

Empowering Society, Designing Show At Banjaran Bandung

A B Putra, C M Sujana¹

¹Bina Nusantara University, Civil Engineering, Faculty of Engineering. Jakarta, Indonesia.
andi.putra004@binus.ac.id

Abstract

Survey Activities of “Empowering Society” activities were carried out in Dusun Wangun, Pasirmulya Village, Bandung Regency. This activity aims to improve and develop the conditions of Wangun Hamlet, Pasirmulaya Village, Bandung Regency. The targeted increase this time is the decision that needs to be taken regarding the cultural tourism village stall in Wangun Village. The decision taken is whether the stall needs to be built from scratch or just enough to be renovated. In addition, this activity also looks for parts of Wangun Village that can be developed or improved. This activity is carried out using surveys and observations. Of course, utilizing surveys and observations, each party involved in the activity needs to be on site. In this case, the parties involved are Community Development Academics from Bina Nusantara University and lecturers from Bina Nusantara University who can contribute to this activity. The activity began at the Bina Nusantara Syahdan Campus, where the parties involved began working in the village of Wangun Village. Arriving at Wangun Village, the parties involved carry out the survey and observation of the survey location, namely the Wangun Village cultural tourism village and locations around Wangun Village. From observations, it has been determined based on a joint decision that the stalls will be remade, not renovated. The stall will be made with a size of 3 meters x 3 meters. The stall design is made in the 2D and 3D form at AutoCAD to facilitate the stall construction, as well as the materials needed for construction have been made in MS. Excel. Empowering Society activities can be continued by following the design and pricing plans for the stall.

Keywords: *Survey, Drawing, Shop Construction, Sustainable Design*

A. Background

Bina Nusantara University develops the Tri Dharma of Higher Education which includes teaching, research, and community service activities. The Faculty of Engineering, Civil Engineering Department as part of Bina Nusantara University has a community service program organized by lecturers, Binus humanitarian organizations such as TFI, and Bina Nusantara University students following the University's vision and mission. In this program, an activity is carried out with the title "Survey of Empowering Society Activities."

Wangun Hamlet is in West Java Province, Bandung, Banjaran. The image below shows the boundaries of Banjaran. Dusun Wangun has a large coffee business, apart from that this village is also looking to create a kind of cultural tourism village to attract a lot of tourists from outside as well as migrants from other villages.



Figure 1. The boundary of Banjaran Area, Bandung (google maps)

B. Target

The target of this activity is the revitalization of the cultural tourism village of Dusun Wangun in the form of renovation and/or rebuilding of stalls and improvements and developments that can be implemented in Dusun Wangun.

C. Output and Outcome

The output of this activity is to decide whether to renovate or remake stalls in cultural tourism villages. It is also decided whether there are other activities to be carried out to improve and develop Dusun Wangun. The outcome of this activity is to improve the quality of the cultural tourism village and attract lots of tourists or newcomers.

D. Activity

Form of Activities

Community service activities in Dusun Wangun were carried out on November 6 2019. This activity included surveying the location of the construction of a cultural tourism village. In the cultural tourism village, there are several stall buildings where it will be decided whether

the stall needs to be renovated or destroyed and rebuilt. In addition, this survey activity was also carried out to see village needs that had not been met or that could be developed or improved.

Activity Process

The activity was carried out by starting the departure from the Binus Syahdan Campus at 4.30. The journey continued until it finally reached Wangun Hamlet. Arriving at Dusun Wangun, civil engineering lecturers (Andi Bayu Putra and Caroline Maretha) surveyed the location of the stall to see the current condition of the stall. The following picture is the condition of the stall when it was implemented.



Figure 2. Stall Condition During Location Survey

From the results of the survey above, it was determined that the shop would be built from scratch, not renovated. One of the reasons was the condition of the stall at that time was no longer supportive and the size of the stall was very small. Based on discussions with Mr Yoyo, head of RW 12 Dusun Wangun and one of the work supervisors in the village, it was decided that the new shop would have a size of 3 meters x 3 meters with a "bird's nest" design. The table below shows the materials needed to complete one stall.

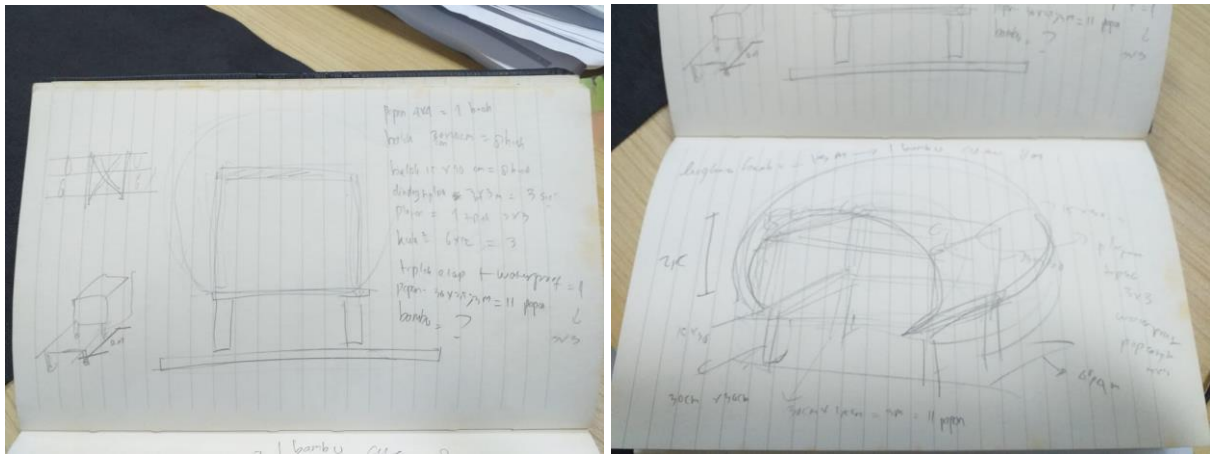


Figure 3. Rough Sketch Plan (by hand)

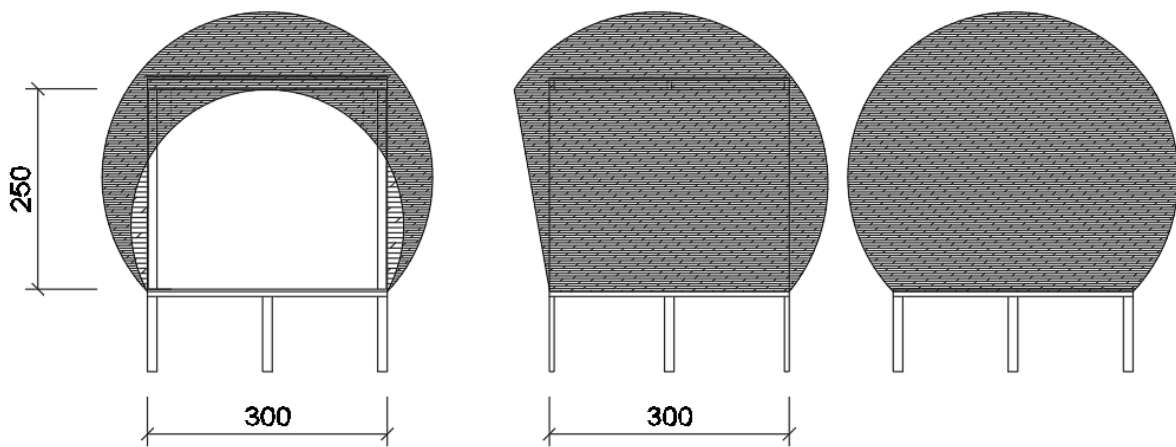


Figure 4. 2D Sketch

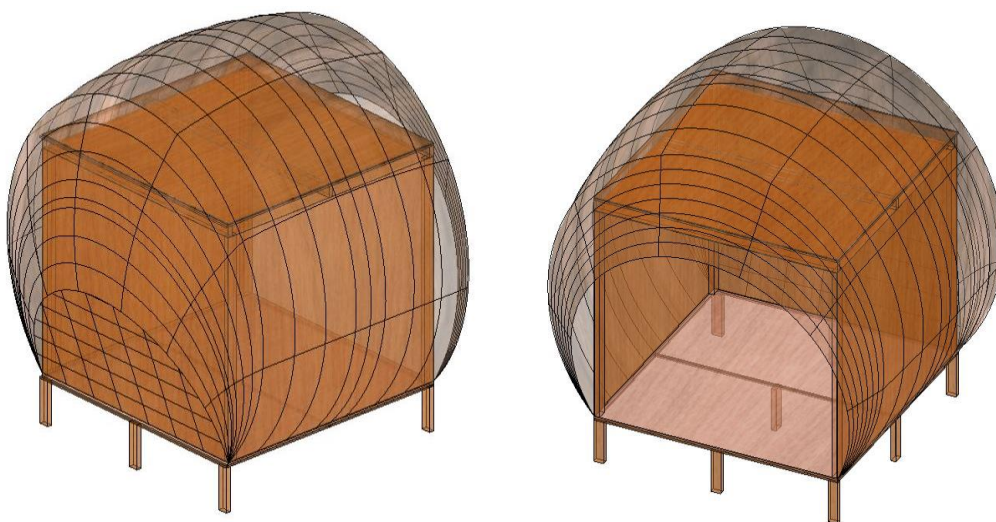


Figure 5. 3D Sketch

Based on the designs above, the shop will be formed according to the details of the materials and designs that have been provided. Below is the estimated cost for the construction.

Material		Volume	Unit Cost	Cost
bamboo booth	8x3	24	Rp75,000.00	Rp1,800,000.00
Edison lamp		5	Rp12,000.00	Rp60,000.00
eternal cable		5	Rp4,580.00	Rp22,900.00
Stop contact plus bronco switch		1	Rp31,000.00	Rp31,000.00
size 12 nails		0.5	Rp18,000.00	Rp9,000.00
front board		11	Rp75,000.00	Rp825,000.00
board 3x20		7	Rp75,000.00	Rp525,000.00
waterproof paint		0.5	Rp220,000.00	Rp110,000.00
4mm triplex ceiling		1	Rp62,000.00	Rp62,000.00
horse2 6x12		3	Rp100,000.00	Rp300,000.00
plywood 0.5cm		3	Rp57,000.00	Rp171,000.00
beam 6x12		13	Rp80,000.00	Rp1,040,000.00
beam 2x3		9	Rp15,000.00	Rp135,000.00
Total				Rp5,090,900.00

Overhead	Rp509,090.00
Builder Cost Estimation	Rp450,000.00
Total	Rp6,049,990.00

Table 1. Cost Estimation

These materials were chosen because it is abundant in volume at the location, especially for wood materials and bamboo materials. The shape was chosen based on other booths that were built in other recreational areas in Asia. It was also chosen based on the discussion with the people that will eventually use it.

E. Documentation

Below is the documentation for this community service



Figure 6. Documentations

F. Enrichment Materials

Below are the enrichment materials made from this community service. These materials are most suited for students that take:

- CIVL6108013 - Drawing Construction
- CIVL6080013 - Construction Methods & Heavy Equipment



SURVEY



Steps:

1. Survey the location. Observe the land, interview the locals. Find out what THEY (the customer) needed the most and planned around that information
2. Create a basic rough design
3. Make a rough estimation of materials and cost
4. Make a refined design
5. Make a refined estimation of materials and cost
6. Revised design and estimation by self correction (double checking the design) or input from colleagues, the customer, or other stakeholders.



BASIC ROUGH DESIGN

From survey and observation, it was determined that the shop needs to be 3 meter x 3 meter wide, with any kind of design as long as it is viable to be used as a shop. If possible, make it interesting. Also use local materials to improve local's influence and make it "traditional" or "cultural"

Design Result (Rough, by hand)



ROUGH ESTIMATION

Estimation (Rough, by hand, on site)



REFINED DESIGN (2D)

From the rough design, it was "translated" into AutoCAD 2D and 3D. The process is by making the shop from bottom up, to make sure there aren't any materials left behind, and if there are any, the design must be revised.

Design Result (2D)

FRONT SIDE BACK



REFINED DESIGN (3D)

The 3D design was made by visualization. Visualize the 2D design in 3D space and by using the AutoCAD 2D object as your restriction. The usual tools are used. Such as: solid, intersect; solid, subtract; extrude, presspull, 3D rotate, and the such.

Design Result (3D)




REFINED ESTIMATION


Using the 2D and 3D design we can better visualize what materials are needed and how many materials required. Below there are several materials not showed at the 2D&3D design because it could still change depends on the actual construction process and the finished product


Material	Volume	Harga Satuan	Harga
bilik bambu	8x3	24	Rp75.000.00
lampu edison	5	Rp12.000.00	Rp60.000.00
kabel ethernet	5	Rp4.580.00	Rp22.900.00
Stop kontak plus saklar			
broco	1	Rp31.000.00	Rp31.000.00
paku ukuran 12	0.5	Rp18.000.00	Rp9.000.00
papan depan	11	Rp75.000.00	Rp825.000.00
papan 3x20	7	Rp75.000.00	Rp525.000.00
cat waterproof	0.5	Rp220.000.00	Rp110.000.00
plafon atas triplek 4mm	1	Rp62.000.00	Rp62.000.00
kuda2 6x12	3	Rp100.000.00	Rp300.000.00
triplek 0.5cm	3	Rp57.000.00	Rp171.000.00
balok 6x12	13	Rp80.000.00	Rp1.040.000.00
balok 2x3	9	Rp15.000.00	Rp135.000.00
Total Harga			Rp5.090.900.00


**Overhead and worker cost isn't included in this table*


DOCUMENTATION














G. Results

The results of the community service is published in one BINUS University youtube video, called *CeritaBINUSIAN 34 - Bangun Desa Pasir Mulya jadi desa wisata dengan berbagai pesona*. With a link:

https://www.youtube.com/watch?v=Xip4H_phxgE&ab_channel=BINUSOFFICIAL and

<https://www.binus.edu/fostering-and-empowering/post/bangun-dusun-wangun-jadi-desa-wisata-dengan-berbagai-pesona>

H. References

- Adiyanta, F.C. Susila. 2019. "Hukum dan Studi Penelitian Empiris: Penggunaan Metode Survey." *Administrative Law & Governance Journal* 1 (4).
- Arikunto, Suharsimi. 1996. *Prosedur Penelitian: Suatu pendekatan Praktek*. . Jakarta: Bina Aksara.
- Hausler, N. 2005. "Definition of Community Based Tourism." *Tourism Forum International at the Reispavillon*.
- Maskur, A. 2022. "ANALISIS ESTIMASI BIAYA PEMBANGUNAN RUMAH EKONOMIS DAN RAMAH LINGKUNGAN UNTUK MASYARAKAT BERPENDHASILAN RENDAH." *Jurnal Media Teknologi (Universitas Galuh)* 8 (2).
- O.S. Prijono, O.S. & A.M.W. Pranarka. 1996. *Pemberdayaan: Konsep, Kebijakan, dan Implementasi*. Jakarta: CSIS.