

PLANNING COMMISSION STAFF REPORT

Supplemental Information

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

The Planning Commission held an "Issues Only" public hearing regarding Petition Nos. PLANSUB2008-0064 and PLANSUB2008-00814. Enclosed are the staff memorandums to the Planning Commission which include public comments received prior to the Issues Only hearing and comments submitted at the Issues Only hearing.

Planning Commission Memorandums

Dated: January 7, 2009

Dated: January 14, 2009



Communication to Planning Commission

Community & Economic Development
Office of the Director

To: Planning Commission Members

From: Everett L. Joyce, Senior Planner *ELJ*

Date: January 7, 2009

CC: Wilf Sommerkorn, Planning Director
Cheri Coffey, Planning Manager

Re: Item Number 6 on the January 14, 2009 Planning Commission Agenda, Rocky Mountain Power Northeast Substation at 144 S 1100 E, be considered as an "Issues Only" public hearing.

On January 5, 2009, the Planning staff along with representatives of Rocky Mountain Power held an Open House regarding Petitions PLNSUB2008-00641 and PLNSUB2008-00814 for the Northeast Substation expansion at 144 So 1100 East. Numerous questions and concerns were brought forward regarding the proposed project. There was significant concern by the public that there was not adequate time for the public to respond to the proposed substation expansion due to the complexity of the issues and the fact that property owners who are concerned may not have been able to attend the open house due to the holiday period.

The applicant has requested (see attached letter) to hold the scheduled January 14, 2009 meeting as an "issues only" hearing, in order to give additional time for individuals to bring forward their issues and concerns regarding the substation expansion project before Planning Commission action. This will allow the applicant, Rocky Mountain Power adequate time to address concerns the Planning Commission may have after public input regarding the proposed substation expansion prior to their final decision public hearing.

Included with this memorandum are public comments the Planning Staff has received to date regarding the proposed substation expansion project. Also included are the site plan and elevation drawings for the proposed substation expansion.

Summary of Issues

- Height of poles and infrastructure - Impact on views
- Impact on property values
- Light pollution
- Noise Impacts
- Long term plan for growth approved prior to individual substation
- 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

Community Meetings and Notices

- The proposed substation improvement project was presented to the East Central Community Council on September 11, 2008. The agenda language for that meeting did not include a specific reference to this property but was more general relating to Rocky Mountain Power projects.
- The January 5, 2009 Open House notice was mailed on December 22, 2008. Notice was mailed to all property owners within 450 feet of the site as well as to the Community Council Chair and an e-mail was sent to all those on the Planning Division list-serve.
- The January 14, 2009 Planning Commission public hearing was mailed out on December 29, 2008 to the same group that was noticed for the Open House.

Agenda Item

6. Rocky Mountain Power Northeast Substation at 144 S 1100 E—a request by Rocky Mountain Power, for a conditional use as a planned development and preliminary subdivision from the Salt Lake City Planning Commission in order to reconstruct and expand electric power capacity to the existing Northeast Substation, located at 144 South 1100 East. The project consists of installation of a new 46/12.5 kilovolt (kV) 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 project is located in an RMF-30 Low Density Multi-family Residential zoning district. The planned development approval of the proposed improvements will require modification of zoning regulation standards related to setbacks, grade changes and fence height. 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. The property is located in City Council District Four, represented by Luke Garrett (Staff Contact: Everett Joyce at 535-7930 or everett.joyce@slcgov.com).

- Petition PLNSUB2008-00641 Conditional Use for Planned Development**—a request by the applicant for approval for reconstruction and intensification of an existing electrical substation with modification to the front yard rear yard setback and buffer requirements, grade changes and fence and wall height.
- Petition PLNSUB2008-00814 Preliminary Subdivision**—a request by the applicant for preliminary approval to combine three lots into one lot for the existing substation.

Enclosures

Rocky Mountain Power letter
Public Comments
Site Plan and Elevations

Rocky Mountain Power Letter

Rocky Mountain Power Northeast Substation at 144 S 1100 E
Petitions PLNSUB2008-00641 and PLNSUB2008-00814



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

January 7, 2009

Mr. Wilf Sommerkorn
Director
Salt Lake City Planning Division
451 South State Street, Room 406
Salt Lake City, UT 84111

Dear Wilf:

Thank you for personally attending the open house for the Rocky Mountain Power Northeast Substation. Clearly, the discussion reflected the neighborhood's desire for more information. Therefore, we would like to request that the agenda item for the Jan. 14 planning commission meeting be amended as an "issues only" discussion. These are important issues that should be addressed in an open forum for the record and we welcome the opportunity to do so. This format will also give the planning commission sufficient time to consider the information in order to take action on the conditional use application at the Jan. 28 meeting.

Rocky Mountain Power's goal is to move the process forward in a timely, responsible manner in order to minimize risk of customer outages this summer in the event load exceeds existing substation capacity.

Sincerely,

Alene E. Bentley
Community Manager

Public Comments

Rocky Mountain Power Northeast Substation at 144 S 1100 E
Petitions PLNSUB2008-00641 and PLNSUB2008-00814

January 5, 2009

To Whom It May Concern:

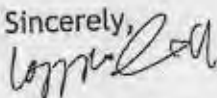
My name is Loggins Merrill and I am the Chair of the East Central Community Council (ECCC). I am writing in behalf of our council, requesting that you postpone the applicant Rocky Mountain Power from the planning commission agenda scheduled for the 14th of January. The applicant is requesting changes to the power substation located on 11th East in between 100 and 200 South. These changes will greatly affect the neighborhood for generations to come and are of great concern to all neighbors in the area. We have already put in a considerable amount of time in researching the issues and what alternatives would better serve the residents in the area. There are still major questions that need to be answered and the University Neighborhood Organization (UNO) and ECCC have tried talking to both city employees as well as Rocky Mountain Power to discuss the impacts and alternative solutions to this project.

It is our position that the open house scheduled for January 5th is too soon after the holiday break where many of our residents are out of town on vacation or not back in school yet as the University of Utah is not even back in session and a large part of our population revolves around the University. In order to have an open, transparent process and show good will to both ECCC and UNO we strongly encourage the city and Rocky Mountain Power to postpone having Rocky Mountain Power on the planning commission agenda by at least 2 weeks so that the ECCC/UNO can notify the neighborhood for a neighborhood meeting. This would also allow the time needed to talk with the city and the applicant about their concerns and possible alternatives to what is being proposed. This issue has previously been brought up during the meetings with the mayor where we were promised help in working with Rocky Mountain Power and this is the perfect time and opportunity to exercise that.

We understand the legal requirements of the power company and the stress they are under to provide the residents with power, however there is a better way to work together in a cooperative manner where the power company can still meet it's obligations and the residents in the surrounding area can have the most minimal negative impact. We do not believe this request to be unreasonable and it further demonstrates the city's willingness to have transparent governance and facilitate open communication.

Thank you for your consideration and willingness to be a partner with this community council in this great city. Working together we can all make our city a desirable place to live.

Sincerely,



Loggins Merrill
East Central Community Council Chair

January 4, 2009

Salt Lake City Planning Director and Members of the Planning Commission
Salt Lake City Planning Commission
451 South State Street, Room 406
Salt Lake City, Utah 84111

To Whom It May Concern,

I recently became aware of Rocky Mountain Power's (RMP) plans to expand its substation located at 144 S. 1100 E. Rocky Mountain Power has not notified the residents of my building directly, rather, we learned of the proposal from representatives who attended a recent community council meeting. I reviewed documents submitted to the planning commission and have several concerns about the RMP's proposal for conditional use. In addition to noise, light, and health concerns, the size and design of the proposed expansion will significantly impact the view corridor enjoyed by residents of Arlington Place Condominiums.

I am disappointed with Rocky Mountain Power's failure to include adequate mitigation of these issues in their proposal for conditional use. Furthermore, as a resident of Salt Lake City, I am concerned that Rocky Mountain Power has also failed to address the development of alternative energy delivery systems in their proposal.

I own a unit on the 7th floor of Arlington Place Condominiums. The unit is on the southwest corner, directly east of the property in question. The view of downtown and beyond, with the exception of one large power pole currently located near the curb of the property, is fantastic. See Attachment A, Figure 1. I have serious reservations about the height and size of the proposed project.

The proposed structure will significantly obstruct the views of any units on the south and west sides of the building. Rocky Mountain Power's rendering of the substation is misleading. It does not adequately represent the impact upon the view corridor enjoyed by residents surrounding the RMP property. See Attachment A, Figures 2 and 3. As you can see, the substation is adjacent to many homes and an office building and is nestled in a very residential neighborhood. If unmitigated the size and scope of the

proposed RMP expansion will destroy the public's view corridor. Quite simply, if approved without condition(s) to mitigate this impact the substation, as proposed, will stick out like a sore thumb.

My second concern is noise and light pollution. After considering RMP's "comparative analysis" of a similar substation I question whether the technology used (is a Radio Shack decibel meter considered an "industry standard" for accurately measuring noise?) or the location chosen adequately measured and replicated the potential noise level of this project.

For example, one issue not addressed in RMP's comparison is the potential noise impact of the large cement-walled medical building directly North of the substation. See Attachment A, Figure 4. Will the proximity of this building's structure amplify sound generated by the expanded substation? Was this a similar condition (variable) of RMP's chosen substation for comparison?

If not, then the comparative study is flawed as it does not accurately reflect the potential for exceeding allowable decibel levels. Given the flawed nature of the comparative analysis, at the very least Rocky Mountain Power should have considered and proposed mitigation of this issue by including the replacement of walls made of concrete with walls made of material similar to highway noise barriers. This is a quiet residential neighborhood and noise is a major concern.

Lighting is another issue I do not see addressed for mitigation in the plans. RMP should use the minimum level of illumination necessary to light the property. This may include using special optics designed to ensure full flow of light over the lit area, and reduce glare to onlookers when the lamp is aimed downwards. Motion detectors can reduce the lighting time (and energy used) and can be used to sense the movement of intruders on the property. Motion detectors should be installed so they are not likely to cause nuisance. Lighting and detectors should be aimed to detect people (and animals) on the property and not outside the property.

My third concern is the potential impact to my health and the health of our community. I did not see any mention of how Rocky Mountain Power will mitigate the health hazards created by high voltage power lines. Ample peer-reviewed empirical evidence exists demonstrating the very real harm to the health of those living in closest proximity to high voltage power lines as those being proposed by RMP in their plans for expansion. Again, the proposal for expansion submitted by RMP for conditional use approval does not offer any mitigation on the matter. However, mitigation of this and other concerns is available for the planning commission to consider as conditions of approval.

Other cities and power companies have worked together to address all of these issues by designing underground substations. This would be the optimal solution in this case. An underground substation

would eliminate most if not all of the concerns listed above. Furthermore, a buried substation would allow for the retention of some open, green space, which is getting harder and harder to find in Salt Lake City. I am sure this would be the costlier option. However, as a customer of Rocky Mountain Power I would gladly pay more to see a solution that mitigates the negative impacts of the conditional use being proposed by Rocky Mountain Power—as addressed in this letter—and has the additional social benefit of being environmentally friendly and visually pleasing.

Finally, I fully understand that decisions regarding any proposed conditional use are guided by Utah State law. Current state law provides that disapproval is allowable only when the identified potential harm(s) created by the proposed conditional use cannot be satisfactorily mitigated by conditions imposed by the governing decision-making body. In this case, I am of the opinion that should the Salt Lake City Planning Commission determine that the potential for harms outlined in this letter cannot be satisfactorily mitigated by Rocky Mountain Power, or that Rocky Mountain Power is disagreeable to the one condition of mitigation proposed here (underground), then the Planning Commission would be well within the guiding intent of State Law for disapproving Rocky Mountain Power's proposed conditional use for the expansion of their substation. Thank you for your consideration.

Sincerely,

Sarah Brenna
115 S. 1100 E. Apt 703
Salt Lake City, Utah 84102
(801) 364-8612
sebrenna@msn.com



Figure 2



Figure 3



Figure 4



January 4, 2009

Salt Lake Planning Director and Members of the Planning Commission
Salt Lake City Planning Commission
451 South State Street, Room 406
Salt Lake City, Utah 84111

To Whom It May Concern:

My wife and I recently became aware of Rocky Mountain Power's (RMP) plans to expand its substation located at approximately 144 South 1100 East. We own a condominium directly across the street in Arlington Place, 115 South 1100 East. Residents of our building have been notified of a meeting of the Planning Commission on January 5; however, we have not been provided with any information from RMP regarding their overall plans for the expansion, alternative options, documentation of need, assessments of environmental and economic impact on the neighborhood, and potential health hazards. There has been no evidence presented to indicate that RMP has consulted with the Department of Health, and departments dealing with the environment. We are very concerned about the lack of transparency in the decision making process.

As a physician/scientist, I am particularly concerned about the potential health dangers from the proposed expansion of this substation and others like it located in high density population areas. My major concerns relate to electromagnetic radiation. While some studies have reported that electromagnetic radiation associated with electric fields surrounding power lines is safe, other studies have strongly implicated such exposure to adverse health effects. These studies link electromagnetic radiation to childhood leukemias and neurodegenerative diseases such as amyotrophic lateral sclerosis (Lou Gehrig's disease). Other studies have shown an association to spontaneous abortion. As summarized in Wikipedia, the Stakeholder Advisory Group on ELF EMF (extremely low frequency electromagnetic fields) established in 2007 by the United Kingdom Department of Health issued a precautionary recommendation (<http://rkpartnership.co.uk/sage/>) that new power lines should be placed underground where possible and new residential buildings should not be built within 197 feet of existing power lines. Many residences adjacent to the 1100 East substation and power lines are considerably closer than 197 feet. In addition, no evidence has been presented to indicate that the soil at the existing substation does not contain PCPs and other toxic substances dangerous to human health. Has soil testing been done?

In view of these health and environmental concerns, it is difficult to understand why RMP has made a decision to proceed without careful consideration of adverse effects and possible alternatives. It is obvious that RMP has chosen the least expensive (in the short term) means of providing additional power, but the long term costs and effects on human health and the environment are of greater importance. I have the strong impression that RMP is not concerned with the health and safety of its customers or the economic impact on the neighborhood of its decision, but rather only with the bottom

line. The fact that alternatives to the current proposal are more expensive is not a sufficient reason not to implement them. It is simply irresponsible to make decisions based solely on cost without regard to the long term consequences to the residents of this and other neighborhoods.

Thank you for your consideration.

Stuart Handwerger, M.D.
Robert and Mary Shoemaker Professor of Pediatrics
Professor of Cell and Cancer Biology
Director, Division of Endocrinology
Cincinnati Children's Hospital Medical Center/University of Cincinnati
3333 Burnet Avenue
Cincinnati, OH 45229-3039
Office: (513) 636-4209
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Email: stuart.handwerger@cchmc.org

Planning Division Open House

January 5, 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 Jerolyn Wroble
Address) 115 S 1100 East #708
SLC, UT 84102
(include zip code)
Phone 801-232-4988

Subject Item: Request the delay of the Jan. 14.
Comments: Planning Commission decision

Few of the people directly affected
by this expansion only have learned
of this decision and plan in the
past three weeks. More information
and discussion is needed.

How could RMP not make a
concerted effort to speak to
the residents of Arlington Place
directly across the street from the
substation? This expansion negatively
impacts property values, aesthetics,
neighborhood quality of life and
potentially health. We need to know more.

Planning Division Open House

January 5, 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 Vicki Williams elevenooneleven@yahoo.com

Address) 115 South 1100 E. #312
SLC UT 84102
(include zip code)

Phone 232-1955 cell 521-8926 H-

Subject Item: Rocky Mt power Substation - north East

Comments:

I live across the street from this project - my husband & I (and all 74 units in our building) were not informed about this very monstrous, huge project. The City should consider how the future is going to change regarding this type of electrical substation - the way they are built now will become obsolete. Pres. Obama has promised a change in this type of infrastructure.

This project has been very hush hush and I am offended it is being pushed down our throats without any feedback from the community who lives there - We only heard about it by ACCIDENT -

Planning Division Open House

January 5, 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 Olivia MORETON

Address) 115 So. 1100 E #802

84102

(include zip code)

Phone 801-891-3567 Moreton@Comcast.net

Subject Item: NORTH East Substation.

Comments:

☒ Concerns: timing notification - no notification / inadequate time
no long term plan exists for the entire valley
need to see projections for growth

Questions/Concerns Regarding Rocky Mountain Power's Application for Conditional Use Permit

Letters to the Salt Lake City Planning Commission should raise questions or concerns about Rocky Mountain Power's (RMP) conditional use permit application. Generally, our concerns relate to the following areas:

1. If the substation is being expanded to provide redundancy in the system, why develop the capacity for 138 KV now? We understand SLC is planning on meeting with RMP about their long-term and is considering standards for the construction of substations. The goal of the current project is redundancy, not to meet current electricity needs. Why not wait until a 10-year plan can be produced by RMP and the City can create development standards for substations?
2. The current application does not address the additional power poles and towers needed to fully expand the substation to 138 KV.
3. Issues related to health, safety, light, noise, property values, visual impact, buffers, etc., are not adequately addressed.
4. Adequate research and alternatives have not been presented to the Planning Commission or to the public. Salt Lake City has a tradition of trying to reduce its environmental impact. Rocky Mountain Power should be required to propose alternatives, including costs and impacts, to the Planning commission.
5. Inadequate notice has been given to neighbors and concerned residents.

Current List of Questions and Concerns:

1. What alternatives exist for handling current power needs and redundancy?
2. What are the expected energy demands over the next 10 years? Does anticipated usage support the expansion?
3. What are the long range pole plans along 1100 East to support the future 138 expansion. Where exactly will poles need to be placed to accomplish the anticipated expansion?
4. Have other properties been considered? If not, please explain why. Are there properties more appropriate for this type of construction (i.e., business districts?)
5. Can the existing alley be used for access instead of 1100 East?
6. What facts support the decision that this is a prime location should a catastrophic failure occur.
This location is on the fault.
7. How are light and noise pollution being addressed? Are there alternatives that reduce the noise that will be generated by the expanded substation?
8. Are there alternatives to the height and footprint of the substation? Murray City has a similar site that has lower towers and a smaller footprint that what is being proposed.

Questions/Concerns Regarding Rocky Mountain Power's Application for Conditional Use Permit

9. The notice for the open house was sent two days before Christmas and the actual open house on the first day after a holiday. The University of Utah does not start its next semester until January 12 so many residences may be out of town. Do you consider this adequate public notice?
10. The proposed location is across from a historic district, across from a nationally designated site (Holy Cross Hospital Chapel and included in a five block area that the planning commission requested be made historic nearly 10 years ago), and was being studied for historic preservation recently. Has the Historic Landmark Commission had an opportunity to weigh in on the proposed development? How will the conditional use permit effect the area's historic neighborhoods?
11. Salt Lake City is a young city and there are many areas not only in the country but in the world that have dealt with many of these issues. Why are we not learning from other areas and requiring smaller footprints, building inside of buildings, and alternative forms of energy?
12. Has the City's Health Department been involved in the discussion? Are the power lines safe for residents? How will the expanded substation effect the medical building next to the site and the hospital across the street? Does the electrical field cause interference with the medical office buildings and the hospital nearby?
13. Has a chemical analysis of the ground under the substation been completed? What is the level of PCBs in the soil?
14. Are their detailed plans to clean up the project including the method and risk associated with it? Is there Environmental Protection Agency approval or certification of the site?
15. Why are redundancy needs not being separated from plans for future expansion to 138 high voltage transmission lines? This prevents residents from seeing the full impact of the future expansion on their neighborhood including cost, power forecast, footprint, mitigation, etc.
16. What is the impact on resident's property values? Has an analysis regarding the drop in value via a solid realtor report been completed?
17. What assurances exist that all mitigation issues will be addressed completed?
18. Is the Planning Commission adequately staffed at the current time? Does the planning commission have the expertise required to address the long term impacts of this request?
19. Can the Planning Commission delay the decision and establish a subcommittee to study all issues surrounding the application? This substation will serve as a model for many others. Are we satisfied that this model is consistent with the City's goals and environmental standards?

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To All Parties Concerned Regarding the proposed RMP Expansion,

I respectfully request that my email, in its entirety, be given to the Planning Commission in their packet for the meeting on this topic and not just summarized by Staff in the Staff Report. The affected neighborhoods must be granted the time to review this proposal BEFORE the Planning Commission meeting which finally decides on this issue. It is requested that the Planning Commission Meeting scheduled on the 14th NOT consider this issue, but continue it to a later date. There is NO RUSH to commit the City to a final course of action. I list my reasons in detail, below.

It is my firm belief that, in the interest of good government and proper planning for Salt Lake city, that Rocky Mountain Power, (RMP) must be required to identify ALL aspects of their plans before ANY official decision is made. This includes clear and complete coverage of all details, including costs to the City, to Land Owners and Homeowners, potential losses of property values, nuisances of noise, visual pollution and all negative effects of electric radiation on humans, animals and plants. These details should also indicate, clearly and without ambiguity, the spot locations and sizes of ALL proposed transmission poles, power lines (including any additional telecommunication wiring to be strung on the poles at lower levels, and the height of those lines and the potential leasing arrangements to the telecommunication carriers), transformers, and all other apparatus needed to accomplish the goals and projects proposed by Rocky Mountain Power.

1100 East is ALREADY the victim of over-sized power and utility poles, unsightly wiring connections, Guy and tie wiring supports, telecommunication lines at low levels, dying, crippled, diseased and destroyed street trees, some treated with growth retardants in past years, poor pruning practices, and seemingly poorly related to the overall Urban Forest Master Plan. The entire issue of utility distribution in Salt Lake City is best described as a "Theater of the Absurd", with neither rhyme nor reason regarding the cost in reduced property values and the general aesthetics of the City.

One has only to check out the size of the Concrete Transmission Tower at the intersection of 1100 East and 800 South, to get a sense of the out of scale, pedestrian-threatening visual obstacles created by poorly planned and authorized towers. It is impossible to see on-coming traffic, and appears to violate the intention if not the law covering obstacles and heights of landscape or fencing occurring within 10 feet of any intersection where pedestrians face on-coming traffic.

More careful attention afforded to the past 'Free-Range-Construction-License' granted to ALL Utility companies is long overdue. The Elephant in the room is clearly visible and growing. There also MUST be stronger, tighter and transparent communication between State and Local Ordinances and Regulations governing Utility construction, and a better distribution of information to the Public-at-Large, in sufficient advance of any closed meeting between Utility representatives and City Officials, and before "it is too late to make costly changes to proposed plans. Salt Lake City deserves more. And the City's time is NOW.

Respectfully,

M. Ray Kingston
1070 East 400 South
Salt Lake City, Utah 84102

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Joyce, Everett

From: Brian Bray [brian.bray@gmail.com]
Sent: Monday, January 05, 2009 4:44 PM
To: Garrott, Luke; Joyce, Everett; council.comment@slcgov.com
Subject: RE: Rocky Mountain Power conditional use application (#PLNSUB2008-00641)
Attachments: Substation - Jan 2004.jpg; Substation - Jan 2009.jpg; Substation - Annotated Map.jpg

Salt Lake City Planning Commission
 451 South State Street, Room 406
 Salt Lake City, Utah 84111

January 5, 2009

To Whom it May Concern,

I am a concerned owner and resident of a condominium at the Arlington Place Condominiums located directly across the street from Rocky Mountain Power's existing electrical substation located at approximately 144 South and 1100 East in the RMP-30 zoning district. I will not be able to attend the open house this evening, so I request that my concerns be passed along to the appropriate council members.

My primary concerns are as follows. I have attached 3 images to illustrate (night shot from Jan 2004 showing the substation as it was before, Current shot from Jan 2009 and an annotated map showing the current layout of the substation).

1. **Current utilization:** I was initially pleased to see that over the last year or so Rocky Mountain Power has appeared to have upgraded and consolidated all the equipment on the site (See the attached before and after pictures from Jan 2004 and Jan 2009). In my estimation, they appeared to remove the majority of the equipment from the site, and went from utilizing 80% of the existing fenced site to only 10% of the site. I saw them 1) cut down all the small towers and transformers from the northern half of the site and 2) gut the small brick building, which currently appears to be completely empty. It appears to me that the only active equipment on the premises is located in a small utility cabinet roughly 20x60 feet in size. My concern is that, given how much empty space is already available, if the project requires the premises to be expanded further, then that implies that this is quite a large project with a huge amount of additional equipment being installed.
2. **Safety and light/noise pollution:** Looking at the attached pictures taken from my bedroom window, I am about 100 feet from the large tower and at eye-level of the power lines that feed from the substation. Obviously additional towers, increased line voltage, etc. would a great safety concern to me and the rest of the building residents, not to mention the visual impact, since as you can see, the large tower is a significant eye-sore obstructing many of the residents views. While they were gutting the small brick building, I noticed the workers were wearing respirators, this concerns me that there could be some contaminates on the site. Additionally, several times over the last couple years I have been awoken by large amount of noise coming from the substation. It sounded like the blades from an exhaust fan were striking its casing. It prompted me on more than one occasion to call the Rocky Mountain Power hot line and I'm concerned that a lot of additional equipment will increase these incidents. Finally, on several occasions, workers have left a large floodlight on the small brick building on for several days or weeks at a time. This causes significant light pollution in the area when left on.

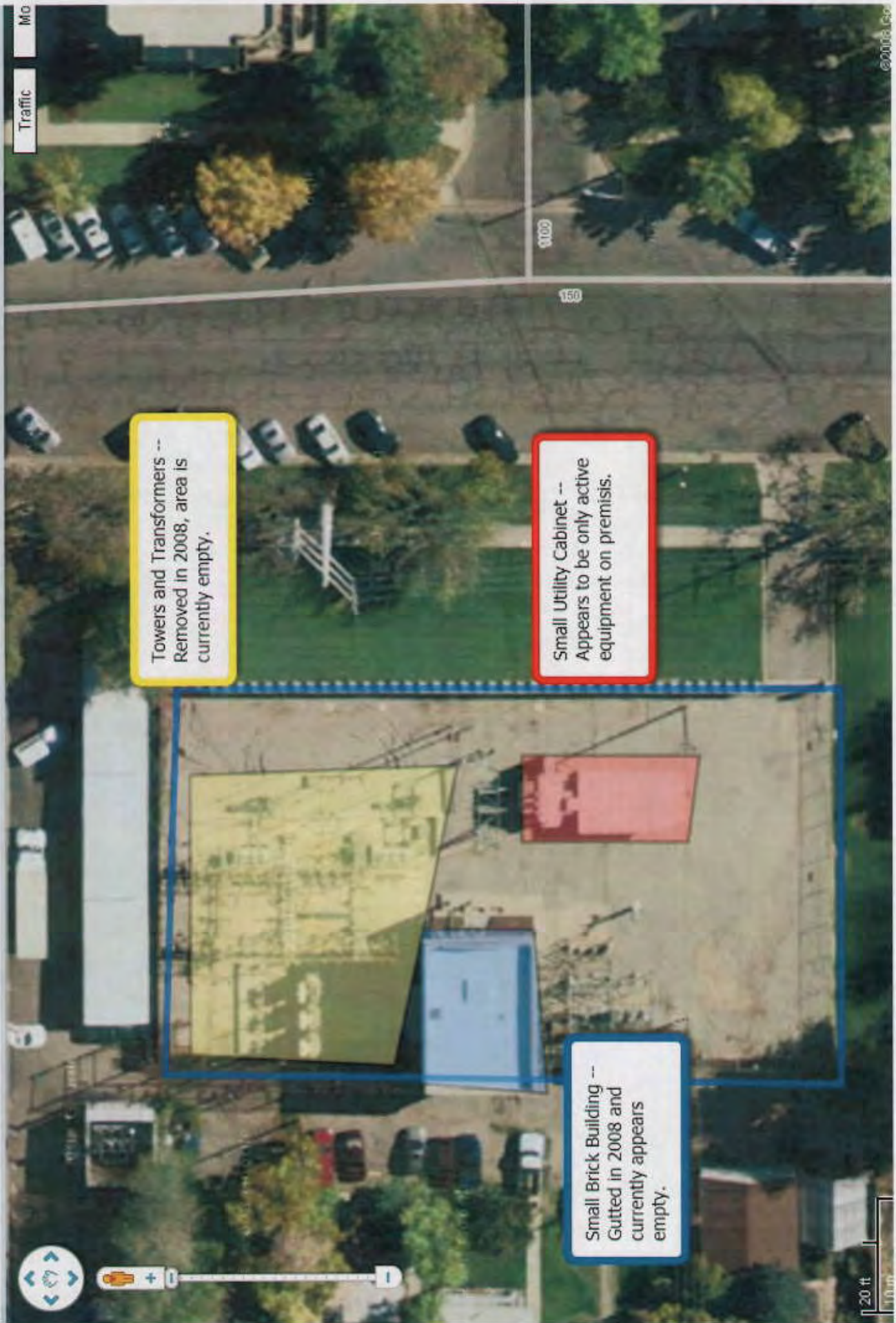
I would request that the commission ask the following questions to Rocky Mountain Power representatives regarding the expansion project:

1. If the current utilization is limited to a 20x60 foot equipment cabinet (the size of the existing perimeter appears to be roughly 100 x 200 feet) then why do they need to expand the fenced perimeter? They could fit 10 times the amount of equipment that is currently on the site within the existing perimeter in order to provide redundancy and expansion to 138 KV. Can Rocky Mountain power provide a diagram or map of the planned layout of the site after the proposed expansion for nearby residents to review?
2. Will the expansion only be within the fenced perimeter or will new towers and poles and lines need to be installed in the surrounding area? How large and large and tall will the additional equipment be? Will there be an increase in the voltage of the lines? Will this impact property values?
3. What alternatives might exist for handling redundancy and expansion? What alternatives have other power companies or substations around the city implemented? My power seems to be quite reliable, do we need the redundancy and expansion?
4. Were the workers cleaning out the brick building simply removing lead or asbestos? Or are there other containment's in the building or in the surrounding soil? Has a chemical analysis of the ground been done? What is the level of PCB's in the soil?

Sincerely,
Brian Bray
115 S. 1100 E. #602
Salt Lake City, UT 84102
801-971-8441
brian.bray@gmail.com







Towers and Transformers --
Removed in 2008, area is
currently empty.

Small Utility Cabinet --
Appears to be only active
equipment on premises.

Small Brick Building --
Gutted in 2008 and
currently appears
empty.

20 ft
10 m

©2008 Google

Joyce, Everett

From: Ekstrom, Robert H [robert.h.ekstrom@lmco.com]
Sent: Tuesday, January 06, 2009 4:55 PM
To: Joyce, Everett
Cc: councilcomment@slcgov.com; Mayor, Everitt, David; Becker, Ralph; wilf.sommerkorn@slcgov.com; Gray, Frank; joelkb@mindspring.com
Subject: Rocky Moutain Power Conditional Use Permit (#PLNSUB2008-00641)

Salt Lake City Planning Commission
 451 South State Street, Room 406
 Salt Lake City, Utah 84111

I am a concerned resident with property at 115 South 1100 East (Arlington Place Condominiums). I have questions and concerns about Rocky Mountain Power's application for Conditional Use Planned Development (#PLNSUB2008-00641) to modify and expand the existing electrical power substation at approximately 144 South 1100 East in the RMP-30 zoning district.

The conditional use permit allows Rocky Mountain Power (RMP) to expand the substation located directly across from my property. The conditional use application fails to provide answers to many questions I have regarding the impact of this expansion. Additionally, I have concerns regarding basic health and safety impacts.

Specifically:

1. I understand that SLC is planning to meet with RMP to discuss their long-term requirements and is also considering standards for the construction of substations. Why not wait on this proposal until a long-term plan is produced by RMP and the city can develop standards for substations? What is the urgency of this request? If this expansion is part of a long-term plan, let's review this request in light of that long-term plan – not in isolation.
2. Issues related to health, safety, light, noise, property values, visual impact, etc. are not being adequately addressed.
3. Has there been adequate research into alternatives and have they been presented to the planning commission? RMP should be required to propose alternatives and to provide evidence regarding their efforts to limit impacts to the environment and adjacent neighborhoods.
4. Why is it necessary to expand a substation that is in the middle of a residential area, essentially land locked by residential development? Again, what are the alternatives?
5. Have alternatives for a lower profile (lower height) substation been analyzed?
6. Have alternative locations been identified and analyzed? If so, has there been a independent review?
7. Has the planning commission reviewed lesson learned from similar situations in other cities?
8. The planning commission needs to carefully study this proposal and be diligent in their review as this substation could become a model for future substation expansion across the city. Is this the proper model? Is it consistent with the city's desired standards and acceptable environmental impacts?

Lastly, I don't believe the city gave adequate notice for the Open House on 5 January. Considering the Christmas holidays, residents holiday travel, etc. it appears as if the intent was to limit community input rather than to encourage that necessary input. Legal or not, the short notice is inappropriate, unnecessary and suspect.

I am deeply concerned that this substation expansion is not necessary at this time and that it must be reviewed in light of the long-term power needs of the community. Where is the 10-year plan? Additionally, this expansion must adequately address the myriad of environmental, safety and property value concerns. The planning commission should be actively seeking community input and not trying to limit that input. Let's make

RMP answer all the tough questions and provide answers to the community concerns. And, let's ensure the community has adequate time to provide the planning commission the full extent of their concerns. Moving too fast is not being responsible.

Please ensure my comments are included in the package prepared for the planning commission members for the meeting on January 14.

Regards,

Robert H. Ekstrom
115 South 1100 East, #614
Salt Lake City, Utah

(801) 394-1064
ekstrom01@comcast.net

Joyce, Everett

From: jbennion [jbennion@landdynamics.com]
Sent: Wednesday, January 07, 2009 11:05 AM
To: Joyce, Everett
Cc: Don Ferguson
Subject: Substation improvement 144 south 1100 east parking issues

Everett Joyce

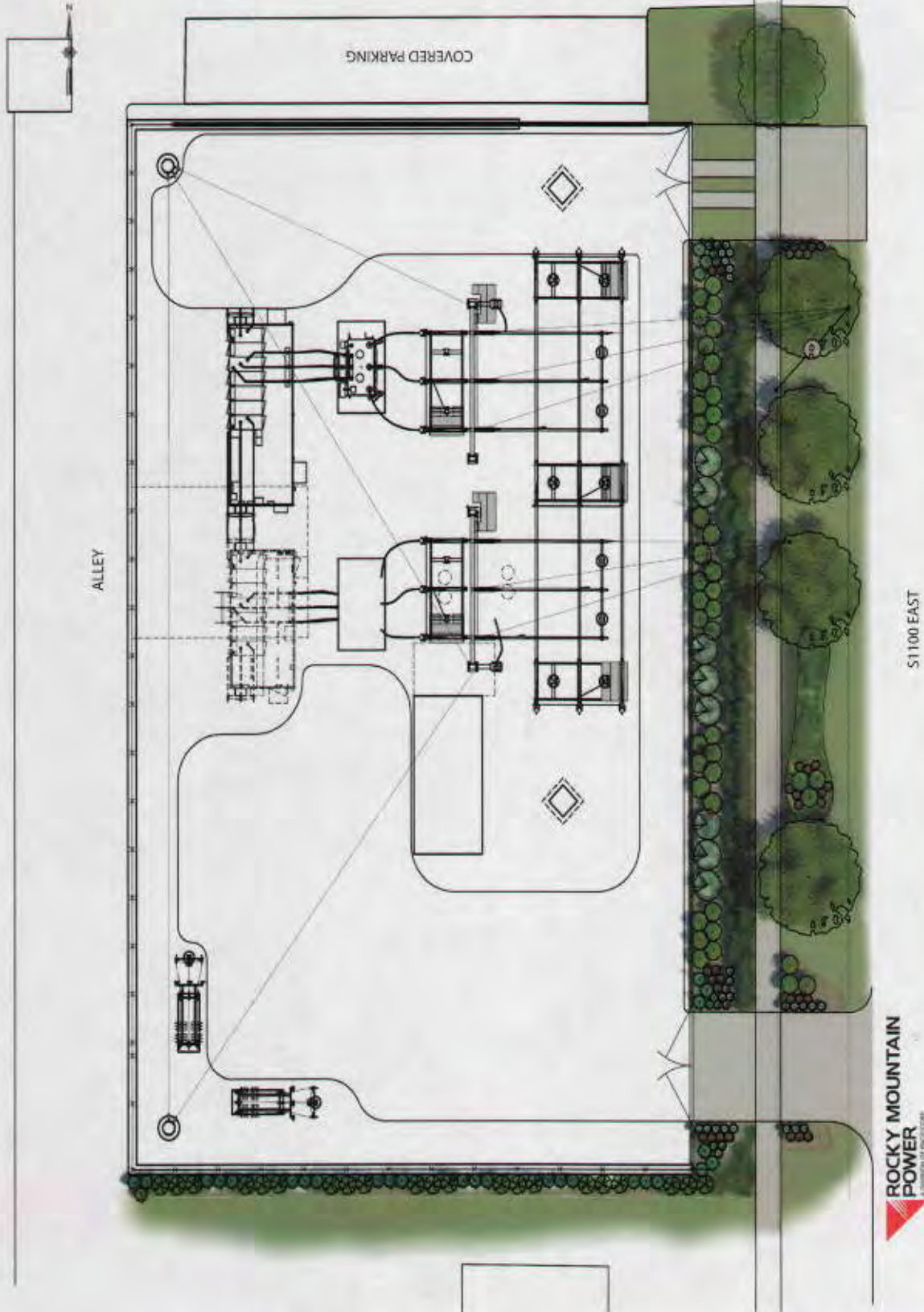
I wanted to get two comments on the record for the January 14th meeting. If this is an acceptable form please add it to the comments. If not please advise me on the procedure I need to follow.

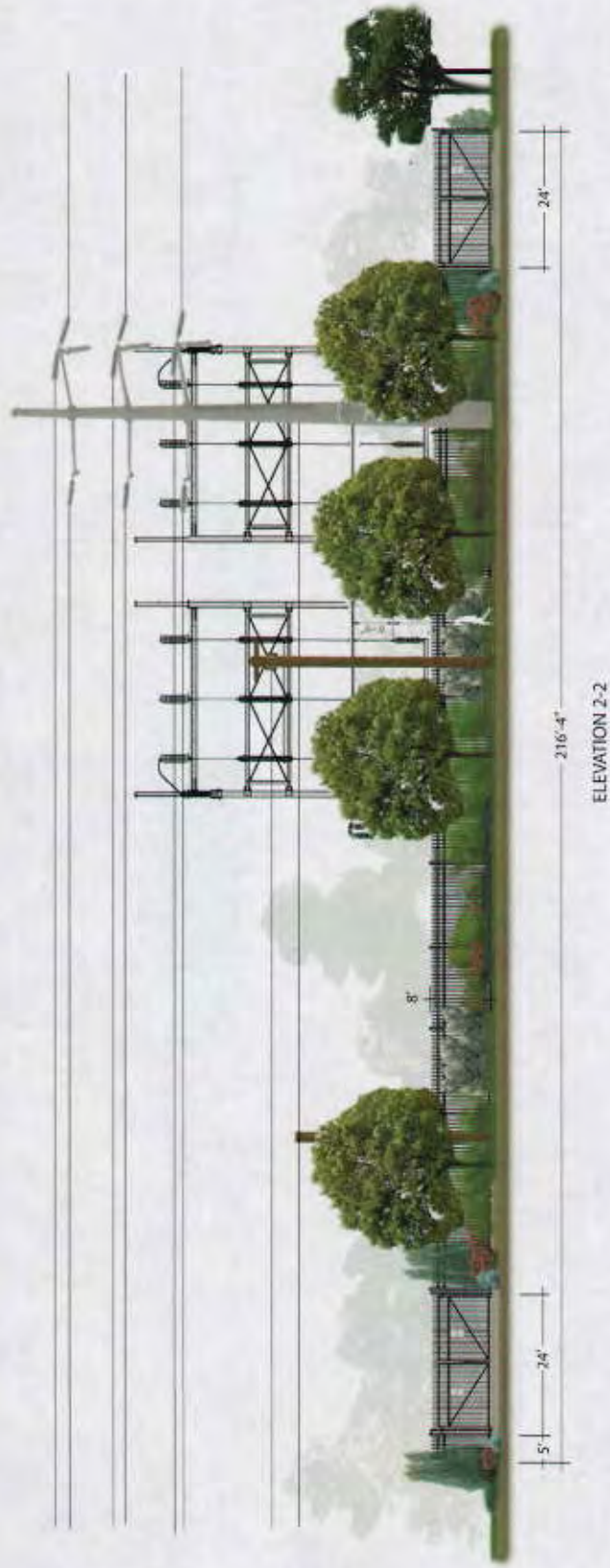
1. I work in the building next to the substation. The parking in front of the substation on 1100 East is used extensively for patrons and tenants of the Medical Towers building, neighborhood, and condo residences. I request that that parking be left open during construction for public parking. It would also be nice to open the property on the south of the substation to public parking.
2. Concerns have been raised concerning the higher voltages being feed to and out of the facility. I request someone with a background in that kind of radiation be consulted before approval. It should include both health and communication (cellphone) issues.

James Bennion
LandDynamics Inc
1060 E 100 S suite #103
SLC Utah, 84102

Site Plan and Elevations

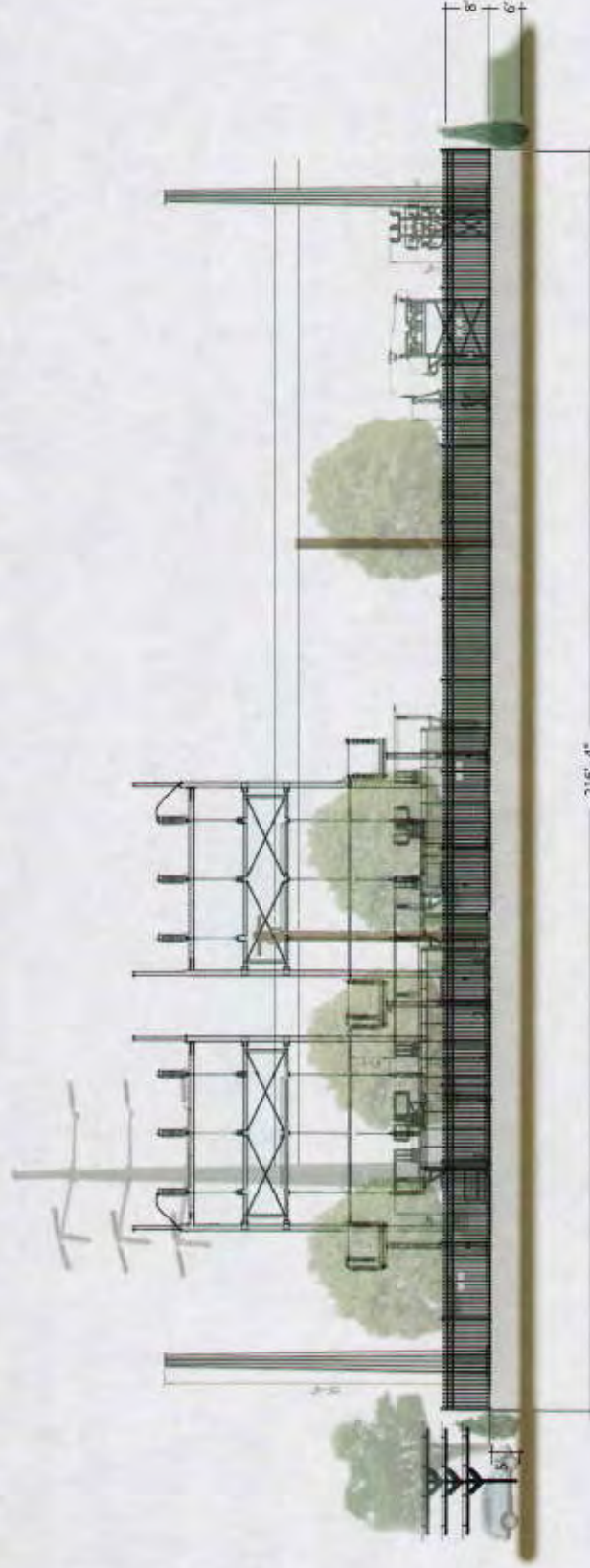
Rocky Mountain Power Northeast Substation at 144 S 1100 E
Petitions PLNSUB2008-00641 and PLNSUB2008-00814





11TH EAST ELEVATION

REVISED 12.08.2008

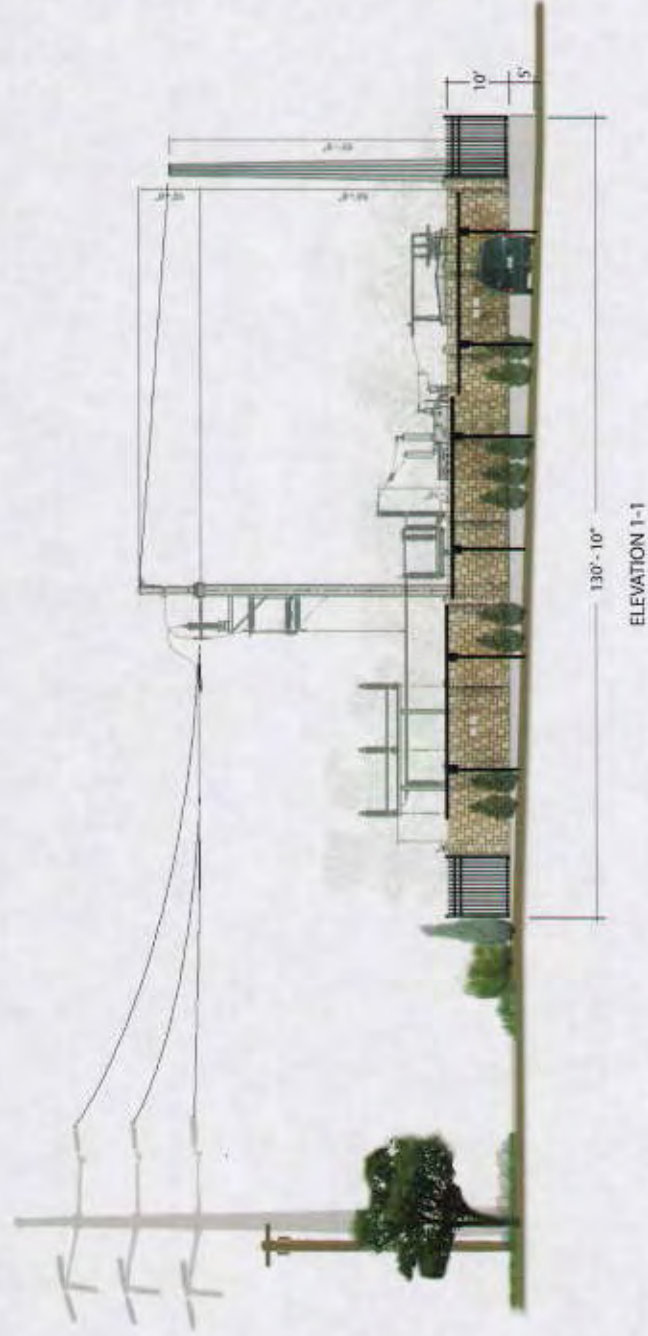


WEST (ALLEY) ELEVATION

REVISED 12.08.2008



ELEVATION 3-3





Communication to Planning Commission

Community & Economic Development
Office of the Director

To: Planning Commission Members

From: Everett L. Joyce, Senior Planner

Date: January 14, 2009

CC: Wilf Sommerkorn, Planning Director
Cheri Coffey, Planning Manager

Re: Additional comments received between January 8-14th regarding Petitions
PLNSUB2008-00641 and PLNSUB2008-00814 for the Northeast Substation
expansion at 144 So 1100 East.

Agenda Item - Issues Only Public Hearing

1. Rocky Mountain Power Northeast Substation at 144 S 1100 E—a request by Rocky Mountain Power, for a conditional use as a planned development and preliminary subdivision from the Salt Lake City Planning Commission in order to reconstruct and expand electric power capacity to the existing Northeast Substation, located at 144 South 1100 East. The project consists of installation of a new 46/12.5 kilovolt (kV) 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 project is located in an RMF-30 Low Density Multi-family Residential zoning district. The planned development approval of the proposed improvements will require modification of zoning regulation standards related to setbacks, grade changes and fence height. 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. The property is located in City Council District Four, represented by Luke Garrott (Staff Contact: Everett Joyce at 535-7930 or everett.joyce@slcgov.com).

- a. **Petition PLNSUB2008-00641 Conditional Use for Planned Development**—a request by the applicant for approval for reconstruction and intensification of an existing electrical substation with modification to the front yard rear yard setback and buffer requirements, grade changes and fence and wall height.
- b. **Petition PLNSUB2008-00814 Preliminary Subdivision**—a request by the applicant for preliminary approval to combine three lots into one lot for the existing substation.

Joyce, Everett

From: Kristin Campbell [kcampbell53@comcast.net]
Sent: Monday, January 12, 2009 9:03 AM
To: Joyce, Everett
Cc: Council Comments; Mayor; Everitt, David; Becker, Ralph; Sommerkorn, Wilford; Gray, Frank; joelkb@mindspring.com; 11thstreetproximate@live.com
Subject: Rocky Mountain Power's Expansion of the 1100 East Substation

SLC Planning Commission
451 South State Street, Room 406

To Whom It May Concern,

I am a concerned resident living at 167 S McClelland. I have questions about Rocky Mountain Power's application for a Conditional Use Planned Development (#PLNSUB2008-00641) TO MODIFY AND EXPAND THE EXISTING Electrical Power Substation at approximately 144 South 110 East in the RMP-30 Zoning district.

- 1) Health Issues: I have 2 children (4 months and 9 years old), risks of leukemia in children living near high voltage transmission Lines more than doubles (less than 100m or 300ft). (see <http://www.medicalnewstoday.com/articles/13440.php>). This result from the OXFORD CHILDHOOD CANCER RESEARCH GROUP study, headed by Gerald Draper analysed and compared 33 years of data (from 1962 to 1995) on 35,000 children diagnosed with cancer, with their distance to the nearest electricity transmission line. **I live less than 100m away.** In addition to my children, there are several other families with children and a daycare (~40 kids) all on the same block.
- 2) The letter from RMP was extremely misleading; the letter suggested that the majority of the renovations would be changing the fence and other exterior items. There was no mention of the expansion of the high voltage transmission lines. This in itself suggests the application should be denied since the RMP is certainly not openly explaining what they want to do.
- 3) Why here? Does our neighborhood need the power or is it being shipped to other neighborhoods? RMP has not openly told us anything or provided maps. It is my understanding that our neighborhood does not need new power and this power is being transmitted else where. In that case, maybe the high voltage transmission lines should be in their backyards not ours.

RMP has not been forth coming in what they are doing and why. In addition the health and safety issues have not been adequately addressed. RMP again is trying to sneak something in without notifying the neighborhood.

Kristin Campbell
Mobile (801) 651-7284

Childhood leukaemia risk doubles within 100 metres of high voltage power lines

15 Sep 2004

[Click to Print](#)

The biggest ever publicly funded UK study (1) into power lines and child cancer has found that children under the age of 15 living within 100 metres of high-voltage power lines have close to twice the risk of developing leukaemia. Children aged 0-5 are the most vulnerable so their risk is likely to be even higher.

This result from the OXFORD CHILDHOOD CANCER RESEARCH GROUP study, headed by Gerald Draper analysed and compared 33 years of data (from 1962 to 1995) on 35,000 children diagnosed with cancer, with their distance to the nearest electricity transmission line. These latest findings from the Draper study of a direct effect on childhood leukaemia from U.K. power lines follow from the acknowledged International studies that the risk of childhood leukaemia is doubled for magnetic field exposures above 0.4 microtesla, well below that seen under high voltage powerlines.

We have learned that " preliminary results" of the latest Draper study, funded to run from 1997-2001 were known as long as 3 years ago and were formally shown confidentially to the U.K. Department of Health in May 2003, but to date has not as yet been entrusted to the public.

We of the Trentham Environmental Action Campaign, an independent research and activist group, concerned about adverse health effects from power-lines, believe it to be absolutely scandalous that 3 years after telling the Department of Health of these latest U.K. findings, it is only as a consequence of our intervention that we are now able to make these findings public.

There appears to have been a determination to withhold the Draper Report for as long as possible.

Trentham has a high voltage powerline crossing many of the houses and there are a significant number of households with young children within 100 metres of the line. Our concerns are also shared by REVOLT, Powerwatch and Electromagnetic Hazard and Therapy, organisations which have also voiced concerns about the health risks of electromagnetic fields for many years.

Our campaign group has been in constant contact with the Government, Mr George Hooker at the Department of Health and the National Radiological Protection Board [NRPB]. We have also been deeply disappointed in the organisations' continuing denial of the problem despite their knowing about these new study results. The NRPB already acknowledges that there is international consensus on the fact that the incidence of childhood leukaemia is doubled at a magnetic field of 0.4 microtesla, which is exceeded under most powerlines. In March 2004, the NRPB reduced the national magnetic field exposure guidelines from 1,600 microtesla to 100 microtesla [3].

They said "In the light of these findings (the association between exposure to magnetic fields and childhood leukaemia) and the requirement for additional research, the need for further precautionary measures should be considered by government". However, 100 microtesla is still 250 times higher than the level (0.4 microtesla) at which the risk of developing childhood leukaemia is doubled.

Electromagnetic fields from powerlines are also linked to adult cancers, depression and suicide. Our Trentham group carried out a local survey which produced extremely worrying results. Depression, miscarriages, headaches, insomnia (with its attendant chronic health problems due to immune system damage) were much more common in the people who lived near the powerline, compared with those who lived further away. Some of these health problems were also found in the important California Health Department report [4] of 2002.

The leukaemia link has now been repeatedly demonstrated. The government should take our nation's health seriously enough to stop allowing houses to be built near high-voltage lines and to remove overhead powerlines from residential areas.

The Minister for Housing and Planning, Keith Hill, in a letter dated July 2004, said "We are aware that there is continuing debate about the effect of living under power lines and whether this can have adverse long-term health effects.

We are of the opinion that power lines are unlikely to have significant effects on the environment". Is this a government statement about people's health or about the environment? Is this confusion, or spin?

It is time the government and planners took the health issue seriously, and reversed their policy of favouring developers, clearly ignoring the risk to children's health. New housing near powerlines should be restricted, and existing lines through residential areas phased out.

Only 50 years ago developing childhood leukaemia was an almost certain death sentence. Due to dramatic improvements in treatment, about 80% of children who suffer from the most common form of childhood leukaemia (ALL, acute lymphoblastic leukaemia) now live for more than 5 years after treatment, but childhood leukaemia remains the largest child killer disease. Survivors often suffer ongoing adverse health complications. The number of children developing leukaemia has been steadily growing over the last 50 years. In 2001, Dr Sam Milham reported [5] a link between the growth in electricity supply and the growth in leukaemia incidence in the USA.

We ignore this at our peril.

[1] Draper G, Vincent T, Kroll M & Swanson J - Childhood cancer and electromagnetic field exposures from powerlines - Department of Health funded 1997-2001, RRX 46 (as yet still unpublished)

[2] International Scientific Conference on the incidence, causal mechanisms and prevention of childhood leukaemia and other cancers. Westminster, 6-10th September 2004. See: <http://www.leukaemiaconference.org>

[3] See: <http://www.nrp.org> for details of their announcements and downloadable publications

[4] Neutra R R, DelPizzo V & Lee G M - An Evaluation of the possible risks from electric and magnetic fields (EMFs) from power lines, internal wiring, electrical occupations & appliances, 2002, California Department of Health & Human Services, The Program, Oakland, California.
<http://www.dhs.ca.gov/ehib/emf/RiskEvaluation/riskeval.html>

See commentary

on: <http://www.electric-fields.bris.ac.uk>

[5] Milham S & Ossiander E M - Historical evidence that residential electrification caused the emergence of the childhood leukaemia peak Medical Hypotheses, 2001, 56(3) 290-295

Further information about powerlines and health problems (including the Trentham survey) can be found on the following websites

TEAC <http://www.revolt.co.uk/trentham> Media (only) Tel: 01782 658648 Mobile 07963915428
(Maureen A)

EMH&T <http://www.em-hazard-therapy.com> Simon Best 01730 816 799 (media only)

Powerwatch <http://www.powerwatch.org.uk/contents.asp>

REVOLT <http://www.revolt.co.uk>

This press release has been issued by the Trentham Environmental Action Campaign
51 Earlsbrook Drive, Trentham, Stoke on Trent ST4 8DL
email maureen@asbur@hotmail.com

Article URL: <http://www.medicalnewstoday.com/articles/13440.php>

Main News Category: Cancer / Oncology

Save time! Get the latest medical news headlines for your specialist area, in a weekly newsletter e-mail. See <http://www.medicalnewstoday.com/newsletters.php> for details.

Send your press releases to pressrelease@medicalnewstoday.com

I respectfully request that my email, in its entirety, be given to the Planning Commission in their packet for the meeting on this topic and not just summarized by Staff in the Staff Report.

I respectfully request that the Salt Lake City Planning Commission table the Conditional Use Permit application for the substation located at 144 S 1100.

In Rocky Mountain Power's conditional use application, they state their intent to design the substation to accommodate future upgrades to 138kv facilities. In talking to Rocky Mountain Power they have admitted that there is not a need for that much power in the area but are basing the need on projections that they are unwilling to share. The community that the substation feeds is a fully developed community and there is no room for growth of the proportions that would require a 138kv substation.

They have stated that the primary need to upgrade the existing equipment and bring the capacity to 47 MVA, which would effectively solve the power issues for the area while providing redundancy for the attached circuits. When asked at the open house on January 5, 2009, if they truly expect to need to go to 138kv power in the near future they stated they were unsure.

To that point I pose the question: Why should we allow them to build a large structure that will be visually unappealing for approx 50 years on something that they are unsure of and cannot prove an immediate need?

Also while talking to the Rocky Mountain Power staff at the January 5th open house, I mentioned I had done research and discovered that Murray Power had built a low profile substation just off of 5300 So. 200 W. Rocky Mountain Power's proposed design in the application reaches heights of 65 feet (similar to Attached Exhibits A) and as mentioned before would be a considerable eyesore for the community. While in contrast the Murray Power substation has towers that are 20 feet shorter and have much less of a visual impact (Attached Exhibit B). Also in my research I discovered a project in Anaheim CA., which buried their substation underground (Attached Exhibit C&D).

While I understand the increased cost of doing a project like the underground substation (\$19.5 million including 10 miles of underground cabling), I feel Rocky Mountain Power has a responsibility to try to provide low impact options to the community it services.

My desire is not to block an upgrade to the substation but only to minimize its impact on my community. Salt Lake is a progressive city and has an opportunity to be a model for cities around the country.

Thank you,

Chris Weed
115 S 1100 E #808
Salt Lake City Utah

Exhibit A:

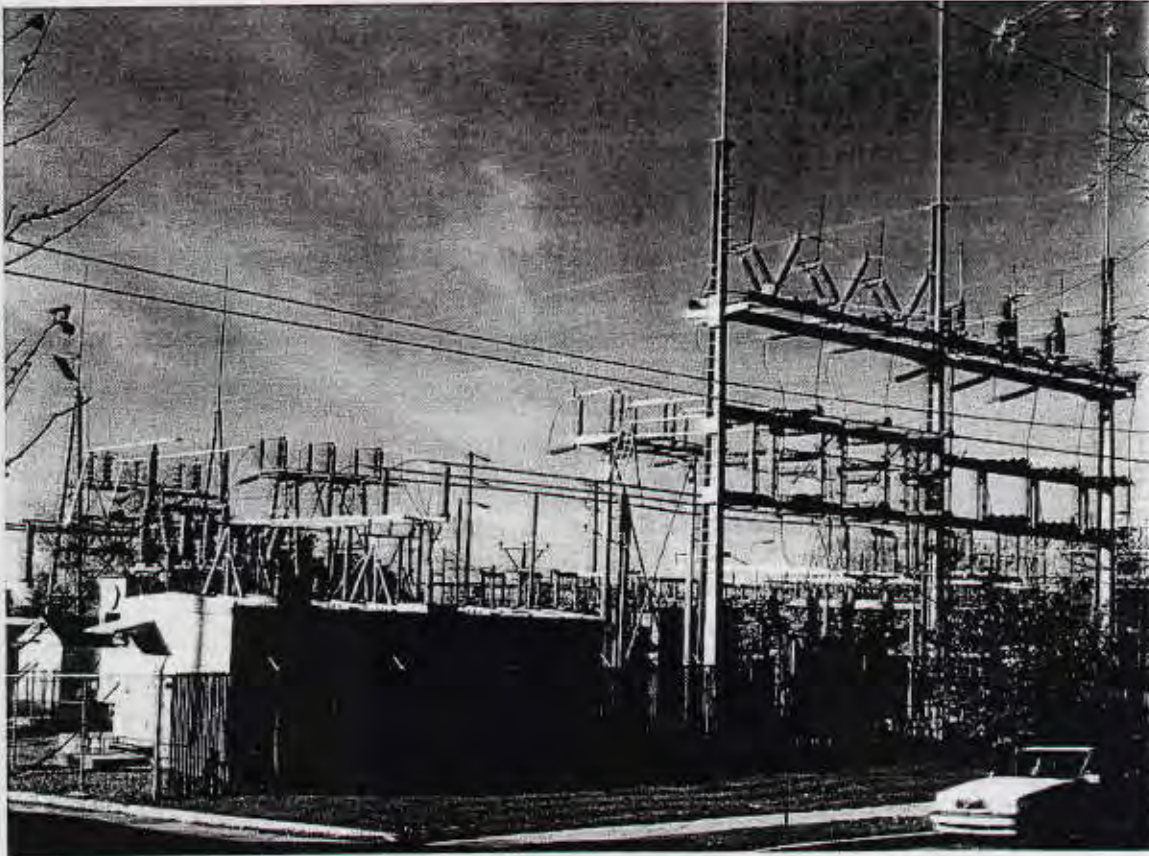


Exhibit B: Murray Power Low Profile Substation

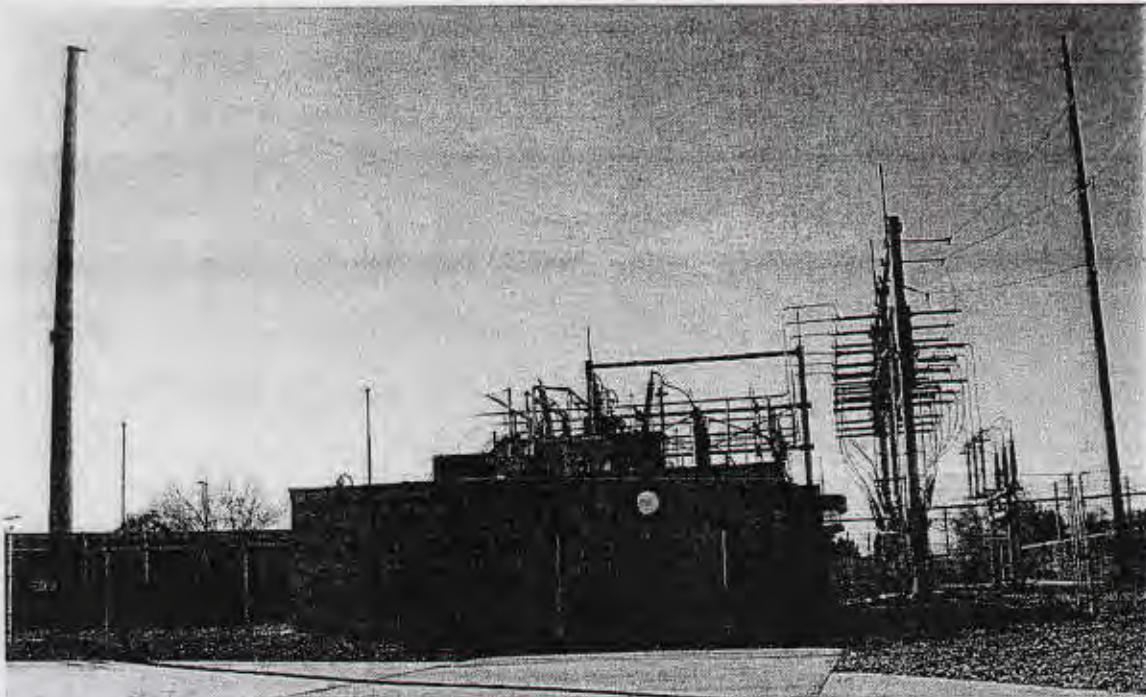
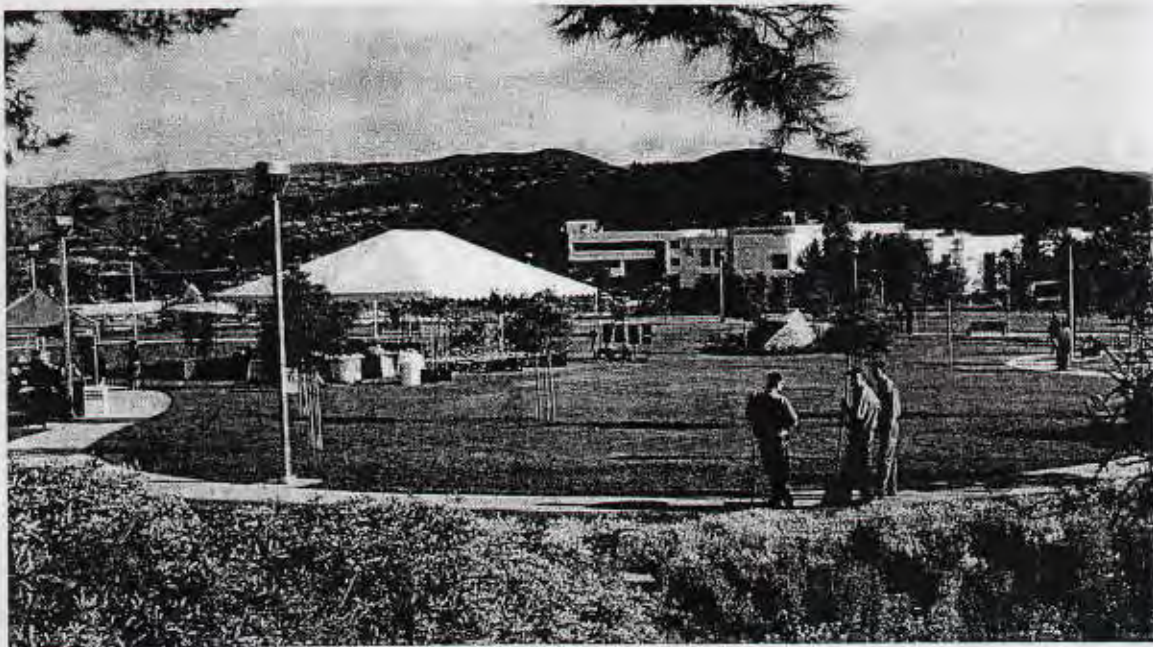


Exhibit C: Shot Of Underground Substation In Anaheim Ca.



Exhibit D: Park on top of Underground Substation in Anaheim Ca.



Questions/Concerns Regarding Rocky Mountain Power's Application for Conditional Use Permit

Letters to the Salt Lake City Planning Commission should raise questions or concerns about Rocky Mountain Power's (RMP) conditional use permit application. Generally, our concerns relate to the following areas:

1. If the substation is being expanded to provide redundancy in the system, why develop the capacity for 138 KV now? We understand SLC is planning on meeting with RMP about their long-term and is considering standards for the construction of substations. The goal of the current project is redundancy, not to meet current electricity needs. Why not wait until a 10-year plan can be produced by RMP and the City can create development standards for substations?
2. The current application does not address the additional power poles and towers needed to fully expand the substation to 138 KV.
3. Issues related to health, safety, light, noise, property values, visual impact, buffers, etc., are not adequately addressed.
4. Adequate research and alternatives have not been presented to the Planning Commission or to the public. Salt Lake City has a tradition of trying to reduce its environmental impact. Rocky Mountain Power should be required to propose alternatives, including costs and impacts, to the Planning commission.
5. Inadequate notice has been given to neighbors and concerned residents.

Current List of Questions and Concerns:

1. What alternatives exist for handling current power needs and redundancy?
2. What are the expected energy demands over the next 10 years? Does anticipated usage support the expansion?
3. What are the long range pole plans along 1100 East to support the future 138 expansion. Where exactly will poles need to be placed to accomplish the anticipated expansion?
4. Have other properties been considered? If not, please explain why. Are there properties more appropriate for this type of construction (i.e., business districts?)
5. Can the existing alley be used for access instead of 1100 East?
6. What facts support the decision that this is a prime location should a catastrophic failure occur. This location is on the fault.
7. How are light and noise pollution being addressed? Are there alternatives that reduce the noise that will be generated by the expanded substation?
8. Are there alternatives to the height and footprint of the substation? Murray City has a similar site that has lower towers and a smaller footprint than what is being proposed.
9. The notice for the open house was sent two days before Christmas and the actual open house on the first day after a holiday. The University of Utah does not start its next semester until January 12 so many residences may be out of town. Do you consider this adequate public notice?
10. The proposed location is across from a historic district, across from a nationally designated site (Holy Cross Hospital Chapel and included in a five block area that the planning commission requested be made historic nearly 10 years ago), and was being studied for historic preservation

Questions/Concerns Regarding Rocky Mountain Power's Application for Conditional Use Permit

recently. Has the Historic Landmark Commission had an opportunity to weigh in on the proposed development? How will the conditional use permit effect the area's historic neighborhoods?

11. Salt Lake City is a young city and there are many areas not only in the country but in the world that have dealt with many of these issues. Why are we not learning from other areas and requiring smaller footprints, building inside of buildings, and alternative forms of energy?
12. Has the City's Health Department been involved in the discussion? Are the power lines safe for residents? How will the expanded substation effect the medical building next to the site and the hospital across the street? Does the electrical field cause interference with the medical office buildings and the hospital nearby?
13. Has a chemical analysis of the ground under the substation been completed? What is the level of PCBs in the soil?
14. Are their detailed plans to clean up the project including the method and risk associated with it? Is there Environmental Protection Agency approval or certification of the site?
15. Why are redundancy needs not being separated from plans for future expansion to 138 high voltage transmission lines? This prevents residents from seeing the full impact of the future expansion on their neighborhood including cost, power forecast, footprint, mitigation, etc.
16. What is the impact on resident's property values? Has an analysis regarding the drop in value via a solid realtor report been completed?
17. What assurances exist that all mitigation issues will be addressed completed?
18. Is the Planning Commission adequately staffed at the current time? Does the planning commission have the expertise required to address the long term impacts of this request?
19. Can the Planning Commission delay the decision and establish a subcommittee to study all issues surrounding the application? This substation will serve as a model for many others. Are we satisfied that this model is consistent with the City's goals and environmental standards?

Joyce, Everett

From: Sommerkorn, Wilford
Sent: Friday, January 09, 2009 11:39 AM
To: Joyce, Everett
Subject: FW: Comments concerning RMP request re substation

Categories: Program/Policy

-----Original Message-----

From: Kathryn Stockton [mailto:kathryn.stockton@english.utah.edu]
Sent: Friday, January 09, 2009 11:35 AM
To: Sommerkorn, Wilford
Subject: Comments concerning RMP request re substation

Dear Mr. Sommerkorn--

I have lived at 159 S. McClelland Street since 1994 (the year I bought my house here) and have taught at the U of U (I'm a professor in the English Department) since 1987--all because of the healthy lifestyle I can enjoy in Salt Lake City. Everywhere I travel, I sing the praises of Salt Lake City as a uniquely wonderful environment in which to live. (This year I lectured at twelve different universities around the country--including Cornell, UC Santa Cruz, Duke, and UCLA, among others--and amazed people, as I always do, by expressing great contentment with the place I live.)

But now I find myself deeply disturbed. In a letter dated December 22, 2008, when I was on break and visiting family for the Christmas holidays, I received my first and only notice of what Rocky Mountain Power is planning to do in (and to) my backyard: erect large, ugly (and I believe hazardous) towers right behind my house and cut down the tallest, most beautiful tree for blocks around that provides essentially the only greenspace behind our many houses that back up to the current substation. Paradoxically, RMP promises to soften the look of these two massive towers by planting "mature" landscaping in front of them!

We who live in this neighborhood are tremendously disturbed not only by these plans but, just as importantly, by the seemingly sham, last-minute process that purported to gather our comments to share with you. How can this single notice, sent at the holidays, with so many of us away on break, serve as sufficient notice to homeowners whose lives and property values will be forever detrimentally changed? We have detailed, urgent questions we want answered! And though the people who ran the January 5th meeting--during a blizzard, I might add--tried their hardest to hear us out, we all stayed to the bitter end (over one-half hour past the appointed meeting time), trying to get answers they didn't have.

Please consider putting a halt to RMP's requests for "modifications" (a truly light word for what they have planned), until the citizens who will be severely and unalterably affected can be heard in force. As a homeowner, I presume, you can imagine that you would want this fair consideration.

In essence, I cannot see how the ugly and harmful changes to this substation in any way accord with Salt Lake City's--and, specifically, the mayor's--commitment to make Salt Lake greener.

Thank you for your kindness in hearing these comments.

Kathryn Bond Stockton
McClelland Street Resident
Professor of English
University of Utah

Joyce, Everett

From: Sommerkorn, Wilford
Sent: Friday, January 09, 2009 10:49 AM
To: Joyce, Everett
Subject: FW: Comments regarding #PLNSUB2008-00641
Categories: Program/Policy

From: Rebecca Merrill [mailto:becca_merrill@hotmail.com]
Sent: Friday, January 09, 2009 10:48 AM
To: Sommerkorn, Wilford; councilcomments@slcgov.com
Subject: Comments regarding #PLNSUB2008-00641

To Whom It May Concern:

I respectfully request that my email, in its entirety, be given to the Planning Commission in their packet for the meeting on (#PLNSUB2008-00641) Rocky Mountain Power's request for a Conditional Use Planned Development to modify and expand the existing Electrical Power Substation at approximately 144 South 1100 East in the RMF-30 zoning district, and not just summarized by Staff in the Staff Report.

I am a resident in the Arlington Condominiums located between 115 South 1100 East (directly across the street) from the Electrical Power Substation. My main concern of this expansion is the suggested size and design in Rocky Mountain Power's proposal. The proposed structure, including 65' main towers and 50' supporting towers, will vastly impact the view corridor outside my condominium unit and approximately 50% of the other units in the building. I have an amazing view of the west side, one of the main reasons for buying this piece of property. I would hate to have this view be replaced with the proposed structure. This will severely affect my property value.

In the open house meeting, held Monday, January 5, 2009, I was dissatisfied with Rocky Mountain Power's presentation. And it reaffirmed my impression that Rocky Mountain Power is trying to push this project through without looking at alternatives better for the community and the city.

I understand the need for a power and the need for upgrades. Where is Rocky Mountain Power's research on alternatives? I don't understand why Rocky Mountain Power is estimating a \$4 million dollar project when an alternative costs \$1.7 million dollar. This alternative project is one of Murray City Power's; it is a low profile would fit in the existing footprint, modern technology, etc. much better for the community and city. In addition to low-profile substations, there are many other options that exist (underground with the possibility of a park on top, inside a building to blend in with the neighborhood).

My other concerns with this expansion are 1) Noise; 2) Light; 3) Security.

1) Noise

The past year, the substation is been running at approx. 12 kW. In which, is remnants little noise. The proposed expansion of electrical output is a 95% increase. I am concerned on what kind of noise the transformers are going to create with this much energy.

2) Light

Rocky Mountain Power has not addressed this issue in its proposed plans. Currently, the substation does not have any light.

3) Security

Rocky Mountain Power has not addressed this issue in its proposed plans. With the increased substation and its purpose for the community, what security measures are taking place?

In conclusion, I have been deeply dissatisfied with Rocky Mountain Power and its approach on this proposed expansion. As resident that will be greatly affected on this decision I hope Salt Lake City Planning commission takes it all into account.

Thank you for your time and consideration.

Rebecca Merrill
115 South 1100 East Unit 808
Salt Lake City, Utah 84102

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Joyce, Everett

From: Sommerkorn, Wilford
Sent: Friday, January 09, 2009 10:36 AM
To: Joyce, Everett
Subject: FW: RMP Expansion
Categories: Program/Policy

From: CD LU [mailto:11thstreetproximate@live.com]
Sent: Monday, January 05, 2009 8:18 PM
To: Council Comments; Eric Jergensen Forwarder; Martin, JT Forward; lgarrott@gmail.com; Soren Simonsen Forwarder; Becker, Ralph; Gray, Frank; Sommerkorn, Wilford; Everitt, David; Hale, Karen
Subject: FW: RMP Expansion

Date: Mon, 5 Jan 2009 14:46:54 -0700
From: enteleki.ray@gmail.com
To: everitt.joyce@slcgov.com
Subject: RMP Expansion
CC: wilf.sommerkorn@slcgov.com; councilcomments@slcgov.com; mayor@slcgov.com; 11thstreetproximate@live.com

To All Parties Concerned Regarding the proposed RMP Expansion.

I respectfully request that my email, in its entirety, be given to the Planning Commission in their packet for the meeting on this topic and not just summarized by Staff in the Staff Report. The affected neighborhoods must be granted the time to review this proposal BEFORE the Planning Commission meeting which finally decides on this issue. It is requested that the Planning Commission Meeting scheduled on the 14th NOT consider this issue, but continue it to a later date. There is NO RUSH to commit the City to a final course of action. I list my reasons in detail, below.

It is my firm belief that, in the interest of good government and proper planning for Salt Lake city, that Rocky Mountain Power, (RMP) must be required to identify ALL aspects of their plans before ANY official decision is made. This includes clear and complete coverage of all details, including costs to the City, to Land Owners and Homeowners, potential losses of property values, nuisances of noise, visual pollution and all negative effects of electric radiation on humans, animals and plants . These details should also indicate, clearly and without ambiguity, the spot locations and sizes of ALL proposed transmission poles, power lines (including any additional telecommunication wiring to be strung on the poles at lower levels, and the height of those lines and the potential leasing arrangements to the telecommunication carriers), transformers, and all other apparatus needed to accomplish the goals and projects proposed by Rocky Mountain Power.

1100 East is ALREADY the victim of over-sized power and utility poles, unsightly wiring connections, Guy and tie wiring supports,telecommunication lines at low levels, dying,

crippled, diseased and destroyed street trees, some treated with growth retardants in past years, poor pruning practices, and seemingly poorly related to the overall Urban Forest Master Plan. The entire issue of utility distribution in Salt Lake City is best described as a "Theater of the Absurd", with neither rhyme nor reason regarding the cost in reduced property values and the general aesthetics of the City.

One has only to check out the size of the Concrete Transmission Tower at the intersection of 1100 East and 800 South, to get a sense of the out of scale, pedestrian-threatening visual obstacles created by poorly planned and authorized towers. It is impossible to see on-coming traffic, and appears to violate the Intention if not the law covering obstacles and heights of landscape or fencing occurring within 10 feet of any intersection where pedestrians face on-coming traffic.

More careful attention afforded to the past 'Free-Range-Construction-License' granted to ALL Utility companies is long overdue. The Elephant in the room is clearly visible and growing. There also MUST be stronger, tighter and transparent communication between State and Local Ordinances and Regulations governing Utility construction, and a better distribution of information to the Public-at-Large, in sufficient advance of any closed meeting between Utility representatives and City Officials, and before "it is too late to make costly changes to proposed plans. Salt Lake City deserves more. And the City's time is NOW.

Respectfully,

M. Ray Kingston
1070 East 400 South
Salt Lake City, Utah 84102

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Dear Planning Commission :

1-05-2009

We are so much on the front line in the proposed upgrade of the electrical sub-station on 144 South 1100 East.

Our beautiful condo is on the lower north-west corner of 1100 East & 1st South in the Arlington Place Condos.

We are very upset about proposed expansion of this station for many reasons, but we have to look out at it from our bedroom and our 2nd bedroom-TV room. This proposal is unwarranted, especially at this time as we wait for the new-more thought out proposals for safer, less intrusive, and less visible and greener solution for this problem. The noise from such a built up project is frightening as is the future lighting grid.

The health reasons against the massive power cables are being discussed amongst professionals as we question this intrusion.

When we drive down McClelland Street between 9th and 8th south, which we do often to look, I get sick to my stomach. It looks like a war zone or the leftovers from a 9-11 attack.

The University of Utah isn't in session yet and a lot of students, faculty and staff aren't back from the holidays yet and haven't had a chance to voice their concerns. There are a lot of rentals to students living around the site as well as staff & faculty.

This project is being rushed through with insufficient feedback from this surrounding community and we'll do everything possible to get this project re-evaluated.

Thanks for your consideration.

Steve & Vicki Williams
115 South 1100 East S 312
Arlington Place Condos





Joyce, Everett

From: Shelley White [shelleywhitesw@yahoo.com]
Sent: Tuesday, January 13, 2009 12:19 AM
To: Joyce, Everett
Cc: Council Comments; Mayor; Everitt, David; Becker, Ralph; Sommerkorn, Wilford; Gray, Frank; Joelkb@mindspring.com; 11thstreetproximate@live.com
Subject: RMP #PLNSUB2008-00641
Attachments: DSC00364.JPG; Salt Lake City Planning Commission.docx



DSC00364.JPG (3 MB) Salt Lake City Planning Commis...

Salt Lake City Planning Commission
451 South State Street, Room 406
Salt Lake City, Utah 84111

To Whom It May Concern,

I am a concerned resident living at 159 South McClelland Street. I have questions about Rocky Mountain Power's application for Conditional Use Planned Development (#PLNSUB2008-00641) to modify and expand the existing Electrical Power Substation at approximately 144 South 1100 East in the RMP-30 zoning district. Since I work in health care and have been working (since 1998) with people who are affected by cancer since, I am especially concerned about the electromagnetic frequencies (EMF's) that a larger plant will emit. I am aware of the National Institute of Environmental Health Sciences (NIEHS) report on "Health Effects from Exposure to Power-line Frequency Electric and Magnetic Fields." The Department of Energy and utility companies were major funders of the report (which I have now read) and I believe this report minimizes the epidemiological studies that have been conducted; however, even in their own report "a majority of the members of this working group (19/28 voting members) concluded that exposure to power-line frequency ELF-EMF is a 'possible' human carcinogen. The NIEHS agrees that the associations reported for childhood leukemia and adult chronic lymphocytic leukemia cannot be dismissed easily as random or negative findings.... The NIEHS concludes that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard."

You may already be familiar with the NIEHS study and already know that the United States has no national guidelines for limiting ELF-EMF levels. There are a few individual states that have set limits on the ELF magnetic field levels at the edges of power-line right-of-ways. These vary from 15 to 25 microtesla (150 to 250 milligauss).

Since most studies do not deny a link to childhood leukemia, I would like to make sure that the City Council is aware that there are 66 children within a very close distance of the proposed power plant expansion. There is a childcare facility two houses away from Rocky Mountain Power's boundary. Children who attend this daycare are between the ages of 4 months and 8 years old. Our next-door neighbors who share the back alley of the power plant, have three children under the age of 11 and care for a newborn baby who lives two doors down on the east side of McClelland street (this family also has a ten-year-old son). Our other next-door neighbor has a ten-year-old daughter. We have a total of 6 children under the age of 11 who live in extremely close proximity to the proposed power plant and, as I stated, 60 children who are involved in the child care facility with a backyard playground that is within two homes of the proposed expansion.

I believe that it is better to pay more now, for cautionary measures --which should include putting the station underground or at least minimizing the size and exposure of the plant-- rather than to pay later, due to (a) upgrade costs (when regulatory standards are set in the U.S.) or (b) citizen litigation by those who believe their children's health problems were caused by the power company.

Please allow the citizens of this neighborhood to take the time needed to ensure the safety of our neighborhood by reducing the size and impact of this plant.

Please allow a smaller subcommittee of the city to study the potential harm to my neighborhood that this expansion will surely cause.

Also, I do not believe that Rocky Mountain Power should be given permission to take down the large tree in our back alley, which is not even on their property.

Sincerely,
Shelley White

(I sent a video of the area in a separate email)



Salt Lake City Planning Commission

451 South State Street, Room 406

Salt Lake City, Utah 84111

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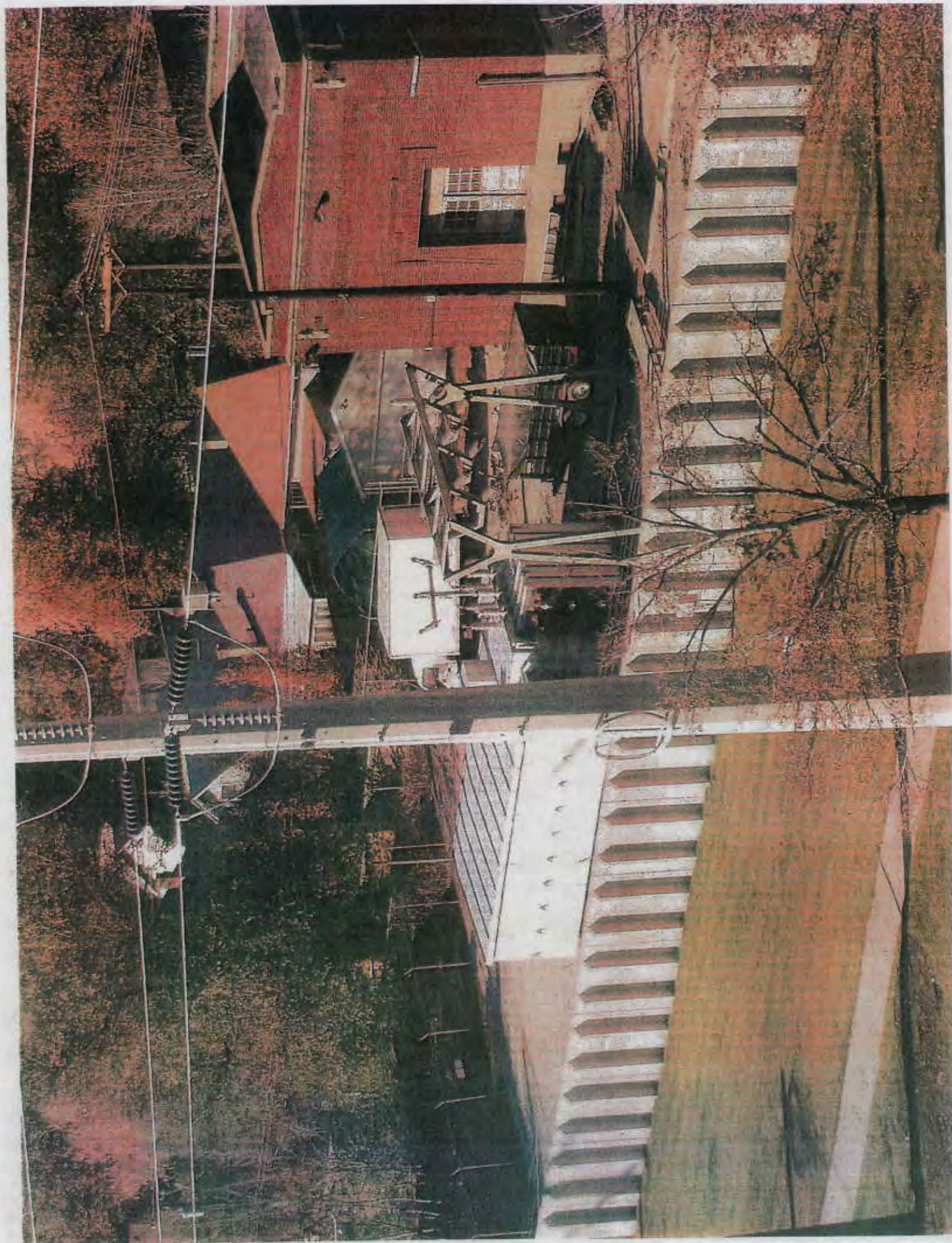
**University
Neighborhood
Organization**

**Information Packet
Issues Only Hearing 1/14/09**

No. PLNSUB2008-00641

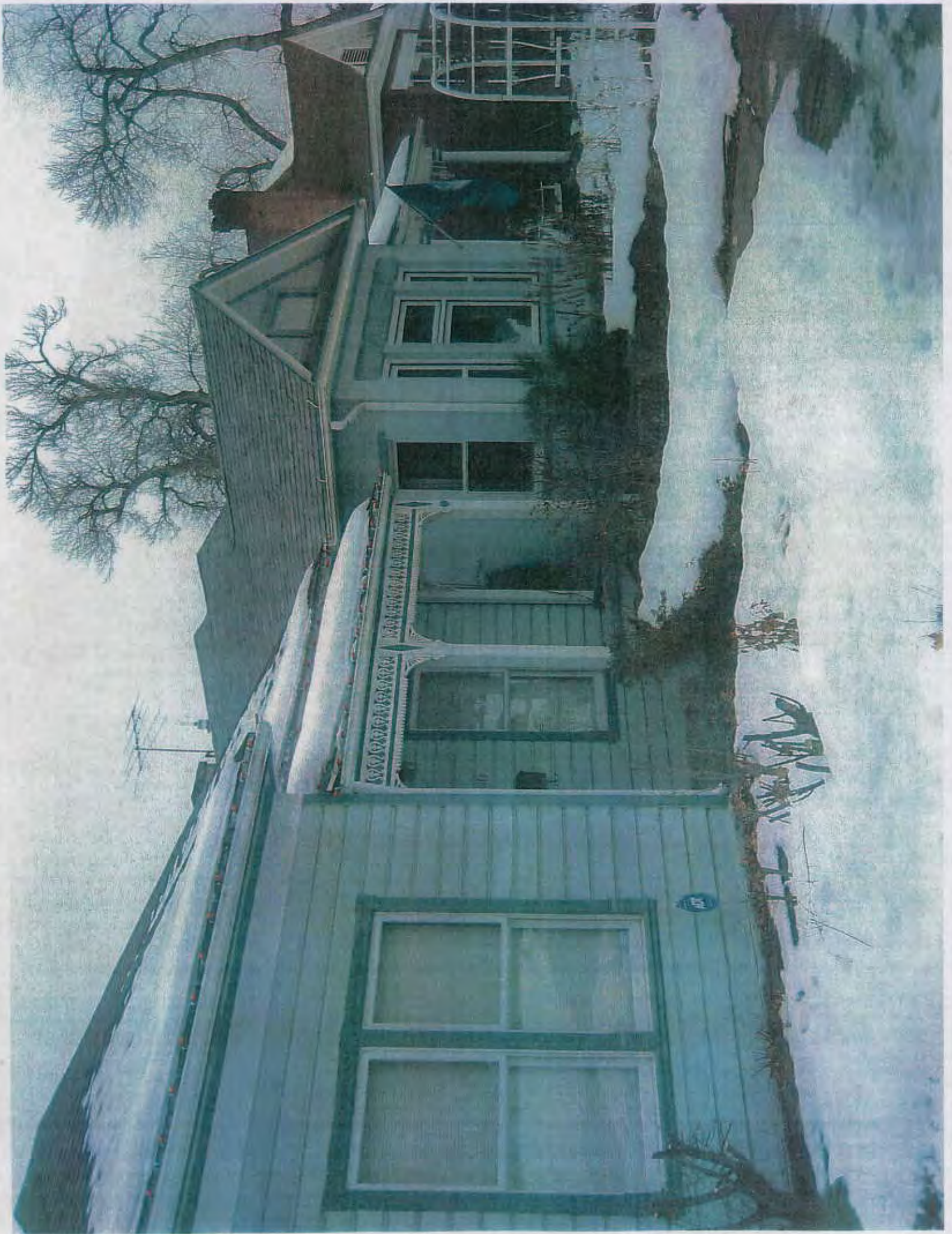




















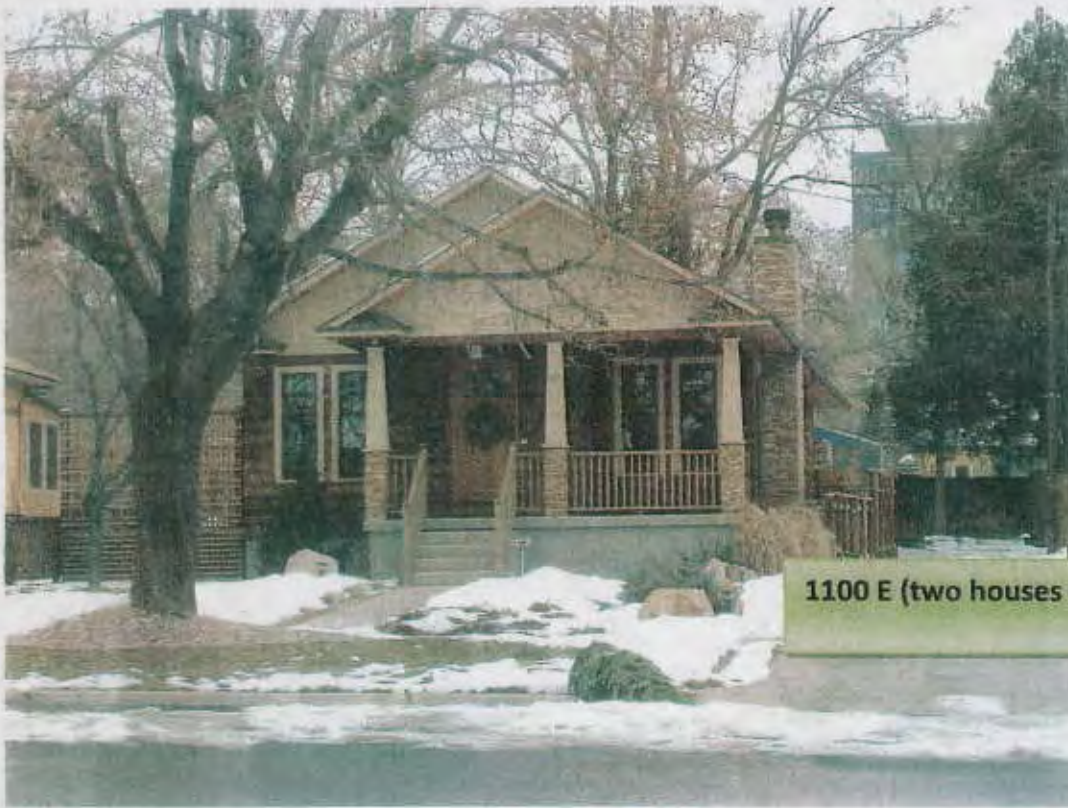




1100 E (directly south of substation)



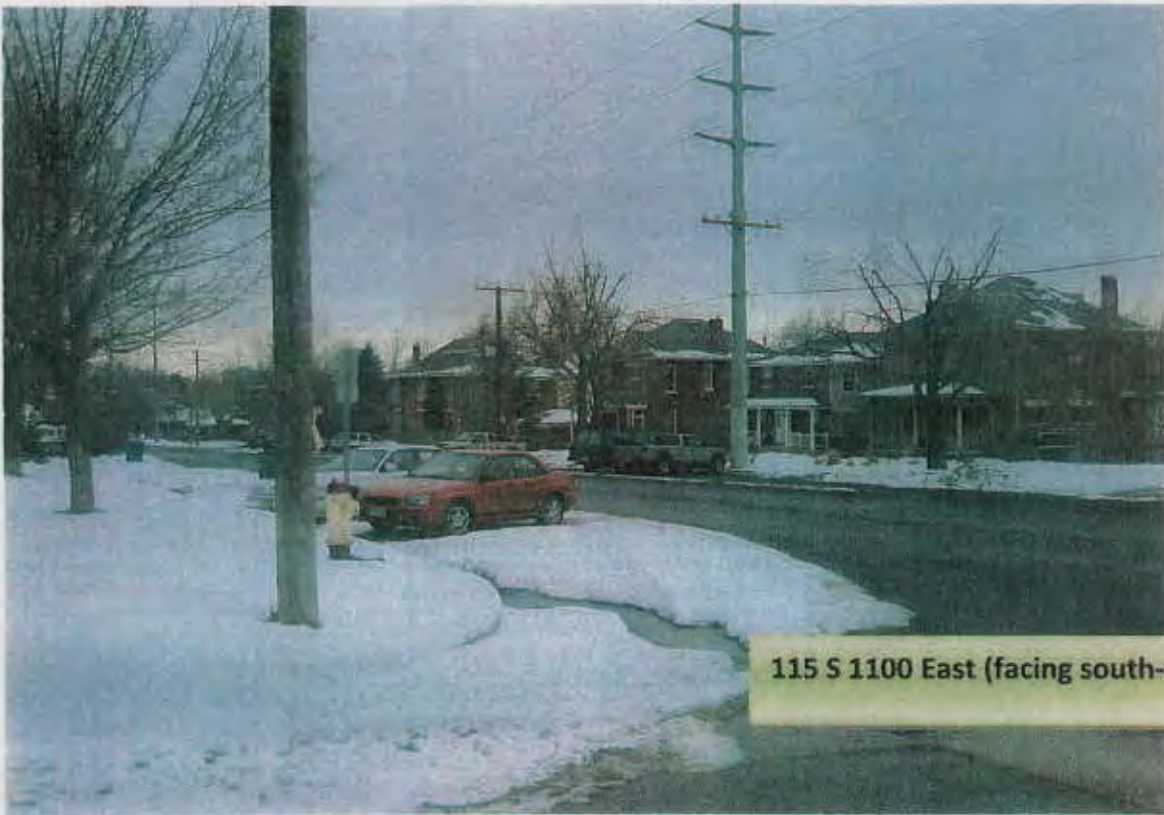
1100 E (two houses south of substation)



1100 E (two houses south-east of substation)



Corner of 200 S 1100 E



115 S 1100 East (facing south-west)

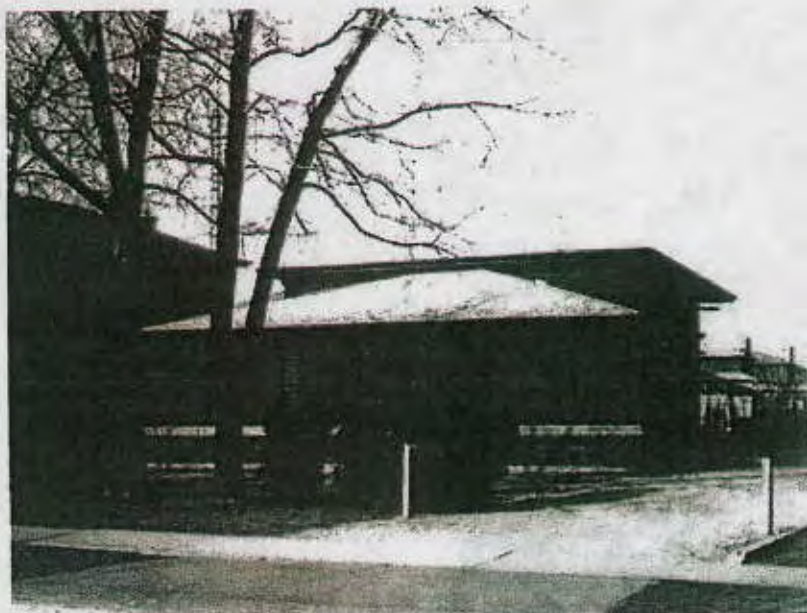


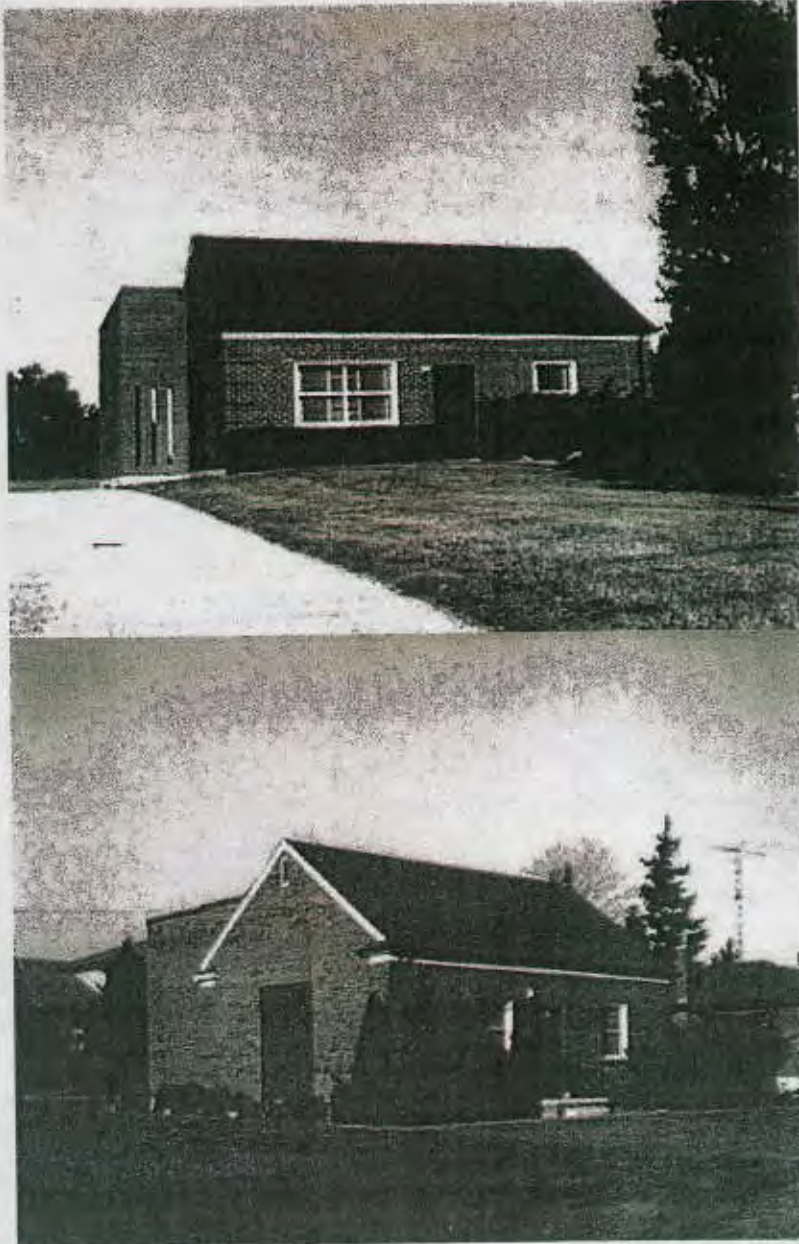
1100 East (facing north-east)

TRANSFORMER HOUSES



In 1987, Canadian photographer Robin Collyer began documenting houses that aren't houses at all – they're architecturally-disguised electrical substations, complete with windows, blinds, and bourgeois landscaping. "During the 1950s and 1960s," Collyer explains in a recent issue of *Cabinet Magazine*, "the Hydro-Electric public utilities in the metropolitan region of Toronto built structures known as 'Bungalow-Style Substations.' These stations, which have transforming and switching functions, were constructed in a manner that mimics the style and character of the different neighborhood





[Images: Robin Collyer].

"there are about 100 of these structures located on residential streets in the central and the suburban parts of the greater Toronto area." Pictured here are only five of them.

In some places these are used to "house" telephone equipment. The local telco actually pays someone to "live" there on Hallowe'en to hand out candy!

JUNE 13, 2006 4:43 AM

Not just a Canadian phenom-

Down in Washington DC the local utils have several "houses" and a few small retail bulding transformer substations

new york city does something similar, only instead of houses, they're apartment buildings.

London, of course, has 23/24 Leinster Gardens (mentioned toward the bottom of that link). It's really a "dummy house," or a ventilation shaft for the Tube. You can read more about it at Urban75.

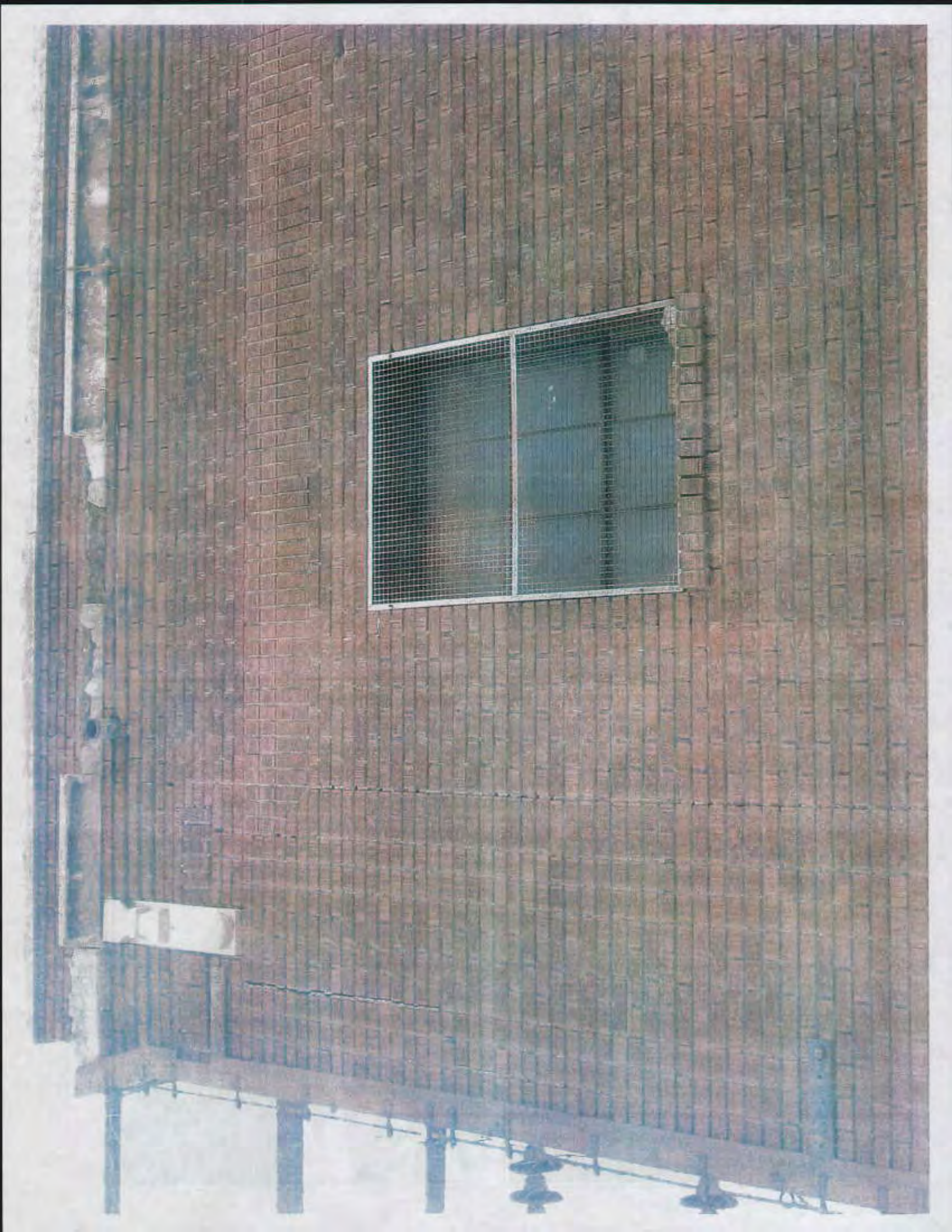
I used to live just 3 houses down from one of the pictures "homes" not noisy or humming at all. Never would have guessed what was really going on inside the quaint looking "house"

There is one of these houses located on Wisconsin Avenue in Washington DC - almost directly across from the former Soviet Embassy.





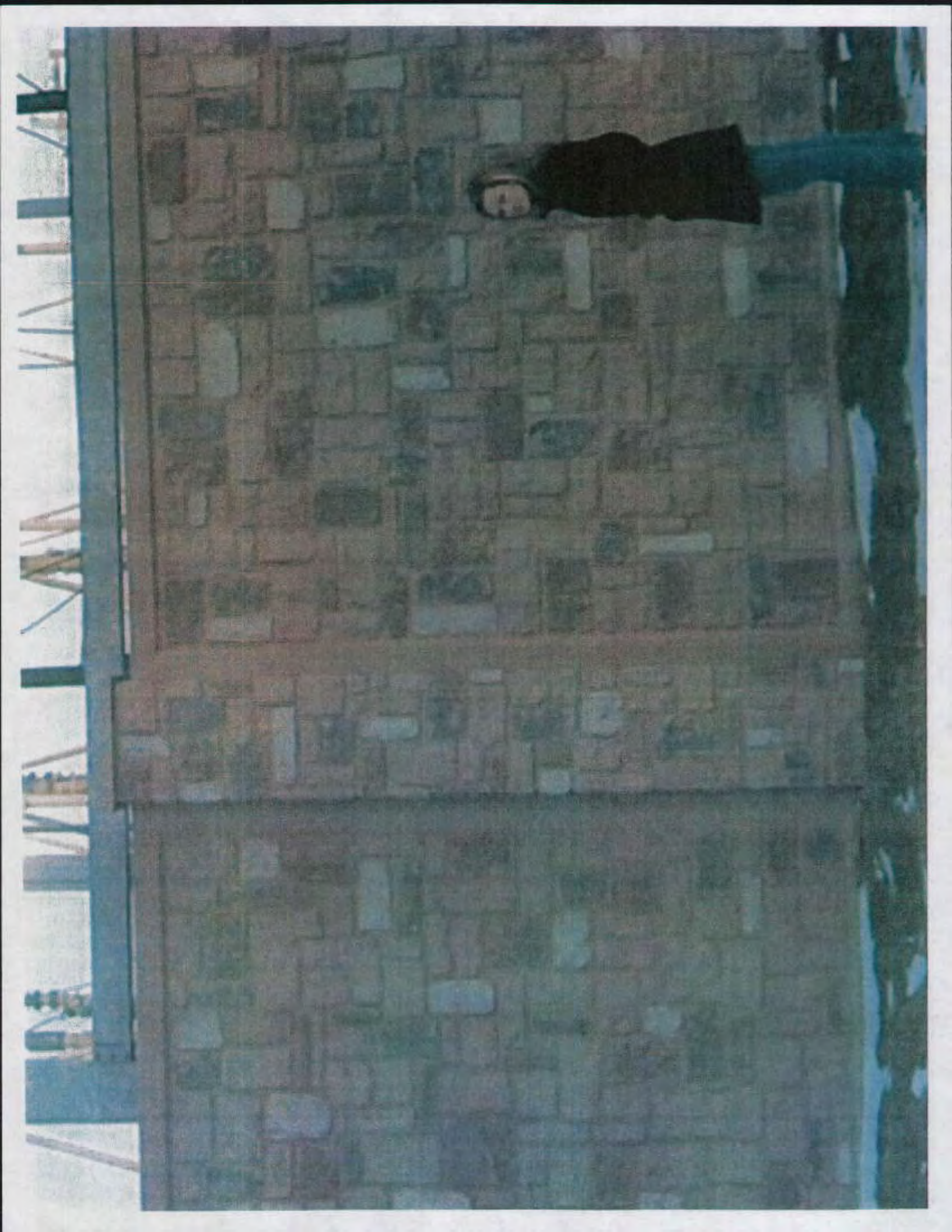
Examples of current substation brick, lighting, door





Examples of walls near 100 S 1100 E





One Flat Stomach Rule: Obey

I cut down over 29lbs of fat
by obeying this one old rule.

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ON:

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From: **Chris Weed** (chris_weed@hotmail.com)

Sent: Tue 1/13/09 10:37 PM

To: CD LU (11thstreetproximate@live.com)

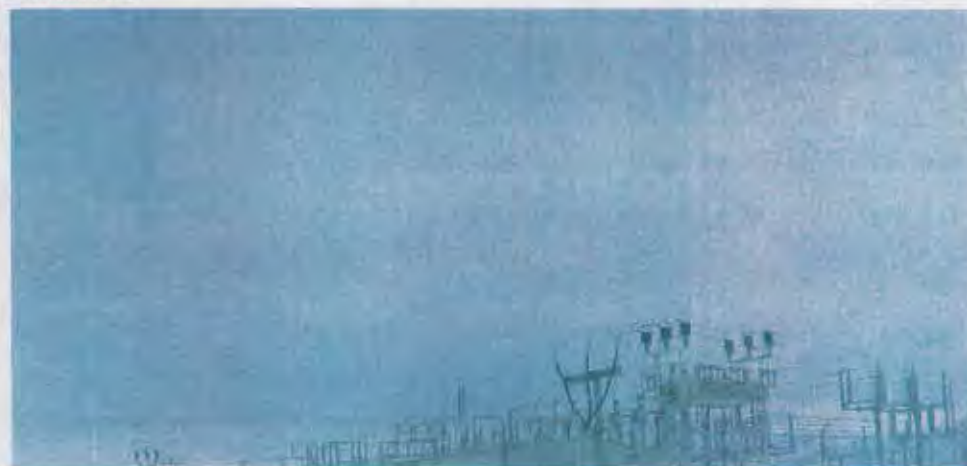
8 attachment(s)

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OneCare

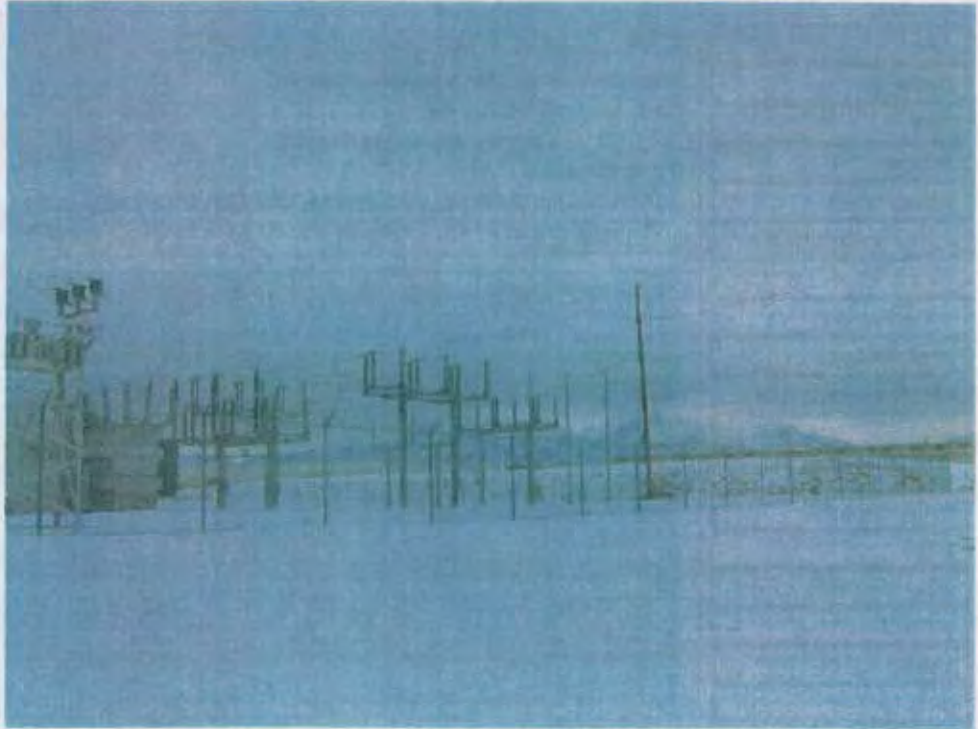


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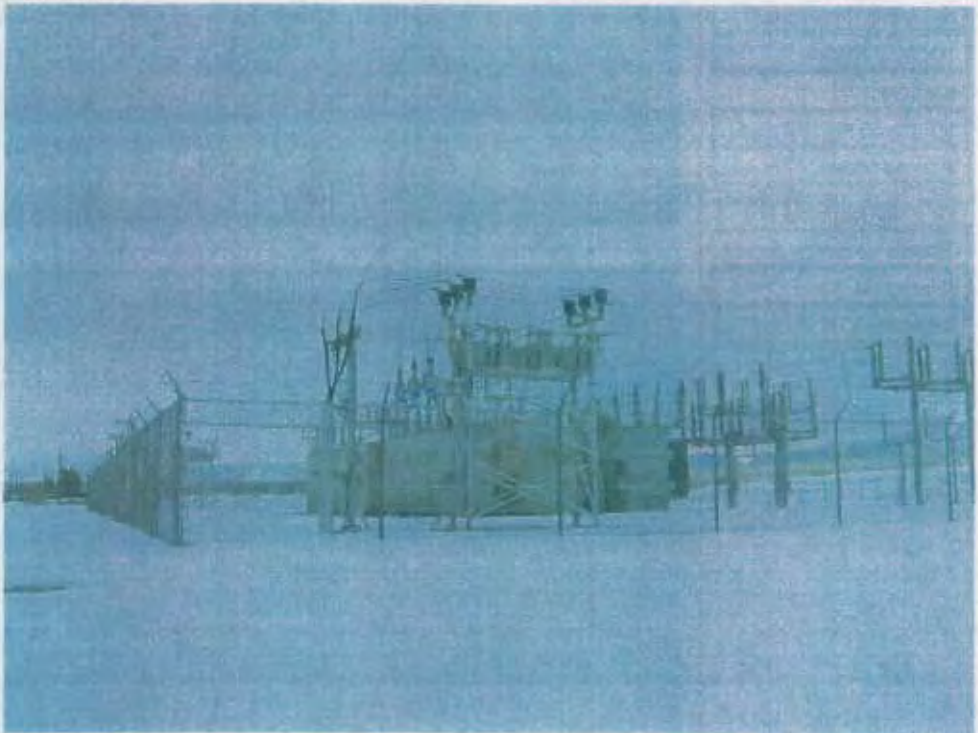




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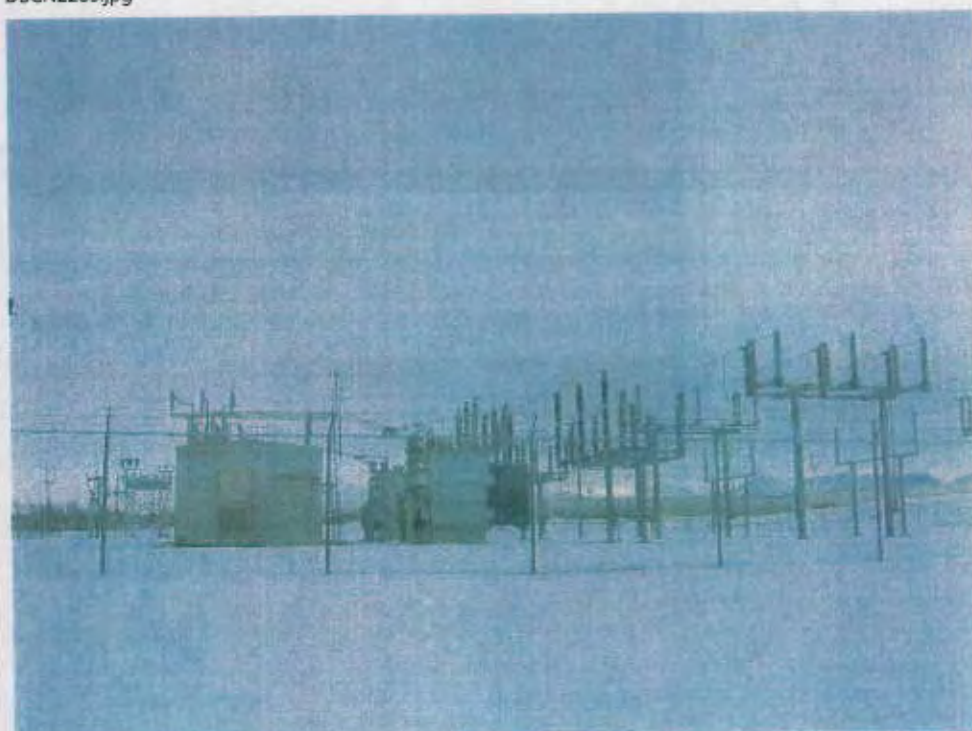
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Questions/Concerns Regarding Rocky Mountain Power's Application for Conditional Use Permit

Letters to the Salt Lake City Planning Commission should raise questions or concerns about Rocky Mountain Power's (RMP) conditional use permit application. Generally, our concerns relate to the following areas:

1. If the substation is being expanded to provide redundancy in the system, why develop the capacity for 138 KV now? We understand SLC is planning on meeting with RMP about their long-term and is considering standards for the construction of substations. The goal of the current project is redundancy, not to meet current electricity needs. Why not wait until a 10-year plan can be produced by RMP and the City can create development standards for substations?
2. The current application does not address the additional power poles and towers needed to fully expand the substation to 138 KV.
3. Issues related to health, safety, light, noise, property values, visual impact, buffers, etc., are not adequately addressed.
4. Adequate research and alternatives have not been presented to the Planning Commission or to the public. Salt Lake City has a tradition of trying to reduce its environmental impact. Rocky Mountain Power should be required to propose alternatives, including costs and impacts, to the Planning commission.
5. Inadequate notice has been given to neighbors and concerned residents.

Current List of Questions and Concerns:

1. What alternatives exist for handling current power needs and redundancy?
2. What are the expected energy demands over the next 10 years? Does anticipated usage support the expansion?
3. What are the long range pole plans along 1100 East to support the future 138 expansion. Where exactly will poles need to be placed to accomplish the anticipated expansion?
4. Have other properties been considered? If not, please explain why. Are there properties more appropriate for this type of construction (i.e., business districts?)
5. Can the existing alley be used for access instead of 1100 East?
6. What facts support the decision that this is a prime location should a catastrophic failure occur. This location is on the fault.
7. How are light and noise pollution being addressed? Are there alternatives that reduce the noise that will be generated by the expanded substation?
8. Are there alternatives to the height and footprint of the substation? Murray City has a similar site that has lower towers and a smaller footprint that what is being proposed.
9. The notice for the open house was sent two days before Christmas and the actual open house on the first day after a holiday. The University of Utah does not start its next semester until January 12 so many residences may be out of town. Do you consider this adequate public notice?
10. The proposed location is across from a historic district, across from a nationally designated site (Holy Cross Hospital Chapel and included in a five block area that the planning commission requested be made historic nearly 10 years ago), and was being studied for historic preservation

Questions/Concerns Regarding Rocky Mountain Power's Application for Conditional Use Permit

recently. Has the Historic Landmark Commission had an opportunity to weigh in on the proposed development? How will the conditional use permit effect the area's historic neighborhoods?

11. Salt Lake City is a young city and there are many areas not only in the country but in the world that have dealt with many of these issues. Why are we not learning from other areas and requiring smaller footprints, building inside of buildings, and alternative forms of energy?
12. Has the City's Health Department been involved in the discussion? Are the power lines safe for residents? How will the expanded substation effect the medical building next to the site and the hospital across the street? Does the electrical field cause interference with the medical office buildings and the hospital nearby?
13. Has a chemical analysis of the ground under the substation been completed? What is the level of PCBs in the soil?
14. Are their detailed plans to clean up the project including the method and risk associated with it? Is there Environmental Protection Agency approval or certification of the site?
15. Why are redundancy needs not being separated from plans for future expansion to 138 high voltage transmission lines? This prevents residents from seeing the full impact of the future expansion on their neighborhood including cost, power forecast, footprint, mitigation, etc.
16. What is the impact on resident's property values? Has an analysis regarding the drop in value via a solid realtor report been completed?
17. What assurances exist that all mitigation issues will be addressed completed?
18. Is the Planning Commission adequately staffed at the current time? Does the planning commission have the expertise required to address the long term impacts of this request?
19. Can the Planning Commission delay the decision and establish a subcommittee to study all issues surrounding the application? This substation will serve as a model for many others. Are we satisfied that this model is consistent with the City's goals and environmental standards?

One Flat Stomach Rule: Obey

I cut down over 29lbs of fat
by obeying this one old rule.

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ON

OPRAH WINFREY
SHOW

OZ



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1/13/09

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other community council ...

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responses from the city

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universe

updates to the subcommi...

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Anaheim Picture

From: CD LU (11thstreetproximate@live.com)

Sent: Tue 1/13/09 9:39 PM

To: 11thstreetproximate@live.com

2 attachment(s)

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Windows
OneCare

Anaheim Picture

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EXPANSION ALERT



Substation located on 800 South McClelland Street (1054 East)

Northeast Substation PLANNED EXPANSION (144 South 1100 East)

- 25% increase from the current footprint size
- 65 foot main towers
- 50 foot supporting towers
- 91% increase in electrical output
- Possible increase in noise
- Possible increase in light pollution
- Possible decrease in property value

Rocky Mountain Power has plans to expand the northeast substation in our neighborhood. We need your help by voicing your concerns on this issue. Please send/voice your concerns about this expansion to all of the following:

Everett Joyce—City Planner 801.535.7930

Email: everett.joyce@slcgov.com

Luke Garrett—City Council 801.535.7600

Email: luke.garrot@slcgov.com

Mayor's Office 801.535.7238

Email: mayor@slcgov.com



To be contacted about the Salt Lake City Planning Commission Public Meeting (regarding this planned expansion) please email our neighborhood group at 11thstreetproximate@live.com.

This message is brought you by a neighborhood group. To join our group or to receive more information on this issue, please contact neighbor Doug Harding 801.651.9963 Email: 11thstreetproximate@live.com.

INTRODUCTION 2005

Central Community Master Plan

The Central Community is located between North and South Temple, 1700 and 2100 South, the I-15 Freeway and University Street and 1300 East. The Central Community is one of eight community-planning areas. For the purposes of this plan, the community is divided into seven neighborhoods including Gateway, Downtown, Central City, East Central North, East Central South, Liberty and People's Freeway.



Purpose

The Central Community Master Plan provides policy guidelines for Salt Lake City commissions, boards and administrative entities to use when directing and implementing projects, programs and public policies that require review, recommendations and approval. This master plan serves the community by providing policies and principles for a sustained and enhanced environment for living and working in the Central Community.

Planning Process

In 1994, the Central Community Master Plan process was initiated to address the changing times of Salt Lake City and to update and replace the 1974 Central Community Development Plan. Consultants were contracted to collect resource information and begin the Central Community planning process using a "grass roots" approach. In 1997 a Final Issues Document was assembled clarifying the concerns identified by residents of the community. Between 1998 and 2002 multiple drafts of the Central Community Master Plan were created and refined based on responses and comments made by community residents. Their contributions had significant impacts to the development of this plan.

The Central Community planning process considered public policy that helps to maintain the livability, charm and tranquility for which the neighborhoods are valued. This planning process dealt with traffic, expanded roadways, pedestrian safety, land use and zoning changes and public procedures for development that will protect the integrity of neighborhoods and foster a healthy sense of community.

- Since 1994, members of three volunteer advisory committees dedicated their personal time reviewing and editing this plan.
- In 1998 and 1999 there were three community workshops, two joint Central Community Council meetings and various individual neighborhood meetings.
- Notice of public master plan workshops were sent to approximately 2,500 community council members, the Downtown Alliance and the Salt Lake City West Pocket Business Coalition. Input from these workshops contributed to the creation of this plan.
- Over 180 individuals participated by providing verbal and written comments. These individuals included elected City Council members, community councils, residents, business and property owners, the Downtown Alliance, the Salt Lake City West Pocket Coalition, historic preservation organizations, consultants, non-profit organizations, the Mayor's staff and administration.

All public comments, suggestions and responses collected were addressed and taken into consideration in the "grass roots" approach in the development of this master plan.

Guiding Principles

Development of the Central Community Master Plan includes these guiding principles:

1. Identify and address the issues, policies and implementation actions presented in the 1974 Central Community Development Plan, which were not achieved.
2. Create a user-friendly document that clearly communicates the vision, goals, and policies to guide and manage future growth in the Central Community.
3. Establish a foundation that supports quality living and does no harm to citizens, especially those with limited abilities.
4. Maintain and improve the Central Community's historic fabric.
5. Expand mobility and accessibility options for all segments of the community.

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Commercial designation (red on map) provides for small-scale commercial uses that can be located with residential neighborhoods without having significant impact upon residential uses. This land use pattern includes, but is not limited to, small businesses such as retail sales and services, small professional offices, and locally owned businesses.

Community Commercial: The Community Commercial designation (fuchsia on map) provides for the close integration of moderately sized commercial areas with adjacent residential neighborhoods.



Community Commercial

Examples include, but are not limited to, grocery stores, hardware stores and garden centers. Community Commercial land use designation also supports businesses with drive-through facilities, professional offices, automobile services, small retail sales and services, small scale assembly and distribution, and repair services.

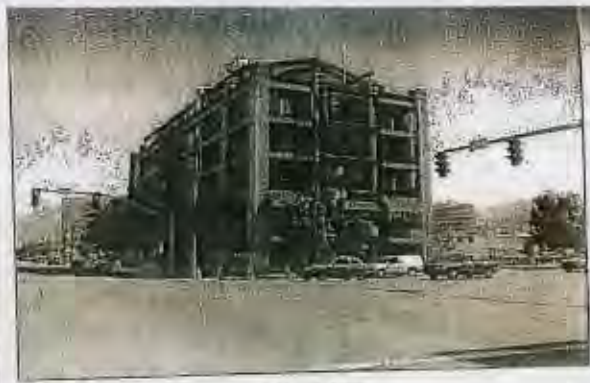
Regional Commercial / Industrial: Regional commercial / industrial land uses (purple on map) include larger commercial land uses that require regularly scheduled trucking deliveries and product shipping. These land uses attract large volumes of traffic



Regional Commercial

from customers and/or employees and therefore are located near freeways and major arterials. Examples include, but are not limited to, automobile dealers, light manufacturing, assembly, small production, semi-truck dealers, "big box" and "superstore" retailers, and businesses heavily dependent on the automobile and trucking industries.

Central Business District (CBD): The intent of the Central Business District designation (yellow on map) is to increase multiple land use activities within a dense urban area following the guidelines established in the Downtown Master Plan. The area should become a 24-hour center of activity, with increased use of mass transit. This designation includes a CBD boundary and transition district. The CBD includes business and financial institutions, regional retail shopping and



Mixed Use

High-Density Mixed Use: The High-Density Mixed use designated areas (brown on map) are targeted for higher intensity commercial use and medium to high-density housing, especially adjacent to light rail stations in the downtown area. The High Density Mixed use designation allows 50 or more dwelling units per acre with multiple level retail sales and service, office space, clinics and similar related land uses.

Gateway Master Plan: The Gateway district (light gray on map) provides a setting for residential, commercial, and industrial development and for implementing the objectives of the Gateway Specific Plan. This plan provides policy that reinforces the mixed use character and encourages the development of urban neighborhoods containing supportive retail, service commercial, office, industrial uses and high-density residential uses.

Community input on Commercial land uses

Commercial land users often seek residentially zoned land because it is less expensive to convert to profitable business ventures than to buy land that is already zoned for commercial uses. Therefore, commercial land use issues are a major concern of the community. Commercial land use issues are listed below. Some of these issues are similar to those in the Residential and Institutional Land Use chapters.

Preventing zoning changes for commercial land use encroachment into residential neighborhoods

Commercial land use encroachment occurs when new businesses are established on formerly residential properties and when existing neighborhood businesses appropriate contiguous residential properties. Both types of expanding commercial development often cause the demolition of residential structures for commercial land use. This has a severe impact on the character, livability, and stability of the existing residential neighborhood.

Businesses in residential neighborhoods attract customers from outside the neighborhood and community, creating traffic, noise, and parking within the adjacent residential areas, resulting in negative impacts on the neighborhood. Residents want stronger code enforcement on owners who allow residential properties to deteriorate in order to force a zoning change in pursuit of commercial expansion, thus degrading residential property and the adjacent neighborhoods.

Controlling non-conforming commercial land uses (Also discussed in the Residential Land Use Chapter.)

Non-conforming land use is any building or land legally occupied by a use prior to revisions to the zoning ordinance that does not conform to the revised ordinance. Non-conforming land uses, such as a commercial business on residentially zoned property, can serve the local community. In some cases these businesses may be 20 to 50 years old and have provided convenient service to the neighborhood. These types of businesses also add character and opportunities for social exchanges in the neighborhood.

commercial uses in residential areas to more suitable commercial sites.

Locate commercial land uses on streets that have adequate carrying capacity. For example, locate regional commercial businesses on arterials and freeways, not on local residential streets.

- CLU-4.7** Encourage the reduction of outdoor storage areas on commercial and industrial establishments and promote urban design methods for screening such land uses.

Property deterioration

Policy CLU-5.0 Prevent commercial property from deteriorating and causing neighborhood blight.

commercial structures.

- CLU-5.2** Encourage code enforcement of commercial properties.

- CLU-5.3** Continue and increase coordination between City capital improvement and private commercial development projects and encourage relocation of businesses to locate in the areas.

INDUSTRIAL LAND USE

INTRODUCTION

Industrial land use types include but are not limited to the following: heavy manufacturing; product production; minor assembly; use of heavy equipment and raw materials; shipping; and distribution; and outdoor or indoor

Industrial land uses in the Central Community between the I-15 Freeway and 200 West Street have been an asset in the City's historical development. However, with land values changing and technology increasing, there is more pressure on commercially oriented businesses to use light industrial uses rather than heavy manufacturing uses. The economic base of the Central Community, which once relied on industrial production, has shifted to commercial retail sales, services, government, and corporate office uses.

The Future Land Use chapter supports existing industrial businesses where they are appropriate and encourages relocation for those businesses that are designated to transition to less intensive land uses in the Central Community or City.

Commercial / Industrial (Purple on the Future Land Use map)

Regional Commercial / Industrial land uses include larger commercial land uses that require regularly scheduled trucking deliveries and product shipping. Industrial land use examples include light manufacturing, assembly, small production and "big box" retailers. The regional commercial / industrial designation supports existing light-manufacturing type land uses in locations designated on the Future Land Use map on page 2.

Community input on Industrial land use

Prevent further expansion of industrial land uses into residential neighborhoods

Industrial business expansion into residential neighborhoods in the Central Community should be prohibited because of concerns regarding truck traffic traveling through residential neighborhoods and the desire for more clean businesses rather than heavy industrial uses.

Future Industrial land use changes

Many of the existing industrial land uses will remain. However, in the future, industrial businesses will be encouraged to transition to commercial uses. New light industrial businesses that locate in the Regional Commercial / Industrial land use areas, as designated on the Future Land Use Map, are limited to locations that are specifically supported by the zoning designation. Future industrial businesses should consider better site planning and property reuse within the changing business environment.

Industrial land use goals

Provide for development of clean, quiet light industrial land uses suitable for big box warehousing in appropriate locations within the Central Business District. Restrict existing industrial land uses to locations and prohibit expansion into the Central Community. Encourage relocation of heavy industrial uses to appropriate areas in the City.

Industrial land use policies

Policy ILU-1.0 Promote light industrial and commercial development in the areas designated as Regional Commercial / Industrial Land Use.

- ILU-1.1** Maintain zoning classification for light industrial and large-scale development.

- ILU-1.2** Support enhancement of free-flowing traffic on West Street from the 900 South ramp rather than at West Ten.

Policy ILU-2.0 Limit industrial land development within the Central Community.

- ILU-2.1** Prevent expansion, intensification, or change of industrial land uses near residential neighborhoods in the Central Community.

INSTITUTIONAL LAND USE

INTRODUCTION

Institutional land uses provide services and recreational activities for the community. There are six institutional land use categories: Cultural and Entertainment, Educational, Government, Medical, Religious, and Social. Institutional land uses serve the public and can be operated by either a public or private entity. Examples include schools, churches, government office buildings and facilities, medical facilities, and homeless shelters and social service offices.

Institutional land uses are concentrated within the Central Community. For example, medical facilities are generally located in the northeast part of the community, social services in the Gateway area, and government buildings in the Central Business District. Religious institutions and educational facilities are scattered throughout the community.

Institutional structures have historical significance

Cultural and entertainment land use: This land use provides recreation and leisure opportunities and generates economic development. Cultural land uses provide resources related to folklore, art, city heritage, historical values, and knowledge of other civilizations and ideologies. These include museums, live theater, art exhibits, concert halls and festivals. Entertainment uses include sports arenas, amphitheaters, and theaters. Cultural facilities provide a wide variety of attractions for the Central Community as well as residents city-wide and along the Wasatch Front.

The report titled *A Vision for Arts and Culture in Salt Lake City* identifies cultural plans for Salt Lake City and supports the coordination of individual cultural resource expansion and improvements within the City. It notes that future cultural facilities could be located in the Gateway area and include a sports stadium, museums, a branch of the public library system, state art museum, and university or technical satellite campus.

Educational land use: This use includes public and private colleges, high schools, and middle schools, extended adult education, technical schools, elementary schools, and some day-care facilities. The community has a public high school, middle school, and several elementary schools, as well as many other religious or private schools. Schools are an important part of the community fabric and an essential component of viable and sustainable neighborhoods. Schools should be kept

on less than four acres are categorized as institutional use in the underlying zoning district, and facilities are located in institutional zones.

Social services: Social Services help the stress and demands of daily living may include counseling centers, soup kitchens, food banks, and homeless shelters.

Community input on Institutional land uses

The impact of institutional land uses includes problems, compatibility with residential uses, and access for the general public to the institutions. Examples of such impacts include traffic congestion throughout the community.

Institutional land use in residential neighborhoods

Institutional land uses provide necessary services to the community. However, the location of institutional land uses within or adjacent to residential areas can create problems for the neighborhoods. The traffic congestion, parking, incompatible appearance, and undesirable activities of the clientele attracted to the use.

Some clientele of institutional land uses

Future Historic Preservation changes

There are specific policies and regulations that govern locally designated historic districts and landmark sites. This master plan supports those historic regulations and recommends investigating designation of additional sites and districts in the community.

Two areas within the Central Community are the focus of new preservation efforts. The recently listed Bryant neighborhood is a National Register designation and was included as an extension of the Central City Historic District in August 2001. The Bennion/Douglas neighborhood received National Register designation in 2002. Other districts need to be surveyed to determine their eligibility for National Register status.

Where Transit Oriented Development Districts are within local or national historic districts, preservation of residential neighborhoods, structures, and viable commercial buildings should be a priority. Transit Oriented Development can target specific properties, such as those along the 400 South corridor, for redevelopment that do not affect the historic character of the neighborhood. New development should occur on vacant or noncontributing sites and should be compatible with the historic district. The goal is to allow higher density structures where commercial zoning exists to meet the desired population density in TOD area while eliminating demolition pressures on contributing historic structures.

The designation and regulation of historic districts and landmark sites provides a mechanism to preserve the unique characteristics of Central Community's historic residential and commercial neighborhoods. Preservation of the historic areas and structures helps to maintain a pedestrian scale and strengthen the continuity of land development patterns with the City's past.

Historic Preservation goals

Preserve the community's architectural heritage, historically significant sites and historic neighborhoods.

Ensure that development is compatible with the existing architectural character and scale of surrounding properties in historic districts.

Goals for individual districts

In addition to the global goals, there are specific goals which address the different characteristics of the individual districts.

The goal for the Central City Historic District is stated in Design Guidelines for Residential Historic Districts in Salt Lake City, Central City Historic District, July 1, 1996, p. 174. "The most significant feature of this district is its overall scale and simple character of buildings as a group, as a part of the streetscape. As a result, the primary goal is to preserve the general, modest character of each block as a whole, as seen from the street. Because the overall street character is the greatest concern, more flexibility in other areas, particularly renovation details should be allowed.

This goal for preservation also must be considered in the context of related neighborhood goals to attract investment and promote affordability."

The goal for the South Temple Historic District is stated in Design Guidelines for Residential Historic Districts in Salt Lake City, South Temple Historic District, July 1, 1996, p. 185. "The design goal for the South Temple District is to preserve its unique character. Preservation of the character, style and details of the many high style buildings is a high priority, as is assuring that new building will be in scale and compatible in character with the historic context."

The goal for the University Historic District is stated in Design Guidelines for Residential Historic Districts in Salt Lake City, University Historic District, July 1, 1996, p. 198. "The design goal for the University District is to preserve the character of its streetscapes and the integrity of its individual historic structures. In particular, preservation of the streetscape, including parkways, tree lawns, front yards and walkways is a high priority."

Historic Preservation policies

Policy and regulations

Policy HP-1.0 Central Community gives high priority to the preservation of historic structures and development patterns.

HP-1.1 Coordinate transit oriented development corridors with historic preservation requirements.

HP-1.2 Ensure that zoning is conducive to preservation of significant and contributing structures or properties.

HP-1.3 Improve and expand preservation measures to protect historic development patterns such as subdivision lot layout, street patterns, neighborhood landscape features and streetscapes.

HP-1.4 Encourage new development, redevelopment and the subdivision of lots in historic districts that is compatible with the character of existing development of historic districts or individual landmarks.

Policy HP-2.0 Use building codes and regulations to support preservation.

HP-2.1 Administer the Uniform Code for Building Conservation (UCBC) standards when retrofitting historic structures.

HP-2.2 Support the conditional use procedure to allow nonresidential uses of landmark sites in residential districts when conducive to preservation of the landmark while ensuring

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Design guidelines

Policy HP-3.0 Design Guidelines in Salt Lake City construction wil

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URBAN DESIGN

INTRODUCTION

Central
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Design



Community input on Urban Design

Urban design guidelines and design review need to be implemented

Design guidelines should be created for different parts of the community and administered as part of the zoning ordinance. They should also assist in preventing poor craftsmanship and poor quality construction.

The existing urban design guidelines in master plans, historic districts, and zoning ordinances need to be implemented during preliminary application processes for development to help educate property owners, business owners, and developers about these policies and the priorities of the community.

Design review needs to be administered more frequently and enforced

The City should adopt design review policies and regulations.

Future Urban Design changes

The use of urban design techniques will be strengthened through zoning amendments, design review processes, enforcement of existing design guidelines, and development of new criteria that focus on the pedestrian. Improved urban design applicability to development and infrastructure improvements will help create a more livable community and a stronger sense of place.

Urban Design goals

Make the Central Community more attractive and livable by applying the best urban design practices.

Implement visual and aesthetic standards for urban design that enhance the Central Community. Design public facilities that enhance the character of the community and encourage coordination, linkage, and balance between land uses. Encourage property improvements that are visually compatible with the surrounding neighborhood.

Urban Design policies

Design guidelines

Policy UD-1.0 Support establishment of guidelines, and regulations for urban design to improve the quality of living in the Central Community.

UD-1.1 Protect view corridors, vistas, and focal points. Refer to the urban design map on page 87.

UD-1.2 Support zoning regulations that provide opportunities for unique and creative urban design solutions.

UD-1.3 Ensure that the design of infill development is compatible with the aesthetic appearance of neighborhoods.

UD-1.4 Administer urban design through zoning regulations where possible.

Policy UD-2.0 Encourage Community Councils in the Central Community to create programs and guidelines to enhance neighborhood identity.

UD-2.1 Support the creation of small area plans.

UD-2.2 Retain as policy the recommendations of plans including the Downtown Master Plan, the Small Area Master Plan, the University District Neighborhood Plan, and the Urban Design Element.

Design applicability

Policy UD-3.0 Provide guidelines that improve the urban design of the Central Community.

UD-3.1 Apply urban design guidelines to City funded projects.

UD-3.2 Prioritize and coordinate capital improvements.

UD-3.3 Protect both the pedestrian and the pedestrian realm. The desired local pedestrian enhancements to the urban design.

UD-3.4 Encourage landscaped roadways such as:

ENVIRONMENT

INTRODUCTION

Environment-related design addresses physical characteristics and issues in the Central Community can be divided into two general categories: natural environmental hazards and the potential adverse effects of urbanization on the environment. Natural environmental hazards include fault zones, liquefaction potential, and the risk of flood. The environmental impacts of urban development include degradation of air quality, the potential for soil and groundwater contamination from hazardous waste, elevated noise and light levels, and the destruction of natural habitat.

The Central Community Master Plan supports environmental and resource protection, the development of environmental legislation for improving and protecting air and water quality, and the cleanup and remediation of soils and hazardous material contamination, as well as addressing noise, light pollution, recycling and water conservation.

Natural environmental hazards

Seismic fault zones and liquefaction potential

Two major fault segments along the Wasatch Front affect the Central Community: the Warm Springs Fault which crosses South Temple Street at West Temple and extends south into the Central Business District; and the East Bench Fault which runs along the eastern edge of the Community below 1300 East. These faults

high ground water levels. Liquefaction may cause structural collapse of buildings, injuries or loss of life.

Risk of flood

The primary streams located within the Central Community are City Creek, Red Butte Creek, and Emigration Creek. Historically, these streams flowed out of the canyons and meandered across the valley to the Jordan River. As Salt Lake City grew, significant segments of the streams were piped and buried. In recent years, City Creek has been reestablished above ground from Memory Grove to North Temple Street and there are plans to further extend the above ground portion. (Refer to the Gateway Master Plan.) Red Butte and Emigration Creeks are currently underground west of approximately 1100 East. These streams are subject to flooding when the winter's accumulation of snow in the mountains begins to melt.

As a participant in the National Flood Insurance Program, Salt Lake City has made a commitment to "preclude and/or minimize exposure to, or damage caused by, flooding and to mitigate any damage or loss caused by such flooding." A 100-year flood plain has been identified along each of the aboveground segments of the streams in the Central Community. A significant area in the southwest portion of the Central Community (300 West to 600 West, south of approximately 500 South), not associated with a specific stream, has also been designated as a 100-year flood plain. The flood zones are identified on the Environmental Constraints map.

Issues related to urban development

Urban development brings with it numerous environmental impacts. Some may be positive but, historically, adverse impacts have been more common. Only in the comparatively recent past have efforts been made through planning and development regulation to

rain or snow can be diverted or filtered naturally before entering the water table. Treatment of runoff water is encouraged. Water efficient conservation measures and management of water resources.

Brownfields and soil contamination

The United States Environmental Protection Agency (EPA) defines "brownfield" as an area of land where expansion or redevelopment is possible or needed, but where there are or may be physical, chemical, or biological contamination that may impede or delay investment. Designation of brownfield in the Central Community is subject to determine if contamination exists and what mitigation measures properties can be redeveloped.

Besides the brownfields, there is soil contamination throughout the city from causes such as underground storage tanks, dry cleaners, beauty salons, and oil spills. Mitigation in these areas can be reclaimed.

Air quality

Air quality standards are established by the Utah State Division of Air Quality and federal standards administered by the Environmental Protection Agency. At the County level, the County does not meet the standards for particulates and sodium. Salt Lake City does not meet the standards for carbon monoxide. As the population increases, air quality will continue to decline and steps are taken to reverse

Policy ENV-1.0 In the Central Community minimize the potential damage and loss of life caused by earthquakes.

- ENV-1.1** Enforce compliance with the existing codes for building near fault lines.
- ENV-1.2** Support education of the public on preparing for and surviving earthquakes.

Recycling and solid waste

Policy ENV-5.0 Central Community supports citywide recycling efforts designed to extend the life of the Salt Lake City/County solid waste facility.

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Storm drainage

A Storm Drainage Management Plan was completed in 1993. This plan lists specific recommendations for storm drainage improvements within the City. The City has also adopted storm drain impact fees to maintain and improve these facilities.

Community input on Public Utilities and Facilities issues

Private versus public streets

The City needs to clarify its responsibilities for private streets and help the residents find ways to upgrade them.

Street lighting

The City should provide the neighborhood lighting posts and globes rather than having the residents initiate their installation and pay for them.

Water systems

The City's water, storm, and reservoir systems are aging and deteriorating. They need to be repaired or replaced, especially in view of the City's anticipated population growth.

Future Public Utilities and Facilities changes

Future changes affecting the Central Community will be the under-grounding of overhead utilities. This will occur in non-residential areas through the redevelopment of individual sites. Implementation of the Salt Lake Street Lighting Design Element will provide a key opportunity to place overhead wires underground through the installation of new street lighting fixtures.

Implementation of the Storm Drainage Management Plan and the Watershed Management Plan will provide for improved water, wastewater and storm water services which meet or exceed public health and environmental standards.

Public Utilities and Facilities goal

- * **Provide and maintain dependable infrastructure, public facilities and utilities that ensure adequate services and a safe environment in the community.**

Public Utilities and Facilities policies

Provision of services

Policy PUF-1.0 Within funding capabilities, ensure that funding mechanisms are in place for continued service in the Central Community.

- PUF-1.1** Maintain existing utilities in the Central Community and upgrade as necessary.
- PUF-1.2** Evaluate the need for special assessment districts to support utility infrastructure improvement demands in the Central Community.

Policy PUF-2.0 In the Central Community, sewer, water, and storm drain services should be evaluated and maintained to meet capacity needs of new development and population growth.

- PUF-2.1** Install and upgrade facilities in the Central Community as deterioration and system demand require.

Provision and maintenance of facilities

Policy PUF-3.0 Ensure that public streets are maintained and improved throughout the Central Community.

- PUF-3.1** Upgrade public interior court streets within the Central Community with neighborhood design input.
- PUF-3.2** As funding is available, develop or expand street medians on appropriate north/south streets within the Central Community, specifically 700, 1000, and 1200 East Streets.
- PUF-3.3** Provide consistent neighborhood design themes for street lighting and ensure that street lighting is provided at a pedestrian scale. Coordinate street lighting in designated historic districts with the Historic Landmark Commission to ensure that compatible design and placement patterns are met.
- PUF-3.4** Continue to support and evaluate ways to improve street sweeping and snow removal services for designated City owned rights-of-way throughout the Central Community.

Citygate then prepared a summary identifying the issues raised in the interviews and recommendations on how to approach Phase II. The Phase II analysis examined detailed management, organizational, process, technology, and other elements necessary in the delivery of planning services that are efficient, effective, strategic, and customer service-driven, using a combination of best practices and common sense.

STAKEHOLDER INTERVIEWS

Our work on-site began with the Citygate team conducting an employee orientation for the Planning Division staff. Following the orientation, Citygate commenced with interviewing the following individuals and groups:

- ◆ Mayor, Mayor's Chief of Staff, and Chief Administrative Officer
- ◆ Individual Councilmembers, Council Director, and Council planners
- ◆ Community Development Director, Deputy Director, and staff
- ◆ Planning Director, Deputy Directors, supervisors, individual planners and support staff
- ◆ Decision-making bodies: Planning Commission; Historic Landmarks Commission; Board of Adjustment; Board of Land Use Appeals
- ◆ Several Community Council Chairs
- ◆ Big and small developers and other applicants
- ◆ Other individuals as requested by the Chief Administrative Officer and City Council Director.

In all, Citygate interviewed well over 150 individuals in both phases combined.

WHAT THE CITY'S APPLICANTS WANT AND DESERVE

During the course of our study, we were able to determine that the City's applicants desire the development review permitting process to include important key features. Without these features, the City's customers will continue to lose confidence in the system, which ultimately could erode their confidence in Salt Lake City's government. These key features include predictability and fair treatment for everyone; accurate and accessible information; timely processing; reasonable and fair processing costs; competent City Hall staff; and planning regulations that are rational and workable.

WHAT THE CITY'S APPLICANTS ARE NOW GETTING AND WHY

The planning processes within Salt Lake City are dysfunctional. None of the stakeholders (i.e., elected officials, decision-making bodies, planners, managers, applicants and community council representatives) feel they are effective in performing their respective responsibilities as part of the planning processes nor do they feel they are getting adequate assistance, support, or respect. Clearly, what is missing is a concise and well-articulated community focus, which all the stakeholders share, and trust in the process by which decisions are made.

How did the City get into this position? Such dysfunction takes many years to develop (at least 10-15 years) where processes decline issue-by-issue, and step-by-step. For example, the turnover in the Planning Director's position (i.e., five directors in eight years, eleven in twenty years), each with a different management style and directions to the planning staff, has led to confusion, inefficiencies, lack of clear expectations for staff, and lack of strong leadership guidance.

As the system got worse, many of the stakeholders tried to influence the outcome of each issue earlier in the process, rather than letting the planning process play out. This has led to a lack of clear delineation of responsibilities and expectations of one's role as a commissioner, board member, elected official, community council chair, applicant, or staff.

That lack of clarification of the processes and stakeholders' roles and the direction from some elected officials and managers "to make this project work," has resulted in the inability for planning staff to "say no" when the ordinances clearly indicate that a "no" answer is warranted. This sets the planning staff up for confrontation with community groups. This kind of dysfunction does not result from any one actor or group of actors in the process. None are well served, and everyone contributes to the dysfunction.

WHAT NEEDS TO BE DONE

Dealing with the concerns expressed by the planning process stakeholders will require the strong commitment by each stakeholder group to follow the planning processes as they are laid out in City policies and ordinances. It also necessitates the Planning Division have the right staffing level and tools, in the right amounts, at the right time.

To turn the present dysfunctional planning process around will require a cultural change. There must be an ongoing alertness to the balancing tests that are in play and a concerted effort on the part of the City to ensure respect for each stakeholder group is maintained in the midst of controversy. There must be political will on the part of elected officials to outline expectations for each of the stakeholder groups. Key elements of cultural change must include the following:

- ◆ **Respect for them** – Stakeholders need to know the government officials are listening, caring, and interested in what they have to say and what their concerns are.
- ◆ **Respect for you, the City** – The stakeholders want officials whom they can respect, identify with, learn from, and count on to act reasonably and responsibly.
- ◆ Stakeholders need to know what to expect so they can minimize their fears.
- ◆ Everyone needs to know what the rules are upfront.

Outlining expectations for each stakeholder group, accepting that each group has a legitimate role in the planning process and are entitled to express their concerns and recommendations, and treating each other with respect is critical to fixing the planning process. Without a strong commitment to develop such expectations and a willingness to enforce their implementation, changing the culture will have little chance of success.

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RECONNAISSANCE SURVEY
1995

SALT LAKE CITY

Salt Lake County, Utah

Expansion Study
Approved
Nov 17, 2006
Budget Amendment #2
page 13-14

Prepared by:

J. Cory Jensen

51 Regional spent
time & thousands
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Countless
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Prepared for:

Salt Lake City Department of
Community and Economic Development,
Planning Division

25 April, 1995

Impact on a
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United States Department of the Interior
National Park Service

Date Listed
8/10/01

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Central City Historic District (Boundary Increase)

other name/site number Bryant Neighborhood

2. Location

street & town Roughly bounded by South Temple, 400 South, 700 East and 1100 East ☐ not for publication

city or town Salt Lake City ☐ vicinity

state Utah code UT county Salt Lake code 035 zip code 84102

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☐ nationally ☐ statewide ☒ locally ☐ See continuation sheet for additional comments.)

W. L. Smith
Signature of certifying official/Title

Date

6/14/2001

Utah Division of State History, Office of Historic Preservation
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

Signature of the Keeper

Date of Action

- ☐ entered in the National Register.
☐ See continuation sheet.
☐ determined eligible for the
National Register
☐ See continuation sheet.
☐ determined not eligible for the
National Register.
☐ removed from the National
Register.
☐ other, (explain:) _____

Date Listed
8/12/01

ABSTRACT

This report presents the results and findings from a reconnaissance survey of east-central Salt Lake City, in a heretofore undesignated section, which was conducted at the request of the Salt Lake City Department of Community and Economic Development, Planning Division. Cory Jensen, a research consultant, conducted the fieldwork and completed a reconnaissance level historic building survey of the area between 165 feet south of South Temple and 400 South streets, and between the east side of 700 East and the west side of 1100 East streets. Also included was the block between 1000 and 1100 East and 400 and 500 South streets. Because of the compact, centralized nature of the survey area and the high density of historic properties, a standard survey was conducted which included all buildings in the survey area, whether or not they met the minimum age criteria specified by the National Register of Historic Places. Approximately 680 buildings were examined and documented. Recommendations are presented to assist Salt Lake City in interpreting the results of the survey, and using the information in efforts to preserve and protect the historic resources in this area.

975 East 100 South

The only example of Prairie School design in the survey area, this house, built in 1908, was designed by Ware and Treganza, who designed many buildings in Salt Lake City. It is now being used as offices and could be in danger of further alteration.

847 East 200 South

This house, built in 1892, is a good example of the Victorian Eclectic style, although it has been sandblasted. It was built for M. Rush Warner a local business man.

856 East 200 South

Built in c1868, this is one of three structures in the area dating from the 1860s. It is also a Hall/Parlor plan in vernacular styling.

976 East 200 South

Another good example of Victorian Eclecticism, built c1903 for real estate developer Samuel Westerfield.

805 East 300 South

This is another Bernard Mecklenberg designed Neo-Classical foursquare. This was built in 1909 for George Roper, a tavern operator.

718 East 300 South

One of only a few Italianate design structures in the survey area, this was built in c1882 for Hyrum Reeve, a superintendent at the Twentieth ward Co-op.

As was noted above, apartment buildings are an integral feature of this area. Most of the apartments surveyed were given either an A or a B evaluation because they have been altered little over time. It is recommended that the applicable structures be included in the thematic nomination of Urban Apartment Buildings

Some important landscape features of this district are the grass medians, or "parkings," which run the length of 800 East and also a section of 200 South between 1000 East and 1100 East. These were originally placed here c1910 to create a boulevard-type environment. Some of them were planted with grass, trees, and flowers, and some included walkways, but all that remains now is grass. As is the case with the "Central City Historic District," it is strongly recommended that these be replanted with trees. The large trees which line many of the streets of the survey area are mature and continued care should be maintained to prevent their demise either to lack of water (which has been a problem during the summer months), disease, or development. These trees add tremendously to the historic character of the area. Some historic sidewalks still remain on a few of the streets. On the north side of 100 South, between 800 East and 900 East is a sectional flagstone/sandstone sidewalk. At 730 & 732 East 100 South the original concrete carriage steps still remain at the curb.



SALT LAKE

REGIONAL MEDICAL CENTER

December 12, 2006

RE: Historic expansion of the University Neighborhood

To whom it may concern:

This letter is to define the position of Salt Lake Regional Medical Center concerning the reevaluation of the historic district currently present within the University Neighborhood.

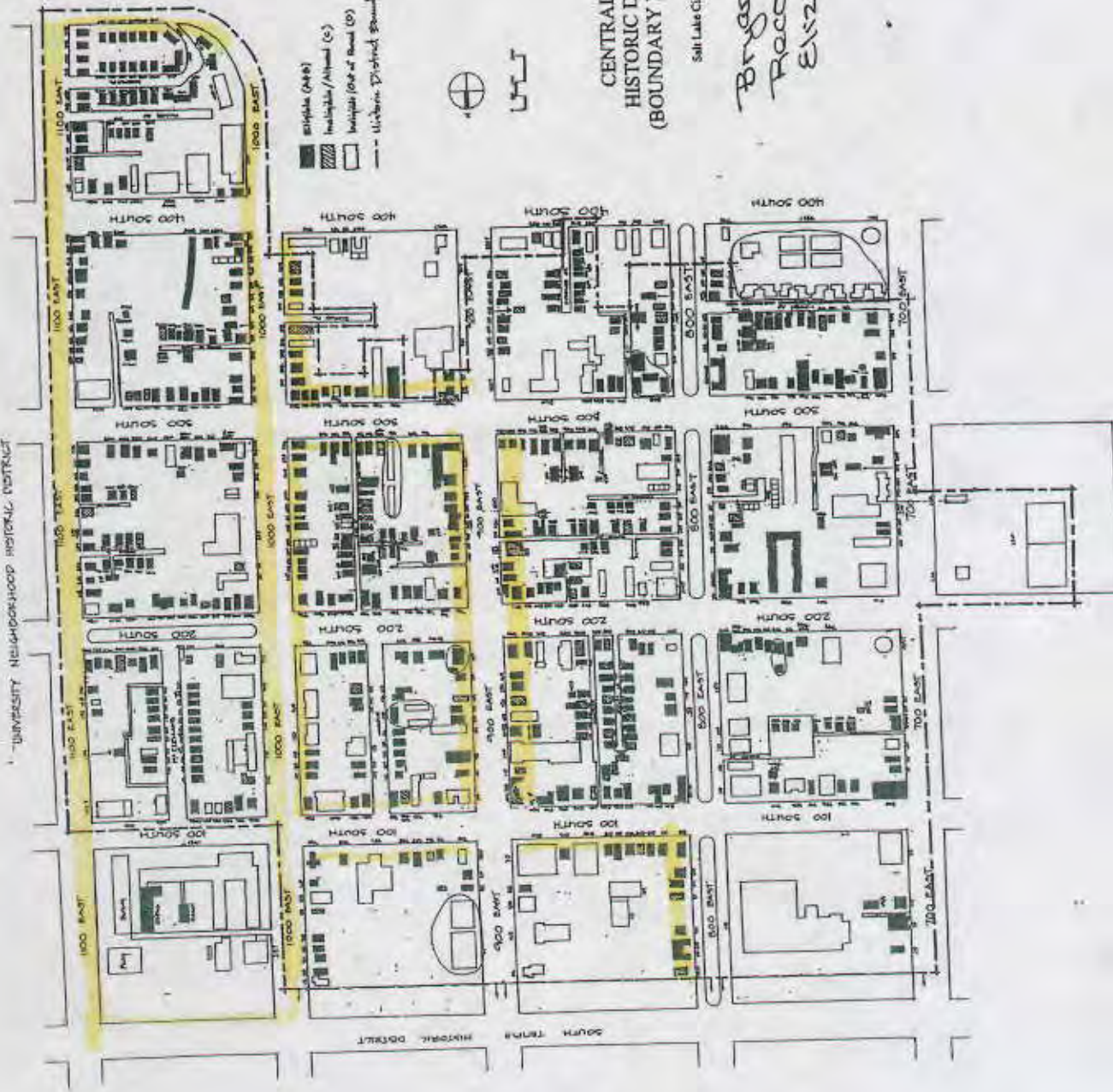
We echo the neighborhood and support the efforts being made to allocate funds for the further research necessary in evaluating the possibility of expanding the historical district from South Temple to 500 South and in-between 1000 East and 1100 East.

Salt Lake Regional Medical Center supports the best possibility for the most appropriate livable community for residents complete with the necessary services needed to support such a community.

Sincerely,

Jeff Frandsen
CEO, Salt Lake Regional Medical Center

UNIVERSITY NEIGHBORHOOD HISTORIC DISTRICT



CENTRAL CITY HISTORIC DISTRICT (BOUNDARY INCREASE)

Salt Lake City, Utah

Bright National
Racoon + Assoc.
Elizabeth Giraud
3/9/01

eh representing first Uno and second as a resident

I would like to first thank Nancy and all of the members of the City Council as well as planning staff that we are to this point tonight.

As a neighborhood and having had teenagers we understand that it's not an easy job raising a city. The importance of staying viable, while at the same time valuing the historical, cultural and architectural heritage.

To our neighborhood, this 9 block area represents not only where we live but is an area that represents a significant element to all of us in terms of our cities history and development. The University designation represents the cities growth around the construction of the University of Deseret now the UU including the many faculty, staff, students and support personnel

It includes unique historical, cultural and architectural one of a kind city resources such as:

Victorian Electric Charles + Clara Nelson 334 So 9th E 1910
designed Walter Ware Ernest Thompson 955 E 1st So 1902
Neo classical revival Daniel Spitz 1073 E 2nd So
Arts + Crafts Mary Ellen Birch home 336 So 11th (Ware + Ferguson 19
1 Samuel Sherrill 975 E 1st So
1870 - 1920
~~1870 - 1920~~ integrity high *

that need the safeguards and protection that only a historical designation can give.

The original 91 approval of the University District included recommendations by the Landmark Commission and the Planning Commission that based on the then completed recon survey the western boundary extend to 10th East.

Today we have more data due to the recon survey completed to establish both the Bryant and Douglas National districts submitted by Elizabeth in 95 and in 2003 9/9/02

I would submit that we can not sacrifice the very heritage that made our city great. I strongly encourage you to approve the funds necessary to allow for this boundary extension.

* Almost all residential were constructed as single fam they retain their org scale, masonry & materials overall integrity is high "

City doc → 91
Julia Osborne
University resub
to National 95
Architect historic
Utah Hist
Cory Jensen

Bryant submitted (2001) 3/9
Doug. 9/9/02
Bryant Broschere
Preserv Docume
tation
Resource

included
the proposed
7 blocks

THE UNIVERSITY HISTORIC DISTRICT

Development trends:

Known for its ongoing preservation efforts, the University District is experiencing continued investment in the area, including renovation, additions to existing buildings and infill construction. A wide range of construction projects is therefore anticipated, including renovation and new buildings.

Goals for the district:

The design goal for the University District is to preserve the character of its streetscapes and the integrity of its individual historic structures. In particular, preservation of the streetscape, including parkways, tree lawns, front yards and walkways is a high priority.

DESIGN CHARACTER

The following is a brief discussion of features that contribute to the design character of the district.

Streetscape Features

Street pattern

The University district developed according to a grid system, which is characterized by wide streets and large blocks. Sidewalks are detached with a planting strip between the sidewalk and the curb. Narrow lanes with small cottages sometimes occur, contrasting with the broader streets. This traditional rectilinear pattern, along with a uniformity of siting and somewhat homogeneous housing stock, created the district's distinct continuity of the streetscape. Preservation of this street pattern is a high priority.

Alleys

A system of alleys provides a contrast to the wide, formal streets and large blocks on the University district. Aside from creating visual diversity in the neighborhood, alleys are functional spaces that relieve traffic on larger streets and provide access to parking and service areas. Thus, the historic character of alleys should be maintained.

This report contains the collective views of an international group of experts and does not necessarily represent the decisions or the stated policy of the International Commission of Non-Ionizing Radiation Protection, the International Labour Organization, or the World Health Organization.

Environmental Health Criteria 238

EXTREMELY LOW FREQUENCY FIELDS

Published under the joint sponsorship of the International Labour Organization, the International Commission on Non-Ionizing Radiation Protection, and the World Health Organization.



**World Health
Organization**

Environmental Health Criteria

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ACKNOWLEDGEMENTS

This monograph represents the most thorough health risk assessment currently available on extremely low frequency electric and magnetic fields. WHO acknowledges and thanks all contributors to this important publication.

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are only used when relevant published data are absent or when they are pivotal to the risk assessment. A detailed policy statement is available that describes the procedures used for unpublished proprietary data so that this information can be used in the evaluation without compromising its confidential nature (WHO, 1990).

In the evaluation of human health risks, sound human data, whenever available, are generally more informative than animal data. Animal and in vitro studies provide support and are used mainly to supply evidence missing from human studies. It is mandatory that research on human subjects is conducted in full accord with ethical principles, including the provisions of the Helsinki Declaration (WMA, 2004).

All studies, with either positive or negative effects, need to be evaluated and judged on their own merit, and then all together in a weight of evidence approach. It is important to determine how much a set of evidence changes the probability that exposure causes an outcome. Generally, studies must be replicated or be in agreement with similar studies. The evidence for an effect is further strengthened if the results from different types of studies (epidemiology and laboratory) point to the same conclusion.

The EHC monographs are intended to assist national and international authorities in making risk assessments and subsequent risk management decisions. They represent an evaluation of risks as far as the data will allow and are not, in any sense, recommendations for regulation or standard setting. These latter are the exclusive purview of national and regional governments. However, the EMF EHCs do provide bodies such as ICNIRP with the scientific basis for reviewing their international exposure guidelines.

Procedures

The general procedures that result in the publication of this EHC monograph are discussed below.

A first draft, prepared by consultants or staff from a RAD Collaborating Centre, is based initially on data provided from reference databases such as Medline and PubMed and on IARC and ICNIRP reviews. The draft document, when received by RAD, may require an initial review by a small panel of experts to determine its scientific quality and objectivity. Once the document is acceptable as a first draft, it is distributed, in its unedited form, to well over 150 EHC contact points throughout the world who are asked to comment on its completeness and accuracy and, where necessary, provide additional material. The contact points, usually designated by governments, may be Collaborating Centres, or individual scientists known for their particular expertise. Generally some months are allowed before the comments are considered by the author(s). A second draft incorporating comments received and approved by the Coordinator (RAD), is then distributed to Task Group members, who carry out the peer review, at least six weeks before their meeting.

EHC monographs are usually revised if new data are available that would substantially change the evaluation, if there is public concern for health or environmental effects of the agent because of greater exposure, or if an appreciable time period has elapsed since the last evaluation. The EHCs on EMF are being revised and will be published as a set of three monographs spanning the relevant EMF frequency range (0–300 GHz); static fields (0 Hz), ELF fields (up to 100 kHz, this volume) and RF fields (100 kHz – 300 GHz).

WHO's assessment of any health risks produced by non-ionizing radiation emitting technologies (in the frequency range 0–300 GHz) falls within the responsibilities of the International EMF Project. This Project was established by WHO in 1996 in response to public concern over health effects of EMF exposure, and is managed by the Radiation and Environmental Health Unit (RAD) which is coordinating the preparation of the EHC Monographs on EMF.

The WHO health risk assessment exercise includes the development of an extensive database that comprises relevant scientific publications. Interpretation of these studies can be controversial, as there exists a spectrum of opinion within the scientific community and elsewhere. In order to achieve as wide a degree of consensus as possible, the health risk assessment also draws on, and in some cases includes sections of, reviews already completed by other national and international expert review bodies, with particular reference to:

- the International Agency for Research on Cancer (IARC) Monograph on static and extremely low frequency (ELF) fields (IARC, 2002). In June 2001 IARC formally evaluated the evidence for carcinogenesis from exposure to static and ELF fields. The review concluded that ELF magnetic fields are possibly carcinogenic to humans.
- Reviews on physics/engineering, biology and epidemiology commissioned by WHO to the International Commission on Non-Ionizing Radiation Protection (ICNIRP), a non-governmental organization in formal relations with WHO (ICNIRP, 2003).
- Reviews by the Advisory Group on Non-Ionising Radiation (AGNIR) of the Health Protection Agency (HPA), United Kingdom (AGNIR, 2001a; 2001b; 2004; 2006).

Scope

The EHC monographs are intended to provide critical reviews on the effect on human health and the environment of chemicals, physical and biological agents. As such, they include and review studies that are of direct relevance for the evaluation. However, they do not describe *every* study carried out. Worldwide data are used and are quoted from original studies, not from abstracts or reviews. Both published and unpublished reports are considered but preference is always given to published data. Unpublished data

The Task Group members serve as individual scientists, not as representatives of their organization. Their function is to evaluate the accuracy, significance and relevance of the information in the document and to assess the health and environmental risks from exposure to the part of the electromagnetic spectrum being addressed. A summary and recommendations for further research and improved safety aspects are also required. The composition of the Task Group is dictated by the range of expertise required for the subject of the meeting (epidemiology, biological and physical sciences, medicine and public health) and by the need for a balance in the range of opinions on the science, gender and geographical distribution.

The membership of the WHO Task Groups is approved by the Assistant Director General of the Cluster on Sustainable Development and Health Environments. These Task Groups are the highest level committees within WHO for conducting health risk assessments.

Task Groups conduct a critical and thorough review of an advanced draft of the ELF EHC monograph and assess any risks to health from exposure to both electric and magnetic fields, reach agreements by consensus, and make final conclusions and recommendations that cannot be altered after the Task Group meeting.

The World Health Organization recognizes the important role played by non-governmental organizations (NGOs). Representatives from relevant national and international associations may be invited to join the Task Group as observers. While observers may provide a valuable contribution to the process, they can only speak at the invitation of the Chairperson. Observers do not participate in the final evaluation; this is the sole responsibility of the Task Group members. When the Task Group considers it to be appropriate, it may meet *in camera*.

All individuals who as authors, consultants or advisers participate in the preparation of the EHC monograph must, in addition to serving in their personal capacity as scientists, inform WHO if at any time a conflict of interest, whether actual or potential, could be perceived in their work. They are required to sign a conflict of interest statement. Such a procedure ensures the transparency and probity of the process.

When the Task Group has completed its review and the Coordinator (RAD) is satisfied as to the scientific consistency and completeness of the document, it then goes for language editing, reference checking, and preparation of camera-ready copy. After approval by the Director, Department of Protection of the Human Environment (PHE), the monograph is submitted to the WHO Office of Publications for printing. At this time a copy of the final draft is sent to the Chairperson and Rapporteur of the Task Group to check the proofs.

Extremely Low Frequency Environmental Health Criteria

This EHC addresses the possible health effects of exposure to extremely low frequency (>0 Hz – 100 kHz) electric and magnetic fields. By

Table 9. Examples of magnetic flux densities from 50 and 60 Hz domestic electrical appliances ^a

Source		Magnetic flux densities (μ T)			
		60 Hz at 30 cm ^b		50 Hz at 50 cm ^c	
		Median	Range ^d	Computed field	SD
Bathroom	Hair dryers	1	bg***-7	0.12	0.1
	Electric shavers	2	bg-10	0.84	
	Electric showers			0.44	0.75
	Shaver socket			1.24	0.27
Kitchen	Blenders	1	0.5-2	0.97	1.05
	Can openers	15	4-30	1.33	1.33
	Coffee makers	bg	bg-0.1	0.06	0.07
	Dishwashers	1	0.6-3	0.8	0.46
	Food processors	0.6	0.5-2	0.23	0.23
	Microwave ovens	0.4	0.1-20	1.66	0.63
	Mixers	1	0.5-10	0.69	0.69
	Electric ovens	0.4	0.1-0.5	0.39	0.23
	Refrigerators	0.2	bg-2	0.05	0.03
	Freezers			0.04	0.02
	Toasters	0.3	bg-0.7	0.09	0.08
	Electric knives			0.12	0.05
	Liquidisers			0.29	0.35
	Kettle			0.26	0.11
	Extractor fan			0.5	0.93
	Cooker hood			0.26	0.10
	Hobs			0.08	0.05
Laundry/Utility	Clothes dryers	0.2	bg-0.3	0.34	0.42
	Washing machines	0.7	0.1-3	0.96	0.56
	Irons	0.1	0.1-0.3	0.03	0.02
	Portable heaters	2	0.1-4	0.22	0.18
	Vacuum cleaners	6	2-20	0.78	0.74
	Central heating boiler			0.27	0.26
	Central heating timer			0.14	0.17
Living room	TVs	0.7	bg-2	0.26	0.11
	VCRs			0.06	0.05
	Fish tank pumps			0.32	0.09
	Tuners/tape players	bg	bg-0.1	0.24	

and lateral body position. They reported that when blankets are heating, typical flux densities range from a few tenths of microtesla on the side of the body farthest from the blanket to a few tens of microtesla on the side closest to the blanket. Wilson et al. (1996) used spot measurements made in the home and in the laboratory. They reported that the average magnetic fields from electric blankets to which the whole body is exposed are between 1 and 3 T. More recently, from eight-hour measurements, Lee et al. (2000) estimated that the time-weighted average magnetic field exposures from overnight use of electric blankets ranged between 0.1 and 2 μ T.

It should be noted that many appliances produce a wide range of harmonics. The interpretation of results from broad band measurements can be misleading, if the spectral content of the fields is not known. Another problem with the interpretation of field measurements from appliances may result from the huge spatial and temporal variability of the fields.

2.2.2.2.5 Distribution substations and transformers

Overhead lines and underground cables at whatever voltage usually terminate at substations. All substations usually contain apparatus to perform similar functions: transforming, switching metering and monitoring. Substations range from large complexes several hundred metres in extent at one end of the scale to simple pole-mounted transformers at the other end of the scale. One feature they all have in common is that members of the general public are excluded from most of the functional regions of the substation, either by a perimeter fence or enclosure (for ground-based substations) or by the height of the pole (for pole-mounted substations).

Although substations vary in their complexity and size, the principles which determine the magnetic fields they produce are common. Firstly, in all substations, there are a number of components which produce a negligible magnetic field outside the confines of the substation. These include the transformers, virtually all switches and circuit breakers, and virtually all metering and monitoring equipment. Secondly, in many cases the largest fields in publicly accessible regions are produced by the overhead lines and underground cables running in and out of the substation. Thirdly, all substations contain a system of conductors (often referred to as 'busbars') which connect the various components within it, and these busbars usually constitute the main source of magnetic field within the substation producing appreciable field outside.

The size of the currents and the separation of the busbars are both larger in higher-voltage substations than in lower-voltage ones. However, the perimeter fence also tends to be further away from the busbars in higher-voltage substations. Therefore, the resulting field to which the public can be exposed can be somewhat greater at higher-voltage substations than at lower-voltage ones. In both cases, the magnetic field falls very rapidly with distance from the substation.

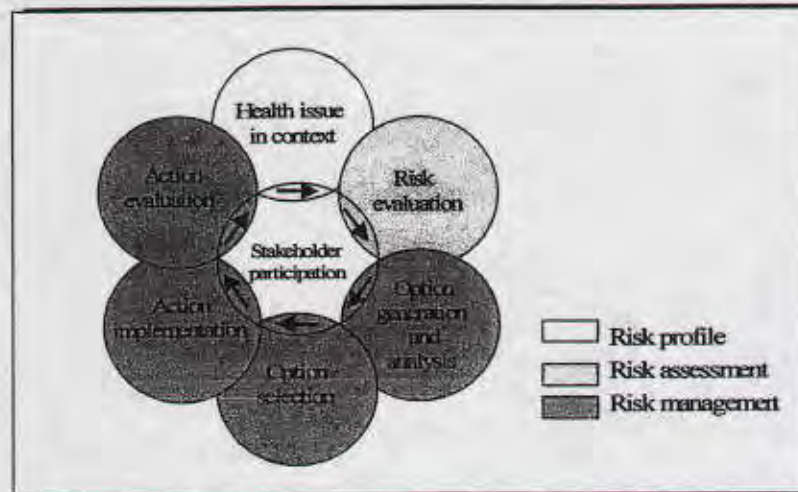


Figure 10. Dealing with risk: A risk analysis process that includes identifying, assessing and managing risks.

13.2.2 Factors affecting health policy

For policy-makers, scientific evidence carries substantial weight, but is not the exclusive criterion. Final decisions will also incorporate social values, such as the acceptability of risks, costs and benefits and cultural preferences. The question policy-makers strive to answer is "What is the best course of action to protect and promote health?"

Governmental health policies are based on a balance of "equity", i.e. the right of each citizen to an equitable level of protection and "efficiency", where cost-benefit or cost-effectiveness is important. The level of risk deemed acceptable by society depends on a number of factors. Where there is an identified risk, the value that society places on the reduction of risk or disease arising from a particular agent, technology or intervention is based on the assumption that the reduction will actually occur. For involuntary exposures a notional (*de minimis*) value of lifetime mortality risk of 1 in 100 000 is accepted as a general threshold (with 1 in a million as an ideal goal) below which the risk is considered to be acceptable or impractical to improve on (WHO, 2002). For example, the risk of ionizing radiation exposure from radon is reasonably well-characterized and the exposure should be reduced so that it does not cause radiation-induced cancer in more than one per 100 000 individuals over their lifetime.

In developing policy, regulators try to maximize the benefits and minimize societal costs. The following issues are considered to be part of this process.

- **Public health/safety** – A major objective of policy is to reduce or eliminate harm to the population. Harmful effects on health are

usually measured in terms of morbidity caused by the exposure and the probability that an effect would occur. They could also be measured in terms of extra cases of disease or death due to exposure, or of the number of cases avoided by reducing exposure.

- *Net cost of the policy* – The cost, referring to more than simply the monetary expense, of the policy for society as a whole, without considering any distribution of the cost, consists of several components: (a) the direct cost imposed on the entire society for any measures taken; (b) the indirect cost to society, for example, resulting from less than optimal use of the technology; and (c) cost reduction created by the policy, for example, faster implementation of a beneficial technology.
- *Public trust* – The degree of public trust in the policy and the degree of its acceptance as an effective means to adequately protect public health is an important objective in many countries. Moreover, the public's feeling of safety is important in itself, since the WHO definition of health addresses social well-being and not only the absence of disease or infirmity (WHO, 1946).
- *Stakeholder involvement* – A fair, open and transparent process is essential to good policy-making. Stakeholder involvement includes participation at each stage of policy development and opportunities to review and comment on a proposed policy prior to its implementation. Such a process may legitimately result in outcomes different from those that would be chosen by scientific experts or decision-makers alone.
- *Non-discriminatory treatment of sources* – All sources should receive the same attention when considering exposure (for example, for ELF fields, when reducing magnetic fields that result from grounding practices in the home, household appliances, power lines and transformers). The policy should focus on the most cost-effective option for reducing exposure. The policy-maker must determine whether (a) different consideration should be given to new or existing facilities and (b) there is justification for a different policy for non-voluntary and voluntary exposure. For further information, see the statement of the European Commission on the precautionary principle (EC, 2000).
- *Ethical, moral, cultural and religious constraints* – Notwithstanding stakeholder consultation, individuals and groups may differ in their views regarding whether a policy is ethical, moral and culturally acceptable or in agreement with religious beliefs. These issues can affect the implementation of a policy and need to be considered.
- *Reversibility* – The consequences of implementing a policy must be carefully considered. Policies need to be balanced and based on

current information and include sufficient flexibility to be modified as new information becomes available.

13.3 Scientific input

Science-based evaluations of any hazards caused by EMF exposure form the basis of international guidelines on exposure limits and provide an essential input to public policy response. Criteria and procedures for determining limit values are outlined in the WHO Framework for Developing Health-based EMF Standards (WHO, 2006a).

13.3.1 Emission and exposure standards

Standards contain technical specifications or other precise criteria that are used consistently as rules, guidelines or definitions of characteristics to ensure that materials, products, processes and services are fit for their purpose. In the context of EMF they can be emission standards, which specify limits of emissions from a device, measurement standards, which describe how compliance with exposure or emission standards may be ensured, or exposure standards, which specify the limits of human exposure from all devices that emit EMF into a living or working environment.

Emission standards set various specifications for EMF-emitting devices and are generally based on engineering considerations, for example to minimize electromagnetic interference with other equipment and/or to optimize the efficiency of the device. Emission standards are usually developed by the International Electrotechnical Commission (IEC), the Institute of Electrical and Electronic Engineers (IEEE), the International Telecommunications Union (ITU), the Comité Européen de Normalisation Electrotechnique / European Committee for Electrotechnical Standardization (CENELEC), as well as other independent organizations and national standardization authorities.

While emission standards are aimed at ensuring, *inter alia*, compliance with exposure limits, they are not explicitly based on health considerations. In general, emission standards are intended to ensure that exposure to the emission from a device will be sufficiently low that its use, even in proximity to other EMF-emitting devices, will not cause exposure limits to be exceeded.

Exposure standards that limit human EMF exposure are based on studies that provide information on the health effects of EMF, as well as the physical characteristics and the sources in use, the resulting levels of exposure and the people at risk. Exposure standards generally refer to maximum levels to which whole or partial body exposure is permitted from any number of sources. This type of standard normally incorporates safety factors and provides the basic guide for limiting personal exposure. Guidelines for such standards have been issued by the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 1998a), the Institute of Electrical and Electronic Engineers (IEEE, 2002) and many national authorities. These have been discussed in Chapter 12. While some countries have adopted the

ICNIRP guidelines, others use them as the de facto standard without giving them a legal basis (WHO, 2006b).

13.3.2 Risk in perspective

There is scientific uncertainty as to whether chronic exposure to ELF magnetic fields causes an increased risk of childhood leukaemia. In addition, given the small estimated effect resulting from such a risk, the rarity of childhood leukaemia, the rarity of average exposures higher than 0.4 μ T and the uncertainty in determining the relevant exposure metric (see section 12.5.3), it is unlikely that the implementation of an exposure limit based on the childhood leukaemia data and aimed at reducing average exposure to ELF magnetic fields to below 0.4 μ T, would be of overall benefit to society.

The actual exposures of the general public to ELF magnetic fields are usually considerably lower than the international exposure guidelines. However, the public's concern often focuses on the possibility of long-term effects caused by low-level environmental exposure. The classification of ELF magnetic fields as a possible carcinogen has triggered a reappraisal by some countries of whether the exposure limits for ELF provide sufficient protection. These reappraisals have led a number of countries and local governments to develop precautionary measures as discussed below.

13.4 Precautionary-based policy approaches

Since protecting populations is part of the political process, it is expected that different countries may choose to provide different levels of protection against environmental hazards, responding to the factors affecting health policy (see section 13.2.2). Various approaches to protection have been suggested to deal with scientific uncertainty. In recent years, increased reference has been made to precautionary policies, and in particular the Precautionary Principle.

The Precautionary Principle is a risk management tool applied in situations of scientific uncertainty where there may be need to act before there is strong proof of harm. It is intended to justify drafting provisional responses to potentially serious health threats until adequate data are available to develop more scientifically based responses. The Precautionary Principle is mentioned in international law (EU, 1992; United Nations, 1992) and is the basis for European environmental legislation (EC, 2000). It has also been referred to in some national legislation, for example in Canada (Government of Canada, 2003), and Israel (Government of Israel, 2006). The Precautionary Principle and its relationship to science and the development of standards have been discussed in several publications (Foster, Vecchia & Repacholi, 2000; Kheifets, Hester & Banerjee, 2001).

13.4.1 Existing precautionary ELF policies

With regard to possible effects from chronic ELF exposure, policy-makers have responded by using a wide variety of precautionary policies based on cultural, social, and legal considerations. These include the impor-

tance given to avoiding a disease that affects mostly children, the acceptability of involuntary, as opposed to voluntary, exposures and the different importance given to uncertainties in the decision-making process. Some measures are mandatory and required by law, whereas others are voluntary guidelines. Several examples are presented below.

- *Prudent avoidance* – This precautionary-based policy was developed for power-frequency EMF. 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 (Nair, Morgan & Florig, 1989). Prudent avoidance has been adopted as part of policy in several countries, including Australia, New Zealand and Sweden (see Table 85). Low-cost measures that can be taken include routing new power lines away from schools and phasing and configuring power line conductors to reduce magnetic fields near rights-of-way.
- *Passive regulatory action* – This recommendation, introduced in the USA for the ELF issue (NIEHS, 1999), 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” (Swiss Federal Council, 1999). The emission levels from a device or class of devices are controlled, while the international exposure limits (ICNIRP, 1998a) are adopted as the maximum level of human exposure from all sources of EMF.
- *Precautionary exposure limits* – As a precautionary measure, some countries have reduced limits on exposure. For example, in 2003, Italy adopted ICNIRP standards but introduced two further limits for EMF exposure (Government of Italy, 2003): (a) “attention values” of one tenth of the ICNIRP reference levels for specific locations, such as children's playgrounds, residential dwellings and school premises, and (b) further restrictive “quality goals” which only apply to new sources and new homes. The chosen values for 50 Hz, 10 μ T and 3 μ T respectively, are arbitrary. There is no evidence of possible acute effects at that level nor evidence from epidemiological studies of leukaemia which suggests that an exposure of 3 μ T is safer than an exposure of 10 or 100 μ T.

Other examples of various types of precautionary policies applied to power-frequency field exposure are given in Table 86 (Kheifets et al., 2005). A complete database of EMF standards worldwide is provided on the website of the WHO International EMF Project (WHO, 2006b).

Table 85. Examples of precautionary approaches

Precautionary approach	Country	Measures
Prudent avoidance	New Zealand Australia Sweden	Adopt ICNIRP guidelines and add low-cost voluntary measures to reduce exposure
Passive regulatory action	USA	Educate the public on measures to reduce exposure
Precautionary emission control	Switzerland	Adopt ICNIRP guidelines and set emission limits
Precautionary exposure limits	Italy	Decrease exposure limits using arbitrary reduction factors

Table 86. Various approaches to EMF exposure limitation for the general public ^a

Agency / country	Limits	Comments
<i>Precautionary policies based on exposure limits</i>		
Israel, 2001	1 μ T	Newly constructed facilities
Italy, 2003	100 μ T	Attention value applies to exposures that occur for more than 4 hours per day
	10 μ T	Quality target that only applies to new lines and new homes
USA	3 μ T	Under maximum load conditions. Established by regulations in some states (e.g. Florida) and by informal guidelines in others (e.g. Minnesota)
	15–25 μ T	
	0.2–0.4 μ T	Adopted in some local ordinances (e.g. Irvine, California)

Table 86. Continued

<i>Precautionary policies based on separation of people from sources of exposure</i>		
Ireland, 1988	No new transmission lines or substations closer than 22 metres to an existing school or building	Local government will not grant construction permits for electrical power installations in the vicinity of schools and day-care centres
The Netherlands, 2005	Increased distance between power lines and places where children can spend significant amounts of time to ensure that their mean exposure will not exceed 0.4 μ T	For new buildings near existing power lines, or new power lines near existing buildings
USA	Restrictions on siting new schools close to existing electric transmission lines New lines must be buried unless technically infeasible and there must be buffer zones near residential areas, schools, day care facilities and youth camps	Adopted by the California Department of Education Adopted by the State of Connecticut
<i>Precautionary policies based on costs</i>		
USA	No- or low-cost alterations to the design or routing if substantial field reduction (more than 15%) can be achieved; 4% used as benchmark of project cost	Adopted by the Public Utilities Commission for the State of California
<i>Precautionary policies based on non-quantitative objectives</i>		
Australia, 2003	Reduction of exposure where it is easily achievable	
Sweden, 1996	Reduction of exposure with no recommendations regarding levels	Includes taking into account EMF when designing new transmission and distribution facilities and siting them away from sensitive areas

^a Source: Kheifets et al., 2005.

Table 87. Continued

Option	Relevant factors in considering benefits	Relevant factors in considering costs
Communication	A knowledgeable public - can better evaluate the acceptability of different levels of ELF risks - can reduce public concern due to misperceived ELF risks - can increase trust in those providing the information. A knowledgeable public and workers - can be involved in the decision-making process regarding ELF sources - can make informed decisions on what appliances to purchase or how to place them so as to minimize exposure - can influence market forces to design sources in order to minimize exposure (e.g. electric blankets).	Possibility of giving rise to unjustified alarm or concern. May have limited effectiveness where the understanding of exposure is difficult or where exposure is involuntary and hard to avoid.
Mitigation	Changes to planning of new facilities 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. Lower cost since options are dealt with in planning stage of new installations.	Requires alternative technical designs be presented for the construction of new facilities. Costs may include sterilization of land, devaluation of property, and compensation payments. Possibility of setting a precedent for future projects regardless of future circumstances.

Table 87. Continued

Option	Relevant factors in considering benefits	Relevant factors in considering costs
Mitigation	Engineering changes of existing facilities	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.). Changes introduced to existing installations involve a higher cost. Costs may include sterilization of land, devaluation of property and compensation payments. Increased cost (or increased size or weight) of appliances.
	Engineering changes to appliances	Reduction of exposure to magnetic fields.
National standards	Exposure limits	May undermine science-based guidelines. May give false sense of security. May hinder incentives for further reduction of undue exposure. Cost of compliance. Difficult to move towards less stringent standards if justified by new scientific evidence.

^a With the exception of the first option, all the options are evaluated in relation to "doing nothing" rather than adopting international guidelines.

ity of the health outcome under study. Changes to standards or policy should only be made after a proper assessment of the science base as a whole, to ensure that the conclusions of the research in a given area are consistent.

Exposure reduction

In recommending precautionary approaches, an overriding principle is that any actions taken should not compromise the essential health, social and economic benefits of electric power. In the light of the current scientific evidence and given the important remaining uncertainties, it is recommended that an assessment be conducted of the impact of any precautionary approach on the health, social and economic benefits of electric power. Provided that these benefits are not compromised, implementing precautionary procedures to reduce exposures is reasonable and warranted. The costs of implementing exposure reductions will vary from one country to another, making it very difficult to provide a general recommendation for balancing the costs against the risk from ELF fields. Given the weakness of the evidence for a link between exposure to ELF magnetic fields and childhood leukaemia and the limited potential impact on public health, the benefits of exposure reduction on health are unclear and thus the cost of reducing exposure should be very low.

13.5.1 Recommendations

In view of the above, the following recommendations are given.

- Policy-makers should establish guidelines for ELF field exposure for both the general public and workers. The best source of guidance for both exposure levels and the principles of scientific review are the international guidelines.
- Policy-makers should establish an ELF EMF protection programme that includes measurements of fields from all sources to ensure that the exposure limits are not exceeded either for the general public or workers.
- Provided that the health, social and economic benefits of electric power are not compromised, implementing very low-cost precautionary procedures to reduce exposures is reasonable and warranted.
- Policy-makers and community planners should implement very low-cost measures when constructing new facilities and designing new equipment including appliances.
- Changes to engineering practice to reduce ELF exposure from equipment or devices should be considered, provided that they yield other additional benefits, such as greater safety, or involve little or no cost.

- When changes to existing ELF sources are contemplated, ELF field reduction should be considered alongside safety, reliability and economic aspects.
- Local authorities should enforce wiring regulations to reduce unintentional ground currents when building new or rewiring existing facilities, while maintaining safety. Proactive measures to identify violations or existing problems in wiring would be expensive and unlikely to be justified.
- National authorities should implement an effective and open communication strategy to enable informed decision-making by all stakeholders; this should include information on how individuals can reduce their own exposure.
- Local authorities should improve planning of ELF EMF-emitting facilities, including better consultation between industry, local government, and citizens when siting major ELF EMF-emitting sources.
- Government and industry should promote research programmes to reduce the uncertainty of the scientific evidence on the health effects of ELF field exposure.