निर्माण प्रबंधन (Construction Management) के सिद्धांत

[Nirman prabandhan (Construction Management) ke Siddhant]

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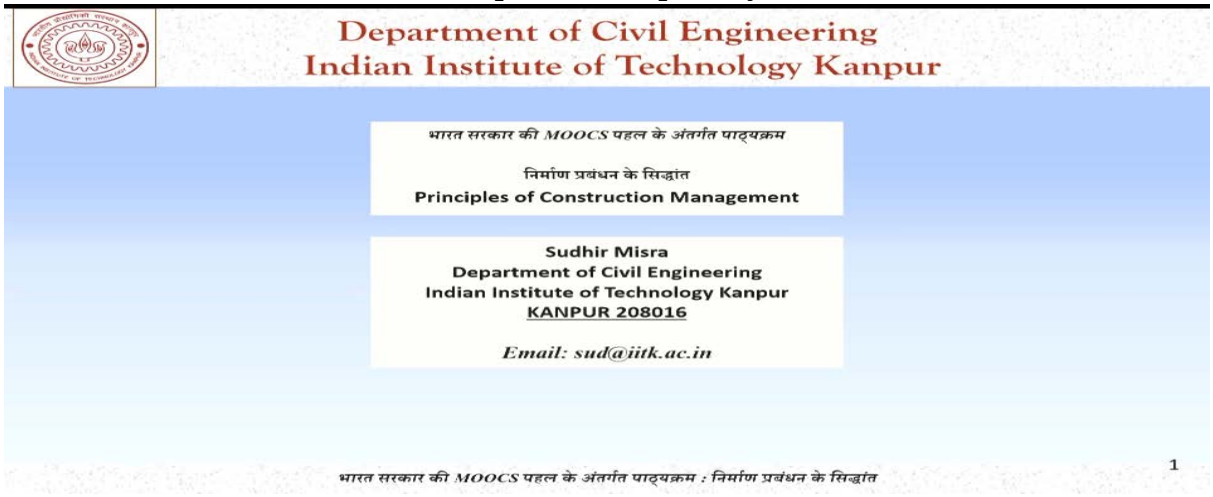
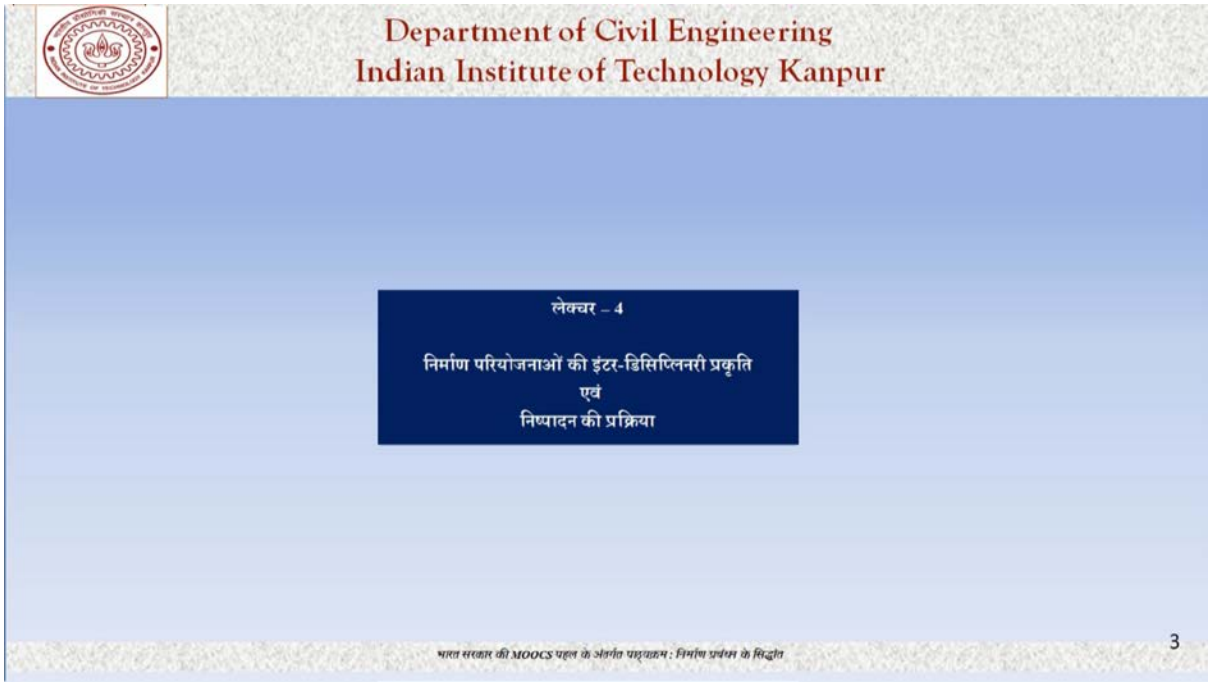
Lecture – 4

Nirmaan pariyojanaon kee intar-disiplinaree prakrti
evan
Nishpaadan kee prakriya



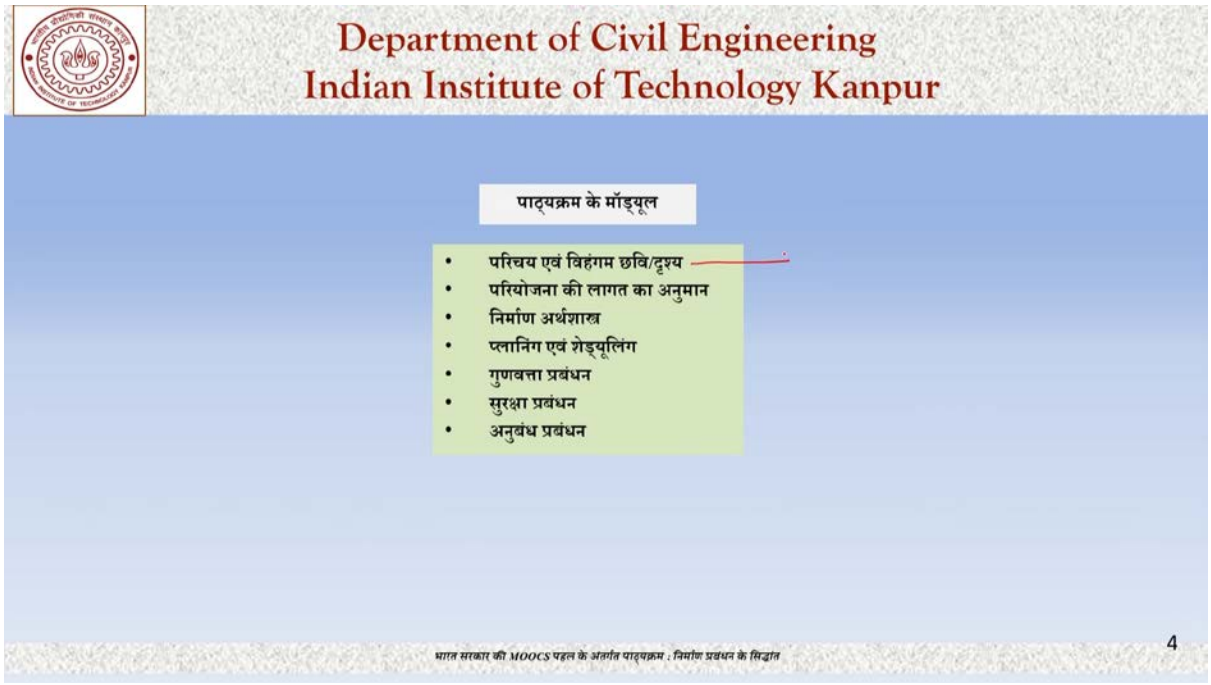
Namaskaar aur aapaka svaagat hai bhaarat sarakaar kee moocs pahal ke antargat paathyakram Nirmaan Prabandhan ke Siddhaant mein.

(Reference Time 00:22)



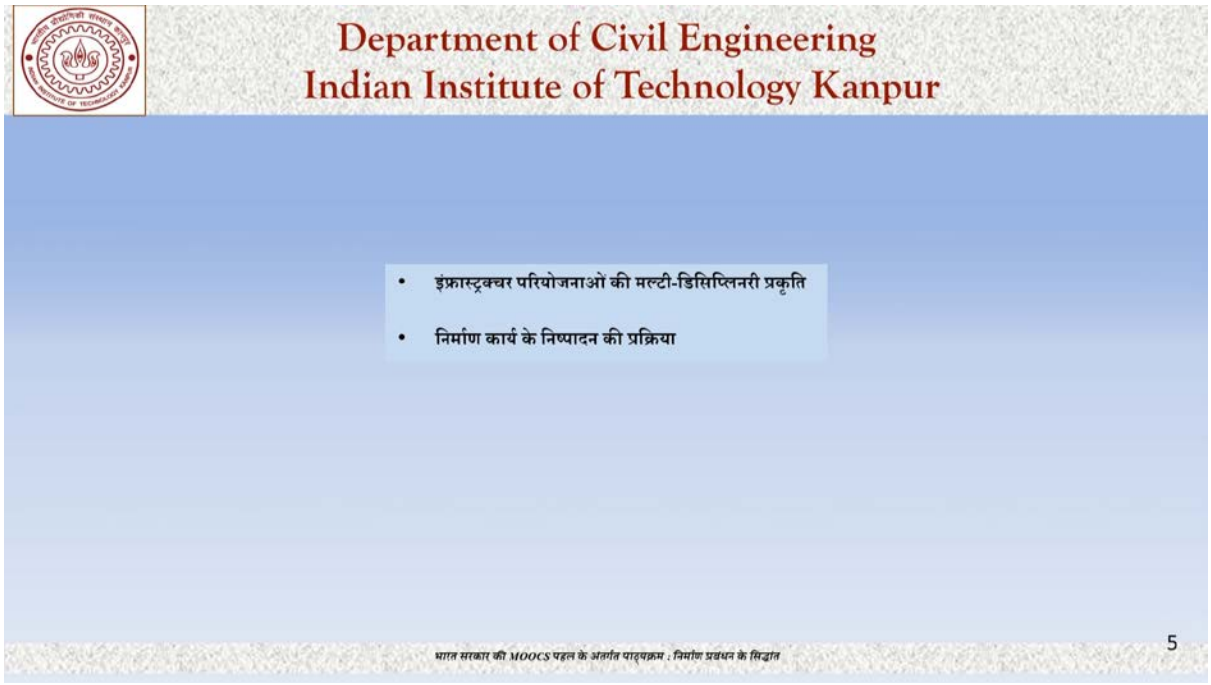
Aur aaj ke is chauthe lecture mein.

(Reference Time 00:25)



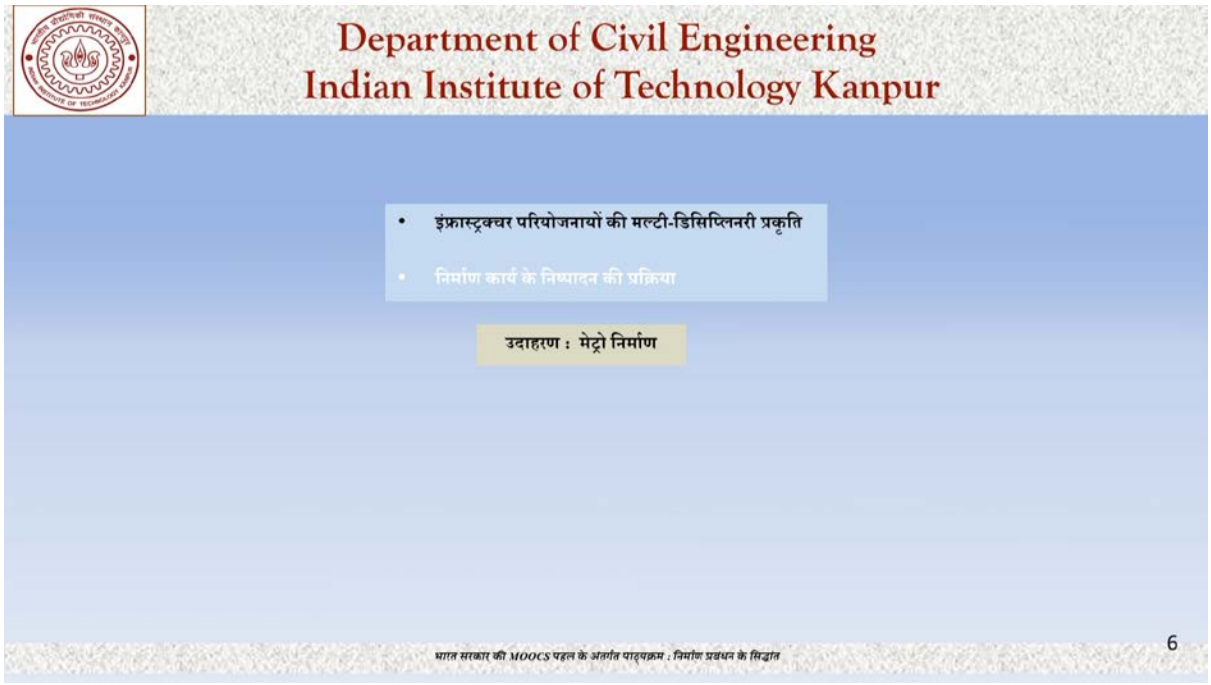
Ham is paathyakram mein in module par charcha karenge yah baat ham log pahale se karate aaye hain aur abhee ham log charcha kar rahe hain parichay evan vihangam chhavi aur drshy jahaan par ki ham ek bahut hee general discussion kar rahe hain pariyojana ka, nirmaan ka aur usake prabandhan mein aane vaalee vibhinn pahaluon ka. Pichhalee baar ham logon ne charcha kee pariyojana prabandhan aur nirmaan prabandhan ke fark mein shikshan sansthaan kee sthaapana ko lekar.

(Reference Time 00:57)



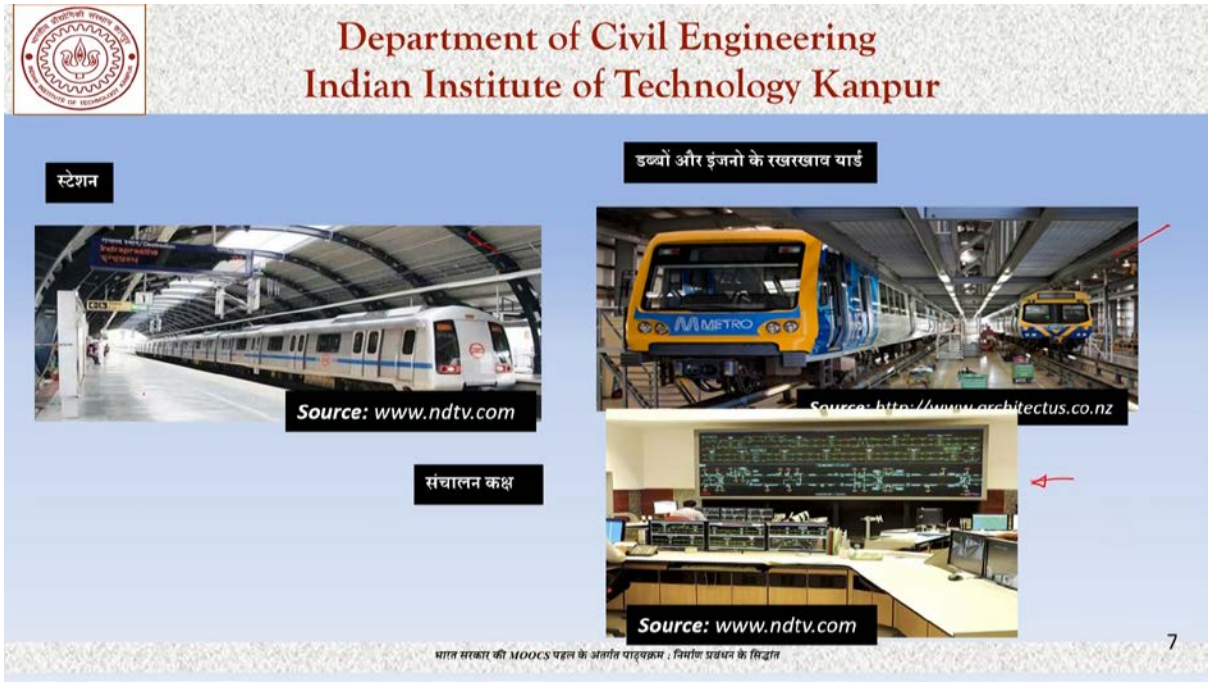
Aaj ham aage badhenge aur infrastructure pariyojanaon kee multi-disciplinary prakrti aur nirmaan kaary ke nishpaadan kee prakriya is par thoda vichaar karenge aur ek udaaharan bhee dekhenge isake maadhyam se ham nirmaan prakriya ko samajhane kee koshish karenge.

(Reference Time 01:13)



To aaiye badhate hain inter-disciplinary prakrti kee or.

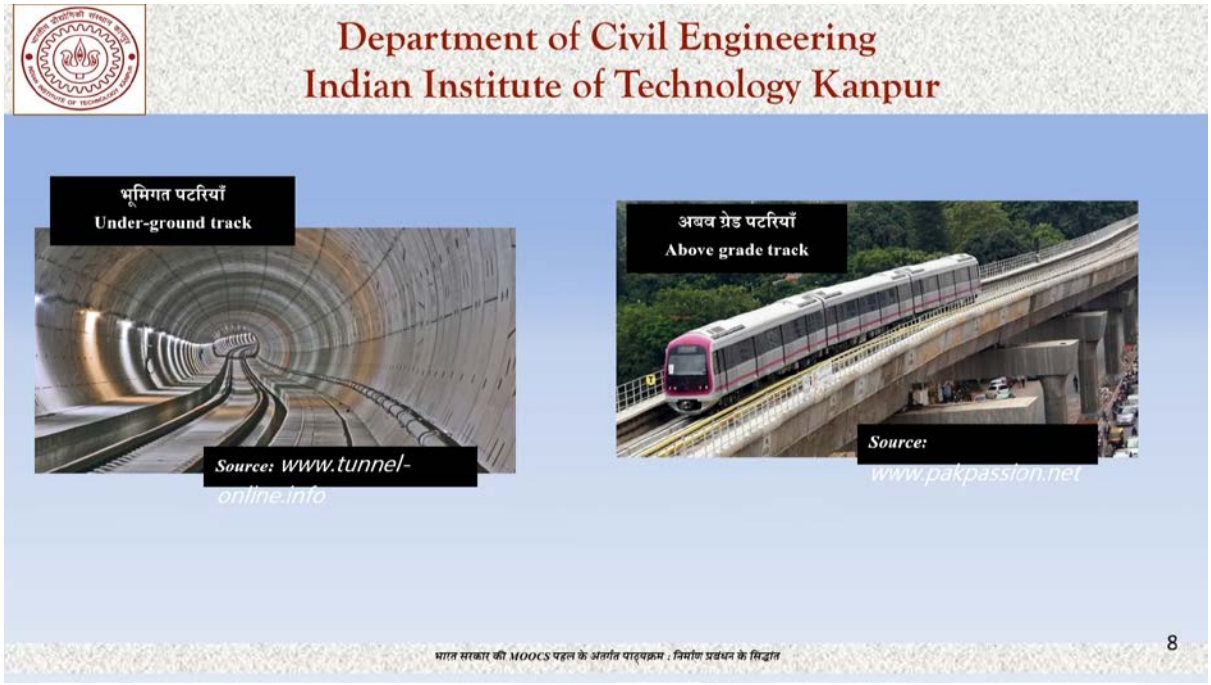
(Reference Time 01:21)



Udaaharan ham lete hain metro nirmaan ka. Bhaarat ke kaee shaharon mein metro ka nirmaan hua hai aur ho bhee raha hai. To yah hai ek metro station ye hai metro ke dabbon aur engines ke rakharakhaav ka yard aur yah ek sanchaalan kaksh. Inake nirmaan mein agar ham dekhenge to tamaam components ka nirmaan karana hota hai. Agar ham station ko hee dekhe to tamaam cheejon ka nirmaan karana hota hai jaise ki platforms, chhaten, yaatriyon kee suvidha ityaadi. Yah to huee kuchh civil structure kee baaten. Phir aata hai mechanical aur electrical kee baat jahaan par ki metro ke dabbe aur engine kee baat hotee hai. Unaka manufacture factory mein hota hai aur unako metro station par laaya jaata hai aur vahee hamaaree metro train hai lekin usake rakharakhaav ke lie is prakaar kee workshops ka

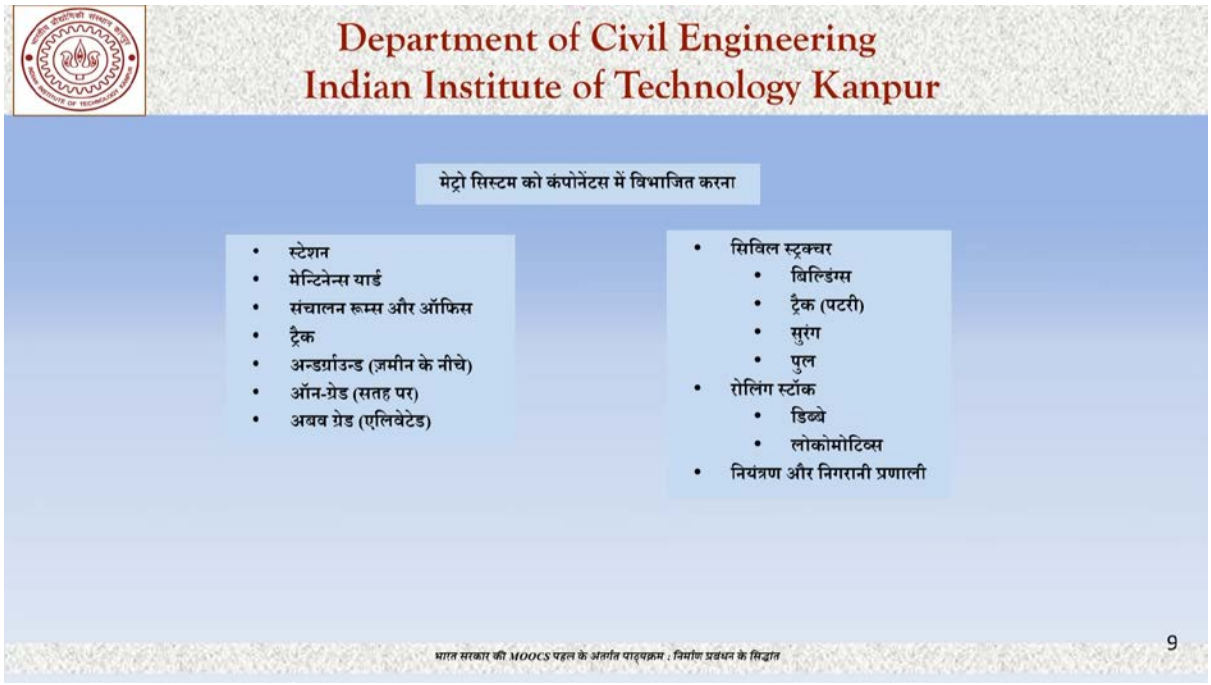
nirmaan karana hota hai. Workshops ka nirmaan karana civil engineering mein aata hai lekin usamen kis tareeke kee suvidha chaahie yah bataata hai mechanical aur electrical engineering vibhaag. Ham sanchaalan kaksh ko jab dekhate hain to yahaan par hamako civil construction to hota hai lekin antat: sanchaalan kee samay bahut saara computerized systems bhee dekhane ko milata hai. To usakee jo zarooraten hain aavashyakataen hain vah computer science, signalling aur tamaam any vibhaag hamako bataate hain.

(Reference Time 02:59)



Metro nirmaan ka ek bahut hee abhinn ang hotee hain patariyaan jin par ki metro chalatee hai. Metro kee patariyaan ya to bhoomigat hotee hain jo ki surangon mein chalatee hain ya above grade hotee hain jo ki ek prakaar se pulon par chalatee hai aur saath mein kabhee-kabhee kuchh sthaanon par vo on grade bhee chalatee hai jahaan par ki vo jameen kee satah par chalatee hain. To yadi ham metro system surangon kee baat karen ya pulon kee baat karen to unaka design unaka nirmaan bilkul alag vidhi se hota hai yah sab baaten hamen dhyaan mein rakhanee hotee hain jab ham metro nirmaan kee planning karate hain, usako design karate hain aur jab ham usake nirmaan mein jaate hain nirmaan ke stage mein jaate hain tab usake prabandhan mein alag-alag prakaar kee chunautiyaan aatee hai.

(Reference Time 03:42)



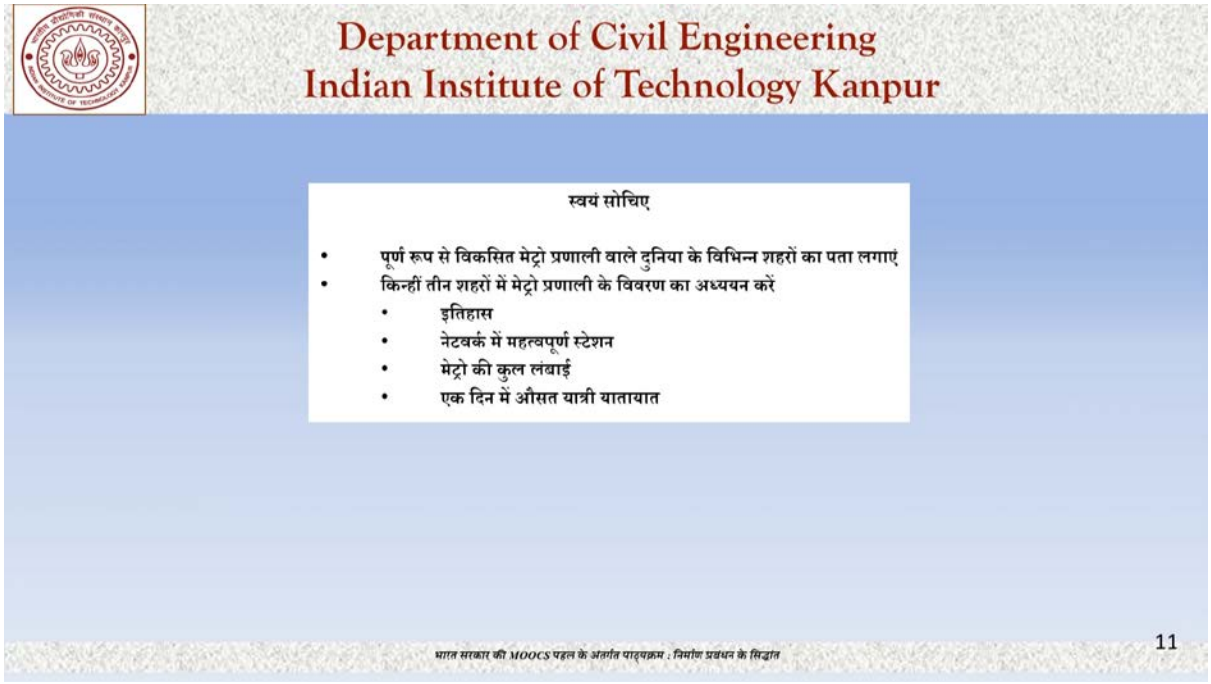
To ek tareeke se agar ham metro system ke components ko vibhaajit karen, unako alag-alag dekhen to bahut saaree cheej hamen dikhaee padatee hain. Station, maintenance yards, sanchaalan kaksh aur office, track jo ki underground ho sakate hain, on grade ho sakate hain, above grade ho sakate hain. Civil structure jisamen ki buildings hongee tamaam tareeke kee imaaraten tracks ya pataree phir surange hogee pul honge rolling stock jo ki dabbe ho sakate hain locomotives ho sakate hain engines hai. Niyantran evan nigaraanee pranaalee jisamen ki signalling, safety precautions aadi.

(Reference Time 04:18)

Aur isake saath jaise bijalee, metro chalaane ke lie bahut badee maatra mein bijalee kee aapoorti kee aavashyakata hotee hai to bijalee kee aapoorti, usaka vitaran, signal pranaalee, ticketing, aapaatakaaleen prabandhan, lighting, ventilation, air conditioning aur agnishaman

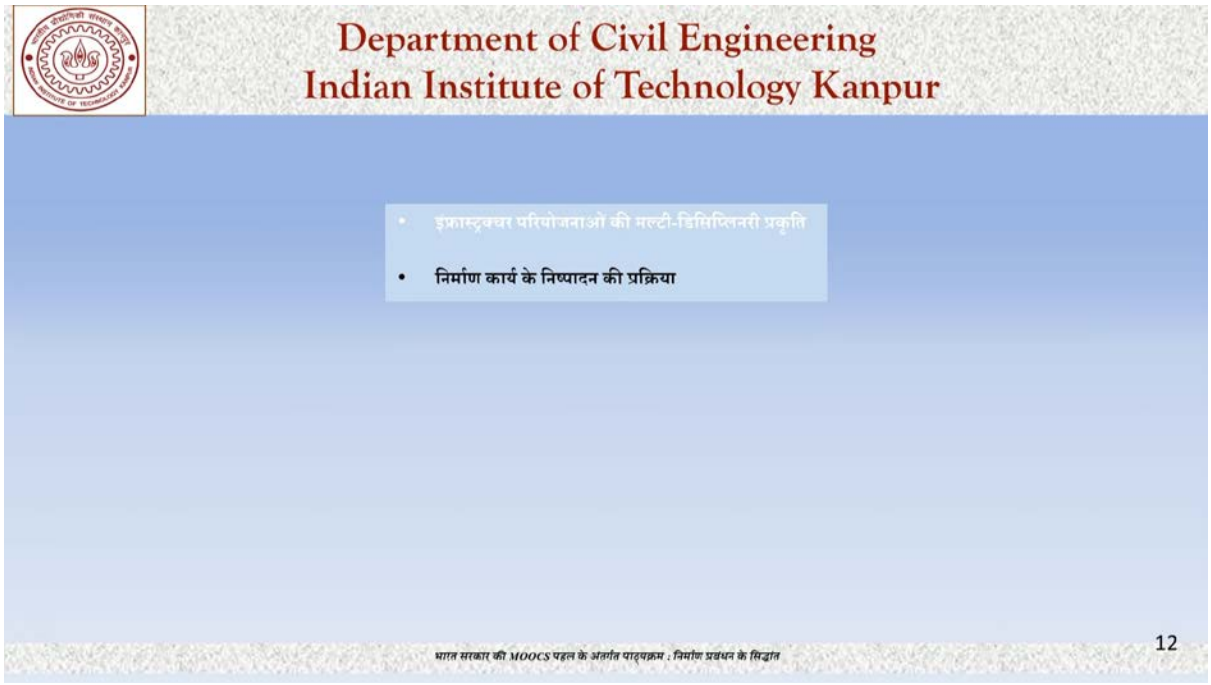
(firefighting). Yah sab bhee metro pranaalee ke ek abhinn ang hote hain. To nirmaan ke samay in sabhee ko samaaveshit karana yah ek prabandhak ka daayitv hota hai. Usake lie drawings banatee hai unakee taiyaaree kee jaatee hai lekin antat: ek prabandhak ka daayitv hota hai ki vah sabhee kuchh samaaveshit karake ek achchha metro system upabhoktaon ko de sake.

(Reference Time 05:08)



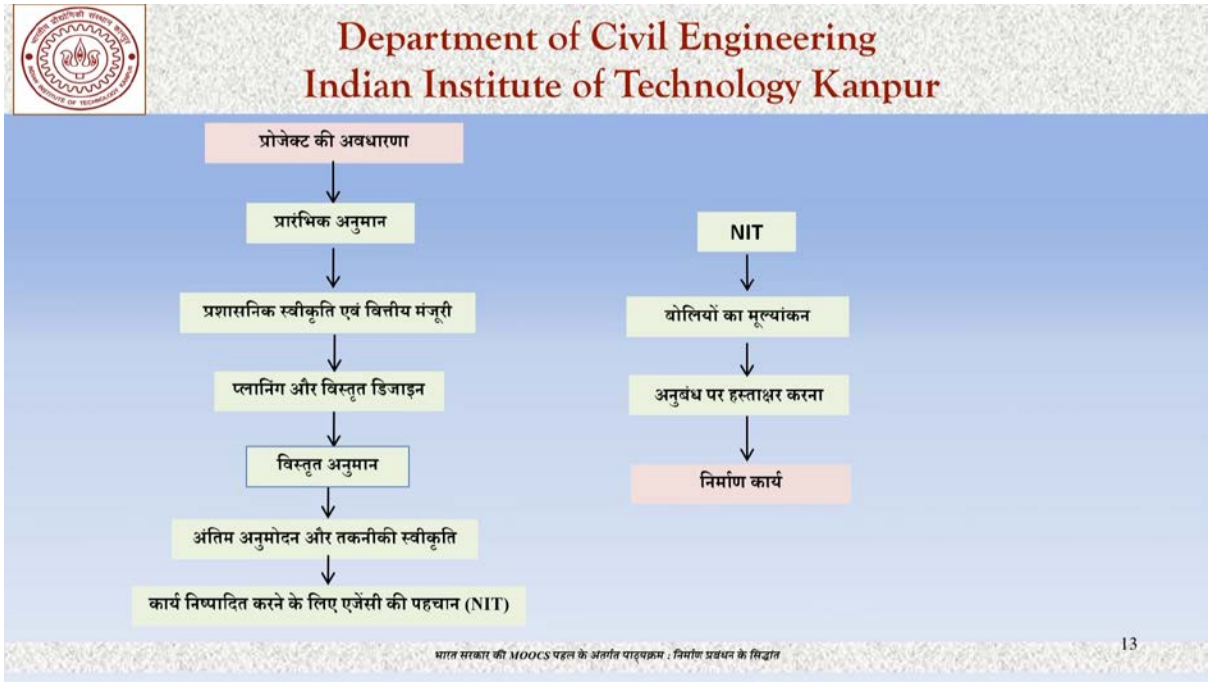
Yah soch chhodane se pahale aage badhane se pahale ham aapake lie kuchh prashn chhod jaate hain. Poorn roop se vikasit metro pranaalee vaale vishv ke vibhinn shaharon ka pata lagaayen Tokyo, Washington, London yah teen shahar to main aapako bata sakata hoon aap tamaam any shaharon ke baare mein jaanakaaree haasil karen jahaan par ki ek vikasit metro pranaalee chal rahee hai. Kinheen teen shaharon ke metro pranaalee ke vivaran ka adhyayan karen. Itihaas jisase ki aapako pata chalega ki ye kab banee to aakhirakaar jo Bhaarat mein metro construction ho raha hai jo nirmaan ho raha hai vo maan leejie 2000 mein ho raha hai to ek tareeke ke technology ek tareeke ke, design karane ke tareeke ek facilities us tareeke ka infrastructure upalabdh. Lekin agar puraana metro construction jab bhee hua hai chaahe vo London mein hua, chaahe vo Tokyo mein hua to vahaan par kis pranaalee se hua yah bhee ek rochak vishay ho sakata hai. Network ke mahatvapoorn station kaun se hain, metro kee kul lambaee kya hai, ek din mein vahaan par ausat kitana yaatree metro mein saphar karata hai. In sab baaton kee jaanakaaree se aapako metro ke baare mein pata chalega aur us paath ko kis prakaar metro kee design mein usakee planning mein dhyaan mein rakha jaata hai is par aapako vichaar karane ka ek mauka milega.

(Reference Time 06:41)



To aaiye aage badhate hain nirmaan kaary ke nishpaadan kee prakriya kee or.

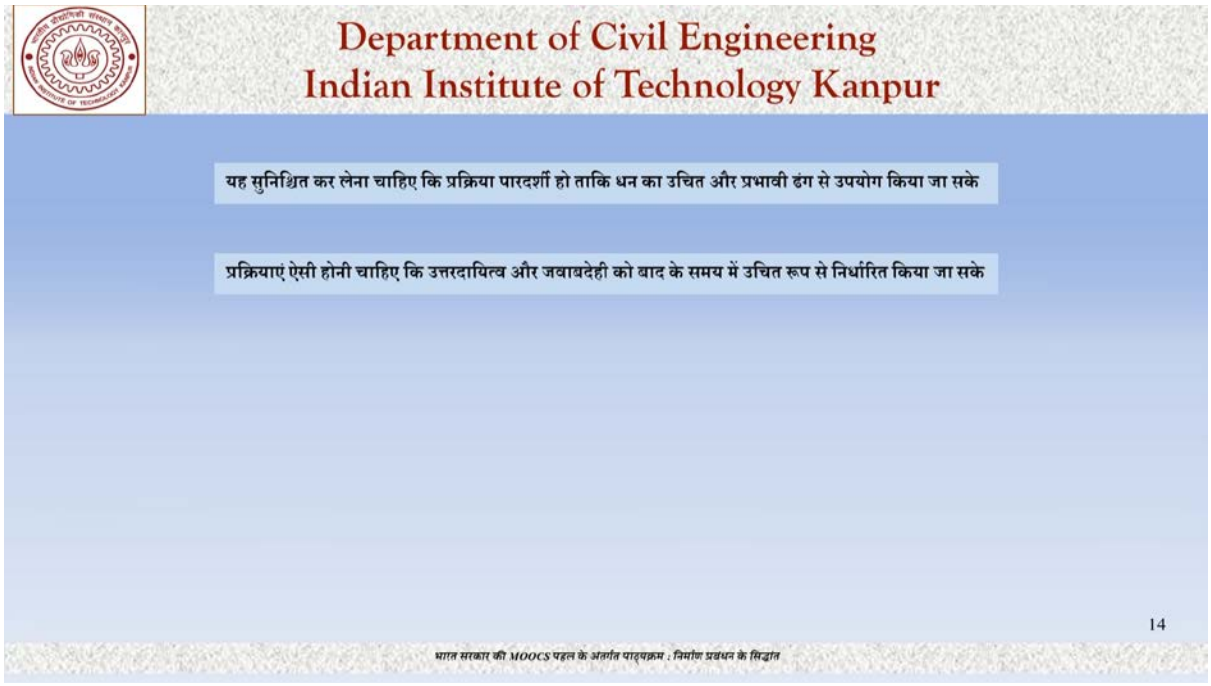
(Reference Time 06:46)



Ye baat pahale bhee huee thee ki project kee avadhaarana, project ka concept, usake baare mein sochana vah ek pahala step hota hai. Usake aage ham chalate hain ek praarambhik anumaan kee or jahaan par ki ham andaaja lagaate hain ki theek hai is pariyojana mein is nirmaan mein itana paisa ya is prakaar ke sansaadhan hamako chaahiye honge, itana dhan lagega. Isake aage baat hotee hai prashaasanik sveekrti evan vitteey manjooree hamako kaheen se us anumaanit laagat ko kharch karane kee anumati chaahie hotee hai to vo anumati ek in principal anumati hotee hai ki haan is project ke liye itanee dhanaraashi aavantit kee gaee. Usake baad aatee hai baat planning aur vistrt design kee. Jab ye poora ho jaata hai tab ham ek bana sakate hain vistrt anumaan jo ki praarambhik anumaan ka ek pakka form hota

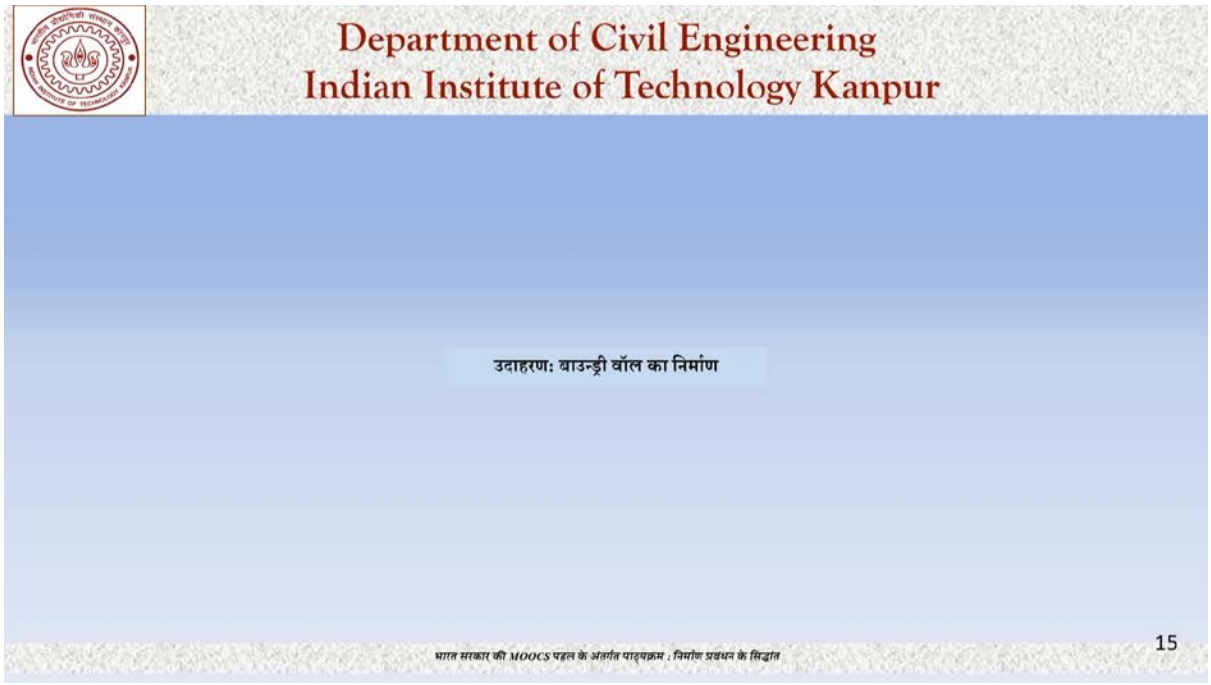
hai. Praarambhik anumaan aakhirakaar ek anumaan hai, vistrt anumaan bhee ek anumaan hai lekin usakee reliability usakee accuracy kaheen jyaada hotee hai. Vistrt anumaan ke baad aata hai kadam antim anumodan aur takaneekee sveekrti kee. Jahaan par ki ek owner antat: yah kahata hai ki haan theek hai is project ko is technical design se ham execute karenge. Jab yah baat tay ho jaatee hai tab ham aage badhate hain ek NIT nikaalane ke lie jisase ki ham yah tay karane kee koshish karen ki us kaary ko nishpaadit karane ke lie kis agency ka chayan kiya jae. Ek baar NIT ho jaata hai tab tamaam log apanee-apanee bolee apane-apane terms end condition hamako bata dete hain to usake aadhaar par un boliyon ka moolyaankan hota hai. Moolyaankan kee sharten, moolyaankan ka tareeka hamen pahale se hee bataana hota hai aur moolyaankan hone ke baad ham anubandh karate hain. Arthaat jo owner hai ya jo client hai vah ek party ke saath ya do parties ke saath jaisa kuchh bhee ho anubandhan karata hai ki theek hai aap hamaara yah nirmaan kaary is avadhi mein itanee laagat se poora karenge aur tab hamaara nirmaan kaary shuroo hota hai.

(Reference Time 09:12)



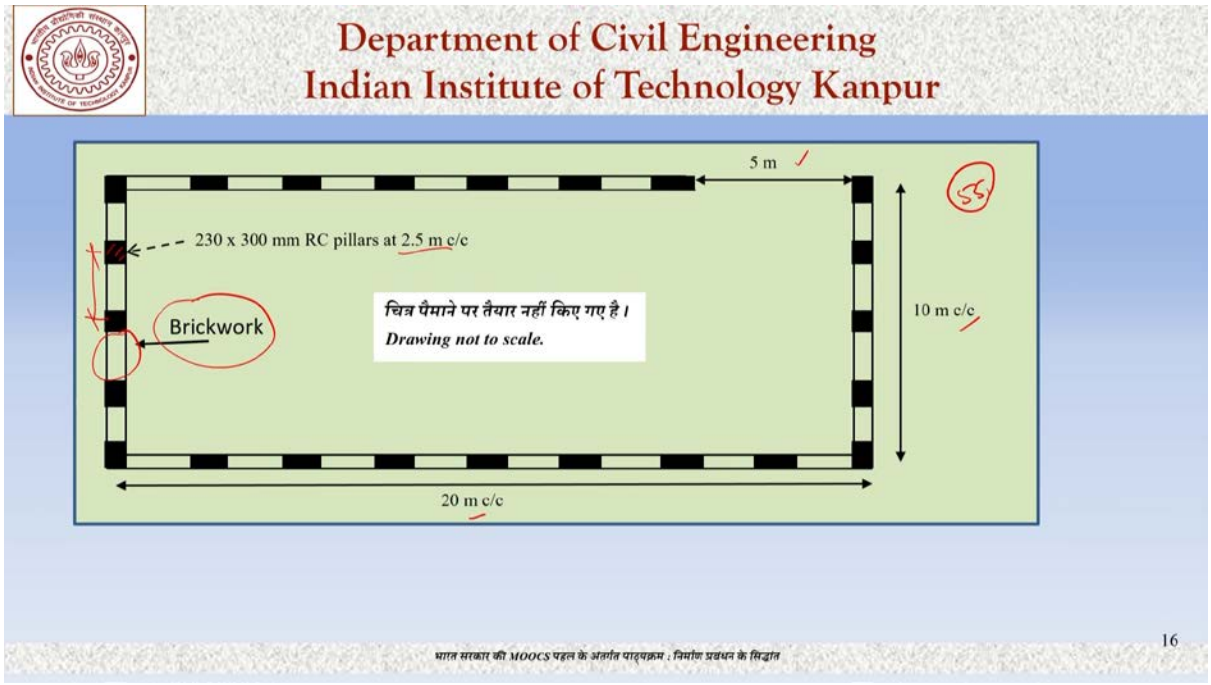
Yah jo kadam hai inamen hamesha yah tay karana hota hai ya tay kar lena chaahie ki prakriya paaradarshee ho taaki dhan ka uchit aur prabhaavee dhang se upayog kiya ja sake. Saath hee saath prakriyaen aisee hon ki uttaradaayitv aur javaabadehee ko baad ke samay mein bhee uchit roop se nirdhaarit kiya ja sake kyonki badee pariyojanaon mein aksar yah hota hai ki kaheen par ek prashn uth gaya us prashn ke javaab mein yah tay kar paana ki jo nirnay lie gae vah kis jaanakaaree ke hisaab se lie gae, kis jaanakaaree ke hote hue lie gae, kya jaanakaariyaan us vakt nhi thee jab yah nirnay lie gae. Yah baat hamesha dhyaan mein rakhanee chaahie aur tabhee ham baad mein bhee uttaradaayitv aur javaabadehee tay kar sakenge. To is baat ko yaheen par viraam dete hue ham ek udaaharan lete hain. Ek bahut hee saral udaaharan ek chaaradeevaaree ka boundary wall ka nirmaan.

(Reference Time 10:09)



To ye boundary wall ka nirmaan jo ham udaaharan le rahe hain yah bahut hee saadhaaran bahut hee saral example hai lekin isamen jo siddhaant dheere-dheere aapako samajh mein aaenge unako ham lekar ke is course mein aage badhenge.

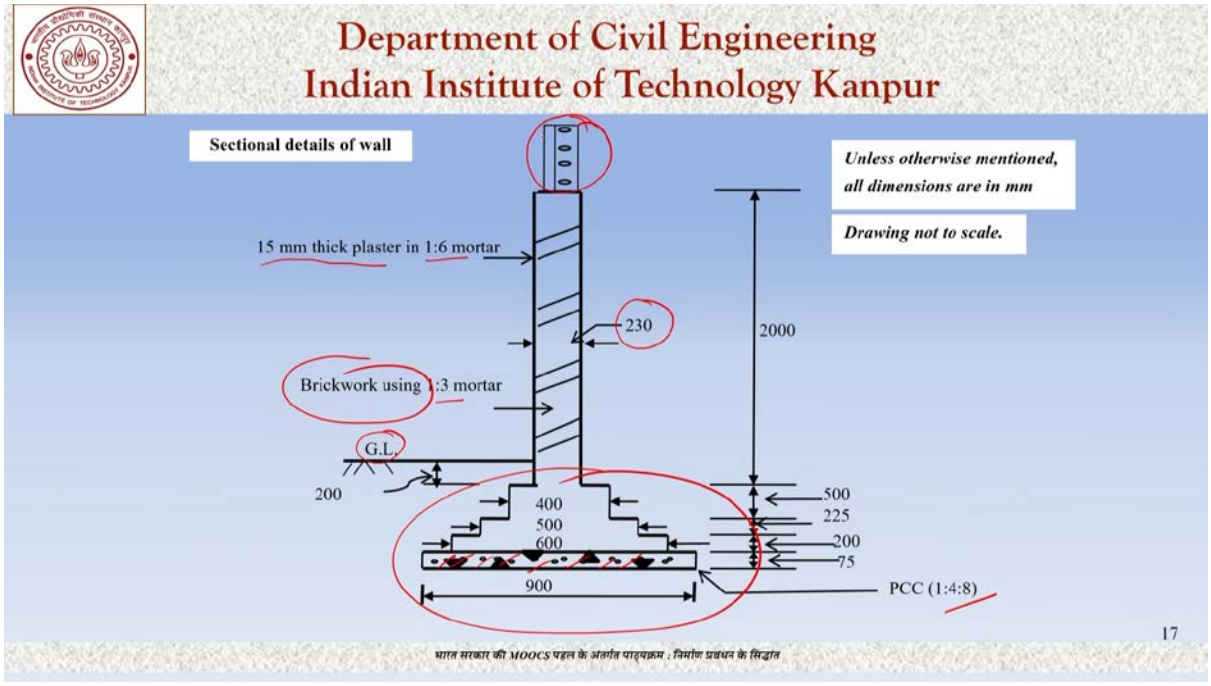
(Reference Time 10:25)



To jahaan tak boundary wall ka savaal hai yah ek schematic sketch hai, ek saral sketch jo ki scale par nhi hai. Hamako karana yah hai ki 20 meter aur 10 meter yah ek plot hai jis par ki ham boundary wall banaana chaahate hain. Yah 5 meter ka hamane get chhod diya arthaat hamaaree boundary wall lagabhag 20 aur 20, 40 aur 15, 55 meter kee boundary wall banegee. Kaisee boundary wall hogee? Hamane yah bhee tay kar diya ki isamen beech-beech mein yah reinforced concrete ke pillar honge jo ki 2.5 meter center too center honge arthaat is kendr aur is kendr kee beech kee yah dooree 2.5 meter hogee aur isake beech mein brickwork se

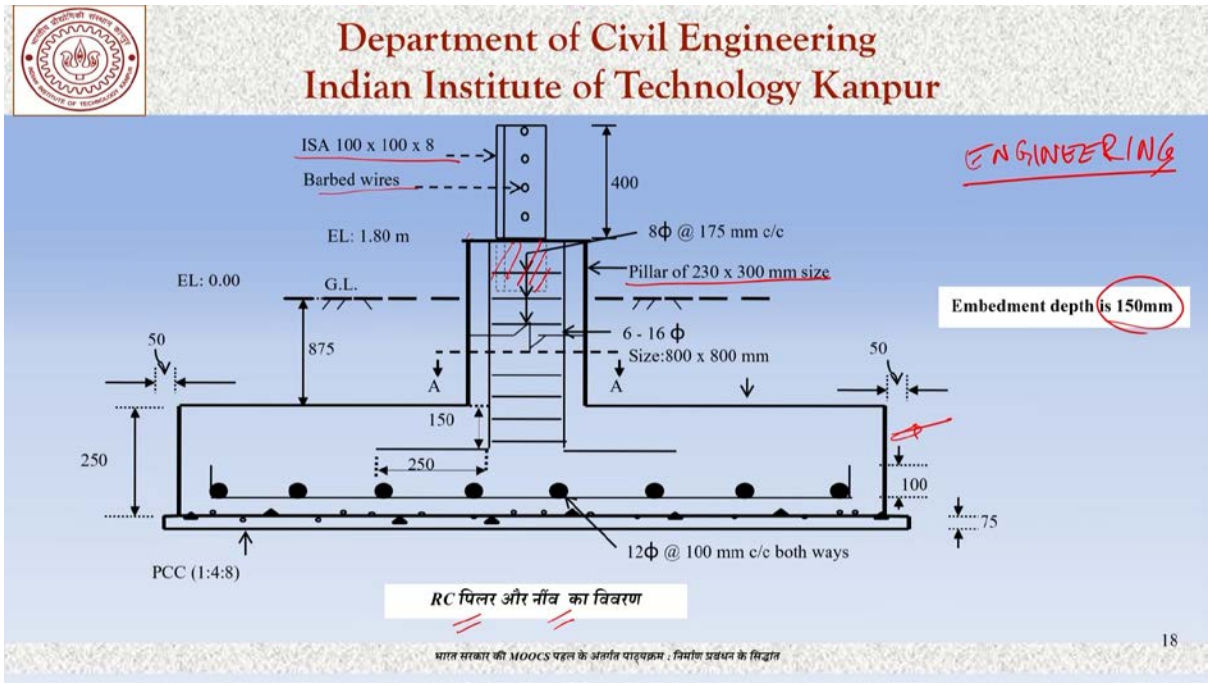
isako bhara jaega yah hamane tay kar liya. Kyon tay kiya, kaise tay kiya yah baat client khud tay karata hai. Client aakhirakaar jo owner hai usako yah tay karana hota hai ki kis prakaar kee boundary wall bane? To is udaaharan mein hamane yah tay kiya owner ke roop mein ki pillars honge aur beech mein boundary wall mein brickwork hoga.

(Reference Time 11:49)



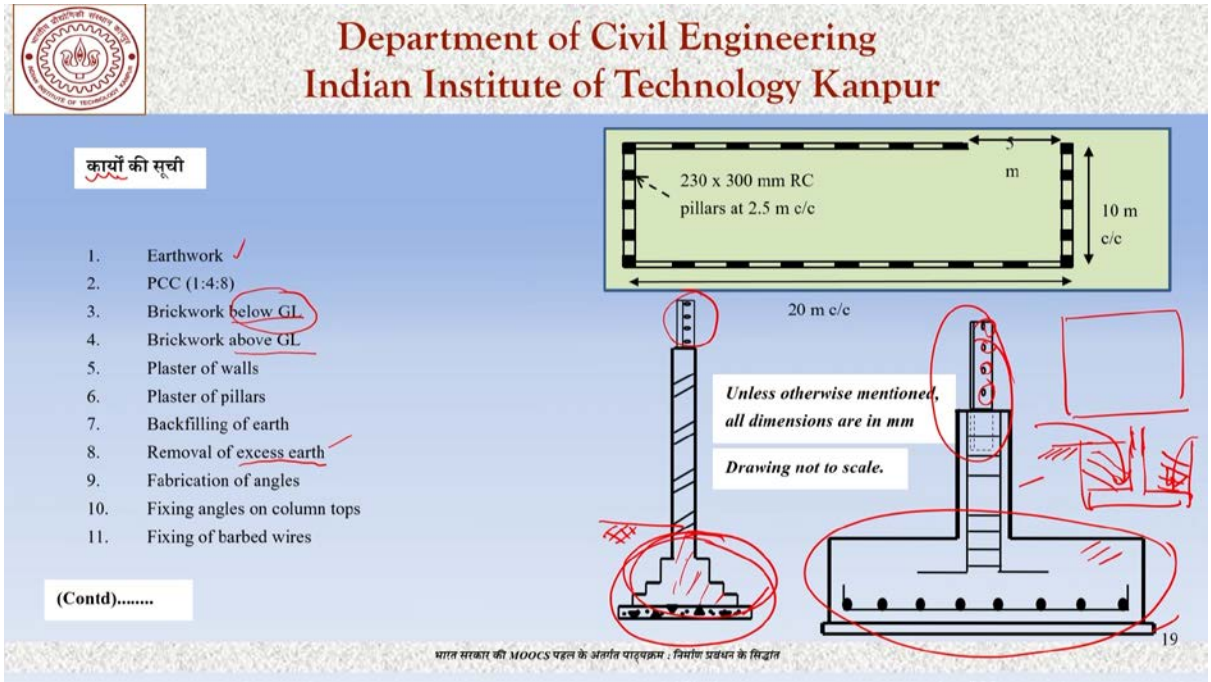
Yah us boundary wall ka ek section liya gaya hai yah tay hua ye ground level hai isakee neeche ye neev hogee, ye brickwork hoga. Is brickwork ke upar 15 mm ka plaster hoga. Kis prakaar ka plaster hoga? 1:6 mortar mein hoga. Brickwork 1:3 mortar mein hoga. Isake neeche yahaan par plain cement concrete daalee jaayegee jo ki 1:4:8 ke anupaat mein hogee aur ye dekhate hue ki 230 mm kee boundary wall hogee hamane yahaan par usake section ke detail bhee tay kar liye. Jahaan tak is angle ka savaal hai ye hamako dikhae padega agale chitr mein jahaan par ki ham charcha kar rahe hain RC pillars aur us pillar ke neeche aane vaalee neev kee.

(Reference Time 12:38)



To yah hamaaree RC pillar kee neenv hai, yah RC pillar hai 230 / 300 ka aur usakee neenv hamaaree yahaan par hai usake oopar concrete ke pillar ke ooparee bhaag mein yah angle jisaka ki maap diya hua hai 100, 100, 8, 8 mileemeter motee aur 100 mm ka usaka donon any dimensions. Usamen yah chaar barbed wires lagaane ka praavadhaan, yah angle 150 mm andar concrete ke pillars mein jamaaya hua hai. To yah sab detail ek engineering detail hai aur yah engineering is udaaharan mein client yaanee owner ne svayan kiya hai aur is boundary wall ko banaane ke lie ab owner ko calculate karana hai ya usako pata karana hai ki kitanee laagat aaegee, kis tareeke ke sansaadhan usamen chaahie honge.

(Reference Time 13:54)



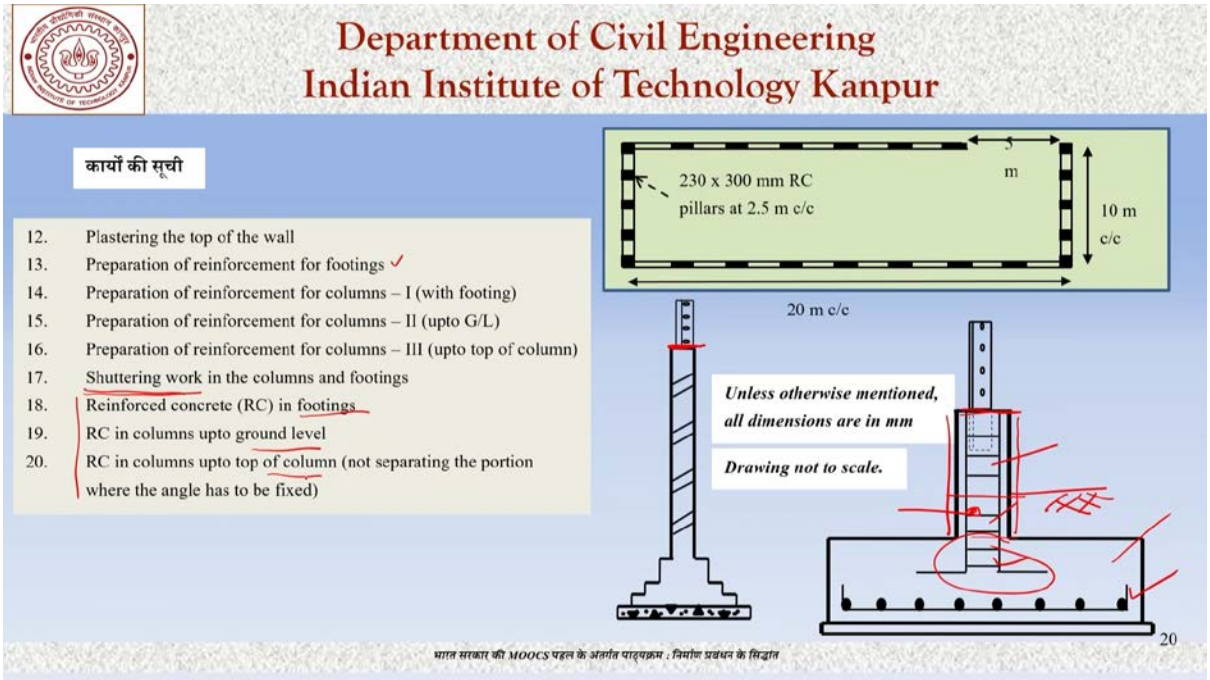
To usake lie yah aavashyak hai ki jo kaary ya activities inwallved hai jo usamen hongee, unakee ek soochee banaee jae. Sabase pahale baat aatee hai earthwork kee meens maane

chaahe vah brick work yaanee eet kee deevaar ke neeche aane vaale neev kee baat ho ya RC pillar usakee foundation isako banaane ke lie jo neenv rakhee jaegee usake lie jo gaddha khoda jaega vo earthwork ho usaka vivaran, usake baad baat aatee hai peeseesee arthaat chaahe vah brick foundation ke neeche ho ya concrete kee foundation ke neeche, phir brickawork below ground level. Ground level hamaara yahaan kaheen par dikhaaya gaya tha arthaat kuchh brick work ya kuchh eet ka kaam ya chunaee ground level ke neeche ho rahee hai, kuchh chunaee graund ke oopar hogee. Isamen kyon fark hona chaahie? Isalie hona chaahie ki ground level ke neeche kaam karane mein aur ground level ke oopar kaam karane mein difficulty level jo kathinaiyaan hai vah alag-alag tarah kee hain. To yah koee aavashyak nhi hai ki jo usaka cost hoga vo per cubic meter ya per square meter jis bhee anupaat mein ho vah graund ke neeche kaam karane mein graund ke oopar kaam karane mein ek hee ho. Isalie ek accurate estimate banaane ke lie ham jahaan tak ho sake un sabhee cheejon ko dhyaan mein rakhana chaahate hain jisase ki hamaare anumaan par fark padata hai. To ek cheej hai below ground level jo bhee gatividhiyaan ho unako ham alag karen, to jo brick work hai to isamen kuchh brick work jo ground level ke neeche ho raha hai vo kitana hai. Usake baad aatee hai brickawork above ground level, ground level ke oopar hone vaale brick work mein. To jo arguments maine ground level ke neeche kaam karane ke lie die the vahee argument die ja sakate hain ki kya ground level ke oopar kaam karane mein jo height hai usaka koee asar nhi padega? Yah baat nhi hai lekin is udaaharan mein kyonki ek 1.5 meter kee wall hai isalie hamane usako nhi diya hai. Yadi ek multi-story building ban rahee hai usamen fark padega jaise agar ham brickawork 1 floor par kar rahe hain ya 10 ven floor par kar rahe hain to usamen daam alag-alag honge usakee laagat alag-alag hogee vo baat bhee dhyaan mein rakhanee hotee hai. To aage badhen plaster of walls. To hamane pichhalee baar bhee kaha tha pichhale drawing mein likha hua tha ki is eet kee deevaar par plastering kee jaegee kitanee plastering hogee usaka calculation usaka estimation. Saath hee saath yah bhee ek prashn hai ki kya jo concrete ke pillar honge un par plastering hogee ya nhi hogee? Ham agar tay karate hain plastering hogee to usaka kitana kshetraphal hai? Phir hai back filling of earth. Ab aap dekhenge kee is neev ko banaane ke lie ya is foundation ko banaane ke lie hamako ek chaukor gaddha khodana hoga, usake baad jab yah neev pad jaegee, usake baad ground level to yahaan par hai. To yah mittee vaapas yahaan par bharanee hogee jisako ham kahate hain back filling. To back filling bhee ek abhinn ang hai poore projectt ka. To earthwork kabhee jab ham likhate hain anubandh mein to ham kahate hain earthwork including back filling arthaat aap yahaan par gaddha khodiye yah mittee hataie aur jitanee mittee baad mein aavashyak ho usako yahaan bharie. Kabhee ham kahate hain ki nhi excavation arthaat removal of earth maatr ek jagah hai ya ek quantity hai aur back filling doosaree quantity hai.

Aage badhate hain removal of excess earth. To aakhirakaar jitanee mittee yahaan se nikaalee jaegee vah sab kee sab to back filling mein use nhi hogee, kuchh mittee avashy surplus ho jaegee us mittee ka dispose thekedaar ko kahaan karana hai 100 meter kee dooree mein karana hai, 1 kilometer dooree mein karana hai, 10 kilometer dooree tak karana hai is dooree ko dhyaan mein rakhate hue jo rate aaega vah alag ho sakata hai. To thekedaar ko yah pata hona chaahie us anubandh mein yah kliyar hona chaahie, saaph hona chaahie, spasht hona chaahie ki jo removal of surplus earth hai jo mittee bachatee hai usako kahaan par dispose karana hai. Yah to nhi ho sakata hai owner kee drshtikon se agar aap dekhen to yah to nhi ho sakata hai ki thekedaar surplus earth ko site par hee chhod kar chala jae. Owner to chaahega kee site se excess earth hata dee jae lekin kahaan dispose hota hai yah usako pahale se hee bataana chaahie. Fabrication of angles. To yah jin angles kee baat ho rahee hai unako kaheen factory mein banaana hoga, to usakee laagat aaegee . Fixing of angles on column tops. To

apane Fabrication kaheen kar diya usake baad usako yahaan par concrete ke pillars mein jamaana isakee bhee laagat aatee hai. Fixing of barbed wires. To in angles mein yah jo chhed kie gae hain unake through barbed wires ko kheenchana isakee laagat aaegee jisamen ki barbed wires kee laagat bhee hogee aur usake lagaane mein jo majadoor hai usakee cost aaegee. Baat yaheen par khatm nhi hotee hai.

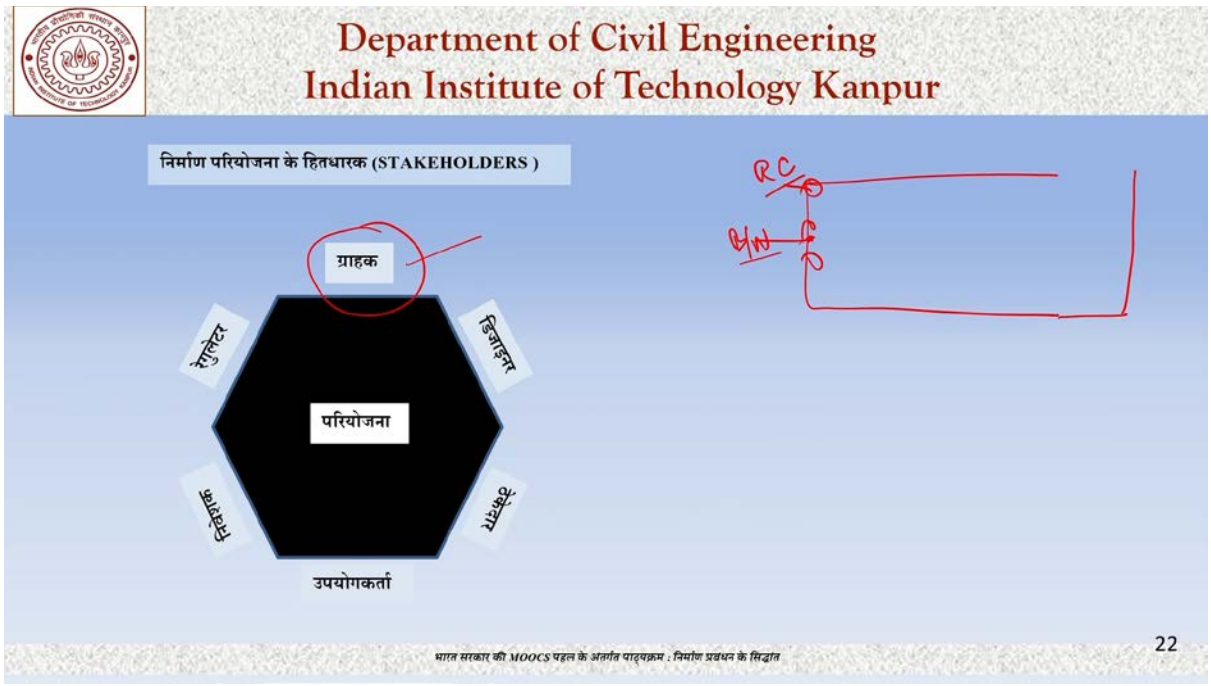
(Reference Time 19:47)



Yah soochee aur bhee hai plastering the top of the wall. To deevaar ke oopar yah jo bhaag hai us par plaster kiya jaana. Phir aata hai steel ka kaam. Jo sariya hai vah kaee jagah istemaal ho rahee hai footings mein, columns mein aur column ko hamane teen bhaagon mein vibhaajit kiya hai. Ek bhaag vah hai ki yahaan par aap yah dekhie yah hamaara hai ground level, to jo ki argument hamane brickwork ke lie diya tha vahee argument hamaara concrete ke lie aur sariya ke lie bhee valid hai ki ground level se neeche hone vaala kaam aur ground level se oopar hone vaala kaam ya alag-alag cost par hoga ya ho sakata hai. To is case mein, is udaaharan mein hamane liya ki kitanee sariya hamaaree footing mein jaegee vo ye vaalee hai. Usake baad footing mein hee jo column kee sariya hai vah yahaan tak vo ye hai. Usake baad ground level tak aane vaalee sariya ka kaam vo ye hai aur ground level se top of column tak jaane vaala sariya ka kaam yahaan tak hai. To usakee sab kee maatra ko nikaala jaana vah bhee ek kaary mein aaega. Phir aata hai shuttering work in columns and footings. To shuttering work jo shuttering lagaee jaatee hai vah hotee hai concrete ko sport karane ke lie jo lakadee ya steel plates se shuttering lagaate hain usako kahate hain shuttering work. To usamen kitanee shuttering lagegee usake anusaar phir hamaare project kee cost badalatee hai. Shuttering kee apanee cost hotee hai. Reinforced concrete in footings aur phir concrete. Reinforced concrete prayog mein aayegee chaahe vah footing mein ho, chaahe vah column mein ho usako bhee hamane height ke hisaab se vibhaajit kiya hai ki footing mein aane vaalee reinforce concrete, column mein ground level tak aane vaalee aur phir top of column tak inako hamen alag-alag treat karana hoga. To is bahut hee saral boundary wall ke udaaharan mein bhee hamane dekha ki tamaam gatividhiyaan hain, tamaam tareeke ke sansaadhan ka prayog hoga un sabhee kee jaanakaaree hona aavashyak hai chaahe vah ham praarambhik anumaan lagaane kee koshish karen ya ham ek vistrt anumaan lagaane kee

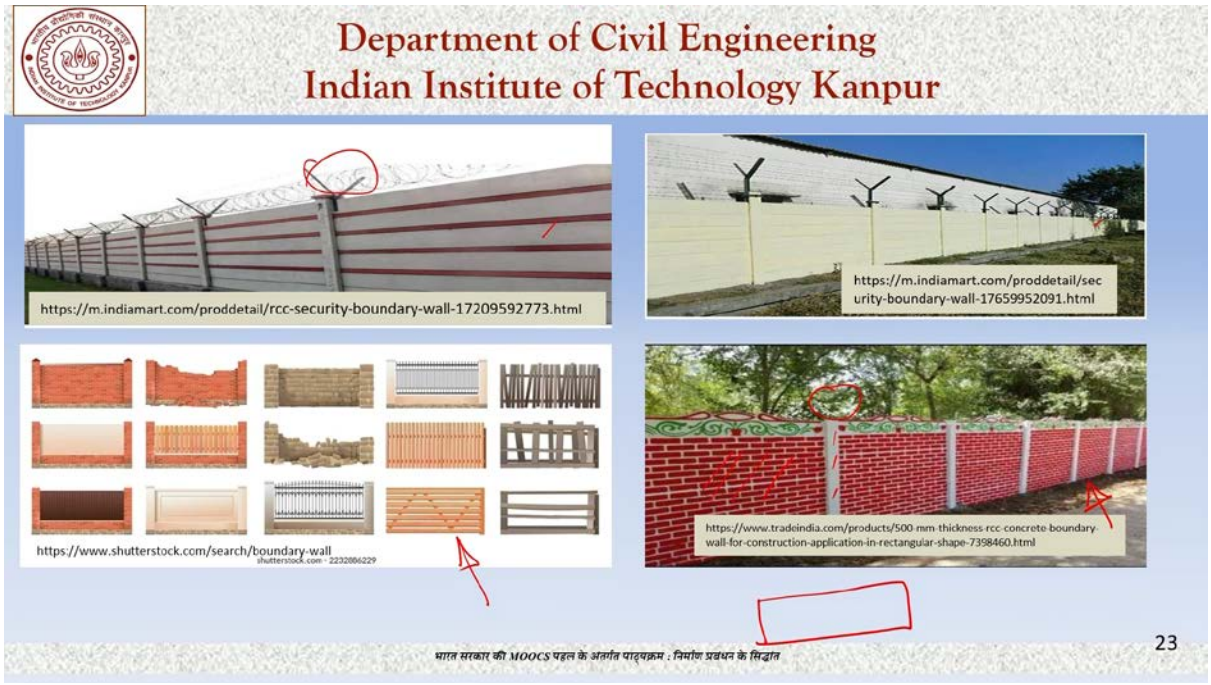
koshish karen. Jis prakaar kee technical details hamaare paas upalabdh thee ham tamaam kaaryon ko list down kar sake, unakee ek soochee bana sake.

(Reference Time 22:26)



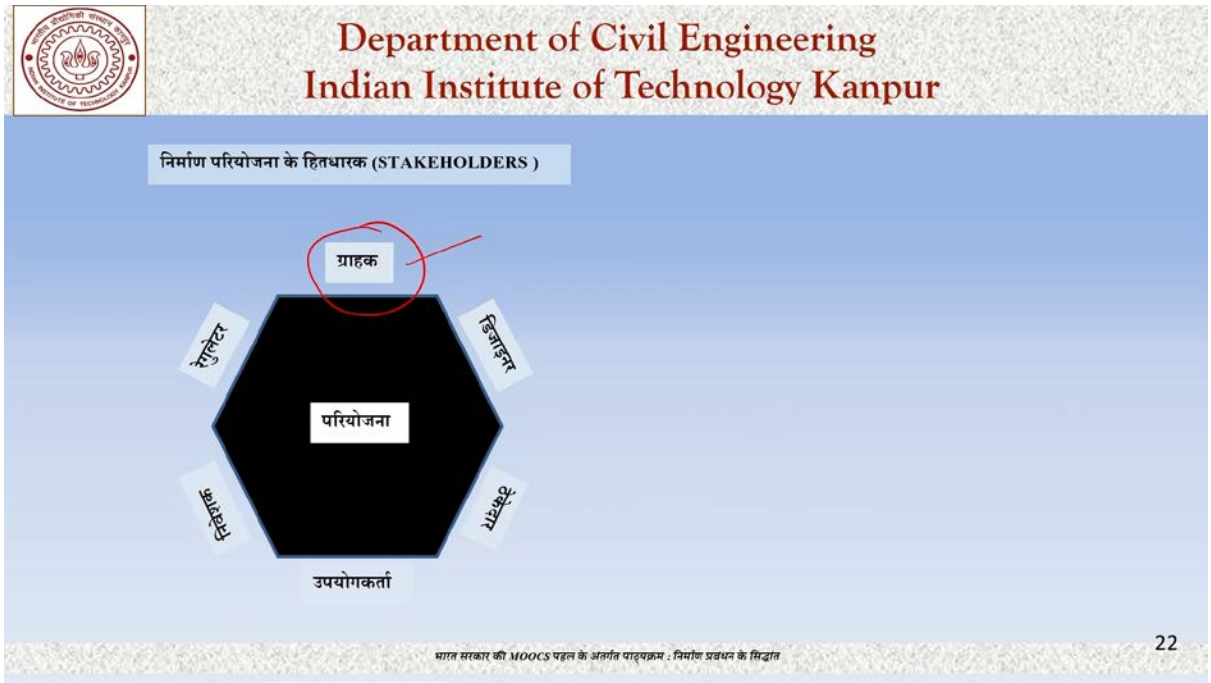
Kintu yah bhee ho sakata hai ki owner jo ki graahak hai usake paas shuroo mein yah expertise na ho ki vah bata sake ki hamako kis prakaar kee boundary wall chaahie. Jo excercies ya jo udaaharan hamane liya vah to yah maan ke liya ki hamaaree boundary wall mein pillars honge aur pillars ke beech mein brickwork hoga aur yah pillars reinforced concrete ke honge. Usakee neenv kee design aur jo size dimensions vah sab hamane die hue the lekin vo technical detail hai agar graahak ke paas ya client ke paas yah expertise nahin hai ki vo kis prakaar kee boundary wall banaana chaahata hai aur us prakaar kee boundary wall banaane ke lie kya-kya chaahie, tab us sthiti mein kya hoga?

(Reference Time 23:27)



To agar maatr ek functional requirement hai ki hamen is jameen ko protect karane ke lie ki yahaan atikraman na ho pae isalie hamen boundary wall bana dee jae, to boundary wall tarah-tarah kee ban sakatee hain. Is tareeke kee ban sakatee, is tareeke kee ban sakatee yah hai. Yah boundary wall jis tareeke kee hamane aaj ke udaaharan mein lee hai usake kaaphee nikat hai yahaan par eete hain yah shaayad concrete ka paart hai concrete ka pillar hai sirph isamen is prakaar ke angle aur barbed wire nahin lage hain to agar ham inako jod denge to us tareeke kee boundary wall ho jaegee jisaka ki hamane udaaharan diya hai. Aur tamaam tareeke kee boundary wall yahaan ban sakatee hai. In sab mein gatividhiyaan alag hongee usamen laagat alag hogee. To ab prashn yah uthata hai ki jo kisee bhee pariyojana mein jo technical detailing hai, jo technical jo soch hai vah kaun karega?

(Reference Time 24:25)



Yadi graahak arthaat client ke paas vah expertise hai to vahaan par honee chaahie aur thekedaar ko ek final drawing dee jae ki isako aap execute kar deejie to anubandh us tareeke se likha jaega. Execute karane mein bhee anubandh kaee tareeke ke ho sakate hain ki material kaun lekar aaega? Graahak kah sakata hai yah client kah sakata hai ki material ham supply karenge ya kuchh material ham supply karenge, jaise kah sakate hain ki steel ham svayan supply karenge. Steel kee cost aapako lene kee aavashyakata nahin hai, cement kee cost aapako lene kee aavashyakata nahin hai cement ham khud supply karenge. In sab baaton ko dhyaan mein rakhate hue anubandh kaee prakaar ke ban sakate hain. To yadyapi yah udaaharan jo liya gaya tha vah maatr boundary wall ka tha lekin is boundary wall ke udaaharan ko extend karake ek badee pariyojana ke baare mein agar aap sochen jaise metro ya haee speed rail ya ek normal rail ka construction bhee sochen, to aapako lagega ki haan jo client hai usako kuchh karana hota hai agar usamen vah kshamata nahin hai to vah engineering kshamata ke lie bhee usako NIT arthaat ek tendar nikaalana hoga jahaan par ki vah design karane vaalon kee kshamata ko aankega unaka moolyaankan karega aur us design ke lie bhee kisee ko contract dega. To is charcha ke saath ham apana pahala module samaapt karate hain. Agale module se ham laagat, scheduling, gunavatta aadi par vichaar vimarsh shuroo karenge.

(Reference Time 26:15)

Upayogee prakaashit pustakon kee soochee pahale bhee hamane aapako dee hai ham aapake saath phir se share karate hain aur aapaka dhanyavaad dete hain. Namaskaar. Jay hind.