

### **BUILDERS' ASSOCIATION OF INDIA – SOUTHERN CENTER** PRESENTS

### INTERNATIONAL CONSTRUCTION EQUIPMENTS AND TECHNOLOGY EXPO



THE SOUTHERN BUILDERS CHARITABLE TRUST







9<sup>th</sup> – 11<sup>th</sup> January 2015 Chennai Trade Centre, Nandambakkam, Chennai.





# WE DON'T BUILD HOMES... WE CRAFT THEM !

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Builders' Association of India Southern Centre Casa Blanca, 11, Casa Major Road, Egmore, Chennai - 600 008. Tel: 2819 2006, Telefax: 2819 1874 Email: baisouthern@yahoo.com Website : www.baisoutherncentre.com

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Mu. Moahan

#### வணக்கம்

காலம் நமக்கு மிகப் பெரிய பரிசை தந்து கொண்டிருக்கிறது. நாம் எத்தகையவர்களாக இருந்தாலும் அது அனைவருக்கும் பொதுவாகவே செயல்படுகிறது. அதை நாம் சரியாகப் பயன்படுத்தினால் பலன் நமக்குத்தான். பயன்படுத்தவில்லையானால் திரும்ப பயன்படுத்த வாய்ப்பு கிடைக்காது.

ஆம், காலம் ஒரு நாளைக்கு 86400 நொடிகளை நமக்கு பரிசாக அளித்துள்ளது. இன்று அதை நாம் சிறப்பாக பயனுள்ள வகையில் அதை பயன்படுத்த தவறினால், தவற விட்ட நொடிகளை திரும்பப் பெறுவது யாராலும் இயலாது.

நேற்று என்பது நாம் இழந்து விட்ட காலம். திிரும்ப வராது. நாளை என்பது நிச்சயமற்ற காலம். உறங்கி எழுபவர்களுக்குத்தான் நாளை உரியது. ஆகவே இன்று என்பதுதான் நமது நிகழ்காலம். இன்று நம் வாழ்க்கையின் ஒரு நாளை அதற்கு பரிசாக கிடைக்கும் ஏதோ ஒன்றிற்காக செலவிடப் போகிறோம். ஆகவே இன்றைய தினத்தை நம்மால் முடிந்த அளவு பயனுள்ளதாக ஆக்குவோம்.

நமது மீதமுள்ள வாழ்க்கையின் தொடக்க நாள்தான் இன்றைய நாள். அதனால் கடந்த காலத்தை நம்மிடமிருந்து பிரித்தெடுத்து ஒரு கோடு வரையுங்கள். நேற்றைய தினம் நேற்றே முடிந்துவிட்டது. கடந்த காலத்தின் வடுக்களைப் பற்றி இன்றைய தினத்திற்கு கவலை கிடையாது. வருங்காலத்தின் உறுதியற்ற நிலையும் அதை பாதிப்பதில்லை. இன்றைய தினம் வாழ்வின் ஒரு அங்கம். அதனால் இன்றைய தினத்தை கவனமாக, பயனுள்ளதாக, ஆனந்தத்துடன் கொண்டாடுவோம். அனைவருடன் அன்பு பாராட்டுவோம்.

#### புத்தர் இவ்வாறு கூறியுள்ளார்:

"இன்று நாம் விழித்தெழுந்து நன்றி செலுத்தலாம். இன்று நம்மால் நிறைய கற்றுக்கொள்ள முடியாவிட்டாலும் குறைவாக கற்றுக் கொண்டதற்காக. குறைவாக கற்றுக் கொள்ள முடியாவிட்டாலும் உடல்நலக் குறைவு ஏற்படாமல் இருந்ததற்காக; உடல் நலக்குறைவு ஏற்பட்டாலும் இறந்து போகாமல் இருந்ததற்காக நாம் நன்றி செலுத்துவோமாக "

"அருவினை என்ப உளவோ கருவியான் காலம் அறிந்து செயின் " - திருக்குறள்

அன்புடன்

மு. மோகன்.



# மய்யத் தலைவர் மடல்



R. Siva Kumar

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#### வணக்கம் !

ஒரு மகிழ்ச்சியான செய்தி. ஜெய்ப்பூரில் நடைபெற்ற மூன்றவாது அகில இந்திய MC/GC கூட்டத்தில் **அகில இந்திய அளவில் 2013ம் ஆண்டின் சிறந்த மய்யம்** என்கிற விருது தென்னக மய்யத்திற்கு அறிவிக்கப்பட்டது. தொடர்ந்து ஐந்தாவது ஆண்டாக இந்த விருது தென்னக மய்யம் பெற்று வருவது மிகவும் பெருமைக்குரியது.

2013-14ம் ஆண்டின் மய்யத்தலைவர் திரு. S. அய்யநாதன் தலைமையிலான நிர்வாகிகள் செயற்குழு பொதுக்குழு உறுப்பினர்கள் ஆகியோருக்கு இத்தருணத்தில் நன்றியையும் பாராட்டுதலையும் தெரிவித்துக்கொள்கிறேன். நமது மய்யத்தின் வளர்ச்சிக்கு தொடர்ந்து பாடுபட்டு சேவை செய்து வரும் நமது முன்னாள் அகில இந்திய தலைவர்கள் பீஷ்மர் இராதாகிருட்டிணன், திரு. M. கார்த்திகேயன் அவர்களின் ஊக்குவித்தலும் வழி காட்டுதலும் நமது அகில இந்திய காப்பாளர் திரு. J.R. சேதுராமலிங்கம் மற்றும் அகில இந்திய துணைத்தலைவர் திரு. L. மூர்த்தி அவர்களது ஒத்துழைப்பும் தொடர்ந்து நமது மய்யத்தின் வளர்ச்சிக்கும் பெருமைக்கும் காரணமாகும்.

மேலும் மய்ய உறுப்பினர்கள் அனைவரது ஒத்துழைப்பும் இந்த பெருமைக்கு காரணம். மேலும் தொடர்ந்து தென்னக மய்யத்தின் புகழும் சேவையும் வளர தங்களது ஒத்துழைப்பை நல்க கேட்டுக்கொள்கிறேன். மேலும் புதிய உறுப்பினர்களை சேர்த்து மய்யத்தை வலிமையாக்க உதவ கேட்டுக்கொள்கிறேன்.

வரும் 2015 ஜனவரி மாதம் 9,10 மற்றும் 11 தேதிகளில் BAICON-2015 சர்வதேச கட்டுமான இயந்திரங்கள் மற்றும் நவீன தொழில்நுட்பக் கருவிகள் கண்காட்சி சென்னை நந்தம்பாக்கம் வர்த்தக வளாகத்தில் நமது மய்யத்தின் சார்பில் நடைபெற உள்ளது. இக்கண்காட்சி நமது கட்டுநர் / ஒப்பந்ததாரர்களுக்கு பயனுள்ள வகையில் தொழில்நுட்பக் கருத்தரங்கங்கள் நடைபெறவுள்ளது. அதே சமயத்தில் நான்காவது அகில இந்திய மேலாண்மை மற்றும் பொதுக்குழு கூட்டம் 9 மற்றும் 10 தேதிகளில் அவ்வளாகத்திலேயே நடைபெறவுள்ளது என்பதை மகிழ்ச்சியுடன் தெரிவித்துக்கொள்கிறோம்.

அன்புடன்

R. சிவக்குமார்



# Concreting - Care

**M.Karthikeyan,** B.E., M.B.A., F.I.E., F.I.V., Consultant (Rehabilitation), Past President – BAI



Reinforced Cement Concrete is widely used in any Construction worldwide. Concrete very well in compression. The reinforcement provided, takes care of tension force in structural element. The components of cement concrete are cement, aggregates, water which are easily available. Quality Control of the constituents and methods of carrying out the concreting are prime importance for Good Work. Quality controls in RCC (Reinforced Cement Concrete) checks the problems of selection of its ingredients, proper workmanship for batching, mixing, placing, compaction and curing of concrete. Quality control is to assure the required quality. Basic Raw Materials specifications and acceptance criteria are to be looked into.

CEMENT: Widely used ordinary Portland cement OPC is of IS 33, IS 43 Grade or IS 53 Grade. Even lame man can understand the grade of cement, if it is three letters (IS 269) it is 33 grade, if it is four letters (IS-8112) it is 43 grade, if it is five letters (IS 12269) it is 53 grade. One need not remember the actual numbers of the codes. On arrival of cement bag, the grade of the cement ,the weight of the bag which is 50 kg is checked for which should not vary more than 2%. Ensure original packing which contain the company's brand name, grade, manufacturing date(printed in week, month and year)

It has to be a fresh stock. Check whether lumps are present with in cement and it should feel cool to the hand immersed in the cement in the bag and also feel silky smooth when rubbed. Add a handful of cement slowly into a bucket full of water and observe the cement particles float for sometime before sinking. Prepare 2"x2"x2" cube in fresh cement with water and put in water immediately and slowly and observe after 24hours that the edges remain sharp and also gain some strength.

Course Aggregate is of size, which passes through sieve of 80mm and fully retained by 4.75mm sieve. It should not be porous, not flakey, and clean free from earth and mud. Size of course aggregates normally used for RCC in buildings vary from 20mm to 10mm.

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Fine Aggregate fully passes through 4.75mm sieve. A good sand from riverbed is ideal. It shall be free from silt, clay, salts, mica, organic materials. Maximum percentage of clay and silt present in Sand up to 7% may be allowed. Sand when it is wet in small percentage of 2% to 5% will increase the volume of dry sand by 30%. A suitable allowance is to be made for that.

To find out the bulking of sand and presence of silk and clay use a measuring jar. Put sand to a height of say 30cm, pour water into it, shake well, and allow it to settle. Now measure the height of sand, say it is 25cm, and then the bulk age is noted as  $30-25/25 \times 100 = 20\%$ . So 20% of more than the quantity specified should be added into the concrete mix. The Measure the silt settled over the sand in the jar and if it is more than 7% of the height of the settled sand then that Sand is fit for concreting. Now, because of scarcity of river sand the manufactured sand is being used. Use of M. Sand with fineness modulus between 2.2 to 3.2 (fine to coarse) for RCC works. Mix design concrete is now used all over the constructions and one should take care of the fineness modulus of the fine aggregate.

Water certified good for construction is to be used. For workability, more water than specified, ie 0.4 to 0.6 (20 liters to 30 liters) per bag of cement should not be added. If more workability is required for manual concreting or more slump required for pumping the concrete then add suitable admixture for workability. With more W.C. ratio the concrete will become weak, porous and allow water, air enter into concrete and spalling of concrete and rusting of reinforcing bars will happen Controlling the water content in concrete is very important to get the required strength. Total strength of the concrete will be lost if you add more water. Full control at work site is needed in this aspect.

Machine mixed concrete or ready mixed concrete only to be used. The batching of ingredients using machine mix shall be carefully done using weight batching machines. While ordering for ready mix concrete please see the location of batching plant and lead time





required to reach the work place. (generally if the lead time is more than one hour, one has to be cautious and consult the project consultants). On arrival of the truck mixer the slump of the concrete is to be checked and report made). The concrete drop height from bond or from concrete pump shall not be more than 4'0" to avoid segregation of concrete



Slump test and also temperatures of concrete (especially during hot weather) are done and adjustments are made suitability. Casting of cubes is to be done very carefully with proper steel mold and concrete placed in layers and roded. Six cubs of size 150x 150x150 mm shall be casted as specified for a batch 5-10 cum of concrete and immersed in water tubs. 3 specimen are tested for 7 days strength and other 3 after 28 days curing.

Though the concrete mix is correctly designed, mixed and carried, placingof it in a systematic manner is very important, like placing, in bays, concreting the rib of beams and columns functions first in the bays and then placing concrete in bays. Decide the cold joints location, generally avoiding them is good. Uses of vibrators with suitable needles are to be thought of before concrete. The vibration is to done by trained foremen and done properly. Less vibration or over vibration will result in segregation of the mix.For compaction of concrete method of Roding, Ramming, Tamping, needle vibrator, from work vibrator (for columns & walls) platform vibrator, screed vibrator are selected in consultation with the engineers and designers



#### **IMPROPER VIBRATION**

Checking the correctness of reinforcement is fore most important. Cover blocks are very important. Cranking of reinforcement, overlaps, placing the fan hooks, electrical conducting are to be checked in advance.

The concrete is laid in layers of not more than 20cm when the thickness is more. When the second layer is done, the vibrator should not enter into the first layer. Suitable methods to measure and pour the concrete to the designed height should be checked. While concrete is placed for, one should not prefer to use more water and cement slurry for work ability.

Curing is more important. It has to be started when the final setting of concrete is laid i.e. After 5 to 6 hours of concrete. It can be by ponding method, covering the surface with PVC sheet and watering. Water ponding should be for at least for seven days and the water sprinkling for next five days. Curing compound can be adopted on vertical surfaces.

I welcome the readers to write to me or call me for discussions on this subject.



#### CBDT extends return of Income / ITR Due date to 30.11.2014

Due Date for filing of return of Income for Assessment Year 2014-15 Extended from 30th September, 2014 to 30th November, 2014 in Specified Cases

#### F.No.153/53/2014-TPL (Pt.I) GOVERNMENT OF INDIA MINISTRY OF FINANCE (DEPARTMENT OF REVENUE) (CENTRAL BOARD OF DIRECT TAXES) North Block, TPL Division, New Delhi

Dated: September 26, 2014

#### PRESS RELEASE

Subject: Extension of due date for filing of Return of Income from 30th Sept, 2014 to 30 th Nov, 2014 in specified cases, regarding.

As per the provisions of the Income-tax Act, 1961 ('the Act'), for an assessee, who is required to obtain Tax Audit Report (TAR) under section 44AB of the Act, the due date for furnishing his return of income is 30 th September of the Assessment Year.

2. The Central Board of Direct Taxes ('the Board') vide order dated 20th August, 2014 extended the due date for obtaining and furnishing of Tax Audit Report under section 44AB of the Act for Assessment Year 2014-15 from 30 th September, 2014 to 30 th November, 2014. Subsequently, a number of representations were received in the Board requesting for extension of the due date for furnishing of return of income also. Writ petitions were also filed in various High Courts for directing the Board to extend the due date for furnishing of return of income from 30 th September, 2014 to 30 th November, 2014 in conformity with the extension of the due date for filing of Tax Audit Report.

3. The Gujarat High Court vide judgement dated 22.09.2014 (2014-TIOL-1681-HC-AHM-IT) directed the Board to extend the due date for furnishing the return of income to 30 th November, 2014, except for the purposes of charging of interest under section 234A of the Act for late filing of return of income. Other High Courts also directed the Board to look into the practical difficulties of the petitioners and take a just and proper decision in this matter.

4. In compliance to the judgments of various High Courts and after considering the representations received for extension of the due date, the Board, in exercise of its power conferred by section 119 of the Act, has extended the 'due-date' for furnishing return of income from 30th September, 2014 to 30th November, 2014 for the Assessment Year 2014-15 for all purposes of the Act in the case of an assessee, who is required to file his return of income by 30th September, 2014, and is also required to get his accounts audited under section 44AB of the Act or is a working partner of a firm whose accounts are required to be audited under section 44AB of the Act.

5. There shall be no extension of the "due date" for the purposes of charging of interest under section 234A of the Act for late filing of return of income and the assessees shall remain liable for payment of interest as per the provisions of section 234A of the Act.

6. For removal of doubt, it is clarified that for an assessee (other than working partner of a firm which is required to obtain and furnish Tax Audit Report), who is required to file its return of income by 30 th September, 2014 but not required to obtain and furnish Tax Audit Report under section 44AB, the due date for furnishing of return of income for assessment year 2014-15 remains as 30 th September, 2014.

(Rekha Shukla) Commissioner of Income Tax (Media & Technical Policy) Official Spokesperson, CBDT



# Systematic Investment Tools for Wealth Creationt

Er. S. Nethaji



We have understood the power of Compounding in the last article and I hope you have already started investing in your favorite investment options.

I have detailed below the options that can support you in consistently investing every month thereby you see your investments grow without your active role.

SIP - Systematic Investment Plan is widely used in the Mutual Fund investment stream, where you can declare that a fixed sum of money (Min. Rs.500) be invested every month for a certain period of time (say one year). Once you provide the required documents and sign the forms, you can be rest assured that they will transfer your specified money to the specified mutual fund every month for the specified time period. Your only responsibility is to maintain the bank balance for the transfer to be effected. Thus you can avoid remembering to invest every month, which will be taken care by the fund company.

For example, you start an investment in HDFC Top 200 Fund with Rs.10,000. Then you decide to invest Rs.5,000 on 5th of every month for the next 2 years. You can fill in the SIP form of HDFC Mutual Fund and submit the details, which will only take a few minutes. There are brokers and agents who can do this at your door step. You just have to make sure that your bank account has Rs. 5000 on the 5th of every month. The HDFC fund will buy Units for Rs.5000 every month and accumulate in your account. Thus your 2 year investments are automated.

You can do this for multiple Mutual fund investments for any amount greater than Rs.500 per month for a maximum period of 3 year at a stretch, which can be renewed / extended/ stopped/ changed at your convenience. There is a nominal fee charged for each of the transaction, which is very negligible compared to the convenience it offers to Investors.

SIP can also be used for investing in GOLD in the form of eGold or Gold ETF (Exchange Traded Funds).

In case you want to choose investing in Recurring Deposit in a bank, you can give standing instructions to the bank asking them to debit a certain amount from you savings account and invest in the Recurring deposit. This will save you the trouble of remembering to transfer the money every month and the investment is automated for the entire term of the investment.

These are the widely used methods of automation of our investments in Mutual funds and bank deposits. They simplify your monthly investments and help you automate your Wealth accumulation.

"Happy Wealth Creation"

		3 STUPID STAGES OF LIFE		
TEEN AGE	:	HAVE TIME + ENERGY	- BUT NO MONEY	
WORKING AGE	:	HAVE MONEY + ENERGY	- BUT NO TIME	
OLD AGE	:	HAVE TIME + MONEY	- BUT NO ENERGY	



# Soil Strengthening

#### Dr. D. Thukkaram

Former All India Vice President & Trustee



The 2 solutions to the problem of foundation design are;

- a. To provide a foundation that will not cause failure of the soil
- b. To strengthen the soil

Soil strengthening means changing the stress strain characteristics of the soil by solidification either with or without change in soil mass.

Strengthening of soft soil material may be done by filling voids with insoluble material by drainage and consolidation by changing the chemical structure by solidifying void water or by reducing the volume of voids.

Injection grouting has been widely used. The most common method for filling voids is by grouting with a slurry of water and Portland cement, fine sand, clay or similar materials may be added to the grout or used alone. Other injection methods include bitumens or various chemicals either singly or in combination.

Improved properties of certain soils may also be obtained by compaction. This may be done by during displacement pile, sand pile, sand-pile, drainage, explosives, vibro flotation or electro-osmosis.

There is no single method of grouting that can be used successfully regardless of the nature of the porous soil. Methods and materials best suited for the particular problem should be chosen.

In case of settlements involving structures already built, methods must be used which do not change the soil mass but in which voids are filled with new materials rather than rearranged soil grains.

In case of grouting soil to stabilize piles against vibrating loads, it is necessary to stop vibration until the solidifying medium has attained sufficient strength to hold the ground firm against the forces. Test samples may be made for such control purposes if times of hardening are not known. Weighting the surface may be necessary, in the case of grouting with high pressures near ground level.

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#### COARSE GRAINED SOILS

Coarse grained materials can be concreted by cement, grouting, made into artificial sandstone by chemical injection, or made non-pervious to water by bituminous grouting. Consolidation by vibration, rammed piles or explosives is possible

#### FINE GRAINED SOIL

Fine grained materials forming cohesive soils are composed of particle of small or colloidal size, each of which is covered with a film of absorbed water which grips it tightly and is not free water. Normal drainage methods are ineffective. Great and long continued pressure would be required to eject the water through the pore spaces, and other more practicable means of stiffening these soils are required. Both electro osmosis and electrolysis could probably be used at the same time.

#### USE OF SOIL STRENTHENING

Strengthening may be of use in the following cases;

- a. Creation of conditions which will permit use of less elaborate foundation design
- b. Stopping horizontal vibrations in a structure, caused by moving machinery, if the upper strata around piles are so soft that movement is occurring in the piles
- c. Pre consolidating strata subject to vibrations from machinery, so that objectionable settlements will not take place from this cause
- d. Removing considerable inequalities in soil conditions over a site
- e. Sealing bottoms of caissons or pile holes
- f. Prevention of lateral movement by forming a wall
- g. Stopping or reducing settlement, by solidifying a mat around and below the pile tips, or by forming an enclosing wall
- h. Providing a means for supporting additional load on existing piles, by solidifying a mat around and



below pile tips or by forming an enclosing wall, if the piles and strata in which they are embedded are not capable of permitting transfer of the combined load from one to the other, but provided the underlying strata are capable of sustaining the total load. The last two uses, if a solidified mat if formed, actually transform friction pies into end-bearing piles.

#### GROUTING

Grouting of granular soil with silt, cement grout, chemicals, or emulsified bituminous-cement slurry has been practiced fairly widely in Europe, America.

No materials are available which have all of the desirable properties, such as;

- The grout must be able to modify the soil properties as desired, usually strength increase and permeability decrease. Temporary improvement may suffice during construction, but permanent effects are usually sought
- b. The grout must be placeable in adequate quantities. This requires a liquid solution. Materials should be mixable on the job with water, to reduce transportation costs.
- c. The grout must be able to penetrate material of the existing grain size and density
- d. Time of reaction should be controllable
- e. Grout should have low viscosity to obtain best penetration and to ease pumping. Viscosity should remain unchanged until the stabilizing reaction occurs
- f. Grout should be relatively insensitive to impurities in the soil or water
- g. The process should be irreversible
- h. Improvement of the soil properties must not decrease with time
- i. Chemicals should be noncorrosive to equipment
- j. Chemicals should be nontoxic and non explosive
- k. Materials and methods should be inexpensive enough to justify grouting instead of other possible means of obtaining desired results.

#### COMPACTION OF SOILS

Compaction by Displacement Piles. Loose cohesionless soils may be compacted by driving displacement piles. In soils having a density below critical, the displacement volume of the piles usually more than compensates for decrease in soil volume owing to vibration from driving. The method should not be used where damage might be done to adjacent structures.

Compaction by Sand-Pile drainage. Water may be withdrawn from soils by pumping form sand piles that act as well. A pile driver for installing sand piles more rapidly and economically might be advantageous. Compaction takes place both while the casings are being driven and when additional sand is placed in the casings and tamped as they are withdrawn, stone column pile also used for compactions there are many ways of providing the sand piles.

Compaction by Explosives. It is used to increase by a large amount of degree of compaction in moderate to great depths of submerged fine and medium sands, including those having an appreciable silt content. Size, depth and lateral distributions of the explosives are based on the spheroidal shattering effects around each charge. The charge should fracture the ground but not form a crater. The charge forms a gas cavity in the saturated soil, and the shock and vibratory waves rearrange the grains more compactly, with surplus pore water causing liquefaction. The gas is then squeezed out to the surface, with no cavities remaining. In a few minutes, boils and water geysers break out, as in quicksand, and last up to 30 min. Repetition further settles the mass but in decreasing amounts.

Vibroflotation. This is a method of compacting granular soils by a vibrator that sinks into the soil. The vibrator is sunk to the desired depth of consolidation by vibration and injection of a stream of water from the bottom of the vibrator. The upward-directed pressure of this water largely eliminates friction between the granules, the soil becomes temporarily quick, and the vibrator sinks rapidly with little energy required. During lowering, a compaction of the surrounding material occurs and a crater several feet in diameter is formed. When the vibrator reaches the predetermined depth, the water feed is changed to the top, so that the granules are acted upon by a stream directed downward. At the same time, sand is dumped into the crater to replace lost soil volume. After compaction at the lowest position, the devices retracted step by step, resulting in a cylindrical compacted column of 8 to 10 ft Ø. Fine granular material, such as loose hydraulic fills, may be compacted. The method will cause settlement and is useful only where this is not harmful at the time. Vibrafloation can be successfully used for under pinning existing foundations.

Electro osmosis. If direct current passes between two electrodes in moist soil, water moves from the positive electrode (anode) to the negative electrode (cathode). Well points work in permeable soils, and



may also be made to work in silts and clays by this means, using the well points as cathodes and driving small pipes for anodes. It has been found that (a) when large currents are employed, considerable heating occurs at the anode, which assists the water movement; (b) there is a linear relation between amount of water expelled and clay content;

(c) the weight of water expelled is proportional to coulombs of electricity; (d) the quantity of water expelled is greatest for sandy soils, and leas for heavy clays; and (e) drying out occurs mainly at and near the anodes. The moisture content at the cathode is not changed much, if the expelled water is drained.

Electrolysis. Electrolysis is a development for hardening soft and plastic clay soils. The method is based on precipitation of insoluble metal salts by electrolysis. Aluminum anodes and copper cathodes are used, with direct current passing until the soil is hardened. If aluminum is used at both electrodes, the soil is consolidated at both. Moisture content of the clay is considerably reduced, and remains unchanged, even under water. Compressibility is reduced to a small percentage of the original. The angle of internal friction is increased up to 30°, and more in heavy clays. Precipitation of insoluble aluminum salts around the piles increased the bearing value of friction piles to possibly double the untreated value. The consolidation is permanent and irreversible. The process might be used to in due rapid consolidation before erection of a structure. This treatment is fairly expensive.

Thermal Treatment. Two methods of permanent stabilization of loess and similar soils have been used in the Soviet Union. Loess is porous and semi permeable; in dry state it has very high bearing capacity, but becomes soft and highly compressible if most. These methods have also been used for underpinning. The cost is said to have been less than for chemical grouting. The thermal method blows hot air at 1100° to 1470° (F) under pressure into sealed boreholes, causing permanent soil changes giving complete resistance to liquefaction; absence of differential compressibility; increase of several times in cohesion, compression, and shear strengths; and cessation of tendency to settle when the ground is wet. The thermal-chemical method uses solid, liquid, or gaseous fuels in the boreholes, where combustion takes place. Temperatures range from 570° to 2000° (F) at a pressure of 0.5 atmospheres. Treatment in one 4 to 8 inches-diameter borehole for 5 to 10 days resulted in a consolidated zone 33 feet deep and 5 to 8 feet in diameter.

# Failures of Pile Foundations

A study of the causes of pile-foundation failure will generally indicate the means of prevention that should be taken. Failures are due to many cause, or combinations of causes, the most common of which are as follows.

lack of adequate borings causes many failures. Borings are always necessary. In some cases, it is sufficient merely to determine the elevation of rock, whereas in others, the character of the overburden may be sufficiently judged from wash water samples of wash borings. Sometimes dry samples from wash borings will provide all necessary information, but in other cases, the exact character of the soil becomes of vital interest and undisturbed samples are necessary.

Inaccurate classification of soils is fatal on many projects often as the result of failure to employ a soilmechanics expert to select the proper type of borings and to supervise making them.

Use of a dynamic driving formula for bearing resistance in predominantly cohesive soils results in many

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settlement failures. Such soils are not suitable for the use of a dynamic formula. Many such failures may be avoided by a check using the static formula for friction and end bearing.

Use of inadequate dynamic formulas often gives false results.

Misinterpretation of test-load data often occurs, in consequence of assuming (a) that the load test on a single pile gives results applicable to a group or a building; (b) that long-term settlements can be predicted from a short test loading; and (c) that the strata being tested are those which will finally have to carry the load. However the factor of safety should govern the safe load and over estimating the pile safe load shall be avoided

Soft underlying strata below the pile tips are frequent causes of settlement.

Damage to an uncased pile in dense ground may occur, and if suspected pile may be excavated, or cas-



ings which can be inspected after driving adjacent piles may be used either for all piles or for a few as a test.

Movement of earth into an open pile hole in soft ground may be prevented by the use of cased or precast piles.

Collapse of thin shells of cased piles may be prevented by more careful driving or by use of a lighter hammer and jetting. In an instance shear pressures developed by fine-grained water-bearing san, estimated at not less than 4,000 psi, caused thin shells to collapse when circular beads around the corrugations in the lower 8 feet reinforced the boots so that they did not collapse.

Settlement due to heaved piles which fall back into their original positions under load may be avoided by checking for heaving and re driving when it has occurred.

Overloading due to added weight from settling fill may cause failures. Such fill is either that through which the piles are driven or further fill that may be anticipated. Such overloading may be taken into account in designing the piles.

Compensating excavation for a basement occasionally can be made to balance added building load and avoid the load of a stratum over a soft material through which the piles must penetrate.

Buckling of piles may occur as a result f inadequate lateral support, removal of side support, increased load, or overdriving.

Breakage of wood piles may readily occur as a result of overdriving particularly with heavy hammers and small tips.

Lateral forces, static, intermittent, or vibrating, require adequate provision in the design.

Lack of batter piles may permit vibration in structures, caused by moving machinery. Grouting or chemical stabilization of porous soil to stabilize a mass around loose or vibrating piles sometimes may be used.

Flowing of a stratum carrying pile load, caused by adjacent excavations, may be prevented if the exact character of the soil strata is investigated prior to construction operations.

Sliding of piles owing to sloughing banks may

sometimes be prevented by stopping dredging, or by washing down silt deposits.

Wrong choice of pile type is responsible not only for some physical failures but for uneconomic installations.

Tension failures may be prevented in concrete piles by the use of reinforcement and also by pre stressing.

Incomplete filling of cast-in-place concrete piles can be detected by proper inspection.

Piles bowed or out of plumb beyond acceptable tolerances should be rejected

Decay in wood piles may be prevented by keeping the cutoff below the lowest possible ground water, by maintaining an artificial ground water level, by preservative treatments, or by the use of a composite section.

Insect and marine-borer attack in wood piles may often be prevented by preservative treatments or encasements.

Disintegration of concrete piles may be greatly reduced by proper attention to the mix and location of reinforcement; also possible by the use of armor or asphalt treatment, and also by using pre stress.

Abrasive action and testing methods can result in falsely high resistances being indicated, and in inadequate lengths of piles, with resulting lack of understanding of their effects or of the seriousness of the results, while a few, on rare occasions, have been used unscrupulously. Some of these circumstances are not widely known, possibly because of the lack of contact which sometimes exists between office engineers, who ma not be informed about latest pile driving theories, and field engineers and pile-driving foremen who may not always be aware of the serious effects which these conditions may have upon the desired results. If the engineer is aware of these conditions, he may guard against them in specifications or otherwise. Some of these procedures are given;

- a. Use of light hammer for a particular work resulting in inability to reach a necessary depth or driving stopped owing to appearance of small set.
- b. To suitable predetermine the height of fall of hammer. With respect the hammer weight and the final set.
- c. In bored cast-in-situ piles the proper socketing depth into the hard stratum.



# Deterioration of Concrete Piles

- ABOVE GROUND: Piles above ground are subjected to usual weathering and air borne destructive elements in damp sea coast regions moisture may penetrate the concrete and cause spalling and resting reinforcement wherever conditions corrosion exist RCC piles are threatened.
- 2. IN EARTH: Generally RCC piles are deemed to be permanent in earth. Ground water containing acids, alkalies, salts may cause damage more severely in sandy soils which permit rapid leaching and provide more air than in clays, where the retarded movement may not be important. Sulphate salts are found in most places and ground water and size may be classified as having low moderate severity or high risk. Dense rich Portland cement precast concrete mixes should be safe against low or moderate concentration of calcium sulphate salts (gypsum). Principally gypsum salt up to 1000ppm sulpatrioxide in ground water or 0.5 percent in clay unless buried over a long time.

For cast-in-concrete, sulphate resistant cement is recommended if the salts consists of magnesium and sodium with sulphate, in-situ piles are not recommended destructive chemicals in ground water may come from the manufacturing plant waste, leaching from coal storage or cinder fills

3. IN SEA WATER: Here it is due to both mechanical and chemical action

- a. Abrasive action; ice, debris, wind, waves and sprays causes serious disintegration even in the best quality of concrete
- b. Stresses form horizontal courses; occurs from blows storm waves, waves that break before striking causes more stresses than the reflected waves, the moving force of the ships and surges due to the same especially during winds and currents cause bending in the piles can cause localised cracks resulting in spalling followed by resting
- c. Mechanical action; the frozen water in the pores of a porous concrete piles causes progressive disintegration and finally exposing the reinforcement. Even ice may form inside the concrete and expand while water outside remains liquid.

Generally the precast RCC piles having number of hair cracks and horizontal cracks caused by shrinkage differences of temperature between interior and exterior surfaces, handling by clay fills or with carbonate crystal formations. Here cracks below is not so detrimen-

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tal but the exposed above tidal range since exposed alternatively for wetting and drying spray of the waves and the capillary action to considerable height where evaporation leaves crystalline deposits. Pre stressed concrete is less subject to deterioration than ordinary cast concrete.

- d. CHEMICAL DECOMPOSITION: The decomposition is promoted by the presence of crack. Resting in air or oxygen baring water leading to the hydration result of decomposition of higher silicate to lower silicate and calcium hydroxide this calcium hydroxide crystals dissolves slowly in water which is followed by the decomposition of clinker grains liberating new quantity of calcium hydroxide and eventually break down of cement is complete the lime in concrete also react with magnesium Sulphate forming calcium which occupies more space than the original calcium hydrate causing swelling these attacks continues till the steel is exposed the deteriorations begin shortly after driving and proceeds at a slower rate for possibly say 7 or 8 years and then hastens.
- e. BORER ATTACKS; Neat cements or pour concrete may be rapidly destroyed in tropical or semi tropical waters by rock borers such as PHOLADS. Good sands or gravels seems to be necessary to resist them
- f. ELECTROLYSIS: No damage seen to occur from a steady direct current less than 15 volts hence there is little likely hood of damage from leakage currents in practice unless the leakage is abnormally high.
- g. HANDLING PILE: Pile should be handled in the manner of structural designs for the pickup points thus avoiding cantilevering or beam action which will cause over stress. Portions over hanging in trucks while transporting may vibrate and fail if subjected to impact bouncing since it is practically impossible to prevent minute cracking precast piles during manufacture when such piles driven in sea waters protection is to be given. Abrasion to be avoided in sea water or alkaline soils for piles
- h. DRIVING OF PILES: Early driving before sufficient curing time, the impact during driving the driving stresses should be within limits or rich mix provided.

Extra reinforcements both longitudinal and the lateral reinforcements provided the top portion of the precast piles. The pile heads should be protected by providing some resilient materials such as nylon ropes rubber pads old coir ropes while driving will take care of the stresses developed at the head portion during rebounds while driving.



### சென்னை மாநகராட்சிக்கு ஒரு வேண்டுகோள்

#### M. Basheer Ahamed, Administrator – BAI

நமது சென்னை மாநகரத்தில் உள்ள வீடுகள், பல மாடி குடியிருப்புகள், பள்ளிக்கூடங்கள், கல்லூரிகள், மருத்துவமனைகள், உணவகங்கள், அனாதை இல்லங்கள், கோயில்கள், மசூதிகள், தேவாலயங்கள் போன்ற பல்வேறு இடங்களில் தினந்தோறும் உண்டாகும் கழிவுகளை அகற்றும் மகத்தான பணியினை சென்னை மாநகராட்சி மிகவும் சிறந்த முறையில் செயலாற்றி வருகிறது. நாம் தினந்தோறும் கூறி வரும் மரங்களை வளர்ப்போம். சுற்றுப்புற சூழ்நிலையைக் காப்போம் என்பதெல்லாம் மேற்சொன்ன கழிவுகள் அகற்றும் வேலைகள் ஒழுங்கான முறையில் நாள் தவறாமல் நடந்தால்தான் முடியும் என்பதை மனதில் கொள்ள வேண்டும். மேற்சொன்ன அனைத்து இடங்களிளலிருந்தும் ஒரு நாள் கழிவுகள் அகற்றப்படவில்லையெனில் சுற்றுப்புற சூழ்நிலை எப்படி இருக்கும் என்று ஒரு கணம் சிந்தித்துப்பாருங்கள்.

கழிவுகளை அகற்றும் பணியை சிறிதும் மனம் கோணாமல் முகத்தைச் சுழிக்காமல் செய்து வரும் துப்புரவு ஊழியர்களை நாம் மனமுவந்து பாராட்டுவதோடு அல்லாமல் தலை வணங்கி மரியாதை செலுத்துவோம். பொது மக்களாகிய நாமும் ஒவ்வொருவருடைய கடமையாக கழிவுகளை கண்ட இடத்தில் சிதறவிடாமல் அதற்குண்டான தொட்டிகளில் போடுவதின் மூலம் கழிவுகளை அகற்றும் ஊழியர்களுக்கு நாம் உதவி செய்வதற்கு ஈடாகும்.

இத்தகைய ஒரு சேவையை சென்னை மாநகராட்சி மிகவும் சிறந்த முறையில் பராமரித்து வருகிறது. இந்த தருணத்தில் அவர்களுக்கு ஒரு



சிறு வேண்டுகோள். ஆங்காங்கே சாலைகளில் அதற்குண்டான தொட்டிகளில் சேர்த்து வைக்கப்படும் கழிவுகளை அகற்றும் பணியை கனரக வாகனங்கள் மூலம் செய்வதை காலை 8 மணி முதல் 11 மணி வரை தவிர்த்து மற்ற நேரங்களில் மேற்கொண்டால் மிகவும் உதவியாக இருக்கும். ஏனெனில் மேற்குறிப்பிட்ட நேரத்தில்தான் பள்ளி மற்றும் கல்லூரி மாணவ மாணவிகள், அலுவலகத்திற்கு செல்பவர்கள் மற்றும் பல்வேறு பணிகளுக்குச் செல்பவர்கள் ஆகியோர் நடமாட்டம் மிகவும் அதிகமாக இருக்கும்.

மாநகரப் பேருந்துகள் நிரம்பி வழியும், இரண்டு சக்கர வாகனங்கள் , மோட்டார் வாகனங்கள் ஆகியவற்றின் போக்குவரத்து மிகவும் அதிகமாக இருக்கும். இப்படிப்பட்ட ஒரு சூழ்நிலையில் சென்னை மாநகராட்சி சார்பாக கனரக வாகனங்களை ஆங்காங்கே சாலைகளில் நிறுத்தி கழிவுகளை அகற்றுவதன் மூலம் போக்குவரத்து நெரிசல் மிகவும் கடுமையாக ஏற்படுகிறது. சம்மந்தப்பட்ட சென்னை மாநகராட்சி அதிகாரிகள் கழிவுகளை அகற்றும் நேரத்தை அதற்கேற்றார்போல் சீராக்கினால் பொது மக்களுக்கு மிகவும் பயனுள்ளதாக அமையும் என்ற ஆலோசனையை தங்கள் மேலான கவனத்திற்கு கொண்டு வருகிறோம். மேலும் சிங்கப்பூர் போன்ற மேலைநாடுகளில் காலை 6 மணிக்குள்ளாக துப்புரவு பணி முழுவதும் நிறைவடைந்துவிடுகிறது என்பதை இங்கே குறிப்பிட விரும்புகிறோம்.

இந்தக் கடிதம் எழுதும் தருணத்தில் மிகவும் மகிழ்ச்சியான செய்தி என்னவெனில் பாரதப் பிரதமர் உயர்திரு. நரேந்திர மோடி அவர்கள் தேசத் தந்தை அண்ணல் காந்தியடிகளின் 146வது பிறந்தநாள் அன்று (02.10.2014) காந்தியடிகளின் "தூய்மை இந்தியா" என்ற நெடுநாளைய கனவுத்திட்டத்தை ஐந்தாண்டு காலத்தில் நிறைவேற்றுவதற்கான செயல் திட்டத்தை துவக்கி வைத்தார். கழிவுகள் அகற்றுவதற்கு பாரதப் பிரதமரே இந்த அளவுக்கு முக்கியத்துவம் கொடுத்திருப்பது விரைவில் நமது இந்தியா படிப்படியாக தூய்மை நாடாக மாறும் என்பதில் ஐயம் இல்லை.





# Leadership Styles for Project Managers - An Insight

#### **Snehal Joshi**

Project management is teamwork and projects are successful when this teamwork is performed with zeal. Though there are many more variables for project's success, the leadership of a project management professional is constant.

The one question, which arises here, is whether the leaders are born or they are made. From the examples of exemplary leadership in all types of industries, it can be concluded that the leaders are born but the inborn quality, which they possess, should be nurtured by mentors. The leaders are made as well but again there is that little difference of imbibed quality and possessed quality of leadership. A Project Manager has a huge res-ponsibility of not only making the project a success but also to make the team members equally satisfied with the work they have performed. The interpersonal skills like leadership, influencing skills along with decision-making skills, which they possess, play an important role.

Handling complex construction project is a huge task; the project manager has to deal with several vendors along with the team of professionals. Leadership skills help project manager for smooth sailing of day-to-day activities. Off course, some have it in built and some have to inculcate it. It is a trait, which is worth possessing and is much talked about in management circle.



#### Let us take a close look at it below

#### Leadership

Leadership is defined as the action of leading a group of people or having capability to do so. It is said correctly, that a person leading a group of people or having a capacity to lead is said to have leadership quality. Let us say, you have a team and the team leader or a Project Manager who is not very proactive, he rather gauges his every move carefully and does not take any decisions without consulting his team. Do you think the project manager has a leadership quality? Well, the leadership style he possesses is different from that of a common perception of a leader.

There is a misconception about the leadership quality possessed by the people at key positions. In this article, several leadership styles are discussed in detail

#### Popular Leadership Styles

#### Autocratic

We see many autocratic leaders around; leaders overpowering their team are called as autocratic leaders. In the past, the world has seen autocratic leaders like Adolf Hitler.

#### The characteristic of autocratic leadership

- With little or no input from the group, members' autocratic leader is a sole owner of his acts. Though many re-nowned leaders use this leadership styles when required, autocratic leadership is not preferred over other type of leadership as single person dominates all the time. This type of leadership can actually create friction in team members.



Autocratic leaders generally perceive that they should perform the decision-making



Bureaucratic leaders are people of rules and for them it is essential that their staff should follow all the rules explicitly

- Autocratic leadership has a clear concept of decision-making. These leaders generally perceive that leaders should perform the decision-making. It is one of the best parts of this leadership style as asking inputs from others can prove fatal at times.
- The leaders may have innate leadership quality but it is always good to talk to the SMEs over processes and procedures. Autocratic leaders may not do this and would take all process and procedure related decisions all by themselves.
- The team usually moves forward with feeling of trust, autocratic leadership may not develop this feeling developing distrust among the team members.

#### Bureaucratic

These types of leaders more often go by the book. They are people of rules and for them it is essential that their staff should follow all the rules explicitly. Bureaucratic leaders believe more in the processes and procedures of organization and follow them like a law. The sectors like manufacturing would benefit with such kind of leadership where there is utmost need of following the processes and procedures. This type of leadership thrives in the industries where innovation and creativity is not required from the team members or employees.

#### Characteristic of bureaucratic leadership

- The bureaucratic leaders will always love to lead by the rules of management and routine. For them maintaining the current system and procedu-res to get the end result is of paramount importance.
- Their eye for detail and having ac-count for each activity happening as a part of their assignment



is enormous which can be used as a boon for industry where there is huge money involved. They can precisely delegate and have innate ability to be accountable for managing resources.

- Bureaucratic leaders lead through the information available. They have all the controls over the flow of information.
- Generally, autocratic leaders will demonstrate the quality of bureaucratic leaders and vice versa.

#### Democratic

A project manager with democratic leadership style always consults the team members before taking important decision. Democratic leadership is about consensus and building trust among team members. Getting inputs from team mem-bers for every crucial decision also helps the leader balance his responsibility and accountability over a particular task.

#### **Characteristic of democratic leader**

- The ideas and decision of group members are taken into consideration for decision making. Democratic leaders shall always create a feeling of camaraderie between the team members
- Every team member gets the ownership of the processes and procedures, which would help the leader in achieving long term or short-term goals.
- Team members would be able to keep up their creative streak as the democratic leader would reward and appreciate the creativity in the team.

#### Charismatic

Charismatic leaders lead teams with lots of enthusiasm and their main aim is the drive others in the right direction. Obviously, they exhibit high levels of energy. Most people in the world with prominent positions exhibit this leadership style. The characteristic of charismatic leader only shows that, charismatic leaders are born and if they are groomed properly can really put their team members on toes due to their charming leader.





Charismatic leaders lead teams with lots of enthusiasm and their main aim is the drive others in the right direction

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Transformational leaders are the best when it comes to boosting performance of team members

#### Characteristic of charismatic leader

- A good leader, despite of what type of leadership style he possesses has a vision, a vision of leading others in a right direction. Apart from having the vision, they are able to explain about it to others.
- Charismatic leader generally has a great sense of forecasting risks and he/she does not mind taking those risks, which stand in their vision.
- Charismatic leaders are sensitive to others capability of performing certain tasks and they also understand the weak areas of the team members not burdening them with unbearable tasks.

#### **Transformational Leadership**

It is said that the transformational leaders are the natural leaders. Trans-formational leaders are the best when it comes to boosting performance of team members. These leaders are equipped with relevant types of mechanism for achieving their vision of a project. Trans-formational leader is also attentive to the progress of a team member, encouraging the team member to take further challenges and is quick to identify team's strength and weakness.

#### **Characteristics of transformational leadership**

- Transformational leadership style is all about taking people with you and making them perform their best at any given situation
- Transformational leader facilitates simulation among the team members or followers by encouraging them by crisscrossing the status quo.
- These leaders inculcate same kind of vision and passion among team members, which actually they are feeling themselves. This helps the team member perform better.
- In the shoes of a role model, trans-formational leaders generally act as a role model for the followers and team members and instead of working for a particular company, the team members perform to the best of their ability for these leaders.

Most leaders amalgamate these leadership styles and use it as per the situation. The kind of leader you are is also based on Myer's and Briggs type of indicator, which is an indicator of personality. Ultimately, the type of personality you possess would determine the kind of leadership skills you have.

Above leadership styles that you can identify in people surrounding you. A smart leader is the one who know to use applicable leadership style wherever required. So, have you identified your leadership style yet? •



Er.A. கார்த்திகேயன்-மேலாண்மை இயக்குநர், M/s. Karthikeyan Associates, மற்றும் நமது மய்யத்தின் உறுப்பினர், Fundamental of Structures என்ற தலைப்பில் பயிற்சி வகுப்பு நடத்துதல்



Er. S. ராமப்பிரபு - மேலாண்மை இயக்குநர், M/s. Ramson Associates, மற்றும் மய்யத்தின் இணைச்செயலாளர், Preparation of new project என்ற தலைப்பில் பயிற்சி வகுப்பு நடத்துதல்



பயிற்சியாளர் திரு. S. இராமப்பிரபு அவர்களுக்கு மய்யத்தலைவர் திரு. R. சிவக்குமார் அவர்கள் நினைவுப் பரிசு வழங்கி கவுரவித்தல்.



பயிற்சி முகாமில் கலந்து கொண்டவர்களின் ஒரு பகுதி



தொழிலாளர் பயிற்சியின் முடிவில் கவுரவ செயலாளர் திரு.A.N. பாலாஜி அவர்கள் நன்றி தெரிவித்தல்.



4-9-2014 அன்று நடைபெற்ற நமது செயற்குழு உறுப்பினர் திரு. R. பார்த்திபன் அவர்களின் இல்லத்திருமணவிழா.



நமது பொதுக்குழு உறுப்பினர்கள் திரு. M. ஜெய்சங்கர், திரு. T.M.S. சிவக்குமார், திரு. J. நிர்மல்சந்த் மற்றும் சங்க உறுப்பினர்கள் கட்டுமானப் பொருள் மற்றும் கலாச்சாரம் அறிய மேற்கொண்ட நியுசிலாந்து பயணம



சுனாமி ஒப்பந்ததாராகளுக்கு Taxation Exemption சம்மந்தமாக மாண்புமிகு அமைச்சா் பொன் இராதாகிருட்டிணன் அவாகளிடம் கன்னியாகுமரி மய்யத்தின் சாா்பில் திரு. G. வேதானந்த் அவா்கள் மனு அளித்தல்.





### BUILDERS' ASSOCIATION OF INDIA Kanyakumari Center

Office: URGENTECHS, 85, W.C. College Road, Nagercoil - 629 001.

Estd. 1941

2: 230 857, Cell: 9894011518 e-mail: urgentech@yahoo.co.in

Er. G. VED ANAND	,	EXXX MIXON ON ANAXXXXXX	Er.X XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
past - Chairman, G.C.	Member	ZOR RT CHARK	x NOR X NOX

22.08.2014.

То

### The Honorable Minister for Finance

Government of India, New Delhi

Through:

Mr. Pon Radhakrishnan, The Honorable Minister of State Heavy Industrial &Public Enterprises, Government of India - New Delhi

**Respected Sir**,

SUB: TSUNAMI RELIEF AND REHABILITATION WORKS IN TAMILNADU COASTAL AREA, VIZ KANYAKUMARI AND OTHER DISTRICTS – REQUEST FOR EXEMPTION FROM LEVY OF SERVICE TAX ON RELIEF & RECONSTRUCTION WORK AND ISSUE OF NOTIFICATION TO THAT EFFECT - REG

Greetings from BUILDER'S ASSOCIATION OF INDIA.

We experienced a bad natural deadliest disaster on 26<sup>th</sup> December 2004, **TSUNAMI** in our coastal areas of Tamil Nadu, Andhra Pradesh & Pandichery. There were loss of lives more than 2 lakhs, made several thousand people homeless and affected their lively hood.

Our Government, NGOs and International AID Agencies worked together and done a wonderful job in a war footing manner for Re-construction of houses and rehabilitation works for Victims.

In the process of rehabilitation and re-construction work our members have undertaken re-construction of houses for Tsunami victims from NGOs. The land was allotted and still lies with the State Government, funded by donors and given free of cost to the beneficiaries.



In this connection we would to draw your attention that for the rehabilitation and reconstructions work, Exemptions from TNVAT and Central Excise were given. However no specific exemption has been given for Service Tax.

Now our members are facing showcase notices, adjudication proceedings and harassments from Service Tax department for recovery of Service Tax for Tsunami reconstruction works. The total Service Tax, Interest and penalties demanded from members exceed, the total cost of construction work done.

The Service Tax department is interpreting laws without looking in to the real facts and harassing our members who lost their sleep for more than five years. Our representations along with the NGOs to the previous Government were not considered and no relief received.

Hence, we request the Honorable Finance Minister to consider this appeal and issue necessary instructions to the Service Tax department to exempt the services rendered by our members for Tsunami rehabilitation and re-construction works.

Thanking you, Yours faithfully,

RAVI

22

18/2014 (G. Ved Anand.)



# LIAISON WORK UNDERTAKEN ALL TYPES (IN STATE/ CENTRAL GOVT.)

FOR FURTHER DETAILS CALL US: 90251 97779 Chennai.



D.O. No. Add. PS to MOS (118 -EV 2872014

**G. SINGARAVELU** 



अतिरिक्त निजी सचिव, राज्य मंत्री भारी उद्योग एवं लोक उद्यम मंत्रालय भारत सरकार ADDITIONAL PRIVATE SECRETARY TO MINISTER OF STATE FOR HEAVY INDUSTRIES & PUBLIC ENTERPRISES GOVERNMENT OF INDIA

Dem Siri

#### 8<sup>th</sup> September 2014

The office of MOS(HI&PE) is in receipt of a letter from Er.G.Ved Anand, Ex-Chairman and G.C. Member, Builders' Association of India, Urgentechs 85, W.C.College Road, Nagercoil -629 001 regarding exemption from levy of Service Tax on Relief & Reconstruction work of Tsunami Relief and Rehabilitation works in Tamilnadu Coastal Area viz; Kanyakumari and other districts (copy enclosed).

Keeping in view the genuine demand of the Association, the Hon'ble Minister is kindly requested to give a positive look at the demand and issue necessary instructions to the Service Tax Department for exemption of the services rendered by the members of the Association as desired by the Hon'ble Minister.

Yours Sincerely,

(G.Singaravelu)

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Addl Private Secretary to Hon'ble Minister for Finance, North Block, New Delhi.

Copy to : Er.G.Ved Anand, Builders'Association of India (Kanyakumari Centre), Urgentechs, 85,W.C. College Road, Nagercoil -629 001

कमरा नं. 36, उद्योग भवन, नई दिल्ली-110011 • फोन : 23062676/78, 23061593, फैक्स : 23060584 Room No. 36, Udyog Bhawan, New Delhi-110011 • Phone : 23062676/78, 23061593, Fax : 23060584



# CMDA Development Regulations

#### S Ramaprabhu

Joint Secretary



#### **Requirement for site Approval**

- 1. No development shall be made in a site unless the authority approves the site for the development
- No piece of land shall be used as a site for the construction of a building for any development if the Authority considers that:
- (a). If the site is near a water body or a water course and the proposed development is likely to contaminate the said water body or water course (or)
- (b). If the site is likely to be inundated and satisfactory arrangement for proper drainage is not Possible
- (C). If the Site is filled up tank or low lying or of made up of soil by depositing rubbish or Offensive matters and the proposal is likely to be affected by dampness owing to the sub-soil water, unless ameliorative measures to the satisfaction of the Authority are Provided (or)
- (d). If the site does not abut any existing public or private street forming part of a Lay-out sanctioned under the provisions of the relevant Local Body Act, conforming to the minimum width prescribed for various uses in these regulations
- (e). No Site in Municipal and panchayat areas which is within a distance of 30 meters from a place declared and used as a burning or burial place / ground shall be used for layout or sub division for human habitation (residential )shall be built including addition / alteration/ reconstructions within 30 meters of such declared burning or burial place / ground unless such burial / burning place / ground was closed and remained closed for a period not less than 5



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years certified by the local body concerned.

3. Minimum extent plot frontage and site dimensions under these regulations shall not apply to the sites put use and existed as such prior to 5.8.1975 evidenced by Registered Documents provided that the then existing activity continue in cases of Other than residential; activates. Further the said parameters shall not apply to the vacant plot / site for residential use subdivided and registered prior to the said cut off date.

#### 4. Reconstitution Deed:

If a development is proposed in more than one plot / site proposing amalgamation or reconstitution of the individual sites to one site, then

(a). Reconstitution Deed in the format and manner prescribed by the Authority shall be furnished by the applicant ,and (b). The proposed building shall fall on the dividing line of the plot / site, such that the individual plot / site is not recognizable as a separate entity after execution of the proposed development there on. Provided that the sub- regulation (b) above shall not apply to amalgamation of a plot / site to serve as access / passage: Provided further that the above sub –regulations (a) and (b) shall not apply to sub – division and layout applications where building proposals are not involved.

#### **Proposed Width of roads:**

Proposed right of way for all major roads together with set – back lines for them shall be in accordance with details specified in Annexure IV (refer Map No. MP-II/CMDA.6/2008 and Map No. MP-II/CMDA.7/2008)

1. Notwithstanding anything contained in the Master Plan / Detailed Development plan or in these Regulations, with the prior approval of the Authority, the Executive Authorities of local bodies (viz. the Corporation of Municipalities concerned)may under their Act provisions, prescribe street alignments with proposed road width higher than those given in the Master plan / Detailed Development plan or in these regulations.





#### 03.09.2014 CAD LAB - துவக்கவிழா

அகில இந்திய முன்னாள் தலைவர் R. இராதாகிருட்டிணன் அவர்கள் K.G. Colleg of Civil Engineering - கல்லுரியில் கட்டடப்பொறியாளர் மாணவர்களுக்காக CAD LAB -யை துவக்கி வைத்து சிறப்புரையாற்றினார்.

K.S. Venkatraman & Co நிறுவன மேலாண்மை இயக்குநரும் நமது நிரந்தர உறுப்பினருமான திரு. R. அஷ்வின் குமார் அவர்கள் நமது மய்ய அலுவலகத்திற்கு வருகைபுரிந்து மய்யத்தலைவர் திரு. R. சிவக்குமார், அகில இந்திய துணைத்தலைவர் திரு. L. மூர்த்தி, மாநிலச் செயலாளர் திரு. N. ரகுநாதன், காப்பாளர் திரு. J.R. சேதுராமலிங்கம், முன்னாள் மாநிலத்தலைவர் திரு. Mu. மோகன், கவுரவ செயலளார் திரு. A.N. பாலாஜி ஆகியோருடன் தொழிலாளர் வருங்கால வைப்புநிதி (EPF) பற்றிய பிரச்சனைகளை கலந்தாலோசித்தார்.

#### 04.09.2014

#### மாநிலத்தலைவர் வருகை

நமது அலுவலகத்தில் அகில இந்திய துணைத்தலைவர், திரு.L. மூர்த்தி, திரு, D.R. சேகர் மாநிலத்தலைவர் மற்றும் திரு. N. ரகுநாதன், மாநிலச் செயலாளர், மாநில அளவிலான குழுக்களின் பிரச்சனைகள் குறித்து ஆலோசித்து அரசுக்கு கடிதங்கள் அனுப்பி வைக்கப்பட்டன.

#### 08.09.2014

#### தொழிலாளர் நல ஆணையர் கூட்டம்

பல்வேறு பணியிடங்களில் வேலை செய்யும் தொழிலாளர்களுக்காக ஓய்வு இல்லம் அமைப்பது பற்றி தமிழக முதல்வர் சட்டசபையில் அறிவித்ததையொட்டி, தொழிலாளர் நல ஆணையர் அவர்கள் தலைமையில் ஓய்வு இல்லம் அமைப்பதை பற்றிய கலந்தாலோசனைக்கூட்டம் தொழிலாளர் நல ஆணையர் அலுவலக வளாகத்தில் நடைபெற்றது. தென்னக மய்யம் சார்பாக அகில இந்திய துணைத்தலைவர் திரு. L. மூர்த்தி, மாநிலச்செயலாளர் திரு. N. ரகுநாதன், பயிற்சி முகாம் துணைக்குழுத்தலைவர் திரு. C. சதீஷ் குமார் ஆகியோர் கலந்து கொண்டு தங்கள் கருத்துக்களை பதிவு செய்தனர்.

#### 11.09.2014 CMDA MEETING

Chennai Metro Politon Development Authority (CMDA) சார்பாக Second Master Plan வன் திட்டங்களை நிறைவேற்றுவதை கண்காணிக்க Monitoring and Review committees அமைக்கப்பட்டுள்ளது. அத்தகைய Committee -களில் Shelter Committee ஒன்று அமைக்கப்பட்டு Shelter Sector -ன் கொள்கைகளை நிறைவேற்றுவதை கண்காணிக்கிறது. Shelter Committee வன் முதற் கூட்டம் Secretary to Govt. H & UD Asst, Govt. of Tamil Nadu and Vice Chairmaan (I/C) CMDA அவர்கள் தலைமையில் மாலை 4 மணி அளவில் CMDA அலுவலகம், சென்னை - 8 ல் நடைபெற்றது. அக்கூட்டத்தில் தென்னக மய்யம் சார்பாக மய்யத்துணைத்தலைவர் திரு. O.K. செல்வராஜ், இணைச் செயலாளர்

திரு. S. இராமப்பிரபு, செயற்குழு உறுப்பினர் திரு.S. நேதாஜி ஆகியோர் கலந்து கொண்டு தங்கள் கருத்துக்களை பதிவு செய்தனர்.

#### 15.09.2014 பயிற்சி முகாம்

கட்டுமானத் தொழிலில் ஈடுபட்டுள்ள Site Engineers / Supervisors மற்றும் ஒப்பந்ததாரர்கள் அறிந்திருக்க வேண்டிய கீழ்கண்ட பொருள்கள் மீது பயிற்சி முகாம். பயிற்சி முகாம் துணைக்குழுத் தலைவர் திரு. C. சதீஷ் குமார் அவர்களால் சிறந்த முறையில் ஏற்பாடு செய்யப்பட்டது. மய்யத்தலைவர் திரு. R. சிவக்குமார் பயிற்சியில் கலந்து கொள்ள வந்திருந்த அனைவரையும் வரவேற்று பயிற்சி முகாமை துவக்கி வைத்தார். அகில இந்திய முன்னாள் தலைவர் திரு. M. கார்த்திகேயன் அவர்கள் பேசுகையில் ஏற்கனவே அறிந்திருக்கும் கட்டுமானக் கல்வியும், அனுபவமும்



இது போன்ற பயிற்சி முகாம்கள் மூலமாக மேலும் மேன்மை அடையும் என்றும் இந்த சந்தர்ப்பத்தை நல்ல முறையில் பயன்படுத்திக் கொள்ளுமாறும் கேட்டுக்கொண்டார்.

- Fundamental of Structures (Foundation to roof) என்ற பொருள் மீது பொறியாளர் A. கார்த்திகேயன் - மேலாண்மை இயக்குநர், Karthikeyan Associates மற்றும் நிரந்தர உறுப்பினர் - தென்னக மய்யம், பயிற்சி வகுப்பை மிகவும் எளிமையாகவும், தெளிவாகவும் நடத்தினார்.
- Preparation for New Project என்ற பொருள் மீது பொறியாளர் S. இராமப்பிரபு - மேலாண்மை இயக்குநர் Ramson Associates மற்றும் இணைச் செயலாளர் தென்னக மய்யம் பயிற்சி வகுப்பை Power Point யை கையாண்டு நடத்தினார். மேலும் அவர் முக்கியமாக வீடு அல்லது மனை வாங்குபவர்கள் கட்டாயமாக தெரிந்திருக்க வேண்டிய விவரங்களை தெரிவித்தார். எந்த ஒரு

விவரமும் தெரிந்து கொள்ளாமல் வாங்குபவர்கள் படும் இன்னல்களை தெரிவித்தார்.

#### 24.09.2014 BAICON -2015 ROAD SHOW

9,10, மற்றும் 11 தேதிகளில் சென்னை வர்த்தக வளாகத்தில் அடுத்த ஆண்டு 2015 ஜனவரி மாதம் நடைபெறவுள்ள baicon-2015 International Cnstruction Equipments and Technology Expo வை முன்னிட்டு Principal Sponsor -களில் ஒருவரான Universal Construction Machinery நிறுவனத்தின் சார்பாக Hotel Le-Meridian-Pune-யில் Road Show மிகவும் சிறப்பாக ஏற்பாடு செய்யப்பட்டது. அதில் Southern Builders Charitable Trust வன் தலைவர் திரு. R. இராதாகிருட்டிணன், BAICON -2015 குழுத்தலைவர் திரு. J.R. சேதுராமலிங்கம், துணைத்தலைவர்கள் திரு. Mu. மோகன், திரு. L. வெங்கடேசன், மய்யத்தலைவர் திரு. R. சிவக்குமார், நிரந்தர உறுப்பினர் திரு. R. கிருஷ்ணமூர்த்தி ஆகியோர் கலந்து கொண்டனர்.

### Build For Tomorrow With a Mind for Day After (Theme of Builders' Day 2014)

The proverb goes: As you sow, so you reap. Our today's act of design & construction of structures will have a very important effect on the future. So our acts & thoughts should primarily be aimed for the future.

It is standard practice that when we plan for a construction we take into account the need of the next 50 years or so, if it is a public structure and at least 30-40 years. If it is a private structure. The reasons are two fold : one is that the structure should not be made to pay for the need of people who would come to this earth 70 years from now – you save for your children or grand children not for great, great, grand children.

The natural resources that we are using for construction work do not have a perennial character. If these are continuously used a day will definitely come when we shall have nothing left. Moreover with technological advances, the need also changes. Here comes the necessity of evolution of construction material & procedure. One day we replaced timber with steel & concrete and unless we put our mind today to replace steel, concrete, sand, stone chips etc with something more matching & resonating with today's world, even God may not be helpful to us.

Whatever we construct and whenever we construct, it has to be need based. Modern construction is not a hassle free process, unlike good old days, and a new construction is invariably a product of some destruction of natural asset. We are yet to understand the full gravity of this negative effect. So we need to be careful about what we construct & how we construct especially because market demands may not necessarily be need based and at time may lead us to ruins.

Regards

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Sushanta Kumar Basu

President, Builders'association of India



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4	2	3	1	7	8	5	9	6				5		7			
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Thanking you in anticipation your early response.

With regards,

A.N. Balaji Hon. Secretary



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உங்களை உயர்வடையச் செய்கிறது.



# Cement, Concrete and Structures

**Dr.L.Ramajeyam,** Ph.D.,M.E.(struct).,F.I.E.,F.I.V.,MISTE,C.Engg.(Ind). Structural Engineer, Dean Civil Engineering, Meenakshi Sundararajan Engineering College Former Principal P.T.Lee.Chengalvaraya Naicker Polytechnic College



The following questions are raised

- 1. What is the concept behind pre-stressed concrete Member?
- 2. Why nowadays pre-stressing concrete Members are used?
- 3. What is Pre-stressed Member and Post tensioned member?

#### We will discuss in detail

#### Development

In order to capture the idea of how pre-stressing works, imagine a barrel made of wooden staves and metal bands. When ropes or metal bands were wound around the wooden staves to form a barrel. When the bands were tightened, they were under tensile prestress, which in turn created compressive prestress between the staves and enabled them to resist hoop tension produced by internal liquid pressure. In other words, the bands and the staves were prestressed before they were subjected to any service loads.

In more formal terms, prestressing means the intentional creation of permanent stresses in a structure or assembly to improve its behavior and strength under various service conditions.

Prestressing tendons (generally of high tensile steel cables or rods) are used to provide a clamping load, which produces a compressive stress to offset the tensile stress that the concrete compression member would otherwise experience due to a bending load.

#### **History of Prestressing**

The art of prestressing concrete evolved over many decades and from many sources, but we can point to a few select instances in history that brought about this technology. In the United States, engineer John Roebling established a factory in 1841 for making rope out of iron wire, which he initially sold to replace the hempen rope used for hoisting cars over the portage railway in central Pennsylvania. Later, Roebling used wire ropes as suspension cables for bridges, and he developed the technique for spinning the cables in place.

During the 19th century, low-cost production of iron and steel, when added to the invention of portland cement in 1824, led to the development of reinforced concrete. In 1867, Joseph Monier, a French gardener, patented a method of strengthening thin concrete flowerpots by embedding iron wire mesh into the concrete. Monier later applied his ideas to patents for buildings and bridges.

Swiss engineer Robert Maillart's use of reinforced concrete, beginning in 1901, effected a revolution in structural art. Maillart, all of whose main bridges are located in Switzerland, was the first designer to break completely with the masonry tradition by putting concrete into forms technically appropriate to its properties – yet visually surprising. His radical use of reinforced concrete revolutionized masonry arch bridge design.

The idea of prestressing concrete was first applied by Eugene Freyssinet, a French structural and civil engineer, in 1928 as a method for overcoming concrete's natural weakness in tension. Prestressed concrete can now be used to produce beams, floors or bridges with a longer span than is practical with ordinary reinforced concrete.

#### Materials

The prestressing reinforcement must be highstrength multi-wire strand, high-strength steel wire, or high-strength alloy bars of the grade and type as specified by the design engineer.

Stronger concrete is usually required for prestressed





than for reinforced work. Present practice calls for a minimum 28-day compressive strength prescribed in the Indian standard code IS:1343-1980 IS 40N/mm2 for pre-tensioned members and 30N/mm2 for post-tensioned members members. High strength is necessary in prestressed concrete for several reasons. First, in order to minimize cost, commercial anchorages for pre-stressing steel are always designed for high-strength concrete. Hence weaker concrete either will require special anchorages or may fail under the application of prestress. Also, concrete of high compressive strength offers high resistance in tension and shear as well as in bond and bearing, and is desirable for prestressed concrete.

Another factor is that high-strength concrete is less prone to shrinkage cracks. It also has a higher modulus of elasticity and smaller creep strain, resulting in smaller loss of prestressing in the steel.

#### **Classification and types**

Prestressed concrete structures can be classified in a number of ways, depending upon their features of design and construction. The following types of prestressing can be accomplished in three ways: pretensioned concrete, and bonded and unbonded post-tensioned concrete.

Pretensioned concrete is cast around already-tensioned tendons. This method produces a good bond between the tendon and concrete, which both protects the tendon from corrosion and allows for direct transfer of tension. The cured concrete adheres and bonds to the bars, and when tension is released it is transferred to the concrete as compression by static friction. However, it requires stout anchoring points between which the tendon is to be stretched, and so the tendon usually forms a straight line.

Most pretensioned concrete products are prefabricated in a factory and must be transported to the construction site, which limits their size. Examples of pretensioned products are balcony elements, lintels, columns, solid slabs, hollow core slabs, tees, walls, sandwich panels, ledger beams, I-beams, bulb-T beams and foundation piles.

#### Bonded post-tensioned concrete

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Bonded post-tensioned concrete is the descriptive term for a method of applying compression after pouring concrete and the curing process (in situ). The concrete is cast around curved ducts made of plastic, steel or aluminum that are placed in the area where tension would occur in the concrete element. A set of tendons is fished through the ducts before the concrete is poured. Once the concrete hardens, the tendons are tensioned by hydraulic jacks that react against the concrete member. When the tendons have stretched sufficiently, according to design specifications, they are wedged in position and maintain tension after the jacks are removed, transferring pressure to the concrete. The duct openings are then grouted to protect the tendons from corrosion.



**Bonded Post-Tensioned Concrete** 



**Unbonded Post-Tensioned Concrete** 

This method is commonly used to create monolithic slabs for house construction in locations where expansive soils create problems for the typical perimeter foundation. All stresses from seasonal expansion and contraction of the underlying soil are taken into the entire tensioned slab, which supports the building without significant flexure.

Post-stressing is also used in the construction of various bridges, both after concrete is cured after support by falsework and by the assembly of prefabricated sections, as in the segmental bridge. The advantages



of this system over unbonded post-tensioning are:

- Large reduction in traditional reinforcement requirements
- Tendons can be easily 'weaved,' allowing a more efficient design approach
- Higher ultimate strength due to the bond generated between the strand and concrete
- No long-term issues with maintaining the integrity of the anchor/dead end



Multistrand post-tensioning anchor



**Rolls of post-tension cables** 

Unbonded post-tensioned concrete differs from bonded post-tensioning by providing each individual cable permanent freedom of movement relative to the concrete. To achieve this, each individual tendon is coated with grease and covered by a plastic sheathing formed in an extrusion process. The transfer of tension to the concrete is achieved by the steel cable acting



Pulling anchors for post-tension cables



Hydraulic jack for tension cables



**Methods of Prestressing** 

against steel anchors embedded in the perimeter of the slab.

The disadvantage over bonded post-tensioning is the fact that a cable can destress itself and burst out of the slab if damaged (such as during repair on the slab).





**Cable conduits in formwork** 

The advantages of this system over bonded post-tensioning are:

- The ability to individually adjust cables based on poor field conditions
- Post-stress grouting is eliminated
- The ability to destress the tendons before attempting repair work

#### Advantages of prestressed concrete

Prestressed concrete is one of the most reliable, durable and widely used construction materials in building and bridge projects around the world. It has made significant contributions to the construction industry, the precast manufacturing industry and the cement industry as a whole. It has led to an enormous array of structural applications, including buildings, bridges, foundations, parking garages, water towers, nuclear reactors, TV towers and offshore drilling platforms.

The advantages of prestressed concrete include:

Lower construction cost

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• Thinner slabs, which are especially important in high-rise buildings where floor thickness savings

can translate into additional floors for the same or lower cost

- Fewer joints since the distance that can be spanned by post-tensioned slabs exceeds that of reinforced construction with the same thickness
- Longer span lengths increase the usable unencumbered floorspace in buildings and parking structures
- Fewer joints lead to lower maintenance costs over the design life of the structure, since joints are the major locus of weakness in concrete buildings.

The terms commonly used in prestressed concrete

#### Wires

Prestressing wire is a single unit made of steel.

#### **Strands**

Two, three or seven wires are wound to form a prestressing strand

#### Tendon

A group of strands or wires are wound to form a prestressing tendon.

#### Cable

A group of tendons form a prestressing cable

#### Bars

A tendon can be made up of a single steel bar. The diameter of a bar is much larger than that of a wire.



**Prestressed Precast I-Beams** 



# **METHODS OF VALUATION OF PROPERTY**

### I. Rental Method (for developed and rented property)

#### Steps

nual Rent	= ,	Α.	
duct outgoings:			
Property taxes	=	Actual or leviable	
Maintenance	=	Max. 10% of 'A'	
Captial Repairs	=	Estimated	
Insurance	=	Actual	
<b>Collection Charges</b>	=	2 to 6% of 'A'	
Service charges	=	Actual	
Total	=		= B
t income A-B			= C
d out Y.P. allowing in	nter	rest on	
pital at % and reden	npti	on of Capital at % for future life of structure	e = D
pitalized value C x D			= E
Add	F	eversionary value of land adopting	
	i	nterest same as applicable for secured	
	g	round rent future life of structure	= F
Value	E	+ F	
	Annual Rent educt outgoings: Property taxes Maintenance Captial Repairs Insurance Collection Charges Service charges Total et income A-B ad out Y.P. allowing in pital at % and redem pitalized value C x D Add Value	inual Rent= /educt outgoings:Property taxes=Maintenance=Captial Repairs=Insurance=Collection Charges=Service charges=Total=et income A-B=out Y.P. allowing interpital at % and redemptipitalized value C x DAddFingValueE	Inval Rent= Aeduct outgoings:Property taxes= Actual or leviableMaintenance= Max. 10% of 'A'Captial Repairs= EstimatedInsurance= ActualCollection Charges= 2 to 6% of 'A'Service charges= ActualTotal=Income A-B- Actual at % and redemption of Capital at % for future life of structurepital at % and redemption of Capital at % for future life of structureAddReversionary value of land adopting interest same as applicable for secured ground rent future life of structureValueE + F

### II. Lands and building method (For underdeveloped and owner occupied or vacant)

#### Steps

- 1. Find out the value of building adopting suitable plinth area rates.
- 2. Allow depreciation for the spent life
- 3. Add land value.
- III. Profit Method (For theatres and hotels) Steps
  - 1. Find the Gross income from Regular shows,<br/>Stalls and advertisements, etc.= A
  - 2. Deduct operating expenses such as publicity, salary of staff, carbon, postages,



	insurance and other resonable expenses.		= B
3.	Deduct owner's risk and enterprises upto 10%		= C
4.	less outgoings		
	(a) Repairs and maintenance actual or estimated		
	(b) Ground rent		
	(c) Taxes		
	(d) Extra sinking fund for furnitures and projectors	= D	

#### IV. Development Method (For Underdeveloped Property) Steps

- 1. Determine the nature and extent of development permissible.
- 2. Find out the gross annual income that can be fetched by the property after development.
- 3. Find out the capitalized value as discussed in rental method.
- 4. Determine the capital expendiutre required for development.
- 5. Present value of the property before development will be deffered capital value of the property after development less the present value of capital expenditure involved in development.

### RELATIONSHIP OF VARIOUS ITEMS WITH TOTAL COST OF BUILDING

The following data information are only approximate and vary according to the location, nature of works ,structures, specifications, method of constructions ,etc. For general idea and for preliminary estimate, these will be helpful.

### **BUILDING WORKS**

- 1. Cost of labour and materials
  - i) Cost on account of labour
  - ii) Cost on account for materials
- 2. i) Cost of foundation and plinth
  - ii) Cost of superstructure
- 3. Cost of second storey

- 30 to 35% of the total cost
- 70 to 65% of the total cost
- 10 to 15% of the total cost
- 90 to 85% of the total cost
- 85 to 90% of the total cost
- Cost of different parts of percentage break up of building (excluding sanitary and electrical works)



i)	Earth in excavation and filling	-	1/2% of the total co
ii)	Concreting in foundation	-	5% of the total cost
iii)	Damp proof course	-	1% of the total cost
iv)	Brickwork	-	34% of the total cos
v)	Roffing	-	20% of the total cos
vi)	Flooring	-	6% of the total cost
vii)	Doors and windows	-	16% of the total cos
viii)	Plastering and pointing	-	10% of the total cos
ix)	White washing ,colour washing		
	Painting, etc.	-	2% of the total cost
x)	Miscellaneous	-	5-1/2% of the total
		-	100% of the total co
Cost	of Sanitary and Electrical Works		
i)	Sanitary and water supply installati	on -	8% of the total cost
::)	Electric installation evolvation fama		00/ of the total cost

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  - II) Electric installation excluding fans -
- 8% of the total cost

### பொருளாளர் மடல்



அன்பார்ந்த உறுப்பினர்களுக்கு,

நமது மய்யத்தின் வலிமை பெருகவும் நாம் ஒன்றுபட்டு உறுப்பினர்களின் இடர்பாடுகள் நீங்கிடவும் இந்த வருடமும் உங்களின் நல்லாதரவு தொடர்ந்து கிடைக்க வேண்டும் என்று கேட்டுக்கொள்கிறேன். மேலும் மய்யத்திற்கு வருடாந்திர புதிய உறுப்பினர்களையும், நிரந்தர உறுப்பினர்களையும் அதிக அளவில் சேர்க்க உதவுமாறு கேட்டுக் கொள்கிறேன்.

உங்கள் ஆதரவினால்தான் அகில இந்திய அளவில் உறுப்பினர்கள் எண்ணிக்கையில் அதிகம் பெற்ற மய்யம் என்ற பெருமைக்கான விருதை தொடர்ந்து பெற்று வருகிறோம் என்பதை மிக்க மகிழ்ச்சியுடன் தெரிவித்துக்கொள்கிறோம்.

இந்த உறுப்பினர் எண்ணிக்கையை மேன்மேலும் உயர்த்தி இந்த வருடமும் அதிக உறுப்பினர்களை சேர்த்த மய்யம் என்ற பெருமையை பெற உங்கள் அனைவரையும் என் இருகரம் கூப்பி மிகவும் அன்புடன் கேட்டுக்கொள்கிறேன்.

ஆண்டு சந்தா உறுப்பினர்கள் 2014-15 ம் ஆண்டிற்கான சந்தாத் தொகையை இந்த வருடம் உடனடியாக தென்னக மய்ய அலுவலகத்தில் செலுத்தி உறுப்பினர் சேர்க்கையை புதுப்பித்துக் கொள்ளுமாறு பணிவன்புடன் கேட்டுக்கொள்கிறேன். சந்தாத்தொகையை பணமாகவோ அல்லது காசோலையாகவோ "பில்டா்ஸ் அசோசியேஷன் ஆப் இந்தியா" என்ற பெயரில் மேலே கண்ட விலாசத்திற்கு நேரடியாகவோ தபால் மூலமாகவோ அனுப்பி வைக்குமாறு கேட்டுக்கொள்கிறேன்.

2014-15 ஆம் ஆண்டிற்கான உறுப்பினர்கள் சந்தா விபரம்

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