

ENVIRONMENTAL ASSESSMENT

The project is located outside the ancestral domain and will not affect any Indigenous Cultural Community or Indigenous People (IP). To officially state this claim, the provincial government has requested the National Commission on Indigenous Peoples (NCIP) to issue a certification that the proposed site is not covered by any Ancestral Domain (Annex 12)

Also, the project site is not within a declared or proposed protected area. The access road traverses both agricultural and residential areas. Most of the existing residential structures have enough set back from the road. Thus, the widening of road will not affect any structure. It is also worth mentioning that there is no cultural or historical monument or structure which will be affected by such improvement as certified by the DENR through the Environmental Compliance Certificate (ECC) Annex 16.

The Provincial Government of Nueva Ecija, which is the implementing body, is responsible for the proper implementation of all the mitigating measures and will conduct regular monitoring during project execution. Local planning and policies will take climate change into consideration and will make infrastructure such as roads and other development needs be climate proofed.

Natural Habitat

The proposed subproject is a 5.17591 kilometer farm-to-market road traversing three barangays of San Juan, Villa Josen and Porais in San Jose City. The subproject site is not within a declared or proposed protected area. The road passes through productive agricultural land. However, the road right-of-way requires a total width of 8 meters, thereby expanding the existing road width of 5 meters. Based on a public consultation conducted in the concerned barangays, the affected communities in general are agreeable to the road width expansion and expressed support to the realization of the project for it is one of the long time aspirations of the residents.

Physical Cultural Resources

The project has no significant effect in the physical cultural resources which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. The existing access road traverses both agricultural and residential

areas. Most of the existing residential structures have enough set back from the road. Thus, the widening of road will not affect any structure. However, some of the perimeter fences made of concrete and/or wooden materials, fruit-bearing and/or forest trees and electric posts will be affected. Appropriate actions to transfer, replace and rebuild said structures will be made. It is likewise worth mentioning that there is no cultural or historical monument or structure which will be affected by such improvement. On the other hand, the agricultural land that will be affected by the widening is immaterial compared to the benefits of the project to the farmers in terms of agricultural productivity and increase in farmers' income. This perception was confirmed by the farmers during the consultation meeting conducted in the concerned barangays. However, during the implementation, particularly during digging, drilling and other earthmoving activities, any discovery of artifacts, bones or other objects of interests will reported to RPCO-SES officer, and National Museum. The project implementer will observe all the provisions stipulated in the Integrated Environmental and Social Safeguards Framework (IESSF). Further, the Chance Archaeological/Paleontological Finds Procedure will be discussed by the provincial LGU to the contractor, site engineers and other on-site personnel for their reference. A copy of the Chance Archaeological/Paleontological Finds Procedure for the subprojects will be made available at the construction site at all times.

In support to this, the PLGU of Nueva Ecija already submitted request to DENR-EMB regarding the Environmental Compliance Certificate (ECC) to the said project. Also the provincial government will observe appropriate measures to protect and mitigate any adverse impact of the project on community health, welfare and the environment.

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Terrain, Soil Type and Rainfall

The terrain of the municipality is flat to undulating, or having slopes less than 10 percent. Meanwhile, soil type in the project area was clay loam and sandy clay loam. These soil type are suitable for ampalaya, vegetables and rice production.

Based on the Modified Corona Philippine Climate Classification, falls under Type I category or described as having pronounced wet and dry seasons. The rainy season, typically from June to November, coincides with the onset of the southwest monsoon that brings rainfall ranging from 1,000 mm to more than 5,000 mm.

Given the soil types and weather classification, the potential in erosion and sedimentation is low. In addition, the subproject should consider the following that affect the soil erosion such as rainfall, crop rotations, soil type, cultivation practices (SALT) and topography.

Drainage Situations and Flooding Potential

There is no existing drainage system in the farm to market road except the irrigation system coming from the creek and streams that connects to the nearby rivers which then supplies water to the agricultural land. Rain water coming into the right of way also increases the water level of the creek and streams. Mud and silt carried by heavy rains or storm flow could deposit gradually inside drains and channels and affect their effective capacity. Debris, large objects and tree fragments could also be washed down catch pits and channels and create serious flow restrictions going to creek and streams. In minimizing the increase of the quantity of flows on the receiving creek and streams, appropriate flooding measures should be consider in the construction of the farm-to-market road such as cross drain system to the drainage outlets, clearing of waterways and planting of trees to lessen the water flow by way of infiltration. These improvements could affect flow paths and could bring unexpected flow to certain section of the drainage system. The construction of farm to road will construct seven cross drains to control the rain waters that could cause flooding in the area. This are the following stations were the cross drains will be install Sta. 0+400; Sta. 0+800; Sta.1+740; Sta. 1+775; Sta.2+685; Sta. 4+062 & Sta. 4+481.12 using RCPC and 425 linear meters grouted riprap on both side of the cross drain and side slopes was included

in the design and program of work with head wall, wing wall and apron to prevent scouring and erosion.

Pest Management

On the other hand, the proponent group will also advocate the adoption of the Department of Agriculture's Integrated Pest Management (KASAKALIKASAN). The program aims to have a significant shift in agricultural extension exhibiting farming practices with reduced use of pesticide if not totally eliminated, thus increasing pesticide non-users and reduce frequency of pesticide application. The program is empowering the farmers to become a rational decision maker in adopting variety of practices in the management of pest and diseases. Farmer's will be practicing more of cultural and biological method to keep the balance of nature so as to protect our natural enemies that can control insect pests. Moreover, the growers will be slowly shifted to organic farming by increasing the use of organic fertilizer. Through this methodology, the farmers/growers will not harm the environment and will keep the farmers and consumers hazard free from toxins contributed by chemicals.

The City Government of San Jose City and the Provincial Agricultural Office of Nueva Ecija in coordination with Department of Agriculture plan to conduct IPM KASAKALIKASAN Farmers Field School twice a year in the project sites starting in CY 2015 either in vegetables production and rice production with target participants of 25 farmers per batch of training to be conducted with total of 50 farmers per year to be train.

Impact During Construction

Despite the fact that some few temporary structures and trees will be affected by the road widening along the road influence area, the project will not cause substantial damage to the environment whether on green field or previously developed sites. However, during road construction, the contractors should observe and considers the following:

- Temporary erosion and sediment control - Inadequately constructed farm-to-market roads can cause environmental impacts including road surface erosion and sediment

yield, pollution of off-site waters, slope failures and mass movement direct loss of habitat (by the conversion of the original land cover into an artificial surface) and indirect loss of habitat (by the fragmentation of an ecosystem into smaller and more isolated patches). Therefore, farm-to-market road engineers should design roads by considering not only cost efficiency but also sustainable management of the forest environment. During the construction project of the farm-to-market road, the standard design must be carried out on the ground to achieve the desired road with minimal impact on environment. Sometimes the standard design cannot be useful for determining the clearing limit of farm to market road.

- Construction noise mitigation - There are some residents along the road influence area that will be affected by the noise during the operations of workers, facilities and heavy equipment. As mitigating measure, work activities and operations of heavy equipment should be avoided during night time.
- Minimize and control dust – The implementation of dust control will limit the area exposed to dust generation. Dust control measures include minimization of soil disturbance, water spraying, surface roughening, mulch and vegetation, and applying polymers and barriers.
- Proper handling of construction wastes - LGU should provide rules and regulations for the proper disposal of all wastes materials. Regulatory and enforcement powers with the public education, awareness, should be properly implemented. This will minimize the amount of site litters and will prevent the indiscriminate dumping of surpluses and wastes along the roadside.
- Safety - Safety of workers must be given priority as it is a very important aspect in a construction to ensure that all workers are not injured in whatever process they engage in. Safety standards protocols must be observed like posting, putting road signs and complete safety uniforms for all workers to avoid any accident.