

PLANNING COMMISSION STAFF REPORT

NORTHEAST SUBSTATION, Planned Development Conditional Use Petition No. PLANSUB2008-00464 Minor Subdivision Petition No. PLANSUB2008-00814

144 S 1100 East

April 22, 2009



Planning and Zoning Division
Department of Community and
Economic Development

Applicant: Rocky Mountain Power

Staff: Everett Joyce 535-7930
everett.joyce@slcgov.com

Tax ID: 16-05-206-011, 16-05-206-012 and 16-05-206-013

Current Zone: RMF-30

Master Plan Designation:
Central Community Master Plan land use designation - Low Medium Density Residential.

Council District: Council District 4 – Luke Garrott

Lot Size: Approximately 35,284 square feet or 0.81 acre

Current Use: Utility – electrical substation

Applicable Land Use Regulations:

- Title 20.20 Minor Subdivisions
- 21a.24.0120 RMF 30
- 21A.54.080 Conditional Uses
- 21A.54.150 Planned Developments

Request

Conditional Use Planned Development

Rocky Mountain Power requests approval of a conditional use as a planned development from the Salt Lake City Planning Commission in order to reconstruct and add electric power capacity to the existing Northeast Substation, located at approximately 144 South 1100 East. The project includes replacement of obsolete, deteriorated electrical equipment and supporting structures. Associated bus work and circuit breakers will be constructed to meet electrical safety clearance and insulation requirements to accommodate future operation at 138 kilovolts (kV).

To support the substation expansion plans the applicant requests modification of several zoning requirements through the planned development process. Approval of the proposed site improvements will require modification of zoning regulation standards related to setbacks, wall and fence height, landscape buffers and grade changes.

The Planning Commission may approve, approve with conditions or deny the request. The Planning Commission through the planned development process is authorized to modify the zoning regulations.

Minor Subdivision

Rocky Mountain Power also requests preliminary subdivision approval to combine three lots into one lot for the existing substation.

Notification

- Notice mailed April 7, 2009
- Sign posted April 10, 2009
- Agenda posted on the Planning Division and Utah Public Meeting Notice websites April 17, 2009

Attachments:

- A. Site Plan and Elevation Drawings
- B. Photographs
- C. Citizen Input
- D. Department Comments
- E. Additional Application Information

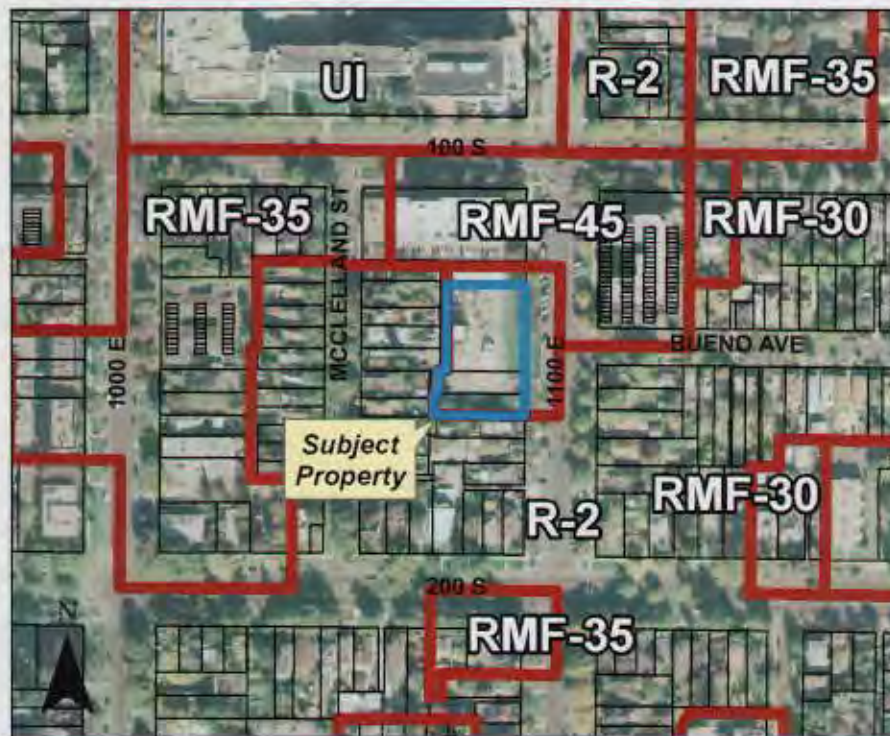
Staff Recommendation

Based on the findings listed in the staff report, it is the Planning Staff's opinion that overall the project generally meets the applicable standards and therefore, recommends the Planning Commission approve the conditional use planned development, petition PLANSUB2008-00464 with the following conditions:

1. That the rear yard setback be reduced from 25 feet to the rear property line to match the existing noncomplying setback. (No equipment is closer than 10 feet from the rear property line.)
2. The 10 foot landscaped buffer along the south property line, be reduced to five feet and that additional landscaping be dispersed within the 30 foot landscaped temporary access drive space. The five foot landscaped buffer be a continuous planting of evergreen materials with a minimum mature height of six feet. Also that the balance of the open space area south of the substation to the south property line be landscaped in ground cover.
3. That the 10 foot landscape buffer requirements on the west property line be reduced to match the existing noncomplying setback, which is the property line for the majority of the property.
4. That the front yard setback be reduced to 8.5 feet with 13.5 feet of landscaping from the front walls to the sidewalk. Also additional vertical landscape elements must be placed along the front fence of the substation walls.
5. That the screen walls have an architectural pattern stamped on the surface.
6. That the applicant, coordinate with the urban forester to designate the appropriate type and location of street trees along the 1100 East frontage.
7. That the applicant retain and protect the existing mature tree located in the southwest corner of the subject property.
8. That the retaining walls be structurally engineered.
9. That soils and materials removed or disturbed from the substation site receive approval from the appropriate State Department of Environmental Quality prior to any excavation.
10. That the applicant, upon completion and upgrade to the 138kV equipment and operation will evaluate the noise levels at property lines and provide a report from the Salt Lake City/County Health Department that the noise levels at property lines meet or exceed noise level requirements. If noise levels are excessive then the applicant will be required to provide additional sound attenuation within the site to reduce the noise levels so that they do not exceed the noise limits at the property line.

Based on the findings listed in the staff report, Planning Staff recommends the Planning Commission approve the proposed minor subdivision, petition PLANSUB2008-00814 to combine the existing three parcels into one parcel.

VICINITY MAP



Background

Project Description

The subject parcel contains an existing substation on three separate parcels. The parcels are addressed as 136, 144 and 148 South 1100 East. The substation was initially permitted in 1925, prior to the city having zoning regulations. The Salt Lake City Board of Adjustment approved expansion of the substation in 1975.

The Northeast Substation site has been used continuously to meet electric power needs in this area of Salt Lake City for decades. Utah Light and Traction Company acquired the existing site in a series of property transactions dating back to the 1920s. Rocky Mountain Power (formerly Utah Power & Light) acquired in fee all of the property owned by Utah Light and Traction Company in 1945 and continued substation operations at the site. The latest expansion of the substation was approved in 1975.

According to the applicant, the need for increased capacity at the Northeast Substation is approaching a critical stage. An outdated 5 MVA transformer was removed last year. In 2007, 4 kV was converted to 12.5 kV and the 4 kV, 5 MVA transformer was removed. The new 25 MVA 46/12.5 kV transformer will be installed in the footprint formerly occupied by the 5 MVA transformer, bringing total capacity of the re-built substation to 47 MVA. Without additional capacity at Northeast Substation, an interconnected substation at the edge of the load zone in the Avenues (North Bench Substation) does not have sufficient capacity to meet customers' growing electric power needs within the Northeast Substation load zone. Both substations are currently at near-full capacity.

Today, the Northeast and North Bench Substations serve approximately 14,000 customers in Salt Lake City's East Central and Avenues areas. Electrical demand in this area is growing at an average annual rate of 2% due to increased use by households and nonresidential users within the service area. (Installation of air conditioning systems, increased electronics use, etc.). The existing transformers at both substations are approaching thermal overload.

Addition of new capacity at Northeast Substation is required in order to address the following issues:

1. Transformer overload at Northeast Substation
2. Transformer overload at North Bench Substation
3. While new capacity is being added at Northeast Substation, additional work will take place to:
 - a. Replace deteriorated 46 kV facilities at Northeast Substation
 - b. Update to meet current National Electric Safety Code (NESC) standards
 - c. Prepare the substation for conversion to 138 kV in the future

The capacity addition must be completed in order to adequately serve current electrical demand and to provide reliable electrical service in the future. Rocky Mountain Power recognizes the importance of developing new and future facilities in a proactive and integrated manner compatible with community plans, while at the same time meeting the electric power needs of Salt Lake City residents and businesses. The applicant has identified that they have designed the substation to accommodate the necessary equipment within the smallest possible footprint that meets the electrical safety clearance standards and access requirements.

In addition to installation of a new 46/12.5 kilovolt (kV) 25 megavolt ampere (MVA) transformer, the project also includes replacement of obsolete, deteriorated electrical equipment and supporting structures. Associated bus work and circuit breakers will be constructed to meet electrical safety clearance and insulation requirements to accommodate future operation at 138 kilovolts (kV). The capacity addition of a 46 kilovolt (kV) transformer means the substation will continue to operate at the existing voltage until future customer use requires 138 kV voltage conversion.

For Salt Lake City, energy consumption for residential customers has grown by an average of 7 percent per customer over a five-year period. Peak customer use of electricity in Salt Lake City has grown by 22 percent over the same period.

Future needs to serve the northeastern portion of Salt Lake City include a network enhancement to the main loop lines that serve this portion of Salt Lake City. The Northeast substation is only one of many substations that will require upgrades to provide a complete 138 kV system loop to serve the future projected needs of this portion of Salt Lake City. Additional substation improvements within the northeast portion of the City will include the North Bench, University and Research Park substations.

Staff Review

The Conditional Use being requested is for a nonresidential planned development. Rocky Mountain Power has identified that projected increases in demand for the Northeast Substation service area will require upgrade to the Northeast Substation. Due to the required safety clearance standards for the proposed upgrades substation equipment it is impossible to come up with reasonable alternative designs that fit the site without modifying zoning ordinance requirements.

The subject property is approximately 35,284 square feet. The proposed planned development complies with the minimum lot area requirement in an RMF-30 Zoning District to allow the planned development process.

The maximum building height in the RMF-30 Zoning District is 30 feet. Certain proposed structures exceed 30 feet from the existing grade. However, these structures are exempt from zoning ordinance regulations. See discussion on Ordinance Exemptions provided later in this report.

Safety Clearance Standards and Site Design

Rocky Mountain Power has provided a site plan design that incorporates the safety clearance standards below. The safety standards and information below was provided by Rocky Mountain Power.

PacifiCorp/Rocky Mountain Power maintains clearances for the area surrounding energized substations in order to ensure public and employee safety. This clearance is based on voltage level. While the Northeast Substation will be operated for the time being at 46 kV, it will be built to 138 kV construction standards to accommodate future conversion when customers' energy needs exceed available capacity. At 138 kV, the minimum clearance requirement is 14'-0". The operating clearance is designed to allow adequate room between the equipment and perimeter fences and walls for operations personnel to safely work on equipment.

These safety requirements conform with PacifiCorp Engineering Standard 6B.5 – Fence Application and Construction, which is based on American National Standards Institute (ANSI) C2 – National Electrical Safety Code (NESC) and ANSI 1119 – Guide for Fence Safety Clearances in Electric Supply Substations.

The substation is designed to meet safety clearance standards required by PacifiCorp Engineering Standard 1B.2 – Safety Clearances and Facility Access and Security and Engineering Standard 1B.9 – Substation Design Criteria. PacifiCorp standards 1B.2 and 1B.9 are based on ANSI C2 – National Electrical Safety Code (NESC). Standards 1B.2 and 1B.9 require meeting or exceeding the minimum clearances stated in the NESC.

Waivers to RMF-30 Zoning Requirements

The applicant is proposing expansion of the substation footprint to the south and to the east. The existing substation is at the property line along the north and west limits of the subject property. The original substation setbacks were established in 1925 with a minor expansion to the south approved by the Board of Adjustment in 1975. Rocky Mountain Power requests waivers from the Salt Lake City Planning Commission from zoning requirements through the Planned Development Conditional Use request for the Northeast Substation.

Set-back requirements

The substation design necessitates waivers for set-back requirements for the east, north and west sides in order to meet substation safety standards and operations access requirements.

- **North:** The existing substation site abuts the Medical Towers office building property on the north. A car-port is located on the north side of the substation fence. Since the new fence line will not change from its existing position, the proposed design will create no new impact.

The north property line is a side yard. The maximum setback requirement is 10 feet. The substation compound is located within the 10 foot setback, however, there is no substation equipment located within the ten foot setback. The existing substation fencing is on the property line.

- **West:** A dead-end alley abuts the west fence. A trash receptacle is located in the alley and cars are occasionally parked in the alley. Since the new fence line will not change from its existing position, the proposed design will create no new impact. Rocky Mountain Power will grade and pave the alley and install a drainage system approved by Salt Lake City. Rocky Mountain Power will continue to maintain the alley after the improvements are made to allow access to the substation for its vehicles and

equipment. This improvement will benefit all property owners adjacent to the alley who share common access rights.

The west property line is located along the rear yard. The rear yard setback requirement is 25 feet. This setback relates to principal structures and not fences, walls or accessory structures. The proposed site design maintains the bus work and transformers within the buildable area. The capacitors are located within the rear yard setback and are located 10 feet from the property line.

- East: The east footprint of the substation is designed to be approximately 13.5 feet behind the sidewalk. Equipment inside the substation yard is configured to meet clearance standards necessary for safety and operations access requirements, explained below.

The east property line is the front yard setback area. The setback requirement is 20 feet. Equipment within the substation maintains the 20 foot setback however the clearance areas for safety and operations access places the substation walls within the front yard setback. The substation walls are setback 8.5 feet from the property line. The average setback for residential structures on the block face is approximately 9.5 feet.

- South: Rocky Mountain Power requests that the 10 foot landscaped buffer be reduced to 5 feet. In consideration of this the applicant will provide a continuous row of evergreen plantings along the south property line.

Landscape buffer requirements

Rocky Mountain Power requests the Planning Commission waive the landscape buffer requirement on the west side of the property. The site is not large enough to provide a landscape buffer on the west due to substation safety clearance and operations access requirements discussed above. A waiver for the west landscape buffer will have minimal impact since the new fence remains in the existing position on the property line. A dead-end alley abutting the west property line separates the substation from the residences on the west. Rocky Mountain Power will grade and pave the alley and install a drainage system approved by Salt Lake City. Rocky Mountain Power will continue to maintain the alley after the improvements are made to allow access to the substation for its vehicles and equipment. This improvement will benefit all property owners adjacent to the alley who share common access rights.

Fence and Wall Height

Public safety is a paramount concern in substation fencing. According to PacifiCorp Engineering Standard 6B.5 – Fence Application and Construction, Section 4.2, Fence height shall stand a minimum of 8'-0" high above grade with a fabric height of 7'-0" feet and 3 strands of barbed wire 1'-0" high on brackets 45 degree outbound. Masonry walls must be a minimum of 10 feet in height. The proposed design provides for a combination of stamped concrete panels and ornamental steel, rather than chain link fence specified in by PacifiCorp's Engineering Standard.

There will be no buildings constructed at the site. Line termination structures carrying electrical conductor will be approximately 37 feet in height, as required by the National Electric Safety Code to meet minimum clearance requirements for substation operation at 138 kV. The line termination structures are exempt from zoning ordinance requirements.

Grade Changes

To accommodate the reduction in height of the substation equipment, Rocky Mountain Power's revised site design utilizes grade changes that exceed the two foot grade changes permitted. Along the east edge of the substation the grade is modified by eight feet.

Zoning Ordinance Exemptions

Zoning Ordinance Section 21A.02.050 Applicability exempts certain aspects of the substation reconstruction activities from zoning regulations. The zoning text identified below in italics.

21A.02.050 Applicability:

- A. *General Applicability: The provisions of this title shall apply to all of the land area within the corporate limits of Salt Lake City, as indicated on the zoning map as provided in chapter 21A.22 of this title. Except as expressly provided in this title, no development shall be undertaken without prior zoning approval pursuant to the provisions of this title.*
- B. *Exemptions: The following properties, uses and structures shall, to the extent provided by law, be exempt from the regulations of this title:*
2. *Utility Installations: Wires, cables, conduits, vaults, laterals, pipes, mains, valves or other similar equipment for the distribution to consumers of telephone or other communications, electricity, gas or water, or the collection of sewage or stormwater when owned, operated and/or maintained by a governmental entity or a public utility. Such installations shall comply with federal communications commission and federal aviation administration rules and regulations and those of other authorities having jurisdiction. This exemption shall not apply to section 21A.40.160, "Ground Mounted Utility Boxes", of this title.*

Equipment for the distribution of electricity is exempt from the regulation of the zoning ordinance. The height of electrical distribution equipment is exempt from the zoning regulations. Therefore the RMF-30 Zoning District height limit is not applicable to the substation improvements.

Environmental Performance Standards

21A.36.180 Environmental Performance Standards:

- A. *Purpose: The purpose of environmental performance standards is to help ensure that the activities and processes employed by any use protect the general welfare of the environment, and the use and enjoyment of nearby properties by limiting the emission of potentially harmful noise, vibration, air pollution, odor and other forms of environmental impacts.*
- B. *Scope Of Regulation: Any use established in any district after April 12, 1995, shall be operated as to comply with applicable performance standards governing noise, vibration, air pollution, odors, fire and explosion hazards and toxic substances. No use already established on April 12, 1995, shall be altered, enlarged, expanded or modified as to conflict with the performance standards applicable to such uses.*
- C. *Review By Other Agencies: In determining the compliance of any proposed use with applicable performance standards pursuant to this section, the zoning administrator may require an applicant for a zoning certificate to obtain review and comments upon the application as proposed from state and county agencies listed on the table below, or their successor agencies, as deemed necessary. See table of concurrent regulatory agencies below:*

TABLE OF CURRENT REGULATORY AGENCIES

<i>Environmental</i>	
<i>Category</i>	<i>Agency(ies)</i>
<i>Noise</i>	<i>Salt Lake Valley health regulation noise control</i>
<i>Air pollution</i>	<i>Salt Lake Valley health regulation air pollution control</i> <i>State of Utah division of air quality</i>
<i>Odors</i>	<i>Salt Lake Valley health regulation air pollution control</i>
<i>Toxic substances</i>	<i>Salt Lake Valley health regulations solid waste management facilities</i> <i>State of Utah division of solid and hazardous waste</i>
<i>Water pollution</i>	<i>State of Utah division of water quality</i> <i>State of Utah division of drinking water</i>
<i>Radiation hazards</i>	<i>State of Utah division of radiation control</i>

The following information regarding environmental and noise was provided by the applicant:

- 1. Environmental.** Rocky Mountain Power's substations are designed to prevent any contaminants from reaching the public utility system. Of primary concern is dielectric oil contained in the transformer. A Spill Prevention, Control and Countermeasures Plan (SPCC Plan) has been written for this site, detailing measures that are in place to prevent a spill from migrating offsite. Berms, gravel and walls all serve to contain a spill on-site. The site is inspected often to detect spills or other problems. A spill response contractor is also hired to respond to any spill; response time would be short, as the contractor is local. A state approved contractor has completed remediation of the old control building to remove any hazardous items, mainly asbestos, in accordance with all laws and regulations.
- 2. Noise.** Compliance with Salt Lake City noise ordinance, Chapter 9.28.060, was also discussed with the Design Review Team. The Northeast substation is zoned RMF-30, low density multi-family. The code allows for 50 dBA noise at the property boundary at night. Since the substation is not fully constructed at this time, measurements were taken at a similar substation (Clearfield South) to predict the sound signature of the ultimate build-out of the Northeast Substation. Clearfield South substation has two 30 MVA transformers (When completed, Northeast will have a new 25 MVA transformer in addition to the existing 22.4 MVA transformer.) The transformers create a 120 cycle hum that is usually associated with electrical equipment. PacifiCorp/Rocky Mountain Power purchases transformers that are designed to be 10 dBA quieter than the typical National Electrical Manufacturers Association (NEMA) rating. Fans are added to the cooling radiators on the transformers to cool the transformers during heavy loading periods. The fan noise is typically greater than the transformer hum.

Measurements were taken at the Clearfield South substation with all the cooling fans running on both transformers. A Radio Shack sound level meter model 33-2050 was used. The meter was set on 'A' weighting (per the 9.28.020 city code) using the fast response setting. The 50 dBA boundaries are drawn in red on a copy of the General Plan layout of the substation. The 50 dBA boundaries are inside the substation fence on the east, south and west sides. The north side boundary is 10 feet into the parking lot of the medical office building, which is not occupied at night. Under the city code, commercial areas are allowed to have 55 dBA noise at the boundary. The substation will meet the commercial noise code. (See Attachment E, diagram, Northeast South Signature.)

The air conditioning units on the switchgear cabinets contribute to the substation sound signature. This noise is considered to be less than the *ninetieth percentile noise level* as defined in the code definitions and standards because the units will cycle on and off as needed to cool the enclosed switchgear. Cooling requirements are reduced in the nighttime hours.

Noise Pollution

The Sound Signature Diagram submitted by the applicant shows that the projected noise levels meet the noise limit standards for the areas adjacent to residential properties. Noise pollution is monitored and enforced by the Salt Lake Valley Health Department. If there are any noise issues once the substation is built, we can request that they monitor to ensure the substation equipment meets the levels required in a residential neighborhood.

Contaminated Soils

During the proposed construction, Rocky Mountain may remove contaminated soils. If they do, the removal will be regulated by the State's Department of Environmental Quality and Rocky Mountain Power will be required to test the soil to determine that it is handled safely, and disposed of in an approved manner. Rocky Mountain Power will be required to test the soil to determine an appropriate disposal location. Salt Lake City inspectors will also be able to monitor the soil removal to ensure that no soil is tracked onto City streets, and stormwater contamination does not occur.

Electric and Magnetic Fields

The issue of Electric and Magnetic Fields (EMF) has been raised. These fields have been studied extensively, and no definite health effects have been found in relationship to EMF exposure. Because of this, there are no regulations or limits to it in the United States. (Some states have set limits of exposure for workers, but Utah has not.) Without any guidelines or limits, the City is unable to evaluate EMF as an environmental concern.

Previous Applications

Board of Adjustment Case No. 6868. In 1975 Utah Power and Light Company requested a special exception to the ordinance to permit a public utility at approximately 142 South 1100 East, which requires Board of Adjustment and Planning Commission approval in a Residential "R-6" Zoning District. On March 13, 1975, the Planning Commission heard Board of Adjustment Case No. 6868 by the Utah Power and Light Company for a public utility at 142 South 1100 East Street. Following the public hearing and discussion the Planning Commission recommended to the Board of Adjustment that this public utility be approved provided a masonry wall and the necessary landscaping are installed around the entire operation and that a retaining wall is installed on the south side. On March 24, 1975 the Board of Adjustment granted a special exception to permit the proposed addition to the existing public utility with a driveway on the south, and the change of grade which exceeds the permitted 2 feet, with the following provisions:

1. that the chain link fence along the front of the existing facility be replaced with a brick or decorative masonry wall
2. that the necessary retaining walls be constructed along the south property line to retain the fill
3. that the landscaping be extended to include the new property
4. that the final plan showing all of these requirements be subject to approval by a Committee of the Board, a copy of the finally approved plan to be filed with the case.

Building permits issued for the existing substation existing site development would reflect the final approval by the Committee of the Board.

Comments

Public Comments

The applicant presented the proposed Northeast Substation expansion plans to the East Central Community Council on September 11, 2008. An Open House was held on January 5, 2008. The Planning Commission held an Issues Only Public Hearing on January 14, 2009. In response to issues brought forward in the open house and the issues only hearing the applicant revised the development plan. The revised plan was presented at a second Open House on March 19, 2009.

Comments received from the two Open Houses and the Issues Only Hearing are included within Attachment C - Citizen Input.

Issues Only Planning Commission Hearing

On January 14, 2009, the Planning Commission held an "Issues Only" public hearing regarding petition PLANSUB2008-00641 for expansion of the existing substation at 144 S 1100 East. Below is a summary of the key issues identified through public comment and through the issues only hearing of January 14, 2009. All written comments submitted to the Planning Commission are provided in Attachment C - Citizen Input on this staff report.

Summary of Issues

- Height of poles and infrastructure - Impact on views
- Impact on property values
- Light pollution
- Noise Impacts
- Health safety issues – Electromagnetic Fields
- Neighborhood quality of life
- Maintaining existing mature trees
- Disturbance of environmental contaminants on-site
- Esthetics
- Construction impact on public parking
- EMF

City Department Comments

The comments received from pertinent City Departments / Divisions are attached to this staff report in Attachment D. The Planning Division has not received comments from the applicable City Departments / Divisions that cannot reasonably be fulfilled or that warrant denial of the petition.

Project Review

- The Planning Commission received a briefing on the Northeast Substation proposal at their work session on November 12, 2008. The Planning Commission Subcommittee met and discussed the Northeast Substation project on December 17, 2008. There were no specific modifications requested by the Planning Commission Subcommittee members (Peggy McDonough, Prescott Muir, and Frank Algarin). Issues raised were consideration of using the brick from the demolition of the old operations structure in the precast wall proposed along the north property line adjacent to the neighboring carports. It was identified that the project should maintain a variety of landscaping as proposed.
- Revisions made by applicant

- Designed the finished grade of the substation compound below existing grade 8 feet along the east edge of the substation to help reduce the height and visual impact of substation equipment.
- Reduced the height of distribution dead end structures on site from 55 feet to 35 feet.
- Reoriented the bus work from a north-south orientation to an east-west orientation which reduces visual impacts from properties on 1100 East.
- Modification to front yard setback and screen wall design.
- Revised the site drainage plan to control drainage on the site and the alley along the west property line.
- Provided a solid wall along the existing adjacent carport on the north property line.

The applicant, Rocky Mountain Power, has submitted revised plans based on input received from the Open House and Issues only hearing held by the Planning Commission on January 14, 2009. The revised plans were presented at another Open House held on March 19, 2009.

The applicant has provided responses to several questions from the Northeast Substation Planning Commission Issues-only meeting held on Jan. 14, 2009. This response letter is located in Attachment E – Applicant Information. The following issues were addressed:

- Demolition concerns
- EMF (electric and magnetic fields)
- Taking advantage of technology to increase efficiency
- Transformers noise
- Building for the future in a “green” way
- Lowering substation to the alley elevation
- Height of existing structures
- Gas Insulated Substations (GIS)?
- Removal of mature tree(s)
- System map
- Property values
- RMP master plan
- Work with the East Central Community Council
- Growth in customer use in this area
- Site for future substation(s)

Analysis and Findings

Options

If the request for the planned development conditional use is denied, then Rocky Mountain Power would have design a substation on the site within the existing foot print with expansion up to required zoning setbacks. To maintain their required safety setbacks from equipment they may have to increase the height of equipment and or increase the overall property size.

Findings

21A.54.080 Conditional Use Standards

A. General Standards for Approval: A conditional use shall be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards set forth in this section. If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with applicable standards, the conditional use shall be denied.

B. Specific Standards: A conditional use permit shall be approved unless the evidence presented shows that one (1) or more of the standards set forth in this subsection cannot be met. The Planning Commission, or, in the case of administrative conditional uses, the Planning Director or the Director's designee, may request additional information as may be reasonably needed to determine whether the standards of this subsection can be met.

1. **Master Plan and Zoning Ordinance Compliance:** The proposed conditional use shall be:
 - a. Consistent with any policy set forth in the City-Wide, Community, and Small Area Master plan and future land use map applicable to the site where the conditional use will be located, and
 - b. Allowed by the zone where the conditional use will be located or by another applicable provision of this title.

Analysis: The subject property is located within the geographic boundaries of the Central Community Master Plan. The Future Land Use Map identifies the area as Low Medium Density Residential. The property is also located within the boundaries of the East Central Neighborhood Plan. The land use designation is Low/Medium Density Residential land uses. The subject property is zoned Residential Multi-Family RMF-30. By zoning the property RMF-30, the City was identifying appropriate land uses for this property. The proposed use is permitted in the RMF-30 Zoning District.

Finding: The proposed development generally complies with the Master Plan and Zoning Ordinance.

2. **Use Compatibility:** The proposed conditional use shall be compatible with the character of the site, adjacent properties, and existing development within the vicinity of the site where the use will be located. In determining compatibility, the Planning Commission shall consider:
 - a. Whether the street or other means of access to the site where the proposed conditional use will be located will provide access to the site without materially degrading the service level on such street or any adjacent street;
 - b. Whether the type of use and its location will create unusual pedestrian or vehicle traffic patterns or volumes that would not be expected with the development of a permitted use, based on:
 - i. Orientation of driveways and whether they direct traffic to major or local streets, and, if directed to local streets, the impact on the safety, purpose, and character of these streets;
 - ii. Parking area locations and size, and whether parking plans are likely to encourage street side parking for the proposed use which will adversely impact the reasonable use of adjacent property;
 - iii. Hours of peak traffic to the proposed use and whether such traffic will unreasonably impair the use and enjoyment of adjacent property; and
 - iv. Hours of operation of the proposed use as compared with the hours of activity/operation of other nearby uses and whether the use, during hours of operation, will be likely to create noise, light, or other nuisances that unreasonably impair the use and enjoyment of adjacent property;
 - c. Whether the internal circulation system of any development associated with the proposed use will be designed to mitigate adverse impacts on adjacent property from motorized, non-motorized, and pedestrian traffic;

- d. Whether existing or proposed utility and public services will be adequate to support the proposed use at normal service levels and will be designed in a manner to avoid adverse impacts on adjacent land uses, public services, and utility resources;
- e. Whether appropriate buffering or other mitigation measures, such as, but not limited to, landscaping, setbacks, building location, sound attenuation, odor control, will be provided to protect adjacent land uses from excessive light, noise, odor and visual impacts and other unusual disturbances from trash collection, deliveries, and mechanical equipment resulting from the proposed use; and
- f. Whether detrimental concentration of existing non-conforming or conditional uses substantially similar to the use proposed is likely to occur, based on an inventory of uses within one-quarter (1/4) mile of the exterior boundary of the subject property.

Analysis: The expansion of the substation will not impact streets or increase traffic. Access will be from 1100 East Street and an adjacent alleyway, the internal site circulation is adequate and utility services are adequate to support the proposed use. The landscape buffer along the south property line has a continuous evergreen planting. Visual impacts of the distribution equipment, power lines and bus work are exempt for the City's zoning regulations. The applicant is requesting modification of the front, rear, side and landscape buffer requirements. The existing substation is built to property line along the north and west property lines. The setback and landscape reduction requests aid facilitation of expansion of the substation to meet present and future demand levels for the Northeast Substation service area. Staff is of the opinion that the reduced ordinance requirements to accommodate the proposed expansion are mitigated through landscape and screening walls and fences that support substation expansion and upgrades on the existing site, not requiring further expansion of the property boundaries to accommodate the substation upgrade. There are no other nonresidential planned developments within ¼ mile of the subject property.

Finding: The Northeast Substation has been in existence since 1925. The proposed substation improvements along with application of the conditions of approval make the proposed use compatible with residential neighborhoods. The proposed development complies with this standard.

3. Design Compatibility: The proposed conditional use shall be compatible with the character of the area where the use will be located with respect to:

- a. Site design and location of parking lots, access ways, and delivery areas;
- b. Whether the proposed use, or development associated with the use, will result in loss of privacy, objectionable views of large parking or storage areas; or views or sounds of loading and unloading areas; and
- c. Intensity, size, and scale of development associated with the use as compared to development and uses in the surrounding area.
- d. If a proposed conditional use will result in new construction or substantial remodeling of a commercial or mixed-used development, the design of the premises where the use will be located shall conform to the conditional building and site design review standards set forth in Chapter 21A.59 of this title.

Analysis: Access ways are two driveways from 1100 East and from the adjacent alley along the wet property line. The adjacent property to the north and one across the street consist of multiple level high rise structures. The remaining development consists of low and moderate density residential uses. The excess height of the substation distribution equipment provide objectionable views, however, such facilities are exempt from regulation of the zoning ordinance.

The size of the substation complex particularly the length of the wall on 1100 East, could create a visual impact on the streetscape. The design pattern of the streetscape walls have been broken into a pattern and rhythm that reflects the 1100 East streetscape character. Other screen walls and fencing has been provided with a design pattern that does not create a continuous wall without any relief. The landscape plan identifies the provision of landscape materials on wall elements along the east and south elevation walls.

Finding: Access ways are compatible with the character of the area. The intensity and scale of development is compatible with surrounding development. The proposed development's site design is compatible with the character of substations in residential zoning districts.

4. Detriment to Persons or Property: The proposed conditional use shall not, under the circumstances of the particular case and any conditions imposed, be detrimental to the health, safety, and general welfare of persons, nor be injurious to property and improvements in the community, existing surrounding uses, buildings, and structures. The proposed use shall:

- a. Not emit any known pollutant into the ground or air that will detrimentally affect the subject property or any adjacent property;
- b. Not encroach on any river or stream, or direct runoff into a river or stream;
- c. Not introduce any hazard or potential for damage to an adjacent property that cannot be mitigated;
- d. Be consistent with the type of existing uses surrounding the subject property; and
- e. Improve the character of the area by encouraging reinvestment and upgrading of surrounding properties.

Analysis: Rocky Mountain Power's substations are designed to prevent any contaminants from reaching the public utility system. Of primary concern is dielectric oil contained in the transformer. A Spill Prevention, Control and Countermeasures Plan (SPCC Plan) has been written for this site, detailing measures that are in place to prevent a spill from migrating offsite. Berms and slopes, gravel and walls all serve to contain a spill on-site. The subject property does not encroach upon any river or stream. During the proposed construction, Rocky Mountain may remove contaminated soils. If they do, the removal will be regulated by the State's Department of Environmental Quality and Rocky Mountain Power will be required to test the soil to determine that it is handled safely, and disposed of in a n approved manner. The issue of Electric and Magnetic Fields (EMF) has been raised. These fields have been studied extensively, and no definite health effects have been found in relationship to EMF exposure. Because of this, there are no regulations or limits to it in the United States. (Some states have set limits of exposure for workers, but Utah has not.) Without any guidelines or limits, the City is unable to evaluate EMF as an environmental concern. The proposed use is a use that is identified in the table of permitted and conditional uses within residential districts. Public utility facilities are allowed in residential zoning districts as a means of assuring adequate delivery of utility services. The proposed substation expansion meets the present and future service needs projected by Rocky Mountain Power for the substation service area while minimizing the impacts on the adjacent residential neighborhood.

Finding: The proposed development will not be detrimental to persons or property. The proposal complies with this standard.

Since the substation has existed at this location since 1925 and the proposal is an upgrade in power generation and capacity that is contained within the boundaries of the existing substation properties, the proposal is considered to be compatible with the surrounding neighborhood.

5. **Compliance with Other Applicable Regulations:** The proposed conditional use and any associated development shall comply with any other applicable code or ordinance requirement.

Finding: With the exception of issues previously outlined as waivers to zoning requirements and included in the and conditions of approval of the staff report, the proposal will be subject to compliance with all applicable city regulations.

Planned Development

Section 21A.54.150C: Authority to Modify Regulations

In approving any planned development, the planning commission may change, alter, modify or waive any provisions of this title or of the city's subdivision regulations as they apply to the proposed planned development. No such change, alteration, modification or waiver shall be approved unless the planning commission shall find that the proposed planned development:

1. **Will achieve the purposes for which a planned development may be approved pursuant to subsection A of this section; and**

Analysis: Subsection A of Section 21A.54.150 states, "A planned development is a distinct category of Conditional Use. As such, it is intended to encourage the efficient use of land and resources, promoting greater efficiency in public and utility services and encouraging innovation in the planning and building of all types of development. Through the flexibility of the planned development technique, the City seeks to achieve the following specific objectives:

- a. *Creation of a more desirable environment than would be possible through strict application of other City land use regulations;*
- b. *Promotion of a creative approach to the use of land and related physical facilities resulting in better design and development, including aesthetic amenities;*
- c. *Combination and coordination of architectural styles, building forms and building relationships;*
- d. *Preservation and enhancement of desirable site characteristics such as natural topography, vegetation and geologic features, and the prevention of soil erosion;*
- e. *Preservation of buildings which are architecturally or historically significant or contribute to the character of the City;*
- f. *Use of design, landscape or architectural features to create a pleasing environment;*
- g. *Inclusion of special development amenities, and;*
- h. *Elimination of blighted structures or incompatible uses through redevelopment and rehabilitation.*

Finding: The request for a planned development stems from the applicant's design of the expanded substation, to utilize the existing substation foot print and expand the substation in a manner to minimize equipment heights and provide required safety clearances from electrical equipment to an extent that the landscaped front yard setback would be less than permitted in the base zoning district. Also the excavation of the site will require grade changes in excess of two feet. The site design also allows for heavy crane access to replace any failed equipment at the substation.

2. **Will not violate the general purposes, goals and objectives of this title and of any plans adopted by the planning commission or the city council.**

Finding: Pursuant to the analysis and findings stated in the Standards for Conditional Uses section of this report, the proposed development is consistent with this standard.

Section 21A.54.150E: Other Standards for Planned Developments

- 1. Minimum area: A planned development proposed for any parcel or tract of land under single ownership or control shall have a minimum net lot area for each zoning district.**

Analysis: The minimum lot size for planned developments in the RMF-30 Zoning District is 9,000 square feet. The subject property is approximately 35,284 square feet.

Finding: The subject property meets this standard.

- 2. Density Limitations: Residential planned developments shall not exceed the density limitation of the zoning district where the planned development is proposed.**

Finding: The proposed planned development has no residential component. This standard does not apply.

- 3. Consideration of a Reduced Width Public Street Dedication: A residential planned development application may include a request to dedicate the street to Salt Lake City for perpetual use by the public.**

Finding: The proposed development does not include any public streets. The standard does not apply.

- 4. Perimeter Setback: The perimeter side and rear yard building setback shall be the greater of the required setbacks of the lot or adjoining lot unless modified by the Planning Commission.**

Analysis: In the RMF-30 Zoning District, the interior side yard setbacks are six foot and 10 foot. The rear setback required is 25 percent of the lot depth up to 25 feet. Neither the north interior side yard or rear yard setbacks meet the setback requirements. These setbacks are noncomplying. The Northeast Substation was permitted in 1925 and built prior to zoning regulations. To accommodate the expansion and upgrade of the substation the noncomplying setbacks would need to be maintained. Adjacent to the north property line is a carport providing parking to a medical office building. The west property line is adjacent to an alleyway. The alley abuts the rear yards of residential properties that front on McClelland Street.

Finding: The applicant is requesting that the Planning Commission modify these requirements as described on pages 5 and 6 of the staff report as part of the planned development approval.

- 5. Topographic Change: The Planning Commission may increase or decrease the side or rear yard setback where there is a topographic change between lots.**

Finding: There is an approximate ten foot topographic grade change between the front and the rear of the lot. The proposal modifies the grade at the east edge of the substation by eight feet. The existing development already has approximately a six foot grade change with retaining walls along the rear lot line and portions of the side lot lines.

Subdivision Standards

20.20.020 - Minor subdivision standards:

- A. The general character of the surrounding area shall be well defined, and the minor subdivision shall conform to this general character;
- B. Lots created shall conform to the applicable requirements of the zoning ordinances of the city;
- C. Utility easements shall be offered for dedication as necessary;
- D. Water supply and sewage disposal shall be satisfactory to the city engineer;
- E. Public improvements shall be satisfactory to the planning director and city engineer.

Findings: The proposal meets the minor subdivision standards.

- The general character issue is addressed in the planned development conditional use section above in this staff report and Staff finds that the proposed development is compatible with surrounding development.
- The lot created conforms to the RMF-30 Zoning District.
- Staff finds that no dedications are required with this request.
- Staff finds that the public way improvements are in place for the subject property.

Summary

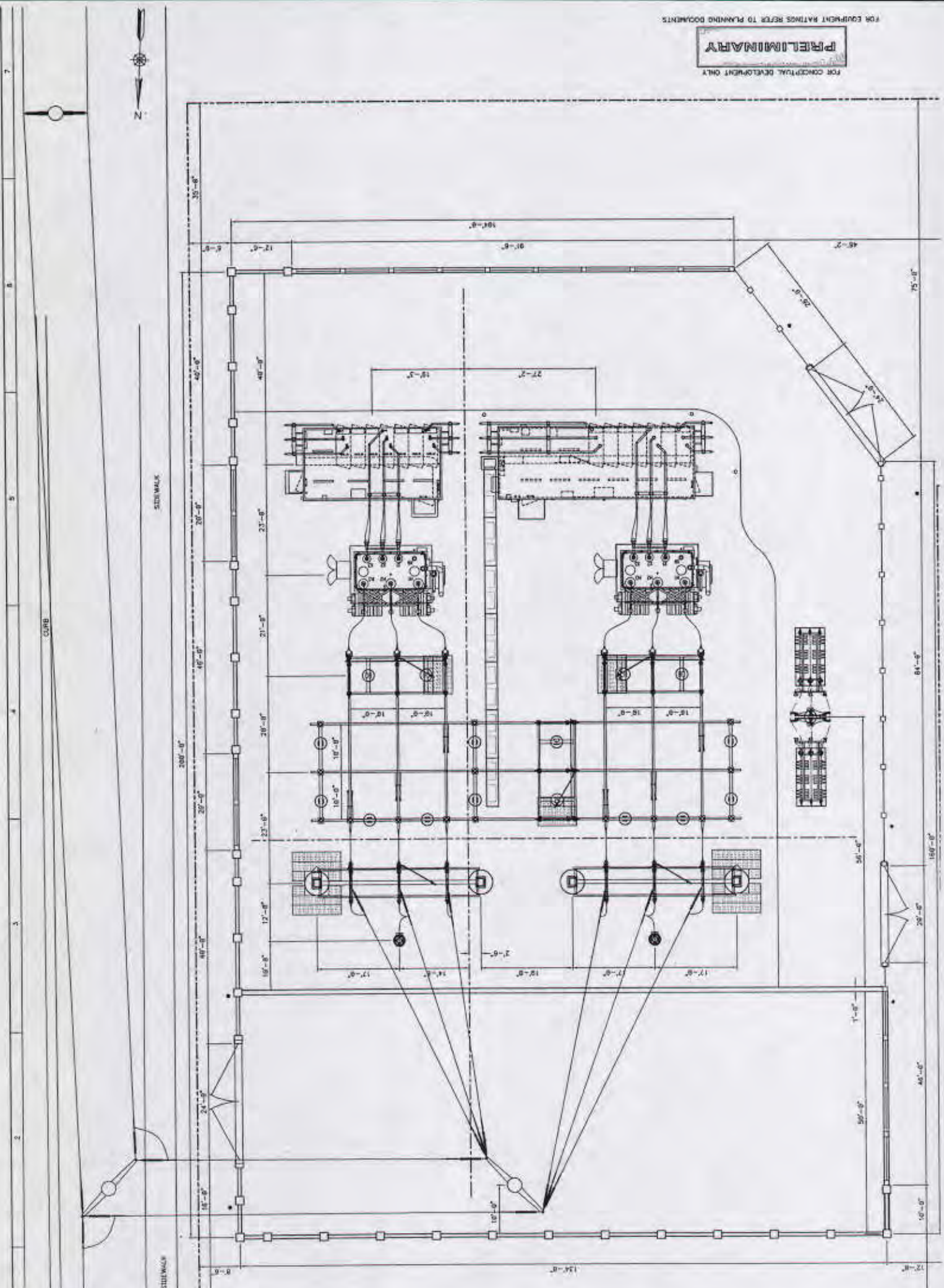
The applicant of the proposed Planned Development / Minor Subdivision has demonstrated substantial compliance with, or the ability to comply with, all of the standards required. The requested modification of certain Zoning Ordinance standards is warranted and supported by the criteria for Planned Developments. Staff has determined that no adverse impacts on the surrounding properties or uses will result from the request and that the Planned Development complies with all of the review standards. Planning staff supports the request to subject to the recommended conditions of approval identified in this report.

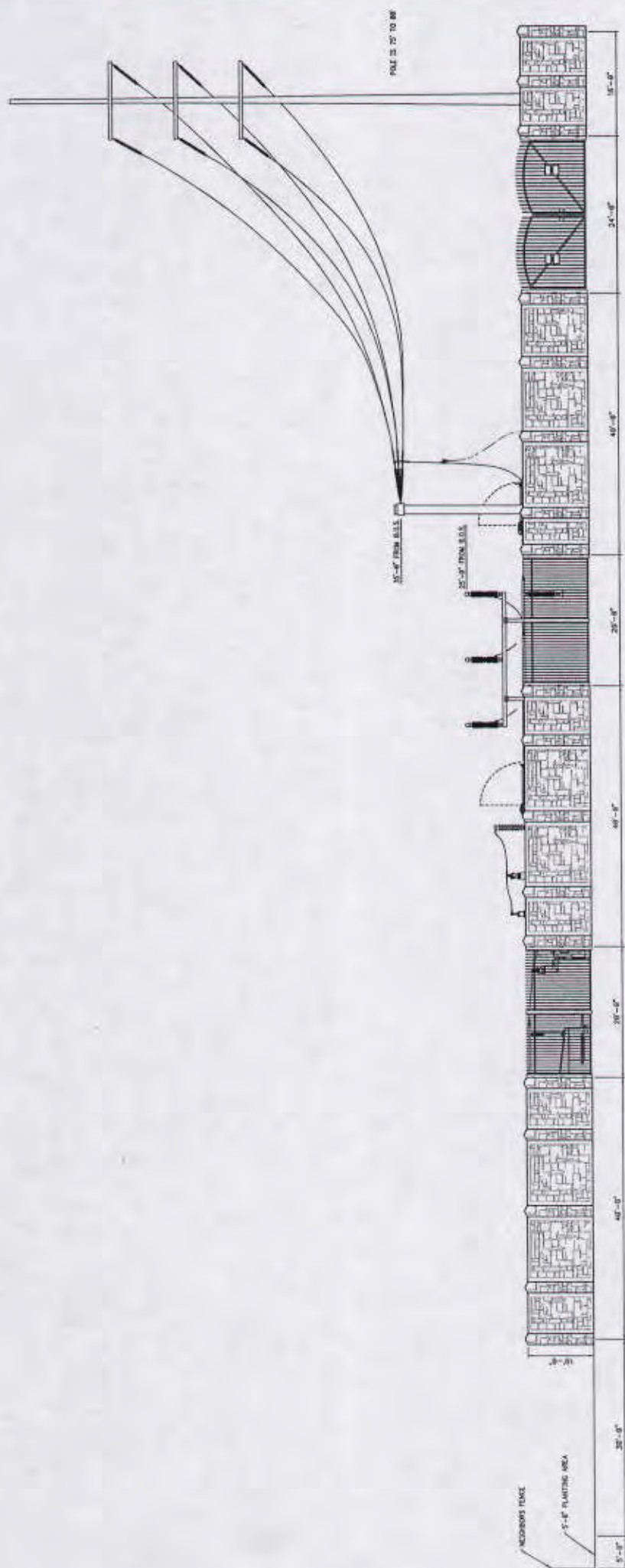
Attachment A

A-1: Revised Drawings

A-2: Original Drawings

Attachment A-1
Revised - Site Plan, Elevations and Landscape Drawings





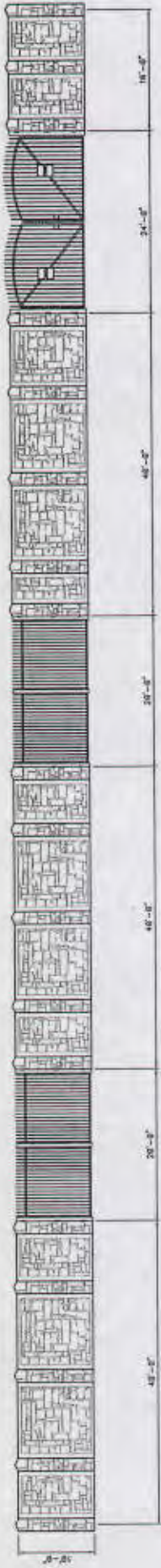
FOR CONCEPTUAL DEVELOPMENT ONLY

PRELIMINARY

FOR EQUIPMENT RATINGS REFER TO PLANNING DOCUMENTS



LEGEND
R.C.S. - BOTTOM OF STEEL



FOR CONCEPTUAL DEVELOPMENT ONLY

PRELIMINARY

FOR EQUIPMENT RATINGS REFER TO PLANNING DOCUMENTS



SECOND
B.O.S. - BOTTOM OF STEEL





North East Substation *East Elevation*



North East Substation *North Elevation*



North East Substation *South Elevation*



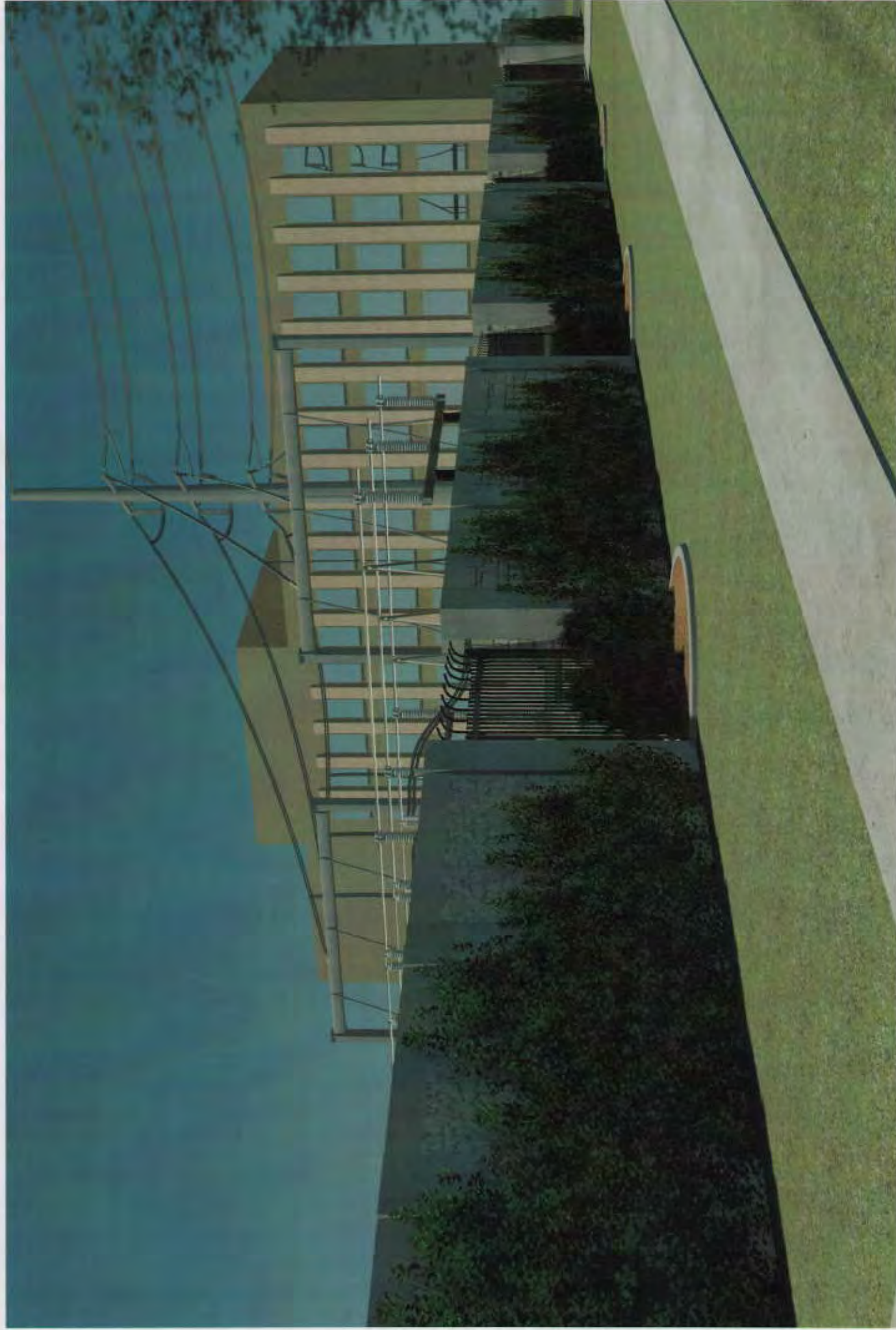
North East Substation *West Elevation*



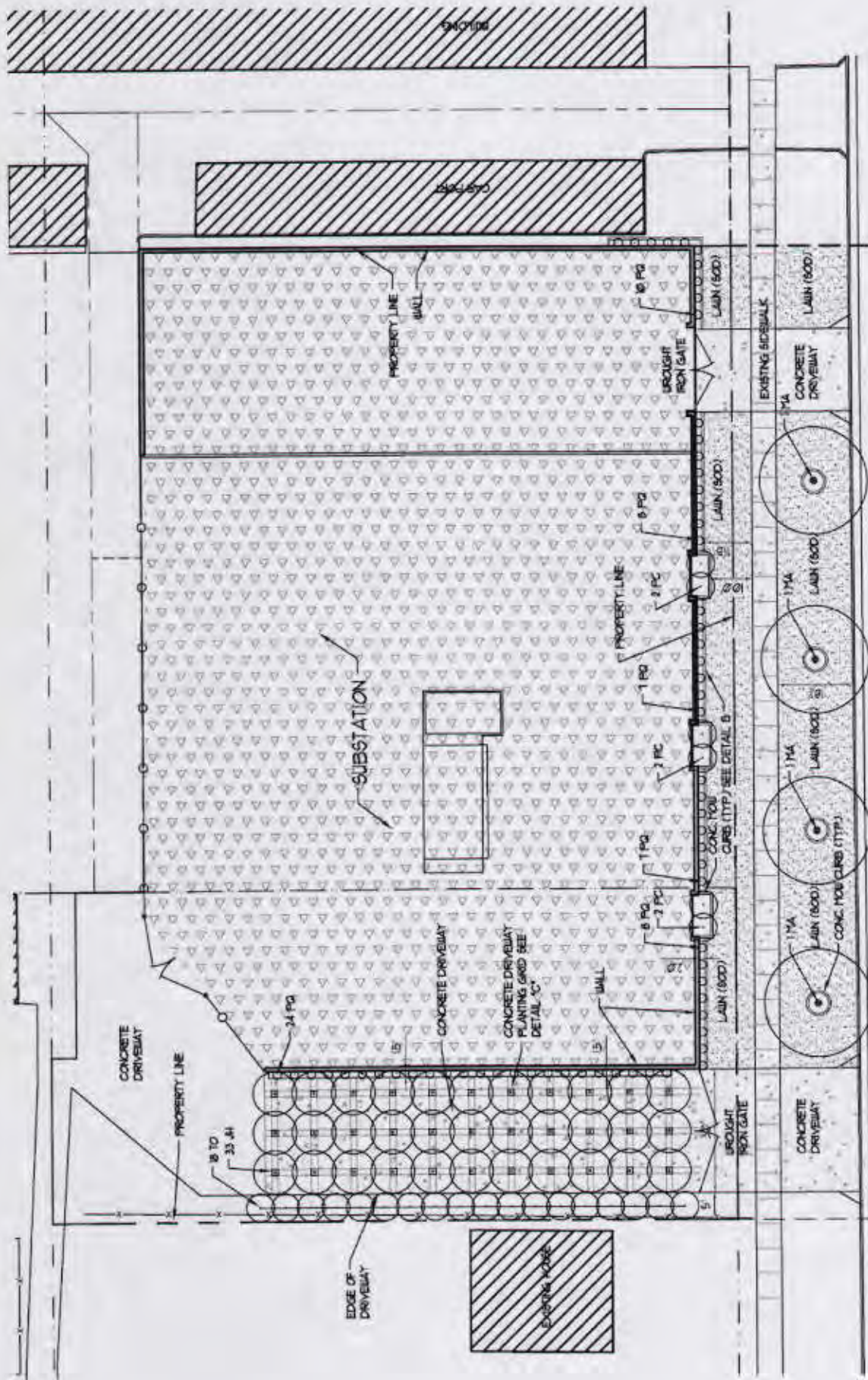
North East Substation *East Perspective*



North East Substation *west Perspective*



North East Substation *Sidewalk Perspective*



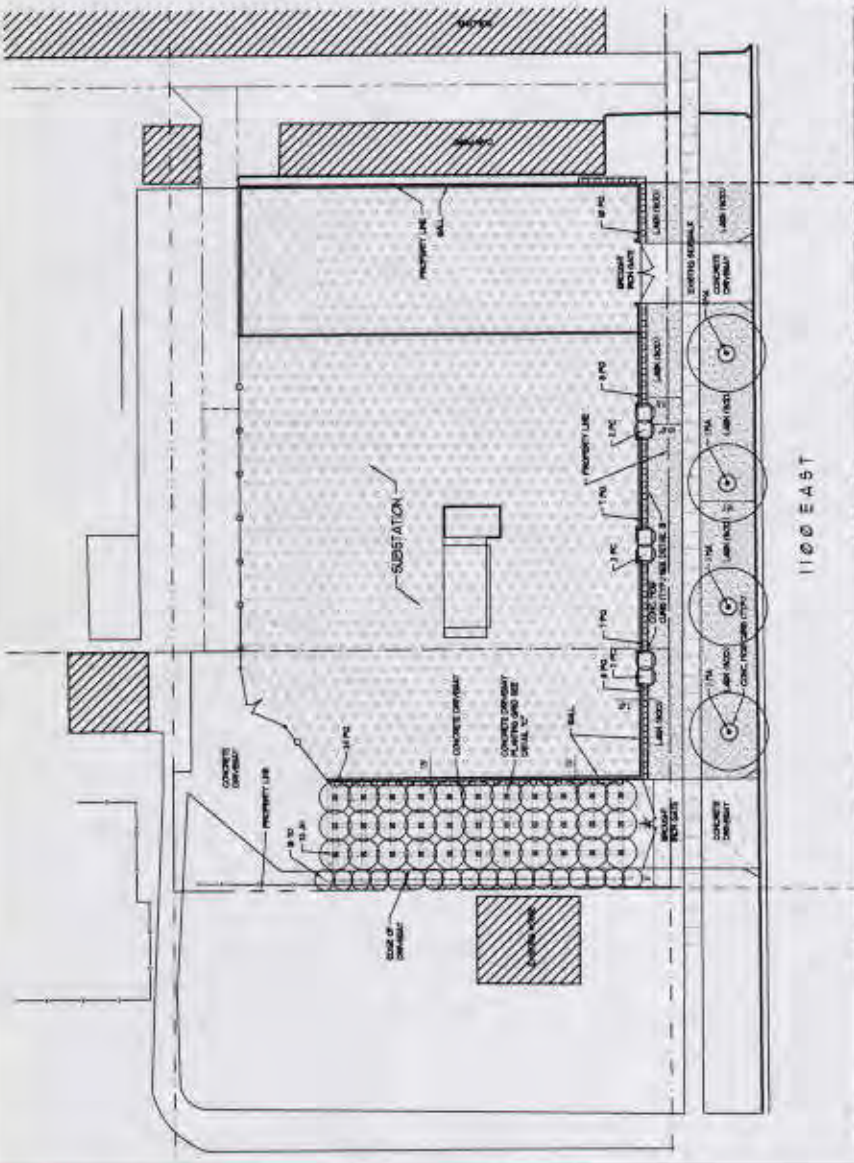
Landscape Plan Site Detail - nts

1100 EAST

PLANT LEGEND			
SYM	SYMBOL	COMMON NAME	SIZE
104	FLORAL SYMBOL	FLORAL SYMBOL	104
105	FLORAL SYMBOL	FLORAL SYMBOL	105
106	FLORAL SYMBOL	FLORAL SYMBOL	106
107	FLORAL SYMBOL	FLORAL SYMBOL	107
108	FLORAL SYMBOL	FLORAL SYMBOL	108
109	FLORAL SYMBOL	FLORAL SYMBOL	109
110	FLORAL SYMBOL	FLORAL SYMBOL	110
111	FLORAL SYMBOL	FLORAL SYMBOL	111
112	FLORAL SYMBOL	FLORAL SYMBOL	112
113	FLORAL SYMBOL	FLORAL SYMBOL	113
114	FLORAL SYMBOL	FLORAL SYMBOL	114
115	FLORAL SYMBOL	FLORAL SYMBOL	115
116	FLORAL SYMBOL	FLORAL SYMBOL	116
117	FLORAL SYMBOL	FLORAL SYMBOL	117
118	FLORAL SYMBOL	FLORAL SYMBOL	118
119	FLORAL SYMBOL	FLORAL SYMBOL	119
120	FLORAL SYMBOL	FLORAL SYMBOL	120
121	FLORAL SYMBOL	FLORAL SYMBOL	121
122	FLORAL SYMBOL	FLORAL SYMBOL	122
123	FLORAL SYMBOL	FLORAL SYMBOL	123
124	FLORAL SYMBOL	FLORAL SYMBOL	124
125	FLORAL SYMBOL	FLORAL SYMBOL	125
126	FLORAL SYMBOL	FLORAL SYMBOL	126
127	FLORAL SYMBOL	FLORAL SYMBOL	127
128	FLORAL SYMBOL	FLORAL SYMBOL	128
129	FLORAL SYMBOL	FLORAL SYMBOL	129
130	FLORAL SYMBOL	FLORAL SYMBOL	130
131	FLORAL SYMBOL	FLORAL SYMBOL	131
132	FLORAL SYMBOL	FLORAL SYMBOL	132
133	FLORAL SYMBOL	FLORAL SYMBOL	133
134	FLORAL SYMBOL	FLORAL SYMBOL	134
135	FLORAL SYMBOL	FLORAL SYMBOL	135
136	FLORAL SYMBOL	FLORAL SYMBOL	136
137	FLORAL SYMBOL	FLORAL SYMBOL	137
138	FLORAL SYMBOL	FLORAL SYMBOL	138
139	FLORAL SYMBOL	FLORAL SYMBOL	139
140	FLORAL SYMBOL	FLORAL SYMBOL	140
141	FLORAL SYMBOL	FLORAL SYMBOL	141
142	FLORAL SYMBOL	FLORAL SYMBOL	142
143	FLORAL SYMBOL	FLORAL SYMBOL	143
144	FLORAL SYMBOL	FLORAL SYMBOL	144
145	FLORAL SYMBOL	FLORAL SYMBOL	145
146	FLORAL SYMBOL	FLORAL SYMBOL	146
147	FLORAL SYMBOL	FLORAL SYMBOL	147
148	FLORAL SYMBOL	FLORAL SYMBOL	148
149	FLORAL SYMBOL	FLORAL SYMBOL	149
150	FLORAL SYMBOL	FLORAL SYMBOL	150
151	FLORAL SYMBOL	FLORAL SYMBOL	151
152	FLORAL SYMBOL	FLORAL SYMBOL	152
153	FLORAL SYMBOL	FLORAL SYMBOL	153
154	FLORAL SYMBOL	FLORAL SYMBOL	154
155	FLORAL SYMBOL	FLORAL SYMBOL	155
156	FLORAL SYMBOL	FLORAL SYMBOL	156
157	FLORAL SYMBOL	FLORAL SYMBOL	157
158	FLORAL SYMBOL	FLORAL SYMBOL	158
159	FLORAL SYMBOL	FLORAL SYMBOL	159
160	FLORAL SYMBOL	FLORAL SYMBOL	160
161	FLORAL SYMBOL	FLORAL SYMBOL	161
162	FLORAL SYMBOL	FLORAL SYMBOL	162
163	FLORAL SYMBOL	FLORAL SYMBOL	163
164	FLORAL SYMBOL	FLORAL SYMBOL	164
165	FLORAL SYMBOL	FLORAL SYMBOL	165
166	FLORAL SYMBOL	FLORAL SYMBOL	166
167	FLORAL SYMBOL	FLORAL SYMBOL	167
168	FLORAL SYMBOL	FLORAL SYMBOL	168
169	FLORAL SYMBOL	FLORAL SYMBOL	169
170	FLORAL SYMBOL	FLORAL SYMBOL	170
171	FLORAL SYMBOL	FLORAL SYMBOL	171
172	FLORAL SYMBOL	FLORAL SYMBOL	172
173	FLORAL SYMBOL	FLORAL SYMBOL	173
174	FLORAL SYMBOL	FLORAL SYMBOL	174
175	FLORAL SYMBOL	FLORAL SYMBOL	175
176	FLORAL SYMBOL	FLORAL SYMBOL	176
177	FLORAL SYMBOL	FLORAL SYMBOL	177
178	FLORAL SYMBOL	FLORAL SYMBOL	178
179	FLORAL SYMBOL	FLORAL SYMBOL	179
180	FLORAL SYMBOL	FLORAL SYMBOL	180
181	FLORAL SYMBOL	FLORAL SYMBOL	181
182	FLORAL SYMBOL	FLORAL SYMBOL	182
183	FLORAL SYMBOL	FLORAL SYMBOL	183
184	FLORAL SYMBOL	FLORAL SYMBOL	184
185	FLORAL SYMBOL	FLORAL SYMBOL	185
186	FLORAL SYMBOL	FLORAL SYMBOL	186
187	FLORAL SYMBOL	FLORAL SYMBOL	187
188	FLORAL SYMBOL	FLORAL SYMBOL	188
189	FLORAL SYMBOL	FLORAL SYMBOL	189
190	FLORAL SYMBOL	FLORAL SYMBOL	190
191	FLORAL SYMBOL	FLORAL SYMBOL	191
192	FLORAL SYMBOL	FLORAL SYMBOL	192
193	FLORAL SYMBOL	FLORAL SYMBOL	193
194	FLORAL SYMBOL	FLORAL SYMBOL	194
195	FLORAL SYMBOL	FLORAL SYMBOL	195
196	FLORAL SYMBOL	FLORAL SYMBOL	196
197	FLORAL SYMBOL	FLORAL SYMBOL	197
198	FLORAL SYMBOL	FLORAL SYMBOL	198
199	FLORAL SYMBOL	FLORAL SYMBOL	199
200	FLORAL SYMBOL	FLORAL SYMBOL	200

NOTES

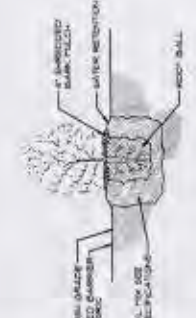
1. TOP CROSS ALL NEW PLANTING AREAS WITH 4" JUMP BARRICADE BARK MULCH SEE PLANTING DETAILS
2. VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION CONTACT BLUE MARKERS AND VERIFY WITH SITE PLANS
3. ALL PLANT MATERIAL SHALL BE HEALTHY STOCK FREE OF DISEASE AND DEFOLIATION - HARMFUL NUTRITIONAL SHAPES
4. PLANT MATERIAL SHALL BE THE SAME SPECIES AND SIZE AS SHOWN IN THE PLANT SCHEDULE
5. ALL PLANTED AREAS SHALL BE BACK FILLED WITH APPROVED SOIL. SEE PLANTING DETAILS
6. ALL BARRIERS SHALL BE PLANTED ACCORDING TO DETAILS
7. LANDSCAPE DATA CALCULATIONS ARE DETAINED ONLY
8. PLANTS SHALL BE PLANTED TO HALF AT HIGHEST THAT DO NOT INTERFERE UTILITIES LINES OR EXISTING STRUCTURES AND DO NOT OBSTRUCT THE DRIVE LANE FRONT ROAD AND TO TOP OF ROAD
9. AFTER COMPLETION OF ALL PLANTING, ALL PLANTING SHALL BE COVERED WITH A 4" JUMP BARRICADE BARK MULCH TO PROTECT PLANTS FROM SOIL EROSION AND WEED GROWTH
10. USE PERMANENT MARKERS TO PROVIDE BOUNDARY CONDITIONS FOR THE PLANTS AND TO DISCLOSE PLANTING AND PLANTING MATERIAL. INFORMATION SHALL INCLUDE PLANTING THE SOIL TO A MINIMUM DEPTH OF 18" IN PLACES AND PROVIDE THE SOIL FOR PLANTING THE SOIL TO A MINIMUM DEPTH OF 18" IN PLACES AND PROVIDE THE SOIL FOR PLANTING THE SOIL TO A MINIMUM DEPTH OF 18" IN PLACES
11. PLANTS SHALL ONLY BE PLANTED WITH THE SOIL IF IT IS AN EXISTING PLANT IN A BARRICADE BARK MULCH SHALL BE RECOMMENDED TO PLANTING WITH CONSTRUCTION TOPICS. SHALL NOT BE USED AS SOIL. SEE LANE AREA AND SEE AT RECES OF COVER IN BARRICADE



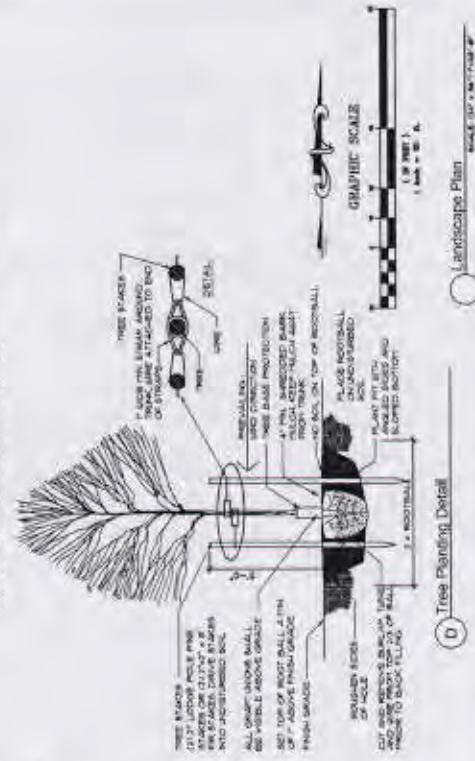
C Concrete Driveway Planting Grid



B Concrete Now Curb



A Shrub Planting Detail



D Tree Planting Detail

aswt+

 Architecture

 Landscape Architecture

 Land Planning

 Engineering

 1414 South 10th Street, Suite 100

 Phoenix, AZ 85001

 Phone: (602) 944-1111

 Fax: (602) 944-1112

 Email: info@aswt.com

 Website: www.aswt.com

ROCKY MOUNTAIN

 POWER

 1414 South 10th Street, Suite 100

 Phoenix, AZ 85001

 Phone: (602) 944-1111

 Fax: (602) 944-1112

 Email: info@aswt.com

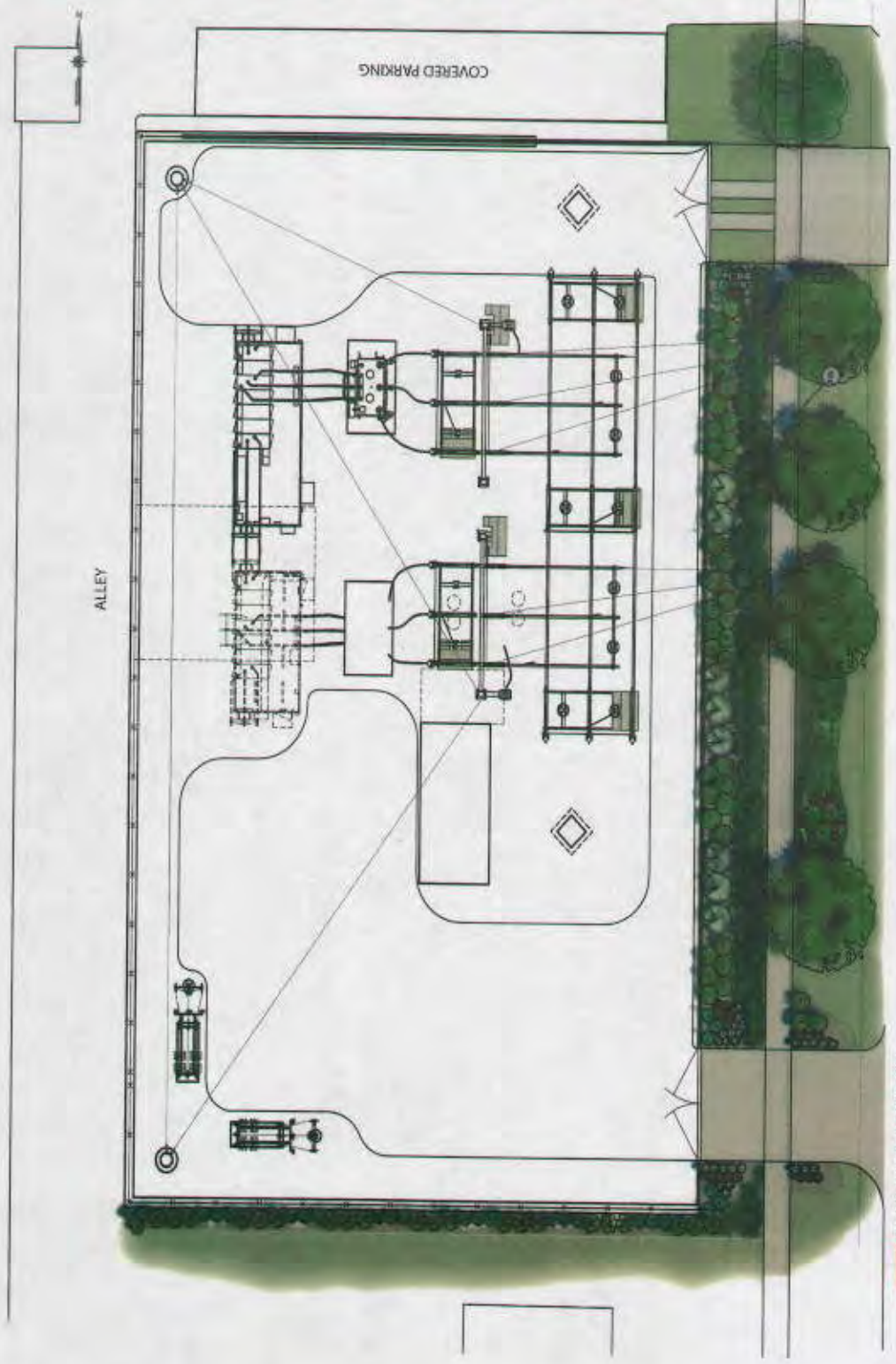
 Website: www.aswt.com

Attachment A-2

Original - Site Plan, Landscape and Elevation Drawings

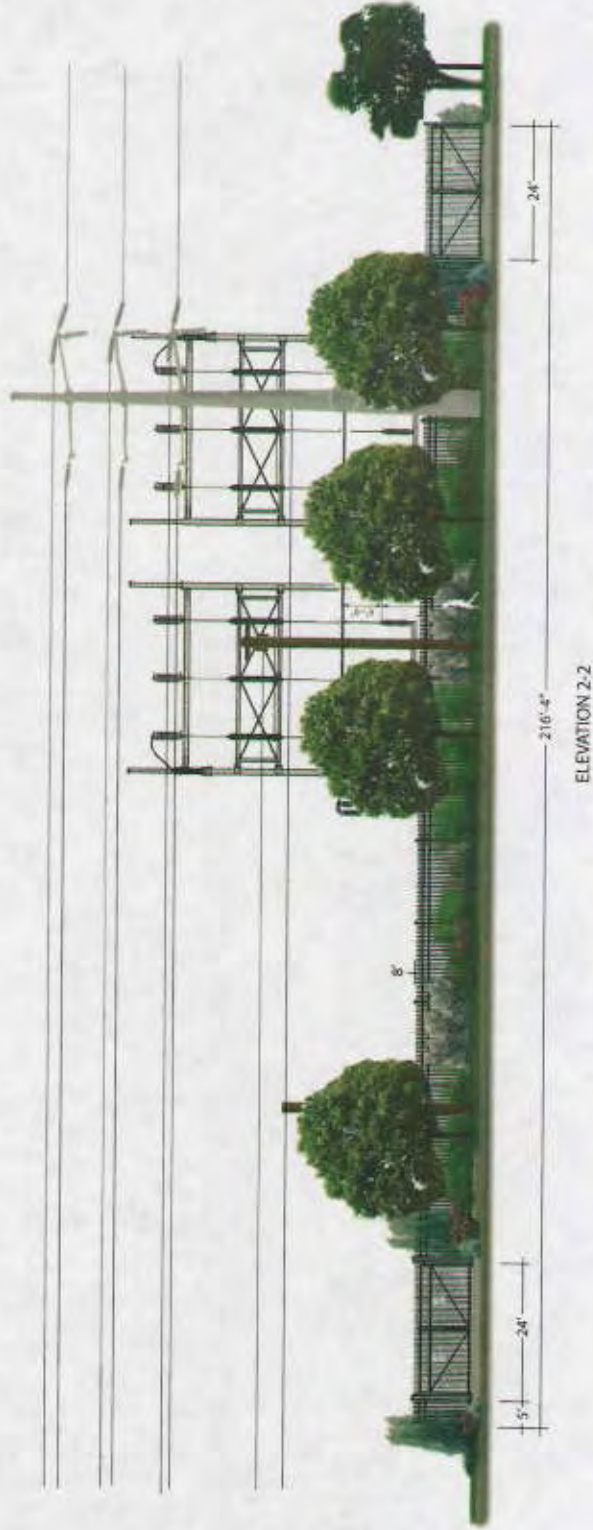


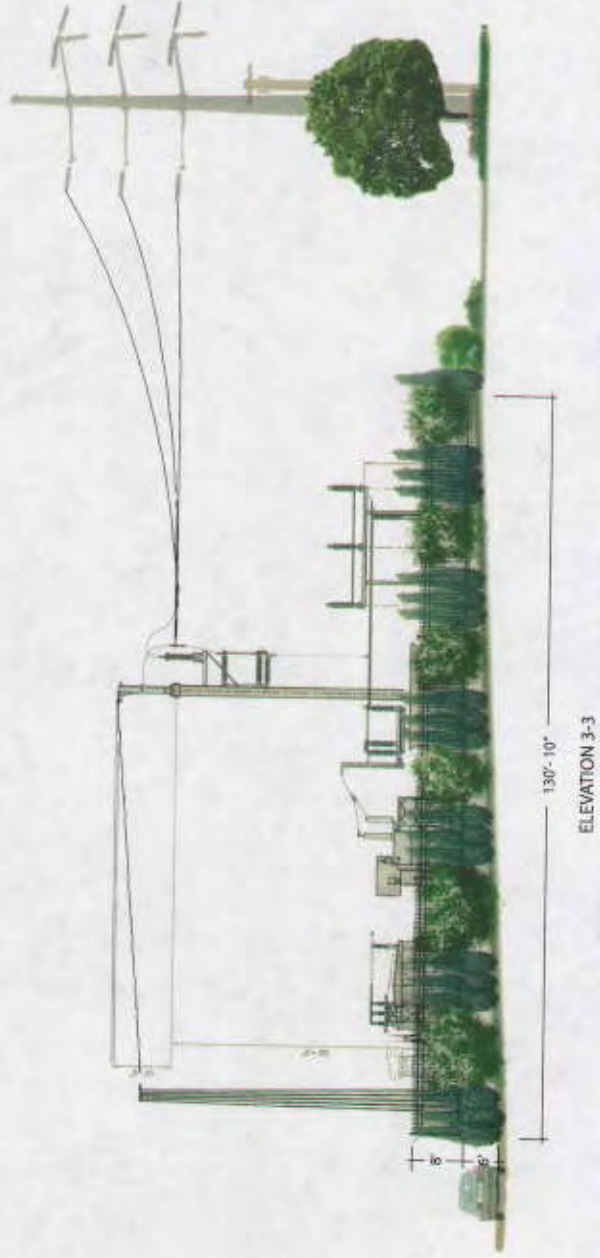
S1100 EAST

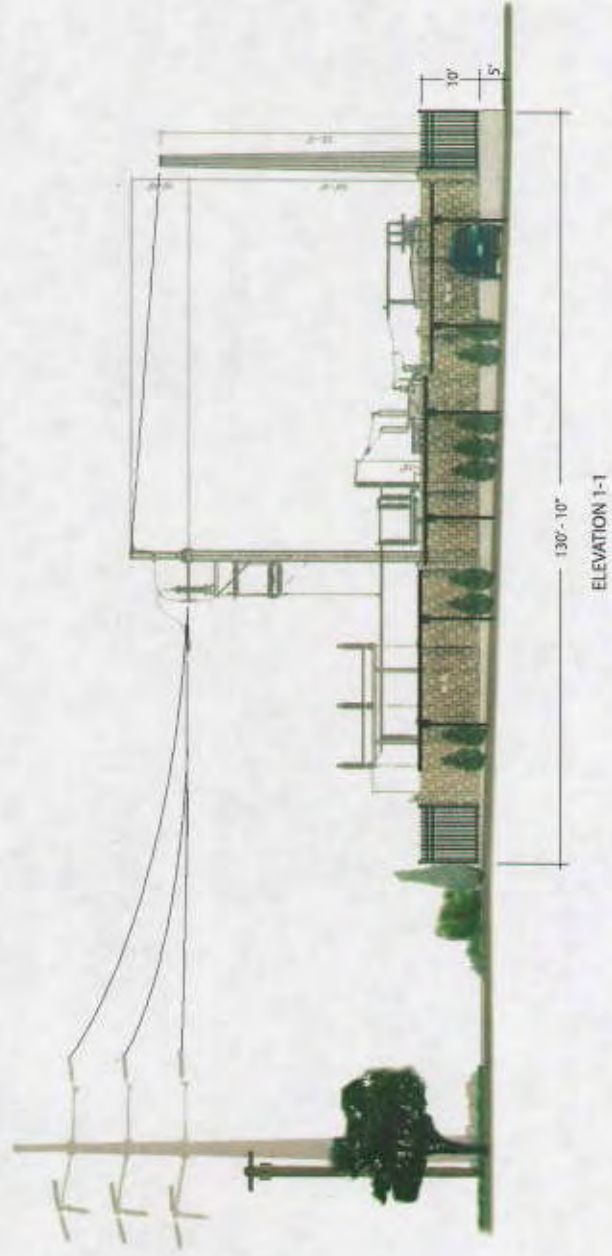


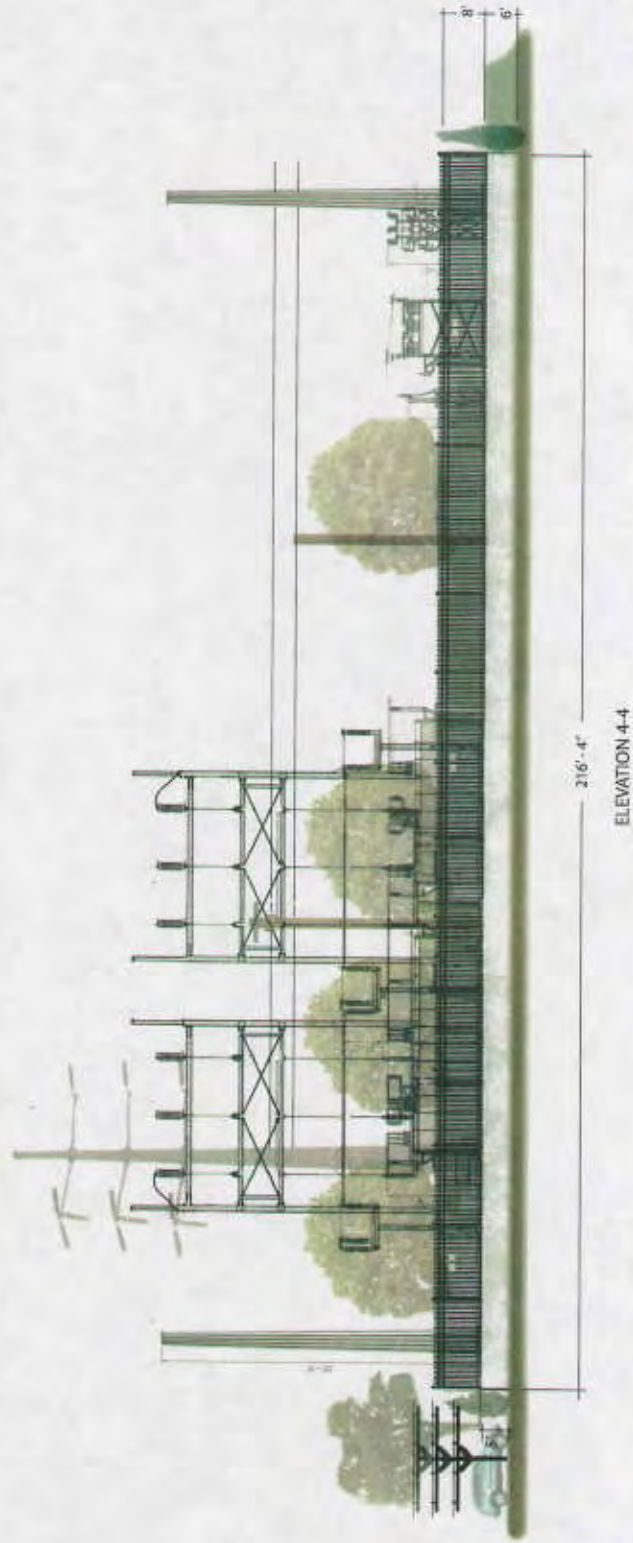
NORTHEAST SUBSTATION
SALT LAKE CITY, UTAH











Attachment B
Photographs



08.16.2007



08.16.2007







Attachment C
Citizen Input

March 19, 2009 Open House Comments and
Comments since Issues Only Hearing – January 14, 2009

Joyce, Everett

From: loggins merrill [loggins.merrill@gmail.com]
Sent: Thursday, March 19, 2009 4:35 PM
To: Joyce, Everett
Subject: Fwd: University Neighborhood and Rocky Mountain Power

It appears I had your email incorrect on the first try...

----- Forwarded message -----

From: loggins merrill <loggins.merrill@gmail.com>
Date: Thu, Mar 19, 2009 at 4:30 PM
Subject: University Neighborhood and Rocky Mountain Power
To: Everitt.Joyce@slcgov.com
Cc: Esther Hunter <estherehunter@hotmail.com>

Dear Everitt,

My name is Loggins Merrill and am the chair for the East Central Community Council. I just wanted to write you and encourage you to seriously consider the letter sent by our University Neighborhood Chair, Esther Hunter. She has brought up several concerns with the public process piece in how to best get information about the proposed changes to the Rocky Mountain Power (RMP) 11th East substation to the residents in her area. I strongly believe that she brings some sound alternatives and ideas on when RMP can best present this information. I also recommend the move of the Planning Commission date to be put back 2 weeks to ensure that the majority of neighbors will be present. We appreciate your understanding our desire to have the most people as possible involved who want to be. Thank you for your consideration.

Loggins Merrill
Chair, East Central Community Council.

--
The problems that exist in the world today cannot be solved by the level of thinking that created them. -
Einstein

--
The problems that exist in the world today cannot be solved by the level of thinking that created them. -
Einstein

Planning Division Open House

March 19, 2009

Rocky Mountain Power - Northeast Substation
Planned Development Conditional Use Petition No. PLANSUB2008-00641
Minor Subdivision Petition No. PLANSUB2008-00814
144 S 1100 East

Comment Sheet

Please provide us with the following information, so that we may contact you for further comment, if necessary (please print clearly, thank you):

Name Stuart Hunter

Address) representing UBC/ECCC

337 S 11th East

84102

(include zip code)

(UBC chair
ECCC Bd member & chair
land use)

Phone (801) 652-4988

(we are concerned w/ 11th east sub &
we have a long term perspective.)

Comments:

- Please see the attached
email. It represents the official
current position of the UBC and ECCC.
regarding the open house. ^{other} Concerns include:
- ① Long term/long range energy routes & plans
 - ② Prudent avoidance as a city policy & zoning guidelines include Best practices
 - ③ Design standards substations
 - ④ Health concerns
 - ⑤ Best Practices / Energy Master plans
 - ⑥ City "expert"
 - ⑦ 11th East Substation impacts (air)
 - ⑧ Toxic clean up & process related to demolition & rebuild of the site
 - ⑨ General - City approach and options.

Please distribute to the Planning Commission in the next packet. Thank you.

From: universityneighborhood@hotmail.com

To: Lucky.Morse@PacifiCorp.com

Subject: Re: Tree Removal Request in park strip along 800 South McClelland Project

Date: Thu, 19 Mar 2009 12:44:04 -0600

Lucky,

I appreciated having the chance to sit down with you and Alene last week. As promised, I reviewed our discussion with the steering committee that heads the full group supporting the UNC for sustainable power.

In recap, and as we discussed this subcommittee is not a group convened for only this one substation or issue as reported in the press.

This group has formed for long term energy planning and efforts related to sustainability in the city.

I have summarized comments on key points below and look forward to your response.

1. The city Open House tonight is not a good date.

In the interest of good public process and establishing a good relationship with your customers in this area UNC officially requested that you consider

moving this topic to a date that is not in conflict for this neighborhood.

As you know, the majority of neighbors in the University Neighborhood Council are involved with the University in some way (attending, teaching, part of staff, support staff).

This is Spring Break and the majority of neighbors participating in the UNC and the UNC subcommittee are away. This is the same issue that you previously encountered with the last Open House held on January 5 since the U did not begin until January 12th. This was the U's Christmas break.

You indicated that you wanted to go ahead despite this concern.

2. The date selected for the Planning Commission is April 8th which marks the beginning of Passover (Easter Weekend) and therefore is a major conflict for many people in the UNC.

* **This is a formal request that you consider requesting the city move the date by 2 weeks if possible.**

As we discussed I would do my best to convey your stated sincere interest in the community. I have relayed your comments and interest but I need to report that most of my neighbors still feel that the selection of dates

gives an indication of RMP's true interest. I strongly encourage you to consider this request to further your stated goal of a good relationship.

3. Everyone expressed appreciation for your agreement to gather the right people from RMP for several outstanding requests from the UNC. I have listed the dates put forward by the group.

Please let me know if these are workable for you and your company. I have not yet contacted the Planning Division to see if they have interest/availability.

Ten year plan and long range plan March 28 11-12:30

Sustainable energy options/planning April 4 11-12:30

UNC general meeting to present the updated substation plan

April 2 (Meeting time is 6:30-8:30)

There are 2 other main presentations and I was allowing about 60 minutes for your portion.)

Please let me know if you have any questions or thoughts, Best regards, Esther

University Neighborhood Council

From: Morse, Lucky

Sent: Thursday, March 19, 2009 11:45 AM

To: University Neighborhood Council

Subject: RE: Tree Removal Request in park strip along 800 South McClelland Project

Esther: Will do. I have an email into Randy and Travis to get it to me as soon as possible.

thanks

Lucky

From: University Neighborhood Council [mailto:universityneighborhood@hotmail.com]

Sent: Thursday, March 19, 2009 11:41 AM

To: Morse, Lucky

Subject: FW: Tree Removal Request in park strip along 800 South McClelland Project

Hi Lucky. The attachments from Randy did not come through. Would you please forward them to me?

Esther

University Neighborhood Council

Planning Division Open House

March 19, 2009

Rocky Mountain Power - Northeast Substation
Planned Development Conditional Use Petition No. PLANSUB2008-00641
Minor Subdivision Petition No. PLANSUB2008-00814
144 S 1100 East

Comment Sheet

Please provide us with the following information, so that we may contact you for further comment, if necessary (please print clearly, thank you):

Name Joel Briscoe

Address) 1124 E. 600 South

SLC, UT 84102
(include zip code)

Phone (801) 583-2281

(801) 425-3038

Comments:

Existing GIS technology could significantly reduce the size & footprint of the Northeast Sub.

I'd like to see electrical use data that is current to 3/2009, not truncated in 2008, like the information RMP presented to the community council chairs in Feb.

I'd like to see a real dialogue w/ the city & its residents.

Please walk along 1100 East w/ neighbors and show them how far the overhead lines will extend into their yards.

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Tuesday, February 24, 2009 9:17 AM
To: Joyce, Everett
Cc: Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder; Becker, Ralph; Gray, Frank; mjwoodhead@att.net; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor
Subject: FW: Utility "Upgrades"

Everett, Please give this email to the pc on the 25th. Thank you.

From: brentcorcoran@comcast.net
Subject: Utility "Upgrades"
Date: Sun, 8 Feb 2009 16:41:50 -0700

Dear Sirs:

We have been against both the process and resolution of recent utility upgrades proposed to run from near South Temple to Parley's Canyon. We think that Rocky Mountain Power is unfairly seizing easement expansions in misuse of eminent domain, and is not putting their own money made from their own guaranteed profits into community-friendly improvements. Wherever substations and high-voltage poles are placed neighborhood blight inevitably follows. Rocky Mountain Power's plan would substantially impact the beauty of many Salt Lake's more historic neighborhood's, as well as a major artery used by visitors to reach our scenic destinations--not to mention the economic and health dangers to such a large segment of the city's population. Luke Garrett has stood up against this process. I hope other political leaders will help lead the fight to prevent this scar upon our city.

Your sincerely,
Brent Corcoran
Miles Merrell
1121 East 800 South
Salt Lake City, UT 84102

Windows Live™ Hotmail®:...more than just e-mail. [Check it out.](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Tuesday, February 24, 2009 8:21 AM
To: Joyce, Everett; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder; Becker, Ralph; Gray, Frank; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor
Subject: FW: posted sunday under Jbaja. hope it sends the right message.

From: Jwood@BikeRaft.com
To: 11thstreetproximate@live.com
Subject: posted sunday under Jbaja. hope it sends the right message.
Date: Sun, 22 Feb 2009 16:13:45 -0700

Our power utility must evolve and become MORE than just a SUPPLIER. Their focus should be shifted from building larger substations to purveyors of programs and incentives that encourage all of us to reduce consumption. That this old established neighborhood has increased demand is a red flag that it is time to reduce development of the U/U campus and associated medical campuses. Instead of building larger substations they should be investing more into programs like their PV Solar incentive program that is so badly under funded that the entire 2009 incentive budget was gone in the first business day of 2009. Building and providing more supply is the OLD dirty energy model. The revolution starts now towards using and building only towards the sustainable energy sources.

john wood

Windows Live™: Discover 10 secrets about the new Windows Live. [View post.](#)

Joyce, Everett

From: jereid@aol.com
Sent: Sunday, February 22, 2009 12:05 PM
To: Joyce, Everett; 11thstreetproximate@live.com
Subject: Oppose 1100 East Substation and High Voltage Lines

Oppose 1100 East Substation and High Voltage Lines

I have lived in this neighborhood for 16 years and have no illusions about the fact that living in the city is not the same as suburbia. I do not expect to enjoy the shelter of quiet tree-lined streets with children playing. However, the proposed expansion of the Northeast Substation is unreasonable and very damaging to the residential neighborhood. There must be alternatives to this plan and I would like to see them seriously considered.

It is not acceptable to create a transmission superhighway above ground in the middle of the city.

Respectfully,

Julia Reid
761 Douglas Street
Salt Lake City
UT 84102
801-581-9060

A Good Credit Score is 700 or Above. See yours in just 2 easy steps!

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Sunday, February 22, 2009 8:58 AM
To: Joyce, Everett; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder; Becker, Ralph; Gray, Frank; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor
Subject: FW: Woods are out of town for Sat. 10:00am meeting

Everett, Please give this to the planning commission on Feb. 25th. Thank you.

From: Jwood@BikeRaft.com
To: 11thstreetproximate@live.com
CC: jwood@bikeraft.com; woods@bikeraft.com
Subject: Woods are out of town for Sat. 10:00am meeting
Date: Fri, 20 Feb 2009 11:41:59 -0700

We are against the further development of the 11th east RMP substation and utility lines. An interesting angle might be to point out that perhaps instead of investment in lines/substations RMP should grow their PV Solar incentive programs. I have a 3 kilowatt PV system on my 219 Elizabeth roof that was one of the first to gain approval and rebate from this RMP program 2 years ago. I just applied again for a 4 kilowatt system for my business this January/2009. The earliest you could submit applications was midnight on 1/5/2009 and by 9:00am that same day RMP had run out of incentive or allotment for the entire 2009 year on both the residential and business sides of this program. Clearly this program is under funded. I would like to see them move money from substation improvements to existing programs like this one where the public is just waiting for them to fill the need.

John Wood

Access your email online and on the go with Windows Live Hotmail. [Sign up today.](#)

Joyce, Everett

From: Sara Kimball [llabmikaras@hotmail.com]

Sent: Friday, February 20, 2009 9:43 AM

To: Joyce, Everett

I live on Sunnyside between 11th and 12th avenue. I am really disapointed that instead of looking to the future and considering a green, renuable project, this is just more of the same. I am very much against this!

Sara Kimball
582-0350

Windows Live™: E-mail. Chat. Share. Get more ways to connect. [Check it out.](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Thursday, February 19, 2009 1:45 PM
To: Mary Woodhead; Joyce, Everett
Cc: universityneighborhood@hotmail.com
Subject: Upcoming PC meeting

Mary,

We need your help and also we have an observation for good public process. We know public notice is under review by the planning staff and so we hope this is something the PC will consider for long term improvements in the code.

Our RMP item is currently scheduled this next week but we have "heard" that the item may once again be postponed.

We are asking for your help to see if this decision can be made before we flyer. We know the legal requirements allow later than this, however if possible, and in the spirit of collaboration, we are hoping that there is a way to know before the last option. We would really appreciate knowing so that we are not "wearing out" our sneaker net.

Our council works really hard to follow good public process efforts and so when we have meetings or when we are involved in a planning effort we hand deliver our notices to the households in our area. Last meeting we hand delivered to 1400 households. This is a small number for us as it involves 2 of our neighborhoods. We know that some cc's have the funds and ability to mail (ie avenueues 6500) but in our case, we do not have the means and so "sneaker net" is what we do. In our area we have many students, small business and also an older population. Many of our neighbors do not utilize computers but we are building an email list (for sustainability sake), as well. This however takes time.

We know that things happen and so last pc meeting when the RMP agenda item was pulled a day in advance, we had no real way to get the news out to everyone involved.

Some folks had made special arrangements for babysitters, substitute employees for single owner shops, change in work schedules and the like. We know that this is how it goes.

However, reality or not, the perception is sometimes that these types of actions are taken to "wear down" the community involvement.

Again we know things happen and the UNC board is interested in healthy progress.

We understand the situation from an applicants perspective (which we have all been) that often the pc meeting is the last step in an application review process which has taken many months. We also feel just as important is the consideration for the public and the public input. Most of the cc's are working really hard to follow the open meeting guidelines and good public process. That process, for us, includes many meetings and focus groups so that when we send our representatives to speak in our behalf, we have spent time on all sides of the issue. This is needed because the two minutes or a presentation format (open house) is never enough in the city pubic process system for projects such as this one.

Important issues like sustainable energy routes and plans are worth our collective time.

The current city notification process is a bit out of sync with most cc efforts for good process, transparency and open meeting guidelines. We believe this can be sorted out to make improvements for the applicants and the public alike. This in fact is an important issue that we would like to emphasize. Also we strongly support CED's effort to rebuild trust with its community

and think it very important. We strongly support that small tweaks in the ordinance can and will solve some of these challenges that have caused problems for cc's and applicants alike.

In the mean time, regarding the RMP discussion item, anything you can do to help us know about this next weeks agenda asap would be greatly appreciated.

Sincerely,
University Neighborhood Council Board.

Everett, please include this email in the next packet for the Feb. 25 PC meeting. Thanks you.

See how Windows Mobile brings your life together—at home, work, or on the go. [See Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 4:54 AM
To: Joyce, Everett; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; Luke Garrott; Soren Simonsen Forwarder; Becker, Ralph; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor; Love, Jill
Subject: FW: Feb 11th Planning Commission meeting

Everett, Please include this actual pod cast program to the planning commission members in the packet for Feb. 25. pc meeting. This is helpful information that everyone making these types of decisions would appreciate. Thank you.

Date: Sat, 14 Feb 2009 23:33:50 +0000
From: jazzman60@comcast.net

I was listening to KUER Friday around 12:15PM to " Talk Of The Nation's " Science Friday" program and was stunned to hear the 20 minute segment on " Smart Grids " and couldn't wait to get a link to it. So here it is. It's on a pod cast where the experts discuss a problem with current needs in power.

The link is <http://www.sciencefriday.com/program/archives/200902132> You can listen through iTunes.
I think the Mayor, the City Council Members including Luke, and the Planning Commission Members should all hear it.

Cheers,

Steve & Vicki

Get more out of the Web. Learn 10 hidden secrets of Windows Live. [Learn Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 6:49 AM
To: Joyce, Everett
Subject: RE: New Questions for Planning Commission

Hi Everett. Was this read into the record on the 11th?

From: estherehunter@hotmail.com
To: everett.joyce@slcgov.com; 11thstreetproximate@live.com
Subject: FW: New Questions for Planning Commission
Date: Thu, 5 Feb 2009 16:20:50 -0700

Please include this email and document in the planning commission packet for Feb. 11. Thank you.

From: chris_weed@hotmail.com
Subject: RE: New Questions for Planning Commission
Date: Thu, 5 Feb 2009 14:39:06 -0700

Attached a Glendale City Council report that includes bidding information from ABB Inc. to build one of their GIS Substations. The item of most interest is on page 9 that includes pricing and spec's on several Design & Build GIS Substation projects through out the United States, Canada and the Caribbean. What it shows is that its very competitive pricing if compared to the estimated \$4 Million for their project, while being 30% of the foot print and height. I have also located and sent screenshots of 3 of the substations (front view and sky view) to show the low impact design.

Windows Live™: E-mail. Chat. Share. Get more ways to connect. [See how it works.](#)

Stay up to date on your PC, the Web, and your mobile phone with Windows Live. [See Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 6:41 AM
To: Joyce, Everett; Love, Jill; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder; Becker, Ralph; Gray, Frank; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor
Subject: FW: Concerns for RMP 144 s 1100 E Substation expansion

Everett please include in the packet for the pc on the 25th. Thank you.

From: Jwood@BikeRaft.com
To: everett.joyce@slcgov.com
CC: woods@bikeraft.com; jwood@bikeraft.com; 11thstreetproximate@live.com
Subject: Concerns for RMP 144 s 1100 E Substation expansion
Date: Mon, 9 Feb 2009 10:08:37 -0700

Everett,

My family lives at 219 S 1140 E up on the hill and any changes to the power transmission lines or poles along 1100 E would directly impact our view and property values. I also own apartment buildings located on Elizabeth between 200 S and 300 S as well. All of these properties would suffer a negative impact from changes to the view corridor. Would the RMP plans include a change to the poles, height, gage or number of lines through this 1100 East visual corridor? If so this Salt Lake citizen and owner of four adjacent properties is dead set against it and would like to know what alternatives RMP has to consider.

Thank you.

John and Jan Wood
801-230-9839 cell

Stay up to date on your PC, the Web, and your mobile phone with Windows Live. [See Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 6:24 AM
To: Joyce, Everett
Subject: RE: Introduction Summary -Rocky Mountain Power application for 11th East Substation Feb. 11th meeting
Attachments: Dear Planning Commission.docx

Also this one. These should all be part of the official record for the 25th if they were not read into the record on the 11th. Did you get a copy of the packet we brought in on the 11th and were they read in under old business? If not this needs to be added to the 25th. Let us know and we can get you a copy. Thank you.

Subject: RE: Introduction Summary -Rocky Mountain Power application for 11th East Substation Feb. 11th meeting
Date: Mon, 9 Feb 2009 16:01:50 -0700
From: everett.joyce@slcgov.com
To: 11thstreetproximate@live.com

NOTICE: The 11th East Substation meeting on February 11, 2009 has been postponed.

The agenda will be amended, however, please share this information with others that would be interested in attending the February 11th Planning Commission meeting regarding the substation.

The document emailed on Saturday has a February 6, 2009 date. The previous document that was sent to the Planning Commission members to replace the draft document was dated February 5, 2009. Are these documents the same or has the latest document been modified?

The Rocky Mountain Power 1100 East Substation is an Other Business agenda item and not a public hearing and would be a staff and applicant discussion with the Planning Commission.

Everett L. Joyce, AICP
 Senior Planner
 801-535-7930
 Salt Lake City Planning Division
 451 South State Street, Rm 406
 PO Box 145480
 Salt Lake City, UT 84114-5480

From: UNC for Sustainable Energy Development [mailto:11thstreetproximate@live.com]
Sent: Saturday, February 07, 2009 2:03 PM
To: Joyce, Everett
Cc: UNC for Sustainable Energy Development
Subject: Introduction Summary -Rocky Mountain Power application for 11th East Substation Feb. 11th meeting

Dear Everett,
 We have two quick requests.

4/13/2009

Would you please confirm that this corrected document (intro.) was sent to each of the planning commissioners individually to replace the draft version that was accidentally submitted for the packet? We have attached it in both rich and word format for easy access.

(Again we are very sorry for our error.)

Also, could you please confirm our understanding that there will be no public hearing at this upcoming pc meeting (Feb. 11) but instead that staff and Rocky Mountain Power will be addressing the commission and responding to questions.

Thank you. We really appreciate your help on this.

Joel, Sarah, Chris, Doug, and the UNC board.

Windows Live™: Keep your life in sync. [Check it out.](#)

Get more out of the Web. Learn 10 hidden secrets of Windows Live. [Learn Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 6:07 AM
To: Joyce, Everett
Subject: FW: Open letter to RMP

Hi Everett. Was this given to the pc on the 11th? If not please add to the packet for the 25th. Can you please let us know? Thank you.

From: 11thstreetproximate@live.com
 To: mjwoodhead@att.net; everett.joyce@slcgov.com; council.comments@slcgov.com;
 eric@contourcomp.com; jtmartin@sprynet.com; lgarrott@gmail.com; soren@crsa-us.com;
 ralph.becker@slcgov.com; frank.gray@slcgov.com; wilford.sommerkorn@slcgov.com;
 david.everitt@slcgov.com; karen.hale@slcgov.com; mayor@slcgov.com
 Subject: Open letter to RMP
 Date: Tue, 10 Feb 2009 01:06:19 -0800

To Rocky Mountain Power

A year ago I purchased a 1920's duplex and in the process of renovating and remodeling I had it tested for lead by the lead free program administered by Salt Lake County. As they tested this old brick structure I spoke with the testers and they said that basically any building of this age has lot of lead in the paint, in the insulation, in the plaster, in the roofing materials, they even found significant lead in the soil located in the drip line where rain and snow falls from the roof.

It was decided that without proper clean up it would be a danger to anyone living in or around the building especially children. So an extensive clean up began. Some of the lead could be encapsulated by careful preparation and removal of any loose materials including windows, frames, and glass. All of which had to be disposed of properly as hazardous waste.

Now comes Rocky Mountain Power and they tore down a building at 144 South 1100 East with a track hoe and open trucks, hauling their waste to who knows where without doing anything to control dust and soil, which I am sure is because of it's age had a great potential to have lead of significant quantities.

Whether required by law or not, don't you think you should be more careful with how you treat those around you?

Isn't it just the right thing to do, to make sure your need to take down and expand does not harm us or our children? Please be more considerate of those living in close proximity to your facilities. We are more than customers we are your neighbors.

Virgil Merrill
 1079 E 200 So
 Salt Lake, UT

Everett, Please provide to the Planning Commission.

Windows Live™: Keep your life in sync. [Check it out.](#)

Stay up to date on your PC, the Web, and your mobile phone with Windows Live. [See Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 6:00 AM
To: Joyce, Everett; Love, Jill; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder; Becker, Ralph; Gray, Frank; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor
Subject: FW: 11th East Substation

Everett, Please include this email in the pc packet for Feb. 25. Thank you.

Date: Tue, 10 Feb 2009 14:10:10 +0000
From: moretons@comcast.net
To: everett.joyce@slcgov.com
CC: 11thstreetproximate@live.com
Subject: RE: 11th East Substation

Planning Board

I write not to oppose the substation but to request more time to study the issue and seek different options for the 11th East substation upgrade.

Now is the time to act in a responsible manner toward energy conservation, and energy distribution that considers quality of life and health issues as well. This issue affects all citizens and calls for a community response (city planning, citizens, RMP). We need to work together.

I live in Arlington Place directly across from the substation. In the past four years living there I have noticed RMP make the pole changeover to larger poles both on Bueno Ave and south on 1100 East. This seems to be part of their piecemeal approach of which this current plan is more of the same.

Please deny this application and continue a more open and public process to create an energy master-plan for the city---a master-plan that utilizes the most modern, environmentally friendly and efficient technology.

Thank you,

John Moreton
115 South 1100 East

Want to do more with Windows Live? Learn "10 hidden secrets" from Jamie. [Learn Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 5:25 AM
To: Becker, Ralph; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor, Joyce, Everett; Love, Jill; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder
Subject: FW: More research

Everett. Please include this information in the material for the pc packet (Feb 25). Thank you.

> Date: Wed, 11 Feb 2009 07:10:50 -0800
> From: shelleywhitesw@yahoo.com
> Subject: More research
> To: 11thstreetproximate@live.com
>
> http://mydocs.epri.com/docs/Portfolio/PDF/2008_P060.pdf
>
> The link above is set up to debunk European studies regarding EMF and is being marketed to managers of power companies.
>
>
>
>
>

Get more out of the Web. Learn 10 hidden secrets of Windows Live. [Learn Now](#)

Joyce, Everett

From: UNC for Sustainable Energy Development [11thstreetproximate@live.com]
Sent: Wednesday, February 18, 2009 4:54 AM
To: Joyce, Everett; Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; Luke Garrott; Soren Simonsen Forwarder; Becker, Ralph; Sommerkorn, Wilford; Everitt, David; Hale, Karen; Mayor; Love, Jill
Subject: FW: Feb 11th Planning Commission meeting

Everett, Please include this actual pod cast program to the planning commission members in the packet for Feb. 25. pc meeting. This is helpful information that everyone making these types of decisions would appreciate. Thank you.

Date: Sat, 14 Feb 2009 23:33:50 +0000
From: jazzman60@comcast.net

I was listening to KUER Friday around 12:15PM to " Talk Of The Nation's " Science Friday" program and was stunned to hear the 20 minute segment on " Smart Grids " and couldn't wait to get a link to it. So here it is. It's on a pod cast where the experts discuss a problem with current needs in power.

The link is <http://www.sciencefriday.com/program/archives/200902132> You can listen through Itunes.
I think the Mayor, the City Council Members including Luke, and the Planning Commission Members should all hear it.

Cheers,

Steve & Vicki

Get more out of the Web. Learn 10 hidden secrets of Windows Live. [Learn Now](#)

Joyce, Everett

From: William Bowen [wrbowen1964@yahoo.com]
Sent: Tuesday, February 17, 2009 5:18 PM
To: Joyce, Everett
Cc: 11thstreetproximate@live.com
Subject: 11th East High Voltage Lines

Mr. Joyce,

As a long time resident of 11th East, I find it quite unconscionable that SLC would even consider a request by RMP to install a high voltage electrical high-line that bisects a historic district along a residential street. This obscene development would seem to fly in the face of Mayor Becker's idea of creating "walkable" neighborhoods by completely disregarding the notion of his sustainable, green city initiatives.

One of the most obvious alternatives to the current RMP proposal would be to bury the high voltage line. Of course, RMP will quickly state that this is a more expensive proposition in terms of first time cost and on-going maintenance. Well then, so be it! If I am to be held hostage by RMP, then I am more than willing to pay the ransom in terms a special property tax to accommodate the underground burial of current and future electrical lines along the 11th East corridor.

Your consideration of my comments is greatly appreciated.

Regards,
Bill Bowen

Joyce, Everett

From: Robert Barth [rgbarth@mac.com]
Sent: Wednesday, February 11, 2009 6:26 PM
To: Joyce, Everett
Subject: Fwd: Proposed Sub-station at 144 S and 11th East

Begin forwarded message:

From: Robert Barth <rgbarth@mac.com>
Date: February 11, 2009 6:21:38 PM MST
To: everett, joyce@slcgov.com
Cc: 11thstreetproximate@live.com
Subject: Proposed Sub-station at 144 S and 11th East

Dear Mr. Joyce,

I am writing to express my strong objection to the proposed plans for the expansion of the power sub-station at 11th East and 1st South. From what I understand, Rocky Mountain Power has proposed a renovation to this sub-station that is unacceptable by most rational measures, including:

The health and well being of the surrounding residents: It has been substantiated that living in close proximity to high-tension power lines and high-voltage/wattage power equipment has a detrimental effect on the health and over-all well being of both humans and animals. The radiation emitted from this sort of facility represents a clear health risk and has been associated with a variety of chronic diseases and conditions in human beings and in animals.

Property values: Many of the residents living in the vicinity of this proposed power sub-station have a considerable investment in the real property they occupy. This investment will be seriously diminished by the construction and on-going operation of a huge power sub-station in or near their neighborhoods. The utility lines servicing this sub-station will represent an immediate health hazard and an esthetic eye-soar in all neighborhoods they reach.

Long range objectives of the City Planning Commission: If, indeed, one of the goals of Salt Lake City's Planning Commission is to improve Salt Lake City's livability and prosperity, the imposition of a huge power sub-station in the middle of a long-established and potentially desirable central city neighborhood seems to be short-sighted, at best, and contrary to sound planning objectives at worst. Salt Lake City is one of the few large western cities *not* to have suffered "core rot" in its older, central neighborhoods. The construction of this proposed sub-station, and the high-tension power lines that service it, appear to be in direct conflict with the idea that Salt Lake City remain a desirable, attractive, and viable city in the future.

Esthetics and Quality of Life: Rocky Mountain Power is a privatized public utility. Its

incentive has been, and remains, the satisfaction of its shareholder's desire for a high return on investment. Rocky Mountain Power seems to be demonstrating that its shareholder's interests supersede those of the citizens it serves. If the Planning Commission allows this company to construct the easiest, cheapest, and fastest solution to its power distribution problems at the expense of the interests and well being of the citizens of Salt Lake City will leave an ugly, hazardous legacy for generations to come. I understand viable alternatives for this problem exist that will adequately address future needs for power distribution in our growing city *and* I also understand that they are also more expensive and difficult to implement. Would the Planning Commission sacrifice the long-term well being and quality of life of today's and tomorrow's Salt Lake City citizens simply to satisfy the immediate desires of a privatized company to conduct operations as cheaply as possible? Would the Planning Commission allow a private company to deface several of Salt Lake's historic neighborhoods simply to satisfy its shareholder's interests?

I urge you to reconsider Rocky Mountain Power's request that you grant them permission to construct and operate this eye-soar and health hazard in our neighborhoods. Please insist that more public hearings be held and that more public discussion on alternative solutions occur before you grant a even a conditional approval of Rocky Mountain Power's plans. We, the citizens of Salt Lake City, entrust you with the quality of our lives in the future. Please do not betray our trust, or act in haste. There is no urgency in this issue other than to make a wise decision that is sound, fair, and reasonable for all concerned.

Thank you for your attention,

Robert Barth
1131 East 900 South
Salt Lake City, UT 84105

801-244-0447

Joyce, Everett

From: Jenna Lampe [jenlampe@hotmail.com]
Sent: Tuesday, February 10, 2009 5:04 PM
To: Joyce, Everett
Subject: 1100 East High Voltage Lines

Dear Everett,

I am a home owner at 833 South 1100 East and am appalled at the high voltage power systems you are planning on invading my home with. Have you been on 1100 East? We do not have the room for 65' main towers or 50' supporting towers. This would be a absolute 100% loss on our homes values, we already have to fear speeding cars on 1100 East and now we will have to endure these power lines? How can you ask us to endure such a loss? I am in remission with cancer, and I know there are health risks associated with what you are planning, can you live with that on your conscious to harm all of us who live here? Please I am begging you to find a better way to do your transmission highway and to keep it out of our front yards! If this is not something you would want to live right next to, then please do not make me.

Sincerely,

Jennifer Lampe

2/11/2009

Rocky Mountain Power Substation Expansion (super-node) and High Voltage Transmission Lines

As customers of Rocky Mountain Power, as citizens of this city and as a neighborhood council we understand the need for Rocky Mountain Power to maintain safe, reliable and economical power to all of the residents of the city as well as to maintain and update its infrastructure. We know that Rocky Mountain Power is an important partner to the city and we have no doubt that the company uses a sophisticated manner to calculate forecasts for growth on a regular basis.

We understand that Rocky Mountain Power is planning the installation of a second 46kv buss (as well as the modernization of the existing 46kv buss) at the 11th East Substation. Most of the equipment at this site, as well as the historic (contributory) 1927 building, has been demolished and removed. Grading of the site has begun. At present, the site is primarily empty.

We also understand that Rocky Mountain Power is requesting its lots (zoned RMF 30) be combined and the grass buffers on the south side (previously promised as a buffer to the neighborhood by Utah Power) be removed. Rocky Mountain Power is also requesting permission to encroach into the public way to the east thereby eliminating the established historic set back and severely impacting the streetscape. The proposed installation of 65' and 50' towers (exceeding the height of the current zone) will dwarf all homes in the area. Rocky Mountain Power is thereby requesting permission to enlarge this site not only to modernize its buss of 46kv but to add a second buss of 48kv to provide expanded capacity and a loop for electrical backup that would serve expanding needs of a large portion of Salt Lake. This current request lays out spacing requirements for the next expansion to high voltage 138kv lines (estimated to be 8-10 years away depending on power growth needs). We have been told that company energy projections show a 2% year to year growth rate to this site(national average is portrayed the same as this local projection).

This future expansion will include new taller wood poles, steel towers, and 15-20' front or side yard easements all along the west side of 11th East between 8th South and South Temple (in our area but planned to beyond 39th South)-easements which will mean many residents will have wires overhanging their homes.

In addition, we have been told that Rocky Mountain Power's need for this large amount of public land at this location is that once the second buss is in place, this location will be critical in the event of catastrophic failure even though it is located on the fault. Should a catastrophic failure occur RMP is planning enough room to bring in and turn 2 semi trucks from 11th East and positioned them inside the wall of the station to provide emergency power.

We also understand that this proposed expansion raises many complicated technical issues that require both short and long term solutions. Some of these issues need to be addressed in other venues including the Public Safety Commission, the legislature, federal agencies, city policy committees, residents of the affected community and will each impacted citizen, to name but a few.

Here then, are some of our short and long term thoughts and concerns:

Initial installation of substations in many areas of our city occurred in the 20's when the landscape and surrounding neighborhood had a completely different face. Many things have changed in the last 100 years including the thinking that surrounds the placement of high voltage systems, technology and our understanding of disease or health risks. We know more now. The city has grown. Are these original sites and corridors still appropriate? We understand the need for a strong infrastructure including back up loops and catastrophic planning but this expansion plan is not just normal growth **this will be a mega site and we believe this extent of expanded capacity should not be planned inside of an existing developed residential neighborhood.**

The current application before the Planning Commission combines the current immediate need for current power demands and a proposed back-up system with a future plan for 138kv. During the last two years RMP has been claiming that this substation has had a 2% year to year growth rate for peak demand for the last 4-5 years. Now today, however, we were told that the peak demand of this substation reported for the last 4-5 years has been 4%. This concerns us.

The first number was given to assure the neighborhood that it could be years before the 138kv might be needed and now the new number is being used to say the immediate expansion for future 138kv lines is prudent.

Not only energy use estimates, but also cost estimates, are hard to pin down. We are concerned that during the last two years in both the 8th South plan and now in this substation plan there have been changing costs, numbers, and facts presented at each community meeting that seem to change in order to debunk the community concerns but not resolve the issues or produce the best possible solution. These changes have at times occurred within the same week. This is not simply a matter of us not understanding the issues at hand.

We are concerned that not enough consideration is being given to holistic, city-wide planning for current and future energy needs. The route and placement of the **high voltage highway**

within the city from undeveloped areas to highly populated neighborhoods, to historic districts (in our particular council area in the Bennion, Douglas and University neighborhoods) needs to be reconsidered. All neighborhoods values based on the various master plans and city infrastructure needs to be plotted in one **comprehensive plan** so that all the various routes and uses and their accompanying impacts be considered. This is true not only for high voltage transmission corridors but this type of yard stick is needed for each permit application that seeks to receive an exception to the current land use law. Examples would include utilities highways, trails, core transportation routes, historic districts, commercial districts, zoning, conditional use permits, non-conforming uses, neighborhoods, business commercial, schools, etc. How else is this type of master planning accomplished if not with the key tools that allow a full view of maximum data? All points of intersection need to be known. This type of coordinated effort works to serve and enhance the community versus "plan as you go" or application by application approach.

We are not in sync with best practices elsewhere. There exist many examples and best practices options that are being used across the country and need to be used here given this world and city is in a climate change crisis. **Better and sustainable options exist** (not experimental ones but tried, tested and already in use all around the world, the US and in the state of Utah). This is a sustainability issue for everyone.

We recognize that as a city and as neighbors (residential, business and medical, etc.) we need to do our part to cut and regulate our own energy consumption. This is a priority.

Much of the technology we found in our research is now old because it has been in place around the globe for over 10 years. **We are not leading the way with the proposed "better options", we are catching up.** We expect the system manufacturers who provide Rocky Mountain with the equipment to install in the substation will continue to make improvements year to year so the technology available when 138kv is needed will be better than what is available today and could actuate a cost savings to the city, Rocky Mountain Power and the neighborhood.

Since this is a sophisticated and technical issue, there should be an independent expert that can help the city staff and help us all with this planning effort. This is the first "next substation" and high voltage highway. This type of installation and growth will continue through-out the city so the best time to change how we approach these applications is now.

We are concerned about health risks associated with long-term, low-level EMF exposure.

There are as many studies that say **there are health risks** associated with continuous exposure to EMF's produced by high voltage lines and substations as there are that say there are not. One

such example is the World Health Organization. In fact, the majority of communities we have contacted have taken the approach to be "**prudent avoidance**" through zoning ordinances that maintain buffers around and near high voltage highways, by maintaining a distance of one mile from schools, etc. to keep EMF's below the recommended rating (2) in these areas.

Since pending legislation of high voltage corridors (anything above 138kv) is under discussion at the legislature, we recommend that this application should be tabled to give an opportunity for the legislative process (SB 41) to be completed. The language of the bill includes that there will be more stringent requirements for upgrades that involve doubling capacity--so if they put the 138kv in place now this application will sidestep that requirement.

We are concerned that cost estimates are not taking into account all the various "costs."

Total cost to the consumer needs to be considered which includes the **ongoing maintenance, life cycle** and the dozens of impacts to the neighbors and the city. Often newer technology has a more expensive start up cost but this initial investment is recovered due to lower operational and maintenance costs. We also feel this analysis needs to include the many human costs associated with this type of exposure. What seems too expensive at start up is often the lowest cost option when these additional considerations are included in the equation.

Also, now is a good time to consider options that were previously too expensive. RMP stated that the high cost of burying cable in 2008 was due to the high cost of the copper. In the current economic times, the price of copper has decreased significantly allowing new cost comparisons for this option discarded in 2008.

We need a process that takes into account the PUBLIC. Toward this end, there is a need for a more **holistic planning approach** from the city that incorporates other agencies, public process, community master plans, and serious mitigation of impacts defined in the zoning ordinance. The public service commission guidelines list that "Every public utility shall furnish, provide and maintain such service, instrumentalities, equipment and facilities as will promote the safety, health, comfort and convenience of its patrons, employees **and the public...**"

All rules and regulations made by a public utility or pertaining to its charges or **service to the public shall be just and reasonable.**

We need to act proactively to incorporate substation and utility standards within the zoning ordinance, much like new definitions for prisons and halfway houses were needed. There is a cumulative impact for this particular neighborhood that is not being considered. Salt Lake City is one of the few areas in the country that has not adopted these types of standards. The standards we found included design standards, distance standards, and mitigation factors; and

were often tiered to accommodate different parts of a city such as downtown commercial, neighborhood, open space, etc. This would allow a proactive approach that incorporates better planning due to clarity of process.

We feel that the city needs to give **equal value for a neighborhood** as is given to a utility corridor in providing the power needs of the city when a neighborhood is serving as the high voltage freeway for the city. This can be done in the form of mitigation standards similar to what was done for 8th South.

We feel that this particular installation provides the unique opportunity for Salt Lake City to provide a strong leadership role in this area.

We are:

- At a critical juncture to the discussions, actions and plans that need to be in place regarding the city's role in developing sustainable policies and practices
- Needing a clear view of our infrastructure planning process and how we interact with other entities to establish a more holistic approach across the valley
- In need of power policy that intersects with other values articulated in established master plans and zoning for which this application provides a perfect test case.
- In a unique time and place with the current city leadership.

This is not about "not in my back yard".

We feel the time to do this better is now and the key leadership role belongs not to the utility company but to the citizens and the city leaders and professionals that represent them. What better time to begin?

If not now, when?

Prudent Avoidance - This precautionary based policy was developed for power frequency EMT. It is defined as taking steps to lower human exposure to ELF fields by redirecting facilities and redesigning electrical systems and appliances at low to modest costs.

Prudent avoidance has been adopted as part of policy in several countries, including:

Australia, New Zealand and Sweden	Adopt ICNIRP guidelines and add low cost voluntary measures to reduce exposure
-----------------------------------	--

Low -cost measures that can be taken include:

- routing new power lines away from schools
- phasing and configuring power line conductors to reduce magnetic fields near right-of-way

Passive Regulatory Action - This recommendation, introduced in the USA, advocates educating the public on ways to reduce personal exposure, rather than setting up actual measures to reduce exposure.

Precautionary Emission Control – This policy, implemented in Switzerland, is used to reduce ELF exposure by keeping emission levels as low as technically and operationally feasible. Measures to minimize emissions should also be financially viable. The international exposure limits are adopted as the maximum level of human exposure from all sources.

Precautionary Exposure Limits – As a precautionary measure, some countries such as Italy have reduced limits on exposure.

Various Policy approaches to EMF exposure limitation for the general public –Examples:

- Newly constructed facilities (Israel, 2001)
- Attention value applies to exposures that occur for more than 4 hours per day (Italy, 2003)
- No new transmission lines or substations closer than 22 metres to an existing school or building (Ireland, 1998)
- Increased distance between power lines and places where children can spend significant amounts of time to exposure that their mean exposure will not exceed 0.4. (Netherlands, 2005)
- New lines must be buried unless technically infeasible and there must be buffer zones near residential areas, schools, day care facilities and youth camps (USA State of Connecticut)
- Reassessment of the need for new facilities
- Avoid unnecessary exposure by comparing different planning scenarios so as to minimize exposure
- Use of best available technology
- Setting a precedent for future projects regardless of future circumstances
- Reduction of exposure by taking protective measures such as installing shielding, changing wiring practices in houses and in distribution or transmission systems (split phasing, raising ground clearances, undergrounding, etc.).

Dear Planning Commission;

The long range growth map for RMP shows a new planned and significant arterial route/loop (I-215) running North/South through the valley. Central to the route is the intersection with the 8th South/Sunnyside line (I-15) which runs east-west and that brings power into the city.

We have all had to learn the difference between the electrical pole in our back (or front) yard and the high voltage transmission "super highway".

While some of the steps to build the North South line/loop may be several years away, a first step and central to that plan is to combine lots at the 11th East sub that then creates enough room for this future growth including a plan for catastrophic failure. This turns the north east sub into a future super node site (another McClelland) from what it is today, a local neighborhood distribution sub.

RMP is in the process of creating a stronger infrastructure that includes redundant loops. We can all see the sense to this intent however this is a multi-faceted issue.

Small upgrades to begin building this line are in place, by RMP, neighborhood by neighborhood.

This is a piecemeal approach.

Each neighborhood fights the immediate concern. RMP ends up spending countless hours and sleepless nights dealing with angry residents/customers and trying to work each application through the city permitting process.

With such a high work load focused on day to day applications, establishing a solid infrastructure and process within planning and so many crisis in its path, rarely does the city have time for long range planning.

Most cities now have an energy/utility master plan that works with the utilities to run this type of core infrastructure and most importantly utilizing BEST PRACTICES.

In some cases this type of electrical infrastructure line is run and super-nodes are placed around the perimeter of the city utilizing areas that are away from residential areas. In some cases we found them placed along existing highways or transit routes. RARELY is this type of line run though the heart of residential neighborhoods or if this is a must, major mitigation is added or included such as below surface subs, subs in houses, large buffer zones, etc.

Based on the location of this sub on the planned North south loop/line, once the initial investment has been made and the land accumulated, there will be few incentives that can be considered to change course due to the economics of the issue. The route will be set.

We have many, many concerns with this. We believe this to be the wrong location for this type super node.

Substations bring a level of contamination and impacts to the land and to its neighbors as do high voltage super highways.

Different options can be considered based on the location of the needed subs in the city. With some it is economic and commercial real estate, others it is quality of life, etc. Due to the climate crisis we all face, this is the time to act related to responsible energy conservation and ways to consider other options. This is an issue that affects us all and so as a total community (city planning, citizens, RMP) we need to work together to BEGIN.

This is why **we have been asking the planning commission to deny this application**, and the city to engage with an open and public process that create an energy master plan that utilizes best practices, a utility master plan, a general plan that takes these various conflicting values into consideration.

We have also been asking for utility and substation definitions and standards within the code.

This type of sub and route is no different than locating a prison/halfway house and our current code is inadequate in providing the guidance needed to both give RMP direction while at the same time safe-guarding our way of life and our neighborhoods.

It would be more efficient for a utility to have guidance with standards such as buffer, design, location requirements, etc. **This is not just an issue of the state.** Many cities have given this type of guidance while the core control rests in their state.

We found that many cities/states have different levels of substations definitions. While we are a developed city which makes this planning more of a challenge, we are not the first in the US to face increased power needs within an established residential area. Nor are we the first to need a new or enhanced infrastructure. Many utilize smart grids, some even get smiley faces depending on better energy conservation efforts. There is much to do.

As citizens we know we must do our part. The rise of energy consumption is serious. We must all work together.

In our favor we have a significant skill set within our city leadership with our Mayor, Ralph Becker (who we elected due to his planning expertise, environmental policy and understanding of residential neighborhoods), Frank Gray, Wilf Sommerkorn and Vicki Bennett to name a few. And also others..Luke, Soren and JT because we believe you understand.

This is not about a few crazed citizens who are nimby's and in want of brown outs. However neither should it be about protecting certain neighborhoods while others become the dumping ground.

There is a collaborative solution.

However, without proper planning "water" always takes the path of least resistance.

We believe we are still early enough in this implementation plan that better options can be considered. Most cities in the US and world put this type of super node in areas that are more remote, can be well mitigated, are away from the major fault line, take the position of prudent avoidance related to health issues, are utilizing best practices that consider the environmental crisis to name but a few.

We would like to repeat, without proper planning, water (or in this case electricity) always takes the path of least resistance.

If we do not begin now...then when?

Best regards,
University Neighborhood Council Board

Attachment D
Department Comments

MEMORANDUM

TO: Planning Commission Members
FROM: Vicki Bennett, Sustainability Director *V. Bennett*
DATE: February 20, 2009
RE: Rocky Mountain Power; substation expansion

I have reviewed the information on Rocky Mountain Power's (RMP) request to enlarge the Northeast Substation at 144 South 1100 East.

From an environmental perspective, there are three major issues that have been raised:

- 1) During the proposed construction, Rocky Mountain Power may remove contaminated soil. If they do, the removal will be regulated by the Department of Environmental Quality, and RMP will need to ensure that it is handled safely, and disposed of in an approved manner. RMP will be required to test the soil to determine an appropriate disposal location. Salt Lake City inspectors will also be able to monitor the soil removal to ensure that no soil is tracked onto City streets, and stormwater contamination does not occur.
- 2) The issue of Electric and Magnetic Fields (EMF) has been raised. These fields have been studied extensively, and no definitive health effects have been found in relationship to EMF exposure. Because of this, there are no regulations or limits to it in the United States. (Some states have set limits of exposure for workers, but Utah has not.) Without any guidelines or limits, I am unable to evaluate EMF an environmental concern. If, in the future, new information causes state or Federal regulations to be promulgated limiting EMF exposure, we will, of course, include that in our evaluation of projects such as this.
- 3) Noise pollution has also been raised. This is monitored and enforced by the Salt Lake Valley Health Department. If there are any noise issues once the substation is built, we can request that they monitor to ensure it meets the levels required in a residential neighborhood.

I also understand that there are concerns about future upgrades to the electrical system as a whole in the City. Our division is working with RMP on demand-side management techniques, in an attempt to reduce the rapid growth of power consumption in the city, and perhaps to delay the need for additional upgrades of the power transmission system. We have just been successful with the Net Metering rulemaking through the Public Service Commission, allowing citizens to produce electricity through solar, wind or other renewable sources and feed excess back into the system at a full cost recovery rate. We are also working with RMP on citizen outreach initiatives, both on energy efficiency opportunities in the home and on the purchase of renewable energy. The more distributed energy we can encourage, the less transmission that will be needed in the future.

Address: 144 South 1100 East
Project Name: Rocky Mountain Power-Replace power station.
Contact: Everett Joyce 535-7930 everett.joyce@slcgov.com
Date Reviewed: September 22, 2008
Zone: RMF-30

The Development Review Team (DRT) is designed to provide **PRELIMINARY** review to assist in the design of the complete site plan. A complete review of the site plan will take place upon submittal of the completed site plan to the Permits Counter.

Ken Brown/Zoning:

Conditional Use approval required. Asking for a reduction of front yard landscaping. Will be combining the parcels and addressing fence heights in the conditional use process. Need to address the 10' landscape buffer requirement where this site abuts a one or two family dwelling zone. Need to address height of structures.

Norm Weiss/Transportation:

Ok-no comments.

Ted Itchon/Fire:

No issues.

Brad Stewart/Public Utilities:

Abandon any un-needed sewer services by plugging with concrete at property line with concrete & call for inspection. Abandon any un-needed water services by cutting off at water main. Drainage plan required. Detention not required. BMP's if discharging to public drainage system. Also must demonstrate that no contaminants are released to public system. (PCB's). Use 100 yr/24 hr storm.

Randy Drummond/Engineering:

Site plan required. APWA Standard plans for drive approaches. If alley is public it may have to be up-graded with asphalt overlay, if the surface has deteriorated. At the time of application for approval, an inventory of the condition of the existing street and/or access-way improvements will occur. At that time, the condition of said improvements will be determined, and any sub-standard improvements (curb, gutter, sidewalk, asphalt paving, etc.) will be required to be either repaired or replaced as a condition of approval of the project. Public Way Permit to required for project completion. Licensed, bonded and insured Contractor to obtain permit to install or repair required street improvements.

Public Utilities

Jason Brown

According to our records there is an existing 3/4 inch meter and a 4-inch sewer lateral that are connected to the existing building located on the site. The plans submitted call out for the building to be demolished. When the building is demolished then the water lateral must be killed at the main and the sewer lateral must be killed at the property line. The sewer lateral is connected from McClelland and thus must be killed at the ROW of McClelland. There is also an existing one-inch lawn meter that may remain to provide irrigation water to the proposed landscaping. A site demolition plan must be submitted to our office for approval.

Attachment E

Additional Applicant Information

Responses to questions from the Northeast Substation Planning Commission
Issues-only meeting held on Jan. 14, 2009

**Responses to questions from the Northeast Substation Planning Commission
Issues-only meeting held on Jan. 14, 2009**

Submitted: 4-6-09

Health & Safety Concerns:

General Response: Rocky Mountain Power complies strictly with all environmental regulations and strives to ensure the generation and delivery of electricity is accomplished in an environmentally responsible way. All employees are responsible and accountable for understanding and incorporating compliance with all environmental requirements in their daily work.

Question: Concerns with PCB levels and air quality during building demolition.

Response: Air samples taken during demolition of the old control building showed no PCBs present.

To conduct the demolition of the old control building, Rocky Mountain Power completed the required inspection forms and hazard assessment from Salt Lake County Health Department, completed paperwork required by Salt Lake City and received approval from the Utah Division of Air Quality. Air monitors were installed around the site to sample the air for both PCBs and asbestos. All air sample results were below the OSHA safety limits.

Question: What about asbestos?

Response: Asbestos in the building was removed and disposed of according to accepted environmental rules and practice by a contractor certified to perform the work. During the demolition of the building, on-site air monitoring showed the air quality was within OSHA safety limits. Rocky Mountain Power received a demolition permit from Salt Lake City and filed the appropriate documents with the Utah Division of Air Quality.

Question: What was found in the soil samples taken?

Response: Soil samples from the site detected petroleum hydrocarbons. All samples except two had levels well below permissible limits. Soil from the two localized areas where the samples exceeded permissible levels will be removed and disposed of properly. Additional sampling and analysis will be performed as needed. Any other areas where these compounds exceed permissible levels will be cleaned up and the soil properly disposed of. These conditions can be remedied properly and do not constitute a risk to the health of those living in the neighborhood.

Question: What about EMF (electric and magnetic fields)?

Response: Given the many years this issue has been reported in the new media, Rocky Mountain Power understands why residents are concerned about possible effects to human health from electric and magnetic fields. In dealing with this issue, Rocky

Mountain Power relies on the findings of scientists and public health specialists, who can best evaluate the information. Thousands of studies have been conducted on this subject during the past 30 years. The prevailing view of most scientists and public health officials is that evidence does not show EMF exposure to be a hazard to human health. Cellular and animal laboratory studies have not yielded any conclusive evidence of risk to human health from magnetic fields in connection with power lines and substations.

Reviews of the scientific literature on this subject have been conducted by several knowledgeable organizations. Two good sources are:

World Health Organization, completed in 2006 and published in 2007.

<http://www.who.int/peh-emf/about/WhatisEMF/en/index.html>

National Institute of Environmental Health Sciences, conducted in 1999. Its booklet, updated in 2002 is available for download or printing at:

<http://www.niehs.nih.gov/health/docs/emf-02.pdf>

In the U.S., there is no federal government standard for magnetic field levels in occupational or residential conditions. Currently, only Florida has a magnetic field regulation for substations. Two states, Florida and New York, have regulations for magnetic fields for transmission lines at the edge of the right-of-way. Those standards range from 150-200 milligauss in Florida and 200 milligauss in New York. While Utah has no such guideline, Rocky Mountain Power's facilities are well within those of Florida and New York. Two international organizations have established standards. The International Committee on Electromagnetic Safety set a limit of 9,000 milligauss; the International Committee on Non-ionizing Radiation Protection set a limit of 833 milligauss.

Technical Issues:

Question: How is Rocky Mountain Power taking advantage of technology to increase efficiency?

Response: With regard to substations, equipment utilized by Rocky Mountain Power is generally more efficient than products installed decades ago. The manufacturers of the equipment the company buys for substations continue to use new technology to improve the materials and manufacturing of that equipment. This has improved the safety, reliability, and efficiency of the equipment.

Electric utilities, because they provide an essential public service, have been guided by state policies and regulation to use existing proven technologies to provide high volumes of electricity at low cost. Rocky Mountain Power provides electricity to its customers at some of the lowest prices in the nation. Regulated utilities typically do not conduct research and development or utilize relatively expensive cutting-edge technologies.

As new technologies advance and are appropriate for utility use, they are employed. For example, recent advances in wind turbine technology, together with federal tax credits, have made this generation resource competitive with other traditional generation sources.

Our company began investing in wind-powered electric generation in 1998. Since 2006, the company has built or contracted for more than 1,100 megawatts of wind and geothermal generation capacity. The company has operated a geothermal power plant since 1984, and recently expanded that 23-megawatt facility by installing an 11-megawatt heat-recovery cycle.

Despite our role as a user of proven technologies, we have advised state and federal energy policy makers that this nation needs a public-private partnership for technological research and development on the scale of NASA's mission to the moon. In order for our company to employ new technologies for the generation and transmission of electricity, they must first be developed to the point that they represent the prudent use of our customers' money.

Question: What about noise from the transformers?

Response: Rocky Mountain Power purchases transformers with a noise level rating of 10 decibels lower than current industry standards as defined by the National Electric Manufacturers Association.

Question: How are you building for the future in a "green" way?

Response: The company offers six energy efficiency programs to Utah residential customers, and six others designed for larger customers. The object of all of these programs is to help customers use electricity more efficiently by providing advice and incentives on energy efficient appliances, air conditioning systems, home insulation, refrigerator recycling, efficient building designs, irrigation systems, to name a few. In 2008, these programs provided 194,862 megawatt-hours in energy efficiency in Utah. That's equivalent to the electricity used by about 21,600 residential homes in a year. Since 2001, the company has invested about \$130 million in demand-side management resources that have increased the energy efficiency of Rocky Mountain Power customers every year.

Because energy efficiency alone cannot provide the increased electric capacity customers need, the company must construct new generation and transmission facilities. Since 2006, the company has built or contracted for more than 1,100 megawatts of wind and geothermal generation capacity. Our newest natural gas combustion turbine plants represent significant advances in the efficient generation of electricity. The company's Energy Gateway transmission initiative, announced in May 2007, is critical to increase the capacity of the company to move electricity from new and existing generating plants to where customers need it. This project represents the first major expansion to the company's transmission system in more than two decades.

The company's Blue Sky program allows customers to ensure even more renewable energy goes on the company's system through the purchase of 100-kilowatt-hour blocks for \$1.95 each. Blue Sky funds are also used to provide grants for small and medium-sized community-based renewable energy projects that may not otherwise be viable.

Question: Can the station be lowered to the alley elevation?

Response: The company worked with the city to incorporate this suggestion into the current proposal. The new design lowers the substation grade to roughly the elevation of the southwest corner of the property, putting the eastern elevation of the substation approximately seven feet below the existing grade. Details were presented in a city-sponsored open house March 19.

Question: What is the height of existing structures?

Response: The maximum height of the existing structures is approximately 25 feet. The existing structures were designed at a time when recommended electrical clearances were less than what is recommended today by the latest National Electric Safety Code. When the company began modernizing this facility in 2007, it removed structures that were approximately 24 to 29 feet high.

Working with city officials, the company's revised proposal reduced the height of structures inside the substation by about 20 feet compared with the original proposal. The overall height of substation structures will be less than 40 feet.

Question: What about Gas Insulated Substations (GIS)?

Response: This design is a relatively expensive option and is not typically used in these applications. If this technology was used at this location, it would likely not reduce the height of the equipment required to connect to the transmission line as it enters the station. Spacing would still be required for the transformer and major equipment required for the operation, protection and control for the station (switchgear).

Question: Why do the mature tree(s) have to be removed?

Response: Rocky Mountain Power is committed to provide safe, reliable, low-cost electricity to customers. In some cases where trees and higher voltage lines and facilities are in close proximity, removal is the best choice for public safety and tree health. The company regrets these conflicts, but cannot compromise on safety. We cannot allow any object, including trees, next to our facilities that could become an unintentional path for electricity to ground; or that might be used to gain illegal access to the substation. Either of these cases pose an unacceptable risk to safety and reliability.

Rocky Mountain Power understands the value of trees and landscaping within neighborhoods and works to achieve a balance between this and the safe delivery of electricity. We provide advice and assistance to our customers on tree species that can be planted safely in proximity to electric facilities. Rocky Mountain Power has committed to provide quality landscaping and visual improvements around Northeast Substation. We want our substations to be good neighbors.

Additional tree trimming background:

- We take pride in having a professional tree maintenance program. The company's supervisors are certified by the International Society of Arboriculture and our

contractors are trained in accepted techniques. They use natural pruning methods to maintain the health of the trees. Natural pruning, besides being healthier for the tree, also reduces re-sprouting in problem areas and limits the length of sprouts that do occur. The tree's species, structure and the strength of wood are all considered when trees are pruned.

- Our contractors do not use "round over" pruning because this method wounds the tree and causes it to grow unnaturally.
- The company's program has been repeatedly recognized with the Tree Line USA award by the National Arbor Day Foundation for vegetation management and tree-pruning practices.
- Generally, we remove trees that pose a serious threat to safety and electric service. Not only does this work help maintain electric safety and service reliability, it is required by state and federal regulations.

Security:

Question: Can the city get a copy of the system map?

Response: As a consequence of the Homeland Security Act, Rocky Mountain Power does not make detailed information of its systems available to the general public. However, the company presented maps of the substation service areas at the Jan. 5 and March 19 open houses; and at the Jan. 14 Planning Commission meeting.

Neighborhood Impact:

Question: What about our property values?

Response: Rocky Mountain Power has a substantial amount of experience with commercial and residential development near many types of electric facilities. Based on market study evaluations, experience with growth and development near electric facilities in Utah and in consultation with Member of Appraisers Institute (MAI) appraisers, it is generally our experience that power lines and other electric facilities in the vicinity of homes do not diminish property value.

Question: Does RMP have a master plan?

Response: Yes. Rocky Mountain Power regularly meets with Salt Lake City to discuss long-range planning for electric facilities. Most recently, the company held two meetings, on January 12 and 26, with Salt Lake City staff to review the master plan. The company met Feb. 5 with the community council representatives to discuss master planning. The company discussed its 10-year plan for the northeast area of Salt Lake City at a University Neighborhood Organization Task Force meeting March 28.

In addition to planning at the community and regional level, the company conducts detailed planning to ensure sufficient resources are available to its 1.7 million customers in six states. This planning is conducted every other year and examines 10-year and 20-year planning horizons. The plan is shared with state utility regulators and other

stakeholders in draft form and substantial public input is taken in development of the final plan. The final versions are posted on the company's Web site.

Question: Will you work with the East Central Community Council?

Response: We are working with the council and its subdivision, the University Neighborhood Organization, to communicate details of the substation proposal, listen to their concerns, and work toward solutions.

Question: What has been the growth in customer use of electricity in this area?

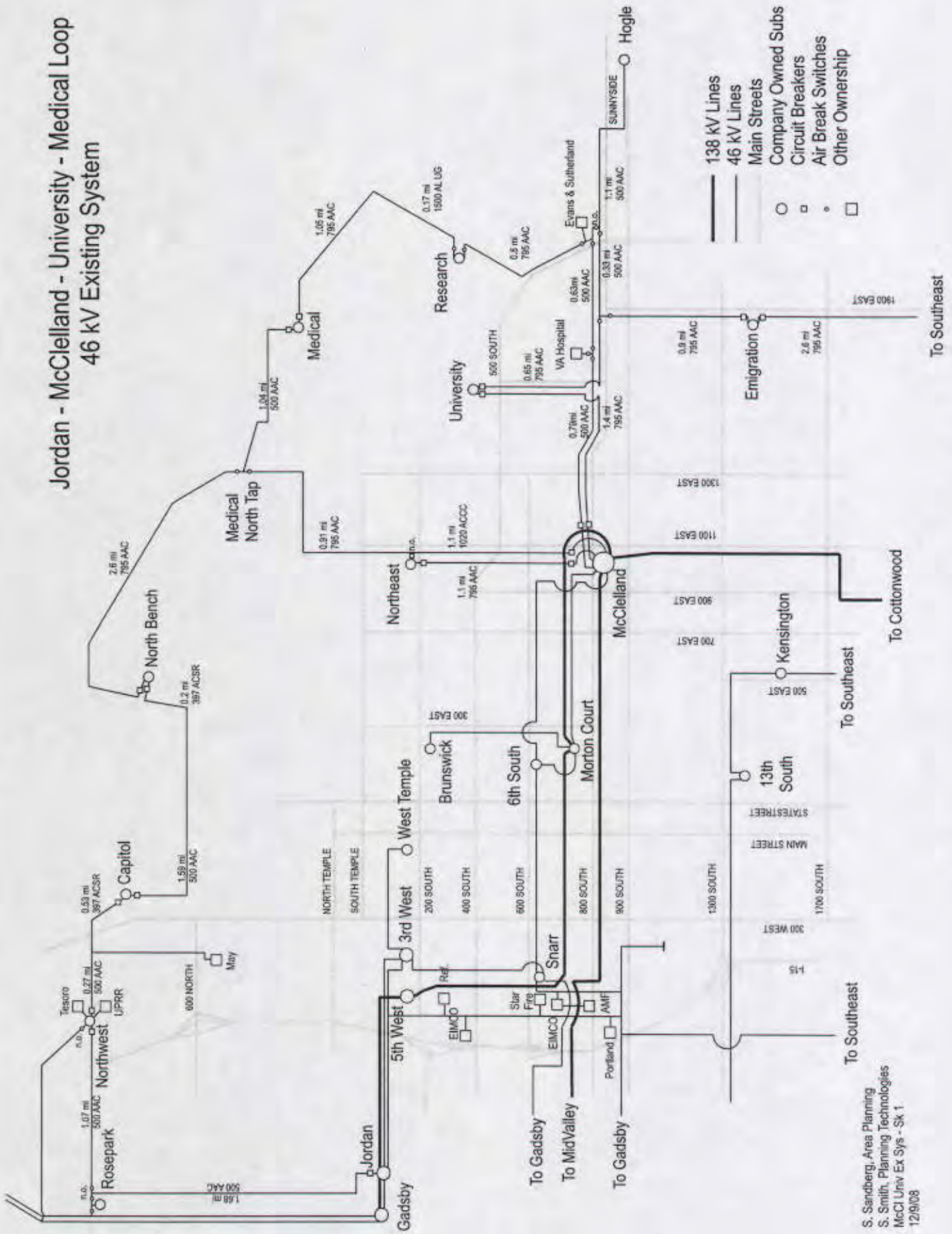
Response: For Salt Lake City, energy consumption for residential customers has grown by an average of 7 percent per customer over a five-year period. Peak customer use of electricity in Salt Lake city has grown by 22 percent over the same period.

Question: Does Rocky Mountain Power have an undeveloped site for future substation(s)?

Response: Typically, in developed areas, the company strives to utilize existing substation properties in expanding the distribution system as customer electrical demand grows. The company's long-term expansion options include replacing existing transformers with larger capacity transformers. As demand grows further, a second transformer in a substation might be the best choice. Beyond that, conversion of the distribution system to higher voltage is an option. In many cases along the Wasatch Front, we have converted 46,000-volt systems one step up, to 138,000 volts, to provide the increased electric capacity our customers need. The company's revised proposal for Northeast Substation includes adding a second transformer and constructing it to be capable of operation at 138,000 volts as customer demand and engineering of the distribution system requires.

In the Northeast and North Bench substation areas, the plan has always been to utilize existing properties and expand capacity as customer demand requires. This reduces the number of power lines required with substations. Increasing the capacity of existing substations in these areas is how the company will meet the increasing consumer demand for electricity. Rocky Mountain Power is evaluating new substation sites in the Sunnyside Avenue area east of Foothill Blvd.

Jordan - McClelland - University - Medical Loop 46 kV Existing System



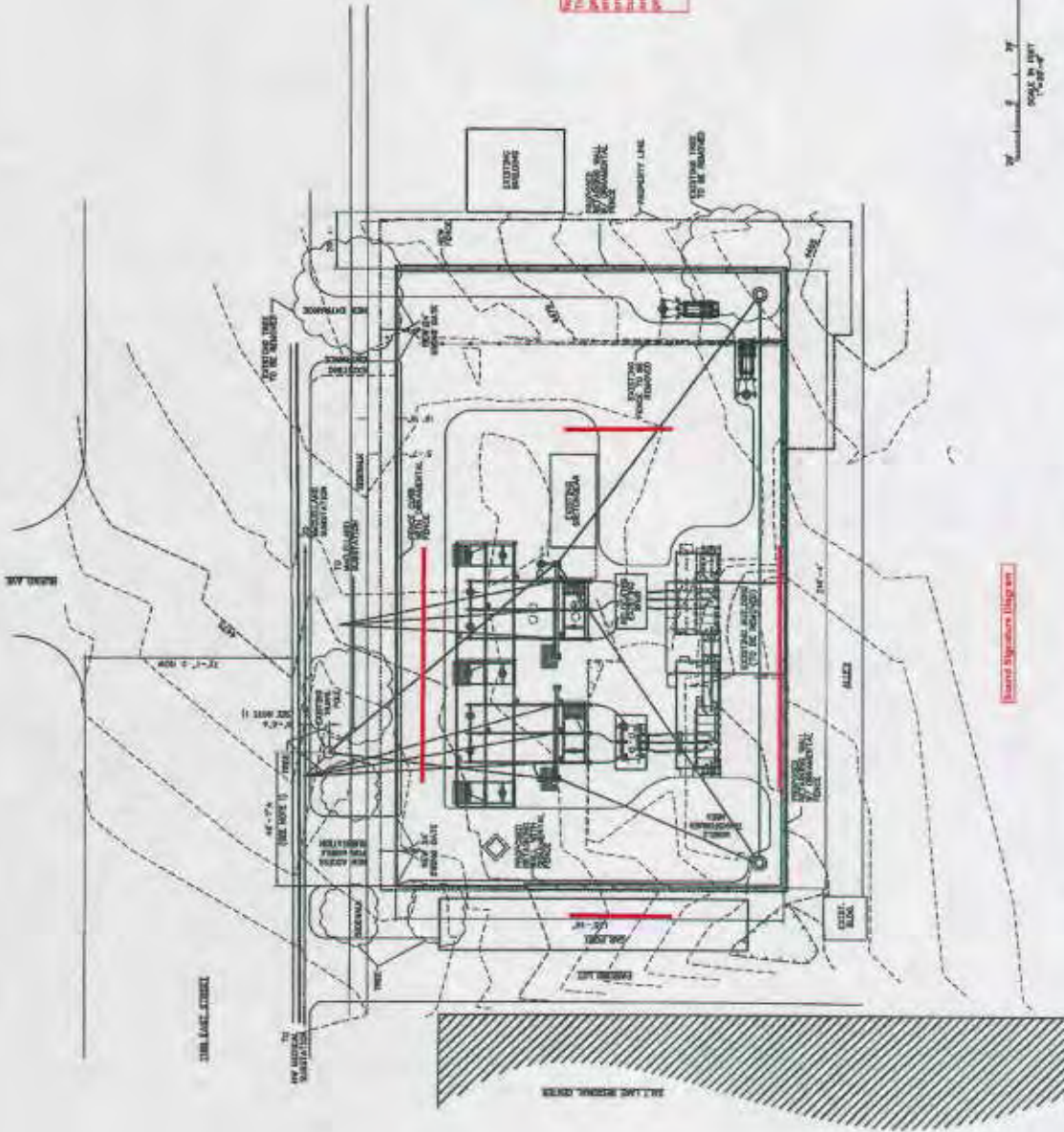
NOTES:

1. THESE DIMENSIONS ARE TO BE FIELD MEASUREMENTS

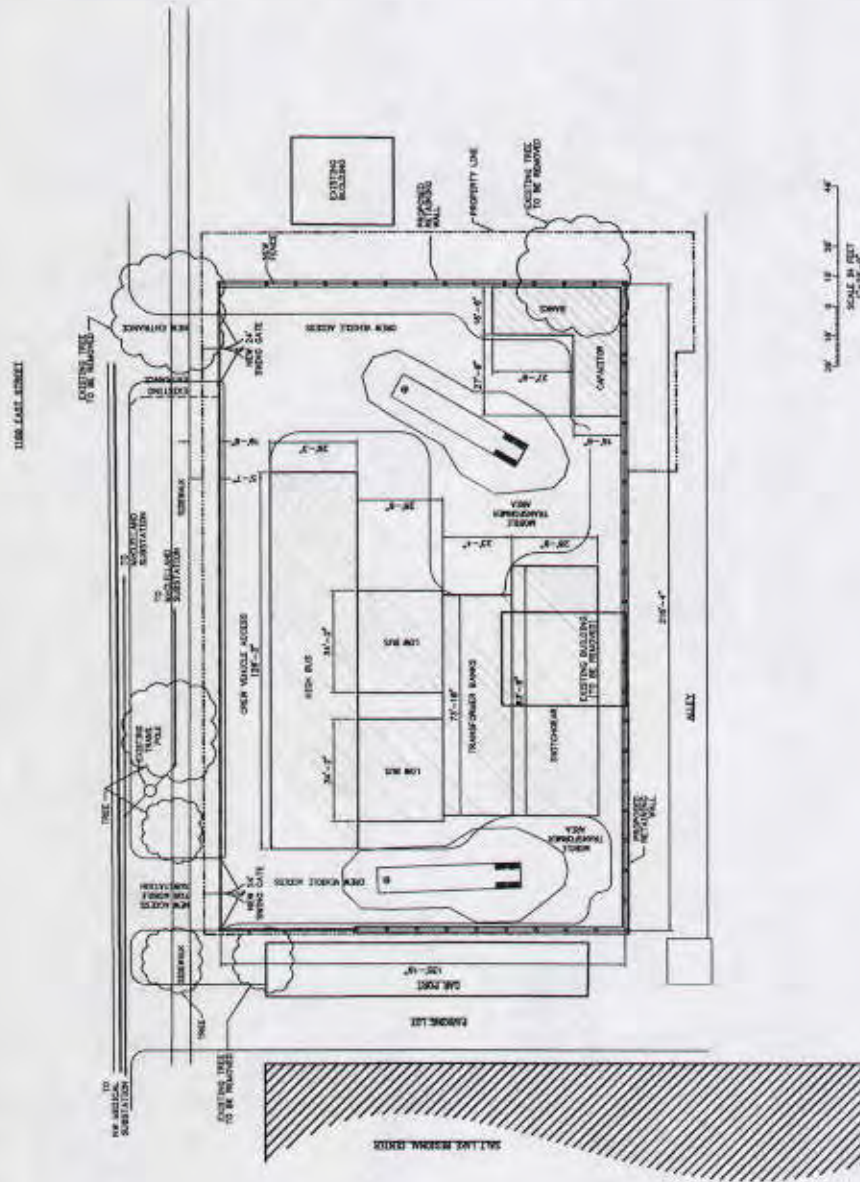
2. TOTAL AREA OF DEVELOPMENT

EXISTING	38,790 SQ. FT.
NEW	7,308.3 SQ. FT.
NEW TOTAL AREA	46,098.3 SQ. FT.

Findings: The brandnames are the loudest sound generators in the substation. The red lines are the boundaries for the 50 db sound intensity. The air conditioners for the control buildings are also sound generators but they are not highlighted particularly unless levels sound are not highlighted.



Journal of Interpersonal Violence



Design Review Team Meeting

The following applicant responses address the issues discussed in the Salt Lake City Design Review Team meeting on September 22, 2008:

Zoning Requirements

Space is limited at the Northeast Substation. Rocky Mountain Power's standard substation footprint measures one acre; the Northeast Substation property is approximately .80 acre. Available space is further constrained by safety clearance and operations access requirements.

Set-back requirements

An application for Planned Development as Conditional Use was submitted on Sept. 9, 2008. Rocky Mountain Power requests the Planning Commission grant an exception for the set-back requirements for the east (front yard), north (side yard) and west (rear yard) sides due to space constraints.

Grade Changes and Excess Height

Grade changes and fence or wall height is requested to exceed the base zoning restrictions.

The height of electrical wires and transmission equipment is exempt from the zoning regulations. Therefore the 30 foot height limit for the bus work and transmission lines is not applicable to the substations improvements.

Landscape buffer requirements

An exception will have minimal impact on the north and west sides due to the property uses.

A mitigation plan for the east side is proposed.

- North: The existing substation site abuts the Medical Towers office building on the north. A car-port is located on the north side of the substation fence.
- West: A dead-end alley abuts the west fence. A trash receptacle is located in the alley. Occasionally cars are parked there.
- East: In order to meet safety clearance and operations access requirements, the east footprint of the substation will be 11 feet behind the sidewalk. Rocky Mountain Power proposes to mitigate the impact of a shorter front set-back by planting trees in the parkway and installing parkway landscaping in addition to landscaping between the east fence and the sidewalk. (See attached Landscape Plan View and elevation renderings.)

PacifiCorp/Rocky Mountain Power maintains clearances for the area surrounding energized substations in order to ensure public and employee safety. A minimum clearance of 5'-0" must be maintained as a restricted zone inside and outside the fence. No objects are allowed within this zone. The requirement is established to prevent the risk of someone sticking an object through the fence and making contact with energized equipment.

In addition to the "Restricted Zone," PacifiCorp/Rocky Mountain Power standards establish an internal fence safety clearance for operation and maintenance. This clearance is based on voltage level. While the Northeast Substation will be operated for the time being at 46 kV, it will be built to 138 kV construction standards to accommodate future conversion when customer loads exceed available capacity. At 138 kV, the minimum clearance requirement is 14'-0". The operating clearance is designed to allow adequate room between the fence and equipment for operations personnel to safely work on equipment. (See attached drawing Safety & Clearance Diagram.)

These safety requirements conform with PacifiCorp Engineering Standard 6B.5 – Fence Application and Construction, which is based on American National Standards Institute (ANSI) C2 – National Electrical Safety Code (NESC) and ANSI 1119 – Guide for Fence Safety Clearances in Electric Supply Substations.

The equipment clearance plan, labeled Equipment Clearance Plan, indicates the necessary clearances surrounding the energized equipment and structures supporting energized parts and equipment. These clearances are designed to provide safe working conditions for operations and maintenance personnel. (See attached drawing, Equipment Clearance Plan.)

The substation is designed to meet safety clearance standards required by PacifiCorp Engineering Standard 1B.2 – Safety Clearances and Facility Access and Security and Engineering Standard 1B.9 – Substation Design Criteria. PacifiCorp standards 1B.2 and 1B.9 are based on ANSI C2 – National Electrical Safety Code (NESC). Standards 1B.2 and 1B.9 require meeting or exceeding the minimum clearances stated in the NESC.

Landscape buffer requirements

Rocky Mountain Power requests the Planning Commission grant an exception to the landscape buffer requirement on the west side of the property. Substation safety clearance and operations access requirements discussed above cannot be reduced to provide a 10-foot landscape buffer on the west side. An exception to the west landscape buffer will have minimal impact since a dead-end alley abutting the west property line separates the substation from the residences on the west. A trash receptacle is located outside the existing substation fence and cars are occasionally parked in the alley.

Rocky Mountain Power will provide landscape buffers consistent with the requirements of Salt Lake Code 21A.48.080 on the south and east side of the property. (See attached elevation renderings.) None is required on the north since it is not zoned for single or two-family residences.

Fence Height

Public safety is a paramount concern in substation fencing. According to PacifiCorp Engineering Standard 6B.5 – Fence Application and Construction, Section 4.2, “Fence height shall stand 8’-0” high above grade with a fabric height of 7’-0” feet and 3 strands of barbed wire 1’-0” high on brackets 45 degree outbound.

Building Height

There will be no buildings constructed at the site. Line termination structures carrying electrical conductor will be approximately 60 feet in height, as required by the National Electric Safety Code to meet minimum clearance requirements for 138 kV construction.

Public Utilities

Drainage Plan

The Northeast Substation is designed to capture all rainwater from a 100 year / 24 hour storm without discharging any rainfall from the site. Based on National Oceanic and Atmospheric Administration (NOAA) Precipitation Frequency Estimates, a 100 year / 24 hour storm in downtown Salt Lake City area has an intensity of 0.12 inches/hour. Assuming no rainfall soaks into the ground or evaporates during that 24-hour period, an estimated total of 2.9 inches of rain would fall. In order to provide the containment necessary to capture all rainwater, the top elevation of the station perimeter retaining wall and concrete fence berm will be a minimum 8” above final grade. The station entrances will have a raised drivable hump to allow service vehicles to access into the station, but keep the rainfall from leaving the station.

Environmental

Rocky Mountain Power's substations are designed to prevent any contaminants from reaching the public utility system. Of primary concern is dielectric oil contained in the transformer. A Spill Prevention, Control and Countermeasures Plan (SPCC Plan) has been written for this site, detailing measures that are in place to prevent a spill from migrating offsite. Berms, gravel and walls all serve to contain a spill on-site. The site is inspected often to detect spills or other problems. A spill response contractor is also hired to respond to any spill; response time would be short, as the contractor is local. A state approved contractor has completed remediation of the old control building to remove any hazardous items, mainly asbestos, in accordance with all laws and regulations.

Noise

Compliance with Salt Lake City noise ordinance, Chapter 9.28.060, was also discussed with the Design Review Team. The Northeast substation is zoned RMF-30, low density multi-family. The code allows for 50 dBA noise at the property boundary at night. Since the substation is not fully constructed at this time, measurements were taken at a similar substation (Clearfield South) to predict the sound signature of the ultimate build-out of the Northeast Substation. Clearfield South substation has two 30 MVA transformers (When completed, Northeast will have a new 25 MVA transformer in addition to the existing 22.4 MVA transformer.) The transformers create a 120 cycle hum that is usually associated with electrical equipment. PacifiCorp/Rocky Mountain Power purchases transformers that are designed to be 10 dBA quieter than the typical National Electrical Manufacturers Association (NEMA) rating. Fans are added to the cooling radiators on the transformers to cool the transformers during heavy loading periods. The fan noise is typically greater than the transformer hum.

Measurements were taken at the Clearfield South substation with all the cooling fans running on both transformers. A Radio Shack sound level meter model 33-2050 was used. The meter was set on 'A' weighting (per the 9.28.020 city code) using the fast response setting. The 50 dBA boundaries are drawn in red on a copy of the General Plan layout of the substation. The 50 dBA boundaries are inside the substation fence on the east, south and west sides. The north side boundary is 10 feet into the parking lot of the medical office building, which is not occupied at night. Under the city code, commercial areas are allowed to have 55 dBA noise at the boundary. The substation will meet the commercial noise code. (See attached diagram, Northeast South Signature.)

The air conditioning units on the switchgear cabinets contribute to the substation sound signature. This noise is considered to be less than the *ninetieth percentile noise level* as defined in the code definitions and standards because the units will cycle on and off as needed to cool the enclosed switchgear. Cooling requirements are reduced in the nighttime hours.

Nature of Request and Project Location

PROJECT SUMMARY

Rocky Mountain Power requests approval of a Planned Development as a Conditional Use from the Salt Lake City Planning Commission in order to add electric power capacity to the existing Northeast Substation, located at 144 South 1100 East. Increased capacity is necessary to meet current electrical demand of the area. In addition to installation of a new 46/12.5 kilovolt (kV) 25 megavolt ampere (MVA) transformer, the project also includes replacement of obsolete, deteriorated electrical equipment and supporting structures. Associated bus work and circuit breakers will be constructed to meet electrical safety clearance and insulation requirements to accommodate future operation at 138 kilovolts (kV). The capacity addition of a 46 kilovolt (kV) transformer means the substation will continue to operate at the existing voltage until future customer use requires 138 kV voltage conversion.

The information contained in the application supports Rocky Mountain Power's request for a Planned Development as a Conditional Use as provided under Salt Lake City Zoning Ordinance Chapter 21A.54.

Detailed maps, drawings, and illustrations are included in addition to descriptive information to assist in the review of this application.

STREET ACCESS TO THIS PROPERTY

Street access to the Northeast Substation is from 1100 East. Medical Tower Plaza is located north of the substation; its main entrance faces 100 South. A carport used by the medical plaza abuts the north property line; a single-family dwelling abuts the south property line. An alley abuts the west property line. Other land uses in the area include high/medium density multi-family residential units and single and two-family residential dwellings.

PROJECT NEED

The Northeast Substation site has been used continuously to meet electric power needs in this area of Salt Lake City for decades. Utah Light and Traction Company acquired the existing site in a series of property transactions dating back to the 1920s. Rocky Mountain Power (formerly Utah Power & Light) acquired in fee all of the property owned by Utah Light and Traction Company in 1945 and continued substation operations at the site.

The need for increased capacity at Northeast Substation is approaching a critical stage. An outdated 5 MVA transformer was removed last year. In 2007, 4 kV was converted to 12.5 kV and the 4 kV, 5 MVA transformer was removed. The new 25 MVA 46/12.5 kV transformer will be installed in the footprint formerly occupied by the 5 MVA

transformer, bringing total capacity of the re-built substation to 47 MVA. Without additional capacity at Northeast Substation, an interconnected substation at the edge of the load zone in the Avenues (North Bench Substation) does not have sufficient capacity to meet customers' growing electric power needs within the Northeast Substation load zone. Both substations are currently at near-full capacity.

Today, the Northeast and North Bench Substations serve approximately 14,000 customers in Salt Lake City's Northeast Bench and Avenues areas. Electrical demand in this area is growing at an average annual rate of 2%. The existing transformers at both substations are approaching thermal overload.

Addition of new capacity at Northeast Substation is required in order to address the following issues:

- Transformer overload at Northeast Substation in Summer 2009
- Transformer overload at North Bench Substation in summer 2009

While new capacity is being added at Northeast Substation, additional work will take place to:

- Replace deteriorated 46 kV facilities at Northeast Substation
- Update to meet current National Electric Code Standards (NEC)
- Prepare the substation for conversion to 138 kV in the future

The capacity addition must be completed in time to put the station in service by May 2009 in order to serve current electrical demand and to provide reliable electrical service in the future. Rocky Mountain Power recognizes the importance of developing new and future facilities in a proactive and integrated manner compatible with community plans, while at the same time meeting the electric power needs of Salt Lake City residents and businesses. Every effort was made to design the substation site to accommodate the necessary equipment within the smallest possible footprint and also meet the electrical safety clearance standards and access requirements needed by Rocky Mountain Power.

Consultation with administration representatives informed Rocky Mountain Power's proposed design, choice of fencing material and landscaping features in order to create the most pleasing environment possible for essential electrical infrastructure. Rocky Mountain Power expects to present its plans to the University Neighborhood Organization on as soon as their schedule allows. The East Central Community Council has scheduled a presentation on Sept. 11, 2008.

BENEFITS

Construction of the project will:

- Eliminate overload conditions at Northeast and North Bench Substations
- Replace deteriorated 46 kV facilities at Northeast Substation
- Meet current National Electric Code Standards
- Prepare substitution for future 138 kV conversion

PROJECT DESCRIPTION

As stated above, the project requires installation of a 46/12.5 kV transformer at Rocky Mountain Power's existing Northeast Substation. A building and un-needed electrical equipment and supporting structures will be removed to provide the smallest footprint for required equipment. The new equipment will be constructed to meet current electrical safety clearance and insulation requirements to accommodate future operation at 138 kV when customer use requires voltage conversion.

New bus, disconnect switches, instrument transformers and support structures will be installed. New major equipment consists of a 46/12.5 kV transformer, metal-clad switchgear, motor-operated air break switches and two 12.5 kV capacitor banks.

CONSTRUCTION PROCESS

Upon approval by the Salt Lake City Planning Commission, construction will begin in late 2008. Site preparation and construction are expected to require six months. Work must be completed in time to put the station in service by spring 2009. Site work will begin with the removal of the building, outdated equipment and materials. The site then will be re-graded to a flat surface, approximately level with 1100 East. When site work is complete, construction of the substation will commence. Clean-up, restoration, and landscaping will occur upon completion of construction.



201 South Main, Suite 2300
Salt Lake City, UT 84111

October 14, 2008

Mr. Everett Joyce
Salt Lake City Planning Division
451 South State Street, Room 406
Salt Lake City, UT 84111

Dear Everett:

Thank you for arranging a meeting with the Salt Lake City Design Review Team on September 22, 2008 to discuss the planned expansion of the Northeast Substation. The following responses address the issues discussed in the meeting:

Zoning Requirements

Space is limited at the Northeast Substation. Rocky Mountain Power's standard substation footprint measures one acre; the Northeast Substation property is approximately .80 acre. Available space is further constrained by safety clearance and operations access requirements.

Set-back requirements

An application for Planned Development as Conditional Use was submitted on Sept. 9, 2008. Rocky Mountain Power requests the Planning Commission grant an exception for the set-back requirements for the east, north and west sides due to space constraints. An exception will have minimal impact on the north and west sides due to the property uses. A mitigation plan for the east side is proposed.

- North: The existing substation site abuts the Medical Towers office building on the north. A car-port is located on the north side of the substation fence.
- West: A dead-end alley abuts the west fence. A trash receptacle is located in the alley. Occasionally cars are parked there.
- East: In order to meet safety clearance and operations access requirements, the east footprint of the substation will be 11 feet behind the sidewalk. Rocky Mountain Power proposes to mitigate the impact of a shorter front set-back by planting trees in the parkway and installing parkway landscaping in addition to landscaping between the east fence and the sidewalk. (See attached Landscape Plan View and elevation renderings.)

PacifiCorp/Rocky Mountain Power maintains clearances for the area surrounding energized substations in order to ensure public and employee safety. A minimum clearance of 5'-0" must be maintained as a restricted zone inside and outside the fence. No objects are allowed within this zone. The requirement is established to prevent the

risk of someone sticking an object through the fence and making contact with energized equipment.

In addition to the "Restricted Zone," PacifiCorp/Rocky Mountain Power standards establish an internal fence safety clearance for operation and maintenance. This clearance is based on voltage level. While the Northeast Substation will be operated for the time being at 46 kV, it will be built to 138 kV construction standards to accommodate future conversion when customer loads exceed available capacity. At 138 kV, the minimum clearance requirement is 14'-0". The operating clearance is designed to allow adequate room between the fence and equipment for operations personnel to safely work on equipment. (See attached drawing Safety & Clearance Diagram.)

These safety requirements conform with PacifiCorp Engineering Standard 6B.5 – Fence Application and Construction, which is based on American National Standards Institute (ANSI) C2 – National Electrical Safety Code (NESC) and ANSI 1119 – Guide for Fence Safety Clearances in Electric Supply Substations.

The equipment clearance plan, labeled Equipment Clearance Plan, indicates the necessary clearances surrounding the energized equipment and structures supporting energized parts and equipment. These clearances are designed to provide safe working conditions for operations and maintenance personnel. (See attached drawing, Equipment Clearance Plan.)

The substation is designed to meet safety clearance standards required by PacifiCorp Engineering Standard 1B.2 – Safety Clearances and Facility Access and Security and Engineering Standard 1B.9 – Substation Design Criteria. PacifiCorp standards 1B.2 and 1B.9 are based on ANSI C2 – National Electrical Safety Code (NESC). Standards 1B.2 and 1B.9 require meeting or exceeding the minimum clearances stated in the NESC.

Landscape buffer requirements

Rocky Mountain Power requests the Planning Commission grant an exception to the landscape buffer requirement on the west side of the property. Substation safety clearance and operations access requirements discussed above cannot be reduced to provide a 10-foot landscape buffer on the west side. An exception to the west landscape buffer will have minimal impact since a dead-end alley abutting the west property line separates the substation from the residences on the west. A trash receptacle is located outside the existing substation fence and cars are occasionally parked in the alley.

Rocky Mountain Power will provide landscape buffers consistent with the requirements of Salt Lake Code 21A.48.080 on the south and east side of the property. (See attached elevation renderings.) None is required on the north since it is not zoned for single or two-family residences.

Fence Height

Public safety is a paramount concern in substation fencing. According to PacifiCorp Engineering Standard 6B.5 – Fence Application and Construction, Section 4.2, "Fence

height shall stand 8'-0" high above grade with a fabric height of 7'-0" feet and 3 strands of barbed wire 1'-0" high on brackets 45 degree outbound.

Building Height

There will be no buildings constructed at the site. Line termination structures carrying electrical conductor will be approximately 60 feet in height, as required by the National Electric Safety Code to meet minimum clearance requirements for 138 kV construction.

Public Utilities

Drainage Plan

The Northeast Substation is designed to capture all rainwater from a 100 year / 24 hour storm without discharging any rainfall from the site. Based on National Oceanic and Atmospheric Administration (NOAA) Precipitation Frequency Estimates, a 100 year / 24 hour storm in downtown Salt Lake City area has an intensity of 0.12 inches/hour. Assuming no rainfall soaks into the ground or evaporates during that 24-hour period, an estimated total of 2.9 inches of rain would fall.

In order to provide the containment necessary to capture all rainwater, the top elevation of the station perimeter retaining wall and concrete fence berm will be a minimum 8" above final grade. The station entrances will have a raised drivable hump to allow service vehicles to access into the station, but keep the rainfall from leaving the station.

Rocky Mountain Power's substations are designed to prevent any contaminants from reaching the public utility system. Of primary concern is dielectric oil contained in the transformer. A Spill Prevention, Control and Countermeasures Plan (SPCC Plan) has been written for this site, detailing measures that are in place to prevent a spill from migrating offsite. Berms, gravel and walls all serve to contain a spill on-site. The site is inspected often to detect spills or other problems. A spill response contractor is also hired to respond to any spill; response time would be short, as the contractor is local. A state-approved contractor has completed remediation of the old control building to remove any hazardous items, mainly asbestos, in accordance with all laws and regulations.

Noise

Compliance with Salt Lake City noise ordinance, Chapter 9.28.060, was also discussed with the Design Review Team. The Northeast substation is zoned RMF-30, low density multi-family. The code allows for 50 dBA noise at the property boundary at night.

Since the substation is not fully constructed at this time, measurements were taken at a similar substation (Clearfield South) to predict the sound signature of the ultimate build-out of the Northeast Substation. Clearfield South substation has two 30 MVA transformers (When completed, Northeast will have a new 25 MVA transformer in addition to the existing 22.4 MVA transformer.) The transformers create a 120 cycle hum that is usually associated with electrical equipment. PacifiCorp/Rocky Mountain Power purchases transformers that are designed to be 10 dBA quieter than the typical National Electrical Manufacturers Association (NEMA) rating. Fans are added to the

cooling radiators on the transformers to cool the transformers during heavy loading periods. The fan noise is typically greater than the transformer hum.

Measurements were taken at the Clearfield South substation with all the cooling fans running on both transformers. A Radio Shack sound level meter model 33-2050 was used. The meter was set on 'A' weighting (per the 9.28.020 city code) using the fast response setting. The 50 dBA boundaries are drawn in red on a copy of the General Plan layout of the substation. The 50 dBA boundaries are inside the substation fence on the east, south and west sides. The north side boundary is 10 feet into the parking lot of the medical office building, which is not occupied at night. Under the city code, commercial areas are allowed to have 55 dBA noise at the boundary. The substation will meet the commercial noise code. (See attached diagram, Northeast South Signature.)

The air conditioning units on the switchgear cabinets contribute to the substation sound signature. This noise is considered to be less than the *ninetieth percentile noise level* as defined in the code definitions and standards because the units will cycle on and off as needed to cool the enclosed switchgear. Cooling requirements are reduced in the nighttime hours.

I trust we have addressed the issues discussed with the Design Review Team. If you require additional information or have questions, please contact me at 220-4437. We look forward to meeting with a subcommittee of the Planning Commission at its earliest convenience.

Sincerely,

Alene E. Bentley
Community Manager

Attachments