



Republic of the Philippines  
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
**CENTRAL OFFICE**  
Manila

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DEPARTMENT ORDER )

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# 6/1/2021

**SUBJECT: Schedule of Minimum Testing Requirements Governing Items of Work of the DPWH Standard Specifications for Public Works Structures (Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems), Volume III, 2019 Edition**

In order to ensure the highest quality of projects being implemented by the Department and to strengthen the implementation of the Quality Control of the Contractors and Quality Assurance Program of the Department, the attached Schedule of Minimum Testing Requirements Governing Items of Work of the DPWH Standard Specifications for Public Works Structures (Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems), Volume III, 2019 Edition is hereby prescribed as ready reference and guidance for DPWH Engineers, Consultants and Contractors.

This Order shall take effect immediately.

  
**MARK A. VILLAR**  
Secretary

14.1.2 FET/RGT

Department of Public Works and Highways  
Office of the Secretary



WIN1U02145

# **Schedule of Minimum Testing Requirements Governing Items of Work of the DPWH Standard Specifications for Public Works Structures (Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems), Volume III, 2019 Edition**

## **Introduction**

An established policy of the Department is that all materials shall be tested and approved in accordance with the Standard Specifications, prior to incorporation into the work. In order that this policy can be fully implemented, the schedule of minimum requirements for testing materials in construction projects has been prepared as a guide and reference for the Engineers.

The Minimum Testing Requirements (MTR) is prepared to specify the type and frequency of tests to be undertaken for materials and products contained in the DPWH Standard Specifications. The implementation of the MTR shall strengthen the Quality Control of the Contractors and the Quality Assurance Program of the Department.

Under the Department of Public Works and Highways (DPWH), the first MTR was released on 1988. This was based on the 1959 Edition of the Materials Manual of the Bureau of Public Works. The 1988 MTR covers the materials and products in various Items of Work in the DPWH Standard Specifications for Highways, Bridges and Airports, Volume II. Succeeding the 1988 MTR is the 2019 MTR, which is based on the 2019 Edition of the DPWH Standard Specifications for Public Works Structures, Volume III. It was carefully drafted by the Bureau of Research and Standards (BRS), the research arm of the DPWH, and was deliberately circulated to and reviewed by representatives of different Bureaus, Unified Project Management Offices and Quality Assurance and Hydrology Division of various Regional Offices of this Department.

The MTR is issued together with the list of Quality Tests (**Annex A**) and list of Standard Test Methods (**Annex B**). In Annex A, the required Quality Tests in the MTR are specified per material. On the other hand, Standard Test Methods and reference Standard Specifications such as the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), International Organization for Standardization (ISO), and Philippine National Standards (PNS) are enumerated in Annex B. The listed reference standards' designation/code comprises its year/edition in which the values, specification or requirements are being used or referred from. Nevertheless, some standards will follow the latest year/edition when the Annexes are being prepared.

For easy reference purposes, materials in the MTR are presented per Item of Work. Composite materials are broken down into its basic components whenever separate/individual testing is applicable or required. Some materials are also repeatedly presented per Item where it is used for quick reference.

Inasmuch as new and improved testing methods and specifications are constantly being developed, it is contemplated that MTR will be revised from time to time.

Further, existing issuances relative to Quality Control and Quality Assurance shall continue to be enforced.



## **Guidelines on the Implementation of the MTR**

### **1. Quality Tests**

Quality Tests includes the chemical and/or physical tests required to be conducted on a material or product in accordance with the DPWH Standard Specifications. Quality tests are listed down in Annex A - Quality Tests on Construction Materials, with its corresponding Standard Test Method shown in Annex B – Reference Standards.

As much as possible, all quality tests are required to be satisfied. Tests shall be done based from the Frequency specified in the MTR. Where, the number of times the required tests must be done relative to the quantity specified in the MTR per size, type, layer, batch, lot, shipment or source.

For cases where not all of the required tests in quality test list can be performed, the Original Mill Certificate (OMC) will serve as supplemental document.

### **2. Original Mill Certificate (OMC)**

OMC is a quality assurance document generated by the raw material manufacturer and provided with the material to intermediate suppliers and ultimately to a finished goods manufacturer. It certifies the materials' compliance with the standard specification such as ASTM, AASHTO, PNS, ACI, etc.

The OMC per batch production must be supplied by the Supplier/Contractor. For cases where original product Authentication Certificate (Red Ribbon) is not possible to obtain, supplier may opt to provide an Authentication Certificate issued by the Department of Foreign Affairs (DFA). For multiple copies of such document, a Certified True Copy will also be accepted.

OMC is a supplemental document for materials where not all of its required tests can be satisfied or performed.

### **3. Other Than Test**

These are additional requirements that must be submitted/produced/accomplished by the Contractor as part of its Quality Control measure such as Welding Report, Inspection Report of Casting, Geotechnical Investigation Report, or Concrete Monitoring Record. The attached standard format for these documents should be strictly complied.

### **4. Engineer's Certificate (EC)**

EC is part of DPWH's Quality Assurance and shall be issued provided that the specifications of the material/product satisfied/passed the requirements stipulated in the DPWH Standard Specifications.

It is also an additional requirement if the DPWH Implementing Office (IO) or the third party has no capability to perform such test. The EC shall be prepared by the DPWH Materials Engineer or Consultant's Materials Engineer in a standard format approved by the DPWH IO. When signed "as received" by the DPWH Project Engineer or Consultant's Resident Engineer and DPWH Materials Engineer or Consultant's Quality Assurance Engineer, EC is a QA/QC record.

If in doubt, DPWH may have the option to conduct tests prior to issuance of the EC.

### **Definition of Terms**

**Test Required** – Mandatory tests to be done on the materials prior to its incorporation/use in the implementation of Item of Work.

**Contractor's Quality Control (QC)** – All those activities such as materials handling and construction procedures, calibration and maintenance of equipment, production process control, and all sampling, testing, and inspection undertaken by the Contractor.

**DPWH Quality Assurance** – All Quality Assurance inspections, sampling and testing undertaken for and on behalf of the DPWH Implementing Office (IO) by the Project Engineer whenever necessary.

**Frequency** – The number of times the required tests must be done relative to the quantity specified in the MTR per size, type, layer, batch, lot, shipment or source.

**Lot size** – The lot size as stated in the MTR refers to the quantity of an item ordered for delivery on a specific date or manufactured in a single production run.

**Shipment** – This refers to an amount of a particular product/material that is sent to another country on a ship, train, airplane, or other vehicle.

**Welding Report** – It is an additional document required when welding works are conducted. The report shall be in accordance with the guidelines of the American Welding Society (AWS) and certified by an accredited welder.

**Inspection Report of Casting** – An evaluation report on activities during concrete casting to be checked by the DPWH Project Engineer or Project Inspector.

**Concrete Monitoring Record** – This document consists of pouring permit and report on concreting works per pouring day of a structure.

**Geotechnical Investigation Report** – It is a report that presents site-specific geotechnical data and consists of three major components (Background Information, Scope of Work and Data Presentation).



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
PART B - OTHER GENERAL REQUIREMENTS				
ITEM B.6 - INSTALLATION OF ODA RECOGNITION PLATE				
Recognition Plate	None	None		Engineer's Certificate
ITEM B.8 - TRAFFIC MANAGEMENT				
Concrete Barrier, Bollards, Plastic Barrier, Steel Barricades, Construction Fence	None	None		Engineer's Certificate
ITEM B.15 - DETOUR/ ACCESS ROAD				
Embankment Materials	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
Pipe Culverts and Storm Drain  Concrete Pipes	1 - Quality Test	One (1) for every 100 pcs.  <i>Alternative Requirements:</i>  One (1) - set consisting of three (3) concrete cylinder samples for not more than 25 pipes cast in the field	Inspection Report of Casting	Inspection Report for each size of not more than 25 pipes cast in the field



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
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MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
- Concrete	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
d. Water	1 - Quality Test	One (1) per source		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

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		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
e. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
f. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
Base Course Materials	1 - Grading Test 1 - Plasticity Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		
	1 - Grading Test 1 - Plasticity Test 1 - Abrasion Test 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Compaction Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every layer of 200 mm of compacted depth based on the result of laboratory compaction tests on the same materials: At least one (1) group of three (3) in-situ density tests for each 1,000 m <sup>2</sup> or fraction thereof.		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM B.16 - RECOGNITION PLATE/PROJECT MARKER				
Recognition Plate/ Marker	None	None		Engineer's Certificate
ITEM B.18 - CRANEWAY				
Timber	1 - Quality Test	One (1) per lot for each type		Engineer's Certificate
Steel/Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	Engineer's Certificate
1. Bolts, Nuts and Washers	1 - Quality Test	One (1) per lot per shipment for each type/size		Engineer's Certificate
Pipe Topped with Soil/Gravel				
1. Pipe Culverts and Storm Drain				
Concrete Pipes	1 - Quality Test	One (1) for every 100 pcs.	Inspection Report of Casting	Inspection Report for each size of not more than 25 pipes cast in the field



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
		<i>Alternative Requirements:</i> One (1) - set consisting of three (3) concrete cylinder samples for not more than 25 pipes cast in the field		
- Concrete	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

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		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
d. Water	1 - Quality Test	One (1) per source		
e. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
f. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
2. Embankment Materials	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
3. Subgrade in Common Excavation	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> per layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM B.19 - GEOTECHNICAL INVESTIGATION				
In Situ Soil	1 - Geotechnical Investigation Report (for confirmatory)	One (1) for every structure		
ITEM B.20 - TEMPORARY FENCE				
Barbed Wire	1 - Quality Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
Chain Link Fence Fabric	1 - Quality Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
Concrete Post				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
Steel Post	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Bolts, Nuts and Washers	1 - Quality Test	One (1) per lot per shipment for each type/size		

8





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM B.21 - TEMPORARY BRIDGE				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Chemical Admixture	1 - Quality Test	One (1) per lot		
Curing Compound	1 - Quality Test	One (1) per lot		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Polyvinyl Chloride (PVC) Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
Galvanized Iron Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
Structural Metal	1 - Quality Test	One (1) per lot for each type/size		

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

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DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Steel Shells	1 - Quality Test	One (1) per lot of each pile type of material used	Welding Report	
Steel Pipes	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Steel H-Piles	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Sheet Piles	1 - Quality Test	One (1) per lot for each type/sized used	Welding Report	
Structural Steel	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Metal Beam				
1. Flex Beam	1 - Quality Test	One (1) per lot		
2. End Piece	1 - Quality Test	One (1) per lot		
Bolts, Nuts and Washers	1 - Quality Test	One (1) per lot per shipment for each type/size		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Steel Post	1 - Quality Test	One (1) per lot for each type/size		
Timber Post	1 - Quality Test	One (1) per lot for each type		
Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Lumber	1 - Quality Test	One (1) per lot		Engineer's Certificate
Paint 1. 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
2. 4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
<b>ITEM B.26 - REQUIREMENTS AND STANDARDS FOR SERVICES OF PERSONS WITH DISABILITY (PWD) AND AGED PERSON</b>				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Wire and Wire Mesh	1 - Quality Test	One (1) per lot for each size		
Epoxy Coated Steel Bars	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		
Timber	1 - Quality Test	One (1) per lot for each type of material used		
Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Metal	1 - Quality Test	One (1) per lot for each type/size used	Welding Report	





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

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		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Plastic	1 - Quality Test	One (1) per lot for each type/size used		
Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof  Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		
Autoclaved Aerated Concrete (AAC) blocks	1 - Quality Test	One (1) for every 5,000 units or fraction thereof		
Paint				
1. 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
2. 4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Prepainted Metal Sheets	1 - Total Thickness	One (1) per lot per thickness		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Hardware/Fasteners	None	None		Engineer's Certificate
Electrical Cast Iron Soil Pipes and Fittings	1 - Quality Test	One per lot for each size		Engineer's Certificate
Water Supply Pipes and Fittings	None	None		Engineer's Certificate
Approved Alternate Pipes and Fittings	None	None		Engineer's Certificate
Special Plumbing Fixtures	None	None		Engineer's Certificate
Fire Protection System	1 - Pressure Test	One (1) per lot		Engineer's Certificate
Hollow Steel Doors	None	None		Engineer's Certificate
Flush Doors	None	None		Engineer's Certificate
Grille Doors	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fire Rated Exit Doors	1- Fire Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
Steel Louver Door	None	None		Engineer's Certificate
Anchors and Fasteners	None	None		Engineer's Certificate
Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
Steel Doors	None	None		Engineer's Certificate
Polyvinyl Doors	None	None		Engineer's Certificate
Glass and Glazing	None	None		Engineer's Certificate
Roll-up Doors	None	None		Engineer's Certificate
Door Kick Plates	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Moulding	None	None		Engineer's Certificate
Modular Partition	None	None		Engineer's Certificate
Hardwares and Fasteners	None	None		Engineer's Certificate
Electric Elevator	1 - Performance/Acceptance Test	One (1) per car for each type		Engineer's Certificate
Railings 1. Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
2. Forms and Falseworks  a. Timber	1 - Quality Test	One (1) per lot for each type of material used		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
b. Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
c. Metal	1 - Quality Test	One (1) per lot for each type/size		
d. Plastic	1 - Quality Test	One (1) per lot for each type/size		
3. Stone	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
4. Metal	1 - Quality Test	One (1) per lot for each type/size used	Welding Report	
5. Stainless Steel (Non-Ferrous Metal)	1 - Quality Test	One (1) per lot		Engineer's Certificate
6. Glass and Glazing	None	None		Engineer's Certificate
7. Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
8. Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
Reflective Sheeting/Signages	1 - Quality Test	One (1) per lot for each type		Engineer's Certificate
Post and Frames	1 - Quality Test	One (1) per lot for each type		
Bracket Railing/Stiffener	1 - Quality Test	One (1) per lot for each type		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Reflectorized Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Adhesive	None	None		Engineer's Certificate
<b>PART C - EARTHWORK</b>				
<b>ITEM 800 - CLEARING AND GRUBBING</b>				
<b>ITEM 801 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS</b>				
Area Cleared and Grubbed Structures and Obstructions Removed	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 802 - EXCAVATION				
Waste Excavated Materials	1 - Grading Test 1 - Plasticity Test 1 - Organic Content	One (1) for every 3,000 m³ per source or fraction thereof		Engineer's Certificate
Excavated Materials to be Incorporated into the Works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m³ per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m² of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 803 - STRUCTURE EXCAVATION				
Waste excavated materials	1 - Grading Test 1 - Plasticity Test 1 - Organic Content	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Excavated materials to be incorporated into the works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1- California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 804 - EMBANKMENT				
Embankment Materials	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m³ per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m² of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
ITEM 805 - DREDGING				
Dredged Waste Materials	1 - Grading Test 1 - Organic Content	One (1) for every 3,000 m³ per source or fraction thereof		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Excavated materials to be incorporated into the works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1- California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 806 - RECLAMATION</b>				
Fill Material	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
	1 - Chloride Content Test 1 - Sulfate Content Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
<b>ITEM 807 - SITE DEVELOPMENT PLAN</b>				
Softscape				
1. Trees	None	None		Engineer's Certificate
2. Shrubs	None	None		Engineer's Certificate
3. Grass	None	None		Engineer's Certificate

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
<b>Hardscape</b>				
1. Fountains	None	None		Engineer's Certificate
2. Benches	None	None		Engineer's Certificate
3. Gazebos	None	None		Engineer's Certificate
Garden Soil	None	None		Engineer's Certificate
Aquatic Plant	None	None		Engineer's Certificate
Aquatic Animal	None	None		Engineer's Certificate
<b>Paver Blocks</b>	1 - Compressive Strength Test	One (1) set of three (3) cylinder samples/ 75 cu.m		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
Curbs				
1. Concrete	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day	Concrete Monitoring Record	
2. Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
3. Mortar for Joint (Cement, Fine Aggregate and Water)	1 - Compressive Strength Test	One (1) set per pouring day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
b. Fine Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Water	1 - Quality Test	One (1) per source		
Column Guards	None	None		Engineer's Certificate
Wheel Guards	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fence				
1. Concrete	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day	Concrete Monitoring Record	
2. Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		
3. Mortar for Joint (Cement, Fine Aggregate and Water)	1 - Compressive Strength Test	One (1) set per pouring day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
b. Fine Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
c. Water	1 - Quality Test	One (1) per source		
4. Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
Gate				
1. Timber	1 - Quality Test	One (1) per lot for each type		
2. Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
3. Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
<b>ITEM 808 - RAMMED AGGREGATE COLUMN</b>				
Rammed Aggregate Column	1 - Static Axial Compressive Load	One (1) pile per project site		Engineer's Certificate
1. Stones	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		





DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
2. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
<b>PART D - REINFORCED CONCRETE</b>				
<b>ITEM 900 - STRUCTURAL CONCRETE</b>				
STRUCTURAL CONCRETE				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Chemical Admixture	1 - Quality Test	One (1) per lot		
Curing Compound	1 - Quality Test	One (1) per lot		
Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
REINFORCED CONCRETE				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m³ or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m³ per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m³ or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m³ per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Chemical Admixture	1 - Quality Test	One (1) per lot		
Curing Compound	1 - Quality Test	One (1) per lot		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
<b>ITEM 901 - LEAN CONCRETE</b>				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Curing Compound	1 - Quality Test	One (1) per lot		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> or fraction thereof placed each day		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 902- REINFORCING STEEL				
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Epoxy Coated Steel Bars	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Wire and Wire Mesh	1 - Quality Test	One (1) per lot for each size		
Wire Rope/ Wire Cable	1 - Quality Test	One (1) per lot for each size		
ITEM 903 - FORMS AND FALSE WORKS				
Timber	1 - Quality Test	One (1) per lot for each type of material used		
Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
Plastic	1 - Quality Test	One (1) per lot for each type/size		
<b>PART E - FINISHINGS AND OTHER CIVIL WORKS</b>				
<b>ITEM 1000 - TERMITE CONTROL</b>				
Soil Poisoning	None	None		Engineer's Certificate
Wood Preservative	None	None		Engineer's Certificate
Powder Termicide	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1001 - STORM DRAINAGE AND SEWERAGE SYSTEM				
Concrete pipes	1 - Quality Test	One (1) for every 100 pcs.	Inspection Report of Casting	Inspection Report for each size of not more than 25 pipes cast in the field
1. Concrete		Alternative Requirements: One (1) - set consisting of three (3) concrete cylinder samples for not more than 25 pipes cast in the field		
	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
d. Water	1 - Quality Test	One (1) per source		
e. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
f. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
High Density (HDPE) Polyethylene Pipes	1 - Quality Test	One (1) per shipment for every plastic type/sized used		

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Galvanized Iron Pipes	1 - Quality Test Original Mill Certificate	One (1) per lot per shipment		Engineer's Certificate
Cast Iron Pipes	1 - Quality Test Original Mill Certificate	One (1) per lot per shipment		Engineer's Certificate
Metal Frames and Gratings				
1. Gray Iron Castings	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
2. Carbon Steel Castings	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
3. Hot-Dip Galvanized Coatings	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1002 - PLUMBING				
Galvanized Iron Pipes	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
High-Density Polyethylene (HDPE) Pipe	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Polypropylene Random/Copolymer (PPP/PPR-C)	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Polyvinyl Chloride (PVC) Pipes	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Chlorinated Polyvinyl Chloride (cPVC) Pipes	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Unplasticized Polyvinyl Chloride (UPVC) Pipes	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Ductile Iron Pipes	1 - Quality Test 1 - Hydraulic Pressure Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Steel Pipes	1 - Hydraulic Pressure Test 1 - Quality Test	One (1) per lot for each type		
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
Water Closet	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Urinal	None	None		Engineer's Certificate
Kitchen Sink	None	None		Engineer's Certificate
Lavatory	None	None		Engineer's Certificate
Floor Drain Plates	None	None		Engineer's Certificate
Bidet	None	None		Engineer's Certificate
Stainless Steel Grab Bar	None	None		Engineer's Certificate
Shower Head/ Shower Valve	None	None		Engineer's Certificate
Facial Mirror	None	None		Engineer's Certificate
Faucet	None	None		Engineer's Certificate
Hose Bibb	None	None		Engineer's Certificate
Gate Valve	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

<b>MATERIAL OR PRODUCT</b>	<b>TEST REQUIRED</b>	<b>CONTRACTOR'S QUALITY CONTROL</b>		<b>DPWH QUALITY ASSURANCE</b>
		<b>FREQUENCY</b>	<b>OTHER THAN TEST</b>	<b>OTHER REQUIREMENTS</b>
Water Meter	None	None		Engineer's Certificate
Cold and Hot Water Lines	None	None		Engineer's Certificate
Fire Extinguisher	None	None		Engineer's Certificate
Yard Hydrant	None	None		Engineer's Certificate
Fire Pump	None	None		Engineer's Certificate
<b>ITEM 1003 - CARPENTRY AND JOINERY WORKS</b>				
Lumber	1 - Quality Test	One (1) per lot		Engineer's Certificate
Plyboard	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate
Plywood	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate
Lawanit	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fiber Cement Board	1 - Quality Test	One (1) per lot		Engineer's Certificate
Gypsum Board	1 - Quality Test	One (1) per lot		Engineer's Certificate
Prepainted Metal Panel	1 - Total Thickness	One (1) per lot		Engineer's Certificate
Plastic Sheet	None	None		Engineer's Certificate
Glue	None	None		Engineer's Certificate
Fasteners	None	None		Engineer's Certificate
Moulding	None	None		Engineer's Certificate
Modular Partition	None	None		Engineer's Certificate
Nails, Screw, Bolts, Rivets and Straps	None	None		Engineer's Certificate
Polyvinyl Chloride (PVC) Pipes	1 - Hydraulic Pressure Test 1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Aluminum Cladding	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
<b>ITEM 1004 - HARDWARE</b>				
Rough Hardware (Nails, Screws, Bolts, Fasteners)	None	None		Engineer's Certificate
Finishing Hardware (Door Locksets, Latches, Door Closers, Knobs, Handles, Hinges, Door Pull, Hook, Bumper and Silencer)	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1005 - STEEL WINDOWS				
Steel Windows – Hot Rolled and Hot Rolled Fire Rated	1 - Air Infiltration Test 1 - Water Penetration Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Steel Windows – Cold Formed and Cold Formed Fire Rated	1 - Air Infiltration Test 1 - Water Penetration Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Casement Windows	None	None		Engineer's Certificate
Projected Windows	None	None		Engineer's Certificate
Awning Windows	None	None		Engineer's Certificate
Double and Single Hung Windows	None	None		Engineer's Certificate
Galvanized Steel Anchors	None	None		Engineer's Certificate

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Screens	None	None		Engineer's Certificate
Accessories (Anchors, Hardware, Fasteners)	None	None		Engineer's Certificate
Glass and Glazing	None	None		Engineer's Certificate
<b>ITEM 1006 - STEEL DOORS &amp; FRAMES</b>				
Hollow Steel Door	None	None		Engineer's Certificate
Flush Doors	None	None		Engineer's Certificate
Grille Doors	None	None		Engineer's Certificate
Fire Rated Exit Doors	1- Fire Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
Fabricated Steel Door	None	None		Engineer's Certificate
Steel Louver Door	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Anchors and Fasteners	None	None		Engineer's Certificate
<b>ITEM 1007 - ALUMINUM GLASS DOORS</b>				
Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
Vinyl	None	None		Engineer's Certificate
Screws, Nuts, Washers, Bolts, Rivets	None	None		Engineer's Certificate



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1008 - ALUMINUM GLASS WINDOWS				
Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
Vinyl	None	None		Engineer's Certificate
Screws, Nuts, Washers, Bolts, Rivets	None	None		Engineer's Certificate
Glass and Glazing				
1. Float Glass	None	None		Engineer's Certificate
2. Ordinary Window and Sheet Glass	None	None		Engineer's Certificate
3. Tempered Glass Doors	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4. Tempered Glass Windows	None	None		Engineer's Certificate
5. Tempered Glass Walls/ Barriers, Etc.	None	None		Engineer's Certificate
6. Glass and Glazing	None	None		Engineer's Certificate
7. Facial Mirror	None	None		Engineer's Certificate
<b>ITEM 1009 - JALOUSIE WINDOWS</b>				
Jalousie Metal Frame	None	None	None	Engineer's Certificate
Glass Slats	None	None	None	Engineer's Certificate
Insert Screens	None	None	None	Engineer's Certificate
Wrought Iron Grilles	None	None	None	Engineer's Certificate
Jalousie Window Assembly	None	None	None	Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Wood Jambs	1 - Thickness 1 - Moisture Content	One (1) per lot per thickness	None	Engineer's Certificate
<b>ITEM 1010 - WOODEN DOORS AND WINDOWS</b>				
Doors				
1. Flush	1 - Quality Test	One (1) per lot		Engineer's Certificate
2. Wood Panel	1 - Quality Test	One (1) per lot		Engineer's Certificate
3. Glass Panel	None	None		Engineer's Certificate
Frames	1 - Quality Test	One (1) per lot		Engineer's Certificate
Window Sashes	1 - Quality Test	One (1) per lot		Engineer's Certificate
Capiz Shells	None	None		Engineer's Certificate
Hardware	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Adhesive	None	None		Engineer's Certificate
<b>ITEM 1011 - ROLL-UP DOORS</b>				
Curtain	None	None		Engineer's Certificate
Counter Balance Barrel Assembly	None	None		Engineer's Certificate
Hood	None	None		Engineer's Certificate
Bracket Plates	None	None		Engineer's Certificate
Guides/ Wall Angles	None	None		Engineer's Certificate
<b>ITEM 1012 – GLASS AND GLAZING</b>				
Float Glass	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Ordinary Window and Sheet Glass	None	None		Engineer's Certificate
Tempered Glass Doors	None	None		Engineer's Certificate
Tempered Glass Windows	None	None		Engineer's Certificate
Tempered Glass Walls/ Barriers, Etc.	None	None		Engineer's Certificate
Glass and Glazing	None	None		Engineer's Certificate
Facial Mirror	None	None		Engineer's Certificate
<b>ITEM 1013 - CORRUGATED ROOFING</b>				
Corrugated and Plain Galvanized Iron Sheets	1 - Quality Test	One (1) per 1,000 sheets or fraction thereof		
Corrugated Asphalt Roofing	1- Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Strap Fasteners	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Rivets, Washers and Burrs	None	None		Engineer's Certificate
Soldering Lead	None	None		Engineer's Certificate
Fabricated Metal Roofing Accessories (Plain G.I. Sheets - Ridge/hip rolls, valleys, flashings and counter flashings, gutters and downspouts)	1 - Quality Test	One (1) per lot for each thickness		
<b>ITEM 1014 - PREPAINTED METAL SHEETS</b>				
Prepainted Roofing Sheets	1 - Total Thickness	One (1) per lot		
Hardware/Fasteners	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1015 - CLAY ROOF TILE				
Clay Roof Tile	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
Fasteners	None	None		Engineer's Certificate
Underlayment	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Sheating a. Corrugated G.I. Sheet	1 - Quality Test	One (1) per lot		
b. Plywood	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate
Wood Batten	None	None		Engineer's Certificate
Hips and Ridges	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1016 - WATERPROOFING				
Cement-base Waterproofing	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Built-Up and Preformed Bituminous Membrane Waterproofing	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Liquid Waterproofing	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
ITEM 1017 - ROOF DRAIN WITH STRAINER				
Roof Drain with Strainer	None	None		Engineer's Certificate
Canopy Drain with Strainer	None	None		Engineer's Certificate
Gutter Drain with Strainer	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1018 - CERAMIC AND GRANITE TILES				
Ceramic Tiles	1 - Quality Test	One (1) per shipment for each type/size		Engineer's Certificate
Granite Tiles	1 - Quality Test	One (1) per shipment for each type/size		Engineer's Certificate
Synthetic Granite Tiles	1 - Quality Test	One (1) per shipment for each type/size		Engineer's Certificate
Accessories	None	None		Engineer's Certificate
Mortar Materials				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags per source or fraction thereof		
2. Fine Aggregates	1 - Grading Test	One (1) for every 75 m³ per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Hydrated Lime	1 - Quality Test Original Mill Certificate	One (1) for every 2,000 bags or fraction thereof		Engineer's Certificate
4. Water	1 - Quality Test	One (1) per source		
Grouting Materials	1 - Compressive Strength Test	One (1) per pouring day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags per source or fraction thereof		
2. Fine Aggregates	1 - Grading Test	One (1) for every 75 m <sup>3</sup> per source or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
3. Water	1 - Quality Test	One (1) per source		
<b>ITEM 1019 - WOOD TILES</b>				
Hardwood	1 - Quality Test	One (1) per lot		Engineer's Certificate
Laminated Wood Tiles	1 - Quality Test	One (1) per lot		Engineer's Certificate
Adhesive	None	None		Engineer's Certificate
Finishes				
1. Varnishes	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
2. Lacquer	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
3. Shellac	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1020 - VINYL FLOOR TILES				
Vinyl Tiles	None	None		Engineer's Certificate
Adhesive	None	None		Engineer's Certificate
Seal Polish	None	None		Engineer's Certificate
ITEM 1021 - CEMENT FLOOR FINISH				
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m³ or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m³ per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Coloring Material	None	None		Engineer's Certificate
Curing Compound	1 - Quality Test	One (1) per lot		
<b>ITEM 1022 - STUCCO FINISH</b>				
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
Fine Aggregates	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
Hydrated Lime	1 - Quality Test Original Mill Certificate	One (1) for every 2,000 bags or fraction thereof		Engineer's Certificate
Water	1 - Quality Test	One (1) per source		
Fibers	None	None		Engineer's Certificate
Pigment	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1023 - GRANOLITHIC MARBLE WORK				
Marble Chips	None	None		Engineer's Certificate
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
ITEM 1024 - PEA GRAVEL WASHOUT FINISH				
Pea Gravel	1 - Grading Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
ITEM 1025 - BUSH HAMMERED FINISH				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		



DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Adobe Aggregates	1 - Grading Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
<b>ITEM 1026 - PEBBLE WASHOUT FINISH</b>				
Pebble	1 - Grading Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
Colored Cement	None	None		Engineer's Certificate
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1027 - CEMENT PLASTER FINISH				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Hydrated Lime	1 - Quality Test Original Mill Certificate	One (1) for every 2,000 bags per source or fraction thereof		Engineer's Certificate
Water	1 - Quality Test	One (1) per source		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1028 - SYNTHETIC ADOBE				
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
Adobe Stones	None	None		Engineer's Certificate
Metal Lath	1-Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
ITEM 1029 - GRANITE WASHOUT FINISH				
Granite Granules	1 - Grading Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		
Pea Gravel	1 - Grading Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Cement	1 - Quality Test	One (1) for every 2,000 bags per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
<b>ITEM 1030 - ACOUSTICAL CEILING</b>				
Acoustical Ceiling Panel	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate
Metal Hangers (Wire Hanger, Angle Hanger, hanger Rod and Flat Hangers)	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate
<b>ITEM 1031 - ACOUSTICAL TREATMENT</b>				
Acoustical (Tile)	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate
Acoustical (Board)	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate
Acoustical (Panel)	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Sprayed-on acoustical material	None	None		Engineer's Certificate
<b>ITEM 1032 - PAINTING, VARNISHING AND OTHER RELATED WORKS</b>				
Paint				
1. 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
2. 4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Tinting Colors	1 - Color Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Acry-colors	1 - Color Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Concrete Neutralizer	None	None		Engineer's Certificate
Silicon Water Repellant	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Patching Compound	None	None		Engineer's Certificate
Varnish	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Lacquer	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Shellac	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Sanding Sealer	None	None		Engineer's Certificate
Oil Wood Stain	None	None		Engineer's Certificate
Glazing Putty	None	None		Engineer's Certificate
Natural Wood Paste Filler	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1033 - METAL DECK				
Structural Metal	1 - Quality Test	One (1) per lot for each thickness		
ITEM 1034 - DAMPPROOFING				
Asphalt Cement	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Coal-Tar Pitch	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Emulsified Asphalt	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Polyethylene Sheet	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Primer	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1035 - NON-STRUCTURAL METAL FRAMING				
Non-Load Metal Partitions (Metal Studs Wall Systems, Ceiling or Soffit Suspended or Furred Framing, Wall Furring)	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate
Fasteners and Accessories	None	None		Engineer's Certificate
ITEM 1036 - POLYCARBONATE SHEET/PANEL				
Polycarbonate Sheet/ Panels	1 - Quality Test Original Mill Certificate	One (1) per lot for each thickness		Engineer's Certificate
Fastening Hardware and Accessories	None	None		Engineer's Certificate
Infills and Flashings	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1037 - CONCRETE ROOF TILE				
Concrete Roof Tile	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Wood Batten	None	None		Engineer's Certificate
Fasteners	None	None		Engineer's Certificate
Gutters, Valleys and Flashings	None	None		Engineer's Certificate
Underlayment	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
ITEM 1038 - REFLECTIVE INSULATION				
Reflective Insulation	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1039 - ALUMINUM CLADDING				
Aluminum and Aluminum Alloy Sheet	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
Rivets	None	None		Engineer's Certificate
ITEM 1040 - METAL LATH AND ACCESSORIES				
Metal Lath	1- Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Accessories (Corner Beads/Casing Beads/Weep Screeds/Contol Joints)	1- Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1041 - GYPSUM BOARD				
Gypsum Board	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Accessories 1. Joint Materials, Metal Furring Runners, Hangers, Inserts and Anchors, Drywall Furring Channels and Resilient Drywall Furring	1 - Quality Test	One (1) per lot for each thickness		Engineer's Certificate
2. Nails and Steel Drill Screws	None	None		Engineer's Certificate
3. Laminating Compound	None	None		Engineer's Certificate
4. Casing Beads, Corner Beads, Control Joints and Edge Trim	None	None		Engineer's Certificate
5. Insulating Strip	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
6. Joint Compound	None	None		Engineer's Certificate
<b>ITEM 1042 - STAINLESS STEEL DOOR AND FRAMES</b>				
Stainless Steel Doors	None	None		Engineer's Certificate
Stainless Steel Frames	None	None		Engineer's Certificate
Frame Anchors	None	None		Engineer's Certificate
<b>ITEM 1043 - PVC DOORS AND FRAMES</b>				
PVC Doors and Frames	None	None		Engineer's Certificate
Hardware	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1044 - FOLDING DOOR/PARTITION				
Doors/Partition Panel	None	None		Engineer's Certificate
1. Wooden				
2. Steel/Aluminum	None	None		Engineer's Certificate
3. Plastic/PVC	None	None		Engineer's Certificate
Frames	None	None		Engineer's Certificate
Hardware and Accessories	None	None		Engineer's Certificate
ITEM 1045 - ALUMINUM CEILING PANEL				
Perforated Ceiling Panel	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1046 - MASONRY WORKS				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof  Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Autoclaved Aerated Concrete (AAC) blocks	1 - Quality Test	One (1) for every 5,000 units or fraction thereof		
Backer Material	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Adobe Blocks	1 - Compressive Strength Test	One (1) per lot		
<b>ITEM 1047 - METAL STRUCTURES</b>				
Structural Steels a. Built-Up Shapes	1 - Quality Test	One (1) per lot per shipment for each size		
b. Cold Formed Plate Shapes	1 - Quality Test	One (1) per lot per shipment for each size		
c. Cold Formed Light Gage Shapes	1 - Quality Test	One (1) per lot per shipment for each size		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
d. Rolled Steel Shapes	1 - Quality Test	One (1) per lot per shipment for each size		
e. Metal Decks	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
f. Hot-Rolled Structural Shapes	1 - Quality Test	One (1) per lot per shipment for each size		
g. Structural Tubing	1 - Quality Test	One (1) per lot per shipment for each size		
h. Steel Pipe	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
i. Steel Plates	1 - Quality Test	One (1) per lot per shipment for each size		
j. Steel Bars	1 - Quality Test	One (1) per lot per shipment for each size		
k. Steel Sheets	1 - Quality Test	One (1) per lot per shipment for each size		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
l. Steel Castings and Forgings	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
m. Bolts, Washers and Nuts	1 - Quality Test	One (1) per lot per shipment for each size		
n. Anchor Rods and Threaded Rods	1 - Quality Test	One (1) per lot per shipment for each size		
o. Headed Stud Anchors	1 - Quality Test	One (1) per lot per shipment for each size		
p. Turnbuckle	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
q. Stainless Steel Flagpole Post	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
<b>ITEM 1048 - FIBER REINFORCED POLYMER (FRP)</b>				
Carbon Fiber Sheet (CFS)	1 - Quality Test	One (1) per lot for each size		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

<b>MATERIAL OR PRODUCT</b>	<b>TEST REQUIRED</b>	<b>CONTRACTOR'S QUALITY CONTROL</b>		<b>DPWH QUALITY ASSURANCE</b>
		<b>FREQUENCY</b>	<b>OTHER THAN TEST</b>	<b>OTHER REQUIREMENTS</b>
Carbon Fiber Plate (CFP)	1 - Quality Test	One (1) per lot for each size		
Epoxy Adhesive	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Glass Fiber Sheet (GFS)	1 - Quality Test	One (1) per lot for each size		
Aramid Fiber Sheet (AFS)	1 - Quality Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
Sealant for Epoxy Injection	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Polymer Cement Patching Material	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1049 - JET GROUTING				
Grout Cubes	1 - Compressive Strength  1 - Density Test	One (1) - set of three (3) grout cube samples per batch  One (1) per batch		
Cement Grout				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Water	1 - Quality Test	One (1) per source		
3. Admixtures	1 - Quality Test	One (1) per lot		
ITEM 1050 - NON-SHRINK GROUT				
Non Shrink Grout (Pre-mixed Powder)	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Water	1- Quality Test	One (1) per source		
Curing Compound	1 - Quality Test	One (1) per lot		
<b>ITEM 1051 - RAILINGS</b>				
Concrete  1. Cement	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Forms and Falseworks				
1. Timber	1 - Quality Test	One (1) per lot for each type		
2. Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
3. Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
4. Plastic	1 - Quality Test	One (1) per lot for each type/size		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Lumber	1 - Quality Test	One (1) per lot		Engineer's Certificate
Plywood	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate
Hardware				
1. Rough Hardware (Nails, Screws, Bolts, Fasteners)	None	None		Engineer's Certificate
2. Finishing Hardware (Door Locksets, Latches, Door Closers, Knobs, Handles, Hinges, Door Pull, Hook, Bumper and Silencer)	None	None		Engineer's Certificate
Masonry				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
6. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

Minimum Testing Requirements



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
7. Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		
8. Autoclaved Aerated Concrete (AAC) blocks	1 - Quality Test	One (1) for every 5,000 units or fraction thereof		
Stone	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
Stainless Steel (Non-Ferrous Metal)	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
Glass and Glazing	None	None		Engineer's Certificate

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate

(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Varnishes	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Shellac	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Lacquer	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Tinting Colors	1 - Color Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1052 - PILING				
Timber Piles	1 - Quality Test	One (1) per shipment for each size		
Concrete Piles (Bridges)	1 - Pile Integrity Test (CrossHole Sonic Logging Test and Low-Strain Pile Dynamic Test)	One (1) per size of pile and for each abutment and every other pier (for multi-span bridges)		
		At least 50% of the total number of Piles at each abutment and pier		
	1 - Dynamic Load Test	At least one (1) at each abutment and pier		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Special Curing Agent	1 - Quality Test	One (1) per lot		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
7. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Steel Pipes Piles/Steel Pipe Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size used	Welding Report	
Steel H-Piles	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Steel Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size of material used	Welding Report	
Polyvinyl Chloride (PVC) Sheet Piles	1 - Quality Test Original Mill Certificate	One (1) per lot for each pile type/size of material used		Engineer's Certificate
Steel Pile Shoes	1 - Quality Test	One (1) per lot for each size	Welding Report	
Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Cement Mortar	1 - Compressive Strength Test	One (1) set per pouring day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Water	1 - Quality Test	One (1) per source		
Slurry	1 - Density 1 - Viscosity Test 1 - pH Test	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1053 - CARPET FLOOR TILE				
Carpet Floor Tiles	None	None		Engineer's Certificate
ITEM 1054 - GLASS FIBER REINFORCED CONCRETE (GFRC) CLADDING PANELS				
GFRC Materials				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Alkali-Resistant Glass Fiber	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
3. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
5. Silica Sand	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
6. Water	1 - Quality Test	One (1) per source		
7. Chemical Admixture	1 - Quality Test	One (1) per lot		
8. Polymer Curing Admixture	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
9. Coloring Pigments	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Steel Framing Materials				
1. Metal Studs and Track	1 - Tensile Strength 1 - Yield Strength 1 - Zinc Coating Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
2. Structural Tubing	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
3. Flex Anchors	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
4. Reinforcing Steel (Deformed)	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
5. Headed Stud Embed Anchors	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
6. Anchor Bolts	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
GFRC Composites	1-Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1055 - INTERIOR CEMENTITIOUS FIREPROOFING				
Sprayed Cementitious Fireproofing Materials	1 - Quality Test Original Mill Certificate	One (1) per lot per type of structural element		Engineer's Certificate
	1 - Thickness Test 1 - Density Test	One bay per floor or one bay for each 929 m <sup>2</sup> , whichever provides the greater number of tests		
ITEM 1056 - ASPHALT ROOF SHINGLES				
Asphalt Roof Shingles	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Ventillation	None	None		Engineer's Certificate
Sheating a. Corrugated G.I. Sheet	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
b. Plywood	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Wood Batten	None	None		Engineer's Certificate
Underlayment	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Fasteners	None	None		Engineer's Certificate
Asphalt Roof Cement	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Drip and Rake Edge	None	None		Engineer's Certificate
<b>ITEM 1058 - FLOOD PROTECTION SYSTEM FOR BUILDINGS</b>				
Demountable Flood Barrier	None	None		Engineer's Certificate
Window Cover Flood Barrier	None	None		Engineer's Certificate
Swinging Flood Gate	None	None		Engineer's Certificate
Pivot-Hinged Flood Barrier	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Flip-Up Flood Barrier	None	None		Engineer's Certificate
Drop-down Flood Barrier	None	None		Engineer's Certificate
Sliding Flood Barrier	None	None		Engineer's Certificate
Glass Paneled Flood Barrier	None	None		Engineer's Certificate
Sealings and Gaskets	1- Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Coating				
1. Powder Coating	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
2. Zinc Coating (Galvanizing)	1 - Zinc Coating Test	One (1) per lot for each type		Engineer's Certificate
Structural Concrete				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Curing Compound	1 - Quality Test	One (1) per lot		
7. Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
8. Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
9. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
<b>PART F - ELECTRICAL</b>				
<b>ITEM 1100 - CONDUITS, BOXES AND FITTINGS (CONDUITS WORKS/ROUGHING-IN)</b>				
Conduit, Boxes and Fittings	None	None		Engineer's Certificate
Rigid Metall Conduit (RMC)	None	None		Engineer's Certificate
Intermediate Metal Conduit (IMC)	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Flexible Metal Conduit (FMC)	None	None		Engineer's Certificate
Electrical Metallic Tubing (EMT)	None	None		Engineer's Certificate
Rigid Polyvinyl Chloride Conduit (PVC)	None	None		Engineer's Certificate
Liquidtight Flexible Nonmetallic Conduit (LFNC)	None	None		Engineer's Certificate
Weatherhead	None	None		Engineer's Certificate
Conduit Boxes, Fittings and Accessories	None	None		Engineer's Certificate
<b>ITEM 1101 - WIRES, CABLES AND WIRING DEVICES</b>				
Wires and Cables	None	None		Engineer's Certificate
Switches	None	None		Engineer's Certificate
Receptacles	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1102 - POWER LOAD CENTER, SWITCHGEAR AND PANELBOARDS, AND OTHER OVERCURRENT PROTECTION DEVICES				
Panelboard with Main & Branch Breakers	None	None		Engineer's Certificate
Motor Control Center with Main, Branch Breakers and Motor Starters/Controllers, NEMA 1, Flushed Type	None	None		Engineer's Certificate
Copper Bus Bar NEMA I Enclosure, Surface Mounted	None	None		Engineer's Certificate
Manual Transfer Switch with Renewable Fuse, Flushed Type	None	None		Engineer's Certificate
Manual Transfer Switch, Breaker Type, Free Standing	None	None		Engineer's Certificate
Automatic Transfer Switch, Breaker Type, Flushed Type	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Automatic Transfer Switch, Breaker Type, Free Standing	None	None		Engineer's Certificate
Pad Mounted Distribution Transformer (OISC) with Complete Accessories	None	None		Engineer's Certificate
Pad Mounted Power Transformer (OISC) with Complete Accessories, single or three phase, Free Standing	None	None		Engineer's Certificate
Pole Mounted Distribution Transformer (OISC) with Complete Accessories, Pole Type	None	None		Engineer's Certificate
Pole Mounted Power Transformer (OISC) with Complete Accessories, single or three phase, Pole type or Platform	None	None		Engineer's Certificate
Dry Type Transformer, single or three phase, Free Standing or Platform	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Current Transformer	None	None		Engineer's Certificate
Potential Transformer	None	None		Engineer's Certificate
Isolation Transformer	None	None		Engineer's Certificate
Generator, single or three phase, Stand-by	None	None		Engineer's Certificate
Generator, single or three phase, Continuous	None	None		Engineer's Certificate
Synchronizing Panel for Generators	None	None		Engineer's Certificate
Solar Panel with inverter, battery and other devices	None	None		Engineer's Certificate
Apitong or Approved Equal Creosoted Wood Pole	None	None		Engineer's Certificate
Anchor Rod	None	None		Engineer's Certificate
Anchor Log	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Powerload Studs with Nuts	None	None		Engineer's Certificate
Repair/Replacement of Power Load Center, Switchgear and Panelboards, and other Overcurrent Protection Devices	None	None		Engineer's Certificate
<b>ITEM 1103 - LIGHTING FIXTURES</b>				
Linear Fluorescent Fixtures	None	None		Engineer's Certificate
Compact Fluorescent Fixtures	None	None		Engineer's Certificate
Environmental Rooms and Exterior Lighting Fixtures	None	None		Engineer's Certificate
Return Air Troffer	None	None		Engineer's Certificate
Emergency Exit Signs	None	None		Engineer's Certificate
Lamps	None	None		Engineer's Certificate
Ballasts for Fluorescent	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Ballasts for Compact Fluorescent Lamps	None	None		Engineer's Certificate
Ballasts for High Intensity Discharge (HID) Lamps	None	None		Engineer's Certificate
<b>ITEM 1104 - AUXILIARY SYSTEM</b>				
Auxiliary System	None	None		Engineer's Certificate
<b>ITEM 1105 - NETWORK CABLING SYSTEM</b>				
Data Cabinet	None	None		Engineer's Certificate
Distribution Frame Panel	None	None		Engineer's Certificate
Terminal Block	None	None		Engineer's Certificate
UTP Patch Panel	None	None		Engineer's Certificate
Fiber Connect Panel	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fiber Optic Cable	None	None		Engineer's Certificate
Fiber Connector	None	None		Engineer's Certificate
Patch Cord	None	None		Engineer's Certificate
Fiber Patch Cord	None	None		Engineer's Certificate
Modular Jack	None	None		Engineer's Certificate
Network Equipment (Servers, Fire Wall, Repeaters, etc.)	None	None		Engineer's Certificate
UTP Cable	None	None		Engineer's Certificate
<b>ITEM 1106 - CLOSED-CIRCUIT TELEVISION (CCTV) SYSTEM</b>				
CCTV System	None	None		Engineer's Certificate
IP-Fixed Dome Camera	None	None		Engineer's Certificate
IP-Pinhole Type Camera	None	None		Engineer's Certificate
Movable Camera	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Weather Proof Camera	None	None		Engineer's Certificate
Data Digital Video Recorder	None	None		Engineer's Certificate
Network Video Recorder	None	None		Engineer's Certificate
Centralized Power Supply with UPS	None	None		Engineer's Certificate
LCD, LED Monitor	None	None		Engineer's Certificate
CCTV Console	None	None		Engineer's Certificate
RG59 Coaxial Cable	None	None		Engineer's Certificate
Digital Disc Recorder	None	None		Engineer's Certificate
<b>ITEM 1107 - PUBLIC ADDRESS SYSTEM</b>				
Public Address System	None	None		Engineer's Certificate
System Management Amplifier	None	None		Engineer's Certificate
Power Amplifier	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Voice Announcement Board	None	None		Engineer's Certificate
Remote Microphone	None	None		Engineer's Certificate
CD/DVD Player	None	None		Engineer's Certificate
MP3 Player	None	None		Engineer's Certificate
USB	None	None		Engineer's Certificate
AM/ FM Tuner	None	None		Engineer's Certificate
Speakers	None	None		Engineer's Certificate
Fabricated Rack	None	None		Engineer's Certificate
Booster Transformer	None	None		Engineer's Certificate
External Volume Control	None	None		Engineer's Certificate
Horn	None	None		Engineer's Certificate
Wires/Cables	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1108 - DOOR ACCESS AND CARD READER SYSTEM				
Door Access and Card Reader System	1 - Performance and Functionality Verification Test 1 - Comissioning Test	One (1) per lot		Engineer's Certificate
Security Cabinet	None	None		Engineer's Certificate
Magnetic Card	None	None		Engineer's Certificate
Magnetic Door Contact	None	None		Engineer's Certificate
ITEM 1109 - GROUNDING SYSTEM				
Grounding System	None	None		Engineer's Certificate
Exothermic Weld Connector	None	None		Engineer's Certificate
Booster pump with control	None	None		Engineer's Certificate
Air Terminal	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Bare Copper Wire	None	None		Engineer's Certificate
Grounding Clamps for Electric Wires	None	None		Engineer's Certificate
Grounding Rod Copper Clad	None	None		Engineer's Certificate
<b>ITEM 1110 - NURSE CALL SYSTEM</b>				
Nurse Call System	None	None		Engineer's Certificate
Area Control Unit (ACU)	None	None		Engineer's Certificate
Nurse Call Console	None	None		Engineer's Certificate
Patient Bed Station	None	None		Engineer's Certificate
Corridor Lights and Zone Lights	None	None		Engineer's Certificate



DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1111 - MISCELLANEOUS ELECTRICAL/CIVIL WORKS				
Reinforced Concrete Pedestel/Pole, Envelope/Encasement				
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m³ or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m³ per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m³ or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m³ per source or fraction thereof		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Curing Compound	1 - Quality Test	One (1) per lot		
7. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
Hand Hole	None	None		Engineer's Certificate
Man Hole	None	None		Engineer's Certificate
Cable Tray	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Mounting Bolts/Eye Bolts	None	None		Engineer's Certificate
Trench Excavation	None	None		Engineer's Certificate
Spool Insulator Secondary Rack	None	None		Engineer's Certificate
<b>PART G - MECHANICAL</b>				
<b>ITEM 1200 – AIR CONDITIONING AND VENTILATING SYSTEM</b>				
Air Conditioning System, VRF/VRV	None	None		Engineer's Certificate
Ventilation System	None	None		Engineer's Certificate
Refrigerants	None	None		Engineer's Certificate
Ventilating Equipment	None	None		Engineer's Certificate
Oscillating Stand Fan	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Oscillating Wall Fan	None	None		Engineer's Certificate
Oscillating Ceiling Fan	None	None		Engineer's Certificate
Stand Fan Industrial Type	None	None		Engineer's Certificate
Propeller Wall, Mounted Fan	None	None		Engineer's Certificate
Propeller Ceiling Fan	None	None		Engineer's Certificate
Propeller Tube Axial Fan Roof Mounted	None	None		Engineer's Certificate
Exhaust Fan Ceiling Cassette	None	None		Engineer's Certificate
Exhaust Fan Wall Mounted	None	None		Engineer's Certificate
Exhaust Fan Wall Mounted, Industrial Type	None	None		Engineer's Certificate
Exhaust Fan Tubular in Line	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Supply Fan Ceiling Cassette	None	None		Engineer's Certificate
Centrifugal Cabinet in Line Fan Ducted Type (CCI)	None	None		Engineer's Certificate
Centrifugal Fan Backward Inclined	None	None		Engineer's Certificate
Kitchen Hood	None	None		Engineer's Certificate
Induced Jet Fan	None	None		Engineer's Certificate
Air Conditioning System, Centralized Air-Condition Ducting	None	None		Engineer's Certificate
<b>ITEM 1201 - WATER PUMPING STATION</b>				
Centrifugal pump with control	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Submersible Multi-Stage Deepwell pump with control	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Booster pump with control	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Jet pump with control	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Water tank	None	None		Engineer's Certificate
Saddle for Water Tank	None	None		Engineer's Certificate
Overhead Tank (Stainless, Galvanized Iron, Polyethylene, Concrete)	None	None		Engineer's Certificate
Valves and Pipe Fittings	None	None		Engineer's Certificate
Electrode	None	None		Engineer's Certificate
Submersible sewage ejector pump with control	None	None		Engineer's Certificate
<b>ITEM 1202 - AUTOMATIC WATER SPRINKLER SYSTEM (AFSS)</b>				
Automatic Water Sprinkler System	1 - Hydrostatic Test	One (1) per lot		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1203 - ELEVATOR SYSTEM				
Electric Elevator	1 - Performance/Acceptance Test	One (1) per car and type used		Engineer's Certificate
ITEM 1204 - ELECTRIC DUMBWAITER				
Electric Dumbwaiter	None	None		Engineer's Certificate
ITEM 1205 - OXYGEN, NTROUS OXIDE, VACCUM AND FUEL GAS SYSTEM				
Oxygen, Ntrous Oxide, Gas Manifold and Duplex Vacuum Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Humidifier, Vacuum Trap Bottle Outlets, Valves	None	None		Engineer's Certificate
Pipes and Tubings	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1206 - HEATING SYSTEM				
Boiler (including fittings and attachments)	None	None		Engineer's Certificate
Pipings, Fittings and Valves	None	None		Engineer's Certificate
Oil Transfer Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Fuel Storage Tank	None	None		Engineer's Certificate
Fuel Day Tank	None	None		Engineer's Certificate
Power Supply (pull box, main circuit breaker, starter, conduits, wirings, fittings, devices and all other equipment)	None	None		Engineer's Certificate
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1207 - BOILER				
Boiler (including fittings and attachments)	1 - Hydrostatic Test	One (1) per lot		Engineer's Certificate
ITEM 1208 - FIRE ALARM SYSTEM				
Smoke Detector with Base	None	None		Engineer's Certificate
Heat Detector with Base	None	None		Engineer's Certificate
Fire Alarm Bell	None	None		Engineer's Certificate
Fire Alarm Control Panel	None	None		Engineer's Certificate
Manual Pull Station Switch	None	None		Engineer's Certificate
Back-up Battery Pack	None	None		Engineer's Certificate
Automatic Voltage Regulator	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Extended Power Supply	None	None		Engineer's Certificate
Loop Expander Module	None	None		Engineer's Certificate
Loop Control Module	None	None		Engineer's Certificate
Annunciator Addressable Module	None	None		Engineer's Certificate
<b>PART H - PILING</b>				
<b>ITEM 1300 - PILING</b>				
Timber Piles	1 - Quality Test	One (1) per shipment for each size		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Concrete Piles (Bridges)	1 - Pile Integrity Test (CrossHole Sonic Logging Test and Low-Strain Pile Dynamic Test)	One (1) per size of pile and for each abutment and every other pier (for multi-span bridges)		
	1 - Dynamic Load Test	At least 50% of the total number of Piles at each abutment and pier  At least one (1) at each abutment and pier		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
2. Fine Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Special Curing Agent	1 - Quality Test	One (1) per lot		
7. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Steel Pipes Piles/Steel Pipe Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size used	Welding Report	
Steel H-Piles	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Steel Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size of material used	Welding Report	
Polyvinyl Chloride (PVC) Sheet Piles	1 - Quality Test Original Mill Certificate	One (1) per lot for each pile type/size of material used		Engineer's Certificate
Steel Pile Shoes	1 - Quality Test	One (1) per lot for each size	Welding Report	
Paint				
20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

<b>MATERIAL OR PRODUCT</b>	<b>TEST REQUIRED</b>	<b>CONTRACTOR'S QUALITY CONTROL</b>		<b>DPWH QUALITY ASSURANCE</b>
		<b>FREQUENCY</b>	<b>OTHER THAN TEST</b>	<b>OTHER REQUIREMENTS</b>
Cement Mortar	1 - Compressive Strength Test	One (1) set per pouring day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Water	1 - Quality Test	One (1) per source		
Slurry	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
PART I - PROTECTIVE WORKS AND ACCESSORIES				
ITEM 1400 – MOORING FIXTURES				
Mooring Cleat (Spheroidal Graphite Cast Iron)	1 - Quality Test	One (1) per lot for each size		
Mooring Post (Spheroidal Graphite Cast Iron)	1 - Quality Test	One (1) per lot for each size		
Mooring Bitt (Spheroidal Graphite Cast Iron)	1 - Quality Test	One (1) per lot for each size		
Mooring Bollard (Spheroidal Graphite Cast Iron)	1 - Quality Test	One (1) per lot for each size		
ITEM 1401 - TIMBER WALING				
Timber	1 - QualityTest	One (1) per lot for each type		
Hardware	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
<b>ITEM 1402 - FENDER CLUSTERS AND DOLPHINS</b>				
Timber Piles	1 - Quality Test	One (1) per shipment for each size		
Concrete Piles (Bridges)	1 - Pile Integrity Test (CrossHole Sonic Logging Test and Low-Strain Pile Dynamic Test)  1 - Dynamic Load Test	One (1) per size of pile and for each abutment and every other pier (for multi- span bridges)  At least 50% of the total number of Piles at each abutment and pier  At least one (1) at each abutment and pier		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Special Curing Agent	1 - Quality Test	One (1) per lot		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
7. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Steel Pipes Piles/Steel Pipe Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size used	Welding Report	
Steel H-Piles	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Steel Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size of material used	Welding Report	
Polyvinyl Chloride (PVC) Sheet Piles	1 - Quality Test Original Mill Certificate	One (1) per lot for each pile type/size of material used		Engineer's Certificate
Steel Pile Shoes	1 - Quality Test	One (1) per lot for each size	Welding Report	
Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Cement Mortar	1 - Compressive Strength Test	One (1) set per pouring day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Water	1 - Quality Test	One (1) per source		
Slurry	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Extruder Fender	None	None		Engineer's Certificate
Molded Fenders	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Elastomer	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Bolts and Nuts	1 - Quality Test	One (1) per lot per shipment for each type/size		
Steel Plates and Angles	1 - Quality Test	One (1) per lot per shipment for each type/size		
<b>ITEM 1403 - RUBBER DOCK FENDERS</b>				
Extruder Fender/ Molded Fender (Elastomer)	1 - Quality test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Foam-Filled Fender (Foam Core and Elastomer)	1 - Quality test Original Mill Certificate	One (1) per lot		Engineer's Certificate
Pneumatic and Hydro-Pneumatic Fender (Elastomer)	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Bolts and Nuts	1 - Quality Test	One (1) per lot per shipment for each type/size		
Stainless Steel Plates and Angles	1 - Quality Test	One (1) per lot per shipment for each type/size		
<b>ITEM 1404— FILTER FABRIC AND AGGREGATES</b>				
Filter Fabric Material	1 - Quality Test Original Mill Certificate	One (1) for each lot and type of material used		Engineer's Certificate
Filter Aggregate Material	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
<b>ITEM 1405 - REINFORCING MAT</b>				
Reinforcing Mat	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1406 - DEFLECTOR WALL, BULKHEAD CURB, STAIR LANDING				
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Special Curing Agent	1 - Quality Test	One (1) per lot		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Forms and Falseworks 1. Timber	1 - Quality Test	One (1) per lot for each type		
2. Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
3. Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
4. Plastic	1 - Quality Test	One (1) per lot for each type/size		
Masonry (Clay or Shale Brick, Concrete Brick and Concrete Masonry Blocks)	1 - Quality Test	One (1) for every 10,000 units or fraction thereof  Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		
Mortar	1 - Compressive Strength Test	One (1) set per pouring day		
Structural Steels	1 - Quality Test	One (1) per lot per shipment for each size		
<b>ITEM 1407- PRECAST BREAKWATER STRUCTURE</b>				
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day		
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Chemical Admixture	1 - Quality Test	One (1) per lot		
Special Curing Agent	1 - Quality Test	One (1) per lot		
Expansion Joint Materials	1 - Quality Test	One (1) per lot for each thickness of filler		
Preformed Elastomeric Compression Joint Seals	1 - Quality Test	One (1) per lot for each type		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
<b>PART J - BULKHEADS</b>				
<b>ITEM 1500 - SAND MATTRESS</b>				
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
<b>ITEM 1501 - ROCKWORKS</b>				
Rocks	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Concrete Grout 1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1503 – EXCAVATION FOR WATERFRONT IMPROVEMENT				
Waste excavated material	1 - Grading Test 1 - Plasticity Test 1 - Organic Content	One (1) for every 3,000 m³ per source or fraction thereof		Engineer's Certificate
Excavated materials to be incorporated into the works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m³ per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m² of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
PART K - WATER SUPPLY				
ITEM 1600 - EXCAVATION				
Waste excavated material	1 - Grading Test 1 - Plasticity Test 1 - Organic Content	One (1) for every 3,000 m³ per source or fraction thereof		Engineer's Certificate
Excavated materials to be incorporated into the works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m³ per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 1601 - FILL AND BACKFILL</b>				
Fill and Backfill	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		



DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Minimum Testing Requirements



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>Item 1602 - PIPELINE SYSTEM</b>				
Mortar Lined and Enamel /Mortar Coated Steel Pipe				
a. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
b. Fine Aggregates	1 - Grading Test	One (1) for every 75 m <sup>3</sup> per source or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
c. Water	1 - Quality Test	One (1) per source		
d. Cylinder Material (Hot Rolled Carbon Steel Sheets or Plates)	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
e. Rubber Gasket	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
f. Coating				
- Coal Tar Enamel	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
- Cement Mortar	1 - Compressive Strength Test	One (1) set per pouring day		
Cast Iron and Ductile Iron Water Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Polyvinyl Chloride (PVC) Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot		
Polyethylene (PE) Plastic Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
<b>ITEM 1603 - VALVES</b>				
Gate Valve	None	None		Engineer's Certificate
Globe Valve	None	None		Engineer's Certificate
Double Regulating Valve	None	None		Engineer's Certificate
Check Valve	None	None		Engineer's Certificate
Butterfly Valve	None	None		Engineer's Certificate
Pressure Reducing Valve	None	None		Engineer's Certificate
Ball Valve	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Float Valve	None	None		Engineer's Certificate
Automatic Air Valve	None	None		Engineer's Certificate
<b>ITEM 1604 - WATER TREATMENT PLANT (WTP)</b>				
Water Treatment Plant (WTP), Modular/Skid Type				
1. Pre-Filtration Treatment System	None	None		Engineer's Certificate
2. Activated Carbon Filtration	None	None		Engineer's Certificate
3. Water Softener System	None	None		Engineer's Certificate
4. Ultra-Filtration System	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Item 1605 - FILTER FABRIC WITH ALUMINUM FRAME				
Filter Fabric	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Aluminum Frame	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
Screws, rivets and other miscellaneous fastening devices	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
PART L - FLOOD AND RIVER CONTROL AND DRAINAGE				
ITEM 1700 - CLEARING AND GRUBBING				
Area Cleared and Grubbed Structures and Obstructions removed	None	None		Engineer's Certificate
ITEM 1701 – CHANNEL EXCAVATION				
Waste Excavated Materials	1 - Grading Test 1 - Plasticity Test 1 - Organic Content	One (1) for every 3,000 m³ per source or fraction thereof		Engineer's Certificate



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Excavated Materials to be Incorporated into the Works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 1702 - STRUCTURE EXCAVATION</b>				
Waste Excavated Materials	1 - Grading Test 1 - Plasticity Test 1 - Organic Content	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Excavated Materials to be Incorporated into the Works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 1703 – DREDGING</b>				
Dredged Waste Materials	1 - Grading Test 1 - Organic Content	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Excavated materials to be incorporated into the works	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 1704 - EMBANKMENT</b>				
Embankment Materials	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 1705 - FILL AND BACKFILL</b>				
Fill and Backfill	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		
<b>ITEM 1706 - OVERHAUL</b>				
Overhaul Material	None	None		Engineer's Certificate
<b>ITEM 1707 - AGGREGATE SUBBASE COURSE</b>				
Subbase Course Materials	1 - Grading Test 1 - Plasticity Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Grading Test 1 - Plasticity Test 1 - Abrasion Test 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Compaction Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Field Density Test (FDT)	For every layer of 200 mm of compacted depth based on the result of laboratory compaction tests on the same materials: At least one (1) group of three (3) in-situ density tests for each 1,000 m <sup>2</sup> or fraction thereof.		
<b>ITEM 1708 – AGGREGATE BASE COURSE</b>				
Base Course Materials	1 - Grading Test 1 - Plasticity Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Grading Test 1 - Plasticity Test 1 - Abrasion Test 1- California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Compaction Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every layer of 200 mm of compacted depth based on the result of laboratory compaction tests on the same materials: At least one (1) group of three (3) in-situ density tests for each 1,000 m <sup>2</sup> or fraction thereof.		
<b>ITEM 1709 – CRUSHED AGGREGATE BASE COURSE</b>				
Crushed Aggregate Base Course Materials	1 - Grading Test 1 - Plasticity Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Grading Test 1 - Plasticity Test 1 - Abrasion Test 1- California Bearing Ratio (CBR) 1- Fractured Face	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Compaction Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every layer of 200 mm of compacted depth based on the result of laboratory compaction tests on the same materials: At least one (1) group of three (3) in-situ density tests for each 1,000 m <sup>2</sup> or fraction thereof.		



**WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC**

Minimum Testing Requirements



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1710 – RIPRAP AND GROUTED RIPRAP				
Stones	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Filter Materials	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
PVC Weepholes	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size used		Engineer's Certificate
Backfilling Materials	1 - Grading Test 1 - Plasticity Test 1 - Compaction Test 1 - Organic Content 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every 1,000 m <sup>2</sup> of each layer of compacted fill or fraction thereof at least one (1) group of three (3) in-situ density tests. The layers shall be placed not exceeding 200 mm in loose measurement or based on the result of compaction trials.		



WORKS AND HIGHWAYS  
DEPARTMENT OF PUBLIC

Minimum Testing Requirements





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Item 1711 - STONE MASONRY				
Stones	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Filter Materials	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
PVC Weepholes	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size used		Engineer's Certificate
<b>ITEM 1712 - CONCRETE SLOPE PROTECTION</b>				
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Water	1 - Quality Test	One (1) per source		
Subbase Course Materials	1 - Grading Test 1 - Plasticity Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		
	1 - Abrasion Test 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Compaction Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every layer of 200 mm of compacted depth based on the result of laboratory compaction tests on the same materials: At least one (1) group of three (3) in-situ density tests for each 1,000 m <sup>2</sup> or fraction thereof.		
Chemical Admixture	1 - Quality Test	One (1) per lot		
Curing Compound	1 - Quality Test	One (1) per lot		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
PVC Weepholes	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
<b>ITEM 1713 - RUBBLE CONCRETE</b>				
Stones	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
<b>ITEM 1714 - GABIONS AND MATTRESSES</b>				
Gabions	1 - Quality Test	One (1) per shipment per lot		Engineer's Certificate
Mattresses	1 - Quality Test	One (1) per shipment per lot		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Rock/Fill	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
Filter Materials (Fabric)	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Erosion Control Mats	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Roving	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Polyester Net Gabion				
1. Net Bag	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
2. Net Yarn	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
Rope	1 - Quality Test	One (1) per lot for each type/size		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1716 - PILING				
Timber Piles	1 - Quality Test	One (1) per shipment for each size		
Concrete Piles (Bridges)	1 - Pile Integrity Test (CrossHole Sonic Logging Test and Low-Strain Pile Dynamic Test)	One (1) per size of pile and for each abutment and every other pier (for multi-span bridges)  At least 50% of the total number of Piles at each abutment and pier		
	1 - Dynamic Load Test	At least one (1) at each abutment and pier		
Concrete  1. Cement	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day		
		1 - Quality Test	One (1) for every 2,000 bags or fraction thereof	



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
2. Fine Aggregate	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate	1 - Grading Test	One(1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Chemical Admixture	1 - Quality Test	One (1) per lot		
6. Special Curing Agent	1 - Quality Test	One (1) per lot		
7. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Steel Pipes Piles/Steel Pipe Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size used	Welding Report	
Steel H-Piles	1 - Quality Test	One (1) per lot per shipment for each size	Welding Report	
Steel Sheet Piles	1 - Quality Test	One (1) per lot for each pile type/size used	Welding Report	
Polyvinyl Chloride (PVC) Sheet Piles	1 - Quality Test Original Mill Certificate	One (1) per lot for each pile type/size of		Engineer's Certificate
Steel Pile Shoes	1 - Quality Test	One (1) per lot for each size	Welding Report	
Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
Cement Mortar	1 - Compressive Strength Test	One (1) set per pouring day		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Water	1 - Quality Test	One (1) per source		
Slurry	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
<b>ITEM 1717 - SHEET PILES</b>				
1. Timber Sheet Pile	1 - Quality Test	One (1) per shipment for each type/size		Engineer's Certificate
2. Concrete Sheet Pile	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day	Inspection Report of casting if precast concrete manufactured in supplier	



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
d. Water	1 - Quality Test	One (1) per source		
e. Chemical Admixture	1 - Quality Test	One (1) per lot		
g. Curing Compound	1 - Quality Test	One (1) per lot		
h. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
3. Steel Sheet Pile	1 - Quality Test	One (1) per lot of each pile type of material used	Welding Report	
4. Polyvinyl Chloride (PVC) Sheet Pile	1 - Quality Test Original Mill Certificate	One (1) per shipment for each pile type of material used		Engineer's Certificate
<b>ITEM 1718 - PIPE CULVERTS AND STORM DRAINS</b>				
Concrete Pipes	1 - Quality Test	One (1) for every 100 pcs.	Inspection Report of Casting	Inspection Report for each size of not more than 25 pipes cast in the field





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
1. Concrete (Pipe/Lined Canal)		Alternative Requirements: One (1) - set consisting of three (3) concrete cylinder samples for not more than 25 pipes cast in the field		
	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
	a. Cement	1 - Quality Test	One (1) for every 2,000 bags per shipment or fraction thereof	
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
d. Water	1 - Quality Test	One (1) per source		
e. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
f. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
Steel Pipes	1 - Quality Test	One (1) per lot of each size	Welding Report	
Aluminum Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot of each type		Engineer's Certificate
Plastic Pipes	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size used		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

<b>MATERIAL OR PRODUCT</b>	<b>TEST REQUIRED</b>	<b>CONTRACTOR'S QUALITY CONTROL</b>		<b>DPWH QUALITY ASSURANCE</b>
		<b>FREQUENCY</b>	<b>OTHER THAN TEST</b>	<b>OTHER REQUIREMENTS</b>
Clay Pipes	1 - Quality Test Original Mill Certificate	One (1) - pipe for every 200 pieces each size, with a minimum of 2 specimens for test		Engineer's Certificate
Fiber Pipe	1 - Quality Test Original Mill Certificate	One (1) per shipment for each size		Engineer's Certificate
Forms and Falseworks 1. Timber	1 - Quality Test	One (1) per lot for each type of material used		
2. Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
3. Metal	1 - Quality Test	One (1) per lot for each type/size used	Welding Report	
4. Plastic	1 - Quality Test	One (1) per lot for each type/size used		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1719 - UNDERDRAINS AND FLAP GATES				
Underdrain 1. Zinc Coated (Galvanized) Corrugated Iron or Steel Culverts and Underdrains	1 - Quality Test	One (1) per lot for each type/size		Engineer's Certificate
2. Extra Strength and Standard Strength Clay Pipe and Perforated Clay Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
3. Perforated Concrete Pipe	1 - Quality Test	One (1) per lot for each type/size		Engineer's Certificate
4. Porous Concrete Pipe	1 - Quality Test	One (1) per lot for each type/size		Engineer's Certificate
5. Bituminized-fiber non-pressure sewer drain and underdrainage pipe systems	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
6. Corrugated Polyethylene Drainage Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
7. Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
8. Polypropylene Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
9. Asbestos-Cement Perforated Underdrain Pipe	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
Filter Fabric Material	1 - Quality Test Original Mill Certificate	One (1) for each lot and type		Engineer's Certificate
Blind Drain/ Granular Backfill Filter Material for Underdrains (Fine Aggregates)	1 - Gradina Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Fiber Reinforced Plastic Mortar Pipe (FRPM)	1 - Quality Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Flap Gate	1- Hydrostatic Test	One (1) for every size for each station		
1. Fiber Reinforced Plastic (FRP)	1 - Quality Test Original Mill Certificate	One (1) per lot for each size		Engineer's Certificate
2. Aluminum Flap Gate	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
<b>ITEM 1720 - MANHOLES, INLETS AND CATCH BASINS</b>				
Concrete	1 - Compressive Strength Test	One (1) set of three (3) concrete cylinder samples from each 75 m <sup>3</sup> of each class or fraction thereof placed each day	Concrete Monitoring Record	
Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
Water	1 - Quality Test	One (1) per source		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Joint Mortar	1 - Compressive Strength Test	One (1) set per pouring day		
Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof		

8



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
		Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		
Autoclaved Aerated Concrete (AAC Blocks)	1- Quality Test	For lots of more than 100,000 units - One (1) per 50,000 units		
		One (1) for every 5,000 units or fraction thereof		
Frames, Gratings, Covers, Ladder				
1. Gray Iron Casting	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
2. Mild to Medium - Strength Carbon Steel Cast	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
3. Structural Steel (Carbon Structural Steel)	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4. Galvanizing	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size		Engineer's Certificate
5. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
<b>ITEM 1721 - CLEANING AND RECONDITIONING EXISTING DRAINAGE STRUCTURES</b>				
Existing Drainage Structures	None	None		Engineer's Certificate
<b>Item 1722 – FENCE AND RAILINGS</b>				
Fence (CHB/Precast)/ Plantbox (Precast) 1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
6. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		



DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Minimum Testing Requirements



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
7. Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof  Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		
8. Autoclaved Aerated Concrete (AAC Blocks)	1 - Quality Test	One (1) for every 5,000 units or fraction thereof		
Fence (Welded Wire)	1 - Quality Test	One (1) per lot for each size		
Railings 1. Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
a. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
d. Water	1 - Quality Test	One (1) per source		
e. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
2. Forms and Falseworks				
a. Timber	1 - Quality Test	One (1) per lot for each type		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
b. Preservatives	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
c. Metal	1 - Quality Test Original Mill Certificate	One (1) per lot for each type/size	Welding Report	
d. Plastic	1 - Quality Test	One (1) per lot for each type/size		
3. Lumber	1 - Quality Test	One (1) per lot		Engineer's Certificate
4. Plywood	1 - Quality Test	One (1) per lot per thickness		Engineer's Certificate
5. Hardware a. Rough Hardware (Nails, Screws, Bolts, Fasteners)	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
b. Finishing Hardware (Door Locksets, Latches, Door Closers, Knobs, Handles, Hinges, Door Pull, Hook, Bumper and Silencer	None	None		Engineer's Certificate
6. Masonry				
a. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
b. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
c. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
d. Water	1 - Quality Test	One (1) per source		
e. Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
f. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
g. Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		
h. Autoclaved Aerated Concrete (AAC) blocks	1 - Quality Test	One (1) for every 5,000 units or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
7. Stone	1 - Specific Gravity 1 - Abrasion Test 1 - Absorption Test	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		Engineer's Certificate
8. Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
9. Stainless Steel (Non-Ferrous Metal)	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate
10. Glass and Glazing	None	None		Engineer's Certificate
11. Aluminum	1 - Quality Test Original Mill Certificate	One (1) sample from each end of each parent coil, or parent plate, but no more than one sample per 1000 kg of sheet or 2000 kg of plate, or part thereof, in a lot		Engineer's Certificate
12. Paint 20-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4-L Cans	1 - Quality Test	One (1) for every 100 cans or fraction thereof		
13. Varnishes	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
14. Shellac	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
15. Lacquer	1 - Quality Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
16. Tinting Colors	1 - Color Test Original Mill Certificate	One (1) per lot		Engineer's Certificate
<b>ITEM 1724 - Main Pumping Station</b>				
Submersible Axial and Mixed Flow Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Vertical Axial Flow Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Horizontal Axial Flow Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Suction Column Pipe set with Flanges and Bolts & Nuts	None	None		Engineer's Certificate
Discharge Column Pipe Set with Flanges and Bolts & Nuts	None	None		Engineer's Certificate
Flap Valve	1 - Hydrostatic Test	One (1) for every size for each station		Engineer's Certificate
Butterfly Valve	1 - Hydrostatic Test	One (1) for every size for each station		Engineer's Certificate
Water Level Indicator	None	None		Engineer's Certificate
Bulk Fuel Storage Tank	None	None		Engineer's Certificate
Fuel Day Tank	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Fuel Transfer Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Overhead Water Tank with Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Water Supply Centrifugal Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Portable Submersible Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Rectangular Flap Gate	1 - Hydrostatic Test	One (1) for every size for each station		Engineer's Certificate
Pump House	None	None		Engineer's Certificate
Pump House and Accessories Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
1. Cement	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
5. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
6. Chemical Admixture	1 - Quality Test	One (1) per lot		
Curing Compound	1 - Quality Test	One (1) per lot		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg per size/source or fraction thereof		
Mortar for Joint	1 - Compressive Strength Test	One (1) set per pouring day		
Concrete Hollow Blocks and Louvers	1 - Quality Test	One (1) for every 10,000 units or fraction thereof  Two (2) per lot of more than 10,000 and less than 100,000 For lots of more than 100,000 units - One (1) per 50,000 units		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Autoclaved Aerated Concrete (AAC) blocks	1 - Quality Test	One (1) for every 5,000 units or fraction thereof		
Prepainted Roofing Sheets	1 - Total Thickness	One (1) per lot		Engineer's Certificate
Hardware/Fasteners	None	None		Engineer's Certificate
<b>ITEM 1725 - INTERMEDIATE PUMPING STATION</b>				
Submersible Axial and Mixed Flow Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Submersible Vertical Axial Flow Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Suction Column Pipe set with Flanges and Bolts & Nuts	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Discharge Column Pipe Set with Flanges and Bolts & Nuts	None	None		Engineer's Certificate
Flap Valve	1 - Hydrostatic Test	One (1) for every size for each station		Engineer's Certificate
Butterfly Valve	1 - Hydrostatic Test	One (1) for every size for each station		Engineer's Certificate
Water Level Indicator	1 - Hydrostatic Test	One (1) for every size for each station		Engineer's Certificate
Fuel Transfer Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Bulk Fuel Storage Tank	None	None		Engineer's Certificate
Fuel Day Tank	None	None		Engineer's Certificate
Vertical Axial Flow Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### **SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1726 – ELECTROMECHANICAL EQUIPMENT AND FACILITIES FOR PUMPING STATIONS				
Motor Control Center (for main pumps and facilities)	None	None		Engineer's Certificate
Generating Set	1 - Exhaust Emission Test 1 - Load Bank Test (Running No-Load and Running Full Load)	One (1) for every size for each station		Engineer's Certificate
Local Control Panel Center (for Auxiliary Equipment)	None	None		Engineer's Certificate
ITEM 1727 – AUXILIARY AND FACILITY EQUIPMENT				
Hoist Crane	1 - Load Test	One (1) for every size for each station		Engineer's Certificate
Overhead Crane	1 - Load Test	One (1) for every size for each station		Engineer's Certificate
Gantry Crane	1 - Load Test	One (1) for every size for each station		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Automatic trash rake complete with accessories ready for service, Primary	None	None		Engineer's Certificate
Trash screen rake complete with accessories ready for service, Secondary	None	None		Engineer's Certificate
Hydraulic gate complete with accessories ready for service	None	None		Engineer's Certificate
Horizontal conveyor complete with accessories ready for service	None	None		Engineer's Certificate
Inclined conveyor and hopper complete with accessories ready for service	None	None		Engineer's Certificate
Trash Hopper	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1728 - CONCRETE BLOCK SLOPE PROTECTION				
Cast-in-Place Concrete Blocks/ Precast Concrete Blocks Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
4. Water	1 - Quality Test	One (1) per source		
5. Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
6. Chemical Admixture	1 - Quality Test	One (1) per lot		
Curing Compound	1 - Quality Test	One (1) per lot		
Bed Course (Subbase Course Materials)	1 - Grading Test 1 - Plasticity Test	One (1) for every 300 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
	1 - Grading Test 1 - Plasticity Test 1 - Abrasion Test 1 - California Bearing Ratio (CBR)	One (1) for every 3,000 m <sup>3</sup> per source or fraction thereof		
	1 - Compaction Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
	1 - Field Density Test (FDT)	For every layer of 200 mm of compacted depth based on the result of laboratory compaction tests on the same materials: At least one (1) group of three (3) in-situ density tests for each 1,000 m <sup>2</sup> or fraction thereof.		
Joint Filler/Sealant				
1. Hot-Poured Elastic Type	1 - Quality Test	One (1) per lot for each type		
2. Cold-Applied Type	1 - Quality Test	One (1) per lot for each type		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Backer Material	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
<b>ITEM 1729 - SEWERAGE TREATMENT PLANT (STP)</b>				
Combined Pre-Treatment Unit with degreasing and grit removal process	None	None		Engineer's Certificate
Manual Bar Fine Screen	None	None		Engineer's Certificate
Influent Non-contact Doppler Flowmeter	None	None		Engineer's Certificate
Equalization Submersible Non-Clog Channel Type Transfer Pump with Cutter	None	None		Engineer's Certificate
Equalization Wide Band Coarse Bubble Diffusers	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
SBR Air Motorized Valve	None	None		Engineer's Certificate
SBR Turbo Air Blower	None	None		Engineer's Certificate
SBR Waste Sludge Non-Clog Submersible Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
SBR Fine Bubble Diffusers	None	None		Engineer's Certificate
Floating Decanter with Motorized Valve	None	None		Engineer's Certificate
Decanter Motorized Valve	None	None		Engineer's Certificate
Decanter Air Solenoid Valve	None	None		Engineer's Certificate
Dissolve Oxygen (DO) Meter	None	None		Engineer's Certificate
Ultraviolet (UV) Sterilizer	None	None		Engineer's Certificate
Effluent Electro Magnetic Flowmeter	None	None		Engineer's Certificate





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Aerobic Sludge Digester (ASD) Wide Band Coarse Bubble Diffusers	None	None		Engineer's Certificate
ASD Non-Clog Submersible Transfer Pump/Screw Press Feed Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
ASD Air Blower	None	None		Engineer's Certificate
Sludge Reaction Loop	None	None		Engineer's Certificate
Volute Dewatering Press	None	None		Engineer's Certificate
Polymer Dosing Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Polymer Stock Solution Tank	None	None		Engineer's Certificate
Polymer Stock Solution Tank Air Mixing	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

### SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION (Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
ITEM 1730 - FLOOD BARRIER SYSTEM				
Demountable Flood Barrier	None	None		Engineer's Certificate
Sliding Flood Barrier	None	None		Engineer's Certificate
Glass-Paneled Flood Barrier	None	None		Engineer's Certificate
Sealings and Gaskets	1- Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Coatings				
1. Powder Coating	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
2. Zinc Coating (Galvanizing)	1 - Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Concrete  1. Cement	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
4. Water	1 - Quality Test	One (1) per source		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
<b>ITEM 1731 - PUMP-GATE FACILITIES</b>				
Submersible Pump	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Gate Leaf	None	None		Engineer's Certificate
Guide Frames	None	None		Engineer's Certificate
Gate Seals	1- Quality Test Original Mill Certificate	One (1) per lot for each type		Engineer's Certificate
Flap Valve	1 - Hvdrostatic Test	One (1) for every size for each station		Engineer's Certificate
Rack Bar	None	None		Engineer's Certificate
Spindle or Screw Hoist	None	None		Engineer's Certificate
Staff Gauge	None	None		Engineer's Certificate



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Maintenance Hooks	None	None		Engineer's Certificate
<b>ITEM 1732 - CONCRETE VOLUTE PUMP</b>				
Pump Pull Out Unit	1 - Pump Performance Test	One (1) for every size for each station		Engineer's Certificate
Formworks 1. Timber	1 - Quality Test	One (1) per lot for each type		
2. Preservatives	None	None		Engineer's Certificate
3. Metal	1 - Quality Test	One (1) per lot for each type/size	Welding Report	
4. Plastic	1 - Quality Test	One (1) per lot for each type/size		



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Minimum Testing Requirements

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

MATERIAL OR PRODUCT	TEST REQUIRED	CONTRACTOR'S QUALITY CONTROL		DPWH QUALITY ASSURANCE
		FREQUENCY	OTHER THAN TEST	OTHER REQUIREMENTS
Concrete	1 - Slump Test	One (1) per truck	Concrete Monitoring Record	
	1 - Compressive Strength Test	One (1) - set of three (3) concrete cylinder samples for every 75 m <sup>3</sup> of each class or fraction thereof placed each day		
1. Cement	1 - Quality Test	One (1) for every 2,000 bags or fraction thereof		
2. Fine Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		
3. Coarse Aggregate Materials	1 - Grading Test	One (1) for every 75 m <sup>3</sup> or fraction thereof		
	1 - Quality Test	One (1) for every 1,500 m <sup>3</sup> per source or fraction thereof		





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## **Minimum Testing Requirements**

**SCHEDULE OF MINIMUM TESTING REQUIREMENTS GOVERNING ITEMS OF WORK OF THE  
DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES, VOLUME III, 2019 EDITION  
(Buildings, Ports and Harbors, Flood Control and Drainage Structures, and Water Supply Systems)**

<b>MATERIAL OR PRODUCT</b>	<b>TEST REQUIRED</b>	<b>CONTRACTOR'S QUALITY CONTROL</b>		<b>DPWH QUALITY ASSURANCE</b>
		<b>FREQUENCY</b>	<b>OTHER THAN TEST</b>	<b>OTHER REQUIREMENTS</b>
4. Water	1 - Quality Test	One (1) per source		
Reinforcing Steel	1 - Quality Test	One (1) for every 10,000 kg for each size/source or fraction thereof		
Maintenance Manhole	None	None		Engineer's Certificate
Bolts, Nuts, and Washers	1 - Quality Test	One (1) per lot per shipment for each size		Engineer's Certificate

# **QUALITY TESTS ON CONSTRUCTION MATERIALS**

## **ANNEX A**







MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>SOIL AND SOIL AGGREGATES</b>			
<b>1. EXCAVATED MATERIALS</b>	<b>B.18, 802, 803, 805, 806, 1503, 1600, 1701, 1702, 1703</b>	Grading Test	AASHTO T 88-19
		Plasticity Test	AASHTO T 89-13 and T 90-16
		Laboratory Compaction (Standard)	AASHTO T 180-18
		Field Density Test (FDT)	AASHTO T 191-14
		Organic Content	AASHTO T 267
		California Bearing Ratio (CBR)	AASHTO T 193-13 / ASTM D 1883-16
<b>2. EMBANKMENT MATERIALS</b>	<b>804, 1601, 1704, 1705, 1710</b>	Same as No. 1 above	
<b>3. FINE AGGREGATES</b>	<b>B.18, B.20, B.21, B.26, 807, 808, 900, 901, 1001, 1002, 1018, 1021, 1022, 1026, 1027, 1029, 1046, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1602, 1710, 1711, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728</b>	Grading Test	AASHTO T 27-14(2018)/(ASTM C 136M-19) AASHTO T 11-05(2018)/(ASTM C 117-17)
		Bulk Specific Gravity	AASHTO T 84-13(2017)/(ASTM C 128-15)
		Absorption	
		Effect of Organic Impurities on Strength of Mortar	AASHTO T 71-08(2017) (ASTM C 87M-17)
		Soundness Test	AASHTO T 104-99(2016) (ASTM C 88M-18)
		Organic Impurities	AASHTO T 21M-15 (ASTM C 40M-20)
		Unit Weight	AASHTO T 19M-14(2018)/(ASTM C 29M-17a)
		Clay Lumps and Friable Particles	AASHTO T 112-00(2017) (ASTM C 142M-17)

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
4. SILICA SAND	1054	Grading Test ASTM C144-18 Specific Gravity - Silica Content Soluble Salts (Sulfates, Chlorides, and Alkalies such as Na <sub>2</sub> O, K <sub>2</sub> O, CaO) Clay and Organic Matter Loss on Ignition Moisture Content	ASTM C146-94a(2014)
5. COARSE AGGREGATES	B.18, B.20, B.21, B.26, 807, 808, 900, 901, 1001, 1002, 1046, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728	Grading Test Bulk Specific Gravity Absorption Abrasion Test Soundness Test Unit Weight	AASHTO T 27-14(2018)/(ASTM C 136M-19) AASHTO T 11-05(2018)/(ASTM C 117-17) AASHTO T 85-14(2018)/ASTM C 127-15 AASHTO T 96-02(2019)/(ASTM C 131M-20) AASHTO T 104-99(2016) (ASTM C 88M-18) AASHTO T 19M-14(2018)/(ASTM C 29M-17a)
6. AGGREGATE SUBBASE COURSE MATERIALS	1707	Grading Test Plasticity Test Abrasion Test Laboratory Compaction (Modified) California Bearing Ratio (CBR) Field Density Test (FDT)	AASHTO T 27-14(2018) / T 11-05(2018) (ASTM C 117-17) AASHTO T 89-13(2017) and T 90-16 AASHTO T 96-02(2015) (ASTM C 131M-14) AASHTO T 180-18/ASTM D 1557-12e1 AASHTO T 193-13(2017) / ASTM D 1883-16 AASHTO T 191-14(2018) / ASTM D 1556M-15e1

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	00
Revision No.	OCTOBER 2020
Date	
Page No.	Page 3 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
7. AGGREGATE BASE COURSE MATERIALS	1708	Same as No. 6 above	
8. CRUSHED AGGREGATE BASE COURSE MATERIALS	1709	Same as No. 6 above	ASTM D 5821-13(2017)
		Fractured Face	ASTM D 6913M-17
9. FINE-GRAINED SOIL	B.19, 807	Grading Test	AASHTO T 89-13 and T 90-16 ASTM D 4318-17e1
		Plasticity Test	AASHTO T 100-15(2019) / ASTM D854-14
		Specific Gravity	AASHTO T 88-19
		Hydrometer Analysis	AASHTO T 265-15(2019) / ASTM D2216-19
		Moisture Content Determination	AASHTO T 176-17
		Sand Equivalent Test	ASTM D 4959-16 AASHTO T 255-00(2017) (ASTM C566-19) AASHTO T 217-14(2018) AASHTO T 265-15(2019)
10. SOIL AND SOIL AGGREGATES	B.19, 807, 808	Moisture Content Determination	AASHTO T 88-19
		Particle Size Analysis of Soils	AASHTO T 11-05(2018) (ASTM C117-17)
		Amount of Materials Finer than 75µm (No.200) sieve by Washing	ASTM D 4318-17e1
		Plasticity Test	ASTM D4943-18
		Shrinkage Limit of Soil	ASTM D854-14
		Specific Gravity of Soil by Water Pycnometer	AASHTO T 99-18 / T 180-18 ASTM D698-12e2 / D1557-12e1
		Laboratory Compaction Test / Moisture Density Relation	

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Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 4 of 40

MATERIALS OR PRODUCT		ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)		TESTS TO BE PERFORMED		TEST METHOD
11. CRUSHED STONE/ SLAG/ GRAVEL	807	808	12. RAMMED AGGREGATE COLUMN	CONCRETE AND OTHER MANUFACTURED PRODUCTS		
				Density of Soil In-placed by Sand Cone Method	ASTM D1556M-15e1	
				California Bearing Ratio	ASTM D1883-16	
				Unit Weight of Aggregates	AASHTO T 19M-14(2018) (ASTM C29M-17a)	
				Organic Impurities in Fine Aggregates for Concrete	AASHTO T 21M-15(2019) (ASTM C40M-20)	
				Strength of Mortar	AASHTO T 71-08(2017) (ASTM C87M-17)	
				Soundness Test (by use of sodium or magnesium sulfate)	AASHTO T 104-99(2016) (ASTM C88M-18)	
				Specific Gravity and Absorption of Fine and Course Aggregates	AASHTO T 84-13(2017) (ASTM C128-15)	
				Abrasion Test	AASHTO T 85-14(2018) (ASTM C127-15)	
				Grading Test	AASHTO T 96-02(2019) (ASTM C131M-20)	
				Abrasion Test	AASHTO T 27-14(2018) (ASTM C136M-19)	
				Fractured Face (for crushed gravel)	AASHTO T 96-02(2019) (ASTM C131M-20)	
				Density (for crushed slag)	ASTM D 5821-13(2017)	
				Modulus Test	AASHTO T 19M-14(2018) (ASTM C29M-17a)	
				Bottom Stabilization Test	ASTM D1143M-20	
13. CONCRETE						
				B.18, B.20, B.21, B.26, 807, 900, 901, 1001, 1002, 1018, 1049, 1051, 1052, 1054, 1111, 1206,	Slump	AASHTO T 119M-18 (ASTM C143M-15a)
					Time of Setting	AASHTO T 197M-11 (ASTM C403M-16)
					Density (when Chemical Admixture is used)	AASHTO T 121M-19 (ASTM C138M-17a)

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

Page No.

Date

Page 4 of 40

OCTOBER 2020



<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK</b> (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
	<b>1300, 1402, 1406, 1407, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728</b>	Bleeding (when Air-entraining admixture is used)	AASHTO T 158-11(2019) (ASTM C 232M-14)(2019)
		Weight per cubic meter	AASHTO T 121M-19 (ASTM C138M-17a)
		Air Content	AASHTO T 152-19
		Yield	
		Compressive Strength Test (Concrete Cylinders and Cores)	AASHTO T 22M-20 (ASTM C39M-20)
		Flexural Strength Test (Third-Point Loading)	AASHTO T 97-18 (ASTM C78M-18)
		Flexural Strength Test (Center-Point Loading)	AASHTO T 177-17 (ASTM C293M-16)
		Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	AASHTO T 24M-15(2019) (ASTM C42M-20)
		Splitting Tensile Strength of Cylindrical Concrete Specimens Test	AASHTO T 198-15(2019) (ASTM C496M-17)
		Length Change of Hardened Hydraulic Cement Mortar and Concrete	AASHTO T 160-17 (ASTM C157M-17)
		Length of Drilled Concrete Core/ Thickness of Specimen Test	AASHTO T 148-15(2019)/ ASTM C174M-17
		Specific Gravity/Density	AASHTO T 133-19 (ASTM C188-17)
		Fineness (By Air Permeability)	AASHTO T 153-20 (ASTM C204-18)
<b>14. PORTLAND CEMENT</b> Physical Tests	<b>B.18, B.20, B.21, B.26, 807, 900, 901, 1001, 1002, 1018, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1046, 1049, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1602,</b>	Normal Consistency	AASHTO T 129-14(2018) (ASTM C187-16)
		Time of Setting: By Vicat Needle	AASHTO T 131-20 (ASTM C191-19)
		Time of Setting: By Gilmore Needles	AASHTO T 154-18 (ASTM C266-18)

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MATERIALS OR PRODUCT		ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
Chemical Tests		1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728	Autoclave Expansion	AASHTO T 107M-18 (ASTM C151M-18)
			Mortar Test/Compressive Strength	AASHTO T 106M-18 (ASTM C109M-20a)
FOR CONCRETING 15. WATER	B.18, B.20, B.21, B.26, 807, 900, 901, 1001, 1002, 1018, 1021, 1022, 1026, 1027, 1029, 1046, 1049, 1050, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1602, 1710, 1711, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728	1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728	Flow of Cement Mortar (other than Portland Cement)	ASTM C1437-15
			Air Content of Cement Mortar	AASHTO T 137-12(2020) (ASTM C 185-20)
			Sulfur Trioxide	
			Magnesium Oxide	
			Insoluble Residue	
			Loss on Ignition	
			pH Test	
			Percent Total Solids	
			Mortar Strength	
			Sulfate Content by Gravimetric Method	
	1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728	1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728	Chloride Content	ASTM C1602M-18 ASTM D512-12
			pH Test	
			Specific Gravity	ASTM C494M-19
			Total Solid (Residue by Oven Drying), % by mass	ASTM C260M-10a(2016)
			Specific Gravity	AASHTO T 155-13(2017) / ASTM C156-17 AASHTO M 148-05/ASTM C309-19
16. ADMIXTURE	B.21, 900, 1049, 1052, 1054, 1111, 1300, 1402, 1406, 1407, 1712, 1713, 1716, 1724, 1728	1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728	Test on Appearance on Concrete Surface	
17. CURING COMPOUND	B.21, 900, 901, 1050, 1052, 1111, 1300, 1402,	1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728		

Page 6 of 40

Page No.

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
	<b>1406, 1407, 1712, 1713, 1716, 1722, 1724, 1728</b>	Character of Film Water Retention Test Drying Time Liquid Membrane-Forming Compounds	
<b>18. HYDRATED LIME</b> Physical Tests	<b>1018, 1022, 1027, 1052, 1714</b>	Grading Specific Gravity Percentage Residue Standard Consistency	ASTM C110-16e1
Chemical Tests		Calcium Oxide (CaO) Magnesium Oxide (MgO)	ASTM C25-19
<b>19. GROUT CUBES</b>	<b>1049</b>	Compressive Strength Density	
<b>METALLIC MATERIALS</b>			
<b>20. REINFORCING STEEL BAR</b> Physical Tests	<b>B.18, B.20, B.21, B.26, 900, 902, 1001, 1046, 1047, 1051, 1052, 1111, 1206, 1300, 1402, 1406, 1407, 1712, 1716, 1718, 1720, 1722, 1724, 1728</b>	Actual Unit Mass Variation in Mass Deformation Measurement Test for Tensile Properties Yield Point Tensile Strength	AASHTO M 31M-19 (ASTM A615-18e1 PNS 49:2002 AASHTO T 68M-09 (ASTM E8M-16ae1) AASHTO T 244-18 (ASTM A370-19e1)

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
Chemical Tests		Elongation	ASTM E1820
		Test for Bending Properties	
		Fracture	
		Phosphorous Content	
21. EPOXY COATED STEEL BAR	902	Actual Unit Mass	AASHTO M 31M-19 (ASTM A615-18e1 PNS 49:2002 ASTM A706M-16 AASHTO M 322M-10(2019) (ASTM A996M-16) AASHTO T 68M-09 (ASTM E8M-16ae1) AASHTO T 244-18 (ASTM A370-19e1)
		Variation in Mass	
		Deformation Measurement	
		Properties	
		Tensile Strength Test	
		Yield Point	
		Elongation	
		Test for Bending Properties	
		Fracture	
		Phosphorous Content	
		ASTM E1820	
		ASTM A751-14a / ASTM E 350-18	
22. WIRE MESH	B.26, 900, 902	Tensile Strength Test	AASHTO M 336M-18 ASTM A 1064M-18a
		Bend Test	
		Elongation	
		902, 904, 1727	
		Tensile Strength	
		ASTM A931-18	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>23. WIRE ROPE OR WIRE CABLE</b>		Bend Test	AASHTO M 30-15(2019) ASTM A741-11(2016)
		Elongation	
		Breaking Strength	
		Ductility	
		Dimension and Construction	
		Coating Weight	
		Adherence	
		Continuity	
		Uniformity	
<b>24. WIRE STRAND</b>	<b>902</b>	Tensile Strength	ASTM A931-18 AASHTO M 203M-20 / ASTM A416M-18 ASTM A1061M-20
		Bend Test	
		Elongation	
<b>25. PRESTRESSING REINFORCING STEEL</b>			
a. High-Tensile Wire	<b>904,1052,1300,1716,1717</b>	Tensile Strength	ASTM A421M-15
		Yield Strength	
		Elongation	
b. High-Tensile Wire Strand or Rope	<b>904,1052,1300,1716,1717</b>	Breaking Strength	ASTM A416M-18
		Yield Strength	
		Elongation	
		Stress Relaxation Properties	

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DPWH-MTR-01  
00  
OCTOBER 2020

Page No.

Date \_\_\_\_\_

Revision No.

Doc. Code:

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>11</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
		Yield Strength Elongation Base Metal Thickness	ASTM A653M-20
f. Hot Rolled Structural Shapes	<b>1047</b>	Same as No. 26 (a)	ASTM A36M-19 ASTM A529M-19 ASTM A572M-15 ASTM A588M-19 ASTM A709M-15 ASTM A913M-03 ASTM A992M-20
g. Structural Tubing	<b>1047</b>	Same as No. 26 (a)	ASTM A500M-20 ASTM A501M-14 ASTM A618M-04(2015) ASTM A847M-14 ASTM A513M-20a
h. Steel Plates	<b>1047</b>	Same as No. 26 (a)	ASTM A36M-19 ASTM A242M-13(2018) ASTM A283M-18 ASTM A514M-18e1 ASTM A529M-19 ASTM A572M-18 ASTM A588M-19 ASTM A709M-15 ASTM A1011M-18a
i. Steel Casting and Forgings	<b>1047</b>	Same as No. 26 (a)	ASTM A216M-18 ASTM A668M-20a
j. Bolts, Nuts and		Hardness	ASTM A307-14e1

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
Washers	B.16, B.20, B.21, 1007, 1008, 1047, 1403, 1406	Tensile Strength Axial Tension Test Yield Point Elongation Dimension Inside and Outside Diameter Compression Load Number of Protrusions Protrusion Tangential Diameter Values Chemical Composition	ASTM A449 – 14 ASTM A 194M-20a ASTM A563-15 ASTM F436M-19 ASTM F959M-17a ASTM F593-17 ASTM F594-09(2020) ASTM F844-07a(2013)
k. Anchor Rods and Threaded Rods	1047	Same as No. 26 (a)	ASTM A36M-19 ASTM A193M-20 ASTM A354-17e2 ASTM A449-14 ASTM A572M-18 ASTM F1554-18
l. Headed Stud Anchors	1047	Same as No. 26 (a)	ASTM A29M-20
m. Turnbuckle	1047	Same as No. 26 (a)	ASTM F1145-05(2017) AASHTO M 269-96(2018)
n. Stainless Steel Flagpole Post	1047	Tensile Strength Yield Strength	ASTM A312M-19 ASTM A554-16

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Elongation Dimension (Length, Diameter, Thickness) Hardness Test Mechanical Test: -Transverse/Longitudinal Tension Test -Flattening Test Tolerance (Straightness, Ovality) Heat Analysis Weld Decay Test Grain Size Determination Hydrostatic Test	
<b>27. STEEL PIPE</b>	<b>1718</b>	Dimension (Outside Diameter, Wall Thickness, Eccentricity, Toe-in and Special Sizes) Tensile Strength Flexural Modulus Hydrostatic Strength Melt Index Slow Crack Growth Resistance Color UV Stabilizer, HDB and HDS	AASHTO M 36M-16(2020) (ASTM A760M-15(2020)) AASHTO M 218-03(2020) AASHTO M 245-20 (ASTM A762M-19) AASHTO M 246-15(2019) (ASTM A742M-20) AASHTO M 190-04(2017) AASHTO M 274-87(2017) ASTM A252M-19 ASTM A53M-20
<b>28. ANCHOR BOLTS</b>	<b>1054</b>	Same as No. 26 (j)	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPMH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
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29. METAL STUDS AND TRACK	1054	Tensile Strength Yield Strength Zinc Coating Test	ASTM A653M-20 ASTM A1011M-18a
30. FLEX ANCHORS	1054	Same as No. 26 (I)	ASTM A29M-20 ASTM A108-18 ASTM B633-19
31. HEADED STUD EMBED ANCHORS	1054	Same as No. 26 (I)	ASTM A 108-18

PILES			
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32. STEEL SHEET PILE	1052, 1300, 1716, 1717	Tensile Strength Yield Point Elongation Dimension	AASHTO M 202M-19(ASTM A328M-13a(2018)) ASTM A572M-18
33. POLYVINYL CHLORIDE (PVC) SHEET PILES	1717	Tensile Strength Flexural Strength Modulus of Elasticity Notched Izod Impact Heat Deflection Temperature Thickness	ASTM D638-14 ASTM D790-17 ASTM D256-10(2018) ASTM D648-18 -

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Weight	-
		Moment of Inertia	-
		Section Modulus	-
		Ultimate Moment	-
		Allowable Moment	-
34. STEEL H-PILES	1052, 1300, 1716	Same as No. 26 (d)	ASTM A36M-19 ASTM A690M-13a(2018)
35. STEEL PILE SHOES	1052, 1300, 1716	Same as No. 26 (i)	ASTM A148M-20e1
36. SLURRY	1052, 1300, 1716	Density	ASTM D4380-12
		Viscosity	ASTM D6910-19
		pH	-
EXPANSION JOINT MATERIALS			
37. EXPANSION JOINT a. Bituminous Type	900	Recovery	AASHTO M 33M-20 (ASTM D994M-11(2016))
		Compression	
		Extrusion	
		Density	
		Asphalt Content	
		Water Absorption	
		Dimension (Width, Length, Thickness)	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
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b. Sponge Rubber and Cork	900	Recovery	AASHTO M 153-20 / ASTM D1752-18
		Compression	
		Extrusion	
		Density	
		Expansion in Boiling Water	
		Boiling in Hydrochloric Acid	
c. Nonextruding and Resilient Bituminous Type	900	Same as No. 37-a above	ASTM D545-19 AASHTO M 213-01(2019) (ASTM D1751-18)

MISCELLANEOUS MATERIALS			
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38. CONCRETE HOLLOW BLOCKS AND LOUVERS	1046	Load-Bearing Concrete Hollow Blocks:	ASTM C90-16a
		Thickness	
		Strength (compressive)	
		Water Absorption	
		Density (oven-dry)	
		Compression Test	
		Moisture Content and Water Absorption.	
		Non-load bearing Concrete Hollow Blocks and Louver Blocks:	
		Density (oven-dry)	
		ASTM C140M-20a	
		ASTM C426-16	
		Strength (compressive)	
		Density (oven-dry)	
		Strength (compressive)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>17</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
		Moisture-Content	ASTM C140M-20a ASTM C426-16
		Compression Test	
		Moisture Content and Water Absorption.	
<b>39. AUTOCLAVED AERATED CONCRETE (AAC) BLOCKS</b>	<b>1046</b>	Nominal Dry Bulk Density	ASTM C1693-11(2017)
		Compressive Strength Test	
		Average Drying Shrinkage / Moisture Content & Bulk Density Determination	
<b>40. ADOBE BLOCKS</b>	<b>1046</b>	Compressive Strength Test	ASTM C67M-20
<b>41. TIMBER</b>	<b>B.18, B.21, B.26, 807, 903, 1003, 1019, 1051, 1052, 1300, 1401, 1402, 1716, 1717, 1722</b>	Initial Moisture Content	AASHTO M 168-07(2020) AASHTO M 133-12(2020)
		Basic Density	
		Tensile Test	
		Compressive Test (Stress-Strain Relationship)	
		Shrinkage (Tangential, Radial and Differential)	
		Diffusion	
<b>42. LUMBER</b>	<b>1003</b>	Thickness	AASHTO M 168-07(2020)
		Shear Test	
		Moisture Content	
<b>43. PLYWOOD</b>	<b>1003, 1015</b>	Thickness	PNS ISO 12465:2017 PNS ISO 12466-1:2016 PNS ISO 12466-2:2016
		Shear Test	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
44. PLYBOARD	1003	Moisture Content Shear Test Thickness	PNS ISO 12465:2017
45. GYPSUM BOARD	1003, 1041	Dimension (Thickness, Width) Flexural strength Deflection Nail Pull Resistance Permeance Water Absorption/Resistance	ASTM C1396-17
46. PRESERVATIVE	B.21, B.26, 807, 903, 1051, 1401, 1722	-	AASHTO M 133-12(2020)
47. PAINT	B.21, B.26, 1032, 1051	Density/Specific Gravity Drying Time Total Pigment (Extraction) Total Solids (by weight) Total Solids (by volume) Fineness	ASTM D1475-13 ASTM D1640M-14(2018) ASTM D2371-19 ASTM D2369-10(2015)e1 ASTM D1210-05(2014)
48. VARNISH	1032, 1051, 1722	Density/Specific Gravity Drying Time	ASTM D1475-13 ASTM D1640M-14(2018)

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>19</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>49. SHELLAC and LACQUER</b>	<b>1051, 1722</b>	Total Pigment (Extraction)	ASTM D2371-19
		Total Solids (by weight)	ASTM D2369 - 20
		Total Solids (by volume)	
		Homogeneity: Clarity and Cleanness Fineness	ASTM D333 -01(2013)
		Color	
		Viscosity	
		Flash Point	
		Film Thickness	
		Gloss	
		Elongation/Flexibility	
		Hardness	
		Abrasion Resistance	
		Print Test	
		Household Chemical Resistance	
		Outdoor Exposure	
		Temperature-Change Resistance	
		Salt Fog	
		Water Fog Test	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
50. CARBON FIBER SHEET	1048	Water Immersion Test	ASTM D3039M-17
		Perspiration Resistance	
		Plasticizer Migration	
		Chip Resistance	
51. EPOXY ADHESIVE FOR CARBON FIBER SHEET	1048	Density	ASTM D7234-19
		Modulus of Elasticity	
		Tensile Strength	
		Design Thickness	
52. CARBON FIBER PLATE	1048	Pull-off Bond Strength	ASTM D3039M-17
		Pull-off Bond Strength to Concrete	
		Viscosity	
		Tensile Strength	
		ASTM D638-14	
		Flexural Strength	
		ASTM D790M	
		Compressive Strength	
		Tensile Shear Bond to Steel	ASTM D1002-10(2019)
		Pull-off Bond Strength	
		ASTM D7234-19	
		Design Thickness	
		Width	-
		Tensile Strength	
		Modulus of Elasticity	
		ASTM D3039M-17	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>21</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
		Density	ASTM D7234-19
		Carbon Fiber Weight	
		Pull-off Bond Strength	
<b>53. EPOXY ADHESIVE FOR CARBON FIBER PLATE</b>	<b>1048</b>	Specific Gravity	ASTM D792-13
		Flexural Strength	ASTM D790-17
		Compressive Strength	ASTM D695/D3410
		Modulus of Elasticity	ASTM D695-15
		Tensile Strength	ASTM D638-14
		Tensile Shear Bond	ASTM D1002-10(2019)
		Bond Strength to: Carbon Fiber Plate and Concrete Carbon Fiber Plate and Steel	ASTM D7234-19
<b>54. GLASS FIBER SHEET</b>	<b>1048</b>	Fiber Areal Weight	ASTM D3039M-17
		Design Thickness	
		Density	
		Tensile Strength	
		Modulus of Elasticity	
		Pull-off Bond Strength	
<b>55. ARAMID FIBER SHEET</b>	<b>1048</b>	Design Thickness	-
		Fiber Areal Weight	ASTM D3039M-17

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
56. SEALANT FOR EPOXY INJECTION	1048	Tensile Strength	ASTM D7234-19
		Modulus of Elasticity	
		Tensile Capacity	
		Pull-off Bond Strength	ASTM D7234-19
57. POLYMER CEMENT PATCHING MATERIAL	1048	Tensile Shear Bond Strength	ASTM D1002-10(2019)
		Bond Strength to Concrete	ASTM D7234-19
		Compressive Strength	ASTM C39M-20
		Pull-Off Bond Strength to Concrete	ASTM D7234-19
58. CONCRETE PIPE	B.18, 1718	Bleeding Rate	ASTM C39M-20
		Strength Test	
		Water Absorption Test	AASHTO T 280-14(2018) (ASTM C497-19a)
		Dimension	AASHTO M 170-20 (ASTM C76-19b)
59. ALUMINUM PIPE	1718	External Load Crushing Strength	
		Dimension	AASHTO M 196-16 (ASTM B745M-15)
		Density	AASHTO M 219-92(2017) (ASTM B746M-16)
		Tensile Test	ASTM E8M-16a <sup>1</sup>

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Bend Test	
<b>60. PLASTIC PIPE</b>	<b>1718</b>	Dimension	AASHTO M 252-20 ASTM F714-13(2019) AASHTO M 278-15(2019)
		Density	
		Melt Index	
		Flexural Modulus	
		Tensile Strength	
		Slow Crack Growth Resistance	
		Hydrostatic Strength Test	
<b>61. CAST IRON PIPE</b>	<b>1001</b>	Tensile Strength	ASTM A74-20 ASTM A48M-03(2016) ASTM A47M-99(2018)e1 ASTM A536-84(2019)e1
		Hardness	
		Breaking Load	
		Machined Diameter	
		Chemical composition (phosphorous, sulfur, chromium, titanium, aluminum, lead, and carbon)	
		Dimension (for hub, spigot, barrel, grooves, water seal and trap)	
		Coating	
		Ultraviolet (UV) Radiation Stability	ASTM D4355M-14(2018)
<b>62. ZINC COATED (GALVANIZED) CORRUGATED IRON PIPE</b>	<b>1719</b>	Mass (Weight) of Coating	AASHTO M 36M-16(2020) [ASTM A760M-15(2020)]
		Dimension	-

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
63. EXTRA STRENGTH AND PIPE AND PERFORATED CLAY PIPE	1719	Dimension Acid Resistance Test	ASTM C700-18
64. PERFORATED CONCRETE PIPE	1719	Dimension Permeability Hydrostatic Test	AASHTO M 175M-05(2020)
65. POROUS CONCRETE PIPE	1719	Three-Edge-Bearing Test Method Flat Slab Tops Core Strength Absorption Hydrostatic Permeability Manhole Step Cylinder Strength Gasket Lubricant Tests Joint Shear Test Alkalinity of Concrete Mixture Off-Center Hydrostatic Joint Test Dimension	AASHTO M 176M-20 (ASTM C654-19) AASHTO T 280-14(2018) ASTM C293M-16

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>25</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>66. BITUMINIZED-FIBER NON-PRESSURE SEWER DRAIN AND UNDERDRAINAGE PIPE SYSTEMS</b>		Modulus of Rupture	
<b>67. CORRUGATED POLYETHYLENE DRAINAGE PIPE</b>	<b>1719</b>	Dimension Pipe Stiffness Pipe Flattening Environmental Stress Cracking Brittleness	AASHTO M 252--20
<b>68. POLY (VINYL CHLORIDE) (PVC) PROFILE WALL DRAIN PIPE</b>	<b>1719</b>	Workmanship (Color, Opacity, Density) Dimension (Diameter, Thickness, Bell Wall Thickness) Pipe Flattening Pipe Impact Strength Pipe Stiffness Soiltight Joints Watertight Joints Extrusion Quality: Acetone Immersion Heat Reversion Perforations Internal Sleeve Dimensions	AASHTO M 304-11(2019)

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ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD		
<b>69. POLYPROPYLENE PIPE</b>	<b>1719</b>	<b>AASHTO M 330-20</b>	Workmanship	
			Dimensions	
			Pipe Stiffness	
			Environmental Stress Crack Resistance	
			Joining Systems	
			Brittleness	
<b>70. ASBESTOS-CEMENT PERFORATED UNDERDRAIN PIPE</b>	<b>1719</b>	<b>ASTM C508M-00(2015)</b>	Crushing Strength	
<b>71. GRAY IRON CASTING</b>	<b>1720</b>	<b>AASHTO M 105-09(2018)/ASTM A74-20/ASTM A48M-03(2016)/ASTM A27M-20/ASTM A126-04(2019)</b>	Tensile Strength	
			Yield Point	
			Elongation	
			Reduction of Area	
			Dimension	
			Chemical Analysis (Phosphorus and Sulfur)	
<b>72. CARBON STRUCTURAL STEEL</b>	<b>1001, 1047, 1052, 1054, 1300, 1403, 1716, 1720, 1722, 1724, 1725, 1729</b>	<b>ASTM A36M-19</b>	Tensile Strength	
			Yield Strength	
			Elongation	
			Chemical Composition	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>27</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>73. CARBON STEEL CAST</b>	<b>1001, 1720</b>	Tensile Strength	ASTM A27M-20
		Yield Point	
		Elongation	
		Reduction in Area	
<b>74. DUCTILE IRON</b>	<b>1002, 1724, 1729</b>	Tensile Strength	ASTM A536-84(2019)e1
		Yield Strength	
		Elongation	
		Hardness	
		Chemical Composition	
		Microstructure	
		Pressure Tightness	
		Radiographic Soundness	
		Magnetic Particle Inspection Dimensions	
<b>75. SILICON BRONZE</b>	<b>1719, 1724</b>	Surface Finish	ASTM B98M-13(2019)
		Dimension (mass, diameter, shape, length, straightness, and edge contour)	
		Tensile Strength	
		Yield Strength	
		Elongation	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
76. FIBER REINFORCED PLASTIC (FRP)	1719	Rockwell Hardness Chemical Composition Tensile Property ASTM D2924-12(2017)/ASTM D638-14 Flexural Property ASTM D790-17 Compression Test ASTM D695-15 Water Absorption ASTM D570-98(2018) Tensile Test ASTM B 557-15 Elongation Yield Strength ASTM B807M-20 Heat Treatment Exfoliation-Corrosion Resistance STP 558-1974 Chemical Composition by Chemical and Spectrochemical B211M-19	
77. ALUMINUM	B.26, 1008, 1045, 1719	Tensile Strength Elongation Yield Strength ASTM B807M-20 Heat Treatment Exfoliation-Corrosion Resistance STP 558-1974 Chemical Composition by Chemical and Spectrochemical B211M-19	
78. STAINLESS STEEL	1051	Tensile Strength Yield Strength Elongation Diameter/Thickness Determination Hardness Chemical Composition ASTM A751-14a	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Heat Treatment (Austinitic)	ASTM A479M-20
		Corrosion Test (Austinitic)	
		Magnetic Permeability (Severn-Type Indicator)	-
<b>79. SPHEROIDAL GRAPHITE CAST IRON</b> a. Mooring Cleat b. Mooring Post c. Mooring Bitt d. Mooring Bollard	<b>1400</b>	Yield Strength	ASTM A27M-20
		Tensile Strength	
		Elongation	
<b>80. PVC WEEPHOLES</b>	<b>1710, 1711</b>	Workmanship (color, opacity, density, and other physical properties)	ASTM D2241 – 15 ASTM D1785 – 15e1 ASTM D2665 – 14 ASTM D2680 – 01(2014) ASTM F679 -16 ASTM D2729 – 17 ASTM D3034-16
		Dimension	
		Impact Resistance	
		Pipe Stiffness	
		Extrusion: -Acetone Immersion -Heat Reversion	
		Soil Tightness	
		Water Tightness	
		Stub Compression Test	
<b>81. GABIONS AND MATTRESSES</b>	<b>1714</b>	Tensile Strength Test	ASTM D638-14
		Elongation	
		Hardness	ASTM D2240-15e1

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
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		Specific Gravity	ASTM D792-13
		Modulus of Elasticity	ASTM D412-16
		Resistance to Abrasion	-
		Brittleness Temperature	ASTM D746-14
		Weight of Coating	ASTM A975-11(2016)
		Punch Strength	

82. FILTER MATERIALS (FABRIC / MAT)	1405, 1714	Apparent Opening Size	ASTM D4751-20
		Water Permittivity	ASTM D4491M-20
		Grab Tensile Strength	
		Grab Failure Strain	
		Seam Breaking Strength	ASTM D4632M-15a
		Puncture Resistance	ASTM D6241-14
		Tear Strength	ASTM D4533M-15
		Ultraviolet (UV) Radiation Stability	ASTM D4355M-14(2018)

83. NET BAGS	1714	Tensile Strength	-
		Elongation	-
		Width, Height	-
		Mesh Composition	-
		Mesh Size	-

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>31</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
		Capacity	-
<b>84. NET YARN</b>	<b>1714</b>	Tensile Strength	ASTM D7179-18
		Elongation	
<b>85. ROPE</b>	<b>1714</b>	Diameter	-
		Tensile Strength	-
		Elongation	-
<b>86. WATERPROOFING</b> a. Cement-base Waterproofing b. Liquid Waterproofing	<b>1016</b>	Furol Viscosity	ASTM D41M - 11(2016)
		Distillation	
		Penetration	
		Matter Soluble in Trichloroethylene	
		Viscosity	ASTM D6083M - 18
		Volume and Weight Of Solids	
		Elongation	
		Tensile Strength	
		Permeance	
		Water Swelling	
		Adhesion	
		Fungi Resistance	
		Tear Resistance	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
87. SPRAYED CEMENTITIOUS FIREPROOFING MATERIALS	1055	Low Temperature Flexibility	
		Dry Density, Minimum Average	ASTM E605M-19
		Bond Strength, min.	ASTM E736M-19
		Compression, 10% Deformation	ASTM E761M-92(2020)
		Air Erosion, max.	ASTM E859M-92(2020)
		Corrosion	ASTM E937M-92(2020)
		Deflection	ASTM E759M-92(2020)
		Bond Impact	ASTM E760M-92(2020)
		Flame Spread	ASTM E84-20
		Smoke Development	
		Non-combustibility	ASTM E136-19A
		Mold Resistance	ASTM G21-15
		Behavior on heating: Loss of volatile matter Sliding of granular surfacing	ASTM D228M – 19a
		Wind Resistance	ASTM D3161M - 20
88. ASPHALT ROOF SHINGLES	1056	Fire Resistance	ASTM E108 – 20a
		Granule Adhesion	ASTM D4977M - 20
		Tear Strength	ASTM D226M – 17
		Breaking Strength	ASTM D4869M – 16a ASTM D6757M - 18
89. UNDERLAYMENT	1056		

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Pliability	
		Loss on Heating	
		Liquid Water Transmission	
		Dimensional Stability	
		Roll Width	
		Roll Area	
		Behavior on Heating	
		Saturation Percent of Felt	
<b>90. ASPHALT ROOF CEMENT</b>	<b>1056</b>	Uniformity	ASTM D4586M – 07(2018)
		Workability	
		Pliability	
		Behavior at Given Temperature	
<b>91. GLASS FIBER REINFORCED CONCRETE (GFRC) COMPOSITES</b>	<b>1054</b>	Tension Test	ASTM C1230-96(2015)
		Compressive Strength	ASTM C109M-20b
		Flexural Strength	ASTM C947-03(2016)
		Hardness	ASTM D2583-13a/ASTM D785-08(2015)
		Impact Resistance	ASTM D256-10(2018)
		Surface Burning	ASTM E84-20
		Thermal Expansion	ASTM D696-16

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MATERIALS OR PRODUCT		ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
92. ALKALI-RESISTANT GLASS FIBERS	1054	Elongation Young's Modulus Tensile Strength Density Length Zirconia Content	Humidified Deflection Weather Resistance Glass Fiber Content	ASTM C473-19
				ASTM G152-13
				ASTM C1229-94(2015)
93. POLYMER CURING ADMIXTURE	1054	Compound Type Polymer Type Solids pH Appearance Minimum Film-Formation Temperature Ultraviolet Resistance Alkali Resistance	PCI MNL-130 (2009) ASTM C1666M-08(2015)	PCI MNL-130 (2019)
94. ZINC COATING (GALVANIZING)	1058, 1730	Zinc Coating Test	ASTM B6-18	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>35</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>95. POWDER COATING</b>	<b>1058, 1730</b>	Gloss Test	ASTM D523-14(2018)
		Bending Test	ASTM D522M-17
		Hardness Test	ASTM D3363-20
		Cross Hatch Adhesion Test	ASTM D3359-17
		Chemical Resistance Test	ASTM D1308-02(2013)
		Impact Test	ASTM D2794-93(2019)
		Salt Spray Corrosion Test	ASTM B117-19
<b>96. SEALINGS AND GASKETS</b>	<b>1058, 1602</b>	Tension Strength Test	ASTM D412-16
		Tensile Modulus	
		Elongation	
		Abrasion Resistance	
		Resilience	
		Compression Set	
<b>97. FENDER – ELASTOMER (EXTRUDED, MOLDED, PNEUMATIC AND HYDRO- PNEUMATIC)</b>	<b>1403</b>	Durometer Hardness	ASTM D2240-15e1
		Tensile Strength	ASTM D412-16
		Elongation	
		Tear Strength	ASTM D624-00(2020)
		Water Absorption	ASTM D471-16a
		Heat Resistance	ASTM D1667-17

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
98. FENDER - FOAM CORE (FOAM-FILLED FENDER)	1403	Ozone Resistance	ASTM D1171-18
		Low Temperature Impact Resistance	ASTM D1229-03(2019)
		Density	ASTM D1667-17
		Tensile strength	ASTM D3575-20/ASTM D412-16
		Elongation (ultimate)	ASTM D3575-20/ASTM D412-16
		Water absorption percent volume after 24-hour exposure	ASTM D1667-17
		25 percent compressive set	ASTM D1667-17
		50 percent compressive set	ASTM D3575-20
99. ELASTOMER (FOAM-FILLED FENDER)	1403	Shore A hardness	ASTM D2240-15e1
		Tensile strength	ASTM D412-16
		Elongation (Ultimate)	ASTM D412-16
		Tear Strength	ASTM D470-13
		Flex life (Ross)	ASTM D1052-09(2019)
		Abrasion resistance (NBS)	ASTM D1630-16
		Pour Point	
100. JOINT FILLER/SEALANT	B.26, 900, 1018, 1023, 1712, 1720, 1728	Penetration	ASTM D5329-20
		Flow	
		Bond	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>37</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>101. BACKER MATERIAL</b>	<b>1046, 1728</b>	Density	ASTM D5249-10(2016)
		Tensile Strength	
		Water Absorption	
		Compression Deflection Force	
		Compression Recovery	
		Heat Resistance	
		Maximum Shrinkage	
<b>102. FRAMES, GRATINGS, COVERS, LADDER RUNGS AND CORRUGATED METAL</b>	<b>1720</b>	Tensile Strength	ASTM A27M-20 AASHTO M 105-09 ASTM A36M-19 AASHTO M 111M-19 ASTM A123M-17
		Yield Point	
		Elongation	
<b>103. CHAIN LINK FENCE FABRIC</b>	<b>B.20</b>	Weight of Coating	AASHTO T65M-19 (ASTM A90M-13(2018))/AASHTO T213M-19 (ASTM A428M-10(2019))
<b>104. COAL TAR ENAMEL</b>	<b>1602</b>	Softening Point	ASTM D36M-14(2020)
		Filler (Ash)	ASTM D2415-20
		Fineness of Filler	ASTM D546-17
		Specific Gravity	ASTM D71-94(2019)
		Penetration	AWWA C203-15

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
105. CERAMIC TILES	1018	High-temperature Test	
		Low-temperature Test	
		Impact Test	
		Peel Test	
105. CERAMIC TILES	1018	Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance – through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance – through body	ISO 10545-6
106. GRANITE TILES	1018	Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance – through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance – through body	ISO 10545-6

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>39</b> of <b>40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>107. AGGREGATE RAMMED COLUMN</b>	<b>808</b>	Static Axial Compressive Load	D1143M - 20
<b>108. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPES</b>	<b>1002</b>	Dimension	ASTM D2846M – 19a
		Density	
		Melt Index	
		Flexural Modulus	
		Tensile Strength	
		Slow Crack Growth Resistance	
<b>109. SHEATHING - CORRUGATED G.I. SHEET</b>	<b>1015</b>	Hydrostatic Strength Test	ASTM A761M – 18
		Sulfur	
		Carbon	
		Manganese	
		Phosphorus	
		Silicon	
		Yield Strength	
		Tensile Strength	

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MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Elongation	ASTM A653M - 20
		Yield Strength	
		Elongation	
		Bending	


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# QUALITY TESTS ON CONTRUCTION MATERIALS

## ANNEX A





 <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>	<b>Quality Tests on Construction Materials</b>		
	Doc. Code:	DPWH-MTR-01	
	Revision No.	00	
	Date	OCTOBER 2020	
	Page No.	Page 1 of 40	

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>SOIL AND SOIL AGGREGATES</b>			
<b>1. EXCAVATED MATERIALS</b>	<b>B.18, 802, 803, 805, 806, 1503, 1600, 1701, 1702, 1703</b>	Grading Test	AASHTO T 88-19
		Plasticity Test	AASHTO T 89-13 and T 90-16
		Laboratory Compaction (Standard)	AASHTO T 180-18
		Field Density Test (FDT)	AASHTO T 191-14
		Organic Content	AASHTO T 267
<b>2. EMBANKMENT MATERIALS</b>	<b>804, 1601, 1704, 1705, 1710</b>	California Bearing Ratio (CBR)	AASHTO T 193-13 / ASTM D 1883-16
		Same as No. 1 above	
<b>3. FINE AGGREGATES</b>	<b>B.18, B.20, B.21, B.26, 807, 808, 900, 901, 1001, 1002, 1018, 1021, 1022, 1026, 1027, 1029, 1046, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1602, 1710, 1711, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728</b>	Grading Test	AASHTO T 27-14(2018)/(ASTM C 136M-19) AASHTO T 11-05(2018)/(ASTM C 117-17)
		Bulk Specific Gravity	AASHTO T 84-13(2017)/(ASTM C 128-15)
		Absorption	
		Effect of Organic Impurities on Strength of Mortar	AASHTO T 71-08(2017) (ASTM C 87M-17)
		Soundness Test	AASHTO T 104-99(2016) (ASTM C 88M-18)
		Organic Impurities	AASHTO T 21M-15 (ASTM C 40M-20)
		Unit Weight	AASHTO T 19M-14(2018)/(ASTM C 29M-17a)
		Clay Lumps and Friable Particles	AASHTO T 112-00(2017) (ASTM C 142M-17)

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 2 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
4. SILICA SAND	1054	Grading Test	ASTM C144-18
		Specific Gravity	-
		Silica Content	
		Soluble Salts (Sulfates, Chlorides, and Alkalies such as Na <sub>2</sub> O, K <sub>2</sub> O, CAO)	
		Clay and Organic Matter	ASTM C146-94a(2014)
		Loss on Ignition	
		Moisture Content	
5. COARSE AGGREGATES	B.18, B.20, B.21, B.26, 807, 808, 900, 901, 1001, 1002, 1046, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728	Grading Test	AASHTO T 27-14(2018)/(ASTM C 136M-19) AASHTO T 11-05(2018)/(ASTM C 117-17)
		Bulk Specific Gravity	
		Absorption	AASHTO T 85-14(2018)/ASTM C 127-15
		Abrasion Test	AASHTO T 96-02(2019)/(ASTM C 131M-20)
		Soundness Test	AASHTO T 104-99(2016) (ASTM C 88M-18)
		Unit Weight	AASHTO T 19M-14(2018)/(ASTM C 29M-17a)
		Grading Test	AASHTO T 27-14(2018) / T 11-05(2018) (ASTM C 117-17)
6. AGGREGATE SUBBASE COURSE MATERIALS	1707	Plasticity Test	AASHTO T 89-13(2017) and T 90-16
		Abrasion Test	AASHTO T 96-02(2015) (ASTM C 131M-14)
		Laboratory Compaction (Modified)	AASHTO T 180-18/ASTM D 1557-12e1
		California Bearing Ratio (CBR)	AASHTO T 193-13(2017) / ASTM D 1883-16
		Field Density Test (FDT)	AASHTO T 191-14(2018) / ASTM D 1556M-15e1

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:

DPWH-MTR-01

Revision No.

00

Date

OCTOBER 2020

Page No.

Page 3 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
7. AGGREGATE BASE COURSE MATERIALS	1708	Same as No. 6 above	
8. CRUSHED AGGREGATE BASE COURSE MATERIALS	1709	Same as No. 6 above	
		Fractured Face	ASTM D 5821-13(2017)
		Grading Test	ASTM D 6913M-17
		Plasticity Test	AASHTO T 89-13 and T 90-16 ASTM D 4318-17e1
9. FINE-GRAINED SOIL	B.19, 807	Specific Gravity	AASHTO T 100-15(2019) / ASTM D854-14
		Hydrometer Analysis	AASHTO T 88-19
		Moisture Content Determination	AASHTO T 265-15(2019) / ASTM D2216-19
		Sand Equivalent Test	AASHTO T 176-17
		Moisture Content Determination	ASTM D 4959-16 AASHTO T 255-00(2017) (ASTM C566-19) AASHTO T 217-14(2018) AASHTO T 265-15(2019)
		Particle Size Analysis of Soils	AASHTO T 88-19
10. SOIL AND SOIL AGGREGATES	B.19, 807, 808	Amount of Materials Finer than 75µm (No.200) sieve by Washing	AASHTO T 11-05(2018) (ASTM C117-17)
		Plasticity Test	ASTM D 4318-17e1
		Shrinkage Limit of Soil	ASTM D4943-18
		Specific Gravity of Soil by Water Pycnometer	ASTM D854-14
		Laboratory Compaction Test / Moisture Density Relation	AASHTO T 99-18 / T 180-18 ASTM D698-12e2 / D1557-12e1

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 4 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Density of Soil In-placed by Sand Cone Method	ASTM D1556M-15e1
		California Bearing Ratio	ASTM D1883-16
		Unit Weight of Aggregates	AASHTO T 19M-14(2018) (ASTM C29M-17a)
		Organic Impurities in Fine Aggregates for Concrete	AASHTO T 21M-15(2019) (ASTM C40M-20)
		Effect of Organic Impurities in Fine Aggregates on Strength of Mortar	AASHTO T 71-08(2017) (ASTM C87M-17)
		Soundness Test (by use of sodium or magnesium sulfate)	AASHTO T 104-99(2016) (ASTM C88M-18)
		Specific Gravity and Absorption of Fine and Course Aggregates	AASHTO T 84-13(2017) (ASTM C128-15) AASHTO T 85-14(2018) (ASTM C127-15)
		Abrasion Test	AASHTO T 96-02(2019) (ASTM C131M-20)
		Grading Test	AASHTO T 27-14(2018) (ASTM C136M-19)
		Abrasion Test	AASHTO T 96-02(2019) (ASTM C131M-20)
11. CRUSHED STONE/ SLAG/ GRAVEL	807	Fractured Face (for crushed gravel)	ASTM D 5821-13(2017)
		Density (for crushed slag)	AASHTO T 19M-14(2018) (ASTM C29M-17a)
		Modulus Test	ASTM D1143M-20
		Bottom Stabilization Test	
CONCRETE AND OTHER MANUFACTURED PRODUCTS			
13. CONCRETE	B.18, B.20, B.21, B.26, 807, 900, 901, 1001, 1002, 1018, 1049, 1051, 1052, 1054, 1111, 1206,	Slump	AASHTO T 119M-18 (ASTM C143M-15a)
		Time of Setting	AASHTO T 197M-11 (ASTM C403M-16)
		Density (when Chemical Admixture is used)	AASHTO T 121M-19 (ASTM C138M-17a)

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 <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>	<b>Quality Tests on Construction Materials</b>				<b>DPWH-MTR-01</b>
	Doc. Code:				<b>00</b>
	Revision No.				<b>OCTOBER 2020</b>
	Date				<b>Page 5 of 40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
	<b>1300, 1402, 1406, 1407, 1712, 1713, 1716, 1718, 1720, 1722, 1724, 1728</b>	Bleeding (when Air-entraining admixture is used)	AASHTO T 158-11(2019) (ASTM C 232M-14)(2019)
		Weight per cubic meter	AASHTO T 121M-19 (ASTM C138M-17a)
		Air Content	AASHTO T 152-19
		Yield	
		Compressive Strength Test (Concrete Cylinders and Cores)	AASHTO T 22M-20 (ASTM C39M-20)
		Flexural Strength Test (Third-Point Loading)	AASHTO T 97-18 (ASTM C78M-18)
		Flexural Strength Test (Center-Point Loading)	AASHTO T 177-17 (ASTM C293M-16)
		Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	AASHTO T 24M-15(2019) (ASTM C42M-20)
		Splitting Tensile Strength of Cylindrical Concrete Specimens Test	AASHTO T 198-15(2019) (ASTM C496M-17)
		Length Change of Hardened Hydraulic Cement Mortar and Concrete	AASHTO T 160-17 (ASTM C157M-17)
		Length of Drilled Concrete Core/ Thickness of Specimen Test	AASHTO T 148-15(2019)/ ASTM C174M-17
		Specific Gravity/Density	AASHTO T 133-19 (ASTM C188-17)
		Fineness (By Air Permeability)	AASHTO T 153-20 (ASTM C204-18)
		Normal Consistency	AASHTO T 129-14(2018) (ASTM C187-16)
<b>14. PORTLAND CEMENT</b> Physical Tests	<b>B.18, B.20, B.21, B.26, 807, 900, 901, 1001, 1002, 1018, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1046, 1049, 1051, 1052, 1054, 1111, 1206, 1300, 1402, 1406, 1407, 1602,</b>	Time of Setting: By Vicat Needle	AASHTO T 131-20 (ASTM C191-19)
		Time of Setting: By Gilmore Needles	AASHTO T 154-18 (ASTM C266-18)

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 6 of 40</b>

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
Chemical Tests	1710, 1711, 1712, 1713, 1716, 1717, 1718, 1720, 1722, 1724, 1728	Autoclave Expansion	AASHTO T 107M-18 (ASTM C151M-18)
		Mortar Test/Compressive Strength	AASHTO T 106M-18 (ASTM C109M-20a)
		Flow of Cement Mortar (other than Portland Cement)	ASTM C1437-15
		Air Content of Cement Mortar	AASHTO T 137-12(2020) (ASTM C 185-20)
		Sulfur Trioxide	AASHTO T 105-20 (ASTM C114-18)
		Magnesium Oxide	
		Insoluble Residue	
		Loss on Ignition	
		pH Test	ASTM C1602M-18 ASTM D512-12
		Percent Total Solids	
Mortar Strength			
Sulfate Content by Gravimetric Method			
Chloride Content			
16. ADMIXTURE		pH Test	
		Specific Gravity	ASTM C260M-10a(2016)
17. CURING COMPOUND	B.21, 900, 901, 1050, 1052, 1111, 1300, 1402,	Total Solid (Residue by Oven Drying), % by mass	
		Specific Gravity	AASHTO T 155-13(2017) / ASTM C156-17
		Test on Appearance on Concrete Surface	AASHTO M 148-05/ASTM C309-19

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 7 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
18. HYDRATED LIME Physical Tests	1406, 1407, 1712, 1713, 1716, 1722, 1724, 1728	Character of Film	
		Water Retention Test	
		Drying Time	
		Liquid Membrane-Forming Compounds	
	1018, 1022, 1027, 1052, 1714	Grading	
Specific Gravity			
Percentage Residue			
Standard Consistency			
Chemical Tests		Calcium Oxide (CaO)	ASTM C25-19
		Magnesium Oxide (MgO)	
		Compressive Strength	
19. GROUT CUBES	1049	Density	
		METALLIC MATERIALS	
20. REINFORCING STEEL BAR Physical Tests	B.18, B.20, B.21, B.26, 900, 902, 1001,1046, 1047, 1051, 1052, 1111, 1206, 1300, 1402, 1406, 1407, 1712, 1716, 1718, 1720, 1722, 1724, 1728	Actual Unit Mass	AASHTO M 31M-19 (ASTM A615-18e1 PNS 49:2002 AASHTO T 68M-09 (ASTM E8M-16ae1) AASHTO T 244-18 (ASTM A370-19e1)
		Variation in Mass	
		Deformation Measurement	
		Test for Tensile Properties Yield Point Tensile Strength	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 8 of 40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
Chemical Tests		Elongation	
		Test for Bending Properties	
		Fracture	ASTM E1820
		Phosphorous Content	ASTM A751-14a / ASTM E 350-18
		Actual Unit Mass	
		Variation in Mass	AASHTO M 31M-19 (ASTM A615-18e1 PNS 49:2002
		Deformation Measurement	ASTM A706M-16
		Properties	AASHTO M 322M-10(2019) (ASTM A996M- 16)
		Tensile Strength Test	AASHTO T 68M-09 (ASTM E8M-16ae1) AASHTO T 244-18 (ASTM A370-19e1)
		Yield Point	
21. EPOXY COATED STEEL BAR	902	Elongation	
		Test for Bending Properties	
		Fracture	ASTM E1820
		Phosphorous Content	ASTM A751-14a / ASTM E 350-18
		Coating Thickness	ASTM A775M-19 / ASTM A934M-19
		Tensile Strength Test	
		Bend Test	AASHTO M 336M-18 ASTM A 1064M-18a
		Elongation	
		Tensile Strength	ASTM A931-18
22. WIRE MESH	B.26, 900, 902		
	902, 904, 1727		

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 9 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>23. WIRE ROPE OR WIRE CABLE</b>		Bend Test	AASHTO M 30-15(2019) ASTM A741-11(2016)
		Elongation	
		Breaking Strength	
		Ductility	
		Dimension and Construction	
		Coating Weight	
		Adherence	
		Continuity	
<b>24. WIRE STRAND</b>	<b>902</b>	Uniformity	ASTM A931-18 AASHTO M 203M-20 / ASTM A416M-18 ASTM A1061M-20
		Tensile Strength	
		Bend Test	
		Elongation	
<b>25. PRESTRESSING REINFORCING STEEL</b>			
		Tensile Strength	ASTM A421M-15
		Yield Strength	
		Elongation	
		Breaking Strength	ASTM A416M-18
		Yield Strength	
		Elongation	
<b>a. High-Tensile Wire</b>	<b>904,1052,1300,1716,1717</b>	Stress Relaxation Properties	
<b>b. High-Tensile Wire Strand or Rope</b>	<b>904,1052,1300,1716,1717</b>		

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 10 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>26. STRUCTURAL STEEL / METAL</b>  a. Built-Up Shapes - Wide Flange, BW - Heavy Column, BH - Wide Flange Tee, BWT  b. Cold Formed Plate Shapes - Angle, BA - Channel, BC  c. Cold Formed Light Gage Shapes - Lip Cee, LC - Lip Zee, LZ - Rectangular Tubing, LR - Square Tubing, LS  d. Rolled Steel Shapes - Wide Flange, W - S Shape, S - Channel, C - Structural Tee, WT - Angle, L - Pipe - Standard, PS - Pipe - Extra Strong, PE - Pipe - Double Extra, PD  e. Metal Deck	<b>1047</b>	Tensile Strength	ASTM A36M-19 ASTM A6M-19
		Yield Strength	
		Elongation	
		Dimension	
		Same as No. 26 (a)	ASTM A36M-19 ASTM A6M-19
		Same as No. 26 (a)	ASTM A36M-19 ASTM A6M-19
		Same as No. 26 (a)	ASTM A6M-19 PNS 49:2020
		Tensile Strength	ASTM A1008M-20

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 <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>	<b>Quality Tests on Construction Materials</b>			Doc. Code:	<b>DPWH-MTR-01</b>
				Revision No.	<b>00</b>
				Date	<b>OCTOBER 2020</b>
				Page No.	<b>Page 11 of 40</b>

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED			TEST METHOD
		Yield Strength	Elongation	Base Metal Thickness	
f. Hot Rolled Structural Shapes	<b>1047</b>	Same as No. 26 (a)			ASTM A36M-19 ASTM A529M-19 ASTM A572M-15 ASTM A588M-19 ASTM A709M-15 ASTM A913M-03 ASTM A992M-20
g. Structural Tubing	<b>1047</b>	Same as No. 26 (a)			ASTM A500M-20 ASTM A501M-14 ASTM A618M-04(2015) ASTM A847M-14 ASTM A513M-20a
h. Steel Plates	<b>1047</b>	Same as No. 26 (a)			ASTM A36M-19 ASTM A242M-13(2018) ASTM A283M-18 ASTM A514M-18e1 ASTM A529M-19 ASTM A572M-18 ASTM A588M-19 ASTM A709M-15 ASTM A1011M-18a
i. Steel Casting and Forgings	<b>1047</b>	Same as No. 26 (a)			ASTM A216M-18 ASTM A668M-20a
j. Bolts, Nuts and		Hardness			ASTM A307-14e1

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 12 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
Washers	B.16, B.20, B.21, 1007, 1008, 1047, 1403, 1406	Tensile Strength	ASTM A449 – 14
		Axial Tension Test	ASTM A 194M-20a
		Yield Point	ASTM A563-15
		Elongation	ASTM F436M-19
		Dimension	ASTM F959M-17a
		Inside and Outside Diameter	ASTM F593-17
		Compression Load	ASTM F594-09(2020)
		Number of Protrusions	ASTM F844-07a(2013)
		Protrusion Tangential Diameter Values	
		Chemical Composition	
k. Anchor Rods and Threaded Rods	1047	Same as No. 26 (a)	ASTM A36M-19 ASTM A193M-20 ASTM A354-17e2 ASTM A449-14 ASTM A572M-18 ASTM F1554-18
l. Headed Stud Anchors	1047	Same as No. 26 (a)	ASTM A29M-20
m. Turnbuckle	1047	Same as No. 26 (a)	ASTM F1145-05(2017) AASHTO M 269-96(2018)
n. Stainless Steel Flagpole Post	1047	Tensile Strength Yield Strength	ASTM A312M-19 ASTM A554-16

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 13 of 40**

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>27. STEEL PIPE</b>	<b>1718</b>	Elongation	AASHTO M 36M-16(2020) (ASTM A760M-15(2020)) AASHTO M 218-03(2020) AASHTO M 245-20 (ASTM A762M-19) AASHTO M 246-15(2019) (ASTM A742M-20) AASHTO M 190-04(2017) AASHTO M 274-87(2017) ASTM A252M-19 ASTM A53M-20
		Dimension (Length, Diameter, Thickness)	
		Hardness Test	
		Mechanical Test: -Transverse/Longitudinal Tension Test -Flattening Test	
		Tolerance (Straightness, Ovality)	
		Heat Analysis	
		Weld Decay Test	
		Grain Size Determination	
		Hydrostatic Test	
		Dimension (Outside Diameter, Wall Thickness, Eccentricity, Toe-in and Special Sizes)	
		Tensile Strength	
		Flexural Modulus	
		Hydrostatic Strength	
		Melt Index	
<b>28. ANCHOR BOLTS</b>	<b>1054</b>	Slow Crack Growth Resistance	
		Color	
		UV Stabilizer, HDB and HDS	
		Same as No. 26 (i)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 14 of 40</b>

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>29. METAL STUDS AND TRACK</b>	<b>1054</b>	Tensile Strength Yield Strength Zinc Coating Test	ASTM A653M-20 ASTM A1011M-18a
<b>30. FLEX ANCHORS</b>	<b>1054</b>	Same as No. 26 (I)	ASTM A29M-20 ASTM A108-18 ASTM B633-19
<b>31. HEADED STUD EMBED ANCHORS</b>	<b>1054</b>	Same as No. 26 (I)	ASTM A 108-18
<b>PILES</b>			
<b>32. STEEL SHEET PILE</b>	<b>1052, 1300, 1716, 1717</b>	Tensile Strength Yield Point Elongation Dimension Tensile Strength Flexural Strength Modulus of Elasticity Notched Izod Impact Heat Deflection Temperature Thickness	AASHTO M 202M-19(ASTM A328M- 13a(2018)) ASTM A572M-18  ASTM D638-14  ASTM D790-17  ASTM D256-10(2018)  ASTM D648-18  -
<b>33. POLYVINYL CHLORIDE (PVC) SHEET PILES</b>	<b>1717</b>		

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 15 of 40**

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
		Weight	-
		Moment of Inertia	-
		Section Modulus	-
		Ultimate Moment	-
		Allowable Moment	-
<b>34. STEEL H-PILES</b>	<b>1052, 1300, 1716</b>	Same as No. 26 (d)	ASTM A36M-19 ASTM A690M-13a(2018)
<b>35. STEEL PILE SHOES</b>	<b>1052, 1300, 1716</b>	Same as No. 26 (i)	ASTM A148M-20e1
<b>36. SLURRY</b>	<b>1052, 1300, 1716</b>	Density	ASTM D4380-12
		Viscosity	ASTM D6910-19
		pH	-
<b>EXPANSION JOINT MATERIALS</b>			
<b>37. EXPANSION JOINT</b> a. Bituminous Type	<b>900</b>	Recovery	AASHTO M 33M-20 (ASTM D994M-11(2016))
		Compression	
		Extrusion	
		Density	
		Asphalt Content	
		Water Absorption	
		Dimension (Width, Length, Thickness)	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 16 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
b. Sponge Rubber and Cork	900	Recovery Compression Extrusion Density Expansion in Boiling Water Boiling in Hydrochloric Acid	AASHTO M 153-20 / ASTM D1752-18
c. Nonextruding and Resilient Bituminous Type	900	Same as No. 37-a above	ASTM D545-19 AASHTO M 213-01(2019) (ASTM D1751-18)
<b>MISCELLANEOUS MATERIALS</b>			
<b>38. CONCRETE HOLLOW BLOCKS AND LOUVERS</b>	1046	Load-Bearing Concrete Hollow Blocks:	
		Thickness	
		Strength (compressive)	ASTM C90-16a
		Water Absorption	
		Density (oven-dry)	
		Compression Test	ASTM C140M-20a
		Moisture Content and Water Absorption.	ASTM C426-16
		Non-load bearing Concrete Hollow Blocks and Louver Blocks:	
		Density (oven-dry)	
		Strength (compressive)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**

Revision No. **00**

Date **OCTOBER 2020**

Page No. **Page 17 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Moisture-Content	
		Compression Test	ASTM C140M-20a
		Moisture Content and Water Absorption.	ASTM C426-16
		Nominal Dry Bulk Density	
		Compressive Strength Test	ASTM C1693-11(2017)
		Average Drying Shrinkage / Moisture Content & Bulk Density Determination	
		Compressive Strength Test	ASTM C67M-20
		Initial Moisture Content	
		Basic Density	
		Tensile Test	AASHTO M 168-07(2020)
		Compressive Test (Stress-Strain Relationship)	AASHTO M 133-12(2020)
		Shrinkage (Tangential, Radial and Differential)	
		Diffusion	
		Thickness	
		Shear Test	AASHTO M 168-07(2020)
		Moisture Content	
		Thickness	PNS ISO 12465:2017
		Shear Test	PNS ISO 12466-1:2016
			PNS ISO 12466-2:2016
<b>39. AUTOCLAVED AERATED CONCRETE (AAC) BLOCKS</b>	<b>1046</b>		
<b>40. ADOBE BLOCKS</b>	<b>1046</b>		
<b>41. TIMBER</b>	<b>B.18, B.21, B.26, 807, 903, 1003, 1019, 1051, 1052, 1300, 1401, 1402, 1716, 1717, 1722</b>		
<b>42. LUMBER</b>	<b>1003</b>		
<b>43. PLYWOOD</b>	<b>1003, 1015</b>		

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 18 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Moisture Content	
		Thickness	
44. PLYBOARD	1003	Shear Test	PNS ISO 12465:2017
		Moisture Content	
		Dimension (Thickness, Width)	
		Flexural strength	ASTM C1396-17
		Deflection	
		Nail Pull Resistance	
		Permeance	
		Water Absorption/Resistance	
45. GYPSUM BOARD	1003, 1041		
46. PRESERVATIVE	B.21, B.26, 807, 903, 1051, 1401, 1722	-	AASHTO M 133-12(2020)
		Density/Specific Gravity	ASTM D1475-13
		Drying Time	ASTM D1640M-14(2018)
47. PAINT	B.21, B.26, 1032, 1051	Total Pigment (Extraction)	ASTM D2371-19
		Total Solids (by weight)	ASTM D2369-10(2015)e1
		Total Solids (by volume)	
		Fineness	ASTM D1210-05(2014)
		Density/Specific Gravity	ASTM D1475-13
48. VARNISH	1032, 1051, 1722	Drying Time	ASTM D1640M-14(2018)

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 19 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>49. SHELLAC and LACQUER</b>	<b>1051, 1722</b>	Total Pigment (Extraction)	ASTM D2371-19
		Total Solids (by weight)	ASTM D2369 - 20
		Total Solids (by volume)	
		Homogeneity: Clarity and Cleanness	ASTM D333 -01(2013)
		Fineness	
		Color	
		Viscosity	
		Flash Point	
		Film Thickness	
		Gloss	
		Elongation/Flexibility	
		Hardness	
		Abrasion Resistance	
		Print Test	
		Household Chemical Resistance	
		Outdoor Exposure	
		Temperature-Change Resistance	
		Salt Fog	
		Water Fog Test	

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 20 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Water Immersion Test	
		Perspiration Resistance	
		Plasticizer Migration	
		Chip Resistance	
		Design Thickness	
50. CARBON FIBER SHEET	1048	Tensile Strength	ASTM D3039M-17
		Modulus of Elasticity	
		Density	
		Pull-off Bond Strength to Concrete	
		Viscosity	
51. EPOXY ADHESIVE FOR CARBON FIBER SHEET	1048	Tensile Strength	ASTM 1084-16
		Flexural Strength	ASTM D638-14
		Compressive Strength	ASTM D790M
		Tensile Shear Bond to Steel	ASTM D695M
		Pull-off Bond Strength	ASTM D1002-10(2019)
52. CARBON FIBER PLATE	1048	Design Thickness	ASTM D7234-19
		Width	-
		Tensile Strength	-
		Modulus of Elasticity	-
			ASTM D3039M-17

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 21 of 40**

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>53. EPOXY ADHESIVE FOR CARBON FIBER PLATE</b>	<b>1048</b>	Density	
		Carbon Fiber Weight	
		Pull-off Bond Strength	ASTM D7234-19
		Specific Gravity	ASTM D792-13
		Flexural Strength	ASTM D790-17
		Compressive Strength	ASTM D695/D3410
		Modulus of Elasticity	ASTM D695-15
		Tensile Strength	ASTM D638-14
<b>54. GLASS FIBER SHEET</b>	<b>1048</b>	Tensile Shear Bond	ASTM D1002-10(2019)
		Bond Strength to: Carbon Fiber Plate and Concrete Carbon Fiber Plate and Steel	ASTM D7234-19
		Fiber Areal Weight	
		Design Thickness	-
		Density	-
		Tensile Strength	ASTM D3039M-17
		Modulus of Elasticity	
		Pull-off Bond Strength	ASTM D7234-19
<b>55. ARAMID FIBER SHEET</b>	<b>1048</b>	Design Thickness	-
		Fiber Areal Weight	ASTM D3039M-17

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**

Revision No. **00**

Date **OCTOBER 2020**

Page No. **Page 22 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Tensile Strength	
		Modulus of Elasticity	
		Tensile Capacity	
		Pull-off Bond Strength	
		Specific Gravity	
56. SEALANT FOR EPOXY INJECTION	1048	Compressive Strength	ASTM D792-13
		Flexural Strength	ASTM D695-15
		Tensile Shear Bond Strength	ASTM D790-17
		Bond Strength to Concrete	ASTM D1002-10(2019)
		Compressive Strength	ASTM D7234-19
57. POLYMER CEMENT PATCHING MATERIAL	1048	Pull-Off Bond Strength to Concrete	ASTM C39M-20
		Bleeding Rate	ASTM D7234-19
		Strength Test	ASTM C39M-20
		Water Absorption Test	
		Dimension	
58. CONCRETE PIPE	B.18, 1718	External Load Crushing Strength	AASHTO T 280-14(2018) (ASTM C497-19a)
		Dimension	AASHTO M 170-20 (ASTM C76-19b)
		Dimension	
		Density	AASHTO M 196-16 (ASTM B745M-15)
		Tensile Test	AASHTO M 219-92(2017) (ASTM B746M-16)
59. ALUMINUM PIPE	1718		ASTM E8M-16ae1

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 23 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>60. PLASTIC PIPE</b>	<b>1718</b>	Bend Test	
		Dimension	
		Density	
		Melt Index	
		Flexural Modulus	
		Tensile Strength	
		Slow Crack Growth Resistance	
<b>61. CAST IRON PIPE</b>	<b>1001</b>	Hydrostatic Strength Test	AASHTO M 252-20 ASTM F714-13(2019) AASHTO M 278-15(2019)
		Tensile Strength	
		Hardness	
		Breaking Load	
		Machined Diameter	ASTM A74-20 ASTM A48M-03(2016) ASTM A47M-99(2018)e1 ASTM A536-84(2019)e1
		Chemical composition (phosphorous, sulfur, chromium, titanium, aluminum, lead, and carbon)	
		Dimension (for hub, spigot, barrel, grooves, water seal and trap)	
		Coating	
		Ultraviolet (UV) Radiation Stability	ASTM D4355M-14(2018)
		Mass (Weight) of Coating	AASHTO M 36M-16(2020) [ASTM A760M-15(2020)]
<b>62. ZINC COATED (GALVANIZED) CORRUGATED IRON PIPE</b>	<b>1719</b>	Dimension	

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 24 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
63. EXTRA STRENGTH AND STANDARD STRENGTH CLAY PIPE AND PERFORATED CLAY PIPE	1719	Dimension Acid Resistance Test	ASTM C700-18
64. PERFORATED CONCRETE PIPE	1719	Dimension Permeability Hydrostatic Test Three-Edge-Bearing Test Method Flat Slab Tops Core Strength Absorption Hydrostatic Permeability Manhole Step Cylinder Strength Gasket Lubricant Tests Joint Shear Test Alkalinity of Concrete Mixture Off-Center Hydrostatic Joint Test	AASHTO M 175M-05(2020)
65. POROUS CONCRETE PIPE	1719	Dimension	AASHTO M 176M-20 (ASTM C654-19) AASHTO T 280-14(2018)
	1719	Dimension	ASTM C293M-16

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 25 of 40**

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>66. BITUMINIZED-FIBER NON-PRESSURE SEWER DRAIN AND UNDERDRAINAGE PIPE SYSTEMS</b>		Modulus of Rupture	
<b>67. CORRUGATED POLYETHYLENE DRAINAGE PIPE</b>	<b>1719</b>	Dimension	<b>AASHTO M 252--20</b>
		Pipe Stiffness	
		Pipe Flattening	
		Environmental Stress Cracking	
		Brittleness	
<b>68. POLY (VINYL CHLORIDE) (PVC) PROFILE WALL DRAIN PIPE</b>	<b>1719</b>	Workmanship (Color, Opacity, Density)	<b>AASHTO M 304-11(2019)</b>
		Dimension (Diameter, Thickness, Bell Wall Thickness)	
		Pipe Flattening	
		Pipe Impact Strength	
		Pipe Stiffness	
		Soiltight Joints	
		Watertight Joints	
		Extrusion Quality:	
		Acetone Immersion	
		Heat Reversion	
		Perforations	
		Internal Sleeve Dimensions	

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 26 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
69. POLYPROPYLENE PIPE	1719	Workmanship Dimensions Pipe Stiffness Environmental Stress Crack Resistance Joining Systems Brittleness	AASHTO M 330-20
70. ASBESTOS-CEMENT PERFORATED UNDERDRAIN PIPE	1719	Crushing Strength	ASTM C508M-00(2015)
71. GRAY IRON CASTING	1720	Tensile Strength Yield Point Elongation Reduction of Area Dimension Chemical Analysis (Phosphorus and Sulfur)	AASHTO M 105-09(2018)/ASTM A74- 20/ASTM A48M-03(2016)/ASTM A27M- 20/ASTM A126-04(2019)
72. CARBON STRUCTURAL STEEL	1001, 1047, 1052, 1054, 1300, 1403, 1716, 1720, 1722, 1724, 1725, 1729	Tensile Strength Yield Strength Elongation Chemical Composition	ASTM A36M-19

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

 <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>	<b>Quality Tests on Construction Materials</b>			Doc. Code:	DPWH-MTR-01
				Revision No.	00
				Date	OCTOBER 2020
				Page No.	Page 27 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
73. CARBON STEEL CAST	1001, 1720	Tensile Strength	ASTM A27M-20
		Yield Point	
		Elongation	
		Reduction in Area	
		Tensile Strength	
74. DUCTILE IRON	1002, 1724, 1729	Yield Strength	ASTM A536-84(2019)e1
		Elongation	
		Hardness	
		Chemical Composition	
		Microstructure	
		Pressure Tightness	
		Radiographic Soundness	
		Magnetic Particle Inspection Dimensions	
		Surface Finish	
		Dimension (mass, diameter, shape, length, straightness, and edge contour)	
75. SILICON BRONZE	1719, 1724	Tensile Strength	ASTM B98M-13(2019)
		Yield Strength	
		Elongation	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

## Quality Tests on Construction Materials

Doc. Code:

DPWH-MTR-01

Revision No.

00

Date \_\_\_\_\_

OCTOBER 2020

Page No.

Page 28 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPMH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Rockwell Hardness	
		Chemical Composition	
		Tensile Property	ASTM D2924-12(2017)/ASTM D638-14
		Flexural Property	ASTM D790-17
		Compression Test	ASTM D695-15
		Water Absorption	ASTM D570-98(2018)
		Tensile Test	
		Elongation	ASTM B 557-15
		Yield Strength	
		Heat Treatment	ASTM B807M-20
		Exfoliation-Corrosion Resistance	STP 558-1974
		Chemical Composition by Chemical and Spectrochemical Test Methods	B21.1M-19
		Tensile Strength	
		Yield Strength	
		Elongation	ASTM A370-19e1
		Diameter/Thickness Determination	
		Hardness	ASTM E140-12B(2019)e1
		Chemical Composition	ASTM A751-14a
76. FIBER REINFORCED PLASTIC (FRP)	1719		
77. ALUMINUM	B.26, 1008, 1045, 1719		
78. STAINLESS STEEL	1051		

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 29 of 40**

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>79. SPHEROIDAL GRAPHITE CAST IRON</b> a. Mooring Cleat b. Mooring Post c. Mooring Bitt d. Mooring Bollard	<b>1400</b>	Heat Treatment (Austenitic)	ASTM A479M-20
		Corrosion Test (Austenitic)	-
		Magnetic Permeability (Severn-Type Indicator)	-
		Yield Strength	ASTM A27M-20
		Tensile Strength	
<b>80. PVC WEEPHOLES</b>	<b>1710, 1711</b>	Elongation	
		Workmanship (color, opacity, density, and other physical properties)	
		Dimension	ASTM D2241 - 15
		Impact Resistance	ASTM D1785 - 15e1
		Pipe Stiffness	ASTM D2665 - 14
		Extrusion: -Acetone Immersion -Heat Reversion	ASTM D2680 - 01(2014) ASTM F679 -16 ASTM D2729 - 17
		Soil Tightness	ASTM D3034-16
		Water Tightness	
		Stub Compression Test	
		Tensile Strength Test	
<b>81. GABIONS AND MATTRESSES</b>	<b>1714</b>	Elongation	ASTM D638-14
		Hardness	ASTM D2240-15e1

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**


**Quality Tests on Construction Materials**

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 30 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
82. FILTER MATERIALS (FABRIC / MAT)	1405, 1714	Specific Gravity	ASTM D792-13
		Modulus of Elasticity	ASTM D412-16
		Resistance to Abrasion	-
		Brittleness Temperature	ASTM D746-14
		Weight of Coating	ASTM A975-11(2016)
		Punch Strength	
		Apparent Opening Size	ASTM D4751-20
		Water Permittivity	ASTM D4491M-20
		Grab Tensile Strength	
		Grab Failure Strain	ASTM D4632M-15a
		Seam Breaking Strength	
		Puncture Resistance	ASTM D6241-14
		Tear Strength	ASTM D4533M-15
83. NET BAGS	1714	Ultraviolet (UV) Radiation Stability	ASTM D4355M-14(2018)
		Tensile Strength	-
		Elongation	-
		Width, Height	-
		Mesh Composition	-
		Mesh Size	-

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 <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>	<b>Quality Tests on Construction Materials</b>		
	Doc. Code:	DPWH-MTR-01	
	Revision No.	00	
	Date	OCTOBER 2020	
	Page No.		Page 31 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>84. NET YARN</b>	<b>1714</b>	Capacity	-
		Tensile Strength	ASTM D7179-18
		Elongation	
<b>85. ROPE</b>	<b>1714</b>	Diameter	-
		Tensile Strength	-
		Elongation	-
		Furol Viscosity	ASTM D41M - 11(2016)
<b>86. WATERPROOFING</b> a. Cement-base Waterproofing b. Liquid Waterproofing	<b>1016</b>	Distillation	ASTM D6083M -- 18
		Penetration	
		Matter Soluble in Trichloroethylene	
		Viscosity	
		Volume and Weight Of Solids	
		Elongation	
		Tensile Strength	
		Permeance	
		Water Swelling	
		Adhesion	
		Fungi Resistance	ASTM D6083M -- 18
		Tear Resistance	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**

Revision No. **00**

Date **OCTOBER 2020**

Page No. **Page 32 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (OPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
87. SPRAYED CEMENTITIOUS FIREPROOFING MATERIALS	1055	Low Temperature Flexibility	
		Dry Density, Minimum Average	ASTM E605M-19
		Bond Strength, min.	ASTM E736M-19
		Compression, 10% Deformation	ASTM E761M-92(2020)
		Air Erosion, max.	ASTM E859M-92(2020)
		Corrosion	ASTM E937M-92(2020)
		Deflection	ASTM E759M-92(2020)
		Bond Impact	ASTM E760M-92(2020)
		Flame Spread	
		Smoke Development	ASTM E84-20
88. ASPHALT ROOF SHINGLES	1056	Non-combustibility	ASTM E136-19A
		Mold Resistance	ASTM G21-15
		Behavior on heating: Loss of volatile matter Sliding of granular surfacing	ASTM D228M -- 19a
		Wind Resistance	ASTM D3161M - 20
		Fire Resistance	ASTM E108 -- 20a
89. UNDERLAYMENT	1056	Granule Adhesion	ASTM D4977M - 20
		Tear Strength	ASTM D226M -- 17 ASTM D4869M -- 16a
		Breaking Strength	ASTM D6757M - 18

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 33 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
<b>90. ASPHALT ROOF CEMENT</b>	<b>1056</b>	Pliability	ASTM D4586M -- 07(2018)
		Loss on Heating	
		Liquid Water Transmission	
		Dimensional Stability	
		Roll Width	
		Roll Area	
		Behavior on Heating	
		Saturation Percent of Felt	
		Uniformity	
		Workability	
<b>91. GLASS FIBER REINFORCED CONCRETE (GFRG) COMPOSITES</b>	<b>1054</b>	Pliability	ASTM C1230-96(2015) ASTM C109M-20b ASTM C947-03(2016) ASTM D2583-13a/ASTM D785-08(2015) ASTM D256-10(2018) ASTM E84-20 ASTM D696-16
		Behavior at Given Temperature	
		Tension Test	
		Compressive Strength	
		Flexural Strength	
		Hardness	
		Impact Resistance	
		Surface Burning	
		Thermal Expansion	

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 34 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Humidified Deflection	ASTM C473-19
		Weather Resistance	ASTM G152-13
		Glass Fiber Content	ASTM C1229-94(2015)
		Zirconia Content	
	1054	Length	
		Density	
		Tensile Strength	PCI MNL-130 (2009)
		Young's Modulus	ASTM C1666M-08(2015)
		Elongation	
	1054	Compound Type	
		Polymer Type	
		Solids	
		pH	
		Appearance	PCI MNL-130 (2019)
		Minimum Film-Formation Temperature	
		Ultraviolet Resistance	
		Alkali Resistance	
94. ZINC COATING (GALVANIZING)	1058, 1730	Zinc Coating Test	ASTM B6-18

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 35 of 40**

<b>MATERIALS OR PRODUCT</b>	<b>ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)</b>	<b>TESTS TO BE PERFORMED</b>	<b>TEST METHOD</b>
<b>95. POWDER COATING</b>	<b>1058, 1730</b>	Gloss Test	ASTM D523-14(2018)
		Bending Test	ASTM D522M-17
		Hardness Test	ASTM D3363-20
		Cross Hatch Adhesion Test	ASTM D3359-17
		Chemical Resistance Test	ASTM D1308-02(2013)
<b>96. SEALINGS AND GASKETS</b>	<b>1058, 1602</b>	Impact Test	ASTM D2794-93(2019)
		Salt Spray Corrosion Test	ASTM B117-19
		Tension Strength Test	
		Tensile Modulus	
		Elongation	ASTM D412-16
<b>97. FENDER – ELASTOMER (EXTRUDED, MOLDED, PNEUMATIC AND HYDRO- PNEUMATIC)</b>	<b>1403</b>	Abrasion Resistance	
		Resilience	
		Compression Set	
		Durometer Hardness	ASTM D2240-15e1
		Tensile Strength	ASTM D412-16
		Elongation	
		Tear Strength	ASTM D624-00(2020)
		Water Absorption	ASTM D471-16a
		Heat Resistance	ASTM D1667-17

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DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 36 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
98. FENDER - FOAM CORE (FOAM-FILLED FENDER)	1403	Ozone Resistance	ASTM D1171-18
		Low Temperature Impact Resistance	ASTM D1229-03(2019)
		Density	ASTM D1667-17
		Tensile strength	ASTM D3575-20/ASTM D412-16
		Elongation (ultimate)	ASTM D3575-20/ASTM D412-16
		Water absorption percent volume after 24-hour exposure	ASTM D1667-17
		25 percent compressive set	ASTM D1667-17
		50 percent compressive set	ASTM D3575-20
		Shore A hardness	ASTM D2240-15e1
		Tensile strength	ASTM D412-16
99. ELASTOMER (FOAM-FILLED FENDER)	1403	Elongation (Ultimate)	ASTM D412-16
		Tear Strength	ASTM D470-13
		Flex life (Ross)	ASTM D1052-09(2019)
		Abrasion resistance (NBS)	ASTM D1630-16
		Pour Point	
100. JOINT FILLER/SEALANT	B.26, 900, 1018, 1023, 1712, 1720, 1728	Penetration	ASTM D5329-20
		Flow	
		Bond	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code: **DPWH-MTR-01**  
Revision No. **00**  
Date **OCTOBER 2020**  
Page No. **Page 37 of 40**

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
101. BACKER MATERIAL	1046, 1728	Density Tensile Strength Water Absorption Compression Deflection Force Compression Recovery Heat Resistance Maximum Shrinkage	ASTM D5249-10(2016)
102. FRAMES, GRATINGS, COVERS, LADDER RUNGS AND CORRUGATED METAL	1720	Tensile Strength Yield Point Elongation	ASTM A27M-20 AASHTO M 105-09 ASTM A36M-19 AASHTO M 111M-19 ASTM A123M-17
103. CHAIN LINK FENCE FABRIC	B.20	Weight of Coating Softening Point Filler (Ash) Fineness of Filler Specific Gravity Penetration	AASHTO T65M-19 (ASTM A90M- 13(2018))/AASHTO T213M-19 (ASTM A428M-10(2019)) ASTM D36M-14(2020) ASTM D2415-20 ASTM D546-17 ASTM D71-94(2019) AWWA C203-15
104. COAL TAR ENAMEL	1602		

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.




DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS

Quality Tests on Construction Materials

Doc. Code:	DPWH-MTR-01
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 38 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		High-temperature Test	
		Low-temperature Test	
		Impact Test	
		Peel Test	
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
105. CERAMIC TILES	1018	Abrasion Resistance -- through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance -- through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
106. GRANITE TILES	1018	Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance -- through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance -- through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7
		Abrasion Resistance -- through body	ISO 10545-6
		Water Absorption	ASTM C373/ISO 10545-3
		Chemical Resistance	ASTM C650/ISO 10545-13
		Break Strength	ASTM C648/ISO 10545-4
		Stain Resistance	ASTM C1378/ISO 10545-14
		Abrasion Resistance - Glazed	ASTM C1027/ISO 10545-7

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 <b>DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</b>	<b>Quality Tests on Construction Materials</b>			Doc. Code:	DPWH-MTR-01
				Revision No.	00
				Date	OCTOBER 2020
				Page No.	Page 39 of 40

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
107. AGGREGATE RAMMED COLUMN	808	Static Axial Compressive Load	D1143M - 20
108. CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPES	1002	Dimension	ASTM D2846M -- 19a
		Density	
		Melt Index	
		Flexural Modulus	
		Tensile Strength	
		Slow Crack Growth Resistance	
109. SHEATHING - CORRUGATED G.I. SHEET	1015	Hydrostatic Strength Test	ASTM A761M -- 18
		Sulfur	
		Carbon	
		Manganese	
		Phosphorus	
		Silicon	
		Yield Strength	
		Tensile Strength	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Quality Tests on Construction Materials**

Doc. Code:	<b>DPWH-MTR-01</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 40 of 40</b>

MATERIALS OR PRODUCT	ITEMS OF WORK (DPWH STANDARD SPECIFICATIONS, VOL. III, 2019 EDITION)	TESTS TO BE PERFORMED	TEST METHOD
		Elongation	ASTM A653M - 20
		Yield Strength	
		Elongation	
		Bending	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 1 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
<b>SOILS AND STABILIZATION</b>			
Standard Method of Test for Particle Size Analysis of Soils	T 88-19		
Standard Method of Test for Determining the Liquid Limit of Soils	T 89-13 (2017)		
Standard Method of Test for Determining the Plastic Limit and Plasticity Index of Soils	T 90-16		
Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54 kg (10 lb) Rammer and a 457 mm (18 in) Drop	T 180-18		
Standard Method of Test for Density of Soil In-Place by the Sand-Cone Method	T 191-14 (2018)	D1556M-15e1	
Standard Method of Test for Determination of Organic Content in Soils by Loss on Ignition	T 267-86 (2018)		
Standard Method of Test for The California Bearing Ratio	T 193-13 (2017)	D1883-16	
Standard Method of Test for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	T 96-02 (2015)	C131M-14	
Standard Method of Test for Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop	T 99-18		
Standard Test Method for Water-Soluble Sulfate in Soil		C1580-15	
Standard Test Method for Mechanical Cone Penetration Testing of Soils		D3441-16	
Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft <sup>3</sup> (2,700 kN-m/m <sup>3</sup> ))		D1557-12e1	
Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis		D6913M-17	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 2 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils		D4318-17e1	
Standard Method of Test for Grain – Size Analysis for Granular Soil Materials	T 311-00 (2019)		
Standard Method of Test for Laboratory Determination of Moisture Content of Soils	T 265-15 (2019)		
Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass		D2216-19	
Standard Method of Test for One – Point Method for Determining Maximum Dry Density and Optimum Moisture	T 272-18		
Standard Method of Test for Specific Gravity of Soils	T 100-15 (2019)		
Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer		D854-14	
Standard Method of Test for Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test	T 176-17		
Standard Method of Test for Determination of Water Content of Soil by Direct Heating		D4959-16	
Standard Method of Test for Total Evaporable Moisture Content of Aggregate by Drying	T 255-00 (2017)	C566-19	
Standard Method of Test for Determination of Moisture in Soils by Means of a Calcium Carbide Gas Pressure Moisture Tester	T 217-14 (2018)		
Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft <sup>3</sup> (600 kN-m/m <sup>3</sup> ))		D698-12e2	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 3 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Method of Test for Shrinkage Factors of Cohesive Soils by the Water Submersion Method		D4943-18	
Standard Test Method for Standard Penetration Test (SPT) and Split -Barrel Sampling of Soils		D1586M-18	
Standard Test Method for Water-Soluble Sulfate in Soil		C1580-15	
<b>AGGREGATES</b>			
Standard Method of Test for Sieve Analysis of Fine and Coarse Aggregates	T 27-14 (2018)	C136M-19	
Standard Method of Test for Materials Finer Than 75-micro m (No. 200) Sieve in Mineral Aggregates by Washing	T 11-05 (2018)	C117-17	
Standard Test Method for Relative Density (Specific Gravity) and Absorption of Fine Aggregate	T 84-13 (2017)	C128-15	
Standard Method of Test for Effect of Organic Impurities in Fine Aggregate on Strength of Mortar	T 71-08 (2017)	C87M-17	
Standard Method of Test for Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	T 104-99 (2016)	C88M-18	
Standard Method of Test for Organic Impurities in Fine Aggregates for Concrete	T 21M/T 21-15 (2019)	C40M-20	
Standard Method of Test for Bulk Density ("Unit Weight) and Voids in Aggregates	T 19M-14 (2018)	C29M-17a	
Standard Test Method for Clay Lumps and Friable Particles in Aggregates	T 112-00 (2017)	C142M-17	
Standard Test Method for Relative Density (Specific Gravity) and Absorption of Coarse Aggregate	T 85-14 (2018)	C127-15	
Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	T 96-02 (2019)	C131M-20	
Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate		D5821-13(2017)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page 4 of 31

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Concrete Aggregates		C33M-18	
Standard Specification for Lightweight Aggregates for Structural Concrete		C330M-17a	
Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses		D1241-15	
Standard Test Methods for Deep Foundations Under Static Axial Compressive Load		D1143M-07 (2013)e1	
Standard Specification for Aggregate for Masonry Mortar		C144-18	
Standard Test Methods for Chemical Analysis of Glass Sand		C146-94a (2014)	
Standard Test Methods for Deep Foundation Elements Under Static Axial Compressive Load		D1143M - 20	
<b>CEMENT</b>			
Standard Method of Test for Density of Hydraulic Cement	T 133-19	C188-17	
Standard Method of Test for Fineness of Hydraulic Cement by Air Permeability Apparatus	T 153-20	C204-18	
Standard Method of Test for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste	T 129-14(2018)	C187-16	
Standard Method of Test for Time of Setting of Hydraulic Cement by Vicat Needle	T 131-20	C191-19	
Standard Method of Test for Time of Setting of Hydraulic Cement Paste by Gillmore Needles	T 154-18	C266-18	
Standard Method of Test for Autoclave Expansion of Portland Cement	T 107M-18	C151M-18	
Standard Method of Test for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)	T 106M-18	C109M-20a	
Standard Test Method for Flow of Hydraulic Cement Mortar		C1437-15	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 5 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Method of Test for Air Content of Hydraulic Cement Mortar	T 137-12(2020)	C185-20	
Standard Test Methods for Chemical Analysis of Hydraulic Cement	T 105-20	C114-18	
Standard Practice for Use of Apparatus for the Determination of Length Change of Hardened Cement Paste, Mortar, and Concrete		C490M-17	
Standard Test Methods for Fineness of Hydraulic Cement by the 45-µm (No. 325) Sieve		C430-17	
Standard Specification for Portland Cement	M 85-20	C150M-20	
Standard Specification for Blended Hydraulic Cements	M 240M-20	C595M-20	
Standard Specification for Masonry Cement		C91M-18	
Standard Test Method for Potential Expansion of Portland-Cement Mortars Exposed to Sulfate		C452-19e1	
Standard Test Method for Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution		C1012M-18b	
Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)		C1107M-20	
<b>CONCRETE, WATER, ADMIXTURES AND CURING COMPOUND</b>			
Standard Test Method for Slump of Hydraulic Cement Concrete	T 119M-18	C143M-15a	
Standard Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance	T 197M-11 (2019)	C403M-16	
Standard Method of Test for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete	T 121M-19	C138M-17a	
Standard Test Method for Bleeding of Concrete	T 158-11 (2019)	C232M-14 (2019)	
Standard Method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method	T 152-19		

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	DPWH-MTR-02
Revision No.	00
Date	OCTOBER 2020
Page No.	Page 6 of 31

Description	AASHTO	ASTM	Other
Standard Method of Test for Compressive Strength of Cylindrical Concrete Specimens	T 22M-20	C39M-20	
Standard Method of Test for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	T 97-18	C78M - 18	
Standard Method of Test for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)	T 177-17	C293M-16	
Standard Method of Test for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete	T 24M-15 (2019)	C42M-20	
Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens	T 198-15 (2019)	C496M-17	
Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete	T 160-17	C157M - 17	
Standard Method of Test for Measuring Length of Drilled Concrete Core	T 148-15 (2019)		
Standard Method of Test for Making and Curing Concrete Test Specimens in the Field	T 23-18	C31M-19a	
Standard Practice for Sampling Freshly Mixed Concrete		C172M-17	
Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores		C174M-17	
Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete			ACI 211.1-91(2009)
Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete		C1602M-18	
Standard Test Methods for Chloride Ion in Water		D 512-12	
Standard Test Method of Measurement of Solids in Water		C1603-16	
Standard Specification for Chemical Admixtures for Concrete		C494M-19	
Standard Specification for Chemical Admixtures for Concrete		C494M - 19	
Standard Specification for Air-Entraining Admixtures for Concrete		C260M-10a (2016)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>7</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete		C618-19	
Standard Method of Test for Water Retention by Liquid Membrane-Forming Curing Compounds for Concrete	T 155-13(2017)		
Standard Test Method for Water Loss (from a Mortar Specimen) Through Liquid Membrane-Forming Curing Compounds for Concrete		C156-17	
Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete	M 148-05	C309-19	
Standard Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime		C25-19	
Standard Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone		C110-16e1	
<b>REINFORCING STEEL MATERIALS</b>			
Standard Specification for Deformed and Plain Carbon and Low Alloy-Steel Bars for Concrete Reinforcement	M 31M-19	A615M-18e1	
Steel Bars for Concrete Reinforcement - Specification			PNS 49:2002
Standard Method of Test for Tension Testing of Metallic Materials	T 68M-09	E8M-16ae1	
Standard Method of Test for Mechanical Testing of Steel Products	T 244-18	A370-19e1	
Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement	M 54M-19	A184M-19	
Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement	M 322M-10 (2019)	A996M-16	
Standard Specification for Corrosion-Resistant Coated Dowel Bars	M 254-06 (2019)		
Standard Test Method for Measurement of Fracture Toughness		E1820 - 20e1	
Standard Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products		A751-14a	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 8 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Methods for Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron		E350 - 18	
Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement		A706M-16	
Standard Specification for Epoxy-Coated Steel Reinforcing Bars		A775M-19	
Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars		A934M -19	
Standard Specification for Steel Wire and Welded Wire, Plain and Deformed, for Concrete Reinforcement	M 336M-18		
Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete		A1064M-18a	
Standard Specification for Zinc-Coated Steel Wire Rope and Fittings for Highway Guardrail	M 30-15 (2019)		
Standard Specification for Metallic-Coated Steel Wire Rope and Fittings for Highway Guardrail		A741-11 (2016)	
Standard Test Method for Tension Testing of Wire Ropes and Strand		A931-18	
Standard Specification for Uncoated Stress-Relieved Steel Wire for Prestressed Concrete	M 204M-19	A421M-15	
Standard Specification for Steel Strand, Uncoated Seven-Wire for Concrete Reinforcement	M 203M-20		
Standard Specification for Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete		A416M-18	
Standard Test Methods for Testing Multi-Wire Steel Prestressing Strand		A1061M	
Standard Test Method for Analysis of Carbon and Low-Alloy Steel by Spark Atomic Emission Spectrometry			
<b>STRUCTURAL STEEL</b>			
Standard Specification for Carbon Structural Steel		A36M - 19	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>9</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling		A6M-19	
Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality		A529M - 19	
Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel		A572M - 18	
Standard Specification for High-Strength Low-Alloy Structural Steel, up to 50 ksi [345 MPa] Minimum Yield Point, with Atmospheric Corrosion Resistance		A588M - 19	
Standard Specification for Structural Steel for Bridges		A709M - 15	
Standard Specification for High-Strength Low-Alloy Steel Shapes of Structural Quality, Produced by Quenching and Self-Tempering Process (QST)		A913M-03	
Standard Specification for Structural Steel Shapes		A992M - 20	
Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable		A1008M-20	
Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process		A653M-20	
Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength		A1011M-18a	
Standard Specification for Sampling Procedure for Impact Testing of Structural Steel		A673M-01	
Steel Bars for Concrete Reinforcement – Specification			PNS 49:2020
Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes		A500M - 20	
Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing		A501M-14	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>10</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Hot-Formed Welded and Seamless High-Strength Low-Alloy Structural Tubing		A618M-04 (2015)	
Standard Specification for Cold-Formed Welded and Seamless High-Strength, Low-Alloy Structural Tubing with Improved Atmospheric Corrosion Resistance		A847M - 14	
Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing		A513M-20a	
Standard Specification for High-Strength Low-Alloy Structural Steel		A242M-13 (2018)	
Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates		A283M-18	
Standard Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding		A514M-18e1	
Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength		A1011M-18a	
Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for High-Temperature Service		A216M-18	
Standard Specification for Steel Forgings, Carbon and Alloy, for General Industrial Use		A668M-20a	
Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 PSI Tensile Strength		A307 - 14e1	
Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength		F3125M-19e1	
Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use		A449 - 14	
Standard Specification for Carbon Steel, Alloy Steel, and Stainless Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both		A194M - 20a	
Standard Specification for Carbon and Alloy Steel Nuts		A563 - 15	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS****Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>11</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Hardened Steel Washers Inch and Metric Dimensions		F436M - 19	
Standard Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners, Inch and Metric Series		F959M - 17a	
Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 Mpa Minimum Tensile Strength		F3125M-19e1	
Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware		A153M-16a	
Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications		A193M-20	
Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners		A354-17e2	
Standard Specification for Hex Cap Screws, Bolts and Studs, Steel, Heat Treated, 120/105/90 ksi Minimum Tensile Strength, General Use		A449-14	
Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength		F1554-18	
Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs		F593-17	
Standard Specification for Stainless Steel Nuts		F594-09 (2020)	
Standard Specification for Washers, Steel, Plain (Flat), Unhardened for General Use		F844-07a (2013)	
Standard Specification for General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought		A29M-20	
Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished		A108-18	
Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel		B633-19	
Standard Specification for Turnbuckles, Swaged, Welded, Forged		F1145-05 (2017)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 12 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Turnbuckles and Shackles	M 269-96 (2018)		
Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes		A312M-19	
Standard Specification for Welded Stainless Steel Mechanical Tubing		A554-16	
Standard Specification for Steel Castings, Carbon, for General Application		A27M-20	
Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels		A479M-20	
Standard Specification for Welded and Seamless Steel Pipe Piles		A252M-19	
Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless		A53M-20	
Standard Specification for Steel Castings, High Strength, for Structural Purposes		A148M-20e1	
Standard Specification for High-Strength Low-Alloy Nickel, Copper, Phosphorus Steel H-Piles and Sheet Piling with Atmospheric Corrosion Resistance for Use in Marine Environments		A690M-13a (2018)	
<b>PILES</b>			
Standard Specification for Steel Sheet Piling	M 202M-19	A328M-13a (2018)	
Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel		A572M - 18	
Standard Specification for Steel Castings, High Strength, for Structural Purposes		A148M-20e1	
Standard Test Method for Tensile Properties of Plastics		D638-14	
Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials		D790-17	
Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics		D256-10 (2018)	

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**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 13 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position		D648-18	
<b>SLURRY</b>			
Standard Test Method for Density of Bentonite Slurries		D4380-12	
Standard Test Method for Marsh Funnel Viscosity of Construction Slurries		D6910M-19	
<b>EXPANSION JOINT MATERIALS</b>			
Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction	M 153-20		
Standard Specification for Preformed Sponge Rubber, Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction		D1752-18	
Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements		D6690-15	
Standard Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)	M 213-01 (2019)	D1751-18	
Standard Specification for Preformed Expansion Joint Fillers for Concrete (Bituminous Type)	M 33M-20	D994M-11 (2016)	
Standard Test Methods for Preformed Expansion Joint Fillers for Concrete Construction (Nonextruding and Resilient Types)		D545-19	
<b>CONCRETE HOLLOW BLOCKS AND LOUVERS, ADOBE BLOCKS AND AUTOCLAVED AERATED CONCRETE (AAC) BLOCKS</b>			
Standard Specifications for Loadbearing Concrete Masonry Units		C90-16a	
Standard Specification for Mortar for Unit Masonry		C270-19ae1	
Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units		C140M-20a	
Standard Test Method for Linear Drying Shrinkage of Concrete Masonry Units		C426-16	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>14</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile		C67M-20	
Standard Specifications for Autoclaved Aerated Concrete (AAC)		C1693-11 (2017)	
Standard Specification for Thin-bed Mortar for Autoclaved Aerated Concrete (AAC) Masonry		C1660-10 (2018)	
Standard Specification for Backer Material for Use with Cold- and Hot- Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints.		D5249-10 (2016)	
Standard Specification for Quicklime for Structural Purposes.		C5-18	
Standard Specification for Gypsum		C22M-00 (2015)	
Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement	M322M-10 (2019)	A996M-16	
Standard Specification for Lightweight Aggregates for Insulating Concrete		C332-17	
Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan in Concrete		C618-19	
<b>TIMBER</b>			
Standard Specification for Wood Products	M 168-07 (2020)		
Standard Test Method for Centrifuge Moisture Equivalent of Soils		D425-17	
<b>PRESERVATIVE</b>			
Standard Specification for Preservatives and Pressure Treatment Processes for Timber	M 133-12 (2020)		
<b>GYPSUM BOARD AND ACCESSORIES</b>			
Standard Specification for Gypsum Board		C1396M - 17	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS****Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>15</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Application and Finishing of Gypsum Board		C840-01	
Standard Specification Glass Mat Gypsum Panels		C1658M-19e1	
Standard Specification for Nails for the Application of Gypsum Board		C514-04 (2020)	
Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness		C954-18	
Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs		C1002-18	
Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board		C475M-17	
<b>PAINT, SHELLAC, LACQUER AND VARNISH</b>			
Standard test Method for Density of Liquid Coatings, Inks, and Related Products		D1475-13	
Standard test Methods for Drying, Curing, or Film Formation of Organic Coatings		D1640M-14 (2018)	
Standard Test Methods for Pigment Content of Solvent-Reducible Paints		D2371-19	
Standard Test Method for Volatile Content of Coatings		D2369-10 (2015)e1	
Standard Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage		D1210-05 (2014)	
Specification for Flat Latex Paint			PNS 139
Specification for Semi-gloss Latex Paint			PNS 463
Specification for Semi-gloss Enamel Paint			PNS 225
Specification for Enamel Paint			PNS 226

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>16</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Specification for Alkyd-based Metal Primer			PNS 366
Specification for Epoxy Metal Primer			PNS 2113
Specification for Flatwall Enamel Paint			PNS 227
Specification for Gloss Latex Paint			PNS 462
Specification for Water Based Gloss Roof Paint			PNS 612
Specification for Elastomeric Wall Coating			PNS 2116
Specification for Epoxy Enamel			PNS 2118
Specification for Roof Paint (Water Based, Flat)			PNS 464
Specification for Roof Paint (Portland Cement)			PNS 465
Paints and Varnishes – Clear Gloss Lacquer - Specification			PNS 368:2017
Standard Guide for Clear and Pigmented Lacquers		D333 -01 (2013)	
<b>CARBON FIBER, CARBON FIBER SHEET AND ADHESIVE</b>			
Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials		D3039M-17	
Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers		D7234-19	
Standard Test Methods for Viscosity of Adhesives		D1084-16	
Standard Test Method for Tensile Properties of Plastics		D638-14	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS****Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>17</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials		D790-17	
Standard Test Method for Compressive Properties of Rigid Plastics		D695-15	
Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)		D1002-10 (2019)	
Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers		D7234-19	
Standard Test Method for Compressive Properties of Polymer Matrix Composite Materials with Unsupported Gage Section by Shear Loading		D3410M-16	
Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement		D792-13	
Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens		C39M-20	
<b>PIPE CULVERT AND STORM DRAINS</b>			
Standard Test Methods for Concrete Pipe, Concrete Box Sections, Manhole Sections, or Tile	T 280-14 (2018)	C497-19a	
Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe	M 170-20	C76-19b	
Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain and Sewer Pipe	M 206M-20	C506-19a	
Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe	M 207M-20	C507-19a	
Standard Specification for Nonreinforced Concrete Sewer, Storm Drain and Culvert Pipe	M 86M-20	C14-20	
Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe	M 242M-20	C655-19a	
Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains and Sewers		C1433-19	
Standard Specification for Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers	M 259-20		

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>18</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers with Less Than 2 ft of Cover Subjected to Highway Loadings	M 273-20		
Standard Specification for Perforated Concrete Pipe	M 175M-05 (2020)	C444-17	
Standard Specification for Concrete Drain Tile	M 178M-20	C412-19	
Standard Specification for Porous Concrete Pipe	M 176M-20	C654-19	
Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless		A53M-20	
Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains	M 36M-16 (2020)	A760M-15 (2020)	
Standard Specification for Steel Sheet, Zinc-Coated (Galvanized), for Corrugated Steel Pipe	M 218-03 (2020)		
Standard Specification for Corrugated Steel Pipe, Polymer-Precoated, for Sewers and Drains	M 245-20	A762M-19	
Standard Specification for Steel Sheet, Metallic-Coated and Polymer-Precoated, for Corrugated Steel Pipe	M 246-15 (2019)	A742M-20	
Standard Specification for Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches	M 190-04 (2017)		
Standard Specification for Steel Sheet, Aluminum-Coated (Type 2), for Corrugated Steel Pipe	M 274-87 (2017)		
Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains	M 196-16	B745M-15	
Standard Specification for Corrugated Aluminum Alloy Structural Plate for Field-Bolted Pipe, Pipe-Arches, and Arches	M 219-92 (2017)	B746M-16	
Standard Test Methods for Tension Testing of Metallic Materials		E8M-16ae1	
Standard Specification for Corrugated Polyethylene Drainage Pipe	M 252-20		
Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Outside Diameter		F714-13 (2019)	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS****Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 19 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Class PS46 Poly(Vinyl Chloride) (PVC) Pipe	M 278-15 (2019)		
Standard Specification for Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings		F679-16	
Standard Specification for Poly(Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter	M 304-11 (2019)		
Standard Specification for Ductile Iron Culvert Pipe		A716-08	
Standard Specification for Clay Drain Tile and Perforated Clay Drain Tile		C4-04 (2018)	
Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated		C700-18	
Standard Specification for Vitrified Clay Pipe and Joints for Use in Microtunneling, Sliplining, Pipe Bursting, and Tunnels		C1208M-18	
Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride)(PVC) Composite Sewer Piping	M 264-03	D2680-01 (2014)	
Standard Specification for Cast Iron Soil Pipe and Fittings		A74-20	
Standard Specification for Gray Iron Castings		A48M-03 (2016)	
Standard Specification for Ferritic Malleable Iron Castings		A47M-99 (2018)e1	
Standard Specification for Ductile Iron Castings		A536-84 (2019)e1	
Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems		D2846M - 19a	
Standard Specification for Corrugated Steel Structural Plate, Zinc-Coated, for Field-Bolted Pipe, Pipe-Arches, and Arches		A761M - 18	
<b>PVC WEEPHOLES</b>			
Standard Specification for Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings		D3034 - 16	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>20</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)		D2241 – 15	
Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120		D1785 – 15e1	
Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings		D2665 – 14	
Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite Sewer Piping		D2680 – 01 (2014)	
Standard Specification for Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings		F679 - 16	
Standard Specification for Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings		D2729 – 17	
Standard Specification for Poly(Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter	M 304-11 (2019)		
<b>GABIONS AND MATTRESSES</b>			
Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire		A641M-19	
Standard Specification for Zinc-5% Aluminum-Mischmetal Alloy-Coated Carbon Steel Wire		A856M-03 (2014)	
Standard Specification for Aluminum-Coated (Aluminized) Carbon Steel Wire		A809-08 (2017)	
Standard Specification for Zinc-5% Aluminum (Hot-Dip) Coatings on Iron and Steel Products		A1072M-11 (2020)	
Standard Specification for Metallic Coated Carbon Steel Wire, Coated at Size and Drawn to Size for Mechanical Springs		A764-07 (2017)	
Standard Test Methods and Definitions for Mechanical Testing of Steel Products		A370-19e1	
Standard Specification for Double-Twisted Hexagonal Mesg Gabions and Revet Mattresses (Metallic-Coated Steel Wire or Metallic-Coated Steel Wire With Poly(Vinyl Chloride)(PVC) Coating)		A975-11 (2016)	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS****Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>21</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Method for Determining Geonet Breaking Force		D7179-18	
Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement		D792-13	
Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension		D412-16	
Standard Test Method for Rubber Property – Durometer		D2240-15e1	
Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact		D746-14	
Standard Test Method for Determining Geonet Breaking Force		D7179-18	
<b>FILTER MATERIALS (FABRIC)</b>			
Standard Test Methods for Determining Apparent Opening Size of a Geotextile		D4751-20	
Standard Test Methods for Water Permeability of Geotextiles by Permittivity		D4491M-20	
Standard Test Method for Grab Breaking Load and Elongation of Geotextiles		D4632M-15a	
Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe		D6241-14	
Standard Test Method for Trapezoid Tearing Strength of Geotextiles		D4533M-15	
Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc-Type Apparatus		D4355M-14(2018)	
<b>WATERPROOFING</b>			
Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing		D41M-11 (2016)	
Standard Specification for Liquid Applied Acrylic Coating Used in Roofing		D6083M-18	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>22</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Guide for Design of Built-Up Bituminous Membrane Waterproofing Systems for Building Decks		C981-20	
Standard Specification for Asphalt Used in Damproofing and Waterproofing		D449M-03 (2014)e1	
<b>SPRAYED CEMENTITIOUS FIREPROOFING</b>			
Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members		E605M-19	
Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members		E736M-19	
Standard Test Method for Compressive Strength of Sprayed Fire-Resistive Material Applied to Structural Members		E761M-92 (2020)	
Standard Test Method for Air Erosion of Sprayed Fire-Resistive Materials (SFRMs) Applied to Structural Members		E859M-93 (2020)	
Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material (SFRM) Applied to Structural Members		E937M-93 (2020)	
Standard Test Method for Effect of Deflection on Sprayed Fire-Resistive Material Applied to Structural Members		E759M-92 (2020)	
Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Material Applied to Structural Members		E760M-92 (2020)	
Standard Test Method for Surface Burning Characteristics of Building Materials		E84-20	
Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C		E136-19A	
Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi		G21-15	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>23</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Methods for Fire Tests of Building Construction and Materials		E119-20	
<b>ASPHALT ROOF SHINGLES, ASPHALT ROOF CEMENT AND UNDERLAYMENT</b>			
Standard Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets and Shingles Used in Roofing and Waterproofing		D228M – 19a	
Standard Test Method for Wind Resistance of Steep Slope Roofing Products (Fan-Induced Method)		D3161M - 20	
Standard Test Methods for Fire Tests of Roof Coverings		E108 – 20a	
Standard Test Method for Granule Adhesion to Mineral-Surfaced Roofing by Abrasion		D4977M - 20	
Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing		D226M - 17	
Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing		D4869M – 16a	
Standard Specification for Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing		D6757M - 18	
Standard Specification for Asphalt Roof Cement, Asbestos-Free		D4586M – 07(2018)	
<b>GLASS-FIBER-REINFORCED CONCRETE (GFRC) COMPOSITES, ALKALI-RESISTANT GLASS FIBERS AND PLYMER CURING ADMIXTURE</b>			
GFRC QC Manual: Manual for Quality Control of Plants and Production of Glass Fiber Reinforced Concrete Products			PCI MNL-130-2009
Standard Test Method for Performing Tension Tests on Glass-Fiber Reinforced Concrete (GFRC) Bonding Pads		C1230-96 (2015)	
Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50 mm] Cube Specimens)		C109M-20b	
Standard Test Method for Flexural Properties of Thin-Section Glass-Fiber-Reinforced Concrete (Using Simple Beam With Third-Point Loading)		C947-03 (2016)	
Standard Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor		D2583-13a	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>24</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials		D785-08 (2015)	
Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics		D256-10 (2018)	
Standard Test Method for Surface Burning Characteristics of Building Materials		E84-20	
Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer		D696-16	
Standard Test Methods for Physical Testing of Gypsum Panel Products		C473-19	
Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials		G152-13	
Standard Test Method for Determination of Glass Fiber Content in Glass Fiber Reinforced Concrete (GFRC) (Wash-Out Test)		C1229-94 (2015)	
Standard Specification for Alkali Resistant (AR) Glass Fiber for GFRC and Fiber-Reinforced Concrete and Cement		C1666M-08 (2015)	
Standard Specification for Pigments for Internally Colored Concrete		C979M-16	
<b>POWDER AND ZINC (GALVANIZING) COATING</b>			
Standard Specification for Zinc		B6-18	
Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware		A153M-16a	
Standard Guide for Testing Coating Powders and Powder Coatings		D3451-06 (2017)	
Standard Test Method for Specular Gloss		D523-14 (2018)	
Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings		D522M-17	
Standard Test Method for Film Hardness by Pencil Test		D3363-20	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.

**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS****Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>25</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Methods for Rating Adhesion by Tape Test		D3359-17	
Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes		D1308-02 (2013)	
Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)		D2794-93 (2019)	
Standard Practice for Operating Salt Spray (Fog) Apparatus		B117-19	
Standard Method of Test for Mass [Weight] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings	T 65M-19	A90M-13 (2018)	
Standard Method of Test for Mass [Weight] of Coating on Aluminum-Coated Iron or Steel Articles	T 213M-19	A428M-10 (2019)	
<b>SEALINGS AND GASKETS</b>			
Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension		D412-16	
Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials		G155-13	
<b>JOINT FILLER/SEALANT</b>			
Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type)	M 33M-20		
Standard Specification for Preformed Sponge Rubber, Cork, and Recycled Rubber Expansion Joint Fillers for Concrete Paving and Structural Construction	M 153-06		
Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements		D6690-15	
Standard Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)	M 213-05		
Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements		D2628-91 (2016)	
Standard Test Methods for Sealants and Fillers, Hot-Applied, for Joints and Cracks in Asphalt Pavements and Portland Cement Concrete Pavements		D5329-20	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>26</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Test Method for Electromagnetic Shielding Effectiveness of Durable Rigid Wall Relocatable Structures		E1851-15	
<b>BACKER MATERIAL</b>			
Standard Specification for Backer Material for Use with Cold-and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints		D5249-10 (2016)	
<b>FRAMES, GRATINGS, COVERS, LADDER RUNGS AND CORRUGATED METAL</b>			
Standard Specification for Steel Castings, Carbon, for General Application		A27M-20	
Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains	M 36 -16		
Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal		D1187M-97 (2018)	
Standard Specification for Sewer and Manhole Brick (Made From Clay and Shale)		C32-13 (2017)	
Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)		C62-17	
Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products		A123M-17	
Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal		D1187M-97 (2018)	
Standard Specification for Gray Iron Castings	M 105-09		
Standard Specification for Carbon Structural Steel		A36M-19	
Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products	M 111M-19		
Standard Specification for Deformed and Plain Carbon and Low-Alloy Steel Bars for Concrete Reinforcement	M 31M-19		
Standard Specification for Sheet Materials for Curing Concrete	M 171-05		

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>27</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Precast Reinforced Concrete Manhole Sections	M 199M-17		
Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals		D3212-07 (2020)	
Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains	M 196-16		
Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals		D3212-07 (2020)	
Standard Specification for Asbestos-Cement Underdrain Pipe		C508M-00 (2015)	
<b>UNDERDRAINS AND FLAP GATES</b>			
Standard Test Method for External Pressure Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe		D2924-12 (2017)	
Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings		A126-04 (2019)	
Standard Specification for Copper-Silicon Alloy Rod, Bar and Shapes		B98M-13 (2019)	
Standard Specification for Ductile Iron Castings		A536-84 (2019)e1	
Standard Specification for Copper Alloy Sand Castings for General Applications		B584-14	
Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs		F593-17	
Standard Test Method for Tensile Properties of Plastics		D638-14	
Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials		D790-17	
Standard Test Method for Compressive Properties of Rigid Plastics		D695-15	
Standard Test Method for Water Absorption of Plastics		D570-98 (2018)	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>28</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Practice for Outdoor Weathering of Plastics		D1435-13	
Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate		B209-14	
Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets		C443-20	
Standard Test Method for Tensile Properties of Polymer Matrix Composite Materials		D3039M-17	
<b>STAINLESS STEEL</b>			
Standard Specification for Stainless Steel Bars and Shapes		A276M-17	
Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.		A479M-20	
Standard Test Methods and Definitions for Mechanical Testing of Steel Products		A370-19e1	
Standard Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products		A751-14a	
Standard Specification for General Requirements for Stainless Steel Bars, Billets, and Forgings		A484M-20b	
Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications		A240M-20	
Standard Hardness Conversion Tables for Metals Relationship Among Brinell Hardness, Vickers Hardness, Rockwell Hardness, Superficial Hardness, Knoop Hardness, Scleroscope Hardness, and Leeb Hardness		E140-12B (2019)e1	
<b>ALUMINUM</b>			
Standard Specification for Aluminum-Alloy 6061-T6 Standard Structural Profiles		B308M-20	
Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes		B221-14	
Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire		B211M-19	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>29</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate		B209-14	
Standard Specification for Aluminum-Alloy Sand Castings		B26M-18e1	
Standard Practice for Operating Salt Spray (Fog) Apparatus		B117-19	
Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains	M 196-16	B745M-15	
Corrosion in Natural Environments Exfoliation Corrosion Testing of 7075 and 7178 Aluminum Alloys—Interim Report on Atmospheric Exposure Tests			STP 558-1974
Standard Test Methods for Tension Testing Wrought and Cast Aluminum- and Magnesium-Alloy Products		B557 - 15	
Standard Specification for Aluminum and Aluminum – Alloy Rivet and Cold – Heading Wire and Rods		B316M-15	
Standard Practice for Extrusion Press Solution Heat Treatment for Aluminum Alloys		B807M-20	
<b>FENDER - ELASTOMER (EXTRUDED, MOLDED, PNEUMATIC AND HYDRO-PNEUMATIC)</b>			
Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension		D412-16	
Standard Test Method for Rubber Property—Durometer Hardness		D2240-15e1	
Standard Test Method for Rubber Deterioration—Surface Ozone Cracking Outdoors (Triangular Specimens)		D1171-18	
Standard Test Method for Rubber Property—Compression Set at Low Temperatures		D1229-03 (2019)	
Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers		D624-00 (2020)	
Standard Test Method for Rubber Property—Effect of Liquids		D471-16a	
Standard Test Method for Rubber—Deterioration in an Air Oven		D573-04 (2019)	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	Page <b>30</b> of <b>31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Standard Specification for Flexible Cellular Materials—Poly (Vinyl Chloride) Foam (Closed-Cell)		D1667-17	
Standard Test Methods for Flexible Cellular Materials Made from Olefin Polymers		D3575-20	
Standard Test Methods for Crosslinked Insulations and Jackets for Wire and Cable		D470-13	
Standard Test Method for Measuring Rubber Deterioration – Cut Growth Using Ross Flexing Apparatus		D1052-09 (2019)	
Standard Test Method for Rubber Property – Abrasion Resistance (Footwear Abrader)		D1630-16	
Standard Classification System for Rubber Products in Automotive Applications		D2000-18	
Ships and Marine Technology – Floating Pneumatic Rubber Fenders – Part 2: Low Pressure			ISO 17357-2:2014
Rubber, Vulcanized or Thermoplastic – Determination of Compression Set – Part 1: At Ambient or Elevated Temperatures			ISO 815-1:2019
<b>COAL TAR ENAMEL</b>			
Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)		D36M - 14(2020)	
Standard Test Method for Coking Value of Tar and Pitch (Alcan)		D2415-20	
Standard Test Method for Sieve Analysis of Mineral Filler for Asphalt Paving Mixtures		D546-17	
Standard Test Method for Relative Density of Solid Pitch and Asphalt (Displacement Method)		D71 - 94(2019)	
Standard for Coal-Tar Protective Coatings And Linings For Steel Water Pipes			AWWA C203 – 15
<b>CERAMIC/GRANITE TILES</b>			
Standard Test Method for Determining Visible Abrasion Resistance of Glazed Ceramic Tile		C1027-09(Reapproved 2017)	

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.



**DEPARTMENT OF PUBLIC  
WORKS AND HIGHWAYS**

**Reference Standards of  
DPWH Standard  
Specifications for Public  
Works Structures (Volume  
III) 2019**

Doc. Code:	<b>DPWH-MTR-02</b>
Revision No.	<b>00</b>
Date	<b>OCTOBER 2020</b>
Page No.	<b>Page 31 of 31</b>

<b>Description</b>	<b>AASHTO</b>	<b>ASTM</b>	<b>Other</b>
Determination of Resistance to Surface Abrasion of Glazed Tiles			ISO 10545-7:1996
Ceramic Tiles – Part 6; Determination of Resistance to Deep Abrasion for Unglazed Tiles			ISO 10545-6:2010
Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products		C373-18	
Determination of Water Absorption, Apparent Porosity, Apparent Relative Density and Bulk Density			ISO 10545-3
Standard Test Method for Resistance of Ceramic Tile to Chemical Substances		C650-20	
Determination of Chemical Resistance			ISO 10545-13
Standard Test Method for Breaking Strength of Ceramic Tile		C648-20	
Determination of Modulus Rupture and Breaking Strength			ISO 10545-4
Standard Test Method for Determination of resistance to Staining		C1378-20	
Determination of Resistance to Stains			ISO 10545-14

NOTE: Where no standard is shown, refer to the Bureau of Research and Standards (BRS) for guidance.

NOTE: The calendar year indicated for the above standards is the current issue. The parties to construction contracts shall rely on the issue current at the time of bidding.





**STANDARD FORMAT FOR ENGINEER'S  
CERTIFICATE AND INSPECTION REPORT OF  
CASTING**





**DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**  
**<IMPLEMENTING OFFICE>**  
**<ADDRESS OF IMPLEMENTING OFFICE>**

**ENGINEER'S CERTIFICATE**

Date: \_\_\_\_\_

EC No.: \_\_\_\_\_

Contract ID : \_\_\_\_\_  
Contract Description : \_\_\_\_\_  
Name of Contractor : \_\_\_\_\_  
Description : \_\_\_\_\_  
Contract Cost : \_\_\_\_\_  
City/Municipality : \_\_\_\_\_  
Station Limits : \_\_\_\_\_  
Quantity : \_\_\_\_\_

This is to certify that <Material used> in <Item of work> on the above project was found to be <Remarks>.

\_\_\_\_\_  
**Project Engineer or**  
**Consultant's Resident Engineer**  
Accreditation No.: \_\_\_\_\_

\_\_\_\_\_  
**Materials Engineer or**  
**Consultant's QA Engineer**  
Accreditation No.: \_\_\_\_\_





ENGINEER'S CERTIFICATE

Date \_\_\_\_\_  
Contract No. \_\_\_\_\_  
Contract Description \_\_\_\_\_  
Name of Contractor \_\_\_\_\_  
Description \_\_\_\_\_  
Contract Cost \_\_\_\_\_  
City/Township \_\_\_\_\_  
Stationing \_\_\_\_\_  
Quantity \_\_\_\_\_

This is to certify that <insert text>  
found to be <insert text>  
<Insert of work> on the above project was

Materials Engineer or  
Consultant's QA Engineer  
At the location \_\_\_\_\_

Project Engineer or  
Consultant's Resident Engineer  
At the location \_\_\_\_\_



**DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS**

**<IMPLEMENTING OFFICE>**

**<ADDRESS OF IMPLEMENTING OFFICE>**

Control No: \_\_\_\_\_

Date: \_\_\_\_\_

**INSPECTION REPORT FOR CASTING**

CONTRACT ID	:	
CONTRACT DESCRIPTION	:	
NAME OF CONTRACTOR	:	
ITEM NO.	:	
DESCRIPTION	:	
QUANTITY	:	
DATE OF CASTING	:	
LOCATION/PRECAST YARD	:	

Activity	Satisfactory	Unsatisfactory	Remarks
Check all members/reinforcements are correct size, dimensions, location and elevation.			
Check specified concrete grade (_____) was utilized.			
Check cylinder samples were promptly demoulded and placed in curing tank; Record Date: _____			
Check pour was continuous without interruption.			
Check specified finishing was complete and correct.			
Check correct curing method was promptly initiated.			
Check strength of (___th) day cylinder samples			
Check form striking satisfactory and record date : _____			
Check concrete surface free of cold joints, honeycomb, exposed rebar or embedded timbers.			
Check no cracks			
Check concrete surface within spec.tolerances and free of off-sets,bends & dips			
Check minor surface repairs complete and compliant.			

**DPWH PROJECT ENGINEER or  
PROJECT INSPECTOR**

Accreditation No. \_\_\_\_\_



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
STATEMENT OF WORK  
<ADD ON OF IMPLEMENTATION>

INSPECTION REPORT FOR CASTING

CONTRACT ID	
CONTRACT DESCRIPTION	
NAME OF CONTRACTOR	
ITEM NO.	
DESCRIPTION	
QUANTITY	
DATE OF CASTING	
LOCATION/PROJECT YARD	

Remarks	Unsatisfactory	Satisfactory	Activity
			Check all reinforcement bars correct size, dimensions, location and location.
			Check specified concrete grade and curing method.
			Check cylinder samples were properly demolded and placed in hot tank, Record.
			Check pour was continuous without interruption.
			Check specified finishing was complete and smooth.
			Check curing method was properly utilized.
			Check strength of (th) day cylinder sample.
			Check formwork satisfactory and secure.
			Check concrete surface free of cold joints, honeycombs, exposed rebar or embedded debris.
			Check no cracks.
			Check concrete surface within specified range and free of oil, wax, dirt, chips.
			Check minor surface repairs complete and satisfactory.

APPROVED BY: PROJECT INSPECTOR  
DATE: \_\_\_\_\_



**CONTRACTOR'S  
LOGO**

**NAME OF CONTRACTOR**  
**<OFFICE ADDRESS OF THE CONTRACTOR>**  
**<CONTACT NO. OF OFFICE OF THE CONTRACTOR>**

Control No: \_\_\_\_\_

Date: \_\_\_\_\_

**INSPECTION REPORT FOR CASTING**

CONTRACT ID	:	
CONTRACT DESCRIPTION	:	
NAME OF CONTRACTOR	:	
ITEM NO.	:	
DESCRIPTION	:	
QUANTITY	:	
DATE OF CASTING	:	
LOCATION/PRECAST YARD	:	

Activity	Satisfactory	Unsatisfactory	Remarks
Check all members/reinforcements are correct size, dimensions, location and elevation.			
Check specified concrete grade (_____) was utilized.			
Check cylinder samples were promptly demoulded and placed in curing tank; Record Date: _____			
Check pour was continuous without interruption.			
Check specified finishing was complete and correct.			
Check correct curing method was promptly initiated.			
Check strength of (____) day cylinder samples			
Check form striking satisfactory and record date : _____			
Check concrete surface free of cold joints, honeycomb, exposed rebar or embedded timbers.			
Check no cracks			
Check concrete surface within spec.tolerances and free of off-sets,bends & dips			
Check minor surface repairs complete and compliant.			

**CONTRACTOR'S PROJECT  
ENGINEER**

Accreditation No. \_\_\_\_\_

CONTRACTOR'S  
LOGO

<CONTACT NO. OF OFFICE OF THE CONTRACTOR>  
<OFFICE ADDRESS OF THE CONTRACTOR>  
NAME OF CONTRACTOR

Control No. \_\_\_\_\_ Date: \_\_\_\_\_

# INSPECTION REPORT FOR CASTING

CONTRACT ID	
CONTRACT DESCRIPTION	
NAME OF CONTRACTOR	
ITEM NO.	
DESCRIPTION	
QUANTITY	
DATE OF CASTING	
LOCATION/PRECAST YARD	

Activity	Satisfactory	Unsatisfactory	Remarks
Check if temperature measurements are taken at the dimension, location and exposure.			
Check the fresh concrete work ( ) was taken.			
At least 3 test samples were promptly taken and placed in curing tank. Record Date.			
At least 3 test samples were promptly taken and placed in curing tank. Record Date.			
Check if curing was continuous without interruption.			
Check specified finishing was complete and correct.			
Check correct curing method was promptly initiated.			
Check if within 14 days of curing.			
Check if formwork satisfactory and removed.			
Check concrete surface free of cold joints.			
Check if exposed repair is embedded.			
Check if repair is adequate.			
Check if repair is adequate within 14 days.			
Check if surface and free of oil, grease & dirt.			
Check if surface repair is complete and correct.			

CONTRACTOR'S PROJECT  
ENGINEER  
Accreditation No. \_\_\_\_\_