

# The Application Strategy of Tourism Highway Landscape Design

Zhaoyu Wang

China Merchants Chongqing Communications Technology Research & Design Institute Co., Ltd., Chongqing 400067, China

**Abstract:** In the context of China's economic development, tourism resources have been continuously developed, and the aesthetic requirements of tourism highway are higher and higher. In order to ensure the good ecological environment and promote the sustainable development of tourism highway in the process of highway construction, it is necessary to analyze the relevant strategies of tourism highway landscape design.

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\***Corresponding author:** Zhaoyu Wang, wangzhaoyu@cmhk.com

At present, China has made great achievements in highway construction, but in fact, there are still some problems in road construction, such as only paying attention to the road and ignoring the surrounding landscape environment design, relatively extensive construction and insufficient innovation. In order to protect the landscape along the highway and realize the good development along the highway, highway landscape design can be adopted. At the same time, it integrates environmental protection, history, humanities and other factors to create a tourism highway landscape.

## 1 Landscape design of tourist highway

The landscape design of tourism highway requires that the highway alignment and corresponding structures have beautiful appearance, and can coordinate with the surrounding environment, and form a natural and beautiful picture on the whole.

However, the construction of highway needs to start from route selection, survey, design to construction, and goes through several links, which will inevitably lead to the damage of the natural environment and cultural landscape along the line to a certain extent. In order to reduce the impact as much as possible and improve the coordination between landscape and highway engineering, it is necessary to take traffic landscape as an important task in the process of tourism highway landscape design; Natural landscape is the natural formation of features, topography, landforms, including plains, grasslands, mountains, the sea, forests and swamps, etc; The human landscape is the material that can meet the spiritual and material needs of human beings in human society, including all kinds of social, cultural and artistic scenery created by human beings, such as transportation facilities, buildings, villages, towns and so on.

Perfect tourism highway landscape should be fully combined with local natural and economic conditions to ensure the effective coordination between natural landscape and cultural landscape. Based on this, the landscape design of tourism highway needs to enhance the coordination between natural landscape and highway engineering structures, so as to promote the improvement of highway landscape system, so it is necessary to ensure the landscape design of tourism highway. The planning work can integrate the functionality, aesthetics and economy of the highway, so it needs to start from the following aspects: (1) Intervisibility: The spatial position of each part of the route can be coordinated to ensure that tourists can enjoy the surrounding scenery clearly and smoothly, and ensure the safety and comfort of drivers in the

driving process; (2) Orientation: Improve the regional vision system to ensure that the driver's line of sight can clearly show the changes of road direction and road conditions, so as to improve the safety of driving process; (3) Coordination: Ensure the coordination of facilities and space landscape along the highway; (4) Greening: The surrounding landscape is supplemented, adjusted and improved by greening.

## **2 Structure landscape**

### **2.1 Subgrade landscape**

Subgrade is the main factor to ensure road traffic and driving safety, and its appearance can also have a direct impact on the overall effect of highway landscape. When designing the slope, it is necessary to ensure that it is flexible and natural as a whole, and implement the design according to local conditions, so that it can be coordinated and unified with the surrounding natural slope. For the slope excavation in the section with dense vegetation, the disturbance should be minimized to avoid damaging the vegetation and mountain. If the vegetation has been damaged, the greening restoration should be carried out as far as possible. If the height of the slope is more than 5 meters, the mode of gentle upward and steep downward should be adopted to make it fully integrate into the nature. If the height of the slope is less than 5 meters, the slope should be slowed down as far as possible to form a buffer zone and clearance zone, which is conducive to further ensuring the safety of driving and restoring the ecological vegetation. It should be noted that the slope shape should avoid the application of too regular broken line as far as possible, but should conform to the surrounding, and adopt the curve shape, arc shape and other shapes that can be consistent with the route and topography for natural transition, so as to maintain the smooth slope<sup>[1]</sup>.

For the drainage design of the subgrade, the side ditch should be concealed as far as possible on the basis of improving the drainage function. For the existing side ditch, the method of overlaying the cover plate can be used to reduce the width of the subgrade broken platform, which can also reduce the amount of excavation, which is not only conducive to beautifying the road appearance, but also can ensure the safety of driving. Especially in the area with flat terrain and low surface runoff, triangular and shallow

dish grass ditch can be used to meet the drainage demand. This process not only has the characteristics of convenient construction, but also can integrate the subgrade and natural environment by planting grass.

### **2.2 Bridge landscape**

In the landscape of tourist highway, bridges are mainly beam bridges and arch bridges, which usually have the characteristics of simplicity and simplicity. Therefore, the design of bridge landscape should try to use rough sandstone to decorate the railings and flanges on the premise of meeting the functional and safety needs, and at the same time try to ensure the miniaturization and lightness of the abutment, so as to make it more fully connected with the terrain. Moreover, plants can be planted around the abutment to make the abutment hidden in the plants, so as to reduce the sense of existence of artificial traces in bridge construction.

### **2.3 Tunnel landscape**

According to the location of the tunnel entrance and the corresponding environment, the shape of the tunnel entrance should be reasonably designed, the local natural factors and cultural characteristics should be integrated into it, and the tunnel entrance should be appropriately decorated to present the tunnel landscape with local characteristics. In addition, in the process of tunnel landscape construction, the concept of "entering the tunnel, leaving the tunnel late" should be integrated to reduce the environmental damage caused by tunnel excavation as far as possible, so as to ensure the ecological nature of the driving environment. In the case of good natural environment, it should be mainly applied to the front portal, because it has the characteristics of simple modeling, so it can cause the least damage to the environment, which is more conducive to the restoration of the original ecological environment after construction.

## **3 Green landscape**

Rich vegetation resources belong to a good greening foundation. In the process of carrying out greening landscape design work, we can take restoration and utilization as the main measures, imitate the surrounding environment to implement greening treatment, so as to maintain the harmony and unity of highway vegetation and natural environment.

Therefore, for the design work, we should integrate the design methods of "exposure", "penetration", "sealing" and "lure"<sup>[2]</sup>.

### **3.1 Through the scene**

For example, if the road section along the river can present a large area of high-quality landscape, you can choose not to plant plants, so as to weaken the sense of visual cutting of greening, make people's line of sight more transparent, and better appreciate the scenery along the way.

### **3.2 Shielding**

If there are high fill sections that are easy to lead to psychological fear or there are indecent landscapes along the road, plants can be planted on the roadside, and landscaping shielding method can be adopted, so that people can ignore the existence of bad landscapes, so as to effectively reduce the sense of panic, and reduce irritability and other bad emotions.

### **3.3 Guide**

For the sharp curve area, trees should be planted in rows on the outside, so that the curve shape of the road can be strengthened, and it can be more significant visually. Therefore, centripetal force can be generated in the driver's psychology, and the driving direction can be effectively guided, which is conducive to improving the safety of the driving process.

### **3.4 Sharp bend**

There are relatively many sharp turns on mountain roads, so it is necessary to effectively deal with the inner landscape of sharp turns. First of all, it should be able to effectively meet the functionality of the landscape, ensure that the position and volume of greening can meet the demand of driving sight, and not block the sight. At the same time, it is also necessary to improve the aesthetic degree of plants, and reasonably trim the canopy line, so as to play the role of inducing driving.

## **4 Viewing platform, parking area landscape**

### **4.1 Viewing platform**

For the site selection of the viewing platform, we should try to avoid using artificial form to develop the site, but should "follow the trend of the mountain", so as to reduce the traces of manual treatment as far as possible. In general, according to the characteristics

of local natural environment, human environment and highway route, clear the section with wide vision and good scenery, and implement corresponding treatment for it, so as to serve as a viewing platform, so that the natural characteristics and human connotation of the section can be fully displayed<sup>[3]</sup>. After confirming the location of the viewing platform, the viewing platform can be divided into 2-3 areas according to the actual situation. If you choose to divide it into two areas, they are "catering area" and "viewing area". The catering area provides food and drink for tourists to supplement their physical strength while enjoying the scenery. The viewing area can provide tourists with telescopes, astronomical telescopes and other viewing equipment, as well as photo demonstration, photo guidance and other services, so as to improve the tourist experience. If the viewing platform can be divided into three areas, a "science and technology experience area" can be added, and VR experience projects can be set in the science and technology experience area, where tourists can experience "forest hunting", "virtual bungee jumping", "mountain road racing" and other projects, so that tourists' senses can be fully stimulated, which is more conducive to improving tourists' satisfaction.

### **4.2 Parking area**

Affected by the characteristics of tourist vehicles, a certain number of parking areas should be added along the highway according to the actual situation to meet the needs of people's diet and rest. It is required that the lanes in the parking area should be widened properly to avoid unnecessary decoration. At the same time, the railings and pavement should be fully connected with the highway. In terms of greening, the landscape penetration mode should be mainly adopted. In addition, people in modern society will choose to carry at least one piece of electronic equipment when they travel, so the demand for electricity is relatively strong. Therefore, the parking area should also provide efficient charging area for electronic equipment, and provide different types of charging lines to meet the charging needs of different mobile phones, cameras, e-books, tablet computers and even notebook computers.

## **5 Ancillary facilities landscape**

### **5.1 Landscape guardrail**

The guardrail of tourism highway should be able to

integrate into the environment, keep its appearance simple and transparent, and adjust its color and shape properly on the basis of anti-collision performance meeting the relevant standards, so as to fully show the local cultural characteristics. In the highway section, wavy and colored guardrails can be used. In the forest area, in order to integrate the guardrail into the environment, the brown guardrail imitating wood can be used to integrate it with the surrounding environment. For the mountain and river sections, the cable guardrail with good permeability can be used to avoid blocking people's sight. At the same time, the bridge guardrail should be able to connect with the subgrade guardrail smoothly and transition naturally.

## 5.2 Highway tourism information system

For the highway in the tourism area, in order to improve the convenience of people's travel, it can provide rich tourism information for them. Therefore, we can set up notice and instruction signs at the entrance of branch line, along the way and the viewing platform of each ticket station, so as to help tourists clear the direction and location of the destination, and play a guiding role. For each branch line, it is necessary to set the travel parking information prompt and provide corresponding guidance.

In order to promote tourists to master more comprehensive tourism information, corresponding information service signs can be set in villages and towns, intersections, parking areas, viewing platforms and other locations, so as to further supplement the road guide signs, and the contents can cover the roads around the scenic area, the corresponding map of the scenic area, and the introduction of scenic spots, so as to make tourists more comprehensive. In order to improve the tourism experience of tourists, it is necessary to learn more about tourism information

and make more scientific tourism plans. It should be noted that all signs and signs should also try to maintain the unity and coordination of style and form, so as to enhance the beauty, and at the same time, pay attention to the integration of local regional characteristics, cultural customs and so on<sup>[4]</sup>.

## 6 Conclusion

For the landscape design of tourism highway, not only need to have a good design concept and design scheme, but also need to ensure that the project is consistent with the actual situation of the highway, so as to effectively guide the construction work, and effectively combine the highway construction work with environmental protection work, build a convenient, safe and comfortable tourism channel, and realize highway construction and environmental protection. The sustainable development of science and technology.

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