NOTICE AND AGENDA
SANTA CLARA CITY COUNCIL WORK MEETING
Wednesday July 7, 2021,
Time: 5:00 p.m.
AGENDA

NOTICE is hereby given that the Santa Clara City Council will hold a Work Meeting on the 7th day of July 2021 at 5:00 PM. in the City Council Chambers of the Town Hall at 2603 Santa Clara Drive, Santa Clara Utah 84765. The Meeting will be available to view live stream on the You Tube link: http://www.youtube.com/channel/UC xLBLm30_XLqM1AEmhpcMA
Council Chambers will be available to residents, but we will have limited availability and follow Covid-19 guidelines.

1. **Call to Order**

2. **Working Agenda**

   A. General Business:

   1. 4th Generator purchase discussion. Presented by Gary Hall, Power Director.

   2. Shooting Range update. Presented by Brad Hays, Parks & Trails Director.

   3. Concept Plan for Coyote Landing discussion. Applicant Robert Smith.

   4. Introduction of Water Way Program. Presented by Kristelle Hill, Administrative Assistant.

3. **Staff Reports**

4. **Adjournment**

Note: In compliance with the Americans with Disabilities Act, individuals needing special accommodation during this meeting should notify the city no later than 24 hours in advance of the meeting by calling 435-673-6712. In accordance with State Statute and Council Policy, one or more Council Members may be connected via speakerphone or may by two-thirds vote to go into a closed meeting.

Zoom Meeting Participants: Participants on the Zoom call are limited to City Staff, Council Members, and applicants on the Agenda. E-mail calendar invitations will be sent out in advance of the meeting. Instructions for each meeting will include the meeting link, ID, and password to join. When joining the meeting your screen name must show your Full Name. Each applicant will be accepted into the meeting when their item is up for discussion. Submissions from this form will be sent directly to the City. Please contact Chris Shelley at (435) 673-6712 Ext. 203 with any questions regarding Public meetings.

The undersigned, duly appointed City Recorder, does hereby certify that the above notice and agenda was posted within the Santa Clara City limits on this 1ST day of July 2021at the Santa Clara City Hall, on the City Hall Notice Board, at the Santa Clara Post Office, on the Utah State Public Notice Website, and on the City Website at http://www.sccity.org. The 2021 meeting schedule was also provided to the Spectrum on January1, 2021.

_____
Chris Shelley – City Recorder

REQUEST FOR ACTION

AGENDA ITEM 1

City Council July 7, 2021

APPLICANT: Santa Clara City Power Department

SUBJECT:

Discuss purchase of 4th Generator

BACKGROUND DESCRIPTION:

With the current market prices for power and the uncertainty of our current resources, it would be beneficial to add a fourth generator as a form of resource. The second reason for purchasing the generators was for long power outages. With our current two generators, we can only energize small portions of the city at a time in the event we lose power from St George City. With the purchase of the third and possible fourth generator, we will be able to energize a larger portion of the city at one time.

Proposed Recommendation

Discussion

Cost

2,532,000

Approved by Legal Department

N/A

Approved in Budget

No

Approved by City Finance Department

Yes

Amount

2,532,000

Requested By

Gary Hall

File Upload Attachments

https://sccity.org/wp-content/uploads/formidable/41/Generator-Presentation-7-7-2021.pptx, https://sccity.org/wp-content/uploads/formidable/41/Project-Price-Uplifts-Letter-2021-06-30-v1.pdf



CITY OF
SANTA CLARA

FORT CLARA POWER STATION GENERATION FACILITY

GENERATION FACILITY

The Santa Clara Generation Facility was mainly purchased to shave our peak power purchase in the summer during high load hours when market prices are at their peak. The five-year average cost to run our generators for one megawatt hour is around $48.00 and the average cost to buy a megawatt hour on the market is around $68.00. We can save an average of $20.00 an hour per megawatt that we run our generators. With our two generators that would be a savings of approximately $80.00 an hour. These are averages, the cost will fluctuate with natural gas prices and market prices for power. With the purchase of the third and possible fourth generator, those savings could double.

The second reason for purchasing the generators was for long power outages. With our current two generators, we can only energize small portions of the city at a time in the event we lose power from St George City. With the purchase of the third and possible fourth generator, we will be able to energize a larger portion of the city at one time.

GENERATOR VS POOL COST

Year	Generator Cost	Pool Cost	Savings per MW	4 MW Generation Savings
2020	$41.48	$93.92	$52.44	$209.76
2019	$40.96	$46.80	$5.84	$23.36
2018	$70.89	$83.99	$13.10	$52.40
2017	$41.58	$58.51	$16.93	$67.72
2016	$44.89	$56.53	$11.64	$46.56

EXAMPLE OF HIGH LOAD HOURS

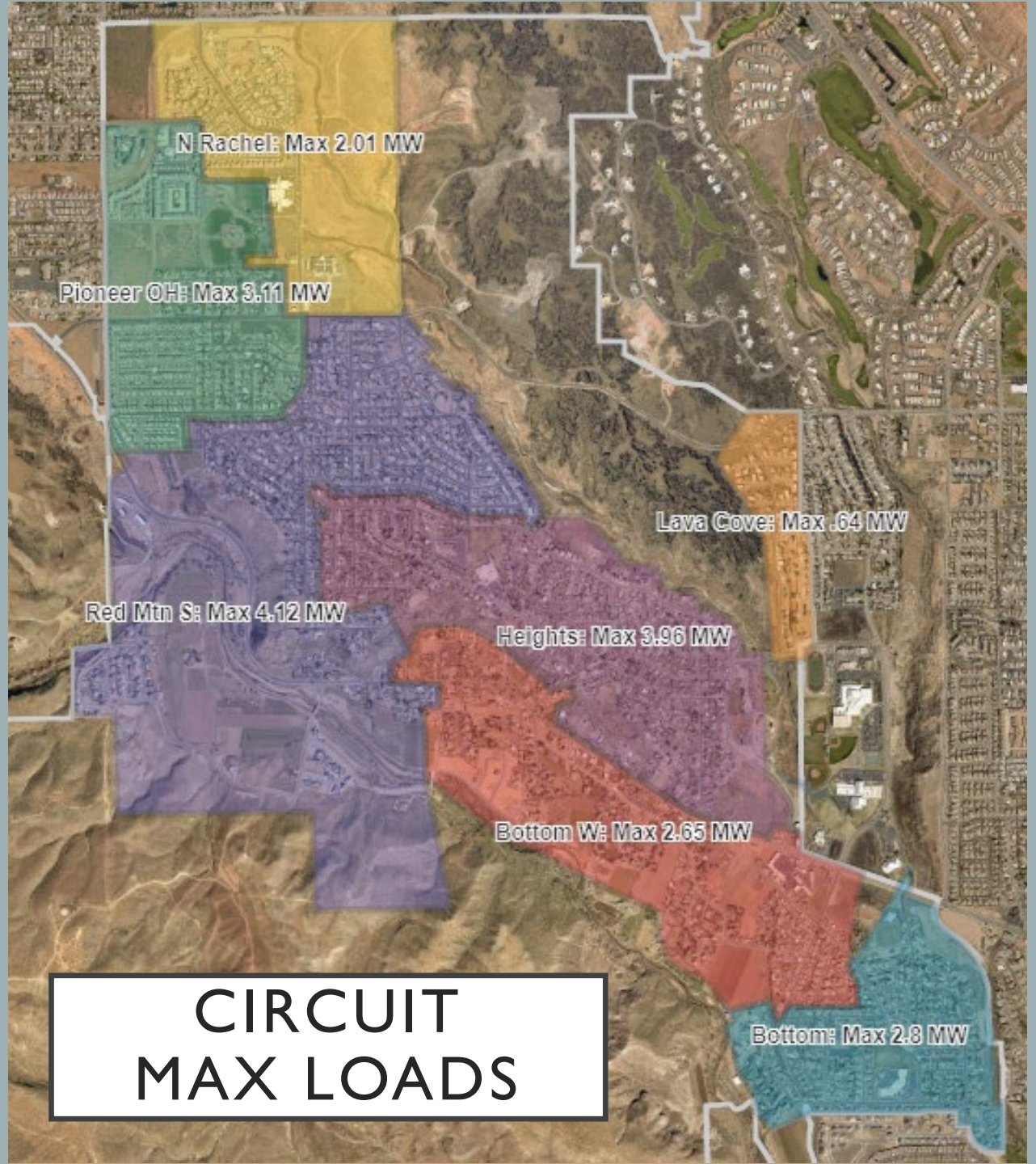
JUNE 2021

HOUR	MW NEEDED	MARKET COST PER MW	TOTAL COST PER HOUR
15	0.5	$200.00	$100.00
16	2.1	$225.00	$472.50
17	5.7	$550.00	$3,135.00
18	6.5	$550.00	$3,575.00
19	1.9	$550.00	$1,045.00
20	0.5	$550.00	$275.00
21	6.4	$300.00	$1,920.00
22	0.5	$200.00	$100.00

Hour	Red Mtn S.	Lava Cove	Pioneer OH	N. Rachel	Bottom	Heights	Bottom W.	Total Load	Hour
1	1.49	.23	1.35	1	1.18	1.68	1.03	**7.96**	1
2	1.35	.23	1.16	.01	.98	1.41	.89	**7.03**	2
3	1.32	.13	1.03	.96	.91	1.15	.82	**6.32**	3
4	1.09	.14	.95	.96	.82	1.15	.72	**5.83**	4
5	.03	.15	.91	.85	.75	1.04	.71	**5.44**	5
6	1.105	.13	.83	.82	.73	.97	.7	**5.23**	6
7	.9	.12	.82	1.185	.74	1.03	.77	**5.62**	7
8	.13	.15	.92	1.29	.94	1.1	.89	**6.42**	8
9	1.2	.15	.94	1.34	1.11	1.3	.98	**7.02**	9
10	1.35	.18	1.08	1.35	1.13	1.46	.1	**7.71**	10
11	1.55	.23	1.32	1.39	.34	1.73	.25	**8.81**	11
12	1.99	.29	.59	1.43	1.49	2.15	1.48	**10.42**	12
13	2.5	.34	1.8	1.54	1.76	2.57	1.75	**12.26**	13
14	2.81	.38	2.24	1.72	2.05	2.98	1.85	**14.03**	14
15	3.32	.49	2.34	1.57	2.32	3.47	2.23	**15.74**	15
16	3.63	.52	2.74	1.71	2.57	3.68	2.38	**17.23**	16
17	3.95	.6	2.93	1.83	2.8	3.81	2.58	**18.5**	17
18	4	.57	2.96	1.9	2.78	3.88	2.63	**18.72**	18
19	3.95	.56	2.94	1.89	2.68	3.79	2.43	**18.24**	19
20	3.55	.53	2.69	1.7	2.5	3.5	2.27	**16.8**	20
21	3.34	.48	2.56	1.52	2.37	3.28	2.25	**15.8**	21
22	3	.46	2.37	.43	2.13	2.95	1.9	**14.22**	22
23	2.76	.39	2.1	1.36	2	2.59	1.67	**12.87**	23
24	.84	.26	1.61	1.16	1.4	1.91	1.22	**9.4**	24
MAX	**4.12**	**.64**	**3.11**	**2.01**	**2.8**	**3.96**	**2.65**	**19.35**	

CIRCUIT LOADS

2020 PEAK DAY – MW PER CIRCUIT



CIRCUIT MAX LOADS

SHOULDER MONTHS MAXIMUM LOADS

September	October	November	December	January	February	March	April
15.7	10.1	6.1	6.8	6.3	6	5.8	9.4

EXISTING DEBT OBLIGATION

INCLUDING 3RD GENERATOR

YEAR	PRINCIPLE	INTEREST	TOTAL CURRENT YEARLY DEBT
2022	350,000.00	42,522.09	392,522.09
2023	370,000.00	41,938.20	411,938.20
2024	369,000.00	36,839.10	405,839.10
2025	377,000.00	31,691.70	408,91.70
2026	385,000.00	26,433.90	411,433.90
2027	391,000.00	21,079.50	412,079.50
2028	259,000.00	16,594.50	275,594.50
2029	263,000.00	12,992.70	275,992.70
2030	266,000.00	9,342.60	275,342.60
2031	270,000.00	5,644.20	275,644.20
2032	274,000.00	1,890.60	275,890.60
TOTAL	**3,574,000.00**	**246,969.09**	**3,820,969.09**

PURCHASE 4TH GENERATOR

OPTION 1

WRAPPED INTO CURRENT DEBT

YEAR	NEW YEARLY DEBT
2022	38,534.80
2023	499,429.45
2024	499,510.10
2025	499,494.20
2026	499,406.50
2027	499,241.50
2028	499,604.55
2029	499,480.50
2030	499,240.60
2031	499,875.20
2032	499,387.20
2033	499,011.65
2034	499,709.05
2035	419,004.75
TOTAL	**6,450,929.93**

OPTION 2

FINANCED SEPERATLEY

YEAR	EXISTING DEBT	4TH GEN	YEARLY DEBT
2022	392,522.09	15,951.60	408,473.69
2023	411,938.20	193,465.65	605,403.85
2024	405,839.10	193,659.00	599,498.10
2025	408,91.70	193,795.65	602,487.35
2026	411,433.90	193,875.60	605,309.50
2027	412,079.50	193,898.85	605,978.35
2028	275,594.50	193,865.40	469,459.90
2029	275,992.70	193,775.25	469,767.95
2030	275,342.60	193,628.40	468,971.00
2031	275,644.20	194,415.40	470,059.60
2032	275,890.60	194,136.25	470,026.85
2033		193,800.40	193,800.40
2034		194,398.40	194,398.40
2035		193,930.25	193,930.25
2036		193,405.40	193,405.40
2037		193,814.40	193,814.40
TOTAL	**3,820,969.09**	**2,923,815.90**	**6,744,784.99**

Wheeler Power Systems
4901 West 2100 South
Salt Lake City, UT 84120
800-662-8650
www.wheelercat.com

June 30, 2021

Mr. Gary Hall
Power Director
Santa Clara City Power

Re: Santa Clara Generation Facility, Generator(s) Addition Offer

Dear Mr. Hall:

As previously discussed, I have been investigating cost increases to the proposal presented to Santa Clara City Power on 11/10/2020. Over the past year, consumers, vendors, and equipment providers have experienced unprecedented increases in costs of raw materials, commodities, precious metals, and other project components. The proposal provided to you on 6/30/2021 includes all the cost increases resulting from these escalations.

I am pleased to report that Caterpillar has done an amazing job controlling costs, and as a result, the cost of the genset itself has not escalated yet. However, a price escalation is forecasted in the very near future. That said, Wheeler is able to hold the original pricing on a genset or gensets, if we place them on order by mid-July 2021 with the goal that the unit(s) will ship in 2021 or early 2022.

This project and our relationship with Santa Clara City are a high priority for Wheeler Power Systems. As such, we have met with and worked extensively with the vendors supplying equipment and materials for this project and have reduced escalation costs to the extent possible. Below you will find the outcome of the cost escalations and subsequent vendor negotiations:

- 11/10/2020 Originally Quoted Price……..$2,217,986.42
- Project Price Escalation since 11/10/2020……2.96%
- Adjusted Project Price to Santa Clara City……..**$2,285,667.04**
- ET Connection Station in Office……..$19,659.79
- Genset, Install & ET Connector Station Total……**$2,305,326.83**

Wheeler Power Systems
4901 West 2100 South
Salt Lake City, UT 84120
800-662-8650
www.wheelercat.com

Additionally, because of the relationships we have with our vendors, Wheeler Power Systems is able to take advantage of economies of scale when placing multiple orders at once, we are able to offer further reduction in pricing if Santa Clara City were to purchase two units and their accompanying installs as follows:

- Genset 1 Adjusted Project Price……$2,263,106.83
- Genset 2 Adjusted Project Price……$2,263,106.83
- Subtotal……**$4,526,213.67**
- ET Connection Station in Office……$19,659.79
- Two Genset & ET Connection Station Total……**$4,545,873.46**

Thank you for your time and the opportunity to offer this exciting project to Santa Clara City.

Sincerely,

Shane Minor
sminor@wheelercat.com

REQUEST FOR ACTION

AGENDA ITEM 2

City Council July 7, 2021

APPLICANT: Parks Department

SUBJECT:

Discussion of the Proposed Shooting Range R P&P

BACKGROUND DESCRIPTION:

The City has completed the Biological Survey through Alpine Environmental Resources. The survey did not find any protected plants but did find some desert tortoises. The BLM St. George Field Office is currently reviewing the findings and will meet with the City to determine the next steps. Appendix A of the attached Biological survey has excellent maps showing the shooting range location and the road. Staff requests to discuss the proposed Santa Clara Shooting Range Recreation Public Purposes Act Application to acquire a 40-acre shooting range within a 271-acre shooting buffer and road construction to the location. The application requirements include:

1. A certified copy of a resolution authorizing the application.

2. A draft development plan including a site plan, management plan to include a statement of the proposed land use with a detailed description of administration and anticipated project expenditures and funding sources.

3. The City will be required to complete a land, hazardous material, and paleontology surveys as part of the application.
4. A Map showing the nature and location of facilities and a professionally prepared site plan (Completed)
5. Timetable for Development
6. Explanation of proposed Maintenance responsibilities.

Staff would like to start working on the R P&P management plan and anticipated project expenditures. We are currently working with Washington County to see what preliminary work they have completed besides the conceptual range layout. If the County does not have a cost estimate, we will need to hire an engineer to estimate road and range construction costs. Once we have the estimated costs, we will need to find outside sources of revenue to help with construction. As part of the R P&P, we will need to determine how the range will be funded. The range is not currently on any City Capitol facility plan so the plans will need to be amended to be Impact fee eligible. The road to the range is on the Road Master Plan as a proposed collector road. Since the range is in an isolated location the plan should include a utility and security plan as part of the range cost estimates. We also need to discuss how the range will be administered. Will it be run by the City alone or a combination of City staff and volunteers? These are the questions we need to answer before we submit the R P&P application. An R P&P Application can take several years to be approved due to the many public comment periods and the ability of the BLM staff work on the request. It is not unrealistic for the range opening day to be 5 or mores years down the road. We may want to discuss what we should do between now and then to ensure public safety for people recreating and living near the existing shooting areas on BLM land within the City limits.

Proposed Recommendation

Discussion

Cost

TBD

Approved by Legal Department

N/A

Approved in Budget

N/A

Approved by City Finance Department

N/A

Amount

0

Requested By

Brad Hays

File Upload Attachments

https://sccity.org/wp-content/uploads/formidable/41/General-Bio-Survey_2021_6_11.pdf, https://sccity.org/wp-content/uploads/formidable/41/RPP-Publication.pdf, https://sccity.org/wp-content/uploads/formidable/41/General-Bio-Survey_2021_6_11-1.pdf

Biological Survey Report for the Proposed Gun Range near Santa Clara, Utah



Prepared for:

BLM, St. George Field Office

(435) 688-3200

&

Santa Clara City

(435) 673-4712

Prepared by:

Alpine Environmental Resources, LLC

435-668-6089

June 11, 2021

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Appendix A –

Figure 1: General Project Location

Figure 2: Proposed Recreation and Public Purpose Land Grant

Figure 3: Proposed Gun Range

Figure 4: Photo Points

Figure 5: Tortoise Survey Results

Figure 6: Tortoise Movement Results

Appendix B

IPaC Report USFW Official Species List

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1. Introduction

Alpine Environmental Resources, LLC conducted biological survey and prepared this report for the Proposed Washington County Gun Range south of Santa Clara City, Washington County, Utah. The proposed gun range is located in the SE ¼ of Section 20, SW ¼ of Section 21, NE ¼ of Section 29 and NW ¼ of Section 28, T42S, R16W, SLBM (Appendix A -Figures 1 and 2).

Santa Clara City is preparing to file an application for a Recreation and Public Purposes grant for the proposed gun range with the Bureau of Land Management (BLM) St. George Field Office. This biological survey report is prepared to document survey effort and the existing biological conditions of the anticipated RPP grant area.

1.1 Existing Conditions

For the purposes of this document, the **project area** is defined as the proposed gun range RPP grant area (271 acres). The **project vicinity** is defined as the project area buffered by 0.5 mile. And, the **project region** is defined as the ecotone that the project area is within.

The proposed gun range is located between 2,950 - 3,100 feet above mean sea level (msl) on the South Hills just north of Box Canyon and east of Stucki Springs Road. Stucki Springs Road is the primary access route. The proposed RPP grant is approximately 271-acres. The preliminary site design consists of a surface disturbance area of approximately 40-acres for the improved range site. The preliminary site design includes access road, parking, and firing lanes (Appendix A – Figure 3).

The project vicinity is within the Mojave Basin and Range ecoregion with Sonoran-Mojave black brush-white bursage desert scrub vegetation community. Soils are Renback-Rock land association with outcrop of very steep Badland exposed on the side slope of the cuesta (USGS 2020). The Renback-Rock land association is on convex mountain slopes composed of material weathered from sandstone, conglomerate, and shale. The typical profile of this well drained soil is: channery clay loam surface, very channery clay between 2 to 9 inches, very flaggy sandy loam 9 to 12 inches, and unweathered bedrock 12 to 16 inches.

Topography of the area generally slopes to the east and northeast. Ephemeral washes drain to the northeast towards the southeast trending Cove Wash, which flows towards the Sunbrook Golf Course, then eventually to the lower end of the Santa Clara River, which is approximately 2.5 miles to the east. The washes within the project area are ephemeral and only flow as result of a local precipitation event. There are no perennial water sources or riparian zones within the project area.

The exposed geologic formation of the South Hills is a cuesta of the Shinarump Conglomerate Member of the Chinle Formation. Parent material varies from a grayish-orange to moderate yellowish-brown, medium- to coarse-grained sandstone with locally well-developed limonite bands ("picture stone" or "landscape rock"), to a moderate-brown, pebbly conglomerate with surrounded clasts of quartz, quartzite, and chert. Weathering along major northeast-trending joints forms repeated straight, narrow gaps in the rock a few inches to several feet wide. Cove Wash is located roughly 1,700 to 600 feet north of the north parcel boundary. Cove Wash cuts through the Shinarump Sandstone exposing rocky "picture stone" ledges. The access road cuts across a low section of the Cove Wash ravine.

Box Canyon trends northeast to the confluence with Cove Wash at the western boundary of the Divaro development west of Sunbrook Golf Course. The upward thrust of the South Hills cuesta and erosion of the Lower Triassic Moenkopi Formation forms Box Canyon. The rocky ledges of Box Canyon expose 30-50 feet of the Shinarump Conglomerate Member of the Chinle Formation. The proposed gun range is just below the "rim" of the Shinarump on the Triassic aged deposits of the Upper Red Member of the Moenkopi Formation where in which stream-channel deposition is represented by a layer of conglomerate overlain by a sandstone ledge separated by a

few feet of brownish-gray to grayish-purple bentonitic shale, overlain with the slope-forming reddish-brown siltstone that forms the base of the Shinarump cliff (Hayden, 2011). Seasonal high magnitude storm events leave small vernal pools pocketed within the rocky washes and on the exposed picture stone slabs for a few days until they evaporate completely. Annual precipitation is 12 to 16 inches. Daytime temperature ranges from winter lows of 20° to summer highs of 112° F.

Photos of the subject site and survey findings are provided in Appendix D. Photo sites are plotted on Figure 4, Appendix A.

2 Methods

Alpine conducted a desktop review of project area including review of aerial photos and conducted database searches for special status species that may occur within the project region. The USFWS Information for Planning and Consultation (IPaC) is a project-planning tool that streamlines the USFWS environmental review process. This on-line tool was used to define a project area, query the USFWS central database for federally listed species, designated critical habitat, and migratory birds that may occur or be impacted by the project. This database search results in an official species list for this project from the USFWS. Those species identified are listed and discussed in Table 1 below. The IPaC report dated February 25, 2021 is provided in Appendix B.

The Utah Heritage Program Central Database was searched for special status species recorded within the 0.5-mile buffered project area and within a 2-mile radius on May 14, 2021 (Appendix C). This database includes records of occurrences of federal and state special status species. Species protected under ESA previously recorded within 0.5-mile radius of the project area include Mojave Desert tortoise (*Gopherus agassizii)* and Holmgren milkvetch (*Astraglus holmgreniorum).* The endangered species, bearclaw-poppy (*Arctomecon humilis)* has been previously recorded within the 2-mile radius of the project area.

The BLM and Alpine developed a biological survey method in accordance with the Mojave Desert Tortoise Survey Protocol (USFWS 2018) and the Species Survey Guidelines for Holmgren Milkvetch (USFWS 2011a). The proposed gun range is a 40-acre area within the 271-acre proposed RPP area. The access road is Stuck Springs Road from the Clary Hills and Gates Lane intersection south to the proposed RPP site. The access road and the 40-acre gun range area were buffered by 300 feet and pedestrian surveyed for 100% visual ground coverage for listed plant species and the Mojave Desert tortoise. The entire 271-acre RPP site was pedestrian surveyed for presence of the Mojave Desert tortoise.

Jill Hankins and Angela Averett, contracted biologists with Alpine Environmental Resources, and Kaylie Topham, student intern, conducted field survey on April 21 and 26 - 30, 2021. Seth Topham recorded the flowering stage of Holmgren milkvetch on April 15, 2021 at known populations west of the weigh station on I-15 and at known populations near Purgatory in Washington County. Known populations exhibited low numbers of flowing plants and smaller than average sized plants during the 2021 season. This is most likely due to below average annual precipitation.

Survey results are discussed in Section 3. Vegetation and wildlife identified during the survey are listed in Section 3, Tables 3 and 4, respectively.

2.1 Federal Endangered, Threatened, Candidate Species

There are a total of 8 threatened, endangered, or candidate species on the official species list for this project. Listed species, federal status, habitat requirements, suitable habitat within the project area, and potential impacts are summarized in Table 1 below. Jones Cycladenia was added to the table below as requested by Stephanie Taylor, BLM wildlife biologist.

TABLE 1: SPECIES PROTECTED UNDER ENDANGERED SPECIES ACT THAT COULD OCCUR IN THE PROJECT REGION

Species/Status	Species Habitat and Potential Habitat within the Project Area	Determination of Effect on Species and Designated Critical Habitat
Mexican Spotted Owl ***Strix occidentalis lucida*** Threatened	In Utah, Mexican spotted owls use canyon habitat with vertical rock walls, crevices, and ledges. Canyon habitat is usually associated with uneven-aged stands of mixed-conifer forests that have experienced minimal human disturbance. The following information outlines the Primary Constituent Elements (PCE) for the Mexican spotted owl as described in the Federal Register (69 FR 53211, August 31, 2004). PCEs related to forest structure include; (1) a range of tree species, including mixed conifer, pine-oak, and riparian forest types, composed of different tree sizes reflecting different ages of trees, 30 to 45 percent of which are large trees with a trunk diameter of 12 inches (0.3 meters) or more when measured at 4.5 feet (1.4 meters) from the ground; (2) a shade canopy created by the tree branches covering 40 percent or more of the ground; and (3) large dead trees (snags) with a trunk diameter of at least 12 inches (0.3 meters) when measured at 4.5 feet (1.4 meters) from the ground. PCEs related to maintenance of adequate prey species include: (1) high volumes of fallen trees and other woody debris; (2) a wide range of tree and plant species, including hardwoods; and (3) adequate levels of residual plant cover to maintain fruits, seeds, and allow plant regeneration. PCEs related to canyon habitat include one or more of the following: (1) presence of water (often providing cooler and often higher humidity than the surrounding areas); (2) clumps or stringers of mixed conifer, pine-oak, pinyon-juniper, and/ or riparian vegetation; (3) canyon wall containing crevices, ledges, or caves; and (4) high percent of ground litter and woody debris. The habitat within the project vicinity is not suitable nesting or foraging habitat for the Mexican spotted owl. Box Canyon is wide and lacks PCE (1) presence of water, (2) clumps or stringers of mixed conifer, pine-oak, pinyon juniper, and/or riparian vegetation (4) high percentage of ground litter and woody debris. Mexican spotted owls have not been recorded within 2-mile radius of the project area (Appendix C). The project area is not within Designated Critical Habitat.	No effect on species. No effect on designated critical habitat.

Species/Status	Species Habitat and Potential Habitat within the Project Area	Determination of Effect on Species and Designated Critical Habitat
	Currently, there is approximately 8.6 million acres of Designated Critical Habitat in Arizona, Colorado, New Mexico, and Utah.	
Southwestern Willow Flycatcher ***Empidonax traillii extimus*** Endangered	The southwestern willow flycatcher is a riparian obligate species, nesting in dense clumps of willow or shrubs with similar structure (alder, some tamarisk) along low-gradient streams, wetlands, beaver ponds, wet meadows, and rivers. The following elements are the PCEs specific to the southwestern willow flycatcher as outlined in the 2011 proposed designated critical habitat rule (76 FR 50541). PCE 1 – Riparian Vegetation: Riparian habitat in a dynamic river or lakeside, natural or manmade successional environment comprised of trees and shrubs and some combination of (a) dense riparian vegetation with thickets of trees and shrubs that can range in height from about 6 to 98 feet tall. Lower-stature thickets (6 to 13 feet tall) are found at higher elevation riparian forests and tall-stature thickets are found at middle-and lower elevation riparian forests; and/or (b) areas of dense riparian foliage at least from the ground level up to approximately 13 feet above ground or dense foliage only at the shrub or tree level as a low dense canopy; and/or (c) sites for nesting that contain a dense (50 to 100%) tree or shrub canopy; and/or (d) dense patches of riparian forests that are interspersed with small openings of open water or marsh or areas with shorter and sparser vegetation that creates a variety of habitat that is not uniformly dense. Patch size may be as small 0.25 acres or as large as 175 acres. PCE 2 – Insect Prey Populations: A variety of insect prey populations found within or adjacent to riparian floodplains or moist environments, which can include; flying ants, wasps, and bees (*Hymenoptera*); dragonflies (*Odonata*); flies (*Diptera*); true bugs (*Hemiptera*); beetles (Coleoptera); butterflies, moths, and caterpillars (*Lepidoptera*); and spittlebugs (*Homoptera*). The project area lacks PCE 1; there is no suitable nesting SWFL habitat within the project area or anywhere along the Santa Clara River throughout Santa Clara City. Riparian vegetation in this area is a very narrow band of spaced cottonwood and tamarisk trees with upland shrub understory. No nesting SWFL have been recorded along the Santa Clara River riparian habitat. Nesting season in Washington County is May 20 through August 31. The project area also lacks PCE 2 – Insect prey populations. SWFL have not been recorded within a 2-mile radius of the project area (Appendix B) Designated Critical Habitat includes the 100-year floodplain of the Virgin River mainstream between Berry Springs (the northern extent of the Designated Critical Habitat) and the Washington Fields Diversion (southern extent). This is more than 8 air miles from the project area.	No effect on species. No effect on designated critical habitat.

Species/Status	Species Habitat and Potential Habitat within the Project Area	Determination of Effect on Species and Designated Critical Habitat
Western Yellow-Billed Cuckoo ***Coccyzus americanus occidentalis*** Threatened	The western yellow-billed cuckoo requires dense, deciduous riparian forest for breeding. Suitable breeding habitat is not available in the project area. As outlined in the Federal Register (79 FR 48547) the PCEs specific to the western yellow-billed cuckoo are: PCE 1 – Riparian Woodlands: Riparian woodlands with mixed willow-cottonwood vegetation, mesquite-thorn-forest vegetation, or a combination of these that contain habitat for nesting and foraging in contiguous or nearly contiguous patches that are greater than 325 feet in width and 200 acres or more in extent. These habitat patches contain one or more nesting groves, which are generally willow-dominated, have above average canopy closure (greater than 70 percent), and have a cooler, more humid environment than the surrounding riparian and upland habitats. PCE 2 – Adequate Prey Base: Presence of a prey base consisting of large insect fauna and tree frogs for adults and young in breeding areas during the nesting season and in post-breeding dispersal areas. PCE 3 – Dynamic Riverine Processes: River systems that are dynamic and provide hydrologic processes that encourage sediment movement and deposits that allow seedling germination and promote plant growth, maintenance, health, and vigor. This allows habitat to regenerate at regular intervals, leading riparian vegetation with vigorously aged patches from young to old. In Washington County, yellow-billed cuckoos are only known to occur as rare summer visitors. The riparian zones throughout Washington County are directly impacted by water diversions from the rivers, agricultural use of the 100-year floodplain, tree harvesting, bank armoring, and non-native species invasion. The UDWR have no recent records of yellow-billed cuckoo nesting in the project vicinity. Under the current conditions, the Santa Clara River riparian zone in the project region lacks dense tract of regenerating riparian vegetation with mature cottonwoods and willows with high productivity of prey species. The project area lacks PCE 1, riparian woodlands of adequate size and canopy closure. Patches of riparian trees with a closed riparian canopy cover do not currently meet the minimum width requirement of 100 meters or the minimum patch requirement of 12 acres. The Santa Clara River is more than 1 air mile from the project area. Currently there is no Proposed Designated Critical Habitat in Washington County.	No effect on species. No effect on proposed designated critical habitat.

Species/Status	Species Habitat and Potential Habitat within the Project Area	Determination of Effect on Species and Designated Critical Habitat
Desert Tortoise ***Gopherus agassizii*** Threatened	The project area is within the Upper Virgin River Recovery Unit as delineated in the 2011 Recovery Plan (USFWS 2011b). This Recovery Unit includes all tortoise habitats within Washington County, Utah, east of the Beaver Dam Mountains. The Upper Virgin River designated critical habitat unit and the Washington County's Red Cliffs Desert Reserve (roughly 62,000 acres) are within this recovery unit. Recently, January 2021, the Washington County Habitat Conservation Plan, the Red Cliffs National Conservation Area Resource Management Plan, and the St. George Field Office Resource Management Plan were amended to permit the Northern Corridor located within the Red Cliffs Desert Preserve. As result, Zone 6 (roughly 6,813 acres) was established for desert tortoise habitat conservation. Zone 6 abuts and is directly south of the project area. State Institutional Trust Land Administration (SITLA) and private lands within Zone 6 will be acquired and managed in partnership with the Washington County HCP Administration and the BLM under the provisions of the Amended St. George Resource Management Plan for desert tortoise habitat conservation. Threats to the species within this recovery unit include loss of habitat due to urbanization, habitat fragmentation, increased wildfire frequency and intensity due to non-native invasive vegetation particularly *Bromus rubens*, *Erodium cicutarium, Schismus barbatus,* and *Salsola tragus.* Desert tortoises in this recovery unit inhabit complex topography consisting of canyons, mesa, sand dunes, and sandstone outcrops where the vegetation is a transitional mixture of sagebrush, creosote bush, blackbrush, and sandy soil community. Desert tortoises often use sandstone and lava caves instead of burrows, travel to sand dunes for egg laying, and use other habitats for foraging. Alpine Biologists completed a project area survey for desert tortoise on April 21st and the 26th - 30th, 2021. The 300 feet buffered access road and the 271-acre proposed RPP site were pedestrian surveyed for tortoise presence. During the survey event 11 live tortoise were recorded, many active and inactive burrows, tortoise shell, egg shell, bone fragments, and scat were recorded, plotted on Figure 3, and photographed. The proposed RPP area is suitable occupied habitat for the Mojave desert tortoise.	May affect, Likely to Adversely Affect the Mojave Desert tortoise. No Effect on the Mojave Desert tortoise designated critical habitat.
Holmgren Milkvetch ***Astragalus holmgreniorum***	Holmgren milkvetch is a member of the pea family, this species grows close to the ground and is a herbaceous, non-woody perennial that produces small purple flowers in the spring (April – May), and dies back to the root crown after the flowering season. The plants pinnately compound leaves arise directly from the root	No effect on the species. May effect, Not Likely

Species/Status	Species Habitat and Potential Habitat within the Project Area	Determination of Effect on Species and Designated Critical Habitat
Endangered	crown. Holmgren milkvetch is only found on shallow, sparsely vegetated soils derived from the Virgin Limestone and the Shnabkaib Member of the Moenkopi Formation. Outcrops of these geologic formations are not found within the project area. The 300-feet buffered proposed gun range area and the access route was surveyed for Holmgren milkvetch individuals and suitable habitat by Alpine biologists on April 21st and April 26th through 30th, 2021. No individual plants were recorded during the survey. During the same survey event, the greater 271-acre proposed RPP site was pedestrian surveyed for tortoise. No Holmgren Milkvetch were recorded during the tortoise survey as well. Approximately 12.5-acres of the proposed RPP site overlaps the Holmgren Milkvetch designated critical habitat (71 FR 77972-78012). The BLM has closely mirrored the designated critical habitat for this species with an overlay designation of the Stucki Spring Area of Critical Environmental Concern (ACEC) on BLM administered land. The proposed RPP site should be adjusted to avoid the ACEC and designated critical habitat.	to Adversely Affect Designated Critical Habitat
Jones Cycladenia ***Cycladenia humilis var. jonesii*** Endangered	Jones cycladenia is a long-lived herbaceous perennial in the Dogbane family; it grows 4 to 6 inches tall. It occurs between 4,390 to 6,000 feet msl in plant communities of mixed desert scrub, juniper, or wild buckwheat-Mormon tea. It is found on gypsiferous, saline soils of Cutler, Summerville, or Chinle Formations. It has orbicular, wide-oval or elliptical leaves and produces pink or rose-colored, trumpet shaped flowers that resemble small morning glories from mid-April to early June. In Utah, this plant is found near Castle Dale, Capital Reef, and in Kane County. The project area is lower in elevation than this species is known to occur. In addition, the geologic formations of known habitat are not within the project area.	No effect on the species. No critical habitat has been designated for this species.
Shivwits (Hermit) Milkvetch ***Astragalus ampullarioides*** Endangered	The hermit milkvetch grows on the unstable clay soil of the Chinle Shale Formation in warm desert shrub and pinyon-juniper communities at elevations ranging from 2,860 to 3,660 feet in Washington County, Utah. Suitable habitat is available in the greater project region; suitable soils of the Chinle Formation were not found within the project area. No individuals were discovered during survey. The project area is not within the designated critical habitat (71 FR 77972-78012).	No effect on the species. No effect of designated critical habitat.

Species/Status	Species Habitat and Potential Habitat within the Project Area	Determination of Effect on Species and Designated Critical Habitat
Dwarf bear-poppy (*Arctomecon humilis)* Endangered	The dwarf bear-poppy is a perennial herb in the poppy family. Plants form rounded clumps and are up to 10 inches tall. Leaves are basal, gray-green in color, have shaggy hairs, and are deeply 3-toothed at the tip. The genus name *Arctomecon* is based on the bear paw-like appearance of the leaves. The short leafy stems are 1-6 inches tall. Due to the short stems, the white flowers appear to float above the cluster of leaves, accentuating the plant's low stature. The flowers typically only have 4 petals that are up to 1.5 inches long. Plants flow from April to May, with the peak of flowering generally occurring in early May. Large plants may produce as many as 400 flowers. The dwarf bear-poppy is similar to the desert bear-poppy (*Arctomecon merriamii),* which occurs in Nevada and California. Dwarf bear-poppy is generally smaller in stature, is more clump forming, less hairy, and has smaller flowers. The dwarf bear-poppy is restricted to "badlands" soil types belonging to several members of one geological formation, the Moenkopi Formation. It typically occurs on rolling hills with sparse vegetation within mixed warm desert shrub communities. Associated species include Mormon tea, Fremont pepperweed, cheesebush, shadscale, and shrubby buckwheat. It occurs on highly erosive, gypsum-rich soils at 2,700 to 3,300 feet in elevation. The Red Bluff ACEC is 6,168 acres; this area is southwest of the proposed RPP parcel. This ACEC contains erodible saline soils suitable for the dwarf bear-poppy. Roughly 0.26-acres of the proposed RPP parcel overlaps the ACEC boundary along the southern parcel line. The proposed RPP boundary would most likely be amended to avoid the ACEC.	No effect on the species. No critical habitat has been designated for this species.
Siler Pincushion Cactus (*Pediocactus Sileri)* Threatened	Siler pincushion cactus grows on gypsiferous clay and sandy soils derived from the Moenkopi Formation. The majority of the plants are associated with the Shnabkaib Member of this particular formation. The Shnabkaib Member is composed of 65 percent siltstone 25 percent gypsum, and 10 percent limestone and dolomite. Siler pincushion cacti are also found scattered on the Middle Red Member of the formation, which is a reddish siltstone with thin to thick layers of gypsum. The cacti are found growing on elevations between 2,800 and 5,400 feet, in the Great Basin Desert Shrub community.	No effect on the species. No critical habitat has been designated for this species.

2.2 BLM Sensitive Species

BLM listed sensitive species that could occur within the project region, their habitat requirements, suitability of habitat within the project area, and potential project impact analysis are listed and discussed in Table 2 below. Species protected under ESA, as discussed in the previous section, and fish species known to occur in the Santa Clara River are excluded from the table, as the project would have no effect on the Santa Clara River.

TABLE 2: BLM SENSITIVE SPECIES THAT COULD OCCUR IN THE PROJECT REGION

Species	Habitat	Suitable Habitat within Project Area	Potential Impact to Species
Arizona toad (*Bufo microscaphus*)	Occur along rocky streams, flooded fields, and reservoirs. Lay eggs in shallow quiet waters (Perennial or permanent). Hibernate during cold season (Sullivan 2005).	None	None
Great plains toad (*Bufo cognatus*)	Occur along rocky streams, flooded fields, and reservoirs. Lay eggs in shallow quiet waters (Perennial or permanent). Hibernate during cold season (Sullivan 2005).	None	None
Bald eagle (*Haliaeetus leucocephalus*)	Occasional winter foraging occurrences. No known roost sites within 2 air miles of the project area.	No suitable nesting or roosting sites within the project area.	None
Burrowing owl (*Athene cunicularia)*	Nest in ground burrows usually made by another mammal (prairie dog, badger) in open grasslands and prairies will use agricultural fields, ditch banks, golf courses, and cemeteries (UDWR 2020).	Suitable habitat within project area. All burrows encountered during the survey were examined for signs of burrowing owls. No active owl burrows or evidence of burrowing owls were discovered during the site survey April 26-30, 2021.	The proposed gun range would cause new surface occupancy and noise disturbance to the extent that the habitat present in the immediate area would no longer be suitable for burrowing owls.
Ferruginous hawk (*Buteo regalis*)	Forages and nests in pinyon-juniper woodlands in Southern Utah (UDWR 2020).	No suitable nesting habitat within the Project Area. Two Red-tailed hawks were noted over head during the survey. Typically red-tailed hawks and ferruginous hawks do not share foraging territory.	None
Allen's big-eared bat (*Idionycteris phyllotis*)	Habitat is primarily mountainous wooded	Bats and myotis' of many species are known to	The proposed gun range would not impact the

	areas but also includes riparian woodland and ranges from Mojave desert scrub to white fir forests. Typically this bat is found near rocks, cliffs, and volcanic boulders. It is frequently netted along streams or over ponds. Utilizes mine shafts, caves, and crevices for maternity roosts.	occur in the project region. The uplifted rocky ledges above Box Canyon form the southwestern project area boundary. These rocky ledges with high vertical relief from the valley floor to the south are suitable roost sites for bats. And, the ponds at nearby Sunbrook Golf Course provide water bodies with sufficient surface area for drinking within reasonable proximity to potential roost sites.	rocky ledges of Box Canyon. The proposed action would not have direct adverse impact to potentially suitable roost sites for bats, therefore no direct adverse impacts on bat species is anticipated. Species identification surveys were not conducted.
Big free-tailed bat (*Nyctinomops macrotis*)	Roost in crevices in high cliffs and rocky outcrops. Prefers rugged rocky canyon (Corbett 2008).	Bats and myotis' of many species are known to occur in the project region. The uplifted rocky ledges above Box Canyon form the southwestern project area boundary. These rocky ledges with high vertical relief from the valley floor to the south are suitable roost sites for bats. And, the ponds at nearby Sunbrook Golf Course provide water bodies with sufficient surface area for drinking within reasonable proximity to potential roost sites.	The proposed gun range would not impact the rocky ledges of Box Canyon. The proposed action would not have direct adverse impact to potentially suitable roost sites for bats, therefore no direct adverse impacts on bat species is anticipated. Species identification surveys were not conducted.
Fringed myotis (*Myotis thysanodes*)	Roost in caves, mines, and buildings in pinyon pine and fir forest (Barbour 1969).	No typical roost sites within the project area.	None
Spotted bat (*Euderma maculatum*)	Typically roost in rock cracks and crevices near water. Prefer Ponderosa pine woodlands, will utilize pinyon-juniper woodlands (Barbour 1969).	No typical roost sites within the project area.	None
Western red bat (*Lasiurus blossevillii*)	Solitary roosting in riparian, broad-leafed trees (Snow 1996).	No typical roost sites within the project area.	None
Townsend's big-eared bat (*Corynorhinus townsendii*)	Typically prefer caves and mines as roost sites.	No typical roost sites within the project area.	None

	Seasonal migrations in elevation to find suitable hibernacula. Foraging occurs over many types of habitats including pinyon-juniper woodlands at forest edge (Rodriguez 2012).		
Zebra-tailed lizard (*Callisaurus draconoides*)	Flatland desert scrub communities within the Sonoran, Mojave, and Chihuahuan Deserts. Usually encountered in areas with sandy soil and plenty of open space to run. Fast runners. Heat tolerant, diurnal lizard is active during mid-day when temperatures are high. Diet consists of bees, insects, caterpillars, beetles, ants, smaller lizards, sometimes plants (Brennan 2006).	Suitable habitat is within the project area. However, no individuals were recorded during the survey.	The proposed gun range would cause surface disturbance of approximately 40-acres of potentially suitable habitat. However, occurrence of this species is not generally anticipated in the project vicinity.
Western banded gecko (*Coleonyx variegatus*)	Rare. Occurs in southwestern Utah, Nevada, and AZ. Inhabits desert scrub communities, including extremely dry, wind blown sand dunes and creosote bush flats, rugged rocky slopes and hillsides and barren high desert plateaus. Primarily eats insects, grasshoppers, termites, spiders (Brennan 2006).	Suitable habitat is within the project area. However, no individuals were recorded during the survey.	Rare occurrence of this species within the project area is possible. The proposed gun range would cause surface disturbance of approximately 40-acres of potentially suitable habitat. Noise disturbance from gunfire during hours of use would exceed beyond the surface disturbance area and continue long term over the operational use of the gun range.
Gila monster (*Heloderma suspectum*)	Occurs in southwestern Utah, uses large rocky shelves, sandy areas, and creosote-sagebrush areas. Primary diet is eggs of lizards, snakes, and birds (UDWR 2020).	Suitable habitat is found along rocky ledges exposed in the ephemeral washes and ravines. Exposed sandstone slabs with pocketed vernal pools are important water sources for the Gila monster. No individuals were recorded during the site survey.	Rare occurrence of this species within the project area is possible. The proposed gun range would cause surface occupancy of approximately 40-acres of suitable habitat. Some rocky ledges could be overturned or disrupted during construction. Noise disturbance from

			gunfire during hours of use would exceed beyond the surface occupancy area and continue long term over the operational use of the gun range.
Chuckwalla (*Sauromalus ater)*	Found near cliffs, boulders, or rocky slopes. Often seen basking on rocks or in rock crevices. Primary diet is plants, sometimes insects (UDWR 2020).	Suitable habitat is within the project area, particularly along the rocky ledges exposed in the ephemeral washes and ravines. Exposed sandstone slabs with pocketed vernal pools are important water sources for the chuckwalla. One individual was recorded in the rock outcrop near Cove Wash along the access road.	Regular to occasional occurrence of this species within the project area is possible. The proposed gun range would cause surface occupancy of approximately 40-acres of suitable habitat. Some rocky ledges could be overturned or disrupted during construction. Noise disturbance from gunfire during hours of use would exceed beyond the surface occupancy area and continue long term over the operational use of the gun range.
Desert night lizard (*Xantusia vigilis*)	Rare. Occurs in southwestern and southeastern corners of Utah, Mojave Desert. Elusive, hides under desert vegetation. Recorded under limbs of Joshua trees. Primary diet is insects and other small invertebrates (UDWR 2020).	Potentially suitable habitat. No Joshua trees are within the project area. No individuals were recorded during the site survey.	Potential occurrence of this species within the project area. The proposed gun range would cause surface occupancy of approximately 40-acres.
Sidewinder (*Crotalus cerastes)*	Occur in southwestern US and Northern Mexico, in Utah this species only occurs in the Mojave Desert region. Prefers sandy open terrain. Mostly nocturnal, avoiding extreme heat of the day. Females give birth to live young. Eats small mammals, lizards, other snakes, and birds (UDWR 2020).	Suitable habitat under rocky ledges within the ephemeral washes adjacent to the project area.	Potential occurrence of this species within the project area. The proposed gun range would cause surface occupancy and long-term loss of approximately 40-acres of suitable habitat.
Speckled rattlesnake (*Crotalus mitchellii*)	Native to Southwestern US and Mexico, in Utah	Suitable den habitat under rocky ledges within the	Potential occurrence of this species within the

	this species only occurs in the Mojave Desert region. Prefers rocky desert habitat, often dens with other rattlesnakes. Females give birth to live young. Eats lizards, birds, and small mammals.	project area.	project area. The proposed gun range would cause surface occupancy and long-term loss of approximately 40-acres of suitable habitat.
Mojave rattlesnake (*Crotalus scutulatus*)	Occurs in extreme southwestern Utah. Females are live bearing, and give birth to as many as seventeen young during late summer. Diet consists of small mammals, lizards, snakes (UDWR 2020).	Suitable den habitat under rocky ledges within the project area.	Potential occurrence of this species within the project area. The proposed gun range would cause surface occupancy and long-term loss of approximately 40-acres of suitable habitat.
Western threadsnake (*Leptotyphlops humilis*)	Native to Southwestern US, in Utah only recorded in Washington County. A secretive burrowing species, often living in moist loose soil. Nocturnal, with eyes that no longer function. Eats small insects, spiders, centipedes, and insect larvae.	Suitable den habitat under rocky ledges within the project area.	Potential occurrence of this species within the project area. The proposed gun range would cause surface occupancy and long-term loss of approximately 40-acres of suitable habitat.

3 Findings

3.1 Vegetation Survey Results

Dominant desert shrubs within the project area include blackbrush (*Coleogyne ramossissima*), white bursage (*Ambrosia dumosa*), Indigo bush (*Psorothamnus fremontii*), Mormon tea (*Ephedra* spp.), California buckwheat (*Eriogonum fasciculatum*), and Virgin River brittlebush *(Encelia virginensis)*. There are little to no invasive species within the study area likely due to the limited access and desert pavement. The site is mostly fenced; access from the east is limited to foot access and the Box Canyon cliff face limits access from the south. The desert pavement consisting of red clay, chert, conglomerate and sandstone gravels limit the invasion of cheat grass, which is of consequential concern on southwestern deserts. Cheat grass invasion, result of historic grazing and climate change, has caused noteworthy changes to the natural wildfire regime. The study area has not experienced disturbance pressure of grazing, OHV, illegal dumping, and wildfire that is typical on public lands at the private/public front zone; it is relatively undisturbed. The access road (Stucki Springs Road) has sections of bedrock that are not suitable for anything less than high clearance 4-wheel drive vehicles.

Individuals or populations of Holmgren milkvetch, Jones cycladenia, Siler pincushion cactus, Shivwhits milkvetch, and dwarf bear-poppy were not encountered during the biological survey.

Table 3 below contains a list of the plant species identified during the survey of the project area and vicinity.

TABLE 3: PLANT SPECIES RECORDED DURING SURVEY OF THE PROJECT AREA

Common Name (*Scientific Name)*
burrow- bush *(Ambrosia dumosa)*
Desert broom (*Baccharis sarothroides)*
desert marigold *(Baileya multiradiata)*
cheatgrass *(Bromus tectorum)*
Mariposa lilly *(Calochortus flexuosus)*
Desert paintbrush *(Castilleja angustifoloa)*
rattlesnake weed *(Chamaesyce albomarginata)*
yellow rabbitbrush *(Chrysothamnus viscidiflorus)*
black brush *(Coleogyne ramosissima)*
hedge-hog cactus *(Echinocereus engelmannii)*
Virgin River brittlebush *(Encelia virginensis)*
green ephedra *(Ephedra viridis)*
Mormon tea *(Ephedra nevadensis)*
buckwheat *(Eriogonum deflexum)*
desert trumpet *(Eriogonum inflatum)*
California buckwheat (*Eriogonum fasciculatum*)
fluff grass *(Erioneuron pulchellum)*
Storks bill (*Erodium cicutarium*)
shy gilia *(Gilia opthalmoides)*
hopsage *(Grayia spinosa)*
broom snakeweed *(Gutierrezia sarothrae)*
halogeton *(Halogeton glomeratus)*
Narrowleaf goldenbush (*Haplopappus linearifolius*)
Cheese bush (*Hymenoclea salsola*)
ratany *(Krameria parvifolia)*
creosote bush *(Larrea tridentata)*
desert pepperweed *(Lepidium fremontii)*
many-spined fish hook *(Mammillaria tetrancistra)*
giant four o'clock *(Mirabilis multiflora)*
wishbone-bush *(Mirabills laevis)*
coyote tobacco *(Nicotiana obtusifolia)*
beaver tail cactus *(Opuntia basilaris)*
brown spined prickley pear *(Opuntia phaeacantha)*
golden cholla *(Opuntia echinocarpa)*
notch -leaved phacelia *(Phacelia crenulata)*
Mesquite (*Prosopis spp*.)
desert almond *(Prunus fasciculata)*
Indigo bush (*Psorothamnus fremontii*)

Common Name (*Scientific Name)*
desert sage *(Salvia dorrii)*
Chia (*Salvia columbariae*)
Baddersage (*Scutellaria Mexicana*)
desert globemallow *(Sphaeralcea ambigua)*
Princes plume (*Stanleya pinnata*)
Wire lettuce (*Stephanomeria pauciflora*)
Tamarisk *(Tamarix ramosissima)*

3.2 Wildlife Survey Results

The subject site received considerable precipitation on April 26th and during the night and morning of April 27th, just prior to the survey. The local rains after a long dry spell and the ambient air temperatures were ideal for springtime tortoise activity. Surveyors encountered 11 live tortoises during the survey event. Active and inactive burrows, tortoise bone and shell fragments, and scat were GPS mapped across the study area. GPS plotted findings are indicated on Figures 5 – 6 in Appendix A.

The project vicinity was also surveyed for raptor and migratory bird suitable habitat. The project area was buffered by 0.5-mile for visual inspection for raptors and migratory birds, nests, and potential nesting sites. The southern parcel boundary is the upper ledge of Box Canyon. This rocky ledge with the 100 feet of vertical relief to the south is suitable nest habitat for raptors, potentially peregrine falcon, red-tailed hawk, golden eagle, great-horned owl, barn owl, or possibly western screech owl. This ridge was scanned with binoculars from the top for raptor nests. No raptor nests were discovered within the buffered project vicinity. A red-tailed hawk was noted souring over the desert south of the project area on 2 of the six survey days. Many cliff swallows were noted during the survey. The cliff swallows most likely use the rocky ledge of Box Canyon for nest sites. Common nighthawks are ground nesters; two were flushed during the survey event.

Black chinned sparrows foraging the desert shrubs were recorded during survey. Black chinned sparrows are migratory, wintering near the US Mexico border, typical breeding season in southern Utah is April 15 - July 15. Black chinned sparrows often nest on steep hillsides covered with dense low shrubs. Their nest is typically a shallow open cup made of dry grass in a low shrub. If clearing of desert shrubs during the breeding season, April 15 – July 15, is required for construction, then a nest search should be conducted prior to clearing by a qualified biologist. If a nest with eggs is discovered it should be avoided until young have fledged.

The following animals were observed within, flying over, or directly adjacent to the project area:

TABLE 4: ANIMALS OBSERVED DURING SURVEY OF THE PROJECT AREA

Common Name	**Scientific Name**	**Abundance and Status Code**
Black chinned sparrow	*Spizella atrogularis*	*US**
Rock wren	*Salpinctes obsoletus*	*CP**
Western wood-pewee	*Contopus sordidulus*	*CS**
Common Raven	*Corvus corax*	*CP**
Red-tailed hawk	*Buteo jamaicensis*	*CP**
Cliff swallow	*Petrochelidon pyrrhonota*	*CS**

Common Name	Scientific Name	Abundance and Status Code
Turkey vulture	*Cathartes aura*	*CS**
Common Nighthawk	*Chordeiles minor*	*RS**
Black-chinned hummingbird	*Archilochus alexandri*	*CS**
Mojave Desert tortoise	*Gopherus agassizii*	*Threatened/Occasional*
Coyote (scat)	*Canis latrans*	*Common*
Black-tailed jack rabbit	*Lepus californicus*	*Common*
Antelope ground squirrel	*Ammospermophilus leucurus*	*Common*
Kangaroo rat	*Dipodomys ordii*	*Common*
Mule deer (scat)	*Odocoileus hemionus*	*Common*
Chuckwalla	*Sauromalus ater*	*State sensitive/Occasional*
Desert horned lizard	*Phrynosoma platyrhinos*	*Common*
Desert collard lizard	*Crotaphytidae bicinctores*	*Common*
Desert spiny lizard	*Sceloporus magister*	*Common*
Side-blotched lizard	*Uta stansburiana*	*Common*
Western whiptail	*Cnemidophorus tigris*	*Common*

*2008 Birds of Washington County, Utah compiled by Rick Fridell, Wildlife Biologist, Utah Division of Wildlife Resources, and Kristen Comella, Wildlife Biologist, Utah Division of Parks and Recreation, Snow Canyon State Park.
C = Common, U = Uncommon, P= Permanent, S = Summer, W = Winter

4 Conclusion

No listed special status plant species were recorded within the surveyed area. The proposed gun range area is within the Upper Member of the Moenkopi Formation; however no Holmgren milkvetch were discovered during the survey event. The greater RPP area is mostly the Shinarump Conglomerate Member of the Chinle Formation. This cap rock is somewhat resistant to weathering and deeper soils of the Moenkopi are only exposed at the proposed gun range but not across the entire RPP area.

The project region is suitable habitat for the Mojave Desert tortoise. The project area is north of and adjacent to Zone 6, a 6,813-acre area of land recently added to the Red Cliff Desert Reserve for preservation and management under the provisions of the Washington County Habitat Conservation Plan as shown on Figure 2, Appendix A. Biologists recorded 11 live tortoises during the survey on April 26-30, 2021. Observations included tortoise within each age group including a recently hatched tortoise, two juvenile, two young adults, five older adults, and an older male (actively mating). Many active burrows were recorded. Some of the burrows were well developed and appeared to have been used for many years. Most of the burrows were recorded along the large blocky, pale yellow to brown sandstone slabs exposed along the northeast trending ravines. Fresh and dried scat was observed and recorded across the entire study area.

The greater 271-acre proposed RPP area buffers the proposed 40-acre gun range. Proposed surface disturbance is within the 40-acre gun range only. Only one tortoise, a hatchling, was recorded within the proposed 40-acre gun range and no burrows were recorded within the gun range area. It appears that tortoise forage across the lower Moenkopi formation as scat was observed across the entire site and tortoise forage species (rattlesnake weed,

desert marigold) are common. However the upper Shinarump formation perhaps provides more suitable habitat for den sites, cover shade, and vernal pools after rain events.

Table 5 below listed special status species and the recommended effects determination on each species and it's designated critical habitat based upon this survey. See Table 1 for rational.

TABLE 5: RECOMMENDATION OF EFFECT ON SPECIAL STATUS SPECIES AND DESIGNATED CRITICAL HABITAT

Species/Status	**Recommendation of Effect on Species and Designated Critical Habitat**
Mexican Spotted Owl (***Strix occidentalis lucida)*** Threatened	No Effect on the species No Effect on designated critical habitat
Southwestern Willow Flycatcher (***Empidonax traillii extimus)*** Endangered	No effect on species No effect on designated critical habitat.
Western Yellow-Billed Cuckoo (***Coccyzus americanus occidentalis)*** Threatened	No effect on species. No effect on proposed designated critical habitat.
Desert Tortoise (***Gopherus agassizii)*** Threatened	May affect, Likely to Adversely Affect the Mojave Desert tortoise. No Effect on the Mojave Desert tortoise designated critical habitat.
Holmgren Milkvetch (***Astragalus holmgreniorum)*** Endangered	No effect on the species. May effect, Not Likely to Adversely Affect Designated Critical Habitat
Jones Cycladenia (***Cycladenia humilis var. jonesii)*** Endangered	No effect on the species. No critical habitat has been designated for this species.
Shivwits (Hermit) Milkvetch (***Astragalus ampullarioides)*** Endangered	No effect on the species. No effect of designated critical habitat.
Dwarf bear-poppy (*Arctomecon humilis)* Endangered	No effect on the species. No critical habitat has been designated for this species.

References

Barbour, R. W., and W. H. Davis. 1969. *Bats of America*. University Press of Kentucky, Lexington. 286 pp.

Brennan, T.C., & A. T. Holy cross. 2006. *A field Guide to Amphibians and Reptiles in Arizona*. Arizona Game and Fish Department. Phoenix, AZ

Corbett, R.J.M., C.L. Chambers, and M.J. Herder. 2008. *Roost and activity areas of Nyctinomops macrotis in northern Arizona. Acta Chiroperologica* 10(2): 323-329.

Hayden, J. M. 2011. Geologic Map of the White Hills Quadrangle, Washington County, Utah. M-250dm. Utah Geological Survey 1:24,000 scale.

Rodrigez, R. 2012. *Life History and Analysis of Endangered, Threatened, Candidate, Sensitive, and Management Indicator Species of the Dixie National Forest*.

Snow, T. 1996 Western Red Bat, non-game field notes.
http://www.azgfd.gov/i_e/ee/resources/field_notes/mam/western_red_bat.pdf

Sullivan, B.K. 2005. Southwestern Desert Bufonids. Pages 237-240 in M.J. Lannoo (ed), Amphibian Declines: The Conservation Status of United States Species. University of California Press, Berkeley. CA

US Geological Survey (USGS), GAP/LANDFIRE National Terrestrial Ecosystems. 2011. National Land Cover, Version 2.

US Geological Survey (USGS). 2019. Web Soil Survey of Washington County, Utah. September 16,2019.

Utah Division of Wildlife Resources (UDWR). 2017. Utah Sensitive Species List. Accessed March 30, 2020 https://dwrcdc.nr.utah.gov/ucdc/ViewReports/SSL_Appendices.pdf

Utah Division of Wildlife Resources (UDWR). 2020. Utah Conservation Data Center. Utah Species Information Accessed April 14, 2020. https://dwrcdc.nr.utah.gov/ucdc/default.asp

US Fish and Wildlife Service (USFWS). 2011a. *Utah Field Office Guidelines for Conducting and Reporting Botanical Inventories and Monitoring of Federally Listed, Proposed and Candidate Plants*. USFWS Ecological Services Field Office, West Valley City, Utah. Publication Date August 31, 2011.

US Fish and Wildlife Service (USFWS). 2011b. *Revised Recovery Plan for the Mojave Population of the Desert Tortoise* (*Gopherus agassizzii).* USFWS, California and Nevada Region, Sacramento, California. 209 pp.

US Fish and Wildlife Service (USFWS). 2018. *Preparing for any action that may occur within the range of the Mojave Desert tortoise (Gopherus agassizzii).* Species Survey Guidelines – Mojave Desert Tortoise.

Appendix A –

Figure 1: General Project Location

Figure 2: Proposed Recreation and Public Purpose Grant

Figure 3: Proposed Gun Range

Figure 4: Photo Points

Figure 5: Tortoise Survey Results

Figure 6: Tortoise Movement Results

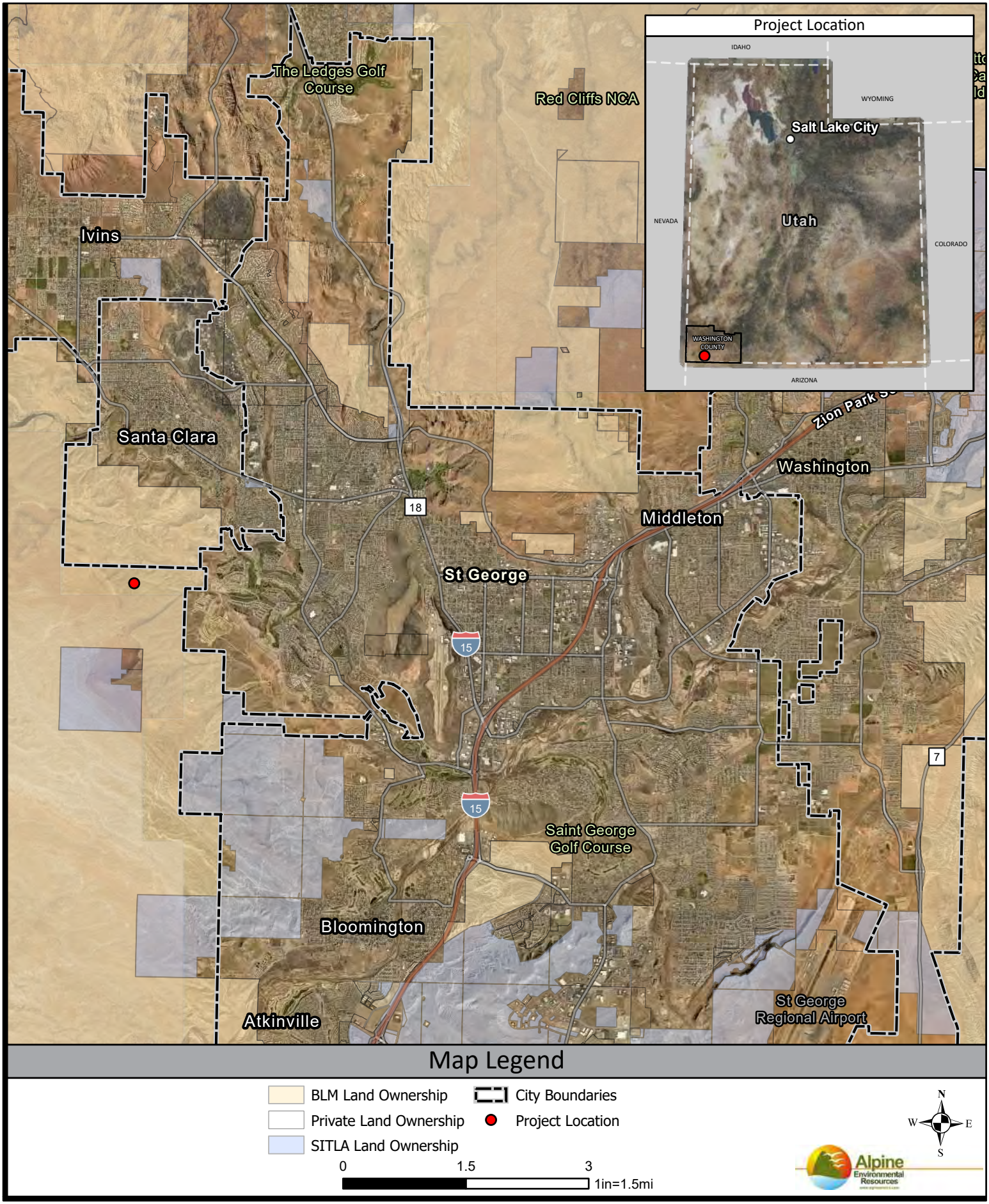


Figure 1: General Project Location

Updated 6/11/2021

SUNRISE ENGINEERING

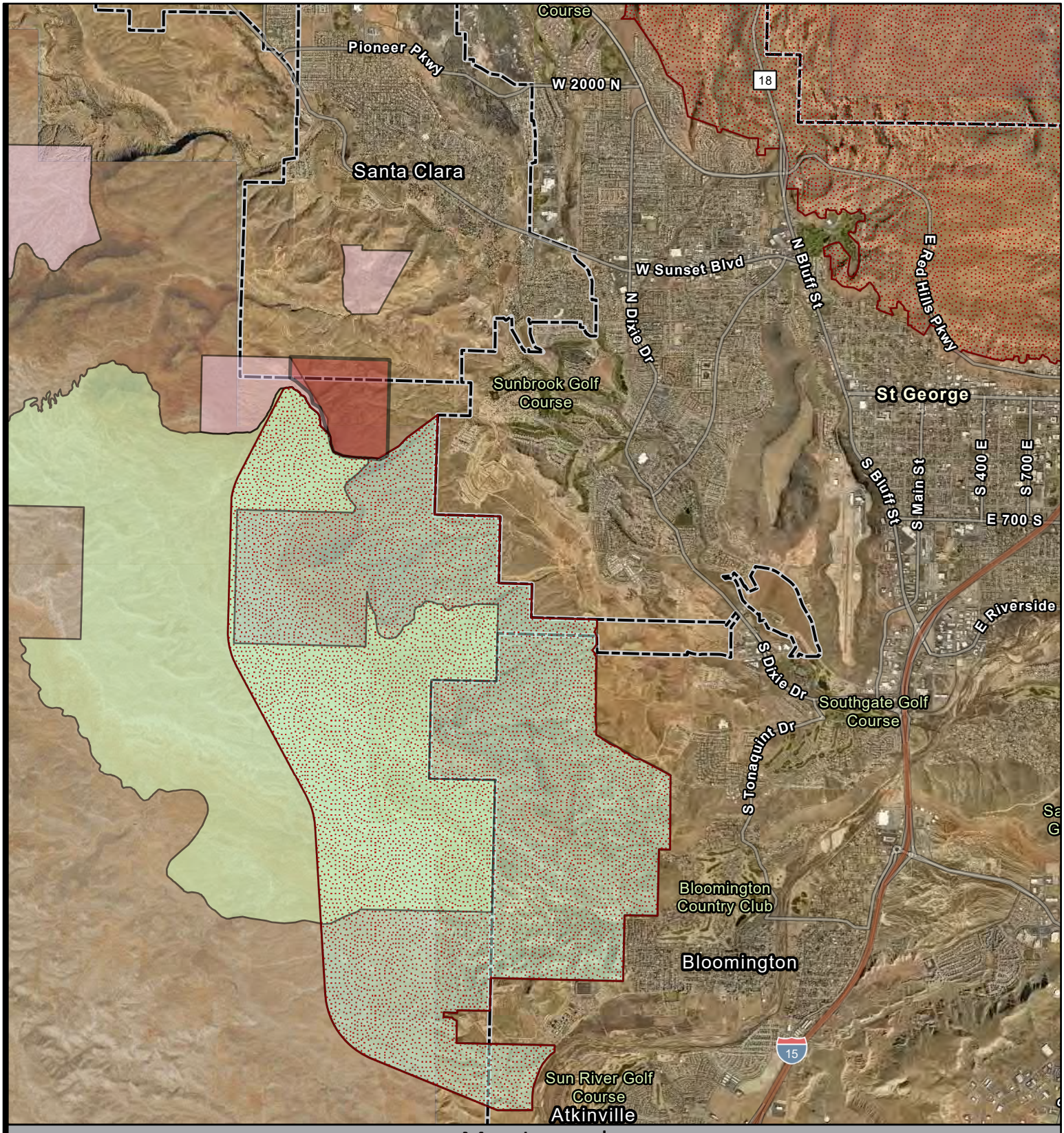


Figure 2: Proposed Recreation & Public Purpose Land Grant

Updated 6/11/2021

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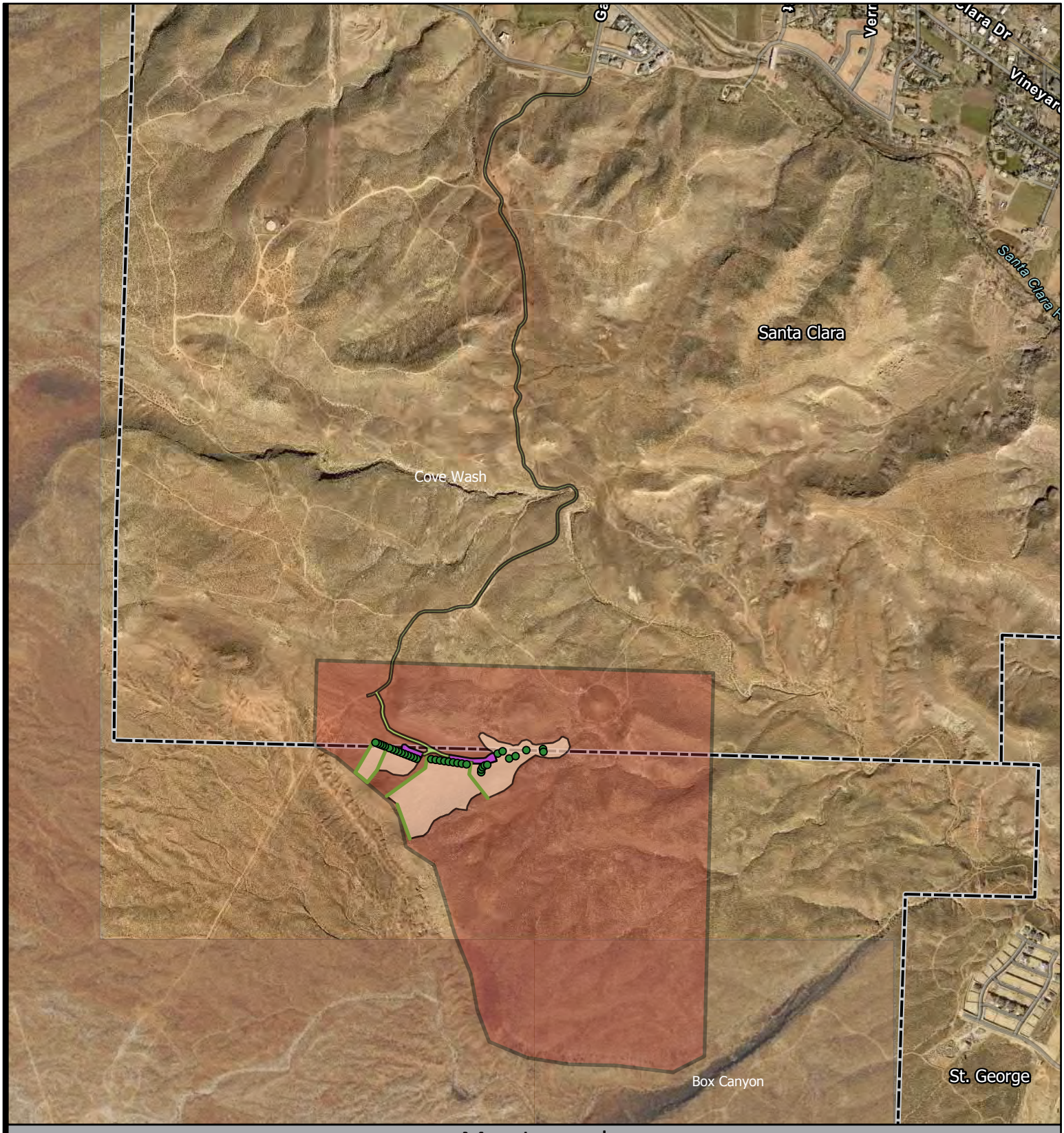


Figure 3: Proposed Gun Range

Updated 6/11/2021

SUNRISE ENGINEERING



Figure 4: Photo Points

Updated 6/11/2021

SUNRISE ENGINEERING

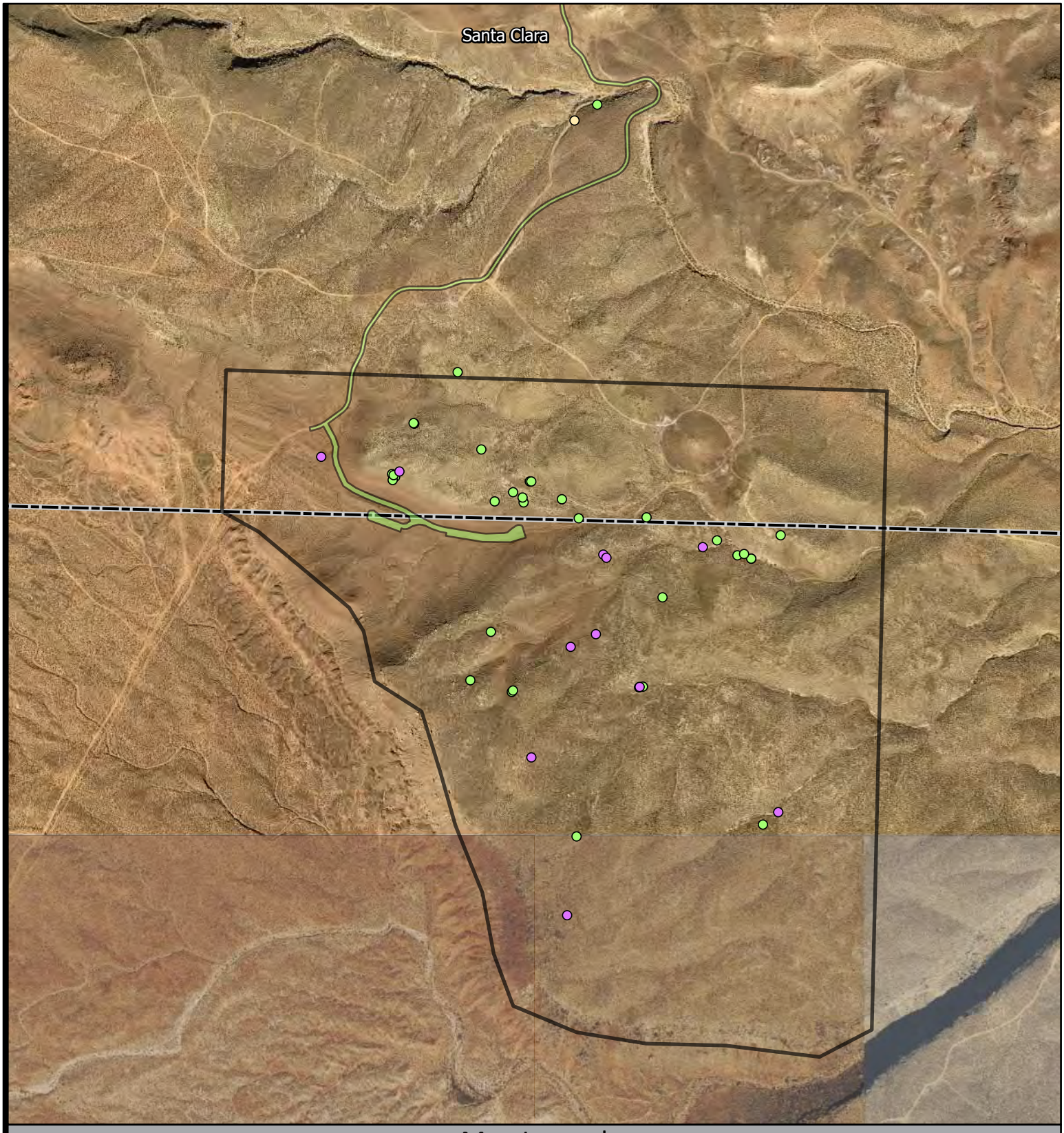


Figure 5: Desert Tortoise Survey Results

Updated 6/11/2021

SUNRISE ENGINEERING

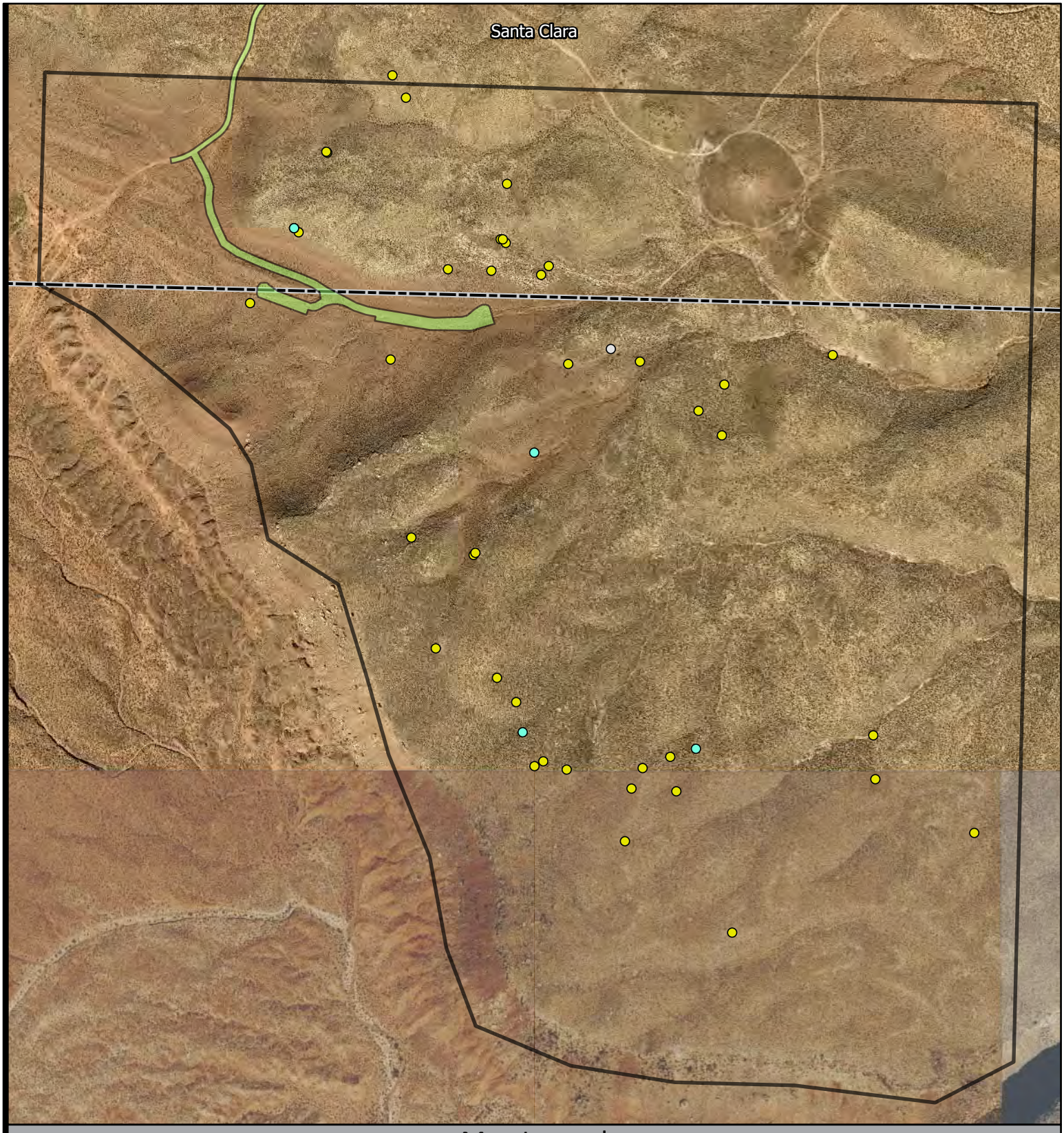


Figure 6: Tortoise Movement Results

Updated 6/11/2021

SUNRISE ENGINEERING

Appendix B –
IPaC Report USFW Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
Phone: (801) 975-3330 Fax: (801) 975-3331
http://www.fws.gov
http://www.fws.gov/utahfieldoffice/

In Reply Refer To: February 25, 2021
Consultation Code: 06E23000-2021-SLI-0354
Event Code: 06E23000-2021-E-00703
Project Name: Santa Clara City Gun Range

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Utah Ecological Services Field Office
2369 West Orton Circle, Suite 50
West Valley City, UT 84119-7603
(801) 975-3330

Project Summary

Consultation Code: 06E23000-2021-SLI-0354
Event Code: 06E23000-2021-E-00703
Project Name: Santa Clara City Gun Range
Project Type: RECREATION CONSTRUCTION / MAINTENANCE
Project Description: Gun Range and access road
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.116040600000005,-113.66246826854453,14z



Counties: Washington County, Utah

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Desert Tortoise *Gopherus agassizii* Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/4481	Threatened

Flowering Plants

NAME	STATUS
Dwarf Bear-poppy *Arctomecon humilis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5492	Endangered
Holmgren Milk-vetch *Astragalus holmgreniorum* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4590	Endangered
Shivwits Milk-vetch *Astragalus ampullarioides* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5840	Endangered
Siler Pincushion Cactus *Pediocactus (=Echinocactus,=Utahia) sileri* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3607	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Holmgren Milk-vetch *Astragalus holmgreniorum* https://ecos.fws.gov/ecp/species/4590#crithab	Final

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black-chinned Sparrow *Spizella atrogularis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447	Breeds Apr 15 to Jul 31

NAME	BREEDING SEASON
Brewer's Sparrow *Spizella breweri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-eared Owl *asio otus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Virginia's Warbler *Vermivora virginiae* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9441	Breeds May 1 to Jul 31
Willow Flycatcher *Empidonax traillii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/3482	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

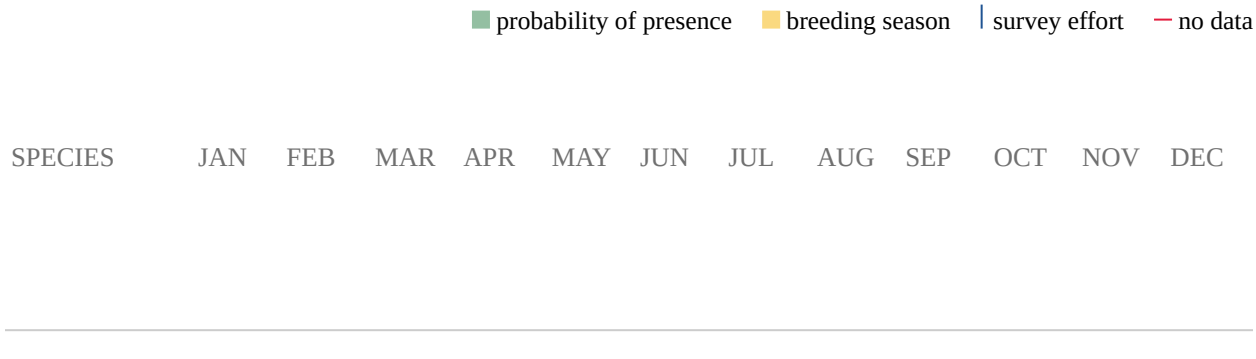
1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

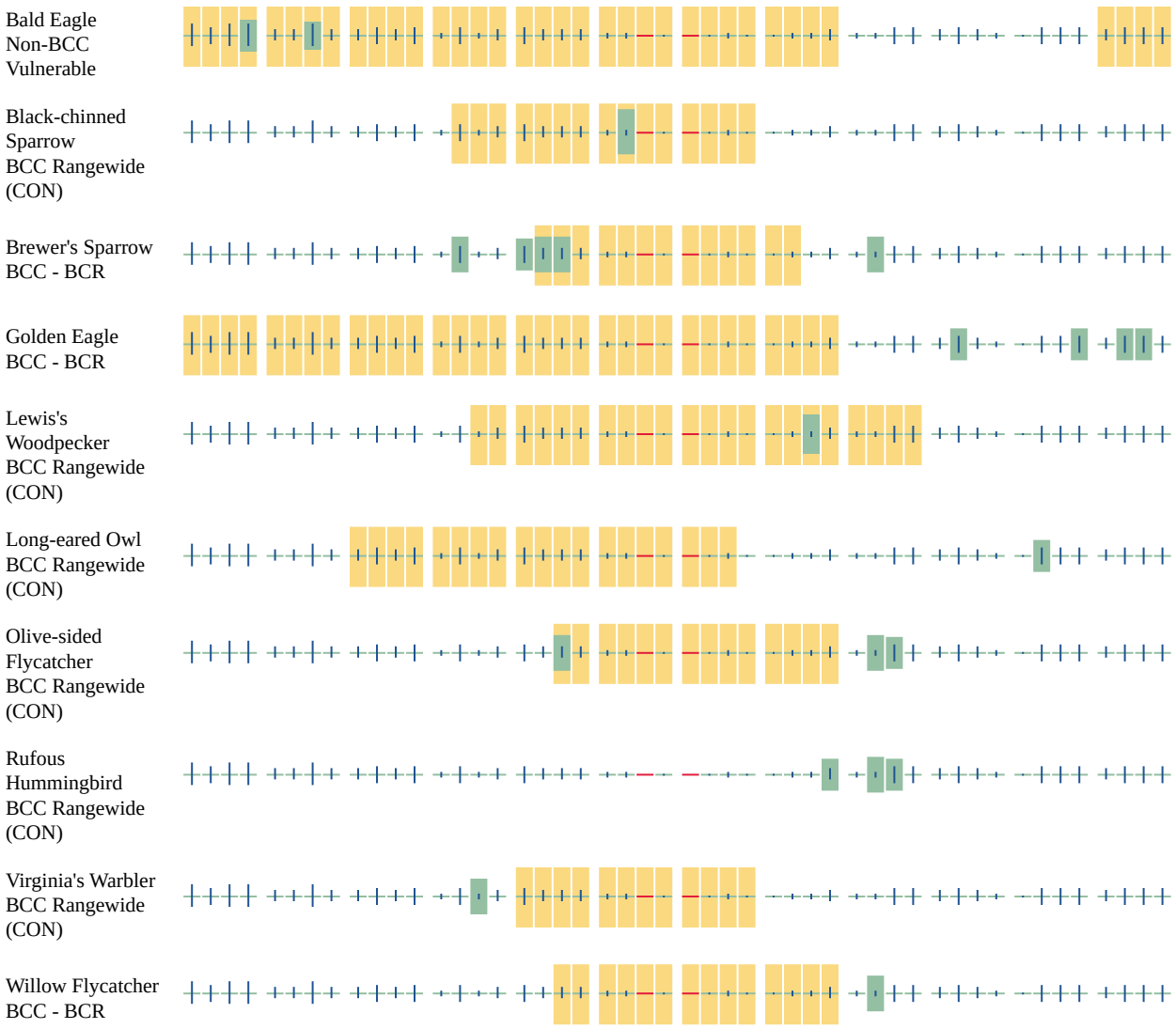
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Appendix C -
Utah Natural Heritage Program Database Search Results

Utah Division of Wildlife Resources
Utah Natural Heritage Program
1594 W. North Temple
PO Box 146301
Salt Lake City, UT 84116

Report Number: 12317
May 14, 2021

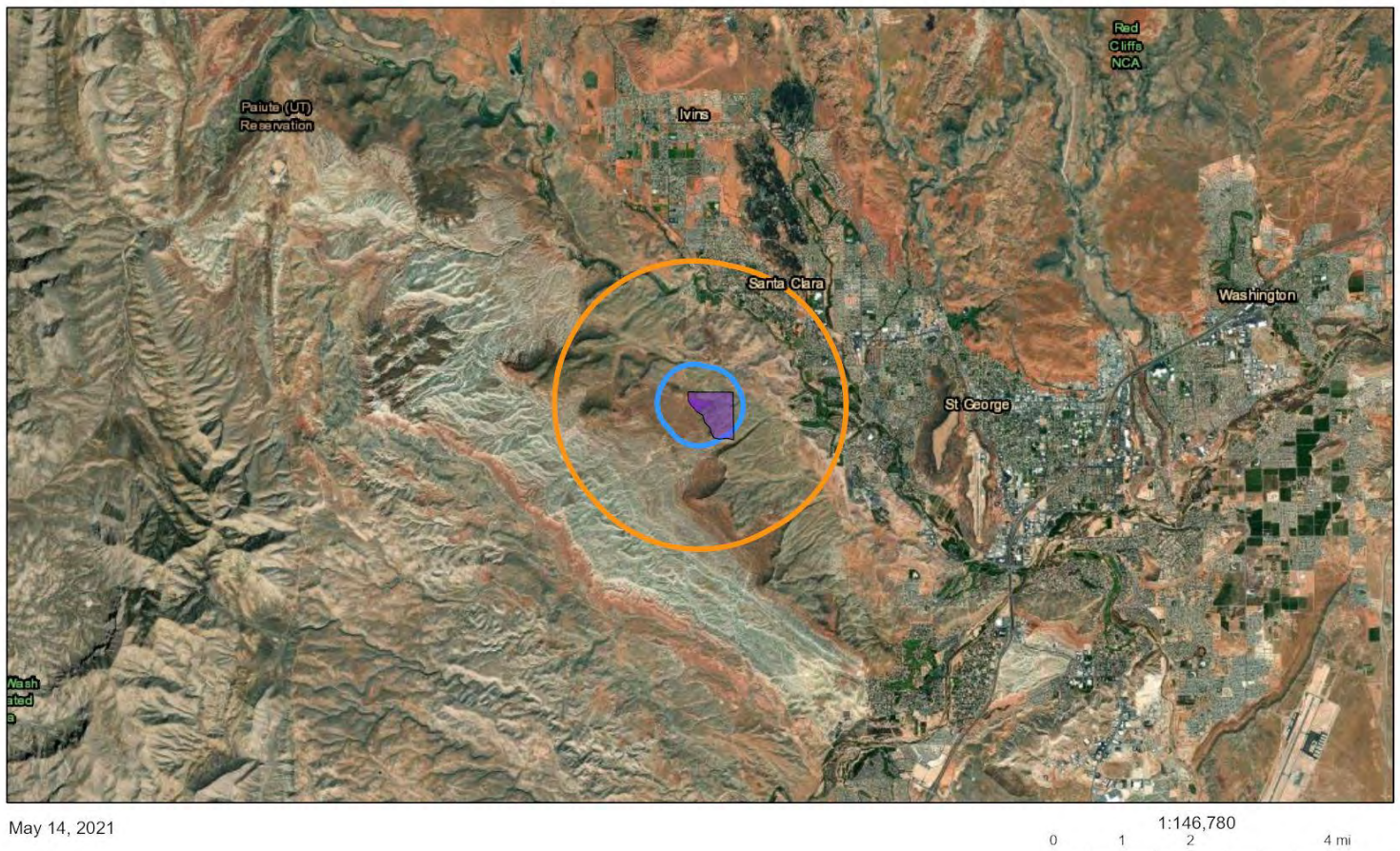
Utah Natural Heritage Program Online Species Search Report

Project Information

Project Name
Washington County Gun Range

Project Description
Gun Range for Target Practice

Location Description
SE 1/4 Section 20, SW 1/4 Section 21, NE 1/4 Section 29, NW 1/4 Section 28, T42S, R16W, SLBM



May 14, 2021

1:146,780
0 1 2 4 mi
0 1.5 3 6 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Animals within a ½ mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Mojave Desert Tortoise	Gopherus agassizii	SGCN	LT	2019

Plants within a ½ mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Paradox Milkvetch	Astragalus holmgreniorum		LE	2018

Animals within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Mojave Desert Tortoise	Gopherus agassizii	SGCN	LT	2019
Desert Sucker	Catostomus clarkii	SGCN		2006
Northern Leopard Frog	Lithobates pipiens	SGCN		1997
Arizona Toad	Anaxyrus microscaphus	SGCN		1992
Virgin Spinedace	Lepidomeda mollispinis	SGCN		1992
Smith's Black-headed Snake	Tantilla hobartsmithi	SGCN		1985
Band-tailed Pigeon	Patagioenas fasciata	SGCN		1969
Western Threadsnake	Rena humilis	SGCN		1937

Plants within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
Dwarf Bearclaw-poppy	Arctomecon humilis		LE	2018
Paradox Milkvetch	Astragalus holmgreniorum		LE	2018

Definitions

State Status

SGCN	Species of greatest conservation need listed in the Utah Wildlife Action Plan

U.S. Endangered Species Act

LE	A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction
LT	A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered
LE;XN	An "endangered" taxon that is considered by the U.S. Fish and Wildlife Service to be "experimental and nonessential" in its designated use areas in Utah
C	A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened
PT/PE	A taxon "proposed" to be listed as "endangered" or "threatened" by the U.S. Fish and Wildlife Service

Disclaimer

The information provided in this report is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, any given response is only appropriate for its respective request.

The UDWR provides no warranty, nor accepts any liability, occurring from any incorrect, incomplete, or misleading data, or from any incorrect, incomplete, or misleading use of these data.

The results are a query of species tracked by the Utah Natural Heritage Program, which includes all species listed under the U.S. Endangered Species Act and species on the Utah Wildlife Action Plan. Other significant wildlife values might also be present on the designated site. Please contact UDWR's regional habitat manager if you have any questions.

Contact the U.S. Fish and Wildlife Service at (801) 975-3330 for the purpose of consultation under the Endangered Species Act.

Please contact our office at (801) 538-4759 or habitat@utah.gov if you require further assistance.

Your project is located in the following UDWR region(s): Southern region

---

Report generated for:
Jill Hankins
Alpine Environmental Resources
4028 E Robin Lane
Phoenix, AZ 85050
(435) 668-6089
alpineenv@gmail.com

Appendix D- Photos



Photo 1: View to the Southeast at the hillside just north of the Proposed Gun Range. Erosion exposes Sandstone, mudstone layers, shelf habitat used by tortoise for shade.



Photo 2: View to the East at the Existing Access Road Along the Proposed Gun Range



Photo 3: Cryptobiotic Soil on Hillside of Exposed Upper Red Member of the Moenkopi Formation below the Cuesta legde along the southern parcel boudary.



Photo 4: View to the North from the South Parcel Boundary at the Proposed Gun Range. The Stucki Springs Access Road is Shown on the upper left.



Photo 5: Live Adult Tortoise in Burrow at Exposed Pale Yellow/Brown Picture Stone Ledge of the Shinarump Conglomerate Member of the Lower Chinle Formation.



Photo 6: Live Young Tortoise on a Sandstone Rock Outcrop. Background is typical Desert Scrub Vegetation across the survey area.



Photo 7: Active tortoise burrow under Exposed Sandstone of the Shinarump Conglomerate Member.



Photo 8: View to the Northeast at exposed Sandstone in the Washes across the Cuesta. Spring rain collects in vernal pools along the ephemeral wash.



Photo 9: Active tortoise burrow under rock ledge.



Photo 10: Active burrow, Live juvenile tortoise nearby.



Photo 11: Live tortoise



Photo 12: View to the East at Box Canyon from the southeast parcel boundary.

Appendix E – Desert Tortoise Survey Field Forms

Desert Tortoise Survey Form

Date: April 21, 2021

Project Name: Washington County Gun Range

Location: 271-acre site in upland south of Cove Wash and north of Box Canyon Wash, east of Boomer Hill on the South Hills of Santa Clara, Washington County, Utah

Legal Description: Stucki Springs Road from turnoff junction to Cove Wash to the proposed gun range, St. George Utah

Investigator(s): Jill Hankins

Weather Conditions: sunny, winds 5-10mph. 82 degrees F.

Site Characteristics: Access Road to proposed gun site buffered by 300-feet. Stucki Springs road, 12-20 feet wide dirt road, survey from the Cove Wash Road junction south to the proposed gun range. Road is 4-wheel drive, high clearance vehicle only. Some dispersed campsites along the road. An overhead powerline crosses over the road near the Cove Wash crossing then runs south along the eastside of the road; it turns and runs east just north of the study area.

Start Time: 1:00 pm

End Time: 4:30 pm

Number Survey Hours: 3.5 hrs

Acres Surveyed: 40 acres

Tortoise/Sign Discovered (tortoise, den, burrows, scat, tracks, etc.): no signs of tortoise or Holmgren milkvetch, Siler pincushion cactus, bearclaw-poppy, Shivwits milkvetch.

Comments: Site is suitable tortoise habitat, black brush, white Bursage, buckwheat, ephedra, creosote bush desert shrub community. Rattlesnake weed and desert marigold common.

Conclusion:

- X No special status species recorded during survey.

Desert Tortoise Survey Form

Date: April 26, 2021

Project Name: Washington County Gun Range

Location: 271-acre site in upland south of Cove Wash and north of Box Canyon Wash, east of Boomer Hill on the South Hills of Santa Clara, Washington County, Utah

Legal Description: 12 acres, SE1/4 Section 20 T42S, R16 W, SLBM. St. George Quadrangle

Investigator(s): Jill Hankins, Angela Averett, Kaylie Topham

Weather Conditions: over cast, light to heavy rain. Winds 0-5mph. 50-52 degrees F. Ended survey due to rain and cold air temps.

Site Characteristics: This site is immediately east of the access road within the proposed gun range.

Start Time: 10:00 am

End Time: 11:15 pm

Number Survey Hours: 3.75 hrs

Acres Surveyed: ~12 acres

Tortoise/Sign Discovered (tortoise, den, burrows, scat, tracks, etc.): newly hatched baby tortoise

Comments: Site is suitable tortoise habitat, black brush, white Bursage, buckwheat, ephedra, creosote bush desert shrub community. Rattlesnake weed and desert marigold common.

Conclusion:

- X Summer 2020 hatchling discovered, did not find burrow in the immediate vicinity. Raining and 50 degrees ended survey early.

Desert Tortoise Survey Form

Date: April 27, 2021

Project Name: Washington County Gun Range

Location: 271-acre site in upland south of Cove Wash and north of Box Canyon Wash, east of Boomer Hill on the South Hills of Santa Clara, Washington County, Utah

Legal Description: 108 acres, SE1/4 Section 20 and NE1/4 Section 29 T42S, R16 W, SLBM. St. George Quadrangle

Investigator(s): Jill Hankins, Angela Averett,

Weather Conditions: good rain over last night and this morning. Partly overcast. Winds 0-5mph. 63-70 degrees F.

Site Characteristics: This site is the proposed gun range buffered by 300 feet.

Start Time: 12:00 pm

End Time: 5:45 pm

Number Survey Hours: 11.5 hrs

Acres Surveyed: ~108 acres

Tortoise/Sign Discovered (tortoise, den, burrows, scat, tracks, etc.): active burrow, inactive burrow, dens, fresh scat, shell fragment

Comments: The south facing hillside with the Shinarump Conglomerate Member that forms a yellowish, grayish blocky cliff ledge forms suitable tortoise dens site under the large blocky rock ledge and above the Moenkopi siltstone, mudstone, thinner layered ledge. This site is suitable tortoise habitat, black brush, white Bursage, buckwheat, ephedra, creosote bush desert shrub community. Rattlesnake weed and desert marigold common. 3,000 – 3,054 feet elevation

Conclusion:

- X Active tortoise habitat on the south facing slope behind (north) of the proposed range area. No live tortoises recorded.

Desert Tortoise Survey Form

Date: April 28, 2021

Project Name: Washington County Gun Range

Location: 271-acre site in upland south of Cove Wash and north of Box Canyon Wash, east of Boomer Hill on the South Hills of Santa Clara, Washington County, Utah

Legal Description: 168 acres, portions of Sections 20, 21, 28, 29, T42S, R16 W, SLBM. St. George Quadrangle

Investigator(s): Jill Hankins, Angela Averett, Kaylie Topham

Weather Conditions: mostly clear, sunny, Winds 5-10 mph afternoon gusts up to 20 mph. 63-70 degrees F.

Site Characteristics: Surveyed area is the northern 45-acres along the north proposed RPP site from the west to the east parcel boundary. And 120-acres through the center of the proposed RPP site south of the planned gun range area, covered the western to the eastern boundary.

Start Time: 9:15 pm

End Time: 5:15 pm

Number Survey Hours: 24 hrs

Acres Surveyed: ~165 acres

Tortoise/Sign Discovered (tortoise, den, burrows, scat, tracks, etc.): potted 3 live adult tortoises, 1 live juvenile tortoise, 5 or 6 active burrows, 3 inactive burrows, rock shade alcoves, fresh scat, old scat, 2 shell remnants from dead juvenile tortoises, egg shell fragments, adult tortoise leg bone.

Comments: The northeast trending finger ravines along the north and south side of the proposed gun range area has multiple live tortoises denning under the large yellowish, blocky, cliff forming boulders that form a distinct rocky ledge, 8 – 12 feet of vertical relief. Roughly 30 feet beneath the yellowish rocky ledge the thinner layered red clay mudstone, sandstone of the Upper Red Member of the Moenkopi formation is exposed. Tortoise burrows are found under the blocky ledges of the Shinarump member. This survey site is suitable tortoise habitat, black brush, white bursage, buckwheat, ephedra, creosote bush desert shrub community. Rattlesnake weed and desert marigold common. 3,000 – 3,054 feet elevation

Conclusion:

- X Active tortoise habitat under the yellowish, blocky, cliff ledges of the Shinarump conglomerate formation mostly on the south facing slopes along the west/northwest trending ravines located north and south of the proposed range area. Survey plotted 4 live active tortoises today. There are puddles in the washes and vernal pools on the rock outcrops from yesterday's rain. Fresh water and warm air temperature after a long dry spell is prime conditions for tortoise activity.

Desert Tortoise Survey Form

Date: April 29, 2021

Project Name: Washington County Gun Range

Location: 271-acre site in upland south of Cove Wash and north of Box Canyon Wash, east of Boomer Hill on the South Hills of Santa Clara, Washington County, Utah

Legal Description: 46 acres, portions of Sections 28, 29, T42S, R16 W, SLBM. St. George Quadrangle

Investigator(s): Jill Hankins, Kaylie Topham

Weather Conditions: mostly clear, sunny, Winds 0-3 mph. 63-81 degrees F.

Site Characteristics: Surveyed the most southern 46 acres of the 271-acre site. Walked transects northeast/southwest trending ending to the bluff that forms the south and southwest property boundary.

Start Time: 10:15 am

End Time: 1:15 pm

Number Survey Hours: 6 hrs

Acres Surveyed: ~46 acres

Tortoise/Sign Discovered (tortoise, den, burrows, scat, tracks, etc.): potted 2 live tortoises; 1 young adult 6"x8" and 1 juvenile 4"x6". 2 active dens, fresh scat, old scat, shell fragment.

Comments: Survey of the southern most 46 acres of the proposed RPP site. Box Canyon is a deep northeast trending canyon cut through the Shinarump and Moenkopi formations. The Shinarump forms large blocky ridgeline exposed with the upward tilt of the Virgin anticline. The western and southern property boundary is the virgin anticline ledge. Vertical relief off the ledge gives way to a 100-200 feet drop to the Box Canyon floor.

The upward tilt of the Virgin Anticline forms northwest trending ravines where erosion exposes the blocky ledge forming sandstone of the Shinarump formation. This formation provides good den sites for burrowing tortoise and exposed sandstone slabs have depressions that become vernal pools retaining puddles of rainwater after summer precipitation. There is evidence of tortoise across the entire site as there are exposed rock slabs forming ledges and vernal pools throughout the study area.

Conclusion:

- X Active tortoise habitat, rain on Monday and Tuesday after a very dry spring and warm temps on Tuesday, Wednesday, and Thursday morning made for prime conditions for tortoise activity.

Desert Tortoise Survey Form

Date: April 30, 2021

Project Name: Washington County Gun Range

Location: 271-acre site in upland south of Cove Wash and north of Box Canyon Wash, east of Boomer Hill on the South Hills of Santa Clara, Washington County, Utah

Legal Description: 50 acres, portions of Sections 28, 29, T42S, R16 W, SLBM. St. George Quadrangle

Investigator(s): Jill Hankins

Weather Conditions: sunny, Winds 0-2 mph 63-81 degrees F.

Site Characteristics: Surveyed area is the center of the proposed 271-acre proposed RPP site. Walked west trending transects covering ephemeral drainages that flow towards cove wash to complete 100% coverage of the study area.

Start Time: 10:00 am

End Time: 1:30 pm

Number Survey Hours: 3.5 hrs

Acres Surveyed: 50 acres

Tortoise/Sign Discovered (tortoise, den, burrows, scat, tracks, etc.): potted 4 live adult tortoises; caught large adult male mating female. I heard them and stopped about 150-feet from them. Video from a distance after, I walked up for photos. The male went into a large old den that we plotted 2 days ago, the den with the tortoise leg bone. I updated the plotted the den as active with mating male tortoise. The female did not move.

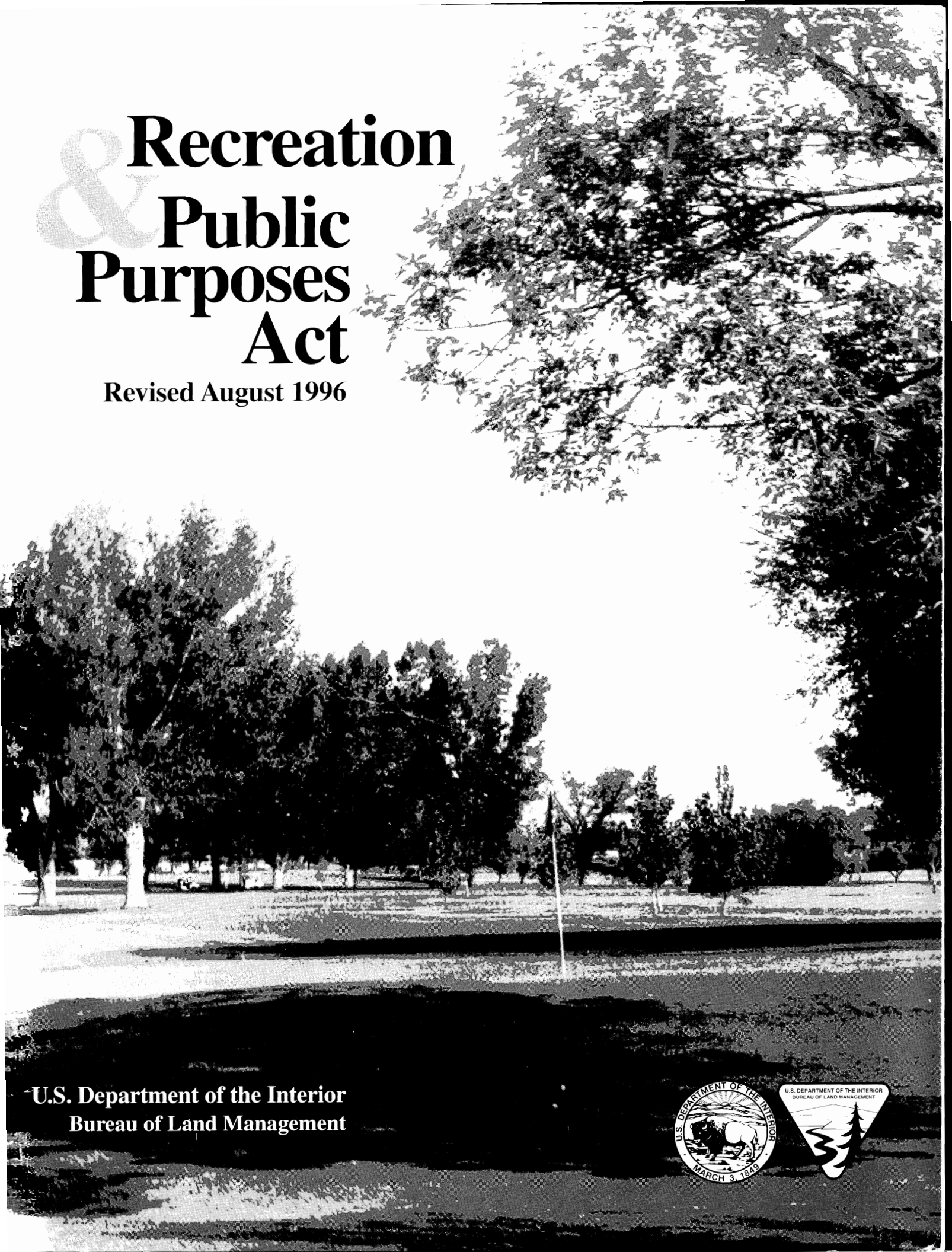
Comments: Fun survey, I think we recorded 11 live tortoises over the past 5 days. I feel we covered the site well. The recent rain after a long dry spring and cool evening and morning temperatures made prime survey conditions for tortoise activity. This site is pretty remote. The west and north boundary is fenced, a small two-tract trail cuts through the bottom of the proposed gun range and exits the site at the bottom of Cove wash beyond the study area; 3 mountain bikers rode through the site during survey events. No other people were around; pretty-quiet site and very little if any trash. This site has little disturbance.

Conclusion:

- X Active tortoise habitat on the yellowish, blocky, cliff ledges of the Shinarump conglomerate formation mostly on the along the east/northeast trending ravines. Survey plotted 4 live active tortoises today.

Recreation & Public Purposes Act

Revised August 1996



U.S. Department of the Interior
Bureau of Land Management

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Introduction

Over the past 40 years, Americans have expressed a dynamic and accelerated interest in outdoor recreation. Our expanding urban populations, increased mobility and leisure time, and higher standard of living have created a demand for more and better recreation facilities. By the same token, urban expansion and a growing population have increased the need for more public services, such as schools, community buildings, hospitals, and sanitary landfills, just to name a few.

Recognizing the strong public need for a nationwide system of parks and other recreational and public purposes areas, the Congress, in 1954, enacted the Recreation and Public Purposes Act (68 Statute 173; 43 United States Code 869 et. seq.) as a complete revision of the Recreation Act of 1926 (44 Stat. 741). This law is administered by the Bureau of Land Management (BLM).

The act authorizes the sale or lease of public lands for recreational or public purposes to State and local governments and to qualified nonprofit organizations. Examples of typical uses under the act are historic monument sites, campgrounds, schools, fire houses, law enforcement facilities, municipal facilities, landfills, hospitals, parks, and fairgrounds.

This pamphlet is designed to guide prospective applicants in obtaining lands and benefits under the act. Department of the Interior regulations for the Recreation and Public Purposes Act are found in Title 43 of the Code of Federal Regulations (43 CFR), Parts 2740 (Sales) and 2912 (Leases).

What Lands Are Covered By the Act?

The act applies to all Public Lands, except lands within national forests, national parks and monuments, national wildlife refuges, Indian lands, and acquired lands.

Under special authority, BLM administers about 2 million acres of revested Oregon and California Railroad and Coos Bay Wagon Road grant lands in western Oregon. These lands may only be leased by public agencies under the act.



—California Division of Forestry Fire Station, Shasta County, California

How Much Land May Be Purchased?

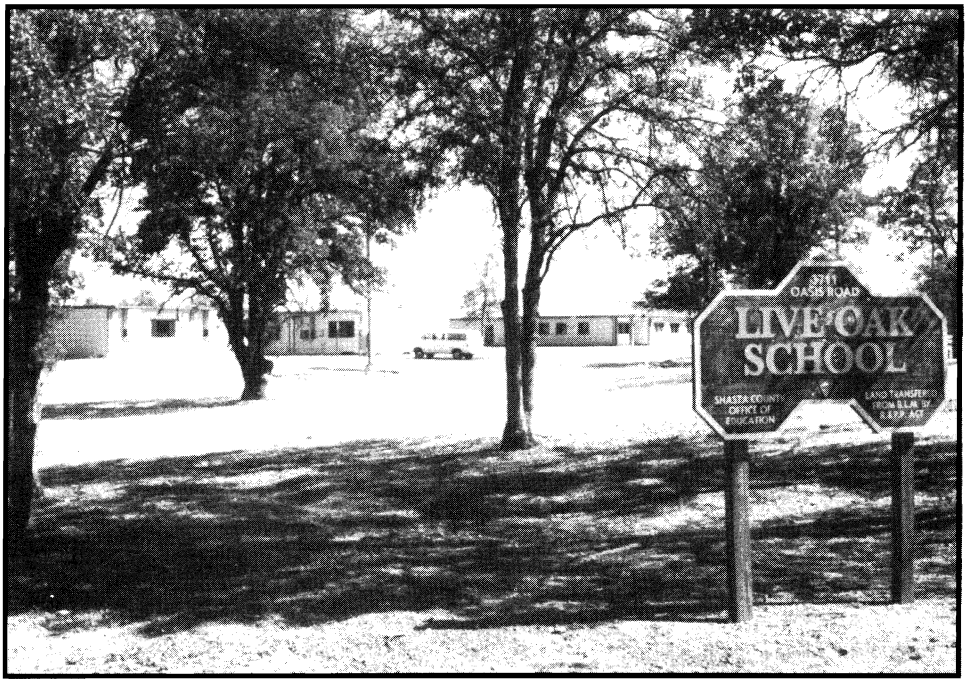
The amount of land an applicant can purchase is set by law. Whether the land is to be purchased or leased, the BLM will classify for purposes of the act **only the amount of land required for efficient operation of the projects described in an applicant's development plan**. Applicants should limit the land requested to a reasonable amount. Applicants will be required to first accept a lease, or lease with option to purchase, to assure approved development takes place before a sale is made and a patent (Government deed) is issued. Projects that may include the disposal, placement, or release of hazardous materials (i.e., sanitary landfills) may go directly to patent.

State Agencies and Other Political Subdivisions

Any State, State agency or political subdivision of a state may purchase for recreation purposes up to 6,400 acres annually, and as many small roadside parks and rest sites, up to 10 acres each, as may be needed. In addition, any State, State agency or political subdivision of a state may acquire 640 acres annually for each public purpose program other than recreation. These lands must be within the political boundaries of the agency or within the area of jurisdiction of the organization or, in the case of cities, they must lie within convenient access to the municipality and within the same State.

Nonprofit Organizations

Nonprofit organizations may purchase up to 640 acres a year for recreation purposes, and an additional 640 acres for other public purposes.



—High School, Redding, California

How Much Land May Be Leased?

The act sets no limitation on the amount of land which may be leased.

The Cost

A. State and Local Governments

1. **Recreation or Historic Monument Purposes.** Permanent conveyances of land for recreation or historical monument purposes are made without charge. Governments may lease lands for recreational use at no charge, but lands leased for historic monument purposes are subject to special pricing as described below.

2. **Other Public Uses.** Public agencies may purchase or lease land by two alternative pricing methods.

Special Pricing

Under special pricing schedules, purchases may be made for $10 an acre, with a minimum price per transfer of $50, or land may be leased for $2 per acre per year with a minimum annual rental of $25. Special pricing applies to land which will be government-controlled, used for government purposes, and serve the general public. Examples include parks, educational facilities, public health-related facilities, fire and law enforcement structures, courthouses, and State, county and community administrative service facilities, social services, storage and maintenance, extension services, and public works.

Regular Pricing

The rental or purchase price of land for uses that do not qualify for special pricing will be one-half of fair market value. The price will be 90 percent of fair market value if the use is restricted to members of a particular or limited group. Uses subject to regular pricing generally are those that are publicly supported and operated, but not essential or customary to government administration and services. They include cemeteries, museums, community centers, tourist information facilities, and fairgrounds.

B. Nonprofit Organizations

Nonprofit organizations may lease or purchase land for uses consistent with their articles of incorporation or creating authority. The lease or purchase price is one-half of the fair market value, or 90 percent if the use is not open to the public.

The charts below summarize the pricing schedule:

Conveyances

Proposed Use	Governmental Entities	Nonprofit Entities
Recreation and Historic Monument Purposes	No Cost	50% of FMV, except only 10% discount may be applied if use is restricted
Special Pricing Program Uses	$10 per acre, with a $50 minimum per transaction	50% of FMV, except only 10% discount may be applied if use is restricted
Regular Pricing Program Uses	50% of FMV, except only 10% discount may be applied if use is restricted	50% of FMV, except only 10% discount may be applied if use is restricted

Leases

Proposed Use	Governmental Entities	Nonprofit Entities
Recreation Purposes	No Cost	50% of FMV, except only 10% discount may be applied if use is restricted
Special Pricing Program Uses (includes historic monument purposes)	$2.00 per acre per year rental, with a $25 per year minimum per transaction	50% of FMV, except only 10% discount may be applied if use is restricted
Regular Pricing Program Uses	50% of FMV, except only 10% discount may be applied if use is restricted	50% of FMV, except only 10% discount may be applied if use is restricted



—Recreation Area, Murtaugh Lake, Idaho

Commitments

To obtain a lease, applicants must obligate themselves to the following commitments:

A. **Nondiscrimination**. Nondiscrimination as to access to the land and facilities based on race, color, religion, sex, age, or national origin in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 241).

B. **Development and Management Plan**. To develop and manage the lands in accordance with an approved program of utilization that must include a plan of development and plan of management.

C. **Use Charges**. To make no more than reasonable charge for the use of facilities on the land (whether by concession or otherwise) and to charge no more for entrance to a use area than is charged at other comparable installations managed by State and local agencies, all charges to be subject to review and modification by the Secretary of the Interior under due process procedures.

Terms and Conditions

A. **Patents**. Patents issued under the Recreation and Public Purposes Act convey a restricted title since they contain certain provisions or clauses which, if not complied with, may result in reversion of the title to the United States. These provisions are:

1. Certain nondiscrimination clauses providing that the patentee may not restrict or permit restriction of the use of any of the lands conveyed or facilities thereon because of race, creed, color, sex, age, or national origin.

2. A provision that, if the patentee or its successor in interest attempts to transfer title or control over the land to another, or the land is devoted to a use other than that for which it was conveyed without the consent of the Bureau of Land Management, title will revert to the United States.

3. The patent will stipulate that the lands will be used in perpetuity for the purposes for which they are acquired. The lease or patent may stipulate that certain provisions of the development program, including the management plan, may be subject to review by the Secretary of the Interior or his delegate.

4. All minerals will be reserved to the United States.

B. **Lease Periods**. Lease periods may be for any length, but shall not exceed 20 years for nonprofit entities and 25 years for governmental entities.

C. **Lease Terms and Conditions**. Leases are issued subject to appropriate environmental and legal stipulations and contain provisions for compliance with:

1. Nondiscrimination based on race, creed, color, sex, age or national origin.

2. The approved plan of management and development upon which the lease was considered and issued. In addition, leases may be canceled for nonuse or a use other than that for which the lease was issued without prior consent of the BLM.

3. Under certain circumstances, the Federal Government may reserve the standing timber, use of water, or place other limitations on the use of natural resources.

4. Other reasonable stipulations as may be required as part of the consideration for the moderate charge being made for the land.

How Interested Parties Should Proceed

Anyone intending to submit an application must have a consultation with the local BLM office that manages the proposed lands prior to submitting the application. The consultation will cover such items as land status, application filing requirements, application processing steps, BLM policies and objectives, management responsibilities of the lessee or patentee and terms and conditions which may be required in a lease or patent, pricing policy, land use planning, and time frames for application processing.

The time of year an application is made may affect the processing time. Applications received late in the field season or during the winter months may be held up where field examinations cannot be made until the following spring. Delay also may result from the presence of unpatented mining claims since it is necessary to determine the validity of

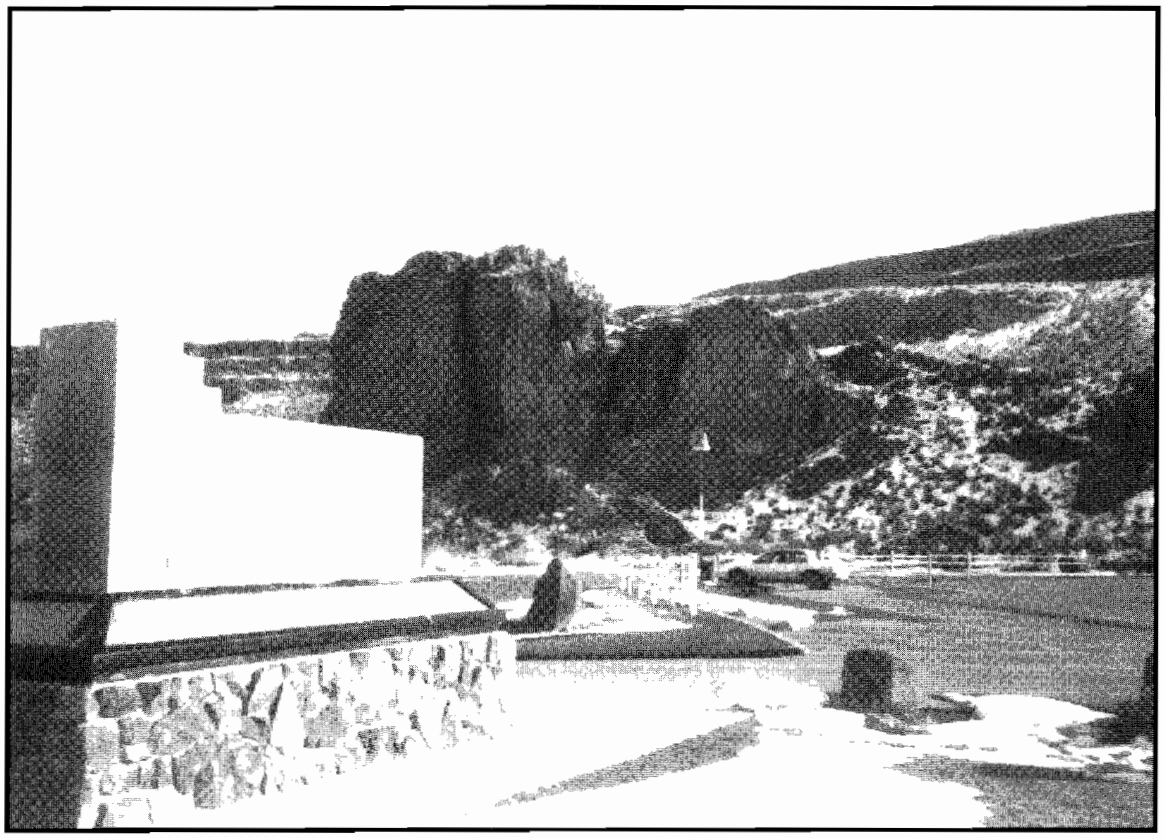
these claims or mineral potential of the area before acting on the applications. Similarly, when lands are sought which have been withdrawn (legally set aside) for power or other particular purposes, considerable time may be required to secure the necessary approvals.

With the advice and help of the local BLM office, prospective applicants should complete the following steps:

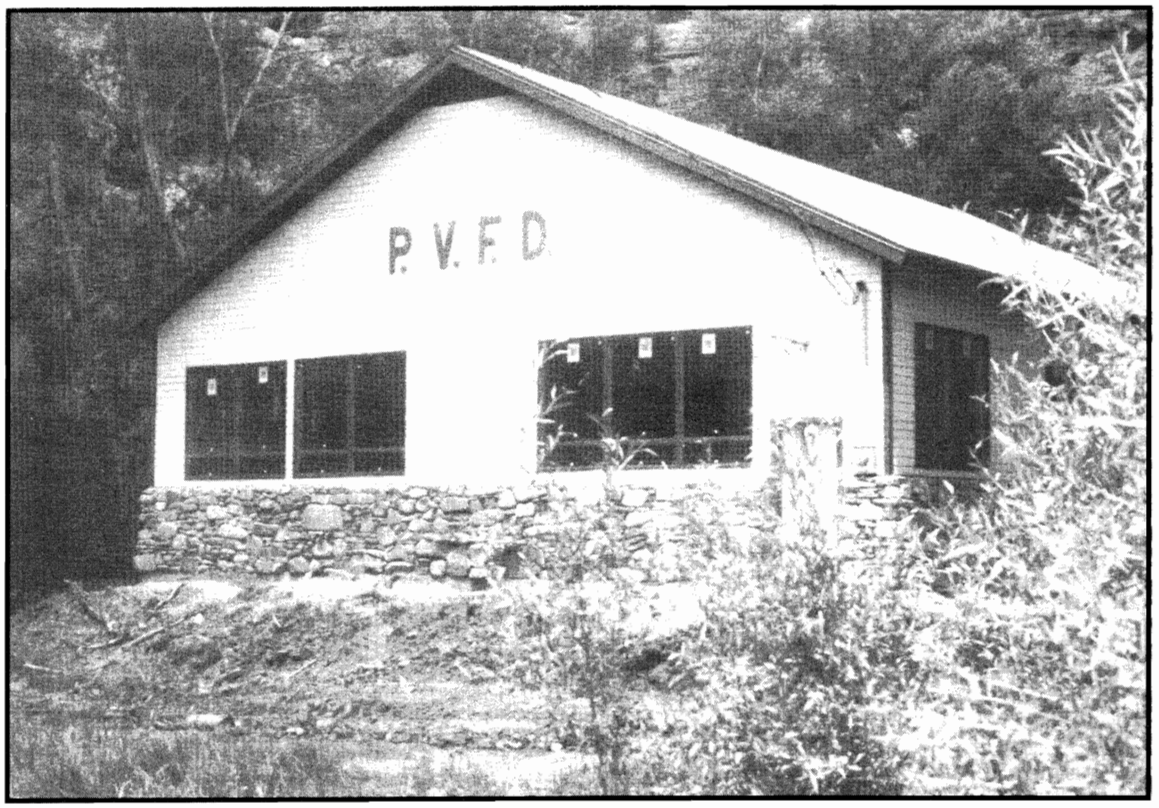
1. Determine that they are qualified to be an applicant under the act and secure evidence that they are legally empowered to lease or hold title to land.

2. Ensure that all the lands to be applied for are needed to accommodate a definite project that serves an actual need and that the project meets the established criteria for such a project. Land included in applications for patents or leases must be shown to be part of a **definite, well-planned project**. A development and management plan and construction schedule are required to ensure proper programming for the future use of the land.

3. Refer to BLM land status records for legal descriptions, acreage and status of lands desired, their availability and nature of any conflicts of record. Unpatented mining claim conflicts can be determined by researching county records, on-the-ground inspection, and the BLM automated mining claim recordation system.



—Community Park, Twin Falls, Idaho



Fire Station, Placerville, Colorado

Application Requirements

Applications are made on BLM Form 2740-1 (see Illustrations 1). In addition, the application should be accompanied by:

1. A $100.00 nonrefundable filing fee.

2. Certified copies of the Charter, Articles of Incorporation or Association, or other creating authority, if the applicant is a nongovernmental corporation or association.

3. A certified copy of a resolution or other evidence authorizing the filing of the application and further authorizing the signing officer to execute the application.

4. A draft development plan (including a site plan), and a management plan, to include:

   (a) A statement of the proposed use of lands, a detailed description of the proposed project and a statement describing administration of the tract (See Illustration 2.)

   (b) The anticipated expenditure for development (including source of funds to be used for development). (See Illustration 3.)

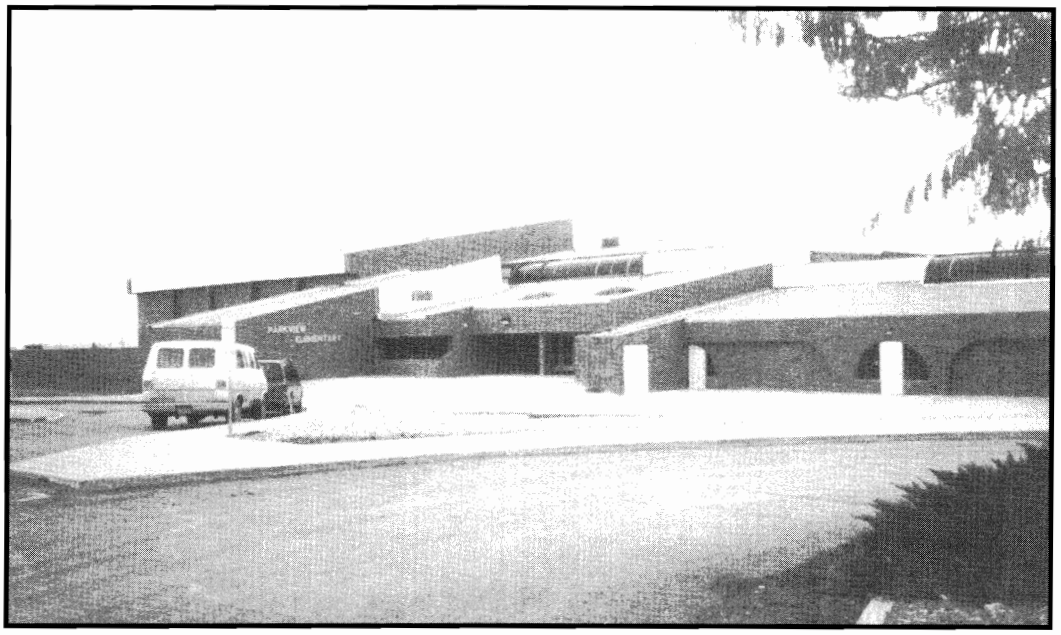
(c) A map showing the nature and location of facilities, land ownership of the entire project, and access routes. A professionally prepared site plan by a planner or architect is not usually required, but is encouraged and recommended as a means to ensure feasibility of the proposal, both functionally and economically. (See Illustrations 4 and 5.) In some cases, it may be desirable, for budgetary reasons, to submit the plan after the tract has been classified.

(d) Timetable for development. (See Illustration 6.)

(e) Explanation of proposed maintenance responsibilities and procedures should be provided. If all or portions of the area are to be preserved in a natural state, the protective measures should be explained. (See Illustration 7.)

The extent of the development plan will depend on the character of the land and its acreage, the purpose of the acquisition, the public demand to be served, and other variable factors. It need not be elaborate, but it must include as complete information as can be provided. **The plan should anticipate the development required during the first 5 years**, with general goals after that period. A principal cause of delay in processing applications has been submission of inadequate plans which require extensive revisions. If the tract is to be incorporated into a larger park or recreation area already established, the program for development of the overall area should be provided, with such modifications as the additional land entails.

Completed applications should be submitted to the BLM office that manages the applied for tract.



—Elementary School, Rangely, Colorado

BLM Procedures After Receipt of an Application

After receiving an application, the BLM will:

1. Determine if the proposal is in conformance with land use planning, review land status to determine if the lands are subject to application, and determine if the application meets all requirements of the law and regulations.

2. Review the development and management plans to determine their adequacy and effectiveness and evaluate the construction schedule and estimated financing to ensure they are realistic and practicable.

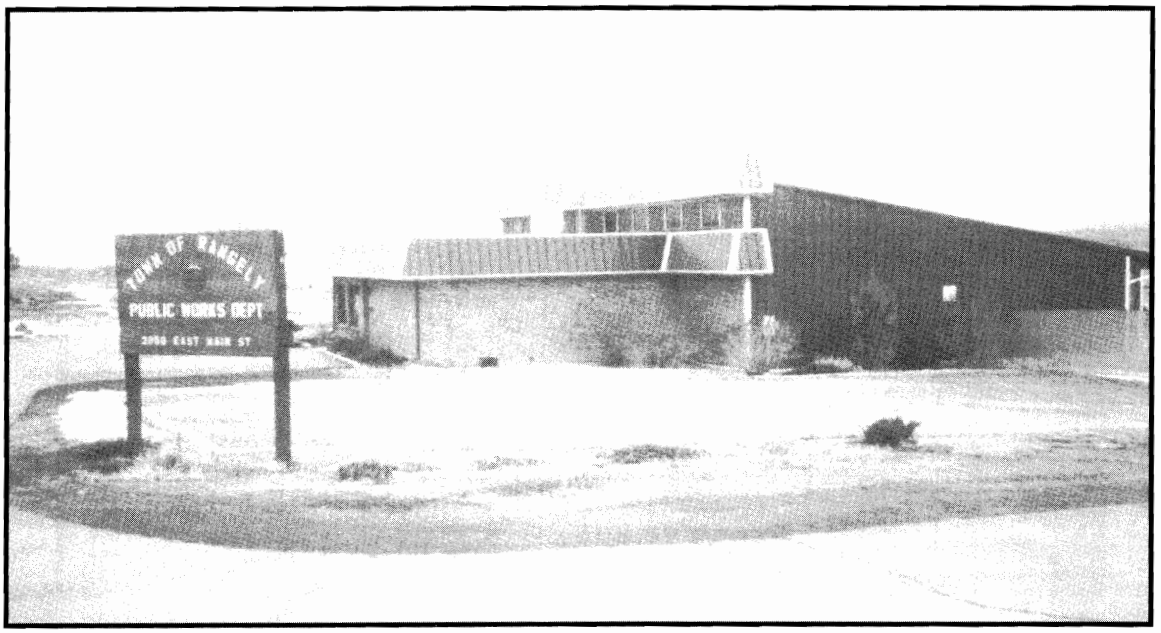
3. Secure the views of other agencies that may have an interest in the lands, including State and local planning and zoning departments.

4. Check for the presence of unpatented mining claims. R&PP leases and patents cannot be issued where mining claims are present. If it is necessary to determine the validity of a mining claim in order to allow the lease, the cost of the determination will be the responsibility of the applicant.

5. Conduct a field examination and other investigations to gather information and data on the environmental considerations and proper classification of the lands.

6. Publish a notice to solicit views and comments from the public concerning the proposal.

Based on its review and evaluation, Bureau officials may approve or disapprove any application in whole or in part, or require its revision.



—Public Works Building, Rangely, Colorado



—Golf Course, Worland, Wyoming

Responsibilities After Lease or Patent is Issued

The BLM periodically reviews areas leased or sold under the act to assure continued compliance with the terms.

The authorized use and character of the land must conform with the approved plan of development and management plan. Reasonable charges may be made to the public for use of facilities provided that fees are no more than those charged at comparable publicly owned installations. The schedule of charges is subject to review and approval by the Secretary of the Interior.

Title to land acquired under this act may be transferred to other parties only with the consent of the BLM (no consent is required if the patent does not contain a reverter provision). If the transfer includes additional uses or changes of use, the uses must be approved by the BLM. The recipient must also meet the qualifications of an applicant under the act. For example, a State agency may transfer title to a county park commission which will manage the tract. Most patents contain a reverter clause which returns title to the United States if the tract is used for purposes not provided for in the patent and not allowable under the act.

Each lease contains a termination clause which provides that, if the land has not been used for the purposes specified in the lease, or is being used for another purpose, the lease will be canceled. The lease may also be canceled if the terms of the development and management plans are not fulfilled, unless modifications of the plans are approved.

A lease may be assigned to another agency or organization with the consent of the BLM, if the assignee meets the qualifications of an applicant under the act. The lessee may surrender the lease or any part of it by filing a relinquishment with the BLM.

Additional information regarding the Recreation and Public Purposes Act may be obtained by contacting any BLM Office.

Glossary of Terms Used

Classification of Lands: An action taken, after examination and analysis through the land use planning process, that identifies a tract of public land as being suitable for a specific type of lease or disposal and opened to applications under applicable authorities.

Land Use Plan: A local BLM planning document designed to guide and control future management actions and the development of subsequent, more detailed and limited scope plans for resources and uses.

Nonprofit Association or Corporation: Any institutions, organizations, or associations which have been established according to local law and are held by the Internal Revenue Service to be tax-exempt.

Patent: A government deed; a document that conveys legal title of public lands to whom the patent is issued.

Plan of Development: An outline of how a definitely proposed and authorized project is to be implemented. The plan includes design drawings, surveys if needed, sketches, cost estimates, and construction schedules.

Plan of Management: A plan showing how lands are to be managed after development has progressed to the point where the project is in operation.

Public Lands: Any lands or interest in lands owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, except lands located on the Outer Continental Shelf and lands held for the benefit of Indians, Aleuts and Eskimos.

Public Purpose: The purpose of providing facilities or services for the benefit of the public in connection with, but not limited to, public health, safety or welfare. Use of lands or facilities for habitation, cultivation, trade or manufacturing is permissible only when necessary for and integral to, i.e., an essential part of, the public purpose.

Special Pricing Program: A schedule of special prices established by the S ecretary of the Interior, based upon the fair market value of the property, with a reduction based on the proposed use.

Form 2740-1
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR LAND FOR RECREATION OR PUBLIC PURPOSES

(Act of June 14, 1926, as amended; 43 U.S.C. 869; 869-4)

FORM APPROVED
OMB NO. 1004-0012
Expires: October 31, 1993

Date	Serial Number *(BLM use only)*
June 1, 1994	

Home phone *(include area code)*: 702-234-9876

1a. Applicant's name	b. Address *(include zip code)*	Business phone *(include area code)*
Routt County Board of County Commissioners	Box 372 Belmont, Nevada 89113	702-234-5628

2. Give legal description of lands applied for *(include metes and bounds description, if necessary)*

SUBDIVISION	SECTION	TOWNSHIP	RANGE	MERIDIAN
NW4NW4	27	4 N.	62 E.	MD
SW4NE4	28	4 N.	62 E.	MD

County of	State of	Containing *(acres)*
Routt	Nevada	80

3a. This application is for ☒ Lease and ☒ Purchase *(If lease, indicate years)*

b. Proposed use is ☒ Public Recreation ☐ Other Public Purposes

4. Attach three (3) copies of the completed statement required by 43 CFR 2741.4(b). *(Specifically identify an established or definitely proposed project for use of the land, a detailed plan and schedule for development, and a management plan which includes a description of how any revenues will be used.)*

See Attachments

5. If applicant is State or Political subdivision thereof, cite your statutory or other authority to hold land for these purposes.

County Board of Supervisors, Nevada Revised Statutes

6. Attach a copy of your authority for filing this application and to perform all acts incident thereto.

7. If land described in this application has not been classified for recreation and/or public purposes pursuant to the Recreation and Public Purposes Act, consider this application as a petition for such classification.

(Continued on reverse)

8. Are all activities, facilities, services, financial aid, or other benefits as a result of your proposed development provided without regard to race, color, religion, national origin, sex, or age? ☒ Yes ☐ No *(If "no," describe the situation or activity and your plans for achieving compliance.)*

Applicant's Signature Janet Y. Booth | Date June 1, 1994

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representation as to any matter within its jurisdiction.

GENERAL INSTRUCTIONS

1. Type or print plainly in ink.
2. Submit application and three (3) copies of related plans to the proper BLM State Office for the State in which the land is located.
3. Study controlling regulations in 43 CFR 2740 *(Sales)* and 43 CFR 2912 *(Leases)*.
4. If applicant is non-governmental association or corporation attach a copy of your charter, articles of incorporation or other creating authority. If this information has been previously filed with any BLM office, refer to previous filing by date, place, and case serial number.
5. If applicant is non-governmental association or corporation, attach a copy of your authority to operate in the State where the lands applied for are located. If previously filed with any BLM office, refer to previous filing by date, place, and case serial number.

SPECIFIC INSTRUCTIONS

(Items not listed are self-explanatory)

Item

2. If land is surveyed, give complete legal description. If land is unsurveyed, description should be by metes and bounds connected, if feasible, by course and distance with a corner of public land survey. If possible, approximate legal subdivisions of unsurveyed lands should be stated. Acreage applied for *must not exceed* that specified by regulations.

3a. Generally, title to lands will not be granted upon initial approval of an application. In order to assure proper development or use plans, the general practice will be to issue a lease or lease with option to purchase after development is essentially completed. In any case, term of lease may not exceed 20 years for non-profit organizations or 25 years for governmental agencies, instrumentalities or political subdivisions.

4. Leases and patents under this act are conditioned upon continuing public enjoyment of the purposes for which the land is classified. The plan of development, use, and maintenance *must* show, at a minimum:

   a. A need for proposed development by citing population trends, shortage of facilities in area, etc.

   b. That the land will benefit an existing or definitely proposed public project authorized by proper authority.

   c. Type and general location of all proposed improvements, including public access *(roads, trails, etc.)*. This showing may take the form of inventory lists, maps, plats, drawings, or blueprints in any combination available and necessary to describe the finished project. Site designs should be provided for intensive use sites and general information about improvements existing or planned on lands within the overall project.

   d. An estimate of the construction costs, how the proposed project will be financed, including a list of financial sources, and an estimated timetable for actual construction of all improvements and facilities.

   e. A plan of management to include operating rules, proposed source and disposition of revenues arising from the proposed operation, personnel requirements, etc.

   f. A specific maintenance plan to include, for example, sewage and garbage disposal, road maintenance, upkeep and repair of grounds and physical facilities, etc.

   g. Applications for solid waste disposal sites *must* comply with guidelines established by the Environmental Protection Agency (40 CFR 240 and 241) and *must* include a detailed physical description of the site (including a map showing 5-foot contours at a scale of 1 inch = 200 feet), description of ground water situation, soil characteristics and management plan.

6. This may consist of a copy of a delegation of authority, resolution or other evidence of authority from the governing board of the applicant's organization, copy of the by-laws of the organization, or the like.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et. seq.) requires us to inform you that:

Information is being collected to process your request for Federal lands under the provisions of June 14, 1926 (43 U.S.C. 869 as amended), Recreation and Public Purposes Act.

Information will be used to illustrate whether the applicant meets requirements of regulations found in 43 CFR Subpart 2740.

Response to this request is mandatory, see regulations found in 43 CFR Subpart 2741.4.

☆ U.S. GOVERNMENT PRINTING OFFICE 1992—676-426

PROPOSED INDIAN CREEK PARK
Development and Improvement Plan

1. Description

The proposed Indian Creek Park comprises 80 acres situated around the junction of the East and the West Forks of Indian Creek, and encompasses 1 miles of shoreline along the streams. The site is located 25 miles southwest of Adams (population 18,000). Nevada State Highway 38, an all-weather gravel road; leads to within 1/2 mile of Indian Creek . There are no existing or known proposed public outdoor recreation facilities within 35 miles and this location is the only available site southwest of Adams. The East and the West Forks join near the mouth of a steep scenic canyon. The proposed site is on relatively level benchland supporting an open stand of large ponderosa pines and aspen. Indian Creek provides excellent trout fishing and elk, deer, and other wildlife are numerous in the vicinity.

2. Statement of Need

This region is now subject to intense recreational pressures from the local population, especially from Adams, and to a lesser extent from tourists using Highway 38. A serious public health and litter problem has been created by use of these undeveloped lands for picnicking and overnight camping and pollution of Indian Creek by human wastes. Recent road counts along Nevada 38 indicate an average weekday traffic flow from April to October of 225 units, while weekends and holidays average 850 units. This traffic is primarily the result of people looking for places to picnic, camp, fish, hike in the mountains, or just to enjoy nature. hunters camp in this location during the winter months. There is one public picnic area with 60 units ten miles northeast of Adams, subjected to severe overuse. During the past several years,this site has shown an average weekend attendance which increased 300 percent (600 visits in 1988 to 1800 visits in 1992). The population of Adams has increased from 9,000 in 1980 to the present 18,000, which is one of the largest percentage increases in the State. With this population growth, new industries have been established in the vicinity, and continued increase in population is to be expected. Scheduled resurfacing of Nevada 38 during the next few years is expected to increase the average daily summer traffic flow from 225 units to more than 1,000 units.

3. Location

The lands embraced by the proposed park are under various forms of management by this agency (see General Vicinity Map):

T. 4 N., R. 62 E., MD Meridian, Nevada

Section 21	S½SE¼SW¼	owned fee title
Section 22	S½SW¼SW¼	owned fee title
Section 27	SW¼NE¼NE¼	leased
Section 28	S½NE¼NE¼	owned fee title
	NW¼NE¼	leased with option to purchase
	N½NE¼NE¼	o wn 20' easement along Indian Creek and right-of-way for vehicular traffic

The lands embraced by the instant application will be used as follows:

Section 27	NW¼NW¼	Overnight campground and development of foot trails
Section 28	SW¼NE¼	Fishing access, overlook and foot trails. No major recreational developments other than a foot bridge crossing the West Fork of Indian Creek are contemplated. This tract is desired to act as a buffer zone between intensive development as exhibited in the camp and picnic grounds and adjoining privately owned lands. Therefore, it is intended that this tract remain in its natural state.

It is urgent that the development of public outdoor recreation facilities be initiated in the Indian Creek area. Development of the proposed Indian Creek Park will not only help alleviate the intense demand for such facilities, but will also act as a springboard for the future acquisition and development of similar sites in this area which are now in private ownership.

4. Concurrence in this project has been obtained from the Routt County Planning Commission. A copy of their comments is enclosed.

Illustration 3

Description of proposed improvements and estimated cost of development for lands encompassed by the proposed Indian Creek Park:

Unit 1 Indian Creek Campground (See Site Design)

NW¼NW¼, Section 27, T. 4 N., R. 62 E., MD Meridian, Nevada

Surveying, planning,and construction of 1/2-mile interior road, 10 feet wide, graded gravel and crushed stone with 4-inch macadam surface; 10 parking units, 3-inch macadam surface; 1/2-mile foot trail, 3 feet wide, graveled.

Clearing, leveling, and developing of campsites, with 20 family units (camping).

Subtotal $21,250

Unit 2 (See General Vicinity Map)

SW¼NE¼, Section 28, T. 4 N., R. 62 E., MD Meridian, Nevada

1/2-mile foot trail, 3 feet wide, graveled; 1 foot bridge crossing West Fork Indian Creek, 5 feet wide by 20 feet long, log-steel structure.

Subtotal 2,000

In addition to the above improvements to be placed on the lands applied for, the following amounts will be expended on county owned or leased land in developing Indian Creek Park.

Subtotal 33,000

The 5-year annual rental for the BLM lands applied for, purchase of 30 acres of privately owned land, annual rental of leased private land, and final purchase price of the BLM land will require an expenditure of $6,300 over the five-year period.

Subtotal 7,800

TOTAL **$64,050**

In addition to the above costs, the county will provide maintenance and custodial services.

(Also **show source of funds to be used in developing and maintaining the site**.)

Illustration 4

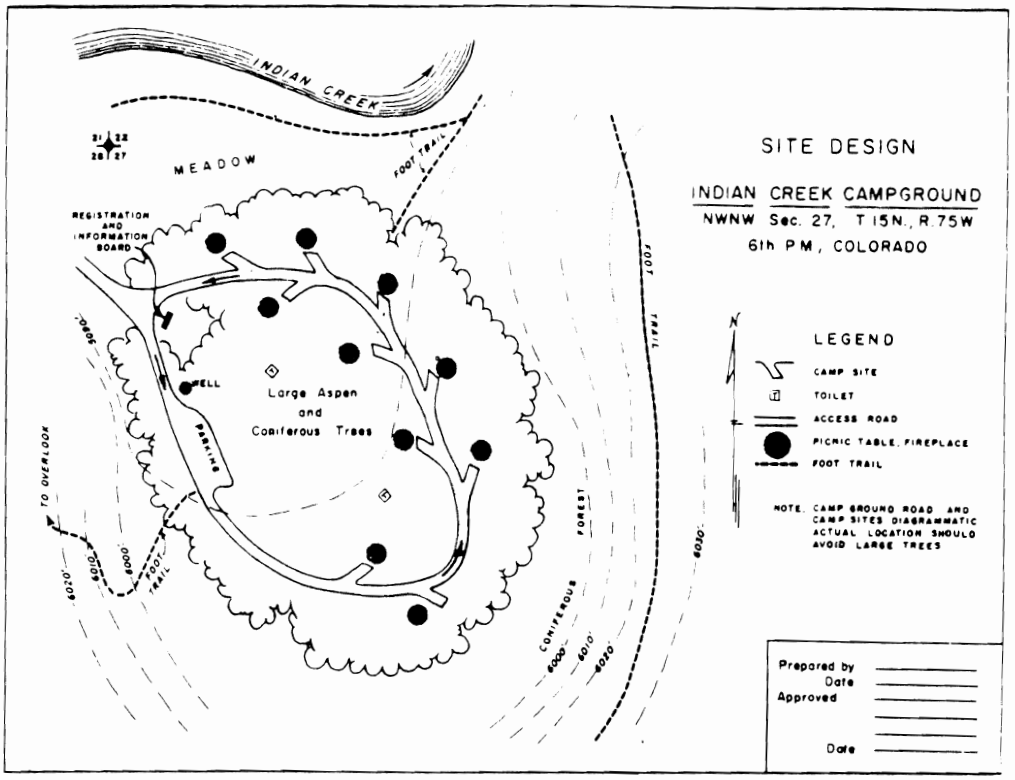
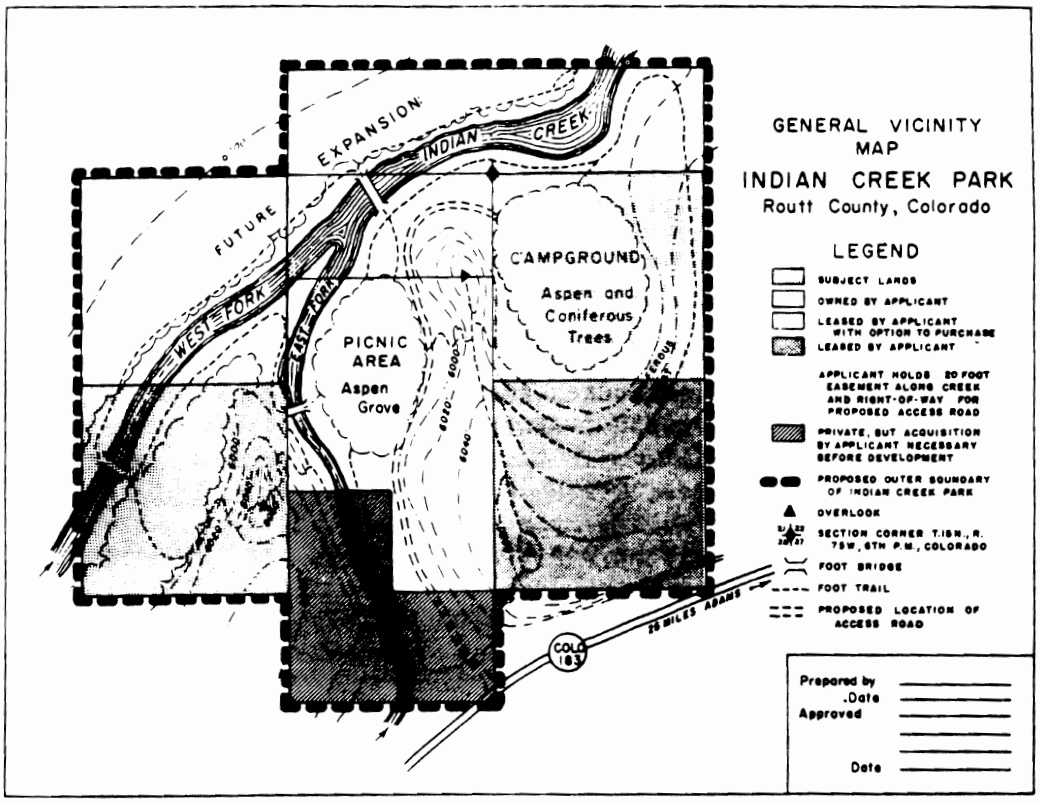


Illustration 5



Timetable for Development of the Indian Creek Park

The plan is to develop the park over a 5-year period which will commence with the lease of the lands applied for. Prior to the end of the 5-year lease period construction will be completed and purchase of the BLM lands will be requested. The proposed timetable for development will approximate the following:

First Year

1.	Acquisition and rental costs:	
	Annual rental for BLM lands applied for, 80 acres @ $2/acre	$ 160
	annual rental of other property within park	300
	Purchase of 30 acres now impeding full utilization and development of Indian Creek Park	5,500
2.	Development costs:	
	Surveys for road and trail construction; development plans for picnic grounds and campgrounds	5,000
		$10,960

Second Year

Annual rental for BLM lands applied for, 80 acres @ $2/acre	160
Annual rental of leased lands	300
Construction of access and interior roads and parking area	12,500
Initial construction of picnic grounds	10,000
Initial construction of foot trails	750
	$23,710

Third Year

Annual rental for BLM lands applied for, 80 acres @ $2/acre	160
Annual rental of leased lands	300
Completion of picnic grounds	10,000
Completion of foot trails	1,500
	$11,960

Fourth Year

Annual rental for BLM lands applied for, 80 acres @ $2/acre	160
Annual rental of leased lands	300
Initial construction of campground	5,000
Construction of two foot bridges	3,000
	$8,460

Fifth Year

Annual rental for BLM lands applied for, 80 acres @ $2/acre		160
Annual rental of leased lands		300
Completion of campground		7,000
Construction of one foot bridge		1,500
		$8,960

Sixth Year

Purchase of BLM leased lands, 80 acres @ $10.00/acre		800
	TOTAL	**$64,050**

Management Plan

In consideration of the nominal annual rental of $2. per acre per year and final purchase price of $10.00 per acre, the Routt County Park Commission (through the Board of County Commissioners), agrees to the following commitments, which commitments will be incorporated by reference in the conveyance of the subject lands:

1. To maintain the lands open to use by the public for recreational purposes without discrimination or favor.

2. To make no more than a reasonable charge for the use of facilities on the land (whether by concession or otherwise) and to charge no more for entrance to and use of the area than is charged at other comparable installations managed by State and local agencies. The Commission will submit to the Bureau of Land Management its schedule of charges. All charges shall be subject to review for conformance with this requirement and appropriate modification by the Secretary of the Interior or his delegate after reasonable notice and opportunity for hearing.

3. To develop and manage the lands in accordance with the approved program of utilization, submitted with this application.

4. To secure the approval of the Secretary of the Interior or his delegate of all plans of construction prior to commencing actual construction.

5. To maintain in satisfactory condition the facilities on these lands.

Form 2912-1
(April 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number

NVN 87153

RECREATION OR PUBLIC PURPOSES LEASE

Act of June 14, 1926, as amended (43 U.S.C. 869 *et. seq.*)

This lease entered into on this 15 day of July , 19 94 , by the United States of America, the lessor, through the authorized officer of the Bureau of Land Management, and Routt County, State of Nevada , hereinafter called the lessee, pursuant and subject to the terms and provisions of the Recreation and Public Purposes Act and to all reasonable regulations of the Secretary of the Interior now or hereafter in force when not inconsistent with any express and specific provisions herein, which are made a part hereof,

WITNESSETH:

Sec. 1. The lessor, in consideration of the rents to be paid and the conditions to be observed as hereinafter set forth, does hereby grant and lease to the lessee the right and privilege of using for the purposes hereinafter set forth in the following-described lands:

NW4NW4, Section 27 and

SW4NE4, Section 28, T. 4 N. R. 62 E., MDM

containing 80 acres, together with the right to construct and maintain thereon all buildings or other improvements necessary for such use for a period of 5 years, the rental to be $ 160 per annum. If, at the expiration date of the lease the authorized officer shall determine that the lease may be renewed, the lessee herein will be accorded the privilege of renewal upon such terms as may be fixed by the lessor. The lessee may use the premises for

Sec. 2. There are reserved to the United States all mineral deposits in said lands, together with the right to mine and remove the same under applicable laws and regulations to be established by the Secretary of the Interior.

Sec. 3. The lessor reserves the right of entry, or use, by

(a) any authorized person, upon the leased area and into the buildings constructed thereon for the purpose of inspection;

(b) Federal agents and game wardens upon the leased area on official business;

(c) the United States, its permittees and licensees, to mine and remove the mineral deposits referred to in Sec. 2, above.

Sec. 4. In consideration of the foregoing, the lessee hereby agrees:

(a) To improve and manage the leased area in accordance with the plan of development and management designated as Indian Creek Park development and improvement plan and approved by an authorized officer on July 5, 1994 or any modification thereof hereinafter approved by an authorized officer, and to maintain all improvements, during the term of this lease, in a reasonably good state of repair.

(b) To pay the lessor the annual rental above set forth in advance during the continuance of this lease.

(c) Not to allow the use of the lands for unlawful purposes or for any purpose not specified in this lease unless consented to under its terms; not to prohibit or restrict, directly or indirectly, or permit its agents, employees, contractors (including, without limitation, lessees, sublessees, and permittees), to prohibit or restrict the use of any part of the leased premises or any of the facilities thereon by any person because of such person's race, creed, color, sex, or national origin.

(d) Not to assign this lease or to change the use of the land, without first receiving the consent of the authorized officer of the Bureau of Land Management.

(e) That this lease may be terminated after due notice to the lessee upon a finding by the authorized officer that the lessee had failed to comply with the terms of the lease, or has failed to use the leased lands for the purposes specified in this lease for a period of consecutive years; or that all or part of the lands is being devoted to some other use not consented to by the authorized officer; or that the lessee has not complied with his development and management plans referred to in subsection 4(a).

(f) That upon the termination of this lease by expiration, surrender, or cancellation thereof, the lessee, shall surrender possession of the premises to the United States in good condition and shall comply with such provisions and conditions respecting the removal of the improvements of and equipment on the property as may be made by an authorized officer.

(g) To take such reasonable steps as may be needed to protect the surface of the leased area and the natural resources and improvements thereon.

(h) Not to cut timber on the leased area without prior permission of, or in violation of the provisions and conditions made by an authorized officer.

(i) That nothing contained in this lease shall restrict the acquisition, granting, or use of permits or rights-of-way under existing laws by an authorized Federal officer.

Sec. 5. *Equal Opportunity Clause.* Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither lessee nor lessee's subcontractors shall maintain segregated facilities.

Sec. 6 *Equal Access Clause.* Lessee shall comply with all provisions of the American Disabilities Act of July 26, 1990, the Architectural Barriers Act of 1968, and Section 504 of the Rehabilitation Act of 1973, as amended. These Acts require that programs and public facilities constructed or renovated be accessible to and usable by persons with disabilities.

Sec 7. The lessee may surrender this lease or any part thereof by filing a written relinquishment in the appropriate BLM office. The relinquishment shall be subject to the payment of all accrued rentals and to the continued obligation of the lessee to place the lands in condition for relinquishment in accordance with the applicable lease terms in subsections 4(f) and 4(g) and the appropriate regulations.

Sec 8. The lessee further agrees to comply with and be bound by those additional terms and conditions identified as

NVN 87153 Terms and Conditions (attached)

and which are made a part hereof.

Sec. 9. No Member of, or Delegate to, the Congress, or Resident Commissioner, after his election or appointment, and either before or after he has qualified, and during his continuance in office, and no officer, agent, or employee of the Department of the Interior, except as otherwise provided in 43 CFR, Part 7, shall be admitted to any share or part of this lease, or derive any benefit that may arise therefrom, and the provisions of Title 18 U.S.C. Sections 431—433, relating to contracts, enter into and form a part of this lease, so far as the same may be applicable.

FOR EXECUTION BY LESSEE

IN WITNESS WHEREOF:

Cynthia L. Norby
(Signature of Lessee's Authorized Officer)

Stephanie N. Johnson
(Signature of Witness)

July 12, 1994
(Date)

THE UNITED STATES OF AMERICA

By Rusty Casto
(Authorized Officer)

Area Manager
(Title)

July 15, 1994
(Date)

This form does not constitute an information collection as defined by 44 U.S.C. 3502 and therefore does not require OMB approval.



SITE SUMMARY

SITE AREA = 19.13 ACRES
TOTAL DWELLING UNITS = 199 UNITS
DENSITY = 10.40 UNITS PER ACRE
TOTAL OPEN SPACE = 7.284 (38.07%)

FRONT LOAD TOWNHOMES	36 UNITS
REAR LOAD TOWNHOMES	83 UNITS
CONDOS	80 UNITS
TOTAL UNITS	**199 UNITS**

Bonus Density criteria have been met in each of the 4 different ways of the provision.

1. **Building Design and Materials**
   a. Building elevations and roof heights very in height and pitch. (see elevations)
   b. Building footprints also vary with 5 different building sizes for the rear loaded units and 2 different building sizes for the front loaded.
      Rear Loaded building count
      - 3 plex = 2
      - 4 plex = 4
      - 5 plex = 3
      - 6 plex = 3
      - 7 plex = 4

      Front Loaded building count
      - 4 plex = 3
      - 6 plex = 4

   c. Visual interest through the use of varied
      - Earth town colors
      - Variety of high-quality materials including stucco, steel, hardy board, brick, wood and vinyl windows.
      - Different textures will include balconies, patios, corbels, and roof overhangs
      - Roofing materials will be extremely durable with flat or S tile roofing.
2. **Site Design**
   a. Site is consistent with adjacent residential areas in both height and building footprint size.
   b. Site consists of multiple amenity areas including one large amenity area at the heart of the subdivision.
   c. Flow of traffic and spacing of buildings is important and streets have been designed to maintain an A and B level of services LOS per the traffic study.
   d. Parking minimum requirements have been exceeded and total 3.15 stalls per unit are provide.
   e. Open space totals 7.287 acres which equates to 38.09% (see plan showing the breakdown of open space by area.)
3. **Landscaping**
   a. Landscaping will be done with water conservation in mind.
   b. Only trees and shrubs susceptible to lower water consumption will used.
   c. Turf will be used sparingly and in areas where in will be best used by residents.
   d. Deep root watering systems will be used to ensure that water is getting down to the roots allowing the roots to learn to grow down to get it's water.
4. **Project Amenities**
   a. Two tennis courts
   b. Four pickleball courts
   c. Playground equipment
   d. Clubhouse
   e. Swimming pool with and spa
   f. Gazebo
   g. Outdoor cooking area
   h. Private outdoor space for each home in the form of either a courtyard or a patio.

Think Architecture

June 29, 2021

0 25 50 100 150

Concept Plan

Coyote Landing, Santa Clara, Utah

CITY OF
SANTA CLARA
FOUNDED 1854

Potential PC Date: _____ (Note: The application will not be placed on a Planning Commission agenda until **ALL** required submittals have been received by the Building Dept)

PLANNED DEVELOPMENT ZONE CHANGE APPLICATION & CHECKLIST (also for PD Zone Amendment)
*Application Fee

I. PROPERTY OWNER(S) / APPLICANT INFORMATION

APPLICANT: Taylor Built Homes / Robert Smith

MAILING ADDRESS: 1100 E South Union Ave. Midvale, UT 84047

PHONE: (801)449-9706 E-MAIL ADDRESS: robert@taylorbuilthomes.com

CONTACT PERSON / REPRESENTATIVE: Robert Smith

MAILING ADDRESS: Same as above

PHONE: Same E-MAIL ADDRESS: Same

PROPERTY INFORMATION

PROJECT NAME: Coyote Landing

LOCATION OF SUBJECT PROPERTY: 400 E and North Town Rd

TAX ID (PARCEL) NUMBER: SC-SB-80 GENERAL PLAN: MDR

EXISTING ZONING: R-1-10 PROPOSED ZONING: PDR

TOTAL ACREAGE OF PROPOSED ZONE CHANGE: 20.7

CITY STAFF REVIEW (TRC)

When did this proposal appear before TRC? 2/18/21 and 6/17/21

IV. APPLICATION REQUIREMENTS

PHYSICAL SUBMISSION

- ☐ Planned Development Zone Change Application
- ☐ List of property owners within 300', formatted as mailing labels, prepared by a title company or other entity
- ☐ Mailing label radius map
- ☐ Payment of filing fee

***$500 (filing fee) + acreage fee; < 1 acre no acreage fee; 1-100 acres: $50 / acre; 101 -500 acres: $25 /acre**
Over 500 acres: $10 / acre
No fee for acreage designated as natural area Open Space and zoned Open Space if over ten acres.

- ☐ Color and materials board (20"x30" maximum size, each color and material must be labeled, and materials must also be numbered and called out on an elevation drawing)

DIGITAL SUBMISSION (note; the Project Plan requirements are found in section 17.68.30 of Zoning code, and summarized below) Submit the items below to: snez@sccity.org
The subject line of your email must read as PD Zone Change Application (Project Name)

- ☐ A project area map
- ☐ A legal description and surveyed site plan in DWG (AutoCad) format prepared by a licensed surveyor or engineer
- ☐ Project Plan(s) including but not limited to:
  - ☐ Colored site development plan, and colored building elevations for all four sides of building(s).
  - ☐ Landscape plan showing the general location of landscaped area and trees and the location of any areas to be preserved in their natural state
  - ☐ Topography at contour intervals of two feet (2') (unless waived by city staff)
  - ☐ A phasing plan, if the development is proposed to be developed in phases
  - ☐ Refuse storage areas screened so that materials stored within these areas are not visible from public streets
  - ☐ Vehicular and pedestrian circulation plan including trails, and also including safe and convenient turning space for cars, sewer vehicles, refuse collection vehicles, firefighting equipment, etc., at the end of private drives and dead-end streets. Show road widths. The city may require a Traffic Impact Study (TIS) if deemed necessary.
  - ☐ Statement or exhibit that all utilities are underground
- ☐ Building height and elevations: the type, character and proposed height of all buildings
- ☐ A detailed narrative (written text) of the proposed development, including but not limited to:
  - ☐ A detailed list of proposed uses
  - ☐ The proposed density in terms of dwelling units per gross acre of land and proposed floor area of non-residential uses per acre
  - ☐ Description of the proposed uses of land, including percentages of land devoted to various types of land use, such as open space, building coverage, parking area, and landscaped area.
  - ☐ A description of the proposed exterior building materials, including roof materials
- ☐ Application Fees Paid

V. APPLICANT AGREEMENT

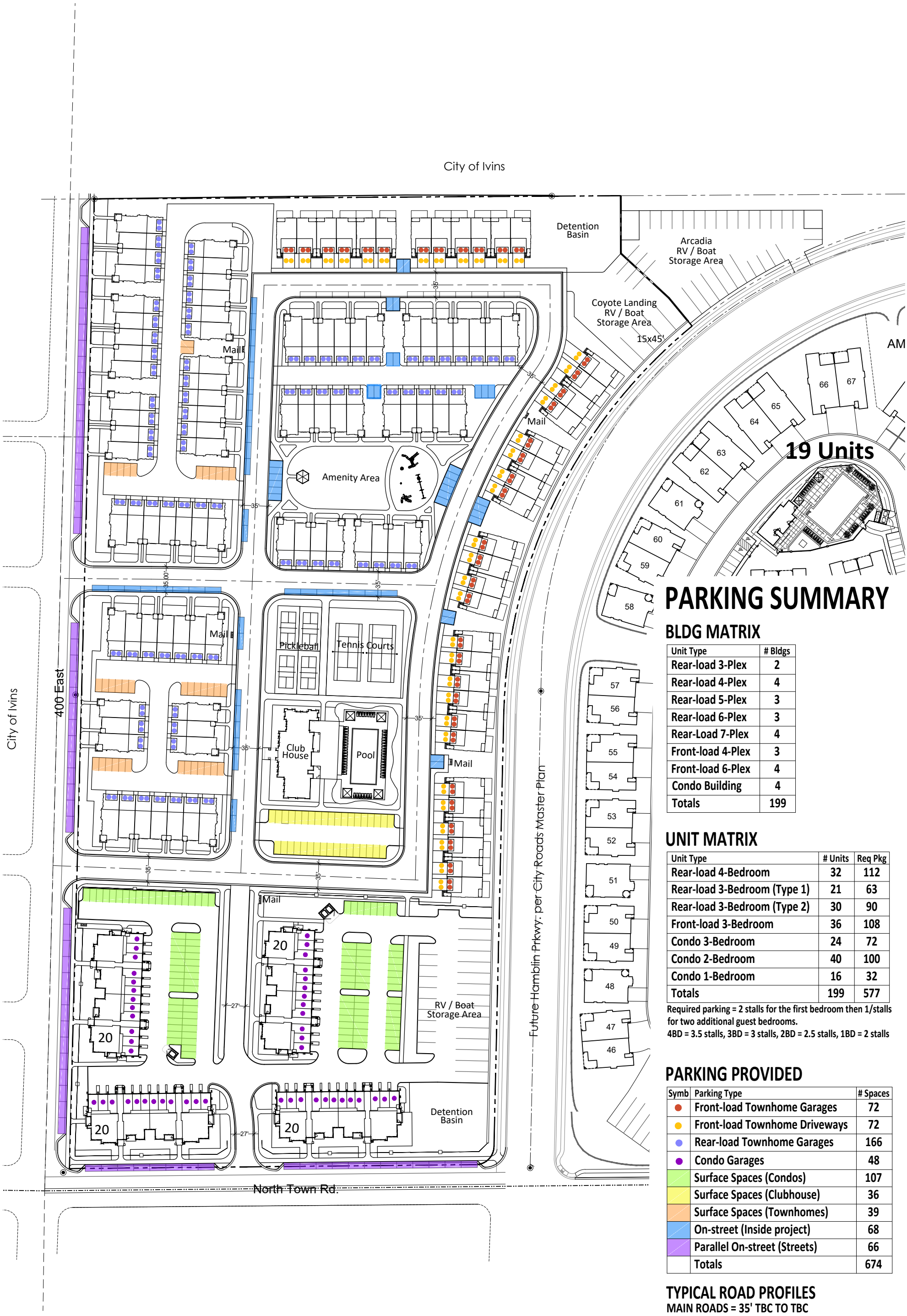
I (we) have read and understood the requirements of this application and all information is true and accurate to the best of my (our) abilities. The application must be signed by the current property owner or a signed statement from the current property owner that the applicant is authorized to submit this application on behalf of the property owner.

Printed Name Robert Smith Signature  Date 6/14/21

Property Owner / Authorized Agent

Printed Name Signature Date

Property Owner / Authorized Agent



PARKING SUMMARY

BLDG MATRIX

Unit Type	# Bldgs
Rear-load 3-Plex	2
Rear-load 4-Plex	4
Rear-load 5-Plex	3
Rear-load 6-Plex	3
Rear-Load 7-Plex	4
Front-load 4-Plex	3
Front-load 6-Plex	4
Condo Building	4
Totals	199

UNIT MATRIX

Unit Type	# Units	Req Pkg
Rear-load 4-Bedroom	32	112
Rear-load 3-Bedroom (Type 1)	21	63
Rear-load 3-Bedroom (Type 2)	30	90
Front-load 3-Bedroom	36	108
Condo 3-Bedroom	24	72
Condo 2-Bedroom	40	100
Condo 1-Bedroom	16	32
Totals	199	577

Required parking = 2 stalls for the first bedroom then 1/stalls for two additional guest bedrooms.
4BD = 3.5 stalls, 3BD = 3 stalls, 2BD = 2.5 stalls, 1BD = 2 stalls

PARKING PROVIDED

Symb	Parking Type	# Spaces
	Front-load Townhome Garages	72
	Front-load Townhome Driveways	72
	Rear-load Townhome Garages	166
	Condo Garages	48
	Surface Spaces (Condos)	107
	Surface Spaces (Clubhouse)	36
	Surface Spaces (Townhomes)	39
	On-street (Inside project)	68
	Parallel On-street (Streets)	66
	Totals	674

TYPICAL ROAD PROFILES

MAIN ROADS = 35' TBC TO TBC
SECONDARY ROADS = 27' TBC TO TBC
ALLEYS = 26' TOTAL WIDTH
(DRIVEWAYS OFF ALLEYS ARE ~5' AVERAGE)

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Parking Plan

Coyote Landing, Santa Clara, Utah

City of Ivins

Detention Basin

Arcadia RV / Boat Storage Area

Coyote Landing RV / Boat Storage Area

15x45'

Mail

Amenity Area

Pickleball

Tennis Courts

Club House

Pool

Mail

Mail

Mail

Mail

RV / Boat Storage Area

Detention Basin

400 East

Future Hamblin Prkwy. per City Roads Master Plan

Arcadia Dr.

Vacation Way

Arcadia Dr.

North Town Rd.

City of Ivins

AM

19 Units

35'

35.00'

27'

20

19 18 17 16 15 14 13 12 11 10 9 8 7 6

20 21 22

57 56 55 54 53 52 51 50 49 48 47 46

45 44 43 42 41 40

63 62 61 60 59 58

66 67 65 64

79 78 77 76

FENCING SUMMARY

- Solid Wall
- Ornamental Fence

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Fencing Plan

Coyote Landing, Santa Clara, Utah

City of Ivins

Detention Basin

Arcadia RV / Boat Storage Area

Coyote Landing RV / Boat Storage Area

15x45'

Mail

Amenity Area

Pickleball

Tennis Courts

Club House

Pool

RV / Boat Storage Area

Detention Basin

400 East

Future Hamblin Pkwy: per City Roads Master Plan

Arcadia Dr.

Vacation Way

North Town Rd.

City of Ivins

AM

19 Units

OPEN SPACE SUMMARY

TOTAL SITE AREA	19.13 ACRES
TURF AREA	1.591 ACRES
PLANTER/XERISCAPE	3.504 ACRES
AMENITIES	0.859 ACRES
WALKWAYS	1.333 ACRES
TOTAL OPEN SPACE	7.287 ACRES
	(38.09%)

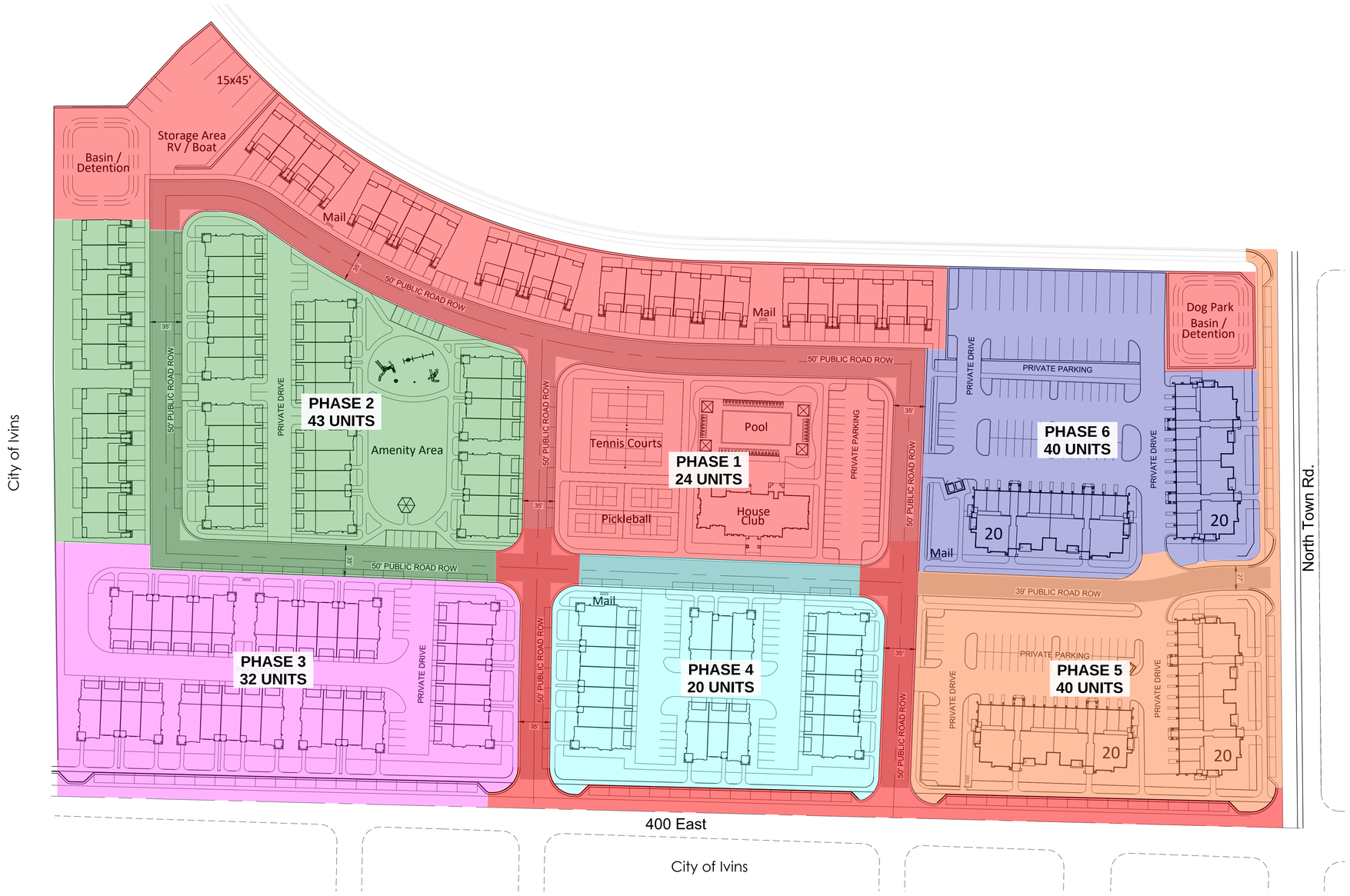
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Open Space Plan

Coyote Landing, Santa Clara, Utah



PHASE 1 = 24 UNITS
PHASE 2 = 43 UNITS
PHASE 3 = 32 UNITS
PHASE 4 = 20 UNITS
PHASE 5 = 40 UNITS
PHASE 6 = 40 UNITS
TOTAL = 199 UNITS

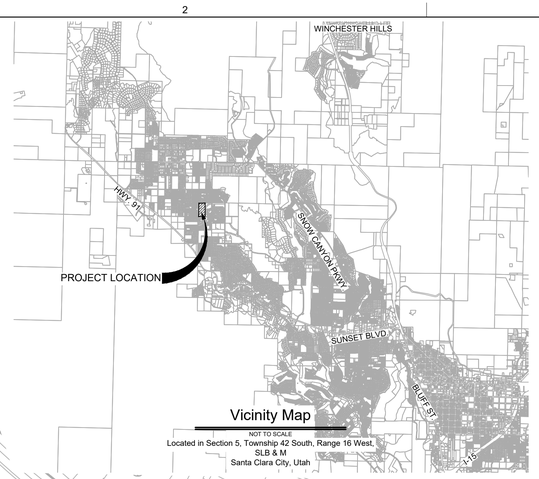
0 60' 120'
SCALE: 1" = 60'

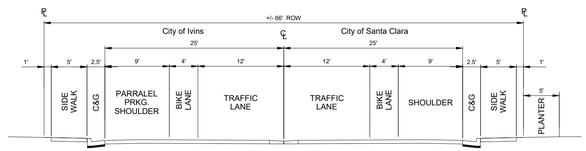
Coyote Landing
Phasing Plan
SANTA CLARA, UTAH

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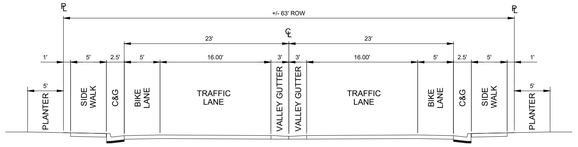
HORROCKS ENGINEERS

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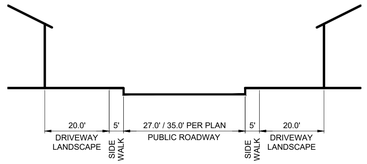


400 EAST ROAD



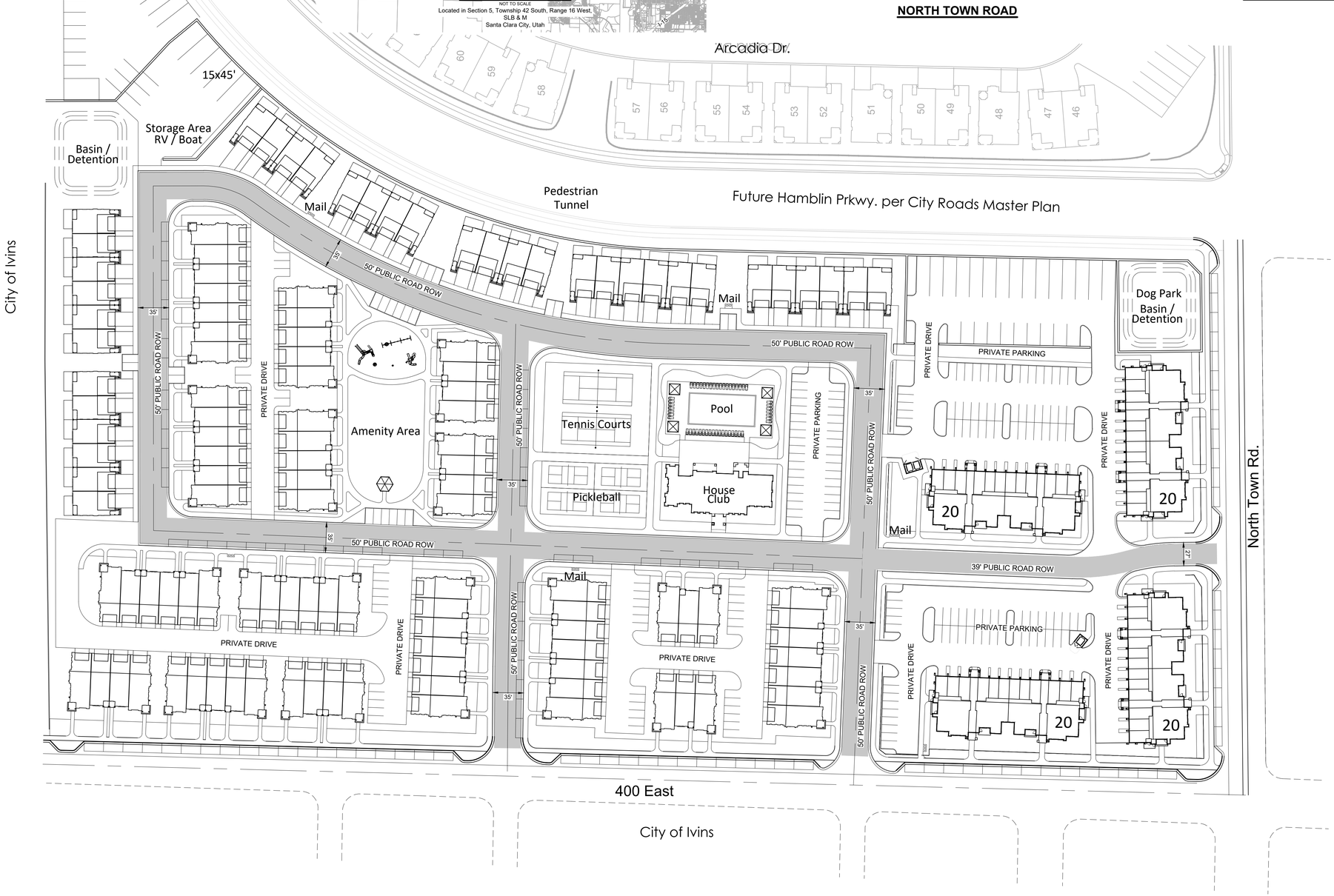
NORTH TOWN ROAD

NOTES:
ALL UTILITIES WILL BE PUBLIC AND LOCATED UNDER GROUND PER CITY SPECIFICATIONS



RESIDENTIAL ROAD SECTION





HORROCKS ENGINEERS
555 South Bluff St., Suite 101
St. George, UT 84770
(435) 986-7888
www.horrocks.com

WARNING
IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE
0 1 2

REVISIONS		
REV #	DATE	
1		

*SEE GENERAL NOTES SHEET

DRAWING INFO	
DATE	2021 06-15
DESIGNED	BW
DRAWN	SA
CHECKED	BW
PROJECT	UT-3083-2104

PRELIMINARY
NOT FOR CONSTRUCTION

QUAIL CREEK CROSSING & COYOTE LANDING

SANTA CLARA, UTAH

VEHICULAR & PEDESTRIAN TRAVEL PLAN

OVERALL

TR.01

\\kayak\data\I\2021\UT-3083-2104 Quail Crossing and Coyote Landing\Project Data\02 CAD\2.03 Sheet Files\Concepts & Exhibits\2021 06-15 Vehicular & Pedestrian Travel.dwg - 60 scale - 6/28/2021 03:30pm, bwillits

Bonus Density criteria have been met in each of the 4 different ways of the provision.

1. **<u>Building Design and Materials</u>**
    a. Building elevations and roof heights very in height and pitch. (See elevations)
    b. Building footprints also vary with 5 different building sizes for the rear loaded units and 2 different building sizes for the front loaded.

        <u>Rear Loaded building count</u>

        i. 3 plex = 2
        ii. 4 plex = 4
        iii. 5 plex = 3
        iv. 6 plex = 3
        v. 7 plex = 4

        <u>Front Loaded building count</u>

        vi. 4 plex = 3
        vii. 6 plex = 4

    c. Visual interest through the use of varied
        i. Earth town colors
        ii. Variety of high-quality materials including stucco, steel, hardy board, brick, wood and vinyl windows.
        iii. Different textures will include balconies, patios, corbels, and roof overhangs
        iv. Roofing materials will be extremely durable with flat or S tile roofing.

2. **<u>Site Design</u>**
    a. Site is consistent with adjacent residential areas in both height and building footprint size.
    b. Site consists of multiple amenity areas including one large amenity area at the heart of the subdivision.
    c. Flow of traffic and spacing of buildings is important and streets have been designed to maintain an A and B level of services LOS per the traffic study.
    d. Parking minimum requirements have been excited and total 3.15 stalls per unit.
    e. Open space totals 7.287 acres which equates to 38.09% (see plan showing the breakdown of open space by area.)

3. **<u>Landscaping</u>**
    a. Landscaping will be done with water conservation in mind.
    b. Only trees and shrubs susceptible to lower water consumption will used.
    c. Turf will be used sparingly and in areas where in will be best used by residents.
    d. Deep root watering systems will be used to ensure that water is getting down to the roots allowing the roots to learn to grow down to get it’s water.

4. **Project Amenities**
    a. Two tennis courts
    b. Four pickleball courts
    c. Playground equipment
    d. Clubhouse
    e. Swimming pool with and spa
    f. Gazebo
    g. Outdoor cooking area
    h. Private outdoor space for each home in the form of either a courtyard or a patio.

Coyote Landing Narrative

6-17-21

In an effort to simplify and meet the requirements for nightly rentals as a conditional use in the PD Zone this project has been revised as one subdivision know as Coyote Landing. This property is surrounded on all sides, of Santa Clara property, by vacation rental communities. My intent it is to build a family friendly community that will complement the surrounding communities in the area and will be something that the city as well as the residents of the community will be proud of and look forward to coming home to. I believe it is also important to provide a variety of excellent amenities for active families and individuals to recreate and build a family memories. I hope to accomplish this with the clubhouse, large pool, spas, and pool features for kids and families to enjoy. I also plan to provide multiple tennis and pickle ball courts for residents and their friends to enjoy

Coyote Landing will be a place for both young and old to come and enjoy the beautiful surroundings that exist in beautiful Santa Clara. With the growing demand of housing this size the development will help mean the needs of new families as well as those empty nesters looking to downsize. It will also serve those that may be looking for a second home. Though I am seeking the approval of short term rentals throughout the community many home owners will most likely choose to not rent their home out or will do so sparingly. On average a nightly rental home in this area is only rented out about 35%-45% of the year.

Coyote Landing will be comprised of townhouses and condo units. The townhomes will be a mixture of both front and rear loaded units in varying size and design. It is the intent that the Residential Zone Density Bonus Provision be applied to this project as well. This project meets each of the requirements for this density bonus in the following ways:

1. Building Design and Materials- The building elevations for the townhomes and condos all show excellent design in roof heights and pitch. The building footprints also vary with 5 different building sizes for the rear loaded units and 2 different building sizes for the front loaded.
    a. Rear Loaded building count
        i. 3 plex = 2
        ii. 4 plex = 4
        iii. 5 plex = 3
        iv. 6 plex = 3
        v. 7 plex = 4
    b. Front Loaded building count
        i. 4 plex = 3
        ii. 6 plex = 4

Each building will have visual interest through the use of varied earth town colors and a variety of high-quality materials including stucco, steel, hardy board, brick, wood and vinyl windows. Different textures will include balconies, patios, corbels, and roof overhangs. Roofing materials will be extremely durable with flat or S tile roofing.

2. Site Design- The site has been designed to be consistent with adjacent residential areas in both height and building footprint size. The site also consists of multiple amenity areas including one large amenity area at the heart of the subdivision. The flow of traffic and spacing of buildings is

important and has been taken into consideration. Much more than the required parking has been provided at a ratio of 3.15 stalls per unit. More than the required minimum of spacing between buildings has also provided to create more of an open feel and give as much distance as possible. As far a open space goes there is a total of 7.287 acres which equates to 38.09% (see plan showing the breakdown of open space by area.)

3. Landscaping- The landscaping will be done with water conservation in mind. Only trees and shrubs susceptible to lower water consumption will used. Turf will be used sparingly and in areas where in will be best used by residents. Deep root watering systems will be used to ensure that water is getting down to the roots allowing the roots to learn to grow down to get it's water.

4. Project Amenities- This subdivision will be unlike any other development in Santa Clara and include the following: Two tennis courts, four pickleball courts, playground equipment, a large professionally designed swimming pool with and spa as well as a state of the art clubhouse which could act as a general store to provide small necessities as well as snacks and drinks to those in the community. There will also be outdoor cooking areas around a gazebo for families to come together to recreate. Each unit will also have it's own form of private outdoor space in the form of either a courtyard or a patio.

   As the use of night rentals is being asked I want to remind those reading this that onsite staff will be on property 7 days a week to care for the needs of those visiting as well as handle any issue should they come up. It has never been our mentality to have anything but professional onsite property management. This is a much different approach that no other short term vacation rental management company in Santa Clara has provided. It is at a very high cost to do this but it results in a much better experience for the guests as well cuts down on the potential issues to others in the community and ensures that the homes and community as a whole will remain kept up and well cared for. There will also be an HOA for the entire subdivision providing landscape maintenance for all common areas as well as pool maintenance for the pool area.

5. Size of Groups for nightly rentals- The condos unit are smaller in size. 1 bedrooms are 755 sf, 2 bedrooms are 1037 sf, and 3 bedrooms are 1300 sf. The 3 bedroom homes will not be allowed to be rented to groups larger 8, groups of 6 for the 2 bedroom and groups of 4 for the 1 bedroom. The townhome homes are also smaller in size ranging from 1735sf to 1973 sf and are 3 and 4 bedrooms. These units will sleep between 8-10. This will not be rented out to groups larger than they can sleep.

6. Other concerns of nightly rentals-

   a. Noise or loud music – Speakers will not be built in outdoor patios, Our CCR's will not allow for outside music in the condos of the townhouses.
   b. Cars/parking? – With over 3.15 stalls per unit, more much parking is being provided than current city minimum requirements.
   c. Trash- Each townhome will have its own trash can and trash enclosures have been provided throughout the subdivision.

d. Nightly security will also ensure that the pool hours are enforced. Daily patrolling and enforcing of streets looking for those violating parking requirements or any other rules of the HOA will be done.



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COYOTE LANDING

SANTA CLARA, UT

FRONT LOAD EXTERIOR RENDERING STREET VIEW

D203

15 JUNE, 2021



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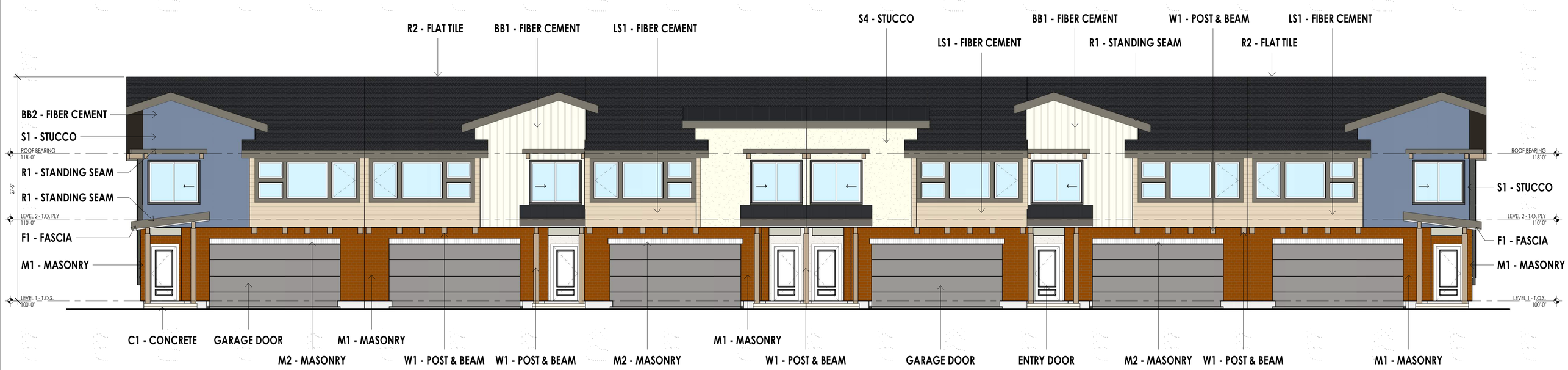
COYOTE LANDING

SANTA CLARA, UT

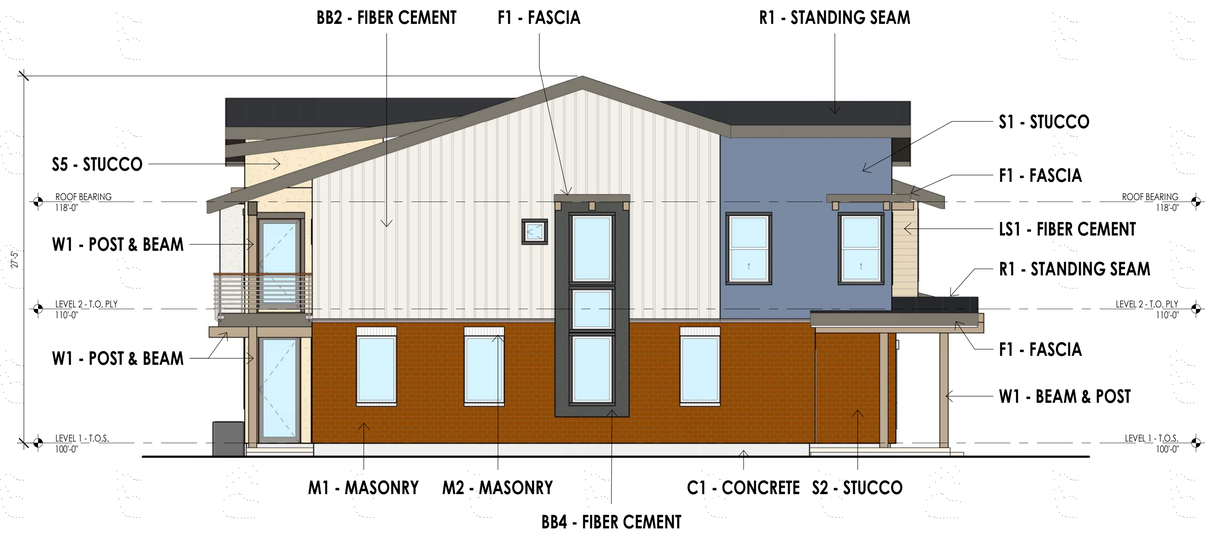
FRONT LOAD EXTERIOR
RENDERING REAR VIEW

D204

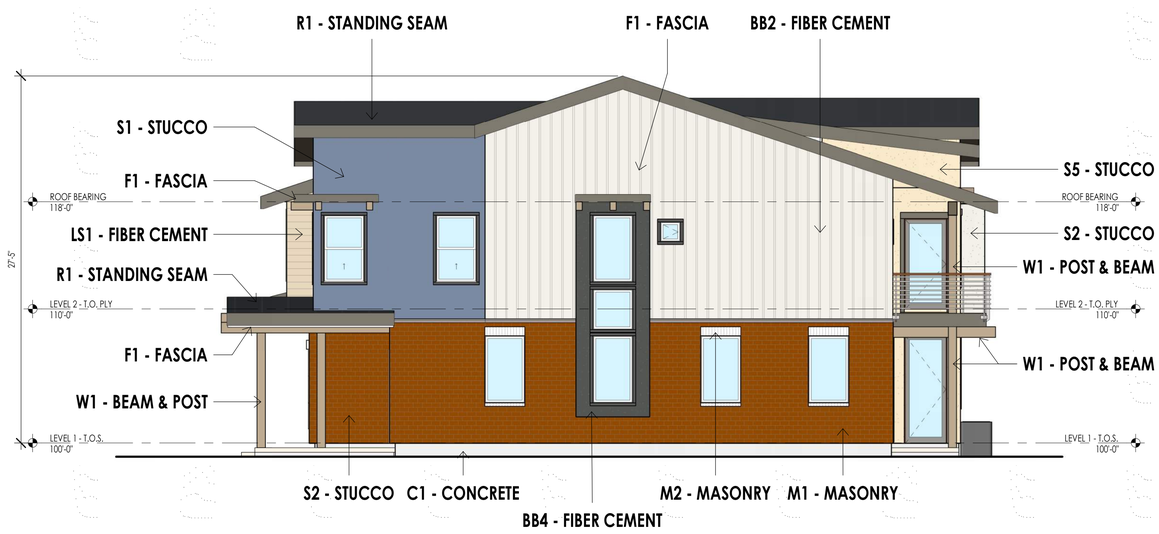
15 JUNE, 2021



FRONT ELEVATION SD — 1 / D301
3/16" = 1'-0"



LEFT ELEVATION SD — 2 / D301
3/16" = 1'-0"



RIGHT ELEVATION SD — 3 / D301
3/16" = 1'-0"

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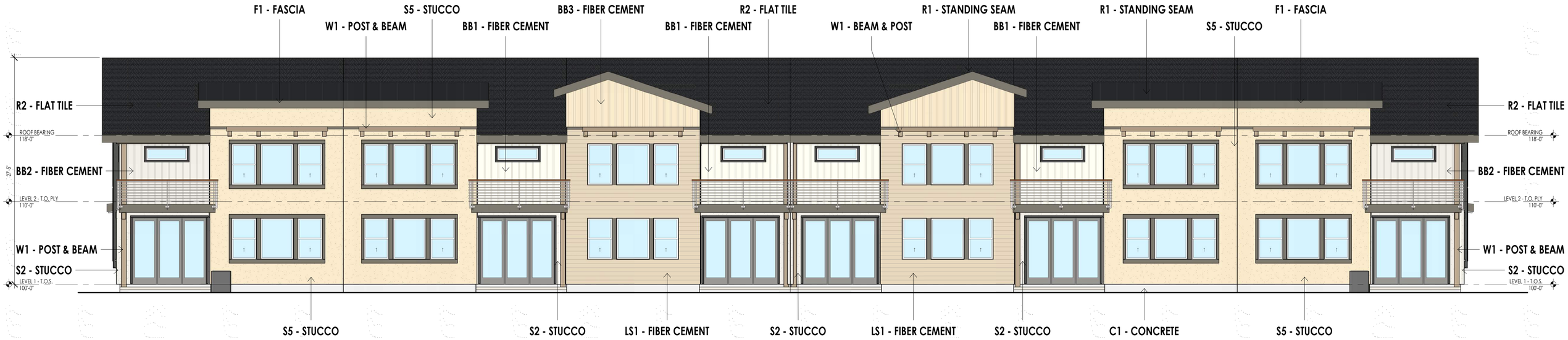
COYOTE LANDING

SANTA CLARA, UT

FRONT LOAD 6-PLEX
EXTERIOR ELEVATIONS

D301

15 JUNE, 2021



REAR ELEVATION SD — 1 / D302

3/16" = 1'-0"

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COYOTE LANDING

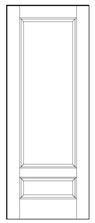
SANTA CLARA, UT

FRONT LOAD 6-PLEX
EXTERIOR ELEVATIONS

D302

15 JUNE, 2021

MATERIAL CHART - 6-PLEX FRONT LOAD



ENTRY DOORS
Material: Wood
Manufacturer: TBD
Color: TBD



W1 - POSTS & BEAMS
Material: Wood
Manufacturer: TBD
Color: SW 9117 - Urban Jungle



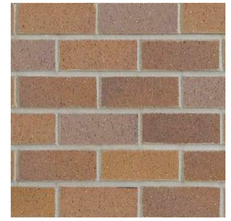
GARGE DOORS
Material: Overhead Door
Manufacturer: Insulated Steel Doors
Color: Terra Bronze



C1 - CONCRETE
Material: Concrete
Manufacturer: TBD
Color: Light Gray



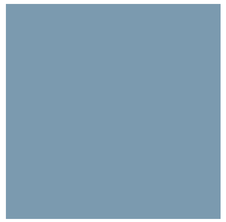
M1 - BRICK
Material: Standard Brick
Manufacturer: Interstate Brick
Color: Bronzestone



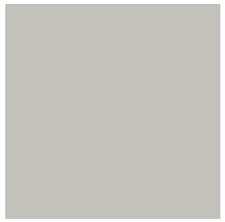
M2 - BRICK
Material: Standard Brick
Manufacturer: Interstate Brick
Color: Copperstone
Used for all soldier course trim



WINDOWS
Material: Vinyl
Manufacturer: TBD
Color: White



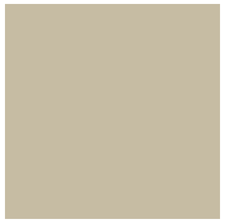
S1 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 9071 - Dyer's Woad



S2 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 7649 - Silverplate

S3 - NOT USED

S4 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 6176 - Liveable Green



S5 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 6149 - Relaxed Khaki



F1 - FASCIA/TRIM/PARAPET CAP/DRIP EDGE
Material: Fiber Cement/MTL
Manufacturer: TBD
Color: Charcoal 379 (Gentek)



LS1 - FIBER CEMENT LAP SIDING
Material: Fiber Cement Lap Siding
6" Exposure
Manufacturer: TBD
Color: SW 6149 - Relaxed Khaki



BB1 - FIBER CEMENT BD & BATT SIDING
Material: Fiber Cement Board and Batt Siding
Manufacturer: TBD
Color: SW 6386 - Napery



BB2 - FIBER CEMENT BD & BATT SIDING
Material: Fiber Cement Board and Batt Siding
Manufacturer: TBD
Color: SW 7649 - Silver Plate



BB3 - FIBER CEMENT BD & BATT SIDING
Material: Fiber Cement Board and Batt Siding
Manufacturer: TBD
Color: SW 6149 - Relaxed Khaki



BB4 - FIBER CEMENT BD & BATT SIDING
Material: FIBER CEMENT
Manufacturer: TBD
Color: SW 7069 - Iron Ore



R1 - ROOFING
Material: Standing Seam Metal
Manufacturer: MBCI
Color: Medium Bronze



R2 - ROOFING
Material: Synthetic Roof Tile
Manufacturer: Eagle Roof Products
Bel Air, Flat Profile
Color: 4697 Skate Range

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COYOTE LANDING

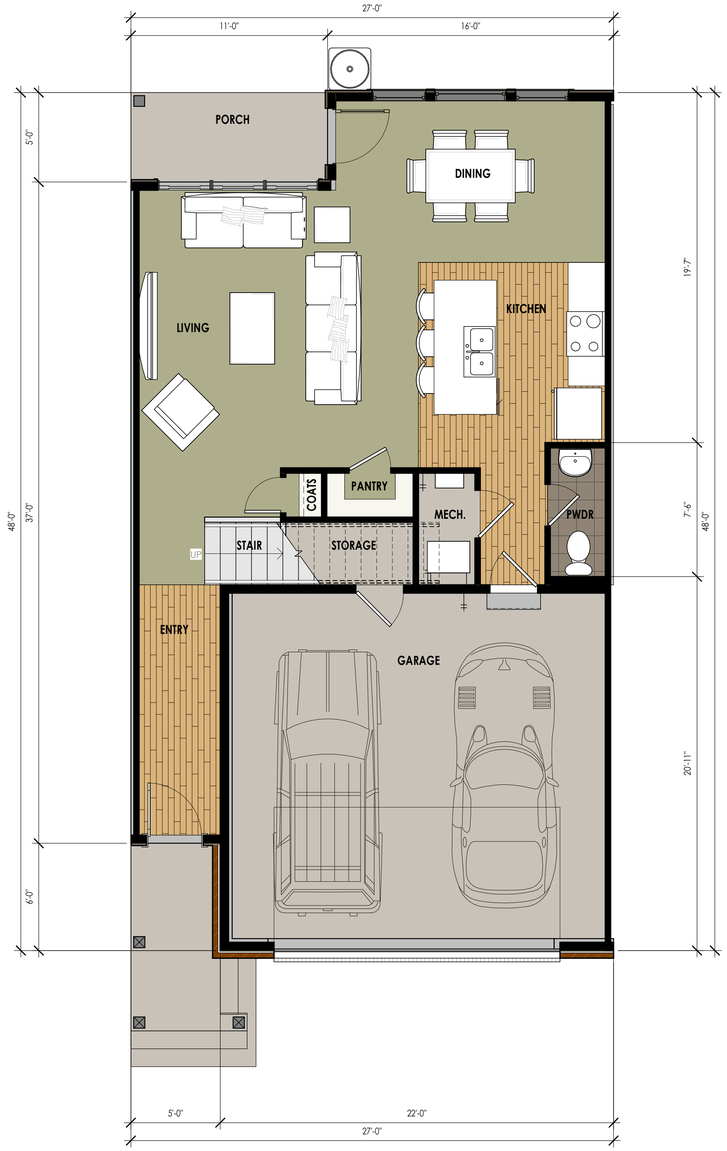
SANTA CLARA, UT

MATERIAL BOARD

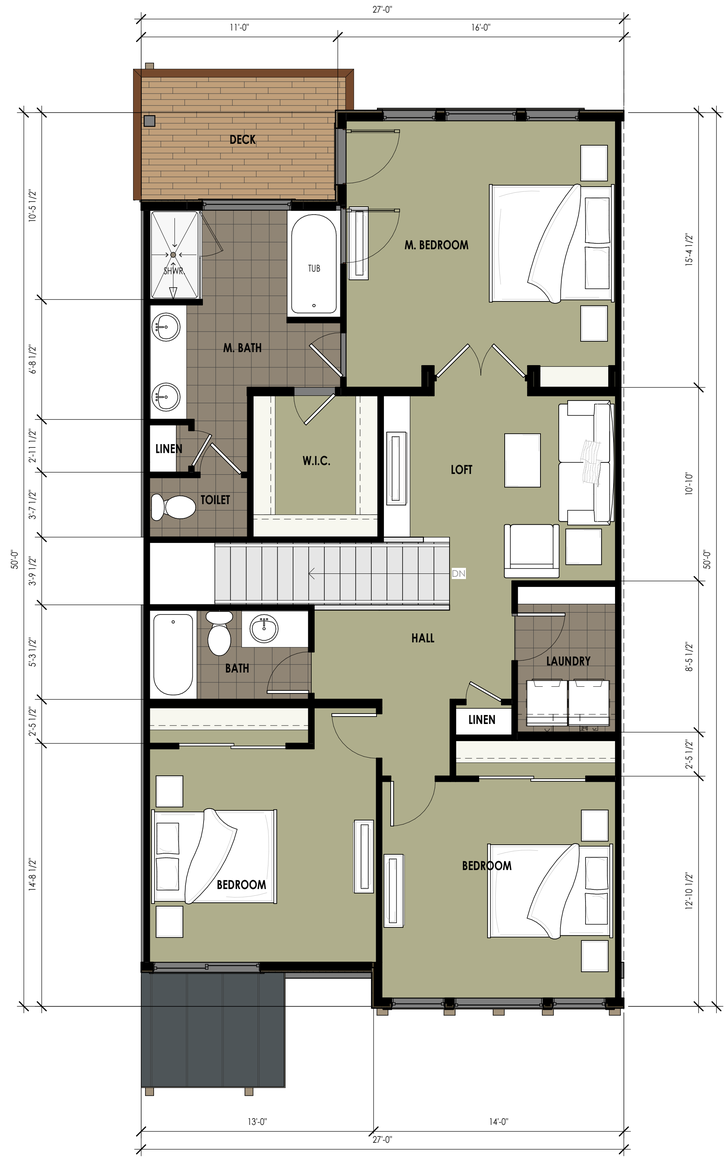
D303

15 JUNE, 2021

3BED-03 AREAS	
Level	**Area**
LEVEL 1 FINISHED	773 SF
LEVEL 2 FINISHED	1200 SF
Finished Total	1973 SF
GARAGE	430 SF
Unfinished Total	430 SF
Grand total	2403 SF



LEVEL 1 - MARKETING FLOOR PLAN
1/4" = 1'-0"
2
D404



LEVEL 2 - MARKETING FLOOR PLAN
1/4" = 1'-0"
3
D404

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COYOTE LANDING - 3 BEDROOM 03

WASHINGTON COUNTY, UT

FRONT LOAD
3BD-03 FLOOR PLANS

D404

15 JUNE 2021



3D VIEW 1 D201

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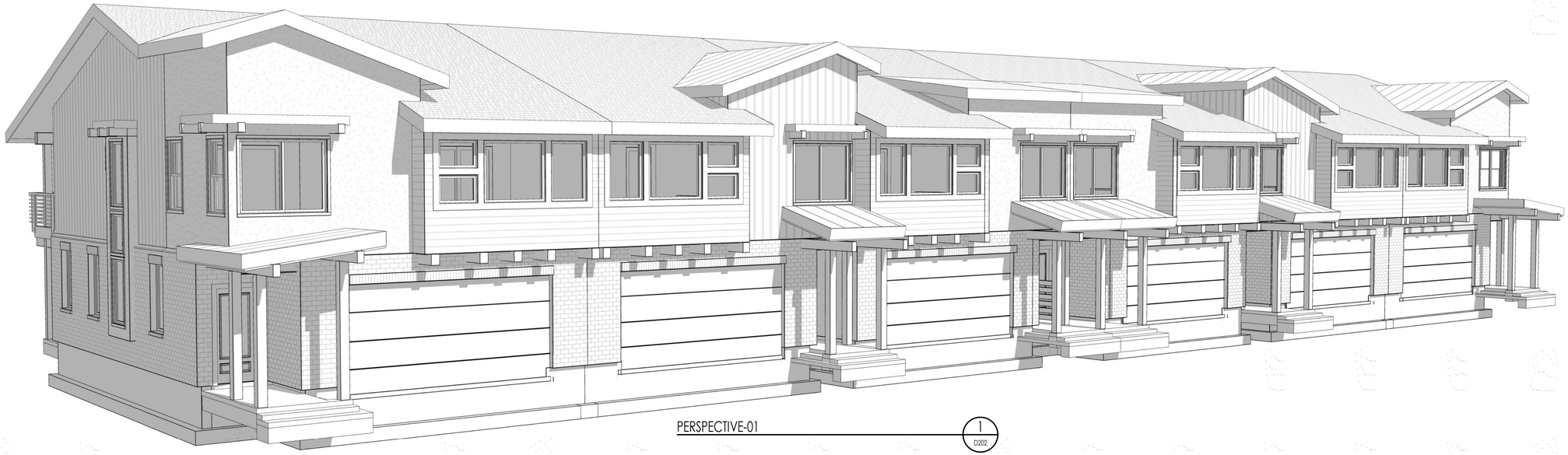
COYOTE LANDING

SANTA CLARA, UT

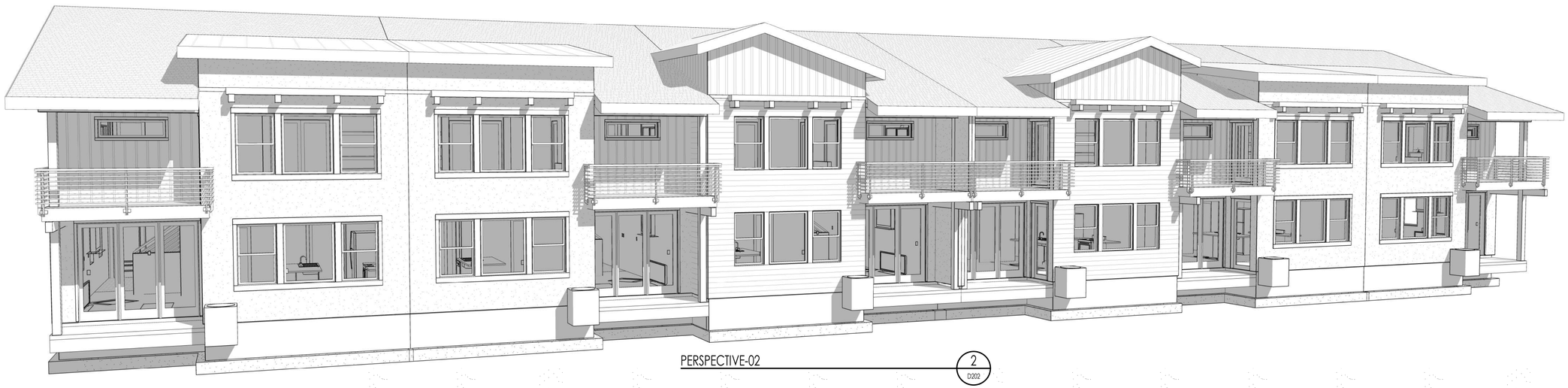
6-PLEX FRONT LOAD
EXTERIOR VIEW

D201

15 JUNE, 2021



PERSPECTIVE-01 1 D202



PERSPECTIVE-02 2 D202

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COYOTE LANDING

SANTA CLARA, UT

6-PLEX FRONT LOAD
EXTERIOR VIEW

D202

15 JUNE, 2021



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COYOTE LANDING

SANTA CLARA, UTAH

REAR LOAD EXTERIOR
RENDERING STREET
VIEW

D203

15 JUNE 2021



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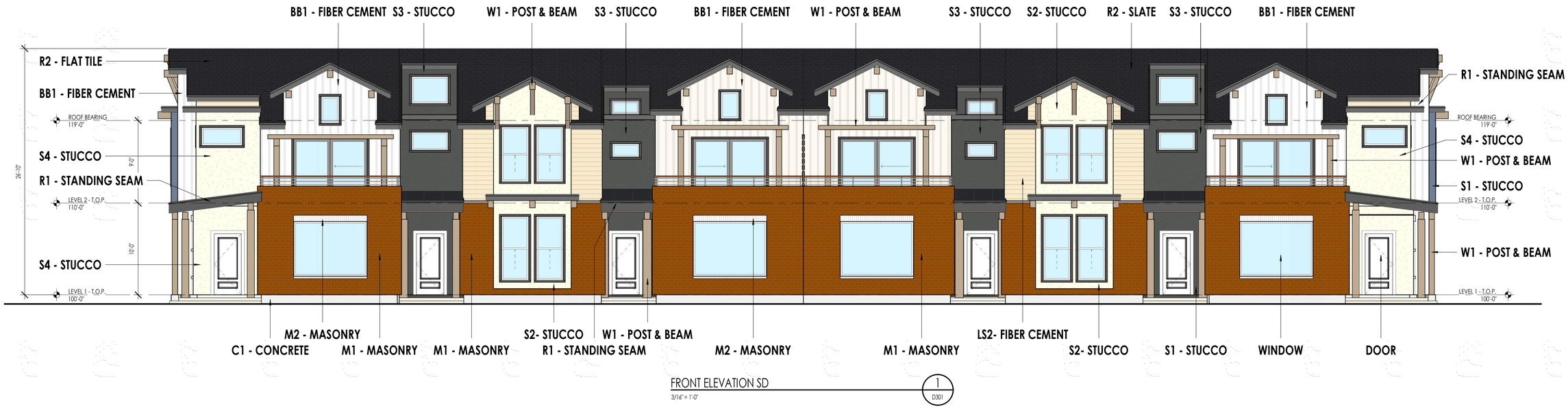
COYOTE LANDING

SANTA CLARA, UTAH

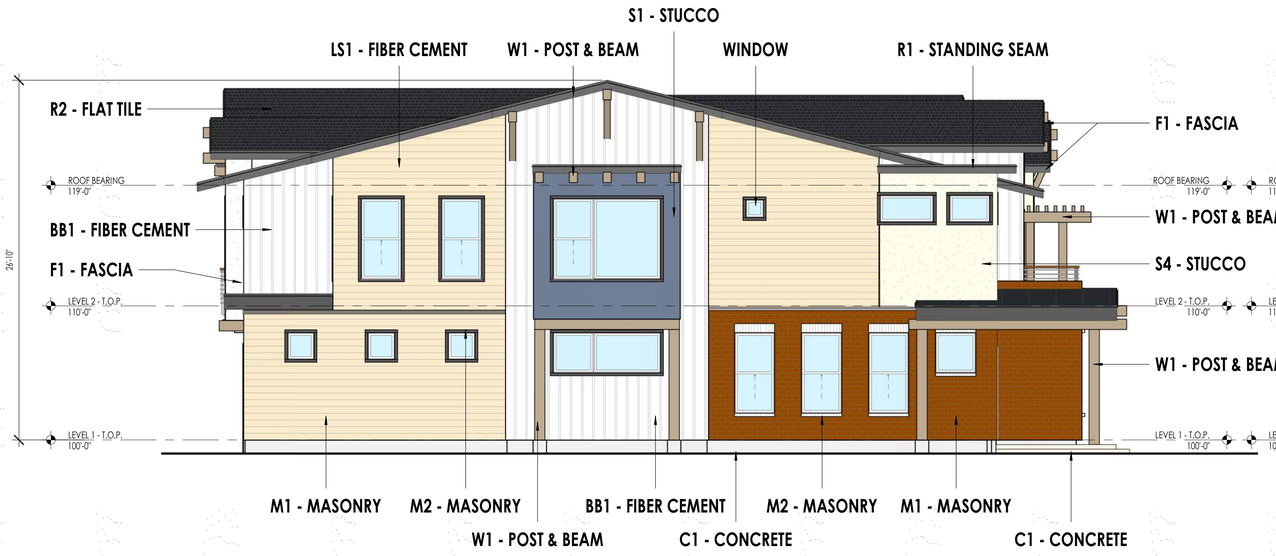
REAR LOAD EXTERIOR
RENDERING REAR VIEW

D204

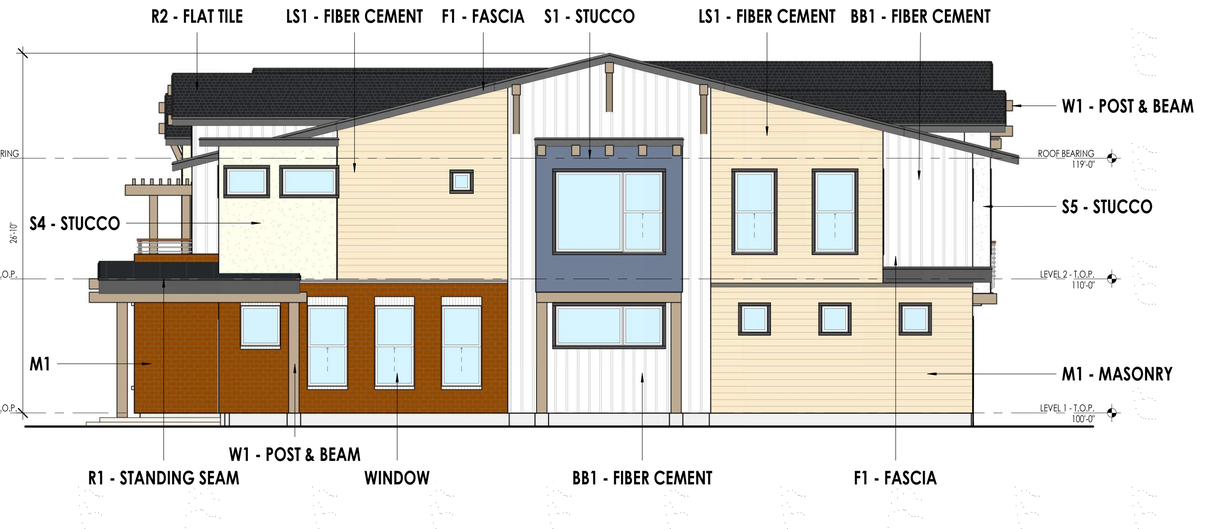
15 JUNE 2021



FRONT ELEVATION SD — 1 / D301
3/16" = 1'-0"



LEFT ELEVATION SD — 2 / D301
3/16" = 1'-0"



RIGHT ELEVATION SD — 3 / D301
3/16" = 1'-0"

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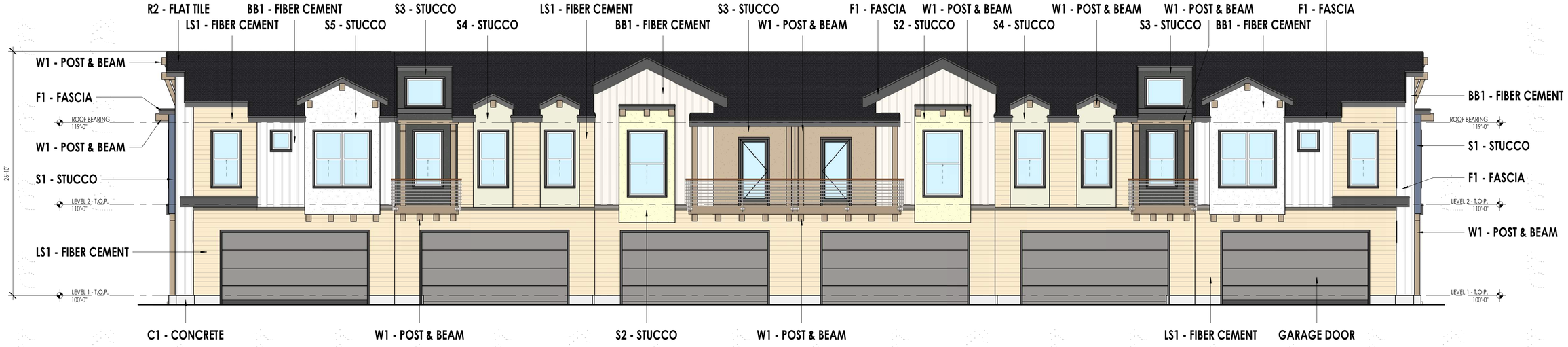
COYOTE LANDING

SANTA CLARA, UTAH

REAR LOAD 6-PLEX
EXTERIOR ELEVATIONS

D301

15 JUNE 2021



REAR ELEVATION SD — 1 / D302

3/16" = 1'-0"

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COYOTE LANDING

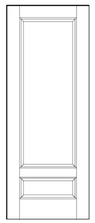
SANTA CLARA, UTAH

REAR LOAD 6-PLEX
EXTERIOR ELEVATIONS

D302

15 JUNE 2021

MATERIAL CHART - 6-PLEX REAR LOAD



ENTRY DOORS
Material: Wood
Manufacturer: TBD
Color: TBD

W1 - POSTS & BEAMS
Material: Wood
Manufacturer: TBD
Color: SW 9117 - Urban Jungle



GARAGE DOORS
Material: Overhead Door
Manufacturer: Insulated Steel Doors
Color: Brown / Terra Bronze

C1 - CONCRETE
Material: Concrete
Manufacturer: TBD
Color: Light Gray



M1 - BRICK
Material: Standard Brick
Manufacturer: Interstate Brick
Color: Ochre Buff



M2 - BRICK
Material: Standard Brick
Manufacturer: Interstate Brick
Color: Golden Buff
Used for all soldier course trim



WINDOWS
Material: Vinyl
Manufacturer: TBD
Color: White

S1 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 9071 - Dyer's Woad

S2 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 6386 - Napery

S3 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 9117 - Urban Jungle

S4 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 6176 - Liveable Green

S5 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 9166 - Drift of Mist



LS1 - FIBER CEMENT LAP SIDING
Material: Fiber Cement Lap Siding
6" Exposure
Manufacturer: TBD
Color: SW 6149 - Relaxed Khaki



BB1 - FIBER CEMENT BD & BATT SIDING
Material: Fiber Cement Board and Batt Siding
Manufacturer: TBD
Color: SW 9166 - Drift of Mist



F1 - FASCIA/TRIM/PARAPET CAP/DRIP EDGE
Material: Fiber Cement/MTL
Manufacturer: TBD
Color: Charcoal 379 (Gentek)



R1 - ROOFING
Material: Standing Seam Metal
Manufacturer: MBCI
Color: Medium Bronze



R2 - ROOFING
Material: Synthetic Roof Tile
Manufacturer: Eagle Roof Products
Bel Air, Flat Profile
Color: 4697 Skate Range

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COYOTE LANDING

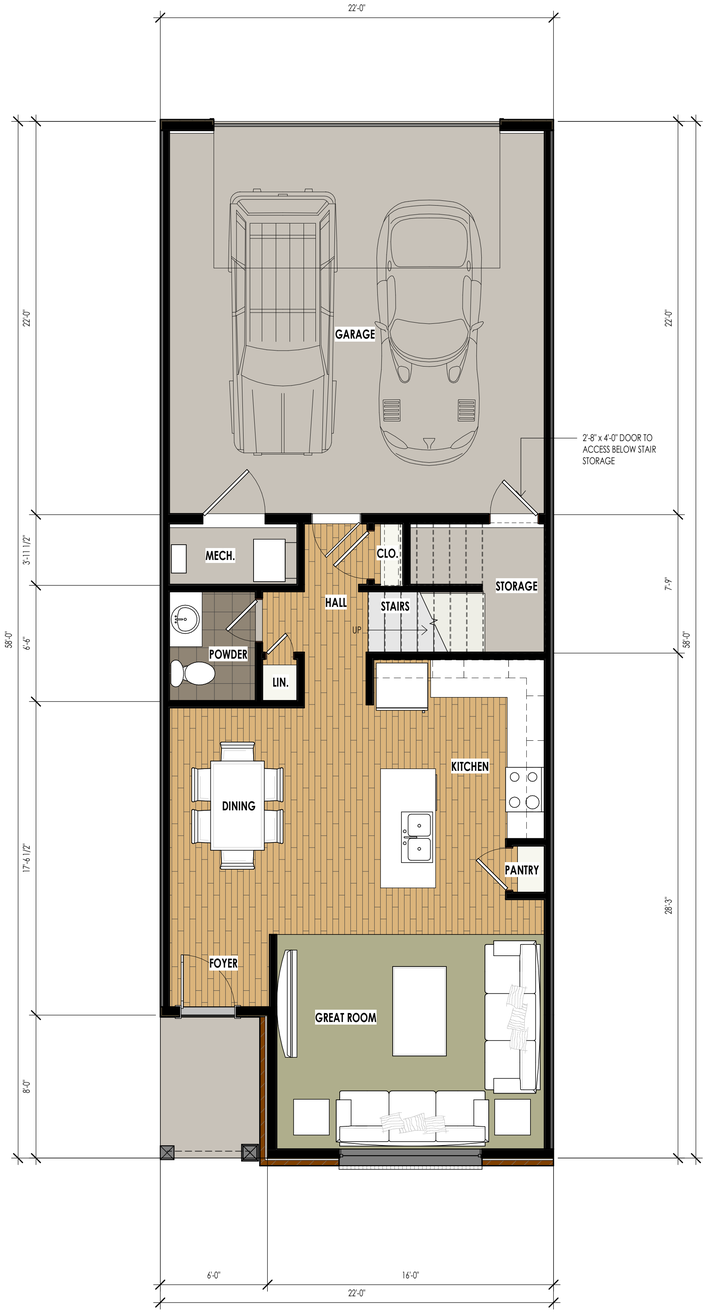
SANTA CLARA, UTAH

MATERIAL BOARD

D303

15 JUNE 2021

3BED-01 AREAS	
Level	**Area**
LEVEL 1 FINISHED	744 SF
LEVEL 2 FINISHED	991 SF
Finished Total	1735 SF
GARAGE	484 SF
Unfinished Total	484 SF
Grand total	2219 SF

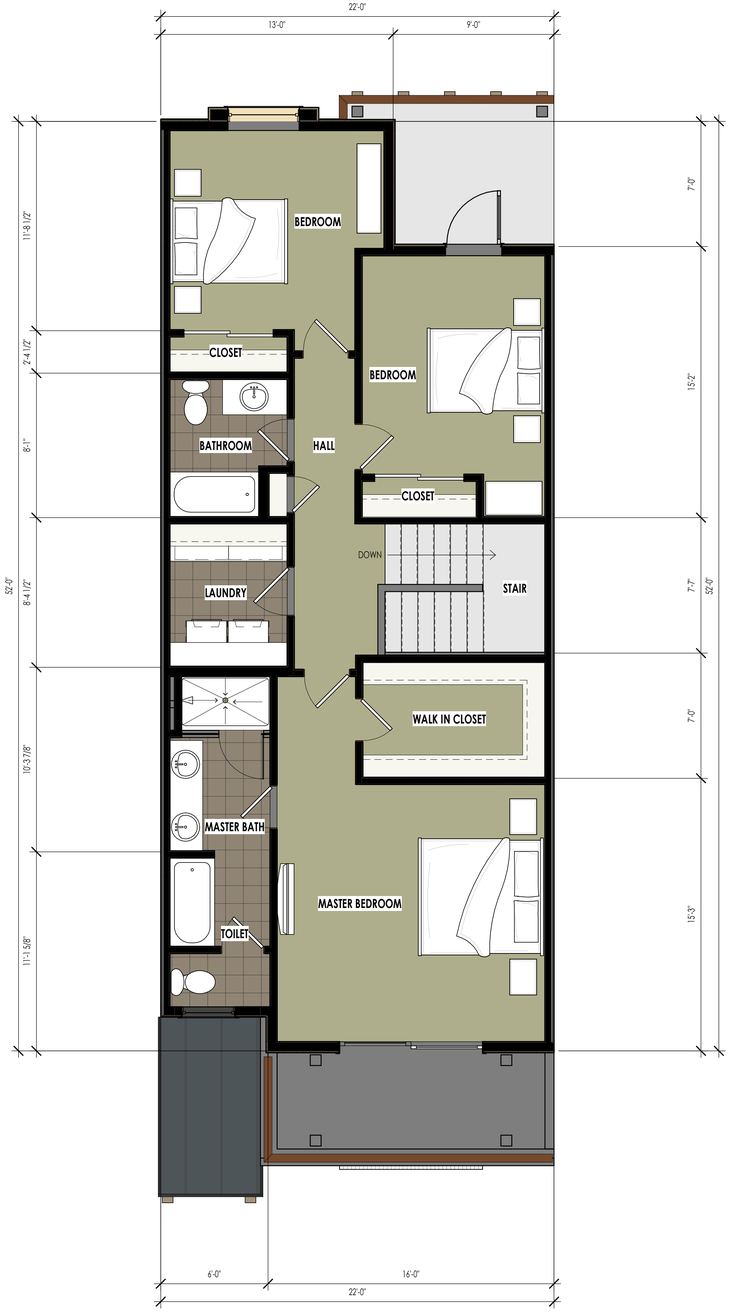


LEVEL 1 - PRESENTATION

1/4" = 1'-0"

2

D401



LEVEL 2 - PRESENTATION

1/4" = 1'-0"

1

D401

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COYOTE LANDING - 3 BEDROOM 01

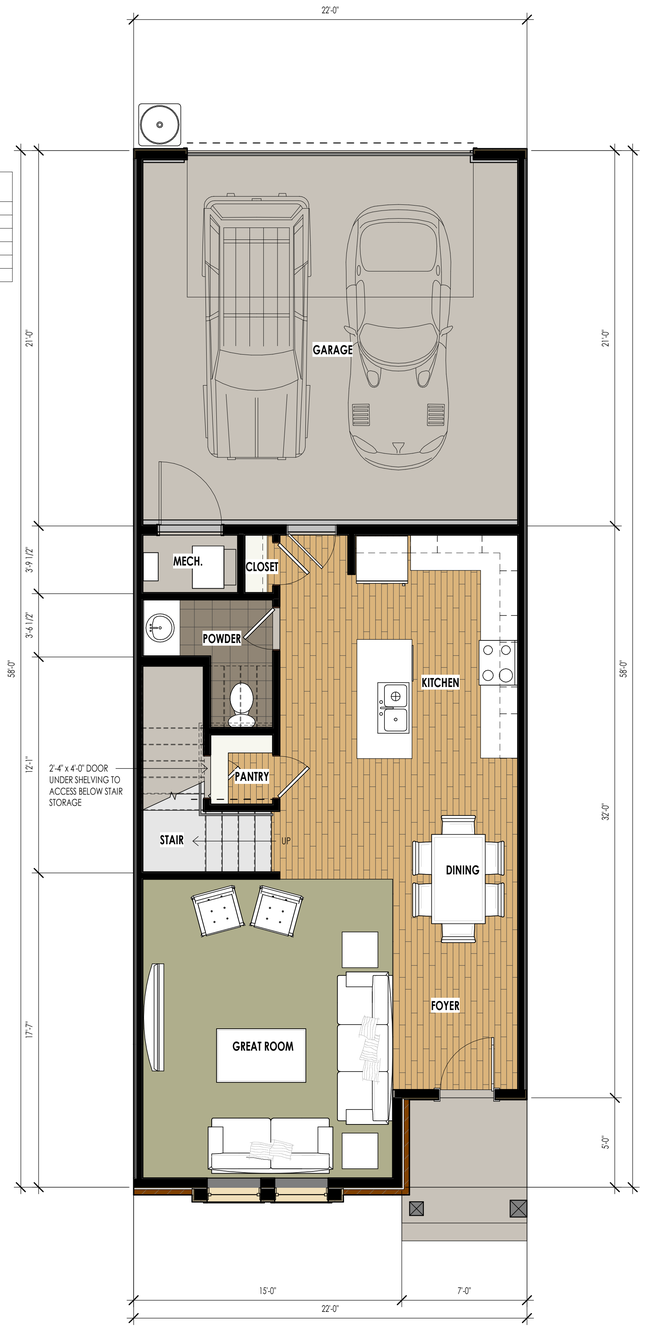
WASHINGTON COUNTY, UT

3BED - 01 FLOOR PLANS

D401

15 JUNE 2021

3BED-02	
LEVEL 1	775 SF
LEVEL 2	1178 SF
Total Finished	1953 SF
GARAGE	466 SF
Total Unfinished	466 SF
Grand total	2419 SF



LEVEL 1 - PRESENTATION 1/4" = 1'-0" — 1 / D402



LEVEL 2 - PRESENTATION 1/4" = 1'-0" — 2 / D402

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COYOTE LANDING - 3 BEDROOM 02

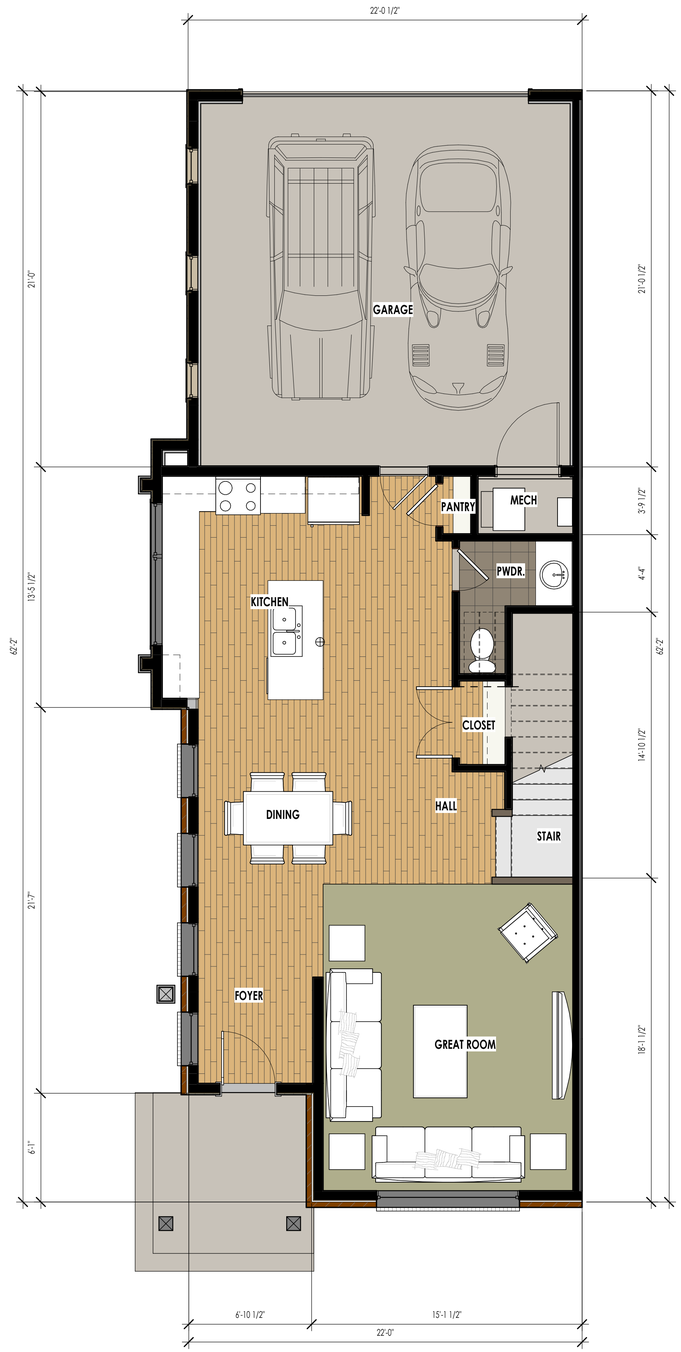
WASHINGTON COUNTY, UT

3BED - 02 FLOOR PLAN

D402

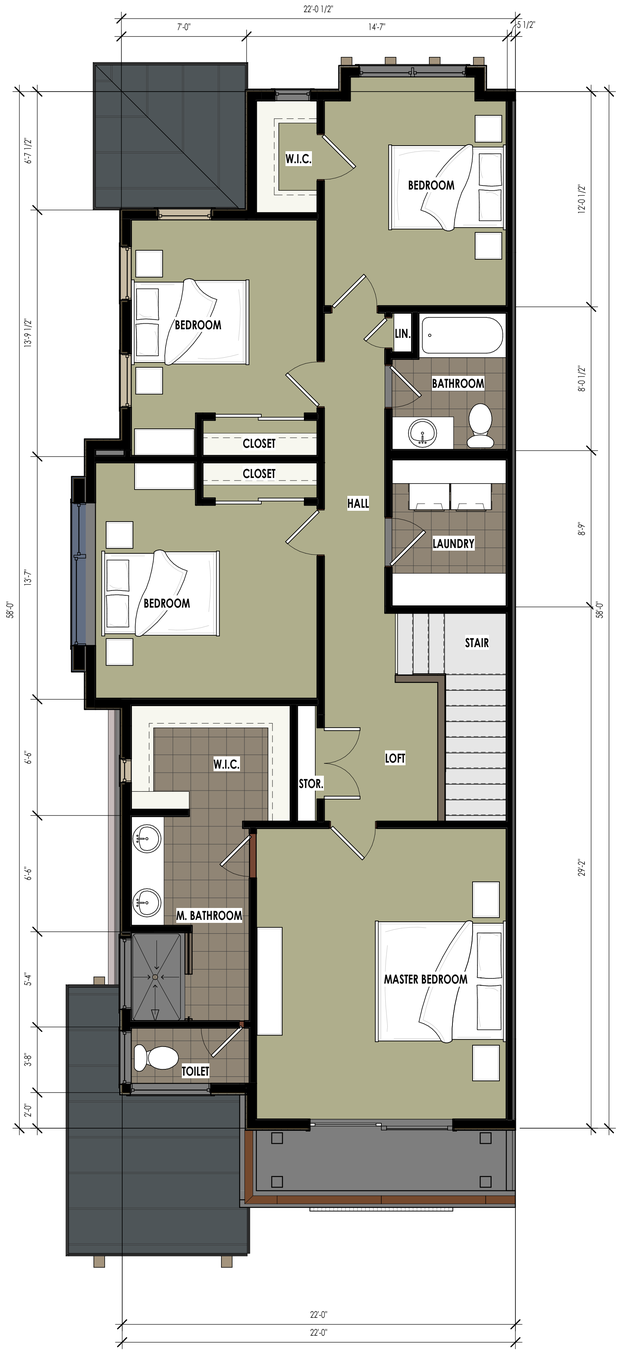
15 JUNE 2021

4BED - 01	
LEVEL 1	887 SF
LEVEL 2	1198 SF
Total Finished	2085 SF
GARAGE	465 SF
Total Unfinished	465 SF
Grand total	2550 SF



LEVEL 1 - PRESENTATION 3 D403

1/4" = 1'-0"



LEVEL 2 - PRESENTATION 4 D403

1/4" = 1'-0"



LEVEL 2 - PRESENTATION LOFT 1 D403

1/4" = 1'-0"

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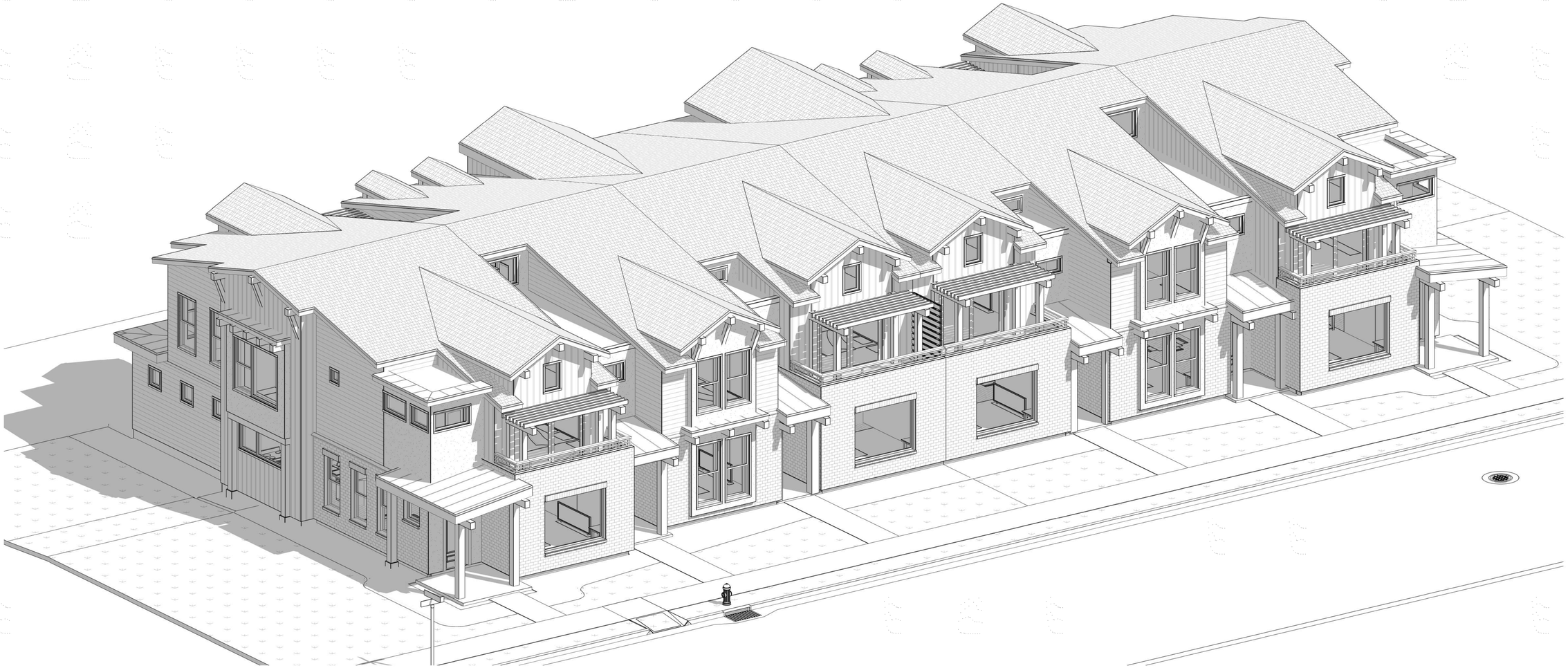
COYOTE LANDING - 4 BEDROOM 01

WASHINGTON COUNTY, UT

4BED - 01 FLOOR PLAN

D403

15 JUNE 2021



3D VIEW — 1 / D201

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COYOTE LANDING

SANTA CLARA, UTAH

6-PLEX REAR LOAD
EXTERIOR VIEW

D201

15 JUNE 2021



PERSPECTIVE-01 — 1 / D202



PERSPECTIVE-02 — 2 / D202

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COYOTE LANDING

SANTA CLARA, UTAH

6-PLEX REAR LOAD
EXTERIOR VIEWS

D202

15 JUNE 2021



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COYOTE LANDING

WASHINGTON COUNTY, UT

EXTERIOR RENDERING
STREET VIEW

D204

15 JUNE 2021



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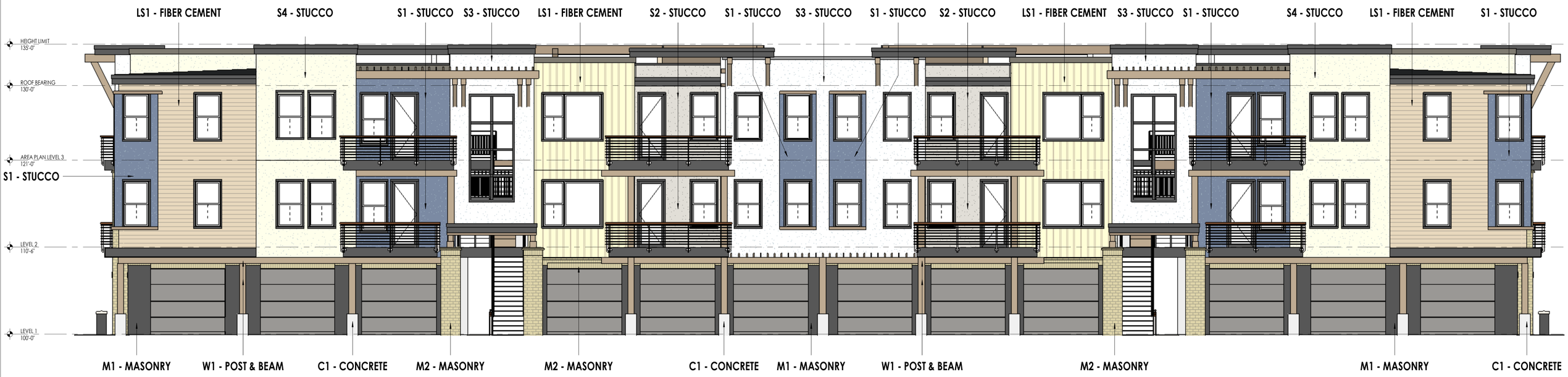
COYOTE LANDING

WASHINGTON COUNTY, UT

EXTERIOR RENDERING
REAR VIEW

D205

15 JUNE 2021



20-PLEX - SOUTH ELEVATION — 1 / D301

3/16" = 1'-0"



20-PLEX - WEST ELEVATION — 2 / D301

3/16" = 1'-0"

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COYOTE LANDING

WASHINGTON COUNTY, UT

BUILDING ELEVATIONS

D301

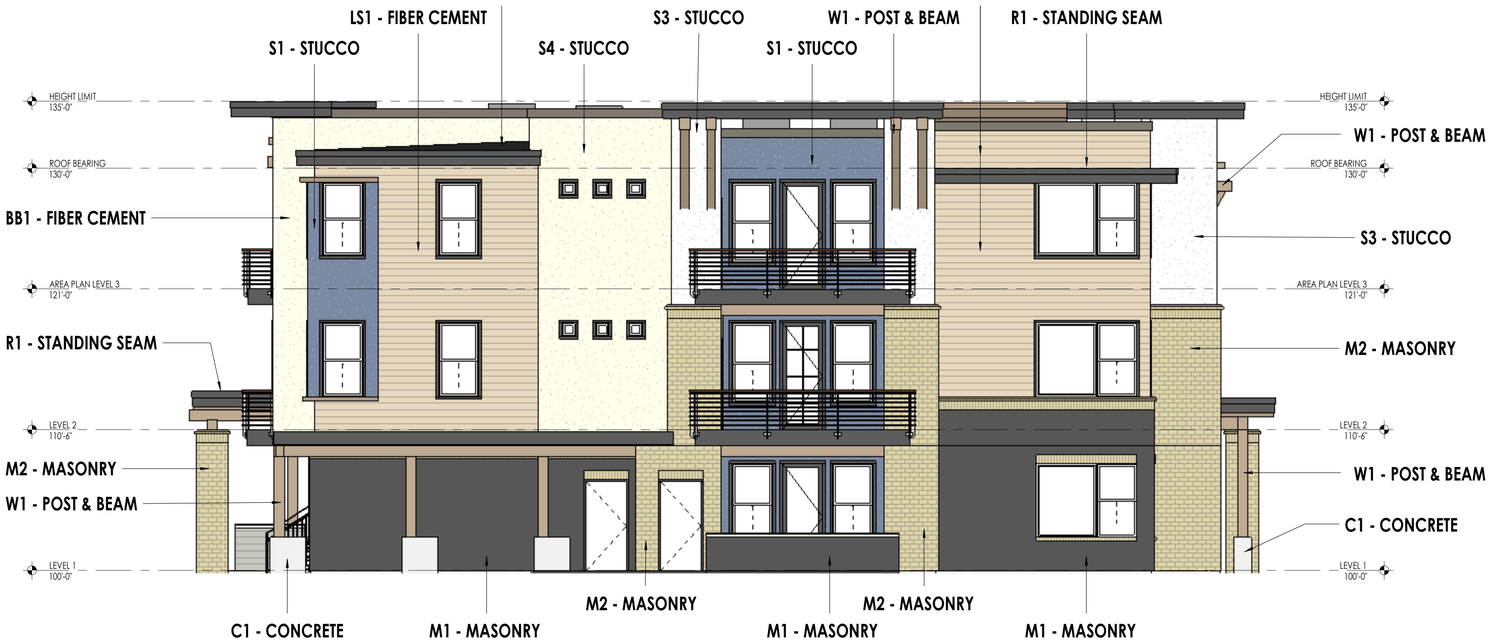
15 JUNE 2021



20-PLEX - NORTH ELEVATION

3/16" = 1'-0"

1 D302



20-PLEX - EAST ELEVATION

3/16" = 1'-0"

2 D302

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COYOTE LANDING

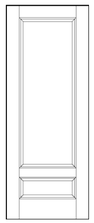
WASHINGTON COUNTY, UT

BUILDING ELEVATIONS

D302

15 JUNE 2021

MATERIAL CHART - 20-PLEX CONDOMINIUMS



ENTRY DOORS
Material: Wood
Manufacturer: TBD
Color: TBD



WINDOWS
Material: Vinyl
Manufacturer: TBD
Color: White



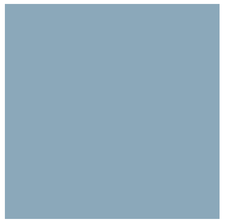
W1 - POSTS & BEAMS
Material: Wood
Manufacturer: TBD
Color: SW 9117 - Urban Jungle



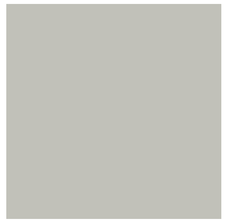
GARAGE DOORS
Material: Overhead Door
Manufacturer: Insulated Steel Doors
Color: Black



C1 - CONCRETE
Material: Concrete
Manufacturer: TBD
Color: Light Gray



S1 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 6521 - Notable Hue



S2 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 7649 - Silverplate

S3 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 9166 - Drift of Mist

S4 - HARDCOAT STUCCO
Material: Hardcoat Stucco
Manufacturer: TBD
Color: SW 6379 - Jersey Cream



M1 - BRICK
Material: Standard Brick
Manufacturer: Interstate Brick
Color: Midnight Black



M2 - BRICK
Material: Standard Brick
Manufacturer: Interstate Brick
Color: Tumbleweed
* Also used for all soldier course trim



LS1 - FIBER CEMENT LAP SIDING
Material: Fiber Cement Lap Siding
6" Exposure
Manufacturer: TBD
Color: SW 6149 - Relaxed Khaki



BB1 - FIBER CEMENT BD & BATT SIDING
Material: Fiber Cement Board and
Batt Siding
Manufacturer: TBD
Color: SW 6386- Napery



R1 - ROOFING
Material: Standing Seam Metal
Manufacturer: MBCI
Color: Medium Bronze



ROOFING
Material: TPO
Manufacturer: ARCAT or Equal
Color: White



FASCIA/TRIM/PARAPET CAP/DRIP EDGE
Material: Fiber Cement/MTL
Manufacturer: TBD
Color: Charcoal 379 (Gentek)

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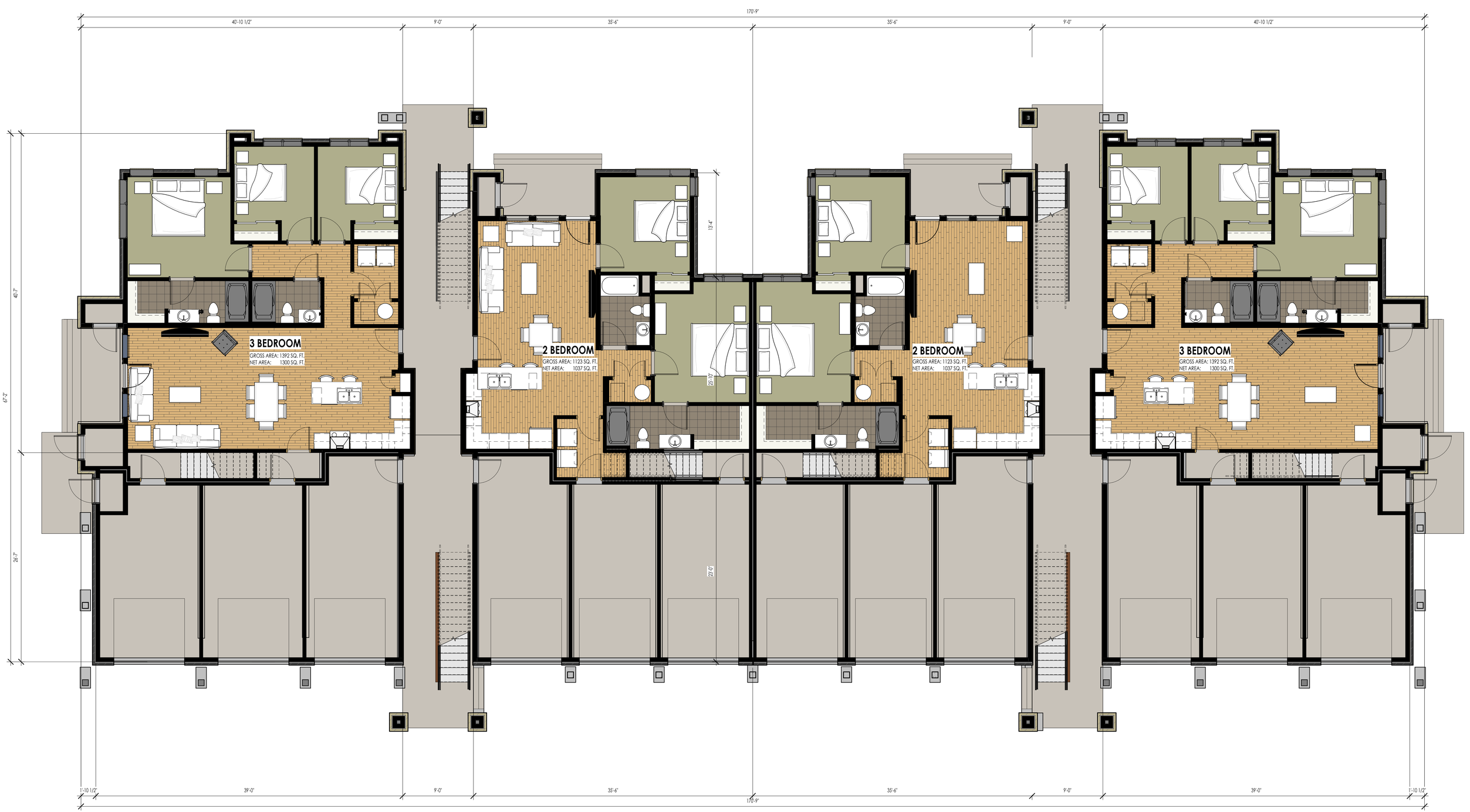
COYOTE LANDING

WASHINGTON COUNTY, UT

MATERIAL BOARD

D303

15 JUNE 2021



20-PLEX - LEVEL ONE

3/16" = 1'-0"

1 / D101

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COYOTE LANDING

WASHINGTON COUNTY, UT

CONDO BUILDING - LEVEL 1

D101

15 JUNE 2021



20-PLEX - LEVEL TWO

3/16" = 1'-0"

1 / D102

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COYOTE LANDING

WASHINGTON COUNTY, UT

CONDO BUILDING - LEVEL 2

D102

15 JUNE 2021



20-PLEX - LEVEL THREE

3/16" = 1'-0"

1 / D103

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COYOTE LANDING

WASHINGTON COUNTY, UT

CONDO BUILDING - LEVEL 3

D103

15 JUNE 2021



FRONT EXTERIOR PERSPECTIVE 1 / D201

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COYOTE LANDING

WASHINGTON COUNTY, UT

EXTERIOR PERSPECTIVE

D201

15 JUNE 2021



REAR EXTERIOR PERSPECTIVE 1 D202

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COYOTE LANDING

WASHINGTON COUNTY, UT

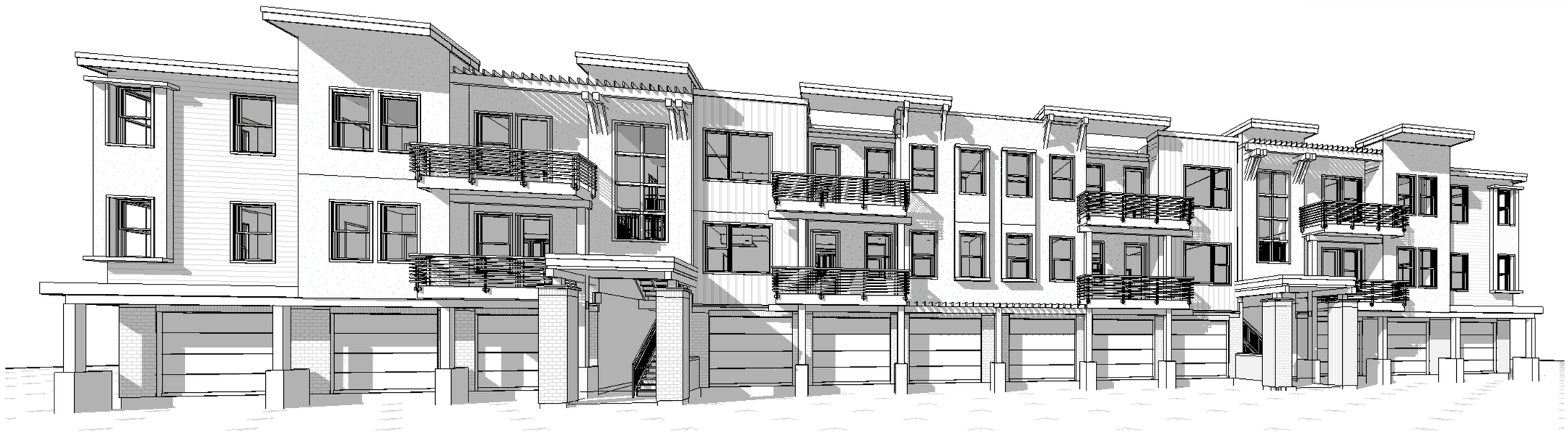
EXTERIOR PERSPECTIVE

D202

15 JUNE 2021



FRONT ELEVATION PERSPECTIVE 1 D203



REAR ELEVATION PERSPECTIVE 2 D203

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COYOTE LANDING

WASHINGTON COUNTY, UT

EXTERIOR PERSPECTIVE

D203

15 JUNE 2021

HORROCKS
ENGINEERS

COYOTE LANDING
TRAFFIC IMPACT STUDY

Prepared For: Taylor Built Homes
2779 Bella Sol Drive
Santa Clara, Utah, UT 84765

Prepared By: Horrocks Engineers
555 S. Bluff Street, Suite 101
St. George, UT 84770

Date: May 2021

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Introduction

This report presents the findings of the Traffic Impact Study (TIS) performed for the Coyote Landing development in Santa Clara, Utah. This report addresses the impacts based on Level of Service (LOS) values calculated by delay per vehicle for selected study intersections.

In this report, the potential traffic impact of the Coyote Landing Development is addressed as proposed by Taylor Built Homes.

Proposed Development

The proposed development at Coyote Landing is planned to be built in one phase. The anticipated build-out year is 2023. Figure 1 shows the location of the development. The development is planned to include 80 condominium units, to be used as nightly vacation rentals, and 119 townhome units for private ownership.

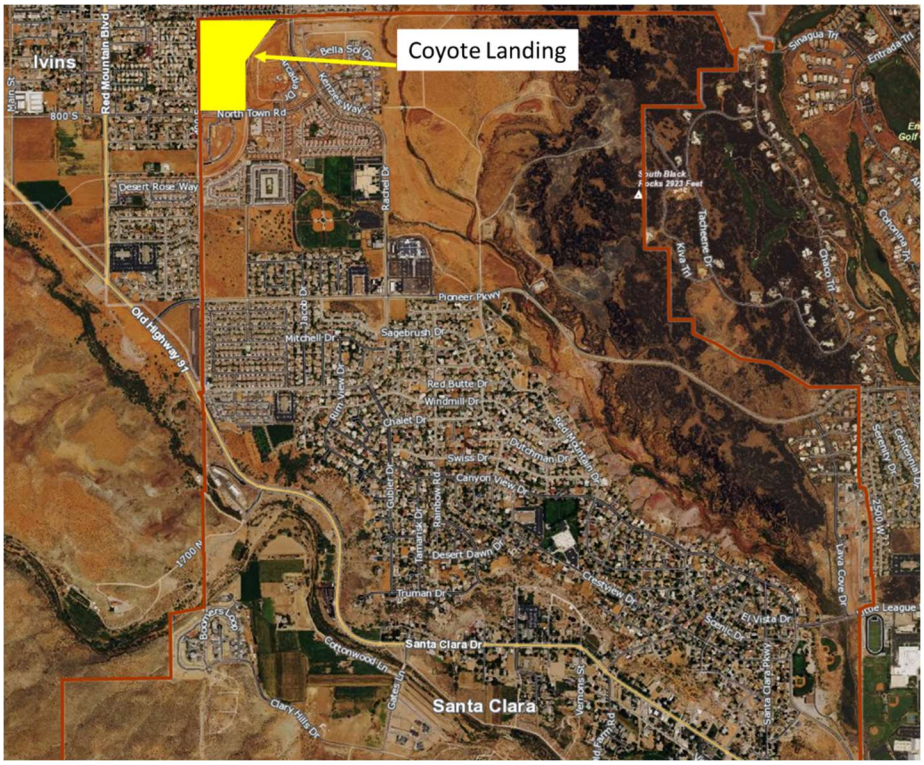


Figure 1-Location of Coyote Landing

The accesses to the development are planned to connect to 400 East and North Town Road. There are two accesses planned on 400 East and one access planned on North Town Road. A full site plan is included in the Appendix.

An RV storage area is planned as a part of the Coyote Landing development. In this site plan, the access is through the development, there is no access to Hamblin Parkway. Access to Hamblin Parkway should

be limited as the road is expected to become the Western Corridor, connecting Snow Canyon Parkway to I-15.

The amenities to Coyote Landing are planned to be shared with the Arcadia development which has been built on the other side of Hamblin Parkway. To connect the two developments, a pedestrian undercrossing is planned to be built under Hamblin Parkway.

Study Area Conditions

The Coyote Landing development is located on the northeast corner of 400 East and North Town Road. The surrounding area is residential. The Western Corridor is planned to be built along the east side of the development in the future, after the expected buildout of this project.

ROADWAY CHARACTERISTICS

400 EAST

400 East is a residential two-lane road that runs north/south on the west side of the subject property. The speed limit is 25 miles-per-hour (mph) in the project area. 400 East is widened to 50 feet from North Town Road to 765 South, but continues north along the proposed project at 24 feet wide. North of 580 South, 400 East is again 50 feet wide.

NORTH TOWN ROAD

North Town Road is a residential two-lane road that runs east/west past the project area. From the east edge of the proposed project to the east, North Town Road is three lanes with finished curb and gutter. Fronting the project property, there is no curb and gutter. The speed limit is 25 mph.

EXISTING TRAFFIC CONDITIONS

Weekday AM and PM turning movement counts were performed at the following intersections:

- 400 East & North Town Road
- 400 East & 680 South
- 400 East & Saunders Loop Road
- Rachel Drive & North Town Road

Existing intersection geometry, control, and turn pocket lengths were obtained by field review and entered with the turning movement volumes into Synchro 10 for analysis. Future traffic data was forecasted for the AM and PM peak hours using historic traffic counts.

Turning movement counts were used to establish a base condition for the analysis and provide a comparison for new traffic around the proposed development. The existing turning movement counts are shown in Figure 2.

In order to quantify the traffic conditions currently exhibited in the study area, the roadway geometries and traffic data were entered in the Synchro 10 software package. Using the 6th edition of Highway

Capacity Manual (HCM) method of calculating intersection delay, a Level of Service (LOS) grade was assigned to the intersection for both the AM and PM peak hours.

Level of Service (LOS) is a term used by the HCM to describe the traffic operations of an intersection, based on congestion and delay. LOS ranges from A (almost no congestion or delay) to F (traffic demand exceeds capacity and intersection experiences long queues and delay). LOS E is the threshold when the intersection exceeds an acceptable standard and intersection improvements are required. The delay criteria used to assign a letter grade to an intersection for signalized and unsignalized intersections is shown below in Table 1. The full Synchro reports are included in the Appendix.

Table 1-Intersection Level of Service

Level of Service	Average Control Delay (sec/veh)	
	Signalized	Un-signalized
A	≤ 10	≤ 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

Table 2 shows the existing LOS conditions at the study intersections.

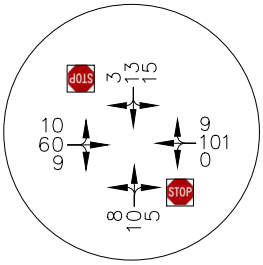
Table 2-Existing LOS Analysis

Intersection	AM Peak Hour		PM Peak Hour	
	Average Delay (sec/veh)	Level of Service	Average Delay (veh/sec)	Level of Service
680 South & 400 East	9.4	A	9.5	A
Saunders Loop & 400 East	9.3	A	8.8	A
North Town Road & 400 East	10.2	B	10.2	B
North Town Road & Rachel Drive	11.0	B	11.1	B

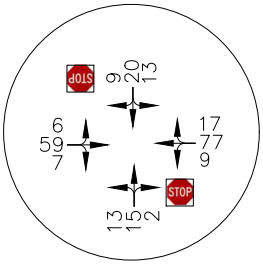
All of the study intersections are currently operating at an acceptable LOS.



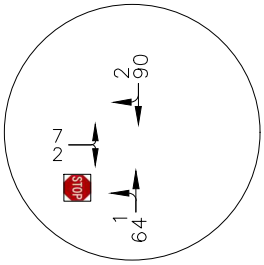
1 AM PEAK HOUR



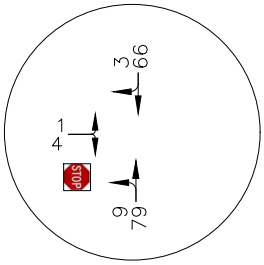
PM PEAK HOUR



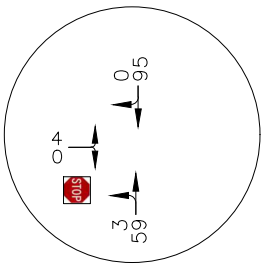
2 AM PEAK HOUR



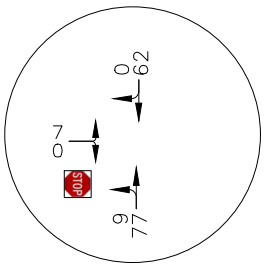
PM PEAK HOUR



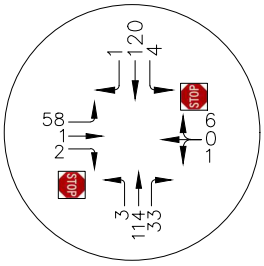
3 AM PEAK HOUR



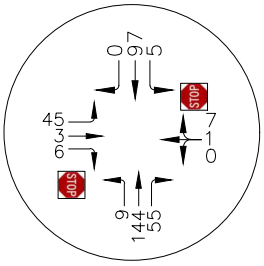
PM PEAK HOUR



4 AM PEAK HOUR



PM PEAK HOUR



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Coyote Landing Development
Existing AM & PM Peak Traffic
Turn Movement Volumes

FIGURE
2

SCALE:
N/A

DATE:
4/2021

Projected Traffic

In order to successfully analyze traffic conditions for future scenarios, existing traffic is grown based on the projected growth in the surrounding area. To find an appropriate growth rate, historic average annual daily traffic (AADT) counts from the Utah Department of Transportation (UDOT) were analyzed for roadways surrounding the project area. UDOT has AADT data up to 2017.

Table 3 shows the AADT for the roadways around Coyote Landing. Growth per year from 2015 to 2017 for the area has ranged from 1.52 percent to almost 46 percent. The roads that connect Ivins and Santa Clara to St. George, like Old Highway 91, Canyon View Drive, and Pioneer Parkway have seen high growth in the last ten years. In discussions with Santa Clara City, 8 percent growth is being used to plan for impact fees, which is similar to what historical growth has shown on Old Highway 91 and Gubler Drive. For this traffic study, 8 percent growth per year will be used to estimate future traffic around the development.

Table 3-Average Growth from Historic Data

Roadway	3 Year	5 Year	10 Year	2017 AADT	2016 AADT	2015 AADT	2014 AADT	2013 AADT	2012 AADT	2011 AADT	2010 AADT	2009 AADT	2008 AADT	2007 AADT	2006 AADT
200 East	1.52%	0.95%	-5.95%	2300	2300	2,200	2,200	2,100	2,200	2,200	2,300	2,400	2,400	6,800	6,600
				0.00%	4.55%	0.00%	4.76%	-4.55%	0.00%	-4.35%	-4.17%	0.00%	-64.71%	3.03%	
Old Highway 91	7.22%	3.71%	-2.50%	7,500	7,100	6,900	6,100	6,000	6,300	10,000	10,000	11,000	11,000	11,000	11,000
				5.63%	2.90%	13.11%	1.67%	-4.76%	-37.00%	0.00%	-9.09%	0.00%	0.00%	0.00%	
Gubler Drive/Canyon View Drive	8.30%	5.67%	22.86%	7,600	7,300	6,900	6,000	5,900	5,800	1,900	1,900	1,900	1,900	2,000	--
				4.11%	5.80%	15.00%	1.69%	1.72%	205.26%	0.00%	0.00%	0.00%	-5.00%	--	
Pioneer Parkway	45.92%	27.55%	12.22%	4,300	1,900	1,800	1,700	1,700	1,700	1,700	1,900	1,900	1,900	2,000	--
				126.32%	5.56%	5.88%	0.00%	0.00%	0.00%	-10.53%	0.00%	0.00%	-5.00%	--	
Average	15.74%	9.47%	6.66%												

TRIP GENERATION

The estimated number of vehicle trips to be generated by the development was calculated using the methodology found in the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th edition. The following ITE Land Uses were used for this development:

220: Multifamily Housing (Low-Rise)

260: Recreational Homes

The Recreational Homes land use was used to estimate the trip generation of the nightly rental condominiums. There is not a specific ITE land use for nightly rentals. A recreational home is a similar use and so will be used to estimate the trips from the nightly rentals. A description of these land uses can be found in the Appendix. Table 4 shows the estimated trip generation of the development.

Table 4-Trip Generation for the Proposed Development

Coyote Landing Development: Build-Out 2023										
ITE Land Use	Units	AM Peak Hour			PM Peak Hour			Daily		
		In	Out	Total	In	Out	Total	In	Out	Total
220: Multifamily Housing (Low-Rise)	119	13	42	55	42	25	67	435	436	871
260: Recreational Homes	80	12	6	18	9	13	22	139	138	278
Total:	199	25	48	73	51	38	89	574	574	1149

Trip Distribution

The new trips estimated to be generated from the proposed development were distributed onto the roadway network based on the proposed site access locations, existing turning movements, existing traffic patterns, and proximity to major roadways. Figure 3 shows the trip distribution to and from the development and the surrounding areas.

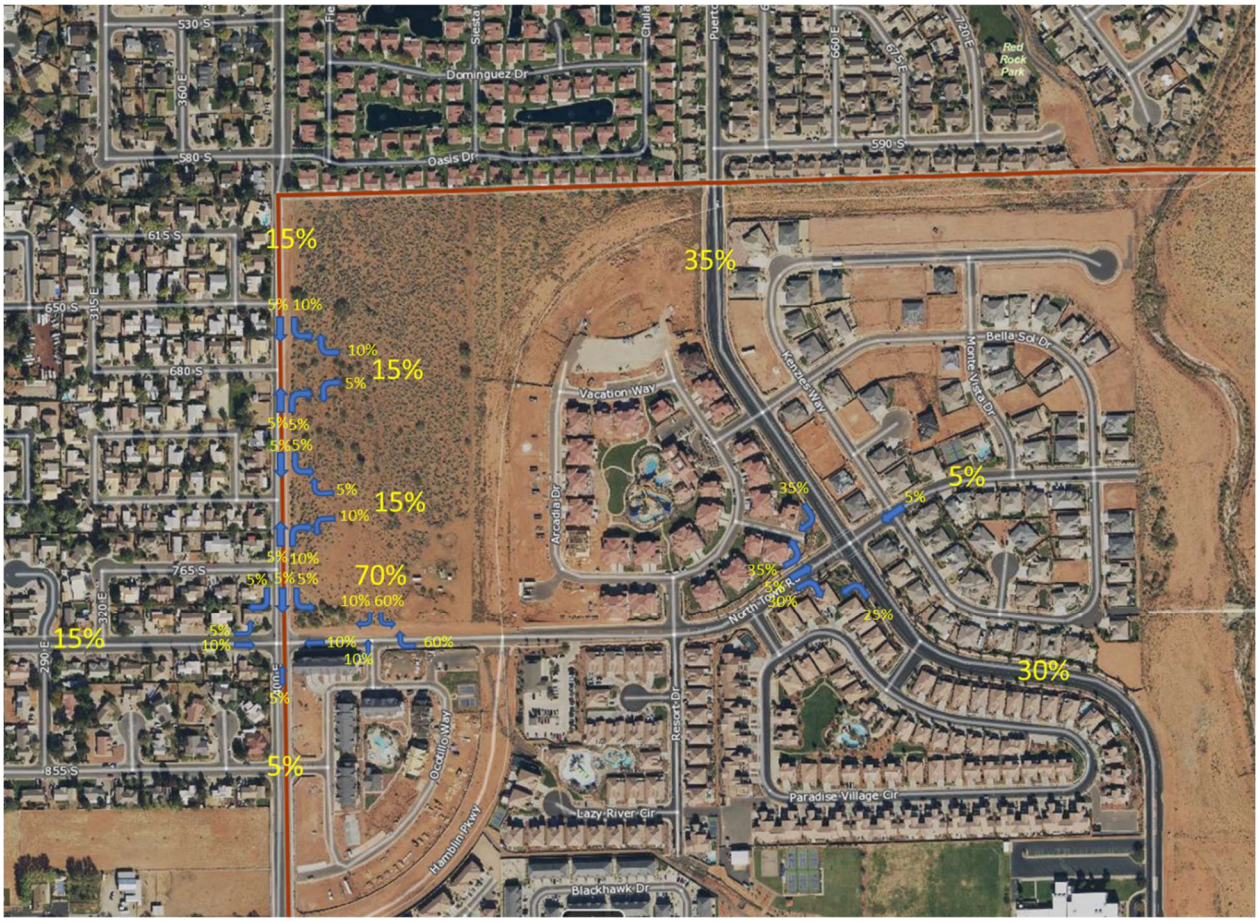


Figure 3-Trip Distribution for Coyote Landing

Traffic Analysis

Future traffic was analyzed by projecting the existing 2021 traffic based on the historical data and growth rate discussed previously. The development traffic was then added to the background traffic to estimate the total future traffic. The AM and PM peak hours were analyzed for the future development scenarios.

2023 BACKGROUND TRAFFIC

For the 2023 background traffic analysis, it was assumed that the existing roadway configuration (lanes, intersection control, etc.) will be used in 2023. The 2023 turning movement counts without the development traffic are shown in Figure 4. Table 5 shows the LOS analysis for the 2023 traffic.

Although existing counts were not taken at the intersection of Ocotillo Way and North Town Road, the intersection was included in the analysis in 2023 with and without project traffic. The proposed access to the development on North Town Road is planned to be aligned with Ocotillo Way. The turning movement counts at this intersection were estimated using the buildout of the homes on Ocotillo Way and the existing counts on North Town Road.

Table 5-2023 LOS Analysis

Intersection	AM Peak Hour		PM Peak Hour	
	Average Delay (sec/veh)	Level of Service	Average Delay (veh/sec)	Level of Service
680 South & 400 East	9.6	A	9.6	A
Saunders Loop & 400 East	9.5	A	8.9	A
North Town Road & 400 East	10.4	B	10.4	B
North Town Road & Ocotillo Way	9.5	A	9.4	A
North Town Road & Rachel Drive	11.6	B	11.7	B

In 2023, all of the study intersections are expected to operate at LOS B or better. There was some increase in the delay between the existing traffic and the 2023 background traffic, but at all of the intersections the delay increased by less than one second.

2023 TRAFFIC WITH DEVELOPMENT

2023 traffic with the addition of the proposed development traffic was estimated by adding the distributed development traffic to the projected 2023 traffic. The estimated turning movement counts are shown in Figure 5. With the addition of the development, it is assumed in the analysis that North Town Road will be widened to three lanes (one through-lane in each direction, with a center turn-lane) and that 400 East will remain a two-lane road.

Table 6 shows the LOS analysis for the projected 2023 traffic with development traffic.

Table 6-2023 with Development Traffic LOS Analysis

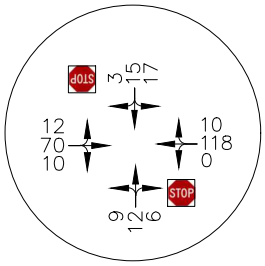
Intersection	AM Peak Hour		PM Peak Hour	
	Average Delay (sec/veh)	Level of Service	Average Delay (veh/sec)	Level of Service
680 South & 400 East	9.9	A	10.0	A
Saunders Loop & 400 East	9.7	A	9.6	A
North Town Road & 400 East	10.6	B	10.6	B
North Town Road & Ocotillo Way	10.3	B	10.3	B
North Town Road & Rachel Drive	11.8	B	11.8	B

The study intersections and proposed accesses for the development are anticipated to operate at LOS B or above at stop-controlled intersections with the addition of the development traffic.

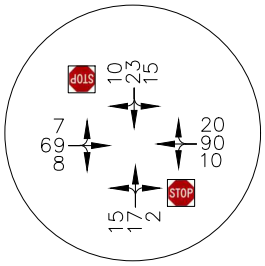
There was some increase in the delay between the 2023 background traffic and the addition of the project traffic, but at all of the intersections the delay increased by less than one second.



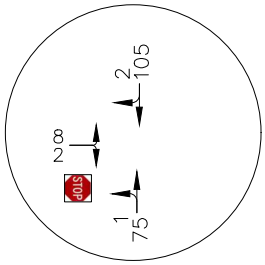
1 AM PEAK HOUR



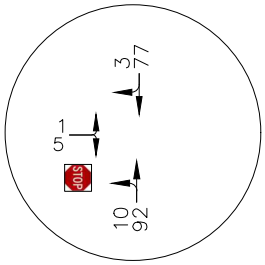
PM PEAK HOUR



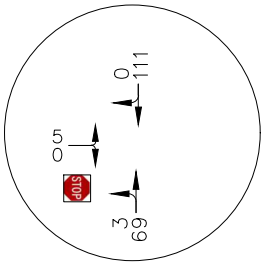
2 AM PEAK HOUR



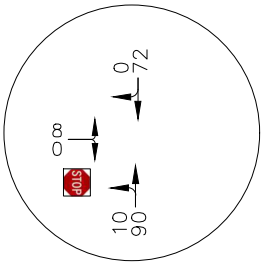
PM PEAK HOUR



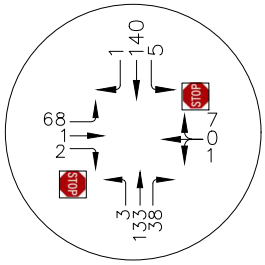
3 AM PEAK HOUR



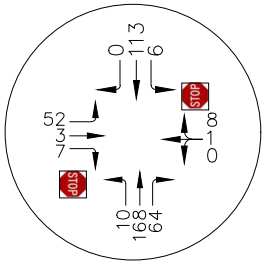
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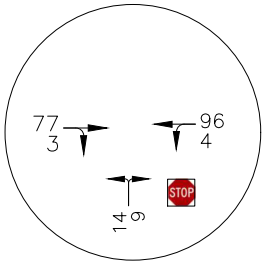
4 AM PEAK HOUR



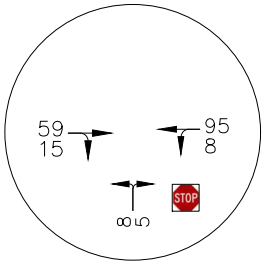
PM PEAK HOUR



5 AM PEAK HOUR



PM PEAK HOUR



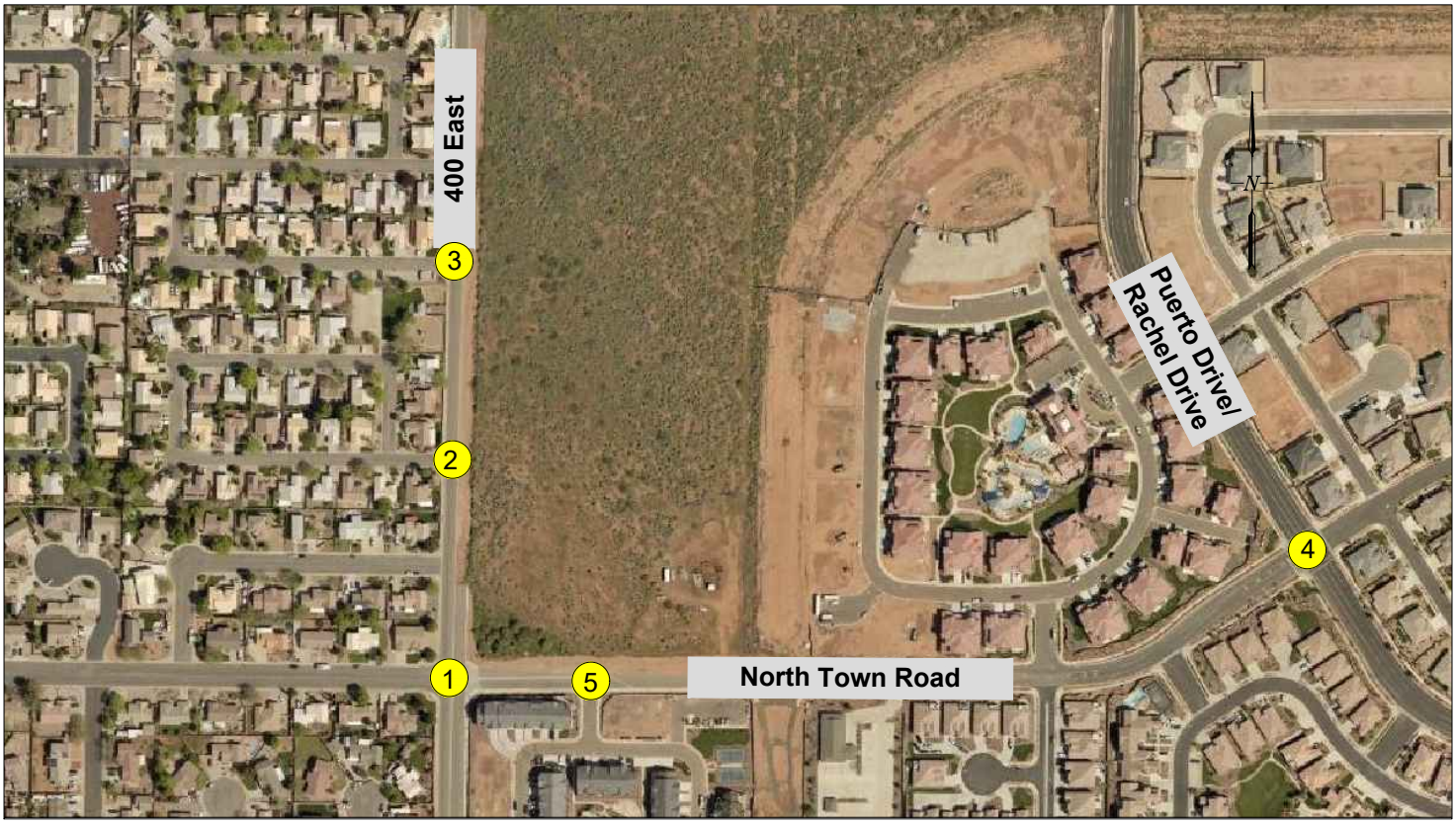
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(435) 986 - 7888

Coyote Landing Development
2023 Background AM & PM Peak Traffic
Turn Movement Volumes

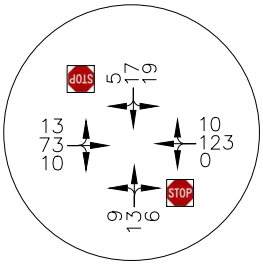
FIGURE
4

SCALE:
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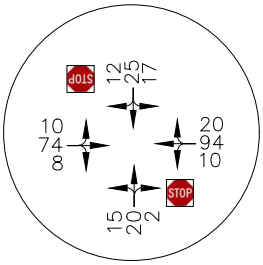
DATE:
4/2021



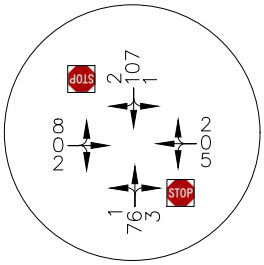
1 AM PEAK HOUR



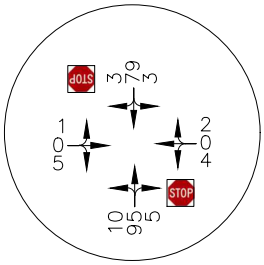
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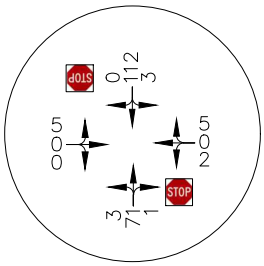
2 AM PEAK HOUR



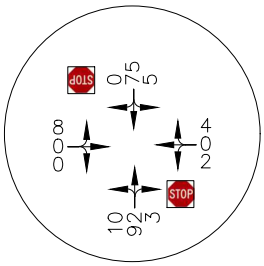
PM PEAK HOUR



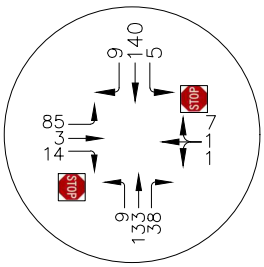
3 AM PEAK HOUR



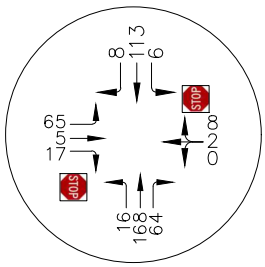
PM PEAK HOUR



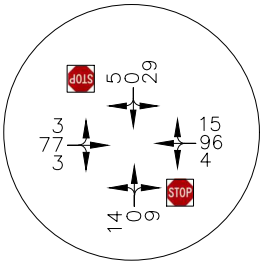
4 AM PEAK HOUR



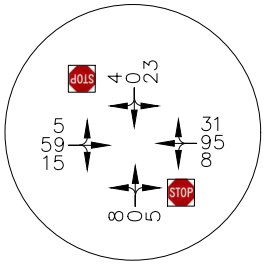
PM PEAK HOUR



5 AM PEAK HOUR



PM PEAK HOUR



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Coyote Landing Development
2023 AM & PM Peak Traffic with Development Traffic
Turn Movement Volumes

FIGURE
6

SCALE:
N/A

DATE:
4/2021

2023 WITH DEVELOPMENT TRAFFIC QUEUE LENGTH ANALYSIS

Table 7 shows the queue length analysis for the 2023 traffic with the addition of the project traffic. The table shows the maximum queue length required at each intersection and at which movement or approach the maximum queue length occurs.

Table 7-2023 Queue Length Analysis with Development Traffic

Intersection	AM Peak Hour		PM Peak Hour	
	Max. Queue Length	Movement	Max. Queue Length	Movement
680 South & 400 East	31'	EB-LTR	31'	EB-LTR
Saunders Loop & 400 East	55'	EB-LTR	55'	EB-LTR
North Town Road & 400 East	56'	WB-LTR & EB-LTR	79'	EB-LTR
North Town Road & Ocotillo Way	54'	SB-LTR	76'	SB-LTR
North Town Road & Rachel Drive	52'	EBL	85'	EBL

The maximum queue lengths around the development occur at the intersections with North Town Road during the PM peak hour. At each of the accesses, the maximum queue lengths also represent the amount of storage each access should have. For example, at the access at Ocotillo Way, the maximum queue length occurs during that PM peak hour and is 85 feet. At least 85 feet of storage should be provided at that access.

Recommendations

According to the traffic analysis through Synchro and SimTraffic, no mitigations are required to improve the LOS at the study intersections. The intersections are expected to run at acceptable levels of service with the proposed accesses and land uses.

It is recommended that North Town Road be striped with 3 lanes, one through-lane in each direction with a center turn lane. A center turning lane will provide space for left turns on North Town Road. It is assumed that vehicles making right turns will use the shoulder. The low speeds and low volumes on North Town Road will not require right turn lanes. Therefore, right turns on North Town Road are not recommended to have turn lanes.

Appendix A: Site Plan



Appendix B: Synchro Reports

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	60	9	0	101	9	8	10	5	15	13	3
Future Vol, veh/h	10	60	9	0	101	9	8	10	5	15	13	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	65	10	0	110	10	9	11	5	16	14	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	140	82	16	117	81	14	17	0	0	16	0	0
Stage 1	48	48	-	32	32	-	-	-	-	-	-	-
Stage 2	92	34	-	85	49	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	830	808	1063	859	809	1066	1600	-	-	1602	-	-
Stage 1	965	855	-	984	868	-	-	-	-	-	-	-
Stage 2	915	867	-	923	854	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	727	795	1063	788	796	1066	1600	-	-	1602	-	-
Mov Cap-2 Maneuver	727	795	-	788	796	-	-	-	-	-	-	-
Stage 1	959	846	-	978	863	-	-	-	-	-	-	-
Stage 2	787	862	-	836	845	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	10.2	2.5	3.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1600	-	-	809	813	1602	-	-
HCM Lane V/C Ratio	0.005	-	-	0.106	0.147	0.01	-	-
HCM Control Delay (s)	7.3	0	-	10	10.2	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-	-

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Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	2	1	64	90	2
Future Vol, veh/h	7	2	1	64	90	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	2	1	70	98	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	171	99	100	0	-	0
Stage 1	99	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	819	957	1493	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	818	957	1493	-	-	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	845	-	-
HCM Lane V/C Ratio	0.001	-	0.012	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	0	3	59	95	0
Future Vol, veh/h	4	0	3	59	95	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	3	64	103	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	173	103	103	0	-	0
Stage 1	103	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	817	952	1489	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	815	952	1489	-	-	-
Mov Cap-2 Maneuver	815	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	953	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1489	-	815	-	-
HCM Lane V/C Ratio	0.002	-	0.005	-	-
HCM Control Delay (s)	7.4	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	1	2	1	0	6	3	114	33	4	120	1
Future Vol, veh/h	58	1	2	1	0	6	3	114	33	4	120	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	100	-	-	-	120	-	75	120	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	1	2	1	0	7	3	124	36	4	130	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	290	304	130	270	269	124	131	0	0	160	0	0
Stage 1	138	138	-	130	130	-	-	-	-	-	-	-
Stage 2	152	166	-	140	139	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	662	609	920	683	637	927	1454	-	-	1419	-	-
Stage 1	865	782	-	874	789	-	-	-	-	-	-	-
Stage 2	850	761	-	863	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	655	606	920	678	634	927	1454	-	-	1419	-	-
Mov Cap-2 Maneuver	655	606	-	678	634	-	-	-	-	-	-	-
Stage 1	863	780	-	872	787	-	-	-	-	-	-	-
Stage 2	842	759	-	857	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	9.1	0.1	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1454	-	-	655	606	920	881	1419	-	-
HCM Lane V/C Ratio	0.002	-	-	0.096	0.002	0.002	0.009	0.003	-	-
HCM Control Delay (s)	7.5	-	-	11.1	11	8.9	9.1	7.5	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	0	0	-	-

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Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	59	7	9	77	17	13	15	2	13	20	9
Future Vol, veh/h	6	59	7	9	77	17	13	15	2	13	20	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	64	8	10	84	18	14	16	2	14	22	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	151	101	27	136	105	17	32	0	0	18	0	0
Stage 1	55	55	-	45	45	-	-	-	-	-	-	-
Stage 2	96	46	-	91	60	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	816	789	1048	835	785	1062	1580	-	-	1599	-	-
Stage 1	957	849	-	969	857	-	-	-	-	-	-	-
Stage 2	911	857	-	916	845	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	725	775	1048	766	771	1062	1580	-	-	1599	-	-
Mov Cap-2 Maneuver	725	775	-	766	771	-	-	-	-	-	-	-
Stage 1	948	841	-	960	849	-	-	-	-	-	-	-
Stage 2	800	849	-	832	837	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.2	3.2	2.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1580	-	-	790	807	1599	-	-
HCM Lane V/C Ratio	0.009	-	-	0.099	0.139	0.009	-	-
HCM Control Delay (s)	7.3	0	-	10.1	10.2	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.5	0	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	9	79	66	3
Future Vol, veh/h	1	4	9	79	66	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	10	86	72	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	180	74	75	0	-	0
Stage 1	74	-	-	-	-	-
Stage 2	106	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	810	988	1524	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	804	988	1524	-	-	-
Mov Cap-2 Maneuver	804	-	-	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	918	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1524	-	945	-	-
HCM Lane V/C Ratio	0.006	-	0.006	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	0	9	77	62	0
Future Vol, veh/h	7	0	9	77	62	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	0	10	84	67	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	171	67	67	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	819	997	1535	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	813	997	1535	-	-	-
Mov Cap-2 Maneuver	813	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	920	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1535	-	813	-	-
HCM Lane V/C Ratio	0.006	-	0.009	-	-
HCM Control Delay (s)	7.4	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	3	6	0	1	7	9	144	55	5	97	0
Future Vol, veh/h	45	3	6	0	1	7	9	144	55	5	97	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	100	-	-	-	120	-	75	120	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	3	7	0	1	8	10	157	60	5	105	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	327	352	105	297	292	157	105	0	0	217	0	0
Stage 1	115	115	-	177	177	-	-	-	-	-	-	-
Stage 2	212	237	-	120	115	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	626	573	949	655	619	889	1486	-	-	1353	-	-
Stage 1	890	800	-	825	753	-	-	-	-	-	-	-
Stage 2	790	709	-	884	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	615	567	949	643	612	889	1486	-	-	1353	-	-
Mov Cap-2 Maneuver	615	567	-	643	612	-	-	-	-	-	-	-
Stage 1	884	797	-	819	748	-	-	-	-	-	-	-
Stage 2	777	704	-	871	797	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	9.3	0.3	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1486	-	-	615	567	949	841	1353	-	-
HCM Lane V/C Ratio	0.007	-	-	0.08	0.006	0.007	0.01	0.004	-	-
HCM Control Delay (s)	7.4	-	-	11.4	11.4	8.8	9.3	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	0	0	-	-

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Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	70	10	0	118	10	9	12	6	17	15	3
Future Vol, veh/h	12	70	10	0	118	10	9	12	6	17	15	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	76	11	0	128	11	10	13	7	18	16	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	160	94	18	134	92	17	19	0	0	20	0	0
Stage 1	54	54	-	37	37	-	-	-	-	-	-	-
Stage 2	106	40	-	97	55	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	806	796	1061	838	798	1062	1597	-	-	1596	-	-
Stage 1	958	850	-	978	864	-	-	-	-	-	-	-
Stage 2	900	862	-	910	849	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	689	782	1061	758	784	1062	1597	-	-	1596	-	-
Mov Cap-2 Maneuver	689	782	-	758	784	-	-	-	-	-	-	-
Stage 1	952	841	-	972	859	-	-	-	-	-	-	-
Stage 2	753	857	-	810	840	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	10.4	2.4	3.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1597	-	-	791	800	1596	-	-
HCM Lane V/C Ratio	0.006	-	-	0.126	0.174	0.012	-	-
HCM Control Delay (s)	7.3	0	-	10.2	10.4	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.6	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	2	1	75	105	2
Future Vol, veh/h	8	2	1	75	105	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	2	1	82	114	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	199	115	116	0	-	0
Stage 1	115	-	-	-	-	-
Stage 2	84	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	790	937	1473	-	-	-
Stage 1	910	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	789	937	1473	-	-	-
Mov Cap-2 Maneuver	789	-	-	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	939	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1473	-	815	-	-
HCM Lane V/C Ratio	0.001	-	0.013	-	-
HCM Control Delay (s)	7.4	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	3	69	111	0
Future Vol, veh/h	5	0	3	69	111	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	3	75	121	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	202	121	121	0	-	0
Stage 1	121	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	787	930	1467	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	785	930	1467	-	-	-
Mov Cap-2 Maneuver	785	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1467	-	785	-	-
HCM Lane V/C Ratio	0.002	-	0.007	-	-
HCM Control Delay (s)	7.5	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	1	2	1	0	7	3	133	38	5	140	1
Future Vol, veh/h	68	1	2	1	0	7	3	133	38	5	140	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	100	-	-	-	120	-	75	120	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	1	2	1	0	8	3	145	41	5	152	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	338	354	152	315	314	145	153	0	0	186	0	0
Stage 1	162	162	-	151	151	-	-	-	-	-	-	-
Stage 2	176	192	-	164	163	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	616	571	894	638	601	902	1428	-	-	1388	-	-
Stage 1	840	764	-	851	772	-	-	-	-	-	-	-
Stage 2	826	742	-	838	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	608	568	894	633	597	902	1428	-	-	1388	-	-
Mov Cap-2 Maneuver	608	568	-	633	597	-	-	-	-	-	-	-
Stage 1	838	761	-	849	770	-	-	-	-	-	-	-
Stage 2	817	741	-	832	760	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	9.2	0.1	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1428	-	-	608	568	894	857	1388	-	-
HCM Lane V/C Ratio	0.002	-	-	0.122	0.002	0.002	0.01	0.004	-	-
HCM Control Delay (s)	7.5	-	-	11.7	11.4	9	9.2	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	90	3	4	114	14	9
Future Vol, veh/h	90	3	4	114	14	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	3	4	124	15	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	101	0	232	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1491	-	756	956
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1491	-	754	956
Mov Cap-2 Maneuver	-	-	-	-	757	-
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	824	-	-	1491	-
HCM Lane V/C Ratio	0.03	-	-	0.003	-
HCM Control Delay (s)	9.5	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	69	8	10	90	20	15	17	2	15	23	10
Future Vol, veh/h	7	69	8	10	90	20	15	17	2	15	23	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	75	9	11	98	22	16	18	2	16	25	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	174	115	31	156	119	19	36	0	0	20	0	0
Stage 1	63	63	-	51	51	-	-	-	-	-	-	-
Stage 2	111	52	-	105	68	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	789	775	1043	810	771	1059	1575	-	-	1596	-	-
Stage 1	948	842	-	962	852	-	-	-	-	-	-	-
Stage 2	894	852	-	901	838	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	686	760	1043	731	756	1059	1575	-	-	1596	-	-
Mov Cap-2 Maneuver	686	760	-	731	756	-	-	-	-	-	-	-
Stage 1	939	834	-	952	843	-	-	-	-	-	-	-
Stage 2	766	843	-	805	830	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	10.4	3.2	2.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1575	-	-	773	791	1596	-	-
HCM Lane V/C Ratio	0.01	-	-	0.118	0.165	0.01	-	-
HCM Control Delay (s)	7.3	0	-	10.3	10.4	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.6	0	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	10	92	77	3
Future Vol, veh/h	1	5	10	92	77	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	11	100	84	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	208	86	87	0	-	0
Stage 1	86	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	780	973	1509	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	774	973	1509	-	-	-
Mov Cap-2 Maneuver	774	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1509	-	933	-	-
HCM Lane V/C Ratio	0.007	-	0.007	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	0	10	90	72	0
Future Vol, veh/h	8	0	10	90	72	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	11	98	78	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	198	78	78	0	-	0
Stage 1	78	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	791	983	1520	-	-	-
Stage 1	945	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	785	983	1520	-	-	-
Mov Cap-2 Maneuver	785	-	-	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	905	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1520	-	785	-	-
HCM Lane V/C Ratio	0.007	-	0.011	-	-
HCM Control Delay (s)	7.4	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	3	7	0	1	8	10	168	64	6	113	0
Future Vol, veh/h	52	3	7	0	1	8	10	168	64	6	113	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	100	-	-	-	120	-	75	120	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	3	8	0	1	9	11	183	70	7	123	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	382	412	123	348	342	183	123	0	0	253	0	0
Stage 1	137	137	-	205	205	-	-	-	-	-	-	-
Stage 2	245	275	-	143	137	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	576	530	928	607	580	859	1464	-	-	1312	-	-
Stage 1	866	783	-	797	732	-	-	-	-	-	-	-
Stage 2	759	683	-	860	783	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	564	523	928	593	572	859	1464	-	-	1312	-	-
Mov Cap-2 Maneuver	564	523	-	593	572	-	-	-	-	-	-	-
Stage 1	859	779	-	791	726	-	-	-	-	-	-	-
Stage 2	745	678	-	845	779	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	9.5	0.3	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1464	-	-	564	523	928	814	1312	-	-
HCM Lane V/C Ratio	0.007	-	-	0.1	0.006	0.008	0.012	0.005	-	-
HCM Control Delay (s)	7.5	-	-	12.1	11.9	8.9	9.5	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	15	8	112	8	5
Future Vol, veh/h	71	15	8	112	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	16	9	122	9	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	93	0	225	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1501	-	763	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	887	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1501	-	758	974
Mov Cap-2 Maneuver	-	-	-	-	759	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	882	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	829	-	-	1501	-
HCM Lane V/C Ratio	0.017	-	-	0.006	-
HCM Control Delay (s)	9.4	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	73	10	0	123	10	9	13	6	19	17	5
Future Vol, veh/h	13	73	10	0	123	10	9	13	6	19	17	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	79	11	0	134	11	10	14	7	21	18	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	173	104	21	146	103	18	23	0	0	21	0	0
Stage 1	63	63	-	38	38	-	-	-	-	-	-	-
Stage 2	110	41	-	108	65	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	790	786	1056	823	787	1061	1592	-	-	1595	-	-
Stage 1	948	842	-	977	863	-	-	-	-	-	-	-
Stage 2	895	861	-	897	841	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	668	771	1056	740	772	1061	1592	-	-	1595	-	-
Mov Cap-2 Maneuver	668	771	-	740	772	-	-	-	-	-	-	-
Stage 1	942	831	-	971	858	-	-	-	-	-	-	-
Stage 2	743	856	-	793	830	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.6	2.3	3.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1592	-	-	777	788	1595	-	-
HCM Lane V/C Ratio	0.006	-	-	0.134	0.183	0.013	-	-
HCM Control Delay (s)	7.3	0	-	10.4	10.6	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.7	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	0	2	5	0	2	1	76	3	2	107	1
Future Vol, veh/h	8	0	2	5	0	2	1	76	3	2	107	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	2	5	0	2	1	83	3	2	116	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	209	209	117	209	208	85	117	0	0	86	0	0
Stage 1	121	121	-	87	87	-	-	-	-	-	-	-
Stage 2	88	88	-	122	121	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	748	688	935	748	689	974	1471	-	-	1510	-	-
Stage 1	883	796	-	921	823	-	-	-	-	-	-	-
Stage 2	920	822	-	882	796	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	745	687	935	745	688	974	1471	-	-	1510	-	-
Mov Cap-2 Maneuver	745	687	-	745	688	-	-	-	-	-	-	-
Stage 1	882	795	-	920	822	-	-	-	-	-	-	-
Stage 2	917	821	-	879	795	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.5	0.1	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1471	-	-	777	799	1510	-	-
HCM Lane V/C Ratio	0.001	-	-	0.014	0.01	0.001	-	-
HCM Control Delay (s)	7.4	0	-	9.7	9.5	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	0	2	0	5	3	71	1	3	112	0
Future Vol, veh/h	5	0	0	2	0	5	3	71	1	3	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	2	0	5	3	77	1	3	122	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	214	212	122	212	212	78	122	0	0	78	0	0
Stage 1	128	128	-	84	84	-	-	-	-	-	-	-
Stage 2	86	84	-	128	128	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	743	685	929	745	685	983	1465	-	-	1520	-	-
Stage 1	876	790	-	924	825	-	-	-	-	-	-	-
Stage 2	922	825	-	876	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	736	682	929	743	682	983	1465	-	-	1520	-	-
Mov Cap-2 Maneuver	736	682	-	743	682	-	-	-	-	-	-	-
Stage 1	874	788	-	922	823	-	-	-	-	-	-	-
Stage 2	915	823	-	874	788	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9	0.3	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1465	-	-	736	900	1520	-	-
HCM Lane V/C Ratio	0.002	-	-	0.007	0.008	0.002	-	-
HCM Control Delay (s)	7.5	0	-	9.9	9	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	3	14	1	1	7	9	133	38	5	140	9
Future Vol, veh/h	85	3	14	1	1	7	9	133	38	5	140	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	100	-	-	-	120	-	75	120	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	3	15	1	1	8	10	145	41	5	152	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	352	368	152	341	337	145	162	0	0	186	0	0
Stage 1	162	162	-	165	165	-	-	-	-	-	-	-
Stage 2	190	206	-	176	172	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	603	561	894	613	584	902	1417	-	-	1388	-	-
Stage 1	840	764	-	837	762	-	-	-	-	-	-	-
Stage 2	812	731	-	826	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	592	555	894	595	578	902	1417	-	-	1388	-	-
Mov Cap-2 Maneuver	592	555	-	595	578	-	-	-	-	-	-	-
Stage 1	834	761	-	831	757	-	-	-	-	-	-	-
Stage 2	798	726	-	806	753	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	9.5	0.4	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1417	-	-	592	555	894	806	1388	-	-
HCM Lane V/C Ratio	0.007	-	-	0.156	0.006	0.017	0.012	0.004	-	-
HCM Control Delay (s)	7.6	-	-	12.2	11.5	9.1	9.5	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	90	3	4	114	15	14	0	9	29	0	5
Future Vol, veh/h	3	90	3	4	114	15	14	0	9	29	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	98	3	4	124	16	15	0	10	32	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	101	0	0	249	254	100	251	247	132
Stage 1	-	-	-	-	-	-	106	106	-	140	140	-
Stage 2	-	-	-	-	-	-	143	148	-	111	107	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1443	-	-	1491	-	-	705	650	956	702	655	917
Stage 1	-	-	-	-	-	-	900	807	-	863	781	-
Stage 2	-	-	-	-	-	-	860	775	-	894	807	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1443	-	-	1491	-	-	698	647	956	692	652	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	698	647	-	692	652	-
Stage 1	-	-	-	-	-	-	898	805	-	861	779	-
Stage 2	-	-	-	-	-	-	852	773	-	883	805	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	9.8	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	780	1443	-	-	1491	-	-	718
HCM Lane V/C Ratio	0.032	0.002	-	-	0.003	-	-	0.051
HCM Control Delay (s)	9.8	7.5	0	-	7.4	0	-	10.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection: 3: 400 East & North Town Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	56	56	29	26
Average Queue (ft)	34	36	3	0
95th Queue (ft)	59	51	17	0
Link Distance (ft)	373	166	360	275
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: 400 East & Saunders Loop

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	55	30
Average Queue (ft)	7	8
95th Queue (ft)	32	29
Link Distance (ft)	389	187
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: 400 East & 680 South

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	3	3
95th Queue (ft)	17	17
Link Distance (ft)	400	179
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Rachel Drive/Puerto Drive & North Town Road

Movement	EB	EB	EB	WB	SB
Directions Served	L	T	R	LTR	L
Maximum Queue (ft)	52	25	24	28	31
Average Queue (ft)	32	1	4	9	1
95th Queue (ft)	51	10	19	31	12
Link Distance (ft)		386		164	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	125		100		120
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 14: North Town Road

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	32	31	54
Average Queue (ft)	2	14	23
95th Queue (ft)	13	38	48
Link Distance (ft)	166	132	153
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	74	8	10	94	20	15	20	2	17	25	12
Future Vol, veh/h	10	74	8	10	94	20	15	20	2	17	25	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	80	9	11	102	22	16	22	2	18	27	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	187	126	34	169	131	23	40	0	0	24	0	0
Stage 1	70	70	-	55	55	-	-	-	-	-	-	-
Stage 2	117	56	-	114	76	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	774	764	1039	795	760	1054	1570	-	-	1591	-	-
Stage 1	940	837	-	957	849	-	-	-	-	-	-	-
Stage 2	888	848	-	891	832	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	667	747	1039	712	743	1054	1570	-	-	1591	-	-
Mov Cap-2 Maneuver	667	747	-	712	743	-	-	-	-	-	-	-
Stage 1	931	827	-	947	841	-	-	-	-	-	-	-
Stage 2	756	840	-	788	822	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	10.6	3	2.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1570	-	-	756	777	1591	-	-
HCM Lane V/C Ratio	0.01	-	-	0.132	0.173	0.012	-	-
HCM Control Delay (s)	7.3	0	-	10.5	10.6	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.6	0	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	5	4	0	2	10	95	5	3	79	3
Future Vol, veh/h	1	0	5	4	0	2	10	95	5	3	79	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	5	4	0	2	11	103	5	3	86	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	223	224	88	224	223	106	89	0	0	108	0	0
Stage 1	94	94	-	128	128	-	-	-	-	-	-	-
Stage 2	129	130	-	96	95	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	733	675	970	732	676	948	1506	-	-	1483	-	-
Stage 1	913	817	-	876	790	-	-	-	-	-	-	-
Stage 2	875	789	-	911	816	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	726	668	970	722	669	948	1506	-	-	1483	-	-
Mov Cap-2 Maneuver	726	668	-	722	669	-	-	-	-	-	-	-
Stage 1	906	815	-	869	784	-	-	-	-	-	-	-
Stage 2	866	783	-	904	814	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.9	9.6	0.7	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1506	-	-	919	784	1483	-	-
HCM Lane V/C Ratio	0.007	-	-	0.007	0.008	0.002	-	-
HCM Control Delay (s)	7.4	0	-	8.9	9.6	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	0	0	2	0	4	10	92	3	5	75	0
Future Vol, veh/h	8	0	0	2	0	4	10	92	3	5	75	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	0	2	0	4	11	100	3	5	82	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	218	217	82	216	216	102	82	0	0	103	0	0
Stage 1	92	92	-	124	124	-	-	-	-	-	-	-
Stage 2	126	125	-	92	92	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	738	681	978	740	682	953	1515	-	-	1489	-	-
Stage 1	915	819	-	880	793	-	-	-	-	-	-	-
Stage 2	878	792	-	915	819	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	728	673	978	733	674	953	1515	-	-	1489	-	-
Mov Cap-2 Maneuver	728	673	-	733	674	-	-	-	-	-	-	-
Stage 1	908	816	-	873	787	-	-	-	-	-	-	-
Stage 2	867	786	-	911	816	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.2	0.7	0.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1515	-	-	728	866	1489	-	-
HCM Lane V/C Ratio	0.007	-	-	0.012	0.008	0.004	-	-
HCM Control Delay (s)	7.4	0	-	10	9.2	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	5	17	0	2	8	16	168	64	6	113	8
Future Vol, veh/h	65	5	17	0	2	8	16	168	64	6	113	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	100	-	-	-	120	-	75	120	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	5	18	0	2	9	17	183	70	7	123	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	395	424	123	370	363	183	132	0	0	253	0	0
Stage 1	137	137	-	217	217	-	-	-	-	-	-	-
Stage 2	258	287	-	153	146	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	565	522	928	587	565	859	1453	-	-	1312	-	-
Stage 1	866	783	-	785	723	-	-	-	-	-	-	-
Stage 2	747	674	-	849	776	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	550	513	928	564	555	859	1453	-	-	1312	-	-
Mov Cap-2 Maneuver	550	513	-	564	555	-	-	-	-	-	-	-
Stage 1	856	779	-	776	714	-	-	-	-	-	-	-
Stage 2	729	666	-	822	772	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	9.7	0.5	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1453	-	-	550	513	928	774	1312	-	-
HCM Lane V/C Ratio	0.012	-	-	0.128	0.011	0.02	0.014	0.005	-	-
HCM Control Delay (s)	7.5	-	-	12.5	12.1	9	9.7	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	71	15	8	112	31	8	0	5	23	0	4
Future Vol, veh/h	5	71	15	8	112	31	8	0	5	23	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	77	16	9	122	34	9	0	5	25	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	156	0	0	93	0	0	254	269	85	255	260	139
Stage 1	-	-	-	-	-	-	95	95	-	157	157	-
Stage 2	-	-	-	-	-	-	159	174	-	98	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1424	-	-	1501	-	-	699	637	974	698	645	909
Stage 1	-	-	-	-	-	-	912	816	-	845	768	-
Stage 2	-	-	-	-	-	-	843	755	-	908	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1424	-	-	1501	-	-	691	631	974	689	639	909
Mov Cap-2 Maneuver	-	-	-	-	-	-	691	631	-	689	639	-
Stage 1	-	-	-	-	-	-	908	813	-	842	763	-
Stage 2	-	-	-	-	-	-	834	750	-	900	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.4	9.7	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	778	1424	-	-	1501	-	-	715
HCM Lane V/C Ratio	0.018	0.004	-	-	0.006	-	-	0.041
HCM Control Delay (s)	9.7	7.5	-	-	7.4	-	-	10.3
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection: 3: 400 East & North Town Road

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	79	55	31	28
Average Queue (ft)	33	35	1	1
95th Queue (ft)	54	49	11	10
Link Distance (ft)	373	166	361	275
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: 400 East & Saunders Loop

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	55	30	31
Average Queue (ft)	9	4	1
95th Queue (ft)	34	21	10
Link Distance (ft)	389	129	244
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: 400 East & 680 South

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	30
Average Queue (ft)	6	6
95th Queue (ft)	26	25
Link Distance (ft)	400	136
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Rachel Drive/Puerto Drive & North Town Road

Movement	EB	EB	EB	WB	NB	SB
Directions Served	L	T	R	LTR	L	L
Maximum Queue (ft)	85	26	24	29	27	31
Average Queue (ft)	32	5	11	9	2	3
95th Queue (ft)	62	22	30	31	13	19
Link Distance (ft)		384		164		
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	125		100		120	120
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 14: North Town Road

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	30	30	76
Average Queue (ft)	2	12	25
95th Queue (ft)	15	35	51
Link Distance (ft)		125	101
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Appendix C: Land Use Descriptions

Land Use: 220
Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors). Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and off-campus student apartment (Land Use 225) are related land uses.

Additional Data

In prior editions of *Trip Generation Manual*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of vehicle trip data found no clear differences in trip making patterns between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:45 and 5:45 p.m., respectively. For the one site with Saturday data, the overall highest vehicle volume was counted between 9:45 and 10:45 a.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 11:45 a.m. and 12:45 p.m.

For the one dense multi-use urban site with 24-hour count data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:00 and 8:00 a.m. and 6:15 and 7:15 p.m., respectively.

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

The average numbers of person trips per vehicle trip at the five general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.13 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.21 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, District of Columbia, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Minnesota, New Jersey, New York, Ontario, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington.

It is expected that the number of bedrooms and number of residents are likely correlated to the number of trips generated by a residential site. Many of the studies included in this land use did not indicate the total number of bedrooms. To assist in the future analysis of this land use, it is important that this information be collected and included in trip generation data submissions.

Source Numbers

168, 187, 188, 204, 211, 300, 305, 306, 319, 320, 321, 357, 390, 412, 418, 525, 530, 571, 579, 583, 864, 868, 869, 870, 896, 903, 918, 946, 947, 948, 951

Land Use: 260
Recreational Homes

Description

A recreational home is located within a resort that contains local services and complete recreational facilities. These dwellings are often second homes used by the owner periodically or rented on a seasonal basis. Timeshare (Land Use 265) is a related land use.

Additional Data

A large number of internal trips were made for recreational purposes in resort communities containing recreational homes.

The sites were surveyed in the 1980s and the 2000s in New York and Oregon.

Source Numbers

187, 901, 968

CITY OF
SANTA CLARA
FOUNDED 1854

APPLICATION FOR A CONDITIONAL USE PERMIT

AS PROVIDED BY THE CITY OF SANTA CLARA, UTAH, ZONING ORDINANCE

Hearing Date: 2nd Thursday at 5:30 p.m. Application **MUST BE SUBMITTED 7 DAYS PRIOR** to hearing date.

Filing Fees: $200.00 (Additional Dwelling Unit Fee: $100.00)

TO THE PLANNING COMMISION
SANTA CLARA, UTAH

DATE: 6/30/21

The undersigned applicant is the owner of the following legally described property: (Give exact legal description to include Section, Township, Range, Lot Subdivision, Street Address, Business Name):

Lots 2 and 3 or Block 25, St George and Santa Clara Bench Co. Survey in section 5 T 42 South, R 16 West, Salt Lake Meridian

Attach a plot plan, drawn to scale, of the property involved showing the following information:

1. Prepare site plans and elevations;
2. Show existing and proposed buildings, fences and general landscape layout;
3. Show parking, loading areas, and automobile circulation;
4. Show any existing and proposed signs, lighting;
5. Show vicinity map (major/minor streets, intersections, neighboring subdivisions and relative location within the city), drainage plan and topography of irregular land;
6. Include any other pertinent information.

Are there any deed restrictions affecting the use of the property involved? Give the expiration date of these restrictions:

No

Would the proposed use be materially detrimental to the surrounding property?:

No

The undersigned property owner requests a CONDITIONAL USE PERMIT as permitted in the Santa Clara City Zoning Ordinances to use the above-described property for the following purposes (attach additional sheets if necessary):

Short Term Nightly Rental for 119 townhouse units at Coyote Landing Subdivision

17.40.060: PLANNING COMMISSION ACTION:

The planning commission may approve, modify, and approve, or deny the conditional use application made to the planning commission. The planning commission shall require such regulations and conditions as may deemed necessary to protect the public health, safety, welfare, and aesthetics of the area. In approving a conditional use permit, the planning commission shall find:

A. That the proposed use is necessary or desirable and will contribute to the general well being of the city;

B. That the use will not be detrimental to the health, safety, welfare, or aesthetics, or detrimental to property or improvements in the area;

C. That the proposed use will comply with the regulations of this title;

D. That the proposed use is in harmony with the intent and purpose of the general plan, or that the plan shall have first been amended through public hearing. (Ord. 97-06 § 9-6)

WHEN A CONDITIONAL USE PERMIT IS GRANTED SUBJECT TO CONDITIONS, SAID CONDITIONAL USE PERMIT DOES NOT BECOME EFFECTIVE UNTIL SUCH TIME AS THOSE CONDITIONS HAVE BEEN MET.

NOTE: A CONDITIONAL USE PERMIT DOES NOT ELIMINATE THE NECESSITY OF OBTAINING A BUILDING PERMIT. A PERMIT IS REQUIRED FOR CONSTRUCTION OF ALL BUILDINGS IN THE PROJECT.

A Conditional Use Permit shall be good for one (1) year after final approval, or as otherwise determined by the Santa Clara Planning Commission. If at the end of one (1) year construction has not been commenced, the Permit shall become null and void unless a request is made with the Planning Commission for an extension. Extensions may be granted for a period of time not to exceed six (6) months.

If use is discontinued for a period of six (6) months, or if property is sold or developed by someone other than applicant, the conditional use is null and void.

The filing fee for this CONDITIONAL USE PERMIT is $200.00. The fee is payable to the City of Santa Clara, Utah and such fee shall not be refundable in whole or in part, even though the application may be withdrawn or denied.

Signature of Applicant

1100 E South Union Ave
Midvale, UT 84047
Address of Applicant

Robert Smith
Printed Name of Applicant

(801)449-9706
Phone number of Applicant

Applicant shall contact adjacent property owners within 300 feet of their property lines. Attach a sheet using the following outline:

We, the undersigned owners of property adjacent to the property legally described in the APPLICATION FOR CONDITIONAL USE PERMIT hereby notify that we have been contacted and informed of the property owner's Conditional Use Permit application and the date the Planning Commission will hear the issue. Ord Chapter: 17.40.010-17.40.100

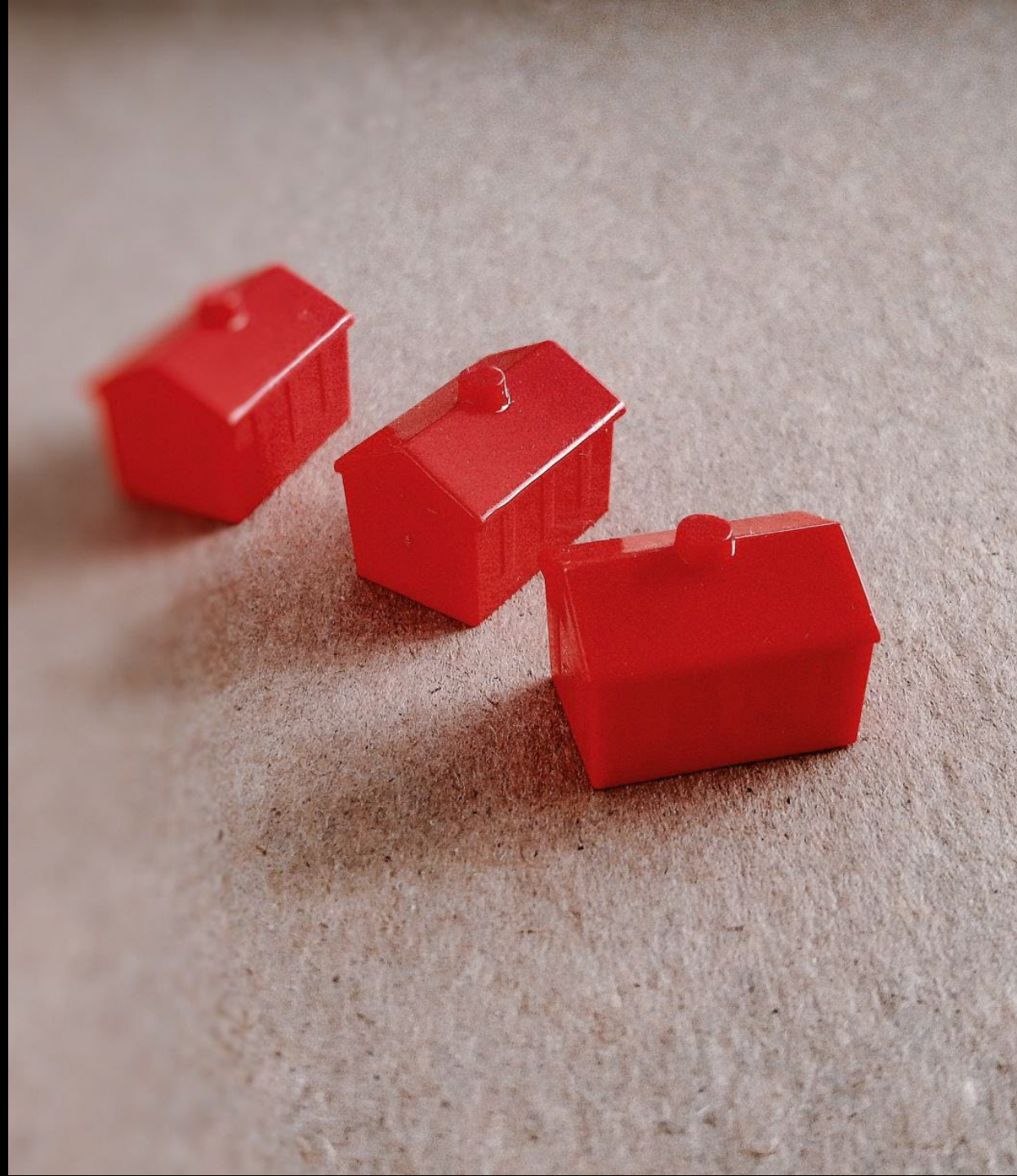
Robert Smith
Printed Name of Property Owner

1100 E. South Union Ave. Midvale, UT 84047
Address of Property Owner

Signature of Property Owner

Tax Credits and Affordable Housing

What are they and how does one qualify?



Tax Credit Program

Tax credits are applied in April each year through the Utah Housing Corporation

Credits are awarded to highest scoring applicants, and points are earned through several criteria:

- Income level – renting to tenants from moderate income (80% AMI) down to very low income (20% AMI)
- Project location – proximity to resources for tenants (e.g. public transportation to work, etc.)
- Project Characteristics- ie. Covered parking, computer room, amenities, wifi, etc
- Applicant experience – does applicant know how to successfully own/develop affordable housing
- Tenet Populations with Special Housing Needs – people with disabilities, homeless, etc.
- Service Tenants with Public House Assistance – work with local PHA to accept applicants from their pool
- Efficient use of Housing Credits

How Does One Qualify for Affordable Housing?

2021 Multifamily Tax Subsidy Project Income and Rent Limits Tables
80% - 20% of Area Median Income (AMI) Effective - April 1, 2021

In order to use the Housing and Economic Recovery Act of 2008 (HERA) Special Income limits, the project had to be Placed In Service (PIS) on or before **December 31, 2008**. For projects placed into service prior to the publication of FY2021 Income limits: Section 3009(a).(E).(i) of the Housing and Recovery Act of 2008 (Public Law 110-289) provides a general "hold harmless" policy for multifamily tax subsidy projects after calendar year 2008. It Is imperative to know the PIS date in order to use the correct limits. For additional guidance regarding the appropriate maximum set of Income limits for existing projects click on the following link: 2021 MTSP Income Limits

				2021MAXIMUM INCOME LIMITS								2021 MAXIMUM GROSS RENTS					
County	HERA	Median	AMI	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person	8 Person	STUDIO	1 BDRM	2 BDRM	3 BDRM	4 BDRM	5 BDRM
Washington			80%	41,520	47,440	53,360	59,280	64,080	68,800	73,520	78,320	1,038	1,112	1,334	1,542	1,720	1,898
Washington			70%	36,330	41,510	46,690	51,870	56,070	60,200	64,330	68,530	908	973	1,167	1,349	1,505	1,660
Washington			60%	31,140	35,580	40,020	44,460	48,060	51,600	55,140	58,740	778	834	1,000	1,156	1,290	1,423
Washington		69,600	50%	25,950	29,650	33,350	37,050	40,050	43,000	45,950	48,950	648	695	833	963	1,075	1,186
Washington			40%	20,760	23,720	26,680	29,640	32,040	34,400	36,760	39,160	519	556	667	771	860	949
Washington			30%	15,570	17,790	20,010	22,230	24,030	25,800	27,570	29,370	389	417	500	578	645	711
Washington			20%	10,380	11,860	13,340	14,820	16,020	17,200	18,380	19,580	259	278	333	385	430	474

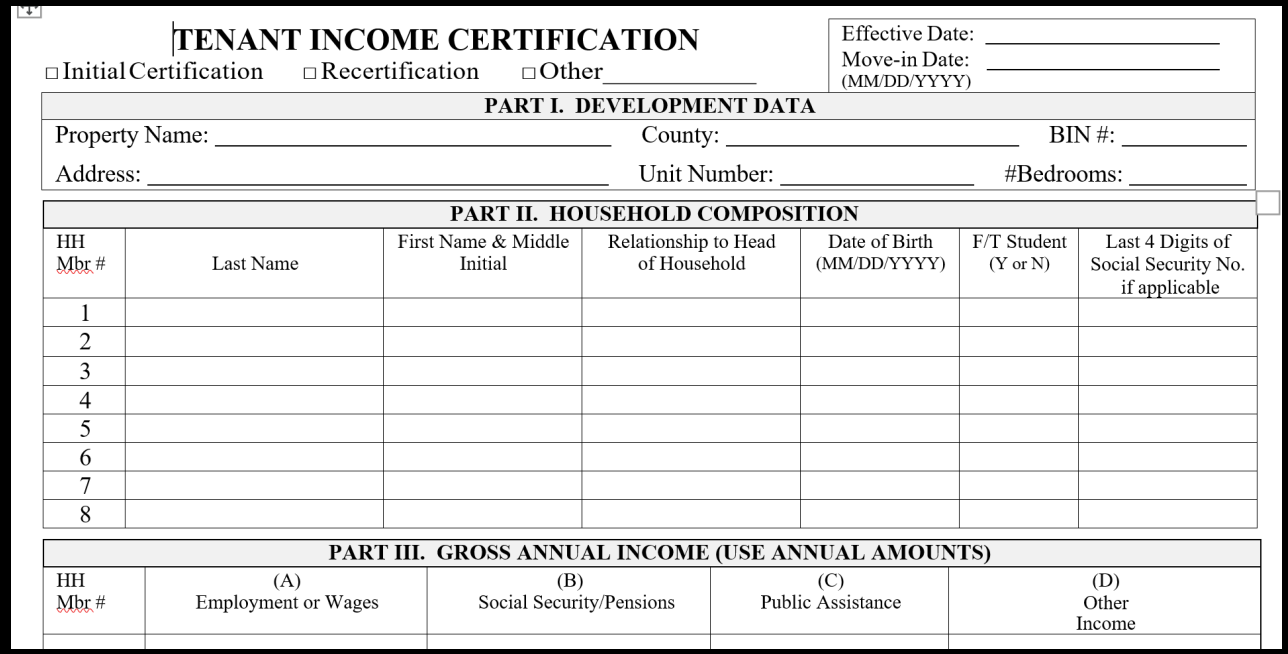
→ Units would be rented to individuals with AMI levels between 20% AMI and 80% AMI. No market rent is set and there is no government subsidy. The tenant is fully responsible to come up with the full amount of rent based on their AMI level.

How Do Only Qualified Tenants Occupy the Units?

→ A Land Use Restrictions Agreement (LURA) is executed/recorded certifying the rent levels committed to will remain for at least 35 years.

→ Tenants are qualified using a Tenant Income Certification (TIC) prior to moving in and annually after that

→ Management company is trained to properly Utilize TICs to ensure property stays in compliance With LURA



TENANT INCOME CERTIFICATION

☐ Initial Certification ☐ Recertification ☐ Other_____

Effective Date: _____
Move-in Date: _____
(MM/DD/YYYY)

PART I. DEVELOPMENT DATA

Property Name: _____ County: _____ BIN #: _____

Address: _____ Unit Number: _____ #Bedrooms: _____

PART II. HOUSEHOLD COMPOSITION

HH Mbr #	Last Name	First Name & Middle Initial	Relationship to Head of Household	Date of Birth (MM/DD/YYYY)	F/T Student (Y or N)	Last 4 Digits of Social Security No. if applicable
1						
2						
3						
4						
5						
6						
7						
8						

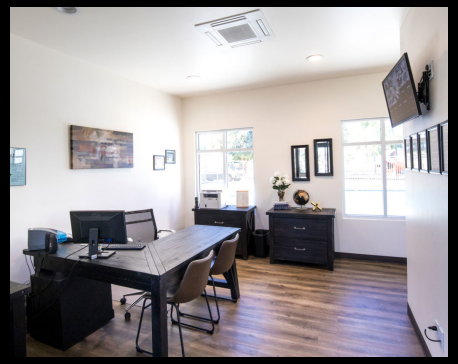
PART III. GROSS ANNUAL INCOME (USE ANNUAL AMOUNTS)

HH Mbr #	(A) Employment or Wages	(B) Social Security/Pensions	(C) Public Assistance	(D) Other Income

→ https://utahhousingcorp.org/multifamily/compliance/forms

Existing Affordable Housing Projects

https://wilshirepacific.com/projects-2/








REQUEST FOR ACTION

AGENDA ITEM 4

City Council July 7, 2021

APPLICANT: Santa Clara City Storm Water Department

SUBJECT:

Consider approval of "Southern Utah Adopt A Water Way" program and documentation in partnership with the City of St. George.

BACKGROUND DESCRIPTION:

The City of Saint George has created and requested assistance in a new program called “Southern Utah Adopt A Waterway”. The program is targeting our local water ways with combined effort including citizens, volunteer groups and municipalities. The goal is to enhances our local river system by smaller organized/sponsored clean-up efforts. It is very similar to the State’s “Adopt a Highway” Program. Santa Clara City has joined this program to enhance and beautify the Santa Clara River/Tuacahn Wash areas within our city limits. We are looking for volunteer groups to adopt a section of river within our City. For further information on the “Southern Utah Adopt A Waterway” Program, click on the link below. https://www.sgcity.org/adoptawaterway/

Proposed Recommendation

Approval

Cost

N/A

Approved by Legal Department

N/A

Approved in Budget

N/A

Approved by City Finance Department

N/A

Amount

N/A

Requested By

Kristelle Hill

File Upload Attachments

https://sccity.org/wp-content/uploads/formidable/41/aawchecklist.pdf, https://sccity.org/wp-content/uploads/formidable/41/aawcleanupdataform1.pdf, https://sccity.org/wp-content/uploads/formidable/41/aawenrollmentform.pdf, https://sccity.org/wp-content/uploads/formidable/41/aawprogramagreement.pdf, https://sccity.org/wp-content/uploads/formidable/41/aawsafetyguidelines.pdf, https://sccity.org/wp-content/uploads/formidable/41/aawsign-insheet.pdf, https://sccity.org/wp-content/uploads/formidable/41/aawvolunteerriskreleaseagreement2.pdf

Adopt A Waterway
Program Checklist

- ❑ Create an Adopt A Waterway Volunteer Group (Adopting Organization)
- ❑ Choose a Designated Representative and an Alternate Contact Person for the Adopting Organization.
- ❑ Select an available site to be formally adopted at https://www.sgcity.org/transportationandengineering/adoptawaterway and meet with the Adopt A Waterway Coordinator. Privately owned property will not be permitted to be adopted.
- ❑ Meet with the Adopt A Waterway Coordinator to discuss the following forms:
  - ❑ Program Agreement
  - ❑ Enrollment Form
  - ❑ Volunteer Risk and Release Agreement
  - ❑ Safety Guideline and sign-in sheet
  - ❑ Cleanup Data Form
- ❑ At least one week prior to the event:
  - ❑ Inform the Adopt A Waterway Coordinator in writing (or email) of the date of the intended activity.
  - ❑ Provide a signed Volunteer Risk and Release Agreement for each volunteer.
  - ❑ Collect trash bags, the Safety Guidelines and a sign-in sheet from the Adopt A Waterway Coordinator. Contact the Adopt A Waterway Coordinator for locations where trash should be placed for city pickup.
  - ❑ The city recommends each volunteer of the adopting organization wear high visibility vests, gloves, boots or sturdy shoes, pants, long sleeves, etc. **The city does not provide these items.**
- ❑ Day of the event:
  - ❑ The Designated Representative needs to conduct a safety meeting with the volunteers to review the Safety Guidelines and have all volunteers sign-in using the sign-in sheet provided by the Adopt A Waterway Coordinator.
  - ❑ The Designated Representative needs to verify that all volunteers have provided a signed Volunteer Risk and Release Agreement before they begin work.
- ❑ Within two (2) weeks following the event:
  - ❑ Submit the *Clean Up Data Form* to the Adopt A Waterway Coordinator.
  - ❑ Submit the volunteer sign-in sheet to the Adopt A Waterway Coordinator.
  - ❑ City will post the Adopt A Waterway sign at the appropriate trail or waterway location following the group's first clean-up event.

Adopt A Waterway
Volunteer Risk and Release Agreement

I, the undersigned, agree for myself or for my minor child/ward, that we are volunteering for _____ who has adopted a waterway under the City of Santa Clara Adopt A Waterway Program, and understand and agree, for myself and for my minor child/ward, that:

1. I/We are not a volunteer for the City of Santa Clara; and
2. The dangers and risks from participating in the activities are significant, including the potential for permanent paralysis and death, and while certain precautions may reduce that risk, the risk of serious injury does exist; and,
3. I/We are knowingly and freely assuming any and all risks, both known and unknown, even if arising from the negligence of the City or others, and assume full responsibility for my/our participation in this activity; and
4. I/We, for myself and my child/ward and on behalf of my/our heirs and assigns, hereby indemnify, release, and hold harmless the City of Santa Clara, its officers, officials, agents, employees, and representatives for any and all liabilities, losses, damages, claims, and injuries, to person or property including death, whether arising from the negligence of the City or otherwise; and
5. I/We act only as a civilian and do not function as an employee, agent volunteer, or representative of the City of Santa Clara, and/or any Landowner; and
6. I/We give permission for media coverage of myself and/or my minor child/ward to be disseminated for public relations purposes.

I have read and fully understand the provisions outlined in the City of Santa Clara Adopt A Waterway Program Volunteer Risk and Release Agreement. This Agreement shall not be modified orally. All minors' signatures must be accompanied by the signature of the parent or legal guardian.

Print Name: _____ Signature: _____

Print Legal Guardian Name if under 18 years old: _____

Legal Guardian Signature if under 18 years old: _____

Date: _____ Phone Number _____ Email: _____

CITY OF
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Adopt-A-Waterway

Cleanup Data Form

Date: _____ Waterway Adopted: _____

Adopting organization: _____

Name of contact person: _____

Phone Number: _____

City/County: _____

Map location, (if available): _____

Location of waterway section cleaned, (if possible, please provide names of road crossings and/or attach a map):

_____

_____

Number of miles cleaned: _____

Number of participants: Adults: _____ Children: _____

Number of trash bags collected: _____

Total amount of trash removed: _____ cu. yds.

Type of trash collected: _____

Most unusual item found: _____

Were any heavy or dangerous items found that the group couldn't remove?: _____

_____

Evidence of outfall discharge? This could be discolored water, oils, soaps, or other pollutants in the waterway, or smells of sewage or other substances.

_____

Cleanup time (in hours): _____

Number of photos taken, (if possible, please attach or email a copy of each photo): _____

Comments: _____

_____

_____

What is the date of your next clean-up? _____

Adopt A Waterway
Enrollment Form

ADOPTING ORGANIZATION INFORMATION

Adopting Organization Name (Please Print): _____

Approximate number of organization volunteers: _____

Name of Designated Representative (Please Print): _____

Phone Number: _____

E-mail address: _____

Full Mailing Address: _____

Name of Alternate Contact Person (Please Print): _____

Phone Number: _____

E-mail address: _____

Full Mailing Address: _____

ADOPTION INFORMATION

Name of Waterway: _____

Location: _____

Planned waterway activities: (please check all that apply):

- ❑ Trash/Debris pickup
- ❑ Restoration
- ❑ Improvement
- ❑ Other (Please Specify): _____

Statement of Agreement

I have read and agree to abide by the policies and regulations laid out in the Program Agreement and Safety Guidelines forms as set forth by the City of Santa Clara with regard to the Adopt A Waterway Program. As the Adopting Organization's Designated Representative, I am responsible for informing the members of the organization of all risk and release provisions and safety guidelines. All member volunteers are required to provide to the Adopt A Waterway Coordinator a signed Volunteer Risk and Release Agreement prior to the cleanup event.

_____ _____

Signature of Designated Representative Date

435-656-4690 2603 Santa Clara Drive, Santa Clara 84765 contact@sccity.org

Adopt A Waterway
Program Agreement

The City of Santa Clara is proud to sponsor and coordinate the Adopt A Waterway program. The purpose of this program is to clean, protect, and preserve our waterways and sensitive habitats that exist within Southern Utah, and to improve the recreational areas that thrive within the community.

1. City of Santa Clara (City) encourages local businesses, civil and professional organizations, environmental groups, academic institutions, HOA's, 4-H, scouting organizations, and any other collective group to formally adopt a section of local waterway for the purpose of improving water quality, protecting and preserving wildlife habitats, and maintaining the beautiful landscape of Southern Utah.
2. **"Adopting Organization"** means any local business, civil and professional organization, environmental group, academic institution, HOA's, 4-H, scouting organization, or other collective group, who formally adopts a local waterway.
3. **"Local Waterway"** means any natural waterway within the City.
4. It is recommended the Adopting Organization adopt a ¼ mile - ½ mile section of a waterway near the Adopting Organization. The number of volunteers needed to accomplish cleanups will depend on the size and condition of the adopted waterway. A meeting with the Adopt A Waterway Coordinator will be held to finalize the adoption area.
5. Adopting Organizations will be recognized with Adopt A Waterway sign provided and installed by the City, which will include the organization's name and information for acknowledgement of their service. The sign will be placed at an appropriate location near the waterway.
6. The City will provide acknowledgement to the Adopting Organization on the Adopt A Waterway map and website, as well as marketing materials related to the program. The City reserves the right to use any and all photos, data, or other information collected from volunteers in the development of promotional and public outreach materials.
7. The Adopting Organization will select one member who is twenty one (21) years of age or older to be assigned the Adopting Organization's Designated Representative. The Designated Representative will be responsible for coordinating all cleanup projects with the members of the Adopting Organization and the City.
8. Adopting Organizations must adopt a waterway for a period of at least two (2) years. After two (2) years, the Adopting Organization may renew their designation and agreement, modify their designation and agreement (choose a different waterway), or terminate the agreement.
9. Adopting Organizations agree to collect trash and perform other desired clean-up activities at the adoption location on at least two (2) dedicated dates per year.
10. The Designated Representative must meet with the Adopt A Waterway Coordinator prior to the desired clean-up date. At that time, the Adopt A Waterway Coordinator will provide the Designated Representative with Volunteer Risk and Release Agreements, an Enrollment Form, Safety Guidelines, a sign-in sheet, trash bags, and access information to the desired location. The City recommends each volunteer of the Adopting Organization wears gloves, boots or sturdy shoes, pants, etc. The City does not provide these items.

11. Each participating member of the Adopting Organization agrees to sign the Volunteer Risk and Release Agreement before starting any project. All signed Volunteer Risk and Release Agreements must be returned to the City Adopt A Waterway Coordinator prior to the event.
12. No one may participate in the Adopt A Waterway program unless they have attended a safety meeting. The Designated Representative shall conduct the safety meeting directly before the start of any clean-up and shall require all volunteers to sign the sign-in sheet.
13. The Adopting Organization's members shall not trespass on private property.
14. Trash and debris collected must be placed in the trash bags provided (unless it is too large), and be placed in a location or dumpster arranged with the Adopt A Waterway Coordinator prior to the event date, unless the Adopting Organization intends to haul the trash off themselves.
15. The Designated Representative must send copies of the completed sign-in sheets and the waterway Clean-up Data form to the Adopt A Waterway Program Coordinator within two (2) weeks after the activity date at contact@sccity.org.
16. The City reserves the right to deny any adoption request or cancel the adoption agreement of any Adopting Organization without cause at any time.
17. We acknowledge there are dangers and risks incurred as a result of participating in activities connected or associated with volunteering; and, to the extent allowed by state law, the Adopting Organization shall indemnify City against all claims, demands, causes of action, suits or judgments, including but not limited to all claims, demands, causes of action, suits or judgments for death or injuries to persons or for loss of or damage to property, arising out of or in connection with this Agreement to the extent caused by the Adopting Organization or its agents. In the event of any such claims made or suits filed against City, City shall give the Adopting Organization prompt written notice. The Adopting Organization agrees to defend against any such claims brought or actions filed against City, whether such claims or actions are rightfully or wrongfully brought or filed. In case a claim should be brought or an action filed with respect to the subject of indemnity herein, the Adopting Organization agrees that City may employ attorneys of its own selection to appear and defend the claim or action on its own behalf at the expense of the Adopting Organization. Said attorney fees shall be reasonable and subject to review by the Adopting Organization. The Adopting Organization shall be responsible for all costs associated with any claim, demand, action, suit, appeal, or judgment, including attorney's fees for which it indemnifies or defends City.
18. The parties may mutually modify the Adopt A Waterway Agreement. Either party may terminate this agreement for any or no reason. Participation in the Adopt A Waterway Program does not give any implied or explicit exclusivity for care of any specific area.
19. This agreement shall remain in effect from the date stated below until two (2) years, at which date it shall expire, unless renewed or extended by mutual agreement.

STATEMENT OF AGREEMENT

I have read, fully understand, and agree to abide by these policies and regulations.

Name of Adopting Organization (Please Print): _____

Name of Designated Representative:

Print: _____

Sign: _____

Date: _____

City of Santa Clara Adopt A Waterway Coordinator:

Print: _____

Sign: _____

Date: _____

CITY OF
SANTA CLARA
FOUNDED 1854

Adopt A Waterway
Safety Guidelines

1. The Adopting Organization's Designated Representative should always survey the conditions of the group's waterway prior to the scheduled event and determine if the conditions are safe and appropriate for the ages and abilities of the group's members. If, at any time, the Designated Representative feels the adopted section of the waterway has become unsafe, the planned activity should be cancelled and rescheduled for another time by contacting the Adopt A Waterway Coordinator.

2. The Designated Representative for the Adopting Organization must conduct a safety meeting prior to all Adopt A Waterway activities to review the guidelines in this form and conditions for the location and day of the event. No one may participate in the Adopt A Waterway Program unless they have attended the safety meeting. The safety meeting may be conducted directly before the start of any clean-up.

3. All member volunteers shall sign a Volunteer Risk and Release Agreement form prior to participating in any clean-up, restoration, or improvement activities, and given to the Adopt A Waterway Coordinator at least one week prior to the activities.

4. Do not pick up any materials that appear hazardous or unsafe, especially unmarked containers. If hypodermic needles, drug paraphernalia, or other suspicious materials are found, please note the location and notify the city after the cleanup. If an emergency arises, call 911 immediately.

5. You may encounter homeless camps. Please avoid these camps as much as possible and do not take trash or debris from the area directly around the camp. Please report homeless camps on your Adopt A Waterway Clean-up Data Form.

6. If children are participating, the adult responsible for the child must always be in the presence of the child.

7. It is recommended each volunteer be up to date with his/her tetanus shot.

8. Volunteers with open cuts and sores should avoid contact with the water unless they are properly protected.

9. Volunteers shall not work in, on or around spillways, dams or other man-made structures. If there are any areas that are questionable, please reach out to the Adopt a Waterway Coordinator.

10. The city recommends each volunteer of the adopting organization wear high visibility vests, gloves, boots or sturdy shoes, pants, long sleeves, etc. **The city does not provide these items.** Volunteers should always work in groups of two (2) or greater.

11. Program participants should not drink water from any waterway.

12. Clean-ups and other activities shall be scheduled during daylight hours and during fair weather.

13. Program participants are encouraged to take breaks, drink fluids, and avoid overexertion.
14. Volunteers should always get help carrying heavy objects. If the object is too heavy to move, mark the location and report it on the Clean-up Data Form.
15. Streambanks and shorelines may be slippery and unstable. Always proceed with caution when walking along the waterway.
16. Only adults are allowed in high risk areas such as steep slopes, areas close to fast moving water, areas close to deep water, or areas with limited ingress/egress. These areas should be avoided when possible.
17. Take small steps and move slowly to avoid losing your balance and getting hurt.
18. There is a hazard of possibly encountering dangerous animals such as snakes and disease carrying insects such as mosquitos or ticks. It is recommended volunteers wear long sleeves and pants where possible, provide bug spray to volunteers and remain constantly aware of habitats and surroundings. The following hazards may be present:
    - Broken glass, nails, metal or other sharp objects.
    - Critters such as snapping turtles, snakes and spiders.
    - Objects such as rocks, trash, or other hidden objects could cause you to trip and lose your balance.

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Adopt A Waterway
Safety Meeting Sign-in Sheet

Name of Adopting Organization:_____ Date of Event: _____

By signing below, you are acknowledging you are a participating volunteer for an Adopting Organization for the Adopt A Waterway Program, that you have signed a Volunteer Risk and Release Agreement and that you have been provided the Safety Guidelines Form for this cleanup.

PRINT NAME	SIGNATURE	PHONE	EMAIL	Mark if under 18 years old*

*If you are under 18 years of age a signature from a legal guardian is required.

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