

TERMS OF REFERENCE

BONIFACIO SOUTH MAIN BOULEVARD PROJECT Fort Bonifacio, Taguig City

1.0 PROJECT INFORMATION

1.1 PROJECT DESCRIPTION AND SIGNIFICANCE

The Bonifacio South Main Boulevard (Boulevard) is a dual-3 lane road envisioned to provide alternate access from the Ninoy Aquino International Airport (NAIA) to Bonifacio Global City (BGC) and to decongest Lawton Avenue.

The Boulevard is in adherence with the Master Development Plan of the Bonifacio South Properties to provide integrated connection among the development in Navy Village, Bonifacio South Pointe and McKinley West.

The construction of the Boulevard will support the development of SM Prime Holdings Inc. (SMPHI), the new office building of the Senate of the Philippines and prospective locators within the Bonifacio South Properties.

BCDA executed a Contract to Sell (CTS) with the Senate of the Philippines wherein BCDA shall construct and open roads which includes the said boulevard, in line with its development which will start within 2018 and expected to be completed by within 2021.

BCDA and SM Prime Holdings, Inc. (SMPHI) executed the Joint Venture Agreement for the development of the Bonifacio South Pointe Property which is needed to be completed within 2021.

The road right-of-way for the said Boulevard is presently occupied by the facilities of Bonifacio Naval Station, Philippine Marine Corps, Army Support Command, Special Service Center, National Mapping and Resource Information Authority.

BCDA shall be responsible in the functional replication of all structures, facilities, utilities and land/site development of the affected facilities including their relocation to the relocation sites.

1.2 CONTRACTUAL FRAMEWORK

The contractual framework for this Project is to be based on the Design and Build Scheme. Under this scheme, the procuring entity shall award a single contract for the engineering design and construction to a single firm, partnership, corporation, joint venture or consortium.

1.3 MINIMUM QUALIFICATIONS OF PROPONENT

The eligibility requirement shall comply with the provisions of Sections 9, 10 & 11 of Annex "G" of the Revised IRR of RA 9184.

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10 Page

2.0 SCOPE OF THE CONTRACT

The Project is the construction of the Bonifacio South Main Boulevard which is approximately 1,800 meters long and 28 meter wide including the construction of Access Road adjacent to the property of the Senate of the Philippines and widening of Pasong Tamo with the following details:

Segment no.	Description	Width	Length
1	Pasong Tamo Widening	16 meters	approximately 440 meters
2	Access Road - 1	20 meters	approximately 420 meters
3	Bonifacio South Main Boulevard (Navy Village)	28 meters	approximately 300 meters
4	Bonifacio South Main Boulevard (Bonifacio South Pointe)	28 meters	approximately 730 meters
5	Bonifacio South Main Boulevard (Philippine Army)	28 meters	approximately 420 meters
6	Bonifacio South Main Boulevard (NAMRIA)	28 meters	approximately 350 meters

2.1 OBLIGATIONS OF THE WINNING BIDDER/CONTRACTOR

The Winning Bidder/Contractor shall:

- a. Responsible for the preparation and submission of all necessary detailed engineering investigations, surveys and design in accordance with the provision of Annex "A" of the Revised IRR of RA 9184 (with exception of the Bidding documents and the ABC).
- b. Construct the Project according to the Detailed Engineering Design (DED) prepared by the Winning Bidder and approved by the BCDA, in conformance to the provisions of the Department of Public Works and Highways (DPWH) Standards Specifications (Blue Book). The Blue Book prescribes, among other things, the material requirements and construction requirements for different items of work, including the tests to be conducted during construction by the Concessionaires or its designated contractor.

For materials and technologies not covered by the Blue Book, or if the Proponent intends to use any new material/technology which is not accredited by the DPWH Bureau of Research and Standards (BRS), the Proponent shall submit a certification from a recognized foreign/international

institution to the effect that the new materials/technology meets the requirements for this Project and that the new materials/technology has been successfully used in existing structures with proven integrity.

- c. Liable for design and structural defects and/or failure of the completed project within the warranty period specified in Section 62.2 of the IRR of RA 9184.
- d. Responsible for the demolition/clearing of all existing structures/facilities, improvements and utilities affected by the Project.

2.2 OBLIGATIONS OF THE BCDA

The BCDA shall:

- a. Provide full information on all requirements for the Project.
- b. Approve the Winning Bidder/Contractor's design without diminishing the Bidder/Contractor's full and sole responsibility for the quality and integrity thereof.
- c. Give prompt written notice thereof to Winning Bidder/Contractor, if it observes or becomes aware of any defect in the Project.
- d. Designate when necessary, representatives authorized to act on its behalf. It shall examine documents submitted by the Winning Bidder/Contractor and render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the Winning Bidder /Contractor's work. It shall observe the procedure of issuing orders to the Winning Bidder/Contractor, in coordination with the Project Management Office/Firm.
- e. Supervise and monitor the implementation of the project.
- f. Pay the accomplishment accepted in the conformance with the requirements included under the Design and Build Contract.
- g. Responsible in relocating the affected structures/facilities and improvements.

2.3 CONTRACT TERMS OF REFERENCE

The Standard Bidding Documents in the approved Government Procurement Policy Board (GPPB), 5th Edition, CY-2016, including Form of Contract, shall be used, with appropriate modifications to incorporate pertinent provisions of Annex "G" of the IRR of RA 9184.

3.0 CONCEPTUAL DESIGN

To provide a uniform and integrated connection amongst the developments of Navy Village, Bonifacio South Pointe, Mckinley West, McKinely Hill and Bonifacio Global City, the road section of the Boulevard shall be **similar to the existing Chateau Road in**

McKinley West where the Boulevard will be connected. Chateau Road has the following component which shall be considered in the Design of the Boulevard, but not limited to:

- Asphalt Pavement
- Street Lighting System
- Pedestrian Lanes
- Cycling Lanes
- Concrete Sidewalk
- Planting Strip
- Way-finding Signages and Markings
- Underground Utility System
- Drainage System

Refer to the attached Roadway Section of the Chateau Road in McKinley West.

4.0 PERFORMANCE SPECIFICATIONS AND PARAMETERS

The Winning Bidder/Contractor shall provide design–build services, which shall meet the following DPWH Standard Specification (Blue Book) and outline specification and parameters in consideration of the future developments of Navy Village, Bonifacio South Pointe, and McKinley West.

4.1 OUTLINE SPECIFICATION AND PARAMETERS

The Winning Bidder/Contractor shall provide the following in addition to the requirements of the DPWH Standard Specifications that will be used and required for the Project:

4.1.1 Part A - Facilities for the Engineer

- 4.1.1.a Rental of Site Office Building of at least 50-sqm area, fully air-conditioned with conference room, office area, comfort room, and supply of water and power including the corresponding utilities and maintenance fees.
- 4.1.1.b Purchase of Site Furnitures and Equipment , 5-office desks and chairs, 1-conference table and 10-chairs, 2-laptops with licensed AutoCad and Softwares, and 2-mobile phones.
- 4.1.1.c Purchase of Service Vehicle, 1-pick up (4x2), at least 2017 model, turbo diesel engine with comprehensive insurance and registration documents. Expenses for the required registration, fuel, repair, maintenance, and competent service driver shall be included.

4.1.2 Part B - General Requirements

Refer to the DPWH Standard Specification.

4.1.3 Part C - Earthworks

Refer to the DPWH Standard Specification.

4.1.4 Part D - Subbase and Base Course

Refer to the DPWH Standard Specification.

4.1.5 Part E - Surface Courses

Refer to the DPWH Standard Specification.

The Winning Bidder shall give preference to Asphalt Road Surface.

4.1.6 Part F - Bridge

Refer to the DPWH Standard Specification.

4.1.7 Part G - Drainage and Slope Protection Works

Refer to the DPWH Standard Specification.

The Winning Bidder/Contractor shall provide drainage line on both sides of the Boulevard with cross drains in every intersection in preparation for the future developments within the Bonifacio South Properties.

4.1.8 Part H - Miscellaneous

Refer to the DPWH Standard Specification.

4.1.9 Part I - Water and Sewer System

Refer to the DPWH Standard Specifications and MWCI Standard Specifications.

The Winning Bidder/Contractor shall provide pipelines and materials to cater the prospective locators within the Bonifacio South Properties. It shall also provide the necessary tapping points along the Boulevard and for future developments. These systems shall be connected to the nearest MWCI system.

4.1.10 Part J - Street Lights

Refer to the DPWH Standard Specifications and Philippine Electrical Code.

The Winning Bidder/Contractor shall provide lamp posts and materials including fixtures, accessories and wirings which shall be similar to the lamp post of McKinley West development.

4.1.11 Part K - Power Distribution Line



Refer to the DPWH Standard Specifications, Philippine Electrical Code, and MERALCO Standard Specifications.

The Winning Bidder/Contractor shall provide conduits and materials ready to receive MERALCO Electrical Cables to cater the prospective locators within the Bonifacio South Properties. It shall also provide the necessary tapping points along the Boulevard and for future developments. These systems shall be connected to the nearest MERALCO system.

4.1.12 Part L - Communication Line

Refer to the DPWH Standard Specifications and Philippine Electrical Code.

The Winning Bidder/Contractor shall provide conduits and materials ready to receive communication lines to cater the prospective locators with Bonifacio South Properties.

4.1.13 Part M - Softscapes / Landscapes

Refer to the DPWH Standard Specifications.

The Winning Bidder/Contractor shall give preference to Narra with at least 4.5 meters in height and 5" Caliper.

4.1.14 Part N - Demolition / removal of affected structure

Refer to the DPWH Standard Specifications and other government rules and regulations.

The Winning Bidder/Contractor shall be responsible in the demolition and removal of all affected structures and obstruction to the project.

4.2 DESIGN CONSIDERATION

The Winning Bidder/Contractor shall comply with the minimum requirements under the following:

- DPWH Standard Specification (Blue Book)
- National Structural Code of the Philippines
- Philippine Electrical Code
- Meralco Standard Specification
- MWCI Standard Specification
- DSG for Bonifacio South Properties

Undertake Detailed Design of the Project with the following considerations:

4.2.1 Design of Vertical and Horizontal Alignment

4.2.1.a Road / Highway Design

The vertical alignment shall be designed considering the existing Chateau Road in McKinley, Pasong Tamo Road and Lawton Avenue and adjusted as required with the objectives of:

- Optimizing the volumes of cut and fill materials, if any;
- Optimizing the average haul distance for cut and fill, if any;
- Limiting of the right-of-way associated with the design; and
- Minimizing soft ground treatment in so far as this is consistent with keeping the carriageway above flood levels.

4.2.1.b Road / Pavement Design

The pavement surface shall be design using an Asphalt Concrete in consideration with the existing pavement surface of Chateau Road in McKinley West. The design of the road shall include the subgrade, subbase, and base using a twenty (20) years design life. The total thickness will be evaluated to arrive at the proper pavement thickness for the design axle load based on the DPWH Standard Specification.

4.2.2 Drainage Design

4.2.2.a Hydrologic Study

The Winning Bidder / Contractor shall collect and review all available hydrological reports and maps of the Project site including physical, geological and climatological reports. The 24-hour daily rainfall data used by the Hydrometeorological Investigation and Special Studies Section of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) in the preparation of the rainfall-intensity-duration frequency curve for various return period will be applied.

The extent and nature of the catchments area shall be examined with the available topographical and geological map and through direct field investigation.

4.2.2.b Drainage Design

The Winning Bidder/Contractor shall undertake the drainage design of the project on the basis of the data and information derived from the hydrological study.

Cross-drain shall be provided at every intersection as shown in the Land Use Plan.

4.2.3 Underground Utilities Design

The Winning Bidder/Contractor shall design the underground utilities based on the latest requirements of the following:

- Philippine National Building Code

- Philippine Electrical Code
- MERALCO
- MWCI

4.2.3.a Power Distribution System

The Winning Bidder/Contractor shall design the power distribution system to accommodate the requirements of the Navy Village and Bonifacio South Pointe using the latest available conduit materials as approved by MERALCO.

4.2.3.b Water Supply System

The Winning Bidder/Contractor shall design the water supply system to accommodate the requirements of the Navy Village and Bonifacio South Pointe using the latest available materials as approved by MWCI.

4.2.3.c Sewer System

The Winning Bidder/Contractor shall design the sewer system to accommodate the requirements of the Navy Village and Bonifacio South Pointe using the latest available conduit materials as approved by MWCI.

4.2.4 Street Lights / Lamp Post

The Winning Bidder/Contractor shall design the lamp post considering the existing lamp post along Chateau Road in McKinley West.

4.2.5 Sidewalk Design

The Winning Bidder/Contractor shall design the surface of the sidewalk using a Concrete and in consideration to the existing sidewalk along Chateau Road in McKinley West.

4.2.5 Softscape / Landscape Design

The Winning Bidder/Contractor shall design the softscape / landscape considering the existing softscape / landscape along Chateau Road in McKinley West.

4.3 WARRANTY

The Winning Bidding/Contractor shall be liable for the design and structural defects and all failure of the completed project under Section 62 of the Revised IRR of RA 9184.

5.0 DETAILED ENGINEERING DESIGN REQUIREMENTS