



Mactan Economic Zone
Lapu-Lapu City

PROJECT TITLE : PROPOSED REHABILITATION OF MEZ SECONDARY ROADS USING INSTAPAVE SURFACE TREATMENT AT MACTAN ECONOMIC ZONE

LOCATION : GATE 1 TO COR. 3RD ST., 3RD ST. TO COR. 2ND AVE., GATE 3 TO COR. 3RD ST., 2ND ST. (1ST AVE. TO COR. 2ND AVE.), 3RD ST., (COR. 3RD AVE. TO SUNPLEATS AREA), 3RD AVE., (COR. 3RD ST. TO COR. 4TH ST.), & 1 LANE OF 4TH ST. (COR. 1ST AVE. TO COR. 2ND AVE.), MACTAN ECONOMIC ZONE, BGRY. IBO, LAPU-LAPU CITY

APPROVED BUDGET OF CONTRACT : PHP 9,907,867.02

I. BACKGROUND

The PEZA through the approved allocation of its Corporate Operating Budget (COB) for C.Y 2024 intends to apply the sum of Nine Million Nine Hundred Seven Thousand Eight Hundred Sixty-Seven Pesos and 02/100 Centavos (Php 9,907,867.02) for project “Proposed Rehabilitation of MEZ Secondary Roads using Instapave Surface Treatment” through the guidelines as per R.A 9184 and its Implementing Rules and Regulations.

A. RATIONALE

Instapave is a technology used for improving road surface condition. Physical and chemical properties of the materials in the Instapave technology with its performance under local conditions such as temperature, humidity and road usage were verified to have yielded positive results. A price/cost comparison with the conventional method of pavement preservation, like asphalt overlay, indicates a considerable savings if Instapave technology is utilized.

To provide a well-maintained road network for registered business enterprises, visitors, guests, and business partners of PEZA Mactan Economic Zone duly established by Proclamation No.1811, it is highly recommended to perform regular road maintenance and repair that ensures the safety of all road users inside MEZ through the aid of a qualified/professional using Instapave Surface Treatment to roads service firm (“CONTRACTOR”, for brevity) which can provide personnel, equipment, supplies, materials and technical expertise for the landscaping in MEZ.





II. GENERAL REQUIREMENTS

A. SCOPE

The CONTRACTOR will provide technical supervision, skilled personnel, tools, equipment and suitable highest quality materials within the specified period to complete the project on the following locations:

- GATE 1 TO COR. 3RD ST.
- 3RD ST. TO COR. 2ND AVE.
- GATE 3 TO COR. 3RD ST.
- 2ND ST. (1ST AVE. TO COR. 2ND AVE.)
- 3RD ST., (COR. 3RD AVE. TO SUNPLEATS AREA)
- 3RD AVE., (COR. 3RD ST. TO COR. 4TH ST.)
- 1 LANE OF 4TH ST. (COR. 1ST AVE. TO COR. 2ND AVE.)

B. MOBILIZATION / DEMOBILIZATION

The contractor is responsible in the mobilization/demobilization of the following equipment used in the project:

- i. Slurry Truck
- ii. Cargo Truck (minimum 2-5 MT)
- iii. Pneumatic tire roller (minimum 10 MT)
- iv. Payloader (minimum 1.5m³)

The contractor must have the necessary experience and expertise in the mobilization/demobilization of heavy equipment's used in the project.

All construction heavy equipment will be tested and inspected in accordance with the requirements of Section 10 of D.O No. 13, before it will be transported.

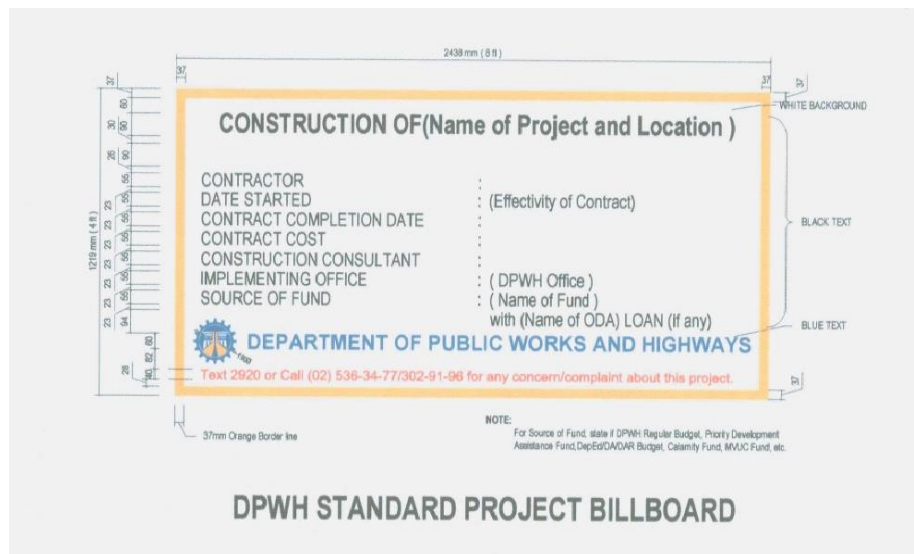
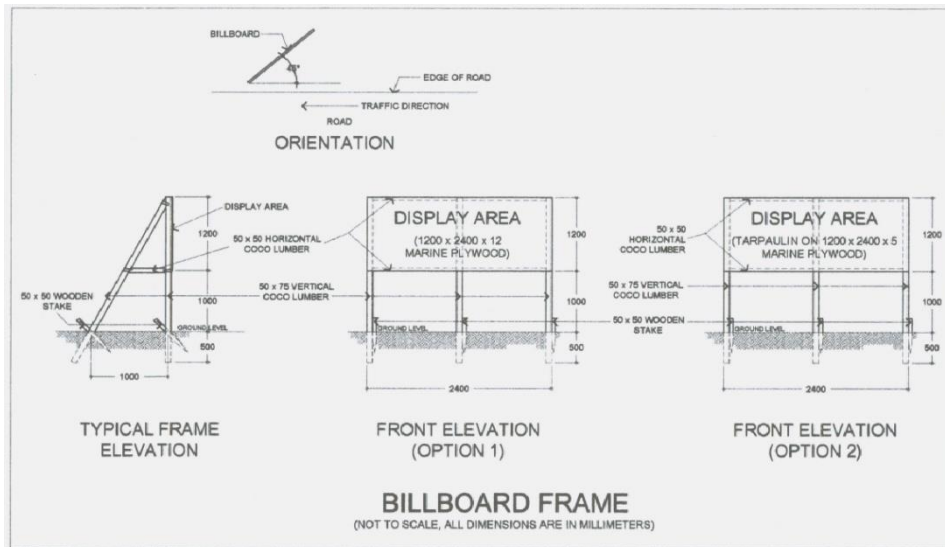
Mobilization shall include transportation to the site of contractor's plant, materials, equipment, workers and furnishings and temporary facilities.

Demobilization shall include hauling and disposal of construction debris/excess materials, removal from the site of contractor's equipment and all temporary facilities. Demobilization also includes clean-up of the site after completion of the contract work.



C. PROJECT BILLBOARD

The CONTRACTOR shall install as per required, one (1) standard billboard size of (1200mm x 2400mm/4ft. 8ft.) and shall be strictly enforced. Project billboard shall be installed for government information projects to notify the public of the implementation of the project and to advise the road users of the on-going construction.



PEZA Name and Logo



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D. CONSTRUCTION SAFETY AND HEALTH

The CONTRACTOR shall submit appropriate Construction Safety and Health Program (CSHP) in accordance with DOLE D.O. no. 13, series of 1998. The proposed CSHP shall be approved by DOLE-BWC and shall submit a copy to the Authority.

The CONTRACTOR shall provide appropriate personal protective equipment. For general construction work, the required PPE for all workers but not limited to shall be safety helmet, safety gloves, safety shoes, safety vests, and protective shields and barriers whenever necessary by reason of the hazardous work process or environment.

Provide safety and warning signages. These will be posted in prominent positions at strategic location visible as far as possible.

All necessary steps shall be taken to prevent danger to persons arising from the fire or explosion from leakage or accumulation of gas or vapor; and from flooding from uncapped water mains, sewers and/or culverts.

All entrance/exits to and from the construction sites shall be properly protected so as prevent any danger to persons engaged in the road asphalt overlay activities using such entrances/exits in the performance of their work.

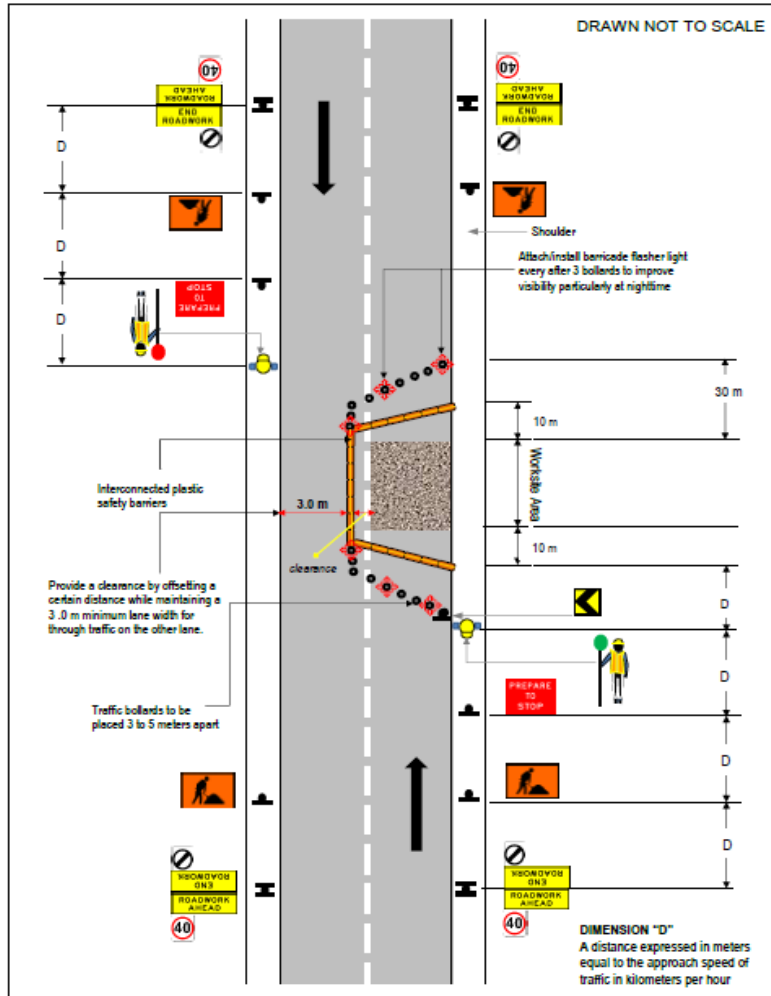
E. TRAFFIC MANAGEMENT

The contractor is responsible in the implementation of the traffic management procedures to ensure the safety of the road workers, road users, and manage potential hazards associated with the traffic environment during the project.





LAYOUT 7 (Case 1) – Part Lane Closure – 2 Lane, 2 Way Road, High Speed, Long Term



III. SITE PREPARATION

A. SITE PREPARATION

1. All existing structures and obstructions shall be removed and hauled outside MEZ.
2. Use every possible precaution to prevent damage to existing conditions to remain such as structures, utilities, walks on or adjacent to the site of the Work.
4. Provide barricades, fences, or other barriers to protect existing conditions to remain from damage during construction.
5. Restoration of affected concrete curbs shall also be included in the project.



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B. MATERIALS

1. SURFACE COURSES (BITUMINOUS TACK COAT- CSB 3 BITUMEN AND INSTAPAVE SYSTEM FOR ROAD SURFACE TREATMENT)

This item shall consist of a blend of Cold Seal Bitumen (CSB), aggregate, water and additives (Instapave Surface Treatment - IST) applied over a prime coated base in accordance with the Plans and Specifications.

The approximate amounts of materials per square meter and sequence of operations for Instapave Surface Treatment (IST) shall be as provided in Table 304A.1.

The quantities given in the above-mentioned table are those of aggregates having a bulk specific gravity of 2.65 as determined by AASHTO T 84 and T 85. Proportionate correction shall be made when the aggregate furnished on the job has a bulk specific gravity above 2.75 or below 2.55. In such case, the corrected amount shall be the product of the quantity shown in the Table and the ratio of the bulk specific gravity of aggregate to 2.65.

The amounts given in the said Table are approximate and the exact amounts shall set by the Engineer. The Engineer, as necessary to fit the conditions, may vary the total amount of bituminous material per square meter, but the total amount of aggregate per square meter, after adjusting for specific gravity, shall not be changed.

Table 304A.1 – Quantities of Materials and Sequence of Operations Using Emulsified Cold Seal Bitumen

Aggregate Grading and Sequence of Operations	IST
Priming: Apply Cold Seal Bitumen Type 1 (CSB-1), L/m ²	0.90- 2.25
Chip Course: Apply Cape Seal Bitumen Type 2 (CSB-2), L/m ²	1.20- 2.00 11.00 – 16.00 (+/- 10%)
Fog Seal: Apply Cold Seal Bitumen Type 3 (CSB-3), L/m ² (Diluted with water at a ratio of 1:1)	1.00
Slurry Course: Apply the mixture of Cold Seal Bitumen (CSB-3), aggregates, mineral filler, water and additives	See Note 1

Note 1 - Depends on the Job Mix Design created by the CSB source in accordance with the International Slurry Surfacing Association:

1. Technical Bulletin 111- Outline Guide Design Procedure for Slurry Seal
2. Technical Bulletin A105 Recommended Performance Guidelines for Emulsified Asphalt Slurry Seal Surface, 1986 (Revised)



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- Technical Bulletin A143 Recommended Performance Guidelines for Polymer Modified Micro-surfacing 1991 or as approved by the Engineer.

304A.2.2 Bituminous Materials

Bituminous material, CSB-1, CSB-2, and CSB-3 (or derivatives) all straight or modified Bitumen emulsions shall conform to the requirements of items 702 and must also conform to the minimum specifications stated in Table 304A.2. Slurry Coarse Mix based on Note 1 shall also conform to the performance specifications set in ISSA Technical Bulletin or must meet the minimum performance properties shown on Table 304A.3.

Table 304A.2- Properties of Cold Seal Bitumen

Properties	Test Method	CSB-1	CSB-2	CSB-3*
Verocity, Saybolt Furol @ 25°C, seconds	ASTM D244	15 - 50	100 - 200	15 - 50
Storage Stability, Settlement (24 hrs), %mass	ASTM D244	1.0 max	1.0 max	1.0 max
Cement Mixing Test, Percentage of Break, %mass	ASTM D244	2.0 max	-	-
Sieve Test, Sample Retained, %mass	ASTM D244	0.10 max	0.10 max	0.10 max
Particle Charge Test	-	Negative	Positive	Positive
Residue by Evaporation, %mass	ASTM D244	60 min	65 min	60 min
Examination of Residue Obtained by Evaporation: -Penetration Number @ 25°C, dmm	ASTM D6	40 – 90	100 – 250	40 – 90
- Ductility @ 25°C, cm	ASTM D1113	40 min	40 min	40 min
- Solubility in Trichloroethylene, %mass	ASTM D2042	97.5 min	97.5 min	97.5 min

*- CSB-3 may be set to achieve specific conditions such as quick set, quick traffic, latex modified or polymer modified emulsions or as approved by the Engineer.

Table 304A.3 - Slurry Coarse Mix Performance Properties

Properties	Test Method	Slurry Coarse
Mix Time (minutes) controllable, min	ISSA T8- 113	3
Consistency Test (cm), range	ISSA T8- 106	2.0 – 3.0
Wet Stripping (% Retained)	ISSA T8 - 114	95%
Wet Tract Abrasion Loss, 1-hour soak ISSA TB - 100 806 g/m (Wear Value)	ISSA TB - 100	806 g/m
Wet Cohesion: 30 mins Minimum set, kg-em 12 60 mins Minimum set, k -cm	ISSA TB- 139	12 20



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304A.2.3 *Aggregates*

The aggregates shall be cleaned, crushed stone, crushed slag, or crushed gravel. Only one type of aggregate shall be used in a project unless alternative types are approved. The gradation for the Cover Coat Aggregates shall conform to Table 304A.4. The gradation for the aggregates to be used in the slurry coarse shall conform to Table 304A.5 and shall be chosen based on the type of application or as approved by the Engineer (or as indicated in Note 1).

Table 304A.4 – Cover Coat Grading Requirements

Sieve Designation	
Standard mm	Alternative U.S Standard
Storage Stability, Settlement (24 hrs), %mass	ASTM D244
Cement Mixing Test, Percentage of Break, %mass	ASTM D244
Sieve Test, Sample Retained, %mass	ASTM D244
Particle Charge Test	-
Residue by Evaporation, %mass	ASTM D244
Examination of Residue Obtained by Evaporation: -Penetration Number @ 25°C, dmm - Ductility @ 25°C, cm - Solubility in Trichloroethylene, %mass	ASTM D6 ASTM D1113 ASTM D2042

III. PUNCH LIST, CLEANING, CLEARING AND TURN-OVER

1. Correct all noted punch lists, defects and/or needed replacements identified and observed.
2. Restore to its original condition any facilities and fixtures that has been damaged due to Instapave works and accidents arising during implementation, if any.
3. Clean, clearing of the area, and hauling and disposal of debris properly before turn-over.
4. Demobilize and turn-over the entire project for acceptance of MEZ or its authorized representative.

IV. WARRANTY

1. The CONTRACTOR shall guarantee the work done to be free from defects for a period of one (1) year. Form of warranty shall be in accordance with the provisions in Section 62 of the Revised Implementing Rules and Regulations (IRR) of R.A. 9184.



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V. RESPONSIBILITIES OF THE CONTRACTOR

1. The principal features of the work do not in any way limit the responsibilities of the CONTRACTOR to the general description of his/her scope of work. He/she shall perform all the work fully and make operational to the intent of the project.
2. The CONTRACTOR warrants that it is authorized to engage in and perform the Works; that it has inspected all relevant documents, and has informed itself fully as to the conditions which might affect the nature, extent, and the cost of the Works; that it has sufficient operating capital to perform and complete the Works; that it has sufficient and adequate equipment, parts, labor and materials that may be needed in the performance thereof; that it has the required knowledge, experience, skill and professional competence to undertake the same; and that it has experienced, skilled, and professionally equipped personnel to be assigned for this purpose.
3. The CONTRACTOR warrants that the method or process it will follow for the Works is the one that will best accomplish the desired results under the existing state of technology; that all materials it will supply or use shall be the best available or obtainable in accordance with the approved Contract and the instructions of the PEZA
4. The CONTRACTOR shall be responsible for the proper execution and coordination of his/her work. He/she shall schedule and program all necessary work activities according to the specified completion period.
5. The CONTRACTOR shall observe the required standards of safety and procedures and that its contract and workers shall be properly insured against all risks. He/she shall provide/equip its workers with Personal Protective Equipment (PPE) during the course of construction/installation. He/she shall observe the Mactan Economic Zone's regulations to be issued together with the Work Permit.
6. The CONTRACTOR shall be responsible for securing MEZ issued work permits and compliance with other MEZ rules and regulations related to the construction works. All workers/engineers working at site are required to wear company uniforms indicating their company name.
7. The CONTRACTOR is not allowed to erect quarters for workers within MEZ premises; sleeping is also not allowed. CONTRACTOR's workers are limited to the designated working area only. Loitering around and inside the MEZ premises is not allowed.
8. The CONTRACTOR shall be responsible for clearing and cleaning of the designated project site of unused materials, left over and other debris at the site and disposal of the same outside of the MEZ premises. A daily inspection of the



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work area shall be conducted by the CONTRACTOR and MEZ or its authorized representative to ensure that the working area is clean and in order at all times.

9. The CONTRACTOR shall protect adjacent areas against any damage by his/her employees, or by his/her materials, equipment and tools during the execution of the work. Any damage done by him/her or his/her employees shall be repaired at his own expense, without additional compensation beyond the contract.
10. Permits, Laws, Ordinances and Standards – the installation provided for and specified herein shall comply with laws and regulations of the local government unit and any government agency having jurisdiction. All necessary permits and
11. Other requirements shall be secured and for the account of the CONTRACTOR. Said requirements shall be turned-over to MEZ upon project completion.
12. The CONTRACTOR shall assign a fulltime Project In-Charge (PIC) for the project to supervise the works mentioned herein. Said PIC must be the one to report on a weekly/monthly basis of the status/progress of the project as agreed during the kick-off meeting and who shall be the one responsible for all coordination works with the MEZ or its authorized representative.
13. All other items of work not specifically mentioned but are necessary to complete the works in accordance with the plans and specifications and other related documents shall be provided by the CONTRACTOR at no additional cost to the MEZ.

VI. SUBMITTALS

1. Before commencing any work or providing any materials at the jobsite for this project, the CONTRACTOR shall submit samples, project Bar Chart/S-Curve and PERT/CPM Network Diagram for the MEZ's approval within five (5) calendar days upon receipt of Notice to Proceed.
2. The CONTRACTOR shall submit to MEZ, the proposed delivery of materials, tools and equipment, and manpower schedules for proper monitoring five (5) calendar days upon receipt of Notice to Proceed.
3. The CONTRACTOR shall submit samples and/or technical brochures of all materials to be used in the project within five (5) calendar days upon receipt of Notice to Proceed which include but may not be limited to the following for
4. MEZ's approval: a. Material list/brochures with technical specifications, b. Manufacturer's printed product installation instructions.
5. The CONTRACTOR is required to have a suitable Construction Safety and Health Program, which must be in accordance with Occupation Safety and Health



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(OSH) Standard, rules and issuances by the DOLE within five (5) calendar days upon receipt of Notice to Proceed. The program shall state the following:

- i. Composition of Construction Safety and Health Committee.
- ii. Specific safety policies which the CONTRACTOR shall observe at the area of construction which include but not limited to Fall Protection, Chemical Hazards, and Materials Handling and Storage.
- iii. Penalties and sanctions for violations of the program.
- iv. The manner of disposing waste arising from the construction.
- v. The safety program shall also include the appointment of a full-time safety officer-in-charge of the implementation of the said program.

VII. PEZA's RESPONSIBILITIES

1. The Engineering and Maintenance Division (EMD) shall be the main responsible unit in monitoring the implementation of the Works in accordance with the conditions of the Contract.
2. The PEZA shall constitute an Inspectorate Team which shall be responsible in assisting the EMD in recommending appropriate measures and improvements, when necessary, as well as to make preliminary inspection, submit a punch-list to the contractor and recommend the acceptance of the project for the approval of the concerned PEZA official.
3. Pay the contractor for the supply of materials, labor and equipment for the project "Proposed Rehabilitation of MEZ Secondary Roads using Instapave Surface Treatment".

VIII. PAYMENT SCHEDULE

1. The PEZA shall, upon a written request by the Contractor, allow an advance payment/mobilization fee in the amount not to exceed fifteen percent (15%) of the total contract price. The fee shall be paid only upon the submission to and acceptance by the PEZA of an irrevocable standby letter of credit of equivalent value from an accredited financial institution or a surety bond callable upon demand, issued by a surety or insurance company duly licensed by the Insurance Commission and confirmed by the PEZA.
2. The Contractor may submit a request for progress payment for every 25%, 50%, 75% and 100% work accomplishment. Progress payments maybe paid by the PEZA to the contractor upon Certification issued by the PEZA.
3. Progress payment shall be adjusted by deducting the amount in the recoupment of the advance payment, and additional retention money amounting to 15% and 10 % of the progress billing respectively.
4. The total "retention money" shall be due for release upon the request of the Contractor for the substitution of the retention money with an irrevocable letter of



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credit or surety bond callable on demand and upon issuance of the Certificate of Inspection and Acceptance by the PEZA.

III. PROJECT DURATION

1. The project duration covering the Proposed Rehabilitation of MEZ Secondary Roads using Instapave Surface Treatment works shall be for a period of **seventy-five (75) calendar days** from the issuance of Notice to Proceed (NTP).
2. The CONTRACTOR’s proposed Work Plan shown in Gantt Chart, which is a mandatory part of the Technical Proposal, should provide a more detailed schedule of activities. Unless approved in writing by MEZ on the written request of the CONTRACTOR, the coverage - from mobilization to demobilization, should not extend beyond the derivable dates as indicated here below.

Work Clusters	Nth Cal-days from Contractor’s Date of Issuance of Notice-to-Proceed	
	Start	Finish
1. Notice to Proceed	1st	1st
2. Mobilization of construction materials and consumables; deployment of personnel and equipment; secure necessary permits; provision of safety signage’s and paraphernalia; and, submission of shop drawings and project bar cart/ S-Curve and PERT/CPM for MEZ’s approval prior to project implementation	2nd	5th
3. Surface preparation and Instapave works of MEZ secondary roads	6th	67th
4. Punch-listing, Rectification of Punch-list items, Cleaning, Restoration of all affected facilities/areas/landscape, and other related fixtures due to works, and Project turn-over	68th	75th

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