

Effective Daily Progress Report to drive the Construction Project

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ABSTRACT--- *Datasets Background/Objectives: To investigate the depth of information of 'Daily Progress Report' and making it effective to drive the Construction Projects.*

Methods: Inclusion of Overall Project Status, Status on Milestones, Area of Concerns and Importance's, Issues etc.

Results/Findings: Can be implemented at construction industry especially for the projects where there are more complex variables and more quantities.

Conclusion/Application: 'Daily Progress Report' can be effectively prepared by inclusion of the entities analyzed here and can be used to drive the Project.

Keywords: Milestones- Intermediate or End or Start of some of the Key activities which is having more importance monitoring which will help in expediting the Project Completion

I. INTRODUCTION

Researches show that many organizations having the difficulty in completing their construction projects on time or on estimated budget. Construction industry environments these days are characterized by complexity, and acceleration of everything from communication to construction methods.¹ Project management has been one of the major drivers of this complexity and acceleration. ²Even though primary cause for delayed completion or over cost is Poor project management, the following are the secondary major causes contributing to delay or cost overrun,

- Poor planning
- Unclear goals and objectives
- Objectives changing during the project
- Unrealistic time or resource estimates
- Lack of executive support and user involvement
- Failure to communicate and act as a team
- Inappropriate skills
- Improper reporting system

As the reporting system listed in the bottom of the above list covers all other remaining issues of the list, management to act immediately concentrate on effective reporting system.³ The remainder of the paper elaborates the requirements on preparing the Effective Daily progress report with which Project manager can drive the Project. Construction product transportation is a physical activity involved in the flow of things between the point of origin and the point of consumption in order to meet requirements of customers or corporations.¹¹

II. PRESENT METHOD BEING FOLLOWED IN THE CONSTRUCTION INDUSTRY

In general, daily happening quantitative updates on various activities are being circulated in MIS to management without any future going.⁴ Project management team also reads it as a routine activity without any further actions on that. Mainly project manages depends on review meetings to get the updates on the project status and they initiates the relevant actions. Since the meeting are generally happens once or twice a week, most of the important actions are also getting delayed for weeks or months. Also the result of the action taken during last meeting also will be known only by next review or any through follow up review.⁶

The delays in decisions which are on critical path having cascading effect on the project completion target. In order to overcome this an Effective Daily progress reporting system becomes essential. Wages and benefits is an important motivators of the employees working in civil construction companies.¹²

If the employers fails to fulfil the salary structure company the performance level will not improve as expected by the higher authorities.¹³ Functioning of an well-established organization need the hard work of employees. Recruitment and selection is a long-lasting one and a central aspect of HR Management. There was lot of problems needs to be handled by the HR department¹⁴ Labour welfare facilities are an important tool to increase the productivity of the employees in any organization. Salary along will not motivate the employees, so in addition to the company must provide some welfare benefits to their employees¹⁵. This paper investigates the impact of Internal Locus of Control on personal variables and job related factors. The primary research strategy employed was the survey strategy¹⁶. Researcher is very much interested on emission rates to know which mode of transport if more eco-friendly and remove logistical problems. SICAL Logistics has recently started a new project named Coastal RORO service as a part of their green logistics¹⁷.

III. EFFECTIVE DAILY PROGRESS REPORT & RESULTS

Effective Progress reporting means that managers and management are fully informed of health of the project and overall direction without having to get involved deeply.⁵ There may be some particular information which management needs in order to answer either sponsor or shareholder or Government or any other body.

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Apart from this management requires those information to drive the Project⁷

Even on relatively less important projects, effective status reporting allows management to spend only a few seconds skimming your report to determine what sort of progress have been made and what kind of actions required.

Excellent status creates clarity from confusion. Key role in the progress status reporting is to take a swirling, chaotic cloud of information and distil it down into its most basic elements and then present them so that hundreds and thousands of hours of work can be explained in couple of minutes.

To drive the project with the Daily Progress Reports, the report should be having all information that may be needed by the Project Management Team. Contents of the Repots are equally important to monitor and implement any mid-way corrective actions.

A. Contents of the Report

There are four major components to Effective Daily Progress reporting system:

- **Overall Status:** This should show the overall project health. This also should clearly indicate the overall status of the Project with all required quantitative updates.
- **Milestones Status:** All projects might be having major accomplishments which must be completed by specific dates. These were defined during the planning stage of the project. Management to be informed about the completion status of these milestones whether particular milestone is complete or in progress or which one is upcoming or when that will get complete. This allows management to analyze the schedule and decide about the forward path.¹⁰
- **Resources:** All the resources required to complete the project are listed during the planning stage and the some of the additional resource requirement also may arise during the course of the project. These are to be informed the management like required vs. available status, additional requirement status about the resources. Resources includes manpower, machineries, consumables etc.
- **Areas of concern/attention:** All the constraints and obstacles which are delaying the project must be addressed. Effective Daily Progress Report should brief the details of such constraints so that the project management team would step in to resolve.⁹

These four components are explained in the following sections

B. Overall Status

This should to include the quantitative updates of the all areas and disciplines. This should indicate the minimum of the following like,

- Scope
- Planned till yesterday and completed till yesterday
- Planned today and completed today
- Balance to go quantity and asking rate per day
- Variance in each discipline

Example

Overall Progress Status

S.No	Activity	Scope	UoM	Cumulative till Yesterday		Today		Cumulative till Today		Percent Planned	Percent Achieved	Variance	Balance Quantity to go	Balance days	Asking rate per day	Remark
				Planned	Actual	Planned	Actual	Planned	Actual							
1	Concreting	12000	CUM	9000	8500	100	80	9100	8580	76%	72%	4%	3420	30	114	
2	Structural Steel Fabrication	4000	MT	3000	2800	200	75	3200	2875	80%	72%	8%	1125	30	38	
3	Structural Steel Erection	4000	MT	2500	2300	200	50	2700	2350	68%	59%	9%	1650	40	41	
4	Piping Fabrication	12000	ID	10500	10000	200	150	10700	10150	89%	85%	5%	1850	50	37	
5	Piping Erection	35000	IM	22000	20000	500	300	22500	20300	64%	58%	6%	14700	60	245	
6	Tankage Fabrication	2000	MT	1800	1700	50	40	1850	1740	93%	87%	6%	260	20	13	
7	Tankage Erection	2000	MT	1000	900	40	30	1040	930	52%	47%	6%	1070	30	36	
8	Equipment Erection	4500	Mt	3000	2800	50	30	3050	2830	68%	63%	5%	1670	30	56	
9	Electrical Equipment	150	MT	100	90	5	2	105	92	70%	61%	9%	58	40	1	
10	Electrical Cable Laying	1500	MTR	1000	1000	200	50	1200	1050	80%	70%	10%	450	40	11	
11	Instrument Installation	200	No	50	50	20	10	70	60	35%	30%	5%	140	40	4	
12	Instrumentation Cable Laying	3000	MTR	200	100	200	100	400	200	13%	7%	7%	2800	40	70	
13	Insulation	3000	SQ.MTR	100		100		200	0	7%	0%	7%	3000	60	50	
14	Painting	14000	SQ.MTR					0	0	0%	0%	0%	14000	60	233	

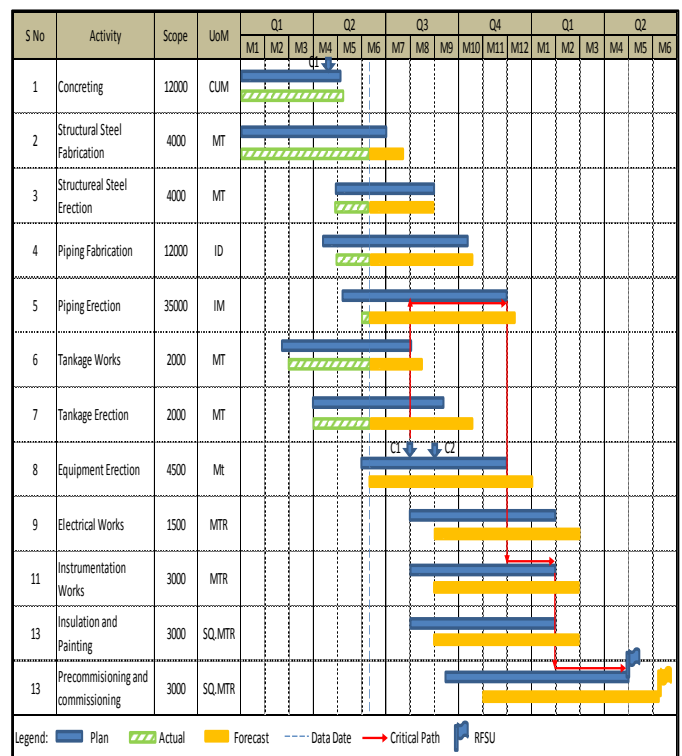
The overall status provides the input to the Project management team to drive the project. The asking rate and current rates will be used to make the decisions like deployment of additional resource requirement, expediting material inputs, additional of additional manpower, addition of Key Plant and machineries etc.

Apart from the above quantitative status, the Overall status should also include a Level 1 overall schedule showing the minimum of the following

- Plan, actual and Forecast
- Critical path
- Forecast Completion date of major disciplines

Example

Level-1 Summary Schedule



The above bar chart shows the overall status of the project in a graphical manner. The planned bar vs actual bar till date show the rate at which the project is progressing and the

planned bar vs. Forecast bar show the Forecast completion date of the project.

C. Milestone Status

Key activities of the project are to be listed in the initial stage of the project and the planned finish dates also to be included to monitor. Progressing in milestones also indicates the health index of the project. These milestones should be measurable and traceable.

In many construction projects, Milestones are being used for billing. Entire Cost will be allocated to various milestones and the respective value will be released up on completion of the each milestones in the milestone linked payment.

Milestone Certificate should be issued up on completion of the each milestone and only based on the Milestone Certificate, the milestone status to be updated.

This should contain the following as minimum,

- Milestones description
- Planned completion date
- Actual completion date
- Forecast completion dates
- Status of the milestones

This should be of either simple table or some graphical representation.

Example

Milestone Status

Progress Milestones Status					
S No	Milestone	Planned Date	Actual Date	Forecast Date	Date Status
1	Concreting of Tank 1	1-May-18	5-May-18		
2	Concreting of Process Column-1 Foundation	1-May-18	8-May-18		
3	Installation of Process Column-1	12-Jun-18		12-Jun-18	●
4	Installation of Process Column-2	15-Jun-18		15-Jun-18	●
5	Completion of Substation Civil Works	30-Sep-18		5-Oct-18	●
6	Completion Internals Installation of Process Column-1	12-Jul-18		18-Jul-18	●
7	Completion of Piping Installation Works	10-Sep-18		5-Oct-18	●
8	Completion of Electrical and Instrumentation Work	10-Oct-18		9-Nov-18	●
9	Completion of Insulation Work	9-Nov-18		9-Dec-18	●
10	Completion of Painting Work	9-Nov-18		11-Dec-18	●
11	Precommissioning Completion	8-Jan-19		12-Feb-19	●
12	Ready for Start Up	9-Jan-19		13-Feb-19	●

● On-Track ● Off-Track No impact on Schedule ● Off-Track Impact on Schedule

D. Resource Status

Resources required for the project should be listed and required, available and gap to be monitored. The key resource status should be presented in tow major classifications namely, manpower and Equipment.

Resource Status-Manpower					
S No	Resource	Required	Available	Gap	Criticality
1	Civil workmen	200	205	5	●
2	Fitter	50	42	8	●
3	Structural Welder	25	20	5	●
4	Piping Welder	30	22	8	●
5	Grinder	20	12	8	●
6	Gas cutter	20	15	5	●
7	Foreman	12	12	0	●
8	Rigger	300	290	10	●
9	Khalasi	150	140	10	●
10	Helper	125	127	2	●
11	Electrical Technicians	100	80	20	●
12	Instrument Technicians	100	90	10	●
13	Painters	75	40	35	●
14	Insulators	45	40	5	●
	Total	1252	1135	118	

● Critical ● Non Critical

Resource Status-Equipment					
S No	Resource	Required	Available	Gap	Criticality
1	Batching Plant	2	1	1	●
2	Transit Mixer	8	6	2	●
3	Bloom Placer	2	2	0	●
4	Concrete Pump	12	8	4	●
5	Crane-400 MT	1	1	0	●
6	Crane-100 MT	5	4	1	●
7	Crane-75 MT	8	6	2	●
8	Trailers	20	20	0	●
9	Welding Machines	60	55	5	●
10	Hydrotesting Pumps	6	5	1	●
11	Compressor	6	6	0	●
12	Blasting and Painting	6	6	0	●

● Critical ● Non Critical

All required key resources directly linked with the cost hence the estimation of required resources should be done carefully and are to be derived based on the forecast plan of the schedule. Optimization should necessarily be done

between hiring cost of the resource and production to be expedited by deploying that particular resource

E. Area of Concern/Attention

Area of Concerns, attentions and importance's to be added in this section. The list should clearly mention the following

- Issue description
 - Impact of the Issue
 - Target date of issue resolution
 - Responsibility
 - Days past since issue noticed /date of the issue notices
- Issues delaying the project, having potentials of delay etc. to be added on the Issues register. Issue register should have the following,

- Issue number:** Ticket Number of the Issue or the number of the ticket.
- Issue Description:** this should be very descriptive and brief
- Date and time reported:** we need this to see ageing. The older an issue is, the more likely someone is going to get in trouble for not solving it faster
- Priority or severity of the issue:** your issue is mega-important if it is a "blocking issue." If the problem is stopping the project from moving forward and is single-handedly responsible for endangering the delivery date, it is a blocking issue and is very important.
- Issue Owner:** the name of the person who currently owns driving this issue forward
- ETR:** expected time of resolution
- Current Activity/Status:** Status about the current progress, mitigation measures and the alternate ways of resolution to be listed

Top 5 or 10 items based on the impact weightage to be reported in the progress report.

IV. CONCLUSION

Producing correct status of the project and issuing it often enough and to the right people. This will trigger the management to intervene and will expedite the progress.

Management should be able to passively absorb the progress status without having to reach out to individual stakeholders of the project to find out where things are at. The pace at which reports being sent, the audience or recipient, and the content of your communications should be available to them easily and quickly.

It should not be necessary to create colorful slide shows or multi-page documents in order to provide really good status reports. Many go that route and drown management in errata. Narratives and prose are always unwelcome in status reports.

In all of the project management training and certification systems available today, almost none teach how to report the current state and next steps of a project. Learn to status your projects effectively and you have a competitive edge that goes beyond the standard project management toolkit.

As this reduces lot of man-hour efforts and time this method can be encouraged for many of the construction projects

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