

A. SOCIAL ASSESSMENT

6.1 Project Beneficiaries

The implementation of the proposed rehabilitation of Dualing – San Mateo - Sta. Cruz FMR would directly benefit 453 households of influenced 3 barangays, most of them are farmers.

Consultations were made on affected beneficiaries of barangay San Mateo, Dualing and Sta. Cruz presenting the various social issues whenever the project will be approved through such as the effects on landholdings, structures, crops and fruit trees that may eventually be compensated to give way for the construction of the farm to market roads.

The beneficiaries expressed their intention of donating the ROW, portion of land to be utilized as farm to market road. Further, they mentioned that the benefit of the project is advantageous for them having an accessible all weather farm to market road.

Attached are the attendance sheet and minutes of meetings during the consultation conducted on January 21, 2011 and December 2, 2013. During the consultation, there were 8 women and 11 men who were consulted on their concerns and inputs on the subproject.

During the consultations women are concerned on the design of the road if it's concrete to have a lasting good road condition or a graveled road.

6.2 Indigenous Cultural Community/Indigenous Peoples (ICC/IP)

There are no Indigenous People (IPs) present in barangay San Mateo, Sta. Cruz and Dualing and the site of proposed project is not within the ancestral domain of the Indigenous People.

6.3 Site and Right-of-Way acquisition

A 12 meter wide is allocated to be utilized by the project especially on the sloping sections of the road. There are 9 land owners affected by the widening of road sections. Private owners would donate the land for the subproject. While the remaining length of road sections are considered as homestead road.

Deed of Donations where signed between the owner of the land as donor and the local government of Aleosan as donee with annotation of the property at the Registry of Deeds. The Office of the Municipal Assessor was copy furnished of the deed of donations for consideration during tax assessment in order to reduce tax paid of the land owners. This is one of the compensation the land owner could avail including seedlings in exchanged to those trees that would be affected during excavation.

6.4 Damage to standing crops, houses and/or properties

The land is located in an agricultural area planted with palay, corn, rubber, mango, bananas and other legumes alongside. There are sections of the farm to market road that plants and trees could be affected during the widening of existing road from 4 meter wide to 7 meters wide especially the trees planted such as coconut, mango and Ipil-ipil. This is because lot owners utilize the vacant land while not in use for the road. Most of the affected persons are farmers. Since, portions of land are already donated, lot owners allowed the road widening.

6.5 Physical displacement of persons

No relocation of houses will happened at the proposed project site as per result of PAP Survey.

6.6 Economic displacement of persons

The proposed project will not result in the loss of livelihood or reduced access of families to their traditional livelihood sources.

B. ENVIRONMENTAL ASSESSMENT

7.1 Natural habitat

The proposed rehabilitation of 2.48 kilometer road project traversed an agricultural land planted with cash crops such as rice, corn and legumes. High value commercial crops are also present like rubber, coconut, banana and mango. There are areas which needs drainage canals because of existing water catchments along the road but no creeks and river that could be passed through the 2.48 kilometer farm to market road.

7.2 Physical Cultural Resources

There are no significant structures, monuments or Physical Cultural Resources on site that will be affected by the subproject.

7.3 Terrain, Soil Types and Rainfall

The project site locate along moderately slope or rolling terrain with maximum slope of 10% in which concreting was necessary to avoid highly cost maintenance. Soil is clay type to sandy loam. Though, erosion is not rampant in the area but siltation due to frequent rainy days and cutting of trees.

7.4 Drainage Situations and Flooding Potential

The proposed project has 15 sections of RCPC to establish the drainage canal in the lower sections to avoid clogging of water that will result to the easily deterioration of road. The area is not a flood prone area because of its hilly terrain and no water bodies present along side or passing through.

7.5 Impacts during Construction

Some adverse impacts of this activity would be generated during construction phases of implementation. Site clearing will result in loss in some vegetative cover in the site, though wildlife is not present in the area. Noise levels would increase during these phases of project implementation, as heavy equipment will be utilized in the earth-moving activities. These impacts however, are temporary in nature and insignificant in magnitude.

- (a) Temporary erosion and sediment control

Avoiding the occurrence of erosion is one of the environmental management concerned as mentioned in the EMP. Minimize cutting of slopes. There are no streams and lakes present in the area.

(b) Construction noise mitigation

There are houses near the project site and small business present. There are no activities that would entail loud noise. To prevent loud noise, proper maintenance of the equipment should be used by the contracting firm. The major sources of noise considered during construction activities would be during excavation, loading, transportation of materials, and operation of construction equipment. These impacts will be mitigated by careful planning of machinery operations, use of low noise equipments and scheduling of operations only during the daytime to reduce their impacts to receptors. However, there are no sensitive receptors such as hospital or school near the Project site.

(c) Proper handling of construction wastes

The contractor will be oriented on the proper waste disposal especially during the construction of concrete pavements. Some of the cement bags could be recycled.

(d) Safety

There are no major health and safety hazard that the project implementation could cause. Personal protective equipments (PPE), such as helmets, gloves, boots, etc. are provided for the workers on construction site. Proper signboards and appropriate information to the local people about the construction activities are provided. Workers operating equipments on construction site are skilled.

Table No. 25
Environmental Management Plan

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
1. Temporary increase in sedimentation during construction	[/] Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoils [] Cut materials will consist mainly of hard rocks and are unlikely to generate significant sediments	[/] Earthmoving/ cutting of slopes to be done during dry months [/] Proper disposal and compaction of spoils [] No measures required	DED/POW; Contract

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
2. Potential contamination of surface and groundwater with oil/grease	<input type="checkbox"/> Waste oil and grease from equipment could contaminate surface water <input type="checkbox"/> There will be no or insignificant amount of waste oil/grease	<input type="checkbox"/> Proper handling and disposal of waste oil and grease	Contract
3. Potential contamination with human waste	<input type="checkbox"/> Construction workers would be temporarily housed in a base camp <input type="checkbox"/> Workers would be mostly locals and are expected to go home to their respective houses after works	<input type="checkbox"/> Set up adequate latrine/toilet facility at the base camp	Contract
4. Potential disruption of traffic flow	<input type="checkbox"/> The access road and/or segments to be rehabilitated need is vital to daily activities of the residents and farmers and need to be kept open to traffic during construction <input type="checkbox"/> The construction will not affect daily movement of residents and farmers	<input type="checkbox"/> Keep the road open to traffic flow and minimize disruptions along the access road and/or construction area; Provide adequate warning signs and traffic personnel when necessary; <input type="checkbox"/> Undertake regular maintenance measures on the passable portions of the roads <input type="checkbox"/> No measures needed	Contract
5. Potential dust/mud nuisance during construction	Roads could become powdery during dry days and muddy during rainy days of the construction period <input type="checkbox"/> Access road and/or the construction/ rehabilitation works passes through a populated area <input type="checkbox"/> Access road and/or construction/ rehabilitation does not pass through any populated area	<input type="checkbox"/> Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas <input type="checkbox"/> Set up speed limits for vehicles, especially within residential areas <input type="checkbox"/> No measures needed	Contract
6. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	<input type="checkbox"/> The road will traverse a mountainous area necessitating deep cuts on mountainsides, particularly between station ____ and ____, etc (check DED for deep cuts)... <input type="checkbox"/> The exposed slopes will likely consist of highly erodible loose materials <input type="checkbox"/> The cut slopes will be hard materials that would resist	<input type="checkbox"/> Include slope protection works at the following stations: Lined canal at 0+000 to 0+105 both sides slope protection works at station 0 + 230 to 0+320a, 0+320b to 0+470, 2+170 to 2+210 and 2+310 to 2 + 340. (Specify the type/s of slope protection to be applied at	DED/POW Or (if budget does not permit) LGU Commitment Letter

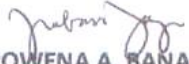
Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
	erosion <input checked="" type="checkbox"/> The road passes through a relatively benign terrain, cuts will be minimal <input type="checkbox"/> The rehabilitation work does not involve additional road cuts	each section- Consult with the Municipal Engineer: <input type="checkbox"/> Bioengineering with geomat and cover crop <input type="checkbox"/> Fast growing shrub species <input checked="" type="checkbox"/> Riprap <input type="checkbox"/> Gabions <input type="checkbox"/> Terracing <input checked="" type="checkbox"/> Concrete protection wall <input type="checkbox"/> Others _____)	
7. Inadequate drainage resulting in flooding or ponding	<input type="checkbox"/> The road will block runoff, resulting in flooding on one side of the road during rainy days. <input checked="" type="checkbox"/> Drainage issues unlikely	<input checked="" type="checkbox"/> Installation of cross drain between station 0+108, 0+180, 0+292, 0+340, 0+400, 0+480, 0+740, 0+920, 1+080, 1+200, 1+460, 1+680, 1+970, 2+320, 2+480	DED
8. Potential increase use of pesticides due to intensification of cash crop production in the area	<input checked="" type="checkbox"/> There is an ongoing IPM program of DA in the service area <input type="checkbox"/> Farmers in the service area have not been trained on IPM	<input checked="" type="checkbox"/> DA to continue to support IPM program <input type="checkbox"/> LGU to Coordinate with DA on IPM training	Capacity Building Plan O&M Plan; Capacity Building Plan
9. Potential acceleration of denudation of the upland/hilly areas due to intensification of crop production	<input checked="" type="checkbox"/> The proposed road will connect to the market an upland/hilly area where farmers are currently practicing erosive farming techniques. The road could help accelerate the denudation of the upland/hillsides rendering them unproductive in a few years. <input type="checkbox"/> The road connects only lowland farms to the market	<input checked="" type="checkbox"/> DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area <input type="checkbox"/> No measure required	O&M Plan; Capacity Building Plan
10. Potential increased in encroachments of human activities into the nearby public forest	<input type="checkbox"/> The proposed road will improve human access to the nearby public forest, resulting in increase slash and burn cultivation, illegal logging and poaching. <input checked="" type="checkbox"/> The proposed road does not improve access to a public forest	<input type="checkbox"/> Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce forestry laws <input checked="" type="checkbox"/> No measure required	O&M Plan; Capacity Building Plan
10. Local employment	<input checked="" type="checkbox"/> Construction will provide local employment opportunities	<input checked="" type="checkbox"/> Hiring priority shall be given to qualified local residents; Implement RI Manual on local hiring	Contract

Issue (Potential Impact)	Assessment	Mitigation Measure	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*
	[] Construction does not provide any local employment opportunities	[] No measures required	



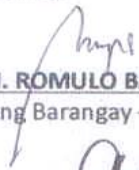
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Endorsed By:

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