ATTACHMENT N: PUBLIC PROCESS MEETING SUMMARIES

September 2019

Salt Lake City Department of Public Utilities
4th Avenue Well Project

Interview Report

INRODUCTION

Salt Lake City Department of Public Utilities (SLCDPU) engaged Wilkinson Ferrari & Co. (WF&Co.) to implement a strong neighborhood engagement effort for its controversial 4th Avenue Well Project to help identify a solution that will work for SLCDPU and the neighborhood.

SLCDPU needs to update its well at 4th Avenue and Canyon Road, one of the oldest in the City, to meet current safety and environmental requirements. The well supplies 3 to 7 million gallons of water daily in the summer months. It is a critical piece of the City's water system that allows SLCDPU to serve tens of thousands of residents, office workers and visitors in the downtown area, as well as providing water for firefighting downtown, City Creek Canyon and nearby mountain foothills.

The project has not been well received by residents in the small, tight-knit and historic Canyon Road/Memory Grove neighborhood where the well is located. Local concerns include the proposed size and design of the new well structure, noise, safety and potential impacts to mature trees.

To better understand the situation and build stronger relationships with area community members, WF&Co. interviewed a selection of key individuals involved with the issue. Information gained from the interviews will be used to devise a sound facilitated meeting process to help SLCDPU find an acceptable solution for the well project. The following people were interviewed.

- Chris Wharton, Salt Lake City Council Member
- Cindy Cromer, area resident, landowner and involved citizen
- Winston Seiler, area resident and geologist
- Alan Walker, area resident and petroleum engineer
- Shane Franz, area resident and systems engineer
- Katie Pugh, area resident and yarn installation artist
- Dee Brewer, area resident and Downtown Alliance Executive Director
- Jill Van Langeveld, Greater Avenues Community Council Chair
- Evan Smith, area resident and Historic Landmark Commission Member
- Craig Ogan, area resident and former advertising executive

In addition, several unsuccessful attempts were made to interview Lisa Livingston, an area resident also concerned about the project.

FINDINGS

Areas of Concern: Those interviewed identified the following areas of concern.

- The site is a valued, historical place (10)
- Building size (9)
- Building aesthetics (7)
- Noise (7)
- Safety (6)
- Trees (5)
- Smell (1)
- Do not want a building at this site at all (1)

The Site: Everyone interviewed talked about how the site is a beautiful, valued, historical place. People stated that it is a small park and having a pump house there has the potential to dramatically alter it. They want to make sure that the project is done right. One person noted the neighborhood includes highly educated individuals with applicable expertise who should be consulted; this individual questioned whether SLCDPU fully understands residents' concerns about the technical issues and their strong emotional connection to the neighborhood.

The Need: All but one of those interviewed said they understand the need for the project. The individual who doesn't think there is a need stated that the well has been functioning for more than 70 years and there doesn't seem to be an urgent need to make these changes now. A couple of interviewees also questioned the need for an electrical upgrade for the project. One person reported contacting Rocky Mountain Power and were told that they will continue to service what is currently there. Almost everyone agreed that worker safety issues need to be addressed during construction and operations.

Initial Design: Everyone interviewed stated how upset they were with the initial proposed designs for the pump house. They felt the designs were not well-thought-out, that the buildings were too big and that the designs didn't fit the area's character. They felt the first design was too "generic-looking" for the area; the second design they felt looked too much like a Starbucks coffee shop.

Finding A Solution: Those interviewed stated how much they want the project done right and appropriately. They want to be dealt with directly and honestly; they don't want their concerns to be brushed off and ignored. They said SLCDPU and its consultants have said things that are based on opinions and not on requirements and facts. Several people said SLCDPU and consultants need to clearly understand and communicate the codes and regulations affecting the project. Many stated the Department has lost credibility because of this. Some expressed concern that SLCDPU and the city doesn't maintain landscaping and other pump houses. Several people mentioned that the small metal boxes currently at the site are an eyesore. Many said they are looking for innovative solutions. One person stated that SLCDPU needs to identify and communicate the mandatory needs and optional

desires for the project. One person said SLCDPU has not yet answered community questions about site constraints, noise level and chemical storage. One person said they don't fully understand why workers need to enter the vault, rather than monitoring operations remotely with cameras and sensors. A couple people said they want to better understand the purpose of the well upgrade. One person said there are other facilities run by SLCDPU that similarly are not compliant with current requirements, so they question the need for the 4th Avenue Well Project. One person said SLCDPU needs to better understand how much this park is used every day.

Building Size: Almost all interviewees said they want a new well structure to be as small as possible. They don't want it to be a dominant feature in the park. Many want the city to reassess what is crucial to include in the building and what can be placed underground or moved to another location. They feel like there are more "modern" ways to meet SLCDPU's needs. One person said they don't want a building there at all.

The Mechanics: One person suggested looking at keeping the pump submerged. They said this could help make the new building smaller. This individual said the existing vault could continue to house the pump, while the electrical system is moved above ground. The person said that a vertical shaft pump can be very loud, but there are ways if done right for it to be quiet.

Safety Concerns: A few of those interviewed were concerned about the use of liquid chlorine at the site. Many thought use of this chemical was too close to homes. One person researched what various fire codes call for in this situation; many codes call for chlorine to be used and stored at least 200 feet from houses. However, Utah code doesn't include this guidance. This person also contacted the Utah Division of Water Resources and found they didn't have any codes that apply to this situation. This individual said that incidents do happen and to just look at the situations that have happened recently in Sandy and Pleasant Grove. One suggested solution is to keep a smaller amount of chlorine onsite or, better still, to add it at another site. Another person said SLCDPU must come up with a way to mitigate potential chlorine incidents and plan for the worst-case scenario. The individual also said SLCDPU must make a stronger case for why chlorine is needed and why it couldn't be added elsewhere in SLCDPU's system. Many wondered if this function could be moved away from Canyon Road, perhaps to a lower park.

Noise Concerns: A couple of people stated that they are worried, even suspicious, that SLCDPU will not be able to adequately control noise coming from the upgraded well. They fear the project could create a constant electrical humming sound in their quiet residential neighborhood. Some mentioned that including a water feature could help mask the sound.

Aesthetics: All of those interviewed want the building to reflect the historic neighborhood's character and aesthetics. One person suggested the building should have a pitched roof, simple brick work, simple windows and appear to have been built in the 1930s or '40s. Many said they want the building to look like a period pump house similar to those in Red Butte and Big Cottonwood canyons. Evan Smith has pulled together some images (displayed below) he thinks captures this. One person said that reusing salvaged brick would be a great way to capture this look. Many expressed the building should be a special design that is timeless and reflective of the historic park. Several others, though, said the building shouldn't pretend to be something it isn't. One person said it should have something artful, such as a fountain or artistic edifice. Another person said that an art feature could include a historical plaque and moving water. This person recommended that a sophisticated, artistic designer needs to work on it.

They all said they want something that feels like it belongs there, except for one person who doesn't want a building there at all. People reported that they don't want the structure to have wide eaves that could attract people experiencing homelessness to sleep under them. Nor do they want river rocks used in the design because they are out of character with the area or screens with vegetation growing on them because the site gets too much sun and heat for them to thrive. One person said the new building shouldn't look like a house, while another expressed concerns about including water features that might attract people to bathe in them.

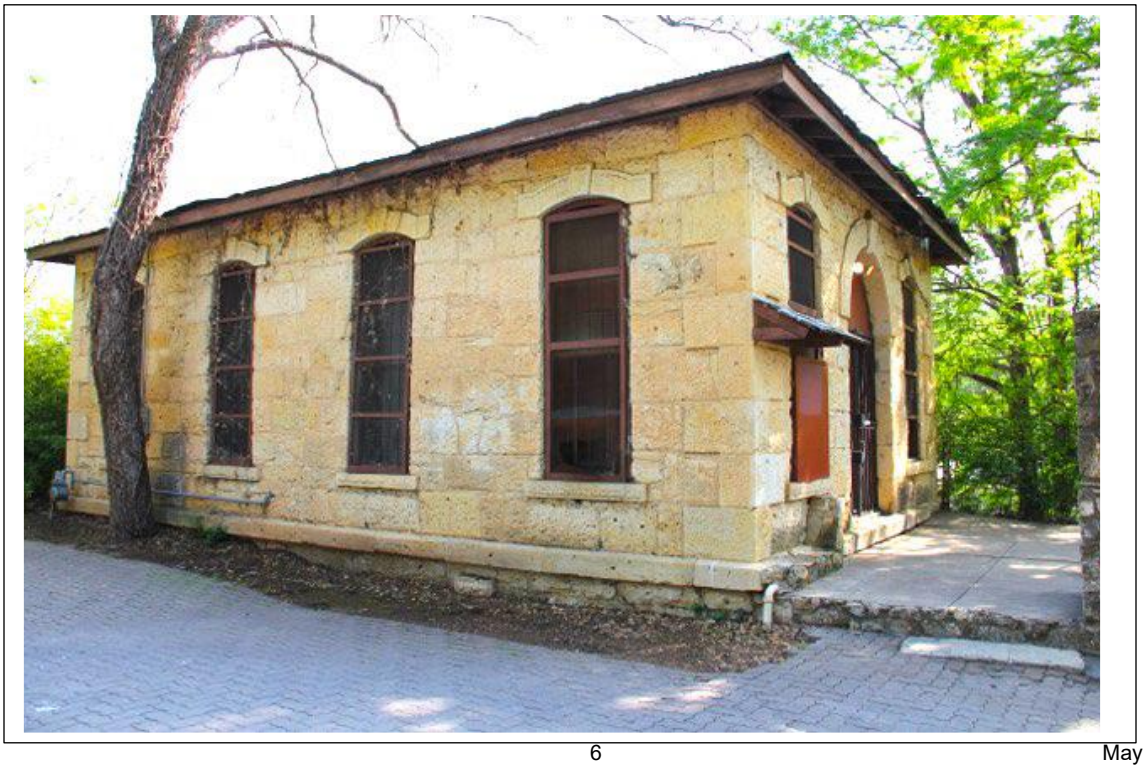
City Council: A couple of people cited the City Council's expectations for SLCDPU to evaluate the project's size, appearance and potential impacts, such as noise. They said that further public engagement must clearly identify and stay true to what the City Council expects SLCDPU to do.

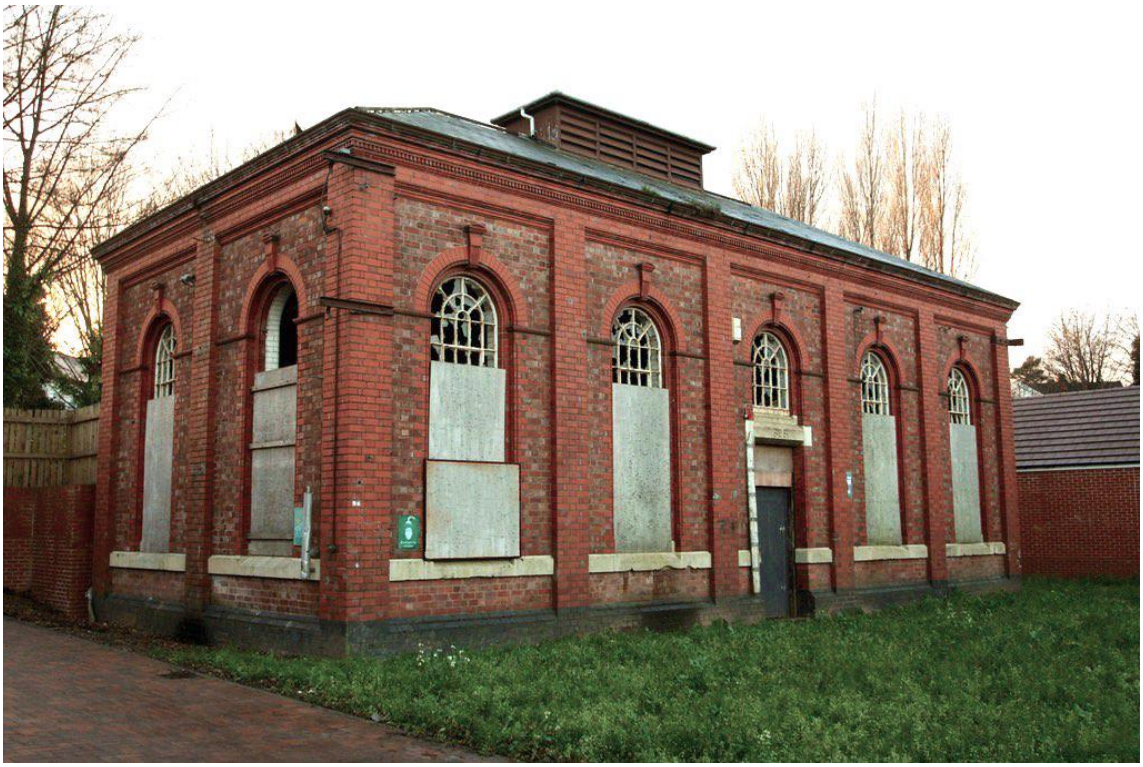
The Process: All interviewees said they want continued involvement to find a solution. They support having a series of facilitated meetings with concerned parties. One person suggested that Dr. Steven Barlett, a University of Utah civil and environmental engineering professor, provide oversight in the mechanical design of the structure. Two people said the process should be focused and time-limited to help ensure a swift (but well-vetted) resolution. They said they have already spent much more time on the issue than expected; they want it to be as efficient as possible.

Facilitator: When asked if they had any thoughts about the four facilitators being considered, no one expressed concerns or strong opinions about any of them. They all agreed that it was important for the facilitator to be skilled and well-prepared, with a solid understanding of the project, residents' concerns and the pros and cons of each.

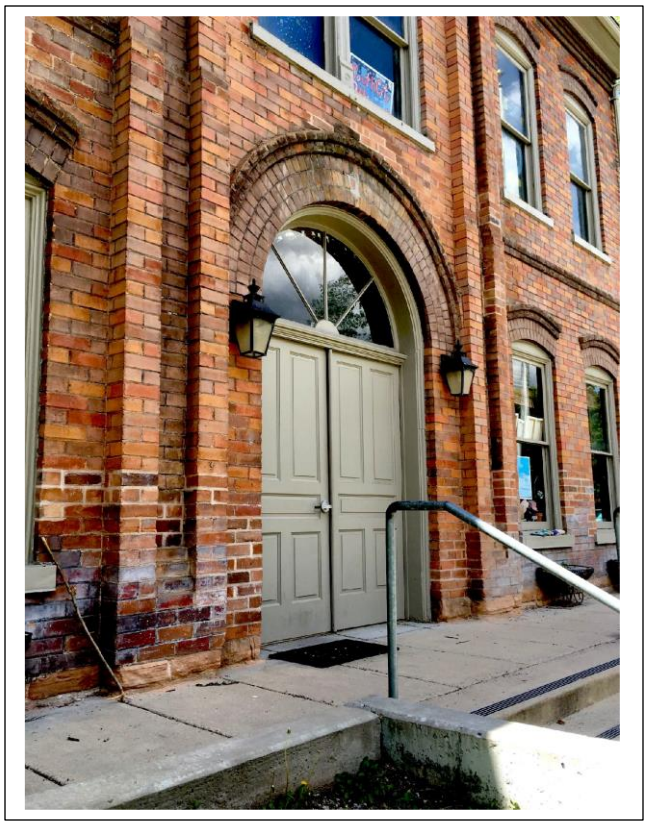
PUMP HOUSE IMAGES:

The following images were assembled by Evan Smith to provide design ideas for a new 4th Avenue Well pump house.






HALL
V.F.E.A.

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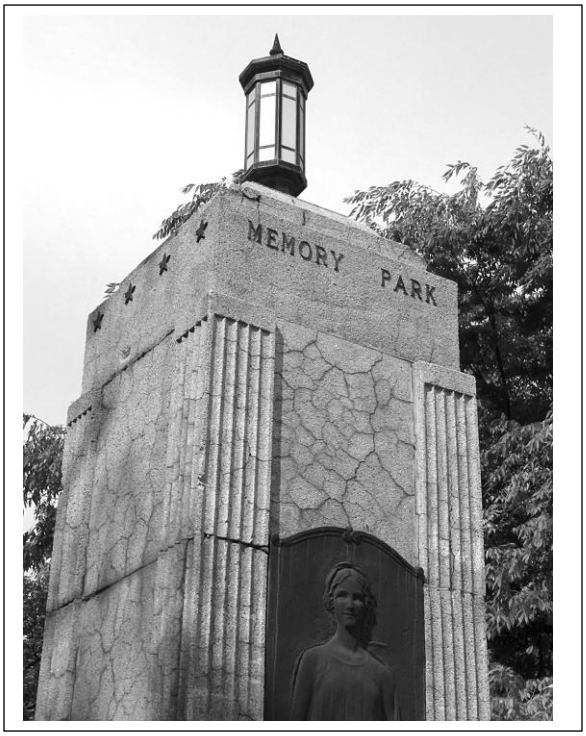

MEMORY PARK

MEETING SUMMARY

Salt Lake City Department of Public Utilities 4th Avenue Well Facilitated Working Group Meeting
Tuesday, October 22, 2019, 6:30 pm
Memorial House at Memory Grove

INTRODUCTION

Salt Lake City Department of Public Utilities (SLCDPU) held a facilitated working group meeting with residents who live near the proposed 4th Avenue well project to kickstart a process to help identify a workable solution for the project. The meeting provided an opportunity to review the purpose and need of the project, discuss residents' concerns and solutions, and review SLCDPU most recent proposals. The facilitated framework enabled frank discussion and information-sharing by both SLCDPU and residents. Participants discussed pros and cons of various proposed solutions and if additional information is required. The agenda and meeting materials are attached.

ACTION ITEMS

SLCDPU officials left the meeting with numerous suggestions, questions and requests from residents, listed below:

- Work with Planning, Historic Landmark Committee, and City Council staff to gather all public comments made about the project to-date.
- Obtain from Winston and Katie the park usage survey they mentioned.
- Provide residents with information on if City officials will restrict SLCDPU to a limited area of the park to avoid future loss of green space.
- Provide residents with information on if the project will affect property values.
- Provide residents and specifically area resident Alan Walker with information on why there isn't room for an electrical submersible pump.
- Provide residents with information on why the current vault is not safe or large enough.
- Provide residents with safety facts and the worst-case scenario for using a tablet calcium. hypochlorite disinfection system.
- Develop a worst-case scenario evacuation plan.
- Provide residents with an evaluation for moving the disinfection system to another site.
- Provide residents with the building height needs and when the building design work begins look at creative solutions to reduce the impact.
- Determine the need for a driveway.
- Provide residents with upkeep, maintenance and monitoring plan.
- Provide residents with information on if the project will affect area parking.
- Provide residents with current noise and vibration levels at the site.
- Report to residents if the project will trigger tree removal to assure the site is clearly visible and free of obstructions.
- Provide residents with evaluation information on moving the well to another location, such as feasibility, costs and project elements. Perhaps present a 30 percent design.
- Provide residents with information about the importance and value of the well, as well as how the distribution system works.
- Provide a meeting summary.
- Schedule next meeting.

DISCUSSION POINTS

Compilation of Public Comments: Residents noted that not all public comments to-date are included in an interview findings report dated September 2019 and prepared by Wilkinson Ferrari & Co. to better understand the situation and to develop an engagement framework and facilitated working group process. Residents were concerned that comments not included might be lost. They would like SLCDPU to gather and summarize all public comments made to the Planning Commission, Historic Landmark Commission, City Council, and at a public open house. They also mentioned that the neighborhood conducted a park usage survey and they would like it included in the summary of comments. Council Member Wharton commented that all City Council Members will receive the compilation of comments.

Quality of Area: Meeting participants discussed how to "maintain the area's integrity" and whether residents care more about the area than SLCDPU/City government does. Some thought that was the case and others disagreed. Comments were also made about how the area is peaceful, accessible and priceless, and there is a desire to preserve as much green space as possible. Questions were asked about whether the City could restrict an area for the well purpose to avoid future creep into the park in future years. The question was also raised if the project could affect property values.

Building Size & Site Design: Most of the meeting's discussion was centered around the size of the proposed building and the site designs. SLCDPU reported that they had reduced the building footprint to 487 square feet or 587 square feet with an electrical enclosure. That's about a quarter the size of the original, 2,214-square-foot proposal, which included a 971-square-foot building and fenced area for a generator. SLCDPU officials reviewed what they explored to reduce the size. Residents said they appreciated the effort by SLCDPU to reduce the size of the building, but they still have questions and would like to see things explored further. Some residents stated they will never like the project.

- ***Submersible Pump:*** SLCDPU reported they had evaluated using an electrical submersible pump but found there is not enough room because of the need to line the well's structure to extend its life. Residents questioned this and asked to have area resident Alan Walker review this information. They suggested it might be necessary to hire a third-party engineer to review this and (perhaps) other project elements. They would like creative solutions to be explored, such as a larger and safer underground vault that could accommodate a submersible pump.

- ***Vault Safety:*** It was mentioned that someone had looked into the vault and, to them, it appears to be safe, that there is enough space to do what needs to be done and that the well should be kept as is. Council Member Wharton commented about the City's obligation to provide safe and reliable drinking water, the importance of worker safety and the City's liability.

- ***Tablet Disinfection System:*** There was considerable discussion around SLCDPU's solution to install a tablet calcium hypochlorite disinfection system that allows for a smaller building size and addresses residents' concerns about safety. There was a discussion about how many tablets would be located on site (one to two five-gallon buckets), how SLCDPU employees would bring the buckets there a couple times a week, and how employees would load the tablets one at a time manually into the system. Questions were raised about whether gas would be created when water hit the tablets, and SLCDPU responded that no gas would be formed. SLCDPU reported that the only way for gas to form is if acid was put on the tablets and that acid was not part of the process and would not be in the pump house. That led to a discussion about potential tampering and the security of the pump house; residents expressed concerns about potential consequences of a worst-case scenario. SLCDPU explained that this type of system is

commonly and safely used at swimming pools. Some attendees expressed concern about possible odors from the tablets. SLCDPU explained that the tablets emit very little odor, and that they would be contained in closed buckets except for that short moment when they are taken from a bucket and installed in the closed disinfection system, which would be enclosed in the proposed building. SLCDPU mentioned they are also exploring installing a carbon-scrubbing ventilation system to filter the air. Residents requested that odor be part of the worst-case scenario report. Residents then asked about the need for an evacuation plan. It was asked if SLCDPU would look at what would be required to move the disinfection system to another site, suggesting that the cost could be borne by City taxpayers and/or SLCDPU ratepayers. The request was made to SLCDPU about the desire to see a 30 percent design for this.

- ***Building Height:*** The group discussed how tall the building might need to be and what effect it might have on the neighborhood. SLCDPU officials said height requirements haven't been determined yet, but this information would be reported to residents when available. Residents expressed concerns about the sight lines and how they might not be able to see their neighbors across the park anymore; they encouraged SLCDPU to consider creative design solutions, such as varying the height and roofline of the building.

- ***Driveway:*** The group discussed if there is a need for a driveway. SLCDPU said they would look into this.

- ***Site Maintenance:*** Residents expressed how they want to make sure the site is clean and safe.

- ***Area Parking:*** Residents were interested in knowing if the project would affect parking in the area.

Building Aesthetics:
SLCDPU reported they had hired CRSA Architects and noted that designs must meet the goals of Salt Lake City Planning and Historic Landmark Commission, and also address community concerns. Residents asked SLCDPU to work with state decision-making authorities to ensure the project is approved as it is presented to residents.

Noise:
SLCDPU reported that the County's regulation for noise threshold is 50 decibels or less and that for this project they will try to get it as low as possible and 30 decibels may be obtainable. Residents asked about current noise and vibration levels and if vibrations would be felt after renovation. SLCDPU reported that vibrations shouldn't occur unless something is not working correctly, and that any malfunction would be addressed as quickly as possible.

Trees:
SLCDPU officials reported they met with the City's Urban Forester and had them conduct an air-knife assessment of tree roots in the area. Residents expressed concern that the proposed building might trigger a need to clear out the blocked site lines so more trees would be eliminated as what is happening in Pioneer Park. Residents also wondered if changed sightlines in the park would increase the risk for crime.

Project Need:

There was discussion about decisions being made by SLCDPU for economic reasons and not because of technical issues. It was voiced that SLCDPU decided the cost was too high to move the well but didn't consider that the existing site is compromised by seismic, flooding and fire risks. It was asked if SLCDPU would explore the feasibility and cost of moving the well. It was suggested that, if moving the well is possible and is a desirable option that perhaps the City could pay for it by bonding or charging higher user fees. SLCDPU explained that the costs to move the well would be considerable because it would require reconfiguring others aspects of the area's water system that is currently configured for that well site, along with other expenses like purchasing land and water rights, and that a new well might not be as productive as the existing well. It was voiced that the well is not critical to the system; SLCDPU explained how the well is an integral part of the system that serves downtown and much of the surrounding area. SLCDPU offered to provide more information about this at a future meeting, or directly to the resident who requested it.

Next Meeting:
The group discussed meeting again. There is a desire that the next meeting be held in 2-3 weeks, at the same time (6:30 pm) and at the same location (Memorial House). There was also some discussion about providing information if appropriate through email exchanges and creating a meeting summary.

ATTENDEES

Area Residents

- Robin Carbaugh
- Carlisle Carroll
- Phil Carroll
- Kurt Fisher
- Jill Van Langeveld
- James Livingston
- Lisa Livingston
- Linnea Noyes
- Steve Mason
- Craig Ogan
- Cecile Paskett
- Katie Pugh
- John Russell
- Leslie Russell
- Winston Seiler
- Evan Smith
- Vickey Walker

Salt Lake City

- Chris Wharton, Salt Lake City Council Member, District 3
- Laura Briefer, Director, Salt Lake City Department of Public Utilities
- Jesse Stewart, Deputy Director, Salt Lake City Department of Public Utilities
- Holly Mullen, Communications & Engagement Manager, Salt Lake City Department of Public Utilities
- Jeff Grimsdell, Water Distribution System Manager, Salt Lake City
- Cory Young, Sanitation Program Manager, Salt Lake City

- Kelsey Lindquist, Senior Planner, Salt Lake City
- Austin Kimmel, Liasion, Salt Lake City Council

Consultants

- Kirk Bagley, Principal, Bowen Collins & Associates
- Cindy Gubler, Partner, Wilkinson Ferrari & Co.
- Mimi Charles, Public Involvement Manager, Wilkinson Ferrari & Co.
- Alexis Cairo, Facilitator, Wilkinson Ferrari & Co.

APPENDIX

MEETING AGENDA

6:30 – 6:40 Welcome & Remarks

- Welcome everyone and review the purpose of the meeting – Cindy Gubler, Partner, Wilkinson Ferrari & Co.
- Salt Lake City Department of Public Utilities commitment to the city and community — Laura Briefer, Director, Salt Lake City Department of Public Utilities
- Introduce facilitator Alexis Cairo – Cindy Gubler, Partner, Wilkinson Ferrari & Co.

6:40 – 6:55 Goals & Steps

- Review the goal of the working group meetings — Alexis Cairo, Facilitator
- Review the steps to accomplish the working group goal and what is hoped to be accomplished during this first meeting — Alexis Cairo, Facilitator
- Review the engagement timeline — Alexis Cairo, Facilitator

6:55 – 7:25 Identify & Capture Concerns & Solutions To-Date

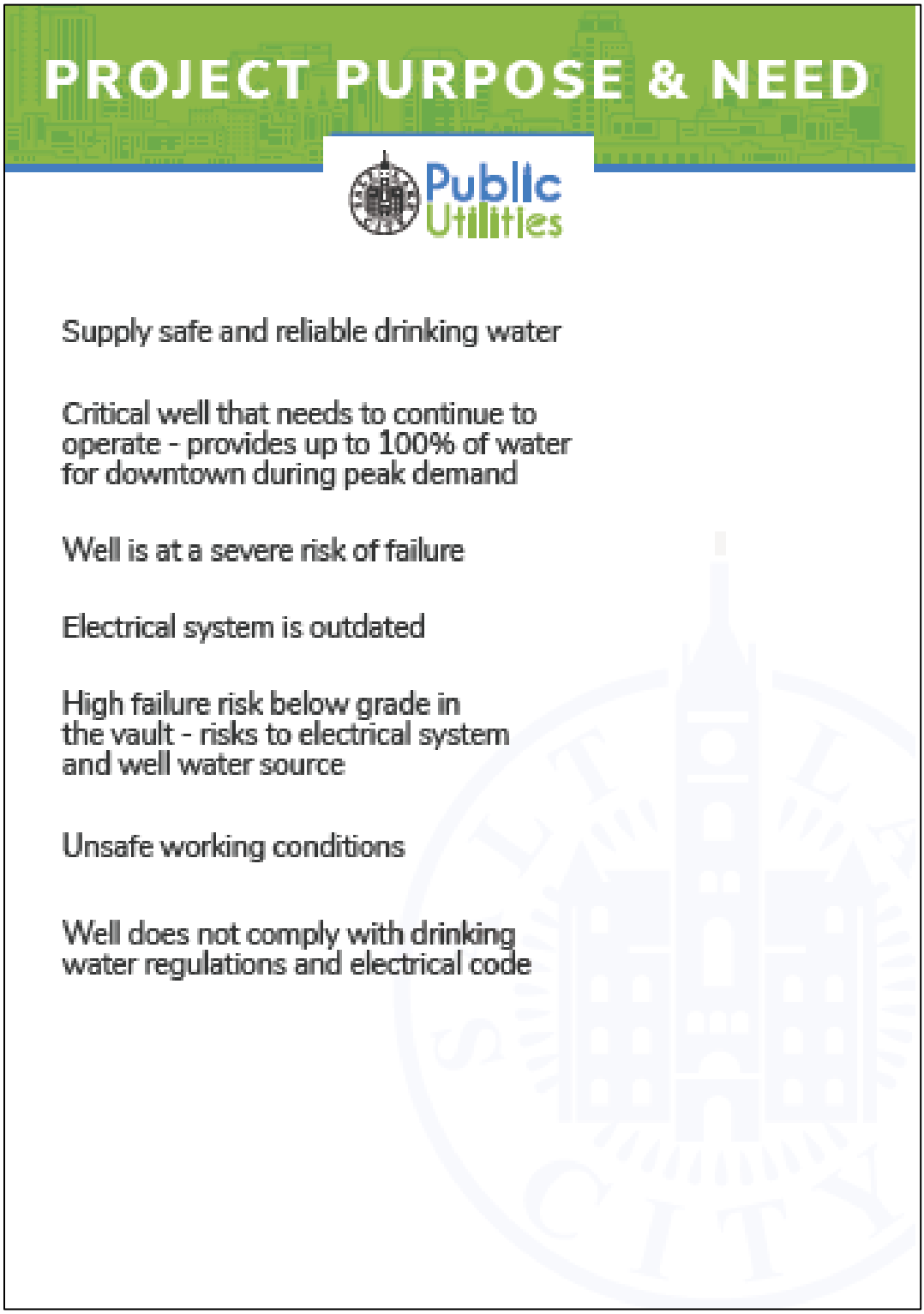
- Post and acknowledge the project's purpose and need, and the proposed project — Alexis Cairo, Facilitator
- Review residents' concerns raised during interview process and discussion to determine if new concerns should be added – Cindy Gubler, Partner, Wilkinson Ferrari & Co., Alexis Cairo, Facilitator & Attendees
- Review residents' solutions provided during interview process and discussion to determine if new solutions should be added – Cindy Gubler, Partner, Wilkinson Ferrari & Co., Alexis Cairo, Facilitator & Attendees
- Review Salt Lake City Department of Public Utilities solutions explored recently and discussion — Jesse Stewart, Deputy Director, Salt Lake City Department of Public Utilities, Alexis Cairo, Facilitator & Attendees

7:25 – 8:15 Group Solution Discussion

- Discussion to determine what information is still needed, where there is agreement, if there are solutions that can be pursued, identify challenges and disagreements — Alexis Cairo, Facilitator & Attendees

8:15 – 8:30 Next Meeting Discussion & Wrap Up

- Discussion to identify focus of the next meeting and when the group can be ready to meet again — Alexis Cairo, Facilitator & Attendees
- Wrap up and thank you — Laura Briefer, Director, Salt Lake City Department of Public Utilities


PROJECT PURPOSE & NEED
Public Utilities
Supply safe and reliable drinking water
Critical well that needs to continue to operate - provides up to 100% of water for downtown during peak demand
Well is at a severe risk of failure
Electrical system is outdated
High failure risk below grade in the vault - risks to electrical system and well water source
Unsafe working conditions
Well does not comply with drinking water regulations and electrical code

PROPOSED PROJECT

Construct well head and electrical system above ground at existing well location

Include a disinfection system

Construct a secure building for the above ground infrastructure

Provide for backup power supply

Meet maintenance and operational needs and regulatory requirements

Obtain approval from DEQ, City Planning Commission and the Historic Landmarks Commission

RESIDENTS' CONCERNS

The Area's Quality

- Site is a beautiful, valued, historic place
- Project has the potential to dramatically alter it

Building Size

- Building size should be as small as possible
- Don't want it to be the dominant feature in the park

Building Aesthetics

- Building should reflect historic neighborhood's character and aesthetics
- Building should feel like it belongs there
- Building should be a special design that is timeless
- Building should not look too generic; it should not look like a Starbuck's coffee shop; the building should not look like a house
- Building should not have eves so homeless people don't sleep under it; if it has a water feature, it should be designed so people don't bathe in it
- Building should not have screens for vegetation to grow on it – it doesn't work

Noise

- Fear constant electrical humming sound

Safety

- Concerned about liquid chlorine at the site

Trees

- Want trees near the site preserved

Smell

- Concerned about smell

Project Need

- Question if the project is not needed or if it can be left alone
- Want to know if the well can be placed in another location

RESIDENTS' SOLUTIONS

The Area's Quality

- Maintain area's integrity

Building Size

- Keep the pump submerged in the vault and move only the electrical above ground

Building Aesthetics

- Building should look like it was built in the 1930's or 40's
- Building could look like a period pump house
- Building could use salvaged brick to make it look older
- Building could be artful and include a water feature
- Building could include a historical plaque
- Materials inventory points to the use of stone and/or stucco/cementitious materials

Noise

- Building could include a water feature to mask the sound

Safety

- Keep smaller amounts of liquid chlorine on site
- Move the liquid chlorine to another location

Trees

Smell

Project Need

- Doing nothing should be an alternative
- Move the well to another location
- Monitor the vault with sensors and cameras

SLCDPU SOLUTIONS

The Area's Quality

- Maintain area's integrity

Building Size

- Identified ways to reduce the size – original building footprint was 971 square feet with a fenced area and generator that made the entire site 2,214 square feet; with identified solutions the building is now 474 square feet or 587 square feet with electrical enclosure.

Previous adjustments to size as of June 2019

- Removal of on-site electrical generator; and utilize a mobile generator
- Removal of site security fencing
- Removal of fluoride system

New adjustments to size to-date

- Usage of a well water-cooled system to reduce HVAC footprint
- Utilize a vaulted flow meter
- Utilize a tablet calcium hypochlorite disinfection system
- Other items to reduce size include removing the safety shower, reducing outside piping by lowering the pump to waste piping, reconfigurating electrical gear to minimize space
- Evaluated an electrical submersible pump: given the well constraints and electrical demand determined that there is not enough room within the well

Building Aesthetics

- Hired CRSA Architects 2018
- Must meet goals of SLC Planning and Historic Landmark Commission, and address community concerns

Noise

- Being designed with noise mitigation
- County regulation is less than 50 decibels; designing to be at around 30

Safety

- Evaluated moving disinfection system to another location
- Evaluating tablet calcium hypochlorite
- Designing usage of remote sensors and alarms

Trees

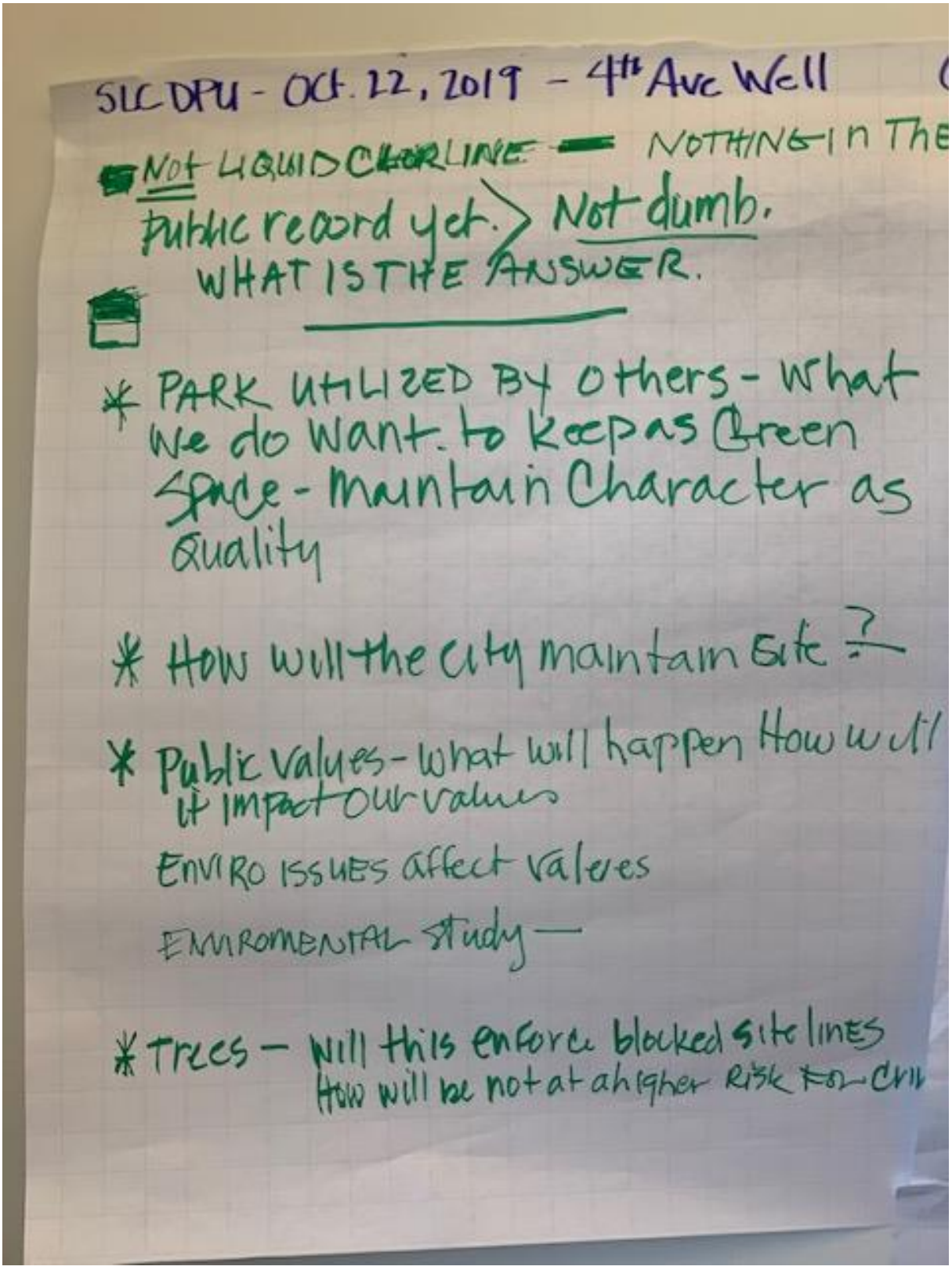
- Met with City Urban Forester to assess tree conditions
- City Urban Forester performed air-knife assessment of roots
- Working to limit number of trees impacted

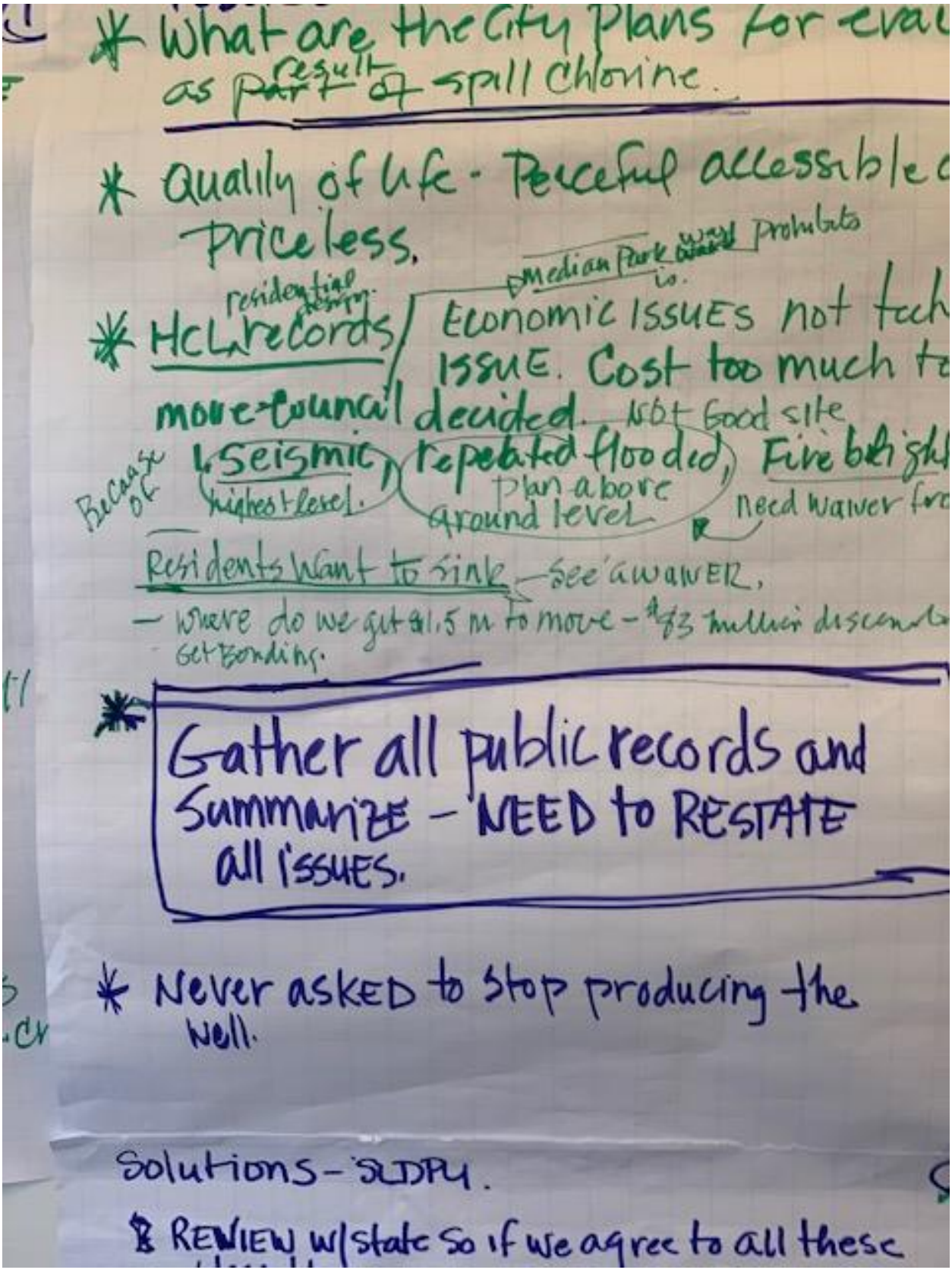
Smell

- Evaluating tablet calcium hypochlorite
- Exploring carbon filters for air ventilation

Project Need

- Doing nothing is not an option; not compliant with state regulations and doesn't meet SLCDPU obligations
- Moving the well is not a viable option; it's a critical piece of our water system - another location may not have same performance
- Plan to use remote sensors and alarms but they will not replace the need for the project


SLC DPU - Oct. 22, 2019 - 4th Ave Well
Not LIQUID CHLORINE — NOTHING in The
public record yet. > Not dumb.
WHAT IS THE ANSWER.
* PARK UTILIZED BY Others - What We do Want to keep as Green Space - Maintain Character as Quality
* How will the city maintain Site ?
* Public values - what will happen How will it impact our values
ENVIRO ISSUES affect values
ENVIROMENTAL Study —
* Trees — Will this enforce blocked site lines
How will be not at a higher Risk For Chil


* What are the City Plans for eva
as result of spill Chlorine.
* Quality of life - Peaceful accessible
priceless.
* HCL records / Economic ISSUES not tech
residential density
Median Park would prohibits
ISSUE. Cost too much to
move Council decided. Not Good site
Because of 1. seismic highest level. repeated flooded, Fire bright
Plan above ground level
need waiver for
Residents want to sink - see a waiver,
- where do we get $1.5 M to move - 1/3 million discard
Get bonding.
* Gather all public records and Summarize - NEED to RESTATE all ISSUES.
* Never asked to stop producing the well.
Solutions - SLIDE.
& REVIEW w/state so if we agree to all these

* Looked into well - its safe, there is space - they can get down there. Keep well as is. (3)

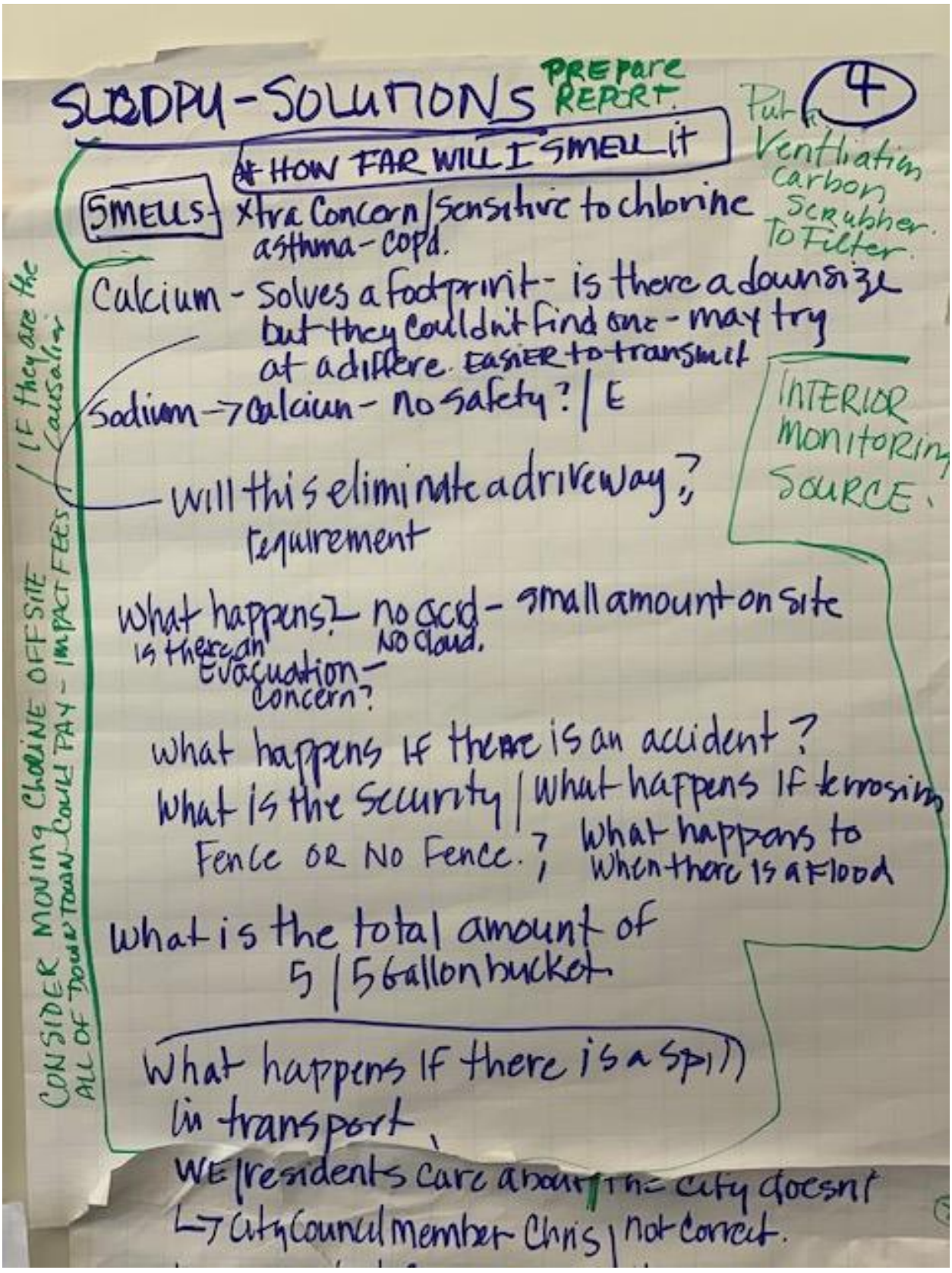
- Get rid of survey - 10 people it diminish the accurate.

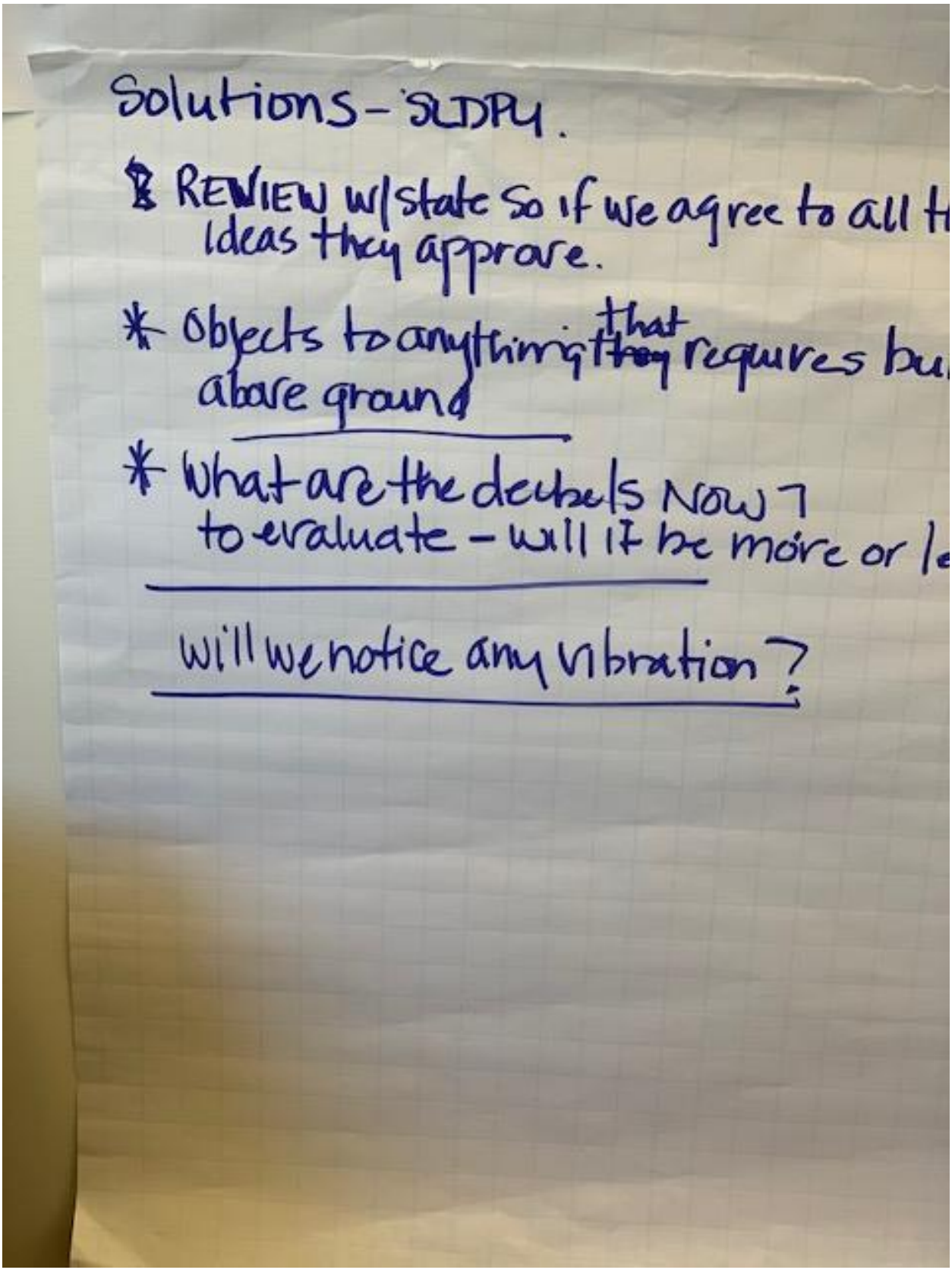
Summarizes all the Public Comments
When they were made / By whom / By when.

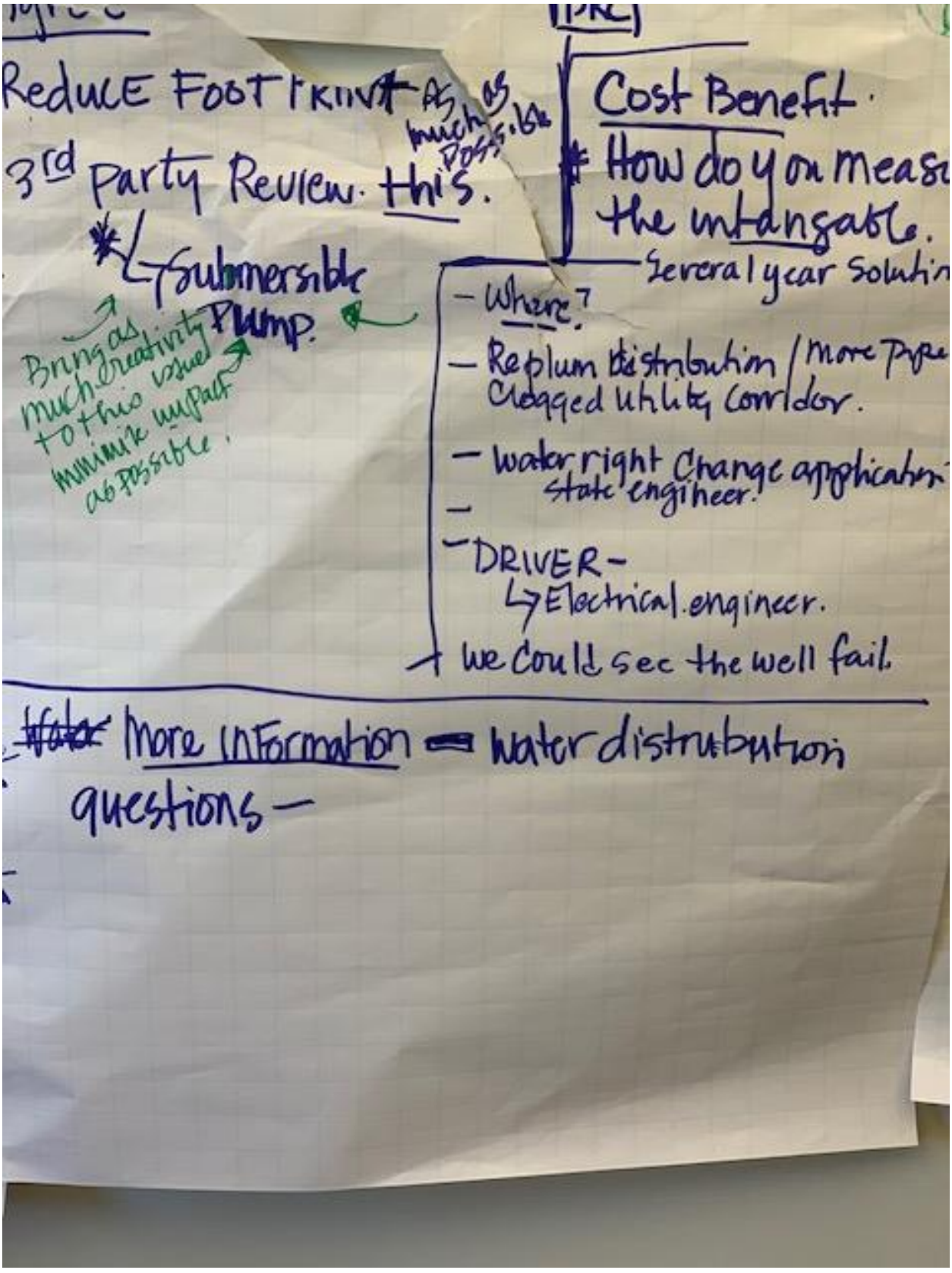
- Include City Cncil Comments
- Include Historical Commission
- Oral comments / send in writing.
- Park attendees - survey - Winston -
- Review Past
- HCL

* WE NEED CREATIVE $OLUTIONS FOR A LARGER (SAFER) UNDERGROUND VAULT.

BRC


SLUDPY-SOLUTIONS
PREPARE REPORT.
4
Put in Ventilation carbon Scrubber. To Filter.
HOW FAR WILL I SMELL it
SMELLS
xtra Concern/Sensitive to chlorine asthma-COPD.
Calcium - solves a footprint - is there a downsize but they couldn't find one - may try at a differe. EASIER to transmit
Sodium → Calcium - no safety? / E
INTERIOR MONITORING SOURCE.
Will this eliminate a driveway? requirement
What happens? no acid - small amount on site
Is there an Evacuation Concern?
NO cloud.
what happens if there is an accident?
What is the security / What happens if terrosism
Fence OR No Fence.? What happens to When there is a Flood
What is the total amount of 5/5 gallon bucket
What happens if there is a Spill in transport.
WE/residents care about the city doesn't
↳ City Council member Chris / not correct.
CONSIDER MOVING CHLORINE OFF SITE ALL OF TOWN COULD PAY - IMPACT FEES
/ If they are the Causation


Solutions - SLIDPY.
* REVIEW w/state so if we agree to all t
ideas they approve.
* Objects to anything that requires bu
above ground
* What are the decibels NOW ?
to evaluate - will it be more or le
will we notice any vibration?


Reduce Footprint as much as possible
3rd Party Review. this.
Submersible Pump.
Bring as much creativity to this issue minimize impact as possible.
Cost Benefit.
How do you measure the intangable.
several year solution
- Where?
- Replum distribution / more pipe
Clogged utility corridor.
- water right Change application
state engineer.
-
- DRIVER -
Electrical engineer.
we could see the well fail.
More information = water distribution
questions -

in transport.
WE residents care about the city doesn't
↳ City Council Member Chris | not correct.
Do We need define integretity
? What does integrity mean — ?

Building Size: Were glad the building
But dont want to
Submersability issue - submersible and you
vicky/allen. want to store chlorine.

we may never like this — its a given.

Provide more info on submersable issue.
Want a third party to assess.
Political economic.

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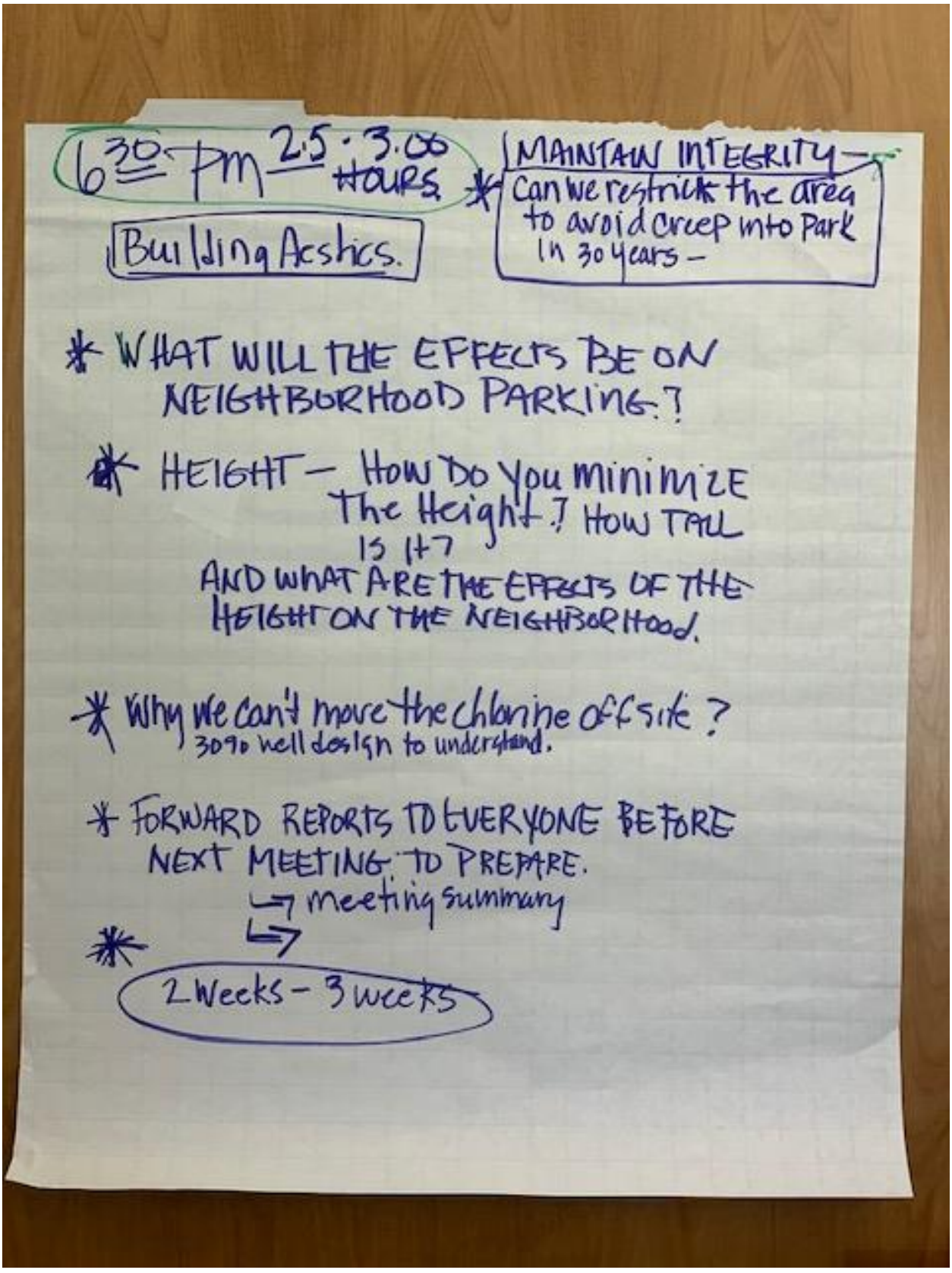
what about the height? will it be diminished?
driver - The height 14' HV hanging from ceiling
Because of site line ~
Will Block site line.

Ag 14' is daunting.


6:30 PM 2.5 - 3.00 HOURS
Building Aesthics.
MAINTAIN INTEGRITY —
Can we restrict the area to avoid creep into Park in 30 years —
* WHAT WILL THE EFFECTS BE ON NEIGHBORHOOD PARKING?
* HEIGHT — How Do You minimize The Height? How TALL IS IT?
AND WHAT ARE THE EFFECTS OF THE HEIGHT ON THE NEIGHBORHOOD.
* Why we can't move the chlorine offsite?
309o well design to understand.
* FORWARD REPORTS TO EVERYONE BEFORE NEXT MEETING TO PREPARE.
↳ meeting summary
↳
*
2 Weeks - 3 weeks

CITIZEN-NEIGHBORHOOD VOLUNTEER MEETING NOTES & COMMENTS

The following should be considered an overview and not "minutes" or the official record of a meeting held October 22, 2019 in Salt Lake City, on the topic of the DPU's 4th Avenue and Canyon Road water project. It was prepared by a Citizen-Neighborhood Volunteer.

Agenda from DPU	Comments, Discussion and Action Items
6:30 – 6:40 Welcome & Remarks • Welcome everyone and review the purpose of the meeting – Cindy Gubler, Partner, Wilkinson Ferrari & Co. • Salt Lake City Department of Public Utilities commitment to the city and community — Laura Briefer, Director, Salt Lake City Department of Public Utilities Introduce facilitator Alexis Cairo – Cindy Gubler, Partner, Wilkinson Ferrari & Co	Meeting was convened 630 PM, 10/22/2019 at Garden Room of Memorial House in Memory Grove **Attending** **Citizens:** James Livingston, Lisa Livingston, Cecile Paskett, Kurt Fisher, John Russell, Leslie Russell, Winston Sellier, Linnea Noyes, Craig Ogan, Jill Van Langeveld, Carlisle Carroll, Phil Carroll, Vickey Walker **SLC Elected Appointed Officials**: Chris Wharton (councilmember), Austin Kimmel (council staff); Laura Briefer, Jesse Stewart, Brad Stewart, Jeff ?????, Holly Mullen from DPU; Kelsey Lindquist, SLC Planning **Bowen Collins:** Kirk Bagley **Wilkinson et al**: Emily Charles, Cindy Gubler and Alexis Cairo DPU Director Laura Briefer welcomed the group, said DPU was here to listen and hit the reset button on community engagement. She described the importance of the well in the City's system, the need to upgrade for worker safety and continued viability of the well. Citizens replied that they have advocated fixing the well, making it safe for workers and wanted off-site, downstream chlorination and submersible pump to be seriously considered. It was conceded that off-site, downstream chlorination and submersible pumps would add expense. It

	was conceded that relocation was expensive and not as legally amenable as the plans under discussion.
6:40 – 6:55 Goals & Steps • Review the goal of the working group meetings — Alexis Cairo, Facilitator • Review the steps to accomplish the working group goal and what is hoped to be accomplished during this first meeting — Alexis Cairo, Facilitator • Review the engagement timeline — Alexis Cairo, Facilitator	Alexis Cairo. Expressed the goal of the engagement is to create a workable solution and remove Citizens objections. A secondary goal was for Citizens to, "Know that you've been heard". Citizens replied that the 09/25/2019 DPU memorandum to the City council suggested the solutions have already been determined. That a smaller building with above ground pumps and on-site chlorination has been decided. The Citizens recognized that DPU has the authority and funding to move forward with the published plan.
6:55 – 7:25 Identify & Capture Concerns & Solutions To-Date • Post and acknowledge the project's purpose and need, and the proposed project — Alexis Cairo, Facilitator • Review residents' concerns raised during interview process and discussion to determine if new concerns should be added – Cindy Gubler, Partner, Wilkinson Ferrari & Co., Alexis Cairo, Facilitator & Attendees • Review residents' solutions provided during interview process and discussion to determine if new solutions should be added – Cindy Gubler, Partner, Wilkinson Ferrari & Co., Alexis Cairo, Facilitator & Attendees • Review Salt Lake City Department of Public Utilities solutions explored recently and discussion — Jesse Stewart, Deputy Director, Salt Lake City	Alexis Cairo reviewed WFC 10-person survey and pointed out the number on concern expressed was maintaining "the integrity of the area". Integrity was not defined and all agreed it should be defined. Citizens pointed out that the documentary predicate for the meeting was not complete. • It did not contain any content analysis of the past 16 months of Citizen comment and testimony to City Council and comments and questions posted on DPU's web site page dedicated to the 4th Avenue Project: (www.slc.gov/utilities/fourth-avenue-well-project/). • Citizens remarked that the notion of and outside engineering firm review suggested in City Council Budget resolution was dismissed by DPU as they were not clear of the review requirements. • Alexis Cairo requested the correct name and contact information Steven F. Bartlett Ph.D., P.E. Associate Chair Department of Civil and Environmental Engineering University of Utah, Asia Campus 119 Songdo Moonwha-Ro, Yeonsu-Gu Incheon, Korea 21985 bartlett@civil.utah.edu T +82.32.626.6146 (office) M 1.435.841.9837 (mobile) • An informal survey of Park users has been taken and will be provided to facilitator.

Department of Public Utilities, Alexis Cairo, Facilitator & Attendees	**Will or Skill:** A discussion around the need to build a utility building versus "fixing up" exists, centered on: • The density of building downtown driving the need to build a building and the Citizens suggestion that impact fees fund any over budget up grades. • A Citizen claims the utility building in a dangerous flood and seismic zone and is subject to jeopardy in one of those catastrophes. **DPU didn't dispute or discuss this assertion.** • DPU and BCA agreed with Citizen question, that with waivers and enough money they could engineer a pump to meet the "fix the well, make the well safe, use submersible pumps and downstream disinfection" desires of Citizens. • Citizens assert that the decision is not one of engineering but one of Money and Political Will. Council Member Wharton indicated there was not political support of big changes to the DPU plan for the well, especially moving the well. Other Concerns which went undiscussed and unacknowledged (with the exception of HazMat and Homeland Security issues): • Citizens expressed concerns: • Maintaining the building and landscape is a concern the site would come to resemble the DeSoto Street facility which neighbors consider an eye sore. • Increased crime due to diminished sightlines. • Loss of greenspace is an ever more crowded city and the loss of a scenic gateway to Memory Grove and City Creek Canyon. • "HazMat" issues relating to malfunction. • Homeland Security Issues (applying acid to the chlorine to cause a cloud. Jesse Stewart discussed the current plan and presented:

- Site map showing a building at 474 sq/ft which is 29x16x14 feet. With the electrical enclosure in the back, that would be 587 feet which would be 37x16.
- At 587 sq/ft, this is about 20% less than the last "designed" iteration proposed by DPU and CRSA.
- HVAC will be cooled by well water eliminating size and noise.
- Flow meter will be in the underground vault.
- Building will be a "hardened" building but have no fence.
- Described previous deleting of on-site emergency generator from site plan.
- Explained the smaller foot print will protect trees.
- Revealed a different mode of disinfection, using a pelletized chlorine which will be hydrated on site.
- Asserts noise level will be at SL county regulation of 50 dB or less. (stream ambient noise level is estimated at 30 dB).
- It will require daily visit to the site for replenishment when operation. He claimed the possibility of spill and odor is very small, but if found to be noxious, DPU would install carbon scrubbers on the vents.
- He and the BCA associated engineer indicated re-sleeving the well would make it impossible to use a submersible pump due to the belief that an electrical upgrade to 480-volts is necessary.
- Jesse Steward did not answer the feasibility of downstream chlorination. He answered was that the well needs to be chlorinated at the point of it joining the water system (the well site).
- It was pointed out this is not what they now do or have ever done.
- Laura Briefer said consideration to moving the chlorination/pump to a nearby home was considered, but that the "current rights of way were already too full". Citizens requested a full discussion as to how/why lines can be "too full".

Electrical:

- Laura Briefer discussed need to upgrade electrical. She stated that RMPC will not support the current 2300 volt electrical set up with the new requirements and said there was a need to move to 480-volt system to support an above ground 480-volt above ground pump.
- Citizens disputed this assertion based on "informal" conversations with RMPC by an electrical engineer who is a property owner in the neighborhood. He has reported that RMPC will support 2300-volt systems and intends to do so as long as many of their customers use it. He also reports that this system can be specified from traditional suppliers from standing inventory.

Continued Delay of Construction:

	Laura Briefer discussed that if the process becomes prolonged and if the well fails, due to its criticality, any future opportunity for public engagement might be lost. Since it's an emergency, SLCPU may lose the ability to install the design as currently being pursued resulting in a less desired outcome (she called it a "quick and ugly fix").
7:25 – 8:15 Group Solution Discussion • Discussion to determine what information is still needed, where there is agreement, if there are solutions that can be pursued, identify challenges and disagreements — Alexis Cairo, Facilitator & Attendees	Alexis Cairo asked if there were items which we can agree on that can be removed. One Citizen was asked, personally, and the responded with "nothing can be removed as I oppose anything that results in putting a building in the park." The citizen mentioned the Greater Avenues Community Council supported a motion that no building is appropriate in City Creek Parks.
8:15 – 8:30 Next Meeting Discussion & Wrap Up • Discussion to identify focus of the next meeting and when the group can be ready to meet again — Alexis Cairo, Facilitator & Attendees • Wrap up and thank you — Laura Briefer, Director, Salt Lake City Department of Public Utilities	**Next Step additional information:** • Alexis Cairo committed to having a more thorough content analysis conducted and sent to participants before next meeting. • Define "integrity of the area" and the impact of a relatively large utility building in such a small space. • Citizens will forward results from survey to facilitator. • Jesse Stewart committed to posting the footprint and engineering plan to the DPU website. • Laura Briefer committed to having a briefing on distribution of Fourth Ave. Well water to better understand the connection it serves. • Per distribution plan, DPU was asked to specifically respond to downstream distribution possibilities and challenges • Citizens to provide requirements for a third-party review of the engineer and plan. • Get a definitive ruling from RMPC on supporting current electrical system or need to upgrade. (Shane Franz needs to be invited to the next meeting to confirm the "third party" report of his findings). • Determine if flood and seismic hazard exist. Consensus is that another meeting will be held and will feature: • Better content analysis. • More detail on the new site plan.

	• Include representatives of CRSA or other designers • Discussion of downstream chlorination to eliminate need for a building. • Discussion of submersible pumps to eliminate industrial sound and a need for a building • A definitive statement on electrical support from RMPC • Further discussion of Third-Party Review. • A Citizen encouraged all parties to think as creatively as possible and listen and respond to all viewpoints.

ACTION ITEMS RESPONSES

November 2019

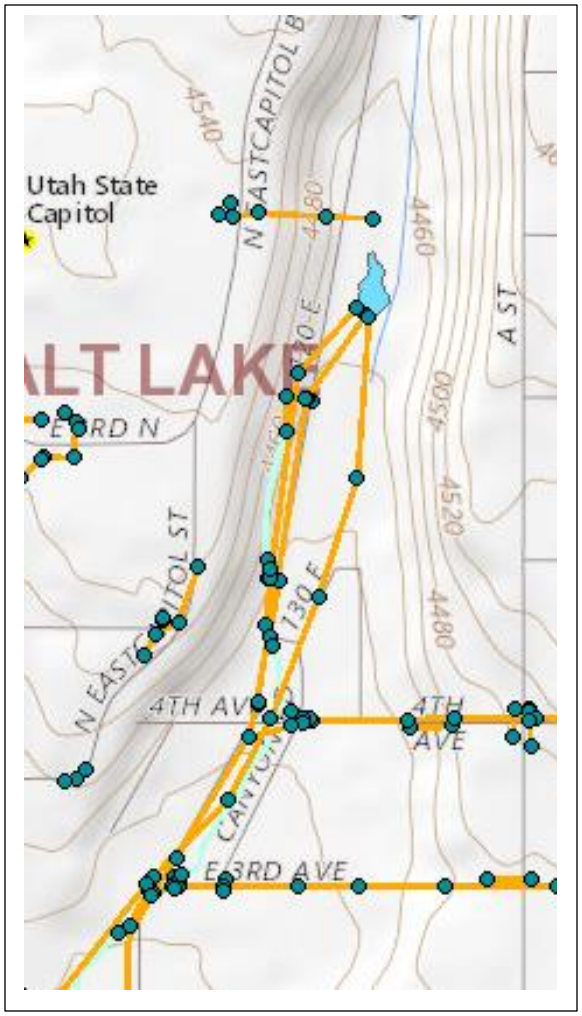
OVERVIEW

On Tuesday, October 22, 2019, Salt Lake City Department of Public Utilities (SLCDPU) held a facilitated working group meeting with residents who live near the proposed 4th Avenue well project to re-boot a process to help identify a workable solution for the project. SLCDPU officials left the meeting with numerous suggestions, questions and requests from residents. The following is SLCDPU response to these action items.

1. **Combine All Public Comments To-Date**: Wilkinson Ferrari & Co. is gathering public comments made to-date during presentations to area community councils, public open houses and Historic Landmark Commission work sessions. They will prepare a comment tracking document.

2. **SLCDPU Obtain Park Usage Survey**: Wilkinson Ferrari & Co. reached out to Winston Seiler and Katie Pugh to obtain the park usage survey. We have not yet received this. Winston did respond that it is more of a petition than a survey.

3. **Provide Residents with Information on Restricting SLCDPU To A Limited Area of The Park to Avoid Future Loss of Green Space:** SLCDPU doesn't have plans for additional above-ground infrastructure once the well-house is completed. However, SLCDPU will work with the City's Attorney's Office and City's Parks Division to understand mechanisms for restricting future development. SLCDPU owns the property and has significant water infrastructure located underground beneath Canyon Side Park. In fact, it is due to the presence of the City's water and stormwater infrastructure that the park exists. The location of the park is where the City Creek channel used to be before the City buried and piped the creek. City Creek is diverted from the pond at Memory Grove through two 60-inch storm drain lines owned by the City that traverses beneath the entire length of Canyon Side Park. Once the City installed the 60-inch stormwater lines and the groundwater well, the open space along Canyon Road was created. SLCDPU is already very constrained with respect to building any additional above-ground infrastructure at Canyons Side Park due to the presence of the large underground storm drains beneath the park. SLCDPU does not allow the construction of structures on top of our underground pipelines. The images below show the stormwater lines (orange) and well location (blue square).



4. **Provide Residents with Information on if the Project Will Affect Property Values:**

The City does not believe there is a legal basis for considering the effect on property values due to government public works projects. Cities make decisions every day that affect citizens including road maintenance, traffic management, police activities, park management and utility services. For every decision made by a city that people believe negatively affects their lives, there are likely an equal number of decisions that have a positive effect. For instance, the risk of the loss or contamination of water supplies due to the poor condition of the 4th Avenue Well infrastructure could have public health and economic impacts to residents throughout the city. Fixing the well and bringing it above ground so that it continues to be reliable has public health and economic benefits to the City's residents.

We assume the concern raised around the 4th Avenue Well project is related to the diminution of the value of property due to the construction of the new well house. While there are laws and court cases that prevent the unfair distribution of the burdens of government, the City is not aware of any instance where a claim has been successful with facts similar to the 4th Avenue

Well project. In order to sustain such a claim, there must be an economic loss that approaches the complete loss of property value and there is no evidence to suggest that the reconstruction of the well house would have such a drastic effect on property values.

5. **Provide Residents and Specifically Area Resident Alan Walker Information on Why There Isn't Room for An Electrical Submersible Pump:** SLCDPU is moving to a 480-volt system as that is the standard from Rocky Mountain Power. It is planned to line the existing well 20" casing to extend the life of the well. After lining, the well will have an inner diameter of approximately 17.25". If a submersible pump could be specially manufactured at 450 hp 480 volt, the diameter of the pump would likely be approximately 16", the motor would be approximately 15.6", with two sets of conductor leads each lead would be approximately 3.55" by 1.2". In addition, the existing 2300-volt submersible pump in approximately 17"in diameter without the conductor cables. Therefore, neither the existing 2300-volt pump and motor configuration nor a potential 480-volt submersible pump and motor will be compatible with the relined well. Given these dimensions, a submersible pump will not fit in the renovated well casing. This was discussed with Mr. Seiler and Mr. Walker in June 2019 and it was agreed by all that a submersible pump would not be feasible at the 4th Avenue well.

6. **Provide Residents with Information on Why the Current Vault Is Not Safe or Large Enough:** The existing vault, subsurface electrical components and well head do not meet current electrical or Utah Division of Drinking water codes. In discussion with structural engineers, the recommendation is to re-build a vault for any future subsurface appurtenance. At the existing vault there is a single ingress an egress location, there are high voltage electrical components with insufficient clearances, and there is pressurized water infrastructure. These elements together result in an unsafe working environment.

7. **Provide Residents with Safety Facts and The Worst-Case Scenario for Using Calcium Hypochlorite Tablets:** Of note, the tablet disinfection system proposed is similar to systems used for community and home swimming pools. However, the quantities of tablets used at the 4th avenue well will be much less than at a pool application as the concentrations required are orders of magnitude less.

   The on-site disinfection calcium hypochlorite tablet system provides a high level of safety that addresses; on-site stored volumes of tablet disinfection, on-site quantity of liquid/solution calcium hypochlorite, and dosing elements for drinking water. Minimal quantities of tablets will be stored on site, we anticipate up to three 55-pound buckets at a time. The storage reservoir for dissolved tablet liquid calcium hypochlorite will likely be less than 90 gallons of dilute solution [300-400 part per million (ppm) as compared to household bleach that is in the range of 50,000 ppm]. A spill of liquid would be contained within the structure and would be discharged to the sanitary sewer following protocols. A dry spill would be swept up, dissolved in water and discharged to the sewer following protocols.

   Regarding a worse -case scenario, calcium hypochlorite when combined with an acid or ammonia will form chlorine gas. This is a risk that many homeowners face with various cleaning

products that may contain these chemicals. Unfortunately, there are cases of accidental poisoning when homeowners mix household bleach and ammonia-based products. At the 4th avenue well site we will not have acids or ammonia on site; thus, we will not have the opportunity to form chlorine gas through that chemical process during operations. That said, residents have brought the concern of someone potentially bringing an acid or ammonia to the site for a nefarious act of terrorism. The site will be equipped with locks, alarms, and sensors to identify access and to secure the site. As previously stated, there will be minimal amounts of solid and liquid calcium hypochlorite on site that would limit the effects of terrorist activities.

Some chlorine gas can be a byproduct of decomposition of the calcium hypochlorite. The product decomposes at 338-356 degrees Fahrenheit releasing oxygen and some chlorine gas. Therefore, a worst-case scenario may be related to fire that could affect the few buckets of tablets stored on site. To mitigate this, combustible materials will not be stored in the disinfection room of the facility. Should fire affect the stored buckets it is unlikely that the gas produced would exceed the OSHA permissible short-term exposure limit of 1 ppm.

8. **Develop A Worst-Case Scenario Evacuation Plan:** SLCDPU does not see the need for an evacuation plan associated with the well. However, SLCDPU will work with the City's Emergency Manager to evaluate potential risk and develop a security and risk mitigation plan.

9. **Provide Residents with an Evaluation for Moving the Disinfection System to Another Site:** Moving disinfection off-site is problematic for several reasons. First this would be taking what area residents think is an issue for them and moving it to another residential and park location. Early on in the discussions with the local residents it was suggested that SLCDPU purchase a home across the street from the well site to put the well and disinfection system or just the disinfection system. Given the proximity of moving the disinfection system simply across the street is counter to the objection of having the disinfection system at the site of the existing well. Regardless, SLCDPU has evaluated moving the system to another park further downstream of the existing well. Several issues are related to moving the disinfection system.

   Untreated water would need to be conveyed to the to the site of the potential disinfection system. The available space beneath the roadway is very limited and additional large diameter water lines would be problematic to install. Canyon Road is already very congested with utilities (two 60-inch storm drain lines, one 10-inch storm drain line, one 15-inch storm drain line, one 8-inch water line, one 16-inch water line, one 24-inch water line and one 8-inch sanitary sewer line). In addition, there are power and communication lines. There are three apartment buildings that require disinfected water. The 24" line from the 4th avenue well splits and becomes two lines (24" and 16") approximately 360 feet down stream of the well and approximately 500 feet upstream of a potential location located at City Creek Park at the intersection of State Street, 2nd Avenue, and N. Canyon Road. To accommodate two lines, the disinfected water from the location at City Creek Park would need to be plumbed to accommodate the current distribution needs. This would add additional trenching and lines within the already busy street. Parking has been raised as a concern for the well. The potential location for off-site disinfection would cause additional parking issues for routine maintenance

either on State Street, 2nd Avenue, and N. Canyon Road. Construction for this revised distribution system would potentially cause significant impacts to the community and traffic in the area of City Creek Park. Given the constraints within the already busy utility corridor, it is not recommended to move the disinfection system.

10. **Provide Residents with Building Height Needs and When the Building Design Work Begins, Look at Creative Solutions to Reduce the Impact:** The height of the vertical turbine motor does not dictate the height of the building. We will need an access door on the roof of the building to service the pump and motor. In previous design iterations the size of the sodium hypochlorite storage tank was the controlling factor for height; that alternative is no longer under consideration. The design elements that currently dictate the building height are the interior electrical panels, ceiling-hung HVAC, and worker height requirements. Given the new technical design we will work with our mechanical engineers and architect to identify if the overall height of the building can be reduced and the possibility of a different height for the tablet disinfection room.

11. **Determine the Need for a Driveway:** After discussing with Salt Lake City Planning, the driveway can be removed from consideration. We would install a walkway to the building access doors.

12. **Provide Residents with Upkeep, Maintenance, and Monitoring Plan:** SLCDPU will provide residents with an upkeep and maintenance plan in the future as the project progresses. SLCDPU water operators will inspect this site daily, as is standard practice with all of our well sites. In addition, we will work with Parks and possibly a private maintenance contractor for upkeep of the landscape and property.

13. **Provide Residents with Information on if the Project Will Affect Parking:** The completed project will not affect parking in the neighborhood. There may be temporary impacts during the construction of the project. SLCDPU will need to obtain permits during construction to identify and mitigate parking or road impacts during construction. Future parking and site visits are expected to be similar to current operations.

14. **Provide Residents with Current Noise and Vibration Levels at the Site:** Given the current architectural application we will reduce the noise level from a motor rated at 86 decibels (dB) to approximately 50 dB with just a CMU structure that is approximately 7" thick. As part of the design we will also have an exterior façade on the structure that will increase the overall wall thickness to approximately 14". This includes the CMU, insulation, air-gap, and the façade; thus, further reducing the dB level. The current dB readings at the site were measured on 11/25/19 and 11/26/1919. The decimeter was run for 3.25 hours and 4 hours during each measurement period. The average and maximum dB readings were 55.2 and 72.4 on 11/25/19 and 58.6 and 70.1 on 11, 26,19, respectively. These reading were taken midday. We are currently not operating the well. These measurements are in line with various references give 50 dB as the normal ambient noise level in a "quiet suburb, conversation at home". 40 dB is representative of the inside of a library, or is the "lowest limit of urban ambient sound." 60 dB is the level of conversation in a restaurant or office. The goal in the design should be that the sound level

occurring on the sidewalk outside the building, due to noise emanating from the building, matches an established average ambient value.

15. **Report to Residents if the Project will Trigger Tree Removal to Assure the Site is Clearly Visible and Free of Obstructions:** It is anticipated that two trees will need to be removed for the well project. SLCDPU is not planning on any additional tree removal for the project. If residents are concerned about visibility and obstructions, SLCDPU could discuss those specific concerns about visibility in the future with the Salt Lake City Urban Forester once SLCDPU has a better idea of the new building design.

16. **Provide Residents with Evaluation Information on Moving the Well to Another Location, Such as Feasibility, Costs, and Project Elements:** SLCDPU worked with the engineering firm Hansen Allen Luce (HAL) to evaluate different alternatives, including abandoning and relocating the 4th Avenue well. A memorandum was prepared April 12, 2019, and posted on the City's 4th Avenue Well project website under the documents portion of the project website. The memorandum includes a discussion regarding feasibility (presented as pro's and con's of the different alternatives) and cost. The cost charts below are included in the report. As noted by HAL, well abandonment and relocation introduces water supply uncertainty and significant cost.

    We have heard from residents that they would like SLCDPU to consider moving the well, SLCDPU does not recommend abandoning the existing well since it produces a significant quantity of water needed to serve downtown Salt Lake City, is high quality, has an existing water right, and is located on land owned by the City. This is an important part of the City's current and future water supplies. In fact, SLCDPU has determined that system-wide additional groundwater resources will be needed to meet future population growth, water demand, land use changes, and buffer against the impacts of climate change. Abandonment of the 4th Avenue well would be inconsistent with the City's water supply planning and needs given its productivity. There is no guarantee that the City would be able to replace this important water resource once the well is abandoned due to legal and hydrogeologic conditions.

#	SCENARIO	PRO	CON
2c-1 & 2c-2	**Leave Well In-Place Build Wellhouse Move Chemical Feed Off-Site** (Similar to Option 2a)	Added chlorine is a Public Health benefit	Would add a building on the site that is now a walking park
		The well is in the ideal location to provide 5-7 mgd at the right pressure and flow to meet local peaking demands	Requires the purchase of new land
		The existing well provides vital drinking water and fire protection	Requires the construction of a separate building
		Reduces building footprint by approximately 300 ft² (15' x 20')	New transmission pipelines will be required
		The well is in place and can continue to be a viable and important water source	3 existing trees would be removed but the area would be re-landscaped
		The well can be extended upward and eliminate the hazards of a below grade well and meet DDW Standards	The existing well is now 75 years old and either now or in the future will have to be re-lined
		An above ground facility can be designed to eliminate all current safety and health concerns	There is an increased potential for a loss in communication between facilities which could result in health & safety concerns
		Added chlorine is a Public Health benefit	With two facilities, energy consumption will increase
		Preliminary engineering design has been done with engineering costs expended	Maintenance costs will increase with two facilities
		There is adequate space on-site to construct the wellhouse	Additional permits and engineering will be required
3a	**Relocate the Well within 300' of Existing Well**	All facilities would be designed and built to meet health and safety codes	There is no guarantee that the well would produce as much as the current location
		A new well would provide a new life for the well over its present condition, perhaps extending its life to 75-100 years	Would requires the acquisition of residential properties, involving the purchase of multiple existing homes to acquire enough space to drill the well
		Added chlorine is a Public Health benefit	Requires additional engineering
			Would involve new pipelines and traffic disruptions
			Requires additional permits
			Abandonment of the existing well

Option	SCENARIO	PRO	CON
3b	Relocate the Well at a Remote Location	The well would be eliminated from the current Neighborhood	There is no guarantee that the well would produce as much as the current location
		All facilities would be designed and built to meet health and safety codes	Will be possible similar local resistance at the new location
		Added chlorine is a Public Health benefit	An up-canyon location will likely receive similar resistance
		A new well would provide a new life for the well over its present condition, perhaps extending its life to 75-100 years	A down-canyon location will interfere with other existing water right holders and likely receive significant opposition
			A well outside the canyon drainage, or on an adjacent hillside will not likely be able to provide the volume of local water needed
			May require the acquisition of property, most likely involving the purchase of multiple existing homes to acquire enough space to drill the well
			Requires an approved water right change application that could take 18 months
			May not be able to acquire an adequate source at a new location
			A new well location may not be proximate to the water demand area
			Requires additional engineering
			Would involve new pipelines and traffic disruptions
			New pipeline would have to connect with existing pressure zone
			Sewer upgrades may be needed to meet DDW requirements
			Requires additional permits
			Abandonment of the existing well

COST SUMMARY OF ALTERNATIVES

A more detailed summary of preliminary costs are provided in the attached cost spreadsheet.

Option	Description	Estimated Cost	% of Option 2a
0	Do Nothing	$0.00	n/a
1	Leave Well In-Place – Add New Well Liner	$151,800	n/a
2a	Leave Well In-Place – Build Wellhouse	$2,688,000	100
2b	Leave Well In-Place – Build Wellhouse and Add New Liner	$2,826,000	105
2c-1	Leave Well In-Place – Build Wellhouse, Add New Liner and Off-Site Chlorinate in Old City Hall Building	$3,272,000	122
2c-2	Leave Well In-Place – Build Wellhouse, Add New Liner and Off-Site Chlorinate in New Building	$3,632,000	135
3a	Abandon the Existing Well and Move to an Alternate Location within 300' of the Existing Well	$5,463,000	203
3b	Abandon the Existing Well and Move to an Alternate Location > 300' of the Existing Well	>$5,463,000	>203
4	Alternative to Bury the Flow Meter for Options 2a, 2b, 2c-1 and 2c-2	$20,000	Additive Cost

PROS AND CONS EVALUATION

A general list of major Pro's and Con's to each of the above identified options is provided below, costs are not listed with the pros and cons; rather the costs are listed above. In the Pro's column, dark green is used to identify issues of major importance to the decision-making process. In the Con's column red represents issues that are considered to be of major importance to decision making while yellow represents issues that are less critical.

17. **Provide Residents with Information About the Importance and Value of the Well, as Well as How the Distribution System Works:** The City's water system serves more than 360,000 people that reside in Salt Lake City, Mill Creek City, Holladay City, and Cottonwood Heights City. The system also serves small portions of Midvale, Murray, and South Salt Lake Cities. The City's

water sources include surface water from the Wasatch Mountains and groundwater. The surface water sources emanate from Little Cottonwood, Big Cottonwood, Parleys, and City Creeks, as well as stored water in Deer Creek as part of the Provo River Project and Central Utah Project. The surface water sources are conveyed by gravity to water treatment plants, where they are treated and enter into the distribution system. The City's groundwater resources are collected from wells and springs along the east bench of Salt Lake County. Groundwater resources are pumped directly into the City's distribution system.

The City's water system is very efficient in that the collection, treatment, and distribution system primarily uses gravity rather than large pumping systems to move the water to where it is needed.

The 4th Avenue well is a critical water resource for the City. As with all of the City's other wells, the 4th Avenue well is currently used during the summer when water demand is higher, primarily due to outdoor irrigation. There are times during the summer when the 4th Avenue well provides 100 percent of the water to areas of downtown Salt Lake City. If the 4th Avenue well fails, SLCDPU would need to use another water source to meet demand. This may be difficult due to the different pressure zones and characteristics of the distribution system and water demand patterns. This could result in water supply or water pressure disruptions in downtown Salt Lake City.

SLCDPU also manages its water sources and system to ensure there is redundancy in case of emergencies. For instance, if there is a situation where one or more of the streams cannot be used in the water supply due to infrastructure or water quality issues, groundwater resources, including the 4th Avenue well can help meet demand and avoid water supply disruptions. If the 4th Avenue well fails, the area it serves would lose that redundancy.

18. **Provide a Meeting Summary:** This meeting summary was completed and distributed to area residents on November 5, 2019.

19. **Schedule Next Meeting:** A facilitated working group meeting will be held on December 2, 2019, from 6:30 to 8:30 pm at Memorial House. Area residents were sent information about the meeting on November 19, 2019.

MEETING SUMMARY

Salt Lake City Department of Public Utilities 4th Avenue Well Facilitated Working Group Meeting
Monday, December 2, 2019, 6:30 pm
Memorial House at Memory Grove

INTRODUCTION

Salt Lake City Department of Public Utilities (SLCDPU) held a second facilitated working group meeting with residents who live near the proposed 4th Avenue well project to help identify a workable solution for the project. The meeting provided an opportunity to acknowledge the action item document that SLCDPU sent to residents, review the updated worksheets, discuss the solutions SLCDPU had presented at the previous meeting and what elements are negotiable and nonnegotiable, and what the proposed facility should look like and what material concepts the residents prefer. The agenda and meeting materials are attached.

ACTION ITEMS

- SLCDPU to share with Shane Franz the engineering work that has been done on the tablet disinfection system.
- Kurt Fisher met with SLCDPU regarding his GRAMA request CO81272-110719 on January 10, 2020. Please see at the end of the meeting summary Kurt's notes and thoughts from that meeting.
- SLCDPU to investigate Shane Franz's idea to have the motor underground for there to be a hydraulic transfer used.
- SLCDPU to provide for Shane Franz the interior of the well and the system design.
- Kurt Fisher to send a link to a home on the northwest corner of Third Avenue and A Street with an exterior cobblestone cladding. Kurt sent the following link on 1/20/20: https://goo.gl/maps/wPvojQGTkmErPcRq7 .
- Kurt Fisher to send link of a water facility located at 4th Avenue and Canyon Road on file at Marriott Digital Library. Kurt sent the following link on 1/20/20: https://collections.lib.utah.edu/ark:/87278/s6dj6wd5; Kurt cautioned that the location should not be taken at face value because he has had to correct the library regarding other images/locations.
- Craig Ogan to send his comment compilation to SLCDPU and Wilkinson Ferrari & Co.
- SLCDPU to reach out to a subgroup of area residents to determine what elements of the engineering design work they are interested in having additional engagement around.
- SLCDPU to identify when to hold the next facilitated working group meeting.
- SLCDPU to schedule public open house once the project is further along.
- Area residents to invite other area residents that are feeling left out to attend the next meeting.

AGREED UPON ITEMS

- Using tablet disinfection.
- Saving the Plain tree and perhaps planting a tree(s) in other areas of the park.
- Non-negotiable and negotiable items.

DISCUSSION POINTS

Meeting Documents: The group discussed if the meeting summary from the first meeting worked for everyone and decided that it did. The group also reviewed the updated worksheets that captured what had been said at the previous meeting. There were no changes to them. Residents were asked if they had received the action item document and if they had any questions regarding it and the responses SLCDPU provided. Residents expressed that they had received the document and that they didn't have any questions.

Non-Negotiable Items: SLCDPU outlined the items that are non-negotiable based upon their mandate, needs and regulations, and the existing situation. SLCDPU explained that they are not willing to abandon the 4th Avenue well and build a new well in another location to replace it. They explained that the well is too critical, a good water producer and there are future needs for additional wells to meet the growing demand for water. SLCDPU stated that they are not willing to move the disinfection system to another location. They explained that it is required, and they must disinfect for safety reasons. A resident asked if having the pump be submerged is also non-negotiable, and SLCDPU said yes, it is non-negotiable because it won't fit. A resident then asked if there was any reason for the meeting to continue and the facilitator and others said that yes there are many other items that are negotiable and that SLCDPU would like further engagement with residents.

Negotiable Items: The facilitator and others identified what items are negotiable. This included the building size and aesthetics, noise reduction/prevention, tree removal/mitigation and the type of disinfection system used at the site.

Risk Analysis: The question was asked if there had been a risk analysis done for the site and what happens to the water system if there is an earthquake, if a new well should be built to address this problem and if this project is just a band aid. SLCDPU explained that they had done an analysis with the well and that there is nothing wrong with the well and its location. SLCDPU provided an overview of how their system works and has redundancies, and the planning they have done for natural disasters, such as an earthquake, and how there are several faults near their water infrastructure in the valley and they have taken this into consideration.

Aquafer Size & Partnering With LDS Church: A question was asked how big the aquifer is and a statement made about how the LDS Church has drilled three wells in the area and that perhaps there is an opportunity to partner with them and that maybe they should be invited to participate in these discussions. SLCDPU reported that they did reach out to the LDS Church a few years ago to see if any of their holdings could be potential new water sources for the City but they did not get any traction with this approach. A participant reported that they had told a representative from the LDS Church about these meetings and invited them to attend.

Disinfection: A resident asked if the disinfection process needs to be at the site and stated that SLCDPU and residents should not just accept that it must be done and asked to see the "math" and for SLCDPU to share their modeling. SLCDPU is interested in clarifying what the resident is asking for.

Building Height & Design: There was discussion about the building height and what will dictate how tall it is. It was expressed that residents would like the facility as unobtrusive as possible. SLCDPU and CRSA explained how the height of the building will be dictated by critical elements inside the building and workers needing to be inside it. CRSA explained that a flat roof would help make it as small as possible

and what a gable roof would do. There were a couple comments about roof styles by those in attendance. Some liked the way a flat roof looks, and others brought up issues flat roofs have, such as smell and snow. No decision was made. It was asked if there could be platforms 4 to 5 feet below for the wellhead to help reduce the size. SLCDPU explained that the wellhead must be 18-inches above ground. A resident that he would like to see the interior of the well and the system design. Kurt Fisher pointed out the Historic Landmark Commission guidance prohibits building facilities such as the above ground proposed 4th Avenue well and the Planning Department has not included that controlling guidance in its evaluation criteria to be used by the Historic Landmark Commission. That provision states: ''Landscaped Medians or Parkways. Parkway are large grassed or treed medians that line the center of a street, such as along 600 East in Central City, and on 1200 East and 200 South in the University district. They provide a unique historical landscape amenity and are often used as recreational or leisure spaces. They markedly enhance and unify the character of both the street and that part of the district. Where they are found, parkways add a unique character to the streetscape, and consequently should remain. Where they have been removed, consider their reinstatement" (id at Part II – Design Guidelines, p. 1:10, A Preservation Handbook for Historic Residential Properties and Districts in Salt Lake City (accessed June 19, 2019) (url: http://www.slcdocs.com/historicpreservation/GuideRes/ResidentialGuidelines.pdf)"

Noise: It was asked if the motor could be underground and for there to be a hydraulic transfer. SLCDPU said they would investigate this and report back. A resident stated that they questioned the decibel readings SLCDPU reported in the action item document and what SLCDPU was using in their calculations. SLCDPU reminded attendees of the field trip they had gone on to another site to hear the noise level coming from that facility and how at the back of the building, where sound-proofing had been retrofitted, no one could hear anything; whereas, at the front of the building where sound proofing was not installed the motor could be heard. SLCDPU also stated that the facility they toured was old and how this new facility would be able to reduce the levels more with proven approaches, such as what CRSA used at Hill Air Force Base.

Building Aesthetics: Planning presented an overview of parameters and standards for the project and handed out an informational sheet. There was considerable discussion about the aesthetics of the building. It was asked if there could be a building design competition and SLCDPU commented that they would not do that. SLCDPU and CRSA presented material concepts and asked attendees to vote with dots on their top three choices. The most dots were placed on images of bricks and stones. Planning also stated that CMU materials cannot be used as exterior material. The following captures comments that were made during a building aesthetics discussion led by area resident Cecile Paskett:

- The building is in a linear park and how the Historic Landmark Committee context is residential, and that any building going in the park should be guided by the space the building is going into not the residential area surrounding it and how if you use their standards you are forced to use brick.
- There used to be an old sawmill at the site so perhaps the design could incorporate a water wheel; A good idea but to not have it look like a miniature golf course.
- Don't want to mimic historic.
- Want it to be unobtrusive.
- Wedding pictures are sometimes taken at the site; the building should be designed with the idea that it is going to be in pictures, and it should not detract from the setting or be a garish focal point.
- Want it to be a utility building; Want it to be simple; look at utility buildings in Sanpete County.

- Want it to be inconspicuous enough that it fits into the neighborhood.
- Want it to be straightforward; Memory Grove bridges are timeless.
- Openness; don't want fences or landscaping that closes off the space.
- Don't want it to look like it is for public use.
- Don't want it to detract.
- There are three options to base the building design: a utility building, new architecture such as Starbucks or brownstone, or a water treatment building prior to 1940. Kurt Fisher will send a link to an old facility on 3rd Avenue and A Street.
- Avoid treatments that are blatantly used to deter homeless people, such as bumps on benches.
- Scale down; keep it small.
- Build it so kids can't climb up it and so it is not a safety problem; remember YouthCity is located in Ottinger Hall.
- Look at colors in the park space; Grey, sandstone, brick, white, evergreen – not cobblestone. Use old red brick used on old utility buildings; have arched windows.
- 19th Century building.
- Don't want it to look like a place where you park your golf cart.
- Want it to be vernacular/simple.

The Process: It was stated that area residents over the past 14 months have applied relentless pressure to SLCDPU and the City regarding this project, and how they had concerns about parking and have backed off that, that their pressure has created gains for things such as tree preservation, how residents will continue to push and apply pressure to make sure the project is done right, but how they don't think this is the City they want, where you have to continually push. The facilitator stated that the process is giving you a voice, and this is what you should want as a resident of the City.

Comment Compilation: The group talked about compiling comments that have been made on the project and who might have what elements. It was stated that the City Council, Historic Landmarks Commission and Craig Ogan should have past comments that can be collected by Wilkinson Ferrari & Co. Craig Ogan agreed to provide the comments that he has to SLCDPU and Wilkinson Ferrari & Co.

Next Meeting: The group talked about meeting again and that it might be good to have a small sub-group of the area residents meet on the engineering design, and that the full group should meet again for the next step of the building aesthetics. SLCDPU expressed that they would like to think about when they can be ready to meet again and get back to the group. The group also talked about when it would be best to take the discussion out to the public and it was agreed to hold a public open house once we were further along in the process. The group also talked about if there are area residents feeling left out of the process and to invite them to attend the next meeting, and how there were around 30 area residents invited but not all attended.

ATTENDEES

Area Residents

- Dee Brewer
- Cindy Cromer
- Kurt Fisher
- Shane Franz
- Dave Jonsson

- Jill Van Langeveld
- Dave Van Langeveld
- James Livingston
- Craig Ogan
- Cecile Paskett
- Evan Smith
- David Garcia

Salt Lake City

- Chris Wharton, Salt Lake City Council Member, District 3
- Laura Briefer, Director, Salt Lake City Department of Public Utilities
- Jesse Stewart, Deputy Director, Salt Lake City Department of Public Utilities
- Holly Mullen, Communications & Engagement Manager, Salt Lake City Department of Public Utilities
- Jeff Grimsdell, Water Distribution System Manager, Salt Lake City
- Cory Young, Sanitation Program Manager, Salt Lake City
- Kelsey Lindquist, Senior Planner, Salt Lake City
- Austin Kimmel, Liaison, Salt Lake City Council

Consultants

- Kirk Bagley, Principal, Bowen Collins & Associates
- David Triplett, CRSA Architecture
- John Ewanowski, CRSA Architecture
- Cindy Gubler, Partner, Wilkinson Ferrari & Co.
- Mimi Charles, Public Involvement Manager, Wilkinson Ferrari & Co.
- Alexis Cairo, Facilitator, Wilkinson Ferrari & Co.

KURT FISHER SLCDPU MEETING NOTES
Kurt Fisher met with SLCDPU regarding his GRAMA request CO81272-110719 on January 10, 2020.

“On January 10, 2020, I met with Mr. Stewart, Deputy Director of the Department of Public Utilities (DPU). My purpose in meeting with him was to clarify how the City's system of groundwater wells related to the City's overall water distribution system. This includes the 4th Avenue Well. The City has described the 4th Avenue Well as "critical", in particular for the downtown business district. Here, I use the less poltically charged term of "important".

The second question that I wanted to explore was how the City proposed to provide water to 24,000 new downtown residents and another 30,000 Northwest Quadrant residents through the City's aging pipeline system. Published plans for major Chamber of Commerce development initiatives, like the Northwest Quadrant, the Inland Port, and the Downtown Rising, all were silent on what water infrastructure improvements would be needed to support that growth. It seem implausible to me that the City's existing infrastructure could handle the new water supply demands.

Background outside of the meeting by KF: The Salt Lake Metropolitan Water District was formed in the 1930s following the failure of the City's water supply during the drought of 1933-1934. During that water crisis, residents were ordered to not water their lawns. The key partners in the District are Salt Lake City and Sandy City. The District's operation supply area is the east half of Salt Lake Valley. The first project of the new District in the 1940s was to build the Deer Creek Reservoir and Olmstead Tunnel. These facilities were anticipated to provide the growing Salt Lake Valley with sufficient water into the far future. The key effect of the District is that our Salt Lake City DPU has dual-sovereignty obligations in terms of supplying water to both Salt Lake City residents and to residents in eastern half of Salt Lake County and Sandy. Our City DPU does not serve Salt Lake City residents alone, or necessarily first.

Mr. Stewart provided an overview chart of the main distribution pipelines and the City's groundwater wells. An excerpt is attached. (KF: Two lines are not shown on the chart: The distribution line from the City Creek Water treatment plant to the high Avenues water tanks and a second to the two water tanks above Ensign Downs.) The water distribution system is gravity fed. Distribution pipelines feed several water pressure zones that have an odd shape. The pressure zones are typically ellipsoid and run parallel to the mountains. This is because each zone covers about 100 vertical feet - the amount of height needed to maintain the target of 40 to 60 lbs. of water pressure into the small pipe systems that feed our homes. When water pressure falls below 40 lbs., you will see effects within your homes. There is one large square water pressure zone, the Victory water pressure zone, that covers most of the City's valley floor lands. The Victory zone is large because the zone compromises a 100 foot vertical profile on a flat area.

Because the system is pressurized principally by gravity, the City is ringed by a series of smaller water tanks and reservoirs in the foothills (blue dots and squares in the attached figure). These supplement the primary 40 million gallon storage reservoir near Skyline High School. Throughout the day, these supplemental tanks and reservoirs are filled as needed using water from the primary distribution pipelines.

Think of the tanks and small reservoirs as water batteries. When peak water drawdowns occur and there is insufficient water pressure in the primary water distribution pipelines, water is feed from the tanks and back into the primary pipelines in order to maintain pressure. The daily capacity of the groundwater

wells is about 33 million gallons, or about enough to top of the 40 million gallon Terminal Reservoir near Skyline High.

Presently, peak water demand is no longer during the mornings or evenings as people prepare for work or prepare their evening meals on returning home. Due to conservation efforts to have all residents water their lawns at night, peak water demand is between 2am to 4am. This not only includes Salt Lake City residents, but also areas in wealthier Sandy that have large lots.

This is where the City's system of ground water wells come into play. The groundwater wells are shown as red dots on the attached figure. Note that they are aligned along a northwest-to-southeast line that corresponds to a particular geologic formation. During the summer daytime, and even when there is sufficient water in the system to maintain pressure, the City runs its ground water wells at maximum rates. This frees up water elsewhere in the main distribution pipelines that can then be pumped into the water tanks in the foothills.

KF Comment: In this sense, all of the City's groundwater wells can be said to be "important", but no one well is "critical" in the sense that water pressure will fail in any area if a single well fails. The City's water distribution system functioned adequately, but with little redundancy, over the several years that it recently took to reconstruct the main Terminal Reservoir. This is also an illustration of the Valley's infrastructure ecology - all parts of the water system are interconnected, and no one component can be thought of as standing alone.

At night, when the residents and businesses of the east side of Salt Lake Valley starting watering their lawns, there is insufficient water in the main distribution pipes to maintain adequate water pressure. The topped off well tanks in the foothills provide supplemental stored water that maintain pressure throughout the system.

KF Comment: As the south end of the Salt Lake Valley has urbanized, in particular with large lot homes, and combined with the current drought cycle, the City's and Metropolitan Water District has increasingly reached its water supply capacity limits. See attached figure from a Feb. 2019 Bowen and Collins Water Supply Plan, Part I, regarding peaking capacity and usage. This has required to City and the District to increasing rely both on expensive imported water and the City's ground water well system. (The DPU and City has a much better water supply picture when viewed in terms of annual water production than when viewed in terms of peak summer day capacity and supply shown in the figure.)

With respect to downtown and Northwest Quadrant growth, Mr. Stewart indicated that the DPU is in the early concept planning stage of running a large main distribution pipeline - on the order of larger than 24 inches in diameter - from the primary water storage tank near Skyline High School down through the City and ending in the west downtown area. There are no firm cost projections at this time.

KF Comment: This is the missing additional cost associated with downtown and Northwest Quadrant growth. I reserve speculating about how much this new primary 6 mile long distribution pipeline will cost, but note that it will be going through developed areas of the City with many underground utility interferences.

Finally, Mr. Stewart indicated that the City is planning to expand and develop more groundwater wells to provide more supplemental and redundant water pressure. I suggested those wells would follow the best aquifer strata along the valley floor, as the other wells do. He pointed out that on the chart, there

are wells that located high in the foothills. (KF: I see three wells on the chart that are not on the valley floor. One is located high in Emigration Canyon and coupled with a water tank. The second is near the Terminal Reservoir. The third well is in Millcreek Canyon.) He indicated that there were multiple opportunities to develop more wells along the foothills that ring the City because of the structure of the subsurface aquifer.

KF Comment: These ground wells cannot "save" the City if a severe drought like the 1933 event occurs in the future. The City's experience, reported in 1930s contemporaneous newspapers, was that the groundwater wells had reduced flows just like surface waters, although not as severe. The groundwater wells are fed by surface recharge lands in our foothills.

In closing, our modern public water systems are marvels of modern engineering for which we should all be grateful. We sometimes lose sight of the fact that between 1847 and the 1910s, over 87,000 Salt Lake residents, in particular children, died from water borne diseases like cholera, typhus, and dysentery. It is our modern water supply system, coupled with flush toilets and a sewer system, and the cholera and typhus vaccines that provide most of the increase in life span that we have enjoyed over the last 100 years. Adequate nutrition is the next most important contributor; other important advances by modern medicine is third. This is a water supply system that works transparently in the background of our daily lives due to the good efforts of public officers like Mr. Stewart. We sometimes take for granted just what a miracle the water system is and how important it is to our life-long and long-lived health."

APPENDIX

AGENDA

6:30 – 6:35 Welcome & Remarks

- Welcome and introductions – Cindy Gubler, Wilkinson Ferrari & Co.

6:35 – 6:40 Goals & Steps

- Review the goal of the working group meetings — Alexis Cairo, Facilitator
- Remind everyone of the ground rules – Alexis Cairo, Facilitator
- Review steps to accomplish the goal and what is hoped to be accomplished at this meeting – Alexis Cairo, Facilitator
- Remind everyone of the timeline – Alexis Cairo, Facilitator

6:40 – 6:55 Identify & Capture Concerns & Solutions To-Date

- Updates made to the residents' concerns and residents' solution worksheets – Alexis Cairo, Facilitator & Attendees

6:55 – 8:15 Group Solution Discussion

- Acknowledgment of the action item document distributed – Alexis Cairo, Facilitator & Attendees
- Discussion around solutions presented – Alexis Cairo, Facilitator & Attendees
- Review and discuss criteria Planning and the Historic Landmark Commission has for the project – Alexis Cairo, Facilitator, Kelsey Lindquist & Attendees
- Present images of potential materials that can be used on the facility and vote on top choices – Alexis Cairo, Facilitator, Jesse Stewart, Deputy Director Salt Lake City Department of Public Utilities & Attendees
- Present images of potential ways to make the facility look smaller and vote on top choices – Alexis Cairo, Facilitator, Jesse Stewart, Deputy Director Salt Lake City Department of Public Utilities & Attendees

8:15 – 8:30 Next Meeting Discussion & Wrap Up

- Discussion to identify focus of the next meeting and when the group can be ready to meet again — Alexis Cairo, Facilitator & Attendees
- Wrap up and thank you — Laura Briefer, Director Salt Lake City Department of Public Utilities

PROJECT PURPOSE & NEED

Public Utilities

Supply safe and reliable drinking water

Critical well that needs to continue to operate - provides up to 100% of water for downtown during peak demand

Well is at a severe risk of failure

Electrical system is outdated

High failure risk below grade in the vault - risks to electrical system and well water source

Unsafe working conditions

Well does not comply with drinking water regulations and electrical code

PROPOSED PROJECT

Construct well head and electrical system above ground at existing well location

Include a disinfection system

Construct a secure building for the above ground infrastructure

Provide for backup power supply

Meet maintenance and operational needs and regulatory requirements

Obtain approval from DEQ, City Planning Commission and the Historic Landmarks Commission

RESIDENTS' CONCERNS

The Area's Quality

- Site is a beautiful, valued, historic place
- Project has the potential to dramatically alter it
- Like to define what this means
- Will the project affect property values

Building Size

- Building size should be as small as possible
- Don't want it to be the dominant feature in the park

Building Aesthetics

- Building should reflect historic neighborhood's character and aesthetics
- Building should feel like it belongs there
- Building should be a special design that is timeless
- Building should not look too generic; it should not look like a Starbuck's coffee shop; the building should not look like a house
- Building should not have eves so homeless people don't sleep under it; if it has a water feature, it should be designed so people don't bathe in it
- Building should not have screens for vegetation to grow on it – it doesn't work
- Concerned about building height
- Concerned about sight lines
- Want to know if a driveway is needed
- Maintenance and upkeep
- Concerned about effects on area parking

Noise

- Fear constant electrical humming sound
- Want to know noise and vibration levels

Safety

- Concerned about liquid chlorine at the site
- Could gas be formed from the tablet calcium hypochlorite
- Building tampering and security
- Worse-case scenario

Trees

- Want trees near the site preserved
- Project may trigger tree removal to address blocked sight lines

Smell

- Concerned about smell
- Odor from the disinfection system

Project Need

- Question if the project is not needed or if it can be left alone
- Want to know if the well can be placed in another location
- Vault appears to be safe
- Question if the well is critical

RESIDENTS' SOLUTIONS

The Area's Quality

- Maintain area's integrity

Building Size

- Keep the pump submerged in the vault and move only the electrical above ground

Building Aesthetics

- Building should look like it was built in the 1930's or 40's
- Building could look like a period pump house
- Building could use salvaged brick to make it look older
- Building could be artful and include a water feature
- Building could include a historical plaque
- Materials inventory points to the use of stone and/or stucco/cementitious materials
- Creative design solutions to make it not look so tall, such as varying the height and roof line of the building

Noise

- Building could include a water feature to mask the sound

Safety

- Keep smaller amounts of liquid chlorine on site
- Move the liquid chlorine to another location

Trees

Smell

Project Need

- Doing nothing should be an alternative
- Move the well to another location
- Monitor the vault with sensors and cameras

SLCDPU SOLUTIONS

The Area's Quality

- Maintain area's integrity

Building Size

- Identified ways to reduce the size – original building footprint was 971 square feet with a fenced area and generator that made the entire site 2,214 square feet; with identified solutions the building is now 474 square feet or 587 square feet with electrical enclosure.

Previous adjustments to size as of June 2019

- Removal of on-site electrical generator; and utilize a mobile generator
- Removal of site security fencing
- Removal of fluoride system

New adjustments to size to-date

- Usage of a well water-cooled system to reduce HVAC footprint
- Utilize a vaulted flow meter
- Utilize a tablet calcium hypochlorite disinfection system
- Other items to reduce size include removing the safety shower, reducing outside piping by lowering the pump to waste piping, reconfigurating electrical gear to minimize space
- Evaluated an electrical submersible pump: given the well constraints and electrical demand determined that there is not enough room within the well

Building Aesthetics

- Hired CRSA Architects 2018
- Must meet goals of SLC Planning and Historic Landmark Commission, and address community concerns

Noise

- Being designed with noise mitigation
- County regulation is less than 50 decibels; designing to be at around 30

Safety

- Evaluated moving disinfection system to another location
- Evaluating tablet calcium hypochlorite
- Designing usage of remote sensors and alarms

Trees

- Met with City Urban Forester to assess tree conditions
- City Urban Forester performed air-knife assessment of roots
- Working to limit number of trees impacted

Smell

- Evaluating tablet calcium hypochlorite
- Exploring carbon filters for air ventilation

Project Need

- Doing nothing is not an option; not compliant with state regulations and doesn't meet SLCDPU obligations
- Moving the well is not a viable option; it's a critical piece of our water system - another location may not have same performance
- Plan to use remote sensors and alarms but they will not replace the need for the project

ACTION ITEMS RESPONSES

November 2019

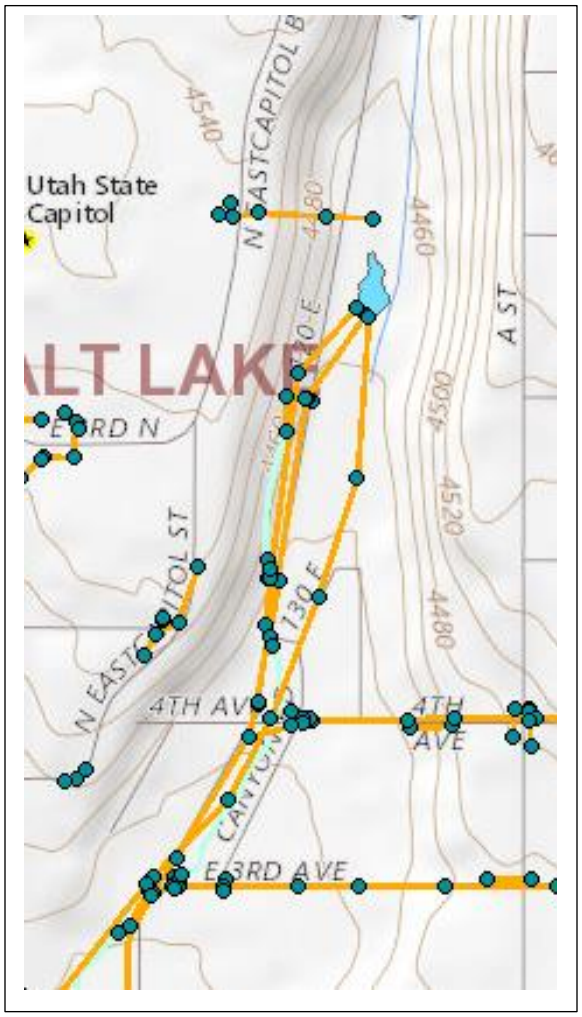
OVERVIEW

On Tuesday, October 22, 2019, Salt Lake City Department of Public Utilities (SLCDPU) held a facilitated working group meeting with residents who live near the proposed 4th Avenue well project to re-boot a process to help identify a workable solution for the project. SLCDPU officials left the meeting with numerous suggestions, questions and requests from residents. The following is SLCDPU response to these action items.

1. **Combine All Public Comments To-Date**: Wilkinson Ferrari & Co. is gathering public comments made to-date during presentations to area community councils, public open houses and Historic Landmark Commission work sessions. They will prepare a comment tracking document.

2. **SLCDPU Obtain Park Usage Survey**: Wilkinson Ferrari & Co. reached out to Winston Seiler and Katie Pugh to obtain the park usage survey. We have not yet received this. Winston did respond that it is more of a petition than a survey.

3. **Provide Residents with Information on Restricting SLCDPU To A Limited Area of The Park to Avoid Future Loss of Green Space:** SLCDPU doesn't have plans for additional above-ground infrastructure once the well-house is completed. However, SLCDPU will work with the City's Attorney's Office and City's Parks Division to understand mechanisms for restricting future development. SLCDPU owns the property and has significant water infrastructure located underground beneath Canyon Side Park. In fact, it is due to the presence of the City's water and stormwater infrastructure that the park exists. The location of the park is where the City Creek channel used to be before the City buried and piped the creek. City Creek is diverted from the pond at Memory Grove through two 60-inch storm drain lines owned by the City that traverses beneath the entire length of Canyon Side Park. Once the City installed the 60-inch stormwater lines and the groundwater well, the open space along Canyon Road was created. SLCDPU is already very constrained with respect to building any additional above-ground infrastructure at Canyons Side Park due to the presence of the large underground storm drains beneath the park. SLCDPU does not allow the construction of structures on top of our underground pipelines. The images below show the stormwater lines (orange) and well location (blue square).



4. **Provide Residents with Information on if the Project Will Affect Property Values:**

The City does not believe there is a legal basis for considering the effect on property values due to government public works projects. Cities make decisions every day that affect citizens including road maintenance, traffic management, police activities, park management and utility services. For every decision made by a city that people believe negatively affects their lives, there are likely an equal number of decisions that have a positive effect. For instance, the risk of the loss or contamination of water supplies due to the poor condition of the 4th Avenue Well infrastructure could have public health and economic impacts to residents throughout the city. Fixing the well and bringing it above ground so that it continues to be reliable has public health and economic benefits to the City's residents.

We assume the concern raised around the 4th Avenue Well project is related to the diminution of the value of property due to the construction of the new well house. While there are laws and court cases that prevent the unfair distribution of the burdens of government, the City is

not aware of any instance where a claim has been successful with facts similar to the 4th Avenue Well project. In order to sustain such a claim, there must be an economic loss that approaches the complete loss of property value and there is no evidence to suggest that the reconstruction of the well house would have such a drastic effect on property values.

5. **Provide Residents and Specifically Area Resident Alan Walker Information on Why There Isn't Room for An Electrical Submersible Pump:** SLCDPU is moving to a 480-volt system as that is the standard from Rocky Mountain Power. It is planned to line the existing well 20" casing to extend the life of the well. After lining, the well will have an inner diameter of approximately 17.25". If a submersible pump could be specially manufactured at 450 hp 480 volt, the diameter of the pump would likely be approximately 16", the motor would be approximately 15.6", with two sets of conductor leads each lead would be approximately 3.55" by 1.2". In addition, the existing 2300-volt submersible pump in approximately 17"in diameter without the conductor cables. Therefore, neither the existing 2300-volt pump and motor configuration nor a potential 480-volt submersible pump and motor will be compatible with the relined well. Given these dimensions, a submersible pump will not fit in the renovated well casing. This was discussed with Mr. Seiler and Mr. Walker in June 2019 and it was agreed by all that a submersible pump would not be feasible at the 4th Avenue well.

6. **Provide Residents with Information on Why the Current Vault Is Not Safe or Large Enough:** The existing vault, subsurface electrical components and well head do not meet current electrical or Utah Division of Drinking water codes. In discussion with structural engineers, the recommendation is to re-build a vault for any future subsurface appurtenance. At the existing vault there is a single ingress an egress location, there are high voltage electrical components with insufficient clearances, and there is pressurized water infrastructure. These elements together result in an unsafe working environment.

7. **Provide Residents with Safety Facts and The Worst-Case Scenario for Using Calcium Hypochlorite Tablets:** Of note, the tablet disinfection system proposed is similar to systems used for community and home swimming pools. However, the quantities of tablets used at the 4th avenue well will be much less than at a pool application as the concentrations required are orders of magnitude less.

   The on-site disinfection calcium hypochlorite tablet system provides a high level of safety that addresses; on-site stored volumes of tablet disinfection, on-site quantity of liquid/solution calcium hypochlorite, and dosing elements for drinking water. Minimal quantities of tablets will be stored on site, we anticipate up to three 55-pound buckets at a time. The storage reservoir for dissolved tablet liquid calcium hypochlorite will likely be less than 90 gallons of dilute solution [300-400 part per million (ppm) as compared to household bleach that is in the range of 50,000 ppm]. A spill of liquid would be contained within the structure and would be discharged to the sanitary sewer following protocols. A dry spill would be swept up, dissolved in water and discharged to the sewer following protocols.

   Regarding a worse -case scenario, calcium hypochlorite when combined with an acid or ammonia will form chlorine gas. This is a risk that many homeowners face with various cleaning

products that may contain these chemicals. Unfortunately, there are cases of accidental poisoning when homeowners mix household bleach and ammonia-based products. At the 4th avenue well site we will not have acids or ammonia on site; thus, we will not have the opportunity to form chlorine gas through that chemical process during operations. That said, residents have brought the concern of someone potentially bringing an acid or ammonia to the site for a nefarious act of terrorism. The site will be equipped with locks, alarms, and sensors to identify access and to secure the site. As previously stated, there will be minimal amounts of solid and liquid calcium hypochlorite on site that would limit the effects of terrorist activities.

Some chlorine gas can be a byproduct of decomposition of the calcium hypochlorite. The product decomposes at 338-356 degrees Fahrenheit releasing oxygen and some chlorine gas. Therefore, a worst-case scenario may be related to fire that could affect the few buckets of tablets stored on site. To mitigate this, combustible materials will not be stored in the disinfection room of the facility. Should fire affect the stored buckets it is unlikely that the gas produced would exceed the OSHA permissible short-term exposure limit of 1 ppm.

8. **Develop A Worst-Case Scenario Evacuation Plan:** SLCDPU does not see the need for an evacuation plan associated with the well. However, SLCDPU will work with the City's Emergency Manager to evaluate potential risk and develop a security and risk mitigation plan.

9. **Provide Residents with an Evaluation for Moving the Disinfection System to Another Site:** Moving disinfection off-site is problematic for several reasons. First this would be taking what area residents think is an issue for them and moving it to another residential and park location. Early on in the discussions with the local residents it was suggested that SLCDPU purchase a home across the street from the well site to put the well and disinfection system or just the disinfection system. Given the proximity of moving the disinfection system simply across the street is counter to the objection of having the disinfection system at the site of the existing well. Regardless, SLCDPU has evaluated moving the system to another park further downstream of the existing well. Several issues are related to moving the disinfection system.

   Untreated water would need to be conveyed to the to the site of the potential disinfection system. The available space beneath the roadway is very limited and additional large diameter water lines would be problematic to install. Canyon Road is already very congested with utilities (two 60-inch storm drain lines, one 10-inch storm drain line, one 15-inch storm drain line, one 8-inch water line, one 16-inch water line, one 24-inch water line and one 8-inch sanitary sewer line). In addition, there are power and communication lines. There are three apartment buildings that require disinfected water. The 24" line from the 4th avenue well splits and becomes two lines (24" and 16") approximately 360 feet down stream of the well and approximately 500 feet upstream of a potential location located at City Creek Park at the intersection of State Street, 2nd Avenue, and N. Canyon Road. To accommodate two lines, the disinfected water from the location at City Creek Park would need to be plumbed to accommodate the current distribution needs. This would add additional trenching and lines within the already busy street. Parking has been raised as a concern for the well. The potential location for off-site disinfection would cause additional parking issues for routine maintenance either on State Street, 2nd Avenue, and N. Canyon Road. Construction for this revised

distribution system would potentially cause significant impacts to the community and traffic in the area of City Creek Park. Given the constraints within the already busy utility corridor, it is not recommended to move the disinfection system.

10. **Provide Residents with Building Height Needs and When the Building Design Work Begins, Look at Creative Solutions to Reduce the Impact:** The height of the vertical turbine motor does not dictate the height of the building. We will need an access door on the roof of the building to service the pump and motor. In previous design iterations the size of the sodium hypochlorite storage tank was the controlling factor for height; that alternative is no longer under consideration. The design elements that currently dictate the building height are the interior electrical panels, ceiling-hung HVAC, and worker height requirements. Given the new technical design we will work with our mechanical engineers and architect to identify if the overall height of the building can be reduced and the possibility of a different height for the tablet disinfection room.

11. **Determine the Need for a Driveway:** After discussing with Salt Lake City Planning, the driveway can be removed from consideration. We would install a walkway to the building access doors.

12. **Provide Residents with Upkeep, Maintenance, and Monitoring Plan:** SLCDPU will provide residents with an upkeep and maintenance plan in the future as the project progresses. SLCDPU water operators will inspect this site daily, as is standard practice with all of our well sites. In addition, we will work with Parks and possibly a private maintenance contractor for upkeep of the landscape and property.

13. **Provide Residents with Information on if the Project Will Affect Parking:** The completed project will not affect parking in the neighborhood. There may be temporary impacts during the construction of the project. SLCDPU will need to obtain permits during construction to identify and mitigate parking or road impacts during construction. Future parking and site visits are expected to be similar to current operations.

14. **Provide Residents with Current Noise and Vibration Levels at the Site:** Given the current architectural application we will reduce the noise level from a motor rated at 86 decibels (dB) to approximately 50 dB with just a CMU structure that is approximately 7" thick. As part of the design we will also have an exterior façade on the structure that will increase the overall wall thickness to approximately 14". This includes the CMU, insulation, air-gap, and the façade; thus, further reducing the dB level. The current dB readings at the site were measured on 11/25/19 and 11/26/1919. The decimeter was run for 3.25 hours and 4 hours during each measurement period. The average and maximum dB readings were 55.2 and 72.4 on 11/25/19 and 58.6 and 70.1 on 11, 26,19, respectively. These reading were taken midday. We are currently not operating the well. These measurements are in line with various references give 50 dB as the normal ambient noise level in a "quiet suburb, conversation at home". 40 dB is representative of the inside of a library, or is the "lowest limit of urban ambient sound." 60 dB is the level of conversation in a restaurant or office. The goal in the design should be that the sound level occurring on the sidewalk outside the building, due to noise emanating from the building, matches an established average ambient value.

15. **Report to Residents if the Project will Trigger Tree Removal to Assure the Site is Clearly Visible and Free of Obstructions:** It is anticipated that two trees will need to be removed for the well project. SLCDPU is not planning on any additional tree removal for the project. If residents are concerned about visibility and obstructions, SLCDPU could discuss those specific concerns about visibility in the future with the Salt Lake City Urban Forester once SLCDPU has a better idea of the new building design.

16. **Provide Residents with Evaluation Information on Moving the Well to Another Location, Such as Feasibility, Costs, and Project Elements:** SLCDPU worked with the engineering firm Hansen Allen Luce (HAL) to evaluate different alternatives, including abandoning and relocating the 4th Avenue well. A memorandum was prepared April 12, 2019, and posted on the City's 4th Avenue Well project website under the documents portion of the project website. The memorandum includes a discussion regarding feasibility (presented as pro's and con's of the different alternatives) and cost. The cost charts below are included in the report. As noted by HAL, well abandonment and relocation introduces water supply uncertainty and significant cost.

    We have heard from residents that they would like SLCDPU to consider moving the well, SLCDPU does not recommend abandoning the existing well since it produces a significant quantity of water needed to serve downtown Salt Lake City, is high quality, has an existing water right, and is located on land owned by the City. This is an important part of the City's current and future water supplies. In fact, SLCDPU has determined that system-wide additional groundwater resources will be needed to meet future population growth, water demand, land use changes, and buffer against the impacts of climate change. Abandonment of the 4th Avenue well would be inconsistent with the City's water supply planning and needs given its productivity. There is no guarantee that the City would be able to replace this important water resource once the well is abandoned due to legal and hydrogeologic conditions.

#	SCENARIO	PRO	CON
2c-1 & 2c-2	**Leave Well In-Place Build Wellhouse Move Chemical Feed Off-Site** (Similar to Option 2a)	Added chlorine is a Public Health benefit	Would add a building on the site that is now a walking park
		The well is in the ideal location to provide 5-7 mgd at the right pressure and flow to meet local peaking demands	Requires the purchase of new land
		The existing well provides vital drinking water and fire protection	Requires the construction of a separate building
		Reduces building footprint by approximately 300 ft² (15' x 20')	New transmission pipelines will be required
		The well is in place and can continue to be a viable and important water source	3 existing trees would be removed but the area would be re-landscaped
		The well can be extended upward and eliminate the hazards of a below grade well and meet DDW Standards	The existing well is now 75 years old and either now or in the future will have to be re-lined
		An above ground facility can be designed to eliminate all current safety and health concerns	There is an increased potential for a loss in communication between facilities which could result in health & safety concerns
		Added chlorine is a Public Health benefit	With two facilities, energy consumption will increase
		Preliminary engineering design has been done with engineering costs expended	Maintenance costs will increase with two facilities
		There is adequate space on-site to construct the wellhouse	Additional permits and engineering will be required
		All facilities would be designed and built to meet health and safety codes	There is no guarantee that the well would produce as much as the current location
		A new well would provide a new life for the well over its	Would requires the acquisition of residential properties,

Option	SCENARIO	PRO	CON
		The well would be eliminated from the current Neighborhood	There is no guarantee that the well would produce as much as the current location
		All facilities would be designed and built to meet health and safety codes	Will be possible similar local resistance at the new location
		Added chlorine is a Public Health benefit	An up-canyon location will likely receive similar resistance
		A new well would provide a new life for the well over its present condition, perhaps extending its life to 75-100 years	A down-canyon location will interfere with other existing water right holders and likely receive significant opposition
			A well outside the canyon drainage, or on an adjacent hillside will not likely be able to provide the volume of local water needed
			May require the acquisition of property, most likely involving

COST SUMMARY OF ALTERNATIVES

A more detailed summary of preliminary costs are provided in the attached cost spreadsheet.

Option	Description	Estimated Cost	% of Option 2a
0	Do Nothing	$0.00	n/a
1	Leave Well In-Place – Add New Well Liner	$151,800	n/a
2a	Leave Well In-Place – Build Wellhouse	$2,688,000	100
2b	Leave Well In-Place – Build Wellhouse and Add New Liner	$2,826,000	105
2c-1	Leave Well In-Place – Build Wellhouse, Add New Liner and Off-Site Chlorinate in Old City Hall Building	$3,272,000	122
2c-2	Leave Well In-Place – Build Wellhouse, Add New Liner and Off-Site Chlorinate in New Building	$3,632,000	135
3a	Abandon the Existing Well and Move to an Alternate Location within 300' of the Existing Well	$5,463,000	203
3b	Abandon the Existing Well and Move to an Alternate Location > 300' of the Existing Well	>$5,463,000	>203
4	Alternative to Bury the Flow Meter for Options 2a, 2b, 2c-1 and 2c-2	$20,000	Additive Cost

PROS AND CONS EVALUATION

A general list of major Pro's and Con's to each of the above identified options is provided below, costs are not listed with the pros and cons; rather the costs are listed above. In the Pro's column, dark green is used to identify issues of major importance to the decision-making process. In the Con's column red represents issues that are considered to be of major importance to decision making while yellow represents issues that are less critical.

17. **Provide Residents with Information About the Importance and Value of the Well, as Well as How the Distribution System Works:** The City's water system serves more than 360,000 people that reside in Salt Lake City, Mill Creek City, Holladay City, and Cottonwood Heights City. The system also serves small portions of Midvale, Murray, and South Salt Lake Cities. The City's water sources include surface water from the Wasatch Mountains and groundwater. The surface water sources emanate from Little Cottonwood, Big Cottonwood, Parleys, and City Creeks, as well as stored water in Deer Creek as part of the Provo River Project and Central Utah Project. The surface water sources are conveyed by gravity to water treatment plants, where they are treated and enter into the distribution system. The City's groundwater resources are collected from wells and springs along the east bench of Salt Lake County. Groundwater resources are pumped directly into the City's distribution system.

    The City's water system is very efficient in that the collection, treatment, and distribution system primarily uses gravity rather than large pumping systems to move the water to where it is needed.

    The 4th Avenue well is a critical water resource for the City. As with all of the City's other wells, the 4th Avenue well is currently used during the summer when water demand is higher, primarily

due to outdoor irrigation. There are times during the summer when the 4th Avenue well provides 100 percent of the water to areas of downtown Salt Lake City. If the 4th Avenue well fails, SLCDPU would need to use another water source to meet demand. This may be difficult due to the different pressure zones and characteristics of the distribution system and water demand patterns. This could result in water supply or water pressure disruptions in downtown Salt Lake City.

SLCDPU also manages its water sources and system to ensure there is redundancy in case of emergencies. For instance, if there is a situation where one or more of the streams cannot be used in the water supply due to infrastructure or water quality issues, groundwater resources, including the 4th Avenue well can help meet demand and avoid water supply disruptions. If the 4th Avenue well fails, the area it serves would lose that redundancy.

18. **Provide a Meeting Summary:** This meeting summary was completed and distributed to area residents on November 5, 2019.

19. **Schedule Next Meeting:** A facilitated working group meeting will be held on December 2, 2019, from 6:30 to 8:30 pm at Memorial House. Area residents were sent information about the meeting on November 19, 2019.

4th Avenue Pump House
HLC New Construction Standards

Department of Community and Neighborhoods

Planning Division

Salt Lake City Public Utilities is proposing to construct a new pump house on the property located at 300 N. Canyon Road. The pump house is necessary to continue to provide drinking water to the community and protect the well that is on the site. The purpose of this open house is to obtain public comment on the proposed construction and to help staff identify issues. The Historic Landmark Commission is holding a work session on the proposed new construction on September 6, 2018. The Historic Landmark Commission will utilize the Standards for New Construction. Staff encourages public comments that include or reflect the adopted standards of review. For reference, the standards are provided on this document.

H. Standards For Certificate Of Appropriateness Involving New Construction Or Alteration Of A Noncontributing Structure: In considering an application for a certificate of appropriateness involving new construction, or alterations of noncontributing structures, the Historic Landmark Commission, or Planning Director when the application involves the alteration of a noncontributing structure, shall, using the adopted design guidelines as a key basis for evaluation, determine whether the project substantially complies with each of the following standards that pertain to the application to ensure that the proposed project fits into the established context in ways that respect and contribute to the evolution of Salt Lake City's architectural and cultural traditions:

1. **Settlement Patterns And Neighborhood Character:**
   - a. **Block And Street Patterns:** The design of the project preserves and reflects the historic block, street, and alley patterns that give the district its unique character. Changes to the block and street pattern may be considered when advocated by adopted City plan.
   - b. **Lot And Site Patterns:** The design of the project preserves the pattern of lot and building site sizes that create the urban character of the historic context and the block face. Changes to the lot and site pattern may be considered when advocated by an adopted City plan.
   - c. **The Public Realm:** The project relates to adjacent streets and engages with sidewalks in a manner that reflects the character of the historic context and the block face. Projects should maintain the depth of yard and height of principal elevation of those existing on the block face in order to support consistency in the definition of public and semi-public spaces.
   - d. **Building Placement:** Buildings are placed such that the project maintains and reflects the historic pattern of setbacks and building depth established within the historic context and the block face. Buildings should maintain the setback demonstrated by existing buildings of that type constructed in the district or site's period of significance.
   - e. **Building Orientation:** The building is designed such that principal entrances and pathways are oriented such that they address the street in the pattern established in the historic context and the block face.
2. **Site Access, Parking, And Services:**
   - a. **Site Access:** The design of the project allows for site access that is similar, in form and function, with patterns common in the historic context and the block face.
     - (1) **Pedestrian:** Safe pedestrian access is provided through architecturally highlighted entrances and walkways, consistent with patterns common in the historic context and the block face.

(2) **Vehicular:** Vehicular access is located in the least obtrusive manner possible. Where possible, garage doors and parking should be located to the rear or to the side of the building.

b. **Site And Building Services And Utilities:** Utilities and site/building services (such as HVAC systems, venting fans, and dumpsters) are located such that they are to the rear of the building or on the roof and screened from public spaces and public properties.

3. **Landscape And Lighting:**
   a. **Grading Of Land:** The site's landscape, such as grading and retaining walls, addresses the public way in a manner that reflects the character of the historic context and the block face.
   b. **Landscape Structures:** Landscape structures, such as arbors, walls, fences, address the public way in a manner that reflect to the character of the historic context and the block face.
   c. **Lighting:** Where appropriate lighting is used to enhance significant elements of the design and reflects the character of the historic context and the block face.
4. **Building Form And Scale:**
   a. **Character Of The Street Block:** The design of the building reflects the historic character of the street façade in terms of scale, composition, and modeling.
      (1) **Height:** The height of the project reflects the character of the historic context and the block face. Projects taller than those existing on the block face step back their upper floors to present a base that is in scale with the historic context and the block face.
      (2) **Width:** The width of the project reflects the character of the historic context and the block face. Projects wider than those existing on the block face modulate the façade to express a series of volumes in scale with the historic context and the block face.
      (3) **Massing:** The shape, form, and proportion of buildings, reflects the character of the historic context and the block face.
      (4) **Roof Forms:** The building incorporates roof shapes that reflect forms found in the historic context and the block face.
5. **Building Character:**
   a. **Façade Articulation And Proportion:** The design of the project reflects patterns of articulation and proportion established in the historic context and the block face. As appropriate, façade articulations reflect those typical of other buildings on the block face. These articulations are of similar dimension to those found elsewhere in the context, but have a depth of not less than twelve inches (12").
      (1) **Rhythm Of Openings:** The facades are designed to reflect the rhythm of openings (doors, windows, recessed balconies, etc.) established in the historic context and the block face.
      (2) **Proportion And Scale Of Openings:** The facades are designed using openings (doors, windows, recessed balconies, etc.) of similar proportion and scale to that established in the historic context and the block face.
      (3) **Ratio Of Wall To Openings**: Facades are designed to reflect the ratio of wall to openings (doors, windows, recessed balconies, etc.) established in the historic context and the block face.
      (4) **Balconies, Porches, And External Stairs:** The project, as appropriate, incorporates entrances, balconies, porches, stairways, and other projections that reflect patterns established in the historic context and the block face.
6. **Building Materials, Elements And Detailing:**
   a. **Materials:** Building facades, other than windows and doors, incorporate no less than eighty percent (80%) durable materials such as, but not limited to, wood, brick,

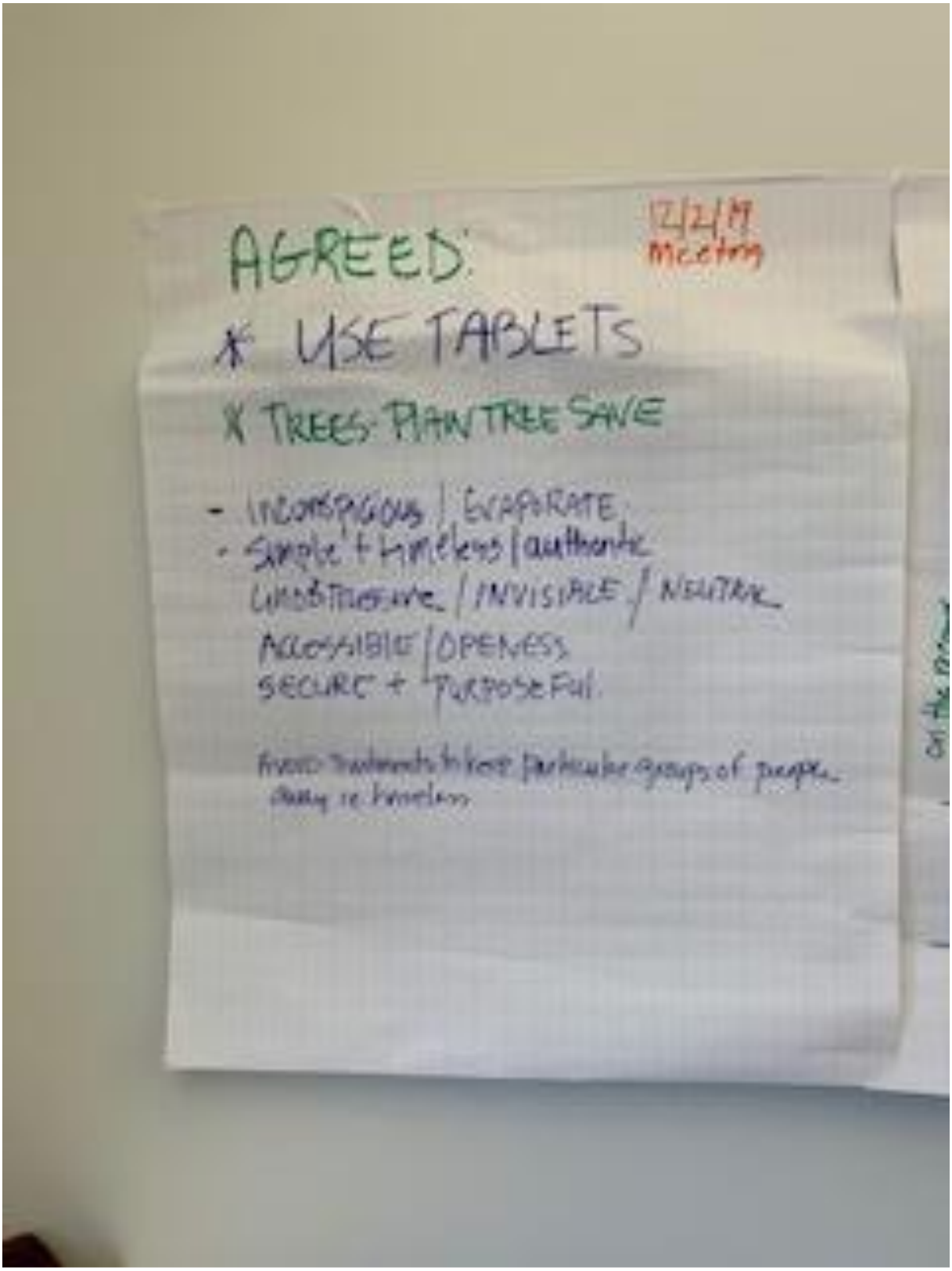
masonry, textured or patterned concrete and/or cut stone. These materials reflect those found elsewhere in the district and/or setting in terms of scale and character.

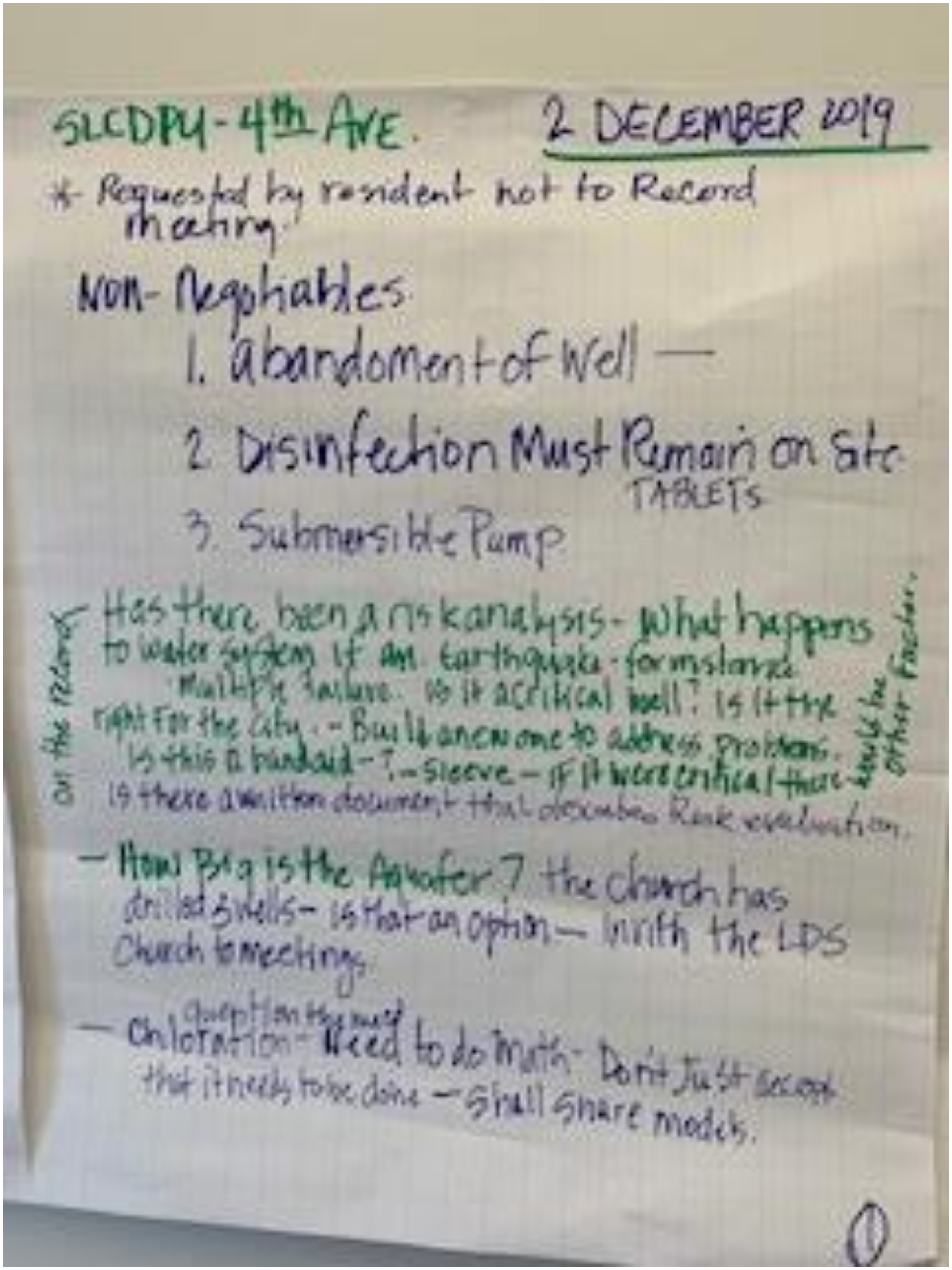
b. **Materials On Street-Facing Facades:** The following materials are not considered to be appropriate and are prohibited for use on facades which face a public street: vinyl siding and aluminum siding.
c. **Windows:** Windows and other openings are incorporated in a manner that reflects patterns, materials, and detailing established in the district and/or setting.
d. **Architectural Elements And Details:** The design of the building features architectural elements and details that reflect those characteristic of the district and/or setting.

7. Signage Location: Locations for signage are provided such that they are an integral part of the site and architectural design and are complementary to the principal structure.

If you have any questions or comments, please contact Kelsey Lindquist at 801-535-7930 or kelsey.lindquist@slcgov.com.

Written comments can be submitted via email or mailed to:
Salt Lake City Planning Division
451 South State Street Rm 406
PO Box 145480
Salt Lake City, UT 84114-5480


AGREED
12/2/19
Meeting
* USE TABLETS
* TREES: PLANT TREE SAVE
- INCONSPICUOUS / EVAPORATE
- Simple + Timeless / authentic
UNOBTRUSIVE / INVISIBLE / NEUTRAL
ACCESSIBLE / OPENESS
SECURE + PURPOSEFUL



SLCDPU - 4th AVE. 2 DECEMBER 2019

* Requested by resident not to Record meeting.

Non-Negotiables

1. abandonment of Well —
2. Disinfection Must Remain on Site
   TABLETS
3. Submersible Pump

On the record

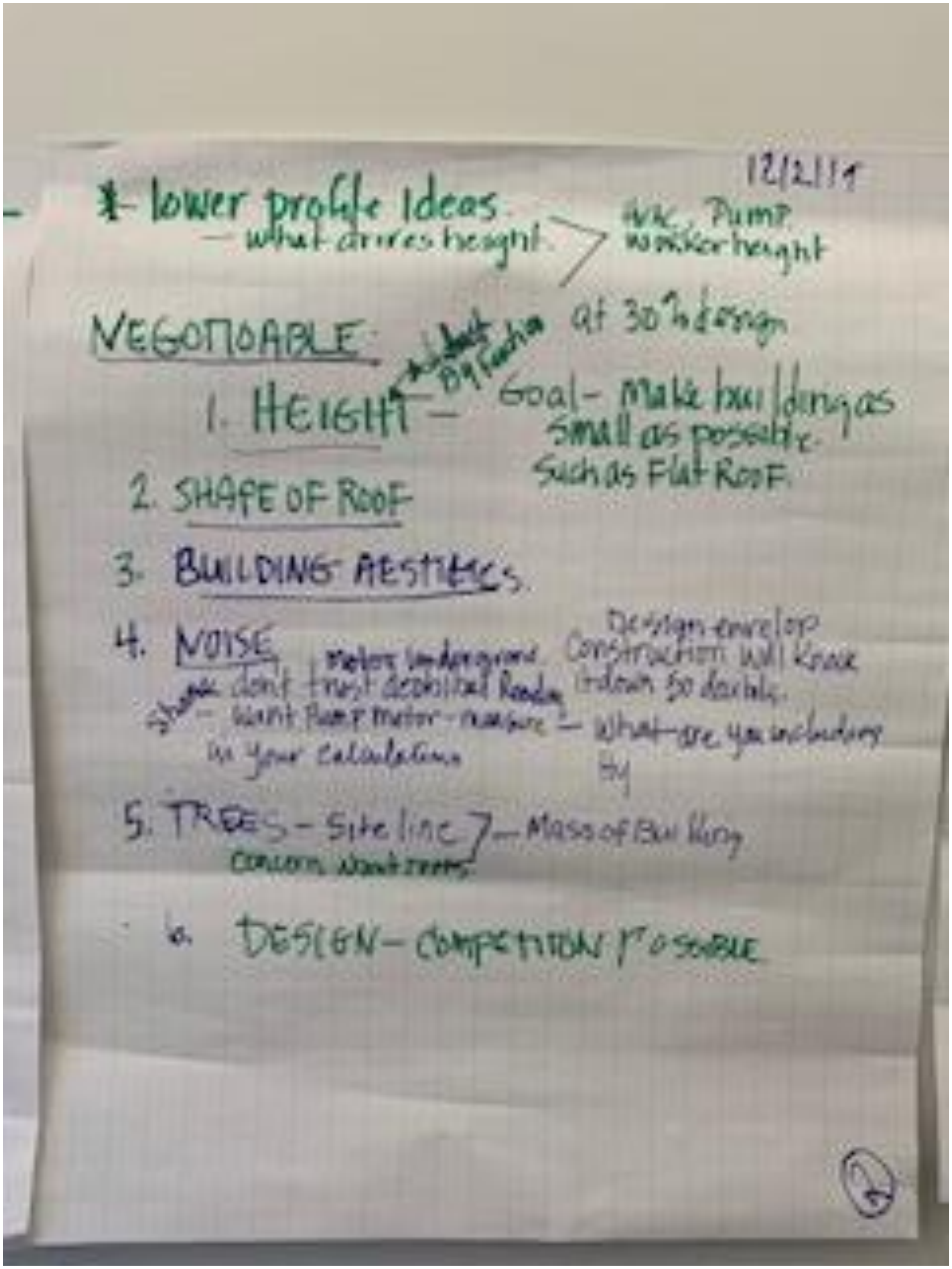
- Has there been a risk analysis - What happens to water system if an earthquake - for instance multiple failure. Is it a critical well? Is it the right for the City. - Build a new one to address problems. Is this a bandaid - ? - sleeve - if it were critical there - Is there a written document that describes Risk evaluation.

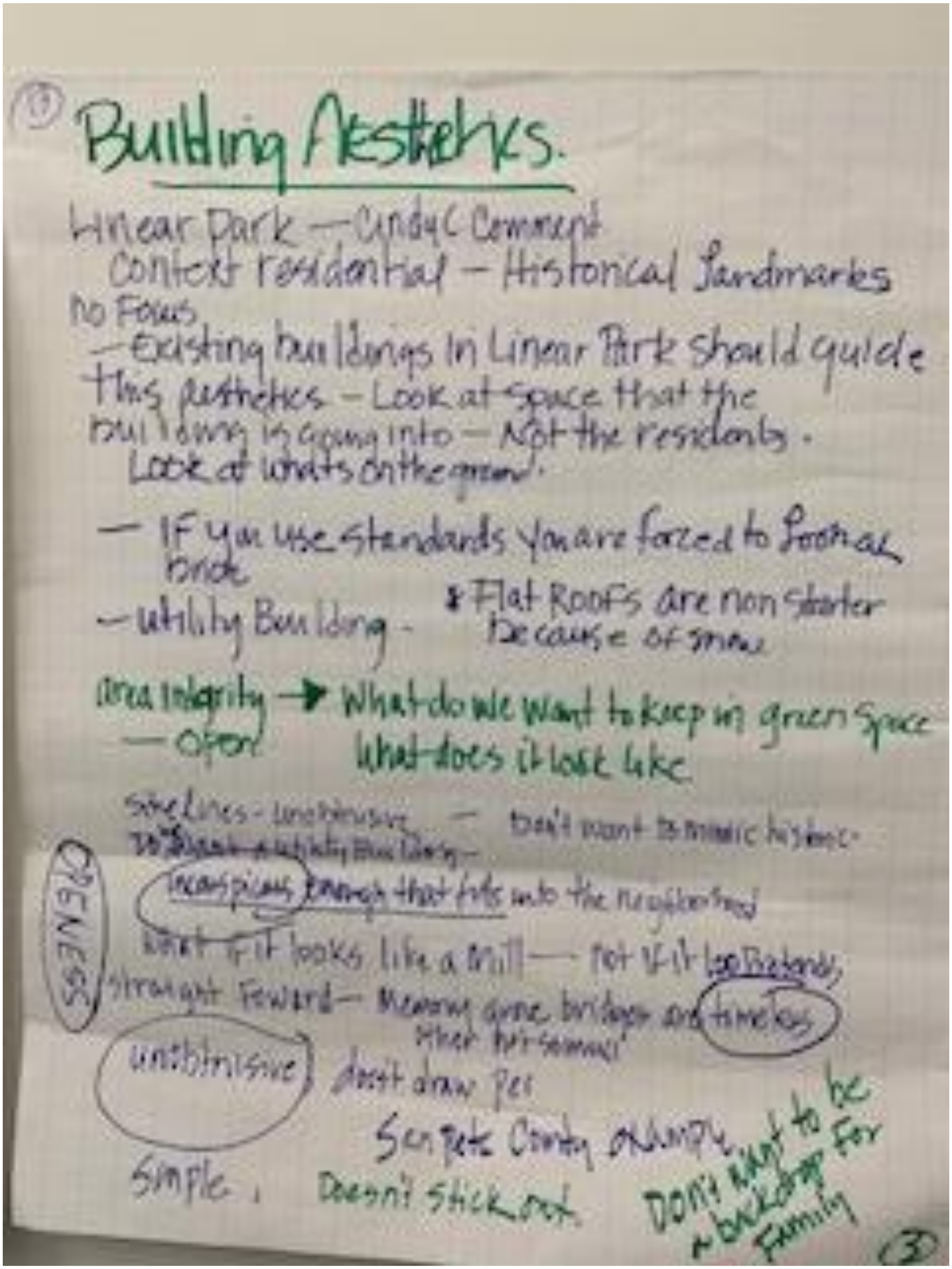
would be other factors

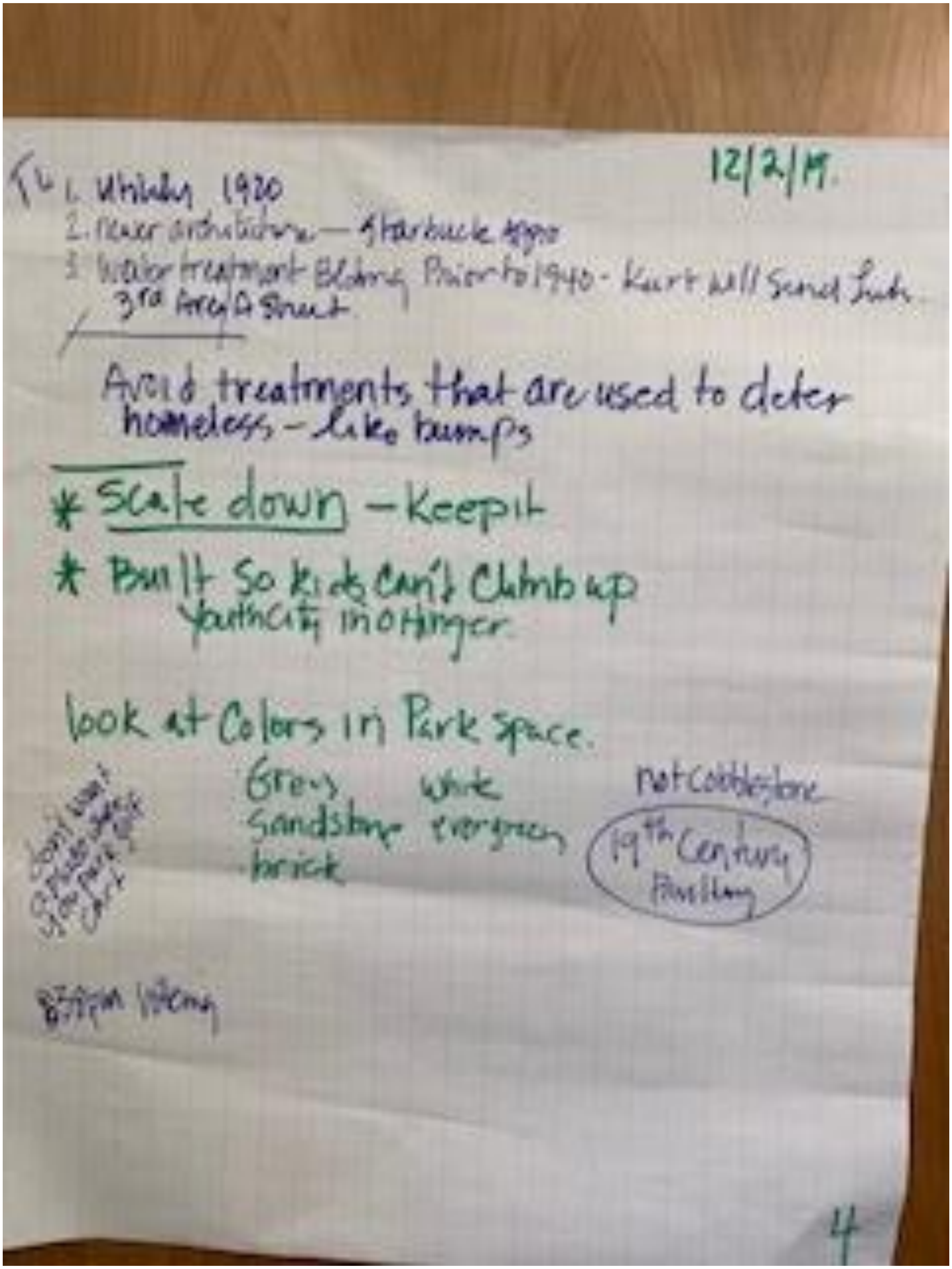
- How Big is the Aquifer? the church has drilled 3 wells - is that an option - with the LDS Church to meeting.

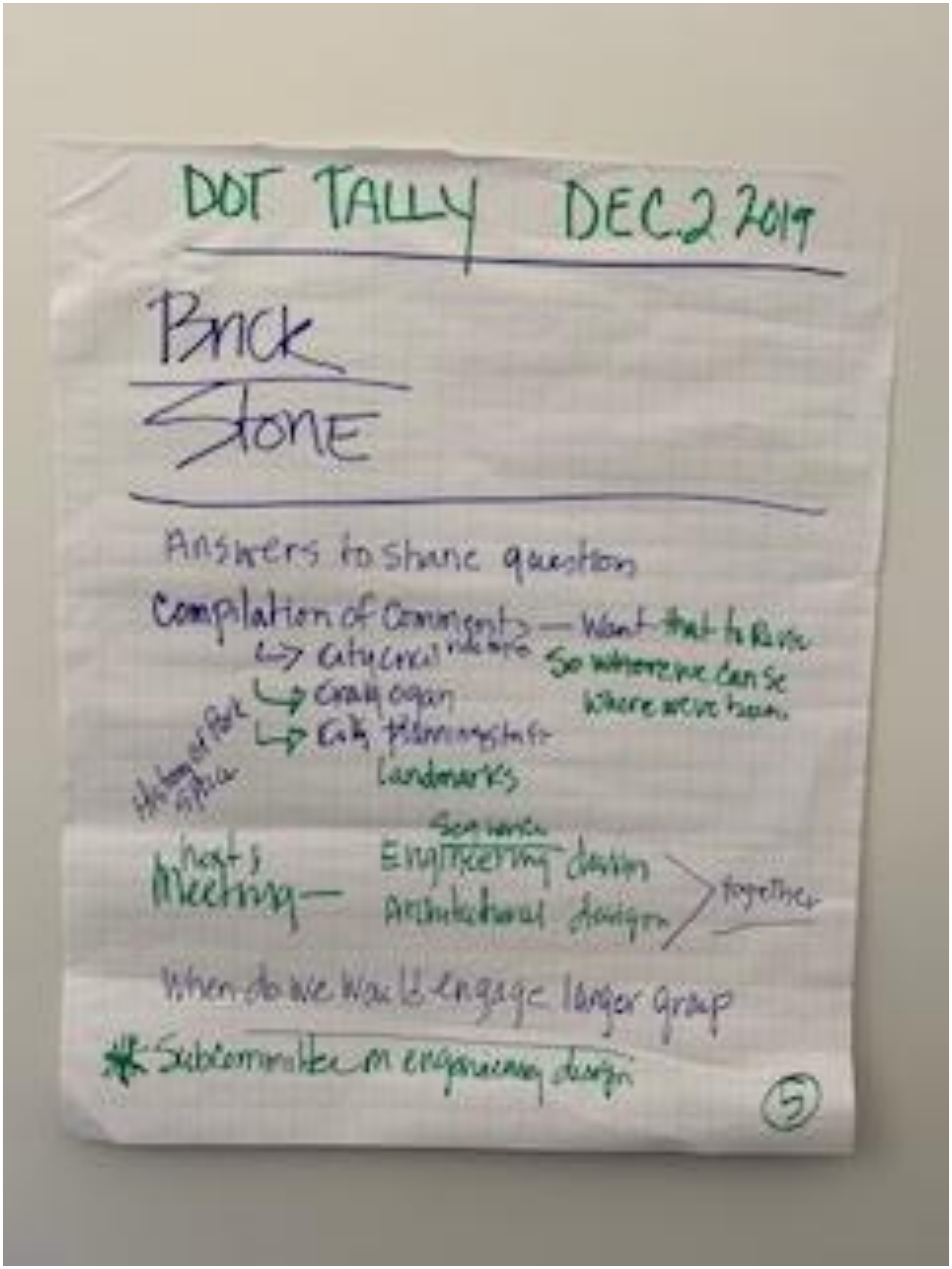
- Chlorination - question the need - Need to do math - Don't just accept that it needs to be done - Shall share models.

(1)


12/2/19
lower profile Ideas
— what drives height
Pump
NEGOTIABLE
at 30% design
1. HEIGHT — Goal - Make buildings as small as possible. Such as Flat Roof.
2. SHAPE OF ROOF
3. BUILDING AESTHETICS
4. NOISE
Design envelop Construction will knock it down 50 decibels.
Motors underground
don't trust decibel Reading
— want Pump motor - measure — what are you including in your calculation
5. TREES — Site line — Mass of Building
6. DESIGN — COMPETITION POSSIBLE


Building Aesthetics.
Linear Park — Cindy C Comment
Context residential – Historical Landmarks
No Focus
– Existing buildings in Linear Park should guide
this aesthetics – Look at space that the
building is going into – Not the residents.
– utility Building –
* Flat Roofs are non starter
because of snow
What do we want to keep in green space
— open
What does it look like
Simple, Doesn't stick out.
Don't want to be a backdrop for Family


12/2/19.
Avoid treatments that are used to deter homeless - like bumps
* Scale down - Keep it
* Built so kids can't climb up
look at Colors in Park space.
not cobblestone
sandstone evergreen
brick
19th Century
4


DOT TALLY DEC. 2 2019
Brick
Stone
Compilation of Comments
Landmarks
Meeting
Engineering design
Architectural design
together
Subcommittee on engineering design
5

Public Utilities

Make It Pure

Facilitated Working Group Meeting – December 2, 2019

Name: KIRK BAGLEY	Address:
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Name: DAVE JONSSON	Address:
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Public Utilities

Make It Pure

Facilitated Working Group Meeting – December 2, 2019

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Public Utilities

Make It Pure

Facilitated Working Group Meeting – December 2, 2019

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Public Utilities

Make It Pure

Facilitated Working Group Meeting – December 2, 2019

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Phone:	Email:

Name:	Address:
Phone:	Email:

Name:	Address:
Phone:	Email:

MEETING SUMMARY

Salt Lake City Department of Public Utilities 4th Avenue Well Facilitated Working Group Meeting
Monday, March 16, 2020
Virtual Meeting

INTRODUCTION

Salt Lake City Department of Public Utilities (SLCDPU) held a fourth facilitated working group meeting with residents who live near the proposed 4th Avenue well project to help identify a workable solution for the project. Because of the COVID-19 situation and the need for social distancing the meeting was held virtually. The meeting provided an opportunity for SLCDPU to give a report on work being done on the foundational elements, share architectural design options, provide information on sound mitigation element, and have a discussion with residents about these items. The meeting materials, flip chart notes and questions that came in through the online chat tool are attached.

ACTION ITEMS

- CRSA to work on making alternations to rendering 3A.
- CRSA and Bowen Collins to continue work on foundational engineering.
- CRSA and Bowen Collins to continue work on sound mitigation.
- SLCDPU to coordinate virtual public open house to share foundational elements, architectural design renderings, noise mitigation elements and obtain input.
- SLCDPU to analyze public input and project parameters.
- CRSA will draft the Historic Landmark Commission packet and SLCDPU will approve and submit it to the Historic Landmark Commission for scheduling.

DISCUSSION POINTS

- **Engineering Status:** Jesse Stewart briefly reviewed the engineering status. He reported that the engineers were still moving ahead with more detailed engineering for the agreed upon foundational elements. There were no questions or comments.

- **Timeline:** Jesse Stewart reviewed the timeline that is included in the handout and that is attached to this summary. There were no questions or comments.

- **Background:** CRSA reviewed the background for creating the architecture design of the building. They stated that the building will be around 500-600 square-feet, it will need to be 14 feet tall, and will need a partial fence to cover external electrical box for safety and aesthetic reasons. There were no questions or comments.

- **Rendering 1A:** CRSA presented the rendering identified as 1A and explained their reasoning around this design and how it fits the design parameters. They explained how the color and style makes the building appear smaller and how there are several buildings in the area that it draws from. The following captures what residents said:

  - Cobble rock on the lower half and dark above splits up the height some.
  - I'd like to see the stone on the west.
  - The stone wall feels very heavy and imposing to me. I would prefer to see the building
  - Still a little modern for me, and the wall is heavy. (Several people agreed with this sentiment)
  - I agree with the comments about it being dark, heavy, and a little too modern.
  - I like the French doors and south elevation.
  - It's more back to the Starbucks look.
  - Don't like the style and the massive stone wall. Very boxy. Too modern. looks out of place.
  - The dark, black brick exteriors in the first two designs will appear dated when we get past this unfortunate period of black structures.
  - Exterior lighting not shown?
  - Are you utilizing the space below ground for the existing vault to reduce building footprint? If not, why? Have you considered an octagonal building?
  - Below ground, probably roots interfere, but agree should take building below as much as possible."
  - I like that the Fourth Avenue Well sign/plaque that is shown.
  - I also like the idea of the plaque.
  - If you are going to install a plaque, it needs to be located where people can walk up to it.

- **Rendering 1B:** CRSA presented rendering identified as 1B. They explained how this design is a variation of 1A and how the slanted roof makes the building appear smaller. The following captures what residents said:

  - This looks the same just the roof slanted at a different angle.
  - We don't want this one. (Several people agreed with this sentiment)
  - It looks like a park restroom not a pump house. Windows suggest an outhouse/restroom. (Several people agreed with this sentiment)
  - The dark, black brick exteriors in the first two designs will appear dated when we get past this unfortunate period of black structures.

- **Rendering 2A:** CRSA presented the rendering identified as 2A and explained their reasoning around this design and how it fits the design parameters. They explained how it draws on the brick work you can see in area buildings and the historical area pump houses. The following captures what residents said:

  - Speaks to me – maybe a different color. Don't like the modern awning. Want a more classic look. Tone down the modern elements.
  - I like the shape and monumental look of it. Nice brick vertical elements too.
  - Like 1A doors as opposed this one.
  - Like that it mirrors the feel with the other neighborhood buildings.
  - The neutral color of the brick will blend in with the colors in the landscaping through the 4 seasons.
  - I'd like to see it in red brick.
  - I'd be curious how stucco or another color of brick would look.
  - Might be worth doing two more renderings of this one in a dark and a light red.
  - It has the same mass and form as 1A, but the detailing references a historic store in Marmalade.
  - I like the roof that is darker and lowers the height visually.
  - Like the band around the top - breaks up the height. Not crazy about the vertical brick on the lower section.
  - Too narrow a door will make it look like a cemetery mausoleum.
  - The metal fencing concerns me as we would see the electrical boxes from the north side.
  - I like the fence. Maybe the fence could be shielded from the north with shrubs.
  - The metal fence adds less mass to the building.
  - We prefer a solid fence.
  - I like the fence but do you know what we see.
  - Evergreen shrubs?
  - With a lattice fence, the transformer will put out too much noise.
  - A solid wall can absorb sound.
  - Do a rock wall that covers.
  - I would prefer a solid wall.
  - The metal fence is more elegant.
  - East and west elevation has large flat uniform walls that feel too modern.
  - Does the present transformer make noise? I haven't detected it. Another resident commented that yes, the transformers make noise. While another stated that if you listen for it in the park, you can hear the hum of the transformer from 15 feet or so away but how you really need to be listening for it. You really need to stand next to the green boxes to hear it. These are the light green five-foot tall boxes that I am talking about.
  - The new transformers will be larger and louder. Bowen Collins responded that the transformers will not be louder or larger.
  - Where are all the existing telephone boxes going.
  - Are there plans for the history plaque on this rendering.

- **Rendering 2B:** CRSA presented rendering identified as 2B. They explained how this design is a variation of 2A and how the slanted roof makes the building appear smaller. The following captures what residents said:

  - What is being hidden/protected with the fence. CRSA responded that it is electrical gear like at your home only larger.
  - Looks like a bathroom or outhouse in Liberty Park, restroom. (Several people agreed with this sentiment)
  - The Tough Shed option. (Several people agreed with this sentiment)
  - This option also reads as a restroom and therefore is confusing to visitors.
  - Don't like this one.

- **Rendering 3A:** CRSA presented the rendering identified as 3A and explained their reasoning around this design and how it fits the design parameters. They explained how it draws on the brick found in the area and historical area pump houses that residents and the public have said they like. The following captures what residents said:

  - This is my favorite design! Walls have pleasing articulations. Vertical elements are strong and the arches mimic Ottinger Hall. (Several people agreed with this sentiment)
  - The river rock wall seems out of place though. Could it be a brick wall?
  - I like the doors on this one.
  - It will stick out like a sore thumb in the winter because of the red brick. I am less opposed to the design than the color of the materials.
  - A lighter color would not.
  - Go with the metal fence.
  - We don't want to see the electrical boxes etc. through a metal fence.
  - Why a fence/wall around it? There isn't one presently.
  - I don't mind the stone wall. It differentiates the fence from the buildings and might help decrease the mass of the building.
  - Would there be any texture to the brick that would be filling in the windowing features, or just solid brown? CRSA responded that textured rick is an option.
  - Use brick like Ottinger Hall. It is not as heavy.
  - Can you add the "Fourth Avenue Well" or plaque? A historical plaque can also go on the existing cobblestone wall. "
  - The historical plaque could exist as a raised cobblestone monument integrated into the existing cobblestone wall.
  - I really like how the big pipe is hidden.
  - It would not stick out as much in the winter.
  - I like this. I like a reddish color - something pinkish like my tudor or Ottinger Hall color. I like the symmetry of the arches. I am in favor of camouflaging the electrical system.
  - This is very interesting to look at, doesn't look like a bathroom or a Starbucks. Yeah!

- **Rendering 3B:** CRSA presented rendering identified as 3B. They explained how this design is a variation of 3A and how the stepped roof was used to make the building appear smaller. The following captures what residents said:

  - I like the roofline, but I like how 3A has features that disrupt the western wall.
  - Are there ways to disguise the green stand-alone transformer, or does it have to be a green metal box? Please don't let 'artists' paint that box. The box can be painted.
  - Can you show the side elevations?
  - Is this the smallest footprint? What is the building height of 3A vs 3B? CRSA responded that 3A is 12'6" and 3B is 13'.
  - I do like the roof line on 3B better than 3A's.
  - I'd like to see 3B in yellow brick.

- **Final Comments:** Alexis Cairo, the facilitator, provided a summary of what had been said during the meeting. She stated that it seems like from the discussion that people prefer 3A the most but would like to see another brick color – a brick color lighter like Ottinger Hall. She also stated that people also liked 2A, that the majority of people thought 1A was too modern, and that almost everyone did not like 1B and 2B because they looked like restrooms and tuff sheds. Residents did not comment or correct Alexis. Alexis then asked them for any additional comments. The following is what residents said:

  - From a personal perspective, all design features are very acceptable with exception of (1) east elevation of option 1A (too busy), and (2) option 3B (not as attractive as the other possibilities). Excellent work from the architects.
  - 1A is too modern. I think that 3A and 2A best meet the criteria that we developed. I prefer the elements and color of 3A. Several people agreed.
  - I'm disappointed my idea of a sawmill replica building is going nowhere.
  - Overall designs seem to contain modern elements.
  - The HLC guidelines are broad enough to drive all the proposals through. The HLC are as sick of this as the rest of us and will be quick to approve whatever is agreed to.
  - We need to go in with what we want and let the HLC tell us no.
  - Can we take what we want and let HLC tell us no?
  - The windows on all the doors, are these opaque? I personally hope so. In your experience are windows often scratched or otherwise permanently vandalized that may not be the case with a solid door. Can windows be replaced or buffed out? What about windows on the domes? I'm more thinking of people scratching them or offensive etchings. Other residents commented that vandalism is low in the park, that there are lots of eyes on the park and that they assume there will be a security camera put somewhere.
  - Is the lowest roof on 3B lower than 12'6?
  - Is the height and footprint on 2A the same height and footprint as 3A?
  - I really like the roof line of 3A.
  - I like 3A better.

- I do like 2A but I like 3A better.
- 2A or 3A liked the best.
- 3A is my favorite, but I do like 2A.
- The mid-century modern stuff in 3A doesn't make sense.
- A lot of this is the psychology of color. I recommend for your March 30 presentation to have fewer designs to have each rendered in the light brown, mid-tone red, and dark red.
- Well done. Agree with David (3A then 2A). Thanks.
- Could we see the side renderings?
- Have you costed these out roughly yet? Cost wise, are you guesstimating less than 1.3-1.5 Million USD?
- Will you be posting these renderings?" "Do we as a group have access to these renderings? WF&Co. responded that the PowerPoint would get posted on SLCDPU website and given to Jill for a story she is doing on it for the Greater Avenues Community Council newsletter.
- You do not need to go back to the Council to request a further budget authorization? SLCDPU responded no.
- I see how the cobble stone wall breaks up the mass of the main building, but in my opinion the wall looks tacked on.
- There could be a way to tie in brick pillars for the wall.
- There is a bridge in the park south of 4th Ave that is composed of plaster plus a bit of sandstone and cobblestone. It might be an option for the fence.
- The choice of brick is going to be so important. No bank brick if possible.
- Most of the noise will come from the windows. Come see what I have done in my house.
- The renderings read as more than 474 square ft but I'll take your word for it. Good night and thank you for your continuing efforts.
- Thank you so much for listening to us!!
- Terrific meeting. Over and out.
- I am pleased to see the more historic references in the design, thank you.
- Thank you for this progress!
- I appreciate your efforts!
- Agreed as well. Thank you for the efforts. This is so much better than the originally submitted designs.
- Thank you.
- Thanks all!
- Thanks everyone!!
- Sincere thanks.
- Thanks, architects, for listening to all our input.
- Thank you all.

- **Next Steps:** SLCDPU will be holding a virtual public open house on March 30, 2020, from 10 to 11 am. Join the open house https://www.facebook.com/SLCGovernment/.

APPENDIX

ATTENDEES

Area Residents

- Dave Johnsson
- Kurt Fisher
- Winston Seiler
- James Livingston
- Lisa Livingston
- Phil Carrell
- Dee Brewer
- Cindy Cromer
- Linnea Noyes
- Jill Van Langeveld
- Evan Smith
- Shane Franz
- Sharon Franz
- Craig Ogan
- David Garcia
- Vicki Walker

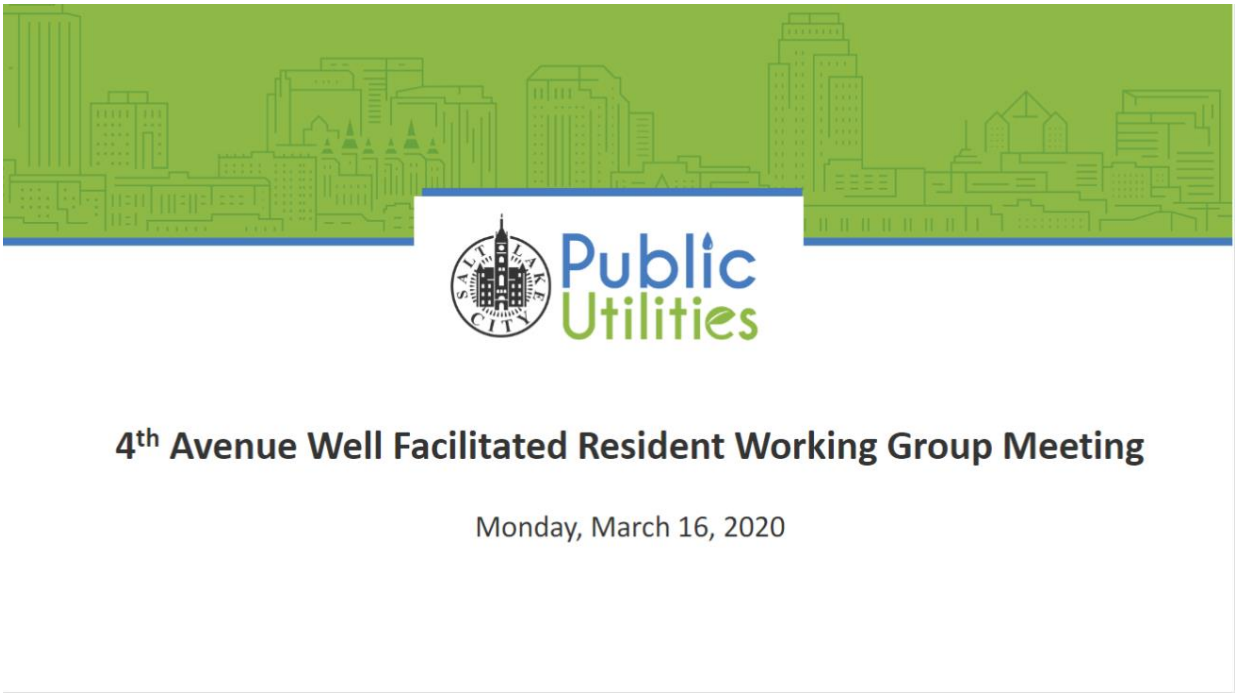
Salt Lake City

- Chris Wharton, Salt Lake City Council Member, District 3
- Jesse Stewart, Deputy Director, Salt Lake City Department of Public Utilities
- Holly Mullen, Communications & Engagement Manager, Salt Lake City Department of Public Utilities
- Austin Kimmel, Liaison, Salt Lake City Council
- Dawn Wagner, Project Manager, Salt Lake City Department of Public Utilities

Consultants

- Kirk Bagley, Principal, Bowen Collins & Associates
- John Ewanowski, CRSA Architecture
- Zach Clegg, CRSA Architecture
- Cindy Gubler, Partner, Wilkinson Ferrari & Co.
- Mimi Charles, Public Involvement Manager, Wilkinson Ferrari & Co.
- Alexis Cairo, Facilitator, Wilkinson Ferrari & Co.
- Hilary Dent, Public Involvement Coordinator, Wilkinson Ferrari & Co.
- Kirsten Dodge, Public Involvement Coordinator, Wilkinson Ferrari & Co.

POWERPOINT PRESENTATION



The Timeline

INTRO:
TIMELINE

- Facilitated working meeting October 22, 2019
- Facilitated working meeting December 2, 2019
- Facilitated working meeting February 27, 2020
- **Facilitated working meeting March 16, 2020**

What's Next

- Virtual public open house March 30, 2020 – 10 – 11 am www.facebook.com/SLCGovernment/
- Submit packet to SLC Planning and Historic Landmark Commission April 2020
- Historic Landmark Commission public hearing May/June 2020
- Council briefing spring/summer 2020
- Procurement spring/summer 2020
- Construction fall/winter 2020/21

Design Parameters

INTRO:
BACKGROUND

- Around 500- to 600-square-foot building needs to be designed to house well components
- The building will need to be around 14 feet tall
- A partial fence is needed to cover external electrical box

Design Parameters

INTRO:
PARAMETERS

- Meet the project's purpose and need
- Meet the needs and standards of the project's owner, SLCDPU
- Follow city codes and ordinances
- Follow and maintain the guidelines defined by the Historic Landmark Commission
- Take into account public input

Highlights Of What We've Heard

INTRO:
AESTHETICS
INPUT
HIGHLIGHTS

- Timeless, simple, unobtrusive and aesthetically pleasing
- Like historic more than modern
- Design elements should pull from historic pump houses
- Like small brick, stone or stucco
- Like old tumbled bricks not shiny finished brick
- Want brick that is the right color for the area
- Needs to age well
- Have elements that emphasize the corners of the building or that have nice little details
- Want design that reduces size but not at the expense of aesthetics
- Like pitched, flat, stepped or tapered roof; a design that makes it look small
- Don't want it to look like a house
- Could have an element like a historic chimney stack that houses the highest element
- Support windows or a façade that can keep sound low
- Pursue hybrid that draws from the park and the surrounding houses
- Interested in the stone wall idea but want to see it in a rendering

Case Studies

DESIGN:
CASE STUDIES

Design Renderings

OPTION
1A

Design Renderings

OPTION
1A

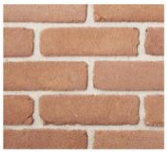
WEST ELEVATION

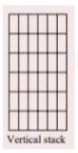
SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

13'-0" tall





Design Renderings

OPTION
1B

Design Renderings

OPTION
1B

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

12'-0" tall

Design Renderings

OPTION
2A

Design Renderings

OPTION
2A

Design Renderings

OPTION
2B

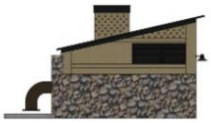
Design Renderings

OPTION
2B

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION



NORTH ELEVATION

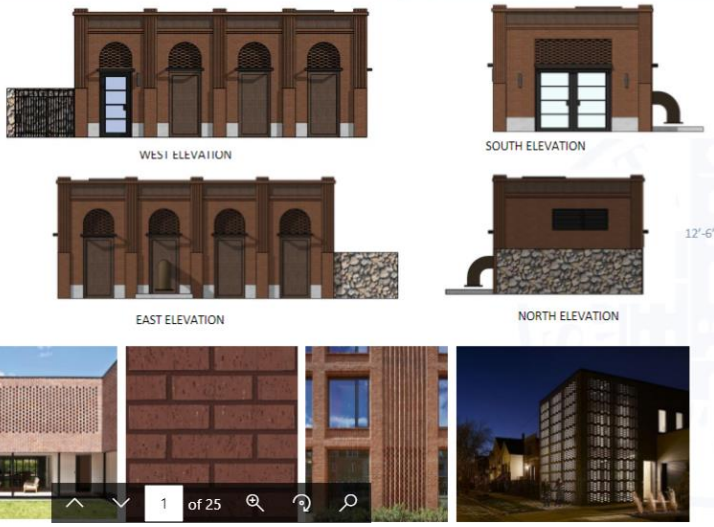
12'-0" tall

Design Renderings

OPTION
3A

Design Renderings

OPTION
3A



Design Renderings

OPTION
3B

Design Renderings

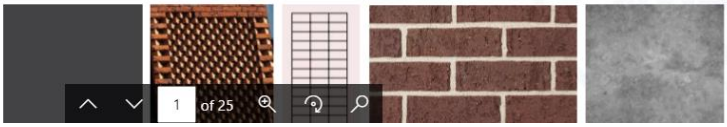
OPTION
3B

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION



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Sound Mitigation

SOUND
MITIGATION

We are designing the envelope to meet or be lower than the maximum 50 db outside noise at all frequencies, which meets county regulations and is less than ambient for an urban neighborhood. We will try to get it as low as possible and 30 db may be obtainable.

OCTAVE BAND CENTER FREQUENCY (HERTZ)	SOUND PRESSURE LEVELS MEASURED IN A REVERBERANT SOUND ROOM PER IEEE 85, CORRECTED TO FREE FIELD CONDITIONS REFERENCE: .0002 DYNES/CM² WEIGHTING NETWORK 'A'	
	148128	MPI (Ref)
	450.00	HP
	4	POLES
	60	HZ
31.5	---	DECIBELS
63	46.0	DECIBELS
125	58.5	DECIBELS
250	70.9	DECIBELS
500	79.2	DECIBELS
1000	82.5	DECIBELS
2000	79.4	DECIBELS
4000	74.9	DECIBELS
8000	67.1	DECIBELS
OVERALL	86.0	DECIBELS

Note: Quote of Design Pump Motor

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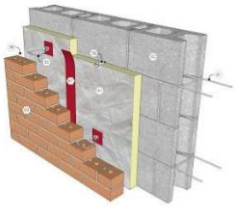
Sound Mitigation

SOUND MITIGATION



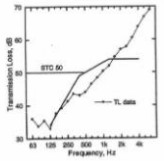
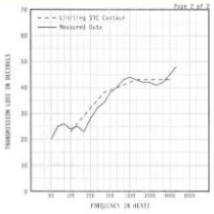


Fig. 1: Sound Transmission Loss for a 190 mm Concrete Block Wall with a Sound Transmission Class (STC) of 50.

Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-35	11
125	58.5	-39	19.5
250	70.9	-43	27.9
500	79.2	-45	34.2
1000	82.5	-50	32.5
2000	79.4	-58	21.4
4000	74.9	-65	9.9
8000	67.1	-70	0

Sound Mitigation

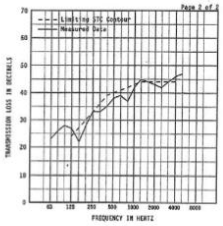
SOUND MITIGATION



Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-20	26
125	58.5	-24	34.5
250	70.9	-28	42.9
500	79.2	-38	41.2
1000	82.5	-44	38.5
2000	79.4	-42	37.4
4000	74.9	-45	29.9
8000	67.1	-48	19.1

Sound Mitigation

SOUND MITIGATION



Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-23	23.0
125	58.5	-27	31.5
250	70.9	-33	37.9
500	79.2	-38	41.2
1000	82.5	-42	40.5
2000	79.4	-43	36.4
4000	74.9	-46	28.9
8000	67.1	-47	20.1

Sound Mitigation

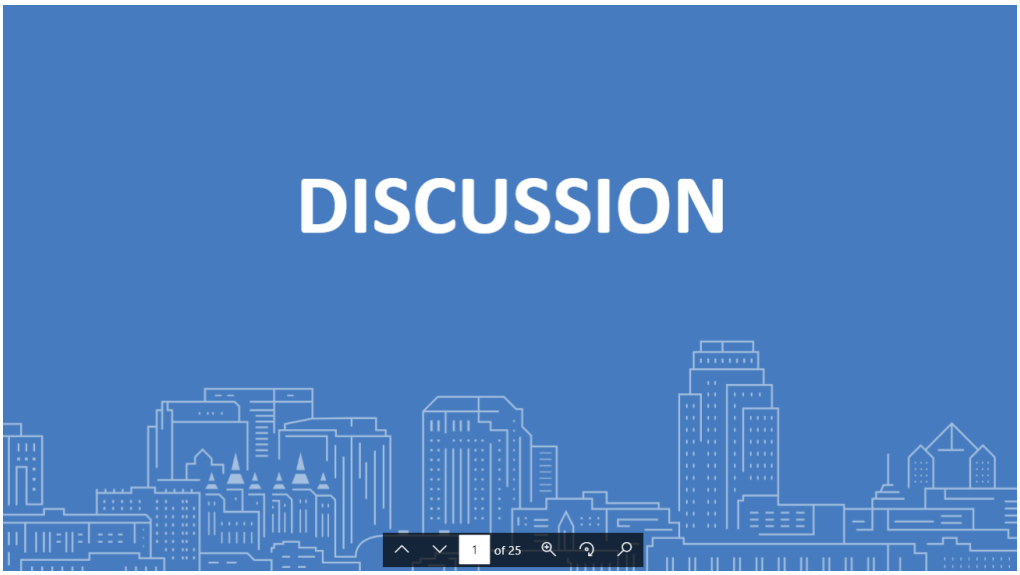
SOUND MITIGATION

Octave Band Frequency (Hz)	Free Field Noise Reduction (db) Ruskatherm Blanket
1/63	9
2/125	11
3/250	9
4/500	11
5/1000	15
6/2000	17
7/4000	16
8/8000	16

To calculate Transmission Loss (db), subtract 6 db from Free Field Noise Reduction (db).

Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-3 X 2 = -6	40.0
125	58.5	-5 X 2 = -10	48.5
250	70.9	-3 X 2 = -6	64.9*
500	79.2	-5 X 2 = -10	69.2*
1000	82.5	-9 X 2 = -18	64.5*
2000	79.4	-11 X 2 = -22	57.4*
4000	74.9	-10 X 2 = -20	54.9*
8000	67.1	-10 X 2 = -20	47.1

*Does not meet acoustic goals. We are working with mechanical engineer to mitigate noise.


DISCUSSION
1
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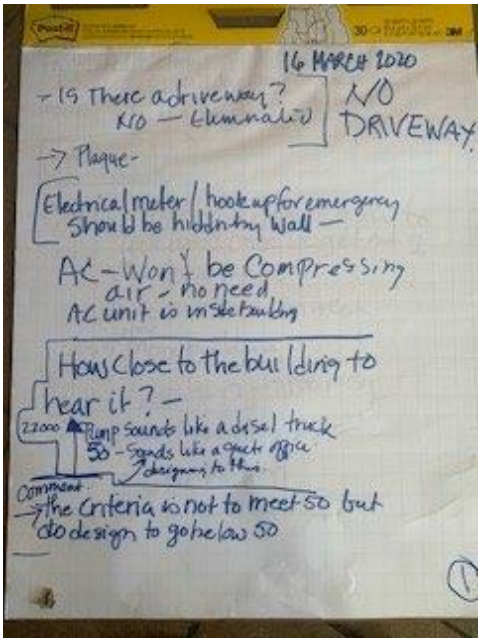
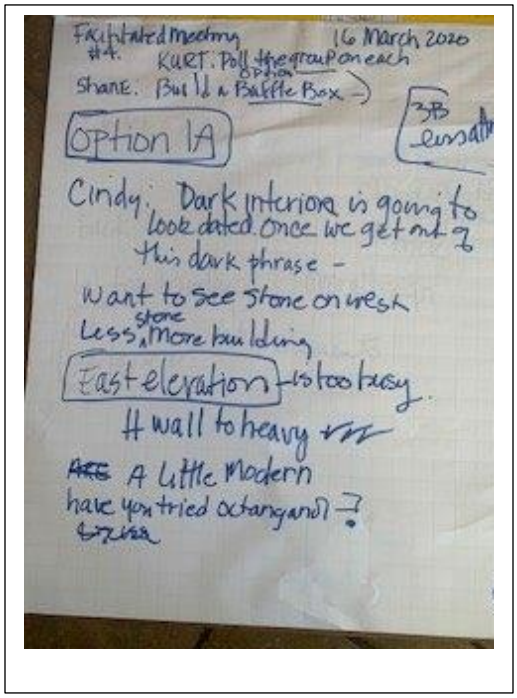
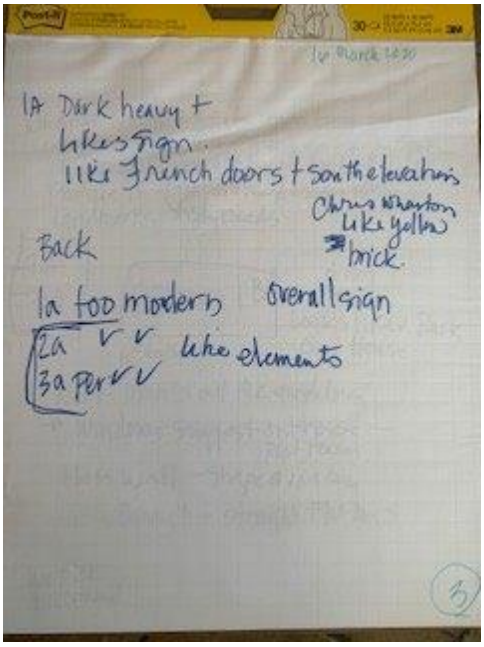
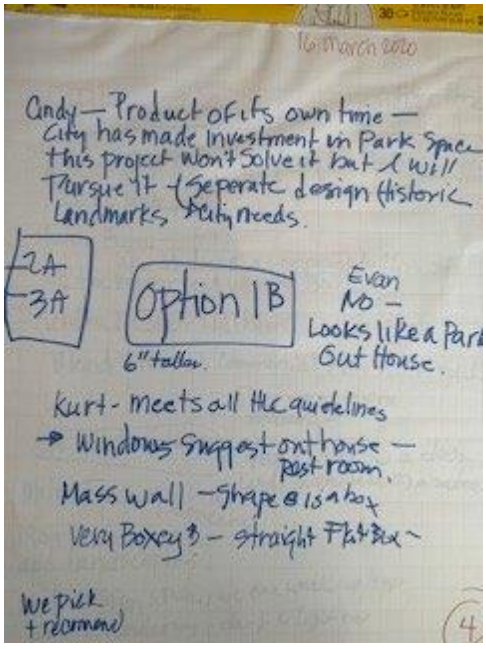
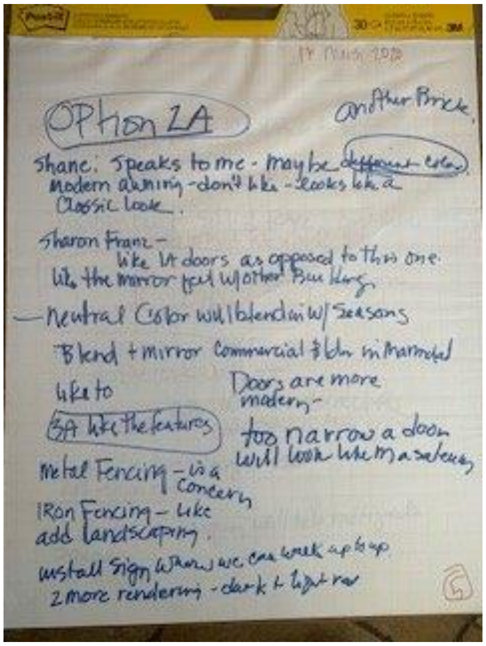
FLIP CHART NOTES











16 March 2020

Option 2A

another Brick.

Shane: Speaks to me - maybe different color
modern awning - don't like - looks like a
Classic look.

Sharon Franz -
like 1A doors as opposed to this one.
like the mirror feel w/other Building.

— neutral Color will blend in w/ Seasons

Blend + mirror Commercial bldg in Marmota

like to

3A like the features

Doors are more modern -

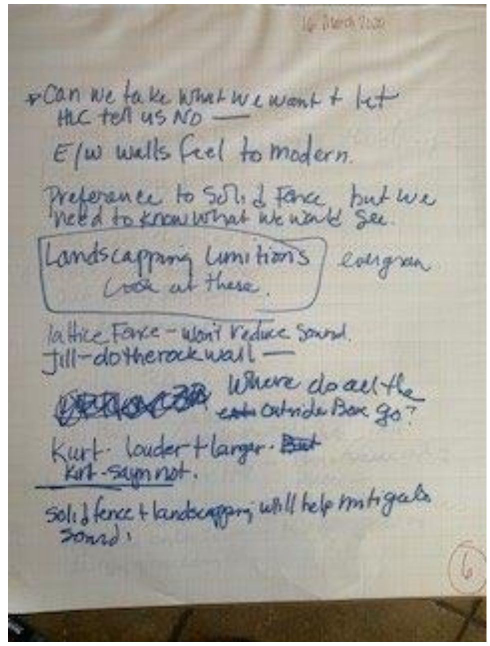
too narrow a door
will look like in a subway

metal Fencing - is a concern

IRon Fencing - like
add landscaping.

install Sign where we can walk up to up.
2 more rendering - dark + light row

5



16 March 2020

* Can we take what we want + let
HC tell us NO —

E/W walls feel to modern.

Preference to Solid Fence, but we
need to know what we would see.

Landscaping Limitations
Look at these.

evergreen

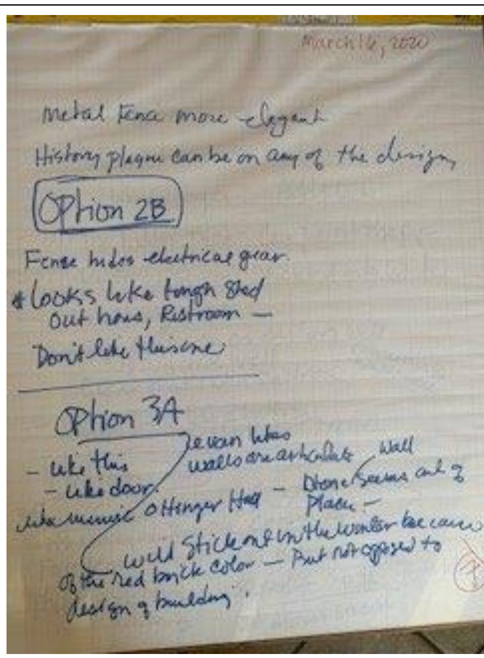
lattice Fence - won't reduce sound.
Jill - do the rock wall —

Where do all the
outside Box go?

Kurt - louder + larger. ~~But~~
Kirk - says not.

Solid fence + landscaping will help mitigate
sound.

6



March 16, 2020

metal Fence more elegant

History plaque can be on any of the design,

Option 2B

Fence hides electrical gear.

* looks like tough shed
out house, Restroom —

Don't like this one

Option 3A

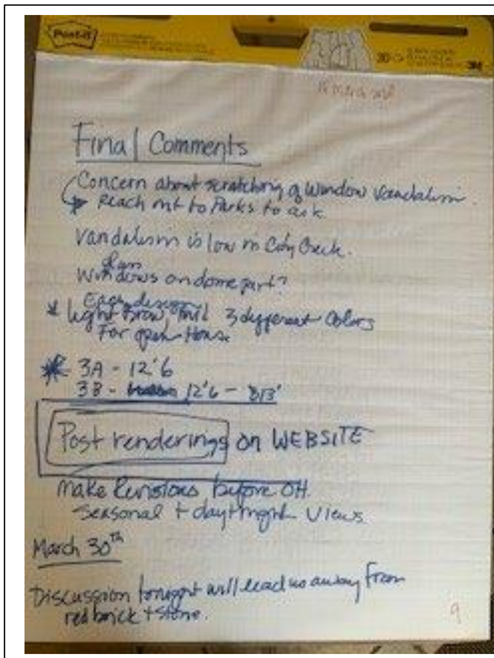
- like this
- like door.

Devon likes
walls are articulate wall

like music Ottinger Hall - Stone seems out of
Place -

will Stick out in the winter because
of the red brick color — But not opposed to
design of building.

7



16 March 2020

Final Comments

Concern about scratching of window vandalism
* Reach out to Parks to ask.

Vandalism is low in City Creek.

Windows on dome part?

* ~~light Brow~~ Each design - 3 different Colors
For open House

* 3A - 12'6
3B - 12'6 - 13'

Post renderings on WEBSITE

make Revisions before OH.
Seasonal + day + night Views.

March 30th

Discussion tonight will lead us away from
red brick + stone.

9

TEXT MESSAGE COMMENTS

18:54:29 From Dave : Is this the area where a compressor will be?

18:55:26 From Dave : No, is there going to be a/c eqpt?

18:55:33 From fisherka : Check check

18:55:34 From Winston Seiler, KCSI : Yes

18:55:37 From Dave : Im listening

18:56:42 From Dave : seeing is one thing, hearing it at night is another

18:57:12 From Dave : Kinda looks like a Tough Shed

18:58:10 From Lisa and James : Capturing Sanpete!

19:00:19 From deebrewer : What is the material on the three panels on the West?

19:00:20 From Winston Seiler, KCSI : Are the only glass “Windows” on the doors?

19:01:15 From Winston Seiler, KCSI : So the door looking features, are solid?

19:01:18 From Winston Seiler, KCSI : Brick?

19:01:43 From Winston Seiler, KCSI : Understood regarding what is glowing in the arches above the brick infill

19:02:12 From Winston Seiler, KCSI : Sorry not a question. Understood

19:03:48 From David : Many great ideas...

19:07:28 From Winston Seiler, KCSI : Looking at the total transmission, could you put that into terms of how close you need to be to the building to hear it. For example, 19.5 dB would you need to put your ear to the wall to hear it? 34.2 decibel, how far away would you hear that?

19:08:25 From Winston Seiler, KCSI : Thank you for getting rid of that extra door. That is great.

19:12:55 From fisherka : The noise design criteria is not to meet 50db, it is to get as low below 50db as possible.

19:13:13 From fisherka : 50b is not a target.

19:16:18 From fisherka : What about another pipe leaving the building, traveling underground, and then rising back to the surface for air intake?

19:18:26 From fisherka : Please take poll for each building

19:19:25 From Dave : Cobble rock on the lower half, dark above splits up the height some....

19:19:32 From altap : I'd like to see the stone on the west.

19:20:42 From Dave : below everyone you should see a cursor

19:20:44 From Cindy Cromer : The dark/black brick exteriors in the first 2 designs will appear dated when we get past this unfortunate period of black structures.

19:20:47 From linneanoyes : The stone wall feels very heavy and imposing to me. I would prefer to see the building.

19:20:49 From Jill Van Langeveld : yes Dave andJill Van L are still here

19:20:58 From David : From a personal perspective, all design features very acceptable with exception of (1) east elevation of Option 1A (too busy), and (2) option 3B (not as attractive as the other possibilities). Excellent work from the architects. David Garcia

19:21:11 From evansmith : I agree with Linnea.

19:22:22 From fisherka : Exterior lighting not shown?

19:22:36 From Winston Seiler, KCSI : I agree with Linnea as well

19:23:27 From John Franz's iPhone : for the architect, are you utilizing the space below ground for the existing vault to reduce building footprint? if not why?

19:23:48 From Sharon Franz : Still a little modern for me, and wall is heavy

19:24:02 From John Franz's iPhone : Have you considered an octagonal building?

19:24:22 From Winston Seiler, KCSI : I like that the "Fourth Avenue Well" is shown

19:24:23 From chriswharton : I agree with the comments about it being dark, heavy, and a little too modern.

19:24:40 From Dave : below gtround, probably roots interfere, but agree should take bldg. below as much as possible

19:24:50 From Winston Seiler, KCSI : But I also like the idea of the plaque

19:26:01 From linneanoyes : I like the french doors and south elevation.

19:26:23 From chriswharton : I have to sign off to work on other City Council business. I liked the one with the yellow brick and the one with the red brick arcade on the sides.

19:26:32 From fisherka : It's more back to the Starbucks look.

19:26:54 From deebrewer : I think 1A is too modern. I think that 3A and 2A best meet the criteria that we developed. I prefer the elements and color of 3A.

19:27:30 From Dave : I'm disappointed my idea of a sawmill replica building is going nowhere....

19:27:39 From John Franz's iPhone : overall designs seem to contain modern elements.

19:27:59 From Lisa and James : Agree with Dee. Like elements of 2A and 3A

19:28:16 From John Franz's iPhone : we don't want that

19:29:35 From Winston Seiler, KCSI : I like 2A and 3A

19:30:35 From fisherka : The HLC guidelines are broad enough to drive all the proposals through. The HLC are as sick of this as the rest of us and will be quick to approve whatever is agreed to.

19:32:05 From Sharon Franz : this looks the same just the roof slanted at a different angle-

19:32:07 From evansmith : 1B is a no from me.

19:32:11 From fisherka : It looks like a park outhouse.

19:32:27 From Dave : yup!

19:32:33 From fisherka : No, it looks like a restroom not pump house.

19:32:41 From evansmith : The style and and the massive stone wall.

19:32:46 From Sharon Franz : the shape is a box

19:33:00 From John Franz's iPhone : no. too modern. looks out of place. we need to go in with what we want and let the hlc tell us no.

19:36:03 From Cindy Cromer : The neutral color of the brick will blend in with the colors in the landscaping through the 4 seasons.

19:36:10 From fisherka : It has the same mass and form as 1A, but the detailing references a historic store in Marmalade.

19:36:11 From altap : I'd like to see red brick.

19:36:13 From Winston Seiler, KCSI : I like the roofline, but I like how 3A has features that disrupt the western wall

19:36:27 From evansmith : I like the shape and monumental look of it. Nice brick vertical elements too.

19:36:59 From Jill Van Langeveld : I like the roof that is darker and lowers the height visually

19:37:01 From Lisa and James : Like the band around the top - breaks up the height. Not crazy about the vertical brick on the lower section.

19:37:02 From fisherka : Too narrow a door will make it look like a cemetary mausoluem.

19:37:15 From evansmith : The metal fencing concerns me as we would see the electrical boxes from the north side.

19:37:47 From linneanoyes : I'd be curious how stucko or another color of brick would look.

19:37:48 From Winston Seiler, KCSI : Disrupt is probably the wrong word…I meant divide.

19:38:05 From linneanoyes : I like the fence.

19:38:16 From Cindy Cromer : If you are going to install a plaque, it needs to be located where people can walk up to it.

19:38:28 From fisherka : Might be worth doing two more renderings of this one in a dark and a light red.

19:38:48 From Sharon Franz : But could we try?

19:38:54 From evansmith : East and west elevation has large flat uniform walls that feel too modern.

19:40:00 From linneanoyes : Maybe the fence could be shielded from the north with shrubs.

19:40:05 From Lisa and James : We prefer a solid fence

19:40:30 From Sharon Franz : I like the fence but do you know what we see

19:42:45 From Lisa and James : Evergreen shrubs?

19:43:05 From fisherka : WIth a lattice fence, the transformer will put out too much noise.

19:43:44 From fisherka : Yes

19:44:03 From fisherka : A solid wall can absorb sound,

19:44:05 From Jill Van Langeveld : do the rock wall. that covers

19:44:12 From Dave : does tne present transformer make noise? I haven't detected it

19:44:43 From John Franz's iPhone : yes the transformers make noise

19:44:44 From Dave : And BTW, where are all the external boxes go?

19:45:03 From Winston Seiler, KCSI : I you listen for it in the park, you can hear the hum of the transformer from 15 feetish away, you can hear it, but you need to be listening to it.

19:45:08 From Winston Seiler, KCSI : Listening for it.

19:45:13 From Winston Seiler, KCSI : It is very subtle

19:45:29 From Winston Seiler, KCSI : You really need to stand next to the green boxes to hear it.

19:45:33 From fisherka : The new transformers will be larger and louder.

19:45:58 From fisherka : Possibly

19:46:01 From Winston Seiler, KCSI : These are the light green five foot tall boxes that I am talking about.

19:46:08 From Dave : In that case, I would prefer a solid wall

19:46:42 From craig ogan : the metal fence is more elegant

19:47:04 From fisherka : Winston's question on the existing telephone boxes?

19:47:41 From Sharon Franz : are there plans for the history plaque on this rendering?

19:48:24 From linneanoyes : The metal fence adds less mass to the building.

19:48:31 From 103961026 : What is being hidden/protected with the fence?

19:48:38 From Cindy Cromer : bathroom

19:48:41 From Dave : The Tough Shed option

19:49:30 From fisherka : Same comment - looks like an outhouse in Liberty Park.

19:49:38 From deebrewer : This option also reads as a restroom and therefore is confusing to visitors

19:49:54 From John Franz's iPhone : don't like this one.

19:50:06 From Sharon Franz : I like the doors on this one

19:50:22 From evansmith : This is my favorite design! Walls have pleasing articulations. Vertical elements are strong and the arches mimic Ottinger Hall. The river rock wall seems out of place though. Could it be a brick wall?

19:50:55 From deebrewer : Agree with Evan's notes

19:51:10 From Sharon Franz : Evan and I think alike

19:51:16 From altap : I like it.

19:51:17 From Lisa and James : Agree about wall -

19:51:17 From Cindy Cromer : 3A will stick out like a sore thumb in the winter because of the red brick. I am less opposed to the design than the color of the materials.

19:51:35 From craig ogan : go with the metal fence

19:51:43 From Jill Van Langeveld : lighter color would not

19:51:56 From Winston Seiler, KCSI : Would there be any texture to the brick that would be filling in the windowing features, or just solid brown

19:52:12 From Lisa and James : we don't want to see the electrical boxes etc. through a metal fence.

19:52:13 From deebrewer : ottinger brick?

19:52:46 From Winston Seiler, KCSI : Could you add the "Fourth Avenue Well" or plaque

19:52:50 From Sharon Franz : I really like how the big pipe is hidden

19:52:56 From Jill Van Langeveld : Would not stickout as ,uch in the winder

19:53:56 From deebrewer : Yes, I meant the ottinger brick is not has heavy.

19:54:18 From 103961026 : vwalker - I like this. I like a reddish color - something pinkish like my tudor or Ottinger hall color; I like the symmetry of the arches. I am in favor of camouflaging the eletrical system.

19:54:22 From fisherka : A historical plaque can also go on the existing cobblestone wall.

19:55:39 From Sharon Franz : this is very interesting to look at, doesn't look like a bathroom or a Starbucks

19:56:12 From Dave : Why a fence/wall around t'former? There isn't one presently?

19:56:53 From fisherka : The historical plaque could exist as a raised cobblestone monument integrated into the existing cobblestone wall.

19:57:10 From Dave : Yeah!

19:57:12 From linneanoyes : I don’t mind the stone wall. It differentiates the fence from the buildings and might help decrease the mass of the building.

19:57:56 From Winston Seiler, KCSI : Are there ways to disguise the green stand alone transformer, or does it have to be a green metal box?

19:58:26 From 103961026 : Can you show the side elevations?

19:58:37 From Winston Seiler, KCSI : So it could not double as the plaque?

19:58:49 From evansmith : Please don’t let ‘artists’ paint that box.

19:59:05 From Winston Seiler, KCSI : Ok. Thanks for answering.

19:59:24 From John Franz’s iPhone : the box can be painted.

19:59:47 From Sharon Franz : is this the smallest footprint

20:00:36 From evansmith : I do like the roof line on 3B better than 3A’s

20:00:54 From Cindy Cromer : I'd like to see 3B in yellow brick.

20:01:05 From Winston Seiler, KCSI : Windows on all the doors, are these opaque? I personally hope so.

20:01:49 From Jill Van Langeveld : I really like the roof line of 3A

20:02:48 From Winston Seiler, KCSI : In your experience are windows often scratched or otherwise permanently vandalized that may not be the case with a solid door? Just curious

20:02:59 From Jill Van Langeveld : I do like it but I like 3A better

20:03:27 From Jill Van Langeveld : I do like 2A better but I like 3A better

20:04:21 From Winston Seiler, KCSI : Or can windows be replaced or buffed out?

20:04:22 From altap : What about windows on the domes?

20:05:05 From Winston Seiler, KCSI : I’m more thinking of people scratching in curses and or other offensive etchings

20:05:26 From fisherka : Alot of this is the pyschology of color. I recommend for your March 30 presentation with fewer designs to have each rendered in the light brown, mid-tone red, and dark red.

20:05:28 From David : With Jill...2A or 3A liked the best. "Buff and polish" comments could optimize either. Terrific meeting. Over and out. David Garcia

20:06:10 From fisherka : I assume there will be a security camera put somewhere.

20:06:14 From Jill Van Langeveld : My typing leaves much to be desired. 3A is my favoriet but I do like 2A

20:06:29 From linneanoyes : What is the building height of 3A vs 3B?

20:07:16 From Lisa and James : Well done. Agree with David (3A then 2A) Thanks

20:07:18 From Sharon Franz : could we see the side renderings

20:07:19 From fisherka : Have you costed these out roughly yet?

20:07:32 From evansmith : So is the lowest roof on 3B lower than 12’6”?

20:07:55 From fisherka : Will you be posting these renderings?

20:09:32 From linneanoyes : Could you show the elevations for 3a please?

20:09:54 From fisherka : Cost wise, are you guesstimating at less than 1.3-1.5 Million USD?

20:11:11 From Sharon Franz : do we as a group have access to these renderings

20:11:21 From 103961026 : Is the height and footprint on the light colored 2 building, the same height and footprint as 3A?

20:11:24 From Sharon Franz : sorry that's how do....

20:11:57 From fisherka : So you do not need to go back to the Council to request a further budget authorization?

20:12:14 From evansmith : I see how the cobble stone wall breaks up the mass of the main building, but in my opinion the wall looks tacked on.

20:12:26 From Jill Van Langeveld : We will say that March 30th renderings will be updated so be sure to check out the Open House. Good to know that people can look at it for a few days after if they could not get on the Open House at 10am.

20:12:30 From evansmith : In 3A-sorry.

20:12:56 From altap : altap is Phil Carroll

20:13:09 From Sharon Franz : there could be a way to tie in brick pillars for the wall

20:14:21 From fisherka : The renderings reads as more than 474 sq ft but I'll take your word for it. Good night and thank you for your continuing efforts.

20:16:13 From Jill Van Langeveld : Thank you so much for listening to us!!

20:16:24 From linneanoyes : There is a bridge in the park south of 4th Ave that is composed of plaster plus a bit of sandstone and cobblestone. It might be an option for the fence.

20:16:47 From Sharon Franz : I am pleased to see the more historic references in the design, thank you

20:17:02 From evansmith : I agree Sharon!

20:17:12 From deebrewer : Thank you for this progress!

20:17:29 From linneanoyes : I appreciate your efforts!

20:17:34 From Winston Seiler, KCSI : Agreed as well. Thank you for the efforts. This is so much better than the originally submitted designs

20:19:29 From Lisa and James : Thank you.

20:22:12 From Lisa and James : ÷\

20:22:12 From Lisa and James : \

20:24:37 From evansmith : The choice of brick is going to be so important. No bank brick if possible

20:24:55 From Sharon Franz : agree with Evan

20:25:20 From Dave : Thanks all!

20:25:41 From Austin Kimmel : Thanks everyone!!

20:25:43 From John Franz's iPhone : sincere thanks

20:26:55 From evansmith : Thanks architects for listening to all our input.

20:27:26 From 103961026 : thank you all - Vickey Walker

MEETING SUMMARY

Salt Lake City Department of Public Utilities 4th Avenue Well Facilitated Working Group Meeting
Thursday, February 27, 2020
Memorial House at Memory Grove

INTRODUCTION

Salt Lake City Department of Public Utilities (SLCDPU) held a third facilitated working group meeting with residents who live near the proposed 4th Avenue well project to help identify a workable solution for the project. The meeting provided an opportunity to review the engineering status, review next steps and the timeline, discuss the architecture design parameters and obtain input from residents on what they would like the "envelope" of the building to look like. The meeting provided CRSA with some direction for how they might approach the architectural design of the building. The meeting materials are attached.

ACTION ITEMS

- CRSA to prepare a couple different architecture design rendering options.
- CRSA and Bowen Collins to discuss engineering elements, such as noise mitigation elements at next meeting.
- SLCDPU to coordinate virtual facilitated working group meeting on March 12, 2020, to share architecture design rendering options and noise mitigation elements and obtain input.
- SLCDPU to coordinate a public open house to share foundational elements, architectural design rendering options, noise mitigation elements and obtain input.

DISCUSSION POINTS

- **Engineering Status:** Jesse Stewart briefly reviewed the engineering status. He reported that the engineers were moving ahead with more detailed engineering for the agreed upon foundational elements. There were no questions or comments.

- **Timeline:** Jesse Stewart reviewed the timeline that is included in the handout and that is attached to this summary. There were no questions or comments.

- **Background:** CRSA reviewed the background for creating the architecture design of the building. They stated that the building will be around 500-600 square-feet, it will need to be 14 feet tall, and will need a partial fence to cover external electrical box for safety and aesthetic reasons. It

was asked if the design on the website was the latest version that they would be using and the answer was yes but how more detailed engineering work is happening. It was voiced by a resident how the project will need to represent the history of our time and how the city and even Park City struggle with what this means. It was commented that the project should celebrate water and life and that it should be an attraction; while other residents stated that it should not be an attraction and that it should "melt" or "disappear."

- **Parameters:** CRSA reviewed the architecture parameters. They stated that the project will need to meet the project's purpose and need, standards of SLCDPU, follow city code and ordinances, follow and maintain the guidelines defined by the Historic Landmark Commission, and take into account public input. There were no questions or comments.

- **Historic Landmark Commission:** CRSA reviewed the Historic Landmark Commission's guidelines and highlighted key elements. This included that buildings should reinforce the basic visual and historical characteristics of the area, new construction should be compatible with its historic context while also reflecting the current time period, and that they encourage contemporary creativity and at the same time promote new design that relates to patterns and characteristics of the historic district. There were no questions or comments.

- **Placement & Orientation:** CRSA reviewed how buildings in historic neighborhoods tend to be situated toward the front of the lot, entrances are oriented towards the street, and tend to be sited in alignment with their lot. The group discussed what this means to this project. CRSA and residents stated that this means the orientation is mainly south facing 4th Avenue, it will have a North to South orientation, there will be doors on the South and West sides, and that most access activity will be on the West side. The group was okay with this thinking.

- **Mass & Scale:** CRSA reviewed the design parameters for mass and scale. This included how homes in the area are 1 to 2 stories, building materials should be consistent with scale, new buildings should reinforce human scale, and the roof form should be representative of what is in the area. There was a lot of discussion around this design parameter. People talked about how the building can't replicated but how it should be designed so it blends with the area. People talked about the range of compromise. The following captures what residents stated:

    - Having something really modern will not be good.
    - Don't want a modern Starbucks's type building.
    - Want something timeless.
    - Looking for something simple and minimalist.
    - From State Street up the bridges, amenities, walkway are timeless.
    - Want it to look like the historic pump houses; like those in the handout.
    - Historic design.
    - The more you can make it look historic the better.
    - Like a pitched, flat, stepped or tapered roof; a design that makes it looks small.
    - Want something that reduces the size but not at the expense of the aesthetics.

- Don't want it to look like a house; would support a pitched roof if it doesn't look like a house.
- Could have an element like a historic chimney stack that houses the highest element in the building.
- Weight the input of those who live near the project more; they are the guardians of the park.
- Sunlight is important to residents.

- **Height & Width:** CRSA reviewed how the height and widths, and ratio of wall-to-window should appear similar to those in the area. There was some discussion around this design parameter. CRSA stated that they want to aesthetically match what is in the area. CRSA reported that there are windows that can mitigate sound and gave the example of in an airport you are able to sit in a terminal with glass windows and not hear the all the jet engines outside. The following captures what residents stated:

    - Concerned that if something translucent was used, such as glass, that it will emit too much sound.
    - Wanted to know if they had to choose between translucent windows or increased sound, and CRSA responded no.
    - Support windows or a façade/brick design interpretation of a window; just want to keep the sound low.
    - Do there need to be windows that allow natural light for workers; SLCDPU said no.
    - Like narrow windows with brick work on top of them. Or bricked rectangle pattern that looks like a window.
    - Want to know what decibel level they would be designing to; Bowen Collins, CRSA and WF&Co. reported that the County's regulation for noise is 50 decibels and that they would try to get as low as possible and that 30 decibels might be obtainable.

- **Elements & Materials:** CRSA reviewed how the façade elements need to be consistent with the neighborhood's historic buildings, should have a proven durability and should attempt to mimic but not replicate. There was a lot of discussion around this design parameter. CRSA said there is a way to merge both by having it pull from the neighborhood but tie into the park. The group agreed that a hybrid should be pursued. The following captures what residents stated:

    - What is the context? Park space (few bricks) or neighborhood (more bricks). Majority thought the context was the neighborhood. City needs design guidelines for parks. It is in a park surrounded by houses. But it sits in the neighborhood.
    - Group discussed materials and agreed on bricks, stone or concrete-type stucco.
    - Consider the texture of materials – use old tumbled brick; don't use shiny finished brick.
    - Historic pump houses like the ones pictured in the handout have nice little details; these subtle details should be used so it looks historic.
    - Have elements that emphasize the corners of the building.
    - Really like small brick with texture and that is the right color for the area.

- Big difference in brick used in the historic pump houses; don't want concrete brick.
- Like the mason work done in the old pump houses.
- Needs to age well and be timeless.
- Simple. Invisible. Unobtrusive. Timeless. Brick. Stone. Stucco.

- Recent HLC Precedents: CRSA reviewed buildings that the Historic Landmark Commission approved. There was some discussion around this. The following captures what residents stated:

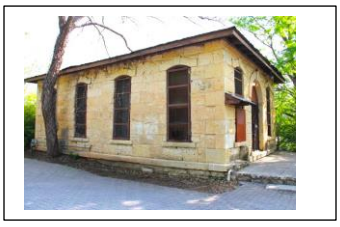
    - The White House with Pitched Roof: Like it. Like the footprint. Like that it doesn't stand out. The concept is right, but the form is wrong. It is subtle; some new builds in the area are not. Comes down to interpretation – what do you like. Like the approach. Question how it will age.
    - Liberty Park Tracy Aviary: Rock materials look nice but not the building at the to. Not the biggest fan. Wont fly in our neighborhood. Evocative of WPA project.
    - Modern Light-Colored House: Like it. To scale with neighborhood. It works in this setting but not in our setting. It has water damage; doesn't age well.
    - Modern House with Porch: Very narrow lot. Elements.

- **Pump Houses:** CRSA showed several images of typical pump houses. This conversation was short. Anonymously it was agreed by resident that they don't want any of them.

- **Garden Wall:** CRSA presented information on Brigham Young's garden wall built in the 1850s and that you can still see remnants of today. CRSA stated that they can draw on this and it does match what is found in the park. There was some discussion about this, and it was decided that if they only get one architectural rendering to look at then no. The following captures what residents stated:

    - Maybe one of the surface walls or the foundation.
    - Like it; think it is cool. Matches people's backyards.
    - Don't like it.
    - Don't want a cobblestone building.
    - Depends on the level it is used.
    - Have seen new construction of this material and it looks cheesy but intrigued by the idea. Like brick better.
    - Worried it is so different. It will stand out. Having a little bridge element is okay. Too many elements.
    - Like it if it will make the building appear smaller. If more materials used makes it look bigger then no. Want it to be inconspicuous. Like whatever materials can do that.
    - Want it to have thick mortar.
    - Will we get more than one architectural rendering to review: if we only get one then no. The group agreed with this.

- **Designs Residents Submitted:** CRSA reviewed a sheet of images that captured the type of images residents had submit throughout the process as to what they like. Throughout the discussion there were many references to these buildings by residents stating how much they liked them and elements in their design. From the sheet of images, residents selected the following as their favorite.



- **Next Steps:** The group discussed CRSA coming back with a couple different architecture design options at the identified next meeting date. The next meeting will be held on Thursday, March 12, 2020 at Memorial House. SLCDPU to hold an open house following the meeting on March 12 to share the design options with the public.

ATTENDEES

Area Residents

- Tom Knight
- David Garcia
- Peg Alderman
- Dave Alderman
- Phil Carrell
- Lance Westley
- Cecile Paskett
- Evan Smith
- Winston Seiler
- Mehrdad Samib
- Linnea Noyes
- Janna Leslie Russell
- Craig Ogan
- Kurt Fisher
- James Livingston
- Lisa Livingston
- Cindy Cromer
- Jill Van Langeveld

Salt Lake City

- Chris Wharton, Salt Lake City Council Member, District 3
- Laura Briefer, Director, Salt Lake City Department of Public Utilities
- Jesse Stewart, Deputy Director, Salt Lake City Department of Public Utilities
- Holly Mullen, Communications & Engagement Manager, Salt Lake City Department of Public Utilities
- Austin Kimmel, Liaison, Salt Lake City Council
- Dawn Wagner, Project Manager, Salt Lake City Department of Public Utilities

Consultants

- Kirk Bagley, Principal, Bowen Collins & Associates
- John Ewanowski, CRSA Architecture
- Zach Clegg, CRSA Architecture
- Cindy Gubler, Partner, Wilkinson Ferrari & Co.
- Mimi Charles, Public Involvement Manager, Wilkinson Ferrari & Co.
- Alexis Cairo, Facilitator, Wilkinson Ferrari & Co.

APPENDIX

Resident Kurt Fisher requested the following statements emailed to Cindy Gubler with Wilkinson Ferrari & Co. be added to the meeting summary.

1. Statement:

"This note is to further clarify comments made in my prior email regarding the current public participation process on the 4th Avenue Well, and this includes the apparent misconception and misinformation that your firm and the City has regarding what was discussed in the December meeting. I am aware of and understand the basics of project management scheduling, including Gnatt and PERT chart preparation. During my career, I spent about 10 years occasionally preparing construction project damage estimates using those algorithms. I am not versed in some of the more modern construction project management algorithms.

The gist of your response to my email is that I did not understand the remaining construction project management steps for the development of the reduced mass well building design initially revealed in the November meeting. The next logical step after reviewing the November design was to move forward with selecting an exterior sheathing materials. That was the topic that your firm and the DPU set for the December meeting. At the end of the December meeting, I recall that Mr. Ogan expressed the community's sentiment that the next followup meeting concern presentation of about five final concept designs from which the community could choose from. Mr. Ogan's email to you today in part confirms my recollection.

At the end of the December meeting, the community expressed that your firm and the City had been given sufficient information on exterior building materials and that they were frustrated by the then six months of delay in coming up with a completed, single alternative concept design. I attribute the source of that frustration to collective group meeting fatigue syndrome (GMFS).

Again, as I have repeatedly stated, the small-mass engineering solution that the City presented in November meeting was both imaginative, innovative and much appreciated. Again, during the December meeting, residents expressed concern over the six months delay and stated that at the next meeting, they wanted to see a five or so exterior sheathing rough, concept designs from which a selection might be made.

From a construction management perspective, the practical consequence of that resident request was to collapse a second meeting on selecting sheathing material elements down with the next following step of producing a set of alternative exterior sheathing for final resident review, comment and selection.

Instead your firm and the City did not proceed as the community requested and introduced an unnecessary construction project management step of holding an additional "aesthetics" meeting. The February meeting concerned the review of a 20 page pamphlet concerning design materials selection and design precedents based on existing buildings in Salt Lake City. The meeting and pamphlet was interesting and informative; I enjoyed them; and I estimate that it took one or two staff members at most a week to put together. But again, the substance of the pamphlet and the February meeting was to review design elements already addressed in the December meeting. That is not what residents requested in the December meeting.

As a scheduling matter, the final review of five or six selections currently set by the City for March 12 has introduced approximately 60-70 days of avoidable project delay into this selection and design-build process.

As a practical administrative matter, the introduction of this 60-70 day delay will result in a compressed review schedule for a final design. That compressed schedule provides additional political leverage to the Department of Public Utilities to force a design that it wants instead of want the agency's and architect's nominal clients - the community residents - want.

Positive results did come from the February meeting. Memory Grove Pocket residents took more direct control of selecting their design preferences. Advance was made in the residents expressing a preference between a 1910s light brick pump house example with tall, narrow window elements and a longer-red building 1920s-1930s pump house example.

Citizen review, who in this instance are the indirect architectural clients of the City, also has the positive benefit of assuring that architects and engineers stay focused on dealing-breaking engineering criteria. Sometimes engineers and architects have the tendency to drift away from core design-construction elements expressed by their clients. That is a natural, ordinary and human consequence of the expertise that they possess.

During the February meeting, I reemphasized the 30db noise design objective from the December meeting. Memory Grove pocket residents have repeatedly expressed that one of their core concerns was pump house noise. In prior DPU documents on this matter, the DPU originally maintained that 100db noise leakage was acceptable. That was later reduced to 70db. In the December meeting in response to community concerns, the DPU positively agreed that a 50db regulatory level - based on part on DPU and citizen provided baseline noise measurements taken at the well site - with an objective to reached down to 30db as is practical as an engineering matter - was a more appropriate criteria. Your followup email to me reciting your December meeting notes confirmed that 50db-30db consensus objective.

At the February meeting, the lead designer, who is a good, well-intentioned and capable engineer, stumbled on what the December noise abatement engineering criteria was and to my non-construction and uninformed lay perspective, made some questionable assertions about abating 80db of noise down to below 50db using translucent window materials. But the point is that citizen review during the February meeting had the positive effect of keeping the architectural and engineering staff focused on the key noise abatement design criteria that had been resolved in the December meeting.

I take to heart your telephone comment that "the city and our staff are working hard to come to an acceptable solution." One way that residents measure the City's progress is agency credibility: "Does the City do what it previously said it would do?" Although I remain of the position that moving the well is public's best interest, my remaining participation has since November consisted of review to assure that the City continues to do what it has told the residents it would do. Additionally, I will resist any attempt during the final stages of the well facilitation and approval process by your firm or the DPU to make statements to the media that characterize the Memory Grove residents as delaying this project design-build process. The delays, as discussed above, are all on the City and DPU's side of the table.

Please do not show up at next March 12 meeting with a slate of exterior sheathing designs that do not facially appear to meet the agreed engineering criteria for noise abatement. At the March 12 meeting, please have the engineers prepared address how each proposed alternative will meet the agreed noise-abatement design criteria.

Best regards, Kurt A. Fisher”

2. Statement:

“==========
The March 2020 Well designs will not include the all encompassing security wall seen in concept renderings prior to June 2020. A small security screen to prevent access to the external electrical box will be included.
==========

Background: In the November 2019 meeting that presented the small mass design, my recollection was that since the building will only contain one or two days worth of pellet chlorine and not the 2,000 gallons of liquid chlorine that the large security fence was no longer needed. I believe I stated in the November meeting that that might require some type of waiver from the Utah State Drinking Water Division, and that I understood that the DPU would pursue that and any other DDW waivers. At that point (November 2019), the community and DPU had reached a consensus decision that a large security

wall would not be included in the final design. Your firm's Feb. 28, 2020 presentation states that "A partial fence is needed to cover the external electrical box."

Deleting the larger security fence was an important design criteria to the Memory Grove Residential pocket members because the large fence may require removing more trees.

The reason that I raise this point is that I arrived late to the Feb. 28th meeting, and as I entered the new young architect was talking about a "security wall" around the building. Later in discussions he referred to possibly integrated cobblestones into "the security wall around the building." This left me the impression that the new young architect had been given an outdated set of design requirements that had not been updated with consensus decisions reached between the DPU and the community.

Please check with your client and confirm that this is also their understanding - a large security wall has been deleted from the design.

The second reason that I raise this is to assure that the next community engagement meeting is not derailed because the DPU and its architects show up with a design that does not comply with what had been previously discussed. By this email, my intent is to just double-check the matter to avoid any future misunderstanding.

Sincerely,

Kurt A. Fisher”

Meeting Handout

Public Utilities

4th Avenue Well Facilitated Resident Working Group Meeting

Thursday, February 27, 2020

Meeting Agenda & Goals

1 Review engineering status

2 Review next steps and timeline

3 Discuss architecture design parameters

4 Design charrette - identify materials and styles for CRSA to pursue

The Timeline

INTRO:
TIMELINE

- Facilitated working meeting October 22, 2019
- Facilitated working meeting December 2, 2019
- **Facilitated working meeting February 27, 2020**

What's Next

- Facilitated working meeting March 12, 2020
- Public open house mid-March 2020
- Submit packet to SLC Planning and Historic Landmark Commission April 2020
- Historic Landmark Commission public hearing May/June 2020
- Council briefing spring/summer 2020
- Procurement spring/summer 2020
- Construction fall/winter 2020/21

Design Parameters

INTRO:
BACKGROUND

- Around 500- to 600-square-foot building needs to be designed to house well components
- The building will need to be around 14 feet tall
- A partial fence is needed to cover external electrical box

Design Parameters

INTRO:
PARAMETERS

- Meet the project's purpose and need
- Meet the needs and standards of the project's owner, SLCDPU
- Follow city codes and ordinances
- Follow and maintain the guidelines defined by the Historic Landmark Commission
- Take into account public input

Design Parameters

INTRO:
HISTORIC
LANDMARK
COMMISSION

- New buildings should "reinforce the basic visual and historical characteristics of the area. [...] Imitating historic styles found in a historic district is generally discouraged. It is preferable to be able to perceive the evolution of the street and neighborhood, discerning the apparent age of each building by its architectural expression and method of construction." (12:9)
- "The design goal for the Avenues District is to preserve the historic scale and unique character, while accommodating compatible new construction. The distinctive design characteristics of individual building types and styles should be preserved here. New construction should be compatible with its historic context while also reflecting current design." (13:9)
- The following design guidelines "encourage contemporary creativity. At the same time, they promote new design that relates to the patterns and characteristics of the historic district."

A Preservation Handbook for Historic Residential Properties and Districts in Salt Lake City, 2012
http://www.slcdocs.com/historicpreservation/GuideRes/ResidentialGuidelines.pdf

Design Parameters

DESIGN: PLACEMENT + ORIENTATION

- Buildings in historic neighborhoods tend to be situated towards the front of the lot
- Entrances are oriented towards the street in response to pedestrian scale
- Buildings tend to be sited in alignment with their lot

Design Parameters

DESIGN: MASS + SCALE

- Single-family houses, both 1 and 2-story, are the primary precedent for scale in this neighborhood
- Building materials should be consistent with existing scale
- A new building should be designed to reinforce a sense of human scale
- Roof form should be representative of surrounding forms and massing throughout the district

Design Parameters

DESIGN:
HEIGHT +
WIDTH/SOLID
+ VOID

- Building heights and widths should appear similar to those found historically in the district
- The ratio of wall-to-window should be similar to that found in historic structures in the district

Design Parameters

DESIGN:
ELEMENTS +
MATERIALS

- Façade elements (such as openings, design details, linework, materials projections and recessions, etc.) should stay consistent with neighborhood's historic buildings
- Materials should have a proven durability and should attempt to mimic historic, but not replicate

Design Parameters

CONTEXT:
RECENT HLC
PRECEDENTS

Design Parameters

CONTEXT:
AVENUES
HISTORIC
DISTRICT

970 E 2nd Ave
(1227 SF)

Design Parameters

CONTEXT:
LIBERTY PARK
HISTORIC
LANDMARK

Tracy Aviary
Kea Expansion

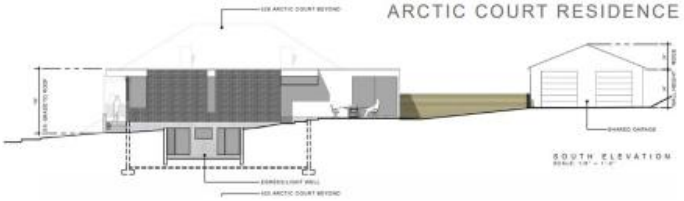
Design Parameters

CONTEXT:
AVENUES
HISTORIC
DISTRICT

Design Parameters

CONTEXT:
CAPITOL HILL
HISTORIC
DISTRICT

524 N. Arctic Court
(2090 SF)



Design Parameters

CONTEXT:
PUMP HOUSE
EXAMPLES

Design Parameters

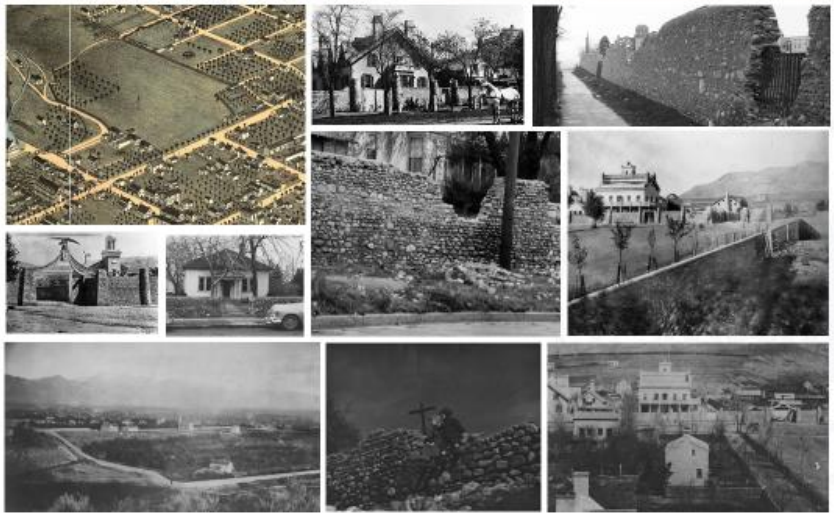
HISTORY: GARDEN WALL

Brigham Young's Garden Wall was built in the 1850s as a protection and "make work" project

The wall was 8 feet high and 30 inches thick at the base. The wall receded to about 12 inches at the top. Using the surrounding resources, the builders constructed the wall from local cobblestone and held it together with sand mortar.

Design Parameters

HISTORY: GARDEN WALL



Design Parameters

HISTORY:
GARDEN WALL

Design Parameters

COMMENTS:
DESIGN

Design Parameters

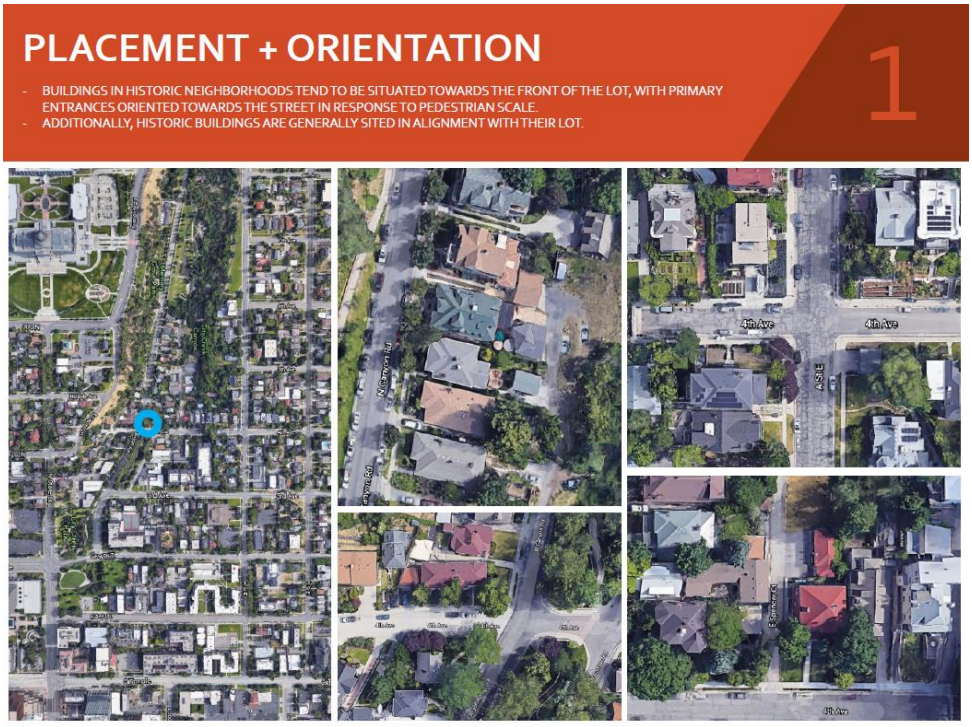
COMMENTS:
MATERIALS

Design Parameters

COMMENTS:
DESCRIBE


DISCUSSION

Informational Boards



HEIGHT + WIDTH/SOLID +VOID

3

- BUILDING HEIGHTS AND WIDTHS SHOULD APPEAR SIMILAR TO THOSE FOUND HISTORICALLY IN THE DISTRICT.
- THE RATIO OF WALL-TO-WINDOW SHOULD BE SIMILAR TO THAT FOUND IN SURROUNDING HISTORIC STRUCTURES.

ELEMENTS + MATERIALS

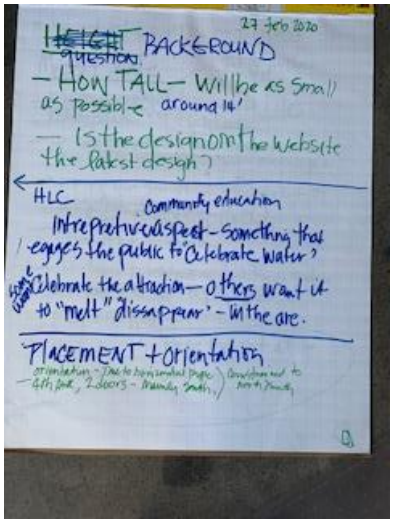
4

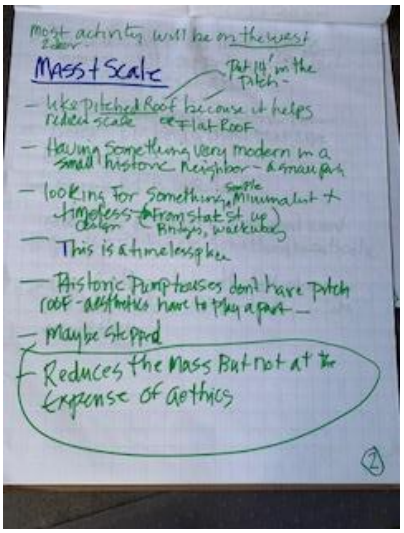
- FACADE ELEMENTS (SUCH AS OPENINGS, DESIGN DETAILS, LINEWORK, MATERIAL PROJECTIONS AND RECESSIONS ETC.) SHOULD STAY CONSISTENT WITH NEIGHBORHOOD'S HISTORIC BUILDINGS.
- MATERIALS SHOULD HAVE A PROVEN DURABILITY AND SHOUTLD ATTEMPT TO REFERENCE HISTORIC, BUT NOT

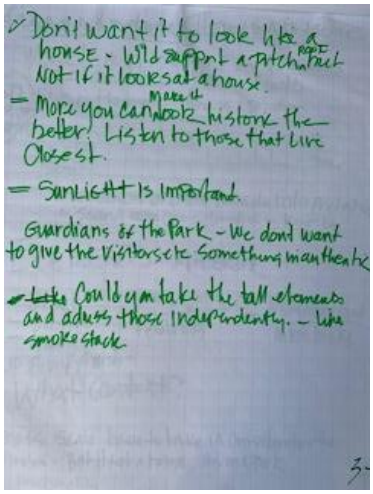
HISTORY: GARDEN WALL

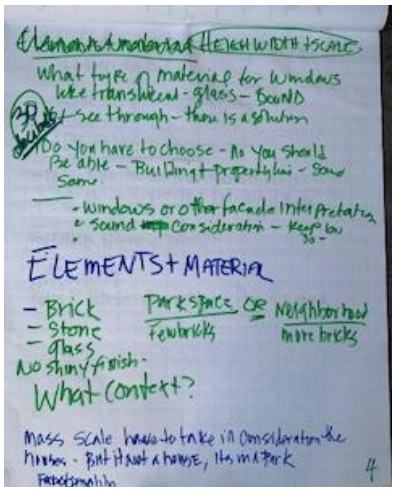
- BRIGHAM YOUNG'S GARDEN WALL WAS BUILT IN THE 1870S AS A "MAKE WORK" PROJECT.
- THE WALL WAS 8 FEET TALL AND 30 INCHES THICK AT ITS BASE. THE WALL RECEDED TO ABOUT 12 INCHES AT THE TOP. USING THE SURROUNDING RESOURCES, THE BUILDERS CONSTRUCTED THE WALL FROM LOCAL COBBLESTONE AND HELD IT TOGETHER WITH SAND MORTAT

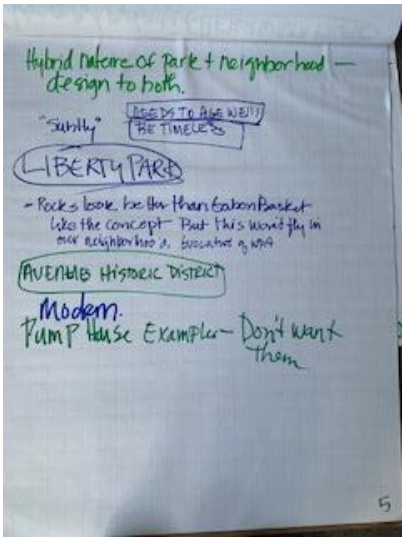
Scribed Notes

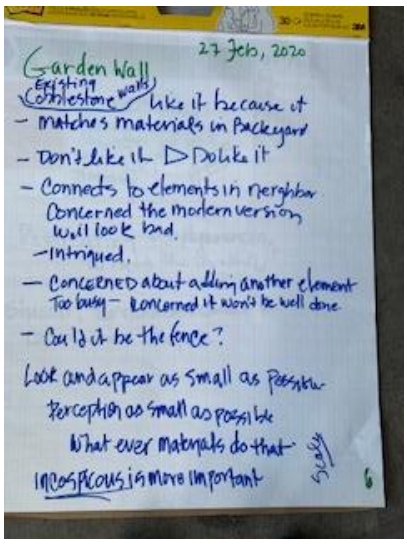


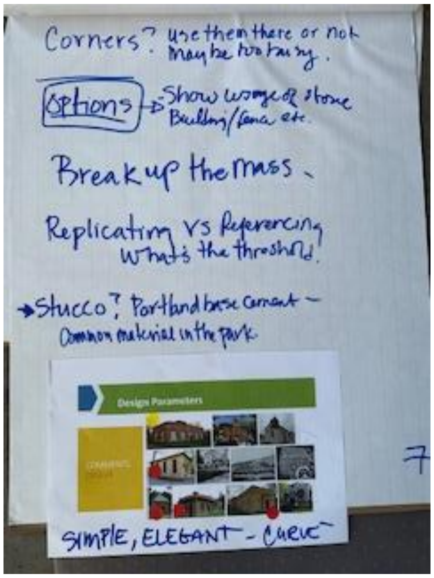


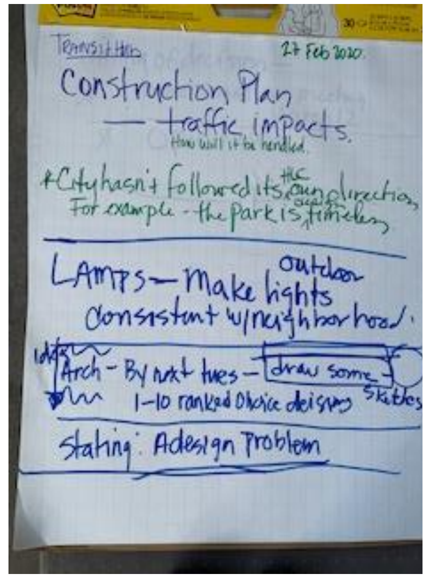









Corners? use them there or not
maybe too busy.
Options → Show usage of stone
Building/fence etc.
Break up the mass.
Replicating vs Referencing
What's the threshold!
→ Stucco? Portland base cement -
Common material in the park.
Design Parameters
SIMPLE, ELEGANT - CURVE
7


Transition
27 Feb 2020.
Construction Plan
— traffic impacts.
How will it be handled.
* City hasn't followed its own direction
For example - the park is timeless
LAMPS — Make outdoor lights
consistent w/neighborhood.
Arch - By next tues - draw some
1-10 ranked choice designs
Sketches
Stating: A design Problem


Timing of decision -
* 1 more smaller meeting
March 12
* Open house
Design Parameters
In a linear park
INVISIBLE
Purposeful
nature

Sign In Sheets

Facilitated Working Group Meeting – February 27, 2020

Name: Tom Knight.	Address: 2666 N. Canyon Rd.
Phone:	Email:
Name: DAVID GARCIA	Address: 282 N Canyon Road
Phone:	Email:
Name: Leg. Alderman	Address: 1217 4th Ave
Phone:	Email:
Name: D AVE ALDERMAN	Address: 1217 4th AVE
Phone:	Email:
Name: Dawn Wagner	Address: SLCDPU
Phone:	Email:
Name: Phil Carroll	Address: 89 Q St
Phone:	Email: allspar@aol.com

Facilitated Working Group Meeting – February 27, 2020

Name: LANCE WEEKLEY	Address: 288 CANYON RD SLC
Phone: 801-673-4725	Email: TAILDRAGGER76@HOTMAIL.COM
Name: Chris Wharton	Address: 617 North 200 West SLC UT 84103
Phone: 801-910-6795	Email: Chris.Wharton@slcgov.com
Name: Austin Kimmel	Address: 11 N. A St
Phone: 801-547-7031	Email: austin.kimmel@slcgov.com
Name: Cecile Paskett	Address: 231 N. Canyon Rd, SLC, 84103
Phone: 801-230-3855	Email:
Name: EVAN SMITH	Address: 218 N. CANYON RD
Phone: 801-201-7483	Email: -
Name: WINSTON SEILER	Address: 211 N CANYON RD
Phone: 6613336036	Email: winstonseiler@yahoo.com

Facilitated Working Group Meeting – February 27, 2020

Name: MEHRDAD SAMIE	Address: 233 EAST CAPITOL ST 84103
Phone: 801 520 6004	Email: FONYFACADE@ME.COM
Name: Linnea Noyes	Address:
Phone: 801 440-3536	Email:
Name: Jann + Leslie Russell	Address: 252 N. Canyon Road
Phone: 801-533-9455	Email: l.russell46@hotmail.com
Name: Craig Ogaard	Address:
Phone:	Email:
Name: Kurt Folson	Address:
Phone:	Email:
Name:	Address:
Phone:	Email:

Facilitated Working Group Meeting – February 27, 2020

Name: John Ewanowski	Address: CRSA-175 S. Main St., Ste. 300
Phone: (801) 746-6820	Email: jewanowski@crsa-us.com
Name: ZACH CLEGG	Address: 175 S. MAIN ST. SLC, UT
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Name: Laura Briefer	Address: 1530 S. West Temple, SLC
Phone: 801 483-6741	Email: laura.briefer@slcgov.com
Name: JESSE STEWART	Address: 1530, S. WEST TEMPE SLC
Phone: 801-483-6869	Email: jesse.stewart@slcgov.com
Name: Kelsey Lindquist	Address:
Phone: 801 535 7930	Email: Kelsey.Lindquist@slcgov.com
Name: Jill Van Langeveld	Address: 809 Northcliffe Dr.
Phone: 801-359-8513	Email: jill.van@hotmail.com

Facilitated Working Group Meeting – February 27, 2020

Name: James Livingston	Address: 236 Canyon
Phone: 8017177087	Email: jl1537639@gmail

Name: Lisa Livingston	Address: 236 N. Canyon Rd.
Phone: 801-717-7161	Email: lmhliv@gmail.com

Name: CINDY CROMER	Address:
Phone: 801 209-9225	Email: 3cinsle@live.com

Name: Holly Mullen	Address:
Phone:	Email:

Name:	Address:
Phone:	Email:

Name:	Address:
Phone:	Email:

4th Avenue Well Virtual Public Open House

Monday, March 30, 2020

Meeting Agenda

1 Introductions
2 Meeting goal
3 Project overview
4 Design parameters
5 Renderings
6 What's next
7 Questions

Goal Of This Meeting

Our Goal For This Meeting - Obtain Input On Architectural Design Options
How The Envelope Of The Building Will Look

- We've heard from the general public at previous public meetings and hearings
- We've been facilitating working group meetings with residents near the site to obtain input
- Based on this input CRSA Architects has developed some architectural design options

Complicated project: We must meet the project's purpose and need, follow city codes and ordinances, follow guidelines defined by the Historic Landmark Commission, and take into account public input.

Project Overview

- Critical well – provides 100% of water for downtown area during peak demand periods and is essential for firefighting

- Need to upgrade the well to meet current safety and environmental requirements so it can continue to provide clean and reliable drinking water

- Well is at severe risk of failure, it is unsafe for workers and it doesn't comply with drinking water regulations and electrical code standards

Photo of existing site.

Project Overview

Core Project Elements

- Reline the well
- New well head and electrical system above ground
- New pump and motor
- Onsite disinfection system
- Small secure building to contain equipment

Project Overview

Two Year Community Engagement Effort
Fundamental Operational Concessions

- Reduced site plan – 2,300 square-feet to 500-600 square – feet with a height of approximately 14 feet
- Changed from liquid disinfection to tablet calcium hypochlorite disinfection system
- Removed fluoride room
- Removed on-site generator
- Revised to include a subsurface flow meter
- Designing with noise mitigation
- Working with urban forester to limit tree impact

Worked Hard To Identify
A Workable Solution

Currently Working On
Detailed Engineering For
Foundational Elements

Design Parameters

- Around 500- to 600-square-foot building needs to be designed to house well components
- The building will need to be around 14 feet tall
- A partial fence is needed to cover external electrical box

Design Parameters

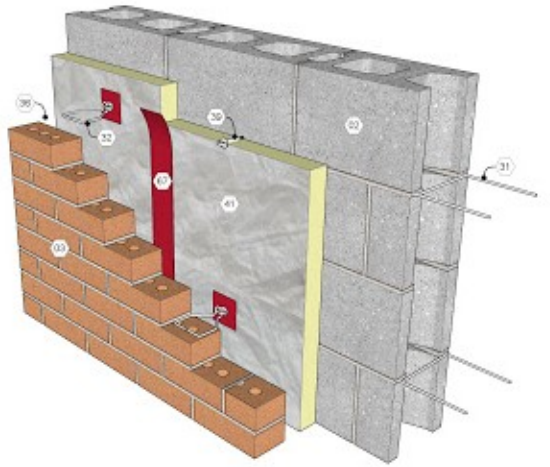
- Meet the project's purpose and need
- Meet the needs and standards of the project's owner, SLCDPU
- Follow city codes and ordinances
- Follow and maintain the guidelines defined by the Historic Landmark Commission
- Take into account public input

Sound Mitigation

We are designing the envelope to meet or be lower than the maximum 50 decibels (dB) outside noise at all frequencies, which meets county regulations and is less than ambient for an urban neighborhood. We will try to get it as low as possible and 30 dB may be obtainable.

OCTAVE BAND CENTER FREQUENCY (HERTZ)	SOUND PRESSURE LEVELS MEASURED IN A REVERBERANT SOUND ROOM PER IEEE 85, CORRECTED TO FREE FIELD CONDITIONS REFERENCE: .0002 DYNES/CM² WEIGHTING NETWORK 'A'	
	148128	MPI (Ref)
	450.00	HP
	4	POLES
	60	HZ
31.5	---	DECIBELS
63	46.0	DECIBELS
125	58.5	DECIBELS
250	70.9	DECIBELS
500	79.2	DECIBELS
1000	82.5	DECIBELS
2000	79.4	DECIBELS
4000	74.9	DECIBELS
8000	67.1	DECIBELS
OVERALL	86.0	DECIBELS

Sound Mitigation



Anticipated wall construction (from interior to exterior): 8” concrete masonry unit (CMU), air/vapor/water retarder, mineral wool insulation, 2” air gap (drainage cavity), 4” brick.

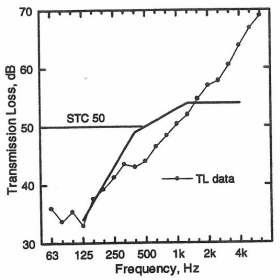
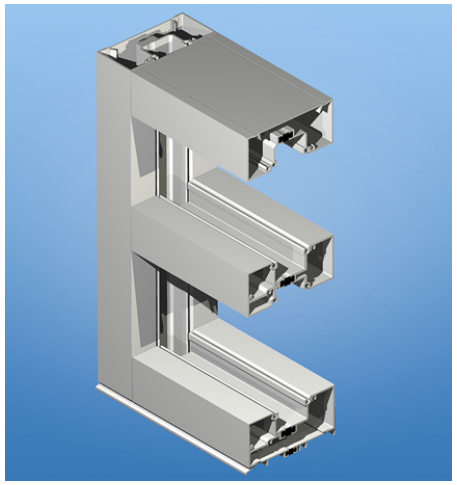


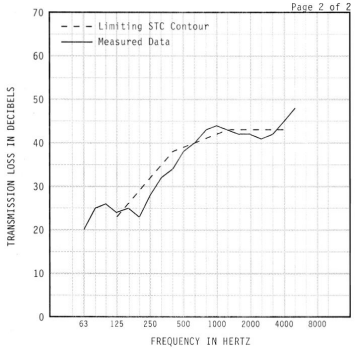
Fig. 1: Sound Transmission Loss for a 190 mm Concrete Block Wall with a Sound Transmission Class (STC) of 50.

Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-35	11
125	58.5	-39	19.5
250	70.9	-43	27.9
500	79.2	-45	34.2
1000	82.5	-50	32.5
2000	79.4	-58	21.4
4000	74.9	-65	9.9
8000	67.1	-70	0

Sound Mitigation



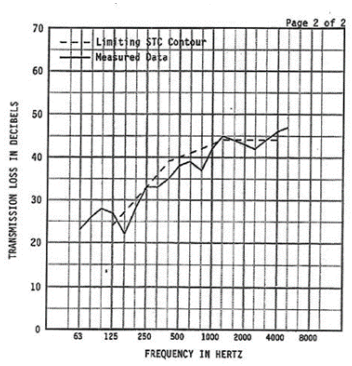
Cutaway section of acoustical window unit
(basis-of-design: Arcadia AG451T STC window)



Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-20	26
125	58.5	-24	34.5
250	70.9	-28	42.9
500	79.2	-38	41.2
1000	82.5	-44	38.5
2000	79.4	-42	37.4
4000	74.9	-45	29.9
8000	67.1	-48	19.1

Sound Mitigation

Cutaway section of acoustical door unit (basis-of-design: Arcadia 3000 STC door)



Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-23	23.0
125	58.5	-27	31.5
250	70.9	-33	37.9
500	79.2	-38	41.2
1000	82.5	-42	40.5
2000	79.4	-43	36.4
4000	74.9	-46	28.9
8000	67.1	-47	20.1

Sound Mitigation

3d view of acoustical louver (basis-of-design: Ruskin ACL445 stationary acoustical louver)

Octave Band Frequency (Hz)	Free Field Noise Reduction (db) Ruskatherm Blanket
1/63	9
2/125	11
3/250	9
4/500	11
5/1000	15
6/2000	17
7/4000	16
8/8000	16

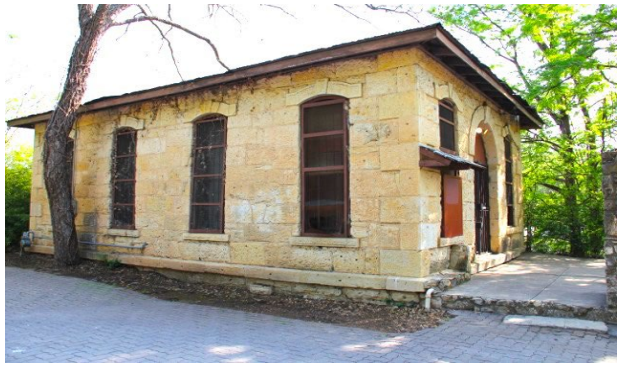
To calculate Transmission Loss (db), subtract 6 db from Free Field Noise Reduction (db).

Test Frequency (Hz)	Pump Quote (db)	Transmission Reduction(db)	Transmission (db)
63	46.0	-3 x 2 = -6	40.0
125	58.5	-5 x 2 = -10	48.5
250	70.9	-3 x 2 = -6	64.9*
500	79.2	-5 x 2 = -10	69.2*
1000	82.5	-9 x 2 = -18	64.5*
2000	79.4	-11 x 2 = -22	57.4*
4000	74.9	-10 x 2 = -20	54.9*
8000	67.1	-10 x 2 = -20	47.1

Highlights Of What We've Heard

- Timeless, simple, unobtrusive and aesthetically pleasing
- Like historic more than modern
- Design elements should pull from historic pump houses
- Like small brick, stone or stucco
- Like old tumbled bricks not shiny finished brick
- Want brick that is the right color for the area
- Needs to age well
- Have elements that emphasize the corners of the building or that have nice little details
- Want design that reduces size but not at the expense of aesthetics
- Like pitched, flat, stepped or tapered roof; a design that makes it look small
- Don't want it to look like a house
- Could have an element like a historic chimney stack that houses the highest element
- Support windows or a façade that can keep sound low
- Pursue hybrid that draws from the park and the surrounding houses
- Interested in the stone wall idea but want to see it in a rendering

Case Studies



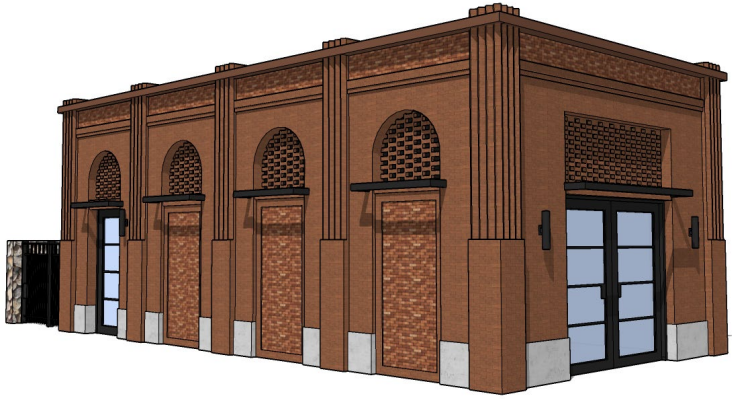
*stock images

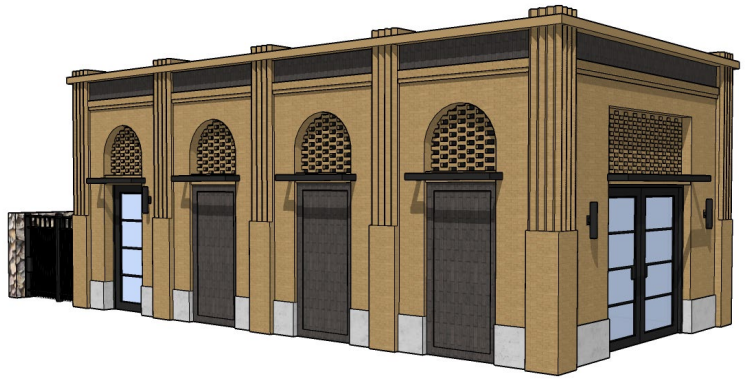
Design Renderings – Presented March 16th

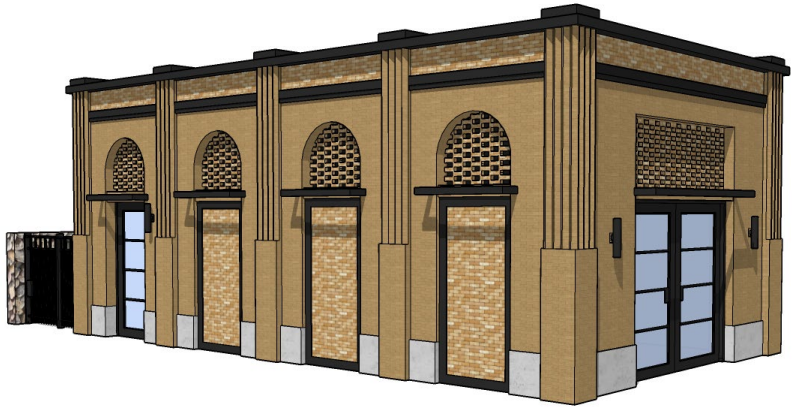
Design Renderings – March 16th Preferred Option

OPTION
3A

Design Renderings – Based on March 16th Public Input







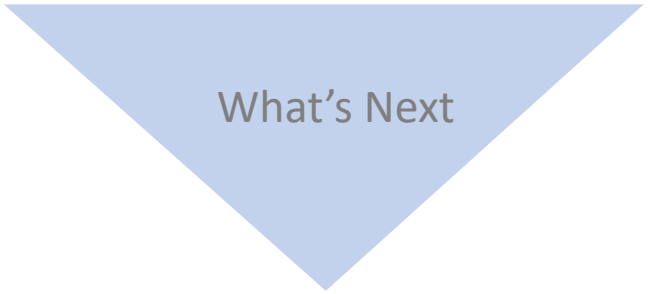

FOURTH AVENUE WELL
2021


FOURTH AVENUE WELL
STOP
ALL WAY

CRSA

What's Next

- Virtual public open house March 30, 2020



- Submit packet to SLC Planning and Historic Landmark Commission April 2020
- Historic Landmark Commission public hearing May/June 2020
- Council briefing spring/summer 2020
- Procurement spring/summer 2020
- Construction fall/winter 2020/21

Questions?