

URBAN PROJECT SITE AUSPICIOUS FENG SHUI ANALYSIS

Chao-Tai Hu Chiwan Hsieh*

*Department of Civil Engineering
National Pingtung University of Science and Technology
Pingtung, Taiwan 912, R.O.C.*

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ABSTRACT

Feng Shui consists of two prevalent Feng Shui schools: Form School principles are related to those elements that can be observed in the exterior situation and Compass School principles are related to the direction. On site Feng Shui analysis traditionally uses a Feng Shui compass to determine the orientation and direction of each project element. Since most urban buildings are commonly surrounded by high rise buildings, it is not easy to identify the mountain and water dragons for auspicious Feng Shui analysis. Therefore, the street intersections surrounding building sites are interpreted as virtual water gates for the revised urban auspicious Feng Shui analysis. Additionally, the Auspiciousness Knack and San-Yuan Suan-Kuang flying star Feng Shui analysis are also adopted in the auspiciousness analysis. This revised urban auspicious Feng Shui analysis procedure has been used successfully for the auspiciousness analysis of many urban project sites. Google Earth with the compass function can be a useful as an advanced tool to assist in site direction determination. The remote sky viewing technique would also improve efficiency and reduce the time required in preliminary and final on-site Feng Shui analysis.

I. INTRODUCTION

Feng Shui is an ancient geomancy related to traditional Chinese culture and philosophy. Feng Shui analysis relates architecture to the environment. Many Chinese people believe that a house designed and constructed according to Feng Shui theories may achieve equilibrium among the people, house, and natural environment. A balanced environment would improve the health, wealth and fortune of the house residents. Feng Shui generally consists of two prevalent Feng Shui schools: the Form School and the Compass School. Form School principles are related to those elements that can be observed in the exterior situation, which include mountains, hills, rivers, or creeks near the project site. However, Compass School principles are related to those elements that cannot be observed in the exterior situation.

Compass School principles are related to the direction. It consists of five major components, which includes Chi, Ying-Yang, Five elements, Ba-Gua, and auspicious Site orientation. These five components will be discussed in the following sections of this paper.

II. FENG SHUI RELATED STUDIES

such as urban planning, natural and cultural heritage conservation [1], land and properties development estimation [2], house design [3] and interior layout design [4]. These applications are focused primarily on the creation and evaluation of architecture design quality. Hwangbo [5-6] examined Feng Shui as an ancient architecture discipline for its contribution to the creation of the constructed environment. Chiou and Krishnamurti [7] analyzed the relevant

*Corresponding author: Chiwan Hsieh, e-mail: cwh@mail.npust.edu.tw

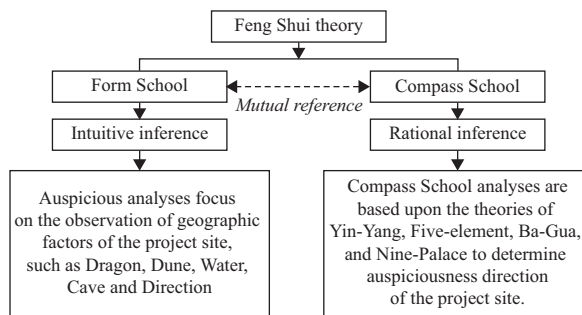


Fig. 1 Fundamental Feng Shui theories diagram

principles of Feng Shui to develop an interactive computer system to judge the fortunate orientation for a building site and auspicious data for construction in traditional Chinese architectural practice. Chien and Shih [8] is one of the few studies that focused on providing Feng Shui recommendations to customers while making apartment customization. Juan *et al.* [9] presented a customer-focused system to support decision making in pre-sale housing customization using a case-based reasoning (CBR) approach combining important Feng Shui theories. Chan [10] discussed the useful rainwater conservation strategies for green buildings under considering Feng Shui issues. Huang and Fang [11] introduce Feng Shui and Five-Elements principles to examine the areas of weakness in environment impact assessment (EIA) systems due to uncertainty and risk. The application of Form School and Compass School Feng Shui principles for urban project site auspicious analysis and planning will be discussed in this paper.

III. FENG SHUI THEORIES

Ding Ray-Pu of the Ching Dynasty (1821-1890) mentioned that Feng Shui consists of two prevalent Feng Shui schools: the Form School and the Compass School. Form School theories are related to those elements that can be observed in the exterior situation or those senses that can be touched, be heard, be watched, be tasted and be smelled. Therefore, Form School theories are relatively easier to teach or transfer. However, Compass School theories are associated with the relationship between the age or period, space, direction and human beings. However, auspicious Feng Shui analyses rely on principles from both theoretical schools as shown in the following Fig. 1.

1. Form School

The Form School focuses on issues concerning the selection of a building or a project site and its surrounding

landscape. The Form School is considered the oldest form of Feng Shui. This school focuses on the landscape surrounding the project site, along with the shapes of hills and water courses. This theory is concerned with the auspicious position of buildings and project sites, which require the hills to provide protection from the wind (Feng), and the provision of good water (Shui) supply without flooding.

However, Form School use for the auspicious analysis of urban project sites will be modified to different procedures that will be discussed in the following sections. Form School analysis is based on five geographical factors: Dragon, Dune, Water, Cave and Direction. Dragon means the topography of extended mountain ridges behind a building or project site.

Although Chinese sometimes refer to Chi as the universe's cosmic dragon's breath, similar to a human breathing, Chi can also be translated more literally as energy. It is an important function in maintaining human life. Chi is the invisible flow of energy that circulates through the earth and sky, bringing the life force with it. It is the essential ingredient in Feng Shui. In Feng Shui theory, Chi would be attached to a mountain and the continuing mountain extension will provide strong living resource (Chi) for its surrounding areas. Just as a building and its residents benefit from a constant flow of fresh air, nothing can flourish without a good supply of smoothly flowing Chi.

The Mountain Dragon can carry Chi, the invisible flow of energy, or bring the life force for materials from the surrounding areas, as shown in Fig. 2. A mountain that possesses majestic, rounded, and beautiful scenery would be considered enriched with Chi. Dune or Sand means the observed distribution of enfolding hills or trees surrounding a building site that protect the project site. In Feng Shui theory, the project site should consist of flat ground in the front, higher mountains or hills in the back and lower hills on each side. Water means the flow of water, or a street, through or bypassing a site. In Feng Shui theory, water can trap and gather Chi. It is a critical element for living beings on the Earth. A river or creek flowing from an upper stream downstream is also named the Water Dragon, as shown in Fig. 3. For an area without mountains and hills, a Water Dragon project site is also a good location for living beings, as shown in Fig. 4.

A project site surrounded by mountains and creeks is defined as an auspicious location (Cave). Cave means a niche or a dwelling and represents the best site location. The Direction of a dwelling was of paramount importance

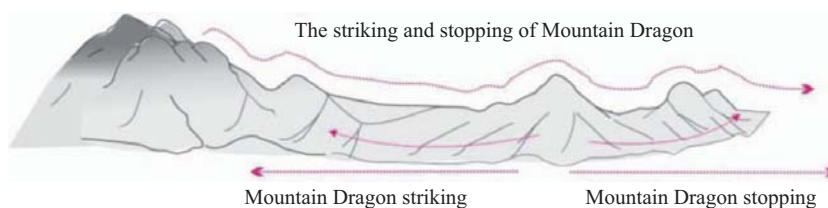


Fig. 2 Schematic view of the striking and stopping of Mountain Dragon

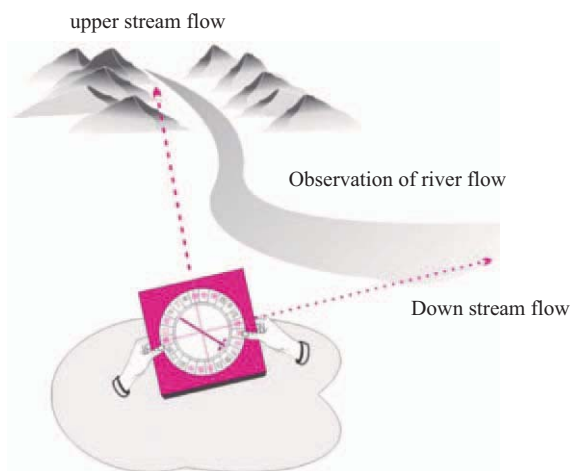


Fig. 3 Observation of Water Dragon

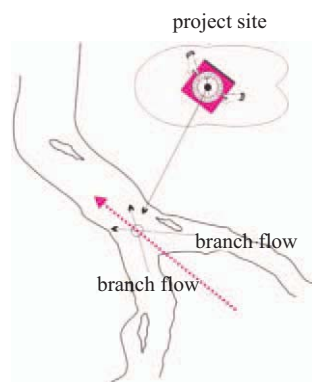


Fig. 4 Observation of flat ground using Water Dragon (Chi can be gathered by river flow of Water Dragon)

in ancient Chinese society. The best direction would be facing due south. These five factors are named in Feng Shui Geometry as the Five Knacks.

According to these five factors, the auspiciousness of a project site or dwelling is related to the forms of its surrounding mountains and rivers. According to these geographical principles, a good building site usually faces south, surrounded on three sides by higher lands, like the crook of an elbow in a curved arm, to provide protection from in-

clement weather or enemies. The lay of the land should be gently sloping and if possible, there should be a river or valley nearby to allow the surface to drain easily. However, mountains and rivers are not commonly found around urban areas, therefore, the auspiciousness analysis of an urban area project will be different and will be discussed in this paper.

2. Compass (Li-Chi) School

The Compass School concentrates on the arrangement of spaces and artifacts within spaces. Compass School principle is based on the metaphysical speculations of cosmology as originated from the I Ching, an intricate divinatory philosophy from China. It is named because a compass is used with the orientation or direction concept. However, Li means that everything needs to maintain harmony with other things in Chinese. As discussed earlier, Chi sustains all living beings and it is unable to be observed. Li-Chi means living beings on Earth are all born from Chi. Li-Chi analyses rely on the inferences based upon the Feng Shui compass, Ying-Yang, Five-elements, Ba-Gua and Nine-Hall which are used to analyze the auspiciousness direction of the project site. The Li-Chi auspiciousness analysis procedures for urban project sites will be discussed in this paper.

i. Ying-Yang

Ying-Yang originates from the nature of the Earth from observations by ancient people. Facing the sun is Yang and the sunset and moon rise direction is Ying. Ying-Yang is a mutual coupling relationship related to the sun and moon. In addition, sky versus ground, sun versus moon, day versus night, winter versus summer, man versus woman, up versus down, left versus right, interior versus exterior, moving versus stationary and stiff versus soft are all typical mutual coupling relationships on the Earth.

These coupling factors are productive and destructive to each other. Balance must be maintained between Ying and Yang. The circulation phenomenon between the sun, air and water is used to establish the system of equilibrium of the Earth, as shown in Fig. 5.

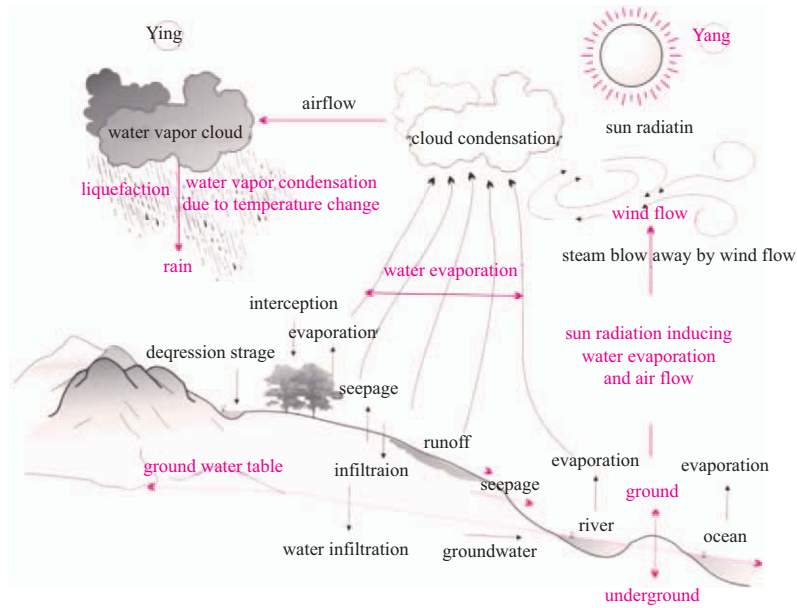


Fig. 5 Ying-Yang mutual coupling system with the sun-air-water

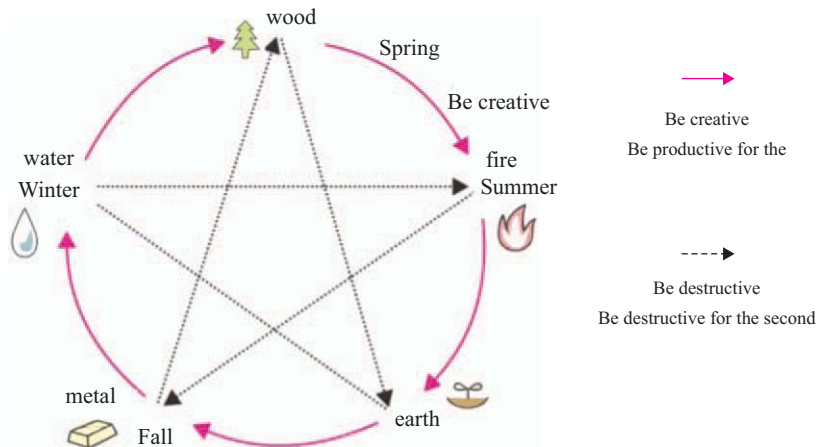


Fig. 6 The creative and destructive relationship between the Five Elements

ii. Five Elements

Metal, wood, water, fire and earth (soil) are the major elements of the Earth. They are named the five elements in Feng Shui theory. These five major materials are also destructive and creative or enriching to each other in a cyclic relationship as shown in Fig. 6. The Five elements principle also provides the auspicious relationship between the materials and related affairs of living beings on the Earth. A typical example is shown in Fig. 7.

iii. Ba-Gua








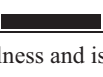
The Compass School uses the Eight Trigrams (or Ba-Gua) of the I Ching and relates them to the eight sections of the compass. These sections are laid out to form the



Fig. 7 Equilibrium systems among Five elements

Ba-Gua: Jen, Sun, Li, Kun, Tui, Chien, Ken, and Kan. Gua means hanging goods in order to present it to the public. Ancient people observed the nature and operation of affairs on the Earth and integrated scientific rules or laws for people to follow. The general rules related between Gua,

Table 1 Typical characteristics of Ba-Gua (Eight-Trigram)

Star order	Gua Name	Element type	Gua Symbol	Original Element	Direction	Family order	Auspiciousness
1	Ken Gua	Water		Water	North	Second Oldest boy	Be productive
2	Kun Gua	Earth		Ground	South West	Mother	Illness
3	Jen Gua	Wood		Thunder	East	Oldest boy	Troublesome
4	Sun Gua	Wood		Wind	South East	Oldest girl	Scholarship
6	Chien Gua	Metal		Sky	North West	Father	Fortune with efforts
7	Tui Gua	Metal		Pind with no wind	West	Youngest daughter	Lost fortune
8	Kan Gua	Earth		Mountain	North East	Young boy	Fortune
9	Li Gua	Fire		Fire	South	Second oldest daughter	Joyous

Note: The fifth-star relates disaster and illness and is located in the center with no Gua name.

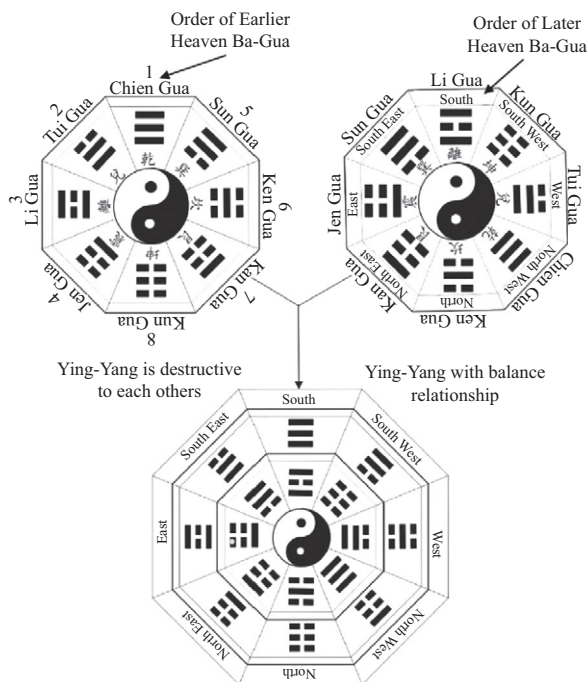


Fig. 8 The combined Earlier Heaven Ba-Gua and Later Heaven Ba-Gua diagram

the five elements, natural form, orientations, orders in family, colors and auspiciousness are summarized in Table 1.

As shown in Table 1, a person with their birth year associated with the south-west 2nd Kun Gua and their mother should pay attention to their health condition in order to prevent illness. The earlier heaven and post-heaven Ba-Gua diagrams are shown in Fig. 8. In general, these Eight-Trigrams relate to the nature and auspiciousness of human beings before and after birth.

iv. Feng Shui Ba-Gua and 8 Cardinal Directions

The four cardinal directions are the directions of north, east, south, and west, commonly denoted by their initials: N, E, S, W. The intermediate (inter-cardinal, or ordinal) directions are northeast (NE), southeast (SE), southwest (SW), and northwest (NW). The intermediate points (directions) and the four cardinal points are combined to form the eight directions of the Feng Shui compass. Chen, Li, Tui, and Ken of the Eight Gua are placed at the four cardinal directions, which are called Four Cardinal Gua. Chien, Kun, Sun, and Kan of the Eight-Trigram are placed at inter-cardinal directions and named as the Four Inter-cardinal Gua as shown in the Feng Shui compass. Ba-Gua is a very important element for auspicious Feng Shui analysis.

v. Feng-Shui Compass

A typical Feng Shui compass with the center portion Later-heaven Ba-Gua is shown in Fig. 9. The 24 Cardinal

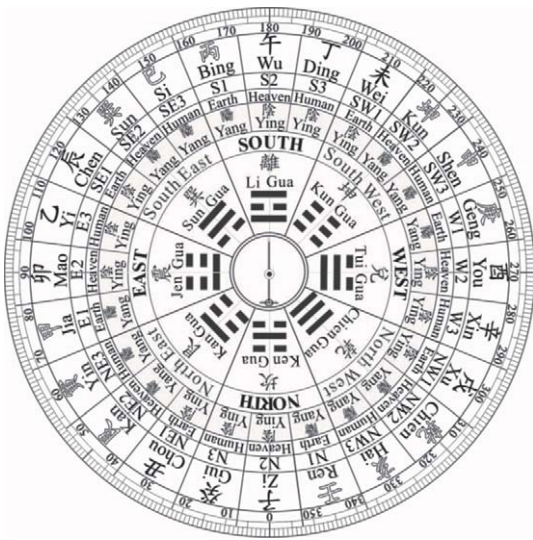


Fig. 9 Typical Feng Shui compass with Ba-Gua and 24 cardinal points

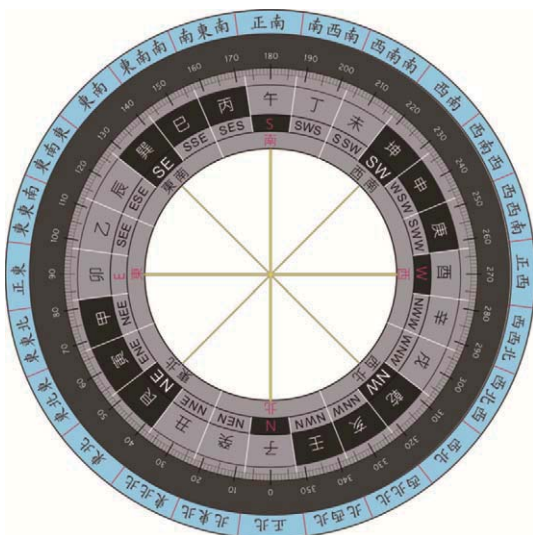


Fig. 10 Commonly use San Yung Feng Shui Compass

points are integrated using 8 of the Ten-Heaven-Stems and Twelve-Earth-Branches, and Four Intermediate-cardinal Gua shown in the outer ring of the compass in Fig. 9. The common use of the San-Yung Feng Shui Compass is shown in Fig. 10.

A typical Feng Shui compass consists of 7 different concentric circles as shown in Fig. 9. The first circle next to the compass center core is the Ba-Gua circle. The circle of 8-cardinal directions is the next element located near the Ba-Gua circle and consists of 8 sections. Beyond the 8-cardinal direction circle, each section is further divided into 3 sub-sections to form the 24 sub-section circles. The

following 24-section circles are the Ying-Yang circle, Earth-Heaven-Human circle, 24 cardinal direction circles, and 24 cardinal point circles. The outer ring is the direction angle circle.

Compass form principles can be used to determine the auspicious directions for a project site, buildings and the fortunate orientation of interior space. Gua provides a scientific formula to diagnose the Chi or (Air flow or Breath) coming from various directions. A person has his/her own Gua number, namely “the later heaven number of Gua” calculated according to his/her year of birth, which indicates the four more auspicious and the four more inauspicious compass orientations. Knowing these, the house owner may adjust the interior layout, such as the orientation of rooms, to conform to Feng Shui principles.

3. 24 Cardinal Points

Even though the Chinese language has words for the four cardinal directions, Chinese mariners and astronomers/astrologers preferred using the twelve directions of the Earthly Branches, which is somewhat similar to the modern-day practice of English-speaking pilots using o’clock for directions. Since twelve points were not enough for sailing, twelve midpoints were added. In total, the 24 cardinal directions are commonly used for sailing, which is coincident with the 24-cardinal points for Chinese Feng Shui analysis. The 24-cardinal point system is coincident with the traditional Chinese lunar 24 solar terms and is commonly referred in Feng Shui analysis.

i. 24 Solar Terms

The traditional Chinese lunar calendar year consists of 24 solar terms (points) related to the agricultural farming activities within the entire year, such as plowing in spring, cultivation in summer, cropping in fall and the storage of farm products in winter. The 24 solar terms are used by lunisolar calendars to stay synchronized with the seasons, which is crucial for agrarian societies. The name of each solar term also refers to the period of time between that day and the next solar term, or 1/24th of a year. The 24 solar terms also refer to specific astronomical positions, as shown in Fig. 11. In addition, the ellipse consists of 360°, which can be divided into 8 sections, and each section includes 45°. Each section can be further divided into three sub-sections. Each solar term includes 15 days and is also spaced 15° apart along the ellipse. The Eight-Trigram of the I-Ching coincides with the 8-sections.

Ba-Gua and the 24 cardinal points are adopted and com-

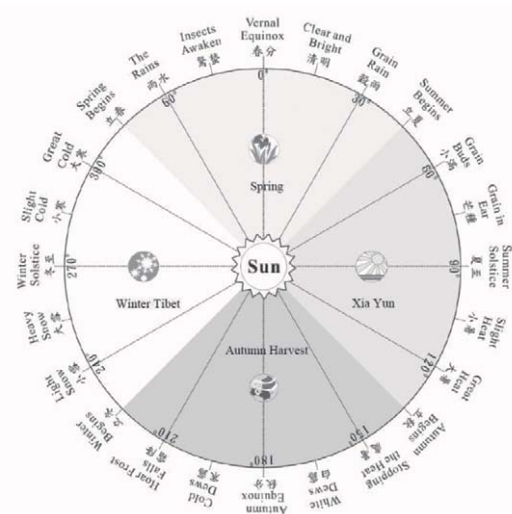


Fig. 11 Traditional Chinese lunar calendar 24 solar terms (points)

bined to form the Feng Shui compass, as shown in Fig. 9. The 24 cardinal points are an important element in auspicious Feng Shui analysis. Eight heaven stems, 12 earthly branches, and 4 intermediate Gua are the 24 items for the 24-cardinal points system.

ii. 10 Heavenly Stems

The Ten Heavenly Stems are a Chinese system of ordinals that first appeared during the Shang dynasty, ca. 1250 BCE, as the names of the ten days of the week. The Heavenly Stems were used in combination with the Earthly Branches, a similar cycle of twelve days, to produce a compound cycle of sixty days. Subsequently, the Heavenly Stems acquired many other uses, the most prominent and long lasting of which was their use together with the Earthly Branches as a 60-year calendrical cycle. The ten Heavenly-stem letters, Jia, Yi, Bing, Ding, Wou, Gee, Geng, Xin, Ren, Gui, arranged in clockwise order from east, south, west, to north with a 24-point system, as shown in Fig. 9. Wou and Gee are placed at the center, while the other 8 stems are placed at the east, south, west and north orthotopic directions, noted as the four orthotopic directions.

iii. 12 Earthly Branches

This system was built from observations of the orbit of Jupiter. Chinese astronomers divided the celestial circle into 12 sections to follow the orbit of Jupiter. Astronomers rounded the orbit of Jupiter to 12 years (from 11.86). In correlative thinking, the twelve years of the Jupiter cycle also identify the twelve months of the year, twelve animals (mnemonics for the system), directions, seasons and the

Chinese hour in the form of double-hours. The characters of the 12 Earthly Branches, Zi, Chou, Yin, Mao, Chen, Si, Wu, Wei, Shen, You, Xu, Hai, are arranged in clockwise order from north, east, south, to west with a 24-point system, as shown in Fig. 9.

iv. 4 Intermediate Gua

As shown in Fig. 9, one branch is placed on each Four-orthotopic-direction, and two branches are placed at each Four-diagonal-direction. In addition, the appropriate trigram names of the I Ching were used and placed at the four diagonal directions. The complete 24 cardinal system is shown in Fig. 9.

v. Ying-Yang and Earth-Heaven-Human of the Feng Shui Compass

As shown in Fig. 9, each Gua section is divided in 3 sub-sections. The Ying-Yang of each Gua is arranged in order. For the 4 orthotopic Gua, the Ying-Yang order is Yang-Ying-Ying, and the intermediate Gua order is Ying-Yang-Yang. In addition, the sub-section of each Gua is arranged with Earth-Heaven-Human in order. Ying-Yang and Earth-Heaven-Human are all important items related to the auspiciousness direction of the project site or house. In general, it is recommended that the Ying-Yang readings of a project site direction and a virtual water gate direction need to match each other. In addition, the Earth-Heaven-Human readings of the project site and the virtual water gate directions are suggested to be in the same Earth-Heaven-Human reading.

IV. AUSPICIOUS FENG SHUI ANALYSIS PROCEDURES FOR ARCHITECTURE

Feng Shui generally consists of two prevalent Feng Shui schools: The Form School and the Compass School. Form School principles are related to those elements that can be observed in the exterior situation, which include mountains, hills, rivers, or creeks near the project site. Exterior situations, such as mountain dragon heading or Chi gathering spots, can be considered as imagery of auspiciousness. However, Compass School principles are related to those elements that cannot be observed in the exterior situation. Compass School principles are related to the direction and are developed through different analysis procedures. The background and applications of the most commonly used auspicious Feng Shui analysis procedures for architecture is summarized in the following Table 2.

Table 2 The most common used Feng Shui analysis procedures for architecture

Founder and related literature	Characteristics	Applications and general procedure
Yeu-Song Yang of Tong Dynasty is the founder of this Feng Shui faction. Yang is also the author of Ba-Jai Records, the primary literature of this Feng Shui faction.	Originated from I-Ching. The auspicious house orientations are divided to 4-East Jai and 4-West Jai.	This procedure can be used for house auspiciousness analysis. House auspicious directions consist 4 lucky stars and 4 bad luck stars. This procedure can be also used to analysis the auspiciousness of office arrangement.
San-Hou faction founder is not clear. Five-Knack of Geomancy is the representative literature of this Feng Shui faction and was edited by Geo-Fon Chao of Ching Dynasty.	Auspiciousness analysis is based upon the mountain and water dragon of the project site. The 3-loop Compass is designated for auspiciousness analysis for site orientation, surrounding environments, and its related person.	San-Hou auspiciousness analysis is primarily used for cemetery. The harmony of the project site between the Mountain dragon, Water Dragon, and project site direction is very important.
San-Yuan is founded by Geon Da-Hon in the period between Ming and Ching Dynasties. The major literature is the Geomancy Dialectics edited by Chang Chon-Shan of Ching Dynasty.	This Feng Shui faction includes two major factions. Flying-Star is the primary auspiciousness analysis procedure for the Jou-Kong Flying Star faction. Kuai Yun & Star Yun are used by the I-Ching faction for auspiciousness analysis.	The auspicious direction of a household and associated windows can be analyzed using the flying star analysis.
Dragon Knack is also named San-Sing Knack, proposed by Tsai & Tsai father and son from Guangdong province of China. Jon-Chou Dragon Knack is one of the primary literature edited by Wang Ting-Chee.	An auspiciousness site is harmony between the Yin-Yang of the Earth, human, environments of the project site.	The San-Sing Knack auspiciousness analysis will investigate the Mountain dragon, Water dragon, and Water gates around the project site.

V. URBAN SITE AUSPICIOUS FENG SHUI ANALYSIS

Typical Feng Shui analysis for large project sites will intuitively investigate surrounding Mountain dragons and river dragons based upon the Form School theory and rationally conduct a Li-Chi auspiciousness analysis using the Feng Shui compass. However, it is most common for high-rise buildings to surround an urban project site, therefore it is very difficult to conduct auspicious Feng Shui analysis for current urban project sites based upon limited site observations. Due to the many surrounding high rise buildings and structures around current urban project sites, mountain dragons and water dragons cannot be identified during conventional auspicious Feng Shui analysis. Traffic flows at the intersection of roadways and streets around a project site are important elements. The intersections of roadways or streets around a project site can be considered as the town gates or water gates (convergence points) in the auspicious Feng Shui analysis for urban project sites. The revised Form School and Compass School auspicious Feng Shui analysis procedure for urban project sites is shown in Fig. 12. The Auspiciousness Knack procedure based upon the Form School theory and San-Yuan Shan-Kuang flying-star ana-

lysis of the Compass School are the fundamental procedures for analysis. These two procedures will be discussed in the following sections.

1. Background of Auspiciousness Knack

Auspiciousness Knack is also named San-Sing Knack, proposed by Tsai & Tsai father and son from Candong province of China. The twenty-four points of this Feng Shui procedure are combined with the 12 Earthly branches, 8 of 10 Heavenly stems, and 4 diagonal Gua. This procedure can be used to analyze the auspiciousness of a house. It is based upon the original environments and post direction of the project site layout. The analysis is according to the Form School theory. Four knacks are commonly used to guide the analysis procedure. The First knack determines the correspondence cardinal direction from the surrounding highest mountain peak (mountain dragon) or river convergence point (water gate) to the center of the project site. The Ying-Yang character of the mountain dragon or water gate should be determined based upon the correspondence cardinal direction and associated Big Dipper 9-Nine Star characteristic. The Second knack determines the associated location of the Nine Stars on the 24-cardinal point diagram. The Third Knack identifies the auspiciousness of each di-

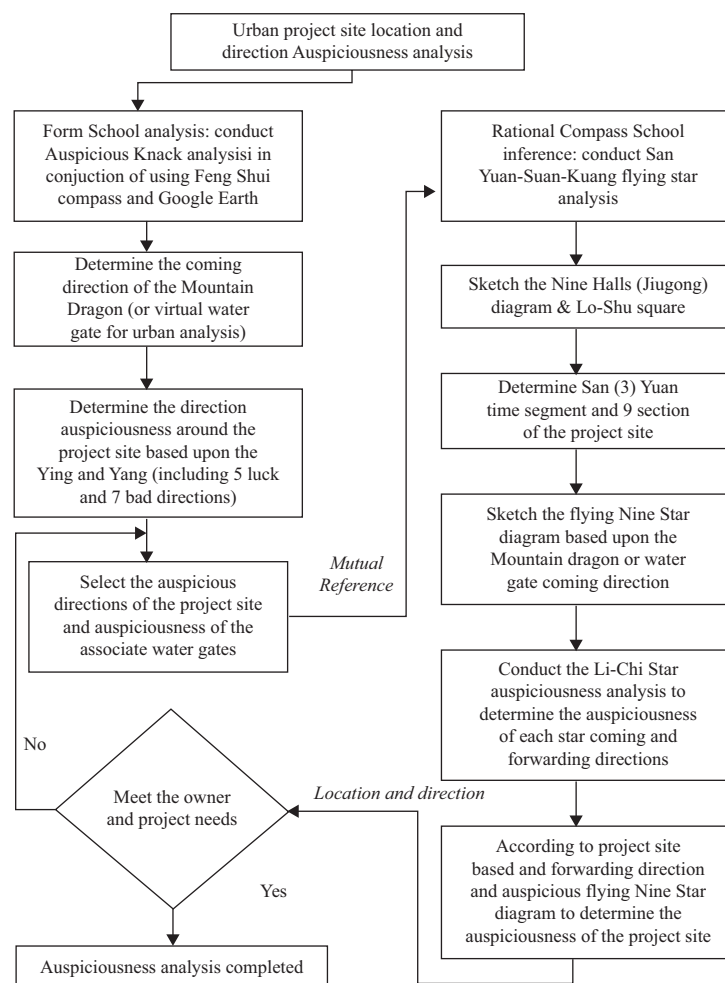


Fig. 12 Revised Urban project site location and direction Feng Shui auspicious analysis procedure

rection based upon the Nine Stars characteristic. The Fourth Knack describes how to arrange the 12 stars in order. Generally, the analysis procedure will start with finding the highest nearby mountain first. If no high mountain exists near the city, a nearby river convergence point is used for the analysis. However, the lack of high mountains or major rivers is a common situation for project sites in modern cities. Nearby major roadways or street intersections are commonly recognized as the virtual convergence point (gate) for the auspiciousness knack analysis for an urban building or project site.

i. The Application of Auspiciousness Knack

Determination of the auspicious location and direction for a project can be analyzed using the Auspicious Feng Shui Knack operation. This process can be used to choose a good Chi gathering location based upon the earlier-heaven condition and find the right direction for the building based upon the later heaven condition. The procedure in-

cludes observation of the current existing surrounding condition and conducting auspiciousness knack analysis to determine the Chi-gathering points (Gates or convergence points). In addition, the Suan-Kuang Flying-star analysis is conducted to analyze the auspicious direction for the building.

ii. Town Gate and Convergence Point

The town gate or convergence point is the Chi gathering location and also named the Chi-orifice. It can be a location for people to gather, a river convergence location, roadway or street intersection, or intersection between mountains. It is the location for passing and gathering Chi and also a location with resources and energy. Generally, the Feng Shui Compass is commonly used to determine the Chi-orifice arrival direction. Google Earth is also a useful tool to identify the Chi-orifice as well.

iii. Urban Virtual Water Gate Interpretation

Selecting the highest mountain around a project site as the arriving mountain dragon is a common procedure for Feng

Table 3 Big-Dipper Nine stars and related characteristic

Star name	Five Element type	Auspiciousness	Characteristic
Dubhe	wood	Good	Elegant
Merak	earth	Good	Wealth
Phecda	earth	Bad	Controversy
Megrez	water	Bad	Sexually attractive
Alioth	fire	Bad	Sickness
Mizar	metal	Good	Make Fortune
Alkaid	metal	Bad	Conflict
Alcor A	metal	Good	Peace
Alcor B	water	Good	Smart

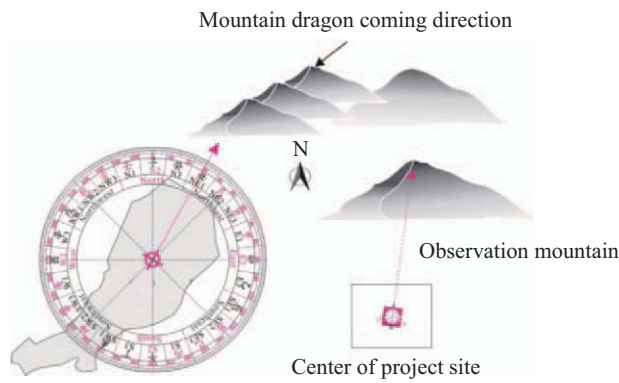


Fig. 13 The use of Feng Shui compass to determine the mountain dragon coming direction to the center of a project site

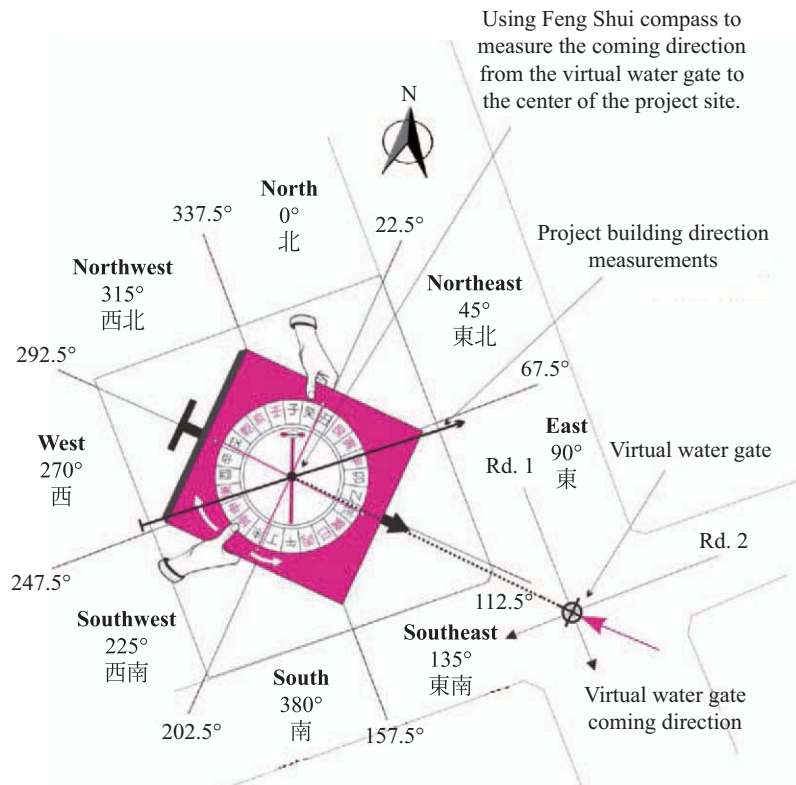


Fig. 14 Interpretation of street intersection as the virtual water gate in urban auspiciousness analysis

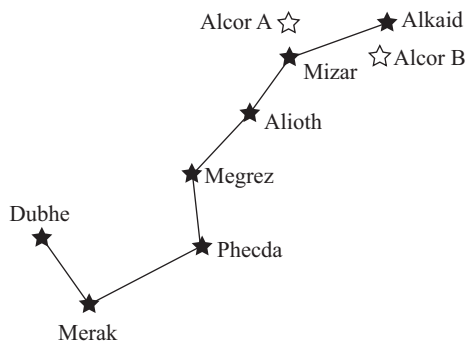


Fig. 15 Big Dipper nine star system

Shui Knack operation, as shown in Fig. 13. Since current urban project sites are commonly surrounded by high rise buildings, it is not easy to locate mountain dragons and water gates. Therefore, the interpretation of city street intersections as virtual water gates is the revised practice in auspicious Feng Shui knack operation. Fig. 14 demonstrates the details for identifying auspicious Feng Shui virtual water gates for an urban project site using the Feng Shui compass. As shown in Fig. 15, the virtual water dragon arrival direction to the center of a project is very important in the auspicious Feng Shui Knack analysis.

iv. Nine-Star Auspiciousness Analysis

The “Big Dipper” is a group of seven relatively bright stars commonly used as a navigational pointer towards the current northern pole. The Big Dipper and the constellation as a whole have mythological significance in numerous world cultures, usually as a symbol of the north. In addition, two famous stars, Left Alcor A and Right Alcor B can be seen on each side of the Mizar star, as shown in Fig. 15. The auspiciousness of the Big Dipper star system is summarized in Table 3. The auspiciousness of these stars is important and related to the project site direction.

2. 24 Cardinal Points and Nine Star Ying-Yang Auspiciousness Analysis

The 24 cardinal points are the combination of 8 heavenly stems, 12 earthly branches, and 4 intermediate Gua, as shown in Fig. 9. Once the virtual water gate arrival direction is determined, the water gate arrival direction can be attached to a modified 24-direction diagram, as shown in Figs. 16 and 17. As shown in Fig. 16 and 17, the 24-points are consolidated into 12 sections to form a square diagram.

The Big Dipper Nine stars are located in the designated location based upon the virtual water gate arrival direction either on earthly branches or heavenly stems. These



Fig. 16 24-direction and Nine-star auspiciousness direction analysis based upon water gate coming direction from 12 earthly branches

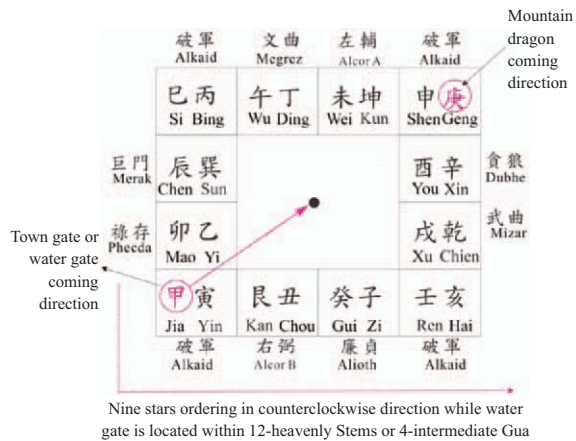


Fig. 17 24-direction and Nine-star auspiciousness direction analysis based upon water gate coming direction from 12-heavenly stems or 4-intermediate Gua

stars will orient either in clockwise or anticlockwise order from the water gate arrival direction as shown in Figs. 16 and 17. Among these nine stars, Right Alcor B, Mizar, Dubhe, Left Alcor A, and Merak, are five good luck stars. These stars and their associated directions are considered auspiciousness directions. On the other hand, Alkaid, Alioth, Megrez and Phecda are four bad luck stars and their associated directions are considered bad luck directions. After this analysis, the auspicious direction can be easily identified around the project site. The auspiciousness of the Big Dipper Nine stars is summarized in Table 3.

As discussed in an earlier section, the Ying-Yang readings and Earth-Heaven-Human reading of a project's site directions needs to match those readings associated with the virtual water gate direction.

Table 4 San-Yuan nine time slots with the associate Ba-Gua and auspicious directions

Yuan	Segment	Year in A.C.	Lucky direction	Lucky segment	Future lucky segment
Upper	1	1864-1883	North	1	2,3
	2	1884-1903	South-west	2	3,4
	3	1904-1923	East	3	4,5
Central	4	1924-1943	South-east	4	5,6
	5	1944-1963	Neutral	5	6,7
	6	1964-1983	North-east	6	7,8
Lower	7	1984-2003	West	7	8,9
	8	2004-2023	North-east	8	9,1
	9	2024-2043	South	9	1,2

i. San-Yuan Suan-Kuang Flying-Star Analysis

San-Yuan Suan-Kuang Feng Shui is a major branch of the traditional Chinese Feng Shui factions. In Chinese, Suan is related to time operation and Kuang is related to space and the universe. As usual, it is also related to the I-Ching, Ying and Yang, Ba-Gua, and Nine-star theory. San-Yuan Suan-Kuang Feng Shui comprises the Compass School and Form School theories. Besides the Form School theory in the auspiciousness analysis, this branch of the Feng Shui factions will use a compass to analyze the project site direction and consider the project site construction period and age of the associated person or objects in the auspicious Feng Shui analysis, as shown in Fig. 12.

ii. San (3) Yuan Time Segments

The Heavenly Stems were used in combination with the Earthly Branches to produce a compound 60-year cycle as a yearly calendar in the traditional Chinese system. Each 60-year is one Yuan and each 60-year (Yuan) includes three 20-year time segments. The Upper, Middle and Lower Yuan with nine time segments in the A.C. calendar system are shown in the Table 4. A building or structure Yuan characteristic is related to the year of initial construction. For example, if the construction project start time is within the year from 2004 to 2023 A.C., the Feng Shui characteristics of this structure are within the 8th time segment and this structure is associated with Gen Gua, as shown in Table 4 for 2017. In addition, north-east direction (8) is the current auspicious direction for this structure, and the south (9) and north (1) will be auspicious directions in the next coming 20 to 40 years.

iii. Nine-Hall (Jiugong) Diagram and Lo-Shu Square

Suan Kung flying-star auspiciousness analysis is conducted based upon the house front door direction. Ancient Chinese astronomers divided the space into nine sections

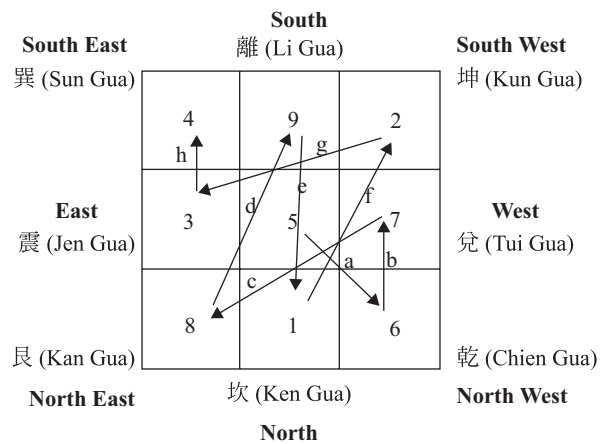


Fig.18 Post-heaven Ba-Gua associated with Nine-hall ordinary flying star diagram

using three rows and three columns. This is also named the Nine-Hall or Jiugong diagram. The Nine-Hall (Jiugong) diagram includes a center cell, four cardinal cells and four diagonal cells as shown in Fig. 18. The post-heaven 4-Cardinal Ba-Guas and 4-Intermediate Ba-Guas are shown in the outside of the Nine-Hall diagram.

The Jiugong (Nine-Hall) flying star analysis starts at the center cell. The flying star order is determined based upon the Ying-Yang characteristic of the project site base direction. The flying order is either in the ordinal or in the anti-ordinal direction according to the Ying-Yang characteristics of the project site within the Nine-Hall diagram, respectively. The ordinal Lo Shu fly-star is shown in Fig. 18. Number 5 is placed in the center cell, then 6 Chien Gua, 7 Tui Gua, 8 Kan Gua, and 9 Li Gua, Thereafter, 1 Kan Gua, 2 Kun Gua, 3 Gen Gua, and 4 Sun Gua. In addition, the Jiugong flying-star is also named the Lo Shu orbit. Lo Shu is part of the legacy of the most ancient Chinese mathematical and divinatory (Yi Jing) traditions, and is an

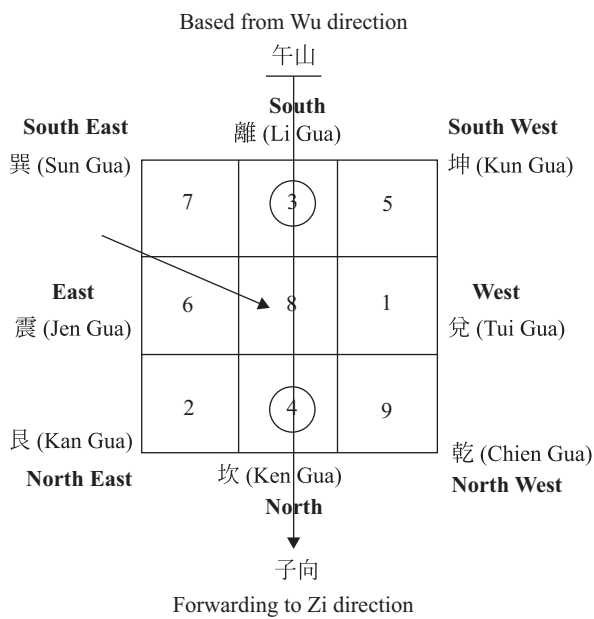


Fig. 19 No. 8 time segment flying star with based from the Wu (3) South direction toward the Zi (4) North direction

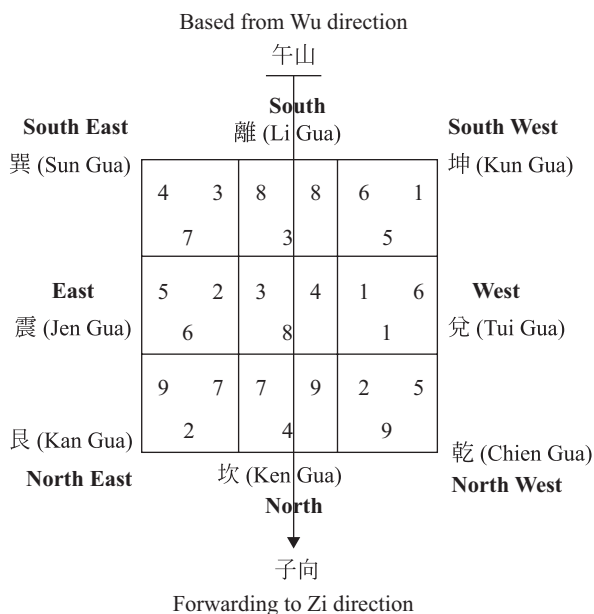


Fig. 20 The complete No. 8 time segment flying star diagram based upon the post-heaven Ba-Gua diagram and mountain ordering from the Wu (3) South direction to the Zi (4) North direction

important emblem in Feng Shui, the art of geomancy concerned with the placement of objects in relation to the flow of Chi or “natural energy”.

iv. Time Segment Flying-Star Analysis

The 8th time segment flying-star diagram for 2017 starts from No. 8 located in the center cell. The remaining numbers fly in ordinal order as shown in Fig. 19. The complete No. 8 time segment flying star diagram based from the Wu (3) South direction and forward to the Zi (4) North direction is shown in Fig. 20. The base direction has more relationship with the original project site background and the forward direction is related to the project site’s future productivity. No. 3 is located on the left side and No. 4 is located on the right side of the center cell indicating the project site is based from the Wu direction (No. 3) and toward the Zi direction (No. 4). Since No. 3 is associated with Jen Gua, which is a cardinal Gua, the flying star would fly in the anti-ordinal order. On the other hand, No. 4 is associated with Sun Gua, which is a diagonal cardinal Gua. The flying star would then fly in the ordinary order. The number shown in the Nine-Hall will represent the auspiciousness of each hall for the time slot. The project owner can change the project direction and conduct the auspiciousness analysis based upon a new project direction that suits their interest.

v. Li-Chi Star Auspiciousness Analysis

Based upon the complete flying star diagram for a proposed project site according to its base direction and forward direction, the auspiciousness of its direction and each associated Nine-Hall cell can be evaluated based on the number shown in the star diagram. The Post-Heaven Ba-Gua Nine (9) stars direction auspiciousness relationship is summarized in Table 5. It is also important to identify the auspiciousness of the project site direction based upon its time segment, based on the base and forward directions. There are four general auspicious conditions shown in Table 6. The details for this analysis will be discussed in the example problem.

VI. GOOGLE EARTH AND FENG SHUI ANALYSIS-RELATED FEATURES

Google Earth is a virtual globe, map and geographical information program. It maps the Earth using the superimposition of images obtained from satellite imagery, aerial photography and geographic information system (GIS) onto a 3D globe. It is based simply on 3D maps with the capability to show 3D buildings and structures (such as bridges). Google Earth consists of users’ submissions using 3D modeling program software. Google Earth displays satellite images of varying surface resolutions of Earth, allowing users to see things like cities and houses looking perpen-

Table 5 Auspiciousness of Nine star number

Number	Star Type	Color	Characteristic
1	Creative	White	Career achievement
2	Illness	Black	Sickness
3	Controversy	Bluish green	Legal dispute
4	Intellectual	Green	Academic achievement
5	Adversity	Yellow	Accidents & mishaps
6	Fortune	White	Success with fortune
7	Misfortune	Red	Robbery
8	Wealth	White	Lucky with fortune
9	Future success	Purple	Future success

Table 6 Auspiciousness of project site direction is based upon the relationship between its' project time segment and the based and forwarding direction

Based star condition	Forwarding star direction	Characteristic
Match	Match	Good for owner and fortune
Match	Not match	Good for owner, however misfortune
Not match	Match	No good for the owner, however fortune
Not match	Not match	No good for owner and misfortune

dicularly down or at an oblique angle (see also bird's eye view or sky view). Google Earth allows users to search for addresses in some countries, enter coordinates, or simply use the mouse to browse to a location. Currently, it is available with two free version licenses, Google Earth with limited function, and Google Earth Pro intended for commercial use.

Google Sky is a feature for Google Earth and an online sky/outer space viewer. This application allows users to view a collaboration of images from satellites or other telescope programs.

Google Street View is a technology featured in Google Maps and Google Earth that provides panoramic views from positions along many streets in the world. Streets with Street View imagery available are shown as blue lines on Google Maps. Most photography is done by car, but some is done by trekker, tricycle, walking, boat, snowmobile, camel and underwater apparatus. Information can also be edited into the 3D image using the Google Sketch Up 3D software.

The advantage of the latest developed Google Earth, Google Sky and Google Street view technologies were adopted in this study for this auspicious Feng Shui analysis for urban households and project sites. The use of these technologies is relatively new for current Feng Shui analysis.

High rise buildings exist commonly in modern cities. These buildings are usually built using a large amount of

steel and concrete materials. Electronic products are also necessary and important facilities in modern offices and households. The Feng Shui compass is a sensitive and important tool for Compass School Feng Shui analysis. Modern high rise buildings will block the observation view during Form School Feng Shui analysis. In addition, building steel and electronic magnetic fields will interfere with compass operation during Feng Shui analysis. Therefore, attaching the Feng Shui compass to a Google Earth map of the project site would significantly improve the viewing capability for determination the project site orientation. Attaching the compass to the Google Earth map will reduce the direction and orientation errors caused by on-site magnetic fields. The use of Google Earth in Feng Shui analysis allows for conducting the analysis from a distant location and will also improve the accuracy and reduce Feng Shui analysis errors.

Google Earth with its useful features can be a useful tool for project site distant viewing before on site analysis. Various types of Feng Shui compasses can also be attached to the Google Earth map for preliminary Feng Shui analysis from a distant office. A San-Yung Feng Shui compass attached to the 101-Stroies Building Google Earth street map and cadastral map are shown in Fig. 21. The project site orientation and local environment details can be further checked during the on-site Feng Shui analysis. The details



Fig. 21 Google Earth street map and cadastral map of 101-Stroies Building, Taipei, Taiwan

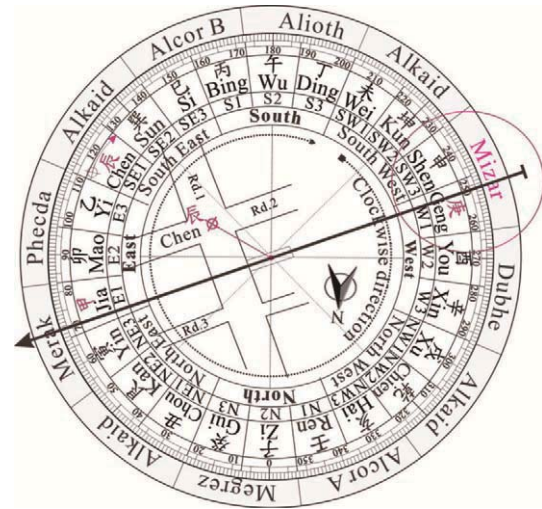


Fig. 23 The building site is based from the Geng direction toward the Jia direction with the second street intersection in ESE (Chen) direction measured from the project site center

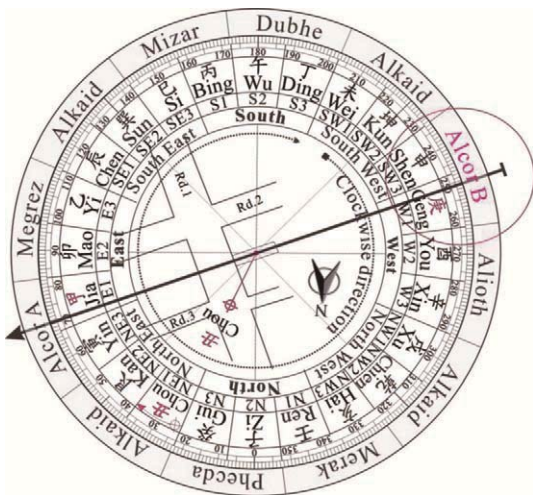


Fig. 22 The building site is based from the Geng direction toward the Jia direction with the first street intersection at NNE (Chou) direction measured from the project site center

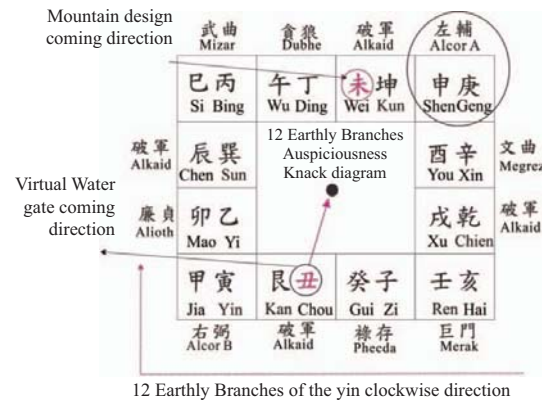


Fig. 24 The NNE water dragon is located in Chou direction measured from the center of project site and it's associated Alcor A auspiciousness star

for Google Earth House site selection, planning, and design are discussed in the following section.

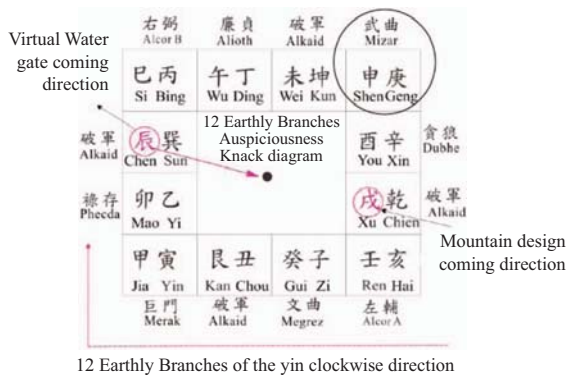
VII. CASE STUDIES OF URBAN FENG SHUI ANALYSES WITH GOOGLE EARTH

1. Sports Store in Kaohsiung City

An urban building was chosen for a commercial store in Kaohsiung City. The building site is based from the Kan direction and toward the Jia direction with two street intersections in the NNE and ESE directions measured from

the center of the building site as shown in Fig. 22 and Fig. 23. The first virtual water gate is located at the NNE direction measured from the center of the project site shown in Fig. 22, The NNE water gate is located in the Chou direction. The project site direction is associated with the Alcor A auspiciousness star as shown in Fig. 24. The second water gate is located in the ESE direction measured from the center of the project site as shown in Fig. 23, The ESE water gate is located in the Chen direction. The project site direction is associated with the Mizar. It is also an auspiciousness star as shown in Fig. 25. Therefore, both street intersections are auspicious directions for the project site.

Since the project construction was completed in March



12 Earthly Branches of the yin clockwise direction

Fig. 25 The second ESE water dragon is located in Chen direction measured from the center of project site and its associated Mizar auspiciousness star

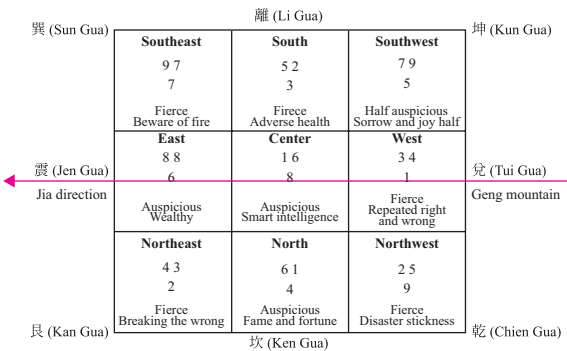


Fig. 26 The complete No. 8 time segment flying star diagram based upon the post-heaven Ba-Gua diagram and mountain ordering from the Tui Gua (1) SWW direction to the Jen Gua (6) NEE Jia direction

of 2009, which is within the No. 8 time segment, and the project site is based from the west (Kan) toward the east (Jia). It is on the Tui Gua as shown in Fig. 9. The complete No. 8 time segment flying star diagram based from the Tui Gua (1) West direction to the Jen Gua (6) East direction for this project site is shown in Fig. 26. The front door faces toward the East direction and it is on the Jen Gua. The associated cell numbers are 8 and 8 as shown in Fig. 26. The right side number 8 coincides with the time segment number 8. The apartment is good for business. However, the based direction cell numbers are 3 and 4, which do not agree with the time segment number. Therefore, this project site is not ensured to provide good health conditions for the owner. However, the project site will bring wealth to the owner as shown in Table 6.

In addition, the Nine-Hall (Jiugong) diagram of the project site and its first floor indoors Li-Chi auspiciousness analysis is shown in Figs. 27 and 28. Based upon the

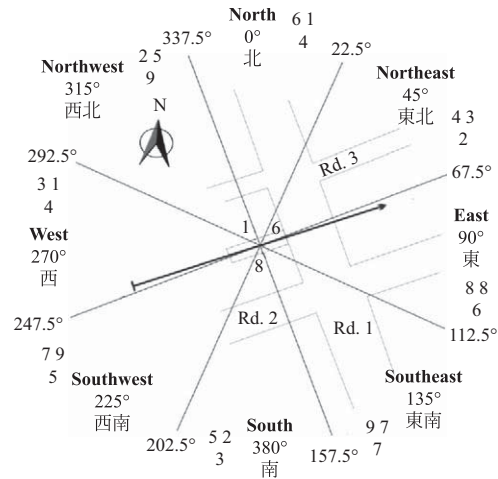


Fig. 27 Nine-Hall (Jiugong) diagram details and related auspiciousness numbers for the project site based from the Tui Gua (1) SWW direction to the Jen Gua (6) NEE direction

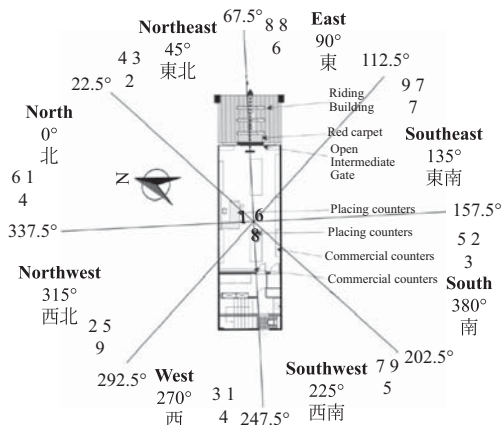


Fig. 28 Nine-Hall (Jiugong) diagram details and related auspiciousness numbers for the project interior layout based from the Tui Gua (1) SWW direction to the Jen Gua (6) NEE direction

Nine-Hall diagram and the auspicious character of the Nine Star numbers of each cell, the auspiciousness of each cell associated location can be determined. The results of this Li-Chi auspiciousness analysis can be also used for the project interior design. As mentioned earlier, this project will be used for a commercial store. Based upon the cell numbers for three cells on the East direction, the door is better to be located in the center in conjunction with placing a red carpet at the front door to bring in wealth for the owner. However, the south-east direction is misfortune and the north-east is a controversial direction. Both directions are not good locations for a store door. The north cell is a

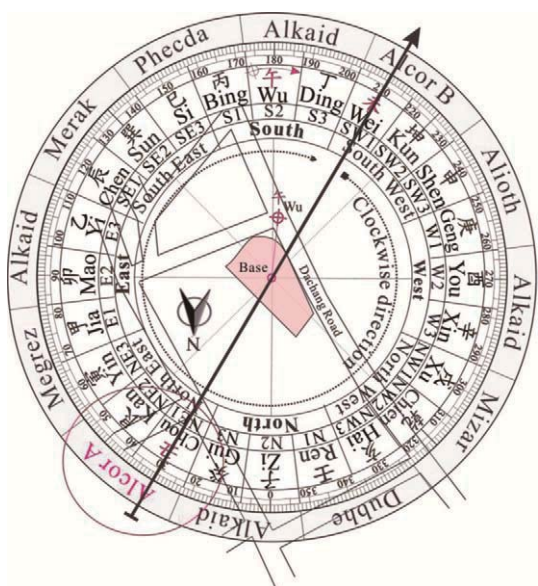


Fig. 29 The house front door direction is based from the Chou direction toward the Wei direction with the first street intersection at the South (Wu) direction measured from the project site center. The associated auspicious star is Alcor A

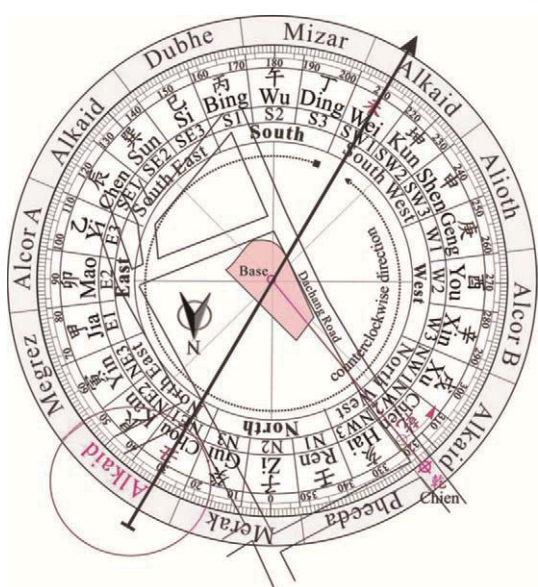


Fig. 30 The second street intersection at the North West (Chien) direction measured from the project site center. The associated star is Alkaid

fortune location and good location for store checking counter. The center cell is a creative and fortunate location. The southern cell is an un-lucky side for the store. In addition, the south-west and south cells are not very good locations for the project site. It is recommended that merchandise ca-

binets be placed on the southern side of the store. This commercial store has been doing good business since 2009.

2. Residential House in San-Ming District of Kaohsiung City

The auspiciousness analysis for a 5-story urban household building in the San-Ming district of Kaohsiung City is discussed herewith. Based upon the owner's requirements and Google Earth preliminary analysis, the building site auspiciousness direction is based from the Chou Mountain (NNE) direction, towards the Wei Mountain (WSS) direction with two street intersections in the S and NW directions measured from the building site center, as shown in Figs. 29 and 30. The first virtual water gate is located in the S direction measured from the project site center shown in Fig. 29. The S direction water gate is located in the Wu Mountain direction. The house front door direction is associated with the Alcor A auspiciousness star, as shown in Fig. 29. The second water gate is located in the NW direction measured from the project site center, as shown in Fig. 30. The NW water gate is located in the Chien Mountain direction. The house front door direction is associated with the Alkaid star. It is not an auspiciousness star as shown in Fig. 30. Therefore, it is recommended that the owners take the S direction street intersection as the auspicious commuting entrance for the household site.

The project construction was completed in December of 2013, within the No. 8 time segment. The house front door is designed from the direction based from the NNE (Chou) toward the WSS (Wei) direction. This is based from Kan Gua toward the Kun Gua as shown in Fig. 9. The complete No. 8 time segment flying star diagram based from the Kan Gua (2) NEE direction to the Kun (5) WSS direction for this project site is shown in Fig. 31. The front door faces toward the WSS direction and it is on the Kun Gua. The associated cell numbers are 5 and 8 as shown in Fig. 31. The right-side number 8 coincides with the time segment number 8. This household would bring wealth to the house owners. In addition, the base direction cell numbers are 8 and 2, in which the left side number 8 also coincides with the time segment number. Therefore, according to this house front door facing direction, this household could provide good health conditions and bring wealth to the owners, as shown in Table 6.

The Nine-Hall (Jiugong) diagram for this household first floor indoors Li-Chi auspiciousness analysis is shown in Fig. 32. Based upon the Nine-Hall diagram and the auspicious character of the Nine Star numbers of each cell

巽 (Sun Gua)	離 (Li Gua)			坤 (Kun Gua)
	Southeast	South	Southwest	
	3 6 7 Auspicious Smart intelligence	7 1 3 Fierce Be aware of health	5 8 5 Auspicious Wealthy	
震 (Jen Gua)	East	Center	West	兌 (Tui Gua)
	4 7 6 Fierce Pay attention to the loss	2 5 8 Fierce Disaster sickness	9 3 1 Fierce Right and wrong	
	8 2 2 Fierce Adverse health	6 9 4 Half auspicious Tolerate	1 4 9 Auspicious Good reading exam	
艮 (Kan Gua)	Northwest	North	Northwest	乾 (Chien Gua)
	8 2 2 Fierce Adverse health	6 9 4 Half auspicious Tolerate	1 4 9 Auspicious Good reading exam	
	坎 (Ken Gua)	Chou mountain		

Fig. 31 The complete No.8 time segment flying star diagram based upon the post-heaven Ba-Gua diagram and mountain ordering from the Kan Gua (2) NNE direction to the Kun Gua (5) SSW direction

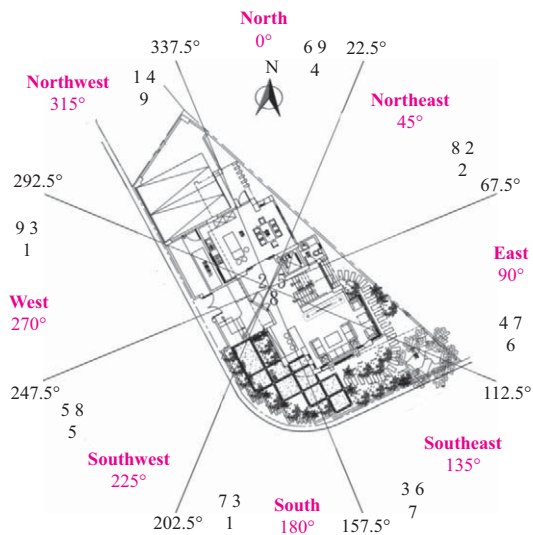


Fig. 32 Nine-Hall (Jiugong) diagram details and related auspicious number for the household first floor from NNE (2) to SWW (5) direction

and the Li-Chi auspiciousness analysis results, the living room and dining room are designed at the East and South East sides of the first floor. The owner and his family are all doing well in their careers and business since moving into this new house.

3. Residential House in Niao-Song District of Kaohsiung City

The auspiciousness analysis for a 4-story urban household building in the Niao-Song district of Kaohsiung City is discussed herewith. Based upon the owner's requirements

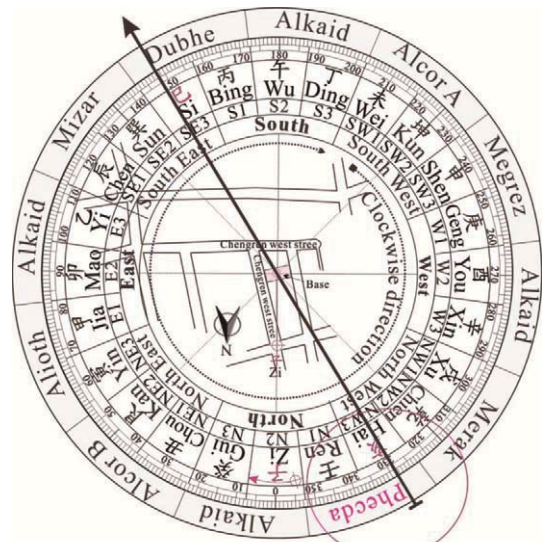


Fig. 33 The house front door direction is based from the Hai direction toward the Si direction with the first street intersection at the North (Zi) direction measured from the project site center. The associated auspicious star is Phecda

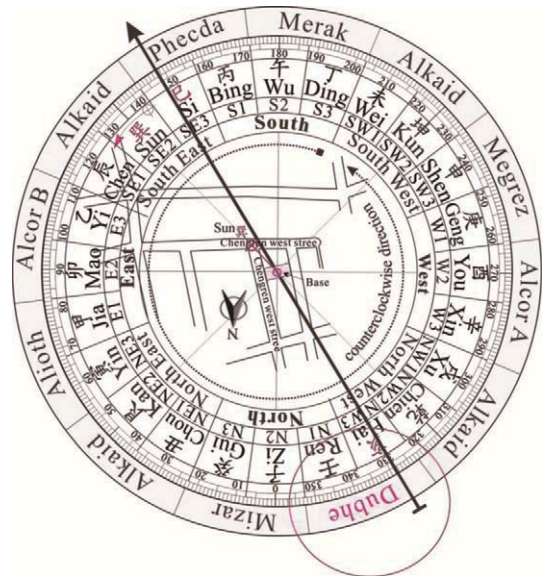


Fig. 34 The second street intersection at the South East (Sun) direction measured from the project site center. The associated auspicious star is Dubhe

and Google Earth preliminary analysis, the house front door auspiciousness direction is designed based from the Hai Mountain (NNW) direction and toward the Si Mountain (SSE) direction with two street intersections in the N and SE directions measured from the building site center, as shown in Fig. 33 and Fig. 34. The first virtual water gate is

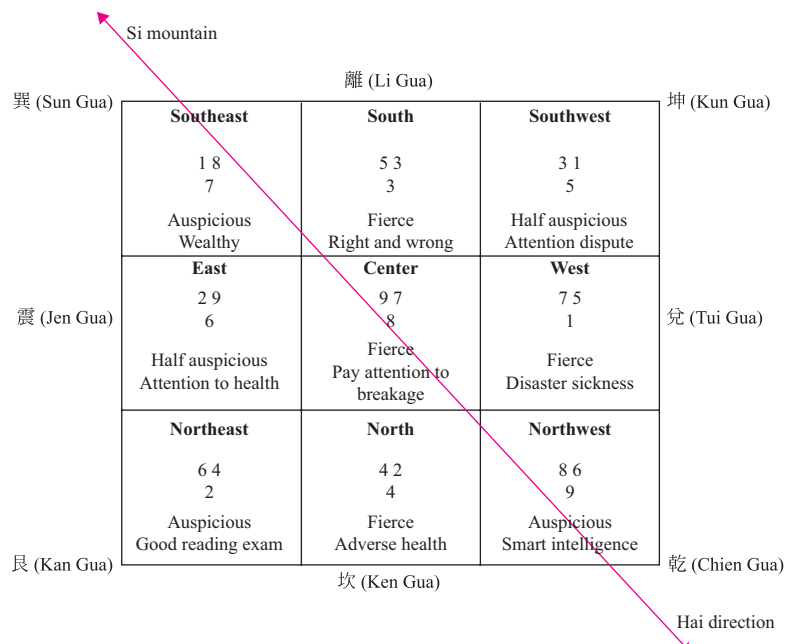


Fig. 35 The complete No. 8 time segment flying star diagram based upon the post-heaven Ba-Gua diagram and mountain ordering from the Chien Gua (9) NNW direction to the Sun Gua (7) SSE direction

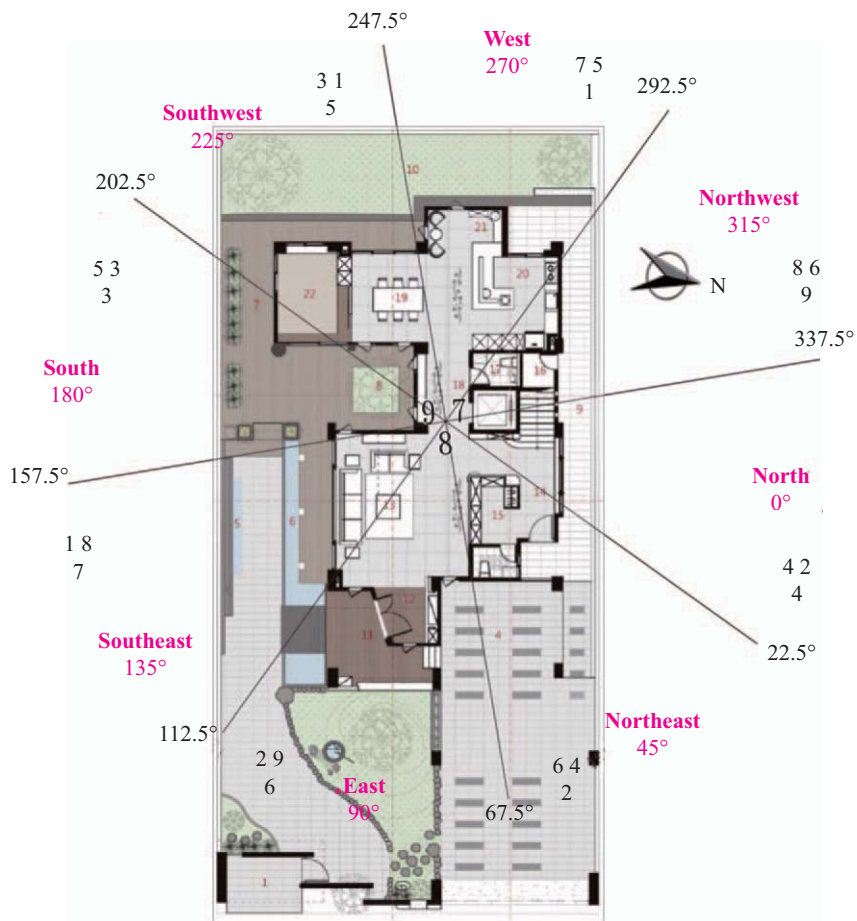


Fig. 36 Nine-Hall (Jiugong) diagram details and related auspicious number for the household first floor from NNW (9) to SSE (7) direction

located at the North direction measured from the project site center, as shown in Fig. 33. The North direction water gate is located in the Zi Mountain direction. The house front door direction is associated with the Phecda auspiciousness star as shown in Fig. 33. The second water gate is located in the SE direction measured from the project site center, as shown in Fig. 34. The SE water gate is located in the Sun Mountain direction. The house front door direction is associated with the Dubhe star. It is also an auspiciousness star as shown in Fig. 34. Therefore, both street intersections are auspicious directions for the household.

Since the project construction was completed in December 2010 it lies within the No. 8 time segment. The house front door is adjusted to the direction based from the NNW (Hai) toward the SSE (Si). This is based on the Chien Gua to Sun Gua as shown in Fig. 9. The complete No. 8 time segment flying star diagram based from the Chien Gua (9) NNW direction to the Sun Gua (7) SSE direction for this project site is shown in Fig. 35. The front door faces toward the SSE direction and it is on the Sun Gua. The associated cell numbers are 1 and 8 as shown in Fig. 35. The right-side number 8 coincides with the time segment number 8. This house could bring wealth to the house owner family. In addition, the base direction cell numbers are 8 and 6, in which the left side number 8 also coincides with the time segment number. Therefore, this house front door facing direction gives this household good health conditions and brings wealth to the owner as shown in Table 6.

The Nine-Hall (Jiugong) diagram for the first floor of this household indoors Li-Chi auspiciousness analysis is shown in Fig. 36. The Li-Chi auspiciousness analysis results indicate the living room and study room are designed at the South East and the North East sides of the first floor. The owner and his family are all doing well in their careers and business since moving into this new house.

VIII. SUMMARY AND CONCLUSIONS

Feng Shui is an ancient geomancy science related to traditional Chinese culture and philosophy. Feng Shui generally consists of two prevalent Feng Shui schools: the Form School and the Compass School. Form School principles are related to those elements that can be observed in the exterior situation, which include mountains, hills, rivers, or creeks near the project site. Compass School principles are related to the direction. It consists of five major components, which includes Chi, Ying-Yang, five elements, Ba-

Gua, orientation.

Since most urban buildings are commonly surrounded by high rise buildings, it is not easy to identify the mountain and water dragons for auspicious Feng Shui analysis. Therefore, the street intersections surrounding building sites are interpreted as virtual water gates for the revised urban auspicious Feng Shui analysis. The Auspiciousness Knack and San-Yuan Suan-Kuang flying star Feng Shui analysis are also adopted in the auspiciousness analysis. This revised urban auspicious Feng Shui analysis procedure has been successfully used for the auspiciousness analysis of many urban project sites. Three examples of auspicious Feng Shui analyses were discussed in this paper. Google Earth with the compass function can be a useful and advanced tool to assist in site direction determination. The remote sky viewing technique would also improve efficiency and reduce the time required in preliminary and final on-site Feng Shui analysis.

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