ASSOCIATED SCHOOLS OF CONSTRUCTION

ROCKY MOUNTAIN REGION
REGION VI
AK, AZ, CO, ID, MT, NV, NM, UT, WY

FAR WEST REGION
REGION VII
CA, HI, OR, WA

Region VII- Commercial Building Division

February 6-9, 2013

Problem Statement

Sanford Consortium
FOR REGENERATIVE MEDICINE

La Jolla, CA

Problem Sponsor:

Hensel Phelps Construction Co.

Competing Teams:

CENTRAL WASHINGTON UNIVERSITY
Your future is Central.

Fresno State
Construction Management

CAL POLY POMONA

NORTHRIDGE MATADORS

CAL POLY
San Luis Obispo

Cal State Long Beach

Chico State University

Washington State University

SAN DIEGO STATE UNIVERSITY

CEM
Construction Engineering Management
Oregon State University
www.ccee.oregonstate.edu/cem or (541) 737-2006

SACRAMENTO STATE

University of Southern California

University of Washington

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I. COMMERCIAL DIVISION TIME TABLE

THURSDAY, FEBRUARY 7TH

Opening Conference / Distribute Problem / Establish Presentation Order	6:00 AM
First Progress Meeting / RFI's Due	10:00 AM
Lunch Delivered to Rooms	+/-12:00 PM
Site Utilization Plan Due	2:00 PM
Second Progress Meeting / Question Session	2:00 PM
Subcontractor Interviews (10 min. / team)	3:30 – 6:30 PM
Dinner Delivered to Rooms	+/-6:00 PM

FRIDAY, FEBRUARY 8TH

Proposals Due	12:00 AM (Midnight)
Interview Material Due (all teams)	8:15 AM
Interviews Start	8:30 AM
Project Debriefing	6:30 PM

SATURDAY, FEBRUARY 9TH

Career Fair	8:00 AM -12:00 PM
Awards Ceremony	11:00 AM

II. PREFACE

WELCOME to the 2013 ASC Student Competition. All participants are to be commended for the personal time and financial commitment made in preparing for and attending this competition. The construction industry has noted these sacrifices and the premier student population that is competing here. This is evident in the quantity and quality of companies attending the Career Fair.

The student competition is designed to challenge each team to different facets of the construction industry. Each team's estimating, scheduling, organization, leadership, productivity, and communication skills will be tested and enhanced while participating in this competition.

The competition will present each participant with construction industry exposure that may not otherwise be experienced until after working in the industry. It is Hensel Phelps Construction Co.'s desire to present each team member with real life situations through this competition. Some of these "experiences" may seem uncomfortable and/or appear to contain no logic. Be aware the real world is very often not kind, fair, or logical! The construction industry will present situations where people are less than pleasant, and pressure is applied to the extreme, but it will also provide great feelings of accomplishment and team camaraderie. Some questions, both in real life and in this competition, may have multiple answers and some questions may have no correct answer. The superior level of the student competitors attending the competition should embrace these challenges and recognize the value of these lessons. The judges in the interview portion of this competition may seem to "put you through the wringer" with tough questions and references to deficiencies in your written proposal. Although it is human nature to "take it personal", please understand that these lessons are for the good of your development and excellence. It is not the intent of the judges to frustrate and alienate you, yet the spirit of competition places a duty on the judges to ask the hard questions that will allow team rankings to occur. At the end of the competition each team member should reflect on the knowledge and experience gained, and hopefully the judges can become mentors and friends to you.

As a driven team member, realize that all teams have come to the competition with the main goal of WINNING! However, with so many competitors, also realize that there can only be one winner announced. As an intelligent, driven, and committed individual, you should recognize the vast knowledge, industry exposure, and experience gained in competing and finishing this problem. This is the real reason all teams and individuals are competing. Yes, it is true, every person competing is a winner, regardless of the final overall placement. Make sure you, and your team, understand this; it does make a difference!

Determination of the Winner is based on a uniform grading scale for the written portion of the competition coupled with the oral presentation, judged by a seasoned multi-member judge panel. The combination of these two components, in the scoring ratios listed, determines the overall team placement. Overall team placements will not be posted, but feedback will be provided after the competition.

Congratulations for participating and Good Luck!

III. PROBLEM SCENARIO Written by Ryan Delira

(Competing schools will represent a Project Team that must evaluate the following project.)

Your company has been awarded the construction contract for the Sanford Consortium for Regenerative Medicine project in La Jolla, CA. This is a negotiated Guaranteed Maximum Price (GMP) contract with one of your oldest clients – Lankford and Associates. On this project, they are not the owner but are acting as the project fee developer for the Consortium. Over the past twenty years, your company has exclusively negotiated almost all of this developer's contracts. The relationship has been a fruitful one. The overall value of work completed for Lankford and Associates totals $1 billion dollars. It goes without saying that this is one of your firm's most important clients. Having the ability to exclusively negotiate this contract speaks to the faith this client has in your firm. In this economy, it is almost unheard of to be given the exclusive right to negotiate a project of this size and complexity. Your team has been engaged in this project for almost a year. You have been working under a preconstruction agreement from onset of conceptual design. This is not a design build contract, but a design assist where your firm has provided constructability analysis, cost data and value engineering throughout the progression of the documents.

After award of the construction contract your firm's upper management has requested that your team conduct an expedient and thorough analysis of the project touching on budget, schedule and associated project risks.

You must submit documentation to them by midnight tonight, and you will be asked to present your findings in a "First Point" meeting with upper management tomorrow.

Interim progress meetings are scheduled for 10:00 AM and 2:00 PM today (Thursday, February 7th, 2012).

Any questions should be delivered, in writing on the Request for Information form (RFI), to the management team at the 10:00 AM meeting. Response to these RFI's will be provided at or before the 2:00 PM meeting. The RFI form is provided in Section X. The 2:00 PM meeting will be for verbal questions and answers only.

Please note that some of the written questions do not fit into the "pre-construction" scenario (i.e. – they occur later during construction), consider these a "time warp" and answer them with that understanding. This is to challenge your team on the full realm of construction issues.

For the oral presentation on Friday, all teams shall include students representing the company's Project Manager, Superintendent, Estimator and Project Engineer; other roles will be at the team's discretion. The 30 minute presentation should allow for 20 minutes of team presentation and 10 minutes of questions and answers.

Your presentation should focus on the following topics: Cost, Schedule, Site Utilization, Construction Planning, Quality and Safety. Creativity and innovation are encouraged, shallow marketing pitches are not.

IV. PROJECT INFORMATION

Written by Ryan Delira

The exclusive negotiation of this high profile project with the development team has created a high expectation for your team from the Ownership group. The project owner is the Sanford Consortium which is made up of five members. These Consortium members include: The Salk Institute, The University of California San Diego (UCSD), The Scripps Research Institute, Sanford Burnham Institute and the La Jolla Institute for Allergy and Immunology. This alliance marshals the resources of five world leaders in life science and stem cell research. Each member of the Consortium has other research facilities on "the mesa," an area of La Jolla where the UCSD campus resides as well as other medical and research facilities.

The project site is a 7.5 acre parcel which is the property of The University of California San Diego. Directly north of the site is the Torrey Pines Golf Course and the UCSD Administration Building which houses the campus architect, chief inspector, and campus fire marshal. Located to the west is the Historic Torrey Pines Glider Port which is classified by the FAA as an active airport. To the South is the renowned Salk Institute, designed by architect Louis Kahn. This building is an architectural masterpiece and is considered as the gold standard for "as-cast" concrete.

The project is located at the north end of the site and is comprised of two interconnected masses consisting of a laboratory tower and an auditorium/ conference center. The laboratory tower is a 104,000SF, mildly reinforced concrete structure with four stories above grade and two stories below grade. The laboratory tower contains a basement vivarium level as well as 14 individual open laboratories with adjacent support rooms. The exterior elements include "as cast" colored concrete which mimics that of the Salk Institute. Other exterior elements include Trespa and aluminum panels as well as 33 individual office "pods". These pods are separated from the main building and hang from a 16' exterior walkway. These pods along with the as-cast concrete are one of the main architectural features of this project.

The auditorium / conference center is a 14,000 two story structural steel building. This structure contains a café, exterior dining deck, auditorium and main entrance lobby.

This project is highly visible, complex and offers the opportunity to showcase your firm to five new potential clients. Your upper management is excited to be a part of this world class laboratory. It is important to them that you put your best foot forward and deliver this project on-time, on-budget and exceed the clients expectations. Your upper management is looking forward to your teams review, analysis and presentation of this project.

V. PROBLEM OUTLINE

Structure and tab your documentation according to the following outline. Include only the information requested in **Section VI. Submission Requirements.**

VI. SUBMISSION REQUIREMENTS:

Please note that some of the following questions do not fit into the time frame of the Problem Scenario described earlier (i.e.-they occur later in the construction phase), consider these a "Time Warp" and answer them with that understanding.

0.1 EARLY DELIVERABLE - BIOGRAPHIES

Although this item is past, as a requirement of the Pre-Problem Statement, your team's final score may reflect a small point deduction if you failed to comply with this item in a timely and professional manner.

0.2 QUALITY OF SUBMITTED PROPOSAL

The appearance and organization of proposals is important in the construction industry as it is often our first opportunity to interact with a new Owner and / or impress the upper management in our company. We want them to see the professional image we are trying to portray and be able to find and understand the information we are presenting. Points will be awarded in this section based upon the appearance and organization of your team's submitted response to the following problems.

0.3 TIMELINESS OF PROPOSAL

One (1) hard copy and one (1) electronic copy of your proposal is due at Midnight, as per the Time Table in Section I. A ½ point penalty will be deducted from the team's score for each minute the proposal is turned in late.

1. Financial Status Report (FSR)

Written by Ryan Piper

As part of Upper Management's First Point review of the project, you must provide the financial status of the project using the company's standard Financial Status Report. In order to satisfy the Owner and enable Hensel Phelps to meet performance expectations, Upper Management expects a thorough analysis that summarizes projected profits, risks and risk mitigation.

PART A: Financial Status Report
Using the Financial Status Report spreadsheet included in Section X.1.1, plug in your analysis of the following project cost items into the cells highlighted in yellow to determine your team's projected gain or loss after buyout:

1. Concrete Estimate
2. General Conditions
3. Purchase amount for Each Trade Analyzed in Proposal Summaries (Landscaping, Ornamental Railings, Architectural Millwork, Drywall, and Epoxy Coatings)

Be prepared to review your thought process with Upper Management on each of these items as you may need to defend your financial analysis of the project. For the purposes of this exercise, please round to the nearest thousand.

ANSWER:
Part A: See attached Financial Status Report spreadsheet included in Section X.1.1. The values that required inputting into the spreadsheet for this analysis come from the General Conditions exercise; Estimate exercise; and Proposal Summary (Tab Analysis) exercise. As such, these values are subject to how you approached those sections.

PART B: Lump Sum Conversion?
(Time Warp to two months after the First Point meeting.)

Your project team has reached a point in design and buyout, where they feel there is a financial opportunity to change the contract from a "Guaranteed Maximum Price" (GMP) format to a fixed price "Lump-Sum" contract. A GMP contract would be a 'cost type' contract in which the contractor is compensated for actual costs plus a negotiated fee and is subject to a maximum price. A Lump Sum contract would mean that the contractor is paid a specified amount to complete a defined scope of work, without requiring a cost breakdown for the work. In order to accomplish this contractual change, a prime change order must be executed and contingencies and allowances will need to be returned to the Owner.

- Design Contingency will no longer be a line item within the Schedule of Values and shall be carried outside the Prime Contract.
- HPCC will not include contingencies nor allowances for future work which may be required as a result of design errors or omissions; this will be the responsibility of the Owner.
- HPCC's Contractor Fee line item will remain at $3,870,000.
- The Lump-Sum Prime Contract shall include temporary power usage up through substantial completion. Once substantial completion is achieved the owner will be responsible.
- Construction Contingency for the remainder of construction will have to be provided from the result of buyout and other gains obtained through the project.

Use the information from your FSR including the Proposal Summary Tab Analysis purchases, Overall Schedule Duration and GC projections coupled with the Contingencies and Allowances to be returned to the Owner via change order to validate whether changing to a Lump Sum contract would benefit both the Owner and Hensel Phelps.

The items to be returned to the Owner via change order include the following:

1. Signage Allowance
2. Window Washing Allowance
3. Temp Power (3 Month) Allowance
4. LEED Silver Allowance
5. HPCC Construction Contingency
6. Owner Design Contingency

Use the second worksheet in the Financial Status Report spreadsheet titled 01 - FSR - Part B to perform your analysis.

After discussing this opportunity with upper management, it was determined to have a follow up meeting to review in detail. In preparation for the meeting, your Operations Manager would like you to write an email justifying this shift for his review prior to the meeting. In the email, be sure to state and/or justify the following items:

- Projected change in Contractor's Fee as a percentage of the overall project cost resulting from the change in contract type. This would be the change in value that your team would feel comfortable applying to fee after this analysis is complete.
- Overall project contingency remaining to complete construction of the project, and why the project team feels this is adequate.

- Summarize where the change in Contractor's Fee originates and provide justification.
- Benefits to the Owner

Address your email to rcpiper@henselphelps.com, and send it prior to final submission.

Submit (1) one hard copy and (1) electronic copy in native format (Excel) of your Financial Status Report

Submit (1) one hard copy and (1) electronic copy (pdf) of your email.

2. Change Management

Written by Sue Bhattacharjee

(Time Warp to later in the project)

The project is underway and your team is working hard to provide the Owner with a state-of-the-art facility within schedule and budget. Your Project Manager has returned from the weekly Owner-Architect-Contractor Meeting with ASI (Architectural Supplemental Instructions) 20 which details the addition of an Aquatics Center to the current design. You, being the Project Engineer, are tasked with composing and reviewing the Change Estimate for this additional scope of work.

PART A: Assembling the Change Estimate

Create a Change Estimate for the Aquatics Center using the Change Estimate spreadsheet provided in Section X.2.1 and taking into consideration the following:

- This will be Change Estimate No. 102.
- There are seven subcontractors involved with this scope of work. Pricing from four of these subcontractors has been previously reviewed by you. Their pricing is already shown on the worksheet titled "Subcontractors" and are highlighted in green.
- For the remaining three subcontractors, review the provided proposals in Section X.2.2, X.2.3 and X.2.4. After carefully reviewing each proposal and making any corrections necessary, input their final cost into the appropriate line on the "Subcontractors" worksheet.
    - Scope review is not required.
    - Use the Approved Wage Rate Sheet provided in Section X.2.5 to verify the correct labor rate is applied in each proposal.

  - Allowable mark-ups include:
    - Sales tax on materials = 8.25%
    - Overhead and Profit = 15%
    - Bonds & Insurance = 2%
- Hensel Phelps will not self-perform any work.
- Based on conversations with the owner, the contractor would keep his General Conditions at 1.5% to account for this change estimate.
- Bond and Insurance will be applied to the direct cost subtotal inclusive of your General Conditions.
- Hensel Phelps' allowable Contractor's Fee on change orders = 4.8% of the direct cost of work.
- The Designer for the Fire Protection Subcontractor has an hourly rate of $82.00.
- For change order work, contractor's fee is not applied to Bond, Insurance and any other fees inclusive of the General Conditions.
- Note: the "Summary" worksheet is only a template. You will need to verify that each of the formulas conform to the information provided above. Hint: the cells highlighted in red look suspicious.

After populating the "Subcontractors" worksheet with the final costs from the three subcontractor proposals, complete the "Summary" worksheet to finalize the cost for this Change Estimate.

Create a cover letter for the Change Estimate by filling out the yellow cells in the "Letter" worksheet.

Submit one hard copy of the Change Estimate and one electronic copy in native format (excel).

PART B: Credit Evaluation
(Time Warp: The Owner has approved your change order in Part A and construction of the Aquatic Center is partially complete.)

Your Project Manager has returned from another Owner-Architect-Contractor Meeting and stated the Owner no longer wishes to build the Aquatic Center and has requested a credit for the balance of uninstalled work. You have been tasked to assess the remaining work and to create the credit change estimate.

Based on your field observations, discussions with the subcontractors and Hensel Phelps staff you gather the following information:

The fire protection subcontractor has already gone through 40 hours of design development and generation of shop drawings; while labor for the plumbing

subcontractor is 75% complete. Framing layout is complete. No finished products have been installed yet. The sump tank, being a long lead item, was already purchased and delivered by the subcontractor.

Based on your discussions with the Project Superintendent and the subcontractors, you know the percentage of work complete for the Mechanical and Electrical subcontractors is 12% and 7%, respectively, of their cost in CE 102. Due to the time spent with coordination and planning this additional scope, Hensel Phelps has negotiated with the owner to retain the General Conditions and Contractor's fee as a percentage of the completed scope, and credit the remaining.

Using the Change Estimate Spreadsheet Part B provided in Section X.2.6, populate the credit amount to be returned to the Owner for each of the subcontractors highlighted in red on the "Subcontractors" worksheet.

Using the same assumptions from Part A, complete the "Summary" worksheet to create the final credit Change Estimate 102R.

Create a cover letter for the Change Estimate by filling out the yellow cells in the "Letter" worksheet.

Your Project Manager has requested an explanation, no longer than one page, briefly describing your justification for each of the credits provided.

Submit (1) one hard copy and (1) electronic copy in native format (Excel) of Change Estimate 102R.
Submit (1) one hard copy and (1) electronic copy (pdf) of the email to your Project Manager.

3. ESTIMATE

Written by Jon Ricketts and Brady Church

PART A – The Concrete Estimate

In preparation for your First Point meeting with Upper Management, your Project Manager has requested you validate the budget for the Structural Concrete scope of work. This is a proactive measure to identify any risks to the future buyout of the concrete scope of work.

In order to validate the conceptual estimate for the structural concrete scope of work, perform a concrete estimate and use HPCC historical cost data (section X.3.2) to come up with a detailed cost estimate for the work.

The goal of Part A is to generate a comprehensive value to furnish and install the structural concrete scope of work. The estimate will be composed of concrete material, installation labor, equipment, and general conditions for the entire structural concrete scope of work. Use this value to complete the structural concrete line item in the Financial Summary Report.

Use the provided contract drawings to quantify the value of Structural Concrete, specifically:

- Concrete Walls
- NOTE: Please include all elevator pit walls.
- NOTE: Consider louver, door, and window openings in concrete estimate.

Assumptions:

- All transitions in wall thickness, along the same gridline, occur 1'-0" from adjacent, perpendicular gridline.
- Walls pour through columns **at exterior walls only** (e.g. If a column is half inside a wall the portion in the wall shall be included in this estimate and the portion outside the wall will be excluded).
- All top of walls terminate at top of slab above and originate at top of slab below. Exceptions:
  - Walls that originate at top of footings.
  - Locations where voids exist between top of wall and slabs above.
  - Walls with no slab above.
- Stair treads and landings are prefabricated metal, and concrete is not required.
- For final calculations round to the nearest CY.
- Concrete General Conditions unit rates are provided within the Company Historic General Conditions provided in Section X.4.3.

The supplemental information in Section X contains:

- Concrete Estimate Spreadsheet (Section X.3.1) – This spreadsheet has been formulated for your use in compiling data in the same format as the other teams. You are to fill in the quantities, unit costs, and fee on this spreadsheet.
- HPCC Historical Cost Data (Section X.3.2) – Resource to be used for labor, material, and equipment unit costs.

Clarifications and Exclusions:

- In order to keep all teams' estimates consistent, do **NOT** modify the Concrete Estimate Spreadsheet. Fill in only blue cells.

- Do **NOT** include additional material to account for concrete waste. Assume this is already covered in the unit costs based on company historical data.
- Do **NOT** include additional material or labor to account for patching of exposed concrete walls. Assume finish is "As-Cast" and needs to have a finish look when the forms are removed.
- Scaling is not recommended. Dimensions indicated on drawings may differ from, and always supersede, scaled dimensions.
- Concrete costs for footings, slabs, and columns are provided in spreadsheet (section X.3.1) and do not need to be taken off.

Submit (1) one hard copy and (1) one electronic copy in native format (Excel) of your concrete estimate.

PART B – (Time Warp) Day of Concrete Pour

During a quality control pre-pour check of the concrete slab, the field engineers noted that (2) 4" sleeves were shown on the subcontractors approved shop drawings, but not installed. The shop drawings indicate these 2 sleeves are to be spaced 8" center to center. Verify the spacing is acceptable per the structural drawings and advise if trim bars need to be added. If bars are added please clarify the size and spacing.

4. GENERAL CONDITIONS

Written by David Shellman

General Conditions are the on-site project management and supervision costs incurred throughout the duration of the project.

A preliminary budget was previously used to develop the overall proposed cost of the project. Upper Management has asked your team to complete a detailed review of the budget to see if there is any potential for savings. To do this, your team will need to prepare a breakdown of the project's General Conditions. This breakdown will allow your team, as well as Upper Management, to confirm the staffing plan, mobilization, operating, and other resource costs that will be spent during the project.

The Supplemental Information attached in Section X.4.3 and X.4.4 provides descriptions of Staff Position Duties and a list of Company Historic General Condition Rates and typical job costs.

Please note the following:

A. General Conditions include salaried on-site personnel that are assigned to the project. Included are all operating costs and expenses that are a function of on-site job supervision. These expenses include but are not limited to: office documentation support, networking service and fees, utilities, cellular phones, computers, etc.

B. Home-office overhead (G&A) is not included in the General Conditions of the project. However, your team may need the assistance of the estimating department. A full time estimator may be considered in the General Conditions for a period of time to assist the Project Manager with subcontractor bid packaging, scope breakdown, purchasing, and contract issuance.

C. Supervisory staff positions should be allocated to the project as the team sees fit.

D. All General Conditions associated with direct work such as concrete are typically carried within the specific scope budget and therefore are not to be included in the overall General Conditions breakdown.

E. A new-hire Field Engineer will be assigned to this project and will NOT be relocating from out of state or outside the 50 mile radius to the jobsite area.

F. This project will be assigned one summer intern. All costs associated with moving and housing are provided by the jobsite office.

Please prepare the following documents:

Part A: General Conditions
Prepare a detailed General Conditions breakdown for the project using the form provided in Section X.4.1. Complete for all General Conditions following Notice to Proceed (NTP).

As you determine the costs and units for each budget item provided in Section X.4.3, be mindful that items may be comprised of labor, material, equipment or any combination of all three. Use your best judgment, team experience or available resources to determine these break-downs.

Submit (1) one hard copy and (1) one electronic copy in native format (Excel) of your General Conditions.

Part B: Staffing Matrix
Prepare a Staffing Matrix showing the duration and period each staff member is on the project following NTP using the form provided in Section X.4.2. Staff

descriptions are provided in Section X.4.4. Draft a narrative describing each person's responsibilities during the project and what areas they will cover.

Submit (1) one hard copy and (1) one electronic copy in native format (Excel) of your Staffing Matrix.

Submit (1) one hard copy and (1) one electronic copy (pdf) of your narrative.

Part C: Cyclotron
(Time Warp)

Your team has been working hard to provide the owners with a world class laboratory. You are the Project Manager and have just returned from your weekly Owner-Architect-Contractor Meeting. In the meeting, the owners discussed adding a Cyclotron system so they could keep up with the latest and greatest technology for their research.

It is clear this impact will require more time and efforts to complete this request. The Owner made it clear during the meeting that this work is to be completed by the contracted Substantial Completion date and will cover additional costs appropriately.

Your task is to review the additional scope of work and overall schedule impact as evaluated by your Project Superintendent (provided in Section X.4.5) to determine what the value for the additional General Conditions will be. There are several different options (i.e. adding staff, enforcing longer work hours, etc.) that should be considered when completing this evaluation. These added costs are to be completely separate from your overall General Conditions breakdown and should be solely used to evaluate which option would be most beneficial to complete this system. The Project Superintendent has mentioned that this work can be completed during normal working hours and will need additional staff members due to the current work load of the current staff members.

Provide an explanation of what additional General Condition cost items will be needed and why.

Submit (1) one hard copy and (1) one electronic copy (pdf) of your explanation.

If required submit (1) one hard copy and (1) one electronic copy in native format (Excel) for revised General Conditions and Staffing Matrix to support your explanation.

5. PROPOSAL SUMMARY (TAB ANALYSIS)

Written by Wade Chance and Julia Bucki

One of the most critical steps in the subcontracting phase of a project is determining the actual scope each sub has included in their bid number. This is typically done using bid tabs. This allows you to know that you are comparing apples to apples when looking at subcontractor quotes. You also need to make sure that each sub has covered the entire scope of work.

Upper Management is expecting the following scopes to be tabbed up for review: light gauge framing with drywall, ornamental railings, epoxy coatings, millwork and landscaping. Keep in mind that the best value is not always the lowest dollar proposal. The Proposal Summary sheets have been created and some “check questions” written on them to determine if the subcontractors have the correct scope per plans and specifications (you may find that additional “check questions” are necessary to define the complete scope or differentiate between bidders; you are to add “check questions” as you see fit). The “Scope Desired” column contains the budget from the original estimate that you are justifying to upper management. These values are not always hard numbers derived from subcontractors so they will vary from the actual proposals.

Choose your subcontractors carefully to ensure they will perform the correct scope, staff the project adequately, and that they are financially stable. Keep in mind that company policy requires bonds on all subcontractors with subcontract values over $75,000 unless the District Manager waives this requirement.
Note: We encourage teams to tabulate quote items by rounding to the nearest $1,000 for each entry; this allows quick summation of the Proposal Summaries.

Part A: Light Gauge Framing and Drywall Proposal Summary
Total up the completed tab sheet for the light gauge framing and drywall provided in Section X.5.1 and make a selection as to who provides the “best value” for the project. Add up each column with the gains and losses to determine the total purchase value for that scope.

Submit (1) hard copy and (1) one electronic copy (pdf) of your completed tab sheet clearly identifying which subcontractor has been selected.

Submit (1) hard copy and (1) one electronic copy (pdf) of a short narrative as to what qualified them as the “best value.”

Note: “Blue Numbers” are values established through internal estimates or breakout numbers from a different subcontractor that account for values NOT provided by that given subcontractor. It assists in establishing the complete “buyout” value for the given scope.

Part B: Ornamental Railings, Epoxy Coatings, Millwork and Landscaping Proposal Summaries

Prior to meeting with Upper Management to review the Regenerative Medicine project some "tabs" have not been completed. To assure the correct subcontractor will be selected, use the subcontractor proposals provided in Section X.5.2 to complete a tab analysis of these scopes: ornamental railings, epoxy coatings, millwork and landscaping. Use the proposal summaries provided in Section X.5.3, 4, 5 & 6 to complete this task. Make sure to indicate on the tab which subcontractor is selected with the total cost of work.

You will be able to speak to representatives of each subcontractor briefly to ask scope questions not included in their proposals when they visit your room between 3:30PM and 6:30PM. Each trade will be represented by a separate Hensel Phelps employee; therefore multiple members of your team can interface with the subcontractors concurrently. Each team will be allowed ten (10) minutes with the subcontractors to conduct mock telephone conversations. Please be aware that the "subcontractors" will respond to questions in a realistic manner; their answers may seem evasive, rude and less than complete. This is done not to frustrate you, but to be realistic and force you to make decisions in the same manner as you will when you enter the industry.

Submit (1) hard copy and (1) electronic copy in native format (Excel) of each proposal summary.

Part C:
Indicate in the FSR in section 1 whether there is a fiscal gain or loss for the scopes identified in Part B of this section.

6. SCHEDULE

Written by Brett Ayoob and Monica Carl Ashley

The project schedule is a fundamental tool in properly planning and managing a project. A well-developed schedule will communicate and direct all parties along the path to success. As part of your review with Upper Management, you will be required to present a complete, workable Critical Path Method (CPM) Schedule which effectively outlines your plan of attack to build this project. This schedule shall be comprised of the following:

1. A CPM Schedule which supports a Substantial Completion no later than 24 months from Notice to Proceed (NTP).
2. The schedule shall be inclusive of all standard constraints such as weather, holidays as well as the potential for lost productivity due to logistics of being on an active campus.

3. Incorporation of key milestones outlined below.
4. Identifying the Primary and Secondary Critical Paths and justifying them.

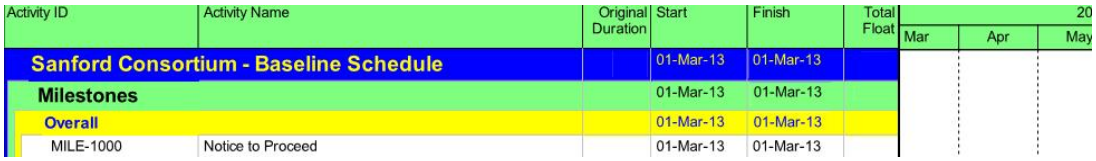
The following criterion explains the background information and requirements of the CPM schedule your team will present.

Note: As part of the preconstruction services already provided for this project, a general schedule outline has been created and analyzed by a seasoned General Superintendent. Summary durations given in parentheses () are to be used as parameters and shall be elaborated on. Your team shall use these parameters to develop a detailed schedule that will fully communicate to upper management the plan your team has to complete this project within the timeframe you have committed to the Owner.

General CPM Schedule Criteria:

a. Presentation Criteria:
   i. Format:
      a. At a minimum show the following columns to the left of the timescale: Activity ID, Activity Description, Original Duration (OD), Early Start (ES), Early Finish (EF), and Total Float (TF) per activity (see Figure “A” below):

Figure A:



   ii. Activity count: No More than 1000 Activities.
   iii. Include Permitting Administrative activities for release of the following packages:
      a. Package 1: Grading & Site Utilities
      b. Package 2: Shell & Site/Landscape
      c. Package 3: Structural & Seismic
      d. Package 4: City Permit – Public Improvements
   iv. There should be a continuous logic flow of critical path activities from Notice to Proceed, Permit Releases, *Procurement (Subcontractor Buy-Out)*, Submittals, Fabrication and Delivery lead times, Construction, Punchlist and Completion.
   v. Clearly identify the critical path of the schedule.
   vi. Organize your activities so they are easy to read, activities are grouped intuitively, and the schedule “flows” well.

b. Contractual Criteria:
    i. Notice to Proceed occurs on March 1, 2013. This NTP authorizes contractor mobilization, site clear & grub as well as work included in Permit Package #1.
    ii. The release of additional permit packages is driving the remaining sequences. The Architect's team is preparing three permit packages for UCSD, the governing authority over the project, as well as an additional package for the governing public authority for the required work in and along the adjacent streets.
        a. Permit Package #1 includes site excavation, grading and underground utilities will be released with NTP.
        b. Permit Package #2 includes the building skin as well as all site construction and improvements. This package will be released 7 days following NTP.
        c. Permit Package #3 will include all structural and seismic elements of the buildings, including the foundations, and will be released 50 days following NTP.
        d. Permit Package #4 is a City Permit for the in street utility work (W/SD/SS) and will be released 60 days following NTP.
    iii. Substantial Completion shall be 730 calendar days after NTP. Substantial Completion is defined as "the building can be used for its intended purpose." In order to satisfy this requirement, all construction activities shall be substantially complete, the building systems must be operational and all code required inspections must be complete and a Temporary Certificate of Occupancy must be received from the State Fire Marshal to allow occupancy of the building for its intended purpose. Final commissioning and punchlist activities are not required to be complete.
    iv. The schedule should account for all State of California holidays to properly plan work around holiday periods.
    v. The project is located on an active college campus. Material delivery delays, construction time constraints and overall campus impact should be analyzed and accounted for in the activity durations.
    vi. Assume 10 working days for Award of Subcontracts. Additionally, assume 10 working days for in-house Submittal Review/Prep and 10 working days for Submission to Architect/Engineer for all submittals.

c. General CPM Structure Requirements:
    i. General Conditions
        a. It will take the team 20 working days to Mobilize on-site after NTP.

b. Show the following critical submittals with their related durations. Note: All Durations below are in Calendar Days (CD).
    a. Reinforcing – 30 CD
    b. Structural Steel – 60 CD
    c. Decking – 30 CD
    d. Stairs – 60 CD
    e. Glass & Glazing – 60 CD
    f. Roofing – 30 CD
    g. Elevators – 30 CD
    h. MEP Long Lead Equipment – 45 CD
c. The schedule should depict fabrication and delivery of the following critical items. Note: All Durations below are in Calendar Days (CD).
    a. Reinforcing – 30 CD
    b. Structural Steel – 120 CD
    c. Stairs – 100 CD
    d. Elevators – 90 CD
    e. Emergency Generator – 240 CD
    f. AHU, Boilers & Chillers – 95 CD
    g. Light Fixtures – 170 CD
    h. Transfer Switches – 130 CD
    i. Switchgear – 130 CD
    j. Cooling Towers – 95 CD

ii. Lab Building Summary Durations
    a. Vivarium Structure (100 CD) – includes foundation, SOG & walls
    b. Level 1 Structure (85 CD)
    c. Level 2 Structure (75 CD)
    d. Level 3 Structure (70 CD)
    e. Level 4 Structure (65 CD)
    f. Roof Structure (50 CD)
    g. Exterior (295 CD)
    h. Interior Vivarium (290 CD)
    i. Interior (350 CD) – Level 1
    j. Interior (390 CD) – Level 2
    k. Interior (320 CD) – Level 3
    l. Interior (300 CD) – Level 4

iii. Public Building Summary Durations
    a. Level 1 Structure (100 CD) – includes foundation, SOG & Walls
    b. Level 2 Structure (100 CD)
    c. Level 3 Structure (50 CD)
    d. Exterior (75 CD)

iv. Sitework Summary Durations
   a. Building Prep Sitework (85 CD) – includes Demo, Clear & Grub, Mass Excavation and Grading
   b. North Torrey Pines Road (55 CD)
   c. Torrey Pines Scenic Drive (45 CD)

v. Minimum Milestones
   a. Overall Milestones
      a. NTP (Notice to Proceed)
      b. Substantial Completion
      c. Final Completion (30 CD after Substantial Completion)
   b. Construction Milestones
      a. Concrete Structure Complete
      b. Remove Tower Crane
      c. Permanent Power to Main Electric Room
      d. Construction Use Elevator Sign Off
      e. Elevators Complete
      f. Lab Building Dry in
      g. Remove Man Hoist
      h. Lab Building Complete
      i. Final Commissioning

Part A - Submittal Requirements:

a. Complete Network: *(Electronic Copy of Schedule in Native Format on thumb drive)*

Answer: See attached Schedule

b. Required CPM Schedule Reports: *(Include Hard Copies, Electronic copy in PDF Format)*

i. Complete CPM: filtering all activities sorted by Start Date.

ii. Milestone Report: filtering project and building milestones.

iii. Primary Critical Path Report (TF<1) / Secondary Critical Path Report (TF<~5)

Answer: See attached Schedule Reports

c. Narrative (Include Hard Copy and Electronic copy in PDF Format.) Schedule clarifications and assumptions utilized in reaching the Baseline.

Part B - Beneficial Occupancy

NOTE: This question should be addressed after the schedule has been built and should not alter your completion date.

The funding sources for this project have mandated that the Consortium begin using the facility no later than December 1, 2014. This has long been a known constraint to both your team and the Owner and during the negotiations for this project it was agreed upon that only a small portion of the facility would need to have 'Beneficial Occupancy' by this date.

It is now, 6 months into the project and in this week's Owner/Architect/Contractor (OAC) meeting you've been informed that the Consortium would like to have beneficial occupancy of the entire Lab Building by December 1, 2014.

d. Can your team accommodate this?
    i. If so, write a statement indicating what areas of the schedule will be accelerated to accommodate this request and how your team will implement these changes in the field.
    ii. If not, draft a letter to the Owner expressing what areas of the Lab Building will be available for beneficial occupancy. Keep in mind that not all schedule activities need to be complete. Punchlist and commissioning activities that will not interfere with the buildings intended use are not required to be complete for beneficial occupancy.

7. COORDINATION OF WORK

Written by Timothy Queely

Part A: Short Interval Production Schedule
(Time warp to before design assist review.)

The project has begun Mechanical, Electrical, Plumbing and Fire Protection (MEPF) coordination throughout the interstitial space. The level one deck will require shores to be installed for 5 months. During a design assist meeting the Mechanical subcontractor brings to your attention that waiting 5 months to start installing Mechanical ductwork will delay the project completion. The Project Superintendent in turn tasks you as the Area Superintendent responsible for coordination, to determine how the ductwork can be installed concurrently with the shores. You immediately call your subcontractor to determine what the time frame is to fabricate and install ductwork following coordination and submittal approval. The subcontractor tells you that fabrication will take 8 weeks and install will take 25 weeks.

a. A Short Internal Production Schedule (SIPS) is developed to detail the necessary day-to-day production or task-to-task production during any repeatable construction project. It details scheduling at the crew level and must rely on exact information that is vital to the successful completion of any construction task. Using the mechanical drawings and attached shoring shop drawings in section X.7.1 construct a SIPS for the Mechanical ductwork install coordination. (Reference SIPS template in section X.7.2.)
   I. Break the operation into specific activities.
   II. Using the production chart attached in section X.7.2.complete the missing information on tab B and order of sequence.
   III. Divide the schedule areas into the provided drawing limits. (For example each drawing sheet will have a start to finish and represent a block.)
   IV. Assume the interstitial space cannot be accessed for testing after the complete ductwork system is installed.
   V. Each area should have a maximum of 14 activities. The number at the top of SIPS represents a block of time determined by the production chart.
   VI. Use the attached example in section X.7.3 as a guide to the required flow and appearance of your SIPS.

Submit (1) one hard copy and (1) electronic copy in native format (Excel) of your completed Short Interval Production Schedule.

b. Provide a list of 10 to15 questions to be discussed with the Mechanical subcontractor and build an accurate SIP schedule.

Part B: Auditorium Ceiling Panels
(Time warp to the first Auditorium Ceiling Panel Delivery)

The first load of five Auditorium ceiling panels is delivered and the field engineer has notified you that the millwork delivered has been initially inspected with multiple color variations and sizing issues that were unacceptable to the design team. The remaining four loads of ceiling panels are schedule to begin fabrication in a week.

The Auditorium ceiling has a lead time of 16 weeks that needs to be coordinated with light fixtures and fire sprinkler heads either penetrating the ceiling or located between the wood ceiling panels. Final MEPF systems can not be completed until the ceiling construction is complete. As a high end finish product, the panels were scheduled for a near end of the project delivery and installation.

1. Write a letter and provide a response to the owner of how this quality issue will be corrected and kept from happening in the future panel fabrication.

2. Provide a list of four items to discuss with the project staff in the weekly staff meeting to assure this does not happen again.

8. PERSONNEL ISSUES

Written by Jim Hickernell

Part A: Project Engineer Beth

You are responsible for staffing the upcoming Sanford Consortium for Regenerative Medicine project. After evaluating several team members that would be good candidates for a promotion to the Project Engineer (PE) position, you select Beth. Over the last four years, Beth completed two other successful projects with Hensel Phelps in the near vicinity. She is a quick learner, natural leader, and adept problem solver. Upper Management agrees with your selection and thinks that Beth will fit in well with the other team members and the Owner's staff. Knowing that the project's success is largely dependent on the team members, you inform Beth of the promotion.

Beth initially seems excited about the promotion and eager to get started, but later tells you that she does not feel comfortable working on the Sanford Consortium project. She says that there are personal reasons and requests a different assignment. Beth's success and job satisfaction are important to you, so you set-up a meeting to discuss her concerns and career options.

The Sanford Consortium is the only project scheduled to start in the local area. There is an alternate project that Beth could be assigned to, but it is 150 miles away and would require her to move. The Project Engineer position is already staffed on the alternate project, so Beth would not receive a promotion at this time. What is your plan for the meeting? Will you offer Beth a position on the alternate project, or try to convince her to work on the Sanford Consortium project? What other options would you consider for Beth? Please write an email to Upper Management describing your plan for the meeting.

Part B: Community Concerns

It goes without saying that the project's image is very important to the Sanford Consortium, Lankford and Associates, and Hensel Phelps Construction Co. As the contractor and face of the project during construction, Hensel Phelps is responsible for protecting both its reputation and that of its clients. As the Project

Manager for Hensel Phelps, your relationships with the Owner and community will set the tone for the project.

You heard that a few members of the community have objections to the construction project. You don't know all of the specifics of their complaints, but it's clear that some people are concerned about the close proximity of construction activities. What steps can you take to smooth over issues with the community while protecting the reputation of the Owner and Hensel Phelps? The Owner would like to hear your suggestions during the next OAC meeting. Put together a list of three to five ways that you and your staff will maintain positive relationships with the community.

9. SAFETY

Written by Jim Hickernell

Part A: Fall Protection Toolbox Meeting

(Time warp to later in the project during construction).
Construction of footings is nearing completion and the project team is preparing to start construction of vertical concrete. You are a Field Engineer on the Sanford Consortium project and were assigned the cast-in-place concrete scope of work. Over the last few weeks, you've been busy creating lift drawings, performing concrete takeoffs, and planning building control. The Area Superintendent asked you to lead the weekly toolbox meeting on Monday, and selected fall protection as the topic. This topic is especially important considering Hensel Phelps carpenters, laborers, and finishers will be utilizing fall protection over the next few months while forming and placing concrete. Leading the toolbox meeting is your opportunity to demonstrate your commitment to safety and knowledge of safe work practices.

Use the attached template to prepare an agenda for the toolbox meeting so that the Superintendent can review and provide comments (see template in section X.9.1). Include fall protection topics that are applicable to the upcoming work and make sure to deliver the information in a format that is easy for the craft workers to understand. If there are any hands-on elements to your toolbox meeting, please include a description on the agenda.

Part B: Job Hazard Analysis

The pods on the exterior of the building are built on cantilevered concrete decks. Construction of this cantilevered concrete poses certain safety risks. As a seasoned Area Superintendent, you know that pre-planning is critical to construction of the decks without any accidents or injuries. The Job Hazard Analysis (JHA) is your primary safety tool in the pre-planning process. A good JHA identifies the hazards, develops a plan to prevent hazards from becoming

accidents, and gives employees detailed safety instructions prior to beginning work.

At your request, the formwork subcontractor turned in a draft of their JHA two weeks before starting work (reference JHA in section X.9.2). This particular subcontractor has a great attitude and always tries hard, but typically falls a little short when it comes to paperwork. As an Area Superintendent, it is your responsibility to review the JHA for accuracy and thoroughness before the subcontractor uses it to train the crews. A quick glance over the JHA shows that the following items are not covered in sufficient detail: falls, equipment, access, and power tools. Take the time to review this JHA in detail and correct the deficiencies and omissions listed above, as well as any other items you notice. Provide a revised JHA with highlighted revisions so that you can explain them to the subcontractor.

10. SITE UTILIZATION

Written by Kevin Lankford

Part A: Site Utilization Plan **Early Deliverable due at 2:00PM**
Now that your team has been awarded the project and you have coordinated a plan of attack, you must back up your schedule with a Site Utilization Plan. Your Site Utilization Plan will help communicate your scheduled plan to the Owner, designer, your staff and craft associated with the project. A blank site plan has been attached in Section X.10.1 for use in creating your site utilization plan. (Keep in mind that you are creating this plan prior to any construction happening on site)

The Sanford Consortium for Regenerative Medicine project site is located along North Torrey Pines Road, a major thoroughfare for UCSD and surrounding medical & research buildings. It is adjacent to the Torrey Pines Golf Course and the Salk Institute for Biological Studies. Located to the west is the Historic Torrey Pines Glider Port which is classified by the FAA as an active airport.

Anticipated access to the site will be from the north at Northpoint Drive in front of the UCSD Administration Building and from the south off of Torrey Pines Scenic Drive. Consideration shall be taken for traffic from employees and deliveries. You must determine where your tower crane will be erected in order to determine its swing radius because your jobsite trailers must be set up outside its swing radius. Additional area outside the site boundary is available to you if your site utilization plan requires it. If you choose to take additional space, provide justification why you chose to do so.

The Site Utilization Plan should show how the site is organized from where the trailers and lay down areas are located to the general circulation of the site for employees and deliveries. Your team shall design a Site Utilization Plan that

takes into consideration the different requirements of the project. At a minimum, consider the following snapshots in time: mass excavation, superstructure, rough-in and finishes.

Explore your options and come up with a site utilization plan that will allow you to start and finish on time. At a minimum, you must address the following:

1. Location and hook swing radius of crane.
2. Office trailer(s) location(s).
3. Temporary utility route to office trailer(s).
4. Laydown area(s) for material unloading and storage.
5. Material and emergency access road to site.
6. Construction access gate(s).
7. Subcontractor craft parking area(s).
8. 16,000 SF for Spoil Stock pile from over excavation of site.
9. Temporary site fencing.
10. Garbage containers and/or dumpster locations.
11. Connex boxes for tool and material storage.
12. Location of jobsite information/bulletin boards.
13. Location of toilets and wash stations (assume 125 craft personnel).
14. Gathering location for emergency situations.

Additional information may be addressed in the Site Utilization Plan as needed. Multiple phase Site Utilization Plans may be submitted, if needed.

Email an electronic copy (pdf) to klankford@henselphelps.com by 2:00PM.

Submit (1) hard copy at the 2:00PM Progress Meeting.

Submit (1) hard copy with your final submission.

Part B: Traffic Control Plan

During construction you will be required to install utilities through North Torrey Pines Road near the intersection of Torrey Pines Scenic Drive. You will need to close one of the southbound lanes of North Torrey Pines Road (45 MPH) from Northpoint Drive to the south corner of Torrey Pines Scenic Drive. Your team shall design a traffic control plan for submittal to the City of San Diego Traffic Control Permit counter for approval. At a minimum, you must address the following:

1. Barricade location(s)
2. Required signage for lane closure
3. Cone location & spacing
4. Direction of traffic

Additional information may be addressed in the Traffic Control Plan as needed.

A blank site plan indicating utility work location has been attached in Section X.10.2 for use in creating your traffic control plan. San Diego Regional Standard typical construction signs and device spacing tables have also been attached for your use in Section X.10.3

Submit (1) one hard copy and (1) one electronic copy (pdf) of your Traffic Control Plan.

11. QUALITY CONTROL

Written by Mike Gulotta

This section is independent and should not influence your response to other sections of the problem statement. The content contained within the "quality control" section does not lead into answers of other sections.

"Time warp" to the beginning of concrete operations...

Your company's culture is that of a true builder. As such, the concrete scope of work will be self-performed. With this decision the responsibility of ensuring each pour's success falls on the project's Superintendents and Field Engineers. The concrete basis of design is that of an As-Cast finish, not allowing for any grinding or "sacking" of the exposed surfaces. This will require near perfect placement of the concrete as well as flawless formwork construction. To further add to the difficulty of the concrete work, the Salk Institute is located adjacent to the project site and is considered the ACI Gold Standard for As-Cast concrete.

Part A - Letter to the General Superintendent

The General Superintendent, Jeff, has expressed his concerns to you, the Project Superintendent, regarding the high level of complexity involving the As-Cast concrete. He has asked you to develop a plan to ensure that the concrete will be placed correctly and efficiently. Draft a letter to your General Superintendent outlining the measures you will take to help ensure a successful project. At a minimum he has asked you to address the following concerns:

1) Directing of concrete trucks through a congested site.
2) Locating and setting up of concrete pumps.
3) Elimination of rock pockets (Aggregate Segregation)
4) Consistency of Truck dispatching.
5) Formwork and Rebar Subs. commitment to the schedule and quality.

Answer: See attached Letter

Part B - Pour Check Card Verification

As a Superintendent you have your first concrete wall pour taking place in two days. It is your company's policy to complete a "Placement Check Card" prior to placing any concrete. You have tasked your Field Engineer with ordering the concrete, reviewing the formwork, and documenting his work on the Placement Check Card. Through your experience with self-performing concrete as a field engineer early in your own career, you know that planning a pour is very stressful and mistakes can easily be made. Since your Company culture has engrained taking pride in your work and providing the best product for the owner, you have decided to review the Pour Check Card and lift drawing with your field engineer. Review the Placement Check Card provided in section X.11.1and note any corrections you would make on the discrepancies portion of the placement check card (located on page 2). Note: The wall height is 12'-6" and has a total length of 98'. For rebar lap splice use "Type 2". The specification section for cast-in-place concrete, splice schedule, & lift drawing has been provided for reference in section X.11.2.

12. TEAM MEMBERS RESUMES

Provide each team members personal resume (**not** a resume tailored to this problem). Include mailing address, telephone and email contact information. Photos are encouraged but not required.

VII. COMPETITION SCORING SYSTEM

Item	Description	POINTS
0.1	Early Deliverable - Biographies	0 (note 1)
0.2	Quality of Submitted Proposal	2
0.3	Timeliness of Proposal	0 (note 2)
1.	Financial Status Report	6
2.	Change Management	10
3.	Estimate	10
4.	General Conditions	12
5.	Proposal Summary	18
6.	Schedule	20
7.	Coordination of Work	10
8.	Personnel Issues	4
9.	Safety	6
10.	Site Utilization	10
11.	Quality Control	12
Subtotal		120
Oral Presentation		80
GRAND TOTAL		200 POINTS

Note 1: No points shall be issued in the competition for content of this previously due item; however points may be deducted from the team's score for having failed to comply with this item in a timely and professional manner.

Note 2: **½ point** will be deducted from the total score for **every minute** past the deadline time. Judges reserve the right to "cap" the penalty amount at their discretion; however no team with a penalty cap will be allowed to place in the competition awards.

As the team placement results often are separated by mere fractions of a point, it is recommended that your team take each point seriously. No points scoring information will be provided to the teams at the conclusion of the competition, but feedback will be provided for each component in an "above-average / average / below-average" format.

VIII. LIST OF JUDGES

Oral Presentation Judges:

Monica Carl Ashley, Area Superintendent
(408) 452-1800
mcarl@henselphelps.com
Northern California District
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San Jose, CA 95110

Wade Chance, Area Superintendent
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Phoenix, AZ 85008

Ryan De Lira, Project Manager
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Mike Gulotta, Project Engineer
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Ryan Piper, Project Manager
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Jon Ricketts, Project Engineer
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Alternates:

Sean Carolan, Operations Manager
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San Jose, CA 95110

Jim Hickernell, Project Engineer
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jhickernell@henselphelps.com
Northern California District
226 Airport Parkway, Suite 150
San Jose, CA 95110

Administrator / Executive Judge:

Eun Kim, Project Manager
(408) 452-1800
ekim@henselphelps.com
Northern California District
226 Airport Parkway, Suite 150
San Jose, CA 95110

IX. THE RULES

The rules for the competition are designed to provide each team with an equal opportunity to apply their knowledge in developing their respective solutions and an equal opportunity to present their solutions to the panel of judges. The following rules apply to the Commercial Division and serve to supplement the ASC Competition Rules.

Rule No. 1 While the competition is in progress, only the six students identified as being team members shall be present in the teams' room(s). As per ASC rules, no "runners" are allowed for food delivery, copying, etc. beyond the six team members. **Faculty advisor(s) may not interface with their team once the competition has begun.**

Rule No. 2 One (1) Hard Copy and one (1) electronic copy of the proposal must be turned into the judges**. No proposals will be formally returned.** If you desire a copy for yourself or need one for your oral presentation preparation, please make copies prior to the submission of the proposal.

Rule No. 3 The number of computers and printers per team is to be as outlined in the Competition Rules as published by the ASC. Use of the Internet is allowable and may be necessary for certain components of the problem; Hensel Phelps Construction Co. will pay for each team to have one (1) internet connection through the hotel for the Thursday written component preparation duration – details as to how this will be provided will be announced at the opening conference. An LCD projector and a computer will be supplied by Hensel Phelps Construction Co. for the teams to use during the oral presentations. Any additional equipment required for a presentation is the responsibility of the team. If your presentation requires specific software you must provide your own computer or inquire as to its availability on the provided computer. Overhead transparency projectors are not provided unless requested in advance.

Rule No. 4 Attendance at other team's oral presentations is subject to the rules of the ASC, but in no case shall members of a school that has yet to present be allowed to attend another school's presentation. This rule extends to all students, faculty members and relatives / friends from the participating school, whether team members / coaches or not.

Rule No. 5 The problems that are used for the competition are drawn from actual construction projects. In the past there have been situations where student team members have worked on, or have specific knowledge of, the project that is the subject of the problem. This can be perceived as giving the team an unfair advantage in developing a solution. If, upon receiving the problem, any student

recognizes the project that is the subject of the problem statement, the student shall notify the problem sponsor to discuss the extent of the student's project or problem knowledge. Alternates may be considered should there be an identified conflict. The judges will have the final decision. Failure to notify the problem sponsor makes the team subject to disqualification.

Rule No. 6 While the judges will endeavor to administer the problem with all fairness and appreciation for the team's perspectives, the decisions of the judges shall be final when deciding conflicts and scoring.

Rule No. 7 A one-half (½) point deduction will be taken for each minute the proposal is turned in past the time it is due. Written proposals are due Friday at 12:00AM (Midnight Thursday night). Location of proposal delivery will be announced at opening conference. Other deliverable items, if applicable, will be due as specified elsewhere herein.

Rule No. 8 Any team with graduate students can participate in the regional competition. However, the national level prohibits graduate students to participate on the team. The invitation from Region VII for the national competition will be from the highest placed team NOT containing any graduate students. If it is your team or school goal to go to the National competition please do not include graduate students on the team.

Rule No. 9 Oral interviews will begin at 8:30 AM on Friday. Presentation materials for all teams are to be turned in to the judges by 8:15 AM. No other presentation material will be allowed into the presentation that is not turned into the judges by this time - NO EXCEPTIONS WILL BE ALLOWED. Teams are encouraged to bring electronic presentation materials on a CD or thumb drive for use on the HPCC provided presentation computer; this will save on set-up time. HPCC's computer will utilize Microsoft Office 2007 software; if specialized software is necessary then the team must provide a computer to run their presentation and this computer must be delivered prior to the 8:15 AM deadline.

Rule No. 10 No phone calls or emails may be made to the Owner, Construction Manager, Architect, Civil, or Structural Engineer, or any other design consultants listed on the Drawings. Similarly, no components of the problem may be sent to others outside the team for assistance in completing the problem. Any violations of the above are subject to point penalties or team disqualification, at the Judge's discretion.

Rule No. 11 Due to the sensitive nature of disclosing project information that the Owner and / or design professionals may not wish to be publicly distributed, Hensel Phelps Construction Co. reserves the right to require Confidentially Agreements be signed by each team member

prior to distribution of the Problem Statement. This may further require that all or some Contract Documents or other material provided to the team, both electronically and hard copy, be returned to Hensel Phelps at the conclusion of the competition.

Rule No. 12 The premise of the proposal and oral interview is that you are presenting to the upper management of your own company. It is preferred that your team take the identity of Hensel Phelps Construction Co., but other team / company names are acceptable. You are therefore asked to not include extra peripheral information about your company such as safety plans, company profiles or other marketing materials. Our intent is to test you on your knowledge of construction concepts, means and methods, not your ability to make up or compile marketing materials and canned programs. Please limit your responses generally to the information requested, although innovation and enhancement is encouraged.

Any team observed violating these rules may be asked to withdraw from the competition or be assessed point penalties.

X. SUPPLEMENTAL INFORMATION

Note: Most provided electronic format only on thumb drive:

0.1 Graphic Files / Letterhead
0.2 Contract Document Drawings
0.3 Request for Information Form
0.4 Competition Evaluation Form
0.5 HPCC Author / Administrator Biographies
0.6 Sample Team Feedback Form
1.1 Financial Status Report Spreadsheet
2.1 Change Estimate Spreadsheet Part A
2.2 Flow Construction Co.
2.3 Wall Contractors Inc.
2.4 Ignite Brothers
2.5 Approved Wage Rate Sheet
2.6 Change Estimate Spreadsheet Part B
3.1 Concrete Estimate Spreadsheet
3.2 Cost Data Sheet
4.1 General Conditions Spreadsheet
4.2 Staffing Matrix Spreadsheet
4.3 Company Historical General Conditions Rates
4.4 Staff Position Duties
5.1 Light Gauge Framing and Drywall Proposal Summary
5.2 Subcontractor Proposals
5.3 Epoxy Flooring Proposal Summary
5.4 Millwork Proposal Summary
5.5 Landscaping & Irrigation Proposal Summary
5.6 Ornamental Railings Proposal Summary
5.3 Telephone Proposal Form
7.1 Shoring Drawings
7.2 Short Interval Production Schedule
7.3 Example SIPS
9.1 Toolbox Meeting Agenda
9.2 Job Hazard Analysis Form
10.1 Site Utilization Plan
11.1 Placement Check Card
11.2 Cast-In-Place Concrete Specification
11.2 Slice Schedule
11.2 Structural Wall Section
11.2 Wall Lift Drawing