



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila



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DEPARTMENT ORDER)

NO. 47)
Series of 2024)

4/11/2024

**SUBJECT: Comprehensive Policy Guidelines on
the Maintenance of National Roads
and Bridges**

As part of the Department's initiative in optimizing its processes responsive to the needs of the Implementing Offices, and as part of its commitment to deliver essential infrastructure projects as well as to prolong its serviceable condition through appropriate and timely execution of routine maintenance activities for national roads and bridges, the herein revised policy guidelines on the Maintenance of National Roads and Bridges is hereby implemented.

This revised policy guideline is formulated to optimize and streamline the Bureau of Maintenance periodic assessment in order to effectively and efficiently monitor the compliance of Implementing Offices in relation to routine maintenance of national roads and bridges, and to ensure that nation's connectivity is safe and convenient to the general public.

This Department Order shall take effect immediately and shall supersede *Department Order No. 189, s. 2022: "Comprehensive Policy Guidelines on the Maintenance of National Roads and Bridges."*

MANUEL M. BONOAN
Secretary

7.1.1 DMMA/MGM/AGC

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Republic of Philippines
Department of Public Works and Highways
Central Office
Manila

Comprehensive Policy Guidelines on the Maintenance of National Roads and Bridges

Department Order No. _____, series of 2024

Bureau of Maintenance

CY 2024

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Acronyms

ADE	-	Assistant District Engineer
ARD	-	Assistant Regional Director
BOM	-	Bureau of Maintenance
CO	-	Central Office
DE	-	District Engineer
DEO/s	-	District Engineering Office/s
DLP	-	Defects Liability Period
DME	-	District Maintenance Engineer
DMPP	-	District Maintenance Point Person
DPWH	-	Department of Public Works and Highways
EMK	-	Equivalent Maintenance Kilometrage
GAA	-	General Appropriations Act
IO/s	-	Implementing Office/s
MAT	-	Maintenance Assessment Team
RD	-	Regional Director
RME	-	Regional Maintenance Engineer
RMPP/s	-	Regional Maintenance Point Person/s
RO/s	-	Regional Office/s
SLD	-	Straight Line Diagram
TAD	-	Technical Assistance District
UC	-	Under Contract
UPMO	-	Unified Project Management Office

i. Definition of Terms

BOM Assessment	- This refers to the spot-checking inspection, which is being conducted by BOM Assessors together with the concerned DMEs, RMPPs and DMPPs, to assess the road and bridge maintenance performance of the IOs based on the rating system detailed hereof.
BOM Assessors	- Technical personnel from BOM holding a permanent position who has successfully completed maintenance-related trainings.
Beyond Routine Maintenance (BRM)	- Road condition wherein the road section/segment contains substantial extent of distresses that routine maintenance activities are insufficient to restore the said road portion to its good serviceable condition at the most cost-effective solutions.
Defects Liability Period (DLP)	- One (1) year from project completion up to final acceptance as stipulated in Section 62.2.2 - 2016 Implementing Rules and Regulations of RA 9184.
Documentation Photolog	- Comprise of photographs on the desired format showing the rectification activity and action taken in response to the noted defects/deficiencies of the BOM Assessment.
Equivalent Maintenance Kilometrage	- A calculated length, based on actual physical length multiplied by adjusted factors, used to estimate the required budget for Routine Maintenance of National Roads and Bridges as defined in the DPWH Data Glossary.
Maintenance Assessment Team (MAT)	- This is composed of BOM Assessor/s, deployed to assigned Implementing Office/s, who have undertaken the minimum required trainings to conduct assessment.
Rating Period	- It starts from the first day of Inspection and ends after the evaluation of Compliance to Proper Documentation and Maintenance Operation Process.
Response Time	- The maximum duration, in working days excluding holidays, in which a defect, present on a road or bridge, should be rectified and/or addressed with maintenance interventions.

1. SPECIFIC ROLES AND RESPONSIBILITIES

1.1 Regional Directors

- a. Shall institute all measures to ensure that DEOs are performing their assigned tasks and responsibilities under these guidelines.
- b. Shall closely monitor the physical condition of all national roads and bridges within their jurisdictions and shall support all DEOs to successfully achieve the DPWH objective for better and safer roads. The ARD is enjoined to faithfully assist in these tasks.
- c. Shall submit to the BOM the latest and approved DMPP List of all the DEOs under their jurisdiction before the end of January annually for the purpose of updating the DMPP Database. Any changes in the assignment shall be likewise submitted to BOM.
- d. Shall submit within five (5) working days from the receipt of the DEO's documentation Photolog to the BOM. Non-submission within the allotted schedule shall be subject to a corresponding deduction on the rating.

1.2 Regional Maintenance Engineers (RMEs)

- a. Shall ensure the effective and efficient implementation of DEOs' road and bridge maintenance activities in accordance to these guidelines.
- b. Shall coordinate to all the DEOs regarding the BOM assessment and shall prepare RMPPs assignment in relation to the latter.
- c. Shall check the completeness of the submitted Documentation Photolog of all the DEOs under their jurisdiction in response to the BOM inspection noted defects/deficiencies.
- d. As the monthly inspection/validation of RO is hereby discontinued, the RME may order random assessment to the DEOs as the need so warrants. (See Appendices "A-2" to "A-4" and Appendix "A-6" for the formats).

1.3 Regional Maintenance Point Persons (RMPPs)

- a. Shall join the BOM Assessment subject to their assignment to assess the DEOs performance and compliance to these guidelines.
- b. Shall prepare all necessary documents, including but not limited to, contracts of all ongoing and under defects liability projects implemented by RO, together with SLD, under their assigned DEOs prior to the assessment of the BOM Assessor/s.

1.4 District Engineers

- a. Shall be directly responsible for the efficient and timely maintenance of all national roads and bridges within their jurisdiction.
- b. Shall be held accountable for the proper expenditure and timely disbursement of maintenance funds and for the management of all other resources intended for the repair and maintenance of each road section (including bridges) within their jurisdiction.
- c. Shall submit to the RO the names and latest photographs of the DMPPs and their respective assigned road section, with electronic copies, before the 15th day of January, annually (See Appendix "A-1" for the format). Any changes in the assignment shall be likewise submitted to the RO.
- d. Shall submit within ten (10) working days the Documentation photolog to the RO after the BOM Assessors' exit meeting.

1.5 Assistant District Engineers

- a. Shall closely monitor the activities of the DME to ensure that the scheduled works (repair of defects/maintenance activities) are prioritized and implemented.
- b. Shall assist the DE in carrying out their responsibilities appurtenant to these guidelines.

1.6 District Maintenance Engineers (DMEs)

- a. Shall assign DMPPs who are technical personnel or Maintenance Foremen/Capataz. For urban areas, each DMPP shall have assigned road sections (including bridges) with a total length not exceeding 25 kms for semi-urban and to rural areas, not exceeding 50 kms.
- b. Shall immediately schedule repair and maintenance activities on the defects/deficiencies noted by the DMPPs and other maintenance needs using Form DPWH-QMSP-17-04-REV01 (Daily Maintenance Activity Schedule), mindful of the response time allowed for each defect, as cited under Section 4.1 of these guidelines (See Appendix "A-5a" for the format).
- c. Shall ensure the proper management and assignment of resources (manpower, equipment, materials, etc.) prior to commencement of defects repair works and other maintenance activities.
- d. The DME and/or his/her assigned technical personnel shall conduct actual field verifications to check if the DMPPs correctly logged and reported the noted defects/deficiencies and location thereof; and to ensure the quality and economic practicality of the completed rectification/repair works.

1.7 District Maintenance Point Persons (DMPPs)

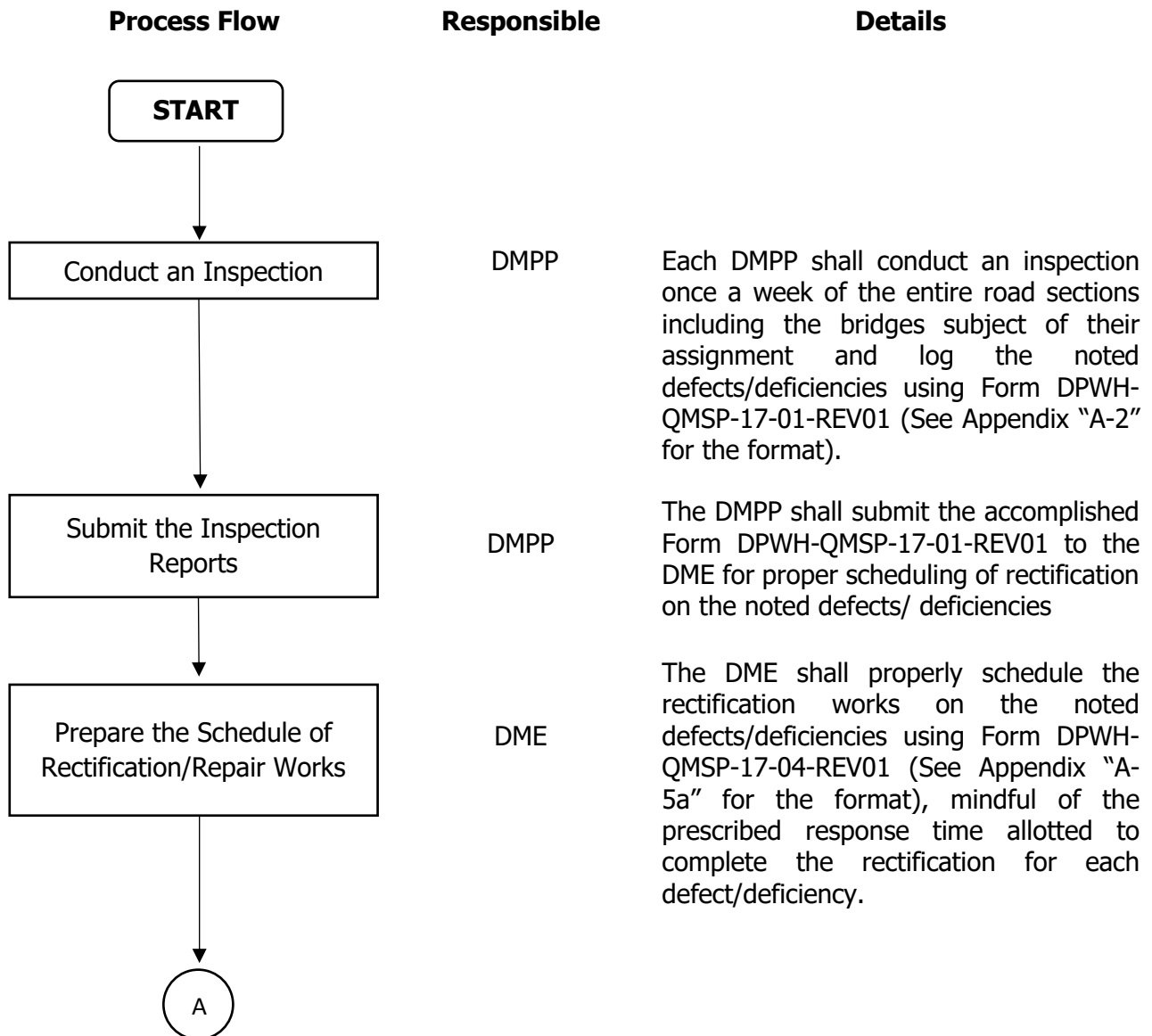
- a. Shall hold permanent positions and have successfully completed Maintenance Enhancement Training and/or other maintenance-related trainings.
- b. Shall conduct inspection once a week covering entirely their assigned road sections and log the results using Form DPWH-QMSP-17-01-REV01 (Road and Bridge Inspection Report), which contains location of noted defects/deficiencies, estimated quantity, etc., and shall be submitted to the DME for scheduling (See Appendix "A-2" for the format). DMPPs' inspection may cover part of its assigned road section, on a certain day, and shall continue the latter until they covered the total length of their designated road section provided that every conduct of inspection, a necessary report shall be submitted to the DME.
- c. Shall prepare Form DPWH-QMSP-17-02-REV01 (Road and Bridge Validation Report) and DPWH-QMSP-17-03-REV01 (District Summary on Road and Bridge Inspection/Validation) based on the results of Section 1.6d of these guidelines, which shall be submitted after every validation to the DME (See Appendices "A-3" and "A-4" for the format).
- d. Shall prepare Documentation Photolog showing actual field conditions Before, During, and After rectification works in response to the BOM Assessment. (See Appendices "A-7" and "A-8" for the format of the whiteboard/blackboard and Documentation Photolog, respectively).
- e. Shall ensure that the Form TAD 1.1 (Activity Card), accomplished by the Maintenance Foreman/Capataz, is properly reported.

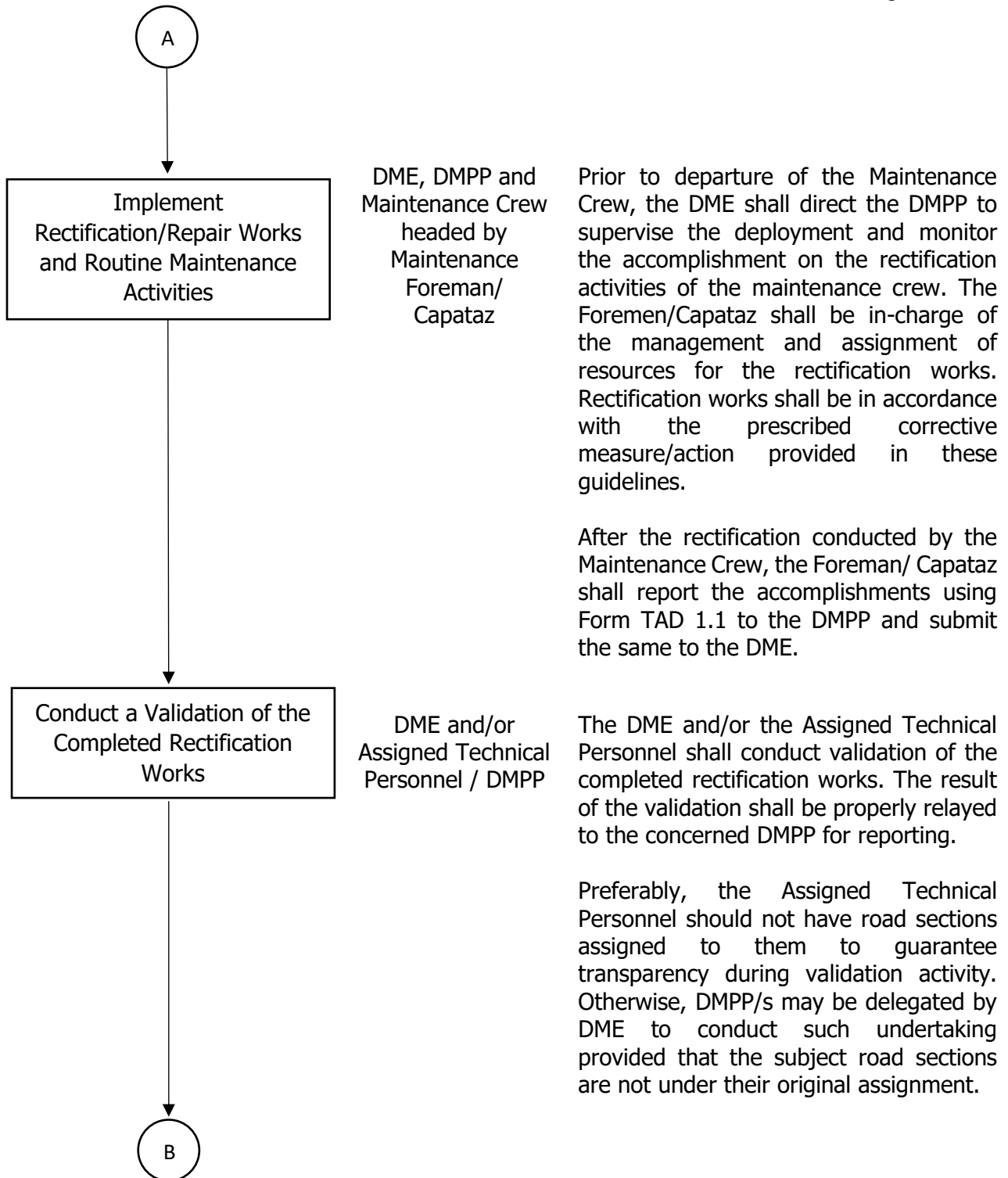
1.8 BOM Assessors

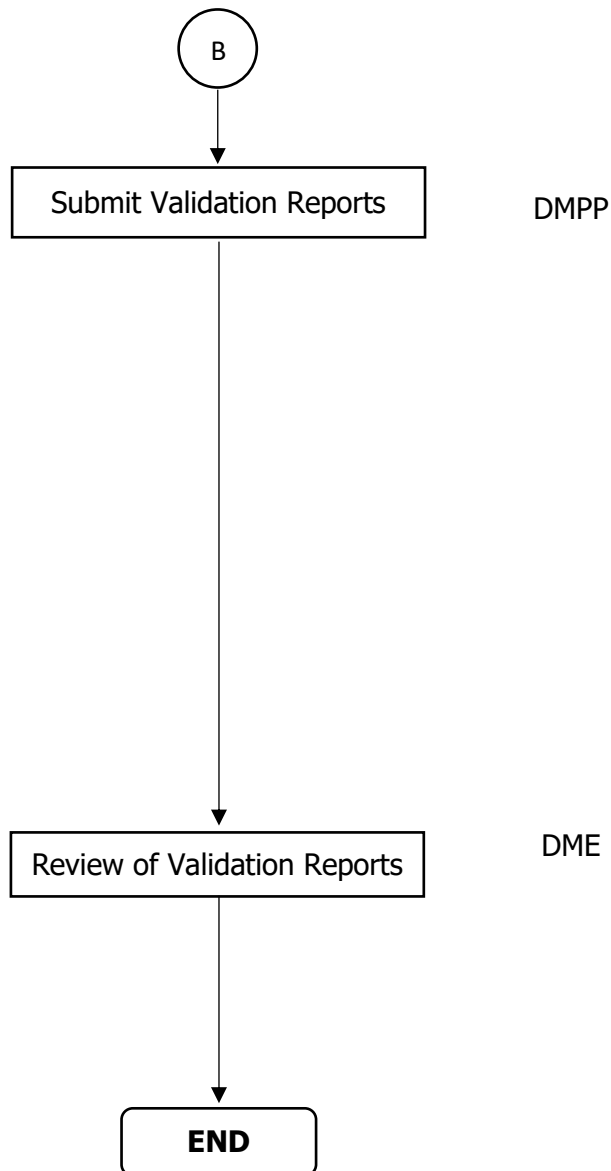
- a. Civil Engineers, holding permanent positions in the BOM, shall conduct assessment of all national roads and bridges following the BOM Assessment Procedures (see Section 3).
- b. Shall provide technical recommendations to ROs and DEOs Maintenance Personnel concerning the implementation of these guidelines.
- c. Shall prepare minutes of the meeting for the exit conference.
- d. Shall submit the assessment report to the Director of BOM not more than five (5) working days upon arrival.

2. DEOs' PROCEDURAL FLOWCHART

The hereunder flowchart shall be considered as standard procedure for the process involving DEOs' (Maintenance Section) routine maintenance activities along national roads and bridges.







The DMPP shall prepare report using Form DPWH-QMSP-17-02-REV01 and DPWH-QMSP-17-03-REV01 (See Appendix "A-3" and "A-4" for the format) based on the results of validation conducted by the DME or its Assigned Technical Personnel or their co-DMPP and submit the report to the DME.

Defects that are not yet rectified shall be retained or included in the next inspection report. There should be no changes to the date when the defect was first noted to monitor the adherence to response times. Valid reasons for non-adherence to response times are fortuitous events (e.g. typhoons, other natural calamities), and insufficiency of funds.

The DME shall review and submit the consolidated DMPP report DPWH-QMSP-17-02-REV01 as well as the DPWH-QMSP-17-03-REV01 to the DE.

3. BOM ASSESSMENT PROCEDURE

3.1 Frequency

The BOM Assessment shall be conducted on a quarterly basis/four (4) times a year in all ROs/DEOs. Moreover, the BOM may conduct additional assessment, especially during emergencies, rainy seasons or as the need so warrants.

3.2 Scope and Coverage

Assessment shall be composed of actual field inspection and evaluation of compliance to Proper Documentation and Maintenance Operation Process. Field inspection shall be conducted on a sampling method (spot-checking) on pre-determined paved road sections, regardless of classification, which were randomly selected prior to the deployment of BOM Assessor/s. Pre-selected road sections must exclude the length of road segment which falls under Section 5. Additional road segments adjacent to the pre-determined location must be added equal to the excluded length. Moreover, sampling pool for the succeeding year shall incorporate already sampled and unsampled road sections. The hereunder table shall be the basis of road length percentage sampling:

Table 3.1 Sample Size

DEO Classification	Percent (%) of Total Paved Road Length to be Inspected
1 st Class	25 - 30
2 nd Class	30 - 35
3 rd Class	35 - 40

3.3 Assessment Composition

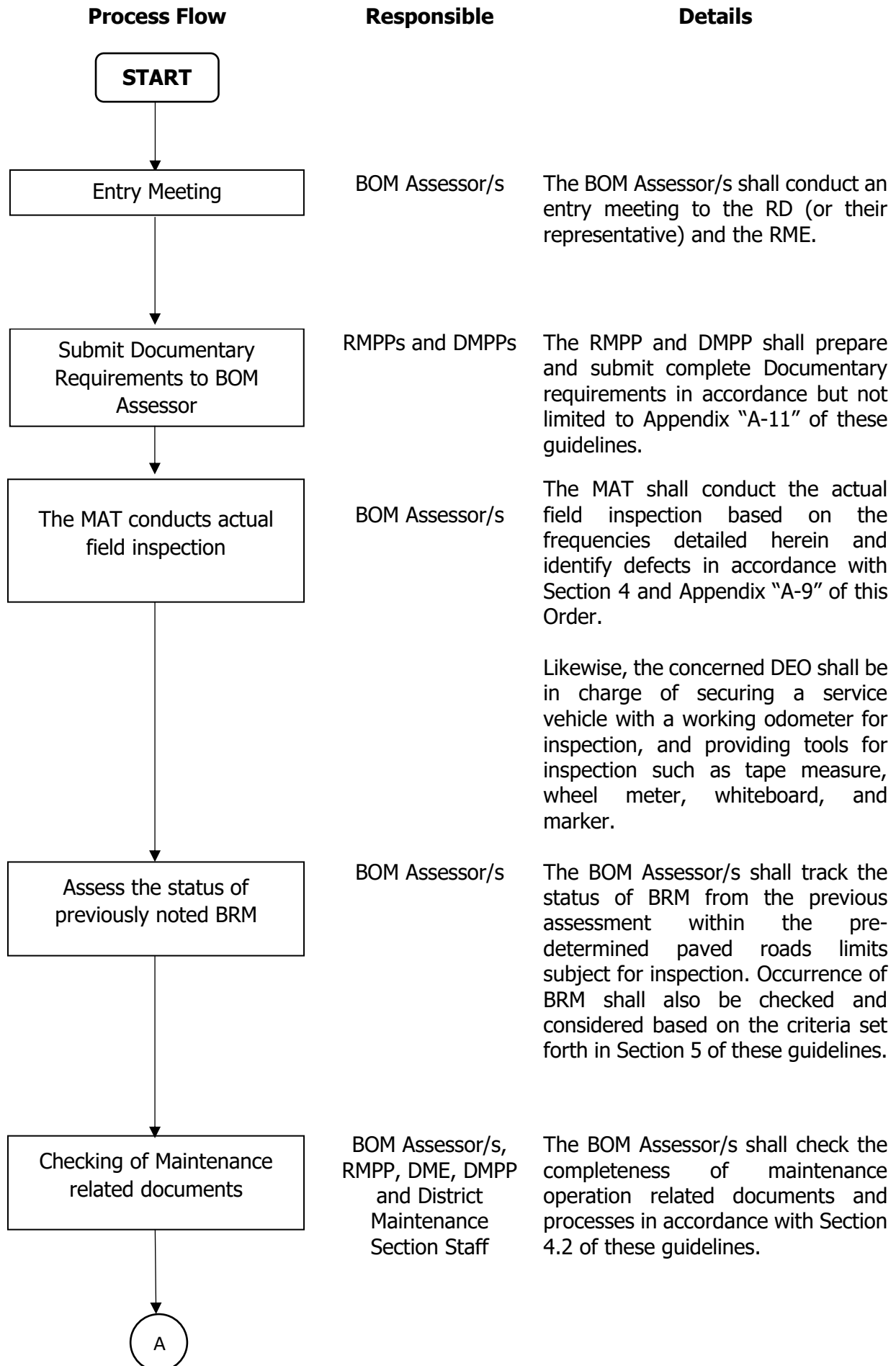
The BOM Assessment shall be composed of actual field Inspection and checking of compliance to Proper Documentation and Maintenance Operation Process.

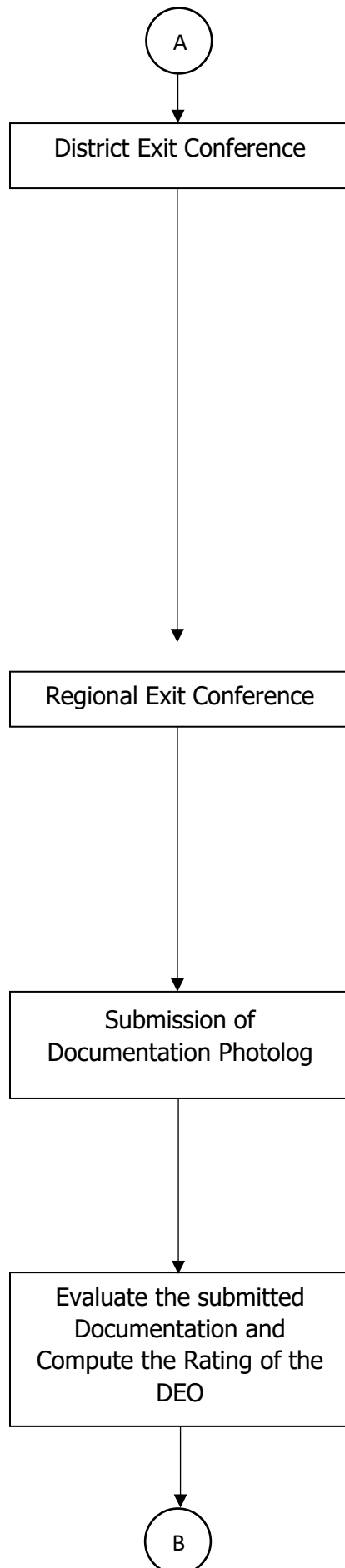
3.4 BOM Assessors' Competency

BOM Assessor/s to be deployed should be technical personnel holding Engineer II, and Engineer III permanent positions who have undertaken any of the following trainings: (1) Training/Workshop on Comprehensive Policy Guidelines on the Maintenance of National Roads and Bridges; (2) Training on Bridge Assessment, Maintenance and Repair/Rehabilitation; (3) Training on Philippine Highway Maintenance Management System, (4) Comprehensive Training for DPWH Field Engineers; (5) Training on DPWH Quality Assurance; and (6) Comprehensive Training on Materials Testing Technology.

3.5 Process Flow

The hereunder flowchart shall be considered as standard procedure for BOM assessment of the DEOs performance in terms of routine maintenance activities on national roads and bridges.





DE, ADE, DME,
MPP, RMPP, and
BOM Assessor/s

After the inspection, an exit conference shall be held preferably with the presence of DE and/or ADE, DME, MPP, RMPP, and the BOM Assessor/s to discuss all noted defects/deficiencies including other related concerns. All personnel present at the meeting shall attest and affix their signatures on the Forms DPWH-QMSP-17-01-REV01 and DPWH-QMSP-17-03-REV01 (See Appendices "A-2" and "A-4" for the format) prepared by the BOM Assessor/s to certify the correctness of the same and ensure that all parties are amenable to the findings.

The DEO shall submit to the RO their Documentation Photolog within ten (10) working days after the exit meeting.

RD, ARD, RME,
RMPPs, and/or
BOM Assessor/s

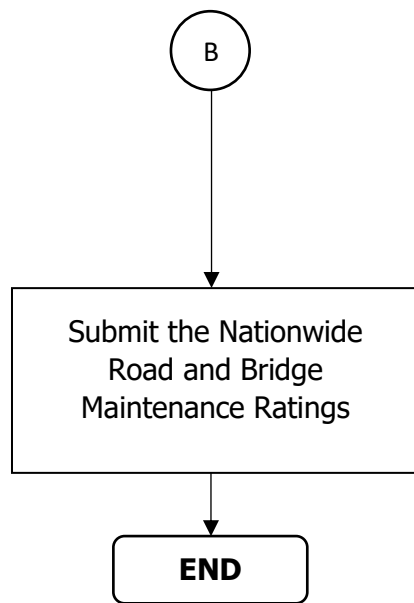
After the inspection of all the DEOs under the BOM Assessor's assignment, the RMPP and/or BOM Assessor/s shall facilitate an exit conference preferably with the presence of RD, ARD, and RME, to discuss the results of the assessment including other related concerns. Likewise, the RMPP shall prepare the Minutes of the Meeting.

RD, ARD, RME

The RO shall submit the DEO's Documentation Photolog, within five (5) working days from its receipt, their response/action taken to the BOM noted defect/deficiencies. Non-submission within the allotted schedule shall be subject to a corresponding deduction on the rating.

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The submitted Documents shall be evaluated by the Bureau of Maintenance to validate the correctness and adherence to these guidelines, and for the purpose of computing the DEO's Road and Bridge Maintenance Rating. The computation shall be based on the Rating System cited in Section 6 of these guidelines.



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The computed Road and Bridge Maintenance Ratings of all the DEOs shall be submitted to the Undersecretary for Technical Services.

4. ROAD AND BRIDGE DEFECTS/DEFICIENCIES AND MAINTENANCE-RELATED DOCUMENTS

- 4.1 The MAT, shall conduct actual field inspection to note and identify the hereunder defects, and appropriately log the findings using form DPWH-QMSP-17-01-REV01 and DPWH-QMSP-17-03-REV01. The description recommended corrective measure/treatment, and activity standard for each defect/deficiency are detailed in Appendix "A-9", hereof. Roads and Bridges defects/deficiencies with its prescribed response time are shown below:

Table 4.1 Defects/Deficiencies and Response Time

Code	Defects/Deficiencies	Response Time (working days)
01	Potholes	3
02	Alligator Cracks	3
03	Major Scaling	30
04	Shoving and Corrugation	10
05	Pumping and Depression	30
06	No/Faded Road Markings	15
07	Defects on Shoulders	7
08	Lush Vegetation	3
09	Clogged Drains	3
10	Open Manhole	10
11	No/Inadequate Sealant in Joints	3
12	Cracks	3
13	Raveling	7
14	Unmaintained Signages and Road Markers	15
15	Unmaintained Bridges	15
16	Unmaintained Guardrails	15

4.2 The BOM Assessor/s shall check the correctness of maintenance operation related documents and process listed below:

- a. Straight Line Diagram reflecting UC, DLP, etc.;
- b. Copy of Contracts/DLP (CO, UPMO, RO, DEO);
- c. DMPP's 10 days Inspection/Validation Report Prior to BOM Assessment;
- d. Updated List of DMPPs;
- e. Daily Maintenance Activity Schedule;
- f. TAD 1.1 of Section 4.2c;
- g. Requisite Reports relative to various routine maintenance related issuances and instructions;
 - i. Removal of Obstruction and prohibited uses within ROW of National Roads
 - ii. Status of Installation of Km Post
 - iii. Report on "Operation Zero Potholes" on national roads
- h. Documentation Photolog and Work Methodology;
- i. Manpower Utilization; and
- j. Other Maintenance Related documents and process

5. SPECIAL CONSIDERATIONS DURING BOM ASSESSMENT

- 5.1 Road sections or segments classified as UC, within DLP or Newly-Converted without EMK allocation are excluded from the BOM Assessment provided that pertinent documents are presented. Nonetheless, the following conditions must still be observed:
- Defects posing imminent danger within the project scope, especially potholes, shall be addressed in the exit conference. Likewise, the IO may direct instructions to the concerned officials for the safety and convenience of the riding public; and
 - Defects noted within the project limit but outside the project scope shall be corrected except pavement markings.
- 5.2 Road segments with substantial extent of distresses shall be considered Beyond Routine Maintenance. However, palliative measures should be applied. The hereunder parameters shall be the basis in classifying a certain road segment as BRM which shall be excluded from the BOM Assessment, viz:

Table 5.1 Beyond Routine Maintenance Parameters

Defects	Parameters
Code 02 – Alligator Cracks	More than 167.5 sq.m. (continuous)
Code 03 – Major Scaling	More than 10 continuous blocks
Code 04 – Shoving and Corrugation	More than 167.5 sq.m. (continuous)
Code 05 – Pumping and Depression	More than 10 continuous blocks
Code 13 – Raveling	More than 502.5 sq.m. (continuous)

- 5.3 Defects caused by fortuitous/force majeure events, diastrophic movements, sub-base failure, and unstable slope (without slope protection) shall also be declared as BRM on a condition that road safety measures were provided.
- 5.4 The declared BRM shall be endorsed to Planning Service by the Office of the Undersecretary for Technical Services for consideration in the Regular Infrastructure Projects of the subsequent fiscal year.
- 5.5 Only the BOM Assessor/s shall declare exceptions within the bounds of the foregoing considerations and sound engineering judgment. BOM Assessor/s can only declare BRM on the sections within the limit of the pre-determined inspection assignment.
- 5.6 All noted defects/deficiencies that do not qualify under the provisions of this Section shall be included in the inspection report.

6. RATING SYSTEM

Based on the outcome of the assessment by the BOM the following percentage points shall be determined for Road and Bridge Maintenance Rating:

Degree / Level of Maintenance of National Roads and Bridges (Inspection)	75.00%
Compliance to Proper Documentation and Maintenance Operation Process	<u>25.00%</u>
TOTAL	100.00%

6.1 Degree/Level of Maintenance of National Roads (Inspection)

- a. DEOs' Inspection grade shall be computed using the Table 6.1a and Table 6.1b of these guidelines as shown hereunder.

Table 6.1a Road and Bridge Defects and the Corresponding Weight Percentage

Coded Defect	Defect/ Deficiency	Weight (%)
01	Potholes	10.00
02	Alligator Cracks	8.00
03	Major Scaling	9.00
04	Shoving and Corrugation	8.00
05	Pumping and Depression	9.00
06	No / Faded Pavement Markings	7.00
07	Defects on Shoulders	5.00
08	Lush Vegetation	3.00
09	Clogged Drains	5.00
10	Open Manhole	5.00
11	No / Inadequate Sealant in Joints	3.00
12	Cracks	5.00
13	Raveling	5.00
14	Unmaintained Signages and Road Markers	5.00
15	Unmaintained Bridges	10.00
	<i>15-D Bridge Deck</i>	5.00
	<i>15-S Bridge Side</i>	3.00
	<i>15-P Bridge Paint</i>	2.00
16	Unmaintained Guardrails	3.00

Note: 1. The corresponding rating of Code 06 is the **average** of 06-E, 06-Y, 06-C, and 06-P.

2. Weight (%) of a particular Coded Defect above will not be considered on the rating if no corresponding pavement type was assessed.

Table 6.1b Point System for Inspection

Code	Unit	5	4	3	2	1
01	(sqm/km)	<0.0053	0.0053 - 0.0107	>0.0107 - 0.0214	>0.0214 - 0.0427	>0.0427
02	(sqm/km)	<0.0149	0.0149 - 0.0298	>0.0298 - 0.0596	>0.0596 - 0.1193	>0.1193
03	(sqm/km)	<0.0486	0.0486 - 0.0972	>0.0972 - 0.1945	>0.1945 - 0.3889	>0.3889
04	(sqm/km)	<0.0082	0.0082 - 0.0164	>0.0164 - 0.0328	>0.0328 - 0.0657	>0.0657
05	(sqm/km)	<0.3978	0.3978 - 0.7956	>0.7956 - 1.5913	>1.5913 - 3.1826	>3.1826
06-E	(lm/km)	<23.2099	23.2099 - 46.4197	>46.4197 - 92.8394	>92.8394 - 185.6789	>185.6789
06-C	(lm/km)	<4.3868	4.3868 - 8.7735	>8.7735 - 17.5470	>17.5470 - 35.0940	>35.0940
06-Y	(lm/km)	<2.0258	2.0258 - 4.0515	>4.0515 - 8.1030	>8.1030 - 16.2060	>16.2060
06-P	(lm/km)	<0.5798	0.5798 - 1.1596	>1.1596 - 2.3193	>2.3193 - 4.6385	>4.6385
07	(lm/km)	<8.1212	8.1212 - 16.2424	>16.2424 - 32.4848	>32.4848 - 64.9696	>64.9696
08	(lm/km)	<8.7464	8.7464 - 17.4928	>17.4928 - 34.9856	>34.9856 - 69.9712	>69.9712
09	(lm/km)	<2.2769	2.2769 - 4.5538	>4.5538 - 9.1076	>9.1076 - 18.2151	>18.2151
10	(no/km)	<0.0085	0.0085 - 0.0170	>0.0170 - 0.0341	>0.0341 - 0.0681	>0.0681
11	(lm/km)	<15.5822	15.5822 - 31.1644	>31.1644 - 62.3287	>62.3287 - 124.6575	>124.6575
12	(lm/km)	<1.2887	1.2887 - 2.5774	>2.5774 - 5.1549	>5.1549 - 10.3097	>10.3097
13	(sqm/km)	<0.9163	0.9163 - 1.8325	>1.8325 - 3.6650	>3.6650 - 7.3300	>7.3300
14	(no)	<13	13 - 27	>27 - 53	>53 - 106	>106
15-D	(% of total)	<2.7131	2.7131 - 5.4261	>5.4261 - 10.8522	>10.8522 - 21.7044	>21.7044
15-S	(% of total)	<0.9535	0.9535 - 1.9070	>1.9070 - 3.8139	>3.8139 - 7.6279	>7.6279
15-P	(% of total)	<2.6131	2.6131 - 5.2262	>5.2262 - 10.4525	>10.4525 - 20.9049	>20.9049
16	(no/km)	<0.8307	0.8307 - 1.6614	>1.6614 - 3.3228	>3.3228 - 6.6456	>6.6456

6.2 Compliance to Proper Documentation and Maintenance Operation Process

a. DEOs' rating under this Section shall be based on the hereunder criteria.

Table 6.2 Criteria for Rating of Documentation

Description		Weight (%)
a.	Straight Line Diagram	5.00
b.	Copy of Contracts/DLP (CO, UPMO, RO, DEO)	6.00
c.	DMPP's 10 days (complete) Inspection/Validation Report Prior to BOM Assessment	10.00
d.	Updated List of DMPPs	3.00
e.	Daily Maintenance Activity Schedule	10.00
f.	TAD 1.1 of Section 4.2c	10.00
g.	Requisite Reports relative to various routine maintenance related issuances and instructions <ul style="list-style-type: none"> i. Removal of Obstruction and prohibited uses within ROW of National Roads ii. Status of Installation of KM post iii. Report on "Operation Zero Potholes" on national roads 	20.00
h.	Documentation Photolog and Work Methodology	30.00
i.	Manpower Utilization	3.00
j.	Other Maintenance Related documents and process	3.00
Total:		100.00

6.3 DEOs shall be graded using adjectival rating mechanism following the hereunder table:

Table 6.3 Adjectival Rating

Adjectival Rating	Numerical Equivalent
Outstanding	5.00
Very Satisfactory	4.00 – 4.99
Satisfactory	3.00 – 3.99
Unsatisfactory	2.00 – 2.99
Poor	1.00 – 1.99

7. ADMINISTRATIVE SANCTIONS AND CITATION

7.1 Sanctions

The Calibrated Sanctions/Penalties shall be imposed on the appointed or designated officials/personnel from the RO and DEO whether in a permanent, officer-in-charge, or caretaker status, based on the schedules detailed hereunder.

If the subjected officials/personnel are transferred during the pendency of their sanction, the same shall still be in effect, notwithstanding, shall form part of the Department's record. In the case that the subjected officials/personnel are reinstated, their previous records shall still be in effect and the sanctions shall be treated pursuant to Table 7.1 of this Order.

Table 7.1 Schedule of Calibrated Administrative Sanctions


Official / Personnel	First Offense	Second Offense	Third Offense
DME and DMPP	WARNING shall be issued if the Road and Bridge Maintenance Rating obtained by the District Engineering Office is lower than " <i>Satisfactory</i> " for one (1) rating period.	REPRIMAND shall be issued if the Road and Bridge Maintenance Rating obtained by the District Engineering Office is lower than " <i>Satisfactory</i> " for two (2) rating periods within the same year. Moreover, the officials and employees involved shall be given a notice not to handle/supervise maintenance-related projects for a period of six (6) months.	APPROPRIATE CHARGES shall be coordinated and forwarded to the Internal Affairs Division of the Legal Service if the Road and Bridge Maintenance Rating obtained by the District Engineering Office is lower than " <i>Satisfactory</i> " for more than two (2) rating periods within the same year.
DE and ADE	WARNING shall be issued if the Road and Bridge Maintenance Rating obtained by the District Engineering Office is lower than " <i>Satisfactory</i> " for two (2) rating periods within the same year.	REPRIMAND shall be issued if the Road and Bridge Maintenance Rating obtained by the District Engineering Office is lower than " <i>Satisfactory</i> " for three (3) rating periods within the same year.	APPROPRIATE CHARGES shall be coordinated and forwarded to the Internal Affairs Division of the Legal Service if the Road and Bridge Maintenance Rating obtained by the District Engineering Office is lower than " <i>Satisfactory</i> " for four (4) rating periods within the same year.
RME and RMPP	WARNING shall be issued if fifty percent (50%), or more, of the District Engineering Offices under the Regional Office's jurisdictions, obtained Road and Bridge Maintenance Rating lower than " <i>Satisfactory</i> " for one (1) rating period within the same year.	REPRIMAND shall be issued if fifty percent (50%), or more, of the District Engineering Offices under the Regional Office's jurisdictions, obtained Road and Bridge Maintenance Rating lower than " <i>Satisfactory</i> " for two (2) rating period within the same year. Moreover, the officials and employees involved shall be given a notice not to handle/supervise maintenance-related projects for a period of six (6) months.	APPROPRIATE CHARGES shall be coordinated and forwarded to the Internal Affairs Division of the Legal Service if fifty percent (50%), or more, of the District Engineering Offices under the Regional Office's jurisdictions, obtained Road and Bridge Maintenance Rating lower than " <i>Satisfactory</i> " for more than two (2) rating periods within the same year.

7.2 Citations

The names of concerned officials and maintenance personnel responsible in the implementation of this Department Order shall be forwarded to the DPWH Program on Awards and Incentives for Service Excellence Committee (DPWH-PRAISE Committee) to be given appropriate awards for timely and efficient maintenance works following the appropriate criteria:


- a. **For District Engineering Offices** - DEOs which attained four (4) consecutive "Outstanding" Ratings within the same year.
- b. **For Regional Offices** – with all DEOs under its jurisdiction which attained four (4) consecutive "Outstanding" Ratings within the same year.

APPENDIX "A-1"**Format of District Maintenance Point Persons List**

 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS Name of D.E.O. District Engineering Office Address																
<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> District Engineer Contact No. </div>	<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Assistant District Engineer Contact No. </div>	<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> District Maintenance Engineer Contact No. </div>														
UPDATED LIST OF DISTRICT MAINTENANCE POINT PERSONS AS OF JANUARY 2022																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: center;">District Maintenance Point Person</th> </tr> <tr> <td style="text-align: center; vertical-align: middle;"> <div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Designation Contact No. </div> </td> </tr> <tr> <td style="text-align: center; vertical-align: middle;"> <div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Designation Contact No. </div> </td> </tr> </table>	District Maintenance Point Person	<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Designation Contact No. </div>	<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Designation Contact No. </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="3" style="text-align: center;">Assigned Road Section(s) with respective Station Limits</th> </tr> <tr> <th style="text-align: center;">Section ID</th> <th style="text-align: center;">Road Section</th> <th style="text-align: center;">Station Limit (K0000±000 to K0000+000) Length (km)</th> </tr> <tr> <td style="height: 100px;"></td> <td></td> <td></td> </tr> <tr> <td style="height: 100px;"></td> <td></td> <td></td> </tr> </table>	Assigned Road Section(s) with respective Station Limits			Section ID	Road Section	Station Limit (K0000±000 to K0000+000) Length (km)						
District Maintenance Point Person																
<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Designation Contact No. </div>																
<div style="border: 2px solid blue; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">2 x 2 PHOTO</div> <div style="text-align: center; margin-top: 5px;"> <u>Name</u> Designation Contact No. </div>																
Assigned Road Section(s) with respective Station Limits																
Section ID	Road Section	Station Limit (K0000±000 to K0000+000) Length (km)														
Prepared By: <div style="text-align: center; margin-top: 10px;"> <u>Signature over Printed Name</u> District Maintenance Engineer </div>	Reviewed by: <div style="text-align: center; margin-top: 10px;"> <u>Signature over Printed Name</u> Assistant District Engineer </div>	Submitted By: <div style="text-align: center; margin-top: 10px;"> <u>Signature over Printed Name</u> District Engineer </div>														
Note: Kindly provide the required information written in RED ink. Use additional sheet if necessary. Pictures must be in formal attire with white background.																

APPENDIX "A-2"

DPWH-QMSP-17-01-REV01
(Road and Bridge Inspection Report)


 Department of Public Works and Highways ROAD AND BRIDGE INSPECTION REPORT		DPWH-QMSP-17-01-REV01				
Region:	District Office:	Stationing/Station Limit/Landmark	Date Inspected	Defect(s)/Deficiencies*	Estimated Quantity and Unit of Measure	Remarks
		1. ROAD SECTION (SECTION ID)				
		STATION LIMIT				
		L = 0.000 km				

Prepared by:

<p>NAME</p> <p>Designation</p>	<p>Legend:</p> <p>LL / LS - Left Lane / Left Side</p> <p>RL / RS - Right Lane / Right Side</p> <p>CL - Center Line</p> <p>BL / BS - Both Lanes / Both Sides</p> <p>BRM - Beyond Routine Maintenance</p> <p>01 Potholes</p> <p>02 Alligator Cracks</p> <p>03 Major Scaling</p> <p>04 Shoving and Corrugation</p> <p>05 Pumping and Depression</p> <p>06-E No edge line</p> <p>06-C No center line</p> <p>06-Y No Yellow line</p> <p>06-P No Pedestrian Lane</p> <p>07 Defects on Shoulders</p> <p>08 Lush vegetation</p> <p>09 Clogged Drains</p> <p>10 Open Manhole</p> <p>11 No/Inadequate Sealant in Joints</p> <p>12 Cracks</p> <p>13 Ravelling</p> <p>14 Unmaintained Road Signages and Markers</p> <p>15-D Bridge Deck</p> <p>15-S Bridge Side</p> <p>15-P Bridge Paint</p> <p>16 Unmaintained Guardrails</p>
---------------------------------------	--

APPENDIX "A-3"

DPWH-QMSP-17-02-REV01
(Road and Bridge Validation Report)

Region:	District Office:	DPWH-QMSP-17-02-REV01					
 Department of Public Works and Highways ROAD AND BRIDGE VALIDATION REPORT		Stationing/Station Limit/Landmark	Date Inspected	Date Validated	Defect(s)/Deficiencies*	Estimated Quantity and Unit of Measure	Remarks
		1. ROAD SECTION (SECTION ID)					
		STATION LIMIT L = 0.000 km					

Prepared by: _____

NAME
Designation


Legend:

LL / LS - Left Lane / Left Side	01 Potholes	06-Y No Yellow line	12 Cracks
RL / RS - Right Lane / Right Side	02 Alligator Cracks	06-P No Pedestrian Lane	13 Ravelling
CL - Center Line	03 Major Scaling	07 Defects on Shoulders	14 Unmaintained Road Signages and Markers
BL / BS - Both Lanes / Both Sides	04 Shoving and Corrugation	08 Lush vegetation	15-D Bridge Deck
BRM - Beyond Routine Maintenance	05 Pumping and Depression	09 Clogged Drains	15-S Bridge Side
	06-E No edge line	10 Open Manhole	15-P Bridge Paint
	06-C No center line	11 No/Inadequate Sealant in Joints	16 Unmaintained Guardrails

APPENDIX "A-4"

DPWH-QMSP-17-03-REV01

(District Summary on Road and Bridge Inspection/Validation)

<div style="text-align: center;"> Department of Public Works and Highways  DISTRICT SUMMARY ON ROAD AND BRIDGE INSPECTION/VALIDATION IN THE IMPLEMENTATION OF DEPARTMENT ORDER NO. __, SERIES OF 20 __ Date of Inspection: _____ Date of Validation: _____ </div>																				
DPWH-QMSP-17-03-REV01																				
Region: District Office:	Name of Road Sections/Station Limit	Length (km) a. As Inspected b. As Validated	Code/Defects/Deficiencies & Estimated Quantity																	
			01 Pothole (sq.m.)	02 Alligator Cracks (sq.m.)	03 Major Cracks (sq.m.)	04 Shoving & Corrugation (sq.m.)	05 Pumping & Depression (sq.m.)	06 No faded road markings			07 Defects on Shoulders (l.m.)	08 Lush Vegetation (l.m.)	09 Clogged Drains (l.m.)	10 Open Manhole (no.)	11 No / Inadequate Sealant in Joints (l.m.)	12 Cracks (l.m.)	13 Ravelling (sq.m.)	14 Unmaintained Road Signages and Markers (no.)	15 Unmaintained Bridges	
			06-E Edge Line (l.m.)	06-C Center Line (l.m.)	06-Y Yellow Line (l.m.)	06-P Pedestrian Lane (l.m.)	15-D Bridge Deck (no.)	15-S Bridge Side (no.)	15-P Bridge Paint (no.)											
	1. ROAD SECTION (SECTION ID)	a. - b. - c. -																		
	STATION LIMIT L = 0.000 km																			
	2. ROAD SECTION (SECTION ID)	a. - b. - c. -																		
	STATION LIMIT L = 0.000 km																			
	Total	a. - b. - c. -																		
	Accomplishment (%)																			

Prepared by: _____
 Reviewed: _____
 Noted: _____


NAME
Designation

NAME
Designation

NAME
Designation

APPENDIX "A-5a"

DPWH-QMSP-17-04-REV01
(Daily Maintenance Activity Schedule)



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
DAILY MAINTENANCE ACTIVITY SCHEDULE

DPWH-QMSP-17-04-REV01

Region : 2

District : 3

Date: 1

MAINTENANCE ACTIVITY	ROAD SECTION & STATIONING/STATION LIMIT/ LANDMARK	NOTED DATE OF DEFECT (based on Inspection Report)	SUPERVISING DMPP/FOREMAN/ CAPTAZ & CREW SIZE	EQUIPMENT & TOOLS	MATERIALS	REMARKS
4	5	6	7	8	9	10

Prepared and Submitted by:

11

District Maintenance Engineer

Checked by:

12

Assistant District Engineer

Approved:

13

District Engineer

APPENDIX "A-5b"

**Guidelines on How to Accomplish
Daily Maintenance Activity Schedule Form
(DPWH-QMSP-17-04-REV01)**


No.

1. Indicate the date when the form was filled-out.
2. Indicate the concerned Regional Office.
3. Indicate the concerned District Engineering Office.
4. Indicate the maintenance activity to be performed consistent with the Technical Assistance District (TAD) 1.1.
5. Write the road section and its corresponding section ID/station limit/landmark of the defect to be rectified.
6. Indicate the date when the defect was noted and must be based in the inspection report (DPWH-QMSP-17-01-REV01).
7. Indicate the name of the supervising DMPP and/or Maintenance Foreman/Crew Leader and crew size consistent with TAD 1.1.
8. Write down all equipment and tools needed for the repair consistent with TAD 1.1.
9. Write down all the materials needed for the repair consistent with TAD 1.1.
10. Write down important "REMARKS" as necessary.
11. Indicate the name and affix the signature of the District Maintenance Engineer (DME).
12. Indicate the name and affix the signature of the Assistant District Engineer (ADE).
13. Indicate the name and affix the signature of the District Engineer (DE).

Note: The Daily Maintenance Activity Schedule (DPWH-QMSP-17-04-REV01) must be accomplished being mindful of the "Response Time" for each code defect.

APPENDIX "A-6"

DPWH-QMSP-17-05-REV01
(Regional Summary on Road and Bridge Inspection/Validation)



Department of Public Works and Highways
REGIONAL SUMMARY
ON ROAD AND BRIDGE INSPECTION/VALIDATION REPORT
IN THE IMPLEMENTATION OF ORDER NO. _____, SERIES OF 20__
 Date of Inspection: _____
 Date of Validation: _____

DPWH-QMSP-17-05-REV01

Region:	Length (km)	Code/Defects/Deficiencies & Estimated Quantity																								
		06				07		08		09		10		11		12		13		14		15		16		
		a. As Inspected	b. As Validated	c.	06-E Edge Line (km)	06-C Center Line (km)	06-Y Yellow Line (km)	06-P Pedestrian (km)	06-D Drains (km)	06-V Vegetation (km)	06-L Lush (km)	06-O Open (km)	06-J Joints (km)	06-S Sealant (km)	06-Cr Cracks (km)	06-R Ravelling (km)	06-U Unmaintained (km)	06-D Deck (km)	06-S Side (km)	06-P Paint (km)	06-G Guardrails (km)	06-U Unmaintained (km)	06-G Guardrails (km)	06-U Unmaintained (km)	06-G Guardrails (km)	
1. DEO	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L = 0.000 km																										
2. DEO	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L = 0.000 km																										
3. DEO	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L = 0.000 km																										
4. DEO	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L = 0.000 km																										
5. DEO	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L = 0.000 km																										
6. DEO	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
L = 0.000 km																										
Total	a.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	b.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	c.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accomplishment (%)																										

Prepared by: _____

NAME _____
Designation _____

Reviewed: _____

NAME _____
Designation _____

Noted: _____

NAME _____
Designation _____

APPENDIX "A-7"**Whiteboard or Blackboard Format**

1. The size of the board should be 2 ft. by 1.5 ft or 60 cm by 45 cm.
2. The board should be oriented landscape.
3. Write the CODE of the defect only.
4. An example of a board with complete details and proper dimensions is shown below.


LA UNION I DEO	
ROAD SECTION	: Manila North Road (S00186LZ)
STATION/LANDMARK	: K0277 + 000 – K0277+100
CODE DEFECT	: 06-E (RL)
ACTION TAKEN	: Repainting of Edge Line
QUANTITY	: 100 l.m.
DATE	: May 12, 2022
DURING	

1.5 ft. OR 45 cm.

2 ft. OR 60 cm.

APPENDIX "A-8"

Documentation Photolog Format

 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS Name of D.E.O. District Engineering Office <i>Address</i>	
Road Section: _____ Defect: _____ Action Taken: _____	Station: _____ Date Rectified: _____ Quantity: _____
(PICTURE)	
BEFORE	
(PICTURE)	
DURING	
(PICTURE)	
AFTER	
Note: Photographs shall have the same angle of shooting with an identified landmark/background/reference point.	
_____ (SIGNATURE OVER PRINTED NAME) Assigned District Maintenance Point Person Page ____ of ____	

APPENDIX "A-9"

Code, Description/Associated Defects, Recommended Corrective Measure/Treatment, Response Times, and Activity Standard for each Defect/Deficiency based on Philippine Highway Maintenance Management Manual (PHMMM)

Code	Description/ Associated Defects	Unit	Recommended Corrective Measure/ Treatment	Response Time	Activity Standard
01	POTHOLES Any of the following defects can be recorded under Code 01: <ul style="list-style-type: none"> • Bowl-Shaped Depression in the pavement surface resulting from the loss of wearing course or base materials; • Delamination - loss of a discrete area of the wearing course layer $\geq 25\text{mm}$ in depth, due to poor bonding between the surface and lower layer. • Edge Break - edge of the bituminous surface is fretted, broken or irregular. • Spalling – breakdown, chip or disintegration of slab surface at edges, joints, corners or cracks (spalls $\geq 50\text{mm}$ wide, measured from the face of the joint or crack, with loss of material, or broken into two or more pieces). • Chuck-hole or Punch out, a depressed or broken part of a slab resulting from pavement cracking and disintegration of concrete. 	sq.m.	On bituminous pavement, bituminous premix (hot) or penetration patching of the affected area; adding base materials is included if no subgrade repair is required. On concrete pavement, bituminous premix (hot) or penetration patching.	3 Days	Act. 111 – Premix Patching on Bituminous Pavements Act. 112 – Penetration Patching Act. 121 – Patching on Concrete Pavements (If continuous Length < 30 meters; otherwise use 71x) Act. 501-Production of Bituminous Premix
02	ALLIGATOR CRACKS Interconnected or interlaced cracks forming a series of small polygons resembling an alligator hide.	sq.m.	Bituminous premix (hot) or penetration patching; adding base materials is included if no subgrade repair is required.	3 Days	Act. 111 – Premix Patching on Bituminous Pavements Act. 112 – Penetration Patching Act. 114 – Replacement of Bituminous Pavement (if continuous Length < 100meters; otherwise use 71x)

Code	Description/ Associated Defects	Unit	Recommended Corrective Measure/ Treatment	Response Time	Activity Standard
					Act. 501-Production of Bituminous Premix
03	MAJOR SCALING Deterioration of the upper concrete slab surface of more than 10mm thickness affecting the whole slab.	sq.m.	Replacement of concrete pavement	30 Days	Act. 123 – Replacement of Concrete Pavement (If one slab or less, use 66x for 1 – 3 slabs; use 71x for more than 3 slabs Act. 199 – Other Maintenance to Roadway and Related Features (Repair of base, sub-base or subgrade)
04	SHOVING AND CORRUGATION <ul style="list-style-type: none"> • Shoving is the bulging of the road surface generally parallel to the direction of traffic and/or horizontal displacement of surfacing materials, mainly in the direction of traffic where braking or acceleration movement occurs. • Corrugations refers to transverse undulations, closely and regularly spaced, with wavelengths of less than 2 meters. • Rutting is a longitudinal deformation in a wheel path; may occur in one or both wheel paths of a lane. • Depressions, localized area within the pavement with elevations lower than surrounding area. May not be confined to wheel paths and could extend across several wheel paths. 	sq.m.	Half or full width replacement of defective pavement; frequent recurrence of the defect in a section must be investigated to determine a more appropriate intervention such as: <ul style="list-style-type: none"> (a) Based on engineering judgment, consider removal and replacement of the affected area; (b) Program road section for reconstruction. 	10 Days	Act. 111 – Premix Patching on Bituminous Pavements Act. 112 – Penetration Patching Act. 114 – Replacement of Bituminous Pavement (if continuous Length < 100meters; otherwise use 71x) Act. 501-Production of Bituminous Premix
05	PUMPING AND DEPRESSION <ul style="list-style-type: none"> • Pumping, seeping or ejection of water from beneath the pavement through cracks causing rocking, faulting and slab cracking. 	sq.m.	Replacement of concrete pavement, including base correction	30 Days	Act. 123 – Replacement of Concrete Pavement (If one slab or less, use 66x for 1 – 3 slabs; use 71x for more than 3 slabs)

Code	Description/ Associated Defects	Unit	Recommended Corrective Measure/ Treatment	Response Time	Activity Standard
	<ul style="list-style-type: none"> Rocking is the vertical movement at a joint or crack under traffic. Faulting is the difference in elevation across a joint or crack creating a "step" deformation Slab cracking under this code refers to shattered slab. Depression, a dip in the pavement surface almost invariably across a crack or joint. 				Act. 199 – Other Maintenance to Roadway and Related Features (Repair of base, sub-base or subgrade)
06	NO/FADED ROAD MARKINGS Absence of pavement markings or less than 50% visibility, as visually assessed; lane markings are classified into: <ul style="list-style-type: none"> 06-E- Edge line 06-C- Center line including transition line and lane lines 06-Y- Yellow line including Yellow Box lines in major intersections with traffic light 06-P - Pedestrian Lane, crosswalks including stop bar 	l.m.	Application or re-application of pavement markings using Thermoplastic Paint Carriageway width ($\geq 6.10\text{m}$) must be provided with Edge and Center line markings Repainting of Faded Strips.	15 Days	Act. 302 – Centerline and Lane line repainting (centerline and lane lines) Act. 309 – Other Traffic services (edge line, pedestrian crosswalk, stop lines, pavement messages; repainting of centerline and lane line by machine)
07	DEFECTS ON SHOULDERS <ul style="list-style-type: none"> Low shoulder refers to the loss of shouldering materials resulting in shoulder level being lower than the pavement level. High shoulder refers to the excess of shouldering materials resulting in shoulder level being higher than the pavement level. Vegetated Shoulder - growth of grass on shoulders. 	l.m.	Resurfacing or reshaping of unpaved shoulder;	7 Days	Act. 131 – Manual Repair of unpaved shoulders Act. 132 – Manual Patching unpaved shoulders Act. 133 – Machine Grading Unpaved shoulders Act. 63X Resurfacing unpaved shoulder, Method A & Method B.
08	LUSH VEGETATION Growth of grass, weeds, and shrubs or any kind of vegetation from the side of the canal to the RROW limits reaching an average height of 0.60 meters. This also includes tree	l.m.	Vegetation control This will include trimming/pruning of trees in compliance with DO 93 s. 2014	3 Days	For Roadside Features, Act. 201 – Vegetation Control For Traffic Services,

Code	Description/ Associated Defects	Unit	Recommended Corrective Measure/ Treatment	Response Time	Activity Standard
	branches and brushes that obstruct sight distance.				Act. 304 – Sight Distance Mowing and Clearing
09	CLOGGED DRAINS Obstructed flow of surface run-offs in the drains due to accumulated materials such as construction spoils, soil, garbage, leaves, rocks, and etc. The following defects are covered under this code: <ul style="list-style-type: none"> Silted/clogged line/barrel culverts, gutter, lined or unlined canals; Damaged gutter, lined canal/culvert; Obstructed ditches (lined or unlined) and inadequate flow lines 	l.m.	Manual cleaning/de-clogging of canals/drainage culverts. Repair damaged lined canal and replace damaged individual culvert pieces. Repair damaged gutter. Manual ditch cleaning and reshaping of unlined ditch.	3 Days	Act. 141 – Manual Ditch Cleaning Act. 142 – Manual Inlet/ Outlet Cleaning Act. 143 – Culvert Line/Barrel Cleaning Act. 199 – Other Maintenance to Roadway and Related Features
10	OPEN MANHOLE Not limited to uncovered drainage manhole but also includes the following Defects/deficiencies on these structures: <ul style="list-style-type: none"> Damaged curb inlets and missing gratings Damaged drainage/manhole edges and covers Unlevelled drainage/manhole covers Missing drainage steel gratings 	No.	Repair damaged drainage manhole covers & opening edges, curb inlets, and drainage gratings. Replace missing drainage manhole covers, curb inlets/drainage gratings	10 Days	Act. 144 – Repair and/or Replacement of Minor Structure Act. 199 – Other Maintenance to Roadway and Related Features
11	NO/INADEQUATE SEALANT IN JOINTS	l.m.	Apply sealant on open joints and joints with insufficient sealant.	3 Days	Act. 122 – Crack and Joints Sealing of Concrete Pavements
12	CRACKS Breaks on pavement occurring in variety of patterns ranging from isolated single crack to an interconnected pattern. This defect includes the following crack types: <ul style="list-style-type: none"> Transverse Crack - unconnected crack running transversely across the pavement/slab. Longitudinal Crack - unconnected crack running longitudinally along the 	l.m.	Seal cracks with asphalt sealant	3 Days	For Concrete Pavement, Act. 122 – Crack and Joints Sealing of Concrete Pavements For Asphalt Pavement, Act. 113 – Sealing of Bituminous Pavement

Code	Description/ Associated Defects	Unit	Recommended Corrective Measure/ Treatment	Response Time	Activity Standard
	<p>pavement; can occur singly or as a series of nearly parallel cracks.</p> <ul style="list-style-type: none"> • Block Crack - interconnected cracks forming a series of blocks approximately rectangular in shape, commonly distributed over the full pavement Cell sizes are usually greater than 1m. • Corner Crack - a crack extending diagonally from longitudinal edge to transverse joint • Diagonal Crack - unconnected crack diagonally across a pavement/slab • Meandering Crack - unconnected irregular winding crack usually singular • Reflection Cracks - cracks on asphalt mirrored from the unsealed concrete joints 				
13	<p>RAVELING Progressive disintegration of the pavement surface by loss of both binder and aggregates</p>	sq.m.	Removal/ replacement or resealing of the affected area;	7 Days	<p>Act. 111 – Premix Patching on Bituminous Pavements</p> <p>Act. 112 – Penetration Patching</p> <p>Act. 113 – Sealing of Bituminous Pavement</p> <p>Act. 114 – Replacement of Bituminous Pavement (if continuous Length < 100meters; otherwise use 71x)</p> <p>Act. 501 – Production of Bituminous Premix</p>
14	<p>UNMAINTAINED SIGNAGES AND ROAD MARKERS</p>	No.	Repair/replacement of broken /damaged or vandalized signages;	15 Days	<p>Act. 301 – Sign Maintenance (traffic signs, delineator, hazard markers,</p>

Code	Description/ Associated Defects	Unit	Recommended Corrective Measure/ Treatment	Response Time	Activity Standard
	<p>Broken, damaged, missing, vandalized, dirty traffic signage, including unpainted and/or leaning post comprising of Regulatory Signs (Type R) including Load Limit of Bridges, Warning Signs (Type W), and Guide Signs or Information Signs (Type G)</p> <p>Unpainted, vandalized, damaged and leaning road markers (kilometer posts, RROW markers, drainage markers) and missing kilometer posts</p>		<p>cleaning of dirty signages; repainting of sign posts</p> <p>Repair/replacement of broken /damaged or vandalized road markers; Cleaning of dirty road markers.</p>		<p>RROW markers, culvert markers Km post)</p> <p>Act. 309 – Other Traffic Services</p>
15	<p>UNMAINTAINED BRIDGES</p> <p>15-D – Bridge deck, refers to any of the following commonly noted defects:</p> <ul style="list-style-type: none"> • Clogged bridge deck water drains • Accumulated sand, gravel, dirt, grass/weed and foreign materials on bridge deck and expansion dam/joint • Scaling, spalling, hole, shoving, alligator cracks and cracking on bridge deck <p>15-S – Bridge Side refers to Damaged and vandalized curbs, sidewalk, wingwall, railings and rail post</p> <p>15-P – Bridge Paint, refers to faded/ unpainted concrete members (railings and wingwall) and steel members (truss and web) and bridge name and/or label</p>	No.	<p>Cleaning of bridge deck and water drain;</p> <p>Repair of damaged curbs, sidewalk, wingwall and railing;</p> <p>Bridge painting or repainting of name/label</p> <p>Repair moderate to severe spalling, scaling and cracking by full or partial depth replacement (Includes concrete decks with bituminous wearing surfaces)</p>	15 Days	<p>Act. 151 –Cleaning Bridges</p> <p>Act. 152- Patching Concrete Decks</p> <p>Act. 153 –Repairs to Concrete Bridge</p> <p>Act. 154 – Repairs to Steel Bridges</p> <p>Act. 199 – Other Maintenance to Roadway and Related Features (painting concrete bridge railings)</p> <p>Act. 209 – Other Roadside Maintenance</p> <p>Act. 65x – Bridge Repainting</p>
16	<p>UNMAINTAINED GUARDRAILS</p> <p>Damaged, dirty, vandalized, wrong lapping, missing, unpainted guardrail panels and end piece, and leaning guardrail posts</p>	No.	<p>Repair/replacement of broken /damaged or vandalized guardrails; correction of lapping of guardrails; cleaning of dirty guardrails; painting of guardrails.</p>	15 Days	<p>Act. 303 – Guardrail Maintenance</p>

APPENDIX "A-10"

Standards for Documentation Photolog

- a. Every repair work done on field must have a corresponding photograph, as evidence.
- b. All repair must have a BEFORE, DURING and AFTER photographs taken from the same vantage point with visible landmark and/or reference, for identification.
- c. BEFORE photographs must show the defect in its untouched or/as-is condition.
- d. DURING photographs must show the proper method of rectifying the defect and also shows the proper road safety measure and proper PPEs of the workers.
- e. For Codes 01 (on asphalt), 02, and 04, during photographs shall show squaring with tack coat properly applied.
- f. AFTER photographs must show the final output of the repair, that is, the area is free from debris or spoils from the repair activities.
- g. For every defect extending more than 100m in length (e.g., Code 04, 06, 07, 08, 09, 11, 12, 13 and 16) photographs must be taken every 100m.
- h. During repair, it is mandatory to have a whiteboard/blackboard that shows the road name, station/landmark, defect, date rectified and the corrective measure (action taken).
- i. Absence of BEFORE, DURING and AFTER or any of which shall not be accepted.
- j. Corrupted files and/or photographs will not be accepted.
- k. Photographs must be Geotagged.
- l. Repair photographs shall be in the format provided by BOM.
- m. Sufficient lighting is required when documenting the activity during night time.

APPENDIX "A-11"

Republic of Philippines
Department of Public Works and Highways
 Bureau of Maintenance
 Manila



**Checklist of Documentary Requirement for
 Roads and Bridges Maintenance Assessment**

Item No.	Description	Hard Copy	Scanned Copy
<input type="checkbox"/> 1	Straight Line Diagram reflecting UC, DLP, etc.		x
<input type="checkbox"/> 2	Copy of Contracts/DLP (CO, UPMO, RO, DEO)		x
<input type="checkbox"/> 3	DMPP's 10 Days Inspection/Validation Report prior to BOM Assessment		x
<input type="checkbox"/> 4	Updated List of DMPPs	x	
<input type="checkbox"/> 5	Daily Maintenance Activity Schedule		x
<input type="checkbox"/> 6	TAD 1.1 of Item No. 3		x
<input type="checkbox"/> 7	Removal of Obstruction and Prohibited uses within ROW of National Roads	x	
<input type="checkbox"/> 8	Status of Installation of KM Post	x	
<input type="checkbox"/> 9	Report on "Operation Zero Potholes" on National Roads	x	
<input type="checkbox"/> 10	Manpower Utilization		x
<input type="checkbox"/> 11	Other Maintenance Related Documents and process <i>Pls specify:</i> _____ _____ _____		x

Prepared by:

Received:

District Maintenance Engineer_____
BOM Assessor

APPENDIX "A-12"**Criteria in Evaluating Compliance to Documentation and Maintenance Operation Processes**

Rating	5	4	3	2	1
Criteria	No error	1 – 2 Minor Errors	3 or more Minor Errors	1 Major Error	2 or more Major Errors

Document		Major Error	Minor Error	Percentage
a.	Straight Line Diagram	<ul style="list-style-type: none"> Completeness of Road Sections with SLD 	<ul style="list-style-type: none"> Correctness of details (Name of DEO, Road Section, Proper Signatory) Consistency with (b) Copy of Contracts/DLP 	5.00
b.	Copy of Contracts/DLP (CO, UPMO, RO, DEO)	<ul style="list-style-type: none"> Completeness of Contracts in comparison with (c) DMPP Inspection Report 	<ul style="list-style-type: none"> Consistency with (a) Straight Line Diagram 	6.00
c.	DMPP's 10 days (complete) Inspection/Validation Report Prior to BOM Assessment	<ul style="list-style-type: none"> Consistency of noted defects and its respective stationing during Inspection and Validation Correctness of input (defect codes, unit, and type of defect in the remarks column) Completeness of Inspection Report (weekly) 	<ul style="list-style-type: none"> Correctness of details (Name of DEO, Road Section, Proper Format, Proper Signatory) 	10.00
d.	Updated List of DMPPs	<ul style="list-style-type: none"> Correctness of assignment limit Memorandum submitting the Updated List of DMPP's to RO before the 15th of January, annually 	<ul style="list-style-type: none"> Correctness of details (Name of DEO, Road Section, Proper Format, Proper Signatory) 	3.00

Document		Major Error	Minor Error	Percentage
e.	Daily Maintenance Activity Schedule	<ul style="list-style-type: none"> Consistency of details with (c) DMPP Inspection/Validation report Adherence to Response Time for each defect (reckoned from date of DMPP Inspection report) 	<ul style="list-style-type: none"> Correctness of details (Name of DEO, Road Section, Proper Format, Proper Signatory) Adherence to Appendix "A-5a" Format 	10.00
f.	TAD 1.1 of Section 4.2c	<ul style="list-style-type: none"> Consistency with (e) Daily Maintenance Activity Schedule and (c) DMPP Inspection/Validation Report (Maintenance Activity, Date of Rectification, Road Section, Stationing) Adherence to Response Time for each defect (reckoned from date of DMPP Inspection report) 	<ul style="list-style-type: none"> Correctness of details (Name of DEO, Proper Format, Proper Signatory) Correctness of input (Crew size, Equipment, Activity number, Crew members) 	10.00
g.	<p>Requisite Reports relative to various routine maintenance related issuances and instructions</p> <p>i. Removal of Obstruction and prohibited uses within ROW of National Roads</p> <p>ii. Status of Installation of KM post</p> <p>iii. Report on "Operation Zero Potholes" on national roads</p>	<ul style="list-style-type: none"> Timeliness of submission of reports <ul style="list-style-type: none"> Quarterly Schedule of Removal of Obstruction Semestral Status of Obstruction Quarterly Schedule/Status of Installation of KM Posts Annual Inventory of KM Posts Report Operation Zero Pothole when conducted 	<ul style="list-style-type: none"> Correctness of details (Name of DEO, Proper Format, Proper Signatory) 	20.00

Document		Major Error	Minor Error	Percentage
h.	Documentation Photolog and Work Methodology	<ul style="list-style-type: none"> • Correctness of Input (Station, Defect, Action Taken) • Consistency with BOM Inspection Report (Type of Defect, Station, Quantity) • Correctness of Rectification Methodology as shown in the photos • Timeliness of Report Submission 	<ul style="list-style-type: none"> • Correctness of details (Name of DEO, Road Section, Proper Signatory) • Adherence to Appendix "A-7" and "A-9" Format 	30.00
i.	Manpower Utilization	<ul style="list-style-type: none"> • Consistency with (f) TAD 1.1 Crew members 	<ul style="list-style-type: none"> • Adherence AMWP or latest issuance on manpower utilization 	3.00
j.	Other Maintenance Related documents and process	<ul style="list-style-type: none"> • Consistency with other Reports/Forms 	<ul style="list-style-type: none"> • Correctness of details • Correctness of input 	3.00

APPENDIX "A-13"**Point System for Documentation Photolog**

Code	Unit	5	4	3	2	1	
01	SQM/DAY	> 10	> 7.5 - 10	> 5 - 7.5	> 2.5 - 5	≤ 2.5	
02	SQM/DAY	> 10	> 7.5 - 10	> 5 - 7.5	> 2.5 - 5	≤ 2.5	
03	Special Provision for code 03 & 05:						
04	SQM/DAY	> 10	> 7.5 - 10	> 5 - 7.5	> 2.5 - 5	≤ 2.5	
05	Special Provision for code 03 & 05:						
06	E	LM/DAY	> 125	> 93 - 125	> 63 - 93	> 31 - 63	≤ 31
	C	LM/DAY	> 125	> 93 - 125	> 63 - 93	> 31 - 63	≤ 31
	Y	LM/DAY	> 225	> 168 - 225	> 110 - 168	> 53 - 110	≤ 53
	P	LM/DAY	> 88	> 66 - 88	> 44 - 66	> 22 - 44	≤ 22
07	LM/DAY	> 4000	> 3000 - 4000	> 2000 - 3000	> 1000 - 2000	≤ 1000	
08	LM/DAY	> 3000	> 2250 - 3000	> 1500 - 2250	> 750 - 1500	≤ 750	
09	LM/DAY	> 50	> 37 - 50	> 23 - 37	> 9 - 23	≤ 9	
10	NO/DAY	> 4	> 3 - 4	> 2 - 3	> 1 - 2	≤ 1	
11	LM/DAY	> 200	> 150 - 200	> 100 - 150	> 50 - 100	≤ 50	
12	LM/DAY	> 200	> 150 - 200	> 100 - 150	> 50 - 100	≤ 50	
13	SQM/DAY	> 300	> 225 - 300	> 150 - 225	> 75 - 150	≤ 75	
14	NO/DAY	> 4	> 3 - 4	> 2 - 3	> 1 - 2	≤ 1	
15-D	NO/DAY	> 4	> 3 - 4	> 2 - 3	> 1 - 2	≤ 1	
15-S	NO/DAY	> 4	> 3 - 4	> 2 - 3	> 1 - 2	≤ 1	
15-P	NO/DAY	> 4	> 3 - 4	> 2 - 3	> 1 - 2	≤ 1	
16	NO/DAY	> 9	> 7 - 9	> 5 - 7	> 3 - 5	≤ 3	

a. Special Provision for code 03 & 05:

For Code 03 and Code 05, the DEOs grade for the Documentation Photolog shall be based on the following conditions:

- a.1 **Rating 5** - if the DEOs conduct replacement of concrete pavement of all the noted defects under Code 03.
- a.2 **Rating 3** - if there are replacement of concrete pavement activities conducted by the DEO but there are still defects remaining under Code 03. However, if the DEO conducts replacement of concrete pavement activity as well as palliative measures on the remaining quantity, the hereunder formula shall be used to compute the grades for Code 03:

$$D = \frac{P}{R} \times 2 + 3$$

where:

D - Documentation Photolog Grade;

P - quantity of defects that are applied with palliative measures;

R - quantity of remaining defects

- a.3 If there are no replacement of concrete pavement activities, but palliative measures were executed, the following formula shall apply:

$$D = \frac{P}{T} \times 2$$

where:

D - Documentation Photolog Grade;

P - quantity of defects that are applied with palliative measures;

T - total quantity of defects

- a.4 Above provision shall also be apply for Code 05.

- a.5 **Rating 1** - if neither replacement of concrete pavement nor palliative measures were made on code 03 and code 05.

Submission of on-going (at least the damaged pavement removed) replacement of concrete pavement activity for Code 03 and Code 05, as part of Documentation Photolog, shall merit the same grade as a completed one.