

Master Plan Report Dania Meadows Subdivision

March 2026

Prepared by Surveyor Scherbel, Ltd.
and



Creating solutions that work and relationships that last.

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1.0 STATEMENT OF PURPOSE AND LAND USES

The Dania Meadows Subdivision Filing encompasses an approximate area of 7.75 acres. The property is located North of Wintergreen Drive and west of the intersection of US Highway 89 and US HWY 26

The purpose of this development is to subdivide the existing Lot 2 property into three lots (lot 3, lot 4 and lot 5), ranging from 1.00 to 4.07 acres for Multi-family Housing uses. The proposed Dania Drive will connect each lot to the Existing Bugling Elk Drive and Wintergreen Drive.

DANIA MEADOWS ADDITION

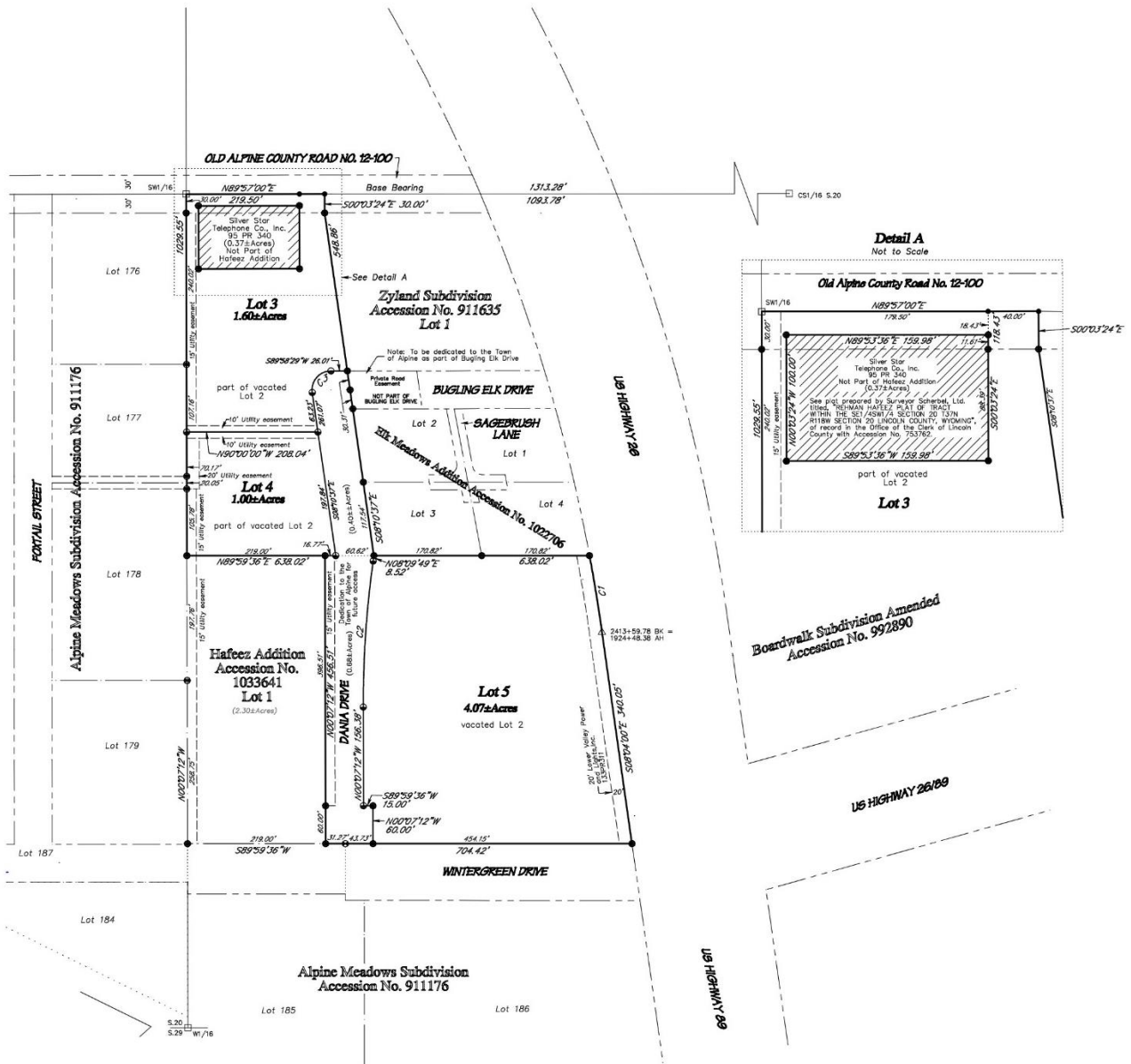


Figure 1: Proposed Subdivision Layout

2.0 DEVELOPMENT SCHEDULE

Phase 1 of the project will consist of grading and paving the proposed Dania Drive, as well as extending water and sewer services. Water service will be extended to lots 3, 4 through a new water line, while lot 5 will receive water services from the current line on Wintergreen Drive at time of construction. Additionally, a sewer line extension will connect the newly created lots on Dania Drive to the existing sewer on the eastern edge of the Zyland subdivision and then link to the existing line on Foxtail Street.

3.0 LOTS AND ZONING

The Current Zoning for the lot is MRC- Mixed Residential and commercial. All lots are proposed to use this existing Zoning. The proposed use of multi-family residences is consistent with this zoning.

4.0 SUITABILITY OF SOILS

The soils in the proposed Dania Meadows Subdivision are classified by the USDA Natural Resources Conservation Service (NRCS) as Hobacker gravelly Sandy loam (Hb). This soil profile includes the following:

- 0-9 inches: gravelly sandy loam
- 9 to 23 inches: very gravelly sandy loam
- 23 to 30 inches: very gravelly sandy loam
- 30 to 60 inches: very gravelly loamy sand

The soil is “somewhat excessively drained” with a depth to water table of more than 80 inches. The soil has low risk of ponding and is in the hydrologic soil group B. The 1976 Soil Survey of Star Valley states this soil has slow runoff and slight erosion hazard. The permeability is between 6 to 20 inches per hour. The report further identifies this soil as being used for urban development.

The Dania Meadows Subdivision will include water and sewer service extensions. These facilities will be placed from three to five feet deep and will be in the portion of the soil profile containing up to 30% coarse fragments greater than three inches. Consequently, all buried water and sewer pipes will require imported bedding and shading. The native soils will be suitable for trench backfill above the shaded pipe. Boulders greater than 12 inches should be excluded from the lower levels of backfill closest to the shading. Screening of this material for bedding is possible, however the remains will not contain adequate “fines” for a suitable trench backfill.

The native Hb soil will be suitable for road subgrade, building foundation and other construction designed to support surface loads. It is non-plastic with low shrink-swell potential and low risk of frost action. The larger coarse fragments will hinder fine grading operations.

Based on the review of the Hb soil, the native soils are suitable for the proposed development and the urban construction likely to occur on the lot.

5.0 COMPATIBILITY WITH ADJACENT LAND USES

The proposed development will be adjacent to land currently zoned MRC Mixed Residential and commercial. The current zoning is consistent with the current uses observed in the surrounding areas. The Town of Alpine has observed consistent growth of residential areas within the town in recent years.

6.0 HOUSING

Alpine has been one of the fastest growing areas in Lincoln County. This is in part due to the proximity to Jackson and the large workforce that commutes to Jackson daily. The need for new housing in the area is evidenced by the construction of new apartment buildings. Recent projects include the new single family

houses being constructed in the Alpine Meadows development, Elkhorn Meadows Townhomes, and the Flatts at Alpine Junction. Snake River Junction was master planned for mixed residential/commercial use, but the area slated for that development is now an RV park. Five of the lots zoned MRC land within Alpine Meadows are proposed to be employee housing for St. John’s Medical Center because of the ongoing housing shortage in the Jackson area.

7.0 PLANNED WATER SYSTEM

The Town of Alpine water system has grown from a system on the south side of the Snake River to serving both sides of the river. As of the 2020 census, the Town population was 1,220 people with an approximate area of 0.9 miles. The town previously incorporated the North Star Utility when it connected to the Alpine system via a 12” pipeline hung across the Snake River Bridge. The following information was taken from the Alpine Water Supply Level 1 Masterplan (Wyoming Water Development Commission).

The Dania Meadows Subdivision is proposed to extend the existing 8” water main located adjacent to the proposed development in the Elk Meadows Subdivision to the east. The water main will be extended to the west side of the proposed Dania Drive adjacent to lot 5 and will extend north along the right of way adjacent to lots 4 and 3.

7.1 Water Users

At the time of the 2025 study, Alpine had 663 connections. 516 of these connections are located south of the Snake River, 147 are located north of the snake river system. Most new service connections have been residential. Several connections for businesses have been added, mainly in services for the residential uses of the area. For the purposes of this study, the existing connections were grouped into 3 categories. **Table 7.1** summarizes the connections within the system.

Table 7.1: Connections and ERU's

Service Connection Location	Number of Connections (2024)
South of Snake River (original Town of Alpine system)	516
North of Snake River (formerly NSU system)	147
Total	663

7.2 Water Use

The Alpine System utilizes meters on individual connections. Many of the meters have limited capability for data collection and are only read once a year. Historically, the Town water operator has taken readings every few days at each meter. This data can be used to estimate average and maximum daily demands. **Table 7.2** summarizes water use as identified in the Master Plan (Wyoming Water Development Commission, 2)

Table 7.2 – 2025 Master Plan Water Use Summary

	Alpine Water Use	
	(gpd)	(gpd/conn.)
Average Daily Demand	759,000	1,145

Maximum Daily Demand	1,800,000	2,715
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From Table 7.2 the maximum daily demand in the City of Alpine Water System is given as 2,715 gpd/Connection. At this time, no new buildings are proposed as part of this master plan.

7.3 Water Sources

The Alpine water system has six water sources: Alpine Well No. 1, Alpine Well No. 2, Alpine Well No. 3, Excel Development No. 1, Flying Saddle Well No. 1, and Flying Saddle Well No. 2.

7.3.1 Alpine Well No. 1

Alpine Well No. 1 is located on Forest Service property just off the Greys River Road southeast of the Town. The well is cased to a total depth of 275 feet. Depth to the first water bearing formation is 60 feet. The well has a 50 hp submersible pump set at 175 feet and produces approximately 350 gpm. A 2006 investigation showed Well No. 1 is capable of a sustained pumping rate of 750 gpm during peak-use periods. To meet this peak rate the well would need to be outfitted with a larger pump and may require a water right appropriation increase. Operation of Well No. 1 is alternated with Well No. 2 to enhance the life of the pumps.

7.3.2 Alpine Well No. 2

Alpine Well No. 2 is located 172 feet east of Well No 1. The well is 243 feet deep and is cased to a depth of 147 feet. At the time of drilling, static water depth was 85 feet. The well has a 50 hp submersible pump set at 156 feet and produces approximately 350 gpm. The 2006 investigation showed Well No. 2 can produce 600 gpm, but sustained pumping could cause air entrainment problems due to water cascading into the well through perforations above the pumping water level. Additionally, the well would need to be outfitted with a larger pump and water right appropriation increase to meet the higher 600-gpm pumping rate.

7.3.3 Alpine District Well No. 3

Well No. 3 is located near Wells No. 1 and 2. Well No. 3 was drilled in 2009 as part of a Wyoming Water Development Study. This well was placed in service sometime shortly after the study. This well has an existing capacity of 450 gpm.

7.3.4 Excel Development No. 1

Excel Development No. 1 is located along the southwest edge of Alpine Lakes Subdivision Lot 1 approximately 175 feet southwest of US Highway 26. The well is 142 feet deep. The well is cased to a depth of 42 feet, screened from 42 feet to 102 feet, and cased from 102 feet to 142 feet. At the time of drilling, static water depth was 26 feet. A pump test revealed the well can produce upwards of 2,500 gpm. The well is currently outfitted to produce 500 gpm. To meet a higher peak rate the well would need to be outfitted with a larger pump and may require a water right appropriation increase. This well is not connected to the main Alpine system at this time.

7.3.5 Flying Saddle Wells No. 1

Flying Saddle Well No. 1 and 2 were constructed as part of the North-Star Utility system but was not fully developed and are currently not in use. There are no immediate plans to use these wells

7.3.7 Water Source Summary

A summary of the Town’s water sources is shown below.

Table 7.3.1: Alpine Water Sources

	Existing Capacity (gpm)	Potential Capacity (gpm)
Alpine Well No. 1	450	700
Alpine Well No. 2	450	700
Alpine Well No. 3	450	650
Total	1,350	4,615

The Flying Saddle wells have been disconnected from the system by closed valves. Their production was not included in the existing capacity total (**Table 7.3.1** above). Additionally, the Excel Development No. 1 Well serves the Targhee Place, Alpine Lakes, and Timberview Apartments developments. It is not connected to the town system. The well is located in the Alpine Lakes development. For this reason, the Excel Development No. 1 Well was not included in the existing capacity total, these connections were not included in the previous connections table.

The Wyoming Department of Environmental Quality Rules and Regulations (WDEQ, 2023) regulations for public water sources were updated in 2023 and also reference the Ten State Standards. Applicable rules for the Town of Alpine Water System are referenced below.

Groundwater source development shall include two wells that are each capable of supplying the average daily demand with the largest well out of service, (WDEQ, 2023, p. 12-22).

Table 7.3.2 Summarizes the Water Source Capacity compared to the average daily demand on the system.

Table 7.3.2 Water Source Capacity Compared to Average Day Demand

Alpine Well #1 Capacity (largest well, not included)	655,200 gpd	455 gpm
+Alpine Well #2 Capacity	640,800 gpd	445 gpm
Alpine Well #3 Capacity	519,840 gpd	361 gpm
-Average Daily Demand	759,000 gpd	527 gpm
Excess Capacity =	401,640 gpd	279 gpm

The Town currently has multiple well sources. The Flying Saddle well production and Excel Development #1 Well production was not included as they are not currently connected to the main water system. From the above table, the town currently has an excess source capacity of 401,640 gpd.

1. Groundwater source development shall include one well and finished water storage that together equals twice the maximum daily demand (WDEQ, 2023, p. 12-22).

Table 7.3.3 Summarizes the well and storage capacity compared to the twice the systems maximum daily demand.

Table 7.3.3:

Well Capacity	1,815,840 GPD
(+) Storage Capacity	1,295,000 Gallons
(-) 2x Maximum Daily Demand	2x 1,800,000 GPD
Capacity Deficit	(489,160) gpd

Based on this analysis the town currently has a capacity Deficit of 489,160 gallons per day. This deficit could be managed by connection to another well source, increasing the pumping capacity of a well or by providing additional storage. Connecting the Excel Development No. 1 Well to the system, for example, would provide an additional 720,000 GPD of capacity and satisfy this requirement.

7.4 Water Rights

The Town of Alpine has municipal water rights for Alpine Wells 1-3 (700, 700 and 650 gpm respectively) and the Excel Development Well No. 1 (500 gpm). These rights combined amount to 3.67 million gallons per day.

7.5 Water Storage

The Alpine System after combining with North-Star Alpine has three storage tanks. One tank is a 250,000 gallon tank, another is a 500,000 gallon tank and the third is a 540,000 gallon tank.

7.5.1 Alpine 250,000 Gallon Tank

Alpine’s 250,000 gallon reinforced concrete cylindrical storage tank is located south of Town on the hillside. The property that the tank rests on is Forest Service property. The tank was constructed in 1996 and is in good condition. The tank is partially buried to protect it from freezing. The 250,000 gallon tank is at a higher elevation than the 500,000 gallon tank and feeds the upper pressure zone of the system. Water is delivered to this tank from the 500,000 gallon tank by a booster pump through a 6-inch diameter line. The booster pump is located just west of the wells. The line is enlarged to an 8-inch line before discharging into the tank. The booster pump can feed the upper pressure zone and move water to the tank at the same time.

7.5.2 Alpine 500,000 Gallon Tank

Alpine’s 500,000 gallon concrete reinforced cylindrical storage tank is also located on Forest Service property on the hillside east of the 250,000 gallon tank. This partially buried tank was constructed in 1996 and is in good condition. Water is delivered to this tank from the wells through an 8-inch line. Water from this tank is gravity feed into the lower pressure zone of the system through a 10-inch line. Water from the 500,000 gallon tank is also delivered to the 250,000 gallon tank through the previously discussed 6-inch line that passes through a booster pump.

7.5.3 Former North Star Utility Tank

North Star Utility had one storage tank when acquired by Alpine. The 540,000 gallon cylindrical shaped steel tank is located on the hillside northeast of the Flying Saddle Development on Forest Service property (See

Figure 7.7.1). The tank was completed in 2007 and is in good condition. The tank stands completely above ground level and according to the system operator, Richard Sifton, the tank was susceptible to freezing during its first winter of operation in 2007-2008. Measures have been taken to minimize this possibility in the future. Water from the tank is gravity fed to the distribution system.

TABLE 7.5.1 – Water Storage Summary

	Volume (gallons)	Type	Year Constructed
Alpine Tank	250,000	Concrete, Cylindrical	1996
Alpine Tank	500,000	Concrete, Cylindrical	1996
North-Star Tank	540,000	Steel, Cylindrical	2007
Total	1,290,000		

7.5.4 Water Storage Analysis

WDEQ Water Quality Rules and Regulations (WQRR) Chapter 12 Sections 15 references the Ten States Standards Section 7.0.1, which states that “storage facilities shall have sufficient capacity, as determined from engineering studies, to meet domestic demands, and where fire protection is provided, fire flow demands.”

Lincoln County currently has adopted the 2006 International Building Code, Appendix B, C and D for fire flow requirements as found in the Lincoln County Land Use Regulations, Appendix N.

These regulations require 1,000 gpm fire flows for single family dwellings, with larger structures following Table B105.1 (See Lincoln County Land Use Regulations Appendix N).

Fire flow calculations for individual structures were not completed in this report, and it is unknown if the large buildings have automatic fire sprinkler systems in place. A fire flow rate of 1,000 gpm is a good target minimum for residential areas, although the central business district will likely require 1,500 gpm or more.

Assuming a two-hour fire event and the previously mentioned fire flow rate of 1,000 gpm, a fire storage amount of 120,000 gallons will be used.

WDEQ Rules & Regulations Chapter 12 Section 10 (i) (WDEQ, 2023) states the following:

(i) Where the finished water storage volume that floats on the distribution system is not capable of supplying the maximum daily demand, the proposed design shall include alternative power for the finished water pumps that demonstrates:

(i) The combined finished water storage volume and pumping capacity supplied by alternative power will be at least adequate to provide the maximum daily demand; and

(ii) The alternative power source will include engine generators, engine drive pumps, or a second independent electrical supply that will provide sufficient power to run the system.

Existing and demands for this redundancy requirement are shown in **Table 3.3**.

Table 3.3 WYDEQ Redundancy Requirement with Fire Flow

	Existing (2025) (gallons)
Maximum Daily Demand (2025)	1,800,000
+ Fire Protection	120,000
- Pumping Capacity w/ backup power	1,815,840
- Storage Capacity	1,295,000
Excess Redundancy	1,190,840

If the design fire flow is increased to 1,500 gpm, this would decrease the capacity excess by 60,000 gallons.

7.6 Service Connections

Each lot is anticipated to receive a 5/8"x 3/4" meter with 1" service line with dual check backflow prevention upon connection to the system.

The default hazard classification as identified in Section 14 (i) (i) (B) of the Water Quality Rules and Regulations Chapter 12 will be followed; however, backflow prevention device will be determined upon development of the lot. If a reduced pressure principle device is required, the device must have certification by one of the following third parties:

American Society of Sanitary Engineers (ASSE)

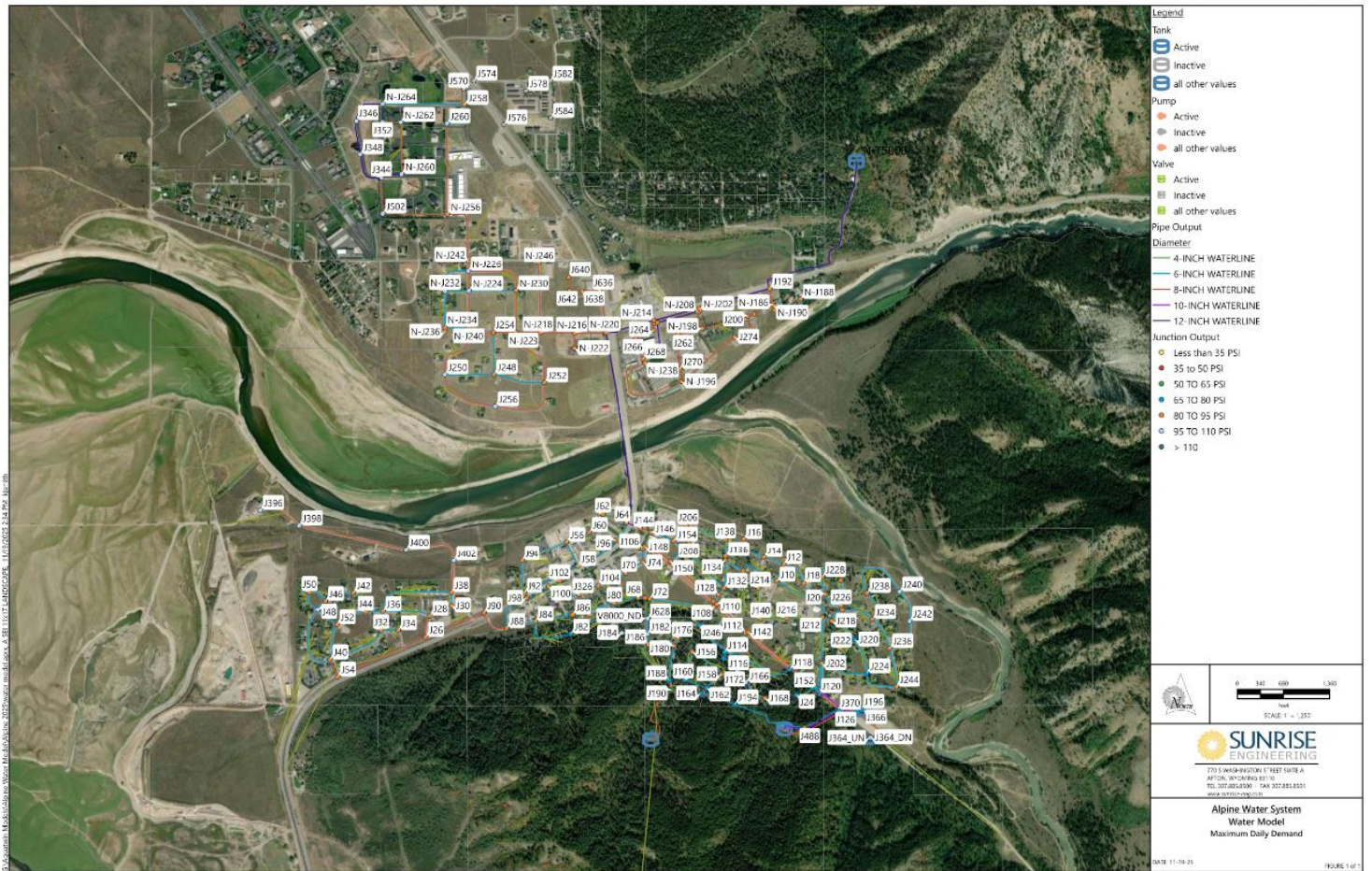
International Association of Plumbing/Mechanical officials (IAPMO)

Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California (USC-FCCCHR)

7.7 Waterline Extension to Dania Meadows

The Proposed line extension to the Dania Meadows Subdivision was modeled using a GIS Based Network Analysis software. Figure 7.7.1 illustrates the water model map for the Town of Alpine. The proposed water line extension is shown as Junction 640 and 642 on the water model.

Figure 7.7.1 Alpine Water Model



The modeling results (**Figure 7.7.2**) show that at Node J-642 near the Dania Meadows Subdivision the available fire flow is 1,344 gallons per minute while maintaining 20 psi in the remainder of the system. Additionally, a fire flow rate of roughly 1,500 gallons per minute could be achieved by looping the waterline to Foxtail Street. The model results also show that the 8-inch line will be able to deliver peak day demands at pressures over 90 psi (**Figure 7.7.3**) to the Dania Meadows Subdivision. This relatively high pressure is due to this site's location within the system.

Figure 7.7.2 Fire Flow at J126

SUNRISE ENGINEERING, INC.



Project: Hafeez Addition

Hydraulic Model Junction Report

Date: 11/19/2025

Owner: Alpine Water Model

By: KJS

Junction ID	Elevation	Demand 1	Head	Pressure	Available Fire Flow	Required Fire Flow
J636	5663	0.63 gpm	5871.99 ft	90.56 psi	1607.92 gpm	1500 gpm
J638	5662	0 gpm	5871.99 ft	90.99 psi	1375.61 gpm	1500 gpm
J640	5662	0 gpm	5871.99 ft	90.99 psi	1313.03 gpm	1500 gpm
J642	5662	0 gpm	5871.99 ft	90.99 psi	1344.09 gpm	1500 gpm
J10	5675.85	12.21 gpm	5872.96 ft	85.41 psi	2571.05 gpm	1500 gpm
J12	5665.88	3.61 gpm	5872.98 ft	89.74 psi	2400.09 gpm	1500 gpm
J14	5661.88	1.24 gpm	5872.98 ft	91.47 psi	1846.76 gpm	1500 gpm
J16	5660.63	2.03 gpm	5872.98 ft	92.01 psi	1445.85 gpm	1500 gpm
J18	5668.11	3.34 gpm	5873.04 ft	88.79 psi	2276.38 gpm	1500 gpm
J20	5652.76	2.52 gpm	5873.1 ft	95.47 psi	2536.08 gpm	1500 gpm

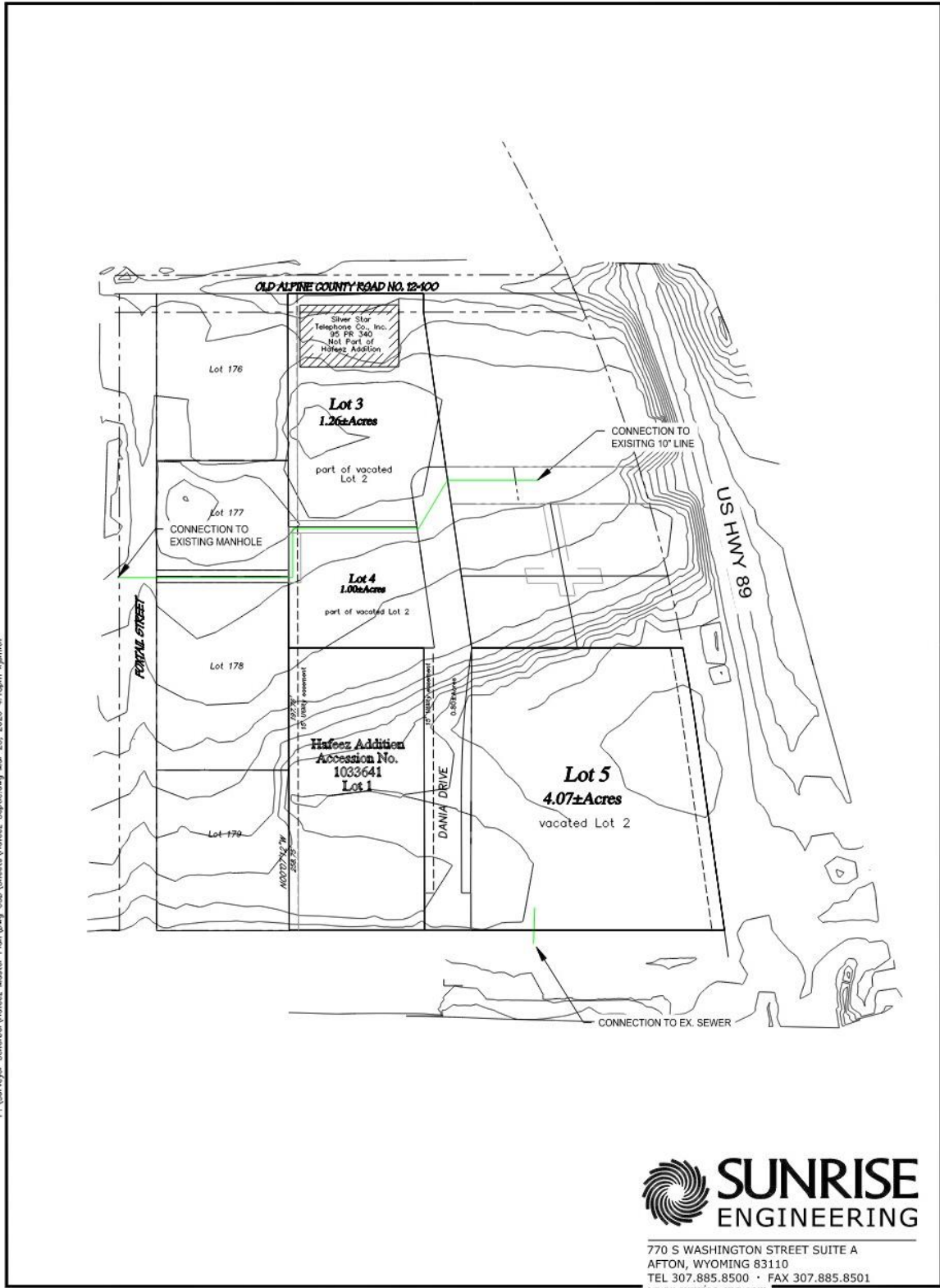
7.8 Summary

The Alpine water system will be able to meet the demands of the new Dania Meadows Subdivision both in terms of peak daily demand and required fire demands. If higher flows are required, looping to Foxtail will be required.

8.0 PLANNED WASTEWATER SYSTEM

The proposed Subdivision will be developed in the future. Proposed developments would include multi-family housing units. At the time of this study, these lots are proposed to be subdivided with no buildings at this time.

The proposed wastewater extension will connect to the existing sewer manhole to the east of the subdivision along Eastern Dania Drive. The existing 10" sewer line will extend along an existing easement to serve the subdivision and connect to the existing line on Foxtail Street. The existing sewer line to the east will abandon a lift station and utilize the new line and gravity flow to the connection on Foxtail Street. The sewer line will serve lots 3 and 4 as shown in **Figure 8.1** below. Lot 5 is proposed to connect to the existing sewer main along Wintergreen Drive.



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Figure 8.1 Proposed Sewer Line Extension

The flows will ultimately reach the Town of Alpine WWTP on the south side of the Snake River. All sewers are proposed to be 4" connections to the existing sewer line. Standard Sewer connection details are shown in **Figure 8.0.1**. Lot owners will be responsible for proper installation and materials for sewer connections as approved by the Town of Alpine.

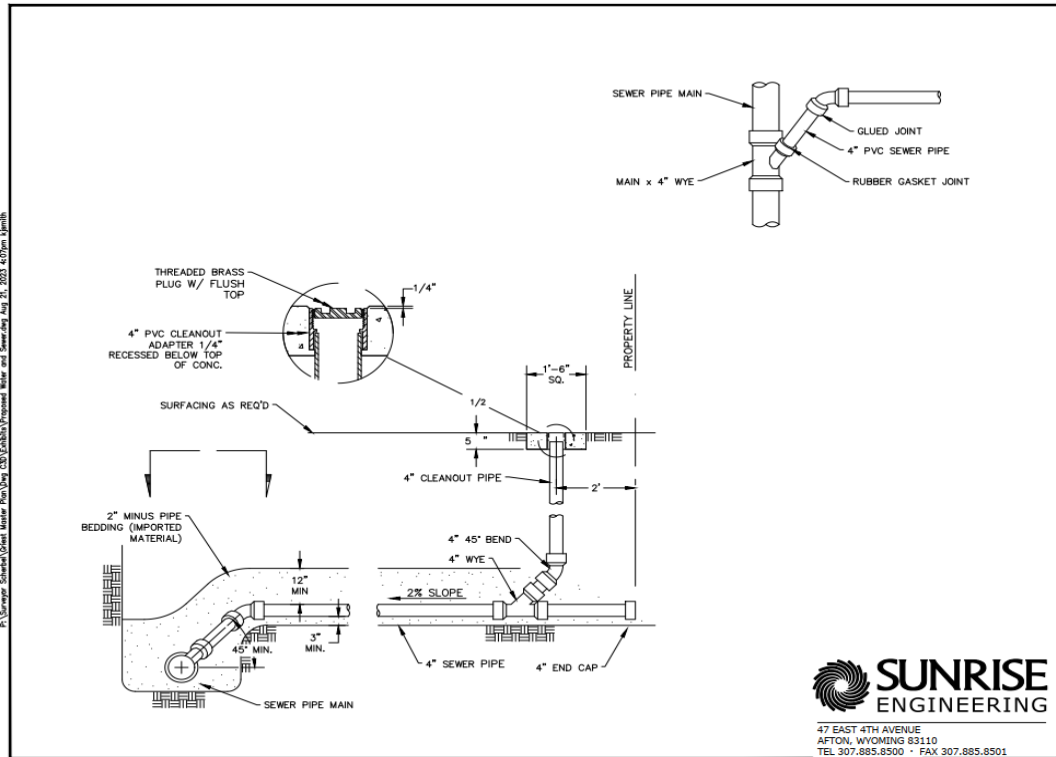


Figure 8.2 Sewer Connection Details

9.0 POINTS OF ACCESS AND TRAFFIC VOLUMES

This review of traffic impacts caused by the proposed development of the Dania Meadows Subdivision is based in part on data from the Wyoming Department of Transportation. It is intended to quantify daily trips from the development and the magnitude of those trips compared to existing traffic counts and roadway capacity guidelines. The road of primary interest is US HWY 89.

9.1 Background

The Dania Meadows is located in the northwest portion of Alpine. It is located northwest of the US HWY 89 and US HWY 26 Intersection. The proposed access to this subdivision is via Dania Drive, which accesses Bugling Elk Drive to the east, and Wintergreen Drive to the south. Both of these streets access US HWY 89/26. Wintergreen Drive extends west from the US 89/26 intersection. **Figures 9.1.1** and **9.1.2** outline the area and illustrate the lot layout.



Figure 9.1.1 Site Photo with area outlined and major roads

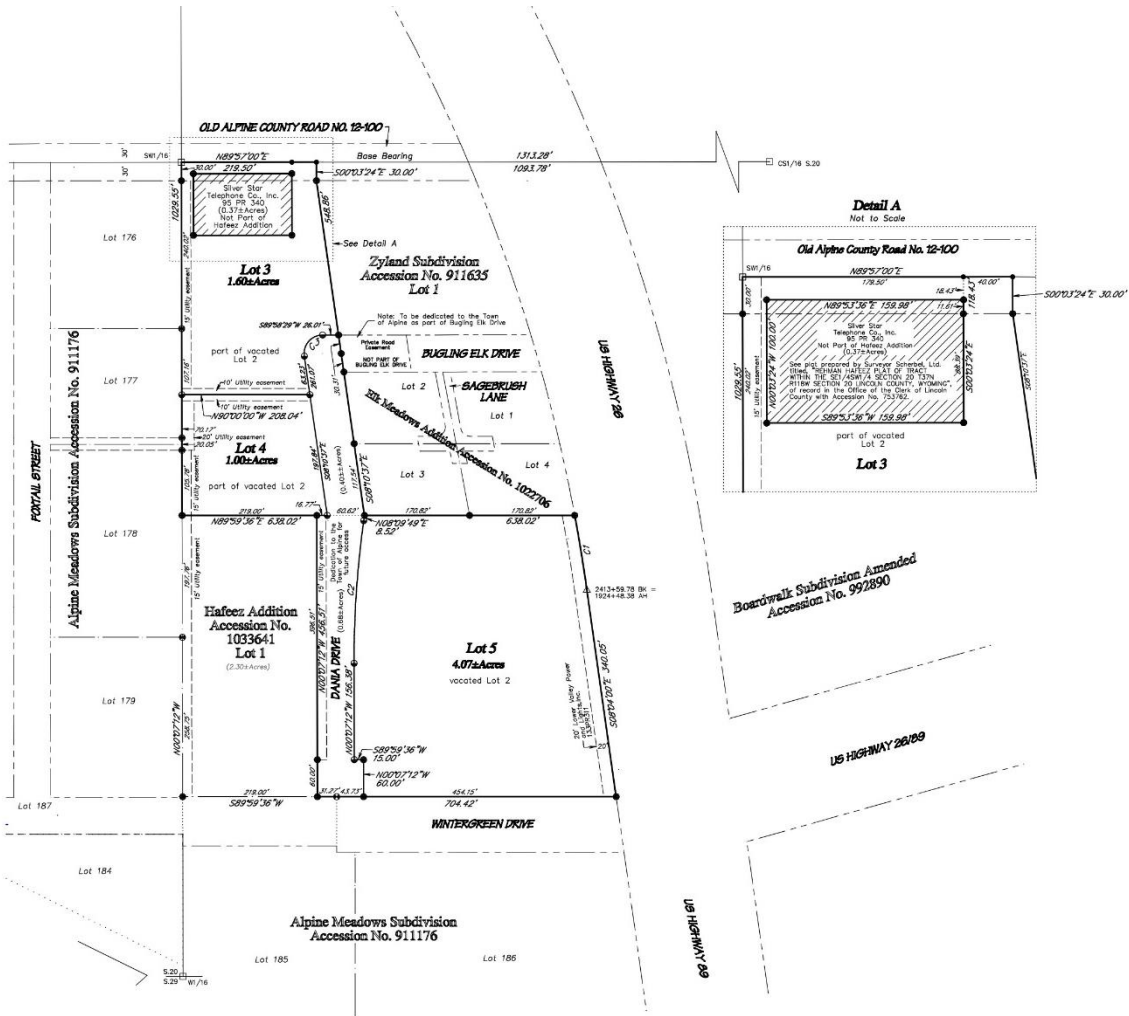


Figure 9.1.2 Lot Layout

9.2 Current Traffic Counts

WYDOT Maintains Traffic Counts for US 89 South of Etna, which is the closest traffic count site on HWY 89 to the project location. The latest available traffic data for this station was from 2022. Average monthly traffic levels were received from the WYDOT database for January traffic level and July levels for 2022. In January the Monthly average was 4,657 per day while in July it reached 7,966. The peak hour PM traffic recorded for January was 543 and the peak hour traffic for July was 860. Peak Hour AM was lower at 349 and 655 for January and July respectively. We can see from these traffic trends that the traffic count is nearly doubled in the summer with the maximum peak hour values happening in the afternoon.

Table 9.3.2 WYDOT 2022 Traffic Count Data For US HWY 89 South of Etna

WYDOT Traffic Count Data HWY 89 South of Etna		
	Jan-22	Jul-22
Average Daily Traffic		
MADT	4657	7966
AM Peak Hour	349	655
PM Peak Hour	543	860

Additionally, the Idaho Traffic Department (ITD) maintains traffic data for Highway 26 at the border of Wyoming and Idaho, which is the closest traffic count site available. Monthly data is available for the entirety of 2024, the monthly averages were received for the months of January and July. The Monthly Average Daily Traffic (MADT) is 2,293 and 4,110 for January and July respectively.

Table 9.3.2 WYDOT 2022 Traffic Count Data For US HWY 89 South of Etna

ITD Traffic Count Data HWY 26 East of Alpine		
	Jan-24	Jul-24
Average Daily Traffic		
MADT	2,293	4,110

9.3 Projected Dania Meadows Subdivision Traffic

The development will be built out in a single phase. It is anticipated to be completed in a single year. No residences are proposed at this time.

9.4 Capacity, Sight Distance, Stopping Distance and Access Spacing

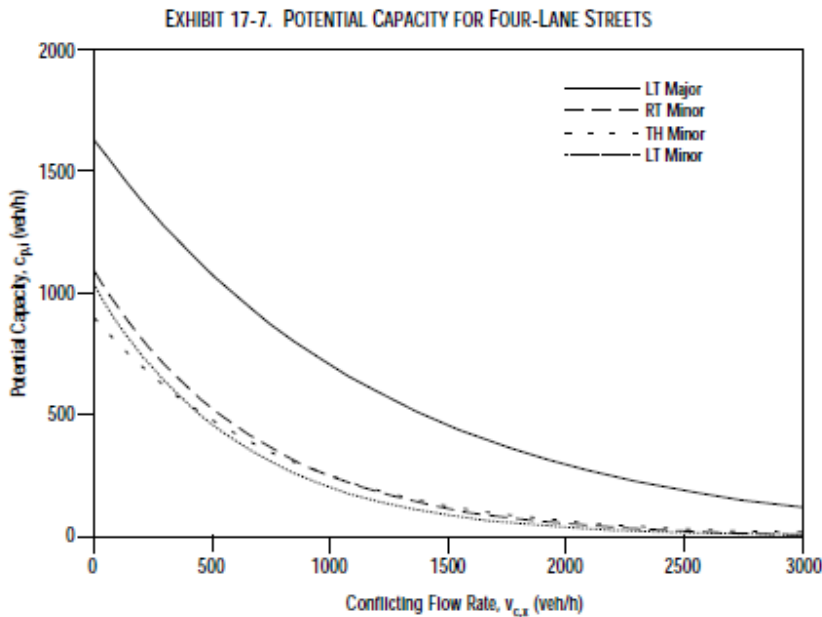
9.4.1 Access roads to HWY 89:

The following “**Table 3-1 ADT Volumes below which MUTCD Signal Warrants Cannot be Met**” is taken from the WYDOT Traffic Studies Manual. The values in the table indicate there will be no need for signalization or additional traffic measures at the intersections the development will use to enter Wintergreen and Bugling Elk Drive both of which connect to HWY 89/26. There is a traffic light at the intersection of Wintergreen and US 89/26

Table 3-1 ADT Volumes below which MUTCD Signal Warrants Cannot be Met

	Number of Lanes for Moving Traffic on Each Approach		Vehicles Per Hour on Major Street (Total of Both Approaches)		Equivalent ADT		Vehicles Per Hour on Higher Volume Minor Street Approach (One Direction Only)		Equivalent ADT	
	Major St.	Minor St.	100%	70%	100%	70%	100%	70%	100%	70%
Warrant 1 Condition A	1	1	500	350	4,000	2,800	150	105	2,400	1,680
	2 or more	1	600	420	4,800	3,360	150	105	2,400	1,680
	2 or more	2 or more	600	420	4,800	3,360	200	140	3,200	2,240
	1	2 or more	500	350	4,000	2,800	200	140	3,200	2,240
Warrant 1 Condition B	1	1	750	525	6,000	4,200	75	53	1,200	848
	2 or more	1	900	630	7,200	5,040	75	53	1,200	848
	2 or more	2 or more	900	630	7,200	5,040	100	70	1,600	1,120
	1	2 or more	750	525	6,000	4,200	100	70	1,600	1,120
Combination of Warrants 1A & 1B	1	1	600	420	4,800	3,360	120	84	1,920	1,344
	2 or more	1	720	504	5,760	4,032	120	84	1,920	1,344
	2 or more	2 or more	720	504	5,760	4,032	160	112	2,560	1,792
	1	2 or more	600	420	4,800	3,360	160	112	2,560	1,792

The following graph **Exhibit 17-7** from the Highway Capacity Manual indicates the number of minor street turn movements that can be accomplished when turning onto a two-lane major street (HWY 89). As shown by the exhibit, even with much higher traffic volumes on HWY 89 there is still ample capacity for the traffic volumes generated by the proposed development at the proposed accesses.



9.4.2 Development Entrance/Exit:

The north-south Dania Drive will allow traffic to access Wintergreen Drive to the south and Bugling Elk Drive to the north. Each lot will access directly to Dania Drive and can access both Wintergreen Drive and Bugling

Elk Drive once on Dania Drive. Dania Drive will access both Wintergreen and Bugling Elk Drive which will avoid any blockages and keep the existing roadway in circulation.

9.4.3 Sight Distance

The two intersections to US HWY 89 are located in a 45 MPH zone. The intersection of Wintergreen Road and HWY 89 is controlled via a four-way stoplight. The intersection of Bugling Elk Drive and US Hwy 26 is controlled by a stop sign.

The sight distances in each location are over 1,000 feet, or extend to the intersection to HWY 89 and 26 (roughly 300 feet). The sight distances compare favorably with the WYDOT traffic studies manual Table 6-2 which calls for 430 feet for a crossover or right turn maneuver and 500 feet for a left turn maneuver.

9.4.4 Stopping Sight Distance

The stopping sight distance recommended by the WYDOT Traffic Studies Manual for this 45 mph section of roadway is 360 feet (WYDOT Table 6-3). There are no issues with vertical curvature at these locations. During dry conditions stopping sight distance meets Table 6-3 at each location.

9.5 Conclusions

In summary, the proposed new Dania Drive will access Wintergreen Drive and Bugling Elk Drive. Additionally, these roads will connect to US HWY 89 and 26. No signalization or other traffic measures are recommended at this time.

10.0 VEHICULAR CIRCULATION PLAN

Vehicles within the development will exit the subdivision directly onto Wintergreen Drive to the south and Bugling Elk Drive to the east. Access to the nearest highway (US HWY 89/26) is facilitated by Wintergreen Drive And Bugling Elk Drive.

11.0 PLANNED STORM WATER MANAGEMENT

As described in the soils report the soils within the Development tend to be well drained, offering the ability to manage storm water on-site.

The existing site is currently open and largely uncultivated containing grasses and sagebrush. A utility building and parking lot is located on the north side of the lot and is graded as a gravel lot. The ground slopes slightly northeast but the grades are irregular with some localized up and down grades. The overall elevation change over the site is approximately 5 feet.

11.1 Design

The Town of Alpine requires that "water be managed without damage to surrounding properties". A common design standard is the 10-year, 24-hour storm. Storm runoff calculations were performed using the SCS Method using the Urban Hydrology for Small Watersheds (TR-55) manual created by the United States Department of Agriculture (USDA). The USDA-NRCS soil classification of the site is Hydrogeologic Soil Group "A" which is a well-draining soil and results in a lower curve number. Precipitation/Frequency Data was found based on the National Oceanic and Atmospheric Administration (NOAA) Atlas 2 Volume II for Wyoming. **Table 11.1.1** below shows the estimated precipitation values for a given frequency and duration for the project site.

Table 11.1.1: Precipitation Values (in) for Given Frequency and Duration

Duration (min)	Return Interval					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
5	0.12	0.21	0.23	0.29	0.33	0.36
10	0.19	0.32	0.36	0.45	0.52	0.55
15	0.24	0.41	0.46	0.57	0.66	0.70
30	0.34	0.57	0.63	0.79	0.91	0.97
60	0.42	0.72	0.80	1.00	1.15	1.23
120	0.49	0.79	0.90	1.10	1.26	1.37
180	0.55	0.85	0.99	1.19	1.36	1.50
360	0.70	1.00	1.20	1.40	1.60	1.80
720	0.85	1.20	1.40	1.70	2.00	2.20
1440	1.00	1.40	1.60	2.00	2.40	2.60

When evaluating a site for stormwater management, the expected runoff is identified to help in determining how much stormwater will need to be retained on site. We analyzed the site Pre-Development as well as Post-Development runoff based on the proposed site plan accounting for building footprint and parking areas. The results can be found in the following sections.

11.2 Pre-Development

After evaluating the existing grade, the site was analyzed as one basin. The total site area that will contribute to stormwater runoff is 2.12 acres. The anticipated runoff during the 10-year, 24-hour storm in the pre-developed state is expected to be a runoff volume of 474-cubic feet using the SCS Method as presented in the TR-55 Manual. A summary of the runoff can be seen below in **Table 11.2.2**. According to the TR-55 Manual, the site mostly resembles upland range (grass understory that is not grazed with some sagebrush cover) and has a curve number of 61. **Table 11.2.1** shows the curve numbers for the building, gravel lot and the open field areas. The shape of the site plane with about five feet of fall or less causes the runoff to flow to the northeast.

Table 11.2 Pre-Development Drainage Basin Summary

AREA #	DESCRIPTION	SF	ACRES	CN
1	Existing Building	1,100.00	0.03	98
2	Gravel	12,000.00	0.28	76
3	Open Field	270,507.60	6.21	61
TOTAL		283,607.60	6.51	62

Table 11.2.2 Pre-Development Runoff

DANIA MEADOWS PRE-DEVELOPMENT TOTAL					
Storm Event (24-Hour)	Sr (Retention)	P (in)*	Qd (in)	Qd (ft)	Storage Volume (ft ³)
100-year	6.39	2.60	0.226	0.019	5,348
50-year	6.39	2.40	0.167	0.014	3,954
25-year	6.39	2.00	0.073	0.006	1,728
10-year	6.19	1.60	0.020	0.002	474
5-year	6.39	1.40	0.002	0.000	53
2-year	6.39	1.00	0.013	0.001	300

11.3 Post-Development

The slopes throughout the subdivision will flow toward the northwest corner of the lots and to the west. Drainage swales are proposed along the roadway edges to contain and infiltrate these flows. Grading on future building sites shall direct water away from buildings toward the roadway swales or to regrade to on-lot detention basins.. A 26 foot roadway will be constructed for the Dania Drive. This area was analyzed with a curve number of 98, assuming no water infiltration. The roadway is approximately 1,000 feet in length.

The slopes in each individual lot will flow toward the northeast corner of each lot. Drainage swales will be used to split the flows equally between the four lots. Grading on the future construction will channel flow away from buildings toward the northeast corner of the lot. A 24' Paved Roadway (Dania Drive) will run through the 60' shared easement and will add to the imperviousness of the lots. Precipitation for each lot will be detained in the roadway detention swales or at other locations as determined by grading plans.

Table 11.3.1 provides the total area of the drainage basin, area of the various features and the corresponding curve numbers.

Table 11.3.1: Post Development Drainage Basin Summary

AREA #	DESCRIPTION	SF	ACRES	CN
1	Existing Building	1,100.00	0.03	98
2	Gravel	12,000.00	0.28	98
3	Roadways	22,962.00	0.53	98
4	Open Area	248,727.60	5.71	61
TOTAL		283,689.60	6.51	66

Table 11.3.2 shows the estimated runoff post development conditions.

Table 11.3.2: Post Development Lot Runoff

DANIA MEADOWS POST-DEVELOPMENT TOTAL					
Storm Event (24-Hour)	Sr (Retention)	P (in)*	Qd (in)	Qd (ft)	Runoff Volume (ft³)
100-year	6.39	2.60	0.23	0.02	4,691
50-year	6.39	2.40	0.17	0.01	3,468
25-year	6.39	2.00	0.07	0.01	1,516
10-year	5.25	1.60	0.05	0.00	1,230
5-year	6.39	1.40	0.00	0.00	47
2-year	6.39	1.00	0.01	0.00	263

Comparing the 10-year volumes between **Tables 11.2.2** and **11.3.2** shows that one can expect about 756 cubic feet of runoff difference as the lot is developed. The hydrograph shows this water will arrive at the points of concentration at a peak rate of about 107.36 gallons per minute or 0.24 cfs. It is proposed to establish a drainage swale along the newly created roadway to manage these stormwater flows. A parabolic drainage swale with a depth of 1 foot by 6 feet in width similar to other areas within the Town can be used to manage these flows. A drainage swale on one side of the roadway (1,000 feet long) will provide 4,000 cubic feet of storage which more than satisfies this requirement. A drainage swale on both sides of the roadway is recommended for snow storage areas and will provide 8,000 cubic feet of storage.

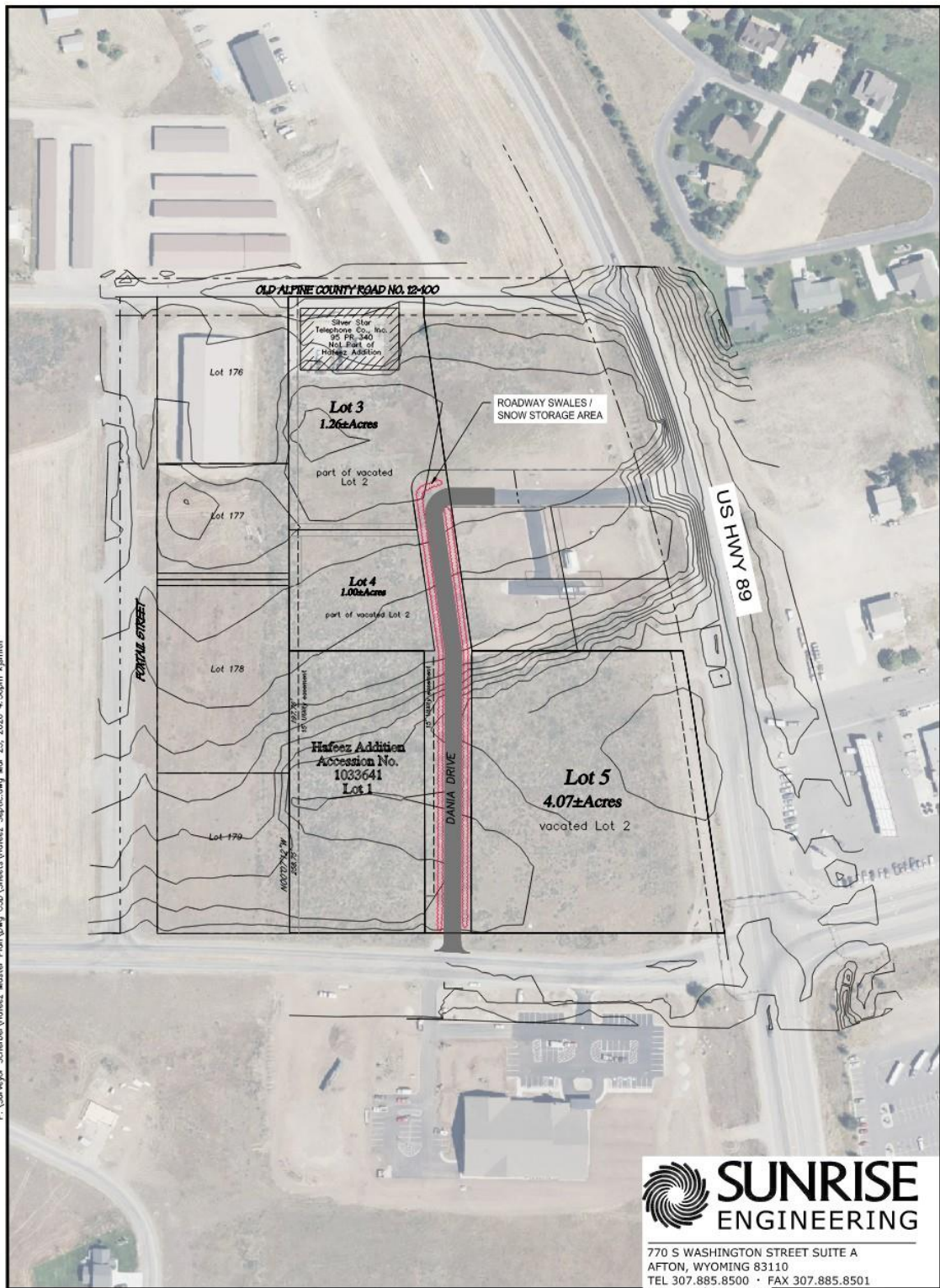


FIGURE 11.3.3 SITE DRAINAGE

11.4 Snow Storage

Snow Storage will be provided as shown on the Site Drainage Plan. The lot sizes will provide plenty of space for snow storage. Snow storage on lot will be provided by the individual lot plans yet to be developed.

11.5 Conclusion

Based on the above calculations, the site will be able to manage the 10-yr, 24-hour stormwater via the roadway swales (on-lot swales will provide additional measures. Snow storage will also be provided in these areas as shown on the site drainage plan.

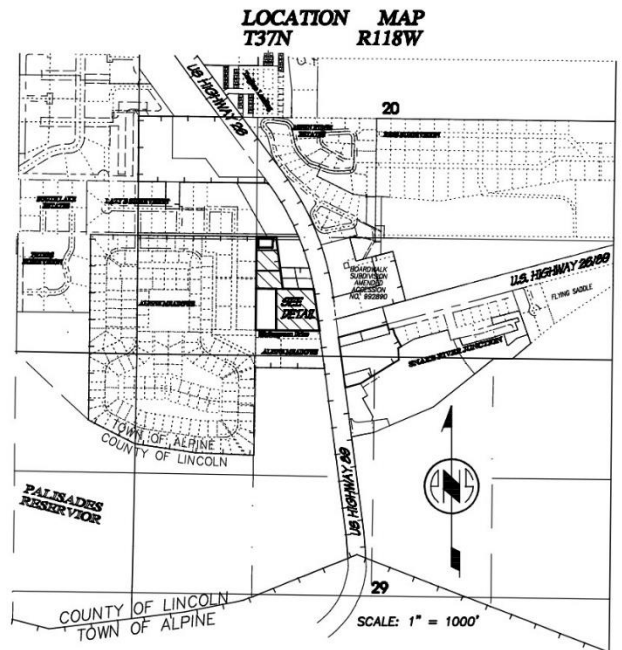
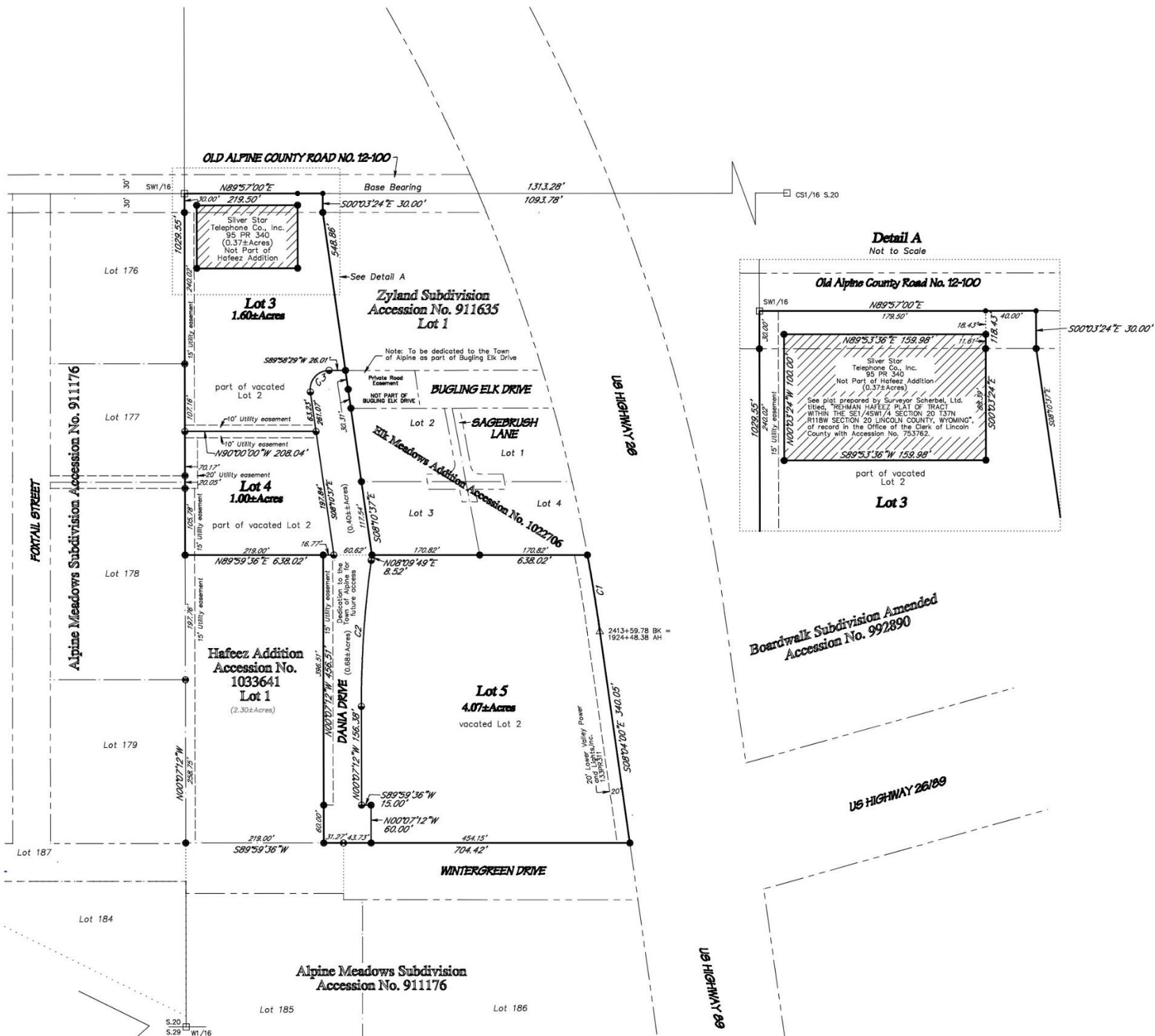
12.0 LANDSCAPING PLAN

Anticipated landscaping for this development will include grassy areas as well as low-water-demand landscaping, such as gravel ground treatments and shrubs. No specific plans for each lot have been determined at this time; however, Town of Alpine requirements will be implemented.

13.0 PLANNED EASEMENTS

The water and sewer lines will be located within the public roadway as well as the proposed utility easements shown on the plat map. There are no proposed easements through this development for access to or extension of the Town of Alpine community trail system.

DANIA MEADOWS ADDITION



CERTIFICATE OF SURVEYOR

STATE OF WYOMING } ss.
 COUNTY OF LINCOLN }
 I, Marlowe A. Scherbel, of Afton, Wyoming, hereby certify that this plat was made from notes taken during an actual survey made by persons under my supervision during October 2025 and from records in the Office of the Clerk of Lincoln County and that it correctly represents **DANIA MEADOWS ADDITION** to the Town of Alpine, described as follows:
 All of Lot 2 of Hafeez Addition, a subdivision of record in the Office of the Clerk of Lincoln County with Accession No. 1033641;
 EXCEPTING therefrom all of that tract of record in said Office in Book 95 of Photostatic Records on page 340;
 ENCOMPASSING an area of 7.75 acres, more or less;
 that said addition was accurately surveyed, that the parts thereof are accurately staked off and marked with appropriate metal monuments, including magnetic iron, and inscribed at least with the registration number of the Land Surveyor to provide source identification at all lot corners of the addition, and that their locations are correctly shown hereon;
 that, to the best of my knowledge, it conforms with the municipal code of the Town of Alpine and to all applicable state statutes;
 that the error of closure is not greater than one part in five-thousand.



The foregoing instrument was acknowledged before me by Marlowe A. Scherbel this ___ day of ___, 2026.
 Witness my hand and official seal.

Notary Public _____ My Commission expires: _____

CERTIFICATE OF OWNERS

STATE OF WYOMING } ss.
 COUNTY OF LINCOLN }
 The undersigned hereby certifies that this addition of part of the SE1/4SW1/4 of Section 20, T37N R118W, within the Incorporated Limits of the Town of Alpine, Lincoln County, Wyoming, as shown on this plat and more particularly described in the Certificate of Surveyor, is with the free consent and in accordance with the desires of the owner and proprietor of the described lands;
 that the name of the addition shall be the **DANIA MEADOWS ADDITION** to the Town of Alpine;
 that the undersigned does hereby vacate all of Lot 2 of Hafeez Addition, a subdivision of record in the Office of the Clerk of Lincoln County with Accession No. 1033641 in accordance with Section 34-12-106 and 108 Wyoming Statutes, 2025, as amended, and respectfully request the Clerk of Lincoln County to so mark said plot in accordance with Section 34-12-110;
 that the undersigned does hereby dedicate Dania Drive to the Town of Alpine for the perpetual use of the public;
 that the 15' Utility easements shown hereon along the west lines of Lot 3 and a portion of Lot 4 and the 10' Utility easements shown hereon along the south line of Lot 3 and the north line of Lot 4 and the 20' Utility easement along the west line of a portion of Lot 4 are hereby granted to all utility companies, their heirs, successors, and assigns, including, but not limited to, Lower Valley Energy, Silver Star Communications, and the Town of Alpine, for the underground installation and maintenance of all utilities including, but not limited to, water, sewer, power, telephone, cable television, gas, storm water drainage and irrigation facilities appurtenant to this addition;
 that said addition is subject to easements of record;
 that Wyoming law does not recognize any riparian rights to the continued natural flow of a stream or river for persons living on the banks of a stream or river;
 that all rights under and by virtue of the Homestead Exemption Laws of the State of Wyoming are hereby released.
 REHMAN HAFEZ
 Signature obtained by Separate Affidavit
 Rehman Hafeez

LEGEND

- Indicates a Corner Record filed or to be filed in the Office of the Clerk of Lincoln County.
 - △ Indicates a 6" x 6" concrete post with brass marker inscribed: "STATE HIGHWAY DEPT R.O.W. MARKER", with appropriate details, found.
 - Indicates a 5/8" x 24" steel reinforcing rod with an aluminum cap inscribed: "SURVEYOR SCHERBEL LTD", and other details, found this survey.
 - ⊙ Indicates a 5/8" x 24" steel reinforcing rod with a 3" aluminum cap inscribed: "SURVEYOR SCHERBEL LTD" and other details, found this survey.
 - ⊖ Indicates a 3/8" x 12" steel spike, of record.
 - — — — — Indicates a platted lot line of record.
 - - - - - Indicates an easement line.
 - — — — — Indicates a right-of-way line.
- The Base Bearing for this survey is the north line of the S1/2SW1/4 of Section 20, T37N, R118W, being N89°57'00"E.
 Due to the rounding algorithms of automated computer drafting, the sum of the parts of total distances shown may be 0.01' different from the total distance shown.

CERTIFICATE OF ACCEPTANCE

STATE OF WYOMING } ss.
 COUNTY OF LINCOLN }
 The foregoing **DANIA MEADOWS ADDITION** to the Town of Alpine was approved at the regular meeting of the Alpine Town Council on this ___ day of ___, 2026, in accordance with Sections 15-1-415 and 34-12-102, 103, Wyoming Statutes, 2025, as amended.
 Attest: _____ Town of Alpine
 Monica Chenault, Clerk _____ Eric Green, Mayor

OWNERS:
 Rehman Hafeez
 255 South Reeves Dr.
 Apt.#202
 Beverly Hills, CA 90212

SURVEYOR:
 Surveyor Scherbel, Ltd.
 P.O. Box 725
 Afton, Wyoming 83110
 (307) 885-9319

LAND USE TABLE:
 Total Number of Lots: 3
 Average Lot Size: 2.58± Acres
 Total Acres: 7.75± Acres
 Zoning: Mixed Residential and Commercial

DATE:
 March 2026

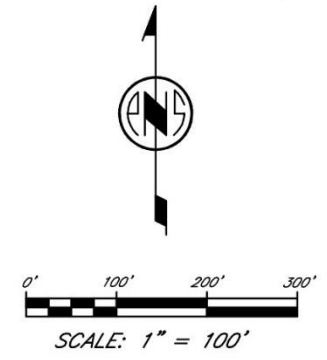
ADVANCE PLAT - SUBJECT TO CORRECTION AND APPROVAL

CURVE TABLE

CURVE	LENGTH	DELTA	RADIUS	CHORD BEARING	CHORD	TANGENT
C1	121.42'	2°30'59"	2764.77'	S09°18'23"E	121.41'	60.72'
C2	232.20'	7°59'25"	1865.00'	N03°52'12"E	232.01'	116.29'
C3	51.39'	98°09'06"	30.00'	S40°53'56"W	45.33'	34.60'

CERTIFICATE OF RECORDATION

This plat was filed for record in the Office of the Clerk of Lincoln County on this ___ day of ___, 2026.
 April Brunski, Clerk



DATE: 1 October 2025
 DRAWN BY: Clint A. Phillips
 CALCULATED BY: Scott A. Scherbel
 CATEGORY/PRIOR: SD/Hafeez
 FIELD BOOK:
 COMPUTER FILE: Dania Meadows Add.pro

SURVEYOR SCHERBEL, LTD.
 PROFESSIONAL LAND SURVEYORS

BOY 96 BIG PINEY - MARLBTON, WYO 83115 TEL 307-376-3347
 BOX 725 AFTON, WYO 83110 TEL 307-885-9319 ALPINE, WYO TEL 307-885-9319
 JACKSON, WYO TEL 307-753-5903; LAVA, ID TEL 208-776-5332; MONTICELLO, ID TEL 208-847-2800

2/23/26-CAP: Edit per JD review
 1/19/26-CAP: Edit per JD review
 1/19/25-CAP: Edit per JD review
 10/21/25-CAP: Edit road, JD review
 10/16/25-CAP: Edit per JD review
 2/29/25-26/26

DANIA MEADOWS ADDITION TO THE TOWN OF ALPINE
 WITHIN
SE1/4SW1/4 SECTION 20
T37N R118W
LINCOLN COUNTY, WYOMING