



PROGRAMME IN BUILDING SURVEYING  
DEPARTMENT OF BUILT ENVIRONMENT STUDIES & TECHNOLOGY  
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING  
UNIVERSITI TEKNOLOGI MARA  
PERAK BRANCH  
SERI ISKANDAR CAMPUS

**BUILDING CONDITION ASSESSMENT (BCA)  
OF JABATAN KERJA RAYA (JKR) JAJAHAN KOTA  
BHARU, KELANTAN.**

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PRACTICAL TRAINING REPORT

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PROGRAMME IN BUILDING SURVEYING  
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BHARU**

FEBRUARY 2022

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

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## TABLE OF CONTENT

<b>CONTENTS</b>	<b>PAGES</b>
<b>CONFIRMATION BY PANEL OF EXAMINER.....</b>	<b>i</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>ii</b>
<b>TABLE OF CONTENT .....</b>	<b>iii</b>
<b>LIST OF TABLES .....</b>	<b>iii</b>
<b>LIST OF FIGURES.....</b>	<b>viii</b>
<b>LIST OF CHARTS.....</b>	<b>x</b>
<b>LIST OF SYMBOLS / ABBREVIATION .....</b>	<b>xi</b>
<b>CHAPTER 1 .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>1</b>
1.1 INTRODUCTION TO INDUSTRIAL TRAINING.....	1
1.2 OBJECTIVES OF INDUSTRIAL TRAINING.....	2
1.3 OBJECTIVES OF THE REPORT.....	2
1.4 CHAPTER OUTLINE .....	3
<b>CHAPTER 2 .....</b>	<b>4</b>
<b>INTRODUCTION TO COMPANY BACKGROUND .....</b>	<b>4</b>
2.1 COMPANY BACKGROUND .....	4
2.2 LOCATION OF KELANTAN PUBLIC WORKS DEPARTMENT. ....	5
2.2.1 Location Plan .....	5
2.2.2 Key Plan .....	5
2.3 VISION AND MISSION OF MALAYSIA PUBLIC WORKS DEPARTMENT	6
2.4 OBJECTIVES OF MALAYSIAN PUBLIC WORKS DEPARTMENT .....	6
2.5 CLIENT CHARTER.....	7
2.6 ORGANIZATION CHART .....	8
2.6.1 Organization Chart of Ministry of Works.....	8
2.6.2 Organization Chart of Kelantan Public Works Department (PWD)....	9
2.6.3 Organization Chart of Building Department of Kelantan Public Works Department .....	10
2.7 CERTIFICATE OF KELANTAN PUBLIC WORKS DEPARTMENT (BUILDING DEPARTMENT) .....	11
2.8 LIST OF COMPLETED AND CURRENT PROJECT OF KELANTAN PUBLIC WORKS DEPARTMENT (PWD) OF BUILDING DEPARTMENT.....	14
2.9 TIME AND OPERATION.....	19
2.10 SCOPE AND RESPOSIBILITIES.....	19

<b>CHAPTER 3 .....</b>	<b>20</b>
<b>LITERATURE REVIEW .....</b>	<b>20</b>
3.1 INTRODUCTION .....	20
3.2 INTRODUCTION OF BUILDING CONDITION ASSESSMENT (BCA) ....	21
3.2.1 Purpose of BCA .....	23
3.2.2 Scope of Works.....	24
3.3 THE IMPLEMENTATION OF BUILDING CONDITION ASSESSMENT (BCA)OF PUBLIC WORK DEPARTMENT (PWD) MALAYSIA.....	25
3.3.1 Building Condition Assessment Rating System (BCARS).....	25
3.3.2 Strengths. Weaknesses, Opportunities and Threats (SWOT) of BCARS.....	26
3.4 GUIDELINE OF BUILDING CONDITION ASSESSMENT (BCA) BY PUBLIC WORKS DEPARTMENT (PWD) MALAYSIA .....	28
3.4.1 Building Condition Assessment (BCA) Implementation Stages According to the Public Works Department (PWD) Malaysia .....	29
3.4.2 The Methodology of the Building Condition Assessment (BCA) Inspection.....	30
3.4.3 The Rating Scale of Building Condition Assessment (BCA).....	31
3.5 INTRODUCTION TO BUILDING DEFECTS.....	34
3.5.1 The Types of Defects in Buildings.....	35
3.5.1.1 The Type of Defects in Buildings (Civil).....	35
3.5.1.2 The Types of Defects in Buildings (Mechanical and Electrical).....	36
3.6 SUMMARY .....	37
 <b>CHAPTER 4 .....</b>	 <b>38</b>
<b>CASE STUDY .....</b>	<b>38</b>
4.1 PROJECT INFORMATION .....	38
4.2 DETAILS OF PROPERTY .....	39
4.3 TOOLS AND EQUIPMENT .....	42
4.4 THE PROCESS OF BUILDING CONDITION ASSESSMENT (BCA) INSPECTION WORK FOR THE PROJECT (WORKFLOW).....	44
4.4.1 Start.....	45
4.4.2 Getting Approval .....	45
4.4.3 Build A Team of Inspectors .....	45
4.4.4 Study of Building Condition Assessment (BCA) Guideline by Public Work Department (PWD).....	46
4.4.5 Divide Task.....	46
4.4.6 Inspection Work .....	46

4.4.7 Findings .....	47
4.4.8 Analysis Data.....	47
4.4.9 Present to Public Works Department (PWD) Kuala Lumpur .....	47
4.4.10 Prepare A Report.....	48
4.5 BUILDING CONDITION ASSESSMENT INSPECTION ACTIVITY	
CONDUCTED BY THE BUILDING INSPECTORS.....	49
4.6 BUILDING CONDITION ASSESSMENT RATING SYSTEM (BCARS) FOR	
JKR JAJAHAN KOTA BHARU, KEANTAN.....	51
4.6.1 Schedule of Building Condition Assessment (Civil).....	51
4.6.2 Schedule of Building Condition Assessment (Mechanical).....	67
4.6.3 Schedule of Building Condition Assessment (Electrical).....	71
4.7.OVERALL BUILDING RATING AND MAINTENANCE ACTION.....	77
4.7.1 The Calculation of Scores for BCA.....	77
4.8 THE BCARS ANALYSIS OF JKR JAJAHAN KOTA BHARU,	
KELANTAN BUILDING.....	78
4.9 BUILDING DEFECT FINDINGS ANALYSIS.....	79
4.9.1. Defect Analysis by Building Element/Component of Civil .....	80
4.9.2 Defect Analysis by The Types of Defects for Civil .....	81
4.9.3 Defect by Categories of Defect (Civil) .....	82
4.9.4 Defect Analysis by Type of Defect (Electrical).....	89
4.9.5 Defect by Categories of Defect (Electrical).....	90
4.9.6 Defect Analysis by Type of Defect (Mechanical) .....	92
4.9.7 Defect by Categories of Defect (Mechanical) .....	93
4.10 The Common Building Defects in JKR Jajahan Kota Bharu, Kelantan...96	
4.11 The Common Problems Encountered During Building Condition	
Assessment (BCA) Inspection Work for JKR Jajahan Kota Bharu,	
Kelantan.....	99
4.12 The Ways to Overcome the Problems in Conducting the Building	
Condition Assessment (BCA) Inspection Work for JKR Jajahan Kota	
Bharu, Kelantan.....	100

<b>CHAPTER 5</b> .....	<b>102</b>
<b>CONCLUSION AND RECOMMENDATION</b> .....	<b>102</b>
5.1 INTRODUCTION .....	102
5.2 RECOMMENDATION.....	102
5.3 CONCLUSION.....	103
<b>REFERENCES</b> .....	<b>104</b>
<b>APPENDICES</b> .....	<b>106</b>

## LIST OF TABLES

<b>TABLE</b>	<b>TITLE</b>	<b>PAGES</b>
Table 1:	List Project of Development Expenditure Statement P.63 for the Year 2021 (MOE Education Project) in JKR Kelantan (Completed).....	14
Table 2:	List Project Development Expenditure Statement P.63 For the Year 2021 (MOE Education Project .....	16
Table 3:	List Project of Development Expenditure Statement P.63 for the Year 2021 (MOE Education Project) in JKR Kelantan (On Going) .....	18
Table 4:	List Project Federal Project of Klinik Kesihatan (Jenis 3) – Complete.....	18
Table 5:	Time and Operation of PWD Kelantan .....	19
Table 6:	SWOT of BCARS .....	26
Table 7:	Building Physical Condition Level.....	31
Table 8:	Maintenance Action.....	32
Table 9:	Matrix Analysis Score Defect Parameter for Building Condition And Maintenance Action.....	32
Table 10:	Building Rating and Maintenance Action .....	33
Table 11:	The example types of Defects in Buildings (Civil).....	35
Table 12:	The Example types of Defects in Buildings (Mechanical and Electrical).....	36
Table 13:	Detail of Project Information of Case Study.....	38
Table 14:	Details of case study .....	39
Table 15:	Tools and equipment.....	42
Table 16:	Inspection Activities .....	49
Table 17:	Building Rating & Maintenance Action .....	77
Table 18:	Overall Building Rating.....	77



## LIST OF FIGURES

<b>FIGURES</b>	<b>TITLE</b>	<b>PAGES</b>
Figure 1:	Logo of Malaysian Public Works Department (PWD) .....	4
Figure 2 :	Location Plan of Kelantan Public Works Department .....	5
Figure 3 :	Site Plan of Kelantan Public Works Department .....	5
Figure 4 :	Client Charter of Malaysia Public Works Department.....	7
Figure 5 :	Organization Chart of Ministry of Works.....	8
Figure 6 :	Organization Chart of Public Works Department (PWD) 2021 ....	9
Figure 7:	Organization Chart Building Department of JKR Negeri Kelantan.....	10
Figure 8 :	Award Certificate of Appreciation from Public Work Department of Malaysia.....	11
Figure 9 :	Certificate from The International Certification .....	112
Figure 10 :	Certificate from SIRIM QAS International Sdn. Bhd. ....	113
Figure 11 :	BCA's Guideline for Existing Building Provided by JKR Malaysia .....	28
Figure 12 :	Condition Assessment Process .....	30
Figure 13 :	Jabatan Kerja Raya (JKR) Kota Bharu.....	39
Figure 14 :	Location Plan of JKR Kota Bharu.....	40
Figure 15 :	Kindergarten .....	40
Figure 16 :	Bank Simpanan Nasional.....	40
Figure 17 :	Mosque of Telipot .....	40
Figure 18 :	Bus Stop.....	41
Figure 19 :	A set of working table and chair .....	41
Figure 20 :	A set of working table and chair .....	41
Figure 21 :	Workflow of Inspection Building .....	44
Figure 22 :	The building investigators' organisational chart.....	45
Figure 23:	BCARS of Civil Component (1-69).....	52
Figure 24 :	BCARS of Civil Component (70-142) .....	53
Figure 25 :	BCARS of Civil Component (143-215) .....	54
Figure 26 :	BCARS of Civil Component (216-287) .....	55
Figure 27 :	BCARS of Civil Component (288-361) .....	56
Figure 28 :	BCARS of Civil Component (362-435) .....	57
Figure 29 :	BCARS of Civil Component (436-509) .....	58
Figure 30 :	BCARS of Civil Component (510-583) .....	59

Figure 31 : BCARS of Civil Component (584-657) .....	60
Figure 32 : BCARS of Civil Component (658-731) .....	61
Figure 33 : BCARS of Civil Component (732-804) .....	62
Figure 34 : BCARS of Civil Component (805-878) .....	63
Figure 35: BCARS of Civil Component (879-953) .....	64
Figure 36 : BCARS of Civil Component (954-1036) .....	65
Figure 37 : BCARS of Civil Component (1036-1065) .....	66
Figure 38 : BCARS of Mechanical Component (1-69).....	68
Figure 39 : BCARS of Mechanical Component (70-143).....	69
Figure 40 : BCARS of Mechanical Component (144-173).....	70
Figure 41 : BCARS of Electrical Component (1-74) .....	72
Figure 42 : BCARS of Electrical Component (75-153) .....	73
Figure 43 : BCARS of Electrical Component (154-232) .....	74
Figure 44 : BCARS of Electrical Component (233-310) .....	75
Figure 45 : BCARS of Electrical Component (311-359) .....	76
Figure 46: Defect Percentage .....	79

## LIST OF CHARTS

CHARTS	TITLE	PAGES
Chart 1:	Matrix of Building Rating.....	75
Chart 2:	Defect Percentage.....	76
Chart 3:	Defect Analysis by Element (Civil).....	77
Chart 4:	Types of Defects (Civil).....	78
Chart 5:	Defect Analysis for Crack (Civil).....	79
Chart 6:	Defect Analysis for Missing (Civil).....	79
Chart 7:	Defect Analysis for Vegetation (Civil).....	80
Chart 8:	Defect Analysis for Holes (Civil).....	80
Chart 9:	Defect Analysis for Peeling of Paint (Civil).....	81
Chart 10:	Defect Analysis for Chipping (Civil).....	81
Chart 11:	Defect Analysis for Rusty (Civil).....	82
Chart 12:	Defect Analysis for Dirty Patches (Civil).....	82
Chart 13:	Defect Analysis for Mould Growth (Civil).....	83
Chart 14:	Others Defect (Civil).....	83
Chart 15:	Types of Defects (Electrical).....	86
Chart 16:	Defects Analysis for Not Function (Electrical).....	87
Chart 17:	Others Defects Analysis (Electrical).....	87
Chart 18:	Types of Defects (Mechanical).....	89
Chart 19:	Defect Analysis by Not Function (Mechanical).....	90
Chart 20:	Defect Analysis by Rusty (Mechanical).....	90
Chart 21:	Others Defect Analysis (Mechanical).....	91

## **LIST OF SYMBOLS / ABBREVIATION**

<b>Symbols / Abbreviation</b>	<b>Meaning of Symbol/Abbreviation</b>
BCA	Building Condition Assessment
PWD	Public Works Department
BARS	Building Assessment Rating System
SWOT	Strengths, Weaknesses, Opportunities, And Threats

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 INTRODUCTION TO INDUSTRIAL TRAINING**

Industrial Training is one of the compulsory requirements for students pursuing a Degree in Building Surveyor at University Technology MARA. This industrial training program is part of a syllabus for students to complete a degree in building surveyor that takes 15 weeks with 7 credit hours beginning on 11 October 2021 until 30 January 2022.

In order to undergo this industry training, students are given the choice to select a government or private agency specialising in building surveyor scope for them to undergo industrial training there. This Industrial Training Program was introduced to strengthen the competencies needed to graduates develop the skills and improve the job levels of graduates. It also gives students the opportunity to learn in the real world of work to achieve high marketability.

In the company, each student is supervised by experienced employees who are responsible for training and supervising company students' attendance, discipline, and performance. Hence, this will be recorded in the university's student evaluation report.

This Industry Training also helps students develop their individual personalities, improves their communication skills, enhances student discipline as students practice good work ethics and regulations and exposure to the work environment. Furthermore, industrial training can improve students' self-esteem and encourage them to pursue professions in their chosen fields after completing their industry training and studies at University Technology MARA.

## **1.2 OBJECTIVES OF INDUSTRIAL TRAINING**

The objectives of the industrial training are:

- To provide pre-professional work experience with specific assignments and responsibilities.
- To improve the communication skills of students and expose them to working environment.
- To encourage a personal career interest, serving as a bridge between university and the world of work
- To boost students to apply the skills and knowledge gained from the university to benefit the organizations

## **1.3 OBJECTIVES OF THE REPORT**

Below are the objectives of the report:

- To identify about the definition of Building Condition Assessment (BCA)
- To identify and analyse the types of building defects that occurred on the selected building.
- To analyse the building rating of the Jabatan Kerja Raya (JKR) Kota Bharu

## **1.4 CHAPTER OUTLINE**

The general purpose of this result was studying the building condition assessment. Below is the summary for purposed chapter.

### **Chapter 1: Introduction to Industrial Training**

Chapter 1 are consisting of the introduction of industrial training and both objectives of industrial training and the report and also including chapter outline.

### **Chapter 2: Introduction to Company background**

Chapter 2 are providing a background of company. The chapter starts with an Introduction to building background, logo of company, location of plan of company, their vision and mission, objectives, function of company, client charter, their organization chart, time and operation, followed by their scope and responsibilities.

### **Chapter 3: Literature Review**

Chapter 3 initiate with an introduction to Building Inspection, introduction of Building Condition Assessment (BCA) and introduction to Building Defects. It will be including the purpose of BCA and their scope of works. It will be ending with summary of chapter 3.

### **Chapter 4: Case Study**

Chapter 4 begins with an introduction of the case study, their method of inspection including tools & equipment. It will be continued into building condition assessment including their defect analysis. Chapter 4 will be ending with summary of chapter 4.

### **Chapter 5: Conclusion**

Chapter 5 concludes and finalizes this report based on the analysed data that were obtained from Chapter 1 and Chapter 4. This chapter also concludes on the Building Condition Assessment (BCA) at the case study. It puts forward recommendation from overall report and future study. Chapter 5 ends with summary.

## CHAPTER 2

### INTRODUCTION TO COMPANY BACKGROUND

#### 2.1 COMPANY BACKGROUND



Figure 1: Logo of Malaysian Public Works Department (PWD)

The Malaysian Public Works Department (PWD) was established in 1872 and was headed by Major J.F.A McNair. It is a federal government department which is part of the ministry of Works Malaysia (MOW). JKR has the responsibilities of implementing infrastructure development and maintenance projects to various ministries, departments, statutory bodies and state governments such as roads, buildings, airports, ports and jetties.

Meanwhile, JKR Kelantan was established in 1938 which serves to provide state infrastructure and infrastructure facilities. The Department of Irrigation and Drainage - JPS (JPT -Drainage and Irrigation Department known as the Department of Irrigation and Drainage -JPS) was established in 1956 to take over duties of this Department which is related to drain construction and reception work.



## 2.2 LOCATION OF KELANTAN PUBLIC WORKS DEPARTMENT.

Below are the location plan and key plan of Kelantan Public works Department

### 2.2.1 Location Plan

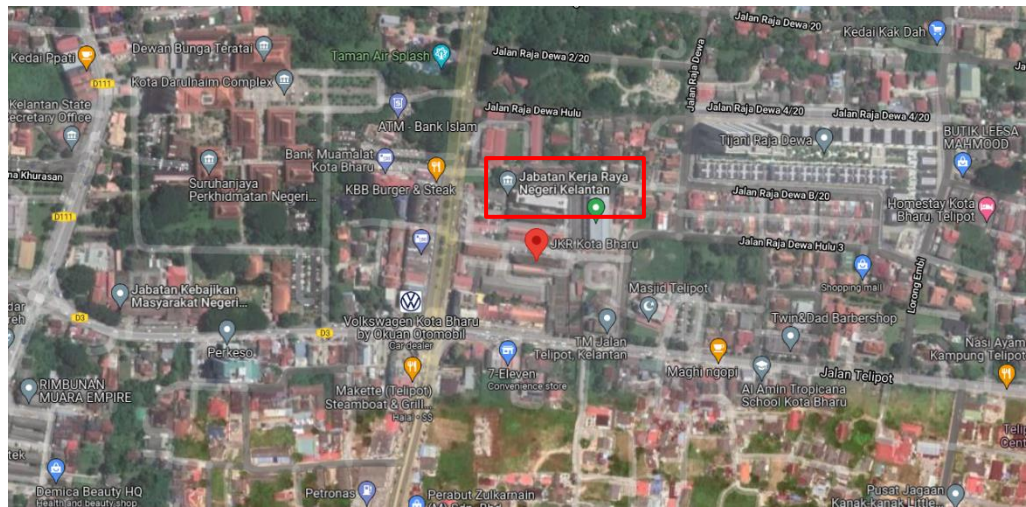


Figure 2 : Location Plan of Kelantan Public Works Department

### 2.2.2 Key Plan

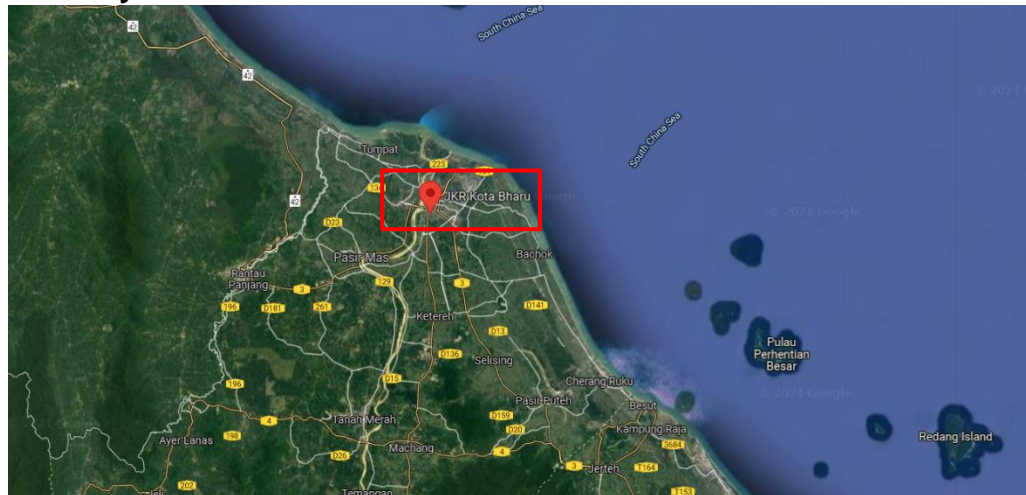


Figure 3 : Site Plan of Kelantan Public Works Department

## **2.3 VISION AND MISSION OF MALAYSIA PUBLIC WORKS DEPARTMENT**

### **Vision**

To become a world-class service provider and centre of excellence in asset management, project management and engineering services for the development of nation's infrastructure through creative and innovative human capital and state-of-the-art technology.

### **Mission**

Our mission is to contribute to the nation-building through:

1. Helping our clients deliver policy outcomes and services through working with them as strategic partners.
2. Standardising our processes and systems to deliver consistent outcomes.
3. Providing effective and innovative asset and project management.
4. Strengthening our existing engineering competencies.
5. Developing our human capital and new competencies.
6. Upholding integrity in delivering our services.
7. Building harmonies relationships with the community.
8. Taking good care of the environment in delivering our services

## **2.4 OBJECTIVES OF MALAYSIAN PUBLIC WORKS DEPARTMENT**

As the Lead Consultant to the Government of Malaysia, the objectives of the Public Works Department are to:

**“Deliver products and perform maintenance services that are timely, quality and cost specified to achieve optimal asset benefits”.**

## 2.5 CLIENT CHARTER

Below is the client charter of Malaysian Public Works Department

# PIAGAM PELANGGAN

## JABATAN KERJA RAYA MALAYSIA

DEPARTMENT OF MALAYSIAN PUBLIC WORKS, JALAN SULTAN SALAHUDDIN, KUALA LUMPUR

100088, 2015 2004 • T: 23 215 3709 • W: www.jkr.gov.my • E: kuaran@jkr.gov.my

SMS: JKR, 'tan.snda' ke 32725    Email: aduan@jkr.gov.my    Web: https://www.jkr.gov.my

### 1.0 PENGURUSAN PROJEK

#### FASA PRA-PEMBINAAN

Terdapat kepada syarat-syarat, pada masa ini, perancangan yang terperinci, akan projek yang di tetapkan oleh Perancang Ekonomi (PEU), JMA, melalui 'Value Assessment (VA)' dan Kriteria Kerja Malaysia telah ditetapkan, tempoh perancangan hingga ialah adalah seperti berikut:

Projek	Jenis Reka-bina dan Tempoh
a) Bangunan	Plan, PAV, kerja struktur, 4 Bulan    Lait-lait, 10 Bulan    Hala & lina, 4 Bulan
b) Jalan dan infrastruktur	Ruang dari 750 sq. jln, 10 Bulan    Model, 14 Bulan    Pita & Dna, 8 Bulan
c) Projek Kompleks (Lait, Cerun, Bencaman, Fagang, Uda, Manin, Pergangutan, Dair, d.l.)	Tempoh yang ditetapkan beracara pelengkap

Terdapat kepada syarat-syarat, pada masa ini, perancangan yang terperinci, akan projek yang di tetapkan oleh Perancang Ekonomi (PEU), JMA, melalui 'Value Assessment (VA)' dan Kriteria Kerja Malaysia telah ditetapkan, tempoh perancangan hingga ialah adalah seperti berikut:

Projek	Jenis Reka-bina dan Tempoh
c) Hospital	13 Kait, 10 Bulan    10 dan 200-cat, 10 Bulan    300 Kait (Pita & Dna), 4 Bulan

Nota: Tempoh maksimum daripada tarikh lalai sehingga tarikh Surety Bulet Terkini Tender adalah 3 Bulan

#### FASA PEMBINAAN

Terdapat kepada syarat-syarat, pada masa ini, perancangan yang terperinci, akan projek yang di tetapkan oleh Perancang Ekonomi (PEU), JMA, melalui 'Value Assessment (VA)' dan Kriteria Kerja Malaysia telah ditetapkan, tempoh perancangan hingga ialah adalah seperti berikut:

Projek	Kos dan Tempoh
a) Bangunan	RM500 ribu ke bawah, 12 Bulan    RM500 ribu - RM20 juta, 24 Bulan    Malah, RM20 juta, 30 Bulan
b) Jalan dan infrastruktur	RM500 ribu ke bawah, 9 Bulan    RM500 ribu - RM20 juta, 22 Bulan    Malah, RM20 juta, 28 Bulan
c) Projek Kompleks (Lait, Cerun, Bencaman, Fagang, Uda, Manin, Pergangutan, Dair, d.l.)	Disiapkan dalam tempoh dari 120 hari yang ditetapkan beracara pelengkap
d) Hospital	70 Kait, 38 Bulan    120 dan 200 kait, 42 Bulan    300 Kait (Pita & Dna), 48 Bulan

### 2.0 SENGARA ASET

#### JALAN PERSEKUTUAN DAN NEGERI

TEKNIK	TEMPOH
a) Tindakan pembaikan sementara, jarang-tinggi (provisional)	1 Hari
b) Tindakan pembaikan awal akhir di kawasan yang akan ditindaklanjuti secara rasmi	3 Hari
c) Selenggara berlaku keadaan yang mengganggu, baik. Jika ada keselamatan orang, seperti sokong bumbung atau tarikh tarikh, insiden akan diresolusi selepas keadaan baik dan selamat	24 Jam
d) Selenggara pembaikan struktur bangunan rasmi, tindakan rasmi, tindakan rasmi	3 Hari

#### BANGUNAN PERSEKUTUAN DAN NEGERI

a) Tindakan pembaikan sementara, jarang-tinggi (provisional)	1 Hari
b) Tindakan pembaikan awal akhir di kawasan yang akan ditindaklanjuti secara rasmi	1 Bulan

#### MEKANKAL

a) Tindakan pembaikan sementara, jarang-tinggi (provisional)	1 Hari
b) Tindakan pembaikan awal akhir di kawasan yang akan ditindaklanjuti secara rasmi	3 Bulan
c) Selenggara berlaku keadaan yang mengganggu, baik. Jika ada keselamatan orang, seperti sokong bumbung atau tarikh tarikh, insiden akan diresolusi selepas keadaan baik dan selamat	3 Minggu
d) Selenggara pembaikan struktur bangunan rasmi, tindakan rasmi, tindakan rasmi	1 Tahun
e) Selenggara pembaikan struktur bangunan rasmi, tindakan rasmi, tindakan rasmi	1 Tahun

#### ELEKTRIK

a) Tindakan pembaikan sementara, jarang-tinggi (provisional)	1 Hari
b) Tindakan pembaikan awal akhir di kawasan yang akan ditindaklanjuti secara rasmi	7 Hari

### 3.0 KHIDMAT NASIHAT TEKNIKAL

#### KEJURUTERAAN CERUB

1. Laporan kejuruteraan cerub dibuat dalam tempoh 24 jam dari tarikh di terima.
2. Laporan akan dibuat dalam tempoh 3 hari bekerja dari tarikh di terima.

#### KEJURUTERAAN SENGARA

1. Laporan kejuruteraan cerub dibuat dalam tempoh 24 jam dari tarikh di terima.
2. Laporan akan dibuat dalam tempoh 3 hari bekerja dari tarikh di terima.

#### KEJURUTERAAN FORENSIK

1. Laporan kejuruteraan cerub dibuat dalam tempoh 24 jam dari tarikh di terima.
2. Laporan akan dibuat dalam tempoh 3 hari bekerja dari tarikh di terima.

### 4.0 PENGURUSAN ADUAN

Pelaku	Tempoh
a) Aduan Persekitaran Aduan	1 Hari Bekerja
b) Aduan Bekerja Aduan	7 Hari Bekerja
c) Aduan Lain Aduan	30 Hari

### 5.0 PENGURUSAN KEWANGAN

BAYARAN BIL. DIBUAT DALAM TEMPOH 14 HARI DARI TARIKH DOKUMEN LENGKAP DITERIMA

Figure 4 : Client Charter of Malaysia Public Works Department

## 2.6 ORGANIZATION CHART

### 2.6.1 Organization Chart of Ministry of Works

Below is the organization chart of Ministry of Work



Figure 5 : Organization Chart of Ministry of Works

2.6.2 Organization Chart of Kelantan Public Works Department (PWD) 2021

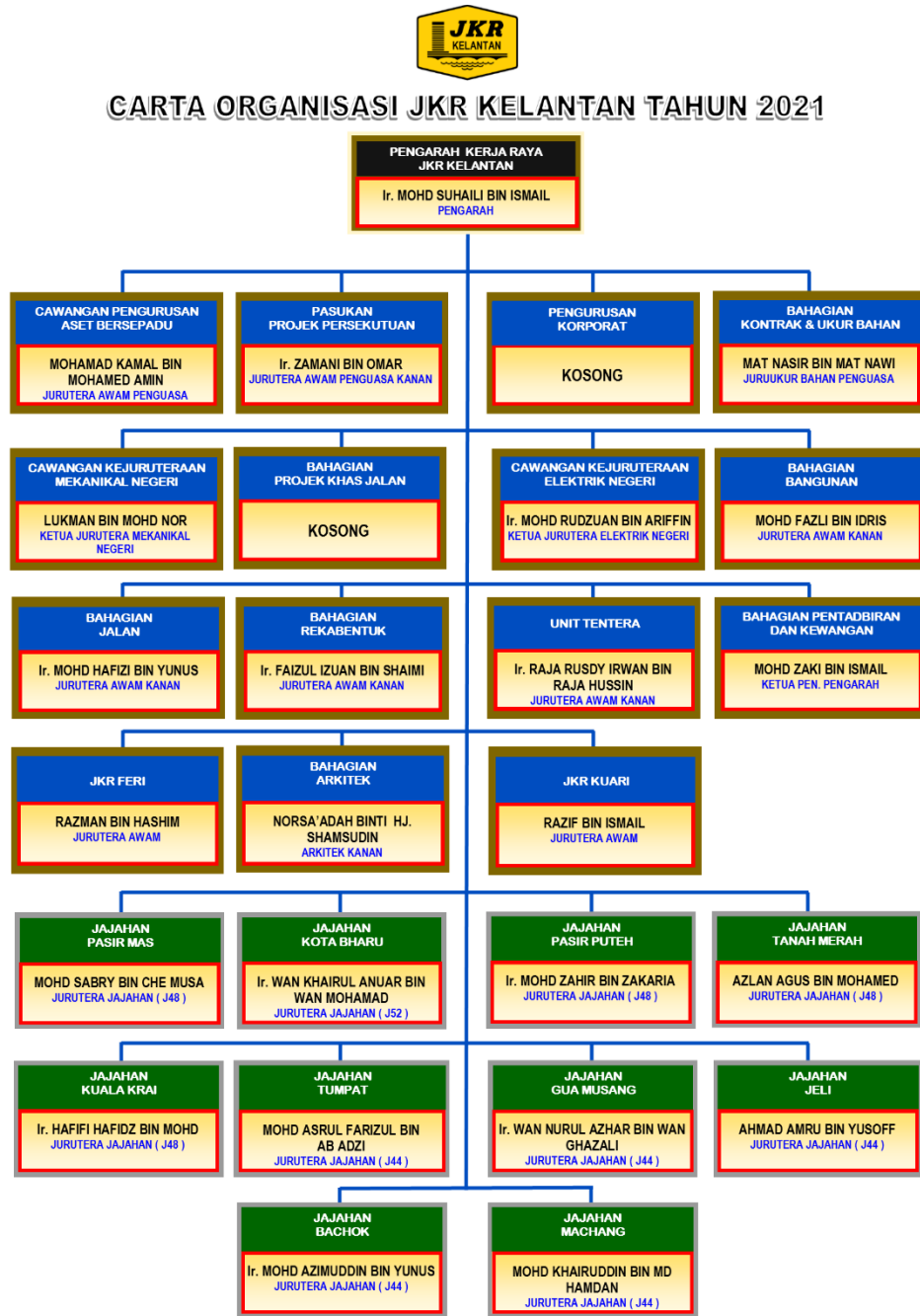


Figure 6 : Organization Chart of Public Works Department (PWD) 2021

### 2.6.3 Organization Chart of Building Department of Kelantan Public Works Department.

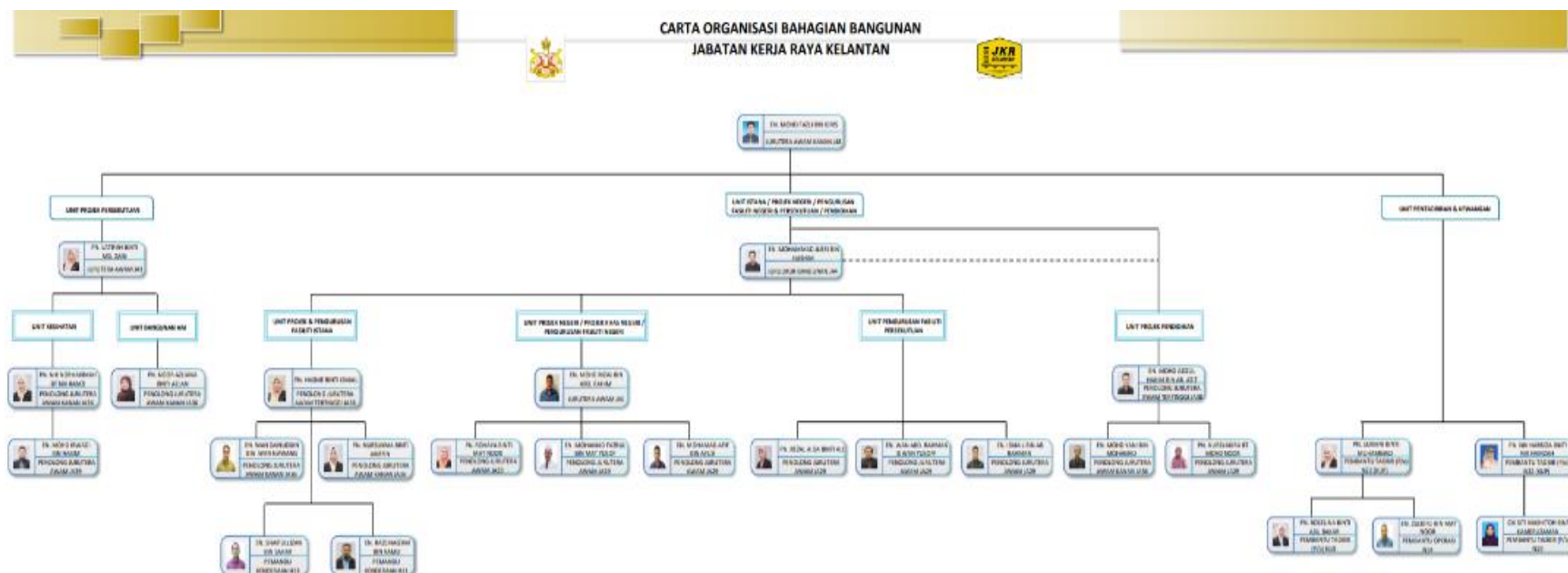


Figure 7 : Organization Chart Building Department of JKR Negeri Kelantan

## 2.7 CERTIFICATE OF KELANTAN PUBLIC WORKS DEPARTMENT



Figure 8 :Award certificate of appreciation from Public Works Department of Malaysia.



## CERTIFICATE

IQNet and SIRIM QAS International hereby certify that

**JABATAN KERJA RAYA (JKR) MALAYSIA**  
**KETUA PENGARAH KERJA RAYA**  
**PEJABAT KPKR, IBU PEJABAT JKR**  
**TINGKAT 5, BLOK F, JALAN SALAHUDDIN**  
**50582 KUALA LUMPUR**  
**WILAYAH PERSEKUTUAN**  
**MALAYSIA**

has implemented and maintains an

**OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM**

which fulfils the requirements of the following standard

**OHSAS 18001 : 2007**

for the following activities

**PROJECT MANAGEMENT SERVICES FOR CONSTRUCTION WORKS**  
**WITH CONTRACT VALUE OF MORE THAN RM 20 MILLION.**

Issued on : 04 May 2018  
 Validity date : 14 May 2021  
 Certification Number : MY-OHS 00604



*Alex Stoichitoiu*  
 Alex Stoichitoiu  
 President of IQNet

*Mohd Azanuddin Salleh*  
 Mohd Azanuddin Salleh  
 Managing Director  
 SIRIM QAS International Sdn Bhd



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Figure 9 : Certificate from The International Certification





Figure 10 : Certificate from SIRIM QAS International Sdn. Bhd.

## 2.8 LIST OF COMPLETED AND CURRENT PROJECT OF KELANTAN PUBLIC WORKS DEPARTMENT.

### i) Development Expenditure Statement P.63 For the Year 2021 (MOE Education Project) in JKR Kelantan (Completed)

Table 1:List project of Development Expenditure Statement P.63 For the Year 2021 (MOE Education Project) in JKR Kelantan (Completed)

No	Title	Price (RM)	Current Contract Price (RM)	Commencement Date/Completion Date
1	Gantian Penuh 1 BD Pra Sekolah Dan Pembekalan Peralatan Serta Lain-Lain Kemudahan Di SK Batu Melintang, Jeli, Kelantan (P63001010034005)	700, 000.00	583, 525.00	Baki Kontrak RM5,000 dibayar pada tahun 2022 (Bayaran Muktamad)  Penyerahan selesai 24/06/2021
2	Gantian Penuh 1 BD Pra Sekolah Dan Pembekalan Peralatan Serta Lain-Lain Kemudahan Di SK Chuchoh Puteri, Kuala Krai, Kelantan (P63001010034006)	700, 000.00	541,841.75	Baki Kontrak RM159,279.15  Jangka serah 30/12/2021
3	Gantian Penuh 1 BD Pra Sekolah Dan Pembekalan Peralatan Serta Lain-Lain Kemudahan di SK Sungai Embak, Kuala Krai, Kelantan (P63001010034007)	700, 000.00	523,280.00	Baki Kontrak RM16,573.00  Jangka serah 30/12/2021

4	Gantian Penuh 1 BD Pra Sekolah Dan Pembekalan Peralatan Serta Lain-Lain Kemudahan Di SK Rantau Panjang, Pasir Mas, Kelantan (P63001010034009)	700,000.00	569,782.5	Baki Kontrak RM56,823.50 (vo/kks RM25,000)  Jangka serah 23/12/2021
5	Pembinaan Gantian Surau Dan Lain-Lain Kemudahan Di SK Lati, Pasir Mas, Kelantan (P63035040012001)	800,000.00	727,143.85	Baki Kontrak RM95,008.40 (vo/kks RM50,000)  Jangka serah 27/12/202
6	Membina Dewan Serbaguna Terbuka Serta Membaikpulih Pelbagai Kerosakan Di Sekolah Menengah Kebangsaan (SMK) Geting, Pengkalan Kubur, Kelantan (P63035040034001)	410,000.00	409,326.6	ayaran Kontrak RM409,326.60 telah selesai  Penyerahan selesai 01/04/2021

**ii) Development Expenditure Statement P.63 For the Year 2021 (MOE Education Project) in JKR Kelantan (On going)**

Table 2:List Project Development Expenditure Statement P.63 For the Year 2021 (MOE Education Project)  
in JKR Kelantan (On going)

<b>No</b>	<b>Title</b>	<b>Price (RM)</b>	<b>Current Contract Price (RM)</b>	<b>Commencement Date/Completion Date</b>
1	Gantian Penuh 1BD Pra Sekolah Dan Pembekalan Peralatan Serta Lain-Lain Kemudahan Di SK Pulau Beluru, Tumpat, Kelantan (P63001010034008)	926,263.38	793,060.00	Tarikh siap semasa 15/05/2022 (EOT No.1)  *PKPD 22 Mei - 4 Jun *PKPD 5 Jun - 18 Jun
2	Gantian Penuh Satu Blok 3BD Pra Sekolah Dan Pembekalan Peralatan Serta Lain-Lain Kemudahan Di SK Sungai Petai, Pasir Puteh, Kelantan (P63001010034010)	2,100,000.00	1,258,744.3	Tarikh siap semasa 12/03/2022 (EOT No. 3)
3	Pembinaan Bangunan Gantian Satu (1) Blok Bangunan 4 Tingkat, 18 Bilik Darjah Dan Lain-Lain Kemudahan Di Sekolah Menengah Kebangsaan Hamzah, Machang, Kelantan (Tawaran Semula) (P63002010032003)	27,000,000.00	18,782,064.54	Tarikh siap semasa 05/04/2022 (EOT No.2)

4	Pembinaan Bangunan Gantian Satu (1) Blok, 10 Bilik Darjah Dan Lain-Lain Kemudahan Di SMK Tan Sri Mohamed Yaakob , Batu Gajah, Tanah Merah, Kelantan (P63002010032056)	13,000,000.00	10,770,000.00	Tarikh siap semasa 08/12/2021 (EOT No.2)
5	Pembinaan Surau Dengan Kapasiti 700 Orang Di Kolej Matrikulasi Kelantan, Ketereh, Kelantan (P63002040033009)	2,500,000.00	2,189,277.47	Tarikh siap semasa 20/04/2022 (EOT No.3)
6	Kolej Vakasional Pengkalan Chepa, Kelantan (Program Conversion SMV Ke Kolej Vokasional 7 Kolej Rintis) (Tawaran Semula) (P63003000030002)	12,994,000.00	11,250,522.00	Tarikh siap semasa 08/04/2022 (EOT No.2)
7	Pembinaan Bangunan Baru Blok Pentadbiran Dan Lain-lain Kemudahan Di Pejabat Pelajaran Daerah Jeli, Kelantan (P63010000030032)	15,000,000.00	11,622,155.33	Tarikh siap semasa 02/03/2023 (EOT No.1)
8	Membina Satu (1) Blok Bangunan Tambahan Empat (4) Bilik Darjah, Membina Pagar Dan Dewan Tertutup Di SK Raja Abdullah, Kota Bharu, Kelantan (P63001020034004)	7,660,000.00	5,798,000.00	Tarikh siap semasa 25/03/2023

**iii) Federal project of Klinik Kesihatan (Jenis 3) - Complete**

Table 3: List Project Development Expenditure Statement P.63 For the Year 2021 (MOE Education Project) in JKR Kelantan (On going)

<b>No</b>	<b>Title</b>	<b>Price (RM)</b>	<b>Current Contract Price (RM)</b>	<b>Commencement Date/Completion Date</b>
1	Klinik Kesihatan (Jenis 3) Penambang, Kota Bharu, Kelantan	21,343,274.27	19,578,484.14	29/12/2019 - original completion date 02/03/2021 - current completion date
2	Klinik Kesihatan (Jenis 3) with Kuaters Rantau Panjang, Pasir Mas, Kelantan.	19,630,140.00	18,540,409.18	15/09/2019 – original completion date 18/02/2021 – current completion date

**iv) Federal project of Klinik Kesihatan (Jenis 7) – On going**

Table 4:List Project Federal project of Klinik Kesihatan (Jenis 3) - Complete

<b>No</b>	<b>Title</b>	<b>Price (RM)</b>	<b>Current Contract Price (RM)</b>	<b>Commencement Date/Completion Date</b>
1	Klinik Kesihatan (Jenis 7 Teratai) Telok Jering, Tumpat, Kelantan.	5,356,356.00	5,353,268.79	12/09/2021- original completion date 19/03/2022 - current completion date
2	Klinik Kesihatan (Jenis 7 Teratai) Sungai Keladi, Pasir Mas , Kelantan.	5,175,751.50	5,205,981.75	22/08/2021 - original completion date 3/01/2022 - current completion date

## 2.9 TIME AND OPERATION

Below are the time and operation of JKR Kelantan:

Table 5: Time and Operation of PWD Kelantan

<b>DAYS</b>	<b>WORKING HOURS</b>
Sunday - Thursday	8 am – 5 pm
Weekdays / Public Holiday	Closed

## 2.10 SCOPE AND RESPONSIBILITIES

Below are the scope and responsibilities of building department of PWD Kelantan:

1. Performs Contract Administration duties on educational projects, general buildings, State and Federal government security.
2. To plan, control and supervise the design work of State and Federal buildings.
3. To plan, control and supervise the construction of State and Federal buildings.
4. Maintain State and Federal buildings.
5. Make monitoring and Project Management of Buildings.
6. Manage contracts, implementation and monitoring of projects.
7. Provide technical advisory services to government departments and agencies

## **CHAPTER 3**

### **LITERATURE REVIEW**

#### **3.1 INTRODUCTION**

Malaysia has begun to prioritize asset and facility maintenance to ensure that buildings utilized by users are in good condition, safe, cost-effective, long-life cycle and able to provide high-quality services to building owners and users besides achieving the first-class building maintenance's country. Douglas (1996) stated that building is a major physical asset within every facility. Buildings generally functions as a shelter and protection from weather, a safe place and privacy to occupants (Wahida et al., 2012)

However, according to Don Prowler (2007), nowadays, a building serves a variety of functions in order to facilitate human activity. As our activities evolved, the roles changed as well. Many of our regular activities now take place entirely within a building. Buildings have become a multifunction learning centre and also a place for communication and socializing, or as a workplace and others. (Wahida et al., 2012). Nevertheless, due to Olanrewaju (2011), after 5 years, building will become worn-out and requires maintenance to be long last for 60 years. (Wahida et al., 2012)

Basically, building maintenance is needed for all buildings. But the maintenance method or system is different according to the design, the type and physical condition of the building, and also the policies that have been set by the building owner, and so on. As a result, in 2008, PWD Malaysia adopted integrity and comprehensive asset management to the organization to improve security and efficiency of buildings.

Systematic asset management can help to avoid serious consequences such as higher maintenance costs, major building defects, and endangering users lives. The system is known as the Building Condition Assessment Rating System (BCARS), which is a system that helps to ease the inspection work of existing buildings to evaluate whether buildings with major or minor defects should be demolished or maintained in the context of overall safety.



### **3.2 INTRODUCTION OF BUILDING CONDITION ASSESSMENT (BCA)**

Generally, building condition assessment (BCA) is typically involves a physical inspection and diagnosis of the building's health. The purpose of a building condition assessment is to determine the current state of a structure and the extent of its deterioration.(Faqih & Zayed, 2021).

Building Condition Assessment (BCA) is a useful method for assessing the physical state of a building. The condition of the building must be assessed because it reflects the physical state and performance of the building defects and failures.(Zubair et al., 2019)

Next, as the matter of fact, assessment of condition is the foundation of ascertaining the rate of regular maintenance appropriate for building facilities components. (Gouda & Marzouk, 2021). A condition assessment provides a systematic method for assessing an entity's capital assets for the purpose of facility repair, renovation, or substitution requirements, ensuring that they can continue to handle the assigned activities. (Gouda & Marzouk, 2021).

Building condition is important to management's ability in order to fulfil service requirements for maintenance and to support decision-making. Building condition reflects the physical state of the buildings hence its performance.(Yacob et al., 2016a)

Further, building performance and BCA are inexorably connected since the building condition is the most common approach to evaluate building performance. Building performance is the requirement and fitness of a building's purpose, including asset, facility, or services. It entails a process of assessing assets in order to determine the best type of maintenance required for that asset in order to support activities and services.(Awang et al., 2017)

Moreover, in order to achieve an accurate building condition evaluation, it is important to interpret building defects precisely and adequate objectivity. Besides, for the safety of the building during its service life, an appropriate building inspection and maintenance plan are required. (Faqih & Zayed, 2021).

In fact, BCA is reliable with the objective of obtaining knowledge and exposure about the physical state of a building, allowing owners to establish appropriate maintenance, repair, major replacement, refurbishment, and investment strategies and actions. (Awang et al., 2017). Overall, BCA assesses the building asset to gather information of the asset's current state and to

choose the effective maintenance approach. (Awang et al., 2017). There are two BCA rating systems are applied in Malaysia, which is CP BS101 Code of Practice for Building Inspection Report with Building Assessment Rating System (BARIS) (Royal Institution of Surveyors Malaysia, 2010) and JKR 21602 - 0004 – 13 Building Examination and Evaluation Guideline for BCA using Building Assessment Rating System (BARS)(Awang et al., 2017)

For the both BCA rating systems are applicable as it measures the same parameter (condition and priority). However, in comparison to BARIS, BARS was chosen for this study because the rating description offered is detailed, including defect, condition, and function, and the difference between ratings is clearly indicated and defined, making the rating procedure easier. (Awang et al., 2017)

The Public Works Department's implementation of BARS for all government buildings in Malaysia has had a beneficial impact in terms of contributing to the assessment of building performance. (Awang et al., 2017). BARS is the result of the ongoing collaboration between various disciplines, specifically building surveyors, particularly civil, mechanical, and electrical surveyors. (Public Works Department, 2013).

In order to respond to the challenges of managing and maintaining assets, the Public Work Department (PWD) devised a simplified, standardised and largely automated condition indication system to improve the current process of building inspection.(Yacob et al., 2016)

BCA systems were created in accordance with the requirements of the Government Total Asset Management Manual. The purpose of a condition assessment system is to make it easier to evaluate all of the asset's components according to the level of work that remains to be improved, as well as to produce consistent, relevant, and valuable data. (Yacob et al., 2016a)

### **3.2.1 Purpose of BCA**

Building condition assessment (BCA) is a proactive approach for understanding the current condition and extent of dilapidation of a building to determine whether new or existing buildings are in good condition, require repair, or should be demolished. The evaluation examines the entire building and infrastructure, including the building frame, building finishes, building site, mechanical and electrical system equipment. Thus, the assessment is to monitor the asset condition and use, recognizing the type of defects in detail, and classifying the deficiencies into minor or major defects that need prompt action besides enabling the prediction of deterioration and forecasting for future performance.

The results of the building condition assessment will determine the asset value and place the building into one of three categories which is first the building has not shown any signs of distress and meets all of the safety and serviceability requirements according to relevant codes of practice, so no action towards retrofitting is required, the building is seen to be deficient but it can be repaired and strengthened to satisfy the safety requirements or performance criteria set by the user, or the building is badly damaged and requires to be demolished and a new building may be built.

Other than that, the purpose of BCA is to identify the reason for the dilapidation that occurred in buildings hence providing a viable maintenance method solution based on the type of problems discovered in the building. Furthermore, BCA is required for maintenance to analyse the scope of works, generate a cost estimate, prioritize work items, and draught a work schedule and lastly, BCA is required to determine the content and amount of work items to prepare relevant tender documents and cost estimates.

### **3.2.2 Scope of Works**

In general, the scopes of inspection methods used in Malaysia are divided into several parts, including architecture and civil, mechanical, electrical, and external work. For the basic systems are, structures, exterior sections, roofing, interior structures, staircases, ceilings, fittings, and even building structures are all examples of architectural and civil features. (Zubair Tajol Anuar et al., 2019)

Meanwhile, piping systems, air conditioning systems, water distribution systems, fire prevention systems, and elevators are examples of mechanical elements. For electrical elements are lamp, wiring and includes communication and security systems. The examples of external work components are roads, outdoor water reticulation, sewerage systems, retaining walls, sewage treatment facilities, and landscaping. (Zubair Tajol Anuar et al., 2019)

Besides, the building condition assessment (BCA) report consists of a brief description of each building component, identification of any issues or deficiencies in any component, and a table of maintenance methods, also the recommendations of those issues and deficiencies in the building. (Zubair Tajol Anuar et al., 2019)

### **3.3 THE IMPLEMENTATION OF BUILDING CONDITION ASSESSMENT (BCA) OF PUBLIC WORK DEPARTMENT (PWD) MALAYSIA.**

The Malaysian government introduced and implemented the Total Asset Management Manual (TAMM) to manage government assets. The adoption of public sector facilities and asset management is critical to ensuring that government buildings are adequately managed and can fulfill the purpose for which they were constructed. As a result, it is compulsory for professionals working in asset or facility management to be knowledgeable and skilled in the associated subject, particularly building condition assessment (BCA). The findings of building defects were analyzed by using Building Condition Assessment Rating System (BCARS) that provided by PWD Malaysia.

#### **3.3.1 Building Condition Assessment Rating System (BCARS)**

BCARS is an application developed to ease the building investigators for the execution of Building Condition Assessment (BCA). The system is divided into two systems which mobile apps and web apps. The development of BCARS is according to the Guideline of BCA for existing buildings (PWD-21602-004013). The development of BCARS and guideline for BCA is due to the inefficiency of investigation work management, involving high costs and financial resources, requiring many energy resources, and weaknesses of adaptation to use the system. Therefore, BCARS was created to address the following issues by establishing a comprehensive and systematic approach for assisting with inspections

### 3.3.2 Strengths, Weaknesses, Opportunities, And Threats (SWOT) Of BCARS.

Basically, every task has its strength, weaknesses, opportunities, and threats (SWOT) as well as Building Condition Assessment Rating System (BCARS). The SWOT of BCARS is described as below:

Table 6:SWOT of BCARS

SWOT	DESCRIPTION
1. Strength	<ul style="list-style-type: none"> <li>- Frequency of inspection once a year.</li> <li>- PWD can manage BCA/BPA with the guidelines for the application of the guidelines in force.</li> <li>- The use of the BCARS system facilitates PWD in implementing BCA/BPA.</li> <li>- Determining the scope of work as well as more systematic planning of operation and maintenance work.</li> </ul>
2. Weaknesses	<ul style="list-style-type: none"> <li>- Manual implementation of BCA/GCA</li> <li>- Level of competence and availability of officers in the implementation of BCA/BPA including external parties</li> <li>- Resource users are not optimal</li> <li>- Level of understanding of government agencies on the outcomes of BCA/BPA implementation.</li> </ul>
3. Opportunities	<ul style="list-style-type: none"> <li>- The number of governments building assets excesses 160,000 blocks.</li> <li>- PWDs can add service variants to government agencies.</li> <li>- Implementation of BCA/BPA internally and externally.</li> <li>- Soaring the image of PWD as a leader in best practices in asset management.</li> <li>- Significant productivity increase.</li> <li>- Specialist in BCA/BPA.</li> </ul>

4. Threats	<ul style="list-style-type: none"><li>- Other agencies implement BCA/BPA without referring to PWD.</li><li>- Availability of records and database system accessible mSATA 1/11 no report repository.</li><li>- Effectiveness of application of relevant guidelines.</li></ul>
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### **3.4 GUIDELINE OF BUILDING CONDITION ASSESSMENT (BCA) BY PUBLIC WORKS DEPARTMENT (PWD) MALAYSIA**

The building inspectors need general guidance from the guidelines to carry out the building inspection task. The guideline also ensures consistency in the inspection process, from inspection to report writing. This guideline covers the processes and responsibilities of the Ministry, Department and Agency engaged in conducting inspections to rate existing buildings. (Jabatan Kerja Raya, 2002). The Public Works Department (PWD) created a standard assessment of the condition of building components and services to ensure that building inspectors undertake inspections following the inspection guidelines.(Jabatan Kerja Raya, 2002)



Figure 11 : BCA's Guideline for Existing Building Provided by JKR Malaysia

This guideline outlines the methodology of building inspection and evaluation; it is simple enough to be utilized by officials in PWD as required in General Order Chapter E Clause 27, which specifies that PWD is responsible for inspecting government structures yearly. These standards include methods for preparing, planning, implementing, rating, and preparing inspection reports, in addition to ensuring that the inspection team can conduct on-site inspections easily, consistently, systematically, and holistically. These standards are dynamic in nature and will be reviewed regularly to account for all changes.



### **3.4.1 Building Condition Assessment (BCA) Implementation Stages According to the Public Works Department (PWD) Malaysia.**

Building condition inspections that need to be carried out are at the following stages:

- i. Stage of acceptance of buildings for operation and maintenance purposes.
- ii. Stage of acceptance of building for asset registration.
- iii. Stage of operation and maintenance of assets.
- iv. Stage of the initial evaluation for restoration, modification, and upgrade.
- v. Stage of preliminary assessment stage for building risk and safety assessment
- vi. Stage of assessment of building condition after a disaster.

### 3.4.2 The Methodology of the Building Condition Assessment (BCA) Inspection.

Figure below shows the condition assessment process according to the guideline.

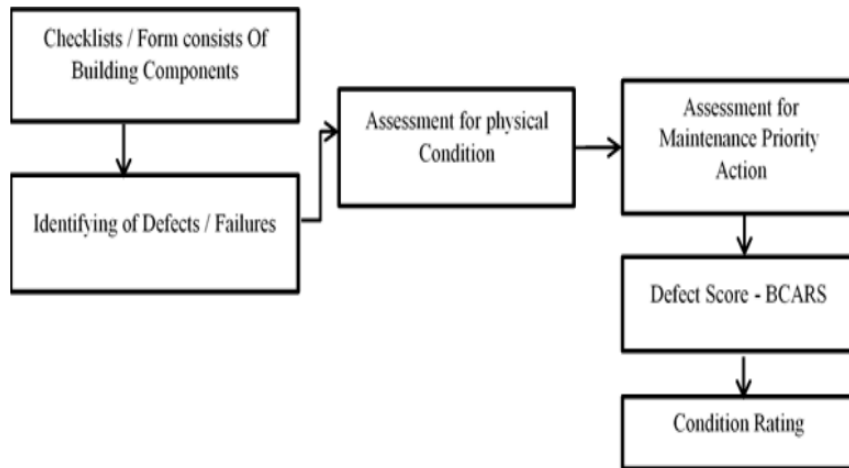


Figure 12 : Condition Assessment Process

Source: Source: JKR 21602-0004-13 (2013)

Condition of buildings will be assessed and collected through Building Condition Assessment (BCA) standard. The inspection approach used is based on visual inspection with the use of relevant tools.(Yacob et al., 2016). The evaluation was based primarily on a physical site visit. Inspections are carried out within the scope of the limitations. This is the initial screening assessment used by Building Surveyors to assess the condition of the assets. The result analysis of inspection shall refer to experts for follow-up action.(Yacob et al., 2016)

### 3.4.3 The Rating Scale of Building Condition Assessment (BCA)

The condition assessment that follows the building assessment is intended to determine the current state of the building objectively. A repeatable rating system that minimises subjective evaluation can be utilised to accurately anticipate future conditions. The condition index values allow you to compare the condition of the various components. Below is the rating scale from the guideline:

Table 7: Building Physical Condition Level

<b>Grade</b>	<b>Inspection Scale</b>	<b>Description</b>
<b>1</b>	Very Good	As New, No Defect, Performing as intended
<b>2</b>	Good	Minor defect, good condition, performing as intended
<b>3</b>	Fair	Major defect, moderate condition, still can functioning with supervision
<b>4</b>	Poor	Major or minor defect, critical, not functioning as agreed service level
<b>5</b>	Very Poor	Major or minor defect, critical, not functioning as agreed service level Very critical, not functioning, risky to safety and health

Source: JKR 21602-0004-13 (2013)

Table 8: Maintenance Action

Priority	Scale	Description
<b>Normal</b>	1	No defect or damages, element / component well maintained
<b>Routine</b>	2	Minor Defects / damages, Needs for monitoring, repairs, replaced to prevent serious defect / damages
<b>Repairs</b>	3	Major defects / damages, needs for major repairs and replacement
<b>Rehabilitation</b>	4	Critical / serious defects / damages, needs for urgent and immediate repairs
<b>Replacement</b>	5	Critical / serious defects / damages, needs for urgent replacement, refer to expert detail inspection / Expert judgement

Source: JKR 21602-0004-13 (2013)

Table 9: Matrix Analysis score defect parameter for building condition and maintenance action

Scale		Maintenance Priority Action				
		E(5)	S 4	SM 3	R2	N 1
<b>Building Physical Condition</b>	5	25	20	15	10	5
	4	20	16	12	8	4
	3	15	12	9	6	3
	2	10	8	6	4	2
	1	5	4	3	2	1

Source: JKR 21602-0004-13 (2013)

A five-point colour-coded rating system has been developed and proved to be most effective as mentioned by Abbott,2007. This will ease the method of assessment for staff or inspector to interpret consistently, making reports more user-friendly and easier to interpret, save time, comprehensive and also accessible to non-technical users to use the information.

Table 10: Building Rating and Maintenance Action

<b>Rating</b>	<b>Physical Condition</b>	<b>Action Matrix</b>	<b>Score</b>
<b>A</b>	Very Good	Preventive Maintenance	1 to 5
<b>B</b>	Good	Condition Based Maintenance	6 to 10
<b>C</b>	Fair	Repairs	11 to 15
<b>D</b>	Poor	Rehabilitation	16 to 20
<b>E</b>	Very Poor	Replacement	21 to 25

Source: JKR 21602-0004-13 (2013)

In table 3.5, the five-point colour coded building rating is shown as a final result of the assessment. Score 1 to 5 with very good condition and action matrix to be taken is preventive maintenance, 6 to 10, good condition with condition-based maintenance, fair condition with score from 11 to 15 required for repairs work. Meanwhile rehabilitation work needs for poor condition with range scores from 16 to 20. Score

### **3.5 INTRODUCTION TO BUILDING DEFECTS**

A building defect is defined as a "failure or shortcoming in a building's function, performance, statutory, or user requirements that might also manifest itself within the structure, fabric, services, or other facilities of the affected building.(Gouda & Marzouk, 2021)

In other words, it is the deterioration, reduction, or failure of a building's functional performance A defective building is something that is unable to offer the functional, aesthetic, or economic values for which it was it is designed and constructed to provide. The serviceability, performance, acceptance, or look of the buildings or their combination are all affected by defects. (Olanrewaju, 2012)

Defects are contagious because if they are not handled promptly, they will not only worsen but also destroy adjoining components, elements, or building parts. Defects considerations are important criteria in evaluating buildings performance. (Gouda & Marzouk, 2021)

The systemic consideration of the nature and kind of specific defects is imperative for resource allocations and waste minimization. However, the effect of defect on the conditions, appearance and performance of buildings depend on the function requirements of the buildings.(Gouda & Marzouk, 2021)



### 3.5.1 The Types of Defects in Buildings

There are numerous types of building defects that are visible to the human eye. Building defects are categorized as minor or major based on the type of defect.

#### 3.5.1.1 The Type of Defects in Buildings (Civil)

The following are the list of common building deficiencies under the civil part:









Table 11: The example types of Defects in Buildings (Civil)

1.	 <p>Crack on retaining wall</p>	2.	 <p>Damp on ceiling</p>
3.	 <p>Rusty on metal stair</p>	4.	 <p>Missing of ceiling</p>
5.	 <p>Chipping on tiles floor</p>	6.	 <p>Loose of doorknob</p>
7.	 <p>Mold growth on wall</p>	8.	 <p>Vegetation on growth staircase</p>
9.	 <p>Termite attack on frame roof</p>	10.	 <p>Water stain mark and Paint peeling off sighted on beam finishes</p>

### 3.5.1.2 The Types of Defects in Buildings (Mechanical And Electrical)

The following are the list of common building deficiencies under mechanical and electrical part:

Table 12: The example types of Defects in Buildings (Mechanical and Electrical)

1.	 <p>Air conditioner not function</p>	2.	 <p>socket cover detached</p>
3.	 <p>Leakages of air conditioner</p>	4.	 <p>Untidy wiring</p>
5.	 <p>Expired date of fire extinguisher</p>	6.	 <p>Not function of lamp</p>
7.	 <p>Smelly on toilet pump</p>	8.	 <p>Not function of DB Box Switch</p>



### **3.6 SUMMARY**

Overall, the literature review section shows the definition of a building condition survey (BCA). One of the most important aspects of asset management is building condition assessments. It will be easier to make maintenance plans and strategies after assessing the building's condition. Building condition is important to management's capacity to achieve service standards for maintenance and to support decision-making. The physical status of a building is reflected in its condition hence its performance. A physical inspection and diagnosis of the building's condition are usually included in a building condition assessment (BCA). The purpose of a building condition assessment is to determine the current state of a structure and the extent of its deterioration. This chapter also shows the guideline that used in doing the inspection. The building inspectors need general guidance from the guidelines to carry out the building inspection task. These standards include methods for preparing, planning, implementing, rating, and preparing inspection reports in order to ensuring that the inspection team can conduct on-site inspections consistently and systematically.

Building condition assessment (BCA) is a proactive approach for understanding the current condition and extent of dilapidation of a building to determine whether new or existing buildings are in good condition, require repair, or should be demolished. The condition assessment is a systematic process of evaluating project repair, renewal or replacement needs to support the organization's mission and activities. Besides, this chapter also reviews the explanation of defects. Defects are contagious because if they are not handled promptly, they will not only worsen but also destroy adjoining components, elements, or building parts. Defects considerations are important criteria in evaluating buildings performance. This chapter also has listed the types of defects that are usually found at the building. There are numerous types of building defects that are visible to the human eye. Building defects are categorized as minor or major based on the type of defect it and needs immediate repair.

## CHAPTER 4

### CASE STUDY

#### 4.1 PROJECT INFORMATION

Building condition assessment (BCA) has been conducted on *JKR Jajahan Kota Bharu, Kelantan* building as instructed by Ministry of Works Malaysia. The details of projects information as below:


Table 13:Detail of Project Information of Case Study

<b>Project's name</b>	Building Condition Assessment (BCA) for <i>Jabatan Kerja Raya (JKR) Jajahan Kota Bharu, Kelantan.</i>
<b>Project duration</b>	26 October 2021 – 23 January 2022
<b>List of teams involved in the project</b>	<ol style="list-style-type: none"><li>1. Sr. Mohammad Jusri bin Hashim</li><li>2. Rezal Aida binti Ali</li><li>3. Nur Atikah Binti Mat Nasir</li><li>4. Mimi Aqielah binti Hashim</li><li>5. Izyan Nazihah binti Abdullah Zawawi</li><li>6. Muhammad Fathul Islam bin Farid</li><li>7. Che Mohamad Shafiq Aiman bin Che Othman</li></ol>
<b>Person in charge (PIC)</b>	Mohd Rizal bin Ibrahim
<b>Scope of project</b>	1 block of <i>JKR Jajahan Kota Bharu, Kelantan</i> including roof, internal and external.

## 4.2 DETAILS OF PROPERTY

Below is the detail of the case study:

Table 14:Details of case study

NO	GENERAL	DESCRIPTION
1	Premise name	 <p data-bbox="796 853 1445 887">Figure 13 : Jabatan Kerja Raya (JKR) Kota Bharu</p> <p data-bbox="1074 913 1166 943"><b>Name:</b></p> <p data-bbox="805 965 1434 1043">Jabatan Kerja Raya (JKR) Jajahan, Kota Bharu, Kelantan.</p> <p data-bbox="1054 1066 1185 1095"><b>Address:</b></p> <p data-bbox="799 1117 1441 1196">JKR Kota Bharu, No. 14, Jalan Kuala Krai, Bandar Kota Bharu, 15050 Kota Bharu, Kelantan</p> <p data-bbox="1058 1218 1182 1247"><b>No.DPA:</b></p> <p data-bbox="916 1270 1326 1299">1105101MYS. 030216.BD0001</p> <p data-bbox="987 1321 1254 1350"><b>Coordinate of GPS</b></p> <p data-bbox="847 1373 1394 1402">6.11006814233583, 102.2432894274126</p>
2	Category of building	Low-rise
3	Ground floor area, GFA (m <sup>2</sup> )	1987m <sup>2</sup>
4	Net floor area, NFA (m <sup>2</sup> )	4,657 m <sup>2</sup>
5	Year of Completion	1994
6	Building status (function), tenure & occupancy	<p data-bbox="1062 1704 1174 1733"><b>Tenure:</b></p> <p data-bbox="1062 1738 1174 1767">22 years</p> <p data-bbox="959 1771 1278 1800"><b>Occupancy:</b> 111 people</p>
7	No of storey height	4 storeys

8

**Location plan,  
outbuilding &  
amenities**

**Location Plan**

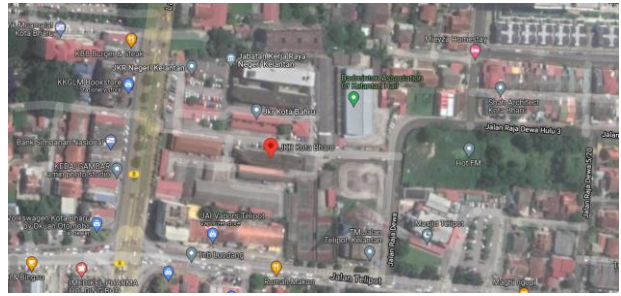


Figure 14 : Location Plan of JKR Kota Bharu.

**Outbuilding**



Figure 15 : Kindergarten

Function: For early childhood education



Figure 16 :Bank Simpanan Nasional

Function: Enabling users to save and withdraw money.

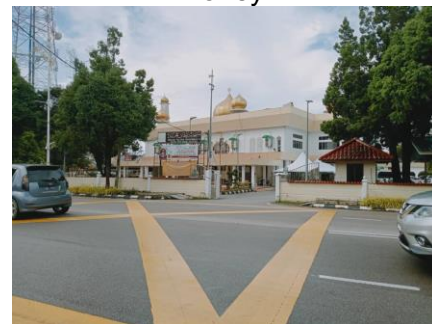


Figure 17 :Mosque of Telipot

Function: A place of worship for Muslims



Figure 18 : Bus Stop

Function: Easy the users to wait and take the bus.

**Amenities**



Figure 19 : A set of working table and chair

Function: For the use of all staff.

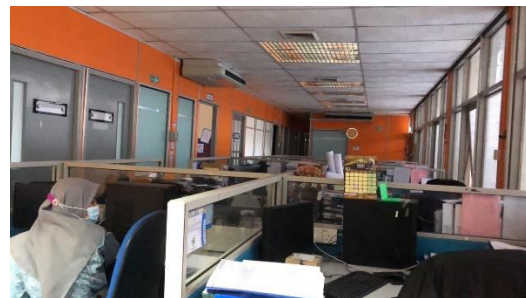




Figure 20 : A set of working table and chair



Function: For the use of all staff.

### 4.3 TOOLS AND EQUIPMENT

Proper tools used in survey is limited and all finding during Building Condition Assessment has been done with proper technique as guarantee. You may refer to the table below for details of tools and equipment used:

Table 15:Tools and equipment

No	Tools and Equipment	Function
1	Measuring tape 	A tape measure or measuring tape is a flexible ruler and used to measure distance. It consists of a ribbon of cloth, plastic, fibre glass, or metal strip with linear-measurement markings. It is a common measuring tool.
2	Laser distance 	Rugged, professional grade laser distance meter featuring advanced laser distance measurement technology Instantly measures up to 50 m (165 ft.) with one-button point-and-click operation Offers Pythagoras calculation to indirectly measure height from two other measurements Quickly calculates area (square feet/meters) and volume Offers easy to-use addition and subtraction function

4	<p>Moisture meter</p> 	<p>Wood and concrete moisture measurement.</p> <p>Wood material: 6 % to 40 % moisture content.</p> <p>Concrete material: 0 % to 100 % moisture content.</p> <p>Red LED bar graph indicator with LCD display,</p> <p>Meter build in test probe, all in one, easy operation.</p> <p>Data hold, Record (max., min.).</p> <p>Optional external probe, Model: MP-31.</p> <p>DC 9V battery (006P).</p>
5	<p>Digital Calliper meter</p>  <p>megaeshop.pk</p>	<p>a device used to measure the distance between two opposite sides of an object. Many types of callipers permit reading out a measurement on a ruled scale, a dial, or a digital display</p>

#### 4.4 THE PROCESS OF BUILDING CONDITION ASSESSMENT (BCA) INSPECTION WORK FOR THE PROJECT (WORKFLOW)

Below is the process during the inspection works at the case study:

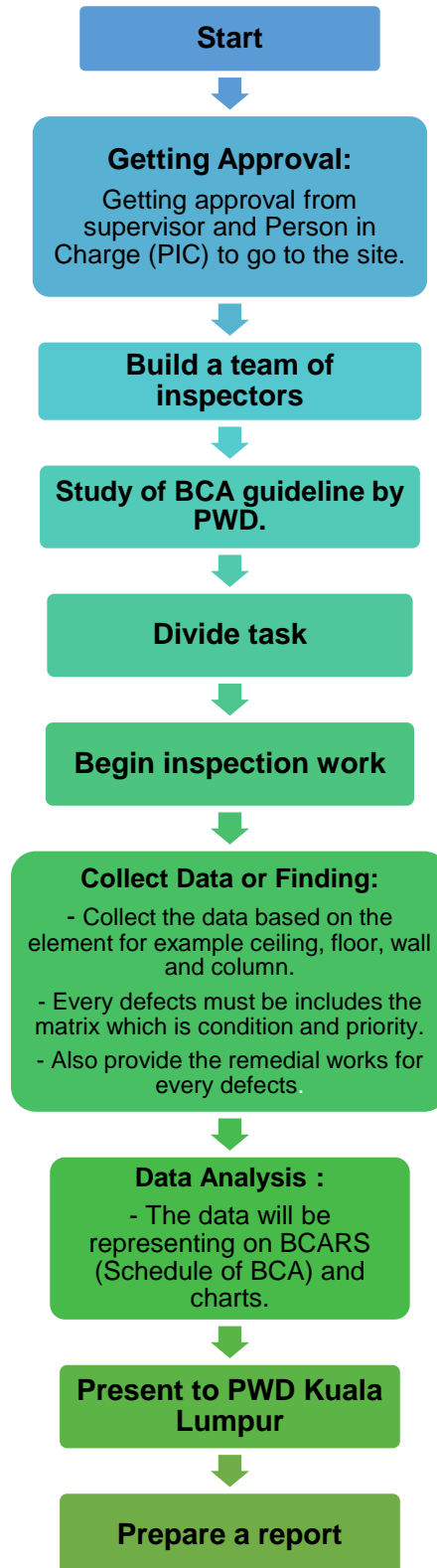


Figure 21 : Workflow of Inspection Building



#### 4.4.1 Start

The BCA inspection work has been implemented starting on October 2021. Before starting BCA, some prior planning was done, such as generating an implementation timeline, obtaining approval from concerned parties, and defining who would be participating in the project.

#### 4.4.2 Getting Approval

The BCA implementation schedule was discussed with the person in charge, Mr. Rizal, to decide the most efficient commencement date for the BCA project as well as the estimated completion date. The schedule then been handed to the supervisor, Mrs. Rezal Aida, for approval.

#### 4.4.3 Build A Team of Inspectors

A group of building investigators consisting of 5 building investigators was constituted after the following approval. This project was led by Mimi Aqielah binti Hashim, with assistance from Nur Atikah binti Mat Nasir, Muhammad Fathul Islam bin Mohd Farid, Che Mohamad Shafiq Aiman bin Che Othman, and Izyan Nazihah binti Abdullah Zawawi, and is overseen by Puan Rezal Aida throughout the BCA project. As the person in charge of the BCA project, Mr. Rizal has contributed a great deal of input and assistance in finishing this project. The building investigators' organisational chart is as follows:

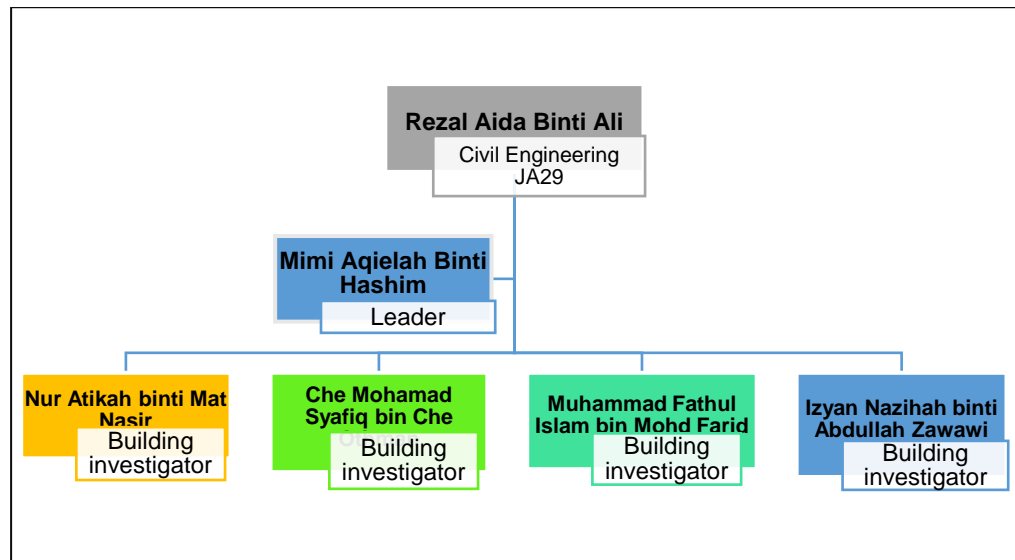


Figure 22 : The building investigators' organisational chart

#### **4.4.4 Study of Building Condition Assessment (BCA) GUIDELINE BY Public Works Department (PWD).**

The Public Works Department (PWD) had created the BCA guideline to assist the building investigators in completing the project and understanding what needs to be considered. All building investigators must understand and adhere to all of the regulations and procedures outlined in the Guideline. The specifies guideline and the elements/components that must be researched as well as the strategies that must be used. The type of building defects, the level of damage, and the priority of repairs, as well as the format for collecting data and documents or forms, should be used to complete this project.

#### **4.4.5 Divide Task**

Given the numerous regulations that must be followed, the building investigator is separated into several responsibilities to ensure that the project is completed on time. The following duties are classified into scope:

- i. Providing a Google form links to collect data from building investigations.
- ii. Adopt BCA for buildings.
- iii. Collect and analyse data.
- iv. Prepare the BCA report.

#### **4.4.6 Inspection Work**

Doing inspection which is access every area started with ground floor until the rooftop, room and level of case study. The inspector also has been provided with some tools and equipment for collecting the data. The inspection works have been done for almost 1 week for overall building. The term of BCA refers to all floors of the structure, as well as the interior and exterior. The project started on the bottom floor (interior), then progressed to the building's exterior, and finally to all floors, including the roof. Every civil, mechanical, and electrical element/component condition must be investigated, and also the data and images of the element/component condition must be recorded. All rooms and spaces, including restrooms, store rooms, pantries, pump rooms, and others must be accessed to determine the state of the rooms. The building inspectors have received assistance from the person in charge of the BCA project in for accessing into inaccessible rooms or spaces.

#### **4.4.7 Findings**

All findings are recorded and submitted via the google form link that have been provided. The details such as level, location, type of defect, condition level of matrix, and repair priority must correspond to the state of the element/component as well as the sources of defects detected in any room or space. All of the findings that have been recorded were analysed, and follow-up action for building improvement will be taken depending on the information gathered. Collect the data based on the element for example ceiling, floor, wall and column weather in good or poor condition. For mechanical and electrical the data that have been collect is based on the functional of the object. Every defects must be includes the matrix which is condition and priority by following the guidelines from Public Works Department (PWD). Remedial works for every defects also need to provide for the future maintenance and improvements.

#### **4.4.8 Analysis Data**

For overall data analysis will be representing on defects sheets and BCARS (Schedule of BCA) and charts. The data also works to identify the overall rating building. The BCA data analysis is done automatically through the BCA format in Excel provided by PWD. All the information entered into the defect sheets format will generate into BCARS (Schedule of BCA) and charts which the results of the analysis are accurate. The overall building rating will be known once the final BCA score is acquired. In addition, a scoring calculation formula for determining building ratings is provided.

#### **4.4.9 Present to Public Works Department (PWD) Kuala Lumpur**

Following the completion of the data and the final confirmation of BCA score, the data was being given for reviewing by Kuala Lumpur PWD officer. If there is an issue during implementing the BCA or entering the data, the building investigators are been asked to make corrections and improvements to guarantee that the BCA data obtained is reasonable and correct. The building investigators will be granted authorization to prepare a BCA report for the Jabatan Kerja Raya (JKR) Jajahan Kota Bharu, Kelantan building after obtaining permission from the PWD of Kuala Lumpur.




#### **4.4.10 Prepare A Report**

The most important part of this project is the Building Condition Assessment (BCA) report which assists to determine the building's current condition. Furthermore, every lifespan of the building needed a building investigation record to help the owner or occupier of the building decide for an inhabited building whether to be retrofitting or demolished. The BCA assessment will also aid in identifying variances in the building's physical condition over time. The BCA report is highly useful and beneficial for maintenance purposes as a guideline to prevent the highest expenses cost of maintenance in the future.

#### 4.5 BUILDING CONDITION INSPECTION ACTIVITY CONDUCTED BY THE BUILDING INSPECTORS

The building inspection was conducted by 5 inspectors on site. Each of inspectors has given their own task in completing the building condition assessment. Below are the inspection activities by building inspectors:

Table 16: Inspection Activities

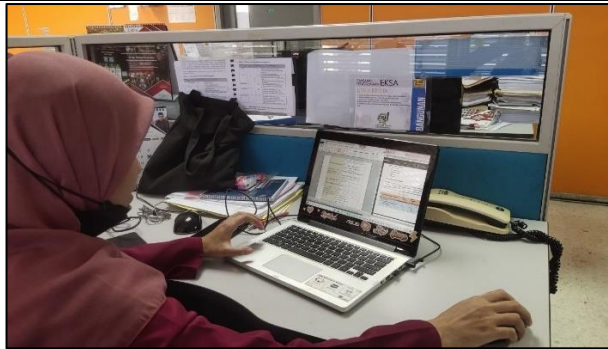
NO	INSPECTION ACTIVITIES
1	 <p data-bbox="533 958 1401 1025">a) Inspection, record data and take picture of building component condition and defect</p>
2	 <p data-bbox="676 1458 1254 1491">b) Measure the building defect component.</p>
3	 <p data-bbox="533 1888 1401 1966">c) Sorting the data into the defect sheets and obtain the results of BCA.</p>

4



d) Presentation of BCA data to the PWD Kuala Lumpur officer.

5



e) Prepare a report of BCA.

#### **4.6 BUILDING CONDITION ASSESSMENT RATING SYSTEM (BCARS) FOR JKR JAJAHAN KOTA BHARU, KELANTAN.**

The building condition assessment rating system (BCARS) analysis for Civil, Mechanical and Electrical component for *JKR Jajahan Kota Bharu, Kelantan* as follows:

##### **4.6.1 Schedule of Building Condition Assessment (Civil)**

Referring to the BCARS, the overall score (matrix analysis) of the building's condition is derived as the sum of the condition evaluation multiplied by the priority of defects, the result obtained is **10402**. While, the total damage/defects for the entire building including the roof are **1065** defects. Apart from that, the total score for the civil components for the *JKR Jajahan Kota Bharu, Kelantan* building is **9.77**. The score indicates the overall rating of the building is **Good**.

BIL.	RUANG	ELEMENTAL / KOMPONEN	KECACATAN / KEROSAKAN	BARIS			
				Penilaian Kondisi /keadaan [a]	Penilaian keutamaan kecacatan [b]	Analisis [c] = (a x b)	Matrik
<b>CIVIL</b>							
1	Ruang Teknikal/COR001001	Dinding	Baik	2	2	4	001
2	Ruang Teknikal/COR001002	Pintu	Baik	2	2	4	002
3	Ruang Teknikal/COR001003	Pintu	Cat mengelupas di pintu	2	2	4	003
4	Ruang Teknikal/COR001004	Bingkai pintu	Cat mengelupas pada bingkai pintu	2	3	6	004
5	Ruang Teknikal/COR001005	Pintu	Baik	2	2	4	005
6	Ruang Teknikal/COR001006	Pintu	Baik	2	2	4	006
7	Ruang Teknikal/COR001007	Dinding	Baik	2	2	4	007
8	Ruang Teknikal/COR001008	Tiang	Lubang pada dinding	3	3	9	008
9	Ruang Teknikal/COR001009	Tiang	Lubang pada plaster tiang	4	4	16	009
10	Ruang Teknikal/COR001010	Tiang	Lubang pada dinding plaster	3	3	9	010
11	Ruang Teknikal/COR001011	Dinding	Baik	2	2	4	011
12	Ruang Teknikal/COR001012	Pintu	Baik	2	2	4	012
13	Ruang Teknikal/COR001013	Tingkap	Baik	2	2	4	013
14	Ruang Teknikal/COR001014	Pintu	Baik	2	2	4	014
15	Ruang Teknikal/COR001015	Tingkap	Baik	2	2	4	015
16	Ruang Teknikal/COR001016	Dinding	Baik	2	2	4	016
17	Ruang Teknikal/COR001017	Pintu	Baik	2	2	4	017
18	Ruang Teknikal/COR001018	Tiang	Cat tidak sekata pada plaster tiang	2	2	4	018
19	Ruang Teknikal/COR001019	Tingkap	Baik	2	2	4	019
20	Ruang Teknikal/COR001020	Pintu	Baik	2	2	4	020
21	Ruang Teknikal/COR001021	Tingkap	Baik	2	2	4	021
22	Ruang Teknikal/COR001022	Tingkap	Baik	2	2	4	022
23	Ruang Teknikal/COR001023	Pintu	Baik	2	2	4	023
24	Ruang Teknikal/COR001024	Tingkap	Baik	2	2	4	024
25	Ruang Teknikal/COR001025	Pintu	Baik	2	2	4	025
26	Ruang Teknikal/COR001026	Tiang	Keretakan pada plaster tiang	4	3	12	026
27	Ruang Teknikal/COR001027	Siling	Baik	2	2	4	027
28	Ruang Teknikal/COR001028	Siling	Siling pecah	5	5	25	028
29	Ruang Teknikal/COR001029	Siling	Siling berlubang	5	5	25	029
30	Ruang Teknikal/COR001030	Siling	Siling pecah	5	5	25	030
31	Ruang Teknikal/COR001031	Siling	Siling pecah	5	5	25	031
32	Ruang Teknikal/COR001032	Siling	Siling pecah	5	5	25	032
33	Ruang Teknikal/COR001033	Siling	Siling pecah	5	5	25	033
34	Ruang Teknikal/COR001034	Siling	Lubang pada siling	5	5	25	034
35	Ruang Teknikal/COR001035	Siling	Lubang pada siling	5	5	25	035
36	Ruang Teknikal/COR001036	Siling	Lubang pada siling	5	5	25	036
37	Ruang Teknikal/COR001037	Siling	Luabng pada siling	5	5	25	037
38	Ruang Teknikal/COR001038	Siling	Siling pecah	5	5	25	038
39	Ruang Teknikal/COR001039	Siling	Lubang pada siling	5	5	25	039
40	Ruang Teknikal/COR001040	Siling	Siling pecah	5	5	25	040
41	Ruang Teknikal/COR001041	Siling	Siling pecah	5	5	25	041
42	Ruang Teknikal/COR001042	Siling	Siling pecah	5	5	25	042
43	Ruang Teknikal/COR001043	Siling	Siling pecah	5	5	25	043
44	Ruang Teknikal/COR001044	Siling	Siling pecah	5	5	25	044
45	Ruang Teknikal/COR001045	Siling	Lubang pada siling	5	5	25	045
46	Ruang Teknikal/COR001046	Siling	Siling retak	5	5	25	046
47	Ruang Teknikal/COR001047	Siling	Siling retak	5	5	25	047
48	Ruang Teknikal/COR001048	Lantai	Baik	2	2	4	048
49	Ruang Teknikal/COR001049	Jubin	Jubin pecah	5	5	25	049
50	Ruang Teknikal/COR001050	Jubin	Rekahan pada jubin	5	5	25	050
51	Bilik Fail/COR002001	Dinding	Baik	2	2	4	051
52	Bilik Fail/COR002002	Dinding	Baik	2	2	4	052
53	Bilik Fail/COR002003	Dinding	Lebih paku pada dinding	3	3	9	053
54	Bilik Fail/COR002004	Dinding	Baik	2	2	4	054
55	Bilik Fail/COR002005	Dinding	Baik	2	2	4	055
56	Bilik Fail/COR002006	Siling	Baik	2	2	4	056
57	Bilik Fail/COR002007	Siling	Siling pecah	5	5	25	057
58	Bilik Fail/COR002008	Siling	Siling tertanggal	5	5	25	058
59	Bilik Fail/COR002009	Siling	Siling pecah	5	5	25	059
60	Bilik Fail/COR002010	Siling	Tompok pada siling	2	2	4	060
61	Bilik Fail/COR002011	Lantai	Baik	2	2	4	061
62	Bilik Fail/COR002012	Lantai	Retak serpihan pada jubin	3	4	12	062
63	Bilik Mesyuarat/COR003001	Dinding	Baik	2	2	4	063
64	Bilik Mesyuarat/COR003002	Bingkai dinding	Gap antara bingkai dinding	2	3	6	064
65	Bilik Mesyuarat/COR003003	Dinding	Baik	2	2	4	065
66	Bilik Mesyuarat/COR003004	Pintu	Baik	2	2	4	066
67	Bilik Mesyuarat/COR003005	Tingkap	Baik	2	2	4	067
68	Bilik Mesyuarat/COR003006	Dinding	Baik	2	2	4	068
69	Bilik Mesyuarat/COR003007	Tingkap	Kunci tingkap tidak berfungsi	5	5	25	069

Figure 23: BCARS of Civil Component (1-69)



70	Bilik Mesyuarat/COR003008	Gril tingkap	Gril tingkap berkarat	2	3	6	070
71	Bilik Mesyuarat/COR003009	Sinki	Sinki berkarat	2	3	6	071
72	Bilik Mesyuarat/COR003010	Tiang	Retak serpihan pada tiang	3	3	9	072
73	Bilik Mesyuarat/COR003011	Tiang	Permukaan plaster tiang yang tidak sekata	3	3	9	073
74	Bilik Mesyuarat/COR003012	Dinding	Cat tidak sekata	2	2	4	074
75	Bilik Mesyuarat/COR003013	Dinding	Baik	2	2	4	075
76	Bilik Mesyuarat/COR003014	Dinding	Lubang pada dinding	3	3	9	076
77	Bilik Mesyuarat/COR003015	Siling	Baik	2	2	4	077
78	Bilik Mesyuarat/COR003016	Siling	Sarang labah labah pada siling	2	2	4	078
79	Bilik Mesyuarat/COR003017	Siling	Siling tertanggal	5	5	25	079
80	Bilik Mesyuarat/COR003018	Siling	Siling pecah	5	5	25	080
81	Bilik Mesyuarat/COR003019	Siling	Tompokan pada siling	2	2	4	081
82	Bilik Mesyuarat/COR003020	Lantai	Baik	2	2	4	082
83	Bilik Mesyuarat/COR003021	Dinding	Tiada skirting	3	3	9	083
84	Bilik Mesyuarat/COR003022	Lantai	Lubang pada jubin lantai	5	5	25	084
85	Bilik Mesyuarat/COR003023	Lantai	Retak serpihan pada jubin	5	5	25	085
86	Bilik Mesyuarat/COR003024	Lantai	Retak serpihan pada jubin	4	3	12	086
87	Bilik Penolong Jurutera Kanan/COR004001	Dinding	Baik	2	2	4	087
88	Bilik Penolong Jurutera Kanan/COR004002	Tingkap	Baik	2	2	4	088
89	Bilik Penolong Jurutera Kanan/COR004003	Dinding	Baik	2	2	4	089
90	Bilik Penolong Jurutera Kanan/COR004004	Dinding	Retak serpihan pada dinding	2	2	4	090
91	Bilik Penolong Jurutera Kanan/COR004005	Dinding	Baik	2	2	4	091
92	Bilik Penolong Jurutera Kanan/COR004006	Tingkap	Baik	2	2	4	092
93	Bilik Penolong Jurutera Kanan/COR004007	Gril tingkap	Baik	2	2	4	093
94	Bilik Penolong Jurutera Kanan/COR004008	Dinding	Baik	2	2	4	094
95	Bilik Penolong Jurutera Kanan/COR004009	Siling	Baik	2	2	4	095
96	Bilik Penolong Jurutera Kanan/COR004010	Siling	Siling pecah	5	5	25	096
97	Bilik Penolong Jurutera Kanan/COR004011	Siling	Siling melendut	5	5	25	097
98	Bilik Penolong Jurutera Kanan/COR004012	Lantai/Carpet	Baik	2	2	4	098
99	Bilik Fail/COR005001	Dinding	Baik	2	2	4	099
100	Bilik Fail/COR005002	Dinding	Baik	2	2	4	100
101	Bilik Fail/COR005003	Dinding	Baik	2	2	4	101
102	Bilik Fail/COR005004	Dinding	Baik	2	2	4	102
103	Bilik Fail/COR005005	Siling	Siling pecah	5	5	25	103
104	Bilik Fail/COR005006	Siling	Siling retak	5	5	25	104
105	Bilik Fail/COR005007	Lantai	Baik	2	2	4	105
106	Bilik penolong Jurutera/COR006001	Dinding	Baik	2	2	4	106
107	Bilik penolong Jurutera/COR006002	Dinding	Baik	2	2	4	107
108	Bilik Penolong Jurutera/COR006003	Pintu	Lubang pada pintu kayu	4	3	12	108
109	Bilik penolong Jurutera/COR006004	Dinding	Baik	2	2	4	109
110	Bilik Penolong Jurutera/COR006005	Dinding	Baik	2	2	4	110
111	Bilik penolong Jurutera/COR006006	Siling	Baik	2	2	4	111
112	Bilik Penolong Jurutera/COR006007	Lantai	Baik	2	2	4	112
113	Bilik Penolong Jurutera/COR006008	Lantai	Kotoran pada jubin	2	3	6	113
114	Stor/COR007001	Dinding	Baik	2	2	4	114
115	Stor/COR007002	Dinding	Baik	2	2	4	115
116	Stor/COR007003	Dinding	Baik	2	2	4	116
117	Stor/COR007004	Dinding	Baik	2	2	4	117
118	Stor/COR007005	Tingkap	Baik	2	2	4	118
119	Stor/COR007006	Gril tingkap	Baik	2	2	4	119
120	Stor/COR007007	Siling	Baik	2	2	4	120
121	Stor/COR007008	Siling	Siling pecah	5	5	25	121
122	Stor/COR007009	Siling	Siling pecah	5	5	25	122
123	Stor/COR007010	Lantai	Baik	2	2	4	123
124	Pantri/COR008001	Dinding	Baik	2	2	4	124
125	Pantri/COR008002	Dinding	Baik	2	2	4	125
126	Pantri/COR008003	Dinding	Baik	2	2	4	126
127	Pantri/COR008004	Tingkap	Baik	2	2	4	127
128	Pantri/COR008005	Gril tingkap	Baik	2	2	4	128
129	Pantri/COR008006	Tingkap	Lubang pada dinding plywood	3	3	9	129
130	Pantri/COR008007	Sinki	Baik	2	2	4	130
131	Pantri/COR008008	Kabinet	Baik	2	2	4	131
132	Pantri/COR008009	Dinding	Baik	2	2	4	132
133	Pantri/COR008010	Kabinet	Baik	2	2	4	133
134	Pantri/COR008011	Siling	Baik	2	2	4	134
135	Pantri/COR008012	Siling	Siling berlubang	5	5	25	135
136	Pantri/COR008013	Lantai	Baik	2	2	4	136
137	Bilik Penolong Jurutera Kanan Jalan/COR009001	Dinding	Baik	2	2	4	137
138	Bilik Penolong Jurutera Kanan Jalan/COR009002	Dinding	Baik	2	2	4	138
139	Bilik Penolong Jurutera Kanan Jalan/COR009003	Dinding	Baik	2	2	4	139
140	Bilik Penolong Jurutera Kanan Jalan/COR009004	Dinding	Baik	2	2	4	140
141	Bilik Penolong Jurutera Kanan Jalan/COR009005	Tingkap	Baik	2	2	4	141
142	Bilik Penolong Jurutera Kanan Jalan/COR009006	Gril tingkap	Baik	2	2	4	142

Figure 24 : BCARS of Civil Component (70-142)

143	Bilik Penolong Jurutera Kanan Jalan/COR009007	Siling	Baik	2	2	4	143
144	Bilik Penolong Jurutera Kanan Jalan/COR009008	Lantai	Baik	2	2	4	144
145	Bilik Solat/COR010001	Dinding	Baik	2	2	4	145
146	Bilik Solat/COR010002	Dinding	Baik	2	2	4	146
147	Bilik solat/COR010003	Pintu	Baik	2	2	4	147
148	Bilik solat/COR010004	Dinding	Baik	2	2	4	148
149	Bilik solat/COR010005	Dinding	Baik	2	2	4	149
150	Bilik solat/COR010006	Grill tingkap	Baik	2	2	4	150
151	Bilik solat/COR010007	Siling	Baik	2	2	4	151
152	Bilik Solat/COR010008	Siling	Siling tercabut	5	5	25	152
153	Bilik solat/COR010009	Lantai	Baik	2	2	4	153
154	Stor/COR011001	Dinding	Sarang labah labah pada dinding	2	2	4	154
155	Stor/COR011002	Dinding	Retak pada dinding	4	3	12	155
156	Stor/COR011003	Dinding	Sarang labah labah pada dinding	2	2	4	156
157	Stor/COR011004	Dinding	Tompokan pada siling	2	2	4	157
158	Stor/COR011005	Pintu	Baik	2	2	4	158
159	Stor/COR011006	Grill pintu	Baik	2	2	4	159
160	Stor/COR011007	Dinding	Sarang labah labah pada dinding	2	2	4	160
161	Stor/COR011008	Dinding	Baik	2	2	4	161
162	Stor/COR011009	Lantai	Kesanompokan pada vinyl flooring	5	5	25	162
163	Stor/COR011010	Vinyl Flooring	Retak serpihan pada Vinyl Flooring	5	5	25	163
164	Stor/COR011011	Vinyl Flooring	Kesanompokan pada vinyl flooring	5	5	25	164
165	Stor/COR011012	Vinyl Flooring	Vinyl Flooring tercabut	5	5	25	165
166	Stor /COR011013	Siling	Baik	2	2	4	166
167	Stor/COR011014	Siling	Siling pecah	5	5	25	167
168	Stor/COR011015	Siling	Tiada siling	5	5	25	168
169	Stor/COR011016	Siling	Tiada siling	5	5	25	169
170	Stor/COR011017	Siling	Tiada siling	5	5	25	170
171	Stor/COR011018	Siling	Tiada siling	5	5	25	171
172	Stor/COR011019	Siling	Siling melendut	5	5	25	172
173	Bilik MSB/COR012001	Dinding	Baik	2	2	4	173
174	Bilik MSB/COR012002	Pintu	Baik	2	2	4	174
175	Bilik MSB/COR012003	Dinding	Baik	2	2	4	175
176	Bilik MSB/COR012004	Dinding	Baik	2	2	4	176
177	Bilik MSB/COR012005	Dinding	Retak pada dinding	4	3	12	177
178	Bilik MSB/COR012006	Siling	Baik	2	2	4	178
179	Bilik MSB/COR012007	Siling	Tiada siling	5	5	25	179
180	Bilik MSB/COR012008	Siling	Tiada siling	5	5	25	180
181	Bilik MSB/COR012009	Siling	Tiada siling	5	5	25	181
182	Bilik MSB/COR012010	Lantai	Baik	2	2	4	182
183	Bilik MSB/COR012011	Lantai	Retak pada lantai	3	3	9	183
184	Bilik Pump/COR013001	Dinding	Baik	2	2	4	184
185	Bilik Pump/COR013002	Pintu	Baik	2	2	4	185
186	Bilik Pump /COR013003	Gril Pintu	Baik	2	2	4	186
187	Tandas lelaki/COR014001	Dinding	Baik	2	2	4	187
188	Tandas lelaki/COR014002	Sinki	Baik	2	2	4	188
189	Tandas lelaki/COR014003	Paip air	Baik	2	2	4	189
190	Tandas lelaki/COR014004	Dinding	Baik	2	2	4	190
191	Tandas lelaki/COR014005	Paip air	Baik	2	2	4	191
192	Tandas lelaki/COR014006	Pintu	Baik	2	2	4	192
193	Tandas lelaki/COR014007	Cermin nako	Baik	2	2	4	193
194	Tandas lelaki/COR014008	Tingkap	Cermin nako tidak berada dalam keadaan yang betul	5	5	25	194
195	Tandas lelaki/COR014009	Tingkap	Bingkai kayu cermin nako reput	5	5	25	195
196	Tandas lelaki/COR014010	Dinding	Jubin dinding pecah	5	5	25	196
197	Tandas lelaki/COR014011	Dinding	Baik	2	2	4	197
198	Tandas lelaki/COR014012	Dinding	Baik	2	2	4	198
199	Tandas lelaki/COR014013	Pintu	Baik	2	2	4	199
200	Tandas lelaki/COR014014	Siling	Baik	2	2	4	200
201	Tandas lelaki/COR014015	Siling	Siling melendut	5	5	25	201
202	Tandas lelaki/COR014016	Siling	Siling melendut	5	5	25	202
203	Tandas lelaki/COR014017	Lantai	Baik	2	2	4	203
204	Tandas Jurutera Bangunan Jalan /COR015001	Dinding	Baik	2	2	4	204
205	Tandas Jurutera Bangunan Jalan /COR015002	Dinding	Baik	2	2	4	205
206	Tandas Jurutera Bangunan Jalan /COR015003	Dinding	Baik	2	2	4	206
207	Tandas Jurutera Bangunan Jalan /COR015004	Sinki	Baik	2	2	4	207
208	Tandas Jurutera Bangunan Jalan /COR015005	Dinding	Baik	2	2	4	208
209	Tandas Jurutera Bangunan Jalan /COR015006	Pintu	Baik	2	2	4	209
210	Tandas Jurutera Bangunan Jalan /COR015007	Siling	Siling pecah dan kesanompokan air	5	5	25	210
211	Tandas Jurutera Bangunan Jalan /COR015008	Lantai	Baik	2	2	4	211
212	Bilik Jurutera Bangunan Jalan/COR016001	Dinding	Baik	2	2	4	212
213	Bilik Jurutera Bangunan Jalan/COR016002	Dinding	Baik	2	2	4	213
214	Bilik Jurutera Bangunan Jalan/COR016003	Dinding	Baik	2	2	4	214
215	Bilik Jurutera Bangunan Jalan/COR016004	Dinding	Baik	2	2	4	215

Figure 25 : BCARS of Civil Component (143-215)

216	Bilik Jurutera Bangunan Jalan/COR016005	Grill Tingkap	Baik	2	2	4	216
217	Bilik Jurutera Bangunan Jalan/COR016006	Dinding	Baik	2	2	4	217
218	Bilik Jurutera Bangunan Jalan/COR016007	Pintu	Baik	2	2	4	218
219	Bilik Jurutera Bangunan Jalan/COR016008	Siling	Baik	2	2	4	219
220	Bilik Jurutera Bangunan Jalan/COR016009	Siling	Siling pecah	5	5	25	220
221	Bilik Jurutera Bangunan Jalan/COR016010	Siling	Siling retak	5	5	25	221
222	Bilik Jurutera Bangunan Jalan/COR016011	Siling	Siling retak	5	5	25	222
223	Bilik Jurutera Bangunan Jalan/COR016012	Siling	Siling retak	5	5	25	223
224	Bilik Jurutera Bangunan Jalan/COR016013	Lantai	Baik	2	2	4	224
225	External/COR017001	Dinding	Baik	2	2	4	225
226	External/COR017002	Dinding	Tumbuhan tumbuh pada dinding	3	2	6	226
227	External/COR017003	Dinding	Keretakan pada dinding	3	2	6	227
228	External/COR017004	Apron	Jubin tertanggal	4	3	12	228
229	External/COR017005	Longkang	Keretakan pada longkang	5	4	20	229
230	External/COR017006	Apron	Jubin tertanggal pada apron	4	3	12	230
231	External/COR017007	Paip saliran	Serpihan retak pada paip	3	3	9	231
232	External/COR017008	Longkang	Keretakan pada longkang	5	4	20	232
233	External/COR017009	Longkang	Tumbuhan tumbuh	3	2	6	233
234	External/COR017010	Longkang	Tumbuhan tumbuh	3	2	6	234
235	External/COR017011	Longkang	Keretakan pada longkang	5	4	20	235
236	External/COR017012	Longkang	Keretakan pada longkang	5	4	20	236
237	External/COR017013	Longkang	Tumbuhan tumbuh	3	2	6	237
238	External/COR017014	Longkang	Penutup longkang berkarat	3	3	9	238
239	External/COR017015	Apron	Jubin tertanggal	4	3	12	239
240	External/COR017016	Dinding	Baik	2	2	4	240
241	External/COR017017	Dinding	Baik	2	2	4	241
242	External/COR017018	Dinding	Baik	2	2	4	242
243	External/COR017019	Dinding	Baik	2	2	4	243
244	External/COR017020	Tangga	Baik	2	2	4	244
245	External/COR017021	Susur Tangan	Baik	2	2	4	245
246	External/COR017022	Susur Tangan	Komponen pada susur tangan tercabut	4	3	12	246
247	External/COR017023	Susur Tangan	Komponen penutup pada susur tangan tercabut	5	5	25	247
248	External/COR017024	Tangga	Papan pada bawah tangga tercabut	3	4	12	248
249	External/COR017025	Siling	Baik	2	2	4	249
250	External/COR017026	Lantai	Baik	2	2	4	250
251	External/COR018001	Balkoni /Susur	Baik	2	2	4	251
252	External/COR018002	Balkoni /Susur	Baik	2	2	4	252
253	External/COR018003	Longkang	Keretakan pada longkang	5	4	20	253
254	External/COR018004	Longkang	Tumbuhan tumbuh	3	2	6	254
255	External/COR018005	Susur pagar	Berkarat pada susur tangan tangga	4	3	12	255
256	External/COR018006	Apron	Tompokan cat pada jubin	2	2	4	256
257	External/COR018007	Apron	Berlumut pada dinding apron	5	4	20	257
258	External/COR018008	Tangga	Baik	2	2	4	258
259	External/COR018009	Tangga	Tumbuhan tumbuh pada tangga	3	2	6	259
260	External/COR018010	Tangga	Mozek tertanggal	4	3	12	260
261	External/COR018011	Tangga	Keretakan menegak pada jubin tangga	4	3	12	261
262	External/COR018012	C-tangga	Lumut pada jubin tangga	3	2	6	262
263	External/COR018013	Tangga	Keretakan pada jubin tangga	4	3	12	263
264	External/COR018014	Tangga	Lumut pada jubin tangga	3	2	6	264
265	External/COR018015	Pagar Tangga	Komponen susur tangan tangga tertanggal	4	3	12	265
266	External/COR018016	Pagar Tangga	Komponen susur tangan tangga berkarat	4	3	12	266
267	External/COR018017	Tangga	Keretakan menegak pada dinding	3	3	9	267
268	External/COR018018	Apron	Lubang pada dinding apron	3	3	9	268
269	External/COR018019	Longkang	Keretakan pada longkang	5	4	20	269
270	External/COR018020	Longkang	Keretakan mendatar pada longkang	5	4	20	270
271	External/COR018021	C-Longkang	Retak menegak pada longkang	5	4	20	271
272	External/COR018022	Dinding	Cat pudar pada permukaan dinding	2	2	4	272
273	External/COR018023	Longkang	Keretakan pada longkang	5	4	20	273
274	External/COR018024	Longkang	Penutup longkang berkarat	3	3	9	274
275	External/COR018025	Penutup	Penutup longkang berkarat	3	3	9	275
276	External/COR018026	Longkang	Keretakan pada longkang	5	4	20	276
277	External/COR018027	Apron	Kelembapan pada jubin apron	3	3	9	277
278	External/COR018028	Paip air	Paip bocor	3	3	9	278
279	External/COR018029	Paip bekalan air	Paip bekalan air tercabut	3	4	12	279
280	External/COR018030	Longkang	Keretakan pada longkang	5	4	20	280
281	External/COR018031	C- Longkang	Keretakan pada longkang	5	4	20	281
282	External/COR018032	Lantai	Jubin tertanggal	4	3	12	282
283	External/COR018033	Longkang	Keretakan pada longkang	5	4	20	283
284	External/COR018034	Longkang	Tumbuhan tumbuh pada longkang	3	2	6	284
285	External/COR018035	Longkang	Retak menegak pada longkang	5	4	20	285
286	External/COR018036	Longkang	Retak serpihan	5	4	20	286
287	External/COR018037	Longkang	Keretakan pada longkang	5	4	20	287

Figure 26 : BCARS of Civil Component (216-287)

288	External/C0R018038	Longkang	Keretakan	5	4	20	288
289	External/C0R018039	Longkang	Paip saluran bocor	4	3	12	289
290	External/C0R018040	Paip saluran	Paip saluran bocor	4	3	12	290
291	External/C0R018041	Tangga	Baik	2	2	4	291
292	External/C0R018042	Tangga	Komponen pada susur tangan longgar	3	3	9	292
293	External/C0R018043	Tangga	Baik	2	2	4	293
294	External/C0R018044	Tangga	Mozek tertanggal	3	3	9	294
295	External/C0R018045	Tangga	Komponen susur tangan berkarat	3	3	9	295
296	External/C0R018046	Tangga	Komponen susur tangan tercabut	3	3	9	296
297	External/C0R018047	Tangga	Baik	2	2	4	297
298	External/C0R018048	Susur pagar	Baik	2	2	4	298
299	External/C0R018049	Tangga	Jubin pecah	4	3	12	299
300	External/C0R018050	Tangga	Tumbuhan tumbuh pada tangga	3	2	6	300
301	External/C0R018051	Tangga	Jubin tertanggal	4	3	12	301
302	External/C0R018052	Dinding	Baik	2	2	4	302
303	External/C0R018053	Dinding	Baik	2	2	4	303
304	External/C0R018054	Tingkap	Baik	2	2	4	304
305	External/C0R018055	Dinding	Baik	2	2	4	305
306	External/C0R018056	Tingkap	Baik	2	2	4	306
307	External/C0R018057	Dinding	Baik	2	2	4	307
308	External/C0R018058	Tingkap	Baik	2	2	4	308
309	External/C0R018059	Pirtu	Baik	2	2	4	309
310	External/C0R018060	Tiang PVC	Baik	2	2	4	310
311	External/C0R018061	Tiang-PVC	Tiang PVC menggelupas	2	2	4	311
312	External/C0R018062	Dinding	Baik	2	2	4	312
313	External/C0R018063	Dinding	Lubang pada dinding	4	3	12	313
314	External/C0R018064	Tingkap	Baik	2	2	4	314
315	External/C0R018065	Grill pintu	Baik	2	2	4	315
316	External/C0R018066	Tingkap	Baik	2	2	4	316
317	External/C0R018067	Dinding	Baik	2	2	4	317
318	External/C0R018068	Pirtu	Bingkai pintu berlubang	4	3	12	318
319	External/C0R018069	Grill pintu	Cat pada grill pintu menggelupas	2	2	4	319
320	External/C0R018070	Dinding	Baik	2	2	4	320
321	External/C0R018071	Tingkap	Baik	2	2	4	321
322	External/C0R018072	Pirtu	Baik	2	2	4	322
323	External/C0R018073	Tingkap	Baik	2	2	4	323
324	External/C0R018074	Dinding	Baik	2	2	4	324
325	External/C0R018075	Dinding	Baik	2	2	4	325
326	External/C0R018076	Dinding	Baik	2	2	4	326
327	External/C0R018077	Tingkap	Tiada cermin	5	5	25	327
328	External/C0R018078	Papan	Sarang labah labah	2	2	4	328
329	External/C0R018079	Tiang	Keretakan pada tiang	4	4	16	329
330	External/C0R018080	Tiang	Tumbuhan tumbuh pada tiang	3	2	6	330
331	External/C0R018081	Siling	Baik	2	2	4	331
332	External/C0R018082	Lantai	Baik	2	2	4	332
333	External/C0R018083	Lantai	Mozek tercabut	3	3	9	333
334	External/C0R018084	Lantai	Jubin tercabut	3	3	9	334
335	External/C0R018085	C- Lantai	Tompokan pada lantai	2	2	4	335
336	External/C0R018086	C - Skirting	Keretakan pada jubin	3	3	9	336
337	External/C0R018087	Skirting	Skirting tertanggal	3	3	9	337
338	External/C0R018088	Lantai	Jubin tertanggal	3	3	9	338
339	External/C0R018089	Lantai	Jubin tertanggal	3	3	9	339
340	External/C0R018090	Lantai	Jubin tertanggal	3	3	9	340
341	External/C0R018091	Lantai	Mozek tertanggal	3	3	9	341
342	External/C0R018092	Skirting	Keretakan pada dinding	4	3	12	342
343	External/C0R018093	Skirting	Keretakan pada dinding	4	3	12	343
344	External/C0R018094	Skirting	Retak pada jubin skirting	4	3	12	344
345	External/C0R018095	Lantai	Kesan kotoran pada lantai	2	2	4	345
346	External/C0R018096	Awning	Baik	2	2	4	346
347	External/C0R019001	Dinding	Baik	2	2	4	347
348	External/C0R019002	Dinding	Baik	2	2	4	348
349	External/C0R019003	Apron	Keretakan pada longkang	5	4	20	349
350	External/C0R019004	Apron	Keretakan pada longkang	5	4	20	350
351	External/C0R019005	Paip saluran	Paip pada longkang tertanggal	4	3	12	351
352	External/C0R019006	Apron	Keretakan pada apron	5	4	20	352
353	External/C0R019007	Dinding	Lubang pada dinding	2	3	6	353
354	External/C0R019008	C - Dinding	Lubang pada dinding	2	3	6	354
355	External/C0R019009	C - Dinding	Lubang pada dinding	2	3	6	355
356	External/C0R019010	Paip saluran	Paip tertanggal	4	3	12	356
357	External/C0R019011	Apron	Keretakan pada apron	5	4	20	357
358	External/C0R019012	Dinding	Baik	2	2	4	358
359	External/C0R019013	Dinding	Baik	2	2	4	359
360	External/C0R019014	Tangga	Baik	2	2	4	360
361	External/C0R019015	Tangga	Komponen pada susur tangan tangga	5	5	25	361

Figure 27 : BCARS of Civil Component (288-361)

362	External/C0R019016	Susur tangan	Baik	2	2	4	362
363	External/C0R02001	Tangga	Baik	2	2	4	363
364	External/C0R02002	Dinding	Baik	2	2	4	364
365	External/C0R02003	Tingkap	Baik	2	2	4	365
366	External/C0R02004	Tingkap	Baik	2	2	4	366
367	External/C0R02005	Tingkap	Baik	2	2	4	367
368	External/C0R02006	Tingkap	Baik	2	2	4	368
369	External/C0R02007	Tingkap	Baik	2	2	4	369
370	External/C0R02008	Siling	Baik	2	2	4	370
371	External/C0R02009	Awning	Baik	2	2	4	371
372	External/C0R020010	Tangga	Jubin tangga tertanggal	4	3	12	372
373	External/C0R020011	Tangga	Jubin tertanggal	4	3	12	373
374	External/C0R020012	Skirting	Jubin tertanggal	4	3	12	374
375	External/C0R020013	Skirting	Jubin tertanggal	4	3	12	375
376	External/C0R020014	Rasuk	Lubang pada rasuk	5	5	25	376
377	External/C0R020015	Longkang	Keretakan pada longkang	5	4	20	377
378	External/C0R020016	Longkang	Tumbuhan tumbuh pada longkang	3	2	6	378
379	External/C0R020017	Apron	Kesan kotoran pada apron	2	2	4	379
380	External/C0R020018	Rasuk	Retakan pada rasuk	5	5	25	380
381	External/C0R020019	Rasuk	Lubang pada rasuk	5	5	25	381
382	External/C0R020020	Apron	Keretakan pada apron	5	4	20	382
383	External/C0R020021	Longkang	Tumbuhan tumbuh pada longkang	3	2	6	383
384	External/C0R020022	Apron	Keretakan pada apron	5	4	20	384
385	External/C0R020023	Rasuk	Lubang pada rasuk	5	5	25	385
386	External/C0R020024	Apron	Tumbuhan tumbuh pada longkang	3	2	6	386
387	External/C0R020025	Apron	Keretakan pada apron	5	4	20	387
388	External/C0R020026	Apron	Keretakan pada apron	5	4	20	388
389	External/C0R020027	Apron	Keretakan pada apron	5	4	20	389
390	External/C0R020028	Longkang	Tumbuhan tumbuh	3	2	6	390
391	External/C0R020029	Apron	Keretakan pada apron	5	4	20	391
392	External/C0R020030	Apron	Keretakan pada apron	5	4	20	392
393	External/C0R020031	Apron	Keretakan pada apron	5	4	20	393
394	External/C0R020032	Apron	Tumbuhan tumbuh pada longkang	3	2	6	394
395	External/C0R020033	Apron	Keretakan pada apron	5	4	20	395
396	External/C0R020034	Apron	Keretakan pada apron	5	4	20	396
397	External/C0R020035	Longkang	Tumbuhan tumbuh pada longkang	3	2	6	397
398	External/C0R020036	Longkang	Tumbuhan tumbuh pada longkang	3	2	6	398
399	External/C0R020037	Apron	Keretakan pada apron	5	4	20	399
400	External/C0R020038	Apron	Keretakan pada apron	5	4	20	400
401	External/C0R020039	Apron	Keretakan pada apron	5	4	20	401
402	External/C0R020040	Apron	Keretakan pada apron	5	4	20	402
403	External/C0R020041	Apron	Keretakan pada apron	5	4	20	403
404	External/C0R020042	Apron	Keretakan pada apron	5	4	20	404
405	External/C0R020043	Longkang	Tumbuhan tumbuh pada longkang	3	2	6	405
406	External/C0R020044	Apron	Keretakan pada apron	5	4	20	406
407	Kaunter C0R021001	Dinding A	Baik	2	2	4	407
408	Kaunter C0R021002	Dinding B	Baik	2	2	4	408
409	Kaunter C0R021003	Dinding C	Baik	2	2	4	409
410	Kaunter C0R021004	Tingkap	Baik	2	2	4	410
411	Kaunter C0R021005	Dinding D	Baik	2	2	4	411
412	Kaunter C0R021006	Tingkap	Baik	2	2	4	412
413	Kaunter C0R021007	Pintu	Baik	2	2	4	413
414	Kaunter C0R021008	Siling	Baik	2	2	4	414
415	Kaunter C0R021009	Siling	Siling berlubang	5	5	25	415
416	Kaunter C0R021010	Siling	Siling tertanggal pada bingkai siling	5	5	25	416
417	Kaunter C0R021011	Lantai	Baik	2	2	4	417
418	Kaunter C0R021012	Jubin	Jubin tertanggal	5	5	25	418
419	Kaunter C0R021013	Tingkap	Baik	2	2	4	419
420	Kaunter C0R021014	Meja Kaunter	Baik	2	2	4	420
421	Bilik Penolong Jurutera C1R022001	Dinding A	Baik	2	2	4	421
422	Bilik Penolong Jurutera C1R022002	Dinding B	Baik	2	2	4	422
423	Bilik Penolong Jurutera C1R022003	Pintu	Retak serpihan pada pintu	3	2	6	423
424	Bilik Penolong Jurutera C1R022004	Dinding C	Baik	2	2	4	424
425	Bilik Penolong Jurutera C1R022005	Tingkap	Baik	2	2	4	425
426	Bilik Penolong Jurutera C1R022006	Dinding D	Baik	2	2	4	426
427	Bilik Penolong Jurutera C1R022007	Siling	Baik	2	2	4	427
428	Bilik Penolong Jurutera C1R022008	Siling	Lubang pada siling	5	5	25	428
429	Bilik Penolong Jurutera C1R022009	Siling	Lubang pada siling	5	5	25	429
430	Bilik Penolong Jurutera C1R022010	Lantai	Baik	2	2	4	430
431	Jurutera bangunan C1R023001	Dinding A	Baik	2	2	4	431
432	Jurutera bangunan C1R023001	Dinding B	Baik	2	2	4	432
433	Jurutera bangunan C1R023003	Dinding C	Baik	2	2	4	433
434	Jurutera bangunan C1R023003	Pintu	Baik	2	2	4	434
435	Jurutera bangunan C1R023005	Dinding D	Baik	2	2	4	435

Figure 28 : BCARS of Civil Component (362-435)

436	Jurutera bangunan C1R023006	Dinding	Lubang pada dinding	4	3	12	436
437	Jurutera bangunan C1R023007	Siling	Baik	2	2	4	437
438	Jurutera bangunan C1R023008	Siling	Siling retak	5	5	25	438
439	Jurutera bangunan C1R023009	Lantai	Baik	2	2	4	439
440	Bilik Mesyuarat C1R024001	Dinding A	Baik	2	2	4	440
441	Bilik Mesyuarat C1R024002	Dinding	Skrus terkeluar dari dinding	4	3	12	441
442	Bilik Mesyuarat C1R024003	Dinding	Kotoran pada dinding	2	2	4	442
443	Bilik Mesyuarat C1R024004	Dinding	Cat mengelupas	2	2	4	443
444	Bilik Mesyuarat C1R024005	Dinding	Retak serpihan pada dinding	4	4	16	444
445	Bilik Mesyuarat C1R024006	Tiang	Retak serpihan pada plaster column	4	3	12	445
446	Bilik Mesyuarat C1R024007	Dinding B	Baik	2	2	4	446
447	Bilik Mesyuarat C1R024008	Pintu	Engsel pintu berkarat	4	4	16	447
448	Bilik Mesyuarat C1R024009	Dinding C	Baik	2	2	4	448
449	Bilik Mesyuarat C1R024010	Tingkap	Tingkap reput dan tidak boleh dibuka	5	5	25	449
450	Bilik Mesyuarat C1R024011	Dinding D	Baik	2	2	4	450
451	Bilik Mesyuarat C1R024012	Dinding	Lubang/retak serpihan pada dinding	4	3	12	451
452	Bilik Mesyuarat C1R024013	Siling	Baik	2	2	4	452
453	Bilik Mesyuarat C1R024014	Siling	Kesan tompokan pada siling	2	2	4	453
454	Bilik Mesyuarat C1R024015	Siling	Siling tertanggal	5	5	25	454
455	Bilik Mesyuarat C1R024016	Siling	Keretakan pada siling	5	5	25	455
456	Bilik Mesyuarat C1R024017	Siling	Kesan tompokan pada siling	2	2	4	456
457	Bilik Mesyuarat C1R024018	Lantai	Baik	2	2	4	457
458	Bilik Mesyuarat C1R024019	Lantai	Lantai tertanggal	5	5	25	458
459	Bilik jurutera Bangunan C1R025001	Dinding A	Baik	2	2	4	459
460	Bilik jurutera Bangunan C1R025002	Dinding B	Baik	2	2	4	460
461	Bilik jurutera Bangunan C1R025003	Pintu	Retak serpihan pada pintu	4	3	12	461
462	Bilik jurutera Bangunan C1R025004	Dinding C	Baik	2	2	4	462
463	Bilik jurutera bangunan/ C1R02401	Tiang	Retak serpihan pada plaster column	4	3	12	463
464	Bilik jurutera Bangunan C1R025006	Siling	Baik	2	2	4	464
465	Bilik jurutera Bangunan C1R025007	Dinding D	Baik	2	2	4	465
466	Bilik jurutera Bangunan C1R025008	Lantai	Baik	2	2	4	466
467	Bilik Penolong Jurutera C1R026001	Dinding A	Baik	2	2	4	467
468	Bilik Penolong Jurutera C1R026002	Dinding B	Baik	2	2	4	468
469	Bilik Penolong Jurutera C1R026003	Pintu	Baik	2	2	4	469
470	Bilik Penolong Jurutera C1R026004	Dinding C	Baik	2	2	4	470
471	Bilik Penolong Jurutera C1R026005	Dinding	Retak serpihan pada dinding	4	3	12	471
472	Bilik Penolong Jurutera C1R026006	Dinding D	Baik	2	2	4	472
473	Bilik Penolong Jurutera C1R026007	Tingkap	Baik	2	2	4	473
474	Bilik Penolong Jurutera C1R026008	Siling	Baik	2	2	4	474
475	Bilik Penolong Jurutera C1R026009	Lantai	Baik	2	2	4	475
476	Bilik Penolong Jurutera C1R027001	Dinding A	Baik	2	2	4	476
477	Bilik Penolong Jurutera C1R027002	Dinding B	Baik	2	2	4	477
478	Bilik Penolong Jurutera C1R027003	Pintu	Baik	2	2	4	478
479	Bilik Penolong Jurutera C1R027004	Dinding C	Baik	2	2	4	479
480	Bilik Penolong Jurutera C1R027005	Tingkap	Baik	2	2	4	480
481	Bilik Penolong Jurutera C1R027006	Dinding D	Baik	2	2	4	481
482	Bilik Penolong Jurutera C1R027007	Siling	Baik	2	2	4	482
483	Bilik Penolong Jurutera C1R027008	Siling	Siling pecah	5	5	25	483
484	Bilik Penolong Jurutera C1R027009	Lantai	Baik	2	2	4	484
485	Bilik Penolong Jurutera C1R028001	Dinding A	Baik	2	2	4	485
486	Bilik Penolong Jurutera C1R028002	Dinding B	Baik	2	2	4	486
487	Bilik Penolong Jurutera C1R028003	Dinding C	Baik	2	22	44	487
488	Bilik Penolong Jurutera C1R028004	Dinding	Dinding pecah	5	5	25	488
489	Bilik Penolong Jurutera C1R028005	Dinding D	Baik	2	2	4	489
490	Bilik Penolong Jurutera C1R028006	Siling	Baik	2	2	4	490
491	Bilik Penolong Jurutera C1R029007	Lantai	Baik	2	2	4	491
492	Bilik Penolong Jurutera C1R028008	Skirting	Jubin tertanggal	5	5	25	492
493	Bilik Penolong Jurutera C1R029001	Dinding A	Baik	2	2	4	493
494	Bilik Penolong Jurutera C1R029002	Dinding B	Baik	2	2	4	494
495	Bilik Penolong Jurutera C1R029003	Pintu	Baik	2	2	4	495
496	Bilik Penolong Jurutera C1R029004	Dinding C	Baik	2	2	4	496
497	Bilik Penolong Jurutera C1R029005	Dinding D	Baik	2	2	4	497
498	Bilik Penolong Jurutera C1R029006	Tingkap	Tingkap mengelupas	3	3	9	498
499	Bilik Penolong Jurutera C1R029007	Siling	Baik	2	2	4	499
500	Bilik Penolong Jurutera C1R029008	Siling	Siling pecah	5	5	25	500
501	Bilik Penolong Jurutera C1R029009	Lantai	Baik	2	2	4	501
502	Pantri C1R030001	Dinding A	Baik	2	2	4	502
503	Pantri C1R030002	Dinding	Baik	2	2	4	503
504	Pantri C1R030003	Pintu	Pintu tiada	5	5	25	504
505	Pantri C1R030004	Dinding C	Baik	2	2	4	505
506	Pantri C1R030005	Dinding D	Baik	2	2	4	506
507	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
508	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
509	Pantri C1R030006	Tingkap	Baik	2	2	4	507

Figure 29 : BCARS of Civil Component (436-509)

510	Pantri C1R030007	Kabinet	Baik	2	2	4	508
511	Pantri C1R030008	Siling	Baik	2	2	4	509
512	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
513	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
514	Pantri C1R030009	Lantai	Baik	2	2	4	510
515	Stor C1R031001	Dinding A	Baik	2	2	4	511
516	Stor C1R031002	Tingkap	Baik	2	2	4	512
517	Stor C1R031003	Dinding B	Baik	2	2	4	513
518	Stor C1R031004	Pintu	Baik	2	2	4	514
519	Stor C1R031005	Dinding C	Baik	2	2	4	515
520	Stor C1R031006	Dinding D	Baik	2	2	4	516
521	Stor C1R031007	Siling	Baik	2	2	4	517
522	Stor C1R031008	Siling	Baik	2	2	4	518
523	Tandas lelaki C1R032001	Dinding A	Baik	2	2	4	519
524	Tandas lelaki C1R032002	Dinding B	Baik	2	2	4	520
525	Tandas lelaki C1R032003	Pintu	Baik	2	2	4	521
526	Tandas lelaki C1R032004	Paip air	Baik	2	2	4	522
527	Tandas lelaki C1R032005	Sinki	Baik	2	2	4	523
528	Tandas lelaki C1R032006	Cermin Nako	Baik	2	2	4	524
529	Tandas lelaki C1R032007	Cermin Nako	Cermin hilang/pecah	5	5	25	525
530	Tandas lelaki C1R032008	Dinding C	Baik	2	2	4	526
531	Tandas lelaki C1R032009	Dinding D	Baik	2	2	4	527
532	Tandas lelaki C1R032010	Pintu	Baik	2	2	4	528
533	Tandas lelaki C1R032011	Siling	Baik	2	2	4	529
534	Tandas lelaki C1R032012	Siling	Siling melendut	5	5	25	530
535	Tandas lelaki C1R032013	Lantai	Baik	2	2	4	531
536	Tandas lelaki C1R032014	Jubin	Jubin tertanggal	5	5	25	532
537	Tandas lelaki C1R032015	Jubin	Jubin pecah	5	4	20	533
538	Bilik Solat lelaki C1R03301	Dinding A	Baik	2	2	4	534
539	Bilik Solat lelaki C1R03302	Dinding	Retak serpihan pada dinding	4	3	12	535
540	Bilik Solat lelaki C1R03303	Dinding B	Baik	2	2	4	536
541	Bilik Solat lelaki C1R03304	Dinding C	Baik	2	2	4	537
542	Bilik Solat lelaki C1R03305	Dinding D	Baik	2	2	4	538
543	Bilik Solat lelaki C1R03306	Siling	Baik	2	2	4	539
544	Bilik Solat lelaki C1R03307	Siling	Siling melendut	5	5	25	540
545	Bilik Solat lelaki C1R03308	Siling	Keretakan pada siling	5	5	25	541
546	Bilik Solat lelaki C1R03309	Siling	Tiada siling	5	5	25	542
547	Bilik Solat lelaki C1R03310	Siling	Siling pecah	5	5	25	543
548	Bilik Solat lelaki C1R03311	Lantai/Carpet	Baik	2	2	4	544
549	Bilik Jurutera selenggara C1R034001	Dinding A	Baik	2	2	4	545
550	Bilik Jurutera selenggara C1R034002	Dinding B	Baik	2	2	4	546
551	Bilik Jurutera selenggara C1R034003	Dinding C	Baik	2	2	4	547
552	Bilik Jurutera selenggara C1R034004	Dinding D	Baik	2	2	4	548
553	Bilik Jurutera selenggara C1R034005	Siling	Baik	2	2	4	549
554	Bilik Jurutera selenggara C1R034006	Siling	Siling retak	5	5	25	550
555	Bilik Jurutera selenggara C1R034007	Siling	Lubang pada siling	5	5	25	551
556	Bilik Jurutera selenggara C1R034008	Lantai	Baik	2	2	4	552
557	Ruang teknikal C1R035001	Dinding A	Baik	2	2	4	553
558	Ruang teknikal C1R035002	Pintu	Baik	2	2	4	554
559	Ruang teknikal C1R035003	Pintu	Baik	2	2	4	555
560	Ruang teknikal C1R035004	Dinding B	Baik	2	2	4	556
561	Ruang teknikal C1R035005	Pintu	Baik	2	2	4	557
562	Ruang teknikal C1R035006	Tingkap	Baik	2	2	4	558
563	Ruang teknikal C1R035007	Pintu	Baik	2	2	4	559
564	Ruang teknikal C1R035008	Tingkap	Baik	2	2	4	560
565	Ruang teknikal C1R035009	Dinding C	Baik	2	2	4	561
566	Ruang teknikal C1R035010	Pintu	Baik	2	2	4	562
567	Ruang teknikal C1R035011	Dinding D	Baik	2	2	4	563
568	Ruang teknikal C1R035012	Dinding	Tumpahan cat pada dinding	2	2	4	564
569	Ruang teknikal C1R035013	Tingkap	Baik	2	2	4	565
570	Ruang teknikal C1R035014	Tingkap	Baik	2	2	4	566
571	Ruang teknikal C1R035015	Tingkap	Baik	2	2	4	567
572	Ruang teknikal C1R035016	Tingkap	Baik	2	2	4	568
573	Ruang teknikal C1R035017	Pintu	Baik	2	2	4	569
574	Ruang teknikal C1R035018	Tingkap	Baik	2	2	4	570
575	Ruang teknikal C1R035019	Tingkap	Baik	2	2	4	571
576	Ruang teknikal C1R035020	Pintu	Baik	2	2	4	572
577	Ruang teknikal C1R035021	Pintu	Baik	2	2	4	573
578	Ruang teknikal C1R035022	Tingkap	Baik	2	2	4	574
579	Ruang teknikal C1R035023	Pintu	Baik	2	2	4	575
580	Ruang teknikal C1R035024	Tingkap	Baik	2	2	4	576
581	Ruang teknikal C1R035025	Siling	Baik	2	2	4	577
582	Ruang teknikal C1R035026	Jubin	Cat tidak kemas	2	2	4	578
583	Ruang teknikal C1R035027	Siling	Siling pecah	5	5	25	579

Figure 30 : BCARS of Civil Component (510-583)

584	Ruang teknikal C1R035028	Siling	Siling melendut	5	5	25	580
585	Ruang teknikal C1R035029	Siling	Siling retak	5	5	25	581
586	Ruang teknikal C1R035030	Siling	Lubang pada siling	5	5	25	582
587	Ruang teknikal C1R035031	Siling	Lubang pada siling	5	5	25	583
588	Ruang teknikal C1R035032	Siling	Lubang pada siling	5	5	25	584
589	Ruang teknikal C1R035033	Siling	Lubang pada siling	5	5	25	585
590	Ruang teknikal C1R035034	Siling	Siling retak	5	5	25	586
591	Ruang teknikal C1R035035	Siling	Lubang pada siling	5	5	25	587
592	Ruang teknikal C1R035036	Siling	Siling retak	5	5	25	588
593	Ruang teknikal C1R035037	Siling	Siling melendut	5	5	25	589
594	Ruang teknikal C1R035038	Siling	Siling retak	5	5	25	590
595	Ruang teknikal C1R035039	Siling	Siling retak	5	5	25	591
596	Ruang teknikal C1R035040	Siling	Lubang pada siling	5	5	25	592
597	Ruang teknikal C1R035041	Siling	Lubang pada siling	5	5	25	593
598	Ruang teknikal C1R035042	Siling	Siling retak	5	5	25	594
599	Ruang teknikal C1R035043	Siling	Siling retak	5	5	25	595
600	Ruang teknikal C1R035044	Siling	Siling melendut	5	5	25	596
601	Ruang teknikal C1R035045	Siling	Lubang pada siling	5	5	25	597
602	Ruang teknikal C1R035046	Lantai	Baik	2	2	4	598
603	External C1R036001	Dinding A	Baik	2	2	4	599
604	External C1R036002	Dinding B	Baik	2	2	4	600
605	External C1R036003	Dinding C	Baik	2	2	4	601
606	External C1R036004	Dinding D	Baik	2	2	4	602
607	External C1R036005	Siling	Baik	2	2	4	603
608	External C1R036006	Lantai	Baik	2	2	4	604
609	External C1R036007	Lantai	Jubin pecah	4	3	12	605
610	External C1R036008	Lantai	Kesan tompokan cat	2	2	4	606
611	External C1R036009	Tangga	Baik	2	2	4	607
612	External C1R036010	Susur tangga	Susur tangga berkarat	4	4	16	608
613	External C1R037001	Balkoni A	Baik	2	2	4	609
614	External C1R037002	Balkoni B	Baik	2	2	4	610
615	External C1R037003	Pintu	Baik	2	1	2	611
616	External C1R037004	Dinding D/a	Baik	2	2	4	612
617	External C1R037005	Dinding D/b	Baik	2	2	4	613
618	External C1R037006	Dinding	Lubang/ retak serpihan pada dinding	5	5	25	614
619	External C1R037007	Dinding	Retak serpihan pada dinding	5	5	25	615
620	External C1R037008	Cermin Nako	Baik	2	2	4	616
621	External C1R037009	Pintu	Baik	2	2	4	617
622	External C1R037010	Dinding D/c	Baik	2	2	4	618
623	External C1R037011	Tingkap	Baik	2	2	4	619
624	External C1R037012	Dinding D/d	Baik	2	2	4	620
625	External C1R037013	Tingkap	Baik	2	2	4	621
626	External C1R037014	Pintu	Baik	2	2	4	622
627	External C1R037015	Tingkap	Baik	2	2	4	623
628	External C1R037016	Dinding D/e	Baik	2	2	4	624
629	External C1R037017	Tingkap	Baik	2	2	4	625
630	External C1R037018	Dinding D/f	Baik	2	2	4	626
631	External C1R037019	Tingkap	Baik	2	2	4	627
632	External C1R037020	Dinding D/g	Baik	2	2	4	628
633	External C1R037021	Pintu	Baik	2	2	4	629
634	External C1R037022	Dinding D/h	Baik	2	2	4	630
635	External C1R037023	Tingkap	Baik	2	2	4	631
636	External C1R037024	Siling	Baik	2	2	4	632
637	External C1R037025	Lantai	Baik	2	2	4	633
638	External C1R037026	Lantai	Kesan tompokan cat	2	2	4	634
639	External C1R037027	Lantai	Jubin tertanggal	4	3	12	635
640	External C1R037028	Lantai	Jubin retak	4	3	12	636
641	External C1R038001	Dinding A	Baik	2	2	4	637
642	External C1R038002	Dinding B	Baik	2	2	4	638
643	External C1R038003	Dinding	Lubang/ retak serpihan pada dinding	4	4	16	639
644	External C1R038004	Dinding	Hakisan pada dinding	4	4	16	640
645	External C1R038005	Dinding	Lubang/ retak serpihan pada dinding	4	4	16	641
646	External C1R038006	Dinding C	Baik	2	2	4	642
647	External C1R038007	Dinding D	Baik	2	2	4	643
648	External C1R038008	Siling	Baik	2	2	4	644
649	External C1R038009	Siling	Hakisan pada siling	4	4	16	645
650	External C1R038010	Lantai	Baik	2	2	4	646
651	External C1R038011	Jubin	Jubin pecah	5	5	25	647
652	External C1R038012	Susur tangga	Susur tangga berkarat	4	4	16	648
653	Kaunter/C2R039001	Dinding A	Baik	2	2	4	649
654	Kaunter/C2R039002	Pintu	Baik	2	2	4	650
655	Kaunter/C2R039003	Dinding B	Baik	2	2	4	651
656	Kaunter/C2R039004	Dinding B/Tiang	Pecah pada plaster tiang	4	4	16	652
657	Kaunter/C2R039005	Gril tingkap	Baik	2	2	4	653

Figure 31 : BCARS of Civil Component (584-657)



658	Kaunter/C2R039006	Meja kaunter	Baik	2	2	4	654
659	Kaunter/C2R039007	Dinding D	Baik	2	2	4	655
660	Kaunter/C2R039008	Dinding D/Pintu	Baik	2	2	4	656
661	Kaunter/C2R039009	Siling	Baik	2	2	4	657
662	Kaunter/C2R039010	Lantai	Baik	2	2	4	658
663	Bilik penolong jurutera/C2R040001	Dinding A	Baik	2	2	4	659
664	Bilik penolong jurutera/C2R040002	Grill tingkap	Baik	2	2	4	660
665	Bilik penolong jurutera/C2R040003	Dinding B	Baik	2	2	4	661
666	Bilik penolong jurutera/C2R040004	Tingkap	Baik	2	2	4	662
667	Bilik penolong jurutera/C2R040005	Dinding C	Baik	2	2	4	663
668	Bilik penolong jurutera/C2R040006	Dinding D	Baik	2	2	4	664
669	Bilik penolong jurutera/C2R040007	Siling	Siling pecah	5	5	25	665
670	Bilik penolong jurutera/C2R040008	Siling	Lubang pada siling	5	5	25	666
671	Bilik penolong jurutera/C2R040009	Lantai	Baik	2	2	4	667
672	Bilik urusetia sebut harga/C2R041001	Dinding A	Baik	2	2	4	668
673	Bilik urusetia sebut harga/C2R041002	Grill tingkap	Baik	2	2	4	669
674	Bilik urusetia sebut harga/C2R041003	Dinding B	Baik	2	2	4	670
675	Bilik urusetia sebut harga/C2R041004	Pintu	Baik	2	2	4	671
676	Bilik urusetia sebut harga/C2R041005	Dinding C	Baik	2	2	4	672
677	Bilik urusetia sebut harga/C2R041006	Pintu	Baik	2	2	4	673
678	Bilik urusetia sebut harga/C2R041007	Dinding D	Baik	2	2	4	674
679	Bilik urusetia sebut harga/C2R041008	Siling	Baik	2	2	4	675
680	Bilik urusetia sebut harga/C2R041009	Lantai	Baik	2	2	4	676
681	Bilik Jurutera Jajahan/C2R042001	Dinding A	Baik	2	2	4	677
682	Bilik Jurutera Jajahan/C2R042002	Dinding B	Baik	2	2	4	678
683	Bilik Jurutera Jajahan/C2R042003	Dinding B/Tiang	Lubang pada lepaan tiang	4	3	12	679
684	Bilik Jurutera Jajahan/C2R042004	Dinding C	Baik	2	2	4	680
685	Bilik Jurutera Jajahan/C2R042005	Dinding	Baik	2	2	4	681
686	Bilik Jurutera Jajahan/C2R042006	Dinding C/Grill	Baik	2	2	4	682
687	Bilik Jurutera Jajahan/C2R042007	Dinding D	Permukaan dinding tidak rata	3	3	9	683
688	Bilik Jurutera Jajahan/C2R042008	Dinding D	Rekahan pada lepaan dinding	3	3	9	684
689	Bilik Jurutera Jajahan/C2R042009	Siling	Siling melendut	5	5	25	685
690	Bilik Jurutera Jajahan/C2R042010	Siling	Siling melendut dan lubang pada siling	5	5	25	686
691	Bilik Jurutera Jajahan/C2R042011	Siling	Siling melendut	5	5	25	687
692	Bilik Jurutera Jajahan/C2R042012	Lantai/Karpet	Baik	2	2	4	688
693	Tandas/C2R042001	Pintu	Baik	2	2	4	689
694	Tandas/C2R042002	Dinding A	Baik	2	2	4	690
695	Tandas/C2R042003	Dinding B	Baik	2	2	4	691
696	Tandas/C2R042004	Dinding C	Baik	2	2	4	692
697	Tandas/C2R042005	Dinding D	Baik	2	2	4	693
698	Tandas/C2R042006	Tingkap	Baik	2	2	4	694
699	Tandas/C2R042007	Grill tingkap	Baik	2	2	4	695
700	Tandas/C2R042008	Siling	Baik	2	2	4	696
701	Tandas/C2R042009	Lantai	Baik	2	2	4	697
702	Bilik pembantu tadbir kanan/C2R044001	Dinding A	Baik	2	2	4	698
703	Bilik pembantu tadbir kanan/C2R044002	Tingkap	Baik	2	2	4	699
704	Bilik pembantu tadbir kanan/C2R044003	Dinding B	Baik	2	2	4	700
705	Bilik pembantu tadbir kanan/C2R044004	Tingkap	Baik	2	2	4	701
706	Bilik pembantu tadbir kanan/C2R044005	Dinding C	Baik	2	2	4	702
707	Bilik pembantu tadbir kanan/C2R044006	Tingkap	Baik	2	2	4	703
708	Bilik pembantu tadbir kanan/C2R044007	Dinding D	Baik	2	2	4	704
709	Bilik pembantu tadbir kanan/C2R044008	Tingkap	Baik	2	2	4	705
710	Bilik pembantu tadbir kanan/C2R044009	Grill tingkap	Baik	2	2	4	706
711	Bilik pembantu tadbir kanan/C2R044010	Siling	Lubang pada siling	5	5	25	707
712	Bilik pembantu tadbir kanan/C2R044011	Siling	Siling tertanggal	5	5	25	708
713	Bilik pembantu tadbir kanan/C2R044012	Siling	Siling pecah	5	5	25	709
714	Bilik pembantu tadbir kanan/C2R044013	Lantai/Karpet	Baik	2	2	4	710
715	Bilik server/C2R045001	Dinding A	Baik	2	2	4	711
716	Bilik server/C2R045002	Dinding B	Baik	2	2	4	712
717	Bilik server/C2R045003	Dinding C	Baik	2	2	4	713
718	Bilik server/C2R045004	Tingkap	Baik	2	2	4	714
719	Bilik server/C2R045005	Dinding D	Baik	2	2	4	715
720	Bilik server/C2R045006	Tingkap	Baik	2	2	4	716
721	Bilik server/C2R045007	Grill tingkap	Baik	2	2	4	717
722	Bilik server/C2R045008	Siling	Baik	2	2	4	718
723	Bilik server/C2R045009	Lantai	Baik	2	2	4	719
724	Ruang teknikal/C2R046001	Dinding A	Baik	2	2	4	720
725	Ruang teknikal/C2R046002	Tingkap	Baik	2	2	4	721
726	Ruang teknikal/C2R046003	Tingkap	Baik	2	2	4	722
727	Ruang teknikal/C2R046004	Pintu	Baik	2	2	4	723
728	Ruang teknikal/C2R046005	Tingkap	Baik	2	2	4	724
729	Ruang teknikal/C2R046006	Tingkap	Baik	2	2	4	725
730	Ruang teknikal/C2R046007	Grill tingkap	Baik	2	2	4	726
731	Ruang teknikal/C2R046008	Pintu	Baik	2	2	4	727

Figure 32 : BCARS of Civil Component (658-731)

732	Ruang teknikal/C2R046009	Tingkap	Baik	2	2	4	728
733	Ruang teknikal/C2R046010	Dinding B	Baik	2	2	4	729
734	Ruang teknikal/C2R046011	Pintu	Baik	2	2	4	730
735	Ruang teknikal/C2R046012	Pintu	Baik	2	2	4	731
736	Ruang teknikal/C2R046013	Kabinet	Baik	2	2	4	732
737	Ruang teknikal/C2R046014	Dinding C	Baik	2	2	4	733
738	Ruang teknikal/C2R046015	Dinding C	Cat pada dinding tidak sekata	2	2	4	734
739	Ruang teknikal/C2R046016	Grill tingkap	Baik	2	2	4	735
740	Ruang teknikal/C2R046017	Dinding D	Lubang pada dinding	4	3	12	736
741	Ruang teknikal/C2R046018	Siling	Lubang pada siling	5	5	25	737
742	Ruang teknikal/C2R046019	Siling	Lubang pada siling	5	5	25	738
743	Ruang teknikal/C2R046020	Siling	Lubang pada siling	5	5	25	739
744	Ruang teknikal/C2R046021	Siling	Lubang pada siling	5	5	25	740
745	Ruang teknikal/C2R046022	Siling	Siling melendut dan lubang kecil pada siling	5	5	25	741
746	Ruang teknikal/C2R046023	Siling	Siling retak dan kesan tompok pada siling	5	5	25	742
747	Ruang teknikal/C2R046024	Siling	Keretakan pada siling	5	5	25	743
748	Ruang teknikal/C2R046025	Siling	Siling melendut	5	5	25	744
749	Ruang teknikal/C2R046025	Lantai	Baik	2	2	4	745
750	Ruang teknikal/C2R046026	Lantai	Jubin retak	5	5	25	746
751	Bilik fotostat/C2R047001	Dinding A	Baik	2	2	4	747
752	Bilik fotostat/C2R047002	Dinding B	Baik	2	2	4	748
753	Bilik fotostat/C2R047003	Dinding C	Baik	2	2	4	749
754	Bilik fotostat/C2R047004	Tingkap	Baik	2	2	4	750
755	Bilik fotostat/C2R047005	Dinding D	Baik	2	2	4	751
756	Bilik fotostat/C2R047006	Siling	Siling melendut	5	5	25	752
757	Bilik fotostat/C2R047007	Lantai	Baik	2	2	4	753
758	Pantri/C2R048001	Dinding A	Baik	2	2	4	754
759	Pantri/C2R048002	Dinding	Cermin tingkap retak	5	5	25	755
760	Pantri/C2R048003	Dinding B	Baik	2	2	4	756
761	Pantri/C2R048004	Dinding C	Baik	2	2	4	757
762	Pantri/C2R048005	Pintu	Pintu tidak dapat ditutup dengan rapat	4	4	16	758
763	Pantri/C2R048006	Kabinet	Baik	2	2	4	759
764	Pantri/C2R048007	Dinding D	Baik	2	2	4	760
765	Pantri/C2R048008	Tingkap	Baik	2	2	4	761
766	Pantri/C2R048009	Grill tingkap	Grill tingkap berkarat	4	4	16	762
767	Pantri/C2R048010	Sinki	Baik	2	2	4	763
768	Pantri/C2R048011	Siling	Siling pecah dan melendut	5	5	25	764
769	Pantri/C2R048012	Lantai	Baik	2	2	4	765
770	Bilik Mesyuarat/C2R049001	Dinding A	Baik	2	2	4	766
771	Bilik Mesyuarat/C2R049002	Dinding	Baik	2	2	4	767
772	Bilik Mesyuarat/C2R049003	Dinding B	Baik	2	2	4	768
773	Bilik Mesyuarat/C2R049004	Dinding C	Baik	2	2	4	769
774	Bilik Mesyuarat/C2R049005	Dinding D	Baik	2	2	4	770
775	Bilik Mesyuarat/C2R049006	Siling	Siling merekah	5	5	25	771
776	Bilik Mesyuarat/C2R049007	Siling	Siling merekah	5	5	25	772
777	Bilik Mesyuarat/C2R049008	Siling	Siling merekah	5	5	25	773
778	Bilik Mesyuarat/C2R049009	Lantai	Baik	2	2	4	774
779	Bilik Mesyuarat/C2R049010	Sinki	Baik	2	2	4	775
780	Stor/C2R050001	Pintu	Keretakan kecil pada pintu	4	3	12	776
781	Stor/C2R050002	Dinding A	Baik	2	2	4	777
782	Stor/C2R050003	Tingkap	Cat bingkai tingkap menggelupas	3	3	9	778
783	Stor/C2R050004	Dinding B	Baik	2	2	4	779
784	Stor/C2R050005	Dinding C	Baik	2	2	4	780
785	Stor/C2R050006	Dinding D	Baik	2	2	4	781
786	Stor/C2R050007	Siling	Tiada siling	5	5	25	782
787	Stor/C2R050008	Siling	Siling melendut	5	5	25	783
788	Stor/C2R050009	Lantai	Baik	2	2	4	784
789	Bilik fail/C2R051001	Dinding A	Baik	2	2	4	785
790	Bilik fail/C2R051002	Tingkap	Baik	2	2	4	786
791	Bilik fail/C2R051003	Sinki	Sinki berkarat	4	4	16	787
792	Bilik fail/C2R051003	Dinding B	Baik	2	2	4	788
793	Bilik fail/C2R051004	Tingkap	Baik	2	2	4	789
794	Bilik fail/C2R051005	Dinding C	Baik	2	2	4	790
795	Bilik fail/C2R051006	Dinding D	Baik	2	2	4	791
796	Bilik fail/C2R051007	Siling	Siling tercabut	5	5	25	792
797	Bilik fail/C2R051008	Siling	Siling pecah	5	5	25	793
798	Bilik fail/C2R051009	Siling	Siling melendut	5	5	25	794
799	Bilik fail/C2R051010	Siling	Siling melendut	5	5	25	795
800	Bilik fail/C2R051011	Siling	Lubang pada siling	5	5	25	796
801	Bilik fail/C2R051012	Lantai	Baik	2	2	4	797
802	Bilik Fail 2/C2R052001	Dinding A	Baik	2	2	4	798
803	Bilik Fail 2/C2R052002	Dinding B	Baik	2	2	4	799
804	Bilik Fail 2/C2R052003	Dinding C	Baik	2	2	4	800

Figure 33 : BCARS of Civil Component (732-804)

805	Bilik Fail 2/C2R052004	Pintu	Baik	2	2	4	801
806	Bilik Fail 2/C2R052005	Dinding D	Baik	2	2	4	802
807	Bilik Fail 2/C2R052006	Dinding	Baik	2	2	4	803
808	Bilik Fail 2/C2R052007	Siling	Siling tertanggal	5	5	25	804
809	Bilik Fail 2/C2R052008	Siling	Siling pecah	5	5	25	805
810	Bilik Fail 2/C2R052009	Lantai	Baik	2	2	4	806
811	Tandas perempuan/C2R053001	Pintu/Tombol	Tombol pintu longgar dan berkarat	4	3	12	807
812	Tandas perempuan/C2R053002	Dinding A	Baik	2	2	4	808
813	Tandas perempuan/C2R053003	Dinding B	Baik	2	2	4	809
814	Tandas perempuan/C2R053004	Dinding C	Baik	2	2	4	810
815	Tandas perempuan/C2R053005	Siling	Baik	2	2	4	811
816	Tandas perempuan/C2R053006	Lantai	Kesan tompok pada jubin lantai	2	2	4	812
817	Tandas perempuan/C2R053007	Tandas	Baik	2	2	4	813
818	Tandas perempuan/C2R053008	Sinki	Baik	2	2	4	814
819	Tandas perempuan/C2R053009	Tingkap nako	Baik	2	2	4	815
820	Bilik solat (P)/C2R054001	Dinding A	Baik	2	2	4	816
821	Bilik solat (P)/C2R054002	Pintu	Baik	2	2	4	817
822	Bilik solat (P)/C2R054003	Dinding B	Baik	2	2	4	818
823	Bilik solat (P)/C2R054004	Dinding C	Baik	2	2	4	819
824	Bilik solat (P)/C2R054005	Dinding D	Keretakan pada dinding	4	4	16	820
825	Bilik solat (P)/C2R054006	Dinding D	Cat mengelupas	2	2	4	821
826	Bilik solat (P)/C2R054007	Siling	Baik	2	2	4	822
827	Bilik solat (P)/C2R054008	Siling	Tiada siling	5	5	25	823
828	Bilik solat (P)/C2R054009	Lantai	Baik	2	2	4	824
829	External C2R055001	Dinding	Baik	2	2	4	825
830	External C2R055002	Dinding	Baik	2	2	4	826
831	External C2R055003	Dinding	Baik	2	2	4	827
832	External C2R055004	Siling	Baik	2	2	4	828
833	External C2R055005	Lantai	Jubin kotor	2	2	4	829
834	External C2R055006	Lantai	Keretakan pada jubin tangga	4	3	12	830
835	External C2R055007	Lantai	Keretakan pada jubin tangga	4	3	12	831
836	External C2R055008	Lantai	Keretakan pada jubin lantai	4	3	12	832
837	External C2R055009	Lantai	Keretakan pada jubin tangga	4	3	12	833
838	External C2R055010	Lantai	Keretakan pada jubin tangga	4	3	12	834
839	External C2R055011	Tangga	Baik	2	2	4	835
840	External C2R055012	Susur tangan	Baik	2	2	4	836
841	External C2R056001	Balkoni	Baik	2	2	4	837
842	External C2R056002	Balkoni	Baik	2	2	4	838
843	External C2R056003	Pintu	Baik	2	2	4	839
844	External C2R056004	Dinding	Baik	2	2	4	840
845	External C2R056005	Dinding	Baik	2	2	4	841
846	External C2R056006	Tingkap	Baik	2	2	4	842
847	External C2R056007	Pintu	Baik	2	2	4	843
848	External C2R056008	Tingkap	Baik	2	2	4	844
849	External C2R056009	Dinding	Baik	2	2	4	845
850	External C2R056010	Pintu	Baik	2	2	4	846
851	External C2R056011	Pintu	Baik	2	2	4	847
852	External C2R056012	Dinding	Baik	2	2	4	848
853	External C2R056013	Tingkap	Baik	2	2	4	849
854	External C2R056014	Dinding	Baik	2	2	4	850
855	External C2R056015	Tingkap	Baik	2	2	4	851
856	External C2R056016	Dinding	Baik	2	2	4	852
857	External C2R056017	Tingkap	Baik	2	2	4	853
858	External C2R056018	Pintu	Baik	2	2	4	854
859	External C2R056019	Tingkap	Baik	2	2	4	855
860	External C2R056020	Dinding	Baik	2	2	4	856
861	External C2R056021	Siling	Baik	2	2	4	857
862	External C2R056022	Lantai	Baik	2	2	4	858
863	External C2R056023	Lantai	Keretakan pada jubin lantai	4	3	12	859
864	External C2R057001	Tangga	Baik	2	2	4	860
865	External C2R057002	Susur tangan	Susur tangan tangga berkarat	4	4	16	861
866	External C2R057003	Dinding	Baik	2	2	4	862
867	External C2R057003	Dinding	Baik	2	2	4	863
868	External C2R057004	Dinding	Baik	2	2	4	864
869	External C2R057005	Dinding	Baik	2	2	4	865
870	External C2R057006	Siling	Baik	2	2	4	866
871	External C2R057007	Lantai	Baik	2	2	4	867
872	External C2R057008	Lantai	Keretakan pada jubin lantai	5	5	25	868
873	Dewan utama C3R058001	Dinding A	Baik	2	2	4	869
874	Dewan utama C3R058002	Pintu	Baik	2	2	4	870
875	Dewan utama C3R058003	Dinding B	Baik	2	2	4	871
876	Dewan utama C3R058004	Pintu	Baik	2	2	4	872
877	Dewan utama C3R058005	Dinding C	Baik	2	2	4	873
878	Dewan utama C3R058006	Dinding D	Baik	2	2	4	874

Figure 34 : BCARS of Civil Component (805-878)

879	Dewan utama C3R058007	Dinding	Lubang pada dinding	5	5	25	875
880	Dewan utama C3R058008	Tingkap	Baik	2	2	4	876
881	Dewan utama C3R058009	Dinding D/b	Baik	2	2	4	877
882	Dewan utama C3R058010	Tingkap	Baik	2	2	4	878
883	Dewan utama C3R058011	Tingkap	Tingkap tercabut	5	5	25	879
884	Dewan utama C3R058012	Tingkap	Baik	2	2	4	880
885	Dewan utama C3R058013	Tingkap	Tingkap tercabut	5	5	25	881
886	Dewan utama C3R058014	Dinding D/c	Baik	2	2	4	882
887	Dewan utama C3R058015	Tingkap	Baik	2	2	4	883
888	Dewan utama C3R058016	Cermin	Tingkap tercabut	5	5	25	884
889	Dewan utama C3R058017	Dinding D	Baik	2	2	4	885
890	Dewan utama C3R058018	Tingkap	Baik	2	2	4	886
891	Dewan utama C3R058019	Tiang	Baik	2	2	4	887
892	Dewan utama C3R058020	Tiang	Baik	2	2	4	888
893	Dewan utama C3R058021	Siling	Baik	2	2	4	889
894	Dewan utama C3R058022	Siling	Siling retak	5	5	25	890
895	Dewan utama C3R058023	Siling	Lubang pada siling	5	5	25	891
896	Dewan utama C3R058024	Siling	Siling retak	5	5	25	892
897	Dewan utama C3R058025	Siling	Lubang pada siling	5	5	25	893
898	Dewan utama C3R058026	Siling	Siling retak	5	5	25	894
899	Dewan utama C3R058027	Siling	Lubang pada siling	5	5	25	895
900	Dewan utama C3R058028	Siling	Tiada siling	5	5	25	896
901	Dewan utama C3R058029	Siling	Siling retak	5	5	25	897
902	Dewan utama C3R058030	Siling	Lubang pada siling	5	5	25	898
903	Dewan utama C3R058031	Siling	Tiada siling	5	5	25	899
904	Dewan utama C3R058032	Siling	Tiada siling	5	5	25	900
905	Dewan utama C3R058033	Siling	Siling tertanggal	5	5	25	901
906	Dewan utama C3R058034	Siling	Siling tertanggal	5	5	25	902
907	Dewan utama C3R058035	Siling	Siling retak	5	5	25	903
908	Dewan utama C3R058036	Siling	Lubang pada siling	5	5	25	904
909	Dewan utama C3R058037	Tiang	Baik	2	2	4	905
910	Dewan utama C3R058038	Lantai	Baik	2	2	4	906
911	Dewan utama C3R058039	Skirting	Jubin tertanggal	4	4	16	907
912	Dewan utama C3R058040	Lantai	Jubin pecah	4	3	12	908
913	Dewan utama C3R058041	Lantai	Jubin pecah	4	3	12	909
914	Dewan utama C3R058042	Skirting	Jubin tertanggal	4	3	12	910
915	Stor C3R059001	Dinding A	Baik	2	2	4	911
916	Stor C3R059002	Dinding B	Baik	2	2	4	912
917	Stor C3R059003	Dinding C	Baik	2	2	4	913
918	Stor C3R059004	Tingkap	Baik	2	2	4	914
919	Stor C3R059005	Dinding D	Baik	2	2	4	915
920	Stor C3R059006	Siling	Baik	2	2	4	916
921	Stor C3R059007	Siling	Siling tercabut (14 keping )	5	5	25	917
922	Stor C3R059008	Lantai	Baik	2	2	4	918
923	Stor C3R059009	Jubin	Jubin tertanggal	5	5	25	919
924	Bilik fail C3R060001	Dinding A	Baik	2	2	4	920
925	Bilik fail C3R060002	Tiang	Baik	2	2	4	921
926	Bilik fail C3R060003	Tingkap	Baik	2	2	4	922
927	Bilik fail C3R060004	Dinding B	Baik	2	2	4	923
928	Bilik fail C3R060005	Pintu	Baik	2	2	4	924
929	Bilik fail C3R060006	Dinding C	Baik	2	2	4	925
930	Bilik fail C3R060007	Dinding	Cat mengelupas	3	3	9	926
931	Bilik fail C3R060008	Dinding	Serpihan retak pada dinding	3	3	9	927
932	Bilik fail C3R060009	Dinding	Keretakan pada dinding	3	3	9	928
933	Bilik fail C3R060010	Dinding	Dinding terhakis	3	3	9	929
934	Bilik fail C3R060011	Dinding	Dinding pecah	5	5	25	930
935	Bilik fail C3R060012	Pintu	Baik	2	2	4	931
936	Bilik fail C3R060013	Dinding D	Baik	2	2	4	932
937	Bilik fail C3R060014	Siling	Baik	2	2	4	933
938	Bilik fail C3R060015	Siling	Tompokan pada siling	3	3	9	934
939	Bilik fail C3R060016	Siling	Siling tercabut	5	5	25	935
940	Bilik fail C3R060017	Siling	Kesanompokan di siling	3	3	9	936
941	Bilik fail C3R060018	Lantai	Baik	2	2	4	937
942	Tandas Lelaki C3R061001	Dinding A	Baik	2	2	4	938
943	Tandas Lelaki C3R061002	Paip air	Baik	2	2	4	939
944	Tandas Lelaki C3R061003	Dinding B	Baik	2	2	4	940
945	Tandas Lelaki C3R061004	Pintu	Engsel pintu berkarat	3	3	9	941
946	Tandas Lelaki C3R061005	Pintu	Pintu rosak	5	5	25	942
947	Tandas Lelaki C3R061007	Dinding C	Baik	2	2	4	943
948	Tandas Lelaki C3R061008	Dinding D	Baik	2	2	4	944
949	Tandas Lelaki C3R061009	Pintu	Baik	2	2	4	945
950	Tandas Lelaki C3R061010	Bingkai pintu	Rekahan di bingkai pintu	5	5	25	946
951	Tandas Lelaki C3R061011	Siling	Baik	2	2	4	947
952	Tandas Lelaki C3R061012	Siling	Lubang pada siling	5	5	25	948

Figure 35: BCARS of Civil Component (879-953)

953	Tandas Lelaki C3R061013	Lantai	Baik	2	2	4	949
954	Tandas perempuan C3R062001	Dinding A	Baik	2	2	4	950
955	Tandas perempuan C3R062002	Dinding B	Baik	2	2	4	951
956	Tandas perempuan C3R062003	Pintu	Baik	2	2	4	952
957	Tandas perempuan C3R062004	Sinki	Baik	2	2	4	953
958	Tandas perempuan C3R062005	Kepala pili	Kepala paip air patah	5	5	25	954
959	Tandas perempuan C3R062006	Cermin Nako	Baik	2	2	4	955
960	Tandas perempuan C3R062007	Dinding C	Baik	2	2	4	956
961	Tandas perempuan C3R062008	Dinding	Jubin tercabut	5	5	25	957
962	Tandas perempuan C3R062009	Dinding D	Baik	2	2	4	958
963	Tandas perempuan C3R062010	Pintu	Baik	2	2	4	959
964	Tandas perempuan C3R062010	Pintu	Pintu terkopek	4	4	16	960
965	Tandas perempuan C3R062012	Pintu	Pintu terhakis	4	4	16	961
966	Tandas perempuan C3R062013	Siling	Baik	2	2	4	962
967	Tandas perempuan C3R062014	Siling	Siling melendut	5	5	25	963
968	Tandas perempuan C3R062015	Siling	Siling tertanggal	5	5	25	964
969	Tandas perempuan C3R062016	Siling	Lubang pada siling	5	5	25	965
970	Tandas perempuan C3R062017	Siling	Kesan bompakan pada siling	4	4	16	966
971	Tandas perempuan C3R062018	Siling	Siling tertanggal	5	5	25	967
972	Tandas perempuan C3R062019	Lantai	Baik	2	2	4	968
973	Tandas perempuan C3R062020	Lantai	Kesan bompakan di lantai	3	4	12	969
974	Laluan Fail C3R063001	Dinding A	Baik	2	2	4	970
975	Laluan Fail C3R063002	Dinding B	Baik	2	2	4	971
976	Laluan Fail C3R063003	Dinding C	Baik	2	2	4	972
977	Laluan Fail C3R063004	Column	Rekahan pada plaster dinding	3	3	9	973
978	Laluan Fail C3R063005	Pintu	Baik	2	2	4	974
979	Laluan Fail C3R063006	Dinding D	Baik	2	2	4	975
980	Laluan Fail C3R063007	Siling	Baik	2	2	4	976
981	Laluan Fail C3R063008	Lantai	Baik	2	2	4	977
982	Laluan Fail C3R063009	Dinding	Dinding terhakis	4	3	12	978
983	Bilik fail C3R064001	Dinding A	Baik	2	2	4	979
984	Bilik Fail C3R064002	Dinding	Dinding mengelupas	3	3	9	980
985	Bilik Fail C3R064003	Dinding B	Baik	2	2	4	981
986	Bilik Fail C3R064004	Dinding C	Baik	2	2	4	982
987	Bilik Fail C3R064005	Dinding D	Baik	2	2	4	983
988	Bilik Fail C3R064006	Dinding	Dinding mengelupas	4	3	12	984
989	Bilik Fail C3R064007	Dinding	Dinding pecah	5	5	25	985
990	Bilik Fail C3R064008	Siling	Baik	2	2	4	986
991	Bilik Fail C3R064009	Siling	Siling tertanggal	5	5	25	987
992	Bilik Fail C3R064010	Siling	Siling tertanggal	5	5	25	988
993	Bilik Fail C3R064011	Siling	Tiada siling	5	5	25	989
994	Bilik Fail C3R064012	Lantai	Baik	2	2	4	990
995	Bilik Fail C3R064013	Skirting	Keretakan	4	3	12	991
996	External C3R065001	Dinding A	Baik	2	2	4	992
997	External C3R065002	Dinding	Keretakan pada dinding tangga	4	4	16	993
998	External C3R065003	Dinding B	Baik	2	2	4	994
999	External C3R065004	Column	Pecahan pada plaster column	3	3	9	995
###	External C3R065005	Dinding	Baik	2	2	4	996
###	External C3R065006	Dinding	Rekahan di dinding	4	4	16	997
###	External C3R065007	Dinding D	Baik	2	2	4	998
###	External C3R065008	Siling	Baik	2	2	4	999
###	External C3R065009	Lantai	Baik	2	2	4	1000
###	External C3R065010	Dinding	Keretakan pada dinding tangga	4	4	16	1001
###	External C3R065011	Balkoni	Baik	2	2	4	1002
###	External C3R066001	Balkoni	Baik	2	2	4	1003
###	External C3R066002	Balkoni	Baik	2	2	4	1004
###	External C3R066003	Dinding D	Baik	2	2	4	1005
###	External C3R066004	Tiang	Rekahan pada plaster dinding	4	4	16	1006
###	External C3R066005	Pintu	Baik	2	2	4	1007
###	External C3R066006	Tingkap	Baik	2	2	4	1008
###	External C3R066007	Tingkap	Baik	2	2	4	1009
###	External C3R066008	Dinding D	Baik	2	2	4	1010
###	External C3R066009	Pintu	Baik	2	2	4	1011
###	External C3R066010	Dinding D	Baik	2	2	4	1012
###	External C3R066011	Tingkap	Baik	2	2	4	1013
###	External C3R066012	Dinding D	Baik	2	2	4	1014
###	External C3R066013	Tingkap	Baik	2	2	4	1015
###	External C3R066014	Dinding D	Baik	2	2	4	1016
###	External C3R066015	Pintu	Baik	2	2	4	1017
###	External C3R066016	Tingkap	Baik	2	2	4	1018
###	External C3R066017	Dinding D	Baik	2	2	4	1019
###	External C3R066018	Tingkap	Baik	2	2	4	1020
###	External C3R066019	Dinding D	Baik	2	2	4	1021
###	External C3R066020	Pintu	Baik	2	2	4	1022

Figure 36 : BCARS of Civil Component (954-1036)

###	External C3R066021	Pintu	Baik	2	2	4	1023
###	External C3R066022	Lantai	Baik	2	2	4	1024
###	External C3R066023	Lantai	Jubin tertanggal	5	5	25	1025
###	External C3R066024	Lantai	Jubin pecah	5	5	25	1026
###	External C3R066025	Lantai	Jubin tertanggal	5	5	25	1027
###	External C3R066026	Lantai	Jubin pecah	5	5	25	1028
###	External C3R066027	Lantai	Rekahan di jubin	5	5	25	1029
###	External C3R066028	Siling	Cat mengelupas	4	3	12	1030
###	External C3R066029	Siling	Cat mengelupas	4	3	12	1031
###	External C3R066030	Siling	Cat mengelupas	4	3	12	1032
###	External C3R066031	Siling	Cat mengelupas	4	3	12	1033
###	External C3R066032	Siling	Cat mengelupas	4	3	12	1034
###	External C3R066033	Siling	Cat mengelupas	4	3	12	1035
###	External C3R066034	Siling	Cat mengelupas	4	3	12	1036
###	External C3R066035	Siling	Cat mengelupas	4	3	12	1037
###	External C3R066036	Rauk	Retak pada plaster rasuk	4	4	16	1038
###	External C3R066037	Siling	Siling menggelupas	4	3	12	1039
###	External C3R066038	Siling	Baik	2	2	4	1040
###	External C3R067001	Dinding A	Baik	2	2	4	1041
###	External C3R067002	Dinding B	Baik	2	2	4	1042
###	External C3R067003	Dinding C	Baik	2	2	4	1043
###	External C3R067004	Dinding D	Baik	2	2	4	1044
###	External C3R067005	Siling	Baik	2	2	4	1045
###	External C3R067006	Lantai	Baik	2	2	4	1046
###	External C3R067007	Pagar Tangga	Baik	2	2	4	1047
###	External C3R067008	Tangga	Baik	2	2	4	1048
###	Roof C4R06801	Dinding	Dinding berlumut	5	5	25	1049
###	Roof C4R06802	Dinding	Rekahan pada dinding	5	5	25	1050
###	Roof C4R06803	Dinding	Tumbuh tumbuhan	5	5	25	1051
###	Roof C4R06804	Lantai	Kerekahan pada lantai	5	5	25	1052
###	Roof C4R06805	Lantai	Kerekahan pada lantai	5	5	25	1053
###	Roof C4R06806	Lantai	Lubang pada lantai	5	5	25	1054
###	Roof C4R06807	Dinding	Kerekahan pada dinding	5	5	25	1055
###	Roof C4R06808	Longkang	Tumbuh tumbuhan	5	5	25	1056
###	Roof C4R06809	Longkang	Tumbuh tumbuhan	5	5	25	1057
###	Roof C4R06810	Longkang	Rekahan pada dinding	5	5	25	1058
###	Roof C4R06811	Dinding	Keretakan	5	5	25	1059
###	Roof C4R06812	Dinding	Keretakan	5	5	25	1060
###	Roof C4R06813	Dinding	Keretakan	5	5	25	1061
###	Roof C4R06814	Dinding	Keretakan	5	5	25	1062
###	Roof C4R068015	Dinding	Dinding berlumut	5	5	25	1063
###	Roof C4R068016	Dinding	Cat menggelupas	5	5	25	1064
###	Roof C4R068017	Saliran paip	Saliran paip berkarat	5	5	25	1065
###	Roof C4R068018	Lantai	Lantai berlumut	5	5	25	1066
<b>Jumlah Markah [d] (<math>\sum</math> of c)</b>							<b>*10402*</b>
<b>Jumlah kerosakan/kecacatan [e]</b>							<b>*1065*</b>
<b>Jumlah Skor (d/e)</b>							<b>9.77</b>
<b>Rating Keseluruhan Bangunan</b>							<b>BAIK</b>

Figure 37 : BCARS of Civil Component (1036-1065)

#### **4.6.2 Schedule of Building Condition Assessment (Mechanical)**

Referring to the BCARS, the overall score (matrix analysis) of the building's condition is derived as the sum of the condition evaluation multiplied by the priority of defects, the result obtained is **961**. The total damage/defects for the entire building, including the roof, are **173** defects, which include the ventilation system, fire system, and water distribution system. Apart from that, the total score for the mechanical components for the *JKR Jajahan Kota Bharu, Kelantan* building is **5.55**. The score indicates the overall rating of the building's mechanical component is **Very good**.

BIL.	RUANG	ELEMENTAL / KOMPONEN	CATAN / KEROS	BARIS			
				Penilaian Kondisi /keadaan	Penilaian keutamaan kecacatan	Analisis Matrik	No. Helaian Kecacatan
				[a]	[b]	[c] = (a x b)	
<b>MEKANIKAL</b>							
1	Ruang teknikal/MOR001001	M-kipas	tiada	2	2	4	000
2	Ruang teknikal/MOR001002	M-kipas	tiada	2	2	4	001
3	Ruang teknikal/MOR001003	M-penghawa dingin	tiada	2	2	4	002
4	Ruang teknikal/MOR001004	M-penghawa dingin	tiada	2	2	4	003
5	Ruang teknikal/MOR001005	M-penghawa dingin	tiada	2	2	4	004
6	Ruang teknikal/MOR001006	M-penghawa dingin	tiada	2	2	4	005
7	Ruang teknikal/MOR001007	M-penghawa dingin	tiada	2	2	4	006
8	Ruang teknikal/MOR001008	M-kipas	tiada	2	2	4	007
9	Ruang teknikal/MOR001009	M-penghawa dingin	tiada	2	2	4	008
10	Ruang teknikal/MOR001010	M-kipas	tiada	2	2	4	009
11	Bilik mesyuarat/MOR003001	M- Penghawa dingin	tiada	2	2	4	010
12	Bilik mesyuarat/MOR003002	M-penghawa dingin	tiada	2	2	4	011
13	Bilik penolong jurutera/MOR004001	M-penghawa dingin	tiada	2	2	4	012
14	Bilik fail/MOR005001	M-penghawa dingin	tiada	2	2	4	013
15	Penolong jurutera/MOR006001	M-kipas	tiada	2	2	4	014
16	Penolong jurutera/MOR006002	M-ventilation fan	tiada	2	2	4	015
17	Penolong jurutera/MOR006003	M-penghawa dingin	tiada	2	2	4	016
18	Bilik penolong jurutera/MOR007001	M-penghawa dingin	tiada	2	2	4	017
19	Pantri/MOR008001	M-kipas	tiada	2	2	4	018
20	Pantri/MOR008002	M-ventilation fan	tiada	2	2	4	019
21	Penolong jurutera kanan/MOR00900	M-aircond	tiada	2	2	4	020
22	Surau/MOR010001	M-kipas	tiada	2	2	4	021
23	Surau/MOR010002	M-ventilation fan	tiada	2	2	4	022
24	Surau/MOR010003	M-aircond	tiada	2	2	4	023
25	Stor/MOR011001	M-penghawa dingin	tidak berfungsi	5	5	25	024
26	Stor/MOR011002	M-ventilation fan	tidak berfungsi	4	4	16	025
27	Bilik pam/MOR013001	M-pump air	kotor	2	2	4	026
28	Tandas/MOR014001	M-pump tandas	tiada	2	2	4	027
29	Jurutera bangunan/jalan/MOR01600	M-aircond	tiada	2	2	4	028
30	Jurutera bangunan/jalan/MOR01600	M-kipas	tiada	2	2	4	029
31	External/MOR017001	M- fire extinguisher	tiada	2	2	4	030
32	External/MOR017002	M-fire alarm	tiada	2	2	4	031
33	External/MOR017003	M-fire hose	tiada	2	2	4	032
34	External/MOR018001	M-fire extinguisher	tiada	2	2	4	033
35	External/R017	External/MOR018002	tiada	2	2	4	034
36	External/MOR018003	M-fire extinguisher	tiada	2	2	4	035
37	External/MOR018004	M-fire hose	tiada	2	2	4	036
38	External/MOR018005	M-fire Alarm	tiada	2	2	4	037
39	External/MOR019001	M-paip meter air	tiada	2	2	4	001
40	External/MOR020001	M-tangki air	tangki air	3	2	6	002
41	External/MOR020002	M-fire Alarm	berkarat	3	2	6	003
42	External/MOR020003	M-compressor aircond	berkarat	3	2	6	004
43	External/MOR020004	M-compressor aircond	tiada	2	2	4	005
44	External/MOR020005	M-compressor aircond	sedikit berkarat	2	2	4	006
45	External/MOR020006	M-compressor aircond	tiada	2	2	4	007
46	External/MOR020007	M-compressor aircond	tiada	2	2	4	008
47	External/MOR020008	M-pipe	tiada	2	2	4	009
48	External/MOR020009	M-compressor aircond	tiada	2	2	4	010
49	External/MOR020010	M-compressor aircond	tiada	2	2	4	011
50	External/MOR020011	M-compressor aircond	tiada	2	2	4	012
51	External/MOR020012	M-pipe	tiada	2	2	4	013
52	External/MOR020013	M-compressor aircond	tiada	2	2	4	014
53	Penolong jurutera/M1R022001	M-aircond	tidak berada	4	3	12	015
54	Bilik jurutera bangunan/M1R023001	M-aircond	tiada	2	2	4	016
55	Bilik mesyuarat/M1R024001	M-aircond	tiada	2	2	4	017
56	Bilik mesyuarat/M1R024002	M-aircond	tiada	2	2	4	018
57	Penolong jurutera kanan bangunan/M1R025	M-aircond	tiada	2	2	4	019
58	Bilik penolong jurutera/M1R026001	M-kipas	tiada	2	2	4	020
59	Bilik penolong jurutera/M1R026002	M-aircond	tiada	2	2	4	021
60	Bilik penolong jurutera/M1R027001	C- Paip saliran	tiada	2	2	4	022
61	Bilik penolong jurutera/M1R028001	C- Apron	tiada	2	2	4	023
62	Bilik penolong jurutera/M1R028002	M-kipas	tiada	2	2	4	024
63	Penolong jurutera/M1R029001	M-aircond	tiada	2	2	4	025
64	Penolong jurutera/M1R029002	M-aircond	tidak berfungsi	2	2	4	026
65	Pantri/M1R030001	M-fire extinguisher	amat tempoh	5	4	20	027
66	Pantri/M1R030002	M-kipas	tiada	2	2	4	028
67	Stor/M1R031001	M-ventilation fan	berhabuk	3	2	6	029
68	Stor/M1R031002	M-ventilation fan	berhabuk	3	2	6	030
69	Tandas/M1R032001	M-pump tandas	tiada	2	2	4	031

Figure 38 : BCARS of Mechanical Component (1-69)



70	Tandas/M1R032002	M-pump tandas	Tempat pemegang pump tandas rosak	5	4	20	032
71	Tandas/M1R032003	M-pump tandas	tiada	2	2	4	033
72	Surau/M1R033001	M-aircond	tiada	2	2	4	034
73	urutera senggara/M1R034001	M-aircond	tiada	2	2	4	035
74	Ruang teknikal/M1R035001	M-aircond	tiada	2	2	4	036
75	Ruang teknikal/M1R035002	M-kipas	tiada	2	2	4	037
76	Ruang teknikal/M1R035003	M-aircond	tiada	2	2	4	038
77	Ruang teknikal/M1R035004	M-kipas	tiada	2	2	4	039
78	Ruang teknikal/M1R035005	M-kipas	tiada	2	2	4	040
79	Ruang teknikal/M1R035006	M-aircond	tiada	2	2	4	041
80	Ruang teknikal/M1R035007	M-kipas	tiada	2	2	4	042
81	Ruang teknikal/M1R035008	M-aircond	tiada	2	2	4	043
82	Ruang teknikal/M1R035009	M-kipas	tiada	2	2	4	044
83	Ruang teknikal/M1R035010	M-aircond	tiada	2	2	4	045
84	Ruang teknikal/M1R035011	M-aircond	tiada	2	2	4	046
85	Ruang teknikal/M1R035012	M-aircond	tiada	2	2	4	047
86	Ruang teknikal/M1R035013	M-ventilation fan	tiada	2	2	4	048
87	Ruang teknikal/M1R035014	M-ventilation fan	tiada	2	2	4	049
88	External/M1R036001	M-fire hose	tiada	2	2	4	050
89	External/M1R036002	M-fire extinguisher	tiada	2	2	4	051
90	External/M1R036003	M-fire alarm	tiada	2	2	4	052
91	External/M1R037001	M-compressor aircond	tiada	2	2	4	053
92	External/M1R037002	M-fire extinguisher	tiada	2	2	4	054
93	External/M1R037003	M-fire extinguisher	tiada	2	2	4	055
94	External/M1R037004	M-fire extinguisher	tiada	2	2	4	056
95	External/M1R037005	C - Paip bekalan air	tiada	2	2	4	057
96	External/M1R038001	M-fire hose	tiada	2	2	4	058
97	External/M1R038002	M-fire alarm	tiada	2	2	4	059
98	Kooperat/M2R040001	M-aircond	tiada	2	2	4	060
99	Kooperat/M2R040002	M-kipas	tiada	2	2	4	061
100	urusetia sebut harga/M2R040003	M-aircond	tidak berfungsi	5	5	25	062
101	Jurutera jajahan/M2R042001	M-aircond	tiada	2	2	4	063
102	Tandas/M2R043001	M-pump tandas	tiada	2	2	4	064
103	mbantu tadbir kanan/M2R044001	M-aircond	tiada	2	2	4	065
104	Server/M2R045001	M-aircond	tiada	2	2	4	066
105	Ruang teknikal/M2R046001	M-kipas	tiada	2	2	4	067
106	Ruang teknikal/M2R046002	M-aircond	tiada	2	2	4	068
107	Ruang teknikal/M2R046003	C- Apron	Keretakan	2	2	4	069
108	Ruang teknikal/M2R046004	M-aircond	tiada	2	2	4	070
109	Ruang teknikal/M2R046005	M- Penghawa dingin	tiada	2	2	4	071
110	Bilik photostat/M2R047001	M-kipas	tiada	2	2	4	072
111	Bilik photostat/M2R047002	M-kipas	tiada	2	2	4	073
112	Pantri/M2R048001	M-kipas	tiada	2	2	4	074
113	Pantri/M2R048002	M-kipas	tiada	2	2	4	075
114	Bilik mesyuarat/M2R049001	ventilation fan	tiada	2	2	4	076
115	Bilik mesyuarat/M2R049002	M-penghawa dingin	tiada	2	2	4	077
116	Bilik mesyuarat/M2R049003	M-penghawa dingin	tiada	2	2	4	078
117	Fail/M2R051001	M-penghawa dingin	tidak berfungsi	5	5	25	079
118	Bilik fail/M2R052001	M-ventilation fan	tiada	2	2	4	080
119	Bilik fail/M2R052002	M-penghawa dingin	tiada	2	2	4	081
120	Tandas/M2R053002	M-pump tandas	tiada	2	2	4	083
121	Surau/M2R054001	M-kipas	tiada	2	2	4	084
122	Surau/M2R054002	M-aircond	tiada	2	2	4	085
123	External/M2R055001	M-fire hose	tiada	2	2	4	086
124	External/M2R056003	M-fire extinguisher	tiada	2	2	4	087
125	External/M2R056004	M-fire extinguisher	tiada	2	2	4	088
126	External/M2R056005	M-fire extinguisher	tiada	2	2	4	089
127	External/M2R056006	M-fire extinguisher	tiada	2	2	4	090
128	External/M2R057001	M-fire hose	tiada	2	2	4	091
129	External/M2R057002	M-fire alarm	tiada	2	2	4	092
130	Dewan utama/M3R058001	M-kipas	tiada	2	2	4	093
131	Dewan utama/M3R058002	M-kipas	tiada	2	2	4	094
132	Dewan utama/M3R058001	M-aircond	tiada	2	2	4	095
133	Dewan utama/M3R058003	M-kipas	tercabut	5	5	25	096
134	Dewan utama/M3R058004	M-aircond	tiada	2	2	4	097
135	Dewan utama/M3R058005	M-kipas	tiada	2	2	4	098
136	Dewan utama/M3R058006	M-kipas	tiada	2	2	4	099
137	Dewan utama/M3R058007	M-penghawa dingin	sedikit kotor	3	2	6	100
138	Dewan utama/M3R058008	M-penghawa dingin	sedikit kotor	3	2	6	101
139	Dewan utama/M3R058009	M-penghawa dingin	tiada	2	2	4	102
140	Dewan utama/M3R058010	M-kipas	tiada	2	2	4	103
141	Dewan utama/M3R058011	M-aircond	tiada	2	2	4	104
142	Dewan utama/M3R058012	M-kipas	tiada	2	2	4	105
143	Dewan utama/M3R058014	M-aircond	tiada	2	2	4	106

Figure 39 : BCARS of Mechanical Component (70-143)

144	Dewan utama/M3R058015	M-kipas	tiada	2	2	4	107
145	Dewan utama/M3R058016	M-aircond	tiada	2	2	4	108
146	Dewan utama/M3R058017	M-aircond	tiada	2	2	4	109
147	Dewan utama/M3R058018	M-aircond	tiada	2	2	4	110
148	Stor/M3R059001	M-aircond	tiada	2	2	4	111
149	Stor/M3R059002	M-aircond	lama	4	4	16	112
150	Stor/M3R059003	M-aircond	tiada	2	2	4	113
151	Stor/M3R059004	M-kipas	tidak berfungsi	4	4	16	114
152	Stor/M3R059005	M-ventilation fan	tiada	2	2	4	115
153	Stor/M3R059006	M-aircond	lama	5	5	25	116
154	Tandas/M3R062001	M-pump tandas	tidak berfungsi	5	5	25	117
155	Tandas/M3R062002	M-pump tandas	tidak berfungsi	5	5	25	118
156	External/M3R066001	M-fire hose	tiada	2	2	4	119
157	External/M3R066001	M-fire alarm	tiada	2	2	4	120
158	External/M3R066002	M-compressor aircond	sedikit berkarat	3	2	6	121
159	External/M3R066003	M-compressor aircond	sedikit berkarat	3	2	6	122
160	External/M3R066004	M-fire extinguisher	tiada	2	2	4	123
161	External/M3R066005	M-fire extinguisher	tiada	2	2	4	124
162	External/M3R066007	M-fire extinguisher	tiada	2	2	4	125
163	External/M3R066008	M-compressor aircond	sedikit berkarat	3	2	6	126
164	External/R065	M-compressor aircond	sedikit berkarat	3	2	6	127
165	External/R065	M-fire extinguisher	tiada	2	2	4	128
166	External/M3R067001	M-fire alarm	tiada	2	2	4	129
167	External/M3R067002	M-fire hose	tiada	2	2	4	130
168	External/M3R066006	M-compressor aircond	sedikit berkarat	4	4	16	169
169	External/M3R066007	M-compressor aircond	sedikit berkarat	4	4	16	170
170	External/M3R066008	M-fire extinguisher	baik	2	2	4	171
171	External/M3R067001	M-fire alarm	baik	2	2	4	172
172	External/M3R067002	M-fire hose	baik	2	2	4	173
173	Roof/M4068001	Tangki air	baik	2	2	4	174
<b>Jumlah Markah [d] (<math>\sum</math> of c)</b>							<b>*961*</b>
<b>Jumlah kerosakan/kecacatan [e]</b>							<b>*173*</b>
<b>Jumlah Skor (d/e)</b>							<b>5.55</b>
<b>Rating Keseluruhan Bangunan</b>							<b>SANGAT BAIK</b>

Figure 40 : BCARS of Mechanical Component (144-173)

#### **4.6.3 Schedule of Building Condition Assessment (Electrical)**

Refer to the BCARS, the overall score (matrix analysis) of the building's condition is derived as the sum of the condition evaluation multiplied by the priority of defects, the result obtained is **2468**. The total damage/defects for the entire building, including the roof, are **359** defects, which include the lighting system, wiring, DB Box and others. Apart from that, the total score of the electrical components for the *JKR Jajahan Kota Bharu, Kelantan* building is **6.87**. The score indicates the overall rating of the building's electrical component is **Good**.

BIL.	RUANG	ELEMENTAL / KOMPONEN	KECACATAN / KEROSAKAN	BARIS			
				Penilaian Kondisi /keadaan [a]	Penilaian keutamaan kecacatan [b]	Analisis Matrik [c] = (a x b)	No. Helaian Kecacatan
<b>ELEKTRIK</b>							
1	Ruang Teknikal E0R001001	E- suis	Baik	2	1	2	001
2	Ruang Teknikal E0R001002	E- suis	Baik	2	1	2	002
3	Ruang Teknikal E0R001003	E- suis	Baik	2	1	2	003
4	Ruang Teknikal E0R001004	E- suis	Baik	2	1	2	004
5	Ruang Teknikal E0R001005	E- suis	Baik	2	1	2	005
6	Ruang Teknikal E0R001006	E- suis	Baik	2	1	2	006
7	Ruang Teknikal E0R001007	E- suis	Baik	2	1	2	007
8	Ruang Teknikal E0R001008	E- suis	Baik	2	1	2	008
9	Ruang Teknikal E0R001009	E- suis	Baik	2	1	2	009
10	Ruang Teknikal E0R001010	E- suis aircond	Baik	2	1	2	010
11	Ruang Teknikal E0R001011	E- suis	Baik	2	1	2	011
12	Ruang teknikal E0R00112	E- suis	Baik	2	1	2	012
13	Ruang Teknikal E0R001013	E- suis aircond	Baik	2	1	2	013
14	Ruang Teknikal E0R001014	E-suis	Baik	2	1	2	014
15	Ruang Teknikal E0R001015	E-suis	Baik	2	1	2	015
16	Ruang Teknikal E0R001016	E-suis	Baik	2	1	2	016
17	Ruang Teknikal E0R001017	E-suis	Baik	2	1	2	017
18	Ruang Teknikal E0R001018	E-suis	Baik	2	1	2	018
19	Ruang Teknikal E0R001019	E-lampu	Baik	2	1	2	019
20	Ruang Teknikal E0R001020	E-lampu	Baik	2	1	2	020
21	Ruang Teknikal E0R001021	E-lampu	Baik	2	1	2	021
22	Ruang Teknikal E0R001022	E-lampu	Baik	2	1	2	022
23	Ruang Teknikal E0R001023	Wayar	Wayar tidak kemas	4	4	16	023
24	Ruang Teknikal E0R001024	Lampu	Lampu tidak berfungsi	5	5	25	024
25	Ruang Teknikal E0R001025	Wayar	Wayar tidak kemas	4	4	16	025
26	Ruang Teknikal E0R001026	Lampu	Bingkai lampu tertanggal	4	3	12	026
27	Ruang Teknikal E0R001027	Wayar	Wayar tidak kemas	4	4	16	027
28	Ruang Teknikal E0R001028	Wayar	Wayar tidak kemas	4	4	16	028
29	Ruang Teknikal E0R001029	Wayar	Wayar tidak kemas	4	4	16	029
30	Ruang Teknikal E0R001030	Wayar	Wayar tidak kemas	4	4	16	030
31	Ruang Teknikal E0R001031	Wayar	Wayar tidak kemas	4	4	16	031
32	Bilik fail E0R002001	E-lampu	Baik	2	1	2	032
33	Bilik fail E0R002002	E-lampu	Lampu tidak berfungsi	5	5	25	033
34	Bilik mesyuarat E0R003001	E-suis	Baik	2	1	2	034
35	Bilik mesyuarat E0R003002	E-suis	Baik	2	1	2	035
36	Bilik mesyuarat E0R003003	E-suis aircond	Baik	2	1	2	036
37	Bilik mesyuarat E0R003004	E-suis	Baik	2	1	2	037
38	Bilik mesyuarat E0R003005	E-suis	Baik	2	1	2	038
39	Bilik mesyuarat E0R003006	Suis penghawa	Suis penghawa dingin tercabut	4	4	16	039
40	Bilik mesyuarat E0R003007	Lampu	Lampu tidak berfungsi	5	5	25	040
41	Bilik mesyuarat E0R003008	Suis lampu	Suis tidak berfungsi	5	5	25	041
42	Bilik mesyuarat E0R003009	Soket	Soket tidak berfungsi	5	5	25	042
43	Bilik mesyuarat E0R003010	E-lampu	Baik	2	1	2	043
44	Bilik penolong jurutera E0R004001	E-suis	Baik	2	1	2	044
45	Bilik penolong jurutera E0R004002	E-suis	Baik	2	1	2	045
46	Bilik penolong jurutera E0R004003	E-lampu	Baik	2	1	2	046
47	Bilik fail E0R005001	E-lampu	Baik	2	1	2	047
48	Bilik penolong jurutera E0R006001	E-suis	Baik	2	1	2	048
49	Bilik penolong jurutera E0R006002	E-suis	Baik	2	1	2	049
50	Bilik penolong jurutera E0R006003	E-suis	Baik	2	1	2	050
51	Bilik penolong jurutera E0R006004	E-lampu	Baik	2	1	2	051
52	Bilik penolong jurutera E0R006005	Soket	Soket tidak berfungsi	5	5	25	052
53	Bilik penolong jurutera E0R006006	Wayar	Wayar tidak kemas	4	4	16	053
54	Stor E0R007001	E-db box	Baik	2	1	2	054
55	Stor E0R007002	E-suis	Baik	2	1	2	055
56	Stor E0R007003	E-suis	Baik	2	1	2	056
57	Stor E0R007004	E-lampu	Baik	2	1	2	057
58	Stor E0R007005	Suis lampu	Baik	2	1	2	058
59	Stor E0R007006	Wayar	Wayar tidak kemas	4	4	16	059
60	Stor E0R007007	Wayar	Wayar tidak kemas	4	4	16	060
61	Stor E0R007008	DB box	Pintu DB box tidak berfungsi	5	5	25	061
62	Stor E0R007009	Bekas	Bekas pendawaian rosak	4	3	12	062
63	Pantri E0R008001	E-suis	Baik	2	1	2	063
64	Pantri E0R008002	E-suis	Baik	2	1	2	064
65	Pantri E0R008003	E-suis	Baik	2	1	2	065
66	Pantri E0R008004	E-lampu	Baik	2	1	2	066
67	Bilik penolong jurutera E0R00901	E-suis	Baik	2	1	2	067
68	Bilik penolong jurutera E0R00902	E-suis aircond	Baik	2	1	2	068
69	Bilik penolong jurutera E0R00903	E-lampu	Baik	2	1	2	069
70	Bilik solat E0R01001	E-suis lampu	Baik	2	1	2	070
71	Bilik solat E0R01002	E-suis aircond	Baik	2	1	2	071
72	Bilik solat E0R01003	E-suis	Baik	2	1	2	072
73	Bilik solat E0R01004	E-lampu	Baik	2	1	2	073
74	Bilik solat E0R01005	Lampu	Lampu malap	3	3	9	074

Figure 41 : BCARS of Electrical Component (1-74)

75	Stor E0R01101	E-db box	wayar tidak kemas	4	4	16	075
76	Stor E0R01102	E-db box	wayar tidak kemas	4	4	16	076
77	Stor E0R01103	E-tda prevent	Baik	2	1	2	077
78	Stor E0R01104	E-suis	kotor	2	3	6	078
79	Stor E0R01105	E-suis	Baik	2	1	2	079
80	Stor E0R01106	E-lampu	Baik	2	1	2	080
81	Stor E0R01107	Wayar	Wayar tidak kemas	4	4	16	081
82	Stor E0R01108	DB box	Wayar tidak kemas	4	4	16	082
83	Stor E0R01109	Wayar	Wayar tidak kemas	4	4	16	083
84	Bilik msb E0R01201	E-db box	Baik	2	1	2	084
85	Bilik msb E0R01202	E-db box	Baik	2	1	2	085
86	Bilik msb E0R01203	E-lampu	Baik	2	1	2	086
87	Bilik pam E0R01301	E-db box	Baik	2	1	2	087
88	Tandas E0R01401	E-lampu	Baik	2	1	2	088
89	Tandas E0R01501	E-lampu	Baik	2	1	2	089
90	Bilik jurutera bangunan jalan E0R01601	E-suis	Baik	2	1	2	090
91	Bilik jurutera bangunan jalan E0R01602	E-suis aircond	Baik	2	1	2	091
92	Bilik jurutera bangunan jalan E0R01603	E-suis	Baik	2	1	2	092
93	Bilik jurutera bangunan jalan E0R01604	E-suis	Baik	2	1	2	093
94	Bilik jurutera bangunan jalan E0R01605	E-suis	Baik	2	1	2	094
95	Bilik jurutera bangunan jalan E0R01606	E-suis	Baik	2	1	2	095
96	Bilik jurutera bangunan jalan E0R01607	E-lampu	Baik	2	1	2	096
97	Bilik jurutera bangunan jalan E0R01608	DB box	Wayar tidak kemas	4	4	16	097
98	External E0R01701	E-lampu	Baik	2	1	2	098
99	External E0R01702	E-suis	Baik	2	1	2	099
100	External E0R01703	E-suis	Baik	2	1	2	100
101	External E0R01704	E-lampu	Baik	2	1	2	101
102	External E0R01705	E-wayar	Baik	2	1	2	102
103	External E0R01706	E- Db box	Berkarat pada pintu DB box	4	3	12	103
104	External E0R01707	E- Db box	tidak dapat ditutup dengan baik	5	5	25	104
105	External E0R01801	E-suis	Baik	2	1	2	105
106	External E0R01802	E-suis	Baik	2	1	2	106
107	External E0R01803	E-suis	Baik	2	1	2	107
108	External E0R01804	E-lampu	Baik	2	1	2	108
109	External E0R01805	E-lampu	Baik	2	1	2	109
110	External E0R01806	E-lampu	Baik	2	1	2	110
111	External E0R01807	E-lampu	Baik	2	1	2	111
112	External E0R01901	E-lampu	Baik	2	1	2	112
113	External E0R01902	E-suis	Baik	2	1	2	113
114	External E0R02001	E-suis	Baik	2	1	2	114
115	External E0R02002	E-wayar	Baik	2	1	2	115
116	External E0R02003	E-wayar	Wayar tidak kemas	4	4	16	116
117	External E0R02004	E-suis	Baik	2	1	2	117
118	External E0R02005	E-suis	Baik	2	1	2	118
119	External E0R02006	E-lampu	Baik	2	1	2	119
120	External E0R02007	E-lampu	tidak berfungsi	5	5	25	120
121	External E0R02008	E-lampu	Baik	2	1	2	121
122	External E0R02009	E-lampu	tidak berfungsi	5	5	25	122
123	External E0R02010	E- Wayar	Pemasangan wayar tidak mengikut	4	4	16	123
124	External E0R02011	E- Wayar	Pemasangan wayar tidak kemas	4	4	16	124
125	External E0R02012	E- Wayar	Pemasangan wayar tidak kemas	4	4	16	125
126	Kaunter E1R02101	E-suis	Baik	2	1	2	126
127	Bilik penolong jurutera E1R02201	E-suis	Baik	2	1	2	127
128	Bilik penolong jurutera E1R02202	E-suis	Baik	2	1	2	128
129	Bilik penolong jurutera E1R02203	E-lampu	Baik	2	1	2	129
130	Bilik jurutera bangunan kanan E1R02301	E-suis	Baik	2	1	2	130
131	Bilik jurutera bangunan kanan E1R02302	E-suis aircond	Baik	2	1	2	131
132	Bilik jurutera bangunan kanan E1R02303	E-lampu	Baik	2	1	2	132
133	Bilik jurutera bangunan kanan E1R02304	E-suis lampu	Baik	2	1	2	133
134	Bilik jurutera bangunan kanan E1R02305	E-lampu	Baik	2	1	2	134
135	Bilik jurutera bangunan kanan E1R02306	E-suis lampu	Baik	2	1	2	135
136	Bilik mesyuarat E1R02401	E-suis	Baik	2	1	2	136
137	Bilik mesyuarat E1R02402	E-suis aircond	Baik	2	1	2	137
138	Bilik mesyuarat E1R02403	E-suis	Baik	2	1	2	138
139	Bilik mesyuarat E1R02404	E-suis aircond	Baik	2	1	2	139
140	Bilik mesyuarat E1R02405	E-suis	Baik	2	1	2	140
141	Bilik mesyuarat E1R02406	E-lampu	Baik	2	1	2	141
142	Bilik mesyuarat E1R02407	Wayar	Pemasangan wayar tidak kemas	4	4	16	142
143	Bilik mesyuarat E1R02408	Wayar	Pemasangan wayar tidak kemas	4	4	16	143
144	Bilik mesyuarat E1R02409	Wayar	Pemasangan wayar tidak kemas	4	4	16	144
145	Bilik mesyuarat E1R02410	Wayar	Pemasangan wayar tidak kemas	4	4	16	145
146	Bilik jurutera bangunan E1R02501	E-suis	Baik	2	1	2	146
147	Bilik jurutera bangunan E1R02502	E-suis	Baik	2	1	2	147
148	Bilik jurutera bangunan E1R02503	E-suis	Baik	2	1	2	148
149	Bilik jurutera bangunan E1R02504	E-lampu	Baik	2	1	2	149
150	Bilik jurutera bangunan E1R02505	Soket	Pemasangan soket tidak mengikut	5	5	25	150
151	Bilik penolong jurutera E1R02601	E-suis	Baik	2	1	2	151
152	Bilik penolong jurutera E1R02602	E-suis	Baik	2	1	2	152
153	Bilik penolong jurutera E1R02603	E-suis	Baik	2	1	2	153

Figure 42 : BCARS of Electrical Component (75-153)

154	Bilik penolong jurutera E1R02604	E-lampu	Baik	2	1	2	154
155	Bilik penolong jurutera E1R02701	Wayar	Pemasangan wayar tidak kemas	4	4	16	155
156	Bilik penolong jurutera E1R02702	E-suis lampu	Baik	2	1	2	156
157	Bilik penolong jurutera E1R02703	E-suis	Baik	2	1	2	157
158	Bilik penolong jurutera E1R02704	E-lampu	Baik	2	1	2	158
159	Bilik penolong jurutera E1R02801	E-suis	Baik	2	1	2	159
160	Bilik penolong jurutera E1R02802	E-suis aircond	Baik	2	1	2	160
161	Bilik penolong jurutera E1R02803	E-suis	Baik	2	1	2	161
162	Bilik penolong jurutera E1R02804	E-lampu	Baik	2	1	2	162
163	Bilik penolong jurutera E1R02901	E-suis	Baik	2	1	2	163
164	Bilik penolong jurutera E1R02902	E-suis aircond	Baik	2	1	2	164
165	Bilik penolong jurutera E1R02903	E-lampu	Baik	2	1	2	165
166	Pantri E1R03001	E-suis	Baik	2	1	2	166
167	Pantri E1R03002	E-db box	Baik	2	1	2	167
168	Pantri E1R03003	E-suis	Baik	2	1	2	168
169	Pantri E1R03004	E-db box	Baik	2	1	2	169
170	Pantri E1R03005	E-lampu	Baik	2	1	2	170
171	Pantri E1R03006	E-suis lampu	Baik	2	1	2	171
172	Pantri E1R03007	DB box	DB box tidak dapat ditutup	2	1	2	172
173	Stor E1R03101	E-suis lampu	Baik	2	1	2	173
174	Stor E1R03102	E-lampu	Baik	2	1	2	174
175	Tandas E1R03201	E-lampu	Baik	2	1	2	175
176	Bilik Solat E1R03301	E-suis	Baik	2	1	2	176
177	Bilik Solat E1R03302	E-db box	Tidak terurus	3	3	9	177
178	Bilik Solat E1R03303	E-suis	Baik	2	1	2	178
179	Bilik Solat E1R03304	E-lampu	Baik	2	1	2	179
180	Bilik jurutera selenggara E1R03401	E-suis	Baik	2	1	2	180
181	Bilik jurutera selenggara E1R03402	E-suis	Baik	2	1	2	181
182	Bilik jurutera selenggara E1R03403	E-suis aircond	Baik	2	1	2	182
183	Bilik jurutera selenggara E1R03404	E-lampu	Baik	2	1	2	183
184	Ruang teknikal E1R03501	E-suis aircond	Baik	2	1	2	184
185	Ruang teknikal E1R03502	E-suis	Baik	2	1	2	185
186	Ruang teknikal E1R03503	E-suis aircond	Baik	2	1	2	186
187	Ruang teknikal E1R03504	E-suis	Baik	2	1	2	187
188	Ruang teknikal E1R03505	E-suis	Baik	2	1	2	188
189	Ruang teknikal E1R03506	E-suis	Baik	2	1	2	189
190	Ruang teknikal E1R03507	E-suis	Baik	2	1	2	190
191	Ruang teknikal E1R03508	E-suis	Baik	2	1	2	191
192	Ruang teknikal E1R03509	E-suis aircond	Baik	2	1	2	192
193	Ruang teknikal E1R03510	E-suis	Baik	2	1	2	193
194	Ruang teknikal E1R03511	E-suis	Baik	2	1	2	194
195	Ruang teknikal E1R03512	E-lampu	Baik	2	1	2	195
196	Ruang teknikal E1R03513	E-lampu	Baik	2	1	2	196
197	Ruang teknikal E1R03514	E-lampu	Baik	2	1	2	197
198	Ruang teknikal E1R03515	E-suis	Baik	2	1	2	198
199	External E1R03601	E-suis	Baik	2	1	2	199
200	External E1R03602	E-lampu	Tidak berfungsi	5	5	25	200
201	External E1R03701	E-lampu	Hilang	5	5	25	201
202	External E1R03702	E-lampu	Hilang	5	5	25	202
203	External E1R03703	E-suis	Baik	2	1	2	203
204	External E1R03704	E-lampu	Tidak berfungsi	5	5	25	204
205	External E1R03705	E-lampu	Tidak berfungsi	5	5	25	205
206	External E1R03706	E-lampu	Tidak berfungsi	5	5	25	206
207	External E1R03707	E-suis	Tidak berfungsi	5	5	25	207
208	External E1R03801	E-suis	Tidak berfungsi	5	5	25	208
209	External E1R03802	E-lampu	Tidak berfungsi	5	5	25	209
210	Kaunter E2R03901	E-suis	Baik	2	1	2	210
211	Bilik korporat E2R04001	E-suis	Baik	2	1	2	211
212	Bilik korporat E2R04002	E-suis	Baik	2	1	2	212
213	Bilik korporat E2R04003	E-suis	Baik	2	1	2	213
214	Bilik korporat E2R04004	E-lampu	Baik	2	1	2	214
215	Bilik urus setia E2R04101	E-suis	Baik	2	1	2	215
216	Bilik urus setia E2R04102	E-suis aircond	Baik	2	1	2	216
217	Bilik urus setia E2R04103	E-lampu	Baik	2	1	2	217
218	Bilik jurutera jajahan E2R04201	E-suis	Baik	2	1	2	218
219	Bilik jurutera jajahan E2R04202	E-suis	Baik	2	1	2	219
220	Bilik jurutera jajahan E2R04203	E-suis	Baik	2	1	2	220
221	Bilik jurutera jajahan E2R04204	E-suis	Baik	2	1	2	221
222	Bilik jurutera jajahan E2R04205	E-suis aircond	Baik	2	1	2	222
223	Bilik jurutera jajahan E2R04206	E-lampu	Baik	2	1	2	223
224	Bilik jurutera jajahan E2R04207	E-lampu	Baik	2	1	2	224
225	Tandas E2R04301	E-lampu	Baik	2	1	2	225
226	Pembantu tadbir E2R04401	E-suis	Baik	2	1	2	226
227	Pembantu tadbir E2R04402	E-suis	Baik	2	1	2	227
228	Pembantu tadbir E2R04403	E-lampu	Baik	2	1	2	228
229	Bilik server E2R04501	E-db box	Baik	2	1	2	229
230	Bilik server E2R04502	E-Server	Baik	2	1	2	230
231	Bilik server E2R04503	E-lampu	Baik	2	1	2	231
232	Bilik server E2R04504	E-suis aircond	Baik	2	1	2	232

Figure 43 : BCARS of Electrical Component (154-232)

233	Bilik server E2R04505	Pendawaian	Wayar berseterak dan tidak tersusun	4	4	16	233	233
234	Bilik server E2R04506	Pendawaian	Pendawaian yang tidak mengikut spesifikasi	5	4	20	234	234
235	Ruang teknikal E2R04601	E-suis	Baik	2	1	2	235	235
236	Ruang teknikal E2R04602	E-suis	Baik	2	1	2	236	236
237	Ruang teknikal E2R04603	E-suis aircond	Baik	2	1	2	237	237
238	Ruang teknikal E2R04604	E-suis	Baik	2	1	2	238	238
239	Ruang teknikal E2R04605	E-suis	Baik	2	1	2	239	239
240	Ruang teknikal E2R04606	E-suis	Baik	2	1	2	240	240
241	Ruang teknikal E2R04607	E-lampu	Baik	2	1	2	241	241
242	Ruang teknikal E2R04608	E-lampu	Baik	2	1	2	242	242
243	Bilik fotostat E1R04701	E-suis	Baik	2	1	2	243	243
244	Bilik fotostat E1R04702	E-suis	Baik	2	1	2	244	244
245	Bilik fotostat E1R04703	E-suis	Baik	2	1	2	245	245
246	Bilik fotostat E1R04704	E-lampu	Baik	2	1	2	246	246
247	Pantri E2R04801	E-suis	Baik	2	1	2	247	247
248	Pantri E2R04802	E-suis	Baik	2	1	2	248	248
249	Pantri E2R04803	E-suis	Baik	2	1	2	249	249
250	Pantri E2R04804	E-db box	Baik	2	1	2	250	250
251	Pantri E2R04805	E-lampu	Baik	2	1	2	251	251
252	Pantri E2R04806	DB Box	Pintu DB box tidak dapat ditutup	4	4	16	252	252
253	Bilik mesyuarat E2R04901	E-suis	Baik	2	1	2	253	253
254	Bilik mesyuarat E2R04902	E-suis aircond	Baik	2	1	2	254	254
255	Bilik mesyuarat E2R04903	E-suis	Baik	2	1	2	255	255
256	Bilik mesyuarat E2R04904	E-suis	Baik	2	1	2	256	256
257	Bilik mesyuarat E2R04905	E-lampu	Baik	2	1	2	257	257
258	Bilik mesyuarat E2R04906	E-suis	Baik	2	1	2	258	258
259	Bilik mesyuarat E2R04907	Wayar	Pendawaian yang tidak mengikut spesifikasi	4	4	16	259	259
260	Stor E2R05001	E-suis	Baik	2	1	2	260	260
261	Stor E2R05002	E-lampu	Baik	2	1	2	261	261
262	Stor E2R05003	Suis lampu	Baik	2	1	2	262	262
263	Bilik fail E2R05101	E-suis	Baik	2	1	2	263	263
264	Bilik fail E2R05102	E-suis	Baik	2	1	2	264	264
265	Bilik fail E2R05103	E-suis aircond	Baik	2	1	2	265	265
266	Bilik fail E2R05104	E-suis lampu	Baik	2	1	2	266	266
267	Bilik fail E2R05105	E-lampu	Baik	2	1	2	267	267
268	Bilik fail E2R05106	Pendawaian	Pendawaian tidak mengikut spesifikasi	5	4	20	268	268
269	Bilik fail E2R05107	Soket	Pemasangan soket yang tidak betul	5	4	20	269	269
270	Bilik fail E2R05108	Suis lampu	Baik	2	1	2	270	270
271	Bilik fail E2R05201	E-suis	Baik	2	1	2	271	271
272	Bilik fail E2R05202	E-lampu	Baik	2	1	2	272	272
273	Bilik fail E2R05203	E-lampu	Baik	2	1	2	273	273
274	Bilik fail E2R05204	E-suis lampu	Baik	2	1	2	274	274
275	Bilik fail E2R05205	E-lampu	Baik	2	1	2	275	275
276	Bilik fail E2R05206	E-suis	Baik	2	1	2	276	276
277	Bilik fail E2R05207	E-lampu	Baik	2	1	2	277	277
278	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
279	Tandas E2R05301	E-lampu	Baik	2	1	2	278	278
280	Bilik solat E2R05401	E-suis	Baik	2	1	2	279	279
281	Bilik solat E2R05402	E-suis	Baik	2	1	2	280	280
282	Bilik solat E2R05403	E-lampu	Baik	2	1	2	281	281
283	Bilik solat E2R05404	Pendawaian	Pendawaian yang tidak mengikut spesifikasi	4	4	16	282	282
284	External E2R05501	E-suis	Baik	2	1	2	283	283
285	External E2R05502	E-lampu	Baik	2	1	2	284	284
286	External E2R05601	E-suis	Baik	2	1	2	285	285
287	External E2R05602	E-suis	Tidak berfungsi	5	5	25	286	286
288	External E2R05603	E-lampu	Hilang	5	5	25	287	287
289	External E2R05604	E-lampu	Tidak berfungsi	5	5	25	288	288
290	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
291	External E2R05606	E-lampu	Tidak berfungsi	5	5	25	289	289
292	External E2R05701	E-suis	Baik	2	1	2	290	290
293	External E2R05702	E-lampu	Tidak berfungsi	5	5	25	291	291
294	Pentast E3R05801	E-suis	Baik	2	1	2	292	292
295	Pentast E3R05802	E-suis	Baik	2	1	2	293	293
296	Pentast E3R05803	E-suis	Baik	2	1	2	294	294
297	Pentast E3R05804	E-Lampu	Baik	2	1	2	295	295
298	Dewan utama E3R05805	E-suis	Baik	2	1	2	296	296
299	Dewan utama E3R05806	E-suis	Baik	2	1	2	297	297
300	Dewan utama E3R05807	E-suis	Baik	2	1	2	298	298
301	Dewan utama E3R05808	E-suis	Baik	2	1	2	299	299
302	Dewan utama E3R05809	E-suis	Baik	2	1	2	300	300
303	Dewan utama E3R05810	E-suis	Baik	2	1	2	301	301
304	Dewan utama E3R05811	E-suis	Baik	2	1	2	302	302
305	Dewan utama E3R05812	E-suis aircond	Baik	2	1	2	303	303
306	Dewan utama E3R05813	E-suis	Baik	2	1	2	304	304
307	Dewan utama E3R05814	E-suis	Baik	2	1	2	305	305
308	Dewan utama E3R05815	E-suis	Baik	2	1	2	306	306
309	Dewan utama E3R05816	E-db box	Baik	2	1	2	307	307
310	Dewan utama E3R05817	E-suis	Baik	2	1	2	308	308

Figure 44 : BCARS of Electrical Component (233-310)

311	Dewan utama E3R05818	E-suis	Baik	2	1	2	309
312	Dewan utama E3R05819	E-suis	Baik	2	1	2	310
313	Dewan utama E3R05820	E-suis	Baik	2	1	2	311
314	Dewan utama E3R05821	E-lampu	Tidak berfungsi	5	5	25	312
315	Dewan utama E3R05822	E-lampu	Tidak berfungsi	5	5	25	313
316	Dewan utama E3R05823	E-lampu	Tidak berfungsi	5	5	25	314
317	Dewan utama E3R05824	E- Suis	Suis tidak berfungsi	5	5	25	315
318	Dewan utama E3R05825	E - Lampu	Lampu tidak berfungsi	5	5	25	316
319	Stor E3R05901	E-suis	Tidak berfungsi	5	5	25	317
320	Stor E3R05902	E-suis	Baik	2	1	2	318
321	Stor E3R05903	E-suis	Baik	2	1	2	319
322	Stor E3R05904	E-suis	Baik	2	1	2	320
323	Stor E3R05905	E-suis	Baik	2	1	2	321
324	Stor E3R05906	E-suis	Baik	2	1	2	322
325	Stor E3R05907	E-suis	Baik	2	1	2	323
326	Stor E3R05908	E-lampu	Tidak berfungsi	5	5	25	324
327	Stor E3R05909	E-lampu	Tidak berfungsi	5	5	25	325
328	Stor E3R05910	E - Wayar	Wayar tidak kemas	4	4	16	326
329	Stor E3R05911	E- Bingkai	Bingkai lampu kendur	5	5	25	327
330	Bilik fail E3R06001	E-suis	Baik	2	1	2	328
331	Bilik fail E3R06002	E-lampu	Tidak berfungsi	5	5	25	329
332	Bilik fail E3R06003	E-lampu	Tidak berfungsi	4	3	12	330
333	Bilik fail E3R06004	E-suis	Tidak berfungsi	4	3	12	331
334	Tandas Lelaki E3R061001	E-lampu	Baik	2	1	2	332
335	Tandas perempuan E3R06201	E-lampu	Baik	2	1	2	333
336	Bilik fail E3R06301	E-suis	Baik	2	1	2	334
337	Roof E4R06401	E-lampu	Baik	2	1	2	335
338	External E4R06501	E-lampu	Baik	2	1	2	336
339	External E4R06502	E-suis lampu	Baik	2	2	4	337
340	External E4R06503	E-lampu	Tidak berfungsi	5	5	25	338
341	External E4R06601	E-suis	Baik	2	1	2	339
342	External E4R06602	E-lampu	Tidak berfungsi	5	5	25	340
343	External E4R06603	E-lampu	Baik	2	1	2	341
344	External E4R06604	E-wayar	Pemasangan soket yang tidak betul	5	4	20	342
345	External E4R06605	E-lampu	Tidak berfungsi	5	5	25	343
346	External E4R06606	E-lampu	Tidak berfungsi	5	5	25	344
347	External E4R06607	E-lampu	Hilang	5	5	25	345
348	External E4R06608	E-lampu	Tidak berfungsi	5	5	25	346
349	External E4R06609	E-suis	Baik	2	1	2	347
350	External E4R06701	E-suis	Baik	2	1	2	348
351	External E4R06702	E-lampu	Tidak berfungsi	4	3	12	349
352	Roof E4R06801	Wayar bulb	Wayar bulb lampu tercabut	5	5	25	350
353	Roof E4R06802	Bulb lampu	Lampu tercabut	5	5	25	351
354	Roof E4R06803	Bulb lampu	Lampu tercabut	5	5	25	352
355	Roof E4R06804	Wayar	Wayar tidak kemas	4	4	16	353
356	Roof E4R06805	Lampu jalan	Lampu jalan tercabut	5	5	25	354
357	Roof E4R06806	Dinding	Wayar bulb lampu tercabut	5	5	25	355
358	Roof E4R06807	Perlindung	Perlindung wayar berkarat	5	5	25	356
359	Roof E4R06808	Perlindung	Perlindung wayar berkarat	5	5	25	357
360	Roof E4R06809	Perlindung	Perlindung wayar berkarat	5	5	25	358
361	Roof E4R06810	Bulb lampu	bulb lampu tercabut	5	5	25	359
<b>Jumlah Markah [d] (<math>\Sigma</math> of c)</b>					<b>*2468*</b>		
<b>Jumlah kerosakan/kecacatan [e]</b>					<b>*359*</b>		
<b>Jumlah Skor (d/e)</b>					<b>6.87</b>		
<b>Rating Keseluruhan Bangunan</b>					<b>BAIK</b>		

Figure 45 : BCARS of Electrical Component (311-359)



#### 4.7. OVERALL BUILDING RATING AND MAINTENANCE ACTION

Table 17: Building Rating & Maintenance Action

No	CATEGORY	VERY GOOD	GOOD	FAIR	POOR	VERY POOR
1	Civil	649	72	71	66	208
2	Electrical	147	11	1	7	7
3	Mechanical	264	3	6	36	50
	<b>Total</b>	<b>1060</b>	<b>86</b>	<b>78</b>	<b>109</b>	<b>265</b>

Table 18: Overall Building Rating

ITEM	CATEGORY	SCORE	PEMBERAT	RATING
1	CIVIL	9.77	50%	B
2	ELECTRICAL	6.87	30%	B
3	MECHANICAL	5.55	20%	A
<b>OVERALL BUILDING RATING</b>		8.056	100%	B

##### 4.7.1 The Calculation of Scores for BCA

This calculation is according to the formula provided by the PWD to obtain the final score for the physical condition of the building.

BCA Score = 8.06

Calculation of the final score of the BCA parameter:

$$= [(25 - \text{BCA Score}) / 25] \times \text{Weightage}$$

$$= [(25 - 8.06) / 25] \times 33\%$$

$$= 22.36$$

Therefore, the final score of the BCA is **22.36**.

**4.8 THE BCARS ANALYSIS OF JKR JAJAHAN KOTA BHARU, KELANTAN BUILDING.**

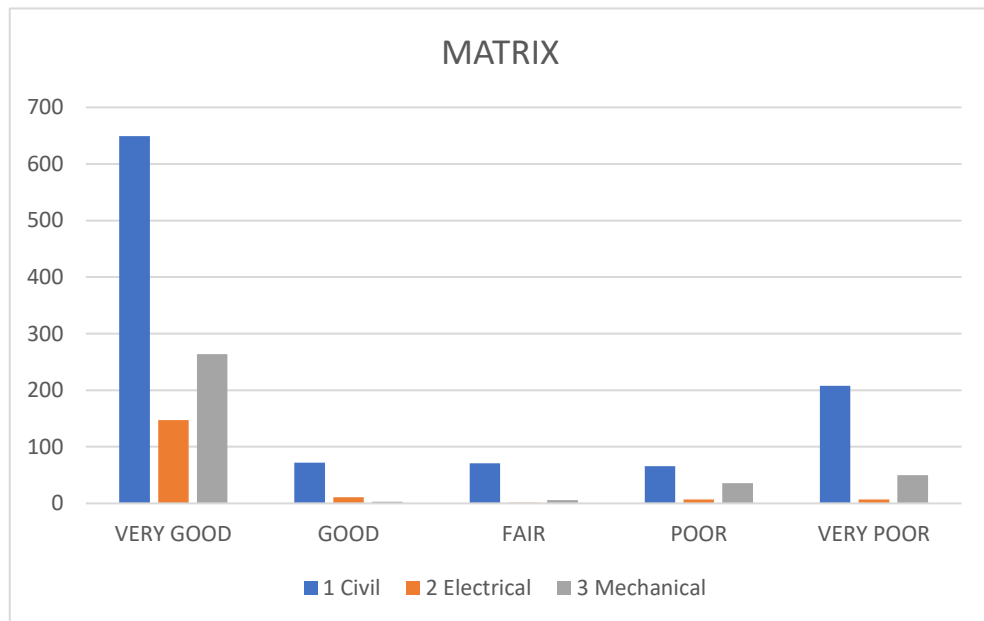


Chart 1 : Matrix of Building Rating

Based on the bar chart, the highest matrix rate is very good with 1060 defects. Followed by good rate with 86 defects. For the fair rate, there's only 78 defects. Meanwhile, for the poor rate is 109 defects and 265 for very poor. The total defects for civil is 1066 defects equal to 9.77 for the total score and mostly the rate of the building is blue which is good. For electrical, the total defects are 359 which is in 6.87 for the total score and the rate is blue which is still good. For the last, the total defects of mechanical are 173 defects which is equal to 5.55 and the rate is very good. For the overall building rating of the analysis defect is good which is in moderation. Building Condition Assessment requires skill in identifying defects and familiarity with reporting procedures. It primarily involves on-site work and preparation of a report.

#### 4.9 BUILDING DEFECT FINDINGS ANALYSIS

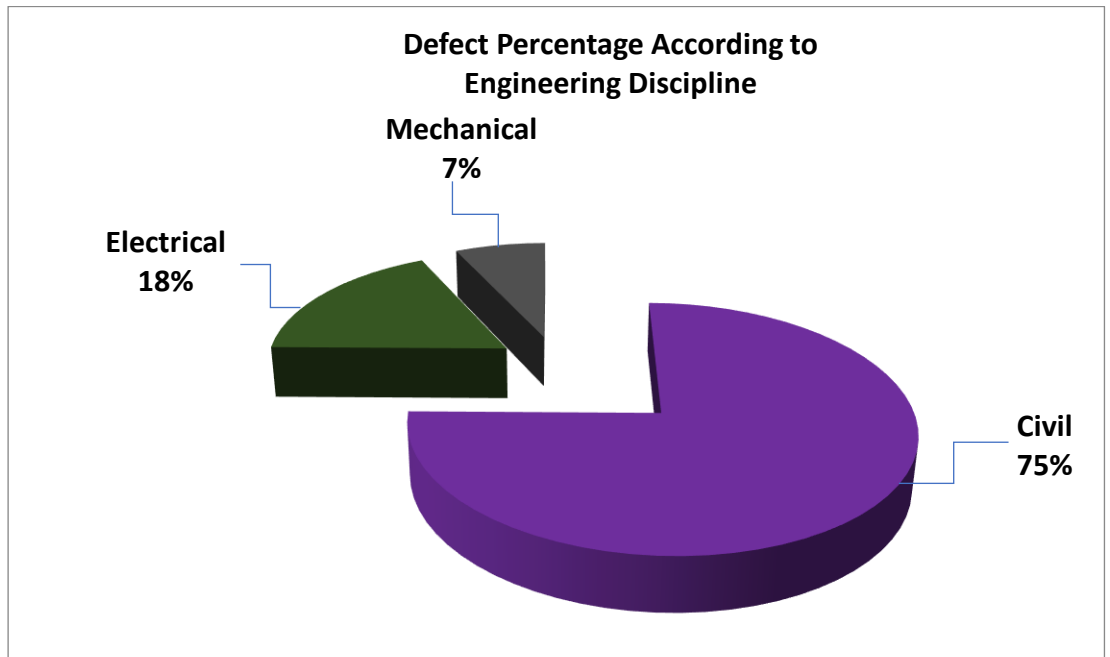


Chart 2: Defect Percentage

The pie chart above shows the gap between of the defect percentage for civil mechanical and electrical part according to engineering discipline. According to the chart above, the results shown that 75% of defect in the building are under civil structure, 18% defects are electrical component meanwhile 7% of the defects are mechanical system that found in the *JKR Jajahan Kota Bharu, Kelantan building*.

From observation, the building has the common types of building defects that often occur in any old building. It was also found that there was no major damage that could endanger the lives of occupants or users of the building. However, most of the defects in the building need to be monitored or maintained to ensure the comfort of consumers.

#### 4.9.1. Defect Analysis by Building Element/Component of Civil

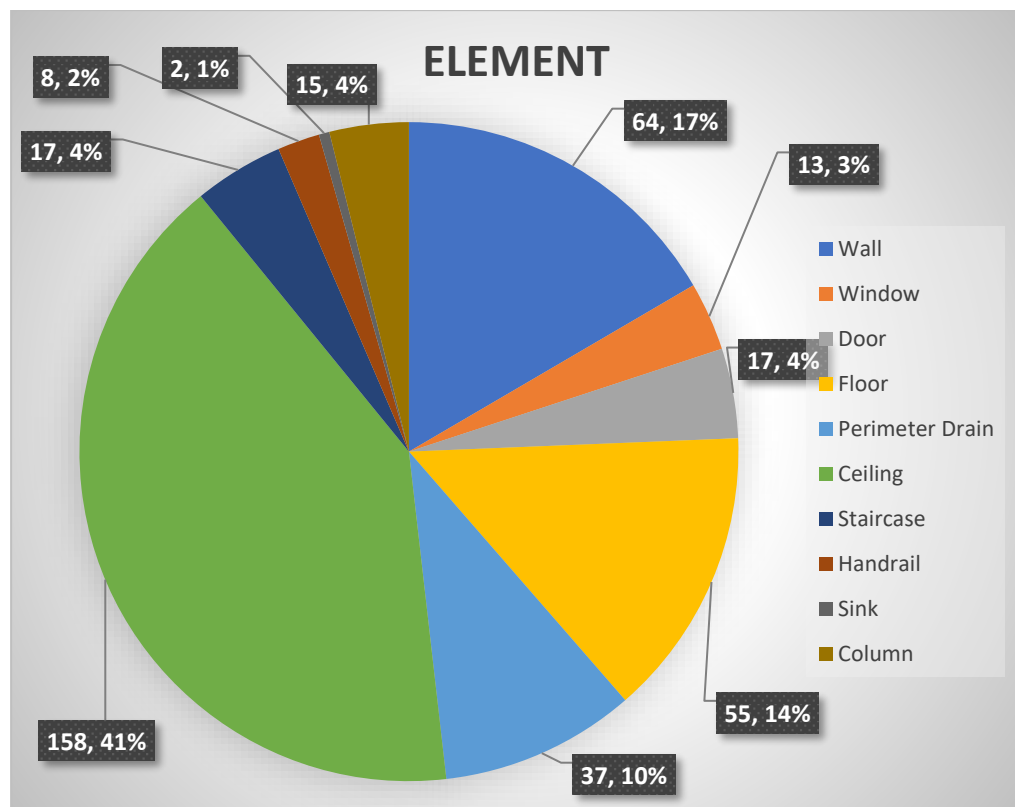


Chart 3: Defect Analysis by Element (Civil)

Based on the pie chart above shows that the element of ceiling the most defects with are in the 7 types defect only which are the detached of ceiling, spider web on ceiling, dirty patches on ceiling, peeling of paint on ceiling, holes on ceiling, missing of ceiling and crack on ceiling. The major defect for ceiling is crack on ceiling which is causes by poor workmanship and age factors. As for the second element wall, there are 9 types of defects for wall which are crack on wall, vegetation on wall, holes on wall, peeling of paint on wall, chipping on wall, dirty patches on wall, mould growth on wall, gap between on wall and spider web on wall. For the wall the major is crack on wall which is causes by human factors. As for lowest is for element handrail and sink which the type of defects is rusty on handrailing and rusty on sink is of defects which is number of defects is less than 10 which is both in 8 and 2 defect only.

#### 4.9.2 Defect Analysis by The Types of Defects for Civil

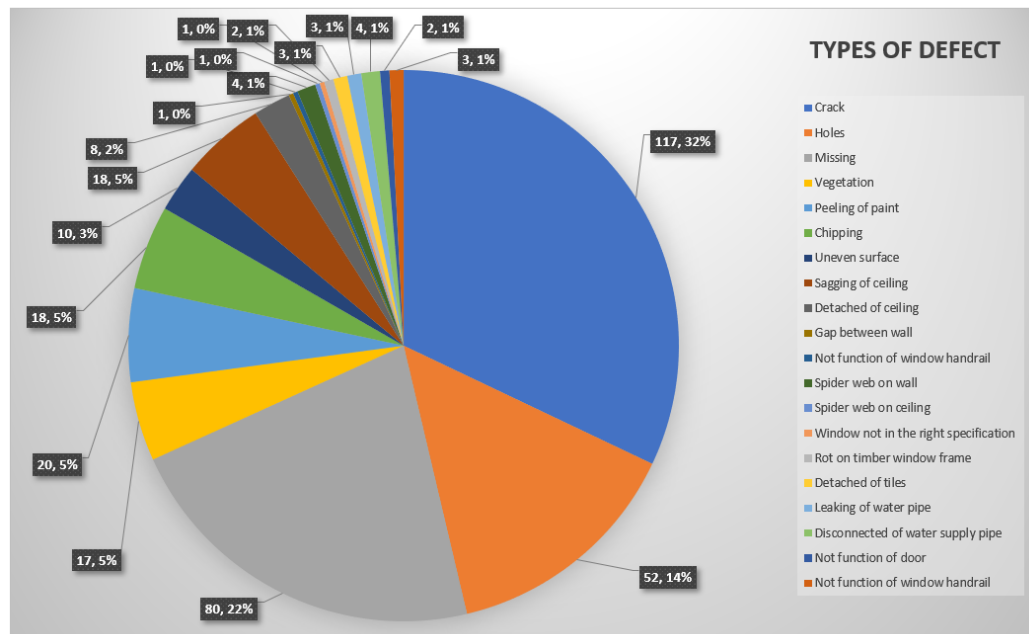


Chart 4: Types of Defects (Civil)

Based on the pie chart above, we can conclude that there are 14 categories or types of defects, which are crack, holes, missing, vegetation, peeling of paint, chipping, uneven surface, sagging of ceiling, detached of ceiling, dirty patches on wall, dirty patches on floor, dirty patches on ceiling, gap between wall and not function of window handrail. However, the major category of defect is crack which is 32%. In our investigation, we diagnose that the crack is caused by human factors and age factors. For the minor category of defects are disconnected of water supply pipe, spider web on ceiling, detached on tiles and not function of door with overall are in score 1%.

### 4.9.3 Defect by Categories of Defect (Civil)

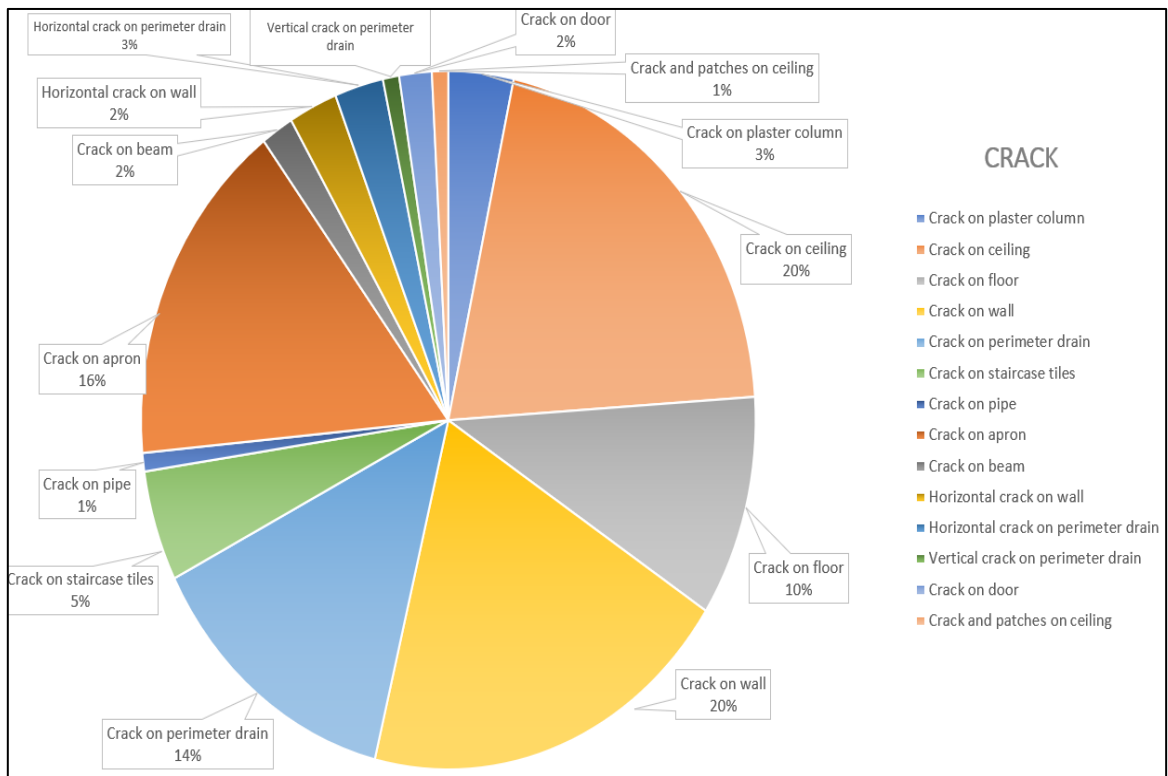


Chart 5: Defect Analysis for Crack (Civil)

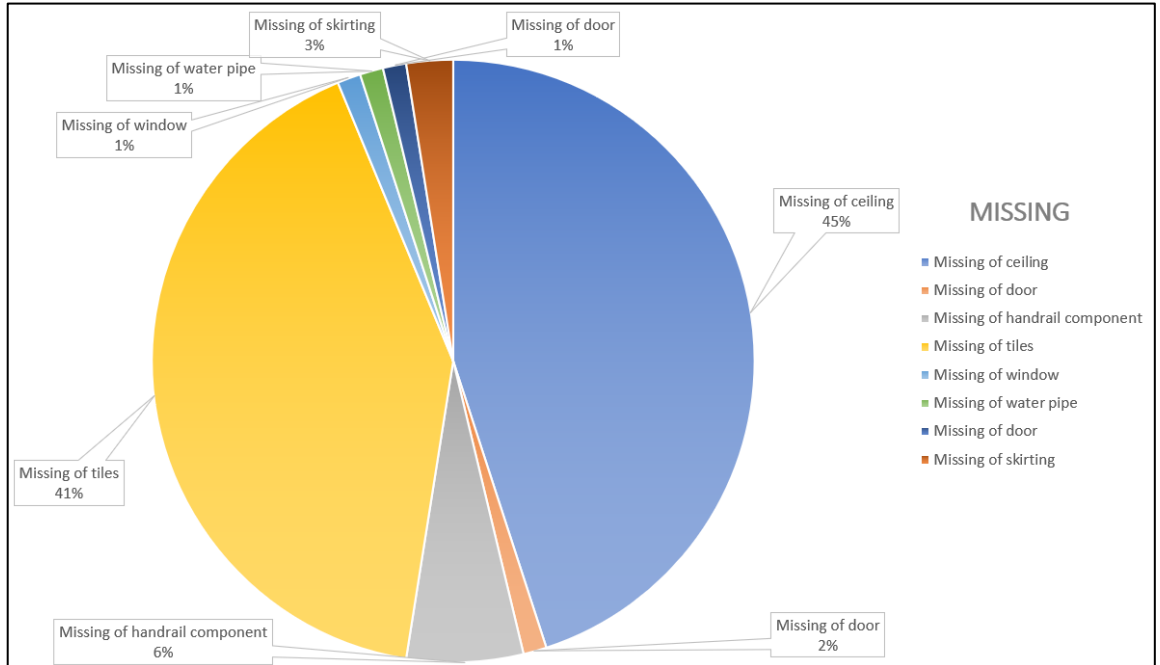


Chart 6: Defect Analysis for Missing (Civil)

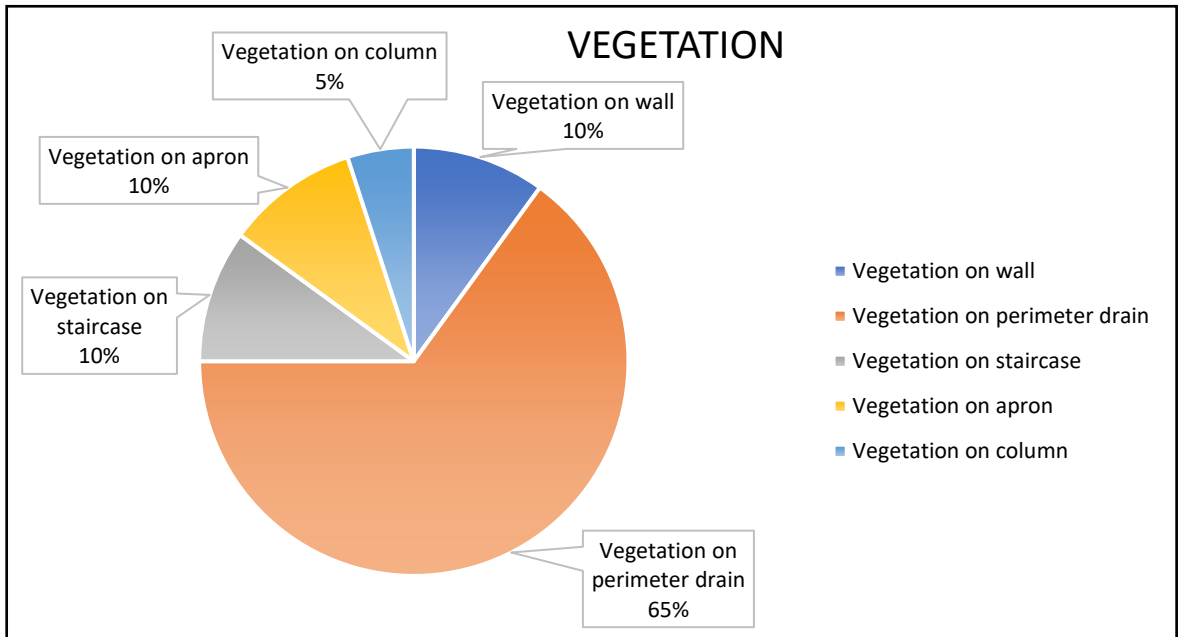


Chart 7: Defect Analysis for Vegetation (Civil)

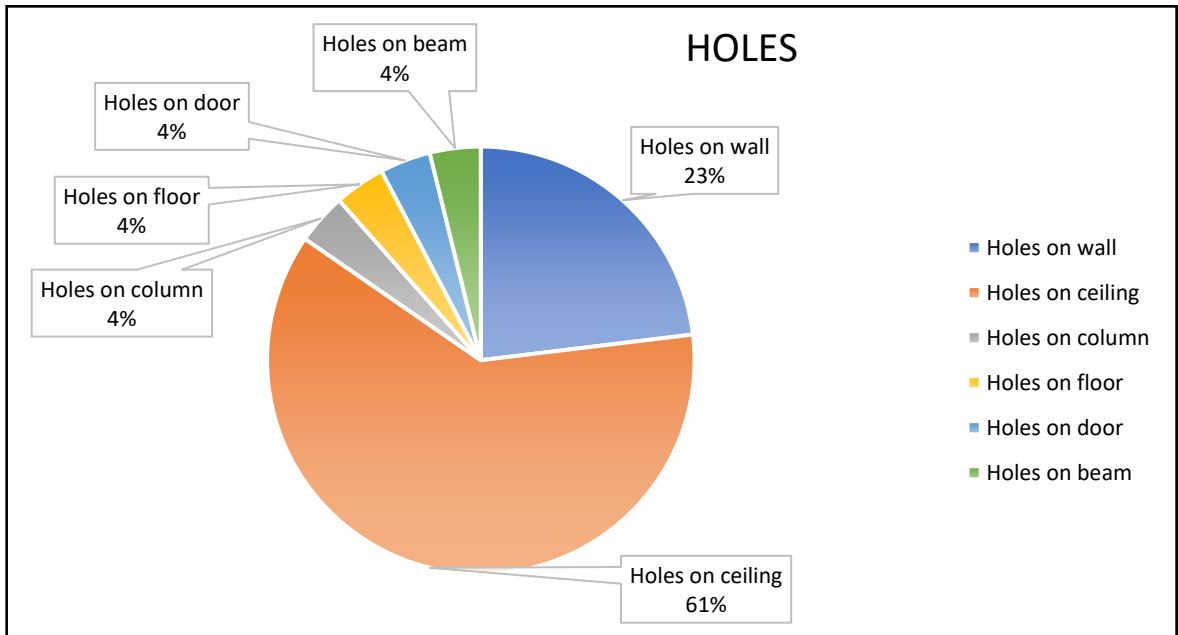


Chart 8: Defect Analysis for Holes (Civil)

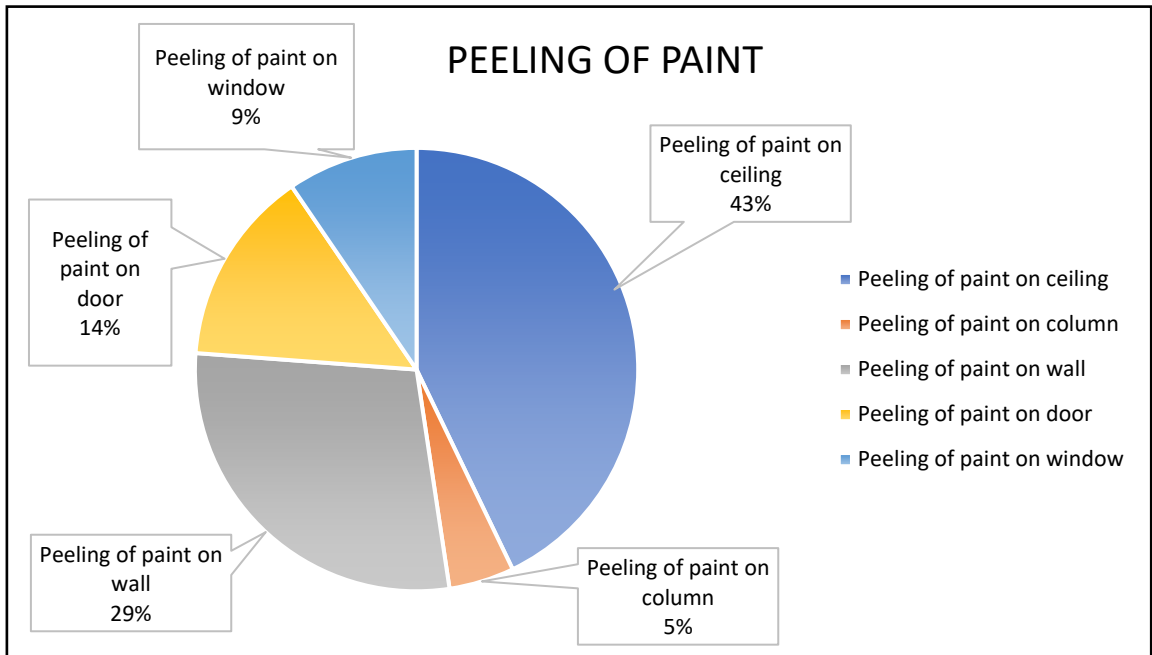


Chart 9: Defect Analysis for Peeling of Paint (Civil)

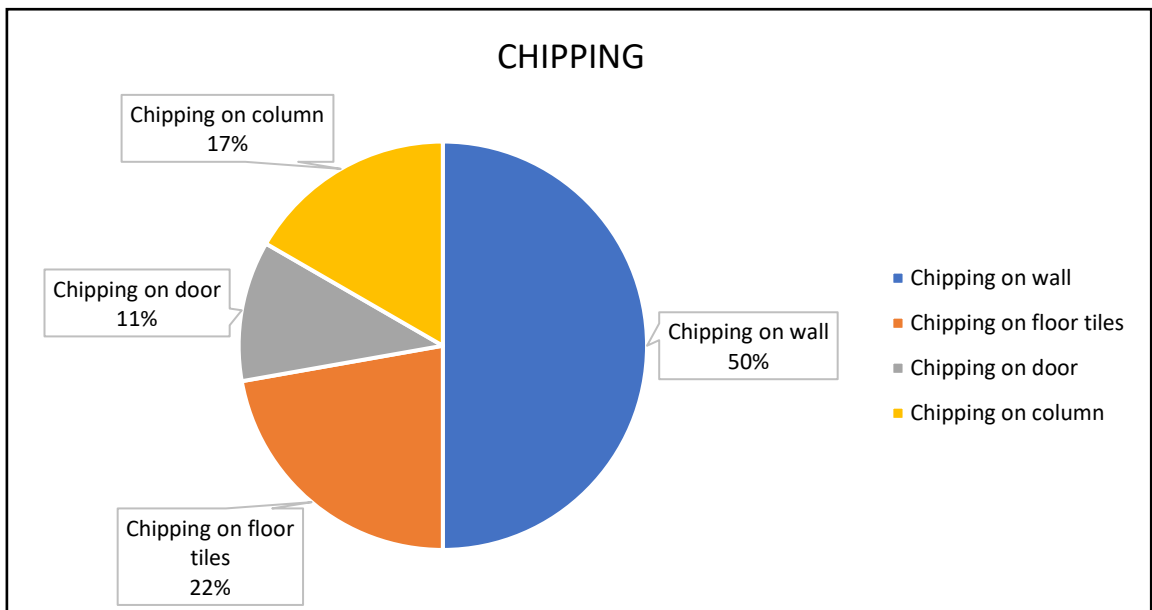


Chart 10: Defect Analysis for Chipping (Civil)



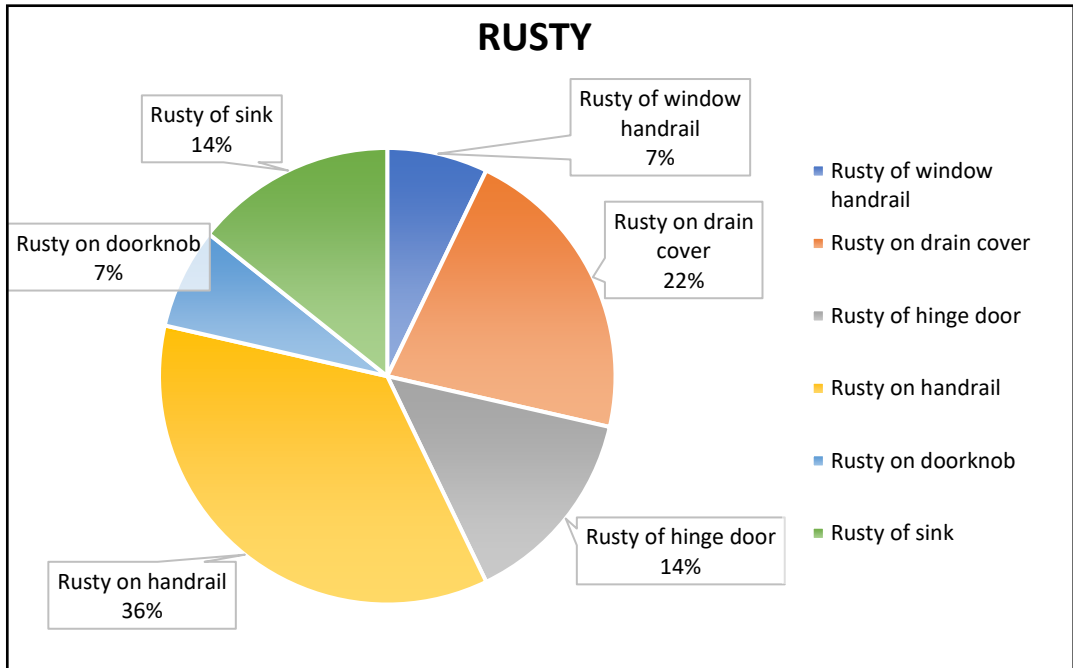


Chart 11: Defect Analysis for Rusty (Civil)

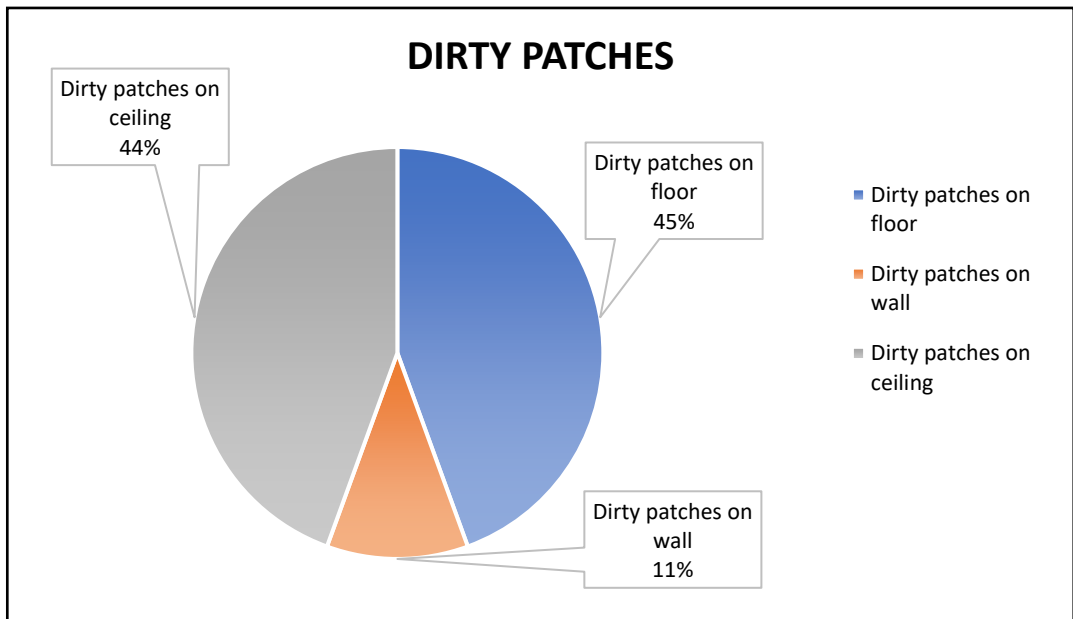


Chart 12: Defect Analysis for Dirty Patches (Civil)

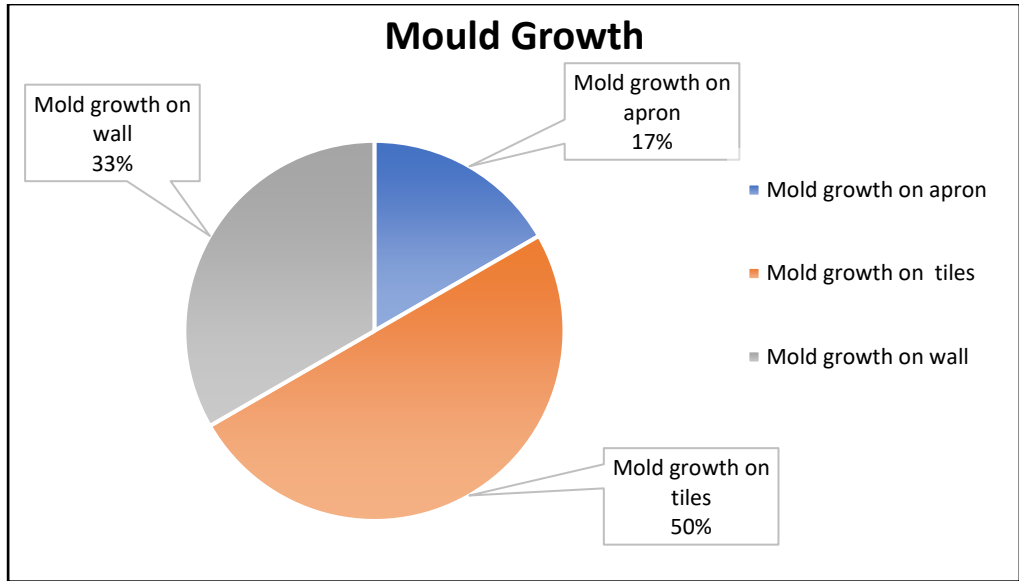


Chart 13: Defect Analysis for Mould Growth (Civil)

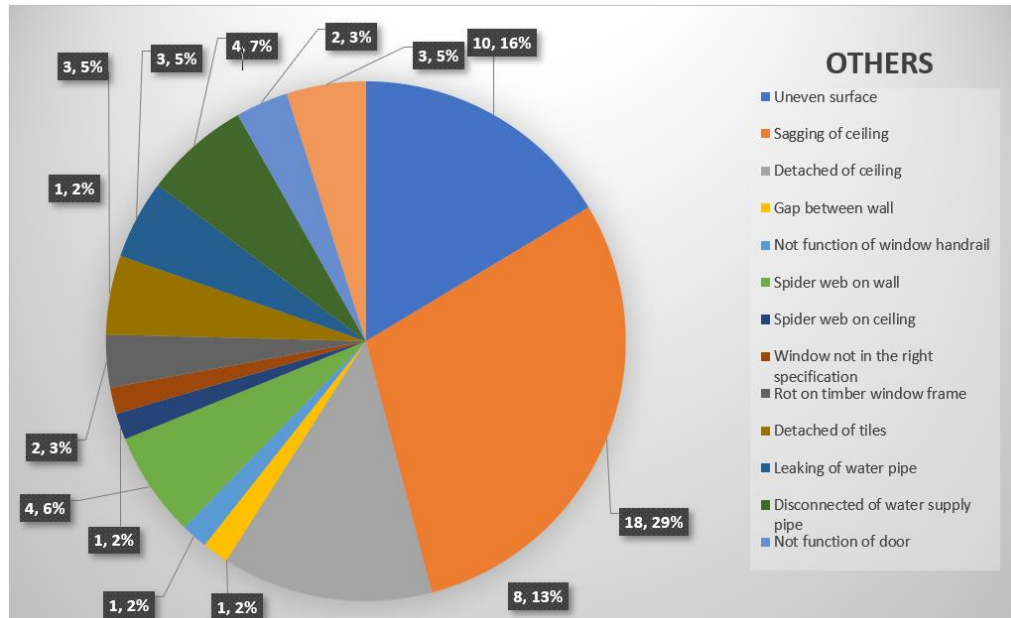


Chart 14: Others Defect (Civil)

The following are details of findings according to the type of elements and sources of the defects;

**i. Ceiling**

The type of ceiling used in this building is a Suspended Ceiling. Overall, the Suspended Ceiling has sagged, broken, perforated, cracked, and disappeared in several locations and requires immediate repair and replacement. This is likely due to the presence of electrical or mechanical components that put a load on the Suspended Ceiling. Furthermore, the Suspended Ceiling deteriorates due to age and humidity factors.

**ii. Wall**

Overall, the damage/defects in the brick walls of this structure are fine cracks caused by the shrinkage and expansion of concrete cracks, and there are holes in the walls due to the effect of perforation for wiring. Furthermore, there are slightly damaged walls, and the paint on the wall surface has been ripped and flaking as a result of the effects of weather and age factors of the building. These walls' damage/defects necessitate repair work and surface repainting.

**iii. Column**

Several cracks in the column cracks were detected on this building due to the process of shrinkage and expansion of the cracks concrete. In addition, cracking of column cracks also occurs due to imperfect electrical component installation work. Maintenance work monitoring measures should be taken into account.

**iv. Door**

Most of the doors in this building are damaged to the door accessories such as handles, knobs, door closer, door frames, and hinges that need replacement. Damage occurred due to careless use and lack of maintenance work performed.

**v. Floor (Tile)**

Overall, the tile-type floor finishes suffer major damage such as detachment/breakage that requires repair and replacement. This situation will endanger route users. This damage was caused by factors from the activities of building users and floor tile installation work that did not follow the specifications.

**vi. Window**

Most of the windows in this office, meeting room and main hall are damaged and cannot function properly which requires replacement. In addition, most of the window frames have also rotted and the paint is peeling off. This damage is likely due to the age factor of the component undergoing Wear and Tear.

**vii. Toilet Accessories**

There are some damaged toilet accessories such as components in the cistern, bottle trap, water tap, water pipe, and floor trap which need replacement.

#### 4.9.4 Defect Analysis by Type of Defect (Electrical)

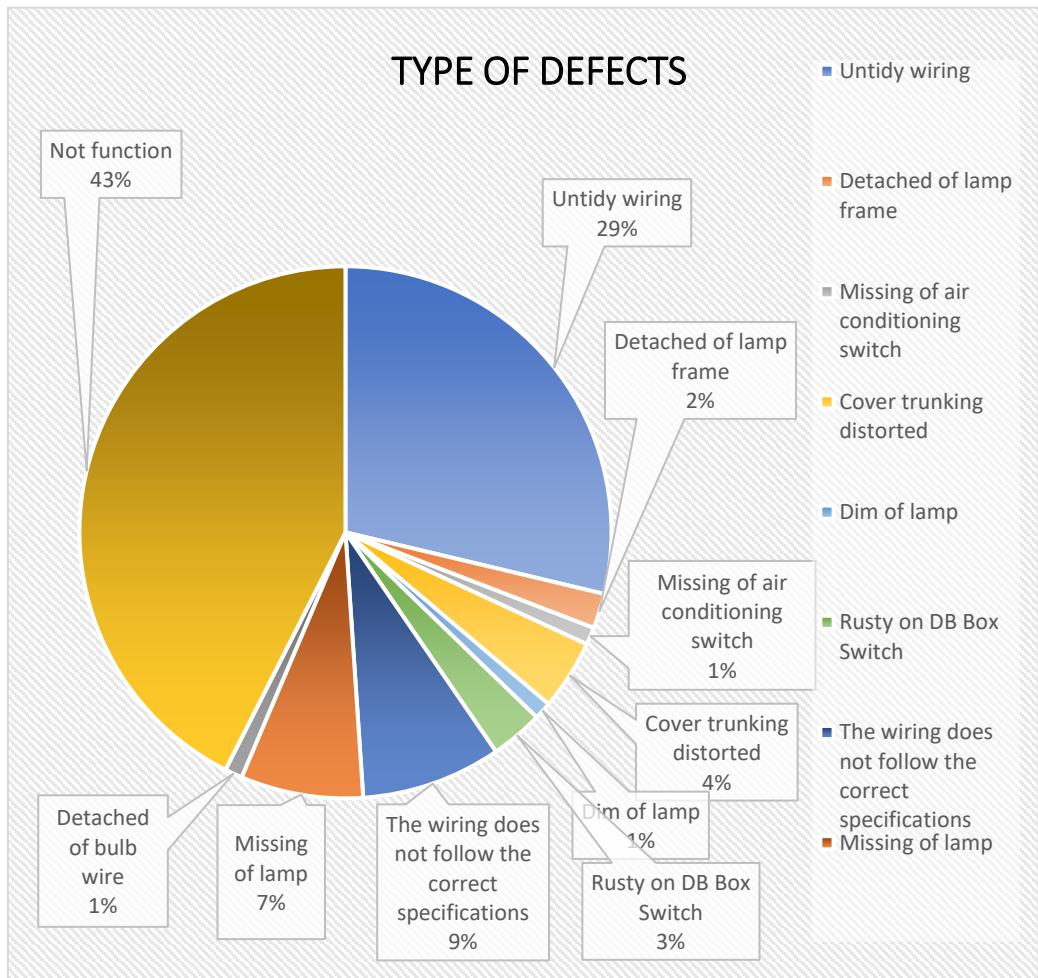


Chart 15: Types of Defects (Electrical)

Based on the pie chart above, we can conclude that there are 9 categories or types of defects: untidy wiring, detached of lamp frame, missing of air conditioning switch, cover trunking distorted, dim of lamp, rusty on DB box switch, the wiring does not follow the correct specification, missing of lamp, detached of bulb wire, and not function of items. However, the major category of defect is not function, which is 43%. In our investigation, we diagnose that not function is caused by poor workmanship. For the minor categories of defect are detached of bulb wire and dim of lamp, both with a score of 1%.

#### 4.9.5 Defect by Categories of Defect (Electrical)

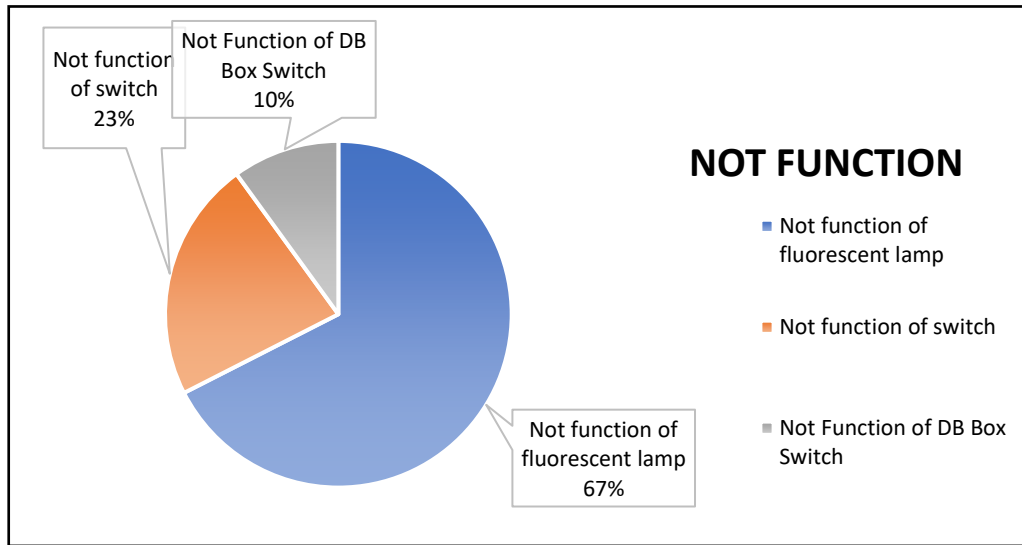


Chart 16: Defects Analysis for Not Function (Electrical)

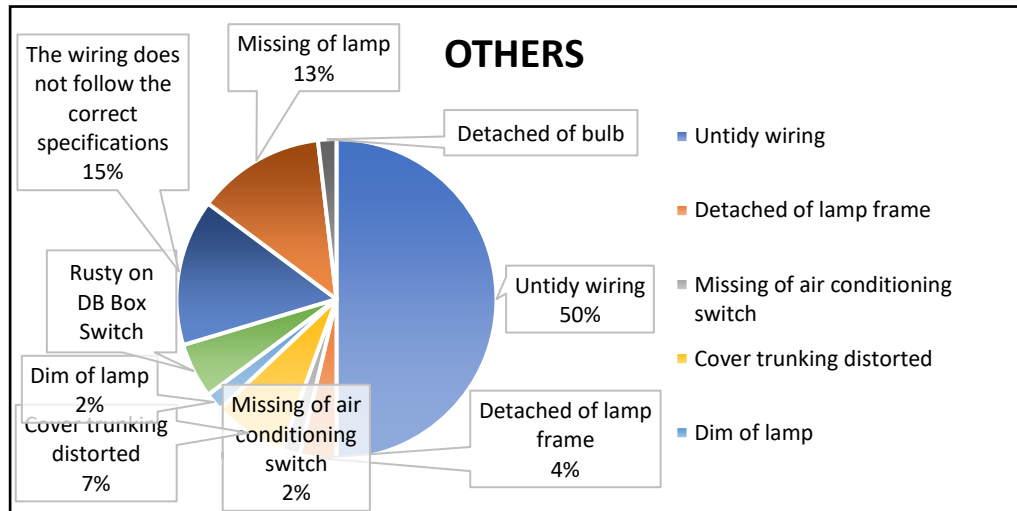


Chart 17: Others Defects Analysis (Electrical)

Here are the details of the findings according to the electrical system/component:

**i. Wiring System**

The wiring system in this building needs to be given attention to carry out replacement or repair work on the electrical wiring system. Most of the electrical wiring systems in this building are at a very good level and a small number are at a very critical level where the lights and sockets are not working properly. In addition, based on observations, there are many rooms and spaces whose wiring is untidy which can result in shortcuts or danger to occupants.

**ii. MSB Room/Distribution Box**

There is some damage to the distribution box which requires replacement of the Residual Current Circuit Breaker (RCCB).

**iii. Indoor Lighting System**

Most of the lights in the building were damaged and did not light up, especially in the Technical Room, Entrance Hall and Toilets. This damage is due to the tube/light bulb having burned out or wiring problems. Lighting replacement and detailed inspection of building wiring should be carried out.

**iv. Switches**

Switch damage in the office space is due to building wiring problems and repair/replacement actions need to be implemented for the switch to function.

**v. Socket**

Most of the sockets in the office space are malfunctioning and damaged due to building wiring problems that require detailed inspection. In addition, there were some detachable sockets due to installation that did not conform to specifications and required repair.

#### 4.9.6 Defect Analysis by Type of Defect (Mechanical)

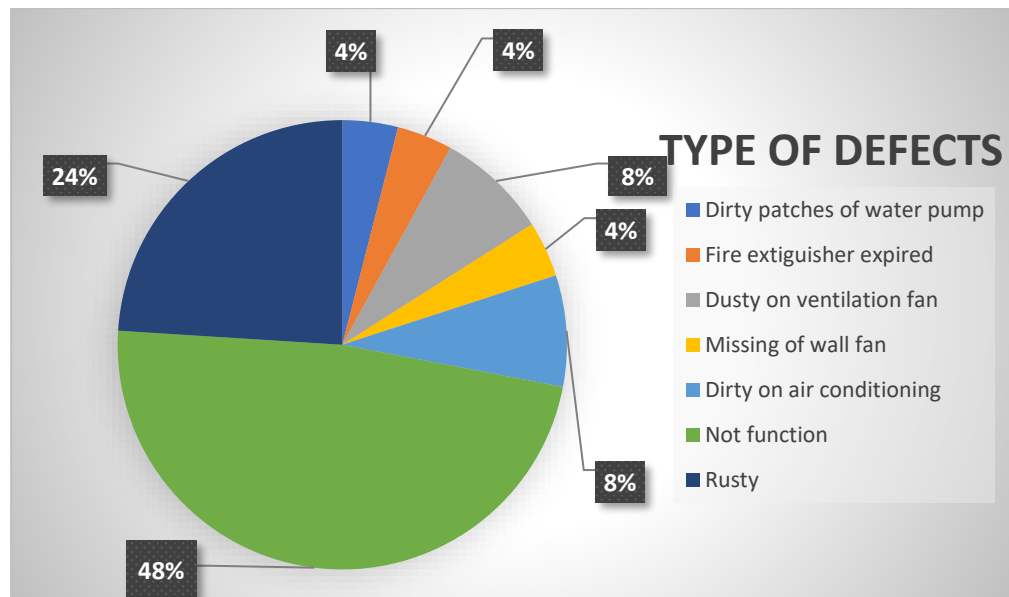


Chart 18: Types of Defects (Mechanical)

Based on the pie chart above, we can conclude that there 7 categories or type of defect, dirty patches on water pump, expired of fire extinguisher, dusty on ventilation fan, missing of wall fan, dirty on-air conditioning, not function and rusty. However, the major category of defect is not function which is 48%. In our investigation, we diagnose that not function is causes by poor workmanship. For the minor category of defect are dirty patches of water pump, expired of fire extinguisher, and missing of wall fan with score 4%.



#### 4.9.7 Defect by Categories of Defect (Mechanical)

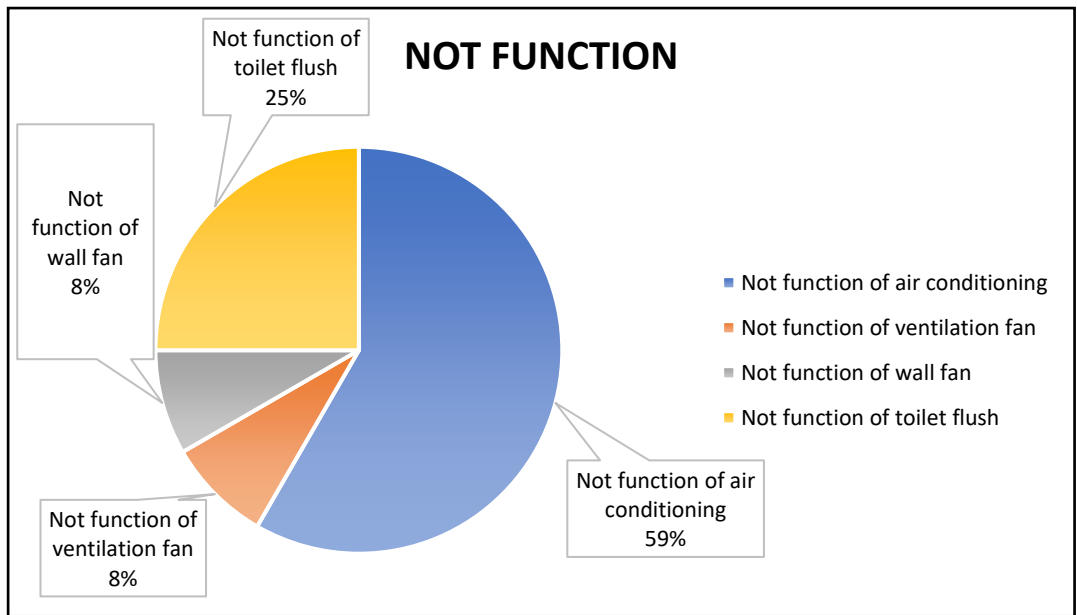


Chart 19: Defect Analysis by Not Function (Mechanical)

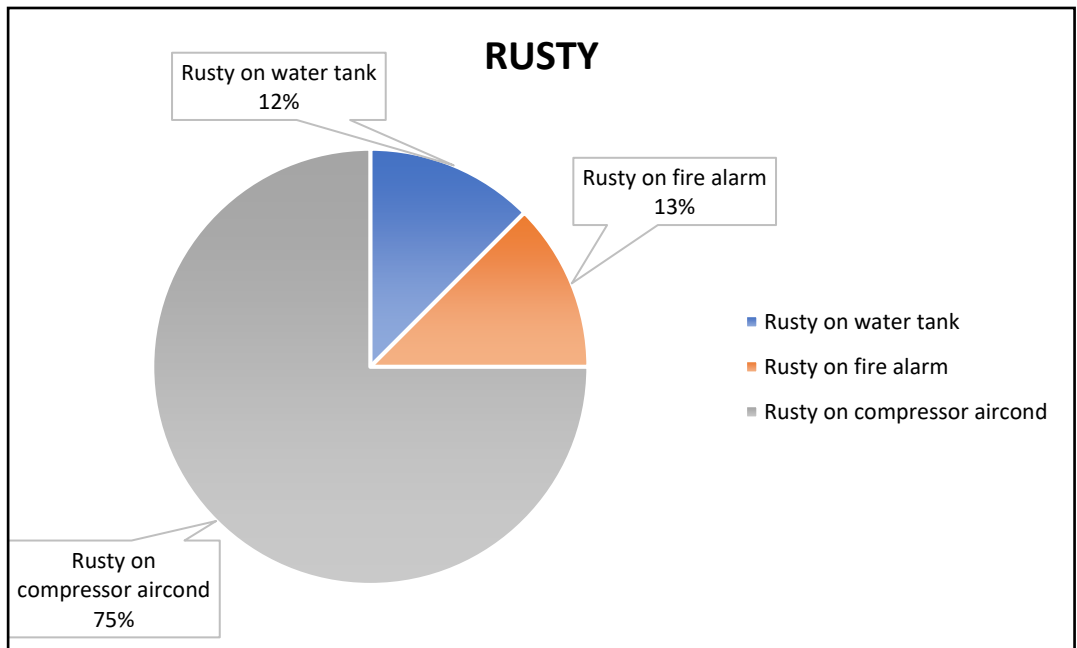


Chart 20: Defect Analysis by Rusty (Mechanical)

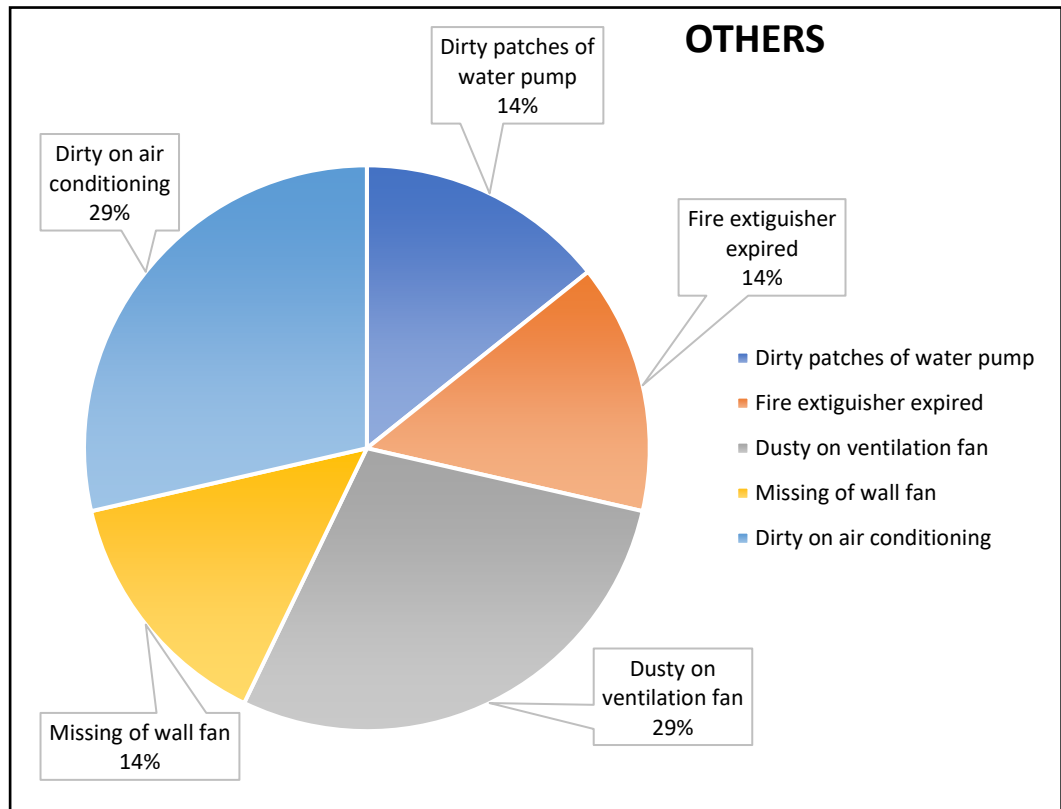


Chart 21: Others Defect Analysis (Mechanical)

The following are details of findings for mechanical system/component:

**i. Air Conditioner**

Overall, based on visual inspection on site and complaints from building occupants, it was found that many air conditioning systems were damaged, did not work optimally according to the set level and there were old air conditioners that emitted noise that disturbed the work atmosphere in the office. Therefore, the air conditioning system in this office needs replacement as the air conditioner has reached a useful life span.

**ii. Fan**

From observation, this office still uses a lot of fans as a ventilation system. However, many fans were found to be malfunctioning, dusty, and missing which required repair, replacement and routine cleaning.

**iii. Flush**

Overall, the toilet pump suffered damage as the flush did not work properly. To solve the problem, repairs and replacements need to be done to ensure the comfort of the occupants.

**iv. Air Conditioning Compressor**

The condition of the air conditioning compressor in this office is mostly rusty, not working and not according to the set specifications. The damage/defect of the air conditioning compressor is likely due to weather factors and the age of the building. Therefore, the whole air conditioning compressor in this office building needs to be repaired

**v. Fire extinguisher, fire hose reels, fire alarm**

Most of the fire extinguishers in this office are still in good condition and have not expired while the physical condition of the fire hose reels and fire alarms have been much rusty where they need replacement. Damage/defects to the fire system may be due to weather or age factors of the building. All fire systems in this office must be in good condition and able to function optimally to avoid danger to occupants.

**vi. Water tank**

The physical condition of the water tank located behind the building block and on the flat type roof is still in good condition and functioning as it should.

#### 4.10 The Common Building Defects in JKR Jajahan Kota Bharu, Kelantan

Below is the most common civil, mechanical and electrical defects found in the JKR Jajahan Kota Bharu building during the inspection:

##### a) Missing/Holes of ceiling



##### b) Crack and vegetation on perimeter drain



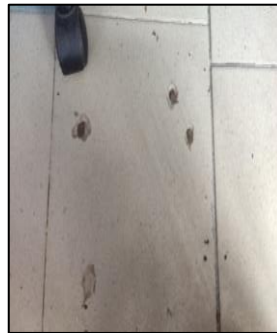
##### c) Crack and damage of flooring



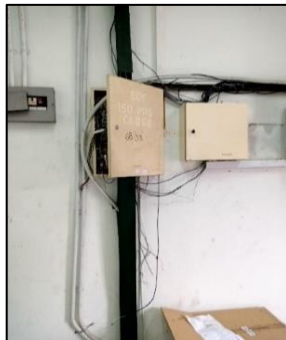
**d) Peeling of paint**



**e) Chipping on floor**



**f) Untidy wiring**



**g) Damaged of DB Box Switch**



**h) Dimmed and not functioning of lighting**



**i) Damaged ventilation fan and rusty of compressor aircons**



**h) Rusty of fire alarm system**



#### **4.11 The Common Problems Encountered During Building Condition Assessment (BCA) Inspection Work for JKR Jajahan Kota Bharu, Kelantan**

Several problems were encountered by building inspectors during the inspection work of the JKR Jajahan Kota Bharu, Kelantan building, including:

##### **a) Difficulty in accessing rooms and spaces**

This issue frequently arises when the occupants of the room refused to comply with building investigators when inspecting their room or workstation. Furthermore, there is the issue of the absence of officers who are responsible for unoccupied and locked rooms such as toilets, file rooms, stores, and so on causes disrupted the building investigation work and slowed down the inspection process.

##### **a) Lack of knowledge of BCA**

This problem often occurs during building investigations involving building tenants. Most of the building occupants are lack awareness about the purpose of doing the BCA inspection. They do not aware of how to visually assess the physical condition of the building, and also do not understand the source of damage that happens to the building components, which makes it difficult for building investigators to accurately determine the cause of damage.

##### **b) Inspections works take a long time to complete.**

Since this project only comprises 1 building block, the investigation work can be completed in a short time, however there are too many components and defects that need to be recorded. And also, a lot of data needs to be entered into the defect sheet manually by following the civil, mechanical and electrical parts that become a long time to complete all the data.

#### **4.12 The Ways to Overcome the Problems in Conducting the Building Condition Assessment (BCA) Inspection Work for *JKR Jajahan Kota Bharu, Kelantan*.**

By referring to the common problems encountered during inspection process, several approaches can be taken to address the issues that arise when implementing BCA, including:

**a) By providing a briefing or information to all occupants of the building staff about the BCA project.**

All occupants of the building staff should get a briefing or information about the BCA project, the purpose of BCA, and the importance of BCA from the officer who issued the instruction to implement the BCA so that all occupants can provide good cooperation to building investigators. They also need to appoint additional persons in charge who will be responsible for reminding employees in the building and assisting with access to all rooms and places to make inspections easier.

Furthermore, since this project encompasses all parts of the building, including the rooftop, the person in charge is also responsible for ensuring that building investigators can complete BCA inspections securely. All staff also needs to be alert to the physical condition of the building in order to provide clear information to investigators since a lot of defects are caused by human activities such as hacking walls for wiring, incorrect installation of switches and sockets, placing a heavy load on the components and other.

**b) Give cooperation to access the room or working station.**

To avoid inspection delays, it is critical to have a big number of employees in charge of ensuring that all inspection work is seamless and the rooms are conveniently accessible. The person in charge must notify the room's occupants not to lock the door when leaving the room and must keep the room secure against trespassers. If only one person is in charge of this project and is not present on the day of the building investigation, the investigator must proceed to another room or space first and repeat the investigation job for the previous room until all rooms and spaces may be accessible. To be more at ease, inhabitants of rooms or workplaces with damage problems could file a complaint with the person in charge,



indicating the location of the damage, the types of components, and the reasons for the damage. Throughout the data collection process, this information will be extremely beneficial to building investigators.

**c) Improved the way key in the data by using a systematic system**

Since this project only comprises 1 building block, the investigation can be done in a short time however there are too many components and defects that need to be recorded and need to include pictures of evidence one by one. To generate BCARS, all of the findings of building condition must be sorted and placed into a defect sheet however, this causes a few difficulties, such as errors during entry data and misunderstandings on how to organize the data. In that situation, the inspector is recommended to use the PWD-provided systematic system, namely BCARS app to rectify the problem. By using the BCARS app, the data will be automatically entered into the defect sheet at the site by the system. The method is really helpful in the reduction of both time and manpower.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 INTRODUCTION**

The purpose of this chapter is to conclude the results that have been discussed in the previous chapters. The results and findings were analysed from the information gathered based on the Building Condition Assessment (BCA) and the overall building rating information of the case study in this chapter as a conclusion. In addition, recommendations will be made in order to provide a reliable opinion that can be used by the relevant parties for further reference. The recommendation is also important in providing direction for future planning. Lastly, this chapter also helps to reveal the overall conclusion of this industrial practical training.

#### **5.2 RECOMMENDATION**

This study is done by conducting the BCA at Jabatan Kerja Raya (JKR) Kota Bharu building. The inspection only took place at one building where the BCA process was done on the entire part of the building. This process only takes into account the Civil, Mechanical & Electrical of the building. Several problems also had occurred during the study that could be avoided during the next project. Some of the recommendations that can be introduced are:

- i. After choosing a building, it is recommended that you visit the site several times to ensure that you are well prepared before entering the building. This is to avoid unnecessary setbacks when you come unprepared.
- ii. The BCA process can be performed on different buildings, with one of the buildings being a well-maintained building to serve as a reference for how the BCA process actually works.
- iii. To ensure the comfort of building users, repairs and maintenance works should be made from time to time based on the discovery of damage.
- iv. The BCA needs to be intensified further to all new buildings and those that have reached a lifespan. This is because the BCA will provide many advantages to users and also can improve building performance.

### 5.3 CONCLUSION

To sum up, more experiences gain by the inspector, more accurate the data and also the judgement give to the intensity of the defects. To ensure the consistency and acceptability of BCA to different types of buildings, a building inspector must have the ability to identify defects and be familiar with reporting procedures. Building condition assessments represent one of the main functions of asset management. Beside from that, there is a link between building condition and user performance. By assessing the building condition, the decision making on maintenance plan and strategies will be easier.

For overall, the time taken to complete the inspection might be affected by the assessor's level of understanding. Currently, the severity of the problems is determined by the assessor's or building inspector's acceptance or judgment. Therefore, more experiences gain by the inspector, more accurate the data and also the judgement give to the intensity of the defects. To ensure the consistency and appropriateness of BCA to different types of buildings, a building inspector must have the ability to identify defects and be familiar with reporting procedures.

During the industrial training at Jabatan Kerja Raya (JKR), trainees in the building department have been exposed to a variety of activities and tasks in the company. Students must also be familiar with all of the company's roles and responsibilities. Exposure to a real working environment is beneficial to students as trainers, particularly in terms of expanding their ideas and becoming more creative and knowledgeable. It will also improve the student's capacity to think effectively, learn independently, solve issues effectively, and generate high-quality creative work.

The most important aspect in the implementation of work must be disciplined, hardworking and trustworthy. Way to communicate also plays an important role in reducing the gap in age and experience with colleagues and the surrounding community.

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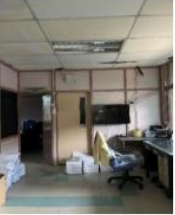



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## APPENDICES

### i) Example Of Defect Sheets for Civil





No. Helaian Kecacatan	001	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001001		
	Elemen/ Komponen	Dinding		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	2	4	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
No. Helaian Kecacatan	002	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001002		
	Elemen/ Komponen	Pintu		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	2	4	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
No. Helaian Kecacatan	003	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001003		
	Elemen/ Komponen	Pintu		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	2	4	
Keterangan Kecacatan/kerusakan				
Cat mengelupas di pintu				
Punca Kecacatan/kerusakan				
Faktor usia				
No. Helaian Kecacatan	004	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001004		
	Elemen/ Komponen	Bingkai pintu		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	3	6	
Keterangan Kecacatan/kerusakan				
Cat mengelupas pada bingkai pintu				
Punca Kecacatan/kerusakan				
Faktor usia				





No. Helaian Kecacatan	005	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001005		
	Elemen/ Komponen	Pintu		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	2	4	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
No. Helaian Kecacatan	006	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001006		
	Elemen/ Komponen	Pintu		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	2	4	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
No. Helaian Kecacatan	007	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001007		
	Elemen/ Komponen	Dinding		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	2	4	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
No. Helaian Kecacatan	008	Aras	Aras 0	
	Lokasi	Ruang Teknikal/C0R001008		
	Elemen/ Komponen	Tiang		
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	3	3	9	
Keterangan Kecacatan/kerusakan				
Lubang pada dinding				
Punca Kecacatan/kerusakan				
Faktor aktiviti manusia				

No. Helaian Kecacatan	034	Aras	Aras 0
Lokasi		Ruang Teknikal/C0R001034	
Elemen/ Komponen		Siling	
PENEM UAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
Lubang pada siling			
Punca Kecacatan/kerusakan			
Faktor aktiviti manusia			
			
No. Helaian Kecacatan	035	Aras	Aras 0
Lokasi		Ruang Teknikal/C0R001035	
Elemen/ Komponen		Siling	
PENEM UAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
Lubang pada siling			
Punca Kecacatan/kerusakan			
Faktor aktiviti manusia			
			
No. Helaian Kecacatan	036	Aras	Aras 0
Lokasi		Ruang Teknikal/C0R001036	
Elemen/ Komponen		Siling	
PENEM UAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
Lubang pada siling			
Punca Kecacatan/kerusakan			
Faktor aktiviti manusia			
			
No. Helaian Kecacatan	037	Aras	Aras 0
Lokasi		Ruang Teknikal/C0R001037	
Elemen/ Komponen		Siling	
PENEM UAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
Lubang pada siling			
Punca Kecacatan/kerusakan			
Faktor aktiviti manusia			
			
No. Helaian Kecacatan	038	Aras	Aras 0
Lokasi		Ruang Teknikal/C0R001038	
Elemen/ Komponen		Siling	
PENEM UAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
Siling pecah			
Punca Kecacatan/kerusakan			
Faktor usia			
			








	Lokasi	Ruang Teknikal/C0R001039
	Elemen/ Komponen	Siling
	PENEM UAN	
	Kondisi	Keutamaan
	5	5
	Matrik	Warna
	25	
	Keterangan Kecacatan/kerusakan	
	Lubang pada siling	
	Punca Kecacatan/kerusakan	
	Faktor aktiviti manusia	
No. Helaian Kecacatan	040	Aras
		Aras 0
	Lokasi	Ruang Teknikal/C0R001040
	Elemen/ Komponen	Siling
	PENEM UAN	
	Kondisi	Keutamaan
	5	5
	Matrik	Warna
	25	
	Keterangan Kecacatan/kerusakan	
	Siling pecah	
	Punca Kecacatan/kerusakan	
	Faktor usia	
		
No. Helaian Kecacatan	041	Aras
		Aras 0
	Lokasi	Ruang Teknikal/C0R001041
	Elemen/ Komponen	Siling
	PENEM UAN	
	Kondisi	Keutamaan
	5	5
	Matrik	Warna
	25	
	Keterangan Kecacatan/kerusakan	
	Siling pecah	
	Punca Kecacatan/kerusakan	
	Faktor usia	
		
No. Helaian Kecacatan	042	Aras
		Aras 0
	Lokasi	Ruang Teknikal/C0R001042
	Elemen/ Komponen	Siling
	PENEM UAN	
	Kondisi	Keutamaan
	5	5
	Matrik	Warna
	25	
	Keterangan Kecacatan/kerusakan	
	Siling pecah	
	Punca Kecacatan/kerusakan	
	Faktor usia	
		
No. Helaian Kecacatan	043	Aras
		Aras 0
	Lokasi	Ruang Teknikal/C0R001043
	Elemen/ Komponen	Siling
	PENEM UAN	
	Kondisi	Keutamaan
	5	5
	Matrik	Warna
	25	
	Keterangan Kecacatan/kerusakan	
	Siling pecah	
	Punca Kecacatan/kerusakan	
	Faktor usia	
		







ii) Example OF Defect Sheets for Mechanical

No. Helaian Kecacatan	001	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001001
		Elemen/ Komponen	M-kipas
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	002	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001002
		Elemen/ Komponen	M-kipas
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	003	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001003
		Elemen/ Komponen	M-penghawa dingin
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	004	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001004
		Elemen/ Komponen	M-penghawa dingin
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			





No. Helaian Kecacatan	005	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001005
		Elemen/ Komponen	M-penghawa dingin
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	006	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001006
		Elemen/ Komponen	M-penghawa dingin
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	007	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001007
		Elemen/ Komponen	M-penghawa dingin
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	008	Aras	Aras 0
		Lokasi	Ruang teknikal/MOR001008
		Elemen/ Komponen	M-kipas
PENEMUAN			
		Kondisi	Keutamaan
		Matrik	Warna
		2	2
			4
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			











No. Helaian Kecacatan	155	Aras	Aras 3
	Lokasi	Stor/M3R059003	
	Elemen/ Komponen	M-aircond	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
2	2	4	
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	156	Aras	Aras 3
 	Lokasi	Stor/M3R059004	
	Elemen/ Komponen	M-kipas	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
tidak berfungsi			
Punca Kecacatan/kerusakan			
faktor usia			
No. Helaian Kecacatan	157	Aras	Aras 3
 	Lokasi	Stor/M3R059005	
	Elemen/ Komponen	M-ventilation fan	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
2	2	4	
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	158	Aras	Aras 3
 	Lokasi	Stor/M3R059006	
	Elemen/ Komponen	M-aircond	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
tidak berfungsi			
Punca Kecacatan/kerusakan			
faktor usia			





No. Helaian Kecacatan	159	Aras	Aras 3
	Lokasi	Tandas M3R061001	
	Elemen/ Komponen	M-pump tandas	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
2	2	4	
Keterangan Kecacatan/kerusakan			
Baik			
Punca Kecacatan/kerusakan			
tiada			
No. Helaian Kecacatan	160	Aras	Aras 3
 	Lokasi	Tandas/M3R062001	
	Elemen/ Komponen	M-pump tandas	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
tidak berfungsi			
Punca Kecacatan/kerusakan			
tidak diseleenggara dengan baik			
No. Helaian Kecacatan	161	Aras	Aras 3
	Lokasi	Tandas/M3R062002	
	Elemen/ Komponen	M-pump tandas	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
5	5	25	
Keterangan Kecacatan/kerusakan			
tidak berfungsi			
Punca Kecacatan/kerusakan			
tidak diseleenggara dengan baik			
No. Helaian Kecacatan	162	Aras	Aras 3
 	Lokasi	External/M3R065001	
	Elemen/ Komponen	M-fire hose	
PENEMUAN			
Kondisi	Keutamaan	Matrik	Warna
2	2	4	
Keterangan Kecacatan/kerusakan			
baik			
Punca Kecacatan/kerusakan			
tiada			

iii) Example of Defect Sheets for Electrical

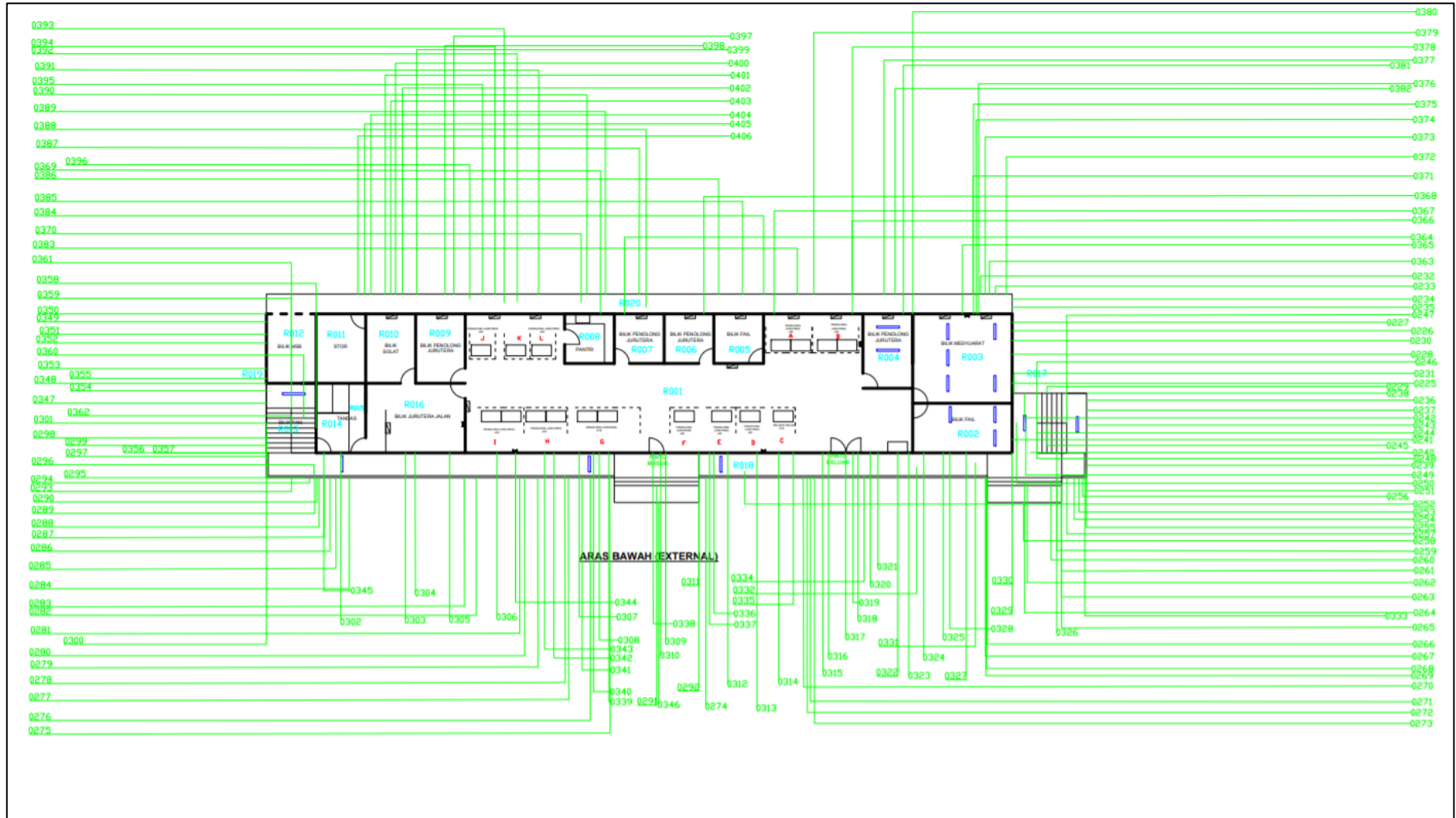
	No. Helaian Kecacatan	001	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001001	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
	No. Helaian Kecacatan	002	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001002	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
	No. Helaian Kecacatan	003	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001003	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
	No. Helaian Kecacatan	004	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001004	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				

	No. Helaian Kecacatan	001	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001001	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
	No. Helaian Kecacatan	002	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001002	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
	No. Helaian Kecacatan	003	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001003	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				
	No. Helaian Kecacatan	004	Aras	Aras 0
	Lokasi		Ruang Teknikal E0R001004	
	Elemen/ Komponen		E- suis	
	PENEMUAN			
	Kondisi	Keutamaan	Matrik	Warna
	2	1	2	
Keterangan Kecacatan/kerusakan				
Baik				
Punca Kecacatan/kerusakan				
Tiada				

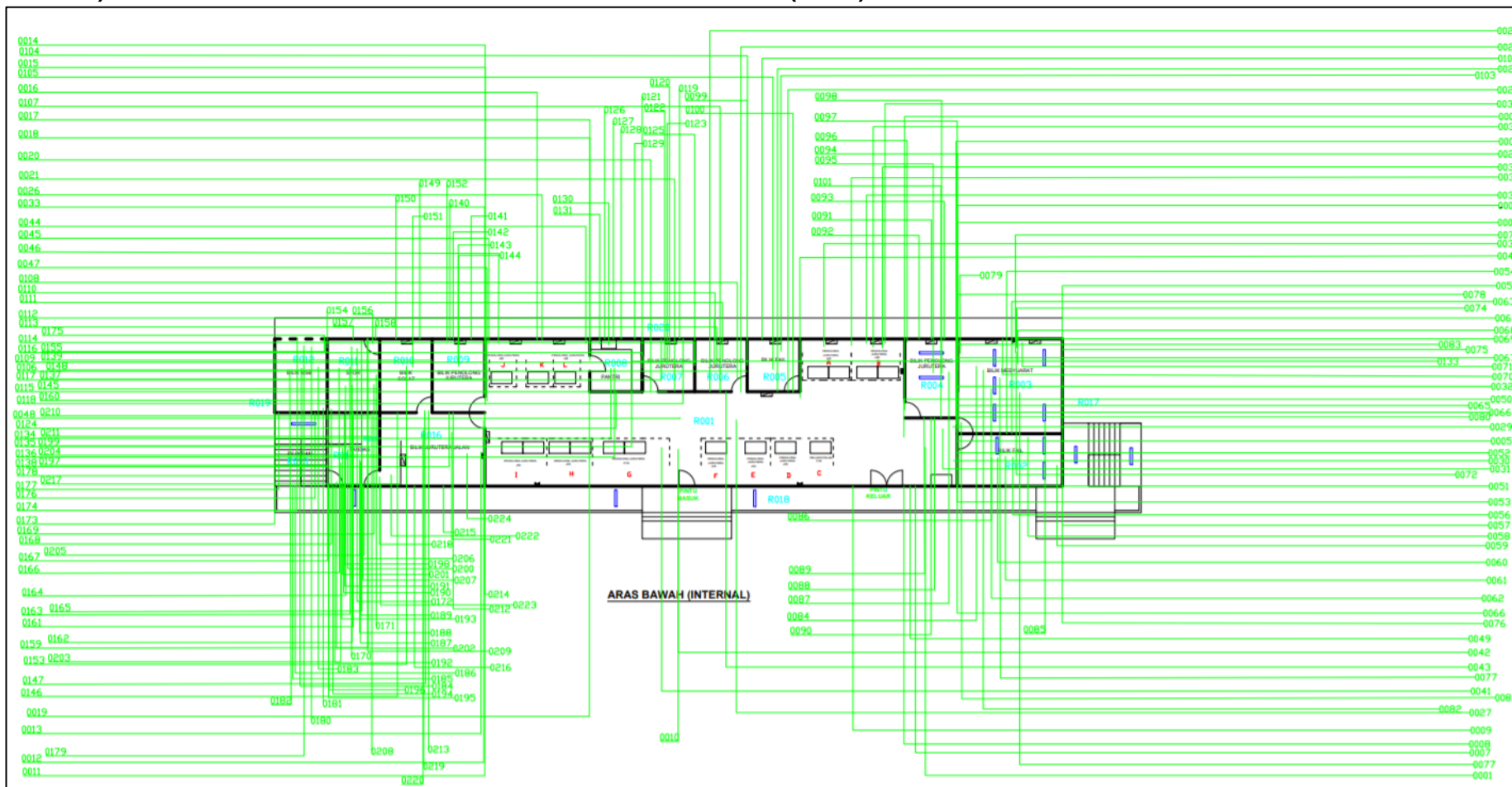
<b>No. Helaian Kecacatan</b>	026	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Ruang Teknikal E0R001026
		<b>Elemen/ Komponen</b>	Lampu
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	3	12	
<b>Keterangan Kecacatan/kerusakan</b>			
Bingkai lampu tertanggal			
<b>Punca Kecacatan/kerusakan</b>			
Aktiviti manusia			
<b>No. Helaian Kecacatan</b>	027	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Ruang Teknikal E0R001027
		<b>Elemen/ Komponen</b>	Wayar
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	4	16	
<b>Keterangan Kecacatan/kerusakan</b>			
Wayar tidak kemas			
<b>Punca Kecacatan/kerusakan</b>			
Hasil kerja yang tidak memuaskan			
<b>No. Helaian Kecacatan</b>	028	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Ruang Teknikal E0R001028
		<b>Elemen/ Komponen</b>	Wayar
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	4	16	
<b>Keterangan Kecacatan/kerusakan</b>			
Wayar tidak kemas			
<b>Punca Kecacatan/kerusakan</b>			
Hasil kerja yang tidak memuaskan			
<b>No. Helaian Kecacatan</b>	029	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Ruang Teknikal E0R001029
		<b>Elemen/ Komponen</b>	Wayar
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	4	16	
<b>Keterangan Kecacatan/kerusakan</b>			
Wayar tidak kemas			
<b>Punca Kecacatan/kerusakan</b>			
Hasil kerja yang tidak memuaskan			

<b>No. Helaian Kecacatan</b>	059	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Stor E0R007006
		<b>Elemen/ Komponen</b>	Wayar
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	4	16	
<b>Keterangan Kecacatan/kerusakan</b>			
Wayar tidak kemas			
<b>Punca Kecacatan/kerusakan</b>			
Hasil kerja yang tidak memuaskan			
<b>No. Helaian Kecacatan</b>	060	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Stor E0R007007
		<b>Elemen/ Komponen</b>	Wayar
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	4	16	
<b>Keterangan Kecacatan/kerusakan</b>			
Wayar tidak kemas			
<b>Punca Kecacatan/kerusakan</b>			
Hasil kerja yang tidak memuaskan			
<b>No. Helaian Kecacatan</b>	061	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Stor E0R007008
		<b>Elemen/ Komponen</b>	DB box
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
5	5	25	
<b>Keterangan Kecacatan/kerusakan</b>			
Pintu DB box tidak berfungsi			
<b>Punca Kecacatan/kerusakan</b>			
Aktiviti manusia			
<b>No. Helaian Kecacatan</b>	062	<b>Aras</b>	Aras 0
		<b>Lokasi</b>	Stor E0R007009
		<b>Elemen/ Komponen</b>	Bekas pendawaian
<b>PENEMUAN</b>			
<b>Kondisi</b>	<b>Keutamaan</b>	<b>Matrik</b>	<b>Warna</b>
4	3	12	
<b>Keterangan Kecacatan/kerusakan</b>			
Bekas pendawaian rosak			
<b>Punca Kecacatan/kerusakan</b>			
Aktiviti manusia			

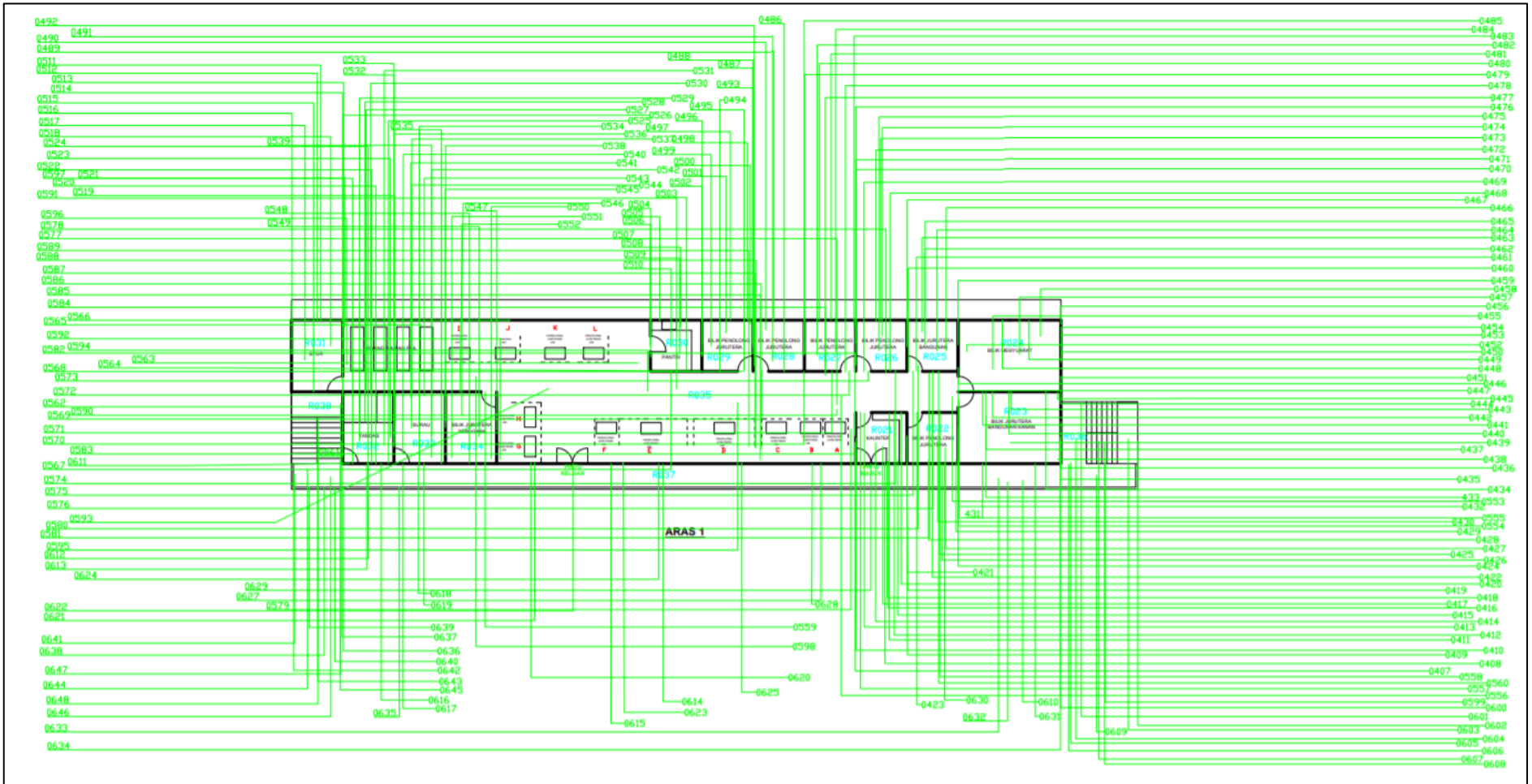
# 1) DEFECT INDICATION CODE GROUND FLOOR EXTERNAL (CIVIL)



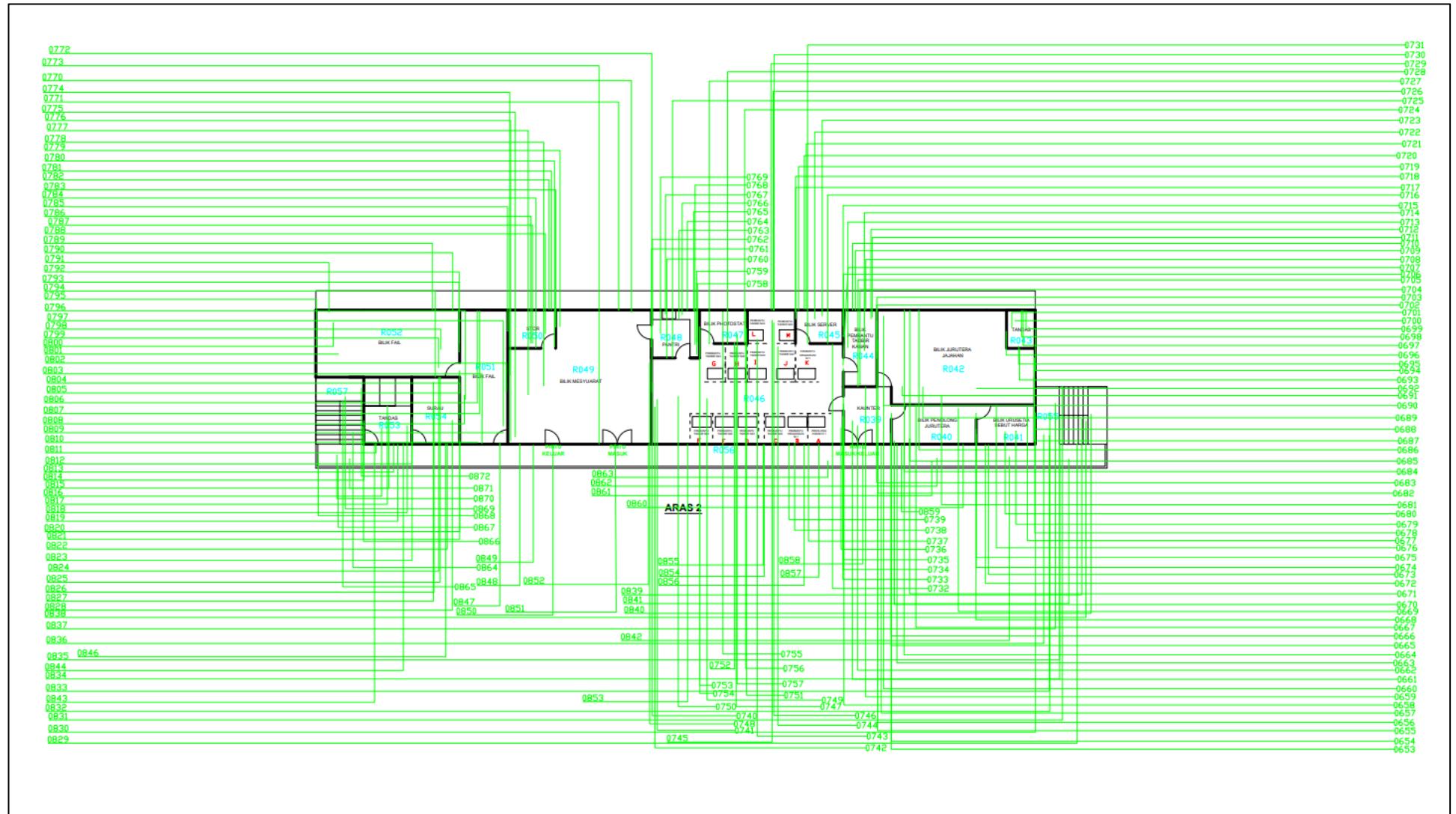
## 2) DEFECT INDICATION CODE GROUND FLOOR INTERNAL (CIVIL)



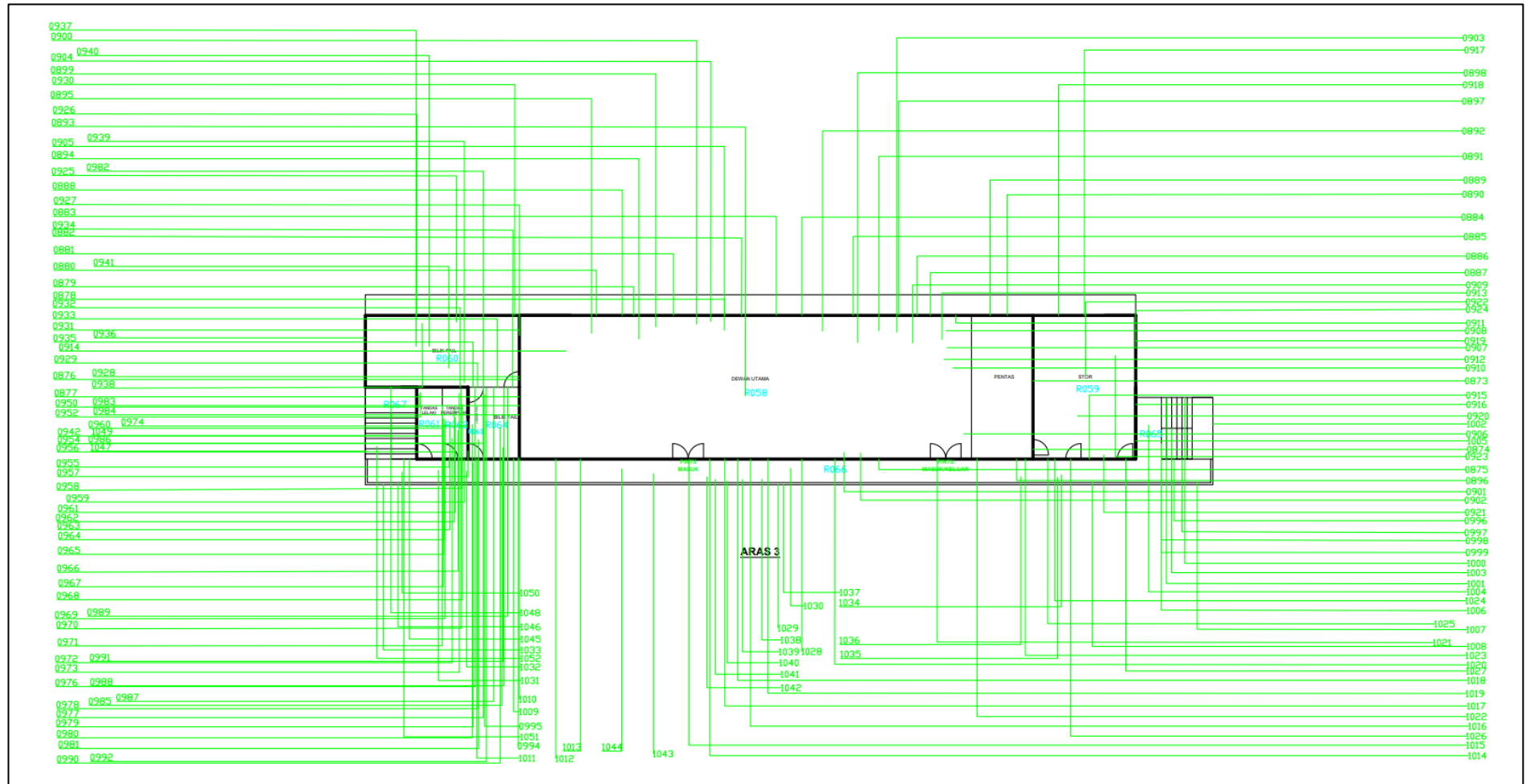
### 3) DEFECT INDICATION CODE 1<sup>st</sup> FLOOR (CIVIL)



#### 4) DEFECT INDICATION CODE 2<sup>nd</sup> FLOOR (CIVIL)

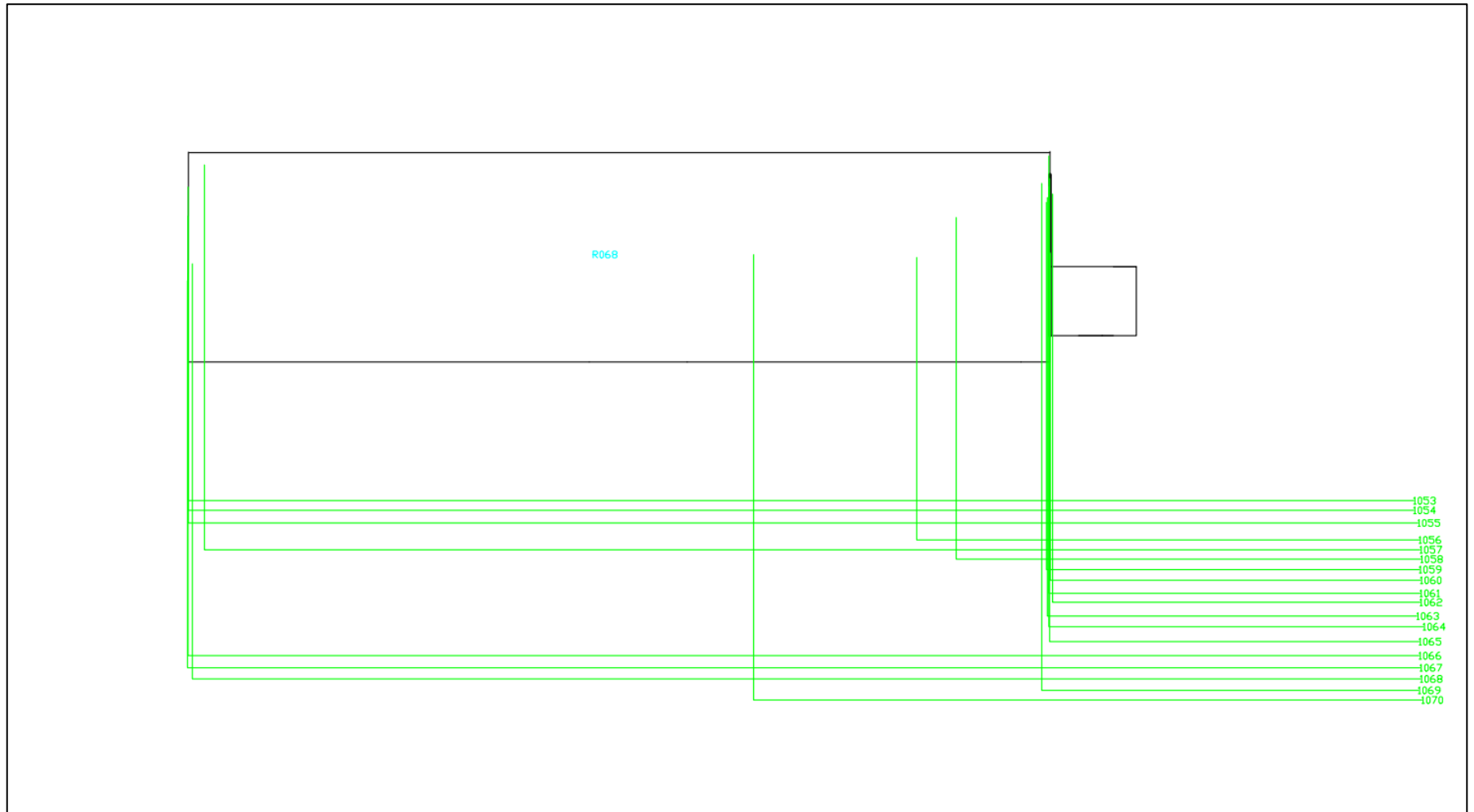


### 5) DEFECT INDICATION CODE 3<sup>rd</sup> FLOOR (CIVIL)

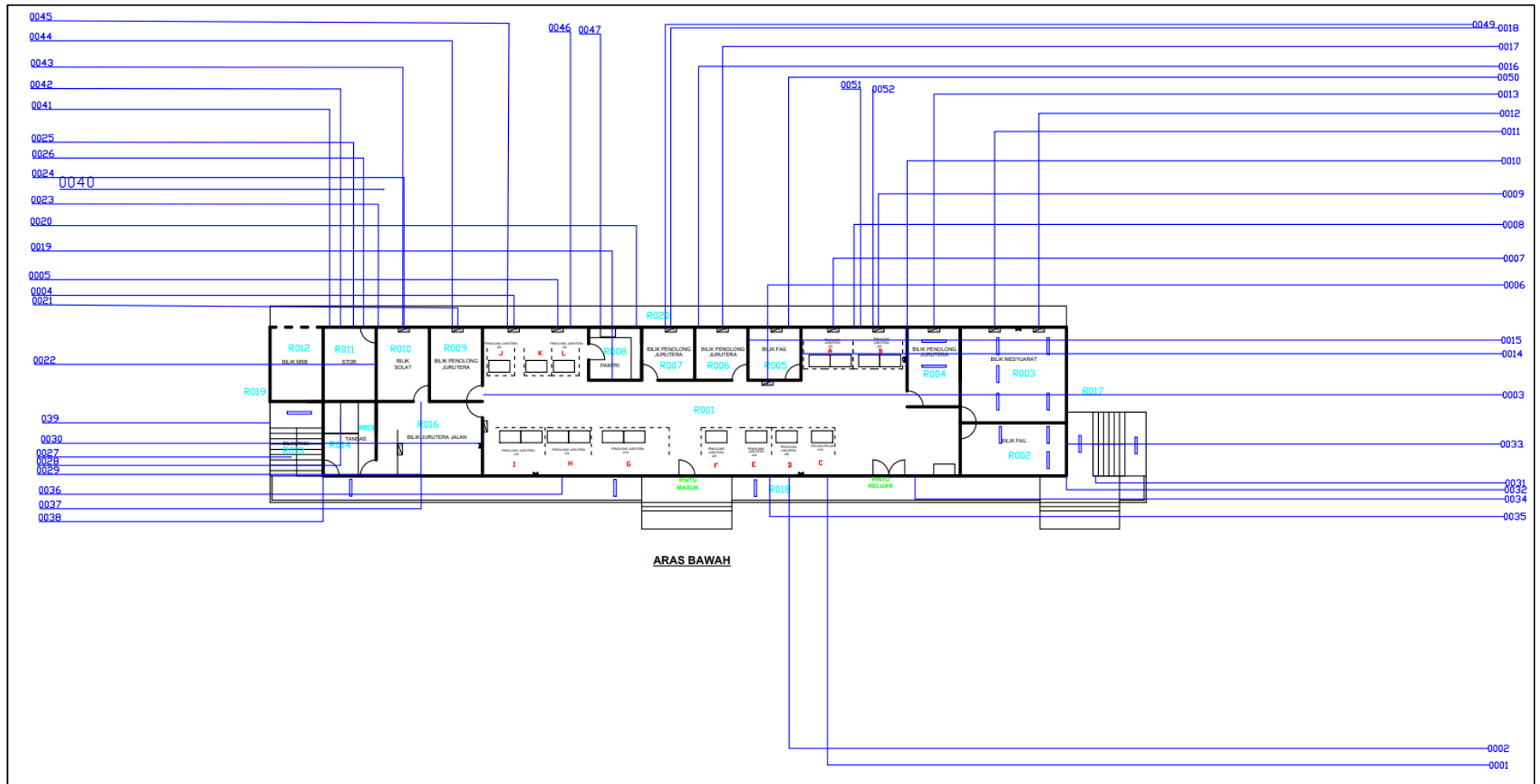




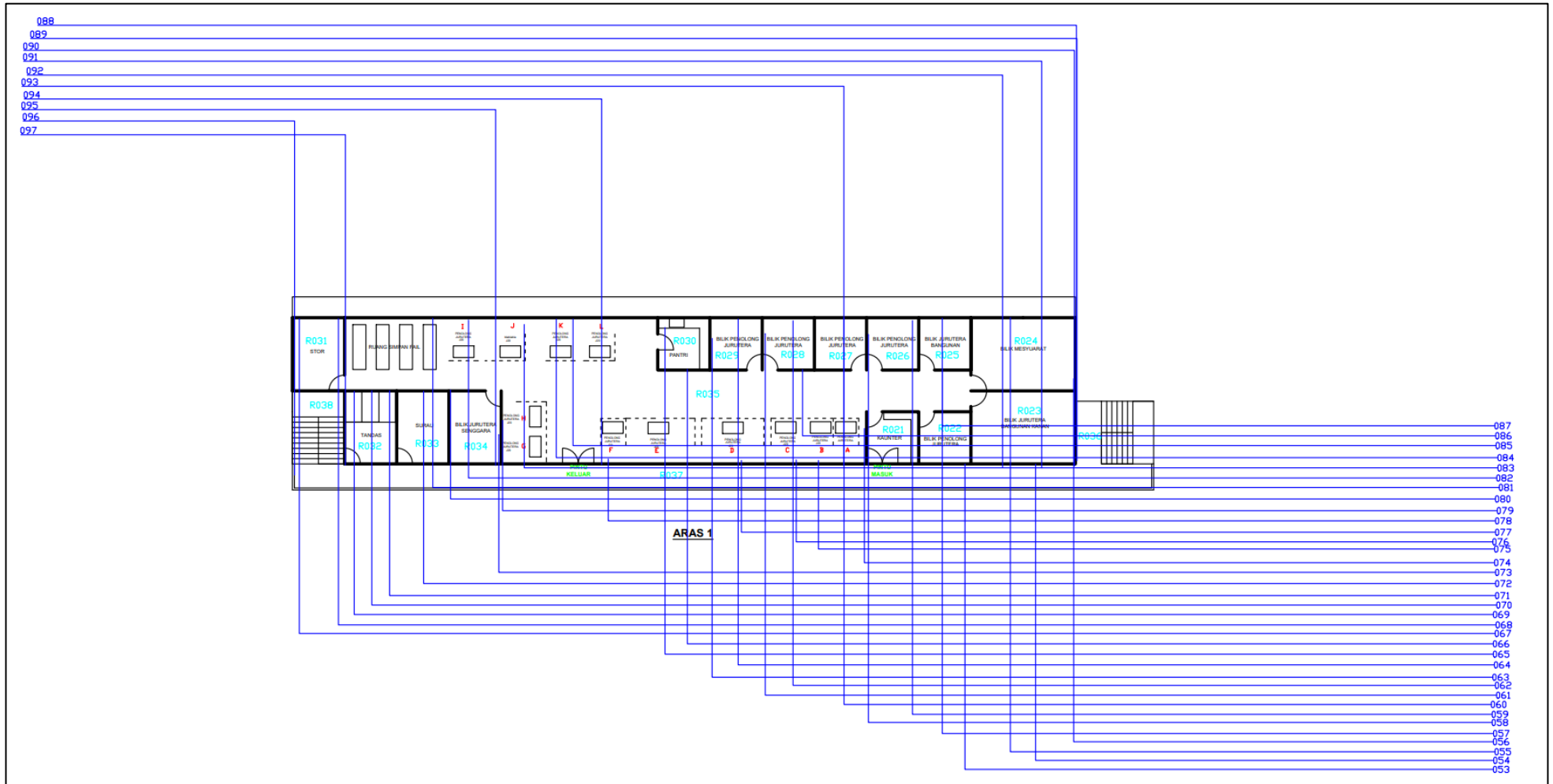
## 6) DEFECT INDICATION CODE ROOFTOP (CIVIL)



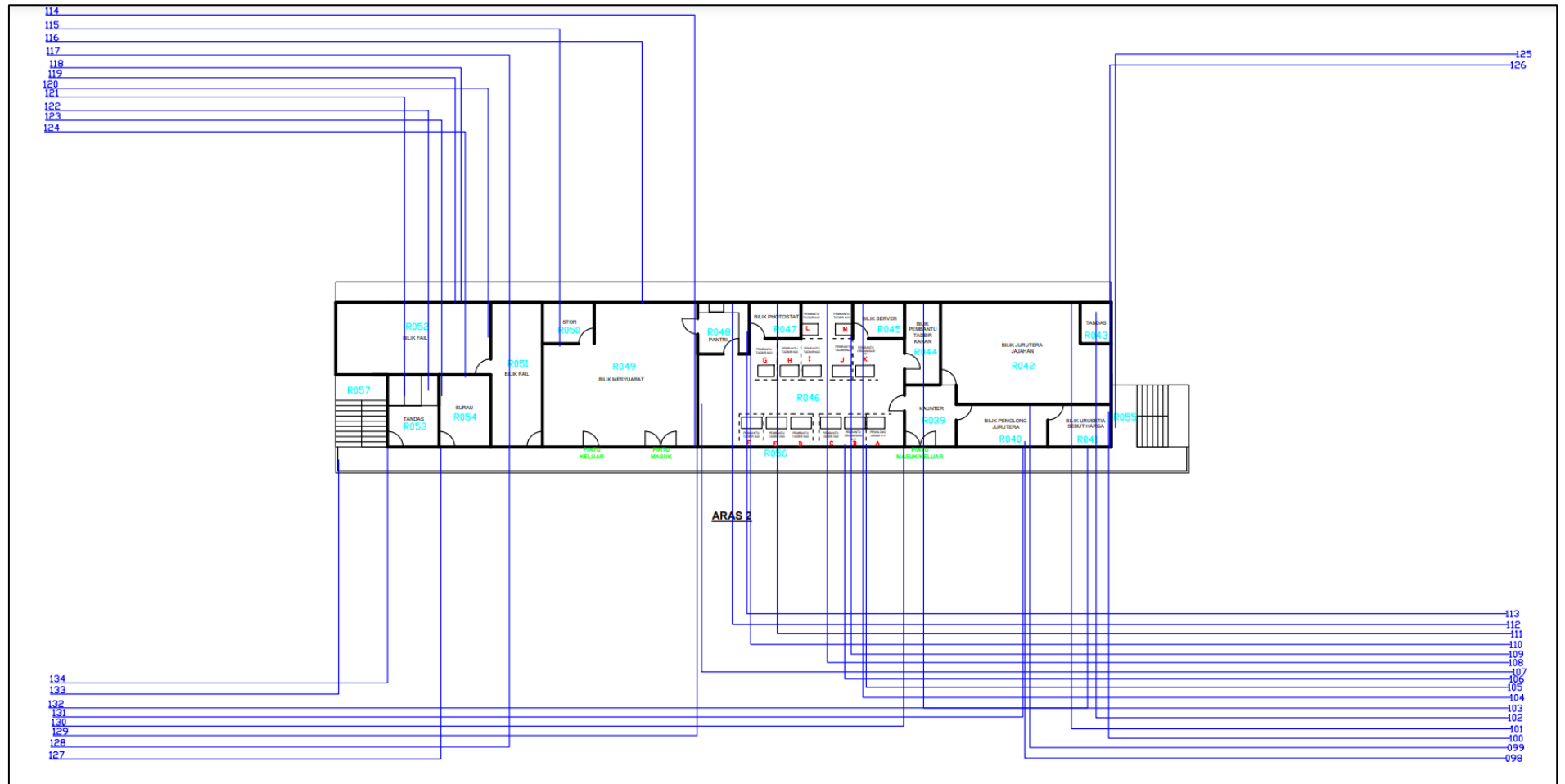
## 7) DEFECT INDICATION CODE GROUND FLOOR (MECHANICAL)



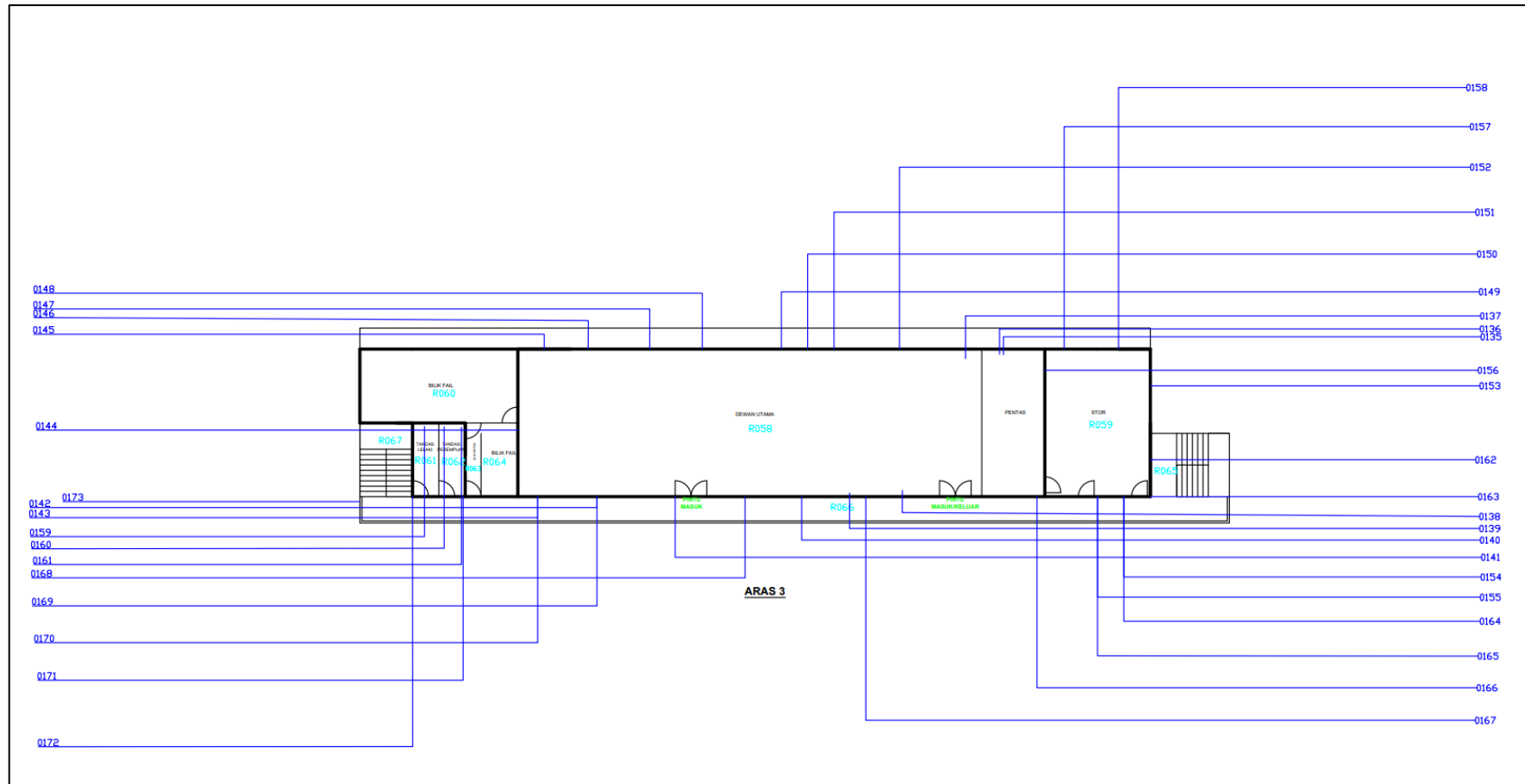
## 8) DEFECT INDICATION CODE 1<sup>st</sup> FLOOR (MECHANICAL)



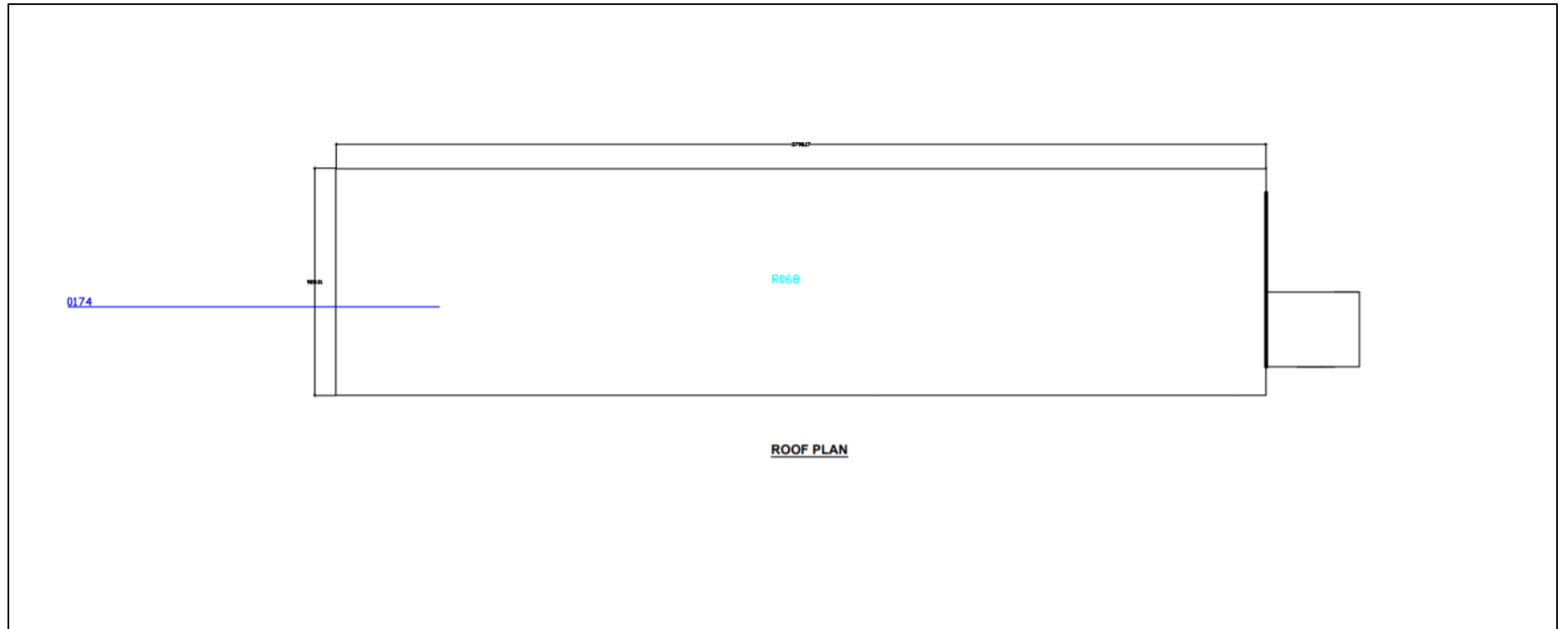
### 9) DEFECT INDICATION CODE 2nd FLOOR (MECHANICAL)



### 10) DEFECT INDICATION CODE 3rd FLOOR (MECHANICAL)



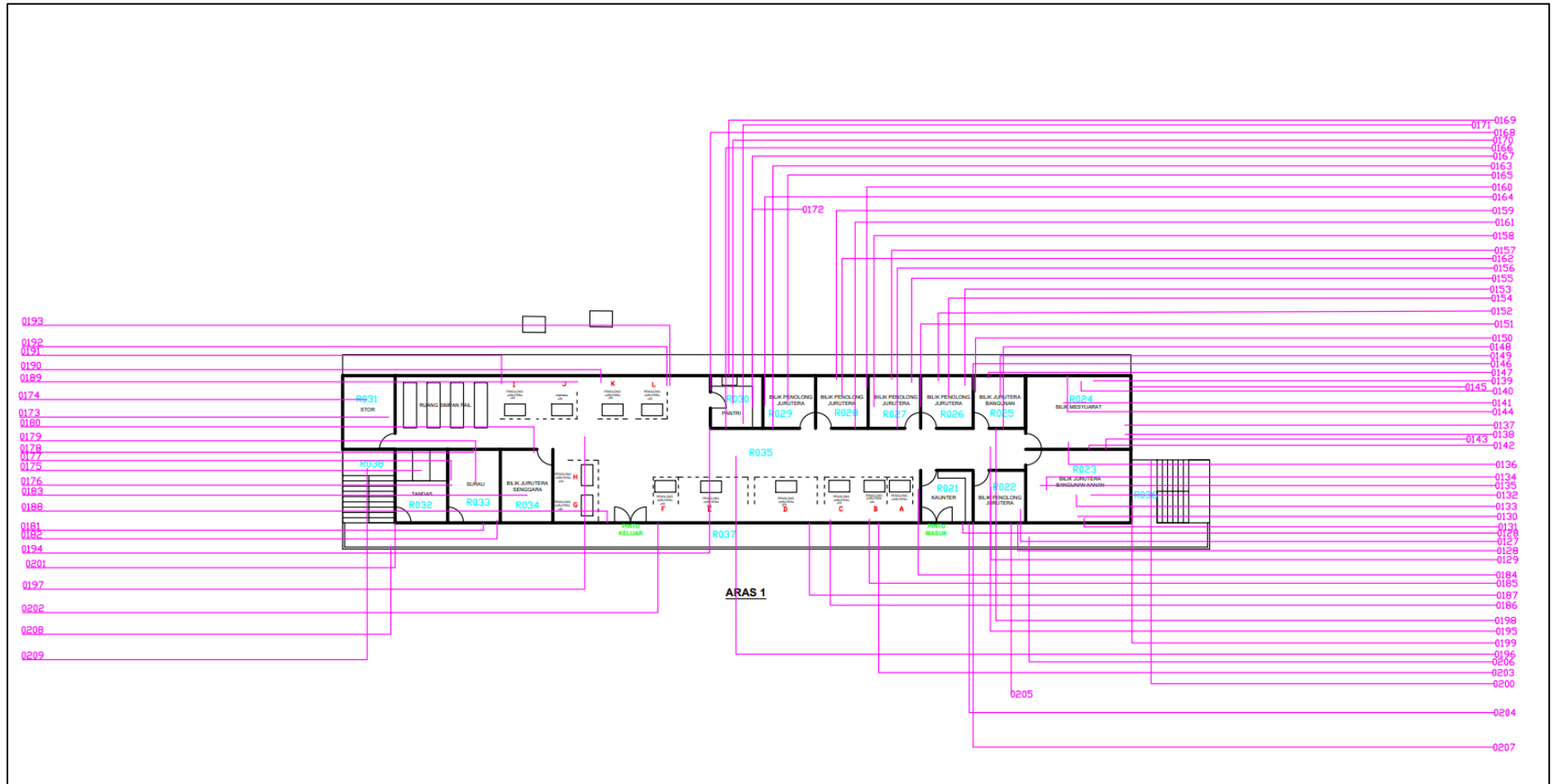
11) DEFECT INDICATION CODE ROOF (MECHANICAL)



## 12) DEFECT INDICATION CODE GROUND FLOOR (ELECTRICAL)



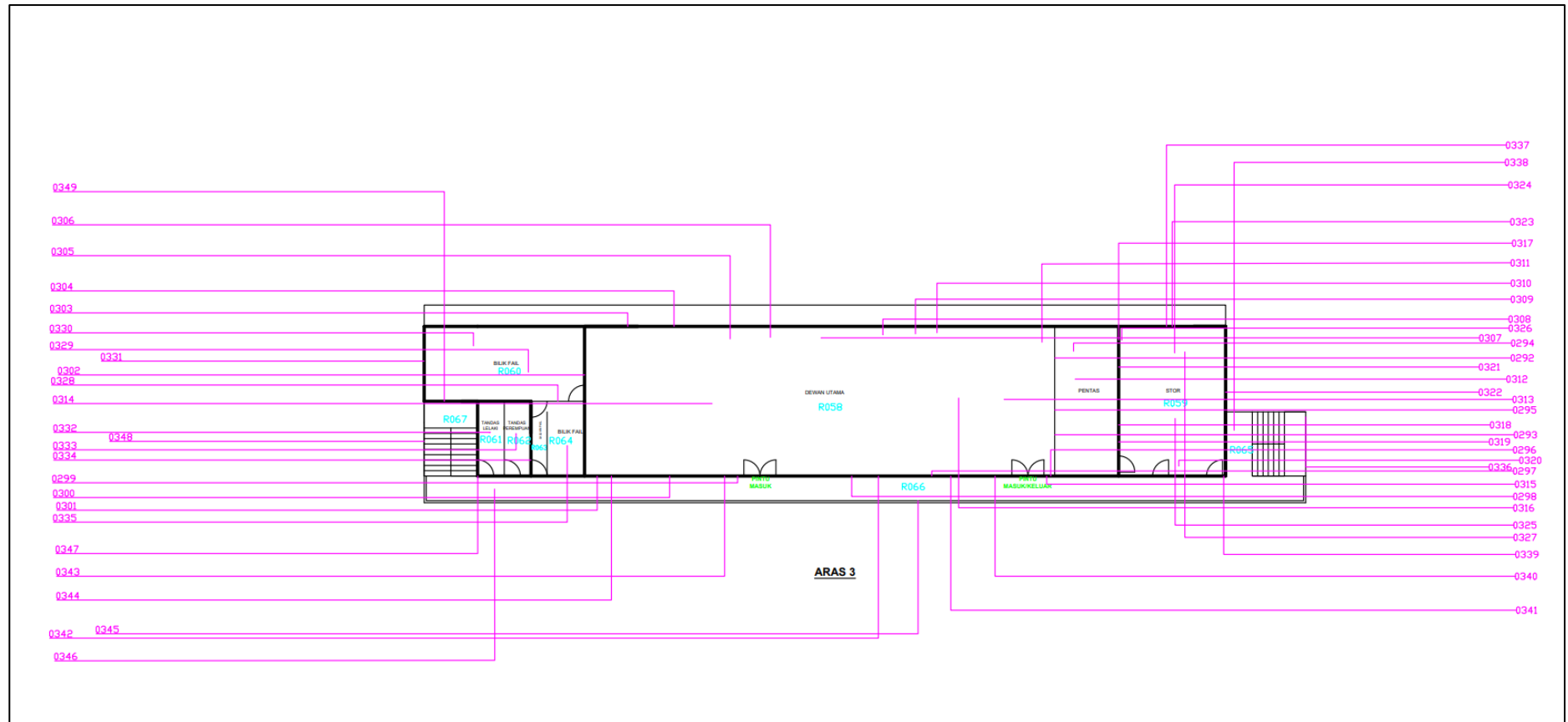
### 13) DEFECT INDICATION CODE 1<sup>st</sup> FLOOR (ELECTRICAL)







### 15) DEFECT INDICATION CODE 3rd FLOOR (ELECTRICAL)



16) DEFECT INDICATION CODE ROOF (ELECTRICAL)

