

# Overview of Main Contents of Landscape Construction Management

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**Abstract:** This paper takes the construction management of landscape as an example, introduces the main management content of "Three control, three management and one coordination" in construction, and from the quality control, schedule control, cost control, safety management and comprehensive coordination aspects of the examples and described, hoping to bring some enlightenment to the relevant practitioners. Of course, the project management ideas and methods will not be unchanged, hope that the relevant practitioners can be in the future work of this article gradually supplement and optimization.

## 1. Introduction

The landscape construction not only includes planting, but also includes pavement, water system, landscape sketch and so on, involving water, electricity, structure, landscape construction, greening and so on. The construction management of Landscape Architecture specialty is interlinked with the construction management of other specialties, and its main contents can be summed up as "Three controls, three management and one coordination", that is, quality control, schedule control, cost control, safety management, contract management, information management, as well as the comprehensive coordination of the construction site. According to the different parties involved, it can be divided into the development construction side, construction side and supervision side of the construction management.

## 2. Quality Control of Landscape Construction Management

The five factors affecting the quality are "human, machine, material, method and environment". In the preparation stage of construction, both the professional engineer of the development construction unit and the project manager of the construction unit shall be familiar with the drawings to avoid random and wrong construction during construction. If any drawing problem is found, the construction unit can feed it back to the supervision unit, which will report it to the development construction unit, and the development construction unit will organize "drawing joint review" to solve it. Before construction, the technical personnel of the construction party shall make "design disclosure" to the team workers to avoid human errors; Mechanical selection should be based on the site operating conditions to choose the appropriate model. For example, in earthwork, the 260-type large excavator should be equipped with a large dump truck, while the 120-type small excavator should be equipped with a small dump truck. The large excavator with a small dump truck or the small excavator with a large dump truck will affect the work efficiency and increase the construction cost; the most important is the material control. Paving slate must do "Material seal sample", after entering the field to "Check the slate". Because there are many kinds of stones, some plates have little color difference. For example, "Shidao Red" and "Xinjiang Red" are very similar, so it is difficult to distinguish them. Therefore, it is necessary to strictly align the plates to avoid sell seconds at best quality prices. In the process of paving, it is necessary to conduct a small-area trial paving, that is, to "model first", and then conduct a large-area paving after the initial inspection is qualified; Stone paving to check the thickness of the board, the ruler is less than the required size  $\pm 2$  mm for qualified. When the seedlings arrive, check the specifications against the list, such as Tree's "Breast diameter, Crown Width, branch point", Shrub's "Height, number of plants per square metre" and flower's "Number of buds per plant" to avoid substandard. But if the crown of the

seedling is beautiful, can also be appropriate to relax conditions, not too rigid. Construction methods to be appropriate. For example, for a four-meter-high scenic wall, the decorative stone must be made with dry-hanging stone technology, rather than wet-taping technology, in order to prevent the stone from falling off and hurting passers-by due to frost heaving in the later stage. The environment would also affect the construction quality, for example, SBS waterproof construction can not be carried out on rainy days, construction temperature below 5°C need to do thermal insulation measures, 6 + Gale Day can not be carried out lifting operations, and so on.

### **3. Landscape Construction Management Progress Control**

Municipal Green Belt, Park Green construction, because the cross-construction is less, so the progress control is relatively easy. But residential areas are different, the main structure and facade of the building, Earth Backfill, water, electricity, fuel gas, heating and other integrated pipe network must be completed before the landscape construction. Landscape construction is in the last working procedure, all the early delay of the construction period need to be by the last landscape construction process to catch up with the deadline of the project, so progress control is very critical. Before the construction, the construction unit should work out a reasonable schedule according to the requirements of the construction period, determine the key working procedures, in the conditions of human、material and work area resources allow, If parallel construction is possible, do not run by water construction. In the construction process to check, found that the progress of the problem should be rectified immediately, rectified and then re-examined. That is, the“PDCA”mode in the management method. Progress and quality usually restrict each other, as the saying goes, “Slow work out fine work” is this truth. If necessary, should be under the premise of quality assurance, through the appropriate reduction of curing time to rush the time, but to grasp the“Degree.”Take asphalt road as an example. According to the road structure, asphalt pavement base is generally cement-stabilized broken/gravel layer (water-stabilized layer) . In accordance with the requirements of the code, the general need for 7 days of water-stabilized layer maintenance, but in fact, three days of maintenance, you can carry out the follow-up surface construction, so you can save 4-day time limit;Some of the road is the base of the concrete layer, according to the requirements of the code, the concrete is to need seven days of maintenance cycle, but in the actual construction process, generally only after a day of time, the final setting strength of concrete can withstand the weight of adults, the person walks above does not appear the footprint, may carry on the follow-up paving construction, thus may save 6 days time limit. The two methods mentioned above not only do not affect the construction quality, but also can save the construction period. However, they require more construction experience and require the construction personnel to know how to guarantee the quality, reduce the more conservative maintenance time stipulated in the construction code.

### **4. The Cost Control of Landscape Construction Management**

The cost control of the construction side is“Jerry-built, shoddy”to save construction costs. The cost control of the development construction side is to require the construction side“Quality and quantity, according to the drawings of the construction.”So the professional engineer or project manager is required to be familiar with the drawings, do not let the other side take advantage of the loophole. In addition, a reasonable process convergence, mechanical collocation, personnel organization, but also a very important cost control. Take greening construction as an example.First, we need to estimate the amount of seedlings that can be planted that day based on the number of available greening workers and the actual work efficiency of the workers. Then, we need to accurately calculate the time of starting seedlings, the time of transporting seedlings, and the time of arrival of seedlings based on the distance of transportation, so that we can plant the seedlings as soon as possible. If there are people waiting for seedlings, it will cause personnel slowdown.If the seedlings arrive but no one is there, dehydration of seedlings will also increase the mortality rate. In the seedling loading stage, to ensure that in line with the requirements of seedling specifications as

much as possible full load, not ultra-high not ultra-long. In the process of seedling planting and maintenance, we must also achieve construction standards, maintenance in time, if the seedlings die to replant, then the corresponding artificial materials and machinery will be repeated, increasing the construction cost by a factor of two. Here's another cost-saving tip. Assuming that the survival rate of seedlings planted in an enterprise is 90%, if the drawings require planting 100 plants, then we will actually plant 110 plants. Even if 10 plants die in the later period, the actual survival rate still meets the requirements, thus saving the freight and machinery costs during replanting. Finally, the visa management in the construction process is also an important part of cost control. Because the initial design conditions may not be the same as the site, so the construction process visa is basically inevitable. In order to bid successfully, the construction side usually bid at a low price in the bidding stage. Therefore, they all want to make up for the profits sacrificed in the low-price bidding by adding visas in the construction. So for the development construction side, whether the visa is necessary, whether the visa measurement is accurate, need professional cost control.

## **5. The Safety Management of the Landscape Construction Management**

The Landscape Profession does not involve the high altitude work, relatively speaking the safety hidden danger is few. In the field is mainly focused on hoisting operation and fire prevention and electricity. Before the construction, the project technical person in charge of safety and technical disclosure to the workers, and sign the retention; When the residential area is green, if there is cross-operation such as the construction of the external facade, prevent falling objects from high altitude; Construction, as far as possible do not carry out the hoisting operation in windy days, in the hoisting of seedlings from the ground before the construction personnel can not be close to one meter high; Waterscape construction, cable to use waterproof cable, underwater lamp voltage to be reduced to 12V by transformer. On-site power connections should be standardized, and private connections should not be made randomly. If the project really needs fire, the fire permit procedures should be strictly followed. When the project uses fire, fire-fighting equipment should be provided and special personnel should watch the fire.

## **6. The Contract Management, Information Management and Organization Coordination of Landscape Construction Management**

In the construction process, some disputes will inevitably appear, which requires managers to deal with these disputes according to laws and regulations, contract terms, to claim and counterclaim for cost and time of construction. During the construction process, the supervisor shall assist the Construction Party in the measurement of the completed works, the application of progress payment, the inspection of materials and processes, and the final acceptance of the completed works, these all need the special person to carry on the information management and the organization coordination between the participating parties. After the completion of the project, all parties to submit their own construction archives, construction files in the various forms need to be collected in the construction process, timely signature and seal. The form must use the *Construction Project Data Form* issued by the state: A form for the contractor, B Form for the supervision unit, C Form for all parties involved in the construction.

## **7. Conclusion**

The management method of landscape construction management is basically similar to that of other specialties. Greening and paving are the main working procedures in landscape construction, and the corresponding jobs are labors and bricklayers. The process of landscape water system and lighting engineering is relatively complicated, involving hydropower specialty, and the the corresponding jobs are plumbers and electrical worker. This article only takes the landscape construction as an example, introduces some problems in the construction management, hoping to bring some enlightenment to the related practitioners. Of course, the ideas and methods of project

management will not remain unchanged, hope that the relevant practitioners can be in the future work gradually supplement and optimization.

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