



ROAD WIDENING PROJECTS IN THE TARLAC 1st CONGRESSIONAL DISTRICT

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Abstract: This study is deemed important because it analyzed the effects of road widening projects on Tarlac 1st Congressional District. It also provides a way to assess how well the DPWH has performed in terms of the effectiveness of its duties and responsibilities and the successes of implementing programs, projects, and activities. After that, a proposed action plan to address these problems, issues and challenges, have been made.

The study used the descriptive evaluative research method in assessing the effects of Road Widening Projects in Tarlac 1st Congressional District in terms of residence, livelihood, road safety, right of way acquisition, local employment, and road improvement. Likewise, it also determined the problems encountered and what action plan proposed to enhance the implementation of road widening projects.

The total mean in terms of residence computed weight of 2.03 which described as less affected this means that the road widening has an average effect to the residence. In terms of livelihood with the computed overall mean of 2.43 interpreted as less affected this implies that the respondent's source of income was unaffected by road widening. While, in terms of Road Safety overall mean of 3.08 described as moderately affected, this implies that road safety measures are not well received by road users. Right of way acquisition has an overall mean of 2.18 interpreted as less affected it implies that the DPWH must strictly adhere the right of way acquisition procedure in all projects. In terms of local employment with overall mean of 2.48 interpreted as less affected, this implies that while local laborers are employed, there are only a limited number available position. In terms of road improvement has an overall mean of 3.89 interpreted as much affected, this implies that the respondents are aware of the benefits of road improvement.

It shows that the number 1 problem is that inadequate safety devices, signages and barriers during construction. Thus, one of the recommendations is that before the project is implemented, the DPWH may identify and resolved the issue with the right of way.

Index Terms – Residence, Livelihood, Road Safety, Right of Way Acquisition, Local Employment, Road Improvement

INTRODUCTION

Roads support both mobility and accessibility while accelerating global activity. Road connection leading to a country's entry and exit. The goal of this project was to create and validate a low-cost, repeatable, non-destructive methodology for characterizing the load capacity of substances used in road widening and construction when founded values are unavailable, as well as to determine a variety of structural coefficients as well as moduli for these materials.

Roads stimulate national economic growth. It is stated that highway transport system is the utmost noticeable feature of the current low-cost and lifecycle style people rely on roadways to ship goods, access information, as well as travel to work. Traffic capacity of the highway can be increased by converting it from four to six lanes. This study investigates safety safeguard measures of widened highway from strengthening the abilities of security protection and lane control ability thru the analysis of an able to run safety of expressway widening. Finally, this paper investigates highway safety management measures of widening road and traffic environment based on the highway widening project.

Established roadways are frequently broadened to increase the capacity as traffic levels enhance. Bridges on these freeways are classically broadened by creating a new part of link deck and trying to connect it to the bridge deck with a tack pour. The stitch pour is subjected to congested roads soundwaves and misdirection immediately following concrete placement, which may be detrimental to the quality of the connection.

Natural disasters make the hilly terrains of the Himalaya one of India's most vulnerable regions. Landslides of various types happen often in the Himalaya's tectonically and geodynamic ally dynamic district. The local road construction system of the town is absolutely necessary for all forms of social and economic activity that take place in the high slopes of the Lesser Himalaya. The stability of slopes that are cut to develop and/or enlarge roads and highways, however, is a significant concern in hilly locations. These cut slopes, which are in danger of collapsing, are the result of unforeseen blasting excavations. Due to variables including intense rainfall, seismic activity, dynamic loads, and/or different types of human involvement, certain slopes are becoming more vulnerable (Singh, Umrao and Singh, 2014).

To assess strain features in the top and bottom layers of a cement concrete pavement subject to variable degrees of ground movement, the use of sensors based on fiber Bragg gratings (FBGs) that can reduce stress transmission errors is presented. Utilizing measurement results, a complete analysis of the distribution's features and the variance in the structure's strain was performed. By comparing the observed outcomes to those acquired through the finite element analysis, this was discovered that the suggested FBG-based sensor legislature is capable of efficiently tracking the stress field paving, demonstrating that the enhanced optical fiber grating strain sensor is a very promising option for tracking the structural health of road pavements.

The National Highway Authority of India, Ministry of Road Transport and Highways (MORT&H), Govt of India, has expanded and strengthened existing national road development in the country. Road network circumstances, volume of traffic, and structure were not satisfactory in terms of IRI value in predicting road weakening as per urban and rural roadways. Under a user-specified set of conditions, the HDM software simulates whole life cycle conditions and costs for an analysis period. The most difficult application of the model is system financial assessment, but the exertion is well worth it because of the possible transportation cost savings attained by contrasting alternatives and implementing budget line enhancement (Kumar, 2015).

Increasing the lanes in the highways will be increased will increased the number of vehicles will, increase motion and use of transportation systems. Road widening is one of the solutions which can be implemented. Moreover, this solution improves transportation efficiency because people will switch to using the broadened nee highway even though they genuinely think it can handle the current volume of traffic.

The traffic capacity of the highway can be increased by converting it from four to six lanes. This study investigates safety safeguard measures of widened highway from strengthening the abilities of security protection and lane control ability thru the analysis of an able to run safety of expressway widening. Finally, this paper investigates highway safety management measures of widening road and traffic environment based on the highway widening project.

The project's impact would be result indicates of transportation infrastructure. The project will enhance the quality of a national road system. Paving soil roads, replacing road sections washed out by massive flooding, broadening existing roads, trying to add exterior layer, and replacing and strengthening bridges are among the road improvement projects. International best practices for road safety, adaptation to climate change and earthquake resistance will be fully integrated into the works. RIIDP will be in charge of the detailed design of the project roads. Based on an assessment of DPWH's capacity, the organizational capacity development component would be intended during the PPTA. It is likely that it will concentrate on the ability of the DPWH regional and district offices in the proposed project, particularly on project implementation and dealing with growingly frequently occurring natural disasters.

This depicts the social consequences of proposed road widening. The researcher aims to assess the social impact on the people who live in the Philippines. The outcome demonstrated that the project will be extremely beneficial to the surrounding area as well as road commuters. The project addresses ongoing traffic issues and accident risks. The maintenance and upgrading are pressing needs for the European infrastructure network, which for masonry bridges primarily means deck broadening, construction of guard rails, and seismographic security in seismic regions. The most common approach to the first two issues is to use r.c. stone blocks, which are frequently lied down on the spandrels, and some other procedure deduced from religion building. Furthermore, because of increased traffic and the high costs of time and materials, it is economically advantageous to broaden current bridges while also repairing them. The redesign of concrete structures introduces some problems that are typically not considered in the construction of building developments, which are briefly discussed. A practical case of bridge broadening with no accessible estimations is defined.

In the Philippines and other emerging economies Road system is a critical service for developing countries. the people's socio - economic status Road broadening, for example, offers a safe and convenient environment. dependable road infrastructure, excluding individuals' period, and conform in travelling. Furthermore, social fiscal advancement the state be contingent on the leaders' proposals to offer people with essential amenities one method adhering to the order and anticipating the requests of the construction of strategies and programs that involve stakeholders lead to an increase in people's business growth The road is among the govt's services. facilities to provide effective and efficient means of transference public transport to improve the lives of individuals.

As a researcher working in the Office of Department of Public Works and highways, residing in the Right of Way Unit. Prior to beginning work on road widening in a specific municipality and/or barangay, an employee is required to conduct a coordination meeting with the local government units (LGUs) to discuss the number and names of the barangays where encroached ROWS are located, as well as a map/plan indicating the encroached portions and describing the ROW's intended use, such as agricultural development, residential, commercial, institutional, and other uses.

Include images of the encroaching structure along with descriptions describing its precise location, such as the lot number, street name, barangay, and city or municipality. Lastly, what kind of plantations exist, if any.

This study attempts to determine the effects and degree of constituent satisfaction with reference to road widening projects in the province of Tarlac's 1st congressional district. It asked especially about the results of road widening projects and the respondents' degree of satisfaction.

This study evaluated the implementation of infrastructure projects of the DPWH encountered various problems which caused its delay and accidents. Based from the DPWH Stakeholders Relations Service-Stakeholders Affairs Division (SRS-SAD) Citizens Feedback Management Center.

1. How do the road widening projects affect the residents in terms of;
 - 1.1 Residence
 - 1.2 Livelihood
 - 1.3 Road Safety
 - 1.4 Right of way acquisition
 - 1.5 Local Employment
 - 1.6 Road Improvement
2. What are the problems encountered in the implementation of road widening projects?
3. What action plan could be proposed based from the result of the study?
4. What are the implications of the study to Public Administration?

RESEARCH METHODOLOGY

In this study, descriptive quantitative design was used as the tool to gather and present the information regarding the road widening in tarlac 1st congressional district in tarlac province. To further illustrate its purpose, descriptive method does not answer questions about how/when/why the characteristics occurred. Rather it addresses the “what” question.

The researcher gives a guide questionnaire each municipality covered by Tarlac 1st Congressional District. Coming from the 15 Municipality, these are: San Manuel, Moncada, Paniqui, Anao, Ramos, Pura, La Paz, Camiling, San Clemente, Victoria, Mayantoc, Sta. Ignacia, San Jose, Gerona and Tarlac City, ten (10) Constituents from different municipality therefore, there were a total of 150 respondents who are affected in road widening.

RESULTS AND DISCUSSION

Table 1
Residence

Statements	Mean	Adjectival Description
Partial loss of dwelling parts like walls and fence	2.17	Less Affected
Increase distances in traversing other side of the road	2.03	Less Affected
Reduces the extent of flooding in roadside villages due to improved drains	2.03	Less Affected
Provides a space for the local community activities such as parking and drying of farm products	2.00	Less Affected
Damaged utilities such as waterline and street lights	1.97	Less Affected
Loss of residential houses that encroached in the road – right of way	1.91	Less Affected
Grand Mean	2.02	Less Affected

It was discovered that the calculated weighted average of residences overall is 2.02, which is described as being less affected. This indicates that the impact of the road widening on the house is about average. This suggests that while road improvements frequently have positive economic and social effects, they also sometimes have unfavorable ones on individuals and communities. Despite all the benefits of road improvements, they may also have detrimental effects on the community and the environment.

Table 2
Livelihood

Statements	Mean	Adjectival Description
Generates employment opportunities for local community	2.68	Affected
Loss of customers due to displaced business establishment	2.63	Affected
Loss of business opportunities due to demolished store	2.51	Affected
Reduces cost of transport due to easy transport of goods and products	2.39	Less Affected
Increases the rental value due to road improvements	2.37	Less Affected
Loss of productive land due to widened road	2.21	Less Affected
Increases income due to opening of variety stores and additional customers	2.20	Less Affected
Grand Mean	2.43	Less Affected

It illustrates how road expansion initiatives affect quality of life. The calculated overall weighted mean of 2.43, which is regarded as less affected, demonstrates that road widening has no appreciable effect on livelihood. This suggests that road widening had no impact on the respondents' income source. This indicates that the respondents still rely on the same source of income or have the same volume of clients. This result contrasts with those that showed that road expansion projects had a negative impact on the informal sector, particularly building material traders, including customer loss, decreased profits, and unpleasant temporary structures for once-vibrant business premises.

Table 3
Road Safety

Statements	Mean	Adjectival Description
Improves road safety measures due to installation of safety signs and construction of pedestrian paths	3.49	Affected
Improves road safety risks due to increase traffic speed and flows due to widened road	3.29	Affected
Eliminates distraction in the view of the motorists	3.06	Affected
Decreases unnecessary signages that encroached the road way	3.04	Affected
Reduces accident because of additional safety devices, traffic signs and road information signs	2.92	Affected
Creates uncertainty in traffic flow to the drivers due to changes in traffic pattern	2.88	Affected
Eliminates road blind spots due to widened road	2.85	Affected
Grand Mean	3.08	Affected

The impact of road widening initiatives on traffic safety. The calculated weighted mean for the entire sample is 3.08, showing that it is affected. This can mean the respondent isn't aware of the traffic safety precautions implemented as part of road-widening projects. It is evident that traffic users do not favor road safety measures.

Table 4
Right-of-way Acquisition

Statements	Mean	Adjectival Description
Explains clearly the process of right –of way acquisition	2.23	Less Affected
Identify the obstruction and prohibited uses within the right of way of national roads	2.23	Less Affected
Conducts public consultation with the affected stakeholders	2.21	Less Affected
Provide documents, information and guidelines on removal of obstruction and illegal structure within right –way of national roads	2.15	Less Affected
Gives compensation to the affected residents for loss of properties during construction	2.09	Less Affected
Grand Mean	2.18	Less Affected

It reflects how satisfied the respondent is with the right of way acquisition process for the road widening project. With a computed overall weighted mean of 2.18, it shows that respondents are less affected by the acquisition of right of way. It implies that the DPWH doesn't have a defined procedure for gaining right-of-way and doesn't adequately consult the public. It means that the DPWH must adhere closely to the process for acquiring road right-of-way for all projects.

Table 5
Local Employment

Statements	Mean	Adjectival Description
Gives additional incomes to the residence by leasing of office spaces, stockpile area, or temporary facilities	2.54	Affected
Hires skilled construction personnel in the community during construction	2.53	Affected
Provides additional income to the community through operations of variety store, food stall and other stores during construction	2.52	Affected
Provides temporary employment by hiring of local laborer in the area	2.51	Affected
Generates employment opportunities for drivers, mechanics and technicians	2.33	Less Affected
Grand Mean	2.48	Less Affected

In terms of local employment, the respondents' satisfaction with the road-widening project is shown. It indicates how the total weighted mean of 2.48 obtained here is perceived as being less affected. This could imply that, while local laborers are employed, there are only a limited number of available positions. This implies that fewer local workers are employed during road widening. As a result, road widening did not result in increased local employment.

Table 6
Road Improvement

Statements	Mean	Adjectival Description
Reduces the travel time because of the project	3.96	Much Affected
Improves the convenience in travels	3.95	Much Affected
Improves the tourism due to access to markets and other business industries in the area	3.93	Much Affected
Minimizes the road accidents	3.87	Much Affected
Provides reliable travel services leading to greater mobility of people and goods and better access to social services	3.77	Much Affected
Grand Mean	3.89	Much Affected

It reveals how satisfied respondents are with the road upgrade project's road widening. The aggregate mean calculated, which was 3.89, shows that the respondent is significantly affected by road improvement. This implies that respondents are aware of the advantages of improving roads. Highway development has been shown to provide highway users with measurable market value cost benefits in areas like driver safety, behavior and conversion, and aesthetics.

Table 8
Problems Encountered

Problems	<i>F</i>	<i>R</i>
Inadequate safety devices, signage and barriers during construction	134	1
Dust and noise during construction	121	2
Traffic congestion during construction	88	3
Improper disposal of debris and spoiled materials	61	4
Accidents happen during construction	59	5
Poor community consultation for the implemented projects	47	6.5
Low quality of widened road	47	6.5
Non- compliance to occupational safety and health standard	36	8
Delayed project completion	10	9
Unpaid loss of properties during right of way acquisition	4	10

Table 8 shows the problems, issues and concerns encountered in the implementation of the road widening projects in Tarlac 1st Congressional District. It can be seen that the rank 1 in terms of problems, issues and concerns that are encountered among residence is inadequate safety devices, signage and barriers during construction, providing awareness to the passers will lead to avoidance of unexpected accidents. The importance of safety and that actual project safety should be prioritized in order to reduce injuries, accidents, and barriers to applying safety, which will improve the sustainability and development of safe environments

Unpaid loss of properties during right of way acquisition ranked ninth because mandated affected of road widening was paid according to the agreement during the public consultation meeting conducted by the local government unit and said office of depth.

CONCLUSION

Based on the findings of the study, the following conclusions were drawn.

1. The road widening has a moderate impact on the residence, suggesting that while road upgrades frequently have positive economic and social advantages, they can also have unfavorable effects on individuals and the society as a whole.
2. Road widening does not affect the respondents in terms of source of income, this finding contrasts with findings that revealed that road expansion projects had a negative impact on the informal sector, particularly building material traders, in terms of customer loss, profit reduction, and unappealing temporary structures for once-thriving business premises, among other things.
3. The road safety measures implemented as part of road expansion projects are unknown to the affected areas/respondents. It is evident that traffic users do not favor road safety measures.
4. The DPWH doesn't have a defined procedure for gaining right-of-way and doesn't do enough public outreach. It means that the DPWH must adhere closely to the process for acquiring road right-of-way for all projects.
5. In Local laborers are engaged, and there are just a few open positions. This means that fewer local employees are hired during road construction. As a result, road widening had little effect on local employment.
6. Respondents are aware of the advantages of road improvements. The quantitative market value cost benefits of highway building to highway users have been established, including motorist safety, comfort and conversion, and aesthetics.
7. Overall, the grand mean of the road widening projects in Tarlac 1st Congressional District is 2.68 and having a verbal description of affected which means road widening projects impact to the impacted areas is satisfactorily.
8. It can be seen that the rank 1 in terms of problems, issues and concerns that are encountered among residence is inadequate safety devices, signage and barriers during construction, providing awareness to the passers will lead to avoidance of unexpected accidents. The importance of safety and that actual project safety should be prioritized in order to reduce injuries, accidents, and barriers to applying safety, which will improve the sustainability and development of safe environments

RECOMMENDATION

1. Before beginning a project in the proposed area, the DPWH may regularly consult with the impacted parties.
2. Before the project is implemented, the DPWH may identify and resolved the issue with the road right of way.
3. The DPWH could offer a remedy for the issues that arose during the implementation of road widening.
4. To ensure their efficacy and maintain their alignment with the policies and standards, the DPWH may need to assess the techniques they have utilized.
5. Future researchers may focus on the impacts of road widening or any environmental projects.
6. Before implementation of the project, the DPWH will conduct a standard testing of materials for quality and safe widened road.
7. The DPWH may require to the safety signage's and provision of PPE for workers to avoid accidents.
8. During and/or after construction, there should be hauling of debris/spoiled materials from site to proper dumping area.
9. There should be a close coordination of DPWH and LGU in provision of detour to lessen the inconvenience to the general public.
10. The DPWH may conduct a weekly inspection of obstruction to maintain the interest of public safety and common good.

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