SUNRISE ENGINEERING

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HYDE PARK CITY
CITY HALL WELL HOUSE AND TRANSMISSION LINE
ADDENDUM #2

FEBRUARY 20, 2025

PLANHOLDER:

This Addendum #2 shall become part of the plans, specifications, and contract documents of the above-mentioned project, and all provisions of the contract shall apply hereto.

Bidders shall acknowledge receipt of all addenda by number in the space provided in the bid documents.

This Addendum #2 covers the following items:

- Addressing questions that have been received throughout the bidding process thus far (as of 02/20/25 @ 4:00 PM)

The ENGINEER will be taking questions throughout the bidding process. Please submit your questions by emailing them to jnelson@sunrise-eng.com. The ENGINEER will stop receiving questions on **February 24th at 5:00 PM** to allow for ample time to respond to the questions. All questions received after this time will not be answered. The bids will be opened at the Hyde Park City Hall located at 113 E Center Street, Hyde Park City, UT 84318 on **February 27th at 2:00 pm**.

Questions and Answers

Below are the following questions that have been submitted with their corresponding answers:

Q: Call out #8 on the mechanical piping says “Pressure Gauge and Pressure Switch” it refers to detail G/WH10. Which then refers to specification 15238SP. That Spec only talks about the gauges, not the switch. Do you have a specific pressure switch in mind for this project?

A: A pressure switch is not required.

Q: Will the optional inspection port for the stormtech chamber shown on WH13 be required?

A: Yes, please include the optional inspection port.

Q: My controls subcontractors are asking me what controls systems will be used for this project. Do you know what controls system with be used?

A: Please refer to SP1700

Q: Is there a Geotech report on the Hyde Park City Hall Well House and Transmission Line?

A: There was a soil classification report that was completed. It will be provided with this addendum.

Q: What is the scope of work for APCO? What does the electrician take care of versus APCO?

A: Please refer to the plans and specifications. If there are any specific questions, please let us know. In general, all conduits and wires will be installed by the general contractor. All instruments will be provided by the contractor as shown in the drawings. The RTU will be supplied by the owner and installed by the contractor. All of this will be in coordination with APCO.

Q: Schedule Updates

A: We will work with contractors on schedules as far as what timelines work best. The transmission line and associated pavement to be completed by the end of September 2025. The connection to the tank shall be completed prior to May 1, 2025. If this needs to be completed prior to the selected contractor fully mobilizing the site for the project we will not start the construction days for the tank connection portion of the project. Project must be completed by June 2026.

Q: Testing Update

A: Material testing will be paid for directly by the owner. Bid Schedule Item 3 quantity should be changed to 0. The contractor will be responsible for scheduling directly with the material testing company and providing the required notices to the testing company to schedule all testing.

Q: What areas are available for staging?

A: The wellhouse site is the only area we are aware of that is available for material staging.

Q: What are the minimum install limits for the connection to the tank if there are concerns with lead times.

A: We will work with the contractor if there are lead time issues with items required by the connection to the tank detail. At a minimum we need to core into the tank and install all required items inside the tank. On the outside if there are long lead valves, we will either just go to the gate valve or come up with another solution.

Q: Additional Driveway entrance

A: There will be one additional driveway entrance required as part of the project. This will be adjacent to the canal. The width of the entrance shall be 14'. The bid schedule item #41 shall be increased from 18 to 19.

Q: Is Hyde Park City aware that Traffic Control may involve hard closure of a block at a time?

A: Hyde Park City is aware that one block closures will be required as the transmission line is constructed. We want to make sure local access is available as much as possible. We will require notices to inform residents of the times access to their property will be affected.

Q: The automatic transfer switch specifications call for the switch to be an ASCO. If the generator manufacturer has their own transfer switch meeting the specification, would that switch be acceptable?

A: Yes that would be acceptable.

Q: Are there any local holidays to be concerned with?

A: Hyde Park Days will be July 18th and 19th. There will be a lot of people around the area of the city hall for different events.

Q: Is the trench to be backfilled with an imported fill or will native fill be allowed?

A: For bidding purposes assume the trench will be backfilled with native material above the pipe bedding. We will get a proctor test on the native material and require it to be compacted per standards in the plans and specifications.

Q: The bid schedule that is provided in the specs does not list the unit or unit quantity on bid item 45. The alternatives don't have units listed either. Please provide.

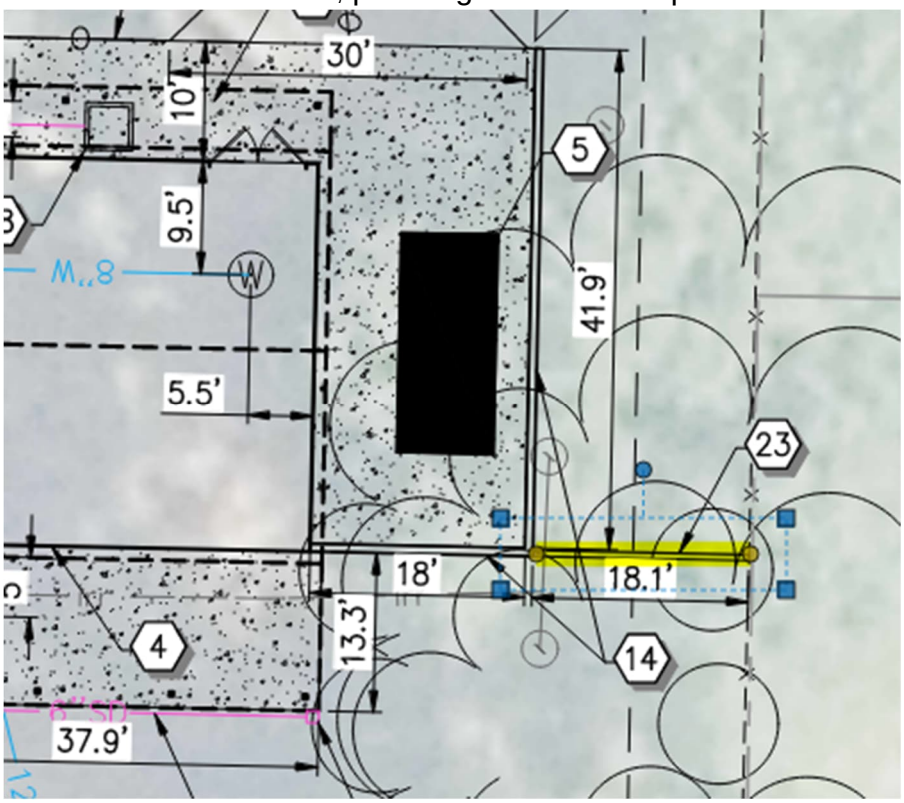
A: Bid Item 45 will be 1 lump sum and an updated bid schedule will be provided.

Q: Bid item 9 calls to remove 30 lf of curb and gutter, but the plans show 49.1'. Please clarify which one is correct.

A: The total will be updated to 80' to account for the removal shown on DM1, WH7, PP1, PP8

Q: What bid item should the 6” concrete mow curb be included in? Note 23 on sheet SP1 calls for this, but it is unclear where it should be placed and how much. Please clarify.

A: Bid Item #44. Between the CMU wall and fence line to separate the grass from the gravel. The screenshot below for clarity is from SP1. There is an erroneous 23 construction note north of here, please ignore. Mow strip shall be 6” wide and 6” tall.



There is an additional “mow curb” under the fence identified by construction note 3 on SP1. This is to be paid for as part of the fence bid item #19

Q: Do melt beads need to be cut out of HDPE pipe?

A: No, melt beads do not need to be removed from the HDPE pipe. All loose shavings and loose debris does need to be removed so it does not end up in the water system.

Q: Is there a preference on what adapters are to be used from HDPE to C900. Flange or MJ Adapters?

A: No.

Q: Is there a need for moisture resistant gypsum board at any location?

A: Yes, match the FRP with moisture resistant gypsum board behind it. So 4' high on all walls in the pump room.

Q: Please clarify the extent of FRP shown on WH4.

A: The FRP board will extend 4' up the interior walls of the pump room for the entire room. Total FRP will be around 361 square feet.

Q: Is it a level 3 finish on the drywall?

A: Yes.

Q: The door schedule on WH1 calls for steel door with Wood Jambs. This must be a mistake. Please clarify.

A: This should read steel door with steel jambs.

Q: The scales on the structural drawings appear to be off.

A: The correct scales on the structural drawings ST3 – ST5 should be 3/8" = 1' for a 22"x34" sheet.

Sincerely,

Josh Nelson, PE
Sunrise Engineering

BID SCHEDULE

Addedum 2

CONTRACT FOR: HYDE PARK CITY CITY HALL WELL HOUSE & TRANSMISSION LINE

The undersigned Bidder, having examined and determined the scope of the Contract Documents, hereby proposes to perform the work described herein for the following unit prices or lump sum amounts.

Note: ***1. Bids shall include sales tax and all other applicable taxes and fees***

2. All bids shall be checked for errors. If errors are made, unit prices shall govern and corrections will be made according to the unit price and totals will be revised to reflect the corrections.

No.	Meas. & Pmt.	Item	Quantity	Unit	Unit Price	Amount
1	02000	Mobilization	1	LS		
2	02005	Traffic Control	1	LS		
3	02510	Materials Sampling and Testing	0	LS		
4	02020	Subsurface Investigation	16	HR		
5	02015	Clear and Grub	1	LS		
6	02500	Remove Existing Tree	1	EA		
7	02500	Remove Existing Stump	2	EA		
8	02500	Remove Existing Concrete Sidewalk	1,085	SF		
9	02500	Remove Existing Curb and Gutter	80	LF		
10	02500	Removal of Bituminous Surface	5,250	SQ YD		
11	SP13100	Wellhouse Sitework	1	LS		
12	SP13100	Wellhouse Building	1	LS		
13	SP13100	Wellhouse Piping and Appurtenances	1	LS		
14	SP13100	Wellhouse Pump and VFD	1	LS		
15	SP13100	Install Electrical Wellhouse Service	1	LS		
16	SP13100	Install Electrical Wellhouse Equipment	1	LS		
17	SP13100	Backup Generator	1	LS		
18	SP13100	Wellhouse perimeter Fence	1	LS		
19	SP13100	Well Site Perimeter Fence	1	LS		
20	SP13100	Generator Screen Wall	1	LS		
21	SP03300	Concrete Generator Pad	1	LS		
22	SP13100	Well Site Concrete Driveway Entrance	1	EA		
23	03300	5' Concrete Sidewalk (4" concrete, 6" UTBC)	510	LF		
24	03300	4' Concrete Sidewalk (4" concrete, 6" UTBC)	320	LF		
25	02222	15" HDPE Storm Drain Pipe	525	LF		
26	02222	18" HDPE Storm Drain Pipe	340	LF		
27	03500	Pre-Cast Concrete 4' x 4' Catch Basin and Grate	1	EA		
28	03500	Pre-Cast Concrete 3' x 3' Catch Basin and Grate	11	EA		
29	SP13100	StormTech Chamber System	1	LS		
30	SP13100	Sports Court Drainage	1	LS		
31	15230	12" Gate Valve	1	EA		
32	02222	12" PVC C900 DR18 Water Line	3,350	LF		
33	SP02319	12" Bore (Under Canal)	100	LF		
34	SP13100	Connect to Existing Tank & Appurtenances	1	LS		
35	02202	Center Street Road Excavation	3,000	CY		
36	02511	3" Hot Plant Mix Bituminous Surfacing (PG 58-28) 1/2"	7,000	SQ YD		
37	02105	4" Untreated Base Course 1" minus	7,000	SQ YD		
38	02105	Subbase Granular Fill 3" Minus	2,300	CY		
39	03300	Curb and Gutter APWA Type A	2,650	LF		

40	SP03300	ADA Ramp	7	EA		
41	SP03300	Concrete Driveway Entrance	19	EA		
42	SP03300	Precast Culvert Section	1	LS		
43	SP02006	Parking Lot Striping	1	LS		
44	SP13100	Landscape Well Site Improvements	1	LS		
45	SP13100	Landscape Restoration	1	LS		
					BASE BID TOTAL	
		BID ALTERNATE 1				
46	02222	16" PVC C900 DR18 Water Line	3,350	LF		
47	SP13100	Connect to Existing Tank (with 16" water line)	1	LS		
48	SP02319	16" Bore (Under Canal)	100	LF		
49	SP02319	16" Bore (Shown on PP1)	50	LF		
50	15230	16" Gate Valve	1	EA		
					BID ALTERNATE 1 TOTAL	
		BID ALTERNATE 2				
51	SP02319	12" Bore (shown on PP1)	50	LF		
					BID ALTERNATE 2 TOTAL	

The undersigned Bidder certifies that this proposal is made in good faith, without collusion or connection with any other person or persons bidding on the work.

Seal (if bid is by Corporation)

Respectfully Submitted:

Bidder: _____

Signature _____

Title: _____

License No. _____ Address: _____

Date: _____

Geotechnical Investigation

Hyde Park City – City Hall Well House

December 3rd, 2024

SUNRISE ENGINEERING

SUNRISE ENGINEERING

Cache Valley Office
2100 North Main Street, North Logan, Utah 84341 | **TEL** 435.563.3734

December 3rd, 2024

Brett Knight
Public Works Director
Hyde Park City
113 E Center Street
Hyde Park, Utah 84318

Subject: Geotechnical Investigation
Hyde Park City – City Hall Well House and Transmission Line
Hyde Park, Utah

Mr. Knight,

Enclosed herein is the report for a geotechnical investigation for the above referenced project. This report presents the results of the geotechnical subsurface exploration, engineering analysis, and recommendations for design and construction of the proposed City Hall Well House and associated transmission pipeline in Hyde Park, Utah.

We appreciate the opportunity to provide geotechnical services to you for this project. Should you have any questions about the report, or if we may be of further service in any way, please let us know.

Sincerely,
SUNRISE ENGINEERING, INC.

Prepared by:

Haiming Peng, P.E.
Project Engineer

Reviewed by:

Scott Archibald, P.E.
Service Center Manager

GEOTECHNICAL INVESTIGATION

HYDE PARK CITY – CITY HALL WELL HOUSE AND TRANSMISSION PIPELINE

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Figure 2 Site Map

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Appendix A Sieve Laboratory Results

1 INTRODUCTION

Sunrise Engineering, Inc. (Sunrise) has completed a geotechnical investigation for a proposed City Hall Well House and associated transmission pipeline in Hyde Park, Utah. The project site is in the topographic locale of Sections 10, Township 12 North, Range 1 East, Salt Lake Base and Meridian (SLBM), as shown in **Figure 1**. This report presents a summary of the geotechnical investigation.

1.1 Objectives

The objectives of the geotechnical investigation were to:

- Evaluate subsurface soil/rock and groundwater conditions within the project area, and
- Provide appropriate foundation and earthwork recommendations at the well house and parking lots site.

1.2 Scope of Work

The following tasks have been completed:

- Collect and review available geologic and soil data within the project area
- Excavate 2 test pits (BH-1 through TP-2) to at the project site
- Analyze collected geotechnical data
- Provide recommendations for the design and construction of the proposed structure

2 PROPOSED CONSTRUCTION

A well house, associated transmission pipeline, adjacent generator pad, and affiliated parking lots will be installed. The well house will have dimension of 32’-7’’ by 34’ on a single floor.

3 SITE INVESTIGATION

3.1 General Geology

The project site is located in Cache Valley. According to Lowe and Galloway (1993), the project site is underlain by the Quaternary younger post-Lake Bonneville alluvial fan deposits (Qaf1) and the Mink Creek Conglomerate Member (Tsjm) of Tertiary Salt Lake Formation. The younger post-Lake Bonneville alluvial fan deposits range in size from clay to boulder. The Mink Creek Conglomerate Member consists of light-gray to light-yellow tuffaceous conglomerate.

3.2 Test Pit Excavation and Subsurface Conditions

Fieldwork was conducted on November 5, 2024 and the test pits (TP-1 and TP-2) were excavated using a track hoe. TP-1 and TP-2 are located in the proposed site of well house and parking lots, respectively, the locations are shown in **Figures 1 and 2**. **Table 1** summarizes the soil and groundwater conditions at the test pit locations.

Table 1. Soil and Groundwater Conditions at Test Pit Locations

Test Pit #	Description	Total Depth	Groundwater
1	0 - 18'': Topsoil consisting of dense dark clay with roots (CL); 18'' - 36'': Dry silt with fine sands and gravels (ML); 36" - 72": Poorly graded gravel with silt and sand (GP-GM).	6'	No Groundwater
2	0 - 18'': Topsoil consisting of dense dark clay (CL); 18'' - 42": Dry silt with fine sands and gravels (ML); 42" - 48": Well-graded gravel with little fines (GW).	4'	No Groundwater

Groundwater was not encountered at any of the test pits. Per the previous well driller's report, the elevation of static water at the wellhead site is approximately 4,490 feet. The proposed finished floor elevation (FFE) at the well house site is about 4,587 feet (**Figure 1**). Therefore, groundwater at the project site is estimated to be around 100 feet below grade. However, during the wet season, perched groundwater may be present in the alluvial deposits.

3.3 Geologic Hazards

3.3.1 Active Fault and Surface Fault Rupture

An active fault is a fault displaying evidence of greater than four inches of displacement along one or more of its traces during Holocene time (about 10,000 years ago to present).

According to the U.S. Geological Survey (2019), the closest active fault is located approximately 4,600 feet east of the site. Therefore, a fault trench study is not required.

3.3.2 Landslide/Rock Fall

Landslide or landslip is a geological phenomenon which includes a wide range of ground movement such as rock falls, deep failure of slopes, and shallow debris flows which can occur in offshore, coastal and onshore environments. Although the action of gravity is the primary driving force for a landslide to occur, there are other contributing factors affecting the original slope stability. Typically, pre-conditional factors build up specific sub-surface conditions that make the area/slope prone to failure, whereas the actual landslide often requires a trigger before being released.

According to Elliott and Harty (2010), the project site is in a very low landslide susceptibility zone. The ground surface at and surrounding the site is well vegetated; therefore, rock fall potential is low.

3.3.3 Floodplain

A floodplain is flat or nearly flat land adjacent to a stream or river that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which are areas covered by the flood that do not experience a strong current. A 100-year flood is calculated to be the level of flood water expected to be equaled or exceeded every 100 years on average. The 100-year flood is more accurately referred to as the 1% flood,

since it is a flood that has a 1% chance of being equaled or exceeded in any single year. Based on the expected flood water level, a predicted area of inundation can be mapped.

The Federal Emergency Management Agency (FEMA) website was reviewed for Flood Insurance Rate Maps (FIRMs) which cover the project area. The well house project site is covered by FRIM 49005C0250D (FEMA, 2023) and indicates that the project area has a minimal flooding potential.

3.3.4 Avalanche Path

An avalanche is a rapid flow of snow down a slope, from either natural triggers or human activity. Typically occurring in mountainous terrain, an avalanche can mix air and water with the descending snow. Powerful avalanches have the capability to entrain ice, rocks, trees, and other material on the slope. Avalanches are primarily composed of flowing snow, and are distinct from mudslides, rock slides, and serac collapses on an icefall. In mountainous terrain, avalanches are among the most serious objective hazards to life and property, with their destructive capability resulting from their potential to carry an enormous mass of snow rapidly over large distances.

According to the Utah Avalanche Center (2019), no avalanches have been recorded in the project area since 1910. Therefore, the site is not within an avalanche path.

3.5.5 Liquefaction

Liquefaction is a process by which soils below the water table temporarily lose strength and behave as a viscous liquid rather than a solid. The types of soils most susceptible are clay-free deposits of sand and silts, and occasionally gravel. When seismic waves, primarily shear waves, pass through saturated granular layers, they distort the granular structure and cause loosely packed groups of particles to collapse. These collapses increase the pore-water pressure between the soil grains if drainage cannot occur. If the pore-water pressure rises to a level approaching the weight of the overlying soil, the effective stresses between soil grains drops to zero and the granular layer temporarily behaves as a viscous liquid rather than a solid. The liquefaction potential of a soil depends primarily on the looseness of the soil, the amount of cementing or clay between particles, and the amount of drainage restriction. Two conditions must exist for liquefaction to occur: (1) the soil must be susceptible to liquefaction (loose, water-saturated, sandy soil, typically between 0 and 30 feet below the ground surface) and (2) ground shaking must be strong enough to cause susceptible soils to liquefy (Anderson and others, 1994).

According to Utah Geological Survey (2003), the project site is located in a very low liquefaction potential zone. Moreover, groundwater is approximately 100 feet below grade at the well house site. Therefore, liquefaction at the well house site is not of concern.

4 DESIGN RECOMMENDATIONS

4.1 Site Preparation

Topsoil, manmade fills (where encountered) and soils loosened by construction activities should be removed from the building pad, pavement areas, and concrete flatwork areas prior to foundation

excavation and placement of site grading fills. Following stripping, the subgrade should be proof-rolled to a firm, non-yielding condition or 90% of maximum dry density (ASTM D1557). Soft areas detected during the proof-rolling operation should be removed and replaced with structural fill. If the soft soil extends more than 1.5 feet deep, stabilization may be required. The use of stabilization should be approved by the geotechnical engineer and would likely consist of over-excavating the area by at least 1.5 feet, placing a geofabric (such as Mirafi 600X) or a geogrid (such as Tensar BX-1100) at the bottom of the excavation over which a stabilizing fill consisting of angular coarse gravel with cobbles is placed up to the design subgrade. Vegetation and other deleterious materials should be removed from the site. The stripped soils will be unsuitable as structural fill but may be stockpiled for later use in landscaped areas.

4.2 Excavation and Site Grading

Earthwork will be required to level the construction site. Shallow temporary construction excavations not exceeding 4 feet in depth may be constructed with near-vertical side slopes. Temporary cut slopes may be constructed at side slopes of 1.5:1.0 (horizontal: vertical). It is the responsibility of the contractor to provide safe working conditions in connection with below grade excavations.

4.3 Fill Material

All fill material should be inorganic soils free of vegetation and debris. Fill material should meet the requirements based on the intended use, as summarized in **Table 2**. Compaction requirements are provided in **Table 3**.

Table 2. Fill Material Requirements

Fill Type	Application	Requirements		
		Gradation		Plasticity
		Size	Percent finer by weight	
Structural Fill	Under foundations, concrete slabs or other structural areas	4 inch No. 4 sieve No. 200 sieve	100 35-65 15-35	Liquid limit 20 max Plasticity Index 6 max
Site Grading Fill	Fill in non-structural areas and below pavements	4 inch No. 200 sieve	100 <50	Liquid limit 40 max Plasticity Index 10 max
Pipe Zone Backfill	Within utility pipe zone	3/4 inch 3/8 inch No. 4 sieve No. 16 sieve No. 200 sieve	100 78-92 55-67 28-38 7-11	Non-plastic
Trench Backfill	Utility trench backfill above pipe zone	6 inch No. 200 sieve	100 <50	Liquid limit 30 max Plasticity Index 6 max
Aggregate Base Course	Access Road and Parking Area	2 inch 1½ inch 3/4 inch 3/8 inch No. 4 sieve No. 40 sieve No. 200 sieve	100 85-100 70-85 55-75 40-65 15-30 4-10	Non-plastic

Pea gravel or other similar non-cementitious, poorly-graded materials should not be used as fill or backfill without prior approval from the geotechnical engineer.

Table 3. Compaction Requirements

Item	Description
Fill Lift Thickness	8 inches or less in loose thickness
Compaction	• 95% of the material's maximum dry density (MDD) per ASTM D1557 below footings, floor slabs and road areas as well as areas with 5 feet or more fill. • 90% of material's MDD per ASTM D1557 in other areas of fill and backfill.
Moisture Content	• near optimum water content (within ±2% of optimum at the time of placement and compaction).

Fill should be tested frequently for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified compaction is achieved. This may require adjustment of the moisture content.

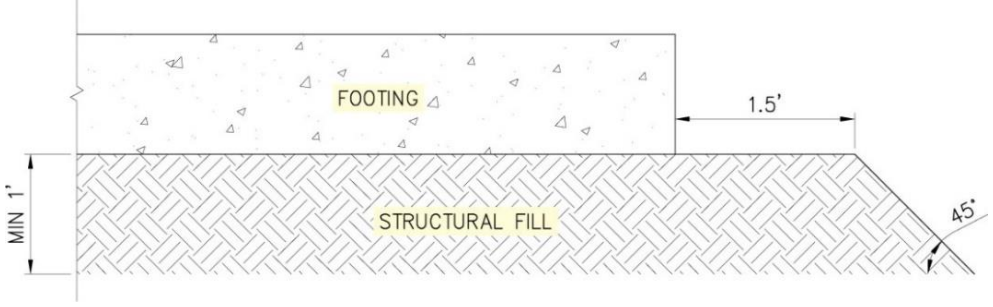
4.4 Permanent Slopes

All final cut and fill slopes, if any, shall be graded to at least 3.0:1.0 (horizontal: vertical) or retained.

4.5 Foundations

4.5.1 Footings

Based on the onsite soil conditions, it is recommended that the proposed well house be constructed on spread footings. Footings should not be installed on loose or disturbed soils, undocumented fill, topsoil, construction debris, frozen soil, or within ponded water. If unsuitable soils are encountered, they should be over-excavated and replaced with structural fill. Structural fill placed below footings should extend laterally beyond the edges of the foundation. Structural fill, with a minimum thickness of 1 foot, should be placed beneath the footing. Structural fill placed below footings should extend laterally beyond the edges of the foundation a distance of 1.5 feet and then 1 foot for every foot of depth below the foundation (see the following sketch):



Overeexcavation / Backfill

If the exposed soils on which the footings are to be founded become loose or disturbed, they should be re-compacted before concrete is placed.

4.5.2 Design Criteria

Based on the available data and in compliance with applicable building codes, the recommended design parameters for footings are summarized in **Table 4**.

Table 4. Design Criteria

Bearing Capacity	
Spread/Mat Foundation	1,800 pounds per square foot (psf)
Isolated Column	1,800 psf
Increase above value for short, transient loads	30%
Density of Structural Fill	125 pounds per cubic foot (pcf)
Modulus for Structural Fill	150 psi/in
Subgrade Soil Density	130 pcf
Subgrade Modulus	150 psi/in

4.5.3 Settlement

The well house at the site should be designed for a settlement of 1 inch and a differential settlement of ½ inch.

4.5.4 Lateral Pressure

Excavation walls will be subjected to horizontal loads from the lateral earth pressure of backfill. When the granular fill is lightly compacted, drained, and the surface of the soil slope behind the wall is horizontal, the backfill may be considered equivalent to a fluid with a density of 35 pounds per cubic foot (pcf) for active pressure and 55 pcf for static pressure.

4.5.5 Lateral Resistance

Resistance to lateral loads at the bottom of the footings can be calculated based on a coefficient of friction of 0.3. Passive resistance provided by properly placed and compacted granular structural fill above the water table may be considered equivalent to a fluid with a density of 250 pcf. These are ultimate frictional and passive pressure values and should be used with appropriate safety factors in design. Note that fill against the sides of footings should be placed and compacted to at least 90% of maximum dry density as indicated in Section 4.3 (Structural Fill).

4.5.6 Drainage

Drainage design should provide for rapid removal of water from foundation soils and pavement materials, both during and after construction. Drainage design should provide for intercepting water and directing it away from cut and fill slopes.

4.5.7 Cement Type

Although subgrade soil samples were collected from each test pit, only sieve analyses were performed. However, chemical analysis was conducted on a soil sample collected from an existing water tank site approximately 2,680 feet east of the project location. Laboratory results from this sample indicate a sulfate concentration below 11 mg/kg of dry soil. Given the close proximity between the two sites, the chemical test results are considered applicable to the water house site. Based on these results, the cement at the site would be subject to a mild sulfate attack. Therefore, the use of Cement Type I or II is recommended for project construction.

4.5.8 Parking Area

It is understood that an asphalt-paved parking area will be constructed. The recommendations in this section are based on light trucks as the traffic load. Under the assumption that the CBR value is 10 for the onsite native subgrade and 78 for road base, and EAL = 5,000 for light trucks, the following recommendations are given: a 3-inches bituminous surface, 6-inch-thick untreated base course (UTBC) over 12-inches of granular borrow (GB) materials or structural fill in fill areas. Before construction of the parking area, the recommendations presented in Section 4.1 should be followed.

4.6 Seismic Lateral Earth Force

4.6.1 Site Class

The seismic site classification cannot be determined solely from surficial soil analysis. However, examination of the well drilling lithology log reveals dense to very dense consolidated materials throughout the upper 100 feet of the soil profile. Based on these subsurface conditions, the project site is classified as Site Class C (very dense soil and soft rock) in accordance with Table 1613.5.2 of the International Building Code (IBC 2009). Note that while the 2015 IBC no longer contains Table 1613.5.2, it references Chapter 20 of ASCE 7, which maintains equivalent site classification criteria.

4.6.2 Seismic Lateral Earth Force

Seismic activity can generate lateral forces acting on the well house structure and equipment. Based on the site-specific parameters and building characteristics (Risk Category III, Site Class C), and using ASCE 7-16 procedures, the seismic design values are provided below.

Basic seismic force equations per ASCE 7-16:

$$\mathrm{C_s} = \frac{SDS}{R/I_e}$$

And seismic base shear equation is:

$$\mathrm{V} = C_s * W$$

Where:

- SDS: site-specific design spectral acceleration
- R: response modification factor for wood frame

- I_e: importance factor for water facility
- W: structure weight

4.6.3 Seismic Parameter Values

Table 5 includes some seismic parameter values obtained from United States Seismic Design Map for the well house site location, these seismic parameters may be useful for structural design.

Table 5. Seismic Parameters from U.S. Seismic Design Map

Parameter	Value (g)
S_s	1.022
S_1	0.34
S_{MS}	1.227
S_{DS}	0.818
S_{D1}	0.34
S_{M1}	0.51
F_a	1.2
F_v	1.5
PGA	0.441

5 LIMITATIONS

The analyses and recommendations presented in this report are based on the data obtained from two test pits at the indicated locations (**Figure 2**). This report does not reflect variations which may occur at other areas or across the project site. The nature and extent of such variations may not become evident until construction. If variations appear evident, it will be necessary to reevaluate the recommendations of this report.

This report has been prepared for the exclusive use and specific application to the project discussed and has been prepared in accordance with currently accepted geotechnical engineering practices. No warranties, either expressed or implied, are provided. In the event that any changes in the nature, design, or location of the project as outlined in this report are planned, the recommendations contained in this report shall be considered invalid unless the changes are reviewed, and the conclusions of this report modified or verified in writing by the geotechnical engineer.

6 REFERENCES

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Figures

NORTH

SCALE

0 30' 60'

AREA MAP

REV NO.	COMMENT	DATE

FOR REVIEW ONLY
NOT
FOR CONSTRUCTION
DATE

SUNRISE ENGINEERING
2100 NORTH MAIN STREET
NORTH LOGAN, UTAH 84341
TEL 435.563.3734
www.sunrise-eng.com

HYDE PARK CITY

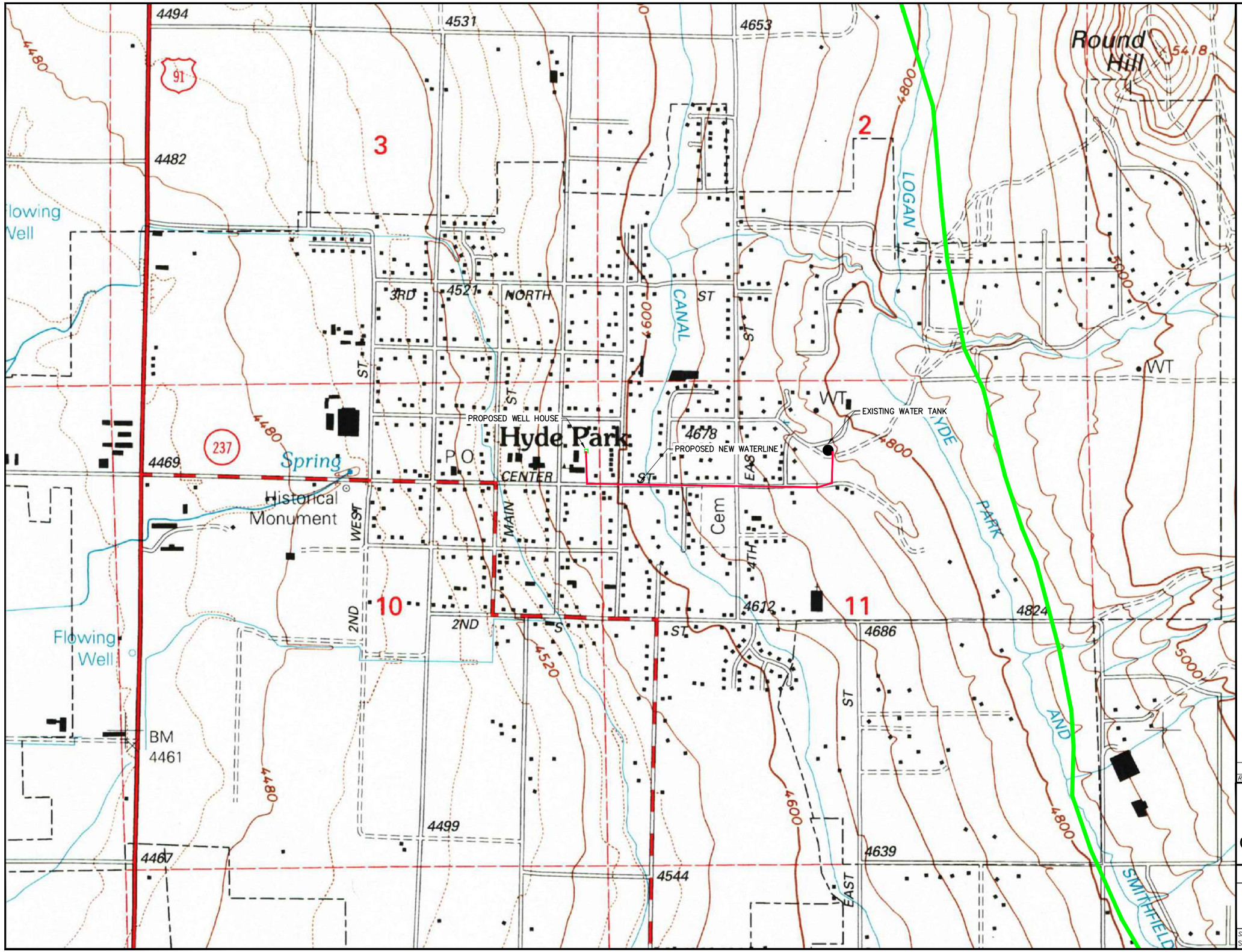
CITY HALL WELL HOUSE

GEOTECHNCAIL INVESTIGATION

WELL HOUSE SITE TEST PIT LOCATIONS

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
S10660	HP	HP	SA	2 of 2	FIG. 2

P:\Hyde Park\S10660 City Hall Well House\Admin\Documents\Geotechnical Soil Classification\Civil 3D\Hyde Park Geotech.dwg Dec 04, 2024 9:55am haiming.peng



NORTH

SCALE

0 500' 1000'

LEGEND

- PROPOSED NEW WATERLINE
- PROPOSED NEW WELL HOUSE
- EXISTING WATER TANK
- HIGH-ANGLE FAULT

AREA MAP

REV NO.	COMMENT	DATE

FOR REVIEW ONLY NOT FOR CONSTRUCTION DATE

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HYDE PARK CITY

CITY HALL WELL HOUSE

GEOTECHNCIAL INVESTIGATION

PROJECT LOCATION MAP

SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.
S10660	HP	HP	SA	1 of 2

FIG. 1

P:\Hyde Park\S10660 City Hall Well House\Admin\Documents\Geotechnical Soil Classification\Civil 3D\H

Appendix A

Sieve Laboratory Results

Test Pit - 1

SIEVE ANALYSIS REPORT

CLIENT: Sunrise Engineering
Attn: Steve Wood
2100 N. Main Street
Logan, Utah 84321

PROJECT: Hyde Park Well House
113 East Center Street
Hyde Park, Utah 84318

SAMPLE DATE: November 5, 2024
REPORT DATE: November 11, 2024
REPORT #: 002084-002
LAB NUMBER: 4448
SAMPLE SOURCE: City Hall - 6' Deep Exploration Pit
METHOD OF TEST: AASHTO T27/T11, ASTM C117/C136

RESULTS

SIEVE	% PASSING
3"	100
2"	98
1 1/2"	94
1"	88
3/4"	81
1/2"	69
3/8"	63
#4	51
#8	33
#16	25
#30	13
#50	11
#100	8
#200	6.6

REMARKS: LL: NP
PL: NP
PI: NP
USCS: GP-GM Poorly graded gravel with silt and sand

Respectfully submitted,
Utah Testing and Engineering

Matthew Eroh
Laboratory Manager

Test Pit - 2

SIEVE ANALYSIS REPORT

CLIENT: Sunrise Engineering
Attn: Steve Wood
2100 N. Main Street
Logan, Utah 84321

PROJECT: Hyde Park Well House
113 East Center Street
Hyde Park, Utah 84318

SAMPLE DATE: November 5, 2024
REPORT DATE: November 11, 2024
REPORT #: 002084-001
LAB NUMBER: 4449
SAMPLE SOURCE: City Hall - 4' Deep Excavation Pothole
METHOD OF TEST: AASHTO T27/T11, ASTM C117/C136

RESULTS

SIEVE	% PASSING
3"	100
2"	92
1 1/2"	85
1"	72
3/4"	61
1/2"	48
3/8"	41
#4	29
#8	20
#16	15
#30	7
#50	6
#100	5
#200	3.9

REMARKS: USCS: GW well graded gravel with sand

Respectfully submitted,

Utah Testing and Engineering

Matthew Eroh
Laboratory Manager

PRE-BID MEETING

SIGN IN SHEET

DATE: February 18, 2025 TIME: 2:00 PM PLACE: Hyde Park City Building

Subject: City Hall Well House and Transmission Line

ATTENDANCE:

NAME	ENTITY	EMAIL
NATE HANSEN	DWA CONSTRUCTION	dwanate.hedwaconstruct.com
LESLIE WOOD	RAYMOND CONST.	bidsc raymondconst.com
Dale Williams	Facer Excavation	Dale81williams@gmail
JARED DIXON	SPINDLER CONST.	JARED@SPINDLERCORP.COM
Robert Griffin	Mike Funk Const	mike@MikeFunkconstruction.com
Tawnya Dillinger	Advanced Excavation	advancedexcavation214@gmail.com
Casey Harris	Geneva Rock	charris@genevarock.com
Travis Burbank	LeGrand Johnson	Travis.Burbank@LJCC.com
Ryan Livermore	United Rentals Fluid	rlivermore@ur.com
Steve Lopez	United Rentals Fluid	slopez1@ur.com
Colton Deeter	United Rentals Trench	Cdeeter@ur.com
Kyle Humpherys	Don C Fisher Construction	Kyle.Fisherconstruction@gmail.com
Matt Cook	Cook Building	mattc cookbuilding.com
Trever Coleman	Geary Electric	Trever@gearyelectricco.com
Derik Overman	LeGrand Johnson	Derik.overman@ljcc.com
Craig Hibbard	LeGrand Johnson	craig_hibbard@ljcc.com
Grant Nielsen	DWA Construction	grant.n@dwaconstruct.com
Troy Petersen	MJM Construction	MJMConstruction4th@gmail.com
Justin Facer	Facer Excavation	facertrucking@gmail.com

PRE BID MEETING

MINUTES AND NOTES

- Funding: no questions
- Construction:
    - no questions on the well house or site
    - What is the scope of work for APCO? What does the electrician take care of versus APCO? We will provide full scope of work for APCO in the addendum and where the work transitions from APCO to the electrician.
    - Who is providing the pump? The general contractor will do so. Who is providing the VFD? The general contractor will be responsible, whether that is them or a subcontractor.
    - We made mention that the bore under anal is to be 5'min in a previous addendum. We also mentioned that potholing will be required to find the pressurized 18" line.
    - No questions on the canal
    - We noted that the connection to the tank needs to be done before may 1st.
- No changes to bidding schedule requested
- We want the transmission line to be in the road and road done by September 30th (end of this paving season). Will add this into the follow up addendum.
- No concerns noted or voiced for the 150-day schedule. The city is double checking funding schedule. The mayor said that we will have to have at least half the funding used by June 2026.
- No questions on construction timing
- We will communicate funding nuances through the addendum.
- Bid item 3 will be removed. A tester will be hired through Hyde Park city. The contractor is responsible for notifying the tester and scheduling with the tester.
- Clarified that subsurface investigation is an as needed bid item.
- No questions on bid schedule
- Park will be open during the wellhouse and site construction
- When is the water in the canal? Only if it rains a bunch because it is a stormwater canal. Pressurized will have it in April.
- Do we have an engineer’s estimate? We can provide one if it is wanted. We will provide it.
- Is there any staging from the well site to the tank? No.
- We noted that a driveway entrance will be added for canal access

- No fee for irrigation permit but a permit application will need to be submitted. There was a question about irrigation permitting and fees.
- Verify one block closures
- Hyde Park days issue?
- Construction staking will be the responsibility of the contractor
- Traffic control will be responsibility of the contractor
- Permitting discussed: SWPP, building permit, encroachment permit.
- Demolition: be aware of the foundations in the area