Module C Construction organization design

Complete the model and corresponding results of construction organization design according to the drawings, models and test requirements (15 points)

1. Construction schedule: Based on the construction schedule that exists but has not yet been perfected in the provided drawings, the participants should carefully check and improve the data for the subsequent 4D progress simulation animation.

2. Site Layout Design for the Main Phase: Based on the provided drawings and site layout standards, design the site layout for the main phase of the project. This should include construction entrances and exits, construction barriers, material storage areas, machinery and equipment placement, temporary facilities, construction roads and passages, and power and fire protection measures. Finally, save the designed construction site layout as a dwg file and name it "Main Phase Construction Site Layout".

3. Site layout: Arrange the site model in the BIMPOP software according to the site layout diagram of the main construction stage.

4. 4D schedule simulation: Create 4D schedule simulation animation in BIMPOP software, which should include all construction nodes and site models of the main stage of the project. According to the construction schedule, the component and site model files should be associated.

5. Roaming video: Add camera animation to reasonably display the effects of 4D progress simulation.

6. Output results: Save the source file of the project without exporting the video, and name the model file as [Construction Organization Design], and the file format is.bfm5.

2. Construction technology simulation (10 points)

1. Open BIMPOP software, click offline login, use the open file function to open the [construction process simulation] provided by the competition.bfm5 model file, complete the construction process simulation task according to the following requirements, and the total duration is less than two minutes.

2. In the technology simulation, the simulation of component placement is selected as [position + visible animation], and the rest of the animation is reasonable (if there is an animation conflict dialog box, please select [Yes]).

3. Construction technology requirements

(1) Selection and application of manpower, machinery and tools: In the process of construction technology simulation, the following manpower, machinery and tools are reasonably used in the construction technology process (can be found by searching ID).

name	ID	name	ID	name	ID
Insertion vibrator	2686	binding wire	525	Reinforcing iron worker	484
claw hammer	628	wood float	725	pump truck	1474

		float			
Concrete tank truck	864	waterpipe	14180		

(2) Simulation of the construction process for stepped independent foundations: Lay and tie the foundation reinforcement bars → Arrange the formwork for the first step of the foundation → Arrange the formwork for the second step of the foundation → Pour and compact the concrete for the first step of the foundation → Pour and compact the concrete for the second step of the foundation → Arrange the formwork for the concrete structural columns and pour the concrete → Water to moisten and cure the formwork → Remove all formwork according to the principle of 'install first, then remove; install later, then remove'

(3) Each step of the construction process operation needs to be accompanied by the corresponding process node, and the text content of the process node is the construction process of (2).

(4) Assign corresponding voice and subtitle to each process node.

(5) Add the camera animation on the timeline and set the camera view reasonably.

4. Output of results

Save the source file of the project without exporting the video, and name the file as [Construction Process Simulation], and the file format is.bfm5.

Note: The output engineering source files "main stage construction site layout", "construction technology simulation" and "construction organization design" should be uploaded through "upload folder" and copied to the U disk designated by the competition. If the above requirements are not saved and submitted, this module will get zero points.