

## ENVIRONMENTAL ISSUES AND MITIGATION MEASURES

Below are the prescribed mitigation measures to address potential impact of the project to the environment:

Issue (Potential Impact)	Assessment	Mitigation Measure	Schedule/ Duration of the Mitigation Measures	Instrument of Implementation (POW, Contract, IDP, or O&M Plan)*	Responsible Unit
1. Temporary increase in sedimentation during construction	<input checked="" type="checkbox"/> Topography of the road alignment necessitate massive earthmoving and cutting of clayey or loose topsoil <input checked="" type="checkbox"/> Minimal 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	Jan – August 2015	DED/POW; Contract	PLGU/ contractor
2. Potential contamination of surface and groundwater with oil/grease	<input checked="" type="checkbox"/> Waste oil and grease from equipment could contaminate surface water <input checked="" type="checkbox"/> There will be no or insignificant amount of waste oil/grease	Proper handling and disposal of waste oil and grease Monitoring to prevent oil contamination	Jan – August 2015	Contract	Contractor PLGU
3. Potential contamination with human waste	<input checked="" type="checkbox"/> Construction workers would be temporarily housed in a base camp <input checked="" type="checkbox"/> Workers would be mostly locals and are expected to go home to their respective houses after works	Set up temporary latrine/toilet facility at the base camp	Jan – August 2015	Contract	PLGU/contractor
4. Potential disruption of traffic flow	<input checked="" 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 checked="" type="checkbox"/> The construction will not affect daily movement of residents and farmers	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; Undertake regular maintenance measures on the passable portions of the roads	Jan – August 2015	Contract	Contractor and PLGU

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5. Potential dust/mud nuisance during construction	<p>[✓] Roads could become powdery during dry days and muddy during rainy days of the construction period</p> <p>[✓] Access road and/or the construction/ rehabilitation works passes through a populated area</p> <p>[✓] Access road and/or construction/ rehabilitation does not pass through any populated area</p>	<p>Undertake sprinkling of road (including access roads) during dry days, and filling up of potholes during rainy days, especially in residential areas</p> <p>Set up speed limits for vehicles, especially within residential areas</p>	Jan – August 2015	Contract	LGU/ contractor
6. Landslide/ erosion of exposed road sides resulting in sedimentation of waterways	<p>[ ] The road will Not traverse a mountainous area necessitating deep cuts on mountainsides</p> <p>[✓] The exposed slopes is only minimal and it not erodible loose materials</p> <p>[ ] The cut slopes will be hard materials that would resist erosion</p> <p>[✓] The road passes through a relatively benign terrain, cuts will be minimal</p> <p>[✓] The rehabilitation work does not involve additional road cuts</p>	<p>[✓] Include slope protection works on both side of the cross drain and slope protection at the following stations: following station Sta. 0+400; Sta. 0+800; Sta. 1+740; Sta. 1+775; Sta. 2+685; Sta. 4+062 &amp; Sta. 4+481.12..etc..</p> <p>(Specify the type/s of slope protection to be applied at each section-</p> <p>[✓] Grouted Riprap is 425 linear meter on both side of the cross drain (Head Wall, Wing wall and apron)</p>	During construction and included in POW and DED	DED/POW  Or (if budget does not permit) LGU Commitment Letter	contractor
7. Inadequate drainage resulting in flooding or ponding	<p>[ ] The road will not block runoff, due to installation of 7 cross drain (RCPC) prevent flooding on one side of the road during rainy days.</p> <p>[✓] Drainage issues unlikely</p>	<p>[✓] Installation of cross drain in following station Sta. 0+400; Sta. 0+800; Sta. 1+740; Sta. 1+775; Sta. 2+685; Sta. 4+062 &amp; Sta. 4+481.12</p>	During construction & O&M plan	DED/ O&M Plan	Contractor/ PLGU
8. Potential increase use of pesticides due to intensification of cash crop production in the area	<p>[ ] There is an ongoing IPM program of DA in the service area</p> <p>[✓] Farmers in the service area have been trained on IPM</p>	<p>[✓] DA to continue to support IPM program</p> <p>[✓] LGU to Coordinate with DA on IPM training</p>	During and after the project implementation	Capacity Building Plan O&M Plan; Capacity Building Plan	PLGU/LGU /DA
9. Potential acceleration of denudation of the upland/hilly areas due to intensification of crop production	<p>[✓] 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.</p>	<p>DA to coordinate with LGU for the introduction of sustainable upland farming systems in the area</p>	Sept. 2015 and beyond	O&M Plan; Capacity Building Plan	PLGU/LGU

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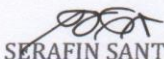
10. Potential increased in encroachments of human activities into the nearby public forest	<input type="checkbox"/> The proposed road will improve human access to the nearby public forest, resulting in increased slash and burn cultivation, illegal logging and poaching. <input checked="" type="checkbox"/> The proposed road does not improve access to a public forest	<input checked="" type="checkbox"/> Coordinate with DENR for the enactment of ordinance deputizing the local community to enforce forestry laws <input type="checkbox"/> No measure required	Strict enforcement of DENR ordinance deputizing local community	O&M Plan; Capacity Building Plan	PLGU/MLGU
11. 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; the workers should be provided with a standard salary wage based on Regional Tripartite Wage Productivity Board (RTWPB) approved wage rates	Jan – August 2015	Contract	Contractor/PLGU
12. Conversion of land use /natural habitat due to quarry	<input checked="" type="checkbox"/> The propose quarry site is within the private land and no need convert existing land use Quarry site is existing and proven source of good quality materials	<input checked="" type="checkbox"/> Quarry materials will be procure from the accredited quarry site of DPWH	Jan – August 2015	Certification of DPWH and PENRO	PLGU/Contractor
13. Potential damage to existing road due to hauling of quarry materials	<input checked="" type="checkbox"/> Source of quarry materials is 5 – 12 kilometers Transportation of quarry materials from source to FMR will cause damage to existing FMR	<input checked="" type="checkbox"/> Regular monitoring of existing roads and strict enforcement of load limits	Jan – August 2015	Certification of DPWH	contractor
14. Waste disposal can create traffic and hazard to commuter	<input checked="" type="checkbox"/> Handling of waste material like excess excavation, logs, concrete slabs, trunks and braches of trees and noise during cutting of trees	<input checked="" type="checkbox"/> Waste disposal should be handle carefully so that will not create hazard/traffic to commuter. <input checked="" type="checkbox"/> The city government and PAP agreed that the waste materials will be absorb by the identified PAP to prevent the movement of waste material so that cannot create traffic to commuters	Jan – August 2015	Certification of LGU/contract	Contractor/PLGU
15. Potential issue on right-of-way acquisition	<input checked="" type="checkbox"/> Affected land owners/area to be acquired by the road widening were compensated by the City Government of San Jose City	<ul style="list-style-type: none"> <li>• Conduct of consultation meeting with the affected land owners regarding the amount per square meter to be paid by city government</li> <li>• Establish Grievance and Redress Mechanism in accordance with the IESSF accessible to the beneficiaries/ affected households for their feedbacks.</li> </ul>	Notarized Memorandum of Agreement between the PAP and City Government	Deed of Sales	City Governem ent of San Jose City

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16. Potential issue on compensation for the demolition and restoration of affected structures	[ ✓ ] The affected structures for the road widening are temporary structures such as bamboo fences	<ul style="list-style-type: none"> <li>• Proper dissemination of information during the consultation meetings.</li> <li>• The demolition of the affected structures will be done by the contractor under the supervision of the Provincial Engineer's Office</li> <li>• The reconstruction of the affected temporary structures will be provided by the city government in coordination with the concerned households, and the barangay.</li> </ul> <p>Public consultation was done and the owner of trees are well informed regarding the project</p>	<p>Demolition of structures – Clearing and Grubbing Phase (2015)</p> <p>Reconstruction of structures – After the clearing and grubbing phase (Jan. – Feb. 2015)</p>	DED/POW Contract	PLGU; Contractor City Government of San Jose City
17. Issue on the trees to be cut, and transfer of electric post	[ ✓ ] The Cut trees/logs will be given to the owner during clearing and grubbing and the electric post will be transfer the electric company	<ul style="list-style-type: none"> <li>• The cutting of trees will be done by the contractor and transfer of electric by the electric company</li> </ul>	Cutting of trees and transfer of electric post during clearing and grubbing ((Jan. – Feb. 2015)		
18. Potential discovery of artifacts, bones, or other objects of interests during the implementation stage	[ ✓ ] The project has no significant effect in the physical cultural resources that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance.	<ul style="list-style-type: none"> <li>• The adoption of the Chance Archaeological/Paleontological Finds Procedure will be observed.</li> </ul>	Start of construction up to the of construction of the project	Contract	PLGU; Contractor
19. Potential negative feedbacks from the affected households	[ ✓ ] Implementing Agency (LGU) is open for feedbacks and concerns arising from the project performance in all phases.	<ul style="list-style-type: none"> <li>• Grievance and Redress Mechanism will be established in accordance with the IESSF accessible to the beneficiaries/ affected households for their feedbacks.</li> </ul>	Whole duration of the project	O & M	PLGU & City Government of San Jose
20. Availability of Quality materials in the quarry source/sites	[ ✓ ] The identified quarry source/site (Tayabo River bed) had enough quality materials that will be needed by the project	<ul style="list-style-type: none"> <li>• Continue to monitor the source of quarry materials and the impact to community</li> </ul>	Whole duration of the project	Certification of DPWH and PENRO	PLGU; Contractor
21. Batching plant requirement and capacity; and the potential social and environmental impacts	[ ✓ ] The batching plant require by the project was two (one own and one hired) the batching will be established/located away from the residential area	<ul style="list-style-type: none"> <li>• Continue to monitor the operation and maintenance of batching specially the potential impacts in the community and environment</li> </ul>	Whole duration and operation of batching plant	Geotagged photos of batching and the operation schedule	PLGU/Contractor

Source: Environmental and Social Management Plan/PRDP

Noted by:

  
**SERAFIN SANTOS**  
 PPMIU Head of Nueva Ecija

**ANNEX 35**

**Annex H -2**

Department of Agriculture  
**Philippine Rural Development Program**

**Chance Archaeological/Paleontological Finds Procedure for Subprojects**

1. This procedure shall be made known to the Local Government Unit (LGU) Contract Administrator, the Contractor, the Site Engineer, all Construction Foremen and all On-Site Supervisors.
2. A copy of this procedure shall be made available at the construction site at all times.
3. Upon discovery of artifacts, bones or other objects of interests, all digging, drilling and other earthmoving activities within the radius of 10 meters from the discovery point shall be immediately suspended. The highest ranking officer of the Contractor present at the site must impose the suspension of activities and immediately inform the LGU Contract Administrator or if not available, the highest ranking LGU officer available.
4. The highest ranking officer of the Contractor at the construction site with or without the LGU Contract Administrator or LGU representative shall immediately take photographs of the artifacts, bones or other objects of interest. The photographs must be taken at close-ups and at distant range or at wide-shots placing the objects at the approximately the same point and position where they were found and showing other markers.
5. The highest ranking officer of the Contractor at the site must ensure that the site is secured and any artifacts, bones or objects of interests already removed from the site must also be placed in a secured place or container.
6. The LGU Contract Administrator and/or highest ranking Officer from the LGU shall immediately report the discovery simultaneously to: (a) the Regional Project Coordination Office (RPCO) Social and Environmental Safeguards (SES) Officer and Engineer or if not available, the highest available ranking Officer of the RPCO; and, consistent with RA 8492, (b) to the National Museum.

The following are the contact numbers of the Archaeology Division of the National Museum:  
Email: [archaeology@nationalmuseum.gov.ph](mailto:archaeology@nationalmuseum.gov.ph)

Telephone Numbers

Curator: (+632) 527-03-08

Administrative: (+632) 527-12-35

Records Section: (+632) 527-11-40

Underwater Telephone: (+632) 527-11-57

Photographs of the finds and the site shall also be sent to the RPCO SES Officer and to the National Museum, preferably through email.

7. The highest ranking LGU official at the time shall also immediately inform the local police and civil authorities who, consistent with Section 20 of RA 8492, shall preserve and protect the site from illegal exploitation until such time as the National Museum shall have established control over them.
8. Upon knowledge of the discovery and prior validation, the RPCO Head shall also inform the PSO Head and NPCO Head who shall coordinate with the National Museum on further actions or evaluations.
9. Depending on the National Museum's evaluation, actions and recommendations, the LGU, RPCO, PSO and NPCO shall then determine the fate of the Subproject.
10. Any delay due to suspension or any discontinuation or termination of the Contract through or as a result of the application of this Procedure shall be considered "force majeure" and hence the applicable provisions of the Contractors Contract (particularly, the provisions described in Section 20 of the General Conditions Philippine Bidding Documents) shall be applied.