National Manual of Assets and Facilities Management
Volume 6, Chapter 1

Maintenance Management Introduction Guideline

Document No. EOM-ZM0-GL-000001 Rev 001

Document Submittal History:

Revision:	Date:	Reason For Issue
000	28/03/2020	For Use
001	18/08/2021	For Use

THIS NOTICE MUST ACCOMPANY EVERY COPY OF THIS DOCUMENT

IMPORTANT NOTICE

This document, ("Document") is the exclusive property of Government Expenditure & Projects Efficiency Authority.

This Document should be read in its entirety including the terms of this Important Notice. The government entities may disclose this Document or extracts of this Document to their respective consultants and/or contractors, provided that such disclosure includes this Important Notice.

Any use or reliance on this Document, or extracts thereof, by any party, including government entities and their respective consultants and/or contractors, is at that third party's sole risk and responsibility. Government Expenditure and Projects Efficiency Authority, to the maximum extent permitted by law, disclaim all liability (including for losses or damages of whatsoever nature claimed on whatsoever basis including negligence or otherwise) to any third party howsoever arising with respect to or in connection with the use of this Document including any liability caused by negligent acts or omissions.

This Document and its contents are valid only for the conditions reported in it and as of the date of this Document.

Table of Contents

1.0   PURPOSE

The purpose of Volume 6 is to assist in the standardization of Maintenance Management across all Government Entities in the effective, efficient and high quality maintenance of their assets and facilities.

The intention is to provide a robust reference for all levels of the Entity and maintenance contractor organizations to use when creating or developing their own documents and processes.

The Entity should use the documents within Volume 6 as the basis for the Entity's own Maintenance Standards and practices, Plans, Templates and Checklists.

2.0   SCOPE

Chapters 2, 3, 4 and 26 of this Volume provide guidance on maintenance management standards and development practices. The remaining chapters provide guidance associated with the writing of Entity specific Maintenance Plans for various engineered assets and systems.

This Volume contains chapters in order as follows:

- Chapter 1: Introduction
- Chapter 2: Conduct of Maintenance
- Chapter 3: Types of Maintenance
- Chapter 4: Developing Maintenance Plans
- Chapter 5: HVAC Maintenance Plans
- Chapter 6: Building Management Systems (BMS) Maintenance Plans
- Chapter 7: Instrumentation Systems Maintenance Plans
- Chapter 8: Mechanical Systems Maintenance Plans
- Chapter 9: Electrical Systems Maintenance Plans
- Chapter 10: Communication Systems Maintenance Plans
- Chapter 11: Security Systems Maintenance Plans
- Chapter 12: Life Safety Systems Maintenance Plans
- Chapter 13: Transportation Systems Maintenance Plans
- Chapter 14: Roads Maintenance Plans
- Chapter 15: Fleet Maintenance
- Chapter 16: Heavy Equipment Maintenance
- Chapter 17: Escalators and Elevators Maintenance
- Chapter 18: Facility Structure Maintenance
- Chapter 19: Soft Service Management Guidelines
- Chapter 20: Cleaning Horizontal / Vertical Plans
- Chapter 21: Pest Control Plans
- Chapter 22: Waste Management Plans
- Chapter 23: Landscaping & Grounds Maintenance Plans
- Chapter 24: Building Fabric Maintenance Plans
- Chapter 25: Hydraulic Structures (Dams)
- Chapter 26: Maintenance History
- Chapter 27: Post Maintenance Testing (PMT)
- Chapter 28: Equipment and Tool Control

The table in Section 3 offers definitions for terms and acronyms specifically used within this Introduction Chapter. For a comprehensive list of definitions, the user should consult the "Expro Definitions and Acronyms Guideline Document No. ENT-E00-GL-000001 Rev 001.

3.0 DEFINITIONS

Term	Definition
Best Practice	In relation to any undertaking and any circumstances, the exercise of that degree of skill, diligence, prudence, and foresight which would reasonably and ordinarily be expected from a skilled and experienced operator engaged in the same type of undertaking under the same or similar circumstances
Codes	A code can include references to standards, which means the standards are incorporated by reference and therefore are part of the code and legally enforceable. Codes are standards that are adopted by jurisdictions and are legally enforceable
Maintenance Plan	A document that addresses the requirements for the delivery of maintenance to an entire system, or group or type of asset, and describes the type selection and to what standard the asset will be maintained. A Maintenance Plan consists of many aspects, including the use of Job Plans as part of Work Orders to deliver the intended maintenance approach.
NMA&FM	National Manual of Assets & Facilities Management
Operation	An active process, task, or discharge of a function.
Plan	A detailed proposal for doing or achieving the desired outcome.
Procedure	Documents which provide information about how to preform interdepartmental activities and processes consistently.
Standards	A level of quality or attainment
Acronyms	
BACNeT	Building Automation and Control Networks
BMS	Building Management Systems
DARS	Digital Audio Radio Service
FoMPP	Formality of Maintenance Performance Procedure
HVAC	Heating, Ventilation, Air Conditioning

Table 1: Definitions

4.0 REFERENCES

The various documents within Volume 6: Maintenance Management have been prepared using the latest relevant Codes, Standards, Legislation and Best Practice at the time of production. The reader should refer to the specific document for the appropriate and applicable references.

Standards and Legislation referenced may become superseded due to any Royal Decree; Regulatory changes; revised standards; innovative practices or new technologies.

Therefore, Expro should be consulted by each Entity during any change process, to ensure that the most up-to-date and accurate information is used.

5.0 RESPONSIBILITIES

Role	Description
Entity	A Saudi Government organization that is responsible for the management of government funded facilities management.

Table 2: Responsibilities

6.0 PROCESS

6.1 Introduction

This volume contains 27 Chapters. Chapter 1 (this Chapter) is the Introduction to the Volume, while the remaining chapters are described within this section. This Introduction document summarizes the content of the various documents within Volume 6 of the National Manual of Assets and Facilities Management.

6.2 Conduct of Maintenance

This chapter comprises of one document titled: Formality of Maintenance Performance Procedure.

The Formality of Maintenance Performance Procedure (FoMPP) provides the Entity, its stakeholders and appointed maintenance contractors with a means to assess the standard of the conduct of maintenance operations. This high standard refers to the strength, quality and robustness of the day-to-day operations.

Implementation of a FoMPP will help assure the Entity that their appointed maintenance contractor has a business operating model that may be considered as 'Best Practice'. The periodic use of the FoMPP Template will produce a strength test report that the Entity can use to track the continuous development of the contract and their contractors.

6.3 Types of Maintenance

This Chapter comprises of two documents, Descriptions and Definitions, and Preventative and Predictive Maintenance Program Procedure.

Descriptions and Definitions this document provides a glossary of terms used in Volume 6. This document also describes the recommended adoption of maintenance types in the built environment for the Entity:

Planned Maintenance
- Preventative Maintenance
- Predictive Maintenance

Unplanned Maintenance
- Corrective/Reactive Maintenance
- Emergency Maintenance

While other maintenance sub-groups exist, Expro promotes the above groups as the structure within which to operate and to achieve 'Intelligent Maintenance'.

Preventative and Predictive Maintenance Program Procedure the Program Procedure provides all stakeholders with the framework and methodology to actively evolve towards cost effective 'Intelligent Maintenance'. This Program Procedure also helps establish a mature maintenance operation that evolves from contract inception to long-term stakeholder relationship.

Implementation of this Program Procedure will help ensure that the planned maintenance regime is set up and managed on good technical and operational fundamentals.

6.4 Developing Maintenance Plans

This chapter comprises of two documents, Development of Maintenance Plans Procedure and a Maintenance Plans Writers Guide.

Development of Maintenance Plans Procedure provides guidance and a methodology to understand how well maintenance plans are performing, and a methodology to correct, adjust or improve adoption of the plans.

Maintenance Plan Writers Guide provides advice on the content of a Maintenance Plan and the standards to which the content should adhere.

This Chapter details the key aspects to be addressed by the Entity in order to develop a suite of Maintenance Plans for the various asset and system types within their facilities. Maintenance Plans are the instructions designed to enable the delivery of all types of maintenance in a variety of contract arrangements. Continuous review and improvement of Maintenance Plans is therefore crucial to the success of the maintenance contract.

6.5   Heating Ventilation Air Conditioning (HVAC) Maintenance Plans

The documents within this chapter features information and guidance for the development and content of HVAC Maintenance Plans recommended to be applied by the Entity and their stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Computer Room Air Conditioning Unit
- Direct Expansion
- Fan Coil Units
- Variable-Refrigerant Flow

The documents also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.6   Building Management Systems (BMS) Maintenance Plans

The documents within this chapter features information and guidance for the development and content of BMS Maintenance Plans recommended to be applied by the Entity and their stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Direct Digital Controllers
- Field devices
- Interlocks
- Network Automation Engine
- Servers

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.7   Instrumentation Systems Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Instrumentation Systems Maintenance Plans recommended to be applied by the Entity and their stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Electrical and lighting control
- Generators back-up systems control
- HVAC systems control
- Life safety systems control

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.8   Mechanical Systems Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Mechanical Systems Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Chiller/Chilled Water System
- District Cooling Systems
- Plumbing Systems
- Water Treatment Systems

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.9   Electrical Systems Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Electrical Systems Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Low Voltage system
- Medium Voltage systems
- High Voltage systems
- Uninterruptible Power Supplies

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.10 Communication Systems Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Communications Systems Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Building Automation and Control Networks (BACNet)
- Digital Audio Radio Service (DARS)
- Mass notification systems
- Videoconferencing systems

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.11 Security Systems Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Security Systems Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Access Control Systems
- Intruder Alarms
- Video Surveillance Systems

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.12 Life Safety Systems Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Life Safety Systems Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this Chapter include Sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Emergency Power Generation Systems
- Fire Detection Systems
- Firefighting Systems

The documents also advise on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.13 Transportation Systems Maintenance Plan

The document within this chapter features information and guidance for the development and content of Roadway Safety Barriers and Signage Maintenance and includes recommendations to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, systems and technologies, but not limited to:
- Barrier systems
- Signage systems

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.14 Roads Maintenance Plans

The documents within this chapter features information and guidance for the development and content of Fleet Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:
- Pavements
- Bridges
- Culverts/drains
- Roadway Lighting

The documents also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.15 Fleet Maintenance

The document within this chapter features information and guidance for the development and content of Fleet Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter include sector and system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:

- Fleet Maintenance strategies
- Training requirements for Fleet Service Personnel
- Incident management and reporting

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.16 Heavy Equipment Maintenance

The document within this chapter features information and guidance for the development and content of Heavy Equipment Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment but not limited to:
- Bobcat loaders
- Excavators
- Folk lifts
- Graders

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.17 Escalators and Elevators Maintenance

The document within this chapter features information and guidance for the development and content of Escalators and Elevators Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:
- Hospital patient bed elevators
- Designated fire fighter
- Passenger elevators
- Goods elevators
- Capsule/Scenic elevators

The Plan also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.18 Facility Structure Maintenance

The document within this chapter features information and guidance for the development and content of Facility Structure Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:
- Civil and structural elements
- Drainage

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.19 Soft Service Management Guideline

Refer to Introduction: Soft Services Management Guideline EOM-ZM0-GL-000002. This document covers Cleaning Horizontal / Vertical Plans, Pest Control Plans, Waste Management Plans, and Landscaping & Grounds maintenance.

6.20 Building Fabric Maintenance

The document within this chapter features information and guidance for the development and content of Building Fabric Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this Chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:
- External Walls
- Doors and windows
- Internal walls
- Finishes

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.21 Hydraulic Structures (Dams)

The document within this chapter features information and guidance for the development and content of Hydraulic Structures Maintenance Plans recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this chapter includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:
- Retaining structure
- Release structure
- Hydraulic and motorized plant

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

6.22 Maintenance History

The document within this chapter features information and guidance for the understanding and benefits received from Maintenance History and recommendations to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

This document provides a foundation of knowledge on the need for and purpose of Maintenance History, and a methodology for identifying, gathering, storing and using Maintenance History with the objective of improving decision making, assets behavior tracking and analysis, and Compliance.

6.23 Post Maintenance Testing

The documents within this chapter features information and guidance for the development, management and delivery of Post Maintenance Testing (PMT) and identifies the standards to which PMT should be designed to within the Kingdom.

PMT is recommended to be undertaken as a means of verifying that any repair, replacement, extension, modification and integration tasks undertaken as part of specific maintenance activities have achieved the operational and quality outcome that is stipulated or required.

6.24 Equipment and Tool Control

The document within this chapter features information and guidance for the development and content of Equipment and Tool Control procedure recommended to be applied by the Entity and its stakeholders. This guidance is based on, and makes reference to, relevant codes, standards and best practices.

Guidance featured within this document includes system specific recommendations, requirements and expectations on:
- Maintenance requirements
- Maintenance types and frequencies
- Consumables and spares

Reference is made to the following types of equipment, assets and technologies but not limited to:
- Non-Portable: Lathes, pillar drills, welding equipment, vehicle hoists, generators, powered cleaning equipment, and beam block and tackles.
- Portable: Vacuum vehicles, screening, scaffolding, engine hoists, compressors, generators, transformers, ladders, engine starters, harnesses and breathing apparatus.

The document also advises on management and responsibilities, system efficiency, fault finding, quality assurance, health and safety, and the environment.

7.0 METHODOLOGY

Each Volume of the National Manual of Assets & Facilities Management has been created by a team of World-Class experts in their field, using latest Standards and best-practice knowledge based on decades of experience.

To ensure that the Entity is compliant with Royal Decrees, Local Standards, and Regulations and to support the Entities decision-making Process associated with the operation and maintenance of facilities, four tiers of linguistic classification have been used within the National Manual of Assets & Facilities Management as follows:

Shall. This is a mandated instruction which must be followed or adhered to (e.g., a Royal Decree, in country standards such as the Saudi Building Code).

Should. This is an instruction or piece of information which is important and, while it may not be mandated to follow the advice, it is advisable to follow (e.g., international standards which are considered legislation in other countries).

Consider. This refers to advice or an instruction which is considered to be important, is worth following, and fits well for the purpose intended.

Advise. This generally refers to good practice and entails practical advice intended to raise standards and enhance quality.
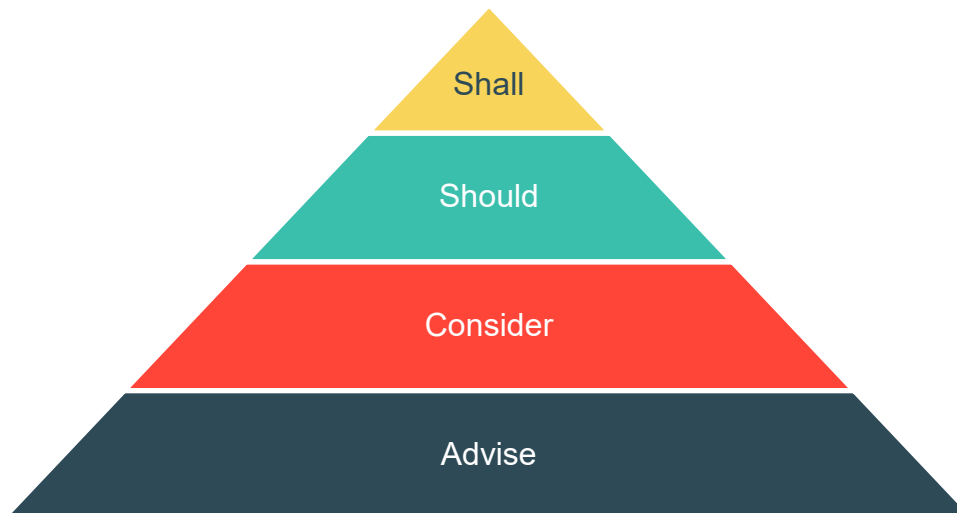

Figure 1: Four Tiers of Linguistic Classification

8.0 ATTACHMENTS

1. National Manual of Assets and Facility Management Volume 6, Contents List.

Attachment 1 – National Manual of Assets and Facilities Management Volume 6, Contents List

National Manual of Assets and Facilities Management Contents List	Doc. No.
Volume 6: Maintenance Management	
Chapter 1: Introduction	
Maintenance Management Introduction Guideline	EOM-ZM0-GL-000001
Chapter 2: Conduct of Maintenance	
Formality of Maintenance Performance Procedure	EOM-ZM0-PR-000001
Chapter 3: Types of Maintenance	
Description and Definitions	EOM-ZM0-PR-000002
Preventative and Predictive Maintenance Program Procedure	EOM-ZM0-PR-000003
Chapter 4: Developing Maintenance Plans	
Development of Maintenance Plan Procedure	EOM-ZM0-PR-000005
Maintenance Plan Writers Guide Procedure	EOM-ZM0-PR-000006
Chapter 5: HVAC Maintenance Plans	
HVAC Maintenance Plan for Healthcare	EOM-ZM0-PL-000001
HVAC Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000002
HVAC Maintenance Plan for Offices	EOM-ZM0-PL-000003
HVAC Maintenance Plan for Municipal	EOM-ZM0-PL-000004
HVAC Maintenance Plan for Housing	EOM-ZM0-PL-000005
HVAC Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000006
Chapter 6: Building Management Systems (BMS) Maintenance Plans	
BMS Maintenance Plan for Healthcare	EOM-ZM0-PL-000007
BMS Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000008
BMS Maintenance Plan for Offices	EOM-ZM0-PL-000009
BMS Maintenance Plan for Municipal	EOM-ZM0-PL-000010
BMS Maintenance Plan for Housing	EOM-ZM0-PL-000011
BMS Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000012
Chapter 7: Instrumentation Systems Maintenance Plans	
Instrumentation Systems Maintenance Plan for Healthcare	EOM-ZM0-PL-000013
Instrumentation Systems Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000014
Instrumentation Systems Maintenance Plan for Offices	EOM-ZM0-PL-000015
Instrumentation Systems Maintenance Plan for Municipal	EOM-ZM0-PL-000016
Instrumentation Systems Maintenance Plan for Housing	EOM-ZM0-PL-000017
Instrumentation Systems Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000018
Chapter 8: Mechanical Systems Maintenance Plans	
Mechanical Systems Maintenance Plan for Healthcare	EOM-ZM0-PL-000019
Mechanical Systems Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000020
Mechanical Systems Maintenance Plan for Offices	EOM-ZM0-PL-000021
Mechanical Systems Maintenance Plan for Municipal	EOM-ZM0-PL-000022
Mechanical Systems Maintenance Plan for Housing	EOM-ZM0-PL-000023
Mechanical Systems Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000024
Chapter 9: Electrical Systems Maintenance Plans	
Electrical Systems Maintenance Plan for Healthcare	EOM-ZM0-PL-000025
Electrical Systems Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000026
Electrical Systems Maintenance Plan for Offices	EOM-ZM0-PL-000027
Electrical Systems Maintenance Plan for Municipal	EOM-ZM0-PL-000028
Electrical Systems Maintenance Plan for Housing	EOM-ZM0-PL-000029
Electrical Systems Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000030
Chapter 10: Communication Systems Maintenance Plans	
Communication Systems Maintenance Plan for Healthcare	EOM-ZM0-PL-000031
Communication Systems Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000032
Communication Systems Maintenance Plan for Offices	EOM-ZM0-PL-000033
Communication Systems Maintenance Plan for Municipal	EOM-ZM0-PL-000034
Communication Systems Maintenance Plan for Housing	EOM-ZM0-PL-000035
Communication Systems Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000036

Chapter 11: Security Systems Maintenance Plans	
Security Systems Maintenance Plan for Healthcare	EOM-ZM0-PL-000037
Security Systems Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000038
Security Systems Maintenance Plan for Offices	EOM-ZM0-PL-000039
Security Systems Maintenance Plan for Municipal	EOM-ZM0-PL-000040
Security Systems Maintenance Plan for Housing	EOM-ZM0-PL-000041
Security Systems Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000042
Chapter 12: Life Safety Systems Maintenance Plans	
Life Safety Systems Maintenance Plan for Healthcare	EOM-ZM0-PL-000043
Life Safety Systems Maintenance Plan for Schools & Universities	EOM-ZM0-PL-000044
Life Safety Systems Maintenance Plan for Offices	EOM-ZM0-PL-000045
Life Safety Systems Maintenance Plan for Municipal	EOM-ZM0-PL-000046
Life Safety Systems Maintenance Plan for Housing	EOM-ZM0-PL-000047
Life Safety Systems Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000048
Chapter 13: Transportation Systems Maintenance Plan	
Roadway Safety Barriers and Signage Maintenance Plan	EOM-ZM0-PL-000049
Chapter 14: Roads Maintenance Plans	
Pavement Maintenance Plan	EOM-ZM0-PL-000050
Bridges Maintenance Plan	EOM-ZM0-PL-000051
Culverts / Drains Maintenance Plan	EOM-ZM0-PL-000052
Roadway Lighting Maintenance Plan	EOM-ZM0-PL-000053
Chapter 15: Fleet Maintenance Plans	
Fleet Maintenance Plan	EOM-ZM0-PL-000054
Chapter 16: Heavy Equipment Maintenance Plans	
Heavy Equipment Maintenance Plan	EOM-ZM0-PL-000060
Chapter 17: Escalators & Elevators Maintenance Plans	
Escalators & Elevators Maintenance Plan	EOM-ZM0-PL-000061
Chapter 18: Facility Structure Maintenance Plans	
Facility Structure Maintenance Plan	EOM-ZM0-PL-000067
Chapter 19: Soft Service Management Guideline	
Soft Services Management Guideline	EOM-ZM0-GL-000002
Chapter 20: Cleaning Horizontal / Vertical Plans	
Cleaning Horizontal / Vertical Plan for Healthcare	EOM-ZM0-PL-000068
Cleaning Horizontal / Vertical Plan for Schools & Universities	EOM-ZM0-PL-000069
Cleaning Horizontal / Vertical Plan for Offices	EOM-ZM0-PL-000070
Cleaning Horizontal / Vertical Plan for Municipal	EOM-ZM0-PL-000071
Cleaning Horizontal / Vertical Plan for Housing	EOM-ZM0-PL-000072
Cleaning Horizontal / Vertical Plan for Parks & Recreation	EOM-ZM0-PL-000073
Chapter 21: Pest Control Plans	
Pest Control Plan for Healthcare	EOM-ZM0-PL-000074
Pest Control Plan for Schools & Universities	EOM-ZM0-PL-000075
Pest Control Plan for Offices	EOM-ZM0-PL-000076
Pest Control Plan for Municipal	EOM-ZM0-PL-000077
Pest Control Plan for Housing	EOM-ZM0-PL-000078
Pest Control Plan for Parks & Recreation	EOM-ZM0-PL-000079
Chapter 22: Waste Management Plans	
Waste Management Plan for Healthcare	EOM-ZM0-PL-000080
Waste Management Plan for Schools & Universities	EOM-ZM0-PL-000081
Waste Management Plan for Offices	EOM-ZM0-PL-000082
Waste Management Plan for Municipal	EOM-ZM0-PL-000083
Waste Management Plan for Housing	EOM-ZM0-PL-000084
Waste Management Plan for Parks & Recreation	EOM-ZM0-PL-000085
Chapter 23: Landscaping & Grounds Maintenance Plans	
Maintenance Plan for Parking	EOM-ZM0-PL-000086
Landscaping & Grounds Maintenance Plan for Pavements	EOM-ZM0-PL-000087
Landscaping & Grounds Maintenance Plan for Parks & Recreation	EOM-ZM0-PL-000088
Chapter 24: Building Fabric Maintenance	
Building Fabric Maintenance Plan	EOM-ZM0-PL-000097

Chapter 25: Hydraulic Structures (Dams)	
Hydraulic Structures (Dams) Plan	EOM-ZM0-PL-000095
Chapter 26: Maintenance History	
Maintenance History Procedure	EOM-ZM0-PR-000007
Chapter 27: Post Maintenance Testing	
Post Maintenance Testing Procedure	EOM-ZM0-PR-000008
Post Maintenance Testing Criteria Procedure	EOM-ZM0-PR-000009
Chapter 28: Equipment and Tool Control	
Equipment and Tool Control Procedure	EOM-ZM0-PR-000010