

Case Study for a new Fire Department Station
For the City of Lindstrom, MN



Project Case Study

Instructions

This will be a group assignment that you will need to submit to the group dropbox. Work with your group members to complete the entire project. You will need to use the background information below as well as the templates found in the Content area in D2L. Have one group member submit the finalized documents to the dropbox. Make sure you use the correct format for the file name (MSP *name of document_Your name_yymmdd*). All team member names need to be listed on the cover sheet and your group should choose one person as the team leader. You will need to create a Charter with the information provided. Once you have the Charter created you can use it to assist you with creating an Estimate along with a Work Breakdown Structure (WBS). The final piece of the assignment is using the information from the Charter and Estimate to create a MS Project Plan. You should have at least three non-labor estimates with notes. Remember, your estimates of cost and duration should match closely between your Excel Estimate and MS Project Plan.

Background

The Lindstrom Volunteer Fire Department has been established since____. The department takes pride in its quick response time and training for the community of Lindstrom and fellow towns. Recently the Minnesota Department of Transportation (MnDOT) has made the decision to change structure of county road 8, which runs through the center of Lindstrom. County road 8 is also a main connection between highway 35, which runs north and south in Minnesota, and the Minnesota/Wisconsin border. County road 8 becomes a busy road for commuters to get to work and for people heading on weekend getaways to lakes and cabins. MnDOT has decided that there should be a divider that will run down the middle of county road 8, and change the path it takes through the town. These changes will leave a negative effect on the Lindstrom Fire Department.

The current fire station, located on county road 8, faces north, meaning when the fire department is paged for an emergency it has access to turn east or west. If a divider is built, the fire department will only be able to turn one direction when leaving the fire hall and that is east. This change will not only have a negative influence on the department, but on the community and people it serves.

In order to alleviate the problem but continue to serve the community of Lindstrom, the fire department would need to relocate to a new location within the town. Since county road 8 is the central divider of the town, the department would want to remain close to access it.

Since it is a Volunteer Fire Department, it is considered an entity of the City of Lindstrom. Meaning that the department works on a budget, and purchases need to be approved by the city (city council and mayor).

The department already has a website, but improvements will be made by interior department members in order for it to be more user-friendly and easy to update by department members. Plus with a new location and new fire hall, the department could keep the community up-to-date on the progress.

Land for the development of the new fire hall was purchased for \$50,000.00. Contractors will need to be hired to construct the new fire hall as quickly as they can but in a reliable manner. The building crew from the department members have went out to tour and take notes of new fire department buildings. They have taken these ideas and have contacted an architect to draw up the blueprints.

You will need to plan for the entire project of the development of the new fire hall for the Lindstrom Fire Department.

Resources

- City of Lindstrom Mayor (No Rate)
- City Council (3 members at No Rate)
- LFD Chief (No Rate)
- LFD Building Committee (6 members at No Rate)
- Architect (\$100.00/hour)
- Excavation Crew (\$100.00/hour)
- Construction Crew (\$200.00/hour)
- Electrician (\$75.00/hour)
- Plumber (\$75.00/hour)
- Floor Crew (\$100.00/hour)
- Cabinet Maker (\$150.00/hour)
- Painter/Wood Finisher (\$100.00/hour)

The Project is given a time frame of four to six months. Road work to County Road 8 will not affect the current fire hall until the fall of 2012. We would like to see construction begin as soon as the frost is out of the ground in the spring of 2012. Remember this building is a house for \$100,000.00 to \$900,000.00 fire vehicles. The City of Lindstrom and the Fire Department have determined a cost of the new building to be around \$1.5 to \$2 million on the high end.

Besides the building being just a fire station, there will be a full kitchen and meeting room, three offices, laundry room, two bathrooms with showers, a work-out room with equipment, and the utilities room.

This building will have numerous stakeholders with the community of Lindstrom being the target, city administration, and the fire department. The building will be able to be used for other city or social events, specifically the meeting room to accommodate the community.

Grading Rubrics/Checklist

The following pages contain rubrics to assist you with the Charter, Estimate, and MS Project Plan. Use the rubrics as a check-off to assist you with making sure you have covered everything needed for the assignment.

Dropbox Submission

1. Submit the Charter as one full document (50 pts).
2. Submit the Excel Estimate as on document containing 3 different spreadsheets; Labor/Work, Schedule/Duration, and Non-Labor (20 pts).
3. Submit the MS Project Plan in the application format (30 pts).

Project Charter points are given for each section as follows (2 pts. - good, 1 pt. - needs work, 0 pts. - missing):		Points Possible
0.0 Project Contact & Approval Information		
	Project name, sponsor, and leader appropriate and complete	2
	Team member information complete (core/primary, extended/secondary)	2
	Principal stakeholders appropriate, information complete	2
	Dates appropriate (chartered, start, completion)	2
1.0 Business Analysis		
	1.1 Business problem or opportunity questions answered as appropriate	2
	1.2 Objective/goal clearly stated (no dates or estimates included)	2
	1.2 All in-scope and out-of-scope items identified and clearly stated	2
	1.3 Benefits & potential values clearly identified	2
	1.4 Impacts of doing nothing - internal to business clearly identified	2
	1.5 Impacts of doing nothing - external to business clearly identified	2
2.0 Phases & Major Deliverables		
	2.1 Deliverables all clearly identified	2
	2.2 Activities clearly identified and appropriate	2
3.0 Project Vital Signs		
	3.1 Overview of schedule appropriate (start, delivery, timing concerns)	2
	3.2 Assumptions and dependencies clearly identified as appropriate	2
	3.3 Risks, likelihood, consequences, and contingency plans clearly identified	2
	3.4 Major quality assurance reviews and roles clearly identified	2
	3.5/3.6 Estimated labor costs identified at a high level (ie. size, hours range)	2
	3.7/3.8 Interdependencies with other projects (not within this project) and impacted functional areas identified	2
4.0 Project Staffing		
	4.1 Project staff and time commitments identified (name/role, FTE - 100%, 50%)	2
	4.2 Special resources identified as appropriate	2
	4.3 Project organization roles and responsibilities clearly described	2
5.0 Project Management Approach		
	5.1 Approach to managing project clearly stated, ie. subcontract, purchase, build in-house, decisions, leadership	2
	5.2 Status reporting plan detailed with meetings, information gathering, communication, use of MS Project	2
	5.3 Change management approach clearly identified (process, decisions, forms, repository)	2
	Overall appearance and professionalism of the document, with appropriate use of bullets, introductory sentences, grammar	2
TOTAL POINTS (MIAs/nonparticipants will not receive points)		50

Project Estimation Rubric	
(2 pts. - good, 1 pt. - needs work, 0 pts. - missing):	
	Points Possible
WBS	
Good summary/phase breakdown.	2
Good detail in WBS structure to be understandable and quality checkpoints included.	2
Good use of action verbs in tasks.	2
Labor	
Good range of 3 estimates, appropriate to project size.	2
Every estimate in whole dollars.	2
Duration/Schedule	
Good range of 3 estimates, appropriate to project size.	2
Every estimate in whole days.	2
Non-labor	
Good range of 3 estimates, appropriate to project size.	2
Good use of additional notes with detail.	2
All values totaled.	2
TOTAL POINTS - Estimate	20

MS Project Rubric	
(2 pts. - good, 1 pt. - needs work, 0 pts. - missing):	Points Possible
Task List	
WBS in MS Project matches the estimate WBS	2
Task Type default for the project is set to Fixed Duration or Fixed Units for every task in the entire project plan. If using Fixed Units, summary tasks will appear as Fixed Duration, which is correct in MS Project.	2
All task durations are entered and match the Excel estimate at the task level	2
All default estimates of 1 day have been eliminated (? Does not show)	2
The task duration total is less than or equal to the Excel statistically estimated duration (should have some overlapping tasks or tasks that occur simultaneously)	2
All task Work values match the Excel estimate	2
All tasks are linked at the lowest level only – no dangles (tasks without predecessors/successors)!	2
Project View	
Project Summary Task Option is enabled and overall project summary totals are visible.	2
WBS option is enabled and WBS numbers appear automatically when viewing	2
Gantt Timescale Middle Tier is set to Month/Year (ie. Jun 07), Bottom Tier is set to weeks (ie. 6/11)	2
Project was saved as and opened automatically to the Gantt Chart View, Table = Summary. Help screens are closed and not visible	2
File was saved with the date (ie. yymmdd) and student group name in the filename	2
Resource List	
Check the Resource Sheet - all resources needed are listed with name or title, pay rate and max % limit	2
All resources have at least one task, all tasks have at least one resource	2
Resources are not overloaded. If overloaded resources exist, they are logically explained in documentation.	2
TOTAL	30