Denny Substation
Urban Design Merit

with the

Seattle Design Commission

November 7, 2013
Denny Substation
Urban Design Merit:
MACRO SITE CONTEXT

November 7, 2013
RELATIONSHIP TO SIGNIFICANT NODES

MACRO SITE CONTEXT

SEATTLE CENTER
LAKE UNION
DOWNTOWN
CAPITOL HILL

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*On Valley Street, all Class 1 Pedestrian Streets requirements apply only to lots abutting on the south side of the street.
GREEN SPACES

GREEN SPACES
GREEN STREETS

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MACRO SITE CONTEXT
RELATIONSHIP TO SIGNIFICANT NODES

DENNY WAY
TO SEATTLE CENTER

DENNY WAY
TO CAPITOL HILL

PONTIUS AVE. N
TO LAKE UNION

VIRGINIA ST.
TO DOWNTOWN

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9 BLOCK AREA
GREEN SPACES

PUBLIC
CASCADE PARK and PEA PATCH

PRIVATE
REI TRAIL SYSTEM

PRIVATE
SEATTLE TIMES BLDG. POCKET PARK
Denny Substation
Urban Design Merit:
SITE & UTILITY OPERATIONS

November 7, 2013
SUBSTATION FOOTPRINT and EQUIPMENT LAYOUT
*Transmission lines and Distribution duct banks will be below grade
existing underground transmission line
• Equipment layout restricted to Parcel 2
• Requires an above and below grade substation design
• Stacked layout complicates accessibility, maintenance, and safety
• Distribution lines routing occurs further below grade than desirable
• No opportunity for prominent urban amenities at the perimeter
• Higher capital cost ($37M higher cost than Vacation of Pontius option)
- Equipment layout dispersed on discontiguous parcels and not optimal for daily operations
- Increased operational difficulty in emergency and non-normal operational situations.
- Complexity of security management is increased
- Safety risk for crews and public beyond conventional substation construction approach
- Increased maintenance and capital improvement costs
- Road and sidewalk closure for maintenance and capital improvements will be required
- Visual acuity between sides is challenging for operation
- Requires below street level vacation
- More vulnerable to destructive external attach than conventional substation design
- Higher cost of initial construction
• creating through block connection
• creating an open space on site
• Equipment layout occurs on Parcel 2, a portion of Parcel 1, and over Pontius Street.

• Substation facility is accessible at grade for ease of maintenance and safety.

• Distribution lines occur slightly below grade as per standard for ease of access, maintenance, and lower cost.

• Unassigned open space affords opportunities for potential public amenities.

• Creates a unique condition for experiencing the neighborhood, art, and the substation

• Serves as a prominent landmark for the city and the neighborhood

• Current costs are aligned with anticipated baseline project cost
STRUCTURE LAYOUT AND TRUCK ACCESS ROUTES
Denny Substation
Urban Design Merit:

VACATE PONTIUS ALTERNATIVE
VEHICULAR TRANSPORTATION IMPACTS

November 7, 2013
EXISTING STREET NETWORK
EXISTING TRAFFIC VOLUMES
P.M. PEAK HOUR

- PONTIUS AVE. N
  105 VEHICLES
- JOHN STREET
  290 VEHICLES
- MINOR AVE. N
  140 VEHICLES
- THOMAS ST.
  240 VEHICLES
- DENNY WAY
  1800 VEHICLES

9 BLOCK AREA
**TOTAL # OF RIDERS PER DAY**

1. 300 RIDERS ON; 100 RIDERS OFF
2. 360 RIDERS ON; 150 RIDERS OFF
3. 600 RIDERS ON; 2,100 RIDERS OFF

**BUS ROUTES**

**BUS NUMBER**

**ZIP CARS**

**BUS STOPS**
PEDESTRIAN AND BICYCLE ROUTES
ACCESS AND SERVICE
EXISTING

- WASTE/RECYCLING ZONE
- LOADING ZONES
- ENTRANCE
ACCESS AND SERVICE PROPOSED

- WASTE/RECYCLING ZONE
- LOADING ZONES
- ENTRANCE

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Urban Design Merit:

MASSING ALTERNATIVES:
1. NO VACATION OF PONTIUS
2. VACATION OF PONTIUS

November 7, 2013
CONTEXTUAL CONNECTION
no vacate option - 2 level substation
no vacate option - 2 level substation

representation of maximum allowable development

above grade level

below grade level
- Equipment layout restricted to Parcel 2
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- Stacked layout complicates accessibility, maintenance, and safety
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optimized footprint; open space potential
reducing the massing further through sloping the facade and allowing urban access and movement through and around the substation.
lifted edges of the substation become an extension of the ground plane; the elevated planes give relief from the congestion of Denny Way and provide unique views and experience of the city.
facade articulation of solid vs. translucent zones for revealing the inner workings of the substation
full composition of components
1. Looking East on Denny
2. Looking West on Denny
3. View from Virginia
4. View from Mirabella
5. View from SCCA
6. View from Colwell Building
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• Unassigned open space affords opportunities for potential public amenities.
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• Current costs are aligned with anticipated baseline project cost
EXISTING - RIGHT OF WAY
R.O.W. line vertical boundary

60’-0”

30’-0”

32’-0”

VACATION OF PONTIUS - RIGHT OF WAY
Denny Substation
Urban Design Merit:
VACATE PONTIUS ALTERNATIVE WITH OPEN SPACE AMENITY

November 7, 2013
GAPS IN USABLE OPEN SPACE
AN ASSESSMENT OF GAPS IN SEATTLE’S OPEN SPACE NETWORK: THE 2011 GAP REPORT UPDATE
May 13, 2011
http://www.seattle.gov/parks/publications/gapreport.htm

- City of Seattle Parks
- Non-City Park/Open Space
- Residential Urban Villages
- Urban Center Villages & Hub Urban Villages
- Gaps in Usable Open Space

1/8 Mile Service Area of Usable Open Space over 10,000 SF
1/4 Mile Service Area of Usable Open Space over 10,000 SF
1/2 Mile Service Area of Usable Open Space over 1/2 Acre
GAPS IN USABLE OPEN SPACE EXISTING

- OPEN SPACE
- NEIGHBORHOOD
- 1/8 MILE SERVICE AREA
- GAPS IN USABLE OPEN SPACE
GAPS IN USABLE OPEN SPACE PROPOSED

- OPEN SPACE
- NEIGHBORHOOD
- 1/8 MILE SERVICE AREA
- GAPS IN USABLE OPEN SPACE
circulation - site flows
substation footprint

PUBLIC OPEN SPACE

“THROUGH BLOCK” CONNECTION

OPTIMIZED SUBSTATION FOOTPRINT
site access points
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PEDESTRIAN EDGE FOR VACATION
OF PONTIUS ALTERNATE AND NON
VACATION OF PONTIUS

November 7, 2013
EXISTING CONDITIONS

MINOR AVE N

JOHN ST AT THE BREWSTER

THE ALLEY AT DENNY WAY

DENNY WAY AT BUS STOP

DENNY WAY LOOKING EAST

PONTIUS AVE N LOOKING NORTH

MINOR AVE N LOOKING NORTH

MINOR AVE N LOOKING SOUTH

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VACATION OF PONTIUS

NO VACATION OF PONTIUS