CENTRE OF STUDIES FOR BUILDING SURVEYING

DEPARTMENT OF BUILT ENVIRONMENT & TECHNOLOGY

UNIVERSITY TECHNOLOGY MARA PERAK BRANCH

SERI ISKANDAR CAMPUS

TINY HOUSE DESIGN PROPOSAL

AIMI SYAMIMI BINTI AZMAN

(2019814174)

BACHELOR OF BUILDING SURVEYING (HONS.)

PRACTICAL TRAINING REPORT

FEBRUARY 2022

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This practical training report is fulfilment of the practical training course.

PREPARED BY

NAME : AIMI SYAMIMI BINTI AZMAN

SIGNATURE :

SUPERVISING LECTURER

NAME : SR TS MOHD ZAKI BIN SHAMSUDIN

SIGNATURE :

DATE :

ACKNOWLEDGEMENT

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ABSTRACT

In semester 7, students of Bachelor in Building Surveying are required to completing Industrial Training at any firm or company that related with syllabus in Building Surveying to gain experience in building development industry. The aims of this Practical Training is to develop intellectual, powers and ability of students in analyzing fact finding and investigation through relevant scientific and qualitative analysis. It is to educate the student in dealing with the implication of developments and awareness of factors affecting the built environment and society. Students also need to prepare a report that related with the industrial training and require the Department's approval of the topic. The topic of this report is Tiny House Design Proposal.

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CHAPTER 1

INTRODUCTION

1.0 COMPANY PROFILE

FHMM Infinity Technology Sdn. Bhd. was established in 2018 as response to the government's calls and recommendations to encourage and regenerate Malaysia's construction sector, which was slipping due to the country's financial crisis several years ago. This organization directed by 100% Bumiputera consisting of various age levels and extensive experience in individual fields. FHMM is a private local company that specialized in construction sector.

1.0.1 Company's Logo

Figure 1.1: Company's logo

1.1 VISION AND MISSION

FHMM Infinity Technology Sdn. Bhd. has set their objective as "Together ensure quality, reliability, perfection, and timeliness in the products and services provided to customers". They set company's vision and mission as well:

1.1.1 Vision

To make FHMM Infinity Technology Sdn Bhd as a successful, quality, and competitive whole bumiputera owned among other contractor companies.

1.1.2 Mission

Create healthy development for society and balanced for the environment, unite energy collectively, productively, and quality.

1.2 ORGANIZATION CHART

1.2.1 Company's Organization Chart

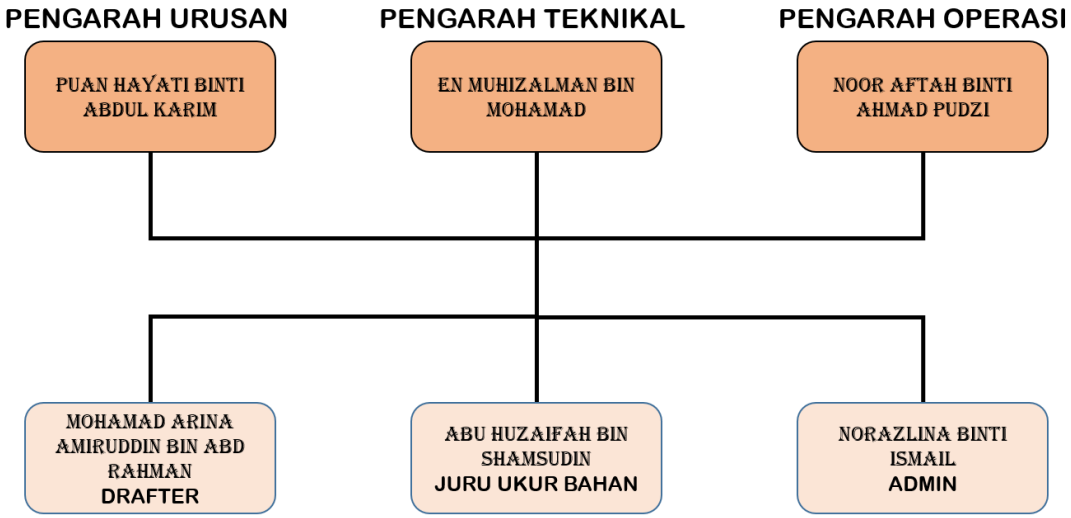

Figure 1.2 Company's organization chart

1.2.2 Scope of Work

Currently, FHMM Infinity Technology Sdn. Bhd. prioritizes works related to construction field besides residential housing renovation and development based on the concept of joint venture, privatization, and others. In this way, they will able to provide more organized, systematic, a good quality of development and maintenance products to their customers.

1.3 LOCATION PLAN

Figure 1.3: FHMM Infinity Technology Sdn. Bhd.

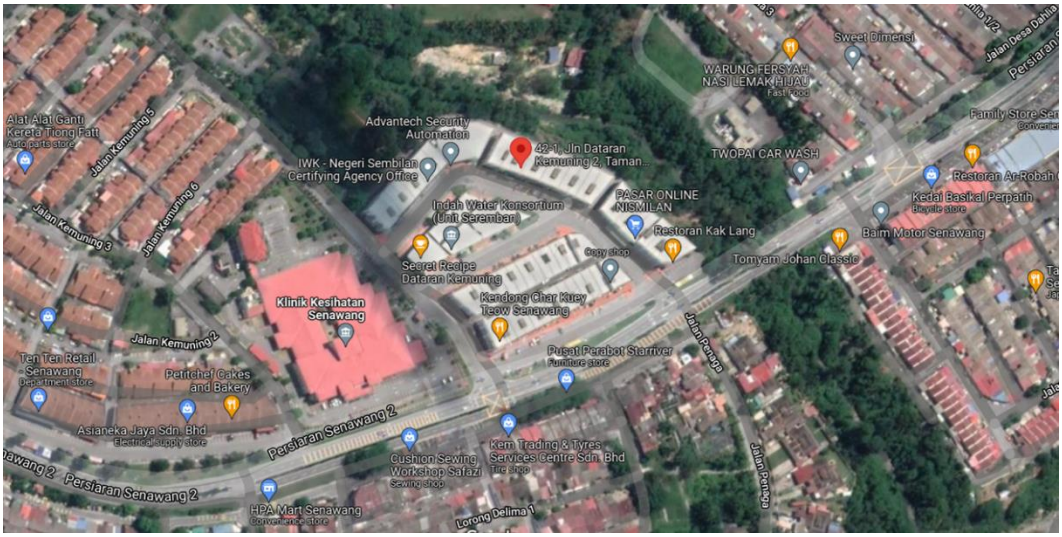

Figure 1.4 Key plan for FHMM Infinity Technology Sdn. Bhd.

1.4 PRACTICAL TRAINING

1.4.1 Duration

All seventh semester students have to undergo 16 weeks of industrial training as part of the program. The practical training can be complete in either government or private sector organizations. During these duration, the students are expected to demonstrate communication skill effectively in written and oral way and exhibit good working ethics. Besides, demonstrate cooperative working commitment amongst co-workers.

1.4.2 Scope of work given

The scope of work given by FHMM Infinity Technology is as a drafter. Drafter work with Computer-Aided Design (CAD) to create schematics that can be viewed, printed, or programmed directly into building information modeling (BIM) systems, besides do the 3 dimensional rendering for all the task given. The task given include, one storey bungalow, tiny house and renovation project.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

Based on English Oxford Dictionaries, the definition of design is a plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made. Building design refers to the broadly based architectural, engineering and technical applications to the design of buildings. All building projects require the services of a building designer, typically a licensed architect or structural engineer. For the smaller and less complicated projects often do not require a licensed professional. The design for small project is usually undertake by building designers, draftspersons, contractors or the interior designers for the fit outs construction or renovations. The larger or more complex building projects require the services of many professionals. The professionals should be trained in specialist disciplines and usually the project are coordinate by an architect.

2.1 BUILDING DESIGNER

2.1.1 Definition and Scope of Work

A Building designer is a professional who specializes in the design and planning of residential and commercial buildings. A building designer is ready to handle complicated issues and work within budgetary constraints while interpreting a client's thoughts and ideas into a real product. Building designers must also be able to communicate well with a variety of audiences. They may provide a variety of services to fit the needs of the client. This professional can work with various architectural statutes to plan and build structures that are designed to meet client's requirements.

Other than that, a building designer scope of work is approaching a design problem with a variety of practical and economical solutions that can meet the requirements of the client. A building designer can help clients with the selection of materials and architectural treatments for their house or building. They can also provide a variety of interior and exterior designs. After the client agreed, building designer may present the conceptual designs and provide a contract that details the services that they will provide. A building designer can help the clients to select the contractors who will work on the project and oversee the construction process.

If the clients agreed to hire a building designer, they can help to prepare and publish construction bid proposals, as well as understand and explain it to clients and make comments. A building designer allowed to perform on-site inspections or observations of the construction site as client's representative, ensuring that all work satisfies recognized standards.

2.1.2 Differences between Building Designer and Architect

Building designers and architects are responsible for the design of buildings, houses, factories, and other structures. They also create and finish draughts of the structure's appearance. Clients and building designers frequently meet to determine what the client need and what they wish to see. After that, the designer builds a draught that satisfies those requirements and ideas. Architects ensure that what the building designer drew out on paper is functional, works, and complies with the building code.

Building designers may collaborate with architects and must be innovative when it comes to design. They must be able to interpret what a customer says and transfer that information into creative structure designs. It is essential to have a working knowledge of building codes and industry standards. Building designers should have a strong background in math, physical sciences, and computer-aided design. Designers must be willing to change plans as they go and modify drawings in accordance to client requests. A building designer's responsibilities include:

- Having consultation session with clients to decide the function, layout, and scale of the building.
- Providing advice on everything from the exterior appearance of the building to the internal design and how to stay within client’s budget.
- Presenting draft and final designs to clients for further comments or approval.
- Assisting clients in the seek for contractors and/or construction firms.

As for the architects, they must have a bachelor's degree from a recognized institute to start their career. Majority of the graduates go on to receive a master's degree and pass the Architect Registration Examination. Architects have the particular training and artistic creativity required to not only design structures but also to establish building requirements. They collaborate closely with drafters, contractors, and building inspectors to ensure that the structure complies with all local and state regulations. They are educated and trained to oversee the construction of a structure from the early planning phase to the final nail hammering work. An architect's tasks include the following:

- Conducting discussion regarding to the design with all party involved, such as clients, design team members, and construction managers.
- Providing preliminary cost, labor, and construction time estimates.
- Visiting work sites on a regular basis to check on work and meeting schedules.
- Using freehand art or computer-aided drafting programs to create scaled drawings.
- Keep up with current city codes, regulations, and architectural trends, as well as design items.

2.2 TINY HOUSE

2.2.1 Definition

Tiny houses are similar to studio apartments, but significantly smaller. Tiny houses are small-scale versions of complete housing unit. A purposeful decision to build and live in a tiny house is made in response to an experience of living a simple life. It has small environmental footprint and less emphasis on material items. Tiny houses are known for its smart use of space and use of innovative technology in their design and construction. A tiny house is a residence that is up to 50 square meters in size, some of it is self-sufficient, and got excellent quality. It is a possibility, not a must, to be mobile or completely off-grid.

Due to its small size, tiny houses are particularly space-efficient. Given the small size of a tiny house, it is expected that the rental cost is ten times cheaper than a flat. People not only can buy or rent a tiny house, but they can also construct one as the construction cost cheaper than the normal house’s.

In addition to Tiny House, the names 'Micro House' and 'Small House' are often used. A Micro Home is a compact, transportable living unit that is ideal for travelling, such as for digital nomads. Although a Tiny House on Wheels (THOW) can be moved, it is usually not designed to be transported. Smaller than a Tiny House, a little house is usually built on a foundation.

2.2.2 Specification

Tiny houses occur in a variety of shapes and sizes, however the following are some of the most typical in Malaysia:

- Prefabricated house: Also known in Malaysia as Industrialized Building System (IBS) house. It is residences where separate elements are produced in a factory and then placed together on site.
- Container residences: These residences are constructed from recycled shipping containers.

ITEM	DETAIL
Size	Smaller than standard residential building. Average of the build-up area is 50 to 200 square meter.
Construction process	The construction process is same as every residential building. However, some of the tiny house, may use special techniques, such as Industrialized Building System.
Material	The material used to build a tiny house is as same as a standard house. However, other alternative can be used to cut the project cost, such as use the biodegradable materials or reclaimed construction waste.
Cost	A television show (SQFT) from TV3 Malaysia, stated the price for 300 square feet house in year 2020 and 2021 is RM 35,000. The prices may exclude land, landscaping and furnishing unless indicated otherwise

Table 2.1 Tiny house's specification

2.2.3 Advantages

One of the many advantages of living in a tiny house is, it an environmentally friendly building. From the time the house is built until the time it occupied, tiny house use significantly less energy than the average residence. Tiny houses are not only less cost to build, but they are also less expensive to maintain. Electricity, fuel, water, and trash disposal bills are all significantly reduced. As example, composting toilets, which break down waste without requiring connection to a sewage system, are seen in many tiny houses. As a result, the owner be able to save money on the utilities expenses.

Another advantage of owning a tiny house is easier maintenance required. A working adult is unlikely to have the time or energy to clean a regular-sized house on a regular basis. The owner of a tiny house would not have to spend as much time cleaning and maintaining it. Tiny house residents can spend little time on chores and more time on their work, hobbies, and relationships because they have less room to clean and fewer appliances to maintain.

Other than that, it is harmony with mother nature. Tiny houses utilize less material and energy to construct and function. Also, because of their modest size, they are easier to place in a naturalistic environment. A Life with less complications excessive items, such as bulging wardrobes, complex technology, and large libraries of books and videos, have no place in a tiny house. Only the goods that actually improve their life are kept by tiny homeowners, who reduce down their belongings to the necessities.

CHAPTER 3
CASE STUDY

3.0 INTRODUCTION

This case study is about tiny house design proposal for company's catalogue. On 3rd November 2021, a staff meeting was conduct and one of the main agenda is FHMM Infinity Technology company assigned the practical student to propose new tiny house design. The management set a requirement which, there should be one or two complete design for each week.

Until January 2022, there are 6 tiny house designs submitted to the company. 2 out of the 6 designs be the client's choice to build their house. The locations of the site are in Mantin, Negeri Sembilan and Rawang, Selangor. Each designs have different size and interior space design. Additionally, there are standard specifications that set by FHMM Infinity Technology for each design prepared for the client.

3.1 PROPOSED DESIGN

3.1.1 Specification

The specifications stated below are designated by the company as the guideline to prepare design and bill of quantities of a building. The standard specifications consist of several items such as wall, ceiling, and floor finishes. The standard specifications are:-

- Anti-termite work
- Clay bricks for wall construction
- Roof tiles
- Plaster ceiling
- Stone Polymer Composite (SPC) for floor finishes
- Anti-slip tiles for bathroom floor finishes
- 5 feet height wall finishes at kitchen and bathroom area
- Apron – Cement render finishes
- Door type - Timber flush door
- Bathroom door type – Aluminum bi fold door
- Window type – Casement window
- Bathroom window type – top hung
- Mechanical and Electrical point
- Septic tank
- Perimeter drain
- Concrete table top (cover with 2’ x 2’ tiles)
- 2 coats paint for primer and base

Besides all these specification, other items and materials used are as set in the standard construction practices. The clients may change the specification above, as some of the client have their own choices for certain materials such as floor finishes. The changes may affect the final price of the contract sum or lead to variation order.

3.1.2 List of Tiny House Design

- Design 1 – Appendix A
- Design 2 – Appendix B
- Design 3 – Appendix C
- Design 4 – Appendix D
- Design 5 (Client: Mr. Aizat) – Appendix E
- Design 6 (Client: Mr. Izhar) – Appendix F

3.2 DESIGN 1

SPECIFICATION	DETAIL
Total square feet	24’ x 14’ = 336 sq. ft.
Estimated cost	From RM 40,000
Drawing / Plan	Appendix A
Front elevation	 Figure 3.1: Front elevation for Design 1
Left elevation	 Figure 3.2: Left elevation for Design 1

Rear elevation	 Figure 3.3: Rear elevation for Design 1
Right elevation	 Figure 3.4: Right elevation for Design 1
3D perspective views	 Figure 3.5

	 Figure 3.6  Figure 3.7 Figure 3.5, 3.6 & 3.7: 3D perspective views for Design 1

Table 3.1: Detail of Design 1

3.3 DESIGN 2

SPECIFICATION	DETAIL
Total square feet	24’ x 14’ = 336 sq. ft.
Estimated cost	From RM 40,000
Drawing / Plan	Appendix B
Front elevation	 Figure 3.8: Front elevation for Design 2
Left elevation	 Figure 3.9: Left elevation for Design 2

Rear elevation	 Figure 3.10: Rear elevation for Design 2
Right elevation	 Figure 3.11: Right elevation for Design 2
3D perspective views	 Figure 3.12

Figure 3.13

Figure 3.14

Figure 3.15

Figure 3.12, 3.13, 3.14 & 3.15: 3D perspective views for Design 2

Table 3.2: Detail of Design 2

3.4 DESIGN 3

SPECIFICATION	DETAIL
Total square feet	20’ x 25’ = 500 sq. ft.
Estimated cost	From RM 60,000
Drawing / Plan	Appendix C
Front elevation	 Figure 3.16: Front elevation for Design 3
Left elevation	 Figure 3.17: Left elevation for Design 3

Rear elevation	 Figure 3.18: Rear elevation for Design 3
Right elevation	 Figure 3.19: Right elevation for Design 3
3D perspective views	 Figure 3.20

	 Figure 3.21  Figure 3.22  Figure 3.23 Figure 3.20, 3.21, 3.22 & 3.23: 3D perspective views for Design 3

Table 3.3: Detail of Design 3

3.5 DESIGN 4

SPECIFICATION	DETAIL
Total square feet	30’ x 19’ = 570 sq. ft.
Estimated cost	From RM 68,000
Drawing / Plan	Appendix D
Front elevation	 Figure 3.24: Front elevation for Design 4
Left elevation	 Figure 3.25: Left elevation for Design 4

Right elevation	 Figure 3.26: Right elevation for Design 4
3D perspective views	 Figure 3.27  Figure 3.28

	 Figure 3.29  Figure 3.30 Figure 3.27, 3.28, 3.29 & 3.30: 3D perspective views for Design 4

Table 3.4: Detail of Design 4

3.6 DESIGN 5 (Mr. Aizat)

SPECIFICATION	DETAIL
Client's name	Mr. Aizat
Total square feet	20' x 25' = 500 sq. ft.
Estimated cost	From RM 60,500
Drawing / Plan	Appendix E
Front elevation	 Figure 3.31: Front elevation for Design 5
Rear elevation	 Figure 3.32: Rear elevation for Design 5

3D perspective views	 Figure 3.33  Figure 3.34  Figure 3.35 Figure 3.33, 3.34, & 3.35: 3D perspective views for Design 5

Table 3.5: Detail of Design 5

3.7 DESIGN 6 (Mr. Izhar)

SPECIFICATION	DETAIL
Client's name	Mr. Izhar
Total square feet	20' x 31' = 620 sq. ft.
Estimated cost	From RM 75,000
Drawing / Plan	Appendix F
Front elevation	 Figure 3.36: Front elevation for Design 6
Left elevation	 Figure 3.37: Left elevation for Design 6

Rear elevation	 Figure 3.38: Rear elevation for Design 6
Right elevation	 Figure 3.39: Right elevation for Design 6
3D perspective views	 Figure 3.40

	 Figure 3.41  Figure 3.42  Figure 3.43 Figure 3.40, 3.41, 3.42 & 3.43: 3d perspective views for Design 6

Table 3.6: Detail of Design 6

CHAPTER 4
PROBLEMS IDENTIFY

4.0 INTRODUCTION

There will be no perfection in every construction project. One of the obstacle in construction project is during designing stage. If the problem during design stage cannot be solved, it may affect during the construction on site stage or afterwards. Even though each design job is unique, the process and methods utilized to create it are the same or quite similar each time. Several numerous criteria, such as legal provisions and regulations, local government specifications, client requests, economy, and many more, merged to form architecture. While for some, designing and building a home is a dream come true, creating a custom design has its own set of challenges. There are some problems and the recommendation suggest while designing the tiny houses.

4.1 PROBLEM

- Adequate action time

In order to complete a design, including floor plan, elevations plan, roof plan and 3 Dimension illustration, the time given is short. This is due to other task given and the priorities to complete the task as soon as possible. The submission been extended from one design in a week to one design in two or three week.

- Unknown site condition

Before designing process, the client usually came to the consultant for explaining their needs and requirements for their house. One thing to be prepared by the client is land grant or site location. This is to ease the designer to design the house following the site orientation and condition. Without knowing the actual site condition, it may lead to numerous amendment of the design during the construction process.

- Ignored by the client

After completing the design, the management team will forward the complete drawing including 3D, to the client for their feedback. Client will reply almost immediately; they will comment if there any amendment needed or straightly agree with the design prepared and proceed with bill of quantities preparation. However, some of the client does not updated anything after received the design and estimated cost. Regardless, the management team try to follow up with them, the client will simply ignore the messages or call from them.

- Limited action

Tiny house is smaller than standard residential building. Due to limited size, the spaces in the house are constrained too. It means some of the space may be multiuse such as living and dining area will be combine as one space. The tiny house cannot be design follow designer's preference only, but to fulfill the client and common construction specification. Besides, the tiny house size cause the designer's idea limited to design the interior space yet want to complete the task given.

- Client's budget

The tiny house does not cost much like standard house. FHMM Infinity Technology set their own standard specification, the designer and quantity surveyor need to follow it as guideline to produce design and bill of quantities. The client has right to state their own specification or to exclude any of the company's standard from their house design and bill of quantities. However, the final cost sometimes does not parallel with client's budget. This will take some time for the designer and quantity surveyor to repair the drawing and bill of quantities.

CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.0 CONCLUSION

As the conclusion, there are several aspects of the site and building that considered in an effective house design, which are orientation, site features, floor plan, materials, finishes, technology, appliances, and many more. All of these aspects typically be the requirements for an architect or designer to plan a new house. The cost of hiring a professional designer is usually well worth it. A focus on good design leads to higher-quality results and a more efficient construction process. A designer who is familiar with and has experiences designing homes for sustainability can also assist clients in ensuring that their house is comfortable and energy efficient for the duration of its lifecycle.

Any house's design is crucial, but this is especially true in tiny houses, where every square foot matters. There are many to-do list before start designing an efficient tiny house, such arranging a rough layout, determine the size, and list the material to be used later to build a tiny house. This is to avoid any dysfunction in the future like waste of space in there. Livability, functionality, convenience, comfort, and style are essentially the major features of a wonderful house. What can be conclude here is, a comfortable shelter relies heavily on the design and usability of the space irrespective of its dimension.

5.1 RECOMMENDATIONS

- Prioritizing task

Despite many task come in one time, the important one should be prioritize first. The important task is company's project, where client's request to design their house. Besides, the management team understand the designer situation and give flexible time to submit the tiny house design. However, the designer should not take advantage from them, and do the tiny house design whenever there is leisure time.

- Consultation session with client

It is important for the designer to have a consultation session with the client. The session may help to avoid any misunderstanding between the management, designer and client party. The client can explain their requirements and wishes of their dream house to the designer, and the technical team can consult and advice the client based on the local authority specification. This session can be held face to face or through online.

- Fixed consultation fee

It is a loss to the company if the client keeps ignored them after the design and bill of quantities been prepared. In order to keep this problem from spreading, the consultation fee should be set for the client. The consultation fee should not be costly; it can be in range under RM 100 for a client. This way is a fair decision for both party. Besides, designer and quantity surveyor should get a confirmation from the management team whether the clients are totally interested or not, before proceed to produce the drawing and bill of quantities.

- Produce various design

The designer should produce more design as long as the estimated cost is relevant with the size of the house. Besides, the designer may propose any furniture or technologies can be used in the tiny house, in order to make sure it function as good as standard house. The more the design produce, the client can freely choose which design they want without need the designer to create new design for them.

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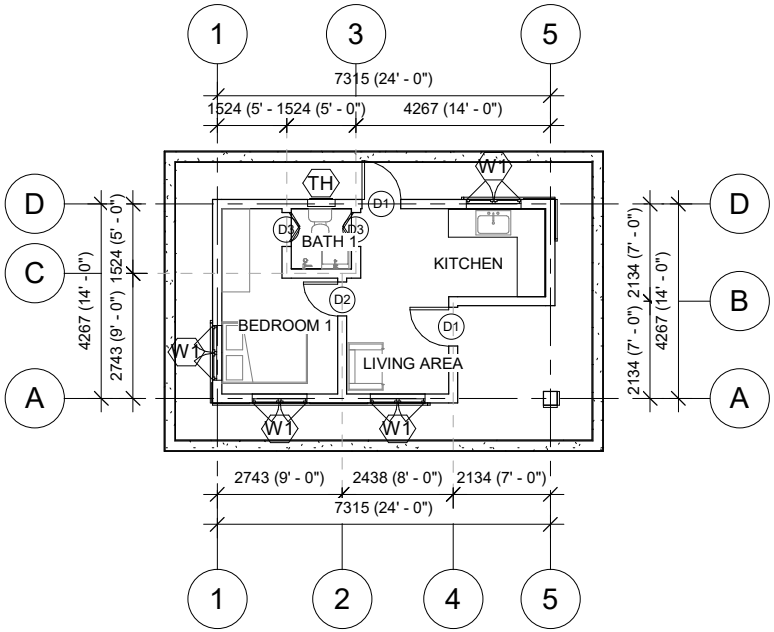
APPENDIX

APPENDIX A



1 FLOOR PLAN

1 : 100

TOTAL AREA= 287sqft

NOTES

Door Schedule			
Mark	Width	Height	Count
D1	850	2100	2
D2	750	2100	1
D3	750	2100	2

Window Schedule			
Mark	Width	Height	Count
TH	600	600	1
W1	1200	1200	4

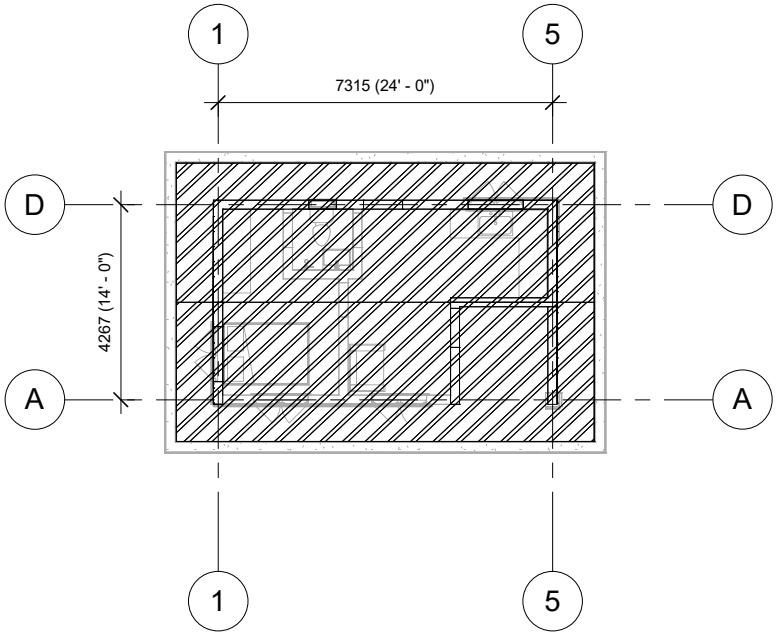
CLIENTS DESIGN 1

SITE ## Street
City, State Zip

DATE 18/11/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



2 ROOF PLAN

1 : 100

NOTES

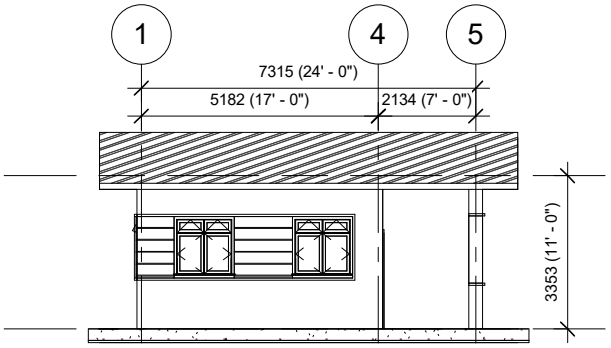
CLIENTS DESIGN 1

SITE ## Street
City, State Zip

DATE 18/11/2021

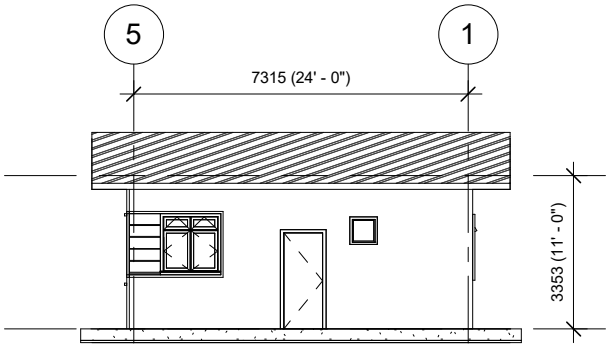
CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



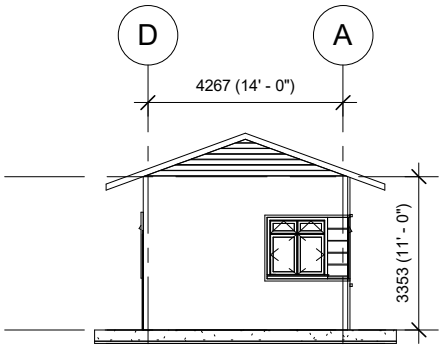
1 FRONT ELEVATION

1 : 100



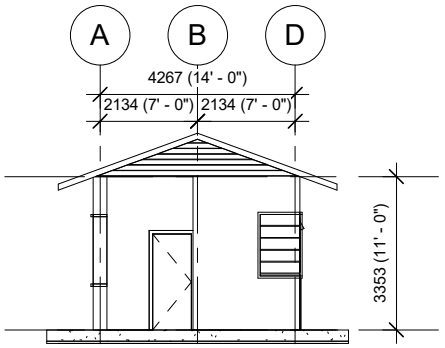
2 REAR ELEVATION

1 : 100



3 LEFT ELEVATION

1 : 100



4 RIGHT ELEVATION

1 : 100

NOTES

CLIENTS DESIGN 1

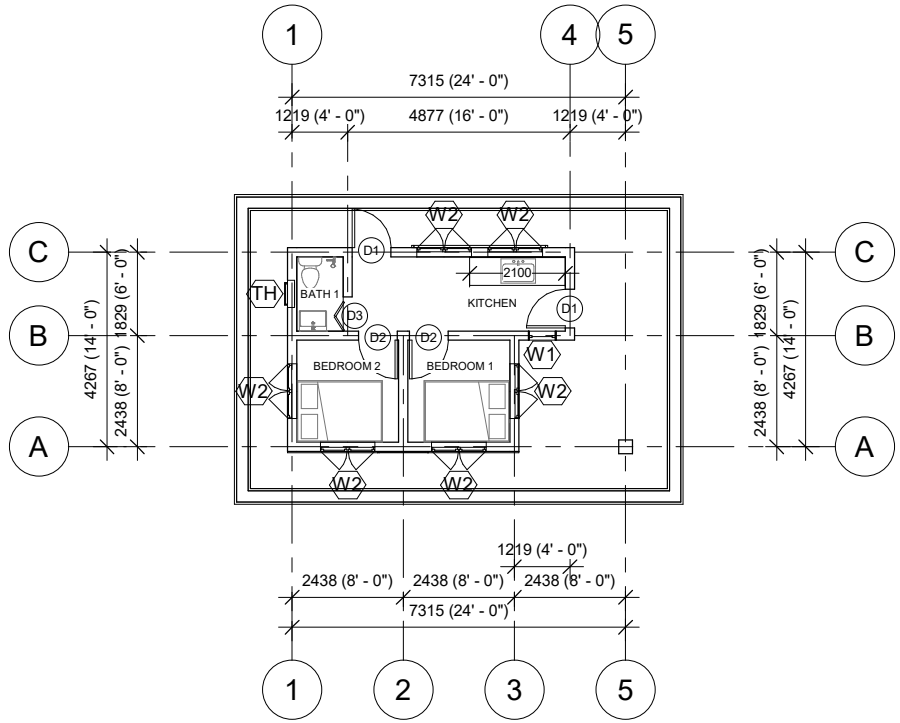
SITE ## Street
City, State Zip

DATE 18/11/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD

APPENDIX B



1 FLOOR PLAN

1 : 100

TOTAL SQFT = 336 sqft

NOTES

Door Schedule			
Mark	Width	Height	Count
D1	850	2400	2
D2	850	2100	2
D3	750	2100	1

Window Schedule			
Mark	Width	Height	Count
TH	600	600	1
W1	600	1500	1
W2	1200	1200	6

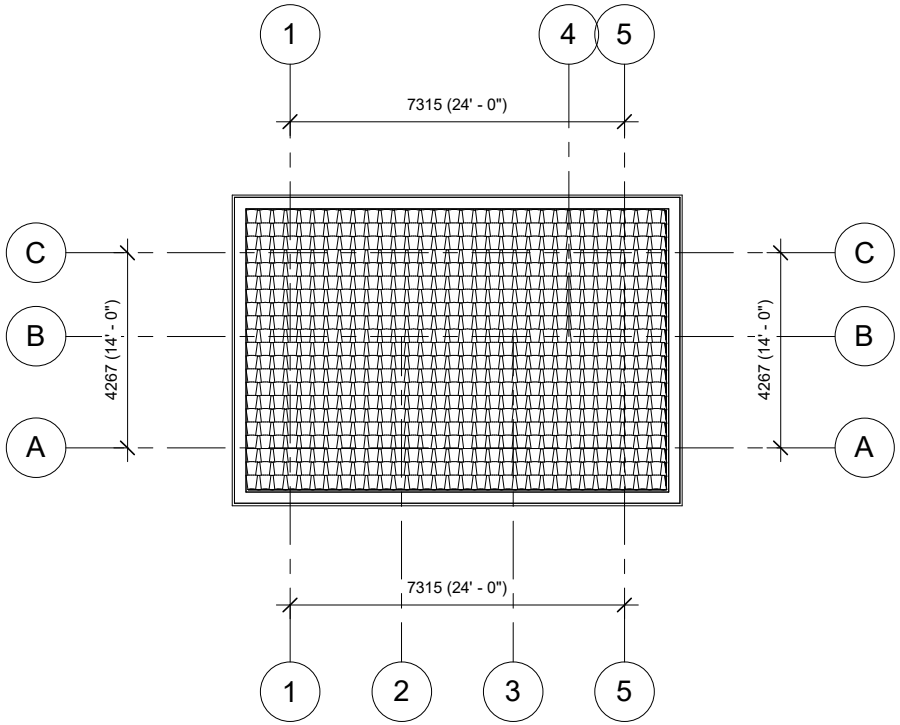
CLIENTS DESIGN 2

SITE ## Street
City, State Zip

DATE 01/12/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



2 ROOF PLAN

1 : 100

NOTES

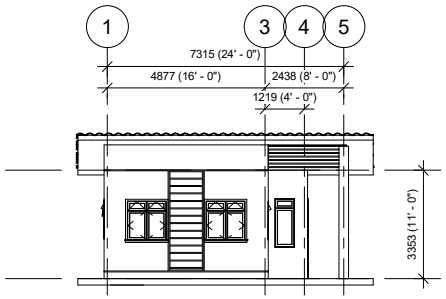
CLIENTS DESIGN 2

SITE ## Street
City, State Zip

DATE 01/12/2021

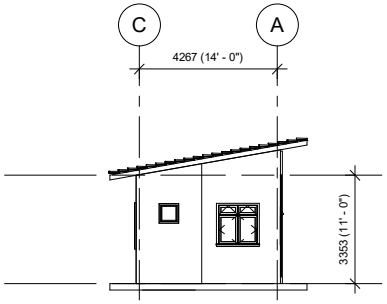
CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



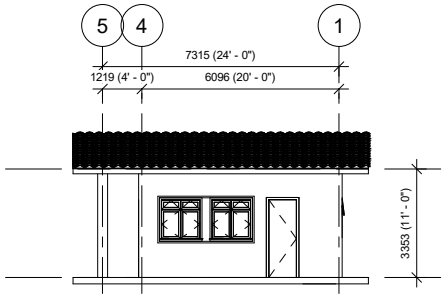
3 FRONT ELEVATION

1 : 100



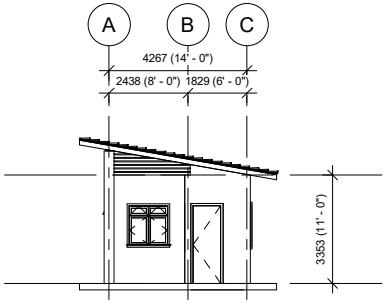
4 LEFT ELEVATION

1 : 100



5 REAR ELEVATION

1 : 100



6 RIGHT ELEVATION

1 : 100

NOTES:

CLIENTS DESIGN 2

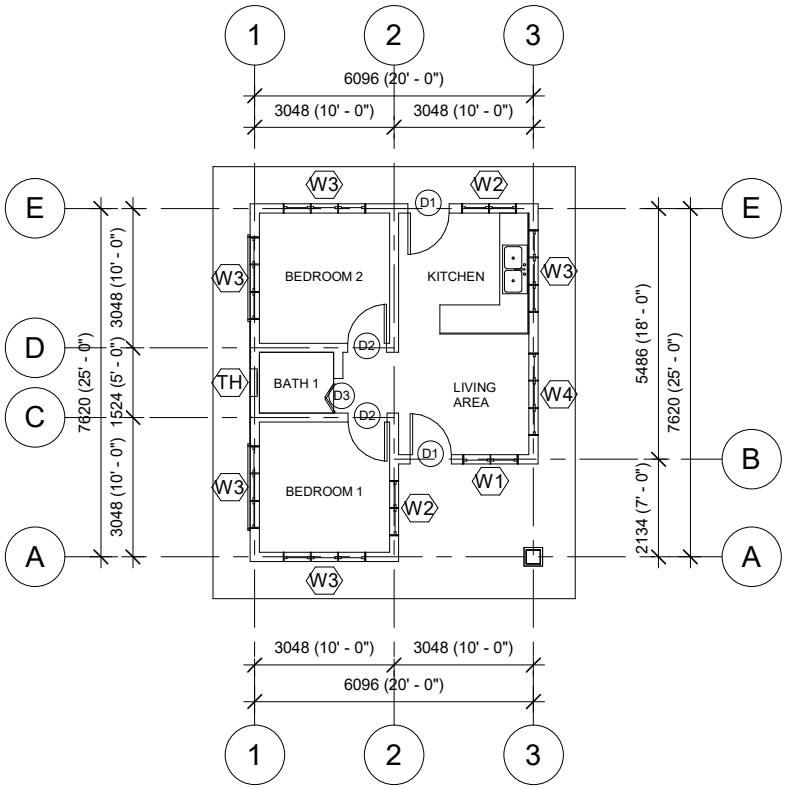
SITE: ## Street
City, State Zip

DATE: 01/12/2021

CONTRACTOR:

FHMM
INFINITY TECHNOLOGY SDN BHD

APPENDIX C



1 FLOOR PLAN

1 : 100

TOTAL SQFT = 500 sqft

NOTES

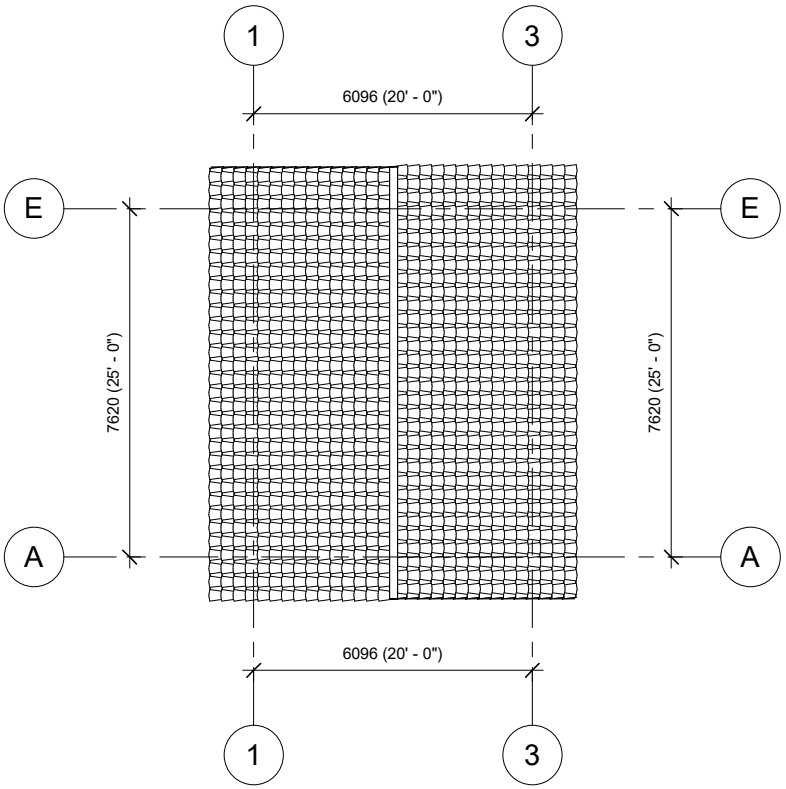
CLIENTS DESIGN 3

SITE Enter address here

DATE 3/12/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



2 ROOF PLAN

1 : 100

NOTES

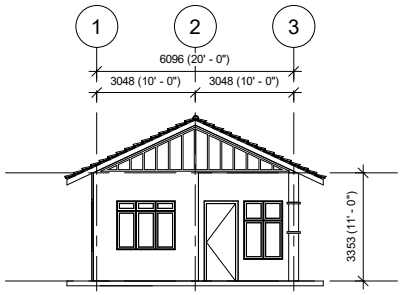
CLIENTS DESIGN 3

SITE Enter address here

DATE 3/12/2021

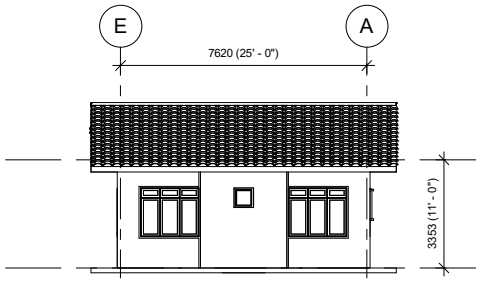
CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



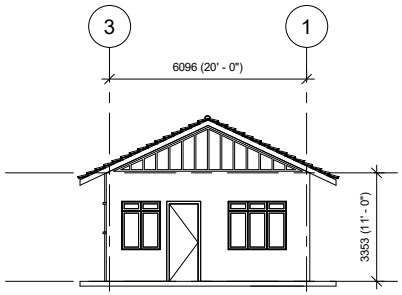
3 FRONT ELEVATION

1 : 100



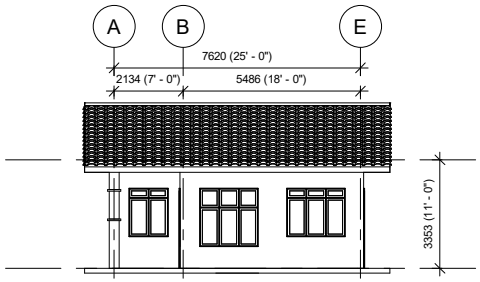
4 LEFT ELEVATION

1 : 100



5 REAR ELEVATION

1 : 100



6 RIGHT ELEVATION

1 : 100

NOTES:

CLIENTS DESIGN 3

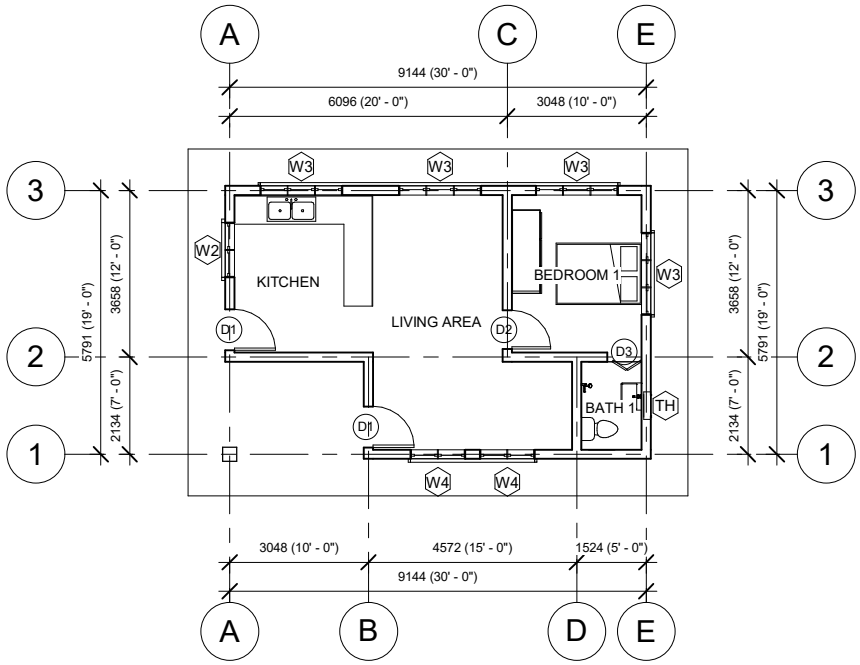
SITE: Enter address here

DATE: 3/12/2021

CONTRACTOR:

FHMM
INFINITY TECHNOLOGY SDN BHD

APPENDIX D



1 FLOOR PLAN
1 : 100

TOTAL SQFT= 570 sqft

NOTES

Door Schedule			
Mark	Width	Height	Count
D1	900	2400	2
D2	850	2100	1
D3	750	2100	1

Window Schedule			
Mark	Width	Height	Count
TH	600	600	1
W1	1200	2100	2
W2	1200	1500	1
W3	1800	1500	4

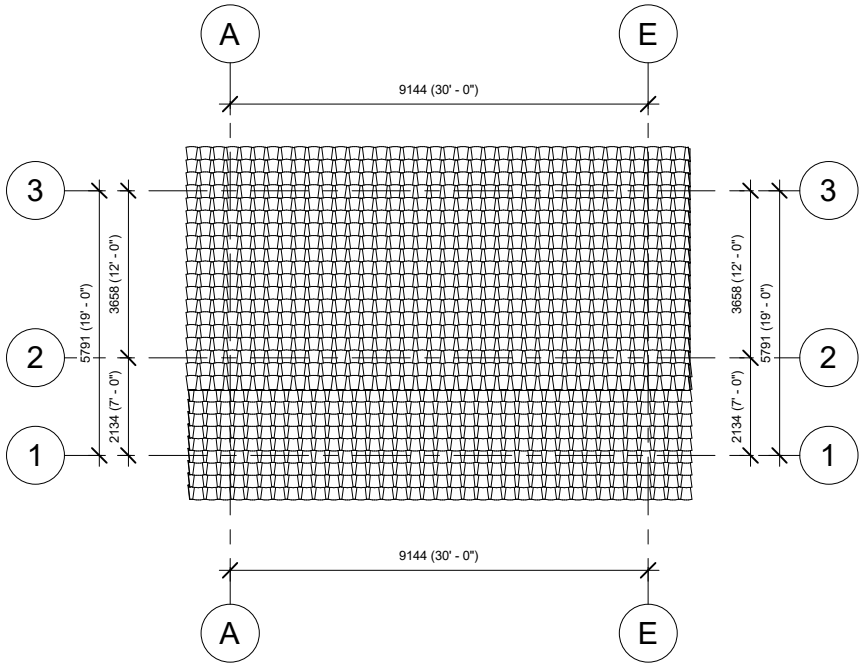
CLIENTS DESIGN 4

SITE Enter address here

DATE 13/01/2022

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



1 ROOF PLAN
1 : 100

NOTES

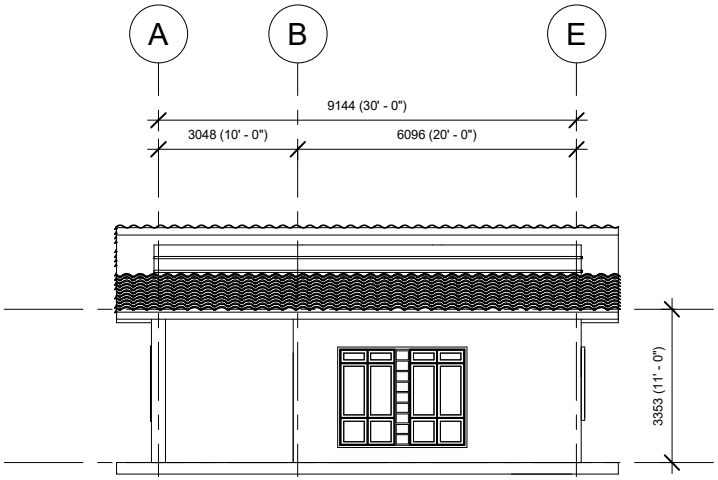
CLIENTS DESIGN 4

SITE Enter address here

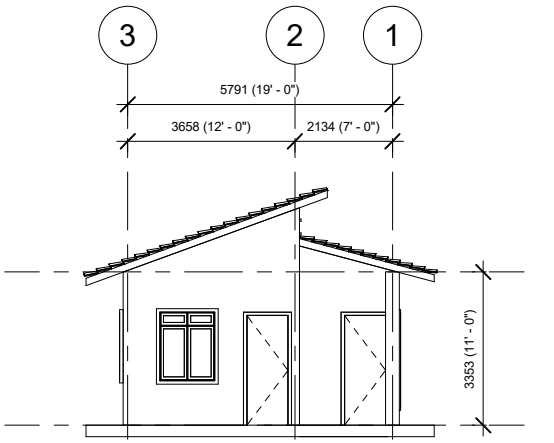
DATE 13/01/2022

CONTRACTOR

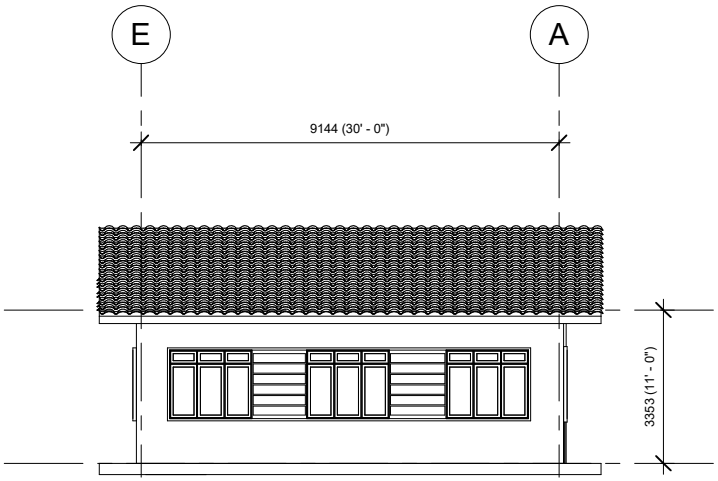
FHMM
INFINITY TECHNOLOGY SDN BHD



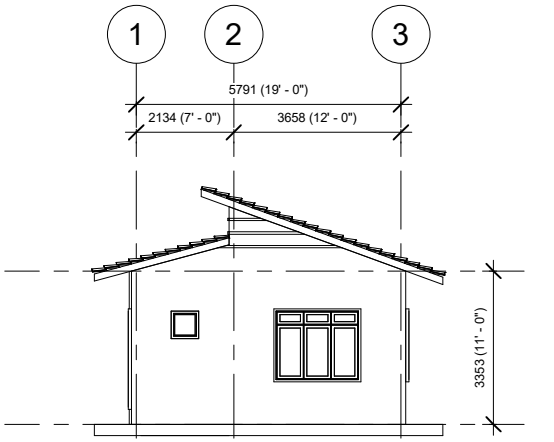
1 FRONT ELEVATION
1 : 100



2 LEFT ELEVATION
1 : 100



3 REAR ELEVATION
1 : 100



4 RIGHT ELEVATION
1 : 100

NOTES

CLIENTS DESIGN 4

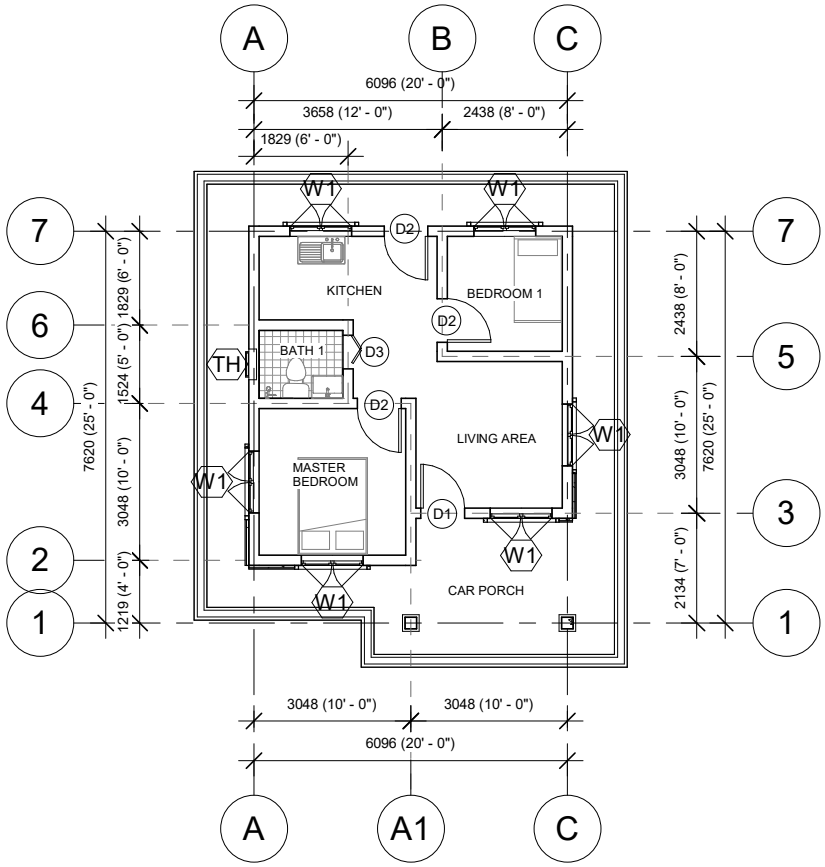
SITE Enter address here

DATE 13/01/2022

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD

APPENDIX E



1 FLOOR PLAN

1 : 100

NOTES

Door Schedule			
Mark	Height	Width	Count
D1	2100	850	1
D2	2100	850	3
D3	2100	650	1

Window Schedule			
Mark	Height	Width	Count
TH	600	600	1
W1	1200	1200	6

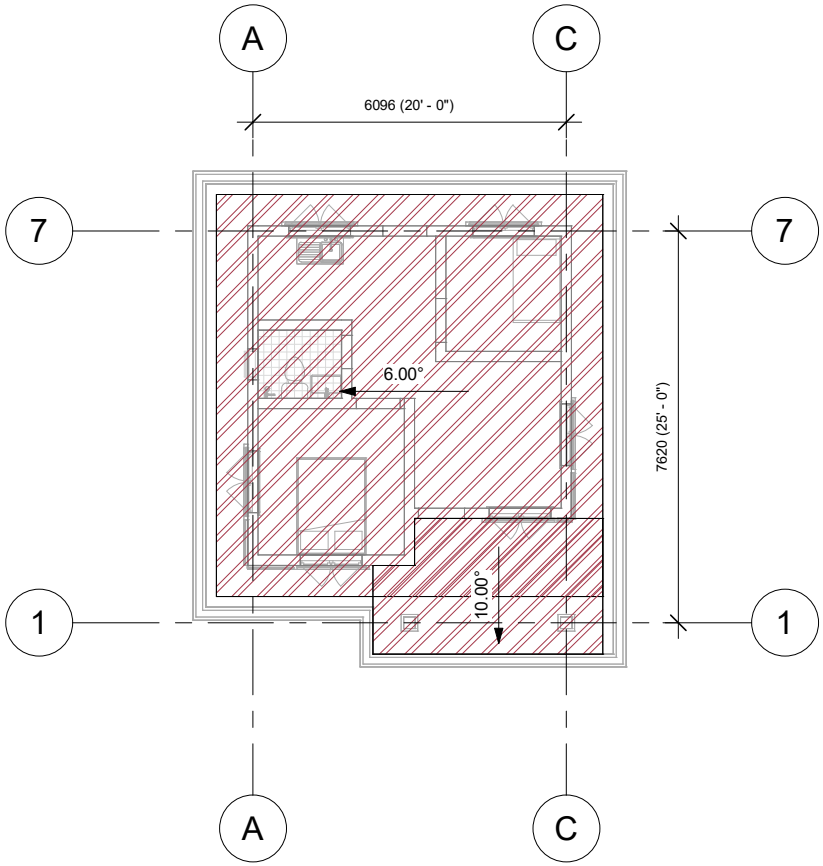
CLIENTS EN. AIZAT

SITE MANTIN

DATE 10/11/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



2 ROOF PLAN

1 : 100

NOTES

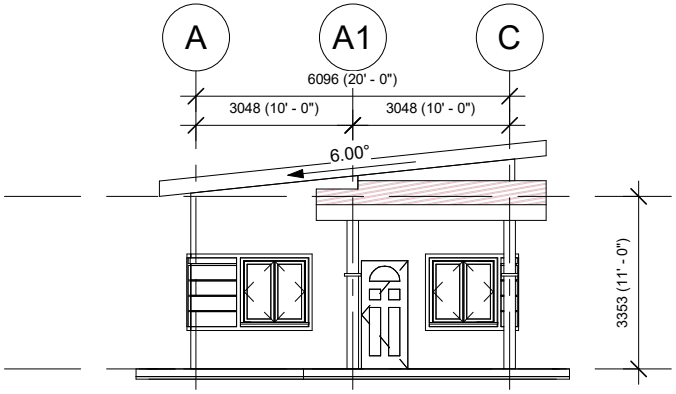
CLIENTS EN. AIZAT

SITE MANTIN

DATE 10/11/2021

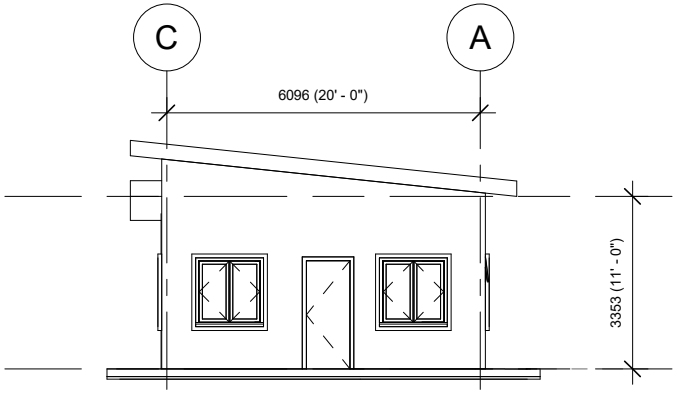
CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



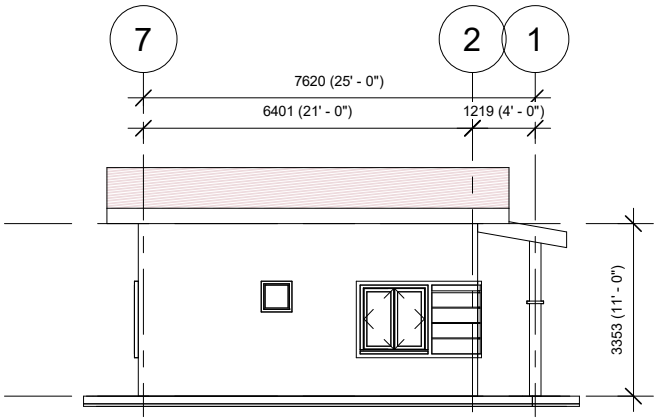
3 FRONT ELEVATION

1 : 100



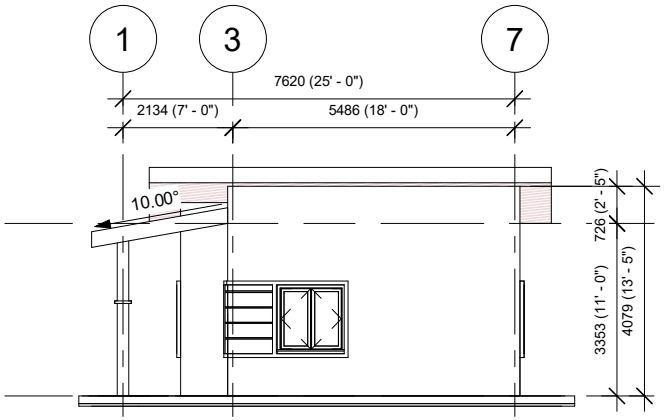
4 REAR ELEVATION

1 : 100



5 LEFT ELEVATION

1 : 100



6 RIGHT ELEVATION

1 : 100

NOTES

CLIENTS EN. AIZAT

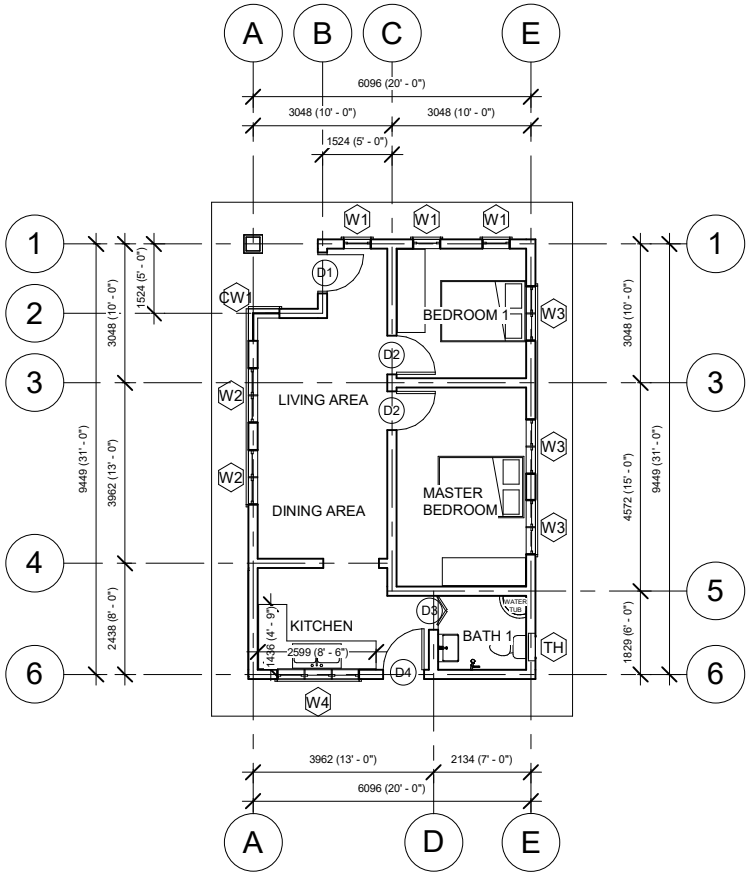
SITE MANTIN

DATE 10/11/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD

APPENDIX F



1 FLOOR PLAN
1 : 100

TOTAL SQFT = 620 sqft

NOTES

Door Schedule			
Mark	Width	Height	Count
D1	900	2400	1
D2	850	2100	2
D3	750	2100	1
D4	900	2400	1

Window Schedule			
Mark	Width	Height	Count
CW1	600	2100	1
TH	600	600	1
W1	600	2100	3
W2	1200	2100	2
W3	1200	1500	3
W4	1800	1500	1

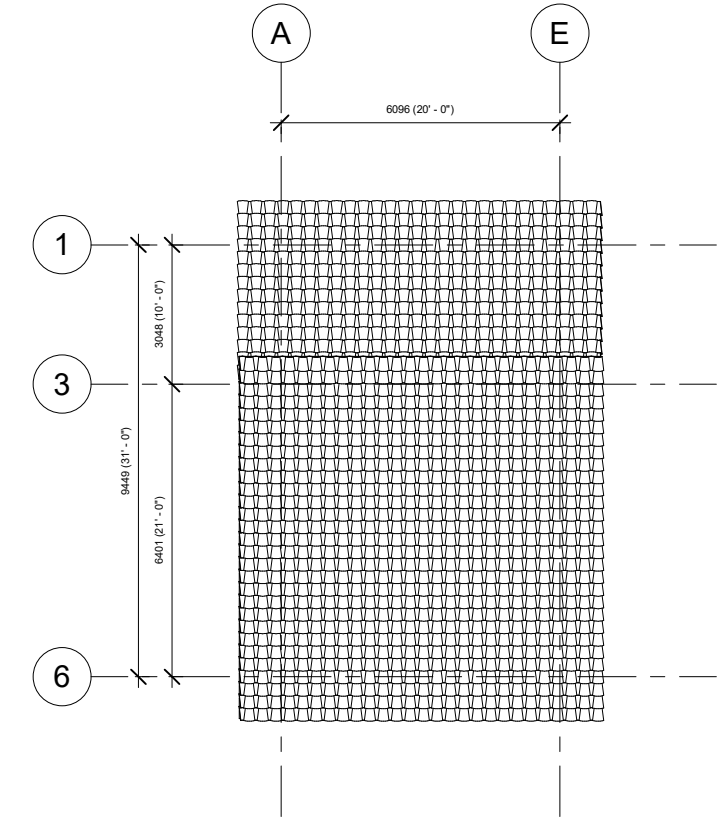
CLIENTS EN IZHAR

SITE KAMPUNG GOMBAK KUANG

DATE 21/12/2021

CONTRACTOR

FHMM
INFINITY TECHNOLOGY SDN BHD



1 ROOF PLAN
1 : 100

NOTES

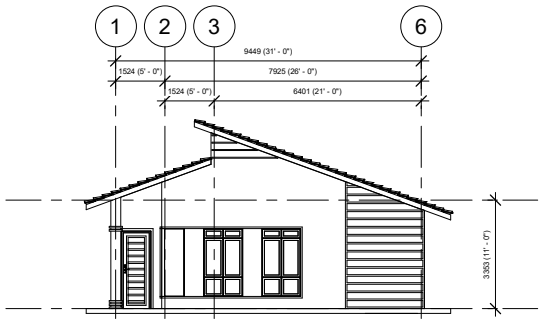
CLIENTS EN IZHAR

SITE KAMPUNG GOMBAK KUANG

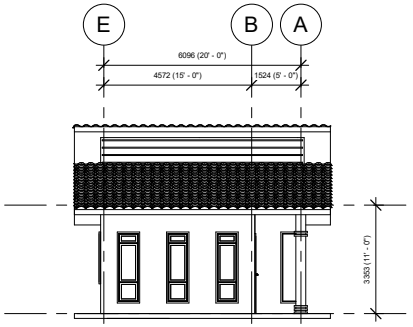
DATE 21/12/2021

CONTRACTOR

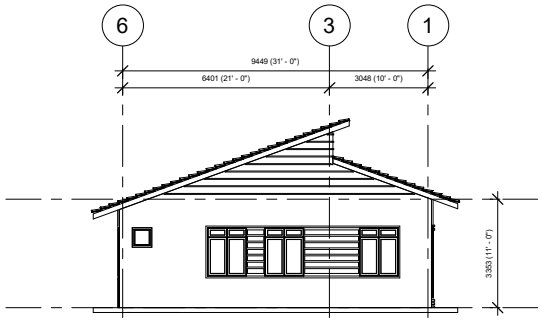
FHMM
INFINITY TECHNOLOGY SDN BHD



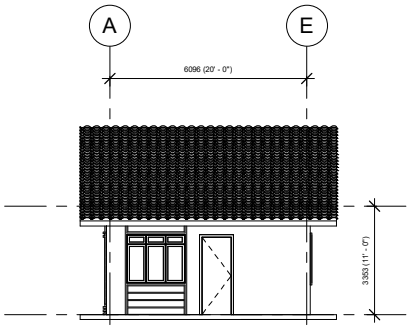
1 FRONT ELEVATION
1 : 100



2 LEFT ELEVATION
1 : 100



3 REAR ELEVATION
1 : 100



4 RIGHT ELEVATION
1 : 100

NOTES:

CLIENTS EN IZHAR

SITE: KAMPUNG GOMBAK KUANG

DATE: 21/12/2021

CONTRACTOR:

FHMM
INFINITY TECHNOLOGY SDN BHD