



Planning and Scheduling of Underground Metro Station Box Using MSP Software

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Abstract – The infrastructure improvement in Mumbai metropolis is finished on a huge scale in latest times. The Mumbai Metro venture is one such venture that's lately beneathneath production and one-of-its type venture. In our venture we've got specifically labored at the Construction Management of the metro venture which entails Line three of the metro venture. The scheduling of numerous sports has been accomplished withinside the Microsoft Project Management Software via way of means of including numerous sports, sub sports, duration, sources required and price of every resource. The numerous problems and the demanding situations confronted all through the complete venture had been additionally recognized and numerous sensible answers had been additionally given concerning the same. As the venture is beneathneath production, numerous delays brought on all through the venture had been additionally recognized. The speedy transit machine of Mumbai Metro is a approach to the huge quantity of visitors and injuries going on withinside the metropolis. It is being constructed with an expected price of Rs.30000crores with typical of of entirety anticipated in 12 months 2021. When completed, the center machine will include of 27 stations with line period 33.5kms for the road Colaba Bandra-Seepez.

Keywords- construction management, Mumbai metro, project management software, rapid transit system, scheduling

I. INTRODUCTION

Line three (Mumbai Metro) The Aqua Line of the Mumbai Metro additionally referred to as Line three or the Colaba Bandra-SEEPZ line is part of the metro machine for the town of Mumbai, India of which creation has been initiated. When completed, the 33.5-km lengthy line may be the primary underground metro line in Mumbai. The metro line will join Cuffe Parade enterprise district in the acute south of the town to SEEPZ with inside the north-imperative with 26 underground and one at-grade station. The song width is general gauge. The fee of this hall is anticipated at Rs.30000 crore (US\$4.three billion). Line three is predicted to lessen street congestion, except lowering the burden at the Western Line among Bandra and Church gate. The challenge is being applied with the aid of using the Mumbai Metro Rail Corporation Limited (MMRCL). The line begins off evolved at Cuffe Parade, will run via Nariman Point, Church gate, CSMT, Worli, Dadar, Mahim, Bandra-Kurla Complex, Santa Cruz (East) and beyond the home and global terminals of Mumbai Airport, via Andheri MIDC and terminates at SEEPZ. The phase of the road among Bandra Kurla Complex and Dharavi stations consists of a 170-metre-lengthy tunnel passing beneath the Mithi River. This may be the second one beneath neath-river metro rail tunnel in India after the tunnel the Hooghly River on Kolkata Metro Line 2. The 33.5 km, Rs. 23,136 crore challenges include 5 foremost entities - MMRCL (Mumbai Metro Rail Corporation Limited), MMRDA, CREC (China). Major (65%) investment for the challenge changed into obtained via a smooth mortgage of Rs. 13,235 crores from JICA (Japan International Cooperation Agency) with the relaxation supplied with the aid of using the exchequer via the Government of India and Government of Maharashtra.

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II. METHODOLOGY

The rapid development of the cities and growth in infrastructure increasing complexities construction of metro project Software are used for planning and designing according by the concerned engineers and the construction project has its own characteristics Metro construction can play significant role in planning in project management both internal and external issues are study.

The methodology of the project involves:

- objective and scope of study
- literature review.
- study of total project management.
- MS Project Software.
- Site Visits.
- Data collection and data analysis.

MSP SOFTWARE

- Microsoft Project is a project management software product, developed and sold by Microsoft. It is designed to assist a project manager in developing a schedule, assigning resources to tasks, tracking progress, managing the budget, and analysing workloads.
- The scheduling of the entire project has been done in the MSP software.
- All the activities, sub-activities, duration, resources, cost all have been added in the software.
- Some of the problems faced during the project were also identified and their solutions were discussed.
- The delays occurred due to these problems have also been incorporated in the software.
- Three types of resources are supported on Microsoft software:
 - Work resources which contain material and labour to complete the activity.
 - Cost resources which exhibit a financial cost.
 - Material resources contain the materials consumed during the project.

III. LITREATURE REVIEW

Literature review: Regarding the speedy improvement of cities, underground structures at city regions, along with metro production, were in large part used for extending every day human existence into underground spaces. Therefore, the popularity of the complicated factors of a metro production can play a substantial position in its control and making plans. The intention of this examine is to research those complexities in subway production. This might also additionally broaden the opportunity of excessive predictability for those challenges. As metro initiatives also are city underground initiatives, each inner and outside problem are studied and their effects on mission control are discussed. It is concluded that super variations withinside the dealing with and making plans of those structures is that blended inner and outside complexities are performed simultaneously. Literature review: Regarding the speedy improvement of cities, underground structures at city regions, along with metro production, were in large part used

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IV. FUTURE SCOPE

The ongoing Underground Mumbai Metro three challenge of general 27 stations wherein 26 stations underground and one station at grade is anticipated to be finished via way of means of the year 2021.

- This challenge will lessen avenue visitors' congestion withinside the metropolis hugely that is the high motive and problem of this challenge.
- Efficient making plans and scheduling of such mass infra tasks will assist withinside the finishing touch of the challenge inside time and finances both.
- In destiny for control of any mass infra challenge, efficient use of control software program like MSP will assist in right making plans and scheduling of the sports together with the period and finances of the challenge. It will lessen the efforts of control and could assist in fixing the issues and corrections inside no time.
- This idea of underground production is followed in lots of towns abroad, and while the query of visitors congestion arises, going underground is the exceptional manner feasible and really honestly this idea could be followed in destiny anyplace in need

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V. CONCLUSION

In the direction of the task, we have been capable of benefit know-how of ongoing sports via way of means of touring on web website online of CSMIA T2 Station and the technique of creation sports have been received and studied with admire to TIME, MATERIAL AND COST. Accordingly, similarly the ones sports have been installed MSP software program alongside period and cost. (Cost of the sources became received from DSR of Mumbai and Delhi.)

- On the premise of assumptions of the destiny demanding situations or difficulties, corrective moves have been proven withinside the software program like lagging of sports because of different factors affecting, scissor crossing of tracks taking region affecting in postpone of tunneling paintings, postpone in excavation interest because of hydraulic excavator breakdown, postpone in becoming a member of the 2 applications after tunnel step forward etc.
- Accurate and green making plans and scheduling became completed on MSP software program. MSP software program made clean operating and higher effects with short improvisation of corrections and fixing problems.
- When the sports have been introduced withinside the software program, we may want to recognize the distinctive regions of MSP software program to benefit extensive know-how of software program.
- Overall, the complete task paintings became very informative and we collected plenty greater facts approximately the continuing task and understood different factors which play crucial function in such kind of mass infra initiatives or fast transit gadget initiatives.

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