# ALASKA STATE CAPITOL SEISMIC RETROFIT & EXTERIOR RENOVATION



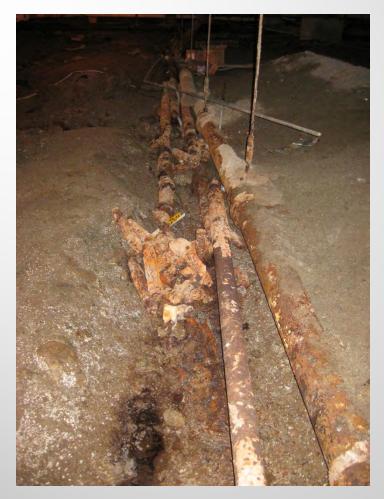
Alaska State Library - Historical Collections

Legislative Council - October 30, 2013

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## Phase I Components:

- 1. Unit Price Work: Clean Crawl Space and Repair Structure under Ground Floor
- 2. Lump Sum Work: Seismic Retrofit of Stone Portico Columns and Roof
- 3. Contingency Allowance: Repair and Reinforcing of Portico and Entry Stair Foundations





Crawl Space Prior to Construction



Access into Crawl Space from SE Corner



Corroded Reinforcing in Floor Joist



Removing Dirt from Crawl Space



Loose Concrete and Rust removed from Joist



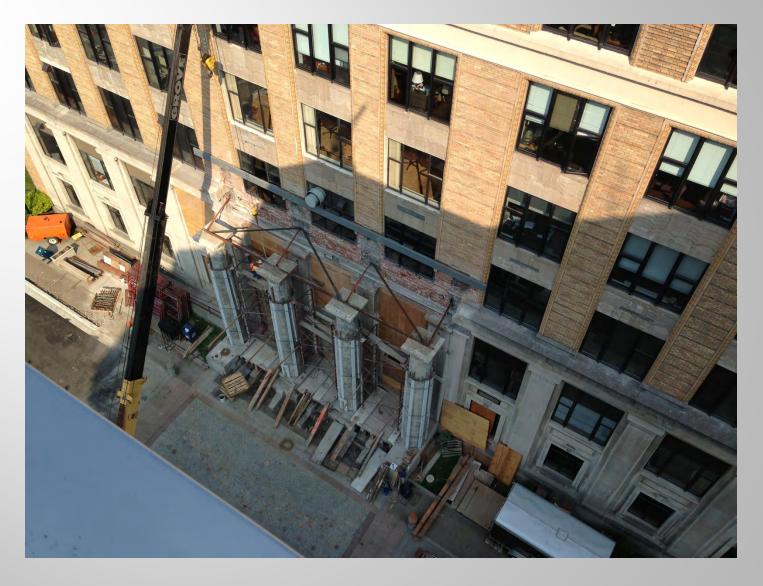
Shotcrete being Applied to Joists



Crawl Space Inspection Team



Stone being Removed from Portico Roof



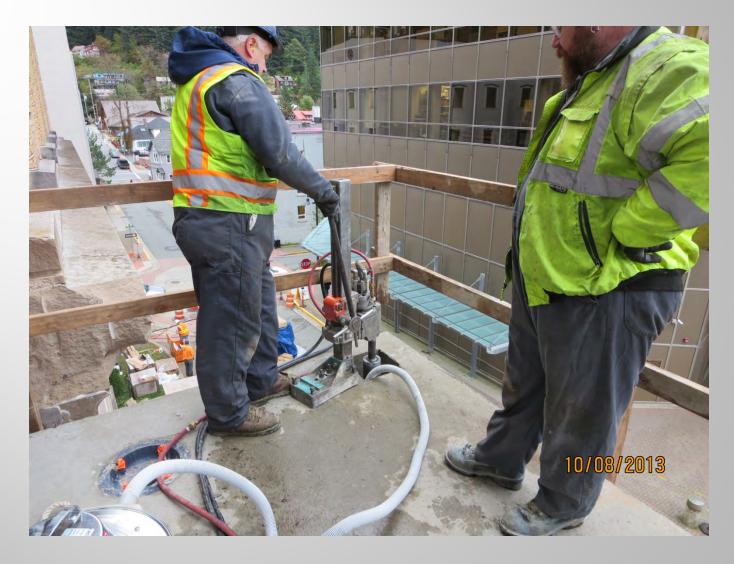
Stone Removed-Columns Braced



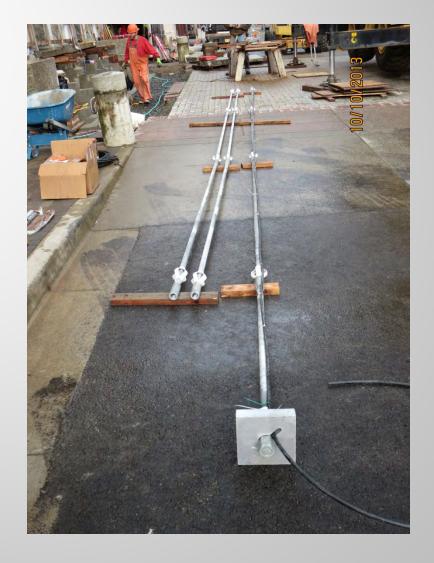
Reinforcing for Pilasters at Building



Concrete Beams and Deck at Portico



Core Drilling Columns for Reinforcing



Column Reinforcing and Grout Tube





## Column Core from the Washington Capitol





Condition of Foundation under Entry Stairs



Drilling into Column Foundations for Reinforcing



Reinforcing for Column Foundations



Crack Gauges being Installed to Monitor any Movement



New Forms for Stair Stringers



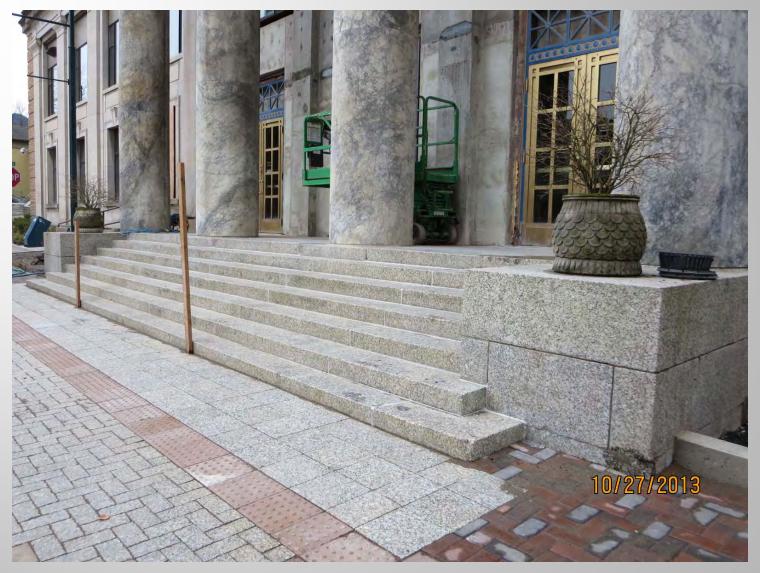
New Stringers and Grade Beam



Resetting the Granite Corner Blocks



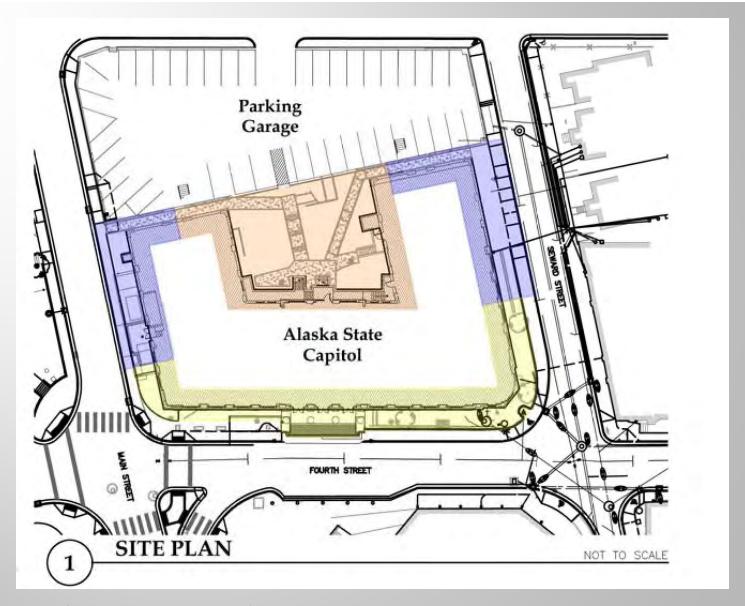
Granite Stairs being Installed



Entry Stairs Nearly Complete

## Phase II Components:

- 1. CM/GC Construction Contract
- Seismic Retrofit of the Rest of the Building
- 3. Renovation and Energy Upgrade of the Exterior Walls
- 4. Replacement of the Heating System



Phasing Plan: 2014, 2015 & 2016

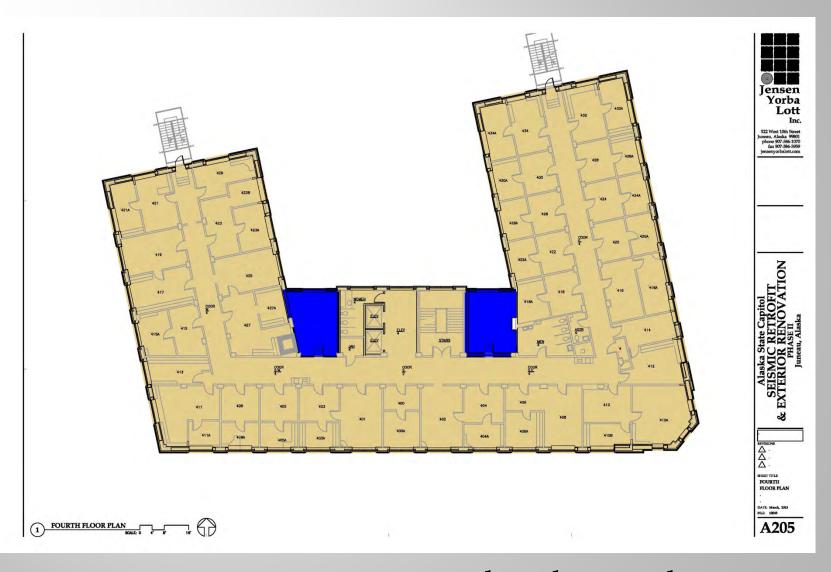


JDCM 2008.14.043



JDCM 2008.14.032

## Concrete Structural Frame 1930



Infill Opportunity on 3<sup>rd</sup>, 4<sup>th</sup> & 5<sup>th</sup> Floors

### 2. Water-Resistance Deficiencies and Challenges

2.6 Sandblasting exacerbates water intrusion and seriously damaged brick.







- Exterior brick has been irretrievably damaged by sandblasting, which removed outer crust.
- Resulting spalling can be retarded, but not stopped, by application of consolidating & water-repellent agent.

- Brick will continue to spall and crumble.
- This may be a significant consideration.



#### Destruction of Stone Base Along Grade





PAUL LUKES: Building Envelope Consulting Services LLC

#### Seismic Cracking of All Stone Window Sills





#### Degradation of Stone Water-Table









#### Degradation of Terra-Cotta Water-Table









#### Leak Symptoms at Windows













Restoring the Original Cornice





# Restoring the Portico Lights



Bronze Letters will be Reinstalled



Capitol Restored to 1929 Design