

FOR INTERNAL CIRCULATION

WRITING GUIDELINES

FINAL PROJECT REPORT



By
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FOREWORD



Assalamu'alaikum wr. wb.

The book entitled 'Manuscript Writing Guidelines: Industrial Internship Reports', Final Project Proposals, and Final Project Reports' is a refinement of the writing manuals that have been previously published in the Civil Engineering Study Program of FT-UMS with the title 'Guidelines for preparation of Industrial Internship Reports', Final Project Proposal, and Final Project report 'year 2000.

In accordance with the development of science, curriculum and procedures for writing scientific manuscripts in universities, the Civil Engineering Study Program of FT-UMS feels the need to review and refine the content of the writing manual that has been in effect since 2000, by holding a Workshop on Final Project and Industrial Internship Procedures on September 14th 2016. With the implementation of this workshop, Civil Engineering Lecturer Council of FT-UMS was able to produce a manuscript writing guidebook that will be effective in 2017.

Hopefully this guidebook is useful, especially in the Civil Engineering Study Program, so that it is used as a reference for guidelines of writing for supervisors, especially for students in preparing Industrial Internship Reports', Final Project Proposals, and Final Project Reports'. In addition, I hope that with this book the students study period can be shortened. Amiin, ya robbal'amin.

Wassalamu'alaikum Wr. Wb.

Surakarta, February 2017
Head of Civil Engineering Study Program

Mochamad Solikin, ST, MT, Ph.D.
NIK: 792

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CHAPTER I

PROCEDURES FOR WRITING

The procedures for writing include: materials and sizes, typing, numbering, tables and pictures as well as writing names.

A. Material and Size

Materials and measurements include : manuscript and cover.

1. Manuscript

Manuscripts are made on A4 quarto HVS paper at least 70 gsm and not duplex.

2. Cover

The cover is made of blue paper (for the Internship Report / KP) and white (for the Final Project Report / TA) and reinforced with cardboard covered with plastic (model *hardcover*). The writing printed on the cover is made in white silver color for KP, yellow gold for TA, while the title page uses white paper and the writing is black.

B. Typing

Typing is presented: type letters, numbers and units, line spacing, borders, space filling, new paragraphs, beginning of sentences, chapter and sub-chapter titles, downward breakdown, and symmetrical layout.

1. Font

The fonts used in KP and TA are:

- a) Manuscript typed by letters *Time New Roman 12*, and for the entire script the same font must be used. Use of italics or squares is not permitted.
- b) Italics are only used to write foreign words / terms.
- c) Notation or signs that cannot be typed, must be written neatly in black ink.

2. Numbers and units

The procedure for writing numbers and units is as follows:

- a) Numbers are typed with numbers, except at the beginning of the sentence, for example:
Ten types of materials and 5 types of equipment.
- b) Decimal numbers are marked with a comma, not with a period, for example: egg weight
50,5 gr.
- c) Units are expressed by their official abbreviation with no dots behind them, for example
m, gr, kg, cal.

3. Line spacing

The distance between 2 lines is made of 1.5 spaces, except digest, direct quotation, description of the notation after the equation, table titles and image titles that are more than 1 line as well as bibliography, typed with 1 space down.

4. Borders

The boundaries of typing, viewed from the edge of the paper, are arranged as follows:

- a) Top : 4 cm.
- b) Bottom : 3 cm.
- c) Left : 4 cm.
- d) Right : 3 cm.

5. Space filling

The space contained in the manuscript page must be filled completely, starting from the top edge to the bottom edge, unless it starts with changing chapters. In addition, typing must be from the left edge to the right edge, and no space is wasted, unless it starts with a new paragraph, equations, pictures, sub-chapters, or special things.

6. New Alenia

Alenia just starts at the 7th type of the left border.

7. The beginning of the sentence

The number, symbol, or chemical formula that starts a sentence should be spelled, for example: One zak of cement *portland* weighs 40 kg.

8. Title of chapter, sub chapter, sub chapter child, and others

Writing chapter titles, sub-chapters, and others in bold with the following rules:

- a) Chapter titles must be written in all capital letters and arranged symmetrically, 4 cm from the top edge without dot at the end of the sentence.
- b) Sub-headings are written in the middle, all words start with a capital letter, except for conjunctions and prepositions, without dot at the end of the sentence. The first sentence after the chapter begins with a new paragraph.
- c) Sub-sub-headings are typed starting from the left border, only the first letter is capitalized, without dot at the end of the sentence. The first sentence after the sub-chapter child begins with a new paragraph.
- d) Additional sub-sub-headings are written from 7th typing, written in italics, only the first letter is in uppercase letters, and ends with a dot. The first sentence that follows is then continuously typed backwards in a line with sub-sub-headings.

9. Details down

If in the writing of the script there are details that must be arranged downward (the first detail), use the serial number with Arabic numerals and enclosed in brackets and dots, and start from the left edge. Using a connecting line (-), arrows (→), stars (*), etc. that are placed in front of the details are not permitted. If this first detail needs description, then the writing of the description starts with the left border under the first letter of the detail (after the closing brackets and period).

If this first detail is broken down further (second detail), use alphabetical order of letters (alphabet) and enclosed in brackets and dots, starting from the left border below the first letter of the first detail. If the second detail has more details (the third detail), use serial numbers with Arabic numerals and marked with open and close brackets and periods, and starting from the border under the first letter of the second detail, and so on.

Example: The main ingredient of concrete consists of cement portland, aggregate and water, with the following explanation:

1). Cement *portland*

Cement *portland* there are several types as follows:

- a). Cement *portland* type I.
- b). Cement *portland* type II.
- c). Cement *portland* types and so on).

2). Aggregate

According to the size of the granules, the aggregate is divided into 2 types, namely:

a). Fine aggregate

This aggregate is sand with a maximum diameter ...

b). Coarse aggregate

The type of coarse aggregate used as a concrete mixture can be:

- (1). Gravel taken directly from the river.
- (2). Split / crushed stone is obtained from stones that are broken with a hammer manually, or by tool *stone crusher*.

3). (etc).

10. The layout is symmetrical

The display of images, tables, chapter titles and sub-chapters is written symmetrically against the left and right edges of typing.

C. Numbering

Numbering in this section includes page numbering, tables, figures, and equations.

1. Pages

Page numbering arrangement:

- 1). The beginning of the report, starting from the Title Page to the Digest, is given page numbers in small Roman numerals (i, ii, iii, iv), and is written in the bottom center with a space of 1, 5 cm from the bottom edge.

- 2). The main and final sections, starting from the Introduction (Chapter I) to the last page, use Arabic numbers as page numbers (1,2,3,).
- 3). The page number in the Chapter Title is placed at the bottom right of the page, while the other page numbers are written on the top right.
- 4). The page numbers in the main and final sections are typed at a distance of 3 cm from the right edge and 1.5 cm from the bottom or top edge.
- 5). Appendices are page numbered with L-1, L-2, L-3, and so on with a distance of 3 cm from the right edge and 1.5 cm from the top edge.

2. Image

Images are numbered with Roman and Arabic numerals. Example: Figure II-2, means that the image is in Chapter II with sequence number 2.

3. Tables

Tables are numbered with Roman and Arabic numerals. Example: Table V-4, means that the table is written in Chapter V with the sequence number 4.

4. Equation

Serial numbers of equations in the form of mathematical formulas, chemical reactions, etc. are written in Roman and Arabic numerals in parentheses and placed near the right margin.

$$\sigma = \frac{M \cdot y}{I} \dots\dots\dots(III-2)$$



D. Figures and Tables

1. Figures

Writing pictures follows the following rules:

- 1). Charts, graphs, maps, and photos are all called (undifferentiated) images.

- 2). The picture number followed by the title is placed symmetrically under the image without ending in a period.
- 3). Images must not be cut off.
- 4). Captions for pictures should be written in the vacant places in the image and not on other pages.
- 5). If the image is painted stretched along the height of the paper, the top of the image should be placed on the left side of the paper.
- 6). The image is positioned so that it is symmetrical.

An example of a guide can be seen in Figure I.1 in Appendix I.1.

2. Tables

Rules in the table:

- 1). The table number followed by the title is placed symmetrically or just above the table, without ending with a period.
- 2). Tables should not be chopped off, unless they are long, so that it is impossible to type them on one page. On the next page of the table, the table number and follow-up words are listed, without a title.
- 3). Columns are named and maintained so that the separation between the columns is sufficiently clear.
- 4). If the table is wider than the width of the paper, so you have to make the paper lengthwise, then the table part should be placed on the left side of the paper. Above and below the table, borders are
- 5). attached, so that the table is separate from the main description in the paper.

Example of guidance can be seen in Table I.1 in Appendix I.2.

E. Language

1. The language used

The language used is standard Indonesian (there are subjects and predicates, and to make it more perfect, objects and information are added). The writing guidelines follow EYD (Enhanced Spelling) and KBBI (Big Indonesian Dictionary).

2. The form of the sentence

Sentences should not display the first person and the second person (I, I, we, we, you), but made in a passive form. In the presentation of thanks to the foreword, the word 'I' is replaced by 'author' or 'composer'.

3. Term

The terms used are Indonesian terms or those that have been Indonesianized. If forced to use a foreign term, it must be printed in italics

4. Important matters

Important things to note:

- 1). Conjunctions, such as 'so', and 'while', should not be used to start a sentence.
- 2). Prepositions, such as 'at', are often used inappropriately, for example, placed in front of the subject (breaking sentence structure).
- 3). The words 'where' and 'from' are often inappropriately used, and are treated exactly as words *where* and *of* in English. In Indonesian this form is not standardized and should not be used.
- 4). The prefixes 'to' and 'at' should be distinguished by prepositions 'to' and 'at'.
- 5). Punctuation must be used appropriately.

F. Writing of names

Writing this name includes the name of the author referred to in the description, the name in the bibliography, names with more than one syllable, names with a connecting line, names followed by abbreviations, and degree of scholarship.

1. Name of the author referred to in the description

Authors whose writings are referred to in the description are only mentioned their last name, and if there are more than 2 people, only the last name of the first author is included followed by et al or *et al*, example:

- 1). According to Calvin (1978)

- 2). Bagasse priority (Othmer and Ferstrom, 1943) yields
- 3). Gasoline can be made from methanol (Meisel et al., 1976) ...

There are 4 people writing in example 3), namely: Meisel, SL, McCullough, JP, Leckthaler, CH, and Weisz, PB

2. The author's name in the bibliography

In the bibliography, all authors must be listed by name, and not only the first author plus et al or *et al* only. Examples: Meisel, SL, McCullough, JP, Leckthaler, CH, and Weisz, PB, 1976

Not only: Meisel, SL et al or Meisel, SL *et al*.

3. The author's name is more than one syllable

If the author's name consists of 2 or more syllables, the method of writing is the last name followed by a comma, abbreviating the first name, middle name and so on, all of which are given a period, or the last name is followed by the first, middle name syllable, and so on.

Example:

- 1). Sultan Takdir Alisyahbana is written: Alisyahbana, ST
- 2). Donald Fitzgerald Othmer written: Othmer, DF

4. Author's name with a connecting line

If the author's name in the original source is written with a connecting line between the two syllables, then the two are considered as one unit. Example:

Sulastin-Sutrisno is written by Sulastin-Sutrisno.

5. Names with abbreviations

A name that is followed by an abbreviation, it is assumed that the abbreviation becomes one with the syllable in front of it.

Example:

- 1). Mawardi AI is written: Mawardi AI
- 2). William D. Ross Jr. written: Ross Jr., WD

6. Degree of degree

Undergraduate degrees should not be listed.

G. New Terms and Quotes

1. New term

New terms that have never been standardized in Indonesian can be used as long as they are consistent. At first use it is necessary to give it in a foreign language (in brackets). If a lot of new terms are used, it is best to create a separate 'glossary'.

2. Quote

Citation is written in the original language, if it is more than 3 lines, it is typed with one space, and if it is less than 3 lines, one and a half spaces. Typed indented. Not translated, but may be written in accordance with the words of the author.

3. Arabic word

The Arabic word transliteration follows the Joint Decree (SKB) of the Minister of Religion and the Minister of National Education of the Republic of Indonesia.

H. Bibliography and Appendix

1. Bibliography

Bibliography only contains references referred to in the description (internship, proposals and final project reports), and is arranged alphabetically by the last name of the first author. Bibliography of books and magazines is not differentiated, namely in the following order:

- 1). Book: author's name, year published, *book title* (italicized), to what volume, issue to what, name of publisher, and city of publication.
- 2). Magazine: author's name, year published, *post title* (italicized), ma-keep the official abbreviation, volume, and referring page numbers.

There are slight differences between the various fields of writing, for example in the use of punctuation marks, but the outline remains the same. Therefore, small differences are still allowed, as long as they are obedient to the whole writing.

2. Attachments

Attachments are used to obtain data or other information that serves to complement the descriptions that have been presented in the main part of a manuscript (for example: detailed drawings and other information from the project for internship reports, calculations or test results from the laboratory for the final research report, as well as calculation or detailed planning drawings for the final building planning report).

The title / name of the attachment is written and arranged in order of the chapter titles that are described in the main part of a manuscript. For example: Annex II.1, Attachment II.2, Attachment III.1, Attachment III.2, and so on.

CHAPTER II

PROPOSED FINAL PROJECT

A. Content and Systematics of the Proposed Final Project

The scope and contents of the Final Project Proposal are arranged in a systematic manner as follows.

I. INTRODUCTION

A. Background

1. Formulation of the problem

Problem Formulation contains an explanation of the reasons why the problems raised in the proposed final project are considered interesting, important and necessary. In addition, it also describes the position of the problems to be studied in a broader scope of problems.

2. The authenticity of the final authenticity of the final

Project The project is stated by showing that the problem to be studied has never been resolved by the author of the previous final project, or it is clearly stated that the difference between the final project and the final project has been carried out.

3. Scope of the finals project

The project contains the limitations or assumptions of the final project that will be done, whether in the field of research, planning, or literature review.

B. Objectives and Benefits of Final

Project This section specifies the objectives to be achieved, and their benefits for future development.

II. LITERATURE REVIEW

Literature review contains a systematic description of the results of writing written by previous authors and which has a relationship with the writing to be done. In this presentation, it should be shown that the problems to be studied have not been answered or have not been resolved satisfactorily.

The facts stated as far as possible are taken from the original source. All sources used must be mentioned with the author's name and year of publication.

III. THEORY BASE

The theoretical basis is described from the literature review. The theoretical basis is compiled by the students themselves as a guide to solving the final project problem and to formulate a hypothesis (if any). The theoretical basis can be in the form of qualitative descriptions, mathematical models, or equations that are directly related to the field of study being discussed.

IV. METHOD OF IMPLEMENTATION

A. Materials / Materials for Final Project

Materials or materials for the proposed final project can be either a population or a sample.

B. Final Project Equipment

Tools used in the implementation of the final project must be described in detail and clearly.

C. Implementation project

Stage The implementation stage contains a fairly detailed description of how to carry out and collect data, and is equipped with a flow chart for the implementation of the final.

The variables to be studied and the data to be collected are clearly described, including their types and ranges. It is also necessary to explain about the model and how to analyze the results of the data that has been obtained.

D. Implementation project

Schedule The final implementation schedule is presented in the form of a matrix or description. This schedule shows: the stages of implementation. details of the activities at each stage, and the time required to carry out each stage.

REFERENCES

ATTACHMENT (if any)

B. Format and Rules for Final Project Writing

Final Proposal consists of the Beginning, Main Part, and Final Section, with a total page of no more than 20 pages.

1. The Beginning

Preface The headline covers the title page and approval page.

1a). Title page. The title page contains: the title of the final project, the purpose of the proposal, the university symbol, the name and number of the student, the destination institution, and the time of submission (see Appendix III.1). Explanation of the title page:

- 1). The title of the final project, made concise, but clear and shows exactly the problem written. The title of the final project needs to be made firm and does not open up opportunities for various interpretations.
- 2). The purpose of the proposal, is to compile the Final Project of the Department of Civil Engineering, Faculty of Engineering, Muhammadiyah University of Surakarta.
- 3). The symbol of the Muhammadiyah University of Surakarta is round (not 5 sides) with a diameter of about 5.5 cm.
- 4). The name of the student, written in full, cannot be abbreviated, and underneath the NIM.
- 5). The name of the intended agency, namely 'CIVIL ENGINEERING PROGRAM FOR THE TEKNIK FACULTY UNIVERSITAS MUHAMMADIYAH SURAKARTA'.
- 6). When to apply, it is indicated by writing the month and year under 'UNIVERSITAS MUHAMMADIYAH SURAKARTA'.

1b). Approval page. This page contains Supervisor's approval complete with signature and approval date (see Attachment III.2).

2. Main

The main part of this final project proposal contains: background, objectives, scope of the final project, literature review, theoretical basis, hypotheses (if any), implementation methods, and implementation schedule, with a systematic as described in Chapter III.A.

3. The final

The final section contains a bibliography and attachments needed in the implementation of the final project. Bibliography and appendices are written according to the rules set out in Chapter IH.

In the attachment (if any) there is information or information needed for the implementation of the final project, for example a questionnaire, and in nature it only completes the final project proposal.

CHAPTER III

FINAL PROJECT REPORT

A. Content and Systematics of Final Report

The scope and content of the Final Project Report are organized into several chapters, sub-chapters and sub-chapter children. The contents of the Final Project Report in CHAPTER I (PENDAHU LUAN) to CHAPTER IV (IMPLEMENTATION METHODS) are not much different from those described in the Final Project Proposal but need to be expanded again. For more details, the scope and content of the Final Project Report are arranged systematically as follows.

CHAPTER I. INTRODUCTION

A. Background

1. Formulation of the problem
2. Authenticity final thesis
3. Scope

B. Objectives and Benefits Final

CHAPTER II LITERATURE REVIEW

The literature review was nearly the same as set out in the final project proposal, and mungkin has been expanded with additional information collected during the implementation of the final project.

CHAPTER III THEORY FOUNDATION

The theoretical foundation is also no different from that presented in the proposed final project, it has only been expanded and refined. Generally on the basis of this theory put forward formulas that are directly related to the field of science used in the analysis of the final project discussion.

If necessary, a 'hypothesis' may be added which contains a brief description which is elaborated from a literature review or theoretical basis, as described in the proposed final project.

CHAPTER IV IMPLEMENTATION METHOD

A. Final Project Material

Final project material can be in the form of a population or sample, must be clearly stated and stated the characteristics or specifications that must be determined.

B. Final Project Equipment

Tools used in the implementation of the final project must be clearly described and if necessary, accompanied by a complete picture with the necessary information.

C. Implementation Stage

This stage contains descriptions such as the proposed final project which is expanded again. In addition, the difficulties that may arise during implementation and how to solve them need to be shown, so that the reader does not experience the same thing.

CHAPTER V ACTIVITIES IMPLEMENTATION

This chapter contains a description of the sequence / steps of the final project activities carried out, complete with theoretical calculations that have been presented, so that certain results are obtained related to the objectives of the final project. All results of the final project activity should be displayed in the form of tables or figures which are collected in the appendix.

CHAPTER VI RESULTS AND DISCUSSION

It is necessary to emphasize that this chapter must exist for final project activities with research topics and topics of study, while for final projects with design topics, this chapter may be ignored.

If this chapter exists, it must contain results and discussions that are integrated, and not broken down individually.

The results obtained from the implementation of the final project activities, as far as possible, are presented in the form of tables, graphs, photos, or other forms, and are immediately discussed, so that readers can more easily follow the description. In the first paragraph of this chapter, it should be stated that these results can be found in the list of figures, the list of tables, or the list of attachments whose numbers are mentioned.

Discussion of the results obtained, in the form of theoretical explanations, either quantitatively, qualitatively, or statically. It is better if the results obtained are compared with the results of similar studies that have been found.

CHAPTER VII CONCLUSIONS AND SUGGESTIONS

A. Conclusion

Conclusions are short and precise statements that are elaborated from the results of the final project and its discussion.

B. Suggestions

Suggestions are suggestions to readers who have an interest in the results of the final project that has been obtained. These suggestions are made based on the author's experience and calculations, aimed at readers who will make a similar final project or continue or develop the title of the final project that has been completed.

REFERENCES

ATTACHMENT

B. Format and Writing Rules

As with the proposed final project, the Final Project Report also consists of three parts, namely the Beginning Part, the Main Part, and the Final Part, but the content is broader.

1. The Beginning

The beginning concise of covers the front cover page, title page, endorsement page, approval sheet, statement of authenticity of the final project, preface, table of contents, list of figures, list of tables, list of attachments, list of notations and abbreviations, and digest.

1a). Front cover page. The front cover page contains: the title of the final project, the purpose of the final project, the symbol of the Muhammadiyah University of Surakarta, the name and number of the student, the destination institution, and the year of the final project completion with the following explanation:

- 1). The title of the final project is made as concise as what has been described in the proposed final project.
- 2). The purpose of the final project is to fulfill some of the requirements for obtaining a Bachelor's Degree in Civil Engineering.
- 3). The symbol of the Muhammadiyah University of Surakarta, is round with a diameter of about 5.5 cm.
- 4). The name of the student submitting the final project is written in full (no abbreviation may be used) and without any degree. The student number (NIM) is listed below the name.
- 5). The target agency, namely 'Civil Engineering Study Program, Faculty of Engineering, Muhammadiyah University of Surakarta'.
- 6). The year of completion of the final project, which is the year of final project examination and is placed under 'MUHAMMADIYAH UNIVERSITY SURAKARTA'.

1b). Title page. The title page contains the same text as the front cover page, but typed on white paper (see Appendix IV.1).

1c). Endorsement page. This page contains the signature of the Board of Examiners and the date of the final project examination which was approved by the Dean of the Faculty. The Board of Examiners consists of Advisor, Examiner I, and Examiner II (see Attachment IV.2).

1d). Approval page. This page contains the supervisor's signature, which contains the supervisor's approval for the title of the final project made by the student that meets the requirements for obtaining an undergraduate degree in the UMS Civil Engineering Study Program (see Appendix IV.3).

1e). Statement of authenticity of the final project. This page is signed by the student, containing a statement that the contents of the final project are not plagiarized and are not the work of others (see Appendix IV.4).

1f). Foreword. The foreword contains a brief description of the purpose of the final project, explanations, and thanks. In the foreword there is nothing of a scientific nature.

1g). Table of contents. The table of contents is intended to provide a comprehensive description of the contents of the final project and as a guide for readers who want to immediately see a chapter or sub-chapter title. The table of contents contains the order of the chapter, sub-chapter and sub-chapter titles, along with the page number

1h). List of picture. If in the final project there are many pictures, it is necessary to have a list of pictures that contains the sequence of image titles along with the page numbers. But if there are only a few pictures, this list doesn't need to be made.

1i). List of Tables. This table list contains the order of the table titles and their page numbers. Whether or not a table list is required is the same as a table list.

1j). Appendix List. Similar to the list of figures and the list of tables, the list of attachments is created if the final project is completed with many attachments and the contents contain the order of the attachments title and page number (see the example of LIST OF DESCRIPTIONS for this book, or in Appendix IV.5).

1k). List of notations and abbreviations. List of notations and abbreviations in the form of a list of symbols and abbreviations used in the final project along with their meanings and units, written in the alphabetical order of the notation, then the sequence of symbols and abbreviations.

1l). Essence. The essence is written in Indonesian and is a brief but complete description of

the objectives of the final project, methods and results of the final project. Objectives, methods and results contained in this essence extracted from goal, stages of implementation, results and conclusions as outlined in the main part final. For this reason, a digest generally consists of 3 articles and should not be more than 1 page in length.

2. The main part of the main

part of the final project contains chapters: introduction, review pus taka, theoretical basis, method of implementation, results of the discussion, conclusions, and suggestions.

The main part of the final report contains chapters: introduction, literature review, theoretical basis, method of implementation, results and discussion, as well as conclusions, and suggestions, with a systematic as described in Chapter IV.A.

3. The final

The final section contains a bibliography and attachments obtained during the implementation of the final project. Bibliography and appendices are written according to the rules set out in Chapter IH.

REFERENCES

- Coordinator of Final Projects, 2015. *Final Project Guide 2015*, Department of Informat Engineering, Faculty of Engineering, Muhammadiyah University, Jakarta, Jakarta.
- Coordinator of Undergraduate Tasks, 2006. *Guidelines for Undergraduate Task Writing*, Mechanical Engineering Study Program, Faculty of Industrial Engineering, Bandung Institute of Technology, Bandung.
- Civil Engineering Lecturer Team, 2010. *Guidelines for Preparation of Job Training Reports, Final Project Proposals, and Final Project Reports*, Department of Civil Engineering, Faculty of Engineering, Muhammadiyah University of Surakarta, Surakarta.
- Drafting Team, 2011. *Handbook for Final Implementation Project*, Mechanical Engineering Study Program, Faculty of Engineering, Siliwangi University, Tasikmalaya.
- Drafting Team, 2013. *Guidelines for Writing Thesis / Thesis and Practical Work Reports*, Department of Electrical Engineering, Faculty of Engineering, Muhammadiyah University of Yogyakarta, Yogyakarta.
- Compilation Team, 2015. *Project Final Guide 2015*, Department of Informatics, Faculty of Engineering, Muhammadiyah University of Surakarta, Surakarta.
- University of Indonesia, 2008. *Technical Guidelines for Student Final Project Writing*, *University of Indonesia*, University of Indonesia, Depok.
- University of Lampung, 2012. *Practical Work Guidelines for the Department of Mechanical Engineering*, *University of Lampung*, University of Lampung, Lampung.

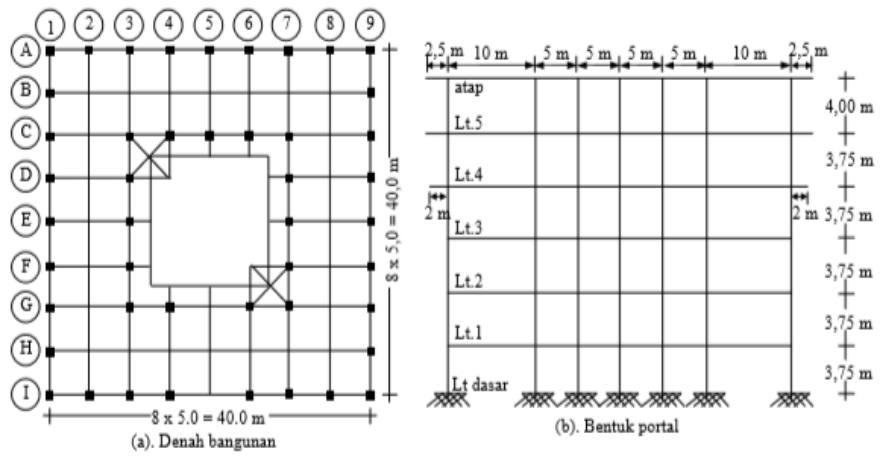


Figure I.1. Building plan and portal form

Table I.1. The level of waste of portal planning results (M_d / M_u)

No.	Jenis struktur	Portal SRPMM			Portal SRPMK			Perbandingan $n=(1)/(2)$
		M_u (kNm)	M_d (kNm)	M_d/M_u (1)	M_u (kNm)	M_d (kNm)	M_d/M_u (2)	
A. Balok								
1	Balok Lt. Atap	2826,88	3633,18	1,29	3005,04	3622,66	1,21	1,07
2	Balok Lt.5	4220,75	4901,12	1,16	4406,32	5137,06	1,17	0,99
3	Balok Lt.4	5322,53	6338,02	1,19	4693,21	5590,64	1,19	1,00
4	Balok Lt.3	6004,70	7600,46	1,27	5477,97	5931,32	1,08	1,18
5	Balok Lt.2	6286,36	7272,98	1,16	5837,67	6469,52	1,11	1,05
6	Balok Lt.1	6068,04	7242,72	1,19	5582,18	6229,48	1,12	1,06
	Jumlah sub A.	30729,26	36988,48	1,20	29002,39	32980,68	1,14	1,05
B. Kolom								
7	Kolom Lt.5	1307,11	1555,01	1,19	1087,74	1337,86	1,23	0,97
8	Kolom Lt.4	1193,79	1472,84	1,23	942,42	1103,01	1,17	1,05
9	Kolom Lt.3	1361,69	1576,36	1,16	897,36	1131,18	1,26	0,92
10	Kolom Lt.2	1366,07	1731,11	1,27	1051,46	1260,18	1,20	1,06
11	Kolom Lt.1	1957,15	2189,10	1,12	1062,27	1202,40	1,13	0,99
12	Kolom Lt.dasar	1266,38	1665,96	1,32	1214,83	1547,50	1,27	1,04
	Jumlah sub B	8452,19	10190,38	1,21	6256,08	7582,13	1,21	1,00
	Jumlah sub (A+B)	39181,45	47178,86	1,20	35258,47	40562,81	1,15	1,04

PLANNING OF 4 FLOOR HOTEL BUILDING IN THE NEW SOLO REGION OF SUKOHARJO WITH ORDINARY MOMENT FRAMEWORK SYSTEM

The proposal of final project

to fulfill some of the requirements to
achieve the Bachelor's degree in Civil Engineering



submitted by:

Yusuf Adhitya Nugroho
NIM: D100 120 089

to:

**CIVIL ENGINEERING STUDY PROGRAM FACULTY OF
ENGINEERING MUHAMMADIYAH UNIVERSITY
SURAKARTA**

January, 2016

APPROVAL SHEET

**4 FLOOR HOTEL BUILDING PLANNING IN THE SOLO
BARU SUKOHARJO REGION WITH ORDINARY MOMENT
BIDDER FRAME-WORK**

The Final Project Proposal

to fulfill some of the requirements to
achieve the Bachelor's degree in Civil Engineering

submitted by:

Yusuf Adhitya Nugroho
NIM: D100 120 089

approved by:

Advisor

Date:

Ir. Ali Asroni, MT
NIK: 484

**PLANNING OF 4 FLOOR HOTEL BUILDING IN THE NEW SOLO REGION
OF SUKOHARJO WITH THE ORDINARY MOMENT FRAMEWORK
SYSTEM**

The Final Project

to fulfill some of the requirements to
achieve the Bachelor degree in Civil Engineering



submitted by:

Yusuf Adhitya Nugroho

NIM: D100 120 089

to:

**CIVIL ENGINEERING PROGRAM FACULTY OF ENGINEERING
MUHAMMADIYAH UNIVERSITY, SURAKARTA**

2017

APPROVAL SHEET

PROPERTIES OF SCC CONCRETE WITH MATERIALS *SUPERPLASTICIZER* *ADDITIONAL* USING TECHNOLOGY *HIGH VOLUME FLY ASH CONCRETE*

Final assignment

submitted and defended in the awareness exam before the Board of Examiners on December 8, 2026

submitted by:

FATIH HAQQU
NIM: D100 110 097

Composition of the Board of Examiners:

Advisor

Mochamad Solikin, ST, MT, Ph.D.
NIDN:

Examiner I

Examiner II

Ir. Ali Asroni, MT
NIDN:

Ir. Abdul Rochman, MT
NIDN:

This final project is accepted as one of the requirements
to achieve a Bachelor's degree in Civil Engineering

Surakarta, 8 December 2016

Dean of the Faculty of Engineering

Head of Civil Engineering Study Program

Ir. Sri Sunarjono, MT, Ph.D.
NIDN :

Mochamad Solikin, ST, MT, Ph.D.
NIDN :

APPROVAL PAGE

Final Project titled '**MECHANICAL PROPERTIES ANALYSIS OF SCC CONCRETE WITH MATERIALS *SUPERPLASTICIZER ADDITIONAL WITH THE UTILIZATION OF TECHNOLOGY HIGH VOLUME FLY ASH CONCRETE***' has been approved by the Final Advisor and accepted to fulfill part of the requirements for obtaining a Bachelor's degree S1 in Civil Engineering Study Program, Muhammadiyah University of Surakarta.

Prepared by:

Name: Fatih Haqqu Zein

NIM: D100 110 097

Approved on:

Day: Thursday

Date: 8 December 2016

Advisor

Mochamad Solikin, ST, MT, Ph.D.

NIDN:

AUTHENTICITY STATEMENT OF FINAL PROJECT

I, the undersigned below:

Name :.....
NIM : D100
Faculty / Prodi : Engineering / Civil Engineering
Title of Final Project :
.....
.....
.....

State that the final project that I make and submit is the result of my work together Ladies and gentlemen (supervisor) except quotations and summaries, all of which I have explained where the source is. Following are the data listed are the original data collected during the implementation of the final project. If there is other people's data, I have clearly stated the source.

I made this statement truthfully and if in the future there is untruth in this statement, then I am willing to accept sanctions in accordance with the applicable regulations at the Muhammadiyah University of Surabaya.

Thus, I made this statement in a conscious state without any force from any party.

Surakarta ,.....

Who made the statement,

Name of Student
NIM: D100

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