Position	Job Description	No. of Months
11. RAP Specialist	Responsible for the development of road right of way strip planning. Responsible for the development of social framework. He will be responsible for the RAP and community development aspects of the project, and also with the socio-environmental, and cultural part of the study. He will ensure that basic concerns in RAP besides dwellings, like livelihood, health care and other basic needs are adequately addressed in the process.	0.50
12. Property Appraiser	Responsible for the estimates of the market values of the property, affected by the ROW for a project. Responsible for determining the fair market value of the land, the replacement cost of structures/improvements, and the fair market value of crops and trees in the properties described above as affected by the ROW requirement of the said project	0.25
13. Gender and Development (GAD) Specialist	Responsible for the development of gender framework. Prepare strategies on how women can positively participate in all the downstream activities expected to follow the project implementation stages up to its operation.	0.25

8 INSTITUTIONAL ARRANGEMENTS

8.1 Implementing Office

8.1.1 Disburse the fund for the conduct of the F/S once the contract is executed;

8.1.2 Implement and manage the contract, including ensuring the quality of output, the monitoring and evaluation of the progress of the study and approval of reports to ensure delivery of outputs as specified in this TOR;

8.1.3 Provide assistance in the coordination with other concerned agencies/entities in the conduct of the study, such as securing the required permits(s) from the Protected Area Management Board (PAMB) - Department of Environment and Natural Resources (DENR) for the conduct of activities and entry into the protected area, among others;

8.1.4 Provide reasonable technical assistance to personnel of the Consultant with respect to incidents related to the conduct of the study;

8.1.5 Provide, upon the request of the Consultant, available information/data and also if available, copies of previous related studies subject to the execution of the Confidentiality and Non-Disclosure Agreement (CNDA), if necessary.

8.1.6 [1]Coordinate with the Regional Office and Project Preparation Division – Planning Service of the DPWH regarding all the activities relating to the conduct of the study, included but not limited to the implementation timelines, submission of deliverables, notice of meetings, etc. Should the need arise, consult with the PPD-PS in coordination with the Regional Office in the implementation of the study.

8.2 Consultant

8.2.1 Conduct the study and deliver **ON TIME** the results/outputs as indicated in this TOR;

8.2.2 Provide the necessary office equipment (i.e., laptop, smartphone, office supplies, etc.) for the conduct of the study. All equipment procured for the development of the project shall be transferred to the Government by the end of the project;

8.2.3 Carry out the services in accordance with the accepted theories and practices to ensure that the final works will provide the most economical and feasible development for the study;

8.2.4 Accept full responsibility for the consulting services to be performed under this TOR for which the Consultant is liable to DPWH;

[1] Include only if the DEO is the Implementing Office

8.2.5 Perform the work in an efficient and diligent manner and shall adhere to the agreed schedule and deliverables; and

8.2.6 Provide on-the-job capacity building/technology transfer to the Implementing Office.

9. OWNERSHIP OF THE OUTPUTS/REPORTS/DOCUMENTS

All submitted outputs/reports/documents under this contract, including but not limited to tracings, as-built drawings, estimates, digital information, computer model and data, specifications, investigations and studies completed or partially completed, inspection logs, and photographs, shall be the property of DPWH and the use of these data for other purposes shall require written consent from the Department. Copyrights will be governed by existing laws, rules and regulations.

Prepared By:

PRINCESS M. MURIA
Engineer II

Submitted By:

GEMMA L. OLAN
Chief, Planning and Design Section

Recommending Approval:

ARIEL V. ARMEDILLA
Assistant District Engineer

Approved By:

SONIA D. PAGLICAUAN
District Engineer

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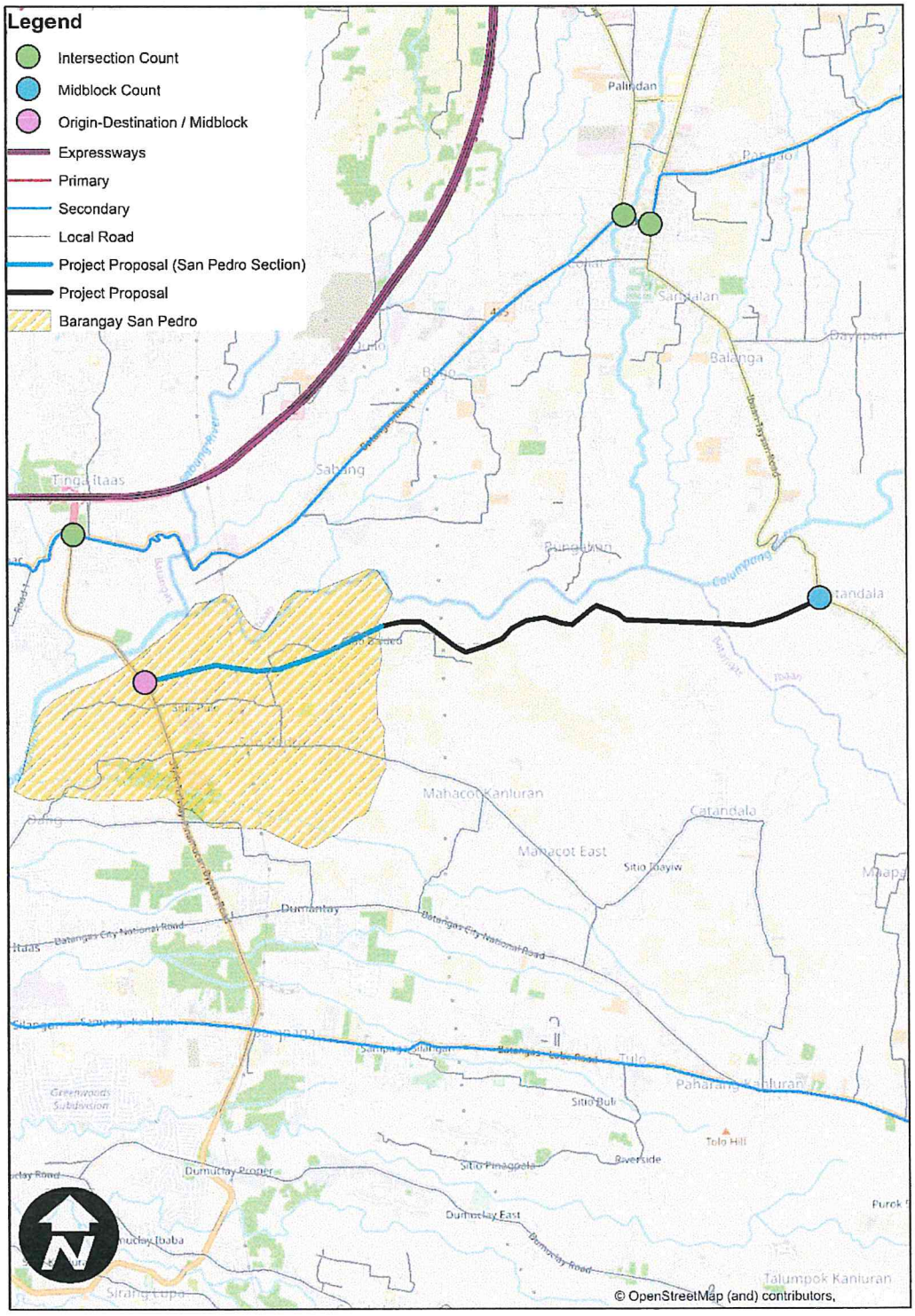
District Engineer

Annex 1: Locations of Traffic Survey Stations at San Pedro-Mahacot-Catandala Road (San Pedro Section)



Annex 2: Summarized/processed Traffic Survey data sheet

TRAFFIC PROJECTION, EXISTING TRAFFIC												
Year	Cars/Taxi/Jeep	Passenger Utility	Goods Utility	Small Bus	Large Bus	Trk-2ax	Trk-3ax	Trk-4+ax	Motorcycle	Tricycle	AADT Total

Annex 3: Traffic Survey Data Sheets/Forms (Manual Count)

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PLANNING SERVICE

PROJECT PREPARATION DIVISION

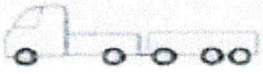
PPD_ST - 001

MANUAL CLASSIFIED TRAFFIC COUNT

Single Direction and Lane Count Form

SITE ID:	REGION:	DISTRICT:	SKETCH:
ROAD SECTION ID:	ROAD NAME:		
KM STATIONS:	SITE DESCRIPTION:		
DIRECTION:			

DAY OF THE WEEK	DATE (MM / DD / YYYY)	WEATHER	TIME	
			START	END

1a. MOTOR - TRICYCLE 																		
1b. MOTORCYCLE 																		
2. PASSENGER CAR 																		
3. PASSENGER UTILITY 																		
4. GOODS UTILITY 																		
5. SMALL BUS 																		
6. LARGE BUS 																		
7. RIGID TRUCK (2 AXLES) 																		
8. RIGID TRUCK (3+ AXLES) 																		
9. SEMI - TRAILER TRUCK (3/4 AXLES) 																		
10. SEMI - TRAILER TRUCKS (5+ AXLES) 																		
11. TRAILER TRUCKS (4 AXLES) 																		
12. TRAILER TRUCKS (5+ AXLES) 																		

Annex 4: Traffic Survey Data Sheets/Forms (O-D Survey)

PPD_SF-004

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PLANNING SERVICE

PROJECT PREPARATION DIVISION

O/D TRAFFIC SURVEY SHEET

STATION NAME		PROJECT			LOCATION (Road/ Municipality/ Region)	SKETCH
DIRECTION		TIME		DATE	INTERVIEWER	
FROM	TO	FROM	TO			

Record No.	VEHICLE TYPE														ORIGIN	CODE	DESTINATION	CODE	TRIP PURPOSE						
	1a. Motor - Tricycle	1b. Motorcycle	2. Passeneger Car	3. Passenger Utility	4. Goods Utility	5. Small Buses (13-30 seats)	6. Large Bus (>30 seats)	7. Rigid Truck 2-axles	8. Rigid Truck (3-axles)	9. Truck Semi-Trailer (3&4 axles)	10. Truck Semi-Trailer (5 axles)	11. Truck Trailer (4 axles)	12. Truck Trailer (5 axles)	CODE					1. Work	2. School	3. Business	4. Private Matter	5. Leisure	6. Others	CODE

VERSION 00

Annex 5: Traffic Survey Data Sheets/Forms (Travel Time Survey)

PPD_SF-005

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
PLANNING SERVICE
PROJECT PREPARATION DIVISION

Travel Time and Delay Survey Field Sheet

Route:			Direction		Date:						
Trips started at: (time)					at (location)						
Trip ended at: (time)					at (location)						
Name of Surveyor:											
CONTROL POINT	KMS	STOPPED	STARTED	TOTAL DELAY	CAUSES OF DELAY						
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
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					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7
					1	2	3	4	5	6	7

Cause of Delay:

1 - Public Utility Vehicle Loading/Unloading
2 - Stop Sign/ Red Signal at Intersection
3 - Pedestrian Crossing
4 - Maneuvering vehicles such as parking, left turning or opposite turns
5 - Blocked by other vehicles such as heavy traffic ahead
6 - Road Construction/ Maintenance
7 - Others (explain)

Annex 6: Traffic Survey Methodologies

A. Intersection Traffic Count

1. Objectives

- Necessary traffic data acquisition for traffic impact study at intersection.

2. Scope of Works and Specifications

Survey shall be conducted in following manners:

2.1 Intersection Traffic Flow Counts

a. At intersections (locations shown in Annex 1) in period of 12 hours on one week day, either Wednesday or Thursday.
b. Vehicles crossing the survey points will be counted according to mode classification and direction.
c. Traffic volume shall be counted and aggregated for each 15-minute period.
d. Mode classification will be; pedestrian including bicycle, motorcycle, tricycle, passenger car including taxi, passenger jeepney, goods utilities including pick-up and vans, medium bus (less than 50 passengers) and large bus (50 passengers or more), small truck (2 axles), large truck (3 axles or more) and semi-trailer trucks (see attached sample format of Intersection Traffic Count Survey Sheet).
e. Some intersections are large and complicated with many legs. So traffic survey shall be designed carefully to get accurate traffic data to/from the intersections.

3. Survey Results

3.1 Coding and Data entry

a. Coding. The data collected in the surveys will be coded after the field survey in accordance with the method shown in the survey manual.
b. Data. The survey results will be input to computers using Microsoft excel customized for each survey data. However, the final data will be input to traffic modelling software.

3.2 Submission of a brief report

Result of the survey will be summarized briefly using figures and tables and the details will be compiled in a report.

B. Manual Count Survey

Vehicle types are classified into the following categories:

i. passenger car including taxi
ii. passenger utility (PUV)/public utility jeepney
iii. goods utility (pick-up and delivery van)
iv. small buses
v. large buses
vi. rigid truck, 2 axle
vii. rigid truck, 3+ axle
viii. truck semi-trailer, 3& 4 axles
ix. truck semi-trailer, 5+ axles
x. truck trailers, 4 axles
xi. truck trailers, 5+ axles
xii. motor-tricycle, and
xiii. motorcycle

Traffic surveys shall be conducted following procedures enumerated below. The specific location of the survey station is presented in Annex 1.

Manual Count (MC) Surveys

a. At identified locations, traffic counts by directional flow in a period of fourteen (12) hours from 6:00AM to 6:00PM in one (1) day preferably on Tuesdays, Wednesdays or Thursdays.
b. Vehicles crossing the survey points will be counted according to mode classification and direction.
c. Traffic volume shall be counted and aggregated in every one (1) hour time interval.

TRAFFIC SURVEY DATA PROCESSING

Coding and data entry

a. Coding: The data collected in the surveys will be summarized and coded after the field survey in accordance with the standard method to be provided by the PPD.
b. Data: The survey results will be inputted to computers using Excel Spreadsheet application.
c. At identified stations close to the intersection, roadside interview by directional flow in a period of twelve (12) hours from 6:00AM to 6:00PM in one (1) day preferably on a Tuesday, Wednesday or Thursday.
d. Vehicle crossing the survey points according to mode classification and direction will be interviewed to determine its origin and destination and other pertinent information required for the study.

e. Data of interviewed vehicle shall be collected, validated and aggregated in every one (1) hour time interval. Validated samples are samples compared with the actual count for the particular hour.
f. Establishment of the OD survey station will be located in a section where safety and sight distances are of primordial concern. Such undertaking will be coordinated with the Local Government Units (LGUs) and police in the area. Proper signage shall be considered.

C. Travel Time and Delay Survey

This survey will be carried out by the Consultant in accordance with the methodology set forth by the Project Preparation Division (PPD), Planning Service which will be commissioned purposely for this study.

Travel Time and Delay Surveys

a. At major roads corridors during the following time periods: AM Peak, Off-Peak and PM Peak, on one weekday excluding Friday, Saturday and Sunday.
b. Travel time shall be surveyed by floating car method for each route and in both directions. A minimum of two runs in each direction shall be conducted. Measurement shall be carried out on board passenger car (test vehicle) and public utility vehicles at each time period.

TRAFFIC SURVEY DATA PROCESSING

Coding and data entry

a. Coding: The data collected in the surveys will be summarized and coded after the field survey in accordance with the standard method to be provided by the PPD.
b. Data: The survey results will be inputted to computers using Excel Spreadsheet application.
c. Report: Results of the surveys will be summarized briefly using figures and tables and the details will be compiled in a report.

Annex 7: Proposed Preliminary RAP Report Outline

Executive Summary

(Brief Summary of the report with Summary of Compensation Cost)

1. INTRODUCTION
1.1.Rationale
1.2.Objectives
1.3.Methodology
1.4.Public Consultation Proceedings
1.5.Project Description

2. LEGAL FRAMEWORK
A short discussion on existing laws, policies and regulations on IROW Acquisition.
(Please refer to LARRIPP in accordance to RA 10752)

3. POLICY ON ELIGIBILITY FOR COMPENSATION AND OTHER ENTITLEMENTS
(Please refer to LARRIPP in accordance to RA 10752)

4. DESCRIPTION OF ADVERSE IMPACTS
A discussion on the estimated number of affected PAPs/PAFs and other assets such as land, structure, trees, crops and other improvements including the severity of the impacts.
4.1. Parameter on the Severity of Impacts
4.2. Adverse Impacts on Project Affected Families (PAFs)
4.3. Impact on Structures, Other Improvements and Trees
4.3.1. Impacts on PAFs per Municipality
4.3.2. PAFs by Classification of Impacts and Total Estimated Costs
4.3.3. Resettlement Options for Severely Affected Structures
4.4. Impacts on Land

5. SOCIO-ECONOMIC PROFILE OF PAFs
5.1. Basic Information
5.2. Household Structure
5.3. Access to Basic Social Services
5.4. Project Awareness
5.5. Type of Affected Structures
5.6. Profile of Landowners
5.7. Brief Profile of IPs (if any)

6. RELOCATION PLAN FOR INFORMAL SETTLERS (If there are ISF's)
6.1. Survey on PAP's willingness to relocate.
6.2. Proposed Relocation Site & Development Plan
6.3. Other Developmental activities to address the Informal Settlers Needs.

7. PUBLIC INFORMATION, CONSULTATION AND PARTICIPATION FRAMEWORK

7.1. Proceedings of Public Consultations
7.2. Information Campaign on Land Acquisition

8. ENTITLEMENT MATRIX

A short discussion on entitlement matrix for structure/other improvements shall also be presented in the Chapter.

Entitlement Matrix for Structures/Other Improvements/Trees and Perennials

9. BUDGET REQUIREMENT

A discussion on the estimated cost of ROW Acquisition of the project.

9.1. Funds for RAP Implementation
9.2. Resettlement Cost
9.3. Procedures for Flow of Funds
9.4. Unit Prices for Cost Estimation
9.5. Total Preliminary RAP Cost

10. GRIEVANCE REDRESSAL

11. INSTITUTIONAL ARRANGEMENT
(Please refer to LARRIPP in accordance to RA 10752 and relevant DPWH Department Orders)

12. MONITORING MECHANISM

12.1. Objective
12.2. Supervision and Internal Monitoring
12.3. External Monitoring and Evaluation
12.4. Stages of Monitoring
12.5. Reporting
12.6. Monitoring Indicators

13. INDIGENOUS PEOPLE ACTION PLAN (if necessary)

ANNEXES:

- List of PAFs for Structures/Other Improvements/Trees and Perennials
- List of PAFs with Affected Lots
- Memorandum of Understanding
- Minutes of Coordination Meeting with LGUs, Attendance Sheet and Photos
- Minutes of Public Consultation, Attendance Sheet and Photos
- PAFs Individual Detailed Estimated Cost, Photos and Sketch of Affected Properties/Assets
- BIR Zonal Value and Current Market Value by the Independent Property Appraiser (IPA) or by the Government Financial Institution (GFI)
- Valuation Report by the IPA or GFI
- Schedule of Prices of Construction Materials (Current Market Prices)
- Current Market Value of Fruit Bearing Trees
- Current Market Value of Timber Trees

Annex 8: Proposed Environmental and Social Impact Assessment Outline

I. Introduction
II. Environmental Regulatory Framework
III. Project Description
IV. Description of Environmental Setting and Receiving Environment/ Environmental Baseline
    a. Land
    b. Water
    c. Air/Noise
    d. People
    e. Future Environmental Conditions without the Project
    f. Future Environmental Conditions with the Project
V. Project Potential Key Impacts Assessment and Mitigation (per project Phase)
    a. Key Potential Impacts on Land
    b. Key Potential Impact on Water
    c. Key Potential Impact on Air and Noise
    d. Key Potential Impact on People
VI. Environmental Management Plan/ Impact Management Plan
VII. Recommendation