

CLIMATE PLEDGE

ARENA

Project Newsletter

Temporary roof steel coming down?
(images 1-3)
Read below on page 3
for more information!



Our team conducted 24 rigorous tests on the enclosure mock-up to verify water/air infiltration rates to identify areas of potential risk and coordinate them with stakeholders to develop details to address any concerns. Read about their strategy on page 5! (image is a close-up of the enclosure mock-up)



TEAM MEMBER SPOTLIGHT



Eleonor Oshitoye's role is to support all Mortenson projects and our ongoing effort, in upholding our commitment to ensuring policies and practices to promote racial and social-economic equity and equal treatment for all SMWBE/DBE/SDVOSB subcontractors. Her role similarly helps to ensure compliance, enforcement, and education to all tier subcontractors and the management of the Community Workforce Agreement (CWA) requirements for the Climate Pledge Arena. Her collaboration with public agencies, Unions, pre-apprenticeship programs, and the WMBE community on an ongoing basis, is critical in developing and maintaining relationships and quality communication. Her ability and willingness to listen and understand the challenges from an SMWBE subcontractor perspective, while providing support and true transparent education and feedback to not only subcontractors of all tier levels, but also the owner, City, Unions, and project team so that everyone's voices are heard and supported accordingly is an asset to aligning our commitment and adherence toward equality and project goal requirements.

Eleonor and Pat Daniels, Director of Constructing Hope, a pre-apprenticeship program that helps formerly incarcerated, drug rehabilitated, battered individuals and/or underserved people of color and women

Eleonor participating in a virtual speaking engagement for the Ascend Program with the UW Foster School of Business for Small, Minority, and Woman-owned firms



TECHNOLOGY AT CLIMATE PLEDGE ARENA

The Climate Pledge Arena utilizes some of the most advanced technologies to review design and constructability aspects of the project, such as 3D Building Information Models (BIM), Virtual Reality (VR), and Augmented Reality. Recently we used the Oculus Quest and an empty 2nd floor to digitally immerse people in Climate Pledge Arena. During the second week of July, over 3 days, we hosted 8 separate sessions of VR for 30 members of the Seattle Kraken and Climate Pledge Arena Team. The people who participated in these sessions are members of the Suite Sales, Premium Sales, and Ticketing teams – from the SVP of Sales and Service to Ticketing Coordinators, and everyone in between. Management for both organizations asked for these sessions to help prepare their staff for the seat selection process that was beginning the following week. Based on feedback from others who had participated in the VR tour, they wanted their team to have a more all-encompassing, immersive visual of what each premium space within the Arena looked and felt like, as well as be able to understand the view offered to guests from different vantage points. We received nothing but glowing feedback on all the sessions that we hosted for them. They told us it was a fun way for team members to be together in groups of 4 that were safe during strict social distancing guidelines. It also proved to be an invaluable resource for them as they planned for the weeks ahead while scheduling seat selection appointments with guests on the waitlist for Kraken season tickets.



“The VR tour was such a positive experience that the Seattle Kraken ordered a VR unit to be deployed in our Preview Center to show our VIPs.” - Bill Chapin, Senior Vice President - Sales & Service Seattle Kraken & Climate Pledge Arena



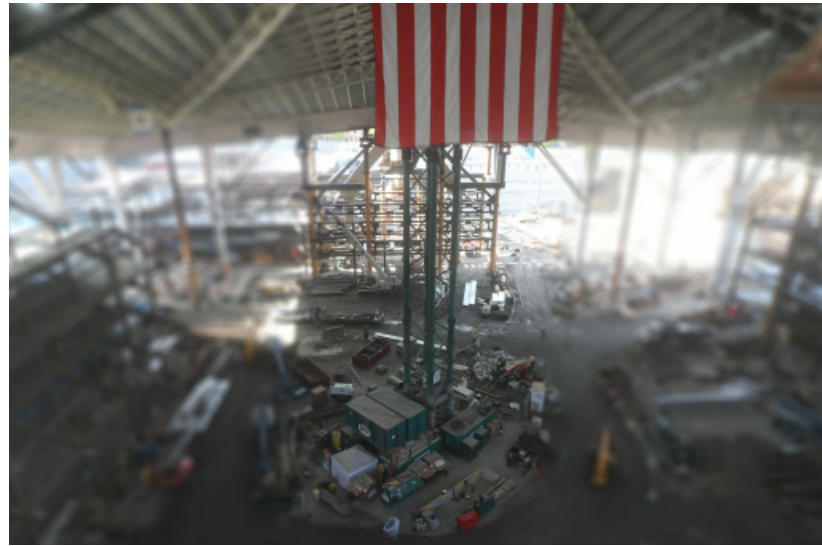
KICKSTAND & CENTER SHORING REMOVAL

On July 25, 2019, the Climate Pledge Arena Temporary Roof Support team made history when they jacked the roof in the first location, the **center shoring tower**. Over the course of the next four months, the roof would be jacked in thirty-two additional locations to fully support the 44-million-pound roof in midair. To the average person sneaking a peak from outside the project, it seemed impossible that something of that scale could seemingly float in the air. Thornton Tomasetti, Hart Crowser, and many dedicated trade partners were able to make it a reality.

The center shoring tower is a four column, 1000-ton capacity steel tower that was supported on four drilled shafts at center ice. This tower stood 150' tall while supporting the roof at its tallest point for 13 months until roof strengthening and the south buttress shear wall were complete. Initially, the center shoring tower raised the roof 1 $\frac{3}{4}$ " inches during jacking, however this number fluctuated throughout the year due to the heat and cold. After removal, the roof peak stands $\frac{1}{2}$ " taller than it did prior to erection of the center shoring tower.

Another key element of the temporary roof support system was the south buttress support, often referred to as the **"kickstand"** for its two steel columns that sat halfway between the cap beam and south buttress. The kickstand was the last location to be jacked and made the roof 100% temporarily supported on November 19, 2019. While it stood for nine and a half months, the kickstand provided lateral and seismic support for the detached south buttress.

The dismantle of both the center shoring tower and the kickstand were tied to completion of the south buttress foundation and shear wall. Now that the concrete is placed and cured, the shear wall can provide the lateral support required at the south buttress. This will in turn keep the roof stable at the south. The removal of these two key locations has opened up work in both the bowl and garage that will keep us moving forward to drop the puck in 2021!



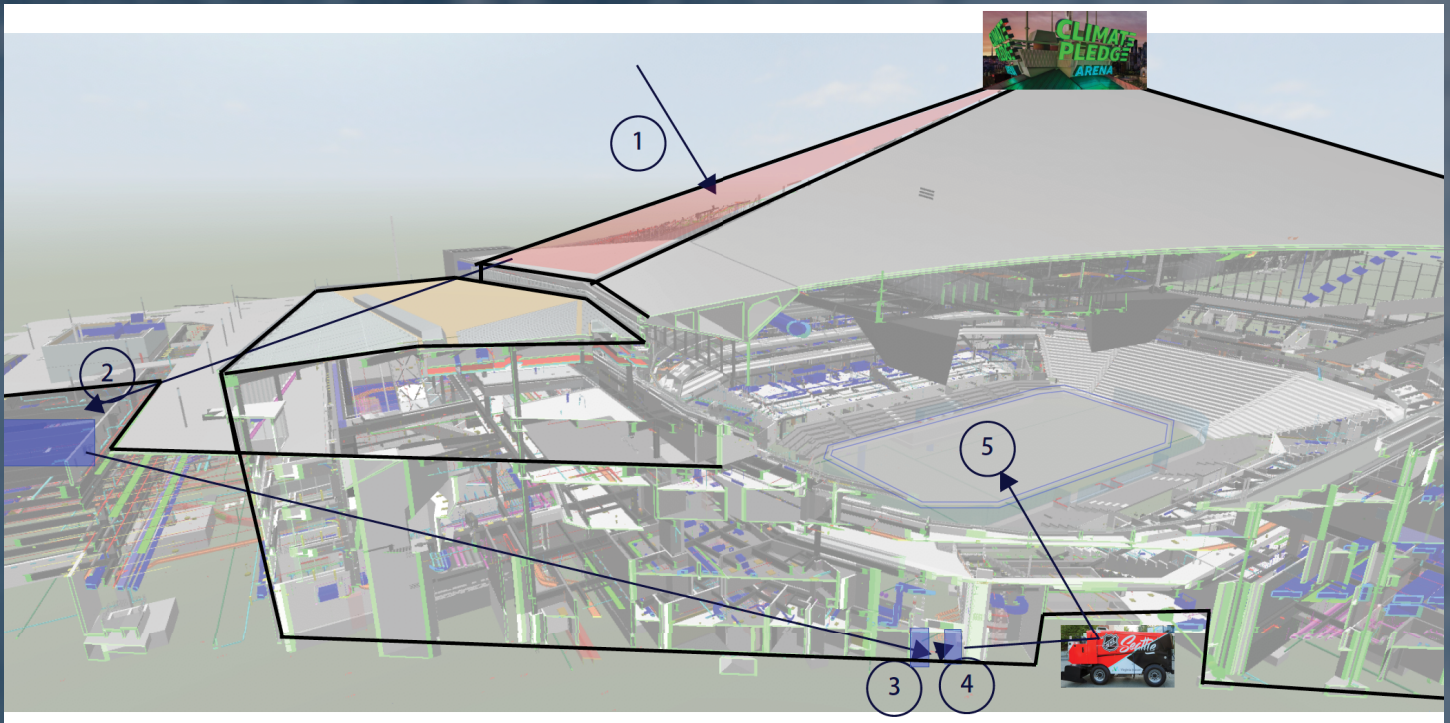
Top:
4 Column Center
Shoring

Middle:
View of Kickstand
looking North on
top of the Cap Beam

Bottom:
Kickstand being
Disassembled

RAIN 2 RINK

BUILDING THE MOST SUSTAINABLE ARENA IN THE WORLD



To achieve the Climate Pledge Arena Rain 2 Rink Water Harvesting system we will (1) collect water from the roof, from there it will flow into a (2) underground cistern. From the cistern, it will route down into the zamboni room where it will go through a (3) water filtration system to bring water quality up to domestic water standards and routes into a day tank, then flow into the (4) Jet Ice water purification system to get the water quality to be crystal clear to meet NHL standards to where it will then discharge to provide (5) a filling station for the water to build and maintain the ice for The Kraken!

**THE ICE RINK IS 200 FT
LONG AND 85 FT WIDE**

**IT WILL TAKE APPROX.
10,600 GALLONS OF
WATER TO ACHIEVE A 1
INCH THICK SURFACE**



MEET YOUR ENCLOSURE TEAM



Christian Generosa
Field Engineer



Brooke Burcham
Project Engineer



Sam Thayer
Superintendent



Roshan Alex
Project Manager

ENCLOSURE SUPPORT

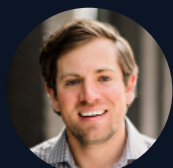
(BECAUSE IT TAKES A VILLAGE)



Santino Medina
VDC/BIM



Lance Gabriel
Schedule



Greg Goebel
Quality

Other sports & entertainment projects some of these team members have also been involved in include:

Truist Park (Atlanta Braves), Amalie Arena (Tampa Bay Lightning), Fiserv Forum (Milwaukee Bucks), Chase Center (Golden State Warriors), Allegiant Stadium (Las Vegas Raiders), and Pegula Ice Arena (Penn State Hockey).

RELEASE THE KRAKEN! (BUT ONLY AFTER WE COMPLETE THE ENCLOSURE, PLEASE)

Even though the enclosure scope may seem relatively small on this project, there is no shortage of challenges associated with it. It started with waterproofing all the perimeter foundation walls which are part of the ERS (Earth Retention System) approximately 60 feet below grade level. On the Upper Concourse level, it involved removing the 40,000 square feet of existing window frames, abating them, and reinstalling them with updated structural connections at the North, East, and West Elevations, then adding a new curtain wall system at the south elevation of the arena and the ticket office. Add to that installing metal panels (interior shafts/plenums and exterior) and fiber cement siding to the exterior of the (4) Snorkels that serve as mechanical spaces for the Arena, and you have **COORDINATION** written all over everything.

To be successful with our install, we detailed, constructed, and tested an enclosure mock-up system that incorporates all the critical interfaces on the project to ensure that all the systems perform above and beyond the specified test pressures for air and water infiltration.



SAFETY WEEK (SEPT 14-18)

Safety Week is an opportunity for people, companies, and our entire industry to join together, celebrate and recommit to safety as the foundation of everything we do. It is obviously the best week of the year, but Safety Week 2020 will certainly be different than past years to allow for proper COVID-19 protocols. Although we are changing the way we do our safety recognition and toolbox talks, we are still going to promote effective ways to meet and recommit to sending every person home safely. The theme this year is Built on Safety. We are built on safety because of our families both on and off the jobsite making sure the decisions we make on the jobsite don't negatively impact anyone's lives off the jobsite. Below is our Covid-19 friendly schedule:



WORKING MORE THAN 12
HOURS PER DAY LEADS TO
A 37% INCREASE
IN HAZARD RATES

MON.

Workers will receive a commemorative "Safety Week" water bottle and pre-packaged breakfast.

Pre-task (each trade partner/ crew family) will consist of Safety Week Kick-Off "Build on Safety" and discussion of "Mask up, Washington."

TUES.

Pre-task (each trade partner/ crew family) Topic: "Focus on the Fundamentals"

WED.

Workers will receive a commemorative "Safety Week" 1/4 ZIP Safety Week Shirt from Leadership!

Pre-task (each trade partner/ crew family) Topic: "COVID-19"

Virtual message and launch of our "Trade Partner of the Month" and "Safe Worker of the Month" campaign

THURS.

Pre-task (each trade partner/ crew family) Topic: "Mental Health Awareness"

FRI.

Pre-task (each trade partner/ crew family) Topic: "THANK YOU"

A pre-packaged lunch will be distributed. Each package will include a QR code that will link to a Mortenson pre-recorded thank you message.

CHECK OUT
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