

Jeff Browning
Hensel Phelps Construction Co.
18850 Von Karman Ave.
Irvine, CA 92612

Subject: As-cast Concrete Placement Plan

Dear, Mr. Browning

As you and I are well aware, the As-cast concrete finish that has been specified for the Sanford Consortium for Regenerative Medicine has a high level of difficulty associated with it. Through communication with the Project Design Team, I have been informed that the concrete design intent is to mirror that of the Salk Institute. Due to the high level of finish and the inability to repair imperfections in the concrete surface after the forms have been stripped, I have developed the below plan to provide a final product that both the architect and owner will be pleased with.

- 1) **Concrete Tuck access and flow:** I have determined that the best way to ensure the truck flow throughout the site is to have a field engineer or craft employee be stationed at the site entrances to direct truck flow. In addition, the concrete trucks will be escorted to the pour location.
- 2) **Pump Setup:** The sizing and location of the concrete pumps will need to be analyzed on a pour-by-pour basis. Between two and three days prior to each concrete pour, a site walk between the Area Superintendent, Concrete Placement Forman, and the pump company Representative will take place. During the site visit all parties mentioned above will: walk the truck path, locate the pump so that it allows for proper concrete truck flow, and size the pump accordingly.
- 3) **Prevention of Aggregate Separation:** The prevention of rock pockets or honeycombing is extremely important since patching of the concrete is not an option. I have determined the best way to prevent this from occurring is through training and QC. I have instituted consolidation training for the concrete placers as well as the concrete finishers. I have also spoken with the concrete company and they have ensured me they will have a QC representative onsite for each pour. Additionally, coordination with the structural engineer has yielded a mix design with a large slump to help with consolidation. Finally, a large scale mockup will be constructed. This will allow for the Architect and Owner to review the wall finish and establish a standard for the entire project.
- 4) **Truck Spacing:** As mentioned above, I have already met with the concrete company and have them on board to have a QC representative onsite for all pours. They have also committed to dispatching trucks with consistent spacing as determined by the wall lift height and the location of the pour on the site. The Area Superintendent in charge of the pour will monitor the concrete placement and adjust truck spacing as needed.
- 5) **Subcontractor Commitments:** Since the formwork construction and rebar installation is as critical as the placement itself, I have scheduled a meeting with both the rebar and formwork subcontractor Project Managers and Forman. In this meeting, I will review the schedule and have them buy into the dates as well as get crew size commitments to hit them. Additionally, the Architects' expectations will be reviewed.

Sincerely,
Hensel Phelps Construction Co.

Mike Jones
Project Superintendent