Thoughts on the Construction of " Village to Village Roads " in Rural areas

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Abstract: The phrase “to be rich and to build road first” fully expresses the eager expectation of farmers for the construction of rural highways, rural revitalization, agricultural economic development and farmers’ fortunes. In recent years, China has gradually increased its investment in rural infrastructure and implemented a series of policies for benefiting the farmers and benefiting the people. Among them, the rural Village to Village Roads policy has provided convenience for farmers and promoted the new rural economy. Now it is proposed to build a "Four Good Rural Road". “Four Good Rural Road” is a major livelihood project personally proposed by General Secretary Xi Jinping. It is a people-centered project and a German government project. However, there are still some problems in the implementation of the policy. Through the consideration of these issues and suggestions, we hope to further improve the policy of “Village to Village Roads”, allow rural farmers to enjoy the fruits of reform, opening up, economic and social development.

1. The "Village to Village Roads" construction

The “Village to Village Roads” policy is a major public policy for the state to build a harmonious society, build beautiful countryside and support the construction of a new countryside in the past 20 years. The general office of the State Council issued the guidance document on the innovation of the institutional mechanism of investment and financing of rural infrastructure by issuing [2017]17 document with the state office. The development and Reform Commission said: " Thirteen Five", the task of rural infrastructure construction is very heavy, according to the industry department estimates, only rural highway construction funds demand more than 1 trillion yuan, maintenance project funds demand more than 300 billion yuan (February 24, 2017 development and Reform Commission website). The implementation of the “Village to Village Roads” policy is a major measure to build, manage, maintain and operate rural highways in China, completely changing the backwardness of rural transportation and making the “Village to Village Roads” policy benefit the millions[1]. Households are more convenient for the farmers to travel and gradually lay a solid foundation for the beautiful rural construction.

1.1. Results of policy implementation

Since the party’s 18th National Congress, we have made solid progress in the construction of the “Four Good Rural Roads” and achieved remarkable results. In the past five years, a total of 1.275 million kilometers of rural roads have been newly built and reconstructed throughout the country. 99.24% of the townships and 98.34% of the established villages have been connected to asphalt roads and cement roads (Xinhua News Agency, December 25, 2017).this has made farmers rich and
provided strong support for the development of the rural economy. It has been welcomed and appreciated by rural farmers and the whole society. At present, most rural areas have basically reached a flat asphalt or concrete road. The extensive construction of rural transportation network has basically taken shape and basically solved the problem of villagers’ travel difficulties. Now farmers who are getting rich have purchased motorcycles, tractors and private cars. With the continuous improvement of the living standards of farmers and the need for new rural construction, farmers’ expectations for high-quality, high-level, unimpeded transport facilities are increasing. Completely changed the traditional concept that farmers have long been afraid of going far and that agricultural and sideline products are difficult to transport, strengthened exchanges and cooperation between urban and rural areas.

1.2. Provide guarantees for farmers to make a fortune
After the “Village to Village Roads” was completed, the farmers increased their income through the development of their own special industries and promoted the development of the rural economy. Rural roads have gradually extended to farmland and rural logistics centers, providing guarantees for increasing farmers' income and agricultural development. The unobstructed rural roads in all directions have enabled agricultural and sideline products to be transported in a timely manner, which has solved the problem of increasing output, increasing income and transporting agricultural products. With the improvement of rural roads, farmers can enjoy the same convenient transportation facilities as urban residents and promote the integration of urban and rural areas. Due to the convenience of transportation, more and more urban residents began to travel to rural areas to make tourism such as farmhouse music and rural tourism very popular. This has become a new bright spot for rural farmers to increase their income[2]. In recent years, due to the relatively low cost of rural economic development, the road bottlenecks in urban and rural economic development have been resolved and more and more manufacturers have begun to build their factories in rural areas so that the rural surplus labor can find a job nearby, which not only solves the surplus rural labor force employment issue, but also increased the income of farmers.

2. Main issues in the process of implementing the "Village to Village Roads" policy
The “Village to Village Roads” policy is an important public policy in the construction of new rural areas in China, The country has initiated one round of highway construction projects, with other public policies, distortions and deviations have occurred due to various reasons. Many problems have resulted in policies that cannot be fully implemented, policies have not been implemented as expected and the effect of policies has run counter to the expected goals. Many farmers have said that it is not necessary for them to make improvements, but there is still a wide gap between them and actual needs. There have been some problems in the development process that should be addressed squarely and securely.

2.1. Some rural Road construction standards are too low, investment is insufficient and project quality is not
In the initial stage of the implementation of the “Village to Village Roads” policy of the country, the design standards for rural roads were low considering the economic conditions in rural areas in China. In some economically underdeveloped cities, counties and townships, due to various local financial reasons, they are unable to obtain sufficient construction energy and capital input, which will inevitably affect the construction progress and quality standards of rural roads.

In the early stage of construction: The Ministry of Communications stipulated that the road width of the “Village to Village Roads” should be 5 meters wide and the width of the road surface should not be less than 3.5 meters. However, in some areas, there are many factors to consider in terms of construction costs. In many places, the road widths of many sections of rural roads are only 3.5m (natural drainage ditches exist at both sides of individual road widths) and road shoulders and embankments are not built and the two vehicles meet each other. The minimum required road surface
width did not meet the basic requirement (4 meters). Although some rural roads designed the lanes in certain sections, the two vehicles met the dilemma in the absence of the lanes, greatly reducing people's satisfaction with the construction of rural roads.

Judging from the progress in the construction of road projects, the progress of project construction among cities, counties and townships (towns) is not balanced. In particular, the construction of areas where individual townships (towns) cross the border has progressed slowly and there has been no adequate coordination. Some engineering sections have not in strict accordance with the project design requirements and construction specifications for construction, construction process is rough, cement sand and other materials can not meet the design standards and regulatory requirements, the project supervision is not standardized and in place, there is no strict inspection of the process according to covert acceptance, in the supervision of the project, larger loopholes lead to road surface breaking or cracking in the case of unfinished individual road sections [3]. Due to the supervision of some traffic departments, highways have been caught up in the inspection process, greatly reducing the useful life of rural roads.

There are frequent occurrences of unconscionable construction in individual construction companies that have little awareness of environmental protection, arbitrarily destroy vegetation and dump construction waste. The main responsibility is not fulfilled and some townships (towns) do not pay enough attention to the “Village to Village Roads”. They cannot timely and effectively organize the masses to control road diseases and there are phenomena such as road maintenance, shoulder repairs and side channel dredges that are not in place, resulting in some road sections. Severe damage, as well as road-to-road propaganda is not deep enough and the people's sense of love for road protection is not strong and casual mining, occupying rural roads is a prominent problem.

Although most cement hardened roads or asphalt roads have been extended to established villages at present, the low traffic capacity is mainly reflected in the fact that, in order to save construction costs, the construction of “village-village access roads” in some areas is not strictly planned and designed and the main roads in rural areas are used. In most natural villages, the slopes are steep, narrow, acute, drainage and safety facilities are not in place. The potential safety hazards are relatively large. The industrial road layout and industrial planning in rural areas are not synchronized and coordinated, the road density in the industrial area is low, the standard is low and the transportation cost of agricultural products is low. The high level has largely hampered the development of the rural economy.

2.2. The hidden dangers of traffic safety in rural roads are more prominent

Due to the relatively low construction standards for “village-village access road” and the lack of investment funds, the lack of comprehensive supporting facilities for roads, the complex road layout of country roads, dangerous sections and inflection points, lack of necessary safety protection measures and traffic safety. The signs pose a threat to traffic safety; At present, due to the rapid development of “Village to Village Roads” traffic management departments have heavy tasks and the contradictions between people, vehicles and roads have become increasingly prominent. Unlawful roads on rural roads, unlicensed vehicles, dumped cars from city dumps, agricultural electric tricycles, illegally carried agricultural vehicles, high-speed motorcycle racing vehicles, transport vehicles for construction materials, tractors, etc., are rampant and traffic violations are serious and some are illegal. Vehicles to avoid management, avoiding the main roads to drive on rural roads, due to a serious shortage of management police, functional departments and lack of adequate coordination, began to appear roads out of control, leaking pipes and other issues caused security hidden dangers, seriously endanger the rural road traffic Safety.

2.3. Irrational use of rural roads

Some farmers took the soil freely on the road shoulders and farmers stole stone, sand and asphalt used for road maintenance. As a result, the roadbed could easily collapse during the rainy season, directly damaging the road and threatening the service life of rural roads. In addition, some farmers in the rural
road drying food, stacking construction materials, etc. will pose a certain hazard to rural roads. Some counties, districts and townships (towns) carry out large-scale infrastructure construction and industrial development in counties and large-scale transport vehicles that have violated transport, overloading are transporting steels, woods, sands, cements and other building materials and start not to take highways, national highways or provinces roads, some sections of roads choose to take rural roads and begin to drive on rural roads, causing many rural roads to be seriously damaged.

3. **Suggestions for improving the construction of "Village to Village Roads"**

3.1. **Increase investment and supervision, comprehensively improve the standards and quality of the construction of “Village to Village Roads”**

Due to the initial construction period of the “Village to Village Roads”, the design speed is: 15km/h for general road sections and 10km/h for special difficult road sections (Ministry of traffic guidelines for rural highway construction standards). Designed vehicles: Mainly agricultural vehicles, tractors, harvesters and other small-sized and light-weight agricultural transport vehicles are used. With socio-economic development, improvement of living standards, and demand for rural economic development, road sections with road widths of less than 4.5m in rural roads with large traffic volumes have been constructed. roads have been reconstructed or paved in certain areas to ensure If two vehicles can pass at the same time, the wrong lane may be added where the conditions are limited and the width and length of the roadbed in the wrong lane should ensure the safety of the vehicle. When setting the wrong lane, full consideration should be given to technical requirements such as vision (line of sight), circle radius (width), slope and length of vertical slope. It is necessary to fully investigate the construction of new “Village to Village Roads” and to solicit the views of the community extensively. The new “Village to Village Roads” shall ensure that the width of the road surface is not less than 4.5 meters, and the design shall be of advanced nature and shall be designed and constructed. The supervision unit shall clarify the responsibilities for safety and quality management, implement a one-vote veto system and a lifelong responsibility system and shall insist on the construction unit self-inspection, the supervisory review of the township (town) government, the follow-up supervision of the supervision unit and the sampling inspection by the traffic department above the county level. The project quality supervision and management system shall be managed hierarchically and shall be responsible at various levels and shall severely deal with construction projects that are in violation of the inferior quality. The implementation of iron face, iron core and iron wrist on the quality management of roads has strictly implemented the powerful measures of “discovering a yellow card warning, two work stoppages and rectifications, and three clearing out of rural road construction teams”.

Implement the financial support for the construction of rural roads by the central and local governments, tilt the funds to weak financial regions, increase the central government's financial support and propaganda, increase the peasants' enthusiasm for donating rural roads construction funds and raise funds for rural roads construction. The maintenance funds for rural roads construction must be subject to special account management, special accounts, special funds and audited by the auditing department. No unit or individual may retain, divert, or misappropriate and promptly report problems of violations and violations in the course of roads construction.

3.2. **Strengthen the construction of supporting facilities and vehicle management to ensure safe and smooth flow**

Do a good job in the supervision of rural roads, bridges, tunnels, three-dimensional intersections, plane intersections and geological hazards, such as dangerous, steep, narrow and dangerous road sections, conduct comprehensive assessments of risk levels. There are risk points and risk road sections with potential safety hazards, such as narrow roads. Set deceleration zones and safety signs in places such
as winding roads, downhill, crossroads and intersections, establish necessary protective fences, protective walls and protective piers in areas with complex roads, dangerous sections, steep slopes, many inflection points, traffic safety problems and other measures. Set up necessary markings, signs, warning piles, barriers and gantry lines for rural roads as required by standards and improve traffic safety facilities such as advance notice, warning or reminders. The competent department of traffic shall continuously check and rectify the sections of dangerous hidden dangers, strictly prohibit any illegal vehicles from passing through, strictly crack down on rural road traffic violations and punishments of speeding vehicles, and ensure the safe and smooth rural roads.

3.3. Implement responsibilities and do a good job in rural road maintenance

Rural highways are national investments and no one can occupy them privately. It is necessary to increase propaganda, enhance farmers' awareness of road protection and encourage the majority of community residents to consciously maintain their own road facilities. The competent department of transportation shall formulate a comprehensive highway maintenance system, ensure that there are people at the highway level, be supported by people and reform the rural highway maintenance system in an innovative way. All townships and delivery departments shall actively explore new modes of rural road socialization and maintenance. Establish rural road maintenance main responsibility and rural road maintenance management agencies, formed city, county, township (town) three-level maintenance management system and allocated full-time professional staff to take charge of the maintenance, management work within the jurisdiction and to fully promote road maintenance, enterprise maintenance, family conservation, public welfare conservation and other various conservation methods, promote new models of road section contracting, slicing and lump summing, unit (personal) adoption etc., to effectively and thoroughly solve the problem of road maintenance; To establish and maintain separate, built Take equal emphasis on identifying conservation responsibilities and funding sources. Give full play to the local farmers' familiarity with the local conditions and at the same time, they have the advantage of the direct beneficiaries of village roads, such as convenient maintenance and actively involve the farmers in the management and maintenance of the “village-village access road”. This will not only save money, but also play a positive role in road maintenance and road protection; it is necessary to implement responsibilities, ensure the maintenance of "village-village access road" and continuously improve the people's happy life index. We must strictly control the overloading and over-limitation of vehicles on rural roads, limit the destruction of rural roads by vehicles; let the “village-village access road” public-minded public policy be implemented, and make due contributions to building a well-off society in an all-round way and further revitalizing the rural economy.

4. Conclusions

In summary, the construction of the “Village to Village Roads” is related to the overall economic and social development in rural areas and is the key to the sustainable and healthy development of the rural economy. It must be rationally planned and rationally constructed to ensure that the construction funds are put in place and roads are improved grade, widen the road width, strengthen the road protection pipe, avoid road overload, overload operation. It is necessary to fundamentally solve the problems of road construction, maintenance, and safety in the “village-village access” communications. Apart from the need for the party committees and governments at all levels to attach great importance to the concerted efforts of all relevant departments and to make concerted efforts, it is also necessary for the majority of farmers’ understanding, support and cooperation. Let rural roads play a full role in the transportation network, let our rural economy get a qualitative leap, and let the society develop more harmoniously. Only in this way, the “Village to Village Roads” will bring happiness to the masses and provides protection for harmonious rural development.
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