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1. Overview

The following method statement for building roads outlines the essential actions that must be taken to complete the project and achieve the desired results. This method statement covers the planning, installation, and security procedures required for road and paving construction. This method statement's goal is to carry out a methodical work execution for road and paving work that will create and provide a secure execution process with the intention of providing general guidelines for roadwork building.

2. Pre-construction activities

- Upon receiving notice from the Client, the Contractor will start mobilizing its work team and its specialized supply chain prior to site possession.
- Prior to the start of work on site, the Client team will review and approve the Construction Phase Health and Safety Plan. This step will also involve fulfilling any pre-commencement planning requirements.
- From the building schedule, the contractor will produce a revised design and procurement list. Other administration tools, such as the necessary information, can then be updated as a result. Any notifications required to begin the event will be given prior to the start.
- At this early stage of their management system, the Contractor will need to focus on developing channels of communication. In order for this project to be successfully completed, the entire project team must communicate effectively.

3. Communication

The details in this method statement must be explained and demonstrated to all involved employees according to the tasks that have been assigned. The site engineer or supervisor, as well as each subcontractor, must sign the authorized method statement. Every day, the supervisor and the health, safety, and environment office will meet with all of the employees before work to go over the tasks that need to be completed during the shift. The pre-work meeting will be completed by all employees to ensure that they are all aware of the activities and associated controls. They will then perform a site inspection to confirm that all the safety measures are in place. Both the pre-works information and the Risk assessment method statement will be kept on the job site with the works supervisor for future reference and review.

4. Equipment/Machinery

Equipment, such as plants and lifting devices, must be completely operational, have undergone testing and evaluation, and be certified by a third party. All employees must be competent and have the necessary training, work experience, and education to successfully complete the tasks that have been assigned to them. When erecting or mounting any equipment, the manufacturer's instructions for any necessary lifting equipment must be present and followed.

A competent person will draft an equipment/machine lift plan and distribute it to all parties involved in the lift operation before any hoisting operations begin. With electricity generators, a drip receptacle must be provided to avoid spills. Each piece of equipment/machinery needs to undergo inspections, which must be noted and documented, to ensure that it is capable of performing work on a daily basis. Each piece of equipment needs to be set up with complete files for credentials in order to work on the job site.

Equipment and tools used for work

1. Backhoe loader – For excavation work
2. Dump truck – For removing excavated material
3. Asphalt Paver – Spreading and levelling
4. Water Bowser – To fill up the roller and clean the surface
5. Bitumen Distributor – Application of bitumen materials
6. Hand sprayer – For spraying bond coat
7. Steel tired roller – For compaction
8. Pneumatic tired roller – Secondary compaction
9. Pate compactor – For edge compaction
10. Air compressor – Clean the surface
11. Cement mixer – Mix raw material for pavement
12. Rolling straight edge – Tolerance measurement
13. Hand tools – Rakes, shovel, hand compactors, levelling and smoothing tools, pavement saw machines, heaters, cleaning tools, hand brooms, small vibratory compactors, liquid asphalt painting.

5. **Construction Methodology**

5.1 Road Construction Excavation

- According to the engineer's directives, common excavation entails the removal and appropriate removal of all sediments, particular strata, and individual rock boulders with a volume smaller than one cubic meter. Strata that have been altered and weathered but aren't rigid enough, in the engineer's opinion, to exhibit all the traits of rock excavation, are properly categorized as common excavation strata.
- Rock excavation entails the removal and proper disposal of all igneous, metamorphic, and sedimentary solid rock and boulders larger than one cubic metre in volume that, in the engineer's opinion, are impracticable to remove using heavy mechanical excavating equipment, a heavy-duty hydraulic ripper, or authorised pneumatic tools.

Rock excavation and common excavation are the two types of excavation that are required for roadways construction.

The backhoe will be utilized for excavating tasks with the bucket attached to one end of it, such as digging a trench to create a well-organized piping system for water or electricity lines.

The surface of a road can be leveled and smoothed out using the backhoe's front loader, which is situated on the side opposite the bucket. You can apply the correct pressure and level out the uneven surfaces of the roads using the front loader. After that, the road will be fully ready for the following stage of road construction.

Any material taken from an excavation must be used to build the sides of an embankment and other areas of the storage yard.

No material excavated on site is to be disposed of without a consultant or the client written consent.

Subgrade

- The existing material must be scarified, watered as needed, mixed, and compacted to a dry density before excavation can continue below the subgrade level for the entirety of the road construction.
- An improved subgrade layer is created using fill and embankments and materials that adhere to project specifications.
- The developed subgrade layer will be packed with the least amount of moisture.
- According to the most recent approved design that has been authorized, all slopes, lines, and grades must be true, correct, and accurate.

- To ensure that cuts are accurate, subgrade levels must be set at the authorized profile grade.
- While the road is being constructed, the prepared formation needs to be kept in such good shape that it is always well-drained.
- Approved soil with a plasticity index must be used as the material for the improved subgrade.
- Instead of placing stabilizing crushed material directly on the ground, the area to be stabilized will always have a geotextile fabric covering it.

5.2 Sub-base Construction

Layers of crushed aggregate known as sub-bases act as a solid foundation and support system for paving. It evenly disperses the weight of the paving as well as any weights that may be applied to it after. Without a sub-base, a project might be less expensive. Saving this money now, though, almost always results in problems for you later. A sub-base is unquestionably advised if vehicles will be moving through the area.

Additionally, a solid sub-base will offer drainage and stop 'ruts' in your paving, which are frequently brought on by poor quality installation and materials. In your paving, "ruts" can form as a result of regular traffic, such as a car pulling into and out of your driveway every morning and evening. You can prevent this by using a high-quality sub-base that inhibits channelization and settlement. Within a sub-base, a thin layer is produced by the interaction of the various particles. The ability of the ground to support heavy loads without sustaining damage is then significantly improved by this layer.

Making sure that each layer has been thoroughly compacted before moving on to the next one will be done, in order to avoid settlement once the area is being used for traffic. Due to the fact that sub-base materials spread weight so evenly.

- A dump truck will bring the material to the location, and an asphalt paver will spread and level it so that the entire surface of the pavement is flat. As specified in the approved design for the road construction, the material must be filled and compacted to the necessary thickness.
- Steel-tired rollers must be used to compact the sub layer so that it reaches the required relative dry density.
- By compacting from side to centre, parallel to the centreline of the road, the full width of each layer must be covered.
- Material will be compacted with a plate compactor that has been approved to use along curbs, headers, walls, and any other areas that are inaccessible to rollers.
- In accordance with technical specifications, alignment, level, and surface regularity will be examined.
- The asphalt paver must regulate and trim the granular sub base layer's final surface to the necessary level and cross fall within the required vertical tolerances.

5.3 Aggregate Road base

There are a few desirable qualities in aggregate road base. The term "road base" in the context of pavements describes the sub-layer material of an asphalt roadway that is laid directly on top of the sub-grade (undisturbed soil) in order to provide a foundation for the top layers of the pavement. Various sizes of aggregate rock are typically used in the construction process.

In addition to serving as the base course for concrete slabs and structural foundations, aggregate base is also used as backfill for underground utilities such as pipelines and other utilities that are located within a roadway. The stable foundation required supporting a pathway, foundation, driveway, or roadway is provided by careful spreading and relative compaction during placement.

- This task entails providing and laying down one or more courses of aggregate, along with binder soil if necessary, on a subgrade or sub-base that has been prepared in accordance with the lines, grades thickness, and typical cross-section specified in the approved design.
- All aggregate road base material must be free of dirt, sand, or other debris, and it must be of a high enough quality to adhere easily to a table of aggregate road base.
- On approved subgrade or approved sub-base, aggregate road base must be spread.
- Utilizing a motor grader equipped with a mechanism that levels off the material at a constant depth and over time, the material will be spread.
- When the ground is muddy, when it is raining, or when it is dusted with snow, the road base aggregate course must not be laid.
- The spread, watering, and shaping of the aggregate road base must be done using a finisher, grader, or other mechanical method that has been approved.
- Segregation must not be used when handling the material. Material that has been separated must be uniformly remixed.
- While spreading the aggregate or base materials, appropriate precautions must be taken to prevent rutting of the subgrade or sub-base.
- Before compaction, the moisture content of the aggregate road base material must be adjusted. This can be done by watering with authorized sprinkler trucks or by letting the material dry out.
- Compacting aggregate road base requires the highest dry density possible.
- Repeating the rolling procedure is necessary to achieve the specified density throughout the thickness of each layer.
- To ensure a smooth surface free of ruts or ridges and with the right section, rolling must be done in conjunction with enough grader speeding in an approved manner.

- After compaction is finished, the material's surface needs to be tightly closed, stable beneath the compaction plant, and free of loose material, compaction planes, ridges, and cracks.
- Mechanical tampers must be used to compact any areas that are inaccessible to standard compaction equipment until a satisfactory level of compaction is achieved.
- The engineer will conduct a test on the finished aggregate road base surface at the chosen site.
- When placed perpendicular to the centre line of the roadway, the variations in the surface from the testing edge of the straight edge with the surface shall never be placed on or parallel to the centre line.
- There must be no deviation from the required elevation in the aggregate cross section as shown on the approved design.

6. References

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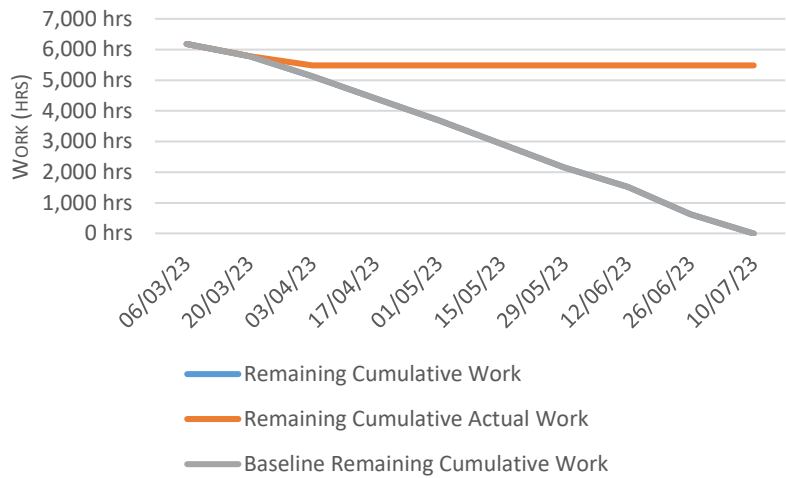
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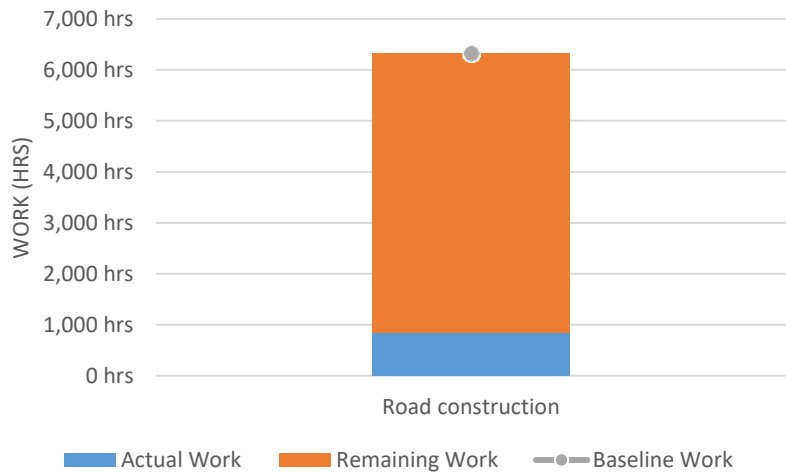


WORK BURNDOWN

Shows how much work you have completed and how much you have left. If the remaining cumulative work line is steeper, then the project may be late.

Is your baseline work zero?

[Try setting a baseline](#)



% Work Complete

13%

Remaining Work

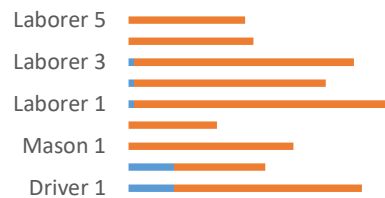
5,485.5 hrs

Actual Work

850.5 hrs

WORK STATS

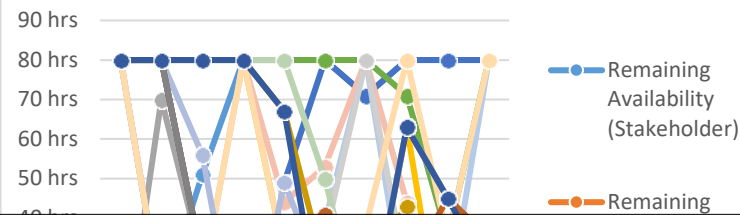
Shows work stats for all top level tasks.

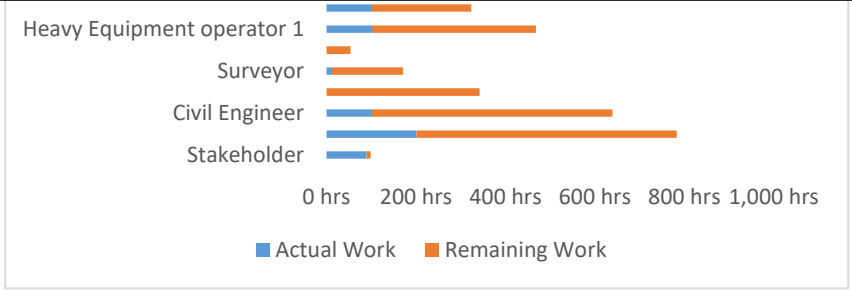


WORK OVERVIEW

Mon
06/03/23

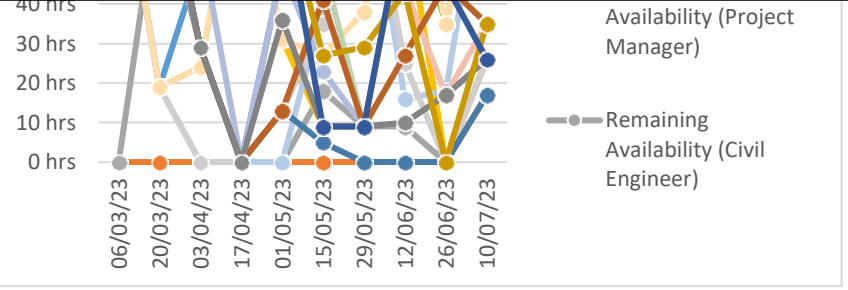
- Wed
19/07/23





RESOURCE STATS

Shows work stats for all your resources.



REMAINING AVAILABILITY

Shows remaining availability for all work resources.

COST OVERVIEW

MON 06/03/23 WED 19/07/23

COST

£177,441.34

REMAINING COST

£164,304.30

% COMPLETE

26%

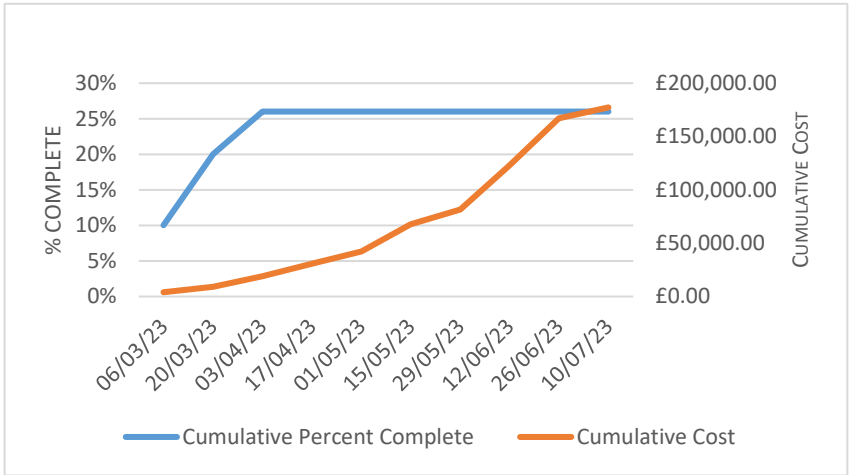
COST STATUS

Cost status for top level tasks.

Name	Actual Cost	Remaining Cost	Baseline Cost	Cost	Cost Variance
Road construction	£13,137.04	£164,304.30	£177,441.34	£177,441.34	£0.00

PROGRESS VERSUS COST

Progress made versus the cost spent over time. If % Complete line below the cumulative cost line, your project may be over budget.



COST STATUS

Cost status for all top-level tasks. Is your baseline zero?

[Try setting as baseline](#)

