Southern Builder

Bulletin of Builders Association of India - Southern Centre

For Private Circulation only

JANUARY 2022

XXX ALL INDIA BUILDERS CONVENTION

XXX ALL INDIA BUILDERS' CONVENTION

Role of construction in nation building

March 11, 12 & 13 2022

RADISSON BLU RESORT TEMPLE BAY
Mamallapuram, Chennai, Tamilnadu

Hosted by:
BUILDERS' ASSOCIATION OF INDIA - SOUTHERN CENTRE
Plot No. A1, 1st Main Road, Opp. AIEMA, Industrial Estate, Ambattur, Chennai 600 058.
T: +91 44 2625 2006 E baisouthern1950@gmail.com | W www.baisouthern.com

ESTD: 1950

Organised by SOUTHERN CENTRE
www.baisouthern.com

Jayaraj International (P) Ltd.,

Jayaraj
Leaders in Timber

(an ISO Certified Company 9001:2008)

Teak wood Logs | Teak Sizes | Door & Window Frames
Hard wood Logs & Sizes | Teak Planks | Doors

Leaders in Teak Wood

T. Raja Sekhar
Managing Director

Timber Yard : 19, Puzhal Union Road, Vadaperumbakkam, Chennai - 600 060.

Corporate Office : 12/1, First Floor, United India colony, 4th Main Road, Kodambakkam, Chennai - 600 024.

Contact : 09840070992, 09840815812, 09382666666, 07092212666

Email Id : jayarajenquiry@gmail.com | **Website:** www.jayarajtimber.com









Southern Builder

Bulletin of Builders Association of India - Southern Centre

For Private Circulation only

Offical Journal of Builders' Association of India - Southern Centre. January - 2022

Builders' Association of India
Southern Centre
Plot No. A1, 1st Main Road, Opp. to AIEMA, Industrial Estate, Ambattur, Chennai - 600 058.
(T) 044-2625 2006 | (E) baisouthern1950@gmail.com | (W) www.baisouthern.com

CONTENTS

ஆசிரியர் மடல்

அன்புடையீர் வணக்கம்,

சுழன்றும் ஏர்ப்பின்னது உலகம் அதனால்
உழந்தும் உழவே தலை

- குறள்

உலகம் பல தொழில் செய்து சுழன்றாலும் உழவுத்தொழிலுக்கு பின்தான் நிற்கின்றது என்று திருவள்ளுவர் உழவுத்தொழிலின் பெருமையைப் பற்றியும் அதன் முக்கியத்துவத்தைப் பற்றியும் மிகத் தெளிவாக கூறியுள்ளார். விவாசயிகள் கடவுளுக்குச் சமமாகக் கருதப்பட வேண்டியவர்கள்.

உலக மக்கள் பல துறைகளிலும் வென்று சாதனை படைத்தாலும் தொழில்நுட்பத்தில் வளர்ச்சி பெற்றாலும் உணவிற்கு விவசாயியை தான் நம்பி இருக்க வேண்டும் என்பதுதான் நிதர்சனமான உண்மை. விவசாயி சேற்றில் கால் வைத்தால்தான் நாம் சோற்றில் கை வைக்க முடியும் என்பது அனைவருக்கும் தெரிந்த உண்மை. ஆகையால் விவசாயியின் உழைப்பையும் விவசாயத்தின் உயர்வையும் புரிந்த நாம் கடின உழைப்பின் வழியாக உருவாக்கிய உணவை வீணடிக்காமல் இருக்க வேண்டும்.

சேற்றில் கால் வைத்து இரு கை கூப்பி கடவுளை வணங்கி நாற்று நட்டு தண்ணீர் பாய்ச்சி தன் கடின உழைப்பால் வியர்வை சிந்தி நெல்மணியை கையில் எடுக்கும் வரை பாடுபடும் ஒவ்வொரு விவசாயிக்குத்தான் தெரியும் அந்த ஒரு பருக்கை உணவின் மதிப்பு. விவசாயி விவசாயத்தின் மூலம் உழைத்து நமக்கு கொடுத்த உணவின் அருமையை மறந்து உணவை வீணடித்து அலட்சியமயாக இருப்பது தவறு.

இன்று ஒரு வேளை உணவு கிடைத்ததே பெரிய பாக்கியம் என்று ஒரு பருக்கையை கூட வீணடிக்காமல் உணவின் அருமையை உணர்ந்தவர்கள் இருக்கத்தான் செய்கிறார்கள். தானத்தில் சிறந்த தானம் அன்னதானம் என்பதை அறிந்து அதன் சிறப்பை உணர்ந்தவர்கள் உணவை வீணடிக்க மாட்டார்கள். மக்கள் தொகையில் 30 சதவிகிதம் பேர் முழுமையான ஊட்டச்சத்து நிறைந்த உணவு கிடைக்காமல் வறுமையில் வாடுகின்றனர் என்று 2020 ஆய்வுகள் தெரிவிக்கின்றன.

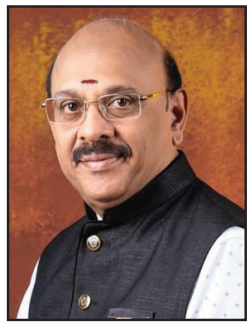
இன்றைய காலகட்டத்தில் உலகின் பல நாடுகளில் பஞ்சமும் பட்டினியும் தலைவிரித்தாடுகிறது. மக்களின் அன்றாட உணவுத் தேவைகூட பூர்த்தி செய்யப்படாமல் போகிறது. சமீப காலத்தில் ஆப்கானிஸ்தான் நாட்டில் உணவுப் பற்றாக்குறையால் மக்கள் திண்டாடி வருசின்றனர். அங்குள்ள சில நல்ல உள்ளங்களின் உதவிக்கரங்களால் கொடுக்கப்படும் ஒரு ரொட்டித் துண்டுக்காக நீண்ட வரிசையில் நின்று அவதியுற்று தங்களின் வயிற்றுப் பசியைப் போக்க வெகு நேரம் நிற்கும் அவல நிலையைப் பார்த்தால் கல் நெஞ்சமும் கண்ணீர் சிந்தும்.

தனி ஒருவனுக்கு உணவில்லை எனில் ஜகத்தினை அழிப்போம் என்றார் பாரதி இன்று உணவில்லை என்ற வார்த்தையை அழிக்க நாம் ஒவ்வொருவரும் இந்தியாவின் முதுகெலும்பாக கருதப்படும் விவசாயத்தை காப்போம். விவசாயிகளின் துயர் துடைப்போம். உணவை வீணடிக்காமல் இருப்பது நாம் ஒவ்வொருவரும் விவசாயிகளுக்கு காட்டும் நன்றி கடன் ஆதலால் உணவின் அருமை அறிந்து நம்மால் இயன்ற அளவிறகு அன்னதானம் அளித்து ஜகத்தினை காப்போம். உலக மக்களின் உயிர் வாழ்விற்கு உன்னதமான உழவு தொழிலையும் நாட்டின் உள்கட்டமைப்பை வலிமைப்படுத்தும் கட்டுமானத் துறையும் எதிர் வரும் காலத்தில் மேன்மையுற செய்யும் வகையில் அரசு நிதி நிலை அறிக்கை மற்றும் அறிவிப்புகளை வெளியிட்டு நாட்டையும் நாட்டு மக்களையும் காத்திட வேண்டும்,

இந்த ஆங்கிலப்புத்தாண்டு கட்டுநர்தம் வாழ்வின் ஒளிமயமாக ஊக்கமும், ஆக்கமும் தரும் ஆண்டாக அமையட்டும்.

என்றும் அன்புடன்
S. அய்யநாதன்

அன்பார்ந்த நண்பர்களே வணக்கம்,



நமது மய்யத்தின் சார்பில் நடைபெறவுள்ள 30வது அகில இந்திய மாநாட்டிற்கான ஏற்பாடுகள் குறித்தும், மேற்கொள்ள வேண்டிய நடவடிக்கைகள் குறித்தும் கலந்து ஆலோசிப்பதற்காக L & T நிறுவன மேலாண் இயக்குநரும், தலைமை நிர்வாகியும் மற்றும் அகில இந்திய கட்டுநர் மாநாட்டின் புரவலருமான திரு. S.N. சுப்பிரமணியம் அவர்கள் அழைத்ததின் பேரில் 03.01.2022 அன்று மாநாட்டுத் தலைவர் திரு. R. இராதாகிருட்டிணன் அவர்கள், மாநாட்டு ஒருங்கிணைப்பாளர் திரு. Mu. மோகன் அவர்கள், பொருளாளர் திரு. L. வெங்கடேசன் அவர்களோடு நானும் நேரில் சந்தித்து கலந்தாலோசனை செய்தோம்

10.01.2022 அன்று பத்மபூஷன் A. ராமகிருஷ்ணா அரங்கில் நடைபெற்ற தென்னக மய்ய மகாசபைக்கூட்டத்தில் 2022-23ம் ஆண்டிற்கான புதிதாக போட்டியின்றி தேர்ந்தெடுக்கப்பட்ட மய்யத்தலைவர், மய்ய நிர்வாகிகள், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்கள் விவரத்தினை தேர்தல் அதிகாரி திரு. J. தாஜூதின் அவர்களும், அவருக்கு துணையாக திரு. S. ஜெயராமன் அவர்களும் அறிவித்தனர். இந்த மகாசபைக்கூட்டத்தில் மூத்த உறுப்பினர்கள், செயற்குழு, மற்றும் பொதுக்குழு உறுப்பினர்களும் கலந்து கொண்டு சிறப்பித்தனர்.

பெருநகர வளர்ச்சி குழுமத்தின் சார்பாக 12.01.2022 அன்று மாலை 3.00 மணி அளவில் நடைபெற்ற கூட்டத்தில் நானும், துணைத்தலைவர் திரு. R. R. ஸ்ரீதர் அவர்களும், மாநிலச் செயலாளர் திரு. S. இராமப்பிரபு அவர்களும் கலந்து கொண்டோம். அக்கூட்டத்தில் திட்டமிடல் அனுமதி வழங்குவதில் ஏற்படும் தாமதம் பற்றி ஆலோசிக்கப்பட்டது.

சத்யம் தொலைக்காட்சி விவாத மேடையில் சேவாரத்னா பீஷ்மா R. இராதாகிருட்டிணன் அவர்கள் கட்டுநர் சமுதாயத்தின் ஒருமித்த குரலாக கட்டுமானப் பொருட்களின் விலையேற்றம் குறித்தும் அதற்கு முக்கிய காரணமாக இருக்கும் போக்குவரத்து செலவின் உயர்வு குறித்து ஆணித்தரமாக எடுத்துரைத்தார். இது அரசின் உடனடி கவனத்திற்கு நிச்சயம் வரும்.

நமது தாய் நாட்டின் 73வது குடியரசு தின விழா 26.01.2022 அன்று காலை 9 மணி அளவில் அறக்கட்டளை வளாகத்தில் சேவாரத்னா பீஷ்மா திரு. R. இராதாகிருட்டிணன் அவர்கள் தேசியக்கொடி ஏற்றி வைக்க குடியரசு தின விழா சிறப்பாக நடைபெற்றது.

கொரோனா பெருந்தொற்று பரவலின் காரணமாக அரசால் நடைமுறைபடுத்தப்பட்ட கட்டுப்பாடுகள் காரணமாக தற்காலிகமாக தள்ளி வைக்கப்பட்டிருந்த 30வது அகில இந்திய கட்டுநர் மாநாடு தற்போது கட்டுப்பாடுகள் தகர்த்தப்பட்டுள்ளதை அடுத்து வரும் மார்ச் மாதம் 11, 12 மற்றும் 13 தேதிகளில் ஏற்கனவே முடிவெடுத்தபடியே மகாபலிபுரம் Radisson Blu Resort Temple Bay–ல் நடத்த திட்டமிடப்பட்டுள்ளது என்பதை மகிழ்ச்சியுடன் தெரிவித்துக் கொள்கிறேன்.

அனைவரும் விரைவாக பதிவு செய்து தவறாது மாநாட்டில் கலந்து கொண்டு சிறப்பிக்க வேண்டுகிறேன்.

என்றும் அன்புடன்

L. சாந்தகுமார்

RETROFITTING OF NON-ENGINEERED BUILDINGS

A.R.Santhakumar
Former Emeritus Professor,
Department of Civil
Engineering IIT Madras

1.INTRODUCTION

Many buildings are informally constructed in a traditional manner without formal design by qualified Engineers or Architects. Such buildings involve stone, brick, concrete blocks, rammed earth, wood posts and thatch roof or combination of some or all the above materials. They are built with mud, lime or cement mortar. Some times combination of mortars having a mix is also used. The safety of these non-engineered buildings against earthquakes is of great concern especially because most losses of lives during past-earthquake have occurred in such buildings. The term non-engineered building is defined rather vaguely to include those which are not specifically designed against seismic forces. In fact such buildings are built mostly with load bearing masonry wall, stud wall and wooden and other construction using combination of load bearing walls, piers in masonry, and columns in RC, steel or wood.

As per the 1991 Census of India, the country has preponderance of non-engineered housing stock in all seismic zones. Out of a total 195.0 million dwelling units, the various wall types used are given in Table 1.

Table 1: Various Wall Types used in India

Wall Type	Total Numbers	Percentage of Total
Earthen walls (mud, unburnt brick/block)	74.7 million	38.3%
Stones walls	21.7 million	11.1%
Burnt Brick walls	68.9 million	35.3%
Concrete walls	3.96 million	2.0%
Wood walls	3.12 million	1.6 %
GI and other metal sheets	1.02 million	0.5%
Bamboo thatch, leaves etc.	21.6 million	11.0%

The earthen and stone which account for 49.4% and burnt brick 35.3% : that is a total of 84.7% are vulnerable, if shaken by an earthquake of moderate to severe intensity. The collapse of masonry and Adobe dwellings gets occurs initiated in earthquakes of intensity V and large scale destruction take place when earthquakes of intensity VII. This was seen in Uttarkashi Earthquake in 1991, Killari earthquake of 1993 and Jabalpur earthquake of 1997, resulting in a large loss of lives. For safety of human lives and property, it is therefore essential that all new buildings are built with earthquake resisting features and existing vulnerable buildings in Zones V, IV and III without such features should be retrofitted in order to achieve at least the minimum life safety in future events.

This document describes guidelines and retrofit schemes for non-engineered traditional buildings with a view to ensure prevention of collapse of such buildings due to future possible earthquakes.

2. REPAIR RESTORATION AND STRENGTHENING CONCEPTS

Buildings decay due to weather, load effects and foundation settlement etc. The building, if it has to resist an earthquake shock it should be safe under normal load and resist the lateral load without collapse. These types of intervention necessary to enhance the performance of the building can be broadly grouped under the following three categories - Repair, Restoration and Strengthening.

2.1 Repairs

The purpose of repairs is to rectify the observed defects and bring the building to reasonable architectural shape so that all services start functioning. This enables the use of building for its intended purpose.. Repairs do not improve structural strength or stability. In fact a repaired building may be deceptive. It may hide the structural defects. Outwardly it may appear good. It may suffer from structural weakness.. Such weakness may cause collapse during future earthquakes.

Repairs include following interventions

i) Patching cracks and plastering.
ii) Fixing doors, windows, broken glass panes.
iii) Setting right electrical installation, wiring etc.
iv) Fixing services such as gas lime, plumbing services including water pipes, sewerage line etc..
v) Rebuilding non-structural walls, partition walls, plastering etc.
vi) Re-fixing roof tiles
vii) Repair to flooring and correcting slope for drainage etc
viii) Providing decorative finishes, white washing.
ix) Painting wood work.
x) Attending to root leakage during rain etc.

In fact, repairs will hide the existing structural defects and hence donot guarantee for good performance when the structure is shaken by an earthquake.

2.2 Restoration

The main purpose is to structurally treat the building with an aim to restore its original strength. This intervention is undertaken for a damaged building if one is sure that the original strength provides an adequate level of safety for future earthquake disasters.

The action will involve cutting portions of wall and rebuilding them, inserting support, underpinning foundation, strengthening a weak component etc.

Some of the common restoration techniques are:

i) Removal of a partition or defective wall and rebuilding it with richer mortar
ii) Crack sealing using epoxy to regain the strength of a structural component.
iii) Adding wire mesh on either side of a cracked component, crack stitching etc. with a view to strengthen it.

2.3 Strengthening of buildings against earthquake loads

Seismic forces are the most serious dynamic forces. Although various approaches to make the building safe by minimizing natural period, increasing damping etc, are practiced most common intervention for non-engineered building is strengthening it by various measures.

The seismic resistance of old existing non-engineered buildings is lowered with passage of time due to material property degradation and structural strength loss. This deterioration may occur due to climatic, biological or chemical causes. Strengthening is undertaken to enhance the original strength to the current requirement so that the desired protection of lives can be guaranteed as per the current codes of practice against possible future earthquakes. The level of strengthening should also consider the remaining life of the structure being strengthened.

Strengthening of a building will involve either component strength enhancement or structural system modification or both. It is expected to improve the overall strength in the following ways:

i) Increasing the lateral load resistance by reinforcing or by introducing new walls and columns.
ii) Introducing the continuity between the components of the structure to achieve ductile performance. This will include connection of wall with roof, including bands and ties between walls and introducing connections between roof and walls and wall to wall.
iii) Eliminating existing weakness in an existing building by introducing symmetry in plan, changing location of mass, reducing large openings etc.
iv) Avoiding brittle modes of failure. This will include improving anchorage and providing bracings in walls.

The extent of modification has to be determined based on the principle of introducing sufficient anchorage of all elements, providing bracing to vertical load carrying members in order to avoid premature mode of failure and to ensure continuity of all structural components in a building.

3. REPAIR MATERIALS

Cement and steel are common materials that are used for repair work. Various types of cement with properties such as shrinkage compensating, low heat and sulphate resistance are preferred for specific repair applications. Steel in the form of bolts, threaded rods, angles, channels and high strength pre-stressed steel can also be used. Wood, bamboo, casuarinas are often used for temporary supports, A brief summary of a few materials generally used in repair of non- engineered structures are given below:

3.1 Shotcrete

Shotcrete is a process in which compressed air forces mortar through a nozzle to be sprayed on a surface of a building at a high velocity. The materials used in shotcrete are generally same as those used for conventional mortar. The reinforcement provided is generally welded wire fabric and deformed bars tacked onto the surface.

Shotcrete is applied using either wet or dry process. The wet mix consists of cement and aggregate premixed with water and the pump pushes the mixture through the hose and nozzle. Compressed air is introduced at the nozzle to increase the velocity of application.

In the dry mix process, compressed air propels premixed mortar and damp aggregate and at the nozzle end water is added through a separate hose. The dry mix and water through the second hose are projected on to a prepared surface.

Generally Shotcrete gun nozzle is held at 0.6 to 1.8 meter from the surface. In most cases Shotcrete can be applied in a single application for the required thickness. It is versatile as it can also be applied on curved or irregular surface. Its strength after application and its good physical characteristics make it ideal for strengthening weak members

3.2 Epoxy resins

These are used for the following:

1. to bond plastic concrete to hardened concrete
2. to bond rigid materials to one another
3. for patch work
4. for painting over concrete to give colour, resistance to chemicals, water and to give abrasion resistance.

They are excellent binding agents. The low viscosity resins can be injected into small cracks. The higher viscosity material is used as binding agent and for filling larger holes and cracks.

3.3 Epoxy mortar

The Epoxy mortar is made using epoxy resins and suitable sized aggregate (sand). They have high compressive strength, high tensile strength and low modulus of elasticity. In cement mortar or concrete, the inclusion of epoxy can be considered as an incorporation of a second binder into the mix. The polymer mortars are two phase systems which forms co-matrix with cement. In cementations water phase, fine polymer particles of size 0.1 to 0.2 microns are dispersed. In cement polymer system, the polymer particles join and chain link reinforcing and there by increasing tensile and flexural strength. They achieve greater plasticity and tend to reduce the shrinkage stress. Hence they vastly improve the property of plain cement mortar.

3.4 Gypsum cement mortar

Based on hydraulic binder these readymade formulations are tailor made to give repair mortar material which is flowable and shrinkage free. Hence they can be applied in complicated locations and only addition of water is required at site. Cementicious mortars such as gypsum cement mortar have limited use for structural applications and are intended for hand/trowel applications.

3.5 Quick-setting cement mortar

These are patented mortars generally having two components. They come in pre-packed condition. They can be classified as

- Unmodified cementicious
- Polyester or Epoxy resin based
- Polymer modified and cementicious
- Cement/ pozzolanic -modified
- Unmodified cementicious
- Polyester or Epoxy resin based
- Polymer modified and cementicious
- Cement/ pozzolanic -modified

Various surface treatments used are shown in Table-2 indicating their properties and the defects they are intended to treat.

Table 2 : Different types of hand applied mortars

Sl. No.	Defect	Repair mortar type	Properties
1	Minor surface defect	A two pack polymers modified cementicious screed.	Gives a fair face finish. Good water proffing properties. Resist acids and gases.
2.	Surface cavities and honeycombed concrete	Highly adhesive, thixo-tropic mortar	Water proof and anti-carbonation finish. Good resistance to pollution.
3.	Powdery surfaces	A two components surface stabilizer	Binds powdery surfaces and evens out absorption characteristic.
4.	Surface protection	Resin rich water based elastic co-polymer	Highly resistant to CO2 diffusion and self cleaning.
5.	Surface barrier	A water based co-polymer	Resistant to fungal attack.
6.	Non-structural cracks	Non shrinking polyol filler	Easily applied elastic compound and cures at low temperature
7.	Minor voids of approximate size 50 x 50 x 50 mm	Rapid curing polymer modified cemebticious co-polymenr	High Strength when compacted in layers
8.	Major voids approximate size 100x100x100mm	Heavy duty thixotripic fiber reinforced polymer modified cementicious mortar.	Can be applied up to 100mm thick. Easy to mould.
9.	Bonding agent	Polymer modified cementicious surface impregnant.	High penetration into porous concrete creating enhanced adhesion
10.	Protection of steel reinforcement	A highly alkaline two component system of cementicious powder and polymer dispersion which react chemically to passivate steel	High penetration and enhanced adhesion to protect steel.

3.6 Micro-concrete

Based on hydraulic binders these readymade formulations are tailor made to give concrete which is flow able and free of shrinkage. They are applied in complicated location and in thin sections such as those met with in jacketing Table-3 gives important properties of the micro-concrete. They can be made either as type A (normal strength) or type B (high strength) depending on requirement.

Table 3 : Properties of micro concrete

Sl. No.	Properties	Type A	Type B
1	Comprehensive strength N/mm²		
	24 hours	20	10
	3 days	30	15
	7 days	40	30
	28 days	50	40
2	Flexural strength N/mm²		
	28days	5	3.5
3	Tensile strength N/mm²		
	28 days	2	1.5

4	Young's modulus kN/mm²	25	25
5	Un restrained expansion in %	1 to 4	I to 4
6	Fresh concrete density kN/m³	21-22	21-22

3.7 Fiber-reinforced concrete

Fiber reinforced concrete has better tensile strength and toughness compared to conventional concrete. They have also improved energy absorption capacity. These compositions offer high tensile strength, durability, ductility and enhanced energy absorption capacity. They are being increasingly used for structural strengthening.

3.8 Mechanicai anchors

Mechanical type of anchors employs wedging action to provide anchorage. These can provide resistance against shear and tension. Some of these anchorages are specialized patented products which can be designed for a required tension or shear force.

3.9 Fiber or reinforced polymer (FRP and CFRP materials)

Carbon fiber reinforced plastic(CFRP) material consists of strong and stiff carbon fibers (approx. 7 micrometer diameter) embedded in an epoxy resin matrix. It has high strength to weight ratios and corrosion resistance thus helps reduce maintenance cost. They are manufactured in long lengths by pultrusion process, with unidirectional fibers ranging from 50-150mm wide and 1.2 1.4 mm thick having fiber volume content greater than 65%. They are black in color and are about 10 times as strong as mild steel but one fifth of its weight.

They have low density, high fatigue strength, and high wear resistance, vibration absorption and dimensional stability, high thermal and chemical stability. They are suitable to be used as a protective and strengthening "jacket". CFRP wraps can be used to strengthen masonry piers and walls especially for seismic loading.

3.10 Metal plates, steel and aluminum etc.

Application of bonded steel plate can increase the flexural and load carrying capacity, improve stiffness-thus reducing deflection and cracking and enhance shear capacity. The process of strengthening is usually bonding additional reinforcement to the external faces of the structure. The steel plate is attached to the structure either by anchor bolt or by chemical or epoxy bonding. Bolts are often used in conjunction with adhesive to provide mechanical anchor for the plate at the ends to prevent premature de-bonding due to peeling. The bolting also help support the plates whilst the adhesive cures. Sometimes instead of steel plates for strengthening brickwork aluminum plates have also been used.

3.11 Ferro cement

Ferro cement is a type of reinforced cement mortar commonly made of hydraulic cement mortar reinforced with closely spaced layers of small diameter wire mesh". The mesh may be made of metallic or other suitable materials. Fineness of mortar matrix and its composition should be compatible with opening and tightness of the reinforcing system, it is meant to encapsulate. The matrix may contain discontinuous fibers.

Well designed Ferro cement wraps can be an economical alternative to CFRP wraps especially for non engineered construction.

Tax Corner

SECTION 17 : Blocked Credit under GST

திரு. S.D. கண்ணன்
Taxation Committee

Since the Inception of GST, there has been a lot of talk regarding mechanism of Credit Input Tax paid on Inter-state & intra-state Purchase of Goods/Service vis-a-vis flow of Input Tax Credit.

In this Article we are basically covering Sec 17 & no other Section related to Input Tax Credit.

INPUT TAX - Sec 2(62)

"input tax" in relation to a registered person, means the central tax, State tax, integrated tax or Union territory tax charged on any supply of goods or services or both made to him and includes—

the integrated goods and services tax charged on import of goods;

the tax payable under the provisions of sub-sections (3) and (4) of section 9; the tax payable under the provisions of sub-sections (3) and (4) of section 5 of the Integrated Goods and Services Tax Act;

the tax payable under the provisions of sub-sections (3) and (4) of section 9 of the respective State Goods and Services Tax Act; or

the tax payable under the provisions of sub-sections (3) and (4) of section 7 of the Union Territory Goods and Services Tax Act,

but does not include the tax paid under the composition levy;

So will try to decode the Section for better understanding.

Input Tax is Tax (CGST/SGST/IGST/UTGST) Paid by Registered Person on Purchase of Goods & Services made by the Registered Person.

An Input Tax Includes –

- IGST Paid on Import of Goods
- Tax Paid under Reverse Charge Mechanism under CGST Act (Advocate Fees, GTA Etc.)
- Tax Paid under Reverse Charge Mechanism under SGST Act (Advocate Fees, GTA Etc.)
- Tax Paid under Reverse Charge Mechanism under ISGT Act (Import of Service, GTA Etc)
- Tax Paid under Reverse Charge Mechanism under UTGST Act (Advocate Fees, GTA Etc.)

BUT TAX PAID ON PURCHASES FROM COMPOSITION SUPPLIER IS NOT ELIGIBLE INPUT TAX

NOTE - from the Section, we can interpret that only REGISTERED PERSON can Claim Input Tax.

INPUT TAX CREDIT - Sec 2(63)

So definition of Input Tax Credit (ITC) is simple & section reads as –

"input tax credit" means the credit of input tax;

So in simple terms, credit can be construed as Set-off of Tax Paid on Purchases as defined under Sec 2(62) which can be adjusted against GST output liability.

So we have understood 2 important terms to deal with Section 17, now will go through the Main Section i.e. Sec 17generally termed as Blocked Credit or Ineligible ITC of this article clause by clause.

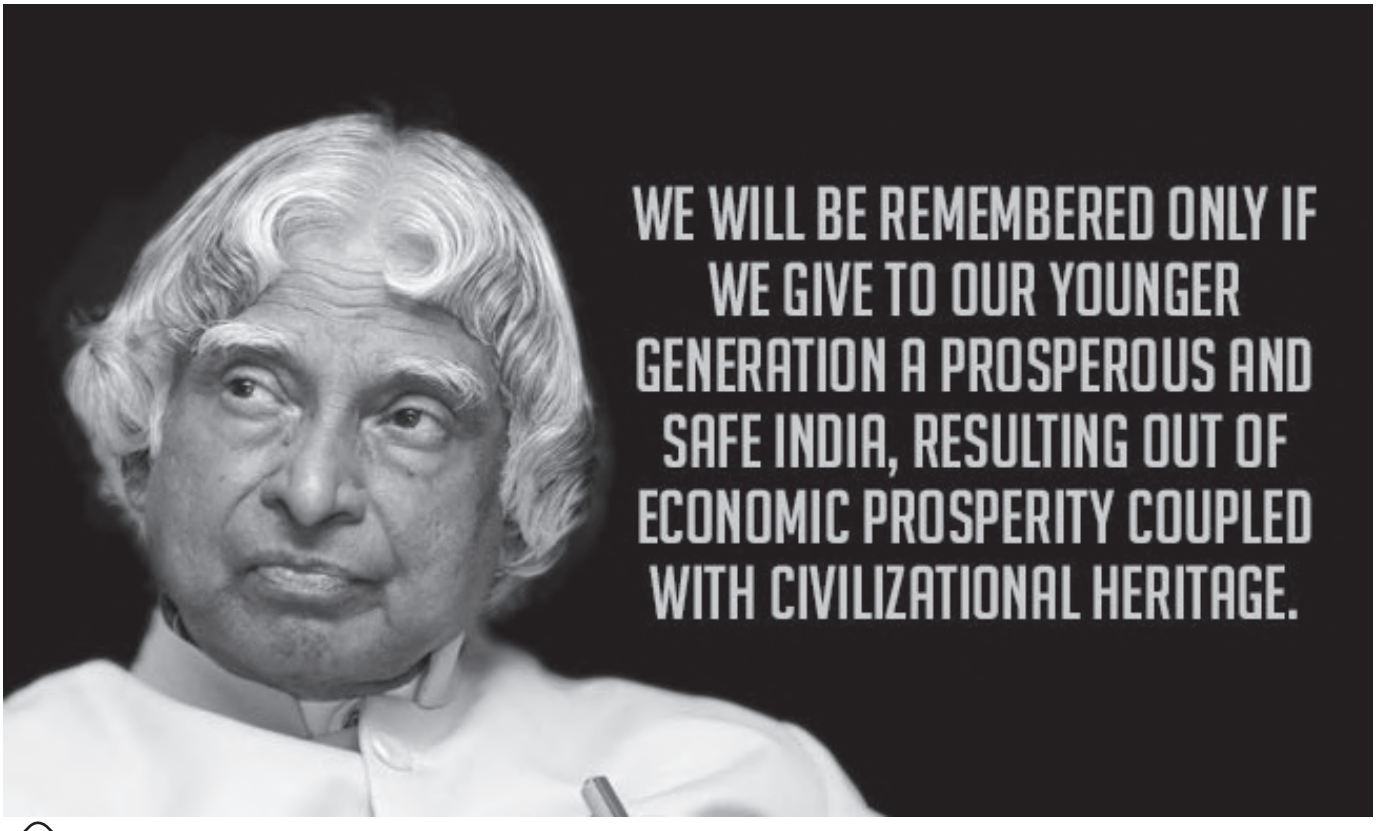
Will directly jump to the Clause by Clause Analysis of Section 17.

I.	**Sec 17(1) :** PURCHASES OF GOODS/SERVICES WHICH ARE USED FOR PERSONAL & BUSINESS USE	Registered Person is allowed to Claimed ITC only to the Extend the Goods/ Services are used for the Purpose of Business. **NOTE** - Rule 42 & 43 of the Act deals with the calculation of Eligible & Ineligible ITC as per Sec 17(1) **Example-** If Computer/Laptop is purchased and same is being used by Registered Person for Business as well as it is being used by some other person of his family or even himself for personal use, then is such cases Sec 17(1) will come into play
II.	**Sec 17 (2) :** PURCHASES OF GOODS/SERVICES WHICH ARE USED FOR MAKING TAXABLE & EXEMPT SUPPLY	Registered Person is allowed to Claimed ITC only to the Extend the Goods/ Services are used for making Taxable Supply (including Zero-rate supply). **NOTE -** Rule 42 & 43 of the Act deals with the calculation of Eligible & Ineligible ITC as per Sec 17(2) **Example -** If Registered Person is Builder & he does have Properties that are sold after completion (Exempt Supply) & before completion (Taxable Supply). In such cases Sec. 17(2) will come into play.
III.	**Sec 17 (3):** TRANSACTIONS TO CONSIDERED FOR EXEMPT SUPPLY U/S 17 (2)	Although Exempt supply is defined u/s 2(47), Sec 17(3) should be read with Explanation (2) of Rule 45 for the Purpose ITC Reversal following transactions are also to be considered . • Tax Paid under RCM • Transaction in securities • Sale of Land & Building subject to clause (b) of Para 5 of Schedule II

		NOTE – • Exempt supply to include Supplies on which recipient is liable to pay Tax under RCM i.e. for example if Goods Transport Agency has 2 business i.e. of GTA & other one being Leasing of Vehicles in such cases supplies done under GTA is to be considered as Exempt supply for the purpose of Sec 17(3) even though tax on same is being payable by recipient under RCM. • Items mentioned under Schedule III are not be considered as Exempt Supply since they are NOT SUPPLIES under the Act so they do not fit into the Category of Exempt or Non Taxable Supply.
	Sec 17 (4): INELIGIBLE ITC IN CASE OF BANKING & FINANCIAL INSTITUTION INCLUDING NBFC	• Above mentioned Registered Person i.e. Banking & Financial Institution have 2 options to avail ITC i.e. • Either Apportion ITC as per Rule 42 & 43 OR • Avail 50% of eligible ITC every month
	Sec 17(5)(a): ITC ON MOTOR VEHICLE (Not having a seating capacity of more than 13 people including driver) for transportation of persons **Sec 17(5) (aa):** ITC ON VESSELS AND AIRCRAFT	• Further Supply of Vehicle • Transportation of Passenger • Imparting Training of driving such vehicle • Further Supply of such vessels or aircraft • Transportation of Passenger • Imparting Training of navigating such vessels • Imparting Training of flying such • aircrafts
	Sec 17(5) (ab): ITC ON SERVICES OF GENERAL INSURANCE , SERVICING , REPAIR & MAINTENANCE OF MOTOR VEHICLE , VESSELS & AIRCRAFT MENTIONED IN Sec 17(5) (a) & (aa) **Sec 17 (5) (b):** ITC ON SUPPLY OF GOODS & SERVICES BOTH AS MENTIONED BELOW	EXCEPT when such services are used for Allowable Supply of Goods & Services specified u/s 17(5) (a) & aa) Where received by Taxable Person engaged in- • in the manufacture of such motor vehicles, vessels or aircraft; • in the supply of general insurance services in respect of such motor vehicles, vessels or aircraft insured by him; • Foods & Beverages • Outdoor Catering • Beauty Treatment • Health Services • Cosmetic & Plastic Surgery • Leasing, Renting or Hiring of motor vehicle, vessels or aircraft referred to (a) & (aa) except when used for purpose specified under the clause • Life Insurance • Health Insurance (ITC on above supply of Goods & Services shall be available if such goods/ services used by registered person for outward taxable supply of the same category of goods/services or as an element of mixed or composite supply) • Membership of club, health & fitness centre • Travel benefits extended to employees on vacation such leave or home travel concession (ITC on such goods/services shall be where it is obligatory for the employer to provide to its employees under any law for the time being in force

	Sec 17 (5) (c): ITC ON WORKS CONTRACT SERVICE OF IMMOVABLE PROPERTY (OTHER THAN PLANT & MACHINERY) **Sec 17 (5) (d) :** ITC ON GOODS/ SERVICES OR BOTH FOR CONSTRUCTION SERVICE OF IMMOVABLE PROPERTY (OTHER THAN PLANT & MACHINERY) FOR PERSONAL USE OR EVEN FOR IN COURSE OF BUSINESS OR FURTHERANCE OF BUSINESS **Sec 17 (6):** GOVERNMENT MAY PRESCRIBE MANNER IN WHICH ITC MAY BE ATTRIBUTED U/S 17 (1) & (2)	(ITC on such goods/services shall be where it is obligatory for the employer to provide to its employees under any law for the time being in force EXCEPT where such Works Contract service is a Input service for further supply of works contract service

Compiled by Sakthi Services / KSDK and Company LLP



NECESSITY AND PROCEDURE FOR STRUCTURAL AUDITING OF BUILDINGS

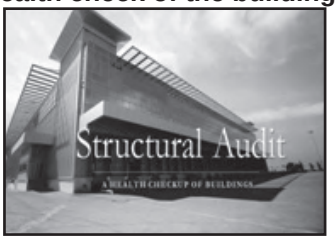
DR. Colonel.
P Nallathambi
Ph.D (Structural Engg),
ME, MBA, FIE, FIV)

Introduction.

In India, many old buildings have reduced strength in due course of time. If further use of such deteriorated structure is continued, it may endanger the lives of the occupants and surrounding habitation. Appropriate actions need to be implemented to improve the performance of structures and restore the desired function of structures. Thus, it is of utmost importance to perform a structural audit of existing buildings and to implement maintenance/ repair work time which will lead to prolonged life of the building and safety of the occupant. The structural audit should highlight and investigate all critical areas and recommend immediate remedial and preventive measures. It should cover the structural analysis of the existing frame and find critical elements for all types of loadings. It also helps in delivering a strong building structure with cost-effective solutions and an appropriate maintenance program.

Health check of the building

Structural health monitoring



Structural audit

Necessity of Structural Audit. With every passing year, the building combats a series of natural upheavals, facing the apathy of every season that undergoes. Many buildings built during the last 25 to 30 years are in severe structural distress. Leakages are a common sight during monsoons. To add to this, we keep hearing of sporadic incidents of building collapse, which has resulted in irreparable losses at times, both of men and material. The concept of 'structural audit' to be made aware and it has to be soon become mandatory to be followed. A structural Audit is an overall health and performance check-up of a building like a doctor examines a patient. It ensures that the building and its premises are safe and have no risk. It analyses and suggests appropriate repairs and retrofitting measures required for the buildings to perform better in their service life. The structural audit is done by an experienced and licensed structural consultant.

There is no secret that several structurally unsound buildings collapse during monsoons or due to ill-maintenance. Buildings more than 30 years are often found lacking in integrity as per modern standards. If the repairs are not done carefully, the loss of human lives in addition to property can be devastating. The only way to avoid such mishaps is to conduct the structural audit with utmost sincerity. The structural audit should highlight and investigate all critical areas and recommend immediate remedial and preventive measures. It should cover the structural analysis of the existing frame and find critical elements for all types of loadings. It also helps in delivering a strong building structure with cost-effective solutions and an appropriate maintenance program. The structural auditing will help to implement maintenance and repair work time which leads to prolonged life of the building and safety of the occupants and apply remedial actions immediately.

Purpose of Structural Audit. (a) To save human life and buildings. (b) To understand the condition of the building. (c) To find critical areas to repair immediately. (d) To comply with statutory requirements. (e) To enhance the life cycle of the building by suggesting preventive and corrective measures like repairs and retrofitting.

Inspection Processes. It involves: Visual Inspection, Non-Destructive (NDT) and Destructive Testing (DT), Concrete strength tests, Chemical attacks, Corrosion potential assessment, Homogeneity and integrity assessment, Core testing and Overload testing.

Visual Inspection. The first stage of a structural audit consists of a visual inspection that should lead to the identification of defects, material degradation, deformation of any sections or interior components. If alterations, additions or replacements are needed, they should be identified during the visual inspection too. All the elements of the building are examined, including columns, beams, slabs, balconies, false ceilings, roofs, parapets, railings, rooms, bathrooms, kitchens, lofts, mezzanine floors, stairways, water tanks, storage, plumbing lines, drainage lines. These inspections are carried out to ascertain cracks/deflections in retaining walls, leakages, and concrete durability. Dampness in the walls is also inspected along with varying loads on the structure that may have occurred. If required, soil bearing capacity can be determined through pit trials or from soil data of the vicinity. Corrosion cracks developed in columns, beams and the members such as chajja and fins.

Visual Inspection of Structural System of the building. Substructure: Settlement of columns or foundations, settlement of walls and floors, deflection and cracks in retaining wall, soil bearing capacity through trial pits or from adjacent soil data. Superstructure: Materials used and framing system of structure, identification of the critical structural members like floating columns, transfer

beams, slender members, rusting of exposed steel and its extent. Mention the status of all building elements like beams, slabs, columns, balconies, canopy, false ceiling, chajja, parapet and railings concerning parameters deflection, cracks, leakages and spalling of concrete. Likewise, verify the status of the water tank, staircase, lift and lift machine room. Detect the dampness in walls, identify the leakages in the terrace, toilets, plumbing lines, drainage lines and overhead tanks.

Non-Destructive Testing. The strength and durability of concrete is essential factor that decides its longevity and safety. For this purpose, Non-Destructive Testing (NDT) should be carried out to check concrete strength, chemical attack resistance, corrosion assessment, among other things. The common techniques to assess whether the building's concrete will stand the test of time. Rebound Hammer Test on beams, slabs, etc. to check the compressive strength of the concrete. Ultrasonic Pulse Velocity Test to inspect cracks and to test the quality of concrete and natural rocks in the building. Core Testing consists of a method in which samples are tested in a laboratory to determine strength. Core Sampling and Testing measure the strength, permeability, the density of concrete. Rebar locators and Cover Meter measure the cover of reinforcement, the diameter of reinforcement and spacing of reinforcement. Chemical Tests are performed to check carbonation and pH, water/acid-soluble chloride and sulphate contents of the concrete. A water permeability Test is carried out to check the resistance of concrete underwater pressure. Half-cell Potential Test is done to check corrosion or the possibility of it in the steel. Some other popular tests in current practice are Leak Testing, Electromagnetic Testing, Laser Testing, Magnetic particle testing, etc. Earthquake resistance (seismic diagnosis test) and fire readiness (fire fighting system analysis) are measured and analysed by the structural auditors in addition to the above-mentioned tests. Carbonation Test for carbonation depth measurement for Steel. Integrity Tests for pile foundations and various testing techniques.

Destructive Testing. To verify the integrity of a structural component, it is always possible to cut or section through the components and examine the exposed surfaces. Components can be pulled or stressed and pressurized until failure to determine their properties of strength and toughness. Materials can be chemically treated to determine their composition. These are some forms of destructive testing. Unfortunately, this approach of destructive testing renders the component useless for its intended use as against non-destructive testing which can be performed on the components and machines without affecting their service performance.

Procedure to Carryout Structural Audit.

Step 1. It is imperative that architectural and structural plans of the building will be helpful in detailed structural calculations including assumptions for the structural design. The assumptions include the allowable live loads; whether the building is designed for residential, commercial, light industry or heavy industry and whether any future provision for adding new floors is considered?. What type of earthquake loads are considered?. Which IS code requirements have been met?.

Step 2. If the Architectural plans and Structural plans are not available, the same can be prepared by any Engineer by measuring the size of the building and locating the position of the columns, beams and size of all such structural elements.

Step 3: Inspection of the building. A detailed inspection of the building can reveal the following: 1. Any settlements in the foundations. 2. Visual cracks in columns, beams and slabs. 3. Concrete disintegration and exposed steel reinforcements - photographs can be helpful. 4. Slight tapping with a hammer can reveal deterioration in concrete. 5. Extent of corrosion in reinforcement.6. Status of Balconies - sagging, deflection, cracks?. 7. Status of Architectural features viz. chhajjas, fins, canopies etc. 8. Cracks in walls indicate swelling in R.C.C. members or distress or deflection or corrosion. 9. Leakages from terrace & Toilet blocks. 10. Leakages & dampness in walls resulting in cracks and corrosion. 11. Changes carried out affect structure. Toilet blocks - Added or changes made?. Change of user - from Residential to Commercial to Industrial? Change of partition walls?. 12. Status of lift and lift machine room - Type of maintenance contract, renewal of license. 13. Status of electrical wiring from meter room to all the flats. Substation status. An explosion in the meter room, substation?. 14. Status of overhead and underground water tanks - capacity. Leakages, cracks and frequency of cleaning, the status of pumps. 15. Plinth protection in the compound includes the status of drainage, water pipes and pumps. How much the Ground was flooded during recent monsoons?. 16. External paint - When last painted and type of paint. 17. Status of repairs and last repaired. What was repaired?. Who was the Agency?. How much was spent on repairs?. 18. Building plans available?. When approved?. Is an occupation Certificate available? Are structural plans available? Is a structural stability certificate available?. Structural calculations available?. 19. Last structural audit prepared?.

Step 4: Tests recommended: It is important that various tests are carried out in the old buildings. This will give an idea about the extent of corrosion, distress and loss of strength in concrete & steel. Tests may include: (a) Concrete core cutting & compression testing for columns, beams and slabs for strength assessment of concrete. (b) Half Cell Potential test for determining the probability of corrosion in the embedded steel. (c) Carbonation test for carbonation depth measurement for steel. (d) Ultrasonic Pulse Velocity Test (UPV) for strength assessment of concrete. This can be useful for simple foundations. (e) Integrity tests for pile foundations.

Step 5: Highlight the critical areas and how to go for repairs. E.g. (a) No. of columns requiring immediate attention including treating rusted steel, adding new steel, jacketing of columns etc. Repairing foundations, repairing balconies, chhajjas. (b) Attending of beams

and slabs wherever required. (c) Attending waterproofing of terrace, toilet blocks. (d) Attending cracks in external walls and providing good quality of paint. The critical areas highlighted need to be attended to immediately.

Step 6: Earthquake Criteria: Chennai is located in Earthquake Zone III as per Indian Standard Codes. The Earthquake Code IS 1893-2016 provides rigorous analysis and designs of the building. Structures have to withstand earthquake forces. It may be possible to retrofit the old buildings so that they do not collapse during earthquakes but may develop some cracks and allow enough time for people to escape. Thus saving precious lives.

Step 7: Compliance with audit requirements. The audit is a good thing, but in itself, an audit is not sufficient. The findings and/or recommendations of audits must be implemented satisfactorily, within a stipulated time limit and are certified by structural engineers; Otherwise, the audit findings will remain on paper. Is it a costly process?. Of course, this is going to be costly; but human lives are important and they need to be saved at any cost.

Step 8: ETABS/ STAAD Pro modelling. This step involves the preparation of a model of the building to find the response of the structure to gravity, wind and earthquake loading. The analysis and reduction of materials strength will give the demand of the building to the desired loading.

Step 9: Finding the actual capacity of the members and finding the demand to the capacity ratio for structural members. Determination of capacity of beams. (a) Determine the size of the structural members, actual reinforcement present in the members. (b) Determine the actual load and moment carrying capacity of the members using IS:456:2000. To get the actual capacity of the members. (c) The capacity of the structural members is determined using software analysis of the members carried out as in the previous step. (d) Compute demand and capacity ratio for the members. (e) Recommend the remedial measure.

Step 10: Arrive the required information based on the inspection, analysis and make recommendations with remedial or retrofitting methods for the suitable structural members.

Structural Audit Techniques. An experienced and competent structural engineer would conduct several Non-destructive tests after removal of plaster from the surface to determine the extent of corrosion, distress and loss of strength in concrete and steel.

Inspection of Fire Equipment. The building structural auditor has to inspect the fire fighting systems (as applicable) with the relevant approved vendor and prepare recommendatory reports, highlighting the repairs and restorations required, for due compliance of the building owner /society. Failure to install the mandatory fire fighting systems, and to keep maintaining them in working condition is mandatory, failing which the fire department is within its jurisdiction to disconnect electricity and water connections, besides revoking the fire NOC for occupancy certificate granted to the building.

Non-Availability of Building Plans and OC: In the event, that the building's sanctioned /approved plans and/or Occupancy Certificate (OC) are not available, then the building owner (society) has to conduct the necessary documentation and arrange /make the buildings plans etc. The buildings occupancy certificate can be procured, using various compliance parameters, but only after repairing and restoring all illegal alterations /amalgamations.

Illegal Alterations - Building Collapses. Reduction of the girth of the buildings column and pillars resulted in the loss of life and property of the buildings residents and other people in the vicinity. Today due to courtesy of human apathy, everything is back to normal and the losses of human lives are apathetically and conveniently forgotten by all concerned.

Recommendations in the Report. A structural audit report is presented to the society by the consultant which entails the following: Recommendations for repairs based on the assessment of deterioration, breakage, and faulty materials. Retrofitting, and restoration measures to bring the damaged components up to the required standard. Strengthening the current components of the building to make it more resistant to collapse and increase its load-bearing capacity. The consultant provides the cost of labour, materials, equipment and overall services to the society in the audit report, and offers expertise on future maintenance and cost-effective measures to slow down future deterioration.

Contents of Structural Audit Report. A “prudent” structural engineer would highlight the relevant violations under the Municipal Laws, while keeping upfront the approved plans of the building: (a) Any changes and contraventions of the approved plans /availability of sanctioned plans. Whether the building has been built in conformity to the sanctioned building plans. (b) Availability of approved and sanctioned building plans, IOD, CC, OC. (c) Changes made to the buildings columns, beams, pillars. (d) Changes made in place of WC, bathroom, kitchen, installation of loft water tanks. (e) Extension or covering of balcony. (f) Removal of internal walls between rooms. (g) Internally amalgamating (joining) of two flats, by removing partition walls /doors. (h) Installing over-protruding grills, sheds, chajjas. (i) Conversions of basements or stilt /podium parking for any other usage (e.g. offices, shops). (j) Existence of unauthorized lofts and mezzanine floors in the building. (k) Any other encroachment of common areas, refuge areas and society premises. (l) Installation of illegal mobile towers and hoardings, and adverse effect of same on the building. (m) Whether the building has appropriate

drainage /sewage lines connected to the mains. (n) Existence of open-well, bore-well and other clandestinely built sub-ground level storage water tanks. (o) Common electrical wiring system. (p) Changes in internal /external drainage /sewage lines. (q) Ground and Overhead water tanks, water meters and supply pipelines. (r) Waterlogging around the periphery of the building and reverse incline level of grounds) Detailed report on the repairs and restorations, that is required in the building, in terms of the approved plans of the building. Note: Structural Engineer /Auditor shall clearly outline each alteration with graphic images and photographs and the repairs /rectifications /restorations that needs to be done in the building.

Post Structural Audit.

Repairs to Improve the Strength of the Building. Based on the audit findings and recommendations different measures of repairs and strengthening are carried out. Repair is carried out to replace or correct deteriorated, damaged, or faulty materials, components, or elements of a structural system. From this point of view, repair may be divided into structural repair and serviceability repair. The former refers to the restoration of lost sectional or monolithic properties of damaged members, while the latter refers to the restoration of structural surfaces to a satisfactory operational standard. Obviously, poor design, poor construction, poor maintenance, incorrect usage, new environmental influences or an intended increase of the loading or extension of the structure's lifespan can repair and/or strengthening necessary. Excluding technical considerations, the ultimate choice of method of repair and strengthening of a concrete structure may also be influenced by factors like the overall quality of repairs and the size of individual repairs, access for repair, relative cost, ease of application, available labour skills and equipment and client requirements including future maintenance and economic considerations. Repairs can be carried out using polymer modified mortar treatment, jacketing to columns using micro-concrete, recasting of slabs/ chajjas and waterproofing treatment.

Strengthening and Retrofitting of Structures. Strengthening is the process of restoring the capacity of damaged components of structural concrete to its original design capacity or increasing the strength of structural concrete. Strengthening of a concrete structure may be required due to several reasons: (a) Change of usage which may cause over-stress in the structural member. (b) Serious materials and structural deteriorations cause structural members to be no longer able to carry the imposed loads with an adequate factor of safety. (c) To increase the capacity for seismic resistance if the building is not designed for it or the structure does not fulfil current design requirement corresponding to seismic zones, R factor or so. (d) Strengthening of structural members can be achieved by replacing poor quality or defective material with better quality material, by attaching additional load-bearing material, such as high-quality concrete, additional steel, thin steel plates. (e) Strengthening by various types of fibre-reinforced polymer sheets and by the redistribution of the load such as by adding a steel supporting system. (f) The purpose of strengthening is to increase the load-carrying capacity or stability of a structure concerning its previous condition.

Remedial Measures to Improve the Structural Safety. Many buildings collapsed in the recent past across the Country. Investigating the cause of these collapses to ascertain the technical reasons for such failures indicate necessary action required. The forensic and technical investigations, observations and analysis have thrown up startling facts which makes structural engineer sit and introspect of the response to the inferences drawn through these investigations. It has been revealed that a substantial number of buildings collapsed due to almost no reference to structural engineering inputs, be it design, structural detailing or supervision. Appraised of the importance of having a structural engineer's involvement at various stages of building construction has to be made compulsory. It is necessary to create awareness of adhering to NBC-2016 provisions mandatory in every building construction. As per clause No.77 of revised Bye-Laws of Cooperative Housing Societies: The society shall cause the 'Structural Audit' of the building as follows: For building ageing between 15 to 30 years once in 5 years. For building ageing above 30 years Once in 3 years.

Conclusion.

The structural audit is a preliminary technical survey of a building to assess the general health of a civil engineering structure. It is usually initiated as the first step for repair. This is similar to the periodic health check-up recommended for older people. The structural diagnosis is a vast, important and highly responsible job that is connected with the lives of human beings. It is mandatory and advisable to carry out the periodical structural audit of the buildings by professional experts and act immediately through recommendations provided in the audit report. The success of repairs and restoration is always based on thorough knowledge, correct diagnosis and in-depth studies of problems in building, proper repair practices and finally socio-economic considerations. The effective implementation of auditing enhances the life span of the structure, prevents deterioration of buildings leading to sustainability.

File No. RW/NH-33044/76/2021-S&R(P&B)
Government of India
Ministry of Road Transport & Highways
S&R (Roads) Zone
No.1, Parliament Street, Transport Bhavan, New Delhi-110001

Date: 04.01.2022

To,

1. The Chief Secretaries of all State Governments/UTs.
2. The Principal Secretaries/Secretaries of all State/UTs PWD dealing with National Highways, other centrally sponsored schemes and state schemes.
3. All engineer-in-Chief and Chief Engineers of all States/ UTs PWD dealing with National Highways, other centrally sponsored schemes and state schemes.
4. The Chairman, National Highways Authority of India (NHAI), G-5&6, Sector-10, Dwarka, New Delhi-110075.
5. The Managing Director, National Highway Infrastructure Development Corporation Ltd., 3rd floor, PTI Building, Parliament Street, New Delhi-110001.
6. Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110010.
7. All CE-ROs, ROs and ELOs of the Ministry.

Subject: Standard operating procedure to debar/penalize/declare the Contractor/Concessionaire as Non-performer in National Highways and other centrally sponsored road projects.

Ref: RW/NH-33 044/76/2021-S&R (P&B) dated: 06.10.2021

Sir,

Ministry has issued SOP to debar/penalize/declare as Non- Performer the Contractor/Concessionaire in National Highways and centrally sponsored road projects vide Ministry's circular under reference. Meanwhile, DoE, MOF has issued guidelines on debarment of firms from bidding vide OM No. F-1/20/2018-PPD dated 02.11.2021. Now with the approval of Competent Authority, para-8 of Ministry's SOP is amended as under to bring it in line with DoE OM mentioned above.

Existing Provisions	Amended Provisions
8. Upon declaration of non-performer/debarred, the Contractor/Concessionaire will not be able to participate in any bid with MoRTH or its executing agencies till such time the Contractor/Concessionaire is removed from the list of non-performers or the debarment persists. The Contractor/Concessionaire shall include its JV partners, promoters etc. whose credentials were considered while qualifying them for the project. Non-performer/debarment status of a bidder on the bid due date will be the criteria for eligibility of a bidder to participate in the said bid.	8.1 Upon declaration of non-performer/debarred, the Contractor/Concessionaire will not be able to participate in any bid for National Highways projects with MoRTH or its executing agencies till such time the debarment persists or the Contractor/Concessionaire is removed from the list of non-performers. In bidding for a particular project, bids from only such firms should be considered for placement of contract, which are neither debarred on the date of opening of tender nor debarred on the date of issue of Letter of Acceptance (LoA). Contracts concluded before the issue of the debarment/declaration as non-performer order shall, not be affected by the debarment order(s) issued subsequently. 8.2 In case, any debarred/ declared non-performer firm submits the bid, the same will be ignored. In case such firm is lowest (L-1), next lowest firm shall be considered as L-1. Bid security submitted by such debarred/ declared non-performer firms shall be returned to them. 8.3Debarment/declaration as non-performer of a particular firm shall automatically extend to all its allied firms. In case a joint venture/ consortium is debarred, all partners/members shall stand debarred for the entire period.

Yours sincerely,

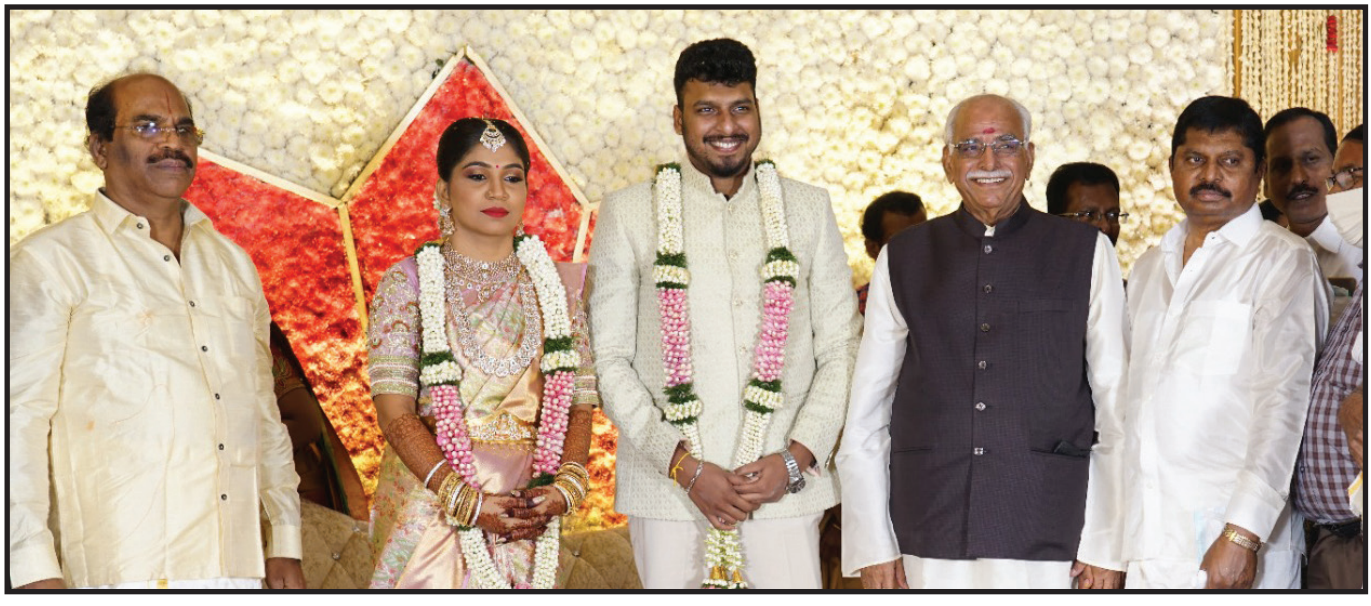
(Jagat Narayan)
Superintending Engineer, S&R (R)
For DG(RD)&SS

10.01.2022 அன்று நடைபெற்ற மகாசபை பொதுக்குழு கூட்டத்தில் புதிதாக தேர்வு செய்யப்பட்ட மய்ய நிர்வாகிகள், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்கள்

10.01.2022 அன்று நடைபெற்ற மகாசபை பொதுக்குழு கூட்டத்தில் புதிதாக தேர்வு செய்யப்பட்ட மய்ய நிர்வாகிகள், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்கள்

05.01.2022 அன்று Meridian Hospital –ல் Cath-Lab திறப்பு விழா நிகழ்ச்சியில் பீஷ்மா திரு. R. இராதாகிருட்டிணன் அவர்கள் கலந்து கொண்டார்

தமிழக கட்டுமான தொழிலாளர் நலவாரியத் தலைவர் திரு. பொன்குமார் அவர்களின் செல்வகுமாரனின் திருமண விழாவில் பீஷ்மா திரு. R. இராதாகிருட்டிணன் அவர்கள் கலந்து கொண்டு மணமக்களை வாழ்த்தினார்.



73வது குடியரசு தினவிழா அறக்கட்டளை வளாகத்தில்
பீஷ்மா திரு. R. இராதாகிருட்டிணன் அவர்கள் கொடியேற்றத்துடன்
சிறப்பாக கொண்டாடப்பட்டது

BUILDERS' ASSOCIATION OF INDIA

BAI

ESTD: 1941

XXX ALL INDIA BUILDERS' CONVENTION

March 11, 12 & 13 2022

RADISSON BLU RESORT TEMPLE BAY
Mamallapuram, Chennai, Tamilnadu

ROLE OF CONSTRUCTION IN NATION BUILDING

INDIA'S BIGGEST AMALGAMATION



DELEGATE FEES

For Registration

BAI Members	:	₹12,000
Spouse	:	₹10,000
Non Member	:	₹15,000

SOUVENIR TARIFF

Back Outer Cover	:	₹4,00,000	Inner Front Cover	:	₹3,00,000
Inner Back Cover	:	₹3,00,000	Full Colour Page	:	₹50,000
Half Colour Page	:	₹30,000			

- GST @ 18% extra as per Govt. norms
- Kindly transfer the Delegate Registration Fees to the following Account.
  XXX ALL INDIA BUILDERS CONVENTION CHENNAI
  Indian Bank, Padi Branch | A/c.No. 7074896816 | IFSC: IDIB000P001
- Please send a payment confirmation with Names & Centre to
  xxxallindiabuildersconvention@gmail.com

Hosted by:
BUILDERS' ASSOCIATION OF INDIA - SOUTHERN CENTRE
Plot No. A1, 1st Main Road, Opp. AIEMA, Industrial Estate, Ambattur, Chennai 600 058.
T: +91 44 2625 2006 E baisouthern1950@gmail.com | W www.baisouthern.com

ESTD: 1950

ESTD: 1941

BUILDERS' ASSOCIATION OF INDIA

XXX ALL INDIA BUILDERS' CONVENTION

11th, 12th & 13th March, 2022

XXX ALL INDIA BUILDERS CONVENTION

APPEAL FOR SOUVENIR ADVERTISEMENT

Builders' Association of India, Southern centre is pleased to organize the XXX All India builders convention Chennai on 10th,11th & 12th March, 2022 at Mahabalipuram, Tamilnadu.

The Builders' Association of India established in the year 1941 represents the Interest of Construction Companies, Builders, Contractors, Architects, Designers, Consultants etc., and has strength grown with both national and international Influence.

Builders' Association of India (BAI) alone today comprises of nearly 40000 members And is well represented in various government bodies and Construction agencies in the Country.

The three days event will Endeavour to connect its members to the latest equipments, materials and technology that are currently available and used instantly For Indian Construction Market.

In Commemoration with the Convention, Southern Centre, BAI proposes to bring out a special Souvenir, the Souvenir which will reach all the members and stake holders of the industry.

We request you to take full advantage of the forum and support this national event by participation through advertising in the event Souvenir

ADVERTISEMENT TARIFF

Back Outer Cover	: ₹ 4.00 Lakhs
Back Inner Cover	: ₹ 3.00 Lakhs
Front Inner Cover	: ₹ 3.00 Lakhs
Full Colour Page	: ₹ 0.50 Lakhs
Half Colour Page	: ₹ 0.30 Lakhs

Cheque in favour of **"XXX All India Builders Convention Chennai".**

Forward the AD material along with confirmation on to the address mentioned below.

Mr.S.Ramaprabhu
Chairman - Souvenir Committee
Plot No.A1, 1st Main Road (opp. AIEMA)
Ambattur Industrial Estate, Chennai - 600 058
Mobile: 98409 31799

ESTD: 1941

BUILDERS' ASSOCIATION OF INDIA

XXX ALL INDIA BUILDERS' CONVENTION

11th, 12th & 13th March, 2022

XXX ALL INDIA BUILDERS CONVENTION

ADVERTISEMENT TARIFF

Back Outer Cover	:	₹ 4.00 Lakhs	❑
Back Inner Cover	:	₹ 3.00 Lakhs	❑
Front Inner Cover	:	₹ 3.00 Lakhs	❑
Full Colour Page	:	₹ 0.50 Lakhs	❑
Half Colour Page	:	₹ 0.30 Lakhs	❑

Please find enclosed the Cheque No: _____, Dated: _____ drawn on

_____ Bank,

for Rs._____ in favour of **"XXX ALL INDIA BUILDERS CONVENTION CHENNAI"**

Attach Advertisement material.

Book Size	:	180 mm x 240 mm
Advertisement Size (Full Page)	:	150 mm x 210 mm
Advertisement Size (Half Page)	:	150 mm x 105 mm

VIRTUAL TRANSFER

Name	:	**XXX ALL INDIA BUILDERS CONVENTION CHENNAI**
BANK	:	INDIAN ABANK
BRANCH	:	PADI, CHENNAI
CURRENT A/C. NO	:	**7074896816**
IFS CODE	:	IDIB000P001
PAN NO	:	AAAAX0159N

SOUVENIR COMMITTEE

Mr.S. Ramaprabhu
Chairman - Souvenir Committee
Mobile: 98409 31799

Mr.A.N. Balaji
Co-Chairman - Souvenir Committee
Mobile: 98410 9796

PROCEEDINGS OF THE REAL ESTATE REGULATORY AUTHORITY

Proc.No.TNRERA /A4/707/2022 **Dated : 13.01.2022**

Sub: TNRERA – Applications for registration of regularised layouts – Fast track procedure for registration of **regularised layouts** – Ordered with immediate effect – Reg.

Ref: Orders of the Authority dated 13.01.2022

*****

ORDER:

In order to expedite the process of approval of **regularised layouts** as an one time measure, the following simplified procedure is ordered with immediate effect. The applications for registration of layout shall accompany the following:

(i) Form 'A'

(ii) Form 'B'

(iii) Copy of Regularisation Proceedings accorded by the competent Planning Authority

(iv) Copy of approval of the Local Body

(v) Encumbrance Certificate

(vi) For according part layout registration, the Promoter is directed to mark distinct boundary in the layout and give an undertaking for the same

(vii) If the Promoter declares that all the development works are completed as per the layout condition and in the Brochure, opening of designated Bank account is not required for **regularised layouts**

(viii) A registration fee of Rs.5/- per sq.m. of plottable area

2. The Authority hereby delegates the powers under Section 81 of the Real Estate (Regulation and Development) Act, 2016 to the Additional Director (Operation), TNRERA to accord registration as an one time measure.

3. This order takes with immediate effect.

for CHAIRPERSON, TNRERA

தமிழன் இலக்கியங்கள் சொல்லை புவியல் உயிரினத்தின் பரிணாம சுருக்கம்

Er.A.G.Marimuthuraj

உயிரினத்தின் தோற்றம் மற்றும் பரிணாம வளர்ச்சி பற்றி பல்வேறுபட்ட காலக்கட்டத்திலே பல்வேறுபட்ட கருத்துக்கள் தோன்றினாலும் 19ம் நூற்றாண்டில் தார்வினின் சிந்தனை வழி உயிரினப் படி மலர்ச்சி பற்றிய புரிதல் முழுமை பெற்றது என்றாலும் பல நூற்றாண்டுக்கு முன்பே தமிழ் சிந்தனை மரபில் உயிரினப் படிமலர்ச்சி பற்றிய நிறைவு ஏற்பட்டுள்ளது சான்றாக தொல்காப்பிய காலம் கூறுவது.

புல்லாகிப் பூடாய்ப் புழுவாய் மரமாகிப்
பல்விருக மாகிப் பறவையாய் பாம்பாகிக்
கல்லாய் மனிதராய குபாயக் கணங்களாய்

தோன்றி அதன் பரிணாம வளர்ச்சி நிலையை கீழ்கண்டவாறு விளக்குகிறது.

புல்லும், மரமும் - தொடு உணர்ச்சியுடன் இயங்கக்கூடியது.

நண்டு, நத்தை - தொடு, சுவை உணர்ச்சியுடன் இயங்கக்கூடியது.

எறும்பு, சிதல் - தொடு, சுவை, நுகர், இயங்கக்கூடியது.

தும்பி, நண்டு - தொடு, சுவை, நுகர், பார்வை இயங்கக்கூடியது.

முதலை, ஆடு,மாடு, பறவை - தொடு, சுவை, நுகர், பார்வை, கேட்டல் இயங்கக்கூடியது

மனித உயிரினம் - தொடு, சுவை, நுகர், பார்வை, கேட்டலுடன் மனத்தால் பகுத்தும் இயங்கக்கூடியது.

ஒன்றறி வதுவே உற்றறிவதுவே
இரண்டறி வதுவே அதனோடு நாவே
மூன்றறி வதுவே அவற்றோடு மூக்கே
நான்கறி வதுவே அவற்றோடு கண்ணே
ஐந்தறி வதுவே அவற்றோடு செவியே
ஆறறி வதுவே அவற்றோடு மனமே
நேரிதின் உணர்ந்தோர் நெறிப்படுத்தினரே
இவ்வுலகிலே !

ஓரறிவுள்ள உயிர் உடம்பினால் அறியக்கூடியது.

ஈரறிவுள்ள உயிர் உடம்பு மற்றும் வாயினாலும் அறியக்கூடியது.

மூவறிவுள்ள உயிர் உடம்பு வாய் மற்றும் மூக்கு மூலம் அறியக்கூடியது.

நாலறிவுள்ள உயிர் உடம்பு வாய் மூக்கு மற்றும் கண் மூலம் அறியக்கூடியது.

ஐயறிவுள்ள மனிதன் உடம்பு, வாய், மூக்கு, கண், செவி மூலம் அறியக்கூடியது,

ஆறறிவுள்ள மனிதன் உடம்பு, வாய், மூக்கு, கண், செவி, மற்றும் மனதினாலும் அறிவும் தன்மை பெற்றுள்ளான்.

ஒட்டு மொத்தத்தில் உலகி உயிர்கள் தாம் பெற்றுள்ள மெய் வாய் மூக்கு, கண், செவி என்னும் ஐம்பொறிகளின் வாயிலாகவும், அகக்கருவியாயகிய மனத்தின் வாயிலாகவும், முறையே ஊறு, சுவை, நாற்றம், ஒனளி, ஒலி என்னும் ஐம்புலன் உணர்வுகளையும் உய்த்துணர்வினையும், பெற்று அறிவினால் வளர்ச்சி பெற்றுள்ள திறத்தை என்னவென்று சொல்வது.

மனிதனுக்கு சக்தியானது 10 வடிவங்களில் கிடைக்கப்பெற்று பல்வேறு தாக்கங்களை உள்ளாக்குகிறது. திட, திரவ, வாயு, ஒளி, ஒலி? துகள்கள், வெப்பம், மின்சாரம், காந்தம், கதிர்வீச்சு என்கின்ற இந்த பத்து வடிவங்களில் அவனுக்கு சக்தி கிடைக்கிறது. மேலும் அவன் வாழும் இடம், தட்பவெப்பம், உணவு, நீர், உழைப்பு முதலியவையே அவன் உடலில் வளர்சிதை மாற்றத்தை எப்படி நிகழ வேண்டும் என தீர்மானிக்கின்றன.

இந்த இயற்கைக்கும் மனிதனுக்கும் அப்படி என்ன தொடர்பு இயற்கை ஏன் மனிதனை தொட்டுக் கொண்டே இருக்கிறது. மனிதனும் ஏன் இயற்கையை ஒட்டிக் கொண்டே இருக்கின்றான். இயற்கை ஏன் இயல்பாகவே மனிதனுக்கு எல்லா வகையிலும் உதவிகளை உற்ற நேரத்தில் வாரி வழங்கிக் கொண்டே உள்ளது. பருவக்காற்றாய், பருவ மழை, பருவ காலங்களால் இன்னும் பல்வேறு பரிமாணத்திலே எப்படி நிகழ்கின்றது.

இயற்கையின் உட்பொருள்களாகிய பஞ்ச சக்தி தோன்றிக் கோடிக்கணக்கான ஆண்டு முடிந்தும் இன்னும் அவை இருக்கிறதே, இனியும் அவை இருக்கப்போகிறதே, முக்காலத்தையும் அவை முழுமையாக ஆக்கிரமித்துக் கொண்டு இயங்குகிறது.

ABSTRACT

Water Resources Department – Operation of sand quarries and sale of sand in the Government depots by the Water Resources Department– Orders - Issued.

Water Resources (I.Spl.-2) Department

G.O (Ms) No.4 Dated : 06.01.2022,
பிலவ வருடம், மார்கழி 22
திருவள்ளுவர் ஆண்டு 2052

Read:

1. G.O. Ms No.325, Public Works (I.spl.2) Department, dated 21.12.2013.
2. G.O (Ms). No.183 Industries (MME.1) Department, dated 28.12.2017.
3. Minutes of the Review Meeting Chaired by Hon'ble Chief Minister on 08.11.2021.

******

ORDER:-

I In the Government order first read above, the Government have issued orders to sell river sand at a cost of Rs. 400 /- per unit from Rs.300/- per unit in the State and the same is being adopted till date.

2. In the Government order second read above, the seigniorage charges for ordinary sand was revised as Rs. 120/m^3 i.e., Rs.340.00 per unit.

3. Thiru. M.Thangavel and Thiru. Elephant G.Rajendran had filed writ petitions in W.P. (MD) No. 16884 and 14088 of 2020, respectively, before the Hon'ble Madurai Bench of Madras High Court. It was prayed in W.P.(MD)No. 14088 of 2020 to direct the respondents to enable only the general public to purchase river sand through "Tamil Nadu Sand Web Service Portal" on all working days.

The Division Bench of Madras High Court at Madurai Bench in W.P. (MD) Nos. 16884 & 14088 of 2020 in its Common order dated 17.03.2021 has passed, orders among the following others:-

"On the allegations made with respect to all the alleged collusion between the lorry owners and the officials, we make it clear that before effecting the sale , the respondents will have to satisfy that there is an approved plan produced by the applicant, namely, the intending purchaser to the satisfaction of the officials and based on the same alone permission will have to be granted".

4. During the meeting held by the Hon'ble Chief Minister to review the operation of sand quarries and sale of sand in the Government depots by the Water Resources Department, the following decisions were taken:

1. The SLP No.006215/2021 filed against the judgement of the Honourable Madurai Bench of Madras High Court dated 17.03.2021 in the WP(MD) No.16884 and 14088 of 2020 be withdrawn so as to comply with the above said orders.

2. The basic cost of sand to be fixed as Rs.1000 per unit.

3. For the pending quarries, necessary environmental clearances from the State Environmental Impact Assessment Authority may be expedited and follow-up action shall be taken up with Environment, Climate Change & Forest Department to get the environmental clearances at the earliest.

4. The sand customers can be facilitated to remit money in cash at the depots by establishing special extension counters of banks at all the Government sand depots.

5. Approved building plan shall be made mandatory at the time of booking river sand.

6. Registration number of any suitable vehicle convenient to the customer may be given at the time of booking and it will be verified / modified at the time of taking delivery in the Water Resources Department depot.

7. All the operations in the sand quarry and depot shall be monitored using IP / CCTV cameras with 24X7 live streaming and real time monitoring of all shunting vehicles with GPS and prefixed Geofence to prevent pilferage.

8. A centralized control room have to be established to monitor all the sand operation activities throughout the State.

9. The Income Tax application to be developed for the above purpose shall be user friendly and Web as well as mobile enabled.

10. Revenue Department, Geology and Mining Department, Tamil Nadu Pollution Control Board, Tamil Nadu Water Supply and Drainage Board and Police Department shall render their cooperation in selection of site, precise area approval, approving the mining plan, issuing consent to establish and operate and issuing the final proceedings for commencing the new quarries and assisting in all the operations along with the Water Resources Department, so that all the sand quarries function in a transparent manner.

11. Effective steps have to be taken to commence the new sand quarries and Government Depots within two months.

12. After implementing the above activities in Phase-I, additional facility of delivering the sand at doorsteps of consumer to be taken as Phase II by the Water Resources Department.

5. Based on the minutes of the meeting, the Government, after careful consideration, have decided to implement the following measures, so as to implement an effective sand sale system:-

1) The SLP No. 006215/2021 filed before the Hon'ble Supreme Court of India against the common order of the Honourable Madurai Bench of Madras High Court dated 17.03.2021 in W.P. (MD) No.16884 and 14088 of 2020, shall be withdrawn.

2) The cost of the sand at sand quarry site shall be fixed as **Rs.1000 per unit**.

3) 16 lorry quarries and 21 bullock cart sand quarries for which environmental clearance have been obtained shall be permitted to operate first and in the second batch 63 lorry quarries, 8 bullock cart sand quarries which are in various stages for getting environmental clearance will be permitted to operate as per the existing protocol.

4) All online applications made by the General Public from 8.00 am to 2.00 pm. shall be exhausted first and then the Lorry Owners can book from 2.00 pm to 5.00 pm depending upon availability of the remaining sand.

5) Registration number of any suitable vehicle convenient to the customer shall be permitted, provided the buyer gives the details of the said vehicle at the time of booking. The customer is also allowed to change the vehicle at the time of taking delivery after verification of vehicle records.

6) The Hon'ble court have ordered that the respondents will have to satisfy that there is an approved plan produced by the applicant namely, the indenting purchaser to the satisfactions of the officials and based upon the same alone permission will have to be granted". Hence in view of the above mentioned direction of the Hon'ble High Court it has been decided that wherever the intended construction requires approved building plan, the same shall be verified.

7) The existing Information Technology Web/mobile enabled application (i.e TN Sand Application) shall be modified and updated for implementing the preference for public booking, etc.

8) Sand booking for public will be provided through Tamil Nadu e-Governance/ e-services such as TAC-TV, e-Kiosk, e-seva maiyam and also at the sand depot counter, so as to facilitate, easy access for online booking for the public who do not have internet connectivity.

9) The above services will be provided on payment of a reasonable service charge as decided by Engineer in Chief, Water Resources Department and Service Providers.

10) Special extension counters of banks shall be established at all the Government sand depots so as to facilitate the sand customers to remit the money in cash at the sand depots, If they so desire in addition to the existing online payment facility such as net banking, debit card, UPI. facility.

11) The existing facilities like IP / CCTV cameras with 24X7 live streaming and real time monitoring of all shunting vehicles with GPS and prefixed Geofence will be strengthened in the established centralized control room in Chennai to prevent pilferage and effectively monitor all the quarrying operations throughout the State. After implementing the above activities in Phase-I, advance booking and additional facility of delivering the river sand at the doorsteps of consumers shall be taken up in Phase-II by the Water Resources Department. Steps shall also be taken to develop and deploy GIS enabled IT application in this regard and develop suitable protocol of door delivery of sand from the sand depots to the sand customers door.

12) Since sand quarry operation needs co-operation of various departments such as Mining, Police, TNPCB and Revenue the concerned District Collectors is directed to facilitate, Co-ordinate among various departments and to monitor the sand quarries to be operated by Water Resources Department.

6. The Engineer-in-Chief and Chief Engineer (General), Water Resources Department, is directed to take necessary action to implement the order in para 5 above

(BY ORDER OF THE GOVERNOR)

SANDEEP SAXENA
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

ABSTRACT

Rules - Regional Plan (Preparation, Publication and Sanction) Rules, 2021 under section 122 of Tamil Nadu Town and Country Planning Act, 1971 (Tamil Nadu Act 35 of 1972) - Orders - Issued.

==========

Housing and Urban Development [UD4(1)] Department

G.O.(Ms).No.2 **Dated: 10.01.2022**

பிலவ வருடம், மார்கழி திங்கள் 26,

திருவள்ளுவர் ஆண்டு 2052,

Read:

From the Director of Town and Country Planning letter No.Roc.12289/2021/MP, dated 31.07.2021 and 14.08.2021.

ORDER:

The appended Notification shall be published in the Tamil Nadu Government Gazette, Extraordinary, dated the 10th January, 2022.

(BY ORDER OF THE GOVERNOR)

HITESH KUMAR S.MAKWANA,
PRINCIPAL SECRETARY TO GOVERNMENT.

//FORWARDED BY ORDER//

SECTION OFFICER.

APPENDIX.

NOTIFICATION.

In exercise of the powers conferred by section 15 read with lause (j) of sub-section (2) of section 122 of the Tamil Nadu Town and ;ountry Planning Act, 1971 (Tamil Nadu Act 35 of 1972), the Governor of 'amil Nadu hereby makes the following rules:-

RULES

1. Short title.- These rules may be called the Tamil Nadu Regional Plan (Preparation, Publication and Sanction) Rules, 2021.

2. Definition.- In these rules, unless the context otherwise requires,-

   (a) "Act" means, the Tamil Nadu Town and Country Planning Act, 1971 (Tamil Nadu Act 35 of 1972);

   (b) "regional planning area" means the area declared to be a regional planning area under sub-section (4) of section 10 of the Act;

   (c) words and expressions used, but not defined in these rules, unless the context otherwise requires, shall have the same meaning as defined in the Tamil Nadu Town and Country Planning Act, 1971 (Tamil Nadu Act 35 of 1972).

3. Preparation of land and building use map.- Within eighteen months from the date of constitution of the Regional Planning Authority, the Regional Planning Authority shall prepare a land and building use map for the regional planning area as a whole drawn to a scale of not less than 1:1,00,000 and for the different parts of the regional area, drawn to a scale of not less than 1:50,000 providing thereon for the matters specified in sub-section (2) of section 15 of the Act and areas of tourist importance.

4. Preparation of Regional Plan.- (1) As soon as may be, but not later than a period of twenty four months, from the date of preparation of the land and building use map, the regional planning authority shall, in consultation with the development authorities, the local planning authorities concerned and the Director, prepare a draft regional plan for the regional planning area or any part of it and other area or areas contiguous or adjacent to the regional area as the Government may direct to be included in the regional plan. Local planning authorities and development authorities may review and reconcile their sanctioned and ongoing development plans to

conform to the regional plan and may make necessary amendments to accommodate proposed regional growth centres and industria zones, if any.

(2) The draft regional plan may provide for all or any of the following matters, namely:-

(a) general location of the region, historic evolution, topography, geology and geomorphology, hydrology (surface and ground water), climate, administrative profile, functional areas, ratio of urban (urbanisation profile) and rural development, the extent of use of land in the region for residential, Industrial, commercial, agricultural and recreational purposes or as forest or for mineral exploitation, tentative land requirement projections from various sectors for various zones, development control regulations for various regional uses;

(b) population of the region and its distribution, population density, age-sex composition, literacy rate (trend analysis), growth of population (natural and migratory), distribution of workforce-formal and informal sector, workforce participation ratio, occupational structure, identification of urban and rural growth centre and new town sites, peri-urban areas, analysis of existing key developments, hierarchy of settlements, density of settlements, zones of development, growth poles and satellite townships;

(c) major economic sectors, economic nodes, major economic hubs, Industrial estates/parks for cluster development, agriculture resources, proposed or estimated agricultural infrastructure, irrigation infrastructure, mineral resources, housing-scenario, stock and supply, need assessment, low cost housing and night shelters, slum settlements, tribal settlements, informal residential areas and unauthorised colonies, gap assessment and requirement for the projected population, proposed measures for inclusive planning (gender, differently abled / physically challenged / disabled / backward class);

(d) transport, trade and communication such as network of roads, highways, railways, waterways, canals and airports and their interrelationship (local, national, global level) with major activity nodes, logistics and terminals including their development, economic linkages, traffic proposal at regional

level (location of integrated freight complexes and multi modal hubs), development corridors and transit oriented developments, major economic thrust sectors, earmark spaces and norms for services like banks, ration shops, telephone, mobile network, internet, postal, police protection, fire protection and others at regional level;

(e) water-supply, drainage, sewerage, sewage disposal, sanitation and refuse, solid waste disposal, decentralised treatment, regional landfill site and strategy to minimise waste generation by encouraging zero-waste disposal, other public utilities, amenities such as education (schools, colleges, universities etc.), health care (general hospitals, multispecialty hospitals, health centres), electricity and gas;

(f) demarcation, conservation and development of areas of natural scenic, beauty, forest, wild-life, natural resources and landscaping, agro-climatic zone, wetland, coastal/hill zone, if any, urban heat island, biodiversity, environmentally sensitive areas-hazard prone zones such as earthquake, floods/ flash floods, high winds, cyclone, fire, land slide, tsunami, vulnerability and risk assessment of the region, pollution levels of water, soil, land, air and other threats to natural environment, disaster risk mitigation measures;

(g) demarcation of objects, buildings and mapping of archaeological or historical or natural heritage or of man-made heritage or of natural beauty, or actually used for religious purposes or regarded by the public with veneration, flow of tourist (season-wise and origin-wise), tourism infrastructure analysis and gap assessment, locations for promotion (even if seasonal) and proposed circuits including strategies to promote green mobility (walking, cycling, public transport) for tourism;

5. Submission of draft regional plan for consent of Government.- As soon as may be, after the preparation of the draft regional plan for the regional area or any part of it, but not later than the period specified in rules 4, the regional planning authority shall submit a copy of the draft regional plan together with all enclosures to the Government through the Director, for obtaining consent of the Government under section 24 for publication of notice of preparation of the plan.

6. Consent of Government.- (1) The Government shall, on receipt of the plan and in any case not later than two months, from the date of receipt of the plan either give its consent to the regional planning authority for publication of the notice under sub-section (1) of section 26, of the preparation of the draft regional plan or may direct the regional planning authority to make such modification in the regional plan, as they deem fit.

(2) Within three months from the date of return of the draft regional plan by the Government the regional planning authority shall make the modification, if any, directed by the Government and resubmit it through the Director.

(3) The Government shall thereupon give their consent for the publication of notice of preparation of the draft regional plan under sub-section (1) of section 26.

7. Notice of preparation of regional plan.- (1) The regional planning authority shall, within sixty days from the date of publication of the draft regional plan, publish a notice in Form I, in the manner prescribed in rule 13, of preparation of the draft regional plan, inviting objections or suggestions from any person interested in the plan, within a period of two months from the date of publication.

(2) Within thirty days from the date of publication of the draft regional plan, the regional planning authority shall send copies of the draft regional plan with enclosures to the Director, the Chairman of the regional planning authority, the District Collector, the heads of departments as listed in the Schedule to these rules and to the State Town and Country Planning Board.

8. Approval of draft plan by regional planning authority.- The regional planning authority shall consider the objections and suggestions, if any, received on the preparation of the regional plan and allow a reasonable opportunity of being heard to any person including representatives of Government departments and authorities, who have made a request for being so heard and make such amendments to the regional plan, as it considers proper and shall submit the said plan with or without modifications to the Government through the Director within three months from the date of expiry of the period referred to in sub-rule(1) of rule 7.

9. Approval of regional plan by the Government.- (1) As soon as may be, but not later than three months from the date of receipt of the

draft regional plan from the regional planning authority, the Government after consulting the Director shall either approve the regional plan or shall approve it with such modifications, as they may consider necessary or may return the regional plan to the regional planning authority to modify the plan or to prepare a fresh plan in accordance with such direction as the Government may issue in this behalf.

(2) If the Government have directed any modification to be made in the draft regional plan, the regional planning authority shall carry out such modification in consultation with the Director and resubmit the plan within six months to the Government.

(3) In case, the Government have directed the preparation of a fresh plan, the regional planning authority shall prepare a fresh plan in accordance with such direction as may be given in this behalf and in consultation with the Director and submit it to the Government after following the procedure and time limit prescribed in these rules.

(4) The Government shall accord approval to the regional plan and publish the said plan by notification in the Tamil Nadu Government Gazette and in the leading newspapers of the region and also indicate thereon the place and time at which the said plan shall be open to the inspection by the public.

.0. Republication of notification.- Within one month from the date of publication of the notification under section 30 in the Tamil Nadu Government Gazette, the regional planning authority shall republish the same in the manner prescribed in rule 13.

.1. Review of regional plan.- The procedures laid down in rules 7 to 10 shall apply to any review of regional plan ordered by the Government under clause (a) of sub-section (2) of section 32 of the Act.

.2. Variation or revocation of a regional plan.-

(1) The Government may vary or revoke a regional plan under sub-section (4) of section 32 of the Act and any such variation or revocation shall be notified in the Tamil Nadu Government Gazette.

(2) Any variation or revocation of a regional plan notified in the Tamil Nadu Government Gazette shall be republished in the manner prescribed in rule 13.

13. Manner of republication of notification and notices.- All notifications issued by the regional planning authority and notices relating to regional plans published in the Tamil Nadu Government Gazette shall be republished,-

(a) in the District Gazette;
(b) on the notice board of the office of the Regional Planning Authority;
(c) on the notice board of the office of the District Collector;
(d) on the notice board of the office of the District Planning Office;
(e) in one or more leading National English daily newspapers and vernacular newspapers circulating in the regional planning area.

THE SCHEDULE
(See rule 7(2))

A. Heads of Departments

(1) Commissioner of Revenue Administration.
(2) Commissioner of Land Administration.
(3) Commissioner of Land reforms.
(4) Commissioner of Survey and Settlements.
(5) Commissioner of Transport.
(6) Commissioner of Civil Supplies.
(7) Commissioner of Municipal Administration.
(8) Director of Health Services and Family Planning.
(9) Director of Medical Education.
(10) Director of Agriculture.
(11) Director of Animal Husbandry.
(12) Commissioner for Milk Production and Livestock Development.
(13) Registrar of Co-operative Societies.
(14) Director of School Education.
(15) Director of Collegiate Education.
(16) Director of Technical Education.
(17) Chief Engineers (General, Irrigation, Buildings, Highways and Rural Works and National Highways).
(18) Director of Town and Country Planning.
(19) Principal Chief Conservator of Forests.
(20) Director of Industries and Commerce.
(21) Director of Rural Development.
(22) Director of Town Panchayat.

(23) Director of Archaeology.
(24) Director of Fisheries.
(25) Director of Statistics.
(26) State Port Officer.
(27) Director of Environment.

B. Autonomous Bodies

(1) Tamil Nadu State Electricity Board.
(2) Tamil Nadu State Housing Board.
(3) Tamil Nadu Khadi and Village Industries Board.
(4) Tamil Nadu Urban Habitat Development Board.
(5) Tamil Nadu Water-supply and Drainage Board.
(6) State Industries Promotion Corporation of Tamil Nadu Limited.
(7) Small Industries Development Corporation.
(8) Electronics Corporation of Tamil Nadu Limited.
(9) Tamil Nadu Industrial Development Corporation.

C. Ministries of the Government of India

(1) Ministry of Defence, New Delhi.
(2) Ministry of Railways, New Delhi,
(3) Ministry of Civil Aviation, New Delhi,
(4) Ministry of Transport and Communication, New Delhi.
(5) Ministry of Housing and Urban Affairs New Delhi.
(6) Ministry of Ports, Shipping and Waterways, New Delhi.

HITESH KUMAR S.MAKWANA,
PRINCIPAL SECRETARY TO GOVERNMENT.
SECTION OFFICER(

FORM-I

(See rule 7(1))

Notice of preparation of Regional Plan under section 26 of the Tamil Nadu Town and Country Planning Act, 1971 (Tamil Nadu Act 35 of 1972).

The Regional Plan together with all enclosures may be inspected free of cost during office hours at the office of the Regional Planning Authority. Copies of the plan are also available at the office of Regional Planning Authority for sale.

2. Any person affected or interested in the Regional Plan, before communicating, in writing, may represent in person to the Chairman of the Regional Planning Authority, the objections or suggestions relating thereto.

Regional Planning Authority.

OFFICE OF THE ENGINEER-IN-CHIEF, CHIEF ENGINEER (GENERAL)& CHIEF ENGINEER, CHENNAI REGION, PWD., CHEPAUK, CHENNAI-5.

CIRCULAR MEMO NO. HDO (A) / 32710 / 2014-6, DATED:13.01.2022.

Sub: PWD - Revision in the Monetary limit for categories of Registration of Contractors - Registration of Contractors in PWD at concerned Regional Chief Engineer's office, PWD and Renewal of live certificate - Instructions - Reg

Ref:
1. G.O.(Ms).No:1789 / Public Works (G2) Department, Dt:29.12.1992.
2. G.O.(Ms).No:222 / Public Works (G2) Department, Dt:08.04.1999.
3. G.O.(Ms).No:195 / Public Works (G2) Department, Dt:14.12.2021.

[redacted]

1. The Government in their Government order 3rd cited, has revised in the Monetary Limit for the categories of Registration of Contractors and enhanced Monetary limit under different classes of Registration for the enlistment of contractors in PWD.
2. In this connection, the Regional Chief Engineers of PWD are requested to follow the Government order scrupulously. The following guidelines are issued for proper implementation of the Government order 3rd cited above.
3. The system of Registration of Contractors should be comprehensive to serve the needs of all Government departments & Public undertakings. It should be done carefully after verifying all the requirements, the bonafied of the evidences produced by the applications for Registration and Renewal.
4. The fitment of the existing Contractors in various classes with new monetary limits may be allowed as below and any enhancement of their status may be considered duly taking into account the value of solvency at 30% of the value of Registration / Renewal / Refitment other financial status, time limit up gradation specified in the Government orders previous experience etc., the fitment Classes and Solvency particulars are furnished in the Table I and II respectively.

5. Due to reclassification of the above classes of contractor as above the contractors already registered to be reviewed and considered for up gradation /renewal etc., on payment of application and registration fees.
6. The contractor already registered in WRO Divisions, Circles & EIC (WRD), CE (General) office, should register in PWD to participate in PWD tenders from 01.04.2022.
7. All registered Contractors including class I to class V Contractors shall be allowed for registration after collection of fees prescribed in the Government Order 2nd cited.
8. The registered Contractors are eligible to take works in the lower classes also.
9. The Contractors shall continue to produce a Solvency Certificate from Revenue authorities as per table-II.
10. All classes of Contractor should furnish latest Income Tax Assessment order.
11. All the Contractors should furnish the GST No. and GST Certificate obtained from the competent authority.
12. The contractor in case of Company (or) corporate firm seeking registration, they should furnish a copy of its latest Auditor's annual report also.
13. The other relevant Guidelines issued in the Government Order 2nd shall be continued. (ie., Application fees & Registration fees) However Partnership firms / Individuals shall have satisfactorily completed the building works of value as furnished in the table III.

Table - III

Class for Registration	Work Experience in past 4 years
For Class-I	Cumulative value of Rs.10.00 Crores in maximum of 10 Works.
For Class-II	Cumulative value of Rs.5.00 Crores in maximum of 10 Works.
For Class-III	Cumulative value of Rs.2.00 Crores in maximum of 10 Works.
For Class-IV	Cumulative value of Rs.50.00 Lakhs in maximum of 10 Works.
For Class-V	Cumulative value of Rs.15.00 Lakhs in maximum of 10 Works.

During the past 4 years (Four) to be considered for registration.

Table-I

Existing Monetary limit and class of contractor as per G.O.Ms.No:222 / PW(G2) dept., dt:08.04.1999.	Fitment in the new Monetary limit and Class as per G.O.Ms.No:195 / PW(G2) dept., dt:14.12.2021.
Class – I, Above Rs.75.00 lakhs	Class – I, Above Rs.10.00 Crores
Class – II, upto Rs.75.00 lakhs	Class – II from 5.00 crores to 10.00 crores
Class – III, upto Rs.30.00 lakhs	Class – III from 2.00 crores to 5.00 crores
Class – IV, upto Rs.15.00 lakhs	Class –IV from Rs.50.00 lakhs to 2.00 crores
Class –V, upto Rs.6.00 lakhs	Class – V upto Rs.50.00 Lakhs.

Table- II

Fitment in the New Monetary Limit	Solvency 30% of the Lower value of Monetary Limit
Class – I, Above Rs.10.00 Crores	3.00 Crores
Class – II, From 5.00 Crores to 10.00 Crores	1.50 Crores
Class – III, from 2.00 crores to 5.00 crores	60 Lakhs
Class – IV, from Rs.50.00 lakhs to 2.00 crore	15 Lakhs
Class –V, upto Rs.50.00 Lakhs.	Below 15 Lakhs

Class V Contractor may be allowed to take works for the value of 3.33 times of their Solvency produced by the Class V Contractor

- The Contractors previously registered in WRO, Division & Circles, Building Divisions, Circles & in EIC (WRD) and Chief Engineer (General) office shall be allowed to participate in PWD tenders up to 31.03.2022 only. From 01.04.2022 contractors already registered in Building Divisions and Circles, with renewal as per G.O.(Ms).No:195 / Public Works (G2) Department, Dt:14.12.2021, and newly registered contractors in PWD shall only be allowed in PWD Tenders.
- From 01.04.2022, the renewal of already registered contractors in Building Division & Circles, shall be made only, when they produce solvency certificate for the value prescribed for each class of contract detailed in Table-II.

14. The registration Certificate itself should specify, that the Contractors registration will be automatically cancelled in case the contractors does not participate in any tender for continuous period of five years. If a Contractor does not submit the tender after purchasing tender forms in three consecutive tenders, his registration shall be cancelled. This should also be incorporated in the registration certificate and refitment orders.

15. The Regional Chief Engineers should also watch on the above and take action to cancel the registration, under intimation to Engineer-in-Chief, Chief Engineer (General) & Chief Engineer, Chennai Region, PWD, Chennai.

16. The Regional Chief Engineers of Public Works Department are therefore requested to follow the said Guidelines without any lapse.

All the Regional Chief Engineers are requested to acknowledge the receipt of this Circular Memo.

To
All the Chief Engineer's of Public Works Department.

For Engineer-in-Chief,
Chief Engineer (General) & Chief Engineer,
Chennai Region, PWD.,
Chepauk, Chennai-5.

SOUTHERN CENTRE ACTIVITIES

03.01.2022

அன்று L&T நிறுவனத்தின் மேலாண் இயக்குநரும் தலைமை நிர்வாகியுமான திரு. S.N. சுப்பிரமணியம் அவர்களின் அழைப்பின் பேரில் 30வது அகில இந்திய கட்டுநர் சங்க மாநாட்டுத் தலைவரும் அகில இந்திய முன்னாள் தலைவருமான சேவாரத்னா பீஷ்மா திரு. R. இராதாகிருட்டிணன், அகில இந்திய கட்டுநர் சங்க மாநாட்டு ஒருங்கிணைப்பாளர் திரு. Mu. மோகன், தென்னக மய்யத்தலைவர் திரு. L. சாந்தகுமார், மாநாட்டு பொருளாளர் திரு. L. வெங்கடேசன் ஆகியோர் அவரை நேரில் சந்தித்து நடைபெறவுள்ள மாநாட்டு ஏற்பாடுகள் குறித்து விளக்கியதோடு மேற்கொள்ள வேண்டிய நடவடிக்கைகள் குறித்து ஆலோசித்தனர்.

10.01.2022

அன்று தென்னக மய்யத்தின் மகாசபைக்கூட்டம் பத்மபூஷன் டாக்டர் A. இராமகிருஷ்ணா அரங்கில் மாலை 4.00 மணி அளவில் நடைபெற்றது. அக்கூட்டத்தில் தென்னக மய்யம் சார்பாக போட்டியின்றி தேர்ந்தெடுக்கப்பட்ட 2022-23ம் ஆண்டிற்கான அலுவலக நிர்வாகிகள், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்களை தேர்தல் அதிகாரியாக நியமிக்கப்பட்ட திரு. J. தாஜூதின் அவர்கள் அறிவித்தார். அவருக்கு துணையாக திரு. S. ஜெயராமன் அவர்களும் செயல்பட்டார். இக்கூட்டத்தில் உடனடி முன்னாள் அகில இந்தியத்தலைவர் திரு. Mu. மோகன், அகில இந்தியத் துணைத்தலைவர் திரு. S. அய்யநாதன், மாநிலத்தலைவர் திரு. R. சிவக்குமார், தென்மண்டல செயலாளர் திரு. K. வெங்கடேசன் , மாநிலச் செயலாளர் திரு. S. இராமப்பிரபு, மாநிலப் பொருளாளர் திரு. T.V. சந்திரசேகர் மற்றும் செயற்குழு, பொதுக்குழு உறுப்பினர்கள் கலந்து கொண்டனர்.

12.01.202

சென்னை பெருநகர் வளர்ச்சி குழுமத்தின் (CMDA) சார்பாக மாலை 3 மணி அளவில் கூட்டம் நடைபெற்றது. இக்கூட்டத்தில் தென்னக மய்யம் சார்பாக மய்யத்தலைவர் திரு. L. சாந்தகுமார், துணைத்தலைவர் திரு. R.R. ஸ்ரீதர், மாநிலச்செயலாளர் திரு. S. இராமப்பிரபு ஆகியோர் கலந்து கொண்டு திட்டமிடல் அனுமதி (Planning permission) வழங்குவதில் ஏற்படும் தாமதம் பற்றி ஆலோசிக்கப்பட்டது.

26.01.2022

Republic day 73வது குடியரசு தின விழா நமது தென்னக மய்யத்தின் சார்பில் அறக்கட்டளையின் வளாகத்தில் காலை 9.00க்கு சேவாரத்னா பீஷ்மா திரு. R. இராதாகிருட்டிணன் அவர்களின் கொடியேற்றத்துடன் நடைபெற்றது. இதில் நமது உடனடி முன்னாள் அகில இந்திய தலைவர் திரு. Mu. மோகன், மாநிலத்தலைவர் திரு. R. சிவக்குமார், மய்யத்தலைவர் திரு. L. சாந்தகுமார், துணைத்தலைவர் திரு. R.R. ஸ்ரீதர், செயலாளர் திரு. A.N. பாலாஜி, பொருளாளர் திரு. N.G. லோகநாதன், இணைச்செயலாளர் திரு. R. நிம்ரோட், மாநிலப் பொருளாளர் திரு. T.V. சந்திரசேகர், முன்னாள் காப்பாளர் டாக்டர். D. துக்காராம், விழுப்புரம் சாசனத்தலைவர் திரு. S. கணபதி, ஆவடி மய்யத்தலைவர் மீனாட்சி சுந்தரம், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்கள் கலந்துகொண்டு சிறப்பித்தனர். அனைவருக்கும் காலை சிற்றுண்டி தென்னக மய்யத்தின் உபசரிப்பில் வழங்கப்பட்டது.

Fenesta™

Better by Design

an ECO-FREINDLY view

For Details : Er. V. Aattanathy (Director - Projects),
Sri kannan Ventures PVT Ltd.
Mob No – 9789871019,
Email – *srikannanventures@gmail.com*

SDK

UMA BLUE METALS

- Manufacturing of High Standard “M” Sand & Plastering Sand, (Water Washing Process) using VSI Machine.
- B.G. Metals 20mm, 12mm & 6mm using by VSI Machine.
- 40mm, GSB, WMM Quarry Dust.

Crushing Unit Address:
Vettakara Kuppam Village, Kodur Post, Cheyyur Taluk,
Kancheepuram District-603 305.

Chennai Address:
No. 14/1, V.o.c Nagar 2nd Street, Anna Nagar East,
Chennai-600 102

Email: umabluemetals066@gmail.com

CONTACT:
97868 66768 / 94449 09746 / 78670 10036
94443 80781 / 99625 87979


SCHWING
Stetter
THE BIG
MOVE
XCMG
BATCHING PLANT | CONCRETE MACHINERY | CONSTRUCTION MACHINERY | ROAD MACHINERY | MATERIAL HANDLING MACHINERY
F71/72 SIPCOT INDUSTRIAL ESTATE, IRUNGATTUKOTTAI, SRIPERUMBUDUR, KANCHIPURAM DISTRICT - 602117, TAMIL NADU, INDIA.
PHONE : 044 2715 6780/781, 47108100/33555588 FAX : 044 27156539 VISIT US AT WWW.SCHWINGSTETTERINDIA.COM
MUMBAI 022 25624863/ 64, 30718300/33555588 I NEW DELHI 011 3092 8500/33555588
HYDERABAD 040 6615 1783/33555588 | BANGALORE 08042438400 / 33555588
KOLKATA 033 3322 3300 / 33555588 | COCHIN 0484 4055984/3355558
AHMEDABAD 079 40244200 /33555588 | PUNE 02026055651 /2/33555588 | GUWAHATI 0361 2234738 / 09831434098
CHANDIGARH 0172 3957500 / 3957503 I BHUBANESWAR 0674 2463999/3355558 I RAIPUR 07566 613495
Follow us
@schwingstetterindia
For Product enquiry
+91 91766 06120