

CHAPTER I

INTRODUCTION

1.1 Background

Jakarta Sewerage Development Project Zone 1 Package 6 (Area 2-2), managed by PT. Adhi Karya, is a crucial step in the Jakarta government's efforts to improve sanitation as the city grows. Focused on Area 2-2, where the population is high, it represents a strategic move towards creating effective and sustainable solutions. Package 6 emphasizes the importance of building a wastewater pipeline network to enhance the sanitation system. The commitment to using advanced technology shows Jakarta's dedication to making the city clean and healthy according to global standards.

Understanding the negative impacts of poor sanitation, the project shows the government's responsibility for the well-being of the community and sustainable urban growth in Area 2-2. The project also aims to boost the local economy by creating jobs and increasing economic activity, bringing positive effects to the community and the region.

To handle the project's complexity, careful task distribution is essential. The Jakarta government guides strategically, while the construction contractor and engineering consultant work together effectively. Additionally, active involvement from the local community ensures an inclusive approach, considering their needs. Through this collaboration, the project establishes a strong foundation for long-term success and positive impacts on Jakarta's residents in Area 2-2.

In recognizing the significance of civil engineering technicians, the University of Atma Jaya Yogyakarta hosts the Merdeka Internship Learn Independent Campus (Internship MBKM) program. This initiative enables students to select a company based on their individual preferences, and the acquired materials can be applied as part of their final project coursework in infrastructure design. The objective is to empower Internship MBKM participants in developing their skills to design structures that align with practical field situations. Consequently, PT. Adhi Karya has been chosen as the internship placement.

PT. Adhi Karya is a well-known Indonesian construction and infrastructure development company that was founded in 1960. It has played a key role in many important construction projects, including those involving buildings, bridges, roads, and other infrastructure developments. The organization, which is well-known for its dependability and creative methods, actively supports sustainable development and makes a major contribution to Indonesia's progress on the social and economic fronts. PT. Adhi Karya is dedicated to improving service quality and is a major player in Indonesia's construction industry. It advances infrastructure to support the country's progress. The company logo of PT. Adhi Karya is show in **Figure 1.1**



beyond construction

Figure 1.1 Logo of PT. Adhi Karya

Source: Company Profile PT. Adhi Karya

1.2 Problem Statement

The purpose of the problem statement is to give direction so that the report will properly address the desired issue. There are the following restrictions on this activity:

1. **Restricted Channel Capacity:** The wastewater channels in Area 2-2 are not large enough to handle the growing volume of wastewater, which could lead to floods
2. **Aging and Vulnerable Pipe Infrastructure:** To maintain the efficient flow of wastewater, extensive replacement and repairs are required for the aging and brittle wastewater pipes.
3. **Integration of New System with Old Infrastructure:** Introducing a new system has to work in unison with the current infrastructure. This poses technological difficulties because the new system has to be aligned without interfering with current activities.
4. **Technical Aspects of Drainage:** To effectively manage precipitation and household wastewater and avoid possible flooding and contamination, effective drainage design is crucial.

1.3 Purpose

The following are a few purposes that this internship activity aims to achieve:

1. **Enhancing Channel Capacity:** In order to overcome current constraints and enable the management of the rising wastewater flow in line with population expansion, the wastewater channels in Area 2-2 will be enlarged and improved.
2. **Renewing Pipe Infrastructure:** In order to guarantee a smooth wastewater flow and avoid any leaks or disturbances, outdated and vulnerable wastewater pipes must be replaced.

3. The effective integration of a new system with the current infrastructure enables the adoption of cutting-edge wastewater management technology without interfering with continuing operations.
4. Optimizing Technical Drainage Aspects: Planning drainage systems to best handle household wastewater and rainfall in order to minimize flood risks and preserve the sustainability of the environment.
5. Enhancing Environmental Quality: Making sure the project not only fixes the infrastructure but also improves the environment around it, taking into account the benefits to the local ecology and satisfying criteria for wastewater treatment.

1.4 Benefit

The following are a few benefits that this internship activity aims to achieve:

1. Enable more educated career decisions by giving a greater grasp of the industry, its dynamics, and daily operations.
2. The ability to improve and grow a variety of abilities, such as problem-solving, teamwork, communication, and technical skills unique to the business.
3. The opportunity to interact with professionals in the field, cultivating important connections that may lead to mentoring or future employment chances. They may also give hands-on experience, enabling people to apply theoretical information in real-world circumstances and build practical skills.