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INNOVATIVE USES OF HOUSE LIFTING TECHNIQUES

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ABSTRACT

If your house is below the street level and sewage water regularly flows in, relocation is not the best solution. With today’s technology you can easily raise the level of your house. And that too without any risks at all. It’s time to save money and live in the same home which you are used to living in. Being more specific, houses that are put up in low-lying areas often face a big issue. This problem is never-ending during the cloudburst seasons when there is profound rainfall and a heavy inflow of water into the low-lying lands. Before now the rise and fall of tides engender problems to such houses; the incessant falling rains make this problem even worse. As a result, there is a solution to this problem and it would be house lifting. Masonry houses are more difficult to lift, primarily because of their design, construction, and weight, but lifting these homes is possible.

KEYWORDS: House, Lifting Technology, Relocation, Low Lying Area, Heavy Inflow of Water

INTRODUCTION

A house is one of the greatest assets which anyone possesses and constructing one's dream home is a very tricky and difficult task. Building a house is quite intricate and puts us through quite a lot of issues and obligations more to the point; construction planning is one such complicated task, in case if you are constructing a dream house then you need to consider numerous aspects to construct a safe and secure home that stands tall for several years to come.

Rebuilding involves great amount of money time and materials. This is not possible for everyone. More over people has emotional attachment with their buildings.
Today citizens are facing various problems like entering of sewage water during rains due to lowering down on road levels. Rainy water directly enters in to the house and shop and destroys the property and create great nuisance.

If your house is below the road level and you have no clue as how to raise its level without rebuilding it. Specialize in lifting and shifting the houses without any damage and raising their level with the help of Jack.

With this scientific technique, in the project helped many people. By opting for this cheap and effective method, they have saved lakhs of rupees and their valuable time.

CASE STUDIES

1. RAISE YOUR HOME, IF NEED BE, WITH THE FOUNDATION! - AT HYDERABAD

Figure :1‘lifting' or ‘shifting' of a house

Source:   http://www.thehindu.com/features/homes-and-gardens/raise-your-home-if-need-be-with- the-foundation/article3456262.ece

A home at Venkataramana colony near Nagole was confronted with the problem of road in front of it being raised by several feet and the owner got the house elevated by three feet to bring it to the road level!

Building a home, rebuilding, repairing or renovating, we all know. But tinkering with a home and that too with its foundation and then lifting it to a desired height, is something not usually heard of. Not only such a situation of the ground level of a dwelling being low than the street level is considered inauspicious by many, it presents several problems including water easily gushing in from the road during rains.
2. HOUSE LIFTING FROM FLOODS

Figure: 2 Building is protected against all forms of Natural disaster

Source: http://grant-ashleynz.blogspot.in/2011/06/house-lifting-from-floods.html

We should make sure that the building is protected against all forms of Natural disaster. If your house is lying in a low land area near the sea or the river, then there are a lot of chances that your house would be affected with floods. When the houses were constructed, enough anti flood measures were not taken to protect it from floods. This is because the required technology was not available at that point of time.

Protection from floods to a house is common in areas of Thailand, Burma etc. where these areas are subjected to heavy rainfall. It is not uncommon for these areas to get flooded quickly. That is why; most of the homes that are made in this area are made on an elevated plane. The houses are often built on a platform that is a good 4 to 5 feet above ground level. The only options remain is the lift these houses from the foundation along with the foundation. Now you might think that this is an impossible task. However, this is not. Modern technology has made it possible for a fully made concrete building to be lifted up along with the foundation.

There are many home lifters available today. It is has become a common feature especially in low lying areas to lift your home and make sure that you are protected against flood. This entire process however, is a very dangerous and risky job and should be handled only by professionals. By no means should you try house lifting on your own. This however again, is quite impossible. Even if you did get your hands on a hydraulic lift, the power truck, the concrete reinforcements and other equipment that you need to complete the process, you would have to manage operating all of them at once to successfully complete the process of lifting your home. Most of the time, such a task is completed by a team of certified professionals who know how to use the equipment and those that have experience in handling such a project. You should therefore hire the right people for the job and get the job done by them.
Now you might think such a process is costly and you cannot afford it. While this is true, the good news is that you can very well afford it. In fact you can get it done for free! The government has given out a large sum of money to aid houses that are affected by floods. Therefore all you really need to do is fill out the paperwork and the specialists will come to you for house moving and finish the necessary work to secure your home.

3. HOUSE-LIFTING TECHNOLOGY COULD SAVE HOMES

Hundreds of condemned homes could be saved if new house-lifting technology proves a success. The technology had the potential to save hundreds of homes that had been deemed beyond repair. The cost of using the technology was about half of what it would cost to rebuild. It does have the potential to save a lot of money.

The plant is capable of lifting buildings up to 3 meters high, with unimpeded access under the building. The foundations of the building can be broken up and removed with small excavators. The natural ground can then be stabilized if required and a new foundation or concrete slab installed. The building is then simply lowered back on to the new foundation and secured. It takes about 14 days to lift a 200-square-meter house, remove and replace the damaged foundation slab and lower the building. It's an extremely fast process.

![Figure: 3 NEW TECHNOLOGY: A high-lift jack is tested on a Rolleston house. Source: www.stuff.co.nz/the.../House-lifting-technology-could-save-homes](image)

4. A LITTLE ABOUT WOLFE HOUSE & BUILDING MOVERS

Wingate house moving lifting and leveling has been associated with moving all types of buildings for over 50 years. Harold Wingate, Sr. started our company in 1959. Through the years, Wingate house moving lifting and leveling has maintained
the highest professional integrity and is committed to providing the most innovative and trusted methodologies in house moving, levelling, rigging and dismantling.

Wingate house moving lifting and levelling is the trusted house moving company that businesses and homeowners turn to for a safe, damage-free structure raising and moving to a new location. We are known for the most modern, up-to-date house moving equipment and employing the latest in house raising and moving technology.

We are continually upgrading our house moving skills to stay knowledgeable as industry technology changes to meet the construction needs of all Louisiana and the entire Gulf Coast Region.

**House Lifting and Building Raising**

![Figure 4: House Lifting and Building Raising by Hydraulic Jacking System](image)

Wolfe House Movers has the latest and best in structural lifting technology in their Unified Hydraulic Jacking System. The hydraulic jacking pump synchronizes the pressure to the jacks so that the whole building will lift evenly without racking. This keeps the cracks in the drywall or plaster to a minimum and sometimes nonexistent.

There are many scenarios where lifting your home can be a viable option. Some of the most common examples are flooding, short basement/crawlspace, adding another story and commercial renovation.

**Source:** [http://www.wolfehousebuildingmovers.com/lifting.html](http://www.wolfehousebuildingmovers.com/lifting.html)

**Flooding:**

Each year different areas of the country get more rain than what the local rivers, canals and storm drains can handle. If your home or local business is in one of these areas and has been flooded once or many times, we can help. You will need to find out from the town where the 100 year flood plain is for your property. Lifting above this level will give you added protection from the big storms and many times...
will cut your flood insurance drastically. Sometimes houses need to be raised just one block (8”) and sometimes they need 12’ or more. No matter what height you would like to lift your structure, Wolfe House and Building Movers can handle your project with ease and support it in place while your mason builds the foundation up underneath.

**Adding Head Room to Your Basement/Crawlspace:**

If you live in a house with only a 6’ basement, a partial basement or even just a crawlspace, than this service could be an excellent choice for you. In this case there are two different options or combinations that can happen. Option number one is to raise your house to an elevation that gives you the desired head room in your basement area. Option number two is to support your house right where it is and excavate below it for the desired basement space. Any combination of those two options is possible and we at Wolfe House Building Movers would be happy to discuss those options with you to figure out what the best solution would be.

**Adding Another Story:**

Many people don’t realize that adding a second or third story under a lifted house can be a viable option. This option means that you don’t have to waste time and money in removing and rebuilding a perfectly good roof as well as cleaning or remodelling the story under the roof. Wolfe House Movers can lift the existing structure up 9’ to 12’ to just above the new desired height. A new wood floor system is then built on the existing foundation walls and exterior frame walls set in place. Once all the bearing points are in place, Wolfe House Movers will return and set the house down onto the newly constructed first floor.

**Commercial Renovation:**

When your business needs more space there are several solutions that we can help with. We can lift the roof of your structure up to give you added height. Whether you have a residential type building or a large warehouse roof, Wolfe House & Building Movers have the expertise and the equipment to lift the roof up 1 foot or 30 feet to give you as much space as you can use.

**Concrete Slab Floors:**

Although concrete slab floors seem to be immovable, Wolfe House Movers have lifted and moved many structures including their concrete floors. For a residence or a business; if the building is nice inside and you can’t afford to be out of it long at all, we can lift the slab floor right up with the building. Once lifted, there must be at least
a 4’ crawl space built under it and permanent steel beams set underneath it every 5’ for support. The alternate to lifting the slab floor would be to lift the house up off of the slab. This would require the entire lower floor of the house to be emptied (lower cabinets, furniture, appliances, bathroom fixtures, etc.) and the steel lifting beams to be installed through the frame walls at approximately 3’ to 4’ above the floor. Once the house is lifted, the foundation walls can be built up and a new wood floor system built. Then the house will be set back down onto the wood floor system. This will require a significant amount of remodelling (dry walling, painting, etc.) to be done on the lower 4’ of the walls.

5. A CASE-STUDY OF TDBD ENGINEERING WORKS (BUILDING LIFTING)

**Jacking Service**

We are instrumental in providing Premium quality Jacking Service to our valued patrons. The offered service is executed by experts who have huge experience in this domain. Our experts appropriately study the requirements of client’s and accordingly deliver this service which optimally suit the preferences laid by them. Further, our service is carried out in compliance with the international quality standards.

**Features:**
- Credibility
- Accuracy
- Flexibility

**Source:** [http://www.indiamart.com/tdbdengineeringworks/building-lifting.html](http://www.indiamart.com/tdbdengineeringworks/building-lifting.html)

**House Lifting Service**

We are offering premium quality House Lifting service to our esteemed customers spread all round the nation. The offered service is specially designed as per the requirements of the clients and is in adherence with industry quality norms. Our offered service is carried out by our skilled professionals who possess enormous experience in the concerned domain and use the latest technology in offering this.
Features:
- Client centric approach
- High efficiency
- Promptness

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html

Lifting Up to 3 Feet Service

We are instrumental in providing effective service for Lifting Up to 3 Feet. The offered service is undertaken by our skilled professionals with utmost precision in order to ensure no damage to the original structure. Our experts study the requirements of clients’ and accordingly provide this service in compliance with the international quality standards.

Features:
- Hassle free management
- High efficiency
- 24 x 7 customer support

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html

Roof Lifting Service

Owing to our rich industry experience, we are engaged in offering Lifting The Roof service for all types of buildings. The offered service is provided by the professionals who are competent enough to lift the height of the roof as per our clients’ needs within stipulated time frame. Widely demanded in national and international market, this service is available at competitive prices to our clients.

Features:
- Hassle free management
- Reliability
- Quality solution
Shops Lifting Service

Owing to our rich industry experience, we also provide service for Lifting Up The Shops. Offered service is provided in complete compliance with international quality standards. We are backed by highly skilled professionals that possess enormous experience in their respective domain and use the latest technology for providing the entire range of service to our clients.

Features:
- Precise solution
- Flexibility
- High quality

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html

Lifted Building

We are expert in providing well organized and efficient Lifted Building service in which base level of building is lifted upward or downward as required by our clients. This lifted building service is performed with high precision by our practiced personnel using the advanced tools to ensure the proper safety.

Features:
- Dependability
- Timely implementation
- Credibility

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html
House Raising Service

We are the renowned service provider rendering quick and reliable House Raising solutions. Widely acknowledged for flexible service approach and advance risk management method, our offered service raise the level of house without developing any cracks and hidden damages in them.

Features:
- Safe lifting
- Flexibility
- Dependability

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html

House on Beams and Jacks

We are an eminent entity, engaged in offering House On Beams And Jacks service that provides the proper support to house and thus ensures the proper protection during earthquakes and other natural calamities. We use the superior quality beams and jacks to carry out this service, so that we do not receive any kind of complaint from the clients’ side.

Features:
- Reliable solution
- Client centric approach
- Timely implementation

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html

House Lifting Service

Our firm is a reliable enterprise that offers excellent quality House Lifting Service. The offered service is provided by us using effective technology and skilled manpower to lift and shift the house. We have a team of highly experienced engineers, who are efficient in rendering this service as per the exact
Our firm is a reliable enterprise that offers excellent quality House Lifting Service. The offered service is provided by us using effective technology and skilled manpower to lift and shift the house. We have a team of highly experienced engineers, who are efficient in rendering this service as per the exact specification provided by the clients. This service can be availed by our respected patrons at the most reasonable prices.

Features:
- Timely execution
- Dependability
- Customized solutions

Source: http://www.indiamart.com/tdbdengineeringworks/building-lifting.html

6. A CASE STUDY ON LIFTING AND SHIFTING OF TEMPLE

Whole Temple of 130 tonne was shifted 400 feet far away from the origin.

Dimension of temple:
- Length (L) : 9 ft.
- Breadth (B) : 16 ft.
- Height (H): 38 ft.
- Location: Ahmedabad

Figure: 14 Temple Shifting process
Source: Divya Bhaskar, Ahmedabad
A new innovative idea was seen by Bhaskar publication at s.g. Highway behind Bhaskar house to shift temple according to vastu Shastra without any demolishment of the temple (by lifting whole temple from the original place).

In India, a temple having 130 tonnes was shifted 400 feet far away from the original place without any demolishment after analyzing 45 days, R.C.C. The temple was shifted easily 25 minutes from one place to another like a box.

Mamchand & Sons. Industry who has 20 workers worked everyday 12 hours for 45 days for analyzing to shift the temple without any damage even if no adverse effect on the bottom of the temple.

**How the temple was relocated at new place?**

By utilization of jacks the whole temple was lifted from its base and the whole of temple was transferred to I-beam and side jacks.

Then this whole assembly was lifted by trailer.

**Process for shifting the temple:**

**CONCLUSIONS**

The following conclusions are drawn from the Lifting technology.

1. House Lifting Technologies are cheap and effective and saved lakhs of rupees and valuable time.
2. When your house is below the road level, it can be easily lifted and shifted without any damage and raising their level in one go with the help of Jack.
3. By house lifting technology, Building is protected against all forms of Natural disaster.
4. We would have to manage all equipment operating systems successfully to complete the process of lifting house.
5. The house lifting task is completed by a team of certified professionals who know how to use the equipment and those that have experience in handling such a project.
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