



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJIRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 11, Issue 4, April 2022

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.118



9940 572 462



6381 907 438



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To Study Vastu Shastra Planning as Per Traditional Indian System & Science of Architecture

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ABSTRACT: In architectural practice, most of the time, the client demands the planning of buildings as per Vastu shastra. Vastu Shastra is applicable for all types of buildings such as residential buildings, and commercial buildings, and also for monuments, mandirs, churches, auditorium halls, museums, etc. The presence of positive energy and negative energy in the environment affects human life. So it is necessary to predict the loss of positive energy from the environment. The study of Vastu shastra has been included so many years ago. The traditional system of Vastu Shastra is used in the old structures which are still available with all-natural resources. The traditional system of Vastu Shastra shows how they are managing the natural resources such as refraction of lights, wind direction, maintaining temperature according to climates, and use of particular types of material. The main aim of Vastu is to create positive energy within the usable space.

KEYWORDS:- Traditional System, Science of the architectural, element of Vastu, Residential building.

I. INTRODUCTION

The study of Vastu shastra indicates behind every Vastu shastra planning there is a scientific reason, so the science of architecture also provides the same platform for the planning of structure. Vastu shastra Planning creates harmonious energy inside the structure. Vastu shastra and the science of architecture, both are based on theoretical and experimental analysis. It is helpful for civil engineering as well as architecture, so the study of Vastu shastra helps while planning different types of structures.

The energy created within the structure depends on several factors but as per the study 5 elements are directly or indirectly interconnected for the development of positive and negative energy such as Prithvi (Earth), Jal (water), Agni (fire), Vayu (Air) and Aakash (Space).

According to a planet study, the movement of the earth also affects the development of energy. The movement of the earth is always concerning its direction, so it is essential to study the 4 main directions of earth and 4 sun directions of the earth which include North, South, East, West and North-East, North-West, South-East, South-West respectively.

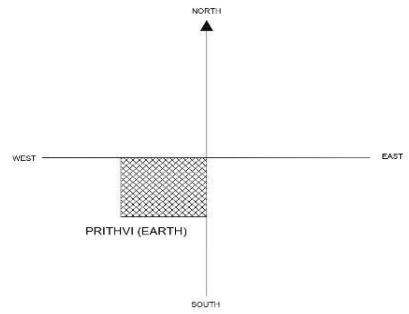
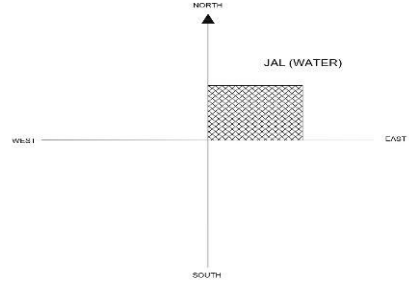
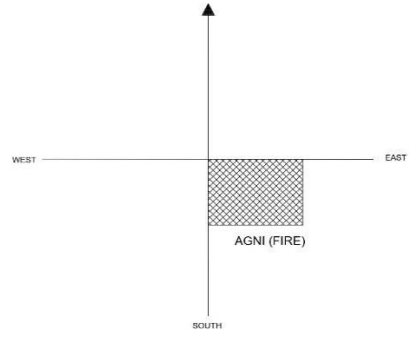
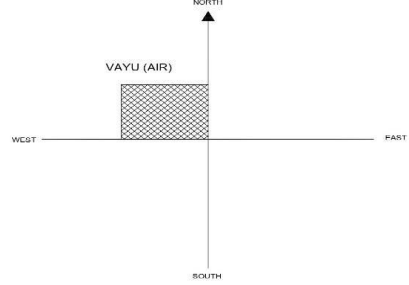
As per a recent study and architectural view, some principles of planning a structure which will ensure proper and economical utilization of space and other resources such as Aspect, Prospect, Orientation, etc.

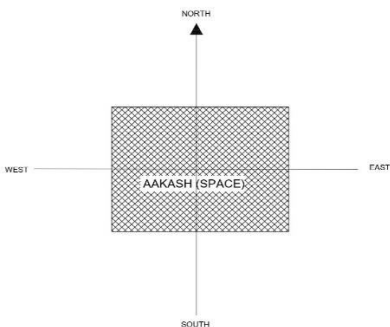
II. RELATED WORK

According to traditional knowledge, 5 elements are interconnected for the development of positive and negative energy inside the structure. (Ref. Table No. 1)

- A. Prithvi (Earth)
- B. Jal (Water)
- C. Agni (Fire)
- D. Vayu (Air)
- E. Aakash (Space)

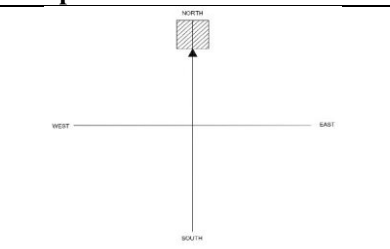
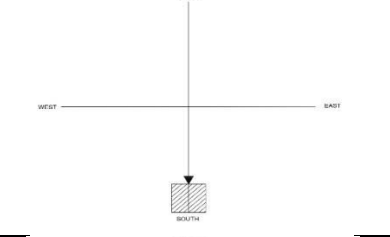
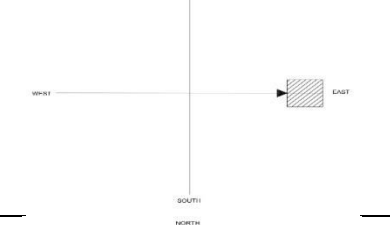
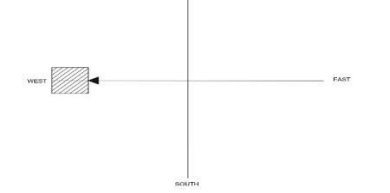
Table No.1 Elements of Vastu shastra

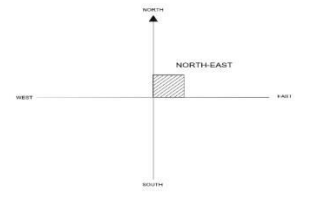
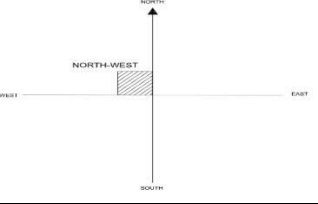
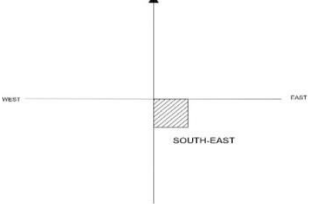
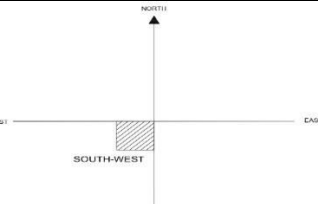
Sl. No.	Details of each Element	Location of building elements as per directions
A.	<i>Prithvi (Earth)</i> :- Prithvi means earth or Bhoomi. The earth element is associated with the southwest direction and is the best choice for locating the master bedroom. This also reinforces the position of the head of the family-like a solid and grounding element for the entire family. In some cases, planting trees and creating some amount of rock hills or rock decorations in this direction is also beneficial.	
B.	<i>Jal (water)</i> :- Jal means water. In our structure northeast direction is where the energy waves of the water element are collected. This benefit takes a mind that some water bodies are located in these directions like indoor-outdoor water features, swimming pools, fountains, ponds, and aquariums.	
C.	<i>Agni (fire)</i> :- Agni means fire. The fire element is in the southeast direction of our structure, on this basis the residential kitchen & electrical appliance should be located in that direction or Agni is demanded of good digestion and transformation for positives and good moodiness some non-toxic candle or lighting material always gives help to us.	
D.	<i>Vayu (Air)</i> :- Vayu means air. The air elements live in the northwest, so place air cooler AC and Air Chimney in this area. In some cases, most people exercise yoga in this room for good air. In this area, more people give a big opening for fresh air and circulation of cool air.	

E.	<i>Aakash (Space):-</i> It means Space. This element is directly linked to sound and silence. Space is the expansiveness in the center of your home, the elements of energy and dynamic space are called BRAHMASTHAN in Vastu shastra. This space takes clearly and clean are versed space for life to flourish and do not place heavy objects.	
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There are 4 main directions of earth and 4 sun directions of the earth which include North, South, East, West and North-East, North-West, South-East, South-West respectively. (Ref. Table No. 2)

Table No.2 *Directions of Earth*

Sl. No.	Details of Directions of Earth	Location of Building Elements as per Directions of Earth
I	<i>North:-</i> Ideal direction for living room and open space. This direction is the rule from God of wealth and it denoted stability.	
ii	<i>South:-</i> According to Vastu it is a place of Yama and mostly advised to us. This place is preferred to the child bedroom storeroom and office in the direction. This direction offers, high sunlight intensity which is good to keep the storeroom moisture-proof, and sunlight will directly until noon so helps for the office or childbed.	
iii	<i>East:-</i> Pick this direction for planning the main doors, windows, and bathroom in our house, because the east direction is ruled by the sun. In some architecture advice to have lost of the opening gives in east direction for bad bacteria destroy which multiplying in the night most of the time kitchen and main opening is preferable in residential structure.	
iv	<i>West:-</i> The direction of God is water in Vastu and is best to locate the study room, bathroom, and toilet in this direction which are the most heated direction for less used areas like the reading room or study room.	

V	<i>North-East:-</i> In a study of architecture, this location is supreme, this is the ideal location to have an open space, water source or pooja room, or meditation space in our structure because in this area we have constant sunlight so it is good for health.	
vi	<i>North-west:-</i> This direction is ideal for dining, garage, and toilets for the planning room. Here the sun is not visible in the evening so doing it is not important to work.	
vii	<i>South-East:-</i> It is the direction of God of fire that is best for locating the kitchen. The sunrays are directly contacting with Kitchen tools or structures so at night multiplied bacteria are destroyed in the early morning and grow good germs for our health.	
viii	<i>South-West:-</i> This direction of the guardian or Pitru means head of the house it is useful for master bedroom, wardrobes, and libraries. It is used to absorb the heat in walls that are coming from the west and is useful for wardrobes.	

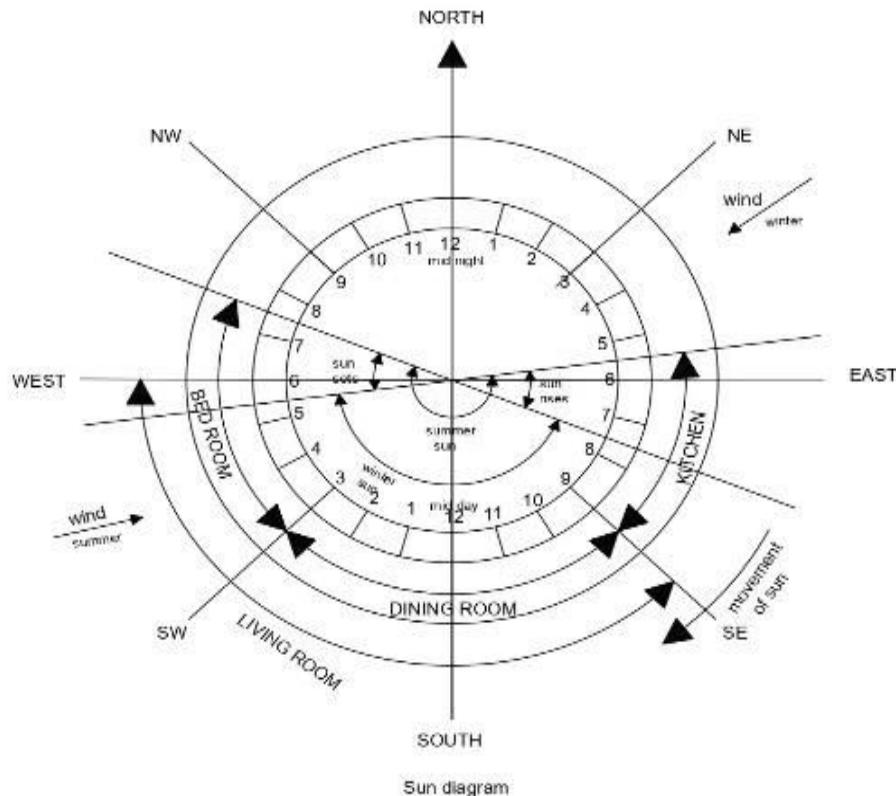
III. METHODOLOGY

Concept of planning related to Vastu shastra:-

For the architectural view, some principles are discussed for a structure. This principle ensures proper and economical utilization of space and other resources of principle are as follows:-

- * *Aspect:-* It is defined as the positioning of windows and doors in external walls to take maximum advantage of natural gifts such as sunlight and wind or breezes.
- * *Prospect:-* It means taking advantage of desirable views available from windows, doors, and balconies of such features outside the building such as gardens, lake, sea, river, hill, etc.
- * *Orientation:-* Orientation means the placement of different types of rooms in the northern direction. The same plan can be plotted in various ways to give different orientations.
According to civil engineering the plan can be oriented concerning the north in such a way that the kitchen lies towards east and north-east, the bedroom is towards south to southwest and maximum hall windows face north, north-east for public building north exposure is desirable.
These three principles viz. aspect, prospect, and orientation can be employed in planning by the use of a “sun diagram” (Ref. Fig. 1).
- * *Privacy:-* The two types of privacy are in consideration.
 - a. *External privacy:-* This means the privacy of the entire building from the surrounded building privacy which affects noise pollution overcrowding of the building etc.
 - b. *Internal privacy:-* This means the placement of internal or external openings which prevents direct view inside of any room from outer space.

Fig. 1 Sun Diagram



- * **Circulation**:-It means a moment of a human being from one place to another place side the structure.
- * **Grouping**:-In some conditions same or similar functions together are grouped and placed in the same direction for taking advantage of the economy.
- * **Roominess**:-In human psychological feeling, the space provided inside the room is called roominess.
- * **Furniture requirement**:-Furniture arrangements are made according to the types of furniture used for different rooms and their nominal sizes.
- * **Sanitation**:-Sanitation is concerned with lighting and ventilation. It also includes proper planning for drainage arrangements for ventilation and light.
- * **Elegance**:-It refers to the elevation of the building the front elevation of the building must aesthetically pleasing ugly features like drainage pipes, and radiators of the air conditioner should be avoided in the front view.
- * **Economy**:-The planning of building should be economical, avoiding all types of wastage. The wastage of raw materials affects economic planning.
- * **Access**:-The principle of access indicates ease in moving from room to room. according to his principle, it must be possible to go from one room to any other room, without crossing the third room.
- * **Architectural composition**:-This principle deals with the aesthetic view or the beauty of a building.
 - a. **Unity**:-All the elements of a building must be unified to look a unique distraction in unity leads to an incomplete look.
 - b. **Contrast**:-Repetition of the same geometrical shape causes monotony in the appearance of the building. contrast means the use of different geometrical shapes to break the monotony.
 - c. **Scale**:-This refers to the total mass of the building, whether its planning is on a domestic, public, or monumental scale. According to the scale, the architectural planning of the building will change.
 - d. **Proportion**:-the elements of the building must have a proportion between them. A door too wide or too high will spoil the appearance of the building. The proportion of length, breadth, and height should be planned in such a way that a feeling of roominess is created.

- e. *Mass composition*:-A mass means a three-dimensional shape or volume. The masses and their grouping in the formation of the building are called mass composition. This composition can be done in various ways to strike a balance so that aesthetics or beauty is achieved.
- f. *Form and Function*:-Depending upon the function of the building it is necessary to adopt a particular form of the building. The form is also closely related to scale. There are monumental forms which must be followed while designing particular buildings.
- * *Climate and its effect*:-The openings are placed according to the sun diagram and wind direction to avoid the effect of climate.

Location of Building elements as per Vastu:

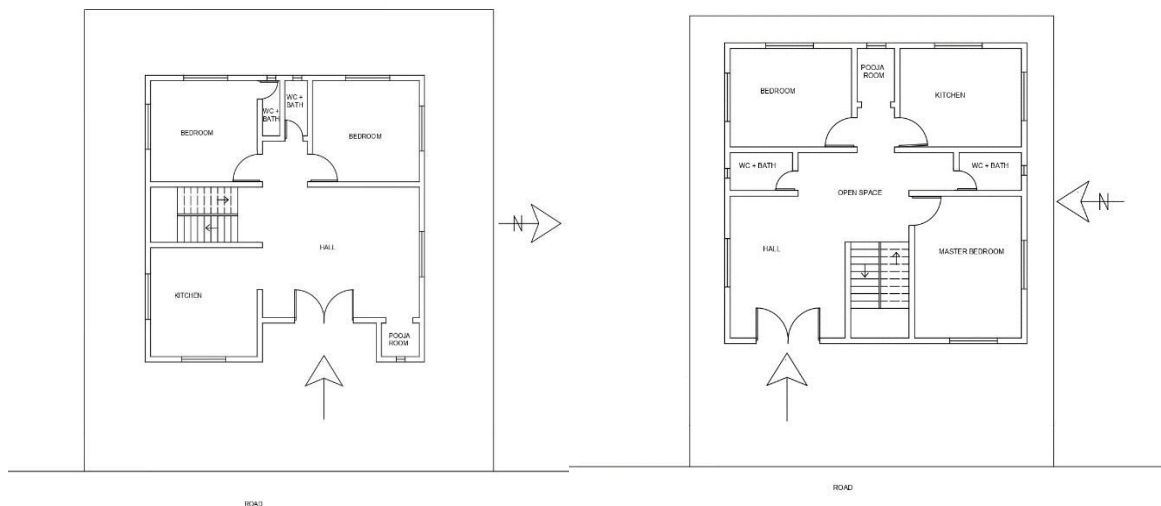
- * *Parking Area*:-A parking area means an area or structure provided for the parking of motor vehicles in a private area. According to Vastu shastra, the ideal place is the southwest corner, with a west or south-facing direction. In Vastu shastra must avoid parking in the northeast direction because the northeast does not welcome any statement material to their place.
- * *Veranda*:-The best direction to build a balcony or a veranda is the northern and eastern direction of the house. North to north-east and east and eastern direction is considered positive direction and south and south-west are considered as directions enhancing the negativity of the hours. It will have a welcome or enjoy sitting in front of the house, in some condition's veranda build for the sitting, take out footwear outside from home and it gives protection from rain which does directly not enter in the front main entrance of the house.
- * *Living room or Hall*:-The living room should be in the North or East direction. If you have a house, which is south-facing, then the living room can be in the southeast corner. North is the best direction for the living room according to Vastu for the hall. According to Vastu Shastra, every window of the living room should be north and East facing to welcome the morning, every day! The ideal area of the living room size as per Vastu is 170 sq. ft or 16 sq. m. this is the area we see when we use the house so it is to be located near the entrance to the residential.
- * *Kitchen*:-According to Vastu Shastra, the Lord of Fire—Agni—prevails in the southeast direction of the home, which means that the ideal placement of the kitchen is the southeast direction of your home. If for any reason, you are unable to do so, the northwest direction will work. Also, the minimum kitchen room size as per Vastu must be 85 sq. ft or 8 sq. m.
- * *Dining room*:-On the south, west, or east side of the house, the dining room should be connected to the kitchen. Also, because it is the most advantageous position, the ideal direction to build a dining room is west. according to Vastu Shastra, the dining table should be in the southeast direction of the house. In this direction, eating food while sitting at the dining table keeps good coordination between the family members, and there remains happiness in the house.
- * *Pooja room*:-The northeast, East, or North directions are preferred for constructing a pooja room. These directions are considered the most auspicious. Avoid placing the pooja rooms beneath the staircases and next to the toilets to ensure zero negative energy. The measurement of an enclosed medium-sized pooja room should be at least 5x7 feet so that two or three people can comfortably pray together. Note that this size of a pooja room can be accommodated only within homes that have a carpet area of more than 1500 square feet.
- * *Bedroom*:-The ideal room size as per Vastu for a bedroom is 130 sq. ft or 12 sq. m. According to the Vastu Shastra, you should also make sure that when you design and build a house, the bedrooms of the house should always be an even size.
- * *Master Bedroom*:-As per 'Vastu Shastra' experts, the only direction in which the master bedroom should be planned is the 'South-West' of the house. The average size of a master bedroom is 14 x 16 feet. It may be bigger than that but 224 square foot is a minimum. This ensures that you can easily accommodate a king or queen-size bed in the master bedroom while still leaving enough closet space.
- * *Children Bedroom*:-Direction plays a vital role in the science of Vastu. And Vastu for kids' room is not an exception to this rule. It is ideal for a child's room to face the east, northeast, or north. East is the most preferred among these as it means that the room faces the rising sun. West direction is ideal for the children's room and must be placed there. Keep the bed in the South-west portion of the room and let your child sleep ahead towards the South or East direction for peace of mind. The door of the children's room should not directly face the bed.
- * *Reading Room or Working Room or Study room*:-Place Study Table in the North or East Direction. The best direction for the study table according to Vastu is in the north or east direction of your home. It should be placed in such a way that the student faces east or north direction while studying. The study room should always be facing the east or west direction of the house, north is the second-best direction. The child should face east or north while

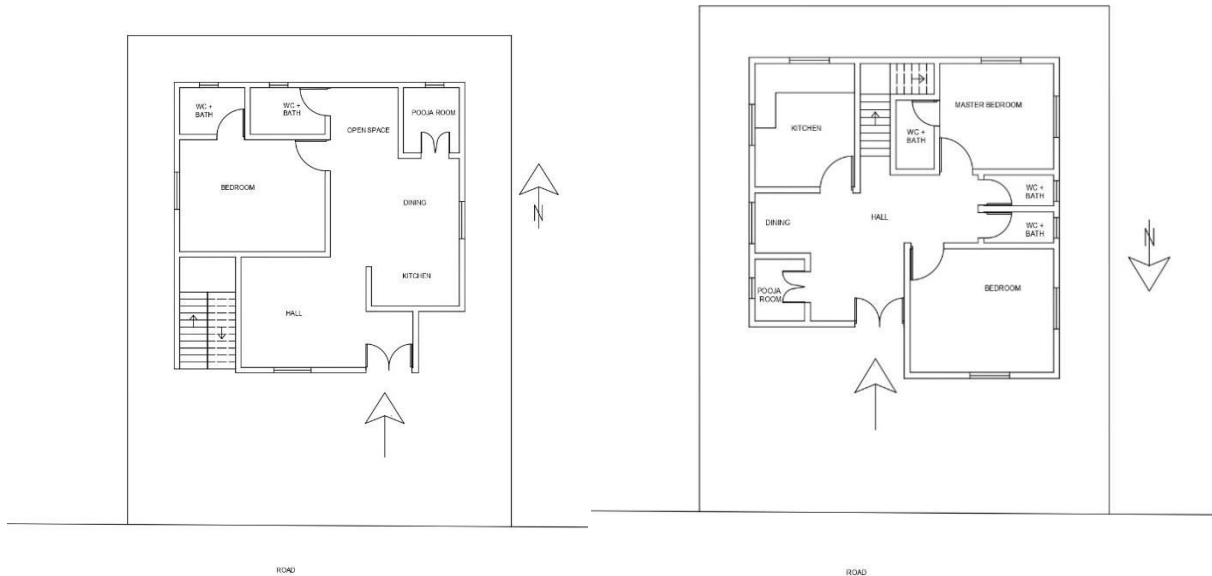
studying and all their rewards and recognitions, certificates, trophies, and motivational posters should be displayed on the north or east wall.

- * **Store Room:**-The storeroom should be placed in the north-western or southwest corner of the home. This direction is appropriate as it prevents the accumulation of things. In case you want to store heavy equipment in the room, then the southwest corner is just perfect. Never locate the storeroom in the east or north direction. The southwest direction is considered the most appropriate direction for carrying heavy goods. While building a house, it should be kept in mind that the southwest part of it should be kept high. Also, the walls of this direction should be made thicker than the walls of other directions.
- * **Bathroom:**-Vastu Shastra considers the north-west or the west as the right position in the room for the toilet. Another favourable side of the room can be the southern side of the room. However, never go for having the toilet on the North-eastern or the eastern side of the room. The bathroom and toilet area must be in the north direction or north-west portion of your house, as per Vastu. Do not build the bath area in the south direction or even in the southeast or south-west direction, as it is said to hurt the health of the people in the house.
- * **Water Closet:**-According to Vastu Shastra, the Flush Toilet or the Commode should have its place where the user faces any direction but never West or East. Therefore, the best place to have the Flush Toilet is either in the Southeast or the Northwest facing the North or the South. The toilet seat should always be placed in such a direction that the person using it would be facing the northern or southern direction of the home. This will keep the health of the family members balanced.
- * **Staircase or lift or ramp:**-Vastu experts believe that for internal staircases, the southwest portion of the property is an ideal choice. The south and the west portions happen to be the second-best choices. In this case, the staircase must start from the north and go towards the south. A staircase must always be built in the western or southern part of the house. It should not be constructed in the northeast corner, as it is believed that a staircase here can lead to financial losses. A staircase in any corner except the western or southern corner is believed to lead to losses.

IV. EXPERIMENTAL RESULTS

- Planning of Residential building with knowledge of vastu & science of architecture.
- Same road side plot with different earth direction is designed as per vastu shastra.





V. CONCLUSION

- A This study shows that Vastu shastra is an important parameter in the construction industry.
- Study of the traditional Indian system and ancient science of architecture shows similar requirements in Vastu shastra planning.
- Detail Study of Vastu shastra provides the easiest Planning of the plot with the same location and different north direction.
- The main aim of writing this paper is to present a simple way of Vastu shastra planning so that every technical/non-technical person can understand it easily.
- Simple way for the planning of road side facing Residential plot with knowledge of vastu & science of architecture.
- Residential road side plot with different earth direction is designed as per vastu shastra.

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