NOTICE OF MEETING
PLANNING COMMISSION
CITY OF ST. GEORGE
WASHINGTON COUNTY, UTAH

Public Notice

Notice is hereby given that the Planning Commission of the City of St. George, Washington County, Utah, will hold a **Planning Commission** meeting in the City Council Chambers, 175 East 200 North, St George, Utah, on **Tuesday, November 15**, commencing at **5:00 p.m**.

The agenda for the meeting is as follows:
Call to Order
Flag Salute

1. **ZONE CHANGE AMENDMENT (ZCA) *(Public Hearing)* Legislative**

A. Consider a request for a zone change amendment to the Snow Canyon Commercial Center Planned Development Commercial (PD-C) zone. The applicant is seeking approval to add a 3,500 sq ft retail building to the site adjacent to Snow Canyon Parkway. No other changes to the grocery store site are proposed. The property is generally located on the south-west corner of Snow Canyon Parkway and 2000 North. The applicant is Snow Canyon Commercial Center, LLC, and the representatives are Chase Jensen and Neil Walter. The project will be known as Snow Canyon Commercial Center Pad A. Case No. 2022-ZCA-042 (Staff – Dan Boles)

B. Consider a request to amend the Stonebridge PD-R (Planned Development Residential) zone. The applicant is seeking approval to amend Phases 4 and 5 of the Sienna Park Condominiums within this planned development. This amendment will update the buildings and conceptual site plan as well as add seven additional units to this development. The total property area is approximately 5.11 acres. The project is located at approximately 271 N. Country Lane. The applicant is Brian McMullin, and the representative is Rob Reed. The project will be known as Sienna Park Condominiums. Case No. 2022-ZCA-044 (Staff – Carol Davidson)

C. Consider a request for a zone change amendment to the Boulder Creek Crossing Planned Development Commercial (PD-C) zone. The applicant is seeking approval to add a 5,139 sq ft two story dental office building to the site. The property is generally located at 1260 E 1450 S. The applicant is Save Dental, and the representatives are Aaron Salmon and Matthew Metcalf. The project will be known as Save Dental. Case No. 2022-ZCA-048 (Staff – Mike Hadley)

2. **ZONING REGULATION AMENDMENT (ZRA) *(Public Hearing)* Legislative**

Consider a request to amend portions of the City Code, including Title 3, Business and License Regulations, to add Mobile Business along with its operational requirements, time limits, and expiration date; and to amend portions of Title 10, Zoning Regulations, to add Mobile Business to be permitted in the C-2 and/or C-3 zone along with its specific standards, application and parking requirements. The applicant is the City of St. George. Case No. 2022-ZRA-005 (Staff – Carol Davidson)

3. **HILLSIDE REVIEW BOARD (HS) Administrative**

Consider a request for a hillside development permit for a commercial building. The applicant is requesting that the Hillside Review Board consider allowing disturbance of property over 20% on the site. The property is currently zoned C-3 (General Commercial). The site is located south-east of the

intersection of Foremaster Dr. and Riverside Drive. The applicant is Scott Cervenak. Case No. 2022-HS-016 (Staff – Dan Boles)

4. PRELIMINARY PLATS (PP) Administrative

A. Consider a request to approve an amended Preliminary Plat to add an additional eight (8) units to the approved sixty-nine (69) units for a total of seventy-seven (77) lot residential subdivision known as Sienna Park Condominiums located at approximately 271 N Country Lane. The property is 5.11 acres and is zoned PD-R. The applicant is Rosenberg Associates, representative Rob Reid. Case No. 2022-PP-035. (Staff – Wes Jenkins)

B. Consider a request for a forty-six (46) lot residential subdivision known as Red Pine Phases 3-4 located at approximately 2890 South 3430 E. The property is 15.06 acres and is zoned R-1-8. The applicant is DSG Engineering, representative Mike Terry. Case No. 2022-PP-041. (Staff – Wes Jenkins)

C. Consider a request for a two (2) lot commercial subdivision known as Snow Canyon Commercial Subdivision Phase 2 located at approximately 2000 North and Snow Canyon Pkwy. The property is 4.58 acres and is zoned PD-C. The applicant is Anderson, Wahlen & Associates, representative Shaun Young. Case No. 2022-PP-043. (Staff – Wes Jenkins)

5. MINUTES

Consider a request to approve the meeting minutes from the October 25, 2022, meeting.

6. CITY COUNCIL ACTIONS

John Willis the City Manager will report on items heard at the November 3, 2022, City Council meeting.

1. 2022-GPA-009 Downtown Plan
2. 2022-ZCA-043 Visionary Sage Haven phases 10 and 11
3. 2022-CUP-007 Dixie Center Townhomes
4. 2022-PP- 042 Auburn Hills Ph 16
5. 2022-PP-038 Desert Canyons Business Park
6. 2022-PP-040 Webb Acres Ph 2 and 3

Brenda Hatch – Development Office Supervisor

Reasonable Accommodation: The City of St. George will make efforts to provide reasonable accommodations to disabled members of the public in accessing City programs. Please contact the City Human Resources Office at (435) 627-4674 at least 24 hours in advance if you have special needs

St.George
Community Development

ITEM 1A

Zone Change Amendment

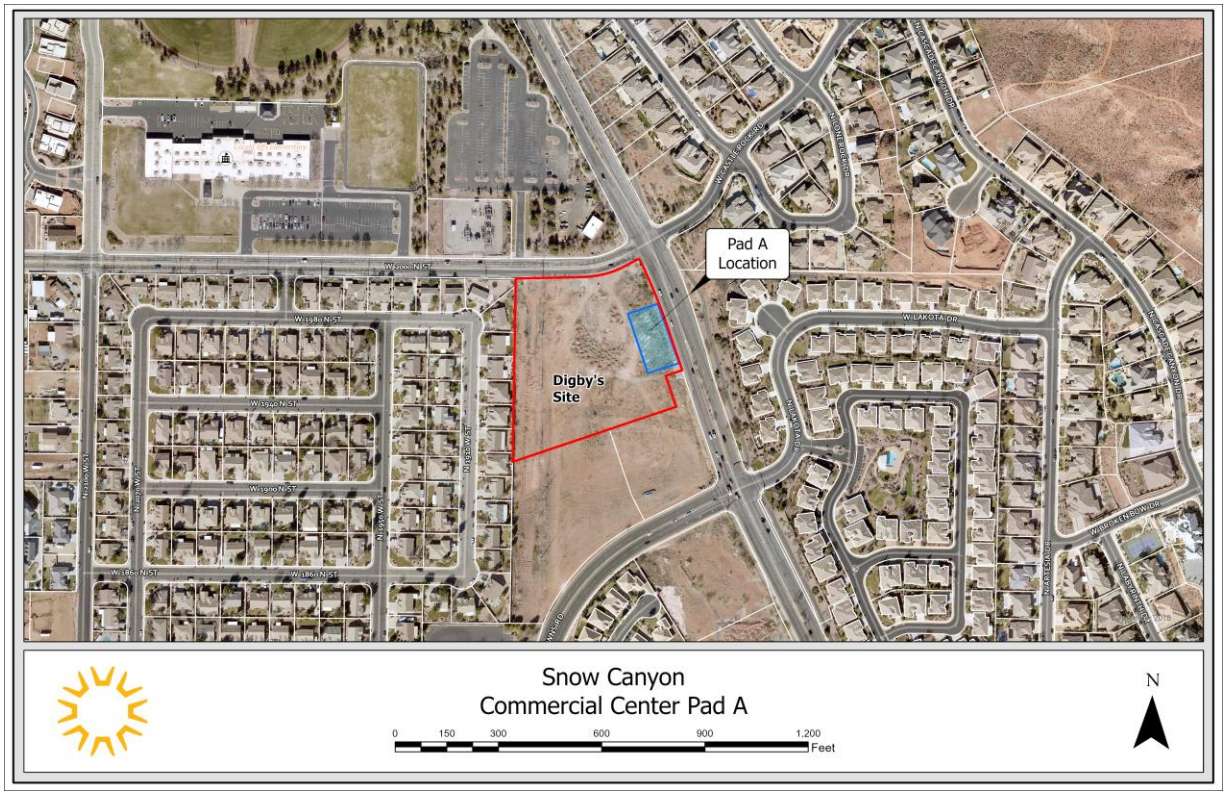
PLANNING COMMISSION AGENDA REPORT: 11/15/2022

ZONE CHANGE AMENDMENT
Snow Canyon Commercial Center Pad A
Case No. 2022-ZCA-042

Request: This is a request for an amendment to the Snow Canyon Commercial Center PD (Planned Development) in order to allow a 3,500 sq ft pad building adjacent to Snow Canyon Parkway.

Background: In December of 2018, the property was rezoned to PD-C (Planned Development Commercial) and a use list was approved for the development. At that time, no specific plans were reviewed and approved. In March of 2021, the site was revised to allow a grocery store on the site. As part of that approval, a pad site was shown on the plans with the intent to come back in the future for approval of that building.

Current Project: This PD amendment is requested to approve conceptual layout of the pad site. The Digby's site is approved.



Project Name: Snow Canyon Commercial Center Pad A

Location: The property is located on the south-west corner of Snow Canyon Pkwy and 2000 North.

Acreage: Approximately 0.75 acres

Applicant/ Representative: Snow Canyon Commercial Center, LLC, Chase Jensen & Neil Walter

Current Zone: PD-C (Planned Development Commercial)

General Plan: COM (Commercial).

Adjacent Zones: North – PD-C (Planned Development Commercial), West – PD-C, South – PD-C, C-2 (Commercial), East – PD-R (Planned Development, Residential).

Ordinance: This project is submitted for review in compliance with Section 10-8D-6 "Planned Development - Commercial Standards."

Site Plan: The proposed conceptual site plan shows a single, 3,500 sq ft building on the western edge of the Digby's site. The site also depicts parking. There are approximately nine stalls that, through the two-lot subdivision (also proposed at this meeting) will be on the Pad A site. The city will need to require that a shared parking agreement is in place prior to issuance of a building permit or final site plan approval.

Building: The proposed building is a single story and 3,500 square feet total. The applicant has provided color elevations and materials. The primary materials are brick and split face CMU. A cement-fiber siding (Hardie Board) will be used for accents along the side facing Snow Canyon Parkway. The materials will tie into the Digby's building.

Height: The proposed building is approximately 26 feet in height. For reference, under the zoning code, a single-family home may be up to 40 feet tall.

Parking: At 40,438 sq ft, the Digby's grocery store is required to have 162 parking stalls. At 3,500 sq ft, Pad A is required to have 14-24 stalls depending on the uses (Restaurant requires more parking than retail). All combined, there is a total of 181 stalls. This means that not all four of the spaces will be able to accommodate a restaurant use unless there is no seating area. Staff will monitor the square footage as business licenses are requested.

Landscaping: City code requires 15' average along the public street, as well as 5% of the parking lot. In addition, the zoning ordinance requires a 10' landscape buffer and block wall along residential property lines. It appears that the site will be able to accommodate these requirements. The block wall has been shown on the Digby's site plan and will be installed with that construction.

Uses: The use list was approved with the original application in 2018. No changes are proposed.

Staff Comments: Staff recommends approval of the application with consideration of the following comments:

1. Roadway(s) - The developer will be responsible for installing roadway improvements as necessary along 2000 North and Snow Canyon Parkway. This will be done in conjunction with the Digby's project.

2. Design – Conceptual building elevations, colors, and materials have been provided for review and discussion.

3. SPR – Future SPR (Site Plan Review) applications and plans shall be submitted and approved by staff (*the SPR is the civil engineering plan set*).

4. Building Height – The applicant is requesting a building height of approximately 26 feet. This is compliant with city code which allows 50' in the PD-C zone.

5. Lighting – A photometric plan was reviewed and approved as part of the Digby's site plan approval process. Staff recommends that the same restrictions on light fixtures such as 20' maximum height be placed on this project.

6. Landscaping - With the submittal of a SPR application, a landscape and irrigation plan will be required. A conceptual landscape plan has been submitted for initial review and attached to this staff report.

7. Buildings – Renderings of the building for the pad building have been submitted and attached to this staff report.

Department Comments:

Sewer/Water

1. No comments were received from sewer or water.

Power

1. No comments

Engineering

1. No comments were received by Engineering.

Parks

1. Protect in place the existing 4" irrigation mainline that runs along the west side of the site. This mainline is connected to Firehouse Park.

Fire

1. No comments on this application.

Recommendation:

Staff recommends approval of this Zone Change Amendment with the following condition:

1. That a cross parking agreement is created between Pad A and the Digby's site.
2. That if any light poles are to be used on this site that they are limited to 20' in height as they were on the Digby's site.
3. That the vegetation along Snow Canyon Parkway matches the species and amount of Snow Canyon Parkway.

Alternatives:

1. Recommend approval as presented.
2. Recommend approval with conditions.
3. Recommend denial.
4. Table the proposed zone change amendment to a specific date.

Possible Motion:

"I move that we forward a positive recommendation to the city Council for the zone change amendment for the Snow Canyon Commercial Center Pad A as presented, case no. 2022-ZCA-042, based on the findings and subject to the conditions listed in the staff report."

Findings for Approval:

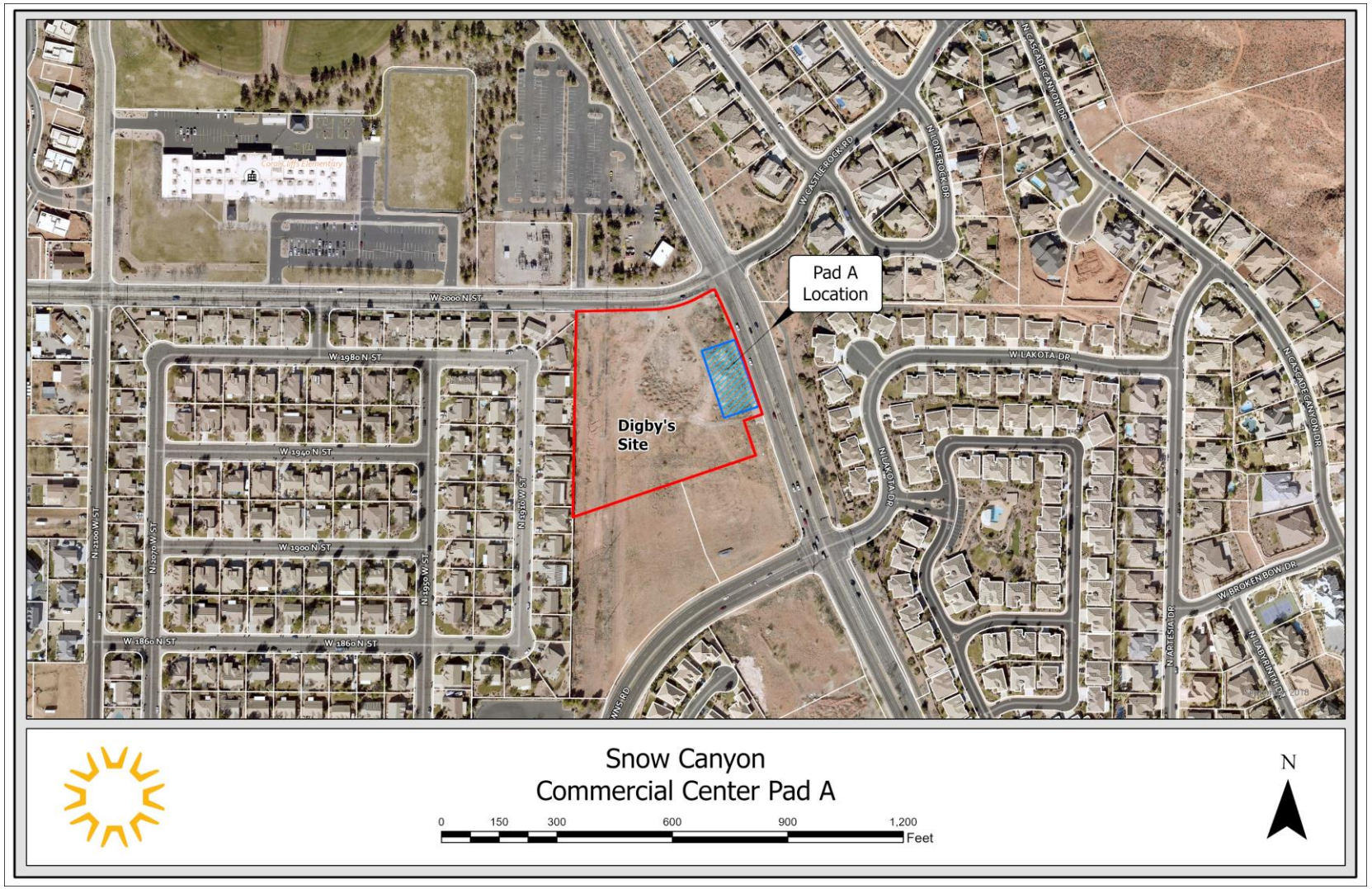
1. The proposed amendment meets the requirements of the original zone change as approved by City Council.
2. There will be adequate parking on site to facilitate the development.

Exhibit A
PowerPoint Presentation

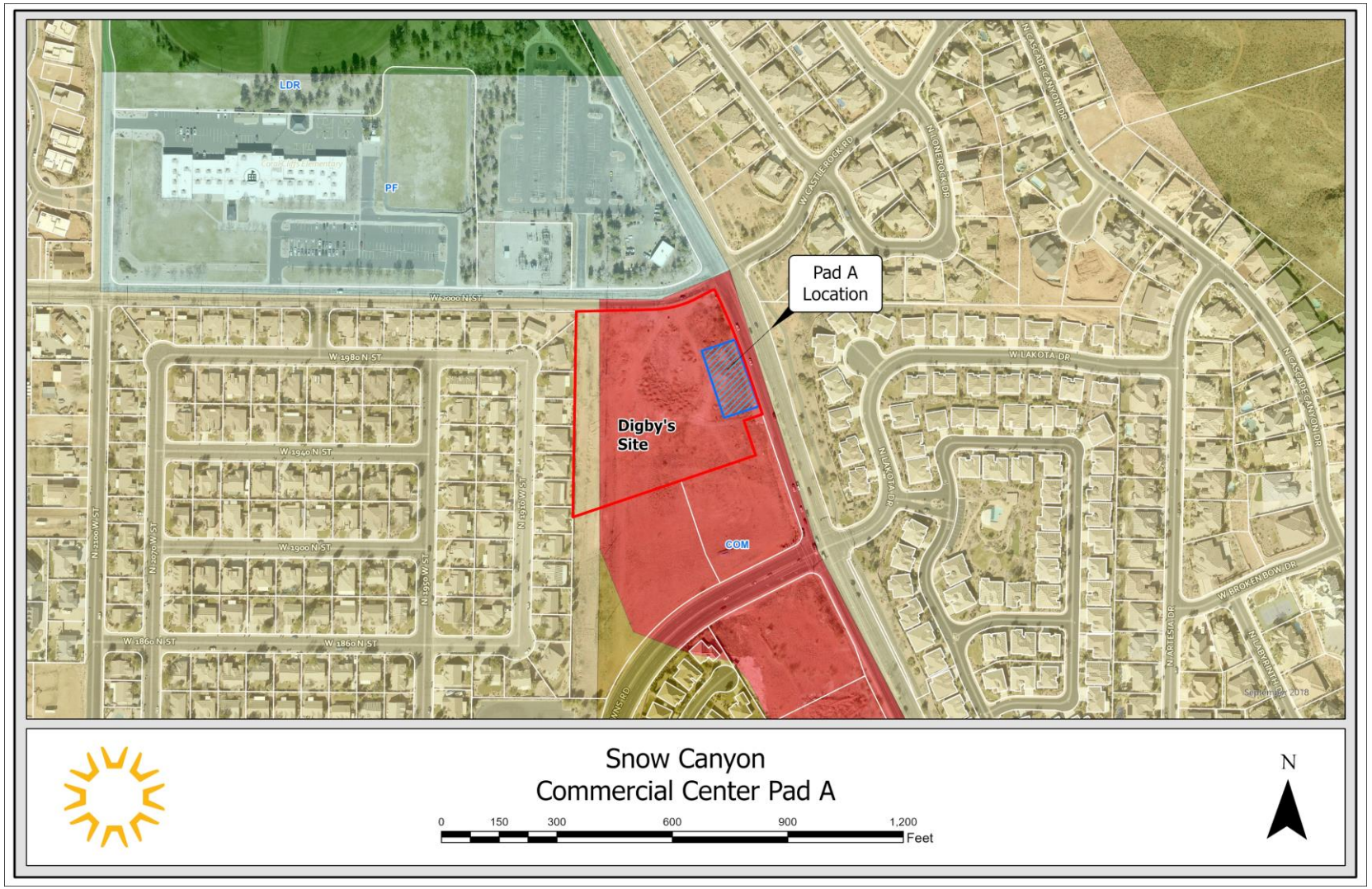
Snow Canyon Commercial Center Pad ‘A’

2022-ZCA-042

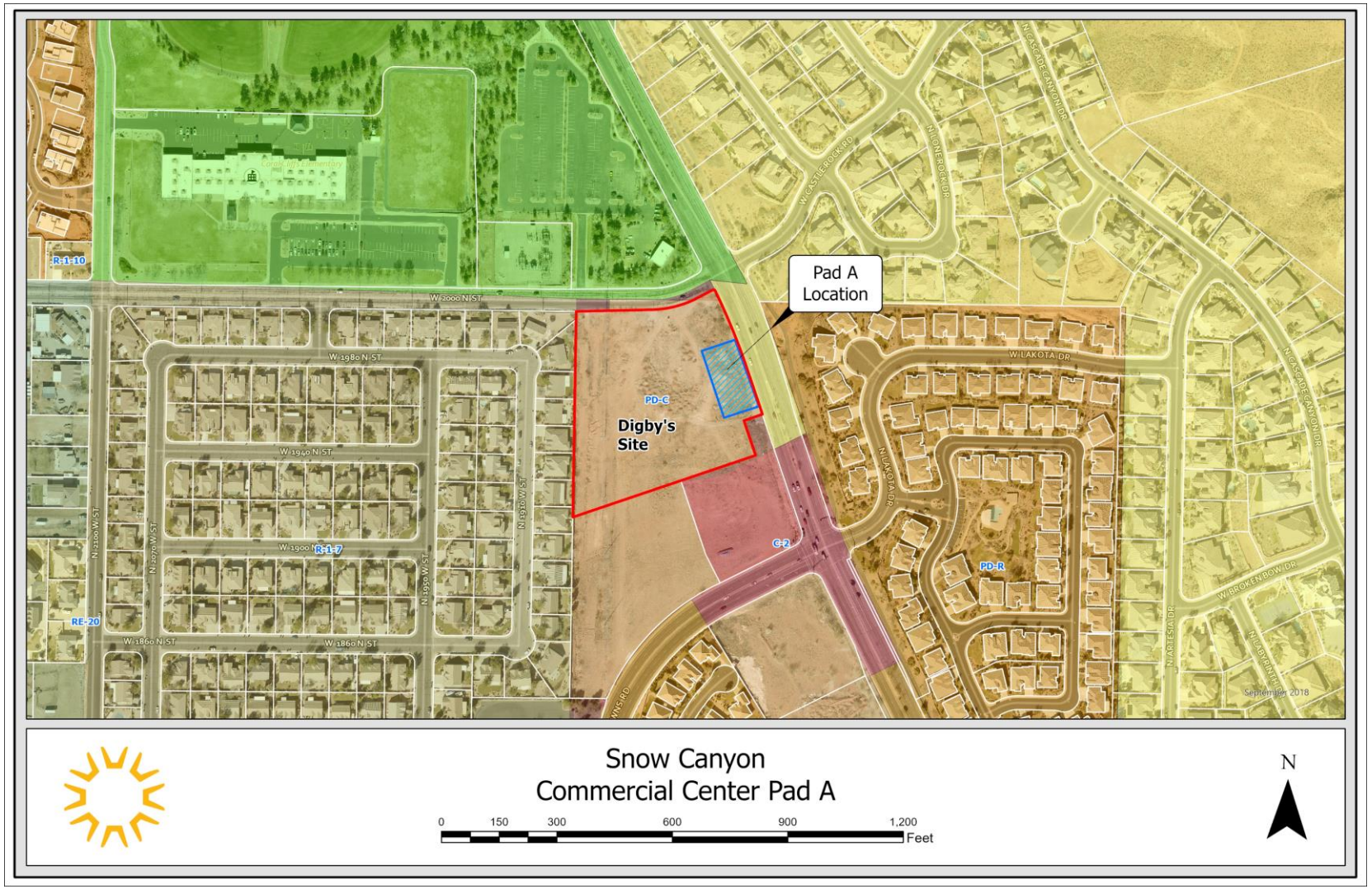
Aerial Map


Pad A
Location
Digby's
Site
W 2000 N ST
W 1980 N ST
W 1940 N ST
W 1900 N ST
W 1860 N ST
W LAKOTA DR
W BROKEN BOW DR
N CASCADE CANYON DR
N LONE ROCK DR
W CASTLE ROCK RD
N LAKOTA DR
N ARTESIA DR
Snow Canyon
Commercial Center Pad A
0 150 300 600 900 1,200
Feet
N

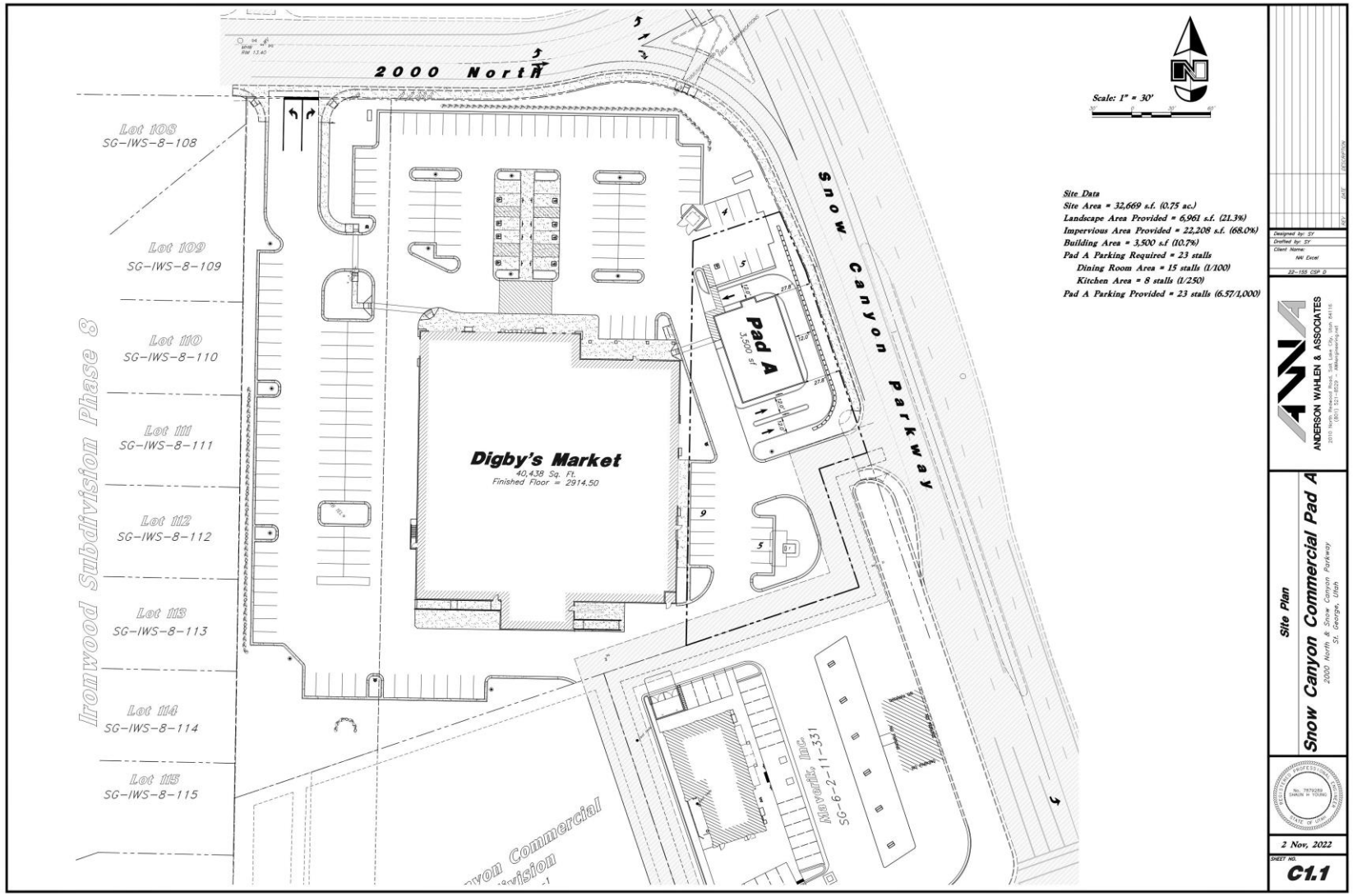
General Plan



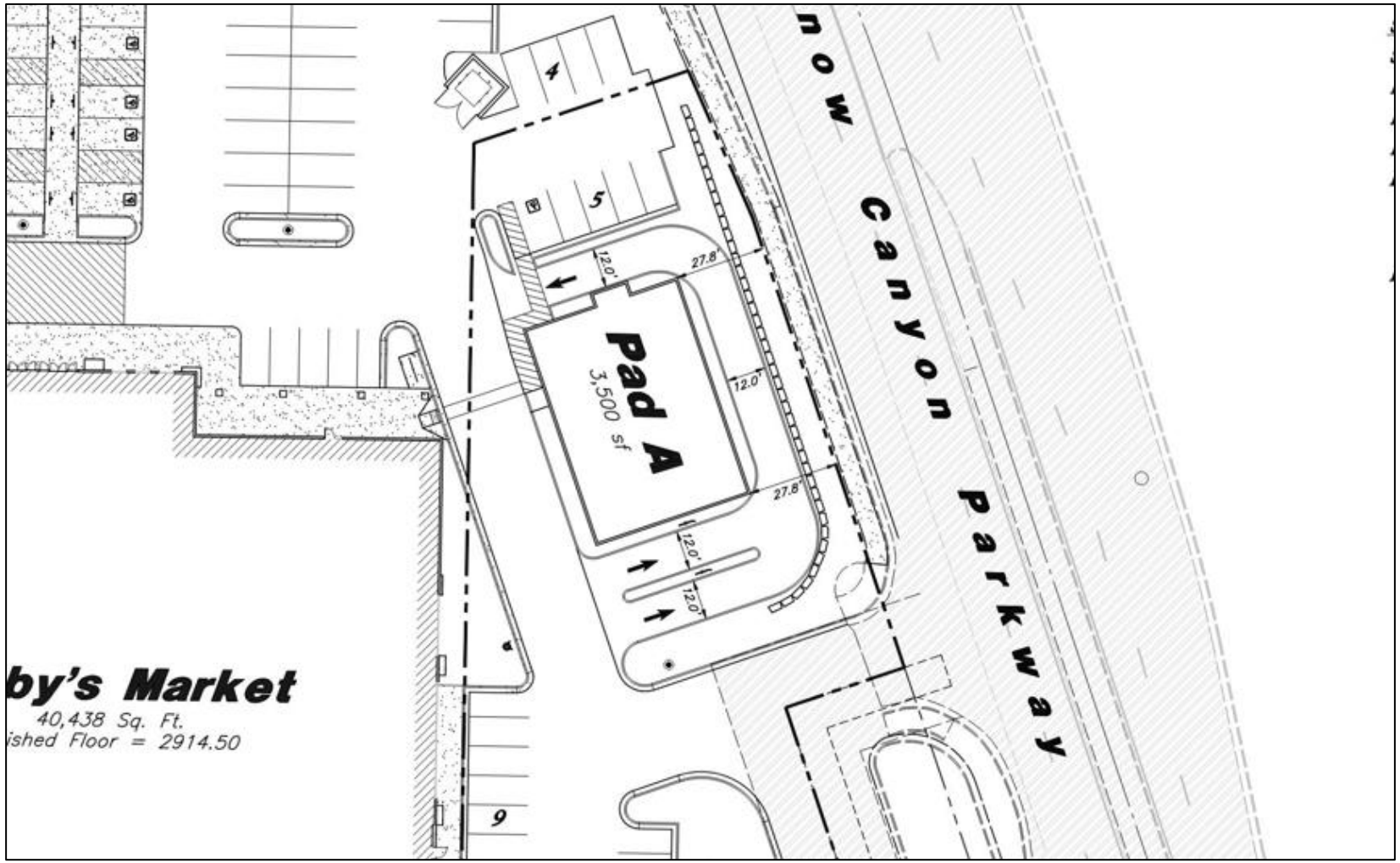
Zoning Map


Pad A
Location
Digby's
Site
PD-C
C-2
PD-R
R-1-10
R-1-7
RE-20
W 2000 N ST
W 1980 N ST
W 1940 N ST
W 1900 N ST
W 1860 N ST
W LAKOTA DR
W BROKEN BOW DR
N LAKOTA DR
N ARTESIA DR
N CASTLE CANYON DR
W CASTLE ROCK RD
N PIONEER DR
Snow Canyon
Commercial Center Pad A
0
150
300
600
900
1,200
Feet
N
September 2018

Digby's site Plan



Pad ‘A’ Site Plan



Conceptual Landscape Plan

Building Elevations

Building Renderings

Materials Board

St.George
Community Development

ITEM 1B

Zone Change Amendment

PLANNING COMMISSION AGENDA REPORT: 11/15/2022

Sienna Park Condos Zone Change (Case No. 2022-ZCA-044)		
Request:	This is a request to amend the Stonebridge PD-R (Planned Development Residential) zone. The applicant is seeking approval to amend Phases 4 and 5 of the Sienna Park Condominiums within this planned development. This amendment will update the buildings and conceptual site plan as well as add seven additional units to this development. The total property area is approximately 5.11 acres	
Applicant:	Brian McMullin	
Representative:	Rob Reid	
Location:	271 N Country Lane	
General Plan:	Low Density Residential (LDR)	
Existing Zoning:	PD-R, Planned Development Residential	
Surrounding Zoning:	North	PD-R
	South	PD-R
	East	PD-R
	West	PD-R
Land Area:	Approximately 1.37 acres	

BACKGROUND:

The original Stonebridge development was created in the 1990's. This 660-unit development started with the dedication of nine holes to the Sunbrook Golf Course. The land use designation for this development is LDR (Low Density Residential) and is achieved by the clustering of the development over 214+ acres. The entire development consists of single and multifamily neighborhoods including Sienna Park Condominiums. The development of this condominium project has spanned over many years and has gone through many changes. It originally was approved to have seven buildings with 10 units in each building, totaling 70 units. Over the years, there have been many changes made to the design and layout of this development. This includes changing the design of the buildings, reducing the building count to six, reducing the total units to 69, and then bringing the total back up to 70. The first two buildings have been built and the third and fourth buildings have been approved and are completing the grading process at this time. The applicant is returning for approval of the design and layout of the final two buildings.

The applicant is also seeking to increase the number of units to 77 total units. As previously mentioned, the entire Stonebridge development has been allotted 660 total units. Since there are many phases within the Stonebridge development that have not been built, the total number of units for the Stonebridge development has been adjusted so that the number of total units does not exceed 660 with the addition of these 7 new units. Please se the Land Use Summary Chart below:

STONEBRIDGE LAND USE SUMMARY

Development	Area (ac)	Density	Phases	Platted Units	Unplatted Units	Total Units
Black Rock	9.59	HD	5	102	0	102
Cyprus	4.57	HD	3	34	36	70
Huntington	19.59	MD	5	99	34	133
Monterey	16.55	MD	3	60	0	60
Sienna	5.11	HD	5	24	53	77
Twin Creeks	25.86	LD	3	83	0	83
Wailea Falls	19.79	MD/HD	7	45	83	128
PD Commercial	0.5	HD	1	0	7	7
Open Space	23					
Black Rock 9 Holes	69.42					
Total Area	193.98					
Total Platted Units				447		
Total Unplatted Units					213	
Total Units						660

When this project was originally approved, there was not an amenity requirement; however, the original approval did include a clubhouse, pool, and hot tub covering approximately 11,505 square feet. With this amendment, the applicant is also requesting to alter the existing amenities. They are proposing to remove the existing hot tub and

replace the existing clubhouse, pool, and add a pickleball court. To bring the entire 77-unit development in compliance with our current code, the required amenity space would be 15,400 square feet. Due to the dedication of the golf course, the space for amenities is limited and the applicants do not have any additional land for amenities. The applicants are requesting to have the remaining required amenity space of 3,895 square feet to be contained within the undisturbed open space area along the north side that separates the buildings from the fairway and tee boxes and contains approximately 32,914 square feet.

See the Zoning Requirements box below:

Zoning Requirements			
Regulation	**Section Number**	**Proposal**	**Staff Comments**
Setbacks	10-7F-4	The specific setbacks are not shown on the plans	They applicant will be required to have: 20’ street side setback 10’ side yard setbacks 20’ rear yard setback The setbacks appear to meet the regulations
Uses	10-7F-2	Residential and amenity space	This meets regulations
Height and Elevation	10-7F-2	Proposed maximum height of units is approximately 3’	The maximum height for this zone is 40’. The proposed structures meet the height requirements.
Density	10-7F-2	The overall density of Stonebridge will be 3.30 du/ac	This meets the density requirements for the LDR zone which is between 1-4 du/ac
Schools, Churches, OS	10-7F-2	None proposed	N/A
Phasing Plan	10-7F-2	This proposal will be considered phases 4 and 5	A phasing plan has been provided
Landscape Plan	10-7F-2	The landscaping plan is attached.	They will be required to have 30% landscaped.
Utilities	10-7F-2	None shown	This will be coordinated with JUC during the site plan review process.
Solid Waste	10-7F-2	None shown	This will be coordinated with JUC during the site plan review process.

Lighting	10-7F-2	The proposed lighting plan includes lighting on the buildings with photo-electric cells to provide softer lighting.	The lighting will be required to meet the night-sky standards found in the code.
Turning Space	10-7F-2	The units will be accessed via a private parking lot.	The turning space will be required to meet the Fire Code.
Signs	10-7F-2	No signs are requested	
Amenities	10-7F-5	Proposed Amenity Area is 11,505sf with additional 3,895sf of undisturbed open space. There will be three amenities: pool, clubhouse, and pickleball court.	Required amenity area for entire development is 15,400sf and they are required to have two amenities.
Overlay Zones	10-13	N/A	N/A
Parking	10-19	Total parking spaces provided for 77 units: Covered = 112 Uncovered: = 67 Total = 179	Required parking for 77 units: Covered = 77 Uncovered = 103 (including guest parking) Total = 180 Short = 1
EVCS And Bike Parking	10-19	Each new unit will have EVCS within their garages.	They will be required to put in bike parking.

RECOMMENDATION:

ALTERNATIVES:

1. Recommend approval as presented
2. Recommend approval with conditions
3. Recommend denial.
4. Table the proposed zone change amendment to a specific date.

POSSIBLE MOTION:

The Planning Commission recommends approval of the zone change amendment for the Sienna Park Condos with the conditions found in the staff report.

FINDINGS FOR APPROVAL:

1. The proposed project meets the requirements of the planned development mixed use zone as found in the zoning regulations.
2. There will be adequate parking on site to facilitate the development.
3. The increase in height will fit harmoniously into the neighborhood, minimizing any negative impacts by considering the proposed setbacks provide an appropriate buffer to neighboring properties.

Exhibit A
Applicant's Narrative

Exhibit B
PowerPoint Presentation

Amended Zone Change Narrative

Sienna Park Condominiums at Stonebridge

Sienna Park Condominiums at Stonebridge
271 North Country Lane
St. George, Utah 84770

352 East Riverside Drive
St. George, Utah 84790
Rob Reid - Project Engineer

October 31, 2022

1 Introduction

In 2004 the St. George City Council approved a zone change for the Stonebridge Planned Development Residential (PD-R) Zone containing approximately 194 acres of property. Stonebridge is a carefully master planned residential development surrounding the 9 holes of the Sunbrook Golf Course. Sienna Park Condominiums at Stonebridge development is located within the Stonebridge PD-R zone (refer to the attached Vicinity Map). Sienna Park includes 5 Phases. Phases 1 and 2 are existing and Phase 3 is currently under construction (refer to the attached Phasing Plan).

The purpose of this amendment is to revise and update the Phase 4 and Phase 5 buildings with garages and parking areas at the Sienna Park Condominiums at Stonebridge development. Sienna Park Phases 4 and 5 includes 24 Units combined in 1.37 Acres. This amendment complies with the approved density allowance and uses of the Stonebridge Land Use Summary (attached) and provides parking that complies with the total parking stalls required for the entire Sienna Park development. This amendment will also include removing and replacing the existing Pool and Pool Building located in existing Phase 1.

2 Amended Site Description

2.0 General Site Amendment Description

The Phase 4 Building "C" will be relocated and updated with a total of 14 units, a change from 8 units previously approved. Building "C" is a 2 Story Building over 13 garages with 1 detached garage. Building "C" will be located northwest of the existing Phase 2 Building that is also a 2 Story building over garages (refer to the attached conceptual building rendering).

The Phase 5 Building "F" will be updated with a total of 10 units, a change from 8 units previously approved. Building "F" will remain in the same location as previously approved. Building "F" is a 2 story Building over 9 garages with 1 detached garage (refer to the attached conceptual building rendering).

The existing Pool and Pool Building located in Phase 1 will be removed, replaced, and updated. The updated Pool and Pool Building will be ADA accessible and located in the same area as the existing Pool and Pool Building (refer to the attached conceptual rendering).

Phase 4 and Phase 5 Buildings and the Phase 1 updated Pool Building will be complementary in colors and materials to all existing buildings in the development including Phase 3 Buildings "D" and "E" currently under construction. Color and materials boards with samples will be provided.

2.1 Site Density

The area for the Amended Zone is 1.37 acres with a total of 24 units. This is within the Sienna Park Condominiums with a total of 77 units in 5.11 acres, with a 13.1 units per acre density. The overall Stonebridge PD-R density is 3.30 units per acre as per the attached Land Use Summary.

2.2 Parking

The original Stonebridge planned development was approved in 2004 meeting the required two parking spaces per unit. Current City of St. George parking ordinances require 2 parking spaces per unit and 1 guest parking per every 3 units, which will only be applied to the uncompleted Phases 3, 4, and 5. To meet the current parking requirements, individual garages will be provided for Phase 3, and buildings in Phases 4 and 5 will be constructed to have 46-foot minimum deep garages that allow for tandem parking. There will be an individual garage in each phase of 4 and 5 to make up for the garage eliminated for elevators. Guest parking will be provided with 18 spaces at various locations throughout the site and within 200 feet of the units they serve.

2.3 Access, Landscaping, Walls and Lighting

Access to the Sienna Park development is from Country Lane (2160 West) via Stonebridge Drive off of Dixie Drive, as shown on the Master Plan (attached). A second access is provided and previously approved to access the Sienna Park project for emergency use only from County Lane

A Landscape Plan has been previously provided and approved for all Phases of the Sienna Park project. Landscaping will comply to current codes of St. George City and the Washington County Water Conservancy District.

Landscape walls will be built on the yards which front on the golf course. A Limited Disturbance Boundary surrounds portions of the project. Previously approved rock retaining walls will be located along the north side of the development with undisturbed areas surrounding the project to protect the natural areas of existing lava and native vegetation (refer to the attached Phasing Plan).

Exterior lighting will be on the buildings with photo-electric cells to provide softer lighting. Interior site areas will have pole top fixture historical lighting located for access and safety. A photometric plan has been previously provided and approved.

2.4 Amenity Spaces

The current landscape and amenity area requirements for this development are 15,400 square feet. The existing clubhouse and pool will be remodeled with an expanded pool and deck area. Landscape areas and a pickleball court will be added to the amenity area. The total clubhouse amenity area totals 11,505 square feet. The remaining required amenity areas are to be within the development's undisturbed open space area along its north side that separates the buildings from the golf course fairway and tee boxes. This area was donated to the City to be a buffer area from the golf course and be used as an enrichment to the view corridor. There are additional areas along the west side that are undisturbed areas reserved to enrich the view corridor to the Black Rock Hole #7.

NORTH

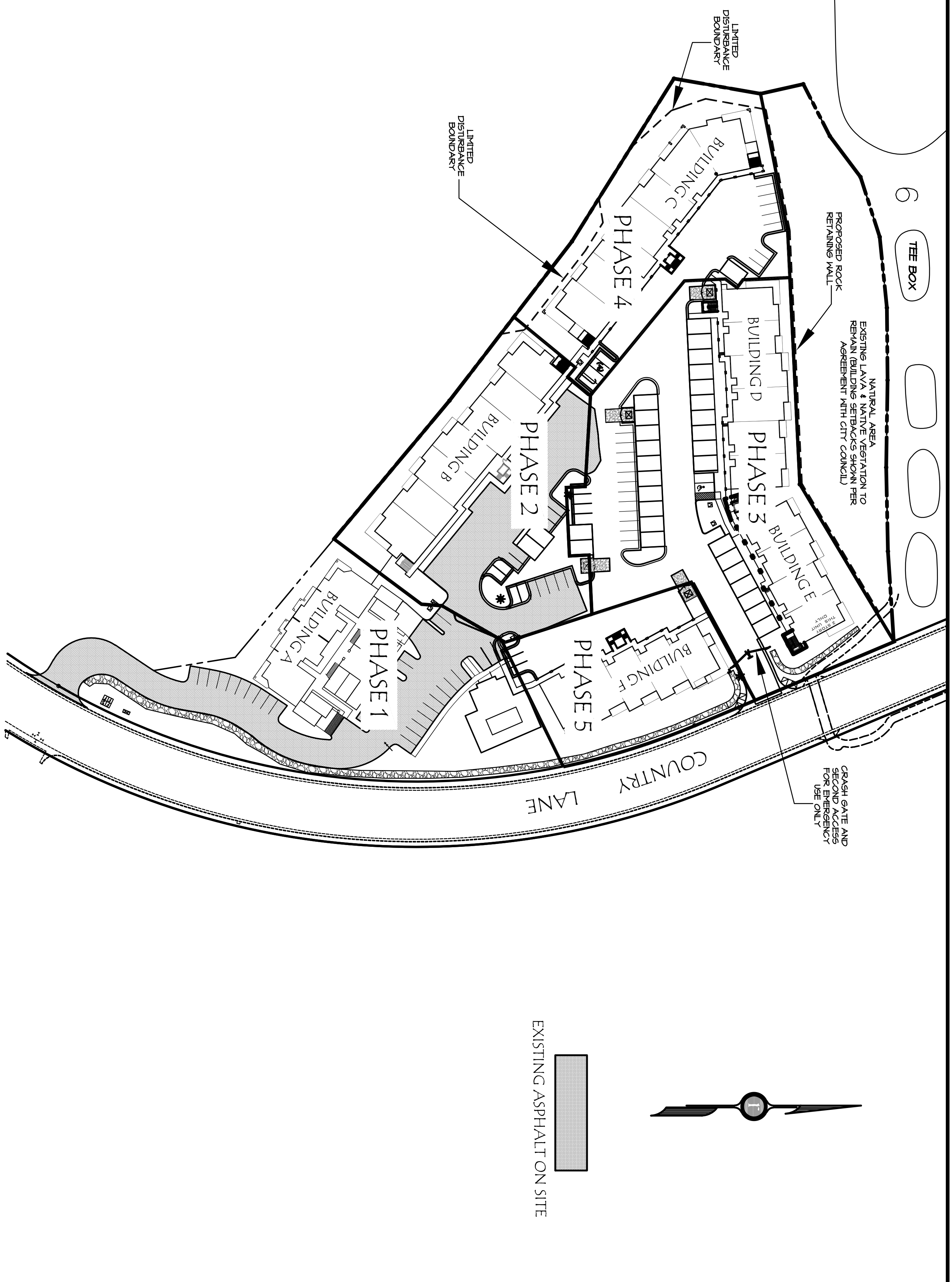
SIENNA PARK CONDOMINIUMS LOCATION

VICINITY MAP

SIENNA PARK CONDOMINIUMS AT STONEBRIDGE

ST. GEORGE, UTAH

NOT TO SCALE



LIMITED DISTURBANCE BOUNDARY
LIMITED DISTURBANCE BOUNDARY
PROPOSED ROCK RETAINING WALL
TEE BOX
6
NATURAL AREA
EXISTING LAVA & NATIVE VEGETATION TO REMAIN (BUILDING SETBACKS SHOWN PER AGREEMENT WITH CITY COUNCIL)
PHASE 1
PHASE 2
PHASE 3
PHASE 4
PHASE 5
BUILDING A
BUILDING B
BUILDING C
BUILDING D
BUILDING E
BUILDING F
CRASH GATE AND SECOND ACCESS FOR EMERGENCY USE ONLY
COUNTRY LANE
EXISTING ASPHALT ON SITE

PHASING PLAN
FOR
SIENNA PARK CONDOMINIUMS AT STONEBRIDGE
ST. GEORGE, UTAH

ROSENBERG
ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS

SHEET
PHASE
OF SHEETS

STONEBRIDGE LAND USE SUMMARY

Development	Area (ac)	Density	Phases	Platted Units	Unplatted Units	Total Units
Black Rock	9.59	HD	5	102	0	102
Cyprus	4.57	HD	3	34	36	70
Huntington	19.59	MD	5	99	34	133
Monterey	16.55	MD	3	60	0	60
Sienna	5.11	HD	5	24	53	77
Twin Creeks	25.86	LD	3	83	0	83
Wailea Falls	19.79	MD/HD	7	45	83	128
PD Commercial	0.5	HD	1	0	7	7
Open Space	23					
Black Rock 9 Holes	69.42					
Total Area	193.98					
Total Platted Units				447		
Total Unplatted Units					213	
Total Units						660

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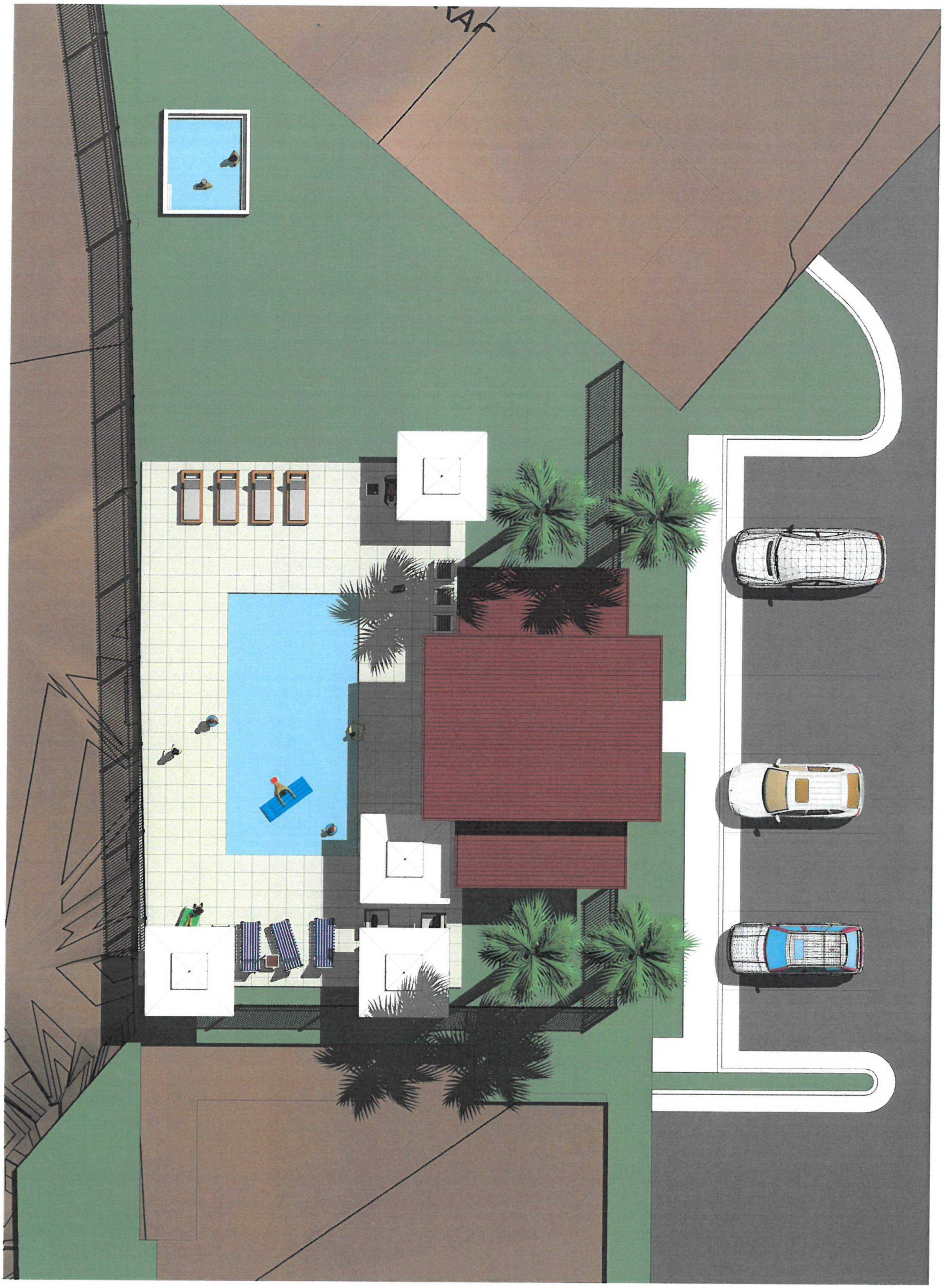


① Site Plan
1/4" = 1'-0"

project:
SIENNA PARK CONDOS - POOL HOUSE
409 NORTH COUNTRY LANE
ST. GEORGE, UTAH 84770

revisions:

Project number | Project Number
Date | Issue Date
Drawn by | Author
Checked by | Checker

Site Plan

A1.0

Mendenhall Architecture & Design, llc
4635 South Highland Dr.
Holladay, UT 84117
801.277.2935

① 3D View 1

10/22/2018 10:07:31 AM

Mendenhall Architecture & Design, llc

4635 South Highland Dr.
Holladay, UT 84117
801.277.2935

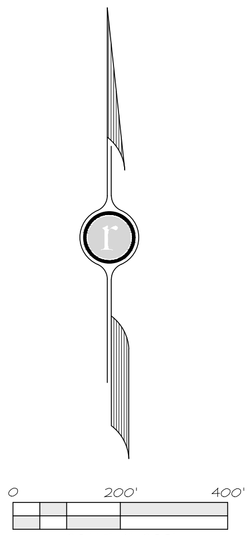
project:
SIENNA PARK CONDOS - POOL HOUSE
409 NORTH COUNTRY LANE
ST. GEORGE, UTAH 84770

revisions:

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker

Cover Sheet

A0.0



SANTA CLARA

SANTA CLARA CITY LIMITS

ST. GEORGE CITY LIMITS

SUNSET PLATEAU SUBDIVISION
R-1-10

TWIN CREEKS
PHASE #3
12 UNITS / 3.28 ACRES

OPEN SPACE
2.68 ACRES

OPEN SPACE

TWIN CREEKS
PHASE #1
43 UNITS / 13.53 ACRES

UTANA HAMMER

WAILEA FALLS
PHASE #2
22 UNITS / 3.71 ACRES

WAILEA FALLS
PHASE #3
15 UNITS / 2.23 ACRES

WAILEA FALLS
PHASE #1
8 UNITS / 2.10 ACRES

PRESTON HAFEN
R-1-10

FUTURE WAILEA FALLS
PHASE(S) 4-5
55 UNITS / 11.75 ACRES

GOLF COURSE
69.42 ACRES

FUTURE SIENNA
PHASE(S) 3-5
53 UNITS
2.89 ACRES

FUTURE
CYPRESS POINT
PHASE #2
20 UNITS / 1.32 ACRES

TWIN CREEKS
PHASE #2
27 UNITS / 8.62 ACRES

GROUP
MANAGMENT
INC.
COMMERCIAL

SANTA CLARA CITY LIMITS

ST. GEORGE CITY LIMITS

SIENNA
PHASE 2
14 UNITS / 0.96 ACRES

HALFWAY WASH

OPEN SPACE
2.26 ACRES

DIXIE DRIVE

FUTURE CLAUDE DR EXTENTION
(EXISTING GRAVEL ROAD)

BLACKROCK
PHASE(S) 5-6
66 UNITS / 4.51 ACRES

COUNTRY LANE

CYPRESS POINT
PHASE #1
34 UNITS / 1.29 ACRES

HUNTINGTON
PHASE #6
34 UNITS / 6.63 ACRES

ARLO HAFEN
R-1-10

FUTURE
CYPRESS POINT
PHASE #3
13 UNITS / 0.83 ACRES

HUNTINGTON
PHASE #5
6 UNITS / 0.92 ACRES

SIENNA
PHASE 1
10 UNITS / 1.26 ACRES

SPRINGFIELD
PLANNED
DEVELOPMENT

HUNTINGTON
PHASE #4
3 UNITS / 0.51 ACRES

BLACKROCK
PHASE(S) 1-4
48 UNITS / 5.09 ACRES

SAND HOLLOW WASH

LWF PARTNERSHIP
R-1-10

HUNTINGTON
PHASE #2
8 UNITS / 1.44 ACRES

LAKE

HUNTINGTON
PHASE #3
44 UNITS / 9.10 ACRES

MONTEREY
PHASE #3
7 UNITS / 2.02 ACRES

OPEN SPACE

STONEBRIDGE DRIVE

OPEN SPACE
3.16 ACRES

MONTEREY
PHASE #2
27 UNITS / 6.65 ACRES

MONTEREY
PHASE #1
27 UNITS / 7.88 ACRES

HUNTINGTON
PHASE #1
38 UNITS / 8.54 ACRES

SANTA CLARA RIVER

OPEN SPACE

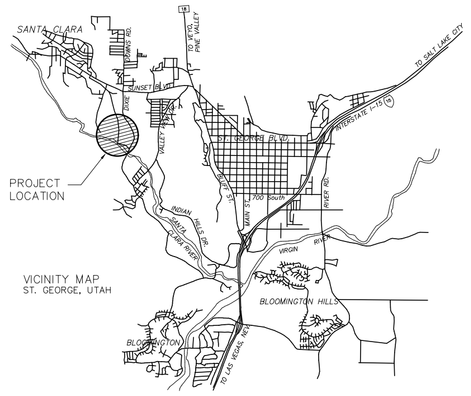
SUBROOK PLANNED DEVELOPMENT

P.D.
COMMERCIAL
0.5 ACRES

DIXIE DRIVE

OPEN SPACE
14.91 ACRES

STONEBROOK
SUBDIVISION
R-1-10



LEGEND

- Medium Density Up to 9 units/acre (Unplatted)
- Medium Density (Approved Preliminary Plat)
- Medium Density (Approved Final Plat)
- Low Density (Approved Preliminary Plat)
- High Density (Approved Final Plat)
- High Density (Approved Preliminary Plat)
- Commercial (Unplatted)
- Open Space
- Dedicated Road
- Golf Course
- Water Feature
- Parcel Not Part of this PD Zone

MASTER PLAN

DATE: JULY 22, 2022

DATE:	7-22-22
JOB NO.:	1511-12-003D
DESIGNED BY:	CRG
CHECKED BY:	RR
DWG:	MASTERPLAN

REVISIONS / DATE

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

MASTER PLAN
FOR
STONEBRIDGE
ST. GEORGE, UTAH

SHEET
A
1 OF 2 SHEETS

PLANNING COMMISSION AGENDA REPORT: 11/15/2022

Save Dental Zone Change Amendment (Case No. 2022-ZCA-048)		
Request:	The applicant is seeking approval to add a 5,139 sq ft two story dental office building to the site	
Applicant:	Save Dental	
Representative:	Aaron Salmon and Matthew Metcalf	
Location:	Approximately 1260 E 1450 S	
General Plan:	Low Density Residential (LDR)	
Existing Zoning:	Planned Development Residential (PD-C) Boulder Creek Crossing.	
Surrounding Zoning:	North	R-1-10 (Single Family Residential, 10,000 sq ft lots)
	South	Open Space
	East	PD-C (Planned Development Commercial)
	West	R-1-10 (Single Family Residential, 10,000 sq ft lots)
Land Area:	Approximately 0.55 acres	

BACKGROUND:
This request is for a PD (Planned Development) amendment (or zone change amendment) to build a new dental office building at the existing Boulder Creek Crossing Ph.2 lot 14 site. The site is approximately 0.55 acres total; the site is located at approximately 1260 East 1450 South.

The two-story building will provide dental services on the main floor and a small (635 sq, ft,) office on second floor for the Save Dental business.

The applicant has provided staff with site plan, a conceptual landscape plan and elevations of the proposed two-story building. The following table outlines the details of those plans.

Please see the zoning requirement details below:

Zoning Requirements			
Regulation	**Section Number**	**Proposal**	**Staff Comments**
Setbacks		Setbacks will be confirmed with Site Plan review.	The required setbacks will be: Front (interior lot): 0' Side (west): 0' Side (east): 0' Rear (north): 20'
Temporary Buildings, including Cargo Containers	10-8-4	None	N/A
Pedestrian Circulation Plan	10-8-6	The site plan provided shows shared access with the surrounding proposed development.	This meets requirements.
Uses	10-8D-2	The use is the same as the existing uses.	The use was established with the original approval of PD-C .
Height and Elevation	10-8D-2	The proposed maximum height is 23'8" (two story).	The PD-C zone allows for a 50' height. This meets regulations.
Phasing Plan	10-8D-2	No phasing proposed.	N/A
Landscape Plan	10-8D-2	A conceptual landscape plan has been provided.	This will be verified for code compliance at the time of site plan approval.

Utilities	10-8D-2	None shown	All utilities will be determined and designed during the JUC process. We will ensure this is completed during the site plan approval process.
Signs	10-8D-2	No signage is being proposed with this phase.	Any signage will meet the requirements of the sign code.
Lighting	10-8D-2	A photometric plan has not been provided.	A photometric plan will be submitted as part of the site plan submittal.
Solid Waste	10-8D-6	The site plan does not show the location for solid waste.	The waste location will be required to have solid wall surrounding it and shown on the site plan.
Buffer Protection of Residential Property	10-8D-6	The site plan shows a landscaped, 10' buffer adjacent to the residential property to the west.	There is 6' masonry wall on the west property line next to R-1-10 zoning. This meets the requirements.
Overlay Zones	10-13	None	N/A
Parking	10-19-5	The applicant is showing 37 parking stalls for the building.	They are required to have 21 parking spaces for the building. This meets requirements.
EVCS And Bike Parking	10-19-6	They are not showing bike racks or electric vehicle charging station.	Regulations require 2 bike spaces and conduit for 1 EVCS.

RECOMMENDATION:
Staff recommends approval of this zone change amendment with the following conditions:

1. A site plan meeting all regulations of the code and consistent with this plan is required prior to construction.

ALTERNATIVES:

1. Recommend approval as presented.
2. Recommend approval with conditions.
3. Recommend denial.
4. Table the proposed zone change amendment to a specific date.

POSSIBLE MOTION:

"I move that we forward a positive recommendation to the city Council for the zone change amendment for the Save Dental as presented, case no. 2022-ZCA-048, based on the findings listed in the staff report."

FINDINGS FOR APPROVAL:

1. The use was established with the approval of the PD-C zone.
2. The proposed zone change meets the zone-change application requirements found in Section 10-7F.

Exhibit A
Applicant's Narrative

Matt Metcalf Architecture, PLLC
3768 S. Loganberry Cir.
St. George, UT 84790
mattmetcalfarch@gmail.com
(435) 229-6849

October 25, 2022

RE: Save Dental Office

Save Dental is requesting a Planned Development Commercial Secondary Zone Change for the proposed Save Dental Office to be located Approximately 1260 E 1450 S, St. George, UT 84790. Parcel Number: SG-BLDR-2-14-PT-A.

The current site is vacant and part of the Boulder Creek Crossing 2 development, partial amendment A (SG) Lot: 14 S: 32 T: 42S R: 15W. The current zoning is PD-C (Planned Development – (Mixed Use / Commercial).

The overall site is 23,856 sq. ft. (0.55 acres) and we are proposing a 5,139 sq. ft., 2-story building
with a 4,504 sq ft. footprint. We are providing 4,917 sq. ft. (20.6%) landscaped area.

We exceed the 21 required parking spaces and are providing 37 spaces total.

Elevations, perspectives, and plans have been provided with this submittal. We anticipate 15 treatment rooms as well as reception, break, lab, and administrative spaces. The main level is 4,504 sq. ft. with a small second level office/administrative area 635 sq. ft. in size.

We believe that the proposed dental office building will be harmonious with the existing site and tenants.

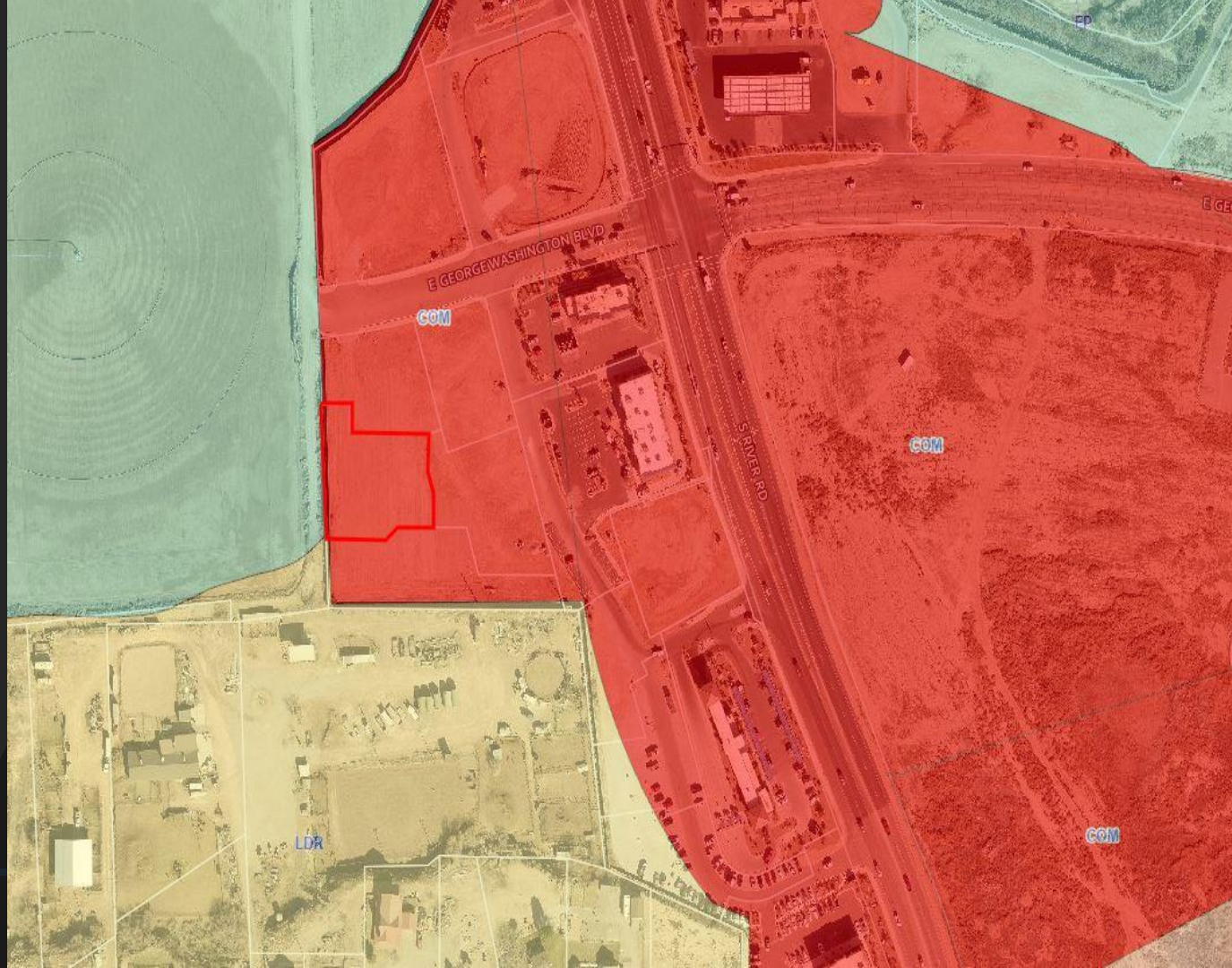
Thank you for your consideration and approval for this project.

Matt Metcalf, Architect
mattmetcalfarch@gmail.com
(435) 229-6849

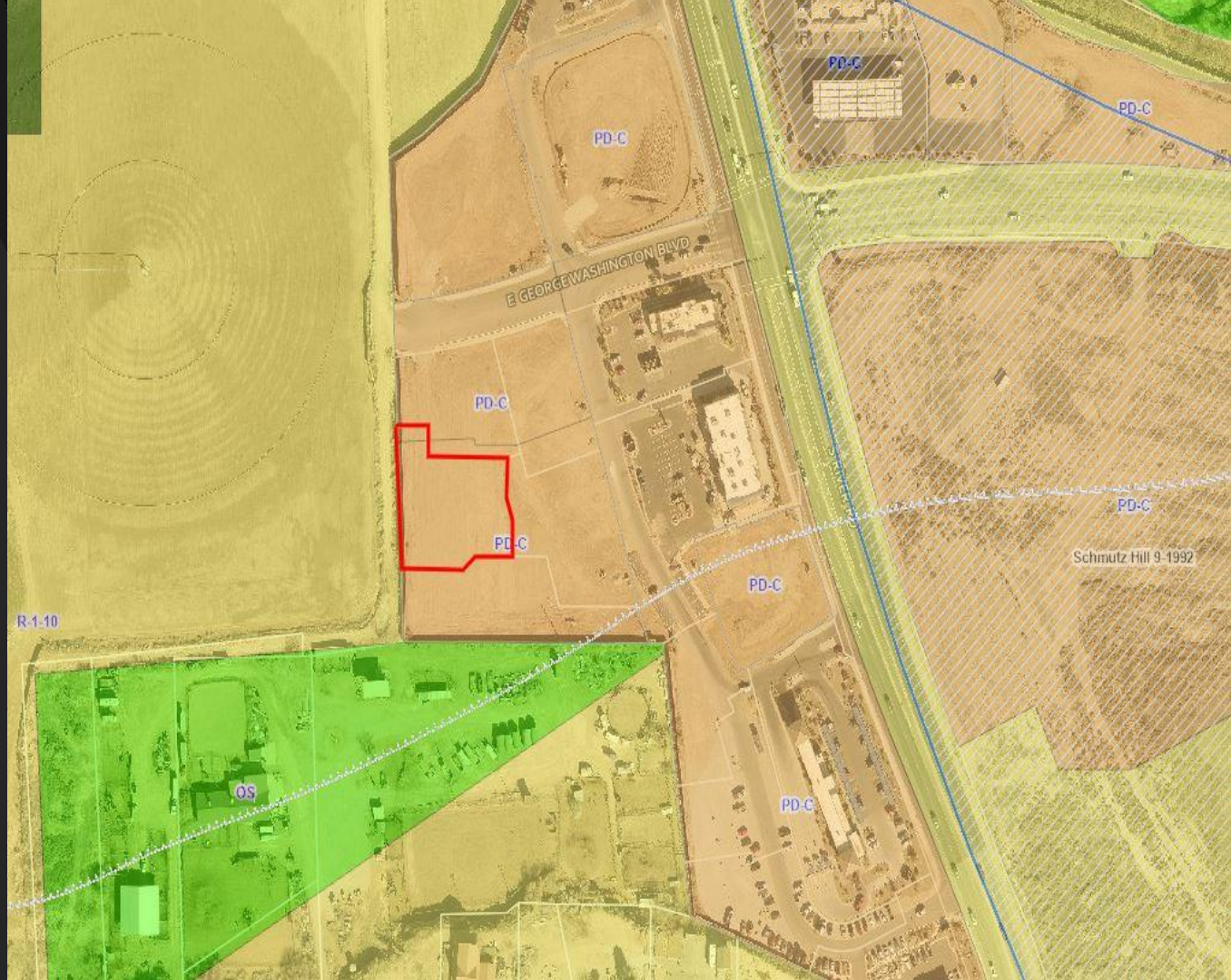

Save Dental
2022-ZCA-048

Aerial Map

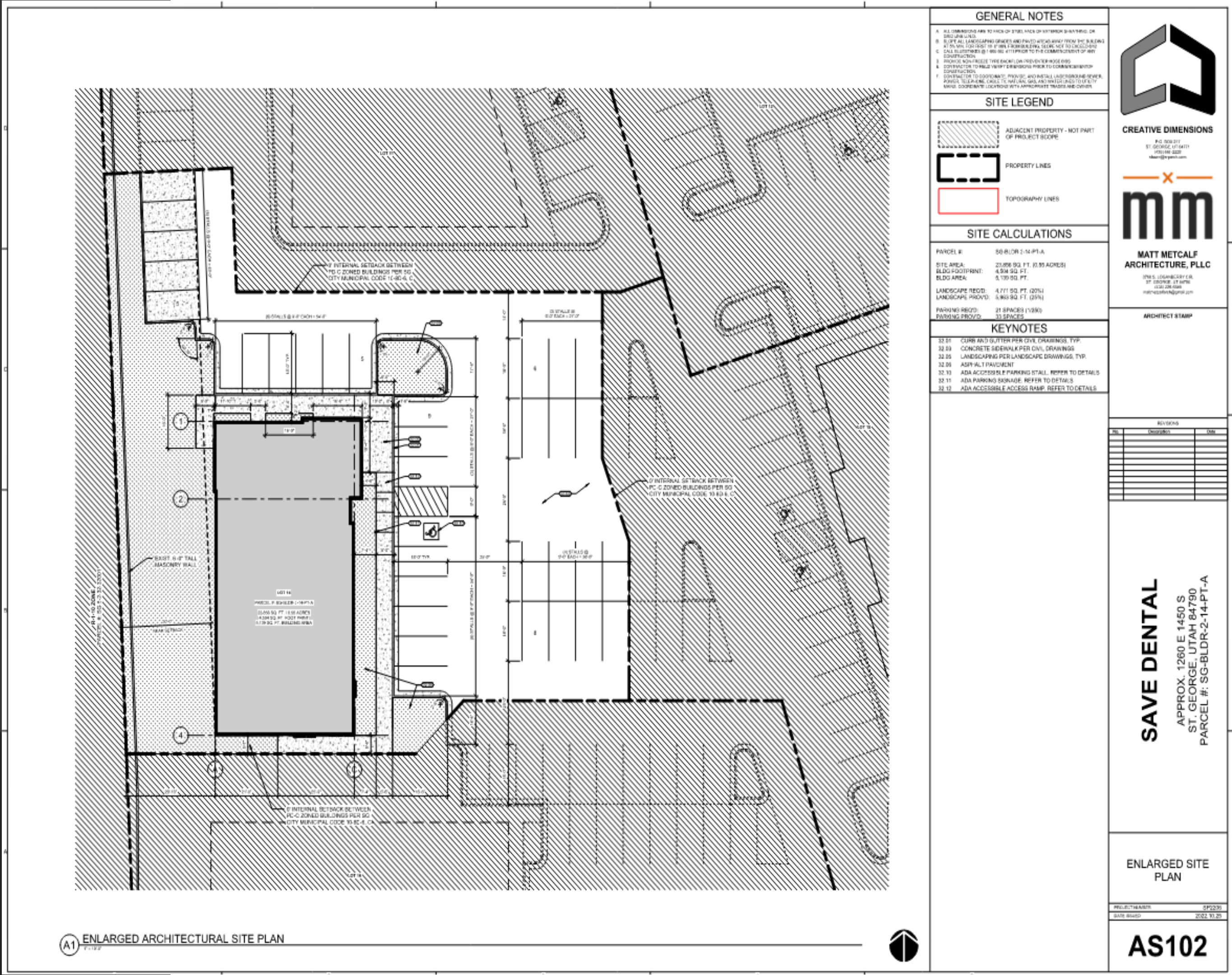
General Plan Map



Zoning Map


PD-C
PD-C
PD-C
E GEORGE WASHINGTON BLVD
PD-C
PD-C
PD-C
PD-C
PD-C
Schmutz Hill 9-1992
R-1-10
OS

Site Plan


GENERAL NOTES
SITE LEGEND
ADJACENT PROPERTY - NOT PART OF PROJECT SCOPE
PROPERTY LINES
TOPOGRAPHY LINES
SITE CALCULATIONS
SITE AREA:
BLDG FOOTPRINT: 4,504 SQ. FT.
BLDG AREA:
PARKING REQ'D: 21 SPACES
PARKING PROV'D: 33 SPACES
KEYNOTES
CURB AND GUTTER PER CIVIL DRAWINGS, TYP.
CONCRETE SIDEWALK PER CIVIL DRAWINGS
LANDSCAPING PER LANDSCAPE DRAWINGS, TYP.
ASPHALT PAVEMENT
ADA ACCESSIBLE PARKING STALL. REFER TO DETAILS
ADA PARKING SIGNAGE. REFER TO DETAILS
ADA ACCESSIBLE ACCESS RAMP. REFER TO DETAILS
CREATIVE DIMENSIONS
MATT METCALF ARCHITECTURE, PLLC
SAVE DENTAL
APPROX. 1260 E 1450 S
ST. GEORGE, UTAH 84790
PARCEL #: SG-BLDR-2-14-PT-A
ENLARGED SITE PLAN
AS102
ENLARGED ARCHITECTURAL SITE PLAN

Landscape Plan

Elevations


EXTERIOR MATERIALS LEGEND
KEYNOTES
C1 EAST EXTERIOR ELEVATION
B1 WEST EXTERIOR ELEVATION
CREATIVE DIMENSIONS
MATT METCALF ARCHITECTURE, PLLC
ARCHITECT STAMP
SAVE DENTAL
APPROX. 1260 E 1450 S
ST. GEORGE, UTAH 84790
PARCEL #: SG-BLDR-2-14-PT-A
EXTERIOR ELEVATIONS

Elevations

CREATIVE DIMENSIONS

MATT METCALF
ARCHITECTURE, PLLC

ARCHITECT STAMP

SAVE DENTAL

APPROX. 1260 E 1450 S.
ST. GEORGE, UTAH 84790
PARCEL #: SG-BLDR-2-14-PT-A

PERSPECTIVE
VIEWS

A202

Materials


SAVE DENTAL
"CHARCOAL"
"DARK BROWN"
"SLATE GRAY"
1
THIN BRICK VENEER
INTERSTATE BRICK
EMPEROR 4"x2-1/2"x16" "ASH" MATTE TEXTURE
2
METAL SIDING & WINDOW FRAMES
VERTICAL TONGUE & GROOVE 6" CHANNEL SIDING
LONGBOARD FACADES
WINDOW & DOOR FRAMES, FLASHING, ETC.
"DARK BROWN"
3
STUCCO FIELD COLOR
SHERWIN-WILLIAMS
SW 9629 "CONSTELLATION"
4
STUCCO ACCENT COLOR
SHERWIN-WILLIAMS
SW 7046 "ANONYMOUS"
5
ARCHITECTURAL STEEL
SHERWIN-WILLIAMS
SW 6258 "TRICORN BLACK"

Conditions of Approval.

1. A site plan meeting all regulations of the code and consistent with this plan is required prior to construction.

PLANNING COMMISSION AGENDA REPORT: 11/15/2022

ZONING REGULATION AMENDMENT TO ADD MOBILE BUSINESS
(2022-ZRA-005)

Amendment to Title 3-1-15
Expiration of License

Amendment to Title 3-2R and Title 3-2W
Mobile Catering Units and **Mobile Business**

Amendment to Title 10-2-1
Definitions

Amendment to Title 10-8B-1
Allowed Uses (in the commercial zones)

Amendment to Title 10-17A-1
Permitted with Standards Application Requirements

Amendment to Title 10-17A-18
Mobile Business – Specific Standards

Amendment to Title 10-19-7
Shared Parking Facilities

REQUEST:
Consider a request to amend portions of the City Code, including Title 3, Business and License Regulations, to add Mobile Business along with its operational requirements, time limits, and expiration date; and to amend portions of Title 10, Zoning Regulations, to add Mobile Business to be permitted in the C-2 and/or C-3 zone along with its specific standards, application, and parking requirements. The applicant is the City of St. George.

BACKGROUND:
This request is to add mobile business to Title 3, Business and License Regulations, and to create specific standards in Title 10, Zoning Regulations, for these businesses. Currently our regulations do not allow for mobile businesses in the City. This proposal will amend several Sections within the City Code. The proposed changes will accomplish the following:

1. **Amendment to Title 3-1-15 Expiration of License**
   This change is not related to mobile businesses but deals with the expiration of a business license. It will change the way business licenses expire. Instead of having two set dates for the expiration, each license will expire one year from the date of issuance.

2. **Amendment to Title 3-2R Mobile Catering Units**
   This change is not related to mobile businesses, but to food trucks. This proposal is to change the name from Mobile Catering Units to Food Trucks, so as to lessen the confusion with what a mobile catering unit is.
3. **Amendment to Title 3-2W Mobile Business**
   This will first, define what a mobile business is and distinguish it between a mobile service. A mobile business is a business which conducts its service within its mobile structure, like a mobile haircutting business. A mobile service may travel to provide its service but returns to its original location once the service is complete, like a carpet cleaner. This section will also add mobile business provisions for inspections, time limits, and expiration of these regulations (explained further below)
4. **Amendment to Title 10-2-1** D**efinitions**
   This adds the two definitions explained above to the Zoning Regulations.

5. **Amendment to Title 10-8B-1 Allowed Uses (in the commercial zones)**
   This adds Mobile Business as a Permitted with Standard (PS) in the C-3 and C-4 zones.

6. **Amendment to Title 10-17A-1_Permitted with Standards Application Requirements**
   This change will add an additional provision to the application requirements for the permitted with standards uses. It requires the applicant to provide proof that they are able to conduct their business on the property owner's property.

7. **Amendment to Title 10-17A-18 Mobile Business – Specific Standards**
   The change lists all of the standards required for a mobile business.

8. **Amendment to Title 10-19-7 Shared Parking Facilities**
   This final change allows a mobile business to enter into a shared parking agreement with the owner of the property where they will be located.

It is proposed that the City Code be amended as follows for a time limited period of two (2) years after which the regulations will be expire or "sunset" and no longer be in effect. A new authorizing Ordinance would need to be adopted prior to the expiration in order to keep the regulations in effect. The purpose behind the 2-year regulatory "sandbox" is to allow the use with basic health, safety, and welfare regulations, and to monitor the issues that may arise in that 2-year period to see if the regulations work, don't work, need amending, or additional provisions, etc.

Proposed Changes:
The complete proposed revisions are attached as Exhibit A

- The proposed additions are in green
- The proposed deletions are in red with a ~~strikethrough~~

RECOMMENDATION:
Staff recommends approval of the amendment to Title 3, Business and License Regulations, and Title 10, Zoning Regulation, to add provisions for mobile businesses as a permitted with standards (PS) use in the C-2 and C-3 zones.

ALTERNATIVES:
1. Recommend approval as presented.
2. Recommend approval with changes.
3. Recommend denial.
4. Continue the proposed zoning regulation amendment to a specific date.

POSSIBLE MOTION:
The Planning Commission recommends approval of the Zoning Regulation Amendment to Title 3, Business and License Regulations, and Title 10, Zoning Regulation, to add provisions for mobile businesses as a permitted with standards (PS) use in the C-2 and C-3 zones.

FINDINGS:
1. It is in the best interest of the city to update city zoning regulations periodically.
2. The proposed revisions will allow the city to welcome appropriate business activity at approved locations.

EXHIBIT A
Proposed Revisions

TITLE 3 SPECIAL BUSINESS REQUIREMENTS

3-1-15 EXPIRATION OF LICENSE: All business licenses shall expire one year from the date of issuance. ~~on December 31 of each year, except licenses required pursuant to section 4-7-3 shall expire on June 30 of each year.~~

ARTICLE R. ~~MOBILE CATERING UNITS~~ FOOD TRUCKS

ARTICLE W. MOBILE BUSINESS

3-2W-1 APPLICABILITY

It shall be unlawful for any person to engage in the business of mobile business without first obtaining a city business license, in addition to any other required license or certificate from the state and complying with the conditions of this article.

3-2W-2 DEFINITIONS

MOBILE BUSINESS: A commercial business for which the point of sale and operation is located entirely within a vehicle, trailer, or other mobile structure not affixed to the land and capable of movement and relocation on a daily basis. A Mobile Business does not include Mobile Services.

MOBILE SERVICE: A service oriented business which may travel from a home base or office to a residential or commercial location to provide the service at that location, but which does not remain at the service site and returns to the home base or office.

3-2W-3 OPERATIONAL REQUIREMENTS

A. INSPECTIONS

1. Inspection shall be made initially and at least once a year thereafter by the chief of police, or officer delegated by him, of the vehicle, trailer, or other mobile structure used for the mobile business.
2. Both the vehicle, trailer, or other mobile structure used for the mobile business shall be available for inspection at any reasonable time upon request by the chief of police, fire chief, or their delegated agent, for the purpose of ascertaining compliance with this article.

B. Location Of Service; Routes: The service locations or routes, together with intended points of sale, shall be provided to the City, either in a list form or clearly designated on a map, together with additions or deletions on a current basis from time to time. The City shall always have the right to remove from such designation and forbid service at

any location where considerations of safety or general public welfare indicate that it would be in the best interests of the City to prohibit such service.
C. Litter Minimized: A licensee shall at all times do whatever is reasonable and necessary to minimize the littering of streets, sidewalks and private property as the result of the mobile business for which a license is issued, including providing convenient trash receptacles, advising customers verbally and in writing of proper methods of trash disposal, and personally policing the sales area before moving to another location in order to clean up any trash or debris resulting from the activities of licensee.
D. Equipment*:* The licensee shall employ such mirrors, warning devices, lights and other equipment as may be reasonable and necessary on a mobile unit to warn traffic and pedestrians of the intended movements of said vehicle, including the incorporation of any suggested changes or equipment that may be requested by the chief of police after inspection as herein above provided.

3-2W-4 TIME LIMITS

1. DAILY USE: A mobile business can be located at the same location, or within the 1 mile of the same location, for no more than twelve (12) hours in a twenty-four (24) period of time.

2. WEEKLY USE: A mobile business can be located at the same location, or within the 1 mile of the same location, for no more than five (5) consecutive days in a seven (7) day period of time.

3. MONTHLY USE: A mobile business can be located at the same location, or within the 1 mile of the same location, for no more than fourteen (14) days in a twenty-eight (28) day period of time.

3-2W-5 TWO YEAR EXPIRATION

This article shall amend the City Code for a time limited period of two (2) years after which this article will expire or “sunset” and will no longer be in effect unless the City Council adopts a new authorizing Ordinance prior to the sunset date to keep the regulations in effect.

3-2W-6 REVOCATION; PENALTY

Failure of a licensee at any time to meet any of the above conditions, including the Zoning Regulations of Title 10, and more specifically 10-17A-18, or any other ordinance or regulation of the City, shall result in a revocation of the license to do business, subject to the hearing provided in section 3-1-19 of this title. Violation may also result in the application of that penalty prescribed in section 3-1-21 of this title. Each day of operation while in violation of this article may constitute a separate offense thereunder. Nothing herein shall be construed to permit door to door peddling or solicitation in a residential neighborhood, or the sale of commodities other than related items from a mobile business location.

TITLE 10 ZONING REGULATIONS

10-2-1: DEFINITIONS:

MOBILE BUSINESS: A commercial business for which the point of sale and operation is located entirely within a vehicle, trailer, or other mobile structure not affixed to the land and capable of movement and relocation on a daily basis. A Mobile Business does not include Mobile Services.

MOBILE SERVICE: A service oriented business which may travel from a home base or office to a residential or commercial location to provide the service at that location, but which does not remain at the service site and returns to the home base or office.

10-8B-1: ALLOWED USES:

Any use not specifically permitted, permitted with standards, or conditionally permitted is prohibited. Only the following uses are allowed:

A. Uses indicated by the letter "P" below are permitted in the designated zone.

B. Uses indicated by the letters "PS" are permitted uses with required standards in this zone. Uses must comply with the standards and evaluation criteria established in chapter 17 of this title.

C. Uses indicated by the letter "C" are conditional uses in the designated zone.

Allowed Uses

	C-1	C-2	C-3	C-4
Alcohol establishments, including the following:				
Bar establishment		C	C	C
Off-premise beer retailer		P	P	P
Microbrewery or micro-winery (with restaurant or bar establishment)		P	P	P
Nightclub, dance hall (with alcohol)		C	C	C
Ambulance service		P	P	
Amusement centers (with no water activity)				
Indoor		P	P	
Outdoor		C	C	
Amusement centers (with water activity)		PS	PS	
Animal services, including the following:				
Animal boarding/care for small animals only and boarded for less than 30 days a year; provided, conducted completely within enclosed building		P	P	P
Animal hospital and veterinarian clinic, including overnight care of large animals (no boarding)		PS	PS	

	C-1	C-2	C-3	C-4
Automobile and vehicle services, limited to the following uses:				
Automobiles and other similar vehicle sales lots		PS	PS	
Automobile parts sales (new parts only); provided, conducted within completely enclosed building		P	P	P
Automobile rental (vehicles up to 26' in length)		P	P	
Automobile repair, storage, including paint, body and fender, brake, muffler, upholstery or transmission work; provided, conducted within completely enclosed building (GVW 14,000 lbs or less)		P	P	P
Tire sales and service; provided, conducted within completely enclosed building		P	P	P
Financial, medical and professional services	P	P	P	P
Food service establishments, including the following and similar uses:				
Catering establishment		P	P	P
Restaurant	P	P	P	P
Lodging, temporary, limited to the following uses:				
Bed and breakfast		P	P	P
Hotel/motel		P	P	P
RV parks, long and short term		PS		
Timeshare units		P	P	P
Hospitals			P	P
Counseling center, mental health, alcohol, drugs (nonresidential, less than 24 hours)		P	P	P
Mental health treatment center, with overnight stay		C	C	C
Nursing home		P	P	
Office	P	P	P	P
Religious facility	P	P	P	P
Residential, limited to the following use:				
Living quarters for manager or security personnel for business which requires 24-hour assistance or security – Up to 600 sf with occupancy limited to 4 people		PS	PS	PS
Large floor area building or site (20,000 sf or more ground floor aggregate)		C	C	C
Retail shops:				
Antique store		P	P	P
Athletic and sporting goods store		P	P	P

	C-1	C-2	C-3	C-4
Department store		P	P	P
Drive-through sales (pharmacy, dairy products, etc.)		P	P	P
Furniture and large appliances sales (used)		P	P	
Furniture sales (new) and repair		P	P	P
Household appliance sales and service		P	P	P
Office supply, office machines sales and service		P	P	P
Paint or wallpaper store		P	P	P
Pawnshop		P	P	
Seed and feed store, retail		P	P	
Supermarket/grocery store		P	P	P
Thrift shop/secondhand store/consignment store (no outside storage and no drop-off of items during the hours the business is closed)		P	P	P
Vegetable stand		P	P	P
Payday lending/title loans		P	P	
Retail sale of goods with some operations outdoors, limited to the following uses:				
Building materials sales			P	
Convenience markets with gas pumps/gas station		P	P	
Convenience markets with gas pumps located in the rear of the building				P
Farm implement sales (outdoor display)		P	P	
Fence, sales and service		P	P	
Garden supplies and plant material sales		P	P	
Greenhouse and nursery; soil and lawn service			P	
Landscape rock sales, ancillary to a permitted use			P	
Service businesses, limited to the following uses:				
Body piercing, ancillary to a permitted use		P	P	P
Carpet and rug cleaning		P	P	P
Child care center	P	P	P	P
Communication transmission facilities, including wireless, primary		PS	PS	PS
Communication transmission facilities, including wireless, primary, height over 50'	C	C	C	C

	C-1	C-2	C-3	C-4
Construction trade services, plumbing shop, electrical shop, etc.			P	
Crematorium, independent human		P	P	
Educational institutions, schools, college, learning centers, trade schools (no residential or 24-hour facilities)		P	P	P
Gunsmith		P	P	P
Janitor service and supply		P	P	P
Locksmith		P	P	P
Mobile Businesses		PS	PS	
Mortuary		P	P	P
Permanent cosmetics, a secondary use to an establishment employing cosmetologist(s)/barber(s), aesthetician(s), electrologist(s), or nail technician(s) licensed by the state under 58-11a-101 et seq., Utah Code Annotated, 1953, as amended, excluding tattoo establishments and home occupations	P	P	P	P
Personal care service	P	P	P	P
Personal instruction service	P	P	P	P
Pest control and extermination		P	P	P
Pet grooming		P	P	P
Printing, lithographing, publishing or reproduction sales and service			P	P
Psychic, tarot card reader, fortune teller, occult art practitioners, hypnotist		P	P	P
RV storage		PS	PS	
Sign sales		P	P	P
Storage rental units		PS	PS	
Tattoo establishment		P	P	P
Taxidermist		PS	PS	
Bus terminal		P	P	P
Taxi/shuttle		P	P	P
Government, public services and facilities, limited to the following uses:				
City, all facilities	P	P	P	P
Public utility facilities, primary		PS	PS	PS

10-17A-1: APPLICATION REQUIREMENTS:

Each permitted with standards applicant shall submit a complete application upon forms provided by the city, which, at a minimum, shall include:

A. A description of the proposed use;

B. A site plan and supporting materials which shall include proof of property owner permission for a mobile business;

C. A design schematic;

D. The size and location of the site;

E. Traffic generation, timing and nature of traffic impacts and the existing condition and capacity of the streets in the area;

F. Utility demand and available capacity, including storm water retention;

G. Emergency vehicle access and anticipated average and peak day demand;

H. Location and amount of off-street parking;

I. Internal vehicular and pedestrian circulation system, including delivery vehicles, loading, and unloading;

J. Fencing, screening, and landscaping to separate the permitted with standards use from adjoining property and uses;

K. Generation and screening of trash, and automated garbage collection (dumpsters);

L. Hours of operation, delivery, and use; and

M. Odor and noise plan if applicable.

10-17A-18: MOBILE BUSINESS – SPECIFIC STANDARDS

All Mobile Businesses operating within the City shall comply with the following standards:

A. The type of business must be a permitted use within the C-2 and/or C-3 zone

B. The mobile business must be located on private property with a notarized authorization from the property owner or their authorized representative allowing the mobile business on the property. The authorization must indicate:

1. Any conditions of the authorization;

2. The duration of the authorization;

3. The number of excess parking stalls currently available to the fixed business on the property; and

4. The solid waste disposal plan.

C. The mobile business must be parked and located:

1. On an improved surface;

2. At least 50 feet from any entrance to the property from a public street;

3. In a manner that does not interfere with the normal flow of traffic, function of the parking lot, or emergency access;

4. In a manner that assures one (1) customer parking space for the mobile business but does not use more than five (5) parking spaces total. In no event shall a Mobile Business be permitted if there is insufficient parking for the property owner and fixed businesses currently at the location; and

5. In compliance with all setback requirements for the zone.

D. A mobile business is prohibited from allowing any minor child inside the vehicle, trailer, or mobile structure without being accompanied by an adult.

E. The owner of a mobile business must possess all federal, state, or local licensing and permitting which may be required for the use. This includes vehicle licensing as well as a business license.

F. The mobile business must comply with all lighting, sign, and fire regulations of this Code and the Utah Code.

G. The mobile business shall dispose of any wastewater at the St. George Wastewater Treatment Plant. Disposal or dumping of any black or grey wastewater shall result in the immediate revocation of any development permit or business license.

10-19-7: SHARED PARKING FACILITIES

4. When a mobile business has permission to operate within the parking area of an existing business but on an after-hours or shared parking basis, the mobile business must obtain written consent of the owner acknowledging the shared parking and must have that written permission with them at all times for inspection during operating hours.

EXHIBIT C
POWER POINT PRESENTATION

Mobile Business

Zoning Regulation Amendment

2022-ZRA-005

Changes to Title 3 Unrelated to Mobile Businesses

3-1-15 EXPIRATION OF LICENSE:

All business licenses shall expire one year from the date of issuance. ~~on December 31 of each year, except licenses required pursuant to section 4-7-3 shall expire on June 30 of each year.~~

ARTICLE R.

~~MOBILE CATERING UNITS~~

FOOD TRUCKS

Definitions (Changes to Titles 3 & 10)

MOBILE BUSINESS:
A commercial business for which the point of sale and operation is located entirely within a vehicle, trailer, or other mobile structure not affixed to the land and capable of movement and relocation on a daily basis. A Mobile Business does not include Mobile Services.

MOBILE BUSINESS

MOBILE SERVICE: A service-oriented business which may travel from a home base or office to a residential or commercial location to provide the service at that location, but which does not remain at the service site and returns to the home base or office.

Operational Requirements

Changes to Title 3

INSPECTIONS:

- At least once a year by chief of police.
- Vehicle or trailer shall be available for inspection by chief of police or fire chief.

LOCATION OF SERVICE, ROUTES:

- Service locations or routes are required
- City has the right to remove a location

LITTER: Removal of litter is required by

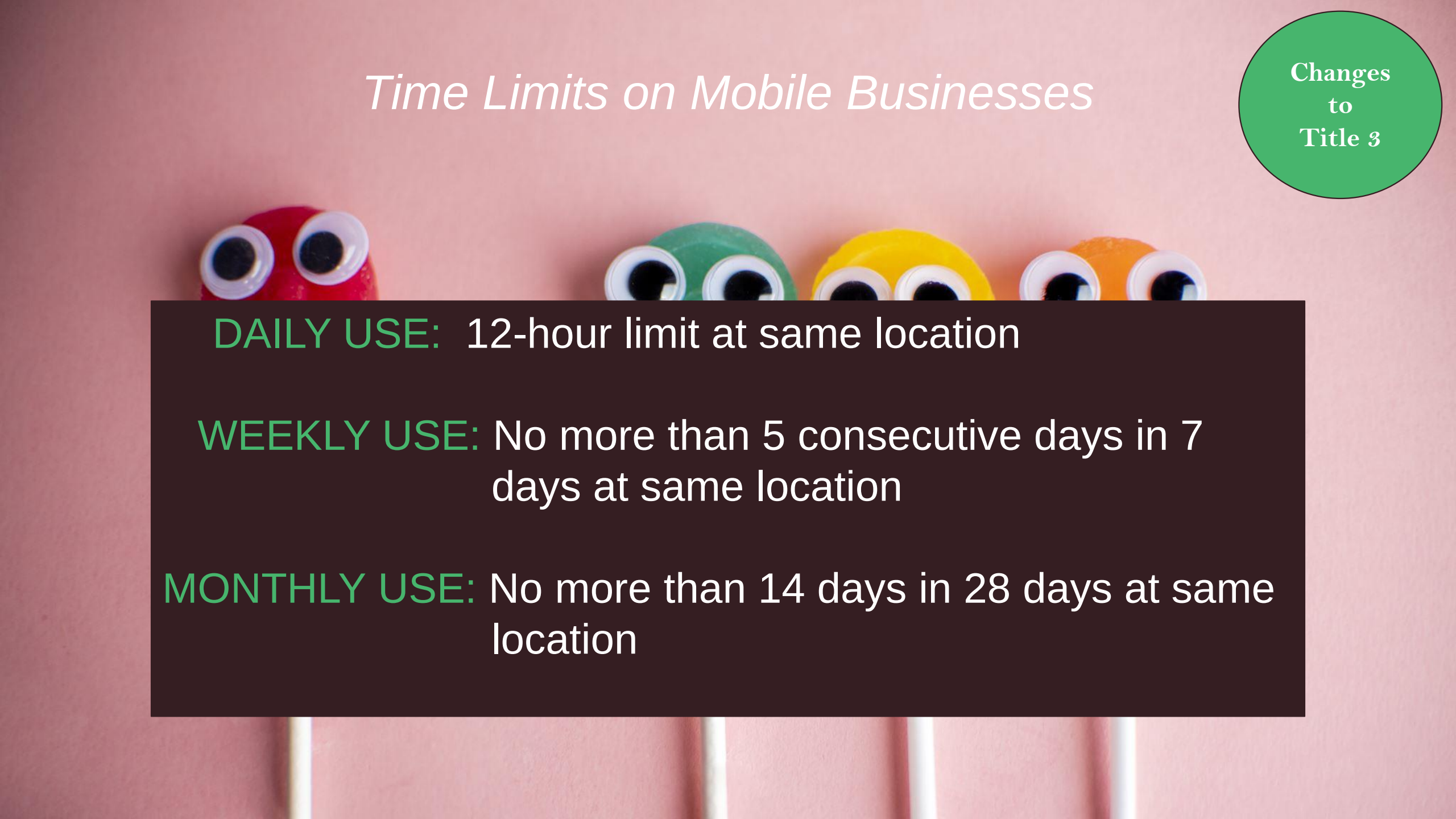
- Offering trash receptables
- Personally policing area before moving to another location

EQUIPMENT:

- Equipment on mobile unit required to alert pedestrians

Time Limits on Mobile Businesses

Changes to Title 3



DAILY USE: 12-hour limit at same location

WEEKLY USE: No more than 5 consecutive days in 7 days at same location

MONTHLY USE: No more than 14 days in 28 days at same location

10-8B-1: Allowed Uses

Changes to Title 10

Use	C-1	C-2	C-3	C-4
Service businesses, limited to the following uses:				
Locksmith		P	P	P
Mortuary		P	P	P

Permitted with Standards – General Provisions

10-17A-1: APPLICATION REQUIREMENTS:

Each permitted with standards applicant shall submit a complete application upon forms provided by the city, which, at a minimum, shall include:

B. A site plan and supporting materials which shall include proof of property owner permission for a mobile business

Mobile Business – Specific Standards

A. Type of business must be a permitted use in C-2 and/or C-3 zone

B. Located on private property – with authorization from owner that includes:
   - Any conditions
   - Duration
   - Number of excess parking stalls available
   - Solid waste and disposal plan

C. Mobile business must be parked and located:
   - On improved surface
   - 50+ feet from entrance of public street
   - Does not interfere with traffic or safety
   - At least 1 pkg space and not more than 5 pkg spaces for mobile business
   - Meets setbacks

D. All minor children must be accompanied by an adult

E. Owner of mobile business must be licensed

F. Must follow lighting, sign, and fire regulations

G. Wastewater must be disposed at St. George Wastewater Treatment Plant

Changes to Title 10

Changes to Title 10

10-19-7: Allowed Uses

4. When a mobile business has permission to operate within the parking area of an existing business but on an after-hours or shared parking basis, the mobile business must obtain written consent of the owner acknowledging the shared parking and must have that written permission with them at all times for inspection during operating hours.

Staff recommends approval of the amendment to Title 3, Business and License Regulations, and Title 10, Zoning Regulation, to add provisions for mobile businesses as a permitted with standards (PS) use in the C-2 and C-3 zones.

St.George
Community Development

ITEM 3
Hillside Permit

HILLSIDE REVIEW BOARD AGENDA REPORT: **11/02/2022**
PLANNING COMMISSION AGENDA REPORT: **11/15/2022**

Caliber Collision Hillside Development Permit (Case No. 2022-HS-016)		
Request:	A Hillside Development Permit to allow disturbance of areas in the 20-30%, 30-40% and 40% and above slope areas. This application is in anticipation of the construction of a new hotel.	
Applicant:	Scott Cervenak	
Representative:	Chris Bick	
Location:	South-East of Foremaster & Riverside Dr.	
General Plan:	MDR (Multi-Family Residential)	
Existing Zoning:	General Commercial (C-3)	
Surrounding Zoning:	North	RE-20 (Residential Estates, 20,000 sq ft lots)
	South	(PD-R) Planned Development Residential
	East	RE-20 (Residential Estates, 20,000 sq ft lots)
	West	(C-3) General Commercial
Land Area:	Approximately 2.04 acres	

BACKGROUND

This is a request to obtain a hillside permit for the property located at the south-east intersection of Foremaster and Riverside Drives. The applicants are proposing to build a new commercial development on this property, specifically an auto repair shop. This property is in the hillside overlay. Section 10-13A-7 of the Zoning Regulations requires that all major development (i.e., cut greater than 4', etc.) on slopes above 20% requires a 'hillside development permit' granted by the City Council upon recommendation from the Hillside Review Board and the Planning Commission.

APPLICABLE ORDINANCE(S) *(Selected portions)*

10-13A-1: Density and Disturbance Standards

A. The hillside development overlay zone (HDOZ) limits development densities and provides specific development incentives to transfer underlying zone densities from hillsides (sending areas) to less steep slopes or more safe development areas (receiving areas), within a development.

B. For those portions of a proposed development with natural slopes twenty percent (20%) or less, development density follows the density and development standards in the underlying zone.

C. For those portions of a proposed development with natural slopes from twenty-one percent (21%) to thirty percent (30%), development activity shall not disturb more than thirty percent (30%) of the parcel within this slope category.

D. For those portions of a proposed development with natural slopes from thirty-one percent (31%) to forty percent (40%), development activity shall not disturb more than five percent (5%) of the area within this slope category.

E. A proposed development may not disturb slopes in excess of forty percent (40%).

10-13A-2: Slope and Slope Areas Determined

A. Slope shall be determined for each significant portion of a development parcel.

B. *Procedure:* The applicant shall map the location of the natural slope by using the following procedure:

1. *Preparation of Contour Maps:* The applicant shall submit an accurate, current contour map, prepared and certified by a licensed professional engineer or surveyor, which shows all land contours at intervals no greater than five feet (5'), drawn at a one inch equals one hundred feet (1" = 100') scale maximum.

2. *Verification through Field Surveys:* The city engineer or designee may require the applicant to submit a field survey to verify the accuracy of the contour map.

C. *Determination of Slope Areas:* Using the contour map, natural slopes shall be calculated using points identified as natural slopes of twenty percent (20%), thirty percent (30%), and forty percent (40%), and shall be located on the contour map and connected by a continuous line. That area bounded by said lines and intersecting property lines shall be used for determining project density. Small washes or outcrops, which have slopes distinctly different from surrounding property, and are not part of the contiguous topography, may be excluded from the slope determination.

EXHIBITS PROVIDED

1. Exhibit A – Site Plan
   "Exhibit A" in the packet shows the location of the new commercial development.

2. Exhibit B –Grading Plan
   "Exhibit B" in the packet shows the proposed preliminary grading plan.

3. Exhibit C – Slope Analysis Map
   "Exhibit C" in the packet shows the overall slope analysis for the area to be disturbed.

4. Exhibit D – Geotechnical Report
   "Exhibit D" – This is the Geotechnical report for Commerce Point.

RECOMMENDATION

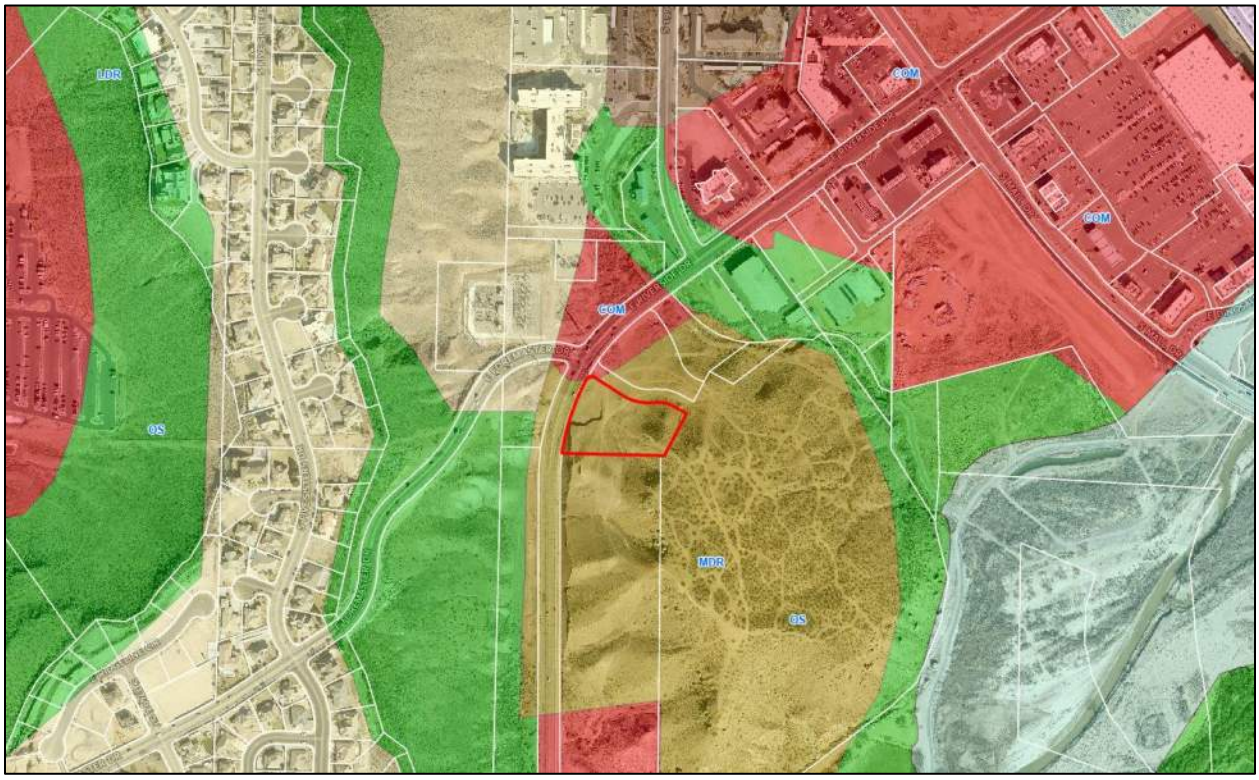
The Hillside Board met on site on November 2, 2022, and recommends approval of the application with the following conditions:

1. That they revisit the Geotechnical recommendations for the building pad over excavation requirements.
2. That their retaining walls include a global stability analysis of the slope.
3. That they carefully consider site drainage above the slopes to minimize rivaling and erosion which could negatively affect the stability.
4. That it is the opinion of the board that the extreme steep slopes are manmade slopes.

EXAMPLE MOTION

"I move that we forward a positive recommendation to the City Council for the hillside permit for Caliber Collision as presented, case no. 2022-HS-016, based on the findings and subject to the conditions listed in the staff report."

General Plan – MDR (Medium Density Residential)



Zoning - C-3 (General Commercial)

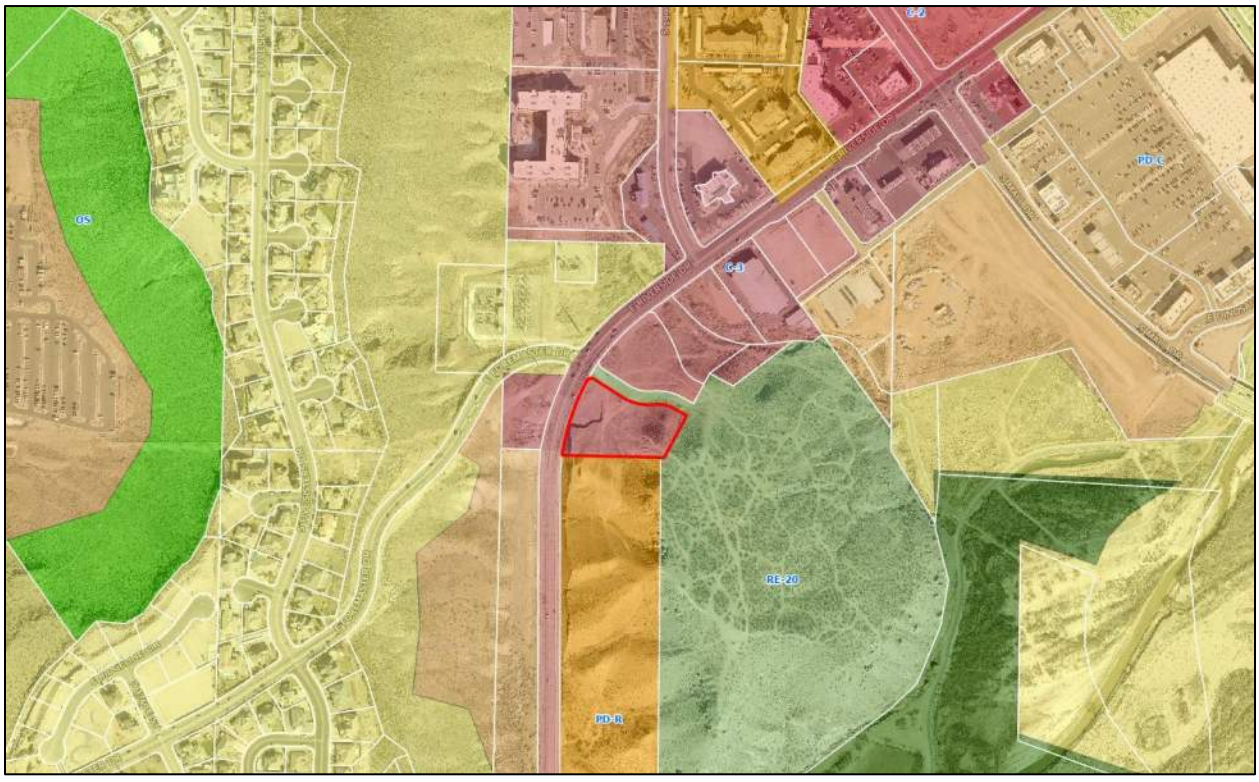
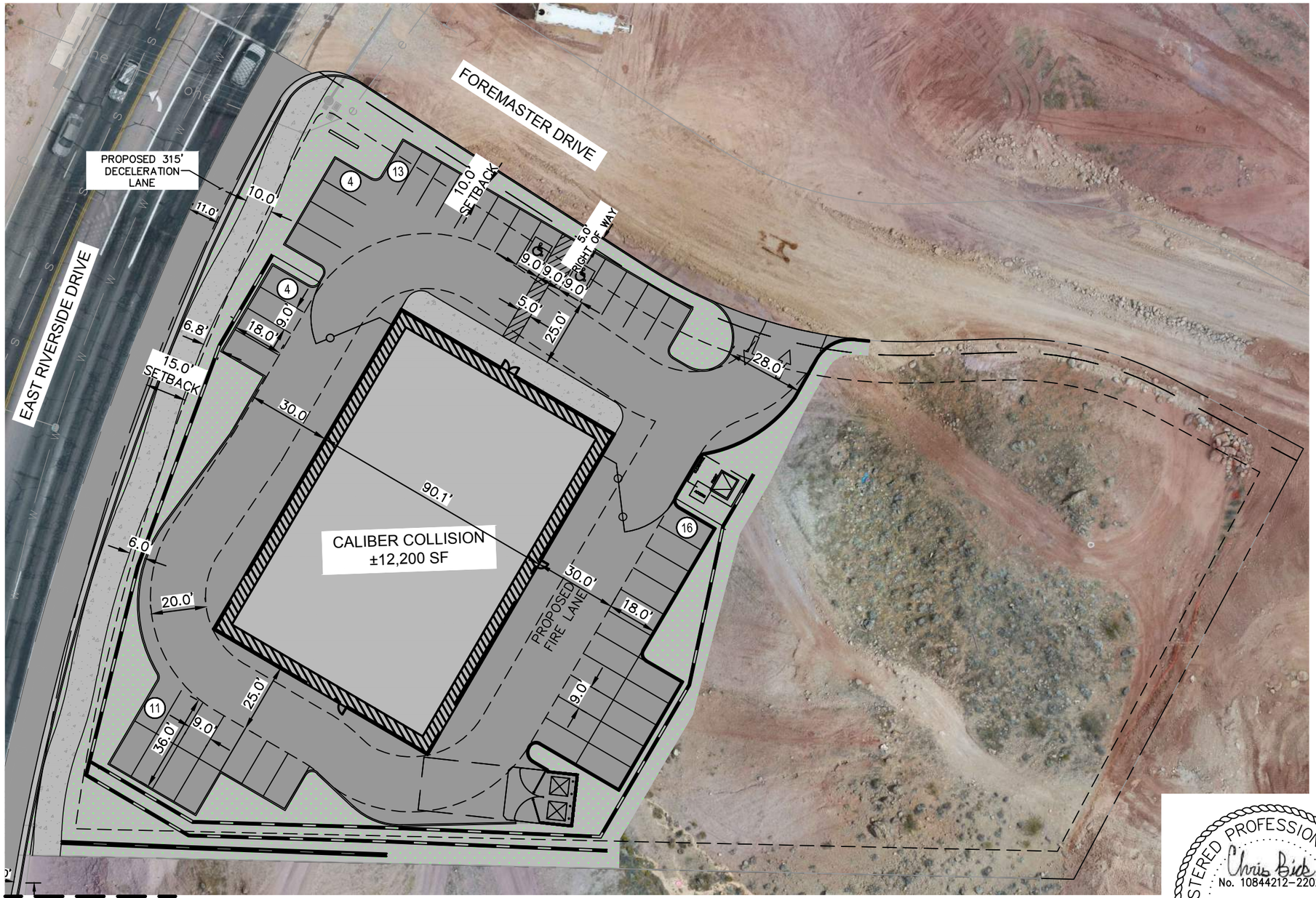


EXHIBIT A

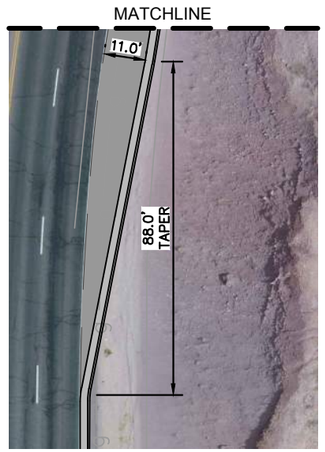
Site Plan



DEVELOPMENT SUMMARY TABLE	
BULIDING AREA	12,168 S.F.
SITE AREA	2.04 AC
PARKING REQUIRED (1 STALL / 400 S.F.)	35 STALLS
PARKING PROVIDED	48 STALLS
DEVELOPED PERVIOUS AREA	13,745 S.F. (15.5% OF OVERALL SITE)
DEVELOPED IMPERVIOUS AREA	42,936 S.F. (48.3% OF OVERALL SITE)

RIVERSIDE DRIVE LANDSCAPE CALCULATIONS		
CALCULATOINS	PROPOSED AVG. LENGTH	MINIMUM AVG. LENGTH
(S.F. OF LANDSCAPE)/ (LENGTH OF FRONTAGE) (4448.2)/(291.2)	15.28 FT	15 FT

FOREMASTER DRIVE LANDSCAPE CALCULATIONS		
CALCULATOINS	PROPOSED AVG. LENGTH	MINIMUM AVG. LENGTH
(S.F. OF LANDSCAPE)/ (LENGTH OF FRONTAGE) (2031.5)/(184.3)	11.02 FT	10 FT



REGISTERED PROFESSIONAL ENGINEER
Chris Bick
No. 10844212-2202
CHRISTOPHER PAUL BICK
10/4/2022
STATE OF UTAH

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

Kimley»Horn
111 East Broadway, Suite 600 | Salt Lake City, UT 84111
Tel. No. (385) 212-3176

PRELIMINARY SITE PLAN

CALIBER COLLISION
1988 EAST RIVERSIDE DRIVE
ST GEORGE, UT

DATE: 8/2/2022

SHEET NUMBER
EX-1

EXHIBIT B

Grading Plan

RETENTION BASIN
APPROX. 2,455 CU.FT.

RIVERSIDE DRIVE

FOREMASTER DRIVE

FFE: 2627'

CONCRETE VALLEY GUTTER

CONCRETE VALLEY GUTTER

MATCH EXISTING 6' BEHIND WALL

SD

PRELIMINARY RETENTION CALCS

Total Project

i	0.851
Rv	0.754
d	0.037 ft.
A	88800.2 sq. ft.
WQV	**2453.9 cu.ft**

Step 4: 90th Percentile Volume

Calculate the 90th percentile volume using the following equations for V_{goal} or WQV.

$$V_{goal} = R_V dA \quad or \quad WQV = R_V dA$$

Where:

V_{goal} and WQV = 90th percentile volume, cf

R_V = Runoff coefficient

d = 90th percentile precipitation depth, ft

A = Project area or BMP drainage area, sf

$$R_V = 0.91i - 0.0204$$

A Guide to Low Impact Development within Utah

REGISTERED PROFESSIONAL ENGINEER
Chris Bick
No. 10844212-2202
CHRISTOPHER PAUL BICK
10/4/2022
STATE OF UTAH

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

Kimley»Horn
111 East Broadway, Suite 600 | Salt Lake City, UT 84111
Tel. No. (385) 212-3176

PRELIMINARY GRADING PLAN

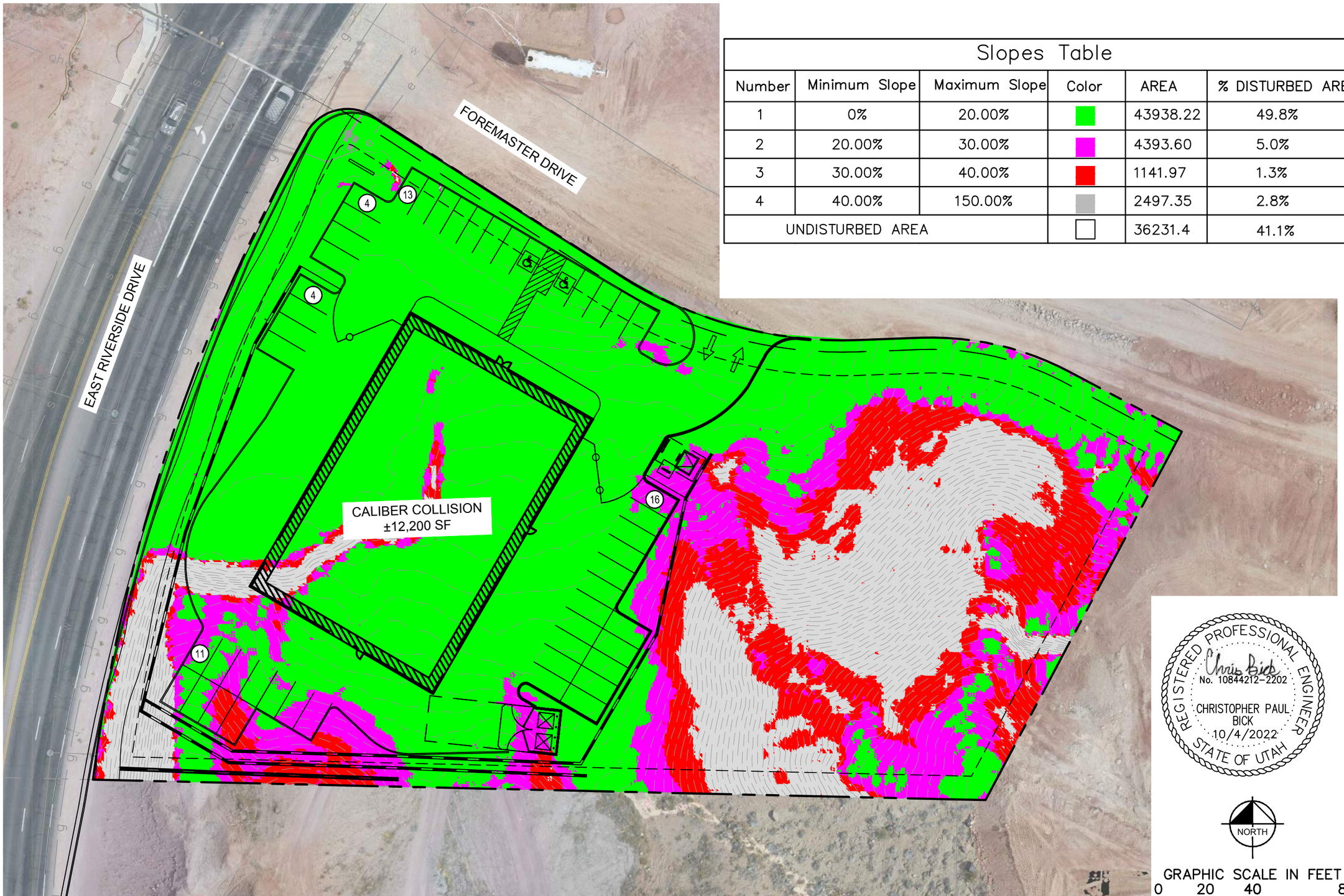
CALIBER COLLISION
1988 EAST RIVERSIDE DRIVE
ST GEORGE, UT

DATE: 8/2/2022

SHEET NUMBER
EX-2

EXHIBIT C

Slope Analysis Map



Slopes Table

Number	Minimum Slope	Maximum Slope	Color	AREA	% DISTURBED AREA
1	0%	20.00%		43938.22	49.8%
2	20.00%	30.00%		4393.60	5.0%
3	30.00%	40.00%		1141.97	1.3%
4	40.00%	150.00%		2497.35	2.8%
UNDISTURBED AREA				36231.4	41.1%

REGISTERED PROFESSIONAL ENGINEER
Chris Bick
No. 10844212-2202
CHRISTOPHER PAUL BICK
10/4/2022
STATE OF UTAH

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

Kimley»Horn
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Tel. No. (385) 212-3176

SLOPE ANALYSIS

CALIBER COLLISION
1988 EAST RIVERSIDE DRIVE
ST GEORGE, UT

SHEET NUMBER
EX-2

Exhibit D
Geotechnical Report

PRELIMINARY GEOTECHNICAL ENGINEERING REPORT

Caliber Collision
1988 East Riverside Drive
Saint George, Utah 84790
PSI Project No. 07061856

PREPARED FOR:

Victory Development
2911 Turtle Creek Blvd, Ste. 700
Dallas, Texas 75219
and
Caliber Holdings, LLC
2941 Lake Vista Drive
Lewisville, Texas 75067

September 8, 2022

BY:

PROFESSIONAL SERVICE INDUSTRIES, INC.
2779 S 600 W
Salt Lake City, Utah 84115
Phone: (801) 484–8827

intertek psi

PROFESSIONAL ENGINEER
No. 01066
BRIAN ROBERT JACKSON
9-8-2022
STATE OF UTAH

Brian R. Jackson, PE
Project Engineer

Britton W. Gentry, PE
Chief Engineer

Professional Services Industries, Inc.
2779 S 600 W
Salt Lake City, Utah 84115
Office – (801) 484-8827

September 8, 2022

Victory Development
2911 Turtle Creek Blvd
Dallas, Texas 75219

&

Caliber Holdings, LLC
2941 Lake Vista Drive
Lewisville, Texas 75067

Attn: Mr. Bronson Reed
bronson.reed@vg-re.com

Re: **Preliminary Geotechnical Engineering Report**
CALIBER COLLISION
1988 EAST RIVERSIDE DRIVE
SAINT GEORGE, UTAH 84790
PSI Project No. 07061856

Professional Service Industries, Inc. (PSI), an Intertek company, is pleased to submit this Preliminary Geotechnical Engineering Report for the referenced project. This report includes the results from the field exploration and laboratory testing along with recommendations for use in preparation of the appropriate design and construction documents for this project.

PSI appreciates the opportunity to provide this Geotechnical Engineering Report and looks forward to continuing participation during the design and construction phases of this project. PSI also has great interest in providing materials testing and inspection services during the construction of this project and will be glad to meet with you to further discuss how we can be of assistance as the project advances.

If there are questions pertaining to this report, or if PSI may be of further service, please contact us at your convenience.

Respectfully submitted,
Professional Services Industries, Inc.

Brian R. Jackson, PE
Project Engineer
brian.jackson@intertek.com

Britton W. Gentry, PE
Chief Engineer
britton.gentry@intertek.com

TABLE OF CONTENTS

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1.0 PROJECT INFORMATION

1.1 PROJECT AUTHORIZATION

Professional Service Industries, Inc. (PSI), an Intertek company, has completed a field exploration and geotechnical evaluation for the proposed Caliber Collision project in Saint George, Utah. Mr. Bronson Reed, representing Victory Development, authorized PSI's services on June 24, 2022, by signing PSI Proposal No. 0706-376883.

1.2 SITE LOCATION

The subject property is located on the east side of Riverside Drive with a street address of 1988 Riverside Drive in Saint George, Utah (see Figure 1 – Site Location Map). The subject site is an irregularly shaped area within the subject property measuring approximately two acres in plan area.

1.3 PROJECT DESCRIPTION

Information provided by Victory Development includes the following:

- A proposed boring location prepared by Timothy M. Gallup titled, "Soil Boring Plan, Riverside Dr South, ST. George, UT 84790," dated May 5, 2022
- A preliminary grading plan prepared by Perigee Consulting titled, "Caliber Collision Saint George, Preliminary Grading Plan," dated May 2022
- A geotechnical engineering report guidelines document titled, "Guideline for Caliber Collision Center New Structure Geotechnical Reports- Building," (date unavailable)
- An aerial photo of the site showing the approximate extent of the property boundaries (date unavailable)

Based on the provided information, the proposed construction will consist of a 1-story (13,200 sf) structure and associated parking areas and drive lanes. The structure will consist of a pre-engineered metal building with a brick veneer. PSI understands that column loads range from 20 to 50 kips. Column foundations will also be used to resist uplift and horizontal forces. Maximum gravity loads for continuous footings may be in the range of 1 to 2 kips per linear foot. The slab-on-grade will be designed to provide a uniform live load of 125 psf and withstand a maximum concentrated load of 8 kips. Slab subgrade shall provide a reaction modulus of 150 psi/ in minimum with a 4" thick granular sub-base. Column spacing is anticipated to vary between 20 and 40 feet on center. The structure will have an interior concrete pit retaining walls with an estimated maximum retaining height of three feet.

The maximum allowable differential movements for soils supporting masonry walls shall be L/900, where L is the horizontal distance between any two points along a wall. The maximum allowable differential movements for soils supporting interior slabs or interior isolated footings shall be L/500, where L is the horizontal distance between any two columns. The maximum allowable total settlement shall be 1 inch. In the case of expansive clays, the maximum potential heave shall be 1 inch.

Currently, there is a an approximately 24-foot difference in grade between the west and east side of the proposed structure. Based on the grading plan cuts on the order of 20 feet will be required on the east side of the structure and fill placement on the order four feet on the west side of the structure. A retaining wall is planned on the east and south side of the parking area and will partially extend along the north

and west side of the parking area. Based on the provided grading plan, the retaining wall is anticipated to be on the order of 40 feet tall at its highest point.

The geotechnical recommendations presented in this report are based on the available project information, structure locations, and the subsurface materials encountered during the field investigation. Should any of the above information or design basis made by PSI be inconsistent with the planned construction, it is requested that you contact us immediately to allow us to make any necessary modifications to this report. PSI will not be held responsible for changes to the project if not provided the opportunity to review the information and provide modifications to our recommendations.

2.0 REGIONAL AND SITE GEOLOGY

2.1 REGIONAL GEOLOGY

The subject site is located at the transition zone between the Colorado Plateau and the Great Basin physiographic regions. The Colorado Plateau is a large crustal block composed of generally flat sedimentary rocks that display relatively little rock deformation such as faulting and folding. The Great Basin is characterized by basin and range topography that is the result of recent extensional stresses in the earth's crust causing quaternary normal faults.

2.2 SITE GEOLOGY

Based on available geologic mapping of the area, the geology consists of the Dinosaur Canyon Member of the Moenave Formation on the east side of the site, and the Petrified Forest Member of the Chinle Formation on the west side of the site. The Dinosaur Canyon Member is described as interbedded, very fine-grained sandstone and siltstone. The Petrified Forest Member is described as bentonitic shale, mudstone, siltstone and claystone that weathers to a "popcorn" texture with abundant mudcracks due to expansive clays and is susceptible to landslides on slopes greater than 15%. Locally, the Petrified Forest Member is extremely soft.

Special Study 127 prepared by the Utah Geological Survey titled, "Geologic Hazards and Adverse Construction Conditions, St. George-Hurricane Metropolitan Area, Washington County, Utah," dated 2008 identifies the site as having a high landslide hazard and high shrink/swell susceptibility.

2.3 REGIONAL SEISMICITY

The current tectonic setting of Utah is controlled by its location within the Intermountain Seismic Belt (ISB). The ISB is an intraplate zone of heightened earthquake activity extending from Montana to northern Arizona that is bound by the Colorado Plateau Province to the east and the Basin and Range Province to the west. The ISB is characterized by late Quaternary normal faulting, and shallow seismicity. Extensional stresses in the earth's crust cause normal faulting starting at the Wasatch Range in Utah and extending to the Sierra Nevada Range in California. The faulting results in north to south mountains separated by valleys (basin and range) characteristic of the region.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 SITE DESCRIPTION

Currently the site consists of an approximately 2-acre lot that is undeveloped with sparse vegetation along the northwest slope of a butte. Riverside Drive is to the west and the land to the north and south of the site is undeveloped. At the time of our site visit, earthwork operations were occurring on the butte above the site to the southeast for a residential development.

3.1.1 TOPOGRAPHY

Based on the provided grading plan and publicly available LIDAR data, the slopes on the east and south side of the site that generally level towards the northwest corner of the site. The highest point on the site is at the southeast corner with an elevation of approximately EL 2686 feet. The lowest point on the site is the northwest corner with an elevation of approximately EL 2625 feet. Most of the grade change occurs on the south and east sides of the site with natural slopes between 3H:1V and 2H:1V.

3.1.2 FAULTING

PSI has reviewed the USGS Quaternary Fault and Fold Database of the United States. Table 3.1 below lists quaternary faults in the database within 25 miles of the site:

TABLE 3.1 – FAULTS WITHIN 25 MILES OF SITE

Fault Name	Type of Fault	Slip Rate (mm/yr)	Direction	Distance		Fault ID Number
				Miles	km	
Washington Fault Zone – Northern Section	Normal	< 0.2	East	2.5	4.1	1004a
Dutchman Draw Fault	Normal	< 0.2	Southeast	11.6	18.7	1003
Washington Fault Zone – Mokaac Section	Normal	< 0.2	South	12.0	19.3	1004b
Volcano Mountain Faults	Normal	< 0.2	East	13.4	21.6	2520
Hurricane Fault Zone – Anderson Junction Section	Normal	0.2 to 1.0	East	13.6	21.9	998c
Gunlock Fault	Normal	< 0.2	Northwest	17.8	28.6	2515
Hurricane Fault Zone – Ash Creek Section	Normal	< 0.2	Northeast	20.1	32.3	998b

Based on a review of the USGS 2014 Deaggregation, the primary contributor to the seismic hazard are the Dutchman Draw Fault, Hurricane Fault zone, and local finite point sources that are modeled from historic seismicity to estimate the hazards on unidentified or uncharacterized faults.

3.1.3 SEISMIC DESIGN PARAMETERS

We understand that the project is governed by the Building Code 2018 of Utah which adopts the International Building Code (IBC), 2018 edition with amendments. As part of this code, the design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event as well as the properties of the soils that underlie the site.

As part of the procedure to evaluate seismic forces, the code requires the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile within the upper 100 feet of the ground surface. Our borings extended to a maximum depth of 51½ feet bgs, but to define the Site Class for this project, we have interpreted the results of soil test borings drilled within the project site and estimated appropriate soil properties below the base of the borings to a depth of 100 feet as permitted by the code. The estimated soil properties were based upon the soils encountered at the site, data available in published geologic reports, and our experience with subsurface conditions in the general site area.

Based upon our evaluation, the subsurface conditions at the site are consistent with the characteristics of a **Site Class "C"** as defined in Chapter 20.3-1 of the ASCE 7-16. The associated probabilistic ground acceleration values and site coefficients for the general site area were obtained from the ASCE 7 Hazard Tool web page (https://asce7hazardtool.online/) using the ASCE 7-16 option and are presented in the table below.

TABLE 3.2: GROUND MOTION VALUES

Period (sec)	Mapped MCE Spectral Response Acceleration (g)		Site Coefficients		Adjusted MCE_R Spectral Response Acceleration (g)		Design Spectral Response Acceleration (g)	
0.2	S_s	0.527	F_a	1.289	S_{Ms}	0.680	S_{Ds}	0.453
1.0	S_1	0.171	F_v	1.5	S_{M1}	0.257	S_{D1}	0.171

2% Probability of Exceedance in 50 years for Latitude, Longitude: 37.0965°, -113.5414°
MCE_R = Maximum Considered Earthquake

The Site Coefficients referring to ASCE 7-16 Section 11.4.7 require the structural engineer to apply appropriate calculations as needed. Design of structures should comply with the requirements of the governing justification's building codes.

3.2 FIELD EXPLORATION AND LABORATORY TESTING PROGRAM

Prior to initiation of field drilling activities, PSI contacted Blue Stakes of Utah a minimum of 48 hours prior to beginning work to locate any potential buried utilities. The USA inquiry identification number for the utility locate request was #A21961195-00A.

To evaluate soil conditions at the subject site, PSI advanced eight geotechnical borings. The borings were drilled by with a truck-mounted CME 55 drill rig, using solid stem auger, HQ coring, and air rotary drilling methods. Borings B1, B2, B3, B4 and B7 were drilled on July 21, 2022. At the time of drilling, Borings B5 and B6 were not accessible to track mounted drilling equipment. Access was provided by the drilling subcontractor using earth moving equipment and borings B5, B6 and B8 were drilled on August 12, 2022.

The boring design element, boring labels, approximate depth and total footage are provided in the following table.

TABLE 3.3: FIELD EXPLORATION SUMMARY

Design Element	Boring Number	Latitude	Longitude	Approximate Elevation (ft)	Approximate Finished Grade/Bottom of Retaining wall (ft)	Boring Depth (ft)
Building	SB-1	37.09668	-113.54156	2,629	2,632	16½
	SB-2	37.09656	-113.54110	2,641	2,632	30½
	SB-3	37.09630	-113.54119	2,642	2,632	30
	SB-4	37.09648	-113.54180	2,640	2,632	25
Retaining Wall	SB-5	37.09613	-113.54099	2,655	2,630	30
	SB-6	37.09634	-113.54076	2,681	2,632	50
Parking Area	SB-7	37.09669	-113.54140	2,629	2,629	5
	SB-8	37.09634	-113.54145	2,640	2,630	15

Sampling procedures were performed in general accordance with applicable ASTM methods (ASTM D1586, ASTM D1587, and ASTM D 2113). Complete field exploration methodologies are presented in Appendix A. Samples were identified in the field, placed in sealed containers, and transported to the laboratory for further classification and testing. At the completion of drilling, the soil borings were backfilled with auger cuttings to match the ground surface.

The boring locations were selected by client personnel and located in the field using a recreational-grade GPS system. However, elevations of the ground surface at the boring locations were not provided and should be surveyed by others prior to construction. The references to elevations of various subsurface strata are based on depths below existing grade at the time of drilling. The approximate boring locations are depicted on the Boring Location Plan provided in the Figures.

During field activities, the encountered subsurface conditions were observed, logged, and visually classified (in general accordance with ASTM D2488/D2487). Field notes were maintained to summarize soil types and descriptions, water levels, changes in subsurface conditions, and drilling conditions.

PSI supplemented the field exploration with a laboratory testing program to determine additional engineering characteristics of the subsurface soils encountered. The laboratory testing program was conducted in general accordance with applicable ASTM Test Methods, and is included in Appendix A. Portions of samples not altered or consumed by laboratory testing will be discarded 30 days from the date shown on this report.

3.3 SUBSURFACE CONDITIONS

The results of the field and laboratory testing have been used to generalize a subsurface profile at the project site. The subsurface profile varies due to the previously mentioned slopes on the south and east side of the site. The following subsurface descriptions provide a highlighted generalization of the major subsurface stratification features and material characteristics at the top of the slope, middle of the slope and bottom of the slope. A generalized cross section of the site is included in Appendix A.

TABLE 3.4: GENERALIZED SOIL PROFILE – TOP OF SLOPE

Stratum	Top Elevation (ft)	Bottom Elevation (ft)	Description
1*	2,699	2,689	Gray **Conglomerate**, cemented cobbles and boulders, hard
2	2,689	2,671	Yellowish Red **Siltstone**, moist, extremely soft
3	2,671	>2,630	Reddish Brown **Claystone**, moist, extremely soft

*Observed on properties southeast of site. Not present in soil borings

TABLE 3.5: GENERALIZED SOIL PROFILE – MIDDLE OF SLOPE

Stratum	Top Elevation (ft)	Bottom Elevation (ft)	Description
1	2,681	2,675	Gray **Gravel and Cobbles** with Boulders, very dense
2	2,675	2,667	Yellowish Red **Siltstone**, moist, extremely soft
3	2,667	>2,630	Reddish Brown **Claystone**, moist, extremely soft

TABLE 3.6: GENERALIZED SOIL PROFILE – MIDDLE OF SLOPE

Stratum	Top Elevation (ft)	Bottom Elevation (ft)	Description
1	2,641	2,637	Sandy Fat **CLAY,** moist, stiff, high plasticity
2	2,637	>2,610	Reddish Brown **Claystone**, moist, extremely soft

The boring logs included in Appendix A should be reviewed for specific information at individual boring locations. The boring logs include soil descriptions, stratifications, locations of the samples, and field and laboratory test data. The descriptions provided on the logs only represent the conditions at that actual boring location; the stratifications represent the approximate boundaries between subsurface materials. The actual transitions between strata may be more gradual and less distinct. Variations will occur and should be expected across the site.

3.4 GROUNDWATER INFORMATION

Groundwater was not encountered during drilling in any of the soil borings. Based on our review of the State Department of Water Resources Water Data Library, groundwater is estimated to be below an elevation of 2570 feet (NAVD88). As such, groundwater is not expected to impact the proposed construction. It is possible, however, that transient, saturated ground conditions at shallower depths could develop at a later time during periods of heavy precipitation, landscape watering, leaking water lines, or other unforeseen causes. Variations in groundwater levels should be expected seasonally, annually, and from location to location.

The groundwater levels presented in this report were measured at the time of PSI field activities. The contractor should determine the actual groundwater levels at the site before construction activities.

4.0 GEOTECHNICAL ENGINEERING ANALYSIS

4.1 EXPANSIVE SOILS

PSI performed ASTM D4546 Swell Testing on selected samples of the recovered on-site material from the soil borings. The following table summarizes the results of the tests:

Boring	Depth (feet)	Soil Type	Moisture Content (%)	Volume Change (%)	Swell Pressure (ksf)
B1	12.5	Claystone	19.1	2.7	4,000
B2	5	Claystone	18.8	12.7	17,300
B3	15	Claystone	21.6	8.9	6,800
B3	30	Claystone	17.3	12.8	7,500
B4	7.5	Claystone	21.5	16.7	9,400
B4	15	Claystone	18.5	4.3	10,300
B4	25	Claystone	11	8.3	7,200

The laboratory swell test results are included in Appendix A. The test results indicated swell percentages of 2.7 to 16.7 percent when tested under a surcharge pressure of 250, 500, 750, and 1000 psf. The surcharge values were selected based on the anticipated approximate overburden pressure after grading, with 100 psf surcharge applied for every 1 foot below the ground surface up to 1,000 psf. Once the samples were hydrated under the surcharge pressure and swelling had stopped, additional pressure was applied until the sample was at or below its initial volume.

Based upon the swell test results, the native soils and bedrock encountered are generally classified as having a “high to very high” potential for swell, therefore; mitigation for swell is required. In addition, if excessive drying and rewetting of these soils is allowed to occur, the risk of swell will increase. Proper drainage and good maintenance must be followed, during and after construction

4.2 SLOPE STABILITY ANALYSIS

Special Study 127 prepared by the Utah Geological Survey identifies sites underlain by the Petrified Forest Member of the Chinle Formation on slopes greater than a critical slope angle of 15 percent as having a high landslide hazard. These criteria fit the previously discussed slopes on the south and east sides of the site. PSI used the software Slide2 (build version 9.007) created by RocScience, Inc to perform a preliminary slope stability analysis using the general cross section in Appendix A. Based on the results of our analysis, the factor of safety (FOS) exceeded 1.0 and the slope is stable under the current conditions. The temporary and long-term stability of the slope will depend on the site conditions and grading during and after construction. Permanent cut or fill slopes should not exceed 2 Horizontal to 1 Vertical (2H:1V), and temporary cut or fill slopes should not exceed 1H:1V.

5.0 GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

5.1 GEOTECHNICAL DISCUSSION

The primary geotechnical consideration at this site is the existence of expansive clay soil and claystone below the proposed finished floor elevation of the structure and required cuts on the order of 40 feet for the retaining wall on the south and east sides of the site. Should changes in the project criteria occur, a review must be made by PSI to determine if modifications to our recommendations will be required.

Based on the information gathered from the soil borings and laboratory testing, the clay soil and claystone encountered at this site has a high potential for expansion. PSI recommends the expansive potential of the claystone be mitigated to an acceptable magnitude as agreed upon by the Project Team to reduce the potential for foundation movements and foundation distress. An improved foundation pad must be constructed under soil supported floor slab and foundation elements due to the presence of expansive claystone underlaying the foundation. Several methods are available to reduce the expansive potential. PSI recommends excavating unacceptable soils and placing an impermeable geomembrane below the building footprint and pavement areas to mitigate water from entering the expansive soils. Please note that over-excavation will limit, but not eliminate the risk of heave. The owner must be willing to accept some risk of movement by using an over-excavation for swell mitigation. Alternatively, a deep foundation system consisting of drilled piers or micropiles installed and a structural floor slab may be considered.

Proper moisture control will be imperative at this site during and following construction. The risk of swelling soils can be reduced, but not eliminated, by preventing fluctuations in moisture content. Therefore, it is imperative that positive slope away from the building and foundations is maintained, hardscape is constructed around the building perimeter, utilities are prevented from transmitting water via trench bedding or broken lines, and pavements are regularly maintained.

The following geotechnical design recommendations have been developed based on the previously described project characteristics and subsurface conditions encountered. The proposed construction should be performed in accordance with these recommendations and the applicable building code, and local governmental standards which have jurisdiction over this project. If there are changes in the project criteria, PSI should be retained to determine if modifications in the recommendations will be required. The findings of such a review would be presented in a supplemental report. Once final design plans and specifications are available, a general review by PSI is recommended to confirm that the conditions anticipated in preparing this geotechnical report are consistent with the earthwork and foundation recommendations contained within the construction documents.

5.2 SITE PREPARATION

The proposed building pad and parking areas should be stripped and grubbed of any construction debris, trash, vegetation, organic laden materials, and other structures in conflict with the proposed construction a minimum of five feet outside the structural and pavement limits. Depressions or low areas resulting from stripping and grubbing should be backfilled with approved soil and compacted in accordance with the recommendations presented in this report.

5.3 EARTHWORK

5.3.1 OVER-EXCAVATION

Due to the presence of expansive claystone, we recommend that the claystone within the building footprint and pavement areas be over-excavated to a depth of 48 inches the bottom of the slab, foundations, and pavement section. The intent of this recommendation is to provide a suitable foundation subgrade and to reduce expansion to within tolerable limits. The over-excavated material should be replaced with structural fill and should be underlain by an impermeable geomembrane liner to prevent water from infiltrating into the expansive claystone.

The potential impact of the expansive characteristics of the claystone underlaying the building footprint and pavement areas can be reduced by protecting the claystone from becoming wet. Placement of an impermeable geomembrane liner and structural fill above the expansive materials can help reduce the possibility for water to infiltrate and wet the underlaying soils. If the expansive soil are wetted, surface heave will occur, which could result in damage to the foundation, floor slab and pavement.

5.3.2 FILL MATERIALS

Following site preparation, the newly exposed subgrades in site improvement areas intended for structures and pavements must be approved by the Geotechnical Engineer prior to fill placement. These exposed subgrades should be proof rolled with a loaded tandem axle dump truck or similar piece of rubber-tired equipment (20 tons or greater) in the presence of the Geotechnical Engineer's representative. The purpose of the proof rolling is to detect the existence of marginal or loose near-surface materials or unsuitable soils that may require over-excavation. Areas which deflect, rut or pump excessively during proof rolling, and which cannot be densified in-place, should be over-excavated to suitable soils and backfilled as directed by the geotechnical engineer. Proof rolling should not be performed on saturated, frozen or during wet weather conditions. Proper control of placement and compaction of new fills should be observed by PSI. Structural fill should be placed in lifts not exceeding 8- to-12-inch loose lifts for large compaction equipment such as vibratory rollers or hoe-packs, but thinner lifts (4-inch loose lifts) may be necessary if small compaction equipment such as plate compactors are to be used. Each lift is to be compacted to a minimum of 95 percent of the maximum dry density within 2 percent of the optimum moisture content, as determined in accordance with ASTM D1557 (Modified Proctor). A sufficient number of in-place density tests, as determined by the geotechnical engineer, should be performed on each lift of fill.

Tested structural fill materials that do not achieve either the required dry density or moisture content range shall be recorded, the location noted, and reported to the Contractor and Owner. A re-test of the area should be performed after the Contractor performs remedial measures.

Imported Structural Fill

Imported structural fill should consist of pit-run or quarry-run rock, crushed rock, or crushed gravel. The material should be well-graded between coarse and fine material, angular, have a plasticity index of 8 or less, and have less than 10 percent by weight passing the U.S. Standard No. 200 Sieve (75-µm).

Drain Rock

Drain rock, or "free-draining" material should have less than 5% passing the No. 200 sieve (washed analysis). Examples of materials that would satisfy this requirement include crushed rock that meets the gradation outlined in Table 3 of ASTM C33 for stone size numbers #7, #67, #56 and #57.

5.3.3 EXCAVATIONS

In Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better ensure the safety of workmen entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is our understanding that these regulations are being strictly enforced and if they are not closely followed the owner and the contractor could be liable for substantial penalties.

The contractor is solely responsible for designing and constructing stable excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

We are providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or other parties' compliance with local, state, and federal safety or other regulations.

5.3.4 SLOPES

Any permanent cut or fill slopes should not exceed 2 Horizontal to 1 Vertical (2H:1V). Excavations extending below a 1H:1V plane extending down from any adjacent footings should be shored for safety. All excavations should be inspected by a representative of the geotechnical engineer during construction to allow any modifications to be made due to variation in the soil types. All work should be performed in accordance with Department of Labor Occupational Safety and Health Administration (OSHA) guidelines as described in the previous section.

5.3.5 UTILITIES

Utility trenches may be backfilled with suitable onsite native soils or imported soil above the pipe zone. Trench backfill should be moisture conditioned to within 0 to 4 percent above the optimum moisture content, compacted in 6- to 8-inch lifts to a minimum of 90 percent of the maximum dry density as determined by the modified Proctor (ASTM D1557). In pavement areas, the top 12-inches of soil subgrade should reach a minimum of 95 percent of this Proctor. Cutoffs or check dams should be considered using a bentonite cement slurry to limit migration of water onsite and under the building footprint. Pipe zone backfill requirements should be in conformance with the requirements of the local agencies having jurisdiction but should consist of clean granular sand material having a sand equivalent equal to or above 30. Jetting or flooding of utility backfill is not recommended. If smaller compaction equipment such as jumping jacks or plate compactors are used, thinner lifts will be required to achieve compaction.

5.4 FOUNDATIONS

In our opinion, the structural loads of the proposed development can be supported on conventional spread footing foundations bearing on structural fill and constructed in accordance with the following design criteria. PSI recommends that foundation type and bearing strata be consistent throughout the proposed structure.

5.4.1 SHALLOW FOUNDATIONS

Shallow spread and continuous footings founded at a depth of at least 18 inches below lowest adjacent finished grade can be designed for a maximum net allowable soil bearing pressure of 4,000 pounds per square foot (psf). Minimum widths of 48 inches for column footings and 18 inches for continuous footings should be used in foundation design to reduce the possibility of a local bearing capacity failure. The above recommended allowable soil bearing pressure may be increased by one third (⅓) for short term wind and/or seismic loads.

If unsuitable soils are encountered below the overexcavation depth, the unsuitable material should be over excavated to suitable subgrade material and replaced with Engineered Fill or granular structural fill. The total width of the over excavation area beneath the design footing elevation should increase by 1 foot for each foot of over-excavation. The over excavated areas should be backfilled with structural fill or clean crushed rock and compacted in accordance with the *FILL MATERIALS* section of this report.

Based on the provided loads and the recommended site preparation, we estimate that post-construction total static settlement will be less than 1 inch. Differential settlement is estimated to be less than ½ inch over a 40-foot span. These magnitudes of estimated settlements are assumed to be within tolerable limits but should be confirmed by the project architect and structural engineer.

We recommend the use of a smooth-edged excavator to make the footing excavations. The foundation excavations should be observed by a representative of PSI prior to steel or concrete placement to assess that the foundation materials can support the design loads and are consistent with the materials and recommendations discussed in this report.

The base frictional resistance and the passive soil resistance will counteract the horizontal loads on shallow foundations. Footings cast against structural fill may be designed using a frictional coefficient between the concrete and soil of 0.40. An ultimate equivalent fluid pressure of 320 pounds per cubic foot (pcf) may be used to compute the ultimate passive resistance. The passive resistance of any un-compacted fill material or loose natural soils should be neglected. It is recommended that the overturning moments on the foundations be resisted by the weight of the foundation system.

After opening, footing excavations should be observed, and concrete should be placed as quickly as possible to avoid exposure of the excavations to wetting and drying. Surface run-off water should be drained away from the excavations and not be allowed to pond within 20 feet of the open excavation during or after construction. When possible, the foundation concrete should be placed during the same day the foundation excavation is made. If it is required that footing excavations be left open for more than one day, they should be protected to reduce moisture loss or gain.

PSI should be consulted during the design of the foundation pad to verify that the appropriate parameters are utilized. PSI should provide periodic observation during construction of the foundation pad to verify that the design parameters and the soil materials used during construction correspond.

5.5 FLOOR SLABS

5.5.1 SLAB-ON-GRADE

Where slab-on-grade floors are constructed in conjunction with conventional shallow footings, the slab-on-grade should be underlain by at least 4 inches of clean (open-graded) granular material to provide uniform support and limit the risk of the capillary rise of moisture. Granular material, such as ¾-inch to ¼-inch crushed rock having less than 5 percent passing the U.S. Standard No. 200 sieve (75-µm) would be suitable for this purpose. The crushed rock should be compacted until it is "well-keyed". In addition, it will be appropriate to install a durable vapor-retarding membrane beneath the slab-on-grade to limit the risk of damp floors in areas that will have moisture-sensitive materials placed directly on the floor. The vapor-retarding membrane should be installed in accordance with the manufacturer's recommendations.

A modulus of subgrade reaction, k value, of 150 pounds per cubic inch (pci, or psi/ inch of deflection) may be used in the grade slab design based on values typically obtained from 1 foot by 1 foot plate load tests. However, depending on how the slab load is applied, the value will have to be geometrically modified. The value should be adjusted for larger areas using the following expression for cohesionless soil:

Modulus of Subgrade Reaction, $k_s = \frac{k}{B}$ for cohesive soils $k_s = k\left(\frac{B+1}{2B}\right)^2$ for cohesionless soils

where:

ks = coefficient of vertical subgrade reaction for loaded area;
k = coefficient of vertical subgrade reaction for 1x1 square foot area; and,.
B = width of area loaded, in feet

5.6 RETAINING WALLS

Based on the provided grading plan, a retaining wall is planned on the north, east, and south sides of the site with a maximum wall height on the order of 40 feet.

5.6.1 CANTILEVER RETAINING WALLS

Design lateral earth pressures against a retaining wall or other embedded structure depend on the drainage condition provided behind the wall, the geometry of the backfill slope, and the type of construction, i.e., the ability of the wall to yield. The two possible conditions regarding the ability of the wall to yield include the active and at-rest earth pressure cases. The active earth pressure case is applicable to a wall that is capable of yielding slightly away from the backfill by either sliding or rotating about its base. A conventional cantilever retaining wall is an example of a wall that can develop the active earth pressure case by yielding. The at-rest earth pressure case is applicable to a wall that is considered to be relatively rigid and laterally supported at the top and bottom and therefore is unable to yield. The following general recommendations for retaining wall design are based on the wall backfill consisting of granular structural fill within the active wedge compacted to 90 to 95% of ASTM D 1557, and the embedded wall is fully drained, i.e., hydrostatic pressure cannot act on the wall.

Walls that are allowed to yield by tilting about their base should be designed using a lateral earth pressure based on an equivalent fluid having a unit weight of 30 psf/ft for horizontal backfill. Non-yielding walls should be designed using a lateral earth pressure based on an equivalent fluid having a unit weight of 48 psf/ft for horizontal backfill. We further recommend that horizontal earth pressures due to surcharge loads be taken as an additional uniform horizontal pressure (rectangular pressure diagram) of 0.5 times the intensity of the surcharge load acting over the entire height of the wall.

Over compaction of the backfill behind walls should be avoided. In this regard, we recommend compacting the backfill to about 93% of the maximum dry density (ASTM D 1557). Heavy compactors and large pieces of construction equipment should not operate within 5 ft of any embedded wall to avoid the buildup of excessive lateral pressures. Compaction close to the walls should be accomplished using hand-operated vibratory plate compactors.

The earth pressure increases and movements of retaining walls due to dynamic loading during a seismic event are relatively complex to model. The soil-structure-interaction depends on the inertial and flexural response of the wall, the response of the soil underlying the wall, the response of the backfill, and the input motions. The dynamic pressures are estimated based on the rigidity of the wall system. To account for dynamic thrust due to seismic loadings we recommend increasing the static earth pressure by a seismic pressure of 8.3 psf/ft for yielding walls. This value is based on a deflection at the top of the wall of at least 0.001H; where H is the height of the wall. The distribution should be triangular, starting from the base of the wall, and the resultant of the additional seismic force can be placed at 0.5H measured up from the base of the wall, where H equals the overall height of the wall in feet measured from the bottom of the footing.

Figure 3 shows the retaining wall pressure configurations for cantilever and gravity retaining walls.

5.6.2 Soil Nail Walls

The soil nail wall system consists of drilling and grouting rows of steel bars or "nails" behind the excavation face as it is excavated and then covering the face with reinforced shotcrete. The placement of soil nails reinforces the soils/weak bedrock located behind the excavation face and increases the soil's ability to prevent a mass of soil from sliding into the excavation. Soil nail walls are typically constructed using the following sequence:

- Excavate the soil at the wall face to between 1 and 3 feet below the row of soil nails to be installed.
- Drill, install and grout soil nails.
- Excavate berm, if present, located within about 3 feet below the elevation of the soil nail.
- Place drainage strips, steel wire mesh and/or reinforcing bars in front of the excavated soil.
- Install shotcrete and place steel plates and nuts over the soil nails.
- Complete nail pullout capacity testing in accordance with wall designer recommendations typically one out of every 20 nails in an installed row.
- Repeat steps two through seven for each row of nails located below the completed row.

Soil nails typically consist of #6 to #12 threaded steel bars (¾- to 1½-inch-diameter). The steel bars are placed in 4- to 8-inch-diameter holes drilled at angles typically ranging from 10 to 25 degrees below horizontal. Centralizers are used to center the steel bars in the holes. Once the steel bars are installed, the holes are grouted using cement grout or concrete. We recommend a preliminary Grout-to-Ground Bond Ultimate Strength (α_{bond}) of 20 psi within the claystone bedrock. Higher adhesion values may be developed, depending on the anchor installation technique. The contractor should be given the opportunity to use higher adhesion values by conducting performance tests prior to the start of installing the production tieback anchors.

5.6.3 SOLDIER PILE AND TIE BACK WALLS

Soldier pile walls consist of steel beams that are concreted into drilled vertical holes located along the wall alignment, typically 8 feet on center. After excavation to specified elevations, tiebacks are installed, if necessary. Once the tiebacks are installed, the pullout capacity of each tieback is tested, and the tieback is locked-off to the soldier pile at or near the design tieback load. Tiebacks typically consist of steel strands that are installed into pre-drilled holes and then either tremie or pressure grouted. Timber lagging is typically installed behind the flanges of the steel beams to retain the soil located between the soldier piles. Geotechnical design recommendations for each of these components of the soldier pile and tieback wall system are presented in the following sections.

PSI recommend that soldier pile walls be designed using the earth pressure diagrams presented in Figures 4 and 5. Due to the expected variance heights of the cut perimeter cuts for the site, PSI anticipates that any soldier pile wall design will include soldier piles with and without tiebacks. Soldier piles without tieback are referred to as cantilevered soldier piles and may be appropriate for use along shorter sections of the site retaining walls. The earth pressures presented in Figures 4 and 5 represent the estimated loads that will be applied to the wall system for various wall heights and are based on fully-drained conditions (no hydrostatic pressure is allowed to build up) above the base of the excavation. We recommend that the embedded portion of the soldier piles be at least 2 feet in diameter and extend a minimum distance of 10 feet into claystone to resist “kick-out.” We recommend using an allowable end bearing value of 30,000 psf for piles embedded a minimum of 10 feet into competent claystone bedrock. The allowable end bearing value should be applied to the base area of the drilled hole into which the soldier pile is concreted.

Tieback anchors will likely be required for some section of the soldier pile walls on this site. Tieback anchors should extend far enough behind the wall to develop anchorage beyond the “no-load” zone and within a stable soil mass. The anchors should be inclined downward at 15 to 25 degrees below the horizontal unless steeper angles area required to avoid buried utility lines of other structures, however steeper inclination of tieback may necessitate the use of walers. Centralizers should be used to keep the tieback in the center of the hole during grouting. Structural grout or concrete should be used to fill the bond zone of the tiebacks. A bond breaker, such as plastic sheathing, should be placed around the portion of the tieback located within the no-load zone if the shoring contractor plans to grout both the bond zone and unbonded zone of the tiebacks in a single stage.

We recommend that spacing between tiebacks be at least three times the diameter of the anchor hole to minimize group interaction. We recommend a preliminary Grout-to-Ground Bond Ultimate Strength (α_{bond}) of 20 psi within the claystone bedrock. Higher adhesion values may be developed, depending on the anchor installation technique. The contractor should be given the opportunity to use higher adhesion values by conducting performance tests prior to the start of installing the production tieback anchors.

5.6.4 RETAINING WALL DRAINAGE

PSI recommends that the retaining wall be provided with drainage. One possible drainage system would include:

1) A 4 or 6-inch diameter perforated drain tile at the bottom of the backfill to collect seepage water with the tile connected to a suitable means of disposal.
2) Clean ½-inch or 1-inch gravel classified as "GP" and containing less than 5% passing a #200 sieve surrounding the draintile.
3) Non-woven 4 ounce per square yard geotextile between the drainage material and the on-site soils to prevent infiltration of fine-grained soils into the draintile, granular drainage blanket, or granular backfill.

Due to the highly expansive claystone bedrock underlaying the site below the retaining wall, it is imperative that water collected by the retaining wall drainage system is not allowed to infiltrate the claystone underlaying the pavement areas or building footprint and should be diverted into stormwater systems.

In specific design cases where water is allowed to build up on the below-grade wall structure, the hydrostatic load correlating to the maximum height of the water build up should be added to the lateral loads acting on the wall.

5.6.5 Moisture Sensitive Soils / Weather Related Concerns

The soils encountered at this site are expected to be sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. In addition, soils which become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. It will, therefore, be advantageous to perform earthwork and foundations construction activities during dry weather.

If grading occurs in a period of increased rainfall, unstable subgrade conditions may be present. These conditions may require stabilizing the subgrade with admixtures, such as cement kiln dust or a coarse aggregate. Isolated areas may be stabilized using a geogrid, such as Tensar BX-1200 or equal, with one foot compacted aggregate base over the geogrid. Additional recommendations can be provided, as required, during construction.

5.6.6 Design Measures to Reduce Changes in Soil Moisture

Site grading should be carefully planned to promote positive drainage away from structures and to divert surface water away into stormwater systems. Water should not be allowed to collect near the structures either during or after construction.

We recommend footing drains be placed around the exterior of the building foundations to reduce the potential for lateral migration of moisture into the building envelope. Pavement surfaces and open space areas should be sloped such that surface water runoff is collected and routed to suitable discharge points. Ground surfaces adjacent to buildings must be sloped to facilitate positive drainage away from the buildings.

Final grading should be designed to provide positive drainage away from the structure. Soil areas within 10-feet of the structure should slope at a minimum of 5 percent away from the building, if possible. Roof leaders and downspouts should discharge onto paved surfaces sloping away from the structure or into a closed pipe system which outfalls to the street gutter pan or directly to the storm drain system.

Landscaped or planted areas should not be placed within 10 feet of the footings of the proposed structures. Where concrete flat work such as sidewalks are placed next to the structure, concrete should be placed adjacent to the foundation to prevent a planter strip that would trap surface water between the foundation and the sidewalk. For vegetation planted near the buildings, plants that require very little moisture should be used. Irrigation systems (drip and/or sprinkler heads) should not direct water where it could saturate foundation soil.

5.7 PAVEMENT DESIGN

Due to the expansive soils, PSI recommends that the pavement areas be over-excavated to a depth of 48 inches and replaced with structural fill overlaying a geomembrane liner. Pavement design recommendations for several levels of traffic loading were developed based on potential traffic, drive paths or patterns and anticipated soil support characteristics of pavement subgrades. PSI utilized the "AASHTO Guide for Design of Pavement Structures" published by the American Association of State Highway and Transportation Officials to evaluate the pavement thickness recommendations in this report. This method of design considers pavement performance, traffic, roadbed soil, pavement materials, environment, drainage and reliability. Each of these items is incorporated into the design methodology. *PSI is available to provide site specific laboratory testing and engineering evaluation to refine the estimated design parameters and sections, upon request.*

Specific design traffic types and volumes for this project were not available to PSI at the issuance of this report. This traffic information is typically used to determine the number of 18-kip Equivalent Single Axle Loads (ESAL) that is applied to the pavement over its design life. In lieu of project specific design parameters, general traffic and subgrade parameter assumptions were used for this design. Furthermore, the scope of services for this project did not include California Bearing Ratio (CBR) testing. A CBR value of 15 was estimated for design purposes, based on the pavement area being underlain by 4 feet of structural fill. Details regarding the basis for this design are presented in the table below.

TABLE 5.1: PAVEMENT DESIGN PARAMETERS

Pavement Type	Reliability	Initial Serviceability Index	Terminal Serviceability Index	Standard Deviation
Flexible	80	4.2	2.0	0.45
Rigid		4.5		0.35

The below presented estimated pavement sections are based on the field and laboratory test results for the project, local pavement design practice, design basis presented herein and previous experience with similar projects. The project Civil Engineer should verify that the ESAL and other design values are appropriate for the expected traffic and design life of the project. PSI should be notified in writing if the assumptions or design parameters are incorrect or require modification.

TABLE 5.2: ESTIMATED FLEXIBLE PAVEMENT SECTION OPTIONS

	Employee	Truck Delivery		
Component	50,000 ESALs	100,000 ESALs	150,000 ESALs	250,000 ESALs
Hot Mixed Asphalt Concrete (HMAC)	3	3	3	3
Aggregate Base Course	6	7	8	10

TABLE 5.3: ESTIMATED RIGID PAVEMENT SECTION OPTIONS

	Truck Delivery	
Component	< 300,000 ESALs	375,000 ESALs
Portland Cement Reinforced Concrete (PCC)	5	5½
Compacted Subgrade	6	6

These recommended pavement sections are to be constructed over three feet of compacted subgrade or structural fill compacted to 95% of the maximum dry unit weight as determined in accordance with ASTM

D1557 (Modified Proctor), and that the pavements will be constructed during the dry summer months. Proof rolling should be used to evaluate pavement subgrades. Any soft areas disclosed by the proof rolling will likely require over-excavation and replacement with structural fill. Some contingencies should be provided for the repair of soft areas. If pavement construction is scheduled during wet weather, it will be necessary to increase the above-recommended base course sections.

The construction of new pavements over established granular construction haul routes or staging areas can be accomplished by re-grading the existing rock section to remove surficial contamination. Typically, a new 6-in. minimum thickness of ¾-inch-minus UTBC is added to the section to serve as a leveling course beneath the above-recommended thicknesses of AC.

Permanent, properly installed drainage is also an essential aspect of pavement design and construction. All paved areas should have positive drainage to prevent ponding of surface water and saturation of the base course. This is particularly important in cut sections or at low points within the paved areas, such as in sunken loading dock areas or around stormwater catch basins. Effective means to prevent saturation of the base course include installing subdrain systems below sunken loading docks and weep holes in the sidewalls of catch basins.

To provide quality materials and construction practices, we recommend that the pavement work conform to the "UDOT 2022 Road and Bridge Construction Standard Specifications" used by the Utah Department of Transportation. Periodic maintenance should be expected and performed on all pavements during the service life. All pavement materials and construction procedures should conform Utah Department of Transportation (UDOT), or appropriate local requirements.

5.7.1 PAVEMENT MATERIALS

Pavement material requirements for the above pavement sections are presented below:

- **Compacted Subgrade:** Pavement subgrade preparation should be performed in accordance with the ***EARTHWORK*** section.
- **Aggregate Base Course:** Base materials should meet all requirements specified in the UDOT 2022 Road and Bridge Construction Standard Specifications. Aggregate base should be placed in maximum 6-inch compacted lifts. The base materials should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D1557. Flexible base materials should be moisture conditioned to between minus two (-2) and plus three (+3) percentage points of the optimum moisture content. Approximately six inches of base course was observed underlaying the asphalt in the test boring locations. The base coarse material may be stockpiled and reused, provided it remains clean of contamination, and meets the specifications for UDOT UTBC.
- **Hot Mix Asphalt Concrete (HMAC) Surface Course:** Should meet all requirements specified in Section 02745 of the UDOT 2022 Road and bridge Construction Standard Specifications.
- **Portland Cement Concrete:** Concrete used for paving should have a minimum compressive strength of 4,000 psi at 28-days. The air content at the point of placement should range from 2 to 4 percent. The concrete pavements should be reinforced and jointed per current ACI recommendations.
- **Concrete Reinforcement:** Should be in accordance with applicable ACI standards. The contraction maximum joint spacing, in general accordance with ACI 330, should be less than 30 times the thickness of the concrete pavement or 15 feet, whichever is smaller.

5.8 PLAN REVIEW AND CONSTRUCTION OBSERVATION

After final plans and specifications are complete, PSI should review the final design and specifications so that the earthwork and foundation recommendations are properly interpreted and implemented. It is considered imperative that the Geotechnical Engineer and/or their representative be present during earthwork operations and foundation installations to observe the field conditions with respect to the design documents and specifications. PSI will not be responsible for changes in the project design or project information it was not provided, or interpretations and field quality control observations made by others. PSI would be pleased to provide these services for this project.

6.0 GEOTECHNICAL RISK AND REPORT LIMITATIONS

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which geotechnical engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations presented in the preceding sections constitute PSI's professional estimate of those measures that are necessary for the proposed structure to perform according to the proposed design based on the information generated and referenced during this evaluation, and PSI's experience in working with these conditions.

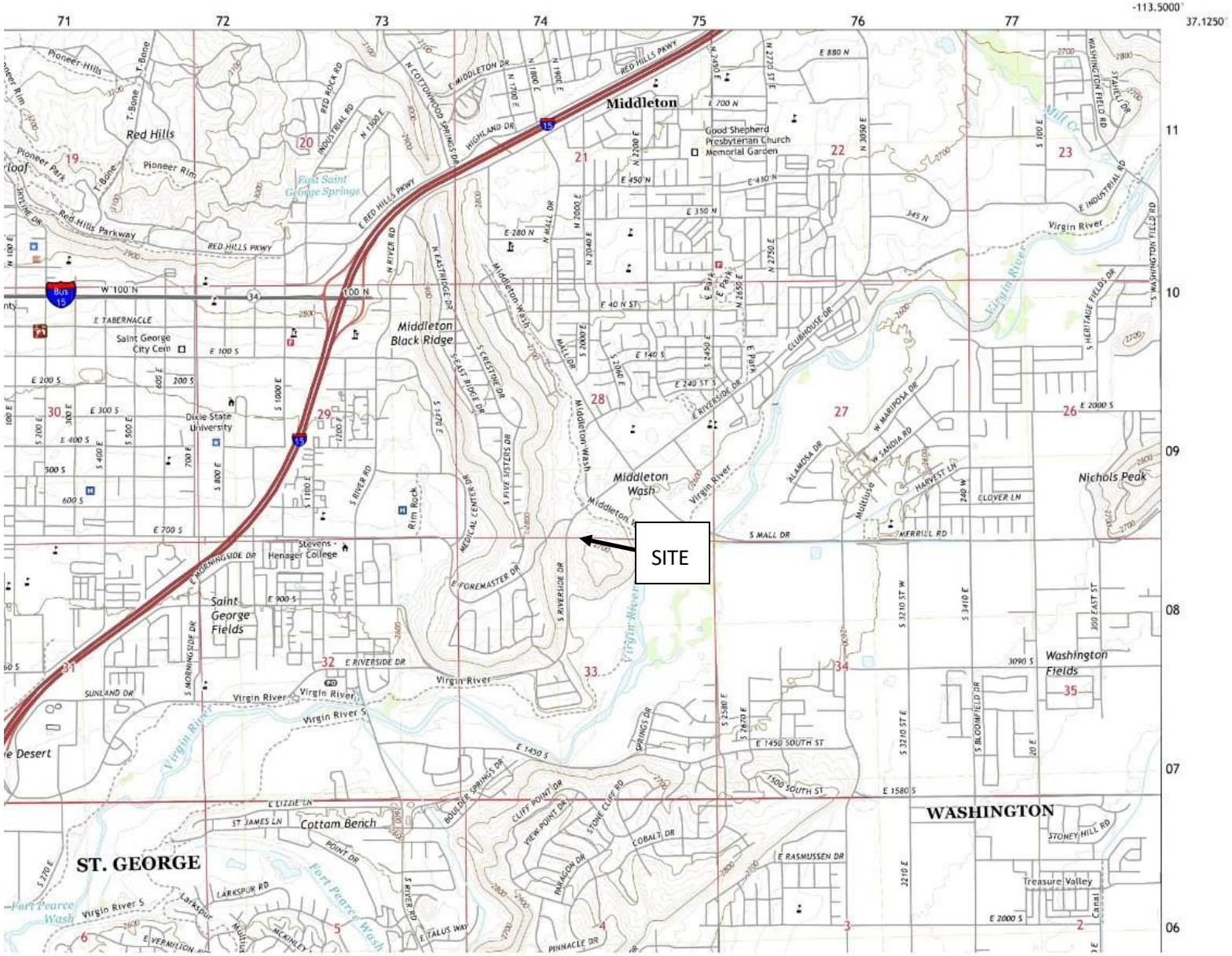
Services performed by PSI for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area. No warranty, expressed or implied, is made.

The recommendations submitted are based on the available subsurface information obtained by PSI, and information provided by the client, client's representative and client's design consultants. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, PSI should be notified immediately to determine if changes in the foundation and/or other recommendations are required. If PSI is not retained to perform these functions, PSI cannot be responsible for the impact of those conditions on the performance of the project.

The Geotechnical Engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At that time, it may be necessary to submit supplementary recommendations.

This report has been prepared for the exclusive use of Client and their design consultants, for the aforementioned project parameters.

FIGURES

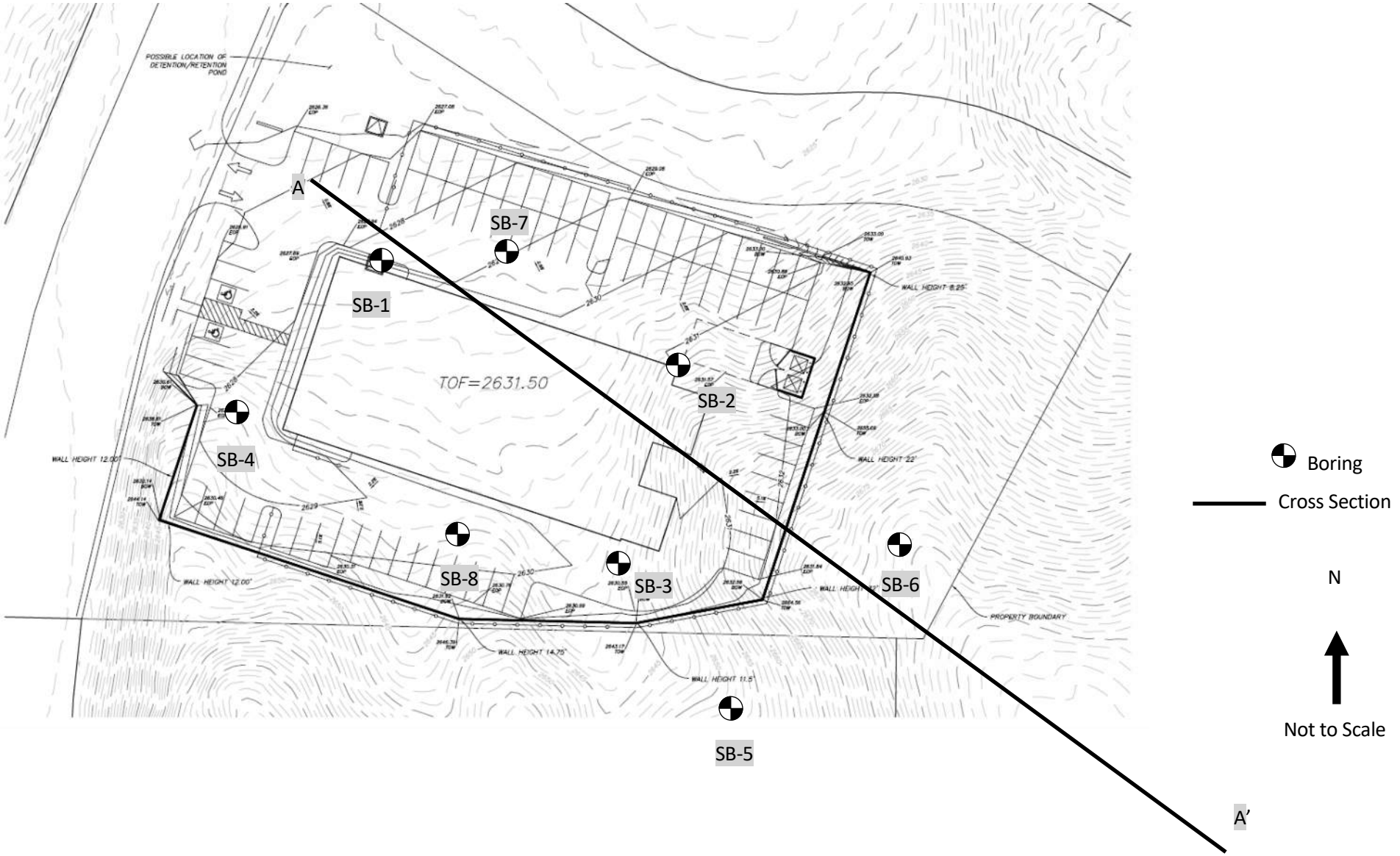


Professional Service Industries, Inc.
2779 S 600 W
Salt Lake City, Utah 84115
(801) 484-8827

Site Vicinity Map
(USGS Saint George 7.5 min Quad)
PSI Project No. 07061856

Caliber Collision – Saint George, Utah

1988 East Riverside Drive
Saint George, Utah 84790



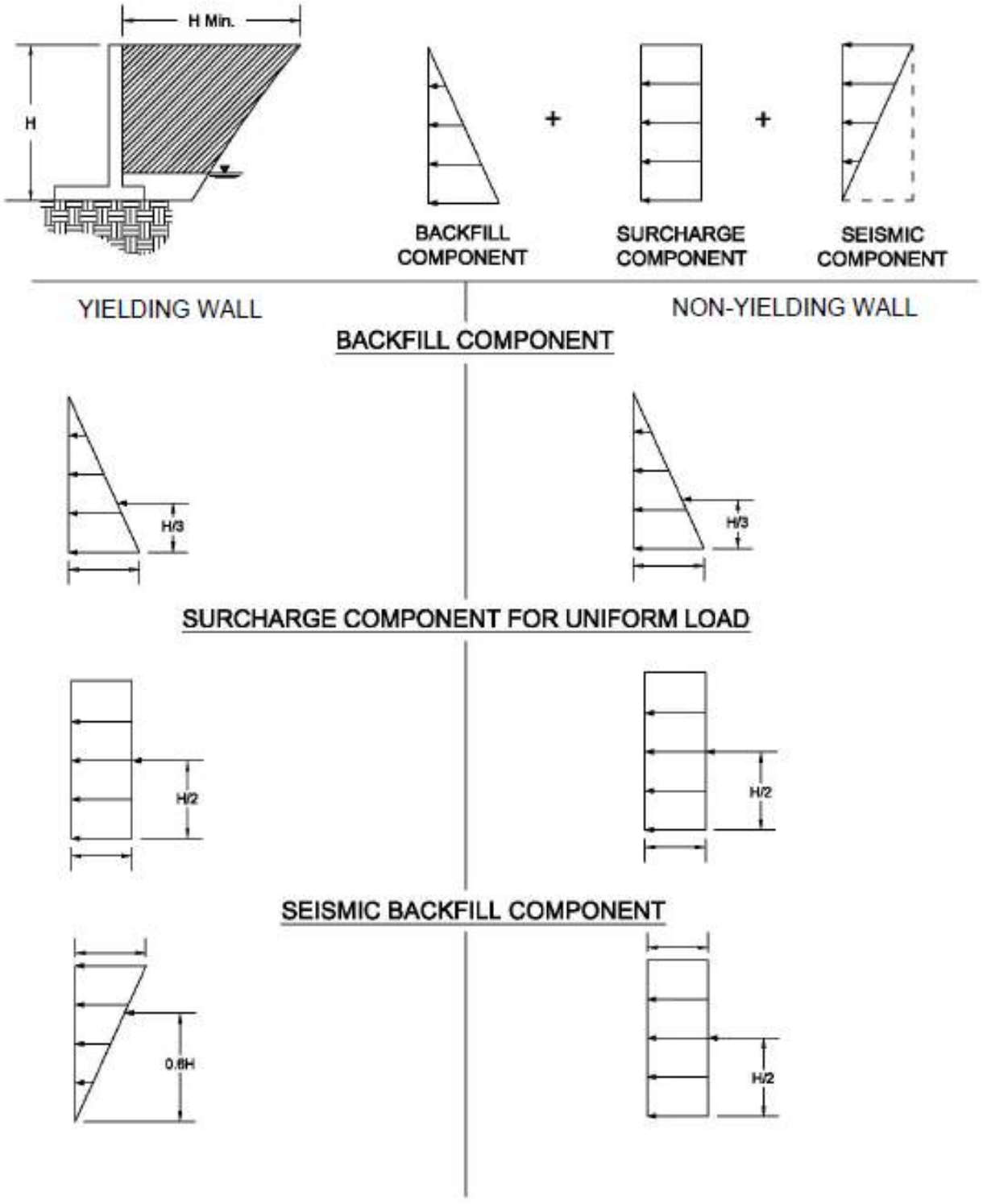
Professional Service Industries, Inc.
2779 S 600 W
Salt Lake City, Utah 84115
(801) 484-8827

BORING LOCATION PLAN

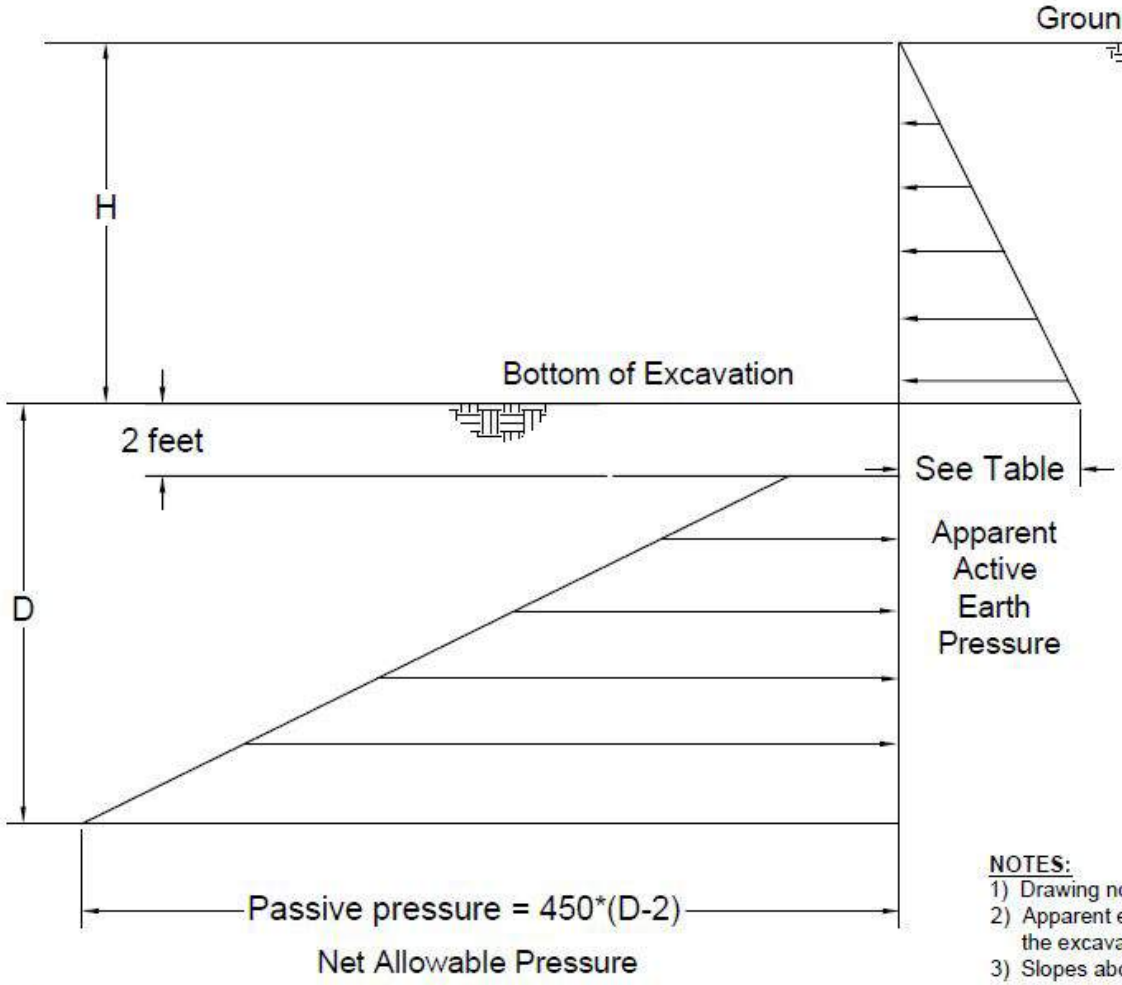
PSI Project No. 07061856

Caliber Collision – Saint George, Utah

1988 East Riverside Drive
Saint George, Utah 84790



intertek psi	DATE September 1, 2022	Caliber Collision – Saint George, Utah	PSI PROJECT #: 07061856
PSI, INC. 2779 South 600 West Salt Lake City, Utah 84115 (801) 484-8827	DRAWN BY: BRJ	**RETAINING WALL PRESSURES**	**FIGURE 3**

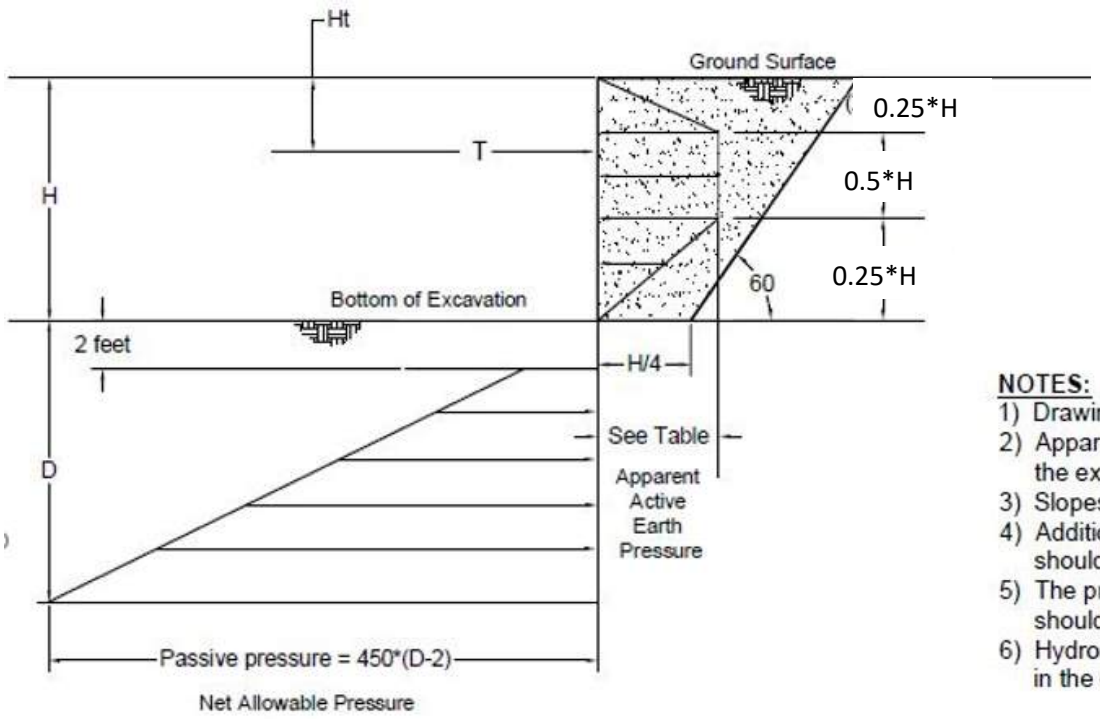


	Apprent Active Earth Pressure Calculation
Walls with less than 5° backslope	30*H

LEGEND:
D = Total depth below base of excavation
H = Exposed height of wall
T = Horizontal load from tieback

NOTES:
1) Drawing not to scale
2) Apparent earth pressure and surcharge act over the pile spacing above the base of the excavation.
3) Slopes above shoring wall will not exceed 5 degrees of horizontal.
4) Additional surcharge from footings of adjacent buildings, retaining walls, or rockeries should be included in accordance with recommendation provided in Figure 6
5) The pressure diagram is approximate, if additional surcharge loading is required PSI should be consulted to provide revised surcharge pressures.
6) Hydrostatic pressures are accounted for in the areas below the base of the excavation in the diagram

intertek psi	DATE September 8, 2022	Caliber Collision – Saint George, Utah	PSI PROJECT #: 07061856
PSI, INC. 2779 South 600 West Salt Lake City, Utah 84115 (801) 484-8827	DRAWN BY: BRJ	**SOLDIER PILE EARTH PRESSURE DIAGRAM (CANTILEVERED)**	**FIGURE 4**



NOTES:

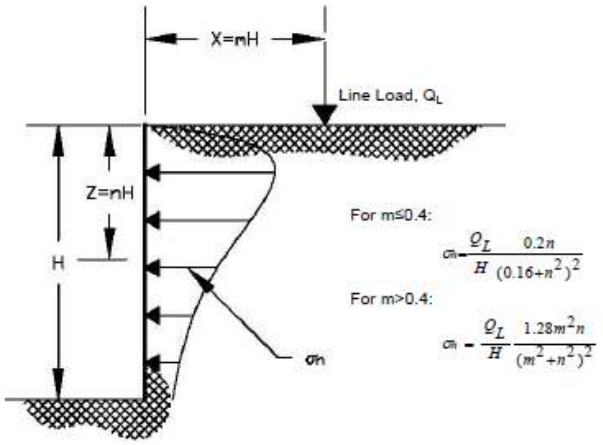
1) Drawing not to scale
2) Apparent earth pressure and surcharge act over the pile spacing above the base of the excavation.
3) Slopes above shoring wall will not exceed 5 degrees of horizontal.
4) Additional surcharge from footings of adjacent buildings, retaining walls, or rockeries should be included in accordance with recommendation provided in Figure 6
5) The pressure diagram is approximate, if additional surcharge loading is required PSI should be consulted to provide revised surcharge pressures.
6) Hydrostatic pressures are accounted for in the areas below the base of the excavation in the diagram

	Walls with less than 5˚ of Backslope
Apparent Active Earth Pressure Calculation, for Single Tieback walls	30*H
Apparent Active Earth Pressure Calculation, for wall with Multiple Tiebacks	30*H

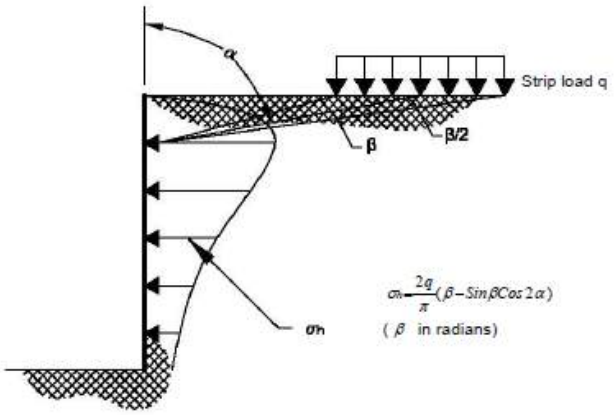
LEGEND:

D = Total depth below base of excavation
H = Exposed height of wall
T = Horizontal load from tieback
No load Zone

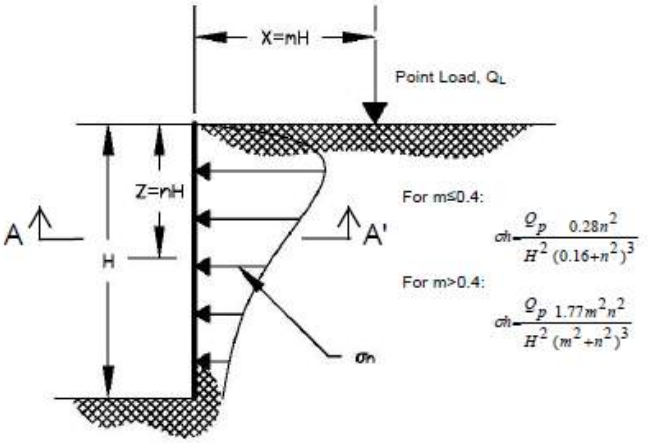
intertek psi	DATE September 8, 2022	Caliber Collision – Saint George, Utah	PSI PROJECT #: 07061856
PSI, INC. 2779 South 600 West Salt Lake City, Utah 84115 (801) 484-8827	DRAWN BY: BRJ	**SOLDIER PILE WITH TIEBACKS EARTH PRESSURE DIAGRAM**	**FIGURE 5**

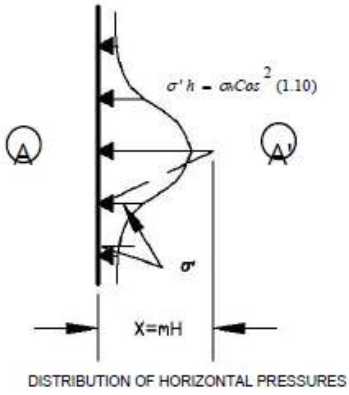


LINE LOAD PARALLEL TO WALL



STRIP LOAD PARALLEL TO WALL





DISTRIBUTION OF HORIZONTAL PRESSURES

VERTICAL POINT LOAD

Notes:

1. These guidelines apply to rigid wall with Poisson's Ration assumed to be 0.5 for backfill materials.
2. Lateral pressures from any combination of above loads may be determined by the principle of superposition.

intertek psi	DATE September 1, 2022	Caliber Collision – Saint George, Utah	PSI PROJECT #: 07061856
PSI, INC. 2779 South 600 West Salt Lake City, Utah 84115 (801) 484-8827	DRAWN BY: BRJ	**RETAINING WALL SURCHARGE**	**FIGURE 6**

APPENDIX A

Field Exploration & Laboratory Testing Program

FIELD EXPLORATION PROGRAM

Approximate exploration locations of our field investigation are shown on Figure 2, Exploration Location Map. PSI notified Blue Stakes of Utah to indicate the approximate location of underground utilities in the vicinity of the proposed exploration locations prior to commencing field activities.

The field exploration consisted of seven solid stem auger borings, and one hollow stem auger borings with HQ coring and air rotary performed. PSI completed borings B1, B2, B3, B4, and B7 on July 21, 2022. At the time of drilling, Borings B5 and B6 were not accessible to track mounted drilling equipment. Access was provided by the drilling subcontractor using earth moving equipment and borings B5, B6 and B8 were drilled on August 12, 2022.Hollow Stem Auger borings. Exploration locations and depths are summarized in the table below:

Table A1: Field Exploration Summary

Design Element	Boring Number	Latitude	Longitude	Approximate Elevation (ft)	Approximate Finished Grade/Bottom of Retaining wall (ft)	Boring Depth (ft)
Building	SB-1	37.09668	-113.54156	2,629	2,632	16½
	SB-2	37.09656	-113.54110	2,641	2,632	30½
	SB-3	37.09630	-113.54119	2,642	2,632	30
	SB-4	37.09648	-113.54180	2,640	2,632	25
Retaining Wall	SB-5	37.09613	-113.54099	2,655	2,630	30
	SB-6	37.09634	-113.54076	2,681	2,632	50
Parking Area	SB-7	37.09669	-113.54140	2,629	2,629	5
	SB-8	37.09634	-113.54145	2,640	2,630	15

Solid Stem and Hollow Stem Auger Borings

The Borings were advanced using a CME-55 track mounted drill rig owned and operated by Applied Geotechnical Engineering Consultants, Inc. out of Saint George, Utah. Soil samples were recovered at selected depths during drilling using a Standard Split Spoon Sampler (outside diameter- 2.0 inches; inside diameter – 1.4 inches) or Modified California Sampler driven by a 140-lb weight free falling 30 inches. The number of blows required to drive the Standard Split Spoon-Sampler 12 inches is designated as the Standard Penetration Resistance (SPT) (N-value, blows per foot) and provides an indication of the consistency of cohesive soils and the relative density of granular materials. The boring logs show the uncorrected N values. They do not reflect the correction for the Modified California Samples, or Hammer Efficiency, which were used in our analysis. Relatively undisturbed Shelby Tube samples (outside diameter – 3.0 inches; inside diameter 2.88 inches) were recovered at selected intervals to measure the in-situ unit weight.

HQ Coring

In test boring B6, an HQ wireline double core barrel was advanced using air rotary drilling methods from a depth of approximately 26½ to 35 feet. The core barrels were advanced using a diamond core bit, and the inner core barrels were recovered using a wireline while the outer core barrel and drill rods remained in place for continuous coring. The HQ core barrel has an outer diameter of 2.5 inches and recovered core samples have a diameter of approximately 2.4 inches. The recovery percentage and Rock Quality Designation (RQD) were recorded by PSI for each core run, and photos of the core samples are shown in Appendix A.

Physical soil samples recovered were sealed in plastic bags and transported to PSI's Salt Lake City laboratory for additional examination and testing. A representative of PSI's geotechnical staff was present during the explorations to record soil and groundwater conditions encountered in the exploration and to obtain soil samples for laboratory testing.

A representative from PSI's office observed the drilling and prepared boring logs of the conditions encountered. It should be noted that the subsurface conditions presented on the boring logs are representative of the conditions at the specific locations drilled. Variations may occur and should be expected across the site. The soil morphology represents the approximate boundary between subsurface materials and the transitions may be gradual and indistinct. Elevations referenced were obtained from publicly available LIDAR data provided by the United States Geological Survey (USGS) and should be considered approximations.

Field Classification

Soil samples were initially classified visually in the field. Consistency, color, relative moisture, degree of plasticity, and other distinguishing characteristics of the soil samples were noted. The terminology used in the soil classifications and other modifiers are depicted in the General Notes and Soil Classification Chart.

LABORATORY TESTING PROGRAM AND PROCEDURES

Soil samples obtained during the field explorations were examined in our laboratory. The physical characteristics of the samples were noted, and the field classifications were modified, where necessary. Representative samples were selected during the course of the examination for further testing.

Moisture Content

Natural moisture content determinations were made on selected soil samples in general accordance with ASTM D2216. The natural moisture content is defined as the ratio of the weight of water to the dry weight of soil, expressed as a percentage.

Visual-Manual Classification

The soil samples were classified in general accordance with guidelines presented in ASTM D2487. Certain terminology incorporating current local engineering practice, as provided in the Soil Classification Chart, included with, or in lieu of, ASTM terminology. The term which best

described the major portion of the sample was used in determining the soil type (i.e., gravel, sand, silt or clay).

Sieve Analysis by Washing

In general, the sample was dried in an oven and then washed with water over the No. 200 sieve. The mass retained on the No. 200 sieve was dried in an oven, and the dry weight recorded. Results from this test procedure assist in determining the fraction, by weight, of coarse-grained and fine-grained soils in the sample.

The determination of the gradation curve of the coarse-grained material was made on selected soil samples in general accordance with ASTM D6913. In general, the oven dried mass retained on the No. 200 sieve is passed over progressively smaller sieve openings, by agitating the sieves by hand or by a mechanical apparatus. The mass retained on each sieve is recorded as a fraction of the total sample, including the percent passing the No. 200 sieve.

Atterberg Limits

The Atterberg Limits are defined by the liquid limit (LL) and plastic limit (PL) states of a given soil. These tests are performed in general accordance with ASTM D4318. These limits are used to determine the moisture content limits where the soil characteristics change from behaving more like a fluid on the liquid limit end to where the soil behaves more like individual soil particles on the plastic limit end. The plasticity index (PI) is the difference between the liquid limit and the plastic limit. The plasticity index is used in conjunction with the liquid limit to assess if the material will behave like a silt or clay.

Unconfined Compressive Strength of Rock Cores

The Uniaxial Compressive Strength (UCS) was of rock core specimens was determined in general conformance with Method C of ASTM D7012. Rock core samples were selected and prepared, and the dimensions of the cylinders were recorded. The rock core specimens were loaded under unconfined and uniform axial load until failure. The maximum load was recorded, and the maximum stress applied to the cores were taken as the Unconfined Compressive Strength (q_u).

One Dimensional Swell or Collapse Test

The one-dimensional swell was tested on selected approximately 2-inch diameter intact samples in general accordance with Method C ASTM D4546. The sample is loaded to a desired vertical pressure and then inundated and allowed to swell or collapse. The volume change is recorded over time, and once the volume has stopped changing, the sample is loaded again incrementally. The test is completed once the sample has returned to its original volume, and the pressure at which that occurs is recorded as the swell pressure.

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than 50% of their dry weight retained on a #200 sieve (0.075mm); they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.
HSA: Hollow Stem Auger - typically 3¼" or 4¼ I.D. openings, except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry
R.C.: Diamond Bit Core Sampler
H.A.: Hand Auger
P.A.: Power Auger - Handheld motorized auger

SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
ST: Shelby Tube - 3" O.D., except where noted.
RC: Rock Core
TC: Texas Cone
BS: Bulk Sample
PM: Pressuremeter
CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. Split-Spoon.
N_{60}: A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)
Q_u: Unconfined compressive strength, TSF
Q_p: Pocket penetrometer value, unconfined compressive strength, TSF
w%: Moisture/water content, %
LL: Liquid Limit, %
PL: Plastic Limit, %
PI: Plasticity Index = (LL-PL),%
DD: Dry unit weight, pcf
▼,▽,▼ Apparent groundwater level at time noted

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Relative Density	N - Blows/foot
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 - 80
Extremely Dense	80+

ANGULARITY OF COARSE-GRAINED PARTICLES

Description	Criteria
Angular:	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular:	Particles are similar to angular description, but have rounded edges
Subrounded:	Particles have nearly plane sides, but have well-rounded corners and edges
Rounded:	Particles have smoothly curved sides and no edges

GRAIN-SIZE TERMINOLOGY

Component	Size Range
Boulders:	Over 300 mm (>12 in.)
Cobbles:	75 mm to 300 mm (3 in. to 12 in.)
Coarse-Grained Gravel:	19 mm to 75 mm (¾ in. to 3 in.)
Fine-Grained Gravel:	4.75 mm to 19 mm (No.4 to ¾ in.)
Coarse-Grained Sand:	2 mm to 4.75 mm (No.10 to No.4)
Medium-Grained Sand:	0.42 mm to 2 mm (No.40 to No.10)
Fine-Grained Sand:	0.075 mm to 0.42 mm (No. 200 to No.40)
Silt:	0.005 mm to 0.075 mm
Clay:	<0.005 mm

PARTICLE SHAPE

Description	Criteria
Flat:	Particles with width/thickness ratio > 3
Elongated:	Particles with length/width ratio > 3
Flat & Elongated:	Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES

Descriptive Term	% Dry Weight
Trace:	< 5%
With:	5% to 12%
Modifier:	>12%

GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

Q_U - TSF	N - Blows/foot	Consistency
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

Description	Criteria
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term	% Dry Weight
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

Description	Criteria
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided:	Fracture planes appear polished or glossy, sometimes striated
Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed:	Inclusion of small pockets of different soils
Layer:	Inclusion greater than 3 inches thick (75 mm)
Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

Q_U - TSF	Consistency
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

Description	Criteria
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

Voids	Void Diameter
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

(Typically Sedimentary Rock)

Component	Size Range
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

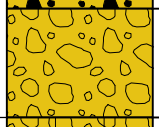
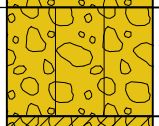
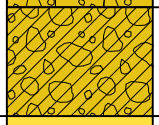
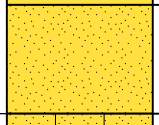
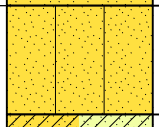
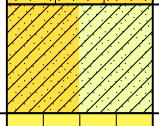
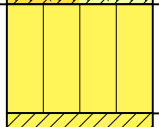
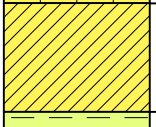
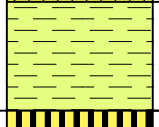
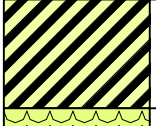
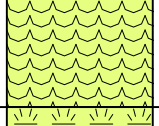
Rock Mass Description	RQD Value
Excellent	90 -100
Good	75 - 90
Fair	50 - 75
Poor	25 -50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	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	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

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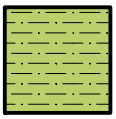
Graphic Symbols for Materials and Rock Deposits

CONCRETE
Portland Cement Concrete

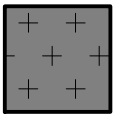
BITUMINOUS CONCRETE



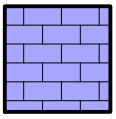
CLAYSTONE

COAL
Coal, Anthracite Coal

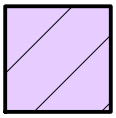
CONGLOMERATE/BRECCIA
Conglomerate, Breccia



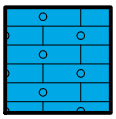
IGNEOUS ROCK
Anorthsite, Basalt, Metabasalt, Diabase (Gabbro), Gabbro, Granite/Granodionite, Homfels, Pegmatite, Rhyolite/Metarhyolite



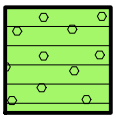
LIMESTONE
Limestone, Dolomite



METAMORPHIC ROCK
Amphibolite, Gneiss, Marble, Phyllite, Quartzite, Schist, Serpentinite, Slate

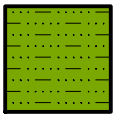


CHERT

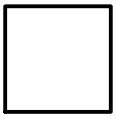


SANDSTONE
Sandstone, Orthoquarzite (Sandstone)

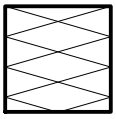
SHALE



SILTSTONE



NO RECOVERY



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BORING B1

DATE STARTED:	7/21/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	7/21/22	**DRILLER:** BEN	**LOGGED BY:** RDS
COMPLETION DEPTH	16.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Augers
ELEVATION:	2629 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.09668°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.54156°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water

While Drilling	N/A feet
Upon Completion	N/A feet
Delay	N/A

BORING LOCATION:
Building Footprint

NW Corner

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ / STRENGTH, tsf	Additional Remarks
	0			B1-1	14	Reddish Brown **Sandy Fat CLAY with gravel** moist, very stiff	CH	11 - 9 - 10 N=19	6		
2625				B1-2	11			10 - 14 - 17 N=31	6		LL = 58 PL = 18
	5			B1-3	9	Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, occasional gypsum veins		10 - 18 - 20 N=38	11		Fines=76.3%
2620				B1-4	10			23 - 41 - 50/5"	9		
	10			B1-5	10		CH	24 - 24 - 30 N=54	13		Fines=79.4%
2615				B1-6	11			30 - 50/5"	19		DD = 97 pcf Sat.=73% Fines=83.7%
	15			B1-7	18			25 - 40 - 42 N=82	11		Fines=83.1%
						End of Boring at approximately 16.5 feet bgs					

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Professional Service Industries, Inc.
2779 South 600 West
Salt Lake City, UT 84115
Telephone: (801) 484-8827

PROJECT NO.: 07061856
PROJECT: Caliber Collision
LOCATION: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

The stratification lines represent approximate boundaries. The transition may be gradual.

BORING B2

DATE STARTED:	7/21/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	7/21/22	**DRILLER:** BEN	**LOGGED BY:** RDS
COMPLETION DEPTH	31.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Augers
ELEVATION:	2641 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.09656°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.5411°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water

While Drilling	N/A feet
Upon Completion	N/A feet
Delay	N/A

BORING LOCATION:
Building Footprint

NE Corner

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ / STRENGTH, tsf	Additional Remarks
2640	0					Dark Gray **Gravel and Cobbles** subrounded, basalt clasts, 10 inch maximum particle size					
				B2-1	1	Reddish Brown **Sandy Fat CLAY with gravel** moist, stiff	CH	4 - 6 - 4 N=10	0		
	5					Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, occasional gypsum veins					
2635				B2-2	18			10 - 32 - 45 N=77	19		DD = 109 pcf Sat.=97% Fines=64.8%
				B2-3	18			16 - 22 - 27 N=49	13		
	10										
2630				B2-4	18			18 - 46 - 30 N=76	16		LL = 66 PL = 30
	15										
2625				B2-5	16		CH	14 - 27 - 31 N=58	11		Fines=75.2%
	20										
2620				B2-6	18			15 - 31 - 38 N=69	11		Fines=61.8%
	25										
2615				B2-7	18			6 - 20 - 20 N=40	13		LL = 62 PL = 28
	30										
2610				B2-8	18			6 - 23 - 48 N=71	13		Fines=61.1%
						End of Boring at approximately 31.5 feet bgs					

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Saint George, Utah

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BORING B3

DATE STARTED:	7/21/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	7/21/22	**DRILLER:** BEN	**LOGGED BY:** RDS
COMPLETION DEPTH	31.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Augers
ELEVATION:	2642 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.0963°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.54119°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water		
While Drilling	N/A	feet
Upon Completion	N/A	feet
Delay	N/A	

BORING LOCATION:
Building Footprint

SE Corner

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ / STRENGTH, tsf	Additional Remarks
2640	0					Dark Gray **Gravel and Cobbles** subrounded, basalt clasts, 10 inch maximum particle size	CH				
				B3-1	11	Reddish Brown **Sandy Fat CLAY with gravel** moist, stiff		3 - 5 - 5 N=10	6		
	5			B3-2	13	Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, occasional gypsum veins		6 - 11 - 12 N=23	8		Fines=68.6%
2635											
	10			B3-3	9			15 - 24 - 24 N=48	10		Fines=72.0%
2630											
	15			B3-4	11		CH	34 - 41 - 50/5"	22	>>	DD = 97 pcf Sat.=82% Fines=65.4%
2625											
	20			B3-5	11			13 - 32 - 39 N=71	11	>>	Fines=69.5%
2620											
	25			B3-6	14			16 - 34 - 30 N=64	12	>>	
2615											
	30			B3-7	11			22 - 50/5"	17	>>	DD = 105 pcf Sat.=80%
						End of Boring at approximately 31.5 feet bgs					

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Saint George, Utah

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BORING B4

DATE STARTED:	7/21/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	7/21/22	**DRILLER:** BEN	**LOGGED BY:** RDS
COMPLETION DEPTH	25.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Augers
ELEVATION:	2640 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.09648°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.5418°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water

While Drilling	N/A feet
Upon Completion	N/A feet
Delay	N/A

BORING LOCATION:
Building Footprint

SW Corner

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ / STRENGTH, tsf	Additional Remarks
	0			B4-1	11	Reddish Brown **Sandy Fat CLAY with gravel** moist, very stiff	CH	2 - 6 - 13 N=19	6		Fines=87.0%
				B4-2	9	Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, occasional gypsum veins		13 - 16 - 20 N=36	9		
2635	5			B4-3	11			17 - 19 - 25 N=44	13		
				B4-4	11			13 - 50/5"	22		DD = 97 pcf Sat.=81% Fines=80.0%
2630	10			B4-5	10			20 - 32 - 47 N=79	13		Fines=82.0%
							CH				
2625	15			B4-6	11			35 - 50/5"	19		DD = 107 pcf Sat.=89%
2620	20			B4-7	11			24 - 21 - 24 N=45	13		Fines=67.7%
2615	25			B4-8	18			11 - 23 - 30 N=53	22		DD = 104 pcf Sat.=97% Fines=69.8%
						End of Boring at approximately 26.5 feet bgs					

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PROJECT NO.: 07061856
PROJECT: Caliber Collision
LOCATION: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

The stratification lines represent approximate boundaries. The transition may be gradual.

BORING B5

DATE STARTED:	8/11/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	8/11/22	**DRILLER:** BEN	**LOGGED BY:** BRJ
COMPLETION DEPTH	31.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Auger
ELEVATION:	2655 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.09613°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.54099°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water

While Drilling	N/A feet
Upon Completion	N/A feet
Delay	N/A

BORING LOCATION:
Retaining Wall
SE Corner

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ / Moisture × / PL ◪ / LL ✚ (0–25–50) / STRENGTH, tsf ▲ Qu ✳ Qp (0–2.0–4.0)	Additional Remarks
	0					Dark Gray **Gravel and Cobbles** well rounded, basalt and sandstone clasts, 10 inch maximum particle size					
				1	18	Reddish Brown **Sandy Fat CLAY with gravel** moist, very stiff	CH	2-5-10 N=15	6	× ◎ >>✳	DD = 95 pcf Sat.=20%
2650	5			2	18	Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, mottled, occasional gypsum veins		8-12-16 N=28	16	× ◎	
				3	17			10-18-29 N=47	16	× ◎	DD = 99 pcf Sat.=64%
2645	10			4	16			15-16-22 N=38	21	× ◪ ◎ >>✚	LL = 58 PL = 25
2640	15			5	18	abundant gypsum at 15'	CH	17-21-36 N=47	16	× ◎	DD = 106 pcf Sat.=75%
2635	20			6	18			20-25-29 N=54	18	× >>◎	
2630	25			7	11			27-50/5	19	× >>◎	DD = 87 pcf Sat.=55%
2625	30			8	17			15-35-33 N=68	23	× ◪ >>✚	LL = 69 PL = 27
						End of Boring at approximately 31.5 feet bgs					

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PROJECT NO.: 07061856
PROJECT: Caliber Collision
LOCATION: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

The stratification lines represent approximate boundaries. The transition may be gradual.

BORING B6

DATE STARTED:	8/11/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	8/12/22	**DRILLER:** BEN	**LOGGED BY:** BRJ
COMPLETION DEPTH	51.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	HSA, Core, Air Rotary
ELEVATION:	2681 ft	**SAMPLING METHOD**	2in-SPT, 2.5in-Mod Cal, HQ Core
LATITUDE:	37.09634°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.54076°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water

While Drilling	N/A feet
Upon Completion	N/A feet
Delay	N/A

BORING LOCATION:
Retaining Wall
East Side

Elevation (feet)	Depth, (feet)	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	Additional Remarks
2680	0			Dark Gray **Gravel and Cobbles** well rounded, basalt and sandstone clasts, occasional boulders, 36 inch maximum size observed at surface				
2675	5	1	18	Yellowish Red **SILTSTONE** moist, extremely soft, with claystone laminations		14-20-20 N=40	11	DD = 101 pcf Sat.=45%
		2	18			17-23-24 N=47	7	
2670	10	3	17			15-19-28 N=47	5	DD = 111 pcf Sat.=29%
2665	15	4	18	Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, mottled, occasional gypsum veins		13-18-26 N=44	12	
2660	20	5	11			36-50/5	12	DD = 108 pcf Sat.=59%
2655	25	6	15			22-47-50/5		
		7	33	Rock Coring performed from 26 1/2 feet to 35 feet		RQD=0 Rec=79%	12	Q_u = 3.4 tsf
2650	30							40 min.
		8	54			RQD=18.3 Rec=90%	13	Q_u = 1.4 tsf
2645	35	9	18	Air Rotary performed from 35 feet to the termination depth		27-40-47 N=86	12	45 min.
2640	40	10	18	Silt laminations, with CaCO3 veins at 40 feet		31-42-48 N=90	15	LL = 55 PL = 25
2635	45	11	8	blocky, mottled		36-50/3	12	DD = 101 pcf Sat.=51%
2630	50	12	18			32-42-49 N=91	10	DD = 110 pcf Sat.=51%
				End of Boring at approximately 51.5 feet bgs				

STANDARD PENETRATION TEST DATA
N in blows/ft ◎
Moisture ✕ PL ◪ LL ✚
0 25 50
STRENGTH, tsf
Qu ▲ Qp ✳
0 2.0 4.0

intertek psi
Professional Service Industries, Inc.
2779 South 600 West
Salt Lake City, UT 84115
Telephone: (801) 484-8827

PROJECT NO.: 07061856
PROJECT: Caliber Collision
LOCATION: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

The stratification lines represent approximate boundaries. The transition may be gradual.

BORING B7

DATE STARTED:	7/21/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	7/21/22	**DRILLER:** BEN	**LOGGED BY:** RDS
COMPLETION DEPTH	31.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Augers
ELEVATION:	2629 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.09669°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.5414°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water		
	While Drilling	N/A feet
	Upon Completion	N/A feet
	Delay	N/A

BORING LOCATION:
Parking Area
North Side of Building

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ × Moisture ◪ PL ✚ LL (0 / 25 / 50) STRENGTH, tsf ▲ Qu ✳ Qp (0 / 2.0 / 4.0)	Additional Remarks
	0					Reddish Brown **Sandy Fat CLAY with gravel** moist, very stiff	CH				
2625	5			B7-1	18	Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, occasional gypsum veins	CH	8 - 11 - 14 N=25	9	× ◎	Fines=86.9%
				B7-2	18			5 - 11 - 11 N=22	9	× ◎	
2620	10					End of Boring at approximately 6.5 feet bgs					
2615	15										
2610	20										
2605	25										
2600	30										

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PROJECT NO.: 07061856
PROJECT: Caliber Collision
LOCATION: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

The stratification lines represent approximate boundaries. The transition may be gradual.

BORING B8

DATE STARTED:	8/12/22	**DRILL COMPANY:**	AGEC
DATE COMPLETED:	8/12/22	**DRILLER:** BEN	**LOGGED BY:** BRJ
COMPLETION DEPTH	16.5 ft	**DRILL RIG:**	CME 55
BENCHMARK:	N/A	**DRILLING METHOD:**	Solid Stem Augers
ELEVATION:	2640 ft	**SAMPLING METHOD:**	2in-SPT, 2.5in-Mod Cal
LATITUDE:	37.09634°	**HAMMER TYPE:**	Automatic
LONGITUDE:	-113.54145°	**EFFICIENCY**	70%
STATION: N/A	**OFFSET:** N/A	**REVIEWED BY:**	BWG

REMARKS:

Water

While Drilling	N/A feet
Upon Completion	N/A feet
Delay	N/A

BORING LOCATION:
Parking Area
South Side of Building

Elevation (feet)	Depth, (feet)	Graphic Log	Sample Type	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification		Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft ◎ × Moisture ◪ PL ✚ LL (0, 25, 50) STRENGTH, tsf ▲ Qu ✳ Qp (0, 2.0, 4.0)	Additional Remarks
	0					Reddish Brown **CLAYSTONE** moist, extremely soft, blocky, occasional gypsum veins					
2635	5			1	18		CH	17-19-20 N=39	20		DD = 91 pcf Sat.=64%
2630	10			2	18			17-22-21 N=43	17		
2625	15			3	18	End of Boring at approximately 6.5 feet bgs		18-20-22 N=42	21		DD = 95 pcf Sat.=74%

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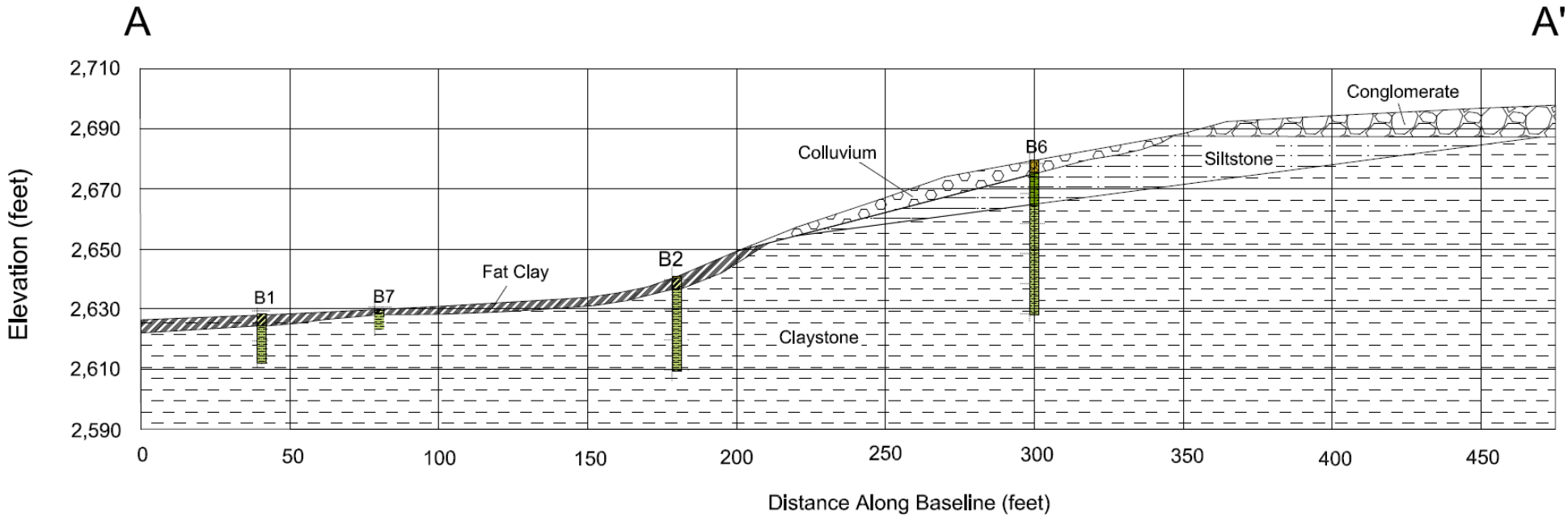
PROJECT NO.: 07061856
PROJECT: Caliber Collision
LOCATION: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

The stratification lines represent approximate boundaries. The transition may be gradual.



intertek psi	DATE August, 2022	Caliber Collision – Saint George, Utah	PSI PROJECT #: 07061856
PSI, INC. 2779 South 600 West Salt Lake City, Utah 84115 (801) 484-8827	DRAWN BY: BRJ	**Generalized Profile Along A-A'**	

Laboratory Summary Sheet

Borehole	Approx. Depth	Liquid Limit	Plastic Limit	Plasticity Index	Qu (tsf)	%<#200 Sieve	Est. Specific Gravity	Water Content (%)	Dry Density (pcf)	Satur-ation (%)	Void Ratio
B1	Grade							6			
B1	2.5	58	18	40				6			
B1	5.0					76.3%		11			
B1	7.5							9			
B1	10.0					79.4%		13			
B1	12.5					83.7%	2.65	19	97	73%	0.70
B1	15.0					83.1%		11			
B2	2.5							0			
B2	5.0					64.8%	2.65	19	109	97%	0.51
B2	7.5							13			
B2	10.0	66	30	36				16			
B2	15.0					75.2%		11			
B2	20.0					61.8%		11			
B2	25.0	62	28	34				13			
B2	30.0					61.1%		13			
B3	2.5							6			
B3	5.0					68.6%		8			
B3	10.0					72.0%		10			
B3	15.0					65.4%	2.65	22	97	82%	0.70
B3	20.0					69.5%		11			
B3	25.0							12			
B3	30.0						2.65	17	105	80%	0.58
B4	Grade					87.0%		6			
B4	2.5							9			
B4	5.0							13			
B4	7.5					80.0%	2.65	22	97	81%	0.70
B4	10.0					82.0%		13			
B4	15.0						2.65	19	107	89%	0.55
B4	20.0					67.7%		13			
B4	25.0					69.8%	2.65	22	104	97%	0.60
B5	2.5						2.65	6	95	20%	0.74
B5	5.0							16			
B5	7.5						2.65	16	99	64%	0.67
B5	10.0	58	25	33				21			
B5	15.0						2.65	16	106	75%	0.56
B5	20.0							18			
B5	25.0						2.65	19	87	55%	0.89
B5	30.0	69	27	42				23			

intertek psi

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Summary of Laboratory Results

PSI Job No.: 07061856
Project: Caliber Collision
Location: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

Laboratory Summary Sheet

Borehole	Approx. Depth	Liquid Limit	Plastic Limit	Plasticity Index	Qu (tsf)	%<#200 Sieve	Est. Specific Gravity	Water Content (%)	Dry Density (pcf)	Satur-ation (%)	Void Ratio
B6	4.0						2.65	11	101	45%	0.64
B6	7.5							7			
B6	10.0						2.65	5	111	29%	0.49
B6	15.0							12			
B6	20.0						2.65	12	108	59%	0.53
B6	25.0										
B6	28.0				3.36			12			
B6	32.5				1.37			13			
B6	35.0							12			
B6	40.0	55	25	30				15			
B6	45.0						2.65	12	101	51%	0.64
B6	50.0						2.65	10	110	51%	0.51
B7	2.5					86.9%		9			
B7	5.0							9			
B8	5.0						2.65	20	91	64%	0.81
B8	10.0							17			
B8	15.0						2.65	21	95	74%	0.74

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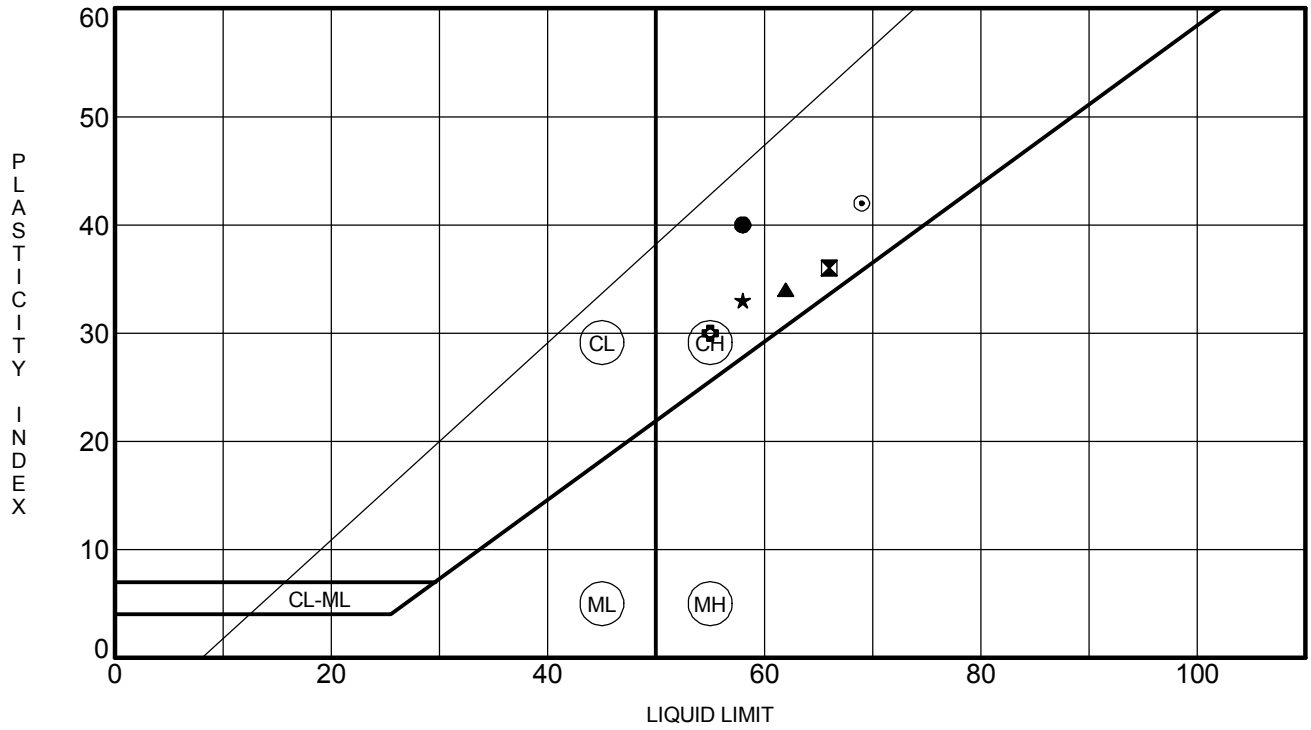
Summary of Laboratory Results

PSI Job No.: 07061856
Project: Caliber Collision
Location: SE Lot of Riverside and Foremaster Dr
Saint George, Utah



	Boring	Depth (ft)	LL	PL	PI	MC	Classification (*Visual)
●	**B1**	**3.3**	**58**	**18**	**40**		Claystone (CH)
⊠	**B2**	**10.8**	**66**	**30**	**36**		Claystone (CH)
▲	**B2**	**25.8**	**62**	**28**	**34**		Claystone (CH)
★	**B5**	**10.8**	**58**	**25**	**33**		Claystone (CH)
⊙	**B5**	**30.8**	**69**	**27**	**42**		Claystone (CH)
✿	**B6**	**40.8**	**55**	**25**	**30**		Claystone (CH)

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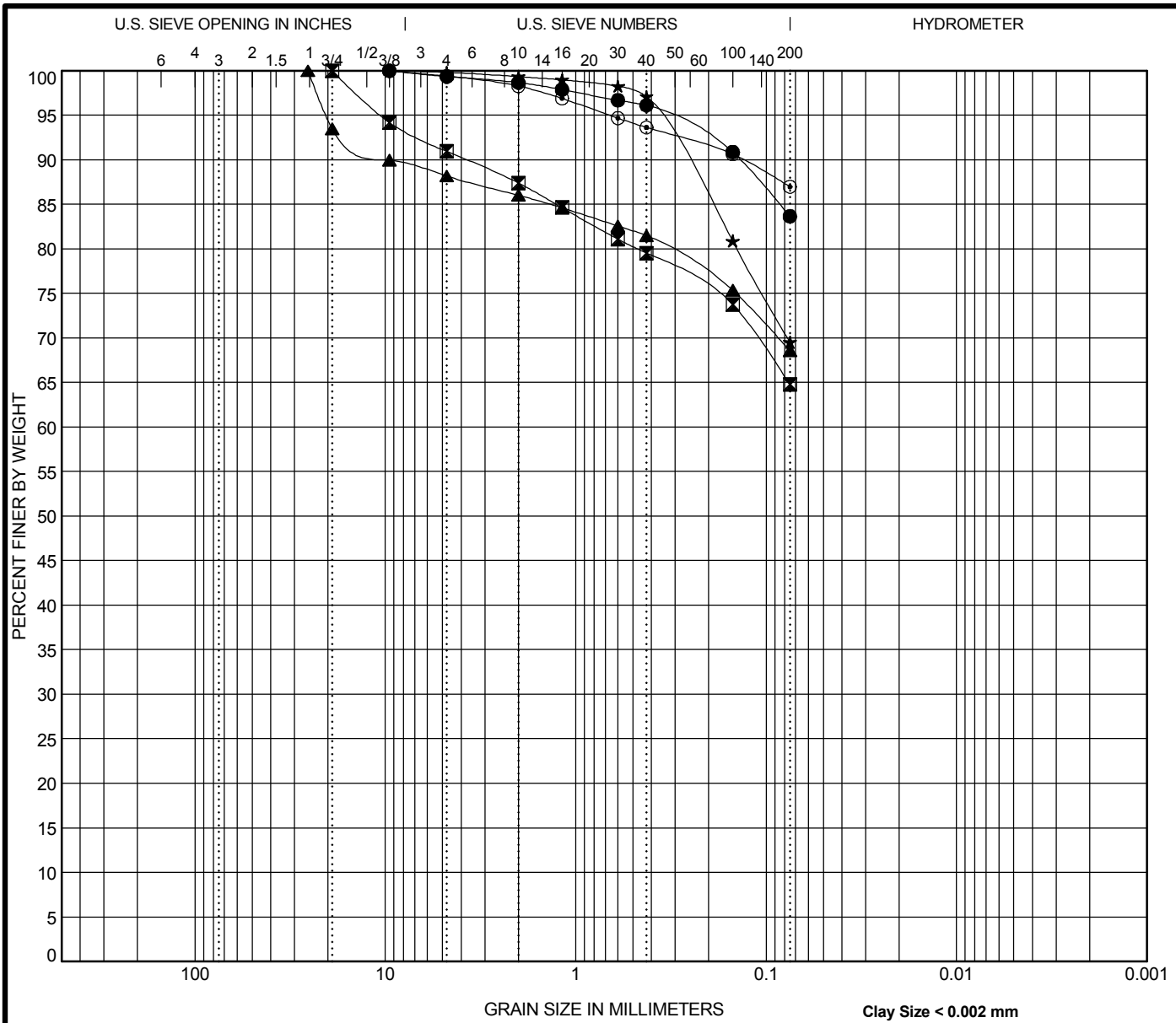
ATTERBERG LIMIT RESULTS

PSI Job No.: 07061856
Project: Caliber Collision
Location: SE Lot of Riverside and Foremaster Dr
Saint George, Utah



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	B1	13.0	Claystone (Fat CLAY with Sand)					
⊠	B2	5.8	Claystone (Sandy Fat CLAY)					
▲	B3	5.8	Claystone (Sandy Fat CLAY)					
★	B3	20.8	Claystone (Sandy Fat CLAY)					
⊙	B4	0.8	Claystone (Fat CLAY with Sand)					

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B1	13.0	9.525				0.7	15.7	83.7	
⊠	B2	5.8	19.05				9.1	26.2	64.8	
▲	B3	5.8	25.4				11.8	19.6	68.6	
★	B3	20.8	9.525				0.2	30.3	69.5	
⊙	B4	0.8	9.525				0.6	12.4	87.0	

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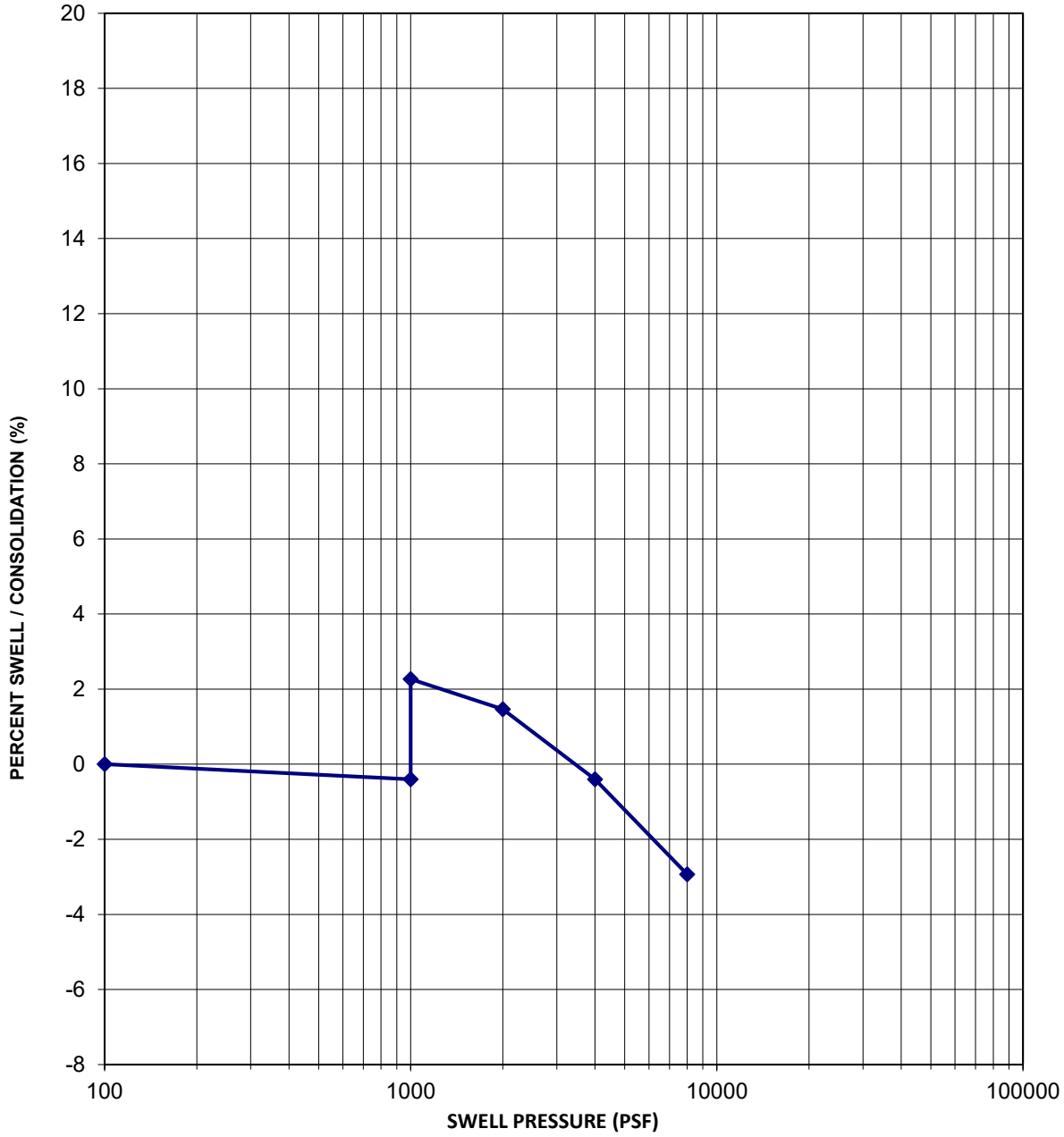
GRAIN SIZE DISTRIBUTION

Project: Caliber Collision
PSI Job No.: 07061856
Location: SE Lot of Riverside and Foremaster Dr
Saint George, Utah

SWELL-CONSOLIDATION TEST

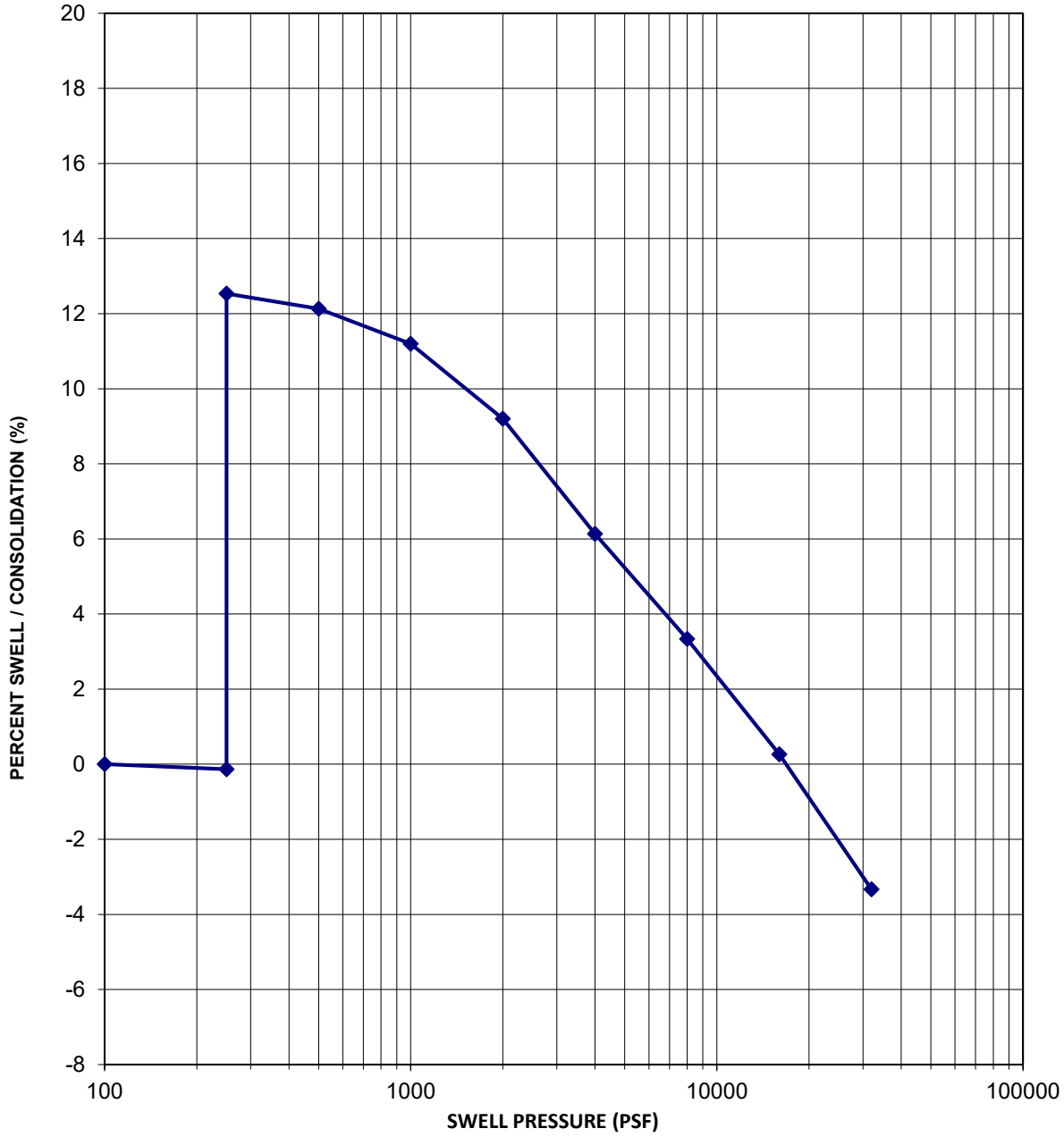


Sample Location	B1
Sample Depth	12.5 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	97 pcf
In-Situ Moisture Content	19.1 %
Volume Change	2.7 %
Swell Pressure	4,000 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO. 07061856**
	SWELL - CONSOLIDATION TEST	

SWELL-CONSOLIDATION TEST

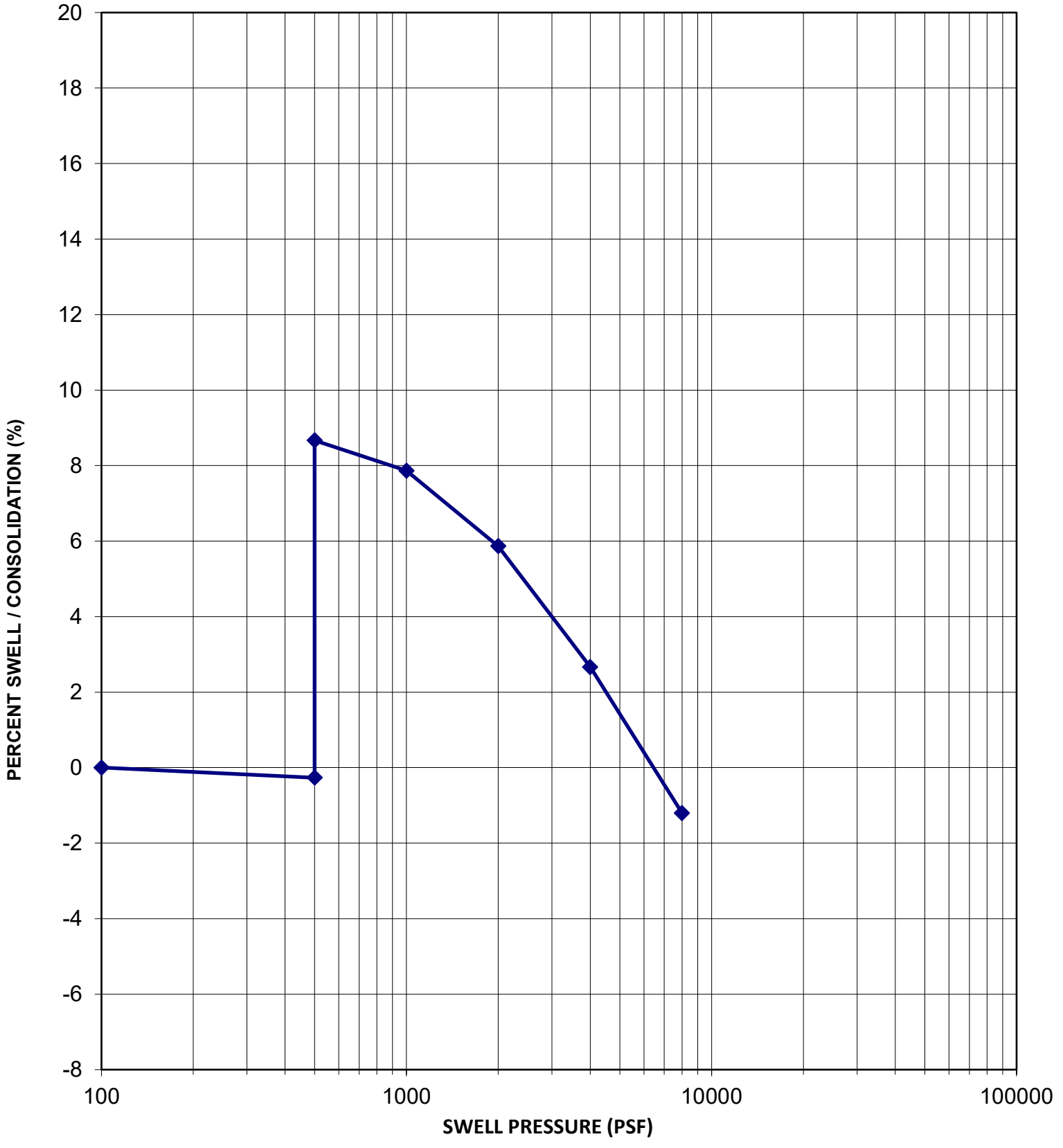


Sample Location	B2
Sample Depth	5 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	109 pcf
In-Situ Moisture Content	18.8 %
Volume Change	12.7 %
Swell Pressure	17,300 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO.** **07061856**
	SWELL - CONSOLIDATION TEST	

SWELL-CONSOLIDATION TEST

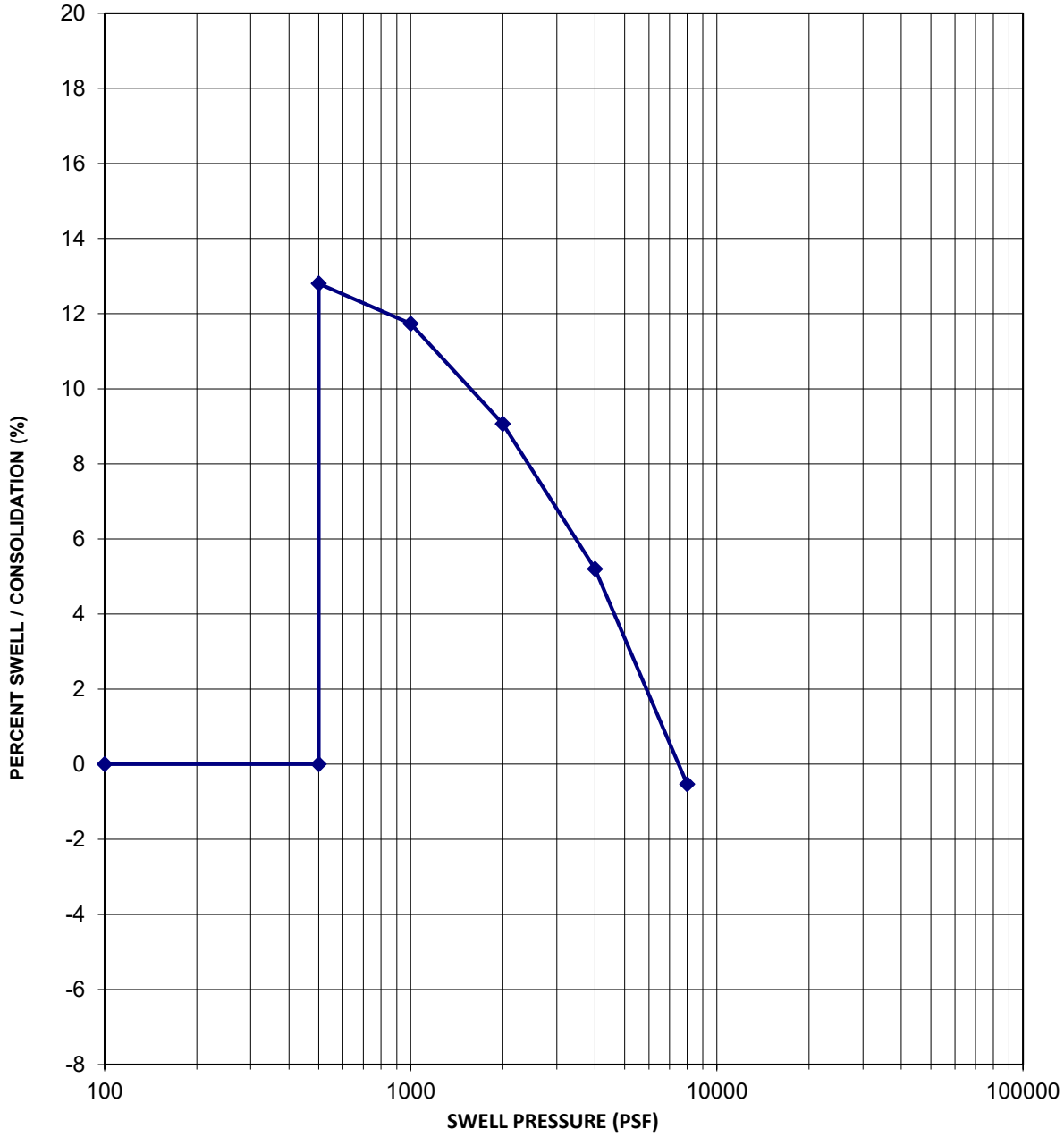


Sample Location	B3
Sample Depth	15 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	97 pcf
In-Situ Moisture Content	21.6 %
Volume Change	8.9 %
Swell Pressure	6,800 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO. 07061856**
	SWELL - CONSOLIDATION TEST	

SWELL-CONSOLIDATION TEST

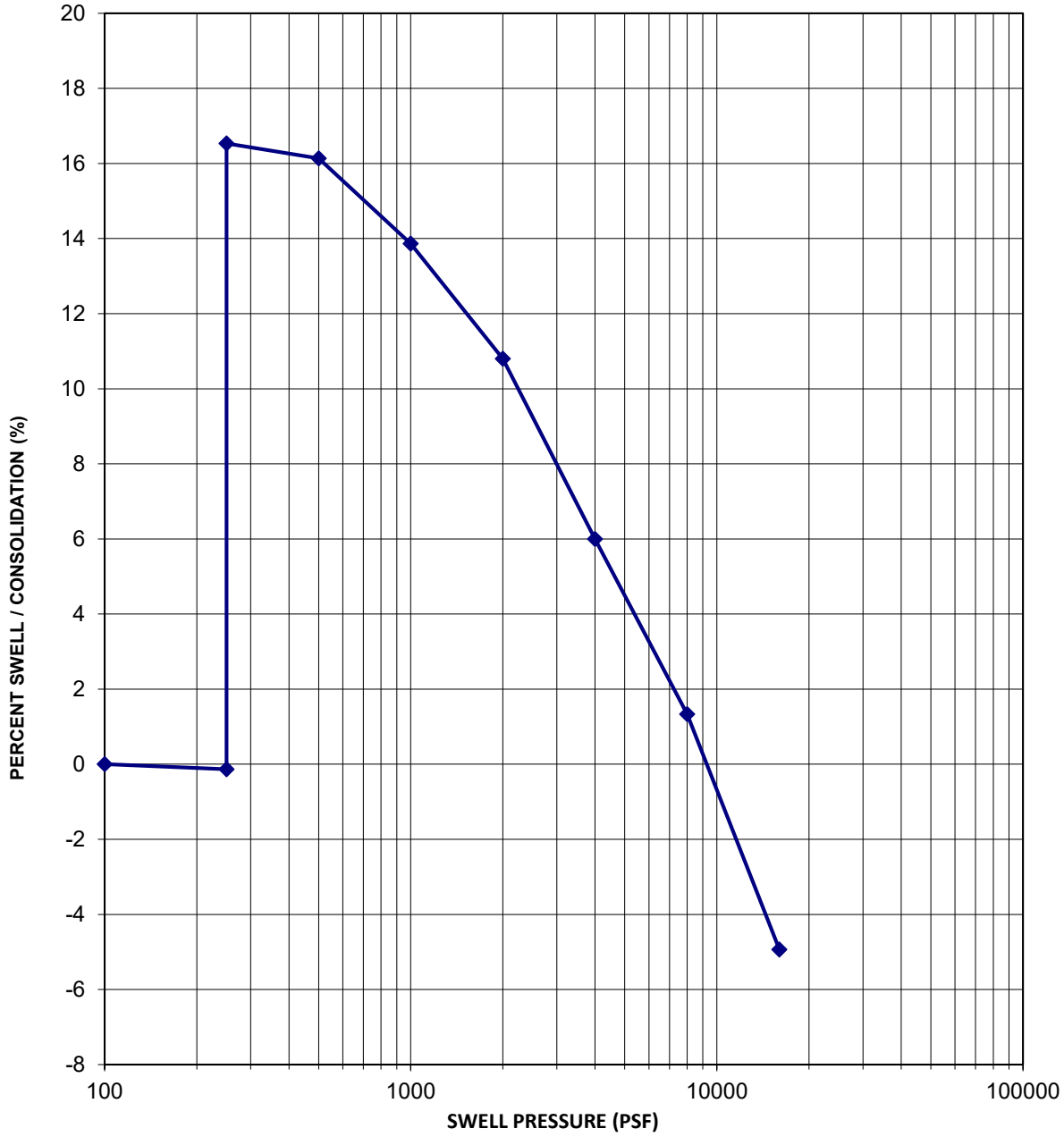


Sample Location	B3
Sample Depth	30 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	105 pcf
In-Situ Moisture Content	17.3 %
Volume Change	12.8 %
Swell Pressure	7,500 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO. 07061856**
	SWELL - CONSOLIDATION TEST	

SWELL-CONSOLIDATION TEST

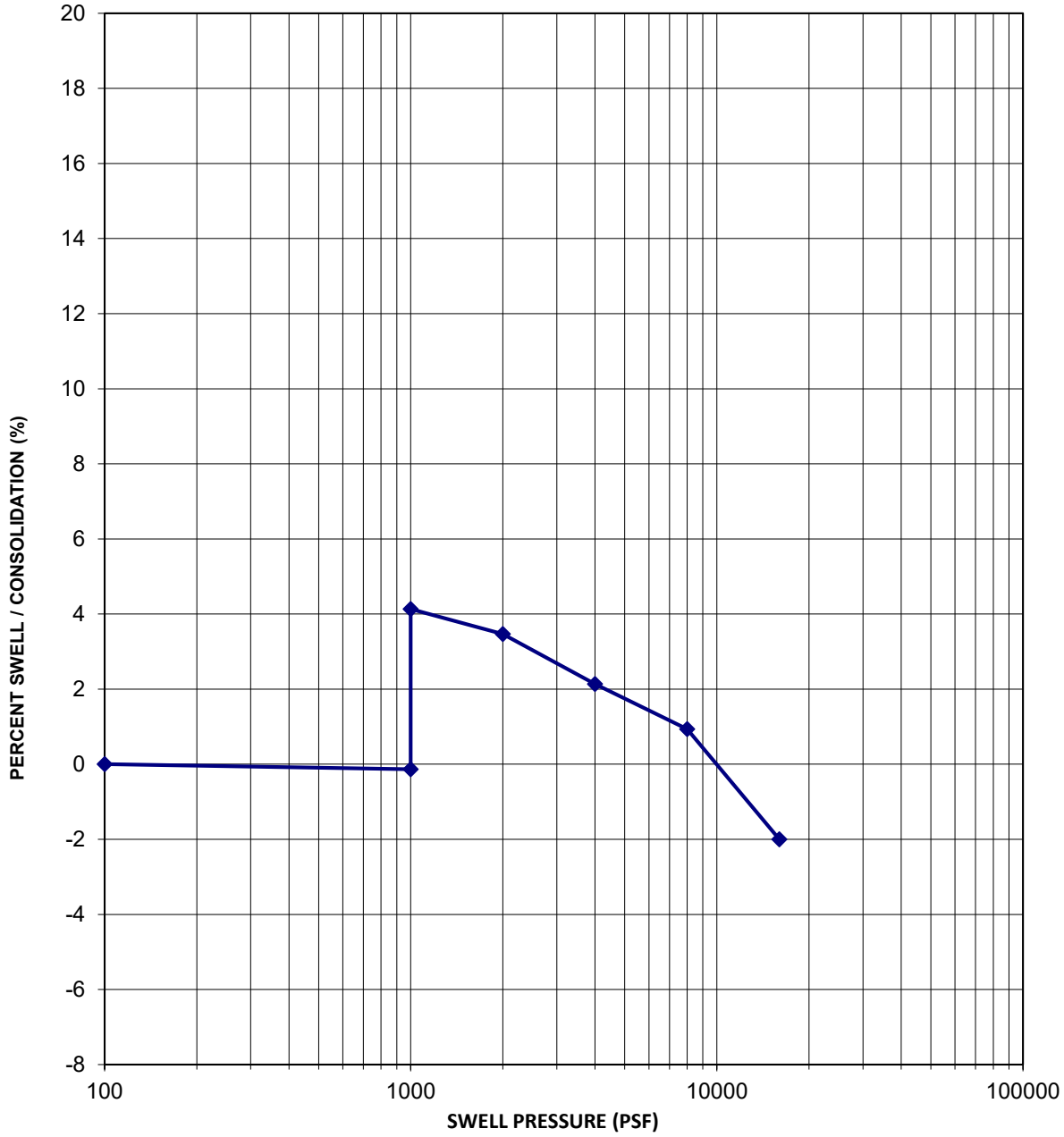


Sample Location	B4
Sample Depth	7.5 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	97 pcf
In-Situ Moisture Content	21.5 %
Volume Change	16.7 %
Swell Pressure	9,400 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO. 07061856**
	SWELL - CONSOLIDATION TEST	

SWELL-CONSOLIDATION TEST

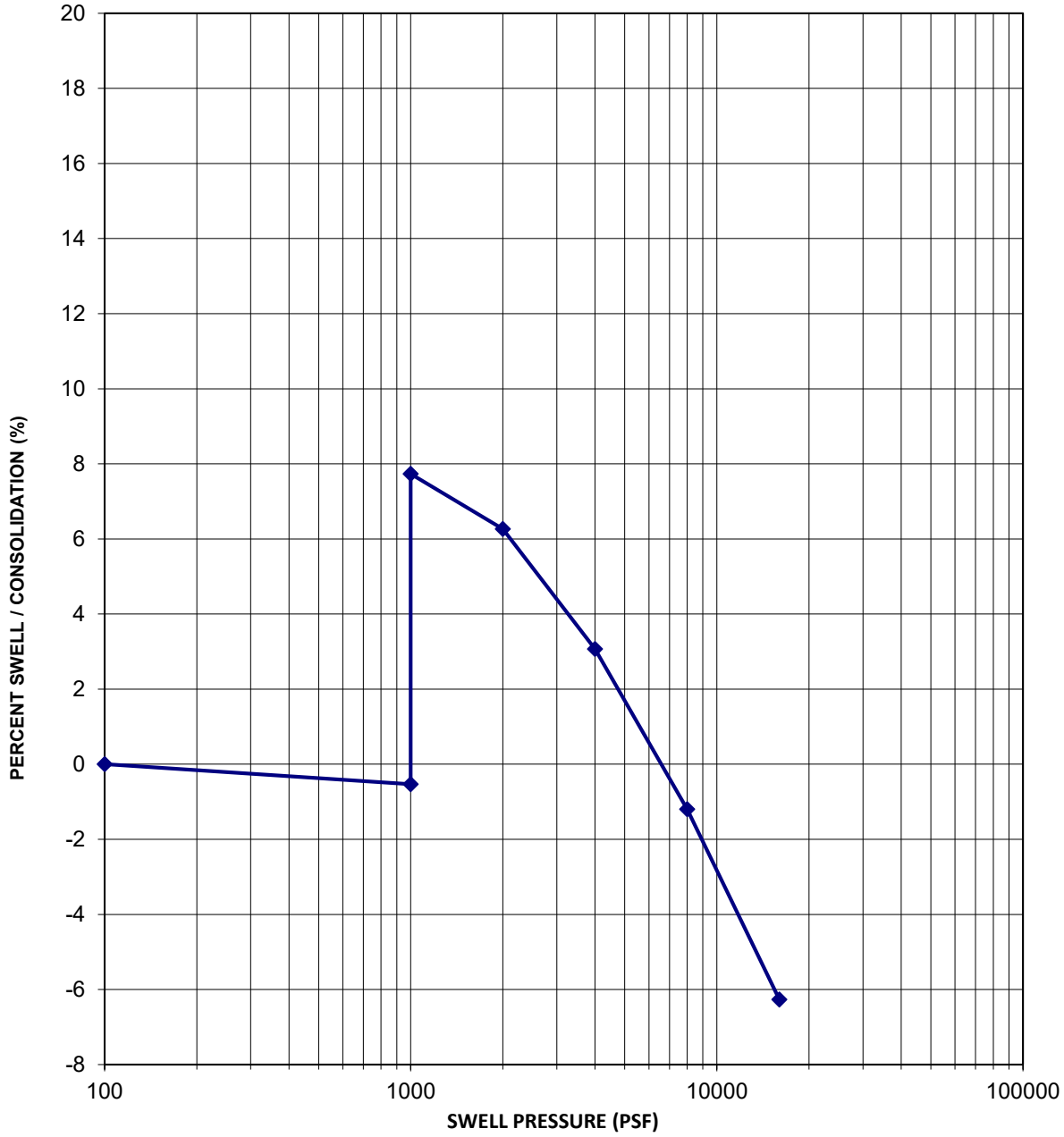


Sample Location	B4
Sample Depth	15 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	107 pcf
In-Situ Moisture Content	18.5 %
Volume Change	4.3 %
Swell Pressure	10,300 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO. 07061856**
	SWELL - CONSOLIDATION TEST	

SWELL-CONSOLIDATION TEST



Sample Location	B4
Sample Depth	25 feet
Sample Description	Claystone
USCS Classification	CH

Dry Density	104 pcf
In-Situ Moisture Content	21.9 %
Volume Change	8.3 %
Swell Pressure	7,200 psf

intertek psi	**Caliber Collision - Saint George**	**JOB NO. 07061856**
	SWELL - CONSOLIDATION TEST	

PLANNING COMMISSION AGENDA REPORT: **11/15/2022**

PRELIMINARY PLAT
Sienna Park Condominiums Amended
Case No. 2022-PP-035

Request:	To approve an amended preliminary plat to add an additional eight (8) units to the approved sixty-nine (69) units for a total of seventy-seven (77) units.
Location:	The site is at located at 271 North Country Lane
Property:	5.11 acres
Number of Units:	77
Density:	13.1 DU/AC
Zoning:	PD-R
Adjacent zones:	This plat is surrounded by the following zones: North – PD-R South – PD-R East – PD-R West – PD-R
General Plan:	LDR
Applicant:	Rosenberg Associates
Representative:	Rob Reid
Comments:	

Preliminary Plats

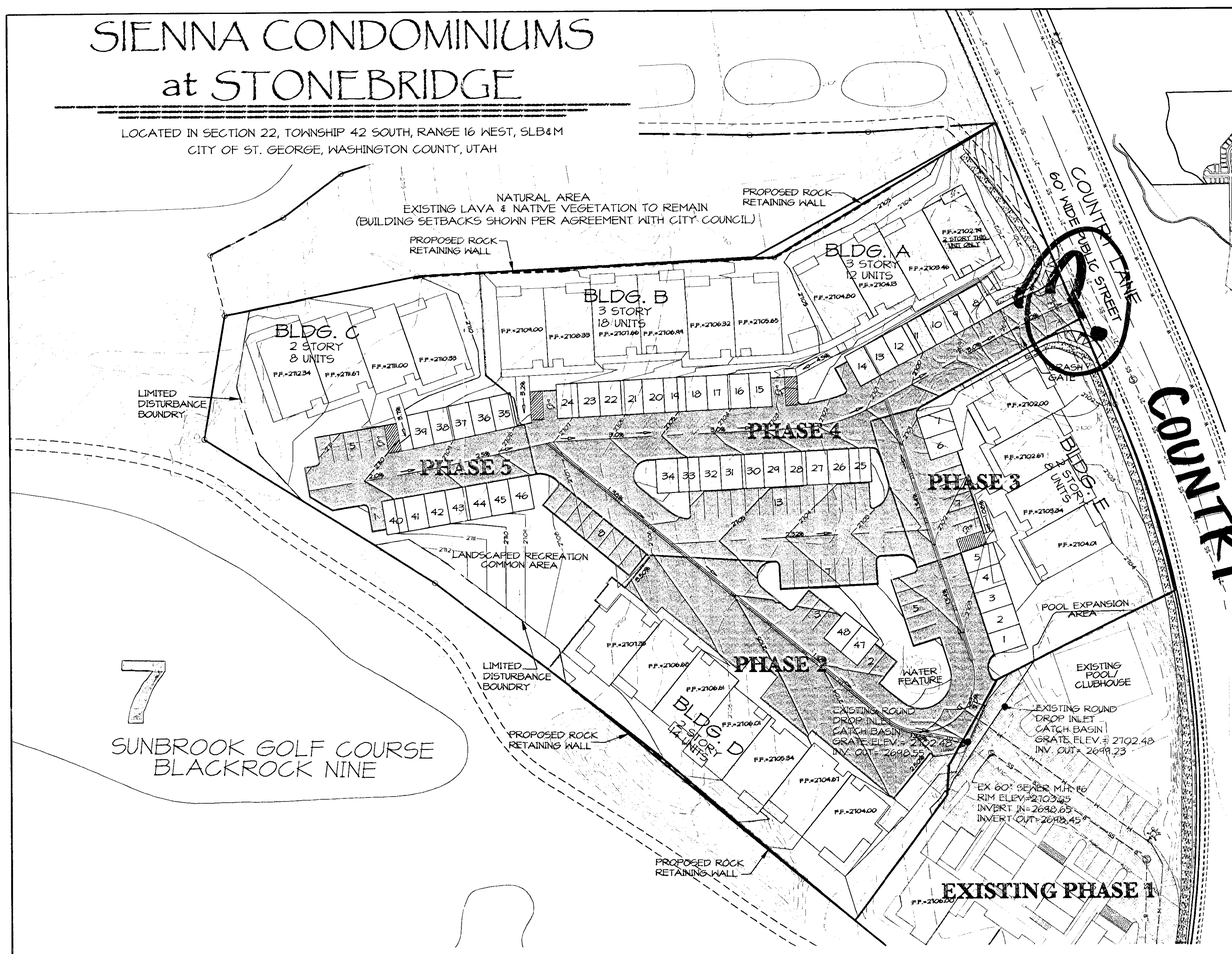
November 15, 2022

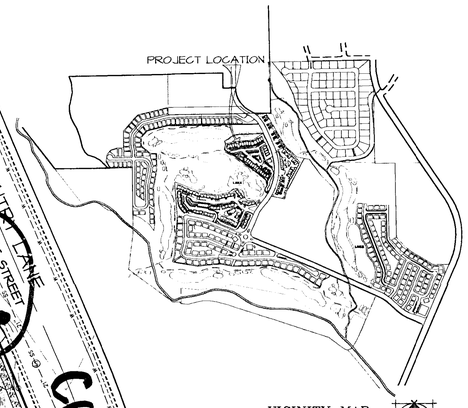
Preliminary Plat – Sienna Park Condominiums (Amended)

Preliminary Plat – Sienna Park Condominiums (Amended)

SIENNA CONDOMINIUMS at STONEBRIDGE

LOCATED IN SECTION 22, TOWNSHIP 42 SOUTH, RANGE 16 WEST, SLB&M
CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH





DEVELOPMENT SUMMARY

TOTAL AREA = 222,727 sq ft - 5.11 acres
EXISTING UNITS = 10
PROPOSED UNITS = 59 69
TOTAL UNITS = 69
DENSITY = 13.7 units/acre
PARKING AREA = 70,338 sq. ft. - 1.61 acres = 32%
BUILDING AREA = 63,005 sq. ft. - 1.45 acres = 28%
LANDSCAPE/COMMON AREA = 84,384 sq. ft. - 2.05 acres = 40%

PARKING SUMMARY

	EXISTING PHASE 1	FUTURE PHASES	TOTALS
COVERED	10	63	73
UN-COVERED	31	53	84
TOTAL PARKING			157
TOTAL REQUIRED			141

NOTES

1. ALL UTILITIES PROPOSED TO CONNECT TO EXISTING UTILITIES IN PHASE 1.
2. SINGLE ACCESS PROVIDED THROUGH PHASE 1 PER ORIGINAL PRELIMANARY PLAT
3. TEMPORARY CONSTRUCTION ACCESS TO BE PROVIDED THROUGH PHASE 4 TO COUNTRY LANE.
4. DEVELOPER TO MINIMIZE DISTURBANCE TO NATURAL VEGETATION AND LAVA BEDS ADJACENT TO GOLF COURSE BOUNDARY PER AGREEMENT WITH CITY COUNCIL.

CYPRESS POINTE CONDOS

SCALE: 1" = 40'

OWNER/DEVELOPER

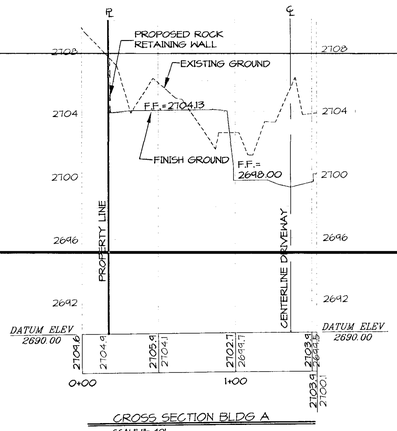
The Developer for this project is:
SIENNA PARK, L.C.
C/O BRIAN McMULLEN
144 WEST BRIGHAM ROAD SUITE 4A
ST. GEORGE, UT 84790

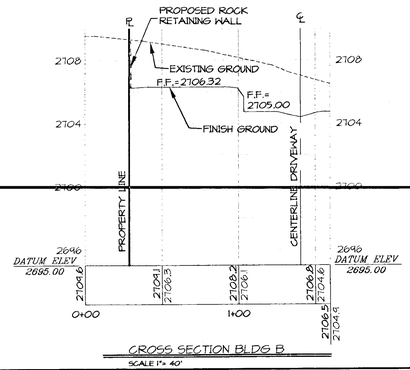
PROJECT ENGINEER

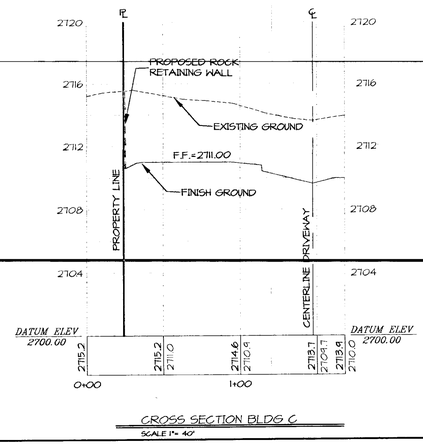
The Engineer for this project is:
ROSENBERG ASSOCIATES
352 EAST RIVERSIDE DRIVE, SUITE A2
ST. GEORGE, UTAH 84790 (435) 673 - 8586

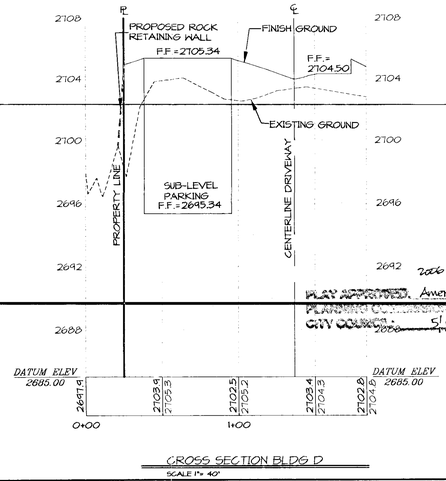
LEGEND

- EXISTING COUNTOUR MAJOR
- EXISTING COUNTOR MINOR
- 2800 — PROPOSED CONTOUR MAJOR
- 2802 — PROPOSED CONTOUR MINOR
- SS — SS — SEWER MAIN (SIZE AS NOTED)
- W — W — WATER MAIN (SIZE AS NOTED)
- ABC — ABC — EXISTING POWER
- PROJECT BOUNDARY
- LIMITED DISTURBANCE LINE
- PROPOSED ROCK WALL
- PROPOSED 24" CONCRETE WATERWAY
- SEWER MANHOLE (SIZE AS NOTED)
- EXISTING FIRE HYDRANT
- WATER VALVE
- PROPOSED PARKING
- EXISTING PARKING









2006-PPA-018

PLAN APPROVED. AMENDED PRELIMINARY
PLANNING COMMISSION: 4/25/06 w/ comments
CITY COUNCIL: 5/18/06 w/ conditions

RECEIVED
MAR 17 2006
BY:

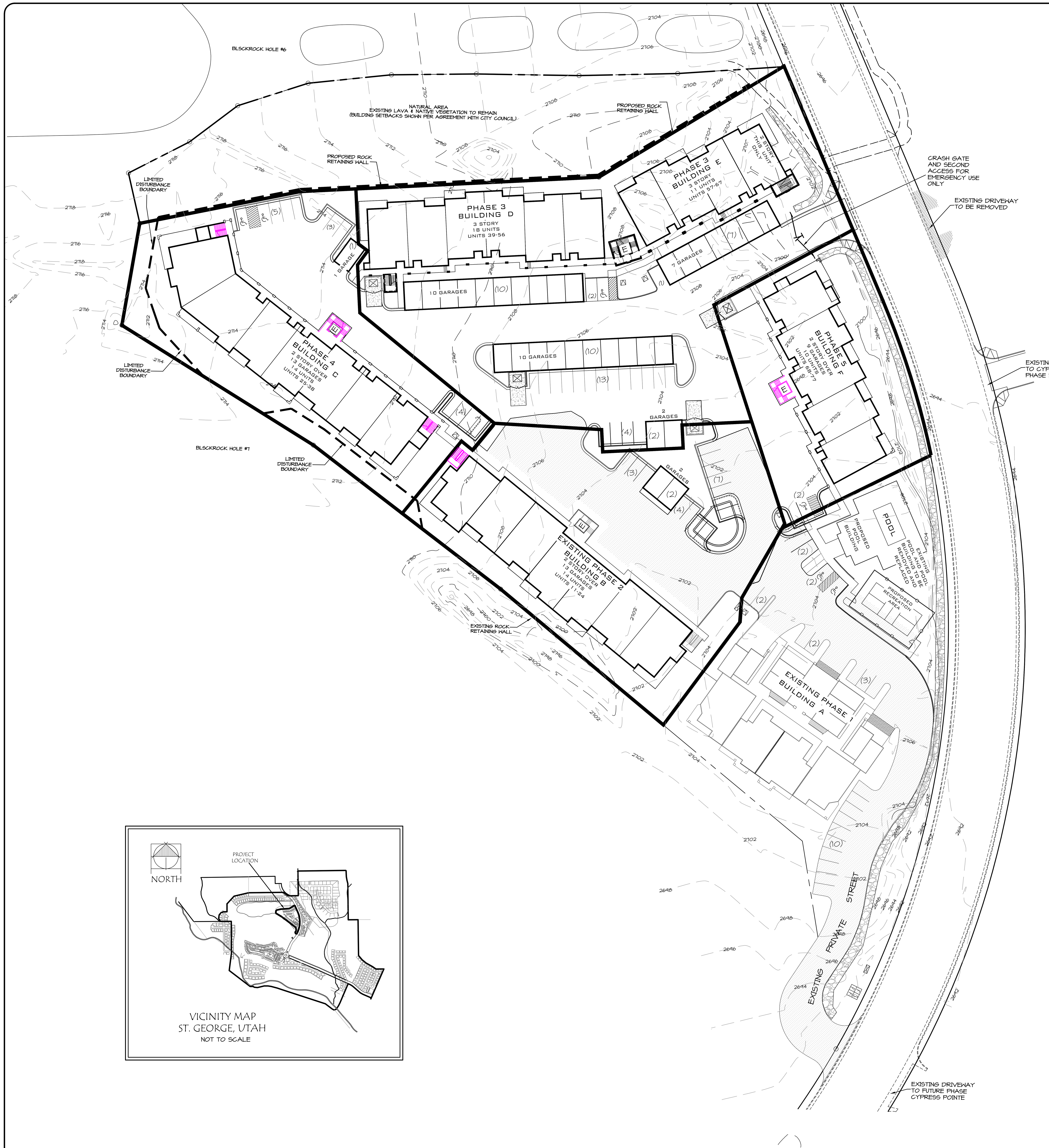
DATE:	11-23-05
JOB NO.:	1571-03-3P2
DRAWN BY:	JMD
DESIGNED BY:	JMD
SCALE:	1" = 30'
DWG:	PRELIMANARY

DATE / REVISIONS

ROSENBERG ASSOCIATES
CONSULTING ENGINEERS AND LAND SURVEYORS
352 East Riverside Drive, Suite A-2 St. George, Utah 84790
Phone (435) 673-8586 Fax (435) 673-8397

AMENDED PRELIMINARY PLAT
FOR
SIENNA PARK CONDOMINIUMS @ STONEBRIDGE
ST. GEORGE, UTAH

SHEET
PRE
1 OF 1 SHEETS



=EXISTING ASPHALT ON SITE

NORTH
PROJECT LOCATION

VICINITY MAP
ST. GEORGE, UTAH
NOT TO SCALE

DEVELOPMENT SUMMARY

TOTAL AREA: 222,727 SQ. FT. 5.11 ACRES

PROJECT LAND USE: CONDOMINIUMS

NUMBER OF PHASES: 5

NUMBER OF UNITS: 77

DENSITY: 13.1 UNITS/ACRE

PHASE 1 BUILDING A : 10 UNITS (EXISTING) 1.26 ACRES
9 UNITS 2 STORY & 8 SINGLE CAR DETACHED GARAGES
1 STORY UNIT OVER 2 SINGLE CAR GARAGES

PHASE 2 BUILDING B : 14 UNITS (EXISTING) 0.96 ACRES
2 STORY OVER 13 TWO CAR TANDEM GARAGES
& 1 SINGLE CAR DETACHED GARAGE

PHASE 3 BUILDING D & E : 29 UNITS 1.52 ACRES
3 STORY & 13 SINGLE CAR DETACHED GARAGES

PHASE 4 BUILDING C : 14 UNITS 0.83 ACRES
2 STORY OVER 13 TWO CAR TANDEM GARAGES
& 1 SINGLE CAR DETACHED GARAGE

PHASE 5 BUILDING F : 10 UNITS 0.54 ACRES
2 STORY OVER 9 TWO CAR TANDEM GARAGES
& 1 SINGLE CAR DETACHED GARAGE

PARKING SUMMARY

	PHASE 1 10 UNITS	PHASE 2 14 UNITS	PHASE 3 29 UNITS	PHASE 4 14 UNITS	PHASE 5 10 UNITS
COVERED:	10	27	29	27	19
UN-COVERED:	10	1	29	1	1
GUEST PARKING:	N/A	N/A	10	5	3

TOTAL PARKING SPACES REQUIRED: 172

TOTAL PARKING SPACES PROVIDED: 177

(OF 177, 6 SPACES ARE ACCESSIBLE WITH 1 VAN ACCESSIBLE)

PROPERTY LOCATION

THE PROJECT IS LOCATED AT:
271 NORTH COUNTRY LANE
ST. GEORGE, UTAH

PARCEL ACREAGE

222,727 SQ. FT. 5.11 ACRES

TOTAL AREA UNDEVELOPED,
PHASE 3: 66,068 SQ. FT. = 1.52 ACRES
PHASE 4: 36,630 SQ. FT., = 0.83 ACRES
PHASE 5: 23,423 SQ. FT., = 0.54 ACRES

PROJECT BENCHMARK

CLASS 1 MONUMENT
NEAR THE INTERSECTION
271 NORTH COUNTRY LANE
ELEVATION = 2690.71

CIVIL ENGINEER

ROB E. REID, P.E.
ROSENBERG ASSOCIATES
352 EAST RIVERSIDE DRIVE,
SUITE A2
ST. GEORGE, UTAH 84790 (435) 673-8586

GEOTECHNICAL ENGINEER

AGEC
ARNOLD DECASTRO, P.E.
1420 SOUTH 270 EAST
ST. GEORGE, UTAH 84790
(435) 680-6849

OWNER/DEVELOPER

BRIAN MC MULLIN
SIENNA POINTE L.L.C.
144 WEST BRIGHAM ROAD STE. 5
ST. GEORGE, UTAH 84790
(801) 633-0992

AMENDED PRELIMINARY PLAT
SIENNA PARK CONDOMINIUMS AT STONEBRIGE

LOCATED IN SECTION 22, TOWNSHIP 42 SOUTH, RANGE 16 WEST
OF THE SALT LAKE BASE AND MERIDIAN IN THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH.
ADDRESS: 271 NORTH COUNTRY LANE, ST. GEORGE, UT 84770
PHASE 3 ACREAGE: 44,447 SQ. FT., 1.52 ACRES

DATE:	10-31-22
JOB NO.:	1577-12-0030
DESIGNED BY:	LMM
CHECKED BY:	RR
DWG:	Sienna Base 2022

REVISIONS

DATE	
11-4-22	City review add exist. driveways

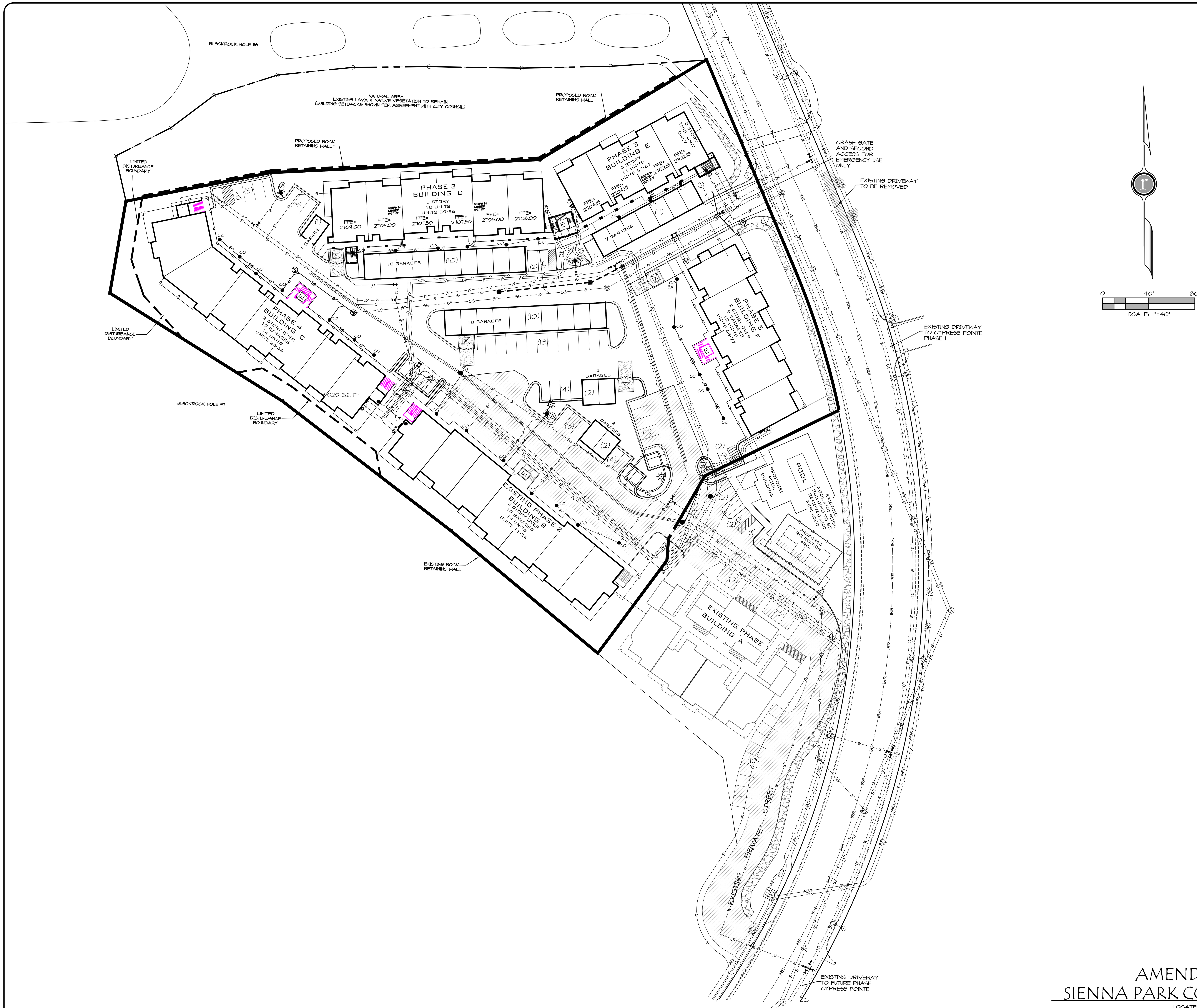
ROSENBERG
ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS

352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

AMENDED PRELIMINARY PLAT
FOR
SIENNA PARK CONDOMINIUMS
IVINS, UTAH

ROBERT A. REID
10-3-22
LICENSED PROFESSIONAL ENGINEER

SHEET
PP-1
OF SHEETS



LEGEND

- =PROJECT PROPERTY BOUNDARY
- =EXISTING ASPHALT ON SITE
- =EXISTING SEWER MAIN
- =EXISTING SEWER MANHOLE
- =PROPOSED SEWER MANHOLE
- =PROPOSED SEWER LINE
- =PROPOSED STORM DRAIN- CATCH BASIN AND STORM DRAIN SUMP
- =EXISTING STORM DRAIN SUMP
- =SEWER LATERAL & CLEANOUT
- =EXISTING WATER MAIN
- =PROPOSED WATER LINE
- =WATER LATERAL
- =WATER METER
- =EXISTING FIRE HYDRANT
- =PROPOSED FIRE HYDRANT
- = WATER VALVE
- =PROPOSED WATER VALVE
- =PRIMARY POWER
- =SECONDARY POWER
- =TRANSFORMER
- =EXISTING GROUND SLEEVE JUNCTION BOX
- =ACCESSIBLE PARKING SPACE AND SIGN
- =EXISTING TV
- =PROPOSED TV
- =EXISTING TELEPHONE
- =PROPOSED TELEPHONE
- =EXISTING NATURAL GAS (SIZE NOTED ON PLAN)
- =PROPOSED NATURAL GAS (SIZE NOTED ON PLAN)
- =EXISTING 16" PVC IRRIGATION LINE
- =STREET LIGHT POLE
- =LIGHT POLE
- =CLEANOUT

AMENDED PRELIMINARY PLAT
SIENNA PARK CONDOMINIUMS AT STONEBRIGE

LOCATED IN SECTION 22, TOWNSHIP 42 SOUTH, RANGE 16 WEST
OF THE SALT LAKE BASE AND MERIDIAN IN THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH.
ADDRESS: 271 NORTH COUNTRY LANE, ST. GEORGE, UT 84770
PHASE 3 ACREAGE: 44,447 SQ. FT., 1.52 ACRES

DATE:	10-31-22
JOB NO.:	1577-12-003D
DESIGNED BY:	LMM
CHECKED BY:	RR
DWG:	Sienna Base 2022

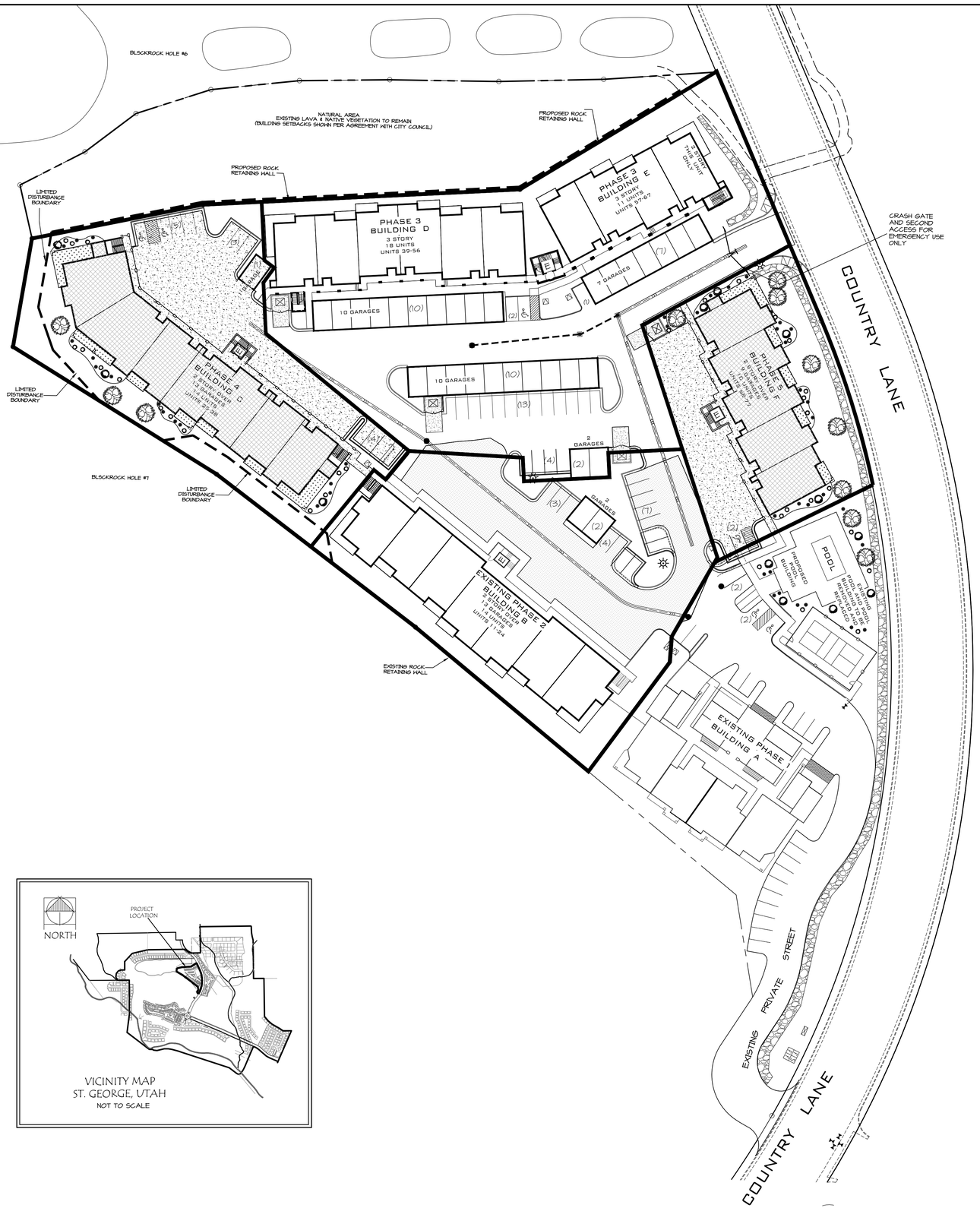
REVISIONS	DATE
City review add irrigation meter	11-9-22
City reveiw add exist. driveways	11-9-22

ROSENBERG
ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
1989 - 2014 25th ANNIVERSARY
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

AMENDED PRELIMINARY PLAT
FOR
SIENNA PARK CONDOMINIUMS
IVINS, UTAH

ROBERT A. REID
10-31-22
LICENSED PROFESSIONAL ENGINEER

SHEET
PP-2
OF SHEETS



LEGEND

PHASE 4

- PRIVATE AREA 11,517 sq. ft. (IMPERVIOUS)
- COMMON AREA 12,475 sq. ft. (IMPERVIOUS)
- LIMITED COMMON AREA 1,488 sq. ft. (IMPERVIOUS)
- NON-IRRIGABLE COMMON AREA 10,242 sq. ft. (PERVIOUS)
- NET-IRRIGABLE COMMON AREA 930 sq. ft. (PERVIOUS)
- PUBLIC RIGHT OF WAY 0 sq. ft. (IMPERVIOUS)

TOTAL AREA = 36,652 sq. ft. (.84 ACRES)

PHASE 5

- PRIVATE AREA 7,325 sq. ft. (IMPERVIOUS)
- COMMON AREA 7,352 sq. ft. (IMPERVIOUS)
- LIMITED COMMON AREA 765 sq. ft. (IMPERVIOUS)
- NON-IRRIGABLE COMMON AREA 5,995, sq. ft. (PERVIOUS)
- NET-IRRIGABLE COMMON AREA 1,982 sq. ft. (PERVIOUS)
- PUBLIC RIGHT OF WAY 0 sq. ft. (IMPERVIOUS)

TOTAL AREA = 23,319 sq. ft. (.53 ACRES)

811 Know what's **below.** **Call** before you dig.

NOTICE:
EXISTING UTILITIES ARE SHOWN ON PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITIES. THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR SHOWN INCORRECTLY.

LEGEND

PHASE 4	PHASE 5
15 GRASS TREE YUCCA	18 GRASS TREE YUCCA
4 CHINESE PASTACHE	6 CHINESE PASTACHE
3 DWARF RED OLEANDER	4 DWARF RED OLEANDER
14 RED CARPET	12 RED CARPET

=EXISTING ASPHALT ON SITE

N

0 40 80

SCALE: 1"=40'

IRRIGABLE AREAS

SIENNA PARK CONDOMINIUMS AT STONEBRIGE

LOCATED IN SECTION 22, TOWNSHIP 42 SOUTH, RANGE 16 WEST
OF THE SALT LAKE BASE AND MERIDIAN IN THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH.

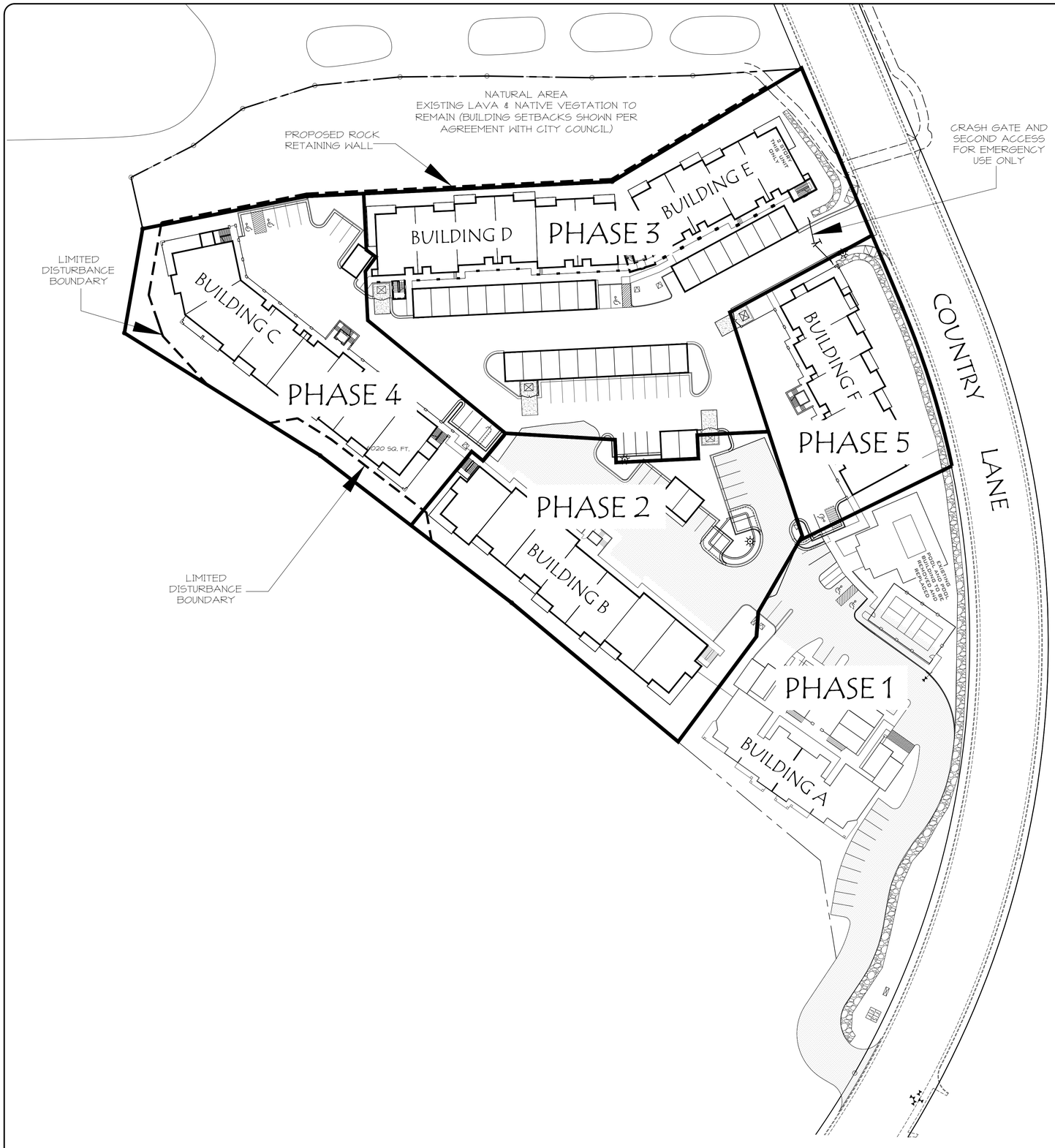
DATE: 10-31-2022
JOB NO.: 1511-12-003D
DESIGNED BY: RP
CHECKED BY: RR
DWG: LANDSCAPE

REVISIONS	DATE
ADA Parking - Limited Common Area	11-01-22

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

CONCEPTUAL LANDSCAPE PLAN
FOR
SIENNA PARK CONDOMINIUMS PHASE 4, 5
IVINS, UTAH

SHEET 1 OF SHEETS



EXISTING ASPHALT ON SITE

DATE: 10-3122
JOB NO.: 1511-12-003D
DESIGNED BY: LMM
CHECKED BY: RR
DWG: Sienna Base 2022

REVISIONS | DATE

ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, Utah 84790
Ph (435) 673-8586 Fx (435) 673-8397
www.racivil.com

PHASING PLAN
FOR
SIENNA PARK CONDOMINIUMS AT STONEBRIDGE
ST. GEORGE, UTAH

SHEET
PHASE
OF SHEETS

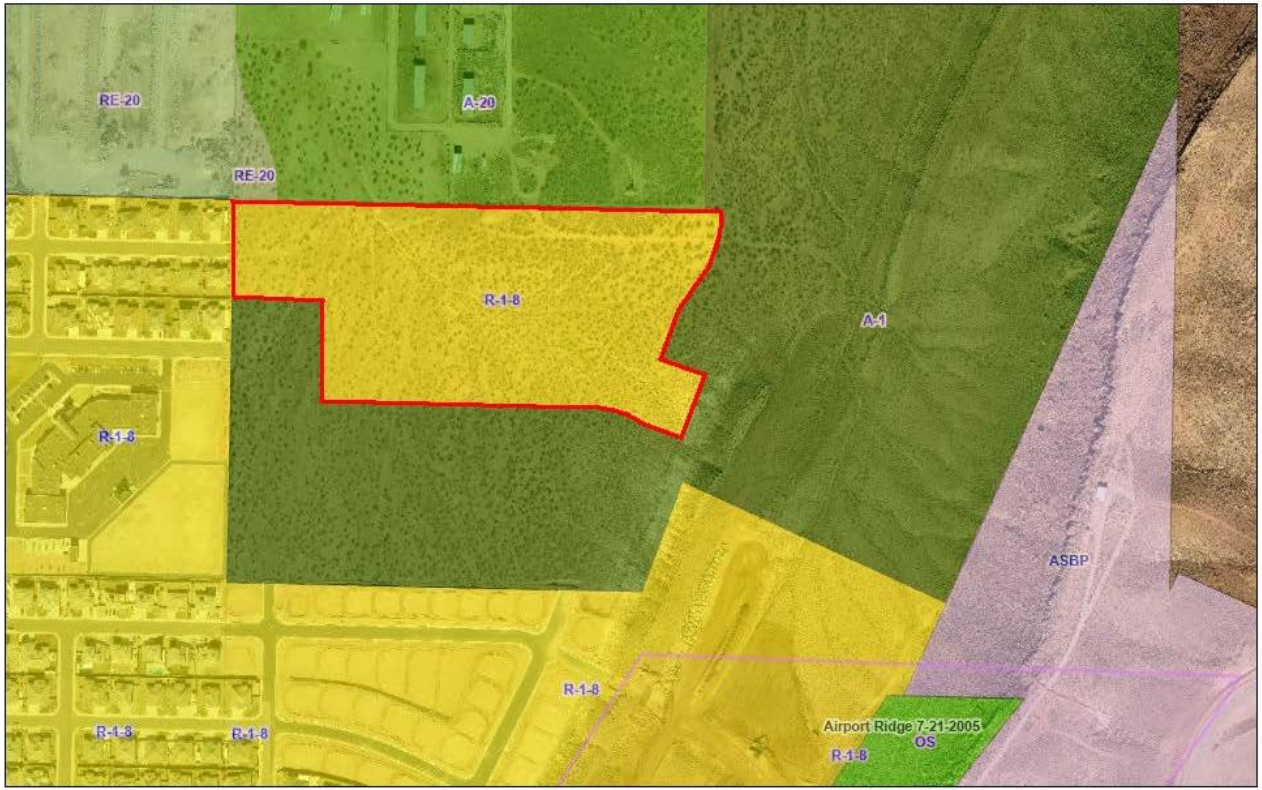
PLANNING COMMISSION AGENDA REPORT: **11/15/2022**

PRELIMINARY PLAT
Red Pine Phases 3-4
Case No. 2022-PP-041

Request:	To approve a preliminary plat for a forty-six (46) lot residential subdivision.
Location:	The site is located at approximately 2890 South 3430 East
Property:	15.06 acres
Number of Lots:	46
Density:	3.05
Zoning:	R-1-8
Adjacent zones:	This plat is surrounded by the following zones: North – A-20 South – R-1-8 East – A-1 West – R-1-8
General Plan:	LDR
Applicant:	DSG Engineering Inc
Representative:	Mike Terry

Preliminary Plats

Preliminary Plat – Red Pine Phases 3-4



Preliminary Plat – Red Pine Phases 3-4

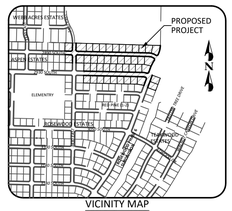
SITE DATA:

ZONING:	R-1-8
SITE AREA:	15.06 ACRES
TOTAL DWELLING UNITS:	46 UNITS
DENSITY:	3.05 DU/AC

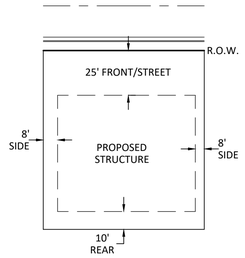
BENCHMARK

WEST ¼ CORNER OF SECTION 11, TOWNSHIP 43 SOUTH, RANGE 15 WEST, SALT LAKE BASE & MERIDIAN WASHINGTON COUNTY BRASS CAP.

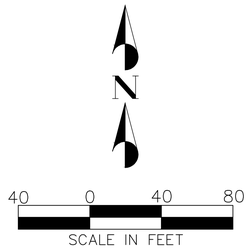
2684.571(FEET) H.C.N. #50121



VICINITY MAP
SCALE: 1" = 1000'



TYPICAL SETBACKS



LEGEND:

- SUBDIVISION BOUNDARY
- STREET CENTERLINE
- ROAD RIGHT OF WAY LINE
- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPOSED CURB & GUTTER
- SETBACK LINE
- PHASE BOUNDARY

WEBB ACRES PH 3

SG-5-3-11-431
RUDGER C ATKIN INC

LOT 424 (DRAINAGE BASIN) TO BE DEDICATED TO THE CITY

FUTURE ALIGNMENT TO CONTINUE NORTH EAST TO FUTURE INTERSECTION OF 2450 SOUTH AND 3850 EAST.

PROPOSED FUTURE PARK LOCATION

ASPEN PH 10

ASPEN PH 9

GTON COUNTY SCHOOL
(ELEMENTARY)

PROPOSED
RED PINE (1-2)

SG-6711-A-2
RUDGER C ATK

DSG ENGINEERING, INC
LAND PLANNERS, LAND SURVEYORS, CIVIL ENGINEERS
113 EAST 200 NORTH STE. #2
St. George, UT 84770
Office (435) 628-2121

NO.	DESCRIPTION	DATE	APP'D

PROJECT NAME : RED PINE (3-4)
SINGLE FAMILY RESIDENTIAL
LOCATED IN ST. GEORGE, UTAH

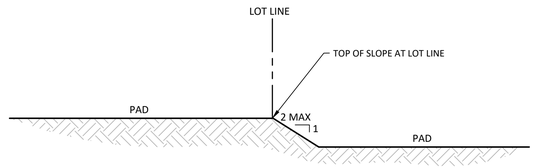
SHEET NAME : PRELIMINARY PLAT PLAN

DATE :	SEPT 2022
PM :	MT
DRAWN BY :	MT
DESIGNED BY :	RT
CHECKED BY :	RT
PROJECT NO. :	22-012
SCALE :	40

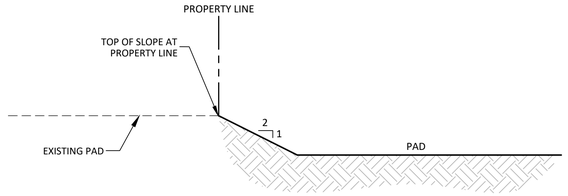
SHEET NUMBER :

PP-1

1 OF 3 TOTAL



SECTION A
N.T.S.



SECTION B
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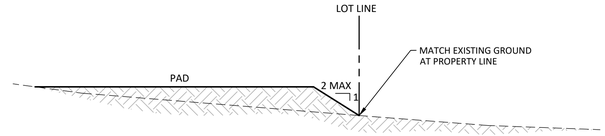
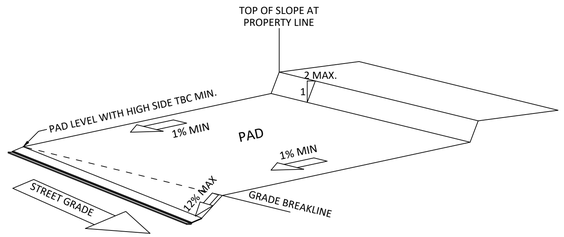
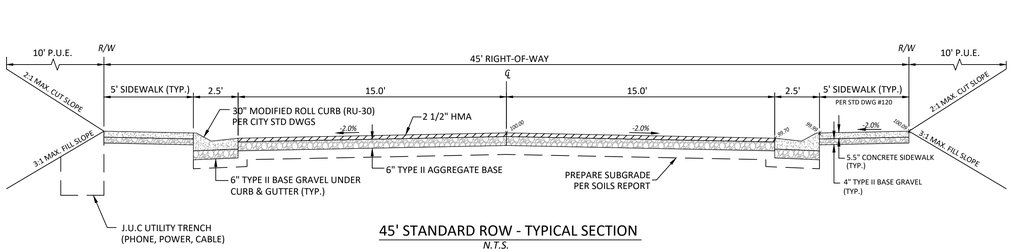


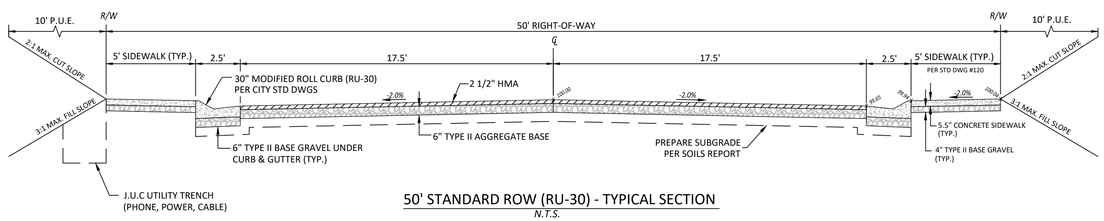
SECTION C
N.T.S.



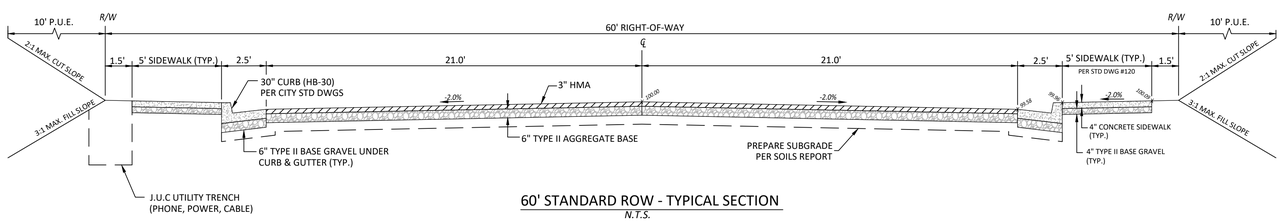
TYPICAL PAD GRADING DETAIL
N.T.S.



45' STANDARD ROW - TYPICAL SECTION
N.T.S.



50' STANDARD ROW (RU-30) - TYPICAL SECTION
N.T.S.



60' STANDARD ROW - TYPICAL SECTION
N.T.S.

NO.	DESCRIPTION	DATE	APP'D

PROJECT NAME :

RED PINE (3-4)
SINGLE FAMILY RESIDENTIAL
LOCATED IN ST. GEORGE, UTAH

SHEET NAME :

PRELIMINARY PLAT PLAN

DSG ENGINEERING, INC
LAND PLANNERS, LAND SURVEYORS, CIVIL ENGINEERS
113 EAST 200 NORTH STE. #2
St. George, UT 84770
Office (435) 628-2121

DATE :	SEPT 2022
PM :	MT
DRAWN BY :	MT
DESIGNED BY :	RT
CHECKED BY :	MT
PROJECT NO. :	22-012
SCALE :	N.T.S

SHEET NUMBER :

PP-2

LID NOTES:

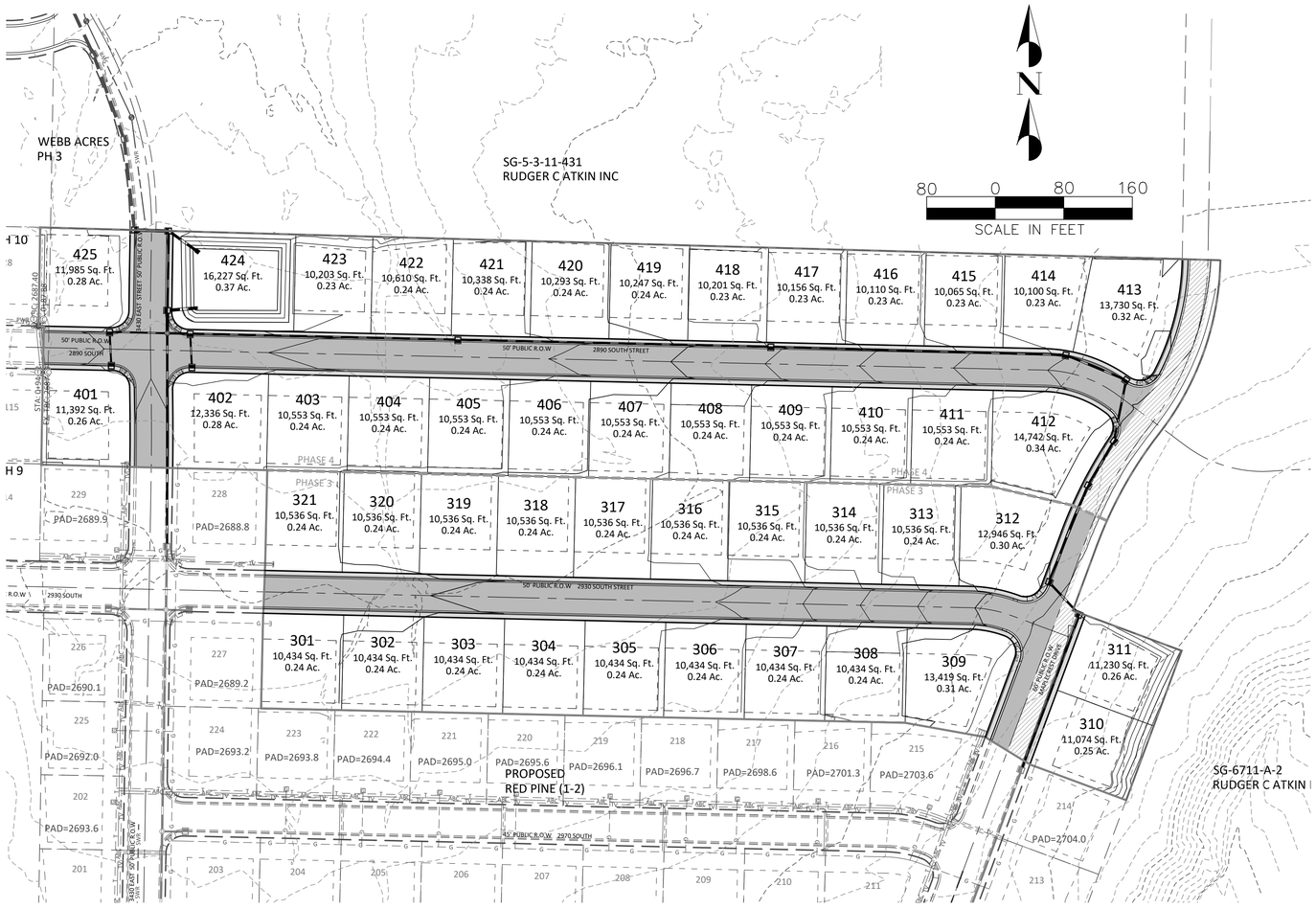
SITE AREA:	15.06 ACRES
TOTAL LOT AREA:	11.57 ACRES
LOT AREA PERCENTAGE OF SITE:	76.8%
SITE PERVIOUS AREA:	8.29 ACRES
SITE IMPERVIOUS AREA:	6.85 ACRES
SITE IMP %:	45.51%
SITE WQRV:	3,666 CU FT
TOTAL DWELLING UNITS:	46 UNITS

DUE TO SILTSTONE BEDROCK NEAR THE SURFACE, UTILITIZING THE TYPICAL BMPS LISTED IN THE DIXIE STORM WATER COALITION ARE TECHNICALLY INFEASIBLE. THE FOLLOWING MEASURES WILL NEVER THE LESS HELP ASSIST IN REDUCING STORM WATER RUNOFF.

1. DEVELOPER TO RETAIN RUN OFF WITH A SOIL SEDIMENT BERM AROUND EACH LOT UNTIL PROPERTY SALE. UPON WHICH TIME THE LONG-TERM STORM WATER MAINTENANCE AGREEMENT (LSTWMA) WILL TRANSFER THE LOW-IMPACT DEVELOPMENT BEST PRACTICES AND REQUIREMENTS TO THE FUTURE HOMEOWNER.

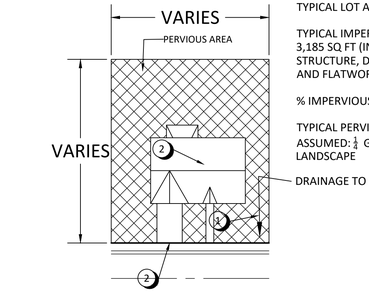
2. HOUSE DOWNSPOUT DISCHARGE RUNOFF IS RECOMMENDED TO CONVEYED AWAY FROM FOUNDATION OVER PERVIOUS LANDSCAPED AREA AND DIRECTED TOWARD THE STREET.

3. AN ON-SITE DETENTION BASIN TO BE INSTALLED ON THE NORTHWEST OF SITE SHOWN ON PLAN. CONVEYING THE STORM WATER TO THE BASIN WILL AID IN SLOWING THE FLOW AND ALLOWING HEAVIER POLLUTANTS TO SETTLE.



LID LEGEND:

1. DISSCONNECTED FLOW TO INFILTRATE INTO LANDSCAPING
2. IMPERVIOUS AREA (STRUCTURES/SIDEWALKS/STREETS)



TYPICAL LOT MAP
N.T.S.

NO.	DESCRIPTION	DATE	APP'D

PROJECT NAME : RED PINE (3-4)
SINGLE FAMILY RESIDENTIAL
LOCATED IN ST. GEORGE, UTAH

SHEET NAME : PRELIMINARY PLAT - LID

DSG ENGINEERING, INC
LAND PLANNERS, LAND SURVEYORS, CIVIL ENGINEERS
113 EAST 200 NORTH STE. #2
St. George, UT 84770
Office (435) 628-2121

DATE :	SEPT 2022
PM :	MT
DRAWN BY :	MT
DESIGNED BY :	RT
CHECKED BY :	MT
PROJECT NO. :	22-012
SCALE :	80

SHEET NUMBER :

PP-3

St.George
Community Development

ITEM 4C

PRELIMINARY PLAT

PLANNING COMMISSION AGENDA REPORT: **11/15/2022**

PRELIMINARY PLAT
Snow Canyon Commercial Subdivision Phase 2
Case No. 2022-PP-043

Request:	To approve a preliminary plat for a two (2) lot commercial subdivision.
Location:	The site is located at approximately 2000 North and Snow Canyon Parkway
Property:	4.588 acres
Number of Lots:	2
Density:	N/A
Zoning:	PD-C
Adjacent zones:	This plat is surrounded by the following zones: North – OS South – PD-C/C-2 East – PD-R West – R-1-7
General Plan:	COM
Applicant:	Anderson, Wahlen & Associates
Representative:	Shaun Young

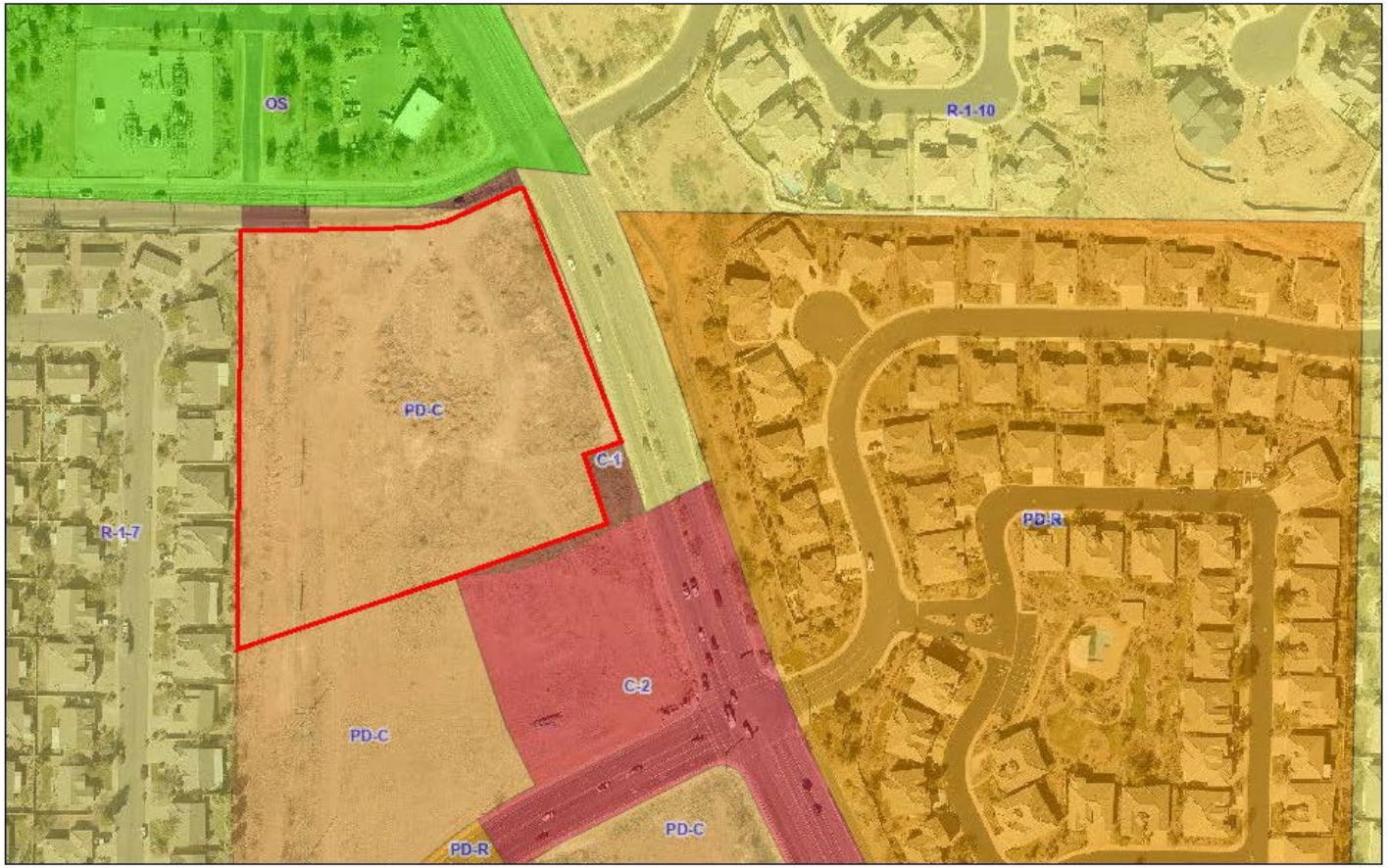
Comments:

1. Condition of approval: Need to obtain a Shared Parking Agreement between Lots 201 & 202.

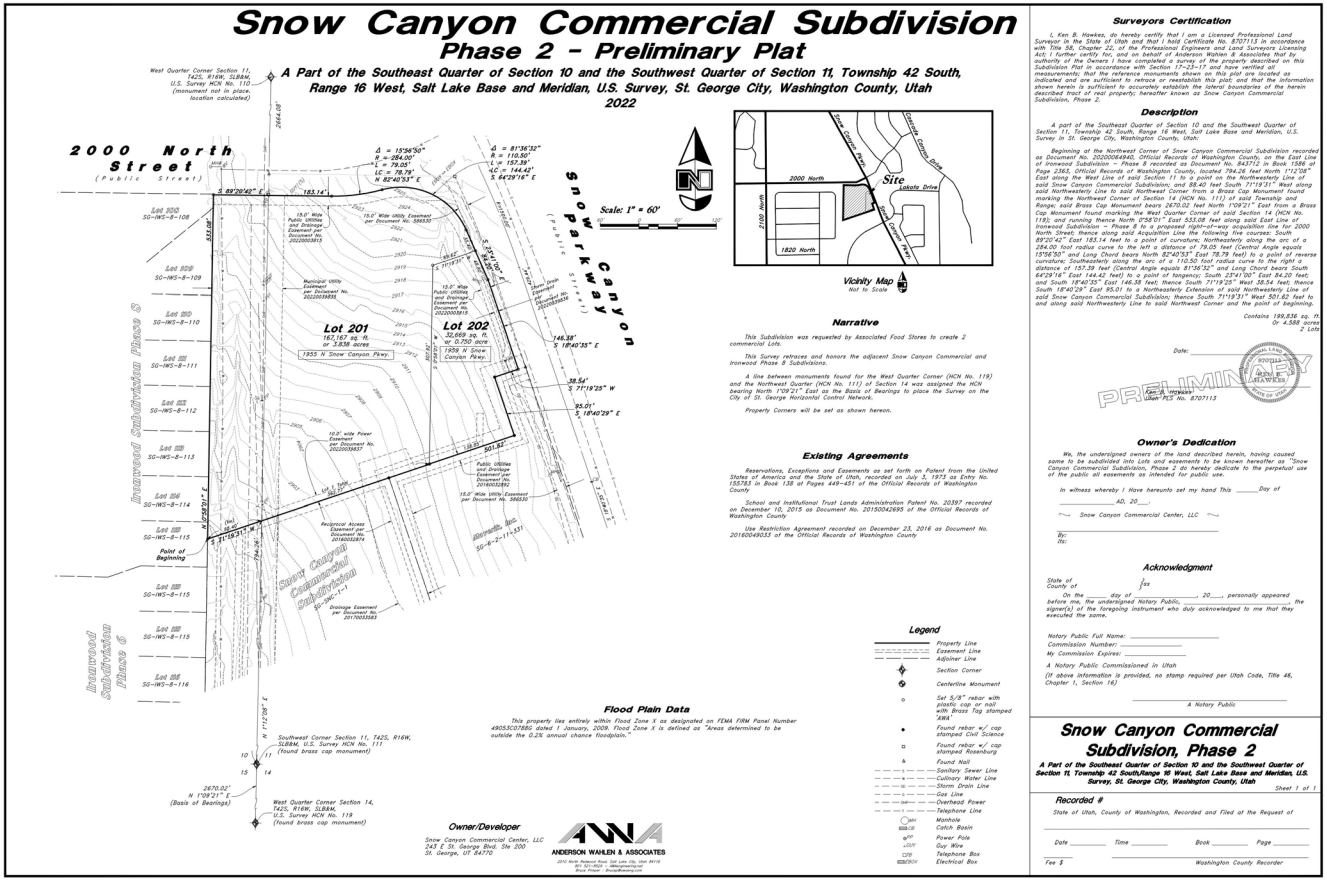
Preliminary Plat

November 15, 2022

Preliminary Plat – Snow Canyon Commercial Subdivision Phase 2



Preliminary Plat – Snow Canyon Commercial Subdivision Phase 2



Snow Canyon Commercial Subdivision
Phase 2 – Preliminary Plat

A Part of the Southeast Quarter of Section 10 and the Southwest Quarter of Section 11, Township 42 South, Range 16 West, Salt Lake Base and Meridian, U.S. Survey, St. George City, Washington County, Utah
2022

2000 North Street (Public Street)

Lot 201
167,167 sq. ft.
or 3.838 acres
1955 N Snow Canyon Pkwy.

Lot 202
32,669 sq. ft.
or 0.750 acre
1959 N Snow Canyon Pkwy.

Snow Canyon Parkway (Public Street)

Ironwood Subdivision Phase 5

Ironwood Subdivision Phase 6

Scale: 1" = 60'

Vicinity Map
Not to Scale

Narrative

This Subdivision was requested by Associated Food Stores to create 2 commercial Lots.

This Survey retraces and honors the adjacent Snow Canyon Commercial and Ironwood Phase 8 Subdivisions.

A line between monuments found for the West Quarter Corner (HCN No. 119) and the Northwest Quarter (HCN No. 111) of Section 14 was assigned the HCN bearing North 1°09'21" East as the Basis of Bearings to place the Survey on the City of St. George Horizontal Control Network.

Property Corners will be set as shown hereon.

Existing Agreements

Reservations, Exceptions and Easements as set forth on Patent from the United States of America and the State of Utah, recorded on July 3, 1973 as Entry No. 155783 in Book 138 at Pages 449-451 of the Official Records of Washington County

School and Institutional Trust Lands Administration Patent No. 20397 recorded on December 10, 2015 as Document No. 20150042695 of the Official Records of Washington County

Use Restriction Agreement recorded on December 23, 2016 as Document No. 20160049053 of the Official Records of Washington County

Flood Plain Data

This property lies entirely within Flood Zone X as designated on FEMA FIRM Panel Number 49053C0758G dated 1 January, 2009. Flood Zone X is defined as "Areas determined to be outside the 0.2% annual chance floodplain."

Legend

Property Line
Easement Line
Adjoiner Line
Section Corner
Centerline Monument
Set 5/8" rebar with plastic cap or nail with Brass Tag stamped "ANA"
Found rebar w/ cap stamped Civil Science
Found rebar w/ cap stamped Rosenburg
Found Nail
Sanitary Sewer Line
Culinary Water Line
Storm Drain Line
Gas Line
Overhead Power
Telephone Line
Manhole
Catch Basin
Power Pole
Guy Wire
Telephone Box
Electrical Box

Owner/Developer

Snow Canyon Commercial Center, LLC
743 E. St. George Blvd. Ste. 200
St. George, UT 84770

ANDERSON WAHLEN & ASSOCIATES
2010 North Redwood Road, Salt Lake City, Utah 84116
801.521.8529 | AWAengineering.net
Bruce Preece | Bruce@awaeng.com

Surveyors Certification

I, Ken B. Hawkes, do hereby certify that I am a Licensed Professional Land Surveyor in the State of Utah and that I hold Certificate No. 8707113 in accordance with Title 58, Chapter 22, of the Professional Engineers and Land Surveyors Licensing Act; I further certify for, and on behalf of Anderson Wahlen & Associates that by authority of the Owners I have completed a survey of the property described on this Subdivision Plat in accordance with Section 17-23-17 and have verified all measurements; that the reference monuments shown on this plat are located as indicated and are sufficient to retrace or reestablish this plat; and that the information shown herein is sufficient to accurately establish the lateral boundaries of the herein described tract of real property; hereafter known as Snow Canyon Commercial Subdivision, Phase 2.

Description

A part of the Southeast Quarter of Section 10 and the Southwest Quarter of Section 11, Township 42 South, Range 16 West, Salt Lake Base and Meridian, U.S. Survey in St. George City, Washington County, Utah:

Beginning at the Northwest Corner of Snow Canyon Commercial Subdivision recorded as Document No. 20200054940, Official Records of Washington County, said point also being on the Ironwood Subdivision Phase 8 recorded as Document No. 942712 in Book 1556 of Official Records, said Boundary Corner being located North 1°09'21" East a measured 794.26 feet North 1°12'08" East along the West Line of said Section 11 to a point on the Northeasterly Line of said Snow Canyon Commercial Subdivision; and 88.40 feet South 71°19'31" West along said Northeasterly Line to said Northwest Corner from a Brass Cap Monument found marking the Northwest Corner of Section 14 (HCN No. 111) of said Township and Range; said Brass Cap Monument bears 2670.02 feet North 1°09'21" East from a Brass Cap Monument found marking the West Quarter Corner of said Section 14 (HCN No. 119); and running thence North 0°58'01" East 533.08 feet along said East Line of Ironwood Subdivision – Phase 8 to a proposed right-of-way acquisition line for 2000 North Street; thence along said Acquisition Line the following five courses: South 89°20'42" East 183.14 feet to a point of curvature; Northeasterly along the arc of a 284.00 foot radius curve to the left a distance of 79.05 feet (Central Angle equals 15°56'50" and Long Chord bears North 82°40'53" East 78.78 feet) to a point of reverse curvature; Southeasterly along the arc of a 110.50 foot radius curve to the right a distance of 157.39 feet (Central Angle equals 81°36'32" and Long Chord bears South 64°29'16" East 144.42 feet) to a point of tangency; South 23°41'00" East 84.20 feet; and South 18°40'35" East 146.38 feet; thence South 71°19'25" West 38.54 feet; thence South 18°40'29" East 95.01 to a Northeasterly Extension of said Northeasterly Line of said Snow Canyon Commercial Subdivision; thence South 71°19'31" West 501.62 feet to and along said Northeasterly Line to said Northwest Corner and the point of beginning.

Contains 199,838 sq. ft.
Or 4.588 acres
2 Lots

Date: _____

PRELIMINARY

Ken B. Hawkes
Utah PLS No. 8707113

Owner's Dedication

We, the undersigned owners of the land described herein, having caused same to be subdivided into Lots and easements to be known hereafter as "Snow Canyon Commercial Subdivision, Phase 2 do hereby dedicate to the perpetual use of the public all easements as intended for public use.

In witness whereby I Have hereunto set my hand This _____ Day of _____ AD, 20___.

Snow Canyon Commercial Center, LLC

By: _____
Its: _____

Acknowledgment

State of _____
County of _____ } ss

On the _____ day of _____, 20___, personally appeared before me, the undersigned Notary Public, _____ the signer(s) of the foregoing instrument who duly acknowledged to me that they executed the same.

Notary Public Full Name: _____
Commission Number: _____
My Commission Expires: _____

A Notary Public Commissioned in Utah

(If above information is provided, no stamp required per Utah Code, Title 46, Chapter 1, Section 16)

_____
A Notary Public

Snow Canyon Commercial Subdivision, Phase 2

A Part of the Southeast Quarter of Section 10 and the Southwest Quarter of Section 11, Township 42 South,Range 16 West, Salt Lake Base and Meridian, U.S. Survey, St. George City, Washington County, Utah

Sheet 1 of 1

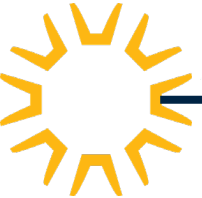
Recorded #

State of Utah, County of Washington, Recorded and Filed at the Request of

_____

Date _____ Time _____ Book _____ Page _____

_____
Fee $ Washington County Recorder



Preliminary Plat – Snow Canyon Commercial Subdivision Phase 2

NOTICE OF MEETING
PLANNING COMMISSION
CITY OF ST. GEORGE
WASHINGTON COUNTY, UTAH

Public Notice

Notice is hereby given that the Planning Commission of the City of St. George, Washington County, Utah, will hold a **Planning Commission** meeting in the City Council Chambers, 175 East 200 North, St George, Utah, on **Tuesday, October 25, 2022**, commencing at **5:00 p.m**.

PRESENT: Chairman Ray Draper
Commissioner Emily Andrus
Commissioner Steve Kemp
Commissioner Nathan Fisher
Commissioner Elise West

CITY STAFF: Community Development Director John Willis
Engineering Manager Cathy Hasfurther
Deputy City Attorney Jami Bracken
Planner III Carol Davidson
Planner III Mike Hadley
Development Office Supervisor Brenda Hatch
Commissioner Austin Anderson

EXCUSED: Commissioner Lori Chapman

Chair Draper opened the meeting, Commissioner West lead us in the pledge of allegiance.

1. **GENERAL PLAN AMENDMENT *(Public Hearing)* Legislative**

   Consider a request for a General Plan Amendment in order to amend the Transportation Master Plan element of the General Plan. The amendment would adjust the alignment of a small portion of Airport Road west of the terminal. The applicant is the City of St. George – St. George Regional Airport, and the representative is Richard Stehmeier. The project will be known as St. George Regional Airport Master Plan. Case No. 2022-GPA-010. (Staff – Dan Boles)

   THIS ITEM HAS BEEN REMOVED FROM THE AGENDA

2. **ZONE CHANGE (ZC) *(Public Hearing)* Legislative**

   Consider a request to change the zone from Commercial-2 (C-2), Single Family Residential 12,000 sq ft minimum lot size (R-1-12), Single Family Residential minimum 10,000 sq ft lots (R-1-10) to Planned Development Residential (PD-R). The proposal is for 32 single family homes on approximately 10.093 acres, located at Desert Canyons off of Skywalker Drive. The project will be known as Desert Terrace. The applicant is Desert Canyons and the representative is Curt Gordon. Case No. 2022-ZC-045. (Staff – Mike Hadley)

   Mike Hadley presented the following:

   Mike Hadley – Mike showed the site layout and the elevation proposed. The elevations were not included with your packet.

Commissioner Kemp – 2 car garages?

Mike Hadley – Yes.

Curt Gordon – This is a continuation of some of the same buildings we have been building at Desert Canyons so far. A mixture of products that we have out there. This is in the more affordable range, there is a pretty strong demand for this product.

Commissioner Kemp – What is the square footage?

Curt Gordon – 1998 sq ft. 4 story, 2 car garage and 2.5 bath.

Commissioner Kemp – What is planned for the recreation area?

Curt Gordon - It will be a tot lot and some grass.

Commissioner Kemp – Does it meet all the parking requirements necessary, and can you get a fire truck in and out of there?

Mike Hadley – They are proposing 9 guest stall, but they will probably need to add one as they would be required to have 10 for 32 units..

Commissioner Kemp – Do you have room to do that?

Mike Hadley – Yes we could probably just add one with another one.

Chair Draper opened the public hearing.

Chair Draper closed the public hearing.

Commissioner Kemp – We have only seen the one front elevation, that is why I'm asking so many questions. What does it look like, how far is the space between the units going to be, you've got limited common area, which I assume are the back yards. Then open common area being your recreation area.

Chair Draper – Will most of the buildings look very similar to this, Curt?

Commissioner Fisher – Why is it that Mike, we don't have more detail like we would with other PDs? More elevations than just the front elevation, landscaping, all those things.

Mike Hadley – The landscaping will go through the site plan.

Chair Fisher – Do they have windows on the side?

Curt Gordon – Yes, these exist out there right now. The Desert Canyons School, these are the same units that are around the school. It is kind of a continuation of that same project. There is just a hill between the two areas that we didn't want to destroy.

Commissioner Kemp – So would you be fine if we approve this subject to the condition that the product look the same as the units in that subdivision? I don't know the name of it.

Curt Gordon – It's Desert Hollow.

Commissioner Fisher – Thank you, that's helpful.

MOTION: Commissioner Kemp made a motion to recommend approval of Item number 2 a zone change from Commercial-2, Single Family Residential, and R-1-10 to Planned Development Residential for 32 lot single family homes on approximately 10.093 acres with the condition that the units will look similar if not identical to the project nearby in the Desert Hollow subdivision.
SECOND: Commissioner Fisher
ROLL CALL VOTE:
AYES (5)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Elise West
NAYS (0)

3. <u>ZONE CHANGE AMENDMENT (ZCA) *(Public Hearing)* Legislative</u>

Consider a request to amend the Southern Hills West PD-C (Planned Development Commercial) zone. The applicant is seeking approval to amend the existing 23,000 square foot conceptual site plan and design by replacing it with a new 18,000 square foot conceptual site plan and design for this commercial development. The total property area is approximately 5.07 acres. The project is located on the northeast corner of River Road and White Dome Drive. The applicant is Prime Directive Development Inc., and the representative is Ryan Thomas. The project will be known as White Dome Commercial. Case No. 2022-ZCA-046 (Staff – Carol Davidson)

Carol Davidson presented the following:

Carol Davidson – We brought this through about a year ago, but they have changed their plans. They will no longer do the carwash; they will keep the 4 buildings and increased the C-Store site. They are not ready to develop the C-Store yet so they will come back through when that is ready. They will have drive thrus on all the buildings. They have parked this 50-50 with restaurant and retail. We will keep a close eye on it when the applicants come in for business license. There was a residential development to the northeast, it's not changing at all it will remain the same they will need to buffer between this commercial and the residential. Staff recommends approval with the condition that the parking will be required to meet the zoning requirements.

Commissioner West – With the three in there how would they have restaurants in all the drive thrus?

Carol Davidson – They would only be able to have one per building.

Ryan Thomas – This is similar to the buildings we have now in Desert Hills Plaza.

Commissioner Kemp – Do you anticipate the double drive thru?

Ryan Thomas – Yes. We have had success with this layout. It has been working for us. We even have Royal Thai in the middle of two and it works out well.

Commissioner Kemp – When do you anticipate your C-Store?

Ryan Thomas – We will start this first and then shop it around, typically they want their own architecture so we will let them handle it.

Chair Draper opened the public hearing.

Chair Draper closed the public hearing.

Commissioner Kemp – I have a question about the buffer, will that just be a block wall?

Carol Davidson – It will be a block wall with 10 ft of landscaping, it is part of the ordinance.

MOTION: Commissioner Fisher made a motion to recommend approval of Item 3 an amendment to the PD-C.
SECOND: Commissioner Kemp
ROLL CALL VOTE:
AYES (5)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Elise West
NAYS (0)

4. <u>CONDITIONAL USE PERMIT (CUP) Administrative</u>

Consider a request for a conditional use permit to allow eight additional townhomes in the development. The project is located at 850 East 600 South. The applicant is Horizon Homes and the representative is Jared Bates. The project will be known as Dixie Center Townhomes. Case No. 2022-CUP-007 (Staff – Dan Boles)

Dan Boles presented the following:

Dan Boles – They are just hoping to finish off the site, they were approved last year. Their Conditional Use Permit expired before they got their drawings approved. What you are seeing is exactly what you approved last year. They are asking for 8 additional townhomes to finish this off. They will have a tot lot and a play area. They are meeting conditions that were placed upon it.

Commissioner Andrus – We got one letter regarding parking. What is the requirement for Student Housing?

Dan Boles – They have stated that these will not be Student Housing, they are meeting the regular requirements for parking in the code.

Commissioner Kemp – Because the property is along the freeway it is subject to the long-term drainage agreement with the City. Are those issues being addressed?

Jared Bates – Yes, the new units are actually higher than the other units.

Cathy Hasfurther – We just did an I-15 corridor study, because of the recent flooding. That is hopefully addressing everything along the freeway. I don't know if the agreement is necessarily with the property owners, but the City and UDOT are involved together so with any improvements to I-15 there will be participation.

Commissioner Kemp – I read through the agreement that looks like there is a requirement that the owners would maintain the stormwater system as it passes through or near their property and I'm wondering how they intend to do that. I've never seen something like that before. There are a lot of these agreements that say we're going to take care of our own stuff.

Cathy Hasfurther – That is generally what it is, we require the property owners take care of what is coming from their site.

Commissioner Kemp – And what is on their property.

Cathy Hasfurther – And what's on their property, yes.

MOTION: Commissioner Kemp made a motion for a positive recommendation for Item 4 a Conditional Use Permit to allow the 8 additional townhomes in the development known as Dixie Center Townhomes.
SECOND: Commissioner Fisher
ROLL CALL VOTE:
AYES (5)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Elise West
NAYS (0)

5. PRELIMINARY PLATS (PP) Administrative

A. Consider a request for a forty-nine (49) lot residential subdivision known as Webb Acres Phases 2 and 3 located at approximately 3430 East and Seegmiller Drive. The property is 1.93 acres and is zoned RE-20. The applicant is DSG Engineering Inc, representative Ryan Thomas. Case No. 2022-PP-040. (Staff – Cathy Hasfurther)

Cathy Hasfurther presented the following:

Cathy Hasfurther – They purchased property to the east of them so that they can align better with the property to the intersection to the south.

Ryan Thomas – The lot count has not changed; we are just trying to line the roads up.

MOTION: Commissioner Andrus made a motion to recommend approval of 5A a 49-lot to residential subdivision Webb Acres.
SECOND: Commissioner West
ROLL CALL VOTE:
AYES (5)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Elise West
NAYS (0)

B. Consider a request for a ten (10) lot residential subdivision known as Auburn Hills Phase 16 located at the northwest corner of Auburn Hills Phase 1. The property is 5.52 acres and is zoned PD-R. The applicant is Bush and Gudgell, representative Bob Hermandson. Case No. 2022-PP-042. (Staff – Cathy Hasfurther)

Cathy Hasfurther presented the following:

Bob Hermandson – This is a remnant parcel we had in Auburn Hills, we had to wait because of the mitigation of the bridge. I actually thought I had pre-platted this 4 years ago, but we hadn't, so that's why we're here.

Chair Draper – Where is the access coming out of here, is there only one?

Bob Hermandson – Yes, there are only 10 units, these are very large lots that are 10 to 15,000 sq ft lots. For Desert Color that is substantial.

Commissioner Kemp – Do you plan on leaving the property to the northeast undisturbed?

Bob Hermandson – Yes. This is near the edge of the City park we will build. None of it is buildable it will remain undisturbed. It's way too steep, you can't get to it.

Commissioner Kemp – What is the elevation difference from the road to these lots?

Bob Hermandson – I would guess 30 ft. (Bob counted the contours) 24 ft.

Commissioner Kemp – What is that space going between those 2 lots? Is that access or drainage or something?

Bob Hermandson – We will have sewer and storm drain going off the hill. We have stubbed those utilities down here on this side. It will stub in by the bridge.

Cathy Hasfurther – I want to point out one thing that I forgot. If you notice on this one that his storm drain is actually right here, and it says that these ones go into the City of St. George, I have already talked to Bob and that has to be a condition of approval that will get changed before it goes to City Council. As far as that easement either remains with the HOA of Desert Color or like he says he's going to take it off the end with the sewer which is an open space which is already owned by Desert Color HOA.

Commissioner Kemp – So which one is it going to be?

Cathy Hasfurther – Right now, he just sent the preliminary plat today, it's going to go off the end of the cul-de-sac.

MOTION: Commissioner Kemp made a motion to recommend approval of Item 5B a 10-lot residential subdivision known as Auburn Hills phase 16 with the condition as discussed by staff that the sewer and stormwater will go through the easement defined as open space in the northwest end of the cul-de-sac and will be maintained by Desert Color.
SECOND: Commissioner Fisher
ROLL CALL VOTE:
AYES (5)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Elise West
NAYS (0)

6. MINUTES

Consider a request to approve the meeting minutes from the October 18, 2022, meeting.

MOTION: Commissioner West made a motion to recommend the minutes for October 18, 2022.
SECOND: Commissioner Fisher
ROLL CALL VOTE:
AYES (5)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Elise West
NAYS (0)

7. CITY COUNCIL ACTIONS

John Willis the Community Development Director will report on items heard at the October 20, 2022, City Council meeting.

1. 2022-ZCA-035 Zion Regional Medical Center
2. 2022-ZC-038 River Crossing
3. 2022-PP-036 Cinder Bluffs

4. 2022-PP-037 River Crossing Ph 2
5. 2022-PP-038 Desert Canyons Business Ph 1
6. 2022-ZCA-040 Solace
7. 2022-ZCA-041 Red Cliffs
8. 2022-ZCA-039 Children's Justice Center
9. 2022-ZRA-004 PD Setbacks and Separation
10. 2022-HS-002 Tech Ridge Storm drain/stairs
11. 2022-CUP-006 CP Marketplace
12. 2022-ZRA-003 Hobby Garages

8. ADJOURN

MOTION: Commissioner Kemp made a motion to adjourn at 5:40 pm
SECOND: Commissioner Fisher
ROLL CALL VOTE:
AYES (6)
Chair Ray Draper
Commissioner Steve Kemp
Commissioner Emily Andrus
Commissioner Nathan Fisher
Commissioner Austin Anderson
Commissioner Elise West
NAYS (0)