

# East Pine Substation Expansion of North Wall

1501 23rd Avenue

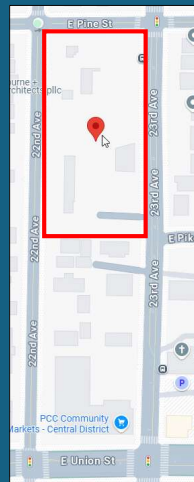
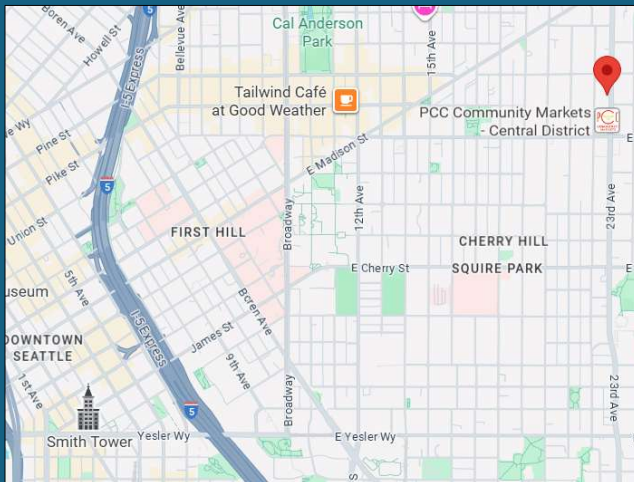


Seattle City Light

WE POWER SEATTLE

1

## Location

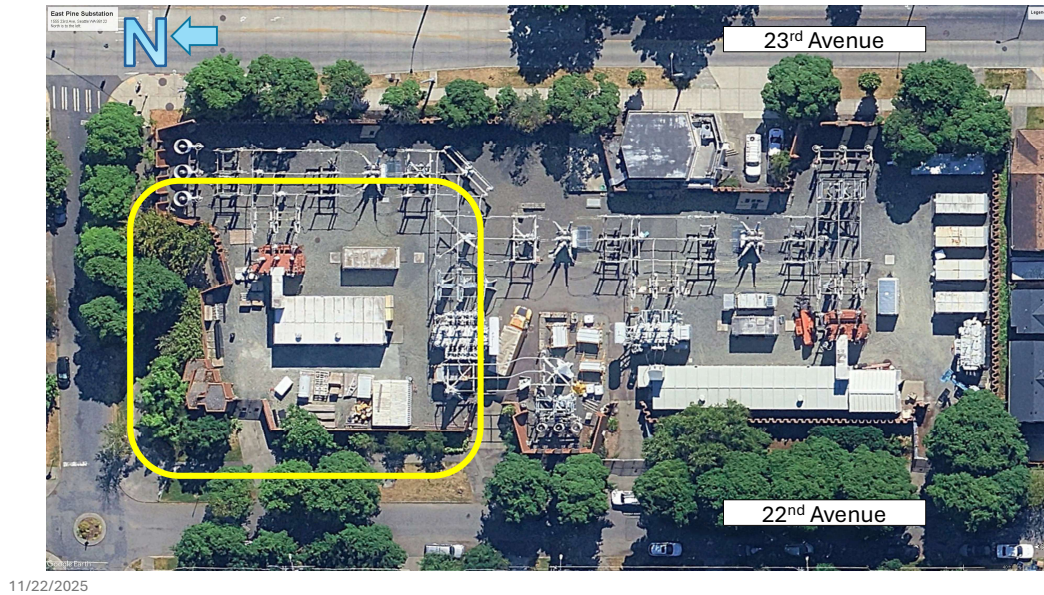


Seattle City Light

WE POWER SEATTLE

2

### Aerial View – Yellow Outline is Project Location



3

### Street View - From SW Corner of the Substation, Facing NE



4



### Street View – Near NW Corner, Facing SE



11/22/2025

5

5

### Street View - From NW Corner, Facing SE



11/22/2025

6

6

### Street View – Left of NW Corner, Facing SE



11/22/2025

7

7

### Street View - From East Pine St., Facing South, Substation's N Elevation



11/22/2025

8

8



## Electrical Terminology 101

**Substation** – A defined network of switching, control, and routing equipment, with transformers to carry **load** (also known as electricity or power). They receive, distribute, and transmit power. Typically includes:



**Control Building** - Serves as the substation control center, can be automated or manned, and manages the flow of electricity in and out of the substation.



**Circuit Breakers** – A protective device that interrupts electrical current during abnormal conditions such as a short circuit or overload. Protects the transformers and related equipment from damage and prevents widespread outages.

11/22/2025

9

9

## Electrical Terminology 101

**Key Terms** (continued):



**Feeders** – A component that carries electrical power from a substation or a distribution point to the consumer (e.g., residences, businesses, hospitals, etc.)



**Transformers** – Serves to step up or down voltage levels to ensure that electricity can be transmitted efficiently over long distances and safely distributed to consumers. Also called a “Bank.”



**Switchgear** – Electrical disconnect switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment. Also used to de-energize equipment to allow work and clear short circuits.

11/22/2025

10

10

## East Pine Substation within SCL's Electrical System

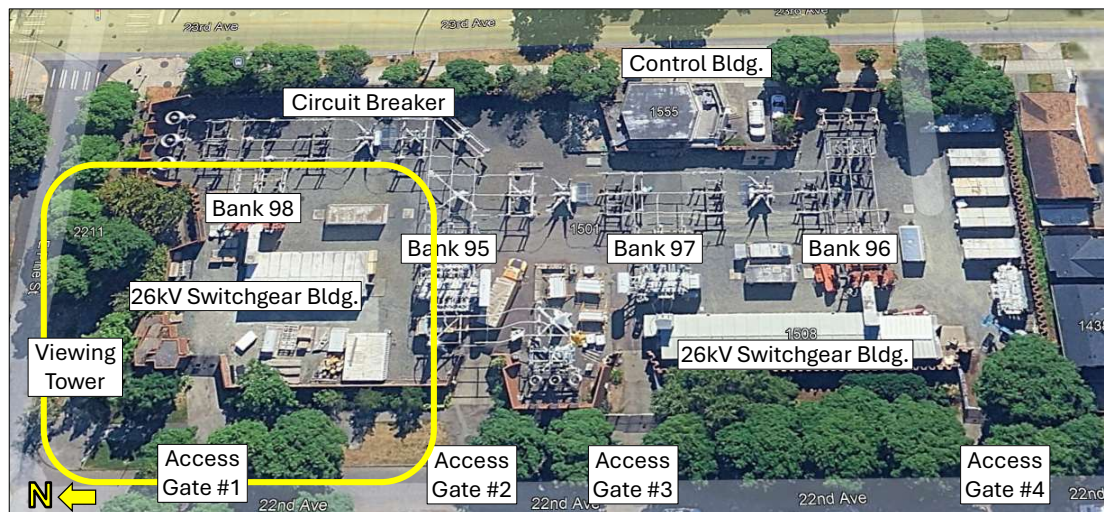
- First carried load in February 1967
- Handles 230 kV, 115 kV, and 26 kV levels
- Distribution and Transmission Substation
  - Distribution – Transformers step down the voltage for distribution at a local level (e.g., 230 kV to 26 kV).
  - Transmission – Interconnects with the Northwest power grid allowing for management of power flow and system stability throughout the region.
- Connects to:
  - Broad Street Substation and Denny Substation
  - South Substation
  - Maple Valley (BPA)

11/22/2025

11

11

## East Pine Substation Components



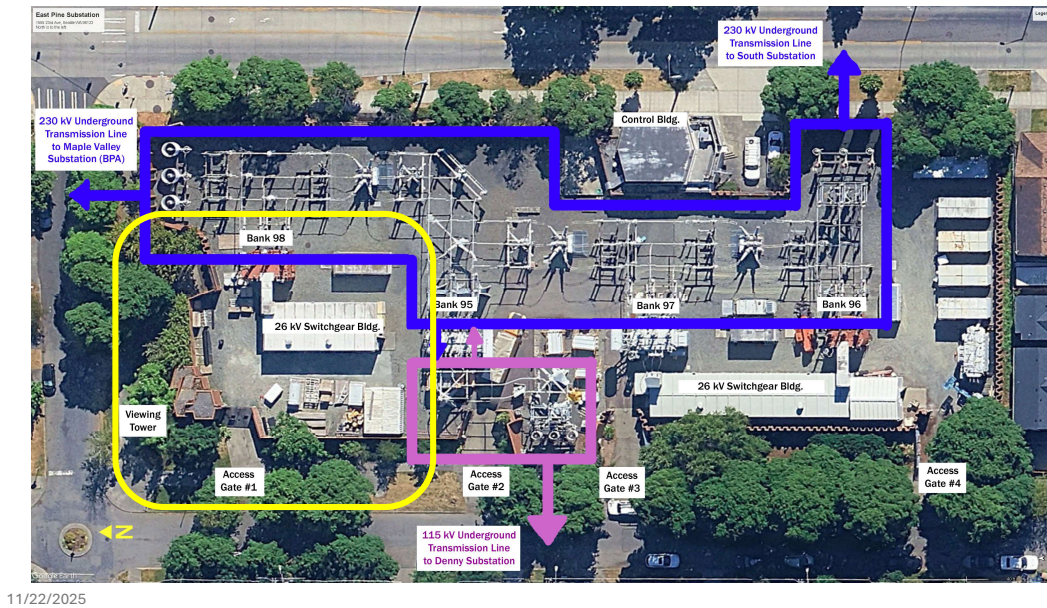
11/22/2025

12

12



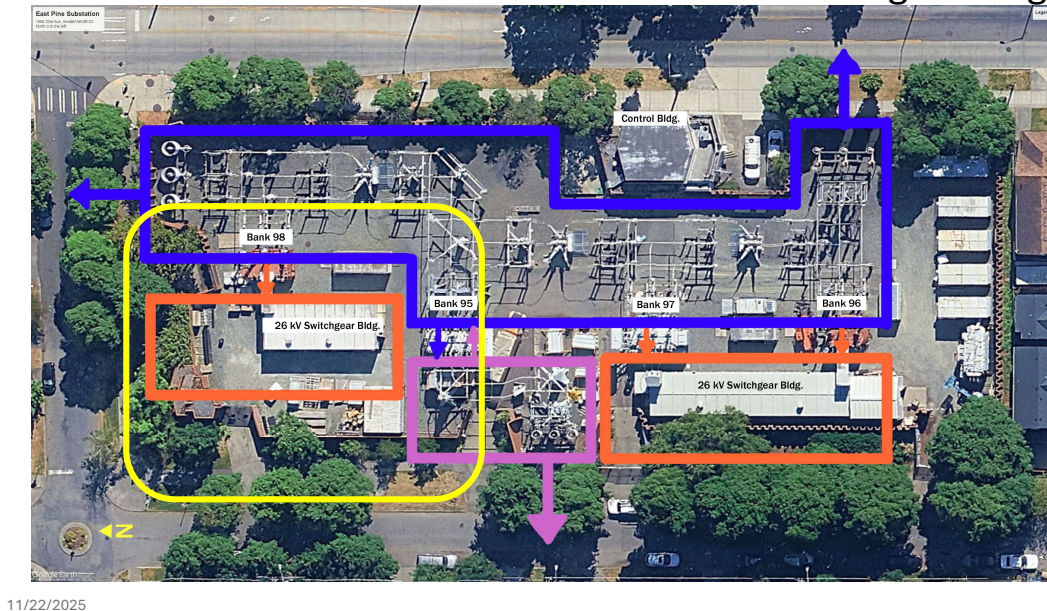
## Aerial View – 230kV and 115kV Electrical Connections



13

13

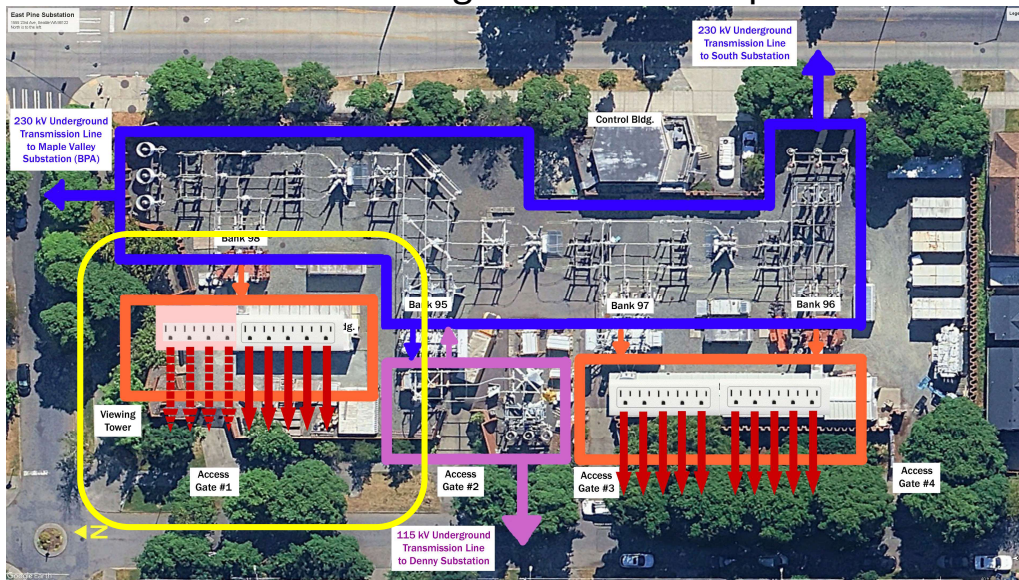
## Aerial View – 26kV Electrical Connections & Switchgear Bldgs.



14

14

## Aerial View – 26kV Switchgear / “Power Strip” Connections



11/22/2025

15

15

## Changes Over Time

- 1967-68 Substation completed to original design
- 1975 Electrical equipment added within the yard. Playground filled in.
- 1994 SW wall expanded out due to 26kV Switchgear Building Addition
- 1998 Control Building receives an addition on the south elevation
- 2002 West Wall and Access Gates #1 and #2 expanded out

11/22/2025

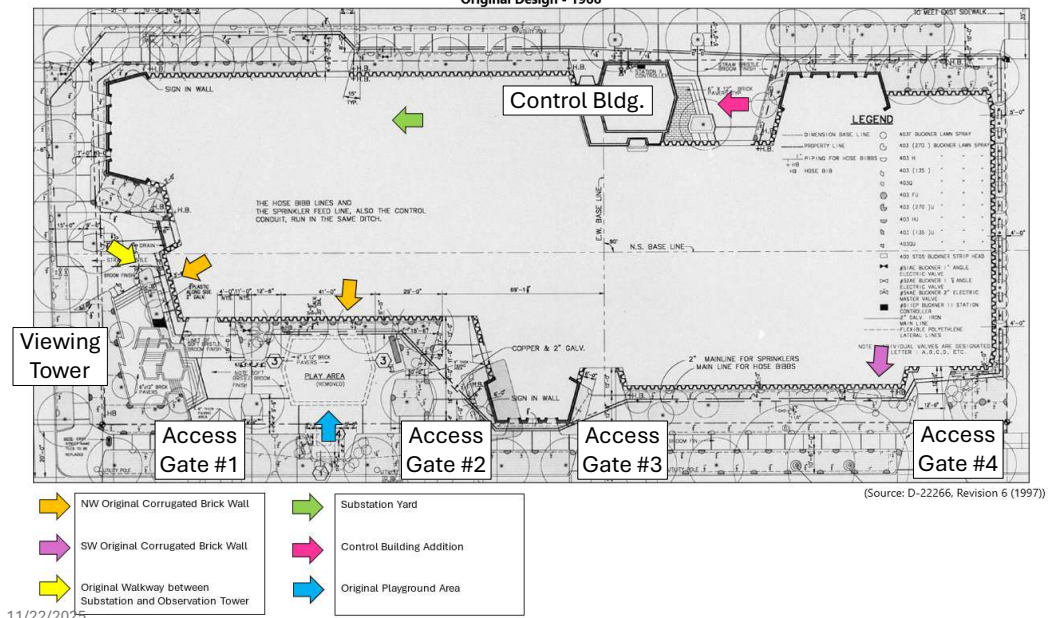
16

16



## Plan View – Changes Over Time

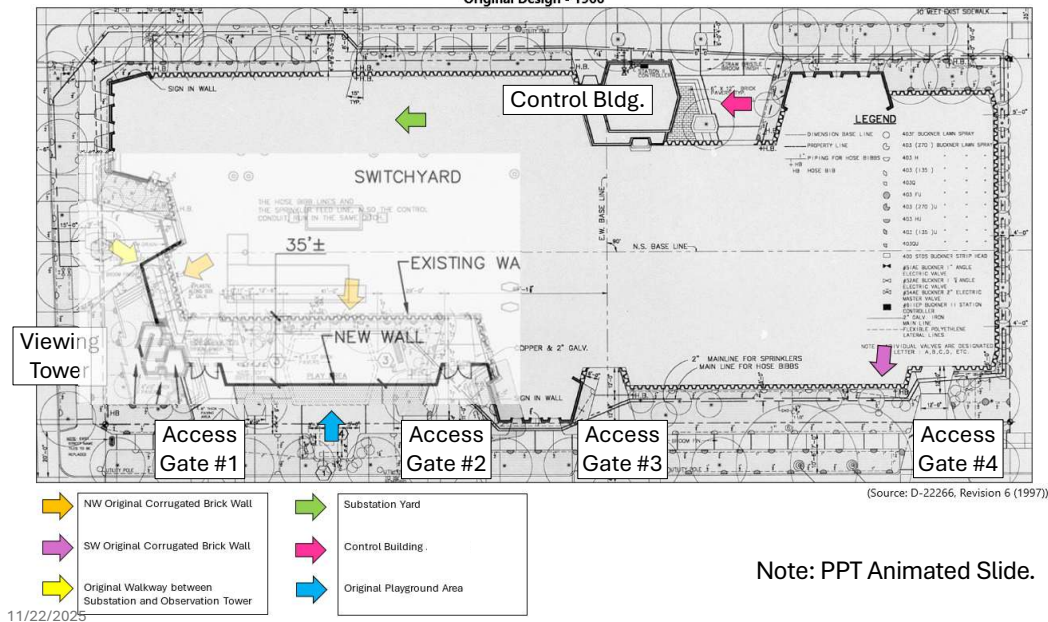
Original Design - 1966



17

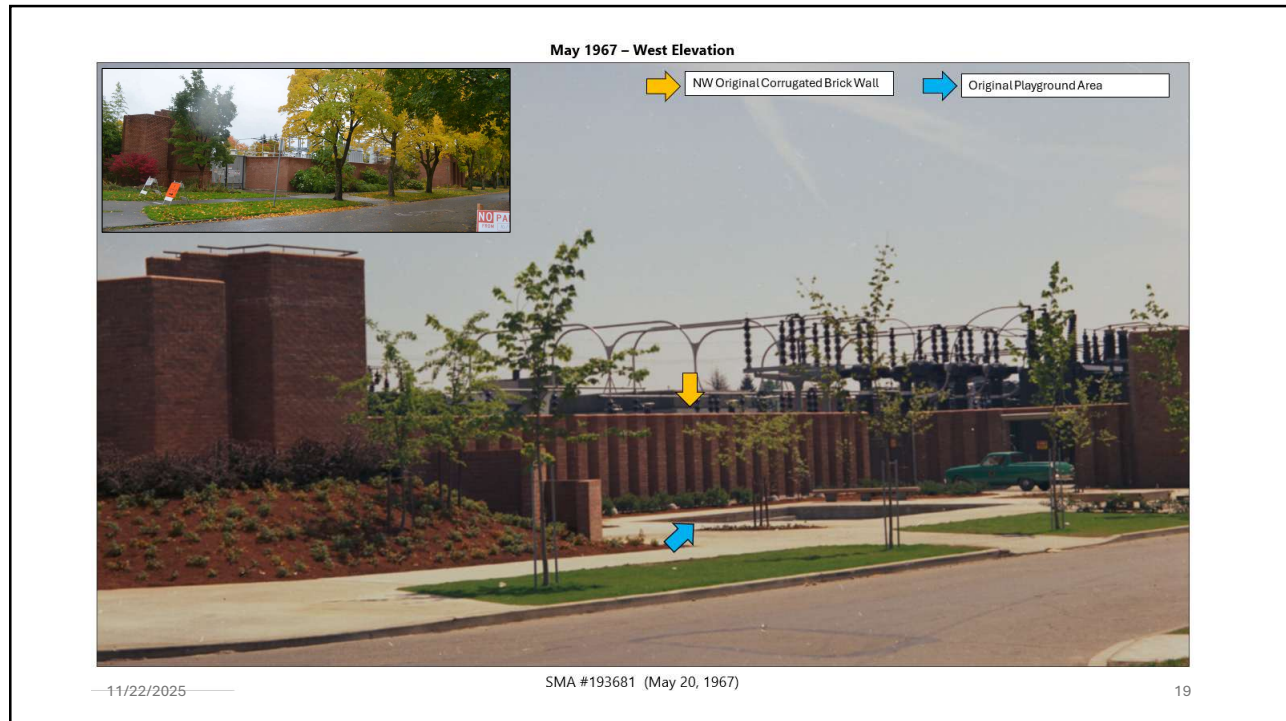
## East Pine Substation – Changes Over Time

Original Design - 1966

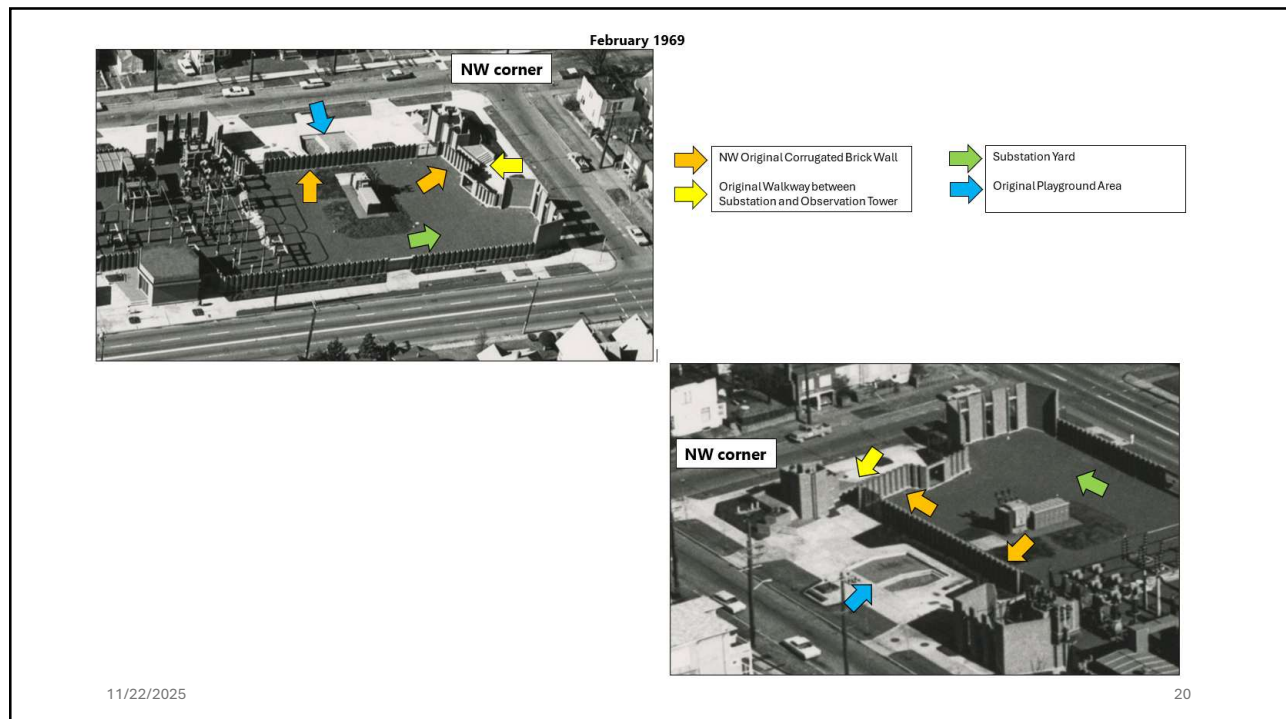


Note: PPT Animated Slide.

18



19

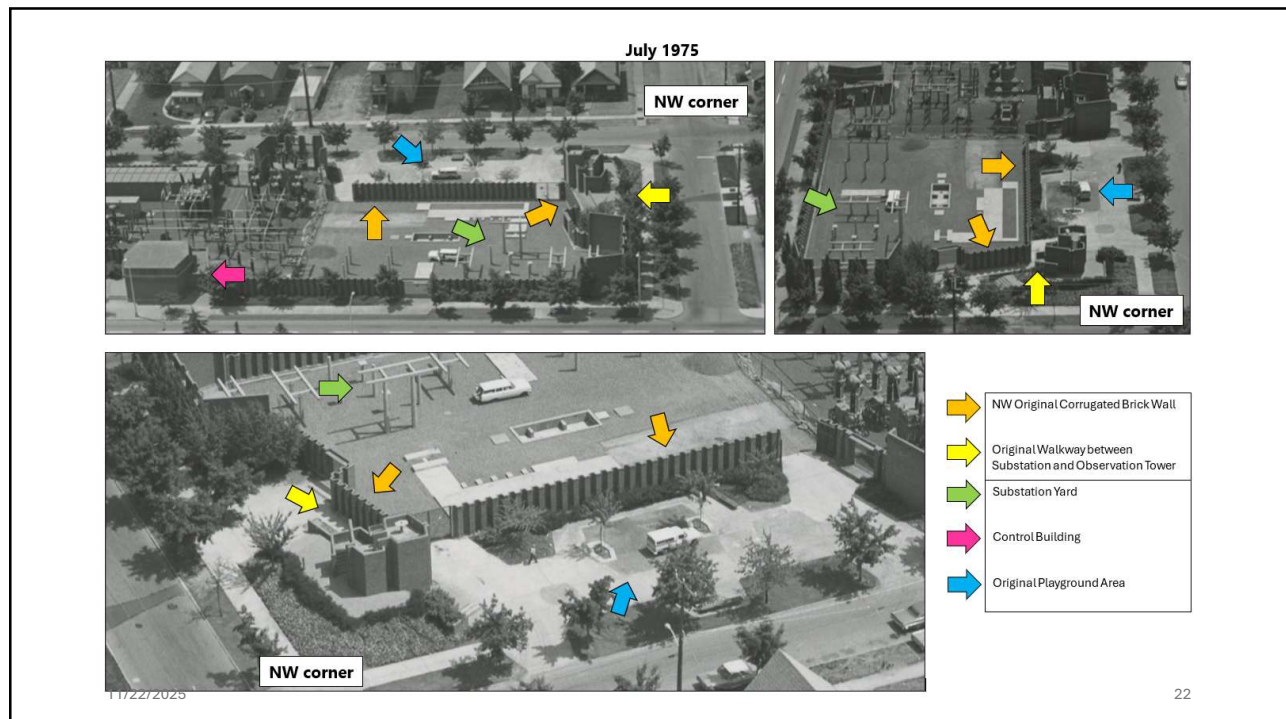


20

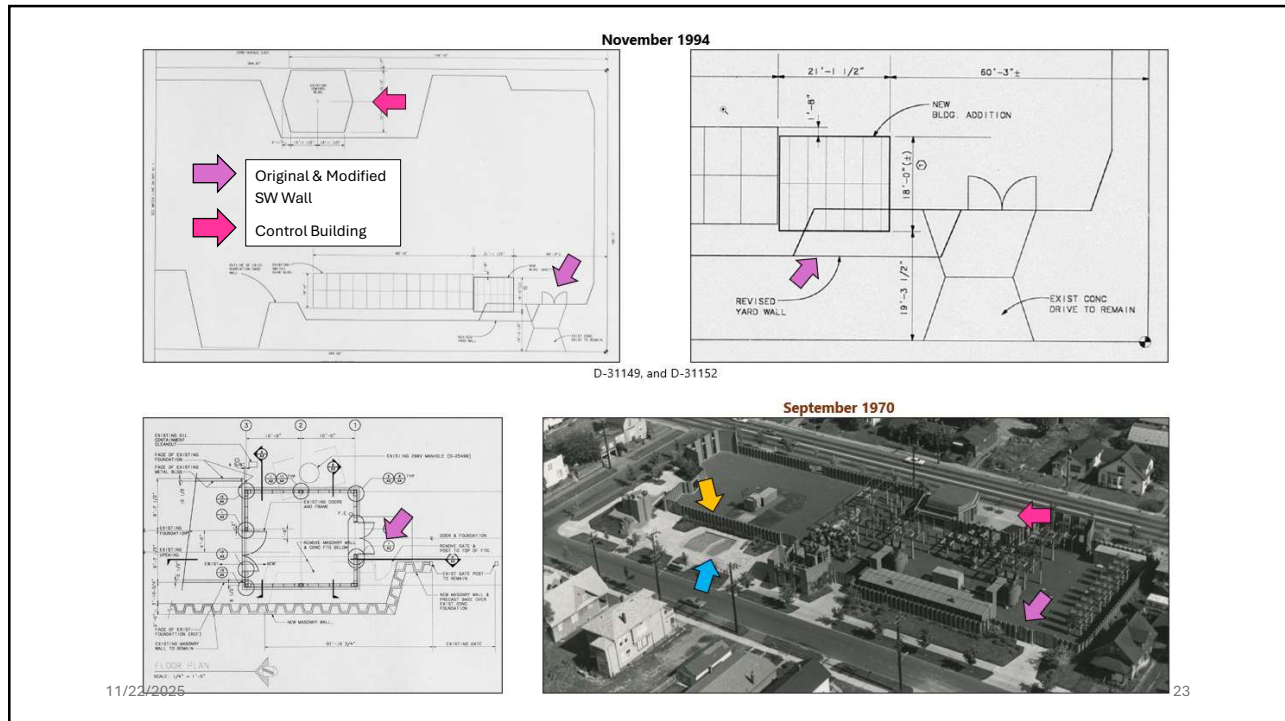




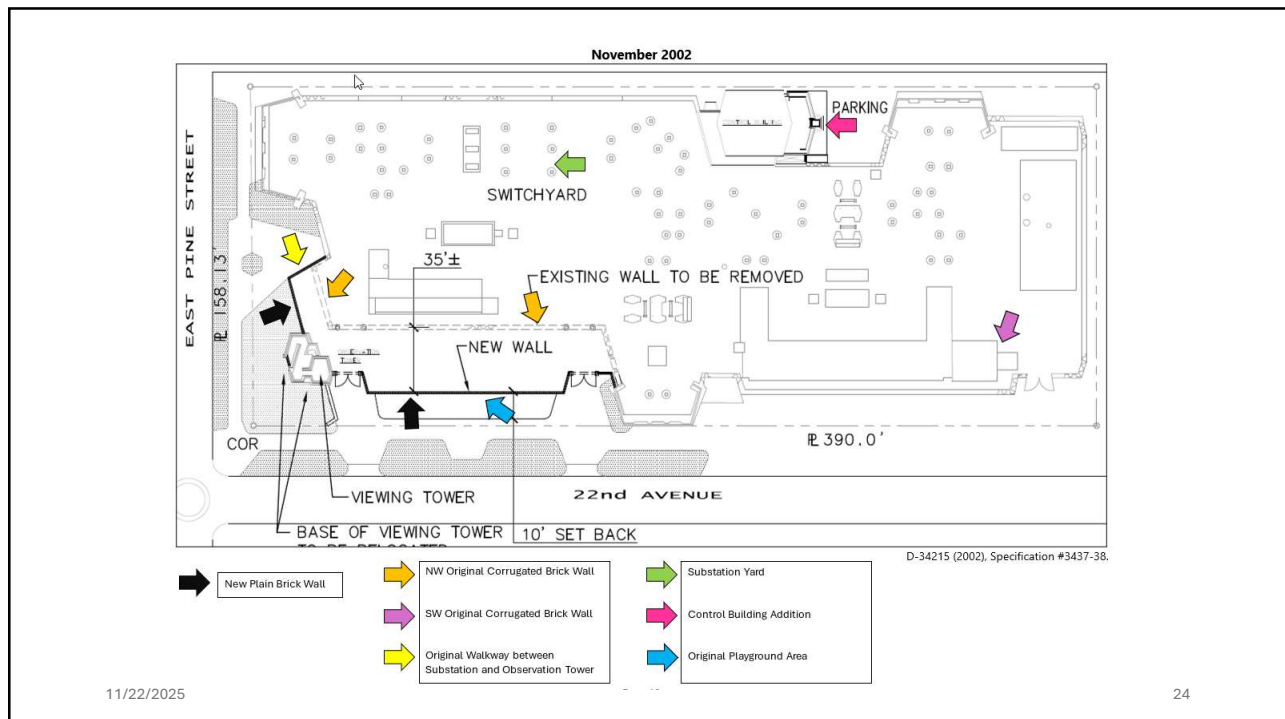
21



22



23



24

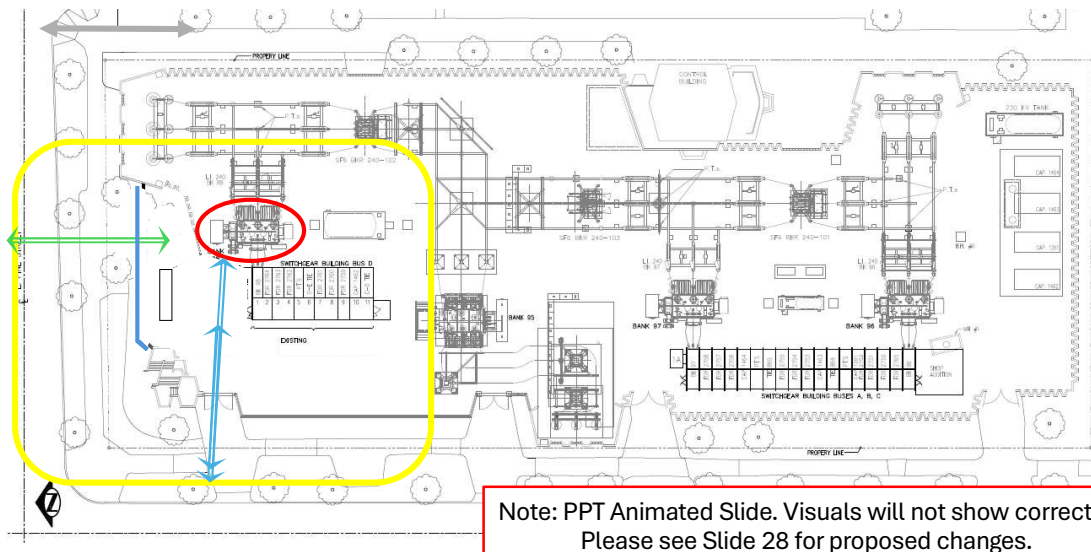


## Aerial Views – 1967, 2002, 2007, and 2024



25

## Plan View – Showing Need for & Proposed New North Wall



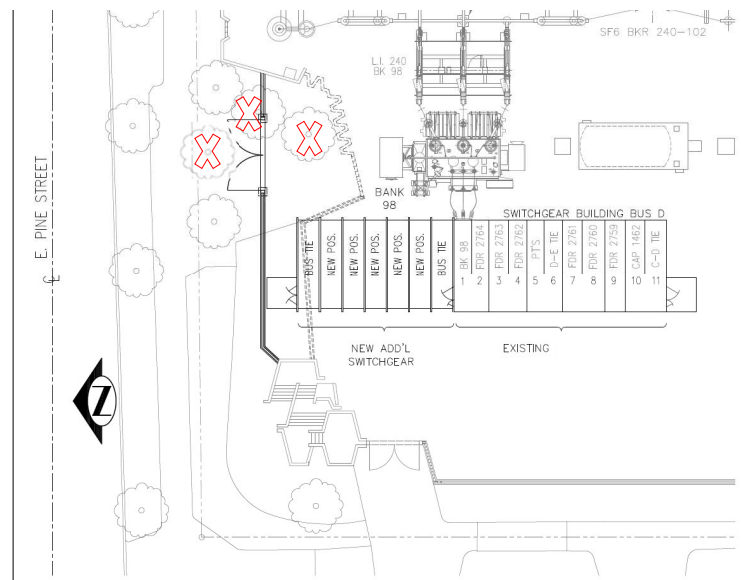
26



11/22/2025

27

### Plan View – Proposed New North Wall

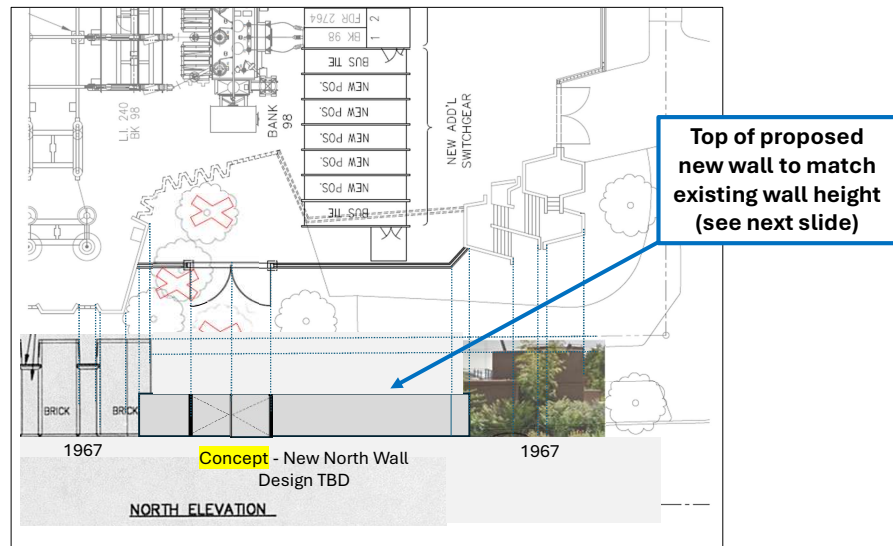


11/22/2025

28



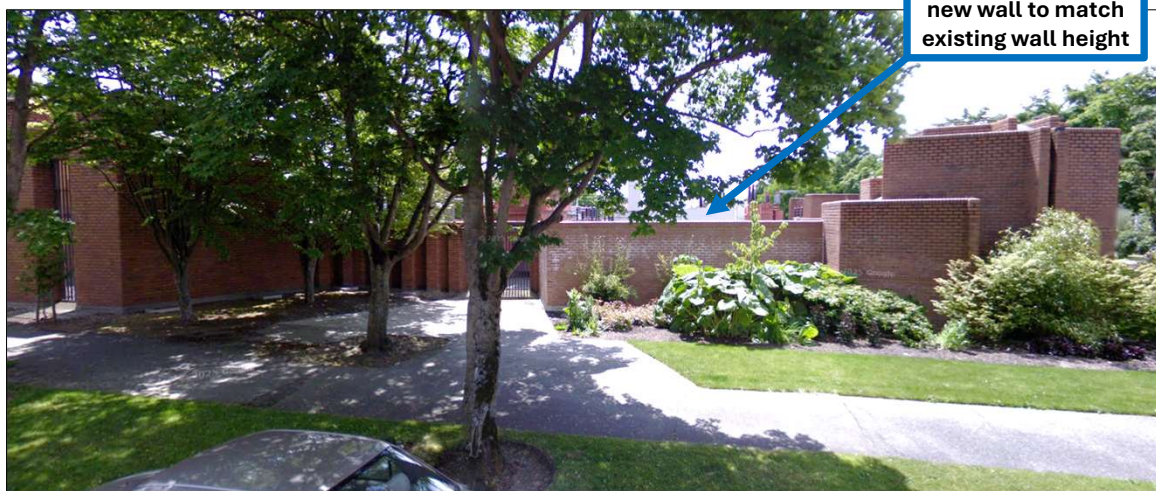
## Plan View with Conceptual Elevation for Proposed New North Wall



11/22/2025

29

29



11/22/2025

30

30

