



## DEVELOPMENT REVIEW COMMITTEE

Tuesday, September 27, 2022, at 10:00 AM  
Court Room/Council Chambers (2nd Floor) and Online

### MEETINGS HELD IN PERSON & ONLINE

The public is invited to participate as outlined below:

- **In Person** – Meetings are held on the 2<sup>nd</sup> floor in the Court Room/Council Chambers at City Hall
- **YouTube Live** – Public meetings will be shown live on the Santaquin City YouTube Channel, which can be found at <https://bit.ly/2P7ICfQ> or by searching for Santaquin City Channel on YouTube.

### ADA NOTICE

If you are planning to attend this Public Meeting and due to a disability need assistance in understanding or participating in the meeting, please notify the City Office ten or more hours in advance and we will, within reason, provide what assistance may be required.

## AGENDA

### NEW BUSINESS

**1. Heritage Heights Concept Review**

A concept review of a 3-lot subdivision located at 850 E. 450 S.

**2. Cortland Park Preliminary Review**

A preliminary review of a 102-unit multifamily subdivision located at approximately 200 N and 400 E.

**3. Stratton Acres Final Review**

Final plan review of a proposed 37-lot subdivision located at approximately Royal Land Drive and 200 E

### MEETING MINUTES APPROVAL

### ADJOURNMENT

## CERTIFICATE OF MAILING/POSTING

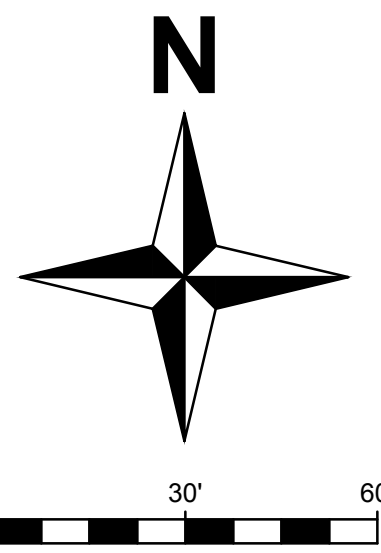
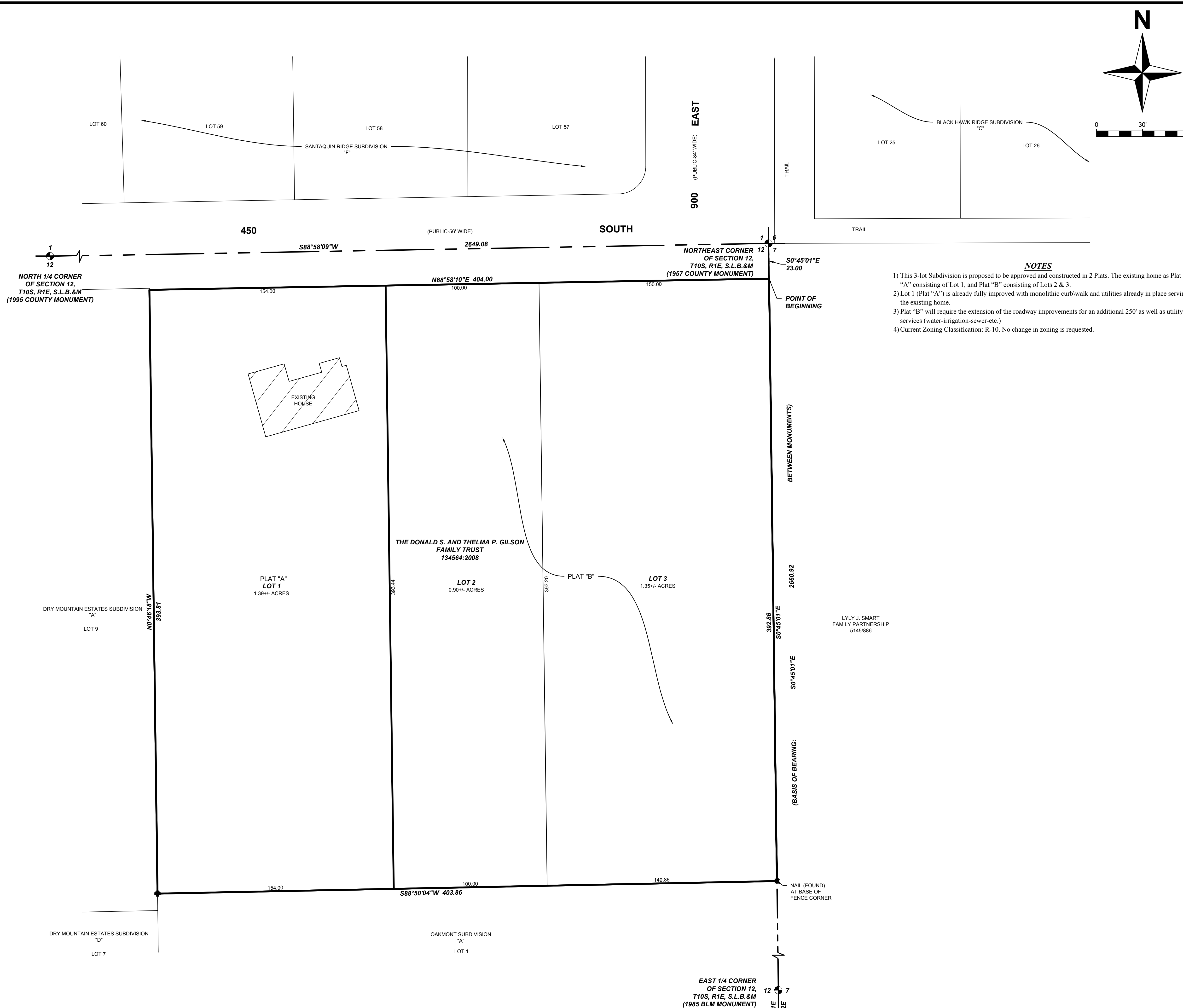
The undersigned duly appointed City Recorder for the municipality of Santaquin City hereby certifies that a copy of the foregoing Notice and Agenda was posted on [www.santaquin.org](http://www.santaquin.org), Santaquin City Social Media sites, posted in three physical locations, and posted on the State of Utah's Public Notice Website.

BY:

Amalie R. Ottley, City Recorder



VICINITY MAP  
NTS



- NOTES**
- 1) This 3-lot Subdivision is proposed to be approved and constructed in 2 Plats. The existing home as Plat "A" consisting of Lot 1, and Plat "B" consisting of Lots 2 & 3.
  - 2) Lot 1 (Plat "A") is already fully improved with monolithic curbwalk and utilities already in place serving the existing home.
  - 3) Plat "B" will require the extension of the roadway improvements for an additional 250' as well as utility services (water-irrigation-sewer-etc.)
  - 4) Current Zoning Classification: R-10. No change in zoning is requested.

**civilsolutionsgroup inc.**

CACHE VALLEY | P: 435.213.3762  
 SALT LAKE | P: 801.216.3192  
 UTAH VALLEY | P: 801.874.1432  
 info@civilsolutionsgroup.net  
 www.civilsolutionsgroup.net

**CONCEPT PLAN**  
**HERITAGE HEIGHTS SUBDIVISION**  
 SANTAQUIN, UTAH  
 NE1/4 OF SECTION 12, T10S, R1E, SLB&M

| REVISION BLOCK NO. | DATE | DESCRIPTION |
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SCALE: 1"=30'  
 DATE: 8-3-2022  
 DRAWN BY: L. CHUGG  
 PROJECT #: 22-143

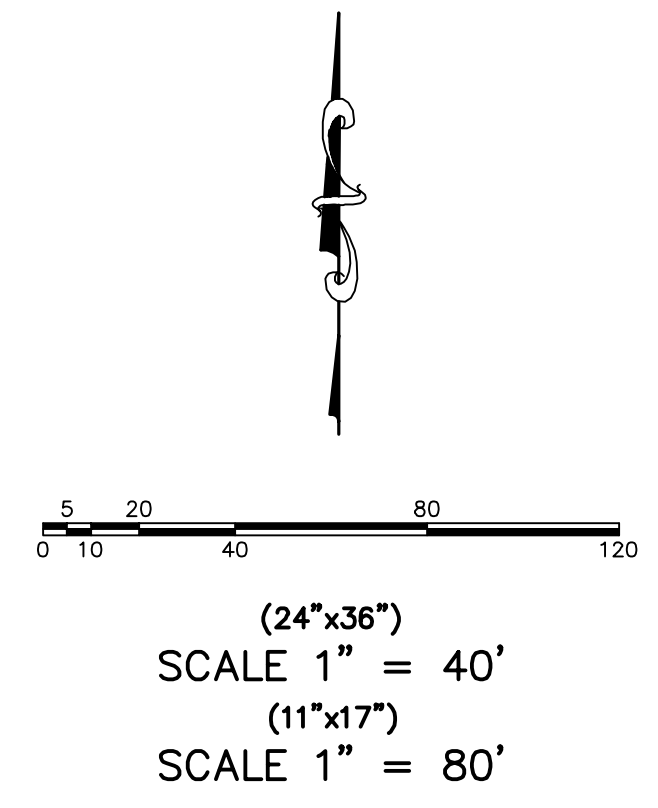
# CORTLAND PARK

## SITEPLAN

### SANTAQUIN, UTAH COUNTY, UTAH

#### PRELIMINARY PLAN SET

#### SEPTEMBER 2022



**BOUNDARY DESCRIPTION:**  
 BEGINNING AT A POINT ON THE FUTURE EASTERLY LINE OF 400 EAST STREET LOCATED S00°30'42"E 1737.86 FEET ALONG THE QUARTER SECTION LINE AND S89°29'04"E 29.85 FEET FROM THE NORTH QUARTER CORNER OF SAID SECTION 1; AND RUNNING THENCE S89°29'04"E 666.49 FEET, THENCE SOUTHEASTERLY 94.95 FEET ALONG THE ARC OF A 115.00 FOOT RADIUS CURVE TO THE RIGHT THROUGH THE CENTRAL ANGLE OF 47°18'24", THE CHORD BEARS S65°49'52"E 92.28 FEET; THENCE S42°10'40"E 27.48 FEET; THENCE N47°49'42"E 67.30 FEET; THENCE ALONG THE FUTURE STREET RIGHT-OF-WAY LINES THE FOLLOWING NINE (9) COURSES TO WIT: (1) NORTHEASTERLY 85.97 FEET ALONG THE ARC OF A 171.00 FOOT RADIUS CURVE TO THE LEFT THROUGH THE CENTRAL ANGLE OF 28°48'16", THE CHORD BEARS N14°37'55"E 85.06 FEET, (2) N00°13'47"E 181.28 FEET, (3) ALONG THE ARC OF A NORTHWESTERLY 18.65 FEET ALONG THE ARC OF A 12.00 FOOT RADIUS CURVE TO THE LEFT THROUGH THE CENTRAL ANGLE OF 90°00'00", THE CHORD BEARS N44°46'13"W 16.97 FEET, (4) N89°46'13"W 432.01 FEET, (5) N89°51'46"W 376.98 FEET, (6) SOUTHWESTERLY 18.77 FEET ALONG THE ARC OF A 12.00 FOOT RADIUS CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 89°37'17", THE CHORD BEARS S45°19'35"W 16.91 FEET, (7) S00°30'56"W 139.43 FEET, (8) S06°47'35"W 54.87 FEET, (9) S00°30'56"W 53.50 FEET TO THE POINT OF BEGINNING. CONTAINING 5.10 ACRES.

### -SHEET INDEX-

| SHEET | SHEET NAME                  |
|-------|-----------------------------|
| 1     | COVER & INDEX               |
| 2     | SITE PLAN                   |
| 3     | GRADING PLAN                |
| 4     | FINAL PLAT                  |
| 5     | EXISTING TOPOGRAPHY PLAN    |
| 6     | DETAIL SHEET                |
| 7     | DETAIL SHEET                |
| 8     | FIRE ACCESS/OPEN SPACE PLAN |
| 9     | TBC PLAN                    |
| 10    | PHASING PLAN                |

**GENERAL NOTES:**

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER.
4. ARCHITECTURAL DRAWINGS TO BE SUBMITTED AND APPROVED BY ARCHITECTURAL REVIEW COMMITTEE.
5. PROJECT TO BE COMPLETED IN TWO PHASES.
6. THE TOT LOT SHALL BE INSTALLED BEFORE THE COMMENCEMENT OF CONSTRUCTION OF THE 11TH RESIDENTIAL UNIT, PER THE DA REQUIREMENTS.

ALL RECOMMENDATIONS MADE IN A PERTINENT GEOTECHNICAL REPORT/STUDY SHALL BE FOLLOWED EXPLICITLY DURING CONSTRUCTION OF BUILDING AND SITE IMPROVEMENTS.

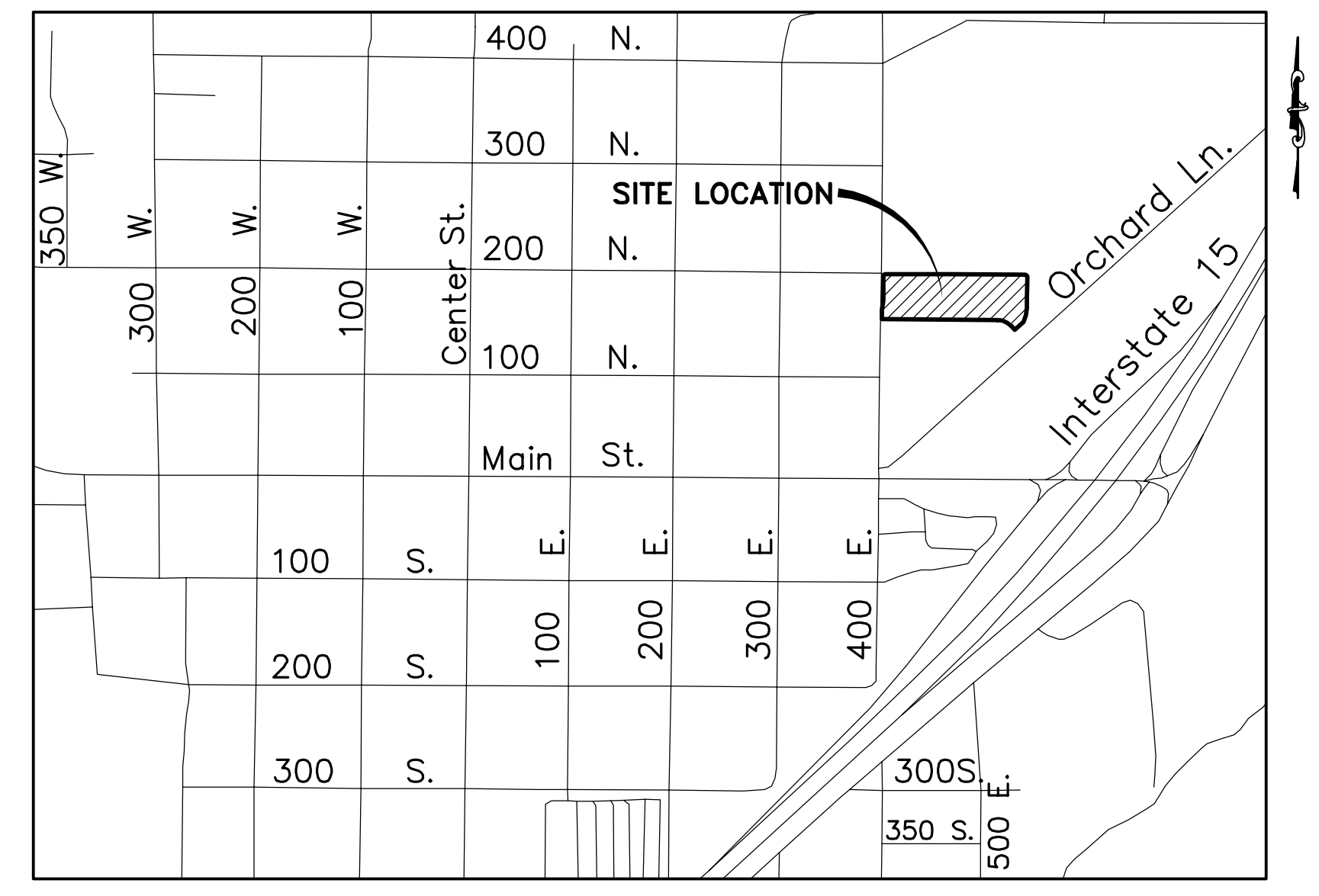
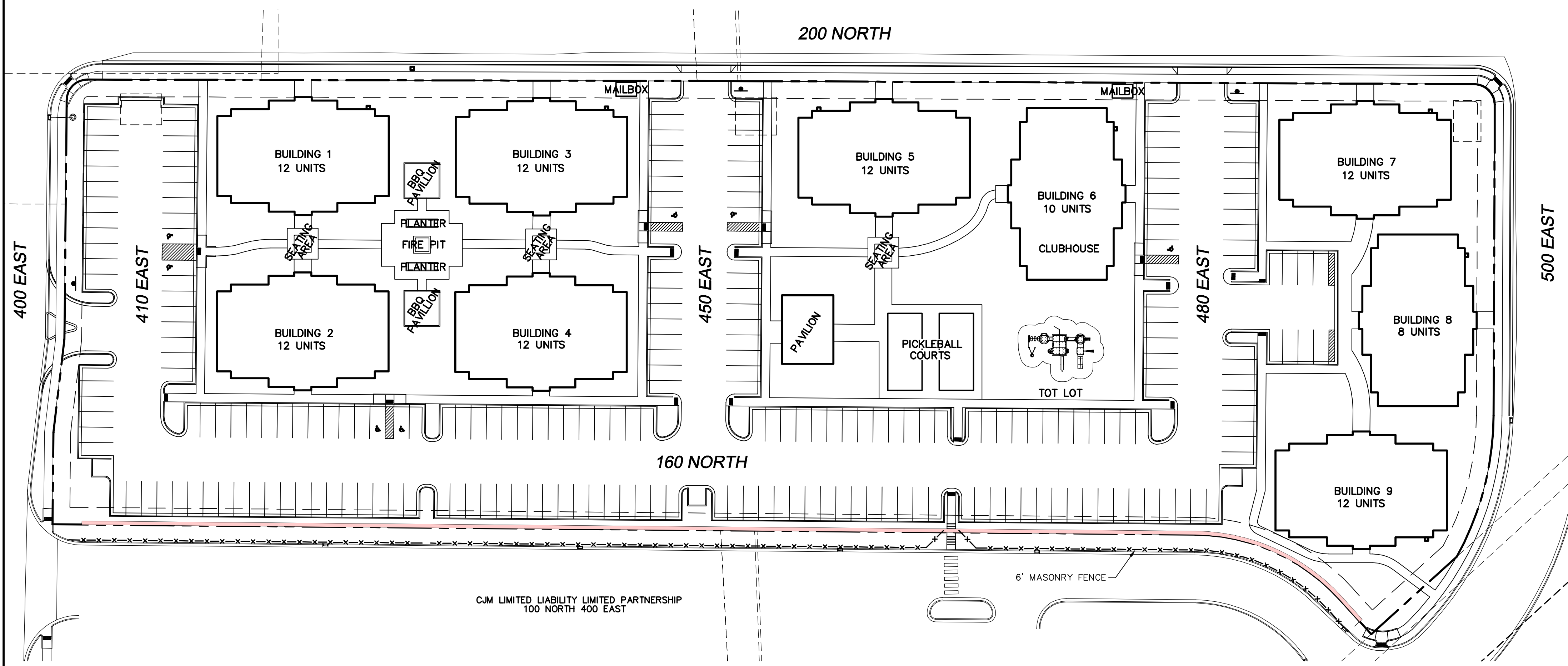
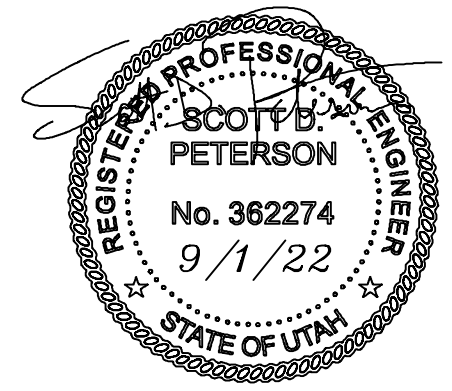
THE DEVELOPER AND THE GENERAL CONTRACTOR UNDERSTAND THAT IT IS HIS/HER RESPONSIBILITY TO ENSURE THAT ALL IMPROVEMENTS INSTALLED WITHIN THIS DEVELOPMENT ARE CONSTRUCTED IN FULL COMPLIANCE WITH ALL STATE AND SANTAQUIN CITY CODES, ORDINANCES AND STANDARDS. THIS FACT DOES NOT RELIEVE THE DEVELOPER OR GENERAL CONTRACTOR FROM FULL COMPLIANCE WITH ALL MINIMUM STATE AND SANTAQUIN CITY CODES, ORDINANCES AND STANDARDS.

**DENSITY TABLE**

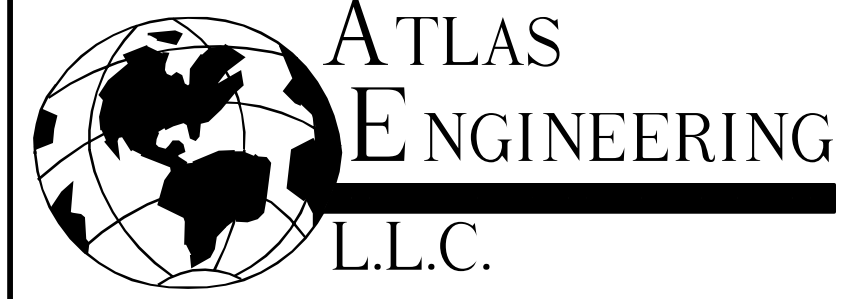
ZONING CLASSIFICATION=MSR  
 NUMBER OF UNITS=102  
 ACREAGE=5.10 ACRES  
 ACREAGE TO BE DEDICATED FOR STREET ROW=0 SF  
 PARCEL SIZE SF=220  
 PARKING REQUIRED=238  
 PARKING PROVIDED=239  
 BUILDING AREA SF=9x5,779=52,011  
 PARKING LOT AREA SF=75,174  
 LANDSCAPE AREA IN SF=94,971 (43%)

**LEGEND**  
 LEGEND APPLIES TO ALL SHEETS

|  |                                   |
|--|-----------------------------------|
|  | SECTION CORNER                    |
|  | EXISTING VALVE                    |
|  | EXISTING POWER POLE               |
|  | PROPERTY BOUNDARY                 |
|  | CENTERLINE                        |
|  | RIGHT-OF-WAY LINE                 |
|  | LOT LINE                          |
|  | SECTION LINE                      |
|  | BUILDING SETBACK                  |
|  | EASEMENT                          |
|  | EXISTING DEED LINE                |
|  | EXISTING GAS                      |
|  | EXISTING FENCE LINE               |
|  | EXISTING DITCH                    |
|  | EXISTING SANITARY SEWER W/MANHOLE |
|  | PROPOSED IRRIGATION LINE          |
|  | EXISTING CULINARY WATERLINE       |
|  | EXISTING PRESSURIZED IRRIGATION   |
|  | PROPOSED CULINARY WATERLINE       |
|  | PROPOSED PRESSURIZED IRRIGATION   |
|  | PROPOSED SEWER LINE               |
|  | FIRE HYDRANT                      |
|  | STREET LIGHT                      |



**VICINITY MAP**  
-NTS-



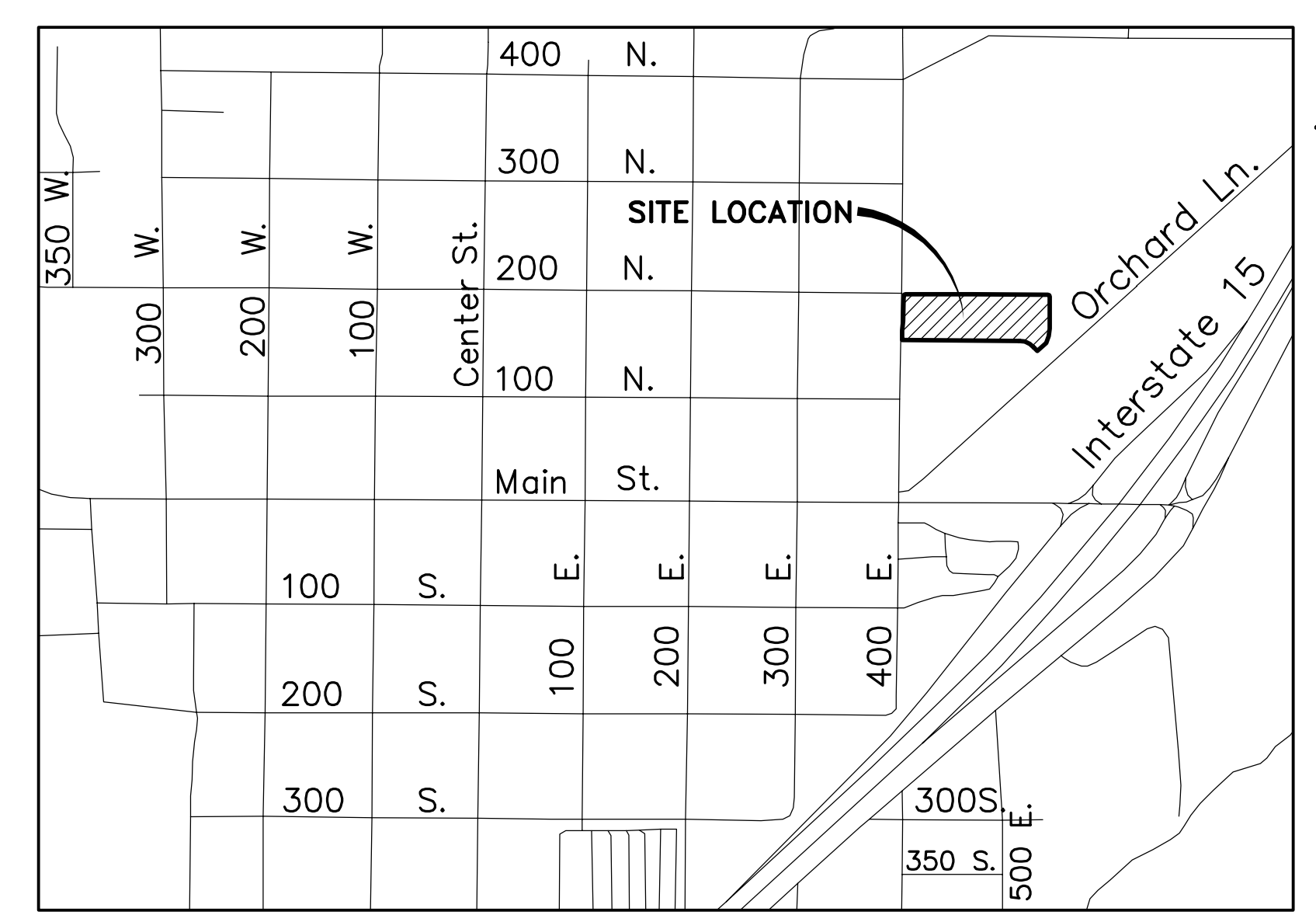
PHONE: 801-655-0566  
 FAX: 801-655-0109  
 946 E 800 N SUITE A  
 SPANISH FORK, UT 84660

**OWNER/DEVELOPER**  
 BRY CHRISTENSEN  
 BRY@CLCHRISTENSEN.COM  
 801-269-1110

**NOTES**

1. ALL UNITS TO BE ADA ADAPTABLE.
2. PROJECT IS TO BE SOLD AS CONDO UNITS. CONDOMINIUM PLAT, CC&R'S, AND HOA DOCUMENTS WILL BE REQUIRED TO BE APPROVED BY PLANNING COMMISSION.
3. PARKING LOT AND BUILDING LIGHTING MUST BE SHIELDED AND DIRECTED DOWNWARD.
4. ALL BUILDINGS ARE TO BE FIRE-SPRINKLERED.

- CONSTRUCTION NOTES:**
- LOCATE AND TIE TO EXISTING CULINARY WATERLINE.
  - LOCATE AND TIE TO EXISTING PRESSURIZED IRRIGATION LINE.
  - LOCATE AND TIE TO EXISTING SEWER LINE.
  - CAP/PLUG AND MARK TO SURFACE.
  - HIGH PRESSURE GAS LINE. USE EXTREME CAUTION.
  - INSTALL 6" MASONRY FENCE.
  - INSTALL 4"-6" RETAINING WALL, WALLS TO BE DESIGNED, DRAWN AND STAMPED BY AN ENGINEER.
  - MATCH EXISTING CURB.
  - INSTALL FIRE HYDRANT ASSEMBLY PER SANTAQUIN CITY STANDARDS.
  - INSTALL DUMPSTER PER SHEET 6.
  - CONST. PEDESTRIAN ACCESS RAMP PER SANTAQUIN CITY STANDARDS.
  - INSTALL STOP SIGN PER SANTAQUIN CITY STANDARDS.

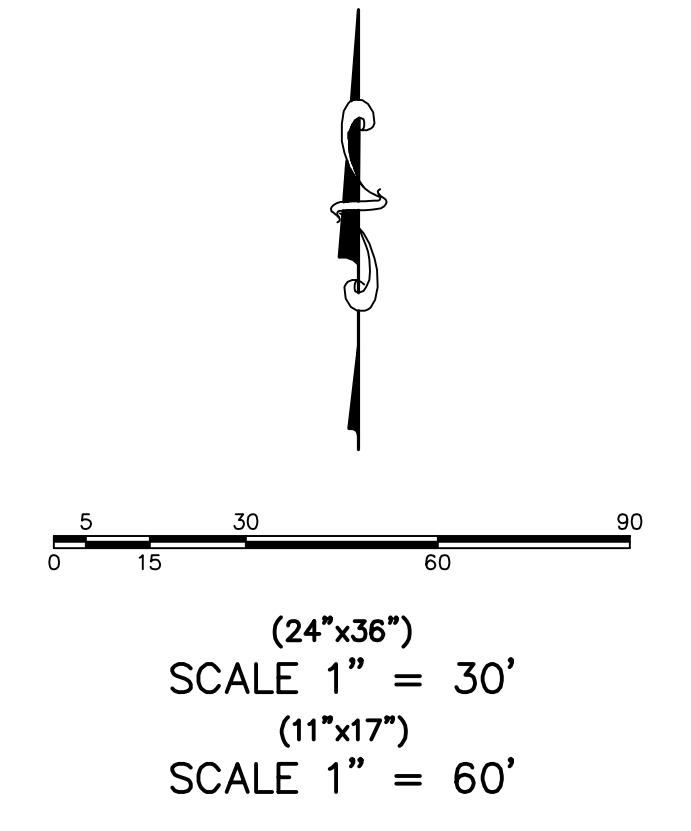


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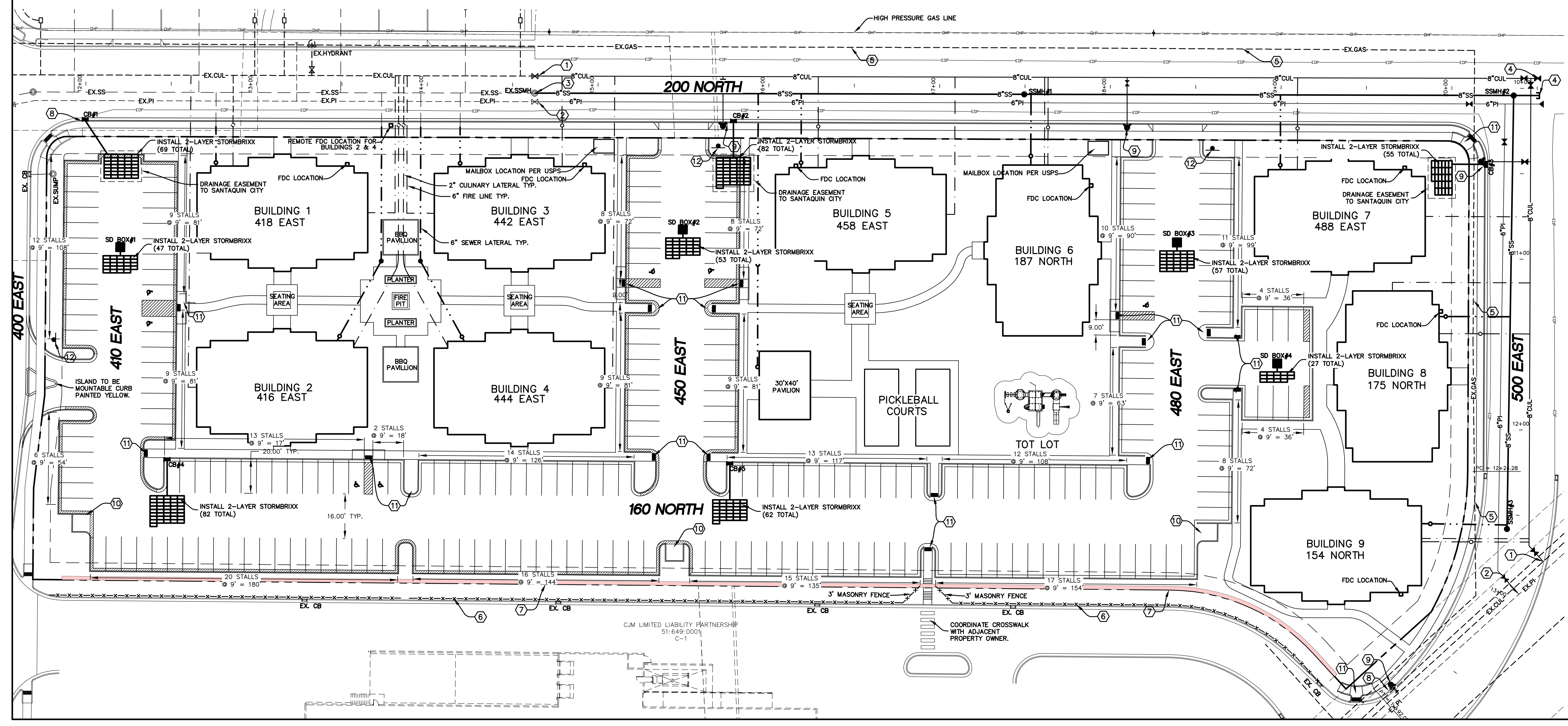
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**GENERAL NOTE:**

- DUE TO THE EXTENSIVE ROADWAY EXCAVATION A 2 INCH OVERLAY WILL BE REQUIRED ON 200 NORTH AND 500 EAST.
- CURB TO BE PAINTED RED ALONG ALL FRONTAGE ROADS WITH THE EXCEPTION OF YELLOW CURB AT THE MAILBOXES FOR ACCESS.



**VICINITY MAP**  
-NTS-



CJM LIMITED LIABILITY PARTNERSHIP  
51-649-0001  
C-1

SHEET NO. 2

SITE PLAN  
SANTAQUIN, UTAH

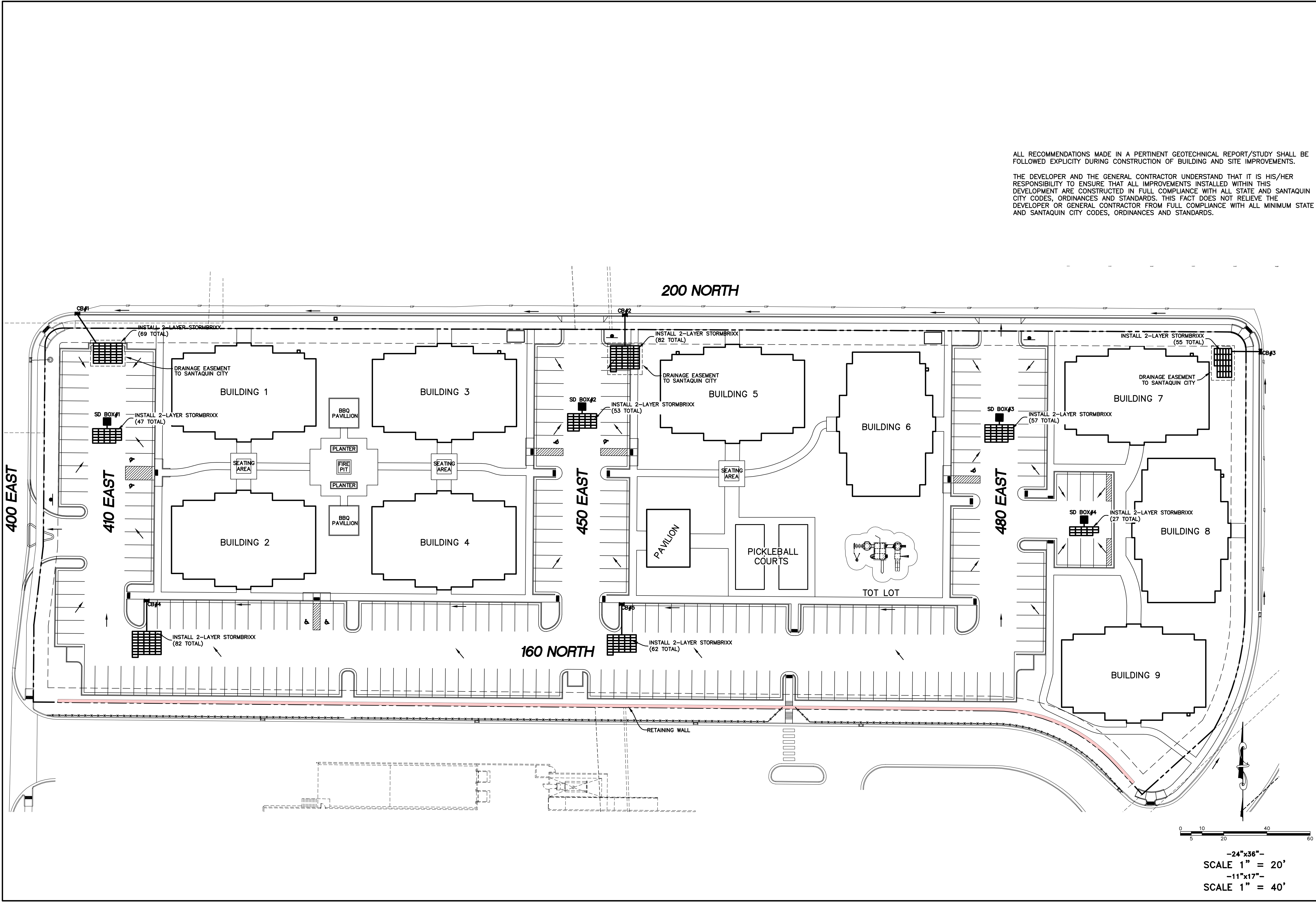
CORTLAND PARK



PHONE: 801-655-0566  
FAX: 801-655-0109  
946 E. 800 N. SUITE A  
SPANISH FORK, UT 84660

| NO. | REVISIONS | BY | DATE |
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SHEET NO.  
**3**

GRADING PLAN  
SANTAQUIN, UTAH

CORTLAND PARK

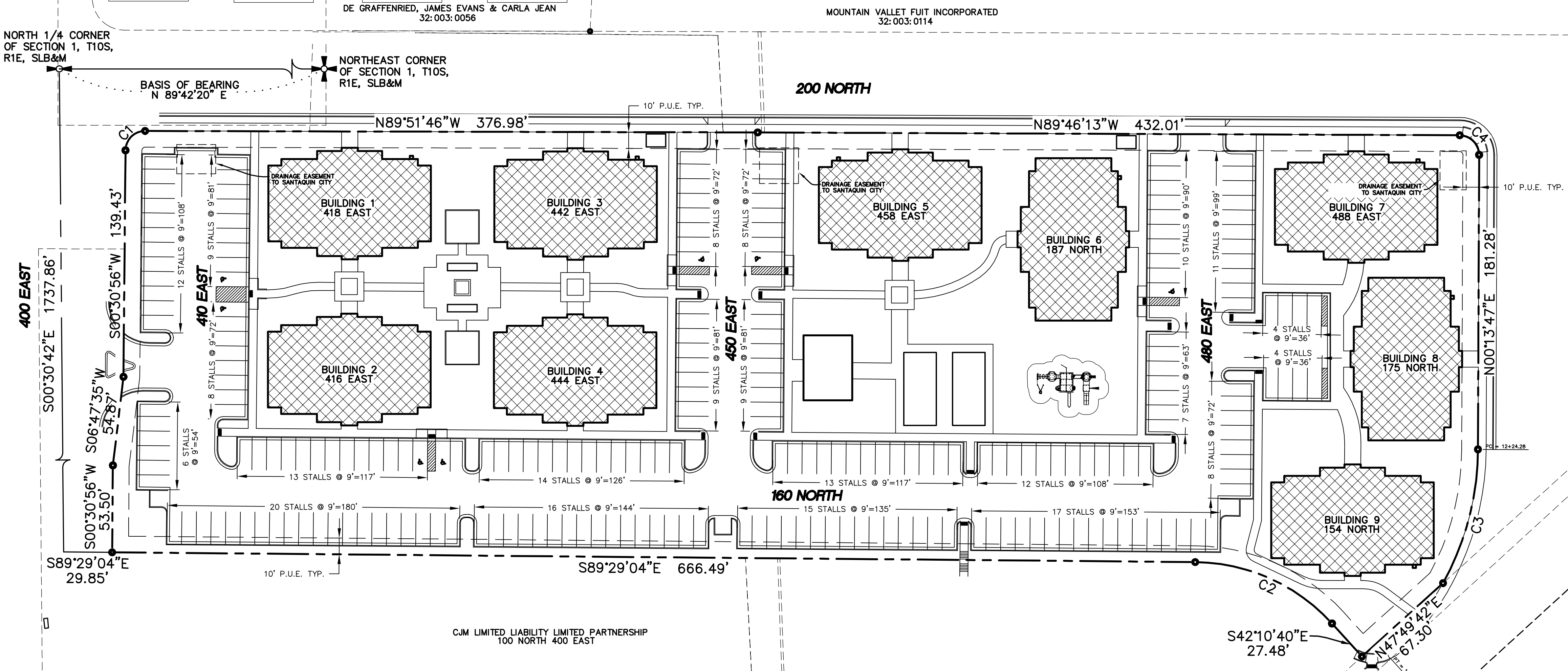
**ATLAS ENGINEERING L.L.C.**

PHONE: 801-655-0566  
FAX: 801-655-0109  
946 E. 800 N. SUITE A  
SPANISH FORK, UT 84660

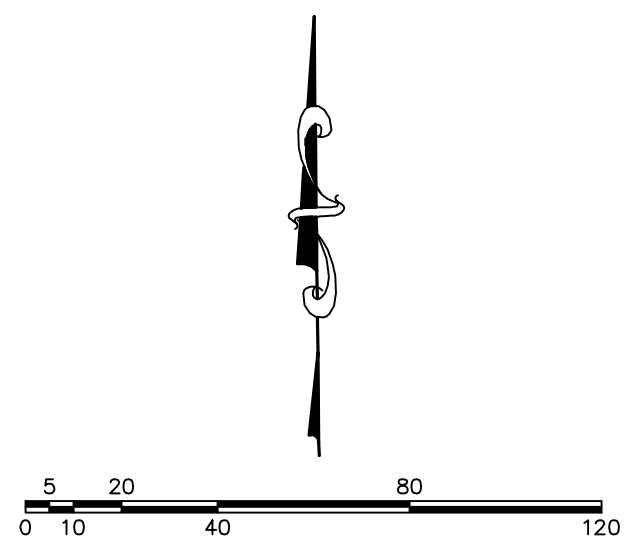
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2:\2019\19-021 Cortland Park\_Santaquin\CAD\DWG\PREL\_MINOR\19-03-GRADING\_PLA.dwg 9/23/16 AM MDT

-24"x36"-  
SCALE 1" = 20'  
-11"x17"-  
SCALE 1" = 40'



- LEGEND**
- FOUND BRASS CAP
  - SET 5/8" IRON PIN
  - CALCULATED POINT, NOT SET
  - PROPERTY BOUNDARY
  - RIGHT-OF-WAY LINE
  - LOT LINE
  - SECTION LINE
  - EASEMENT
  - CENTERLINE
  - 1** PROPOSED LOT NUMBERS
  - ADDRESSES
  - PRIVATE AREA
  - LIMITED COMMON AREA
  - COMMON AREA



| CURVE TABLE |        |        |             |                         |
|-------------|--------|--------|-------------|-------------------------|
| CURVE       | RADIUS | LENGTH | CHORD DIST. | DELTA                   |
| C1          | 12.00  | 18.77  | 16.91       | S 45°19'35" W 89°37'17" |
| C2          | 115.00 | 94.95  | 92.28       | N 65°49'52" W 47°18'24" |
| C3          | 171.14 | 85.96  | 85.06       | N 14°37'25" E 28°46'45" |
| C4          | 12.00  | 18.85  | 16.97       | N 44°46'13" W 90°00'00" |



BEGINNING AT A POINT ON THE EASTERLY LINE OF 400 EAST STREET LOCATED 500'30'42"E 1737.86 FEET ALONG THE QUARTER SECTION LINE AND S89°29'04"E 29.85 FEET FROM THE NORTH QUARTER CORNER OF SAID SECTION 1; AND RUNNING THENCE S89°29'04"E 666.49 FEET, THENCE SOUTHEASTERLY 94.95 FEET ALONG THE ARC OF A 115.00 FOOT RADIUS CURVE TO THE RIGHT THROUGH THE CENTRAL ANGLE OF 47°18'24", THE CHORD BEARS S65°49'52"E 92.28 FEET; THENCE S42°10'40"E 27.48 FEET; THENCE N47°49'42"E 67.30 FEET; THENCE ALONG THE FUTURE STREET RIGHT-OF-WAY LINES THE FOLLOWING NINE (9) COURSES TO WIT: (1) NORTHEASTERLY 85.97 FEET ALONG THE ARC OF A 171.00 FOOT RADIUS CURVE TO THE LEFT THROUGH THE CENTRAL ANGLE OF 28°48'16", THE CHORD BEARS N14°37'55"E 85.06 FEET, (2) N00°13'47"E 181.28 FEET, (3) ALONG THE ARC OF A NORTHWESTERLY 18.65 FEET ALONG THE ARC OF A 12.00 FOOT RADIUS CURVE TO THE LEFT THROUGH THE CENTRAL ANGLE OF 90°00'00", THE CHORD BEARS N44°46'13"W 16.97 FEET, (4) N89°46'13"W 432.01 FEET, (5) N89°51'46"W 376.98 FEET, (6) SOUTHWESTERLY 18.77 FEET ALONG THE ARC OF A 12.00 FOOT RADIUS CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 89°37'17", THE CHORD BEARS S45°19'35"W 16.91 FEET, (7) S00°30'56"W 139.43 FEET, (8) S06°47'35"W 54.87 FEET, (9) S00°30'56"W 53.50 FEET TO THE POINT OF BEGINNING. CONTAINING 5.10 ACRES.

**SURVEYOR'S CERTIFICATE**

I, DAVID F. HUNT DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 5243543 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF SAID TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS, AND EASEMENTS AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT AND THAT THIS IS TRUE AND CORRECT.

SURVEYOR \_\_\_\_\_ DATE \_\_\_\_\_

**BOUNDARY DESCRIPTION**  
SEE LEFT

**OWNER'S DEDICATION**  
KNOW ALL MEN BY THESE PRESENTS THAT WE, ALL OF THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.  
IN WITNESS WHEREOF WE HAVE HEREUNTO SET OUR HANDS THIS DAY OF \_\_\_\_\_, A.D. 2022.

OWNER: \_\_\_\_\_ OWNER: \_\_\_\_\_  
OWNER: \_\_\_\_\_ OWNER: \_\_\_\_\_

**ACKNOWLEDGMENT**  
STATE OF UTAH \_\_\_\_\_ COUNTY OF UTAH \_\_\_\_\_ S.S.  
ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 2022, PERSONALLY APPEARED BEFORE ME \_\_\_\_\_, WHOSE IDENTITY IS PERSONALLY KNOWN BY ME OR PROVEN BY SATISFACTORY EVIDENCE TO ME, AND WHO BY ME DULY SWORN/AFFIRMED, DID SAY THAT THEY ARE THE \_\_\_\_\_ OF \_\_\_\_\_ AND THAT SAID DOCUMENT WAS SIGNED BY THEM ON BEHALF OF SAID \_\_\_\_\_, AND ACKNOWLEDGED TO ME THAT SAID \_\_\_\_\_ EXECUTED THE SAME.

A NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

COMMISSION NUMBER / EXPIRES \_\_\_\_\_ NOTARY PUBLIC PRINTED NAME \_\_\_\_\_

**ACCEPTANCE BY LEGISLATIVE BODY**  
THE CITY COUNCIL OF SANTAQUIN CITY, COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ A.D. 2022.

APPROVED BY MAYOR \_\_\_\_\_  
APPROVED \_\_\_\_\_ ATTEST \_\_\_\_\_  
ENGINEER (SEE SEAL) \_\_\_\_\_ CLERK-RECORDER \_\_\_\_\_

**CORTLAND PARK**  
SANTAQUIN CITY, UTAH COUNTY, UTAH  
CONTAINING 9 BUILDINGS AND 5.10 ACRES  
LOCATED IN THE NORTHEAST CORNER OF SECTION 1, TOWNSHIP 10 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH.

SURVEYOR'S SEAL \_\_\_\_\_ NOTARY PUBLIC SEAL \_\_\_\_\_ CITY ENGINEER SEAL \_\_\_\_\_ CLERK-RECORDER SEAL \_\_\_\_\_

**DOMINION ENERGY**  
DOMINION APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. DOMINION MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT CONSTITUTE ABRIGATION OR WAIVER OF ANY OTHER EXISTING RIGHTS, OBLIGATIONS OR LIABILITIES PROVIDED BY LAW OR EQUITY. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL OR ACKNOWLEDGEMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH IN THE OWNERS DEDICATION AND THE NOTES AND DOES NOT CONSTITUTE A GUARANTEE OF PARTICULAR TERMS OF NATURAL GAS SERVICE. FOR FURTHER INFORMATION PLEASE CONTACT DOMINION'S RIGHT-OF-WAY DEPARTMENT AT 1-800-366-8532.

APPROVED \_\_\_\_\_  
DOMINION ENERGY

**CONVEYANCE OF COMMON AREAS TO ASSOCIATION**  
THE UNDERSIGNED OWNER IN RECORDING THIS PLAT, HAS DESIGNATED CERTAIN AREAS OF THE LAND AS PRIVATE DRIVEWAYS, STREETS, LIMITED COMMON AREAS AND OTHER COMMON AREAS INTENDED FOR THE USE BY MEMBERS OF SUMMIT TOWNHOMES HOMEOWNERS ASSOCIATION, THEIR GUESTS AND INVITEES. SUCH AREAS ARE TO BE CONVEYED TO THE APPROPRIATE PARTIES, INCLUDING THE CONVEYANCE OF COMMON AREAS TO SUMMIT TOWNHOMES HOMEOWNERS ASSOCIATION, BY DEED, TO BE RECORDED IN THE UTAH COUNTY RECORDERS OFFICE, FOR THE USE AND ENJOYMENT BY THE OWNERS OF LOTS OR DWELLINGS IN THE PLAT "A" SUMMIT TOWNHOMES PROJECT AS MORE FULLY DESCRIBED IN THE DECLARATION OF COVENANTS CONDITIONS AND RESTRICTIONS APPLICABLE TO THIS PROJECT AND RECORDED WITH THIS PLAT.

APPROVED \_\_\_\_\_  
DOMINION ENERGY

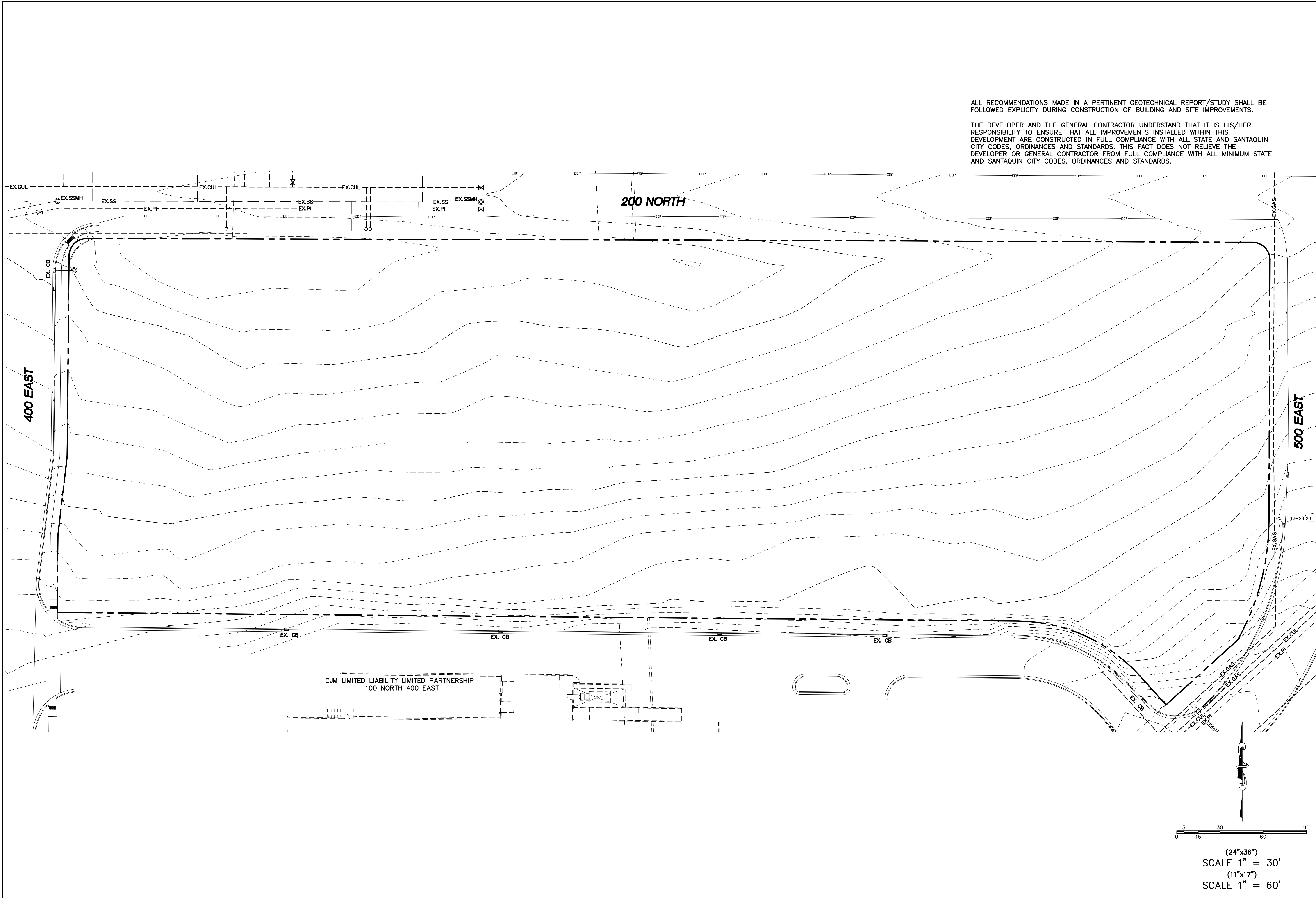
**NOTE OF DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS**  
THIS PROJECT, WITH ITS LOTS, DWELLINGS AND COMMON AREAS ARE SUBJECT TO CERTAIN COVENANTS, CONDITIONS AND RESTRICTIONS AS CONTAINED IN THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR PLAT "A" SUMMIT TOWNHOMES, WHICH ARE RECORDED IN THE OFFICES OF THE UTAH COUNTY RECORDER. SAID COVENANTS, CONDITIONS AND RESTRICTIONS ARE INTENDED TO RUN WITH THE LAND AND TO BE BINDING UPON ALL HEIRS, SUCCESSORS OR ASSIGNS OF THE DECLARANT IN ACCORDANCE WITH THE RECORDED DECLARATION.

**ROCKY MOUNTAIN POWER APPROVAL**  
APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 2022.  
ROCKY MOUNTAIN POWER REPRESENTATIVE \_\_\_\_\_

**CENTURYLINK APPROVAL**  
APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 2022.  
CENTURYLINK REPRESENTATIVE \_\_\_\_\_

**CENTRACOM APPROVAL**  
APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 2022.  
CENTRACOM REPRESENTATIVE \_\_\_\_\_

ENGINEER/SURVEYOR INFO:  
ATLAS ENGINEERING  
PHONE: 801-655-0566  
FAX: 801-655-0109  
946 E 800 N SUITE A  
SPANISH FORK, UT 84606



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SHEET NO.

5

EXISTING TOPOGRAPHY

SANTAQUIN, UTAH

CORTLAND PARK

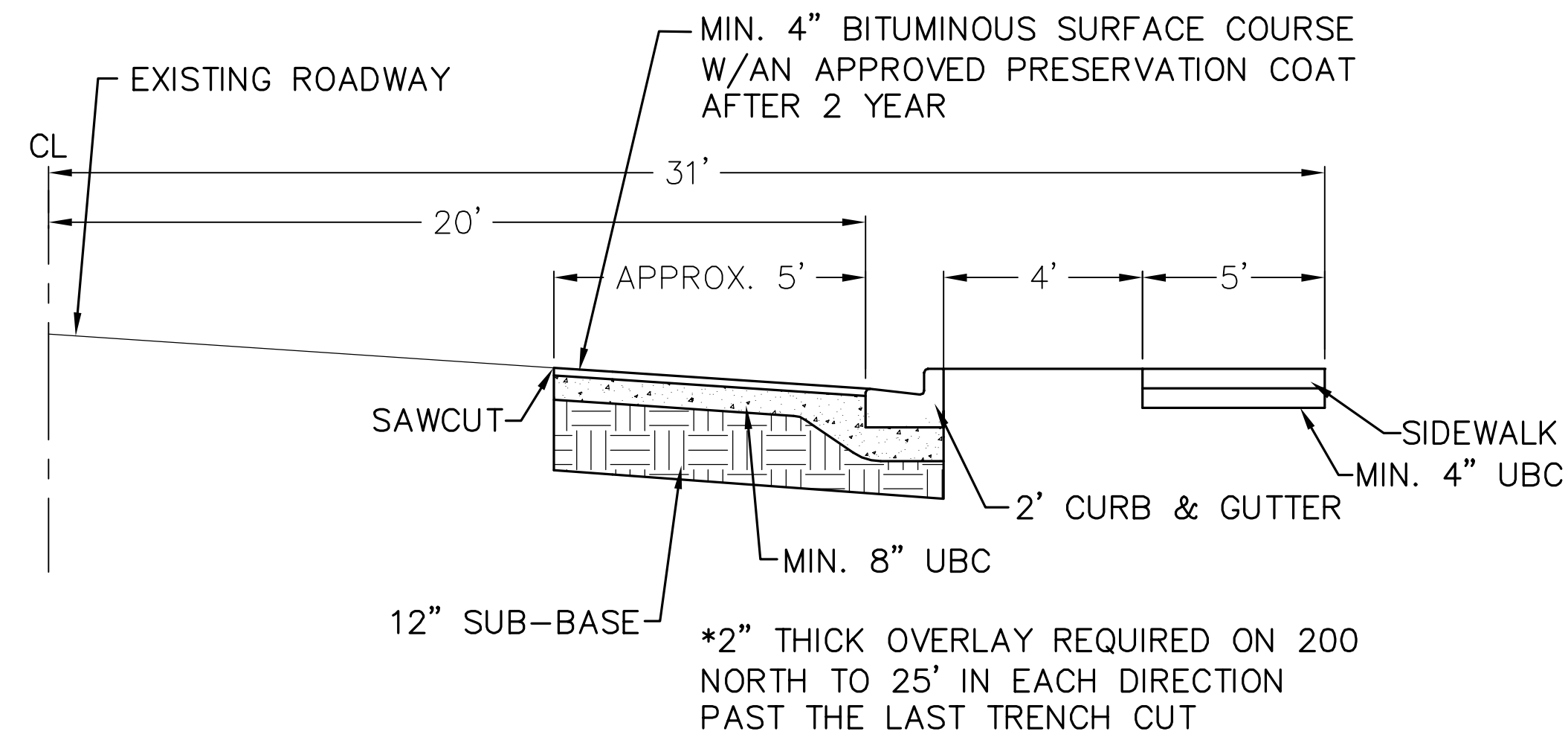
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 FAX: 801-655-0109  
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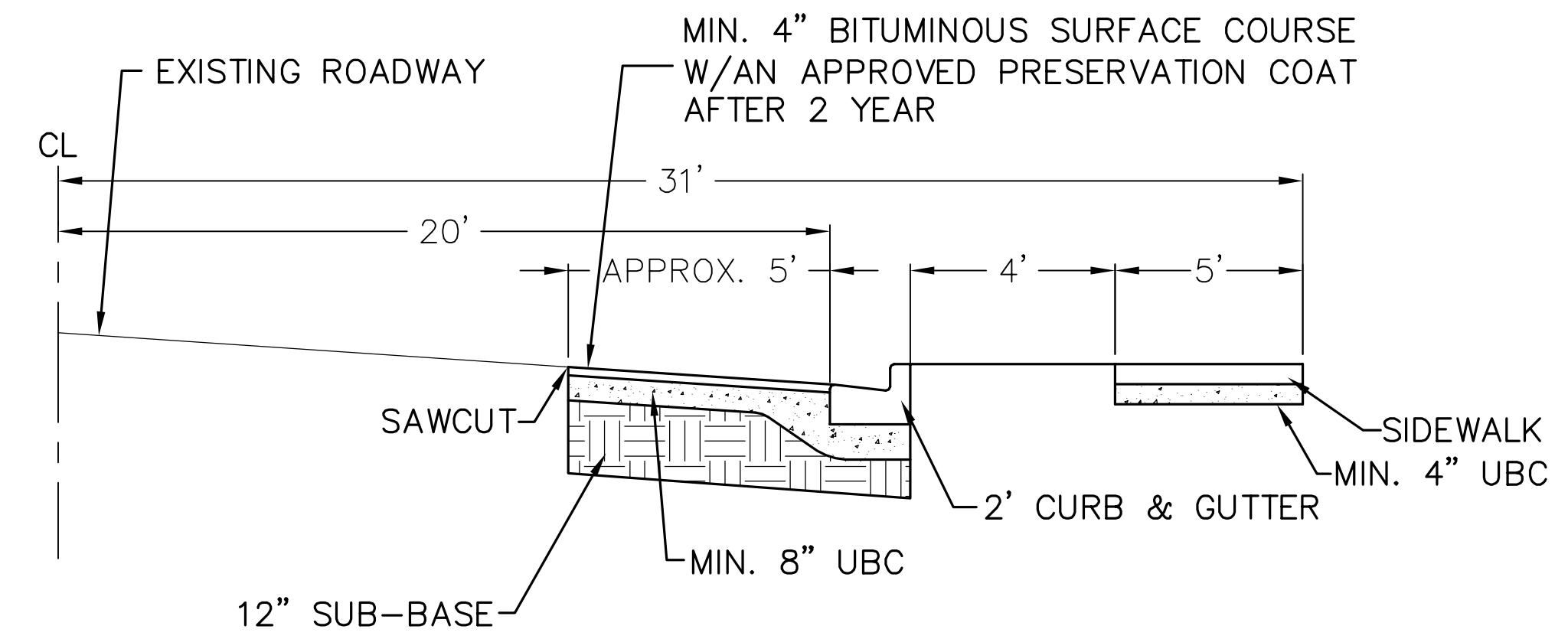
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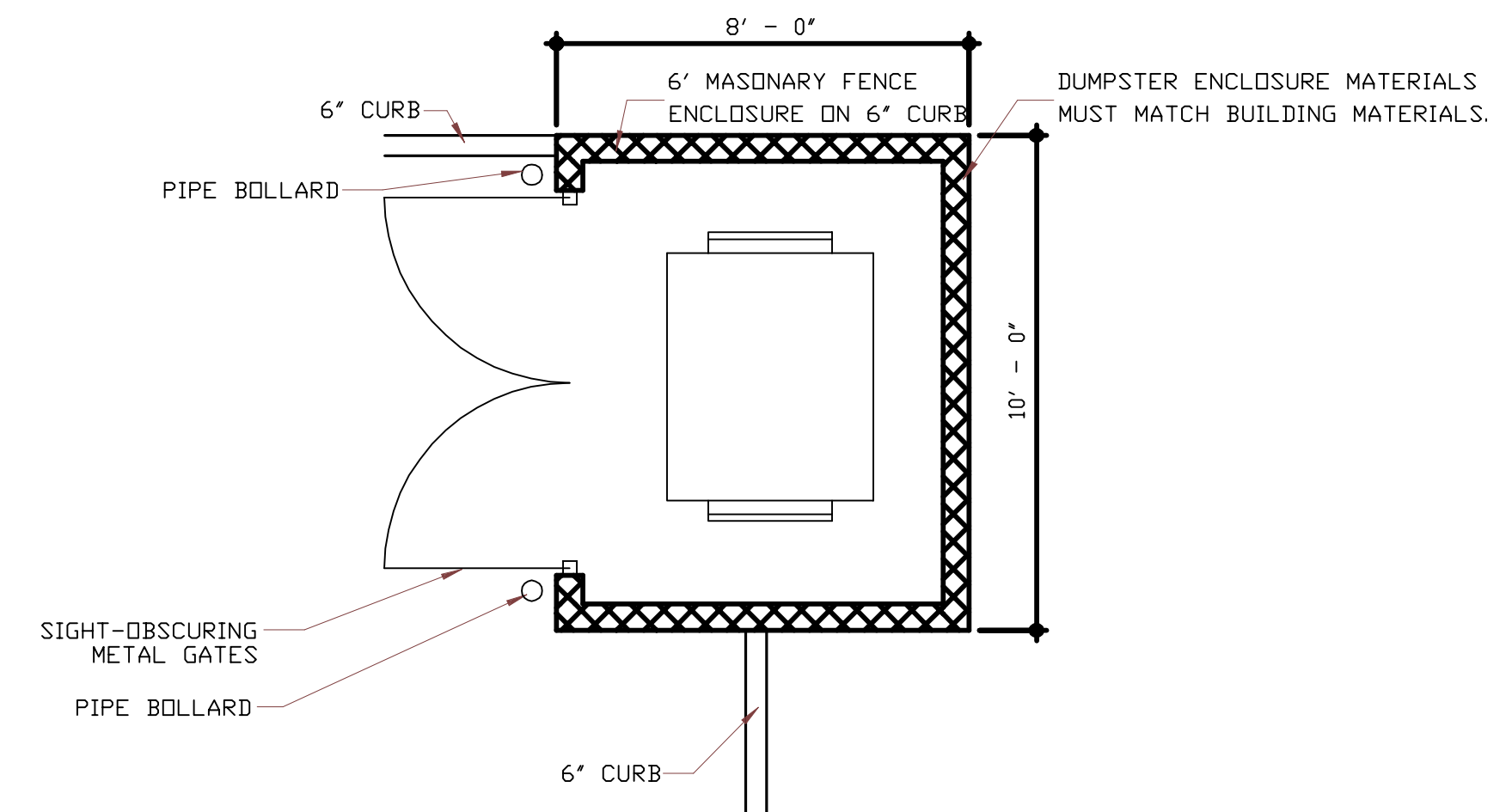
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**500 EAST DETAIL**  
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NOTES:

1. 100-YEAR WATER ELEVATION MAY NOT ENCR OACH WITHIN 6" VERTICALLY OF ANY HABITABLE STRUCTURE OR EXCEED THE EDGE OF RIGHT-OF-WAY.
2. 100-YEAR WATER ELEVATION MAY NOT RISE ABOVE AN ELEVATION OF 3" BELOW THE TOP OF ANY BERM OR EDGE OF RIGHT-OF-WAY IF ADJACENT EXISTING BUILDINGS ARE BELOW STREET LEVEL.
3. THE CROWN OF THE ROAD SHALL BE HELD TO EXISTING GRADE, UNLESS PERMITTED OTHERWISE BY THE CITY ENGINEER WHERE NEEDED TO ENABLE CONTAINMENT OF 100-YEAR STORM, TO MATCH GRADE AT ADJACENT PREVIOUSLY DEVELOPED PROPERTIES, OR TO MEET GRADE AT INTERSECTIONS



**DUMPSTER ENCLOSURE**

SCREENED ON THREE (3) SIDES WITH A MASONRY WALL HAVING A HEIGHT OF AT LEAST ONE (1') FOOT ABOVE RECEPTACLE. A STEEL SITE-OBSCURING GATE AT LEAST SIX (6') FEET HIGH IS REQUIRED. USE SAME ARCHITECTURAL ELEMENTS AND TYPES OF MATERIALS AND COLORS AS THE PRIMARY STRUCTURE.

SHEET NO.

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DETAIL SHEET

SANTAQUIN, UTAH

CORTLAND PARK

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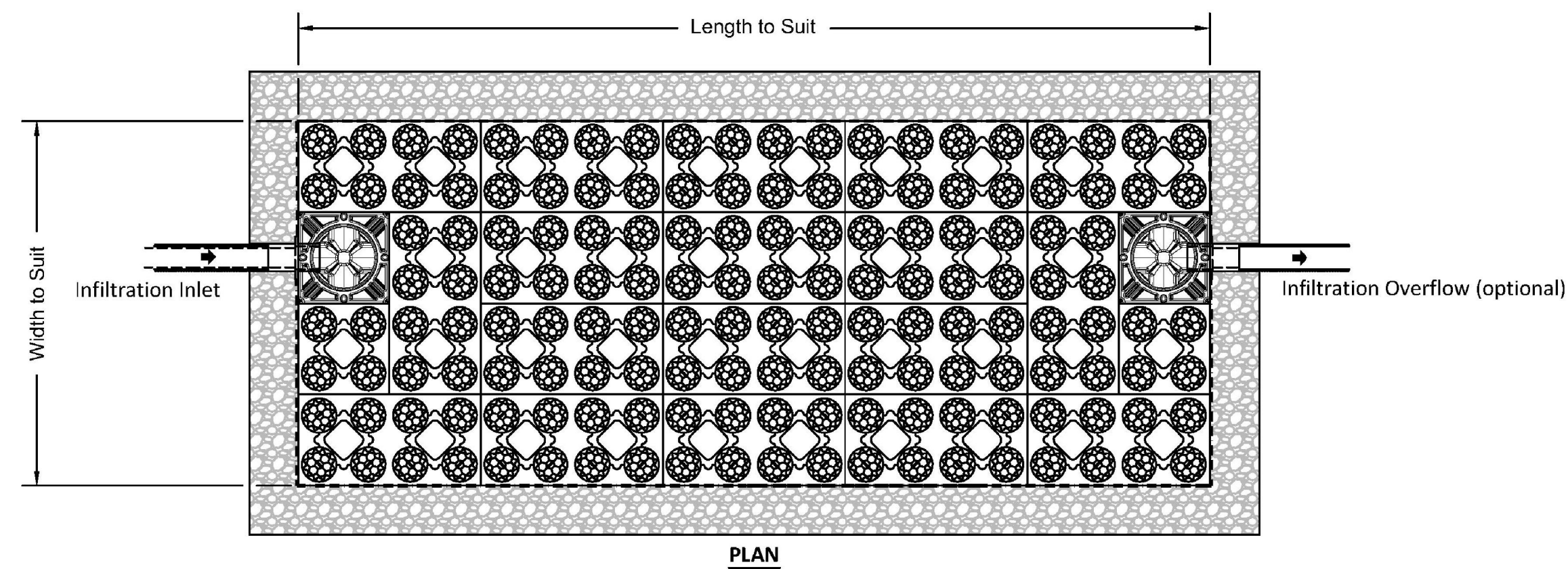
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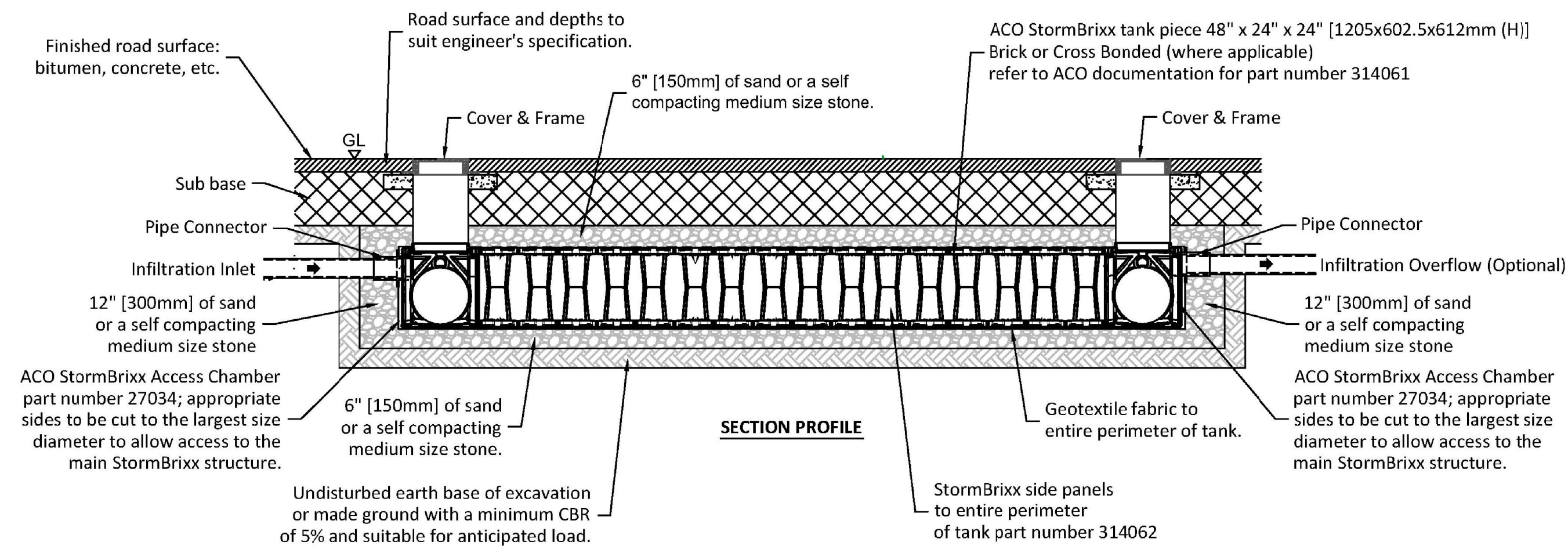
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| Minimum cover depths (1) over the top of ACO StormBrixx            |                                |
|--|--------------------------------|
| Location   | Minimum cover depth ft (m) (4) |
| Non-Trafficked areas i.e. Landscaping                              |                                |
| Car parks, vehicles up to 5512lbs gross mass                       | 1.97 (0.6)                     |
| Car parks, occasional vehicles greater than 5512lbs (3) gross mass | 2.46 (0.75)                    |
| Occasional HGV traffic up to 97,003lbs GVW (HA loading)            | Please consult with ACO        |

- (1) Assumes 27 degree load distribution through fill material and overlaying surface asphalt or block paving
- (2) Minimum cover depth to avoid accidental damage from gardening/landscaping work
- (3) Occasional Trafficking by refuse collection or similar vehicles (typically one per week)
- (4) Please check minimum frost cover depths for geographical location



This drawing is for guidance purposes only. This is to be read in conjunction with other ACO drawings and is subject to all ACO Polymer Products, Inc. guidance, liabilities and manufacturers warranties. For further information please contact our technical department, visit the StormBrixx website at <http://www.acostormbrixx.us/>, or email us at [info@acousa.com](mailto:info@acousa.com)

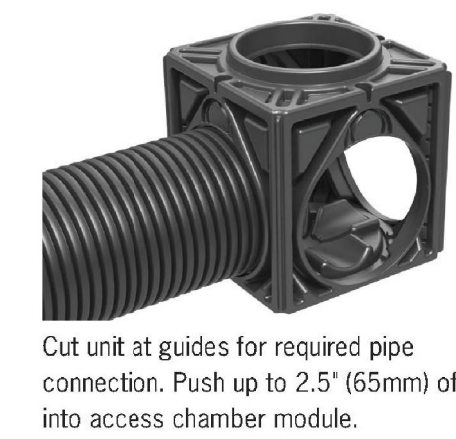
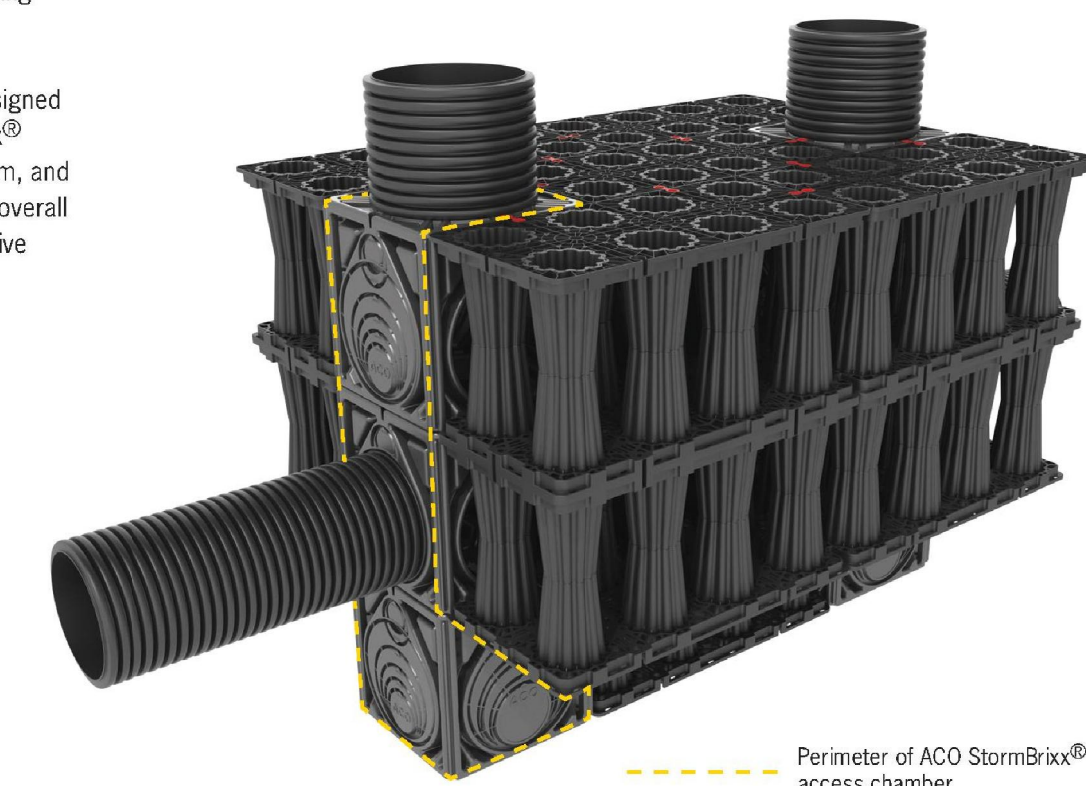
**ACO StormBrixx® Access Chamber**

The access chamber is designed to provide complete 3D access to enable inspection of all levels and areas of the system by either tracked or push rod CCTV inspection equipment. Where required, ACO StormBrixx® systems can be jetted using standard equipment.

When the ACO StormBrixx® access chamber has been configured to create a low flow drain down channel or a silt trap, the unit allows for the removal of silt and debris.

**Cover and frame**  
18" diameter (450mm) solid ductile iron cover and frame is available to complete the StormBrixx® access chamber installation. Cover is rated to 40 ton loads.

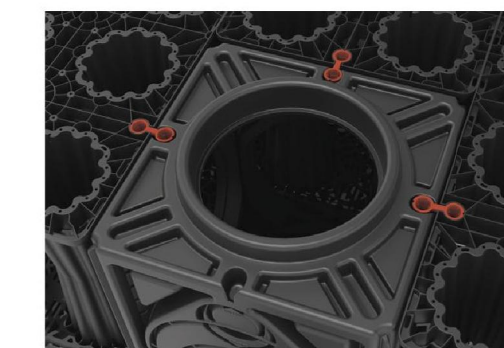
The modular stackable chamber is designed to be incorporated into any StormBrixx® detention/retention or infiltration system, and forms an integral part of the system's overall volume, removing the need for expensive upstream manholes.



Cut unit at guides for required pipe connection. Push up to 2.5" (65mm) of pipe into access chamber module.



If using more than one access chamber module in a stack, it will be necessary to remove base from all modules except bottom base unit. Cut along the recessed cutting line provided and remove base.



Layer connectors should be incorporated before the next module is added to the access chamber stack.



Once the main access chamber has been constructed it will be necessary to add a 18" (450mm) ID raising piece cut to length and placed over the top of the access chamber unit. Once the bases of the upper module(s) have been removed, simply stack units on top of each other ensuring that each module is clipped to the main structure using the StormBrixx® layer connectors.



[www.ACOStormBrixx.us](http://www.ACOStormBrixx.us)

SHEET NO.

7

DETAIL SHEET

SANTAQUIN, UTAH

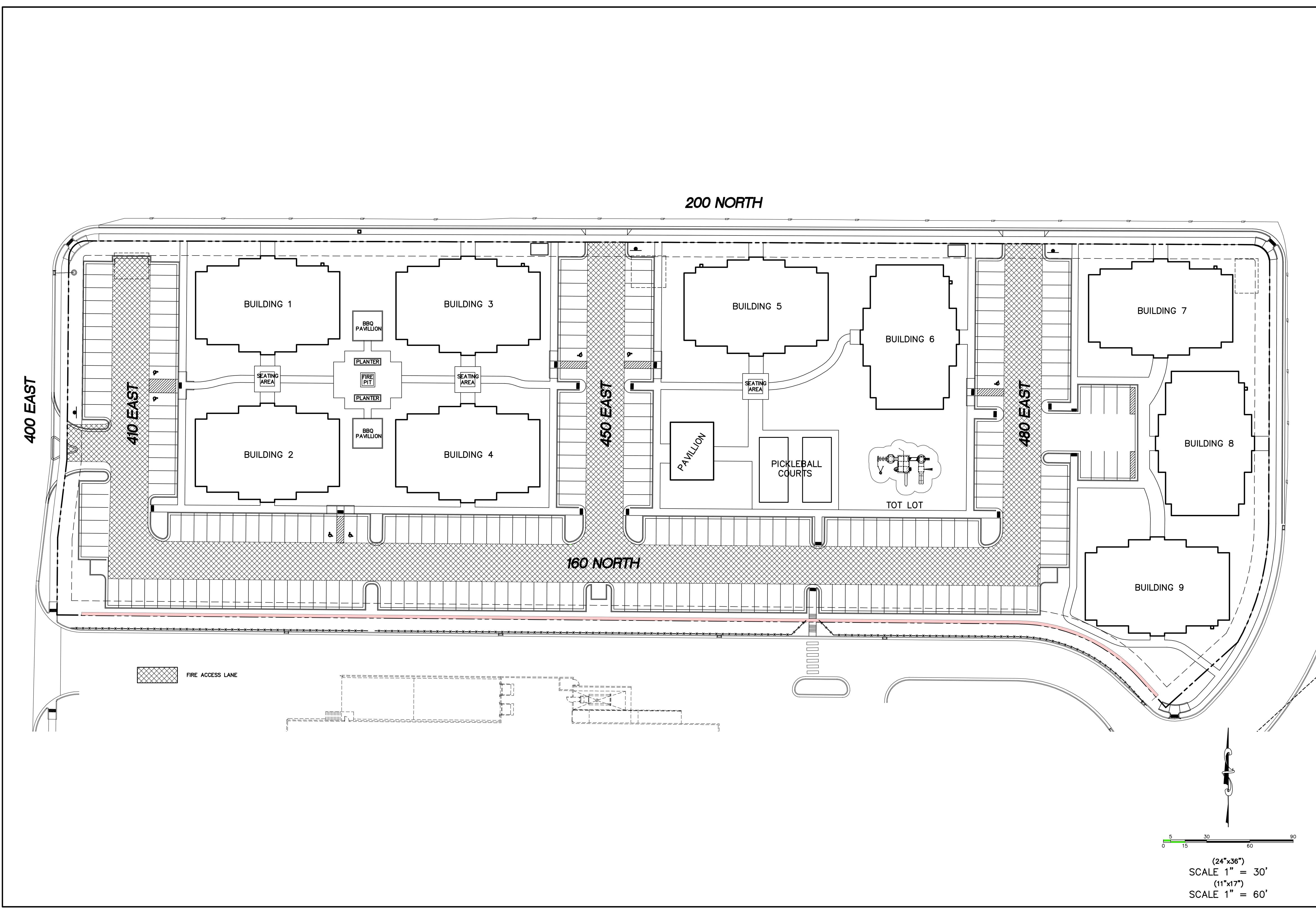
CORTLAND PARK



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SPANISH FORK, UT 84660

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|----------------|--|--|------------------------|---|---|--|
| SBD-1L-RA      | <b>INFILTRATION - STORMBRIXX SINGLE LAYER WITH ACCESS UNITS AND OVERFLOW (HARDSCAPE)</b> |  |                        | <b>ACO Polymer Products, Inc.</b>   |   |  |
| DATE: 11/24/15 | INSTALLATION DRAWING - ACO STORMBRIXX  |  |                        | 825 W. Beechcraft St<br>Casa Grande, AZ 85122<br>Tel: 520-421-9888<br>Fax: 520-421-9899 | 9470 Pinecone Drive<br>Mentor, OH 44060<br>Tel: 440-639-7230<br>Fax: 440-639-7235 | 4211 Pleasant Rd.<br>Fort Mill, SC 29708<br>Tel: 440-639-7230<br>Fax: 803-802-1063 |
| ISSUE: A       | Arizona Tel: 888-490-9552  | e-mail: <a href="mailto:info@acousa.com">info@acousa.com</a> | Ohio Tel: 800-543-4764 | <a href="http://www.acousa.com">www.acousa.com</a>                                      |   | South Carolina Tel: 800-543-4764   |

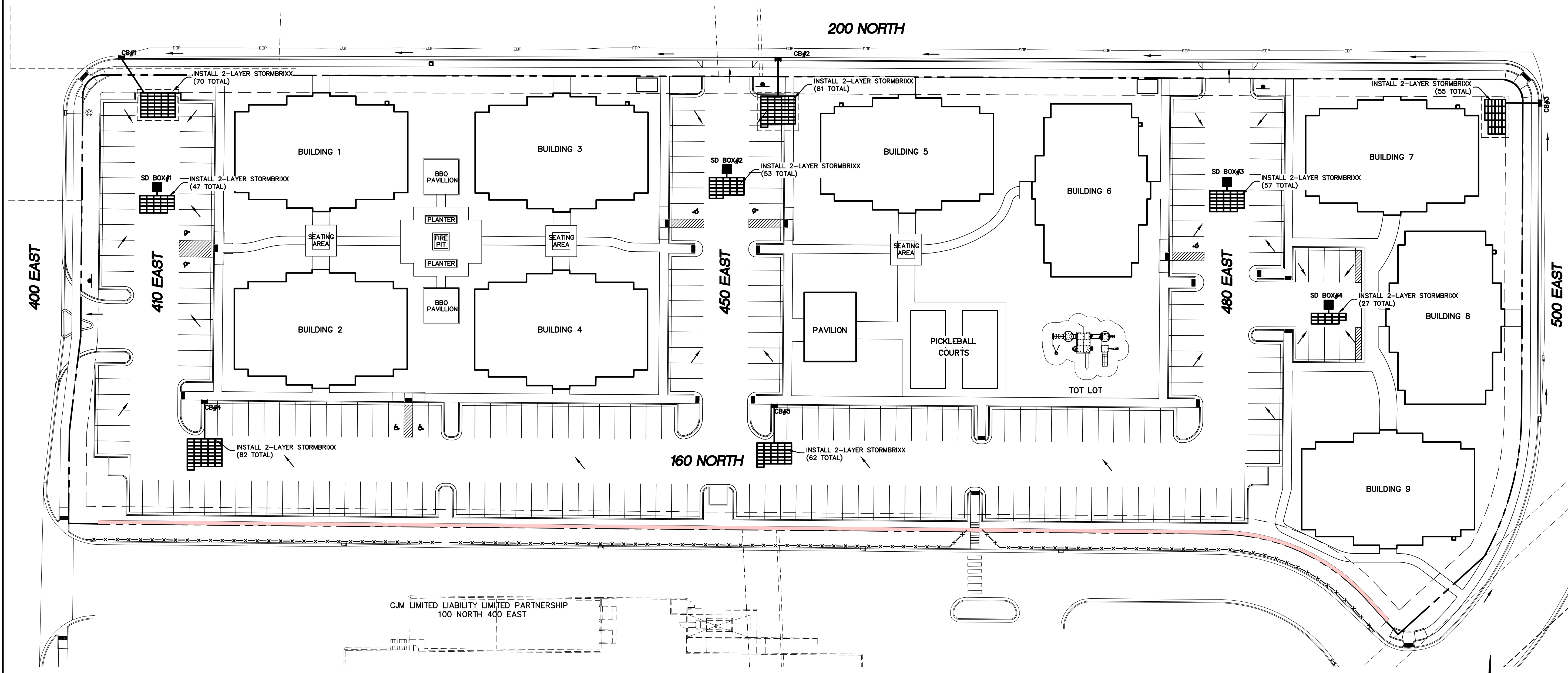
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| <p><b>CORTLAND PARK</b></p> <p><b>ATLAS ENGINEERING L.L.C.</b></p> <p>PHONE: 801-655-0566<br/>         FAX: 801-655-0109<br/>         946 E. 800 N. SUITE A<br/>         SPANISH FORK, UT 84660</p>   | <p><b>FIRE ACCESS/<br/>OPEN SPACE PLAN</b></p> <p><b>SHEET NO. 8</b></p> <p><b>SANTAQUIN, UTAH</b></p> |      |    |    |  |  |    |  |  |    |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
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CJM LIMITED LIABILITY LIMITED PARTNERSHIP  
100 NORTH 400 EAST

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TBC PLAN

SANTAQUIN, UTAH

CORTLAND PARK

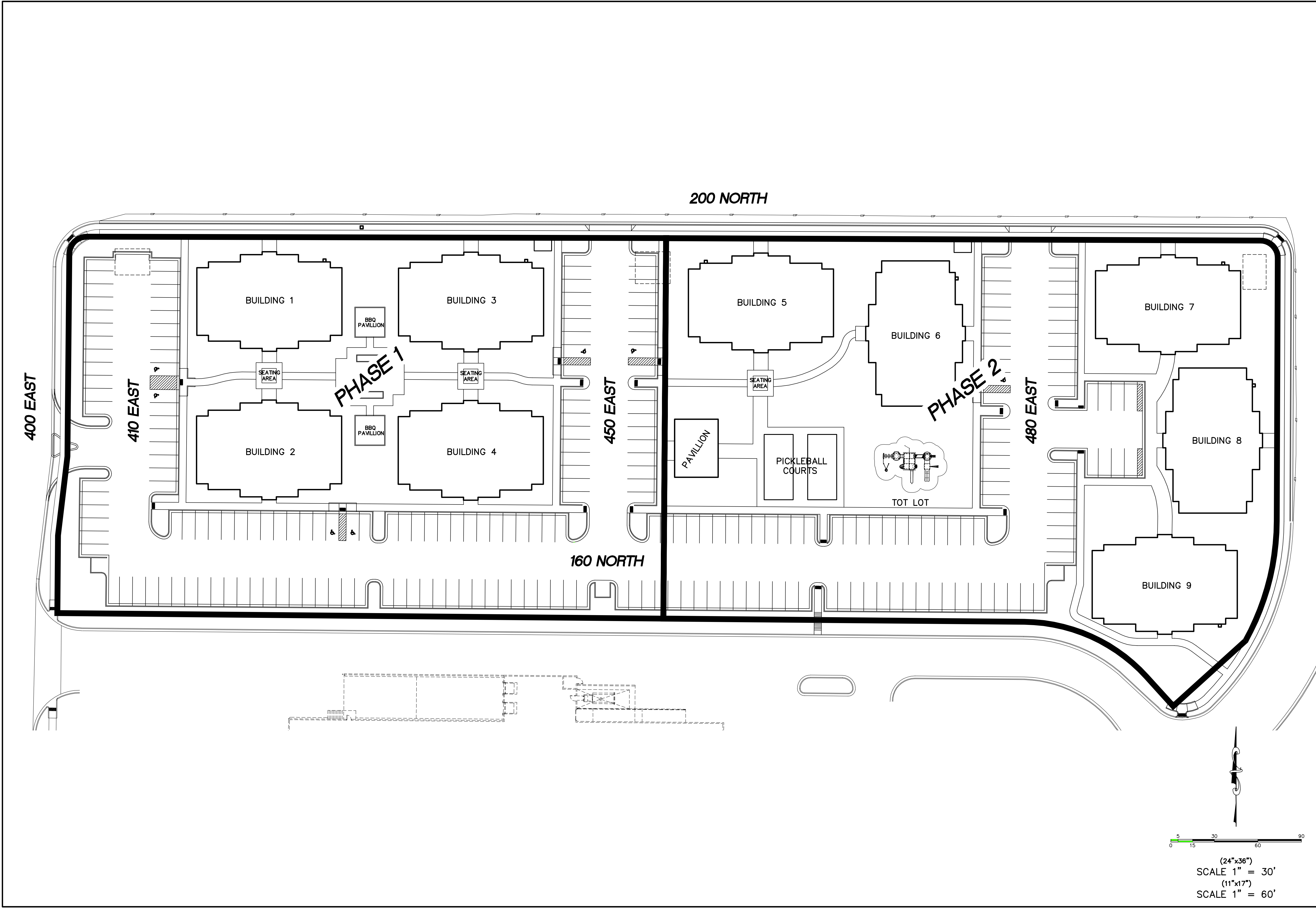
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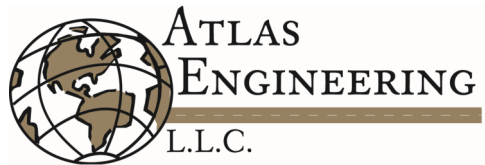
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PRELIMINARY STORM DRAINAGE CALCULATIONS  
For  
**Orchard Vista**  
A Residential Subdivision



Written by: Gavin West  
Reviewed by: Andrew J. DelPivo, P.E.

May 2022

# Orchard Vista Subdivision Drainage Plan

## **Introduction:**

Orchard Vista is a 5.10-acre residential subdivision located at 400 East and 200 North. It will create 9 building units, parking area, a pavilion, 2 pickleball courts, and a tot lot.

The storm water containment was evaluated and designed using Stormbrixx chambers. Stormwater will flow along to various low points on the site where it will be collected by an inlet box and flow into underground Stormbrixx chambers.

## **Drainage Plan:**

5.80 acres was used in the storm drain calculations because that is the area that will flow into the storm drain system. Storm drain systems have been designed to contain a 100-year event. Retention systems for public right-of-way and private area have been kept separate. Public streets within the development will flow down curb and gutter until it reaches a catch basin. The private area stormwater will flow to various low points where it will be collected by inlet boxes. All catch basins and inlet boxes will flow into underground Stormbrixx chambers where stormwater will percolate back into the ground.

The Rational Method was used to calculate runoff from the developed site. A weighted "C" value of 0.74 was calculated that accounts for landscaped and impervious areas. The percolation rate of 5 min/inch was used per recommendation of Geotechnical Report No. 2588-001-18.

The project was divided into 9 basins. Each basin was designed to contain a 100-year event and allowing an outflow equal to the percolation rate. Storage amounts were determined by net storage volume of SD Stormbrixx (22.53 cf) and the amount of storage provided by drain rock surrounding the Stormbrixx, using a 0.40 void ratio. Stormbrixx will be placed 2 layers deep as groundwater was not encountered in geotechnical investigations.

Basin 1 collects stormwater from 0.73 acres. The total required storage is 1,848 ft<sup>3</sup>. 69 Stormbrixx will provide 1,555 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 300 ft<sup>3</sup> of storage.

Basin 2 collects stormwater from 0.61 acres. The total required storage is 1,475 ft<sup>3</sup>. 55 Stormbrixx will provide 1,239 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 250 ft<sup>3</sup> of storage.

Basin 3 collects stormwater from 0.54 acres. The total required storage is 1,274 ft<sup>3</sup>. 47 Stormbrixx will provide 1,059 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 225 ft<sup>3</sup> of storage.

Basin 4 collects stormwater from 0.85 acres. The total required storage is 2,180 ft<sup>3</sup>. 82 Stormbrixx will provide 1,847 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 340 ft<sup>3</sup> of storage.

Basin 5 collects stormwater from 0.59 acres. The total required storage is 1,425 ft<sup>3</sup>. 53 Stormbrixx will provide 1,194 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 240 ft<sup>3</sup> of storage.

Basin 6 collects stormwater from 0.67 acres. The total required storage is 1,669 ft<sup>3</sup>. 62 Stormbrixx will provide 1,397 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 275 ft<sup>3</sup> of storage.

Basin 7 collects stormwater from 0.74 acres. The total required storage is 1,535 ft<sup>3</sup>. 57 Stormbrixx will provide 1,397 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 260 ft<sup>3</sup> of storage.

Basin 8 collects stormwater from 0.35 acres. The total required storage is 754 ft<sup>3</sup>. 27 Stormbrixx will provide 608 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 160 ft<sup>3</sup> of storage.

Basin 9 collects stormwater from 0.85 acres. The total required storage is 2,178 ft<sup>3</sup>. 82 Stormbrixx will provide 1,847 ft<sup>3</sup> of storage. Drain rock surrounding the Stormbrixx will provide 340 ft<sup>3</sup> of storage.

**Summary:**

The storm drain retention system meets or exceeds all Santaquin City storm drain requirements. Values given for storage requirements are conservatively derived from calculations included in the appendix. All buildings will have finished floor elevations that provide for positive drainage away from buildings. In the event that any of the drainage structures should become damaged or clogged with debris, the water will travel down the public roadways along 400 East and 200 North until it enters an existing storm drain system.

The locations of the proposed layout of the drainage system and calculations to determine discharge rates are shown in the appendix and associated plans.

# Appendix



**WEIGHTED "C" VALUE**

**Orchard Vista**

|                       |                     |                           |                           |                         |
|-----------------------|---------------------|---------------------------|---------------------------|-------------------------|
| <b>Total Acreage:</b> | <b>5.80</b>         |                           |                           |                         |
| <b>Description</b>    | <b>Area (Acres)</b> | <b>Runoff Coefficient</b> | <b>Percentage of Area</b> | <b>Weighted C Value</b> |
| Pervious Area         | 1.42                | 0.25                      | 24.48                     | 6.12                    |
| Impervious Area       | 4.38                | 0.90                      | 75.52                     | 67.97                   |
|                       |                     |                           | <b>Total</b>              | <b>74</b>               |

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 1

**Retention Volume Determination**

---

Basin Size, acres (A): 0.73  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 875 sf  
 outflow to perc 0.243056 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 817                    | 73                    | 744                     | 0.02                      |
| 10                    | 3.840                      | 1245                   | 146                   | 1099                    | 0.03                      |
| 15                    | 3.320                      | 1614                   | 219                   | 1395                    | 0.03                      |
| 30                    | 2.240                      | 2178                   | 438                   | 1741                    | 0.04                      |
| <b>60</b>             | <b>1.400</b>               | <b>2723</b>            | <b>875</b>            | <b>1848</b>             | <b>0.04</b>               |
| 120                   | 0.780                      | 3034                   | 1750                  | 1284                    | 0.03                      |
| 180                   | 0.560                      | 3267                   | 2625                  | 642                     | 0.01                      |
| 360                   | 0.320                      | 3734                   | 5250                  | -1516                   | -0.03                     |
| 720                   | 0.190                      | 4434                   | 10500                 | -6066                   | -0.14                     |
| 1440                  | 0.110                      | 5134                   | 21000                 | -15866                  | -0.36                     |

69 Stormbrixx provides 1,555 cf of storage  
 Drain rock provides 300 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 2

### Retention Volume Determination

Basin Size, acres (A): 0.61  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 800 sf  
 outflow to perc 0.222222 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 683                    | 67                    | 616                     | 0.01                      |
| 10                    | 3.840                      | 1040                   | 133                   | 907                     | 0.02                      |
| 15                    | 3.320                      | 1349                   | 200                   | 1149                    | 0.03                      |
| 30                    | 2.240                      | 1820                   | 400                   | 1420                    | 0.03                      |
| <b>60</b>             | <b>1.400</b>               | <b>2275</b>            | <b>800</b>            | <b>1475</b>             | <b>0.03</b>               |
| 120                   | 0.780                      | 2535                   | 1600                  | 935                     | 0.02                      |
| 180                   | 0.560                      | 2730                   | 2400                  | 330                     | 0.01                      |
| 360                   | 0.320                      | 3120                   | 4800                  | -1680                   | -0.04                     |
| 720                   | 0.190                      | 3705                   | 9600                  | -5895                   | -0.14                     |
| 1440                  | 0.110                      | 4290                   | 19200                 | -14910                  | -0.34                     |

55 Stormbrixx provides 1,239 cf of storage

Drain rock provides 250 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 3

**Retention Volume Determination**

---

Basin Size, acres (A): 0.54  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 740 sf  
 outflow to perc 0.205556 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 604                    | 62                    | 543                     | 0.01                      |
| 10                    | 3.840                      | 921                    | 123                   | 797                     | 0.02                      |
| 15                    | 3.320                      | 1194                   | 185                   | 1009                    | 0.02                      |
| 30                    | 2.240                      | 1611                   | 370                   | 1241                    | 0.03                      |
| <b>60</b>             | <b>1.400</b>               | <b>2014</b>            | <b>740</b>            | <b>1274</b>             | <b>0.03</b>               |
| 120                   | 0.780                      | 2244                   | 1480                  | 764                     | 0.02                      |
| 180                   | 0.560                      | 2417                   | 2220                  | 197                     | 0.00                      |
| 360                   | 0.320                      | 2762                   | 4440                  | -1678                   | -0.04                     |
| 720                   | 0.190                      | 3280                   | 8880                  | -5600                   | -0.13                     |
| 1440                  | 0.110                      | 3798                   | 17760                 | -13962                  | -0.32                     |

47 Stormbrixx provides 1,059 cf of storage  
 Drain rock provides 225 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 4

### Retention Volume Determination

Basin Size, acres (A): 0.85  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 990 sf  
 outflow to perc 0.275 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 951                    | 83                    | 869                     | 0.02                      |
| 10                    | 3.840                      | 1449                   | 165                   | 1284                    | 0.03                      |
| 15                    | 3.320                      | 1879                   | 248                   | 1632                    | 0.04                      |
| 30                    | 2.240                      | 2536                   | 495                   | 2041                    | 0.05                      |
| <b>60</b>             | <b>1.400</b>               | <b>3170</b>            | <b>990</b>            | <b>2180</b>             | <b>0.05</b>               |
| 120                   | 0.780                      | 3532                   | 1980                  | 1552                    | 0.04                      |
| 180                   | 0.560                      | 3804                   | 2970                  | 834                     | 0.02                      |
| 360                   | 0.320                      | 4348                   | 5940                  | -1592                   | -0.04                     |
| 720                   | 0.190                      | 5163                   | 11880                 | -6717                   | -0.15                     |
| 1440                  | 0.110                      | 5978                   | 23760                 | -17782                  | -0.41                     |

82 Stormbrixx provides 1,847 cf of storage

Drain rock provides 340 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 5

**Retention Volume Determination**

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Basin Size, acres (A): 0.59  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 775 sf  
 outflow to perc 0.215278 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 660                    | 65                    | 596                     | 0.01                      |
| 10                    | 3.840                      | 1006                   | 129                   | 877                     | 0.02                      |
| 15                    | 3.320                      | 1305                   | 194                   | 1111                    | 0.03                      |
| 30                    | 2.240                      | 1760                   | 388                   | 1373                    | 0.03                      |
| <b>60</b>             | <b>1.400</b>               | <b>2200</b>            | <b>775</b>            | <b>1425</b>             | <b>0.03</b>               |
| 120                   | 0.780                      | 2452                   | 1550                  | 902                     | 0.02                      |
| 180                   | 0.560                      | 2641                   | 2325                  | 316                     | 0.01                      |
| 360                   | 0.320                      | 3018                   | 4650                  | -1632                   | -0.04                     |
| 720                   | 0.190                      | 3584                   | 9300                  | -5716                   | -0.13                     |
| 1440                  | 0.110                      | 4149                   | 18600                 | -14451                  | -0.33                     |

53 Stormbrixx provides 1,194 cf of storage  
 Drain rock provides 240 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 6

### Retention Volume Determination

Basin Size, acres (A): 0.67  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 830 sf  
 outflow to perc 0.230556 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 750                    | 69                    | 680                     | 0.02                      |
| 10                    | 3.840                      | 1142                   | 138                   | 1004                    | 0.02                      |
| 15                    | 3.320                      | 1481                   | 208                   | 1274                    | 0.03                      |
| 30                    | 2.240                      | 1999                   | 415                   | 1584                    | 0.04                      |
| <b>60</b>             | <b>1.400</b>               | <b>2499</b>            | <b>830</b>            | <b>1669</b>             | <b>0.04</b>               |
| 120                   | 0.780                      | 2784                   | 1660                  | 1124                    | 0.03                      |
| 180                   | 0.560                      | 2999                   | 2490                  | 509                     | 0.01                      |
| 360                   | 0.320                      | 3427                   | 4980                  | -1553                   | -0.04                     |
| 720                   | 0.190                      | 4070                   | 9960                  | -5890                   | -0.14                     |
| 1440                  | 0.110                      | 4712                   | 19920                 | -15208                  | -0.35                     |

62 Stormbrixx provides 1,397 cf of storage

Drain rock provides 275 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 7

### Retention Volume Determination

Basin Size, acres (A): 0.63  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 815 sf  
 outflow to perc 0.226389 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 705                    | 68                    | 637                     | 0.01                      |
| 10                    | 3.840                      | 1074                   | 136                   | 938                     | 0.02                      |
| 15                    | 3.320                      | 1393                   | 204                   | 1189                    | 0.03                      |
| 30                    | 2.240                      | 1880                   | 408                   | 1472                    | 0.03                      |
| <b>60</b>             | <b>1.400</b>               | <b>2350</b>            | <b>815</b>            | <b>1535</b>             | <b>0.04</b>               |
| 120                   | 0.780                      | 2618                   | 1630                  | 988                     | 0.02                      |
| 180                   | 0.560                      | 2820                   | 2445                  | 375                     | 0.01                      |
| 360                   | 0.320                      | 3222                   | 4890                  | -1668                   | -0.04                     |
| 720                   | 0.190                      | 3827                   | 9780                  | -5953                   | -0.14                     |
| 1440                  | 0.110                      | 4431                   | 19560                 | -15129                  | -0.35                     |

57 Stormbrixx provides 1,397 cf of storage

Drain rock provides 260 cf of storage



## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 8

### Retention Volume Determination

Basin Size, acres (A): 0.35  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 580 sf  
 outflow to perc 0.161111 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 392                    | 48                    | 343                     | 0.01                      |
| 10                    | 3.840                      | 597                    | 97                    | 500                     | 0.01                      |
| 15                    | 3.320                      | 774                    | 145                   | 629                     | 0.01                      |
| <b>30</b>             | <b>2.240</b>               | <b>1044</b>            | <b>290</b>            | <b>754</b>              | <b>0.02</b>               |
| 60                    | 1.400                      | 1305                   | 580                   | 725                     | 0.02                      |
| 120                   | 0.780                      | 1455                   | 1160                  | 295                     | 0.01                      |
| 180                   | 0.560                      | 1566                   | 1740                  | -174                    | 0.00                      |
| 360                   | 0.320                      | 1790                   | 3480                  | -1690                   | -0.04                     |
| 720                   | 0.190                      | 2126                   | 6960                  | -4834                   | -0.11                     |
| 1440                  | 0.110                      | 2462                   | 13920                 | -11458                  | -0.26                     |

27 Stormbrixx provides 608 cf of storage

Drain rock provides 160 cf of storage

## RETENTION BASIN SIZE

PROJECT TITLE: **Orchard Vista**

BASIN: 9

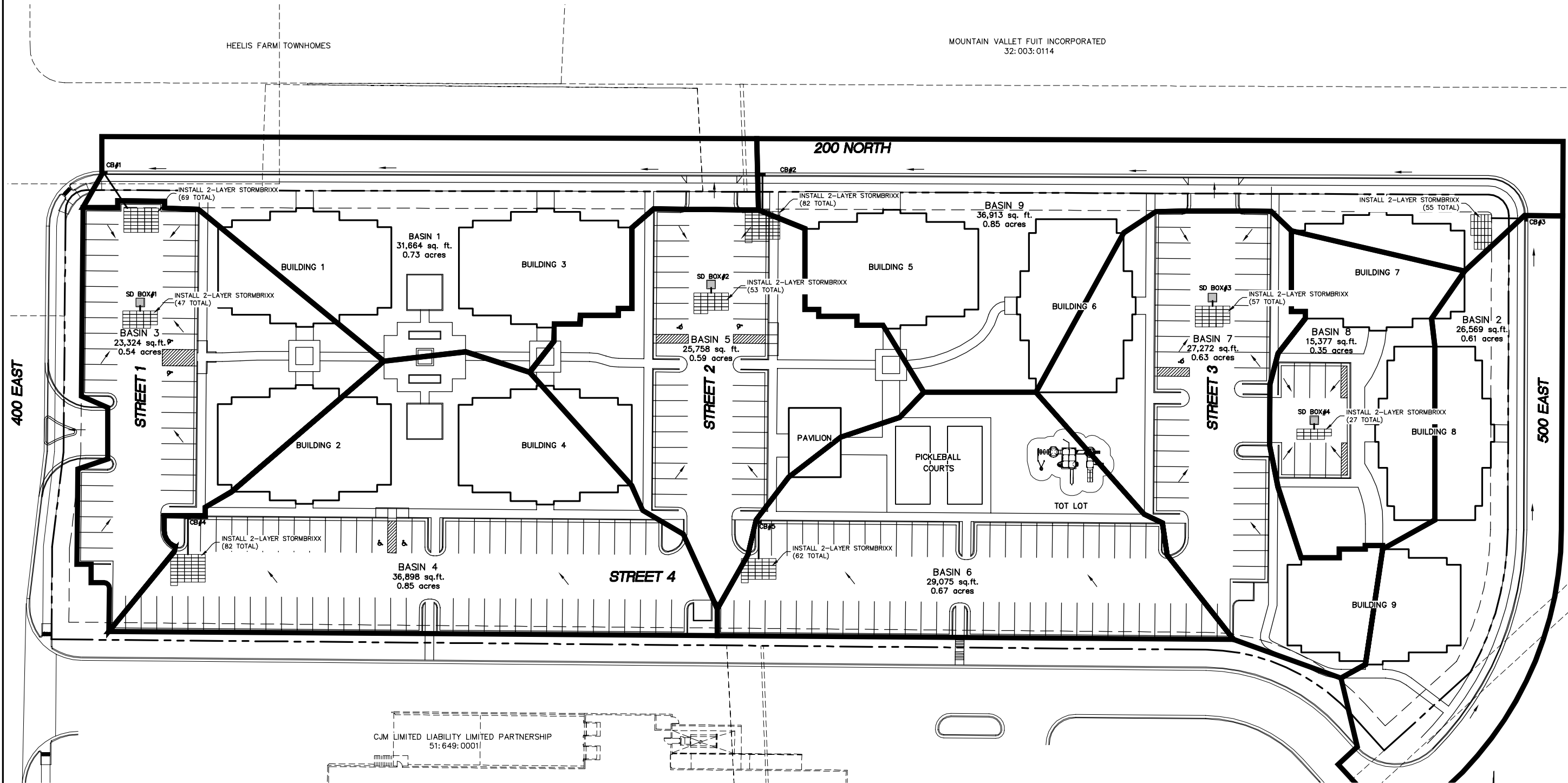
### Retention Volume Determination

Basin Size, acres (A): 0.85  
 Runoff Coefficient (C): 0.74  
 Design Frequency: 100  
 perc rate 5 min/in  
 Area for perc 992 sf  
 outflow to perc 0.275556 cfs

| Storm Duration (min.) | Rainfall intensity (in/hr) | Runoff volume (cu.ft.) | perc outflow (cu.ft.) | Storage volume (cu.ft.) | Storage volume (acre ft.) |
|-----------------------|----------------------------|------------------------|-----------------------|-------------------------|---------------------------|
| (T)                   | (I)                        | CIAT                   | QT                    | CIAT-QT                 |                           |
| 5                     | 5.040                      | 951                    | 83                    | 868                     | 0.02                      |
| 10                    | 3.840                      | 1449                   | 165                   | 1284                    | 0.03                      |
| 15                    | 3.320                      | 1879                   | 248                   | 1631                    | 0.04                      |
| 30                    | 2.240                      | 2536                   | 496                   | 2040                    | 0.05                      |
| <b>60</b>             | <b>1.400</b>               | <b>3170</b>            | <b>992</b>            | <b>2178</b>             | <b>0.05</b>               |
| 120                   | 0.780                      | 3532                   | 1984                  | 1548                    | 0.04                      |
| 180                   | 0.560                      | 3804                   | 2976                  | 828                     | 0.02                      |
| 360                   | 0.320                      | 4348                   | 5952                  | -1604                   | -0.04                     |
| 720                   | 0.190                      | 5163                   | 11904                 | -6741                   | -0.15                     |
| 1440                  | 0.110                      | 5978                   | 23808                 | -17830                  | -0.41                     |

82 Stormbrixx provides 1,847 cf of storage

Drain rock provides 340 cf of storage



400 EAST

500 EAST

200 NORTH

HEELIS FARM TOWNHOMES

MOUNTAIN VALLET FUIT INCORPORATED  
32:003:0114

CJM LIMITED LIABILITY LIMITED PARTNERSHIP  
51:649:0001



(24"x36")  
SCALE 1" = 30'  
(11"x17")  
SCALE 1" = 60'

SHEET NO.  
**1**  
Item 2.

STORM DRAIN BASINS  
SANTAQUIN, UTAH

ORCHARD VISTA  
ATLAS  
ENGINEERING  
L.L.C.  
PHONE: 801-655-0566  
FAX: 801-655-0109  
946 E. 800 N. SUITE A  
SPANISH FORK, UT 84660



| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
| 12  |      |    |           |
| 11  |      |    |           |
| 10  |      |    |           |
| 9   |      |    |           |
| 8   |      |    |           |
| 7   |      |    |           |
| 6   |      |    |           |
| 5   |      |    |           |
| 4   |      |    |           |
| 3   |      |    |           |
| 2   |      |    |           |
| 1   |      |    |           |

- 1) Pg. 3 - GSH requires that they review the final grading plan due to excessive fills.
- 2) Pg. 6 - GSH recommends a design infiltration rate of 5 minutes per inch.
- 3) Pg. 7 - Existing soils exhibit high strength and moderate to low compressibility.
- 4) Pg. 7 - No ground water encountered in any of the borings.
- 5) Pg. 8 - Existing soils may be used as structural fill if it meets the criteria in this report.
- 6) Pg. 8 - Unsuitable soils must be removed to a depth of 2 feet below slabs, roads, footings, etc.
- 7) Pg. 8 - Difficult to Impossible to compact soils in wet/cold months (i.e. no grading in Winter).
- 8) Pg. 13 - Primary settlement anticipated at less than 1 inch, lightly loaded floor slabs less than 1/4".
- 9) Pg. 17 - Negligible amounts of sulfates encountered; Type 1 or 1A cement recommended.
- 10) Pg. 17 - No seismic faults run through the site.
- 11) Pg. 18 - No liquefaction is anticipated.

**REPORT  
GEOTECHNICAL STUDY  
PROPOSED RIDLEY'S FAMILY MARKET  
DEVELOPMENT  
NORTHEAST CORNER OF THE INTERSECTION OF  
MAIN STREET AND 400 EAST STREET  
SANTAQUIN, UTAH**

Submitted To:

Ridley's Family Markets  
621 Washington Street South  
Twin Falls, Idaho 83301

Submitted By:

GSH Geotechnical, Inc.  
473 West 4800 South  
Salt Lake City, Utah 84123

April 26, 2018

Job No. 2588-001-18

April 26, 2018  
Job No. 2588-001-18

Mr. Mark Ridley  
Ridley's Family Markets  
621 Washington Street South  
Twin Falls, Idaho 83301

Mr. Mark Ridley:

Re: Report  
Geotechnical Study  
Proposed Ridley's Family Market Development  
Northeast Corner of the Intersection of Main Street and 400 East Street  
Santaquin, Utah

## **1. INTRODUCTION**

### **1.1 GENERAL**

This report presents the results of our geotechnical study performed at the site of the proposed Ridley's Family Market Development located at the northeast corner of the intersection of Main Street and 400 East Street in Santaquin, Utah. The general location of the site with respect to existing roadways, as of 2018, is presented on Figure 1, Vicinity Map. A more detailed layout of the site showing the proposed development, nearby features, and streets is presented on Figure 2, Site Plan. The approximate locations of the borings drilled and infiltration testing completed in conjunction with this study are also presented on Figure 2.

### **1.2 OBJECTIVES AND SCOPE**

The objectives and scope of our study were planned in discussions among Mr. Mark Ridley of Ridley's Family Markets, Mr. Shaun Young, P.E. of Anderson Wahlen and Associates, and Mr. Mike Huber of GSH Geotechnical, Inc. (GSH).

In general, the objectives of this study were to:

1. Define and evaluate the subsurface soil and groundwater conditions at the site.

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Salt Lake City, Utah 84123  
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2. Provide appropriate foundation, earthwork and pavement recommendations, and geoseismic information to be utilized in the design and construction of the proposed development.

In accomplishing these objectives, our scope has included the following:

1. A field program consisting of the excavating, logging, and sampling of 32 borings and completing 3 infiltration tests.
2. A laboratory testing program.
3. An office program consisting of the correlation of available data, engineering analyses, and the preparation of this summary report.

### **1.3 AUTHORIZATION**

Authorization was provided by returning a signed copy of our Professional Services Agreement No. 18-0418 dated April 11, 2018.

### **1.4 PROFESSIONAL STATEMENTS**

Supporting data upon which our recommendations are based are presented in subsequent sections of this report. Recommendations presented herein are governed by the physical properties of the soils encountered in the exploration borings, projected groundwater conditions, and the layout and design data discussed in Section 2, Proposed Construction, of this report. If subsurface conditions other than those described in this report are encountered and/or if design and layout changes are implemented, GSH must be informed so that our recommendations can be reviewed and amended, if necessary.

Our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time.

## **2. PROPOSED CONSTRUCTION**

The project will consist of the development of approximately 20 acres with 5 retail building pads, a fuel center, and associated parking lots. The structures are anticipated to be 1 level, constructed using a combination of light metal/wood framing, reinforced concrete, masonry, and/or steel post/beams supported on conventional spread and continuous wall foundations with slab-on-grade floors. Projected maximum column and continuous wall loads are on the order of 120 kips and 5 kips per lineal foot, respectively.

Three city streets are also proposed to be constructed/updated to service the development.

Projected traffic in the parking areas is anticipated to consist of a light to moderate volume of automobiles and light trucks with occasional medium-weight trucks. In potential delivery areas and primary drive lanes, traffic is projected to consist of a moderate volume of automobiles and light trucks, a light to moderate volume of medium-weight trucks, and occasional heavyweight trucks.

It is proposed to construct/update 400 East Street, Orchard Lane, and 200 North Street. At the time of this report, specific traffic associated with these roadways was not available. Currently, the developed area near the site is primarily single-family residential homes. It is anticipated that future development will consist of additional single-family residential homes and developments similar to this one. Based on the available information, the ultimate traffic on the future roadway is projected to consist of a moderate volume of automobiles and light trucks and occasional medium- and heavyweight trucks. During construction of the current development and future developments, the volume of medium- and heavyweight trucks will be significantly higher. Once additional traffic information is available, GSH must be contacted to update our recommendations.

Maximum site grading cuts to achieve design grades are anticipated to be generally on the order of 2 to 3 feet. GSH understands that certain areas of the site will be raised with up to 15 feet of site grading fill, especially in the area of the proposed Ridley's Family Market structure. Due to the varying degrees of site grading fill, GSH must review final grading plans to provide additional recommendations as needed.

### **3. SITE INVESTIGATIONS**

#### **3.1 FIELD PROGRAM**

In order to define and evaluate the subsurface soil and groundwater conditions across the site, 32 borings were drilled at the site. These borings were completed to depths ranging from 3 to 21.5 feet with a truck-mounted drill rig equipped with hollow-stem augers. The approximate locations of the borings are presented on Figure 2.

The field portion of our study was under the direct control and continual supervision of an experienced member of our geotechnical staff. During the course of the drilling operations, a continuous log of the subsurface conditions encountered was maintained. In addition, samples of the typical soils encountered were obtained for subsequent laboratory testing and examination. The soils were classified in the field based upon visual and textural examination. These classifications were supplemented by subsequent inspection and testing in our laboratory. Graphical representation of the subsurface conditions encountered is presented on Figures 3A through 3AF, Boring Logs. Soils were classified in accordance with the nomenclature described on Figure 4, Key to Boring Log (USCS).

A 3.0-inch outside diameter, 2.42-inch inside diameter drive sampler (Dames & Moore) and a 2.0-inch outside diameter, 1.38-inch inside diameter drive sampler (SPT) were utilized at select

locations and depths. The blow counts recorded on the boring logs were those required to drive the sampler 12 inches with a 140-pound hammer dropping 30 inches.

Following completion of drilling operations, 1.25-inch diameter slotted PVC pipe was installed many of the borings to provide a means of monitoring the potential groundwater fluctuations. The borings were backfilled with auger cuttings.

### 3.2 LABORATORY TESTING

#### 3.2.1 General

In order to provide data necessary for our engineering analyses, a laboratory testing program was completed. The program included moisture, density, gradation, California Bearing ratio (CBR), consolidation and chemical tests. The following paragraphs describe the tests and summarize the test data.

#### 3.2.2 Moisture and Density Tests

To aid in classifying the soils and to help correlate other test data, moisture and density tests were performed on selected samples. The results of these tests are presented on the boring logs, Figures 3A through 3AF.

#### 3.2.3 Gradation Tests

To aid in classifying the granular soils, full and partial gradation tests were performed. Results of the tests are tabulated below:

| Boring No. | Depth (feet) | Percent Passing Sieve |      |      |      |      |       |        |        |         |         | Soil Classification |
|------------|--------------|-----------------------|------|------|------|------|-------|--------|--------|---------|---------|---------------------|
|            |              | 3"                    | 2"   | 1"   | 3/4" | 3/8" | No. 4 | No. 10 | No. 40 | No. 100 | No. 200 |                     |
| B-2        | 14.0         | --                    | --   | --   | --   | --   | --    | --     | --     | --      | 3.4     | GP                  |
| B-5        | 4.5          | --                    | --   | --   | --   | --   | --    | --     | --     | --      | 56.1    | CL/SC               |
| B-7        | 1.5          | 100                   | 100  | 82.9 | 77.4 | 55.8 | 40.7  | 31.0   | 19.9   | 13.8    | 11.3    | SP/SM (Road Base)   |
| B-14       | 2.5          | 100                   | 79.4 | 79.4 | 60.2 | 39.7 | 28.2  | 21.3   | 14.    | 10.8    | 7.9     | GP/GM               |
| B-15       | 2.5          | 100                   | 100  | 100  | 92.5 | 59.6 | 38.2  | 24.8   | 12.7   | 6.4     | 1.5     | SP                  |
| B-19       | 5.0          | --                    | --   | --   | --   | --   | --    | --     | --     | --      | 6.8     | GP/GC               |
| B-28       | 10.0         | --                    | --   | --   | --   | --   | --    | --     | --     | --      | 11.2    | SP/SM               |
| B-30       | 2.5          | --                    | --   | --   | --   | --   | --    | --     | --     | --      | 1.3     | GP                  |



### 3.2.4 California Bearing Ratio (CBR) Test

To determine subgrade characteristics and to provide data for design of future pavements with respect to the existing subgrade soil conditions, a CBR test was performed on the representative bulk sample of the near-surface soils obtained from the borings along the roadway alignments. The test sample was compacted to approximately 100 percent of the Standard Proctor density at optimum moisture content. The test was performed in accordance with the Utah Department of Transportation (UDOT) Procedure 8-9-22 “California Bearing Ratio Soil” as presented in the Utah State Department of Highways Manual of Instruction, Part 8, Materials. The results of the CBR test are tabulated on the following table:

| Soil Classification       | CL                              |              |
|---------------------------|---------------------------------|--------------|
| Soil Properties as Molded | Dry Density                     | 106.6 pcf    |
|                           | Moisture Content (Total Sample) | 16.2 percent |
|                           | Surcharge                       | 10 pounds    |
|                           | Swell                           | 0.9 percent  |
| CBR                       | At 0.2" penetration             | 8.4 percent  |

### 3.2.5 Consolidation Tests

To provide data necessary for our settlement analyses, consolidation tests were performed on each of 3 representative samples of the fine-grained soils encountered. The results indicate that the fine-grained soils tested are moderately over-consolidated and will exhibit moderate strength and compressibility characteristics when loaded below the pre-consolidation pressure. Detailed results of the tests are maintained within our files and can be transmitted to you, upon your request.

### 3.2.6 Chemical Tests

To determine if the site soils will react detrimentally with concrete, chemical tests were performed on representative samples of the on-site soils encountered. The results of the chemical tests are tabulated below:

| Boring No. | Depth (feet) | Soil Classification | pH   | Total Water Soluble Sulfate (mg/kg-dry) |
|------------|--------------|---------------------|------|---|
| B-1        | 2.5          | CL                  | 7.98 | 50.9                                    |

### 3.3 INFILTRATION TESTS

Three infiltration tests were performed at Borings B-30, B-29, and B-19 at a depth of about 5 feet within the natural gravel soils with varying silt and clay content. The measured infiltration rates ranged from 1 to 2 minutes per inch, which reflects current natural site conditions at the test location and depth. It is our experience that the infiltration rates will decrease over the lifetime of an infiltration system due to siltation and the introduction of other materials. Accordingly, we recommend a design infiltration rate of 5 minutes per inch be used for design purposes within natural granular soils in the area of the tests. Please note that although not encountered within potential retention/detention areas, clay soils are present at the site. Infiltration rates in clay soils will be much slower, and GSH must be notified if clay soils are encountered within the retention/detention areas.

### 3.4 SUBSURFACE SOIL AND GROUNDWATER

The following paragraphs provide generalized descriptions of the subsurface profiles and soil conditions encountered within the borings conducted during this study. As previously noted, soil conditions may vary in unexplored locations.

The borings were drilled to depths ranging from 3.0 to 21.5 feet. The soil conditions encountered in each of the borings, to the depths penetrated, were generally similar across the boring locations.

- Asphalt was encountered within existing roadways in Borings B-5, B-7, B-14, and B-15. Approximately 3 inches of asphalt and up to 18 inches of aggregate base were encountered.
- Approximately 3 to 6 inches of topsoil was encountered in Borings B-2, B-3, B-6, B-8 through B-13, B-16 through B-22, B-24, and B-28 through B-31. Topsoil thickness is frequently erratic and thicker zones of topsoil should be anticipated.
- Non-engineered fill soils were encountered in Borings B-1 through B-3, B-19, B-27, and B-28, to depths ranging from 0.5 to 4.0 feet beneath the existing ground surface.
- Natural soils were encountered below the ground surface, non-engineered fill, and road base in each of the borings. The natural soils consisted primarily of silty clay with varying sand and gravel content, sand with varying silt and gravel content, and gravel with varying silt, clay, and sand content.
- Materials causing auger refusal were encountered within the dense natural granular soils in Borings B-1, B-3, B-14, and B-15 at depths ranging from 3 feet to 13 feet below the existing ground surface.

The natural clay soils were stiff to hard, slightly moist to moist, light brown, brown, and black in color, and moderately over-consolidated. The natural clay soils are anticipated to exhibit moderate strength and compressibility characteristics under the anticipated loading.

The natural sand and gravel soils were medium dense to very dense, slightly moist to moist, and light brown, brown, and black in color. The natural sand and gravel soils are anticipated to exhibit moderately high strength and moderately low compressibility characteristics under the anticipated load range.

Groundwater was not encountered within the borings and is not anticipated to effect construction.

For a more descriptive interpretation of subsurface conditions, please refer to Figures 3A through 3AF, Boring Logs. The lines designating the interface between soil types on the boring logs generally represent approximate boundaries. In situ, the transition between soil types may be gradual.

#### **4. DISCUSSIONS AND RECOMMENDATIONS**

##### **4.1 SUMMARY OF FINDINGS**

The proposed structures may be supported upon conventional spread and continuous wall foundations supported upon suitable natural soils and/or structural fill extending to suitable natural soils.

The most significant geotechnical aspects at the site are:

1. The existing structures and utilities to be demolished/relocated.
2. The existing non-engineered fills encountered in Borings B-1 through B-3, B-19, B-27, and B-28.
3. The shallow depth to auger refusal in Borings B-1, B-3, B-14, and B-15.

Prior to proceeding with construction, demolition and removal of the existing structures, slabs, foundations, pavements, associated debris, surface vegetation, root systems, topsoil, non-engineered fill, and any deleterious materials from beneath an area extending out at least 5 feet from the perimeter of the proposed building foundations and 3 feet beyond floor slabs, pavements and exterior flatwork areas will be required. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

Due to the developed nature of this site and the surrounding area, additional non-engineered fills may exist in unexplored areas of the site. Based on our experience, non-engineered fills are

frequently erratic in composition and consistency. All surficial loose/disturbed soils and non-engineered fills must be removed below all footings, floor slabs, and rigid pavements.

On-site granular soils, including existing non-engineered fills, may be re-utilized as structural site grading fill if they meet the criteria for such, as stated later in this report.

The dense soils encountered at the refusal depths may require additional effort to excavate and should be considered in the design and bidding process.

Detailed discussions pertaining to earthwork, foundations, pavements, and the geoseismic setting of the site are presented in the following sections.

## **4.2 EARTHWORK**

### **4.2.1 Site Preparation**

Prior to proceeding with construction, demolition and removal of the existing structures, slabs, foundations, pavements, associated debris, surface vegetation, root systems, topsoil, non-engineered fill, and any deleterious materials from beneath an area extending out at least 5 feet from the perimeter of the proposed building foundations and 3 feet beyond floor slabs, pavements, and exterior flatwork areas will be required. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

All non-engineered fills must be removed below all foundations, floor slabs, and pavements. If footing trenches are backfilled with structural fill below footings the width of the replacement backfill must meet the requirements as discussed in Section 4.3.2, Installation, of this report.

It must be noted that from a handling and compaction standpoint, soils containing high amounts of fines (silts and clays) are inherently more difficult to rework and are very sensitive to changes in moisture content, requiring very close moisture control during placement and compaction. This will be very difficult, if not impossible, during wet and cold periods of the year. Additionally, the on-site soils are likely above optimum moisture content for compacting at present and would require some drying prior to re-compacting.

Subsequent to stripping and prior to the placement of floor slabs, foundations, structural site grading fills, exterior flatwork, and pavements, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or otherwise unsuitable soils are encountered beneath footings, they must be completely removed. If removal depth required is greater than 2 feet below footings, GSH must be notified to provide further recommendations. In pavement, floor slab, and outside flatwork areas, unsuitable natural soils should be removed to a maximum depth of 2 feet and replaced with compacted granular structural fill.

Subgrade preparation as described must be completed prior to placing overlying structural site grading fills.

A representative of GSH must verify that all loose/disturbed soils and non-engineered fills have been completely removed below footings, floor slabs, and pavements.

#### **4.2.2 Temporary Excavations**

Temporary excavations up to 8 feet deep in fine-grained cohesive soils may be constructed with sideslopes no steeper than one-half horizontal to one vertical (0.5H:1.0V). Excavations deeper than 8 feet are not anticipated at the site.

For granular (cohesionless) soils, construction excavations above the water table, not exceeding 4 feet, should be no steeper than one-half horizontal to one vertical (0.5H:1.0V). For excavations up to 8 feet in granular soils and above the water table, the slopes should be no steeper than one horizontal to one vertical (1H:1V).

To reduce disturbance of the natural soils during excavation, it is recommended that smooth edge buckets/blades be utilized.

Due to the relatively shallow auger refusal depths, additional excavation effort should be anticipated within deeper excavations, such as those for construction of utilities.

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated.

#### **4.2.3 Structural Fill**

Structural fill is defined as all fill which will ultimately be subjected to structural loadings, such as imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as site grading fill, and as replacement fill below footings. All structural fill must be free of surface vegetation, root systems, rubbish, topsoil, frozen soil, and other deleterious materials.

Structural site grading fill is defined as structural fill placed over relatively large open areas to raise the overall grade. For structural site grading fill, the maximum particle size shall not exceed 4 inches; although, occasional larger particles, not exceeding 8 inches in diameter, may be incorporated if placed randomly in a manner such that "honeycombing" does not occur and the desired degree of compaction can be achieved. The maximum particle size within structural fill placed within confined areas shall be restricted to 2 inches.

On-site soils may be re-utilized as structural site grading fill if they do not contain construction debris or deleterious material and meet the requirements of structural fill. Fine-grained soils will require very close moisture control and may be very difficult, if not impossible, to properly place and compact during wet and cold periods of the year.

Imported structural fill below foundations, floor slabs, and pavements shall consist of a well graded sand and gravel mixture with less than 30 percent retained on the three-quarter-inch sieve and less than 20 percent passing the No. 200 Sieve (clays and silts).

On-site granular soils, including existing non-engineered fills, may be re-utilized as structural site grading fill if they meet the criteria for such as stated herein. However, should some of these soils contain coarse gravel in excess of 30 percent retained on the three-quarter-inch sieve by weight and, therefore, cannot be tested for compaction using conventional means (laboratory Proctors and nuclear densometer), then re-utilization of these fill/natural soils as structural site grading fill will require either screening and/or full-time observation during placement to document compaction means and methods.

To stabilize soft subgrade conditions (if encountered) or where structural fill is required to be placed closer than 2.0 feet above the water table at the time of construction, a mixture of coarse angular gravels and cobbles and/or 1.5- to 2.0-inch gravel (stabilizing fill) should be utilized. It may also help to utilize a stabilization fabric, such as Mirafi 600X or equivalent, placed on the natural ground if 1.5- to 2.0-inch gravel is used as stabilizing fill.

#### 4.2.4 Fill Placement and Compaction

All structural fill shall be placed in lifts not exceeding 8 inches in loose thickness. Structural fills shall be compacted in accordance with the percent of the maximum dry density as determined by the AASHTO<sup>1</sup> T-180 (ASTM<sup>2</sup> - D1557) compaction criteria in accordance with the table below:

| <b>Location</b>   | <b>Total Fill Thickness (feet)</b> | <b>Minimum Percentage of Maximum Dry Density</b> |
|---|------------------------------------|--|
| Beneath an area extending at least 4 feet beyond the perimeter of the structure | 0 to 8                             | 95   |
| Beneath an area extending at least 4 feet beyond the perimeter of the structure | 8 to 15                            | 100  |
| Site grading fills outside area defined above                                   | 0 to 5                             | 90   |
| Site grading fills outside area defined above                                   | 5 to 8                             | 95   |
| Site grading fills outside area defined above                                   | 8 to 15                            | 100  |
| Utility trenches within structural areas  | --                                 | 96   |
| Road base   | -                                  | 96   |

<sup>1</sup> American Association of State Highway and Transportation Officials

<sup>2</sup> American Society for Testing and Materials

Structural fills greater than 15 feet thick are not anticipated at the site.

Subsequent to stripping and prior to the placement of structural site grading fill, the subgrade shall be prepared as discussed in Section 4.2.1, Site Preparation, of this report. In confined areas, subgrade preparation should consist of the removal of all loose or disturbed soils.

Coarse angular gravel and cobble mixtures (stabilizing fill), if utilized, shall be end dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto the surface continuously at least twice. As an alternative, the stabilizing fill may be compacted by passing moderately heavy construction equipment or large self-propelled compaction equipment at least twice. Subsequent fill material placed over the coarse gravels and cobbles shall be adequately compacted so that the “fines” are “worked into” the voids in the underlying coarser gravels and cobbles.

Non-structural fill may be placed in lifts not exceeding 12 inches in loose thickness and compacted by passing construction, spreading, or hauling equipment over the surface at least twice.

#### **4.2.5 Utility Trenches**

All utility trench backfill material below structurally loaded facilities (footings, floor slabs, flatwork, pavements, etc.) shall be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill shall be proof rolled and/or properly compacted prior to the construction of any exterior flatwork over a backfilled trench. Proof rolling shall be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proof rolling, they shall be removed to a maximum depth of 2 feet below design finish grade and replaced with structural fill.

Most utility companies and City-County governments are now requiring that Type A-1a or A-1b (AASHTO Designation – basically granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways, the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T-180 (ASTM - D1557) method of compaction. GSH recommends that as the major utilities continue onto the site that these compaction specifications are followed.

Fine-grained soil, such as silts and clays, are not recommended for utility trench backfill in structural areas.

Due to the relatively shallow auger refusal depths, additional excavation effort should be anticipated within deeper excavations such as those for construction of utilities.

### 4.3 SPREAD AND CONTINUOUS WALL FOUNDATIONS

#### 4.3.1 Design Data

The results of our analysis indicate that the proposed structures may be supported upon conventional spread and continuous wall foundations established upon suitable natural soils and/or structural fill extending to suitable natural soils. For design, the following parameters are provided:

|   |                                |
|---|--------------------------------|
| Minimum Recommended Depth of Embedment for Frost Protection                         | - 30 inches                    |
| Minimum Recommended Depth of Embedment for Non-frost Conditions                     | - 15 inches                    |
| Recommended Minimum Width for Continuous Wall Footings                              | - 18 inches                    |
| Minimum Recommended Width for Isolated Spread Footings                              | - 24 inches                    |
| Recommended Net Bearing Capacity for Real Load Conditions on suitable natural soils | - 3,000 pounds per square foot |
| Bearing Capacity Increase for Seismic Loading                                       | - 50 percent                   |

The term “net bearing capacity” refers to the allowable pressure imposed by the portion of the structure located above lowest adjacent final grade. Therefore, the weight of the footing and backfill to lowest adjacent final grade need not be considered. Real loads are defined as the total of all dead plus frequently applied live loads. Total load includes all dead and live loads, including seismic and wind.

#### 4.3.2 Installation

Under no circumstances shall the footings be established upon soft, loose or disturbed soils, non-engineered fills, sod, rubbish, frozen soils, debris, or within ponded water. If the natural soils upon which the footings are to be established become loose or disturbed, they must be removed and replaced with granular structural fill. If granular structural fill upon which the footings are to be established become disturbed, they should be recompacted to the requirements for structural fill.

The width of replacement fill below footings should be equal to the width of the footing plus one additional foot for each foot of fill thickness placed. For example, if the width of the footing is



2 feet and the thickness of the structural fill beneath the footing is 1 foot, the width of the structural fill at the base of the footing excavation would be a total of 3 feet.

#### **4.3.3 Settlements**

Based on proposed loadings, soil bearing capacities, and the foundation recommendations as discussed above, we expect primary total settlement beneath individual foundations to be less than one inch.

The amount of differential settlement is difficult to predict because the subsurface and foundation loading conditions can vary considerably across the site. However, we anticipate differential settlement between adjacent foundations could vary from 0.5- to 0.75-inch. The final deflected shape of the structure will be dependent on actual foundation locations and loading.

#### **4.4 LATERAL RESISTANCE**

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of friction of 0.30 may be utilized for the footing interface with in situ natural clay soils and 0.40 for footing interface with natural granular soils or granular structural fill. 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 300 pounds per cubic foot. Below the water table, this granular soil should be considered equivalent to a fluid with a density of 150 pounds per cubic foot.

A combination of passive earth resistance and friction may be utilized provided that the friction component of the total is divided by 1.5.

#### **4.5 FLOOR SLABS**

Floor slabs shall be established upon suitable natural soils and/or upon structural fill extending to suitable stabilized natural soils. Under no circumstances shall floor slabs be established over non-engineered fills, loose/disturbed soils, surface vegetation, root systems, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

In order to facilitate curing of the concrete and to provide a capillary moisture break, it is recommended that floor slabs be directly underlain by at least 4 inches of “free-draining” fill, such as “pea” gravel or three-quarters to one inch minus clean gap graded gravel.

Settlement of lightly loaded floor slabs designed according to previous recommendations (average uniform pressure of 200 pounds per square foot or less) is anticipated to be less than one-quarter of an inch.

#### 4.6 PAVEMENTS

The natural fine-grained soils will exhibit poor to moderate pavement support characteristics when saturated or nearly saturated. The natural subgrade must be properly prepared as discussed in Section 4.2.1 Site Preparation, of this report. With the subgrade soils and the projected traffic as discussed in Section 2, Proposed Construction, the pavement sections below are recommended:

##### Parking Areas

(Light to Moderate Volume of Automobiles and Light Trucks,  
 Occasional Medium-Weight Trucks,  
 and No Heavyweight Trucks)  
 [1 equivalent 18-kip axle load per day]

##### Flexible:

|            |  |
|------------|--|
| 2.5 inches | Asphalt concrete   |
| 7.0 inches | Aggregate base   |
| Over       | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |

##### Rigid:

|            |  |
|------------|--|
| 5.0 inches | Portland cement concrete (non-reinforced)  |
| 4.0 inches | Aggregate base   |
| Over       | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |

Internal Roadway/Primary Drive Lanes Areas

(Moderate Volume of Automobiles and Light Trucks,  
 Light to Moderate Volume of Medium-Weight Trucks,  
 and Occasional Heavyweight Trucks)  
 [10 equivalent 18-kip axle loads per day]

Flexible:

|            |  |
|------------|--|
| 3.0 inches | Asphalt concrete   |
| 9.0 inches | Aggregate base   |
| Over       | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |

Rigid:

|            |  |
|------------|--|
| 5.5 inches | Portland cement concrete (non-reinforced)  |
| 5.0 inches | Aggregate base   |
| Over       | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |

Truck Lanes

(Moderate Volume of Automobiles and Light Trucks,  
 Light to Moderate Volume of Medium-Weight Trucks,  
 and Moderate Volume of Heavyweight Trucks)  
 [40 equivalent 18-kip axle loads per day]

Flexible:

|             |                  |
|-------------|------------------|
| 4.0 inches  | Asphalt concrete |
| 12.0 inches | Aggregate base   |

|      |  |
|------|--|
| Over | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |
|------|--|

Rigid:

|            |   |
|------------|---|
| 6.5 inches | Portland cement concrete (non-reinforced) |
|------------|---|

|            |                |
|------------|----------------|
| 6.0 inches | Aggregate base |
|------------|----------------|

|      |  |
|------|--|
| Over | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |
|------|--|

City Streets (500 East, Orchard Lane, and 200 North Streets)  
 (Moderate to Heavy Volume of Automobiles and Light Trucks,  
 Moderate Volume of Medium-Weight Trucks,  
 and Light Volume of Heavyweight Trucks)  
 [60 equivalent 18-kip axle loads per day]

Flexible:

|            |                  |
|------------|------------------|
| 4.5 inches | Asphalt concrete |
|------------|------------------|

|             |                |
|-------------|----------------|
| 12.0 inches | Aggregate base |
|-------------|----------------|

|      |  |
|------|--|
| Over | Properly prepared natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils |
|------|--|

It is recommended that “drive-thru” lanes where transactions occur be paved with rigid pavement equivalent to that stipulated for internal roadway in order to eliminate potential rutting from the high volume of tight-maneuvering vehicles.

For dumpster pads, we recommend a pavement section consisting of 6.5 inches of Portland cement concrete, 9.0 inches of aggregate base, over properly prepared suitable natural subgrade or site grading structural fills extending to suitable natural soils. Dumpster pads shall not be constructed overlying non-engineered fills unless heavily reinforced.

These above rigid pavement sections are for non-reinforced Portland cement concrete. Concrete should be designed in accordance with the American Concrete Institute (ACI) and joint details should conform to the Portland Cement Association (PCA) guidelines. The concrete should have

a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent  $\pm$  1 percent air-entrainment.

#### **4.7 CEMENT TYPES**

Laboratory tests indicate that the site soils contain negligible amounts of water soluble sulfates. Therefore, concrete which will be in contact with the site soils may be prepared using Type I or IA cement.

#### **4.8 GEOSEISMIC SETTING**

##### **4.8.1 General**

Utah municipalities have adopted the International Building Code (IBC) 2015. The IBC 2015 code determines the seismic hazard for a site based upon 2008 mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil site class. The USGS values are presented on maps incorporated into the IBC code and are also available based on latitude and longitude coordinates (grid points).

##### **4.8.2 Faulting**

Based upon our review of available literature, no active faults are known to pass through the site. The site is located about 0.7 mile west of the mapped Nephi Section of the Wasatch Fault.

##### **4.8.3 Soil Class**

For dynamic structural analysis, the Site Class D – Stiff Soil Profile, as defined in Chapter 20 of ASCE 7 (per Section 1613.3.2, Site Class Definitions, of IBC 2015) can be utilized.

##### **4.8.4 Ground Motions**

The IBC 2015 code is based on 2008 USGS mapping, which provides values of short and long period accelerations for the Site Class B boundary for the Maximum Considered Earthquake (MCE). This Site Class B boundary represents average bedrock values for the Western United States and must be corrected for local soil conditions. The table on the following page summarizes the peak ground and short and long period accelerations for the MCE event and incorporates the appropriate soil amplification factor for a Site Class D soil profile. Based on the site latitude and longitude (39.9764 degrees north and 111.7760 degrees west, respectively), the values for this site are tabulated on the following page.

| Spectral<br>Acceleration<br>Value, T       | Site Class B<br>Boundary<br>[mapped values] |      | Site Class D<br>[adjusted for site<br>class effects] |                  | Design<br>Values<br>(% g) |
|--|---|------|--|------------------|---------------------------|
|  | (% g)                                       |      | Site<br>Coefficient                                  | (% g)            |                           |
|  | Peak Ground Acceleration                    | 54.2 |  | $F_a = 1.000$    |                           |
| 0.2 Seconds<br>(Short Period Acceleration) | $S_S = 135.6$                               |      | $F_a = 1.000$  | $S_{MS} = 135.6$ | $S_{DS} = 90.4$           |
| 1.0 Second<br>(Long Period Acceleration)   | $S_1 = 48.7$                                |      | $F_v = 1.513$  | $S_{M1} = 73.7$  | $S_{D1} = 49.1$           |

#### 4.8.5 Liquefaction

Liquefaction is defined as the condition when saturated, loose, finer-grained sand-type soils lose their support capabilities because of excessive pore water pressure which develops during a seismic event. Clayey soils, even if saturated, will not liquefy during a major seismic event.

Liquefaction is not anticipated to occur within the soils encountered due to the lack of shallow groundwater and the density of the granular soils.

#### 4.9 SITE VISITS

GSH must verify that all disturbed soil, deleterious materials, and any other unsuitable soils have been removed and that non-engineered fills have been removed, and that suitable soils have been encountered prior to placing site grading fills, footings, slabs, and pavements. Additionally, GSH must observe fill placement and verify in-place moisture content and density of fill materials placed at the site.

#### 4.10 CLOSURE

If you have any questions or would like to discuss these items further, please feel free to contact us at (801) 685-9190.

Respectfully submitted,

**GSH Geotechnical, Inc.**

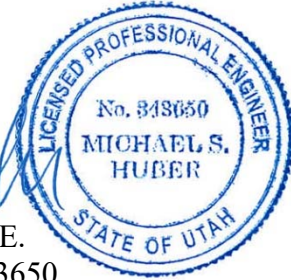


Robert A. Gifford  
Project Engineer/Geologist

Reviewed by:



Michael S. Huber, P.E.  
State of Utah No. 343650  
Vice President/Senior Geotechnical Engineer

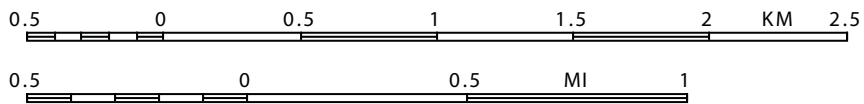
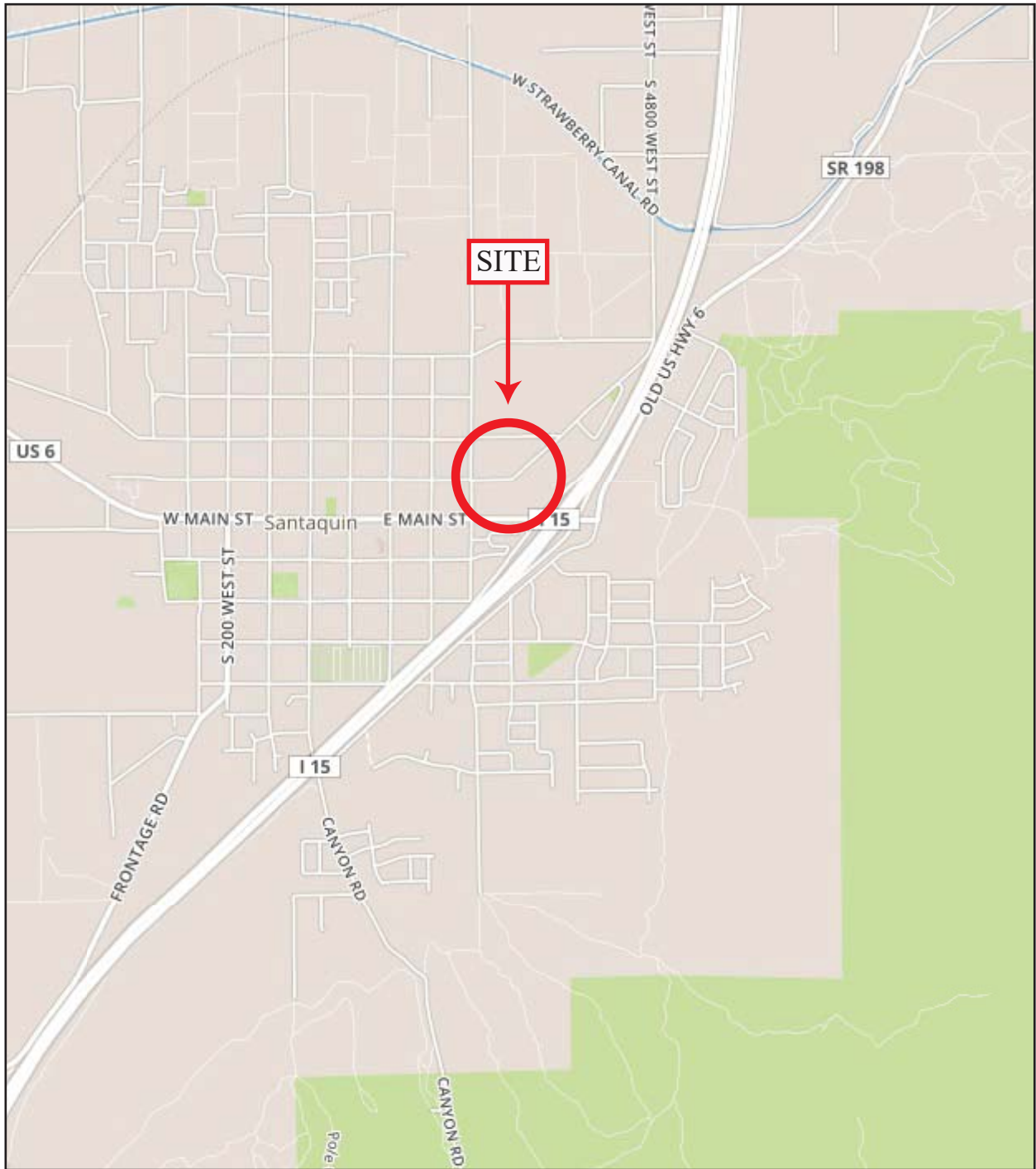


RAG/MSH;jlh

- Encl. Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figures 3A through 3AF, Boring Log
- Figure 4, Key to Boring Log (USCS)

Addressee (email)

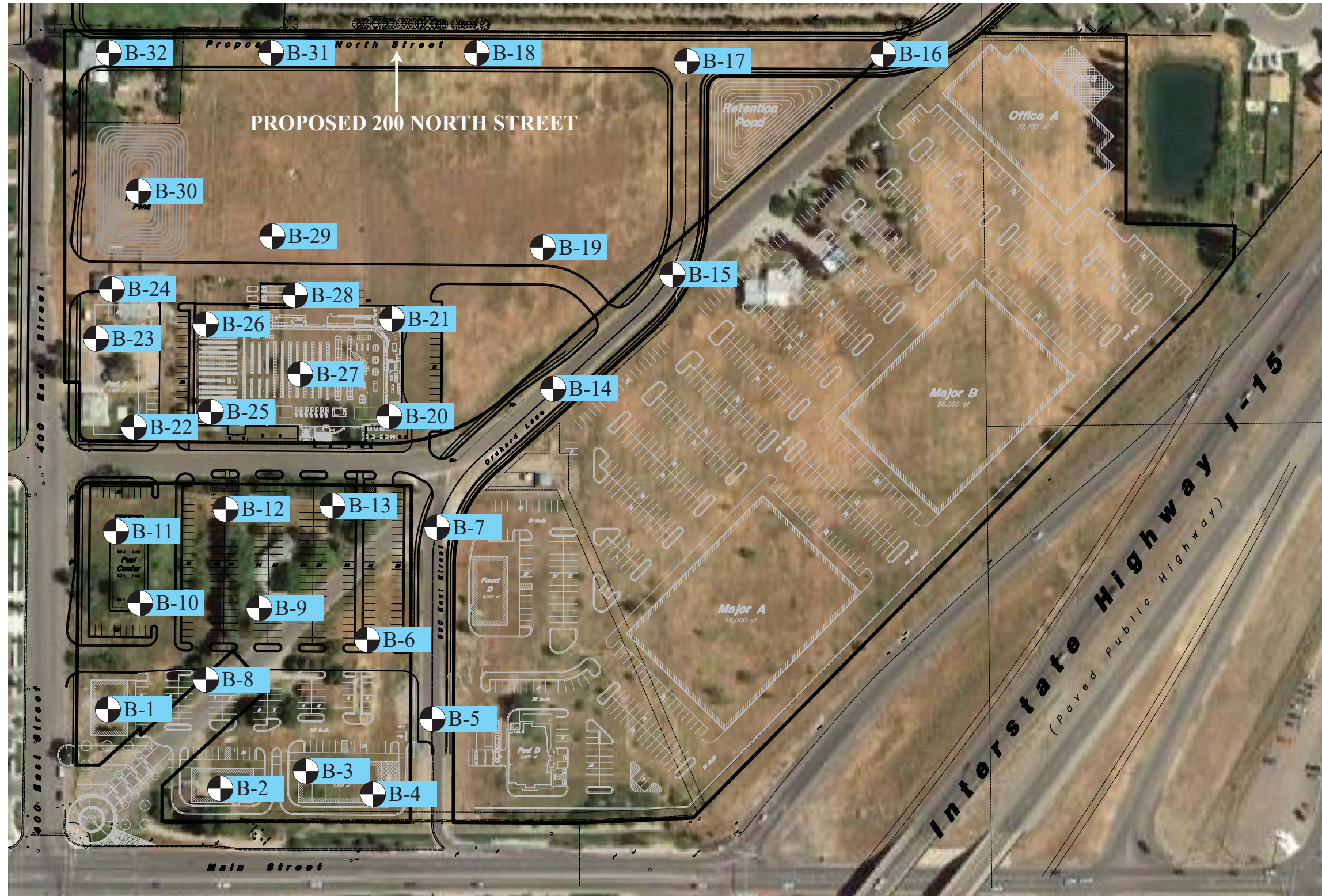
cc: Mr. Shaun Young, P.E. (email)  
Anderson, Wahlen & Associates



REFERENCE:  
ALL TRAILS - NATIONAL GEOGRAPHIC TERRAIN  
DATED 2018

FIGURE 1  
VICINITY MAP  
 GSH





REFERENCE:  
ADAPTED FROM DRAWING ENTITLED  
"SITE PLAN" PROVIDED BY CLIENT



FIGURE 2  
SITE PLAN  




# GSH

# BORING LOG

Page: 1 of 1

**BORING: B-1**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/17/18 DATE FINISHED: 4/17/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/17/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist<br>stiff      |
|             | CL<br>FILL       | SILTY CLAY, FILL<br>with fine and coarse gravel; brown   |             |            |               |              |                   |               |                  |                  | moist<br>very stiff          |
|             | CL               | SILTY CLAY<br>with some fine sand; brown   |             | 26         | X             | 21.2         | 100               |               |                  |                  | stiff                        |
|             |                  |  | 5           | 14         | X             | 22.3         | 95                |               |                  |                  | hard                         |
|             |                  | grades with some fine and coarse gravel  | 10          | 50/4"      | X             |              |                   |               |                  |                  | slightly moist<br>very dense |
|             | GP/<br>GM        | FINE TO COARSE SANDY FINE AND COARSE GRAVEL<br>with silt; brown<br>Refusal at 11.0'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 11.0'. |             |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3A



# GSH

## BORING LOG

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### BORING: B-2

Item 2.

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             | CL<br>FILL       | SILTY CLAY, FILL<br>with fine and coarse gravel; major roots (topsoil) to 6"; brown  |             |            |               |              |                   |               |                  |                  | slightly moist          |
|             | CL               | SILTY CLAY<br>with some fine sand; brown   |             | 22         | X             | 19.5         | 97                |               |                  |                  | very stiff              |
|             |                  |  | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  | grades with occasional layers of silty sand up to 2" thick;<br>light brown with oxidation  |             | 34         | X             |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand and trace silt; light brown   |             | 76         | X             | 2.2          | 3.4               |               |                  |                  | slightly moist<br>dense |
|             |                  | End of Exploration at 15.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 15.5'. |             |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3B



# GSH

## BORING LOG

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**BORING: B-3**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION   | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|---|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  |   |             |            |               |              |                   |               |                  |                  |                              |
|             |                  | <b>Ground Surface</b>   | 0           |            |               |              |                   |               |                  |                  | slightly moist               |
|             | CL<br>FILL       | SILTY CLAY, FILL<br>with some fine and coarse gravel; major roots (topsoil) to 6";<br>brown                                 |             |            |               |              |                   |               |                  |                  |                              |
|             | CL               | SILTY CLAY<br>with fine gravel; light brown   |             | 47         | X             |              |                   |               |                  |                  | hard<br>slightly moist       |
|             |                  |   | 5           | 70         | X             | 20.1         | 99                |               |                  |                  |                              |
|             | SM               | SILTY FINE SAND<br>light brown with oxidation   |             |            |               |              |                   |               |                  |                  | slightly moist               |
|             |                  |   | 10          | 22         | X             |              |                   |               |                  |                  | medium dense                 |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; black   |             |            |               |              |                   |               |                  |                  | slightly moist<br>very dense |
|             |                  | Refusal at 13.0'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 13.0'. | 15          |            |               |              |                   |               |                  |                  |                              |
|             |                  |   | 20          |            |               |              |                   |               |                  |                  |                              |
|             |                  |   | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3C



# GSH

## BORING LOG

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**BORING: B-4**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist               |
|             | CL<br>FILL       | SILTY CLAY, FILL<br>with fine and coarse gravel; brown   |             |            |               |              |                   |               |                  |                  | very stiff<br>slightly moist |
|             | CL               | SILTY CLAY<br>with fine gravel; brown  |             | 30         | X             |              |                   |               |                  |                  | stiff                        |
|             |                  |  | 5           | 17         | X             |              |                   |               |                  |                  | moist                        |
|             | SP               | FINE TO COARSE SAND<br>with fine gravel; brown   |             |            |               |              |                   |               |                  |                  | medium dense                 |
|             |                  |  | 10          | 46         | X             | 0.7          | 100               |               |                  |                  |                              |
|             |                  | End of Exploration at 11.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 11.5'. |             |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3D



# GSH

## BORING LOG

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**BORING: B-5**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             |                  | 3" ASPHALT   |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | 1.5' ROAD BASE   |             |            |               |              |                   |               |                  |                  |                         |
|             | SP/<br>SM        | SILTY FINE TO COARSE SAND<br>with fine and coarse gravel; brown                |             |            |               |              |                   |               |                  |                  | slightly moist<br>dense |
|             | CL/<br>SC        | FINE SANDY CLAY/CLAYEY FINE SAND<br>with fine gravel; brown                    |             |            |               | 13.0         |                   | 56.1          |                  |                  | slightly moist<br>stiff |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3E



**GSH**

**BORING LOG**

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**BORING: B-6**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|----------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown          |             |            |               |              |                   |               |                  |                  | stiff          |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3F



# GSH

## BORING LOG

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**BORING: B-7**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             |                  | 3" ASPHALT   |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | 1.5' ROAD BASE   |             |            |               | 17.9         |                   | 1.5           |                  |                  |                         |
|             | SM               | SILTY FINE TO COARSE SAND<br>with fine and coarse gravel; brown                |             |            |               |              |                   |               |                  |                  | slightly moist<br>dense |
|             | CL               | SILTY CLAY<br>with fine and coarse gravel; brown                               |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3G





**GSH**

**BORING LOG**

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**BORING: B-8**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3H



# GSH

## BORING LOG

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**BORING: B-9**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | grades with fine and coarse gravel   |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 31



# GSH

## BORING LOG

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### BORING: B-10

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/17/18 DATE FINISHED: 4/17/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/17/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|--------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                                |
|             |                  | Ground Surface   | 0           |            |               |              |                   |               |                  |                  | moist                          |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown<br><br>grades light brown  |             | 19         |               | 17.0         | 106               |               |                  |                  | stiff                          |
|             |                  |  | 5           | 50/3"      |               | 11.9         | 97                |               |                  |                  | slightly moist<br>hard         |
|             | SM               | SILTY FINE SAND<br>light brown with oxidation  | 10          | 39         |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             | SP               | FINE TO MEDIUM SAND<br>with trace silt; light brown  | 15          | 29         |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             |                  | End of Exploration at 21.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 21.5'. | 20          | 36         |               |              |                   |               |                  |                  |                                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3J



# GSH

## BORING LOG

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**BORING: B-11**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/17/18 DATE FINISHED: 4/17/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/17/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|--------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                                |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown  |             | 13         |               | 18.5         | 105               |               |                  |                  | slightly moist<br>stiff        |
|             |                  | grades light brown   | 5           | 35         |               | 8.0          | 98                |               |                  |                  | very stiff                     |
|             |                  | grades with occasional layers of silty fine sand up to 3" thick; oxidation   | 10          | 39         |               |              |                   |               |                  |                  |                                |
|             | SM               | SILTY FINE SAND<br>light brown with oxidation  | 15          | 31         |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; brown  | 20          | 69         |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             |                  | End of Exploration at 21.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 21.5'. | 25          |            |               |              |                   |               |                  |                  |                                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3K



**GSH**

**BORING LOG**

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**BORING: B-12**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/17/18 DATE FINISHED: 4/17/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/17/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                              |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>very stiff |
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 5           |            |               |              |                   |               |                  |                  | moist                        |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. |             |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3L



**GSH**

**BORING LOG**

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**BORING: B-13**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | Ground Surface   | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 6"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3M



**GSH**

**BORING LOG**

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**BORING: B-14**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | Ground Surface   | 0           |            |               |              |                   |               |                  |                  |                         |
|             |                  | 3" ASPHALT   |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | 1.5' ROAD BASE   |             |            |               |              |                   |               |                  |                  |                         |
|             | GP/<br>GM        | FINE TO COARSE SANDY FINE AND COARSE GRAVEL<br>with some silt; brown |             |            |               | 2.6          |                   | 7.9           |                  |                  | slightly moist<br>dense |
|             |                  | Refusal at 3.5'.<br>No groundwater encountered at time of drilling.  | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3N



# GSH

## BORING LOG

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**BORING: B-15**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION   | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS              |
|-------------|------------------|---|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|----------------------|
|             |                  |   |             |            |               |              |                   |               |                  |                  |                      |
|             |                  | Ground Surface  | 0           |            |               |              |                   |               |                  |                  |                      |
|             |                  | 3" ASPHALT  |             |            |               |              |                   |               |                  |                  |                      |
|             |                  | 1.5' ROAD BASE  |             |            |               |              |                   |               |                  |                  |                      |
|             | SP               | FINE AND COARSE GRAVELLY FINE TO COARSE SAND with trace silt; brown |             |            |               | 6.5          |                   | 1.5           |                  |                  | slightly moist dense |
|             |                  | Refusal at 3.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                      |
|             |                  |   | 10          |            |               |              |                   |               |                  |                  |                      |
|             |                  |   | 15          |            |               |              |                   |               |                  |                  |                      |
|             |                  |   | 20          |            |               |              |                   |               |                  |                  |                      |
|             |                  |   | 25          |            |               |              |                   |               |                  |                  |                      |

See Subsurface Conditions section in the report for additional information.

FIGURE 30





**GSH**

**BORING LOG**

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**BORING: B-16**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 4"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | grades with some fine gravel   | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. |             |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3P



**GSH**

**BORING LOG**

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**BORING: B-17**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 4"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3Q



**GSH**

**BORING LOG**

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**BORING: B-18**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 4"; brown          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3R



# GSH

# BORING LOG

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**BORING: B-19**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL<br>FILL       | SILTY CLAY, FILL<br>with some fine gravel; major roots (topsoil) to 4"; brown  |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             | GP/<br>GC        | FINE AND COARSE GRAVEL<br>with some clay; brown                                |             |            |               | 3.1          |                   | 6.8           |                  |                  | slightly moist<br>dense |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3S



# GSH

## BORING LOG

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### BORING: B-20

Item 2.

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|----------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 4"; light brown  |             | 27         | X             | 19.1         | 102               |               |                  |                  | very stiff     |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown  | 5           | 45         | X             |              |                   |               |                  |                  | slightly moist |
|             |                  |  | 10          | 43         | X             |              |                   |               |                  |                  | medium dense   |
|             |                  | End of Exploration at 11.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 11.5'. | 15          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3T



# GSH

## BORING LOG

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### BORING: B-21

Item 2.

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/18/18 DATE FINISHED: 4/18/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/18/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                              |
|             | CL               | SILTY CLAY<br>with some fine sand; major roots (topsoil) to 4"; brown  |             | 12         |               | 12.9         | 110               |               |                  |                  | slightly moist<br>stiff      |
|             | SP/<br>SM        | FINE TO COARSE SAND<br>with fine and coarse gravel and silt; ight brown  | 5           | 62         |               |              |                   |               |                  |                  | slightly moist<br>dense      |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown  | 10          | 98         |               |              |                   |               |                  |                  | slightly moist<br>very dense |
|             |                  |  | 15          | 50/1"      |               |              |                   |               |                  |                  |                              |
|             |                  |  | 20          | 50/5"      |               |              |                   |               |                  |                  |                              |
|             |                  | End of Exploration at 20.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 20.5'. |             |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3U



**GSH**

**BORING LOG**

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**BORING: B-22**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                        |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                        |
|             | CL               | SILTY CLAY<br>with fine sand; major roots (topsoil) to 6"; brown               |             |            |               |              |                   |               |                  |                  | slightly moist<br>hard |
|             |                  |  |             | 82         | X             | 14.8         | 107               |               |                  |                  | slightly moist         |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown                |             |            |               |              |                   |               |                  |                  |                        |
|             |                  |  | 5           |            |               |              |                   |               |                  |                  | medium dense           |
|             |                  |  |             | 41         | X             |              |                   |               |                  |                  |                        |
|             |                  | End of Exploration at 7.5'.<br>No groundwater encountered at time of drilling. |             |            |               |              |                   |               |                  |                  |                        |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                        |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                        |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                        |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                        |

See Subsurface Conditions section in the report for additional information.

FIGURE 3V



# GSH

## BORING LOG

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**BORING: B-23**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|----------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist |
|             | GP               | FINE AND COARSE GRAVEL<br>with occasional layers of fine to coarse sand up to 2"; brown  |             | 52         | X             |              |                   |               |                  |                  | dense          |
|             |                  | grades with fine to coarse sand  | 5           |            |               |              |                   |               |                  |                  |                |
|             |                  |  |             | 68         | X             | 3.2          | 119               |               |                  |                  |                |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                |
|             |                  |  |             | 78         | X             |              |                   |               |                  |                  |                |
|             |                  | End of Exploration at 14.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 14.5'. | 15          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3W





# GSH

## BORING LOG

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**BORING: B-24**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|--------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                                |
|             | GC               | FINE AND COARSE GRAVEL with fine to coarse sand with some silty clay; major roots (topsoil) to 6"; brown |             |            |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling.                           | 5           |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3X



# GSH

## BORING LOG

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**BORING: B-25**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist               |
|             | CL               | SILTY CLAY<br>with some fine sand and layers of fine and coarse gravel up to 3" thick; brown   |             | 50/3"      |               | 10.6         | 80                |               |                  |                  | hard                         |
|             | GP               | FINE AND COARSE GRAVEL<br>light brown  | 5           | 50/4"      |               |              |                   |               |                  |                  | slightly moist<br>very dense |
|             |                  | grades with fine to coarse sand  | 10          | 41         |               |              |                   |               |                  |                  | medium dense                 |
|             |                  |  | 15          | 46         |               |              |                   |               |                  |                  |                              |
|             |                  |  | 20          | 74         |               |              |                   |               |                  |                  | dense                        |
|             |                  | End of Exploration at 21.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 21.5'. | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3Y



# GSH

## BORING LOG

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### BORING: B-26

Item 2.

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|--------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                                |
|             |                  | Ground Surface   | 0           |            |               |              |                   |               |                  |                  |                                |
|             | CL               | SILTY CLAY<br>with fine and coarse gravel; brown   |             | 11         |               | 17.0         | 105               |               |                  |                  | slightly moist<br>stiff        |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown  | 5           | 45         |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             | SP               | FINE TO COARSE SAND<br>with some fine gravel; light brown  | 10          | 50/5"      |               |              |                   |               |                  |                  | slightly moist<br>very dense   |
|             |                  | End of Exploration at 11.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 11.5'. | 15          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3Z



# GSH

## BORING LOG

Page: 1 of 1

**BORING: B-27**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                      |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                              |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                              |
|             | GP<br>FILL       | FINE AND COARSE GRAVEL, FILL<br>brown  |             |            |               |              |                   |               |                  |                  | slightly moist<br>very dense |
|             | CL               | SILTY CLAY<br>with gravel; brown   |             | 42         | X             | 2.3          | 128               |               |                  |                  | slightly moist<br>very stiff |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown  | 5           | 69         | X             |              |                   |               |                  |                  | slightly moist<br>dense      |
|             |                  |  | 10          | 51         | X             |              |                   |               |                  |                  | medium dense                 |
|             |                  | End of Exploration at 11.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 11.5'. | 15          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                              |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                              |

See Subsurface Conditions section in the report for additional information.

FIGURE 3AA



# GSH

# BORING LOG

Page: 1 of 1

**BORING: B-28**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|----------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  | slightly moist |
|             | CL<br>FILL       | SILTY CLAY, FILL<br>with fine and coarse gravel; major roots (topsoil) to 5"; light brown  |             | 69         | X             |              |                   |               |                  |                  | hard           |
|             | CL               | SILTY CLAY<br>with some fine sand; light brown   | 5           | 65         | X             | 20.1         | 100               |               |                  |                  | hard           |
|             | SP/<br>SM        | FINE TO COARSE SAND<br>with silt and fine and coarse gravel; light brown   | 10          | 50/5"      | X             | 1.8          |                   | 11.2          |                  |                  | very dense     |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown  | 15          | 50/5"      | X             |              |                   |               |                  |                  | slightly moist |
|             |                  | End of Exploration at 16.5'.<br>No groundwater encountered at time of drilling.<br>Installed 1.25" diameter slotted PVC pipe to 16.5'. | 20          |            |               |              |                   |               |                  |                  | very dense     |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3A



**GSH**

**BORING LOG**

Page: 1 of 1

**BORING: B-29**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                        |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|--------------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                                |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                                |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; major roots (topsoil) to 5"; light brown | 0           |            |               |              |                   |               |                  |                  | slightly moist<br>medium dense |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling.               | 5           |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                                |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                                |

See Subsurface Conditions section in the report for additional information.

FIGURE 3AC



# GSH

## BORING LOG

Page: 1 of 1

**BORING: B-30**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand and trace silt; major roots (topsoil)<br>to 5"; brown |             |            |               | 1.6          |                   | 1.3           |                  |                  | slightly moist<br>dense |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling.                           | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3A



**GSH**

**BORING LOG**

Page: 1 of 1

**BORING: B-31**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | CL               | SILTY CLAY<br>with major roots (topsoil) to 5"; black                          |             |            |               |              |                   |               |                  |                  | slightly moist<br>stiff |
|             |                  | grades with fine gravel; light brown   | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. |             |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3AH





**GSH**

**BORING LOG**

Page: 1 of 1

**BORING: B-32**

CLIENT: Ridley's Family Markets PROJECT NUMBER: 2588-001-18  
 PROJECT: Proposed Ridley's Family Market Development DATE STARTED: 4/19/18 DATE FINISHED: 4/19/18  
 LOCATION: Northeast Corner of Main Street and 400 East, Santaquin, Utah GSH FIELD REP.: TH  
 DRILLING METHOD/EQUIPMENT: 3-3/4" ID Hollow-Stem Auger HAMMER: Automatic WEIGHT: 140 lbs DROP: 30"  
 GROUNDWATER DEPTH: Not Encountered (4/19/18) ELEVATION: ---

| WATER LEVEL | U<br>S<br>C<br>S | DESCRIPTION  | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS                 |
|-------------|------------------|--|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|-------------------------|
|             |                  |  |             |            |               |              |                   |               |                  |                  |                         |
|             |                  | <b>Ground Surface</b>  | 0           |            |               |              |                   |               |                  |                  |                         |
|             | GP               | FINE AND COARSE GRAVEL<br>with fine to coarse sand; light brown                |             |            |               |              |                   |               |                  |                  | slightly moist<br>dense |
|             |                  | End of Exploration at 5.0'.<br>No groundwater encountered at time of drilling. | 5           |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 10          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 15          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 20          |            |               |              |                   |               |                  |                  |                         |
|             |                  |  | 25          |            |               |              |                   |               |                  |                  |                         |

See Subsurface Conditions section in the report for additional information.

FIGURE 3A

CLIENT: Ridley's Family Markets  
 PROJECT: Proposed Ridley's Family Market Development  
 PROJECT NUMBER: 2588-001-18

Item 2.

# KEY TO BORING LOG

| WATER LEVEL | USCS | DESCRIPTION | DEPTH (FT.) | BLOW COUNT | SAMPLE SYMBOL | MOISTURE (%) | DRY DENSITY (PCF) | % PASSING 200 | LIQUID LIMIT (%) | PLASTICITY INDEX | REMARKS |
|-------------|------|-------------|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|---------|
|-------------|------|-------------|-------------|------------|---------------|--------------|-------------------|---------------|------------------|------------------|---------|

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

## COLUMN DESCRIPTIONS

- ① **Water Level:** Depth to measured groundwater table. See symbol below.
- ② **USCS:** (Unified Soil Classification System) Description of soils encountered; typical symbols are explained below.
- ③ **Description:** Description of material encountered; may include color, moisture, grain size, density/consistency,
- ④ **Depth (ft.):** Depth in feet below the ground surface.
- ⑤ **Blow Count:** Number of blows to advance sampler 12" beyond first 6", using a 140-lb hammer with 30" drop.
- ⑥ **Sample Symbol:** Type of soil sample collected at depth interval shown; sampler symbols are explained below.
- ⑦ **Moisture (%):** Water content of soil sample measured in laboratory; expressed as percentage of dryweight of
- ⑧ **Dry Density (pcf):** The density of a soil measured in laboratory; expressed in pounds per cubic foot.
- ⑨ **% Passing 200:** Fines content of soils sample passing a No. 200 sieve; expressed as a percentage.
- ⑩ **Liquid Limit (%):** Water content at which a soil changes from plastic to liquid behavior.
- ⑪ **Plasticity Index (%):** Range of water content at which a soil exhibits plastic properties.
- ⑫ **Remarks:** Comments and observations regarding drilling or sampling made by driller or field personnel. May include other field and laboratory test results using the following abbreviations:

| CEMENTATION:   | MODIFIERS:           | MOISTURE CONTENT (FIELD TEST):                                   |
|--|----------------------|--|
| <b>Weakly:</b> Crumbles or breaks with handling or slight finger pressure. | <b>Trace</b><br><5%  | <b>Dry:</b> Absence of moisture, dusty, dry to the touch.        |
| <b>Moderately:</b> Crumbles or breaks with considerable finger pressure.   | <b>Some</b><br>5-12% | <b>Moist:</b> Damp but no visible water.                         |
| <b>Strongly:</b> Will not crumble or break with finger pressure.           | <b>With</b><br>> 12% | <b>Saturated:</b> Visible water, usually soil below water table. |

Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on the logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.

| UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)   | MAJOR DIVISIONS  |  | USCS SYMBOLS   | TYPICAL DESCRIPTIONS  |
|---|--|--|--|---|
|   | COARSE-GRAINED SOILS<br>More than 50% of material is larger than No. 200 sieve size. | GRAVELS<br>More than 50% of coarse fraction retained on No. 4 sieve. | CLEAN GRAVELS<br>(little or no fines)  | GW  |
| GRAVELS WITH FINES<br>(appreciable amount of fines)                                 |  |  | GP   | Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines |
|   |  |  | GM   | Silty Gravels, Gravel-Sand-Silt Mixtures                        |
| GC  |  |  | Clayey Gravels, Gravel-Sand-Clay Mixtures  |   |
| SANDS<br>More than 50% of coarse fraction passing through No. 4 sieve.              |  | CLEAN SANDS<br>(little or no fines)                                  | SW   | Well-Graded Sands, Gravelly Sands, Little or No Fines           |
|   |  | SANDS WITH FINES<br>(appreciable amount of fines)                    | SP   | Poorly-Graded Sands, Gravelly Sands, Little or No Fines         |
|   | SM   |  | Silty Sands, Sand-Silt Mixtures  |   |
| SC  | Clayey Sands, Sand-Clay Mixtures   |  |  |   |
| FINE-GRAINED SOILS<br>More than 50% of material is smaller than No. 200 sieve size. | SILTS AND CLAYS<br>Liquid Limit less than 50%  | ML   | Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity |   |
|   |  | CL   | Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays                  |   |
|   |  | OL   | Organic Silts and Organic Silty Clays of Low Plasticity  |   |
|   | SILTS AND CLAYS<br>Liquid Limit greater than 50%                                     | MH   | Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soils  |   |
|   |  | CH   | Inorganic Clays of High Plasticity, Fat Clays  |   |
|   |  | OH   | Organic Silts and Organic Clays of Medium to High Plasticity   |   |
| HIGHLY ORGANIC SOILS  | PT   | Peat, Humus, Swamp Soils with High Organic Contents                  |  |   |

| STRATIFICATION:                                       |             |
|---|-------------|
| DESCRIPTION   | THICKNESS   |
| Seam  | up to 1/8"  |
| Layer   | 1/8" to 12" |
| <b>Occasional:</b><br>One or less per 6" of thickness |             |
| <b>Numerous:</b><br>More than one per 6" of thickness |             |

### TYPICAL SAMPLER GRAPHIC SYMBOLS

- Bulk/Bag Sample
- Standard Penetration Split Spoon Sampler
- Rock Core
- No Recovery
- 
- 
- California Sampler
- Thin Wall

### WATER SYMBOL

- Water Level

Note: Dual Symbols are used to indicate borderline soil classifications.

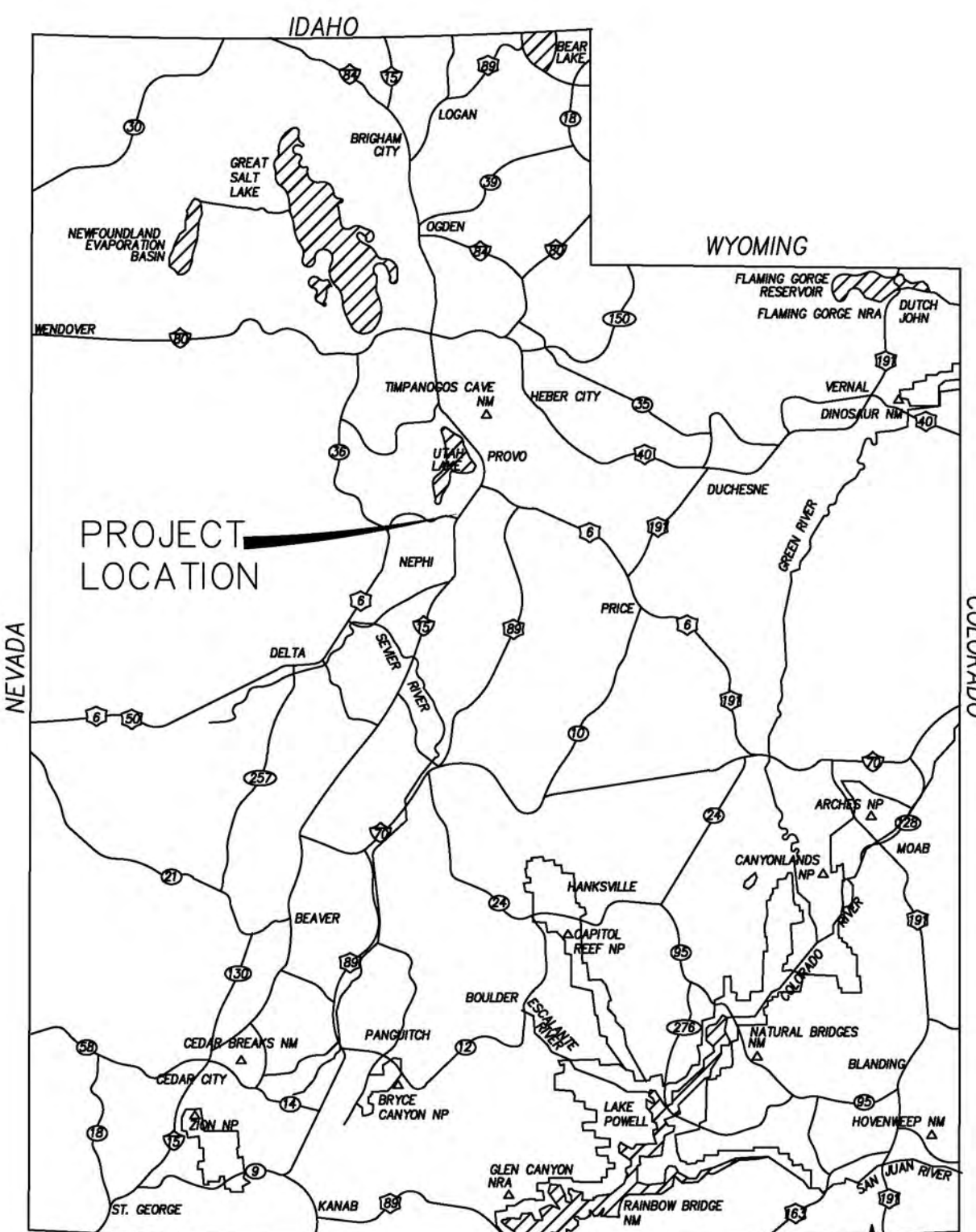
FIGURE 4



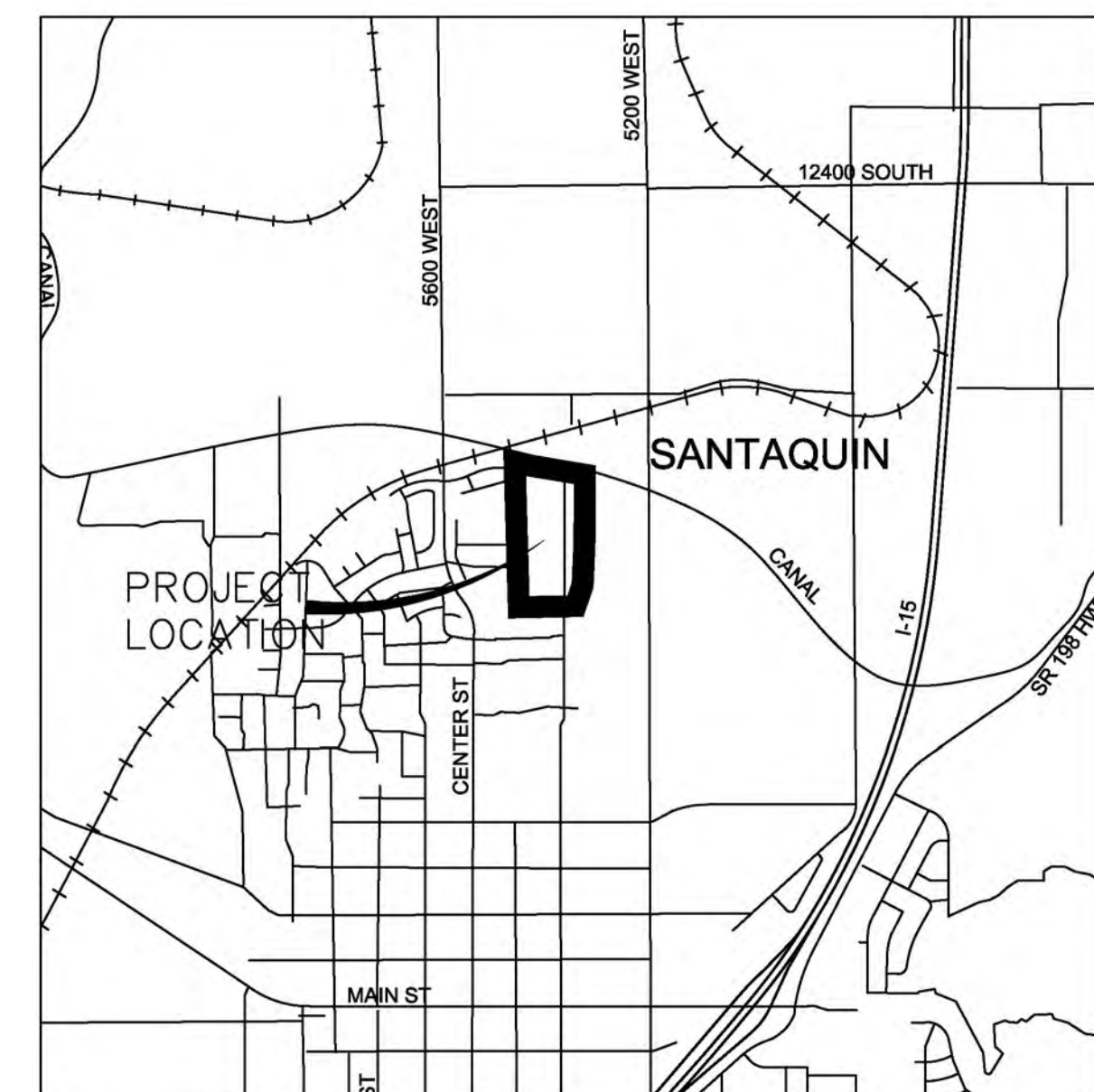
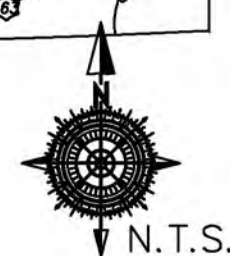
SITE DEVELOPMENT CONSTRUCTION PLANS

# STRATTON ACRES SUBDIVISION PHASE 1

| REVISIONS |             |      |                 |
|-----------|-------------|------|-----------------|
| #         | DESCRIPTION | DATE | SHEETS AFFECTED |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |
|           |             |      |                 |



VICINITY MAP

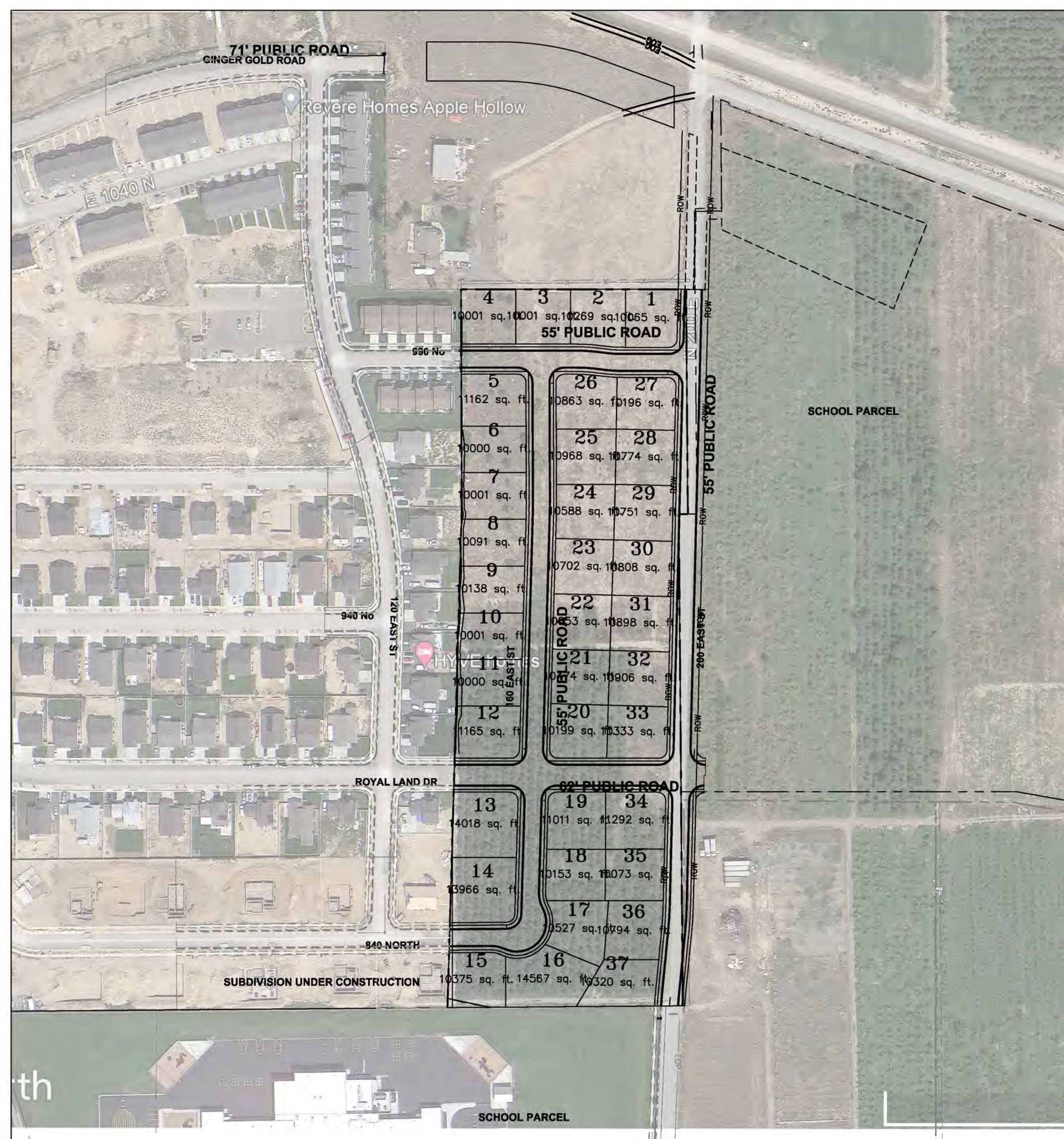


PROPERTY OWNER:  
STRATTON ACRES LLC  
KAMERON SPENCER  
847 E DRAPER MEADOW LANE  
DRAPER, UTAH 84020  
801-330-0546

ENGINEER:  
GATEWAY CONSULTING INC.  
PAUL WATSON  
PO BOX 951005  
RIVERTON, UTAH 84095  
801-694-5848

LOCATION  
SOUTH HALF OF THE NORTHWEST QUARTER  
OF SECTION 36 TOWNSHIP 9 SOUTH, RANGE 1  
EAST, SALT LAKE BASE AND MERIDIAN  
SANTAQUIN, UTAH COUNTY, UTAH

FINAL  
JULY 20th, 2022



NOTE:  
The Developer and the General Contractor understand that it is his/her responsibility to ensure that all improvements installed within this development are constructed in full compliance with all State and SANTAQUIN City Codes, Ordinances and Standards. These plans are not all inclusive of all minimum codes, ordinances and standards. This fact does not relieve the Developer or General Contractor from full compliance with all minimum State and Santaquin City Codes, Ordinances and Standards'.

**LEGEND**

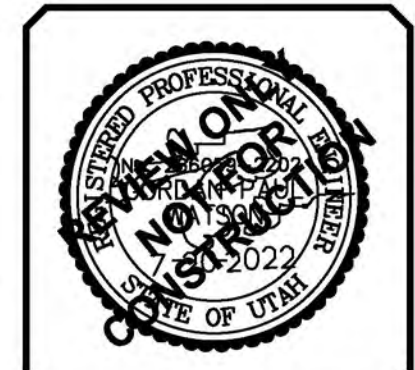
|                                 |              |                          |
|---------------------------------|--------------|--------------------------|
| SEWER LINE                      | SEWER        | EXISTING SEWER LINE      |
| SEWER APPARATUS                 | SEWER        | EXISTING STORM LINE      |
| STORM LINE                      | STORM        | EXISTING DRAINAGE SHELL  |
| DRAINAGE SHELL                  | STORM        | EXISTING WATER LINE      |
| STORM APPARATUS                 | STORM        | EXISTING IRRIGATION LINE |
| WATER LINE                      | WATER        | EXISTING FENCE           |
| WATER APPARATUS                 | WATER        | EXISTING CONTOURS (SPT)  |
| FIRE HYDRANT                    | FIRE HYDRANT | 1'-17" FINISH CONTOUR    |
| IRRIGATION LINE                 | IRRIGATION   | 1'-17" FINISH CONTOUR    |
| IRRIGATION APPARATUS            | IRRIGATION   | PHASE LINE               |
| DRAINAGE LINE (DRAINAGE REPORT) | DRAINAGE     | CLUB & GUTTER            |
|                                 |              | PROPOSED TRAIL           |
|                                 |              | PUE                      |
|                                 |              | SETBACK                  |
|                                 |              | SIDE SLOPE AND GREATER   |
|                                 |              | PROPOSED OPEN SPACE      |
|                                 |              | DRAINAGE DIRECTION       |

| INDEX OF SHEETS |                                       |
|-----------------|---------------------------------------|
| 1               | TITLE SHEET                           |
| 1A              | PROJECT NOTES                         |
|                 | BOUNDARY SURVEY                       |
|                 | PLAT                                  |
| 2               | EXISTING CONDITIONS/DEMOLITION PLAN   |
| 3               | OVERALL SITE PLAN                     |
|                 |                                       |
| G1-G3           | GRADING SHEETS (1"=30')               |
|                 |                                       |
| U1              | CULINARY WATER UTILITY PLAN           |
| U2              | SANITARY SEWER UTILITY PLAN           |
| U3              | STORM WATER UTILITY PLAN              |
| U4              | IRRIGATION UTILITY PLAN               |
|                 |                                       |
| SS1             | LIGHTING / SIGNAGE /STRIPING PLAN     |
|                 |                                       |
| PP1             | WEST ROAD 0+00 to 8+00                |
| PP2             | WEST ROAD 8+00 to 12+00               |
| PP3             | EAST ROAD 0+00 to 8+00                |
| PP4             | EAST ROAD 8+00 to 16+50               |
| PP5             | GINGER ROAD 0+00 to 7+50              |
| PP6             | NORTH ROAD 0+00 to 4+75               |
| PP7             | SOUTH ROAD 0+00 to 4+50               |
|                 |                                       |
| SWPPP           | STORM WATER POLLUTION PREVENTION PLAN |
| ER1-ER2         | EROSION CONTROL NOTES AND DETAILS     |
|                 |                                       |
| D1              | STREET DETAILS                        |
| D2              | SANITARY SEWER DETAILS                |
| D3              | CULINARY WATER DETAILS                |
| D4              | STORM WATER DETAILS                   |
| D5              | PRESSURIZED IRRIGATION DETAILS        |
| D6              | STREET LIGHT AND SIGNAGE DETAILS      |

|              |                   |
|--------------|-------------------|
| ZONE         | R-10              |
| LOTS         | 37                |
| ACREAGE      | 12.39ac.          |
| ACREAGE LOTS | 9.19ac.           |
| ACREAGE ROW  | 3.20ac.           |
| DENSITY      | 3 lots to the ac. |

**GATEWAY CONSULTING, Inc.**  
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PH: (801) 694-5848  
paul@gatewayconsultingllc.com

CIVIL ENGINEERING • CONSULTING • LAND PLANNING  
CONSTRUCTION MANAGEMENT



SHEET NO. 1

STRATTON ACRES SUBDIVISION PHASE 1  
7-20-2022

### CONSTRUCTION NOTES

#### Construction Notes

1. All work to be done in conformity to SATAQUIN CITY standards and specification and as directed by the SATAQUIN CITY engineer or his representatives.
2. All sewer and water system construction shall be in accordance with SATAQUIN CITY standards and specifications. Contractor to obtain current standards from the SATAQUIN CITY.
3. Contractor shall contact blue stakes prior to beginning construction, to facilitate the location and identification of existing underground utilities.
4. Contractor responsible for protection of all utilities shown or not shown.
5. Contractor shall be responsible to obtain and pay for necessary permits.
6. Contractors shall attend all pre-construction conferences.
7. Contractor shall be responsible for all public safety and OSHA standards.
8. Contractor shall field verify locations and invert elevations of all existing sewer facilities and other utilities prior to building or staking any new sewer lines.
9. Location and installation of gas, power, telephone, and cable lines to be done in accordance with SATAQUIN CITY standards.
10. All culinary water lines shall be per SATAQUIN CITY standards.
11. Minimum depth for culinary waterlines from the final grade to the top of the pipe is 4 feet, unless otherwise noted on the plan and profile sheets.
12. Minimum spacing between waterlines and sewer lines is 10 feet horizontally or 12 inches vertically (in times of crossing the waterline shall be above the sewer line). All other utilities shall be spaced a minimum distance of 12 inches from the waterline.
13. All ductile iron valves, hydrants, and buried fittings shall be wrapped with 8 mil thick polyethylene film tube or sheet. The film shall be held in place by and approved adhesive tape, equal to scotchrap no. 50. All fittings and valves requiring wrapping shall be wrapped prior to placing concrete thrust blocking. All valves are to be flanged to the adjacent fittings.
14. Sanitary sewer laterals shall extend into each lot 15' and be marked with a 2" by 4" board with the top 12" painted green.
15. All sewer laterals will be marked with a "S" stamped into the curb above.
16. Culinary water laterals shall extend into each lot 15' and be marked with a 2" by 4" board with the top 12" painted blue.
17. All culinary water laterals will be marked with a "W" on the curb above.
18. Contractor to verify as build sewer laterals for building FF design. Existing sewer lateral to govern.

**NOTE:**  
The Developer and the General Contractor understand that it is his/her responsibility to ensure that all improvements installed within this development are constructed in full compliance with all State and SANTAQUIN City Codes, Ordinances and Standards. These plans are not all inclusive of all minimum codes, ordinances and standards. This fact does not relieve the Developer or General Contractor from full compliance with all minimum State and Santaquin City Codes, Ordinances and Standards'.

### MISC CONSTRUCTION NOTES

THE CONTRACTOR SHALL CAREFULLY READ ALL OF THE NOTES AND SPECIFICATIONS, THE CONTRACTOR SHALL BE SATISFIED AS TO THEIR TRUE MEANING AND INTENT AND SHALL BE RESPONSIBLE FOR COMPLYING WITH EACH.

#### GENERAL NOTES

- 1) THE CONTRACTOR SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE FOLLOWING: SATAQUIN CITY STANDARD SPECIFICATIONS, LATEST EDITION, AND ALL AMENDMENTS THERETO UNLESS OTHERWISE STATED.
- 2) PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL CONTACT SATAQUIN CITY FOR A PRE-CONSTRUCTION CONFERENCE.
- 3) IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEER'S INTERPRETATION THEREOF SHALL BE CONCLUSIVE.
- 4) WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
- 5) THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR. IT SHALL BE EXPECTED THAT PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE.
- 6) THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS ON THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN PECULIAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES, WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR PECULIAR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.
- 7) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT, AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF ALL PERMITS AND APPROVALS APPLICABLE TO THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT THE NECESSARY RIGHTS-OF-WAY, EASEMENTS, AND/OR PERMITS ARE SECURED PRIOR TO CONSTRUCTION.
- 8) THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT WHERE APPLICABLE FOR ANY WORK DONE WITHIN RIGHTS-OF-WAY OR EASEMENTS FROM SATAQUIN CITY AND UDOT. CONTRACTOR SHALL NOTIFY CITY, COUNTY, AND/OR STATE, 24 HOURS IN ADVANCE OF COMMENCING THE WORK, OR AS REQUIRED BY SAID PERMITS.
- 9) THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT WHERE APPLICABLE FOR ANY WORK DONE WITHIN RIGHTS-OF-WAY OR EASEMENTS FROM SATAQUIN CITY AND UDOT. CONTRACTOR SHALL NOTIFY CITY, COUNTY, AND/OR STATE, 24 HOURS IN ADVANCE OF COMMENCING THE WORK, OR AS REQUIRED BY SAID PERMITS.
- 10) THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- 11) CONTRACTOR SHALL INSPECT THE SITE OF THE WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK.

- 12) THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER AND/OR ENGINEER.
- 13) THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.
- 14) THE CONTRACTOR AGREES THAT:
  - A. THEY SHALL BE RESPONSIBLE TO CLEAN THE JOB SITE AT THE END OF EACH PHASE OF WORK.
  - B. THEY SHALL BE RESPONSIBLE TO REMOVE AND DISPOSE OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR OWN EXPENSE IN A TIMELY MANNER.
  - C. THEY SHALL BE RESPONSIBLE TO MAINTAIN THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.
  - D. THEY SHALL BE RESPONSIBLE TO KEEP MATERIALS, EQUIPMENT, AND TRASH OUT OF THE WAY OF OTHER CONTRACTORS SO AS NOT TO DELAY THE JOB. FAILURE TO DO SO WILL RESULT IN A DEDUCTION FOR THE COST OF CLEAN UP FROM THE FINAL PAYMENT.
  - E. THEY SHALL BE RESPONSIBLE FOR THEIR OWN SAFETY, TRAFFIC CONTROL, PERMITS, RETESTING AND REINSPECTIONS AT THEIR OWN EXPENSE.
  - F. UNLESS OTHERWISE NOTED ALL EXCESS SOILS AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LAWFULLY DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.
- 15) THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- 16) DUST TO BE CONTROLLED 24 HOURS PER DAY, 7 DAYS PER WEEK, AS CONDITIONS DICTATE, WITH A WATER TRUCK.
- 17) CONSTRUCTION STAKING FOR LIMITS OF DISTURBANCE INCLUDING CONSTRUCTION AND SILT FENCES, GRADING, CURB, GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAIN, WATER, AND ELECTRICITY MAY BE DONE BY AWARDED SURVEYOR. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FORTY-EIGHT (48) HOURS IN ADVANCE OF THE NEED FOR STAKING. ANY STAKING REQUESTED BY THE CONTRACTOR OR THEIR SUBCONTRACTORS THAT IS ABOVE AND BEYOND STANDARD STAKING NEEDS, WILL BE SUBJECT TO AN EXTRA WORK BACK CHARGE TO THE CONTRACTOR.
- 18) FOR ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS, THE CONTRACTOR SHALL PRESERVE THE INTEGRITY AND LOCATION OF ANY AND ALL PUBLIC UTILITIES AND PROVIDE THE NECESSARY CONSTRUCTION TRAFFIC CONTROL. CONTRACTOR SHALL, THROUGH THE ENCROACHMENT PERMIT PROCESS, VERIFY WITH THE NECESSARY REGULATOR AGENCIES, THE NEED FOR ANY TRAFFIC ROUTING PLAN. IF A PLAN IS REQUIRED, CONTRACTOR SHALL PROVIDE A PLAN AND RECEIVE PROPER APPROVALS PRIOR TO BEGINNING CONSTRUCTION.
- 19) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
- 20) IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
- 21) WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITY. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.
- 22) THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS RECORDED AS A PRECONDITION TO FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

- 23) WORK IN EASEMENTS AND/OR RIGHTS-OF-WAY IS SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE REGULATORY AGENCY RESPONSIBLE FOR OPERATION AND/OR MAINTENANCE OF SAID EASEMENTS AND/OR RIGHTS-OF-WAY.
- 24) BENCHMARK:
  - ELEVATION: 4758.858
  - DESCRIPTION: NORTHEAST CORN SEC 36, T9S, R1E, S18&M
  - FOUND 3" BRASS CAP

#### CLEARING AND GRADING NOTES

- 1) CONTRACTOR SHALL PERFORM EARTHWORK IN ACCORDANCE WITH SATAQUIN CITY STANDARD SPECIFICATIONS, AND THE RECOMMENDED EARTHWORK SPECIFICATIONS FOUND IN THE LATEST REPORT OF GEOTECHNICAL INVESTIGATION.
- 2) THE EXISTING TOPOGRAPHY SHOWN ON THESE PLANS IS BASED ON A TOPO SURVEY SUPPLIED BY THE OWNER.
- 3) THE OWNER SHALL PROVIDE A TEMPORARY EROSION CONTROL PLAN AND OBTAIN ALL PERMITS REQUIRED BY SATAQUIN CITY, AND THE STATE OF UTAH FOR TEMPORARY EROSION CONTROL. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ALL TEMPORARY EROSION CONTROL AND MAINTENANCE, AND SHALL PROVIDE EROSION AND SEDIMENT CONTROL FORMS TO THE CITY. FOR ADDITIONAL EROSION CONTROL INFORMATION, SEE "EROSION CONTROL/REVEGETATION PLAN" SHEETS AND REPORTS.
- 4) SUBSOIL INVESTIGATIONS HAVE BEEN CONDUCTED AT THE SITE OF THE WORK. SOIL INVESTIGATIONS WERE CONDUCTED FOR DESIGN PURPOSES ONLY, AND THE DATA SHOWN IN THE REPORTS ARE FOR SUBSURFACE CONDITIONS FOUND AT THE TIME OF THE INVESTIGATION. THE OWNER AND ENGINEER DISCLAIM RESPONSIBILITY FOR THE INTERPRETATION BY THE CONTRACTOR OF DATA, SUCH AS PROJECTION OR EXTRAPOLATION, FROM THE TEST HOLES TO OTHER LOCATIONS ON THE SITE OF THE WORK, SOIL BEARING VALUES AND PROFILES, SOIL STABILITY, AND THE PRESENCE, LEVEL, AND EXTENT OF UNDERGROUND WATER FOR SUBSURFACE CONDITIONS DURING CONSTRUCTION.

### DEWATERING NOTES

- 1) THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE AND MAINTAIN ALL MACHINERY, APPLIANCES, AND EQUIPMENT TO MAINTAIN ALL EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION. THE CONTRACTOR SHALL DISPOSE OF THE WATER SO AS NOT TO CAUSE DAMAGE TO PUBLIC OR PRIVATE PROPERTY, OR TO CAUSE A NUISANCE OR MENACE TO THE PUBLIC OR VIOLATE THE LAW. THE DEWATERING SYSTEM SHALL BE INSTALLED AND OPERATED SO THAT THE GROUND WATER LEVEL OUTSIDE THE EXCAVATION IS NOT REDUCED TO THE EXTENT WHICH WOULD CAUSE DAMAGE OR ENDANGER ADJACENT STRUCTURES OR PROPERTY. ALL COST FOR DEWATERING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL PIPE CONSTRUCTION. THE STATIC WATER LEVEL SHALL BE DRAWN DOWN OPERATIONS A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF EXCAVATIONS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL SOILS AND ALLOW THE PLACEMENT OF ANY FILL TO THE SPECIFIED DENSITY. THE CONTRACTOR SHALL HAVE ON HAND, PUMPING EQUIPMENT AND MACHINERY IN GOOD WORKING CONDITION FOR EMERGENCES AND SHALL HAVE WORKMEN AVAILABLE FOR ITS OPERATION. DEWATERING SYSTEMS SHALL OPERATE CONTINUOUSLY UNTIL BACKFILL HAS BEEN COMPLETED TO 1 FOOT ABOVE THE NORMAL STATIC GROUNDWATER LEVEL.
- 2) THE CONTRACTOR SHALL CONTROL SURFACE WATER TO PREVENT ENTRY INTO EXCAVATIONS. AT EACH EXCAVATION, A SUFFICIENT NUMBER OF TEMPORARY OBSERVATION WELLS TO CONTINUOUSLY CHECK THE GROUNDWATER LEVEL SHALL BE PROVIDED.
- 3) SUMPS SHALL BE AT THE LOW POINT OF EXCAVATION. EXCAVATION SHALL BE GRADED TO DRAIN TO THE SUMPS.
- 4) THE CONTROL OF GROUNDWATER SHALL BE SUCH THAT SOFTENING OF THE BOTTOM OF EXCAVATIONS, OR FORMATION OF "BOILS," DOES NOT OCCUR. DEWATERING SYSTEMS SHALL BE DESIGNED AND OPERATED SO AS TO PREVENT REMOVAL OF THE NATURAL SOILS. THE RELEASE OF GROUNDWATER AT ITS STATIC LEVEL SHALL BE PERFORMED IN SUCH A MANNER AS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL FOUNDATIONS SOILS, PREVENT DISTURBANCE OF COMPACTED BACKFILL, AND PREVENT FLOTTING OF STRUCTURES, AND EXPOSE ALL EXISTING STRUCTURES AND SEWERS. (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR DISPOSAL OF WATER FROM CONSTRUCTION DEWATERING ACTIVITIES, IT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY DEWATERING ACTIVITIES.

### UNDERGROUND UTILITIES

- 1) THE INFORMATION SHOWN ON THE PLANS WITH REGARD TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATIONS AND/OR RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THESE LOCATIONS TO BE EITHER TRUE OR EXACT. PRIOR TO CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENTS AND TO EXPOSE ALL EXISTING UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, SEWER, STORM DRAIN, WATER, IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER FORTY-EIGHT HOURS IN ADVANCE OF THE EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE THE EXACT LOCATION AND ELEVATION CAN BE VERIFIED AND DOCUMENTED, THE COST ASSOCIATED TO PERFORM THIS WORK SHALL BE INCLUDED IN EITHER THE LUMP SUM CLEARING COST OR IN THE VARIOUS ITEMS OF WORK. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION/ELEVATION MUST BE MADE PRIOR TO CONSTRUCTION.
- 2) PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATED IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-562-4111 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK. THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES WHOSE UTILITIES ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
- 3) THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE. FOR EXCAVATIONS 4 FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES, ALONG WITH ANY LOCAL CODES OR ORDINANCES. ANY EXCAVATION GREATER THAN 10 FEET IN DEPTH REQUIRES A TRENCH BOX.
- 4) PRIOR TO OPENING AN EXCAVATION, CONTRACTOR SHALL ENDEAVOR TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS, I.E. SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE, SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXACT LOCATION AND APPROXIMATE DEPTH OF ANY UNDERGROUND INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.
- 5) IN CASES OF HIGH GROUNDWATER, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO USE RUBBER GASKET JOINTS ON ALL PRE CAST PIPES. THE COST FOR RUBBER GASKET JOINTS SHALL BE INCLUDED IN THE UNIT PRICES OF PIPE.
- 6) THE CONTRACTOR SHALL PROVIDE CLAY DAMS IN UTILITY TRENCHES TO PREVENT CHANNELING OF SUBSURFACE WATER, DURING AND AFTER CONSTRUCTION. CONSTRUCT CLAY DAMS AT THE TOP OF GRADE BREAKS AND AT THE FOLLOWING INTERVALS:
  - \* TRENCHES WITH SLOPES < 10% = DAMS AT 500' INTERVALS
  - \* TRENCHES WITH SLOPES > 10% = DAMS AT 100' INTERVALS

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PIPE OF ADEQUATE CLASSIFICATION WITH SUFFICIENT BEDDING TO MEET ALL REQUIREMENTS AND RECOMMENDATIONS OF SATAQUIN CITY FOR H-20 LOAD REQUIREMENTS.

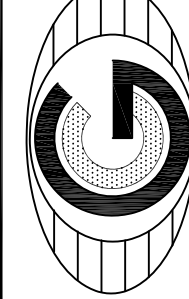
- 8) ALL CONSTRUCTION AND MATERIALS FOR THE SEWER MAIN AND LATERALS MUST COMPLY WITH THE SATAQUIN CITY DISTRICT. THE UNIT COST OF THE SEWER LATERAL INCLUDES CONNECTION TO THE SEWER MAIN.
- 9) ALL EXISTING WATER VALVES TO BE OPERATED UNDER THE DIRECTION OF SATAQUIN CITY PUBLIC WORKS DEPARTMENT PERSONNEL ONLY.
- 10) WATER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY FROM SEWER MAINS. CROSSINGS SHALL MEET STATE HEALTH STANDARDS. CONTRACTOR RESPONSIBLE FOR ALL NECESSARY FITTINGS AND THRUST BLOCKS.
- 11) THE CONTRACTOR SHALL NOTIFY ENGINEER AT LEAST 48 HOURS PRIOR TO BACKFILLING OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH THE REGULATORY AGENCY STANDARD SPECIFICATIONS.
- 12) ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER AND STREET PAVING.

### SURFACE IMPROVEMENTS

- 1) SUB GRADE PREPARATION: EARTHWORK FOR ROADWAY SECTIONS SHOULD BE CONDUCTED PER THE LATEST GEOTECH REPORT. ONCE ROADWAY EXCAVATION STARTS, THE SUB GRADE SHOULD BE SCARIFIED AND RECOMPACTED AT THE PROPER MOISTURE CONTENT TO 98 PERCENT RELATIVE DENSITY (STANDARD PROCTOR ASTM D-1557). THE NATIVE SUB GRADE SHOULD BE FIRM AND NON-YIELDING PRIOR TO SUB BASE PLACEMENT. EVERY EFFORT SHOULD BE MADE TO AVOID EXPOSING NATIVE SUB-GRADES TO EXCESS MOISTURE.
- 2) ALL MANHOLE RIMS, VALVES AND MONUMENT BOXES, ETC. SHALL BE ADJUSTED TO FINISH GRADE AFTER STREET PAVING, UNLESS OTHERWISE NOTED. ON PAVED AREAS, PROVIDE A 1 FOOT BY 1 FOOT CONCRETE COLLAR SET INTO CONCRETE CURB 1/8 INCH LOWER THAN FINISH GRADE AT OUTER EDGE. PROVIDE CONCRETE COLLAR FOR ALL VALVES AND MONUMENTS PER SATAQUIN CITY STANDARD SPECIFICATIONS. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR SAID FACILITIES.
- 3) PAYMENT FOR PAVEMENT WILL BE MADE ONLY FOR AREAS SHOWN ON THE PLANS. REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.
- 4) INSTALLATION OF STREET LIGHTS SHALL BE IN ACCORDANCE WITH SATAQUIN CITY DEVELOPMENT GUIDELINES.
- 5) PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS BUILT TO THESE PLANS AND SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE OWNER, CITY OF SATAQUIN, AND POWER CO. TO HAVE THE ELECTRICAL SYSTEM AND ALL STREET LIGHTS ENERGIZED.
- 6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPPING AND/OR PAVEMENT MARKINGS NECESSARY TO THE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.
- 7) STRIPING AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH UPW SECTIONS 01570 AND 02580.

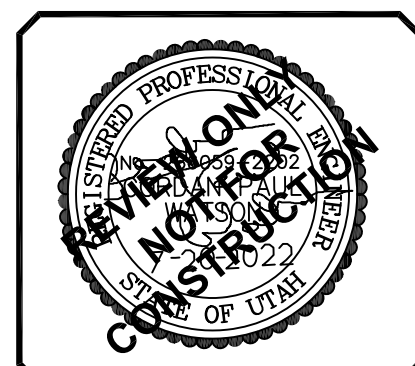
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|        | CHECKED BY:  |        |
|        | SCALE:       |        |

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**CIVIL ENGINEERING \* CONSULTING \* LAND PLANNING**  
**CONSTRUCTION MANAGEMENT**

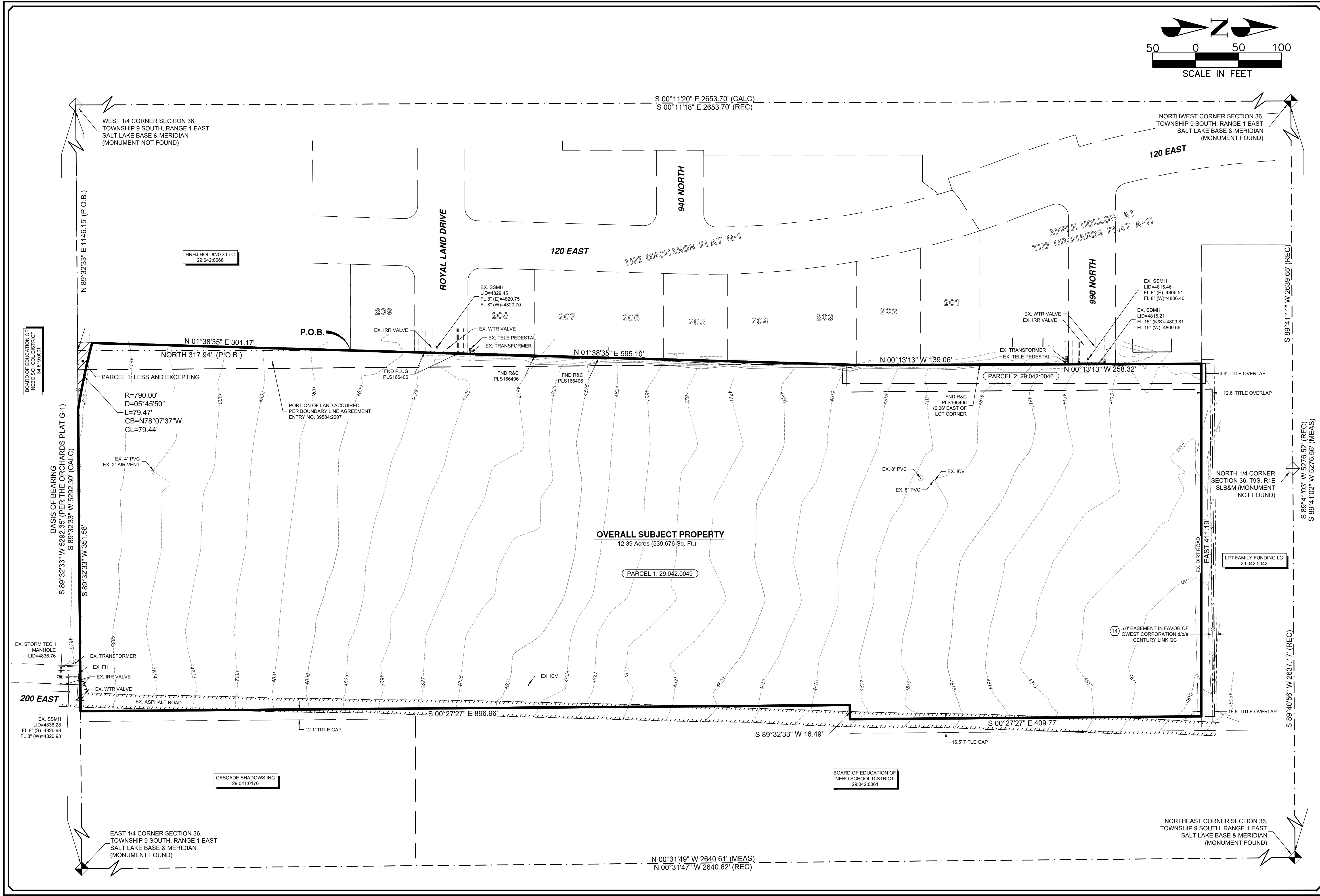
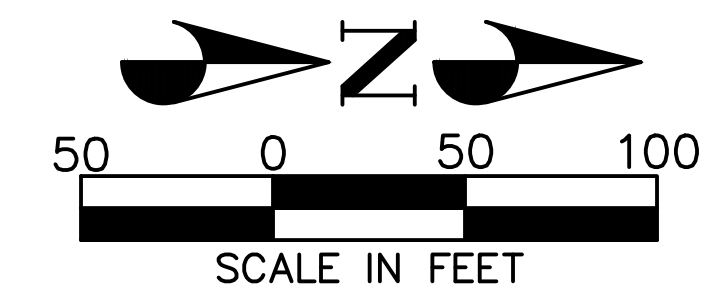
**STRATTON ACRES**  
**PHASE 1**  
**PROJECT NOTES**  
**AND CONTACT INFORMATION**  
 7-20-2022  
 PLOT DATE:

SANTAQUIN CITY



SHEET NO. **1A**





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**PEPG CONSULTING LLC**  
 9270 SOUTH 300 WEST • SANDY, UT 84070  
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 CIVIL ENGINEERING - LAND SURVEYING - PROJECT MANAGEMENT  
 GEOTECHNICAL - MATERIALS TESTING - INSPECTIONS

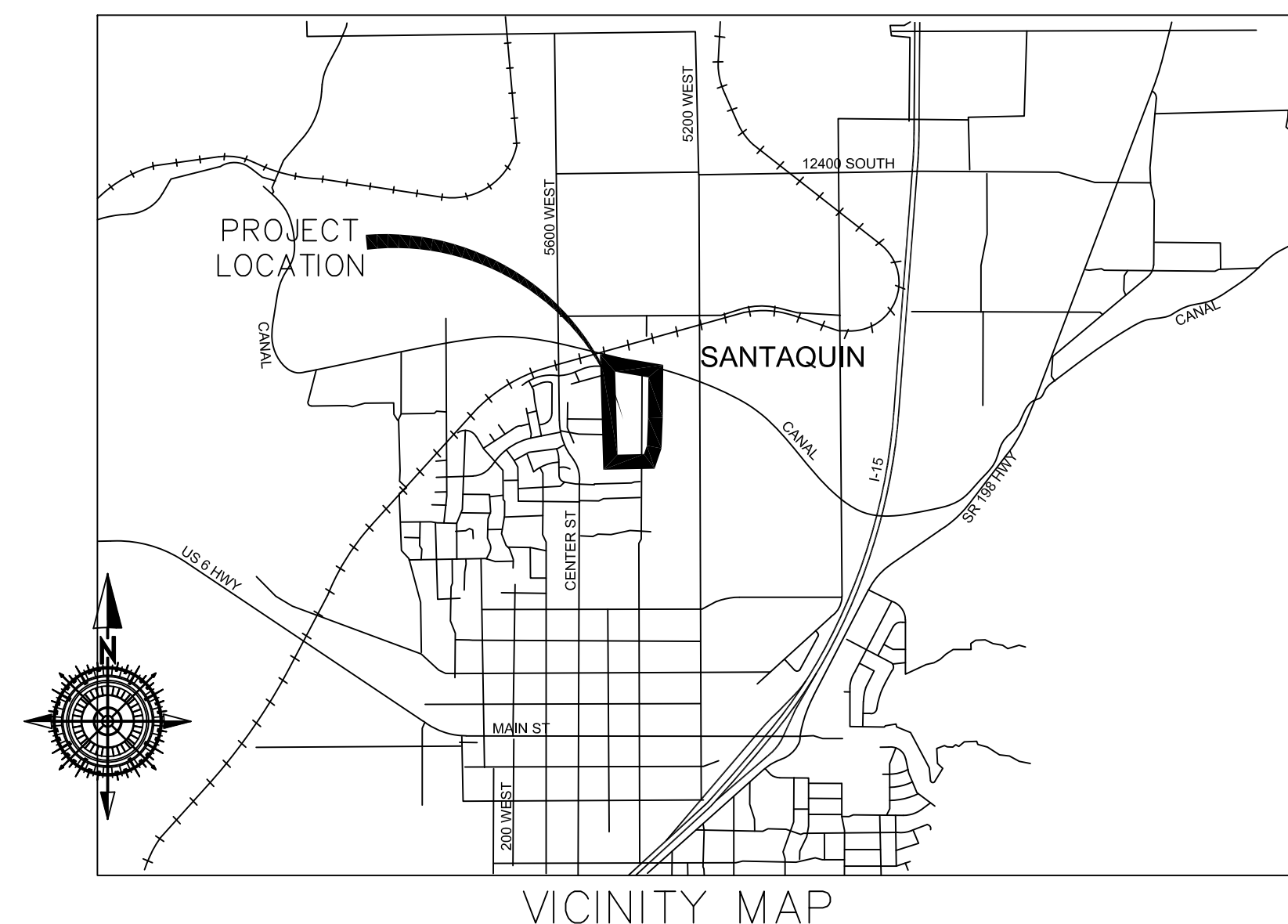
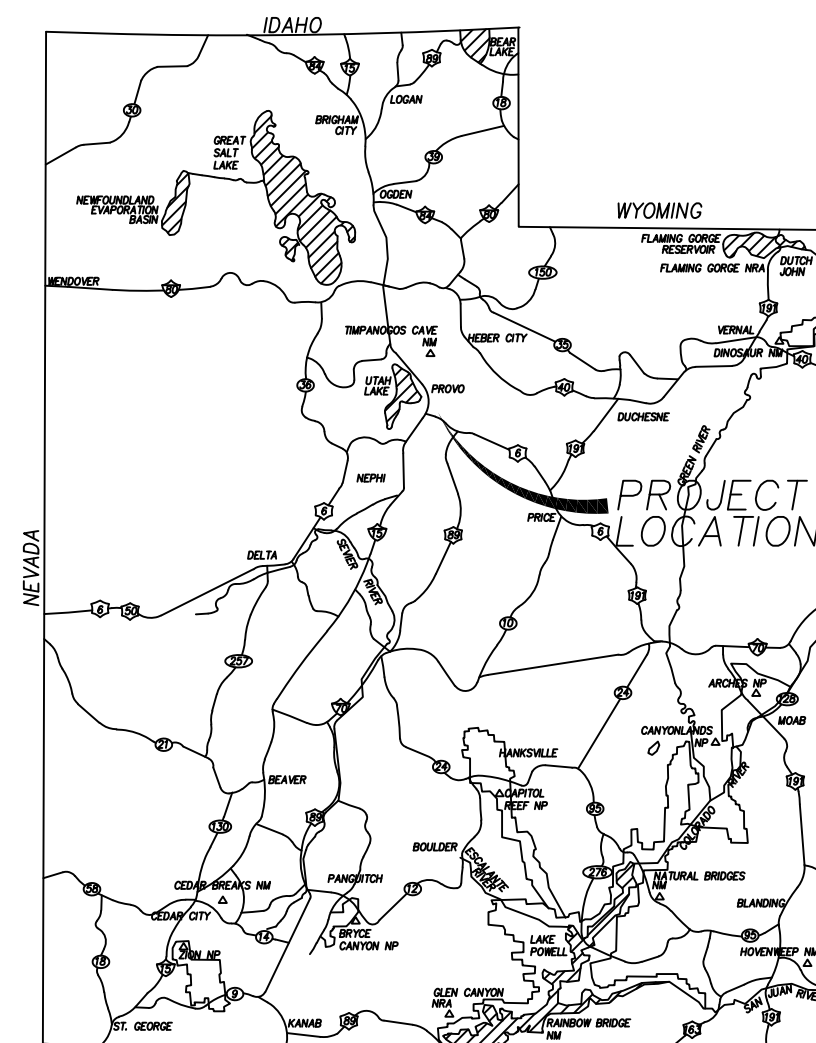
**CEDAR POINT CAPITAL, INC.**  
**ALTA/NSPS SURVEY**  
 PARCEL 1: 29-042-0049  
 PARCEL 2: 29-042-0046  
 MARCH 16, 2021  
 DWG: ALTA-01  
 PROJECT NUMBER: 14.35.2110  
 DRAWING FILE

SANTAQUIN CITY

# STRATTON ACRES SUBDIVISION PHASE 1

PROJECT LOCATED IN THE SOUTH HALF OF THE NORTHWEST CORNER  
OF SECTION 36, TOWNSHIP 9 SOUTH, RANGE 1 EAST  
SALT LAKE BASE AND MERIDIAN  
SANTAQUIN CITY, UTAH COUNTY, UTAH

## FINAL PLAT



### SURVEYOR'S CERTIFICATE

I, \_\_\_\_\_ DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR WITH  
PEPG CONSULTING, LLC AND THAT I HOLD LICENSE NO. 9679988 AS PRESCRIBED UNDER THE  
LAWS OF THE STATE OF UTAH IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL  
LAND SURVEYORS LICENSING ACT. I FURTHER CERTIFY BY AUTHORITY OF THE OWNER(S), I  
HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED  
BELOW IN ACCORDANCE WITH SECTION 17-23-17 AND HAVE VERIFIED ALL MEASUREMENTS  
AND HAVE PLACED MONUMENTS AS REPRESENTED ON THIS PLAT. AND THE PLAT IS STRATTON  
ACRES SUBDIVISION PHASE 1, SANTAQUIN, UTAH, HAS BEEN DRAWN CORRECTLY TO THE  
DESIGNATED SCALE AND IS A TRUE AND CORRECT REPRESENTATION OF THE HEREIN  
DESCRIBED LANDS INCLUDED IN SAID SUBDIVISION, BASED UPON DATA COMPILED FROM  
RECORDS IN THE SALT LAKE COUNTY RECORDER'S OFFICE AND FROM SAID SURVEY MADE BY  
ME ON THE GROUND.

### BOUNDARY DESCRIPTION

Beginning at the southeast corner of Lot 209 of The Orchards Plat G-1, Entry Number  
102759:2019, Map Number 16746; said point being North 89°32'33" East, along the section  
line, 1146.15 feet and North 317.94 feet from the East Quarter Corner of Section 36,  
Township 9 South, Range 1 East, Salt Lake Base and Meridian; said East Quarter Corner of  
Section 36 being South 89°32'33" West, along the section line, 5292.30 feet from the  
Quarter Corner of said Section 36; and running thence along the easterly boundary line of  
said The Orchards Plat G-1 the following two (2) calls; thence North 01°38'35" E, 595.10  
feet; thence North 00°13'13" West, 139.06 feet to a point at the southeast corner of the  
Apple Hollow at The Orchards Plat A-11, Entry Number 12754:2019, Map Number 16860;  
thence North 00°13'13" West, along the easterly boundary line of said Apple Hollow at The  
Orchards Plat A-11, 258.32 feet; thence East, 411.19 feet; thence South 00°27'27" East,  
409.77 feet; thence South 89°32'33" West, 16.49 feet; thence South 00°27'27" East, 896.96  
feet to a point the quarter section line; thence South 89°32'33" West, along said quarter  
section line, 429.81 feet, thence North 01°38'35" East, 318.15 feet to the point of beginning.

Contains: 12.40 Acres

DATE: \_\_\_\_\_

### OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL MEN BY THESE PRESENTS, THAT ALL OF THE UNDERSIGNED OWNERS  
OF ALL OF THE PROPERTY DESCRIBED IN THE SURVEYORS CERTIFICATE HEREON  
AND SHOWN ON THE MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS,  
BLOCKS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS,  
EASEMENTS, AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR THE  
PERPETUAL USE OF THE PUBLIC.

IN WITNESS WHEREOF WE HAVE HEREUNTO SET OUR HANDS THIS \_\_\_\_\_  
DAY OF \_\_\_\_\_, A.D. 20\_\_\_\_\_

STRATTON ACRES LLC  
KAMERON SPENCER (MANAGER)

### NOTES:

- TYPE II MONUMENT (ALUMINUM CAN AND REBAR) TO BE SET. #5 REBAR & CAP TO BE SET AT ALL LOT CORNERS. NAIL AND BRASS WASHER TO BE SET IN TOP OF CURB @ PROJECTION OF SIDE LOT LINES.
- NDORBU - NEIGHBORHOOD DELIVERY BOX UNIT.
- ALL FRONT AND SIDE YARD LANDSCAPING MUST BE BONDED OR INSTALLED PRIOR TO RECEIVING CERTIFICATE OF OCCUPANCY.
- ALTHOUGH CORNER VISIBILITY AREAS DO NOT IMPACT THE PROPOSED STRUCTURE SETBACKS ON CORNER LOTS, THE DRIVEWAY LOCATIONS MUST BE OUT OF THE CLEAR VIEW AREAS, WHICH MAY IMPACT HOME ORIENTATION.
- THIS PROPERTY IS LOCATED IN AN AGRICULTURAL COMMUNITY IN WHICH NORMAL AGRICULTURAL USES AND ACTIVITIES ARE COMMON AND PART OF THE IDENTITY OF SANTAQUIN CITY. IT CAN BE ANTICIPATED THAT SUCH AGRICULTURAL USES AND ACTIVITIES MAY NOW OR IN THE FUTURE BE CONDUCTED NEAR THIS PROPERTY. PROPERTY OWNERS NEED TO UNDERSTAND AND ACKNOWLEDGE THAT THEY MAY EXPERIENCE ANNOYANCE OR INCONVENIENCE WHICH MAY RESULT FROM SUCH NORMAL AGRICULTURAL USES AND ACTIVITIES. ADDITIONALLY, PROPERTY OWNERS MUST REFRAIN FROM TRESPASSING ON PRIVATE PROPERTY WHICH CAN NEGATIVELY IMPACT THE INTEGRITY OF AGRICULTURAL LANDS AND BUSINESSES.

### ROCKY MOUNTAIN POWER

1. PURSUANT TO UTAH CODE ANN. 54-3-27 THIS PLAT CONVEYS TO THE OWNER(S) OR OPERATORS OF UTILITY FACILITIES A PUBLIC UTILITY EASEMENT ALONG WITH ALL THE RIGHTS AND DUTIES DESCRIBED THEREIN.  
2. PURSUANT TO UTAH CODE ANN. 17-27a-603(4)(c)(i) ROCKY MOUNTAIN POWER ACCEPTS DELIVERY OF THE PUE AS DESCRIBED IN THIS PLAT AND APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS AND APPROXIMATES THE LOCATION OF THE PUBLIC UTILITY EASEMENTS, BUT DOES NOT WARRANT THEIR PRECISE LOCATION. ROCKY MOUNTAIN POWER MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT AFFECT ANY RIGHT THAT ROCKY MOUNTAIN POWER HAS UNDER:  
a. A RECORDED EASEMENT OR RIGHT-OF-WAY  
b. THE LAW APPLICABLE TO PRESCRIPTIVE RIGHTS  
c. TITLE 54, CHAPTER 86, DAMAGE TO UNDERGROUND UTILITY FACILITIES OR  
d. ANY OTHER PROVISION OF LAW

Approved this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

ROCKY MOUNTAIN POWER

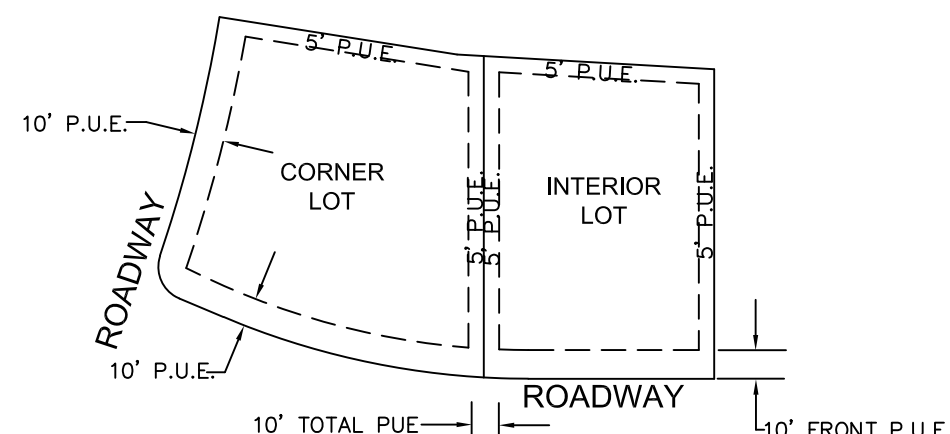
### DOMINION ENERGY QUESTAR CORPORATION

DOMINION ENERGY QUESTAR CORPORATION APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. DOMINION ENERGY QUESTAR CORPORATION MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT CONSTITUTE ABROGATION OR WAIVER OF ANY OTHER EXISTING RIGHTS, OBLIGATIONS OR LIABILITIES PROVIDED BY LAW OR EQUITY. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL OR ACKNOWLEDGEMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH IN THE OWNERS DEDICATION AND THE NOTES AND DOES NOT CONSTITUTE A GUARANTEE OF PARTICULAR TERMS OF NATURAL GAS SERVICE. FOR FURTHER INFORMATION PLEASE CONTACT DOMINION ENERGY QUESTAR CORPORATION'S RIGHT-OF-WAY DEPARTMENT AT 800-368-8532.  
Approved this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

QUESTAR GAS COMPANY

By: \_\_\_\_\_  
Title: \_\_\_\_\_

### TYPICAL LOT P.U.E. DETAILS

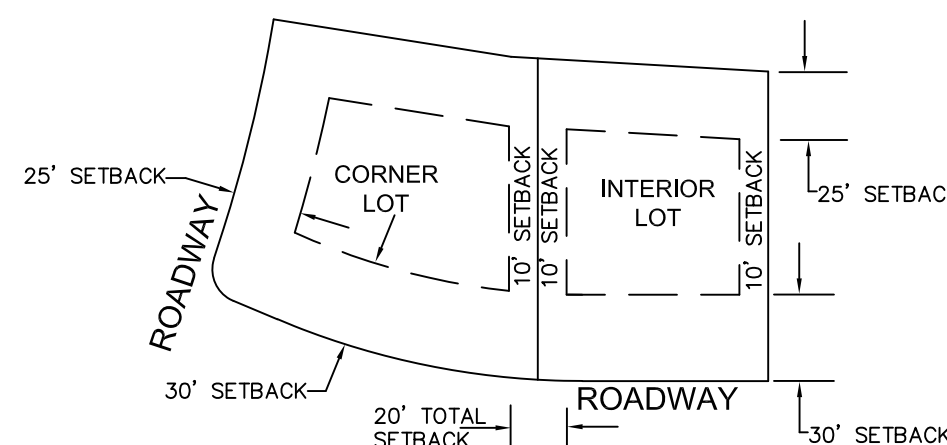


INTERIOR AND CORNER LOTS  
UNLESS OTHERWISE NOTED ON PLAT

- NOTES:
- 10 FEET PUE FRONT AND STREET SIDES.
  - 5 FEET PUE REAR AND 5' PUE SIDE LOT LINES.

NOT TO SCALE

### TYPICAL LOT SETBACK DETAILS



INTERIOR AND CORNER LOTS  
UNLESS OTHERWISE NOTED ON PLAT

- NOTES:
- 30FT FRONT SETBACK
  - 25FT REAR SETBACK
  - 10FT SIDE LOT SETBACK

NOT TO SCALE

### SCHOOL BOARD ACKNOWLEDGMENT

STATE OF UTAH COUNTY OF \_\_\_\_\_ S.S.  
ON THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, PERSONALLY APPEARED BEFORE ME \_\_\_\_\_  
FOR AND IN BEHALF OF \_\_\_\_\_  
WHO BEING BY ME DULY SWORN, DID SAY THAT (S)HE IS THE SIGNER(S) OF THE FOREGOING INSTRUMENT, AND THAT THE (S)HE EXECUTED THE SAME.

MY COMMISSION EXPIRES \_\_\_\_\_ NOTARY PUBLIC RESIDING IN \_\_\_\_\_ COUNTY

### LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF UTAH COUNTY OF \_\_\_\_\_ S.S.  
On the \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_, personally appeared before me, the undersigned Notary Public, in and for said County of \_\_\_\_\_ in said State of Utah, \_\_\_\_\_ who after being duly sworn acknowledged to me that \_\_\_\_\_ a Limited Liability Company ( ), that He signed the owners dedication freely and voluntarily for and in behalf of said Limited Liability Company for the purposes therein

MY COMMISSION EXPIRES \_\_\_\_\_ NOTARY PUBLIC RESIDING IN \_\_\_\_\_ COUNTY

### UTAH COUNTY RECORDER

NO. \_\_\_\_\_ BOOK \_\_\_\_\_ PAGE \_\_\_\_\_ DATE \_\_\_\_\_  
STATE OF UTAH, COUNTY OF WASATCH, TIME \_\_\_\_\_, FEE \_\_\_\_\_  
RECORDED AND FILED AT THE REQUEST OF \_\_\_\_\_

COUNTY RECORDER

SURVEYOR OF RECORD:

**CMT TECHNICAL SERVICES**

9270 SOUTH 300 WEST • SANDY, UT 84070  
PHONE: (801) 562-2521 • FAX: (801) 562-2551

MATERIALS TESTING • INSPECTION SERVICES • LAB TESTING • GEOTECHNICAL  
ENVIRONMENTAL • CIVIL ENGINEERING • TRANSPORTATION ENGINEERING  
SURVEYING • CONSTRUCTION MANAGEMENT • SPECIALTY LAB

PROJECT ENGINEER:

**GATEWAY CONSULTING, inc**  
P.O. BOX 951005 SOUTH JORDAN, UT 84095  
PH: (801) 694-5848  
paul@gatewayconsultingllc.com

### LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF UTAH COUNTY OF \_\_\_\_\_ S.S.  
On the \_\_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_\_, personally appeared before me, the undersigned Notary Public, in and for said County of \_\_\_\_\_ in said State of Utah, \_\_\_\_\_ who after being duly sworn acknowledged to me that \_\_\_\_\_ a Limited Liability Company ( ), that He signed the owners dedication freely and voluntarily for and in behalf of said Limited Liability Company for the purposes therein

MY COMMISSION EXPIRES \_\_\_\_\_ NOTARY PUBLIC RESIDING IN \_\_\_\_\_ COUNTY

COUNTY RECORDER SEAL

CITY CLERK SEAL

SURVEYORS SEAL

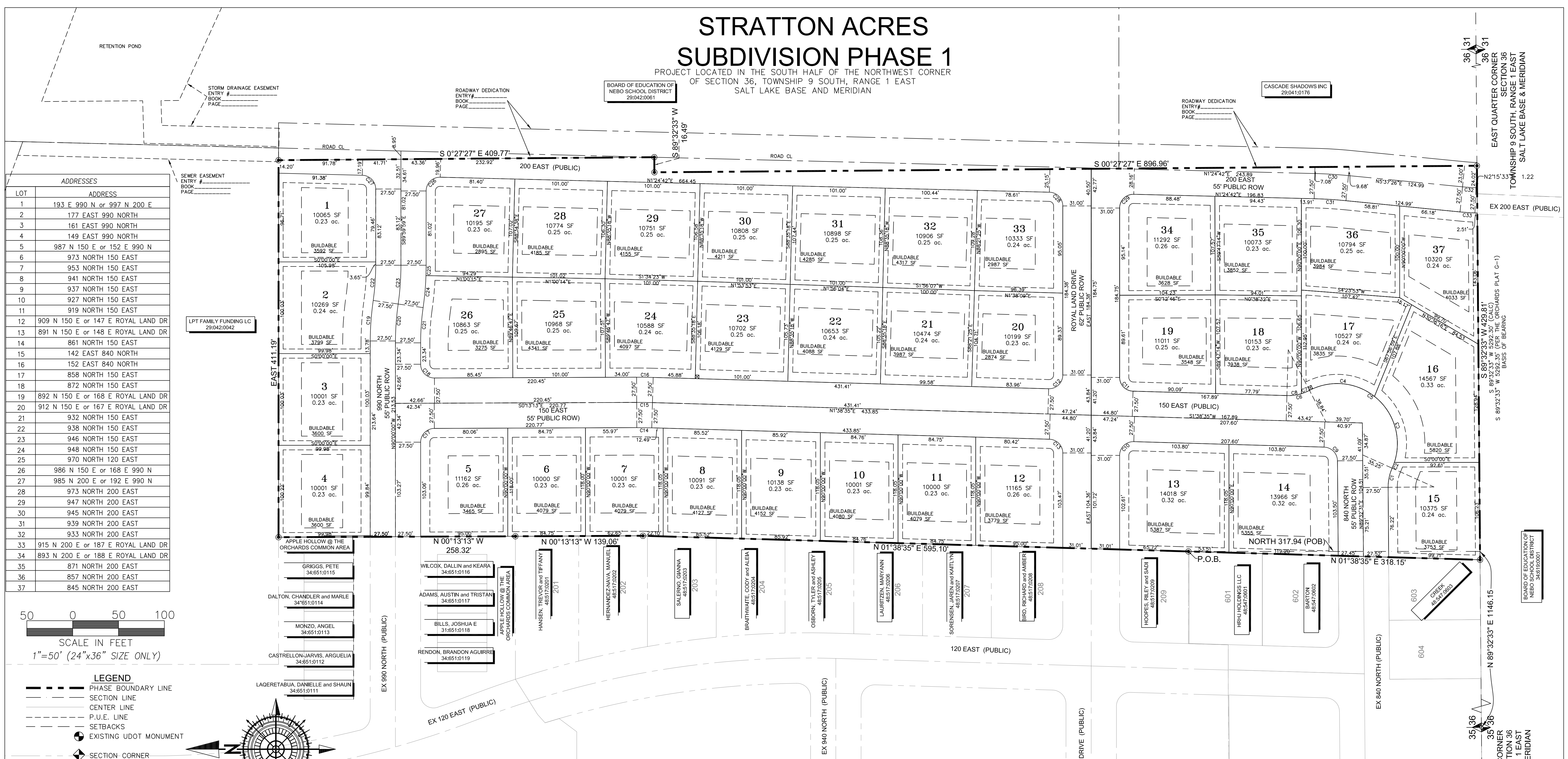
CITY ENGINEER SEAL

SHEET NO

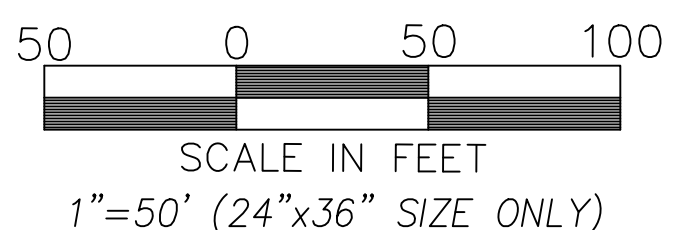
1 / 2

# STRATTON ACRES SUBDIVISION PHASE 1

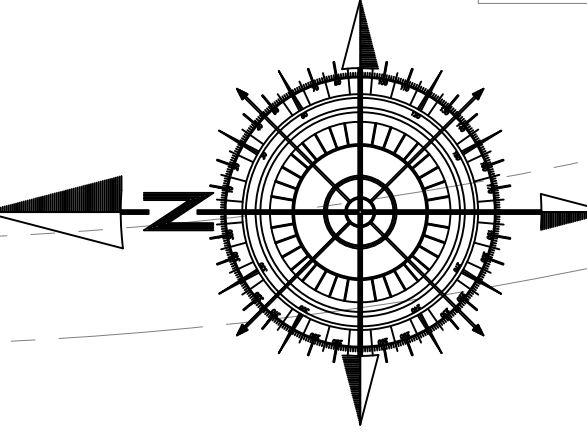
PROJECT LOCATED IN THE SOUTH HALF OF THE NORTHWEST CORNER  
OF SECTION 36, TOWNSHIP 9 SOUTH, RANGE 1 EAST  
SALT LAKE BASE AND MERIDIAN



| LOT | ADDRESS                            |
|-----|------------------------------------|
| 1   | 193 E 990 N or 997 N 200 E         |
| 2   | 177 EAST 990 NORTH                 |
| 3   | 161 EAST 990 NORTH                 |
| 4   | 149 EAST 990 NORTH                 |
| 5   | 987 N 150 E or 152 E 990 N         |
| 6   | 973 NORTH 150 EAST                 |
| 7   | 953 NORTH 150 EAST                 |
| 8   | 941 NORTH 150 EAST                 |
| 9   | 937 NORTH 150 EAST                 |
| 10  | 927 NORTH 150 EAST                 |
| 11  | 919 NORTH 150 EAST                 |
| 12  | 909 N 150 E or 147 E ROYAL LAND DR |
| 13  | 891 N 150 E or 148 E ROYAL LAND DR |
| 14  | 861 NORTH 150 EAST                 |
| 15  | 142 EAST 840 NORTH                 |
| 16  | 152 EAST 840 NORTH                 |
| 17  | 858 NORTH 150 EAST                 |
| 18  | 872 NORTH 150 EAST                 |
| 19  | 892 N 150 E or 168 E ROYAL LAND DR |
| 20  | 912 N 150 E or 167 E ROYAL LAND DR |
| 21  | 932 NORTH 150 EAST                 |
| 22  | 938 NORTH 150 EAST                 |
| 23  | 946 NORTH 150 EAST                 |
| 24  | 948 NORTH 150 EAST                 |
| 25  | 970 NORTH 120 EAST                 |
| 26  | 986 N 150 E or 168 E 990 N         |
| 27  | 985 N 200 E or 192 E 990 N         |
| 28  | 973 NORTH 200 EAST                 |
| 29  | 947 NORTH 200 EAST                 |
| 30  | 945 NORTH 200 EAST                 |
| 31  | 939 NORTH 200 EAST                 |
| 32  | 933 NORTH 200 EAST                 |
| 33  | 915 N 200 E or 187 E ROYAL LAND DR |
| 34  | 893 N 200 E or 188 E ROYAL LAND DR |
| 35  | 871 NORTH 200 EAST                 |
| 36  | 857 NORTH 200 EAST                 |
| 37  | 845 NORTH 200 EAST                 |



- LEGEND**
- PHASE BOUNDARY LINE
  - SECTION LINE
  - CENTER LINE
  - P.U.E. LINE
  - SETBACKS
  - EXISTING UDOT MONUMENT
  - ◆ SECTION CORNER
  - BOUNDARY CORNER
  - EXISTING REBAR AND CAP
  - ☒ NBDCU MAIL BOX



| CURVE | LENGTH  | RADIUS  | CHORD DIST. | CHORD BRG.  | DELTA      |
|-------|---------|---------|-------------|-------------|------------|
| C1    | 21.48'  | 50.00'  | 21.32'      | N78°08'53"W | 24°37'12"  |
| C2    | 6.75'   | 65.50'  | 6.74'       | N68°47'18"W | 5°54'01"   |
| C3    | 80.07'  | 65.50'  | 75.18'      | S73°14'28"W | 70°02'26"  |
| C4    | 75.27'  | 65.50'  | 71.19'      | S5°18'04"W  | 65°50'23"  |
| C5    | 162.13' | 65.56'  | 123.86'     | N43°15'30"E | 141°40'59" |
| C6    | 16.05'  | 50.00'  | 15.98'      | S7°33'08"E  | 18°23'26"  |
| C7    | 9.49'   | 50.00'  | 9.47'       | S22°10'59"E | 10°52'16"  |
| C8    | 16.05'  | 50.00'  | 15.98'      | S7°33'08"E  | 18°23'26"  |
| C9    | 23.13'  | 15.00'  | 20.91'      | S45°49'26"W | 88°21'41"  |
| C10   | 23.99'  | 15.00'  | 21.52'      | N44°10'42"W | 91°38'35"  |
| C11   | 23.13'  | 15.00'  | 20.91'      | S45°49'18"W | 88°21'25"  |
| C12   | 23.99'  | 15.00'  | 21.52'      | S44°10'42"E | 91°38'35"  |
| C13   | 23.13'  | 15.00'  | 20.91'      | N45°49'18"E | 88°21'25"  |
| C14   | 16.29'  | 501.00' | 16.29'      | N0°42'41"E  | 1°51'48"   |
| C15   | 17.19'  | 528.50' | 17.19'      | N0°42'41"E  | 1°51'48"   |
| C16   | 18.08'  | 556.00' | 18.08'      | S0°42'41"W  | 1°51'48"   |
| C17   | 23.50'  | 15.00'  | 21.17'      | N45°06'37"W | 89°46'47"  |

| CURVE | LENGTH | RADIUS  | CHORD DIST. | CHORD BRG.  | DELTA     |
|-------|--------|---------|-------------|-------------|-----------|
| C18   | 23.62' | 15.00'  | 21.25'      | S44°53'23"W | 90°13'13" |
| C19   | 44.32' | 327.50' | 44.28'      | S85°45'33"E | 7°45'11"  |
| C20   | 42.46' | 300.00' | 42.42'      | N85°56'43"W | 8°06'33"  |
| C21   | 38.57' | 272.50' | 38.54'      | N85°56'43"W | 8°06'33"  |
| C22   | 38.57' | 272.50' | 38.53'      | S85°56'43"E | 8°06'32"  |
| C23   | 42.46' | 300.00' | 42.42'      | S85°56'43"E | 8°06'32"  |
| C24   | 35.03' | 327.50' | 35.01'      | N84°56'53"W | 6°07'41"  |
| C25   | 11.32' | 327.50' | 11.32'      | N89°00'46"W | 1°58'51"  |
| C26   | 23.93' | 15.00'  | 21.47'      | N44°17'38"W | 91°24'40" |
| C27   | 23.19' | 15.00'  | 20.95'      | N45°42'21"E | 88°35'18" |
| C28   | 23.19' | 15.00'  | 20.95'      | N45°42'21"E | 88°35'18" |
| C29   | 23.93' | 15.00'  | 21.47'      | N44°17'39"W | 91°24'42" |
| C30   | 36.76' | 500.00' | 36.75'      | N3°31'04"E  | 4°12'44"  |
| C31   | 34.74' | 472.50' | 34.73'      | N3°31'04"E  | 4°12'44"  |
| C32   | 14.68' | 250.00' | 14.68'      | S3°56'30"W  | 3°21'53"  |
| C33   | 16.35' | 277.50' | 16.34'      | N3°56'11"E  | 3°22'30"  |

SURVEYOR OF RECORD:

**CMT TECHNICAL SERVICES**

9270 SOUTH 300 WEST • SANDY, UT 84070  
PHONE: (801) 562-2521 • FAX: (801) 562-2551

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PH: (801) 694-5848  
paul@gatewayconsultingllc.com

UTAH COUNTY RECORDER

NO. \_\_\_\_\_ BOOK \_\_\_\_\_ PAGE \_\_\_\_\_ DATE \_\_\_\_\_  
STATE OF UTAH, COUNTY OF WASATCH, TIME \_\_\_\_\_, FEE \_\_\_\_\_  
RECORDED AND FILED AT THE REQUEST OF \_\_\_\_\_

COUNTY RECORDER

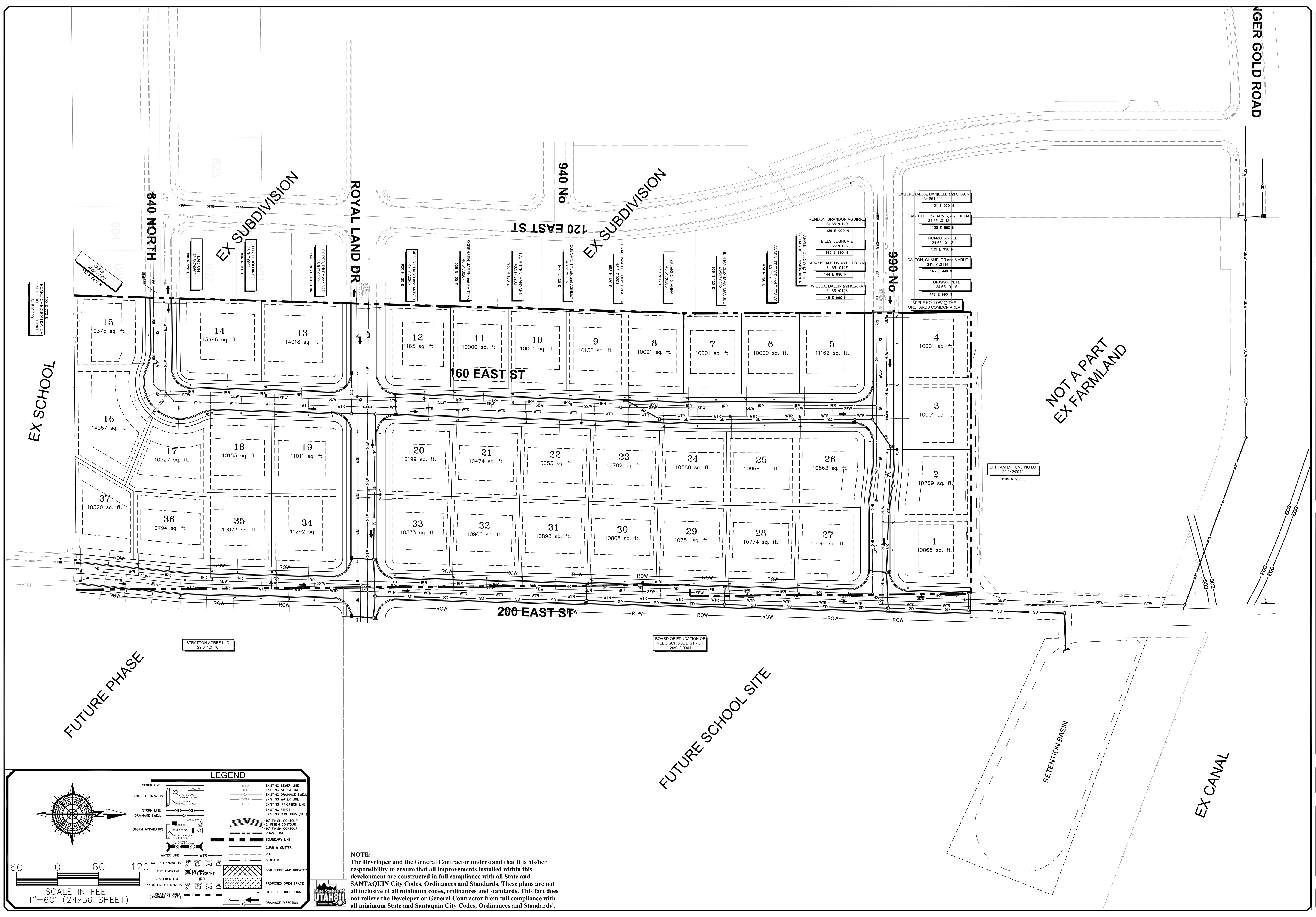
COUNTY RECORDER SEAL

SHEET NO

2 / 2







| NO. | DESCRIPTION | DATE | APP'D |
|-----|-------------|------|-------|
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|     |             |      |       |
|     |             |      |       |
|     |             |      |       |
|     |             |      |       |

ORIG. DATE: 2-8-21  
 SURVEY BY: OPW  
 DRAWN BY: OPW  
 DESIGNED BY: OPW  
 CHECKED BY: OPW  
 SCALE: 1"=60'

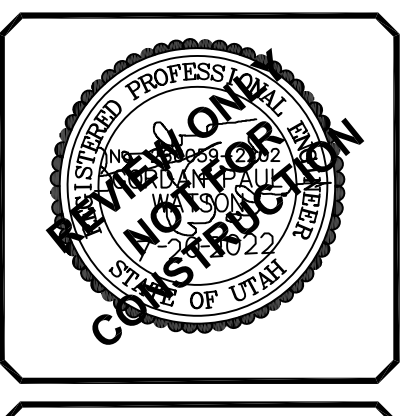
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 paul@gatewayconsultingllc.com

CIVIL ENGINEERING \* CONSULTING \* LAND PLANNING  
 CONSTRUCTION MANAGEMENT

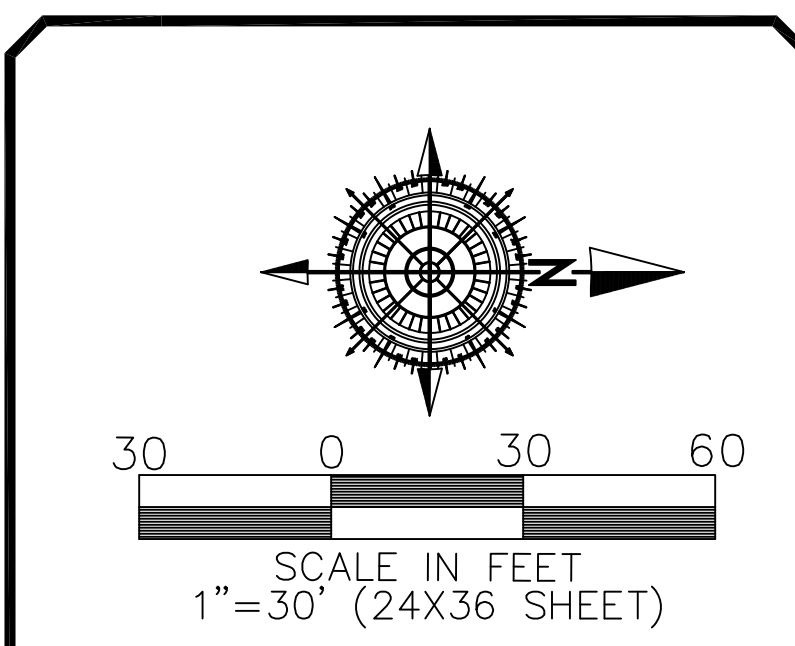
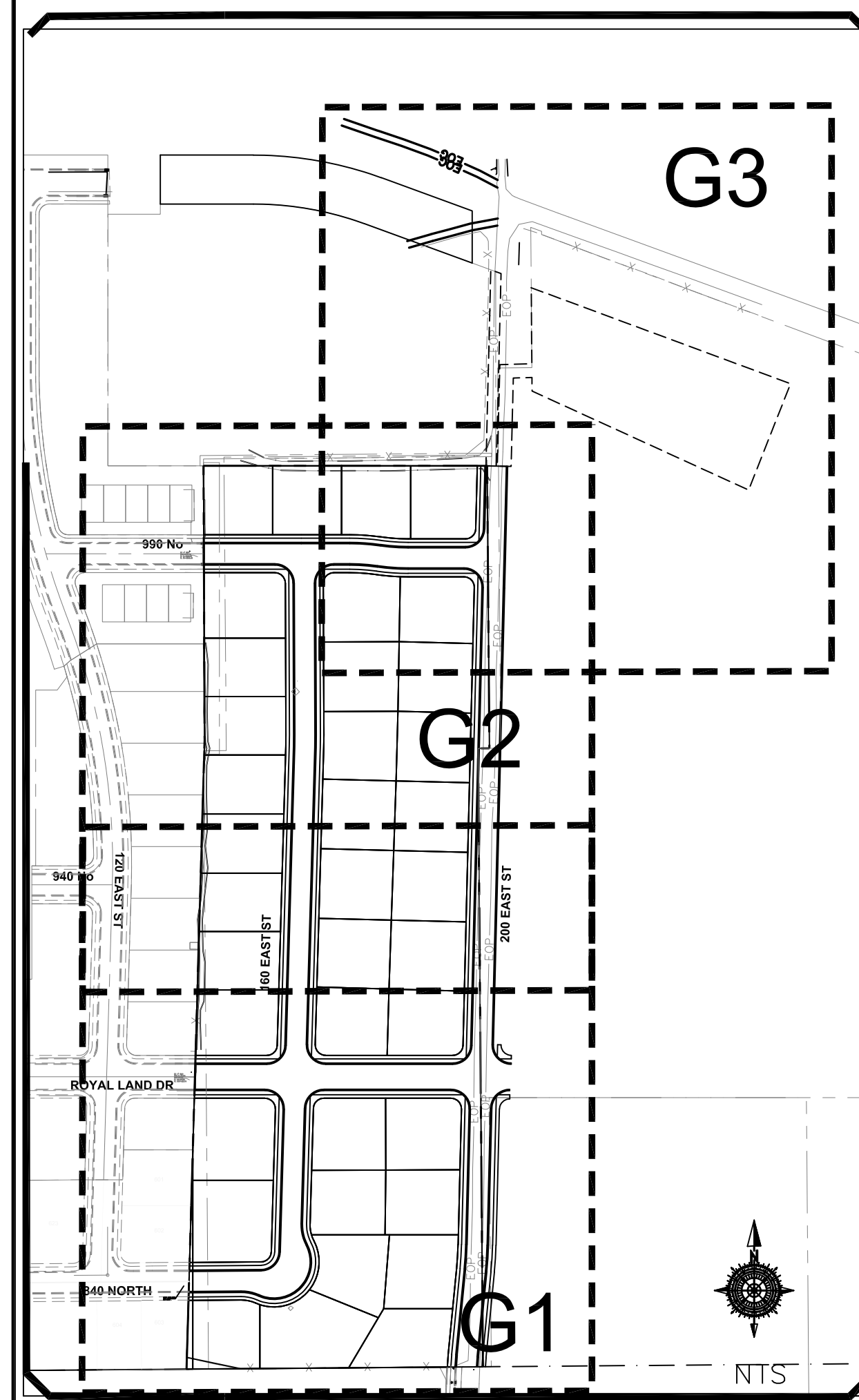
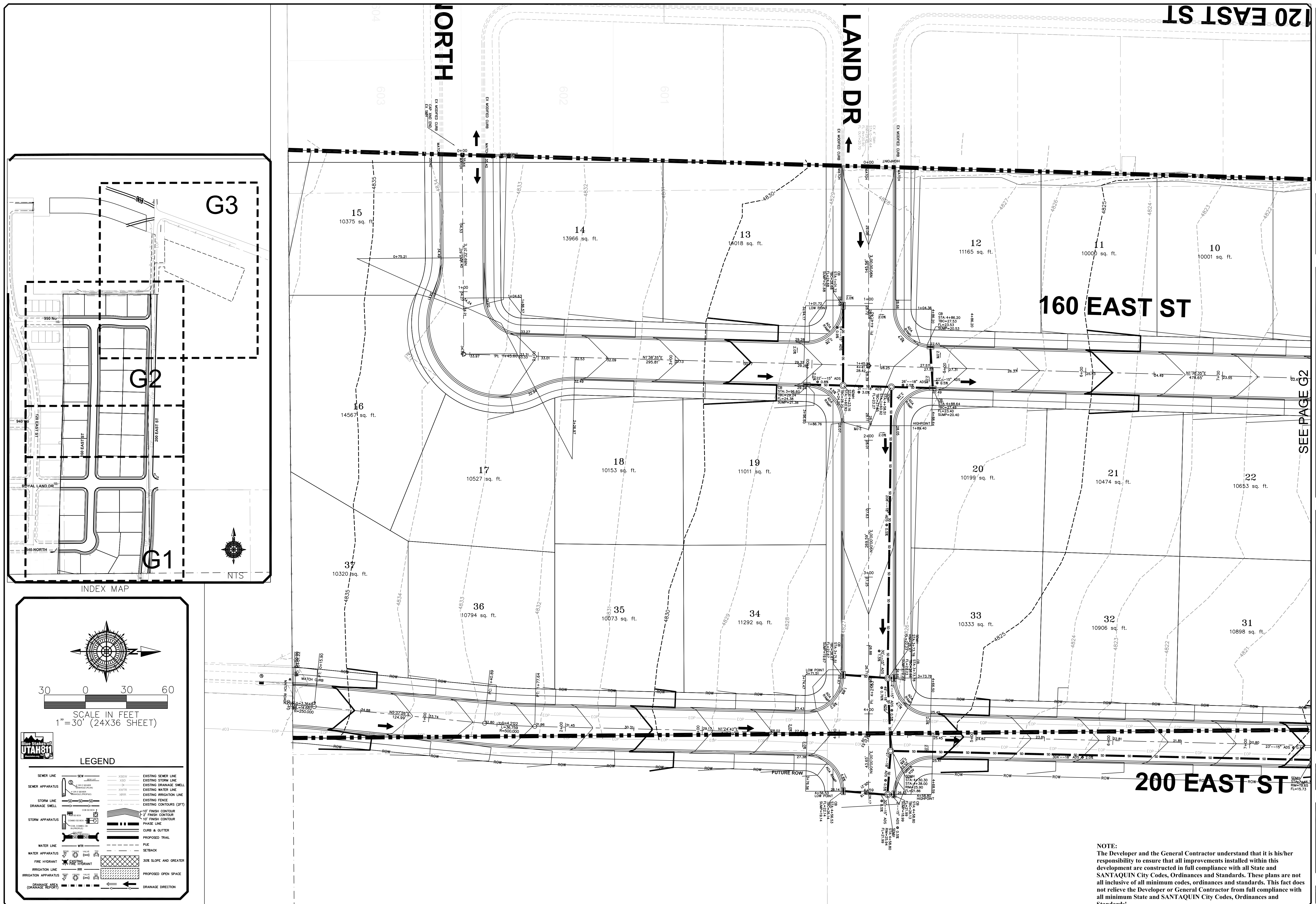
**STRATTON ACRES PHASE 1**  
 SITE PLAN

7-20-2022

SANTAQUIN CITY



SHEET NO. 3



**LEGEND**

|                                 |     |                          |                       |
|---------------------------------|-----|--------------------------|-----------------------|
| SEWER LINE                      | SEW | EXISTING SEWER LINE      | SEW                   |
| SEWER APPARATUS                 | SEW | EXISTING STORM LINE      | STO                   |
| STORM LINE                      | STO | EXISTING DRAINAGE SHELL  | DSH                   |
| DRAINAGE SHELL                  | DSH | EXISTING WATER LINE      | WTR                   |
| STORM APPARATUS                 | STO | EXISTING IRRIGATION LINE | IRR                   |
| WATER LINE                      | WTR | EXISTING FENCE           | FNC                   |
| WATER APPARATUS                 | WTR | EXISTING CONTOURS (PT)   | CON                   |
| FIRE HYDRANT                    | FHY | 10' FINISH CONTOUR       | 10'                   |
| IRRIGATION LINE                 | IRR | 2' FINISH CONTOUR        | 2'                    |
| IRRIGATION APPARATUS            | IRR | 10' FINISH CONTOUR       | 10'                   |
| DRAINAGE AREA (DRAINAGE REPORT) | DA  | PROPOSED TRAIL           | TRAIL                 |
|                                 |     | PUE                      | PUE                   |
|                                 |     | SETBACK                  | SETBACK               |
|                                 |     | 30% SLOPE AND GREATER    | 30% SLOPE AND GREATER |
|                                 |     | PROPOSED OPEN SPACE      | PROPOSED OPEN SPACE   |
|                                 |     | DRAINAGE DIRECTION       | DRAINAGE DIRECTION    |

**NOTE:**  
The Developer and the General Contractor understand that it is his/her responsibility to ensure that all improvements installed within this development are constructed in full compliance with all State and SANTAQUIN City Codes, Ordinances and Standards. These plans are not all inclusive of all minimum codes, ordinances and standards. This fact does not relieve the Developer or General Contractor from full compliance with all minimum State and SANTAQUIN City Codes, Ordinances and Standards.

| NO. | DESCRIPTION | DATE | APP'D |
|-----|-------------|------|-------|
|     |             |      |       |
|     |             |      |       |
|     |             |      |       |

ORIG. DATE: 2-8-21  
 SURVEY BY: OPW  
 DRAWN BY: OPW  
 DESIGNED BY: OPW  
 CHECKED BY: OPW  
 SCALE: 1"=30'

**GATEWAY CONSULTING, Inc**  
 P.O. BOX 951005 SOUTH JORDAN, UT 84095  
 PH: (801) 694-5848  
 paul@gatewayconsultingllc.com

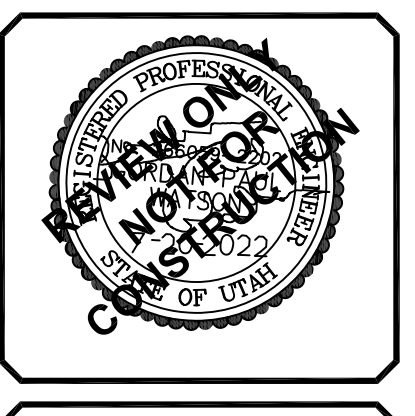
CIVIL ENGINEERING \* CONSULTING \* LAND PLANNING  
 CONSTRUCTION MANAGEMENT

**STRATTON ACRES  
 PHASE 1**

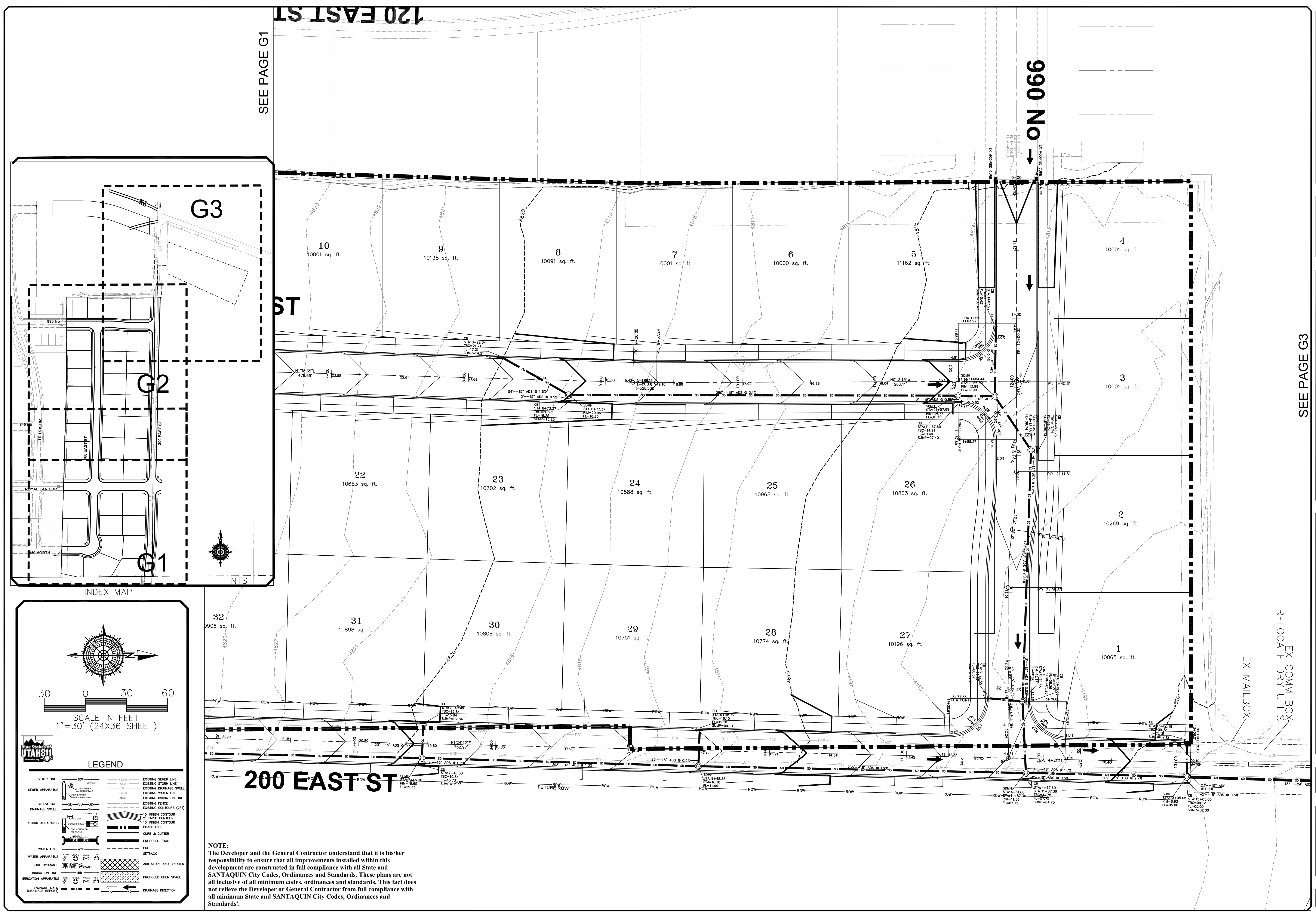
**GRADING**

7-20-2022

SANTAQUIN CITY

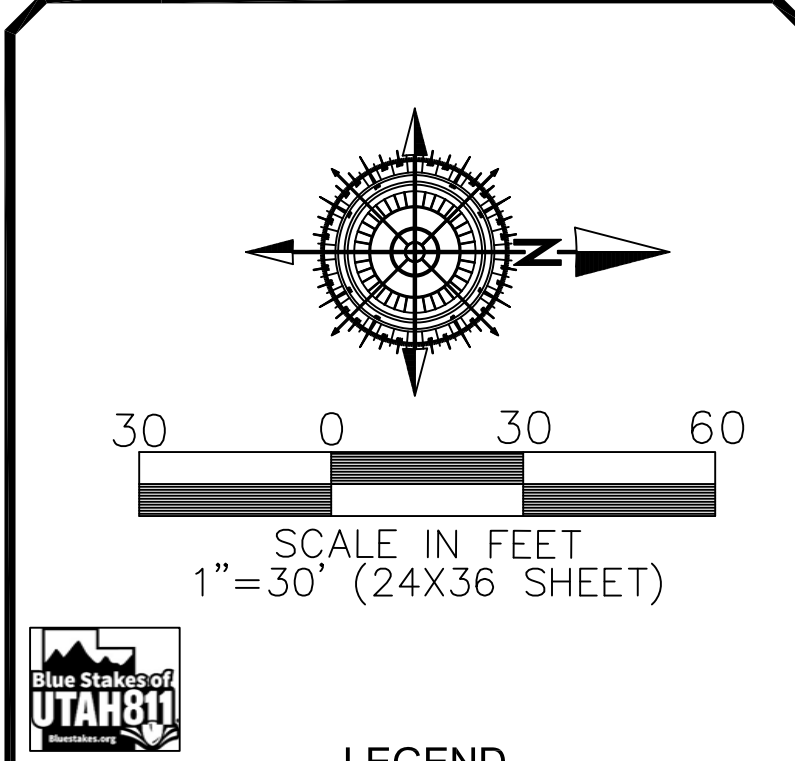


SHEET NO. **G1**



SEE PAGE G1

SEE PAGE G3



**NOTE:**  
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**LEGEND**

|  |                                 |  |                          |
|--|---------------------------------|--|--------------------------|
|  | SEWER                           |  | EXISTING SEWER LINE      |
|  | SEWER APPARATUS                 |  | EXISTING STORM LINE      |
|  | STORM LINE                      |  | EXISTING DRAINAGE SHELL  |
|  | DRAINAGE SHELL                  |  | EXISTING WATER LINE      |
|  | STORM APPARATUS                 |  | EXISTING IRRIGATION LINE |
|  | WATER LINE                      |  | EXISTING FENCE           |
|  | WATER APPARATUS                 |  | EXISTING CONTOURS (PT)   |
|  | FIRE HYDRANT                    |  | 10' FINISH CONTOUR       |
|  | IRRIGATION LINE                 |  | 2' FINISH CONTOUR        |
|  | IRRIGATION APPARATUS            |  | 10' FINISH CONTOUR       |
|  | DRAINAGE AREA (DRAINAGE REPORT) |  | PHASE LINE               |
|  |                                 |  | CURB & GUTTER            |
|  |                                 |  | PROPOSED TRAIL           |
|  |                                 |  | PUE                      |
|  |                                 |  | SETBACK                  |
|  |                                 |  | 3:1 SLOPE AND GREATER    |
|  |                                 |  | PROPOSED OPEN SPACE      |
|  |                                 |  | DRAINAGE DIRECTION       |

| NO. | DESCRIPTION | DATE | APP'D |
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ORIG. DATE: 2-8-21  
 SURVEY BY: OPW  
 DRAWN BY: OPW  
 DESIGNED BY: OPW  
 CHECKED BY: OPW  
 SCALE: 1"=30'

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 CONSTRUCTION MANAGEMENT

**STRATTON ACRES PHASE 1 GRADING**

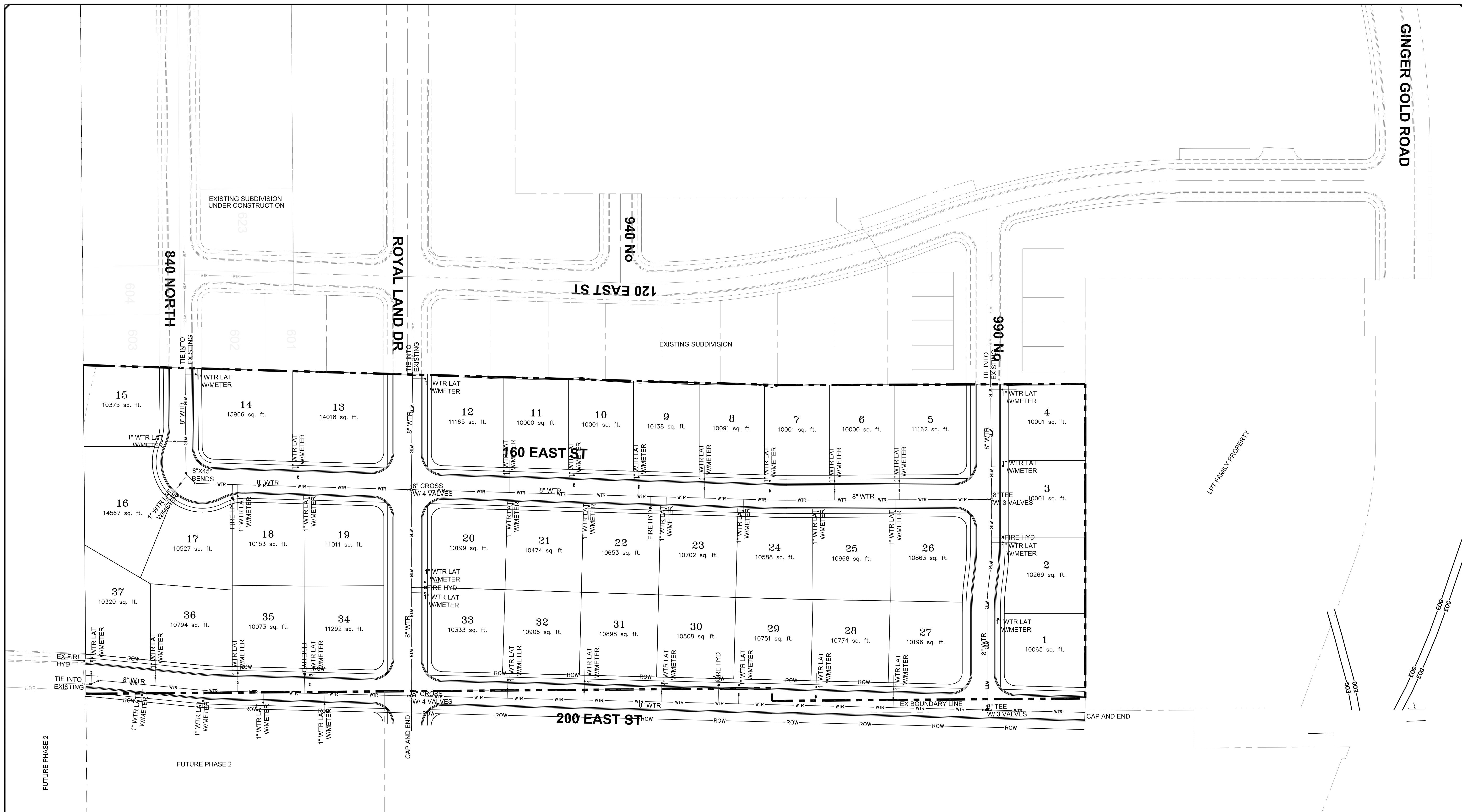
7-20-2022

SANTAQUIN CITY



SHEET NO. **G2**



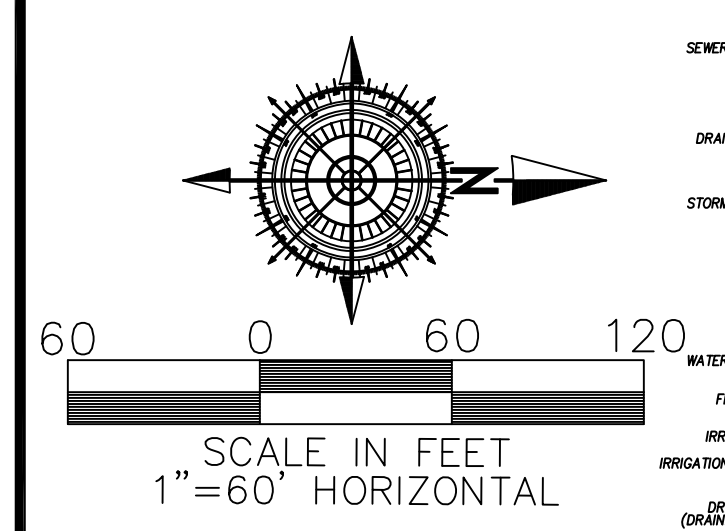


**LEGEND**

|  |                                |  |                          |
|--|--------------------------------|--|--------------------------|
|  | SEWER LINE                     |  | EXISTING SEWER LINE      |
|  | SEWER APPARATUS                |  | EXISTING STORM LINE      |
|  | STORM LINE                     |  | EXISTING DRAINAGE SHELL  |
|  | STORM LINE WITH DRAINAGE SHELL |  | EXISTING WATER LINE      |
|  | STORM APPARATUS                |  | EXISTING IRRIGATION LINE |
|  | WATER LINE                     |  | EXISTING FENCE           |
|  | WATER APPARATUS                |  | EXISTING CONTOURS (DTF)  |
|  | FIRE HYDRANT                   |  | 12' FINISH CONTOUR       |
|  | IRRIGATION APPARATUS           |  | 2' FINISH CONTOUR        |
|  | DRAINAGE AREA (DRAINAGE BASIN) |  | 10' FINISH CONTOUR       |
|  |                                |  | CLASS & OUTLET           |
|  |                                |  | PROPOSED TRAIL           |
|  |                                |  | FILE                     |
|  |                                |  | SETBACK                  |
|  |                                |  | SLOPE AND GREATER        |
|  |                                |  | PROPOSED OPEN SPACE      |
|  |                                |  | DRAINAGE DIRECTION       |

**Blue Stakes of UTAH 811**

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| NO. | DESCRIPTION | DATE | APP'D |
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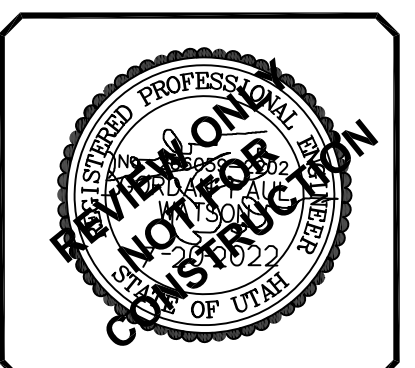
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 DRAWN BY: GPW  
 DESIGNED BY: GPW  
 CHECKED BY: GPW  
 SCALE: 1"=60'

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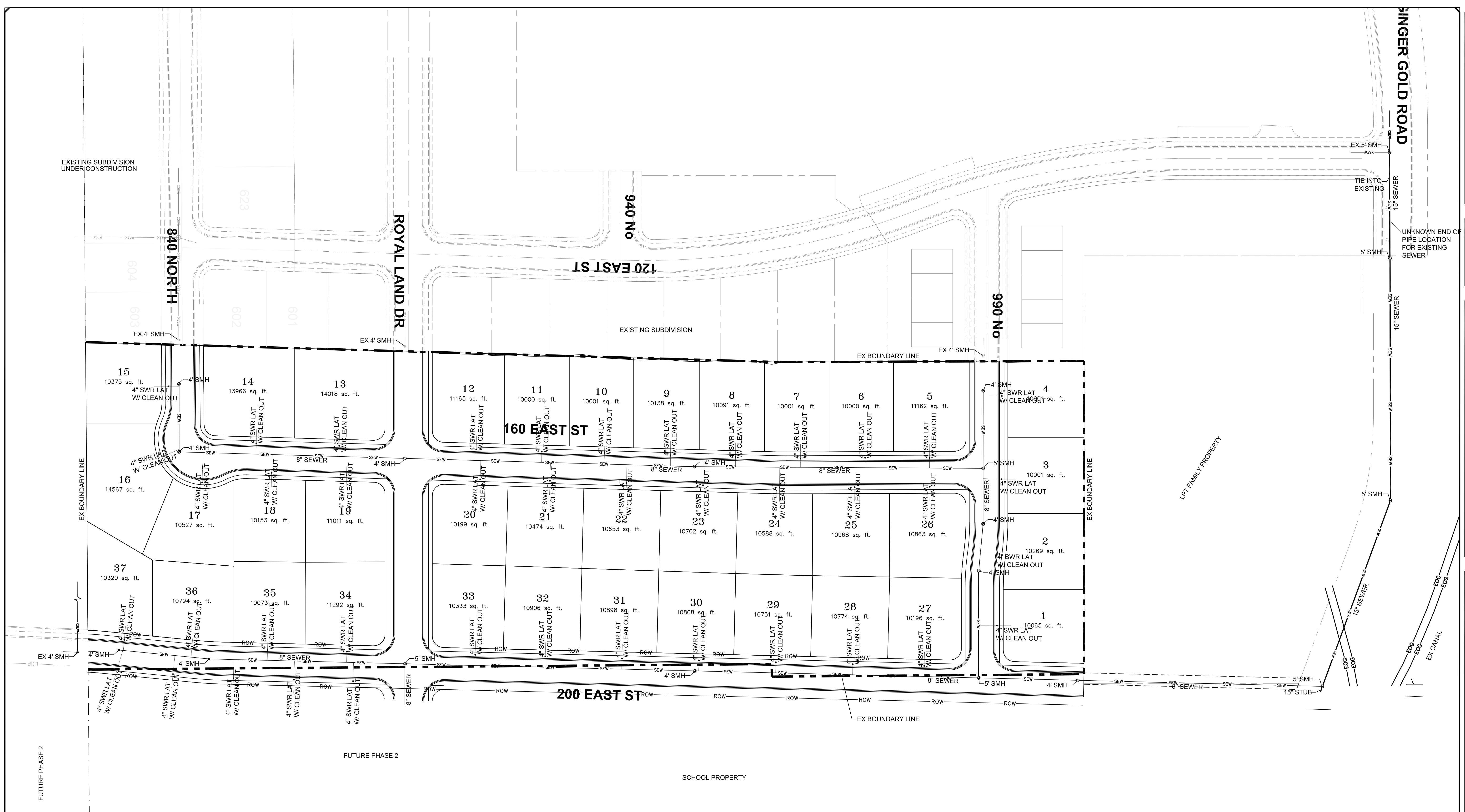
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**STRATTON ACRES PHASE 1**  
 WATER UTILITY SHEET  
 PRINT DATE: 7-20-2022

SANTAQUIN CITY



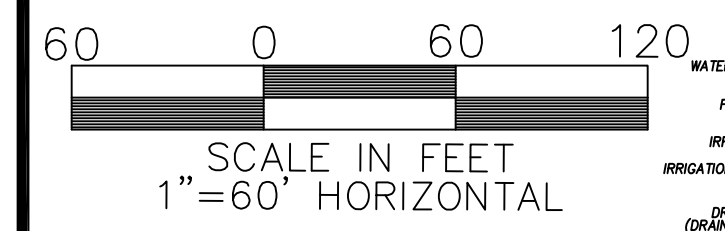
SHEET NO. **U1**



**LEGEND**

|  |                      |  |                                |
|--|----------------------|--|--------------------------------|
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|  | SEWER APPARATUS      |  | EXISTING STORM LINE            |
|  | STORM LINE           |  | EXISTING DRAINAGE SHELL        |
|  | DRAINAGE SHELL       |  | EXISTING WATER LINE            |
|  | STORM APPARATUS      |  | EXISTING IRRIGATION LINE       |
|  | WATER LINE           |  | EXISTING FENCE                 |
|  | WATER APPARATUS      |  | EXISTING CONTOURS (PT)         |
|  | FIRE HYDRANT         |  | 15' FINISH CONTOUR             |
|  | IRRIGATION LINE      |  | 2' FINISH CONTOUR              |
|  | IRRIGATION APPARATUS |  | CURB & GUTTER                  |
|  | PROPOSED OPEN SPACE  |  | PROPOSED ROAD                  |
|  | PROPOSED OPEN SPACE  |  | PROPOSED FIRE                  |
|  | PROPOSED OPEN SPACE  |  | PROPOSED SETBACK               |
|  | PROPOSED OPEN SPACE  |  | PROPOSED 30% SLOPE AND GREATER |
|  | PROPOSED OPEN SPACE  |  | PROPOSED 15% SLOPE AND GREATER |
|  | PROPOSED OPEN SPACE  |  | PROPOSED 5% SLOPE AND GREATER  |
|  | PROPOSED OPEN SPACE  |  | PROPOSED 1% SLOPE AND GREATER  |
|  | PROPOSED OPEN SPACE  |  | PROPOSED 0% SLOPE AND GREATER  |

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| NO. | DESCRIPTION | DATE | APPD. |
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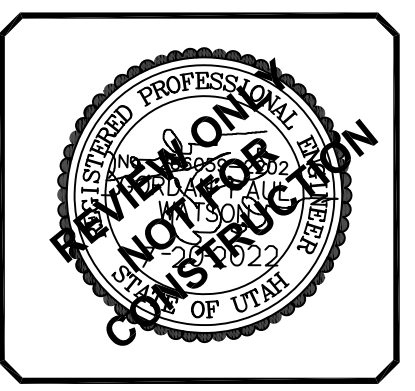
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| SURVEY BY:   | GPW    |
| DRAWN BY:    | GPW    |
| DESIGNED BY: | GPW    |
| CHECKED BY:  | GPW    |
| SCALE:       | 1"=60' |

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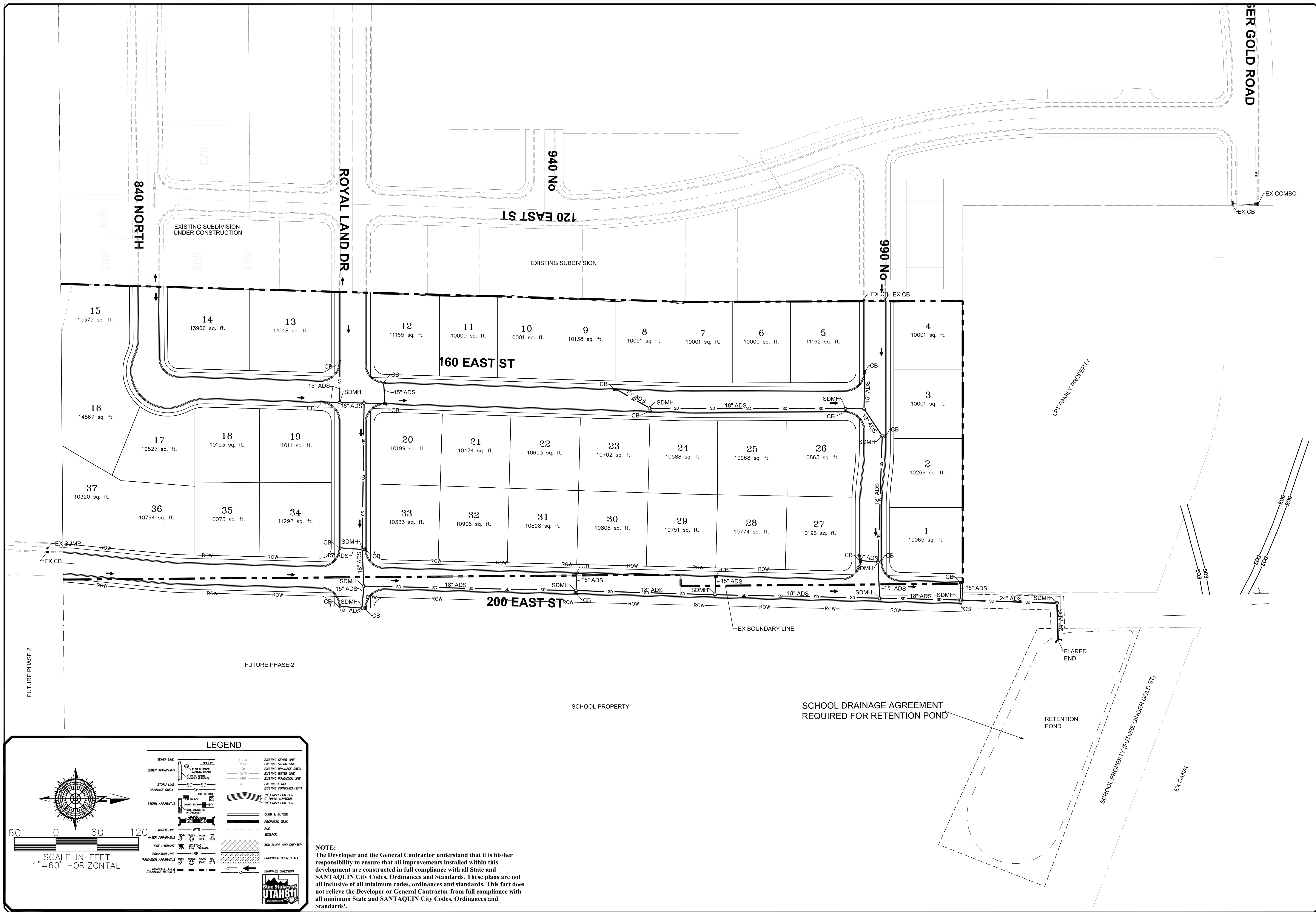
**CIVIL ENGINEERING CONSULTING LAND PLANNING CONSTRUCTION MANAGEMENT**

**STRATTON ACRES PHASE 1**  
 SEWER UTILITY SHEET  
 PRINT DATE: 7-20-2022

SANTAQUIN CITY



SHEET NO. **U2**



**LEGEND**

|  |                                |  |                          |
|--|--------------------------------|--|--------------------------|
|  | SEWER LINE                     |  | EXISTING SEWER LINE      |
|  | SEWER APPARATUS                |  | EXISTING STORM LINE      |
|  | STORM LINE                     |  | EXISTING DRAINAGE SHELL  |
|  | STORM APPARATUS                |  | EXISTING WATER LINE      |
|  | WATER LINE                     |  | EXISTING IRRIGATION LINE |
|  | FIRE HYDRANT                   |  | EXISTING FENCE           |
|  | IRRIGATION LINE                |  | EXISTING CONTOURS (DTT)  |
|  | DRAINAGE AREA (DRAINAGE BASIN) |  | 15' FINISH CONTOUR       |
|  | 15' FINISH CONTOUR             |  | 2' FINISH CONTOUR        |
|  | 2' FINISH CONTOUR              |  | 10' FINISH CONTOUR       |
|  | 10' FINISH CONTOUR             |  | CLEAR & GROUT            |
|  | PROPOSED TRAIL                 |  | FILE                     |
|  | SETBACK                        |  | SLOPE AND GREATER        |
|  | PROPOSED OPEN SPACE            |  | DRAINAGE DIRECTION       |

**SCALE IN FEET**  
1"=60' HORIZONTAL

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| NO. | DESCRIPTION | DATE | APP'D |
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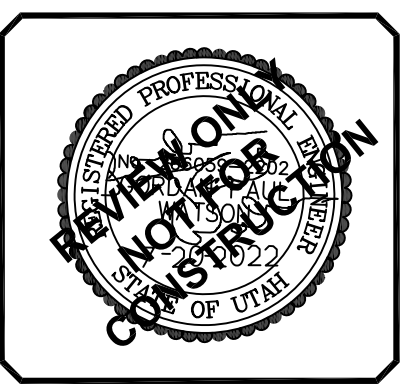
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| ORIG. DATE: 2-8-21 | SCALE: 1"=60'    |
| SURVEY BY: GPW     | CHECKED BY: GPW  |
| DRAWN BY: GPW      | DESIGNED BY: GPW |

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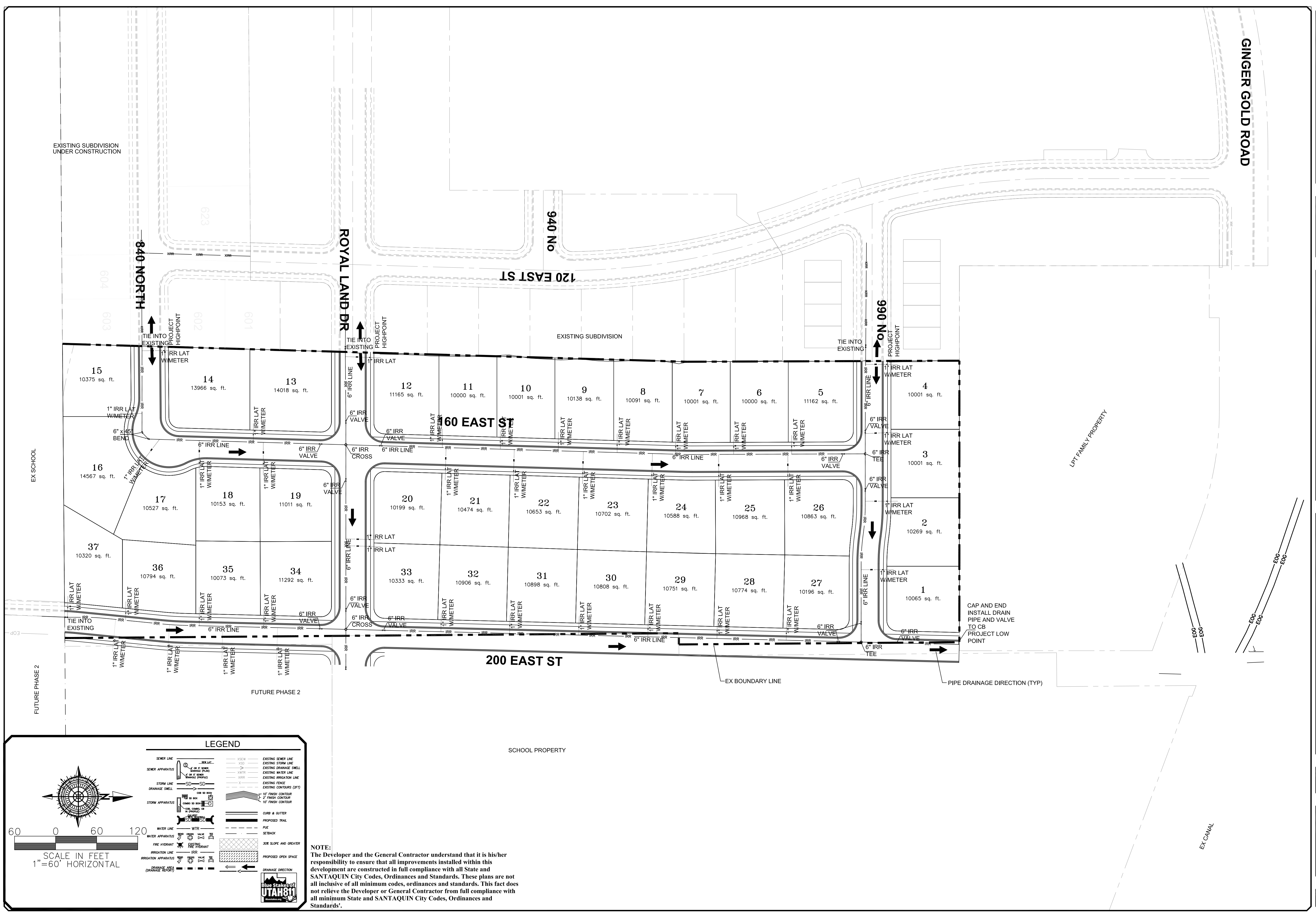
**STRATTON ACRES PHASE 1**  
 STORM UTILITY SHEET  
 PRINT DATE: 7-20-2022

SANTAQUIN CITY

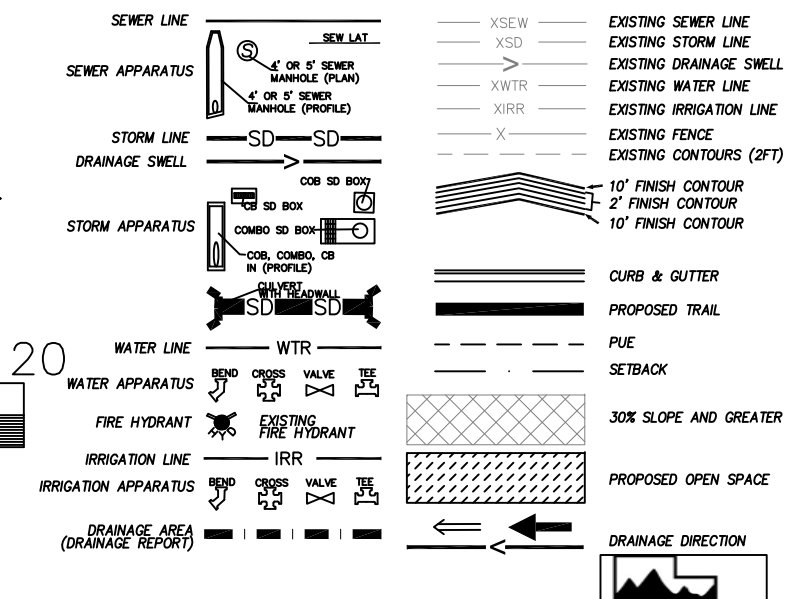


SHEET NO. **U3**





LEGEND



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| NO. | DESCRIPTION | DATE | APP'D |
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ORIG. DATE: 2-8-21  
 SURVEY BY: GPM  
 DRAWN BY: GPM  
 DESIGNED BY: GPM  
 CHECKED BY: GPM  
 SCALE: 1"=60'

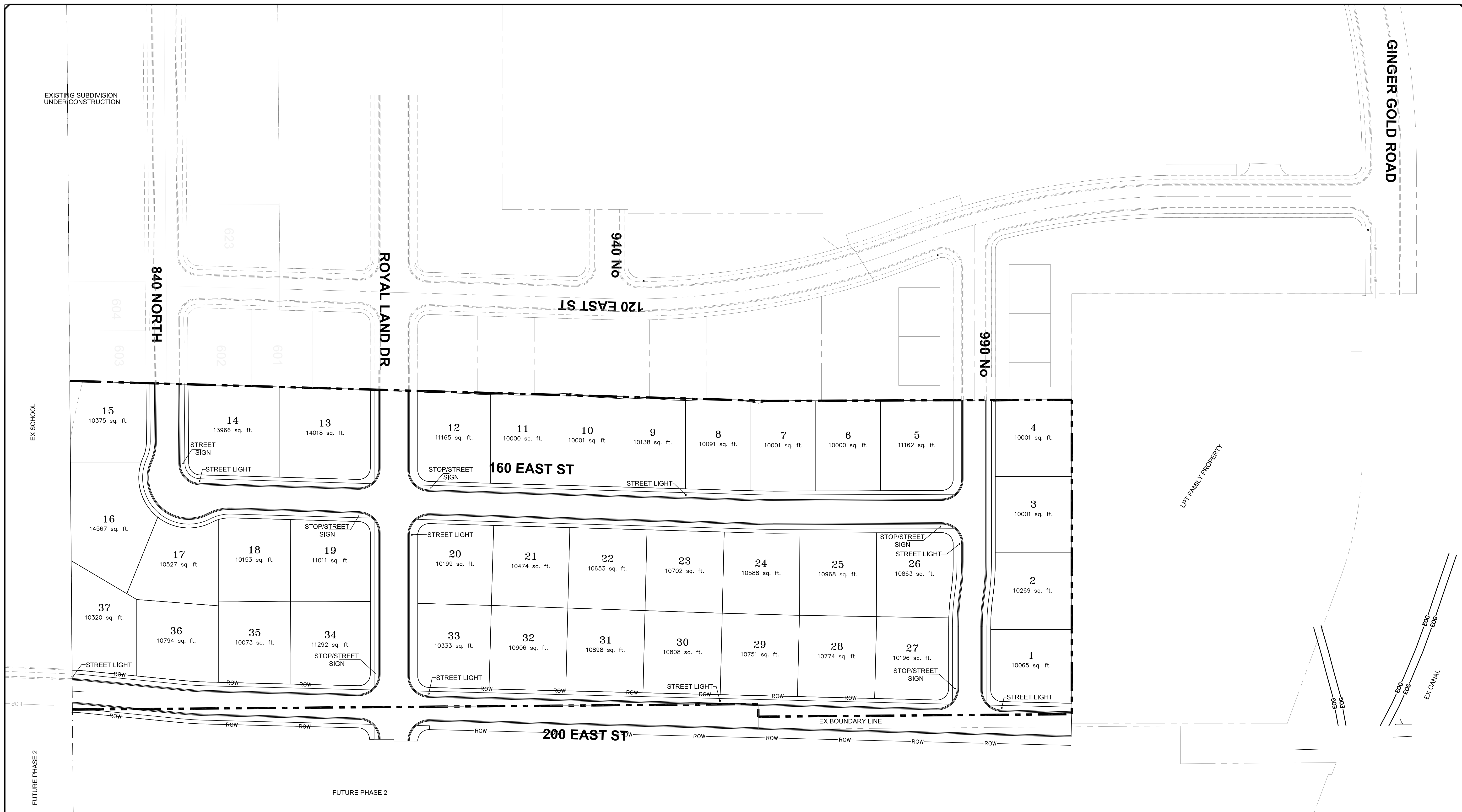
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**STRATTON ACRES**  
**PHASE 1**  
 IRRIGATION UTILITY SHEET  
 PRINT DATE: 7-20-2022

SANTAQUIN CITY



SHEET NO. U4

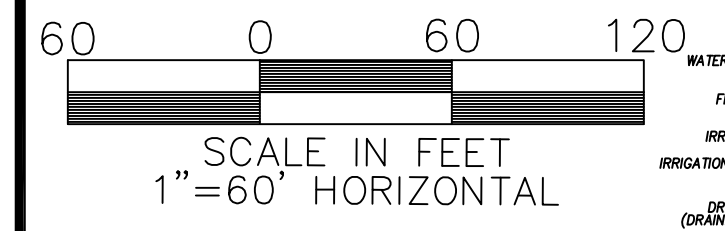


**LEGEND**

|  |                      |  |                          |
|--|----------------------|--|--------------------------|
|  | SEWER LINE           |  | EXISTING SEWER LINE      |
|  | SEWER APPARATUS      |  | EXISTING STORM LINE      |
|  | STORM LINE           |  | EXISTING DRAINAGE SHELL  |
|  | DRAINAGE SHELL       |  | EXISTING WATER LINE      |
|  | STORM APPARATUS      |  | EXISTING IRRIGATION LINE |
|  | WATER LINE           |  | EXISTING FENCE           |
|  | FIRE HYDRANT         |  | EXISTING CONTOURS (5 FT) |
|  | IRRIGATION APPARATUS |  | 10' FINISH CONTOUR       |
|  | DRAINAGE LINE        |  | 2' FINISH CONTOUR        |
|  | 15' FINISH CONTOUR   |  | 10' FINISH CONTOUR       |
|  | 2' FINISH CONTOUR    |  | CLASS A GUTTER           |
|  | 10' FINISH CONTOUR   |  | PROPOSED TRAIL           |
|  | CLASS B GUTTER       |  | FILE                     |
|  | PROPOSED TRAIL       |  | SETBACK                  |
|  | FILE                 |  | SLOPE AND GREATER        |
|  | SETBACK              |  | PROPOSED OPEN SPACE      |
|  | SLOPE AND GREATER    |  | DRAINAGE DIRECTION       |
|  | PROPOSED OPEN SPACE  |  |                          |

**Blue Stakes of UTAH 811**

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| NO. | DESCRIPTION | DATE | APP'D |
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ORIG. DATE: 2-8-21  
 SURVEY BY: GPM  
 DRAWN BY: GPM  
 DESIGNED BY: GPM  
 CHECKED BY: GPM  
 SCALE: 1"=60'

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**CONSTRUCTION MANAGEMENT**

**STRATTON ACRES**  
**PHASE 1**

**LIGHT AND SIGN PLAN**

PRINT DATE: 7-20-2022

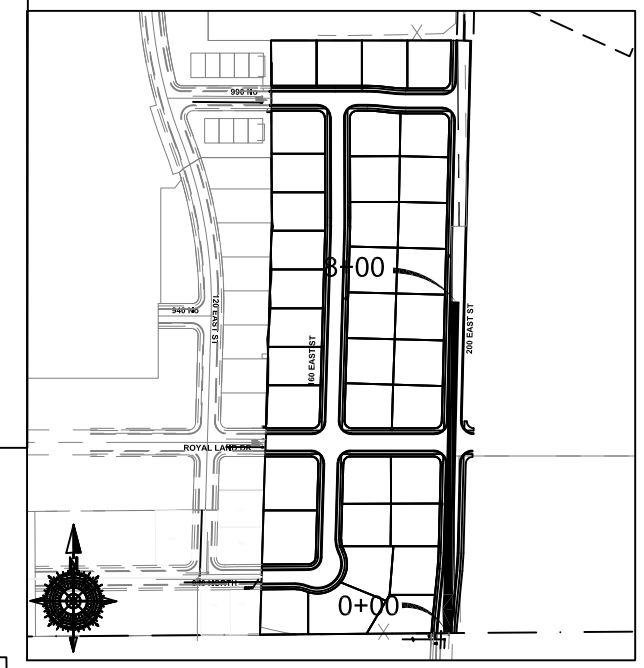
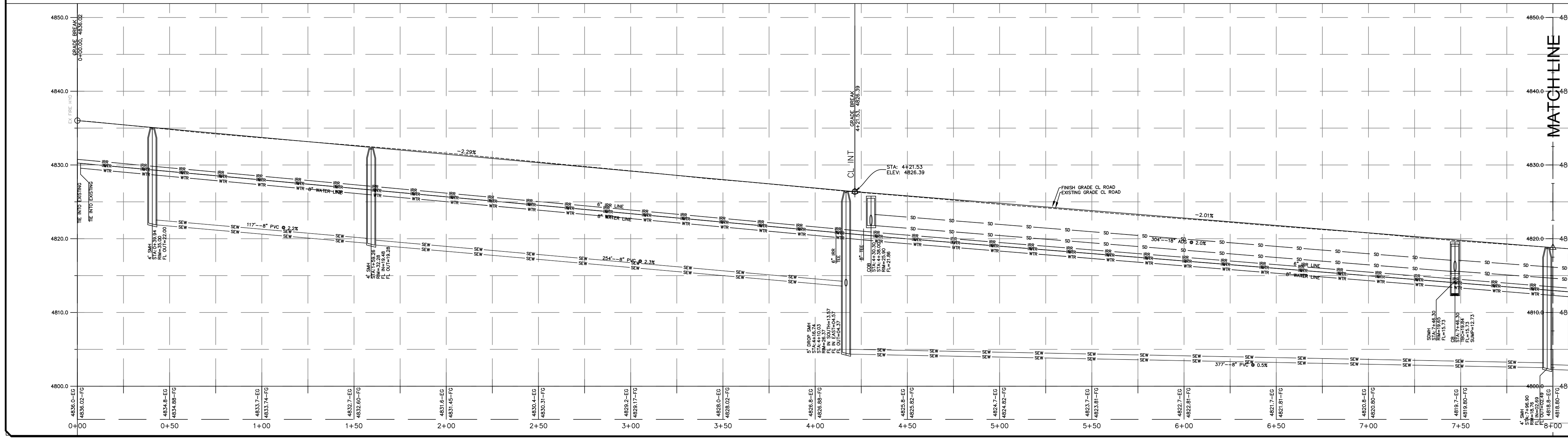
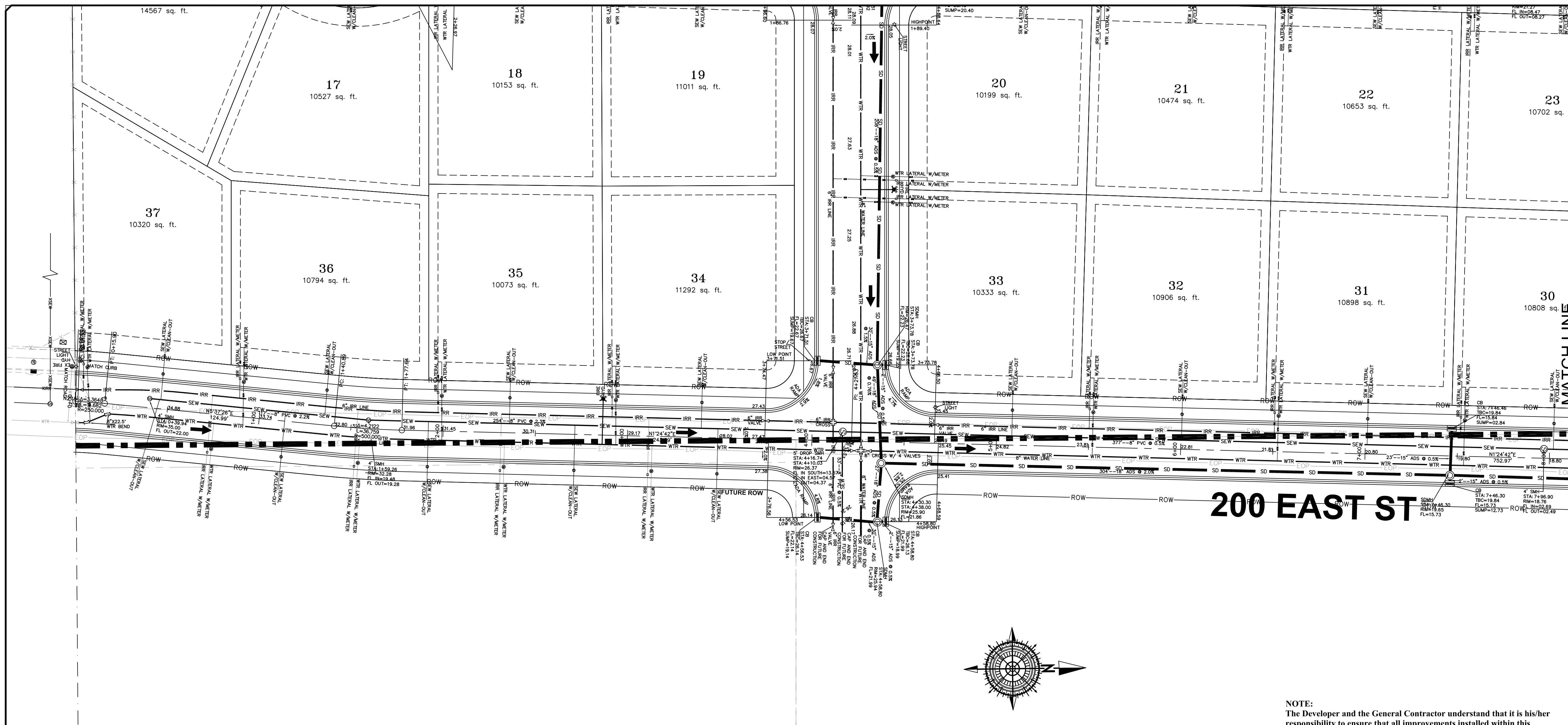
SANTAQUIN CITY



SHEET NO. SS1







**LEGEND**

- SEWER LINE
- SEWER APPURTENANCES
- STORM LINE
- STORM APPURTENANCES
- WATER LINE
- FIRE HYDRANT
- IRIGATION APPURTENANCES
- EXISTING DRAINAGE SWELL
- EXISTING STORM LINE
- EXISTING IRRIGATION LINE
- EXISTING BARED PHONE
- EXISTING CONTOUR (OFF)
- 2' FINISH CONTOUR
- CURB & GUTTER
- PROPOSED TRAIL
- PUE
- SETBACK
- 30% SLOPE AND GREATER
- PROPOSED OPEN SPACE
- DRAINAGE DIRECTION

**SCALE IN FEET**  
 1" = 30' HORIZONTAL  
 1" = 7.5' VERTICAL

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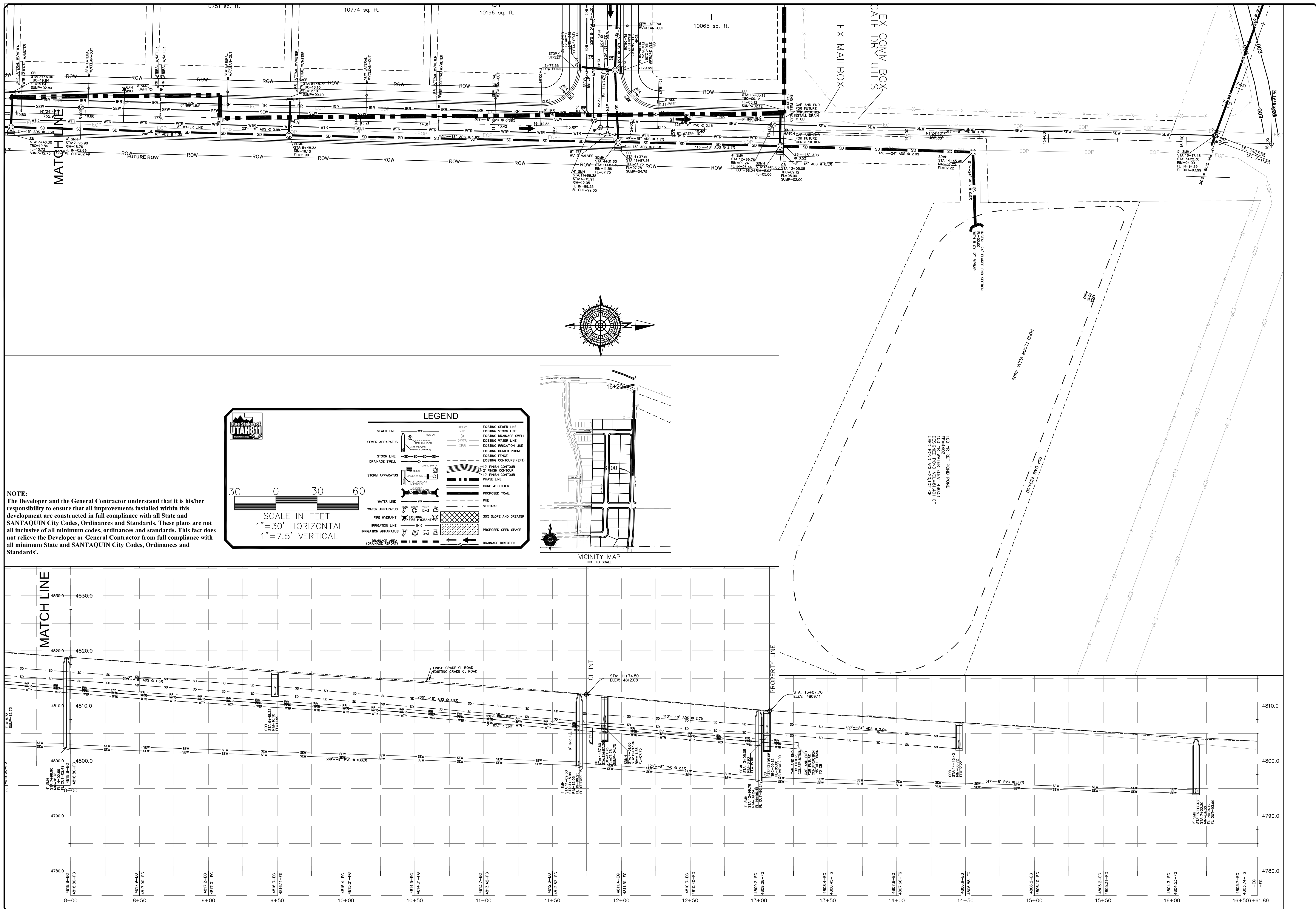
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**STRATTON ACRES**  
**PHASE 1**  
**PLAN AND PROFILE**  
**EAST RD 0+00 TO 8+00**  
 7-20-2022

**SANTAQUIN CITY**

**PP3**

SHEET NO. **PP3**



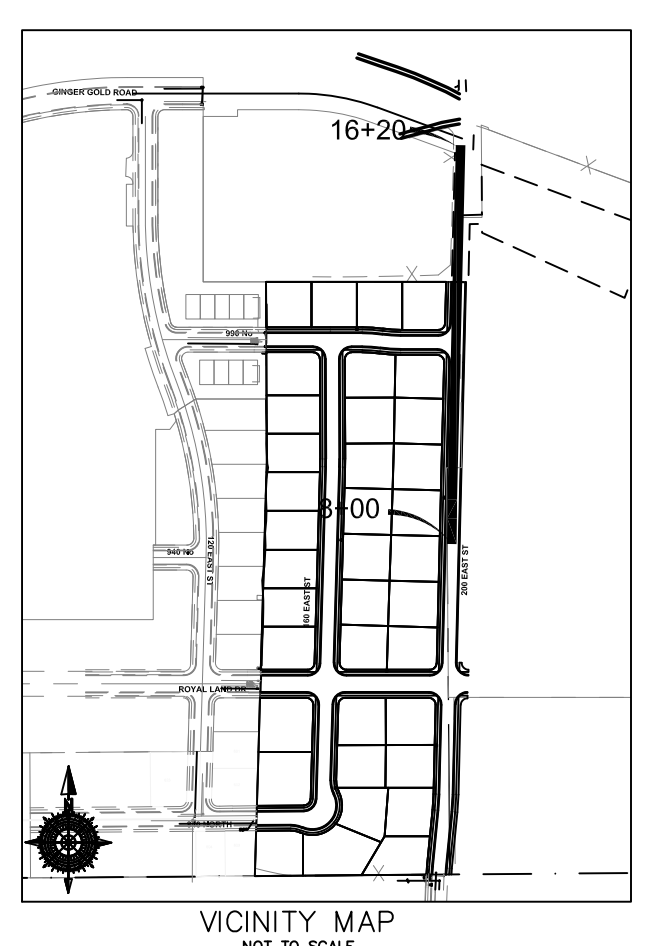
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**Blue Stains of UTAH811**

**LEGEND**

|                                 |                          |
|---------------------------------|--------------------------|
| SEWER LINE                      | EXISTING SEWER LINE      |
| SEWER APPARATUS                 | EXISTING STORM LINE      |
| STORM LINE                      | EXISTING DRAINAGE SMOEL  |
| DRAINAGE SMOEL                  | EXISTING WATER LINE      |
| STORM APPARATUS                 | EXISTING IRRIGATION LINE |
| WATER LINE                      | EXISTING BURIED PHONE    |
| WATER APPARATUS                 | EXISTING FENCE           |
| FIRE HYDRANT                    | EXISTING CONTOURS (SPT)  |
| IRRIGATION LINE                 | 2' FINISH CONTOUR        |
| IRRIGATION APPARATUS            | 10' FINISH CONTOUR       |
| DRAINAGE AREA (DRAINAGE TROUGH) | PHASE LINE               |
|                                 | CURB & GUTTER            |
|                                 | PROPOSED TRAIL           |
|                                 | PUE                      |
|                                 | SETBACK                  |
|                                 | 30% SLOPE AND GREATER    |
|                                 | PROPOSED OPEN SPACE      |
|                                 | DRAINAGE DIRECTION       |

SCALE IN FEET  
1"=30' HORIZONTAL  
1"=7.5' VERTICAL



| NO. | DESCRIPTION | DATE | APP'D |
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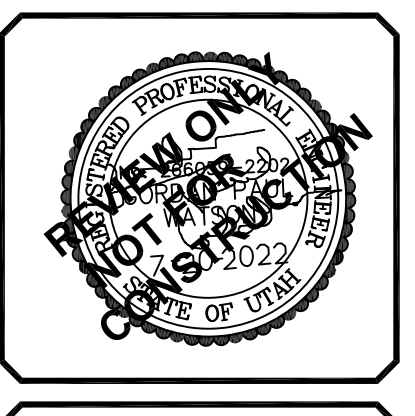
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 SCALE: 1"=30'

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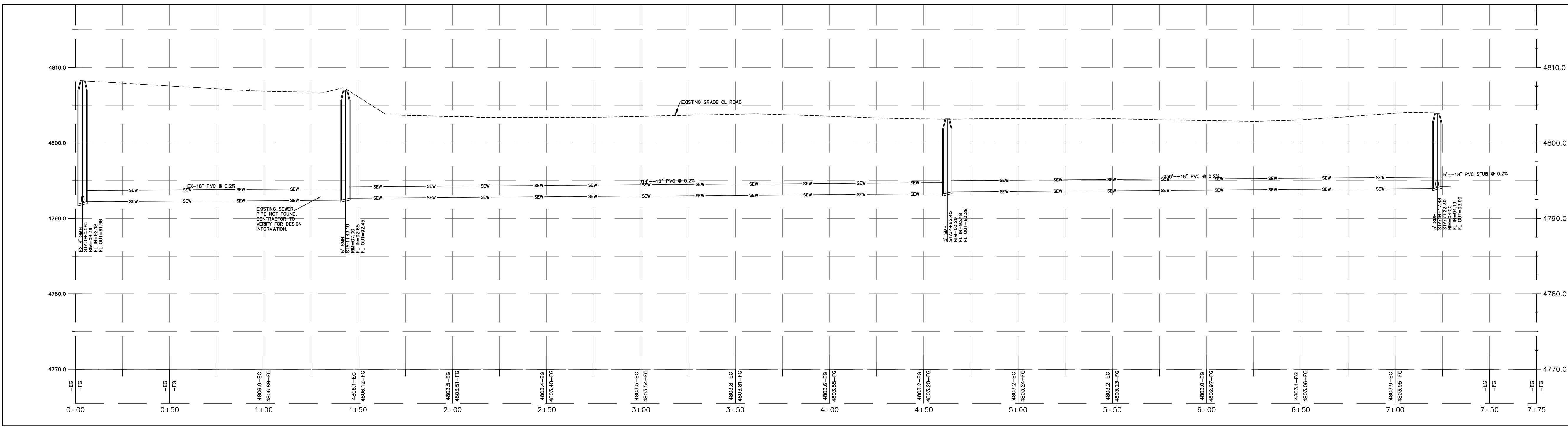
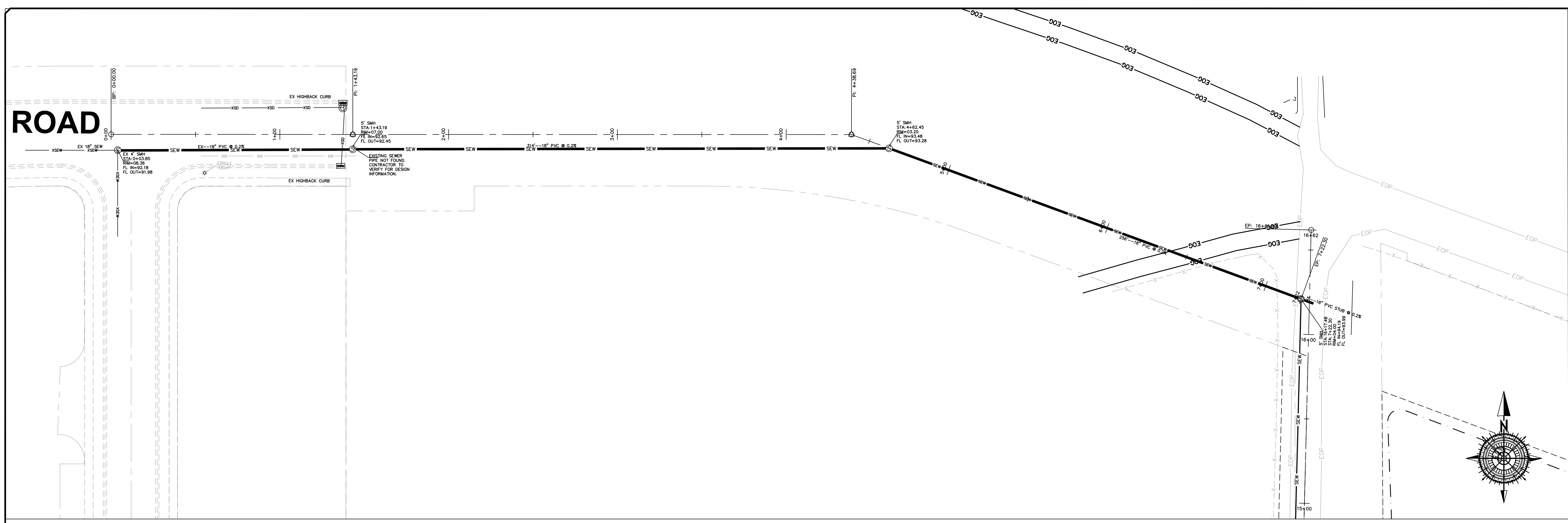
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**STRATTON ACRES**  
**PHASE 1**  
**PLAN AND PROFILE**  
**EAST RD 8+00 TO 16+50**  
 7-20-2022

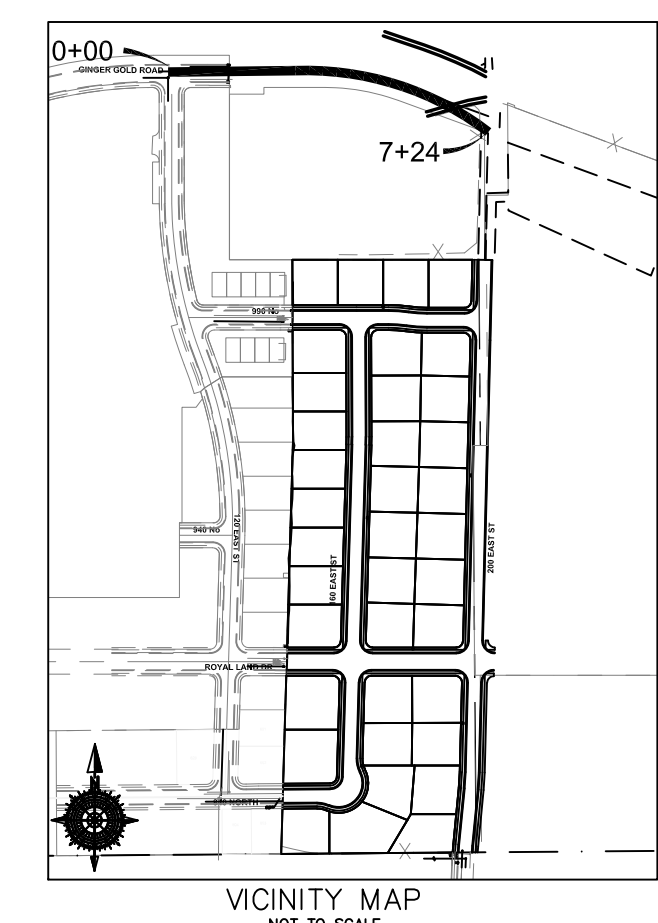
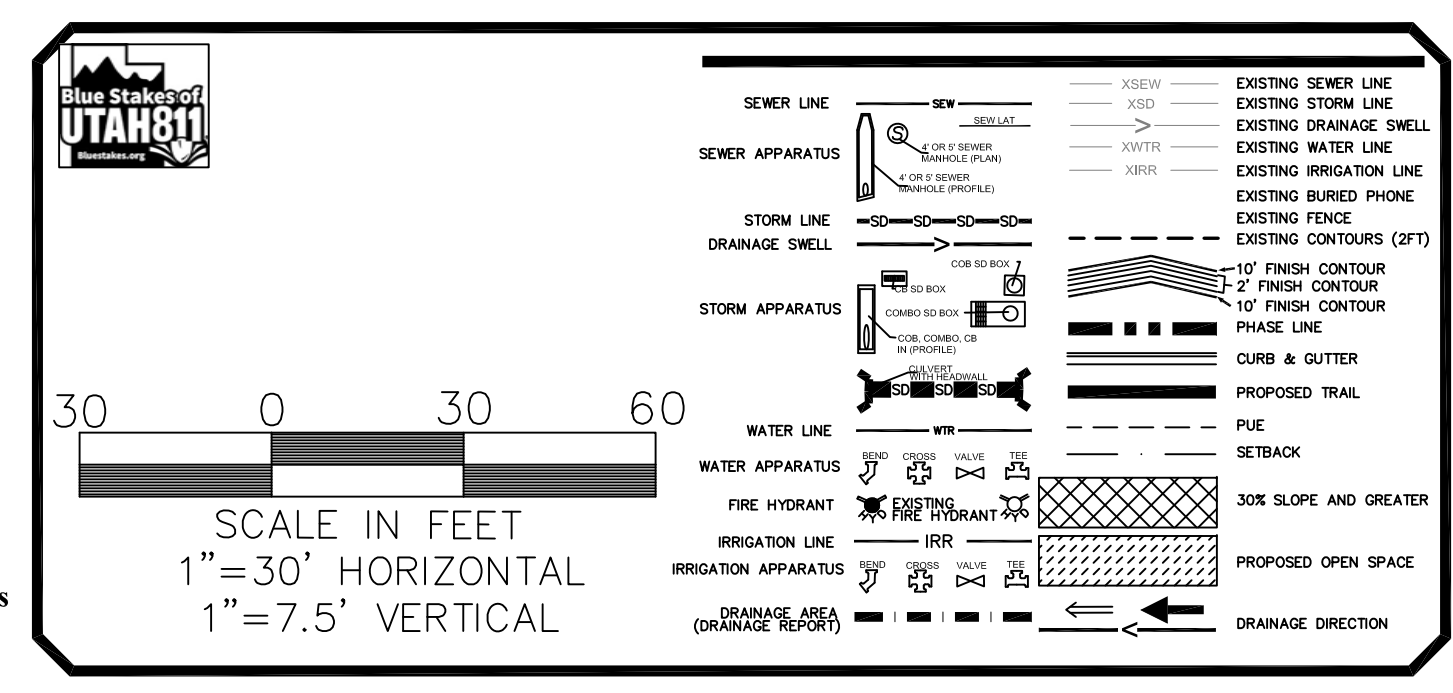
SANTAQUIN CITY



SHEET NO. **PP4**



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| NO. | DESCRIPTION | DATE | APP'D |
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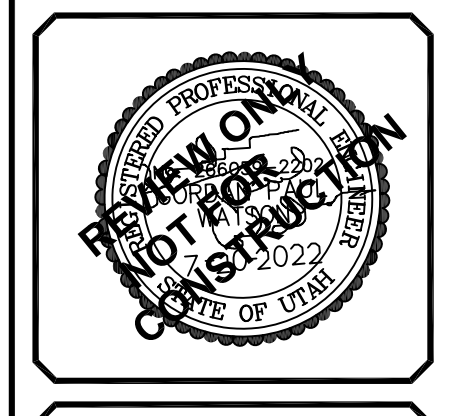
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CIVIL ENGINEERING \* CONSULTING \* LAND PLANNING  
 CONSTRUCTION MANAGEMENT

STRATTON ACRES  
 PHASE 1  
 GINGER GOLD (OFF SITE)  
 0+00 TO 7+50  
 7-20-2022

SANTAQUIN CITY



SHEET NO. PP5

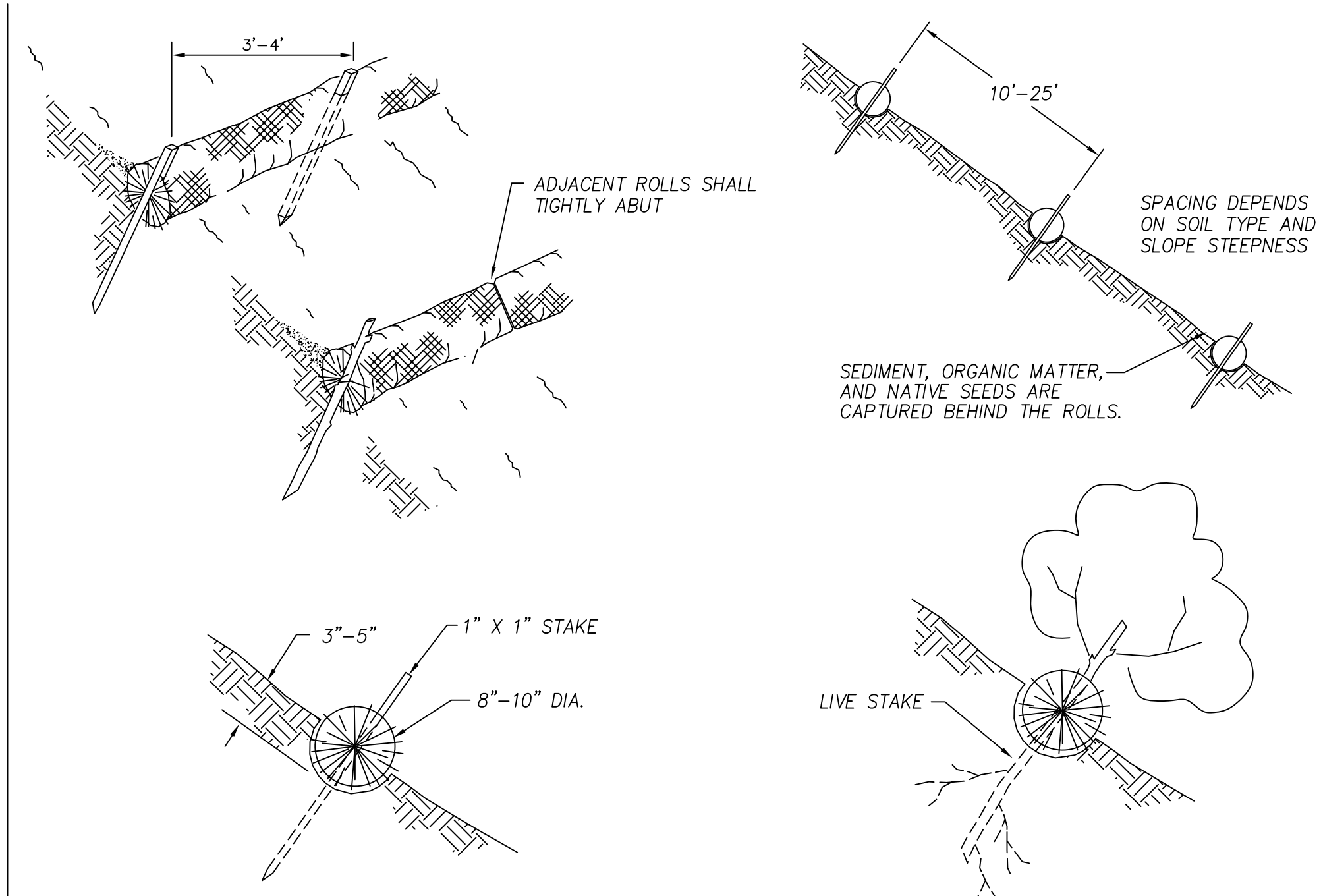
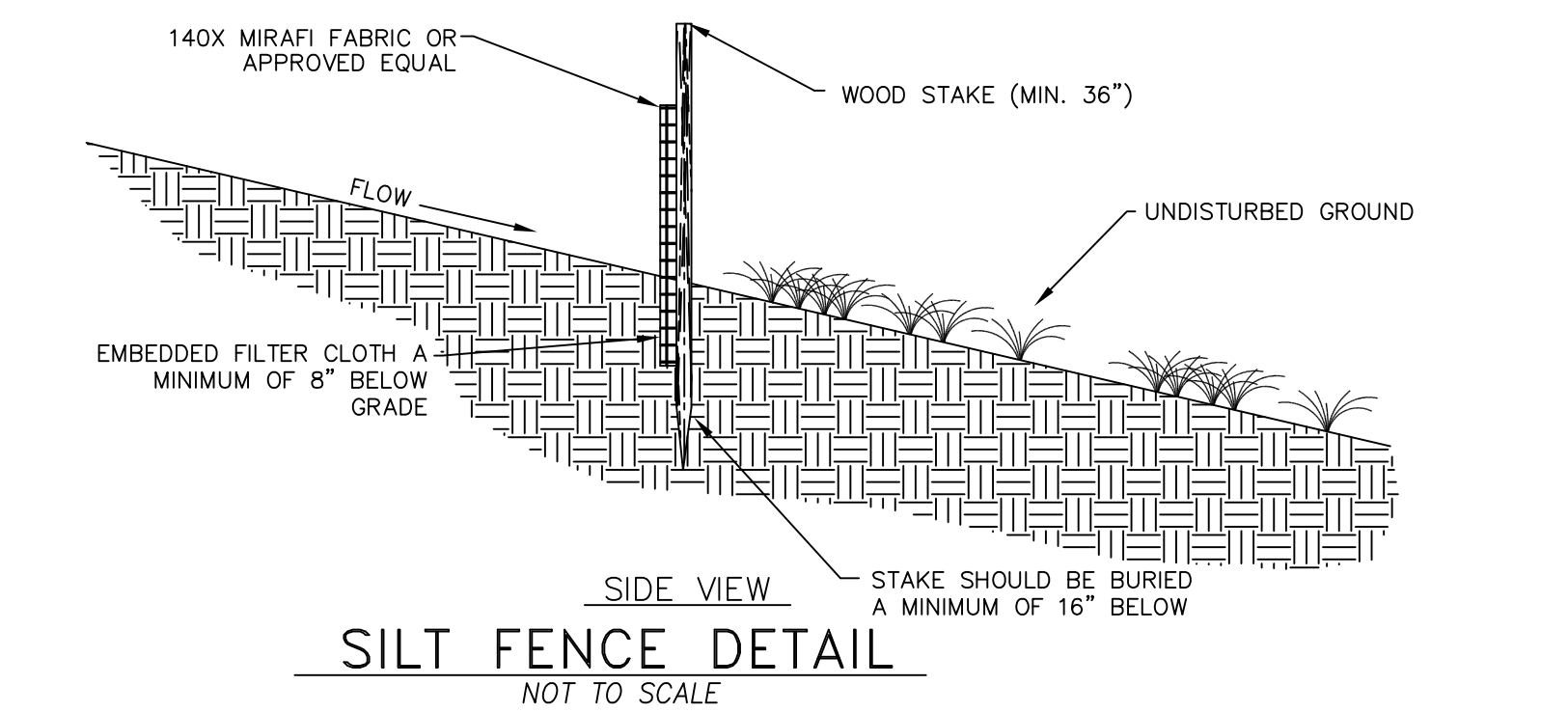
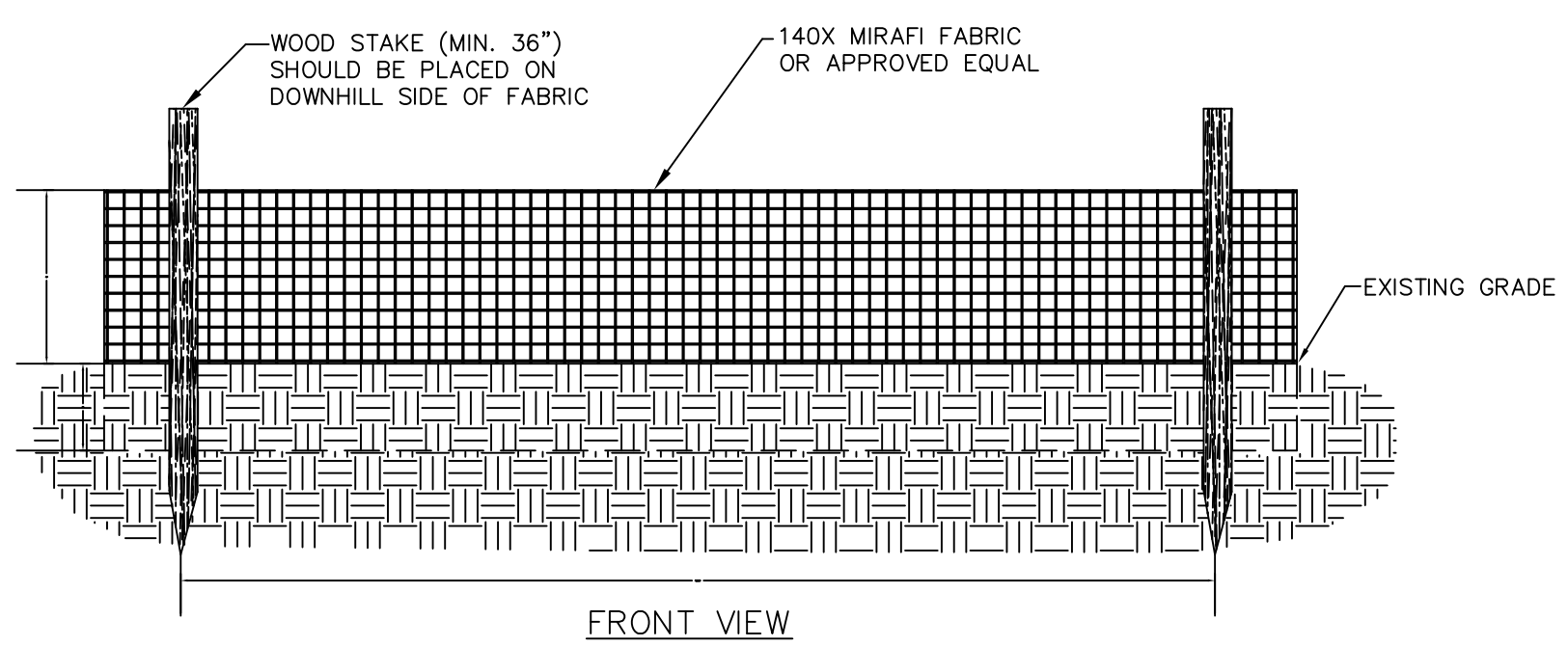












**NOTES:**  
Straw wattles shall be installed as soon as construction will allow or when designated by the Engineer. Straw wattles shall be placed in shallow trenches and staked along the contour of disturbed or newly constructed slopes, in accordance with the Plans, perpendicular to the flow direction and parallel to the slope contour.

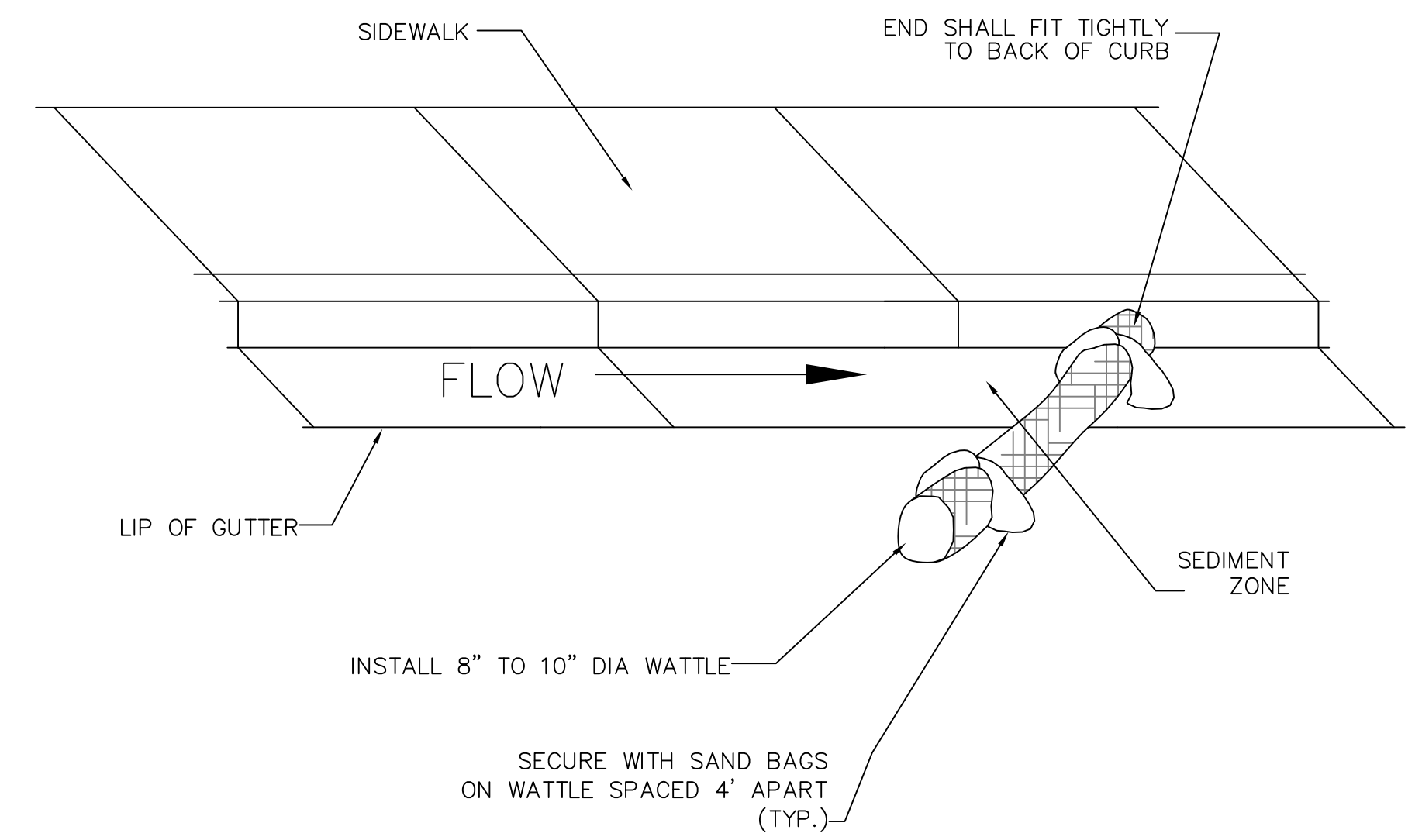
The wattles shall be installed at the intervals designated by the Engineer.

Trench construction and wattle installation shall begin from the base of the slope and work uphill. Excavated material shall be spread evenly along the uphill slope and compacted using hand tamping or other method approved by the Engineer. On gradually sloped or clay-type soils trenches shall be 2 to 3 inches deep. On loose soils, in high rainfall areas, or on steep slopes, trenches shall be 3 to 5 inches deep, or half the thickness of the wattle.

The wattle shall be install snugly into the trench, abutting adjacent wattles tightly, end to end, without overlapping the ends. Wattles shall be staked at each end and at 4 foot centers along their entire length. When trench conditions require, pilot holes for the stakes shall be driven through the wattle and into the soil using a straight bar. Stakes shall be driven through the middle of the wattle, leaving 2 to 3 inches of the stake protruding above the wattle.

Wattles shall be inspected regularly to ensure they remain thoroughly entrenched and in contact with the soil, and immediately after a runoff producing rainfall.

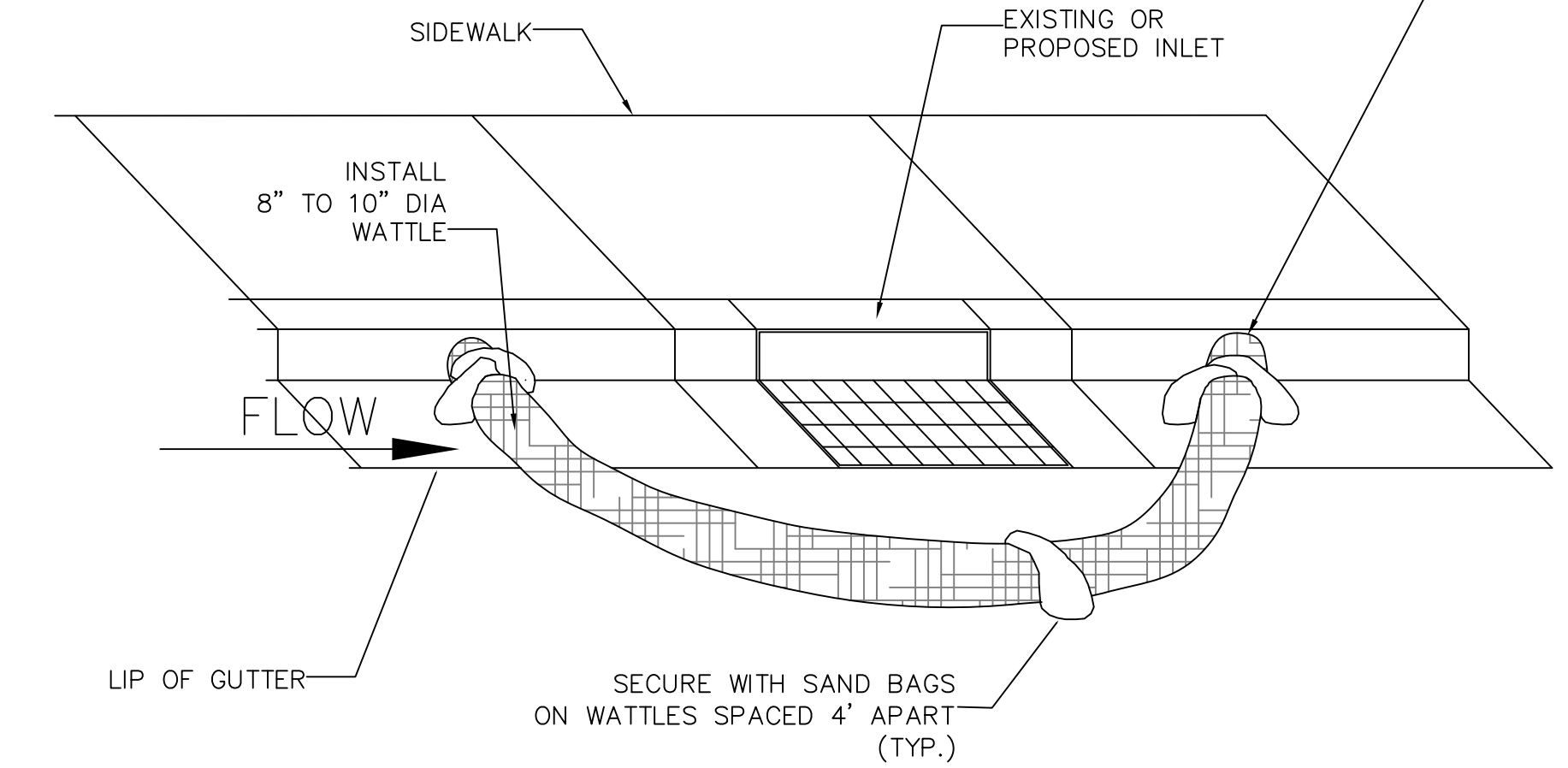
**STRAW WATTLE (SILT FENCE ALTERNATIVE)**  
NOT TO SCALE



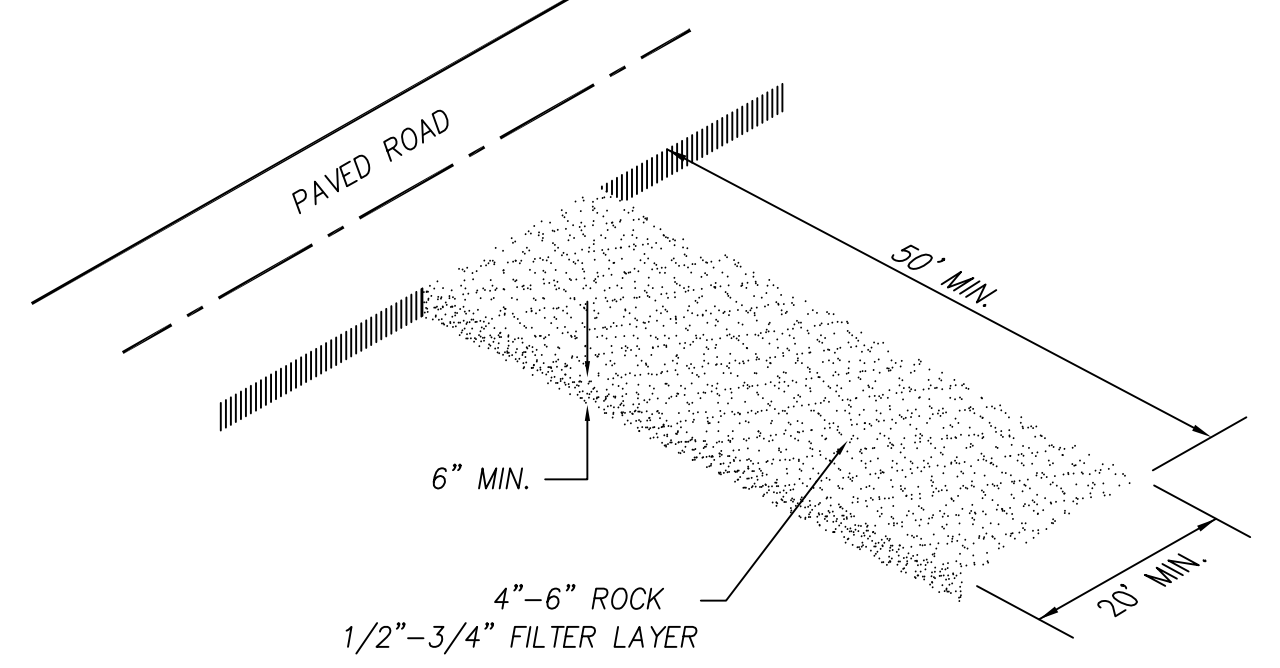
**GUTTER PROTECTION SETUP**

NOTE:  
INSTALL GUTTER WATTLE MIDWAY BETWEEN IMPACTED INLETS AND CONSTRUCTION DISTURBANCE.

IF THE AREA BEHIND THE INLET IS NOT STABILIZED, A BMP SHOULD BE USED TO PREVENT SEDIMENT FROM ENTERING THE INLET



**INLET PROTECTION BARRIERS**  
NOT TO SCALE



**NOTES:**  
1-CLEAR AND GRUB AREA AND GRADE TO PROVIDE MAXIMUM SLOPE OF 2%  
2-COMPACT SUBGRADE AND PLACE FILTER FABRIC IF DESIRED (RECOMMENDED FOR ENTRANCES TO REMAIN IN USE FOR MORE THEN 3 MONTHS)  
3-PLACE COURSE AGGREGATE 1 TO 2-1/2 INCHES SIZE, TO A MINIMUM DEPTH OF 8 INCHES  
4-LOCATE ONSITE WASHOUT AREA MORE THEN 50 FT AWAY FROM NEAREST STORM INLET.  
5-DAILY INSPECTIONS ARE REQUIRED FOR LOSS OF GRAVEL OR SEDIMENT. SWEEPING OF ASPHALT ROADWAY MAY BE REQUIRED TO ELIMINATE GRAVEL FROM TRACKED TO SURFACE.

**VEHICLE TRACKING DETAIL**  
NOT TO SCALE

**NOTE:**  
TYPICALLY STRAW BALES ARE NOT RECOMMENDED FOR INLET PROTECTION BARRIERS.

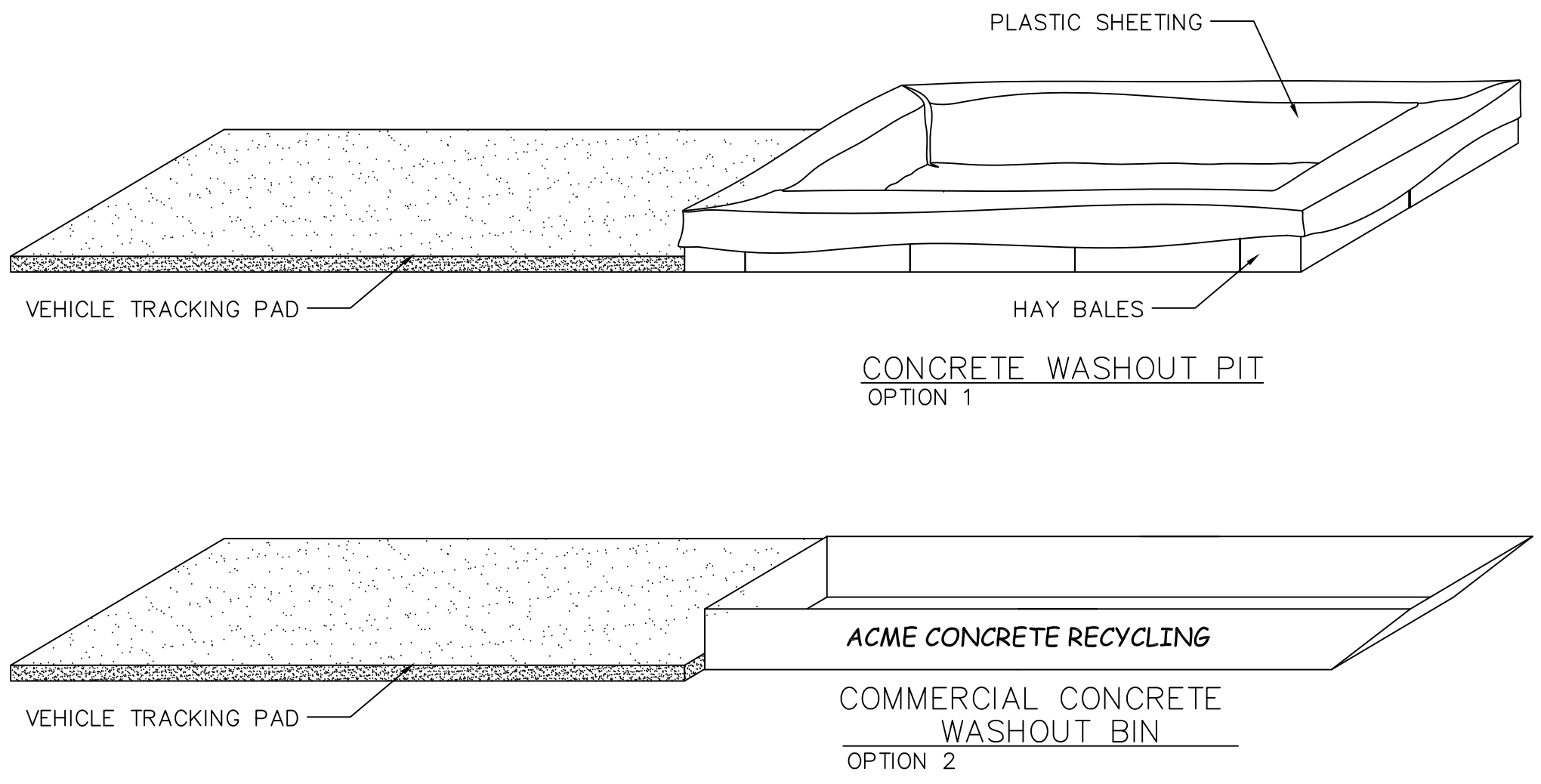
PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREET SEGMENTS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.

SANDBAGS OF EITHER BURLAP OR WOVEN 'GEOTEXTILE' FABRIC TO BE USED TO WEIGH DOWN WATTLE IN AREAS WHERE THE WATER FLOW MAY MOVE THE WATTLE.

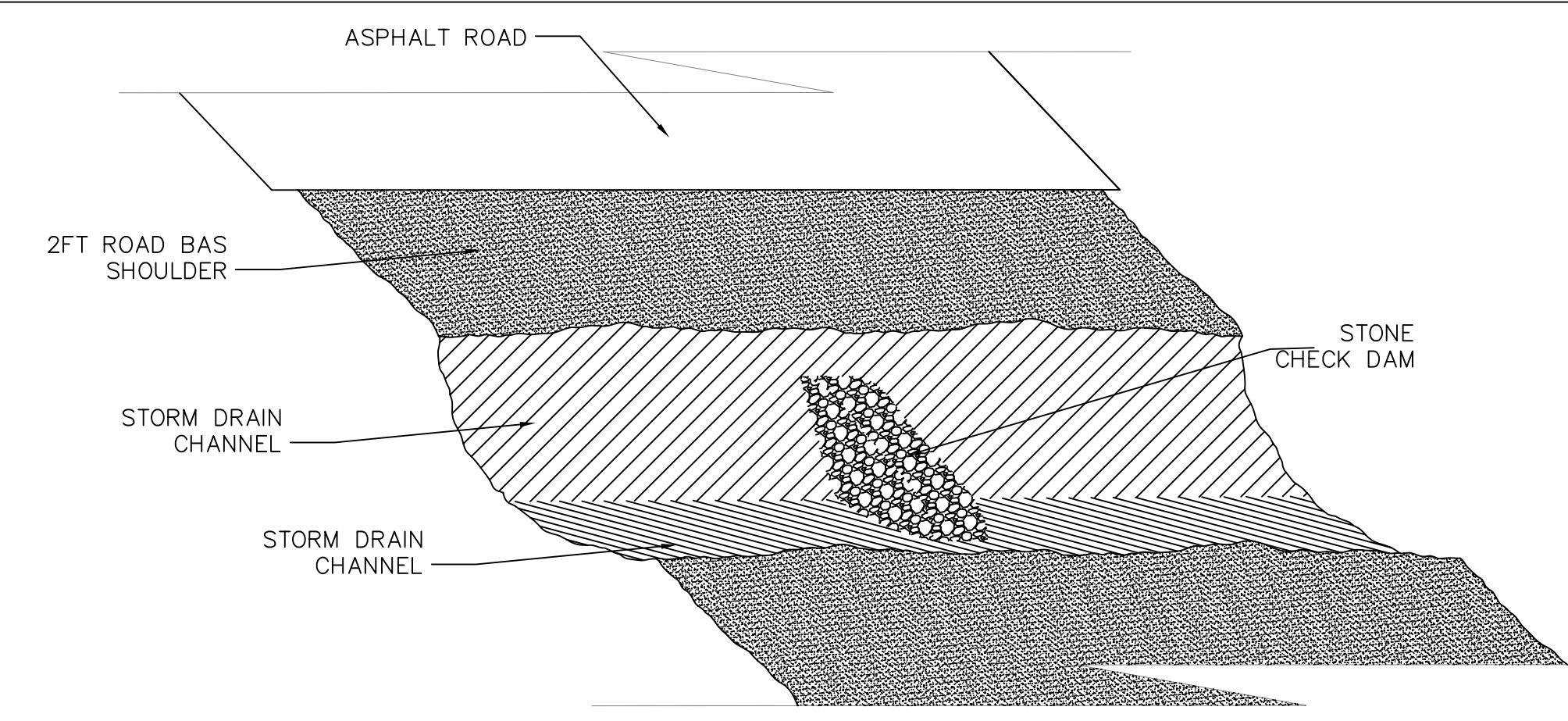
INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

**BMP**  
1-AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE OR CEMENT ON SITE.  
2-PERFORM CONCRETE TRUCK WASHOUT OFF SITE OR IN DESIGNATED AREA  
3-DO NOT WASHOUT CONCRETE TRUCKS INTO STORM DRAIN, OPEN DITCHES, STREETS OR STREAMS  
4-LOCATE ONSITE WASHOUT AREA MORE THEN 50 FT AWAY FROM NEAREST STORM INLET.  
5-WASHOUT CONCRETE WASTE INTO WASHOUT PIT OR COMMERCIAL WASHOUT BIN ONLY.

**USE OF CONCRETE WASHOUT**  
1-IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE CONCRETE WASHOUT AREA.  
2-WASHOUT CONCRETE WASTE INTO PIT OR CONTAINER WHERE IT CAN SET AND LATER BE BROKEN UP AND DISPOSED OF PROPERLY  
3-NO WASTE OR LITTER IS TO BE PERMITTED TO ACCUMULATE IN THE WASHOUT AREA. AREA SHOULD BE CLEAN AT THE END OF EACH WORK DAY.  
4-INSTALL PROPER WASTE WATER PROTECTION AT ALL EFFECTED DOWNHILL STORM DRAINS AND INLETS  
5-INSTALL A VEHICLE TRACKING PAD TO PROTECT THE STREETS FROM MUD AND OTHER DEBRIS FROM TRUCKS. MAKE SURE ALL TRUCKS ARE CLEAR OF MUD AND ROCK THAT CAN FALL FROM TRUCK WHILE TRAVELING ON STREETS.



**CONCRETE WASHOUT AREA**  
NOT TO SCALE



**DRAINAGE CHANNEL PROTECTION**  
NOT TO SCALE

**NOTE:**  
1. PLACE A CHECK DAM AT EVERY 100 LINIER FEET OF DRAIN CHANNEL  
2. PLACE CHECK DAMS PERPENDICULAR TO THE FLOW LINE OF THE CHANNEL  
3. CONSTRUCT CHECK DAMS SO THAT WATER DOES NOT FLOW AROUND THE ENDS OF THE DAM  
4. REMOVE SEDIMENT AS IT ACCUMULATES AND PLACE IT IN A STABLE AREA APPROVED BY THE ENGINEER.

| NO. | DESCRIPTION | DATE | APP'D |
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|     |             |      |       |

|              |        |
|--------------|--------|
| ORIG. DATE:  | 2-6-21 |
| SURVEY BY:   | GPW    |
| DRAWN BY:    | GPW    |
| DESIGNED BY: | GPW    |
| CHECKED BY:  | GPW    |
| SCALE:       | N/A    |

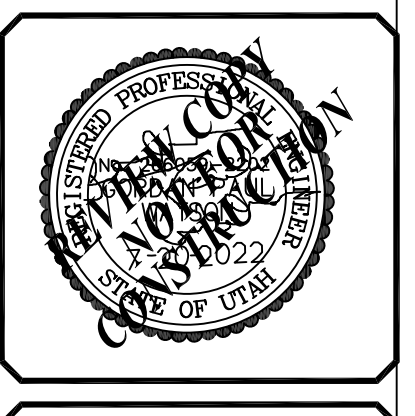
**GATEWAY CONSULTING, Inc.**  
P.O. BOX 951005 SOUTH JORDAN, UT 84095  
PH: (801) 694-5848  
paul@gatewayconsultingllc.com

**CIVIL ENGINEERING • CONSULTING • LAND PLANNING**  
CONSTRUCTION MANAGEMENT

**STRATTON ACRES**  
**PHASE 1**  
EROSION CONTROL  
DETAILS and NOTES

7-20-2022

SATAQUIN  
CITY

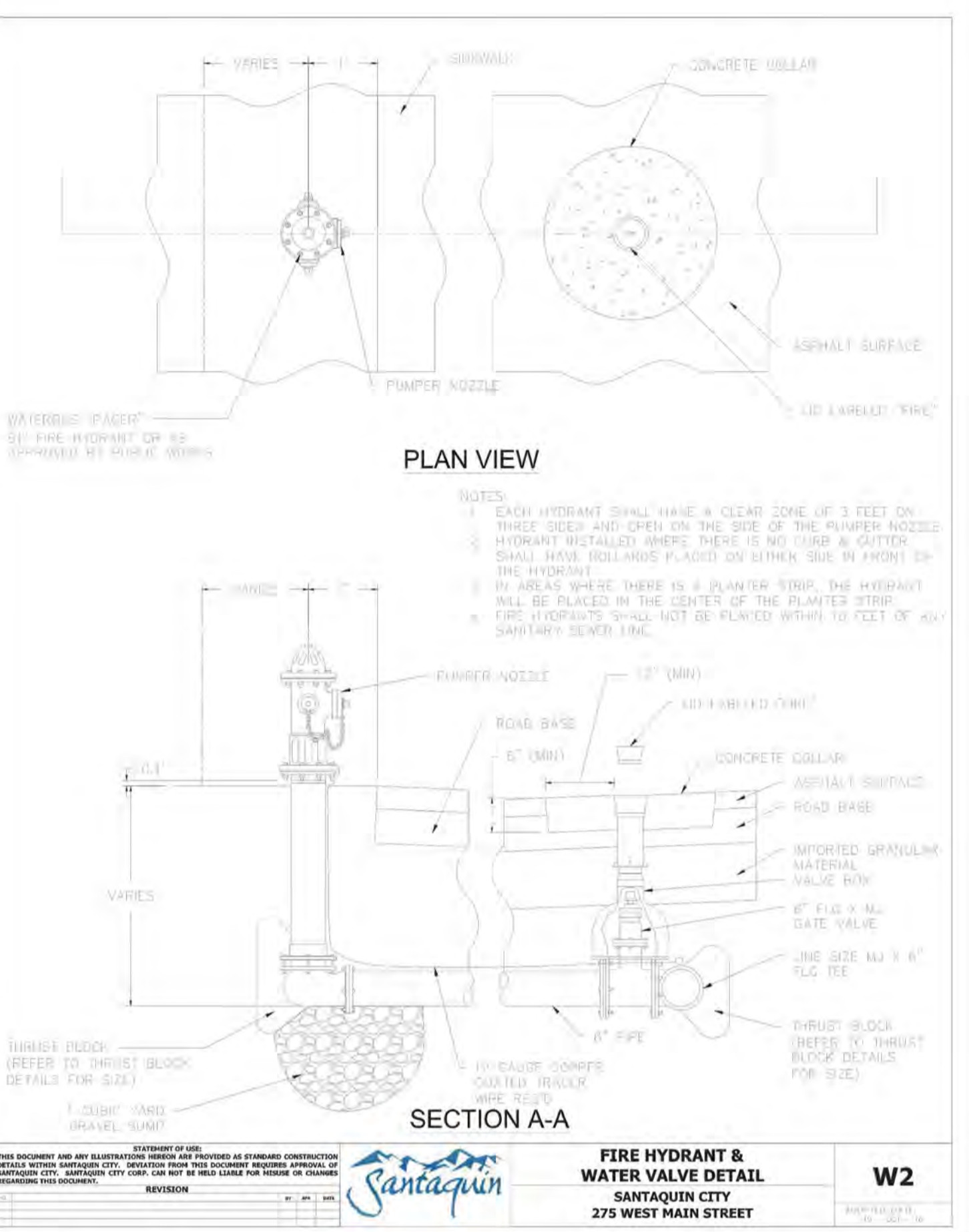


SHEET NO. ER-2

See SATAQUIN CITY specifications for further information.

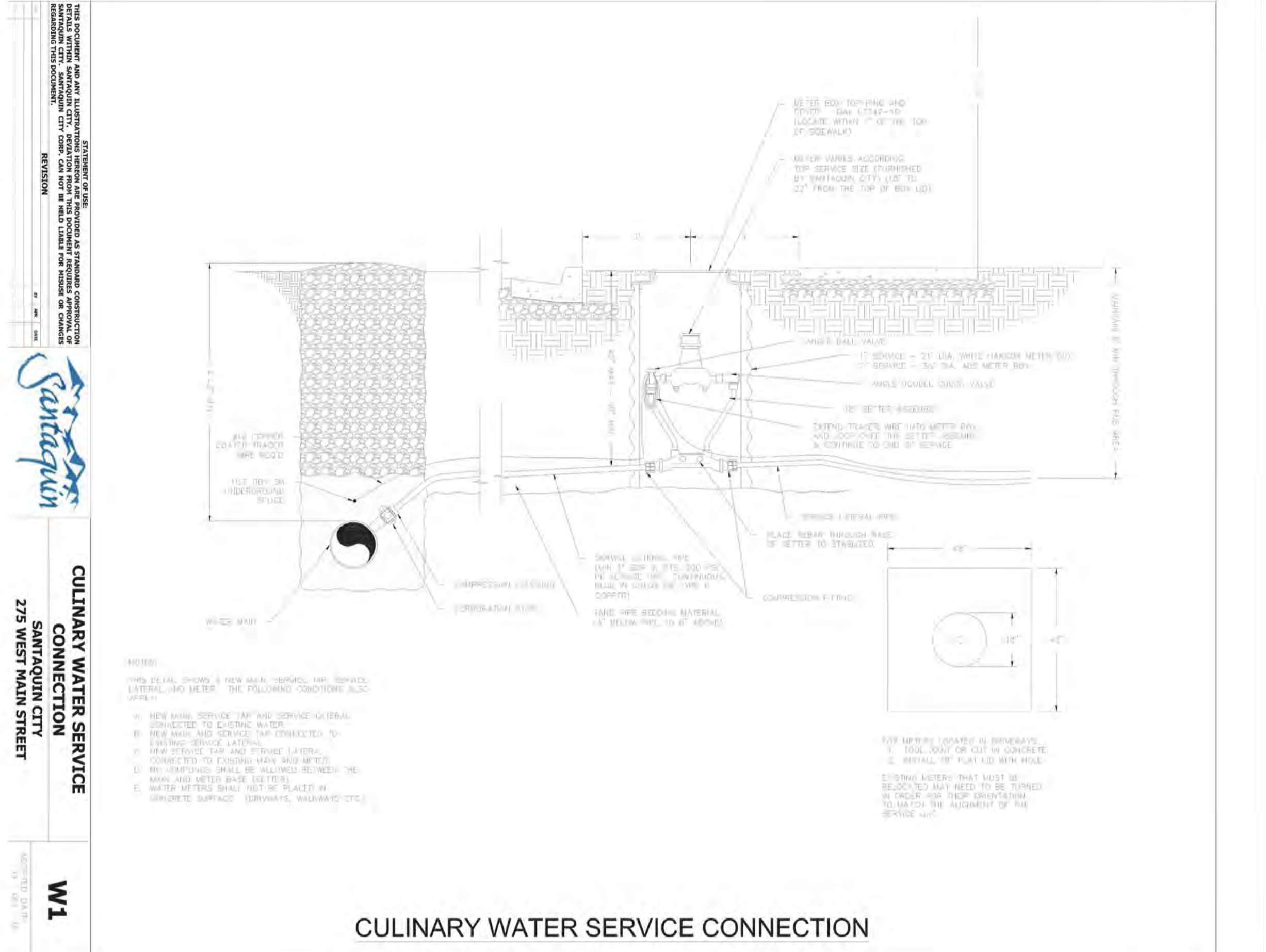






**FIRE HYDRANT & WATER VALVE DETAIL**  
SANTAQUIN CITY  
275 WEST MAIN STREET

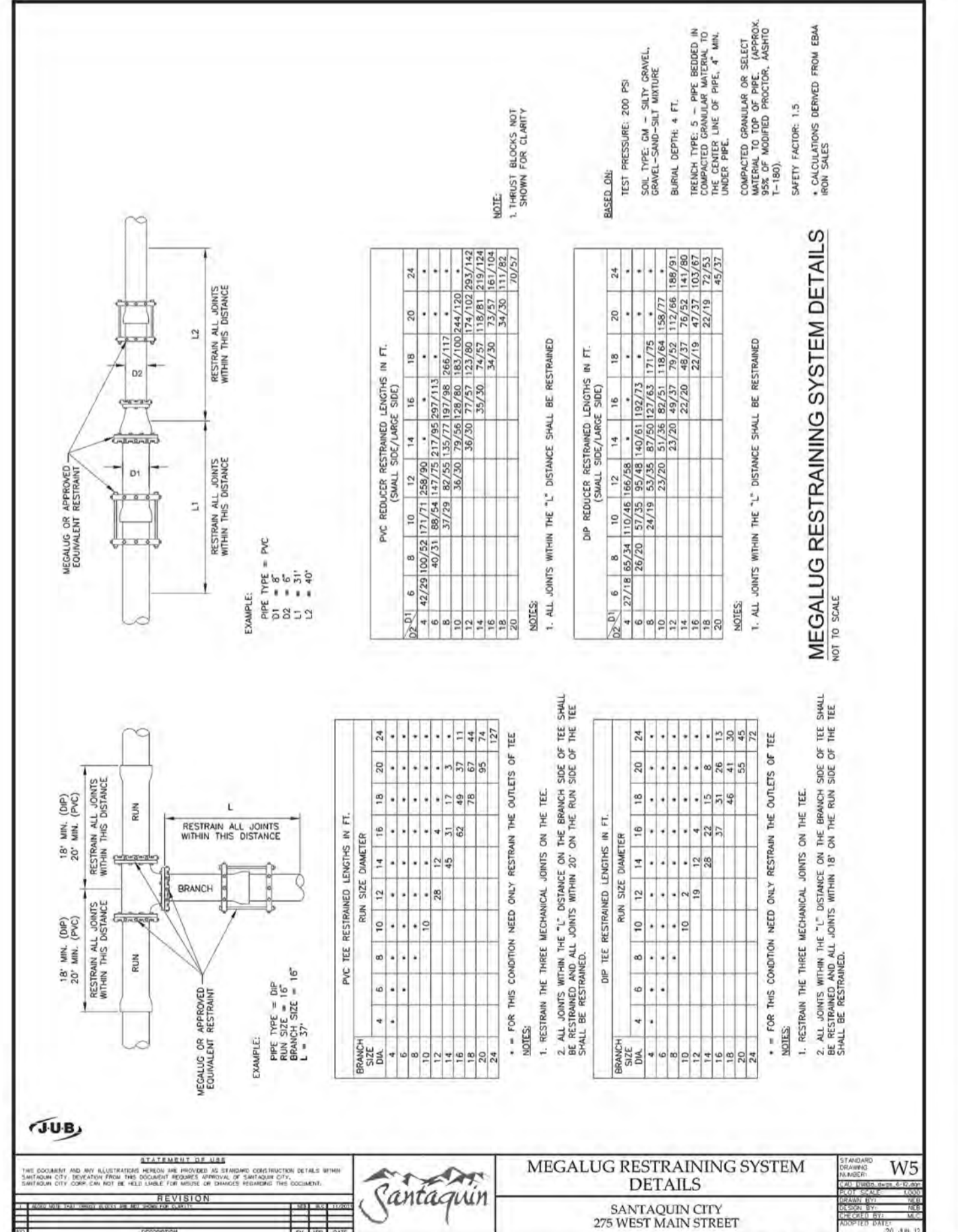
W2



**CULINARY WATER SERVICE CONNECTION**  
SANTAQUIN CITY  
275 WEST MAIN STREET

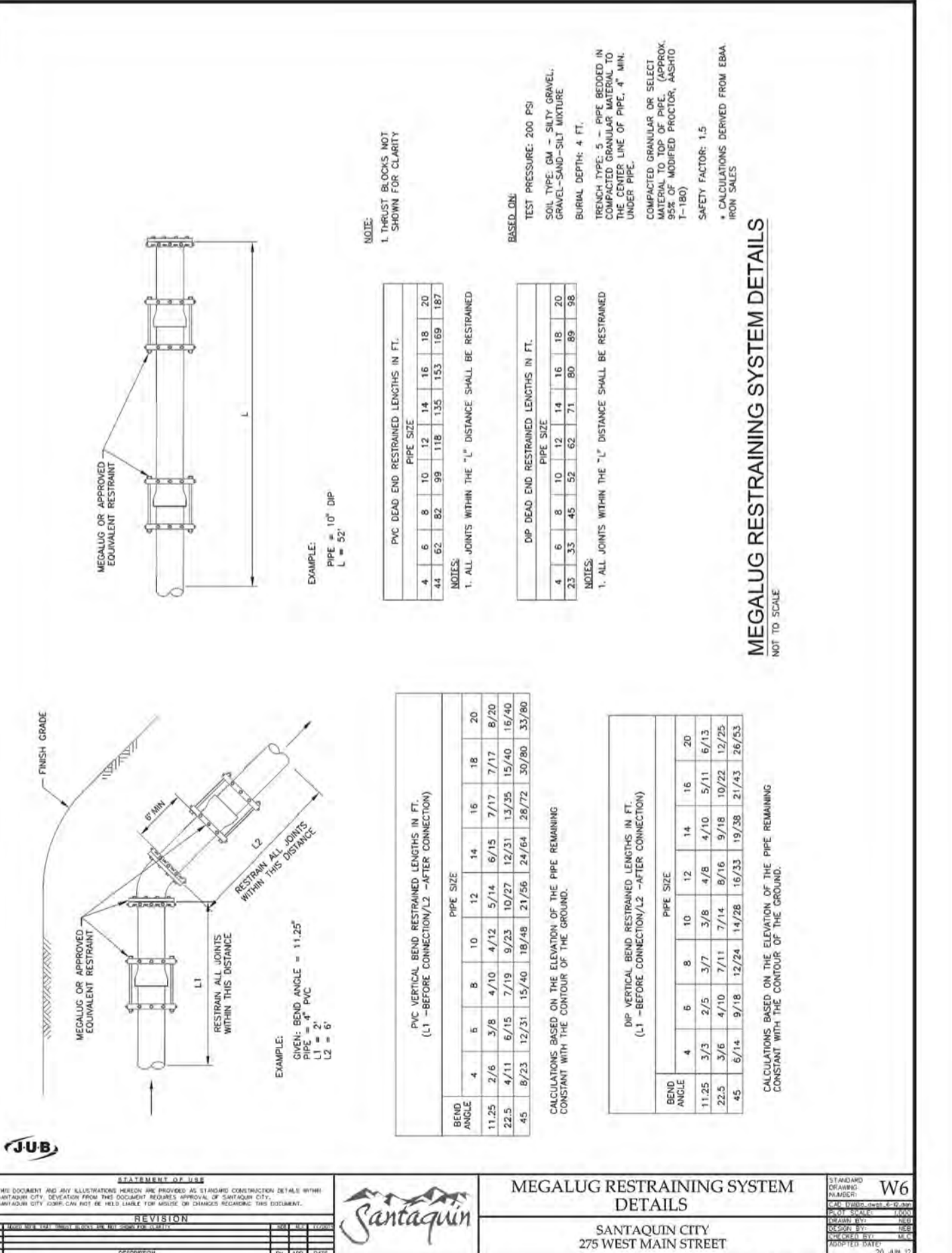
W1

**CULINARY WATER SERVICE CONNECTION**



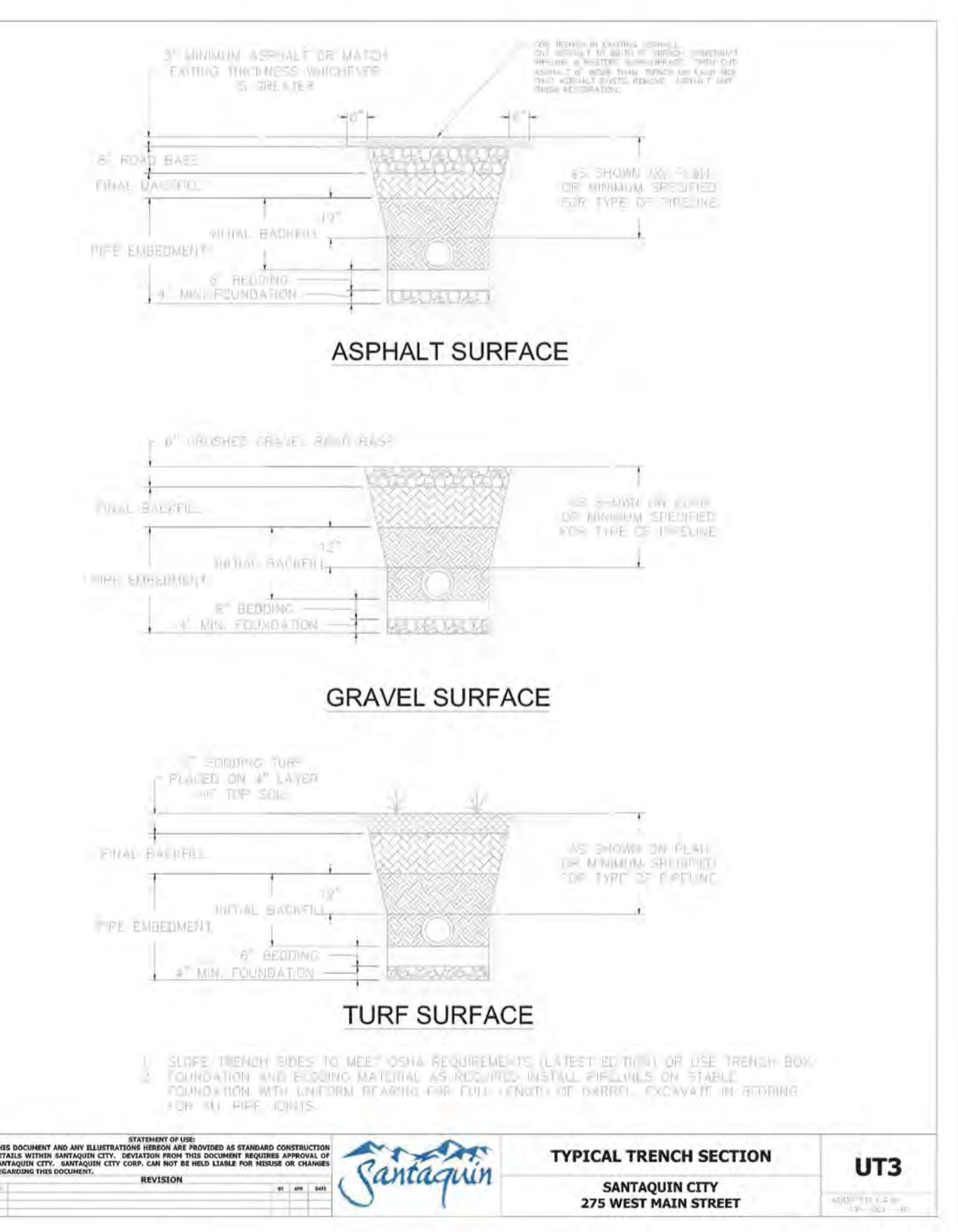
**MEGALUG RESTRAINING SYSTEM DETAILS**  
SANTAQUIN CITY  
275 WEST MAIN STREET

W5



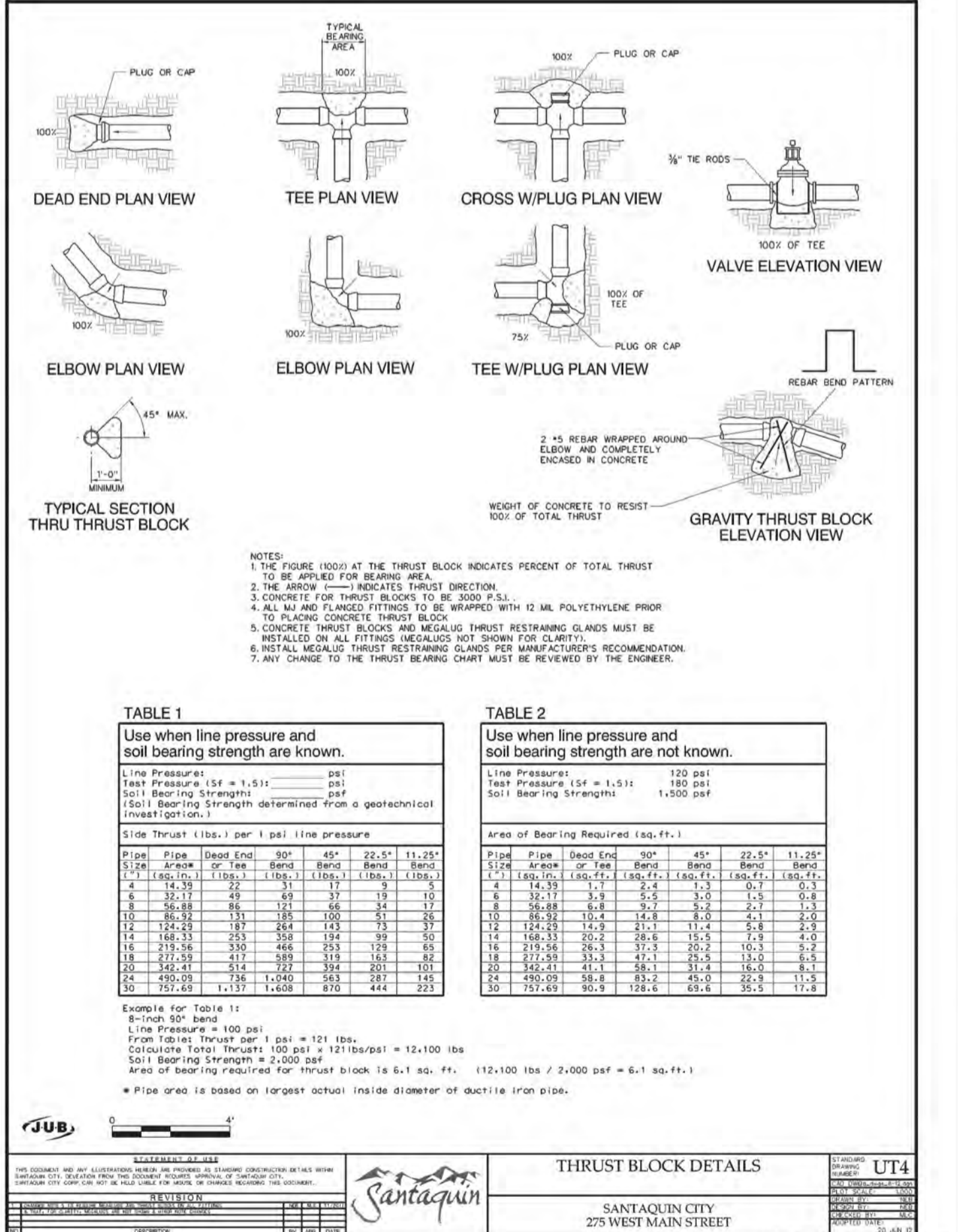
**MEGALUG RESTRAINING SYSTEM DETAILS**  
SANTAQUIN CITY  
275 WEST MAIN STREET

W6



**TYPICAL TRENCH SECTION**  
SANTAQUIN CITY  
275 WEST MAIN STREET

UT3



**THRUST BLOCK DETAILS**  
SANTAQUIN CITY  
275 WEST MAIN STREET

UT4

| NO. | DESCRIPTION | DATE | APP'D |
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|     |             |      |       |

ORIG. DATE: 2-8-21  
SURVEY BY: GPW  
DRAWN BY: GPW  
DESIGNED BY: GPW  
CHECKED BY: GPW  
SCALE: N/A

**GATEWAY CONSULTING, Inc.**  
P.O. BOX 951005 SOUTH JORDAN, UT 84095  
PH: (801) 694-5848  
gw@gatewayconsulting.com

**CIVIL ENGINEERING • CONSULTING • LAND PLANNING  
CONSTRUCTION MANAGEMENT**

**STRATTON ACRES  
PHASE 1  
WATER DETAIL**

7-20-2022

**SANTAQUIN CITY**









## Stratton to city

Starting at a point that is South  $89^{\circ}32'33''$  West, 3721.98 feet along the Basis of Bearing line from the East Quarter Corner of Section 36, Township 9 South, Range 1 East, Salt Lake Base and Meridian to a point of beginning and commencing thence South  $89^{\circ}32'33''$  West, 3.48 feet; thence North  $0^{\circ}27'27''$  West, 390.47 feet; thence South  $89^{\circ}57'52''$  East, 42.02 feet; thence South  $0^{\circ}02'28''$  West, 1.84 feet to a point on a 15.00-foot radius curve to the left; thence along the arc of said curve 23.22 feet through a central angle of  $88^{\circ}40'57''$  (Chord Bearing South  $45^{\circ}45'11''$  West, 20.97 feet); thence South  $1^{\circ}24'42''$  West, 197.92 feet to a point on a 527.50-foot radius curve to the right; thence along the arc of said curve 38.78 feet through a central angle of  $4^{\circ}12'44''$  (Chord bearing South  $3^{\circ}31'04''$  West, 38.77 feet); thence South  $5^{\circ}37'26''$  West, 124.99 feet to a point on a 22.50-foot radius curve to the left; thence along the arc of said curve 13.02 feet through a central angle of  $3^{\circ}21'08''$  (Chord bearing South  $3^{\circ}56'52''$  West, 13.02 feet) back to the point of beginning.

Parcel Contains 0.169 acres.

## School to city

Starting at a point that is South  $89^{\circ}32'33''$  West, 3686.56 feet along the Basis of Bearing line and North 390.12 feet from the East Quarter Corner of Section 36, Township 9 South, Range 1 East, Salt Lake Base and Meridian to a point of beginning and commencing thence North  $89^{\circ}57'42''$  West, 42.02 feet; thence North  $0^{\circ}27'27''$  West, 506.49 feet; thence North  $89^{\circ}32'33''$  East, 16.49 feet; thence North  $0^{\circ}27'27''$  West, 409.77 feet; thence East, 40.82 feet; thence South  $1^{\circ}24'42''$  West, 840.11 feet to a point on a 15.00-foot curve to the left; thence along the arc of said curve 23.93 feet through a central angle of  $91^{\circ}24'42''$  (Chord bearing South  $44^{\circ}17'39''$  East, 21.47 feet); thence South 31.00 feet; thence West, 2.27 feet; thence South, 30.16 feet back to the point of beginning.

Parcel contains 0.758 acres.

2-11-22

A 20' sewer easement, 10' either side of described centerline

Beginning at a point that is N 89°32'32" E 1,022.98 feet along the section line and North 1,712.66 feet from the West ¼ corner of Section 36, Township 1 East, Range 9 South, Salt Lake Base and Meridian, and running thence N 89°53'59" E 321.86 feet, thence S 69°55'19" E 259.85 feet, thence S 01°24'42" W 1,461.43 feet, thence S 05°37'26" W 129.21 feet to the point of terminus.