

# Summer “C” Semester 2021

## TERM PROJECT INSTRUCTIONS (Tentative -Subject to Changes)

Your company has been awarded a contract to construct the [Parland Fire Station Project](#). The Notice-to-Proceed (NTP) is scheduled on **July 6, 2021**. The project plans have been posted at the Canvas Learning System. You are required to propose the project duration and the Substantial Completion (T.C.O.) and the Final Completion (C.O.) dates based on your proposed schedule.

### PART I

#### Work-Break-Down Structure: (Due Date: [15-Jun-21](#)) – Online Submittal

Given the posted “Term Project Drawings” create a Work-Breakdown-Structure (WBS) based on Systems and locations (not CSI Breakdown). Your WBS should be broken down into multiple levels (at least 4 Levels, excluding the top project WBS element).

**In preparing and submitting your WBS, comply with the following guidelines:**

- Provide ID's for the WBS Elements. Assign numbers (1, 2, 3, 4, etc.) for the WBS ID's at each level. Also, provide meaningful names for each WBS Element.
- You need to develop your WBS Structure using [Primavera](#). The printouts of the WBS should be done from Primavera. WBS submittal using Excel or any other software will not be graded.
- Provide a cover page listing the course number and title, your name and ID, Term Project – Part I, and submittal date. Present your WBS in various formats (hierarchal, graphical, etc.).
- All reports to be assembled in one PDF File.
- The due date and time for the TP 1<sup>st</sup> submittal is [15-Jun-21 03:15 PM](#) via the link posted on Canvas under the [Term Project Progress Assessment](#) Group.

## PART II

### **Cost Bid Estimate: (Due Date: 22-Jun-21) – Online Submittal**

Your Term Project Schedule should be partially resource and cost loaded. Use RS Means Online to estimate the crews, production rates, quantities, and cost estimate for the following CSI Divisions:

- **Division 03:** Concrete (*inclusive*)
- **Division 04:** Masonry (*inclusive*)
- **Division 08:** Openings (*inclusive*)
- **Division 09:** Wall Framing and Drywall (Insulation, hanging, and tape & finish)
- **Division 09:** Flooring (All types)

**You need to structure the estimate based on your developed WBS referred to in Part I of these instructions.** The cost should be broken down into Labor, Material, Equipment, Overhead, and Profit. Use 10% as the rate for Overhead and 5% as the rate for Profit. Use Excel to present your cost estimate.

- Provide a cover page listing the course number and title, your name and ID, Term Project – Part II, and submittal date.
- All reports to be assembled in one PDF File.
- The due date and time for the TP 2<sup>nd</sup> submittal is **22-Jun-21 03:15 PM** via the link posted on Canvas under the [Term Project Progress Assessment](#) Group.

## PART III

### **Activity List and Durations (Due Date: 29-Jun-21) – Online Submittal**

Use Primavera Enterprise (P6) to schedule the Project. Assign the following Project ID for the Baseline Schedule: **S2-xx-BL** (where S2-xx is your assigned P6 ID).

Your schedule should contain between **275 to 300** activities, including: milestones, summary activities, submittals, approvals, procurement of long-lead items, construction, and final inspections and project closing. Use the global calendar "Standard 5 Day Workweek" to schedule all your activities.

- You need to submit a draft of your Activity List and durations *printed from P6*. Lists prepared in Excel or other software will not be graded.
- Provide a cover page listing the course number and title, your name and ID, Term Project – Part III, and submittal date.
- All reports to be assembled in one PDF File.
- The due date and time for the TP 3<sup>rd</sup> submittal is **29-Jun-21 03:15 PM** via the link posted on Canvas under the [Term Project Progress Assessment](#) Group.

## PART IV

### **Activity Classification & Logic (Due Date: 06-Jul-21) – Online Submittal**

Use Primavera Enterprise (P6) to assign logical relationships among activities. Also, classify the activities using Project specific Activity Codes (do not use global activity codes). Your codes should include at **LEAST** the following classifications: (S2-xx is your P6 ID)

- **S2-xx-CSI:** CSI Divisions. Use the latest CSI Divisions breakdown
- **S2-xx-RSP:** Subcontractor Responsibility (assign fictitious subs names)
- **S2-xx-TYP:** General scope (General, Submittal, Approvals, Procurement, Construction, etc.)
- **S2-xx-LOC:** Location of work (Building Zone, Parking, Site, etc.)
  
- You need to submit a draft of your assigned activity relationships and activity codes with the following columns: Activity ID, Activity Name, Original Duration, the assigned activity codes, predecessors, and successors. In the Bar Area, show the relationships between the bars. Preferably printed on 11x17 sheet size.
- Provide a cover page listing the course number and title, your name and ID, Term Project – Part IV, and submittal date.
- All reports to be assembled in one PDF File.
- The due date and time for the TP 4<sup>th</sup> submittal is **06-Jul-21 03:15 PM** via the link posted on Canvas under the [Term Project Progress Assessment](#) Group.

## PART V

### **Resource and Cost Loading. No Interim Submittal is Required**

Using your cost data estimate, load resources (manpower and cost) data to all activities that are:

- **Division 03:** Concrete
- **Division 04:** Masonry
- **Division 08:** Openings
- **Division 09:** Wall Framing & Drywall
- **Division 09:** Flooring

The activity costs should be broken down into Labor, Material, Equipment, Overhead, and Profit. Use 10% as the rate for Overhead and 5% as the rate for Profit. (Do not use rates for overhead and profit from RS Means).

Each of the resource/cost loaded activities should be assigned the following combination of Resource ID & Cost Account. The following Resources have been created in the FIU Enterprise for you to assign to activities:

- **TP-MAT:** Material (Material Type)
- **TP-LAB:** Labor (Labor Type)
- **TP-EQP:** Equipment (Nonlabor Type)
- **TP-OH:** Overhead/General Requirements (Nonlabor Type)
- **TP-PRF:** Profit/Premium (Nonlabor Type)

The following Cost Accounts have been created in the FIU Enterprise for you to assign to activities:

- **TP.03.100:** Forming C.I.P Concrete
- **TP.03.200:** Rebar C.I.P Concrete
- **TP.03.300:** Pouring C.I.P Concrete
- **TP.03.500:** Other Concrete Work
- **TP.04.100:** Masonry
- **TP.08.100:** Doors
- **TP.08.500:** Windows
- **TP.09.200:** Drywall & Wall Framing
- **TP.09.600:** Flooring

Your task is to assign the manpower requirements and material, labor, non-labor cost accounts and their associated resource and Budgeted Costs to each activity that are related to the divisions listed above.

**PARTS 1 to 5 above complete the data needed to finalize your Baseline Schedule. You can start preparing the different reports that you will include in your Final Project Submittal. You need to prepare several useful reports to be presented to your managers, project owner, subcontractors and the project's A/E. Use the following guidelines in generating your reports (Further instructions**

**will be addressed in class):**

1. Present the project in two forms: graphically (logic diagram, time-scaled networks, bar-charts, resource and cost curves and profiles, etc...) and tabular (schedule report, cost/budget reports, resource reports, etc...)
2. For the different reports, use meaningful order and selection criteria. For each report, you need to state the purpose of the report, and **state clearly the reason behind the criteria** you have chosen for the specific report.
3. If a graphical report fits on more than one page wide, you need to tape the pages together. Don't submit loose sheets.
4. All Baseline reports should be assembled in one BOOKMARKED PDF File, with each report have a bookmark link in the file. Name the PDF file S2-xx-BL, where S2-xx is your P6 Login ID.

## PART VI

### Progress Updating as-of 08-Nov-21 and 07-Feb-22

- Prepare two schedule Updates. Assign Project ID's according to the instructions below:

Update #01:

**S2-XX-UP01** (where S2-XX is your P6 ID)

Data Date: 08-Nov-21

Update #02:

**S2-XX-UP02** (where S2-XX is your P6 ID)

Data Date: 07-Feb-22

In updating the activities, assume some delays for some activities and some acceleration of some other activities.

- Update the resources and costs of the activities based on the assigned schedule progress.
  - Present the progress of project in two forms: graphically (logic diagram, time-scaled networks, bar-charts, resource and cost profiles, etc...) and tabular (schedule report, cost/budget reports, resource reports, etc...). I expect comparison of Baseline and the schedule updates in the generated reports.
  - For the different reports, use meaningful order and selection criteria. For each report, you need to clearly state the purpose and reason behind the criteria you have chosen.
5. All Schedule Update #01 reports should be assembled in one **BOOKMARKED PDF** File, with each report have a bookmark link in the file. Name the PDF file S2-xx-UP01, where S2-xx is your P6 Login ID.
  6. All Schedule Update #02 reports should be assembled in one **BOOKMARKED PDF** File, with each report have a bookmark link in the file. Name the PDF file S2-xx-UP02, where S2-xx is your P6 Login ID.

## FINAL REPORT SUBMITTAL GUIDELINES

Comply with the following guidelines in submitting your Final Project Report

- Your final report for the term project should be in an electronic format (**BOOKMARKED PDFs**). You need to submit three separate PDF files (Baseline, Update #01, and Update #02)
- The name of the pdf files should be:
  - S2-xx-BL
  - S2-xx-UP01
  - S2-xx-UP02Where, S2-xx is your Primavera Login ID
- Save the reports you generate under different layouts (reference the reports in the layout titles)
- Include a **cover sheet** and a **table of contents** in each pdf file. The Table of Contents should reference each single report you have for the specific schedule. Each report should be bookmarked in the file. If you are not familiar with how to bookmark pdf files, learn now and make sure you have software that will allow you to implement the bookmarks. Do not wait to the last minute to learn how to use create bookmarks.
- Include an introduction section in your Baseline pdf file describing your company (assuming you are submitting the project report to the Project Owner as part of your proposal)
- Include major sections in the pdf files that group the reports for a specific schedule based on a meaningful criterion that you choose.
- Export your schedules (save the .xer files) and include in your final submittal.
- The due date and time for the Final Term Project Submittal is **27-Jul-21 03:15 PM** via the link posted on Canvas under the **Term Project Final Report** Group.

Your schedule(s) should be always hosted on the FIU EIC Primavera Server under your EPS Element for the instructor to review at any time. Failure to do so will result in you not getting partial progress grades. Term Project and Schedules prepared using a Primavera Database that you have access to outside (at work or locally on your computer) and not on the EIC server will not be accepted.

**List of Interim and Final Submittals:**

Throughout the semester, the instructor will be checking your progress on developing the term-project. A certain percentage of your project grade will be given during this review process. Another percentage of the grade will be given for the presentation quality of your reports. The Term Project will be graded partially based on your progress throughout the semester based on the following schedule (**due times: 03:15 PM**):

**Interim Submittals**

<b>Due Date</b>	<b>Interim Submittal</b>	<b>Submittal Description (Canvas Submittal)</b>
15-Jun-21	PART I	WBS reports (list and chart views)
22-Jun-21	PART II	Submit Quantity Take-Off and Cost Calculation Sheets
29-Jun-21	PART III	Preliminary List of Activities and Durations
06-Jul-21	PART IV	List of assigned Activity Codes and Logic. The report should show list of predecessors, successors, and activity code values per activity

The following are additional key dates that the instructor advises you to target in order not to fall behind:

<b>Recommend Date</b>	<b>Interim Submittal</b>	<b>Submittal Description (Instructor will review online)</b>
13-Jul-21	PART V	Complete the Resource/Cost Loading
20-Jul-21	PART VI	Complete Updating the Schedule
22-Jul-21		Complete designing and printing Baseline Schedule Reports
25-Jul-21		Complete designing and printing Schedule Updates #01 & #02 Reports

**Final Submittals**

<b>Due Date</b>	<b>Interim Submittal</b>	<b>Submittal Description (Canvas Submittal)</b>
27-Jul-21	Final	Term Project Final Report with attachments

Submittal of pdf files with no proper and inclusive **BOOKMARKS** will result in

**20% REDUCTION** of your Term Project grade