

TABLE OF CONTENT

PREFACE	i
TABLE OF CONTENT	iii
 CHAPTER I INTRODUCTION	
1.1. Background	I-1
1.2. Objectives of Environmental Monitoring Plan	I-1
1.3. Benefits of Environmental Monitoring Plan	I-1
1.3.1. Benefits to Initiator	I-1
1.3.2. Benefits to Relevant Agencies	I-2
1.3.3. Benefits to Affected Communities	I-2
 BAB II ENVIRONMENTAL MONITORING PLAN	
2.1. Pre-Construction Stage	II-2
2.2. Construction Stage	II-6
2.3. Post Construction Stage	II-28

Appendix:

Figure of Environmental Monitoring Plan

DAFTAR TABEL

Tabel 2.1. Matrik Rencana Pemantauan Lingkungan (RPL).....	III-36
--	--------

DAFTAR GAMBAR

	Lampiran
Tabel 3.1. Peta Rencana Pemantauan Lingkungan	1

CHAPTER I INTRODUCTION

1.1. Background

In an effort to reduce the negative impact to a minimum and develop its positive impact, then the Manager of Cikampek-Palimanan toll road as the initiator in its completion of EIA study, prepared the RPL and RPL as a guideline in conducting environmental monitoring of the impact arising from the construction of toll roads along the Cikampek-Palimanan 116.4 km along with its supporting infrastructure.

1.2. Objectives of Environmental Monitoring Plan

- Formulate measures or precautions, prevention and control negative impacts and enhance positive impacts resulting from development activities Cikampek toll road - in this experiment.
- Improvement of the environmental control system inside or out of bounds through the monitoring activities as feedback.

1.3. Benefits of Environmental Monitoring Plan

Usefulness of monitoring the implementation of the environment is not only felt by the proponent, but also by the relevant agencies and affected communities.

1.3.1. Benefits for Initiator

Importance of Environmental Monitoring Plan is to:

- a. As a means to evaluate the effectiveness of activity used in the management / control negative impacts and positive impacts of development as stated in the Environmental Management Plan (RKL).
- b. As an early indicator for the presence of undesirable environmental changes, thus overcoming the impact of these steps can be implemented effectively.
- c. As

guidelines for the proponent to carry out cooperation in environmental monitoring activities and the surrounding area with relevant agencies in conserving the environment.

- c. To meet the requirements of applicable law.
- d. As a means to collect relevant evidence in cases of prosecution and defense.
- e. As a means to take further policy for the development of these activities.

1.3.2. Benefits to Relevant Agencies

- a. As a means of feedback to relevant agencies in determining the policy steps to be taken to improve environmental quality / environmental conservation efforts and natural resources.
- b. As a means of feedback to relevant agencies and the security officers in anticipating and evaluating the various activities that will arise and have to be more easily conduct preventive measures (prevention) as well as supervision of environmental management.
- c. To assist monitoring agencies in the development of environmental monitoring.

1.3.3. Benefits to Affected Communities

- a. To increase community participation in efforts to monitor safety, hygiene, health and environmental sustainability.
- b. To use the community as a social control, in order to maximize positive impacts and minimize negative impacts.

CHAPTER II

ENVIRONMENTAL MONITORING PLAN

Implementation of development Cikampek- Palimanan Toll Road and the supporting infrastructure, will work well if environmental management efforts and the success of environmental management undertaken by the proponent in accordance with the guidelines that have been raised in Environmental Management Plan and monitored in a monitoring activity.

Guidelines for monitoring of major and significant impacts outlined in the document Environmental Monitoring Plan.

The description of the monitoring to be performed on components that impact these activities will be conducted based on the phases of activity in the construction of Cikampek - Palimanan toll roads along the 116.4 km.

In the environmental monitoring plan is some impact and sources of impacts to the implementing agencies and recipient management reports, itemized by discussion as the following:

- a. Significant impacts are monitored
 - Types of components / parameters of the environment
 - important indicator of the impact of the monitored components
- b. Source impact
- c. Environmental parameters monitored
- d. The purpose of environmental monitoring plan
- e. Methods for environmental monitoring:
 - method of data collection and analysis
 - The location of environmental monitoring
 - Duration and frequency of monitoring
- f. Institutions for environmental monitoring
 - Implementing environmental monitoring
 - Supervision of environmental monitoring
 - Reporting the results of environmental monitoring

In more details, location of environmental monitoring in each section since from Section I to Section VI, can be seen on the attachment.

2.1 Pre-Construction Stage

1. The emergence of community unrest

(1) Significant impacts are monitored:

Component Type / Parameter Environment: Attitudes and perceptions of society, both negative and positive.

Significant Impact Indicators: Socialization to the community affected.

(2) Source of Significant Impacts

This community unrest arises mainly from people who are in the location of site activities. The source is the cause of the impact of implementation activities since the survey, measurement and installation of stakes, have spread the information that the land around the site of activities will be exempted. But the information is not sure when the time land preparation is carried out, this raises concerns that land people used as sources of livelihood.

(3) Environmental parameters are monitored:

Knowledge and understanding of the overall community of Cikampek - Palimanan Toll Road Development and building facilities and supporting infrastructure.

The creation of proper perception about Palimanan Cikampek toll road development and a positive attitude towards such development.

(4) Environmental Monitoring Objectives

Knowing the development, type and level of disquiet in society a result of the activities of land survey and measurement.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

To determine the condition of the public unrest is done through a limited survey using questionnaires and interview tools to local residents.

- Levels of public unrest that occurred

- The issues that arise in society
- Finding information developed in the community about Cikampek toll road construction work - experiment.

b). Location of environmental monitoring

Held at the villages in the area of Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency.

c) The duration and frequency of monitoring

Done periodically within one month after the survey and measurement and the installation of stakes.

(6) Institution of Environmental Monitoring

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies.

Supervisor: Office of LH in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Police party in the 5 regions regency.

Reporting: Regent in 5 Regency, BPLHD regency of West Java Province. BPJT-Department of Public Works

2. The emergence of Social Conflict

(1) Significant impacts are monitored:

Component Type / Parameter Environment: Social economic and cultural

Impact Indicators Important: There is a horizontal conflict between those who opposed and who agree with the land acquisition for highway.

(2) Source of Significant Impacts

Procurement of land for the construction of the highway.

(3) environmental parameters are monitored:

Level of public unrest which led to the occurrence of horizontal conflicts caused by those who opposed the land acquisition activities while other groups receive.

(4) Environmental Monitoring Objectives

Avoid open conflict between the parties, which do not correspond to understand.

Tapping the potential for interference of security conflict.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Field observations along with interviews with residents about the presence or absence of potential conflict.

b). Location of environmental monitoring

Location of monitoring in all districts in 5 regencies, especially in rural districts Babakan Ciwaringin Cirebon regency.

c) The duration and frequency of monitoring

Performed 1 time per month during the land acquisition phase implemented.

(6) Institution of Environmental Monitoring

Implementing: Ministry of Public Works (Land Acquisition Committee / TPT), Manager Toll-Palimanan Cikampek,

Supervisor: Department of Land and National Land Agency in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency.

Reporting: BPLHD West Java Province

Toll Road Regulatory Agency (BPJT) - Department of Public Works

3. Reduced Income

(1) Significant impacts are monitored:

Component Type / Parameter Environment: public unrest with uncertain value of land compensation.

Impact Indicators Important: The difference of the value of compensation land between the consensual and the market price.

(2) Source of Significant Impacts

Activities of land acquisition for the highway project needs.

(3) environmental parameters monitored:

Obtaining information about the situation earlier public unrest due to the value of land compensation.

(4) Environmental Monitoring Objectives

Avoid open conflict between the parties, which do not correspond to understand.

Tapping the potential for interference of security.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Field observations along with interviews with residents about the presence or absence of public complaints.

b). Location of environmental monitoring

Location of monitoring in all districts in 5 regencies.

c) The duration and frequency of monitoring

Performed 1 time in 3 months during land acquisition phase.

(6) Institution of Environmental Monitoring

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the Land Acquisition Committee.

Supervisor: Department of Land Affairs in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency, Directorate General of Highways Department of Public Works.

Reporting: BPLHD West Java Province, Toll Road Regulatory Agency (BPJT) - Department of Public Works

2.2. Construction Phase

A. Components of Physical - Chemical

1. Reduced Air Quality

(1) Significant impacts are monitored:

- Types Component / Parameter Environment: Air quality at the site access road
- Significant Impact Indicators: Reduced air quality at nearby residential

(2) Source of Significant Impacts

Increased air pollution is attributed to the escape of dust particles from the surface of the road due to vehicles transporting material and activities, also due to exhaust emissions

from vehicles that transport materials through the village streets and roads as transportation routes regency material.

(3) environmental parameters monitored:

- Levels of dust and ambient air
- Negative perceptions surrounding community access roads used to transport materials and building materials.
- Layers of dust visible in the precarious and houses are also on the leaves at the curb.

(4) Environmental Monitoring Objectives

- Reducing the ambient air pollutant concentrations caused by material transportation activities and vehicle operating projects.
- Preventing health problems for workers around the location of the dam community.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Taking samples of dust, analyzed in the laboratory, and compared with quality based on government regulation No.41 of 1999, regarding the National Air Quality Standards.

b) Location of environmental monitoring

In and around the location of activities, especially villages that are in alignment territory road transport, as well as the location where the interchange.

c) The duration and frequency of monitoring

1 times in one month for Cikampek-Palimanan progress toll road development activities.

(6) Institute of Environmental Monitoring

Executing: Toll Road Operating Board (BUJT) / Operator Toll

Supervisor: Environmental Office on 5 Regency, Department of Public Works of West Java Province

Reporting: BPLHD Prov. West Java, Regent on 5 regions regency, Toll Road Regulatory Agency (BPJT) - Department of Public Works

2. Increased Noise

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters: The quality of noise on the access road
- Significant Impact Indicators: Increased noise

(2) Source of Significant Impacts

Increasing noise caused by transportation vehicles in addition to materials and activities and operation base camp, also a result of project vehicles carrying construction workers out of the project.

(3) environmental parameters monitored:

- Levels of noise in residential areas and also in certain locations that are considered important to monitor such as the location of plantations and rice fields associated with terrestrial fauna.
- Negative perceptions surrounding community access roads used to transport materials and building materials.

(4) Environmental Monitoring Objectives

- Reducing the concentration of noise generated from transportation activities and vehicle operating materials project.
- Preventing health problems for workers around the location of the dam which caused the noise.
- To know the level of success of environmental management that have been implemented.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Direct observation in the field to determine the concentration of noise that occurs as compared with the Threshold Value permitted in accordance with Kep.MenLH No. Kep-48/MENLH/I 1 / 1998.

b). Location of environmental monitoring

In and around the location of activities, especially villages that are in alignment territory road transport, as well as the location where the interchange.

c) The duration and frequency of monitoring

1 times in one month for Cikampek-Palimanan progress toll road development activities.

(6) Institute of Environmental Monitoring

Executing: Toll Road Operating Board (BUJT) / Operator Toll

Supervisor: Environmental Office on 5 Regency

Reporting: BPLHD Prov. West Java, Regent on 5 regions regency, Toll Road Regulatory Agency (BPJT) - Department of Public Works

3. Reduced Surface Water Quality

(1) Significant impacts are monitored:

- Component / Environmental Parameters: The quality of river water and surface water
- Key Indicators of Impact: Reduced water quality

(2) Source of Significant Impacts

Cleaning and preparation of the subgrade.

Construction of highway throughout ± 116.4 km and its supporting infrastructure.

(3) environmental parameters are monitored:

The quality of river water at bridge construction site and on the rivers that pass by the highway network alignment.

(4) Environmental Monitoring Objectives

- Knowing the toll road network development impacts on surface water quality / river in its path.
- Avoid interference with surface water drainage / river due sedimentasi and erosion.
- Detecting unrest residents who use the river water source as a source of raw water daily.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Direct observation by taking samples of river water on the highway network path.

Results of laboratory analysis of water samples and then compared with the Water Quality Standards, based on Government Regulation No. 82 Year 2001, on Threshold Limit

Values for raw water.

b). Location of environmental monitoring

In the channel crossed by river water that toll road network, especially those that are always flowing throughout the year and large capacity.

c) The duration and frequency of monitoring

1 times in three months during construction activities progress of Cikampek-Palimanan Toll Road

(6) Institution of Environmental Monitoring

Executing: Toll Road Operating Board (BUJT) / Palimanan Cikampek toll road Operator.

Environmental Office on 5 Regency related

Supervisors: Public Health Service on 5 Regency related

Reporting: BPLHD Prov. West Java

Regent on 5 regions regency

Toll Road Regulatory Agency (BPJT) - Department of Public Works

4. Impaired Surface Water Flow

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters: The flow of surface water either artificial or natural drainage, as well as river flow
- Impact Indicators Important: Changing the direction flux

(2) Source of Significant Impacts

- Cleaning and preparation of the subgrade.
- Preparation of highway agencies throughout the 116,4 km and its supporting infrastructure.

(3) environmental parameters are monitored:

Changes in surface water flow at specific locations affected by highway construction activities.

(4) Environmental Monitoring Objectives

Knowing the impact that occurs on surface water flow and also the river due to construction of highways, and where the direction of flow is controlled in order to maintain

its existence.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Observed directly in the field in coordination with the implementing work / contractors also relevant agencies.

b). Location of environmental monitoring

Monitoring conducted at locations where surface water flow changes both natural and artificial drainage is also in contradiction with the rivers.

c) The duration and frequency of monitoring

Performed 1 time in 3 months, during the construction period lasts.

(6) Institution of Environmental Monitoring

Executing: Executing / contractor of the project,

Supervisor: Office of Public Works Highways West Java Province Irrigation Office in 5 regions regencies, Toll Road Operating Board (BUJT) / Palimanan Cikampek toll road Operator

Reporting: BPLHD Prov. West Java

Regent on 5 regions regency

Toll Road Regulatory Agency (BPJT) - Department of Public Works

5. Occurrence of Soil Erosion

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters: The occurrence of landslide of soil material
- Significant Impact Indicators: The occurrence of sedimentation in drainage channels and rivers

(2) Source of Significant Impacts

- Cleaning and preparation of subgrade, as well as soil excavation and landfill.
- Preparation of the body along the 116.4 km of toll roads and their supporting infrastructure.

(3) environmental parameters monitored:

Impaired drainage of surface water flow which is due to sedimentation, and disruption of river water quality.

(4) Environmental Monitoring Objectives

Knowing early on how far the influence of erosion occurred on the occurrence of sedimentation on the existing drainage channel, and to know that there are sedimentation in river body.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

Make observations and measurements directly in the field and collaborating with related agencies.

b). Location of environmental monitoring

Monitoring sites are along the toll roads where there are surface water channels and rivers that cut by toll roads.

c) The duration and frequency of monitoring

Monitoring carried out during construction activities take place, at least 3 months.

(6) Institute of Environmental Monitoring

Executing: Executing / contractor of the project,

Supervisor: Office of Public Works Highways West Java Province

Regency Irrigation Office in 5 regency, Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road.

Reporting: BPLHD Prov. West Java, Regent on 5 regions regency, Toll Road Regulatory Agency (BPJT) - Department of Public Works

6. Groundwater Flow Disturbance

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters

: Reduced quantity of ground water

- Significant Impact Indicators: The occurrence of water shortages in the residential neighborhood.

(2) Source of Significant Impacts

- Cleaning and preparation of subgrade, as well as soil excavation and landfill.
- Preparation of the ROW along the 116.4 km of toll roads and their supporting infrastructure.

(3) environmental parameters monitored:

Changes in the direction of groundwater flow and reduced the quantity of ground water.

(4) Environmental Monitoring Objectives

Knowing early on changes in soil water availability, both in the residential neighborhood, area residents and businesses within the base camp and office construction workers.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

To monitor directly in the field, especially in shallow wells the location of the population as a source of water, also the location of the source of spring water around the study area (if any).

b). Location of environmental monitoring

Monitoring conducted on residential location and also the location where there is a spring, which is the source of water for the needs of residents, both bathing, washing and toilet facilities and to need watering.

c). Duration and frequency of monitoring

Monitoring carried out for 3 months, during the construction period lasts.

(6) Institute of Environmental Monitoring

Executing: Executing / contractor of the project.

Supervisor: Office of Public Works Highways West Java Province, Environmental Office in 5 regencies

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Regencies. Toll Road Regulatory Agency (BPJT).

7. Slope Stability Disorders

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters: The stability of slopes
- Significant Impact Indicators: Disruptions of slope stability at a particular location

(2) Source of Impact

Cleaning and preparation of subgrade, excavation and stockpiling of soil, and construction activities along the highway agency facilities and supporting infrastructure.

(3) environmental parameters monitored:

Disturbance of slope stability in areas that require cutting cliffs and sloping areas that require landfill.

(4) Environmental Monitoring Objectives

Detect catastrophic landslide and soil erosion on the location or construction activities alignment of the highway.

(5) Method of Environmental Monitoring

a) Methods of data collection and analysis

- To monitor directly in the field.
- Observe the condition of the drainage flow of surface water / river.
- Direct Observation of sedimentation in river body.

b). Location of environmental monitoring

In locations where there is a river bridge, and at locations that have treated the cut and fill that stands out.

c) The duration and frequency of monitoring

1 times in every month for Cikampek-Palimanan toll road development activities progress.

(6) Institution of Environmental Monitoring

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road.

Department of Mines in 5 regions Regency

Supervisor: Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.

Reporting: BPLHD Prov. West Java, Regent Cq. Environmental Office in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

B. Biological Components

1. Reduced Cultivation Vegetation Types

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters: The number and type of vegetation cultivation
- Indicators of Significant Impacts: Decreasing the amount of vegetation existing at the time of cultivation land clearing activities

(2) Source of Significant Impacts

Work subgrade preparation, excavation and embankment work, operation of basecamp.

(3) environmental parameters monitored:

The reduced amount of existing vegetation.

(4) Environmental Monitoring Objectives

- Monitoring the secondary impact due to a reduction in the amount of cultivated vegetation during road construction activities that potentially disturb terrestrial ecosystems.
- Giving feedback of monitoring for the effects can be reduced.

(5) Method of Environmental Monitoring

a). Methods of data collection and analysis

- To conduct field observations Interviews with the community.

b). Location of environmental monitoring

- Forests, plantations and rice fields in the area of project site

c). Duration and frequency of monitoring

1 time every 3 months during construction activities Cikampek-Palimanan.Toll Road

(6). Environmental Monitoring institution

Implementing: Ministry of Public Works (TPT), Manager Toll Road Cikampek-Palimanan, Department of Agriculture and Forestry in 5 related Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. Public Works, Environmental Office

Regency in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

C. Components of Social, Economic and Cultural

1. Increasing Employment Opportunities

(1). Significant impacts to be monitored:

- Types Component / Environmental Parameters: Employment opportunities for local residents in the project sites.
- Significant Impact Indicators: The amount of job opportunities that are utilized by residents around the project site.

(2). Source of Significant Impacts

Highway construction activity along the 116.4 km starting from. Purwakarta to Cirebon Regency.

(3). Environmental parameters are monitored:

The number of workers that can be absorbed by the project both from immigrant labor and local labor, and other types of business opportunities provided by the community in the project area.

(4). Objectives of Environmental Monitoring

To find out how far the project can absorb the local and immigrant labor. How far the project to empower local communities in the partnership business.

To prevent social unrest because of the presence of immigrant labor.

(5). Methods of Environmental Monitoring

- Conduct observations and interviews with residents and labor migrants in order to find out whether there is any indication of social jealousy among them.
- Conduct an employment record that is received by the contractor / contractors, to determine the ratio of local workers and migrants.

(6). Environmental Monitoring institutions

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor in related Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

2. The emergence of Social Jealousy

(1). Significant impacts to be monitored:

- Types Component / Environmental Parameters: Social Jealousy
- Significant Impact Indicators: The acceptance of labor and immigrants who are not in balance with local recruitment.

(2). Source of Significant Impacts

Acceptance of construction labor and construction services business partnership activities.

(3). Environmental parameters are monitored:

- The number of local employment and labor migrants working in the project.
- Opportunity to have partnership efforts between the local business community with the project.

(4). Objectives of Environmental Monitoring

To find the number of workers absorbed by the project during the construction phase and magnitude of energy absorption of local projects.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Observation and direct interviews with residents around, and with village officials in the district is also related to the project to get an idea of employment and business opportunities that can be filled by local communities.

b). Location of environmental monitoring

Monitoring sites are in all districts in 5 regencies.

c). Duration and frequency of monitoring

1 times in three months during construction activities Cikampek- Palimanan toll road progress.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Palimanan Cikampek toll road Operator, Social Service in 5 regions Regency

Supervisor: BPLHD Prov. West Java, DG Highway Dep. Public Works. Environmental Office Institutions in 5 Regencies

Reporting: BPLHD Prov. West Java Regent Cq. Environmental Office Institutions in 5 Regencies, Toll Road Regulatory Agency (BPJT).

3. Increased Business Opportunities

(1). Significant impacts to be monitored

- Types Component / Environmental Parameters: Employment opportunities.
- Significant Impact Indicators: The amount of job opportunities to surrounding people.

(2). Source of Significant Impacts

Implementation of highway construction and the supporting infrastructure facilities along the 116.4 km.

(3). Environmental parameters are monitored:

The number of workers that can be absorbed by the project both from immigrant labor and local labor, and other types of business opportunities provided by the community in the project area.

(4). Objectives of Environmental Monitoring

- To know how far the project can absorb the local and immigrant labor.
- How far the project to empower local communities in the partnership business.
- To prevent social unrest because of the presence of immigrant labor.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Conduct observations and interviews with residents and labor migrants in order to find out

whether there is any indication of social jealousy among them.

To examine employment records received by the contractor / contractors, to determine the ratio of local workers and migrants.

b). Location of environmental monitoring

Conducted in all districts in the 5 related regencies.

c). Duration and frequency of monitoring

1 times in three months during construction activities Palimanan-Cikampek toll road progress.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator

Supervisor: BPLHD Prov. West Java, DGH Dep. PU. Environmental Office in 5 regencies.

Reporting: BPLHD Prov. West Java

Regent Cq Environmental Office in 5 regencies, toll Road Regulatory Agency (BPJT). DGH Dep. PU.

4. Traffic disruption

(1). Significant impacts to be monitored:

- Types Component / Environmental Parameters: Disordered Traffic
- Significant Impact Indicators: The occurrence of traffic congestion and disruption on public roads in the village street.

(2). Source of Significant Impacts

Implementation of highway construction and the supporting infrastructure facilities along the 116.4 km, and the mobilization of heavy vehicles of the project.

(3). Environmental parameters are monitored:

The condition of traffic jams and other disturbances that occur on roads that became the route of transportation projects and traffic disruption on the village road access.

(4). Objectives of Environmental Monitoring

- To find out how much the project may affect traffic conditions.
- Knowing the earliest possible disruption of traffic conditions before they become sources of public unrest.

- To prevent social unrest because of the presence of t vehicle on a public road projects.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Conduct observations and interviews with residents and road users society, social unrest and find data that occur in the project environment.

To examine a record number of vehicles received by the contractor / contractors, in order to compare the number of vehicles and public transport projects.

b). Location of environmental monitoring

Conducted in all road vehicle through which funds projects in areas of Islamic boarding school in Babakan Ciwaringin STA 200 +700 s / d STA 201 +055.

c). Duration and frequency of monitoring

1 times in three months during construction activities of Cikampek-Palimanan Toll Road progress.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

5. Damage to Public Roads (Local Roads / Village)

(1). Significant impacts to be monitored:

- Types Component / Environmental Parameters: public unrest

- Indicators of Significant Impacts: Damage to public roads used as access roads by the project

(2). Source of Significant Impacts

Land clearing and preparation of basic soil preparation is also base camp for highway construction needs.

(3). Environmental parameters are monitored:

Traffic density and speed of construction materials transport vehicle, as well as volume and length of roads were damaged.

(4). Objectives of Environmental Monitoring

- To obtain information in order to improve the management system when creating ACTs are not allowed.
- Calculate the distance of road damage on the location of access road transport. Analyzing the causes of damage to access roads.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Calculating the burden of transportation vehicles and materials tailored to the class path by considering the burden that is allowed. Provide speed limit of vehicles through the access road transport materials for the project.

b). Location of environmental monitoring

Monitoring sites are in all districts in 5 regencies, especially access roads used as vehicle transportation route of construction materials.

c). Duration and frequency of monitoring

1 time per month during construction work.

(6). Environmental Monitoring institution

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

6. Damage to Public Utilities (Water Pipe)

(1). Significant impacts to be monitored:

- Types Component / Parameter Environment: Damage to infrastructure and public utilities.
- Significant Impact Indicators: Disorders of service.

(2). Source of Significant Impacts

Highway construction activities such as excavation, disposal and land clearing.

(3). Environmental parameters are monitored:

Disruption of performance of public utilities such as PLN, PDAM, gas pipelines, irrigation channels, Telkom and others.

(4). Objectives of Environmental Monitoring

Knowing the early disruption of public utilities infrastructure contained in the study area.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

To review directly to the field at the point where there is a contradiction with the public utility concerned.

b). Location of environmental monitoring

Monitoring sites are along the highways, especially at locations that are crossing with the utility lines/ channels.

c). Duration and frequency of monitoring

Monitoring carried out during the construction phase lasts, 3 months.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

7. Damage to Social Facilities and Public Facilities

(1). Significant impacts to be monitored:

- Types Component / Parameter Environment: The existence of public facilities and social amenities.

- Significant Impact Indicators: Diminishing the existence of social and public facilities.

(2). Source of Significant Impacts

Activities of land acquisition for construction of the highway.

(3). Environmental parameters monitored:

Public unrest due to reduction in the presence of public facilities and social environment.

(4). Objectives of Environmental Monitoring

Knowing how big the need for social facilities and public facilities such as mosques, schools, neighborhood health center in rural areas, so that people's aspirations can be accommodated from the outset.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Direct observation in the field by doing the data collection for the facility is lost and how much should be replaced or rebuilt and new development location.

b). Location of environmental monitoring

Residential areas, residents who have social facilities and public facilities affected by the project.

c). Duration and frequency of monitoring

Monitoring carried out during the construction period, at least 3 months.

(6). Environmental Monitoring institution

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

3. Post-Construction Stage (Operations)

A. Components of Physical - Chemical

1. Reduced Air Quality

(1). Significant impacts to be monitored:

- Types Component / Parameter Environment: Air quality in environmental toll roads.
- Significant Impact Indicators: Reduced air quality at nearby settlements.

(2). Source of Significant Impacts

Increased air pollution is attributed to the escape of dust particles from the surface of the road due to vehicles through the toll road, also due to exhaust emissions from other vehicles through the village street and road regency as lane road used to transport people and goods to and from the highway.

(3). Environmental parameters are monitored:

- Increasing levels of SO_x, NO_x, CO_x, and particulate dust in the air around the study area.
- Negative perceptions surrounding community access roads used to transport materials and building materials.
- Layers of dust visible in the precarious and houses are also on the leaves at the curb.

(4). Objectives of Environmental Monitoring

- Reducing the concentration of ambient air pollutants generated from transportation activities of people and goods through road approach that uses a toll or toll roads.
- Preventing health problems for workers and communities around the location of toll activities that are near the toll road and interchange.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Make observations and measurements directly in the field at certain points representing.

Perform laboratory analysis of the results of field measurements of air samples.

Take air samples, analyzed in the laboratory, and compared with standard PPRI No.41 of 1999, regarding the National Air Quality Standards.

b). Location of environmental monitoring

In and around the location of activities, in particular villages in the area of the highway alignment, as well as the location where the interchange.

c). Duration and frequency of monitoring

1 time in 6 months during operation of toll roads Cikampek-Palimanan progress.

(6). Environmental Monitoring institution

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

2. Increased Noise

(1). Significant impacts to be monitored:

- Types Component / Parameter Environment: Air quality noise at the location of the building material transportation access alignment.
- Significant Impact Indicators: Increased noise at the location of access road transport material.

(2). Source of Significant Impacts

- Activities of clearing land and making the driveway.
- The operation of the base camp.

(3). Environmental parameters are monitored:

Air quality conditions, particularly noise at residential locations.

(4). Objectives of Environmental Monitoring

- To find elevated levels of noise
- To know the level of successful management

(5). Methods of Environmental Monitoring

a) Methods of data collection and analysis

- Make noise measurements with a sound level meter
- Comparing the measurements with Threshold Value permitted in accordance with Ministry of Environment Decree No. Kep-48/MENLH/11/1998.

b) Location of environmental monitoring

At the beginning of the project until the end of the project, especially on settlements.

c) The duration and frequency of monitoring

1 times in one month for Cikampek-Palimanan toll road development activities progress.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

3. Changing Land Use

(1) Significant impacts are monitored:

- Types Component / Environmental Parameters: The condition of land use around the location of the toll road route.
- Significant Impact Indicators: The occurrence of land use change

(2). Source of Significant Impacts

- Activities of toll road operations.

(3). Environmental parameters are monitored:

The condition of the allotment of land around the highway alignment.

(4). Objectives of Environmental Monitoring

- To know the level of land use change that occurred
- To know the level of success of environmental management

(5). Methods of Environmental Monitoring

a) Methods of data collection and analysis

- Making observations and measurements
- Comparing with the local regency spatial planning policy.

b) Location of environmental monitoring

At the beginning of the project until the end of the project, especially around the entrance and exit of the highway.

c) The duration and frequency of monitoring

1 times in six months during the activities and operation of Cikampek - Palimanan.toll roads

(6). Environmental Monitoring institution

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

B. Components of Social, Economic and Cultural

1. Increasing Employment Opportunities and Opportunity Employer

(1). Significant impacts to be monitored:

- Types Component / Parameter Environment: Job opportunities.
- Significant Impact Indicators: The amount of job opportunities to surrounding people.

(2). Source of Significant Impacts

Activities and operation of toll roads and supporting infrastructure throughout the 116.4 km.

(3). Environmental parameters are monitored:

The number of workers that can be absorbed by the project both from immigrant labor and local labor, and other types of business opportunities provided by the community in the project area.

(4). Objectives of Environmental Monitoring

- To know how far the project can absorb the local and immigrant labor.
- How far the project to empower local communities in the partnership business.
- To prevent social unrest because of the presence of immigrant labor.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

Conduct observations and interviews with residents and labor migrants in order to find out whether there is any indication of social jealousy among them.

To examine employment records received by the contractor / contractors, to determine the ratio of local workers and migrants.

b). Location of environmental monitoring

Monitoring sites along the toll roads following the toll access road leading to the regency or provincial roads. The location of the monitoring conducted in all districts in the 5-related regency.

c). Duration and frequency of monitoring

1 times in six months during the activities and operation of Cikampek-Palimanan toll roads progress.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

2. Public Perception

(1). Significant impacts to be monitored:

- Types Component / Parameter Environment: The Economy in community around the study location.
- Significant Impact Indicators: The creation of businesses and new jobs

(2). Source of Significant Impacts

The operations of toll roads and facilities and supporting infrastructure.

(3). Environmental parameters are monitored:

- The opening of the employment and new business places for farming communities around the study area, due to the operation of toll roads Cikampek-Palimanan.
- Increased incomes in the study area and around the study sites.

(4). Objectives of Environmental Monitoring

Knowing the public perception in the study area and around the study sites, as well as business that flourished in the villages with the Toll Road, as well as helped by the facilities of the local economy was built on the toll roads like the rest area.

(5). Methods of Environmental Monitoring

a). Methods of data collection and analysis

- Interview with village chief and sub-district heads and sub-district, and villages in the district whose territory a place other resort locations highway (rest area).
- Conduct analysis of data from source data obtained from relevant agencies such as Department of Agriculture and of Section Regencies.

b). Location of environmental monitoring

Monitoring conducted on neighborhoods where residents whose territory is affected by the toll road alignment from the beginning to the end of the project.

At the location of Islamic Boarding School of Babakan Ciwaringin STA 200 +700 s / d STA 201 +055.

c). Duration and frequency of monitoring

1 times in six months during the activities' operating Cikampek - Palimanan toll roads progress.

(6). Environmental Monitoring institutional

Executing: Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor relating Regencies

Supervisor: BPLHD Prov. West Java, DGH Dep. PU, Environmental Office Regency LH in 5 regions.

Reporting: BPLHD Prov. West Java, Regent Cq. Institutions LH in 5 Areas Regency, Toll Road Regulatory Agency (BPJT).

**Table 2.1. Tabel 3.2. MATRIX OF ENVIRONMENTAL MONITORING PLAN (RPL)
CIKAMPEK – PALIMANAN TOLL ROAD 116,4 KM
IN WEST JAVA PROVINCE**

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
I. Pre-Construction Stage	Section- I, STA 91+500 s/d 118+550 Purwakarta and Subang Section II STA 118+550 s/d STA 129+750 Subang		Section III STA 129+750 s/d STA 158+450 Subang and Indramayu) Section IV STA 158+450 s/d STA 177+350 (Indramayu and Majalengka)		Section V STA 177+350 s/d STA 193+450 Majalengka) Section VI STA 193+450 s/d STA 207+900 (Majalengka and Cirebon)						
1. The emergence of community unrest	Attitudes and perceptions of society, both negative and positive.	Socialization to the community affected	Implementation activities since the survey, measurement and installation of stakes, have spread the information that the land around the site of activities will be exempted.	Knowledge and understanding of the overall community of Cikampek - Palimanan Toll Road Development and building facilities and supporting infrastructure . The creation of proper perception about Palimanan Cikampek toll road development	Knowing the development, type and level of disquiet in society a result of the activities of land survey and measurement.	To determine the condition of the public unrest is done through a limited survey using questionnaires and interview tools to local residents. - Levels of public unrest that occurred - The issues that arise in society - Finding information developed in the community about Cikampek toll	Held at the villages in the area of Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Tepatnya pada STA 193+450 s/d STA 207+900 (Majalengka Cirebon)	Done periodically within one month after the survey and measurement and the installation of stakes.	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies	Office of LH in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Police party in the 5 regions regency	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
				and a positive attitude towards such development.		road construction work - experiment.					
2. The emergence of Social Conflict	Social economic and cultural	There is a horizontal conflict between those who opposed and who agree with the land acquisition for highway.	Procurement of land for the construction of the highway.	Level of public unrest which led to the occurrence of horizontal conflicts caused by those who opposed the land acquisition activities while other groups receive.	Avoid open conflict between the parties, which do not correspond to understand. Tapping the potential for interference of security conflict.	Field observations along with interviews with residents about the presence or absence of potential conflict.	Location of monitoring in all districts in 5 regencies, especially in rural districts Babakan Ciwaringin Cirebon regency.	Performed 1 time per month during the land acquisition phase implemented.	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies	Office of LH in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Police party in the 5 regions regency	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works
3. Reduced Income	public unrest with uncertain value of land compensation.	The difference of the value of compensation land between the consensual and the market price	Activities of land acquisition for the highway project needs.	Obtaining information about the situation earlier public unrest due to the value of land compensation.	Avoid open conflict between the parties, which do not correspond to understand. Tapping the potential for interference of security.	Field observations along with interviews with residents about the presence or absence of public complaints.	Location of monitoring in all districts in 5 regencies.	Performed 1 time in 3 months during land acquisition phase.	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies	Office of LH in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Police party in the 5 regions regency	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
II. Construction Stage											
A. Components of Physical - Chemical											
1. Reduced Air Quality	Air quality at the site access road	Reduced air quality at nearby residential	Construction activities of toll road 116,4km	Increased level of SOx, NOx, COx, and dust in surrounding project area.	Reducing the ambient air pollutant concentrations caused by material transportation activities and vehicle operating projects. - Preventing health problems for workers around the location	taking samples of dust, analyzed in the laboratory, and compared with quality based on government regulation No.41 of 1999, regarding the National Air Quality Standards.	around the location of activities, especially villages that are in alignment territory road transport, as well as the location where the interchange Sta. 92+600-92+850, Sta 98+700-98+800, Sta 104+550-104+900, Sta 113+700-113+800, Sta 116+800-116+900 Purwakarta & Subang Sta 122+450-122+600 Sta 123+550-123+700 Sta 126+300-126+650, Indramayu Sta 129+950-30+000 Sta 131+400-31+500 Sta 132+050-	Performed 1 time in a month during land construction stage	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant officials in the 5 regencies	Office of Environment in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Police party in the 5 regencies	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution			
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting	
							32+150 Sta 132+300-32+450 Sta 132+600-32+700 Sta 136+700-36+900 Sta 149+800-149+950, Majalengka Sta 158+450-177+350. Sta 180+300-180+600 Sta 187+000-187+400 Sta 188+200-188+550 Sta 188+700-189+000 189+800-190+200. Sta 194+700-194+800 Sta 198+000-198+050 Sta 199+000-199+250 Sta 199+900-200+000 Sta 200+200-200+400 Sta 200+600-201+200 Sta 201+400-201+500 Sta 202+400-202+550 Sta 205+800-					

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
							205+850 Sta 206+850-207+000 Cirebon.				
2. Increased Noise	The quality of noise on the access road	Increased noise	transportation vehicles in addition to materials and activities and operation base camp, also a result of project vehicles carrying construction workers out of the project.	Levels of noise in residential areas and also in certain locations that are considered important to monitor such as the location of plantations and rice fields associated with terrestrial fauna..	Reducing the concentration of noise generated from transportation activities and vehicle operating materials project. - Preventing health problems for workers around the location of the dam which caused the noise.	Direct observation in the field to determine the concentration of noise that occurs as compared with the Threshold Value permitted in accordance with Kep.MenLH No. Kep-48/MENLH/1 / 1998	around the location of activities, especially villages that are in alignment territory road transport, as well as the location where the interchange Sta. 92+600-92+850, Sta 98+700-98+800, Sta 104+550-104+900, Sta 11 3+700-113+800, Sta 116+800-116+900 Purwakarta & Subang Sta 122+450-122+600 Sta 123+550-123+700 Sta 126+300-126+650, Indramayu Sta 129+950-30+000 Sta 131+400-31+500 Sta 132+050-32+150 Sta 132+300-	Performed 1 time in a month during land construction stage	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies	Office of Environment in Purwakarta Regency, Subang, Majalengka, and Cirebon Regency. Police party in the 5 regencies	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
							32+450 Sta 132+600-32+700 Sta 136+700-36+900 Sta 149+800-149+950, Majalengka Sta 158+450-177+350. Sta 180+300-180+600 Sta 187+000-187+400 Sta 188+200-188+550 Sta 188+700-189+000 189+800-190+200. Sta 194+700-194+800 Sta 198+000-198+050 Sta 199+000-199+250 Sta 199+900-200+000 Sta 200+200-200+400 Sta 200+600-201+200 Sta 201+400-201+500 Sta 202+400-202+550 Sta 205+800-205+850 Sta 206+850-				

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
							207+000 Cirebon.				
3. Reduced Surface Water Quality	The quality of river water and surface water	Reduced water quality	Cleaning and preparation of the subgrade. Construction of highway throughout ± 116.4 km and its supporting infrastructure.	The quality of river water at bridge construction site and on the rivers that pass by the highway network alignment.	- Knowing the toll road network development impacts on surface water quality / river in its path. - Avoid interference with surface water drainage / river due sedimentasi and erosion. - Detecting unrest residents who use the river water source as a source of raw water daily	Direct observation by taking samples of river water on the highway network path. Results of laboratory analysis of water samples and then compared with the Water Quality Standards, based on Government Regulation No. 82 Year 2001, on Threshold Limit Values for raw water.	In the channel crossed by river water that toll road network, especially those that are always flowing throughout the year and large capacity. STA 94+800, STA 101+900, STA 106+500, STA 110+500, STA. Section II Subang Sta. 92+600-92+850, Sta 98+700-98+800, Sta 104+550-104+900, Sta 1 13+700-113+800, Sta 11 6+800-11 6+900, Section III Kab. Indramayu pada River Cilamantan STA 138+500, River Cipunegara STA 142+000. Section IV Majalengka Sta 158+450-1 77+350 Section IV River	Performed 1 time in a month during land construction stage	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies	Office of Environment in Purwakarta Regency, Subang, Majalengka, Indramayu and Cirebon Regency. Police party in the 5 regencies	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
4. Impaired Surface Water Flow	The flow of surface water either artificial or natural drainage, as well as river flow	Changing the flow direction	Cleaning and preparation of the subgrade. Preparation of highway agencies throughout the 116,4 km and its supporting infrastructure.	Changes in surface water flow at specific locations affected by highway construction activities.	Knowing the impact that occurs on surface water flow and also the river due to construction of highways, and where the direction of flow is controlled in order to maintain its existence	Observed directly in the field in coordination with the implementing work / contractors also relevant agencies.	Ciwaringin STA 20 1+000, Canal Ciliwung STA 205+500. In the channel crossed by river water that toll road network, especially those that are always flowing throughout the year and large capacity. STA 94+800, STA 101+900, STA 106+500, STA 110+500, STA. Section II Subang Sta. 92+600-92+850, Sta 98+700-98+800, Sta 104+550-104+900, Sta 1 13+700-113+800, Sta 11 6+800-11 6+900, Section III Kab. Indramayu pada River Cilamatan STA 138+500, River Cipunegara STA 142+000. Section IV Majalengka Sta 158+450-	Performed 1 time in 3 months during land construction stage	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, and the relevant village officials in the 5 regencies	Office of Environment in Purwakarta Regency, Subang, Majalengka, and Cirebon Regency. Police party in the 5 regencies	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
							1 77+350 Section IV River Ciwaringin STA 20 1+000, Canal Ciliwung STA 205+500.				
5. Occurrence of Soil Erosion	The occurrence of landslide of soil material	The occurrence of sedimentation in drainage channels and rivers	Cleaning and preparation of subgrade, as well as soil excavation and landfill. - Preparation of the body along the 116.4 km of toll roads and their supporting infrastructure.	Impaired drainage of surface water flow which is due to sedimentation, and disruption of river water quality.	M Knowing early on how far the influence of erosion occurred on the occurrence of sedimentation on the existing drainage channel, and to know that there are sedimentation in river body.	Make observations and measurements directly in the field and collaborating with related agencies.	Monitoring sites are along the toll roads where there are surface water channels and rivers that cut by toll roads.	Monitoring carried out during construction activities take place, at least 3 months.	contractor of the project,	Office of Public Works Highways West Java Province Regency Irrigation Office in 5 regency, Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works
6. Groundwater Flow Disturbance	Reduced quantity of ground water	The occurrence of water shortages in the residential neighborhood.	Cleaning and preparation of subgrade, as well as soil excavation and landfill. Preparation of the ROW along the 116.4 km of toll roads and their supporting infrastructure.	Changes in the direction of groundwater flow and reduced the quantity of ground water.	Knowing early on changes in soil water availability, both in the residential neighborhood, area residents and businesses within the base camp and office construction	Monitoring conducted on residential location and also the location where there is a spring, which is the source of water for the needs of residents, both bathing, washing and toilet facilities and to need watering.	Monitoring conducted on residential location and also the location where there is a spring, which is the source of water for the needs of residents, both bathing, washing and toilet facilities and to need watering.	Monitoring carried out during construction activities take place, at least 3 months.	contractor of the project,	Office of Public Works Highways West Java Province Regency Irrigation Office in 5 regency, Toll Road Operating Board (BUJT) /	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
					workers.	washing and toilet facilities and to need watering.				Operator-Palimanan Cikampek toll road.	
7. Slope Stability Disorders	The stability of slopes	Disruptions of slope stability at a particular location	Cleaning and preparation of subgrade, excavation and stockpiling of soil, and construction activities along the highway agency facilities and supporting infrastructure.	Disturbance of slope stability in areas that require cutting cliffs and sloping areas that require landfill.	Detect catastrophic landslide and soil erosion on the location or construction activities alignment of the highway.	- To monitor directly in the field. - Observe the condition of the drainage flow of surface water / river. - Direct Observation of sedimentation in river body.	In locations where there is a river bridge, and at locations that have treated the cut and fill that stands out. With slopes around 15-30%, on Section I to VI.	Monitoring carried out during construction activities take place, at least every month.	contractor of the project,	Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works
B. Biological Components											
1. Reduced Cultivation Vegetation Types	The number and type of vegetation cultivation	Decreasing the amount of vegetation existing at the time of cultivation land clearing activities	Work subgrade preparation, excavation and embankment work, operation of basecamp.	The reduced existing amount of vegetation.	Monitoring the secondary impact due to a reduction in the amount of cultivated vegetation during road construction activities that potentially disturb terrestrial ecosystems.	To conduct field observations Interviews with the community.	Forests, plantations and rice fields in the area of project site	Monitoring carried out during construction activities take place, at least every month.	Ministry of Public Works (TPT), Manager Toll Road Cikampek-Palimanan, Department of Agriculture and Forestry in 5 related Regencies	Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
					- Giving feedback of monitoring for the effects can be reduced.						
C. Components of Social, Economic and Cultural											
1. Increasing Employment Opportunities	: Employment opportunities for local residents in the project sites.	The amount of job opportunities that are utilized by residents around the project site.	Construction activities of toll road 116,4km	The number of workers that can be absorbed by the project both from immigrant labor and local labor, and other types of business opportunities provided by the community in the project area.	To find out how far the project can absorb the local and immigrant labor. How far the project to empower local communities in the partnership business. To prevent social unrest because of the presence of immigrant labor.	- Conduct observations and interviews with residents and labor migrants in order to find out whether there is any indication of social jealousy among them. - Conduct an employment record that is received by the contractor / contractors, to determine the ratio of local workers and migrants.	Monitoring sites are in all districts in 5 regencies.	Monitoring carried out during construction activities take place, at least every 3 months.	Toll Road Operating Board (BUJT) / Operator-Palimanan Cikampek toll road, Department of Labor in related Regencies	Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works
2. The emergence of Social Jealousy	Social Jealousy	The acceptance of labor and immigrants who	Acceptance of construction labor and construction	- The number of local employment and labor	To find the number of workers absorbed by	Observation and direct interviews with residents	Monitoring sites are in all districts in 5 regencies.	Monitoring carried out during construction	Toll Road Operating Board (BUJT) /	Environmental Office in 5 Regencies, Directorate of	Regent in 5 Regencies, BPLHD regency of West Java

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
		are not in balance with local recruitment..	services business partnership activities.	migrants working in the project. - Opportunity to have partnership efforts between the local business community with the project.	the project during the construction phase and magnitude of energy absorption of local projects.	around, and with village officials in the district is also related to the project to get an idea of employment and business opportunities that can be filled by local communities.		activities take place, at least every month.	Palimanan Cikampek toll road Operator, Social Service in 5 regions Regency	Environment al Geology of West Java Province.	Province. BPJT-Department of Public Works
3. Increased Business Opportunities	Employment opportunities.	The amount of job opportunities to surrounding people.	Implementation of highway construction and the supporting infrastructure facilities along the 116.4 km.	The number of workers that can be absorbed by the project both from immigrant labor and local labor, and other types of business opportunities provided by the community in the project area.	- To know how far the project can absorb the local and immigrant labor. - How far the project to empower local communities in the partnership business. - To prevent social unrest because of the presence of immigrant labor.	Conduct observations and interviews with residents and labor migrants in order to find out whether there is any indication of social jealousy among them. To examine employment records received by the contractor / contractors, to determine the ratio of local workers and migrants.	Conducted in all districts in the 5 related regencies. From Section I to Section VI.	Monitoring carried out during construction activities take place, at least every 3 months.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environment al Office in 5 Regencies, Directorate of Environment al Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Data collection and analysis	Location	Duration and Frequency	Executing	Supervising	Reporting
4. Traffic disruption	Disordered Traffic	The occurrence of traffic congestion and disruption on public roads in the village street.	Implementation of highway construction and the supporting infrastructure facilities along the 116.4 km, and the mobilization of heavy vehicles of the project.	The condition of traffic jams and other disturbances that occur on roads that became the route of transportation projects and traffic disruption on the village road access.	- To find out how much the project may affect traffic conditions. - Knowing the earliest possible disruption of traffic conditions before they become sources of public unrest. - To prevent social unrest because of the presence of vehicle on a public road projects.	Conduct observations and interviews with residents and road users society, social unrest and find data that occur in the project environment. To examine a record number of vehicles received by the contractor / contractors, in order to compare the number of vehicles and public transport projects.	Conducted in all road vehicle through which funds projects in areas of Islamic boarding school in Babakan Ciwaringin STA 200 +700 s / d STA 201 +055.	Monitoring carried out during operation stage activities take place, at least every 3 months.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring Location	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Duration and Frequency	Location	Duration and Frequency	Executing	Supervising	Reporting
5. Damage to Public Roads (Local Roads / Village)	public unrest	Damage to public roads used as access roads by the project	Land clearing and preparation of basic soil preparation is also base camp for highway construction needs.	Traffic density and speed of construction materials transport vehicle, as well as volume and length of roads were damaged.	- To obtain information in order to improve the management system when creating ACTs are not allowed. - Calculate the distance of road damage on the location of access road transport. Analyzing the causes of damage to access roads.	Calculating the burden of transportation vehicles and materials tailored to the class path by considering the burden that is allowed. Provide speed limit of vehicles through the access road transport materials for the project.	Monitoring sites are in all districts in 5 regencies, especially access roads used as vehicle transportation route of construction materials.	1 time per month during construction work.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environment and Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works
6. Damage to Public Utilities (Water Pipe)	Damage to infrastructure and public utilities.	Disorders of service.	Highway construction activities such as excavation, disposal and land clearing.	Disruption of performance of public utilities such as PLN, PDAM, gas pipelines, irrigation channels, Telkom and others.	Knowing the early disruption of public utilities infrastructure contained in the study area.	To review directly to the field at the point where there is a contradiction with the public utility concerned.	Monitoring sites are along the highways, especially at locations that are crossing with the utility lines/ channels.	1 time per month during construction work.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environment and Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring Location	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Duration and Frequency	Location	Duration and Frequency	Executing	Supervising	Reporting
7. Damage to Social Facilities and Public Facilities	The existence of public facilities and social amenities.	Diminishing the existence of social and public facilities	Activities of land acquisition for construction of the highway.	Public unrest due to reduction in the presence of public facilities and social environment.	Knowing how big the need for social facilities and public facilities such as mosques, schools, neighborhood health center in rural areas, so that people's aspirations can be accommodated from the outset.	Direct observation in the field by doing the data collection for the facility is lost and how much should be replaced or rebuilt and new development location.	Residential areas, residents who have social facilities and public facilities affected by the project.	1 time per 3 months during construction work.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environment and Geology of West Java Province.	Regent in 5 Regencies, BPLHD agency of West Java Province. BPJT-Department of Public Works
3. Post-Construction Stage (Operations)											
A. Components of Physical - Chemical											
1. Reduced Air Quality	Air quality in environmental toll roads	Reduced air quality at nearby settlements.	exhaust emissions from other vehicles through the village street and road regency as lane road used to transport people and goods to and from the highway.	- Increasing levels of SOx, NOx, COx, and particulate dust in the air around the study area. - Negative perceptions surrounding community access roads used to	- Reducing the concentration of ambient air pollutants generated from transportation activities of people and goods through road approach that uses a toll or toll roads. - Preventing health	Make observations and measurements directly in the field at certain points representing. Perform laboratory analysis of the results of field measurements of air samples.	In and around the location of activities, in particular villages in the area of the highway alignment, as well as the location where the interchange. c). Duration and frequency of monitoring	1 time in 6 months during operation of toll roads Cikampek-Palimanan progress.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environment and Geology of West Java Province.	Regent in 5 Regencies, BPLHD agency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring Location	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Duration and Frequency	Location	Duration and Frequency	Executing	Supervising	Reporting
				transport materials and building materials. - Layers of dust visible in the precarious and houses are also on the leaves at the curb.	problems for workers and communities around the location of toll activities that are near the toll road and interchange.	Take air samples, analyzed in the laboratory, and compared with standard PPRI No.41 of 1999, regarding the National Air Quality Standards.					
2. Increased Noise	Air quality noise at the location of the building material transportation access alignment.	Increased noise at the location of access road transport material.	- Activities of clearing land and making the driveway. - The operation of the base camp.	K Air quality conditions, particularly noise at residential locations.	- To find elevated levels of noise - To know the level of successful management	- Make noise measurements with a sound level meter - Comparing the measurements with Threshold Value permitted in accordance with Ministry of Environment Decree No. Kep-48/MENLH/11/1998.	At the beginning of the project until the end of the project, especially on settlements. Sta. 92+600-92+850, Sta 98+700-98+800, Sta 104+550-104+900, Sta 113+700-113+800, Sta 116+800-116+900.	1 time in 6 months during operation of toll roads Cikampek-Palimanan progress.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.	Regent in 5 Regencies, BPLHD reGENCY of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring Location	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Duration and Frequency	Location	Duration and Frequency	Executing	Supervising	Reporting
3. Changing Land Use	The condition of land use around the location of the toll road route.	The occurrence of land use change	Activities of toll road operations.	The condition of the allotment of land around the highway alignment.	- To know the level of land use change that occurred - To know the level of success of environmental management	- Making observations and measurements - Comparing with the local regency spatial planning policy.	At the beginning of the project until the end of the project, especially around the entrance and exit of the highway. jalan tol	1 time in 6 months during operation of toll roads Cikampek-Palimanan progress.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environment Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works
B. Components of Social, Economic and Cultural											
1. Increasing Employment Opportunities and Opportunity Employer	Job opportunities.	The amount of job opportunities to surrounding people	Activities and operation of toll roads and supporting infrastructure throughout the 116.4 km.	The number of workers that can be absorbed by the project both from immigrant labor and local labor, and other types of business opportunities provided by the community in the project area.	- To know how far the project can absorb the local and immigrant labor. - How far the project to empower local communities in the partnership business. - To prevent social unrest because of the presence of immigrant labor.	Conduct observations and interviews with residents and labor migrants in order to find out whether there is any indication of social jealousy among them. To examine employment records received by the contractor / contractors, to determine the ratio of local workers and migrants.	Monitoring sites along the toll roads following the toll access road leading to the regency or provincial roads. The location of the monitoring conducted in all districts in the 5-related regency.	1 time in 6 months during operation of toll roads Cikampek-Palimanan progress.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environment Geology of West Java Province.	Regent in 5 Regencies, BPLHD regency of West Java Province. BPJT-Department of Public Works

Stage	Significant Impact to be monitored		Source	Parameters monitored	Objectives of environmental monitoring Location	Method of Environmental Monitoring			Institution		
	Component/Parameter	Significant Impact Indicator				Duration and Frequency	Location	Duration and Frequency	Executing	Supervising	Reporting
2. Public Perception	The Economy in community around the study location.	The creation of businesses and new jobs	The operations of toll roads and facilities and supporting infrastructure.	- The opening of the employment and new business places for farming communities around the study area, due to the operation of toll roads Cikampek-Palimanan. - Increased incomes in the study area and around the study sites.	Knowing the public perception in the study area and around the study sites, as well as business that flourished in the villages with the Toll Road, as well as helped by the facilities of the local economy was built on the toll roads like the rest area.	- Interview with village chief and sub-district heads and sub-district, and villages in the district whose territory a place other resort locations highway (rest area). - Conduct analysis of data from source data obtained from relevant agencies such as Department of Agriculture and of Section Regencies.	Monitoring conducted on neighborhoods where residents whose territory is affected by the toll road alignment from the beginning to the end of the project. At the location of Islamic Boarding School of Babakan Ciwaringin STA 200 +700 s / d STA 201 +055.	1 time in 6 months during operation of toll roads Cikampek-Palimanan progress.	Toll Road Operating Board (BUJT) / Palimanan Cikampek Toll-Operator	Environmental Office in 5 Regencies, Directorate of Environmental Geology of West Java Province.	Regent in 5 Regencies, BPLHD reGENCY of West Java Province. BPJT-Department of Public Works