



રાજકોટ મહાનગરપાલિકા

ટેન્ડર નં. રામન/બાંધકામ(વે.ઓ.)/૨૧-૨૨/૪૧

એ - ટેકનીકલ બીડ

કામનું નામ

વોર્ડ નં-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ પાસે માઠ પ્રસંગે જ્ઞાવવાનું
બાથરૂમ બનાવવાનું કામ

અંદાજીત રકમ: રૂ. ૩,૫૫,૨૦૦/-	અર્નેસ્ટ મની ડીપોઝીટ: રૂ. ૩,૫૬૦/-
ટેન્ડર ફી : રૂ. ૭૫૦/-	

મુખ્ય તારીખો

૧. ઓફલાઈન ટેન્ડર મેળવવાની / ઓનલાઈન ટેન્ડર ડાઉનલોડ કરવાની છેલ્લી તારીખ (ફક્ત સ્પીડ પોસ્ટ / રજી. પોસ્ટ મારફતે સ્વીકારવામાં આવશે)	૧૫/૧૨/૨૦૨૧ બપોરે ૧૩:૦૦ કલાક સુધી
૨. ટેન્ડર ભરી પરત કરવાની છેલ્લી તારીખ (ફક્ત સ્પીડ પોસ્ટ / રજી. પોસ્ટ મારફતે સ્વીકારવામાં આવશે)	૧૭/૧૨/૨૦૨૧ સાંજે ૧૮:૦૦ સુધી
૩. ટેકનીકલ બીડ ખોલવાની તારીખ	૧૮/૧૨/૨૦૨૧ સવારે ૧૧:૦૦ પછી
૪. ટેન્ડરમાં સબમિટ કરવામાં આવેલ તમામ ડોક્યુમેન્ટના ઓરીજિનલ રૂબરૂમાં બતાવવાની તારીખ	૨૦/૧૨/૨૦૨૧ સાંજે ૧૫:૦૦ થી ૧૮:૦૦ દરમ્યાન
૫. પ્રાઇસ બીડ ખોલવાની તારીખ (જો શક્ય હશે તો)	૨૧/૧૨/૨૦૨૧ સાંજે ૧૮:૦૦ પછી
૬. બીડ વેલીડીટી	૧૨૦ દિવસ
૭. કામની સમયમર્યાદા	૫૦ દિવસ

સીટી એન્જિનીયર

રાજકોટ મહાનગરપાલિકા (વેસ્ટ ઓન)

શ્રી હરિસિંહજી ગોહિલ ભવન, ૩મ નં.૮,
૧૫૦ રીંગ રોડ, રાજકોટ - ૩૬૦૦૦૫



રાજકોટ મહાનગરપાલિકા

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ટેન્ડર નોટીસ

બાંધકામ શાખા - પશ્ચિમ ઝોન

રાજકોટ મહાનગરપાલિકા દ્વારા નીચે જણાવેલ કામે સરકારશીના નિયમ મુજબ રજીસ્ટર્ડ થયેલ કક્ષા પ્રમાણેના અને નિયત સોલવન્સી સર્ટીફિકેટ તથા આ પ્રકારના કામનો અનુભવ ધરાવનાર કોન્ટ્રાક્ટરશીઓના પર્સન્ટેઇઝ રેઇટ ઈ-ટેન્ડર સીટી એન્જિનીયર, રાજકોટ મહાનગરપાલિકા, પશ્ચિમ ઝોન, શ્રી હરિસિંહજી ગોહિલ ભવન, ૧૫૦' રીંગ રોડ, રાજકોટ-૩૬૦૦૦૫ ના સરનામે નીચે દર્શાવેલ મુદતમાં મળી જાય તે રીતે મોકલી આપવાના રહેશે.

ક્રમ	કામનું નામ	૧. અંદાજીત રકમ ૨. ટેન્ડર ફી ૩. ઈ.એમ.ડી. ૪. કામની સમય મર્યાદા
૧	વોર્ડ નં-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ પાસે માઠા પ્રસંગે નહાવવાનું બાથરૂમ બનાવવાનું કામ	૧. ૩,૫૫,૨૦૦/- ૨. ૭૫૦/- ૩. ૩,૫૬૦/- ૪. ૬૦ દિવસ

ટેન્ડર માટેની અગત્યની તારીખો

૧.	ઓફલાઈન ટેન્ડર મેળવવાની / ઓનલાઈન ટેન્ડર ડાઉનલોડ કરવાની છેલ્લી તારીખ	૧૫/૧૨/૨૦૨૧ બપોરે ૧૩:૦૦ કલાક સુધી
૨.	કામકાજના સમય દરમ્યાન કચેરીમાં ઈ-ટેન્ડર ફી., ઈ.એમ.ડી. તથા અન્ય જરૂરી ડોક્યુમેન્ટ્સ રજૂ કરવાની છેલ્લી તારીખ	૧૭/૧૨/૨૦૨૧ સાંજે ૧૮:૦૦ સુધી (ફક્ત સ્પીડ પોસ્ટ / ૨૪. પોસ્ટ મારફતે સ્વીકારવામાં આવશે)
૩.	ટેકનીકલ બિડ ખોલવાની તારીખ	૧૮/૧૨/૨૦૨૧ સવારે ૧૧:૦૦ પછી
૪.	સબમિટ કરેલ ડોક્યુમેન્ટ્સ વેરીફિએ કરાવવા એજન્સીએ હાજર રહેવાની તારીખ	૨૦/૧૨/૨૦૨૧ સાંજે ૧૬:૦૦ થી ૧૮:૦૦ દરમ્યાન
૫.	ઓનલાઈન ભાવ ખોલવાની તારીખ (ફક્ત કવોલીફાઈડ બિડની જ પ્રાઇસ બિડ જણાવેલ તારીખે ખોલવામાં આવશે)	૨૧/૧૨/૨૦૨૧ સાંજે ૧૮:૦૦ પછી (જો શક્ય હશે તો)
૬.	બીડ વેલીડીટી	૧૫૦ દિવસ
૭.	કામની સમય મર્યાદા	૬૦ દિવસ

ટેનર કામ કરવા માટે જરૂરી લાયકાત:

૧. નાણાંકીય માપદંડ:

- ✓ છેલ્લાં સાત વર્ષના વાર્ષિક ટર્નઓવરની સરેરાશ ટેનરની રકમના ૫૦% કરતાં વધુ હોવી જોઈશે.
- ✓ વર્કિંગ કેપીટલ ટેનરની રકમના ઓછામાં ઓછી ૨૫% હોવી જોઈએ તથા તે અંગેનું ચાર્ટર્ડ એકાઉન્ટન્ટશ્રીનું પ્રમાણપત્ર રજુ કરવું ફરજીયાત છે.
- ✓ બીડર પાસે ઓછામાં ઓછુ “ઈ-૨” શ્રેણીનું રજુસ્ટ્રેશન હોવું જોઈશે.
- ✓ બીડરે રૂ. ૧.૦૦ લાખની સોલ્વન્સી રજુ કરવી જોઈશે.

૨. અનુભવનો માપદંડ:

- ✓ એજન્સીએ છેલ્લાં સાત વર્ષમાં આ પ્રકારનું ઓછામાં ઓછું એક કામ સરકારી, અર્ધ-સરકારી અંતર્ગત મુખ્ય એજન્સી તરીકે કરેલું હોવું જોઈશે
- ✓ એજન્સી પાસે કામ કરવા માટે પુરતા પ્રમાણમાં સાધનસામગ્રી તથા જરૂરી અનુભવી સ્ટાફ હોવો જોઈશે.

ખાસ નોંધ:

એજન્સીએ ટેનર ફી નો ડીમાન્ડ ડ્રાફ્ટ, ઈ.એમ.ડી. નો ડીમાન્ડ ડ્રાફ્ટ તેમજ અન્ય રજુ કરવાના થતા જરૂરી ડોક્યુમેન્ટ્સ સાથે ઈ.એસ.આઈ.સી. (Employees State Insurance Corporation) રજુસ્ટ્રેશનની નકલ તેમજ ઈ.પી.એફ. (Employees' Provident Fund) રજુસ્ટ્રેશનની નકલ અતેની કચેરીને રજુ કરવાના રહેશે અન્યથા એજન્સીને નોનરીસ્પોન્સીવ ગણી; તેવી એજન્સીના ભાવ ખોલવામાં આવશે નહીં.

સામાન્ય શરતો:

1. અર્નેસ્ટ મની ડિપોઝિટ (ઇ.એમ.ડી.) એસ્ટીમેટની રકમના એક ટકા મુજબ ભરવાની રહેશે. ઈ.એમ.ડી. રાજકોટ મહાનગરપાલિકાની તરફણે કોઈ પણ શેડ્યુલ બેંક (કો-ઓપરેટીવ બેંક સિવાય) ના રાજકોટ પેયેબલ ડીમાન્ડ ડ્રાફ્ટ કરાર જ ભરી શકાશે.
2. સિક્યોરીટી ડિપોઝિટની રકમ કામના ૫% લેખે કરારનામું કરતી વખતે જમા કરવાની રહેશે.
3. જરૂરી લેબર લાયસન્સ / ઈ.પી.એફ. નંબર લેવાની જવાબદારી જે તે કોન્ટ્રાક્ટરની રહેશે.
4. કોન્ટ્રાક્ટરશ્રીઓએ ટેનરના બંધ કવર ઉપર આ કામનું નામ સ્પષ્ટ અક્ષરે લખવાનું રહેશે.
5. આ કામના ટેનર ડોક્યુમેન્ટ ટેકનીકલ બીડ અને પ્રાઇસ બીડ) રાજકોટ મહાનગરપાલિકાની વેબ સાઈટ www.rmc.gov.in પરથી પણ ડાઉનલોડ કરી શકાશે અને ટેનરમાં જણાવ્યા

મુજબની તારીખ સુધીમા ટેન્ડર સાથે જરૂરી દસ્તાવેજો ટેન્ડર કી, ઈ એમ.ડી., આઈડેન્ટીટી પૂફ, એફ્રેસ પૂફ, પાન કાર્ડની પ્રમાણિત નકલ, વ્યવસાય વેરો ભર્યાની નકલ, સંપર્ક ફોન નંબર / મોબાઇલ નંબર વિગેરે એજન્સીએ રજુ કરી દેવાના રહેશે.

રાજકોટ મહાનગરપાલિકાની વેબ સાઈટ www.mc.gov.in પરથી ટેન્ડર ડાઉનલોડ કરી રજૂ કરનાર એજન્સી પ્રી-કવોલીફાય નહીં થાય તો તેવી એજન્સીના ભાવ ખોલવામાં આવશે નહીં. તેમજ તેઓએ ટેન્ડર સાથે ભરેલ ટેન્ડર ફી પરત કરવામાં આવશે નહિં. એનેક્ષર-૧માં દર્શાવેલ ફોર્મેટમાં વિગતો રજૂ કરવી ફરજીયાત છે.

6. ટેન્ડર કામની સમજીતી તથા અન્ય વિગતો ઓફીસ સમય દરમયાન બાંધકામ શાખા, પશ્ચિમ ઝોન) માંથી જાણવા મળી શકશે.
7. કોન્ટ્રાક્ટરશ્રીઓએ ટેન્ડરના બંધ કવર ઉપર કામનું નામ તથા વોર્ડ નંબર સ્પષ્ટ અક્ષરે લખવાનું રહેશે.
8. એજન્સીએ છેલ્લા સાત વર્ષના સમયગાળામાં સરકારી, અર્ધસરકારીમાં આ જ પ્રકારનું કોઈ પણ રકમનું ઓછામાં ઓછું એક સરખા પ્રકારનું કામ મુખ્ય કોન્ટ્રાક્ટર તરીકે પૂર્ણ કરેલું હોવુ જોઈએ તથા એજન્સી પાસે કામ કરવા માટે પુરતા પ્રમાણમા સાધન સામગ્રી તથા જરૂરી અનુભવી સ્ટાફ હોવો જોઈએ

આ કામ બેરોજગાર ડિપ્લોમા / ડીગ્રી હોલ્ડરને કોઈ પણ ટર્નાર્યોવર, અનુભવ કે સોલ્યુન્સી વગર આપવામાં આવી શકશે. પરંતુ તેઓ કોઈ પણ જગ્યાએ નોકરી કે ધંધો નથી કરતા તે અંગેનો રૂ. 300/- ના સ્ટેમ્પ પેપર ઉપર “સોંગંદનામું” રજુ કરવાનું રહેશે. ઉપરાંત નીચે જણાવ્યા મુજબના જરૂરી દસ્તાવેજોની “ખરી નકલ” ટેન્ડર સાથે રજુ કરવાના રહેશે.

- ✓ રાજ્ય સરકાર / કેન્દ્ર સરકાર / જી.ડબલ્યુ.એસ.એસ.બી.માં રજુસ્ટ્રેશન કરાવ્યાની નકલ ડિપ્લોમા ડીગ્રી નું સર્ટીફિકેટની નકલ
- ઉપરોક્ત તમામ દસ્તાવેજો અસલ વેરીફીકેશન સમયે રજુ કરવાના રહેશે અન્યથા નોન-રેસ્પોન્સીવ ગણવામાં આવશે.
9. ટેન્ડર ખરીદવાની માગણી સાથે એજન્સીએ જરૂરી તમામ દસ્તાવેજોની નકલો રજૂ કરવાની રહેશે જેને આધારે પ્રી-કવોલીફાય થનાર એજન્સીને જ ટેન્ડર કોપી ઇસ્યુ કરવામાં આવશે.
 10. એજન્સીએ ટેન્ડર સાથે પોતાના બીજાનેશ એફ્રેસ પૂફ તથા પોતાનો આઇ.ડી ચૂક રજુ કરવાનું રહેશે.

11. આ કામે પેનલ્ટી કોંદ્રાકટ વેલ્યુના ૦.૧૦ % મુજબ પ્રતિ દિન રહેશે જે વધુમાં વધુ અંદાજીત કિંમતના ૧૦% સુધી કાપવામાં આવશે.
12. એજન્સીએ જી.એસ.ટી.(GST) તથા અન્ય ટેકસ સહિત પોતાના ભાવ ભરવાના રહેશે, કોન્સ્ટ્રક્ટર દ્વારા તે મુજબ જી.એસ.ટી. બ્રેક-અપ સાથેનું ઇન્વોઇસ રજુ કરવામાં નહીં આવે તો સદરહુ ટેકસ કોન્ટ્રાક્ટરના બીલમાંથી કપાત કરી જમા કરવામાં આવશે.
13. આ ટેન્ડર કામે ખરીદવાનું થતું મટીરીયલ એજન્સીએ જી.એસ.ટી. (GST) નંબર ધરાવતા હોય તેવા રજીસ્ટર્ડ સપ્લાયર પાસેથી જ મટીરીયલ ખરીદ કરવાનું રહેશે, જી.એસ.ટી. (GST) નંબર ન ધરાવતા હોય તેવા અનરજીસ્ટર્ડ સપ્લાયર પાસેથી મટીરીયલ ખરીદ કરવામાં આવશે તો તેવા મટીરીયલ માટેનું જી.એસ.ટી. (GST) અંગે કોઈ પણ પ્રકારનું પેમેન્ટ / રકમ ચુકવવા રાજકોટ મહાનગરપાલિકા જવાબદાર રહેશે નહીં.
14. એજન્સીએ ટેન્ડર ફી નો ડીમાન્ડ ડ્રાફ્ટ, ઈ.એમ.ડી. નો ડીમાન્ડ ડ્રાફ્ટ તેમજ અન્ય રજુ કરવાના થતા જરૂરી ડોક્યુમેન્ટ્સ સાથે ઈ.એસ.આઈ.સી. રજીસ્ટ્રેશનની નકલ તેમજ ઈ.પી.એફ. રજીસ્ટ્રેશનની નકલ અત્રેની કચેરીને રજુ કરવાના રહેશે અન્યથા એજન્સીને નોન-રિસ્પોન્સિવ ગણી એવી એજન્સીના ભાવ ખોલવામાં આવશે નહીં.
15. એજન્સી કોઈ પણ જગ્યાએ બ્લેક લીસ્ટ થયેલ નથી તથા કોઈ પોલિસ ફરિયાદ થયેલ નથી તે અંગેનું રૂ! ૩૦૦/- નું નોટરાઇઝડ સોગંધનામું રજુ કરવાનું રહેશે.
16. ટેન્ડર ડોક્યુમેન્ટમાં દર્શાવેલ તમામ શરતો ધ્યાને લઇ ઓફર આપવાની રહેશે.
17. આ કામે આવેલ કોઈપણ ટેન્ડર કે બધા ટેન્ડરનો સ્વીકાર / અસ્વીકાર કરવાનો હક રાજકોટ મહાનગરપાલિકા અભાધિત રાખે છે.
18. ઉપરોક્ત કામના કોઈ પણ અથવા બધા ટેન્ડરો કોઈ પણ કારણે દર્શાવ્યા સિવાય મંજુર અથવા ના-મંજુર કરવાનો અધિકાર નીચે સહી કરનાર દ્વારા અભાધિત રાખવામાં આવે છે.

સીટી એન્જીનીયર
રાજકોટ મહાનગરપાલિકા

-:: ટેન્ડર રજુ કરવા બાબતની સમજૂતી ::-

1. ટેકનીકલ બીડ તથા પ્રાઇસ બીડ અલગ-અલગ કવરમાં બંધ કરવાના રહેશે અને કવર ઉપર કામનું નામ તથા "ટેકનીકલ બીડ" / "પ્રાઇસ બીડ" મોટા અક્ષરે આ ટેન્ડર સાથે છેલ્લા પાના પર લખાયેલ સ્ટીકર ચોટાડવાનું રહેશે.
2. ઉપરોક્ત બજો કવર - એક મોટા કવરમાં બંધ કરી; ઉપર કામનું નામ તથા સંપૂર્ણ વિગતો દર્શાવી રજુ કરવાનું રહેશે.
3. નિયત સમયે "ટેકનીકલ બીડ" ખોલવામાં આવશે અને "ટેકનીકલ બીડ" માં રજુ થયેલ યોગ્ય શ્રેણીના રજુસ્ટ્રેશન, અનુભવની વિગત, અર્નેસ્ટ મની ડીપોગ્રીટ, સોલવન્સી વિગેરેની ચકાસણી કરવામાં આવશે. જે અન્યાં યોગ્યતા ધરાવનાર એજન્સીની જ "પ્રાઇસ બીડ" ખોલવામાં આવશે. અન્ય એજન્સીઓની "પ્રાઇસ બીડ" ખોલવામાં આવશે નહીં, જે તમામ એજન્સીઓને બંધનકર્તા રહેશે.

કોન્ફ્રાક્ટરની સહી તથા સિક્કો

-:: ચેક લીસ્ટ ::-

૧. સરકારી, અર્ધ-સરકારી વિભાગમાં રજીસ્ટ્રેશન કરાવ્યાની નકલ.
 ૨. છેલ્લા સાત નાણાંકીય વર્ષ દરમયાન સમાન પ્રકારના કરેલ કામના અનુભવના દાખલાની નકલ. બેરોજગાર ઈજનેર માટે અનુભવ જરૂરી નથી પરંતુ રૂ!૩૦૦/- નું નોટરાઇડ સોગંધનામું કે તેનો બેરોજગાર છે અને ક્યાય પણ નોકરી કે કોઈ ધંધો કરતાં નથી.
 ૩. કામની રકમના ૨૫% મુજબ વક્કિંગ કેપિટલ હોવા અંગેનો આધાર
 ૪. રૂ! ૧.૦૦ લાખની રકમ સોલવન્સી સર્ટીફીકેટ.
 ૫. રૂ!૩૦૦/- ના સ્ટેમ્પ પેપર ઉપર બ્લેક લીસ્ટ થયેલ નથી તથા ડોક્યુમેન્ટની ખરી તેમજ કોઈ પોલિસ ફરિયાદ થયેલ નથી તે અંગેનું સોગંધનામું રજુ કરવાનું રહેશે.
 ૬. અર્નેસ્ટ મની ડિપોઝિટ (સહકારી બેંક સિવાય): રૂ! ૩,૫૬૦/-
બેંકનું નામ તથા વિગત
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કોન્ટ્રાક્ટરનું નામ :

સરનામું :

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ઉપરોક્ત વિગતે જરૂરી તમામ ડોક્યુમેન્ટ રજુ કરેલ છે.

કોન્ટ્રાક્ટરની સહી તથા સિક્કો

-:: શરતો અને બોલીઓ ::-

૧. ટેન્ડર ભરતી વખતે નીચેની વિગતો ધ્યાનમાં રાખવી:
 - અ. ટકા(%) કે રકમ આકડા તેમજ શબ્દોમાં સ્પષ્ટ લખવી.
 - બ. પેઢી કે ભાગીદાર વતી સહી કરનારે તે જ પ્રમાણે સહી કરવી.
 - ક. નિયત થયેલ જગ્યાએ નિયત થયેલ વિગતો જ લખવી.
 - લ. છેકધાકવાળું ટેન્ડર રદ કરવામાં આવશે.
 - ઈ. શરતો, એબ્સ્ટ્રેક્ટ તથા સમજૃતીમાં દરેક પાને સહી કરવી.
 - એફ. અર્નેસ્ટ મની ભર્યાનો દાખલો ટેન્ડરના કવર ઉપર પહોંચ નંબરથી લખવો.
અસલ પહોંચ ટેન્ડર સાથે રાખવી.
૨. કામ પુરા ખંતથી કરવું જોઈશે અને કરેલું સધજું કામ કારીગારની રીતે કરેલું હોવું જોઈએ. ટેન્ડર રજુ કરનાર કામમાં જે માલ સામાન વાપરે તે ઉત્તમ પ્રકારનો હોવો જોઈએ અને સીટી એન્જનીયરશ્રી એ પસંદ કરેલો હોવો જોઈએ. કામ કેટલી ત્વરાથી ચલાવવું તે બાબત તથા કામ અથવા તેમાં વપરાતો માલ સમાન કેવા પ્રકારનો છે તે બાબત સીટી એન્જનીયરશ્રી જે નિર્ણય કરે તે આખરનો સમજવો જોઈશે. કામની ઝડપ અને તેની ગતી વધારવા સીટી એન્જનીયરશ્રી નો નિર્ણય આખરી સમજવાનો રહેશે તથા લેખિત તેમજ મૌખિક સુચના તેમજ નોટીસ આપવા છતાં પણ કામની ગતી કે ઝડપ વધારવામાં નહીં આવે તો માન. કમિશર સાહેબને કોન્ટ્રાક્ટ રદ કરવાનો અધિકાર રહેશે.
૩. સધળી ખાણોની ફી, રોયલ્ટી, સિક્યોરિટી ડીપોઝિટ અને સમાન ભરી રાખવા માટે કોઈ જમીનનું ભાડું આપવાનું હોય તો તે કોન્ટ્રાક્ટરે આપવાનું રહેશે.
૪. કોન્ટ્રાક્ટર પોતાના કામદારોને થયેલ ઈજા માટે તથા તેને કોઈ બદલો આપવો પડે તો તે માટે તમામ રીતે જવાબદાર કોન્ટ્રાક્ટર રહેશે. કામદારોને થયેલ ઈજા માટે યોગ્ય બદલો આપવામાં જો કોન્ટ્રાક્ટર નિષ્ફળ નીવડે અને કામ કરતા કામદારોને તેનો બદલો રાજકોટ મહાનગરપાલિકા તરફથી આપવામાં આવે તો તેવી આપેલી રકમ ટેન્ડર ભરનાર આપવા જોગ થયેલ રકમમાંથી અથવા આપવાના થાય તે રકમમાંથી કાપી લેવા રાજકોટ મહાનગરપાલિકા મુખત્યાર છે.

૫. આમાં કબુલ કરેલી તેવી કામની જુદી-જુદી બાબતો માટેનો દરજ્જો તે બાબતો મંજુર કરેલી સમજૃતી અનુસાર પૂરી કરવામાં આવી છે એમ સ્વીકારવામાં આવે તો જ કાયદેસર ગણાશે. જે તે પ્રસંગે કામની સદરહુ બાબતો એવી રીતે પૂરી કરી છે એમ સ્વીકારવામાં નહીં આવે તે પ્રસંગે સીટી એન્જનીયરશ્રી છેવટના બીલો તૈયાર કરતી વખતે વ્યાજબી લાગે તેવા ઘટાડાના દરથી બીલો કરવા મુખત્યાર છે.
૬. કોન્ટ્રાક્ટરે નીચે જણાવ્યા મુજબના કોઈને કામે રાખવા નહીં:
 અ. ૧૮ વર્ષથી ઓછી ઉમર હોય, કે
 બ. કામ ઉપર જેને સીટી એન્જનીયરશ્રી એ મનાઈ કરેલ હોય
૭. વર્ક ઓર્ડર મળ્યે તુર્ત જ કામ ચાલુ કરવાનું છે. ઓર્ડરમાં જણાવેલ ૫૦ દિવસની મુદત દરમ્યાન કામગીરી કરવાની છે. જો મુદત દરમ્યાન સુચના પ્રમાણે કામ કરવામાં નહીં આવે તો માન. કમિશર સાહેબને યોગ્ય લાગશે તો કોન્ટ્રાક્ટરના ખર્ચે અને જોખમે અન્ય કોન્ટ્રાક્ટર પાસે અગાર તો ખાતા મારફત કામ પુરુ કરાવશે અને આમ બાકી રહેતું કામ પુરુ કરવામાં રાજકોટ મહાનગરપાલિકાને કોન્ટ્રાક્ટ એગ્રીમેન્ટ કરતા જો વધુ ખર્ચ થશે તો તે કોન્ટ્રાક્ટર પાસેથી કાયદેસર રીતે આ વધારાનો ખર્ચ વસુલ કરી શકશે. માન.કમિશર સાહેબને જો યોગ્ય લાગશે તો મુદત દરમ્યાન કામ પુરુ નહીં થયું હોય છતાં પણ કોન્ટ્રાક્ટર પાસે કામ ચાલુ રખાવી શકશે અને તેની મુદત સંજોગોને લક્ષ્યમાં રાખીને વધારી આપશે. આ કામ નિયત સમય મર્યાદામાં પૂર્ણ ન થયેથી વધારાના દરેક દિવસની પેનલ્ટી ફી ટેન્ડરની રકમના ૦.૧૦% મુજબની રહેશે.
૮. ટેન્ડરની વેલીડીટી ૧૨૦ દિવસની રહેશે.
૯. કામ કરતા માલ સમાન નડતરરૂપ ન થાય તે રીતે કરવાનું છે.
૧૦. એજન્સી દ્વારા રજુ કરવામાં આવેલ ભાવ અતેથી સ્વીકાર્ય બાદ સદરહુ કામે કરાર કરવા જણાવવામાં આવ્યેથી દિન-૮ માં સિક્યુરિટી ડિપોઝિટ જમા કરાવી સ્ટેમ્પ ડયુટી એક્ટ,૧૯૫૮ અને તેના વખતો-વખતના સુધારા મુજબ જરૂરી સ્ટેમ્પ ડયુટી ભરી કરારનામું કરવાનું રહેશે. જેમાં નિષ્ફળ ગયેથી ભરવામાં આવેલ અનેસ્ટ મની ડિપોઝિટ જપ્ત કરવામાં આવશે અને એજન્સીને રાજકોટ મહાનગરપાલિકાના કામો માટે ત્રણ વર્ષ માટે બ્લેકલિસ્ટ અથવા ડીબાર કરવામાં આવશે.

૧૧. સિક્યોરિટી ડીપોઝીટ તરીકે ભરેલ રકમ કામ પૂરું થઈ ગયા બાદ ૧૨ (બાર) માસ પછી કે કોન્ટ્રાક્ટરને ફાઇનલ બિલ મળ્યા બાદ એ બે માંથી જે મોડું હશે તે પછી આપવામાં આવશે. પરંતુ તે સમય દરમ્યાન કોઈ કામ ખરાબ થયેલ અથવા નુકશાન પામેલ માલુમ પડશે તો તે કામ કોન્ટ્રાક્ટરે દુરસ્ત કરી આપવાનું રહેશે અને જો તેમ કરવામાં નાકામિયાબ નીવડશે તો દુરસ્તી તેને ખર્ચ અને જોખમે રાજકોટ મહાનગરપાલિકા તરફથી કરાવી લેવામાં આવશે અને તે પૈકીનો થયેલ ખર્ચ સિક્યોરિટી ડીપોઝીટની રકમમાંથી કાપી લેવામાં આવશે.
૧૨. કામ ઉપર કોન્ટ્રાક્ટરે પોતે અથવા તેના વતી કોઈ જવાબદાર માણસને હાજર રાખવાનો રહેશે.
૧૩. કામ પૂરું થઇ ગયા બાદ સાઈટ બરાબર સાફ કરી આપવાની રહેશે અને જો તેમ કરવામાં કોન્ટ્રાક્ટર નાકામિયાબ નીવડશે તો તેને ખર્ચ અને જોખમે રાજકોટ મહાનગરપાલિકા તરફથી સાઈટ સાફ કરાવી લેવામાં આવશે.
૧૪. રસ્તો બંધ કરવા માટે દિવસના ભાગમાં સુચનાના બોર્ડ તથા રાત્રે યોગ્ય બતીની વ્યવસ્થા કોન્ટ્રાક્ટરે કરવાની રહેશે. તેના અભાવે થતી નુકશાનીની તમામ જવાબદારી કોન્ટ્રાક્ટરની રહેશે.
૧૫. વર્ક ઓર્ડર આપ્યા બાદ ચાલુ કામે અન્ય આસામીઓની મિલકતને અગાર જાનમાલને કોઈપણ નુકશાન થશે તો તેની તમામ જવાબદારી કોન્ટ્રાક્ટરની રહેશે અને તે માટે કોઈપણ વળતરની રકમ ચુકવવાની થાય તો તે કોન્ટ્રાક્ટરે ભરી આપવાની રહેશે. જો કોન્ટ્રાક્ટર અમલ ન કરે તો તેવા વળતર વિગેરેની રકમ તેના બીલોમાંથી કપાત કરવામાં આવશે.
૧૬. કોઈ પણ કારણોસર કોન્ટ્રાક્ટર ટેન્કરમાં દર્શાવેલ કામ કરવા અશક્તિમાન થશે તો રાજકોટ મહાનગરપાલિકા તેના ખર્ચે અને જોખમે આ કામ પૂરું કરાવશે અને આમ કરતા ટેન્કરમાં જણાવેલ ભાવ કરતા વધારે ખર્ચ થશે તો રાજકોટ મહાનગરપાલિકા કોન્ટ્રાક્ટરની સિક્યોરિટી ડીપોઝીટમાંથી કે સાઈટ ઉપર પડેલા માલ સામાનની હરરાજી કરી કે બિલમાંથી વસુલ કરી શકશે અને તેમ કરતા કોન્ટ્રાક્ટરનો કોઈપણ વાંધો કે હક્ક રહેશે નહીં.

૧૭. આ કામનો કોઈ પણ ભાગ સંતોષકારક રીતે કોન્ટ્રાક્ટર નહી કરે તો રાજકોટ મહાનગરપાલિકા ના ઈજનેર તેઓને ૧૦ દિવસની નોટીસ કામ સુધારવા આપશે. મુદત વિત્યા બાદ રાજકોટ મહાનગરપાલિકાના ઈજનેર કોન્ટ્રાક્ટરના ખર્ચે અને જોખમે માણસો રાખી તેમજ માલ સમાન ખરીદી કામ કરવાની કાર્યવાહી કરશે અને કોન્ટ્રાક્ટર પાસેથી ખર્ચ વસુલી શકશે. આ કામ સીટી એન્જિનીયરશ્રી બીજા કોન્ટ્રાક્ટર પાસે પણ કરાવી શકશે.
૧૮. વર્ક ઓર્ડરમાં જણાવ્યાની તારીખે કામ પૂરું કરવામાં કોન્ટ્રાક્ટર નિષ્ફળ જશે તો અગાઉ કલમ-૭ માં જણાવ્યા પ્રમાણે પેનલ્ટી વસુલ લેવામાં આવશે. જો રાજકોટ મહાનગરપાલિકા ને કારણે સંજોગો અનુસાર કામ બંધ રહે તો જેટલા દિવસ કામ બંધ રહે તેટલા દિવસની મુદત આપવામાં આવશે અથવા તો કોઈ સબળ કારણસર કામ બંધ રહે તેની જાણ કોન્ટ્રાક્ટરે રાજકોટ મહાનગરપાલિકા ઈજનેરને જ કરવાની રહે છે અને જો કારણ વ્યાજબી લાગશે તો વધારાની મુદત માટે માન. કમિશનર સાહેબ વિચારશે અને તેનો નિર્ણય આખરી ગણાશે.
૧૯. આ કામ ચાલુ થયે વચ્ચેના ગાળાની સંતોષકારક પ્રગતી હશે તો જરૂર જણાયે ઓછામાં ઓછા એક માસ પછી કોન્ટ્રાક્ટરને થયેલ કામનું રનીંગ બિલ આપવામાં આવશે. આ રનીંગ બિલ થયેલ કામ પ્રમાણે અને ફાઈનલ બીલના "ઉપાડ" એડવાન્સ તરીકે આપવામાં આવશે. રનીંગ બીલમાં લીધેલ કામનો જથ્થો કે કામની વિગતનું આખરી સ્વરૂપ બિલ વખતે નક્કી થાય તે રીતે રહેશે. રનીંગ બિલ આકરવામાં; આવેલ બીલની વિગત બધી જ ફાઈનલ બીલમાં હોવી જરૂરી નથી.
૨૦. કોન્ટ્રાક્ટરે આ કામમાં કોઈ પણ આઇટમ સંતોષકારક રીતે સ્પેસીફીકેશન મુજબ નહી કરી હોય તો રાજકોટ મહાનગરપાલિકા ને લાગે તે "ભાવ ઘટાડો" (રીડયુઝ રેઇટ) કરી શકશે અને તે કોન્ટ્રાક્ટરે માન્ય રાખવાનો રહેશે.
૨૧. આ કામમાં રાજકોટ મહાનગરપાલિકા ના ઈજનેર ટેન્કરમાં જણાવ્યા મુજબના સ્પેસીફીકેશન કે ડ્રોઇંગ કે ડીઝાઇનમાં ફેરફાર કરી શકશે એટલે કે મૂળ સ્પેસીફીકેશનમાં જણાવ્યા મુજબના કામમાં ઘટાડો કરવો કે વધારો કે તદન નવું કામ કરાવી શકશે અને કોન્ટ્રાક્ટરે ટેન્કરની મૂળ શરતોને કાયમ રાખી તે મુજબ કામ કરી આપવાનું છે. આ ફેરફારને કારણે રાજકોટ મહાનગરપાલિકા સાથે થયેલ કરાર રદ થઇ શકશે નહી.

- (અ) આ વધારાના ઉપર મુજબના કામમાં જો એક્સ્ટ્રા આઇટમ થઈ અને આઇટમ ટેન્ડરમાં જણાવેલ હશે તો તે મુજબ ભાવ આપવામાં આવશે.
- (બ) જો એક્સ્ટ્રા આઇટમ ટેન્ડરમાં નહીં હોય પરંતુ રાજકોટ મહાનગરપાલિકા નો જે તે વખતનાં શેડ્યુલ ઓફ રેઇટ (SOR) હશે તો તે મુજબ ભાવ આપવામાં આવશે. આ વખતે જો ટેન્ડર ઉચા ભાવનું હશે તો વધારાના ટકા આપવામાં આવશે નહીં પરંતુ જો ટેન્ડર નીચા ભાવનું હશે તો આવી આઇટમોમાંથી કોન્ટ્રાક્ટરે ભરેલ નીચા ટકા બાદ કરવામાં આવશે.
- (ક) એક્સ્ટ્રા આઇટમ ટેન્ડરમાં કે રાજકોટ મહાનગરપાલિકા ના જે તે વખતમાં શેડ્યુલ ઓફ રેઇટસ (SOR) માં નહીં હોય તેવી આઇટમનો વ્યાજબી ભાવ સમજુતીથી નક્કી કરશે અને જે ભાવ માન. કમિશર સાહેબ ની મંજુરી આપે આપી શકશે. આવી આઇટમોના ભાવ ઉપર કોન્ટ્રાક્ટરે ટેન્ડરમાં જણાવેલ વધારે કે ઓછા ટકાની અસર થશે નહીં.
- (સ) આ મૂળ જથ્થામાં કે ડ્રોઇંગ સ્પેસીઝીકેશનમાં કરવો પડતો ફેરફાર કોન્ટ્રાક્ટરે કબુલ રાખવાનો રહેશે અને આમ કરવાને કારણે મજુરી કે માલ સામાનનો ભાવ વધારો થશે તો રાજકોટ મહાનગરપાલિકા ઉપર કોન્ટ્રાક્ટર નો દાવો રહેશે નહીં.

૨૨. આ કામ કોન્ટ્રાક્ટરે માલ મજુરી સાથે કરવાનો છે. એટલે કે કામમાં જોઈતા મટીરીયલ્સ (હથીયાર, સાધનો, સીડી કે ત્રાપા વગેરે) નો સમાવેશ થાય છે. આ કામ માટે તેને જોઈતા મજફરો (કારીગરો, સુપરવાઈઝર વિગેરે) નો સમાવેશ થાય છે. કોન્ટ્રાક્ટરે તે કામ કરનારાઓ માટે પીવાના પાણીની વ્યવસ્થા કરવાની છે. જે કોઈ આઇટમમાં સ્પેસીઝીકેશન ન હોય ત્યાં પણ રાજકોટ મહાનગરપાલિકા ના સ્પેસીઝીકેશન મુજબ કામ કરવાનું રહેશે. જો રાજકોટ મહાનગરપાલિકા માં પણ સ્પેસીઝીકેશન ન હોય તો ગુજરાત વોટર સપ્લાય એન્ડ સુવરેજ બોર્ડ (GWSSB) ના સ્પેસીઝીકેશન મુજબ કામ કરવાનું છે. કોઈ કામનું સ્પેસીઝીકેશન ઉપરોક્ત જણાવેલ ખાતામાં ન હોય તો એવા કામનું સ્પેસીઝીકેશન કોન્ટ્રાક્ટરે રાજકોટ મહાનગરપાલિકા ઇજનેર પાસેથી લેખિતમાં મેળવવાનું રહેશે. કામ બાબત કોઈ પણ જાતનો વાંધો કે વાંધાઓ પડે તો તેનો આખરી નિર્ણય માન. કમિશર સાહેબનો રહેશે અને તે કોન્ટ્રાક્ટરને બંધનકર્તા રહેશે.

૨૩. કોન્ટ્રાક્ટર તરફથી કામ થઈ ગયા બાદ ૨૪ કલાકમાં સાઈટ સાફ કરી આપવાની રહે છે. તે સમય દરમયાન સાઈટ સાફ કરવામાં આવશે નહીં તો જગ્યા રોકાણ અંગેનું;

- કામ પૂરું થયાની તારીખથી ધોરણસર ભાડું ચડત થશે અને તે કોન્ટ્રાક્ટર પાસેથી વસુલ કરવામાં આવશે આથવાતો તેઓને ખર્ચે અને જોખમે સાઈટ ઉપર પડેલ માલ રાજકોટ મહાનગરપાલિકા ના ઈજનેર દુર કરાવશે અને તેની રકમ કોન્ટ્રાક્ટર પાસેથી વસુલ લેવામાં આવશે.
૨૪. જે કામ અથવા માલ નાપાસ કરવામાં આવે તે સાઈટ ઉપરથી ૨૪ કલાકમાં ખસેડવાનો રહેશે અને તેમ કરવામાં કસુર થશે તો કોન્ટ્રાક્ટરના ખર્ચે અને જોખમે તે કામ અથવા માલ ખસેડવામાં આવશે.
૨૫. ટેન્કરમાં જણાવેલ કોઈ પણ આઇટમ ખાતા મારફત કરવાની જરૂર જણાશે તો તે કામ ખાતા મારફત કરવામાં આવશે. જેના માટે કોન્ટ્રાક્ટર વાંધો ઉઠાવી શકશે નહીં.
૨૬. દરેક કામમાં વપરાતો માલ-સમાન સીટી એન્જિનીયરશ્રી / સક્ષમ અધિકારીશ્રી પાસે પાસ કરવી ત્યાર બાદ જ વાપરવાનો રહેશે.
૨૭. જો કોન્ટ્રાક્ટર ચાલુ કામ છોડી જતા રહેશે અગર કામ બંધ કરી દેશે તો રાજકોટ મહાનગરપાલિકા તેમને ખર્ચે અને જોખમે કામ ચાલુ કરી શકશે અગર તો બીજા કોન્ટ્રાક્ટર પાસે કામ શરૂ કરાવી શકશે. આમ કરવામાં રાજકોટ મહાનગરપાલિકા ને કોન્ટ્રાક્ટર સાથેના એગ્રીમેન્ટ કરતા વધુ ખર્ચ થશે તો કોન્ટ્રાક્ટર પાસેથી કાયદેસર રીતે વસુલ કરી શકશે અને આ ઉપરાત તેમની સિક્યોરીટી ડીપોર્ઝિટ જપ્ત કરી શકશે.
૨૮. કોન્ટ્રાક્ટરના દરેક પ્રોગ્રેસીવ બિલમાંથી ૧૦% રકમ રાજકોટ મહાનગરપાલિકામાં જમા રહેશે તેનો ફાઈનલ બીલમાં સમાવેશ કરવામાં આવશે.
૨૯. આ સાથેના પ્રાઇસ બીડના પરિશિષ્ટમાં સમાવિષ્ટ આઇટમ માં દર્શાવેલ ભાવ (૬૨) બાબતે ભવિષ્યમાં ગેરસમજ ઉપસ્થિત થાય તો તે અંગે સીટી એન્જિનીયરશ્રી નો નિર્ણય આપી રહેશે.
૩૦. સીટી એન્જિનીયરશ્રી મારફત ટેન્કરો ખોલવામાં આવશે ત્યારથી એકસો વીસ (૧૨૦) દિવસમાં ટેન્કર સ્વીકારવામાં આવેલ છે કે નહીં તેનો નિર્ણય માન. કમિશર સાહેબ મારફત કરવામાં આવશે. આ મુદતમાં જો કોઈ પણ પ્રકારના નિર્ણયની જાણ

કોન્ટ્રાક્ટરને કરવામાં નહીં આવે તો ટેન્ડરના ભાવો કોન્ટ્રાક્ટર કે રાજકોટ મહાનગરપાલિકાના સક્ષમ અધિકારીશ્રી બંનેની સહમતીથી આવેલ ભાવોનું ટેન્ડર મંજુર કરવા માટે માન. કમિશર સાહેબ આખરી નિર્ણય કરી શકશે.

૩૧. જે કોન્ટ્રાક્ટરના ભાવ મંજુર થશે અને ભાવ મંજુર થવાના ખબર મળ્યેથી થયેલ ભાવથી થતી કિંમતના ૫ ટકાની રકમ સીક્યુરિટી ડીપોઝિટ તરીકે મહાનગરપાલિકાની ટ્રેઝરીમાં દિવસ-૮ માં ભરી સ્ટેમ્પ ડ્યૂટી એક્ટ મુજબની રકમના નોન-જ્યુડિશિયલ સ્ટેમ્પ પેપર ઉપર મહાનગરપાલિકા દ્વારા માન્ય કરેલ ફોર્મમાં કરારનામું કરી આપવાનું રહેશે. આ માટે સ્ટેમ્પ પેપર તેમજ એડહેસિવ સ્ટેમ્પનો ખર્ચ કોન્ટ્રાક્ટરે ભોગવવાનો રહેશે.
૩૨. વર્કમેન કોમ્પેન્સેશન એકટ હેઠળ ઇન્સ્યુરન્સની ડબલ્યુ.સી.ની પોલીસી લેવાની રહેશે.
૩૩. સાઈટ ઉપર કામ કરતાં કામદારોની સંખ્યા અનવચે સરકારશ્રીના લેબર એક્ટ મુજબ લેબર લાયસન્સ લેવાનું રહેશે અને તેના પ્રવર્તમાન કાયદાઓનું પલક કરવાનું રહેશે તેમજ આ કાયદામાં સરકારશ્રી તરફથી વખતો વખત જે કોઈ ફેરફાર થાય તેનો અમલ કરવાનો રહેશે.
૩૪. સરકારશ્રીના પ્રવર્તમાન નિયમો અનુસાર ઈ.પી.એફ.નંબર લેવાનો રહેશે તથા આ કાયદામાં વખતો વખત જે કાંઈ ફેરફાર થાય તેનો અમલ કરવાનો રહેશે.
૩૫. સર્વિસ ટેકસ / જી.એસ.ટી. ના કાયદા અનુસાર ટેકસ ભરવાની જવાબદારી જે તે કોન્ટ્રાક્ટરશ્રીની રહેશે.
૩૬. કચેરી તરફથી સુચવવામાં આવતા આ કામને લગતા જરૂરી ટેસ્ટ રીપોર્ટ કોન્ટ્રાક્ટરે પોતાના ખર્ચે કરાવી આપવાના રહેશે.
૩૭. ગુજરાત સરકારશ્રીના શ્રમ અને રોજગાર વિભાગના જી.આર. નં.સી.ડબલ્યુ.એ/૨૦૦૪/૮૪૧/એમ-૩ તા.૩૦.૦૧.૦૬ ના ઠરાવ મુજબ શ્રમીકોના કલ્યાણ માટે બીલની કુલ રકમના ૧% (એક ટકા) લેખે સેસ રકમ રાજકોટ મહાનગરપાલિકા રનીંગ બીલમાંથી કપાત કરશે, તેમજ તેના માટે જરૂરી રજીસ્ટ્રેરેશન એજન્સીએ સ્વ.ખર્ચે કરવાનું રહેશે.

૩૮. કામ રાખનાર કોન્ટ્રાક્ટરશ્રીએ ૧૦ કે તેથી વધુ કામદારો કામે રાખેલ હશે તો કોન્ટ્રાક્ટરશ્રીએ ઈ.એસ.આઈ. (એપ્લોઇડ સ્ટેટ ઈન્સ્યોરન્સ) એકટ હેઠળ રજીસ્ટ્રેશન કરાવી જરૂરી રજીસ્ટ્રેશન નંબર મેળવવાનો રહેશે. કોન્ટ્રાક્ટરશ્રીએ તેમના હસ્તકના કામદારોને ઈ.એસ.આઈ.એકટ હેઠળ મળવાપાત્ર તમામ લાભો આપવાના રહેશે. કોન્ટ્રાક્ટરશ્રીએ ઈ.એસ.આઈ.એકટના જે તે સમયે પ્રવર્તમાન તમામ ધારા-ધોરણોનું પાલન કરવાનું રહેશે.
૩૯. આ સાથે સામેલ રાખેલ આ કચેરી હુકમ નં.રામનપા/સી/૧૩૨ તા.૧૦.૦૬.૨૦૧૩ તથા પરિપત્ર નં.રામનપા/સી/૩૨૬ તા.૨૨.૧૨.૨૦૧૨ તેમજ અન્ય સામેલ પરંપત્રો વાંચીને તેમાં સહી સીકકા કરી ટેન્ડર સાથે રજુ કરવાના રહેશે.
૪૦. ટેન્ડરની તમામ શરતો અને બોલીઓ વાંચીને કોન્ટ્રાક્ટરે દરેક પાના પર ટુંકી સહીઓ કરી આપવાની છે. અધુરી વિગત કે ચેકચાક વાળું ટેન્ડર રદ કરવાપાત્ર બનશે.
૪૧. વર્કમેન કોમ્પેન્સેશન એકટ હેઠળ ઈન્સ્યોરન્સની, ડબલ્યુ.સી. ની પોલીસી લેવાની રહેશે.
૪૨. સરકારશ્રીના પ્રવર્તમાન નિયમો અનુસાર ઈ.પી.એફ. નંબર લેવાનો રહેશે તથા આ કાયદામાં વખતો વખત જે કંઈ ફેરફાર થાય તેનો અમલ કરવાનો રહેશે.
૪૩. કચેરી તરફથી સૂચવવામાં આવતા કામે લગતા જરૂરી ટેસ્ટ રીપોર્ટ કોન્ટ્રાક્ટરે પોતાના ખર્ચે કરાવી આપવાના રહેશે.
૪૪. ભારત / ગુજરાત સરકારશી ના વખતો-વખત ના કાયદાઓ-નિયમોમાં થતા ફેરફાર કોન્ટ્રાક્ટરને બંધનકરતા રહેશે.
૪૫. પોલીસ કમિશનરશી, રાજકોટ દ્વારા વખતો-વખત બહાર પાડવામાં આવતાં જાહેરનામાનો કોન્ટ્રાક્ટરે ચુસ્તપણે અમલ કરવાનો રહેશે.

અધિક મદદનીશ ઈજનેર
બાંધકામ શાખા

નાયબ કાર્યપાલક ઈજનેર
બાંધકામ શાખા

સીટી એન્જિનીયર
બાંધકામ શાખા

કોન્ટ્રાક્ટરની સહી તથા સિક્કો:

-:: કામના તાંત્રિક સ્પેશિફીકેશન ::-

Item No.1:

Excavation of Foundation in Soft Murrum and hard murrum Soil or Sand from 0.0 mtr. To 1.50 mtr depth including lifting and laying in designated place as instructed including removal of earth etc. complete.

1.0 General:

1.1 Any soil which generally yields to the application of the pickaxes and shovels, phawaras rakes or any such ordinary excavation implement or organic soil, gravel, slit, sand turf lawn, clay, peat etc. fall under this category.

2.0 Cleaning the site:

2.1 The site on which the structure is to be built shall be cleared, and all obstructions, loose stone, materials and rubbish of all kind, bush, wood and trees shall be removed as directed. The materials so obtain shall be property of the government and shall be conveyed and stacked as directed within RMC limit. The roots of the tree coming in the sides shall be cut and coated with a asphalt.

2.2 The rate of site clearance is deemed to be included in the rate of earth work for which no extra will be paid.

3.0 Setting out:

After clearing the site, the center lines will be given by the engineer-in-charge. The contractor shall assume full responsibility for alignment, elevation and dimension and of each and all parts of the work. Contractor shall supply labors, materials, etc required for setting out the reference marks and bench marks and shall maintain them as long as required and directed.

4.0 Excavation:

The excavation in foundation shall be carried out in true line and level and shall have the width and depth as shown in the drawings or as directed. The contractor shall do the necessary shoring and strutting or providing necessary slopes to a safe angle, at his own cost. The bottom of the excavated area shall be leveled both longitudinally and transversely as directed by removing and watering as required. No earth filling will be allowed for bringing it to level, if by mistake or any other reason excavation is made deeper or wider than that shown on the plan or directed. The extra depth or width shall be made up with concrete of same proportion as specified for the foundation concrete at the cost of the contractor. The excavation upto 1.5 mt depth shall be measured under this item.

5.0 Disposal of the excavated stuff:

The excavated stuff of the selected type shall be used in filling the trenches and plinth or leveling the ground in layers including ramming and watering etc.

The balance of the excavated quantity shall be removed by the contractor from the site of work to a place as directed within RMC limit and all lift.

After refilling, surplus earth shall have to carted by the contractor within specified limit including loading transporting unloading spreading without any extra cost.

The surplus stuff shall be disposed off at the following sites as directed within the prescribed limits of Notification as directed by the engineering in charge.

1. Beside Kotharia Police Station near Stone Quarry
2. All Quarry areas of Raiya Smart City

If the contractor fails to dispose the excavated stuff as specified, penalty will be imposed by Rajkot Municipal Corporation as per the Notification for C&D waste,

Mode of Measurement and Payment:

The measurement of excavation in trenches for foundation shall be made according to the sections of trenches shown on the drawing or as per sections given by the engineer-in-charge. No payment shall be made for surplus excavation made in excess of above requirement or due to stopping and sloping back as found necessary on account of conditions of soil and requirements of safety.

The rate shall be for a unit of one cubic Meter.

Item No.2:

Excavation of Foundation in Soft Rock from 0.0 mtr. to 1.50 mtr depth including lifting and laying as instructed

1.0 General:

- 1.1 Any soil which generally yields to the application of the pickaxes and shovels, phawaras rakes or any such ordinary excavation implement or organic soil, gravel, slit, sand turf lawn, clay, peat etc. fall under this category.

2.0 Cleaning the site:

- 2.1 The site on which the structure is to be built shall be cleared, and all obstructions, loose stone, materials and rubbish of all kind, bush, wood and trees shall be removed as directed. The materials so obtain shall be property of the government and shall be conveyed and stacked as directed within RMC limit. The roots of the tree coming in the sides shall be cut and coated with a asphalt.
- 2.2 The rate of site clearance is deemed to be included in the rate of earth work for which no extra will be paid.

3.0 Setting out:

After clearing the site, the center lines will be given by the engineer-in-charge. The contractor shall assume full responsibility for alignment, elevation and dimension and of each and all parts of the work. Contractor shall supply labors, materials, etc required for setting out the reference marks and bench marks and shall maintain them as long as required and directed.

4.0 Excavation:

The excavation in foundation shall be carried out in true line and level and shall have the width and depth as shown in the drawings or as directed. The contractor shall do the necessary shoring and strutting or providing necessary slopes to a safe angle, at his own cost. The bottom of the excavated area shall be leveled both longitudinally and transversely as directed by removing and watering as required. No earth filling will be allowed for bringing it to level, if by mistake or any other reason excavation is made deeper or wider than that shown on the plan or directed. The extra depth or width shall be made up with concrete of same proportion as specified for the foundation concrete at the cost of the contractor. The excavation upto 1.5 mt depth shall be measured under this item.

5.0 Disposal of the excavated stuff:

The excavated stuff of the selected type shall be used in filling the trenches and plinth or leveling the ground in layers including ramming and watering etc.

The balance of the excavated quantity shall be removed by the contractor from the site of work to a place as directed within RMC limit and all lift.

After refilling, surplus earth shall have to carted by the contractor within specified limit including loading transporting unloading spreading without any extra cost.

The surplus stuff shall be disposed off at the following sites as directed within the prescribed limits of Notification as directed by the engineering in charge.

1. Beside Kotharia Police Station near Stone Quarry
2. All Quarry areas of Raiya Smart City

If the contractor fails to dispose the excavated stuff as specified, penalty will be imposed by Rajkot Municipal Corporation as per the Notification for C&D waste.

Mode of Measurement and Payment:

The measurement of excavation in trenches for foundation shall be made according to the sections of trenches shown on the drawing or as per sections given by the engineer-in-charge. No payment shall be made for surplus excavation made in excess of above requirement or due to stopping and sloping back as found necessary on account of conditions of soil and requirements of safety.

The rate shall be for a unit of one cubic Meter.

Item No.3:

Foundation filling with CC work in proportion of 1:3:6 using 1.5 cm to 2.0 cm aggregate including Ramming, Curing etc.

1.0. Materials

- 1.1 Water shall conform to M-1. Cement shall conform shall conform to M-3. Sand shall conform to M-6. Stones aggregate 20 mm. nominal size shall conform to M- 12.
- 2.0 Workmanship
 2.1 General
 2.1.1 Before starting concrete the bed of foundation trenches shall be cleared of all loose materials, leveled, watered and rammed as directed.
- 2.2 Proportion of Mix
 2.2.1 The proportion of cement, sand and coarse aggregate shall be one part of cement, 3 parts of sand and 6 parts of stone aggregate; and shall be measured by volume.
- 2.3 Mixing
 2.3.1 The concrete shall be mixed in a mechanical mixer at the site of work. Hand mixing may however be allowed for smaller quantity of work if approved by the Engineer-in-charge. When hand mixing is permitted by the Engineer-in-charge in case of break-down of machineries and in the interest of the work, it shall be carried out on a water tight platform and care shall be taken to ensure that mixing is continued until the mass is uniform in colour and consistency. However in such cases 10% more cement than otherwise required shall have to be used without any extra cost. The mixing in mechanical mixer shall be done for a period 1½ to 2 minutes. The quantity of water shall be just sufficient to produce a dense concrete of required workability for the purpose.
- 2.4 Transporting & placing the concrete.
 2.4.1 The concrete shall, be handed from the place of mixing to the final position in not more than 15 minute by the method as directed and shall be placed into its final position, compacted and finished within 30 minutes of mixing with water i.e. before the setting commences.
 2.4.1 The concrete shall be laid in layers of 15 cms to 20 cms.
- 2.5 Compacting:
 2.5.1 The concrete shall be rammed with heavy iron rammers and rapidly to get the required compaction and to allow all the interstices to be filled with mortar.
- 2.6 Curing
 2.6.1 After the final set, the concrete shall be kept continuously wet if required by ponding for a period of not less then 7 days from the date of placement.
- 2.7 Mode of measurements and payment:
 2.7.1 The concrete shall be measured for its length, breadth, and depth, limiting dimensions to those specified on plan or as directed.
 2.7.2 The rate shall be for a unit of one cubic meter.

Item No.4:

Rubble Plinth masonry work in Cement:Mortar in proportion of 1:6 with Brick Masonry Or Rubble Corner and in proportion of 1:3 with C.Pointing

Materials

Stones for the works shall be of the specified varieties which are hard, durable, fine grained and uniform in colour (for superstructure work) free from veins, flaws and other defects. Quality and work shall conform to the requirements specified in

IS:1597 (Part-I) (Latest Edition). The percentage of water absorption shall not exceed 5 percent as per test conducted in accordance with IS:1124 (Latest Edition). The Contractor shall supply sample stones to the RMC for approval. Stones shall be laid with its grains horizontal so that the load transmitted is always perpendicular to the natural bed.

Cement-sand mortar for stone masonry works shall be in the proportion of 1:6. Materials and preparation of mortar shall be as specified below:

Workmanship

For All Works below ground level the masonry shall be random rubble uncoursed with ordinary quarry dressed stones for the hearting and selected quarry dressed stones for the facing.

For all works above ground level and in superstructure the masonry shall be random rubble uncoursed, well bonded, faced with hammer dressed stones with squared quoins at corners. The bushings on the face shall not be more than 40 mm on an exposed face and on the face to be plastered it shall not project by more than 12 mm nor shall it have depressions more than 10 mm from the average wall surface.

Face stones shall extend back sufficiently and bond well with the masonry. The depth of stone from the face of the wall inwards shall not be less than the height or breadth at the face. The length of the stone shall not exceed three times the height and the breadth on base shall not be greater than three-fourths the thickness of wall nor less than 150 mm. The height of stone may be upto a maximum of 300 mm. Face stones or hearting stones shall not be less than 150 mm in any direction.

Chips and spalls shall be used wherever necessary to avoid thick mortar joints and to ensure that no hollow spaces are left in the masonry. The use of chips and spalls in the hearting shall not exceed 20 percent of the quantity of stone masonry. Spalls and chips shall not be used on the face of the wall and below hearting stones to bring them to the level of face stones.

The maximum thickness of joints shall not exceed 20 mm. All joints shall be completely filled with mortar. When plastering or pointing is not required to be done, the joints shall be struck flush and finished as the work proceeds. Otherwise, the joints shall be raked to a minimum depth of 20 mm by a raking tool during the progress of the work while the mortar is still green.

Through or bond stones shall be provided in walls upto 600 mm thick and in case of walls above 600 mm thickness, a set of two or more bond stones overlapping each other by at least 150 mm shall be provided in a line from face to back. In case of highly absorbent types of stones (porous lime stone and sand stone, etc.) the bond stone shall extend about two-thirds into the wall and a set of two or more bond stones overlapping each other by at least 150 mm shall be provided. Each bond stone or a set of bond stones shall be provided for every 0.5 sq.m of wall surface.

All stones shall be sufficiently wetted before laying to prevent absorption of water from the mortar. All connected walls in a structure shall be normally raised uniformly and regularly. However if any part of the masonry is required to be left behind, the wall shall be raked back (and not saw toothed) at an angle not exceeding 45 deg. Masonry work shall not be raised by more than one meter per day.

Green work shall be protected from rain by suitable covering. Masonry work shall be kept constantly moist on all the faces for a minimum period of seven days for proper curing of the joints.

The rate shall be for a unit of one cubic meter.

Item No.5, 9, 10, 11 and 12:

Providing and laying cement concrete in M-20 or 1: 1½ : 3 in nominal mix (1 cement: 1½ coarse sand : 3 graded stone aggregate 20 mm, nominal size) curing complete excluding reinforcement for reinforced work in : (A) Foundations, footing base, of columns and mass concrete. (B) Copping. (C) Slabs, landings shelves, balconies, lintels, chhajja, beams, girders and cantilever. (D) Columns, pillars, posts, and struts (E) Stair case (K) Vertical and horizontal fins upto floor two level including form work.

1.0 Materials:

Water shall conform to M-1, cement shall conform to M-2, Sand shall conform to M-4, Grit shall conform to M-8. Graded stone aggregate 20 mm, nominal size shall conform to M-12.

2.0 General:

- 2.1 The concrete mix is not required to be designed by preliminary tests. The proportion of concrete mix shall be 1:1½:3 (1 Cement: 1½ coarse sand: 3 graded stone aggregate) 20 mm nominal size) by volume.
Concrete work shall have exposed concrete surface or as specified in the item.
- 2.2 The designation ordinary M-100, M-150, M-200, M-250 specified as per IS correspond approximately to 1:3:6, 1:2:4, 1:1½:3 and 1:1:2 nominal mix of ordinary concrete by volume respectively.
- 2.3 The ingredients required for ordinary concrete containing one bag of cement of 50 Kg by weight (0.0342 Cu.M) for different proportions of mix shall be as under:

Grade of concrete	Total quantity of dry aggregate by volume per 50 kgs of cement to be taken as the sum of individual volume of fine and coarse aggregates, max.	Proportion of fine aggregate to coarse aggregate	Quantity of water per 50 Kgs of cement maximum
M-100 (1:3:6)	300 Litres	Generally 1.2 for fine aggregate to coarse aggregate by volume but subject to an upper limit of 1:1.1/2 and lower limit 1:3	34 Litres
M-150 (1:2:4)	220 Litres		32 Litres
M-200 (1:1½:3)	160 Litres		30 Litres
M-250 (1:1:2)	100 Litres		27 Litres

- 2.4 The water cement ratio shall not be more than specified in the above table. The cement concrete of the mix specified in the Table shall be increased if the quantity of water in mix has to be increased to overcome the difficulties of placements and compaction so that water cement ratio specified on the table is not exceeded.
- 2.5 Workability of the concrete shall be controlled by maintaining a water cement ratio that is found to give a concrete mix which is just sufficient wet to be placed and compacted without difficulty with the means available.
- 2.6 The maximum size of coarse aggregate shall be as large as possible within the limits specified but in no case greater than one fourth of minimum thickness of the member, provided that the concrete can be placed without difficulty so as to surround all reinforcement thoroughly and to fill the corners of the form.

- 2.7. For reinforced concrete work, coarse aggregates having a nominal size of 20 mm, are generally considered satisfactory.
- 2.8 For heavily reinforced concrete members as in the case of ribs main beams, the nominal maximum size of coarse aggregate should usually be restricted to 5 mm, less than the minimum the distance between the main bars, or 5 mm less than the minimum cover to the reinform or whichever is smaller.
- 2.9 Where the reinforcement is widely spaced as in solid slabs, limitations of size of the aggregate may not be so important, and the nominal maximum size may sometimes be as greater as or greater than the minimum cover.
- 2.10 Admixture may be used in concrete only with approval of engineer-in-charge based upon the evidence that with the passage of time, neither the compressive strength of concrete is reduced nor are other requisite qualities of concrete and steel impaired by the use of such admixtures.

3.0 Workmanship:

3.1 Proportioning:

Proportioning shall be done by volume, except cement which shall be measured in terms of bags of 50 kg. weight the volume of one such bag being taken as 0.0342 cu.metre. Boxes of suitable size shall be used for measuring sand aggregate. the size of boxes (internal) shall be 35 x 25 cms, and 40 cms deep while measuring the aggregate and sand the boxes shall be filled without shaking ramming or hammering. The proportioning of sand shall be on the basis of its dry volume and in case of damp sand, allowances for bulkage shall be made.

3.2 Mixing:

- 3.2.1 For all work, concrete shall be mixed in a mechanical mixer which along with other accessories shall be kept in first class working condition and so maintained throughout the construction. Measured quantity of aggregate, sand and cement required for each batch shall be poured into the drum of the mechanical mixer while it is continuously running. After about half a minute of dry mixing measured quantity of water required for each batch of concrete mix shall be added gradually and mixing continued for another one and a half minute. Mixing shall be continued till materials are uniformly distributed and uniform color of the entire mass is obtained and each individual particle of the coarse aggregate shows complete coating of mortar containing its proportionate amount of cement. In no case shall the mixing be done for less than 2 minutes after all ingredients have been put into the mixer.
- 3.2.2 When hand mixing is permitted by the engineer-in-charge for small jobs or for certain other reasons, it shall be done on the smooth water tight platform large enough to allow efficient turning over the ingredients of concrete before and after adding water. Mixing platform shall be so arranged that no foreign material gets mixed with concrete nor does the mixing water flow out. Cement in required number of bags shall be placed in a uniform layer on top of the measured quantity of fine and coarse aggregate, which shall also be spread in a layer of uniform thickness on the mixing platform. Dry coarse and fine aggregate and cement shall then be mixed thoroughly by turning over to get a mixture to uniform color. Specified quantity of water shall then be added gradually through a rose can and the mass turned over till a mix of required consistency is obtained. In hand mixing quantity of cement shall be increased by 10 percent above that specified.
- 3.2.3 Mixers which have been out of use for more than 30 minutes shall be thorough

cleaned before putting in a new batch. Unless otherwise agreed to by the engineer-in-charge the first batch of concrete form the mixture shall contain only two thirds of normal quantity of coarse aggregate. Mixing plant shall be thoroughly cleaned before changing from one type of cement to another.

3.3 Consistency:

- 3.3.1 The degree of consistency which shall depend upon the nature of the work and the methods of vibration of concrete, shall be determined by regular slump tests in accordance with IS 1199 - Latest edition. The slump of 10 mm to 25 mm shall be adopted when vibrators are used and 80 mm when vibrators are not used.

3.4 Inspection:

- 3.4.1 Contractor shall give the engineer-in-charge due notice before placing any concrete in the forms to permit him to inspect and accept the false work and forms as to their strength, alignment, and general fineness but such inspection shall not relieve the contractor of his responsibility for the safety of men, machinery, materials and for results obtained. Immediately before concreting, all forms shall be thoroughly cleaned.
- 3.4.2 Centering design and its erection shall be got approved from the engineer-in-charge. One carpenter with helper shall invariably kept present throughout the period of concreting. Movement of labor and other persons shall be totally prohibited for reinforcement laid in position. For access to different parts suitable mobile platforms shall be provided so that steel reinforcement in position is not disturbed. For ensuring proper cover, mortar blocks of suitable size shall be cast and tied to the reinforcement. Timber, kapachi or metal pieces shall not be used for this purpose.

3.5. Transporting and Laying:

- 3.5.1 The method of transporting and placing concrete shall be as approved. Concrete shall be so transported and placed that no contamination, segregation or loss of its constituent material takes place. All form work shall be cleaned and made free from standing water dust, snow or ice immediately before placing of concrete. No concrete shall be placed in any part of the structure until the approval of the engineer-in-charge has been obtained.
- 3.5.2 Concreting shall proceed continuously over the area between construction joints. Fresh concrete shall not be placed against concrete which has been in position for more than 30 minutes unless a proper contraction joint is formed. Concrete shall be compacted in its final position within 30 minutes of its discharge from the mixer. Expert where otherwise agreed to by the engineer-in-charge concrete shall be deposited in horizontal layers to a compacted depth of not more than 0.45 meter when internal vibrators are used and not exceeding 0.30 meter in all other cases.
- 3.5.3 Unless otherwise agreed to by the engineer-in-charge, concrete shall not be dropped in to place from a height exceeding 2 meters. When trunking or chutes are used they shall be kept close and used in such a way as to avoid segregation. When concreting has to be resumed on a surface which has hardened it shall be roughened swept clean, thoroughly wetted and covered with a 13 mm thick layer of mortar composed of cement and sand in the same ratio as in the concrete mix itself. This 13 mm layer of mortar shall be freshly mixed and placed immediately before placing of new concrete. Where concrete has not fully hardened all laitance shall be removed by scrubbing the wet surface with wire of bristle brushes care being taken to avoid dislodgement of any particles of coarse aggregate. The

surface shall then be thoroughly wetted all free water removed and then coated with neat cement grout the first layer of concrete to be placed on this surface shall not exceed 150 mm in thickness and shall be well rammed against old work particular attention being given to corners and close spots.

- 3.5.4 All concrete shall be compacted to produce a dense homogenous mass with the assistance of vibrators unless otherwise permitted by the engineer-in-charge for exceptional cases such as concreting under water where vibrators cannot be used. Sufficient vibrators in serviceable condition shall be kept at site so that spare equipment is always available in the event of breakdowns. Concrete shall be judge to be compacted when the mortar fills the spaces between the coarse aggregate and begins to cream up to form an even surface mixture. During compaction, it shall be observed that needle vibrators are not applied on reinforcement which is likely to destroy the bond between concrete and reinforcement.

3.6 Curing:

Immediately after compaction, concrete shall be protected from weather including rain running water shocks vibration traffic rapid temperature changes frost and drying out process. It shall be covered with wet sacking hessian or other similar absorbent material approved soon after the initial set and shall be kept continuously wet for a period of not less than 14 days from the date of placement. Masonry work over foundation concrete may be started after 48 hours of its laying but curing of concrete shall be continued for a minimum period of 14 days.

3.7 Sampling and testing of concrete:

- 3.7.1. Samples from fresh concrete shall be taken as per IS 1199 - Latest edition, and cubes shall be made cured and tested at 7 days of 28 days as per requirements in accordance with IS 516 - Latest edition. A random sampling procedure shall be adopted to ensure that each concrete batch shall have a reasonable chance of being tested i.e. the sampling should be spread over the entire period of concreting and cover all mixing units. The minimum frequency of sampling of concrete of each grade shall be in accordance with following:

Quantity of concrete in the work	No.of samples	Quantity of concrete in the work.	No.of samples
1-5 cmt	1	16-30 cmt	3
6-15 cmt	2	31-50 cmt	4
51 and above	4 ± one additional for each additional 50 m or part thereof		

NOTE:- At least one sample shall be taken from each shift. Ten test specimens shall be made from each sample five for testing at 7 days and the remaining five at 28 days. The samples of concrete shall be taken on each days of the concreting as per above frequency. The number of specimens may be suitably increased as deemed necessary by the engineer-in-charge when procedure of tests given above reveals a poor quality of concrete and in other special cases.

- 3.7.2. The average strength of the group of cubes cast for each day shall not be less than the specified cube strength of 150 Kg/Cm² at 28 days. 20% of the cubes cast for each day may have value less than the specified strength. Such concrete shall be classified as belonging to the appropriate lower grade. Concrete made in accordance with the proportion given for a particular grade shall not, however, be placed in a higher grade on the ground that the test strength are higher than the minimum specified.

3.8 Stripping:

- 3.8.1. The engineer-in-charge shall be informed in advance by the contractor of his intention to strike the form work. While fixing the time for removal of form, due consideration shall be given to local conditions, character of the structure, the weather and other conditions that influence the setting of concrete and of the materials used in the mix. In normal circumstances (generally where temperatures are above 20°C) and where ordinary concrete is used, forms may be struck after expiry of periods specified below for respective item of work.

Stripping Time:

In normal circumstances and where ordinary cement is used forms may be struck after expiry of following periods:

a)	Side of walls, columns and vertical faces of beams	- 24 to 48 hours.
b)	Beam softish (props. left under)	- 7 days
c)	Removal of props slabs:	
	i) Slabs spanning upto 4.5 m	- 7 days
	ii) Spanning over 4.5 m	- 14 days
d)	Removal of props for beams and arches	
	i) Spanning upto 6 m	- 14 days
	ii) Spanning over 6 m	- 21 days

- 3.8.2. All form work shall be removed without causing any shock or vibration as would damage the concrete. Before the soffit and struts and struts are removed, the concrete surface shall be gradually exposed, where necessary in order to ascertain that concrete has sufficiently hardened. Centering shall be gradually and uniformly lowered in such a manner as to permit the concrete to take stresses due to its own weight uniformly and gradually. Where internal metal ties are permitted, they or their removable parts shall be extracted without causing any damage to the concrete and remaining holes filled with mortar. No permanently embedded metal part shall have less 25 mm cover to the finished concrete surface. Where it is intended to re-use the form work, it shall be cleaned and made good to the satisfaction of the engineer-in-charge. After removal of work and shuttering, the City Engineer shall inspect the work and satisfy by random checks that concrete produced is of good quality.

- 3.8.3. Immediately after the removal of forms, all exposed bolts etc. passing through the cement concrete member and used for shuttering or any other purpose shall be cut inside the cement concrete member to a depth of at least 25 m below the surface of the concrete and the resulting holes be filled by cement mortar. All fissures caused by form joints, all cavities produced by the removal of form ties and all other holes and depressions, honeycomb spots, broken edges or corners and other defects, shall be thoroughly cleaned, saturated with water and carefully pointed and rendered true with mortar of cement and fine aggregate mixed in proportions used in the grade of concrete that is being finished and of as dry consistency as is possible to use. Considerable pressure shall be applied in filling and pointing to ensure thorough filling in all voids. Surfaces which are pointed shall be kept moist for a period of 24 hours. If pockets / honeycombs in the opinion of the engineer-in-charge are of such an extent or character as to affect the strength of the structure materially or to endanger the life of the steel reinforcement, he may declare the concrete defective and require the removal and replacement of the portions of structure affected.

(a) the bars shall be kept in position by the following methods :

- (i) In case of beam and slab construction, sufficient number of precast cover blocks in cement mortar 1 :2 (1 cement : 2 coarse sand) about 4 x 4 cms. section and of thickness equal to the specified cover shall be placed between the bars and shuttering as to secure and maintain the requisite cover of concrete over the reinforcement. In case of cantilevered or doubly reinforce beams or slabs, the main reinforcing bars shall be held in position by introducing chain spacers or supports bars at 1.0. to 1.2 metres centers.
 - (ii) In case of columns and walls, the vertical bars shall be kept in position by means of timber templates slots accurately cut in them, the templates shall be removed after concreting has been done below it. The bars may also be suitably tied by means of annealed steel wires to the shuttering to maintain position during concreting.
- 1.2. All bars, projecting from pillars, Columns beams, slabs etc, to which other bars and concrete are to be attached or bounded to later on, shall be protected with a coat of thin neat cement grout, if the bars are not likely to be incorporated with succeeding mass of concrete within the following 10 days, This coat of thin neat cement shall be removed before concreting.

4.0. Mode of measurements & payment.

- 4.1. The consolidated cubical contents of concrete, work as specified in item shall be measured. The concrete laid in excess of sections shown on drawing or as directed shall not be measured. No deduction shall be made for I
 - (a) Ends of dissimilar materials such as joints, beams, posts, girders, rafters, purline trusses, corbels and steps etc. upto 500 sq.cm. in section,
 - (b) Opening upto 0.1 Sq. M.
- 4.2. The rate includes cost of all materials labour, tools and plant required for mixing, placing in position, vibrating and compacting, finishing, as directed. curing and all other incidental expenses for producing concrete of specified strength. The rate excludes the cost of form work.
- 4.3. The rate shall be for a unit of one cubic meter.

Item No.6: **Brick work 1:6**

Materials:

Water shall conform to M-1.

Cement:

Cement shall conform to M-3.

Brick:

The bricks shall be hard or machine moulded and made from suitable soils and burnt. They shall be free from cracks and flaws and nodules of free lime. They shall have smooth rectangular faces with sharp corners and shall be of uniform colors.

The bricks shall be moulded with a frog of 100 mm x 40 mm and 10 mm to 20 mm deep on one of its flat sides. The bricks shall not break when thrown on the ground from a height of 600 mm.

The size of modular bricks shall be 190 mm x 90 mm.

The size of the conventional bricks shall be as under:

(9" x 4.3/8" x 2.3/4") 225 x 110 x 75 mm

Only bricks of one standard size shall be used in one work. The following tolerances shall be permitted in the conventional size adopted in a particular work.

Length $\pm 1/8"$ (3mm) width : $\pm 1/16"$ (1.5mm)

Height: $\pm 1/16"$ (1.5 mm)

The crushing strength of the bricks shall not be less than 35 kg/sq.cm. The average water absorption shall not be more than 20 percent by weight. Necessary tests for crushing strength and water absorption etc., shall be carried out as per IS: 3495 (Part I to IV) - latest edition.

Workmanship:

i) Proportion:

The proportion of the cement mortar shall be 1:6 (1-Cement, 6-Fine sand) by volume.

Wetting of bricks:

The bricks required for masonry shall be thoroughly wetted with clean water for about two hours before use or as directed. The cessation of bubbles, when the bricks are wetted with water is an indication of thorough wetting of bricks.

Laying:

Bricks shall be laid in English bond unless directed otherwise. Half or cut bricks shall not be used except when necessary to complete the bond; closer in such case shall be cut to required size and used near the ends of walls.

A layer of mortar shall be spread on full width for suitable length of the lower coarse. Each brick shall first be properly bedded and set frame by gently tapping with handle of trowel or wooden mallet. It's inside face shall be flushed with mortar before the next brick is laid and pressed against it. On completion of coarse the vertical joints shall be fully filled from the top with mortar.

The work shall be taken up truly in plumb. All courses shall be laid truly horizontal and all vertical joint shall be truly vertical. Vertical joints in alternate coarse shall generally be directly one over the other. the thickness of brick coarse shall be kept uniform.

The brick shall be laid with frog upwards. A set of tools comprising of wooden straight edges, mason's spirit level, square half meter rub, and pins, string and plumb shall be kept on site of work for frequent checking during the progress of work.

Both the faces of walls of thickness greater than 23 cms shall be kept in proper place. All the connected brick work shall be kept not more than one meter over the rest of the work. Where this is not possible, the work shall be raked back according to bond (and not left toothed) at an angle not steeper than 45 degrees.

All fixtures, pipes, outlets of water, hold fasts of doors and windows etc. which are required to be built in wall shall be embedded in cement mortar.

Joints:

Bricks shall be so laid that all joints are quite flush with mortar. Thickness of joints shall not expose 12 mm. The face joints shall be raked out as directed by raking tools daily during the progress of work when the mortar is still green so as to provide key for plaster or pointing to done.

The face of brick shall be cleaned the very day on which the work is laid and all mortar

dropping removed.

Curing:

Green work shall be protected from rain suitably. Masonry work shall be kept moist on all the faces for a period of seven days. The top of masonry work shall be kept well wetted at the close of the day.

Proportion of foundation bed:

If the foundation is to be laid directly on the excavated bed, the bed shall be leveled, cleared of all loose materials, cleaned and wetted before string masonry is to be laid on concrete footing, the top of concrete shall be cleaned and moistened. The contractor shall obtain the engineer's approval for the foundation bed before foundation masonry is started. When precast flooring is to be provided flush with the top of plinth, the inside plinth offset shall be kept lower than the outside plinth top by the thickness of the following.

Mode of measurement & Payment:

The measurement of this item shall be taken for the brick masonry fully completed in foundation upto plinth. The limiting dimensions not exceeding those shown on the plains or as directed shall be final. Battered tapered and curved position shall be measured net.

Item No.7:

20 mm. thick sand face cement plaster on walls and RCC structure up to height of 10 mt. and above ground level consisting of 12 mm thick backing coating of C.M. 1:3 (1 cement : 3 sand) and 8 mm thick finishing coat in C.M. 1:2 (1 cement: 2 sand) etc. complete

Material:

Water shall conform to M-1.

Cement Mortar shall conform to M-11

Workmanship:

The work shall be carried out in the coats. The backing coat (base coat) shall be 12 mm thick in C.M. 1:3. The relevant specification is below:

Scaffolding:

Wooden bullies, bamboos, planks, treatles and other scaffolding shall be sound. These shall be proper examined before erection and use. Stage scaffolding shall be provided for ceiling plaster which shall be independent of the walls.

Preparation of background:

The surface shall be cleaned of all dust, loose mortar, droppings, traces of algar, efflorescence and other foreign matter by water or by brushing if it is not hard and by hacking if it is hard. In case of concrete surface, if a chemical retarder has been applied to the form work, the shall be roughed by wire brushing and all the resulting dust and loose particle cleared off and care shall be taken that none of the retarders is left on the surface. Trimming of projections on brick / concrete surfaces where necessary shall be carried out to get on even surface.

Raking of joints in case of masonry where necessary shall be allowed to dry out for sufficient period before carrying out the plaster work.

The work shall not be soaked but only damped evenly before applying the plaster. If the surface becomes dry, such are shall be moistened again.

For external plaster, the plastering operation shall be started from top floor and carried downwards for internal plaster, the plastering operations may be started whenever the

building frame and cladding work are ready and the temporary supports of the ceilings on the wall of the floor have been removed. Ceiling plaster shall be completed before starting plaster to walls.

The plaster about 15 x 15 cms shall be first applied horizontally and vertically at not more than 2 meters intervals over the entire surface to serve as gauge. The surfaces of these gauges shall be truly in plane of the finished plastered surface. the mortar shall than be applied in uniform surface slightly more than the specified thickness, then brought to a true surface by marking a wooden straight edge reaching across the gauges with small upward and sideways movements at a time finally the surface shall be finished off true with a trowel or wooden float according as a smooth or a sandy granular texture is required. Excessive troweling or over working the float shall be avoided. All corners, arises angles and junctions shall be truly vertical or horizontal as the case may be and shall be carefully finished. Rounding or chamfering corners, arises junctions etc. shall be carried out with proper templates to the size required.

Cement plaster shall be used half an hour after addition of water, and mortar or plaster which is partially set shall be rejected and removed forthwith from the site.

In suspending the work at the end of the day, the plaster shall be left out clean to the line both horizontally and vertically. When recommencing the plaster, the edges of the old work shall be scrapped clean and wetted with cement putty before plaster is applied to the adjacent areas to enable the two to properly join together. Plastering work shall be closed at the end of the day on the body of features such as plaster bonds and cornices nor at the corners or arises. Horizontal joints in plaster work shall not also occur on parapet tops and copings as these invariably lead to leakage. No portion of the surface shall be left out initially be packed up later on the outside of the plaster and keeping them wet.

The thickness of back coat shall be 12 mm average. Before the first coat hardens its surface shall be beaten up by edges of wooden tapers and close dents shall be made on the surface. The subsequent coat shall be applied after this coat has been allowed to set for 3 to 5 days depending upon the weather conditions. The surface shall not be allowed to dry during this period.

the second coat be started over right after finishing of plaster. The plaster shall be kept wet for a period of 7 days. During this period, it shall be protected from all damages.

Mode of measurements & Payments:

The rate shall include the cost of all materials labour and scaffolding etc. involved in the operations described under workmanship.

All plaster shall be measured in square meter unless otherwise specified length, breadth or height shall be measured correct to a centimeter.

Thickness of the plaster shall be exclusive of the thickness of the key i.e. grooves or open joints in brick work, stone work etc. or space between laths. Thickness of plaster shall be average thickness with minimum 10 mm at any point on this surface.

This item includes plastering upto floor two level.

The measurement of wall plastering shall be taken between the walls or partition (dimensions before plastering being taken) for length and from the top of floor or skirting to ceiling for height, depth of cover of cornices, if any, shall be deducted.

Soffits of stairs shall be measured as plastering on ceilings. Elowigns soffits shall be measured separately.

For jambs, soffits, sides, etc. for openings not exceeding 0.5 sq.mt. each in area for ends of joints, beams, posts girders, steps etc. not exceeding 0.5 sq.mt. each in area and for openings exceeding 0.5 sq.mt. and not exceeding 3.00 sq.mt. in each area deductions and additions shall be made in the following manner:

- a) No deductions shall be made for ends of joints, beams, posts etc. and openings not exceeding 0.5 sq.mt. each and no addition shall be made for reverse, jambs, soffits, side etc. of these openings, for finish to plaster around ends of joints, beams, posts etc.
- b) Deductions for openings exceeding 0.5 sq.mt. but not exceeding 3.00 sq.mt. each shall be made as following and no addition shall be made for reverse, joints, soffits, sides, etc. of these openings.
 - i) When both faces of all walls are plastered with same plaster. Deductions shall be made for one face only.
 - ii)
 - For openings having door squares equal to or projecting beyond the thickness of wall. Full deduction for opening shall be made from each plastered face of the wall.
 - In case of openings of area above 3 dq.mt. each deduction shall be made for opening but Jambs, soffits and slits shall be measured.
 - The rate shall be for a unit of square meter.

Item No.8:

Cement Plaster With Neeru + Cement Finish

Material:

Water shall confirm to M-1.

Cement Mortar shall confirm to M-11

Workmanship:

12 mm thick cement plaster in single coat in CM 1:3 (1-cement : 3-sand) with a floating coat of neat cement slurry.

Scaffolding:

Wooden bullies, bamboos, planks, treatles and other scaffolding shall be sound. These shall be proper examined before erection and use. Stage scaffolding shall be provided for ceiling plaster which shall be independent of the walls.

This kind of Plaster is normally for interior side or as specified location by Consultant to be applied as above. NORMAL CEMENT PLASTER and the surface shall be rubbed smooth after coating it with a thick coat of pure Portland cement slurry while the base coat is still fresh. If Neeru plus cement finish is specified floating with neat cement will not be required.

Mode of Measurement & Payment:

The rate shall include the cost of all materials labour and scaffolding etc. involved in the operations described under workmanship.

All plaster shall be measured in square meter unless otherwise specified length, breadth or height shall be measured correct to a centimeter.

Thickness of the plaster shall be exclusive of the thickness of the key i.e. grooves or open joints in brick work, stone work etc. or space between laths. Thickness of plaster

shall be average thickness with minimum 10 mm at any point on this surface.

This item includes plastering up to floor two level.

The measurement of wall plastering shall be taken between the walls or partition (dimensions before plastering being taken) for length and from the top of floor or skirting to ceiling for height, depth of cover of cornices, if any, shall be deducted.

Soffits of stairs shall be measured as plastering on ceilings. Elowigns soffits shall be measured separately.

For jambs, soffits, sides, etc. for openings not exceeding 0.5 sq.mt. each in area for ends of joints, beams, posts girders, steps etc. not exceeding 0.5 sq.mt. each in area and for openings exceeding 0.5 sq.mt. and not exceeding 3.00 sq.mt. in each area deductions and additions shall be made in the following manner:

- a) No deductions shall be made for ends of joints, beams, posts etc. and openings not exceeding 0.5 sq.mt. each and no addition shall be made for reverse, jambs, soffits, side etc. of these openings, for finish to plaster around ends of joints, beams, posts etc.
- b) Deductions for openings exceeding 0.5 sq.mt. but not exceeding 3.00 sq.mt. each shall be made as following and no addition shall be made for reverse, joints, soffits, sides, etc. of these openings.
 - i) When both faces of all walls are plastered with same plaster. Deductions shall be made for one face only.
 - ii)
 - ✓ For openings having door squares equal to or projecting beyond the thickness of wall. Full deduction for opening shall be made from each plastered face of the wall.
 - ✓ In case of openings of area above 3 dq.mt. each deduction shall be made for opening but Jambs, soffits and slits shall be measured.

The rate shall be for a unit of square meter.

Item No.13:

Filling in foundation and plinth with hard murrum or selected soil in layers of 0.23 cm. thickness including watering, ramming and consolidating etc. complete.

1.0 Materials :

- 1.1 Murrum shall be clean of good binding quality, and of approved quality obtained from approved pots/quarries of disintegrated rocks which contain silicons materials and natural mixture of clay of calcarious origin. The size of murrum shall not be more than 20 mm.

2.0 Workmanship :

- 2.1 The murrum or selected soil shall be filled in foundation and plinth in 20 cms. layers including consolidating, ramming, watering, dressing etc. complete.

3.0 Mode of measurement and payment:

- 3.1 The relevant specifications of the item shall be followed.
- 3.2 The rate includes cost of collecting and carting murrum/or selected earth of approved quality with all lead and labour required for filling in trenches and plinth.

3.3 The rate shall be for a unit of one cubic metre.

Item No.14:

Apex Color work on Outer side of Wall (Two coats) (with Base Coat)
FINISHES

EXTENT AND INTENT

The Contractor shall supply all materials, labour, tools, ladders, scaffolding and other equipment necessary for the completion and protection of all painting / finishing work. Painting & finishing, as herein specified shall be applied to all surfaces requiring painting / finishing throughout the interior and exterior of the buildings as given in the schedule of finishes or elsewhere. The painting / finishing shall be carried out by a specialist workers, approved by the Engineer- in-charge of RMC for this work.

STORAGE

Storage of materials to be used on the job shall be, only in a single place approved by the Engineer-in-charge of RMC for this work. Such storage place shall not be located within any of the buildings included in the contract.

MATERIALS

Materials used in the work shall be of manufacture approved by the Engineer-in-charge of RMC for this work, Ready mixed paints, varnishes, enamels, lacquers, stains, paste fillers, distempers and other materials must be delivered to the job site in the original containers, with the seals unbroken and labels intact. Each container shall give the manufacturer's name, type of paint, color of paint and instructions of reducing. Thinning shall be done only in accordance with directions & manufacturer's specification. Remove rejected materials immediately from the premises.

SHADES

All shades, as provided in the shade schedule, shall be approved by the Engineer-in-charge of RMC for this work. The Contractor shall as far as possible use pre-mixed manufacturer's shades and shall prepare sample of the shades selected and submit same for approval by the Engineer-in-charge of RMC for this work. No work is to proceed until the Engineer-in-charge of RMC for this work has given his approval, preferably in writing, of the shade samples.

COMMENCEMENT OF WORK

Painting / finishing shall not be started until the surfaces to be painted / finished are in a condition fit to receive painting / finishing and so certified by the Engineer-in-charge of RMC for this work.

Painting / finishing work shall be taken in hand only after all other civil work is completed.

Buildings where painting / finishing work is to commenced shall be thoroughly swept and cleaned up before commencement of painting / finishing.

SCAFFOLDING

Only double scaffolding having two sets of vertical supports shall be provided for all, painting / finishing work. The supports shall be tied together with horizontal pieces over which the scaffolding planks shall be fixed.

All the vertical and horizontal members of the scaffolding shall be placed sufficiently away from the surfaces to be painted to ensure proper and uniform application.

WORKMANSHIP

The workmanship shall be of the very best; all materials evenly spread and smoothly flowed as without running sags, using good quality tools, brushes, etc., as required. Only skilled painters / applicators shall be employed. A properly qualified foreman shall be constantly on the job whilst the work is proceeding. All surfaces to be painted / finished shall be cleaned free of all loose dirt and dust before painting / finishing is started. All work where a coat of material has been applied must be inspected and approved before application of the succeeding specified coat. Each undercoat shall be distinct shade of the approved color.

Before painting / finishing, remove hardware, accessories, plates and similar items or provide portion to all such items. Upon completion of each space, replace all fixtures removed. Remove doors if necessary to paint bottom edge. Use only skilled mechanics for the removal and replacement of above items.

CONCEALED SURFACES

All interior and exterior trim, door frames, doors, shelving, cabinet work shall be thoroughly and carefully back painted as all surfaces and edges which will be concealed when installed. Such surfaces shall be clean, dry, sanded and properly prepared to receive the paint. Tops, bottom and edges of doors shall be finished same as the rest of the door.

PROTECT AND CLEAN

The agency shall protect not only his own work at all times, but shall also protect all adjacent work and materials by suitable covering during progress of his work. Upon completion of his work, he shall remove all paint and varnish spots from floors, glass and other surfaces. Any defaced surfaces shall be cleaned and the original finish restored. He shall remove from the premises all rubbish and accumulated material and shall leave the work in clean, orderly and acceptable conditions.

PREPARATION OF SURFACES

PLASTER WORK: Fill all holes, cracks and abrasions with plaster of paris / cement slurry as directed, properly prepared and applied and smoothed off to match adjoining surfaces. Do not use sand paper on plaster surfaces. Plaster shall be allowed to dry for at least 12 (twelve) weeks before the application of paint / finishes.

STEEL AND IRON: All surfaces shall be washed with mineral spirits to remove any dirt or grease before applying paint. Where rust or scale is present, it shall be wire brushed and sandpapered clean. All cleaned surfaces shall be given one coat of approved phosphate before prime coat in accordance with the manufacturers, Instructions. Shop coats of paint that have become marred shall be cleaned off, wire brushed, and spot primed over the affected areas.

APPLICATION

The paint shall be continuously stirred in the container so that its consistency is kept uniform throughout.

The painting / finishing shall be laid on evenly and smoothly by means of crossing and laying off, the latter in the direction of the grain of the wood. The crossing and laying off consists of covering the area with paint, brushing the surface hard for the

first time and then brushing alternatively in opposite directions, two or three times and then finally brushing lightly in a direction at right angles to the same. In this process no brush marks shall be left after the laying off is finished. The full process of crossing and laying off will constitute one coat.

Where so stipulated, the painting / finishing shall be carried out using spray machines suited for the nature and location of the work to be carried out. Only skilled and experienced workmen shall be employed for this class of work. Paints used shall be brought to the requisite consistency by adding a suitable thinner. Spraying shall be carried out only in dry conditions. No exterior painting / finishing shall be done in damp foggy or rainy weather. Surface to be painted shall be clean, dry, smooth and adequately protected from dampness. Each coat shall be applied in sufficient quantity to obtain complete coverage, shall be well brushed and evenly worked out over the entire surface and into all corners, angles and crevices allowed to thoroughly dry. Second coat shall be of suitable shade to match final color, and shall be approved by the Engineer-in-charge of RMC for this work before final coat is started. Allow at least 48 hours drying time between coats for interior and 7 days for exterior work, and if in the judgment of the Engineer-in-charge of RMC for this work more time is requested it shall be allowed. Finished surfaces shall be protected from dampness and dust until completely dry. Finished work shall be uniform of approved color, smooth and free from runs, sags, defective brushing and clogging. Make edges of paints adjoining materials of colors sharp and clean, without overlapping.

In order to achieve a superior finished surface, putty paste fillers shall be used on, all surfaces to be painted. To fill pores, dents, etc. The putty / paste fillers shall be approved quality and manufacture and shall be applied to the surface with a knife or other sharp edged tools after the priming coat as well as after each undercoat. The surface, after filling with putty / paste tiller, shall be rubbed down with fine sand paper and dusted off before the application of the subsequent coat.

Paste wood filler when set shall be wiped across the grains of the wood and then with the grain to secure a clean surface. Surface to be stained shall be covered with uniform coat of stain wiped off if required.

FINISH: The painted surfaces shall be finished to require texture. Matt finish shall be achieved by use of sponge rollers or stippling brushes as called for.

The rate shall be paid for a unit of one square meter basis.

Item No.15:

Plastic Emulsion paint (two coats) (Asian Paint, ICI, Dulux, Nerolac, Berger, etc. of approved type (with prime coat):

Materials:

The enamel paint shall satisfy in general requirements in specifications of oil paints. Enamel paint shall confirm to I S Latest edition.

Workmanship:

The materials required for work of painting work shall be obtained directly from approved manufacturer or approved dealer and brought to the site in maker's drum, bags etc. with seal unbroken.

All materials not in actual use shall be kept properly protected, lids of containers shall be kept closed and surface of paint in open or partially open containers covered with a thin layer of turpentine to prevent formation of skin. The materials which have become stale or flat due to improper and long storage shall not be used. The paint shall be stirred thoroughly in its container before pouring into small containers. While applying also, the paint shall be continuously stirred in smaller container. No left over paint shall be put back into store tins. When not in use, the containers shall be kept properly closed.

If for any reasons, thinning is necessary, the brand of thinner recommended by the manufacturer shall be used.

The surface to be painted shall be thoroughly cleaned and dusted. All rust, dirt and grease shall be thoroughly removed before painting is started. No painting on exterior or other exposed parts of the work shall be carried out in wet, damp or otherwise unfavourable weather and all the surfaces shall be thoroughly dry before painting work is started.

Application of paint:

Brushing operations are to be adjusted to the spreading capacity advised by the manufacturer of particular paint. The paint shall be applied evenly and smoothly by means of crossing and laying off. the crossing and laying off consists of covering the area over with paint, brushing the surface hard for the first time over and then brushing alternately in opposite directions two or three times and then finally brushing lightly in a direction at right angles to the same. In this process, no brush marks shall be left after the laying off is finished. The full process of crossing and laying off will constitute one coat.

Each coat shall be allowed to dry completely and lightly rubbed with very fine grade of sand paper and loose particles brushed off before next coat is applied. Each coat shall vary slightly in shade and shall be got approved from the engineer-in-charge before next coat is started.

Each coat except the last coat shall be lightly rubbed down with sand paper of fine pumice stone and cleared of dust before the next coat is applied. No hair marks from the brush or clogging of paint puddles in the corners of panels, angles of moulding etc. shall be left on the work.

Special care shall be taken while painting over bolts, nuts, rivets, overlaps etc. Approved best quality brushes shall be used.

Mode of measurement and payment:

The new steel and other metal surface shall be measured under this item.

All the work shall be measured net in the decimal system as executed subject to the following limits unless otherwise stated hereinafter.

- Dimensions shall be measured to the nearest 0.01 meter.
- Areas shall be worked out to the nearest 0.01 meter.

No deductions shall be made for openings not exceeding 0.5 sq.m. each and no addition shall be made for painting to beddings, moulding, edges, jambs, soffits, sills etc of such opening.

In case of fabricated structural steel and iron work, priming coat of paint shall be included with fabrication. In case of trusses, if measured in sq.m compound griders,

stanchions, lattices, girder and similar work, actual are shall be measured and no extra shall be paid for painting on bolts heads, nuts, washers etc. No addition shall be made to the weight calculated for the purpose of measurements of steel and iron works for paint applied on shop or at site.

The different surfaces shall be grouped into one general item, areas of uneven surfaces being converted into equivalent plain areas in accordance with the table given as per Annexure-II for payment.

The rate is including priming coat.

The rate shall be for a unit of one square meter.

Item No.16:

Providing and fixing two side polished kota stone with supply and fitting for platform and cupboard.

Kota stone (Polished, Green colour) flooring over 25 mm (average) thick base of cement mortar 1 : 6 (1 cement: 6 coarse sand,) laid over and jointed with grey cement slurry including rubbing and polishing complete 25 mm. thick

1.0. Materials

- 1.1. Water shall confirm to M-1. Lime mortar shall confirm to M-10, Cement mortar shall confirm to M-11, Polished kota stone shall confirm to M-49.

2.0. Workmanship

- 2.1. Each slab shall be cut to the required size and shape and fine chisel dressed at all the edges. The sides thus dressed shall have a full contact if a straight edge is laid along. The sides shall be table rubbed with coarse sand before paving. All angles and edges of the slabs shall be true square and free from chippings and giving a plane surface. The thickness shall be 25 mm. (Average) as specified in this item but not less than 20 mm at any place.
- 2.2. Bedding for the Kota stone slabs shall be of cement mortar 1:6 (1 cement : 6 coarse sand) of average thickness 20 mm as given in the description of the item. Sub grade shall be cleaned, wetted and mopped. Mortar of the specified mix and thickness shall be spread on an area sufficient to receive one kota stone slab. The slab shall then be washed clean before laying. It shall be laid on top pressed, tapped gently to bring it in level with the other slabs. It shall then be lifted and laid aside. Top surface of the mortar shall then be corrected by adding fresh mortar at hollows or depressions. The mortar shall then be allowed to harden bit. Over this Surface, cement slurry of honey like consistency shall be applied. The slab shall then be gently placed in position and tapped with wooden I mallet till it is properly bedded in level. with and close to the adjoining slab. The joint shall be as fine as possible. The slabs fixed in the floor adjoining the walls shall enter not less than 10 mm. under the plaster, skirting or dedo. The junction between wall and floor shall be finished neatly. The finished surface shall be true to levels and slopes as directed.
- 2.3. The floor shall be kept wet for a minimum period of 7 days so that bedding and joints set properly.
- 2.4. Polishing shall be normally commenced after 14 days of laying the stone slab.

First polishing shall be done with carborundum stones of 120 grade grit fitted in the heavy machine and then deacon polishing shall be done with carborundum stone of 220 to 350 grade grit fitted in heavy machine. Water shall be properly used during polishing. The stone shall then be washed clean with water. When directed by the Engineer-in-charge; wax polish of approved quality shall be applied on the surface with the help of soft cloth over a clean and dry surface. Then the polishing machine fitted with bobs shall be run over it.

- 2.5. The holes required for Nahni traps, pipes and other fittings shall be made without any extra cost.
- 2.6. The kota stone for platform and c.b. shall be supplied and fixed with two side polished and the work shall have to be completed as per requirement and instructions of engineer in-charge.

3.0. Mode of measurements & payment

- 3.1. The rate shall include the cost of all materials and labour involved in all the operations described above. The kota stone flooring shall be measured in square meters correct to two places of decimal, length and breadth shall be measured correct to a: centimeter and between the finished face of skirting dedo or wall plaster and no deduction shall be made nor extra paid for any opening in floor of areas up to 0.1 sq.mt.
- 3.2. The rate for item no. 16 shall be for a unit of one sq. meter where as for item no.19 will be one running meter.

Item No.17:

Providing and laying glazed tiles of 6 mm thick of approved quality (1st quality) of required size jointed with cement paste on 10 mm thick cement plaster 1:3 (1-cement3- Coarse sand) pointing white cement and jointed with white cement slurry

MATERIALS

Glazed Tiles

The tiles shall be of best quality as approved by the Engineer- in-charge. They shall be float and true to shape. They shall be free from cracks, crazing spots, chipped edges and corners. The glazing shall be of uniform shade.

Variation from the stated sizes, other than the thickness of tile shall be plus or minus 1.5 mm. The thickness of tile shall be 6 mm except as above the tiles shall confirm to I.S. Latest edition.

BEDDING

The sub-grade shall be cleaned, wetted and mopped. The bedding shall then be laid evenly over the surface tamped and corrected to desired level and allowed to harden enough to offer a rigid cushion to tiles and to enable the mason to place wooden planks across and equal on it.

The Color glazed tiles shall be laid on cement mortar bedding of 10 mm thick in C.M. 1:3. The mortar shall have sufficient plasticity for laying and there shall be no hard lumps that would interfere with the evenness of bedding. The base shall be cleared and well wetted. The mortar shall then be spread in thickness not less than 10mm at any place and average 12mm thickness. The proportion of the cement mortar shall be as specified in the item.

FIXING TILES

The tiles before laying shall be soaked in water for at least two hours. Neat grey cement grout at 3.3 Kg. / Cement / Sq. Mt. of honey like consistency shall be spread over the mortar bedding as directed. The edges of the tiles are smeared with neat cement slurry. The tiles shall be well pressed and gently tapped with a wooden mallet till they are properly bedded and in level with the adjoining tiles. There shall be no hollows in bed or joints. The joints between the tiles shall be as thin as possible in straight line or as per pattern.

The tiles shall not have staggered joints. The joints shall be true to centre line both ways. The Nahni trap coming in the flooring shall be so positioned that its grating shall replace only one tile as far as possible. Where full size tiles cannot be fixed, they shall be cut (Swan) to the required size and the edges rubbed smooth to ensure straight and true joints. The joints shall be filled with grey cement grout with wire brush of trowel to a depth of 5mm and loose material removed. White cement shall be used for pointing the joints. After fixing the tile finally in an even plane the flooring shall be kept wet and allowed to nature undisturbed for 7 days.

CLEANING

The surplus cement grout that may have come out of the joints shall be cleared off before it sets. Once the floor has set, it shall be carefully washed, cleared by dilute acid and dried. Proper precaution and measures shall be taken to ensure that the tiles are not damaged many ways till the completion of the construction.

The rate for this item will be paid on one square meter basis.

Item No.18:

Flush door 25mm thick with Iron frame for door & window with polishing / oil painting using company viz. kitply / century /dura / everest

Wooden flush door shutters (solid core) :

The solid core type flush door shutters shall be of decorative or non-decorative type as specified in the drawing. The size and thickness of the shutter shall be as specified in drawings or as directed. The timber species for core shall be used as per I.S. Latest edition. The timber shall be free from decay and insect attack. Knots and knot holes less than half the width of cross-section of the members in which they occur may be permitted. Pitch pockets, pitch streaks and harmless pin holes shall be permissible except in the exposed edges of the core members. The commercial plywood, cross-bands shall conform to I.S: latest edition.

The face panel of the shutters shall be formed by gluing by the hot press process on both faces of the core with either, plywood or cross-bands and face veneers. The lipping, rebating, opening of glazing; venetian etc. shall be provided if specified in the drawing.

All edges of the door shutters shall be square. The shutters shall be free from twist or warp in its plant Both faces of the shutters shall be sand papered to smooth even texture.

The shutters shall be tested for:

1. **End immersion test :** The test shall be carried out as per I.S. latest edition. There shall be no delamination at the end of the test.
2. **Knife test :** The face panel when tested in accordance with I.S. latest edition shall pass the test.

3. **Glue adhesion test :** The flush door shall be tested for glue adhesive test in accordance with I.S.: latest edition. The shutters shall be considered to have passed the test if no delamination occurs in the glue lines in the plywood and if no single delamination more than 80 mm in length and more than 3 mm in depth has occurred in the assembly glue lines between the plywood face and the style and rail. Delamination at the corner shall be measured continuously around the corner. Delamination at the knots, knot holes and other permissible wood defects shall not be considered in assessing the sample.

The tolerance in size of solid core type flush door shall be as under: In Nominal thickness \pm 1.2 mm in Nominal height \pm 3 mm.

The thickness of the shutter shall be uniform throughout with a permissible variation of not more than 0.8 mm: when measured at any two points.
This wooden shutter must be framed with steel section.

2.0. Workmanship

The relevant specifications shall be followed except that the shutters be non decorative type and block board core with face veneer or plywood, with 25 mm thickness.

Readymade shutters shall be of correct size and shall fit into the door or other openings without excessive scrapping of edges. Adding of battens etc., to make up to the size shall not be allowed.

The rate shall be for a unit of one sq.meter.

Item No.19:

Supply and fixing of Laminates 1 mm of approved quality

The laminates of 1 mm of approved quality as per the instructions of engineer in charge shall have to be supplied and fixing work with required material is to be carried out fully.

The rate shall be for a unit of one square meter.

Item No.20:

RCC Pre-cast Jali of C.C. 1:2:4 reinforced with 1.6 mm Dia mild steel wire incl. Roughing, cleaning, fixing and finishing in C.M. 1:3 and curing etc. comp. of 5.0 cm. thick as per directed by Consultant.

A. MATERIALS:

Water shall conform to S-1. Cement shall conform to S-3. Sand shall conform to S-6. Cement Mortar shall conform to S-11. Aggregate shall conform to S-12. Mild steel wire shall conform to S-20.

B. WORKMANSHIP:

It shall be of C.C. 1: 2: 4 (1 Cement: 2 Coarse Sand: 4 Graded stone aggregate of 6 mm nominal size), reinforced with 1.6 mm Dia mild steel wire unless otherwise specified. The thickness of Jali shall be as specified in the item. The Jali shall be set in position true to line and level before the jambs sills and soffits of the opening are plastered. It shall then be properly cemented with CM 1: 3 and rechecked for the levels. Finally, the jambs, sills and soffits shall be plastered gripping the Jali uniformly on all sides.

The rate shall be for a unit of one square meter.

Item No.21:

Providing Steel work for RCC work supplying, bending, binding & hooking by binding wire with Thermo Mechanically Treated (TMT) bars confirming to IS 1786, Fe-500

1:0. Materials

- 1.11. TMT bars of Fe-500 should be confirming to IS:1786.

2.0. Workmanship

- 2.1. The work shall consist of furnishing and placing reinforcement to the shape and dimensions shown as on the drawings or as directed.
- 2.2. Steel shall be clean and free from rust and loose mill scale at the time of fixing in position and subsequent concreting.
- 2.3. Reinforcing steel shall conform accurate to the dimensions given in the bar bending schedules shown an relevant drawings. Bars shall be bent cold to specified shape and dimensions or as directed, using a proper bar bender, operated by hand or power to attain proper radius of bends. Bars shall not be bent or straightened in a manner that will the material. Bars bent during transport or, handing shall be straightened before being used on the work. They shall not be heated to facilitate bending. Unless otherwise specified, a 'U' type hook at the end of each bar shall invariably be provided to main reinforcement. The radius of the bend shall not be less then twice the diameter of circle having an equivalent effective area. The hooks shall be suitably encased to prevent any splitting of the concrete.
- 2.4. All the reinforcement bars shall be accurately placed in exact position shown on the drawings, and shall be securely held in position during placing of concrete by annealed binding wire not less than 1 mm in size and by using stay blocks or metal chair spacers, metal hangers, supporting wires or other approved devices at sufficiently close intervals, Bars shall not be allowed to sag between supports nor displaced during concreting or any other operations of the work. All devices used for positioning shall be of non-corrodible material. Wooden and metal supports shall not extend to the surface of concrete, except where shown on drawings. Placing bars on, layers of freshly laid concrete as the work progresses fro adjusting bar spacing shall not be allowed. Pieces of broken stone or brick and wooden blocks shall not be used. Layers of bars shall be separated by spacer bars, precast mortar bricks. or their approved devices. Reinforcement after being placed in position shall be maintained in a clean condition until completely embedded in concrete. Special care shall be exercised to prevent any displacement of reinforcement in concrete already placed: To prevent reinforcement form corrosion, concrete cover shall be provided as indicated on drawings. All the bars producing from concrete and to which other bars are to be spliced and which are, likely to be exposed for a period exceeding 10 days shall be protected by a thick coat of neat cement grout.
- 2.5. Bars crossing each other where required shall be secured by binding wire (annealed) of size not less than 1 mm in such a manner that they do not slip; over each other at the time of fixing and concreting:

- 2.6. As far possible, bars of full length shall be used. In case this is not possible. Overlapping of bars shall be done as directed, When practicable, overlapping bars shall not touch each other, but be kept apart by 25 mm. or 1.25 times the maximum size of the coarse aggregate whichever is greater by concrete between them. Where not feasible, overlapping bars shall be bound with annealed wires not less than 1 mm. thick twisted tight. The overlaps shall be staggered for different bars and located at points, along the span where neither shear nor bending moment is maximum.
 - 2.7. Whenever indicated on the drawings or desired by the Engineer-in-charge, bars shall be joined by couplings which shall have a cross-section sufficient to transmit the full stresses of bars. The ends of the bars that are joined by coupling shall be upset for sufficient length so that the effective cross section at the base of threads is not less than the normal cross-section of the bar. Threads shall be standard threads: Steel for coupling shall conform to I:S.226 (Latest edition)
 - 2.8. When permitted or specified on the drawing's joints of reinforcement bars shall butt-welded so as to transmit their full stresses. Welded joints shall preferably be located at points when steel will not be subject to more than 75 percent of the maximum permissible stresses and welds so staggered that at any one section not more than 20 percent of the rods are welded. Only electric arc welding using a process which excludes air from the molten metal and conforms to any or all other special provisions for the work shall be accepted. Suitable means shall be provided for holding bars securely in position during welding. It shall be ensured that no voids are left in welding and when welding is done in two or, three stages, previous surface shall be cleaned properly. Ends of the bars shall be cleaned of all loose scale, rust, grease, paint and other foreign matter before welding. Only competent welders shall be employed on the work. The M.S. electrodes used for welding shall conform to I.S. 814 (Latest edition). Welded pieces of reinforcement shall be tested: Specimen shall be taken from the actual site and their number and frequency of test shall be as directed.
- 3.0. Mode of measurements & payment
- 3.1. Reinforcement shall be measured in length including overlaps, separately for different diameters as actually used in the work. Where welding or coupling is resorted to, in place of lap joints, shall be measured for payment as equivalent length of overlap as per design requirement. From the length so measured, the weight of reinforcement shall be calculated in Kgs. Length shall include hooks at the ends. Wastage and annealed steel wire for binding shall not be measured and the cost of these items shall be deemed to be included in the rate for reinforcement.
 - 3.2. The rate for reinforcement includes cost of steel binding wires, its carting to work site, cutting, bending; placing, binding and fixing in position as shown on the drawings and as directed, It shall also include all devices for keeping reinforcement in approved position, cost of joining as per approved method and all wastage and spacer bars.
 - 3.3. The rate shall be for a unit of One Kg.

Item No.22:

Iron Work as per drawing and Instructions all complete:

All structural steel shall conform to IS 266 - Latest edition. The steel shall be free from the defects mentioned in IS 226 (Latest edition) and shall have a smooth

finish. The material shall be free from loose mill scale, rust, pits or other defects affecting the strength and durability. River bars shall conform to IS 1148 Latest edition.

When the steel is supplied by the contractor, test certificate of the manufacturer shall be obtained according to IS 226 Latest edition and other relevant Indian Standards.

The design should be made as per the instructions of engineer-in-charge. The rate includes supplying and welding (along with labours), transportation and fixing in position of the steel work.

The rate shall be for a unit of one Kilogram.

Item No.23:

Painting work of Character / Number on Polished Wodden Plate / Building

The painting of character / numbering work is to be done with oil paint of approved quality as directed by engineer-in-charge.

The unit of rate will be paid per number basis.

Item No.24.A:

Providing and fixing Brass Wheel valve of 25 mm / 50 mm dia and fixing etc complete of I.S.I. mark etc complete.

MATERIALS

The brass check or non return valve shall be fully cleared of all foreign matter before fixing. The fixing of valve shall be done by means of bolts nuts and 3 mm. rubber insertions with flanges of spigot and socketed till pieces, drilled to the same specification as in case of socket and spigot and with flanges in case of flanged pipes. The jointing small be done leak proof.

The ISI Marked Brass full way wheel valve of 25 mm / 50 mm dia shall have to fitted as per instructions of engineer-in-charge.

The rate for this work will paid per Number basis.

Item No.24.B:

Trusted brass cock, stop cock etc. 15mm dia Screw down bolt type fitting with fixing.

The Brass Cock Screw down bolt type of 15 mm dia is to be provided and all the necessary fitting and fixing with required material as per the instructions of engineer in charge is to be carried out and complete accordingly.

The rate shall be for a unit of one number.

Item No.24.C:

Providing and fixing to wall ceiling and floor 6 kgs/Sq. CM. workings pressure polythene pipes of the following outside diameter. low density complete with

special flange compression type fittings wall clips etc. including making good the wall/ceiling and floor (A) 110 mm (B) 50 mm:

1.0. Material

- 1.1. The low density polythene pipe of specified diameter with 6 Kg/Sq. cm. working pressure shall conform to IS. latest edition. The specials and fittings required shall be of best quality.

2.0. Workmanship

- 2.1. The PVC. pipes of specified diameter shall be fixed as directed: Due to thermal expansion of rigid PVC pipes, due allowance shall be made particularly in over ground pipe lines for any change in length of pipe line which may occur during installation or when pipe line is in service:
- 2.2. Above ground installation of rigid PVC; pipe should be undertaken after preparations are observed for their protection against direct sun rays and mechanical damage.
- 2.3. The rigid PVC. pipe lines should not be kept exposed above ground when it passes through public places, railway lines, road side and foot paths.
- 2.4. PVC.pipes shall be supported at the following intervals:
- 20 mm. dia. 500 mm. - 25 mm. dia. 750 mm. - 32 mm. dia 900 mm:
- 2.5. Close support spacing shall be provided if recommended by the manufacturer.
- 2.6. The guide lines indicated by the manufacturer regarding handling, transportation, storing, laying and jointing of pipes shall be kept in view during execution.
- 2.7. PVC pipes shall be fixed on wall with wooden plugs and suitable plastic clamps.

2.8. Jointing the pipes:

- 2.8.1. The pipes and sockets shall be accurately cut. The ends of the pipes and fittings should be absolutely free from dirt and dust. The outside surface of the pipes and the inside of the fittings shall then be roughened with emery paper, and then solvent cement joint. Since solvent, cement is aggressive to PVC care must be taken to avoid applying excessive cement to the inside of pipe sockets as any surplus cement cannot be wiped off after jointing. Empty solvent cement tins, brushes, rags, or paper unpregnated with cement should not be buried in the trenches. They should be gathered not left scattered about, as they can prove to be a hazard to animals, which may chew them.
- 2.8.2. If any manufacturer recommends its own methods of jointing the same shall be adopted after necessary approval from the Engineer-in-charge.

2.9. Laying pipes in Trenches:

- 2.9.1. The pipes shall be laid over uniform relatively soft fine grained soil found to be free of presence of hard objects such as large flints, rocky projections; large tree roots etc. The width of the trenches shall be minimum width required for working.
- 2.9.2. The pipes laid underground shall not be less than one meter from the ground level. The pipe shall be positioned in the trenches so as to avoid any induced stressed due to deflection. Any deviation required shall be obtained by using proper type of rubber ring joints.

3.0. Mode of measurements and payment

- 3.1. The description of each item shall, unless otherwise stated, be held to include where necessary, conveyance, and delivery, handling, unloading, storing, fabrication, hoisting, all labour for finishing to required shape and size, setting, fitting in position, straight, cutting and waste, return of packings etc.

- 3.2. The length shall be measured on running meter basis of finished work. The length shall be taken along the centre line of the pipe and fittings. The pipes fixed to walls, ceiling; floors etc. shall be measured and paid under this item.
- 3.3. All the work shall be measured in decimal system as fixed in its place, subject to tolerance given below unless otherwise stated.
 - (i) Dimension shall be measured to the nearest 0.01 metre.
 - (ii) Area shall be worked out to the nearest 0.01 sq.meter
- 3.4. All measurements of cutting shall unless otherwise stated be held to include the consequent waste.
- 3.5. In case of fitting of unequal bore, the largest bore shall be measured for the test.
- 3.6. Testing of pipe lines, fittings, and joints include for providing all plant and appliances necessary for obtaining access to the work to be tested and carrying out the tests.
- 3.7. The rate includes galvanized steel tubing with screwed socket joints, together with all fittings (such as bends, sockets, springs, elbows, tees, crosses, short pieces, clamps and plugs unions etc.) and fixing complete with clamping wall-hooks, wooden plugs etc. and also cutting, screwing and waste and for making forged (or handmade) bends on piping as required. Connector shall be inserted, where required or directed. The rate also includes cutting through walls, floors etc. and their making good and painting exposed threads with anticorrosive paint as above and testing. Where tubes are to be fixed to wall, ceiling and flooring, the rate shall not include painting of pipes, providing sleeves and sand filling under floor for which separate payment shall be made.
- 3.8. The rate shall be for a unit of One running meter.

Item No.24.D, 24.E and 24.F:

Providing & fixing 15mm, 25mm and 40 mm dia G.I. Pipe with special fittings & fixing with I.S.I mark

MATERIALS

Galvanized mild steel tubes of specified dia. nominal bore shall be as per I.S. 1239-1968. The galvanized fittings, clamps, etc. required for specified dia. bore pipes shall be of best quality and make as approved by the O.O.W.

WORKMANSHIP

CUTTING, LAYING AND JOINTING

When the tubes are to be cut or rethreaded, the end shall be carefully filed out so that no obstruction to bore is offered. The ends of the tubes shall then be threaded confirming to the requirements of I.S. 554-1955 with pipe dies and taps carefully in such a manner as will not result in slackness of joints when the two pieces are screwed together.

The taps and dies shall be used only for straightening screw threads which have become bent or damaged and dies shall not be used for turning of the threads so as to make them slacks as the latter procedure may not result in a watertight joint.

The screw threads for tube and fittings shall be protected from edge unit they are fitted.

In jointing the tubes, the inside of the socket and the screwed end of the tubes shall be oiled and smeared with white or red lead and wapping around with a few turns of fine spun yarn round the screwed end of the tube. The end shall then be tightly screwed in the socket, tees, etc. with a pipe wrench. Care shall be taken that all pipes and fittings are properly jointed so as to make the joints completely water tight and pipes are kept at all times free from dust and dirt during fixing. But joints shall be removed after screwing. After laying, the open ends of the pipes shall be temporarily plugged to prevent access of water, soil or any other foreign matter.

Any threads exposed after jointing shall be painted or in the case of underground piping thickly coated with approved anti-corrosive paint to prevent corrosion.

FIXING OF THE TUBE FITTING TO WALL CEILING AND FLOORS

In case of fixing of tubes and fittings to the walls or ceilings, these shall run on the surface of the wall or ceiling (not in chase) unless otherwise specified. The fixing shall be done by means of standard pattern; holder clamps keepings the pipes about 15 mm, clear of the wall. When it is found necessary to conceal the pipes and when specified so, chasing may be adopted or pipe fixed in ducts or recesses etc. provided that there is sufficient space to work on the pipe with usual tools. The pipe shall not ordinarily be buried in walls or solid floors, where unavoidable, pipes may be buried for short distances provided that adequate protection is given against damages and where so require joints are not buries. Where required M.S. tube sleeve shall be fixed at a place a pipe is passing through a wall or floor for expansion and contraction and other movements. In case the pipe is embedded in walls or floors, it should be painted with anti-corrosive bitumastic paint of approved quality. The pipe should not come in contact with lime mortar or lime concrete as the pipe is affected by lime. Under the floors, the pipe shall be laid in layer of sand filling.

All pipes and fittings shall be fixed truly vertical horizontal unless unavoidable. The pipes shall be fixed to walls with standard pattern clamps of required size and shape, one end of which shall be properly plugged or cemented into walls with cement mortar 1:3 (1 Cement: 3 coarse sand) and the other tighten round the pipes to hold it security. These clamps shall be spaced at regular intervals in straight length at 2 M C/C interval in horizontal run and 2.5 M. interval in vertical run. For pipe of 15 mm. dia, the holes in the walls and floors shall be made by drilling with chisel or jumper and not by dismantling the brick work or concrete. However, for bigger diameter pipes, the holes shall be carefully made of the smallest required size. After fixing the pipe the holes shall be made good with cement mortar 1:3 (1 Cement: 3 Coarse sand) and properly finished to match the adjacent surface.

TESTING OF JOINTS

After laying and jointing, the pipes and fittings shall be inspected under working conditions of pressure and flow. Any joint found leaking shall be redone, and all leaking pipes removed and replaced without extra cost.

The pipes and fittings as they are laid shall be tested to hydraulic pressure of 6 Kg / Sq. cm. The pipe shall be slowly and carefully charged with water allowing all air to escape and avoiding all shock, and water hammer. The draw off takes and stop cock shall then be closed and specified hydraulic pressure shall be applied gradually. The pressure gauge must be accurate. The pipes and fittings shall be tested in

sections as the work of laying proceeds keeping the joints exposed for inspection during the testing.

Mode of Measurements & Payments:

The description of each item shall, unless otherwise stated, be held to include where necessary, conveyance, and delivery, handling, unloading, storing, fabrication, hoisting, all labour for finishing to required shape and size, setting, fitting in position, straight, cutting and waste, return of packings etc.

The length shall be measured on running meter basis of finished work. The length shall be taken along the centre line of the pipe and fittings. The pipes fixed to walls, ceiling, floors etc shall be measured and paid under this item.

All the work shall be measured in decimal system as fixed in its place, subject to tolerance given below unless otherwise stated.

- i) Dimension shall be measured to the nearest 0.01 metre.
- ii) Area shall be worked out to the nearest 0.01 sq.metre

All measurements of cutting shall unless otherwise stated be held to include the consequent waste.

In case of fitting of unequal bore, the largest bore shall be measured for the test.

Testing of pipelines, fittings and joints include for providing all plant and appliances necessary for obtaining access to the work to be tested and carrying out the tests.

The rate includes galvanized steel tubing with screwed socket joints, together with all fittings (such as bends, sockets, springs, elbows, tees, crosses, short pieces, clamps and plugs unions etc.) and fixing complete with clamping wall-hooks, wooden plugs etc and also cutting, screwing and waste and for making forged (or hand made) bends on piping as required. Connector shall be inserted, where required or directed. The rate also includes cutting through walls, floors etc and their making good and painting exposed threads with anti-corrosive paint as above and testing. Where tubes are to be fixed to wall, ceiling and flooring, the rate shall not include painting of pipes, providing sleeves and sand filling under floor for which separate payment shall be made.

The rate shall be for a unit of One running meter.

Item No.24.G:

Providing and fixing Overhead Water Tanks "Sintex" or equivalent of 1000 Litres capacity with all necessary plumbing fittings etc. comp. as directed by Engineer-in-charge.

MATERIALS AND WORKMANSHIP :

Overhead water tanks "Sintex" or equivalent of cylindrical vertical tanks with closed top of self-supported type having approved grade of polyethylene, molded to seamless and suitable for potable water tank of capacity as mentioned in Schedule-B as per company's dimensions provided with G.I. fittings of size 25mm Dia for inlet, outlet, overflow and scour connections and float valves etc. complete placed with all fittings fixing as directed by engineer in charge.

The rate for this work will be paid per number basis.

Item No.25:

Foundation filling with Cement:Mortar in proportion of 1:6 using Brick scrap of size 60cm to 60cm

The work is to be carried out as per the detailed specification mentioned in Item No.4 except that brick scrap material is to be used in place of rubble.

The rate shall be for a unit of One cubic meter.

Item No.26:

IPS Flooring: Providing I.P.S. flooring of about 40 mm. thick using C.M. 1:2 proportion including finishing, tieing, etc. complete as per detailed specification

A. Materials Cement Concrete

The cement concrete shall conform to specifications for concrete given in a separate section for ordinary concrete. The maximum size of coarse aggregate shall be 12 mm. The fine aggregate shall consist of properly graded particles.

The proportion of mix shall be 1:2:4 as specified. The minimum amount of mixing water, that will produce a workable mix and will allow finishing, shall be used, generally a w/c ratio of G.S. should suffice. For large works mechanical mixing may be resorted to at the direction of the Engineer-In-Charge.

B. Laying of I.P.S Flooring

1. The sub grade for the concrete floor shall be a bedding of compacted earth and rubble stones soling to the required level. The earth cushion of 300 mm. thick shall be applied using locally available soil. The soil should be properly sieved and free from any gravel, stones etc. This shall be gradually built upto the full thickness using excavated soil if found desirable. The earth cover shall be the uniformly soaked with water without making it slushy. The rubble stones of about 200 to 230 thick size shall be laid over this earth cover in proper position. The rubble laying shall be done such that proper bond is obtained by fitting in closely the adjacent stones by using bond stones. For this proper breaking of points shall be done. The rubble stones shall be carefully laid, hammered down with a wooden mallet into position and solidly bedded. No hollow space shall be left anywhere in the joints. This can be possible by using small chips in the interior to fill interstice between adjacent stones shall be wetted before use.
2. The surface of the sub grade shall be cleaned of all loosed materials and moistened immediately before laying the concrete floor. The concrete flooring shall be laid in alternated bays not exceeding 6 sqm. each. The edges of each panel into which the floor is divided should be supported by flat bars of steel or wood duly oiled at least 48 hours elapse before the concreting in the adjacent bays is commenced.

The rate shall be for a unit of one square meter.

Item No.27:**Removal of Excavated Stuff and Laying within the sites specified in Notification as directed by Engineer-in-Charge**

The excavated stuff of the selected type shall be used in filling the trenches and plinth or leveling the ground in layers including ramming and watering etc.

The balance of the excavated quantity shall be removed by the contractor from the site of work to a place as directed within RMC limit and all lift.

After refilling, surplus earth shall have to carted by the contractor within specified limit including loading transporting unloading spreading without any extra cost.

The surplus stuff shall be disposed off at the following sites as directed within the prescribed limits of Notification as directed by the engineer-in-charge.

1. Beside Kotharia Police Station near Stone Quarry
2. All Quarry areas of Raiya Smart City

If the contractor fails to dispose the excavated stuff as specified, penalty will be imposed by Rajkot Municipal Corporation as per the Notification for C&D waste.

Mode of Measurement and Payment:

The measurement of excavation in trenches for foundation shall be made according to the sections of trenches shown on the drawing or as per sections given by the engineer-in-charge. No payment shall be made for surplus excavation made in excess of above requirement or due to stopping and sloping back as found necessary on account of conditions of soil and requirements of safety.

The rate shall be for a unit of one cubic Meter.

Asst. Engineer
R.M.C.

Dy.Ex.Engineer
R.M.C.

Addl. CITY ENGINEER
R.M.C.

Signature of Contractor

-:: ટેનરના જુદા-જુદા કવર માટેના સ્ટીકર ::-



મુખ્ય કવર અર ચોટાં

બીડ સબમીશન

ટેનર નં. રામન/બાંધકામ(વે.ઓ.)/૨૧-૨૨/૪૧

કામનું નામ: વોર્ડ નં-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ
પાસે માઠા પ્રસંગે નહાવવાનું બાથરૂમ બનાવવાનું
કામ



ટેકનીકલ બીડના કવર માર્ગ

એ - ટેકનીકલ બીડ

ટેનર નં. રામન/બાંધકામ(વે.ઓ.)/૨૧-૨૨/૪૧

કામનું નામ: વોર્ડ નં-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ
પાસે માઠા પ્રસંગે નહાવવાનું બાથરૂમ બનાવવાનું
કામ



પ્રાઇસ બીડ માર્ગ
ટેકનીકના કવર માર્ગ

બી - પ્રાઇસ બીડ

ટેનર નં. રામન/બાંધકામ(વે.ઓ.)/૨૧-૨૨/૪૧

કામનું નામ: વોર્ડ નં-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ
પાસે માઠા પ્રસંગે નહાવવાનું બાથરૂમ બનાવવાનું
કામ





રાજકોટ મહાનગરપાલિકા

ટેન્ડર નં. રામન/બાંધકામ(વે.ઓ.)/૨૧-૨૨/૪૧

બી - પ્રાઇસ બીડ

રૂ..... પહોંચ નં..... તારીખ.....

ધૂટક કામ (સેક્કે ટકાવારી દર)

કું / અમો આ ટેન્ડરમાં લખેલું કામ અંદાજ પત્રકના રૂ. ૩,૫૫,૨૦૦/- કરતાં
.....% (શબ્દોમાંટકા)
ઓછા / વધુ ભાવે કરવા સહમત છું / છીએ.

કામનું નામ: વોડ નં-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ પાસે માઠા પ્રસંગે
ન્હાવવાનું બાથરૂમ બનાવવાનું કામ

મંજુર થયેલ અંદાજ : રૂ.૩,૫૫,૨૦૦/- અર્નેસ્ટ મની : રૂ.૩,૫૫૦/-

ટેન્ડર ફી: રૂ.૭૫૦/-

કોન્ટ્રાક્ટરનું નામ:

સરનામું: :

તારીખ: સાક્ષી:

સરનામું: :

.....

ધંધો:

ભાવ ભરનારની સહી

સદરહુ ભાવ પત્ર રાજકોટ મહાનગરપાલિકા વતી મંજુર કરવામાં આવે છે.

તારીખ:

મંજુર કરનાર અધિકારીની સહી

રાજકોટ મહાનગરપાલિકા

બાંધકામ શાખા

કામનું નામ: વોર્ડ નં.-૦૧ માં રૈયાગામમાં જુની પંચાયત ઓફિસ પાસે માઠા પ્રસંગે નહાવવાનું બાથરૂમ
બનાવવાનું કામ

-:: પરિશીષ્ટ ::-

(કામની કઈ કઈ બાબત કરવાની છે તે બતાવવાની યાદી)

Sr.	QTY.	Item	Rate	Unit	Amount
1	13.00	Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including lifting and laying in 90 mtr. lead area as instructed	96.60	Cu.Mt.	1255.80
2	10.10	Excavation of Foundation in Soft Rock from 0.0 mtr. to 1.50 mtr depth including lifting and laying in 90 mtr. lead area as instructed depth including lifting and laying in 90 mtr. lead area as instructed	220.80	Cu.Mt.	2230.08
3	3.70	Foundation filling with CC work in proportion of 1:2:4 using 1.5 cm to 2.0 cm aggregate including Raming, Curing etc.	3913.20	Cu.Mt.	14478.84
4	11.50	Foundation filling with Rubble Cement Mortar in proportion of 1:6 Cement:Mortar	1493.00	Cu.Mt.	17169.50
5	1.10	CC work 1:1.5:3 for Coping using aggregate of size 10-20 mm,centring, curing, finishing etc. complete (without reinforcement)	4588.00	Cu.Mt.	5046.80
6	20.40	Brick Masonry work in Cement:Mortar 1:6	4196.00	Cu.Mt.	85598.40
7	116.00	20mm thick Sand Face Cement Plaster Work in which 1 paster in proportion of 1:3 and 2nd plaster inteh proportion of 1:2 using Cement:Mortar with spong finishing etc. complete (Note: Before carringout Plaster work on RCC, required tipping work should be carried out as instructed)	217.00	Sq.Mt.	25172.00

8	58.00	Cement Plaster 12 mm thick using Cement:Mortar in proportion 1:3 with Niru Finishing curing, etc. complete	182.00	Sq.Mt.	10556.00
9	1.60	CC work 1:1.5:3 for Beam using aggregate of size 10-20 mm, centring, curing, finishing etc. complete (without reinforcement)	5449.00	Cu.Mt.	8718.40
10	3.80	CC work M-20 for RCC slab using aggregate of size 10-20 mm, centring, curing, finishing etc. complete (without reinforcement)	5738.00	Cu.Mt.	21804.40
11	0.70	CC work M-20 for Lintel using aggregate of size 10-20 mm, centring, curing, finishing etc. complete (without reinforcement)	5538.00	Cu.Mt.	3876.60
12	0.40	CC work 1:1.5:3 for Chhaja using aggregate of size 10-20 mm, centring, curing, finishing etc. complete (without reinforcement)	5153.00	Cu.Mt.	2061.20
13	5.60	Filling of Plinth in layers of 0.23 m thick including murrum and sprinkling of water, compaction etc. complete	279.00	Cu.Mt.	1562.40
14	116.00	Apex Color work on Outer side of Wall (Two coats) (with BaseCoat)	99.00	Sq.Mt.	11484.00
15	58.00	Plastic Imulsion Paint (Two coats) (Asian Paint, ICI, Dulux, Nerolac, Berger etc. of approved type) (with Prime Coat)	126.00	Sq.Mt.	7308.00
16	20.00	Supply, Fixing & Polishing of Kota Stone work thickness 20-25 mm to be fixed in Lime:Mortar 1:2 and liquid Cement and as instructed	791.00	Sq.Mt.	15820.00
17	28.00	Supply & Fixing of Glazed tiles (1st Quality) of required size in Cement Roga and joints to be filled with white cement after 12mm rough plaster in proportion of 1:3	426.00	Sq.Mt.	11928.00

18	2.00	Flush Door 25mm thick with Iron frame for Door & window with polishing / oil painting using company viz. Kitply / Century / Dura / Everest	1925.00	Sq.Mt.	3850.00
19	4.00	Supply & Fixing of Laminates 1mm of Approved Quality	1148.00	Sq.Mt.	4592.00
20	3.00	Supply & Fixing of CC Pre-Cast Jali	843.00	Sq.Mt.	2529.00
21	900.00	Supplying, Cutting, Beding, Binding and Hooking and binding with wire for RCC work Tor steel TMT round bar including all cost	57.00	kg.	51300.00
22	100.00	Iron work as per drawing and instruction including all	86.00	kg.	8600.00
23	50.00	Numbering on Building / Quarters (Painting work)	10.00	Character	500.00
24		PLUMBING WORK			
A	1.00	Brass wheel valve 40mm dia. fitting with fixxing.	940.00	Nos.	940.00
B	15.00	Tusted brass cock, stop cock etc. 15mm dia fitting with fixing.	180.00	Nos.	2700.00
C	50.00	Supply & fixing 110 MM DIA. (OUTER) P.V.C. Pipes (RIGID) - 6 Kg. ISI marked	227.00	R.Mt.	11350.00
D	10.00	40 mm Galva. Pipe Class-A (Light quality) with IS-1239 mark.	231.00	R.Mt.	2310.00
E	15.00	25 mm Galva. Pipe Class-A (Light quality) with IS-1239 mark.	138.00	R.Mt.	2070.00
F	5.00	15 mm Galva. Pipe Class-A (Light quality) with IS-1239 mark.	76.25	R.Mt.	381.25
G	1.00	1000 Ltrs.Water Storage Tank of HDPE material cylindrical Vertical Black with closed Top 'SINTEX' brand	7700.00	Nos.	7700.00
25	2.00	Foundation filling with Cement:Mortar in proportion of 1:6 using Brick scrap of size 60cm to 60cm	552.00	Cu.Mt.	1104.00
26	20.00	Cement Concrete flooring (IPS) 50 mm thick in proportion of 1:2:4 with a floating coat of neat cement, finishing, curing etc. complete	283.00	Sq.Mt.	5660.00

27	29.00	Removal of Excavated Stuff within RMC limit as directed by Engineer-in-Charge (in outer Part Of City)	122.00	Cu.Mt.	3538.00
				Rs.	355194.67
				Say	355200.00

સધજું કામ ફરમાવવામાં આવે તે પ્રમાણે શરતો અને સમજૃતી મુજબ કરવાનું છે.
ઉપરોક્ત પરિશિષ્ટમાં નિર્દેશ કરેલ આઈટમોનું કામ ભાગ-એ ટેકનીકલ બીડ માં સામેલ કરેલ
સંબંધિત આઈટમોની શરતો અને સમજૃતી પ્રમાણે કરવાનું છે.

મદદનીશ એન્જી. રાજકોટ મહાનગરપાલિકા	નાયબ કાર્યપાલક ઈજનેર રાજકોટ મહાનગરપાલિકા	સીટી એન્જીનીયર રાજકોટ મહાનગરપાલિકા
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કોન્ટ્રાક્ટરની સહી તથા સિક્કો