EAGLE MOUNTAIN
PLANNING COMMISSION MEETING

AUGUST 12, 2025, 5:30 PM
EAGLE MOUNTAIN CITY COUNCIL CHAMBERS
1650 EAST STAGECOACH RUN, EAGLE MOUNTAIN, UTAH 84005

5:30 PM – PLANNING COMMISSION WORK SESSION - CANCELLED

1. **DISCUSSION ITEMS - None. The meeting will start at 6:30 with no work session.**

6:30 PM PLANNING COMMISSION POLICY SESSION

2. **CALL TO ORDER**
3. **PLEDGE OF ALLEGIANCE**
4. **DECLARATION OF CONFLICTS OF INTEREST**
5. **MINUTES**

5.A. July 22, 2025 Planning Commission Minutes

6. **STATUS REPORT**
7. **ACTION AND ADVISORY ITEMS**

7.A. ORDINANCE/PUBLIC HEARING - An ordinance of Eagle Mountain City, Utah, Amending Eagle Mountain Municipal Code 17.80 Sign Regulations and Sign Permits.

BACKGROUND: (Presented by Carlos Vasquez). An ordinance amending Chapter 17.80 of the Eagle Mountain Municipal Code to create monument sign standards for commercial properties along SR-73.

7.B. EXCEPTION - Redemption Hill Parking Exception

BACKGROUND: (Presented by Planner, Steven Lehmitz). Consideration by the Planning Commission of alternative parking provisions for Redemption Hill Church, located at 9517 N Mt Airey Drive (Parcel No. 40:516:0110).

7.C. SITE PLAN - Ranches Academy Addition

7.D. PRELIMINARY PLAT AND SITE PLAN - Alpine School District Elementary 133

7.E. ORDINANCE/PUBLIC HEARING - An Ordinance of Eagle Mountain City, Utah, Approving the Horizon Master Development Plan.

BACKGROUND: (Presented by Senior Planner, Robert Hobbs). A request by Caden Hazard for Master Development Plan and associated Rezone approval to convert existing Agriculture and Country Residential zoning to Foothill Residential (FR), and, for Preliminary Plat Approval for 110 single-family detached residential lots with open space all on/for approximately 109 acres of property located in Section 30, T5S, R1W, on the north side of Pony Express Parkway and Lone Tree Parkway (County Assessor

Parcels/Serial # 58:040:0378) addressed as 2434 E. Pony Express Parkway in Eagle Mountain City; application set identified as the: Horizon project.

TABLE - PENDING RE-NOTICING AS A DEVELOPMENT AGREEMENT/PRELIMINARY PLAT

7.F. MASTER SITE PLAN - John Hancock Charter School West Campus revisit

TABLE INDEFINITELY - PENDING RESOLUTION OF WATER AND OFF-SITE IMPROVEMENTS ISSUES

7.G. MASTER PLAN - Culinary Water Master Plan and IFFP

7.H. MASTER PLAN - Wastewater Master Plan and IFFP

8. DISCUSSION ITEMS

9. NEXT SCHEDULED MEETING

10. ADJOURNMENT

THE PUBLIC IS INVITED TO PARTICIPATE IN PUBLIC MEETINGS FOR ALL AGENDAS.

In accordance with the Americans with Disabilities Act, Eagle Mountain City will make reasonable accommodations for participation in all Public Meetings and Work Sessions. Please call the City Recorder's Office at least 3 working days prior to the meeting at 801-789-6611. This meeting may be held telephonically to allow a member of the public body to participate. This agenda is subject to change with a minimum 24-hour notice.

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	
ITEM TYPE:	Minutes
FISCAL IMPACT:	
APPLICANT:	

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE

PUBLIC HEARING **PREPARED BY** **PRESENTED BY**

RECOMMENDATION:

BACKGROUND:

ITEMS FOR CONSIDERATION:

PLANNING COMMISSION ACTION/RECOMMENDATION:

ATTACHMENTS:

1. PC Meeting Minutes Draft 7.22.2025

EAGLE MOUNTAIN PLANNING COMMISSION MEETING MINUTES

July 22, 2025, 5:30 p.m.
Eagle Mountain City Council Chambers
1650 East Stagecoach Run, Eagle Mountain, Utah 84005

COMMISSION MEMBERS PRESENT: Commissioners Jason Allen, Rod Hess, Brent Strong, and Craig Whiting; and Alternate Commissioner Bryan Free.

ELECTED OFFICIAL PRESENT:

CITY STAFF PRESENT: Brandon Larsen, Planning Director; Marcus Draper, City Attorney; David Stroud, Senior Planner; Steven Lehmitz, Planner; and Megan Green, Planning Secretary.

5:30 P.M. – Eagle Mountain City Planning Commission Work Session

Commissioner Allen called the meeting to order at 5:30 p.m.

1. **Discussion Items**

1. A. DISCUSSION ITEM – Review/Code Workshop Presented by Planning Commissioner, Jason Allen.

- Commissioner Whiting presented ideas for senior housing locations and questions about overlay zones versus special use permits. Potential amenities for senior housing, such as swimming pools, pickleball courts, and clubhouses were also discussed.
- Commissioner Free shared research on short-term rental/Airbnb regulations in other cities, including licensing requirements and parking plans. The need for on-lot parking to avoid street congestion, transient room tax, application fees, challenges of enforcing short-term rental regulations, and the importance of compliance incentives were also discussed.
- Commissioner Allen shared ideas on Architectural Standards and Commercial Parking Standards. He shared City code, 17.72.030b. Commercial parking standards, including the possibility of allowing some parking at the side or rear of buildings, and maintaining street frontage with street-facing buildings were mentioned.
- Commissioner Hess proposed specific guidelines for multifamily housing, including placing garages at the rear of buildings and providing access lanes. Commissioner Strong emphasized the need for guidelines on parking terraces to address future development.

Commented [BL1]: Let's use past tense for minutes. They are supposed to be a look back at an event that all ready occurred.

Commented [BL2]: Be consistent with present and past tense.

Commissioner Allen adjourned the work session at 6:29 p.m.

6:30 P.M. – Eagle Mountain City Planning Commission Policy Session

2. Commissioner Allen called the policy session to order at 6:36 p.m.

3. Pledge of Allegiance

Commissioner Allen led the Pledge of Allegiance.

4. Declaration of Conflicts of Interest

None.

5. Approval of Meeting Minutes

DRAFT

5. A.

MOTION: ***Commissioner Whiting moved to approve the minutes of the July 8, 2025, Planning Commission Meeting. Commissioner Strong seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

6. Status Report

Planning Director Brandon Larsen reviewed the planning items discussed and voted upon during the City Council meeting.

7. Action and Advisory Items

7. A. Amending the Eagle Mountain Municipal Code Consolidated Fee Schedule

Presentation Summary Points: This proposed amendment (attached) to the Consolidated Fee Schedule addresses concerns about illegal dumping, as well as privacy screening and site plan approval follow-through. Neighborhood Improvement has become aware of an issue with illegal dumping of construction and landscape debris in the City. Some of the known sites where this is occurring are near the northeast corner of the intersection of Bobby Wren Blvd. and Pony Express Pkwy., as well as near the intersection of Silver Ridge Rd. and Harvest Crop Dr. (dumping has occurred as recently as April 2025). The City occasionally deals with issues with privacy fence screening that is supposed to be installed around developments, as well as follow-through with required improvements or conditions of approval for site plans.

Staff believe that establishing stiffer fines for illegal dumping and violations related to privacy fence screening and site plan approval follow-through will help to deter bad actors in the future. Violations related to privacy screening and site plans would have a graduating scale, but illegal dumping would have an early and consistent deterrent of $1000 per violation. Staff believe the establishment and raising of these fines would help to send a clear signal to the development community of the City's desire to maintain a clean, functional, and beautiful city before and after development activities. This proposal also includes some general clean-up. Some of the language in the subsections of Section 9 of the Consolidated Fee Schedule is cut off from the currently adopted version.

- Brandon Larsen introduced a proposal to address illegal dumping and site plan violations, including privacy screen fence installations. Examples of illegal dumping in the city and the need for stiff penalties to deter future violations were also shared.

Discussion Summary Points:

- There were suggestions for increasing fines for contractors who illegally dump on city property versus individuals. Legally the City can only fine an individual or contractor up to $1,000.00 for illegal dumping. Daily fines were also discussed.
- Ongoing developments on city property and the need for contractors to clean up after themselves in a timely manner.

DRAFT

Commissioner Allen opened the public hearing at 6:53 p.m. As there were no comments, he closed the hearing.

MOTION: ***Commissioner Whiting moved to recommend approval to the City Council of Item 7.A., Amending the Eagle Mountain Municipal Code Consolidated Free Schedule, excluding any references to illegal dumping and tabling the illegal dumping section until the next Planning Commission Meeting. Commissioner Strong seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7. B. Animal, Exceptions, Public Hearings, and Appeals Code Amendment

Presentation Summary Points: Recent situations brought to the City regarding animals have prompted this code amendment to provide clarification and add standards. The ability to seek exceptions to home business and accessory dwelling unit standards is also being removed. Finally, a recent change to state code (UCA 10-9a-701(5)) requires the City to remove public hearings for variances and land use appeals.

Discussion Summary Points:

- There were concerns about allowing certain animals on smaller lots without restrictions on lot size, the open-ended nature of the exceptions and the potential for conflicts with neighbors, and the need for clear guidelines and the potential for inconsistent application of the code.
- There was support for the ability to grant exceptions for animal management plans with some minimum lot size restrictions.
- The commissioners discussed the need for clear guidelines and the potential for inconsistent application of the code.

  Changing Code 16.1 5.020a from 28 days to 45 days was also discussed.

Commissioner Allen opened the public hearing at 7:12 p.m.

Commissioner Allen closed the public hearing at 7:13 p.m.

MOTION: ***Commissioner Strong moved to table Item 7.B, Animal, Exceptions, Public Hearings, and Appeals Code Amendment until the next Planning Commission Meeting, to give the Staff to revisit the Animal, ADU, and Home Business tables. Commissioner Allen seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7. C. Preliminary Plat Code Amendment

DRAFT

Presentation Summary Points: The proposed amendments are primarily to bring City code in-line with changes to state code regarding the land use authority of preliminary plats. State code 10-9a-604.1 prohibits the legislative body of the City from approving a preliminary plat that contains single-family. two-family, or townhome lots/units. A change is also proposed to noticing as we do not require the Applicant to submit stamped envelopes to mail public notices. The City sends out postcard notices and bills the Applicant.

Discussion Summary Points:

- Consistent language in the code regarding applicant costs for mailing postcards.
- The need for clear language in the code and the importance of consistency in land use authority.

Commissioner Allen opened the public hearing at 7:58 p.m. As there were no comments, he closed the hearing.

MOTION: ***Commissioner Allen moved to recommend approval to the City Council of Item 7.C., Preliminary Plat Code Amendment. Commissioner Strong seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7.D. Final Plat Code Amendment

Presentation Summary Points: The proposed final plat changes are clean-up items to the code along with adding a few additional standards to what is required on a final plat. To highlight a few of the changes: the final plat to be recorded will contain a note indicating the zone under which the plat was reviewed. Also, street names are proposed to prohibit the use of the cardinal directions of north, south, east and west. This stems from a plat currently under review with a street named South Sister Peak. The South in this case is not the geographical identifier of the location in the City but part of the formal name of the street. This can cause confusion with an address (as an example) of 1234 North South Sister Peak.

Discussion Summary Points: None

Commissioner Allen opened the public hearing at 8:02 p.m. As there were no comments, he closed the hearing.

MOTION: ***Commissioner Hess moved to recommend approval to the City Council of Item 7.D., Final Plat Code Amendment. Commissioner Allen seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7. E. Brylee Commercial Lot 3 Site Plan

DRAFT

Presentation Summary Points: The Applicant requests site plan approval to construct a multi-tenant commercial building in the Commercial Regional zone. The property and adjacent lots are accessed from Eagle Mountain Blvd. by Desert Willow Drive and then a private internal road—; Beckman Drive. There is no direct lot access from Eagle Mountain Blvd.

Discussion Summary Points: None

Applicant's Statements Summary Points: Dave Murdock, representing the new property owners, introduces himself and mentions ongoing discussions with potential tenants.

Commissioner Allen opened the public hearing at 7:46 p.m. As there were no comments, he closed the hearing.

MOTION: ***Commissioner Whiting moved to recommend approval to the City Council of Item 7.E., Brylee Commercial Lot 3 Site Plan. Commissioner Strong seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7. F. Pony Express Medial Site Plan

Presentation Summary Points: The applicant requests site plan approval of a medical office building. Access is provided via Ira Hodges Scenic Parkway or through adjacent commercial uses along Eagle Mountain Blvd. The medical building has the potential to have up to three tenants.

Discussion Summary Points: None

Applicant's Statements Summary Points: Steve Hewitt with Leeward Builders provides details about the building's tenants, that there are 4 units in the building, and the architectural elements.

Commissioner Allen opened the public hearing at 7:53 p.m. As there were no comments, he closed the hearing.

MOTION: ***Commissioner Hess moved to recommend approval to the City Council of Item 7.F., Pony Express Medical with the two conditions that the red lines on the landscape plan have or will be made, as well as the identifications on the plans for the architectural exterior treatments to be completed. Commissioner Allen seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

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8. Discussion Items

9. Next Scheduled Meeting

The next Planning Commission meeting is scheduled for August 12, 2025.

10. Adjournment

MOTION: ***Commissioner Hess moved to adjourn the meeting at 8:00 p.m. Commissioner Whiting seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Excused**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

The meeting was adjourned at 8:00 p.m.

Approved by the Planning Commission on

_____

Brandon Larsen
Planning Director

DRAFT

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	Monument Signs on Commercial Properties Fronting SR-73
ITEM TYPE:	Development Code Amendment
FISCAL IMPACT:	N/A
APPLICANT:	Carlos Vasquez, Management

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
N/A	N/A

PUBLIC HEARING
Yes

PREPARED BY
Carlos Vasquez

PRESENTED BY
Carlos Vasquez

RECOMMENDATION:
Staff recommend that the City Council discuss the adoption of an ordinance amending Chapter 17.80 of the Eagle Mountain City Code to create monument sign standards for commercial properties along SR-73.

BACKGROUND:
Eagle Mountain City has actively prioritized commercial development in strategic corridors, with a particular focus on the area along SR-73, which is undergoing significant transformation and is anticipated to become a major highway serving the region. In preparation for the growth and increased visibility this corridor will bring, City staff have proactively developed detailed regulations to guide how monument signs can be designed and installed along SR-73.

By creating these sign parameters ahead of new development, the City aims to ensure consistency, safety, and esthetics throughout the commercial corridor. This preventative approach helps avoid situations where early developers might set their own signage standards that could later prove incompatible with the community's vision or other projects.

The amendment would create a new section of code (EMMC 17.80.120) to regulate monument signs on private commercial parcels along SR-73. The amendment responds to visibility, safety, and aesthetic concerns unique to this high-speed corridor, where standard sign allowances are limited for this type of road.
Key provisions include:

- Monument signs only (pole and billboard signs prohibited)
- Strict private property placement (no public land use)
- Height and size limits determined by lot size
- Durable materials such as metal and concrete

- Internal LED illumination only; no animation or dynamic content
- Strict color and logo limits to ensure visual consistency
- Rules determining the frequency and spacing of the signs.
- Specific structure models (A and B) with detailed dimensions and esthetics
- Optional group signs for small properties

- Compliance with sight triangle rules and UDOT coordination

These regulations support clear, high-quality signage while respecting the unique development challenges along SR-73.

ITEMS FOR CONSIDERATION:
This item does not include a red-line version because it is completely new.

The City Council can discuss and carefully consider how this amendment advances several important objectives for the SR-73 commercial corridor:

- Promoting a Cohesive Commercial Identity: the amendment helps create a visually consistent and attractive appearance for all businesses.
- Maintaining Public Safety Through Sight Distance Controls: The amendment includes specific requirements to ensure that signs do not obstruct drivers' or pedestrians' clear line of sight at intersections and access points.
- Reducing Visual Clutter: With clearly defined limitations on sign dimensions and appearance, the amendment aims to prevent an excessive or disorderly array of signage that could distract drivers, overwhelm the visual environment, or detract from the overall appearance of the corridor.

PLANNING COMMISSION ACTION/RECOMMENDATION:
It is recommended that the Planning Commission provide a positive recommendation to the City Council for the adoption of the code.

ATTACHMENTS:
1. EMMC 17.80.120 Ordinance and Schematics

Chapter 17.80
SIGN REGULATIONS AND SIGN PERMITS

17.80.120 Monument Signs on Commercial Properties Fronting SR-73

A. Applicability. This subsection applies exclusively to monument signs located on privately owned commercial property with frontage along Utah State Route 73 (SR-73) within Eagle Mountain City. These content and design restrictions apply only to signs permitted under this subsection and are not applicable to other sign types regulated in this chapter.

B. Purpose. To enhance visibility, public safety, and aesthetic appeal for businesses along SR-73 where topography, setbacks, or traffic speeds limit standard sign effectiveness.

C. Permitted Sign Type. Only monument signs are permitted under this subsection. The following are expressly prohibited:

1. Pole signs
2. Off-premises advertising signs (e.g., billboards)
3. Signs located within public rights-of-way or easements
4. Any other sign that is not a monument sign.

D. Location Standards. All signs must be located entirely on private property. Signs shall not encroach upon or be located within any public right-of-way, easement, or utility corridor.

E. Design and Construction Requirements.

1. Height and Area Standards

Sign height and area shall be based on the size of the commercial property or unified commercial development as follows:

Lot Area (acres)	Max Sign Area (sq ft)	Max Height (ft)
Less than 5	48 sq ft	10
5 to 20	192 sq ft	20
Greater than 20	432 sq ft	30

2. Materials. All signs shall be constructed of durable, weather-resistant materials such as concrete or metal, as described in this same code, under EMCC Schematic 17.80.180(c) – Monument Sign Schematics for SR-73. Wood or wood-based structural components are prohibited.
   Decorative finishes such as simulated wood grain or stone veneer may be applied to the exterior.
3. Illumination. Only internal LED illumination is allowed. Signs shall comply with all brightness and shielding standards in EMMC 17.80.060(D). Halo, external, or animated lighting is prohibited.
4. Copy and Design Restrictions. Only logos and alphanumeric text are allowed on signage; descriptive images, depictions of business activities, or symbolic art are prohibited.

Logos are permitted but may use only one primary non-white color; off-white must remain the predominant sign color.

No animation, video, or dynamic message content is permitted.

Only flat panel designs are permitted. Push-through, or raised letters are allowed but must be flush-mounted and sized for legibility.

5. Layout and Structure. Each sign shall consist of a rock or brick base occupying 20% of the total height, an optional decorative panel (e.g., faux wood) occupying 15%, and stacked sign panels occupying the remaining 65% (See EMMC Schematic 17.80.180(c) – Monument Sign Schematics for SR-73, Model A). In case of not opting for the decorative panel, the staked sign panels can occupy the remaining 80% (See EMMC Schematic 17.80.180(c) – Monument Sign Schematics for SR-73, Model B). The number and size of stacked panels shall be consistent with the approved models (A or B) adopted by the city.
6. Spacing and Quantity. Only one monument sign is permitted per commercial frontage under this subsection. A commercial frontage is defined as each separately platted parcel or a continuous stretch of 300 linear feet of SR-73 frontage. No more than one sign shall be installed within each 300-foot frontage segment.
   Individual businesses may not exceed the equivalent of two panels of space on a shared monument sign.
   In the event that the commercial property is located within a shopping plaza or a multi-store commercial development, they shall share a single monument sign that complies with all applicable size and design standards.
   Small commercial properties with insufficient lot size or frontage to qualify for an individual sign may voluntarily combine with one or more adjacent or nearby commercial parcels to create a joint monument sign, provided that:

a. The combined properties have at least 5 acres or 300 linear feet of total frontage;
b. The sign is located on private land within or immediately adjacent to one of the participating properties;
c. Only one joint sign is allowed per combined grouping;
d. The total sign size is determined based on the combined lot area; and
e. The sign complies with the approved SR-73 monument sign schematics.

Any such joint monument sign shall be approved as part of a consolidated sign permit application, including written consent from all participating property owners.

F. Visibility and Regulatory Coordination.

1. Visibility Triangle Compliance.

To preserve public safety and ensure clear sightlines for motorists, all monument signs shall comply with clear sight zone requirements at intersections and driveways. These zones shall be defined as a triangle formed by:

a. From the corner of the intersection or driveway, 30 feet along the edge of each roadway or driveway.
b. Those two points are connected with a diagonal line to form a triangle.
c. This triangular area must remain free of any part of the sign (including base, lighting, or landscaping) that exceeds 30 inches in height above the adjacent road surface.

In addition to the requirements of this Section, the sign shall comply with Utah Code § 41-6a-1401, as amended, and related provisions of the Utah Traffic Code, which prohibit parking and obstructions that impair visibility within regulated distances of intersections, signs, and traffic control devices.

2. Coordination with UDOT.

Applicants shall contact the appropriate Region 3 Office of the Utah Department of Transportation (UDOT) to verify that the proposed monument sign, including placement and height, complies with all applicable state regulations, including UDOT's Access Management Manual and Outdoor Advertising Control standards. Approval under this section does not waive any state or city-level requirements. Proof of such coordination may be required prior to issuance of a sign permit.

G. Approval Process. Monument signs proposed under this subsection shall be approved as part of the building permit process for the associated commercial property. If no new building permit is being sought, a separate sign permit must be obtained through the City's Planning Department.

The review shall confirm full compliance with all applicable standards in this subsection, including those for design, location, materials, visibility, lighting, spacing, and state coordination.

Commercial property owners with existing buildings along SR-73 may also apply for a monument sign under this subsection, provided the proposed sign complies with all applicable requirements.

Review and approval of such signs shall follow the same standards and include verification of coordination with UDOT, as outlined in subsection F.

H. Maintenance and Discontinued Use. Signs shall be maintained in a clean, safe, and structurally sound condition capable of withstanding typical environmental conditions including wind, rain, and snow.
A sign must be removed within 60 calendar days of discontinued use, including the permanent closure of the commercial property or development it serves, or abandonment of the sign. This includes involuntary destruction due to an accident or natural event unless the sign is repaired or replaced.

I. Exceptions and Supremacy. Signs permitted under this subsection are exempt from all other provisions of EMMC 17.80.070(A)–(F), including but not limited to standard monument sign height, materials, lighting, and size requirements. No variance or administrative exception is required if the sign complies with this subsection.

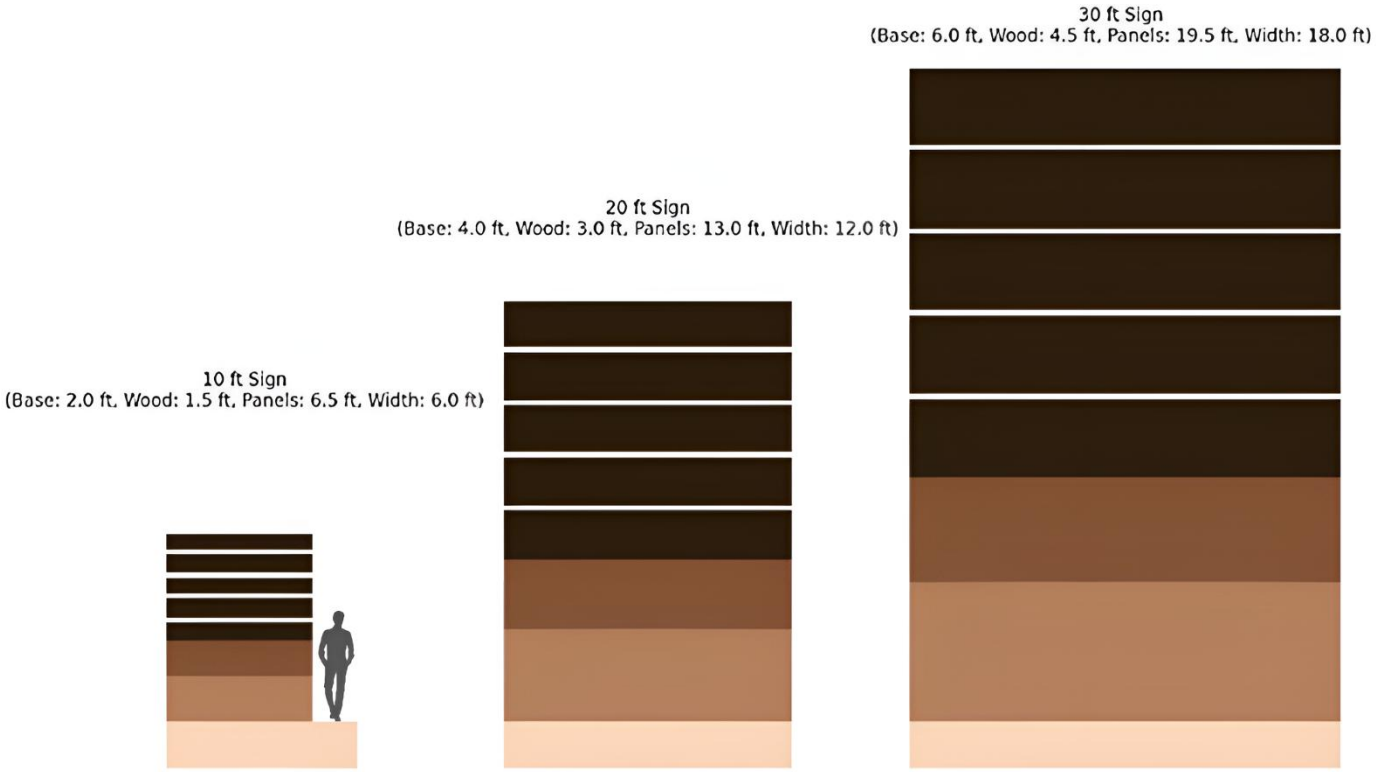
17.80.130 Exempt signs.

R. Signs constructed under 17.80.120 subsection are exempt from the requirements specified in previous sections, following the guidelines described in the section of Schematic 17.80.180(c) – Monument Sign Schematics for SR-73.

Schematic 17.80.180(c) – Monument Sign Schematics for SR-73

A. MODEL A: Three-Zone Structure (Rock Base + Wood Panel + Panel Stack)

Scaled to 10’, 20’, 30’ total heights



Ground (peach): A 2 ft “ground-plane” rectangle at the very bottom (for dimensional context only).

Rock Base (lightest brown): Occupies 20 % of the total sign height.

Wood-like panel (middle sepia-brown): Occupies approximately 15% of the total sign height.

Five Stacked Sign Panels (dark brown): Occupy the remaining 65 % of the total. Each of the five is equal in height (with small gaps between them for visual distinction and enhanced readability).

Dimensional Table

Using these percentages, the table below lists exact foot-values for each of the three total-height options. It is set Width = 3 × (Rock Base Height) for a uniform, stable footprint.

Sign Size	Total Height	Rock Base Height (20 % of total)	Wood Panel Height (15 % of total)	Panel Stack Height (65 % of total)	Width (3× Base)
10 ft	10 ft	2.0 ft	1.5 ft	6.5 ft	6 ft (3×2 ft)
20 ft	20 ft	4.0 ft	3.0 ft	13.0 ft	12 ft (3×4 ft)
30 ft	30 ft	6.0 ft	4.5 ft	19.5 ft	18 ft (3×6 ft)

Total Height	Base Depth	Panel Depth
10 ft	2.0 ft	1.0 ft
20 ft	2.5 ft	1.5 ft
30 ft	3.0 ft	2.0 ft

1. **Rock or Brick Base Width:** The same as the “Width” column, since the stone-veneered bottom is full-face width.
2. **Wood-like Panel Region:** A single decorative section right above the rock base.
3. **Panel Stack:** All five dark-brown sign panels combined occupy the “Panel Stack Height”, subdivided evenly into five strips:

    10 ft sign → 6.5 ft ÷ 5 = 1.30 ft each

    20 ft sign → 13.0 ft ÷ 5 = 2.60 ft each

    30 ft sign → 19.5 ft ÷ 5 = 3.90 ft each

Panel & Text Layout

1. **Primary Text (with logo):**

    Should occupy the topmost of the five dark panels and extend to the space of two panels for visibility, adapting to the needs of the business.

It can be around 35 %–40 % of the panel-stack's height.

10 ft sign: Panel-stack = 6.5 ft → Primary band around 2.3 ft (35%).

20 ft sign: Panel-stack = 13 ft → Primary band around 4.6 ft.

30 ft sign: Panel-stack = 19.5 ft → Primary band around 6.8 ft.

2. **Secondary Brands:**

   Each panel band below the primary should be between 15 % and 20 **%** of the panel stack.

3. **Spacing ("Reveals") Between Panels:**

   Leave a small gap (10 % of each panel's height) above each board for backlighting or separation.

   A 10% reveal between boards gives a clean, separate look.

4. **Font & Color:**

   Use a bold, high-contrast white or off-white face on each dark brown panel. Colors shall be the same for all businesses on the sign.

   Typeface consistency with good legibility from a distance is ideal.

   Ensure letters maintain a minimum height of 20 % of each band's height for visibility.

   The top panel's logo can display only one main color that is different from off-white. Off-white should still be the main color of the sign.

5. **Rock Base Details:**

   Install stone veneer pattern (as seen in model 1). Mortared seams and slight texture variation are ideal.

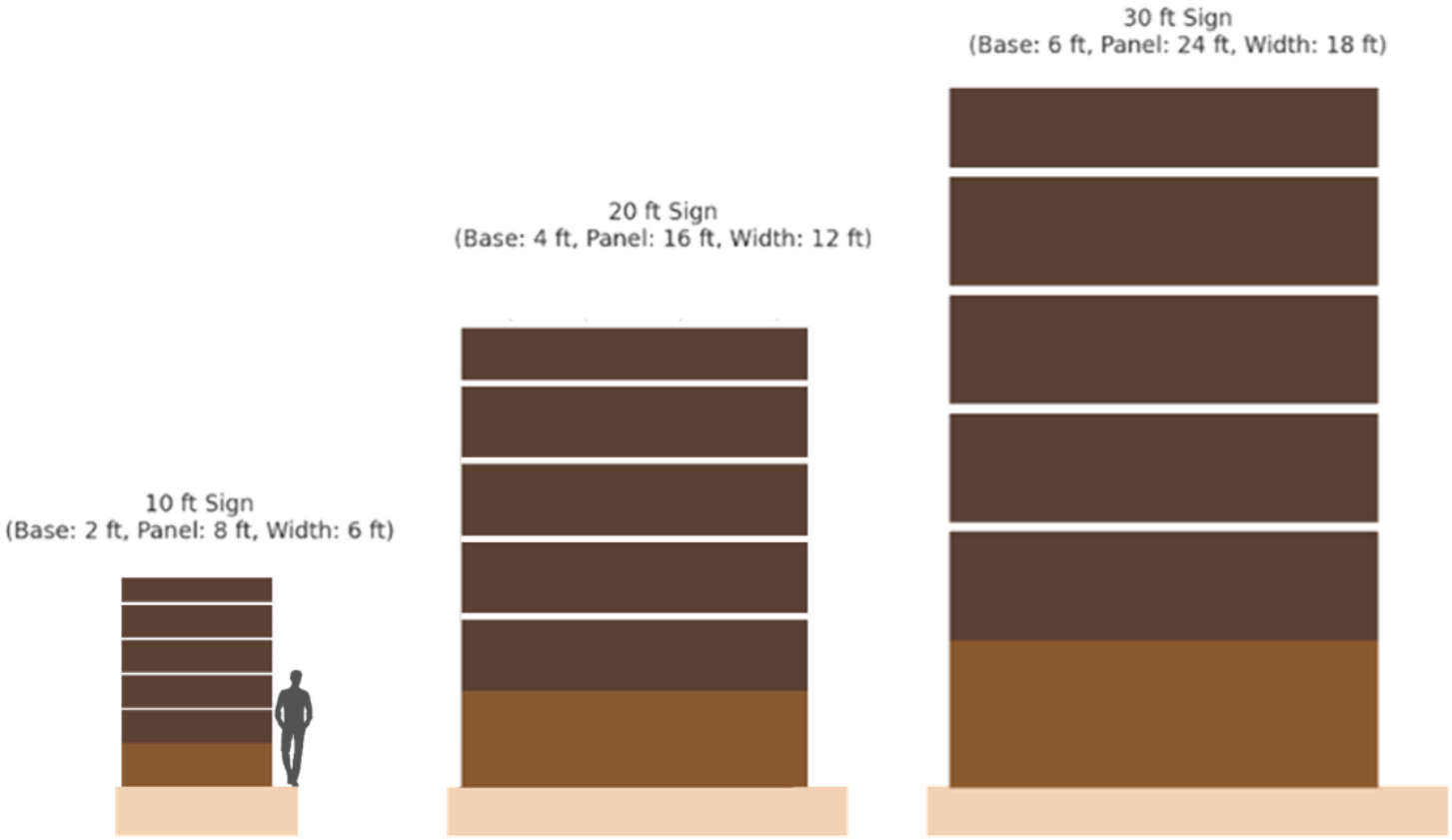
   Consider a slight cap (concrete) that overhangs at the top of the rock base to shed water.

6. **Wood Panel Options:**

   Material Choice**.** It is recommended to use durable materials considering the city's climatic conditions.

B. MODEL B: Two-Zone Structure (Rock Base + Panel Stack)

Scaled Diagrams (10', 20', 30' total heights)



In each subplot:

The bottom light–tan rectangle is the “ground” for reference.
The brownish-gold rectangle above it is the rock base.
The darker, stacked rectangles above that are the five sign panels (each panel occupies an equal slice of the panel stack).

Dimensional Table

The rock base occupies approximately 20 % of the total sign height, and the five panels together occupy the remaining 80%. The width of the sign (both base and panels) follows the same aspect ratio.

Below are the dimensions. “Panel height” is the sum of all five panels.

Total Sign Height	**Base Height (20 % of total)**	**Panel Stack Height (80 % of total)**	**Overall Width**
10 ft	2.0 ft	8 ft	6 ft
20 ft	4.0 ft	16 ft	12 ft
30 ft	6.0 ft	24 ft	18ft

Total Height	**Base Depth**	**Panel Depth**
10 ft	2.0 ft	1.0 ft
20 ft	2.5 ft	1.5 ft
30 ft	3.0 ft	2.0 ft

1. Rock or Brick Base (brownish gold): Height = 20.2 % of the total. You can see, for example, that at 30 ft total, the rock base is 6.06 ft tall.
2. Five Stacked Panels (dark brown): Each panel is the same height, together filling 80 % of the total. In the 10 ft version, all five occupy 8 ft, so each is 1.6 ft tall.

Sign Size	**Number of Panels**	**Each Panel Height (if equal)**
10 ft	5	8.0 ft ÷ 5 = 1.6 ft
20 ft	5	16.0 ft ÷ 5 = 3.2 ft
30 ft	5	24.0 ft ÷ 5 = 4.8 ft

Panel & Text Layout

1. **Primary Text (with logo):**

   Should occupy the topmost of the five dark panels and extend to the space of two panels for visibility, adapting to the needs of the business.

   It can be around 35 %–40 % of the panel-stack's height.

   10 ft sign: Panel-stack = 6.5 ft → Primary band around 2.3 ft (35%).

   20 ft sign: Panel-stack = 13 ft → Primary band around 4.6 ft.

   30 ft sign: Panel-stack = 19.5 ft → Primary band around 6.8 ft.

2. **Secondary Brands:**

   Each panel band below the primary should be between 15 % and 20 **%** of the panel stack.

3. **Spacing ("Reveals") Between Panels:**

   Leave a small gap (10 % of each panel's height) above each board for backlighting or separation.

   A 10% reveal between boards gives a clean, separate look.

4. **Font & Color:**

   Use a bold, high-contrast white or off-white face on each dark brown panel. Colors shall be the same for all businesses on the sign.

   Typeface consistency with good legibility from a distance is ideal.

   Ensure letters maintain a minimum height of 20 % of each band's height for visibility.

   The top panel's logo can display only one main color that is different from white or off-white. White or off-white should still be the main color of the sign.

5. **Rock or Brick Base Details:**

   Install stone veneer pattern (as seen in model 2). Mortared seams and slight texture variation are ideal.

   Consider a slight cap (concrete) that overhangs at the top of the rock base to shed water.

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	Redemption Hill Parking Exception
ITEM TYPE:	Motion
FISCAL IMPACT:	N/A
APPLICANT:	Steve Pierson

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
General Plan Designation: Community Commercial Zone: Commercial	2.85 Acres

PUBLIC HEARING
Yes

PREPARED BY
Steven Lehmitz, Planner

PRESENTED BY
Robert Hobbs

RECOMMENDATION:
Staff recommends that the Planning Commission grant an exception to Redemption Hill Church to deviate from EMMC Table 17.55.120(c), thus allowing them to expand their main assembly space up to 4,980 square feet.

BACKGROUND:
Redemption Hill Church has the opportunity to expand their main assembly space to 4,980 square feet. EMMC Table 17.55.120(c) requires churches to have 1 parking stall per 20 square feet in the main assembly room. This would require the church to have 249 parking stalls. The property the church is located on has 130 parking stalls shared among various tenants. The applicant is petitioning the Planning Commission to consider and utilize EMMC 17.55.110(F) and (G) to grant them an exception to the parking requirements for their use.

ITEMS FOR CONSIDERATION:
EMMC 17.55.110 (F) Additional Information. Any information provided by the developer relative to trip generation, hours of operation, shared parking, peak demands or other information relative to parking shall be considered when evaluating parking needs.

- The applicant has a formal parking agreement with Scot Hazard, the owner of the property, that allows them to use all 130 parking spaces on Sundays, as no other tenants are open for business.
- On July 20, 2025, the applicant noted that at their 9:45 a.m. service, 86 of the 130 parking stalls were used. For their 11:30 a.m. service, 79 of the 130 parking stalls were utilized.

EMMC 17.55.110(G) Alternative Parking Requirements. Alternative parking provisions which do not fully comply with requirements may deviate from the standards contained in Table 17.55.120(c), Required Parking by Land Use, when the planning commission determines that the deviation does not impair the service level required by this chapter.

- 249 parking spaces required, but only 130 parking spaces are available on the site.

PLANNING COMMISSION ACTION/RECOMMENDATION:
N/A

ATTACHMENTS:
1. Parking Agreement
2. Maps

Steven L – There is already an easement recorded (or note on the plat) including cross easements for parking and drive aisles between the two buildings there. We have no other occupants using the lot on Sundays, so the entire parking lot is generally empty (and has been since we placed these buildings into service, with the exception of what Redemption Hill already uses on Sundays in their current space). We have no objection to Redemption Hill utilizing all the stalls on Sundays as needed. I believe Colby was monumenting something to that effect in the new lease agreement with Redemption Hill for the space in the south building. I imagine a copy of the lease covenants appertaining to parking is sufficient for you? Or is this email good enough? Let me know what you'd like to see and we will get you something for your file.

Scot J. Hazard

President – Principal Broker

801-404-4200 Mobile

801-789-8000 Office

The Real Estate Group

General Plan Category

LEGEND

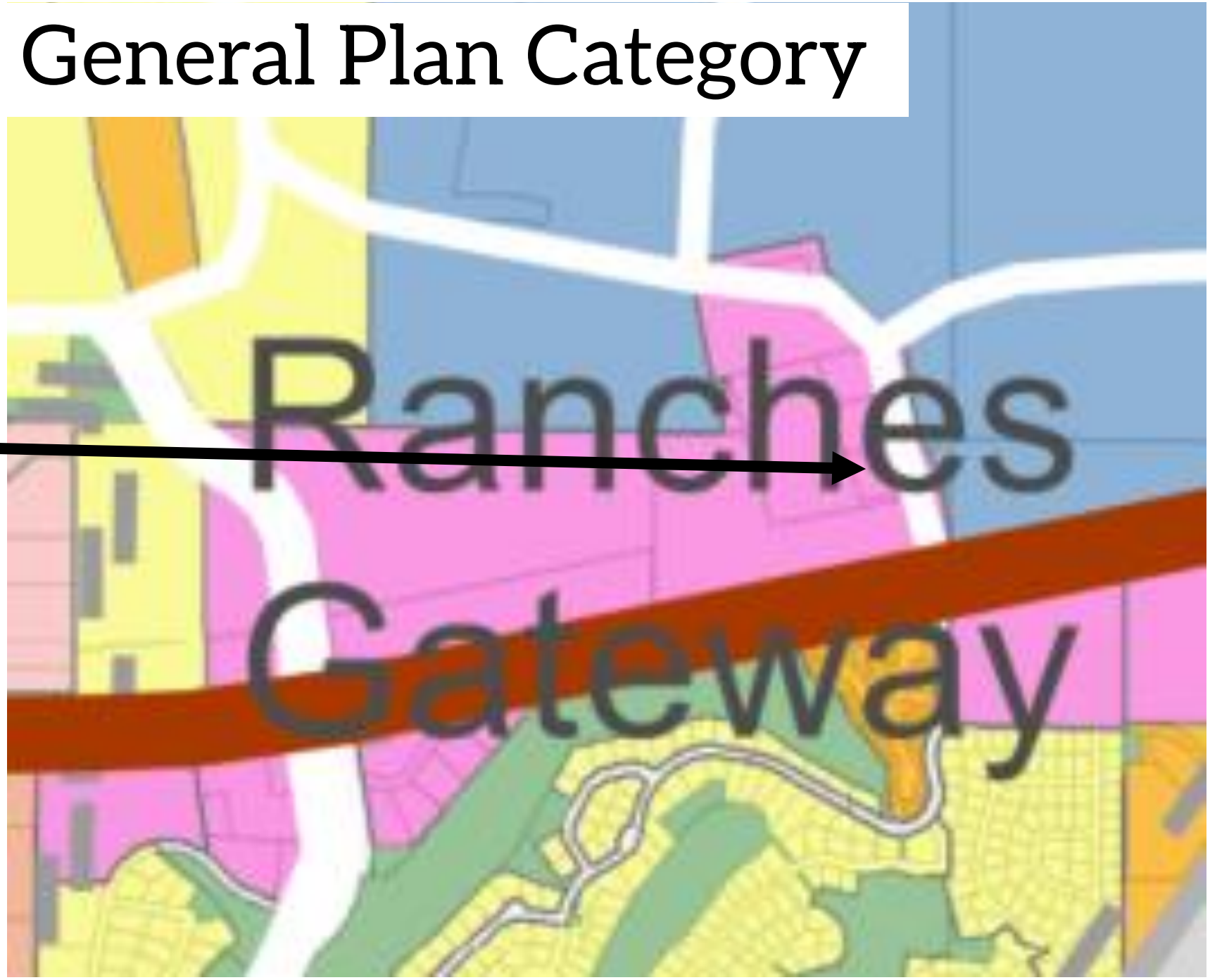
Residential Categories:
- Foothill Residential
- Agricultural/Rural Density One
- Agricultural/Rural Density Two
- Neighborhood Residential One
- Neighborhood Residential Two
- Neighborhood Residential Three

Mixed Use/Commercial Categories:
- Community Commercial
- Town Center Mixed Use
- Regional Commercial
- Employment Center/Campus
- Business Park/Light Industry

Public/Civic Categories:
- Civic Uses/Schools
- Parks and Open Space

NEIGHBORHOOD CHARACTER AREA

TRANSPORTATION
- UDOT Highway/Freeway
- City Road Network - Collector & up



Zoning

Zoom to
O-03-2013 'Commercial' Zone
Parcel ID: 40:516:0115
Current Landuse: Commercial
General Zoning: Commercial
Address: EAGLE MOUNTAIN, UT
Master Development Agreement: O-03-2013
Commercial zones establishes the land use regulations for commercial and office zones in Eagle Mountain City, including allowed uses, minimum land use standards, and other development provisions. [Ord. O-12-2020 § 2 (Exh. A); Ord. O-0
2020 § 2 (Exh. A)].
More info: Eagle Mountain Municipal Code Title 17.38 Commercial Zone

58:033:0386
40:482:0105
40:482:0104
40:481:0103
40:481:0100
40:516:0115
58:033:0413
58:033:0626
58:033:0011
58:033:0412
58:033:0403
66:144:0081
58:033:0423
58:033:0304

9541
9523
9485
9469
9569
N Mt Airey Dr
N Mt Airey Dr
9535
9529
9517
9511

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	Ranches Academy Addition Site Plan
ITEM TYPE:	Site Plan
FISCAL IMPACT:	N/A
APPLICANT:	Ricky Parkinson

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
General Plan Category: Civic Uses/Schools Zone: Town Core Residential	4.69 Acres

PUBLIC HEARING
Yes

PREPARED BY
Steven Lehmitz, Planner

PRESENTED BY
Robert Hobbs

RECOMMENDATION:
Staff recommends that the Planning Commission forward a positive recommendation to the City Council.

BACKGROUND:
Ranches Academy is proposing a few additions to the existing school building, located at 7789 N Tawny Owl Circle (Parcel No. 58:040:0059).

ITEMS FOR CONSIDERATION:
EMMC 17.55 Off-street Parking -- N/A

EMMC 17.72.030 Site design.
A. Building Location -- N/A
B. Commercial Parking Location -- N/A

EMMC 17.100.050 Site plan development standards. The following are standards required for all site plans in any zoning district:
A. Use of Property -- Complies
B. Screening Requirements -- N/A
C. Access Requirements -- Complies
D. Off-Street Truck Loading Space -- N/A
E. Utilities -- Complies
F. Grading and Drainage -- Complies
G. Dedication of Water Shares -- N/A
H. Protection of Steep Slopes and Natural Drainages -- N/A

EMMC 17.100.060 Architectural requirements.
A. Mechanical Equipment -- N/A
B. Windows -- N/A

C. Building Lighting -- Complies
D. Trash Enclosures, Storage Areas, and External Structures -- N/A
E. Exterior Materials -- N/A
F. Landscape Guidelines -- N/A
G. Parking Lot and Street Lighting -- Complies
H. Enclosed Uses -- N/A
I. Businesses Moving into Existing Buildings -- N/A
J. Nuisances -- Complies

PLANNING COMMISSION ACTION/RECOMMENDATION:
N/A

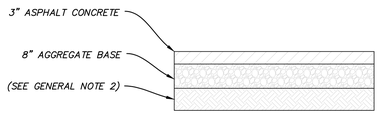
ATTACHMENTS:
1. Site and Elevation Plans
2. Maps

ROADWAY SECTION NOTES:
1. CONTRACTOR TO COMPLY WITH THE RECOMMENDATIONS PROVIDED BY GSH GEOTECHNICAL REPORT (PROJECT # 4062-001-25) FOR THIS PROJECT REGARDING SITE PREPARATION, GRADING, COMPACTION ETC.

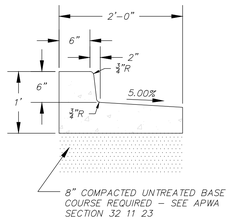
2. SEE GEOTECH REPORT FOR SUBSOIL PREPARATION.

3. ALL CONSTRUCTION AND MATERIAL SHALL MEET EAGLE MOUNTAIN CITY STANDARDS

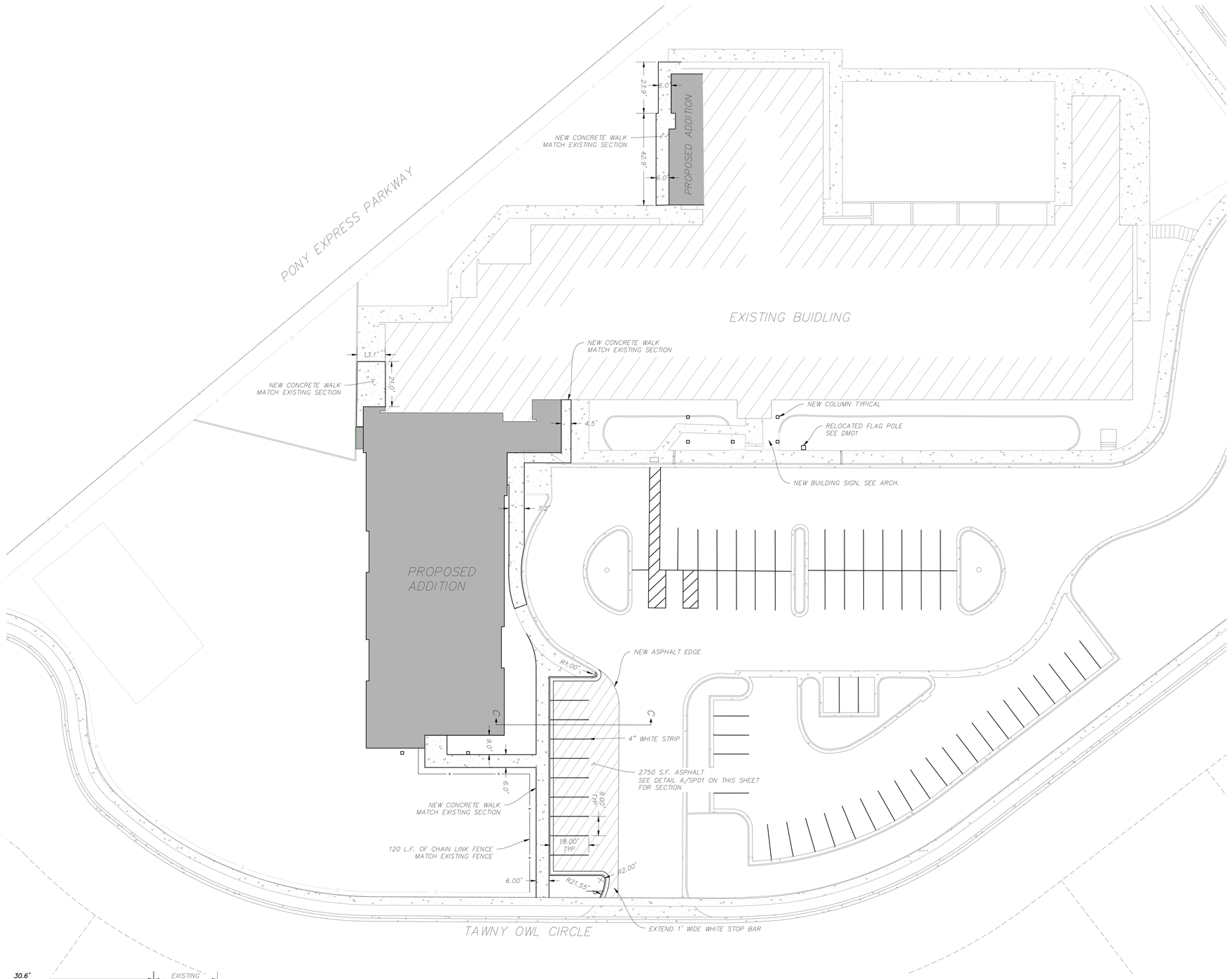
4. A SIGN PERMIT WILL NEED TO BE OBTAINED SEPARATELY FOR ANY BUILDING OR MONUMENT SIGNS.

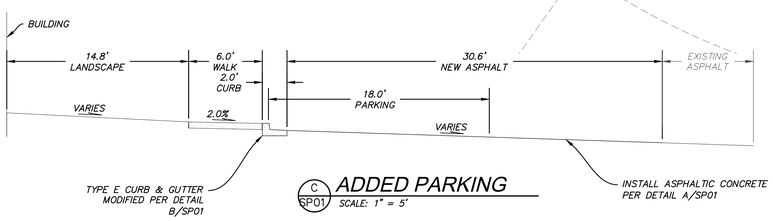


A/SP01 ASPHALT SECTION
SCALE: N.T.S.



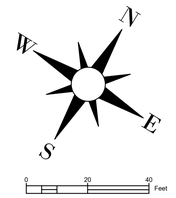
B/DT01 TYPE E CURB & GUTTER MODIFIED
N.T.S.





C/SP01 ADDED PARKING
SCALE: 1" = 5'

Original drawing is 30" x 42"



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801.628.6004 TEL 801.590.6811 FAX WWW.PERIGEECIVIL.COM

Revisions

Project Number	2549
Original Issue	05.02.2025
Project Status	PERMIT & BID SET

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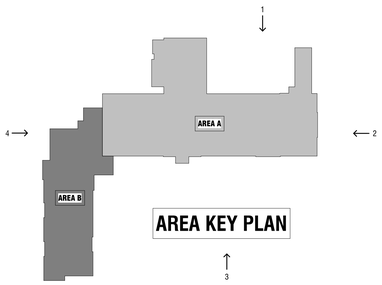
Sheet Title

SITE PLAN

Sheet Number

C 201



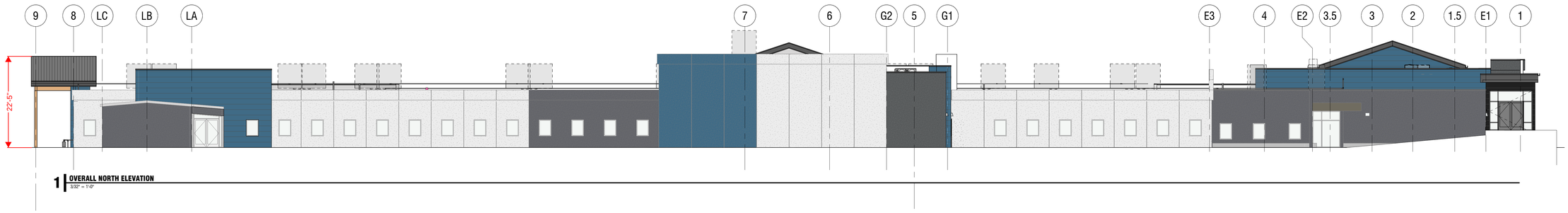
AREA KEY PLAN

EXTERIOR MATERIAL SCHEDULE						
MARK	DESCRIPTION	MANUFACTURER	COLOR	SIZE	FINISH	COMMENTS
E-1	EIFS - COLOR 1	DRYVIT	LIGHT GRAY TO MATCH P-1	--	SANDBLAST	EIFS
E-2	EIFS - COLOR 2	DRYVIT	BLUE TO MATCH P-2	--	SANDBLAST	EIFS
E-3	EIFS - COLOR 2	DRYVIT	DARK GRAY TO MATCH P-3	--	SANDBLAST	EIFS
EC-1	EXPOSED CONCRETE FOUNDATION WALL	--	--	--	--	--
FC-1	FIBER CEMENT LAP SIDING	HARDIEBOARD	BLUE TO MATCH E-2, P-2	8"	SELECT CEDARMILL / PAINTED	--
GL-1	1" INSULATED - LOW E - CLEAR GLASS	PPG	SOLARBAN 70XL	--	--	--
GL-1T	1" INSULATED - LOW E - TEMPERED CLEAR GLASS	PPG	SOLARBAN 70XL	--	--	--
GL-4	1/4" CLEAR GLASS	PPG	CLEAR	--	--	--
MC-1	METAL PARAPET CAP	MBCI	MIDNIGHT BRONZE	--	SIGNATURE 300	--
MS-1	METAL SOFFIT	MBCI	MIDNIGHT BRONZE	12"	SIGNATURE 300	--
P-1	PAINT - COLOR 1	SW	USEFUL GRAY SW 7050	--	--	PAINT EXISTING CONCRETE / EIFS
P-2	PAINT - COLOR 2	SW	RAINSTORM SW 6230	--	--	PAINT EXISTING CONCRETE / EIFS
P-3	PAINT - COLOR 3	SW	CITYSCAPE SW 7067	--	--	PAINT EXISTING CONCRETE / EIFS
RSS-1	STANDING SEAM ROOF	MBCI	MIDNIGHT BRONZE	--	--	--
WD-1	MASS TIMBER	--	--	--	STAINED / SEALED	--

NOTE THAT ALL EXISTING EXTERIOR SURFACES WILL RECEIVE NEW PAINT: PREP SURFACE AS NEEDED FOR FULL ADHESION.

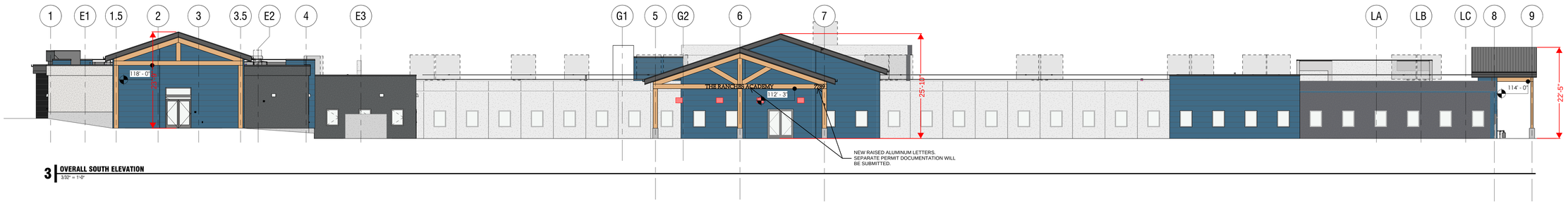
EXTERIOR ELEVATION GENERAL NOTES

1. REFER TO THE MATERIAL AND FINISH SCHEDULES ON SHEET A651 FOR FURTHER INFORMATION.
2. CONTRACTOR TO LEAVE A 3/4" GAP BETWEEN ALL DISSIMILAR MATERIAL TYP. TO BE FILLED WITH BACKER ROD AND SEALANT, COLOR AS SELECTED.
3. ALL EXPOSED EXTERIOR STEEL TO BE PAINTED (I.E. LINTELS, ETC.).
4. CONTRACTOR TO PAINT ALL VENT PIPES, EXHAUST FANS AND OTHER ROOF EQUIPMENT AND PENETRATIONS THAT ARE VISIBLE FROM THE SURROUNDING BUILDING'S STREET FRONTAGE.
5. SEE ELECTRICAL DRAWINGS FOR EXTERIOR POWER LOCATIONS, LIGHTING, HORN STROBES, CARD READERS, ETC.
6. SEE PLUMBING DRAWINGS FOR DOWNSPOUT NOZZLE, HOSE BIB, AND FDC CONNECTION LOCATIONS, ETC.



1 OVERALL NORTH ELEVATION
3/32" = 1'-0"

2 OVERALL EAST ELEVATION
3/32" = 1'-0"



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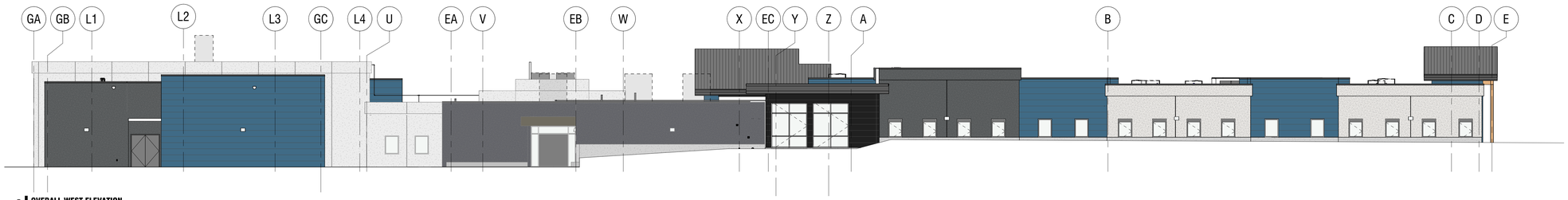

4 OVERALL WEST ELEVATION
3/32" = 1'-0"

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THE RANCHES ACADEMY

RANCHES EXPANSION & REMODEL

7789 N TAWNY OWL CIR, EAGLE MOUNTAIN, UT 84005

Revisions

Num.	Description	Date

Project Number	25549
Original Issue	05.02.2025
Project Status	PERMIT & BID SET

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6424079
JUSTIN HOWLAND HUNTER
STATE OF UTAH

Sheet Title

EXTERIOR ELEVATIONS OVERALL

Sheet Number

A201

Current.dwf 5/2/2025 11:28:56 AM

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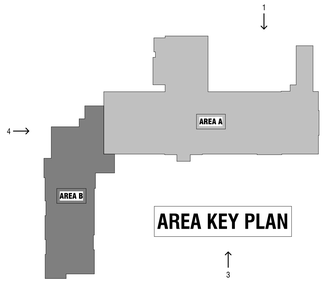

AREA KEY PLAN

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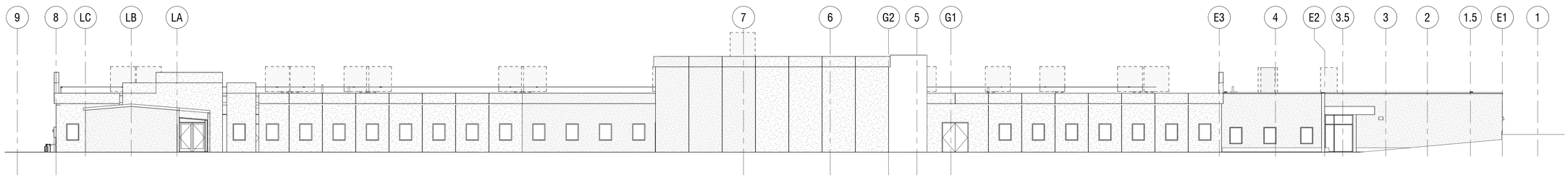
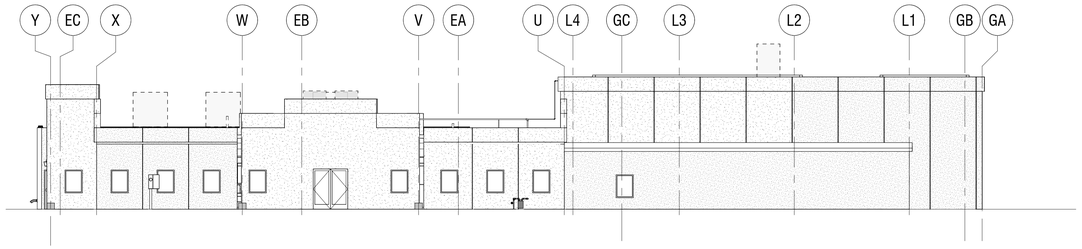
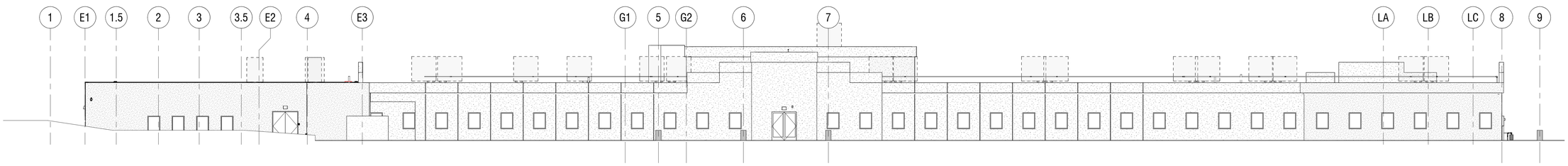


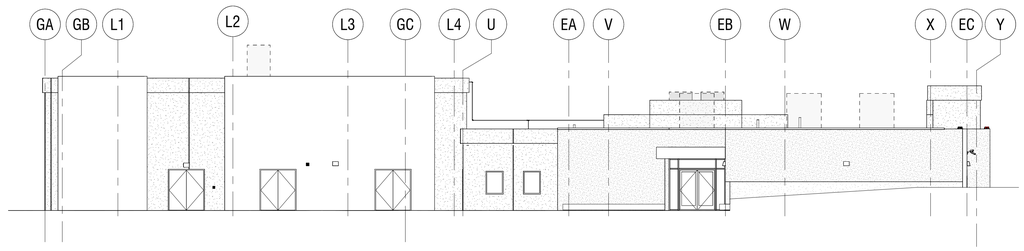
1 OVERALL NORTH EXISTING ELEVATION
3/32" = 1'-0"



2 OVERALL EAST EXISTING ELEVATION
3/32" = 1'-0"



3 OVERALL SOUTH EXISTING ELEVATION
3/32" = 1'-0"



4 OVERALL WEST EXISTING ELEVATION
3/32" = 1'-0"

Current as of: 5/5/2025 9:57:11 AM

Original drawing is 30" x 42" Autodesk Docs://24549 - THE RANCHES/24549 THE RANCHES.rvt

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THE RANCHES ACADEMY

RANCHES EXPANSION & REMODEL

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Revisions

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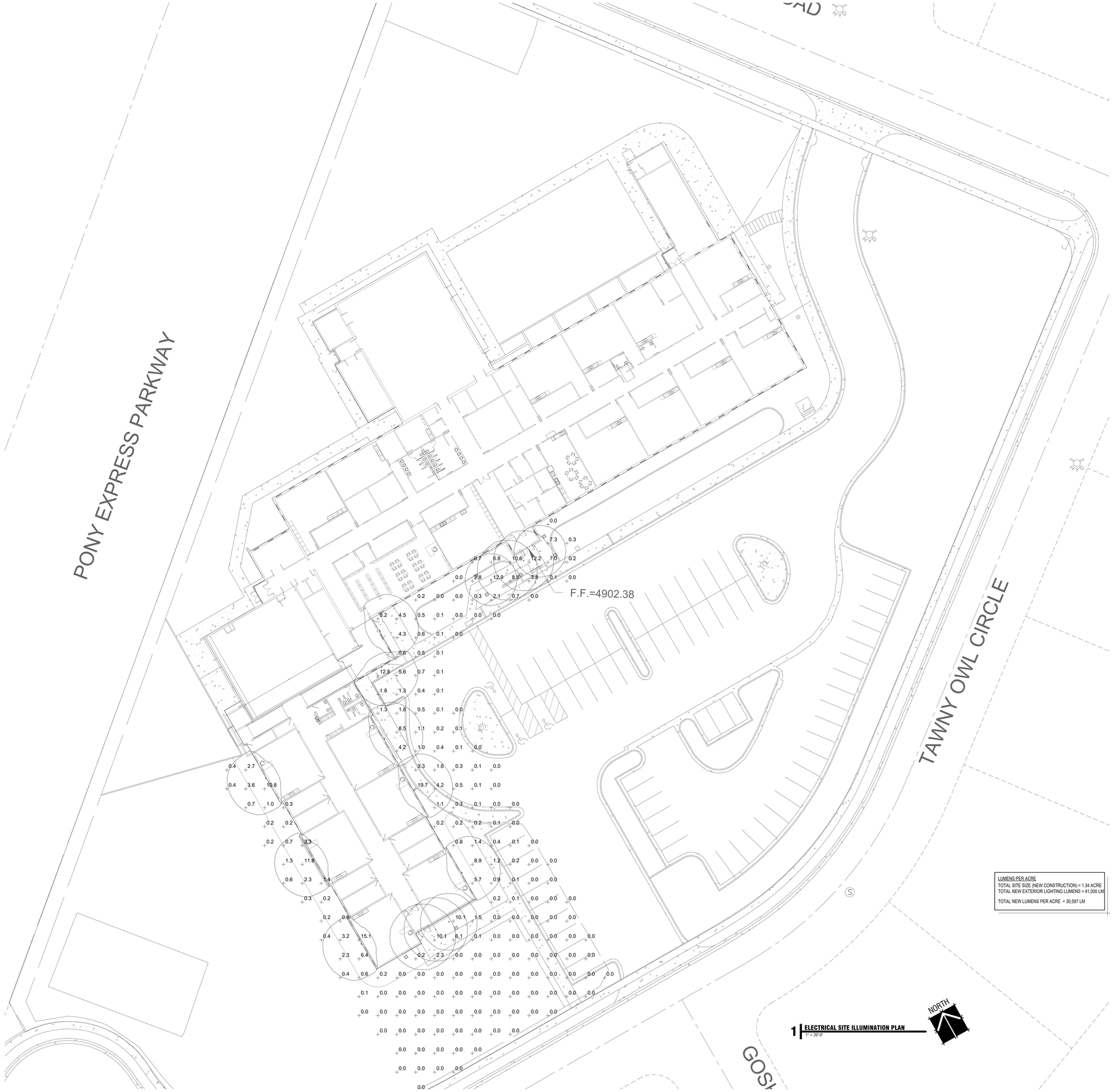
6424579
JEREMY MORTLAND, HUNT
STATE OF UTAH

Sheet Title

EXISTING EXTERIOR ELEVATIONS OVERALL

Sheet Number

A201E



1 **ELECTRICAL SITE ILLUMINATION PLAN**
1" = 20'-0"

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ENV:2025-079.00

THE RANCHES ACADEMY

RANCHES EXPANSION & REMODEL

7789 N TAWNY OWL CIR, EAGLE MOUNTAIN, UT 84005

Revisions

Num.	Description	Date

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REGISTERED PROFESSIONAL ENGINEER
DAVID P. WHITTON
No.264397
STATE OF UTAH
2025/05/02

Sheet Title

ELECTRICAL SITE ILLUMINATION PLAN

Sheet Number

EG102

Current as of: 7/28/2025 12:28:23 PM
Original drawing is 30" x 42" Autodesk Docs://25549 - THE RANCHES/25079_THE_RANCH_ACADEMY_V25 ELEC CENTRAL.pdf.rvt

Submitted by JRC, Inc.

Job Name:
Ranches Expansion and Remodel
Architect: Babcock Design Group (Salt Lake City)
Engineer: Envision Engineering (Salt Lake City)

Catalog Number:
WDGE2 LED P3SW 40K 80CRI VF MVOLT SRM PIR DDBXD
Notes: Up to 15ft mounting height for PIR sensor - VERIFY

Type:
AW1
JRC25-167837

WDGE2 LED

Architectural Wall Sconce
Visual Comfort Optic

Catalog Number

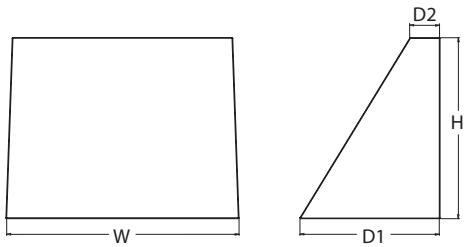
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1):	7"
Depth (D2):	1.5"
Height:	9"
Width:	11.5"
Weight: (without options)	13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

design select — Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P1[1] P1SW P2[1] P2SW P3[1] P3SW P4[1] P5[1] Door with small window (SW) is required to accommodate sensors. See page 2 for more details.	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K[2] 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[3] 480[3]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[4] **Shipped separately** AWS 3/8inch Architectural wall spacer[5] PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.[5]

Options

E4WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)
E10WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min)
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)
PE	Photocell, Button Type[6]
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[7]
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[8]
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
DSLE	Dual Switching (1 Driver, 2 Light Engines)
CCE	Coastal Construction[5]

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

NLTAIR2 PIR	Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.
NLTAIR2 PIRH	Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.
NLTAIREM2 PIR	Embedded wireless controls by nLight with UL924 listed emegency operation, Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights[9]
NLTAIREM2 PIRH	Embedded wireless controls by nLight with UL924 listed emegency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights[9]

See page 4 for out of box functionality

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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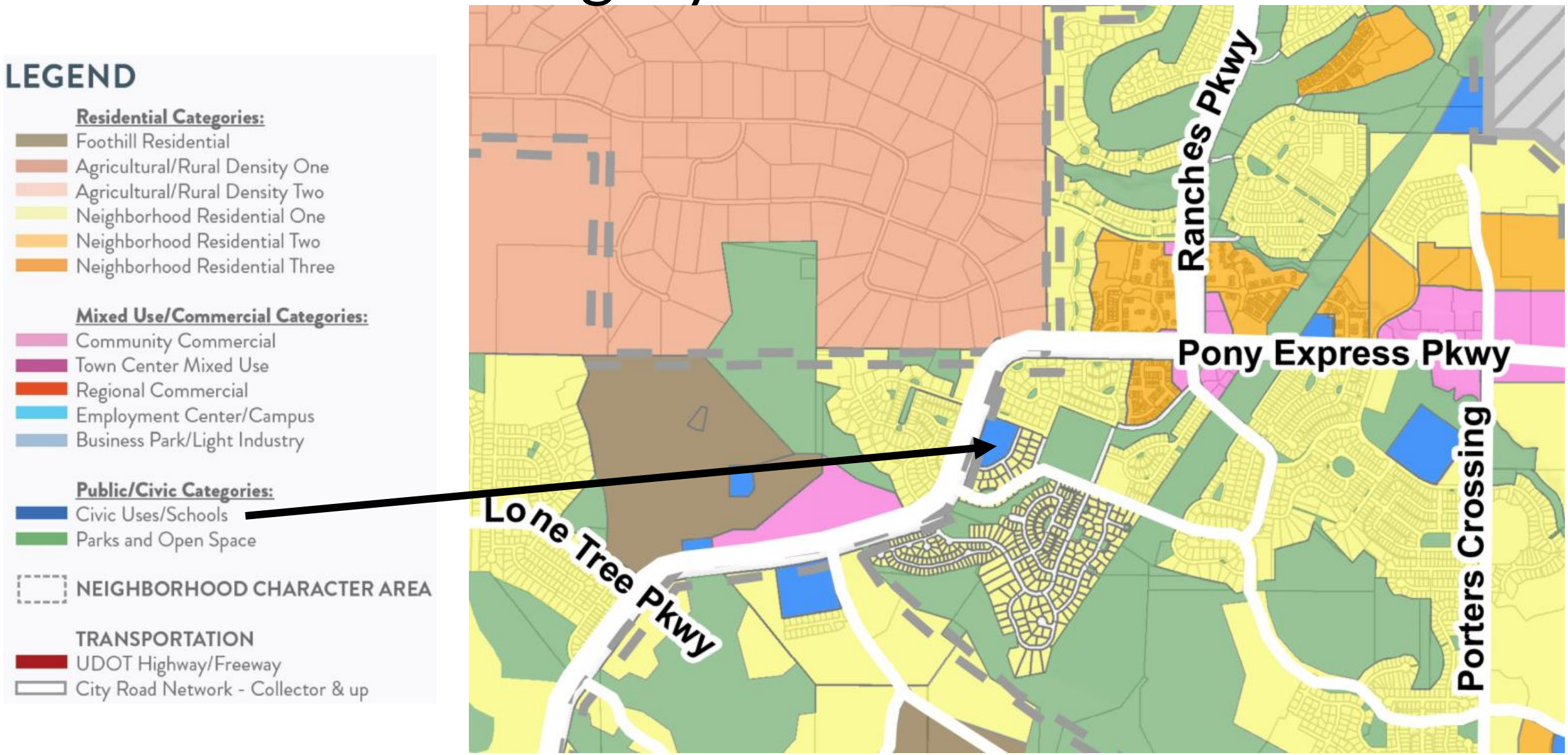
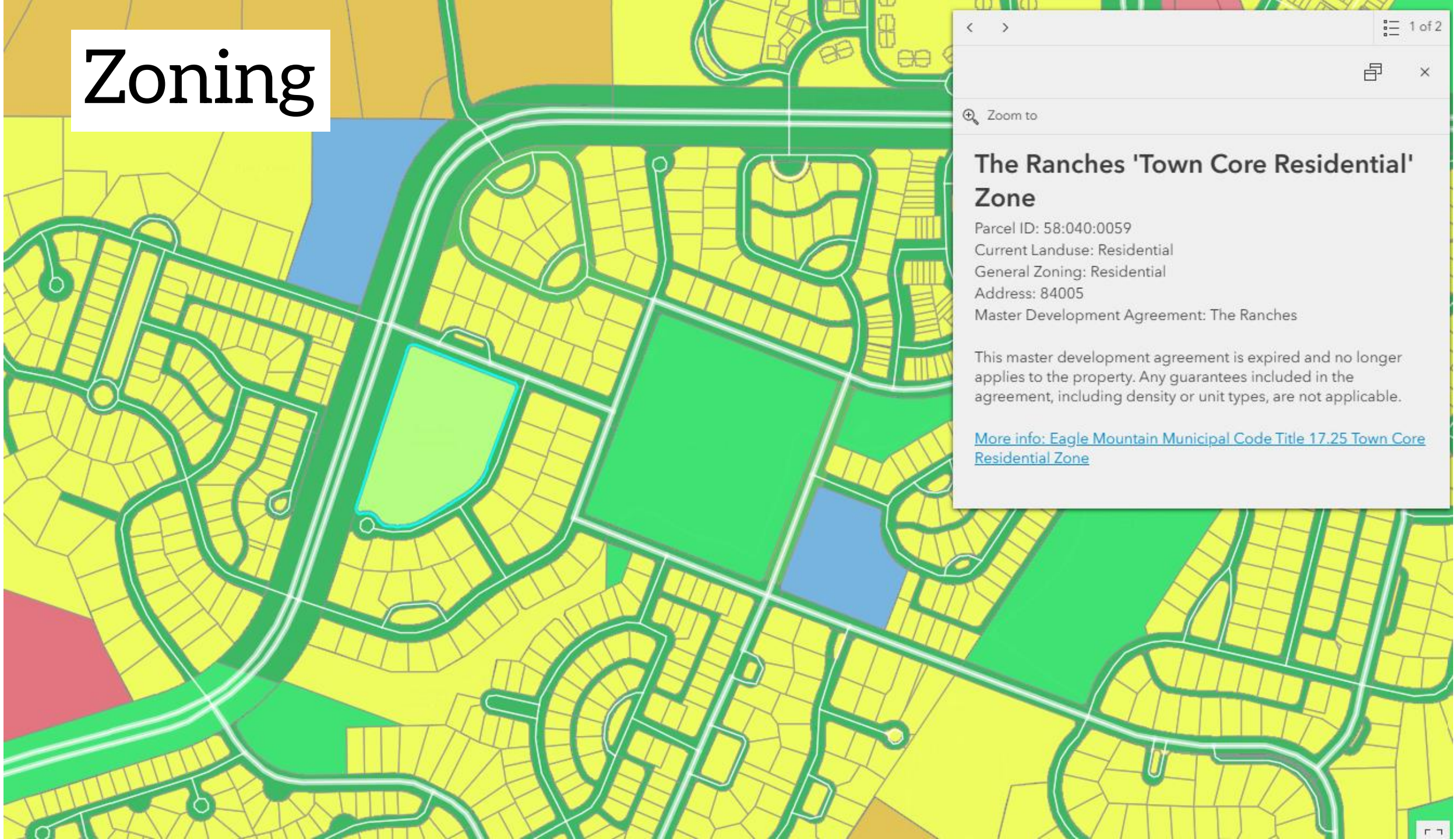
General Plan Category



Zoning


1 of 2
Zoom to
The Ranches 'Town Core Residential' Zone
Parcel ID: 58:040:0059
Current Landuse: Residential
General Zoning: Residential
Address: 84005
Master Development Agreement: The Ranches
This master development agreement is expired and no longer applies to the property. Any guarantees included in the agreement, including density or unit types, are not applicable.
More info: Eagle Mountain Municipal Code Title 17.25 Town Core Residential Zone

58:034:0244
58:034:0558
51:398:0077
51:398:0088
51:398:0001
51:364:0001
51:398:0076
58:040:0059
51:329:0001
35:610:0075
58:040:0188
45:305:0089
36:895:0001
58:040:0326
58:040:0265
41:592:0086
58:040:0366
58:040:0223
58:040:0391
58:040:0246

N Pony Express Pkwy
N Pony Express Pkwy
E Red Hawk Ranch Rd
N Tawny Owl Cir
E Tawny Owl Cir
E Goshawk Rd
7789
3061
3077
3087
3097
3107
3119
3126
2984
2992
3002
2995
2989
3142
7808
7800
7792
7778
3094
3135
3116
7745
7725
3014
3032
3044
3056

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	ASD Elementary 133 Prelim and Site Plan
ITEM TYPE:	Preliminary Plat & Site Plan
FISCAL IMPACT:	N/A
APPLICANT:	Scott Johnson, Alpine School District

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
General Plan Category: Employment Center/Campus Zone: Business Campus	13.28 Acres

PUBLIC HEARING
Yes

PREPARED BY
Steven Lehmitz, Planner

PRESENTED BY
Robert Hobbs

RECOMMENDATION:
Staff recommends that the Planning Commission forward a positive recommendation to the City Council.

BACKGROUND:
Alpine School District is proposing the construction of an additional elementary school in Eagle Mountain, located on Parcel No. 59:034:0186, directly north of the Pinnacles residential development.

ITEMS FOR CONSIDERATION:
EMMC 17.55 Off-street Parking -- N/A

EMMC 17.72.030 Site design.
A. Building Location -- N/A
B. Commercial Parking Location -- N/A

EMMC 17.100.050 Site plan development standards. The following are standards required for all site plans in any zoning district:
A. Use of Property -- Complies
B. Screening Requirements -- N/A
C. Access Requirements -- Complies
D. Off-Street Truck Loading Space -- N/A
E. Utilities -- Complies
F. Grading and Drainage -- Complies
G. Dedication of Water Shares -- N/A
H. Protection of Steep Slopes and Natural Drainages -- N/A

EMMC 17.100.060 Architectural requirements.
A. Mechanical Equipment -- N/A

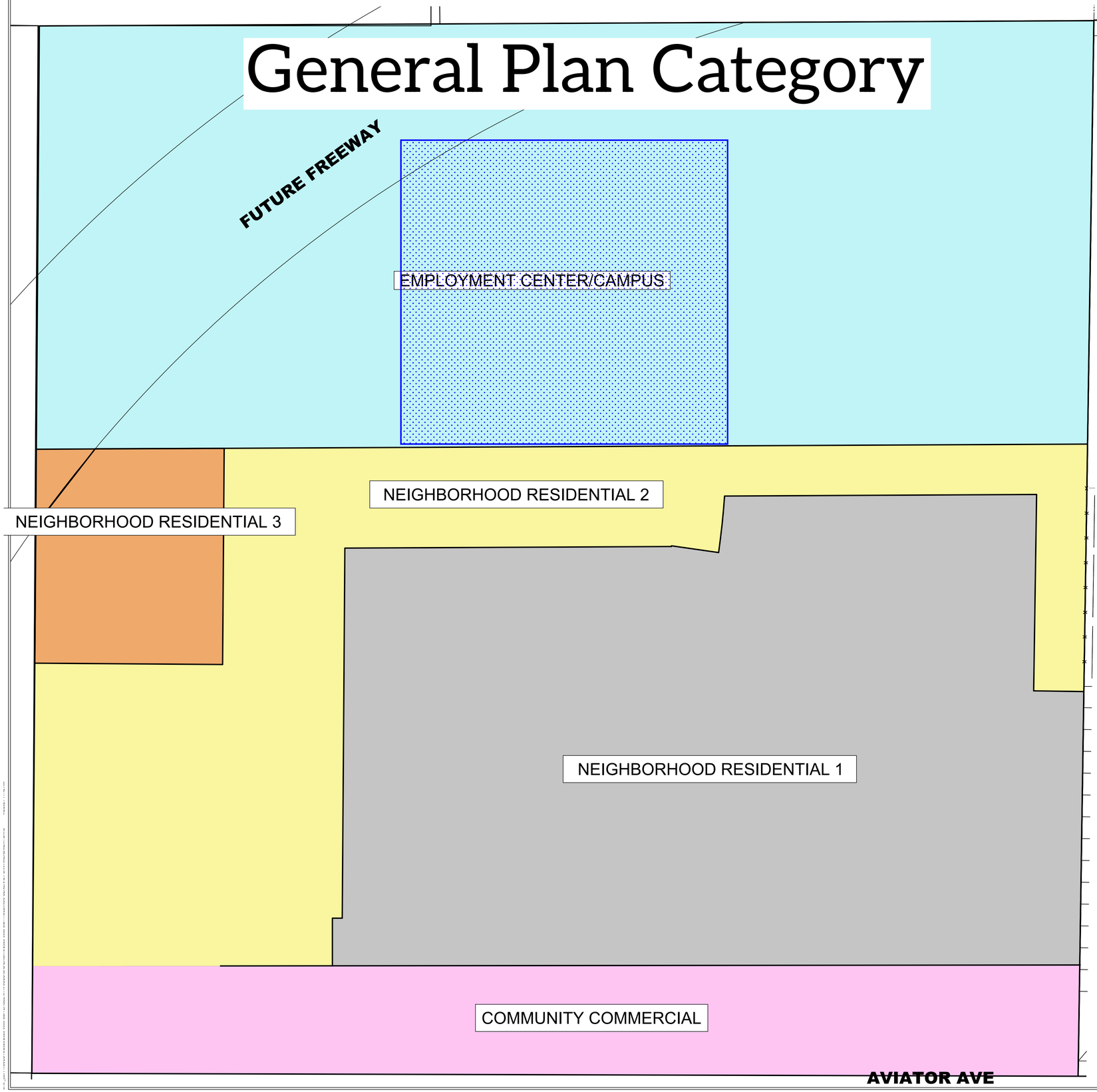
B. Windows -- N/A
C. Building Lighting -- Complies
D. Trash Enclosures, Storage Areas, and External Structures -- N/A
E. Exterior Materials -- N/A
F. Landscape Guidelines -- Complies
G. Parking Lot and Street Lighting -- Complies
H. Enclosed Uses -- N/A
I. Businesses Moving into Existing Buildings -- N/A
J. Nuisances -- Complies

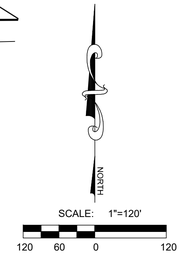
PLANNING COMMISSION ACTION/RECOMMENDATION:
N/A

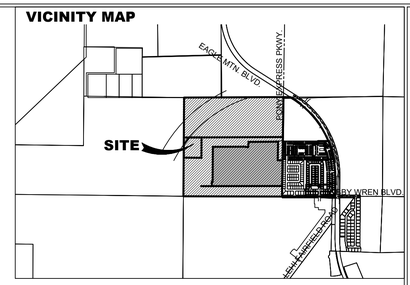
ATTACHMENTS:

1. Maps
2. Preliminary, Elevation, and Site Plans

General Plan Category






VICINITY MAP
EAGLE MTN. BLVD.
PONY EXPRESS PKWY.
SITE
TIMBERLAKE BLVD.
SILVER SAGE DR.
SILVER SAGE DR.
HIDDEN HOLLOW DR.
HIDDEN HOLLOW DR.
SILVER SAGE DR.
SILVER SAGE DR.
SILVER SAGE

Zoning

FUTURE FREEWAY

BUSINESS CAMPUS
65.34 AC

RC

MF-2

R-3

OS-I

MF-1

RC

R-2

R-2

R-3

CN
16.67 A.C

AVIATOR AVE

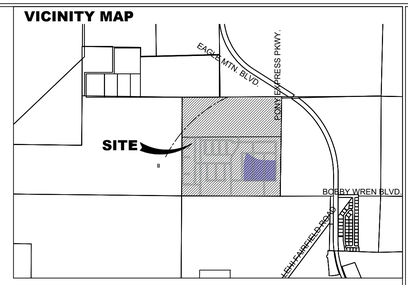
BRYLEE FARMS

NORTH

SCALE: 1"=120'

120 60 0 120

VICINITY MAP



LEGEND

- R-C
- R-3
- R-2
- MF-1
- MF-2
- BUSINESS CAMPUS
- CN
- OS-1

NOTE: THE BUSINESS CAMPUS AREA IS NOT SEEKING A REZONE AT THIS TIME.

LEI
- A Utah Corporation -
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

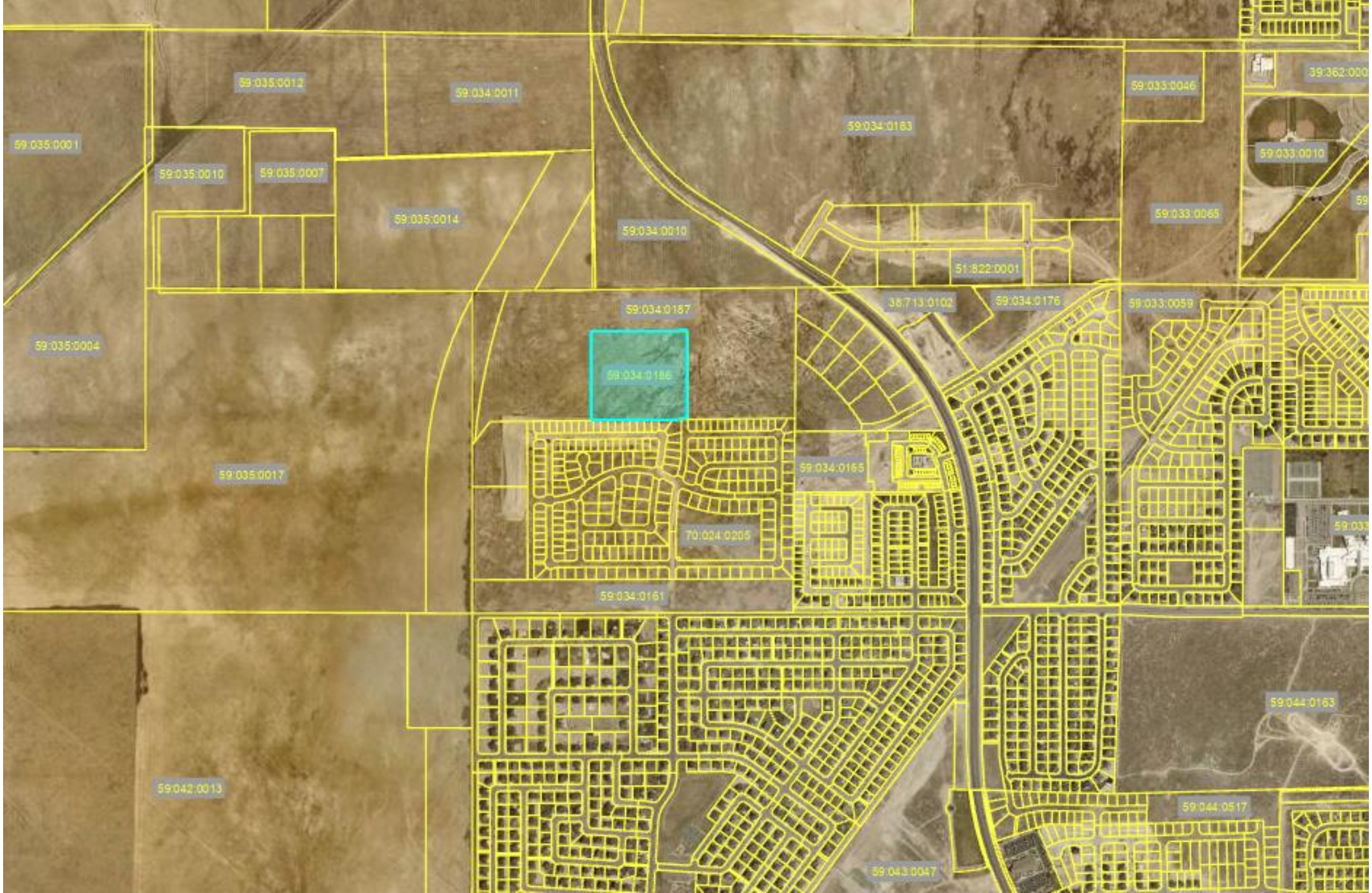
NOT FOR CONSTRUCTION

B&H HOLDINGS
EAGLE MOUNTAIN ,UTAH
REZONE EXHIBIT

REVISIONS
1 -
2 -
3 -
4 -
5 -

LEI PROJECT #: 2020-0059
DRAWN BY: DSE/BJA
DESIGNED BY: BTG
SCALE: 1"=120'
DATE: 4/5/2021

SHEET 1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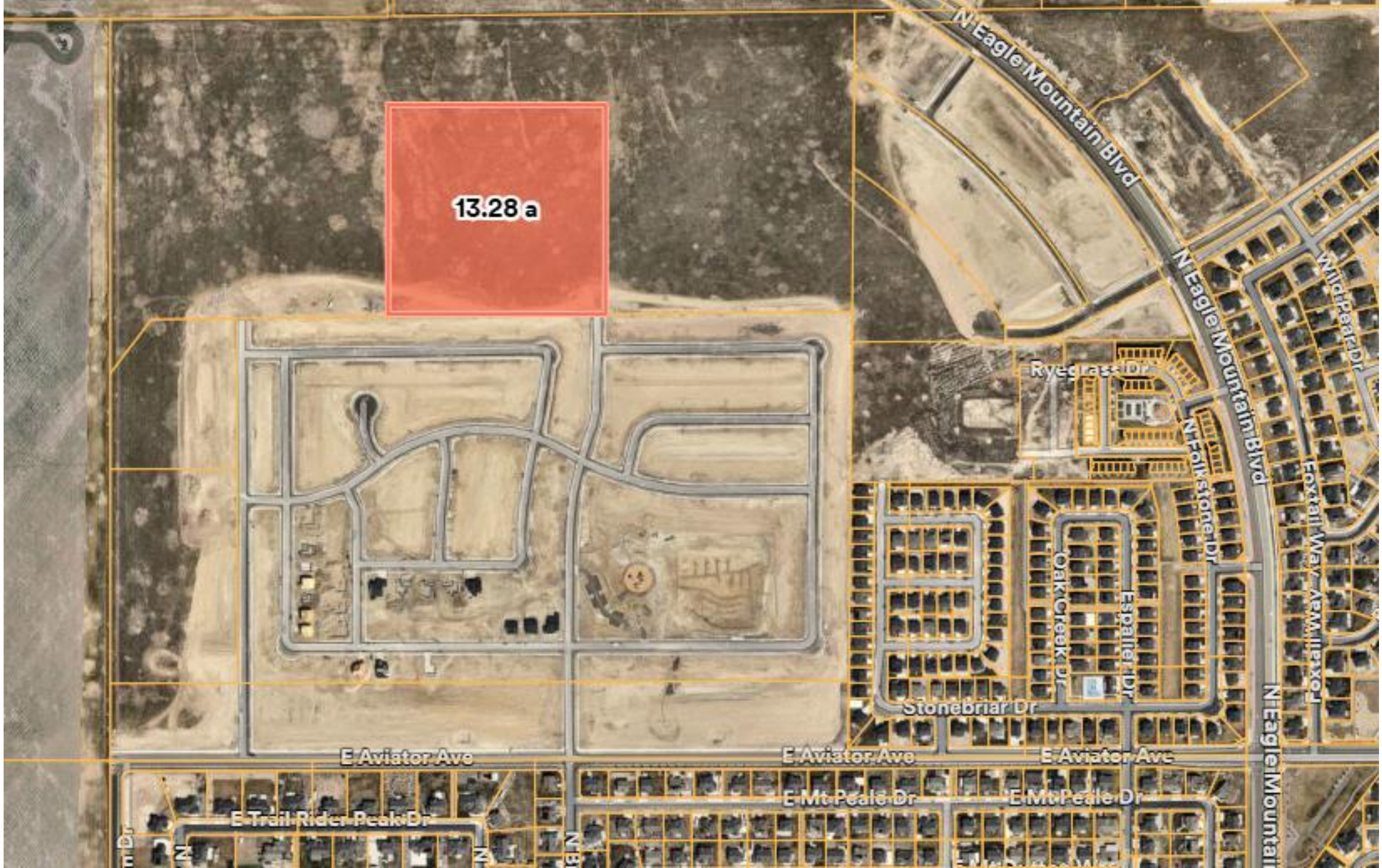
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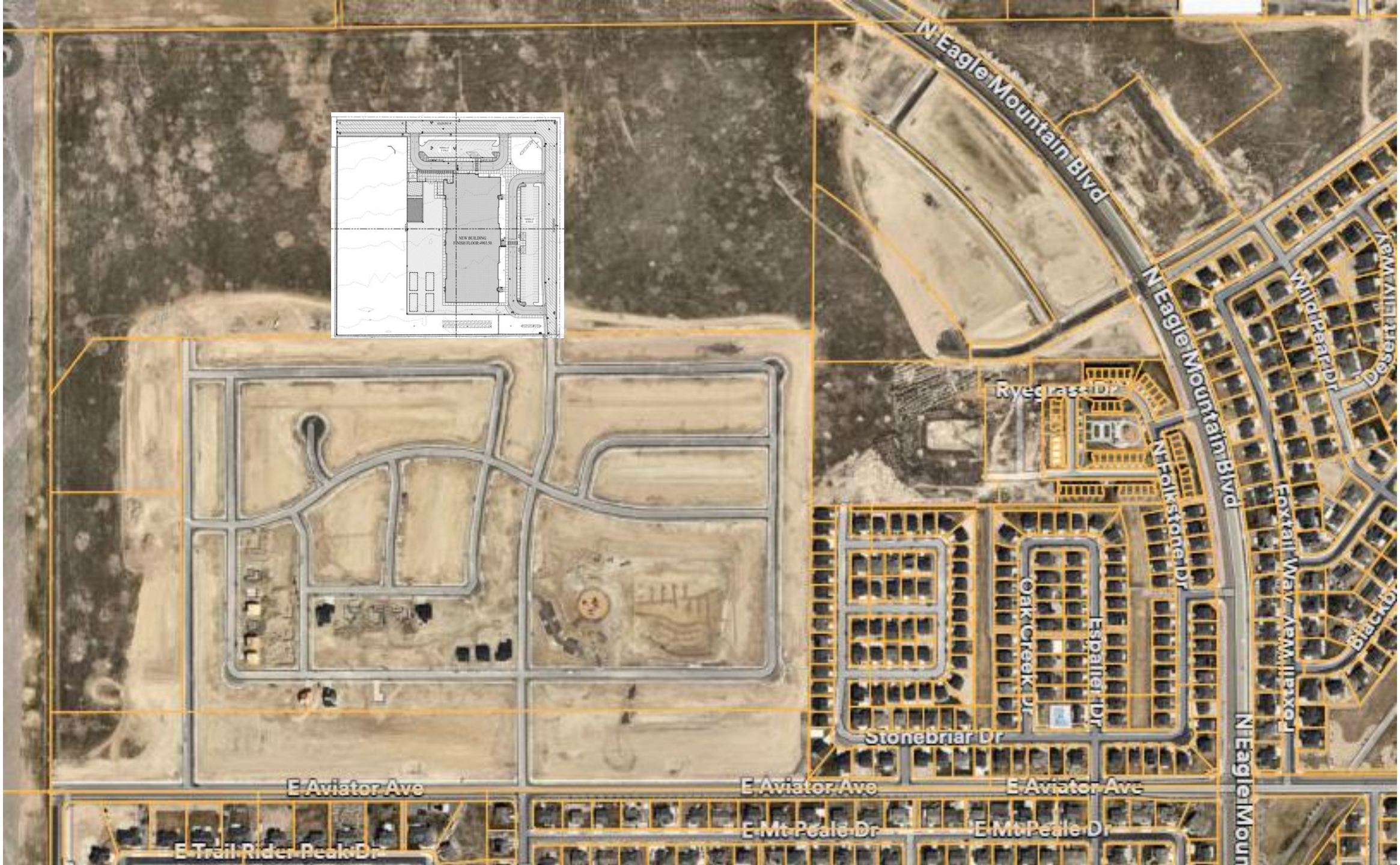
N Eagle Mountain Blvd
N Eagle Mountain Blvd
Wild Pear Dr
Ryegrass Dr
N Folkstone Dr
Foxtail Way
Armillaxo
Oak Creek Dr
Espalier Dr
Stonebriar Dr
N Eagle Mountain Blvd
E Aviator Ave
E Aviator Ave
E Aviator Ave
E Mt Peale Dr
E Mt Peale Dr
E Trail Rider Peak Dr
N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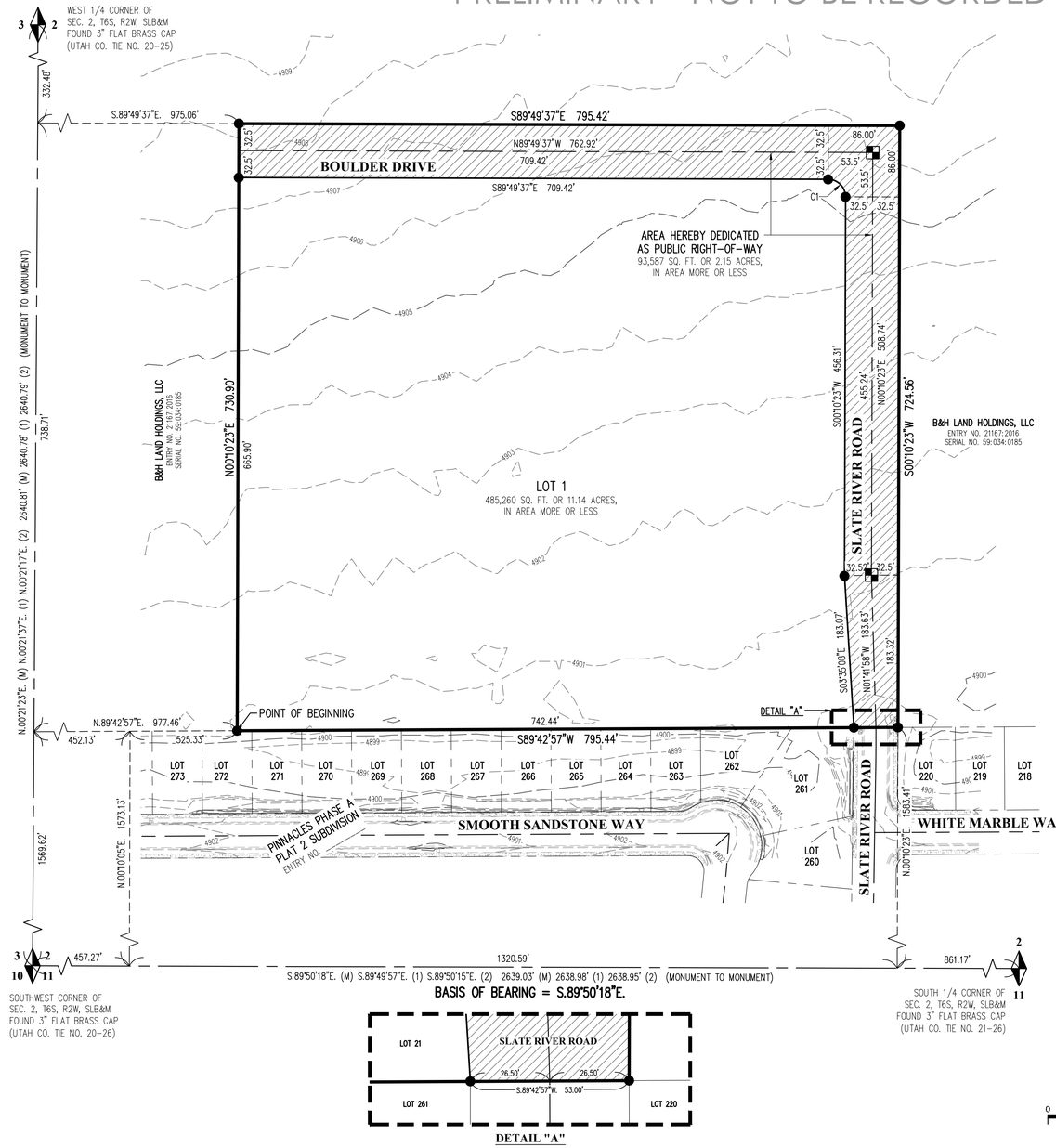
N Folkstone Dr
Foxtail Way
Foxtail Way
Stonebriar Dr
Oak Creek Dr
Espalier Dr
E Aviator Ave
E Aviator Ave
E Aviator Ave
E Mt Peale Dr
E Mt Peale Dr
E Trail Rider Peak Dr
N Eagle Mountain Blvd

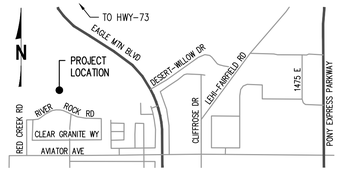
AVIATOR ELEMENTARY SCHOOL SUBDIVISION

SITUATE IN THE SOUTHWEST QUARTER OF SECTION 2,
TOWNSHIP 6 SOUTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN,
EAGLE MOUNTAIN, UTAH COUNTY, STATE OF UTAH

PRELIMINARY - NOT TO BE RECORDED



DETAIL "A"



VICINITY MAP (NTS)

LEGEND

- SUBDIVISION BOUNDARY
- SUBDIVISION LOT LINE
- ADJOINER BOUNDARY
- SECTION LINE
- ROAD CENTER LINE
- EXISTING CURB & GUTTER
- XXXX' EXISTING MAJOR CONTOUR LINE
- XXXX' EXISTING MINOR CONTOUR LINE
- DEDICATED ROADWAY
- EXISTING CONCRETE
- UNLESS OTHERWISE NOTED, SET 5/8" BY 24" REBAR WITH ORANGE PLASTIC CAP. CAP IS STAMPED "MERIDIAN 801-569-1315"
- STREET MONUMENT TO BE SET
- FOUND SECTION CORNER

SURVEY NOTES:
1. 5/8" X 24" REBAR WITH AN ORANGE PLASTIC CAP STAMPED "MERIDIAN 801-569-1315" TO BE PLACED AT ALL OTHER LOT CORNERS.

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD BEARING	CHORD LENGTH
C1	21.00'	90°00'00"	32.99'	S44°49'37"E	29.70'

PLAT CALCULATIONS		
INFORMATION	ACRES	NOTES
TOTAL ACREAGE	13.29	LOT AND ROADWAY
BUILDABLE ACREAGE	–	–
TOTAL ACREAGE IN LOTS	11.08	1 LOT
TOTAL OPEN SPACE	–	–
TOTAL IMPROVED OPEN SPACE	–	–
AVERAGE LOT SIZE	11.08	–
LARGEST LOT SIZE	11.08	–
SMALLEST LOT SIZE	11.08	–
OVERALL DENSITY	–	–
TOTAL # OF LOTS	1	1 LOT

DIRECT COMMUNICATIONS

DIRECT COMMUNICATIONS CEDAR VALLEY, LLC CERTIFIES THAT IT WILL PROVIDE TELECOMMUNICATIONS SERVICES TO THIS SUBDIVISION UTILIZING THE TRENCHES PROVIDED BY THE DEVELOPER AS PER THE DIRECT COMMUNICATIONS CEDAR VALLEY P.S.C. UTAH NO. 1 TARIFF.

DIRECT COMMUNICATIONS _____ DATE _____

SURVEYOR'S CERTIFICATE

I, TRAVIS R. WILLIAMS, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, HOLDING CERTIFICATE NUMBER 13941945, IN ACCORDANCE WITH TITLE 58, CHAPTER 22, OF THE PROFESSIONAL ENGINEERS AND LAND SURVEYORS ACT; I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS I HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED ON THIS SUBDIVISION PLAT IN ACCORDANCE WITH SECTION 17-23-17, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, A PARCEL AND STREETS, TOGETHER WITH EASEMENTS HEREAFTER TO BE KNOWN AS: "AVIATOR ELEMENTARY SCHOOL SUBDIVISION" AND THAT THE SAME HAS BEEN CORRECTLY MONUMENTED ON THE GROUND AS SHOWN ON THIS PLAT.

PROFESSIONAL LAND SURVEYOR PLS NO. 13941945 06/04/2025 TRAVIS R. WILLIAMS STATE OF UTAH

TRAVIS R. WILLIAMS
PLS NO. 13941945
DATE OF PLAT: JUNE 4, 2025

LEGAL DESCRIPTION

A PARCEL ON LAND, UPON AN ENTIRE TRACT OF PROPERTY AS DESCRIBED IN WARRANTY DEED IN FAVOR OF B&H HOLDINGS, LLC RECORDED AS ENTRY NO. 21167:2016 IN THE OFFICE OF THE UTAH COUNTY RECORDER, SITUATE IN SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 SOUTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN, IN UTAH COUNTY, UTAH. THE BOUNDARIES OF SAID PARCEL OF LAND ARE DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHERLY BOUNDARY LINE OF PROPERTY DESCRIBED IN SPECIAL WARRANTY DEED IN FAVOR OF CENTURY LAND HOLDINGS OF UTAH, LLC RECORDED AS ENTRY NO. 196901:2021 IN THE OFFICE OF THE UTAH COUNTY RECORDER, SAID POINT IS 457.27 FEET S.89°49'57"E. ALONG THE SECTION LINE TO THE INTERSECTION OF SAID SECTION LINE AND THE WESTERLY BOUNDARY LINE OF PINNACLES PHASE A PLAT 1 SUBDIVISION RECORDED AS ENTRY NO. 61510:2024 IN THE OFFICE OF THE UTAH COUNTY RECORDER AND 1573.13 FEET N.00°10'05"E. ALONG SAID WESTERLY BOUNDARY LINE AND ITS EXTENSION TO THE NORTHWEST CORNER OF SAID DESCRIBED PROPERTY AND 525.33 FEET N.89°42'57"E. ALONG SAID NORTHERLY BOUNDARY LINE FROM THE SOUTHWEST CORNER OF SAID SECTION 2 (BASIS OF BEARING IS S.89°50'18"E. ALONG THE SECTION LINE BETWEEN THE FOUND MONUMENTS REPRESENTING THE SOUTHWEST CORNER AND THE SOUTH QUARTER CORNER OF SAID SECTION 2); AND RUNNING THENCE N.00°10'23"E. 730.90 FEET; THENCE S.89°49'37"E. 795.42 FEET; THENCE S.00°10'23"W. 724.55 FEET TO A POINT IN SAID NORTHERLY BOUNDARY LINE; THENCE ALONG SAID NORTHERLY BOUNDARY LINE S.89°42'57"W. 795.44 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL OF LAND CONTAINS 578,847 SQUARE FEET OR 13.29 ACRES IN AREA, MORE OR LESS.

SURVEYOR'S NARRATIVE

IT IS THE INTENT OF THIS PLAT AND THE SURVEY ON WHICH IT IS BASED TO CORRECTLY REPRESENT THE BOUNDARY LINES AND PROPERTY CORNERS OF THE SUBJECT PARCEL. IT IS ALSO THE INTENT OF THIS PLAT TO SUBDIVIDE THE SUBJECT PROPERTY INTO 1-LOT AND STREETS. THE BASIS OF BEARING FOR THIS SURVEY IS S.89°50'18"E. ALONG THE SECTION LINE BETWEEN THE MONUMENTS REPRESENTING THE SOUTHWEST CORNER AND THE SOUTH QUARTER CORNER OF SECTION 2, TOWNSHIP 6 SOUTH, RANGE 2 WEST, SALT LAKE BASE & MERIDIAN. THE FIELD DATA FOR THIS SURVEY WAS COLLECTED IN APRIL OF 2025.

AS PART OF THIS SURVEY, MERIDIAN HAS CONDUCTED FIELD SEARCHES FOR EVIDENCE AND MONUMENTATION. FOUND EVIDENCE AND MONUMENTATION IS REPRESENTED HEREON. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS PART OF THIS SURVEY IS NOTED BELOW. THERE MAY EXIST OTHER EVIDENCE, MONUMENTATION AND DOCUMENTS THAT COULD AFFECT THIS SURVEY, ANY NEW EVIDENCE, MONUMENTATION OR DOCUMENTS CONTRADICTORY TO THIS SURVEY SHOULD BE PRESENTED TO THE SURVEYOR FOR HIS REVIEW AND CONSIDERATION.

(1) PINNACLES PHASE A PLAT 2 SUBDIVISION: ENTRY NO. _____:2025.
(2) UTAH COUNTY SURVEYOR'S STATE PLANE COORDINATE & DEPENDENT RESURVEY OF THE NORTHEAST QUARTER OF T.6S., R.2W., S.L.B.&M.
*NOTE: ABOVE REFERENCED DOCUMENTS ARE SHOWN HEREON AS (#) ON THE FACE OF THE PLAT.

(M) BEARING AND/OR DISTANCE DATA TAKEN FROM SURVEYED MEASUREMENTS.
(C) BEARING AND/OR DISTANCE DATA TAKEN FROM SURVEYED MEASUREMENTS COUPLED WITH RECORD INFORMATION.

OWNER'S DEDICATION AND CONSENT TO RECORD

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED ARE OWNER OF THE ABOVE DESCRIBED TRACT OF LAND, AND HEREBY CAUSE THE SAME TO BE DIVIDED INTO A LOT AND STREETS TOGETHER WITH EASEMENTS AS SET FORTH TO BE HEREAFTER KNOWN AS

AVIATOR ELEMENTARY SCHOOL SUBDIVISION

AND DOES HEREBY DEDICATE FOR THE PERPETUAL USE OF THE PUBLIC, ALL ROADS AND OTHER AREAS SHOWN ON THIS PLAT AS INTENDED FOR PUBLIC USE. THE UNDERSIGNED OWNERS ALSO HEREBY CONVEYS TO EAGLE MOUNTAIN CITY AND TO ANY AND ALL PUBLIC UTILITY COMPANIES A PERPETUAL NON-EXCLUSIVE EASEMENT OVER THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, THE SAME TO BE USED FOR THE INSTALLATION, MAINTENANCE AND OPERATION OF UTILITY LINES AND FACILITIES. THE UNDERSIGNED OWNER ALSO HEREBY CONVEYS ANY OTHER EASEMENTS AS SHOWN AND/OR NOTED ON THIS PLAT TO THE PARTIES INDICATED AND FOR THE PURPOSES SHOWN HEREON.

DATED THIS _____ DAY OF _____ A.D. 2025. OWNER: ALPINE SCHOOL DISTRICT

BY: _____

ITS: _____

ACKNOWLEDGMENT
(ALPINE SCHOOL DISTRICT)

STATE OF UTAH } S.S.
COUNTY OF UTAH }

ON THIS _____ DAY OF _____, 2025, PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR SAID COUNTY OF UTAH, _____, WHO, BEING BY ME DULY SWORN, DID SAY THAT HE/SHE IS THE _____ OF _____,AND THAT THE FOREGOING OWNER'S DEDICATION WAS SIGNED FOR, AND IN BEHALF OF, SAID BOARD OF EDUCATION, AND HE/SHE ACKNOWLEDGED TO ME THAT SAID UNIVERSITY EXECUTED THE SAME.

NOTARY PUBLIC NAME _____
COMMISSION NUMBER _____
MY COMMISSION EXPIRES _____
A NOTARY PUBLIC COMMISSIONED IN UTAH

_____ NOTARY PUBLIC

APPROVAL BY LEGISLATIVE BODY

THE CITY COUNCIL OF THE CITY OF EAGLE MOUNTAIN, COUNTY OF UTAH, APPROVES THIS SUBDIVISION SUBJECT TO THE CONDITIONS AND RESTRICTIONS STATED HEREON, AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR THE PUBLIC PURPOSE OF THE PERPETUAL USE OF THE PUBLIC.

THIS _____ DAY OF _____, A.D. 2025.

_____ CITY MAYOR

_____ CITY ENGINEER

_____ CITY ATTORNEY

_____ ATTEST: CITY RECORDER

COMCAST

[COMCAST ENTITY] APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. [COMCAST ENTITY] DOES NOT WARRANT THE LOCATION OF ANY PUBLIC UTILITY EASEMENTS. THIS APPROVAL DOES NOT MODIFY, AFFECT, OR WAIVE ANY RIGHTS, OBLIGATIONS, OR LIABILITIES PROVIDED BY LAW OR EQUITY OR UNDER ANY EASEMENTS, RIGHTS-OF-WAY, AGREEMENTS, OR LAWS, INCLUDING, WITHOUT LIMITATION, ANY LAWS APPLICABLE TO PRESCRIPTIVE RIGHTS. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL, OR ACKNOWLEDGEMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH IN THE OWNER'S DEDICATION AND NOTES, AND DOES NOT CONSTITUTE A GUARANTEE OR PROVISION OF TELECOMMUNICATIONS SERVICES OF THE TERMS OF SUCH SERVICES.

APPROVED THIS_____ DAY OF_____ 2025.

BY_____

TITLE_____
COMCAST REPRESENTATIVE

ENBRIDGE GAS UTAH

QUESTAR GAS COMPANY, DBA ENBRIDGE GAS UTAH ("ENBRIDGE"), APPROVES THIS PLAT SOLELY TO CONFIRM THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. ENBRIDGE MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT (A) AFFECT AND RIGHT ENBRIDGE HAS UNDER TITLE 54, CHAPTER 8A, A RECORDED EASEMENT OR RIGHT OF WAY, PRESCRIPTIVE RIGHTS, OR ANY PROVISION OF LAW; (B) CONSTITUTE ACCEPTANCE OF ANY TERMS CONTAINED IN ANY PORTION OF THE PLAT; AND (C) GUARANTEE ANY TERMS OR WAIVE ENBRIDGE'S RIGHT TO REQUIRE ADDITIONAL EASEMENTS FOR GAS SERVICE.

APPROVED THIS_____ DAY OF _____2025.

BY_____

TITLE_____
QUESTAR GAS COMPANY
DBA ENBRIDGE GAS UTAH

ROCKY MOUNTAIN POWER

1. PURSUANT TO UTAH CODE ANN. 54-3-27 THIS PLAT CONVEYS TO THE OWNER(S) OR OPERATORS OF UTILITY FACILITIES A PUBLIC UTILITY EASEMENT ALONG WITH ALL THE RIGHTS AND DUTIES DESCRIBED THEREIN.

2. PURSUANT TO UTAH CODE ANN. 10-9A-603 ROCKY MOUNTAIN POWER ACCEPTS DELIVERY OF THE P.U.E. AS DESCRIBED IN THIS PLAT AND APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS AND APPROXIMATES THE LOCATION OF THE PUBLIC UTILITY EASEMENTS, BUT DOES NOT WARRANT THEIR PRECISE LOCATION. ROCKY MOUNTAIN POWER MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT AFFECT ANY RIGHT THAT ROCKY MOUNTAIN HAS UNDER:

a. A RECORDED EASEMENT OR RIGHT-OF-WAY
b. THE LAW APPLICABLE TO PRESCRIPTIVE RIGHTS
c. TITLE 54, CHAPTER 8A DAMAGE TO UNDERGROUND UTILITY FACILITIES OR
d. ANY OTHER PROVISION OF LAW

APPROVED THIS_____ DAY OF_____ 2025.

_____
ROCKY MOUNTAIN POWER

RECORDED OWNER:

ALPINE SCHOOL DISTRICT
575 NORTH 100 EAST,
AMERICAN FORK, UTAH 84003

AVIATOR ELEMENTARY SCHOOL SUBDIVISION

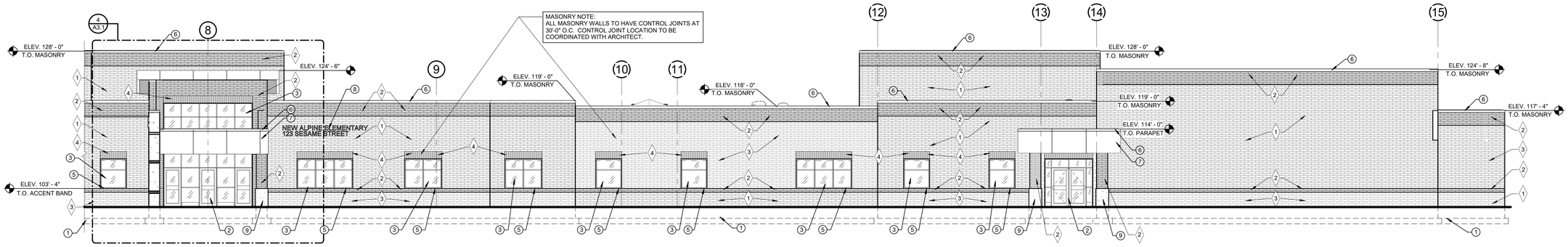
SITUATE IN THE SOUTHWEST QUARTER OF SECTION 2,
TOWNSHIP 6 SOUTH, RANGE 2 WEST, SALT LAKE BASE AND MERIDIAN,
EAGLE MOUNTAIN, UTAH COUNTY, STATE OF UTAH

PREPARED BY:

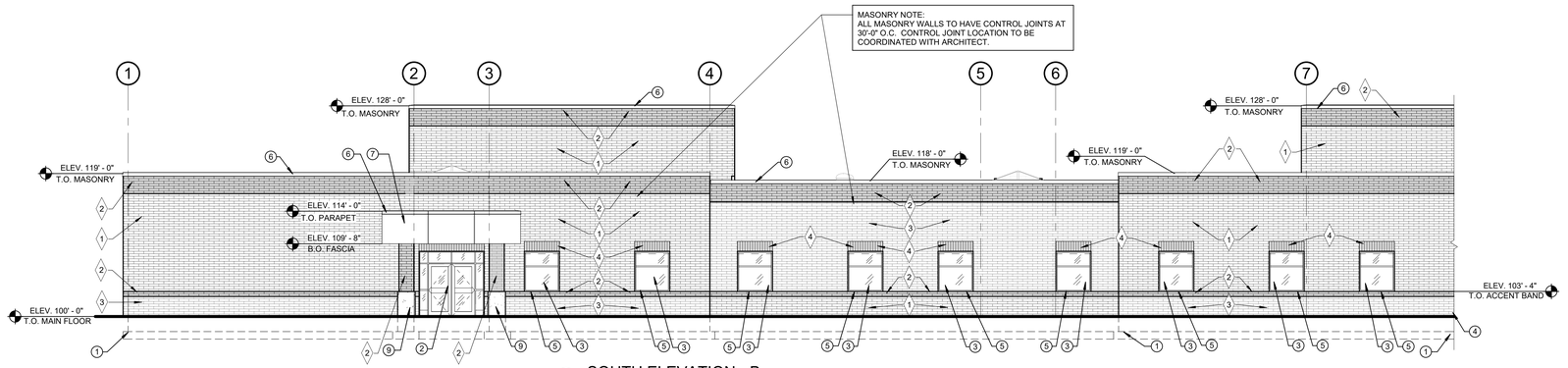
MERIDIAN ENGINEERING, INC.
1628 WEST 11010 SOUTH, SUITE 102
SOUTH JORDAN, UTAH 84095
PHONE (801) 569-1315 FAX (801) 569-1319

SURVEYORS SEAL	CITY ENGINEER SEAL	CLERK-RECORDER SEAL	COMP. FILE 25050 PRELMINARY PLAT
			PROJECT NO. 25050
			SHEET NO. 1 OF 1

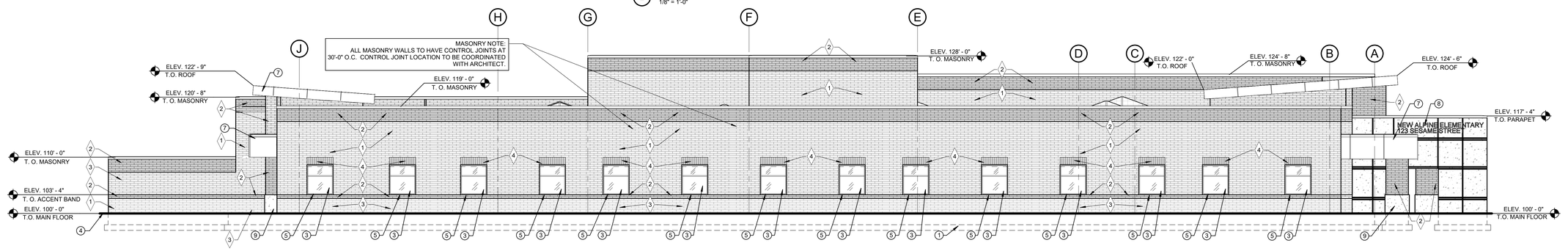
U:\Projects\2025\25050-NL\+MH+\SD\+Aviator Elementary\25050 (dwg)\25050_Preliminary Plat.dwg, Jun 04, 2025 - 3:44pm



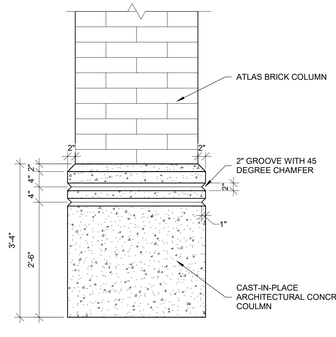
1 SOUTH ELEVATION - A
1/8" = 1'-0"



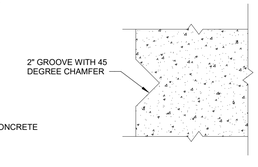
2 SOUTH ELEVATION - B
1/8" = 1'-0"



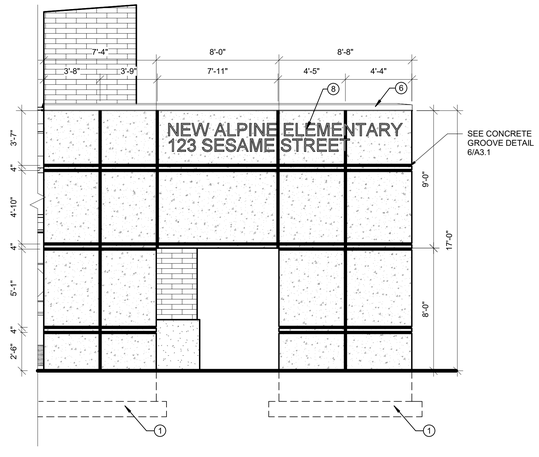
3 EAST ELEVATION
1/8" = 1'-0"



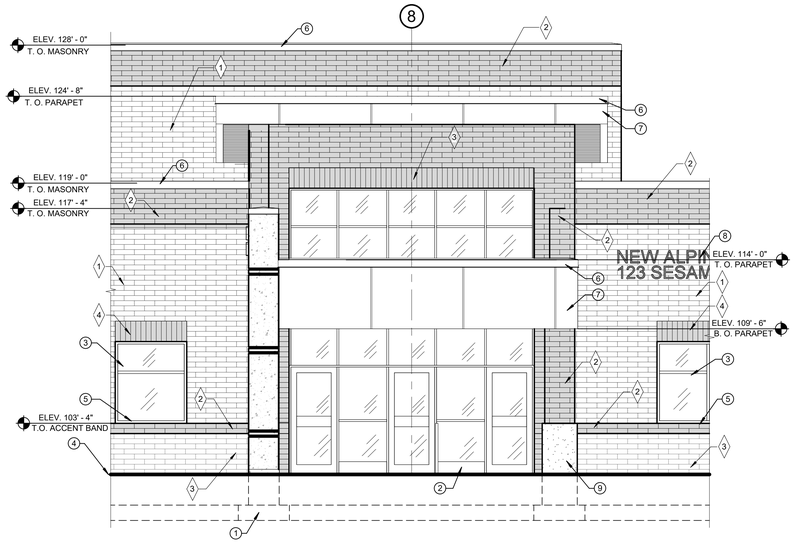
7 CONCRETE COLUMN BASE
3/4" = 1'-0"



6 CONCRETE WALL GROOVE DETAIL
NO SCALE



5 ARCHITECTURAL CONCRETE WALL DETAIL
1/4" = 1'-0"



4 SOUTH ELEVATION - ENTRY
1/4" = 1'-0"

SHEET NOTES

1 - CONCRETE FOOTINGS AND FOUNDATION WALLS - SEE STRUCTURAL SHEETS FOR SIZE AND REINFORCING.

2 - ALUMINUM DOOR SYSTEM - SEE DOOR SCHEDULE.

3 - ALUMINUM WINDOW - SEE WINDOW TYPES.

4 - APPROXIMATE EXISTING GRADE

5 - PRE-FINISHED METAL WINDOW SILL FLASHING - SEE DETAILS 1 & 4/A5.4

6 - PRE-FINISHED METAL WALL CAP - COLOR AS SELECTED BY ARCHITECT.

7 - PRE-FINISHED METAL FASCIA COMPOSITE PANELS OVER 1/2" DENZ GLASS COLOR AS SELECTED BY ARCHITECT - SEE SPECS.

8 - CAST METAL BUILDING LETTERS. NAME OF SCHOOL AND ADDRESS AS SHOWN ON ELEVATIONS BUILDING LETTERS SHALL BE CENTER JUSTIFIED - SEE SPECS.

9 - CAST-IN-PLACE ARCHITECTURAL CONCRETE COLUMN BASE - SEE DETAIL 7/A3.1 & SEE SPECS

SOILS NOTE

ALL UNDOCUMENTED FILL MUST BE REMOVED AND REPLACED WITH STRUCTURAL FILL COMPACTED TO 95% FROM UNDER THE BUILDING FOOTPRINT. SEE THE GEOLOGICAL REPORT THAT INDICATED STRUCTURAL FILL TO BE PLACED TO 4'-0" UNDER BOTTOM OF FOOTING ELEVATIONS

MASONRY SCHEDULE

1 ATLAS BRICK (FIRST COLOR) - "IRON STONE" - MATTE FINISH

2 ATLAS BRICK (SECOND COLOR) - "MIDNIGHT BLACK" - MATTE FINISH

3 ATLAS BRICK (THIRD COLOR) - "PLATIMUM" - MATTE FINISH

4 SOLIDER COURSE ATLAS BRICK (ACCENT COLOR) - "MIDNIGHT BLACK" - MATTE FINISH

170 NORTH MAIN STREET
STANSBURY PARK, UTAH 84074
WWW.KMAARCHITECTS.COM

KMA ARCHITECTS

STATE OF UTAH
WES CHRISTENSEN
No. 9499562-0301
6-9-25
LICENSED ARCHITECT

REVISIONS:

PROJECT TITLE
ALPINE SCHOOL DISTRICT
ELEMENTARY #133
APPROX. N SLATE RIVER ROAD
EAGLE MOUNTAIN, UTAH

DRAWN BY: JH
CHECKED BY: WC
DATE: JUNE 2025
PROJECT #: 176025

A3.1

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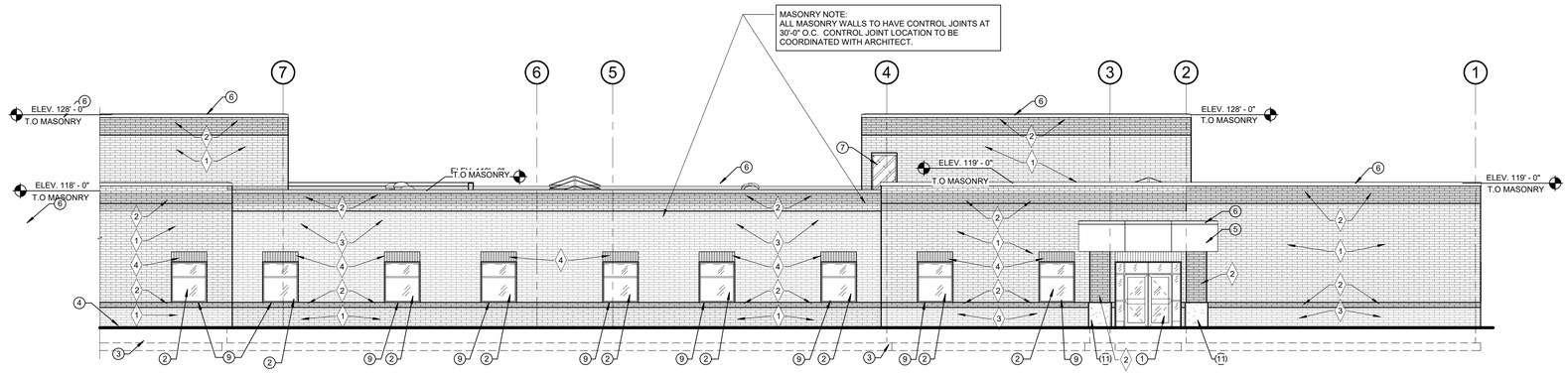
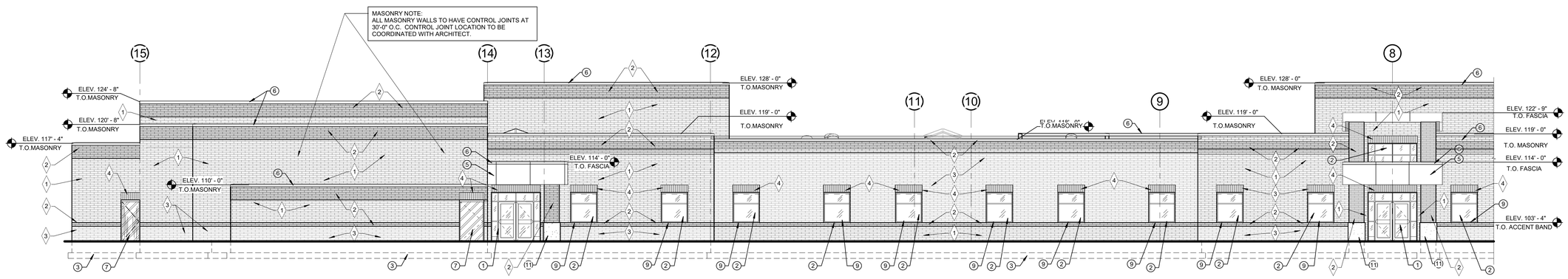
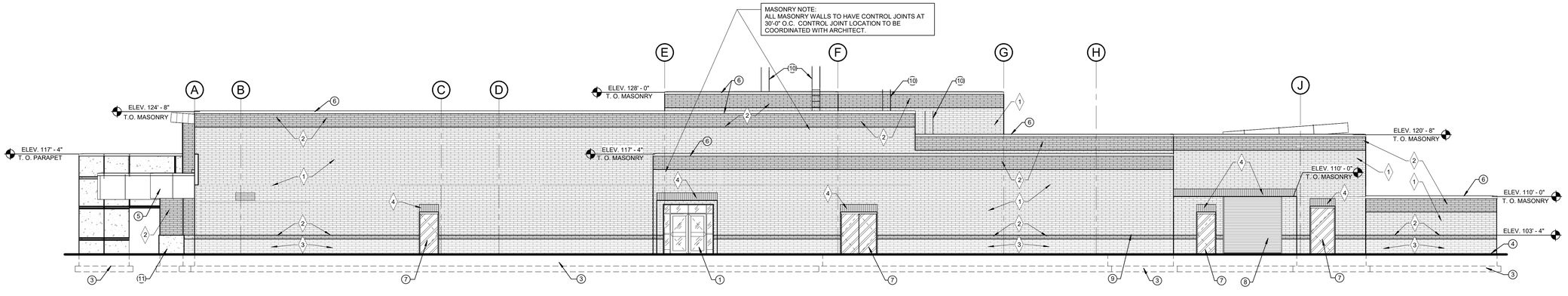
6/9/2025 5:48:11 PM As indicated



1 NORTH ELEVATION - A
1/8" = 1'-0"



2 NORTH ELEVATION - B
1/8" = 1'-0"



3 WEST ELEVATION
1/8" = 1'-0"

SHEET NOTES

1 - ALUMINUM DOOR SYSTEM - SEE DOOR SCHEDULE.

2 - ALUMINUM WINDOW - SEE WINDOW TYPES.

3 - CONCRETE FOOTINGS AND FOUNDATION WALLS - SEE STRUCTURAL SHEETS FOR SIZE AND REINFORCING.

4 - APPROXIMATE EXISTING GRADE

5 - PRE-FINISHED METAL FASCIA COMPOSITE PANELS OVER 1/2" DENZ GLASS COLOR AS SELECTED BY ARCHITECT - SEE SPECS.

6 - PRE-FINISHED METAL WALL CAP - COLOR AS SELECTED BY ARCHITECT.

7 - HOLLOW METAL DOOR AND FRAME (PAINTED) - SEE DOOR SCHEDULE. COLOR AS SELECTED BY ARCHITECT.

8 - PRE-FINISHED OVERHEAD ROLL-UP DOOR - SEE DOOR TYPES.

9 - PRE-FINISHED METAL WINDOW SILL FLASHING - SEE DETAILS 1 & 4/A5.4

10 - PRE-FABRICATED STEEL ROOF LADDER - SEE DETAIL 5/A2.4.

11 - CAST-IN-PLACE ARCHITECTURAL CONCRETE COLUMB BASE - SEE DETAIL 7/A3.1 & SEE SPECS

SOILS NOTE

ALL UNDOCUMENTED FILL MUST BE REMOVED AND REPLACED WITH STRUCTURAL FILL COMPACTED TO 95% FROM UNDER THE BUILDING FOOTPRINT. SEE THE GEOLOGICAL REPORT THAT INDICATED STRUCTURAL FILL TO BE PLACED TO 4'-0" UNDER BOTTOM OF FOOTING ELEVATIONS

MASONRY SCHEDULE

1 ATLAS BRICK (FIRST COLOR) - "IRON STONE" - MATTE FINISH

2 ATLAS BRICK (SECOND COLOR) - "MIDNIGHT BLACK" - MATTE FINISH

3 ATLAS BRICK (THIRD COLOR) - "PLATIMUM" - MATTE FINISH

4 SOLIDER COURSE ATLAS BRICK (ACCENT COLOR) - "MIDNIGHT BLACK" - MATTE FINISH

170 NORTH MAIN STREET
SPANISH FORK, UTAH 84660
WWW.KMAARCHITECTS.COM
KMA ARCHITECTS

STATE OF UTAH
WESLEY CHRISTENSEN
No. 9469810-2202
6-6-25
LICENSED ARCHITECT

REVISIONS:

PROJECT TITLE
ALPINE SCHOOL DISTRICT
ELEMENTARY #133
APPROX. N SLATE RIVER ROAD
EAGLE MOUNTAIN, UTAH

DRAWN BY:	JH
CHECKED BY:	WC
DATE:	JUNE 2025
PROJECT #:	176025

A3.2

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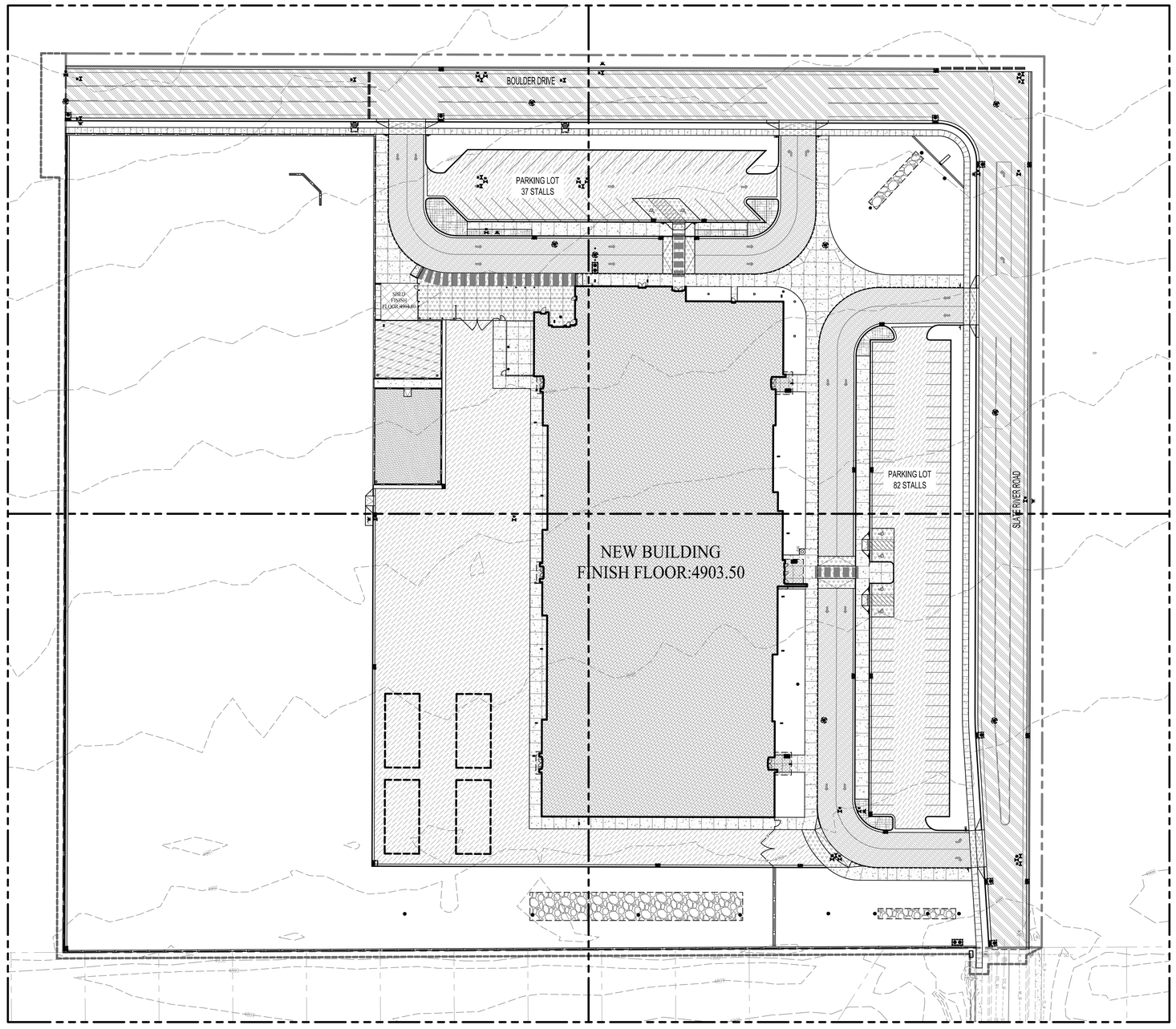
6/9/2025 9:48:16 PM 1/8" = 1'-0"

CS234 CS231



CS233 CS232

0 40 80

SCALE 1"=40'

GENERAL SITE LAYOUT NOTES:

1. REFER TO ARCHITECTURAL SITE PLAN FOR DETAIL OF DUMPSTER ENCLOSURE.
2. REFER TO ELECTRICAL PLANS FOR TRANSFORMER LOCATIONS AND LIGHTING.
3. REFER TO LANDSCAPE PLANS FOR LAYOUT OF PLANTINGS.
4. VERIFY THE GRID DISTANCES SHOWN FOR BUILDING LOCATIONS WITH ARCH PLANS.
5. ALL PAVEMENT REPAIR TO MEET REQUIREMENT STANDARD DETAILS ON C100.
6. TRANSITION CURB FROM STANDARD CURB HEIGHT TO CURB TERMINATION OVER 6' MINIMUM AT ALL LOCATIONS.
7. REPAIR/CONSTRUCT DRIVE APPROACHES PER CITY STANDARDS.
8. CURVE AND LINE DATA IS BASED ON THE TOP BACK OF CURB AND FRONT OF SIDEWALK.
9. THE PROJECT LIMIT LINE, ALSO REFERRED TO AS THE CIVIL ASSUMED AREA OF DISTURBANCE, IS INTENDED TO REPRESENT THE GENERAL EXTENT OF AREAS POTENTIALLY IMPACTED BY CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO MATERIAL STORAGE, EQUIPMENT ACCESS, AND WORK OPERATIONS ASSOCIATED WITH CIVIL SCOPE. THIS LINE IS BASED ON CIVIL DESIGN ASSUMPTIONS AND IS NOT NECESSARILY EXHAUSTIVE. ADDITIONAL AREAS OF DISTURBANCE MAY BE INDICATED ON PLAN SHEETS PREPARED BY OTHER DISCIPLINES (E.G. ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL, LANDSCAPE), AND SUCH AREAS MAY EXTEND BEYOND THE CIVIL-DEFINED LIMIT LINE. THEREFORE, THE PROJECT LIMIT LINE SHOWN ON CIVIL DRAWINGS SHOULD NOT BE INTERPRETED AS THE DEFINITIVE OR SOLE BOUNDARY OF DISTURBANCE FOR THE PROJECT. IN SOME INSTANCES, A TEMPORARY PROJECT LIMIT LINE MAY ALSO BE SHOWN ON THE PLANS. THIS TEMPORARY LIMIT MAY EXTEND BEYOND THE ASSUMED PROPERTY BOUNDARIES AND IS USED TO ILLUSTRATE AREAS TEMPORARILY NEEDED FOR IMPROVEMENTS OUTSIDE OF THE OWNERS PROPERTY, OFTEN CITY ROADWAY IMPROVEMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW ALL PLAN SETS TO IDENTIFY AND ACCOUNT FOR ALL POTENTIAL AREAS OF DISTURBANCE.
10. FOR CONCRETE SIDEWALK IN CITY ROW REFER TO APWA NO 231 DETAIL ON SHEET C104, IF NOT REFER TO DETAIL ON C100.

PARKING STALL COUNT	
TOTAL STALLS:	119
STALLS:	113
HC STALLS:	6

HATCH LEGEND

- ASPHALT PAVEMENT SEE DETAIL B ON SHEET C100
- HEAVY DUTY ASPHALT PAVEMENT SEE DETAIL C ON SHEET C100
- SIDEWALK PER DETAILS ON SHEET C100
- VEHICULAR CONCRETE PER DETAIL A ON SHEET C100
- PLAYGROUND BARK REFER TO LANDSCAPING PLANS
- INTEGRAL COLORED CONCRETE BROOM FINISH, COLOR TO BE COORDINATED WITH OWNER
- NEW BUILDING
- BUILDING OVERHANG
- UNDERGROUND DETENTION BASIN REFER TO CG450 PLANS
- PLAYGROUND SURFACE REFER TO LANDSCAPE PLANS.
- CITY ROAD ASPHALT PAVEMENT SEE DETAIL D ON SHEET C100
- NEW SURFACE UTILITIES REFER TO CU300

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4/22/2025 11:41:34 AM

OVERALL SITE PLAN CS230
ASD #133 ELEMENTARY SCHOOL

MERIDIAN ENGINEERING, INC.
1628 WEST 11010 SOUTH, SUITE 102
SOUTH JORDAN, UTAH 84095
PHONE (801) 569-1315 FAX (801) 5691319

Blue Stakes of UTAH 811

170 NORTH MAIN STREET
SPANISH FORK, UTAH 84660
WWW.KMAARCHITECTS.COM

KMA ARCHITECTS

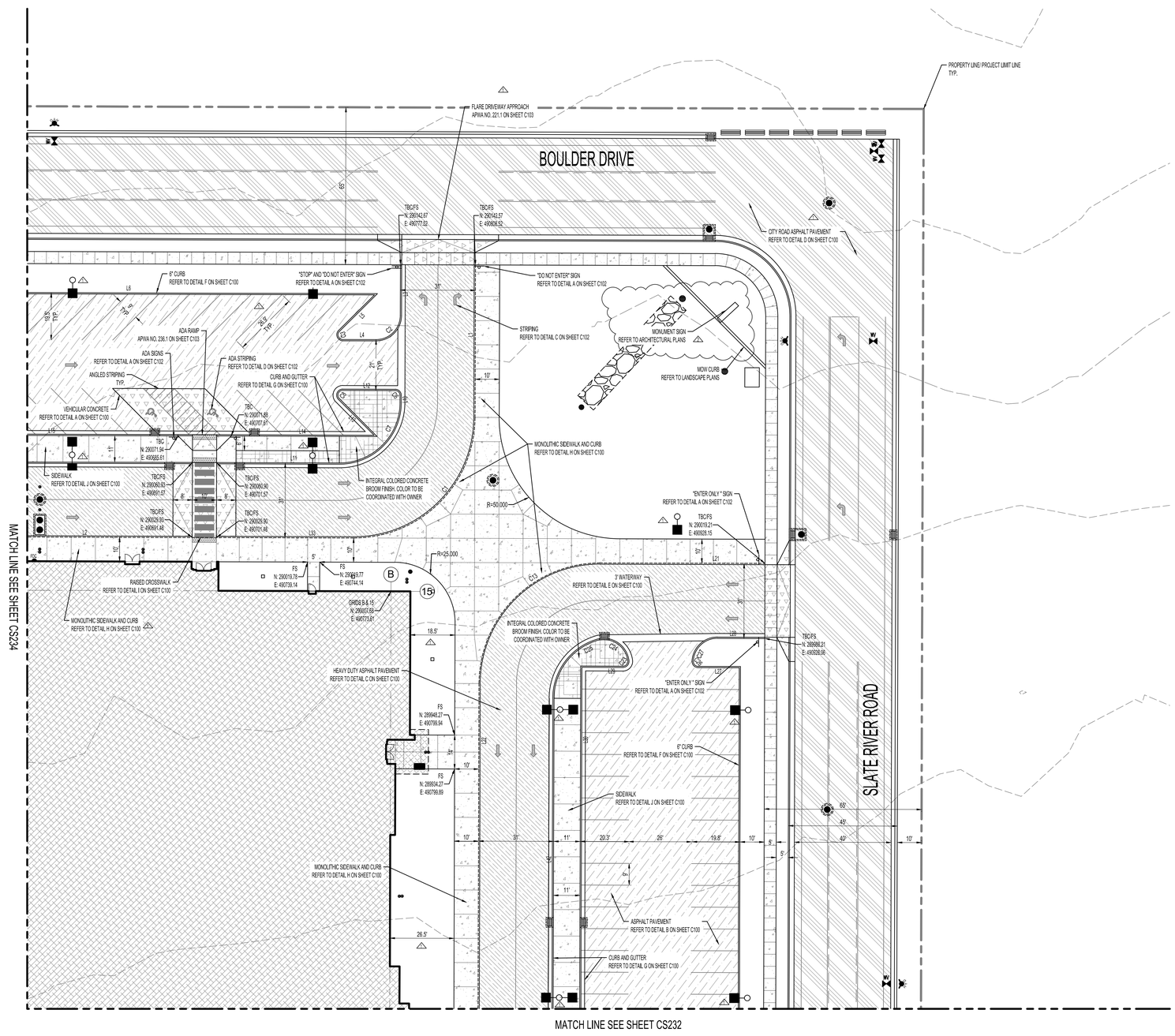
PROFESSIONAL ENGINEER
DATE ISSUED
No. 5501898-2202
MARK A. COOK
STATE OF UTAH

REVISIONS:

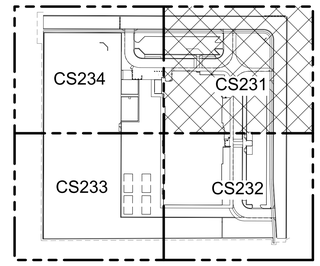
ALPINE SCHOOL DISTRICT
ELEMENTARY #133
EAGLE MOUNTAIN, UTAH
APPROX. N SLATE RIVER ROAD

DRAWN BY: CCC
CHECKED BY: MAC
DATE: 06/10/2025
PROJECT #: 25050

CS230



NOTES: REFER TO NOTES ON CS230.



VICINTY MAP
NOT TO SCALE

HATCH LEGEND

ASPHALT PAVEMENT SEE DETAIL B ON SHEET C100	NEW BUILDING
HEAVY DUTY ASPHALT PAVEMENT SEE DETAIL C ON SHEET C100	BUILDING OVERHANG
CONCRETE SIDEWALK PER DETAIL J ON SHEET C100	UNDERGROUND DETENTION BASIN REFER TO CG450 PLANS
VEHICULAR CONCRETE PER DETAIL A ON SHEET C100	PLAYGROUND SURFACE REFER TO LANDSCAPE PLANS.
PLAYGROUND BARK REFER TO LANDSCAPING PLANS	CITY ROAD ASPHALT PAVEMENT SEE DETAIL D ON SHEET C100
INTEGRAL COLORED CONCRETE BROOM FINISH. COLOR TO BE COORDINATED WITH OWNER	NEW SURFACE UTILITIES REFER TO CU300

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4/23/2025 11:41:34 AM

ENLARGED SITE PLAN CS231
ASD #133 ELEMENTARY SCHOOL

170 NORTH MAIN STREET
SPANISH FORK, UTAH 84660
WWW.KMAARCHITECTS.COM

KMA ARCHITECTS

PROFESSIONAL ENGINEER
DATE ISSUED: 2025-02-10
No. 5651938-2202
MARK A. COOK
STATE OF UTAH

REVISIONS:
ADD #2 06/26/25
CITY COMMENTS 07/10/25

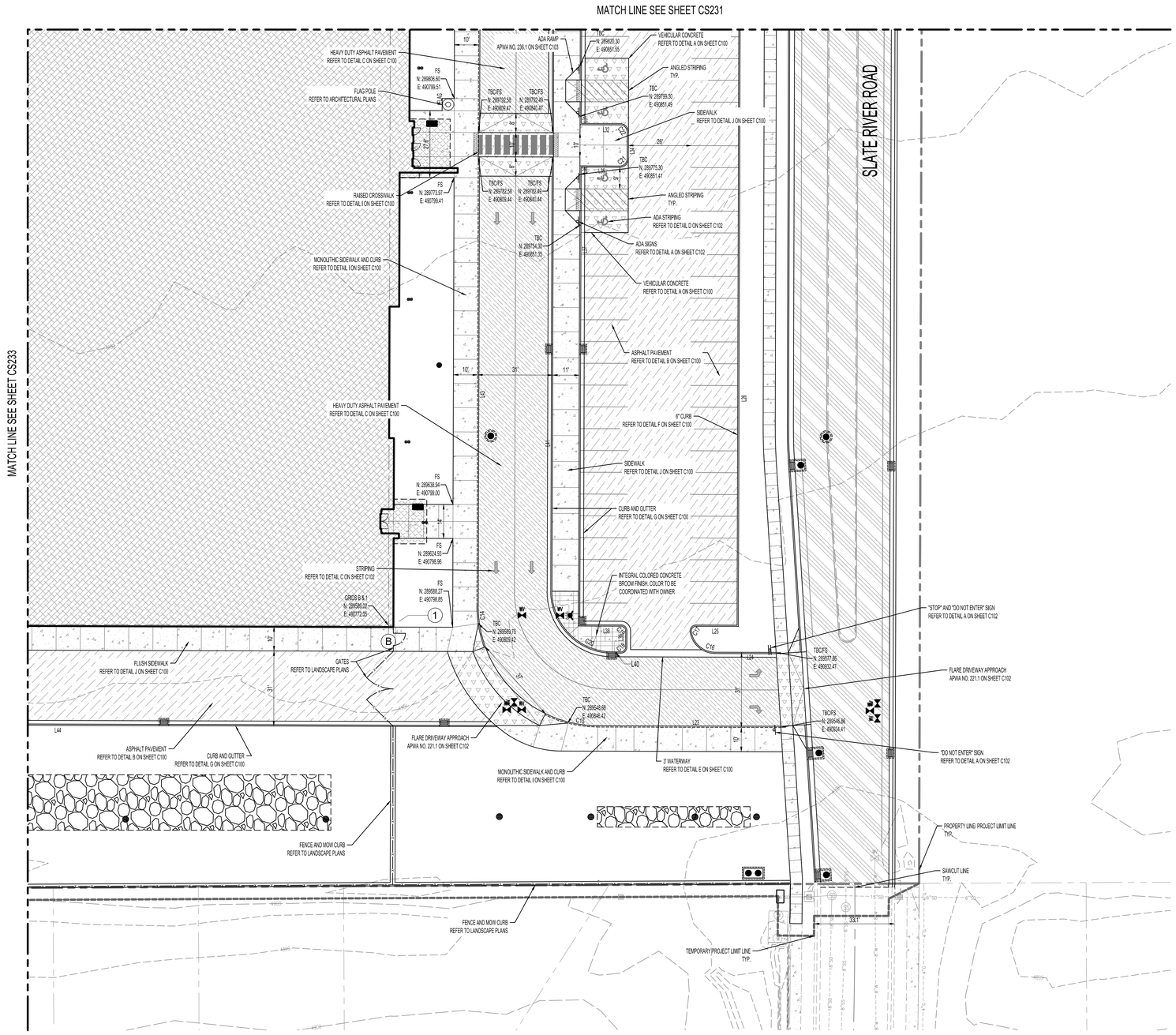
ALPINE SCHOOL DISTRICT
ELEMENTARY #133
APPROX. N SLATE RIVER ROAD
EAGLE MOUNTAIN, UTAH

DRAWN BY: CCC
CHECKED BY: MAC
DATE: 06/10/2025
PROJECT #: 25050

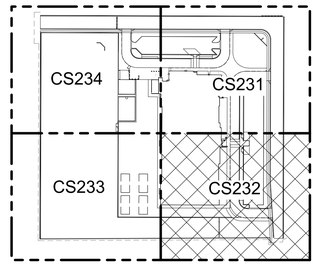
MERIDIAN ENGINEERING, INC.
1628 WEST 11010 SOUTH, SUITE 102
SOUTH JORDAN, UTAH 84095
PHONE (801) 569-1315 FAX (801) 5691319

Blue Stakes of UTAH 811 Blue Stakes.org

CS231



NOTES: REFER TO NOTES ON CS230.



VICINTY MAP
NOT TO SCALE

HATCH LEGEND

ASPHALT PAVEMENT SEE DETAIL B ON SHEET C100	NEW BUILDING
HEAVY DUTY ASPHALT PAVEMENT SEE DETAIL C ON SHEET C100	BUILDING OVERHANG
SIDEWALK PER DETAILS ON SHEET C100	UNDERGROUND DETENTION BASIN REFER TO CG450 PLANS
VEHICULAR CONCRETE PER DETAIL A ON SHEET C100	PLAYGROUND SURFACE REFER TO LANDSCAPE PLANS.
PLAYGROUND BARK REFER TO LANDSCAPING PLANS	CITY ROAD ASPHALT PAVEMENT SEE DETAIL D ON SHEET C100
INTEGRAL COLORED CONCRETE BROOM FINISH. COLOR TO BE COORDINATED WITH OWNER	NEW SURFACE UTILITIES REFER TO CU300

ENLARGED SITE PLAN CS232
ASD #133 ELEMENTARY SCHOOL

MERIDIAN ENGINEERING, INC.
1628 WEST 11010 SOUTH, SUITE 102
SOUTH JORDAN, UTAH 84095
PHONE (801) 569-1315 FAX (801) 5691319

Blue Stakes of UTAH 811

170 NORTH MAIN STREET
SPANISH FORK, UTAH 84660
WWW.KMAARCHITECTS.COM
KMA ARCHITECTS

PROFESSIONAL ENGINEER
DATE ISSUED: 2025-06-10
No. 5651938-2202
MARK A. COOK
STATE OF UTAH

REVISIONS:

ALPINE SCHOOL DISTRICT
ELEMENTARY #133
APPROX. N SLATE RIVER ROAD
EAGLE MOUNTAIN, UTAH

DRAWN BY: CCC
CHECKED BY: MAC
DATE: 06/10/2025
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CS232

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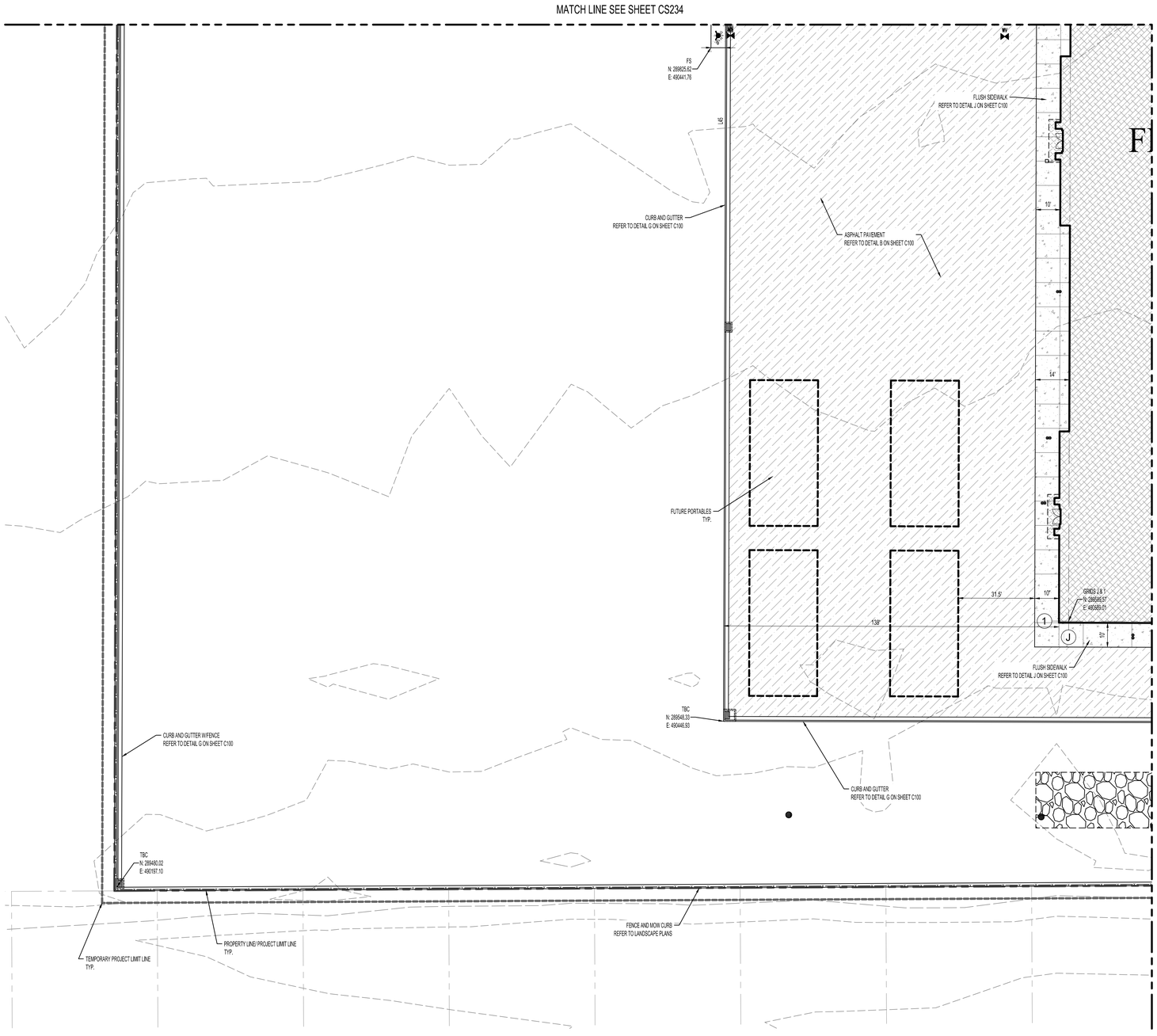
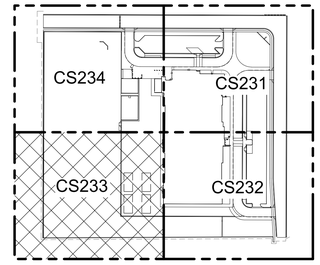
4/23/2025 11:41:34 AM



NOTES: REFER TO NOTES ON CS230.



VICINTY MAP
NOT TO SCALE

HATCH LEGEND

ASPHALT PAVEMENT SEE DETAIL B ON SHEET C100	NEW BUILDING
HEAVY DUTY ASPHALT PAVEMENT SEE DETAIL C ON SHEET C100	BUILDING OVERHANG
SIDEWALK PER DETAILS ON SHEET C100	UNDERGROUND DETENTION BASIN REFER TO CG450 PLANS
VEHICULAR CONCRETE PER DETAIL A ON SHEET C100	PLAYGROUND SURFACE REFER TO LANDSCAPE PLANS.
PLAYGROUND BARK REFER TO LANDSCAPING PLANS	CITY ROAD ASPHALT PAVEMENT SEE DETAIL D ON SHEET C100
INTEGRAL COLORED CONCRETE BROOM FINISH. COLOR TO BE COORDINATED WITH OWNER	NEW SURFACE UTILITIES REFER TO CU300

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ENLARGED SITE PLAN CS233
ASD #133 ELEMENTARY SCHOOL

170 NORTH MAIN STREET
SPANISH FORK, UTAH 84660
WWW.KMAARCHITECTS.COM

KMA ARCHITECTS

PROFESSIONAL ENGINEER
DATE ISSUED: 2025-06-10
No. 5651938-2202
MARK A. COOK
STATE OF UTAH

REVISIONS:

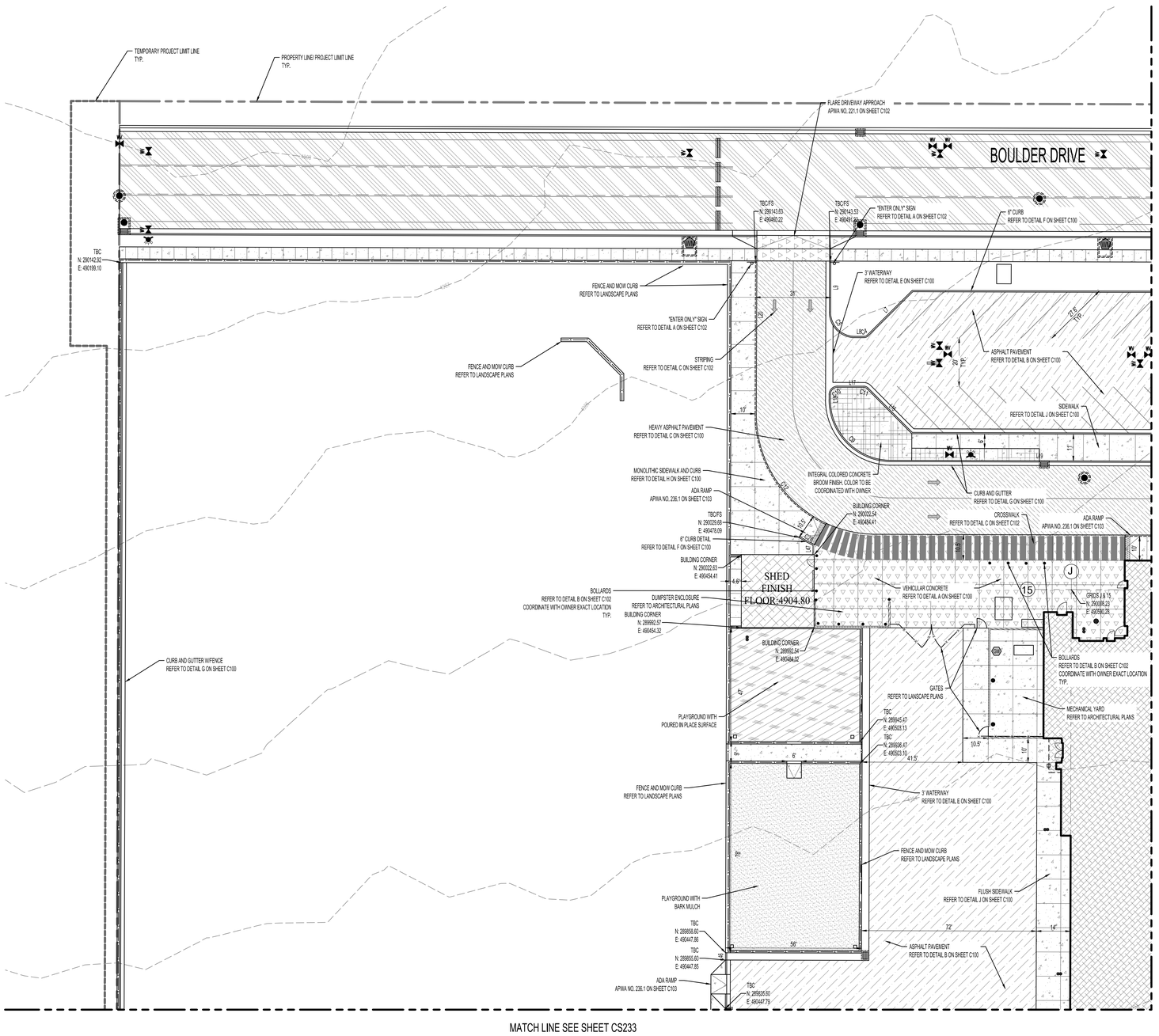
ALPINE SCHOOL DISTRICT
ELEMENTARY #133
APPROX. N SLATE RIVER ROAD
EAGLE MOUNTAIN, UTAH

DRAWN BY: CCC
CHECKED BY: MAC
DATE: 06/10/2025
PROJECT #: 25050

MERIDIAN ENGINEERING, INC.
1628 WEST 11010 SOUTH, SUITE 102
SOUTH JORDAN, UTAH 84095
PHONE (801) 569-1315 FAX (801) 5691319

Blue Stakes of UTAH 811 blue stakes.org

CS233



NOTES: REFER TO NOTES ON CS230.

VICINITY MAP
NOT TO SCALE

HATCH LEGEND

ASPHALT PAVEMENT SEE DETAIL B ON SHEET C100	NEW BUILDING
HEAVY DUTY ASPHALT PAVEMENT SEE DETAIL C ON SHEET C100	BUILDING OVERHANG
SIDEWALK PER DETAILS ON SHEET C100	UNDERGROUND DETENTION BASIN REFER TO CG450 PLANS
VEHICULAR CONCRETE PER DETAIL A ON SHEET C100	PLAYGROUND SURFACE REFER TO LANDSCAPE PLANS.
PLAYGROUND BARK REFER TO LANDSCAPING PLANS	CITY ROAD ASPHALT PAVEMENT SEE DETAIL D ON SHEET C100
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4/23/2025 11:41:34 AM

ENLARGED SITE PLAN CS234
ASD #133 ELEMENTARY SCHOOL

KMA ARCHITECTS
170 NORTH MAIN STREET
SPANISH FORK, UTAH 84660
WWW.KMAARCHITECTS.COM

PROFESSIONAL ENGINEER
DATE ISSUED: 4/23/2025
No. 5351898-2202
MARK A. COOK
STATE OF UTAH

REVISIONS:

ALPINE SCHOOL DISTRICT
ELEMENTARY #133
APPROX. N SLATE RIVER ROAD
EAGLE MOUNTAIN, UTAH

DRAWN BY: CCC
CHECKED BY: MAC
DATE: 06/10/2025
PROJECT #: 25050

CS234

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Blue Stakes of UTAH 811

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TOPSOIL NOTE

EXCAVATION CONTRACTOR TO SCREEN ON-SITE (STOCKPILED) TOPSOIL FOR USE AT ALL PLANTED AREAS. PLACE TOPSOIL TO THE FOLLOWING DEPTHS:
- 6" MINIMUM UNDER ALL SODDED AREAS.
- 12" MINIMUM AT PLANTED ROCKSCAPED AREAS

EXCAVATION CONTRACTOR TO SPREAD TOPSOIL AFTER SPRINKLER SYSTEM TRENCHING HAS BEEN COMPLETED. THIS IS TO BE COORDINATED WITH THE GENERAL CONTRACTOR.

PLAYGROUND EQUIPMENT NOTE

1 - PLAYGROUND EQUIPMENT AREAS (PGEA-1 AND PGEA-2) TO BE PREPARED AND GRADED AS SHOWN. CONTRACTOR TO FURNISH AND INSTALL PLAYGROUND EQUIPMENT SELECTED BY OWNER PER ALLOWANCE.

2 - (PGEA-1) CONTRACTOR TO INSTALL WOODCHIP SOFT-FALL MATERIAL (18" DEEP) OVER ENTIRE PLAYGROUND EQUIPMENT AREA SHOWN. SEE SPECIFICATIONS.

3 - (PGEA-2) CONTRACTOR TO INSTALL POURED IN PLACE RUBBERIZED SURFACING OVER ENTIRE PLAYGROUND EQUIPMENT AREA SHOWN. SEE SPECIFICATIONS

PLANT SCHEDULE

KEY	SCIENTIFIC NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
	SOD (AS PER LOCAL VARIETY)				
	POURED-IN-PLACE RUBBERIZED PLAYGROUND SURFACING (AT PGEA-2) SEE DETAIL 16/L5				
	18" DEEP SOFT FALL WOOD CHIPS (AT PGEA-1)				
	LANDSCAPE ROCK "TYPE 1" (SEE DESCRIPTION BELOW) OVER 2 LAYERS OF COMMERCIAL WEED BARRIER (COLOR AND TYPE TO BE AS SELECTED BY SCHOOL DISTRICT - CONCRETE COLOR NOT PERMITTED BY CITY)				
	LARGE LANDSCAPE BOULDERS 2', 3', 4' SIZES (COLOR AND TYPE TO BE AS SELECTED BY SCHOOL DISTRICT) QUANTITY 150				

LANDSCAPE ROCK NOTES "TYPE 1":
(6" MIN. DEPTH, FRACTURED ROCK)
30% - 4"
70% - 3"

NOTES:
A - SOD INSTALLATION AND CARE SHOULD BE SCHEDULED AS FOLLOWS:
-FERTILIZE AFTER INSTALLATION
-WEED CONTROL (ALLOW TO SIT FOR 1 WEEK BEFORE MOWING)
-A MINIMUM OF 3 MOWINGS OF ALL PLANTED AREAS.

B - MAINTAIN WATER COVERAGE AND ADJUST SPRINKLER SYSTEM AS NEEDED UNTIL ALL ABOVE IS COMPLETED AND FINAL ACCEPTANCE IS GIVEN.

PLANT SCHEDULE

KEY	SCIENTIFIC NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
	Malus x "Spring Snow"	Spring Snow Crabapple	14	2 1/2"	Green - White 20' x 20'
	Acer grandidentatum	Bigtooth Maple	15	2 1/2"	Green - Yellow 25' x 15'
	Gingko biloba (Male trees only as per city request)	Gingko	12	2 1/2"	Green - Yellow 35' x 35'
	Euonymus alatus "Compactus"	Dwarf Burning Bush	36	5 GAL.	GREEN - RED 6' X 10'
	Spiraea x bumalda "Goldflame"	Goldflame Spirea	32	5 GAL.	YELLOW/GREEN 4' x 4'
	Berberis thunbergii 'Crimson Pygmy'	Crimson Pygmy Dwarf Japanese Barberry	17	5 GAL.	CRIMSON 2' X 3'
	Pinus mugo "Slowmound"	Slowmound Mugo Pine	43	5 GAL.	Evergreen 2' X 2'
	Festuca glauga "Elijah Blue"	Elijah Blue Fescue	164	5 GAL.	ICE BLUE 1' X 1'
	Yucca filamentosa "Ivory Tower"	Ivory Tower Yucca	121	5 GAL.	GREEN 3' x 3'
	Cornus sericea "Kelseyi"	Kelsey's Dwarf Red-Osier Dogwood	9	5 GAL.	GREEN - RED 3' X 3'
	Calamagrostis x acutiflora "Karl Foerster"	Feather Reed Grass	297	2 GAL.	GOLDEN 2' X 2'

SHEET NOTES:

01 - 8" X 12" CONCRETE CURBING AS SHOWN. SEE DETAIL 10/L5.

02 - MARQUEE SIGN BASE. SEE DETAILS 1/L6.

03 - INTERNAL HALYARD FLAGPOLE WITH INTEGRAL LIGHTING SYSTEM. SEE DETAIL 3/L6. SURROUND WITH A 3'-0" SQUARE CONCRETE PAD.

04 - SPRINKLER SYSTEM P.O.C. SEE SPRINKLER PLAN.

05 - 10'-8" x 31'-4" MASONRY DUMPSTER ENCLOSURE. SEE DETAIL 2/L6. PROVIDE BLOCK-OUTS IN FOUNDATION TO ALLOW DRAINAGE THROUGH AS REQUIRED.

GENERAL NOTES:

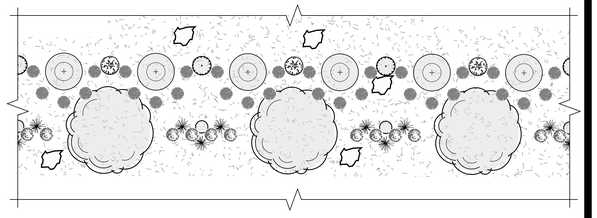
A - ALL NEW LAWN AREAS TO HAVE SOD INSTALLED. INSTALL AS PER INDUSTRY STANDARD. SEE DETAIL 2/L5.

B - TREES TO BE INSTALLED AS PER INDUSTRY STANDARD. SEE DETAIL 1/L5.

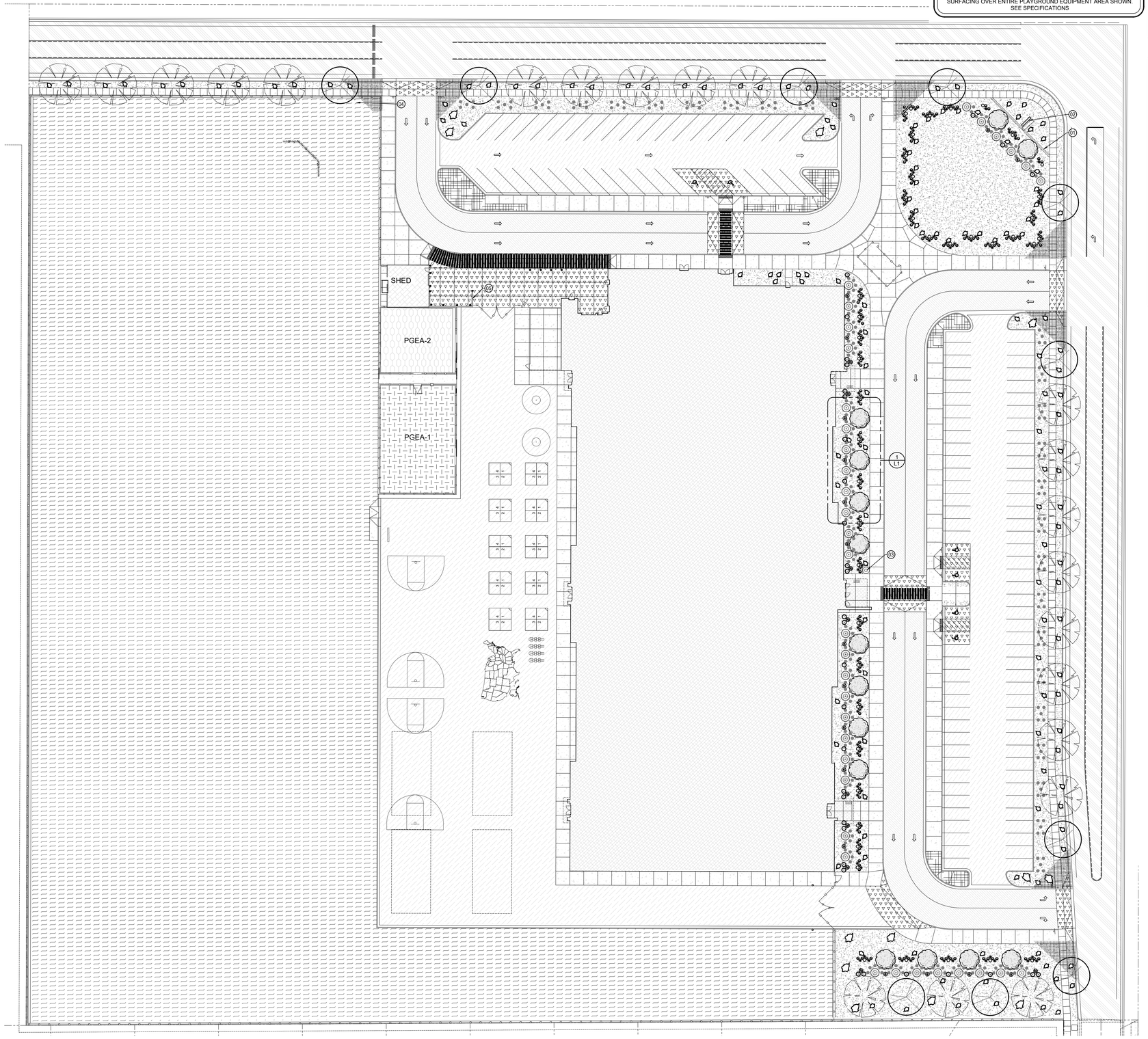
C - MAINTAIN WATER COVERAGE AND ADJUST SPRINKLER SYSTEM AS NEEDED UNTIL ALL ABOVE IS COMPLETED AND FINAL ACCEPTANCE IS GIVEN.

D - INSTALL 2 LAYERS OF COMMERCIAL GRADE WEED MATTING TO BE INSTALLED UNDER ALL ROCKSCAPED AREAS.

E - SEE DETAILS 1 /L1 FOR TYPICAL PLANTING LAYOUT.



1 PLANTING DETAIL 1" = 10'-0"



NORTH

0 15' 30'

LANDSCAPE PLAN (15" x 21") 1" = 60'-0" (30" x 42") 1" = 30'-0"

KMA ARCHITECTS
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STATE OF UTAH
WESLEY ALLEN CHRISTENSEN
No. 9469958-0301
LICENSED ARCHITECT

REVISIONS:

ALPINE SCHOOL DISTRICT
ELEMENTARY #133
EAGLE MOUNTAIN, UTAH
APPROX. NORTH SLATE RIVER ROAD

DRAWN BY: RJW
CHECKED BY: WC
DATE: JUNE 2025
PROJECT #: 176025

L1

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	Horizon Master Community
ITEM TYPE:	Preliminary Plat
FISCAL IMPACT:	N/A
APPLICANT:	Caden Hazard

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
Foothill Residential/Ag & Country Residential	109.33

PUBLIC HEARING
Yes

PREPARED BY
Robert Hobbs, Senior Planner

PRESENTED BY
Robert Hobbs

RECOMMENDATION:
TABLE - pending re-noticing as a Development Agreement/Preliminary Plat request (no MDP or Rezone)

BACKGROUND:
This matter was noticed as a combination Master Development Plan (project is over 50 acres), associated rezone (Ag and Country Residential to Foothill Residential) and preliminary plat (actually a redo of one entitled years ago). After research was begun as part of this report's generation, it was discovered that in 2024, Ord. O-49-24 already rezoned the property from Agriculture and Country Residential to Foothill Residential. The City's zoning map had not been updated to show the property as being [now] zoned Foothill Residential by the time the application process was started. Accordingly, this report no longer contains commentary and findings regarding master plans and rezoning; rather, it addresses the proposed preliminary plat's conformance to code, and, acknowledges a Development Agreement -- designed to facilitate alternative design choices for the plat is needed and forthcoming.

Given that noticing for a Master Development Plan and Rezone (besides the plat) was sent out based on a mapping error that showed the property under its old zoning, Staff has decided to re-notice the matter for a future Planning Commission date in order to clarify that the only proposed approvals under consideration are, or will be, for a preliminary plat and, expectedly, a Development Agreement as indicated.

ITEMS FOR CONSIDERATION:
DEVELOPMENT AGREEMENT(S)
Authorized under UCA 10-9a-532 as a contract between a private and public entity [the City], one may be crafted for use with this application.

PRELIMINARY PLAT APPROVALS
Approval of Preliminary Plats is based upon compliance with City code requirements [Conclusions of Law] and requirements of any applicable Development Agreement(s). Approval criteria for a

Preliminary Plat are stated in EMMC § 16.20. Plat application types and their reviews are administrative in nature. Therefore, plats are to be approved if all required elements and code compliance are provided in their plan/plat drawings. Some criteria are subjective.

Note that EMMC 16.30.080 ["Rural residential subdivisions"] has special provisions governing rural-type developments. It reads as follows:
"Subdivisions that are to be reviewed under agricultural, RA1, RA2, RD1, RD2, or *FR* zone development standards (see Chapters 17.20 and 17.25 EMMC) *may not be required to install the same public improvements as subdivisions developed in other zones. Requirements to install curbs, gutters, sidewalks, water and sewer utilities, and streetlights may be waived* by the city council after a recommendation from the planning commission, upon condition that the developer provides for pedestrian circulation and accommodates water and sewer utilities and surface drainage throughout the subdivision. Necessary facilities may include, but not be limited to, trails and pathways, storm drainage detention ponds or secondary water facilities."

Preliminary Plat (EMMC § 16.20) Opinion:
The subdivision aspect of the combined application set has been reviewed by the DRC Committee and most suggested corrections/revisions incorporated into plat drawings.

Plat Data, Standards & Findings:
Land Use Zone(s): FR
Total Acreage: 109.33
Total Lot Count: 110 (with 4 additional open space parcels -- 2 City owned and, apparently, 2 HOA owned)
Total Acreage in Lots: 55.00
Total Acreage in Asphalt Pavement Area: 10.39
Total Acreage in Open Space/Parcels: 42.79 acres (40.57/2.22)

FR Zoned Area:
Required Minimum [Building] Lot Size: 10,890 sq. ft.
Proposed Minimum [Building] Lot Size: 11,140 sq. ft.
Largest Proposed [Building] Lot Size: 55,439 sq. ft.
Maximum Lot Size: n/a
Required Average [Building] Lot Size: 21,780 sq. ft.
Proposed Average {Building] Lot Size: 21,780 sq. ft.
Lot dimensions: *Compliant*

Overall Project Density:
1.01 lots or dwelling units per acre (du/a)

RsOW:
Internal subdivision rights-of-way are proposed to be "rural" (i.e., 50' wide) in accordance with EMMC 16.35.130b & 140. Horizon Loop and Walnut Drive are slated to have an 8' asphalt trail on one side of the roads and an 8.5' wide parkstrip on the other side. At the widened asphalt section between the intersection of Walnut Drive and Horizon Loop, the paved travelway widens by 4' and the parkstrip narrows to 4.5'. Widths and profiles are agreeable.

The Fire Department has approved the use and layout of Horizon Loop and a fire access road (within Phases 4 & 5) to satisfy the rule of 30 maximum. That is, fire code and EMMC 126.35.070.I both require that, "The number of dwelling units [building lots] on a single fire apparatus access road [street] shall not exceed 30." Typically, when at least two ways in/out of a project or portion thereof exist, then that rule is usually met.

The "block length" or travel distance between pedestrian and/or vehicular intersections of/for sections of the project's roads exceed allowed norms. *Non-compliant*

Connectivity Index Required:
FR land: 1.50. Provided: 1.5 (6 links/4 nodes). *Compliant*

Utilities:
Plans provided. Utilities reviewed by Engineering. Open Space by Parks -- comments made during DRC and reflected in attached, revised development plans. Streetlights are not required by EMMC 16.35.100.c. Water demand, given 110 building lots with a 1/2 acre average, calculated at .45 per household and 2 acre-feet per lot for irrigation -- presumed need for 269.50 acre feet worth of water shares -- 49.5 minimum for purely domestic (indoor) use. Applicant attests that they have sufficient water shares to cover the allocation required for the project. Verification of the same is needed.

Landscaping/Open Space: The project has 2.22 acres of open space split into two parcels. Developer proposes development of trails within 42.57 acres of open space slated to be owned and maintained by the City. Within that open space, Developer proposes varying trails include a concreted stairway with landings, rail and lighting. Developer seeks credit for the overbuild cost of that amenity to be applied against their normal open space amenity cost(s).

17.25.050 Generally applicable provisions.
All development projects within any residential zone shall conform to the following general requirements:
...
"**B. Open Space and Trails.** Lots and roads shall be arranged to best protect contiguous open space areas, ridgelines, hillsides, drainages, wildlife habitat and corridors, and provide useable open space or trail access to useable open space. All developments shall connect to existing adjacent trails and wildlife corridors and continue them through the development and shall provide regional trails and corridors if included in the city's general plan, parks and open space plan, or bike and pedestrian plan. Rather than including large areas of unbuildable land in lots, developers are encouraged to preserve and dedicate these areas as public open space. The approval authority may require the developer to pay a fee in lieu according to EMMC 16.35.105(A)(12), or may consider, at their discretion, alternative open space plans. Alternative plans will be evaluated based upon the benefit to the neighborhood/community, proximity to existing amenities or natural features, and the unique nature of the site, and may include additional trails, preservation/dedication of additional open space areas, and unique improvements/amenities. Alternative plans may include a proposed "buy-down" of open space acreage with additional amenities at a rate of 150 points per acre (required acreage x 100 points + "bought-down" acreage x 150 points). Parks and trails must be improved as required by the standards set forth in Chapter 16.35 EMMC....."

16.35.105 Park and improved open space requirements.
The amount of land required for parks shall be calculated during the master development plan, preliminary plat and/or site plan approval process, according to the requirements in EMMC 17.25.040, Residential development standards. The park requirements are intended to be flexible in order to best meet the recreational needs of a neighborhood.

A. All improved open space must meet the following requirements:
...
10. Natural open space areas shall be left in their natural state. These areas may be improved

with paved trails and necessary improvements to establish trails and any associated viewing areas. Any disturbed open space caused by construction activities shall be restored to its natural state and the required revegetation shall not be counted towards improved open space requirements. Improvements within the open space shall be counted toward the minimum amenity requirement for a project. Only the amenity and not the adjacent area containing the amenity may be counted toward the required element points, at the approval authority's discretion.

11. Open space shall be fully improved prior to recording the first plat in a project, or a separate cash escrow of $3,750 per lot must be put in place with the city with each plat to cover the anticipated cost of park improvements. For example: final plat = 20 lots; cash escrow for final plat = $75,000 ($3,750 x 20).

12. Fee in Lieu. An applicant may request to pay, or the city may require the applicant to pay, a fee in lieu of dedication and construction of improved open space, to be paid with the recordation of each final plat. The fee shall be calculated as follows:

a. The fee in lieu shall be calculated at a rate of $3.75 per square foot of required improved open space, plus the appraised value of the open space. If a fee in lieu is collected, the city shall determine the timing and location of park improvements, but the improvements should be made on a park that benefits the future residents of the development. If the developer is required to improve an existing park, the improvements shall be made prior to recording the first plat.

Example:
44-Lot Subdivision
Required open space = 44,000 sq ft x $3.75 = $165,000
Appraised value = $35,000
$165,000 + $35,000 = $200,000
$200,000/44 lots = $4,545.45

Developer has commented respecting the provision of open space and amenities (see attached narrative): "8. In addition to the single family lots added (some from more efficient redesign, others from the land previously proposed as multi-family parcels), the developer has added significant improved open space, including nature path trail systems, and an iconic 360 concrete stair amenity similar to those found near Dixie Tech in St George, UT -- https://www.utahsadventurefamily.com/tech-ridge-stairs-dragon-tail-steps-st-george/." Their "ask" will likely have to be handled with the contemplated Development Agreement.

Correspondence:
Any correspondence from agencies or the citizenry is hereafter attached to this document for perusal. Agency comments may express opinions regarding the plat application or be geared towards recommending Conditions of Approval for a development should it be approved, or, directing corrections to the final plat or related construction drawings. Any written material from the public is also hereto attached.

Miscellaneous:
1. The Wildlife Corridor is also another issue that will have to be vetted by the Commission (and perhaps Council). Before the meeting when this item will be heard, Staff will try to ascertain the extent of encroachment on the corridor and additional information into this report (which will get updated); and,

2. A section or portion of the project appears to be in area earmarked as a ridgeline protection zone. That zone's controls specify that,

> "Property within 50 vertical feet of prominent ridges may be included within private lots; however, shall be deemed unbuildable, and shall provide a public pedestrian easement to the city for the purpose of creating an integrated and connected system of ridgeline trails, which tie into neighboring development.
>
> No structure, accessory structure, or ancillary structure may be built within the ridgeline setback area, with the exception of public infrastructure, public lookout towers, benches, or other public viewpoint or recreation structures. No cuts, fills, clearing, or grading shall occur within the ridgeline setback, except for public trails, structures, and infrastructure. Development within close proximity to prominent ridges shall comply with ridgeline design standards found within this chapter." Again, Staff will, having more time, be able to comment more comprehensively on the proposed plat's conformance to the ridgeline standards.

Note (1-2): Both the Wildlife Corridor (2021, amended 2024) and Ridgeline (2018) Title 17 zoning chapters were codified after the proposed plat was originally approved in 2007.

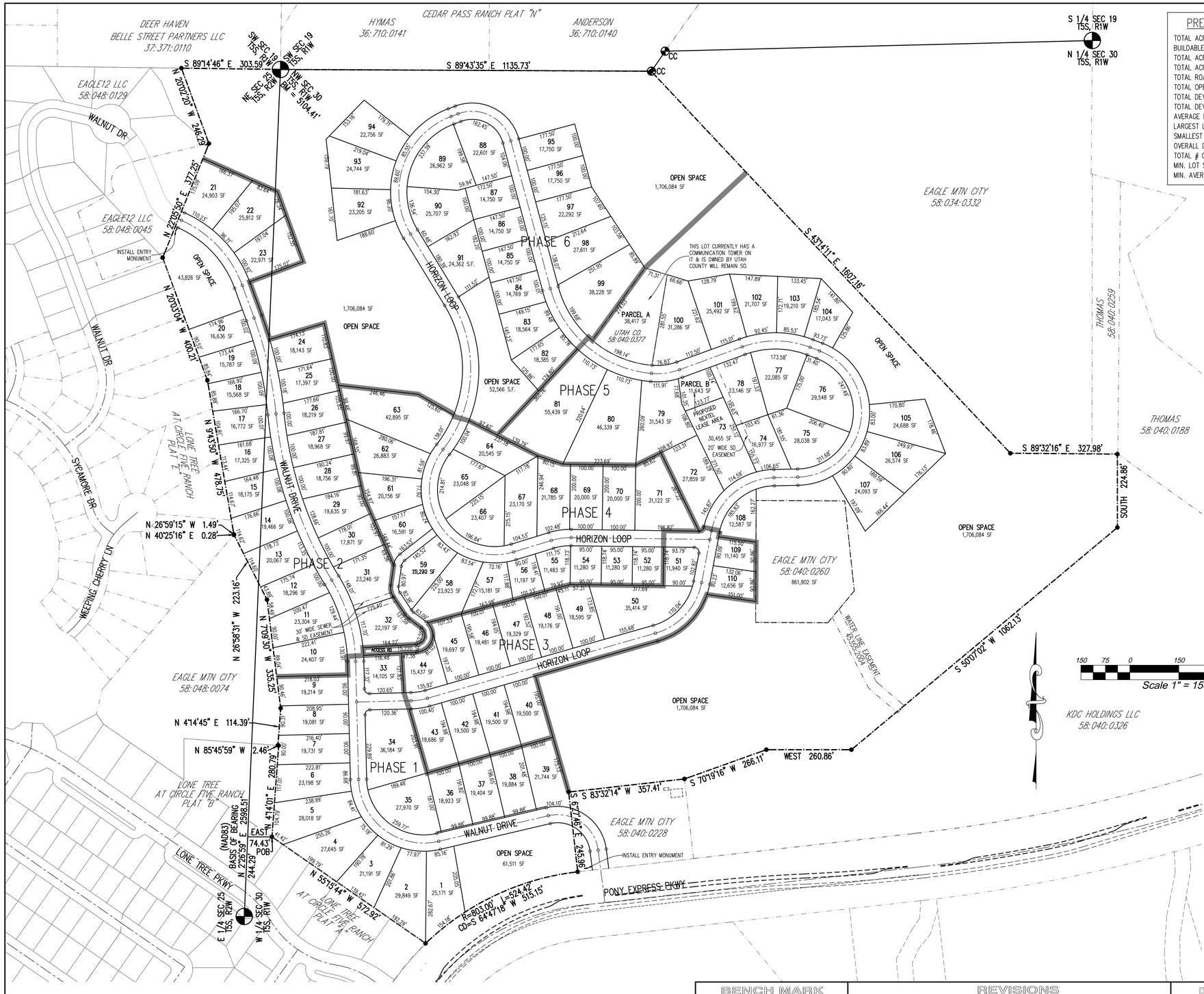
3. Garbage collection as per normal single-family neighborhood with cans for each home; and,

4. Project to be dark-sky compliant.

PLANNING COMMISSION ACTION/RECOMMENDATION:
N/A

ATTACHMENTS:

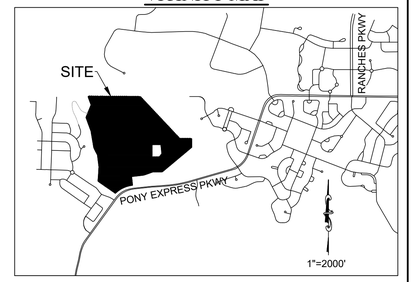
1. Vicinty Map and Legal Description
2. Background -- Horizon Master Plan
3. Land Use Plan
4. Updated - Horizon Preliminary Plat
5. Horizon Slope Analysis
6. Geotecnical Study CMT - Horizon
7. Horizon - Erosion Grading and Drainage Plan
8. Water Model Memo
9. Horizon project.Aug 2025 neighbor email opposing



PRELIM PLAN LAND CALCULATIONS

TOTAL ACREAGE:	109.33 ACRES
BUILDABLE ACREAGE:	66.19 ACRES
TOTAL ACREAGE IN LOTS:	55.00 ACRES
TOTAL ACREAGE IN PARCELS:	1.15 ACRES
TOTAL ROADWAY AREA:	10.04 ACRES
TOTAL OPEN SPACE:	43.14 ACRES
TOTAL DEVELOPED OPEN SPACE REQUIRED:	1.89 ACRES
TOTAL DEVELOPED OPEN SPACE PROVIDED:	2.36 ACRES
AVERAGE LOT SIZE:	21,780 SF/0.50 ACRES
LARGEST LOT SIZE:	55,439 SF/1.11 ACRES
SMALLEST LOT SIZE:	11,140 SF/0.26 ACRES
OVERALL DENSITY:	1.01 LOTS/ACRE
TOTAL # OF LOTS:	110 LOTS
MIN. LOT SIZE ALLOWED:	10,890 S.F.
MIN. AVERAGE LOT SIZE:	21,780 S.F.

VICINITY MAP



LEGAL DESCRIPTION

Beginning at a point located North 2°26'59" East along section line 244.29 feet and East 74.43 feet from the West Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence along the easterly boundary of Lone Tree at Circle Five Ranch Plat "B" the following two courses and distances: 1) North 4°14'01" East 280.79 feet, and 2) North 85°45'59" West 2.46 feet; thence North 4°14'45" East 114.39 feet; thence North 7°09'30" West 335.25 feet; thence North 26°58'31" West 223.16 feet; thence along the easterly boundary of Lone Tree at Circle Five Ranch Plat "E" the following four courses and distances: 1) North 40°25'16" East 0.28 feet, 2) North 26°59'15" West 1.49 feet, 3) North 9°43'50" West 478.75 feet, and 4) North 20°03'04" West 400.21 feet; thence North 22°05'50" East 377.25 feet; thence North 20°02'20" West 246.29 feet; thence South 89°14'46" East along section line 303.59 feet to the Northwest Corner of Section 30; thence South 89°43'35" East along section line 1135.73 feet; thence South 43°14'11" East 1607.16 feet; thence South 89°32'16" East 327.98 feet; thence South 224.86 feet; thence South 50°07'02" West 1062.13 feet; thence West 260.86 feet; thence South 70°19'16" West 266.11 feet; thence South 83°32'14" West 357.41 feet; thence South 6°27'46" East 245.96 feet; thence along the arc of a 803.00 foot radius non-tangent curve to the left 524.42 feet through a central angle of 37°25'05" (chord bears South 64°47'18" West 515.15 feet); thence North 55°15'44" West along the northerly boundary of Lone Tree at Circle Five Ranch Plat "A" a distance of 572.92 feet to the point of beginning.

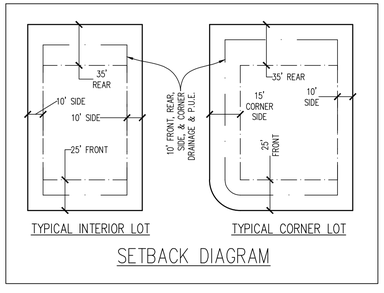
Less and Excepting therefrom the following:

Beginning at a point located North 2°26'59" East along section line 1767.77 feet and East 990.97 feet from the West Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence North 36°02'03" East 274.03 feet; thence South 73°10'04" East 71.31 feet; thence South 9°33'35" West 281.55 feet; thence along the arc of a 327.50 foot radius non-tangent curve to the right 201.30 feet through a central angle of 35°13'00" (chord bears North 67°13'46" West 198.14 feet) to the point of beginning.

Also Less and Excepting therefrom the following:

Beginning at a point located North 2°26'59" East along section line 902.29 feet and East 1528.45 feet from the West Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence North 0°16'25" East 373.66 feet; thence South 89°43'35" East 271.29 feet; thence South 6°02'19" East 277.33 feet; thence South 39°41'05" West 126.85 feet; thence North 89°43'35" West 221.24 feet to the point of beginning.

Total Area = 108.45 Acres



SETBACK DIAGRAM

GENERAL NOTES

1. SEE SHEETS 5 & 6 FOR EXISTING CONTOURS.
2. THERE ARE SMALL AREAS IN THIS SUBDIVISION LOTS WITH A NATURAL GRADE THAT EXCEEDS 25% IN RELATION TO THE PROPOSED LOT LAYOUT. A SLOPE ANALYSIS PLAN HAS BEEN PROVIDED FOR THIS SITE.
3. BUILDING SETBACKS ARE SHOWN IN THE SETBACK DIAGRAM
4. ALL ROADS WILL BE PUBLIC AND MEET CITY STANDARDS.
5. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
6. ALL OUTDOOR LIGHTING MUST BE FULL CUT-OFF, DARK SKY COMPLIANT IN ACCORDANCE WITH CITY CODE.
7. HOMES CONSTRUCTED WITHIN THIS SUBDIVISION MUST COMPLY WITH CITY CODE ARCHITECTURAL DESIGN REVIEW.
8. CITY WILL OWN AND MAINTAIN THE PROPOSED OPEN SPACE AREAS SHOWN ON THIS PRELIMINARY PLAT.
9. TURNAROUNDS WILL BE PROVIDED AT PHASING LINES WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
10. PROPOSED ZONE = FR
11. THERE ARE NO IRRIGATION DITCHES OR STRUCTURES, CANALS, WELLS, STREAMS, SIGNIFICANT ROCK OUTCROPPINGS, WETLANDS, FLOOD PLAINS, OR OTHER NATURAL FEATURES ON SITE.
12. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.

PROPOSED ZONE: FOOTHILL RESIDENTIAL

SHEET INDEX

1. PRELIMINARY PLAT
2. PRELIMINARY UTILITY PLAN (NORTH)
3. PRELIMINARY UTILITY PLAN (SOUTH)
4. PRELIMINARY UTILITY PLAN (OFF-SITE)
5. PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (NORTH)
6. PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (SOUTH)

SURVEYOR:
AZTEC ENGINEERING INC.
732 N. 780 W.
AMERICAN FORK, UT. 84003
AZTECENGINEERING@GMAIL.COM

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 5104.41'

REVISIONS

Rev.	Date	Description

Developer: Belle Street Partners
c/o Scott Hazard
3688 E. Campus Drive Suite 100, Eagle Mountain, UT 84005
Phone: (801) 636-1858

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

HORIZON
EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY PLAT

LOCATED IN THE NW CORNER OF SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SLB&M

Scale: 1"=150'
Date: 03/28/25

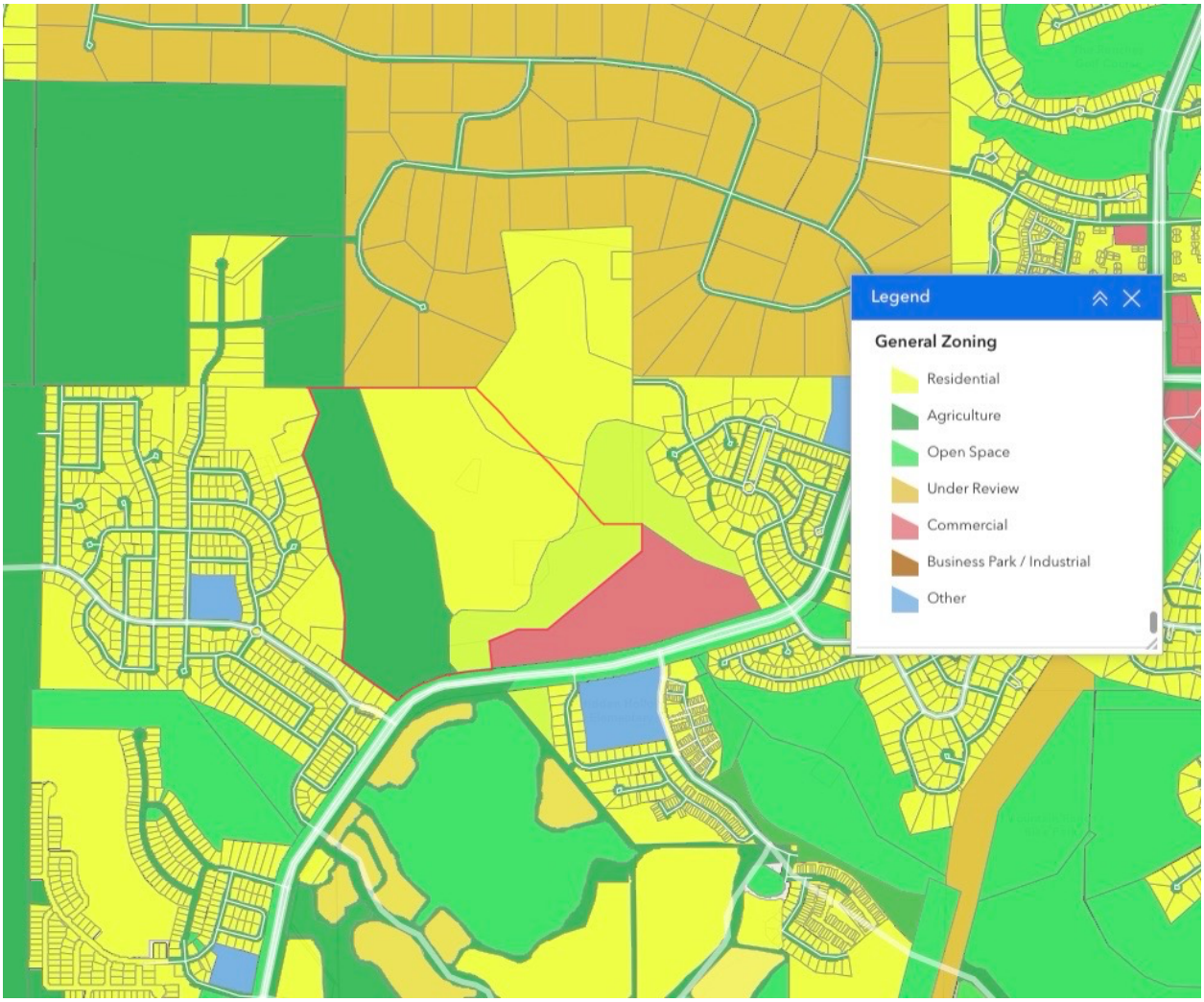
The following is a brief background of the Horizon Master Plan, formerly known as the Circle 5 Ranch development originally vested on Utah County Parcel # 58:040:0378.

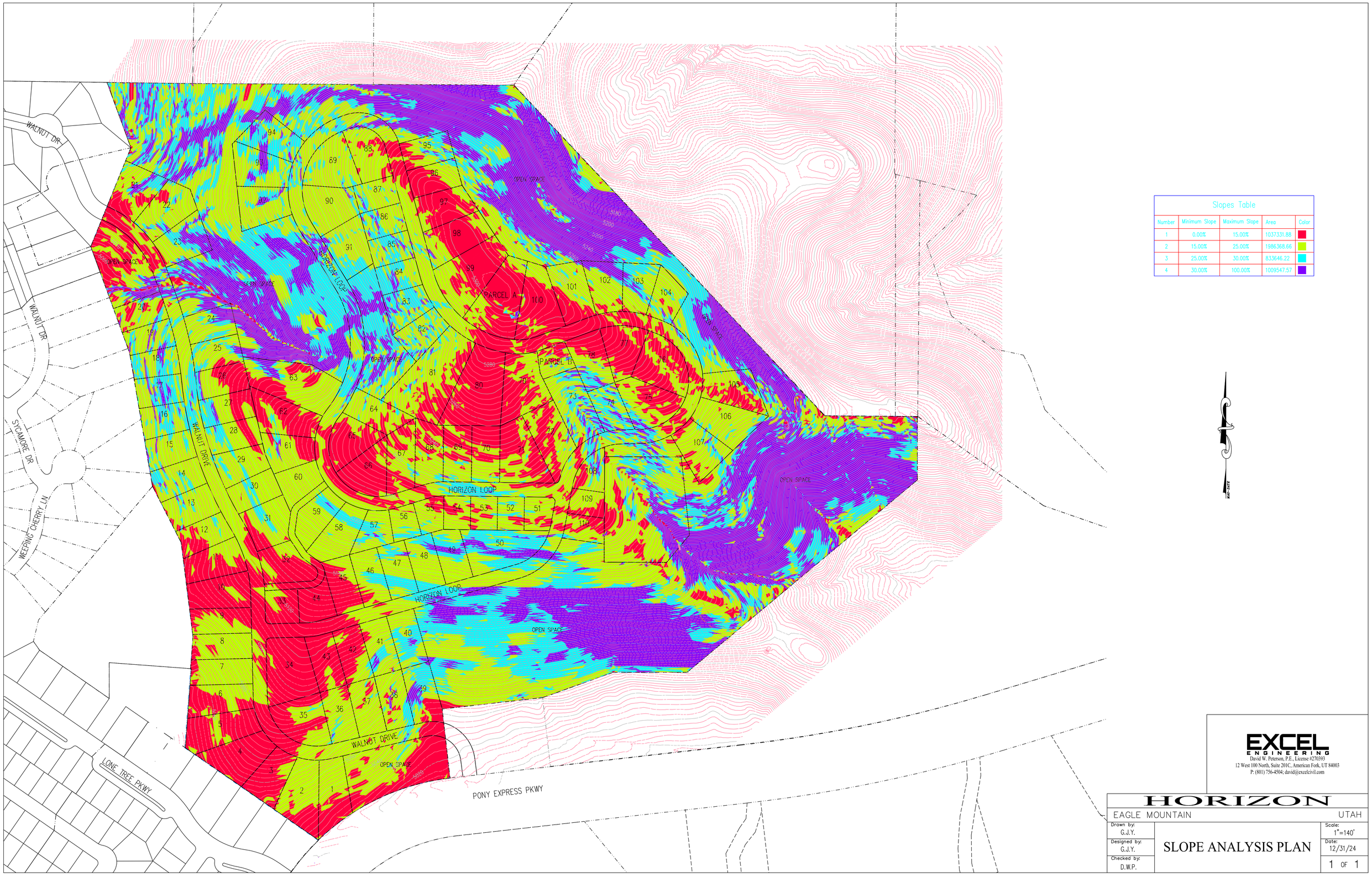
1. A preliminary plat for Circle 5 Ranch was approved by the Eagle Mountain Planning Commission in 2007.
2. The approved preliminary plat includes 81 single-family lot ranging between 0.35 and 1.08 acres in size, as well as natural open space and residential streets.
3. In 2007 the Eagle Mountain Municipal Code did not contain expiration language related to preliminary plats, but Section 16.20.060 Expirations and Extensions of Approvals was added to the EMMC in 2010.
4. In the fall of 2024, EM City initiated zone change applications for multiple parcels throughout the City in an effort to update the underlying zoning from zoning associated with expired master plans (in this case, The Ranches master plan) to a current zone recognized by the City.
5. During the City Council meeting that addressed the Circle 5 Ranch parcel, the developer (Scot Hazard) and the City Council agreed that a Foothill residential zone would be the most appropriate zone for the property and most consistent with the vested plat. The Council adopted the FH zone during that meeting.
6. During that same City Council meeting in the fall of 2024, some discussion took place about the ongoing validity of a plat vesting that does not expire. Rather than try the details of such a discussion, the City Council and developer agreed that the developer would work towards updating the preliminary plat, include developable land that was specifically excluded from the original vesting (these were proposed multi-family parcels, permitted under the original Ranches MP zoning), bring the design to current standards as much as possible considering the constraints of topography, access, and connectivity, and present a new master plan for the City Council's review.
7. Some elements of the City's current code cannot be complied with while maintaining the general design of the approved preliminary plat in the updated and revised plan, such as: cross-block connectivity, block length, and egress compliant with "typical" fire code design intent (the fire chief has reviewed the proposed plan and has approved the layout and egress in its proposed form – fire sprinklers will be required in the upper 3 phases of the master plan). Another matter includes the ridgeline protection zone. Compatibility with the ridge line ordinance is nearly impossible, as a significant number of the lots load from roads centered on the ridge lines. Finally, the property lies within the wildlife overlay zone that was adopted after the preliminary plat vesting. In conversations with Todd Black, the

City's wildlife biologist, the proposed Horizon design would not adversely affect the deer migration through this area, especially as this area is no longer identified as a primary migration route.

8. In addition to the single family lots added (some from more efficient redesign, others from the land previously proposed as multi-family parcels), the developer has added significant improved open space, including nature path trail systems, and an iconic 360 concrete stair amenity similar to those found near Dixie Tech in St George, UT -- https://www.utahsadventurefamily.com/tech-ridge-stairs-dragon-tail-steps-st-george/
9. Mailbox locations and turnouts consistent with EMMC have also been added to the master plan.

Existing Conditions





Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	15.00%	1037331.88	
2	15.00%	25.00%	1986368.66	
3	25.00%	30.00%	833646.22	
4	30.00%	100.00%	1009547.57	

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HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y.	SLOPE ANALYSIS PLAN	Scale: 1"=140'
Designed by: G.J.Y.		Date: 12/31/24
Checked by: D.W.P.		1 OF 1

Compatibility Statement

The proposed development has been designed to ensure compatibility with the surrounding land uses and the broader goals of the city. Located within an area that includes a mix of residential and open, the project complements existing development patterns in terms of density and layout. Surrounding properties are currently residential and open space and the proposed plat aligns with these uses by providing appropriate transitions in scale and street connectivity.

Internally, the development promotes compatibility through a well-organized street network, pedestrian connectivity, and integrated open space. Lot configurations, infrastructure placement, and access points have been arranged to ensure smooth traffic flow and maintain neighborhood cohesion. Design guidelines or CC&Rs will help regulate architectural styles, fencing, and landscaping to support a unified appearance and long-term community quality.

Overall, the proposed preliminary plat is consistent with the city's planning objectives and zoning regulations, and it will contribute positively to the built environment while respecting the character and function of neighboring areas.

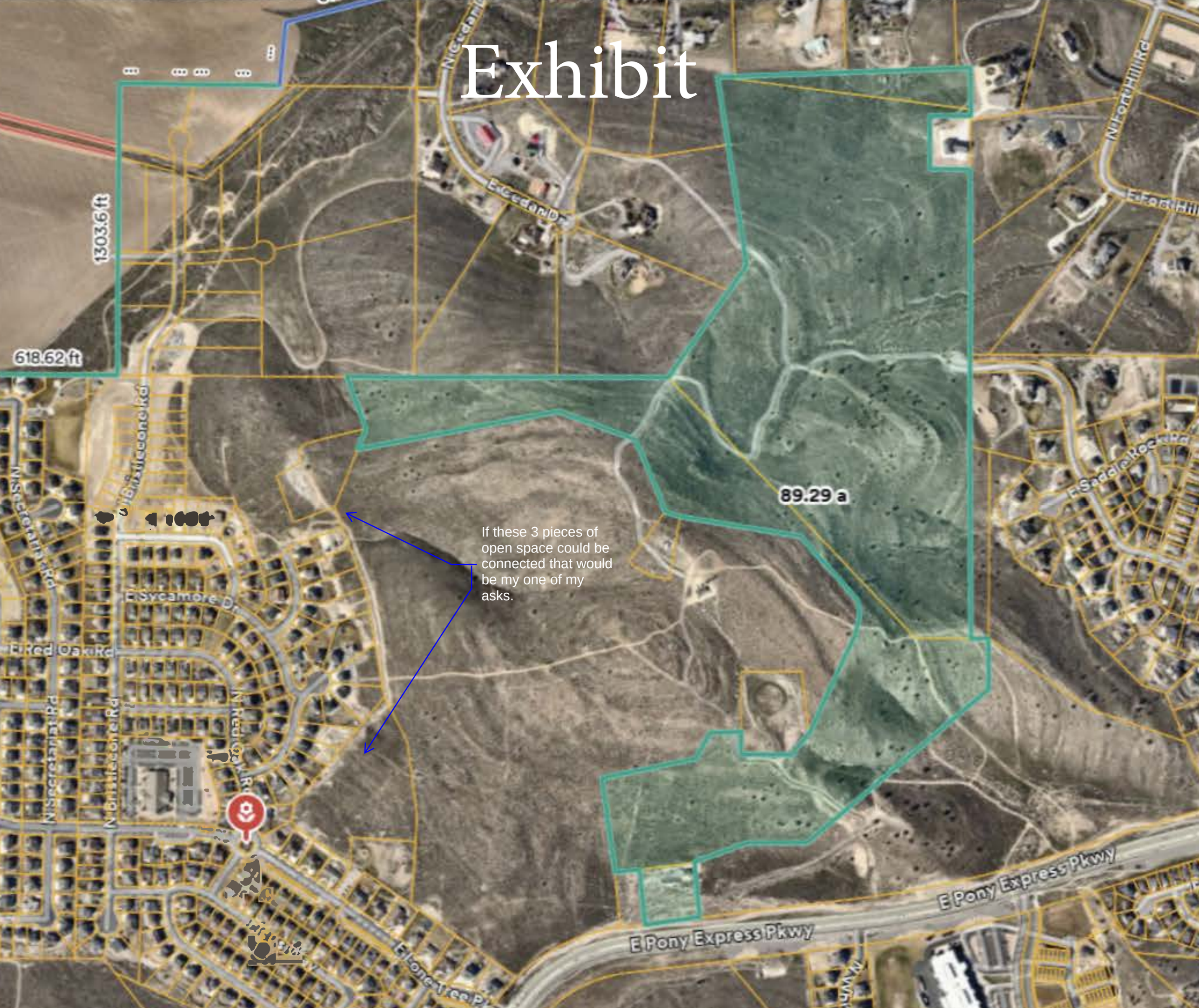
Environmental Impact Report

In collaboration with the City's wildlife biologist, Todd Black, it has been determined that at the time of this application there are no foreseeable adverse environmental impacts to be expected as a result of the proposed development.

As noted in the following exhibit, the desire for connections to adjacent open space have been expressed. The shaded green in exhibit shows the open space/wildlife corridor connected to city property. The width of which is approximately 650' at it's widest point and 140' at its narrowest. This corridor of open space meets the connectivity needs of the wildlife in the area as well as preserves the property's vested development rights.

In an effort to maintain a beautiful and open landscape, no wildlife fencing is to be installed by the city to restrict wildlife movement within the corridor. Such fencing has been deemed unnecessary and of little impact to the wildlife using it by the City's wildlife biologist. The developer agrees to restrict access to open space to designated trail heads and will disallow access from private property where lot lines meet with open space boundaries.

Exhibit



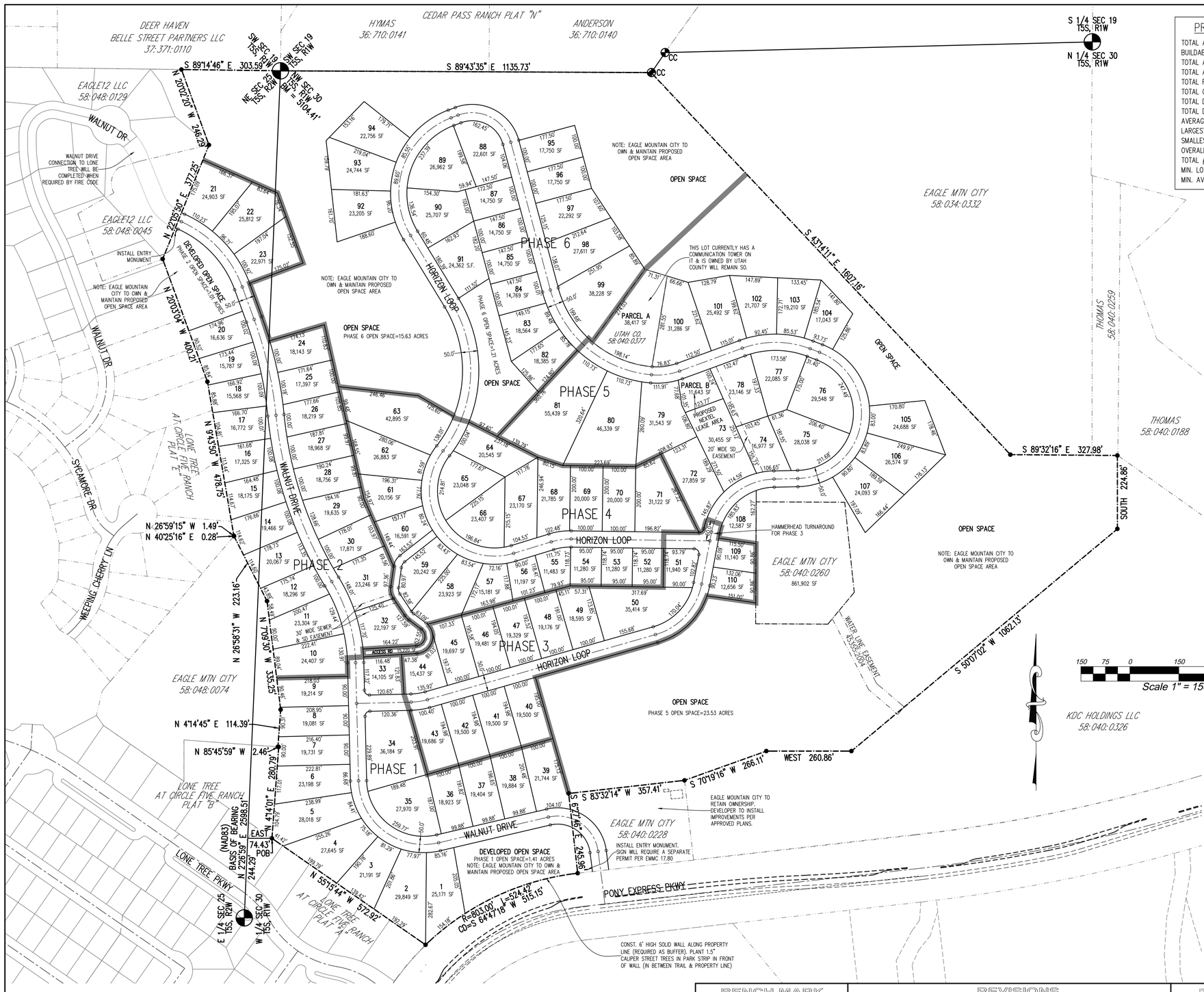
If these 3 pieces of open space could be connected that would be my one of my asks.

Proposed Land Use and Zoning Map

Phasing, roads, water retention/detention, open spaces, trails, amenities can all be seen in the maps provided in the Horizon Preliminary Plan document. All of the project will be zoned Foothill Residential.

Parks, Open Space, and Trails Plan

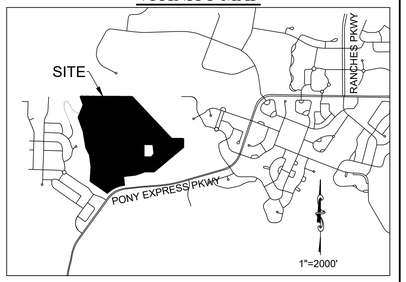
The Horizon subdivision includes a large trail system to take advantage of the surrounding open space and integrates into an already established biking trail system on the property. These trials will connect into surround city trail systems to provide pedestrian connectivity. A notable amenity planned into the project is a recreational staircase for the public to use for leisure and fitness. We feel these amenities will be well used and unique to the city and will meet the city's current requirements for parks, trails, and open space.



PRELIM PLAN LAND CALCULATIONS

TOTAL ACREAGE:	109.33 ACRES
BUILDABLE ACREAGE:	66.19 ACRES
TOTAL ACREAGE IN LOTS:	55.00 ACRES
TOTAL ACREAGE IN PARCELS:	1.15 ACRES
TOTAL ROADWAY AREA:	10.39 ACRES
TOTAL OPEN SPACE:	42.79 ACRES
TOTAL DEVELOPED OPEN SPACE REQUIRED:	1.89 ACRES
TOTAL DEVELOPED OPEN SPACE PROVIDED:	2.42 ACRES
AVERAGE LOT SIZE:	21,780 SF/0.50 ACRES
LARGEST LOT SIZE:	55,439 SF/1.11 ACRES
SMALLEST LOT SIZE:	11,140 SF/0.26 ACRES
OVERALL DENSITY:	1.01 LOTS/ACRE
TOTAL # OF LOTS:	110 LOTS
MIN. LOT SIZE ALLOWED:	10,890 S.F.
MIN. AVERAGE LOT SIZE:	21,780 S.F.

VICINITY MAP



LEGAL DESCRIPTION

Beginning at a point located North 2°26'59" East along section line 244.29 feet and East 74.43 feet from the West Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence along the easterly boundary of Lone Tree at Circle Five Ranch Plat "B" the following two courses and distances: 1) North 4°14'01" East 280.79 feet, and 2) North 85°45'59" West 2.46 feet; thence North 4°14'45" East 114.39 feet; thence North 7°09'30" West 335.25 feet; thence North 26°58'31" West 223.16 feet; thence along the easterly boundary of Lone Tree at Circle Five Ranch Plat "E" the following four courses and distances: 1) North 40°25'16" East 0.28 feet, 2) North 26°59'15" West 1.49 feet, 3) North 9°43'50" West 478.75 feet, and 4) North 20°03'04" West 400.21 feet; thence North 22°05'50" East 377.25 feet; thence North 20°02'20" West 246.29 feet; thence South 89°14'46" East along section line 303.59 feet to the Northwest Corner of Section 30; thence South 89°43'35" East along section line 1135.73 feet; thence South 43°14'11" East 1607.16 feet; thence South 89°32'16" East 327.98 feet; thence South 224.86 feet; thence South 50°07'02" West 1062.13 feet; thence West 260.86 feet; thence South 70°19'16" West 266.11 feet; thence South 83°32'14" West 357.41 feet; thence South 6°27'46" East 245.96 feet; thence along the arc of a 803.00 foot radius non-tangent curve to the left 524.42 feet through a central angle of 37°25'05" (chord bears South 64°47'18" West 515.15 feet); thence North 55°15'44" West along the northerly boundary of Lone Tree at Circle Five Ranch Plat "A" a distance of 572.92 feet to the point of beginning.

Less and Excepting therefrom the following:

Beginning at a point located North 2°26'59" East along section line 1767.77 feet and East 990.97 feet from the West Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence North 36°02'03" East 274.03 feet; thence South 73°10'04" East 71.31 feet; thence South 9°33'35" West 281.55 feet; thence along the arc of a 327.50 foot radius non-tangent curve to the right 201.30 feet through a central angle of 35°13'00" (chord bears North 67°13'46" West 198.14 feet) to the point of beginning.

Also Less and Excepting therefrom the following:

Beginning at a point located North 2°26'59" East along section line 902.29 feet and East 1528.45 feet from the West Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence North 0°16'25" East 373.66 feet; thence South 89°43'35" East 271.29 feet; thence South 6°02'19" East 277.33 feet; thence South 39°41'05" West 126.85 feet; thence North 89°43'35" West 221.24 feet to the point of beginning.

Total Area = 108.45 Acres

GENERAL NOTES

1. SEE SHEETS 5 & 6 FOR EXISTING CONTOURS.
2. THERE ARE SMALL AREAS IN THIS SUBDIVISION LOTS WITH A NATURAL GRADE THAT EXCEEDS 25% IN RELATION TO THE PROPOSED LOT LAYOUT. A SLOPE ANALYSIS PLAN HAS BEEN PROVIDED FOR THIS SITE.
3. PROPOSED ZONE = FR. BUILDING SETBACKS SHALL BE AS PER FR ZONE AND GENERAL FOR PRIMARY AND ACCESSORY STRUCTURES.
4. ALL ROADS WILL BE PUBLIC AND MEET CITY STANDARDS.
5. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
6. NO STREET LIGHTING IS PROPOSED. DEVELOPER IS REQUESTING A WAIVER.
7. HOMES CONSTRUCTED WITHIN THIS SUBDIVISION MUST COMPLY WITH CITY CODE ARCHITECTURAL DESIGN REVIEW.
8. CITY WILL OWN AND MAINTAIN THE PROPOSED OPEN SPACE AREAS SHOWN ON THIS PRELIMINARY PLAT.
9. TURNAROUNDS WILL BE PROVIDED AT PHASING LINES WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
10. THERE ARE NO IRRIGATION DITCHES OR STRUCTURES, CANALS, WELLS, STREAMS, SIGNIFICANT ROCK OUTCROPPINGS, WETLANDS, FLOOD PLAINS, OR OTHER NATURAL FEATURES ON SITE.
11. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.
12. SEE SHEET 5 & 6 FOR ROAD CONTOURS SHOWING HOW ROADS WILL BE GRADED AND CONNECT.

SHEET INDEX

1. PRELIMINARY PLAT
2. PRELIMINARY UTILITY PLAN (NORTH)
3. PRELIMINARY UTILITY PLAN (SOUTH)
4. PRELIMINARY UTILITY PLAN (OFF-SITE)
5. PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (NORTH)
6. PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (SOUTH)
7. DETAILS

PROPOSED ZONE: FOOTHILL RESIDENTIAL

SURVEYOR:
AZTEC ENGINEERING INC.
732 N. 780 W.
AMERICAN FORK, UT. 84003
AZTECENGINEERING@GMAIL.COM

BENCH MARK
NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 5104.41'

REVISIONS

Rev.	Date	Description
1	07/10/25	REVISED AS PER CITY COMMENTS

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c/o Scott Hazard
3688 E. Campus Drive Suite 100, Eagle Mountain, UT 84005
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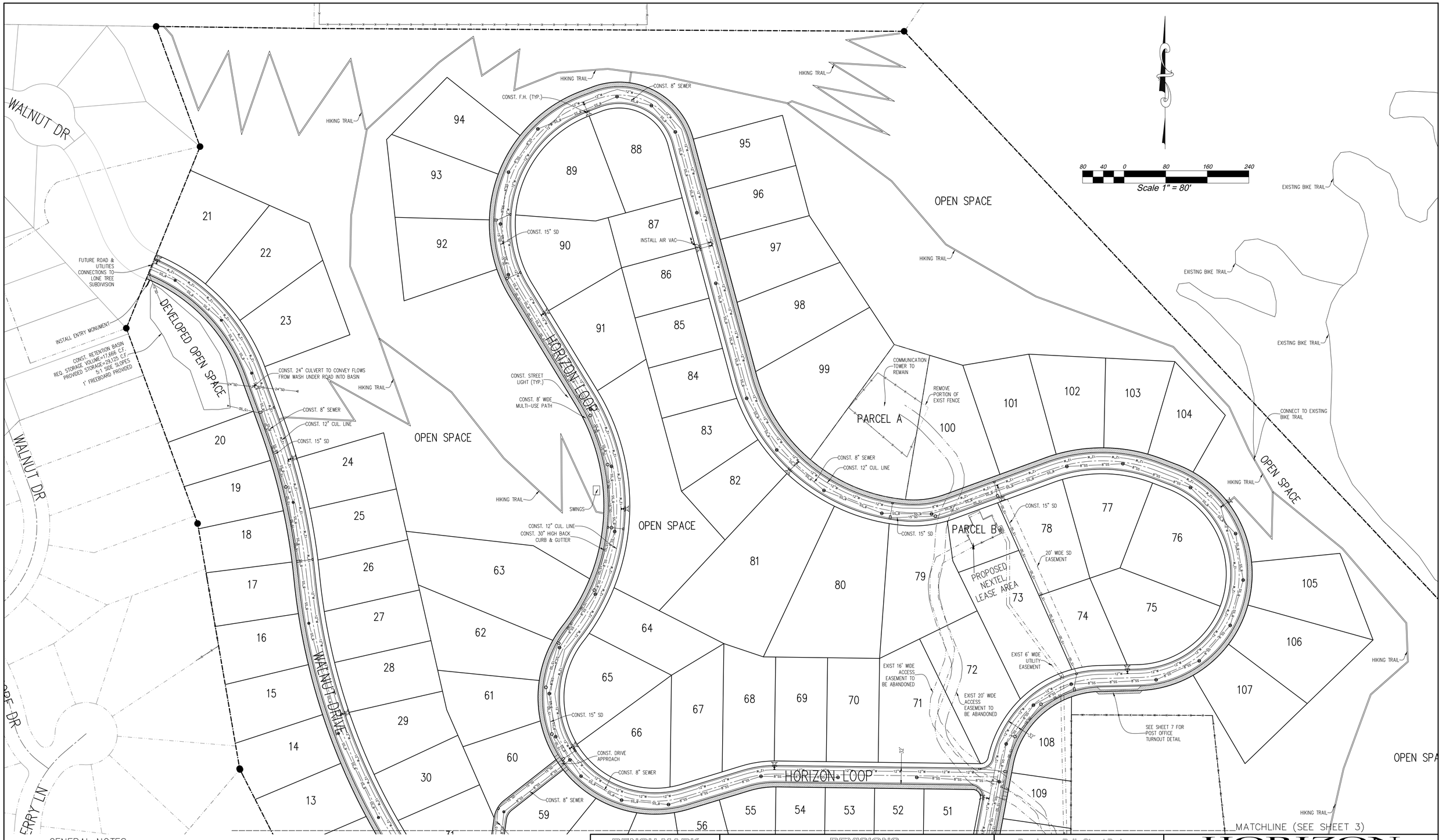
P: (801) 756-4504; david@excelcivil.com

HORIZON
EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY PLAT
LOCATED IN THE NW CORNER OF SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SLB&M

Scale: 1"=150'
Date: 03/28/25
1 OF 7



GENERAL NOTES

1. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
2. NO STREET LIGHTING IS PROPOSED. DEVELOPER IS REQUESTING A WAIVER.
3. TURNAROUNDS WILL BE PROVIDED AT PHASING LINES WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
4. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.

RETENTION/L.I.D. NOTES

1. THE RETENTION BASIN IS TO BE LINED WITH LANDSCAPE FABRIC AND COVERED WITH GRAVEL.
2. LOW IMPACT DEVELOPMENT (L.I.D.) IS ACCOMPLISHED WITH 100% INFILTRATION OF THE 100-YEAR STORM IN THE RETENTION BASIN.

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
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HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY UTILITY PLAN (NORTH)

Scale: 1"=80'
Date: 03/28/25

HORIZON LOOP

WALNUT DRIVE

ACCESS RD

PONY EXPRESS PKWY

DEVELOPED OPEN SPACE

OPEN SPACE

OPEN SPACE

MATCHLINE (SEE SHEET 2)

MATCHLINE (SEE SHEET 4)

CONST. DRIVE APPROACH

CONST. 8" SEWER

CONST. 15" SD

INSTALL AIR VAC

30' WIDE SEWER & SD EASEMENT

CONST. EMERGENCY FIRE ACCESS ROAD (23' WIDE DRIVABLE WIDTH)

CONST. STREET LIGHT (TYP.)

CONST. F.H. (TYP.)

CONST. 12" CUL. LINE

CONST. 8' WIDE MULTI-USE PATH

CONST. 30" HIGH BACK CURB & GUTTER

36' FROM FACE TO FACE (4' EXTRA IN THIS SECTION OF ROADWAY FOR FIRE ACCESS)

HIKING TRAIL

EXIST 16' WIDE ACCESS EASEMENT TO BE ABANDONED

EXIST 6' WIDE UTILITY EASEMENT

EXIST 20' WIDE ACCESS EASEMENT TO BE ABANDONED

EXIST 30' WATER LINE EASEMENT

CONST. 12' WIDE STAIRWAY (5.75" RISERS W/14" TREAD) 173' VERTICAL CLIMB (360 RISERS)

CONST. DETENTION BASIN
REQ. STORAGE VOLUME=86,050 C.F.
PROVIDED STORAGE=93,165 C.F.
FENCE PERIMETER OF BASIN DUE TO 3:1 SIDE SLOPES & DEPTH OF BASIN
1' FREEBOARD PROVIDED

ACCESS TO POWER TO LIGHT STAIRS

CONST. ASPHALT ACCESS TO EXIST PUMP HOUSE

EXIST BUILDING

CONST. DRIVE APPROACH

SEE SHEET 7 FOR POST OFFICE TURNOUT DETAIL

ORIFICE BOX

6' TRAIL ACCESS

CONST. 20 STALL PARKING LOT

CONST. 15" SD

CONST. WATER SERVICE FOR WATER FOUNTAIN/BOTTLE FILLER

CONST. RAMP & MATCH EXIST TRAIL

REMOVE PORTION OF EXIST TRAIL

CONST. RAMP & MATCH EXIST TRAIL

EXIST COMM LINE

CONST. 12" CUL. LINE (OFF-SITE)

EXIST 8" SEWER

CONST. 12" CUL. LINE

CONST. 18" SD

CONST. 8" SEWER

CONST. 6' HIGH SOLID WALL ALONG PROPERTY LINE (REQUIRED AS BUFFER). PLANT 1.5" CALIPER STREET TREES IN PARK STRIP IN FRONT OF WALL (IN BETWEEN TRAIL & PROPERTY LINE)

INSTALL ENTRY MONUMENT

EXIST SDMH

EXIST SSMH

EXIST 20" CUL.

EXIST GAS LINE

EXIST POWER LINE

CONNECT TO EXIST 8" SEWER STUB

REMOVE EXIST CURB & MATCH ASPHALT

CONNECT TO EXIST 12" SD STUB & CONST. SD BOX

GENERAL NOTES

1. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
2. NO STREET LIGHTING IS PROPOSED. DEVELOPER IS REQUESTING A WAIVER.
3. TURNAROUNDS WILL BE PROVIDED AT PHASING LINES WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
4. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.

RETENTION/L.I.D. NOTES

1. THE RETENTION BASIN IS TO BE LINED WITH LANDSCAPE FABRIC AND COVERED WITH GRAVEL.
2. LOW IMPACT DEVELOPMENT (L.I.D.) IS ACCOMPLISHED WITH 100% INFILTRATION OF THE 100-YEAR STORM IN THE RETENTION BASIN.

80 40 0 80 160 240

Scale 1" = 80'

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 5104.41'

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HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY UTILITY PLAN (SOUTH)

Scale: 1"=80'
Date: 03/28/25

MATCHLINE (SEE SHEET 3)

CONST. 12" CUL. LINE

EXIST 20" CUL.

TIE INTO TANK 5 BOOSTER PUMP DISCHARGE LINE

EXIST WATER TANK

80 40 0 80 160 240

Scale 1" = 80'

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
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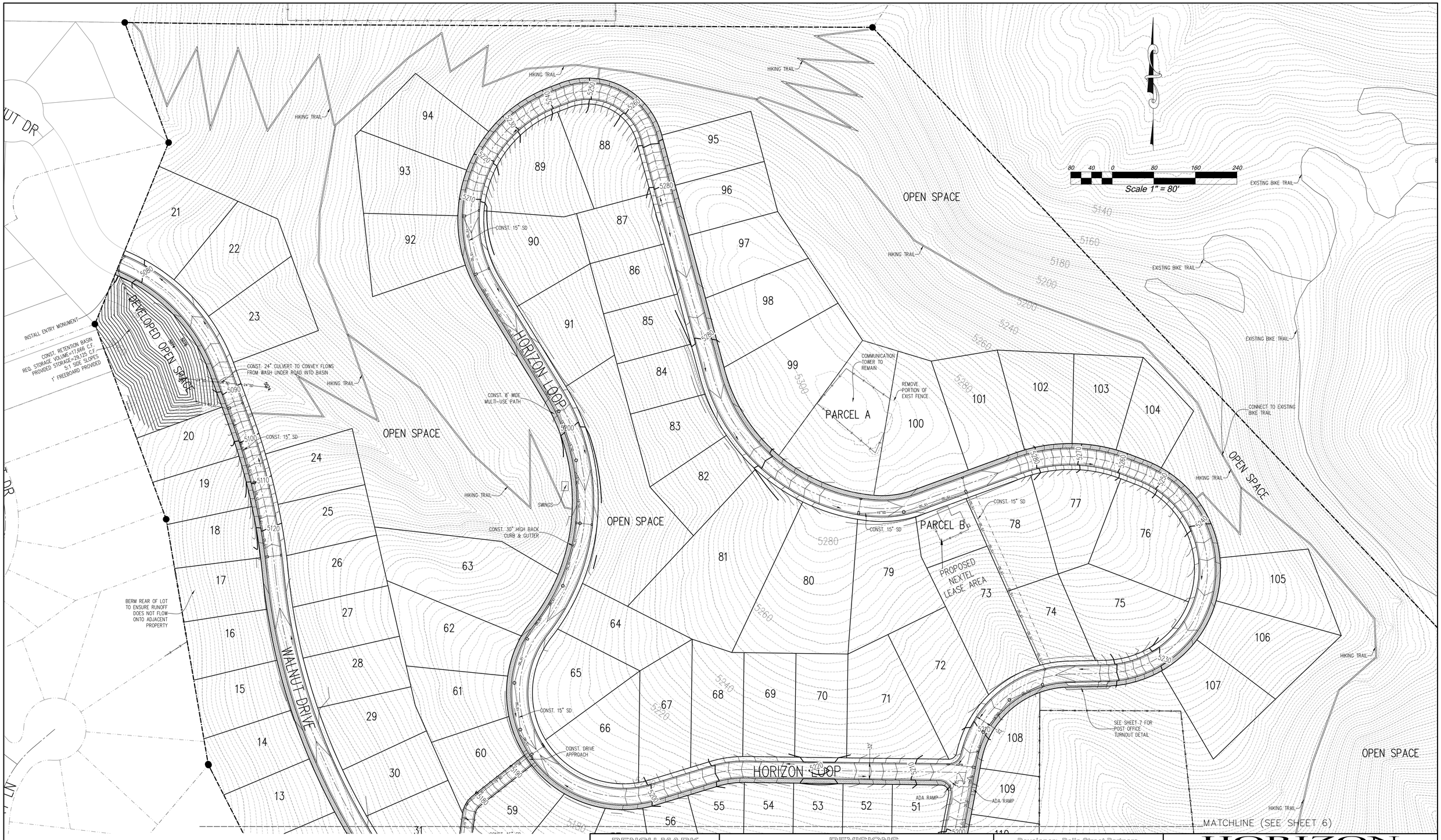
HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY UTILITY PLAN (OFF-SITE)

Scale: 1"=80'
Date: 03/28/25



GRADING & DRAINAGE PLAN NOTES:

SEE GRADING, EROSION AND SLOPE NOTES ON SHEET 6.

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
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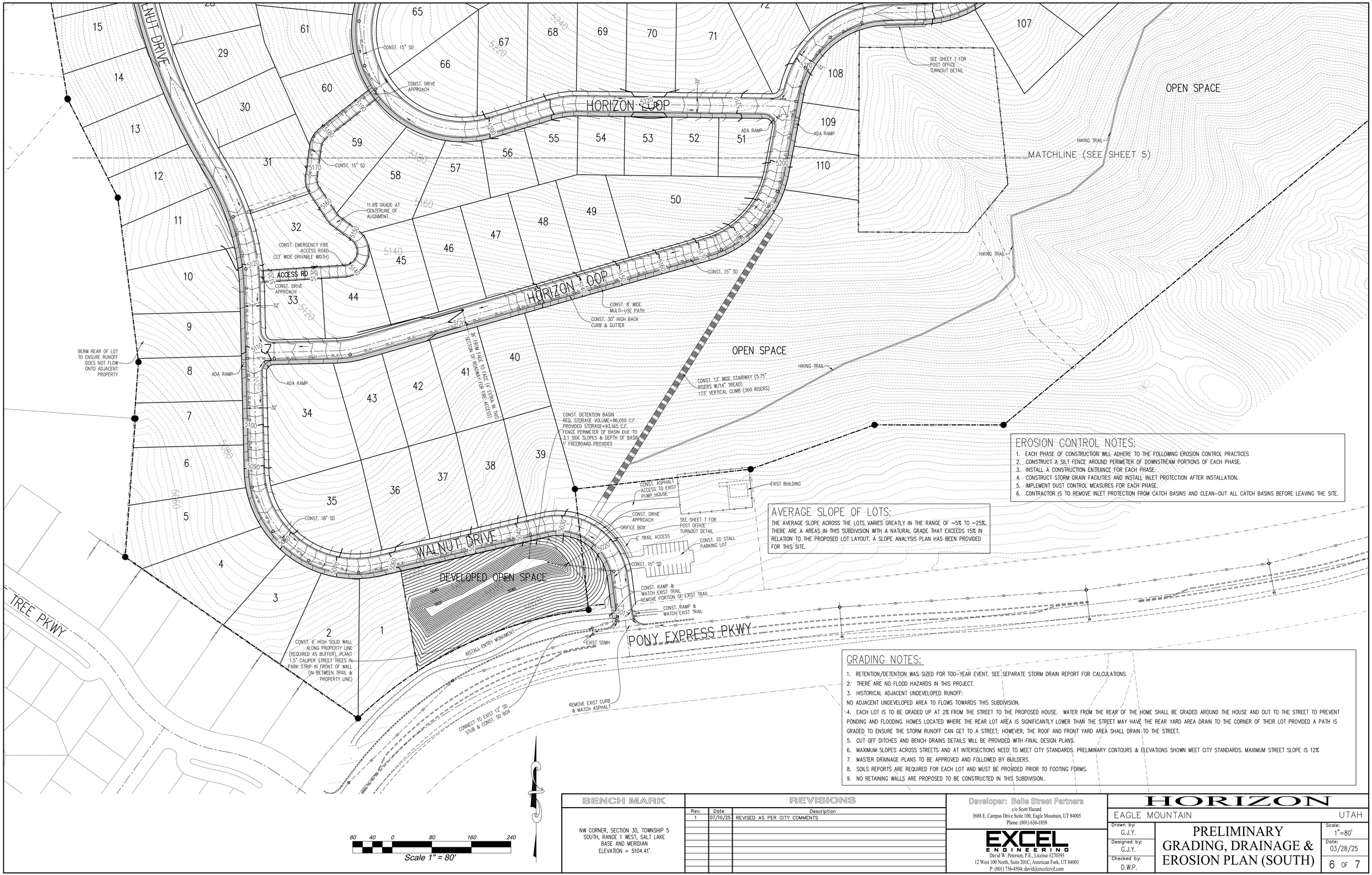
HORIZON

EAGLE MOUNTAIN UTAH

PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (NORTH)

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.
Scale: 1"=80'
Date: 03/28/25



EROSION CONTROL NOTES:

1. EACH PHASE OF CONSTRUCTION WILL ADHERE TO THE FOLLOWNG EROSION CONTROL PRACTICES
2. CONSTRUCT A SILT FENCE AROUND PERIMETER OF DOWNSTREAM PORTIONS OF EACH PHASE.
3. INSTALL A CONSTRUCTION ENTRANCE FOR EACH PHASE.
4. CONSTRUCT STORM DRAIN FACILITIES AND INSTALL INLET PROTECTION AFTER INSTALLATION.
5. IMPLEMENT DUST CONTROL MEASURES FOR EACH PHASE.
6. CONTRACTOR IS TO REMOVE INLET PROTECTION FROM CATCH BASINS AND CLEAN-OUT ALL CATCH BASINS BEFORE LEAVING THE SITE.

AVERAGE SLOPE OF LOTS:

THE AVERAGE SLOPE ACROSS THE LOTS VARIES GREATLY IN THE RANGE OF ~5% TO ~25%. THERE ARE A AREAS IN THIS SUBDIVISION WITH A NATURAL GRADE THAT EXCEEDS 15% IN RELATION TO THE PROPOSED LOT LAYOUT. A SLOPE ANALYSIS PLAN HAS BEEN PROVIDED FOR THIS SITE.

GRADING NOTES:

1. RETENTION/DETENTION WAS SIZED FOR 100-YEAR EVENT. SEE SEPARATE STORM DRAIN REPORT FOR CALCULATIONS.
2. THERE ARE NO FLOOD HAZARDS IN THIS PROJECT.
3. HISTORICAL ADJACENT UNDEVELOPED RUNOFF:
NO ADJACENT UNDEVELOPED AREA TO FLOWS TOWARDS THIS SUBDIVISION.
4. EACH LOT IS TO BE GRADED UP AT 2% FROM THE STREET TO THE PROPOSED HOUSE. WATER FROM THE REAR OF THE HOME SHALL BE GRADED AROUND THE HOUSE AND OUT TO THE STREET TO PREVENT PONDING AND FLOODING. HOMES LOCATED WHERE THE REAR LOT AREA IS SIGNIFICANTLY LOWER THAN THE STREET MAY HAVE THE REAR YARD AREA DRAIN TO THE CORNER OF THEIR LOT PROVIDED A PATH IS GRADED TO ENSURE THE STORM RUNOFF CAN GET TO A STREET; HOWEVER, THE ROOF AND FRONT YARD AREA SHALL DRAIN TO THE STREET.
5. CUT OFF DITCHES AND BENCH DRAINS DETAILS WILL BE PROVIDED WITH FINAL DESIGN PLANS.
6. MAXIMUM SLOPES ACROSS STREETS AND AT INTERSECTIONS NEED TO MEET CITY STANDARDS. PRELIMINARY CONTOURS & ELEVATIONS SHOWN MEET CITY STANDARDS. MAXIMUM STREET SLOPE IS 12%
7. MASTER DRAINAGE PLANS TO BE APPROVED AND FOLLOWED BY BUILDERS.
8. SOILS REPORTS ARE REQUIRED FOR EACH LOT AND MUST BE PROVIDED PRIOR TO FOOTING FORMS.
9. NO RETAINING WALLS ARE PROPOSED TO BE CONSTRUCTED IN THIS SUBDIVISION..

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 5104.41'

REVISIONS

Rev.	Date	Description
1	07/10/25	REVISED AS PER CITY COMMENTS

Developer: Belle Street Partners
c/o Scott Hazard
3688 E. Campus Drive Suite 100, Eagle Mountain, UT 84005
Phone: (801) 636-1858

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

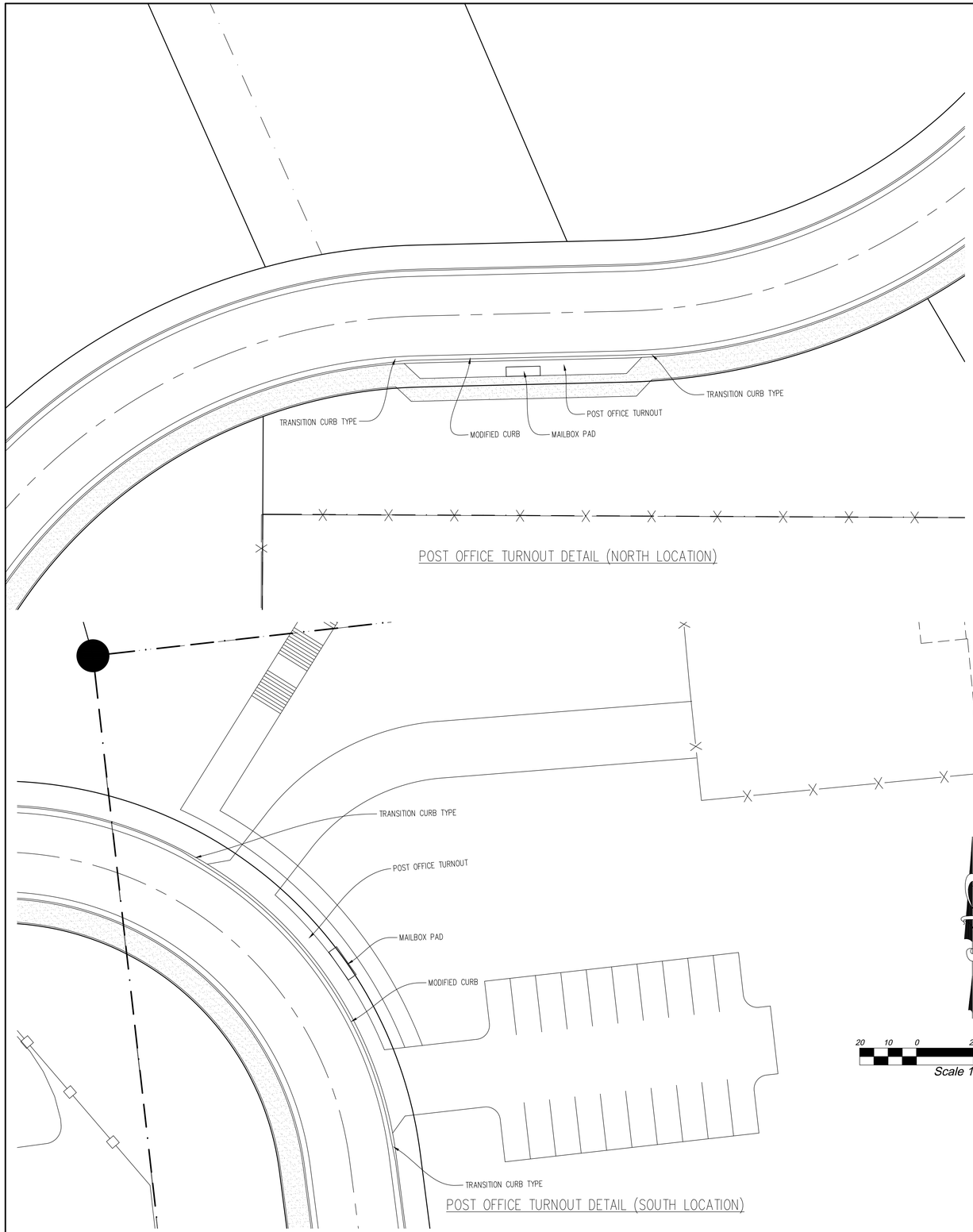
HORIZON

EAGLE MOUNTAIN UTAH

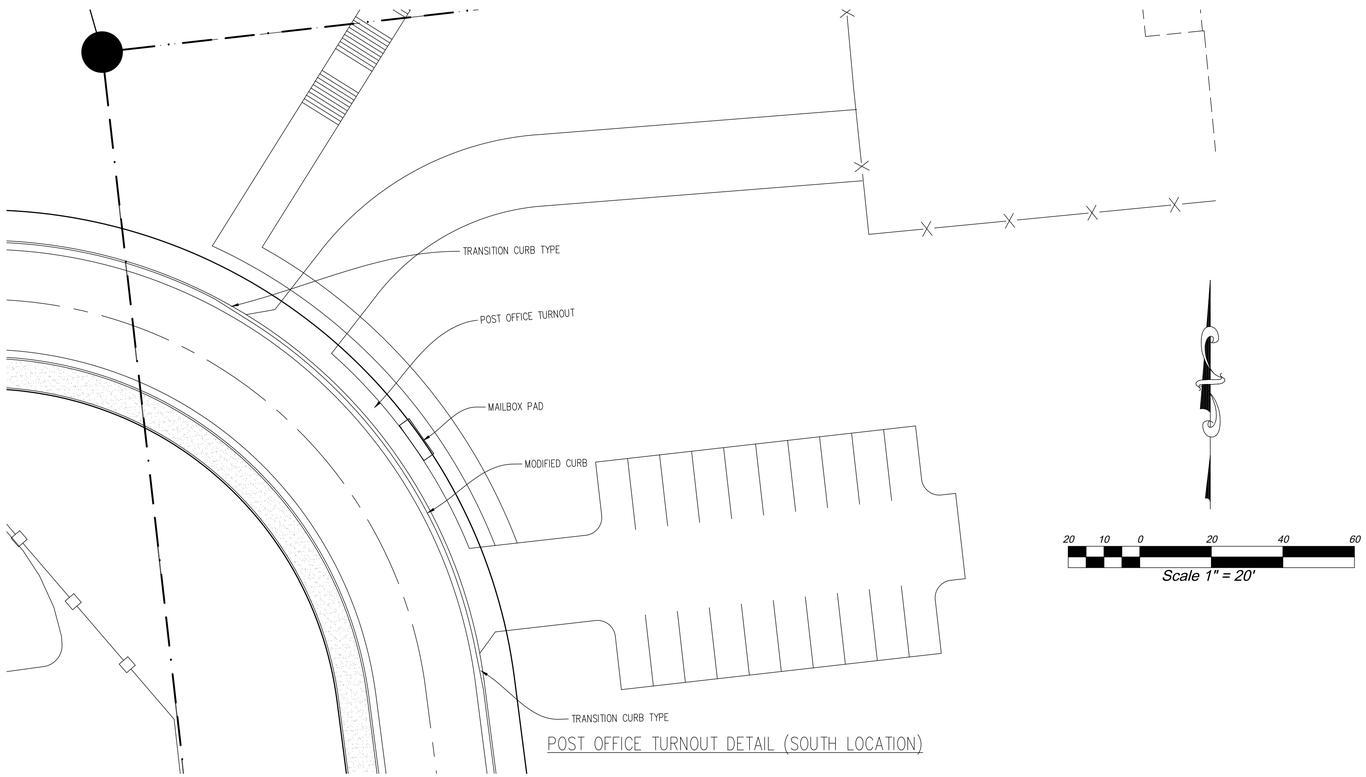
Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (SOUTH)

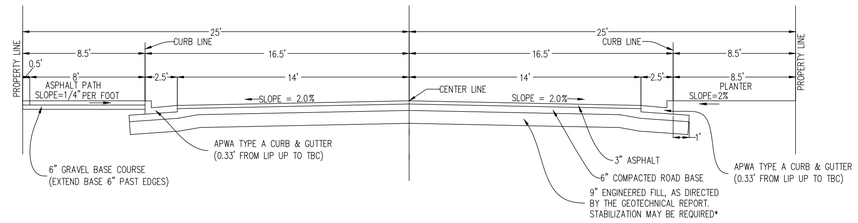
Scale: 1"=80'
Date: 03/28/25



POST OFFICE TURNOUT DETAIL (NORTH LOCATION)



POST OFFICE TURNOUT DETAIL (SOUTH LOCATION)

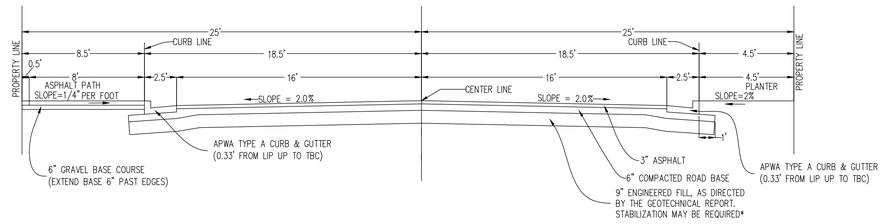


TYPICAL 50' STREET SECTION

SCALE: NONE

*0" SUBBASE REQUIRED WHERE COMPETENT BEDROCK IF THE SUBGRADE

APPLIES TO HORIZON LOOP AND WALNUT DRIVE (EXCEPTING THE WIDENED ASPHALT SECTION)



TYPICAL 50' STREET SECTION

SCALE: NONE

*0" SUBBASE REQUIRED WHERE COMPETENT BEDROCK IF THE SUBGRADE

APPLIES TO WIDENED ASPHALT SECTION BETWEEN WALNUT DRIVE & HORIZON LOOP INTERSECTION

Developer: Belle Street Partners
c/o Scott Hazard
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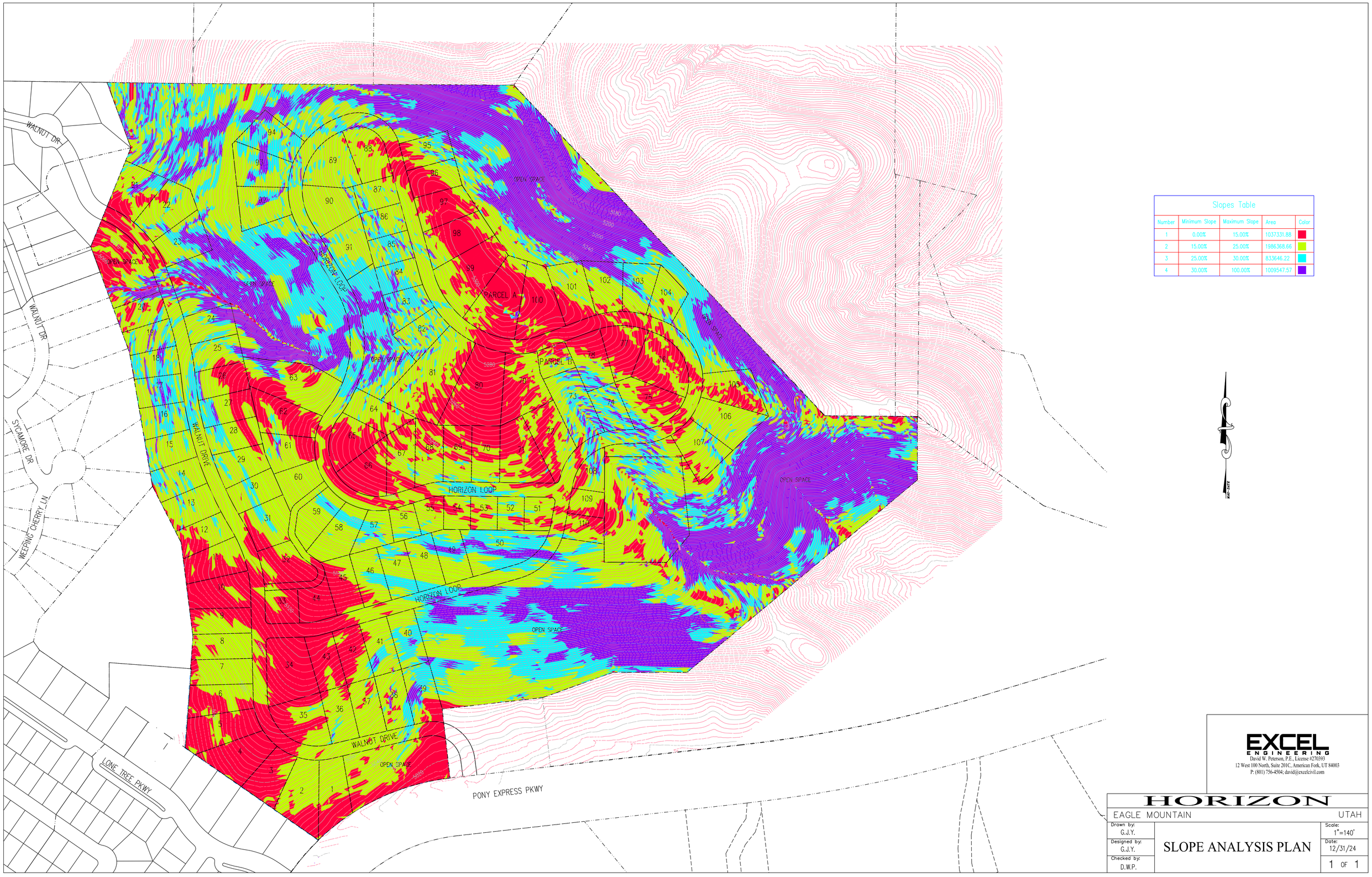
REVISIONS

Rev.	Date	Description

HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y	DETAILS	Scale: 1"=20'
Designed by: G.J.Y.		Date: 07/10/25
Checked by: D.W.P.		7 OF 7



Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	15.00%	1037331.88	
2	15.00%	25.00%	1986368.66	
3	25.00%	30.00%	833646.22	
4	30.00%	100.00%	1009547.57	

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HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y.	SLOPE ANALYSIS PLAN	Scale: 1"=140'
Designed by: G.J.Y.		Date: 12/31/24
Checked by: D.W.P.		1 OF 1

CMT TECHNICAL SERVICES

ENGINEERING •GEOTECHNICAL •ENVIRONMENTAL (ESA I & II) •
MATERIALS TESTING •SPECIAL INSPECTIONS •
ORGANIC CHEMISTRY • PAVEMENT
DESIGN •GEOLOGY

GEOTECHNICAL ENGINEERING STUDY

Circle 5 Ranch

About 2300 East Pony Express Parkway
Eagle Mountain, Utah

CMT PROJECT NO. 23414

FOR:
Belle Street Partners
3688 East Campus Drive, Suite 100
Eagle Mountain, Utah 84043

December 10, 2024

CMT TECHNICAL SERVICES

December 10, 2024

Mr. Caden Hazard
Belle Street Partners
3688 East Campus Drive, Suite 100
Eagle Mountain, Utah 84043

Subject: Geotechnical Engineering Study
Circle 5 Ranch
About 2300 East Pony Express Parkway
Eagle Mountain, Utah
CMT Project No. 23414

Mr. Hazard:

Submitted herewith is the report of our geotechnical engineering study for the subject site. This report contains the results of our findings and an engineering interpretation of the results with respect to the available project characteristics. It also contains recommendations to aid in the design and construction of the earth related phases of this project.

On November 5, 2024, CMT Technical Services (CMT) staff professionals were on-site and excavated 20 test pits extending to depths of approximately 6 inches to 7.5 feet below the existing ground surface where refusal occurred on bedrock. Samples of the subsurface soils exposed in the test pits were collected during the field operations and subsequently transported to our laboratory for further observation and testing of select samples.

Conventional spread and/or continuous footings may be utilized to support the proposed structures, provided the recommendations in this report are followed. This report presents detailed discussions of design and construction criteria for this site.

We appreciate the opportunity to work with you at this stage of the project. CMT offers a full range of Geotechnical Engineering, Geological, Material Testing, Special Inspection services, and Phase I and II Environmental Site Assessments. With offices throughout Utah, Idaho, Arizona, Colorado and Texas, our staff is capable of efficiently serving your project needs. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at 801-492-4132.

Sincerely,
CMT Technical Services

Jeffrey J. Egbert, P.E., LEED A.P., M. ASCE
Senior Geotechnical Engineer

Reviewed by:

William G. Turner, P.E., M. ASCE
Senior Geotechnical Engineer

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APPENDIX
Figure 1: Site Plan
Figures 2-21: Test Pit Logs
Figure 22: Key to Symbols

1.0 INTRODUCTION

1.1 General

CMT Technical Services (CMT) was retained to conduct a geotechnical subsurface study for the proposed development of approximately 112 acres as a residential subdivision. The parcel is situated on the north side of Pony Express Parkway at about 2300 East in Eagle Mountain, Utah, as shown in the **Vicinity Map** below.

VICINITY MAP

1.2 Objectives, Scope and Authorization

The objectives and scope of our study were planned in discussions between Mr. Caden Hazard of Belle Street Partners, and Mr. Bill Turner of CMT. In general, the objectives of this study were to define and evaluate the subsurface soil and groundwater conditions at the site, and provide appropriate foundation, earthwork, pavement and seismic recommendations to be utilized in the design and construction of the proposed development.

In accomplishing these objectives, our scope of work included performing field exploration, which consisted of the excavating/logging/sampling of 20 test pits, performing laboratory testing on representative samples of the subsurface soils collected in the test pits, and conducting an office program, which consisted of correlating

available data, performing engineering analyses, and preparing this summary report. This scope of work was authorized by returning a signed copy of our proposal dated October 21, 2024, and executed on October 28, 2024.

1.3 Description of Proposed Construction

We understand that single family residences will be constructed at the site, which will likely have two levels of wood frame construction above grade and possibly a single level of reinforced concrete below grade (basement). We project that maximum structural loads for the residences will be on the order of 4,000 pounds per lineal foot for walls, 50,000 pounds for columns, and an average uniform loading not exceeding 100 pounds per square foot for floor slabs. If the structural loading conditions are different than we have projected, please notify us so that any appropriate modifications to our conclusions and recommendations contained herein can be made.

We also understand that pavements at the site will include internal residential streets which we anticipate will utilize asphalt pavement. Traffic is projected to consist of mostly automobiles and light trucks, a few daily medium-weight delivery trucks, a weekly garbage truck, and an occasional fire truck.

Site development will require some earthwork in the form of cutting and filling. A site grading plan was not available at the time of this report, but we project that maximum cuts and fills may be on the order of 5 to 10 feet. If deeper cuts or fills are planned, CMT should be notified to provide additional recommendations, if needed.

1.4 Executive Summary

Proposed residences can be supported upon conventional spread and continuous wall foundations. The most significant geotechnical aspects regarding site development include the following:

1. Topsoil up to approximately 12 inches in thickness, which will require removal beneath structures, flatwork, and pavements;
2. Subsurface natural soils predominately consist of GRAVEL (GM), with an occasional layer of SILTY CLAY (CL-ML) or Lean CLAY (CL), extending to the bottom of the test pits where refusal occurred on bedrock at depths of 6 inches to 7.5 feet below the existing ground surface;
3. Groundwater was not encountered in the test pits; and
4. Foundations may be placed entirely on suitable, undisturbed natural gravel soils, entirely on competent bedrock, or entirely on properly placed and compacted structural fill extending to suitable, undisturbed natural soils or bedrock.

CMT must assess that topsoil, undocumented fills, debris, disturbed or unsuitable soils have been removed and that suitable soils have been encountered prior to placing site grading fills, footings, slabs, and pavements.

In the following sections, detailed discussions pertaining to the site are provided, including subsurface descriptions, geologic/seismic setting, earthwork, foundations, lateral resistance, lateral pressure, floor slabs, and pavements.

2.0 FIELD EXPLORATION

To define and evaluate the subsurface soil and groundwater conditions, 20 test pits were excavated with a compact excavator at the site to depths of approximately 6 inches to 7.5 feet below the existing ground surface where refusal occurred on bedrock. Locations of the test pits are shown on ***Figure 1, Site Plan***, included in the Appendix. The field explorations were performed by experienced members of our geotechnical staff.

Representative samples of the subsurface soils encountered were collected by obtaining disturbed "grab" samples from within the test pits. The samples were sealed in plastic bags prior to transport to the laboratory.

The subsurface soils encountered in the test pits were classified in the field based upon visual and textural examination, logged and described in general accordance with ASTM[1] D-2488. These field classifications were supplemented by subsequent examination and testing of select samples in our laboratory. Graphical representations of the subsurface conditions encountered are presented on each individual Test Pit Log, ***Figures 2 through 21***, included in the Appendix. A Key to Symbols defining the terms and symbols used on the logs, is provided as ***Figure 22*** in the Appendix.

Upon completion of logging and sampling, the test pits were backfilled with the excavated soils. When backfilling, minimal to no effort was made to compact the backfill and no compaction testing was performed. Thus, the test pit backfill is considered undocumented fill and settlement of the backfill in the test pits over time should be anticipated.

3.0 LABORATORY TESTING

Selected samples of the subsurface soils were subjected to various laboratory tests to assess pertinent engineering properties, as follows:

1. Moisture Content, ASTM D-2216, Percent moisture representative of field conditions
2. Atterberg Limits, ASTM D-4318, Plasticity and workability
3. Gradation Analysis, ASTM D-1140/C-117, Grain Size Analysis

Laboratory test results are presented on the test pit logs (***Figures 2 through 21***) and in the **Lab Summary Table** on the following page:

[1]American Society for Testing and Materials

LAB SUMMARY TABLE

TEST PIT	DEPTH (feet)	SOIL CLASS	SAMPLE TYPE	MOISTURE CONTENT(%)	GRADATION			ATTERBERG LIMITS		
					GRAV.	SAND	FINES	LL	PL	PI
TP-1	1	CL-ML	Grab	7	6	30	64	21	17	4
TP-1	5	GM	Grab	8	31	25	44			
TP-2	0	GM	Grab	6	26	23	51			
TP-3	0.5	GM	Grab	7	48	18	34			
TP-4	0	GM	Grab	3	62	14	24			
TP-5	0.5	GM	Grab	5	48	20	32			
TP-6	1	GM	Grab	5	41	19	40			
TP-7	0	GM	Grab	5	53	15	32			
TP-8	0.5	GM	Grab	6	41	24	35			
TP-9	1	GM	Grab	7	44	30	26			
TP-10	0	GM	Grab	6	45	18	37			
TP-11	1	GM	Grab	4	62	15	23			
TP-12	1	GM	Grab	3	49	20	31			
TP-13	0	GM	Grab	5	38	22	40			
TP-14	2	GM	Grab	12	55	18	27			
TP-15	0.5	GM	Grab	6	33	29	38			
TP-16	1	GM	Grab	8	56	18	26			
TP-17	0.5	CL	Grab	12	0	33	67	39	31	8
TP-18	0.5	GM	Grab	5	65	12	23			
TP-19	0.5	GM	Grab	9	41	15	44			
TP-20	0	GM	Grab	6	52	16	32			

4.0 GEOLOGIC & SEISMIC CONDITIONS

4.1 Geologic Setting

The subject site is located on the boundary between Cedar Valley and Utah Valley in north-central Utah on the west side of Utah Lake. The site sits at elevations between approximately 5,060 and 5,290 feet above sea level. Both valleys are deep, sediment-filled basins that are part of the Basin and Range Physiographic Province. The valleys were formed by extensional tectonic processes during the Tertiary and Quaternary geologic time periods, and are bordered by the Wasatch Mountain Range on the east and Oquirrh Mountains on the west. The valleys are located within the Intermountain Seismic Belt, a zone of active tectonism and seismic activity extending from southwestern Montana to southwestern Utah. The active (evidence of movement within the last 10,000 years) Wasatch Fault Zone is part of the Intermountain Seismic Belt and extends from southeastern Idaho to central Utah along the western base of the Wasatch Mountain Range.

Much of northwestern Utah, including Cedar and Utah Valleys, was also previously covered by the Pleistocene age Lake Bonneville. Utah Lake, which currently occupies much of the western portion of Utah Valley, is a remnant of this ancient freshwater lake. Lake Bonneville reached a high-stand elevation of between approximately 5,100 and 5,200 feet above sea level at between 18,500 and 17,400 years ago. Approximately

17,400 years ago, the lake breached its basin in southeastern Idaho and dropped by almost 300 feet relatively fast as water drained into the Snake River. Following this catastrophic release, the lake level continued to drop slowly over time, primarily driven by drier climatic conditions, until reaching the current levels of Utah Lake and the larger Great Salt Lake to the north. Shoreline terraces formed at the high-stand elevation of the lake and several subsequent lower lake levels are visible in places on the mountain slopes surrounding the valley. Much of the sediment within the valleys was deposited as lacustrine sediments during both the transgressive (rise) and regressive (fall) phases of Lake Bonneville and in older, pre-Bonneville lakes that previously occupied the basin.

The geology of the USGS 7.5 Minute Saratoga Springs and Cedar Fort, Utah Quadrangles, including the location of the subject site, have both been mapped by Biek[2,3]. The surficial geology on the subject site and adjacent properties is mostly mapped as "Butterfield Peaks Formation" (Map Unit IPobp) dated as Middle to Lower Pennsylvanian, "Lacustrine gravel and sand" (map unit Qlgb) dated as upper Pleistocene, and "Alluvial-fan and colluvial deposits" (map unit Qafc) dated to be Holocene to upper Pleistocene.

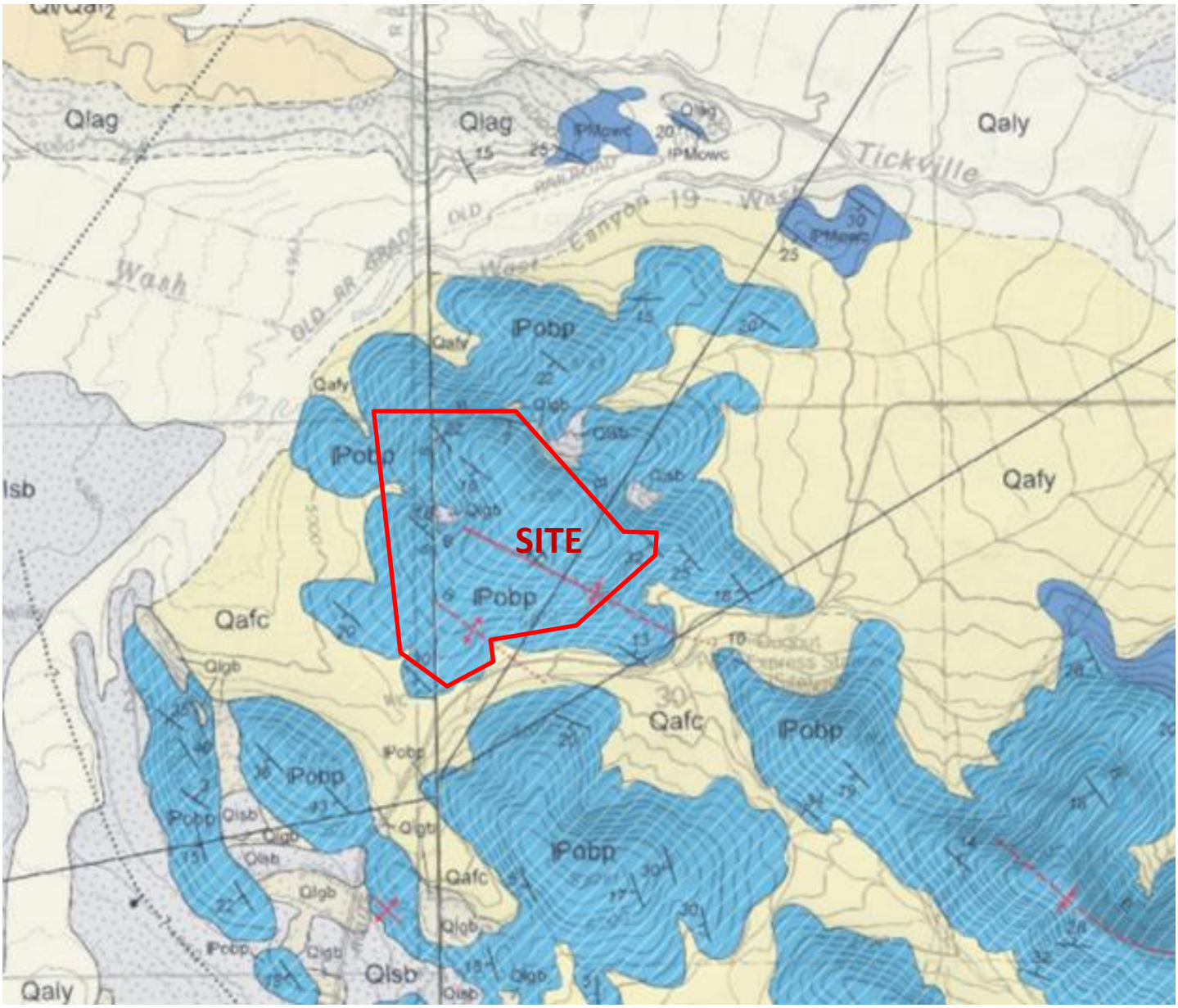
Unit IPobp is described in the referenced mapping as "Interbedded, brown-weathering, fine grained calcareous sandstone, medium gray, fine grained sandy limestone, minor orthoquartzite, and several limestone intervals, four of which are mapped separately; typically cyclically interbedded with several tens of feet of calcareous sandstone capped by gray limestone several feet thick; contains minor siltstone and mudstone interbeds that are very poorly exposed; forms ledgy to cliffy slopes. ... Measured section is 3,283 feet (1,166 m) thick, …."

Unit Qlgp is described in the referenced map as "Moderately to well-sorted, moderately to well-rounded, clast supported, pebble to cobble gravel and lesser pebbly sand; thin to thick bedded; typically interbedded with or laterally gradational to sand and silt facies; gastropods common in sandy lenses; locally partly cemented with calcium carbonate; Qlgb deposited at and below highest Bonneville shoreline, and Qlgp deposited at and below the Provo shoreline; forms beach ridges, terraces, bars, and spits; 0 to 50 feet (0-15 m) thick."

Unit Qafc is described in the referenced map as "Poorly to moderately sorted, clay- to boulder-size sediment deposited by debris flows and slopewash in large, partly enclosed basins at the north end of Lake Mountain; 0 to about 40 feet (0-12 m) thick."

No fill has been mapped at the location of the site on the geologic map. Refer to the **Geologic Map**, on the following page.

[2]Robert F. Biek, 2004, Geologic map of the Saratoga Springs 7.5' quadrangle, Utah County, Utah. M-201. UGS. 1:24,000 scale.
[3]Robert F. Biek, 2004, Geologic map of the Cedar Fort 7.5' quadrangle, Utah County, Utah. M-202. UGS. 1:24,000 scale.



GEOLOGIC MAP

4.2 Faulting

No surface fault traces are shown on the referenced geologic map crossing, adjacent to, or projecting toward the subject site. The nearest active (movement in the last 10,000 years) fault is the Provo section of the Wasatch fault zone, 13.8 miles to the east.

4.3 Seismicity

4.3.1 Site Class

Utah has adopted the International Building Code (IBC) 2021, which determines the seismic hazard for a site based upon 2014 mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil site class. The USGS values are presented on maps incorporated into the IBC code and are also available based on latitude and longitude coordinates (grid points). For site class definitions, IBC 2021 Section 1613.2.2 refers to Chapter 20, Site Classification Procedure for Seismic Design, of ASCE[4] 7-16, which stipulates that the average values of shear wave velocity, blow count and/or shear strength within the upper 100 feet (30 meters) be utilized to determine seismic site class.

Based on average shear wave velocity data within the upper 30 meters ($V_{S,30}$) published by McDonald and Ashland[5], the subject site is located within unit description QafoC, which has a log-mean $V_{S,30}$ of 502 meters per second (1647 feet per second). Thus, it is our opinion the site best fits Site Class C – Very Dense Soil and Soft Rock, which we recommend for seismic structural design.

4.3.2 Seismic Design Category

The 2014 USGS mapping utilized by the IBC provides values of peak ground, short period and long period spectral accelerations for the Site Class B/C boundary and the Risk-Targeted Maximum Considered Earthquake (MCE_R). This Site Class B/C boundary represents average bedrock values for the Western United States and must be corrected for local soil conditions. The Seismic Design Categories in the International Residential Code (IRC 2021 Table R301.2.2.1.1) are based upon the Site Class as addressed in the previous section. For Site Class C at site grid coordinates of 40.3584 degrees north latitude and -111.9988 degrees west longitude, $\mathbf{S_{DS}}$ is 0.647 and the **Seismic Design Category** is D_0.

4.3.3 Liquefaction

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

The site is located within an area designated by the Utah Geologic Survey[6] as having “Very Low” liquefaction potential. This is defined as having a less than 5% probability that with a 100-year period an earthquake strong enough to cause liquefaction will occur.

[4]American Society of Civil Engineers
[5] McDonald, G.N. and Ashland, F.X., 2008, “Earthquake Site-Conditions Map for the Wasatch Front Urban Corridor, Utah,” Utah Geological Survey Special Study 125, 41 pp.
[6] Utah Geological Survey, "Liquefaction-Potential Map for a Part of Utah County, Utah," Utah Geological Survey Public Information Series 28, August 1994. https://ugspub.nr.utah.gov/publications/public_information/pi-28.pdf

A special liquefaction study was not performed for this site. We predominately encountered unsaturated gravel underlain by shallow bedrock. In our opinion, based upon the conditions encountered, liquefaction will not occur at this site.

4.4 Other Geologic Hazards

No landslide deposits or features, including lateral spread deposits, are mapped on or adjacent to the site. The site is not located within a currently known or mapped potential debris flow, stream flooding, or rock fall hazard area.

5.0 SITE CONDITIONS

5.1 Surface Conditions

At the time the test pits were excavated the site consisted of a hilly area of open range land vegetated with some grasses, weeds, and sage brush. Based upon aerial photos dating back to 1993 that are readily available on the internet, the area has remained range land with residential development occurring all around since that time. The portion of Pony Express Parkway that borders the site on the south appears to have been constructed between 2002 and 2003 (see **Vicinity Map** in **Section 1.1** above).

5.2 Subsurface Soils

At the locations of the test pits we encountered approximately 6 to 12 inches of topsoil at the surface. At many of the test pit locations we encountered only approximately 6 inches of soil over the bedrock. Natural soils encountered predominately consisted of Silty GRAVEL (GM) with varying amounts of sand, cobbles, or boulders. At the location of TP-1, below the topsoil, we encountered a layer of Sandy SILTY CLAY (CL-ML) extending to approximately 4 feet below the ground surface, followed by gravel. Also, in TP-17 we encountered a thin layer of Sandy Lean CLAY (CL) overlying the bedrock.

The natural gravel soils were slightly moist and estimated to be in a loose to very dense state. These soils are also projected to exhibit moderately high bearing strength and low compressibility characteristics. The silt/clay soils were slightly moist to moist and estimated to be of medium stiff consistency. The silt/clay soils are projected to exhibit moderate bearing strength characteristics with moderate compressibility characteristics.

For a more descriptive interpretation of subsurface conditions, please refer to the test pit logs, ***Figures 2 through 21***, which graphically represent the subsurface conditions encountered. The lines designating the interface between soil types on the logs generally represent approximate boundaries - in situ, the transition between soil types may be gradual.

5.3 Groundwater

We did not encounter groundwater at the time of our field explorations within the maximum depth explored of about 7.5 feet below the existing ground surface. There is a potential that water perched on the bedrock could be encountered in wetter seasons.

Groundwater levels can fluctuate seasonally and in response to numerous other factors such as heavy precipitation, irrigation of neighboring land, and other unforeseen factors. The detailed evaluation of these and other factors, which may be responsible for ground water fluctuations, and the magnitude of potential fluctuations, is beyond the scope of this study.

5.4 Site Subsurface Variations

Based on the results of the subsurface explorations and our experience, variations in the continuity and nature of subsurface conditions should be anticipated. Due to the heterogeneous characteristics of natural soils, care should be taken in interpolating or extrapolating subsurface conditions between or beyond the exploratory locations.

Also, after completing the logging and sampling, the test pits were backfilled with the excavated soils but minimal to no effort was made to compact these soils. Thus, the test pit backfill is considered undocumented fill and settlement of the backfill in the test pits over time should be anticipated.

6.0 SITE PREPARATION AND GRADING

6.1 General

All deleterious materials should be stripped from the site prior to commencement of construction activities. This includes vegetation, topsoil, loose and disturbed soils, etc. Based upon the conditions observed in the test pits there is topsoil on the surface of the site which we estimated to be about 6 to 12 inches in thickness. When stripping and grubbing, topsoil should be distinguished by the apparent organic content and not solely by color; thus we estimate that topsoil stripping will need to include the upper 4 to 10 inches.

Following clearing and grubbing the subgrade should be observed by a CMT geotechnical engineer to assess that suitable natural soils have been exposed and any deleterious materials, loose and/or disturbed soils have been removed, prior to placing site grading fills, footings, slabs, and pavements.

Fill placed over large areas to raise overall site grades can induce settlements in the underlying natural soils. If more than 5 feet of site grading fill is anticipated over the natural ground surface, we should be notified to assess potential settlements and provide additional recommendations as needed. These recommendations may include placement of the site grading fill far in advance to allow potential settlements to occur prior to construction.

6.2 Temporary Excavations

Excavations deeper than about 8 to 10 feet are not anticipated at the site. Groundwater was not encountered within the depths explored, about 6 inches to 7.5 feet at the time of our field explorations, and thus is not anticipated to be encountered in excavations. However, during wetter months water could potentially perch on the shallow bedrock. Heavy and/or specialized equipment will likely be required to excavate into the bedrock.

In clayey (cohesive) soils and competent bedrock, temporary construction excavations not exceeding 4 feet in depth may be constructed with near-vertical side slopes. Temporary excavations up to 8 feet deep, above or below groundwater, may be constructed with side slopes no steeper than one-half horizontal to one vertical (0.5H:1V).

For sandy/gravelly (cohesionless) soils, temporary construction excavations not exceeding 4 feet in depth should be no steeper than one-half horizontal to one vertical (0.5H:1V). For excavations up to 8 feet and above groundwater, side slopes should be no steeper than one horizontal to one vertical (1H:1V). Excavations encountering saturated cohesionless soils will be very difficult to maintain and will require very flat side slopes and/or shoring, bracing and dewatering.

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

6.3 Fill Material

Following are our recommendations for the various fill types we anticipate will be used at this site:

FILL MATERIAL TYPE	DESCRIPTION | RECOMMENDED SPECIFICATION
Structural Fill	Placed below structures, flatwork and pavement. Well-graded sand/gravel mixture, with maximum particle size of 4 inches, a minimum 70% passing 3/4-inch sieve, a maximum 20% passing the No. 200 sieve, and a maximum Plasticity Index of 10.
Site Grading Fill	Placed over larger areas to raise the site grade. Sandy to gravelly soil, with a maximum particle size of 6 inches, a minimum 70% passing 3/4-inch sieve, a maximum 50% passing No. 200 sieve, and a maximum Plasticity Index of 15.
Non-Structural Fill	Placed below non-structural areas, such as landscaping. On-site soils or imported soils, with a maximum particle size of 8 inches, including silt/clay soils not containing excessive amounts of degradable/organic material (see discussion below).
Stabilization Fill	Placed to stabilize soft areas prior to placing structural fill and/or site grading fill. Coarse angular gravels and cobbles 1 inch to 8 inches in size. May also use 1.5-inch to 2.0-inch gravel placed on stabilization fabric, such as Mirafi RS280i, or equivalent (see **Section 6.6**).

Some onsite gravel soils may be suitable for use as structural fill, if processed to meet the requirements given above, and may also be used in site grading fill and non-structural fill situations.

On-site clay soils are not suitable for use as structural fill but may be used as site grading fill and non-structural fill. Note that these soils are inherently more difficult to work with in proper moisture conditioning (they are very sensitive to changes in moisture content), requiring very close moisture control during placement and compaction. This will be very difficult, if not impossible, during wet and cold periods of the year. We also recommend the site grading fill thickness using on-site clay soils not exceed a maximum of 3 feet below structures, to minimize potential settlements.

All fill material should be approved by a CMT geotechnical engineer prior to placement.

6.4 Fill Placement and Compaction

The various types of compaction equipment available have their limitations as to the maximum lift thickness that can be compacted. For example, hand operated equipment is limited to lifts of about 4 inches and most "trench compactors" have a maximum, consistent compaction depth of about 6 inches. Large rollers, depending on soil and moisture conditions, can achieve compaction at 8 to 12 inches. The full thickness of each lift should be compacted to at least the following percentages of the maximum dry density as determined by ASTM D-1557 (or AASHTO[7] T-180) in accordance with the following recommendations:

LOCATION	TOTAL FILL THICKNESS (FEET)	MINIMUM PERCENTAGE OF MAXIMUM DRY DENSITY
Beneath an area extending at least 4 feet beyond the perimeter of structures, and below flatwork and pavement (applies to structural fill and site grading fill) extending at least 2 feet beyond the perimeter	0 to 5 5 to 8	95 98
Site grading fill outside area defined above	0 to 5 5 to 8	92 95
Utility trenches within structural areas	--	96
Roadbase and subbase	-	96
Non-structural fill	0 to 5 5 to 8	90 92

Structural fills greater than 8 feet thick are not anticipated at the site. For best compaction results, we recommend that the moisture content for structural fill/backfill be within 2% of optimum. Field density tests should be performed on each lift as necessary to verify that proper compaction is being achieved.

6.5 Utility Trenches

For the bedding zone around the utility, we recommend utilizing sand bedding fill material that meets current APWA[8] requirements.

[7] American Association of State Highway and Transportation Officials
[8] American Public Works Association

All utility trench backfill material below structurally loaded facilities (foundations, floor slabs, flatwork, parking lots/drive areas, etc.) should be placed at the same density requirements established for structural fill in the previous section.

Most utility companies and local governments are requiring Type A-1a or A-1b (AASHTO Designation) soils (sand/gravel soils with limited fines) be used as backfill over utilities within public rights of way, and the backfill be compacted over the full depth above the bedding zone to at least 96% of the maximum dry density as determined by AASHTO T-180 (ASTM D-1557).

Where the utility does not underlie structurally loaded facilities and public rights of way, natural soils may be utilized as trench backfill above the bedding layer, provided they are properly moisture conditioned and compacted to the minimum requirements stated above in **Section 6.4**.

6.6 Stabilization

The natural clay soils at this site will likely be susceptible to rutting and pumping. The likelihood of disturbance or rutting and/or pumping of the existing natural soils is a function of the soil moisture content, the load applied to the surface, as well as the frequency of the load. Consequently, rutting and pumping can be minimized by avoiding concentrated traffic, minimizing the load applied to the surface by using lighter equipment and/or partial loads, by working in drier times of the year, or by providing a working surface for the equipment. Rubber-tired equipment particularly, because of high pressures, promotes instability in moist/wet, soft soils.

If rutting or pumping occurs, traffic should be stopped and the disturbed soils should be removed and replaced with stabilization material. Typically, a minimum of 18 inches of the disturbed soils must be removed to be effective. However, deeper removal is sometimes required.

To stabilize soft subgrade conditions (if encountered), a mixture of coarse, clean, angular gravels and cobbles and/or 1.5- to 2.0-inch clean gravel should be utilized, as indicated above in **Section 6.3**. Often the amount of gravelly material can be reduced with the use of a geotextile fabric such as Mirafi RS280i or equivalent. Its use will also help avoid mixing of the subgrade soils with the gravelly material. After excavating the soft/disturbed soils, the fabric should be spread across the bottom of the excavation and up the sides a minimum of 18 inches. Otherwise, it should be placed in accordance with the manufacturer's recommendation, including proper overlaps. The gravel material can then be placed over the fabric in compacted lifts as described above.

6.7 Slope Stability

We anticipate that cut and fill slopes will be created to construct the residential streets throughout the site. We recommend that permanent cut and fill slopes be no steeper than 2H:1V (Horizontal:Vertical) and no higher than 15 feet without site-specific analysis by CMT.

7.0 FOUNDATION RECOMMENDATIONS

The following recommendations have been developed based on the previously described project characteristics, including the maximum structural loads discussed in **Section 1.3**, the subsurface conditions observed in the field and the laboratory test data, and standard geotechnical engineering practice.

7.1 Foundation Recommendations

Based on our geotechnical engineering analyses, the proposed residences may be supported upon conventional spread and/or continuous wall foundations placed on entirely on suitable, undisturbed natural gravel soils, entirely on competent bedrock, or entirely on structural fill extending to suitable natural soils or bedrock. Footings may be designed using a net bearing pressure of 4,000 psf.

The term “net bearing pressure” refers to the pressure imposed by the portion of the structure located above lowest adjacent final grade, thus the weight of the footing and backfill to lowest adjacent final grade need not be considered. The allowable bearing pressure may be increased by 1/3 for temporary loads such as wind and seismic forces.

We also recommend the following:

1. Exterior footings subject to frost should be placed at least 30 inches below final grade.
2. Interior footings not subject to frost should be placed at least 16 inches below grade.
3. Continuous footing widths should be maintained at a minimum of 18 inches.
4. Spot footings should be a minimum of 24 inches wide.

7.2 Installation

Under no circumstances shall foundations be placed on undocumented fill, topsoil with organics, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. If other unsuitable soils are encountered, they must be completely removed and replaced with properly compacted structural fill. We also recommend that footings not be supported partly on natural soils or structural fill and partly on bedrock, to reduce the potential for excess differential settlement.

Deep, large roots may be encountered where trees and larger bushes are located or were previously located at the site; such large roots should be removed. The base of footing excavations should be observed by a CMT geotechnical engineer to assess if suitable bearing soils have been exposed.

All structural fill should meet the requirements for such, and should be placed and compacted in accordance with **Section 6** above. The width of structural replacement fill below footings should be equal to the width of the footing plus 1 foot for each foot of fill thickness. For instance, if the footing width is 2 feet and the structural fill depth beneath the footing is 2 feet, the fill replacement width should be 4 feet, centered beneath the footing.

The minimum thickness of structural fill below footings should be equivalent to one-third the thickness of structural fill below any other portion of the foundations. For example, if the maximum depth of structural fill is 6 feet, all footings for the new structure should be underlain by a minimum 2 feet of structural fill.

7.3 Estimated Settlement

Foundations designed and constructed in accordance with our recommendations could experience some settlement, but we anticipate that total settlements of footings founded as recommended above will not exceed 1 inch, with differential settlements on the order of 0.5 inches over a distance of 25 feet. We expect approximately 50% of the total settlement to initially take place during construction.

7.4 Lateral Resistance

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of 0.40 for natural gravel soils and structural fill, or 0.45 for competent bedrock, may be utilized for design. Passive resistance provided by properly placed and compacted natural gravel soils or structural fill above the water table may be considered equivalent to a fluid with a density of 425 pcf. A combination of passive earth resistance and friction may be utilized if the passive resistance component of the total is divided by 1.5.

8.0 LATERAL EARTH PRESSURES

Excavation into bedrock would be required to construct basements for most of the site. The lateral earth pressure values given below are for a backfill material that will consist of drained natural gravel soils or structural fill placed and compacted in accordance with the recommendations presented herein. If other soil types will be used as backfill, we should be notified so that appropriate modifications to these values can be provided, as needed.

The lateral pressures imposed upon subgrade facilities will depend upon the relative rigidity and movement of the backfilled structure. Following are the recommended lateral pressure values, which also assume that the soil surface behind the wall is horizontal and that the backfill within 3 feet of the wall will be compacted with hand-operated compacting equipment. For subgrade walls less than 12 feet high employing a seismic at-rest lateral earth pressure for design is not needed.

CONDITION	STATIC (psf/ft)*	SEISMIC (psf/ft)**
Active Pressure (wall is allowed to yield, i.e. move away from the soil, with a minimum 0.001H movement/rotation at the top of the wall, where "H" is the total height of the wall)	35	18
At-Rest Pressure (wall is not allowed to yield)	55	N/A
Passive Pressure (wall moves into the soil)	425	140

*Equivalent Fluid Pressure (applied at 1/3 Height of Wall)
**Equivalent Fluid Pressure (added to static and applied at 1/3 Height of Wall)

9.0 FLOOR SLABS

Floor slabs may be established upon suitable, undisturbed, natural gravel soils and/or on structural fill extending to suitable natural soils or bedrock. Under no circumstances shall floor slabs be established directly on bedrock, or any topsoil, undocumented fills, loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

To facilitate curing of the concrete, we recommend that floor slabs be directly underlain by at least 4 inches of "free-draining" fill, such as "pea" gravel or 3/4-inch to 1-inch minus, clean, gap-graded gravel. To help control normal shrinkage and stress cracking, the floor slabs should have the following features:

1. Adequate reinforcement for the anticipated floor loads with the reinforcement continuous through interior floor joints;
2. Frequent crack control joints; and
3. Non-rigid attachment of the slabs to foundation walls and bearing slabs.

10.0 DRAINAGE RECOMMENDATIONS

10.1 Surface Drainage

It is important to the long-term performance of foundations and floor slabs that water not be allowed to collect near the foundation walls and infiltrate into the underlying soils. We recommend the following:

1. All areas around each residence should be sloped to provide drainage away from the foundations. We recommend a minimum slope of 4 inches in the first 10 feet away from the structure. This slope should be maintained throughout the lifetime of the structure.

2. All roof drainage should be collected in rain gutters with downspouts designed to discharge at least 10 feet from the foundation walls or well beyond the backfill limits, whichever is greater.

3. Adequate compaction of the foundation backfill should be provided. We suggest a minimum of 90% of the maximum laboratory density as determined by ASTM D-1557. Water consolidation methods should not be used under any circumstances.

4. Landscape sprinklers should be aimed away from the foundation walls. The sprinkling systems should be designed with proper drainage and be well-maintained. Overwatering should be avoided.

5. Other precautions that may become evident during construction.

10.2 Foundation Subdrains

The natural soils encountered at this site primarily consisted of gravel (GM), which is a Group 1 soil per IRC[9] 2021. However, given the potential for water to perch on the shallow bedrock, we recommend foundation drains be constructed, particularly where the bedrock is excavated for foundations.

Foundation subdrains should consist of a 4-inch diameter perforated or slotted plastic or PVC pipe surrounded by clean gravel. The invert of the subdrain should be at least 2 feet below the top of the lowest adjacent floor slab. The gravel portion of the drain should extend a minimum 2 inches laterally and below the perforated pipe and at least 1 foot above the top of the lowest adjacent floor slab. The gravel zone must be installed immediately adjacent to the perimeter footings and the foundation walls. To reduce the possibility of plugging, the gravel must be wrapped with a geotextile, such as Mirafi 140N or equivalent. Prior to the installation of the footing subdrain, the below-grade walls should be dampproofed. The slope of the subdrain should be at least 0.5%. The gravel placed around the drainpipe should be clean 3/4-inch to 1-inch minus gap-graded gravel and/or “pea” gravel. The foundation subdrains can be discharged into the area subdrains, storm drains, or other suitable down-gradient location.

11.0 PAVEMENTS

All pavement areas must be prepared as discussed above in **Section 6.1**. Under no circumstances shall pavements be established over topsoil, undocumented fills (if encountered), loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

In roadway areas, subsequent to stripping and prior to the placement of pavement materials, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or otherwise unsuitable soils are encountered, we recommend they be removed to a minimum of 18 inches below the subgrade level and replaced with structural fill.

We anticipate the natural clay soils encountered near the surface in a couple of the test pits will exhibit poor pavement support characteristics when saturated or nearly saturated. Based on our laboratory testing experience with similar soils, our pavement design utilized a California Bearing Ratio (CBR) of 3 for the natural silt/clay soils.

[9] International Residential Code

Given the projected traffic as discussed above in **Section 1.3**, and Eagle Mountain Standards, the following pavement section is recommended for approximately 4 ESAL's (18-kip equivalent single-axle loads) per day:

MATERIAL	PAVEMENT SECTION THICKNESS (inches)	
Asphalt	**3**	**3**
Road-Base	**6**	**6**
Subbase	**9**	**0***
Total Thickness	**18**	**9**

*Where competent bedrock is the subgrade

Untreated base course (UTBC) should conform to city specifications, or to 1-inch-minus UDOT specifications for A–1-a/NP, and have a minimum CBR value of 70%. Material meeting our specification for structural fill can be used for subbase, as long as the fines content (percent passing No. 200 sieve) does not exceed 15%. Roadbase and subbase material should be compacted as recommended above in **Section 6.4**. Asphalt material generally should conform to APWA requirements, having a ½-inch maximum aggregate size, a 75-gyration Superpave mix containing no more than 15% of recycled asphalt (RAP) and a PG58-28 binder.

12.0 QUALITY CONTROL

We recommend that CMT be retained as part of a comprehensive quality control testing and observation program. With CMT on-site we can help facilitate implementation of our recommendations and address, in a timely manner, any subsurface conditions encountered which vary from those described in this report. Without such a program CMT cannot be responsible for application of our recommendations to subsurface conditions which may vary from those described herein. This program may include, but not necessarily be limited to, the following:

12.1 Field Observations

Observations should be completed during all phases of construction such as site preparation, foundation excavation, structural fill placement and concrete placement.

12.2 Fill Compaction

Compaction testing by CMT is required for all structural supporting fill materials. Maximum Dry Density (Modified Proctor, ASTM D-1557) tests should be requested by the contractor immediately after delivery of any fill materials. The maximum density information should then be used for field density tests on each lift as necessary to ensure that the required compaction is being achieved.

12.3 Excavations

All excavation procedures and processes should be observed by a geotechnical engineer from CMT or their representative. In addition, for the recommendations in this report to be valid, all backfill and structural fill placed in trenches and all pavements should be density tested by CMT. We recommend that freshly mixed concrete be tested by CMT in accordance with ASTM designations.

13.0 LIMITATIONS

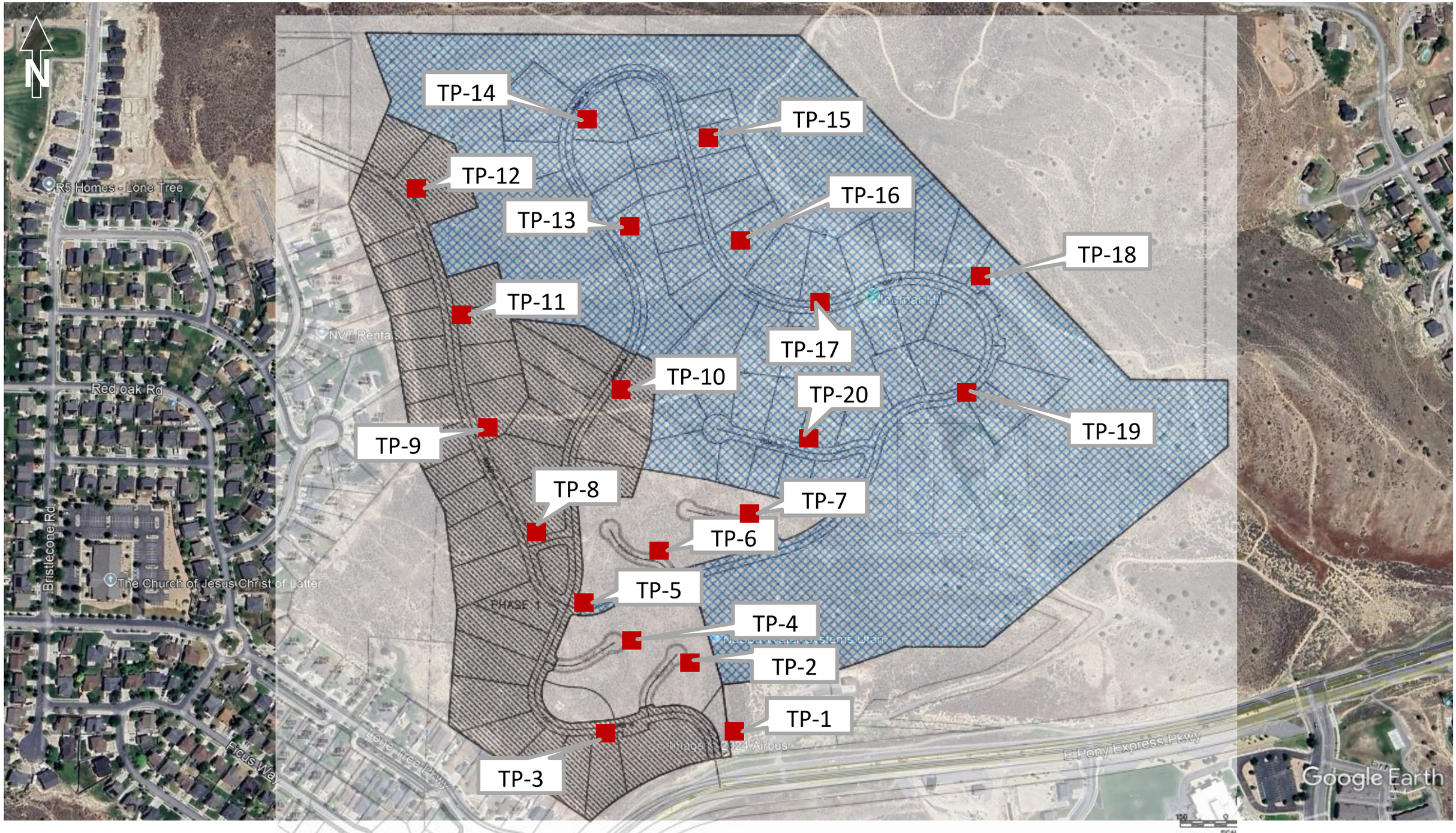
The recommendations provided herein were developed by evaluating the information obtained from the subsurface explorations and soils encountered therein. The exploration logs reflect the subsurface conditions only at the specific location at the particular time designated on the logs. Soil and ground water conditions may differ from conditions encountered at the actual exploration locations. The nature and extent of any variation in the explorations may not become evident until during the course of construction. If variations do appear, it may become necessary to re-evaluate the recommendations of this report after we have observed the variation.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

We appreciate the opportunity to be of service to you on this project. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at 801-492-4132. To schedule materials testing, please call 801-381-5141.

APPENDIX

SUPPORTING
DOCUMENTATION



CMT TECHNICAL SERVICES	**Circle 5 Ranch** About 2300 E. Pony Express Pkwy, Eagle Mountain, UT	**SITE PLAN**	Date:	0-Jan-1900	Figure: 1
			CMT No.:	23414	

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-1

Total Depth: 7.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil: Silty gravel with roots										
				1								
1		Light Brown Sandy SILTY CLAY (CL-ML), some gravel, slightly moist soft (estimated)		2	7		6	30	64	21	17	4
2												
3												
4		Tan Sandy Silty GRAVEL (GM), slightly moist medium dense (estimated)										
5		grades trace boulders and calcified silt		3	8		31	25	44			
6												
7												
		REFUSAL AT 7.5' ON BEDROCK										
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: 40.3554392°, -111.9989062°
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 2

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-2

Total Depth: 0.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Brown Sandy Silty GRAVEL (GM) with roots, slightly moist very dense (estimated)		4	6		26	23	51			
		REFUSAL AT 0.5' ON BEDROCK										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: 40.3560923°, -111.9992°
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 3

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-3

Total Depth: 1'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Brown Silty GRAVEL (GM) with sand, cobbles, roots, slightly moist very dense (estimated)										
				5	7		48	18	34			
1		REFUSAL AT 1.0' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 4

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-4

Total Depth: 0.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Brown Silty GRAVEL (GM) with sand, roots, slightly moist very dense (estimated)		6	3		62	14	24			
		REFUSAL AT 0.5' ON BEDROCK										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 5

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-5

Total Depth: 1.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Brown Silty GRAVEL (GM) with sand, roots, slightly moist very dense (estimated)										
1				7	5		48	20	32			
		REFUSAL AT 1.5' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 6

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-6

Total Depth: 2.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist very dense (estimated)										
1				8								
2				9	5		41	19	40			
		REFUSAL AT 2.5' ON BEDROCK										
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 7

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-7

Total Depth: 0.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Brown Calcified Silty GRAVEL (GM) with sand, roots, slightly moist very dense (estimated)		10	5		53	15	32			
		REFUSAL AT 0.5' ON BEDROCK										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

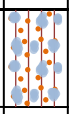
Figure: 8

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-8

Total Depth: 1'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
				11	6		41	24	35			
1		REFUSAL AT 1.0' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 9

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-9

Total Depth: 1.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
1				12	7		44	30	26			
		REFUSAL AT 1.5' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 10

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-10

Total Depth: 0.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with boulders, roots and boulders slightly moist, loose		13	6		45	18	37			
		REFUSAL AT 0.5'										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 11

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-11

Total Depth: 1.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
				14								
1				15	4		62	15	23			
		REFUSAL AT 1.5'										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 12

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-12

Total Depth: 2.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
1				16								
2				17	3		49	20	31			
		REFUSAL AT 2.5' ON BEDROCK										
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 13

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-13

Total Depth: 0.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)		18	5		38	22	40			
		REFUSAL AT 0.5'										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 14

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-14

Total Depth: 2.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil: Silty gravel with roots										
1		Brown Calcified Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)		19								
2		grades moist		20	12		55	18	27			
		REFUSAL AT 2.5' ON BEDROCK										
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 15

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-15

Total Depth: 1.5'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
1				21	6		33	29	38			
		REFUSAL AT 1.5' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

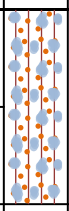
Figure: 16

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-16

Total Depth: 2'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Calcified Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
1				22	8		56	18	26			
2		REFUSAL AT 2.0' ON BEDROCK										
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 17

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-17

Total Depth: 1'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Calcified Sandy CLAY (CL), roots, moist medium stiff (estimated)		23								
				24	12		0	33	67	39	31	8
1		REFUSAL AT 1.0' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

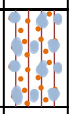
Figure: 18

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-18

Total Depth: 1'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Calcified Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)										
				25	5		65	12	23			
1		REFUSAL AT 1.0' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 19

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-19

Total Depth: 1'
Water Depth: (see Remarks)

Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Calcified Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)		26								
				27	9		41	15	44			
1		REFUSAL AT 1.0' ON BEDROCK										
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 20

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Test Pit Log TP-20

Total Depth: 0.5'
Water Depth: (see Remarks)
Date: 11/5/24
Job #: 23414

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
							Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Calcified Silty GRAVEL (GM) with sand, boulders, roots, slightly moist loose (estimated)		28	6		52	16	32			
		REFUSAL AT 0.5' ON BEDROCK										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Mini Excavator
Excavated By: CMT Technical Services
Logged By: Chesley Gale

CMT TECHNICAL SERVICES

Figure: 21

Circle 5 Ranch

About 2300 E. Pony Express Pkwy, Eagle Mountain, UT

Key to Symbols

Date: 11/5/24
Job #: 23414

① Depth (ft)	② GRAPHIC LOG	③ Soil Description	④ Sample Type	⑤ Sample #	⑥ Moisture (%)	⑦ Dry Density(pcf)	Gradation ⑧ Gravel %	Sand %	Fines %	Atterberg ⑨ LL	PL	PI

COLUMN DESCRIPTIONS

① **Depth (ft.):** Depth (feet) below the ground surface (including groundwater depth - see below right).

② **Graphic Log:** Graphic depicting type of soil encountered (see ② below).

③ **Soil Description:** Description of soils, including Unified Soil Classification Symbol (see below).

④ **Sample Type:** Type of soil sample collected; sampler symbols are explained below-right.

⑤ **Sample #:** Consecutive numbering of soil samples collected during field exploration.

⑥ **Moisture (%):** Water content of soil sample measured in laboratory (percentage of dry weight).

⑦ **Dry Density (pcf):** The dry density of a soil measured in laboratory (pounds per cubic foot).

⑧ **Gradation:** Percentages of Gravel, Sand and Fines (Silt/Clay), obtained from lab test results of soil passing the No. 4 and No. 200 sieves.

⑨ **Atterberg:** Individual descriptions of Atterberg Tests are as follows:

LL = Liquid Limit (%): Water content at which a soil changes from plastic to liquid behavior.

PL = Plastic Limit (%): Water content at which a soil changes from liquid to plastic behavior.

PI = Plasticity Index (%): Range of water content at which a soil exhibits plastic properties (= Liquid Limit - Plastic Limit).

STRATIFICATION	
Description	**Thickness**
Seam	Up to ½ inch
Lense	Up to 12 inches
Layer	Greater than 12 in.
Occasional	1 or less per foot
Frequent	More than 1 per foot

MODIFIERS
Trace
<5%
Some
5-12%
With
> 12%

MOISTURE CONTENT
Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp / moist to the touch, but no visible water.
Wet: Visible water, usually soil below groundwater.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			USCS SYMBOLS	②	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 sieve size.	GRAVELS The coarse fraction retained on No. 4 sieve.	CLEAN GRAVELS (< 5% fines)	GW		Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GP		Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (≥ 12% fines)	GM		Silty Gravels, Gravel-Sand-Silt Mixtures
			GC		Clayey Gravels, Gravel-Sand-Clay Mixtures
	SANDS The coarse fraction passing through No. 4 sieve.	CLEAN SANDS (< 5% fines)	SW		Well-Graded Sands, Gravelly Sands, Little or No Fines
			SP		Poorly-Graded Sands, Gravelly Sands, Little or No Fines
		SANDS WITH FINES (≥ 12% fines)	SM		Silty Sands, Sand-Silt Mixtures
			SC		Clayey Sands, Sand-Clay Mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS Liquid Limit less than 50%		ML		Inorganic Silts and Sandy Silts with No Plasticity or Clayey Silts with Slight Plasticity
			CL		Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
			OL		Organic Silts and Organic Silty Clays of Low Plasticity
	SILTS AND CLAYS Liquid Limit greater than 50%		MH		Inorganic Silts, Micacious or Diatomacious Fine Sand or Silty Soils
			CH		Inorganic Clays of High Plasticity, Fat Clays
			OH		Organic Silts and Organic Clays of Medium to High Plasticity
HIGHLY ORGANIC SOILS			PT		Peat, Soils with High Organic Contents

Note: Dual Symbols are used to indicate borderline soil classifications (i.e. GP-GM, SC-SM, etc.).

SAMPLER SYMBOLS

- Block Sample
- Bulk/Bag Sample
- Modified California Sampler 3.5" OD, 2.42" ID
- D&M Sampler
- Rock Core
- Standard Penetration Split Spoon Sampler
- Thin Wall (Shelby Tube)

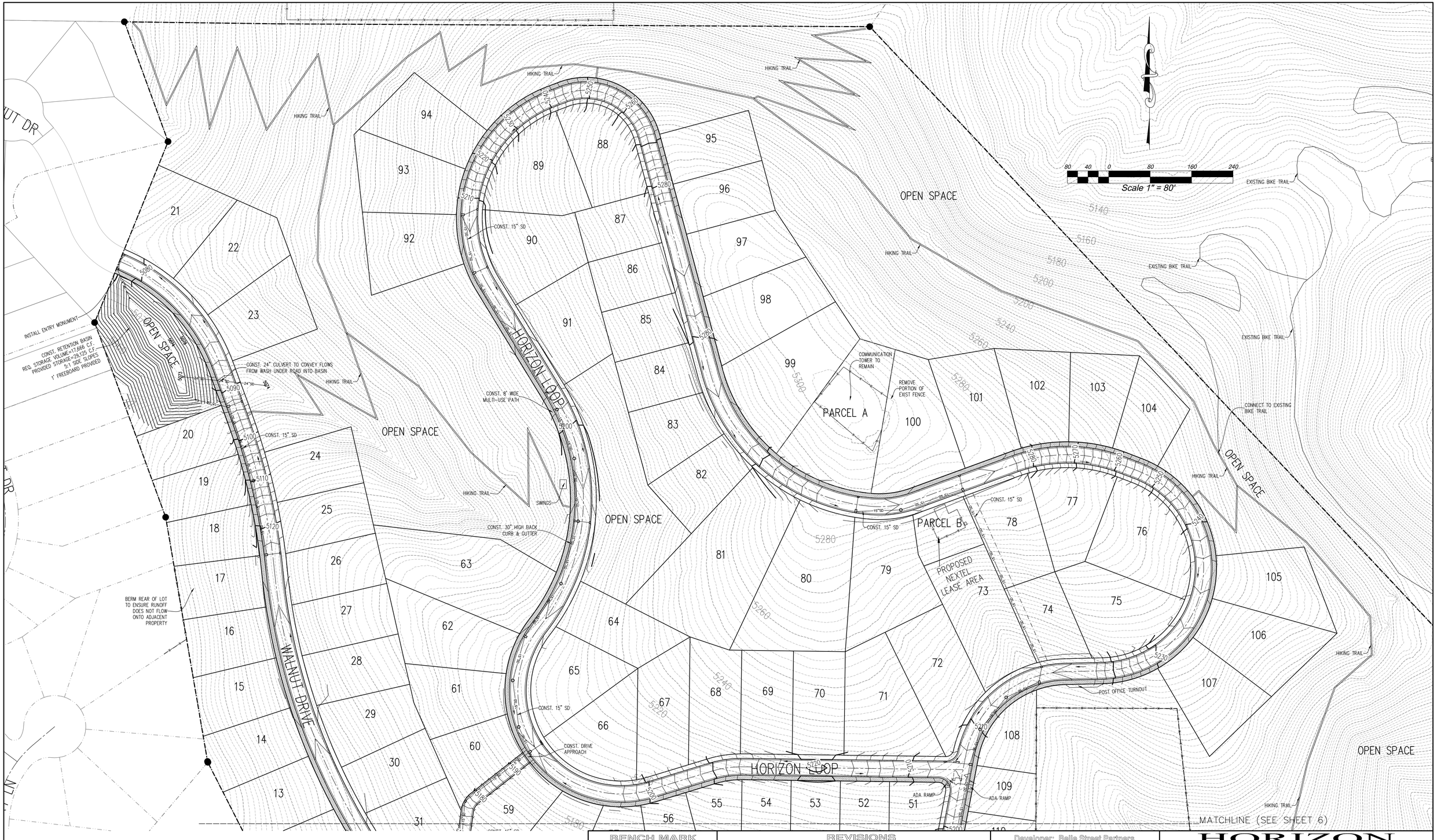
WATER SYMBOL

- Encountered Water Level
- Measured Water Level (see Remarks on Logs)

1. The results of laboratory tests on the samples collected are shown on the logs at the respective sample depths.
2. The subsurface conditions represented on the logs are for the locations specified. Caution should be exercised if interpolating between or extrapolating beyond the exploration locations.
3. The information presented on each log is subject to the limitations, conclusions, and recommendations presented in this report.

CMT TECHNICAL SERVICES

Figure: 22



GRADING & DRAINAGE PLAN NOTES:

SEE GRADING, EROSION AND SLOPE NOTES ON SHEET 6.

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 5104.41'

REVISIONS

Rev.	Date	Description

Developer: Belle Street Partners
c/o Scott Hazard
3688 E. Campus Drive Suite 100, Eagle Mountain, UT 84005
Phone: (801) 636-1858

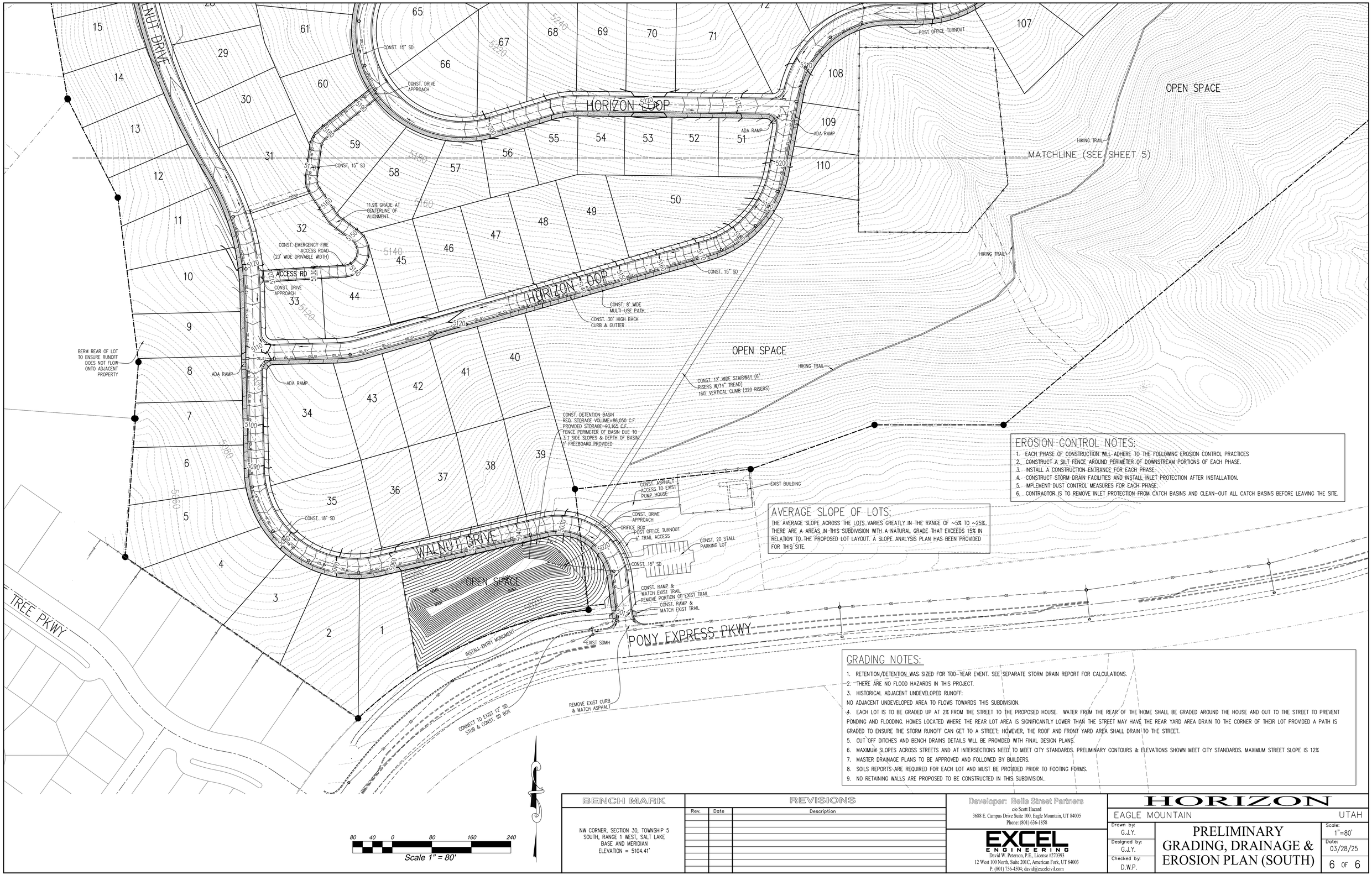
EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

HORIZON

EAGLE MOUNTAIN UTAH

PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (NORTH)

Drawn by: G.J.Y.	Scale: 1"=80'
Designed by: G.J.Y.	Date: 03/28/25
Checked by: D.W.P.	5 OF 6



EROSION CONTROL NOTES:

1. EACH PHASE OF CONSTRUCTION WILL ADHERE TO THE FOLLOWING EROSION CONTROL PRACTICES
2. CONSTRUCT A SILT FENCE AROUND PERIMETER OF DOWNSTREAM PORTIONS OF EACH PHASE.
3. INSTALL A CONSTRUCTION ENTRANCE FOR EACH PHASE.
4. CONSTRUCT STORM DRAIN FACILITIES AND INSTALL INLET PROTECTION AFTER INSTALLATION.
5. IMPLEMENT DUST CONTROL MEASURES FOR EACH PHASE.
6. CONTRACTOR IS TO REMOVE INLET PROTECTION FROM CATCH BASINS AND CLEAN-OUT ALL CATCH BASINS BEFORE LEAVING THE SITE.

AVERAGE SLOPE OF LOTS:

THE AVERAGE SLOPE ACROSS THE LOTS VARIES GREATLY IN THE RANGE OF ~5% TO ~25%. THERE ARE A AREAS IN THIS SUBDIVISION WITH A NATURAL GRADE THAT EXCEEDS 15% IN RELATION TO THE PROPOSED LOT LAYOUT. A SLOPE ANALYSIS PLAN HAS BEEN PROVIDED FOR THIS SITE.

GRADING NOTES:

1. RETENTION/DETENTION WAS SIZED FOR 100-YEAR EVENT. SEE SEPARATE STORM DRAIN REPORT FOR CALCULATIONS.
2. THERE ARE NO FLOOD HAZARDS IN THIS PROJECT.
3. HISTORICAL ADJACENT UNDEVELOPED RUNOFF:
NO ADJACENT UNDEVELOPED AREA TO FLOWS TOWARDS THIS SUBDIVISION.
4. EACH LOT IS TO BE GRADED UP AT 2% FROM THE STREET TO THE PROPOSED HOUSE. WATER FROM THE REAR OF THE HOME SHALL BE GRADED AROUND THE HOUSE AND OUT TO THE STREET TO PREVENT PONDING AND FLOODING. HOMES LOCATED WHERE THE REAR LOT AREA IS SIGNIFICANTLY LOWER THAN THE STREET MAY HAVE THE REAR YARD AREA DRAIN TO THE CORNER OF THEIR LOT PROVIDED A PATH IS GRADED TO ENSURE THE STORM RUNOFF CAN GET TO A STREET; HOWEVER, THE ROOF AND FRONT YARD AREA SHALL DRAIN TO THE STREET.
5. CUT OFF DITCHES AND BENCH DRAINS DETAILS WILL BE PROVIDED WITH FINAL DESIGN PLANS.
6. MAXIMUM SLOPES ACROSS STREETS AND AT INTERSECTIONS NEED TO MEET CITY STANDARDS. PRELIMINARY CONTOURS & ELEVATIONS SHOWN MEET CITY STANDARDS. MAXIMUM STREET SLOPE IS 12%
7. MASTER DRAINAGE PLANS TO BE APPROVED AND FOLLOWED BY BUILDERS.
8. SOILS REPORTS ARE REQUIRED FOR EACH LOT AND MUST BE PROVIDED PRIOR TO FOOTING FORMS.
9. NO RETAINING WALLS ARE PROPOSED TO BE CONSTRUCTED IN THIS SUBDIVISION..

BENCH MARK

NW CORNER, SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN
ELEVATION = 5104.41'

REVISIONS

Rev.	Date	Description

Developer: Belle Street Partners
c/o Scott Hazard
3688 E. Campus Drive Suite 100, Eagle Mountain, UT 84005
Phone: (801) 636-1858

EXCEL ENGINEERING
David W. Peterson, P.E., License #270393
12 West 100 North, Suite 201C, American Fork, UT 84003
P: (801) 756-4504; david@excelcivil.com

HORIZON

EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.

PRELIMINARY GRADING, DRAINAGE & EROSION PLAN (SOUTH)

Scale: 1"=80'
Date: 03/28/25

PSOMAS

Balancing the Natural and Built Environment

October 24, 2024

Belle Street Partners
3688 E Campus Dr.
Suite 100
Eagle Mountain, UT 84005

Re: Circle Five Ranch Water Modeling
Psomas Project: 8BSP010100

The purpose of this memo is to summarize the findings of incorporating the Circle Five Ranch property into Eagle Mountain's Water System. Circle Five is located off Pony Express Blvd, just below Eagle Mountain City's Tank 3.

Due to the development's elevations and the existing City water pressures, the development cannot simply tie into the adjacent waterlines and maintain adequate pressures. There are a couple of options that would provide adequate pressures for the development as summarized below.

Option 1

Install an offsite waterline that ties into the City's Zone 5. During peak day, the development's pressures would range from 42-113 psi. However, the offsite waterline would exceed 175 psi and would need to be designed accordingly.

To provide the required fire flow of 1,500 gpm, the offsite waterlines would need to be at least 12-inches from the point of connection throughout the development. This would provide in a minimum peak day with fire pressure of 25 psi.

If each of the development's homes were equipped with fire sprinklers, the required fire flow would be reduced to 1,000 gpm. With a fire flow of 1,000 gpm, a 12-inch offsite waterline, and 8-inch waterlines onsite, the minimum pressure on the site would be 20 psi.

Option 2

Size a VFD pump to provide the system with adequate pressures under peak day, fire flow, and low flow conditions. For this option, the development's water system could tie into the City's waterline in Pony Express Blvd. For this options, home fire sprinklers would be recommended so that fire flow requirements, and subsequently the size of pump, could be reduced. The VFD pump would need to be constructed at an elevation of 5,080 feet and

11456 South Temple Drive
Suite 200
South Jordan, UT 84095

Tel 801.270.5777
Fax 801.270.5782
www.Psomas.com

provide a pressure of 129 psi. Lots below this elevation would need to connect directly to the City's existing waterline on Pony Express Blvd.

This option would require approval from the City, as they typically do not install and maintain inline booster stations.

Sincerely,

PSOMAS

Sarah Young, PE
Project Engineer

Robert Hobbs

From: Alexia Turley <lexieturley@yahoo.com>
Sent: Saturday, August 2, 2025 9:53 PM
To: Robert Hobbs
Subject: Opposition to Horizon Project (Parcel #580:040:0378)

Caution! This message was sent from outside your organization.

Allow sender | Block sender | Report

Dear Robert Hobbs,

My name is Alexia Mayo, and I am a resident of Eagle Mountain living at 7611 N Riva Ridge Rd Eagle Mountain, UT 84005. I am writing to formally express my strong opposition to the Horizon Project proposal, including the Master Development Plan, Rezone, and Preliminary Plat Approval for Parcel #580:040:0378, which is scheduled for hearing on August 12, 2025.

While I understand the need for thoughtful growth in our city, I believe this proposed development is not in the best interest of current residents for several reasons:

1. Increased Strain on Infrastructure

Our local schools, roads, and utilities are already under significant pressure. Adding 110 new homes will further overwhelm essential services that are not yet equipped to handle this scale of expansion.

2. Loss of Open Space and Rural Character

This project threatens to erase one of the very qualities that makes Eagle Mountain unique — its open space and rural atmosphere. Many of us moved here to escape the overcrowded developments in surrounding cities.

3. Traffic and Safety Concerns

Pony Express Parkway and nearby roads are already heavily trafficked, especially during peak hours. Adding more residential density without major infrastructure improvements will only increase congestion and safety risks for pedestrians and children.

4. Premature Rezoning

Rezoning agricultural and country residential land for denser residential use seems premature and inconsistent with the city's long-term planning goals. These types of changes should be driven by the community's vision — not just developer demand.

I respectfully urge you to **deny this proposal** or, at the very least, **delay approval** until a comprehensive impact study is conducted and the public is given more opportunities to weigh in.

Sincerely,

Alexia Mayo

7611 N Riva Ridge Rd Eagle Mountain, UT 84005

Lexieturley@yahoo.com

801-663-4821

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	John Hancock Charter School - Master Site Plan (Re-Review)
ITEM TYPE:	Master Site Plan
FISCAL IMPACT:	N/A
APPLICANT:	John Hancock Charter School Foundation

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
Ag/Rural Density 2; Foothill Residential	7.3 (6.9753 ac per Utah County Parcel Viewer Map)

PUBLIC HEARING
Yes

PREPARED BY
Robert Hobbs, Senior Planner

PRESENTED BY
Robert Hobbs

RECOMMENDATION:
Table [again] - pending resolution of Lake Mountain Road's proposed improvements' installation process and documentation of water supply (shares) to the site being provided to Staff.

BACKGROUND:
The attached Master Site Plan (MSP), in an earlier form, passed DRC and Planning Commission concept review and received the Planning Commission's positive recommendation for approval earlier in March. Further analysis thereafter by the Planning Director and City Engineering revealed the desirability of obtaining a traffic impact study (TIS) from the Applicant. Following receipt of the TIS, and an engineer's response memo associated with a revised plan, the MSP is now being advanced to the Planning Commission for re-review and recommendation for Council. Staff has noted with this review an issue regarding Lake Mountain Road improvements as proposed on the civil plan set.

ITEMS FOR CONSIDERATION:
Master Site Plan Approvals
Approval of Master Site Plans is based upon compliance with City code requirements [Conclusions of Law] and requirements of any applicable Development Agreement(s).

Approval criteria for a [Master] Site Plan Approval request are stated in EMMC §§ 17.100.050 & 17.100.060.

Site plans and their reviews are administrative in nature. Therefore, they are to be approved if all required elements and code compliance are provided in their plan drawings. Some criteria are subjective. [Note: The information below does not recite adopted code standards, only findings related thereto.] They are noted as "special uses" in the city's residential zones.

Site plan reviews (i.e., what planning and zoning may analyze or require) for schools [charter

included] are constrained by state law:

Effective 5/1/2024; UCA 10-9a-305. Other entities required to conform to municipality's land use ordinances -- Exceptions -- School districts, charter schools, home-based micro-schools, and micro-education entities -- Submission of development plan and schedule.
…
(2) (a) Except as provided in Subsection (3), a school district or charter school is subject to a municipality's land use ordinances.
(b) (i) Notwithstanding Subsection (3), a municipality may:
(A) subject a charter school to standards within each zone pertaining to setback, height, bulk and massing regulations, off-site parking, curb cut, traffic circulation, and construction staging; and
(B) impose regulations upon the location of a project that are necessary to avoid unreasonable risks to health or safety, as provided in Subsection (3)(f).

(ii) The standards to which a municipality may subject a charter school under Subsection (2)(b)(i) shall be objective standards only and may not be subjective.
(iii) Except as provided in Subsection (7)(d), the only basis upon which a municipality may deny or withhold approval of a charter school's land use application is the charter school's failure to comply with a standard imposed under Subsection (2)(b)(i).
(iv) Nothing in Subsection (2)(b)(iii) may be construed to relieve a charter school of an obligation to comply with a requirement of an applicable building or safety code to which it is otherwise obligated to comply.

(3) A municipality may not:
(a) impose requirements for landscaping, fencing, aesthetic considerations, construction methods or materials, additional building inspections, municipal building codes, building use for educational purposes, or the placement or use of temporary classroom facilities on school property…

Master Site Plan (EMMC §§ 17.100.050 & 17.100.060) Opinion: The Project has been reviewed by the DRC Committee and suggested corrections/revisions incorporated into plan drawings. The Master Site Plan's present configuration appears to be in conformance with site plan standards pertinent to a school facility.

Master Site Plan Standards & Findings:
Use of Property: No sections of undeveloped land are intended on the school property save, perhaps, for an area to the south where a "future building" is called for.

A. Buffering Screening: n/a save for trash enclosure; City should cause the same to have a solid surround and metal gates in care and keeping with commercial uses in the City.
B. Access: Provided to development from public row [immediate from Lake Mountain Road/site approach from Lake Mountain] and also Pole Canyon Boulevard that transition to/from private drives; questions respecting the same as well as adequacy of row dedication, ingress/egress points' build-out, etc. should be directed to City Engineering. Right-of-way dedication, as proposed, is along the north end of the property (Pole Canyon), Lake Mountain right-of-way having already been set aside with the 2021 approval of the Triumph Subdivision.
C. Off-Street Truck Loading: apparently n/a
D. Utilities: Intended to be underground; *water provision hoped & expected by developer to be negotiated with the City per their attached statement -- developer anticipates using a well to satisfy water demand(s).*
E. Grading and Drainage: City Engineering will enforce; grading/drainage plan exhibit attached
F. Protection of Steep Slopes and Natural Drainages: n/a given topography at project site and surrounds

G. Setbacks, height and parking: Compliant, unknown, compliant [no code stated minimum standard]...

Other:
Staff has concerns following review of the civil plans with:
1. Site access via either Pole Canyon or Lake Mountain road; and,
2. The presence of proposed street frontage improvements past the development envelope on the site on an abutting parcel (# 59:019:0022 to the west); and,
3. The lack of proposed [future] street frontage improvements along the property's western property line/Lake Mountain street line at the point where the parking/service drive area is proposed to end [improvements like curb/gutter/paving, etc. are not "to and through"; and,
4. Whether water can be provided for the school (hoped for negations including use of a well of unknown output and quality have been logically deemed inadequate by admin.); and,
5. The effects of massing of school improvements [two] in the immediate area. Some of those issues are City Engineering/Public Works matters but the use is allowed subject to administrative review of project design (as modulated by state code).

The Applicant, in their response letter, stated regarding road improvements the following: "...Response: A traffic impact study prepared by Hales Engineering detailing the traffic impacts of the second school and our coordinated design to facilitate impacts is attached with this response. The site plan has been updated with traffic engineer's recommendations and sheets C210 and C501 has been included to detail the recommended right-turn lane on Pole Canyon Boulevard." The TIS summary reports as follows:

HALES ENGINEERING
innovative transportation solutions

Eagle Mountain - John Hancock Academy West
Traffic Impact Study

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

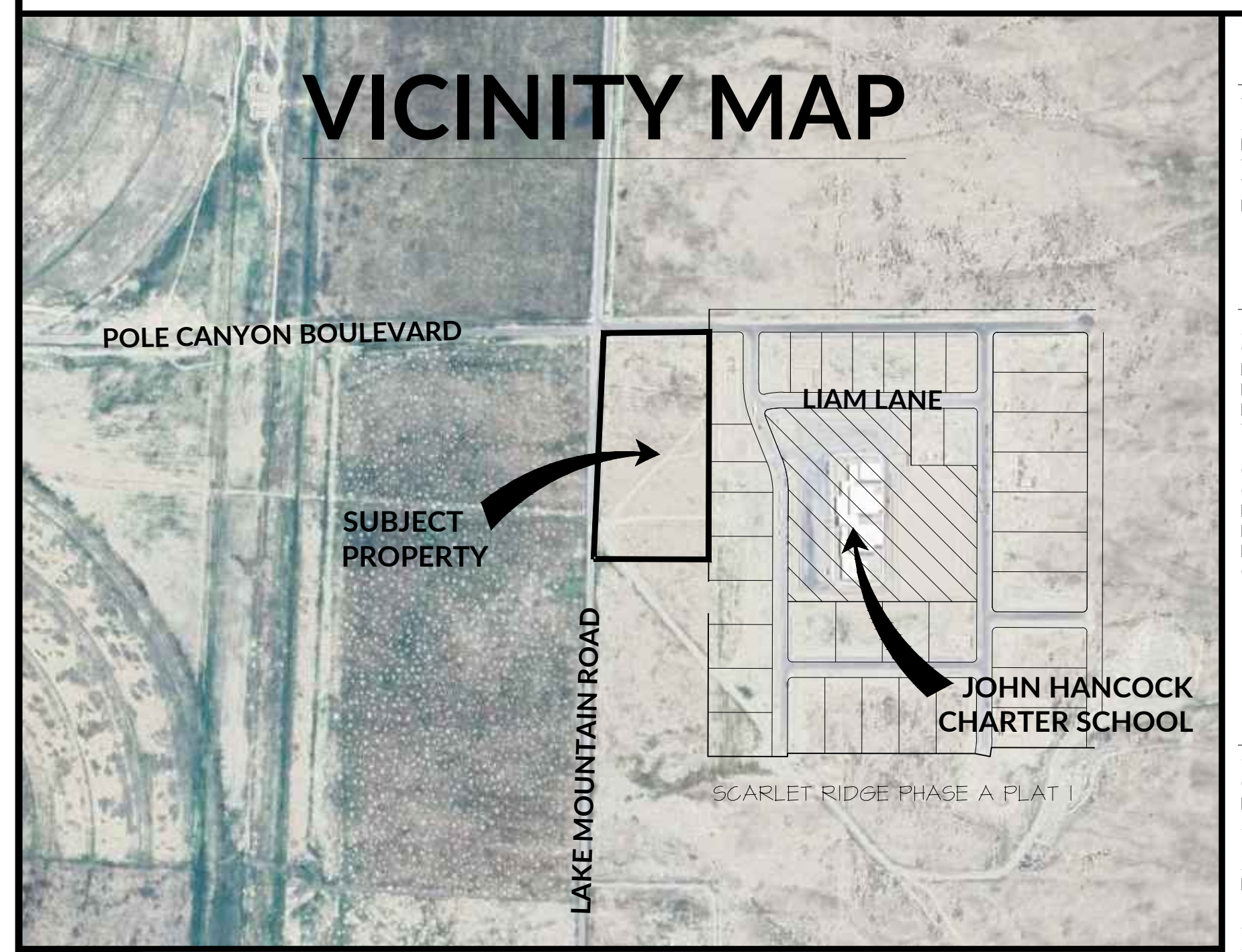
Project Conditions		
• The development will consist of a charter school with 400 students • The project is anticipated to generate approximately 908 weekday daily trips, including 418 trips in the morning peak hour, and 288 trips in the evening peak hour • The on-site queueing is anticipated to be sufficient		
2025	**Background**	**Plus Project**
Assumptions	• None	• 30-minute staggered start and end times
Findings	• Acceptable LOS	• Poor LOS at the Pole Canyon Blvd / Lake Mtn Rd intersection
Mitigations	• None	• **Pole Canyon Blvd / Lake Mtn Rd:** Implement an all-way stop
2030	**Background**	**Plus Project**
Assumptions	• Future volumes: o 10% annual growth rate o Volumes added from the Ault Farms TIS (2020)	• None
Findings	• Acceptable LOS	• Acceptable LOS • Significant EB queuing at the Pole Canyon Blvd / Lake Mtn Rd intersection
Mitigations	• None	• **Pole Canyon Blvd / Lake Mtn Rd:** Install EB RT pocket with 100' queue storage

PLANNING COMMISSION ACTION/RECOMMENDATION:
[Previously] recommended approval of a Master Site Plan on March 25, 2025.

ATTACHMENTS:

1. JHCS_Vicinity Map
2. JHCS West Campus Civil - Clouded
3. JHCS West Review Response
4. Traffic Study
5. Proposed R.O.W. to EM City Exhibit A
6. March 25, 2025 PC Approved Minutes
7. JHCS_Water Rights

VICINITY MAP

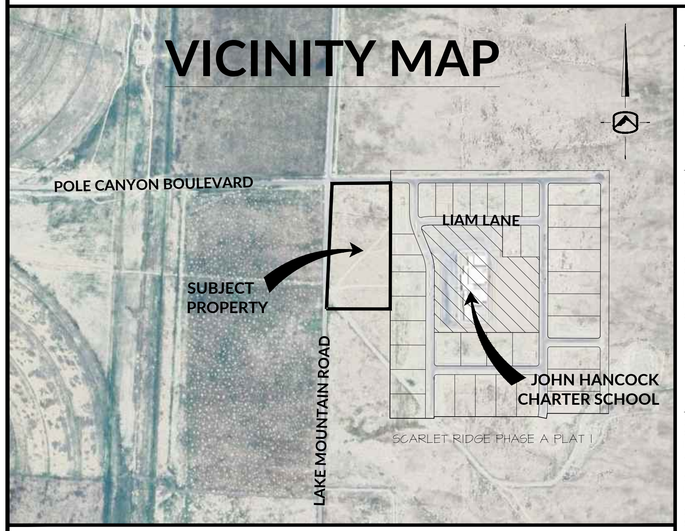


JOHN HANCOCK CHARTER SCHOOL - WEST CAMPUS

APPROX. LOCATION:

2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

VICINITY MAP



UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS: OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

CONTRACTOR FURTHER AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

TRAFFIC CONTROL & SAFETY NOTES

1. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT STATE OF UTAH DEPARTMENT OF TRANSPORTATION MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, THE CURRENT EAGLE MOUNTAIN CITY STANDARD DRAWING, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK.

2. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE CITY TRAFFIC ENGINEER, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.

3. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.

4. ALL SIGNAGE AND TRAFFIC DEVICES TO BE USED DURING AND AFTER THE CONSTRUCTION PERIOD SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

5. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR REVIEW AND APPROVAL.

6. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.

7. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.

DEFERRED SUBMITTAL

1. FIRE SPRINKLER DRAWINGS & FIRE ALARM DRAWINGS WILL BE PROVIDED PRIOR TO INSTALLATION.

GENERAL NOTES

1) ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL CONFORM TO THE EAGLE MOUNTAIN CITY STANDARDS & SPECIFICATIONS.

2) ALL WORK PERFORMED ON EAGLE MOUNTAIN CITY OWNED UTILITIES & CONNECTIONS THERETO SHALL CONFORM TO THE EAGLE MOUNTAIN CITY STANDARDS & SPECIFICATIONS. APWA STANDARDS WILL BE USED IN THE ABSENCE OF ANY EAGLE MOUNTAIN CITY STANDARDS AND DETAILS.

3) THESE PLANS CALL FOR BUT ARE NOT DESIGN DRAWINGS FOR THE RELOCATION, AND/OR REMOVAL OF EXISTING DRY UTILITIES INFRASTRUCTURE. DESIGN DRAWINGS FOR SAID RELOCATIONS AND REMOVALS SHALL BE BY OTHERS.

4) CALL BLUESTAKES 48 HOURS PRIOR TO DIGGING.

5) CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING MANHOLES AND OTHER UTILITIES BEFORE BUILDING OR STAKING ANY UTILITY LINES.

PERMISSION TO USE PLANS

ALL DESIGN INFORMATION DEPICTED IN THESE, THE "C" OR CIVIL DRAWINGS IS PROPRIETARY AND THE SOLE PROPERTY OF SILVERPEAK ENGINEERING, INC. THESE DRAWINGS MAY BE USED ONLY BY AUTHORIZATION BY SILVERPEAK ENGINEERING INC. THIS DESIGN IN PART OR IN TOTAL BY NOT BE USED OR DUPLICATED FOR ANY OTHER PROJECT OR PURPOSE. NON PAYMENT OR PARTIAL PAYMENT FOR THIS DESIGN AUTOMATICALLY REVOKES THE AUTHORIZATION OF USE.

CONTRACTOR

ONE WEST CONSTRUCTION

ATTN: TED LEWIS
290 N. FLINT STREET
KAYSVILLE, UTAH 84037
PHONE: 801-860-0523

LICENSED PROFESSIONAL ENGINEER
07/25/2025
No. 375250
JOSHUA R. JENSEN
STATE OF UTAH

SILVERPEAK ENGINEERING

177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
PHONE: (801) 499-5054
WWW.SILVERPEAKENG.COM

INDEX TO DRAWINGS

C001	*CIVIL COVER SHEET*
C002	*GENERAL & UTILITY NOTES*
C200	*SITE PLAN*
C201	*SITE DETAILS*
C210	*POLE CANYON BLVD TURN LANE STRIPING PLAN*
C300	*GRADING / DRAINAGE PLAN*
C301	*GRADING DETAILS*
C400	*UTILITY PLAN*
C401	*UTILITY DETAILS*
C402	*UTILITY DETAILS*
C500	*POLE CANYON BOULEVARD EAST IMPROVEMENT PLAN & PROFILE*
C501	*POLE CANYON BOULEVARD WEST IMPROVEMENT PLAN & PROFILE*
C502	*LAKE MOUNTAIN ROAD IMPROVEMENT PLAN & PROFILE*
C600	*EROSION CONTROL PLAN*
C601	*STORM WATER POLLUTION PREVENTION NOTES*

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

REVISED:

DATE: 07/25/2025
PROJECT: AW-061.02
DRAWN BY: BJK
CHECKED BY: JRJ

JOHN HANCOCK - WEST CAMPUS, 2570 N LAKE MOUNTAIN ROAD, EAGLE MOUNTAIN, UTAH

S:\Silverpeak Projects\Academics\West\Utah\AW\061 John Hancock Charter School + Eagle Mountain\AW-061.02 JHCS West Campus\Civil\Survey\AW-061.02 JH West Campus (14).dwg 7/24/2025 9:44:23 AM

SHEET NUMBER:
C001
COVER

ALL INFORMATION SHOWN HEREON IS NOT FINAL OR APPROVED WITHOUT THE GOVERNING AGENCY'S STAMP AND SIGNATURE. ANY USE OF THIS DRAWING AND ITS CONTENT WITHOUT SAID APPROVAL IS DONE AT THE INDIVIDUAL'S OWN RISK. SILVER PEAK ENGINEERING DOES NOT ASSUME LIABILITY FOR ANY SUCH USE.

GENERAL NOTES

CONTRACTOR SHALL OBTAIN A COPY OF, AND STRICTLY ADHERE TO THE CURRENT STANDARDS AND SPECIFICATIONS OF ALL APPLICABLE AGENCIES.

ALL WORK TO CONFORM TO EAGLE MOUNTAIN CITY'S STANDARDS, DRAWINGS,AND SPECIFICATIONS. APWA STANDARDS WILL BE USED IN THE ABSENCE OF ANY EAGLE MOUNTAIN CITY STANDARDS AND DETAILS.

CONTRACTOR TO NOTIFY EAGLE MOUNTAIN CITY'S AND SILVERPEAK ENGINEERING 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION REQUIRED FOR THIS PROJECT.

NO ALLOWANCE WILL BE MADE FOR DISCREPANCIES OR OMISSIONS THAT CAN BE EASILY OBSERVED. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING, AND BRING UP ANY QUESTIONS BEFOREHAND.

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.

CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE CITY OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.

CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO GOVERNING AGENTS STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO PREVENT BLOWING.

THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.

TRAFFIC CONTROL TO CONFORM TO THE CURRENT MUTCD AND UDOT STANDARDS.

THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTORS FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

CONTRACTORS MUST START AT THE LOW END OF ALL GRAVITY FED LINES AND WORK UP HILL. FAILURE TO COMPLY WITH THIS NOTE SHALL RELEASE THE CIVIL ENGINEER OF ALL LIABILITY.

CONTRACTOR SHALL LAYOUT AND POTHOLE FOR ALL POTENTIAL CONFLICTS WITH UTILITY LINES ON OR OFF SITE AS REQUIRED PRIOR TO ANY CONSTRUCTION.

NO ALLOWANCE SHALL BE MADE FOR DISCREPANCIES OR OMISSIONS THAT CAN BE EASILY OBSERVED. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING, AND BRING UP ANY QUESTIONS BEFOREHAND.

GEOTECHNICAL NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 96% STANDARD PROCTOR DENSITY PER ASTM TEST D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED REGISTERED SOILS ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUB GRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED, HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.
2. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT, SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY BETWEEN SOILS REPORT AND PLANS, ETC.

UNDERGROUND INFORMATION

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS IS BASED ON INFORMATION GATHERED FROM UTILITIES AND/OR FROM ABOVE-GROUND STRUCTURES OR EVIDENCE FOUND AT THE TIME OF SURVEY. AS SUCH, THE UNDERGROUND INFORMATION IS A BEST ESTIMATE. SILVER PEAK DOES NOT REPRESENT OR GUARANTEE THAT THE UNDERGROUND INFORMATION PROVIDED IS CORRECT OR UP TO DATE.

IT SHALL BE THE CONTRACTORS FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. CALL BLUESTAKES A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY DIGGING OR UTILITY WORK.

NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.

UTILITY NOTES

CONTRACTOR SHALL OBTAIN A COPY OF, AND STRICTLY ADHERE TO THE CURRENT STANDARDS AND SPECIFICATIONS OF EAGLE MOUNTAIN CITY. CONTRACTOR IS TO OBTAIN ANY REQUIRED PERMITS AND NOTIFY THE UTILITY OWNER AND SILVER PEAK ENGINEERING PRIOR TO BEGINNING ANY WORK ON WET UTILITIES. CONTRACTOR IS TO COORDINATE DRY UTILITY WORK WITH THE UTILITY OWNERS.

STORM DRAIN
SEE EAGLE MOUNTAIN CITY STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE STORM DRAIN & APPURTENANCES WITHIN THE PUBLIC RIGHT-OF-WAY SHOWN ON THIS PLAN. SEE THE DETAILS PROVIDED ON THIS SET OF DRAWINGS FOR ALL OTHER STORM DRAIN CONSTRUCTION. APWA STANDARDS WILL BE USED IN THE ABSENCE OF ANY EAGLE MOUNTAIN CITY STANDARDS AND DETAILS.

LAND DRAIN: NOT USED

SANITARY SEWER
SEE EAGLE MOUNTAIN CITY STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE SANITARY SEWER & APPURTENANCES SHOWN ON THIS PLAN.

CULINARY WATER
SEE EAGLE MOUNTAIN CITY STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE CULINARY WATER & APPURTENANCES SHOWN ON THIS PLAN.

SECONDARY WATER
SEE EAGLE MOUNTAIN CITY STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE SECONDARY WATER & APPURTENANCES SHOWN ON THIS PLAN.

DRY UTILITIES
THESE PLANS SHOW THE LOCATION OF POWER, NATURAL GAS, AND COMMUNICATIONS UTILITIES, BUT ARE NOT DESIGN DRAWINGS FOR THE RELOCATION OR REMOVAL OF EXISTING DRY UTILITIES, NOR FOR ANY NEW DRY UTILITY STUBS. CONTRACTOR IS TO SUBMIT SITE PLAN TO DRY UTILITIES FOR DESIGN OF SERVICE CONNECTIONS TO BUILDING. ACTUAL CONSTRUCTION OF SAID SERVICES TO BE DONE BY RESPECTIVE UTILITY PROVIDERS.

CONTRACTOR MUST START AT THE LOW END OF ALL GRAVITY FED LINES AND WORK UP HILL. FAILURE TO COMPLY WITH THIS NOTE WILL RELEASE THE CIVIL ENGINEER OF ALL LIABILITY.

THE CONTRACTOR IS TO VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POT HOLING A MINIMUM OF 300 FEET AHEAD OF THE LINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO POTHOLE UTILITIES THE CONTRACTOR WILL BE REQUIRED TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.

ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW PIPE DURING CONSTRUCTION.

ALL THRUST BLOCKS SHALL BE POURED IN PLACE AGAINST UNDISTURBED SOIL AS PER SPECIFICATIONS, ALL VALVES, FITTINGS, AND APPURTENANCES TO BE BLOCKED.

CONTRACTOR TO LOOP NEW WATERLINE AROUND GRAVITY UTILITIES IF CONFLICT DOES OCCUR. (NOTIFY ENGINEER OF THE PROBLEM).

CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL DRAWINGS.

NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.

APWA STANDARDS WILL BE USED IN THE ABSENCE OF ANY EAGLE MOUNTAIN CITY STANDARDS AND DEVICES.

DEMOLITION NOTES

1. CONTRACTOR TO LEGALLY REMOVE & DISPOSE OF ALL EXTRANEOUS UTILITIES , STRUCTURES, IMPROVEMENTS & DEBRIS ON THE SITE PRIOR TO CONSTRUCTING THE IMPROVEMENTS SHOWN ON THIS PLAN.
2. SAID DEMOLITION MAY INCLUDE, BUT IS NOT LIMITED TO UTILITY SERVICES AS WELL AS ASPHALT, CONCRETE, FENCES, TREES, SHRUBS & OTHER DELETERIOUS MATERIALS ON THE SITE.
3. SAID DEMOLITION EXCLUDES UTILITY MAINS UNLESS SPECIFICALLY SHOWN ON THIS PLAN.
4. SAID DEMOLITION EXCLUDES PUBLICLY OWNED STREET IMPROVEMENTS UNLESS SPECIFICALLY SHOWN ON THIS PLAN.
5. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL UNDERGROUND TANKS, PIPES, VALVES, ETC.
6. CONTRACTOR IS TO COORDINATE ALL PERMITS, FEES & INSPECTIONS AS REQUIRED BY ANY AGENCY HAVING JURISDICTION.
7. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO ONE APPROACH TO SITE. THE APPROACH SHALL BE DESIGNATED BY THE GENERAL MANAGER.

ABOVE-GROUND IMPROVEMENTS

CONTRACTOR SHALL OBTAIN A COPY OF, AND STRICTLY ADHERE TO THE CURRENT EAGLE MOUNTAIN CITY STANDARDS AND SPECIFICATIONS. APWA STANDARDS WILL BE USED IN THE ABSENCE OF ANY EAGLE MOUNTAIN CITY STANDARDS AND DETAILS.

CONTRACTOR IS TO OBTAIN ANY REQUIRED PERMITS AND NOTIFY THE STREET OWNER AND SILVER PEAK ENGINEERING PRIOR TO BEGINNING ANY WORK WITHIN SAID STREET.

SITE WORK OUTSIDE OF THE PUBLICLY OWNED RIGHT OF WAY SHALL CONFORM WITH THE NOTES AND DETAILS SHOWN ON THIS SET OF PLANS. CONTRACTOR IS TO NOTIFY THE OWNER AND SILVERPEAK ENGINEERING PRIOR TO BEGINNING SAID WORK.

ALL DIMENSIONS, AND GRADES SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

ALL EXISTING MANHOLES, WATER VALVES, CLEAN OUTS, ETC., ARE TO BE RAISED OR LOWERED TO GRADE.

ALL NEW VALVES, MANHOLES, ETC. SHALL BE INSTALLED A MINIMUM OF 6" BELOW FINISH GRADE & RAISED TO GRADE AS REQUIRED WITH A MINIMUM 6" CONCRETE RING.

FULL DEPTH EXPANSION JOINTS WILL BE PLACED AGAINST ANY OBJECT DEEMED TO BE FIXED, CHANGES IN DIRECTION, AND AT EQUAL INTERVALS NOT TO EXCEED 50 FEET. SLABS-ON-GRADE WILL BE TYPICALLY SCORED (1/2 THE DEPTH) AT INTERVALS NOT TO EXCEED THEIR WIDTH OR 12 TIMES THEIR DEPTH, WHICHEVER IS LESS. SCORING WILL BE PLACED TO PREVENT RANDOM CRACKING.

CONCRETE WATERWAYS, CURB WALLS, MOW STRIPS, CURB AND GUTTER, ETC., WILL TYPICALLY BE SCORED (1/2 THE DEPTH) AT INTERVALS NOT TO EXCEED 10 FEET, AND HAVE FULL DEPTH EXPANSION JOINTS THAT EQUAL SPACING NOT TO EXCEED 40 FEET.

UNLESS OTHERWISE NOTED, ALL SLABS-ON-GRADE WILL HAVE A MINIMUM 8" TURNED-DOWN EDGE TO HELP CONTROL FROST HEAVE.

UNLESS OTHERWISE NOTED, ALL ON-GRADE CONCRETE WILL BE PLACED ON A MINIMUM 4" GRAVEL BASE OVER A WELL COMPACTED (96% STANDARD PROCTOR DENSITY) SUB GRADE.

ALL EXPOSED SURFACES WILL HAVE A TEXTURED FINISH, RUBBED, OR BROOMED, ANY "PLASTERING" OF NEW CONCRETE WILL BE DONE WHILE IT IS STILL "GREEN".

ALL JOINTS (CONTROL JOINTS, CONSTRUCTION JOINTS, EXPANSION JOINTS, ETC.), WILL BE SEALED WITH A ONE PART POLYURETHANE SEALANT (SEE SPECIFICATION).

CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.

ALL EXISTING ASPHALT WILL BE SAW CUT IN NEAT STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.

HANDICAP ACCESSIBILITY: ALL CONSTRUCTION SHALL MEET THE ADA HANDICAP ACCESSIBILITY REQUIREMENTS. FOR ANY DISCREPANCIES BETWEEN THE PLANS AND ADA REQUIREMENTS, ADA REQUIREMENTS WILL GOVERN.

STRIPING WILL BE PER THE PLANS AND/OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. STRIPING TO INCLUDE HANDICAP INSIGNIAS, SIGNS, CROSS-HATCHING, DIRECTION ARROWS, ETC. AS SHOWN OR AS DIRECTED.

NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.

ABBREVIATIONS

NOT ALL ITEMS MAY BE APPLICABLE

Ø	DIAMETER
Δ	DELTA
°	DEGREES
'	MINUTES, FEET
"	SECONDS, INCHES
ADA	AMERICAN DISABILITIES ACT
APPROX	APPROXIMATION
ARCH	ARCHITECTURAL
B&C	BAR & CAP
BL	BOUNDARY LINE
BM	BENCHMARK
BND	BOUNDARY
BOW	BACK OF WALK
BRG	BEARING
BVC	BEGIN VERTICAL CURVE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
C&G	CURB AND GUTTER
CB	CATCH BASIN
CH	CHORD
CHB	CHORD BEARING
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COMBO	COMBINATION
CONC	CONCRETE
CONST	CONSTRUCTION
CUL	CULINARY
CW	CULINARY WATER
CWL	CULINARY WATERLINE
DEMO	DEMOLITION
DI	DUCTILE IRON
DIAM	DIAMETER
DIST	DISTANCE
E	EAST
EG	EXISTING GRADE
EOA	EDGE OF ASPHALT
ELEC	ELECTRICAL
EVC	END VERTICAL CURVE
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EXIST	EXISTING
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FND	FOUND
FND	FOUNDATION
FTG	FOOTING
GB	GRADE BREAK
GR	GRATE
GV	GATE VALVE
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HPE	HIGH POINT ELEVATION
HPS	HIGH POINT STATION
HWM	HIGH WATER MARK
INV	INVERT
IRR	IRRIGATION
IRRMH	IRRIGATION MANHOLE
K	RADIUS OF CURVATURE
L	LENGTH

ABBREVIATIONS

NOT ALL ITEMS MAY BE APPLICABLE

LAT	LATERAL SERVICE
LD	LAND DRAIN
LDMH	LAND DRAIN MANHOLE
LG	LIP OF GUTTER
LP	LIGHT POLE
LPE	LOW POINT ELEVATION
LPS	LOW POINT STATION
MECH	MECHANICAL
MH	MANHOLE
MON	MONUMENT
N	NORTH
NE	NORTHEAST
NR	NON-RADIAL
NW	NORTHWEST
OC	ON CENTER
PL	PROPERTY LINE
PROP	PROPERTY
PUE	PUBLIC UTILITY EASEMENT
PUE&DE	PUBLIC UTILITY & DRAINAGE EASEMENT
PUE&DE	PUBLIC UTILITY EASEMENT & DRAINAGE EASEMENT
PVC	POLYVINYLCHLORIDE
R	RADIUS
RCL	ROADWAY CENTERLINE
RCP	REINFORCED CONCRETE PIPE
S	SOUTH
SD	STORM DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDCO	STORM DRAIN CLEANOUT
SDMH	STORM DRAIN MANHOLE
SE	SOUTHEAST
SEC	SECONDARY
SEC	SECTION
SLB&M	SALT LAKE BASE & MERIDIAN
SPEC	SPECIFICATION
SPECS	SPECIFICATIONS
SPP	STEEL PIPE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
STDS	STANDARDS
SW	SECONDARY WATER
SW	SOUTHWEST
SWL	SECONDARY WATERLINE
TAN	TANGENT
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TBW	TOP BACK OF WALK
TEL	TELEPHONE
TCW	TOP OF CURBWALL
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOG	TOP OF GRATE
TOW	TOP OF WALL
TYP	TYPICAL
UDOT	UTAH DEPARTMENT OF TRANSPORTATION
U.N.O.	UNLESS NOTED OTHERWISE
UP	UTILITY POLE
UTIL	UTILITY
V	VALVE
VC	VERTICAL CURVE
W	WATER
W	WEST
WL	WATERLINE
WM	WATER METER
WV	WATER VALVE
X	CROSS
X-SECT	CROSS-SECTION

EAGLE MOUNTAIN CITY GENERAL CONSTRUCTION NOTES

EAGLE MOUNTAIN

Engineering Division
2565 North Pony Express Parkway
Eagle Mountain City, Utah 84005
(801) 789-6671

Eagle Mountain City General Notes for construction drawings:

SEWER-
- Pipe bedding: ¾" gravel required 6" below, on the sides & 12" above the pipe (minimum).
- Depth: Sewer main/laterals to maintain 4' of cover (minimum) from finished grade, 3' minimum from top of pipe at time of installation.
- Separation: sewer mains & laterals to maintain 10' separation (minimum) from culinary water mains & laterals.
- Sewer Y's: 3' minimum separation between sewer Y's.
- Lateral stubs: A) stubs must extend 15' into property and be marked with 2x4 painted green. B) All laterals must be GIS (shot in) at the Y's and stubs. Also slopes (2% min. on 4" pipe) to be checked before backfill.
- Manholes: manholes to be within 1' of finished grade. 12" of whirly gig form (max) and no flat rings allowed. 12" of ¾" gravel required under manholes/boxes.

WATER-
- Valves: 1. Valves must be flanged to tee's (fittings). 2. Valves 12" and larger to be butterfly valves.
- Bedding: sand must meet AASHTO (A-3) gradation with 100% passing the #4 sieve. 6" below pipe on the sides & 12" above pipe (minimum).
- Depth: water main & laterals must maintain 4' cover from finished grade (minimum), 3' minimum from top of pipe at time of installation. Max depth 72" from finished grade.
- Services & fittings: services & fittings to maintain 3' minimum separation from pipe joints and other fittings.
- Setters: all setters to be 21" tall (minimum), have unions at the base and be dual check model, also ¾" setters to have double braces. Setters to be set at: 18" to 22" from the top of setter to top of lid.
- Water can lid: all lids to say "Eagle Mountain" on them recessed with a hole for the ERT and to be set at level to 1" above the plane of the curb & sidewalk.
- Water Can: the water can for ¾" & 1" services will need to be a 36" tall minimum and 21" inside diameter. Water can for 1-1/2" to 2" service will need to follow APWA specification.
- Hydrants: hydrants to be 5' bury (minimum).
- Laterals: all laterals need to be GIS (shot in) at the corp. stop & setter, and also visual inspection on poly inserts before backfill. Water laterals to extend 15' into property and be marked with a 2x4 painted blue. All poly lines to have visual poly insert inspection.
- Tracer wire: run tracer wire along main & extend up setters and hydrants, do not run up valve boxes.
- Water fittings: all water fittings to be checked for thrust blocks (pre & post) and GIS (shot in) before backfill.
- Vertical separation: water main to maintain 18" minimum separation from storm drain or other obstacles/utilities.
- Water line fittings: all fittings to have mega lug followers.
- Water Main Line: NO DEFLECTION or bending of pipe will be allowed in the water lines and bend fittings will be required. All fittings to be Mega-lug fittings.

STORM DRAIN-
- Bedding: ¾" gravel 6" below and on sides of pipe & 12" above pipe (minimum).
- ADS: all ADS pipe to be "HP" brand.
- Collars: collars to be 1'x1' around pipe, 4000 psi concrete, inspection is needed pre & post collar pour.
- Manholes: manholes to be within 1' of finished grade. 12" of whirly gig form (max) and no flat rings allowed. 12" of ¾" gravel required under manholes/boxes.

ROAD SECTION-
- Proof rolls: proof roll required on all sections of road: i.e. sub-grade, sub-base, and curb base and road base. Curb stakes required for sub-grade inspection and string line required for sub-base and road base inspection.
- UTBC: state spec. road base required for all roads, commercial base acceptable for the sidewalks & trails.
- Collars: all collars to be 1' wide by 1' deep with a 6000 psi concrete with 1.5# fiber mesh per cubic yard (3/4" monofilament) required for all street collars. Manhole covers and water valve towers to be ½" down from asphalt edge and concrete to be ¼" to 3/8" down from asphalt edge.

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS
PRIOR TO COMMENCING
ANY CONSTRUCTION

177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
PHONE: (801) 499-5054

SILVERPEAK ENGINEERING
STRUCTURAL CIVIL SURVEY
WWW.SILVERPEAKENG.COM

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL:

DATE: **07/25/2025**
PROJECT: **AW-061.02**
MANGER: **J.R.J.**

REVISIONS

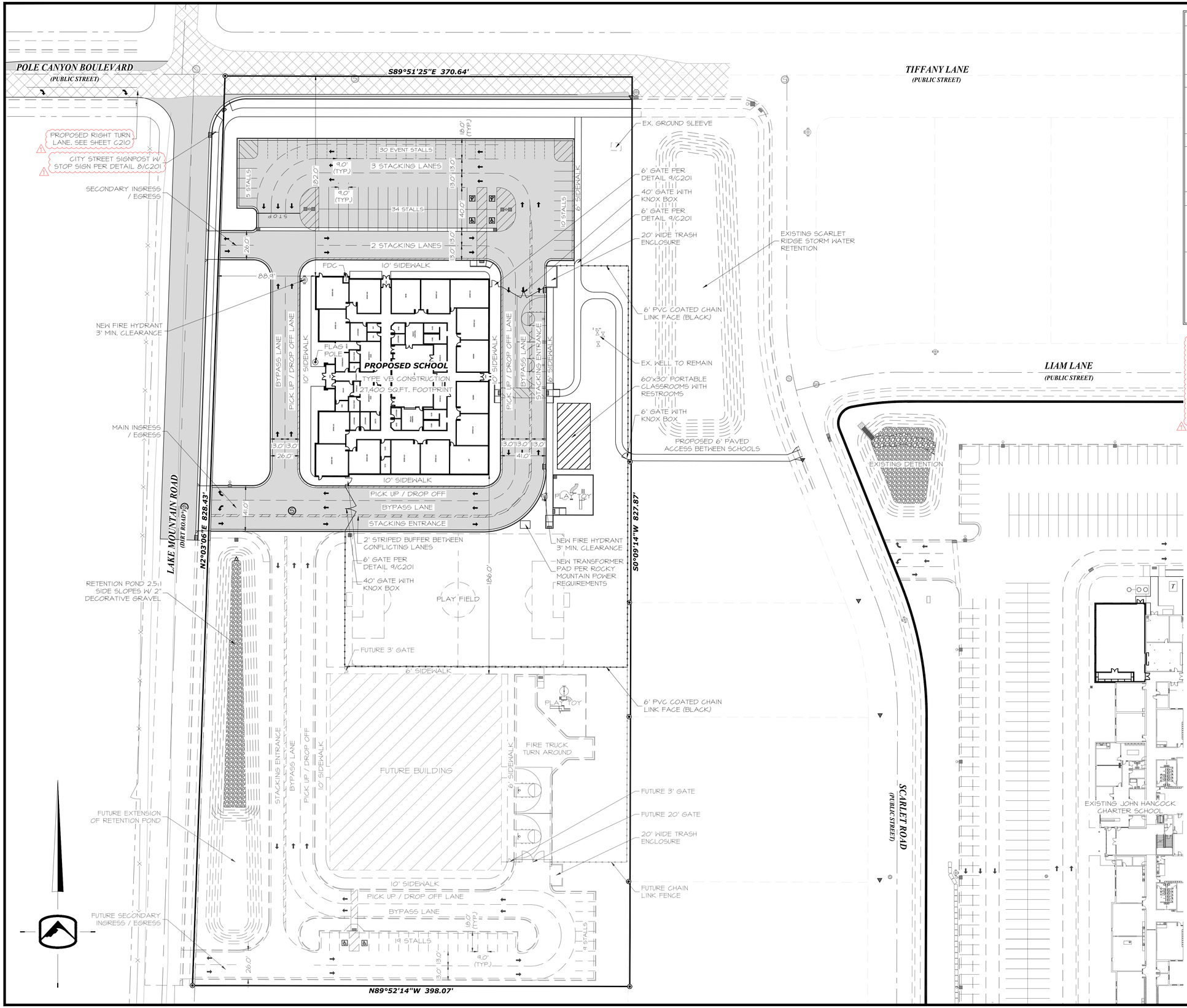
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

GENERAL & UTILITY NOTES

SHEET NUMBER:

C002

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.



SITE AREA TABULATION

PUBLIC STREET (CENTERLINE TO R.O.W.)	38,767 SQ.FT.	0.89 AC.	100%
LANDSCAPE	7,084 SQ.FT.	0.16 AC.	18%
HARDSCAPE	31,683 SQ.FT.	0.73 AC.	82%
PHASE 1			
LANDSCAPE	92,737 SQ.FT.	2.13 AC.	41%
HARDSCAPE	74,328 SQ.FT.	1.70 AC.	38%
BLDG FOOTPRINT	29,200 SQ.FT.	0.67 AC.	15%
TOTAL	196,265 SQ.FT.	4.50 AC.	100%
PHASE 2			
LANDSCAPE	23,549 SQ.FT.	0.54 AC.	22%
HARDSCAPE	55,917 SQ.FT.	1.28 AC.	52%
BLDG FOOTPRINT	27,400 SQ.FT.	0.63 AC.	26%
TOTAL	106,866 SQ.FT.	2.45 AC.	100%
TOTAL SITE (INCLUDING PUBLIC STREET IMPROVEMENTS)			
LANDSCAPE	124,015 SQ.FT.	2.85 AC.	36%
HARDSCAPE	161,283 SQ.FT.	3.70 AC.	47%
BLDG FOOTPRINT	56,600 SQ.FT.	1.30 AC.	17%
TOTAL	341,898 SQ.FT.	7.85 AC.	100%

PH 1 PARKING PROVIDED	79 STALLS
PH 1 ADA STALLS PROVIDED	4 STALLS
PH 2 PARKING PROVIDED	28 STALLS
PH 2 ADA STALLS PROVIDED	2 STALLS
TOTAL PARKING PROVIDED	107 STALLS

*CENTERLINE AND RIGHT-OF-WAY OF LAKE MOUNTAIN ROAD DETERMINED BY TRACING THE LEGAL DESCRIPTION PROVIDED IN EXHIBIT "A" CORRECTION AFFIDAVIT ENTRY NO. 148845:2007 WHICH DESCRIBES THE BEARINGS AND DISTANCES OF THE LAKE MOUNTAIN ROAD CENTERLINE AND CALLS LAKE MOUNTAIN ROAD A 56 FOOT WIDE ROADWAY, 28 FEET EACH SIDE OF THE CENTERLINE.

PER EAGLE MOUNTAIN CITY REQUEST, LAKE MOUNTAIN ROAD SHALL BE A 59 FOOT RIGHT-OF-WAY WHICH REQUIRES 1.5' OF ROAD DEDICATION.

LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- CENTERLINE
- EASEMENT LINE
- SETBACK LINE
- IRR — NEW IRRIGATION LINE
- SD — NEW STORM DRAIN
- SS — NEW SANITARY SEWER
- SW — NEW SECONDARY WATERLINE
- W — NEW CULINARY WATERLINE
- IRR — EX. IRRIGATION LINE
- OHP — EX. OVERHEAD POWER LINE
- SD — EX. STORM DRAIN
- SS — EX. SANITARY SEWER
- SW — EX. SECONDARY SATERLINE
- T — EX. TELEPHONE LINE
- CTV — EX. CABLE TV LINE
- G — EX. GAS LINE
- W — EX. CULINARY WATERLINE
- NEW FENCE PER PLAN
- EX. FENCE PER PLAN
- SECTION CORNER
- MONUMENT
- CONTROL POINT
- 4250 EG CONTOUR MINOR
- 4250 EG CONTOUR MAJOR
- 4250 FG CONTOUR MINOR
- 4250 FG CONTOUR MAJOR
- NEW ASPHALT PER DETAIL 1/C301
- EXISTING ASPHALT
- FIRE TURNAROUND & ACCESS
- EXISTING CURB & GUTTER
- 24" HIGH BACK CURB PER DETAIL 2/C301
- 24" RELEASE GUTTER PER DETAIL 3/C301

0 40 80 160

HORIZONTAL SCALE: 1"=40'

SITE PLAN

CALL BLUESTAKES @ 1-800-662-4111 AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

SILVERPEAK ENGINEERING
177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
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STRUCTURAL CIVIL SURVEY

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 375250 JOSHUA R. JENSEN STATE OF UTAH

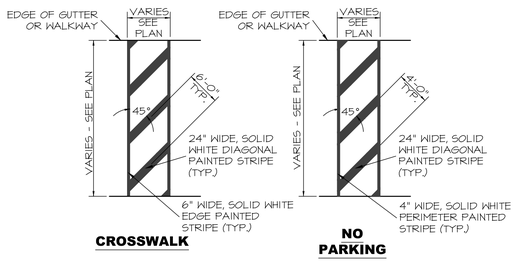
DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

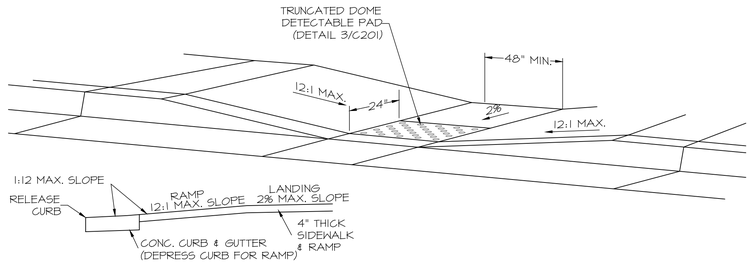
SITE PLAN

SHEET NUMBER: C200

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

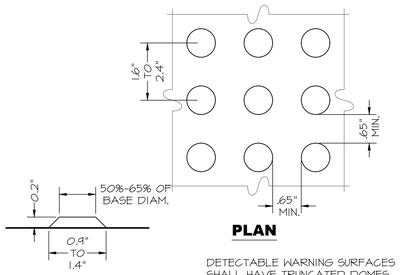


STRIPING DETAILS
NOT TO SCALE — 1 C201



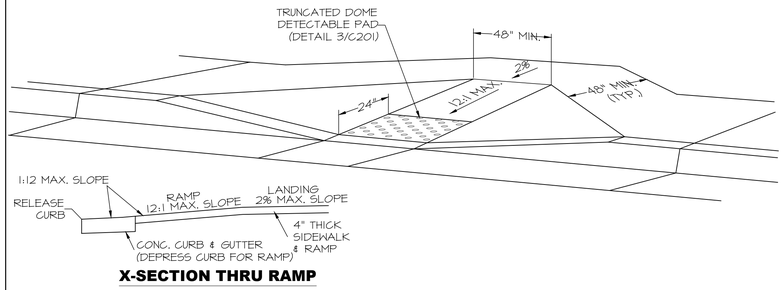
X-SECTION THRU RAMP

ADA RAMP
NOT TO SCALE — 2 C201



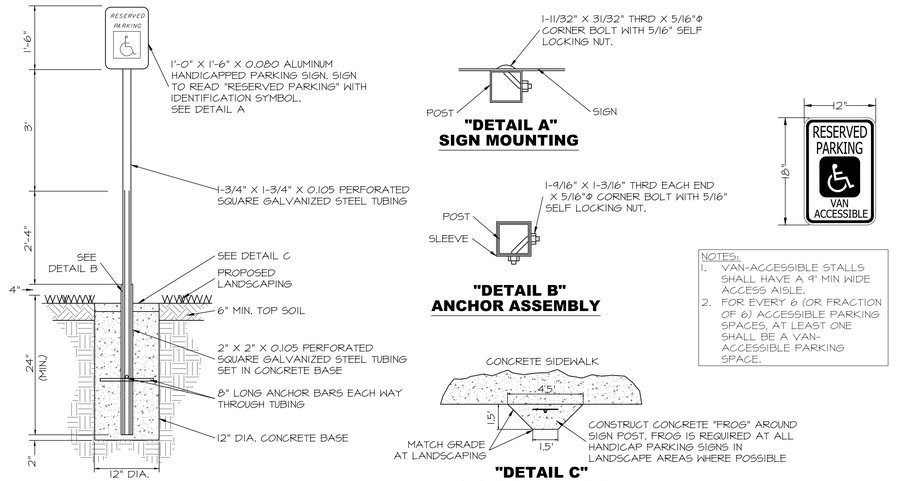
DETECTABLE WARNING SURFACES SHALL HAVE TRUNCATED DOMES COMPLYING WITH ANSI 117.1 SECTION 705.5

TRUNCATED DOME DETECTABLE PAD
NOT TO SCALE — 3 C201



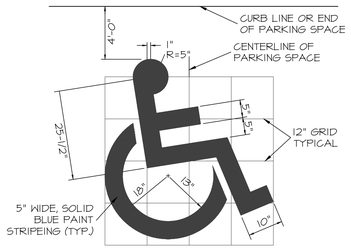
X-SECTION THRU RAMP

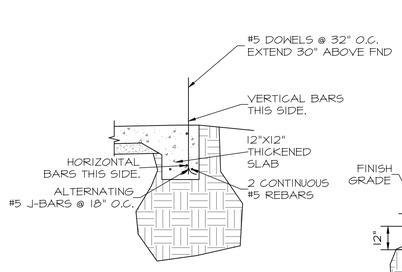
ADA RAMP
NOT TO SCALE — 4 C201



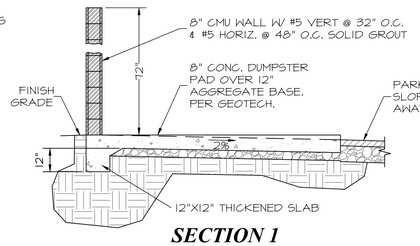
HANDICAPPED PARKING SIGN

HANDICAP PARKING SIGN DETAILS
NOT TO SCALE — 5 C201

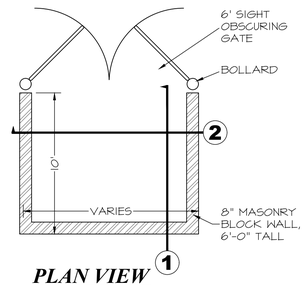




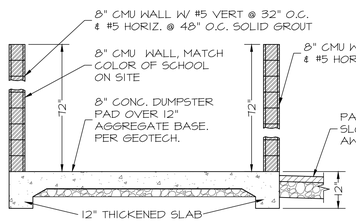
STEM WALL & FOUNDATION SECTION



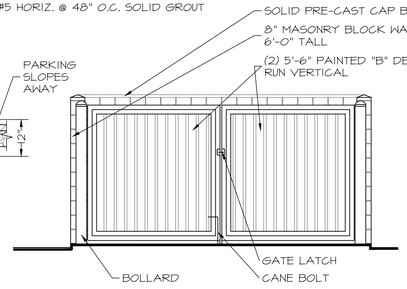
SECTION 1



PLAN VIEW

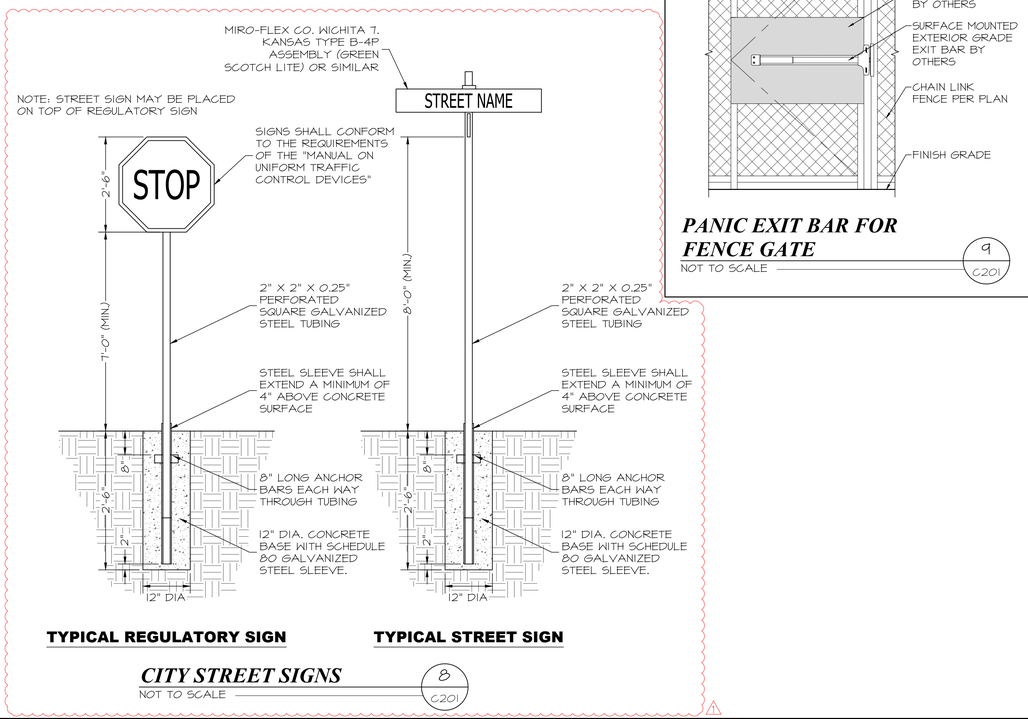


SECTION 2

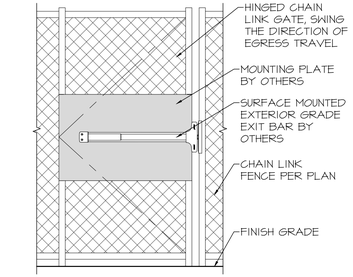


DUMPSTER ENCLOSURE
NOT TO SCALE — 7 C201

TYPICAL NO PARKING SIGN
NOT TO SCALE — 6 C201



CITY STREET SIGNS
NOT TO SCALE — 8 C201



PANIC EXIT BAR FOR FENCE GATE
NOT TO SCALE — 9 C201

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SILVERPEAK ENGINEERING
177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
PHONE: (801) 499-5054
WWW.SILVERPEAKENG.COM
STRUCTURAL CIVIL SURVEY

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 375253 JOSHUA R. JENSEN STATE OF UTAH

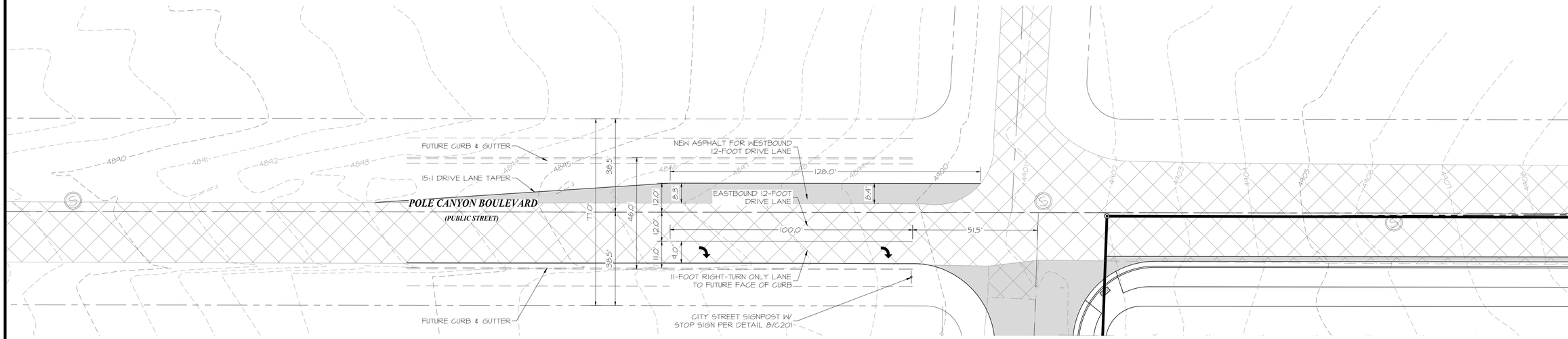
DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS

MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

SITE DETAILS

SHEET NUMBER: C201



LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- CENTERLINE
- EASEMENT LINE
- SETBACK LINE
- IRR — NEW IRRIGATION LINE
- SD — NEW STORM DRAIN
- SS — NEW SANITARY SEWER
- SW — NEW SECONDARY WATERLINE
- W — NEW CULINARY WATERLINE
- IRR — EX. IRRIGATION LINE
- OHP — EX. OVERHEAD POWER LINE
- SD — EX. STORM DRAIN
- SS — EX. SANITARY SEWER
- SW — EX. SECONDARY WATERLINE
- T — EX. TELEPHONE LINE
- CTV — EX. CABLE TV LINE
- G — EX. GAS LINE
- W — EX. CULINARY WATERLINE
- NEW FENCE PER PLAN
- X — EX. FENCE PER PLAN
- SECTION CORNER
- MONUMENT
- CONTROL POINT
- 4250 — EG CONTOUR MINOR
- 4250 — EG CONTOUR MAJOR
- 4250 — FG CONTOUR MINOR
- 4250 — FG CONTOUR MAJOR
- NEW ASPHALT PER DETAIL 1/C301
- EXISTING ASPHALT
- FIRE TURNAROUND & ACCESS
- EXISTING CURB & GUTTER
- 24" HIGH BACK CURB PER DETAIL 2/C301
- 24" RELEASE GUTTER PER DETAIL 3/C301

0 20 40 80

HORIZONTAL SCALE: 1"=20'

POLE CANYON BLVD
TURN LANE STRIPING PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS
PRIOR TO COMMENCING
ANY CONSTRUCTION

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EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 375250 JOSHUA R. JENSEN STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

POLE CANYON BLVD TURN LANE STRIPING PLAN

SHEET NUMBER:
C210

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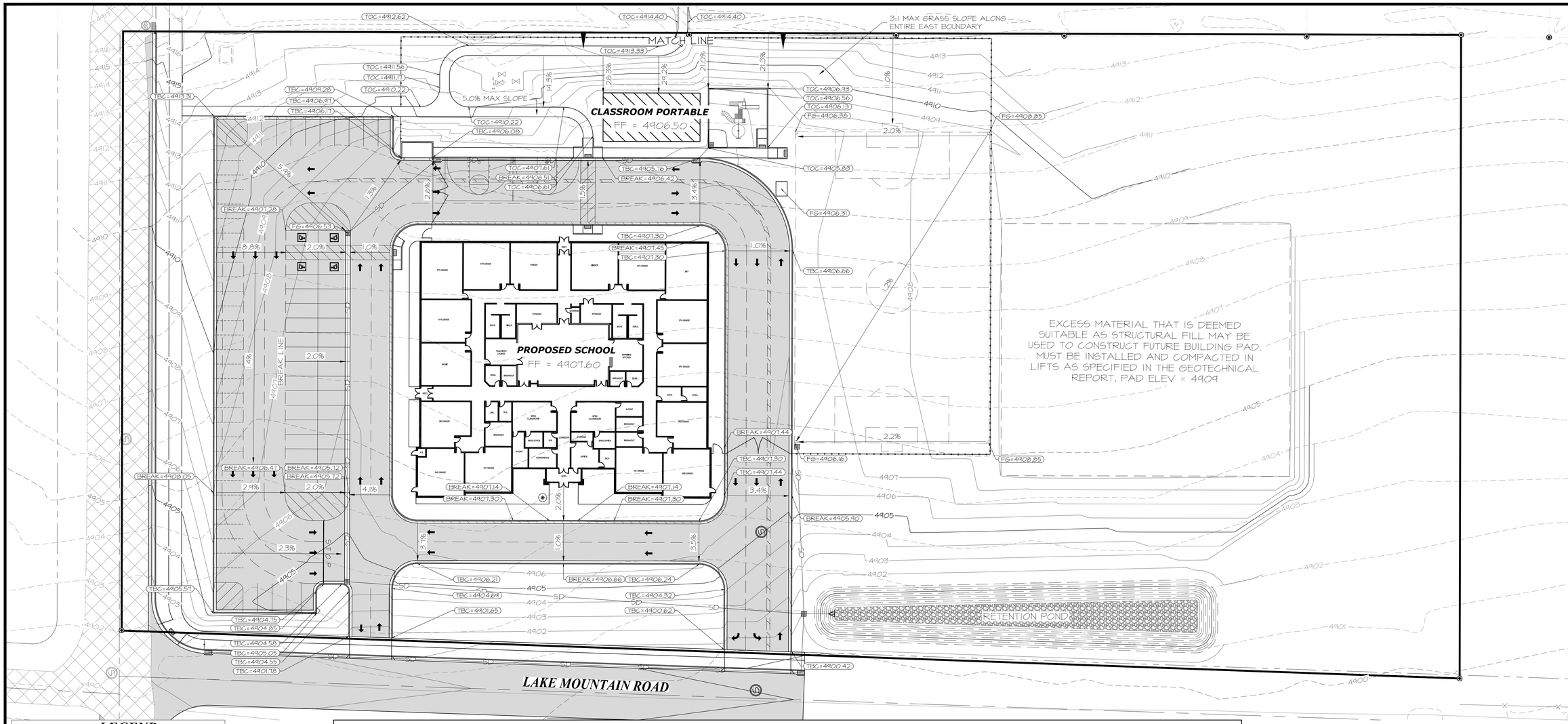

LEGEND

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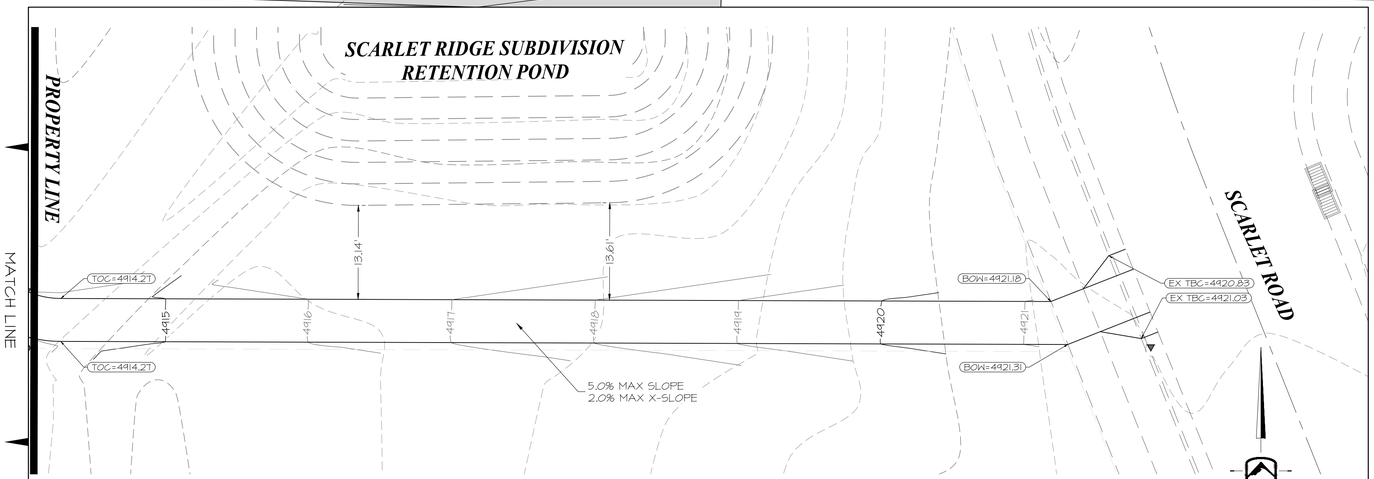
- 24" RELEASE GUTTER PER DETAIL 3/C301

SCARLET RIDGE SUBDIVISION RETENTION POND



PAVED ACCESS BETWEEN SCHOOLS

SCALE: 1"=10'

RETENTION POND
HWM = 4901.50
FREEBOARD = 1.00 FT
TOTAL RETAINED CAPACITY = 22,782 CU.FT.
REQUIRED CAPACITY = 22,242 CU.FT.
SIDE SLOPES = 2.5:1 (GRAVEL)
POND BOTTOM GRAVEL RIP-RAP

0 30 60 120

HORIZONTAL SCALE: 1"=30'

GRADING / DRAINAGE PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

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EAGLE MOUNTAIN, UTAH

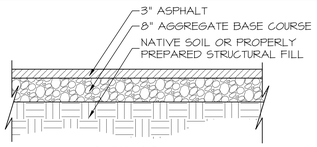
SEAL: LICENSED PROFESSIONAL ENGINEER — 07/25/2025 — No. 375253 — JOSHUA R. JENSEN — STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

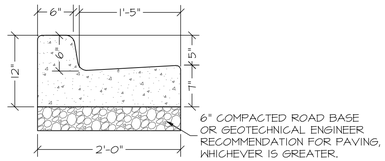
REVISIONS	
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

GRADING / DRAINAGE PLAN

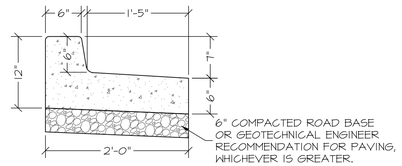
SHEET NUMBER: C300



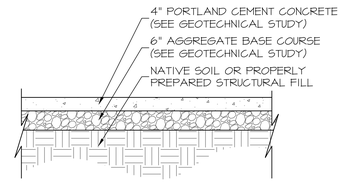
TYPICAL PARKING X-SECTION 1 / C301
NOT TO SCALE



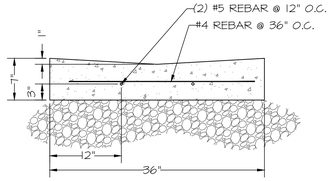
24" HIGH BACK CURB DETAIL 2 / C301
NOT TO SCALE



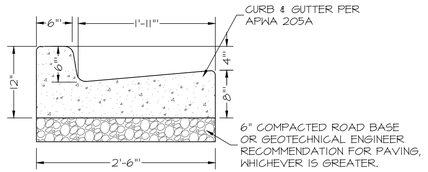
24" RELEASE GUTTER DETAIL 3 / C301
NOT TO SCALE



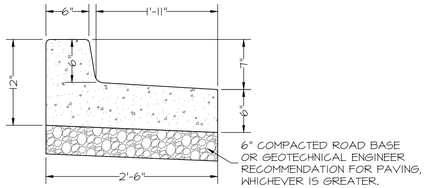
TYPICAL CONCRETE PAVING X-SECTION 4 / C301
NOT TO SCALE



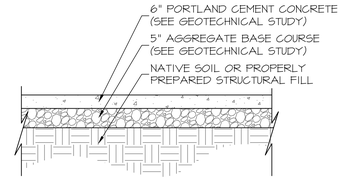
3' WATER WAY 5 / C301
NOT TO SCALE



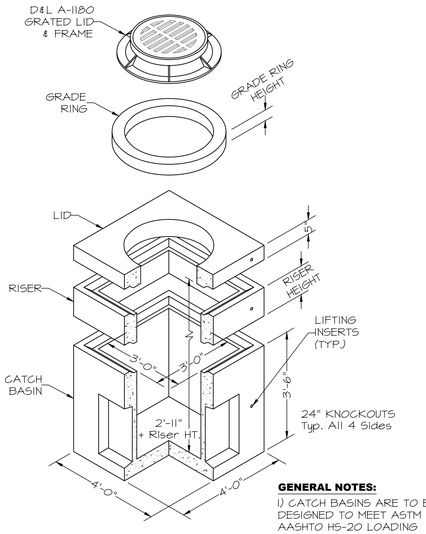
30" HIGH BACK CURB DETAIL 6 / C301
NOT TO SCALE



30" RELEASE GUTTER DETAIL 7 / C301
NOT TO SCALE



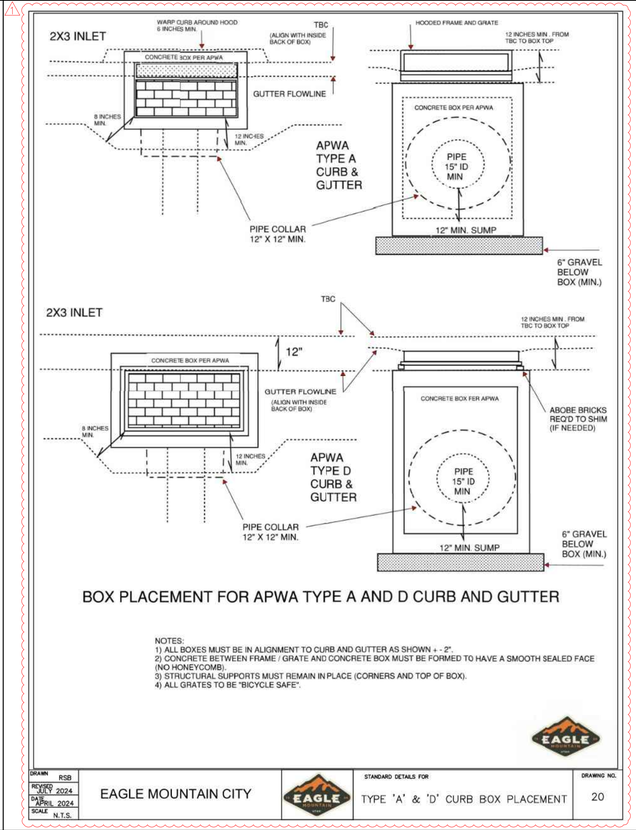
DRIVABLE CONCRETE PAVING X-SECTION 8 / C301
NOT TO SCALE



GENERAL NOTES:

1) CATCH BASINS ARE TO BE DESIGNED TO MEET ASTM C858 WITH AASHTO H5-20 LOADING

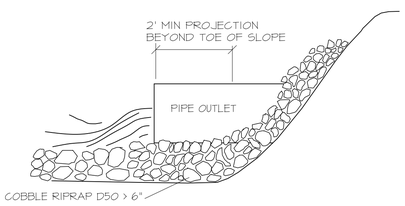
STORM DRAIN CLEAN OUT (SDCO) 9 / C301
NOT TO SCALE



BOX PLACEMENT FOR APWA TYPE A AND D CURB AND GUTTER

NOTES:
1) ALL BOXES MUST BE IN ALIGNMENT TO CURB AND GUTTER AS SHOWN + - 2".
2) CONCRETE BETWEEN FRAME / GRATE AND CONCRETE BOX MUST BE FORMED TO HAVE A SMOOTH SEALED FACE (NO HONEYCOMB).
3) STRUCTURAL SUPPORTS MUST REMAIN IN PLACE (CORNERS AND TOP OF BOX).
4) ALL GRATES TO BE "BICYCLE SAFE".

DRAWN	RSB	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR	DRAWING NO.
REVISED	JULY 2024		TYPE 'A' & 'D' CURB BOX PLACEMENT	20
DATE	APRIL 2024			
SCALE	N.T.S.			



PIPE OUTLET TO RETENTION POND 10 / C301
NOT TO SCALE

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DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS

MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

GRADING DETAILS

SHEET NUMBER: C301

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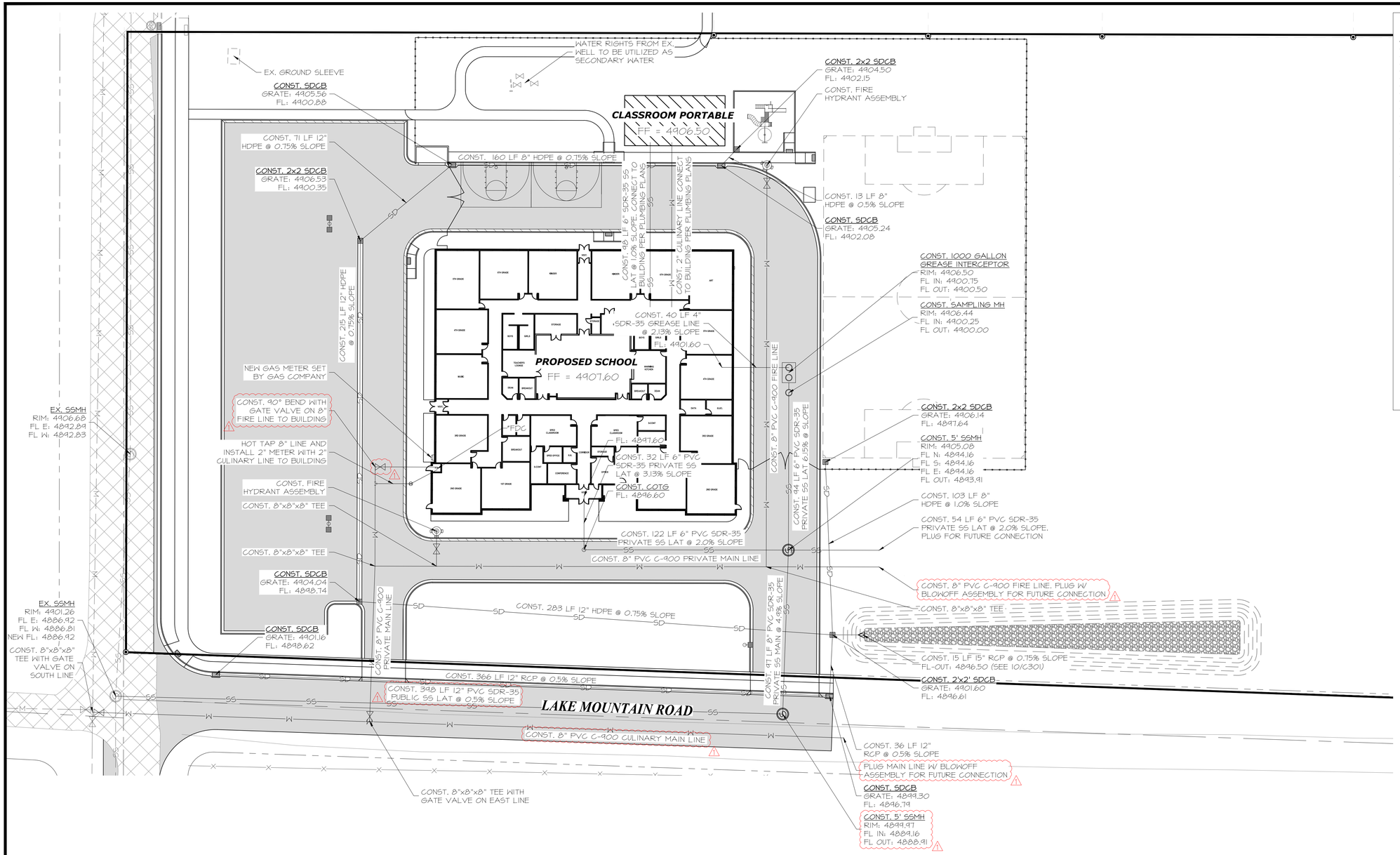

LEGEND

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- 24" RELEASE GUTTER PER DETAIL 3/C301

0 30 60 120

HORIZONTAL SCALE: 1"=30'

UTILITY PLAN

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SEAL:
LICENSED PROFESSIONAL ENGINEER
07/25/2025
No. 375253
JOSHUA R. JENSEN
STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS

MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

UTILITY PLAN

SHEET NUMBER:
C400

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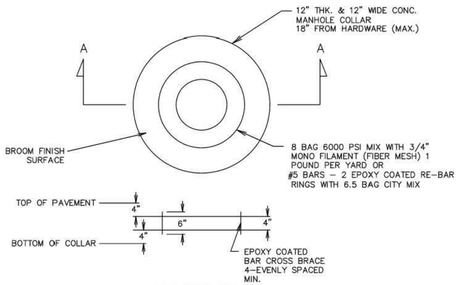
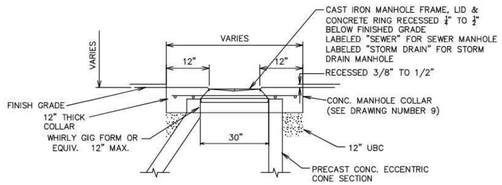


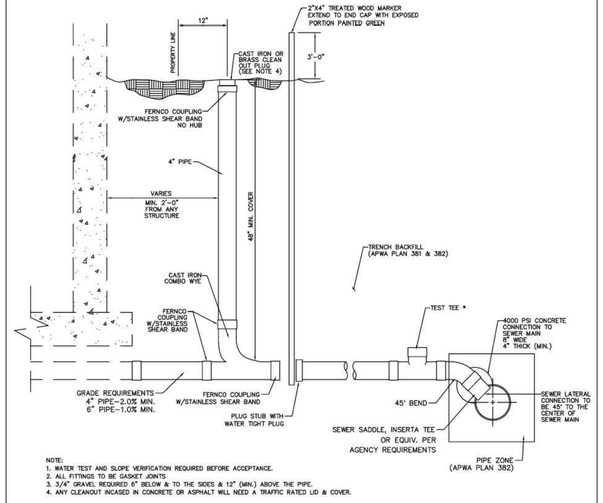
RE-BAR RING



SECTION A--A

NOTE:
1. CONCRETE COLLAR TO BE 1/4" TO 1/2" BELOW PAVEMENT SURFACE.
2. CONCRETE MUST BE FROM RIM TO MANHOLE CONE & DOWN THE SIDES OF MANHOLE CONE TO GET 12" MIN.

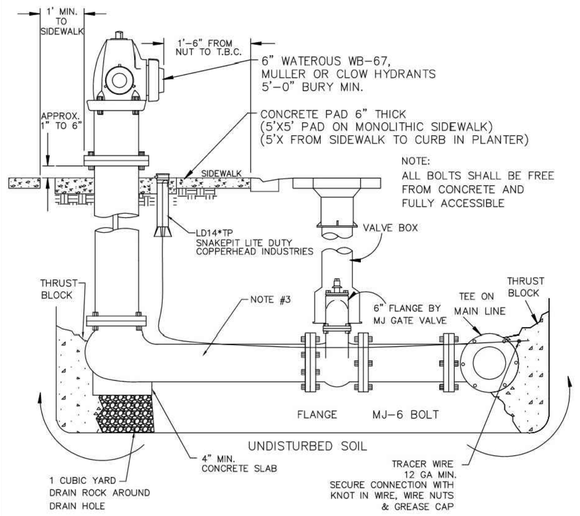
DRAWN RSB	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR	DRAWING NO.
REVISED		CONCRETE COLLARS FOR MANHOLES	23
DATE MAY 2024			
SCALE VARIES			



NOTE:
1. WATER TEST AND SLOPE VERIFICATION REQUIRED BEFORE ACCEPTANCE.
2. ALL FITTINGS TO BE GASKET JOINTS
3. 3/4" GRAVEL REQUIRED 6" BELOW & TO THE SIDES & 12" (MIN.) ABOVE THE PIPE.
4. ANY CLEANOUT INCASED IN CONCRETE OR ASPHALT WILL NEED A TRAFFIC RATED LID & COVER.

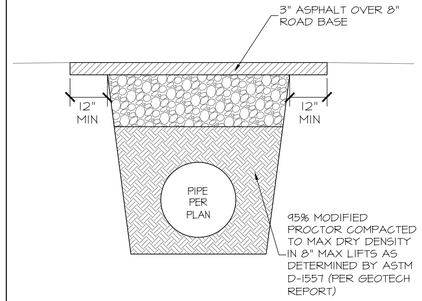
SEWER LATERAL SERVICE & CONNECTION TO EXISTING MAINLINE

DRAWN RSB	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR	DRAWING NO.
REVISED APRIL 2024		SEWER LATERAL SERVICE & CONNECTION	2
DATE SEPT 2017			
SCALE N.T.S.			



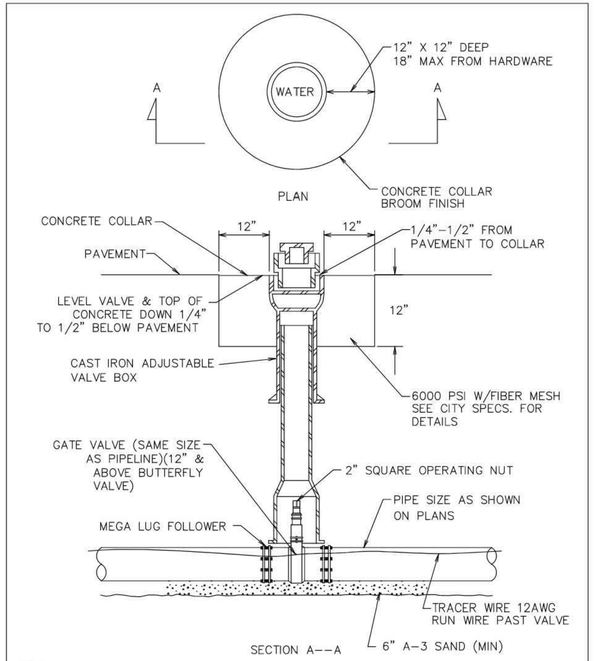
NOTES:
1. VALVE TO BE PLACED IN ASPHALT W/CONCRETE RING
2. TRACER WIRE TO BE RUN UP HYDRANT BARREL IN 1" CONDUIT.
3. THERE WILL BE NO SERVICE TAPS ALLOWED ON THE FIRE LINES.

DRAWN RSB	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR	DRAWING NO.
REVISED APRIL 2024		FIRE HYDRANT & VALVE	14
DATE NOV. 2015			
SCALE N.T.S.			



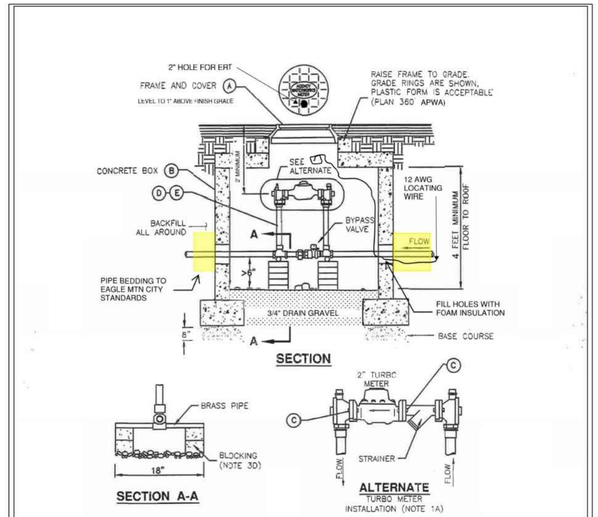
TYPICAL UTILITY TRENCH CROSS SECTION

NOT TO SCALE — 1 / C401



NOTES:
1. STREET COLLAR CONCRETE MUST BE 6000 PSI (MIN.) W/1 LBS. 3/4" MONOFILAMENT PER YARD.
2. ALL VALVE BOX ADJUSTMENT MUST BE THROUGH SLIDER RISER. IF ONE BASE & TOP IS STILL TOO LOW ANOTHER BASE MUST BE CUT TO GRADE & USED. NO DROP IN RISERS ALLOWED.
3. COLLARS MUST BE 12" FROM VALVE BOX (WIDE–CIRCULAR) & 12" DEEP. NO COLLARS ALLOWED OVER 18" FROM HARDWARE. COMPACT ALL LOOSE UTBC OR TRENCH FILL BEFORE POURING COLLAR.
4. ALL COLLARS REQUIRE INSPECTION BEFORE PLACING CONCRETE.
5. VALVE BOXES & MANHOLES IN LANDSCAPING REQUIRE 8" WIDE BY 8" DEEP, 4000 PSI COLLAR.

DRAWN RSB	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR	DRAWING NO.
REVISED AUG. 2024		CONCRETE COLLARS FOR WATER VALVES	24
DATE MAY 2024			
SCALE VARIES			



NOTES:
1) SETTER CANNOT OBSTRUCT OPENING- USE LID WITH OFFSET HOLE.
2) ALL POLY PIPE TO BE RATED FOR 200 PSI AND CTS O.D.
3) CONCRETE COLLARS ARE REQUIRED IN GRASS OR IF PLASTIC FORM RISERS ARE USED. 12" OF RISE WITH GRADE RINGS / FORM MAX.
4) ALL PIPE BEDDING AND TRENCH FILL MUST MEET EAGLE MTN CITY STANDARDS.
5) A VISUAL POLY STIFFENER CHECK IS REQUIRED BEFORE FITTINGS ARE TIGHTENED
6) BYPASS NOT ALLOWED ON STEERS USED FOR IRRIGATION (D/E)

LEGEND

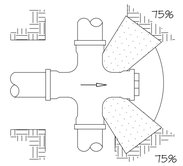
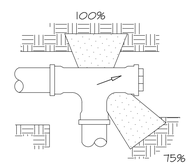
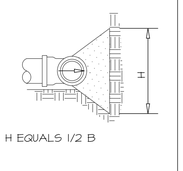
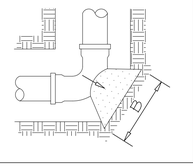
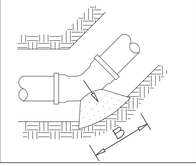
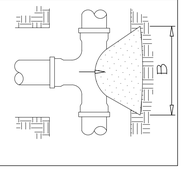
No.	*	ITEM	DESCRIPTION
(A)		27" FRAME AND COVER	PLAN 502 APWA
(B)		CONCRETE BOX	4' X 4' X 4' MIN.
(C)		STAINLESS STEEL METER BOLTS	5/8" x 2 3/4" BRASS
(D)		1 1/2" CUSTOM SETTER WITH BYPASS	
(E)		2" CUSTOM SETTER WITH BYPASS	

* FURNISHED BY UTILITY AGENCY

NOTE: ALL MATERIALS MUST BE APPROVED THROUGH SUBMITTALS

1 1/2" and 2" meter

DRAWN RSB	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR	DRAWING NO.
REVISED AUG. 2024		1 1/2" AND 2" METER	4
DATE APRIL 2024			
SCALE N.T.S.			

TYPE OF FITTING	CROSS W/PLUG	TEE W/PLUG	SECTION
TYPICAL INSTALLATION			
TYPE OF FITTING	90° BEND	45° THRU 11 1/4° BEND	TEE OR DEAD END
TYPICAL INSTALLATION			

THRUST BLOCK BEARING AREA (sq. ft.)

TYPE OF FITTING		90° BEND	45° BEND	11 1/4° OR 22 1/2° BEND	TEE OR DEAD END
SIZE OF PIPE	4"	3	2	2	2
	6"	6	3	2	4
	8"	11	6	3	7.5
	12"	24	13	7	17
	14"	33	18	9	23
	16"	43	23	12	30
	18"	54	29	15	38
	20"	67	36	18	47

NOTES:
1. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILL.
2. CONSTRUCT THRUST BLOCKS W/ 2000 PSI CONCRETE-CURE MINIMUM 5 DAYS.
3. AREAS ARE BASED ON 200 PSI TEST PRESSURE AND 2000 PSF BEARING CAPACITY.
4. BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE.
5. BLOCKS TO BE POURED AGAINST UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL EXTENDING DOWN TO NATURAL GRADE.
6. WRAP ALL FITTINGS WITH 8-MIL POLYETHLENE FILM AFTER APPLYING 2 FIELD COATS OF NO-OXIDE WAX TO NUTS & BOLTS BEFORE POURING THRUST BLOCKS.
7. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES, AND/OR BEARING CAPACITIES ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL OF ENGINEER.

TYPICAL THRUST BLOCK DETAIL 2 / C401

NOT TO SCALE

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STRUCTURAL CIVIL SURVEY

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL: UTAH LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 375250 JOSHUA R. JENSEN STATE OF UTAH

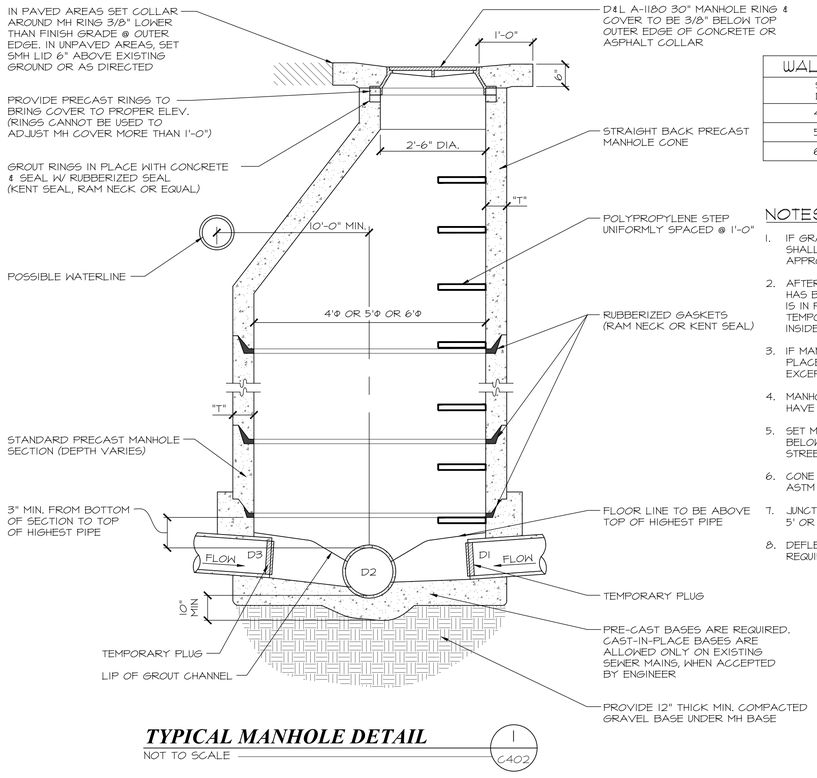
DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

UTILITY DETAILS

SHEET NUMBER: C401

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.



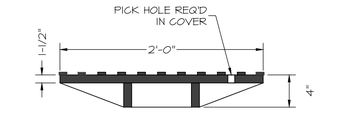
WALL THICKNESS (T)	
SMH DIA.	"T" (INCHES)
4'-0"	5"
5'-0"	6"
6'-0"	7"

NOTES:

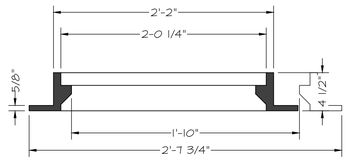
1. IF GRADE ALLOWS, INVERTS OF D1 & D3 SHALL MATCH TOP OF D2 OTHERWISE AS APPROVED BY DISTRICT.
2. AFTER ALL GRADING AROUND MANHOLE HAS BEEN COMPLETED & FINAL SURFACING IS IN PLACE, REMOVE DEBRIS & TEMPORARY PLUGS OR PLYWOOD FROM INSIDE OF MANHOLE.
3. IF MANHOLE BASE IS TO BE POURED IN PLACE FOLLOW SAME PATTERN AS SHOWN EXCEPT USE 10" MIN. WALL THICKNESS.
4. MANHOLES DEEPER THAN 20'-0" SHALL HAVE AN 18" THICK CONCRETE BASE.
5. SET MANHOLE FRAME & COVER TO 3/8" BELOW FINISH GRADE AFTER FINAL STREET GRADING IS COMPLETE.
6. CONE & WALL SECTIONS TO CONFORM TO ASTM C-478.
7. JUNCTIONS OF (3) OR MORE PIPES REQUIRE 5' OR LARGER MANHOLE.
8. DEFLECTION ANGLE OF 75° OR HIGHER REQUIRE 5' OR LARGER MANHOLE.

TYPICAL MANHOLE DETAIL

NOT TO SCALE — 1 / C402



MANHOLE COVER

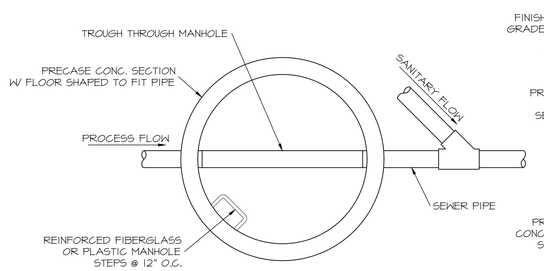


MANHOLE RING

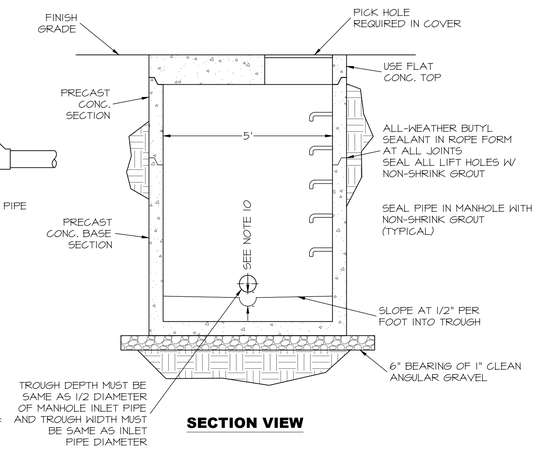
NOTE:
IF CONCRETE GRADE RINGS ARE USED ON A SAMPLING MANHOLE INSTALLATION, THE TOTAL HEIGHT OF THE STACKED RINGS MUST NOT EXCEED 12".

MANHOLE COVER & RING

NOT TO SCALE — 2 / C402



PLAN VIEW



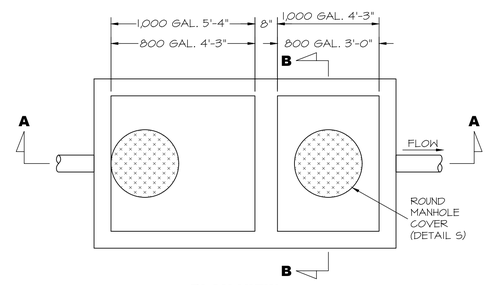
SECTION VIEW

NOTES

1. PIPING, CLEANOUT CONFIGURATION, SIZE AND TYPE OF PIPING MATERIAL AS PER CITY OR SANITARY DISTRICT. INSPECTION BY SVNRF PRIOR TO BACKFILLING IS REQUIRED.
2. WIDTH OF TROUGH IN THE MANHOLE MUST BE THE SAME SIZE AS THE INLET PIPE INTO MANHOLE. DEPTH OF TROUGH MUST BE THE SAME AS 1/2 OF INLET PIPE DIAMETER.
3. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
4. REINFORCEMENT STEEL SHALL BE ASTM A615 GRADE 60.
5. THE CONCRETE COVER OVER REINFORCEMENT STEEL SHALL BE A MINIMUM OF 1-1/2" INCHES.
6. THE STRUCTURE SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF UTAH.
7. THE STRUCTURE SHALL BE DESIGNED FOR THE FOLLOWING LOADING CONFIGURATION:
   A) WALLS DESIGNED FOR A SATURATED EQUIVALENT FLUID AT-REST SOIL PRESSURE OF 90 PCF PLUS TRUCK SURCHARGES.
   B) TRUCK LOADING USING AN AASHTO H-20 TRUCK LOAD.
8. MANHOLES OVER 4 FEET IN DEPTH WILL HAVE STAINLESS OR PLASTIC STEPS.
9. ALL MANHOLES MUST HAVE ROUND NOTCHED COVERS WITH PICK HOLE FOR REMOVAL.
10. FOR NEW CONSTRUCTION, BOTTOM OF INLET PIPE INTO MANHOLE MUST BE AT LEAST 3 INCHES ABOVE THE BOTTOM OF THE TROUGH THROUGH THE MANHOLE.

SAMPLING MANHOLE

NOT TO SCALE — 3 / C402



PLAN VIEW

NOTES

1. PIPING CLEANOUT CONFIGURATION, SIZE AND TYPE OF PIPING MATERIAL AS PER CITY OR SANITARY DISTRICT. INSPECTION BY SVNRF PRIOR TO BACKFILLING IS REQUIRED.
2. INTERCEPTOR PIPING AND OTHER ASSOCIATED PIPING CHANGES THAT ARE NECESSARY TO INSTALL INTERCEPTOR MUST BE IN ACCORDANCE WITH LOCAL REGULATIONS.
3. INTERCEPTOR MUST BE PROPERLY VENTED IN ACCORDANCE WITH UNIFORM PLUMBING CODE STANDARDS.
4. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
5. REINFORCEMENT STEEL SHALL BE ASTM A615 GRADE 60.
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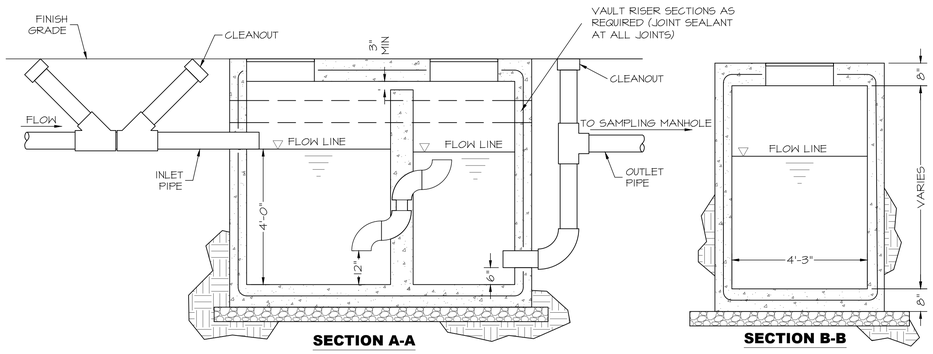
   B) TRUCK LOADING USING AN AASHTO H-20 TRUCK LOAD.
9. MANWAY FRAME AND COVER SHALL BE A TRAFFIC TYPE CASTING FOR H-20 TRUCK LOAD.
10. THE INLET PIPE SHALL BE AT AN ELEVATION 1 INCH HIGHER THAN THE OUTLET PIPE.
11. WHERE THE SEWER LINE ALREADY EXISTS, THE SEWER INVERT INTO AND OUT OF THE INTERCEPTOR SHALL BE 4'-0" ABOVE THE INTERCEPTOR FLOOR.
12. THE BAFFLE IN THE INTERCEPTOR SHALL BE WITHIN 3 INCHES OF THE CEILING.
13. COVERS SHALL BE CIRCULAR AND SOLID.
14. SANITARY WASTE FROM TOILETS MUST NOT BE PLUMBED THROUGH THE INTERCEPTOR.
15. INTERCEPTOR MUST BE LOCATED IN SUCH A MANNER THAT IT IS READILY ACCESSIBLE FOR CLEANING.



SECTION A-A **SECTION B-B**

GREASE INTERCEPTOR

NOT TO SCALE — 4 / C402

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EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER — 07/25/2025 — No. 375255 — JOSHUA R. JENSEN — STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

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1	7/25/2025 EMC REVIEW 1

UTILITY DETAILS

SHEET NUMBER: C402

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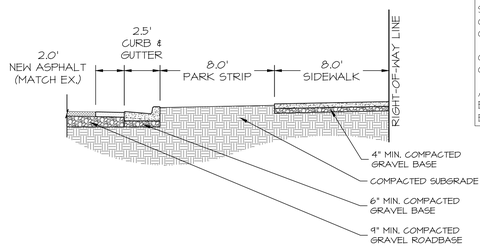


NOTES:

SIDEWALKS SHALL HAVE A THICKNESS OF 4" MIN. NON-REINFORCED PORTLAND CEMENT CONCRETE.

CURB & GUTTER SHALL BE CONSTRUCTED PER DETAIL 6/C301.

ASPHALT THICKNESS SHALL MATCH EXISTING ASPHALT ON POLE CANYON BOULEVARD (4" MIN.).

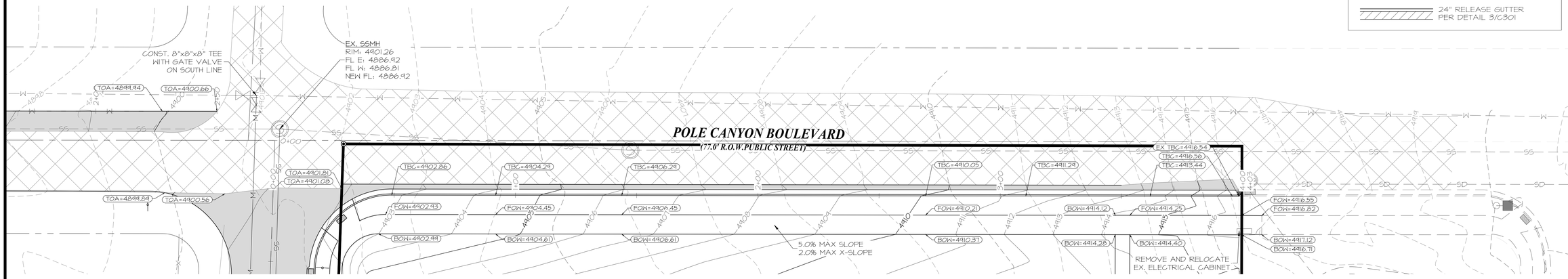
POLE CANYON BLVD. IMPROVEMENTS

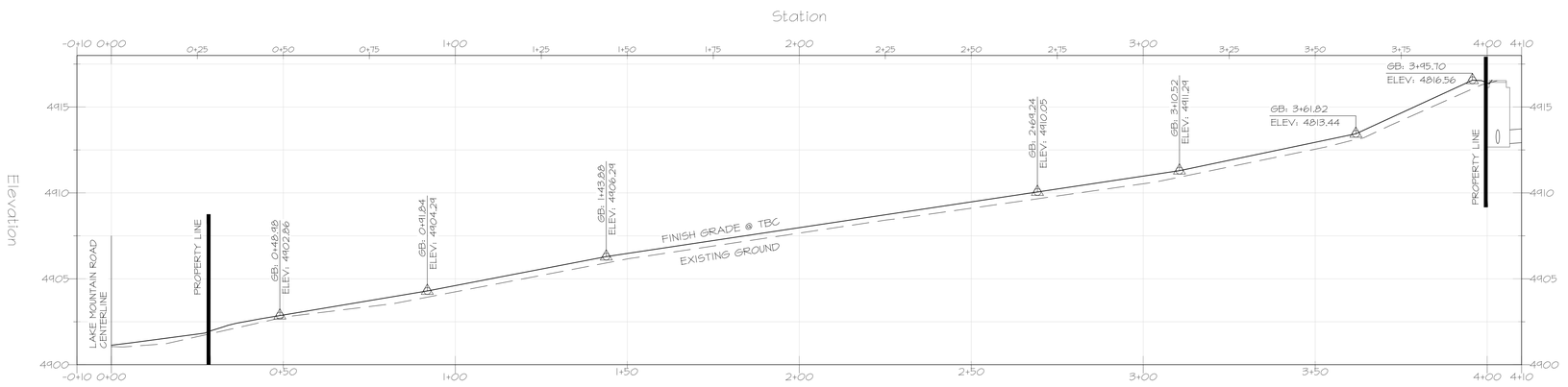
SCALE: 1"=5' — 1/C500

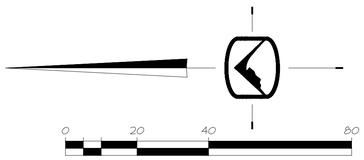
LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- CENTERLINE
- EASEMENT LINE
- SETBACK LINE
- IRR — NEW IRRIGATION LINE
- SD — NEW STORM DRAIN
- SS — NEW SANITARY SEWER
- SW — NEW SECONDARY WATERLINE
- W — NEW CULINARY WATERLINE
- IRR — EX. IRRIGATION LINE
- OHP — EX. OVERHEAD POWER LINE
- SD — EX. STORM DRAIN
- SS — EX. SANITARY SEWER
- SW — EX. SECONDARY WATERLINE
- T — EX. TELEPHONE LINE
- CTV — EX. CABLE TV LINE
- G — EX. GAS LINE
- W — EX. CULINARY WATERLINE
- NEW FENCE PER PLAN
- EX. FENCE PER PLAN
- SECTION CORNER
- MONUMENT
- CONTROL POINT
- 4250 — EG CONTOUR MINOR
- 4250 — EG CONTOUR MAJOR
- 4250 — FG CONTOUR MINOR
- 4250 — FG CONTOUR MAJOR
- NEW ASPHALT PER DETAIL 1/C301
- EXISTING ASPHALT
- FIRE TURNAROUND & ACCESS
- EXISTING CURB & GUTTER
- 24" HIGH BACK CURB PER DETAIL 2/C301
- 24" RELEASE GUTTER PER DETAIL 3/C301







HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

POLE CANYON BLVD EAST IMPROVEMENT PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

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EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER — 07/25/2025 — No. 375250 — JOSHUA R. JENSEN — STATE OF UTAH

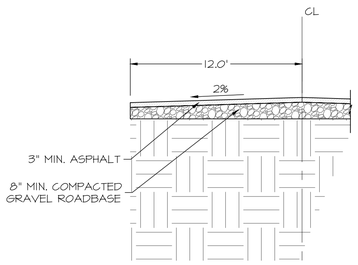
DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.
⚠	7/25/2025 EMC REVIEW 1

POLE CANYON BLVD EAST IMPROVEMENT PLAN

SHEET NUMBER: C500

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.



POLE CANYON BLVD. ROAD IMPROVEMENTS

SCALE: 1"=5'

1 / C501

LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- CENTERLINE
- EASEMENT LINE
- SETBACK LINE
- NEW IRRIGATION LINE
- NEW STORM DRAIN
- NEW SANITARY SEWER
- NEW SECONDARY WATERLINE
- NEW CULINARY WATERLINE
- EX. IRRIGATION LINE
- EX. OVERHEAD POWER LINE
- EX. STORM DRAIN
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- MONUMENT
- CONTROL POINT
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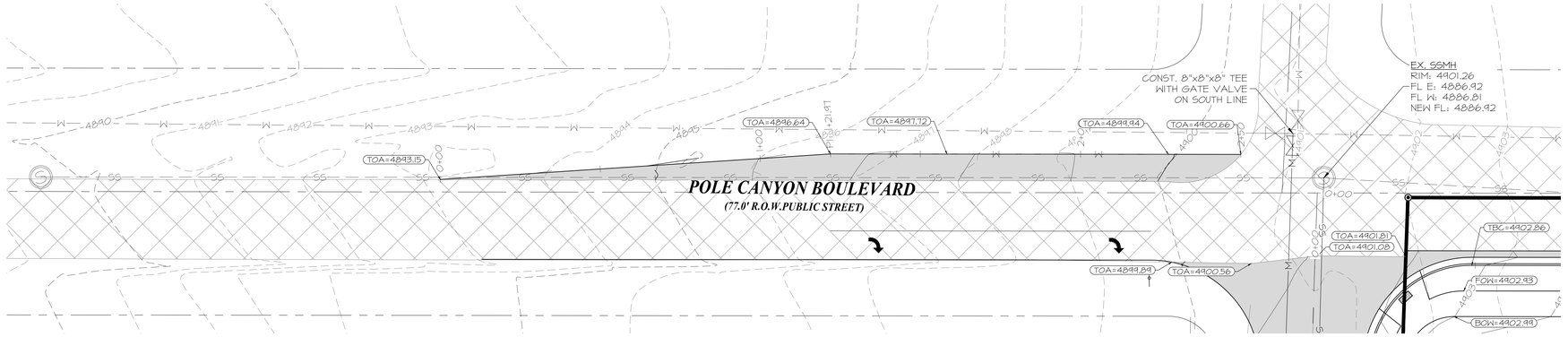
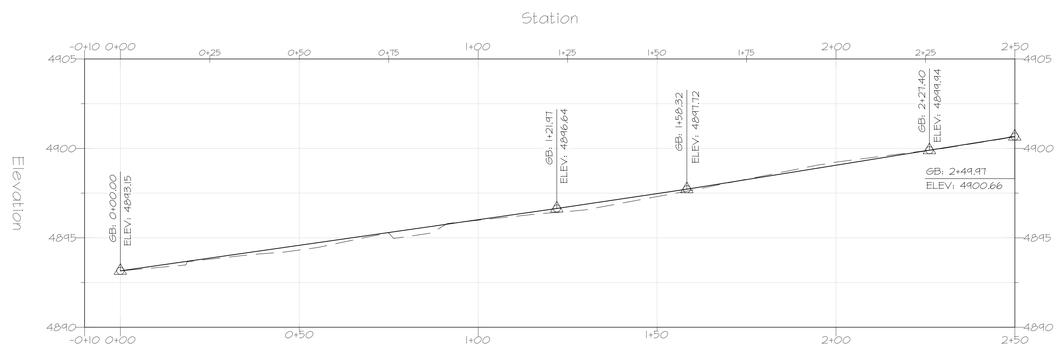
- EG CONTOUR MAJOR
- FG CONTOUR MINOR
- FG CONTOUR MAJOR
- NEW ASPHALT PER DETAIL 1/C301
- EXISTING ASPHALT
- FIRE TURNAROUND & ACCESS
- EXISTING CURB & GUTTER
- 24" HIGH BACK CURB PER DETAIL 2/C301
- 24" RELEASE GUTTER PER DETAIL 3/C301





0 20 40 80

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

POLE CANYON BLVD WEST IMPROVEMENT PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

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SEAL: LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 375250 JOSHUA R. JENSEN STATE OF UTAH

DATE: 07/25/2025
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MANGER: J.R.J.

REVISIONS

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1	7/25/2025 EMC REVIEW 1

POLE CANYON BLVD WEST IMPROVEMENT PLAN

SHEET NUMBER: C501

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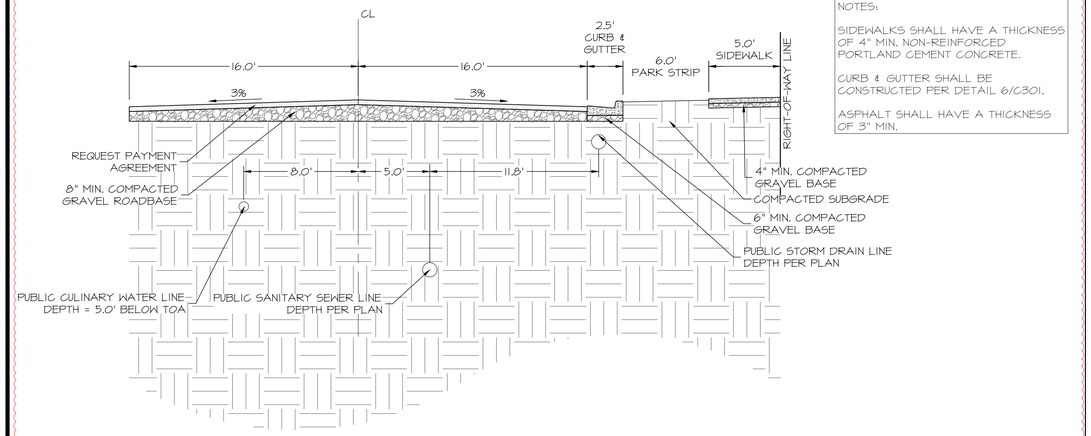

NOTES:

SIDEWALKS SHALL HAVE A THICKNESS OF 4" MIN. NON-REINFORCED PORTLAND CEMENT CONCRETE.

CURB & GUTTER SHALL BE CONSTRUCTED PER DETAIL 6/C301.

ASPHALT SHALL HAVE A THICKNESS OF 3" MIN.

LAKE MOUNTAIN ROAD IMPROVEMENTS

SCALE: 1"=5' — 1 / C501

LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- CENTERLINE
- EASEMENT LINE
- SETBACK LINE
- IRR — NEW IRRIGATION LINE
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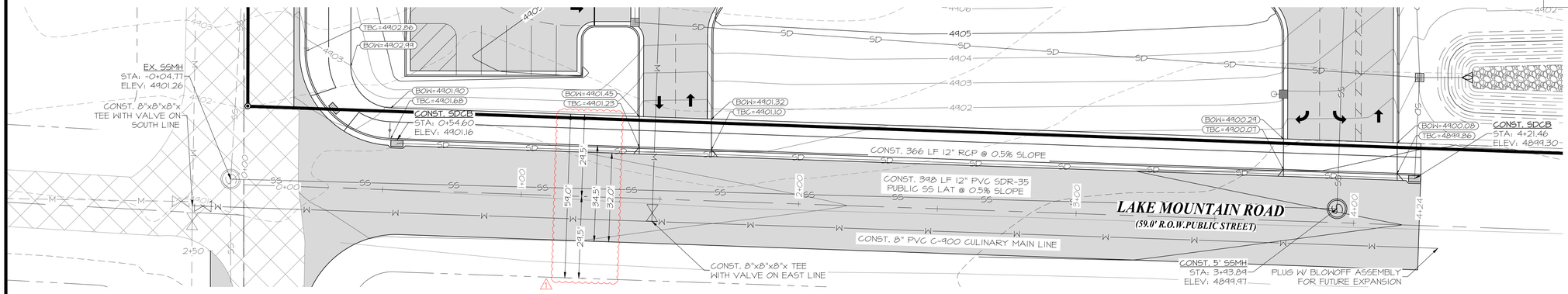
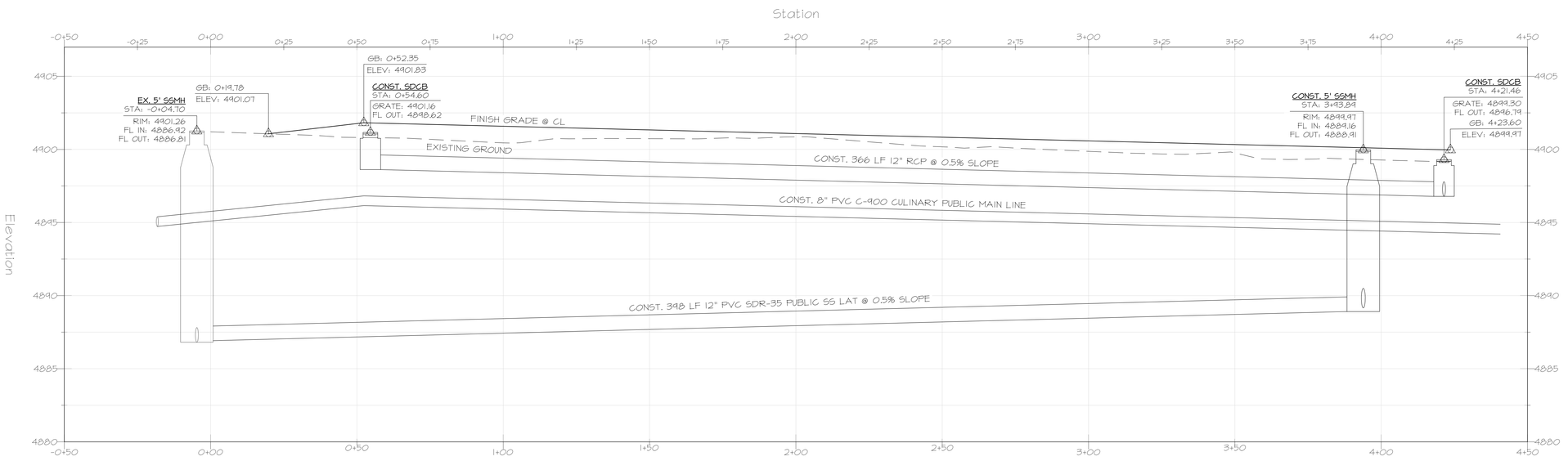
0 20 40 80

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'





LAKE MOUNTAIN ROAD IMPROVEMENT PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

SILVERPEAK ENGINEERING
177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
PHONE: (801) 499-5054
STRUCTURAL CIVIL SURVEY WWW.SILVERPEAKENG.COM

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

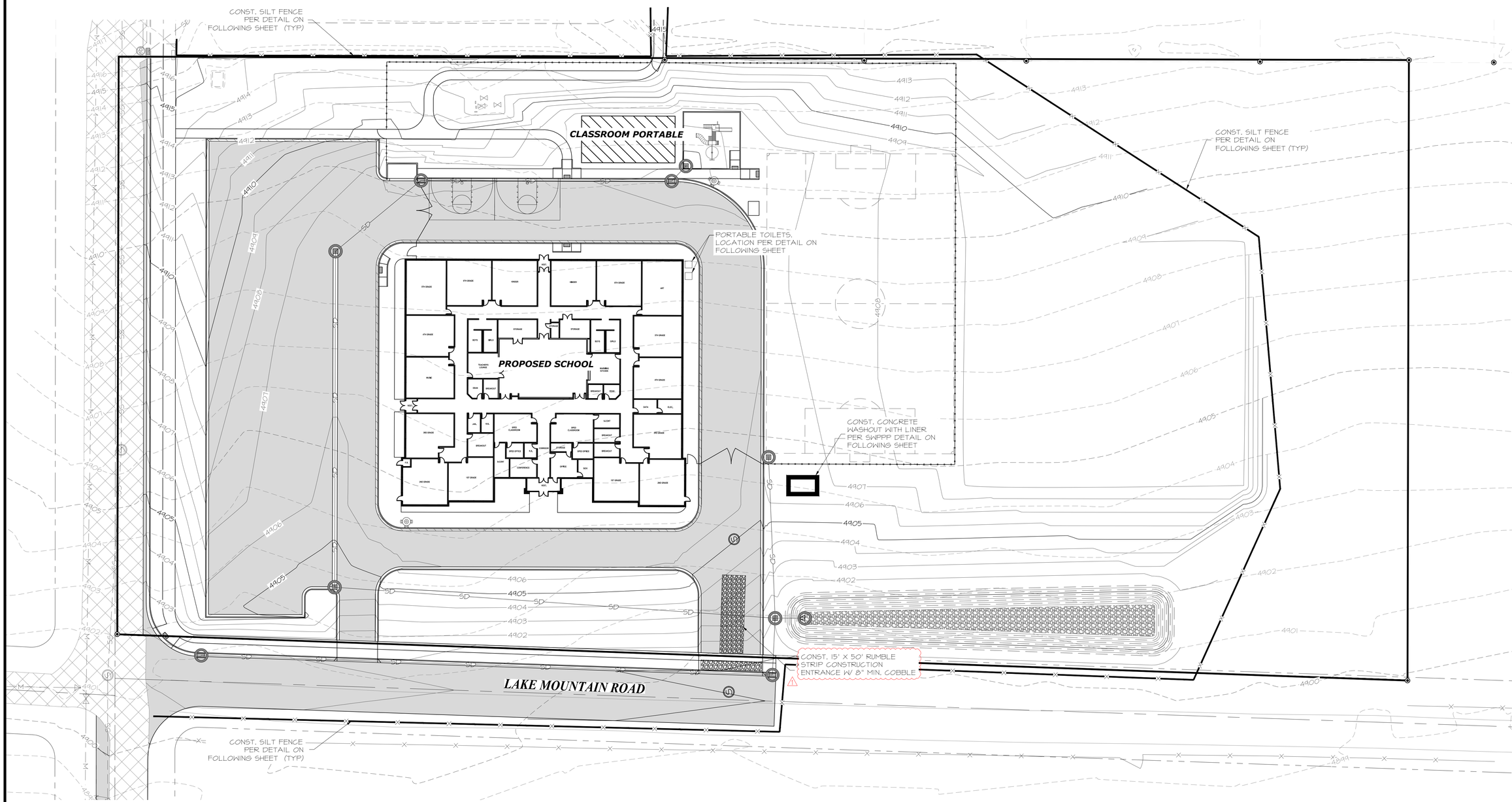
SEAL: LICENSED PROFESSIONAL ENGINEER — 07/25/2025 — No. 375250 — JOSHUA R. JENSEN — STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.
⚠	7/25/2025 EMC REVIEW 1

LAKE MOUNTAIN RD IMPROVEMENT PLAN

SHEET NUMBER: C502



LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- SD — NEW STORM DRAIN
- SD — EX. STORM DRAIN
- 4250 — EG CONTOUR MINOR
- 4250 — EG CONTOUR MAJOR
- 4250 — FG CONTOUR MINOR
- 4250 — FG CONTOUR MAJOR
- NEW ASPHALT PER X-SECTION
- EXISTING ASPHALT
- EXISTING CURB & GUTTER
- CONST. CURB & GUTTER PER X-SECTION
- X — CONST. SILT FENCE
- SD INLET PROTECTION

0 30 60 120

HORIZONTAL SCALE: 1"=30'

EROSION CONTROL PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

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JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 373250 JOSHUA R. JENSEN STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS

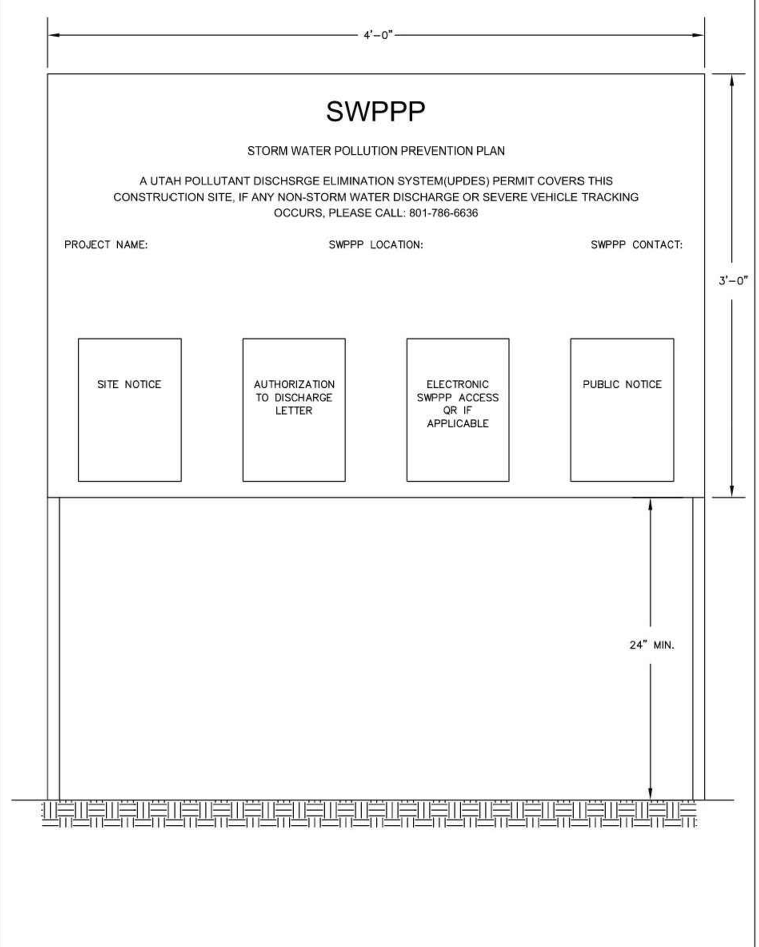
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

EROSION CONTROL PLAN

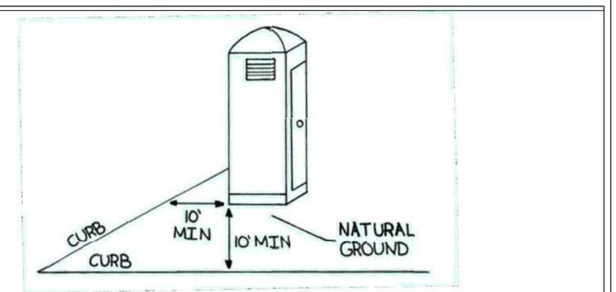
SHEET NUMBER: C600

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

JOHN HANCOCK - WEST CAMPUS



DRAWN RSB REVISED APRIL 2024 DATE MAY 2022 SCALE VARIES	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR 1 ACRE OR LARGE RESIDENCE AND ALL COMMERCIAL SWPPP SIGN	DRAWING NO. 21



APPLICATION
- Provide temporary sanitary facilities when permanent facilities are too far from activities or are unavailable.

INSTALLATION/USE PROCEDURE
- Locate portable toilets away from waters of the state, and at least 10 feet from any storm water conveyance, inlet, curb and gutter, or conduit to a waterway.
- Wherever possible, locate portable toilets upon natural ground and not on impervious surfaces such as asphalt, concrete, or similar
- Prepare a level surface and provide clear access to the toilet(s) for servicing and for on-site personnel
- Secure portable toilets to prevent tipping

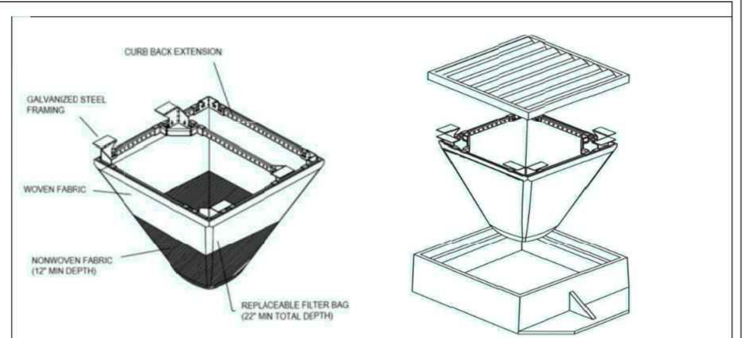
ALTERNATIVE DESIGN
- If it is not possible to locate toilets away from waters of the state, storm water conveyances, or paved surfaces, evaluate the need for additional controls such as secondary containment, additional surface preparation, or berms and implement as appropriate

MAINTENANCE
- Portable toilets should be maintained in good working order by licensed service
- Portable toilets should be inspected daily to detect any leaks.
- Damaged toilets must be repaired/replaced immediately
- All waste must be deposited in the sanitary sewer system for treatment with appropriate agency approval.

PERFORMANCE
- Portable toilets must be placed, secured, and maintained in such a way that sanitary waste is contained without leaks.
- Portable toilets must be placed, secured, and maintained in such a way that in the event of a spill or leak, sanitary waste would not enter any waters of the state, storm water conveyance, inlet, curb and gutter, or conduit to a waterway.

GENERAL
- The operator is responsible for selecting effective BMPs.

DRAWN RSB REVISED __ DATE NOV. 2024 SCALE VARIES	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR SWPPP PORTABLE TOILET	DRAWING NO. 29



APPLICATION
- As per Eagle Mountain City code 15.50.070, inlet protection must meet or exceed ASTM D8057.
- Use inlet protection methods to trap sediment and debris from runoff before it enters the stormwater system.
- Ideal for areas near storm drains, curb inlets, and other drainage structures.
- Not intended for high-flow areas without additional support measures.

SUBMITTAL AND OPERATION PROCEDURE
- Submit manufactures detail to the oversight authority and attach to this detail.
- Attached manufacturer installation and maintenance literature.
- Ensure the devices are securely fastened and properly positioned to maximize effectiveness.
- Regularly inspect and maintain the devices to ensure they are functioning correctly.
- Use appropriate types of inlet protection based on site-specific conditions.
- Do not install drop inlet systems without overflows in sag locations where hydroplaning is a risk.
- Install inlet protection measures that remove sediment from discharges prior to entry into any storm drain inlet that carries storm water flow from your site to surface water of the state, provided you have authority to access the storm drain inlet.
- Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same business day in which it is found

ALTERNATIVE DESIGN
- Alternative inlet protection devices may be used if they demonstrate equal or better performance to ASTM D8057.
- Submit alternatives to the oversight authority for approval.
- Document any alternative designs with detailed installation procedures and maintenance requirements.

MAINTENANCE
- Inspect inlet protection devices regularly, especially after storm events.
- Remove accumulated sediment and debris as needed to maintain effectiveness.
- Repair or replace damaged inlet protection devices prior to the next wet condition risk.
- Ensure a clear area around inlet protection devices to facilitate inspections and maintenance.

DRAWN RSB REVISED __ DATE NOV. 2024 SCALE VARIES	EAGLE MOUNTAIN CITY	STANDARD DETAILS FOR SWPPP INLET PROTECTION	DRAWING NO. 30

CONSTRUCTION & BMP SEQUENCING

BMP INSPECTION AND MAINTENANCE SHALL BEGIN WITH THE INSTALLATION OF THE FIRST BMP AND CONTINUE UNTIL THE LAST BMP (REVEGETATION) HAS BEEN COMPLETED.

CATCH BASIN PROTECTION

1 CATCH BASIN PROTECTION PER DETAIL LABELED "CURLEX LOG" AND/OR "FABRIC UNDER GRATE" SHALL BE INSTALLED UPON COMPLETION OF STORM DRAIN CONSTRUCTION.

2 FOR CATCH BASINS LOCATED IN CURB AND GUTTER:
- A "CURLEX LOG" SHALL REMAIN IN PLACE UNTIL CURB AND GUTTER IS CONSTRUCTED.
- B CATCH BASIN PROTECTION PER DETAIL LABELED "FABRIC UNDER GRATE" SHALL BE INSTALLED UPON COMPLETION OF CURB AND GUTTER CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL FINISH GRADING IS COMPLETED.

3 FOR CATCH BASINS LOCATED IN LANDSCAPE AREAS:
- A "CURLEX LOG" SHALL REMAIN IN PLACE UNTIL SITE GRADING OCCURS.
- B CATCH BASIN PROTECTION PER DETAIL LABELED "CURLEX LOG" AND/OR "FABRIC UNDER GRATE" SHALL BE INSTALLED UPON COMPLETION OF SITE GRADING, AND SHALL REMAIN IN PLACE UNTIL ALL GRADING & LANDSCAPING IS COMPLETED.

CONCRETE WASTE MANAGEMENT

1 A CONCRETE WASTE MANAGEMENT FACILITY SHALL BE CONSTRUCTED PRIOR TO POURING ANY CONCRETE ON THE SITE, AND SHALL REMAIN IN PLACE UNTIL THE LAST CONCRETE POUR HAS BEEN COMPLETED.

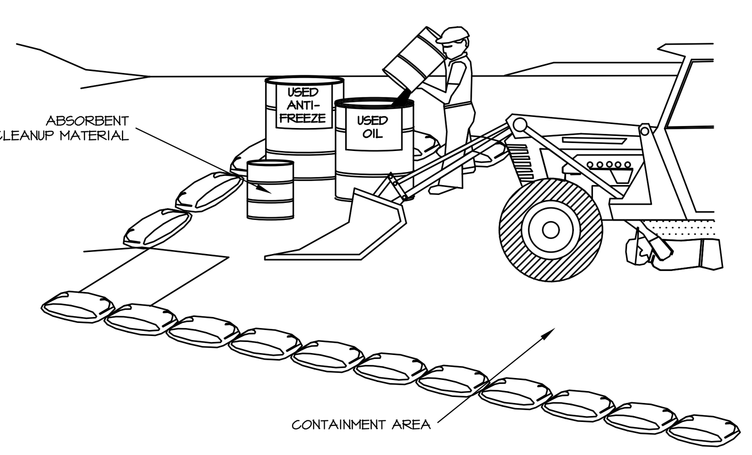
2 CONTRACTOR IS TO REMOVE THE CONCRETE WASTE MANAGEMENT FACILITY BY LEGALLY REMOVING AND DISPOSING OF WASTE CONCRETE AND, IF NECESSARY, ANY NON-SOIL BERM MATERIALS.

REGEVETATION

1 SEEDING AND PLANTING OF THE SITE PER THE LANDSCAPE PLAN SHALL OCCUR WITHIN 14 DAYS OF COMPLETION OF THE FINISH GRADING, IF SAID 14 DAYS OCCUR BETWEEN APRIL 15 AND SEPTEMBER 15. OTHERWISE, SEEDING AND PLANTING SHALL BEGIN APRIL 15.

2 PLANTING EFFORTS SHALL BE COMPLETED WITHIN 15 DAYS.

3 SEEDING AND PLANTING SHALL BE CONSIDERED COMPLETE WHEN 70% OF PLANTINGS ARE ESTABLISHED.



EQUIPMENT MAINTENANCE/REPAIR

NOTES:

1. LEAKING VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED ON-SITE. EQUIPMENT AND VEHICLES SHALL BE INSPECTED FREQUENTLY FOR LEAKS AND SHALL BE REPAIRED IMMEDIATELY. CLEAN UP SPILLS AND LEAKS PROMPTLY WITH ABSORBENT MATERIALS; DO NOT FLUSH WITH WATER.

2. VEHICLES AND EQUIPMENT SHALL BE MAINTAINED, AND REPAIRED ON-SITE ONLY IN DESIGNATED AREAS. PREVENT RUN-ON AND RUN-OFF FROM DESIGNATED AREAS.

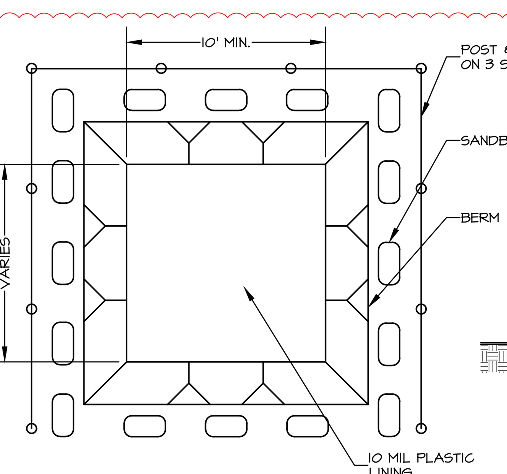
3. CONTAINMENT DEVICES SHALL BE PROVIDED AND AREAS SHALL BE COVERED IF NECESSARY.

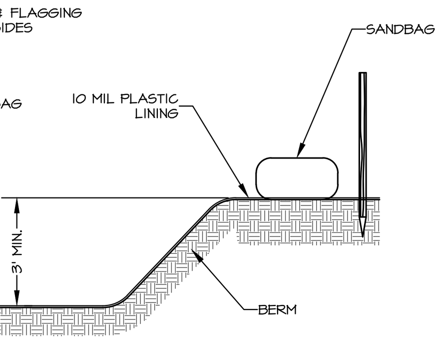
4. DESIGNATE ON-SITE VEHICLE AND EQUIPMENT MAINTENANCE AREAS, AWAY FROM STORM DRAIN INLETS AND WATERCOURSES.

5. ALWAYS USE SECONDARY CONTAINMENT, SUCH AS A DRAIN PAN OR DROP CLOTH TO CATCH SPILLS AND LEAKS WHEN REMOVING OR CHANGING FLUIDS. LEGALLY DISPOSE OF USED OILS, FLUIDS AND LUBRICANTS.

6. PROVIDE SPILL CONTAINMENT DIKES OR SECONDARY CONTAINMENT AROUND STORED OIL, FUEL, AND CHEMICAL DRUMS.

7. MAINTAIN AN ADEQUATE SUPPLY OF ABSORBENT SPILL CLEANUP MATERIALS IN DESIGNATED AREAS.





SECTION 1

CONCRETE WASHOUT DETAIL

APPLICATION
- WASHOUT MUST MEET EPA CGP REQUIREMENTS.

OPERATION PROCEDURES
- WASHOUT FACILITY SHALL BE WATERTIGHT AND IMPERMEABLE.
- WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
- SIGN SHALL BE INSTALLED AT WASHOUT LOCATION
- LOCATE WASHOUT FACILITIES A MINIMUM OF 50 FEET FROM SENSITIVE AREAS SUCH AS STORM DRAINS, OPEN DITCHES, WATER BODIES, WETLANDS, OR WHERE AN INFILTRATION FEATURE WILL BE INSTALLED.
- KEEP WASHOUT FACILITIES AWAY FROM OTHER CONSTRUCTION TRAFFIC AND ACCESS AREAS TO REDUCE THE LIKELIHOOD OF ACCIDENTAL DAMAGE, OR TRACKING.

MAINTENANCE
- INSPECT AND VERIFY THAT CONCRETE WASHOUT AREAS ARE IN PLACE PRIOR TO THE COMMENCEMENT OF CONCRETE WORK.
- WASHOUTS MUST BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH ONE FOOT OF FREEBOARD.
- REMOVE WASTE MATERIALS ONCE WASHOUT FACILITIES REACH 70% CAPACITY.
- DISPOSE ALL MATERIALS IN CONFORMANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
- INSPECT WASHOUT FACILITIES WEEKLY.
- WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED, HARDENED CONCRETE AND CONTAINMENT SYSTEM SHALL BE REMOVED AND DISPOSED OF AT A LICENSED WASTE FACILITY. ATTACH INFORMATION OF DISPOSAL FACILITY.
- GROUND DISTURBANCES CAUSED BY THE REMOVAL OF CONCRETE WASHOUT AREAS SHALL BE BACKFILLED, REPAIRED, AND STABILIZED.

1. THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WAS DEVELOPED AT THE REQUEST OF THE OWNER FOR THE CONSTRUCTION OF COMMERCIAL CONSTRUCTION IN EAGLE MOUNTAIN CITY, EAGLE MOUNTAIN COUNTY, STATE OF UTAH. THIS PLAN IDENTIFIES POTENTIAL SOURCES OF POLLUTANTS OF STORM WATER, PRESENTS POLLUTION CONTROL MEASURES, AND ASSISTS IN INSURING IMPLEMENTATION AND MAINTENANCE OF THE BEST MANAGEMENT PRACTICES (BMP'S) INDICATED HEREIN.

2. A NOTICE OF INTENT SHALL BE FILED WITH THE STATE OF UTAH DIVISION OF WATER QUALITY BY THE OWNER SO THAT THIS CONSTRUCTION PROJECT MAY BE COVERED UNDER THE STATE GENERAL PERMIT. THE PERMIT IS UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) GENERAL PERMIT (NO. UTR 300000) FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. PERMIT FORMS ARE AVAILABLE FOR DOWNLOAD FROM THE DEPARTMENT OF ENVIRONMENTAL QUALITY AT WWW.WATERQUALITY.UTAH.GOV/UPDES/SWCON02.PDF

3. IN THE EVENT OF A CHANGE IN OWNERSHIP, A NEW NOTICE OF INTENT SHALL BE FILED WITH THE DIVISION OF WATER QUALITY.

4. IN THE EVENT OF A RELEASE OF A REPORTABLE QUANTITY OF A POLLUTANT, THE CONTRACTOR SHALL ADVISE THE OWNER TO NOTIFY THE UTAH RESPONSE CENTER, EAGLE MOUNTAIN CITY, AND SILVERPEAK ENGINEERING IF NECESSARY, THIS SWPPP SHOULD BE REVISED TO REFLECT THE CHANGE IN CONDITIONS OF THE CONSTRUCTION ACTIVITY. A REPORTABLE QUANTITY IS ESTABLISHED BY 40 CODE OF FEDERAL REGULATIONS (CFR) 117.3 OR 40 CFR 302.4.

5. ALL CONTRACTORS AND THEIR PERSONNEL WHOSE WORK CAN CONTRIBUTE TO OR CAUSE POLLUTION OF STORM WATER SHALL BE MADE FAMILIAR WITH THIS SWPPP PLAN. ADEQUATE TRAINING FOR IMPLEMENTATION OF THE MEASURES PRESENTED HEREIN SHALL BE PROVIDED TO THE CONTRACTORS AND THEIR PERSONNEL. ALL CONTRACTORS AND SUBCONTRACTORS, EVEN ON RESIDENTIAL CONSTRUCTION WITH DISTURBANCE AREAS LESS THAN ONE ACRE, SHALL ABIDE BY THIS SWPPP.

6. CHANGES IN CONSTRUCTION OR IN CONDITIONS WHICH ARE NOT COVERED BY THIS SWPPP SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER, SKYLAND INVESTMENTS AND DEVELOPMENT AND SILVERPEAK ENGINEERING IF NECESSARY, THIS SWPPP WILL BE REVISED TO REFLECT THE CHANGE IN CONSTRUCTION OR IN CONDITIONS.

7. ALL PREVENTION AND CLEAN UP MEASURES SHALL BE CONDUCTED IN ACCORDANCE WITH EAGLE MOUNTAIN CITY ORDINANCES, AS WELL AS STATE AND FEDERAL REGULATIONS. WASTE MATERIALS SHOULD BE DISPOSED OF IN A LEGAL MANNER. ALL DISCHARGERS OF STORM WATER MUST COMPLY WITH THE LAWFUL REQUIREMENTS OF EAGLE MOUNTAIN CITY REGARDING THE DISCHARGES OF STORM WATER TO STORM DRAINS.

8. THIS SWPPP DOES NOT COVER THE REMOVAL OF HAZARDOUS OR TOXIC WASTE. IN THE EVENT OF A DISCHARGE OR RELEASE OF A REPORTABLE QUANTITY OF TOXIC WASTE, WORK SHALL BE STOPPED UNTIL THE SPILL CAN BE ASSESSED AND A MITIGATION REPORT PREPARED BY A QUALIFIED ENVIRONMENTAL CONSULTANT, AND IF NECESSARY, REVIEWED BY EAGLE MOUNTAIN CITY AND ANY OTHER AGENCY HAVING JURISDICTION.

9. THIS SWPPP SHALL BE MADE AVAILABLE TO THE PUBLIC UNDER SECTION 308(B) OF THE CLEAN WATER ACT. UPON REQUEST BY MEMBERS OF THE PUBLIC, THE DISCHARGER SHALL MAKE AVAILABLE FOR REVIEW A COPY OF THIS SWPPP EITHER TO THE DIVISION OF WATER QUALITY OR DIRECTLY TO THE REQUESTER. THIS SWPPP MUST BE KEPT ON SITE DURING CONSTRUCTION ACTIVITY AND MADE AVAILABLE UPON REQUEST OF A REPRESENTATIVE OF THE DIVISION OF WATER QUALITY AND/OR THE LOCAL AGENCY.

10. CONTACTS

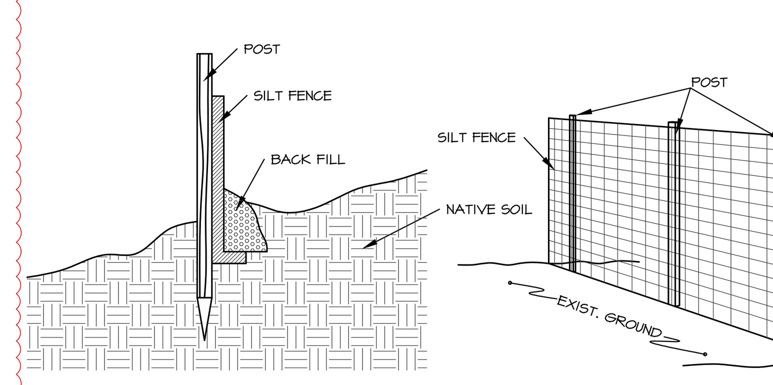
DEVELOPER	EAGLE MT SCHOOL DEVELEPMENT, LLC
ADDRESS	290 N. FLINT ST.
CITY, STATE	KAYSVILLE, UT
TELEPHONE	801-444-9378
CONTRACTOR/DISCHARGER	ONEWEST CONSTRUCTION
ADDRESS	290 N. FLINT ST.
CITY, STATE	KAYSVILLE, UT
TELEPHONE	801-560-0523
CIVIL ENGINEER	SILVERPEAK ENGINEERING
PROJECT MANAGER	JOSHUA R. JENSEN, P.E., S.E.
ADDRESS	177 E ANTELOPE DR, SUITE B
CITY, STATE	LAYTON, UT 84041
TELEPHONE	801-499-5054
EAGLE MOUNTAIN CITY	
ADDRESS	1650 STAGECOACH RUN
CITY, STATE	EAGLE MOUNTAIN, UT
TELEPHONE	801-789-6000
STATE OF UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY	288 NORTH 1460 WEST P.O. BOX 144870 SALT LAKE CITY, UTAH 84114-4870
U.S. EPA ENVIRONMENTAL PROTECTION AGENCY DENVER, COLORADO	REGION VIII 800-759-4372
ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460	202-475-9518

11. REFERENCES
- A. PLAN PER SILVERPEAK ENGINEERING,
- B. STORMWATER POLLUTION PREVENTION PLAN PREPARED BY SILVERPEAK ENGINEERING

12. THE PROPOSED CONSTRUCTION ACTIVITY IS THE CONSTRUCTION OF ONE BUILDING PLUS THE CONSTRUCTION OF ALL IMPROVEMENTS, UTILITIES, AND DRAINAGE AND GRADING FEATURES AS SHOWN ON THE PLANS.

13. THE ESTIMATED RUN-OFF COEFFICIENT AFTER COMPLETION IS 0.57

14. A NEGLIGIBLE AMOUNT OF WATER FLOWS ONTO THE SITE.



SILT FENCE DETAIL

STORM WATER POLLUTION PREVENTION PLAN SPECIFIC NOTES

A. PROHIBITION ON MOST NON-STORM WATER DISCHARGES

ONLY STORM WATER FROM THE PROJECT SITE SHALL BE ALLOWED TO FLOW INTO THE ON-SITE STORM DRAIN SYSTEM. CLEAN WATER FROM THE FLUSHING OF FIRE HYDRANTS, WATER MAINS, AND STORM DRAINS MAY BE DISCHARGED TO THE STORM DRAIN IF IT IS NOT ALLOWED TO COLLECT DIRT, DEBRIS, AND TRASH WHILE FLOWING TO A STORM DRAIN INLET.

B. POTENTIAL SOURCES OF STORM WATER POLLUTANTS

POTENTIAL STORM WATER POLLUTANTS INCLUDE SOIL SEDIMENT AND NUTRIENTS, OIL, GREASE, TOXIC POLLUTANTS, AND HEAVY METALS. SOURCES OF STORM WATER POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO SOIL EROSION BY WATER AND/OR WIND; CLEARING OF VEGETATION; GRADING; VEHICLE AND EQUIPMENT REFUELING AND MAINTENANCE; WASHING OF CONCRETE TRUCKS, MIXERS AND HANDLING EQUIPMENT; PAINTS, SOLVENTS AND ADHESIVES; AND LANDSCAPING WORK.

C. EROSION AND SEDIMENT CONTROLS

1. COVER EXPOSED STOCKPILES OF SOILS, CONSTRUCTION AND LANDSCAPING MATERIALS WITH HEAVY PLASTIC SHEETING.
2. IN LANDSCAPING AREAS WHERE THE VEGETATION HAS NOT ESTABLISHED GROWTH AND TAKEN HOLD, CONSTRUCT SANDBAG OR DIRT BERMS AROUND THEIR PERIMETER TO INSURE THAT WATER WILL BE CONTAINED INSIDE THE LANDSCAPING AREA AND THAT IT WILL NOT BE CONVEYED TO A STORM DRAIN INLET.
3. DISTURBED AREAS SHALL BE SEEDED BY THE THE DEVELOPER. SILT BARRIERS SHALL BE MAINTAINED BY THE DEVELOPER IN THE MEAN TIME. OR, THE DEVELOPER SHALL RE-SEED DISTURBED AREAS AS THEY SEE FIT AND REMOVE THE SEDIMENT CONTROLS.
4. THROUGHOUT CONSTRUCTION, CONTRACTOR SHALL DIVERT STORM WATER RUNOFF AROUND DISTURBED SOILS WITH BERMS OR DIRT SWALES.

D. OTHER CONTROLS

1. WASTE DISPOSAL
   - A. KEEP WASTE DISPOSAL CONTAINERS COVERED.
   - B. PROVIDE FOR THE WEEKLY (OR MORE FREQUENT, IF NECESSARY) DISPOSAL OF WASTE CONTAINERS.
   - C. PROVIDE CONTAINERS AT CONVENIENT LOCATIONS AROUND THE SITE.
2. SWEEPING OF SITE
   - A. PROVIDE DAILY, IF NECESSARY, SWEEPING BY HAND OR MECHANICAL MEANS TO KEEP THE PAVED AREAS OF THE SITE FREE OF DUST, DIRT, AND DEBRIS IF NECESSARY DURING PERIODS OF CONSTRUCTION.
   - B. DISPOSE OF ACCUMULATED DIRT IN WASTE CONTAINERS, OR HAUL IT OFF THE SITE TO A LANDFILL.
3. SANITARY/SEPTIC DISPOSAL

   PORTABLE TOILETS AND OTHER SANITARY FACILITIES SHALL BE SERVICED WEEKLY AND PUMPED CLEAN BY A WASTE DISPOSAL COMPANY. NO TOXIC OR HAZARDOUS WASTE SHALL BE DISPOSED OF IN A PORTABLE TOILET OR IN THE ON-SITE SANITARY SEWER. TOILETS SHALL BE ANCHORED AGAINST OVERTURNING.
4. SPILLS
   - A. STORE ADEQUATE ABSORBENT MATERIALS, RAGS, BROOMS, SHOVELS, AND WASTE CONTAINERS ON THE SITE TO CLEAN-UP SPILLS OF MATERIALS SUCH AS FUEL, PAINT, SOLVENTS, OR CLEANERS. CLEAN UP MINOR SPILLS IMMEDIATELY.
   - B. FOR REPORTABLE QUANTITY OF HAZARDOUS OR TOXIC SUBSTANCE, SECURE THE SERVICES OF QUALIFIED PERSONNEL FOR CLEAN-UP AND DISPOSAL.
5. CONTROL OF ALLOWABLE NON-STORM WATER DISCHARGES LANDSCAPING IRRIGATION, EROSION CONTROL MEASURES, PIPE FLUSHING AND TESTING, AND PAVEMENT WASHING ARE ALLOWED IF THEY CANNOT FEASIBLY BE ELIMINATED, COMPLY WITH THIS PLAN, DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF WATER QUALITY STANDARDS, AND ARE NOT REQUIRED TO BE PERMITTED BY THE LOCAL REGIONAL WATER QUALITY CONTROL BOARD.
6. VEHICLES AND EQUIPMENT
   - A. FIX LEAKS OF FUEL, OIL AND OTHER SUBSTANCES IMMEDIATELY.
   - B. PERFORM REFUELING AND SERVICE OF VEHICLES OR EQUIPMENT OFF-SITE WHEN POSSIBLE. IF REFUELING OR SERVICE OF EQUIPMENT IS PERFORMED ON-SITE, THEN PROVIDE AN IMPERVIOUS, CONTAINED AREA WHERE ANY SPILLS CAN BE CONTAINED WITHOUT FLOWING TO A STORM WATER INLET OR INTO THE GROUND.
   - C. USE DRIP PANS TO CATCH LEAKS AND SMALL SPILLS.
7. CONCRETE TRUCKS, MIXERS AND HANDLING EQUIPMENT
   - A. DO NOT DISPOSE OF WASHOUT FROM THE WASHING OF CONCRETE TRUCKS,MIXERS, AND HANDLING EQUIPMENT WHERE IT WILL FLOW INTO A STORM WATER INLET OR INTO A PUBLIC STREET.
   - B. PROVIDE A HOLDING TANK TO RECEIVE ANY WASHOUT FROM CONCRETE EQUIPMENT. DISPOSAL OF TANK CONTENTS SHALL BE CONDUCTED BY CONTRACTOR.
   - C. PROVIDE, DESIGNATE AND POST A SIGN MARKING A DESIGNATED AREA FOR WASHING ANY VEHICLES OR EQUIPMENT. DRAINAGE FROM THIS AREA SHOULD BE CONTAINED OR FLOW TO A HOLDING TANK.
8. LANDSCAPING OPERATIONS
   - A. USE ONLY THE MINIMUM AMOUNT OF LANDSCAPING FERTILIZES, NUTRIENTS, AND OTHER CHEMICALS THAT ARE NEEDED.
   - B. DO NOT OVER WATER FERTILIZED OR TREATED LANDSCAPE AREAS. MINIMIZE RUNOFF OF IRRIGATION WATER FROM LANDSCAPING.
   - C. DO NOT PLACE LANDSCAPING MATERIAL IN THE STREET ONCE PAVING IS COMPLETE.
9. STORM WATER INLETS

   CONTRACTOR SHALL PROVIDE STRAW FILLED BAGS OR SOCKS AROUND INLETS WITHIN 1000 FEET OF CONSTRUCTION AS BARRIERS TO PREVENT SEDIMENT ENTERING THE INLETS. TRAPPED SEDIMENT SHALL BE REMOVED FOLLOWING STORM EVENTS. BARRIERS SHALL BE REMOVED FOLLOWING COMPLETION OF CONSTRUCTION.

E. INSPECTION

1. REGULAR INTERVAL INSPECTION AND INSPECTION BEFORE AND AFTER STORMS
   - A. VISUALLY INSPECT THE SITE WEEKLY TO INSURE THAT STORM WATER INLETS ARE FREE OF DIRT AND DEBRIS.
   - B. BEFORE A STORM, INSPECT THE SITE TO INSURE THAT STORM WATER POLLUTION CONTROL MEASURES ARE IN PLACE.
   - C. AFTER A STORM, INSPECT ALL STORM WATER INLETS TO INSURE THAT THEY ARE CLEAR OF DIRT AND DEBRIS. CLEAN THOSE STORM WATER INLETS THAT ARE NOT CLEAR AND FREE OF DEBRIS.
   - D. THE DIVISION OF WATER QUALITY MAY REQUIRE THE DISCHARGER TO CONDUCT ADDITIONAL SITE INSPECTIONS, SUBMIT REPORTS AND CERTIFICATIONS, OR TO PERFORM SAMPLING AND ANALYSIS.
2. CONDUCT INSPECTIONS OF THE CONSTRUCTION SITE PRIOR TO ANTICIPATED STORM EVENTS AND AFTER ACTUAL STORM EVENTS, TO IDENTIFY AREAS CONTRIBUTING TO A STORM WATER DISCHARGE, TO EVALUATE WHETHER MEASURES TO REDUCE POLLUTANT LOADINGS IDENTIFIED IN THIS SWPPP ARE ADEQUATE, TO PROPERLY IMPLEMENT IN ACCORDANCE WITH THE TERMS OF THE GENERAL PERMIT, AND TO DETERMINE WHETHER ADDITIONAL CONTROL PRACTICES ARE NEEDED.
3. PREPARATION OF REPORTS AND RETENTION OF RECORDS
   - A. EACH DISCHARGER MUST CERTIFY ANNUALLY THAT ITS CONSTRUCTION ACTIVITY IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE GENERAL PERMIT AND THIS SWPPP. THIS CERTIFICATION MUST BE BASED ON THE SITE INSPECTIONS. THE FIRST CERTIFICATION MUST BE COMPLETED BY JULY 1, 2009, AND EACH JULY 1 THEREAFTER.
   - B. THE DISCHARGER IS REQUIRED TO RETAIN RECORDS OF ALL MONITORING INFORMATION, COPIES OF ALL REPORTS REQUIRED BY THIS GENERAL PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR CONSTRUCTION ACTIVITY FOR A PERIOD OF AT LEAST THREE YEARS. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE STATE. WITH THE EXCEPTION OF NONCOMPLIANCE REPORTING, DISCHARGERS ARE NOT REQUIRED TO SUBMIT THE RECORDS EXCEPT UPON SPECIFIC REQUEST BY THE STATE DEQ DIVISION OF WATER QUALITY.
   - C. DISCHARGERS WHO CANNOT CERTIFY COMPLIANCE MUST NOTIFY THE STATE DEQ DIVISION OF WATER QUALITY. THIS NOTIFICATION SHALL IDENTIFY THE TYPE OR TYPES OF NONCOMPLIANCE, DESCRIBE THE ACTIONS NECESSARY TO ACHIEVE COMPLIANCE, AND INCLUDE A TIME SCHEDULE, SUBJECT TO THE MODIFICATIONS BY THE STATE DEQ DIVISION OF WATER QUALITY, INDICATING WHEN COMPLIANCE WILL BE ACHIEVED. NONCOMPLIANCE REPORTS MUST BE SUBMITTED WITHIN 30 DAYS OF THE IDENTIFICATION OF THE NONCOMPLIANCE.

F. MAINTENANCE OF CONTROLS

1. MAINTENANCE AND REPAIR ALL CONTROLS AND MEASURES INDICATED ON THIS PLAN SHALL BE MAINTAINED IN GOOD AND EFFECTIVE CONDITION. IF ANY CONTROLS OR MEASURES ARE DAMAGED OR REMOVED, THEY SHALL BE PROMPTLY REPAIRED OR RESTORED.
2. PLAN REVISIONS IF CONSTRUCTION ACTIVITY OR CONDITIONS CHANGE FROM THOSE SHOWN IN THIS PLAN, THEN THIS PLAN SHALL BE REVISED TO REFLECT THE CURRENT CONDITIONS.

G. FINAL STABILIZATION AND POST-CONSTRUCTION CONTROLS

1. AFTER CONSTRUCTION HAS BEEN COMPLETED, THE SITE SHALL BE SWEPT CLEAN, STORM WATER INLETS (GRATES AND BASINS) SHALL BE CLEANED, AND ALL WASTE AND LEFTOVER MATERIALS SHALL BE REMOVED FROM THE SITE.
2. ALL LANDSCAPING AND PLANTING AREAS SHALL BE WELL MAINTAINED TO PREVENT EROSION. AVOID OVER WATERING OF LANDSCAPING.
3. ALL PAVED AREAS SHALL BE SWEPT WEEKLY EITHER BY HAND OR BY MECHANICAL MEANS TO KEEP THE SITE CLEAR OF DIRT, DUST, AND DEBRIS.
4. WASTE MATERIALS ON-SITE SHALL BE STORED IN COVERED CONTAINERS WHICH ARE CLEANED OUT REGULARLY.
5. TESTING OF FIRE HYDRANTS ON-SITE SHALL NOT BE CONDUCTED UNTIL THE AREA WHERE THE WATER DISCHARGES HAS BEEN SWEPT CLEAN OF DIRT AND DEBRIS.
6. STORM DRAIN LINES SHALL BE CHECKED AND CLEANED ANNUALLY TO KEEP THEM CLEAN AND CLEAR OF DEBRIS.
7. ALL ON-SITE STORM WATER INLETS SHOULD BE CLEARLY MARKED "STORM WATER ONLY".

H. COMPLETION OF CONSTRUCTION ACTIVITIES AND NOTICE OF TERMINATION

WHEN CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED ON THIS SITE, THE OWNER SHALL FILE A LETTER WITH THE STATE DEQ DIVISION OF WATER QUALITY. THIS LETTER SHALL CERTIFY THAT THE CONSTRUCTION ACTIVITY HAS BEEN COMPLETED, THAT ALL ELEMENTS OF THE SWPPP HAVE BEEN IMPLEMENTED, THAT CONSTRUCTION AND EQUIPMENT MAINTENANCE WASTES HAVE BEEN DISPOSED OF PROPERLY, THAT THE SITE IS IN COMPLIANCE WITH ALL LOCAL STORM WATER REQUIREMENTS INCLUDING EROSION/SEDIMENT CONTROL REQUIREMENTS, POLICIES, AND GUIDELINES.

DEFINITIONS

1. "BEST MANAGEMENT PRACTICES" ("BMP'S") MEANS SCHEDULES OF ACTIVITIES, PROHIBITIONS OF PRACTICES, MAINTENANCE PROCEDURES, AND OTHER MANAGEMENT PRACTICES TO PREVENT OR REDUCE THE POLLUTION OF WATERS OF THE UNITED STATES. BMP'S ALSO INCLUDE TREATMENT REQUIREMENTS, OPERATING PROCEDURES, AND PRACTICES TO CONTROL SITE RUNOFF, SPILLAGE OR LEAKS, WASTE DISPOSAL, OR DRAINAGE FROM RAW MATERIAL STORAGE.
2. "CLEAN WATER ACT" ("CWA") MEANS THE FEDERAL WATER POLLUTION CONTROL ACT ENACTED BY PUBLIC LAW 92-500 AS AMENDED BY PUBLIC LAWS 95-217, 95-576, 96-483, AND 97-111; 33 USC 1251 ET SEQ.
3. "CONSTRUCTION SITE" IS THE LOCATION OF THE CONSTRUCTION ACTIVITY.
4. "NON-STORM WATER DISCHARGE" MEANS ANY DISCHARGE TO STORM DRAIN SYSTEMS THAT IS NOT COMPOSED ENTIRELY OF STORM WATER EXCEPT DISCHARGE PURSUANT TO AN NPDES PERMIT AND DISCHARGES RESULTING FROM FIRE FIGHTING ACTIVITIES.
5. "SIGNIFICANT MATERIALS" INCLUDES, BUT IS NOT LIMITED TO RAW MATERIALS; FUELS; MATERIALS SUCH AS SOLVENTS, DETERGENTS, AND PLASTIC PELLETS; FINISHED MATERIALS SUCH AS METALLIC PRODUCTS; RAW MATERIALS USED IN FOOD PROCESSING OR PRODUCTION HAZARDOUS SUBSTANCES DESIGNATED UNDER SECTION 101(14) OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERLCA); ANY CHEMICAL THE FACILITY IS REQUIRED TO REPORT PURSUANT TO SECTION 313 OF TITLE III OF SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA); FERTILIZERS; PESTICIDES; AND WASTE PRODUCTS SUCH AS ASHES, SLAG, AND SLUDGE THAT HAVE THE POTENTIAL TO BE RELEASED WITH STORM WATER DISCHARGES.
6. "SIGNIFICANT QUANTITIES" IS THE VOLUME, CONCENTRATIONS, OR MASS OF A POLLUTANT IN STORM WATER DISCHARGE THAT CAN CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE; ADVERSELY IMPACT HUMAN HEALTH OR THE ENVIRONMENT; AND CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY APPLICABLE WATER QUALITY STANDARDS FOR THE RECEIVING WATER.
7. "STORM WATER" MEANS STORM WATER RUNOFF, SNOW MELT RUNOFF, SURFACE RUNOFF AND DRAINAGE. IT EXCLUDES INFILTRATION AND RUNOFF FROM AGRICULTURAL LAND.
8. "POLLUTION" MEANS THE "MAN-MADE OR MAN-INDUCED ALTERATION OF THE CHEMICAL, PHYSICAL, BIOLOGICAL, AND RADIOLOGICAL INTEGRITY OF WATER" [CLEAN WATER ACT SECTION 502(19)]. POLLUTION ALSO MEANS "AN ALTERATION OF THE QUALITY OF THE WATERS OF THE STATE BY WASTE TO A DEGREE WHICH UNREASONABLY AFFECTS EITHER... THE WATERS FOR BENEFICIAL USES... OR FACILITIES WHICH SERVE THESE BENEFICIAL USES." [CALIFORNIA WATER CODE SECTION 13050(l)].
9. "CONTAMINATION" MEANS "AN IMPAIRMENT OF THE QUALITY OF THE WATERS OF THE STATE BY WASTE TO A DEGREE WHICH CREATES A HAZARD TO THE PUBLIC HEALTH THROUGH POISONING OR THROUGH THE SPREAD OF DISEASE...INCLUDING ANY EQUIVALENT EFFECT RESULTING FROM THE DISPOSAL OF WASTE, WHETHER OR NOT WATERS OF THE STATE ARE AFFECTED."
10. "NUISANCE" MEANS "ANYTHING WHICH MEETS ALL OF THE FOLLOWING REQUIREMENTS: (1) IS INJURIOUS TO HEALTH , OR IS INDECENT OR OFFENSIVE TO THE SENSES, OR AN OBSTRUCTION TO THE FREE USE OF PROPERTY, SO AS TO INTERFERE WITH THE COMFORTABLE ENJOYMENT OF LIFE AND PROPERTY; (2) AFFECTS AT THE SAME TIME AN ENTIRE COMMUNITY OR NEIGHBORHOOD, OR ANY CONSIDERABLE NUMBER OF PERSONS, ALTHOUGH THE EXTENT OF THE ANNOYANCE OR DAMAGE INFLICTED UPON INDIVIDUALS MAY BE UNEQUAL; (3) OCCURS DURING OR AS A RESULT OF THE TREATMENT OR DISPOSAL OF WASTES."
11. "LOCAL AGENCY" MEANS ANY AGENCY THAT IS INVOLVED WITH REVIEW, APPROVAL, OR OVERSIGHT OF THE CONSTRUCTION SITES' (a) CONSTRUCTION ACTIVITY, (b) EROSION AND SEDIMENT CONTROLS, (c) STORM WATER DISCHARGE.

SWPPP NOTES

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS
PRIOR TO COMMENCING
ANY CONSTRUCTION

177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
PHONE: (801) 499-5054
SILVERPEAK ENGINEERING
STRUCTURAL CIVIL SURVEY WWW.SILVERPEAKENG.COM

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL: LICENSED PROFESSIONAL ENGINEER 07/25/2025 No. 375250 JOSHUA R. JENSEN STATE OF UTAH

DATE: 07/25/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.
1	7/25/2025 EMC REVIEW 1

SWPPP NOTES

SHEET NUMBER: C601

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

To: Eagle Mountain City
Attn: Robert Hobbs
Re: John Hancock Academy WEST CAMPUS Site Plan Review
Location: Approx. 2570 N Lake Mountain Rd., Eagle Mountain City

Dear Robert,

Based on the review received dated 04/17/2025, the following changes have been made to the above-mentioned drawings. You will find an itemized list which addresses each comment individually. You will find the original comments followed by our response in bold.

Dwight Payne

1. Track out pad to be 15 wide, 50' long and 8" cobble.

1 Response: Track out pad updated on sheet C600 to CGP standard dimensions.

2. Detail needed for portable toilet.

2 Response: EMC's standard portable toilet detail added to plans. See sheet C601.

3. Inlet protection to meet or exceed ASTM D8057.

3 Response: Noted. EMC's standard inlet protection detail added to plans. See sheet C601.

4. Concrete washout meet CGP requirements.

4 Response: Updated detail for concrete washout has been added to sheet C601 with notes that correlate with CGP standards. Additional information for all BMPs can be found in the attached SWPPP manual.

5. Access EMC BMP manual from city website / Engineering / Environmental Compliance.

5 Response: Noted. City manual used when modifying SWPPP plans.

6. Submit SWPPP to be reviewed by EMC Environmental Compliance using CGP template.

6 Response: Noted. SWPPP manual is attached with this response.

M Bahr and Robert Ballif

7. C002- place updated list

7 Response: Please provide the updated list. Unable to find comprehensive general construction notes on EMC's website.

8. C200- Street/Stop Signs

8 Response: Callout added for city street signpost with stop sign. Details for these signs can be found on sheet C201.

9. C400- Show gate valve

9 Response: Gate valve is now called out and shown on sheet C400.

10. C400- Lake Mountain Road Size?
10 Response: Size of public sewer and water lines in Lake Mountain Road are now called out on sheet C400.

11. C400- SWR 5' from CL, WTR 8' from CL
11 Response: Sheet 400 is updated to show sewer and water lines placed correctly within Lake Mountain Road. Callouts to dimensions are included within the cross-section detail on sheet C501.

12. C400- With blowoff assembly
12 Response: Callouts to include a blowoff assembly to all water line plugs are added to sheet C400.

13. C400- 5' diameter manhole
13 Response: Callouts updated to install a 5' dia. manhole on public sewer line.

14. C401- Replace with updated details
14 Response: Applicable details have been replaced with Eagle Mountain City details.

15. C500- Show base and subbase for Pole Canyon Blvd. improvements
15 Response: Base and subbase shown on cross section detail for Pole Canyon Boulevard.

16. C501- Show base and subbase for Lake Mtn. Road improvements
16 Response: Base and subbase shown on cross section detail for Lake Mountain Road. This detail has also been updated to show improvements for a 59.0' Right-of-Way and correct locations of public sewer and water lines.

Transportation

17. The roads out there and the lack of a 2nd paved access roadway to/from the project. The existing school already has substantial traffic impacts and adding another school facility in the same area would increase those impacts. The city wants a traffic study.

17 Response: A traffic impact study prepared by Hales Engineering detailing the traffic impacts of the second school and our coordinated design to facilitate impacts is attached with this response. The site plan has been updated with traffic engineer's recommendations and sheets C210 and C501 has been included to detail the recommended right-turn lane on Pole Canyon Boulevard.

Public Works

18. Need to consider building out this section of Lake Mountain Road to facilitate flow of traffic. This entire intersection should be built out.

18 Response: Improvements along property frontage at the intersection are planned to be built with 16 feet of asphalt to future face of curb planned for the west side of Lake Mountain Road.

David Salazar

19. Local roads have ROW of 59'.

19 Response: The buildout shown on the plans for Lake Mountain Road has been updated to be the full 59' R.O.W. Updated cross section detail found on sheet C501. Also included with this response is a proposed legal description and exhibit for the public road dedication required.

If you should have any questions, please feel free to call.

Sincerely,

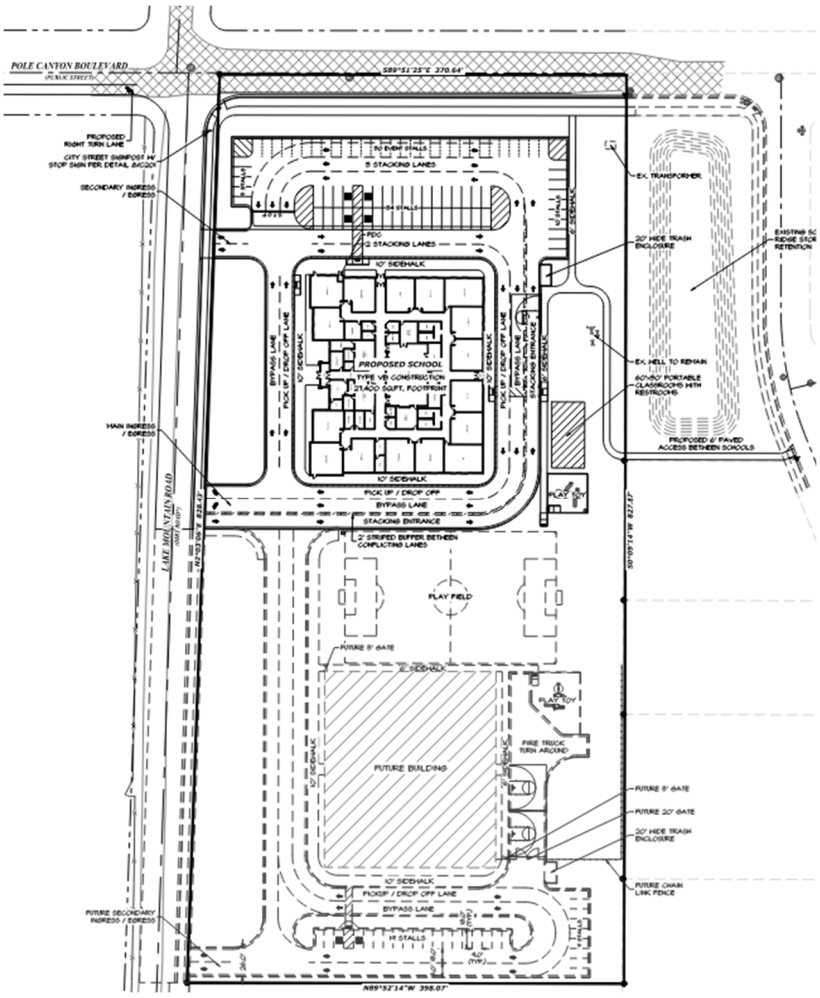
Branden Kitchen
Silverpeak Engineering

Reviewed By: Josh Jensen

HALES ENGINEERING
innovative transportation solutions

John Hancock Academy West

Traffic Impact Study



Eagle Mountain, Utah

July 18, 2025

UT25-3002

LICENSED PROFESSIONAL ENGINEER
NO. 12894535
Joseph S. Browning
07/18/2025
STATE OF UTAH

1220 North 500 West, Ste. 202 Lehi, UT 84043 p 801.766.4343
www.halesengineering.com

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed John Hancock Academy West development located in Eagle Mountain, Utah. The development is located to the east of Lake Mountain Road on the south side of Tiffany Lane.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025) and future (2030) conditions with and without the proposed project and to recommend mitigation measures as needed. The morning and afternoon peak hour level of service (LOS) results are shown in Table ES-1. An exhibit of the proposed mitigated roadway network is shown in Figure ES-1. A site plan of the project is provided in Appendix A.

Table ES-1: Peak Hour Level of Service Results

	Intersection	Level of Service									
		Existing (2025)						Future (2030)			
		Background		Plus Project				Background		Plus Project	
		AM	PM	AM	PM	AM MIT	PM MIT	AM	PM	AM	PM
1	Lake Mountain Rd / Eagle Mountain Blvd	a	b	a	b	a	b	a	b	a	a
2	Pole Canyon Blvd / Lake Mountain Rd	c	b	e	b	C	A	c	b	C	A
3	Pole Canyon Blvd / Pony Express Pkwy	b	b	c	b	c	b	c	b	c	b
4	Secondary Access / Lake Mountain Rd	-	-	d	a	a	a	-	-	a	a
5	Main Access / Lake Mountain Rd	-	-	a	a	a	a	-	-	a	a

1. Intersection LOS values represent the overall intersection average for roundabout, signalized, and all-way stop-controlled (AWSC) intersections (uppercase letter) and the worst movement for all other unsignalized intersections (lowercase letter)
2. MIT = Mitigated scenerio

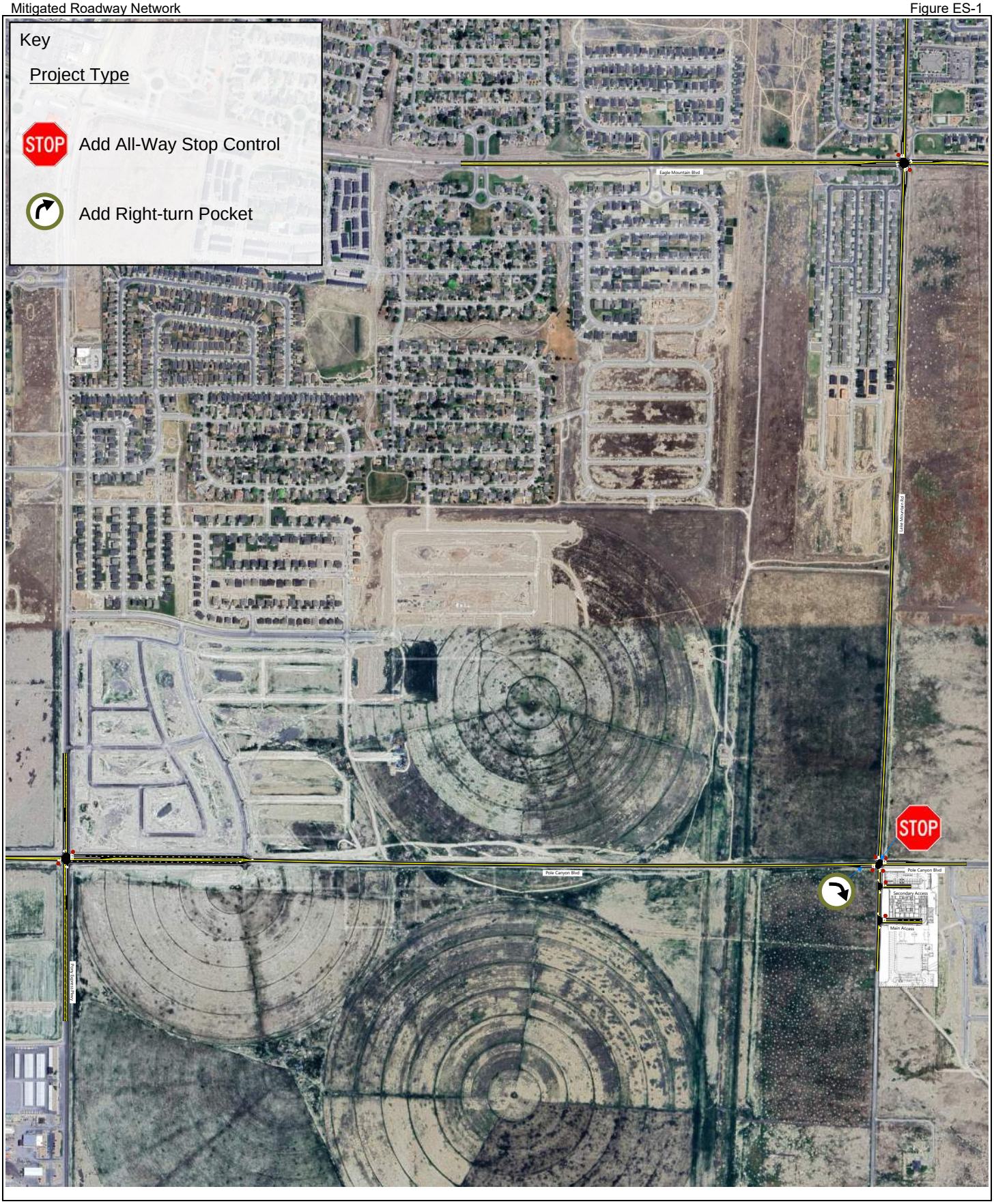
Source: Hales Engineering, July 2025

SUMMARY OF KEY FINDINGS & RECOMMENDATIONS

Project Conditions		
• The development will consist of a charter school with 400 students • The project is anticipated to generate approximately 908 weekday daily trips, including 418 trips in the morning peak hour, and 288 trips in the evening peak hour • The on-site queueing is anticipated to be sufficient		
2025	**Background**	**Plus Project**
Assumptions	• None	• 30-minute staggered start and end times
Findings	• Acceptable LOS	• Poor LOS at the Pole Canyon Blvd / Lake Mtn Rd intersection
Mitigations	• None	• **Pole Canyon Blvd / Lake Mtn Rd:** Implement an all-way stop
2030	**Background**	**Plus Project**

Assumptions	• Future volumes:
	  ○ 10% annual growth rate
	  ○ Volumes added from the Ault Farms TIS (2020)
		• None

Findings	• Acceptable LOS	• Acceptable LOS • Significant EB queuing at the Pole Canyon Blvd / Lake Mtn Rd intersection
Mitigations	• None	• **Pole Canyon Blvd / Lake Mtn Rd:** Install EB RT pocket with 100’ queue storage


Key
Project Type
STOP
Add All-Way Stop Control
Add Right-turn Pocket
Eagle Mountain Blvd
Pole Canyon Blvd
Secondary Access
Main Access
STOP

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I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed John Hancock Academy West development located in Eagle Mountain, Utah. The proposed project is located east of Lake Mountain Road on the south side of Tiffany Lane. Figure 1 shows a vicinity map of the proposed development.

The purpose of this traffic impact study is to analyze traffic operations at key intersections for existing (2025) and future (2030) conditions with and without the proposed project and to recommend mitigation measures as needed.

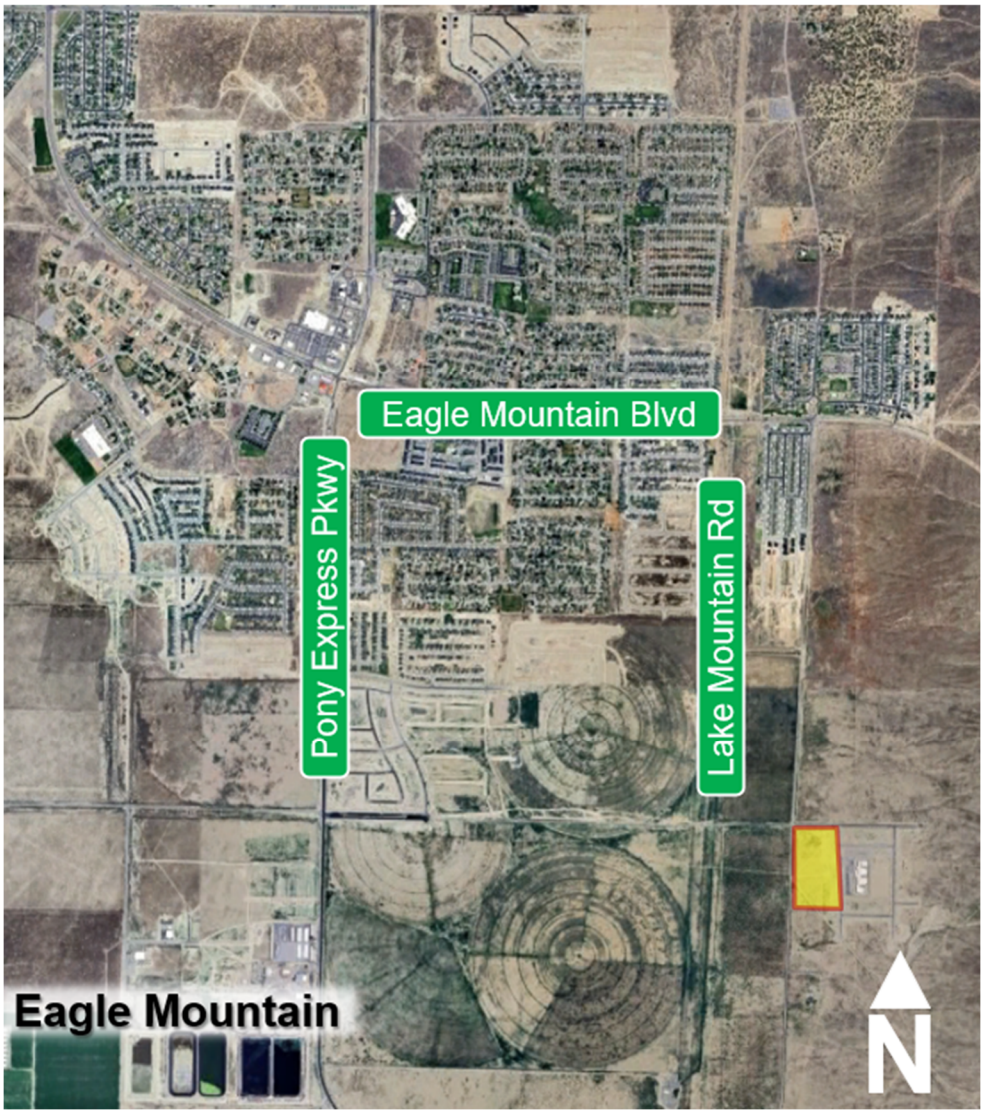


Figure 1: Vicinity map showing the project location in Eagle Mountain, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- Lake Mountain Road / Eagle Mountain Boulevard
- Pole Canyon Boulevard / Lake Mountain Road
- Pole Canyon Boulevard / Pony Express Parkway
- Secondary Access / Lake Mountain Road
- Main Access / Lake Mountain Road

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The *Highway Capacity Manual* (HCM), 7th Edition, 2022 methodology was used in this study to remain consistent with "state-of-the-practice" professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized, roundabout, and all-way stop-controlled (AWSC) intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections, LOS is reported based on the worst movement.

Using Synchro/SimTraffic software, which follow the HCM methodology, the peak hour LOS was computed for each study intersection. Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. The detailed LOS reports are provided in Appendix C. Hales Engineering also calculated the 95th percentile queue lengths for the study intersections using SimTraffic. The detailed queue length reports are provided in Appendix D.

Many of the figures in this report are printouts of the Synchro model. These figures are not meant to be a design exhibit for exact lane striping and design, due to the limitations of the Synchro software. Instead, the purpose of these figures is to show assumed peak hour turning movement volumes and the conceptual travel lane configuration of the study roadway network.

D. Level of Service Standards

For the purposes of this study, a minimum acceptable intersection performance for each of the study intersections was set at LOS D. If levels of service E or F conditions exist, an explanation and/or mitigation measures will be presented. A LOS D threshold is consistent with "state-of-the-practice" traffic engineering principles for urbanized areas.

Table 1: Level of Service Description

LOS		Description of Traffic Conditions	Average Delay (seconds/vehicle)	
			Signalized Intersections	Unsignalized Intersections
A		Free Flow / Insignificant Delay	≤ 10	≤ 10
B		Stable Operations / Minimum Delays	> 10 to 20	> 10 to 15
C		Stable Operations / Acceptable Delays	> 20 to 35	> 15 to 25
D		Approaching Unstable Flows / Tolerable Delays	> 35 to 55	> 25 to 35
E		Unstable Operations / Significant Delays	> 55 to 80	> 35 to 50
F		Forced Flows / Unpredictable Flows / Excessive Delays	> 80	> 50

Source: Hales Engineering Descriptions, based on the *Highway Capacity Manual* (HCM), 7th Edition, 2022 Methodology (Transportation Research Board)

II. EXISTING (2025) BACKGROUND CONDITIONS

A. Purpose

The purpose of the background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified, and potential mitigation measures recommended. This analysis provides a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site are described below:

Pole Canyon Boulevard – is a city-maintained roadway which is classified by the Eagle Mountain City Transportation Master Plan (July 2022) as a future minor collector. The roadway has one travel lane in each direction. The posted speed limit is 45 mph in the study area.

Lake Mountain Road – is a city-maintained roadway which is classified by the Eagle Mountain City Transportation Master Plan (July 2022) as a local road. The roadway has one travel lane in each direction. The posted speed limit is 35 mph in the study area.

C. Traffic Volumes

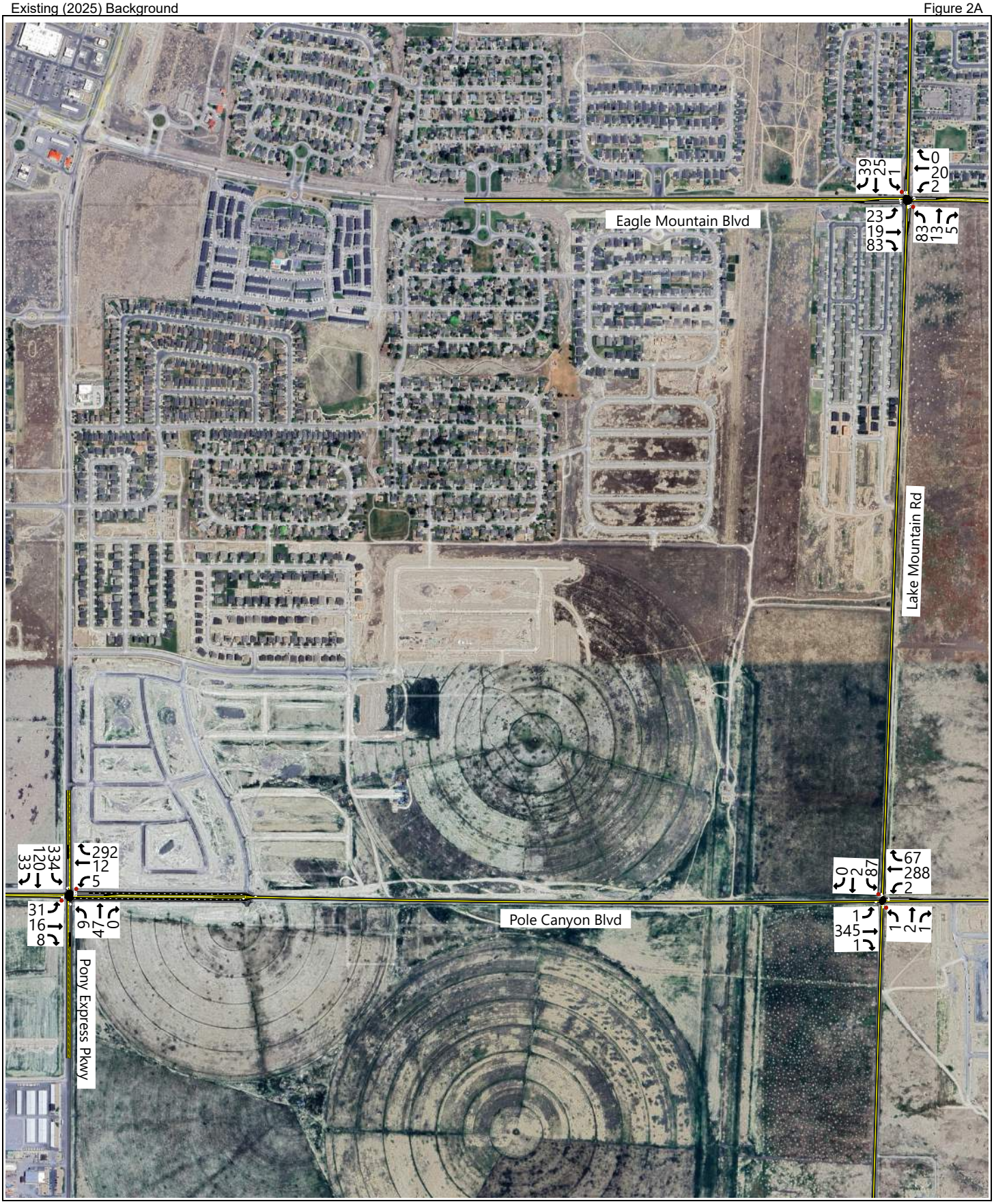
Weekday morning (7:00 to 9:00 a.m.) and afternoon (2:00 to 4:00 p.m.) peak period traffic counts were performed at the following intersections:

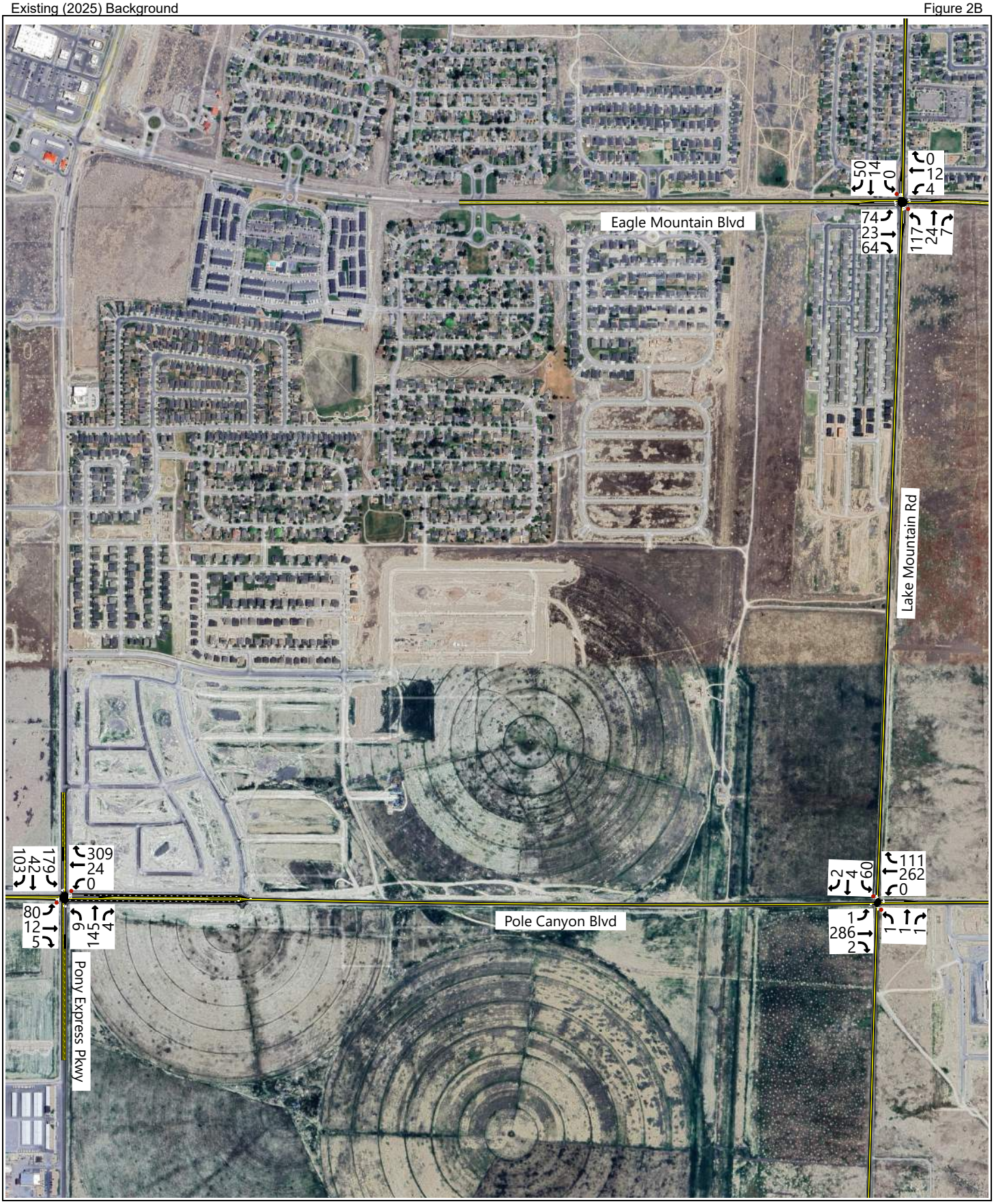
- Lake Mountain Road / Eagle Mountain Boulevard
- Pole Canyon Boulevard / Lake Mountain Road
- Pole Canyon Boulevard / Pony Express Parkway

The counts were performed on Thursday, May 1, 2025. The morning peak hour was determined to be between 7:45 and 8:45 a.m., and the afternoon peak hour was determined to be between 2:45 and 3:45 p.m. The afternoon peak hour volumes were approximately 1% higher than the morning peak hour volumes. Both the morning and afternoon peak hour volumes were used in the analysis. Detailed count data are included in Appendix B.

Hales Engineering considered seasonal adjustments to the observed traffic volumes. Monthly traffic volume data were obtained from a nearby UDOT automatic traffic recorder (ATR) on SR-73 (ATR #626). In recent years, traffic volumes in May have been approximately 104% of the average traffic volumes. Therefore, to remain conservative the observed traffic volumes were not adjusted.

Figure 2 shows the existing morning and afternoon peak hour volumes as well as intersection geometry at the study intersections.


Eagle Mountain Blvd
Lake Mountain Rd
Pole Canyon Blvd
Pony Express Pkwy
39 25 1
0 20 2
23 19 83
83 13 5
334 120 33
292 12 5
31 16 8
6 47 0
0 2 87
67 288 2
1 345 1
1 2 1


Eagle Mountain Blvd
Lake Mountain Rd
Pole Canyon Blvd
Pony Express Pkwy
50 14 0
0 12 4
74 23 64
117 24 7
179 42 103
309 24 0
80 12 5
6 141 4
2 4 60
111 262 0
1 286 2
1 1 1

D. Level of Service Analysis

Hales Engineering determined that all study intersections are currently operating at acceptable LOS during the morning and afternoon peak hours, as shown in Table 2. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2025) conditions.

Table 2: Existing (2025) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Afternoon Peak
Lake Mountain Rd / Eagle Mountain Blvd	NB/SB Stop	a (8.3) / NBT	b (10.1) / NBT
Pole Canyon Blvd / Lake Mountain Rd	NB/SB Stop	c (15.2) / SBL	b (10.5) / SBL
Pole Canyon Blvd / Pony Express Pkwy	EB/WB Stop	b (11.8) / EBT	b (13.3) / WBT

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, July 2025

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the morning and afternoon peak hours.

F. Mitigation Measures

No mitigation measures are recommended.

III. PROJECT CONDITIONS

A. Purpose

The project conditions discussion explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in Chapter I.

B. Project Description

The proposed John Hancock Academy West development is located to the east of Lake Mountain Road on the south side of Tiffany Lane. The development will consist of a charter school with 400 students. Only the north portion was studied in this report- the south may come in at a future date and will likely need its own study. A concept plan for the proposed development is provided in Appendix A.

C. Trip Generation

Trip generation for the development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE), *Trip Generation*, 11th Edition, 2021.

Trip generation for the proposed project is included in Table 3. The total trip generation for the development is as follows:

- Daily Trips: 908
- Morning Peak Hour Trips: 418
- Evening Peak Hour Trips: 288

Table 3: Trip Generation

Trip Generation Eagle Mountain - John Hancock Academy West									
	Land Use[1]	# of Units	Unit Type	Trip Generation			New Trips		
				Total	% In	% Out	In	Out	Total
Weekday Daily									
	Charter Elementary School (536)	400	Students	908	50%	50%	454	454	908
AM Peak Hour									
	Charter Elementary School (536)	400	Students	418	52%	48%	217	201	418
Afternoon Peak Hour									
	Charter Elementary School (536)	400	Students	288	49%	51%	141	147	288
1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 11th Edition, 2021.									
SOURCE: Hales Engineering, July 2025									

D. Trip Distribution and Assignment

Trip distribution percentages for new trips were based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection were also used to establish these distribution percentages, especially near the site. The assumed distribution of new trips during the morning and afternoon peak hour is shown in Table 4.

Table 4: New Trip Distribution

Direction	% To/From Project (2025)	% To/From Project (2030)
North	55%	35%
West	35%	30%
E.M. Blvd Internal Neighborhoods	10%	10%
Ault Farms	-	15%
South	-	10%

These trip distribution assumptions were used to assign the morning and afternoon peak hour trip generation at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

E. Access

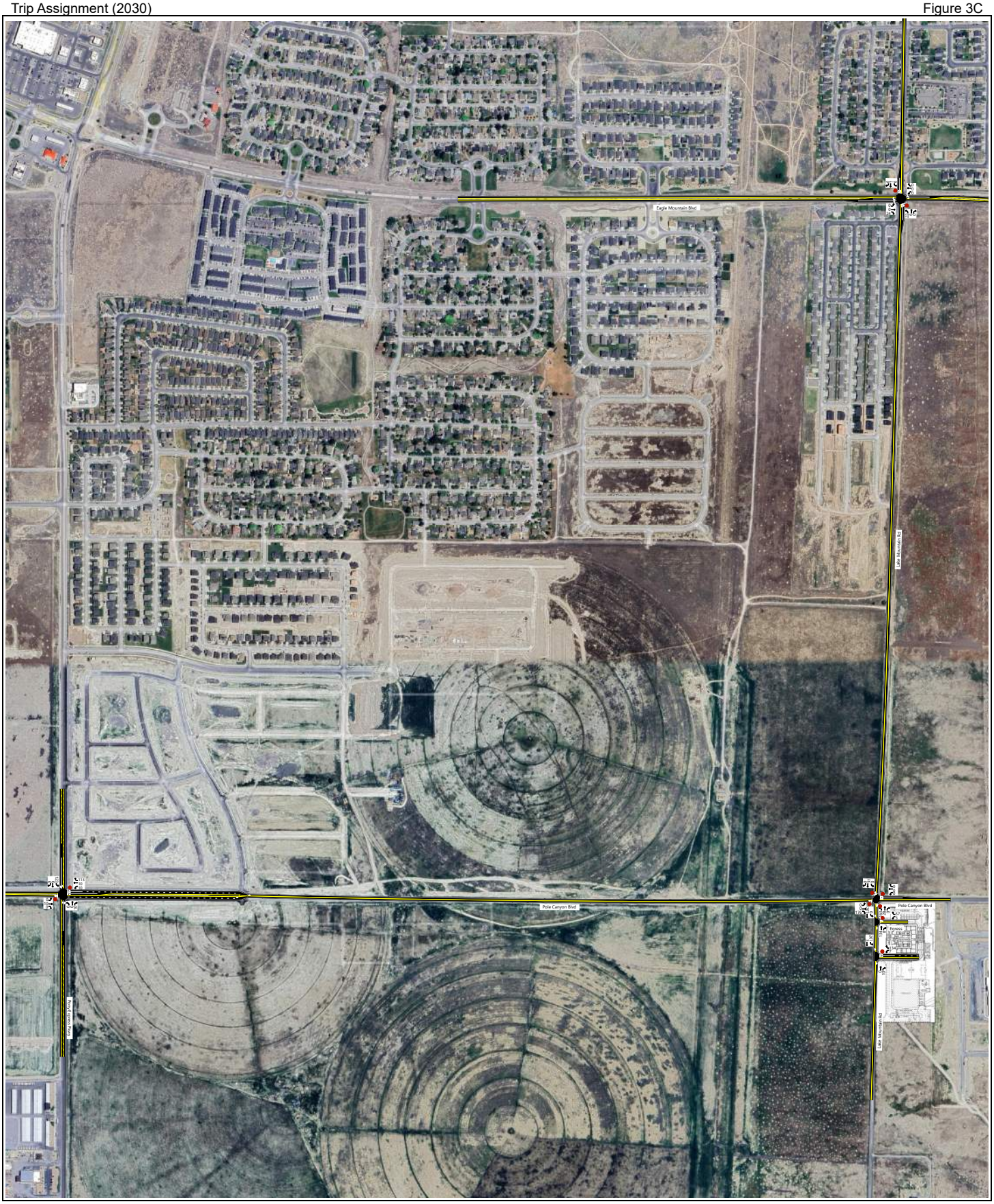
The proposed access for the site will be gained at the following locations:

Lake Mountain Road:

- The Secondary Access will be located approximately 155 feet south of the Pole Canyon Boulevard / Lake Mountain Road intersection. It will access the project on the east side of Lake Mountain Road. It is anticipated that the access will be stop-controlled. It is also anticipated that ingress movements will be blocked during peak hours and directed to the main access to the south.
- The Main Access will be located approximately 380 feet south of the Pole Canyon Boulevard / Lake Mountain Road intersection. It will access the project on the east side of Lake Mountain Road. It is anticipated that the access will be stop-controlled.

Eagle Mountain Blvd
Pole Canyon Blvd
Lake Mountain Rd
Egress

Eagle Mountain Blvd
Pole Canyon Blvd
Secondary Access
Main Access


Eagle Mountain Blvd
Pole Canyon Blvd
Lake Mountain Rd
Pole Canyon Blvd
Express
Lake Mountain Rd
Cory B Wride Memorial Hwy

Eagle Mountain Blvd
Pole Canyon Blvd
Lake Mountain Rd
Secondary Access
Main Access

F. Auxiliary Lanes

Auxiliary lanes are deceleration (ingress) or acceleration (egress) turn lanes that provide for safe turning movements that have less impact on through traffic. These lanes are sometimes needed at accesses or roadway intersections if right- or left-turn volumes are high enough.

Deceleration (ingress) lanes are generally needed when there are at least 50 right-turn vehicles or 25 left-turn vehicles in an hour. These guidelines were used for the City roadways in the study area.

Based on these guidelines, the anticipated project traffic, and low number of through volumes around the projects accesses, no auxiliary lanes are recommended.

G. On-Site Queuing Analysis

There is one pick-up / drop-off zone along the school. The entrance is anticipated to have approximately 565 feet around the school for picking up and dropping off.

The on-site circulation and queuing analyses were completed in VISSIM to closely represent the on-site out-loading conditions. Multiple runs were used to provide a statistical evaluation of the site circulation operations. This assumed an enrollment of 400 students and that all students are dismissed at the same time. The afternoon peak hour was analyzed since it has been observed at many charter schools that picking up students takes longer than dropping them off.

The 95th percentile maximum queue length during the afternoon peak hour was found to be approximately 1,800 linear feet. Based on this analysis, it is anticipated that the 565-foot drop-off zone and the 1,660-feet of queueing space around the drop-off area will be adequate for the anticipated queue length.

IV. EXISTING (2025) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the existing (2025) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for existing background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the existing (2025) background traffic volumes to predict turning movement volumes for existing (2025) plus project conditions. Existing (2025) plus project morning and afternoon peak hour turning movement volumes are shown in Figure 4. Staggered start times of 30 minutes for the morning drop-off and afternoon pick-up were assumed. If staggered start times are not used, it is anticipated more extensive mitigations measures will be needed.

C. Level of Service Analysis

Hales Engineering determined that the Pole Canyon Boulevard / Lake Mountain Road intersection is anticipated to operate at poor LOS during the morning peak hour with project traffic added, as shown in Table 5.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and afternoon peak hour are summarized as follows:

- Pole Canyon Blvd / Lake Mountain Rd:
  - Northbound: 150 feet

E. Mitigation Measures

It is recommended that the Pole Canyon Boulevard / Lake Mountain Road intersection be converted to an all-way stop-controlled (AWSC) configuration.

Eagle Mountain Blvd
Pole Canyon Blvd
Lake Mountain Rd
Secondary Access
Main Access

Eagle Mountain Blvd
Pole Canyon Blvd
Secondary Access
Main Access

Table 5: Existing (2025) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Afternoon Peak
Lake Mountain Rd / Eagle Mountain Blvd	NB/SB Stop	a (8.8) / NBT	b (10.3) / NBT
Pole Canyon Blvd / Lake Mountain Rd	NB/SB Stop	e (36.6) / NBL	b (10.5) / SBL
Pole Canyon Blvd / Pony Express Pkwy	EB/WB Stop	c (21.1) / EBL	b (12.9) / WBT
Secondary Access / Lake Mountain Rd	WB Stop	d (32.4) / WBR	a (3.7) / WBR
Main Access / Lake Mountain Rd	WB Stop	a (4.1) / WBR	a (3.1) / WBR

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, July 2025

F. Mitigated Scenario

With the proposed improvements, it is anticipated that all study intersections will operate at acceptable levels of service, as shown in Table 6.

Table 6: Existing (2025) Plus Project Peak Hour LOS - Mitigated

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Afternoon Peak
Lake Mountain Rd / Eagle Mountain Blvd	NB/SB Stop	a (8.7) / NBT	b (10.4) / NBT
Pole Canyon Blvd / Lake Mountain Rd	AWSC	C (15.8)	A (7.8)
Pole Canyon Blvd / Pony Express Pkwy	EB/WB Stop	c (19.9) / EBL	b (13.4) / WBT
Secondary Access / Lake Mountain Rd	WB Stop	a (3.4) / WBR	a (3.4) / WBR
Main Access / Lake Mountain Rd	WB Stop	a (3.3) / WBR	a (3.1) / WBR

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, July 2025

V. FUTURE (2030) BACKGROUND CONDITIONS

A. Purpose

The purpose of the future (2030) background analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions. Through this analysis, future background traffic operational deficiencies can be identified, and potential mitigation measures recommended.

B. Roadway Network

According to the Wasatch Front Regional Council (WFRC) / Mountainland Association of Governments (MAG) Regional Transportation Plan, there are no projects planned before 2030 in the study area. Therefore, no changes were made to the roadway network for the future (2030) analysis.

C. Traffic Volumes

Hales Engineering obtained future (2030) forecasted volumes from calculating annual growth rate for the area using data ATR #626 on SR-73. It was calculated that there was approximately a 10% annual growth rate. Traffic volumes from the Ault Farms TIS (2020) were added to the future (2030) forecasted volumes at the Pole Canyon Boulevard / Pony Express Parkway intersection. Future (2030) morning and afternoon peak hour turning movement volumes are shown in Figure 5.

D. Level of Service Analysis

Hales Engineering determined that all study intersections are anticipated to operate at acceptable levels of service during the morning and afternoon peak hours in future (2030) background conditions, as shown in Table 7. These results serve as a baseline condition for the impact analysis of the proposed development for future (2030) conditions.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. No significant queueing was observed during the morning and afternoon peak hours.

F. Mitigation Measures

No mitigation measures are recommended.

Eagle Mountain Blvd
Lake Mountain Rd
Pole Canyon Blvd
Pony Express Pkwy
43 25 5
5 22 5
25 21 91
91 14 6
400 134 35
468 39 10
35 27 10
101 39 5
5 5 96
74 317 5
5 380 5
5 5 5

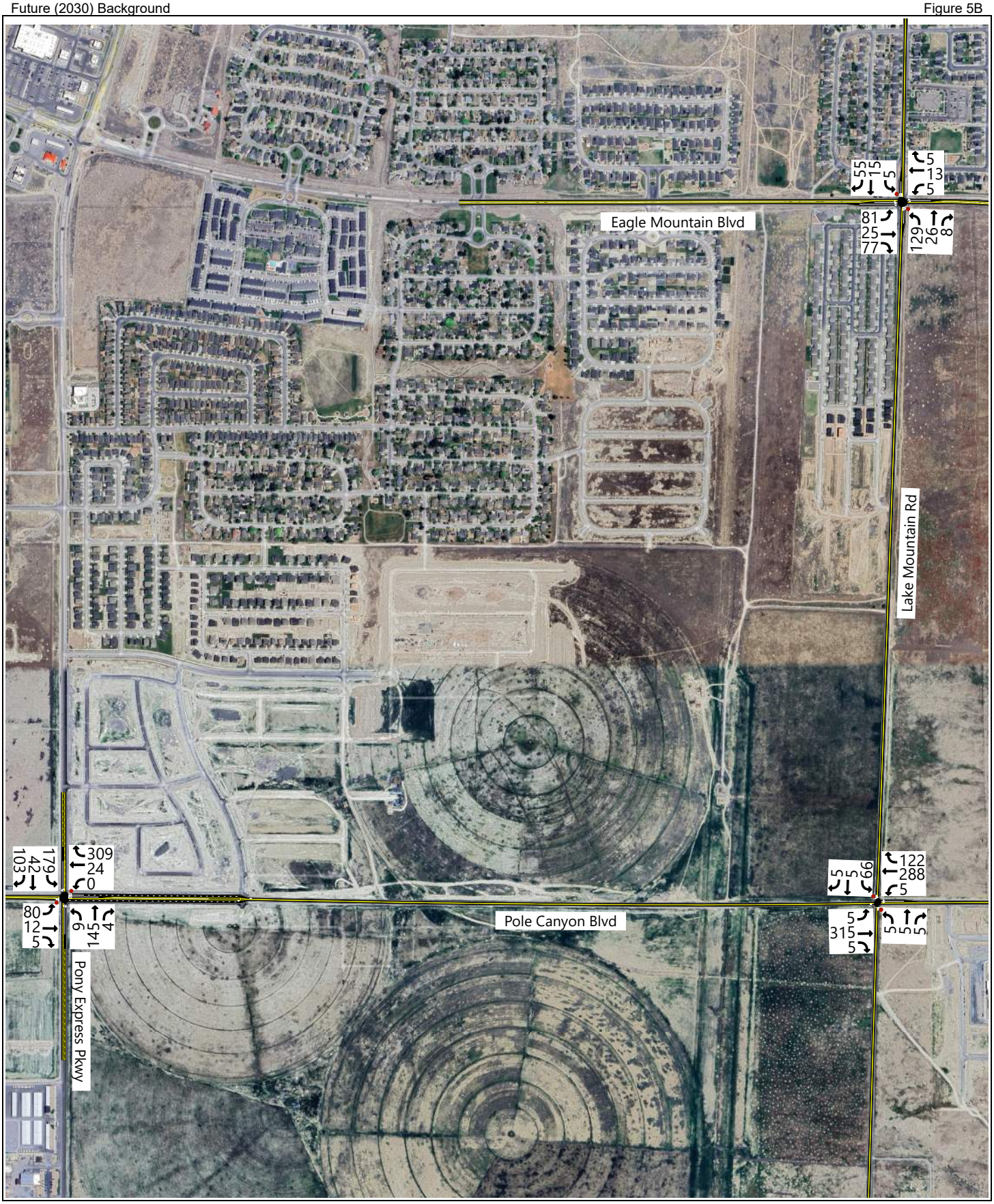

Eagle Mountain Blvd
Lake Mountain Rd
Pole Canyon Blvd
Pony Express Pkwy
55 15 5
5 13 5
81 25 77
129 26 8
179 42 103
309 24 0
80 12 5
6 145 4
5 5 66
122 288 5
5 315 5
5 5 5

Table 7: Future (2030) Background Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Afternoon Peak
Lake Mountain Rd / Eagle Mountain Blvd	NB/SB Stop	a (9.0) / NBT	b (10.5) / NBT
Pole Canyon Blvd / Lake Mountain Rd	NB/SB Stop	c (20.8) / SBL	b (10.6) / SBL
Pole Canyon Blvd / Pony Express Pkwy	EB/WB Stop	c (19.3) / EBL	b (13.1) / WBT

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

Source: Hales Engineering, July 2025

VI. FUTURE (2030) PLUS PROJECT CONDITIONS

A. Purpose

The purpose of the future (2030) plus project analysis is to study the intersections and roadways during the peak travel periods of the day for future background traffic and geometric conditions plus the net trips generated by the proposed development. This scenario provides valuable insight into the potential impacts of the proposed project on future background traffic conditions.

B. Traffic Volumes

Hales Engineering added the project trips discussed in Chapter III to the future (2030) background traffic volumes to predict turning movement volumes for future (2030) plus project conditions. Future (2030) plus project morning and afternoon peak hour turning movement volumes are shown in Figure 6.

C. Level of Service Analysis

Hales Engineering determined that all intersections are anticipated to operate at acceptable levels of service during the morning and afternoon peak hours in future (2030) plus project conditions, as shown in Table 8.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. Significant 95th percentile queue lengths during the morning and afternoon peak hour are summarized as follows:

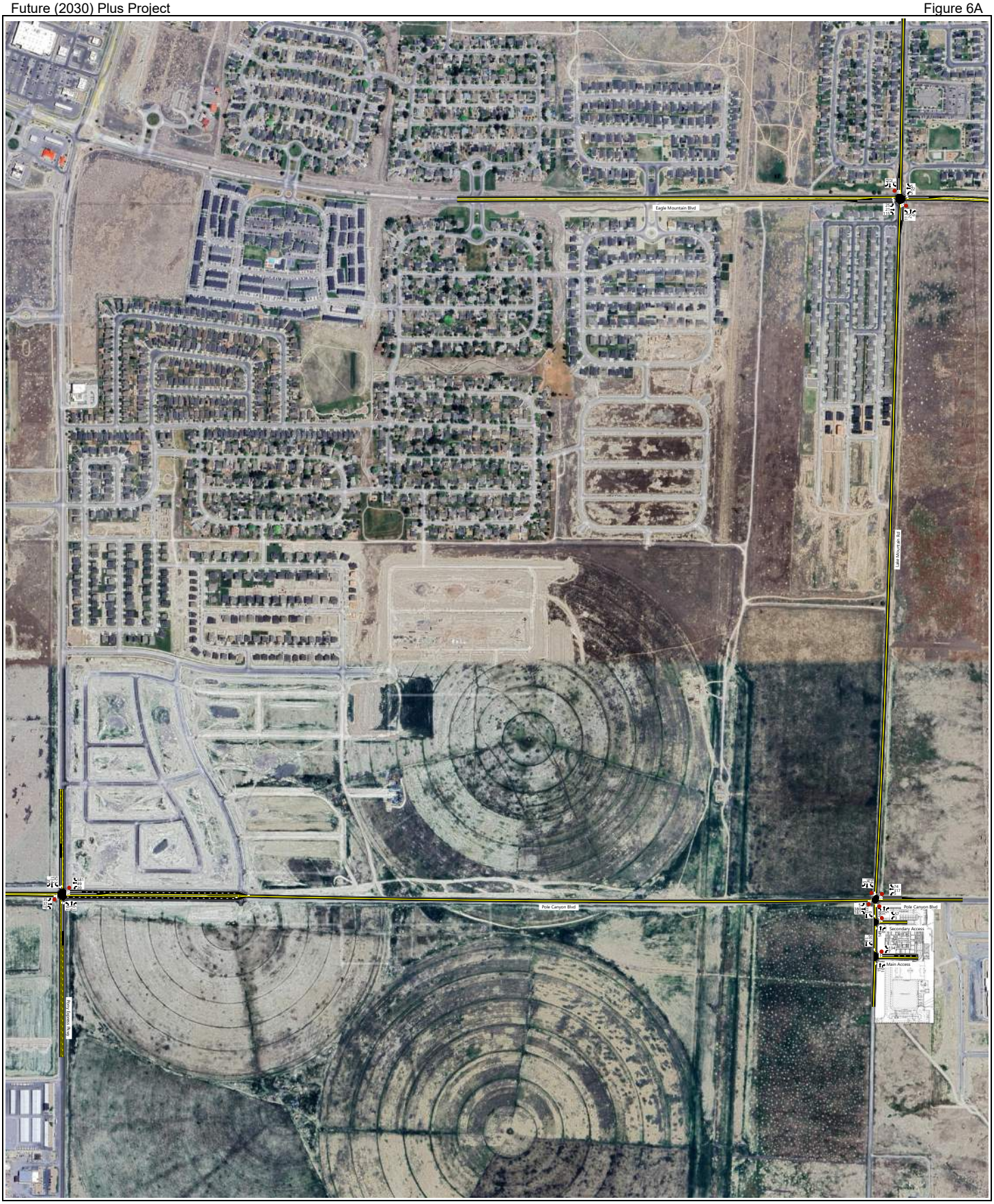
- Pole Canyon Blvd / Lake Mountain Rd:
  - Eastbound: 400 feet

E. Mitigation Measures

To mitigate the excessive queueing, it is recommended that an eastbound right-turn pocket with 100 feet of storage be installed at the Pole Canyon Boulevard / Lake Mountain Road intersection.

F. Mitigated Scenario

With the proposed improvements, it is anticipated that there will be sufficient queue storage for eastbound right-turning vehicles at the Pole Canyon Boulevard / Lake Mountain Road intersection.


Eagle Mountain Blvd
Pole Canyon Blvd
Secondary Access
Main Access

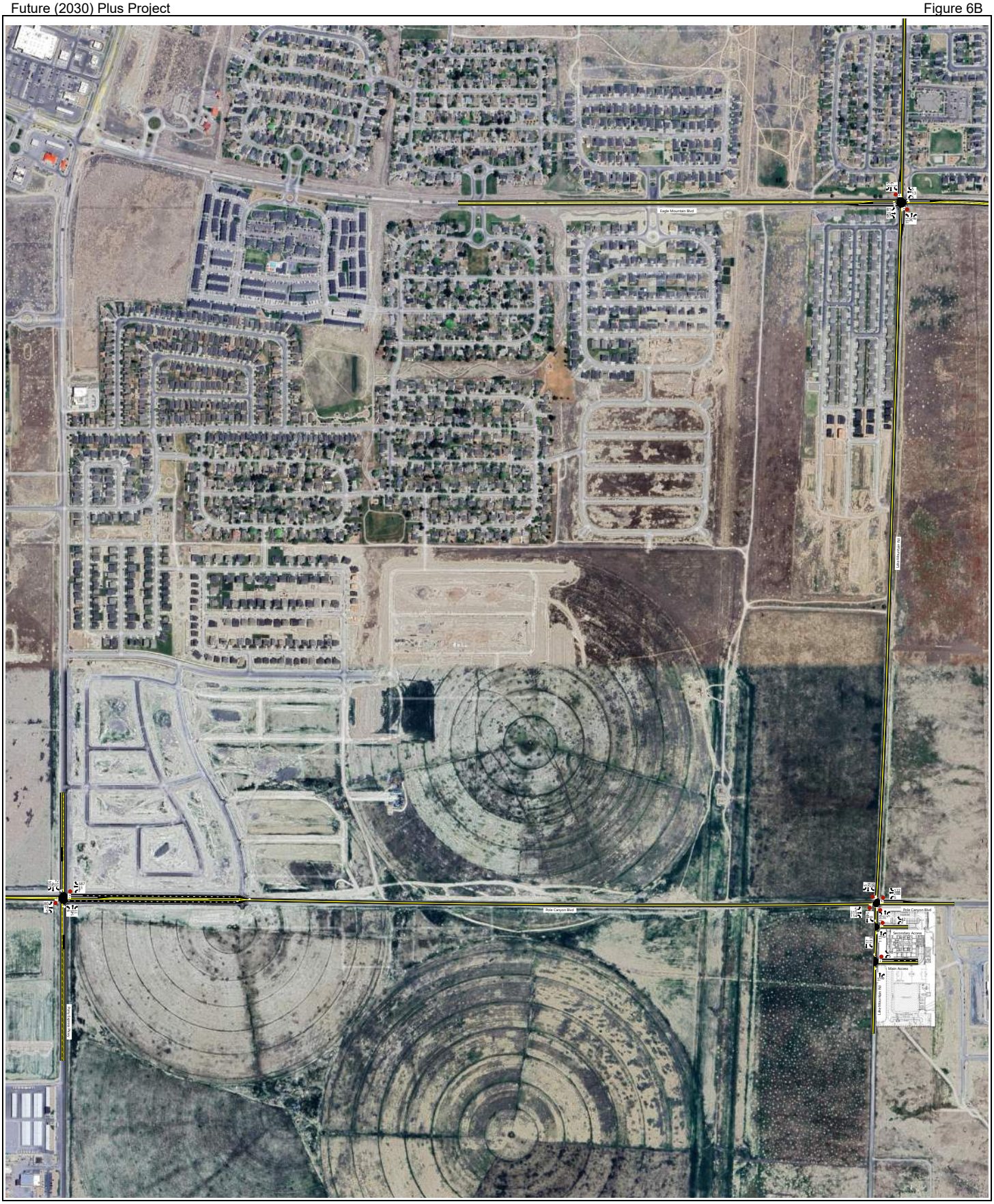

Eagle Mountain Blvd
Pole Canyon Blvd
Secondary Access
Main Access

Table 8: Future (2030) Plus Project Peak Hour LOS

Intersection		LOS (Sec. Delay / Veh.) / Movement[1]	
Description	Control	Morning Peak	Afternoon Peak
Lake Mountain Rd / Eagle Mountain Blvd	NB/SB Stop	a (9.4) / NBT	a (9.8) / NBT
Pole Canyon Blvd / Lake Mountain Rd	AWSC	C (18.8)	A (7.9)
Pole Canyon Blvd / Pony Express Pkwy	EB/WB Stop	c (22.3) / EBL	b (12.6) / WBT
Secondary Access / Lake Mountain Rd	WB Stop	a (5.3) / WBL	a (6.1) / WBL
Main Access / Lake Mountain Rd	WB Stop	a (6.3) / WBL	a (4.7) / WBL

1. Movement indicated for unsignalized intersections where delay and LOS represents worst movement. SBL = Southbound left movement, etc.
2. Uppercase LOS used for signalized, roundabout, and AWSC intersections. Lowercase LOS used for all other unsignalized intersections.

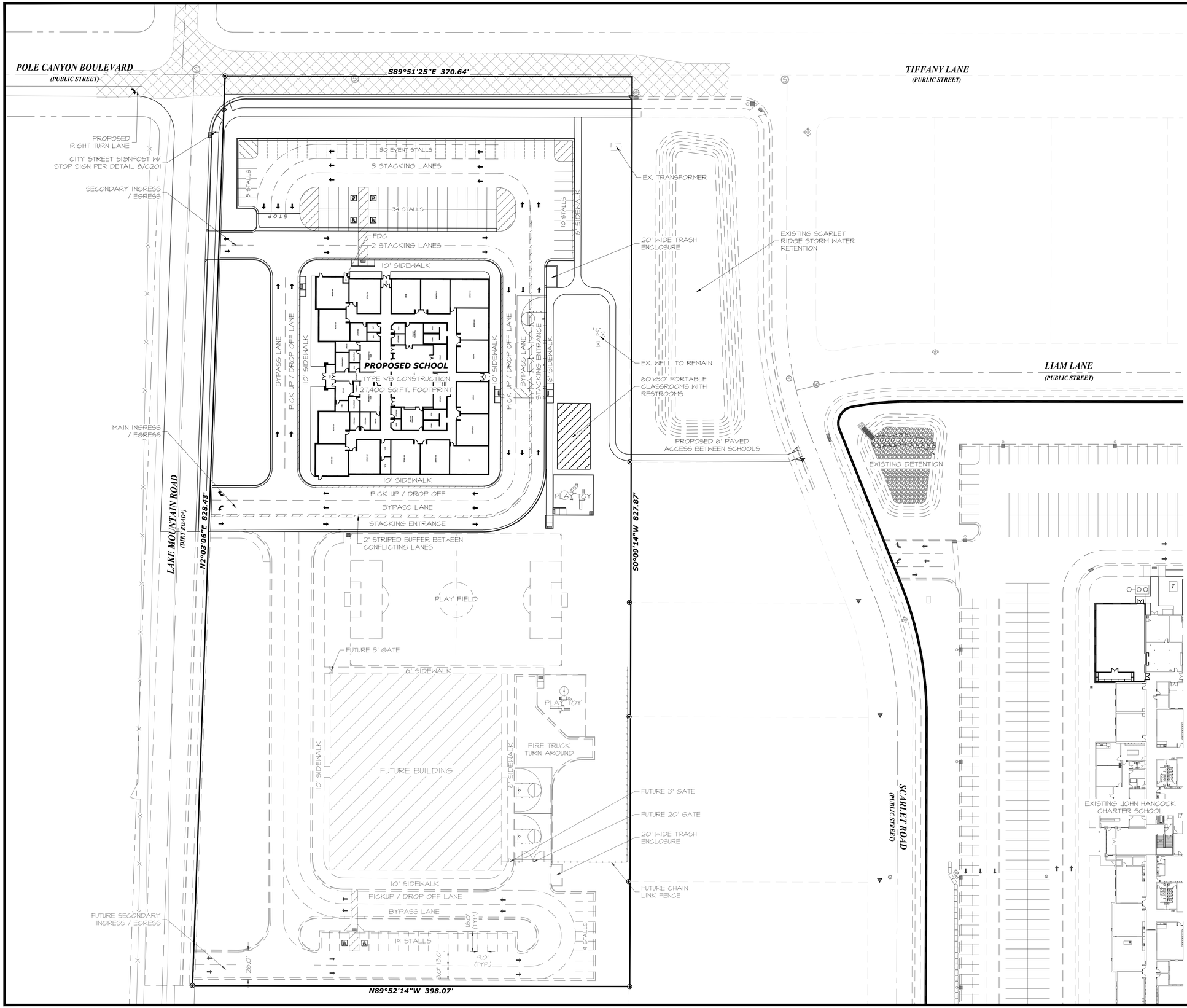
Source: Hales Engineering, July 2025

G. Recommended Storage Lengths

Hales Engineering determined recommended storage lengths based on the 95th percentile queue lengths given in the future (2030) plus project scenario. These storage lengths do not include the taper length. It is recommended that a 100 foot right-turn pocket be installed at the Pole Canyon Boulevard / Lake Mountain Road Intersection.

APPENDIX A

Site Plan



LEGEND

NOT ALL ITEMS IN THE LEGEND MAY BE APPLICABLE

- BOUNDARY LINE
- CENTERLINE
- EASEMENT LINE
- SETBACK LINE
- IRR — NEW IRRIGATION LINE
- SD — NEW STORM DRAIN
- SS — NEW SANITARY SEWER
- SW — NEW SECONDARY WATERLINE
- W — NEW CULINARY WATERLINE
- IRR — EX. IRRIGATION LINE
- OHP — EX. OVERHEAD POWER LINE
- SD — EX. STORM DRAIN
- SS — EX. SANITARY SEWER
- SW — EX. SECONDARY WATERLINE
- T — EX. TELEPHONE LINE
- CTV — EX. CABLE TV LINE
- G — EX. GAS LINE
- W — EX. CULINARY WATERLINE
- EX. FENCE PER PLAN
- SECTION CORNER
- MONUMENT
- CONTROL POINT
- 4250 — EG CONTOUR MINOR
- 4250 — EG CONTOUR MAJOR
- 4250 — FG CONTOUR MINOR
- 4250 — FG CONTOUR MAJOR
- NEW ASPHALT PER DETAIL 1/C301
- EXISTING ASPHALT
- FIRE TURNAROUND & ACCESS
- EXISTING CURB & GUTTER
- 24" HIGH BACK CURB PER DETAIL 2/C301
- 24" RELEASE GUTTER PER DETAIL 3/C301

0 40 80 160

HORIZONTAL SCALE: 1"=40'

SITE PLAN

CALL BLUESTAKES
@ 1-800-662-4111
AT LEAST 48 HOURS PRIOR TO COMMENCING ANY CONSTRUCTION

SILVERPEAK ENGINEERING
177 E. ANTELOPE DR. STE. B
LAYTON, UT 84041
PHONE: (801) 499-5054
STRUCTURAL CIVIL SURVEY WWW.SILVERPEAKENG.COM

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

SEAL:

DATE: 07/09/2025
PROJECT: AW-061.02
MANGER: J.R.J.

REVISIONS	
MARK	DATE / DESC.

SITE PLAN

SHEET NUMBER: C200

PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

APPENDIX B

Turning Movement Counts

Traffic Count Solutions LLC
801.505.9052

Intersection Turning Movement Summary

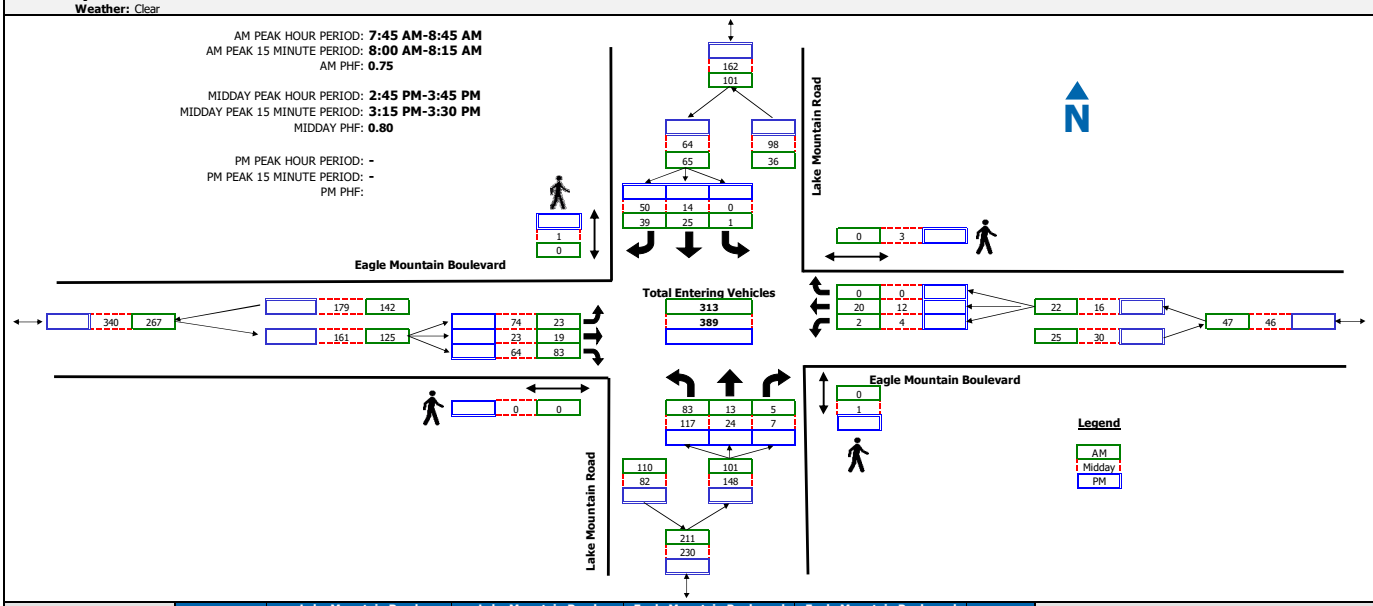
Intersection: Lake Mountain Road / Eagle Mountain Boulevard
North/South Road: Lake Mountain Road
East/West Road: Eagle Mountain Boulevard
Jurisdiction: Eagle Mountain
Project Title: Eagle mountain John hancock Academy West TIS
Project No: UT25-3002
Weather: Clear

Date: 5-1-25, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **7:45 AM-8:45 AM**
AM PEAK 15 MINUTE PERIOD: **8:00 AM-8:15 AM**
AM PHF: **0.75**

MIDDAY PEAK HOUR PERIOD: **2:45 PM-3:45 PM**
MIDDAY PEAK 15 MINUTE PERIOD: **3:15 PM-3:30 PM**
MIDDAY PHF: **0.80**

PM PEAK HOUR PERIOD: **-**
PM PEAK 15 MINUTE PERIOD: **-**
PM PHF:



COUNT SUMMARY	Lake Mountain Road Northbound				Lake Mountain Road Southbound				Eagle Mountain Boulevard Eastbound				Eagle Mountain Boulevard Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
7:00 - 7:15	10	0	0	0	0	4	8	0	3	5	4	0	1	9	0	0	44
7:15 - 7:30	10	0	0	0	0	1	12	0	1	4	6	0	0	6	0	0	40
7:30 - 7:45	12	1	0	0	0	1	13	0	4	3	12	0	0	2	0	0	48
7:45 - 8:00	9	0	0	0	0	2	11	0	4	9	20	0	0	6	0	0	61
8:00 - 8:15	25	3	1	0	0	11	14	0	9	2	30	0	0	10	0	0	105
8:15 - 8:30	28	6	2	0	1	10	7	0	7	5	25	0	1	3	0	0	95
8:30 - 8:45	21	4	2	0	0	2	7	0	3	3	8	0	1	1	0	0	52
8:45 - 9:00	8	2	0	0	0	1	11	4	7	5	9	0	0	6	0	4	49
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	6	0	0	0	0	0	7	0	12	4	12	0	0	2	0	0	43
14:15 - 14:30	10	1	1	1	0	0	11	0	9	2	14	1	0	5	0	0	53
14:30 - 14:45	16	0	0	0	0	4	14	1	10	5	24	0	1	6	0	0	80
14:45 - 15:00	24	3	1	0	0	5	13	1	16	3	19	0	0	4	0	0	88
15:00 - 15:15	22	5	1	0	0	4	11	0	16	4	19	0	1	2	0	2	85
15:15 - 15:30	44	9	4	0	0	5	17	0	21	6	10	0	2	4	0	0	122
15:30 - 15:45	27	7	1	1	0	0	9	0	21	10	16	0	1	2	0	1	94
15:45 - 16:00	16	2	0	1	0	0	12	0	24	2	8	1	1	3	0	0	68
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Traffic Count Solutions LLC
801.505.9052

Intersection Turning Movement Summary

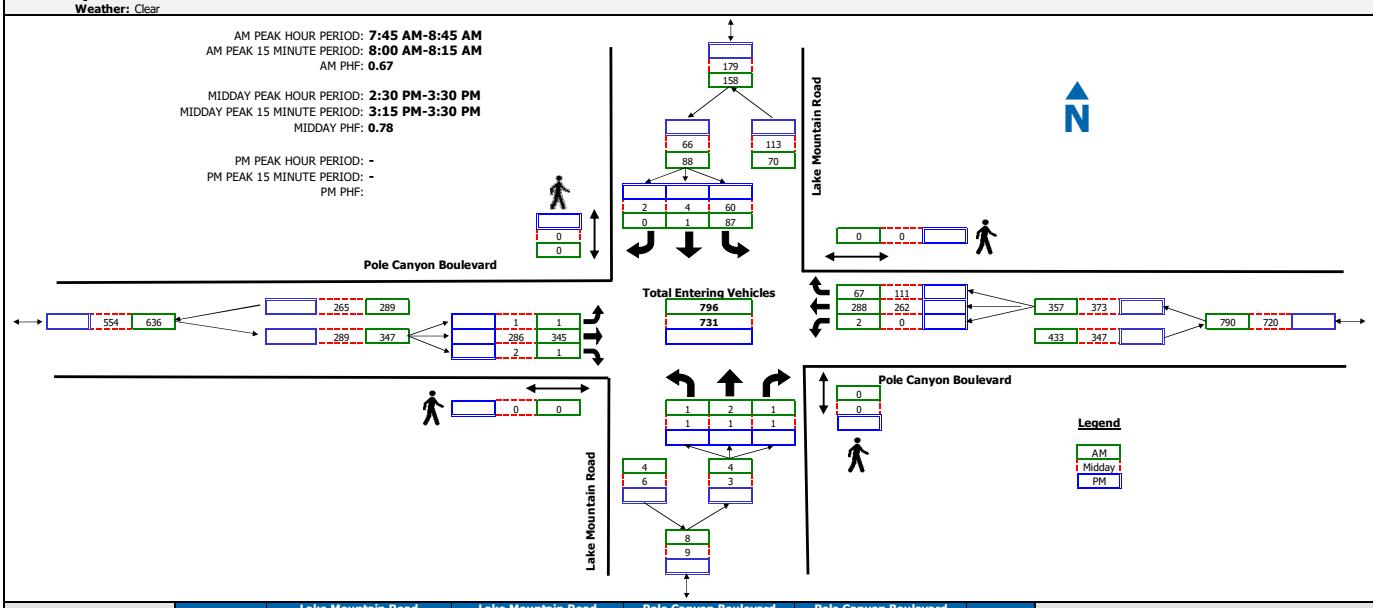
Intersection: Lake Mountain Road / Pole Canyon Boulevard
North/South Road: Lake Mountain Road
East/West Road: Pole Canyon Boulevard
Jurisdiction: Eagle Mountain
Project Title: Eagle mountain John hancock Academy West TIS
Project No: UT25-3002
Weather: Clear

Date: 5-1-25, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **7:45 AM-8:45 AM**
AM PEAK 15 MINUTE PERIOD: **8:00 AM-8:15 AM**
AM PHF: **0.67**

MIDDAY PEAK HOUR PERIOD: **2:30 PM-3:30 PM**
MIDDAY PEAK 15 MINUTE PERIOD: **3:15 PM-3:30 PM**
MIDDAY PHF: **0.78**

PM PEAK HOUR PERIOD: **-**
PM PEAK 15 MINUTE PERIOD: **-**
PM PHF:



COUNT SUMMARY	Lake Mountain Road Northbound				Lake Mountain Road Southbound				Pole Canyon Boulevard Eastbound				Pole Canyon Boulevard Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
7:00 - 7:15	0	0	0	0	1	0	1	0	0	6	0	0	0	1	0	0	9
7:15 - 7:30	2	1	0	0	1	0	1	0	0	17	0	0	0	1	0	0	23
7:30 - 7:45	0	0	0	0	4	0	0	0	0	21	0	0	0	1	0	0	26
7:45 - 8:00	0	0	0	0	17	1	0	0	0	70	0	0	1	37	8	0	134
8:00 - 8:15	0	2	1	0	35	0	0	0	1	129	0	0	0	109	22	0	299
8:15 - 8:30	0	0	0	0	30	0	0	0	0	130	1	0	1	103	26	0	291
8:30 - 8:45	1	0	0	0	5	0	0	0	0	16	0	0	0	39	11	0	72
8:45 - 9:00	1	0	0	0	2	0	1	0	1	12	0	0	0	11	0	0	28
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	1	0	0	0	4	0	0	0	1	22	0	0	0	4	4	0	36
14:15 - 14:30	1	0	0	0	7	1	0	0	0	30	1	0	0	11	1	0	52
14:30 - 14:45	0	0	0	0	11	1	0	0	0	63	0	0	0	9	2	0	86
14:45 - 15:00	1	1	0	0	12	2	1	0	0	83	0	0	0	70	24	0	194
15:00 - 15:15	0	0	0	0	20	0	0	0	0	101	1	0	0	70	25	0	217
15:15 - 15:30	0	0	1	0	17	1	1	0	1	39	1	0	0	113	60	0	234
15:30 - 15:45	0	0	0	0	1	1	0	0	2	17	1	0	0	24	8	0	54
15:45 - 16:00	0	0	0	0	0	0	1	0	0	6	0	0	1	12	4	0	24
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Traffic Count Solutions LLC
801.505.9052

Intersection Turning Movement Summary

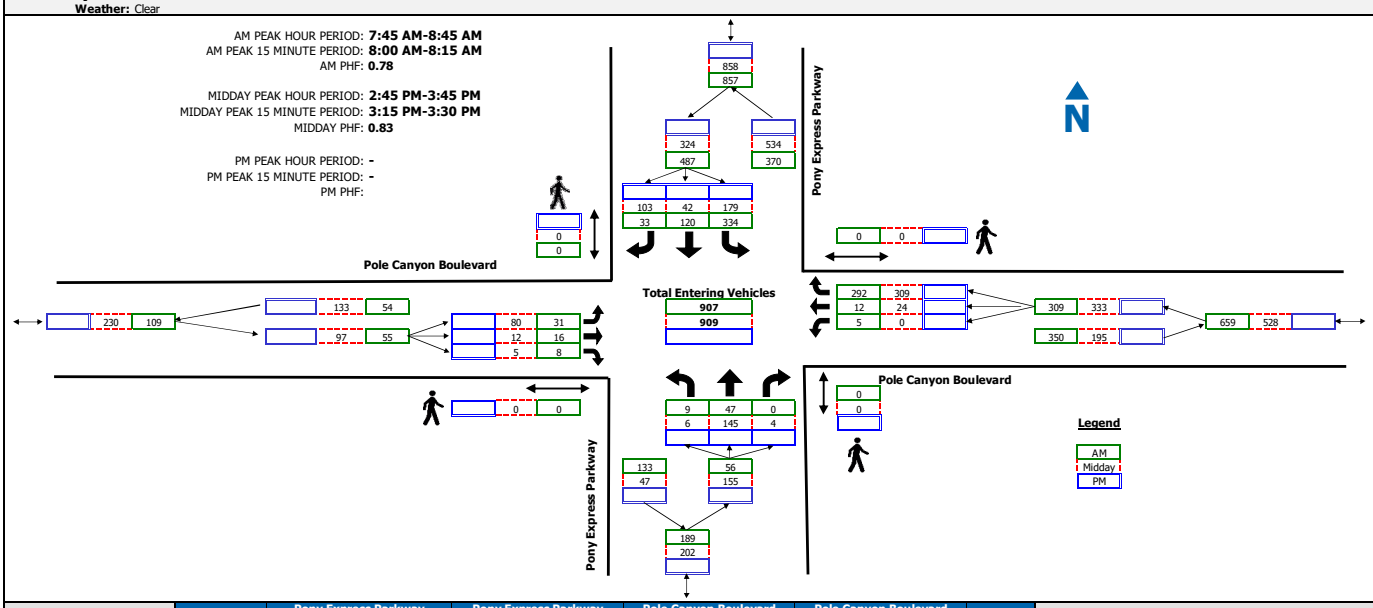
Intersection: Pony Express Parkway / Pole Canyon Boulevard
North/South Road: Pony Express Parkway
East/West Road: Pole Canyon Boulevard
Jurisdiction: Eagle Mountain
Project Title: Eagle mountain John hancock Academy West TIS
Project No: UT25-3002
Weather: Clear

Date: 5-1-25, Thu
Day of Week Adjustment: 100.0%
Month of Year Adjustment: 100.0%
Adjustment Station #: 0
Growth Rate: 0.0%
Number of Years: 0

AM PEAK HOUR PERIOD: **7:45 AM-8:45 AM**
AM PEAK 15 MINUTE PERIOD: **8:00 AM-8:15 AM**
AM PHF: **0.78**

MIDDAY PEAK HOUR PERIOD: **2:45 PM-3:45 PM**
MIDDAY PEAK 15 MINUTE PERIOD: **3:15 PM-3:30 PM**
MIDDAY PHF: **0.83**

PM PEAK HOUR PERIOD: **-**
PM PEAK 15 MINUTE PERIOD: **-**
PM PHF:



COUNT SUMMARY	Pony Express Parkway Northbound				Pony Express Parkway Southbound				Pole Canyon Boulevard Eastbound				Pole Canyon Boulevard Westbound				TOTAL
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
AM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
7:00 - 7:15	2	17	0	0	8	67	13	0	6	0	1	0	1	0	8	0	123
7:15 - 7:30	0	10	0	0	21	55	21	0	3	0	0	0	1	0	8	0	119
7:30 - 7:45	2	7	0	0	17	38	6	0	15	1	1	0	0	2	9	0	98
7:45 - 8:00	4	15	0	0	62	42	11	0	11	0	2	0	0	0	31	0	178
8:00 - 8:15	4	11	0	0	128	36	7	0	9	5	0	0	3	3	83	0	289
8:15 - 8:30	1	12	0	0	112	22	8	0	8	11	6	0	2	4	90	0	276
8:30 - 8:45	0	9	0	0	32	20	7	0	3	0	0	0	0	5	88	0	164
8:45 - 9:00	0	12	0	0	21	30	13	0	8	3	0	0	2	2	14	0	105
MIDDAY PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
9:00 - 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 - 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 - 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 - 10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 - 10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 - 10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 - 11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 - 11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 - 11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 - 12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 - 12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 - 13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00 - 13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00 - 14:15	1	14	0	0	22	6	16	0	18	2	3	0	0	0	20	0	102
14:15 - 14:30	1	27	0	0	42	5	14	0	14	0	0	0	0	0	28	0	131
14:30 - 14:45	0	21	1	0	77	17	26	0	18	3	1	0	0	0	12	0	176
14:45 - 15:00	2	28	0	0	73	7	22	0	15	4	1	0	0	5	67	0	224
15:00 - 15:15	0	27	0	0	65	13	21	0	22	3	0	0	0	3	75	0	229
15:15 - 15:30	3	51	1	0	24	10	26	0	14	4	3	0	0	8	129	0	273
15:30 - 15:45	1	39	3	0	17	12	34	0	29	1	1	0	0	8	38	0	183
15:45 - 16:00	1	26	0	0	10	5	20	0	29	1	1	0	0	1	15	0	109
PM PERIOD COUNTS																	
Period	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**TOTAL**
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C

LOS Results

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	83	81	97	5.8	A
	T	***13***	***15***	***113***	***8.3***	***A***
	R	5	5	105	2.1	A
	Subtotal	101	101	100	6.0	A
SB	L	1	1	100	2.7	A
	T	25	26	105	6.4	A
	R	39	43	110	3.2	A
	Subtotal	65	70	108	4.4	A
EB	L	23	25	110	1.9	A
	T	19	19	100	0.8	A
	R	83	83	100	1.0	A
	Subtotal	125	127	102	1.1	A
WB	L	2	2	89	1.8	A
	T	20	20	99	0.3	A
	Subtotal	22	22	100	0.4	A
Total		314	320	102	3.3	A

Intersection: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	1	0	0		
	T	2	2	89	12.3	B
	R	1	2	200	3.2	A
	Subtotal	4	4	100	7.8	A
SB	***L***	***87***	***88***	***101***	***15.2***	***C***
	T	23	22	96	2.8	A
	Subtotal	110	110	100	12.7	B
EB	L	1	0	0	1.7	A
	T	365	370	101	4.5	A
	R	1	1	100	2.9	A
	Subtotal	367	371	101	4.5	A
WB	L	2	3	133	3.8	A
	T	288	283	98	0.5	A
	R	67	65	97	0.3	A
	Subtotal	357	351	98	0.5	A
Total		839	836	100	4.0	A

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	9	9	100	2.0	*A*
	T	47	49	104	0.8	*A*
	Subtotal	56	58	104	1.0	*A*
SB	L	334	342	102	2.8	*A*
	T	120	116	96	1.1	*A*
	R	33	33	100	0.7	*A*
	Subtotal	487	491	101	2.3	*A*
EB	L	31	30	97	11.4	*B*
	T	***16***	***15***	***95***	***11.8***	***B***
	R	8	7	90	4.7	*A*
	Subtotal	55	52	95	10.6	*B*
WB	L	5	4	76	8.3	*A*
	T	21	20	95	7.3	*A*
	R	292	287	98	6.0	*A*
	Subtotal	318	311	98	6.1	*A*
Total		917	912	99	4.0	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Background*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	119	112	102	7.5	*A*
	T	***25***	***20***	***89***	***10.1***	***B***
	R	7	7	109	3.7	*A*
	Subtotal	151	139	92	7.7	*A*
SB	T	15	12	90	6.2	*A*
	R	51	46	98	3.6	*A*
	Subtotal	66	58	88	4.1	*A*
EB	L	76	69	99	2.4	*A*
	T	24	23	107	1.1	*A*
	R	66	57	95	1.0	*A*
	Subtotal	166	149	90	1.7	*A*
WB	L	4	3	77	1.9	*A*
	T	12	11	98	0.3	*A*
	Subtotal	16	14	88	0.6	*A*
Total		399	360	99	4.3	*A*

Intersection: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	1	1	109	4.4	*A*
	T	1	1	109	9.6	*A*
	R	1	1	109	6.4	*A*
	Subtotal	3	3	100	6.8	*A*
SB	***L***	***61***	***51***	***91***	***10.5***	***B***
	T	21	18	94	3.4	*A*
	R	2	2	96	7.6	*A*
	Subtotal	84	71	85	8.6	*A*
EB	L	1	1	109	1.2	*A*
	T	293	264	98	3.2	*A*
	R	2	2	96	1.9	*A*
	Subtotal	296	267	90	3.2	*A*
WB	T	269	251	102	0.5	*A*
	R	114	107	102	0.4	*A*
	Subtotal	383	358	93	0.5	*A*
Total		767	699	99	2.4	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Background*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	9	9	109	2.3	*A*
	T	148	134	99	1.1	*A*
	R	4	5	128	0.1	*A*
	Subtotal	161	148	92	1.1	*A*
SB	L	183	164	98	2.9	*A*
	T	43	37	94	1.6	*A*
	R	105	102	106	0.7	*A*
	Subtotal	331	303	92	2.0	*A*
EB	L	82	78	104	11.6	*B*
	T	12	12	109	12.8	*B*
	R	5	4	83	8.1	*A*
	Subtotal	99	94	95	11.6	*B*
WB	***T***	***24***	***26***	***117***	***13.3***	***B***
	R	315	293	102	9.3	*A*
	Subtotal	339	319	94	9.6	*A*
Total		929	864	101	5.7	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	114	115	100	7.2	A
	T	***19***	***19***	***100***	***8.8***	***A***
	R	6	6	109	4.0	A
	Subtotal	139	140	101	7.3	A
SB	L	1	1	100	5.5	A
	T	32	34	105	8.0	A
	R	39	39	100	2.7	A
	Subtotal	72	74	103	5.2	A
EB	L	24	23	98	2.3	A
	T	19	18	95	1.2	A
	R	122	125	102	1.2	A
	Subtotal	165	166	101	1.4	A
WB	L	2	2	80	2.8	A
	T	20	21	105	0.3	A
	Subtotal	22	23	105	0.5	A
Total		399	403	101	4.1	A

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	***L***	***160***	***158***	***99***	***36.6***	***E***
	T	39	40	103	27.6	D
	R	1	2	200	23.9	C
	Subtotal	200	200	100	34.7	D
SB	L	88	89	102	24.6	C
	T	70	72	103	20.1	C
	Subtotal	158	161	102	22.6	C
EB	L	1	0	0		
	T	342	337	99	8.0	A
	R	166	177	106	4.6	A
	Subtotal	509	514	101	6.8	A
WB	L	2	2	80	6.2	A
	T	288	294	102	0.6	A
	R	68	68	101	0.3	A
	Subtotal	358	364	102	0.6	A
Total		1,224	1,239	101	10.5	B

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	7	93	1.9	*A*
	T	40	39	96	1.1	*A*
	Subtotal	48	46	96	1.2	*A*
SB	L	443	447	101	3.3	*A*
	T	104	107	103	1.2	*A*
	R	28	29	102	0.9	*A*
	Subtotal	575	583	101	2.8	*A*
EB	***L***	***26***	***24***	***91***	***21.1***	***C***
	T	24	24	102	15.5	*C*
	R	6	7	108	7.6	*A*
	Subtotal	56	55	98	16.9	*C*
WB	L	4	4	89	10.3	*B*
	T	50	52	103	7.0	*A*
	R	400	403	101	7.7	*A*
	Subtotal	454	459	101	7.6	*A*
Total		1,136	1,143	101	5.4	*A*

Intersection: Lake Mountain Rd & Secondary Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	141	139	99	8.3	*A*
	Subtotal	141	139	99	8.3	*A*
SB	T	217	229	106	0.8	*A*
	Subtotal	217	229	106	0.8	*A*
WB	***R***	***58***	***60***	***103***	***32.4***	***D***
	Subtotal	58	60	103	32.4	*D*
Total		416	428	103	7.7	*A*

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SimTraffic LOS Report

Project: **Eagle Mountain - John Hancock Academy West TIS**
Analysis Period: ***Existing (2025) Plus Project***
Time Period: ***Morning Peak Hour*** **Project #:** ***UT25-3002***

Intersection: **Lake Mountain Rd & Main Access**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	4	4	114	3.7	*A*
	Subtotal	4	4	100	3.7	*A*
SB	L	212	223	105	1.8	*A*
	T	4	5	111	1.0	*A*
	Subtotal	216	228	106	1.8	*A*
WB	***R***	***138***	***135***	***98***	***4.1***	***A***
	Subtotal	138	135	98	4.1	*A*
Total		358	367	103	2.7	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	132	131	100	7.9	*A*
	T	***25***	***28***	***112***	***10.3***	***B***
	R	7	8	114	4.5	*A*
	Subtotal	164	167	102	8.1	*A*
SB	T	16	17	103	8.2	*A*
	R	44	41	94	2.6	*A*
	Subtotal	60	58	97	4.2	*A*
EB	L	64	67	105	2.4	*A*
	T	20	20	103	1.0	*A*
	R	86	85	99	1.3	*A*
	Subtotal	170	172	101	1.7	*A*
WB	L	4	3	86	1.7	*A*
	T	11	12	109	0.3	*A*
	Subtotal	15	15	100	0.6	*A*
Total		407	412	101	4.7	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	112	115	103	9.1	*A*
	T	36	37	103	9.9	*A*
	R	1	1	100	7.9	*A*
	Subtotal	149	153	103	9.3	*A*
SB	***L***	***48***	***45***	***93***	***10.5***	***B***
	T	56	59	106	9.7	*A*
	R	2	2	100	5.3	*A*
	Subtotal	106	106	100	10.0	*A*
EB	L	1	1	100	6.8	*A*
	T	230	231	100	4.6	*A*
	R	108	105	98	2.5	*A*
	Subtotal	339	337	99	4.0	*A*
WB	T	210	216	103	0.3	*A*
	R	90	92	102	0.2	*A*
	Subtotal	300	308	103	0.3	*A*
Total		894	904	101	4.3	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	8	107	2.1	*A*
	T	125	121	97	1.1	*A*
	R	3	5	167	0.1	*A*
	Subtotal	136	134	99	1.1	*A*
SB	L	254	253	100	3.0	*A*
	T	36	36	99	1.4	*A*
	R	88	93	105	0.6	*A*
	Subtotal	378	382	101	2.3	*A*
EB	L	68	70	102	12.5	*B*
	T	16	16	97	12.0	*B*
	R	4	4	100	5.6	*A*
	Subtotal	88	90	102	12.1	*B*
WB	***T***	***28***	***25***	***91***	***12.9***	***B***
	R	370	381	103	9.4	*A*
	Subtotal	398	406	102	9.6	*A*
Total		1,001	1,012	101	6.0	*A*

Intersection: Lake Mountain Rd & Secondary Acces
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	104	108	103	0.7	*A*
	Subtotal	104	108	104	0.7	*A*
SB	T	145	145	100	0.9	*A*
	Subtotal	145	145	100	0.9	*A*
WB	***R***	***44***	***44***	***101***	***3.7***	***A***
	Subtotal	44	44	100	3.7	*A*
Total		293	297	101	1.3	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: **Eagle Mountain - John Hancock Academy West TIS**
Analysis Period: ***Existing (2025) Plus Project***
Time Period: ***Afternoon Peak Hour*** **Project #:** ***UT25-3002***

Intersection: **Lake Mountain Rd & Main Access**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	2	2	100	0.6	*A*
	Subtotal	2	2	100	0.6	*A*
SB	L	140	140	100	1.8	*A*
	T	6	5	83	0.8	*A*
	Subtotal	146	145	99	1.8	*A*
WB	***R***	***102***	***105***	***103***	***3.1***	***A***
	Subtotal	102	105	103	3.1	*A*
Total		250	252	101	2.3	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project - Mitigation*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	114	115	100	7.4	*A*
	T	***19***	***19***	***100***	***8.7***	***A***
	R	6	6	109	4.0	*A*
	Subtotal	139	140	101	7.4	*A*
SB	L	1	1	100	6.6	*A*
	T	32	34	105	8.2	*A*
	R	39	39	100	2.8	*A*
	Subtotal	72	74	103	5.3	*A*
EB	L	24	23	98	2.3	*A*
	T	19	18	95	1.2	*A*
	R	122	125	102	1.1	*A*
	Subtotal	165	166	101	1.3	*A*
WB	L	2	2	80	2.8	*A*
	T	20	21	105	0.3	*A*
	Subtotal	22	23	105	0.5	*A*
Total		399	403	101	4.1	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: All-way Stop Controlled

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	160	158	99	6.5	*A*
	T	39	40	103	8.0	*A*
	R	1	2	200	4.5	*A*
	Subtotal	200	200	100	6.8	*A*
SB	L	88	89	102	10.4	*B*
	T	70	72	103	9.2	*A*
	Subtotal	158	161	102	9.9	*A*
EB	L	1	0	0		
	T	342	337	99	28.4	*D*
	R	166	177	106	21.6	*C*
	Subtotal	509	514	101	26.1	*D*
WB	L	2	2	80	10.1	*B*
	T	288	294	102	9.5	*A*
	R	68	68	101	3.9	*A*
	Subtotal	358	364	102	8.5	*A*
Total		1,224	1,239	101	15.8	*C*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project - Mitigation*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	7	93	1.9	*A*
	T	40	39	96	1.1	*A*
	Subtotal	48	46	96	1.2	*A*
SB	L	443	447	101	3.3	*A*
	T	104	107	103	1.2	*A*
	R	28	29	102	0.9	*A*
	Subtotal	575	583	101	2.8	*A*
EB	***L***	***26***	***24***	***91***	***19.9***	***C***
	T	24	24	102	15.7	*C*
	R	6	7	108	7.5	*A*
	Subtotal	56	55	98	16.5	*C*
WB	L	4	4	89	13.4	*B*
	T	50	52	103	6.8	*A*
	R	400	404	101	7.7	*A*
	Subtotal	454	460	101	7.6	*A*
Total		1,136	1,144	101	5.4	*A*

Intersection: Lake Mountain Rd & Secondary Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	141	139	99	0.6	*A*
	Subtotal	141	139	99	0.6	*A*
SB	T	217	229	106	1.0	*A*
	Subtotal	217	229	106	1.0	*A*
WB	***R***	***58***	***60***	***103***	***3.4***	***A***
	Subtotal	58	60	103	3.4	*A*
Total		416	428	103	1.2	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: **Eagle Mountain - John Hancock Academy West TIS**
Analysis Period: ***Existing (2025) Plus Project - Mitigation***
Time Period: ***Morning Peak Hour*** **Project #:** ***UT25-3002***

Intersection: **Lake Mountain Rd & Main Access**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	4	4	114	0.3	*A*
	Subtotal	4	4	100	0.3	*A*
SB	L	212	223	105	1.8	*A*
	T	4	5	111	1.1	*A*
	Subtotal	216	228	106	1.8	*A*
WB	***R***	***138***	***135***	***98***	***3.3***	***A***
	Subtotal	138	135	98	3.3	*A*
Total		358	367	103	2.3	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project - Mitigated*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	132	130	99	7.9	*A*
	T	***25***	***28***	***112***	***10.4***	***B***
	R	7	8	114	4.6	*A*
	Subtotal	164	166	101	8.2	*A*
SB	T	16	17	103	8.1	*A*
	R	44	41	94	2.6	*A*
	Subtotal	60	58	97	4.2	*A*
EB	L	64	67	105	2.4	*A*
	T	20	20	103	1.0	*A*
	R	86	85	99	1.3	*A*
	Subtotal	170	172	101	1.7	*A*
WB	L	4	3	86	1.7	*A*
	T	11	12	109	0.3	*A*
	Subtotal	15	15	100	0.6	*A*
Total		407	411	101	4.6	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: All-way Stop Controlled

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	112	115	103	4.9	*A*
	T	36	37	103	6.1	*A*
	R	1	1	100	3.3	*A*
	Subtotal	149	153	103	5.2	*A*
SB	L	48	45	93	7.2	*A*
	T	56	59	106	7.0	*A*
	R	2	2	100	3.4	*A*
	Subtotal	106	106	100	7.0	*A*
EB	L	1	1	100	10.5	*B*
	T	230	231	100	12.8	*B*
	R	108	105	98	7.2	*A*
	Subtotal	339	337	99	11.0	*B*
WB	T	210	216	103	6.4	*A*
	R	90	92	102	3.5	*A*
	Subtotal	300	308	103	5.5	*A*
Total		894	904	101	7.8	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project - Mitigated*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	8	107	2.1	*A*
	T	125	121	97	1.1	*A*
	R	3	5	167	0.1	*A*
	Subtotal	136	134	99	1.1	*A*
SB	L	254	253	100	3.0	*A*
	T	36	36	99	1.4	*A*
	R	88	93	105	0.6	*A*
	Subtotal	378	382	101	2.3	*A*
EB	L	68	70	102	12.6	*B*
	T	16	16	97	12.2	*B*
	R	4	4	100	5.7	*A*
	Subtotal	88	90	102	12.2	*B*
WB	***T***	***28***	***25***	***91***	***13.4***	***B***
	R	370	382	103	9.3	*A*
	Subtotal	398	407	102	9.6	*A*
Total		1,001	1,013	101	6.0	*A*

Intersection: Lake Mountain Rd & Secondary Acces
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	104	108	103	0.7	*A*
	Subtotal	104	108	104	0.7	*A*
SB	T	145	145	100	1.0	*A*
	Subtotal	145	145	100	1.0	*A*
WB	***R***	***44***	***44***	***101***	***3.4***	***A***
	Subtotal	44	44	100	3.4	*A*
Total		293	297	101	1.2	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Existing (2025) Plus Project - Mitigated*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Main Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	2	2	100	0.4	*A*
	Subtotal	2	2	100	0.4	*A*
SB	L	140	140	100	1.8	*A*
	T	6	5	83	0.8	*A*
	Subtotal	146	145	99	1.8	*A*
WB	***R***	***102***	***105***	***103***	***3.1***	***A***
	Subtotal	102	105	103	3.1	*A*
Total		250	252	101	2.3	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	91	89	98	6.2	*A*
	T	***14***	***15***	***109***	***9.0***	***A***
	R	6	7	122	3.5	*A*
	Subtotal	111	111	100	6.4	*A*
SB	L	5	5	105	5.0	*A*
	T	25	25	101	6.1	*A*
	R	43	41	96	3.5	*A*
	Subtotal	73	71	97	4.5	*A*
EB	L	25	25	101	2.2	*A*
	T	21	22	104	0.9	*A*
	R	91	89	98	1.1	*A*
	Subtotal	137	136	99	1.3	*A*
WB	L	5	5	105	1.9	*A*
	T	22	22	99	0.4	*A*
	R	5	6	126	0.1	*A*
	Subtotal	32	33	103	0.6	*A*
Total		352	351	100	3.5	*A*

Intersection: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	5	4	84	12.8	*B*
	T	5	5	105	15.2	*C*
	R	5	6	126	8.0	*A*
	Subtotal	15	15	100	11.7	*B*
SB	***L***	***96***	***96***	***100***	***20.8***	***C***
	T	20	18	90	7.5	*A*
	R	5	4	84	18.3	*C*
	Subtotal	121	118	98	18.7	*C*
EB	L	5	3	63	5.1	*A*
	T	429	435	101	5.0	*A*
	R	5	5	105	3.1	*A*
	Subtotal	439	443	101	5.0	*A*
WB	L	5	5	105	3.2	*A*
	T	317	327	103	0.6	*A*
	R	74	75	101	0.3	*A*
	Subtotal	396	407	103	0.6	*A*
Total		969	983	101	5.0	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Background*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	10	10	100	2.4	*A*
	T	63	65	103	1.3	*A*
	R	5	6	114	0.3	*A*
	Subtotal	78	81	104	1.4	*A*
SB	L	400	403	101	3.4	*A*
	T	134	136	102	1.3	*A*
	R	35	32	91	0.8	*A*
	Subtotal	569	571	100	2.8	*A*
EB	***L***	***35***	***34***	***96***	***19.3***	***C***
	T	27	27	101	18.3	*C*
	R	10	10	100	5.9	*A*
	Subtotal	72	71	99	17.0	*C*
WB	L	10	10	100	17.3	*C*
	T	39	38	98	16.3	*C*
	R	468	476	102	14.5	*B*
	Subtotal	517	524	101	14.7	*B*
Total		1,236	1,247	101	8.5	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Background*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	125	98	104	7.9	A
	T	***25***	***19***	***100***	***10.5***	***B***
	R	8	8	139	4.3	A
	Subtotal	158	125	79	8.1	A
SB	L	5	4	107	5.0	A
	T	15	10	91	6.0	A
	R	53	37	93	3.6	A
	Subtotal	73	51	70	4.2	A
EB	L	79	62	105	2.7	A
	T	24	18	99	0.9	A
	R	75	54	96	1.0	A
	Subtotal	178	134	75	1.8	A
WB	L	5	4	107	2.0	A
	T	13	10	105	0.4	A
	R	5	4	107	0.2	A
	Subtotal	23	18	78	0.7	A
Total		432	328	101	4.5	A

Intersection: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	5	3	80	6.0	A
	T	5	4	107	8.8	A
	R	5	4	107	3.8	A
	Subtotal	15	11	73	6.2	A
SB	***L***	***64***	***45***	***94***	***10.6***	***B***
	T	26	20	104	2.7	A
	R	5	4	107	7.4	A
	Subtotal	95	69	73	8.1	A
EB	L	5	3	80	3.2	A
	T	305	226	99	3.2	A
	R	5	5	133	1.5	A
	Subtotal	315	234	74	3.2	A
WB	L	5	3	80	3.7	A
	T	279	216	103	0.6	A
	R	118	92	104	0.4	A
	Subtotal	402	311	77	0.6	A
Total		827	625	101	2.5	A

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Background*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	9	7	108	2.4	*A*
	T	142	107	101	1.0	*A*
	R	4	3	100	0.1	*A*
	Subtotal	155	117	75	1.1	*A*
SB	L	175	128	98	2.9	*A*
	T	41	32	104	1.4	*A*
	R	101	75	99	0.6	*A*
	Subtotal	317	235	74	2.0	*A*
EB	L	78	62	106	11.0	*B*
	T	12	8	91	11.5	*B*
	R	5	3	80	4.8	*A*
	Subtotal	95	73	77	10.8	*B*
WB	***T***	***23***	***19***	***109***	***13.1***	***B***
	R	302	233	103	8.5	*A*
	Subtotal	325	252	78	8.8	*A*
Total		891	677	101	5.4	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	114	104	92	7.4	*A*
	T	***20***	***23***	***115***	***9.4***	***A***
	R	6	4	73	3.9	*A*
	Subtotal	140	131	94	7.6	*A*
SB	L	6	5	91	4.9	*A*
	T	32	33	102	8.3	*A*
	R	44	43	99	2.9	*A*
	Subtotal	82	81	99	5.2	*A*
EB	L	26	25	98	2.1	*A*
	T	21	24	114	1.0	*A*
	R	116	118	102	1.2	*A*
	Subtotal	163	167	102	1.3	*A*
WB	L	6	6	109	2.0	*A*
	T	22	22	98	0.6	*A*
	R	6	6	109	0.0	*A*
	Subtotal	34	34	100	0.7	*A*
Total		416	413	99	4.1	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: All-way Stop Controlled

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	163	160	98	6.5	*A*
	T	34	32	94	7.8	*A*
	R	4	3	67	6.2	*A*
	Subtotal	201	195	97	6.7	*A*
SB	L	96	98	102	10.5	*B*
	T	52	56	107	8.6	*A*
	R	4	3	67	8.5	*A*
	Subtotal	152	157	103	9.8	*A*
EB	L	4	3	67	35.4	*E*
	T	383	381	99	34.2	*D*
	R	176	175	100	28.0	*D*
	Subtotal	563	559	99	32.3	*D*
WB	L	4	4	89	9.5	*A*
	T	318	320	101	10.2	*B*
	R	74	71	95	4.0	*A*
	Subtotal	396	395	100	9.1	*A*
Total		1,314	1,306	99	18.8	*C*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	9	106	1.9	*A*
	T	54	59	108	1.5	*A*
	R	14	14	97	0.2	*A*
	Subtotal	76	82	108	1.3	*A*
SB	L	465	464	100	3.5	*A*
	T	116	119	103	1.4	*A*
	R	30	33	108	0.9	*A*
	Subtotal	611	616	101	3.0	*A*
EB	***L***	***30***	***29***	***95***	***22.3***	***C***
	T	33	34	103	19.9	*C*
	R	8	11	129	8.7	*A*
	Subtotal	71	74	104	19.2	*C*
WB	L	18	16	86	19.7	*C*
	T	44	46	103	19.4	*C*
	R	514	512	100	12.3	*B*
	Subtotal	576	574	100	13.1	*B*
Total		1,338	1,346	101	8.1	*A*

Intersection: Lake Mountain Rd & Secondary Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	146	142	97	0.8	*A*
	Subtotal	146	142	97	0.8	*A*
SB	T	217	215	99	0.8	*A*
	Subtotal	217	215	99	0.8	*A*
WB	***L***	***4***	***3***	***86***	***5.3***	***A***
	R	56	55	98	3.7	*A*
	Subtotal	60	58	97	3.8	*A*
Total		422	415	98	1.2	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: **Eagle Mountain - John Hancock Academy West TIS**
Analysis Period: ***Future (2030) Plus Project***
Time Period: ***Morning Peak Hour*** **Project #:** ***UT25-3002***

Intersection: **Lake Mountain Rd & Main Access**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	15	13	87	0.5	*A*
	R	10	10	100	0.1	*A*
	Subtotal	25	23	92	0.3	*A*
SB	L	201	199	99	1.9	*A*
	T	19	19	100	1.0	*A*
	Subtotal	220	218	99	1.8	*A*
WB	***L***	***6***	***6***	***92***	***6.3***	***A***
	R	130	129	99	3.3	*A*
	Subtotal	136	135	99	3.4	*A*
Total		382	376	98	2.3	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	134	134	100	7.8	*A*
	T	***28***	***29***	***105***	***9.8***	***A***
	R	7	6	86	4.1	*A*
	Subtotal	169	169	100	8.0	*A*
SB	L	4	5	111	3.9	*A*
	T	18	17	97	7.9	*A*
	R	48	46	97	2.8	*A*
	Subtotal	70	68	97	4.2	*A*
EB	L	70	69	98	2.4	*A*
	T	22	23	107	0.7	*A*
	R	86	93	108	1.3	*A*
	Subtotal	178	185	104	1.6	*A*
WB	L	4	4	89	1.6	*A*
	T	11	12	109	0.4	*A*
	R	4	5	111	0.0	*A*
	Subtotal	19	21	111	0.5	*A*
Total		436	443	102	4.4	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: All-way Stop Controlled

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	117	110	94	5.0	*A*
	T	30	31	103	6.3	*A*
	R	4	4	100	3.6	*A*
	Subtotal	151	145	96	5.2	*A*
SB	L	52	51	97	7.5	*A*
	T	52	57	110	6.2	*A*
	R	4	6	150	4.5	*A*
	Subtotal	108	114	106	6.7	*A*
EB	L	4	3	75	10.9	*B*
	T	254	251	99	13.3	*B*
	R	112	113	101	7.2	*A*
	Subtotal	370	367	99	11.4	*B*
WB	L	4	3	75	5.3	*A*
	T	232	225	97	6.6	*A*
	R	98	102	104	3.5	*A*
	Subtotal	334	330	99	5.6	*A*
Total		964	956	99	7.9	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	8	107	2.1	*A*
	T	125	127	102	1.2	*A*
	R	10	11	105	0.1	*A*
	Subtotal	143	146	102	1.2	*A*
SB	L	227	224	99	3.0	*A*
	T	36	36	99	1.4	*A*
	R	88	93	105	0.7	*A*
	Subtotal	351	353	101	2.2	*A*
EB	L	68	71	104	11.1	*B*
	T	16	19	115	11.7	*B*
	R	4	4	100	3.0	*A*
	Subtotal	88	94	107	10.9	*B*
WB	L	8	6	80	6.5	*A*
	T	***28***	***25***	***91***	***12.6***	***B***
	R	344	336	98	8.5	*A*
	Subtotal	380	367	97	8.7	*A*
Total		963	960	100	5.4	*A*

Intersection: Lake Mountain Rd & Secondary Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	109	106	97	0.7	*A*
	Subtotal	109	106	97	0.7	*A*
SB	T	144	148	103	0.9	*A*
	Subtotal	144	148	103	0.9	*A*
WB	***L***	***2***	***1***	***50***	***6.1***	***A***
	R	42	39	94	3.3	*A*
	Subtotal	44	40	91	3.4	*A*
Total		296	294	99	1.2	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: **Eagle Mountain - John Hancock Academy West TIS**
Analysis Period: ***Future (2030) Plus Project***
Time Period: ***Afternoon Peak Hour*** **Project #:** ***UT25-3002***

Intersection: **Lake Mountain Rd & Main Access**
Type: **Unsignalized**

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	12	13	104	0.4	*A*
	R	8	7	93	0.1	*A*
	Subtotal	20	20	100	0.3	*A*
SB	L	130	132	101	1.8	*A*
	T	15	17	113	0.8	*A*
	Subtotal	145	149	103	1.7	*A*
WB	***L***	***6***	***6***	***109***	***4.7***	***A***
	R	96	92	95	3.2	*A*
	Subtotal	102	98	96	3.3	*A*
Total		268	267	100	2.2	*A*

HALES ENGINEERING
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SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project - Mitigated*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	114	104	92	7.3	*A*
	T	***20***	***23***	***115***	***9.4***	***A***
	R	6	4	73	4.0	*A*
	Subtotal	140	131	94	7.6	*A*
SB	L	6	5	91	4.9	*A*
	T	32	33	102	8.4	*A*
	R	44	43	99	2.9	*A*
	Subtotal	82	81	99	5.3	*A*
EB	L	26	25	98	2.1	*A*
	T	21	24	114	1.0	*A*
	R	116	118	102	1.2	*A*
	Subtotal	163	167	102	1.3	*A*
WB	L	6	6	109	2.0	*A*
	T	22	22	98	0.6	*A*
	R	6	6	109	0.0	*A*
	Subtotal	34	34	100	0.7	*A*
Total		416	413	99	4.0	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: All-way Stop Controlled

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	163	160	98	6.2	*A*
	T	34	32	94	8.0	*A*
	R	4	3	67	6.2	*A*
	Subtotal	201	195	97	6.5	*A*
SB	L	96	98	102	10.6	*B*
	T	52	56	107	8.5	*A*
	R	4	3	67	8.5	*A*
	Subtotal	152	157	103	9.8	*A*
EB	L	4	3	67	20.0	*C*
	T	383	381	99	19.4	*C*
	R	176	175	100	9.2	*A*
	Subtotal	563	559	99	16.2	*C*
WB	L	4	4	89	9.6	*A*
	T	318	320	101	10.3	*B*
	R	74	71	95	4.0	*A*
	Subtotal	396	395	100	9.2	*A*
Total		1,314	1,306	99	11.9	*B*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project - Mitigated*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	9	106	1.9	*A*
	T	54	59	108	1.5	*A*
	R	14	14	97	0.2	*A*
	Subtotal	76	82	108	1.3	*A*
SB	L	465	464	100	3.6	*A*
	T	116	119	103	1.4	*A*
	R	30	33	108	0.9	*A*
	Subtotal	611	616	101	3.0	*A*
EB	***L***	***30***	***29***	***95***	***21.6***	***C***
	T	33	34	103	20.0	*C*
	R	8	11	129	8.0	*A*
	Subtotal	71	74	104	18.8	*C*
WB	L	18	16	86	20.0	*C*
	T	44	46	103	18.8	*C*
	R	514	512	100	12.0	*B*
	Subtotal	576	574	100	12.8	*B*
Total		1,338	1,346	101	8.0	*A*

Intersection: Lake Mountain Rd & Secondary Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	146	142	97	0.8	*A*
	Subtotal	146	142	97	0.8	*A*
SB	T	217	215	99	0.8	*A*
	Subtotal	217	215	99	0.8	*A*
WB	***L***	***4***	***3***	***86***	***5.7***	***A***
	R	56	55	98	3.9	*A*
	Subtotal	60	58	97	4.0	*A*
Total		422	415	98	1.3	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project - Mitigated*
Time Period: *Morning Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Main Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	15	13	87	0.5	*A*
	R	10	10	100	0.1	*A*
	Subtotal	25	23	92	0.3	*A*
SB	L	201	199	99	1.9	*A*
	T	19	19	100	0.9	*A*
	Subtotal	220	218	99	1.8	*A*
WB	***L***	***6***	***6***	***92***	***5.1***	***A***
	R	130	129	99	3.3	*A*
	Subtotal	136	135	99	3.4	*A*
Total		382	376	98	2.3	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project - Mitigated*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Eagle Mountain Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	134	134	100	7.9	*A*
	T	***28***	***29***	***105***	***9.8***	***A***
	R	7	6	86	4.0	*A*
	Subtotal	169	169	100	8.1	*A*
SB	L	4	5	111	3.9	*A*
	T	18	17	97	7.8	*A*
	R	48	46	97	2.8	*A*
	Subtotal	70	68	97	4.1	*A*
EB	L	70	69	98	2.4	*A*
	T	22	23	107	0.7	*A*
	R	86	93	108	1.3	*A*
	Subtotal	178	185	104	1.6	*A*
WB	L	4	4	89	1.6	*A*
	T	11	12	109	0.4	*A*
	R	4	5	111	0.0	*A*
	Subtotal	19	21	111	0.5	*A*
Total		436	443	102	4.4	*A*

Intersection: Lake Mountain Rd & Pole Canyon Blvd
Type: All-way Stop Controlled

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	117	110	94	4.8	*A*
	T	30	31	103	6.2	*A*
	R	4	4	100	3.0	*A*
	Subtotal	151	145	96	5.0	*A*
SB	L	52	51	97	7.5	*A*
	T	52	57	110	6.2	*A*
	R	4	6	150	4.5	*A*
	Subtotal	108	114	106	6.7	*A*
EB	L	4	3	75	9.5	*A*
	T	254	251	99	12.2	*B*
	R	112	113	101	5.3	*A*
	Subtotal	370	367	99	10.1	*A*
WB	L	4	3	75	5.5	*A*
	T	232	225	97	6.7	*A*
	R	98	102	104	3.5	*A*
	Subtotal	334	330	99	5.7	*A*
Total		964	956	99	7.4	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project - Mitigated*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Pony Express Pkwy & Pole Canyon Blvd
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	L	8	8	107	2.1	*A*
	T	125	127	102	1.2	*A*
	R	10	11	105	0.1	*A*
	Subtotal	143	146	102	1.2	*A*
SB	L	227	224	99	3.0	*A*
	T	36	36	99	1.4	*A*
	R	88	93	105	0.7	*A*
	Subtotal	351	353	101	2.2	*A*
EB	L	68	71	104	11.2	*B*
	T	16	19	115	11.7	*B*
	R	4	4	100	3.0	*A*
	Subtotal	88	94	107	11.0	*B*
WB	L	8	6	80	6.5	*A*
	T	***28***	***25***	***91***	***12.7***	***B***
	R	344	336	98	8.5	*A*
	Subtotal	380	367	97	8.8	*A*
Total		963	960	100	5.4	*A*

Intersection: Lake Mountain Rd & Secondary Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	109	106	97	0.7	*A*
	Subtotal	109	106	97	0.7	*A*
SB	T	144	148	103	0.9	*A*
	Subtotal	144	148	103	0.9	*A*
WB	***L***	***2***	***1***	***50***	***5.9***	***A***
	R	42	39	94	3.3	*A*
	Subtotal	44	40	91	3.4	*A*
Total		296	294	99	1.2	*A*

HALES ENGINEERING
innovative transportation solutions

SimTraffic LOS Report

Project: Eagle Mountain - John Hancock Academy West TIS
Analysis Period: *Future (2030) Plus Project - Mitigated*
Time Period: *Afternoon Peak Hour* **Project #:** *UT25-3002*

Intersection: Lake Mountain Rd & Main Access
Type: Unsignalized

Approach	Movement	Demand Volume	Volume Served		Delay/Veh (sec)	
			Avg	%	Avg	LOS
NB	T	12	13	104	0.4	*A*
	R	8	7	93	0.1	*A*
	Subtotal	20	20	100	0.3	*A*
SB	L	130	132	101	1.8	*A*
	T	15	17	113	0.8	*A*
	Subtotal	145	149	103	1.7	*A*
WB	***L***	***6***	***6***	***109***	***4.9***	***A***
	R	96	92	95	3.2	*A*
	Subtotal	102	98	96	3.3	*A*
Total		268	267	100	2.2	*A*

APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Existing (2025) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB				SB				EB			WB			
	L	LT	LTR	R	L	LT	LTR	R	L	LTR	R	L	LT	R	T
01: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd		75				50		50							
02: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd							100								
03: Pony Express Pkwy & Pole Canyon Blvd					50					75				100	50

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Existing (2025) Background

Time Period: Afternoon Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB			WB		
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LTR	R	L	R	T
01: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd		75					50		75							
02: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd								75								
03: Pony Express Pkwy & Pole Canyon Blvd						50						75			150	50

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Existing (2025) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB				EB			WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	L	LTR	R	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50								
02: Lake Mountain Rd & Pole Canyon Blvd			150					125									
03: Pony Express Pkwy & Pole Canyon Blvd						75					75					125	50
04: Lake Mountain Rd & Secondary Access					100									100			
05: Lake Mountain Rd & Main Access																75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Existing (2025) Plus Project

Time Period: Afternoon Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB		WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LTR	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50								
02: Lake Mountain Rd & Pole Canyon Blvd			100					75									
03: Pony Express Pkwy & Pole Canyon Blvd						75						75				150	50
04: Lake Mountain Rd & Secondary Acces														75			
05: Lake Mountain Rd & Main Access																75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Existing (2025) Plus Project - Mitigation

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB				EB			WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	L	LTR	R	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50								
02: Lake Mountain Rd & Pole Canyon Blvd			100					75			325				150	75	
03: Pony Express Pkwy & Pole Canyon Blvd						75					75					125	50
04: Lake Mountain Rd & Secondary Access														75			
05: Lake Mountain Rd & Main Access																75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Existing (2025) Plus Project - Mitigated

Time Period: Afternoon Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB				SB					EB		WB				
	L	LT	LTR	R	L	LT	LTR	R	TR	L	LTR	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75				50		50								
02: Lake Mountain Rd & Pole Canyon Blvd			75				75				100			100	75	
03: Pony Express Pkwy & Pole Canyon Blvd					75						75				150	75
04: Lake Mountain Rd & Secondary Acces													75			
05: Lake Mountain Rd & Main Access															75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Future (2030) Background

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB			WB			
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LTR	R	L	LT	R	T
01: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd		75					50		50								
02: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd			50					125									
03: Pony Express Pkwy & Pole Canyon Blvd						75						75		50		250	75

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Future (2030) Background

Time Period: Afternoon Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB				SB					EB			WB			
	L	LT	LTR	R	L	LT	LTR	R	TR	L	LTR	R	L	LT	R	T
01: Lake Mountain Rd/Lake Mtn Rd & Eagle Mountain Blvd		75				50		75								
02: Lake Mtn Rd/Lake Mountain Rd & Pole Canyon Blvd			50				75									
03: Pony Express Pkwy & Pole Canyon Blvd					50						75				125	50

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Future (2030) Plus Project

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB			WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LTR	R	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50									
02: Lake Mountain Rd & Pole Canyon Blvd			100					75				400				150	75	
03: Pony Express Pkwy & Pole Canyon Blvd						75						100		50			200	100
04: Lake Mountain Rd & Secondary Access															75			
05: Lake Mountain Rd & Main Access							50							25			75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Future (2030) Plus Project

Time Period: Afternoon Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB			WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LTR	R	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50									
02: Lake Mountain Rd & Pole Canyon Blvd			75					75				125				100	75	
03: Pony Express Pkwy & Pole Canyon Blvd						50						75					125	50
04: Lake Mountain Rd & Secondary Access															50			
05: Lake Mountain Rd & Main Access																	75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Future (2030) Plus Project - Mitigated

Time Period: Morning Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB				WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LT	LTR	R	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50										
02: Lake Mountain Rd & Pole Canyon Blvd			75					75				175		100			150	75	
03: Pony Express Pkwy & Pole Canyon Blvd						75							100		50			200	100
04: Lake Mountain Rd & Secondary Access																75			
05: Lake Mountain Rd & Main Access							50								25			75	

SimTraffic Queueing Report

Project: Eagle Mountain - John Hancock Academy West TIS

Analysis: Future (2030) Plus Project - Mitigated

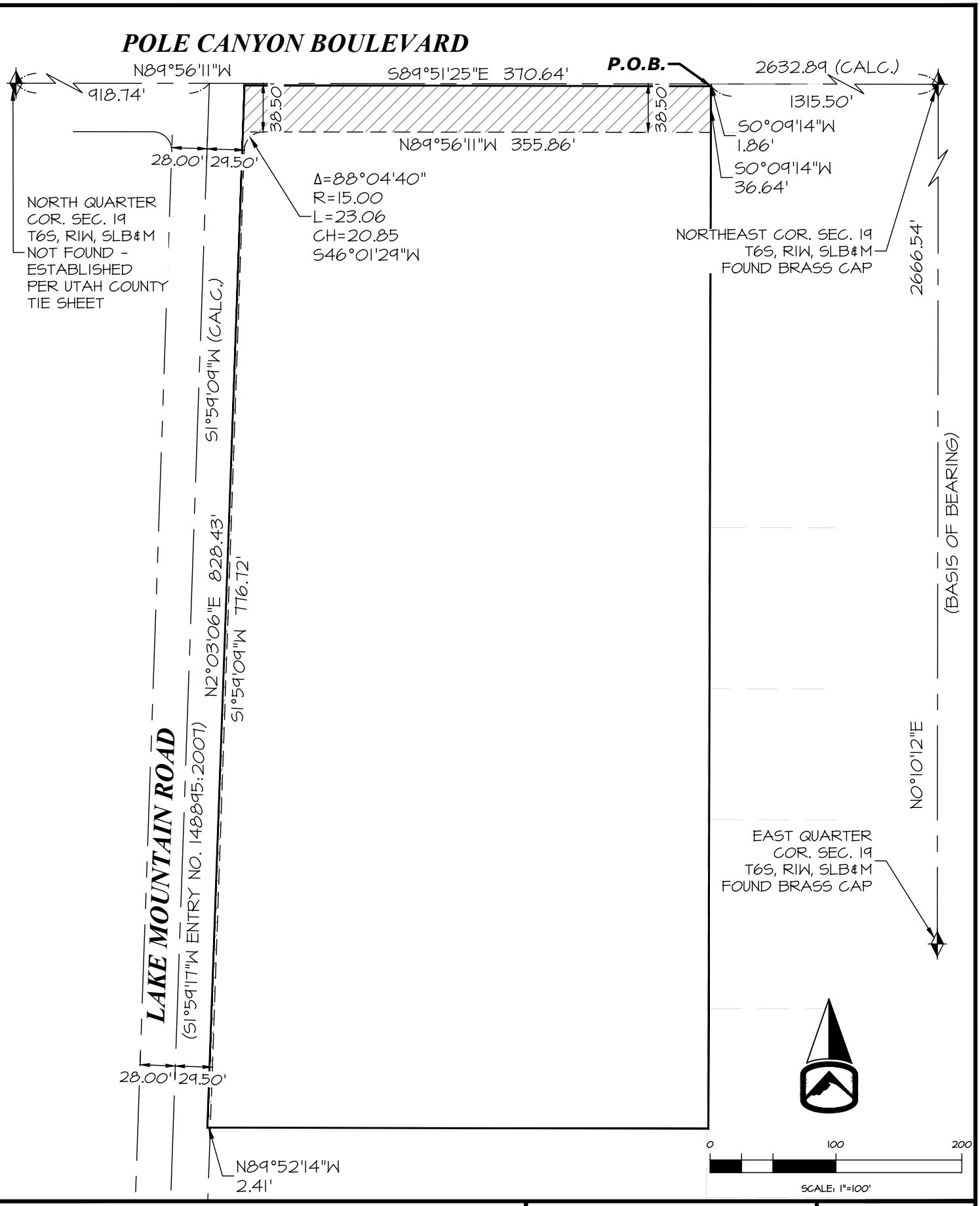
Time Period: Afternoon Peak Hour

95th Percentile Queue Length (feet) - Rounded Up to Nearest Multiple of 25 ft

HALES ENGINEERING
innovative transportation solutions

Project #: UT25-3002

Intersection	NB					SB					EB				WB				
	L	LT	LTR	R	TR	L	LT	LTR	R	TR	L	LT	LTR	R	L	LR	LT	R	T
01: Lake Mountain Rd & Eagle Mountain Blvd		75					50		50										
02: Lake Mountain Rd & Pole Canyon Blvd			75					75				100		75			100	75	
03: Pony Express Pkwy & Pole Canyon Blvd						50							75					125	50
04: Lake Mountain Rd & Secondary Access																50			
05: Lake Mountain Rd & Main Access																		75	



SILVERPEAK ENGINEERING

177 E. ANTELOPE DR. STE. B
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STRUCTURAL CIVIL SURVEY WWW.SILVERPEAKENG.COM

JOHN HANCOCK - WEST CAMPUS
APPROX. 2570 NORTH
LAKE MOUNTAIN ROAD
EAGLE MOUNTAIN, UTAH

EXHIBIT A

DATE: 7/25/2025
PROJECT: AW-061.02
MANAGER: J.R.J.

EAGLE MOUNTAIN PLANNING COMMISSION MEETING MINUTES

March 25, 2025, 5:30 p.m.
Eagle Mountain City Council Chambers
1650 East Stagecoach Run, Eagle Mountain, Utah 84005

COMMISSION MEMBERS PRESENT: Commissioners Jason Allen, Rod Hess, Brent Strong, and Craig Whiting; and Alternate Commissioner Bryan Free.

CITY STAFF PRESENT: Brandon Larsen; Planning Director; Marcus Draper, City Attorney; Todd Black, Wildlife Biologist/Environmental Planner; Nathan Shumway, Environmental Planning Intern; Robert Hobbs, Senior Planner; David Stroud, Senior Planner; Steven Lehmitz, Planner; and Heather Lamb, Planning Secretary.

5:30 P.M. – Eagle Mountain City Planning Commission Work Session

Commissioner Allen called the meeting to order at 5:31 p.m.

1. Discussion Items

1. A. DISCUSSION - 2025 Draft Open Space Plan

- Discussion of the 2025 Natural Open Space & Wildlife Habitat Management Plan.

1. B. DISCUSSION - Planning Commission General Powers and Duties Part 2

Commissioner Allen adjourned the work session at 6:14 p.m.

6:30 P.M. – Eagle Mountain City Planning Commission Policy Session

2. Commissioner Allen called the policy session to order at 6:30 p.m.

3. Pledge of Allegiance

Commissioner Allen led the Pledge of Allegiance.

4. Declaration of Conflicts of Interest

None.

5. Approval of Meeting Minutes

5. A.

MOTION: ***Commissioner Whiting moved to approve the minutes. Commissioner Strong seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

6. Status Report

Planning Director Brandon Larsen reviewed the planning items discussed and voted upon during the City Council meeting.

7. Action and Advisory Items

7. A. ORDINANCE/PUBLIC HEARING - An Ordinance of Eagle Mountain City, Utah, Amending the General Plan Future Land Use Map for Certain Lands Known as Cedar Valley Holbrook

Item 7.A. and Item 7.B. were presented concurrently.

Presented by Senior Planner, Robert Hobbs: A request for approval to Amend the General Plan Future Land Use Map from Business Park/Light Industry to Neighborhood Residential One, Neighborhood Residential Two, and Community Commercial, and, an associated Rezone request to convert existing Agriculture zoning to R1, RC and CC zoning on/for 73.03 acres of property located in the NE ¼ of Section 23, T5S, R2W, on the north side of SR-73, south of 8000 North and west of Airport Road Parcel #'s. 58:047:0060, 58:047:0058, 58:047:0061, and 58:047:0062 in Eagle Mountain City.

Applicant's Statements Summary Points: Brad Mackay Ivory Development.

- There will be an intersection at Airport Road and Pony Express, which will have a traffic signal. This will not be a major interchange that was originally planned; it will now be a standard intersection,
- Applicant stated Mr. Holbrook will donate part of the property (off of Airport Road) for an LDS Chapel Site, most of the RC zone will be taken up by this site.
- Possible wildlife fencing along the wash, but it is currently owned by Steven Holbrook, which will need to be discussed at another time once the property is acquired.

Commissioner Allen opened the public hearing at 6:50 p.m. As there were no comments, he closed the hearing at 6:50 p.m.

Discussion Summary Points:

- Discussion and review of the request to amend the General Plan Future Land Use Map from Business Park/Light Industry to Neighborhood Residential One, Neighborhood Residential Two, and Community Commercial, and an associated Rezone request to convert existing Agriculture zoning to R1, RC, and CC zoning on/73.03 acres of property.
- Comment made by Todd Black, Wildlife Biologist/Environmental Planner, stated there has been discussion with the owners/developers to place a fence on the far west of the rezone property to tie into the highway fence.

MOTION: ***Commissioner Hess moved to forward a positive recommendation of Item 7. A. An Ordinance of Eagle Mountain City, Utah, Amending the General Plan Future Land Use Map for Certain Lands Known as Cedar Valley Holbrook. Commissioner Allen seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

MOTION TO RECONSIDER: ***Commissioner Hess moved to reconsider the previous Motion regarding Agenda Item 7 A. Commissioner Whiting seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

MOTION: ***Commissioner Hess moved to recommend approval to the City Council of Item 7.A. with the recommendation that the Future Land Use Map be amended with all residential portions be neighborhood residential one. Commissioner Whiting seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7.B. ORDINANCE/PUBLIC HEARING - An Ordinance of Eagle Mountain City, Utah, Rezoning Certain Lands Known as Cedar Valley Holbrook

Item 7.A. and Item 7.B. were presented concurrently.

Presented by Senior Planner, Robert Hobbs: A request for approval to Amend the General Plan Future Land Use Map from Business Park/Light Industry to Neighborhood Residential One, Neighborhood Residential Two and Community Commercial, and, an associated Rezone request to convert existing Agriculture zoning to R1, RC and CC zoning on/for 73.03 acres of property located in the NE ¼ of Section 23, T5S, R2W, on the north side of SR-73, south of 8000 North and west of Airport Road Parcel No's. 58:047:0060, 58:047:0058, 58:047:0061, and 58:047:0062 in Eagle Mountain City.

Commissioner Allen opened the public hearing at 6:50 p.m. As there were no comments, he closed the hearing at 6:50 p.m.

MOTION: ***Commissioner Whiting moved to forward a positive recommendation to the City Council of Item 7.B., with the condition that RC would be zoned R2. Commissioner Hess seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Not Voting - Alternate**

The motion passed with a unanimous vote.

7. C. SITE PLAN - McDonald's

Presented by Senior Planner, David Stroud: Site Plan approval of McDonald's on a portion of Parcel No. 59:044:0112 and Parcel No. 59:044:0175, to be platted at Lot 4 of The District at Eagle Mountain Subdivision. The approximate address is 4248 North Pony Express.

Applicant's Statements Summary Points, Darrin Perkes, Dominion Engineering:

- The applicant has been working with the City to enhance architecture,
- The mechanical units are typically mounted on the rooftop,
- Electrical utilities are typically at the back of the buildings, such as the electrical cabinet, the electrical cabinet would match the color of the building.

Commissioner Allen opened the public hearing at 7:19 p.m.

The following individuals spoke during the public comment period: Jeff Ruth (in person) and Stella Castellano (email comment summarized at the meeting)

Commissioner Allen closed the public hearing at 7:22 p.m.

Discussion Summary Points:

MOTION: ***Commissioner Strong moved to forward a positive recommendation to the City Council of Item 7.C., with the recommendations that The District at Eagle Mountain Town Center Subdivision Plat A is recorded before submittal of a building permit, and 2) all mechanical equipment, whether ground or roof mounted, is screened from view. Commissioner Whiting seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7.D. PRELIMINARY PLAT/PLAT AMENDMENT - Marketplace 4

MOTION: ***Commissioner Allen moved to table Item 7.D Preliminary Plat/Plat Amendment Marketplace until the April 8, 2025, Planning Commission meeting. Commissioner Whiting seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7.E. MASTER SITE PLAN - John Hancock Charter School

Presented by Senior Planner, Robert Hobbs: A request for Master Site Plan approval for the John Hancock Charter School to be located in the N ¼ of Section 19, S6S, R1W at the southeast intersection of E. Pole Canyon Boulevard and N. Lake Mountain Road in a Foothill Residential Zone on 6.9753 acres of land (Parcel No. 59:019:0023) in Eagle Mountain City.

Commissioner Allen opened the public hearing at 7:30 p.m. As there were no comments, he closed the hearing at 7:30 pm.

Discussion Summary Points: There was no discussion on Agenda item 7. E.

MOTION: ***Commissioner Whiting moved to forward a positive recommendation to the City Council on Item 7.E. Master Site Plan John Hancock Charter School, with the recommendations of 1) Site plan shall have the note that refers to a "proposed 6' paved access between schools" changed to "proposed 6' paved access between school and neighboring subdivision"; and, 2) Provide a material type callout on the site plan where the future building is intended to be placed; and, 3) School shall have a minimum 6' high solid screen wall or non-chain link fence around the trash enclosure featuring solid metal gates; and, 4. Any conditions required by City Engineering. Commissioner Allen seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7. F. ORDINANCE/PUBLIC HEARING - An Ordinance of Eagle Mountain City, Utah, Amending the General Plan Future Land Use Map for Certain Lands Known as Big Eagle 7.

Item 7.F. and Item 7.G. were presented concurrently.

Presented by Planner 2, Steven Lehmitz: A General Plan amendment for Parcel No. 59:047:0003 to change the General Plan Future Land Use Map from Regional Commercial to Business Park/Light Industry.

Applicant's Statements Summary Points, Mitchell Nelson:

- On the General Plan map, Cedar Valley Highway is adjusted to be located on the east side of the property; this placement would also position utilities on the east side.

Commissioner Allen opened the public hearing at 7:36 p.m. As there were no comments, he closed the hearing at 7:36 p.m.

Discussion Summary Points:

- The Development Agreement can't be changed unless an Amendment to the General Plan Future Land Use Map for this certain land known as Big Eagle 7 is amended.
- Energy production is currently used primarily for a Data Center(s), under provision in the Development Agreement – energy power can be generated for our use as long as it is for subordinante use.

MOTION: ***Commissioner Allen moved to forward a positive recommendation to the City Council on Item 7. F. An Ordinance of Eagle Mountain City, Utah, Amending the General Plan Future Land Use Map for Certain Lands Known as Big Eagle 7. Commissioner Hess seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

7. G. ORDINANCE/PUBLIC HEARING - An Ordinance of Eagle Mountain, Utah, Rezoning Certain Lands Known as Big Eagle 7.

Item 7.F. and Item 7.G. were presented concurrently.

Presented by Planner 2, Steven Lehmitz: A rezone request for Parcel No. 59:047:0003 to change the zoning from Agriculture to Industrial with the Regional Technology and Industry Overlay also applied.

Commissioner Allen opened the public hearing at 7:36 p.m. As there were no comments, he closed the hearing at 7:36 p.m.

MOTION: ***Commissioner Allen moved to forward a positive recommendation to the City Council on Item 7. G. An Ordinance of Eagle Mountain, Utah, Rezoning Certain Lands Known as Big Eagle 7. Commissioner Strong seconded the motion.***

Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**
Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

8. Discussion Items

9. Next Scheduled Meeting

The next Planning Commission meeting is scheduled for April 8, 2025.

10. Adjournment

MOTION: ***Commissioner Strong moved to adjourn the meeting at 7:40 p.m. Commissioner Whiting seconded the motion.***

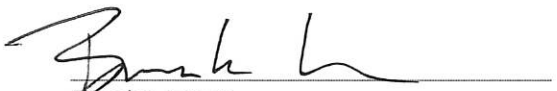
Jason Allen	**Yes**
Robert Fox	**Absent**
Rod Hess	**Yes**
Brent Strong	**Yes**

Craig Whiting	**Yes**
Bryan Free	**Yes**

The motion passed with a unanimous vote.

The meeting was adjourned at 7:40 p.m.

Approved by the Planning Commission on



Brandon Larsen
Planning Director

WATER RIGHTS NOT PROVIDED AT THIS TIME, NEED TO DICUSS FURTHER WITH CITY STAFF, INCLUDING CONVERSATION ABOUT WELL ON SITE FOR IRRIGATION WATER.

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	Culinary Water Master Plan and IFFP
ITEM TYPE:	Motion
FISCAL IMPACT:	N/A
APPLICANT:	City initiated

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
N/A	N/A

PUBLIC HEARING
Yes

PREPARED BY
Vince Hogge, City Engineer

PRESENTED BY
Vince Hogge

RECOMMENDATION:
N/A

BACKGROUND:
To be explained at meeting

ITEMS FOR CONSIDERATION:
N/A

PLANNING COMMISSION ACTION/RECOMMENDATION:
Staff recommends that the Planning Commission approve the Culinary Water Master Plan and IFFP.

ATTACHMENTS:
1. 2025 Eagle Mountain City Master Plan compiled
2. 2025_Eagle_Mountain_City_IFFP_compiled (Revised)

Culinary Water Master Plan

EAGLE MOUNTAIN, UT

July, 2025

Prepared for:
Eagle Mountain City
2545 N. Poly Express Pkwy
Eagle Mountain, UT 84005

Prepared by:
PSOMAS
Sarah Young, PE
11456 South Temple Drive Suite 200
South Jordan, UT 84095
Project No. 8EMC010119

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APPENDIX A. EXHIBITS

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APPENDIX B.
Buildout Project List

1.1 Introduction

Eagle Mountain City has seen significant growth over the past couple of decades and as a result the City has recognized the importance of planning for the future water needs of the City. The purpose of this master plan is to provide the City with direction for decision over the next 40 years and to evaluate the needed infrastructure through full buildout of the system.

A hydraulic model of the drinking water system was prepared in order to analyze the current and full buildout systems including interim models for 5 and 10-year improvements.

1.2 Definitions

CUWCD	Central Utah Water Conservancy District	gpm	gallons per minute
ERU	Equivalent Residential Units	PRV	Pressure Reducing Valve
DDW	Division of Drinking Water	LOS	Level of service
IFFP	Impact Fee Facilities Plan	SID	Special Improvement District
psi	pounds per square inch	IFC	International Fire Code

1.3 Equivalent Residential Connection (ERC/ERU)

For ease of calculations in water master plans, land uses other than residential are converted to ERU's. For this report, these values were calculated from actual water usage data provided by Eagle Mountain City from 2023. See Table 1 for the ERU conversions used for this IFFP.

Table 1. Equivalent Residential Connections Conversions

Type	ERC
Large Lots (Zone 4)	1.14
All other Residential	1.00
Commercial	12.83
Institutional	21.13
Condos	0.87
Industrial	18.90

1.4 Level of Service

The City has updated their system specific source and included a variability factor for the water demand requirements. These coupled with the State of Utah Division of Drinking Water (DDW) Rules, govern the minimum Level of Service (LOS) that Eagle Mountain City Water Department is required to provide. The current LOS within the water system is stated as follows:

Storage

- 577 gallons of storage per ERU for indoor and outdoor use
- 2,848 gallons per irrigated acre for outdoor use in Zone 4
- Emergency storage is based upon an assessment of risk and the desired degree of system dependability (percent after fire storage is considered).
- Fire storage for the largest building within the zone

Source

- 1,511 gallons per day of source capacity for indoor and outdoor use per ERU
- Per conversation with the DDW, safe yield of a well is assumed to be two thirds of the pump capacity

Minimum Water Pressure Requirements

- 40 psi during peak day demands
- 30 psi during peak instantaneous demands
- 20 psi during peak day demands with fire

Water Rights

- 0.53 acre-feet per ERU
- 2.5 acre-feet per irrigated acre

In addition to the State rule requirements, the City requires developments to maintain 30 psi at any moment during the modeled peak hour of the peak day scenario for new developments, assuming either Well 1 or Well 2 is out of service.

2.1 Existing System

Eagle Mountain City currently provides water to customers in Eagle Mountain and the White Hills area. For discussion purposes the City has been broken into 3 areas: the West, the North, and the South (or City Center). Projects have been constructed to connect the White Hills water system into the City's system. See Figure 1 for the location of each Service Area and Exhibit 3.1 for a map of the existing water system.

From the City's billing information, it was determined that there is currently a total of 15,152 equivalent residential connections which equates to a peak day flow of 17,273 gpm.

The City has a separate secondary system in the south part of the City that will remove some public outdoor use from the culinary system. The secondary system is currently also serving limited areas of residential irrigation however, most residential or commercial irrigation will continue to be served by the culinary system.

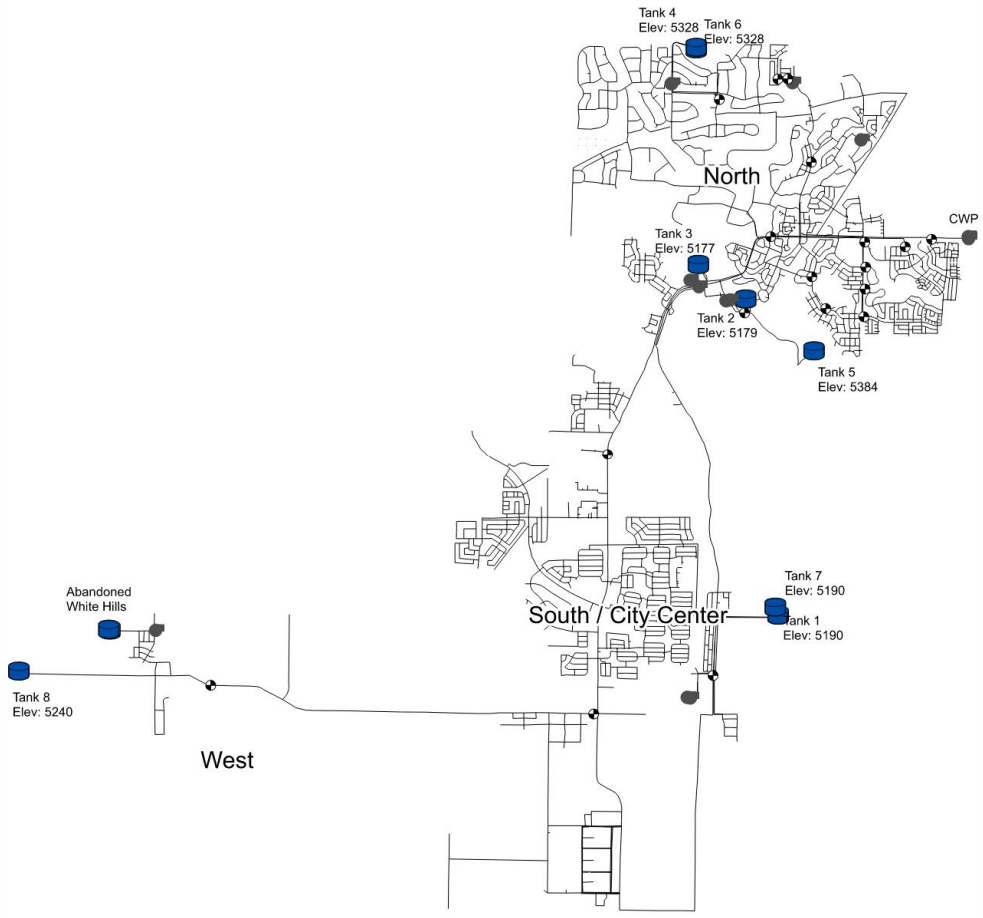


Figure 1. Eagle Mountain's Water System

The City is divided into nine pressure zones, including three zones in White Hills, with most of the current development occurring in Zone 1. See Table 5 for a list of the pressure zones and pressure elevations. The system is currently supplied by nine tanks, which are normally filled by five wells and water from the CWP pump station.

2.2.1 Existing Tanks

Currently, there are eight water storage tanks in Eagle Mountain City that provide the total storage capacity for the City's culinary water system with the new White Hills Tank now completed and an additional tank under design south of Tank 1. The new White Hills Tank, Tank 8 has replaced the two smaller existing tanks in the white hills service zone.

To convert the existing storage capacity of the individual tanks to ERU's, the DDW requires volumes for both fire and emergency storage to be determined. The fire storage for the City has been calculated based on the largest building in the City, which is equivalent to 360,000 gallons. The higher zones, White Hills, Tanks 4 and 6, and Tank 5 are at a higher pressure and will require adequate fire storage for the zones they serve.

Currently, the Upper White Hills Zone only has residential connections, and therefore, will require 1,500 gpm for 2 hours of fire storage. Although the Tyson plant can be fed from either Tanks 1 and 7 or the White Hills tanks, it currently has the additional fire storage in Tanks 1 and 7. However, because of its proximity to the new tank, after construction we recommend that the entirety of the Tyson plant's fire storage be allocated to the new White Hills Tank.

Because the higher zones can service the lower zones through PRVs, fire storage is available for the other zones. However, due to the distance of Zone 1 from other tanks, we recommended most of Zone 1 storage be accounted for in Tanks 1 and 7 and in the White Hills Tank. New tanks built in existing pressure zones are assumed to have enough fire storage unless larger buildings are constructed in the zone. New tanks built at higher elevations will be required to provide additional fire storage adequate for the buildout of its zone.

Each tank also needs additional storage set aside for emergencies. The DDW does not have a volume requirement for emergency storage. The DDW rule only states that "Emergency storage shall be considered during the design process. The amount of emergency storage shall be based upon an assessment of risk and the desired degree of system dependability." Per the Technical Memorandum on the Division of Drinking Water Sizing Requirements Study memo by Jones and DeMille, the emergency storage requirement has been set at 5% of the total tank volume.

After the fire and emergency storage, the remaining capacity in the tanks is the equalization storage. Equalization storage includes both indoor and outdoor storage needs. Per the system specific source

analysis, 584 gallons of storage is required for each ERU. See *Table 2* for a summary of each tank's ERU capacity.

Table 2. Existing Tank Storage Capacity

Tank	Total Volume (gal)	Fire Storage (gal)	Emergency Storage (gal)	Equilization Storage (gal)	ERU
ST-001/Tank 1	1,000,000	120,000	50,000	830,000	1,438.47
ST-002/Tank 2	1,000,000	90,000	50,000	860,000	1,490.47
ST-003/Tank 3	2,000,000	90,000	100,000	1,810,000	3,136.92
ST-004/Tank 4	600,000	120,000	30,000	450,000	779.90
ST-005/Tank 5	2,000,000	240,000	100,000	1,660,000	2,876.95
ST-006/Tank 6	2,500,000	120,000	125,000	2,255,000	3,908.15
ST-007/Tank 7	3,500,000	120,000	175,000	3,205,000	5,554.59
White Hills Tank		ABANDONED WITH TANK 8			
Tank 8	4,000,000	360,000	200,000	3,440,000	5,961.87
Total 2025	16,600,000	1,260,000	830,000	14,510,000	25,147

2.2.2 Existing Source

Currently, the City's system is served by six wells, however only one of either the White Hills Well and the Cooke Well can operate at a time. Additionally, the City has a Purchase Agreement with Central Utah Water Conservancy District (CUWCD) to purchase 15,000 acre-feet per year of water. In 2024, the City took approximately 5,000 ac-ft per year, during Peak day the City currently utilizes approximately 6,900 gpm. The City also has two additional wells under construction and upgrades at two of the existing wells. It is anticipated that Well 8 will be operational in August of 2025 and Well 7 sometime in 2026. See Table 2 for the monthly water production of each source.

Per the DDW, the safe yield of a well is two-thirds of the operating point of a pump. Table 3 summarizes the current available source and projected amount with current projects. Because all of the sources are in the same pressure zone and then pumped to the existing tanks or can flow to lower portions of the City, the City's source demands can be evaluated for the entire City together.

The ERU capacity was determined by adding the indoor and outdoor use ERU requirements and dividing it by the total source capacity.

Source	Current Source (gpm)	Current Safe Yield (gpm)	Projected Source (gpm)	Projected Safe yield (gpm)
Well 1	3200	2133.33	3200	2133.33
Well 2	2200	1466.67	2200	1466.67
Well 3	1700	1133.33	1700	1133.33
Well 5	3200	2133.33	4500	3000.00
Cooke well 1*	1400	933.33	1400	933.33
Cooke Well 2*	1400	933.33	3000	2000.00
Well 7	0		4000	2666.67
Well 8	0		3200	2133.33
CUWCD	7000	7000	7000	7000.00
Total	18700	14800	28800	21533.33

**Only one of the Cooke wells can operate at a time

Table 3. Existing Source Capacity

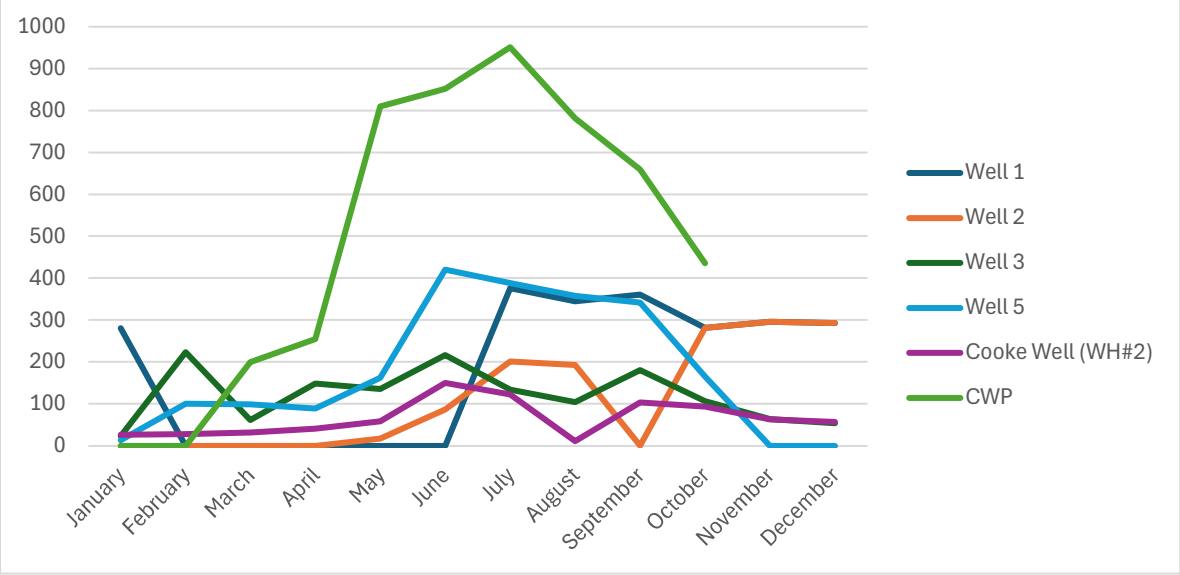


Figure 2. 2024 Water Use by Source (ac-ft)

2.2 Historic Water Usage

Over the last several decades the water use has increased along with the population, peaking in 2020. Since then, even though the population has continued to increase the annual water use has stayed steady. However, it should be noted that 2021-2023 were wetter than normal years so that may account for some of the water reduction. In 2024 the City used a total of 12,144 ac-ft/yr. See Figure 3 for the City's historical water Use.

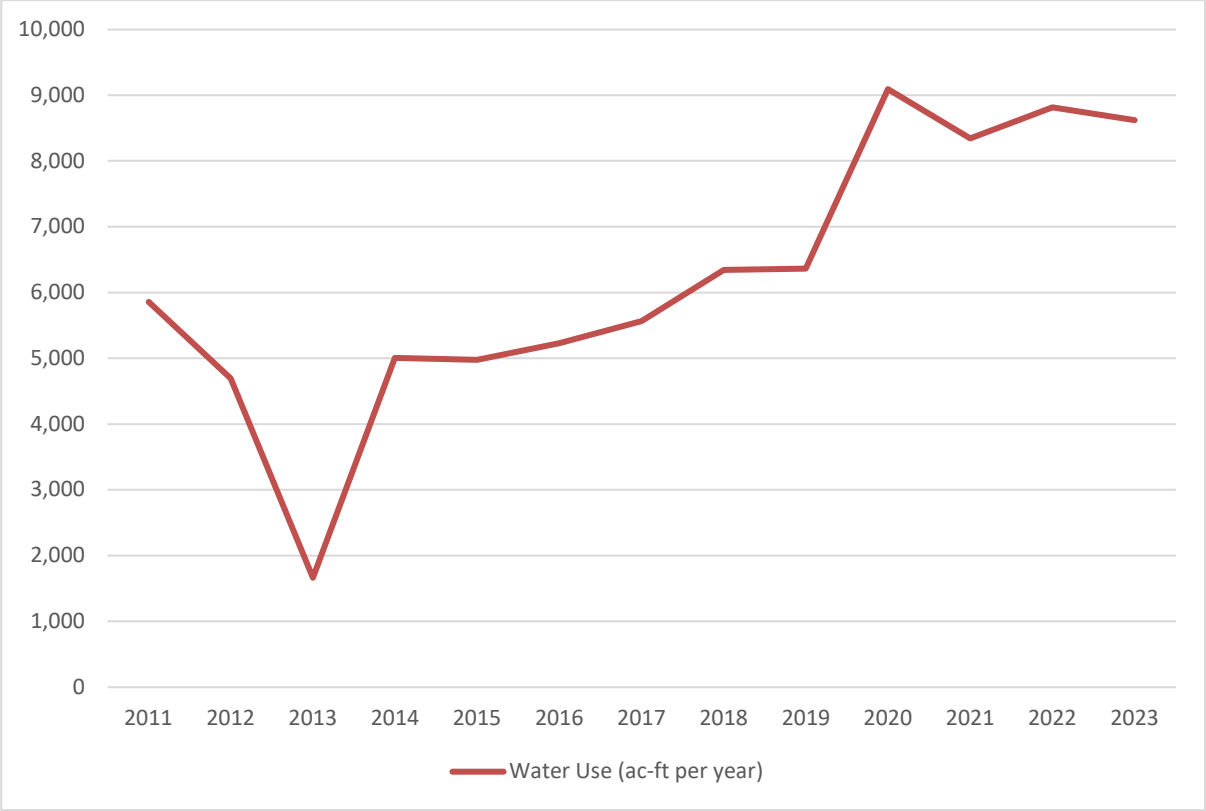
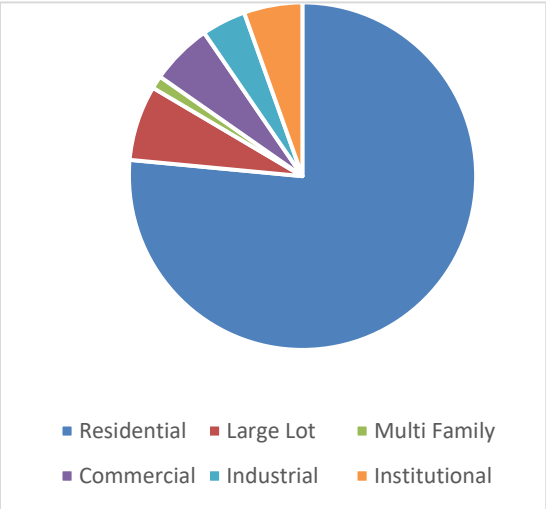


Figure 3. Annual Water Use

Currently most of the water serves residential connections, however, the system also includes:



- 78 commercial connections
- 38 industrial connections
- 45 institutional connections (schools and churches)
- Several open space connections

Figure 4. Water Use by Land Use

2.3 Existing Water Rights and Available Water

In 2020, Barr Engineering completed a study that projected that Eagle Mountain City is party to 30,198 ac/ft year of water rights. Which included 5031 ac/ft of rights that would require ownership deed and change applications as well as 14,300 ac/ft year from CUWCD. However, the study also states that Eagle Mountain City's potential reliable water supply is only 28,496 ac-ft/yr. To utilize the full amount additional wells and a new pump station from CWP will be required.

Every new development is now required to provide water rights in order to be allowed to develop. This will likely limit growth within the City.

2.4 Conservation

Utah's statewide conservation goal is to reduce water use per capita by 15% by 2030. To accomplish this goal, regional goals have been set considering a variety of different factors and public input. Eagle Mountain is part of the Provo River region which has a goal to reduce water usage by 19% over its 2015 water use numbers or an average water use per capita across the basin of 179 gallons per capita per day (gpcd).

In 2015 Eagle Mountain was using on average 163.6 gpcd so the City's goal is to reduce water to 139 gpcd. In 2023 and 2024, the City saw a reduction of at least 15% and met the current goals.

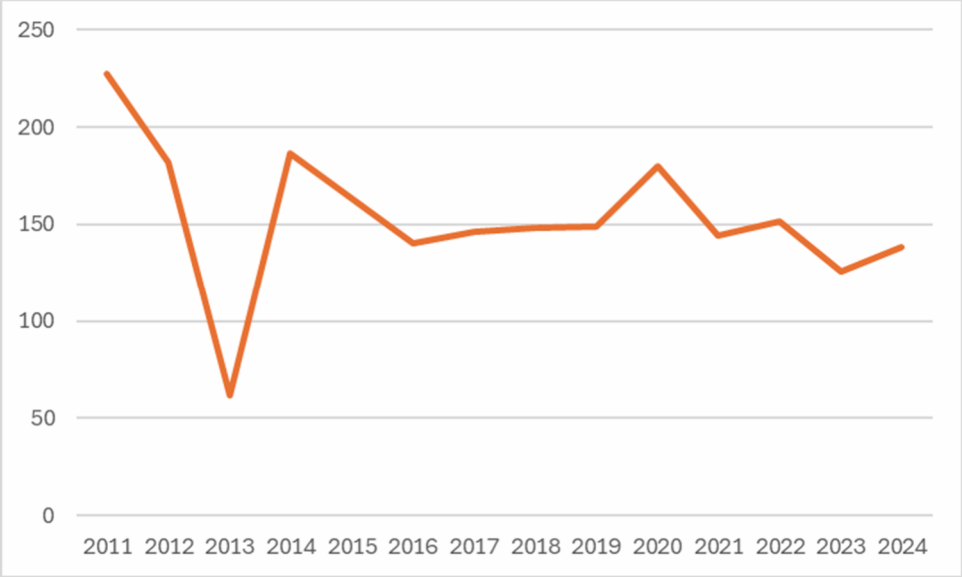


Figure 5.Water Use per Capita per day

By 2060 the water use goal will be to have reduced water use by 30%, therefore, the City should continue to implement additional water saving measures and continue with the current water conservation strategies in place, which include:

- **Water Rates** - Eagle Mountain Currently charges a base rate based on Meter Size and then an additional tiered water use rate based on water use and Land Use. Table 4 details the current tiered water rates

Table 4. Current Eagle Mountain Tiered Water Rates

	TIER 1		Tier 2		Tier 3		Tier 4	
	Quantiy (in thousands)	Rate (per 1000 gal)	Quantiy (in thousands)	Rate (per 1000 gal)	Quantiy (in thousands)	Rate (per 1000 gal)	Quantiy (in thousands)	Rate (per 1000 gal)
Residential	0-65	$ 1.38		$ 1.46	115-165	$ 1.52	Over 165	1.58
Large Residential	0-120	$ 1.38	120-170	$ 1.46	170-230	$ 1.52	Over 230	1.58
Commercial	0-170	$ 1.38	170-220	$ 1.46	Over 230	$ 1.52		
Institutional	0-500	$ 1.38	500-750	$ 1.46	Over 750	$ 1.52		
Industrial		$ 1.58		$ 1.58		$ 1.58		

- **Smart Irrigation Controls**- The City has recently upgraded all of its sprinkler heads to work off of smart timers which automatically adjust the water when it rains or if the temperatures drop.
- **Limiting Front lawn irrigation**- In 2023, Eagle Mountain approved measures to limit irrigation of front yards to 50% for new developments. Looking at 100 random lots throughout the city, this

saves an average of approximately 0.04 gpm on the peak flow rate or approximately 0.01 af/year per lot.

- **Limiting Irrigation Times:** City Code prohibits irrigating between the hours of 10:00 AM and 6:00 PM. This helps reduce the amount of evaporation thus reducing the overall irrigation need. First offense the water user will receive a written warning, the second offence the water service will be terminated and be subject to a $100 reconnection fee.

3.1 Growth Projections

Growth Projections

Eagle Mountain is growing rapidly and is among the fastest growing cities in the State. Per the Economic Development Master plan that was completed in 2023, it is assumed that the City will grow at an estimated 5,200 additional people each year. This is equivalent to an additional 1,410 residential connections every year. The city has a population of 75,000 or the equivalent of 20,194 residential connections(ERC). See Figure 6 for the projected growth.

Because of limited water rights (discussed in Section 2.3) it is anticipated that the number of ERC will be limited. Currently, any new development needs to provide water rights before it can be built. However, because the location of growth cannot be projected this master plan utilizes the full buildout projections that the Economic development plan makes.

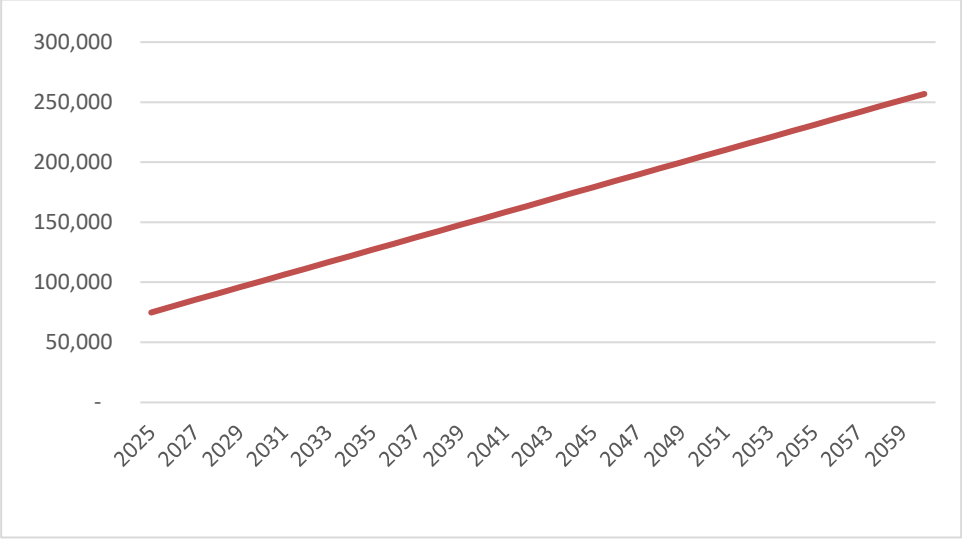


Figure 6. Population Projections

4.1 System Improvements

4.1.1 Pressure Zones

As stated earlier, Eagle Mountain City's water system is currently divided into nine pressure zones. At the City's full build out, an additional five pressure zones will be necessary. Within the City's water model, new pressure zones were created to maintain water pressures within a desired range of 70-120 psi. In some instances, this pressure range was expanded to eliminate the need for additional smaller pressure zones, but the minimum service levels were still maintained. See Figure 5 and Exhibit 3.5 for a summary of the pressure zones.

Table 5. Pressure Zones

Pressure Zone	Served from	HGL	40 psi Elevation	70 psi Elevation	120 psi elevation	140 psi elevation
Zone 1	Tank 1 and 7	5101	5008.6	4939.3	4823.8	4777.6
Ranches	PRVs	5070	4977.6	4908.3	4792.8	4746.6
Zone 3	Tank 3 and 4	5180	5087.6	5018.3	4902.8	4856.6
Zone 4	Tank 4 and 6	5320	5227.6	5158.3	5042.8	4996.6
Zone 5	PRVs	5370	5277.6	5208.3	5092.8	5046.6
Ox Bridge	PRVs	5231	5138.6	5069.3	4953.8	4907.6
Bridge	PRVs	5233.7	5141.3	5072	4956.5	4910.3
WH Mid	White Hills tanks	5300	5207.6	5138.3	5022.8	4976.6
WH Lower	PRVs	5198	5105.6	5036.3	4920.8	4874.6
Future Zone 6		4955	4862.6	4793.3	4677.8	4631.6
Future Zone 7		5540	5447.6	5378.3	5262.8	5216.6
Future Zone 8		5540	5447.6	5378.3	5262.8	5216.6
Future Zone 9		5750	5657.6	5588.3	5472.8	5426.6
Future Zone 10		5950	5857.6	5788.3	5672.8	5626.6

Most of the new pressure zones will be created in undeveloped areas on the eastern side of the City as development moves east into the Lake Mountain area. If some of these areas are determined to be unbuildable, some of the planned pressure zones may not be needed.

4.1.2 Storage Capacity Improvements

By the year 2060, the City will require over 40.8 million gallons of equalization storage. If the growth rate follows projections, additional storage will generally be required every three years. See Table 6 for the additional storage required and the estimated year the additional storage will be needed.

Table 6. Storage Improvements Required Through 2060

Year	Population	growth	growth rate	ERU	Required Equilization Storage (gal)	Available Equilization Storage (gal)	Excess/ Deficiency (gal)	Added Storage (gal)
2025	75,000	5200	6.93%	20,194.54	11,652,247	14,510,000	2,857,753	3,320,535
2026	80,200	5200	6.48%	21,503.91	12,407,754	14,510,000	2,102,246	
2027	85,400	5200	6.09%	22,813.28	13,163,262	14,510,000	1,346,738	
2028	90,600	5200	5.74%	24,122.65	13,918,769	18,310,000	4,391,231	4,000,000
2029	95,800	5200	5.43%	25,432.02	14,674,276	18,310,000	3,635,724	
2030	101,000	5200	5.15%	26,741.39	15,429,784	18,310,000	2,880,216	
2031	106,200	5200	4.90%	28,050.76	16,185,291	18,310,000	2,124,709	
2032	111,400	5200	4.67%	29,360.14	16,940,798	18,310,000	1,369,202	
2033	116,600	5200	4.46%	30,669.51	17,696,306	22,110,000	4,413,694	4,000,000
2034	121,800	5200	4.27%	31,978.88	18,451,813	22,110,000	3,658,187	
2035	127,000	5200	4.09%	33,288.25	19,207,320	22,110,000	2,902,680	
2036	132,200	5200	3.93%	34,597.62	19,962,827	22,110,000	2,147,173	
2037	137,400	5200	3.78%	35,906.99	20,718,335	25,435,000	4,716,665	3,500,000
2038	142,600	5200	3.65%	37,216.36	21,473,842	25,435,000	3,961,158	
2039	147,800	5200	3.52%	38,525.74	22,229,349	25,435,000	3,205,651	
2040	153,000	5200	3.40%	39,835.11	22,984,857	25,435,000	2,450,143	
2041	158,200	5200	3.29%	41,144.48	23,740,364	28,760,000	5,019,636	3,500,000
2042	163,400	5200	3.18%	42,453.85	24,495,871	28,760,000	4,264,129	
2043	168,600	5200	3.08%	43,763.22	25,251,379	28,760,000	3,508,621	
2044	173,800	5200	2.99%	45,072.59	26,006,886	28,760,000	2,753,114	
2045	179,000	5200	2.91%	46,381.96	26,762,393	32,085,000	5,322,607	3,500,000
2046	184,200	5200	2.82%	47,691.34	27,517,900	32,085,000	4,567,100	
2047	189,400	5200	2.75%	49,000.71	28,273,408	32,085,000	3,811,592	
2048	194,600	5200	2.67%	50,310.08	29,028,915	32,085,000	3,056,085	
2049	199,800	5200	2.60%	51,619.45	29,784,422	35,410,000	5,625,578	3,500,000
2050	205,000	5200	2.54%	52,928.82	30,539,930	35,410,000	4,870,070	
2051	210,200	5200	2.47%	54,238.19	31,295,437	35,410,000	4,114,563	
2052	215,400	5200	2.41%	55,547.56	32,050,944	38,735,000	6,684,056	3,500,000
2053	220,600	5200	2.36%	56,856.94	32,806,452	38,735,000	5,928,548	
2054	225,800	5200	2.30%	58,166.31	33,561,959	38,735,000	5,173,041	
2055	231,000	5200	2.25%	59,475.68	34,317,466	38,735,000	4,417,534	
2056	236,200	5200	2.20%	60,785.05	35,072,973	38,735,000	3,662,027	
2057	241,400	5200	2.15%	62,094.42	35,828,481	41,110,000	5,281,519	2,500,000
2058	246,600	5200	2.11%	63,403.79	36,583,988	41,110,000	4,526,012	
2059	251,800	5200	2.07%	64,713.16	37,339,495	41,110,000	3,770,505	
2060	257,000	5200	2.02%	66,022.53	38,095,003	41,110,000	3,014,997	

4.1.2a Storage Capacity South of Unity Pass

The area south of Unity Pass is currently served by two tanks totaling 4,500,000 gallons of storage. By themselves, these tanks can provide service to approximately 6,900 ERC. The current system

has approximately 5,615 connections. Although this is more than what the two tanks can serve, tanks in White Hills and north of Unity Pass can service this area as well.

In addition, a new 4 million gallon tank is currently being designed in this zone which will be able to supply an additional 5,921 ERC.

4.1.2b Storage Capacity North of SR-73

The area north of SR-73 is fed from two tanks, a 600,000-gallon tank and a 2.5-million-gallon tank. It is estimated that 1,134 connections currently exist north of SR-73. The storage in this zone is enough for 4,600 ERC.

4.1.2c Storage Capacity Zone 5

Currently, Tank 5 doesn't have any lots connected to it. This tank currently serves the main zone, but once lots are connected in this zone it will have the ability to serve 2,863 ERC.

4.1.2d Storage Capacity White Hills

Currently, White Hills is fed from two small tanks, with a combined total storage volume of 679,500 gallons. A new 4 million gallon tank is now in operation. With Tank 8 in operation the White Hills tanks have been abandoned. Per the Firefly West system IFFP, an additional tank will be required in the next 10 years to provide additional storage for the area.

4.1.3 Source Capacity Improvements

Because the City system is currently below the required source capacity of 21,190 gpm reliable source, several projects are in the design/construction stages to alleviate the shortages. These source improvements include improvements to Well 5 and the White Hills Wells and the construction of two new wells, Well 7 and Well 8. In total, the current projects should add approximately 10,900 gpm of new source capacity which will be constructed over the next couple of years.

Even with these projects, as a result of the rapid growth, the City will still be just below its source requirement and the City will need to continue with ongoing source projects. See *Table 7* for the anticipated source requirements and timing. It should be noted that when constructing a well, the ultimate capacity is uncertain until the well is built. Therefore, if a constructed well does not provide the anticipated capacity, multiple smaller wells will need to be constructed over the same time frame to achieve the necessary source requirement.

Although full buildout shows locations of future wells, this study did not include the hydrogeological evaluation needed to know whether there is adequate water supply to support a well. In addition, as discussed in Section 2.3, the aquifers cannot support the full buildout, and therefore, it is not possible to build all the wells listed in Table 7.

Table 7. Source Improvements Required Through 2060

Year	Population	growth	growth rate	ERU	Required Source (gpm)	Available Source (gpm)	Excess/ Deficiency (gpm)	Amount Added (gpm)
2025	75,000	5200	6.93%	20,194.54	21,190	19,800	(1,390)	4,067
2026	80,200	5200	6.48%	21,503.91	22,564	22,466	(98)	2,666
2027	85,400	5200	6.09%	22,813.28	23,938	22,466	(1,472)	
2028	90,600	5200	5.74%	24,122.65	25,312	25,466	154	3,000
2029	95,800	5200	5.43%	25,432.02	26,686	28,466	1,780	3,000
2030	101,000	5200	5.15%	26,741.39	28,060	35,466	7,406	7,000
2031	106,200	5200	4.90%	28,050.76	29,434	35,466	6,032	
2032	111,400	5200	4.67%	29,360.14	30,808	35,466	4,658	
2033	116,600	5200	4.46%	30,669.51	32,182	35,466	3,284	
2034	121,800	5200	4.27%	31,978.88	33,556	35,466	1,910	
2035	127,000	5200	4.09%	33,288.25	34,930	38,466	3,536	3,000
2036	132,200	5200	3.93%	34,597.62	36,303	38,466	2,163	
2037	137,400	5200	3.78%	35,906.99	37,677	41,466	3,789	3,000
2038	142,600	5200	3.65%	37,216.36	39,051	41,466	2,415	
2039	147,800	5200	3.52%	38,525.74	40,425	41,466	1,041	
2040	153,000	5200	3.40%	39,835.11	41,799	44,466	2,667	3,000
2041	158,200	5200	3.29%	41,144.48	43,173	44,466	1,293	
2042	163,400	5200	3.18%	42,453.85	44,547	47,466	2,919	3,000
2043	168,600	5200	3.08%	43,763.22	45,921	47,466	1,545	
2044	173,800	5200	2.99%	45,072.59	47,295	50,466	3,171	3,000
2045	179,000	5200	2.91%	46,381.96	48,669	50,466	1,797	
2046	184,200	5200	2.82%	47,691.34	50,043	54,466	4,423	4,000
2047	189,400	5200	2.75%	49,000.71	51,417	54,466	3,049	
2048	194,600	5200	2.67%	50,310.08	52,791	54,466	1,675	
2049	199,800	5200	2.60%	51,619.45	54,165	54,466	301	
2050	205,000	5200	2.54%	52,928.82	55,539	58,466	2,927	4,000
2051	210,200	5200	2.47%	54,238.19	56,912	58,466	1,554	
2052	215,400	5200	2.41%	55,547.56	58,286	58,466	180	
2053	220,600	5200	2.36%	56,856.94	59,660	62,466	2,806	4000
2054	225,800	5200	2.30%	58,166.31	61,034	62,466	1,432	
2055	231,000	5200	2.25%	59,475.68	62,408	62,466	58	
2056	236,200	5200	2.20%	60,785.05	63,782	66,466	2,684	4000
2057	241,400	5200	2.15%	62,094.42	65,156	66,466	1,310	
2058	246,600	5200	2.11%	63,403.79	66,530	69,566	3,036	3100
2059	251,800	5200	2.07%	64,713.16	67,904	69,566	1,662	
2060	257,000	5200	2.02%	66,022.53	69,278	69,566	288	

4.1.3a Source Capacity South of Unity Pass

The current system has a bottleneck that limits the flow from north of Unity Pass into the City Center. Therefore, this area has also been evaluated separately. It is estimated that the area currently has 5,615 connections and requires 6,401 gpm of source capacity.

The area can utilize approximately 4,500 gpm from the area north of Unity Pass, which has the majority of the system's existing source capacity. The area is also fed from Well 1, which has a safe yield of 2,133 gpm

Therefore, under normal operations the City has the required source capacity it needs to meet the demand of the area. Well 8 is currently under construction which will help provide the required source capacity for the continued growth and redundancy in the area.

The area can also be fed from the White Hills Wells, which currently have a maximum capacity of 1,400 gpm. The capacity of these wells is planned to be expanded. One of the two wells would be planned to operate as a redundant source to the White Hills Zone until additional supply can be pulled from CUWCD Pump Station #2 and provide redundancy to the area.

In addition, several projects have been evaluated to increase the flow from the City's main sources to the City Center. The projects will continue to add redundancy to the area and provide additional supply to help meet the demands of the projected growth.

4.1.3b Source Capacity North of SR-73

The area north of SR-73 is fed from two pump stations that lift water from the main City source into this area's two storage tanks. It is estimated that 1,134 connections exist north of SR-73. Because these lots are typically larger, we have assumed that each lot utilizes approximately 1.23 gpm/lot. This equates to a total flow for the area of 1,395 gpm. The two pump stations can pump 1,457 gpm. Both of the pump stations include a backup pump and should be able to keep up with estimated demand.

During July 2024, the area struggled to keep up with demand. After further evaluation, it appears that water being pumped to this zone is being discharged to other areas of the city, utilizing supply that is needed for this zone.

Because the pumps operate continuously during the summer, a new pump station is currently under construction and is planned to be operational by the beginning of June 2026.

4.1.3c Source Capacity Zone 5

Currently, the pump station that serves Zone 5 does not feed lots, and therefore, has enough capacity to serve the Zone. Once lots are connected to the Zone or the connection from Tank 5 to

Lake Mountain Road is made, a pump and PRV should be adjusted to ensure that the capacity is being utilized by the Zone.

4.1.3d Source Capacity White Hills

Currently, the two White Hills Wells each have a capacity of 1,400 gpm however only one can operate at a time. Per the Firefly IFFP, they will be expanding the Cooke well to 2,500 gpm. With the additional anticipated growth in the Firefly IFFP, these wells will be over capacity. The Draft Firefly Master Plan anticipates using water from the CUWCD to address the shortfall but makes no recommendation on how that flow will reach this area. Firefly will need to provide a solution before exceeding the capacity of the Cooke wells

An additional well has been recommended to help alleviate the shortfall.

4.1.4 Distribution Improvements

Currently, the largest bottleneck in the system is getting water over Unity Pass. Several projects will be needed to take all of the available source in the area.

As the Second CUWCD pump station is built the Distribution system along SR-73 will become the new bottleneck area and several capacity improvements will be needed along that stretch to deliver water from the northeast of the City to the southwest where it is anticipated that most of the growth will occur.

With the addition of Well 8, 3,000 ft of 16” line will need to be installed from this new well connecting into the line in Pole Canyon Blvd west of the power line and heading east up to the proposed tank along Pole Canyon Blvd east of Lake Mountain Road. The line heading west will require a PRV station, the line heading to the tank will need to tie into the higher pressure line.

Beyond these areas of concern, water lines will be required to provide water for undeveloped areas as they grow. See Exhibit 3.2 for the full buildout map of the system and Appendix B for a list of the proposed projects through buildout.

5.0 Conclusion and Recommendations

Like many communities in the west, Eagle Mountain City is growing rapidly with limited resources to acquire and expand its water system to meet the growing needs. The improvements recommended in Section 4.1 were outlined based on projected growth rates and anticipated locations of future development. Since growth rates and location of growth may vary from projections, some of the recommended improvements may be needed sooner or later than anticipated.

The current water system is short on source supplies and storage, even with the current projects, additional improvements will continue to be required to meet the LOS standards. Because of available water, the system will be limited on growth and water conservation measures will become more and more important.

Beyond the immediate improvements, Eagle Mountain City should begin planning strategic locations for additional storage projects and development of new water sources. As the City continues to experience rapid growth, we recommend that the Master Plan and Impact Fee Facility Plan be reviewed and updated every few years and the system model be kept up to date.

Appendix A

Exhibits

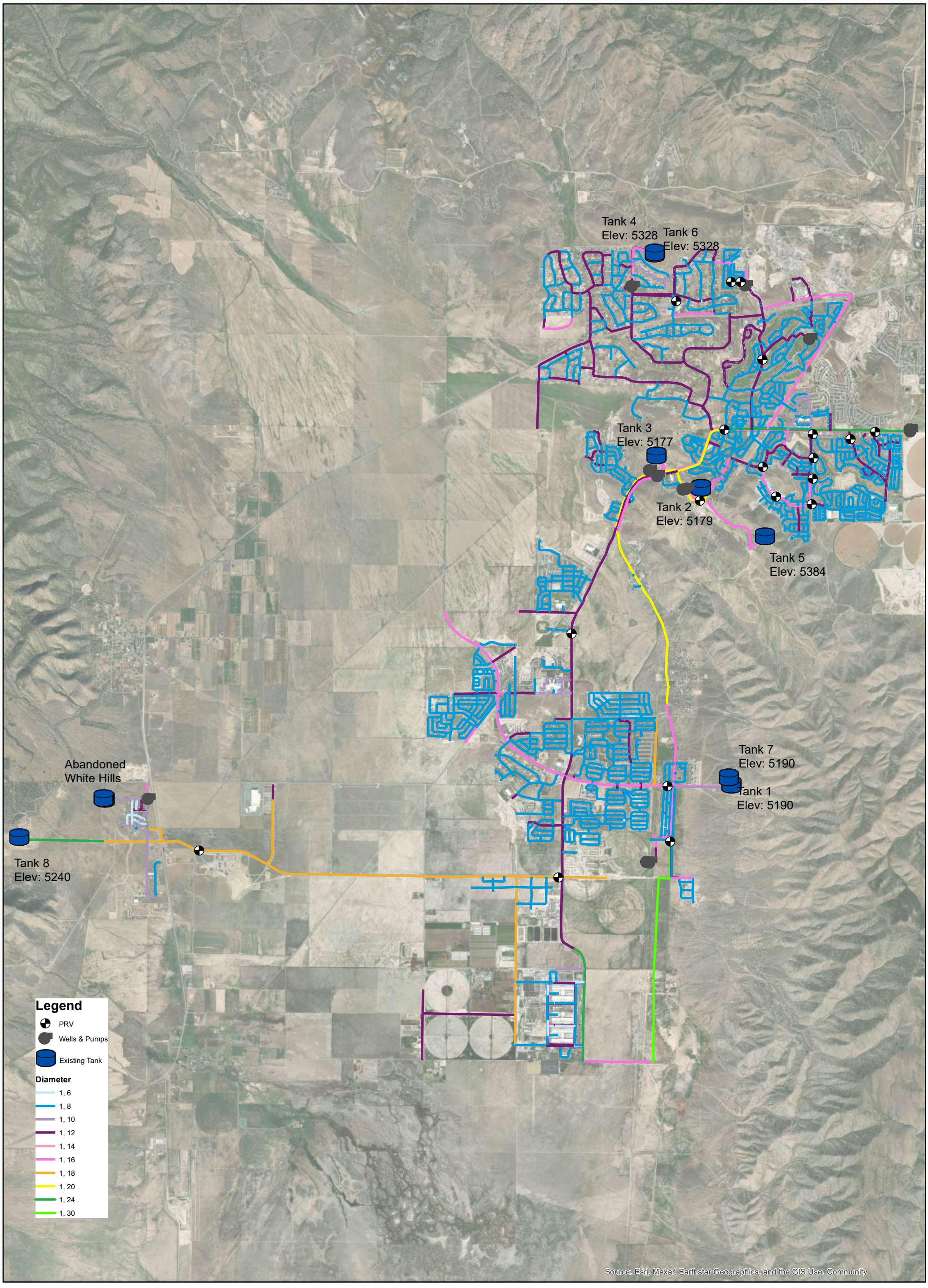


Figure 3.1 Existing Water System

PSOMAS

EAGLE MOUNTAIN

N

0 4,050 8,100 Feet

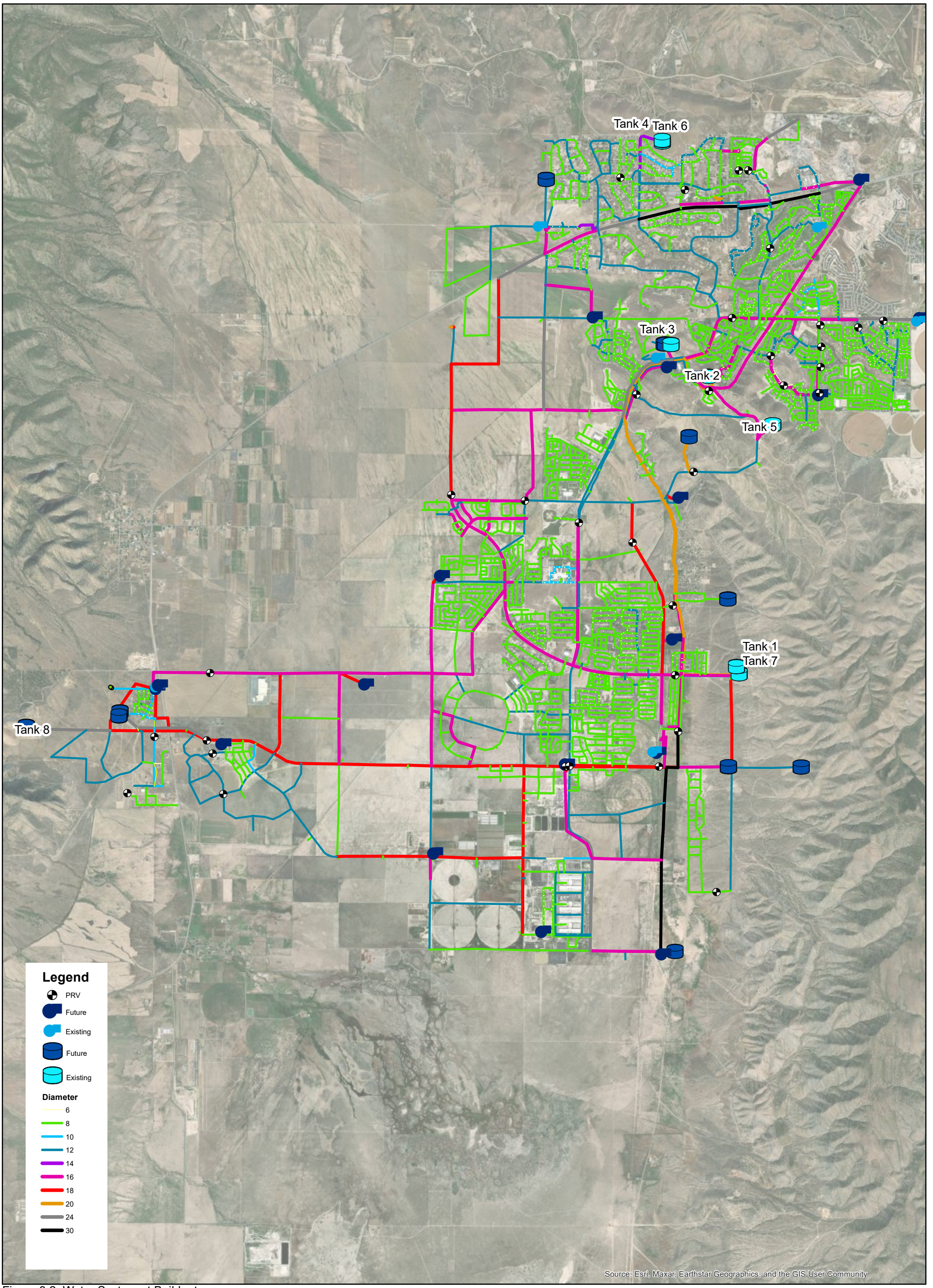


Figure 3.2 Water System at Buildout

PSOMAS

EAGLE MOUNTAIN

N

0 4,050 8,100 Feet

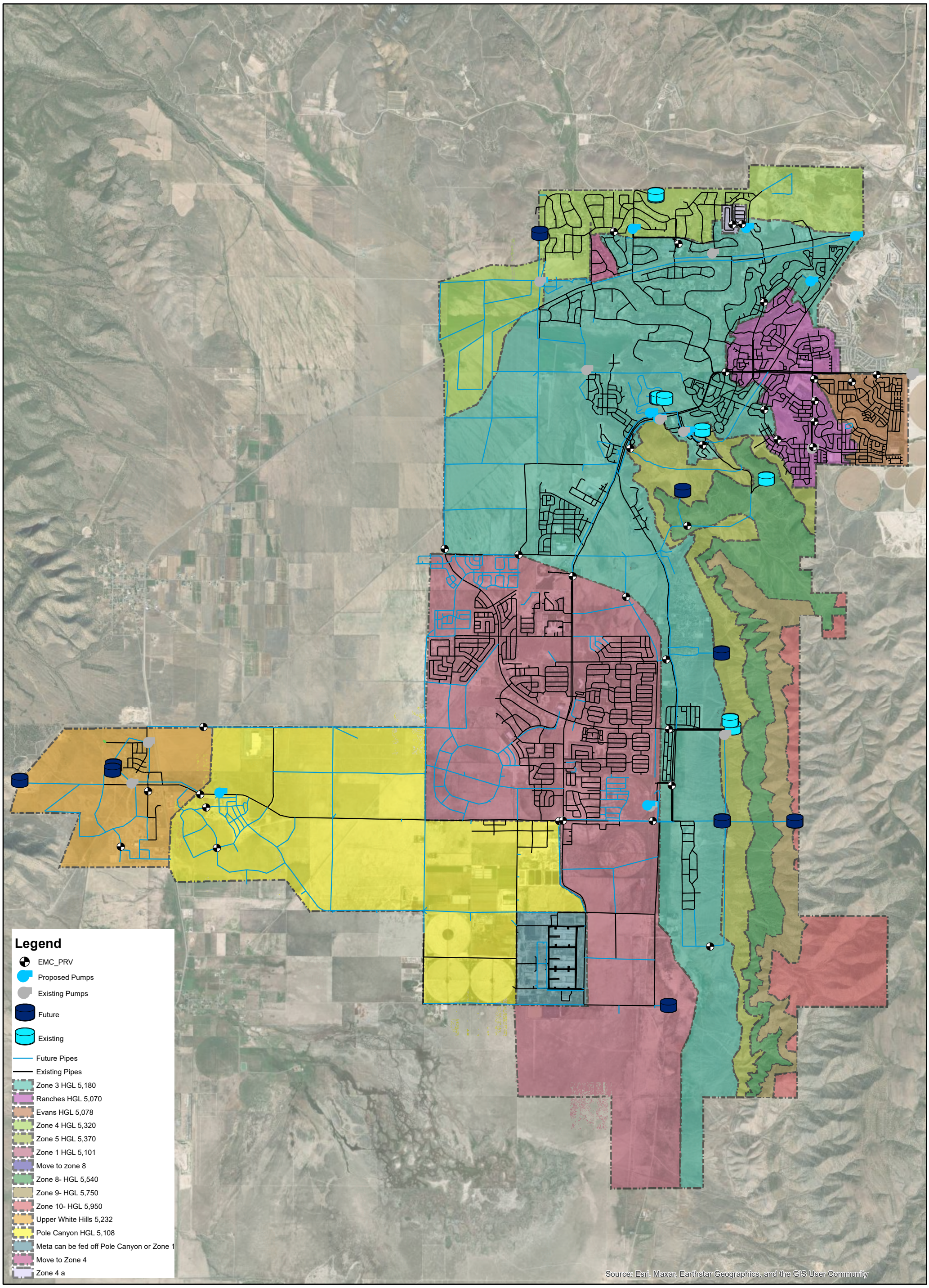


Figure 3.3 Pressure Zones

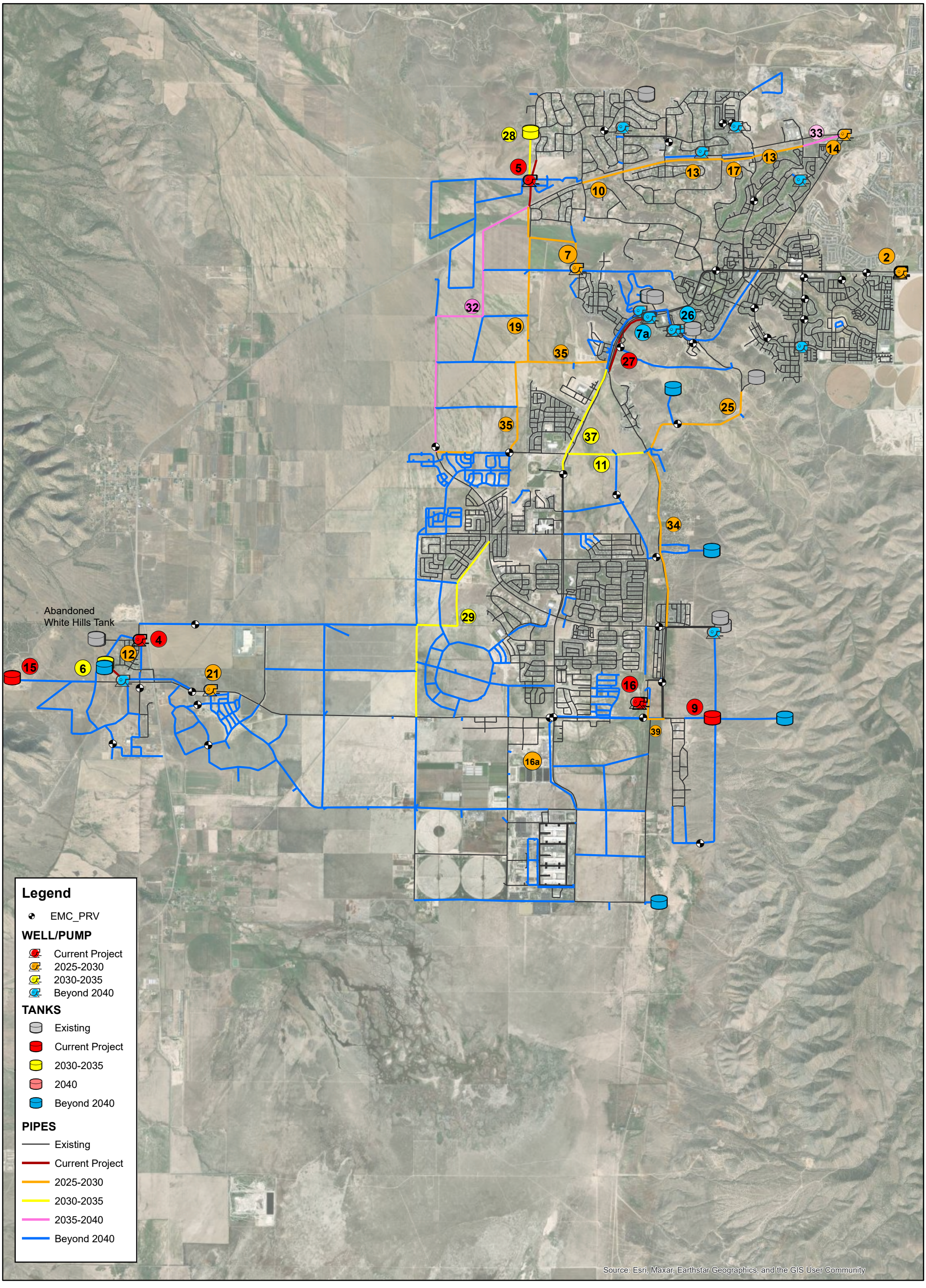


Figure 3.4 Recommended Projects

Appendix B

Recommended Project List

Appendix C

Results

- Peak Day Water Model Results
- Peak instant Water Model Results
- Available Fire Flow Model Results

EAGLE MOUNTAIN WATER PROJECT LIST

		Current Projects	Approximate year needed	Existing Road	System Project for Future Growth	Projected cost
7a	Source	Well 7 (Unity Pass)	2025	NA	Existing requirements	$ 5,800,000
16	Source	Well 8 (Adjacent to Well 1)	2025	NA	Existing requirements	$ 5,800,000
4	Source	White Hills Well Improvements	2025	NA	Existing requirements	$ 2,000,000
26	Source	Well 5 Improvements	2025	NA	Existing requirements	$ 2,000,000
15	Storage	4 MG White Hills Tank	2025	NA	Existing/ WH growth	$ 6,500,000
9	Storage	4MG Tank 9 (South of tank 1)	2026	NA	Future Growth	$ 6,500,000
5	System Capacity	Belle Street Booster	2025	Yes	Existing	$ 800,000
27	System Capacity	Pony Express Parallel line	2025	Yes	Existing requirement/redundancy/CWP water to City	$ 1,061,910
						$ 30,461,910

		Next 5 years (2025-2030)	Approximate year needed	Existing Road	System Project for Future Growth	
7	source	LoneTree Well (Well 9) (3000 gpm reliable source)	2028	NA	Future Growth	$ 5,800,000
21	source	WH well (3000 gpm reliable source)	2029	NA	Future Growth	$ 5,800,000
2	source	Remaining Capacity CWP (Only a contract ammendment no infrastructure)	2030	NA	Future Growth	$ -
34	System Capacity	Lake Mountian From Tank 5 connection to Eagle Mountain Blvd		Yes	Needed to utilize CWP	$ 3,394,364
10	System Capacity	Complete Line on SR-73 (24" & 30")	2028	Yes	Needed to utilize CWP	$ 2,386,459
35	System Capacity	Install Water Line from Pony Express to the Existing Line in Mid Valley Road	2028	No	Needed to utilize CWP, LoneTree and future CWP	$ 3,376,709
19	System Capacity	Water line in Airport Road	2028	Yes/no	Needed to utilize CWP, LoneTree and future CWP	$ 1,867,815
25	System Capacity	Tank 5 to Lake Mountain Road (this project will also require improvements to the booster that feeds tank 5	2030	No	Needed to utilize CWP	$ 1,775,862
14	source	North CWP	2030	NA	Future Growth	$ 10,300,000
13	System Capacity	Parallel line in SR73	2030	Yes	Needed to Utilize North CWP	$ 1,357,000
17	System Capacity	Parallel line in SR73	2030	Yes	Needed to Utilize North CWP	$ 411,240
12	ex Deffieciency	upgrade 6" white hills			Existing requirements	$ 500,000
16a	other	New public works (cost shared with Waste water)				$ 5,000,000
39	System Capacity	16" line from Well 1 to new tank	2026	Yes	Need to utilize Well 8	$ 817,560
						$ 42,787,009

		5-10 years (2030-2035)	Approximate year needed	Existing Road	System Project for Future Growth	
6	storage	WH Tank (4 MG)	2035	NA	Future Growth (Firefly) IFFP)	$ 6,800,000
28	storage	Tank West of Tank 4	20		Helps with New CWP	$ 6,800,000
37	System Capacity	12" Parallel line in Pony Express from lake mountain road to PRV		Yes	Future Growth	$ 959,241
29	System Capacity	Line from Eagle mountain Blvd to Pole Canyon		No	Future Growth	$ 2,690,274
11	System Capacity	Install 12" line between lake mountain and pony express	2030	N/A	Future Growth	$ 471,494
						$ 17,721,009

EAGLE MOUNTAIN WATER PROJECT LIST

		Beyond 10 years (2035-2040)	Approximate year needed	Existing Road	System Project for Future Growth	Projected cost
30	source	3000 gpm well (Pole Canyon Or City Center)	2035	NA	Future Growth	$ 5,800,000
38	source	3000 gpm well (Pole Canyon Or City Center)		NA	Future Growth	$ 5,800,000
31	source	Adding another pump to the North CWP	2039	NA	Future Growth	$ 1,000,000
32	System Capacity	Line along Eagle mountain Blvd	2039	Yes	Future Growth (Needed to Utilize North CWP)	$ 4,000,000
33	System Capacity	Parallel line in SR73	2039	Yes	Future Growth (Needed to Utilize North CWP)	$ 1,019,784
37	System Capacity	12" Parallel line in Pony Express from lake mountain road to PRV		Yes	Future Growth	$ 566,587
16	System Capacity	12" Parallel line in Pony Express from PRV to Eagle Mountain BLvd		Yes	Future Growth	$ 1,129,068
						$ 19,315,439

Culinary Water Impact Fee Facility Plan

EAGLE MOUNTAIN, UT

July, 2025

Prepared for:
Eagle Mountain City
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APPENDIX A. EXHIBITS

Exhibit 3.1 – Eagle Mountain Existing Water System
Exhibit 3.2 – Eagle Mountain Existing System at Buildout
Exhibit 3.3 – Eagle Mountain Current and Planning Period Improvements
Exhibit 3.4 – Eagle Mountain Pressure Zones

APPENDIX B. BUILDOUT PROJECTS COST OPINION

1.1 Introduction

In November 2021, a Capital Facilities Plan (CFP) was completed for Eagle Mountain City titled, Eagle Mountain Impact Fee Facilities Plan, November 2021. Recently, Eagle Mountain has been experiencing enormous growth, growing from 13,118 Equivalent Residential Units (ERU) in 2021 to approximately 20,200 ERUs in 2024.

1.2 Definitions

CUWCD	Central Utah Water Conservancy District
ERU	Equivalent Residential Units
DDW	Division of Drinking Water
IFFP	Impact Fee Facilities Plan
psi	pounds per square inch
gpm	gallons per minute
PRV	Pressure Reducing Valve
LOS	Level of service
SID	Special Improvement District
IFC	International Fire Code

1.2.1 Equivalent Residential Connection (ERU)

For ease of calculations in water master plans, land uses other than residential are converted to ERU's. For this report, these values were calculated from actual water usage data provided by Eagle Mountain City from 2023. See Table 1 for the ERU conversions used for this IFFP.

Table 1. Equivalent Residential Connections Conversions

Type	ERC
Large Lots (Zone 4)	1.14
All other Residential	1.00
Commercial	12.83
Institutional	21.13
Condos	0.87
Industrial	18.90

1.3 Level of Service

The State of Utah Division of Drinking Water (DDW) Rules and the International Fire Code (IFC) govern the minimum Level of Service (LOS) that Eagle Mountain City Water Department is required to provide. The current LOS within the water system are stated as follows:

Storage

- 577 gallons of storage per ERU for indoor and outdoor use
- 2,848 gallons per irrigated acre for outdoor use in Zone 4
- Emergency storage is based upon an assessment of risk and the desired degree of system dependability (percent after fire storage is considered).
- Fire storage for the largest building within the zone

Source

- 1,511 gallons per day of source capacity for indoor and outdoor use per ERU
- Per conversation with the DDW, safe yield of a well is assumed to be two thirds of the pump capacity

Minimum Water Pressure Requirements

- 40 psi during peak day demands
- 30 psi during peak instantaneous demands
- 20 psi during peak day demands with fire

Water Rights

- 0.53 acre-feet per ERU
- 2.5 acre-feet per irrigated acre

In addition to the State rule requirements, the City requires developments to maintain 30 psi at any moment during the modeled peak hour of the peak day scenario for new developments, assuming either Well 1 or Well 2 is out of service.

2.1 Existing System

Eagle Mountain City currently provides water to customers in Eagle Mountain and the White Hills area. For discussion purposes the City has been broken into 3 areas: the West, the North, and the South (or City Center). Projects have been constructed to connect the White Hills water system into the City's system. See Figure 1 for the location of each Service Area and Exhibit 3.1 for a map of the existing water system.

From the City's billing information, it was determined that there is currently a total of 15,152 equivalent residential connections which equates to a peak day flow of 17,273 gpm.

The City has a separate secondary system in the south part of the City that will remove some public outdoor use from the culinary system. The secondary system is currently also serving limited areas of residential irrigation however, most residential or commercial irrigation will continue to be served by the culinary system.

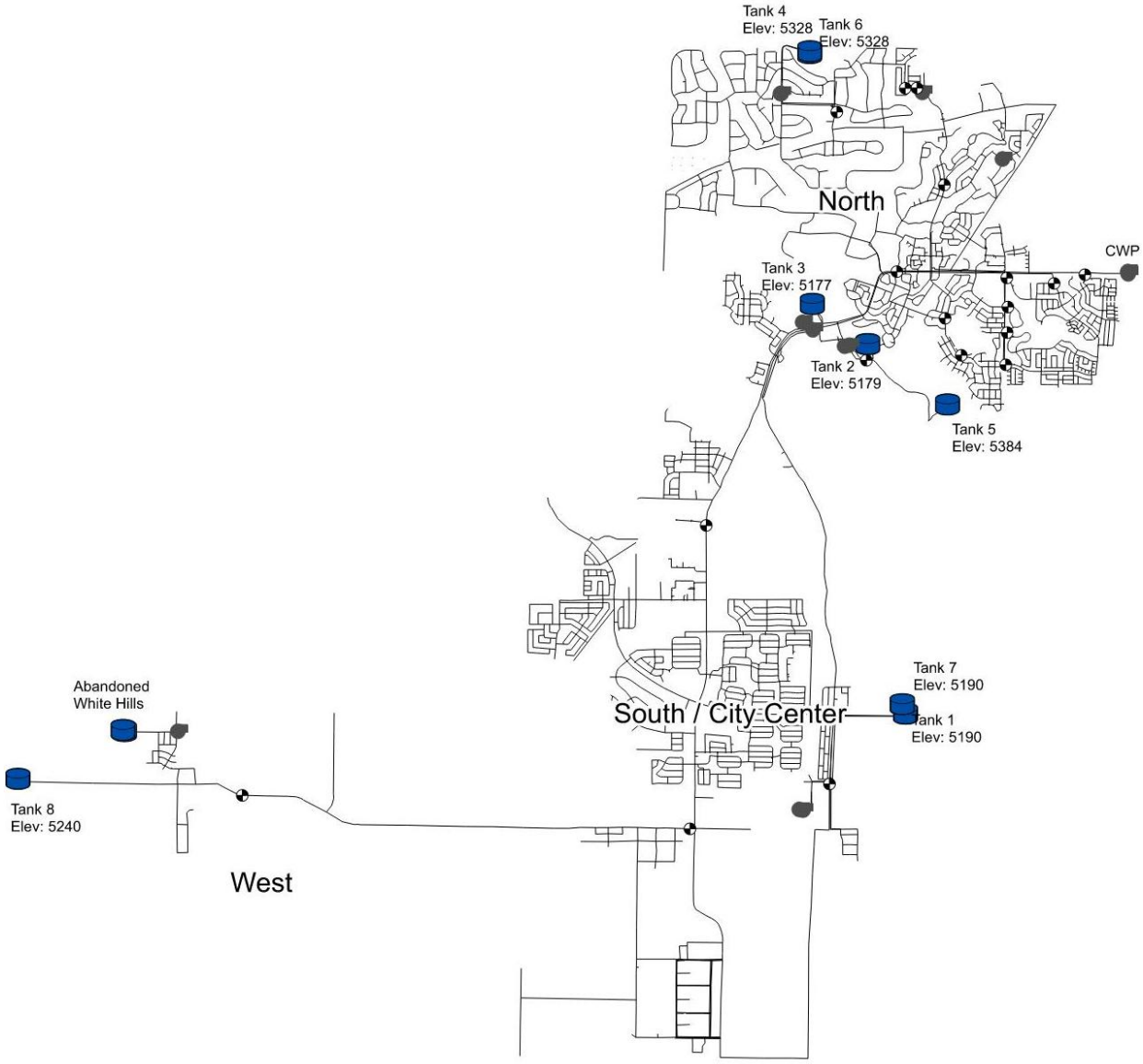


Figure 1. Eagle Mountain's Water System

The City is divided into eight pressure zones including three zones in White Hills, with most of the current development occurring in Zone 1. See Table 2 for a list of the pressure zones and pressure

elevations. The water for the pressure zones is currently supplied by nine tanks, which are normally filled by five wells and water from the CWP pump station.

2.2 Existing Project Funding

Several facilities in the existing system were funded using Special Improvement District (SID) Bonds, reimbursement agreements, and Revenue bonds however, these have currently all been paid off.

3.1 Planning Period and Growth Projections

Planning Period

To evaluate City growth and system improvements as part of this IFFP, a ten-year planning period will be used to identify specific system needs. To assist the City in long-range planning, additional anticipated projections to build out (year 2060) will also be evaluated.

Growth Projections

Eagle Mountain is growing rapidly and is among the fastest growing cities in the State. Per the Economic Development Master plan that was completed in 2023, it is assumed that the City will grow at an estimated 5,200 additional people each year. This is equivalent to an additional 1,410 residential connections every year. The City had a population of 75,000 or the equivalent of 20,194 residential connections. See Figure 2 for the projected population growth.

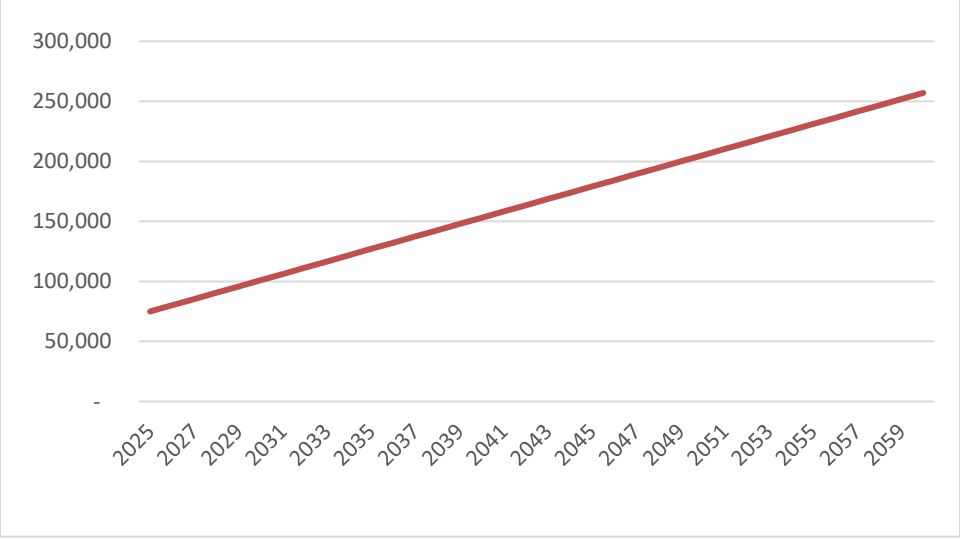


Figure 2. Population

3.2 System Improvements

3.2.1 Pressure Zones

As stated earlier, Eagle Mountain City's water system is currently divided into nine pressure zones. At the City's full build out, an additional five pressure zones will be necessary. Within the City's water model, new pressure zones were created to maintain water pressures within a desired range of 70-120 psi. In some instances, this pressure range was expanded to eliminate the need for additional smaller pressure zones, but the minimum service levels were still maintained. See Table 2 and Exhibit 3.5 for a summary of the pressure zones.

Table 2. Pressure Zones

Pressure Zone	Served from	HGL	40 psi Elevation	70 psi Elevation	120 psi elevation	140 psi elevation
Zone 1	Tank 1 and 7	5101	5008.6	4939.3	4823.8	4777.6
Ranches	PRVs	5070	4977.6	4908.3	4792.8	4746.6
Zone 3	Tank 3 and 4	5180	5087.6	5018.3	4902.8	4856.6
Zone 4	Tank 4 and 6	5320	5227.6	5158.3	5042.8	4996.6
Zone 5	PRVs	5370	5277.6	5208.3	5092.8	5046.6
Ox Bridge	PRVs	5231	5138.6	5069.3	4953.8	4907.6
Bridge	PRVs	5233.7	5141.3	5072	4956.5	4910.3
WH Mid	White Hills tanks	5300	5207.6	5138.3	5022.8	4976.6
WH Lower	PRVs	5198	5105.6	5036.3	4920.8	4874.6
Future Zone 6		4955	4862.6	4793.3	4677.8	4631.6
Future Zone 7		5540	5447.6	5378.3	5262.8	5216.6
Future Zone 8		5540	5447.6	5378.3	5262.8	5216.6
Future Zone 9		5750	5657.6	5588.3	5472.8	5426.6
Future Zone 10		5950	5857.6	5788.3	5672.8	5626.6

Most of the new pressure zones will be created in undeveloped areas on the eastern side of the City as development moves east into the Lake Mountain area. If some of these areas are determined to be unbuildable, some of the planned pressure zones may not be needed.

3.2.2 Storage Capacity Improvements

Currently, there are eight water storage tanks in Eagle Mountain City that provide the total storage capacity for the City's culinary water system with the new White Hills Tank now completed and an additional tank under design south of Tank 1. The new White Hills Tank, Tank 8 has replaced the two smaller existing tanks in the white hills service zone.

To convert the existing storage capacity of the individual tanks to ERU's, the DDW requires volumes for both fire and emergency storage to be determined. The fire storage for the City has been calculated based on the largest building in the City, which is equivalent to 360,000 gallons. The higher zones, White

Hills, Tanks 4 and 6, and Tank 5 are at a higher pressure and will require adequate fire storage for the zones they serve.

Currently, the Upper White Hills Zone only has residential connections and therefore will require 1,500 gpm for 2 hours of fire storage. Although the Tyson plant can be fed from either Tank 1 and 7 or the White Hills tanks, it currently has the additional fire storage in Tanks 1 and 7. However, because of its proximity to the new tank, after construction we recommend that the entirety of the Tyson plant's fire storage be allocated to the new White Hills Tank.

Because the higher zones can service the lower zones through PRVs, fire storage is available for the other zones. However, due to the distance of Zone 1 from other tanks, we recommended most of Zone 1 storage be accounted for in Tanks 1 and 7 and in the White Hills Tank.

Each tank also needs additional storage set aside for emergencies. The DDW does not have a volume requirement for emergency storage. The DDW rule only states that "Emergency storage shall be considered during the design process. The amount of emergency storage shall be based upon an assessment of risk and the desired degree of system dependability." Per the Technical Memorandum on the Division of Drinking Water Sizing Requirements Study memo by Jones and DeMille, the emergency storage requirement has been set at 5% of the total tank volume.

After the fire and emergency storage, the remaining capacity in the tanks is the equalization storage. Equalization storage includes both indoor and outdoor storage needs. Per the system specific source analysis, 584 gallons of storage is required for each ERU. See Table 3 for a summary of each tank's ERU capacity.

Tank	Total Volume (gal)	Fire Storage (gal)	Emergency Storage (gal)	Equilization Storage (gal)	ERU
ST-001/Tank 1	1,000,000	120,000	50,000	830,000	1,438.47
ST-002/Tank 2	1,000,000	90,000	50,000	860,000	1,490.47
ST-003/Tank 3	2,000,000	90,000	100,000	1,810,000	3,136.92
ST-004/Tank 4	600,000	120,000	30,000	450,000	779.90
ST-005/Tank 5	2,000,000	240,000	100,000	1,660,000	2,876.95
ST-006/Tank 6	2,500,000	120,000	125,000	2,255,000	3,908.15
ST-007/Tank 7	3,500,000	120,000	175,000	3,205,000	5,554.59
White Hills Tank		ABANDONED WITH TANK 8			
Tank 8	4,000,000	360,000	200,000	3,440,000	5,961.87
Total 2025	16,600,000	1,260,000	830,000	14,510,000	25,147

Table 3. Existing Tank Storage Capacity

By the year 2040, the City will require over a total of 24.5 million gallons of storage. If the growth rate follows projections, additional storage will generally be required every three years. See Table 4 for the additional storage required and the estimated year additional storage will be needed.

Table 4. Storage Improvements Required Through 2,040

Year	Population	ERU	Required Equilization Storage (gal)	Available Equilization Storage (gal)	Excess/ Deficiency (gal)	Added Storage (gal)
2025	75,000	20,194.54	11,652,247	14,510,000	2,857,753	3,320,535
2026	80,200	21,503.91	12,407,754	14,510,000	2,102,246	
2027	85,400	22,813.28	13,163,262	14,510,000	1,346,738	
2028	90,600	24,122.65	13,918,769	18,310,000	4,391,231	4,000,000
2029	95,800	25,432.02	14,674,276	18,310,000	3,635,724	
2030	101,000	26,741.39	15,429,784	18,310,000	2,880,216	
2031	106,200	28,050.76	16,185,291	18,310,000	2,124,709	
2032	111,400	29,360.14	16,940,798	18,310,000	1,369,202	
2033	116,600	30,669.51	17,696,306	21,160,000	3,463,694	3,000,000
2034	121,800	31,978.88	18,451,813	21,160,000	2,708,187	2,500,000
2035	127,000	33,288.25	19,207,320	21,160,000	1,952,680	
2036	132,200	34,597.62	19,962,827	21,160,000	1,197,173	
2037	137,400	35,906.99	20,718,335	24,485,000	3,766,665	3,500,000
2038	142,600	37,216.36	21,473,842	24,485,000	3,011,158	
2039	147,800	38,525.74	22,229,349	24,485,000	2,255,651	
2040	153,000	39,835.11	22,984,857	24,485,000	1,500,143	

3.2.2a Storage Capacity South of Unity Pass

The area south of Unity Pass is currently served by two tanks totaling 4,500,000 gallons of storage. By themselves, these tanks can provide service to approximately 6,900 ERC. The current system has approximately 5,615 connections. Although this is more than what the two tanks can serve, tanks in White Hills and north of Unity Pass can service this area as well.

In addition, a new 4MG tank, Tank 9, is currently being designed in this zone which will be able to supply an additional 5,921 ERC.

3.2.2b Storage Capacity North of SR-73

The area north of SR-73 is fed from two tanks, a 600,000 gallon tank and a 2.5 million gallon tank. It is estimated that 1,134 connections currently exist north of SR-73. The storage in this zone is enough for 4,600 ERC.

3.2.2c Storage Capacity Zone 5

Currently, Tank 5 doesn't have any lots connected to it. This tank currently serves the main zone, but once lots are connected in this zone it will have the ability to serve 2,863 ERC.

3.2.2d Storage Capacity White Hills

Currently, White Hills is fed from two small tanks, with a combined total storage volume of 679,500 gallons. A new 4-million-gallon tank is under construction. Per the Firefly West system IFFP, an additional tank will be required in the next 10 years to provide additional storage for the area.

3.2.3 Source Capacity Improvements

Currently, the City's system is served by five wells, one of which is not in operation due to water quality issues (Well 4). Additionally, the City has a Purchase Agreement with Central Utah Water Conservancy District (CUWCD) to purchase 15,000 acre-feet per year of water. During Peak day the City currently utilizes 6,865 gpm. The City also has two additional wells under construction and upgrades at two of the existing wells. It is anticipated that Well 8 will be operational in August of 2025 and Well 7 sometime in 2026.

Per the DDW, the safe yield of a well is two-thirds of the operating point of a pump. Table 5 summarizes the current available source and projected amount with current projects. Because all of the sources are in the same pressure zone and then pumped to the existing tanks or can flow to lower portions of the City, the City's source demands can be evaluated for the entire City together.

The ERU capacity was determined by adding the indoor and outdoor use ERU requirements and dividing it by the total source capacity.

Table 5.Existing Source Capacity

Source	Current Source (gpm)	Current Safe Yield (gpm)	Projected Source (gpm)	Projected Safe yield (gpm)
Well 1	3200	2133.33	3200	2133.33
Well 2	2200	1466.67	2200	1466.67
Well 3	1700	1133.33	1700	1133.33
Well 5	3200	2133.33	4500	3000.00
White Hills well 1	1400	933.33	1400	933.33
White hills Well 2	1400	933.33	3000	2000.00
Well 7	0		4000	2666.67
Well 8	0		3200	2133.33
CUWCD	7000	7000	7000	7000.00
Total	20100	15733.33	30200.00	22466.67

Because the City system is currently below the required source capacity of 21,190 gpm, several projects are in the design/construction stages to alleviate the shortages. These source improvements include improvements to Well 5 and the White Hills Wells and the construction of two new wells, Well 7 and Well 8. In total, the current projects should add approximately 10,400 gpm of new source capacity which will be constructed over the next couple of years.

Even with these projects, as a result of the rapid growth the City will still be below its source requirement and the City will need to continue with ongoing source projects. See Table 6 for the anticipated source requirements and timing. It should be noted that when constructing a well, the ultimate capacity is uncertain until the well is built. Therefore, if a constructed well does not provide the anticipated capacity, multiple smaller wells will need to be constructed over the same time frame to achieve the necessary source requirement.

Table 6. Source Improvements Required Through 2,040

Year	Population	ERU	Required Source (gpm)	Available Source (gpm)	Excess/ Deficiency (gpm)	Amount Added (gpm)
2025	75,000	20,194.54	21,190	18,867	(2,324)	4,067
2026	80,200	21,503.91	22,564	21,533	(1,032)	2,666
2027	85,400	22,813.28	23,938	21,533	(2,405)	
2028	90,600	24,122.65	25,312	24,533	(779)	3,000
2029	95,800	25,432.02	26,686	27,533	847	3,000
2030	101,000	26,741.39	28,060	28,533	473	1,000
2031	106,200	28,050.76	29,434	34,533	5,099	6,000
2032	111,400	29,360.14	30,808	34,533	3,725	
2033	116,600	30,669.51	32,182	34,533	2,351	
2034	121,800	31,978.88	33,556	34,533	977	
2035	127,000	33,288.25	34,930	37,533	2,603	3,000
2036	132,200	34,597.62	36,303	37,533	1,229	
2037	137,400	35,906.99	37,677	40,533	2,855	3,000
2038	142,600	37,216.36	39,051	40,533	1,481	
2039	147,800	38,525.74	40,425	40,533	107	
2040	153,000	39,835.11	41,799	43,533	1,733	3,000

3.2.3a Source Capacity South of Unity Pass

The current system has a bottleneck that limits the flow from north of Unity Pass into the City Center. Therefore, this area has also been evaluated separately. It is estimated that the area currently has 5,615 connections and requires 6,401 gpm of source capacity.

The area can utilize approximately 4,500 gpm from the area north of Unity Pass, which has the majority of the system's existing source capacity. The area is also fed from Well 1, which has a safe yield of 2,133 gpm

Therefore, under normal operations the City has the required source capacity it needs to meet the demand of the area. Well 8 is currently under construction which will help provide the required source capacity for the continued growth and redundancy in the area.

The area can also be fed from the White Hills Wells, which currently have a maximum capacity of 1,400 gpm. The capacity of these wells is planned to be expanded. One of the two wells would be planned to operate as a redundant pump to the White Hills Zone

In addition, several projects have been evaluated to increase the flow from the City's main sources to the City Center. See Section 4.1 for a full list of these projects. The projects will continue to add redundancy to the area and provide additional supply to help meet the demands of the projected growth.

3.2.3b Source Capacity North of SR-73

The area north of SR-73 is fed from two pump stations that lift water from the main City source into this area's two storage tanks. It is estimated that 1,134 connections exist north of SR-73. Because these lots are typically larger, we have estimated that each lot utilizes approximately 1.23 gpm/lot for a total flow for the area of 1,395 gpm. The two pump stations can pump 1,457 gpm. Both of the pump stations include a backup pump and should be able to keep up with demand.

During July 2024, the area struggled to keep up with demand. After further evaluation, it appears that water being pumped to this zone is being discharged to other areas of the City, utilizing supply that is needed for this zone.

Because these pumps currently operate continuously during the summer, A new pump station is currently under design and is planned to be operational by the beginning of June 2026.

3.2.3c Source Capacity Zone 5

Currently, the pump station that pumps to the Zone 5 tank does not feed lots and therefore has enough capacity to serve the Zone. Once lots are connected to the Zone or the connection from Tank 5 to Lake Mountain Road is made, a pump and PRV should be adjusted to ensure that the capacity is being utilized by the Zone.

3.2.3d Source Capacity White Hills

Currently, the White Hills Wells have a capacity of 1,400 gpm which is served by two wells. Per the Firefly IFFP, one will be expanded to 3,100 gpm. With the additional anticipated growth in the Firefly IFFP, these wells will be over capacity. Once Capacity is reached Firefly will be required to come up with a solution for the additional source.

4.0 Current Projects

Since the 2021 IFFP, several projects have been completed or are under construction. They are summarized below:

1) A pump station that pumps water over Unity Pass to Tanks 1 and 7 has been constructed and is in operation.
2) A 4 MG tank in the White Hills Area. This tank is set at a higher elevation and will be able to serve the area better. This project will replace the existing White Hills Tanks (included as part of the Firefly Master Plan). (Project 15)
3) Upgrades to the White Hills Wells. It is anticipated that this will increase the source capacity to 5,200 gpm (included in the Firefly Master Plan) (Project 4).
4) The City has two new wells, Well 7 and Well 8, under design/construction. Well 7 is located near the new pump station at Unity Pass and Well 8 is adjacent to Well 1. (Project 7a and 16)
5) The City is in the process of increasing the capacity of Well 5. (Project 26)
6) A new 4 MG tank in the South Service Area south of Tanks 1 and 7 is under design. (Project 9)
7) An additional Zone 4 pump is under design. (Project 5)
8) A parallel Waterline from the new Unity Pass Pump station to Lake Mountain Road (Project 27)

4.1 Facilities Planning

As the City continues to grow, the water system will need to expand to keep up with the additional demand. From current land use and zoning maps, a City full build-out scenario was created and used to anticipate pipelines, PRV's, storage, and source projects that will be necessary. This scenario is summarized in Exhibit 3.2

The needed improvements for the planning period have been phased into 5-year increments: 2025-2030 and 2030-2035. To assist the City with long range planning, improvements beyond 2035 have also been included. See Exhibit 3.3 for locations of these projects. The projects needed by 2030 are described in this section. Costs for projects beyond 2030 are given in Appendix B.

In addition to the timing, budgetary project costs have been developed for the necessary improvements. These budgetary costs include materials, construction, engineering, legal, and right of way acquisitions.

These projects have been analyzed and the timing of the projects is determined based on best available data, current growth projections, and known development plans. If new development occurs in locations that were not anticipated in the model, or if growth occurs quicker than anticipated, some projects may need to be initiated sooner than the projections.

4.1.1 Years 2025-2030

In addition to the projects that have recently been completed, and those that are under construction (listed in Section 4.0), several other projects will be needed in the next 5 years. See Appendix B for a summary of cost for these improvements.

Water Source Projects

1) Construct a well North of Lone Tree Development (Project 7)
2) Construct a new well in White Hills (Project 21)
3) First phase of the CUWCD Pump station North of SR73 (6000 gpm) (Project 14)

Water Line Projects

4) Install a parallel 16-inch waterline along Lake Mountain Road from new waterline in Project 9 to Eagle Mountain Blvd (Project 34)
5) Complete the water line on SR-73 (24 & 30 inch) (Project 10)
6) Install a waterline from Pony Express to the west connecting south to the existing waterline in Mid-Valley Road (Project 35)
7) Install new waterline from the airport south to proposed waterline project described in Project 7. (Project 19)
8) A new waterline from Tank 5 to Lake Mountain Road (Project 25)
9) A 16” line from Well 8 to Tank 9 and PRV (Project 39)
10) Parallel waterlines in SR-73 (Project 13)
11) Parallel waterlines in SR-73 (Project 17)

Tank Projects.

4.1.2 Year 2030-2035

Water Line Projects

12) Waterline from existing PRV in Pony Express to Eagle Mountain Blvd (Project 35)
13) Install a parallel waterline along Pony Express from Lake Mountain to the existing PRV (Project 37)
14) Water line connecting Eagle Mountain Blvd to Pole Canyon along Lehi-Fairfield Road (Project 29)

Water Tank Projects

15) 4 MG tank west of Tank 4 with 16” waterline from suction side of pump (project 28)
16) 4 MG tank in White Hills (included in the Firefly Master Plan as a 2.5 MG tank) (Project 6)

5.0 Conclusion and Recommendations

Like many communities in the west, Eagle Mountain City is growing rapidly with limited resources to acquire and expand its water system to meet the growing needs. The improvements recommended in Section 4.1 were outlined based on projected growth rates and anticipated locations of future development. Since growth rates and location of growth may vary from projections, some of the recommended improvements may be needed sooner or later than anticipated.

The current water system is short on source supplies and storage and, even with the current projects, additional improvements will continue to be required to meet the LOS standards.

Beyond the immediate improvements, Eagle Mountain City should begin planning strategic locations for additional storage projects and development of new water sources. As the City continues to experience rapid growth, we recommend that the Master Plan and Impact Fee Facility Plan be reviewed and updated every few years and the system model be kept up to date.

Appendix A

Exhibits

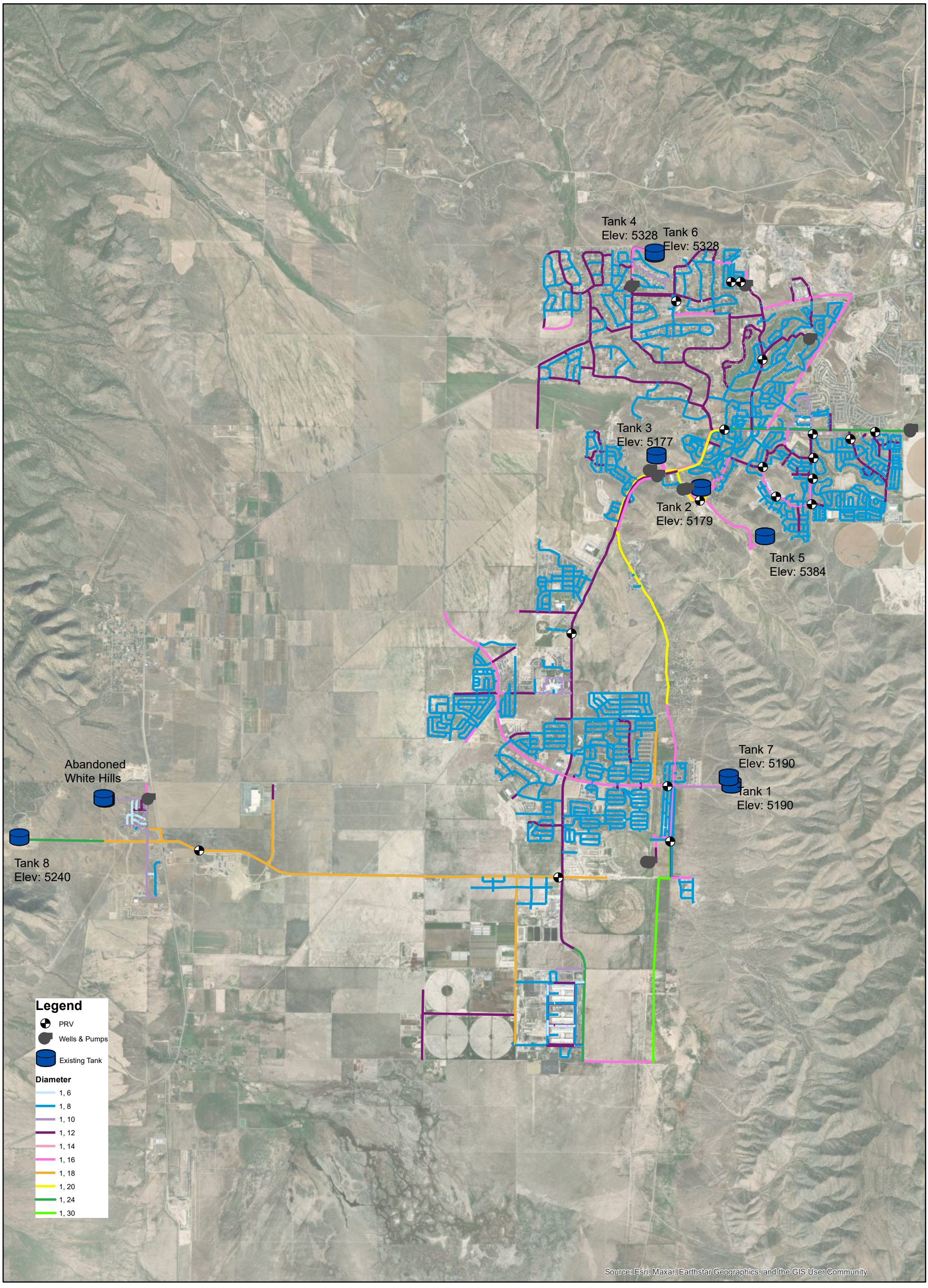


Figure 3.1 Existing Water System

PSOMAS

EAGLE MOUNTAIN

N

0 4,050 8,100 Feet

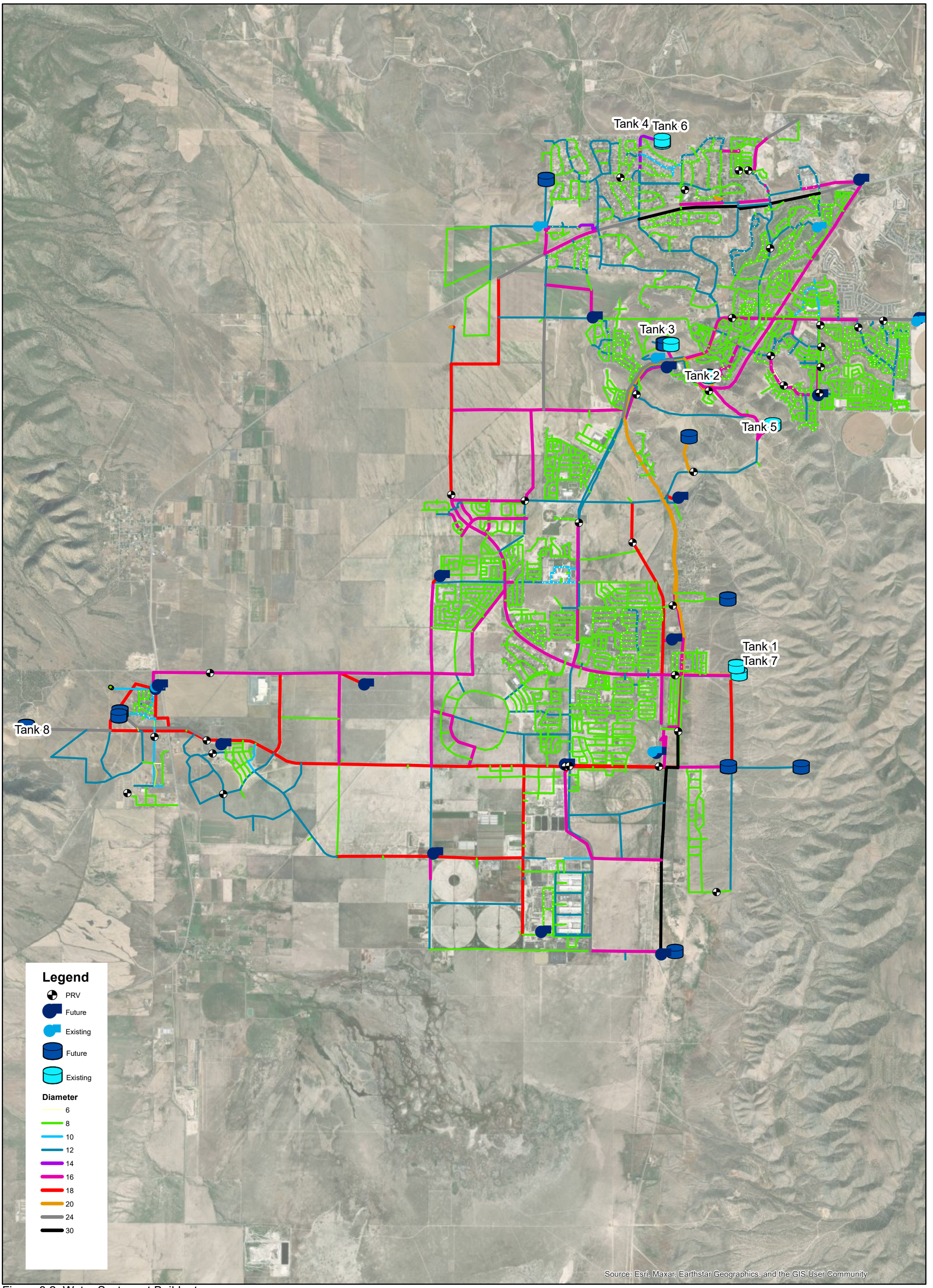


Figure 3.2 Water System at Buildout

PSOMAS

EAGLE MOUNTAIN

N

0 4,050 8,100 Feet

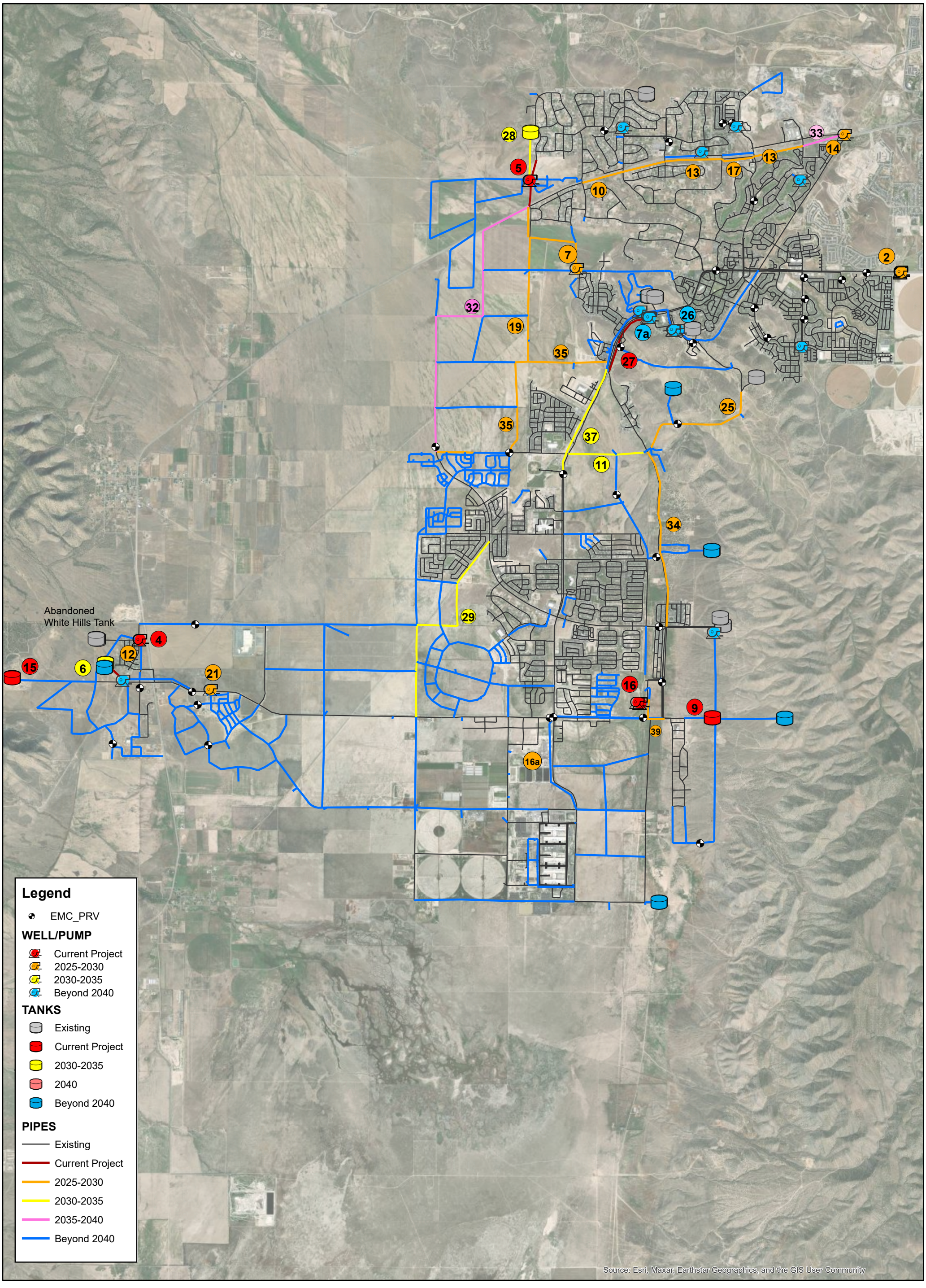


Figure 3.3 Recommended Projects

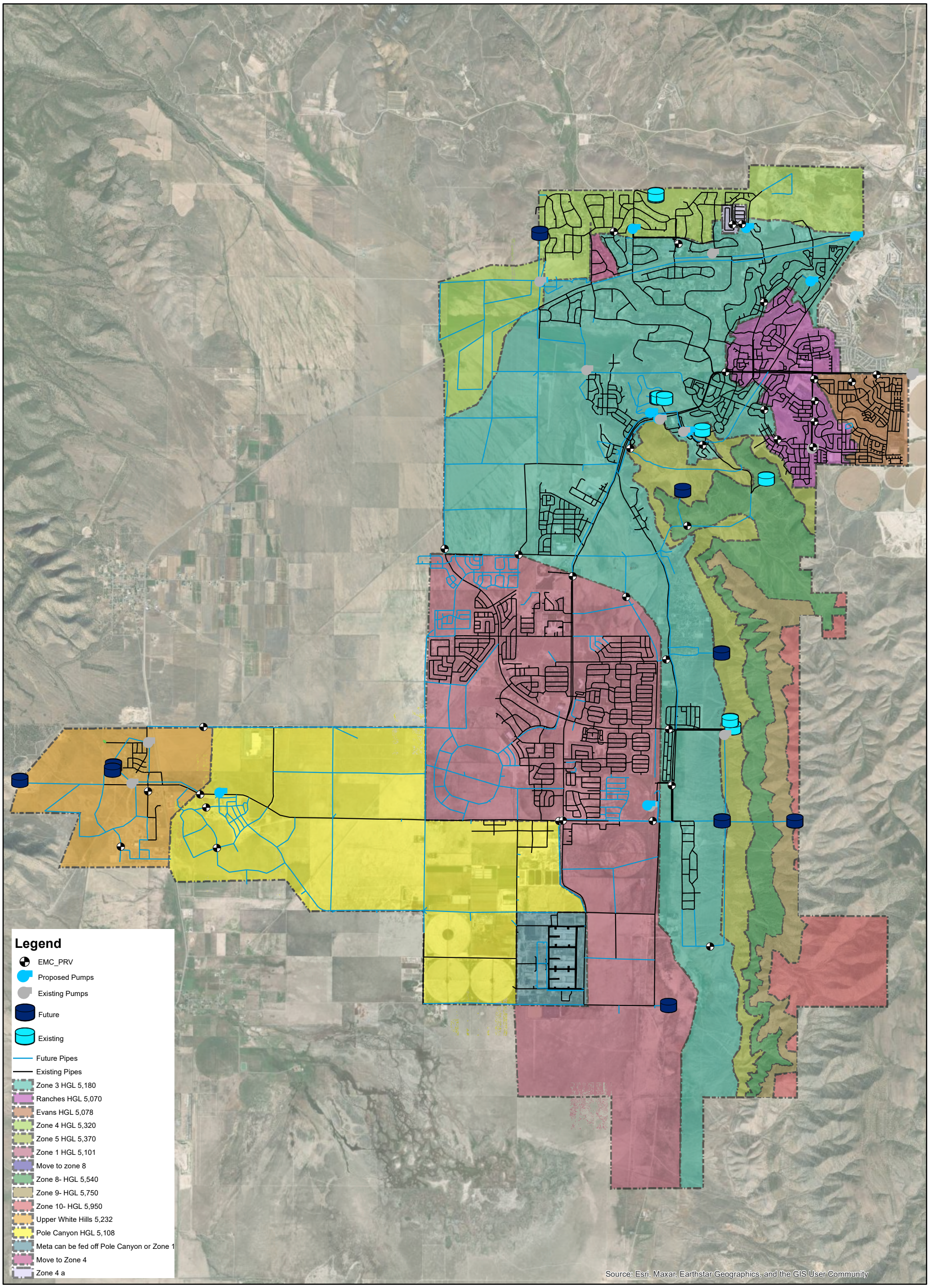


Figure 3.4 Pressure Zones

Appendix B

Buildout Project Cost

Years 2025-2030				
IFFP Project Number	Description	Cost	Amount used in the next 10 years	Cost to new development
Current Projects				
7a	3,000 gpm reliable source well (Well 7)	$ 5,500,000	100%	$ 5,500,000
7a	.75 ac well propoerty	$ 300,000	100%	$ 300,000
16	3,000 gpm reliable source well (Well 8)	$ 5,500,000	100%	$ 5,500,000
16	.75 ac well propoerty	$ 300,000	100%	$ 300,000
9	4MG Tank 9 (South of tank 1)	$ 6,500,000	100%	$ 6,500,000
15	4 MG White Hills Tank	$ 6,500,000	100%	$ 6,500,000
27	Pony Express Parallel Water line	$ 1,061,910	100%	$ 1,061,910
5	Belle Street Booster	$ 800,000	100%	$ 800,000
26	Well 5 Improvements	$ 2,000,000	100%	$ 2,000,000
4	Cooke Well Improvements	$ 2,000,000	100%	$ 2,000,000
7	3,000 gpm reliable source well (Well 9)	$ 5,500,000	100%	$ 5,500,000
7	.75 ac well propoerty	$ 300,000	100%	$ 300,000
21	White hills well	$ 5,500,000	100%	$ 5,500,000
21	.75 ac well propoerty	$ 300,000	100%	$ 300,000
34	Install Line along Lake Mountain Road from project 9 to Eagle Mountain Blvd	$ 3,394,364	90%	$ 3,054,928
10	Complete the waterline on SR73 (24&30 inch).	$ 2,386,459	60%	$ 1,431,875
35	Install Line from Pony Express to the west connecting south to the Line in Mid-valley road.	$ 2,376,709	80%	$ 1,901,368
35	Easement	$ 1,000,000	80%	$ 800,000
19	Water line in Airport Road	$ 1,867,815	50%	$ 933,908
25	A new water line from tank 5 to Lake Mountain Road	$ 1,175,862	100%	$ 1,175,862
25	Easement	$ 600,000	100%	$ 600,000
14	First Phase of CWP	$ 10,000,000.00	100%	$ 10,000,000.00
14	.75 ac well propoerty	$ 300,000.00	90%	$ 270,000.00
17	Parallel lines in SR-73	$ 411,240.00	70%	$ 287,868.00
13	Parallel lines in SR-73	$ 1,357,092.00	70%	$ 949,964.40
12	Upgrade White Hill 6" Waterline	$ 500,000	100%	$ 500,000
16a	New Public Works (cost shared with Waste Water)	$ 5,000,000	100%	$ 5,000,000
39	New Line from well 1 to tank 9	$ 817,560	100%	$ 817,560
	Total	$ 73,249,011	94%	$ 68,967,682

Years 2030-2035				
IFFP Project Number	Description	Cost	Amount used in the next 10 years	Cost to new development
11	Install 12" line between lake mountain and pony ex	$ 471,494.00	80%	$ 377,195.20
37	Install a Parallel line along Pony Express from Lake Mountain to the Existing PRV	$ 959,241.00	70%	$ 671,468.70
29	A new water line along Fairfield Lehi Road connecting Eagle Mountain Blvd to Pole Canyon	$ 2,690,274.12	70%	$ 1,883,191.88
28	4 MG tank west of Tank 4.	$ 6,500,000.00	100%	$ 6,500,000.00
28	1 acre tank property	$ 300,000.00	100%	$ 300,000.00
6	4MG TANK	$ 6,500,000.00	70%	$ 4,550,000.00
6	1 acre tank property	$ 300,000.00	70%	$ 210,000.00
		$ 17,721,009.12	82%	$ 14,491,855.78

	EAGLE MOUNTAIN CITY **PLANNING COMMISSION MEETING** **AUGUST 12, 2025**
TITLE:	Wastewater Master Plan and IFFP
ITEM TYPE:	Motion
FISCAL IMPACT:	N/A
APPLICANT:	City initiated

CURRENT GENERAL PLAN DESIGNATION & ZONE	ACREAGE
N/A	N/A

PUBLIC HEARING
Yes

PREPARED BY
Vince Hogge, City Engineer

PRESENTED BY
Vince Hogge

RECOMMENDATION:
N/A

BACKGROUND:
To be explained at the meeting.

ITEMS FOR CONSIDERATION:
N/A

PLANNING COMMISSION ACTION/RECOMMENDATION:
Staff recommends that the Planning Commission approve the Wastewater Master Plan and IFFP.

ATTACHMENTS:
1. WW Master Plan 7-30-25_report
2. WW IFFP 7-30-25

EAGLE MOUNTAIN CITY

2025 WASTEWATER MASTER PLAN REPORT

Prepared by:

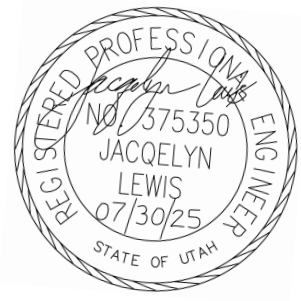
JWO ENGINEERING

1307 N Locust Lane

Provo, UT 84604

Contact: Jacqelyn Lewis, P.E.

309-271-9981



July 2025

JWO ENGINEERING
A Professional Limited Liability Company

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EXECUTIVE SUMMARY

JWO Engineering, PLLC was contracted to complete a wastewater master plan for Eagle Mountain City (EMC). This report will evaluate necessary infrastructure for wastewater conveyance and treatment for the buildout conditions based on projected growth.

The following table is a summary of projects, and their estimated costs that JWO Engineering, PLLC recommends being completed within the next 5 years for EMC. Please refer to the rest of this report for a complete list of recommended projects and their estimated costs. Estimated costs in this table are concept level estimates based on 2025 costs. In the Budgeting section of this report, the costs were adjusted using an assumed inflation rate for each year. Actual costs will be determined by the project details and economic conditions at the time of the work being carried out. Please see the Exhibits within the report depicting the proposed pipeline projects.

An urgent recommendation is to begin designing and constructing the East and West Sewer Trunklines as soon as possible.

Table 1 – Recommended Collection Improvements Within Next 5 Years

Collection Improvement Project	2025 Estimate (Millions)
East Trunkline	$ 24.24
West Trunkline	$ 12.14
Pole Canyon Trunkline	$ 15.92
Annual GIS updates (5yr)	$ 0.01
Total for next 5 years	$ 52.30

Table 2 - Recommended Treatment Improvements Within Next 5 Years

Treatment Improvement Project	2025 Estimate (Millions)
WWTP 6 MGD Expansion	$ 120.00
Total for next 5 years	$ 120.00

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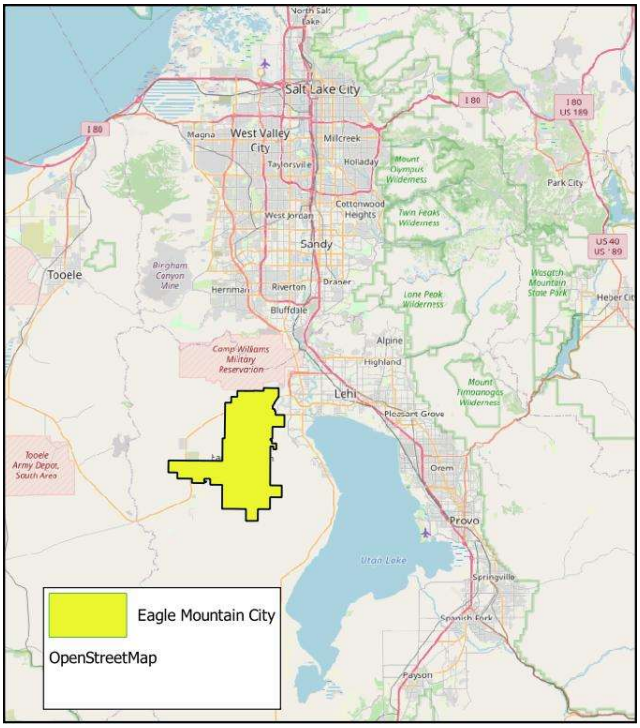

Figure 1 - Vicinity Map

BACKGROUND

Eagle Mountain City (EMC) located in Utah County near Utah Lake as shown in the vicinity map above and is one of the fastest growing cities in the US. Since its incorporation in 1996 it has grown from a population of less than 300 to over 73,000 at the start of 2025, and consequently has undergone rapid development. Recent annual growth rates have averaged 10% and it is anticipated to continue with this growth as numerous new developments have been approved and underway. EMC has also recently annexed adjacent land, just over 300 Acres, which will add to the growth and expected population. The average household size in the state of Utah is 3.09. EMC has an average household size of 4.37 people, one of the highest in the nation.

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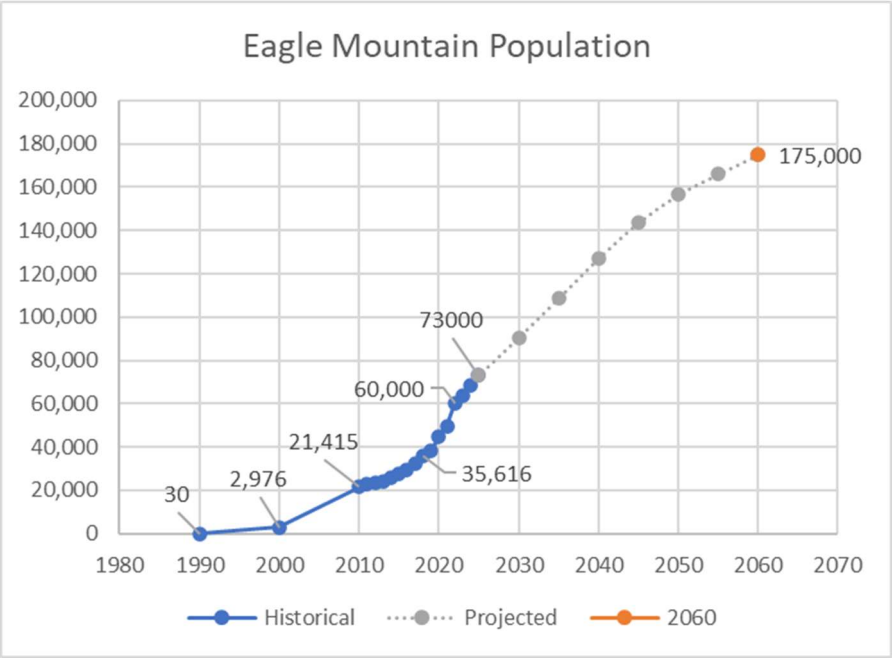

Figure 2 - Eagle Mountain City Population Chart

With only an estimated 19 square miles as being developed of EMC's 50 square miles, there is still much growth anticipated. It is projected that the city will continue to grow rapidly, with a population of 175,000 by 2060. Proper planning of city infrastructure is a crucial component of sustaining this expansion. The last EMC IFFP was completed in 2022, and before that was 2018. The population has more than doubled since 2018. Minimal infrastructure has been added or improved since 2018, but as the population continually increases rapidly, EMC will need to make infrastructure improvements a priority to support this population growth.

EMC's wastewater system contains three separate service areas designated as the North Service Area (NSA) the South Service Area (SSA) and the West Service Area (WSA). These service areas are approximate and may vary with continued development and improvements. The NSA conveys flows to the East and are treated by Timpanogos Special Services District. Flows from the SSA and WSA flow South and East respectively to the existing WWTP to be treated by EMC. The flows treated by EMC are treated and disposed of by means of Rapid Infiltration Basins (RIBs).

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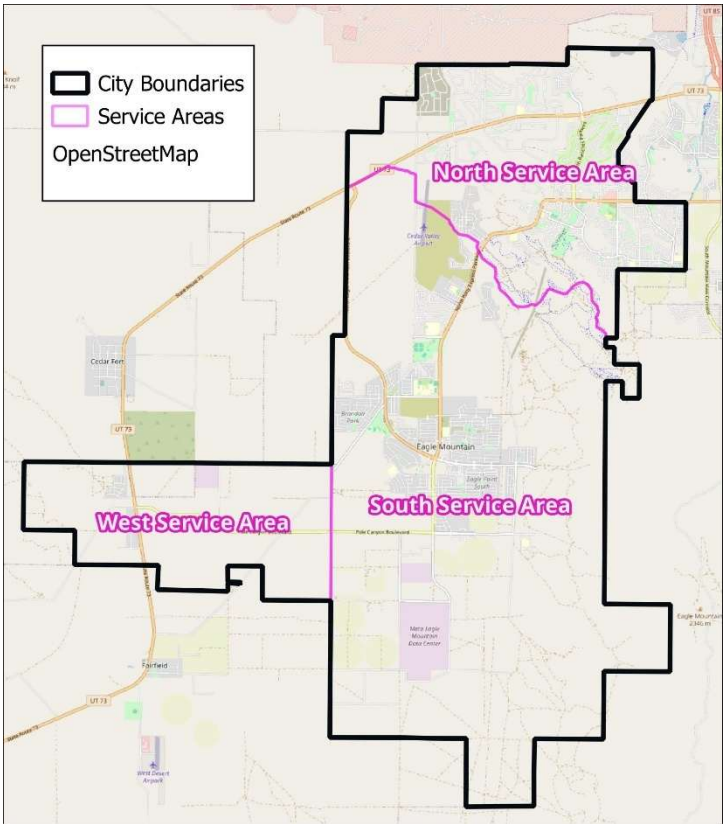

Figure 3 - Service Areas

GEOGRAPHIC INFORMATION SYSTEM (GIS)

EMC provided GIS shape files for their wastewater facilities. These files were used to compare existing facilities with proposed improvements. Field verification is needed as the shape files were not complete. There were main lines missing from the WSA to the WWTP. Numerous pipes were without details such as sizes, materials and depths. It is recommended that EMC update their GIS files to accurately depict the current completed infrastructure of EMC. The GIS files should be kept up to date as new wastewater infrastructure is added to EMC. Some information in this plan may be inaccurate due to omissions in the available GIS information.

EXISTING REPORTS

Current available reports addressing EMC's wastewater situation include the 2024 EMC WSA WW IFFP, EMC Impact Fee Facilities Plan Report from 2012 (IFFP 2012), 2018 (IFFP 2018), and 2022 (IFFP 2022). Eagle Mountain General Plan (2018) was also used for future land use and density populations. Some data from these existing reports was used in our assessment of the existing and proposed EMC wastewater water facility conditions.

EQUIVALENT RESIDENT CONNECTIONS (ERC'S)

An Equivalent Residential Connection (ERC) alternatively referred to as an Equivalent Residential Unit (ERU) represents the design flowrate from one residential connection. The previous report,

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2022 IFFP, recommended an ERC flowrate of 220 gallons per day. Existing water meter data was provided for the winter months throughout EMC. Winter months were used as they would not include water used for irrigation. Actual values of ERUs were calculated and are shown in the table below. While multi-family residences can be smaller households, EMC continues to be at an above average household size implying that even smaller housing doesn't always result in a smaller household. This report will continue to use an ERC value of 220 gallons per day.

Table 3 – Calculated ERU Values

NSA ERU	240 gpd
SSA/WSA ERU	220 gpd

Current ERU's were obtained from EMC and used for the existing wastewater model.

Table 4 - Existing ERU Count

	Current # ERU's
NSA	8,027
SSA	6,744
WSA	134

ERU's per Acre can vary significantly depending on land use. Residential will be on the higher end with values between 8 and 4. On the other end, half acre lots would be a value of 2.0. Industrial and commercial users will generally be on the lower end but also vary greatly depending on the type of industry. As future developments are not yet known a value of 3.4 ERU/Acre will be used.

LEVEL OF SERVICE

EMC's current wastewater system design requirements are defined by the current city ordinances and construction standards. Wastewater pipes shall be lined non-reinforced concrete, lined reinforced concrete, or PVC and have a minimum velocity of 2 foot per second unless otherwise approved by the City Engineer. This report recommends that the standards be updated to require all concrete pipe to be lined and be corrosion resistant. Minimum slopes for pipes consistent with state standards are found in the table below:

Table 5 - Minimum Pipe Slope

Pipe Diameter	Minimum Slope
4"	2.000%
6"	1.000%
8"	0.334%
10"	0.248%
12"	0.194%
14"	0.158%
15"	0.144%
16"	0.132%
18"	0.113%
21"	0.092%
24"	0.077%
27"	0.066%
30"	0.057%
36"	0.045%

Service levels indicate how effectively a piece of infrastructure meets the city's expectations and potential need for improvement. The amount of flow that a sewer pipe can convey is a combination of its size and slope. If the pipe becomes too full, a backup in the system can occur. As pipe diameter increases, the capacity changes significantly with depth of flow. Larger pipes will have a smaller peaking factor as well as the ability to carry additional depth of flow. The level of service (LoS) for pipes in the city is broken into four levels that help determine the need for pipe size upgrades and are defined in the table below.

Table 6 - Level of Service Criteria

Level of Service	Pipe Diameter (in)	% Full with Peak Flow	Design Peak Factor
A	<18"	50%	2.50
	21"-30"	67%	2.25
	30"<	75%	2.00
B	<18"	67%	2.50
	21"-30"	75%	2.25
	30"<	85%	2.00
C	<18"	75%	2.50
	21"-30"	85%	2.25
	30"<	95%	2.00
D	<18"	85%	2.50
	21"-30"	95%	2.25
	30"<	100%	2.00

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LoS D is considered failing. Pipes at 100% full would be a surcharged condition. Pipes at system build-out should be designed for LoS condition A with the associated peak factor.

EXCESS CAPACITY

All sewer pipes within EMC are currently not designed for excess capacity.

PIPE LOADING CAPACITY

EMC requested the maximum capacity of pipe based on minimum slope using 220 gpm as the ERU. Capacity is calculated for each LoS as laid out in the table above. The table below calculates the capacity of a pipe with varied depth of flow or %full with the peak factors applied.

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Table 7 - Pipe Flow Calculator

JWO Engineering

Pipe Flow Calculator — Flow/ERU 220 (gpd)

Service level A										
Diameter	% full	Depth	Up Invert	Down Invert	Length	Minimum	Mannings	Peak	Q avg	Capacity
(in)		(in)	(elev)	(elev)	(ft)	Slope	N	Factor	(gpd)	(ERU's)
8	50%	4.00	4500.00	4499.9967	1	0.00334	0.012	4.00	61,115	277
10	50%	5.00	4500.00	4499.9975	1	0.00248	0.012	4.00	95,484	434
12	50%	6.00	4500.00	4499.9981	1	0.00194	0.012	3.00	183,104	832
15	50%	7.50	4500.00	4499.9986	1	0.00144	0.012	3.00	286,029	1,300
18	50%	9.00	4500.00	4499.9989	1	0.00113	0.012	2.50	494,426	2,247
21	50%	10.50	4500.00	4499.9991	1	0.00092	0.012	2.50	672,950	3,058
24	67%	16.08	4500.00	4499.9992	1	0.00077	0.012	2.50	1,387,606	6,307
27	67%	18.09	4500.00	4499.9993	1	0.00066	0.012	2.50	1,758,738	7,994
30	67%	20.10	4500.00	4499.9994	1	0.00057	0.012	2.50	2,164,652	9,839
36	75%	27.00	4500.00	4499.9992	1	0.00082	0.012	2.00	6,096,841	27,712
42	75%	31.50	4500.00	4499.9992	1	0.00082	0.012	2.00	9,196,697	41,803

Service level B										
Diameter	% full	Depth	Up Invert	Down Invert	Length	Minimum	Mannings	Peak	Ave Flow	Capacity
(in)		(in)	(elev)	(elev)	(ft)	Slope	N	Factor	(gpd)	(ERU's)
8	67%	5.36	4500.00	4499.9967	1	0.00334	0.012	4.00	96,479	438
10	67%	6.70	4500.00	4499.9975	1	0.00248	0.012	4.00	150,736	685
12	67%	8.04	4500.00	4499.9981	1	0.00194	0.012	3.00	289,057	1,313
15	67%	10.05	4500.00	4499.9986	1	0.00144	0.012	3.00	451,538	2,052
18	67%	12.06	4500.00	4499.9989	1	0.00113	0.012	2.50	780,523	3,547
21	67%	14.07	4500.00	4499.9991	1	0.00092	0.012	2.50	1,062,350	4,828
24	75%	18.00	4500.00	4499.9992	1	0.00077	0.012	2.50	1,603,064	7,286
27	75%	20.25	4500.00	4499.9993	1	0.00066	0.012	2.50	2,031,823	9,235
30	75%	22.50	4500.00	4499.9994	1	0.00057	0.012	2.50	2,500,764	11,367
36	85%	30.60	4500.00	4499.9996	1	0.00045	0.012	2.00	5,103,764	23,198
42	85%	35.70	4500.00	4499.9996	1	0.00045	0.012	2.00	7,698,703	34,994

Service level C										
Diameter	% full	Depth	Up Invert	Down Invert	Length	Minimum	Mannings	Peak	Ave Flow	Capacity
(in)		(in)	(elev)	(elev)	(ft)	Slope	N	Factor	(gpd)	(ERU's)
8	75%	6.00	4500.00	4499.9967	1	0.00334	0.012	4.00	111,460	506
10	75%	7.50	4500.00	4499.9975	1	0.00248	0.012	4.00	174,141	791
12	75%	9.00	4500.00	4499.9981	1	0.00194	0.012	3.00	333,940	1,517
15	75%	11.25	4500.00	4499.9986	1	0.00144	0.012	3.00	521,649	2,371
18	75%	13.50	4500.00	4499.9989	1	0.00113	0.012	2.50	901,717	4,098
21	75%	15.75	4500.00	4499.9991	1	0.00092	0.012	2.50	1,227,304	5,578
24	85%	20.40	4500.00	4499.9992	1	0.00077	0.012	2.50	1,811,495	8,234
27	85%	22.95	4500.00	4499.9993	1	0.00066	0.012	2.50	2,296,001	10,436
30	85%	25.50	4500.00	4499.9994	1	0.00057	0.012	2.50	2,825,915	12,845
36	95%	34.20	4500.00	4499.9996	1	0.00045	0.012	2.00	5,322,053	24,191
42	95%	39.90	4500.00	4499.9996	1	0.00045	0.012	2.00	8,027,978	36,490

Service level D										
Diameter	% full	Depth	Up Invert	Down Invert	Length	Minimum	Mannings	Peak	Ave Flow	Capacity
(in)		(in)	(elev)	(elev)	(ft)	Slope	N	Factor	(gpd)	(ERU's)
8	85%	6.80	4500.00	4499.9967	1	0.00334	0.012	4.00	125,952	572
10	85%	8.50	4500.00	4499.9975	1	0.00248	0.012	4.00	196,783	894
12	85%	10.20	4500.00	4499.9981	1	0.00194	0.012	3.00	377,359	1,715
15	85%	12.75	4500.00	4499.9986	1	0.00144	0.012	3.00	589,474	2,679
18	85%	15.30	4500.00	4499.9989	1	0.00113	0.012	2.50	1,018,959	4,631
21	85%	17.85	4500.00	4499.9991	1	0.00092	0.012	2.50	1,386,879	6,303
24	95%	22.80	4500.00	4499.9992	1	0.00077	0.012	2.50	1,888,973	8,586
27	95%	25.65	4500.00	4499.9993	1	0.00066	0.012	2.50	2,394,202	10,882
30	95%	28.50	4500.00	4499.9994	1	0.00057	0.012	2.50	2,946,780	13,394
36	100%	36.00	4500.00	4499.9996	1	0.00045	0.012	2.00	4,952,961	22,513
42	100%	42.00	4500.00	4499.9996	1	0.00045	0.012	2.00	7,471,227	33,960

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WASTEWATER SYSTEM ANALYSIS

EXISTING CONDITIONS

The EMC wastewater network consists of approximately 956,000 LF of pipe with nearly 4200 manholes. There are a total of 5 lift stations currently serviced by EMC (Lone Tree, Lakeview, New Park, Pole Canyon, and Steeplechase), and 4 privately operated lift stations (Brylee Farms, Scenic Mountain 1 and 2, and Silverlake). There are potentially four additional lift stations being constructed which will be added to the wastewater system. QTS LS will be serviced by EMC, and Oquirrh Mountain, Pinnacles, and Rose Ranch will be privately owned and operated. Flows to TSSD for the past 2 months have been about 1.75 MGD. Flows to EMC WWTP have been about 1.5 MGD.

North Service Area (NSA)

The NSA is estimated to be 80% developed of its nearly 12 square miles of land and accounts for approximately 57% of the total city population. The majority of this service area is residential and all flows are conveyed to be treated with TSSD. It has three lift stations managed by EMC; Lakeview, Lone Tree and New Park, and three private lift stations; Scenic Mountain 1 and 2, and Silver Lake within the system. Each of these lift stations are currently in operation. Septic systems were not included in the existing model.

Improvements have been planned to convert the Lone Tree lift station to an overwatch type facility due to the age and condition of the existing pumps. The new overwatch pump station will continue to discharge to the NSA at this time.

The figure below shows the existing NSA with pipe diameters from the provided shape files, as well as lift stations.

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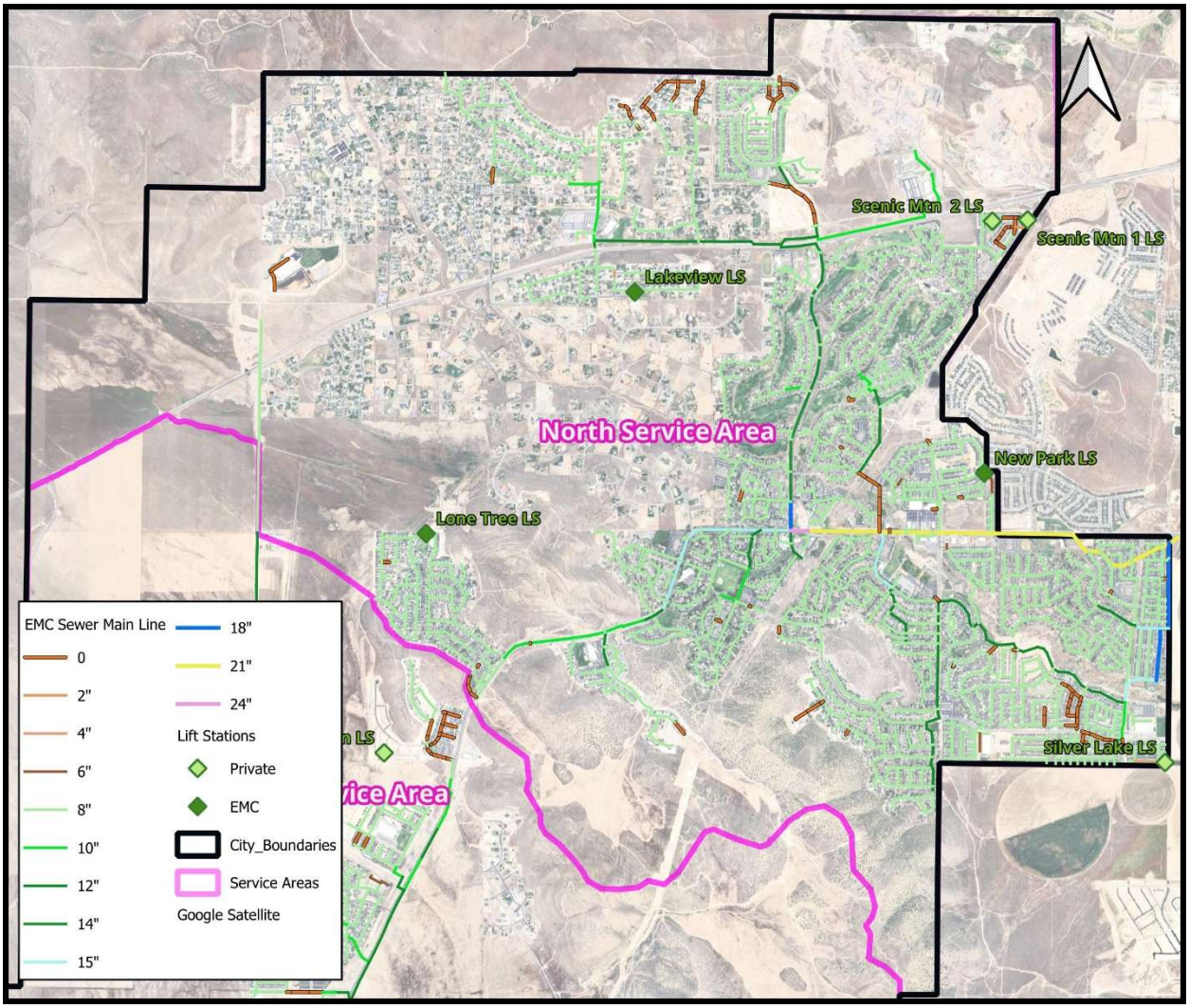

Figure 4 - Existing NSA

South Service Area (SSA)

The SSA is estimated to be 30% developed of its 31.5 square miles of land and accounts for approximately 40% of the total city population. This service area includes the Meta/Facebook sites which each have a lift station, Steeplechase LS. An additional industrial site, QTS is currently being developed and will have its own lift station to convey flows to EMC WWTP. The QTS LS is not yet in service. There are four private lift stations in this service area, Brylee Farms and Oquirrh Mountain, Pinnacles, and Rose Ranch. Only Brylee Farms LS is currently in operation. Several new developments have already been approved and are underway in this service area.

Previous IFFP reports have shown that Pony Express Parkway sewer pipes near the WWTP have been nearly at capacity and will not be able to convey additional future flows with continued development.

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The figure below shows the existing SSA with pipe diameters from the provided shape files, as well as lift stations.

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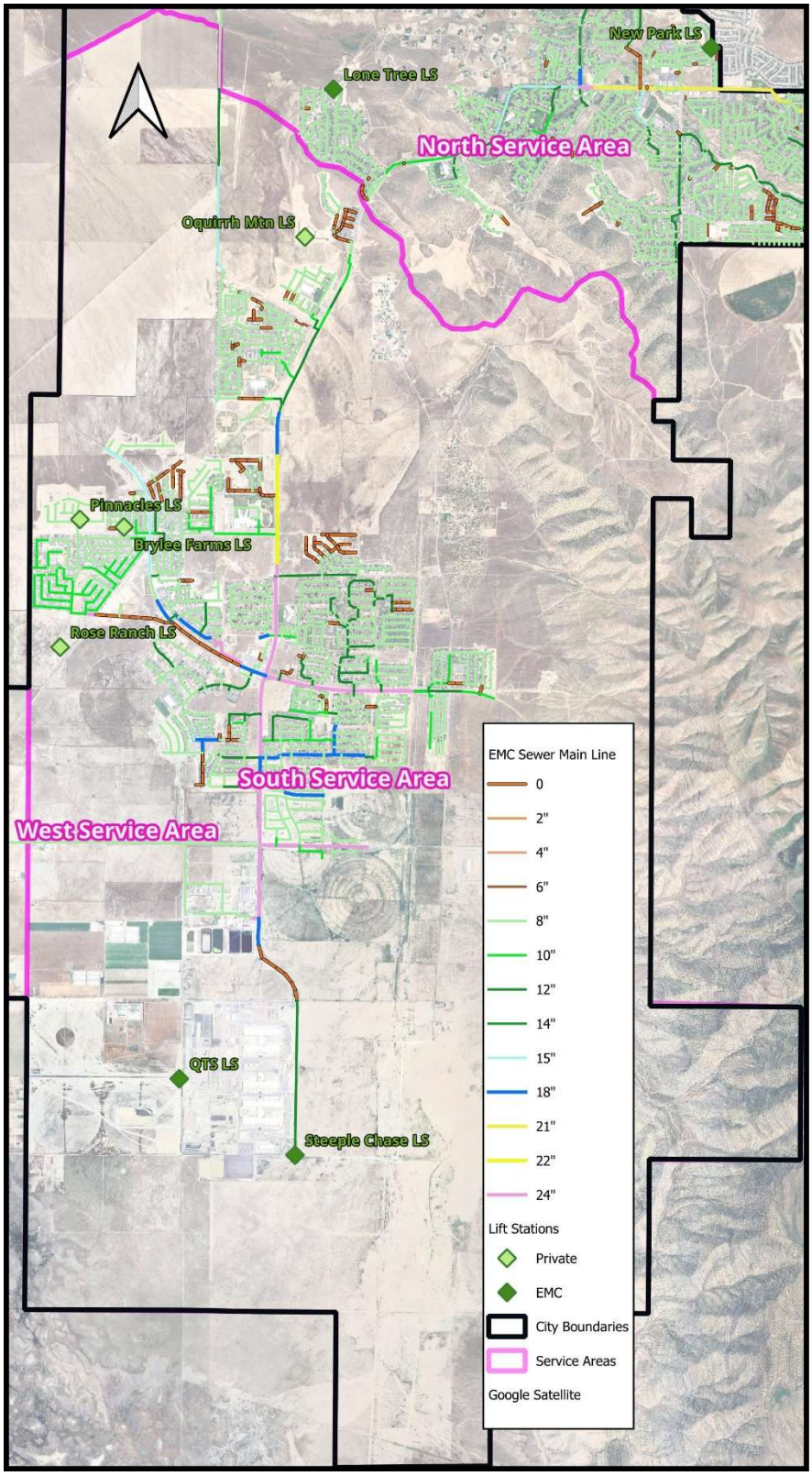

Figure 5 - Existing SSA

West Service Area (WSA)

The WSA is estimated to be less than 10% developed of its 7.4 square miles of land and accounts for approximately 3% of the total city population. More than 90% of the land within the WSA is currently used for farming or has not yet been developed. There is one industrial user, Tyson Foods Plant which has a holding tank to help more evenly distribute flows being discharged. The Firefly development is underway and will occupy just over 4 square miles of the WSA.

The WSA currently contains only a small wastewater network that collects flows from Tyson Foods and White Hills Subdivision and is pumped by means of Pole Canyon LS to EMC WWTP. This is the only LS in the WSA. There has been a temporary line to the LS from Tyson Foods. This line will be replaced once pipes in Pole Canyon Road are upsized with the Firefly development. Partial construction has been completed for a deep Pole Canyon Trunkline to replace the existing LS and have increased future flows from the WSA conveyed by gravity to the EMC WWTP.

The figure below shows the existing SSA with pipe diameters from the provided shape files, as well as lift stations.

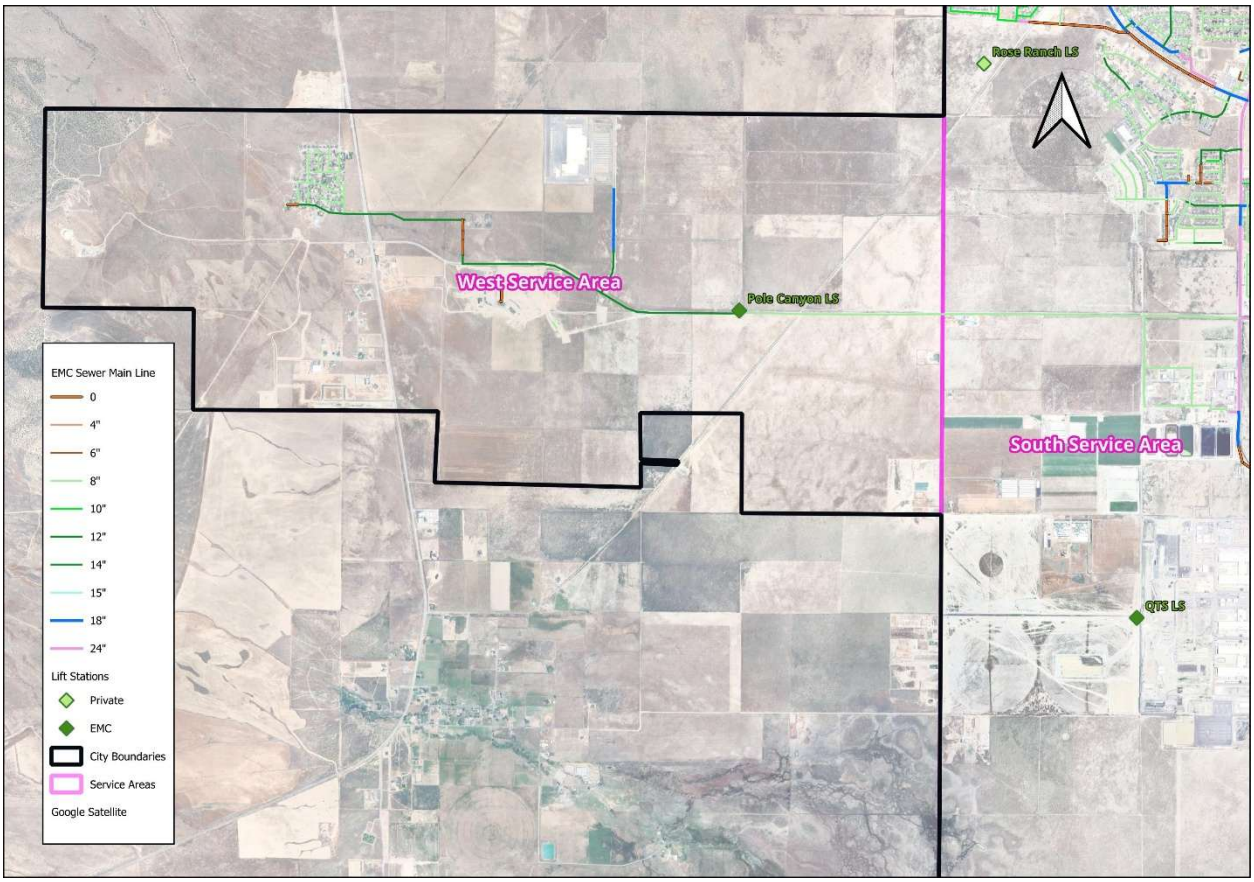

Figure 6 - Existing WSA

Treatment Plant

The EMC WWTP has recently been expanded to accommodate flows of 2.4 MGD with construction being nearly complete. Currently the WWTP is under design for additional capacity to be able to accommodate an additional 6.0 MGD bringing the total WWTP capacity to 8.4 MGD. The average total flows treated by the WWTP for the last 2 months is about 1.5 MGD. While the current capacity is 2.4 MGD by volume it should be noted that for solids loading it is already nearly at capacity necessitating the immediate need for additional capacity as growth continues.

EXISTING CONDITIONS MODEL

Advanced Engineering and Environmental Services, LLC (AE2S) modeled the sewer system using InfoWorks ICM. InfoWorks is able to import existing shape files and its data to create a system model with pipe diameters and elevations. EMC provided the existing shape files for the existing EMC wastewater system to create this model. However, as the model was run and evaluated, it was apparent that the shape files were not complete and fully updated. There were several pipes with no diameter, and many other fields with no information that will be helpful for evaluation such as "Year" (presuming that to be the year the pipe was installed) and "CUTDEPTH" (presuming that is the depth of cover). The manhole shape file appears to have multiple fields for rim and or invert elevations. These fields should be edited to be consistent and complete. Field names should be edited to help understand the difference between "INVERT" and "INVERTELEV", and "Elevation" and "RIMELEV". It was evident that some manholes used "Elevation" for a rim elevation, while others used "RIMELEV" for that information. Fields should be consistently used throughout the shapefile to avoid confusion. Since EMC GIS data provided was incomplete, slopes of existing pipes were either linearly interpolated between upstream and downstream manholes, or for larger gaps in pipe inverts, a minimum slope based on diameter was assumed.

Pipe capacities are of most concern at the confluences of pipes or along main trunklines. While smaller pipes are still included in the model, these pipes generally do not carry significant flows.

The existing wastewater infrastructure was evaluated for their current LoS based on existing discharges during peak flows. EMC provided daily flow data from October to March which determined the average and peak day flows. The calculated peak factor for the NSA was 2.74 and for the SSA/WSA it was 1.82 for existing conditions. The model used a peak factor of 2.0 for both SA in the existing conditions model. The model results discussed below for each service area are based on peak flows. Exhibits showing the existing diameters and model results for each service area based on existing conditions with peak flows are included.

North Service Area (NSA)

Pipes

Of most concern in this service area are pipes within Silverlake. The 21" main trunkline as it conveys flows to TSSD is shown to be at a LoS D. Based on data provided, it has a high point at manhole ID 3455. It is recommended that EMC confirm the invert depths at this manhole and the manholes upstream and downstream from it and update the GIS files. Additionally, the 18" line flowing towards the 21" line is shown at a LoS D. These inverts should also be verified. Two sections of pipe

along the main trunkline towards TSSD are in LoS B categories. The trunkline conveying flows from the far north areas is hovering between LoS A and LoS B. Assuming invert elevations provided are correct, these pipelines are full and should carefully consider any additional flows into these trunklines. All other existing pipes are within the LoS A criteria. As several pipe sections are already exceeding LoS A, adding any additional flows to these pipelines would exceed the recommended capacity based on LoS.

Manholes

There are no known issues with existing manholes, and it is presumed that all existing manholes have a LoS A.

Lift Stations and Force Mains

The peak flow condition for a lift station is the capacity of the pumps. No peak factor was applied to the lift stations.

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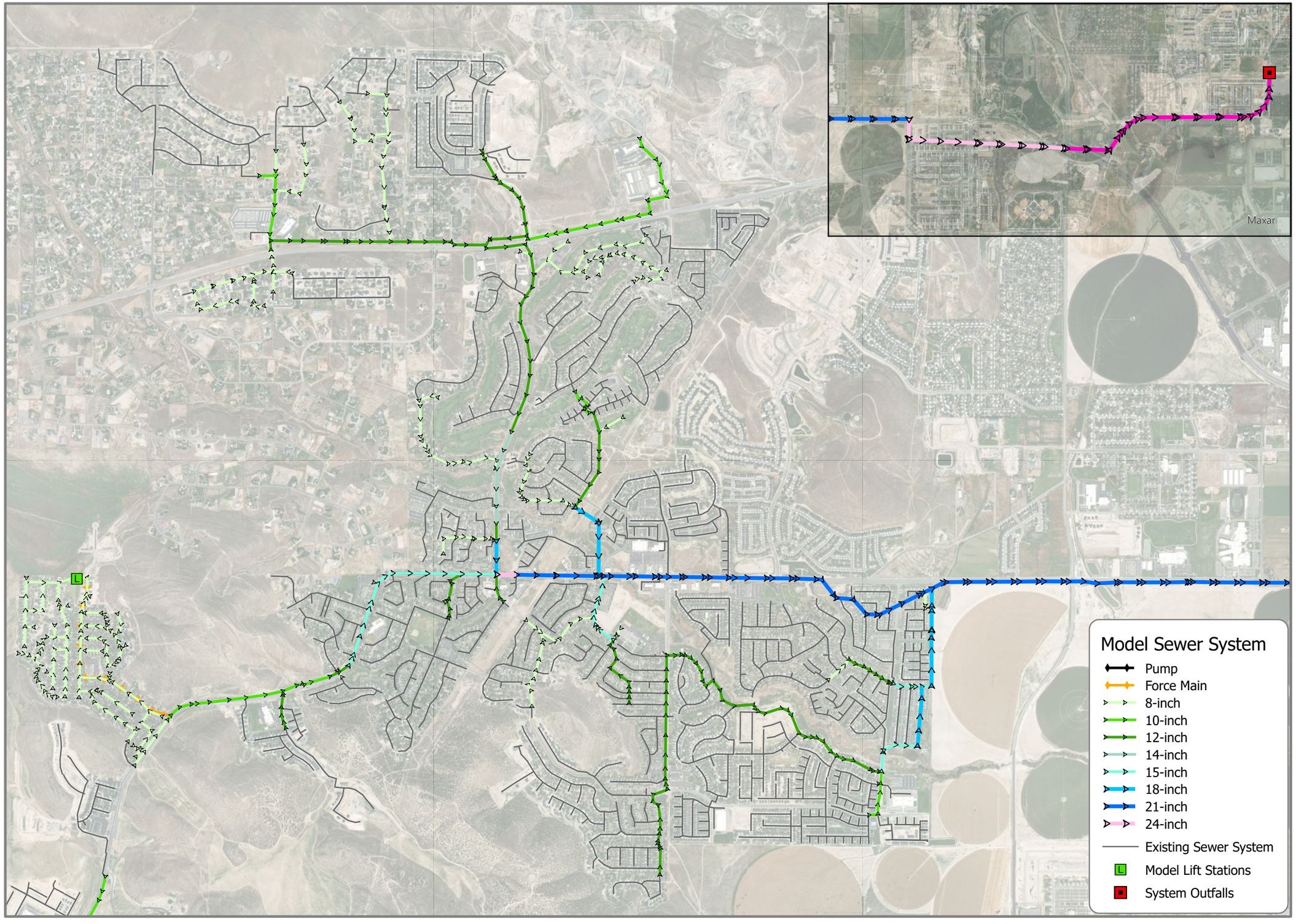

N

0 500 1,000

Feet

1 inch equals 1,874 feet

Locator Map Not to Scale

Eagle Mountain City
Utah, UT

EXISTING WASTEWATER SYSTEM

NORTH SERVICE AREA

DIAMETER (IN)

WASTEWATER SYSTEM MASTER PLAN

Date: 5/8/2025

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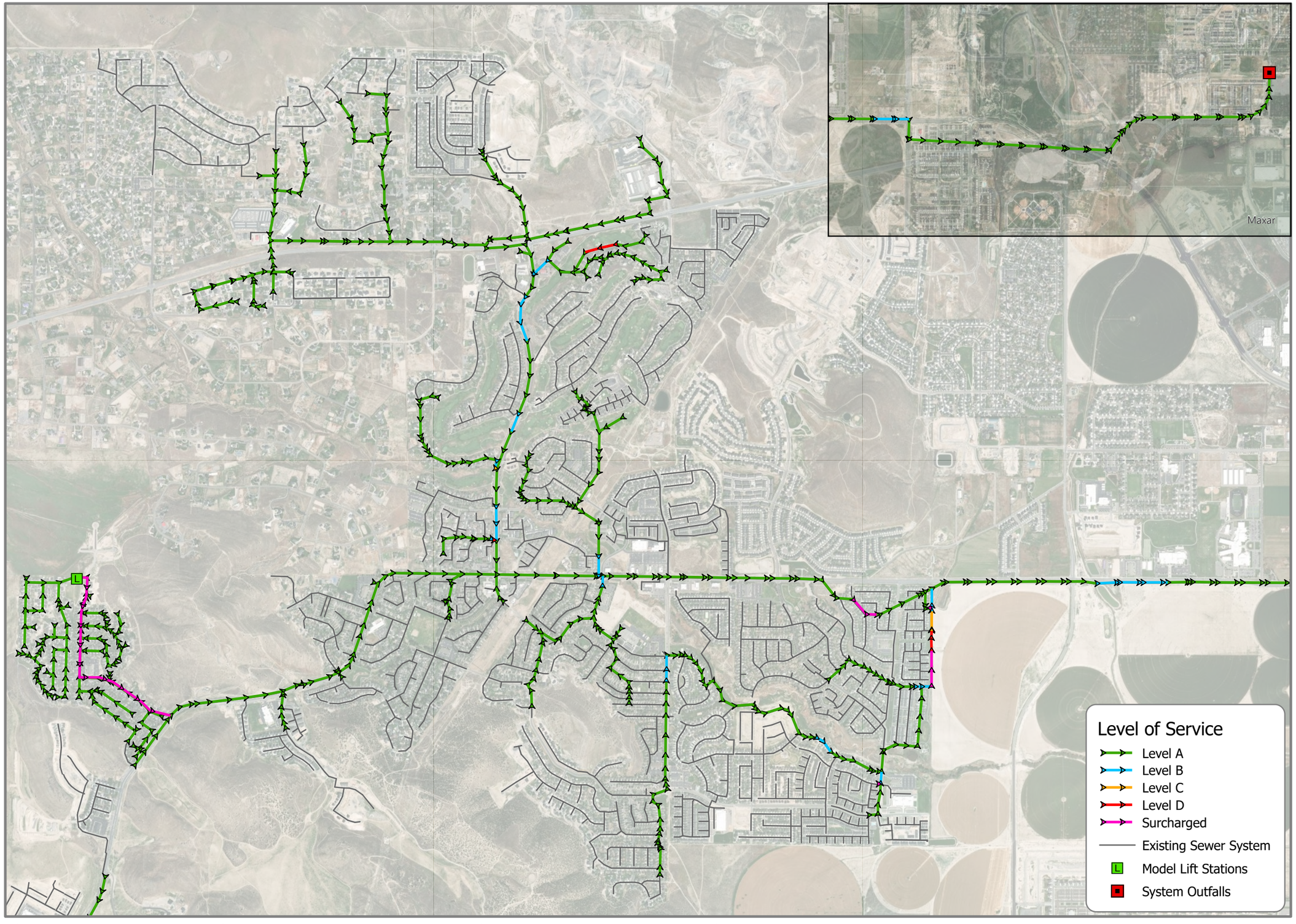

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Feet

1 inch equals 1,874 feet

Locator Map Not to Scale

Eagle Mountain City
Utah, UT

EXISTING WASTEWATER SYSTEM

NORTH SERVICE AREA

LEVEL OF SERVICE

WASTEWATER SYSTEM MASTER PLAN

Date: 6/16/2025

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South Service Area (SSA)

Pipes

The peak flow model shows that the main trunkline in Pony Express Parkway is at a LoS C south of Pole Canyon Blvd as it approaches the WWTP indicating this trunkline is at capacity. The existing shape files labeled several pipes north of this area as 24" and one section of 18". It was requested to verify this diameter and was determined the nominal diameter was 24" but the actual inside diameter for 22.5". The model was run with these pipes at 22.5" diameter. There are a few lines at confluences that are not at a LoS A. It is expected for this to happen at confluences. These locations should be evaluated to ensure invert elevations are correct. All other existing pipes are within the LoS A criteria.

Manholes

There are no known issues with existing manholes, and it is presumed that all existing manholes have a LoS A.

Lift Stations and Force Mains

The peak flow condition for a lift station is the capacity of the pumps. No peak factor was applied to the lift stations. Brylee Farms LS and Steeple Chase LS are the only operating lift stations in the SSA.

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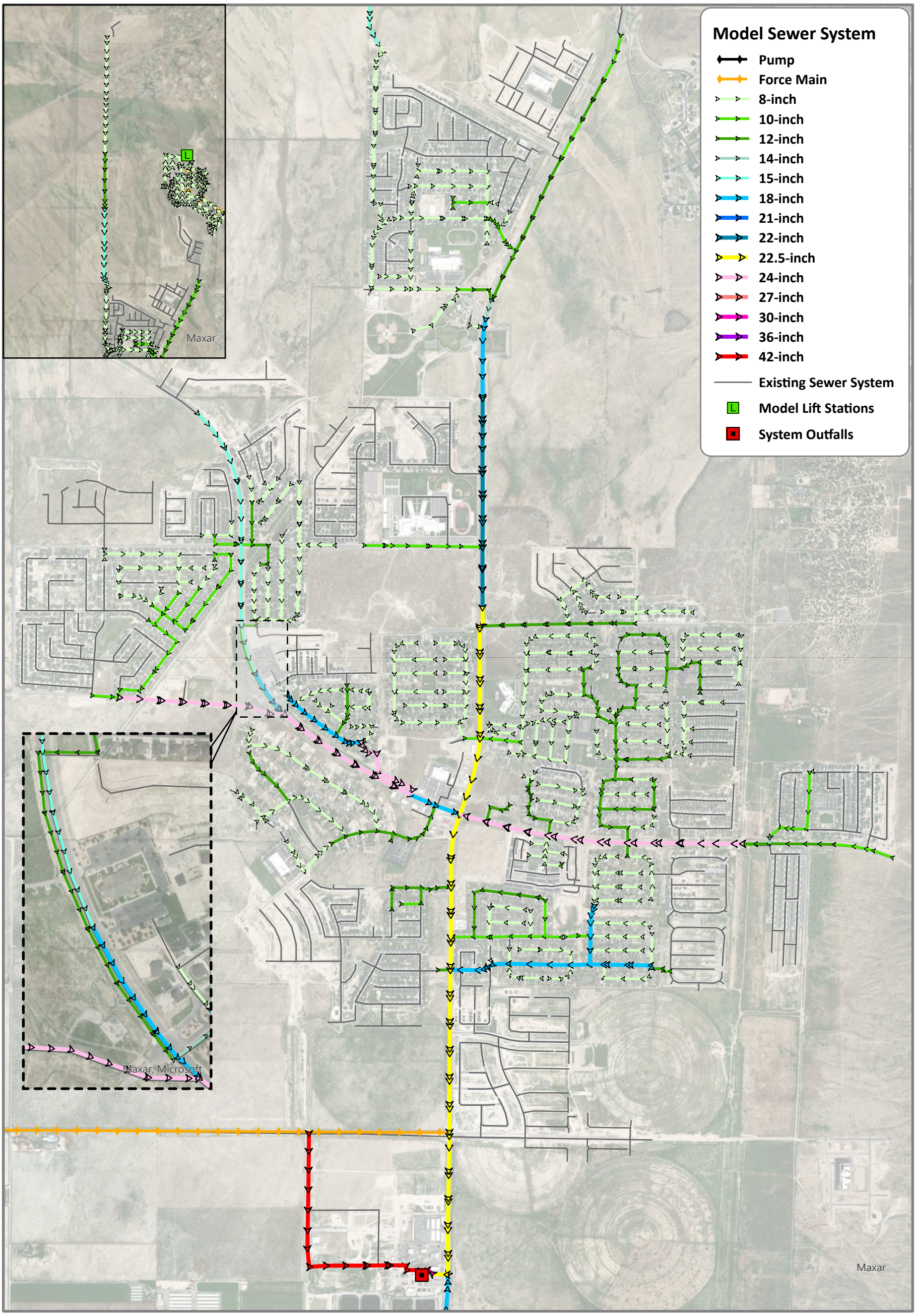

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N

0 500 1,000

Feet

1 inch = 1,750 feet

EXISTING WASTEWATER SYSTEM SOUTH SERVICE AREA DIAMETER (IN)

WASTEWATER SYSTEM MASTER PLAN
Eagle Mountain City | Utah, UT

Date: 6/17/2025

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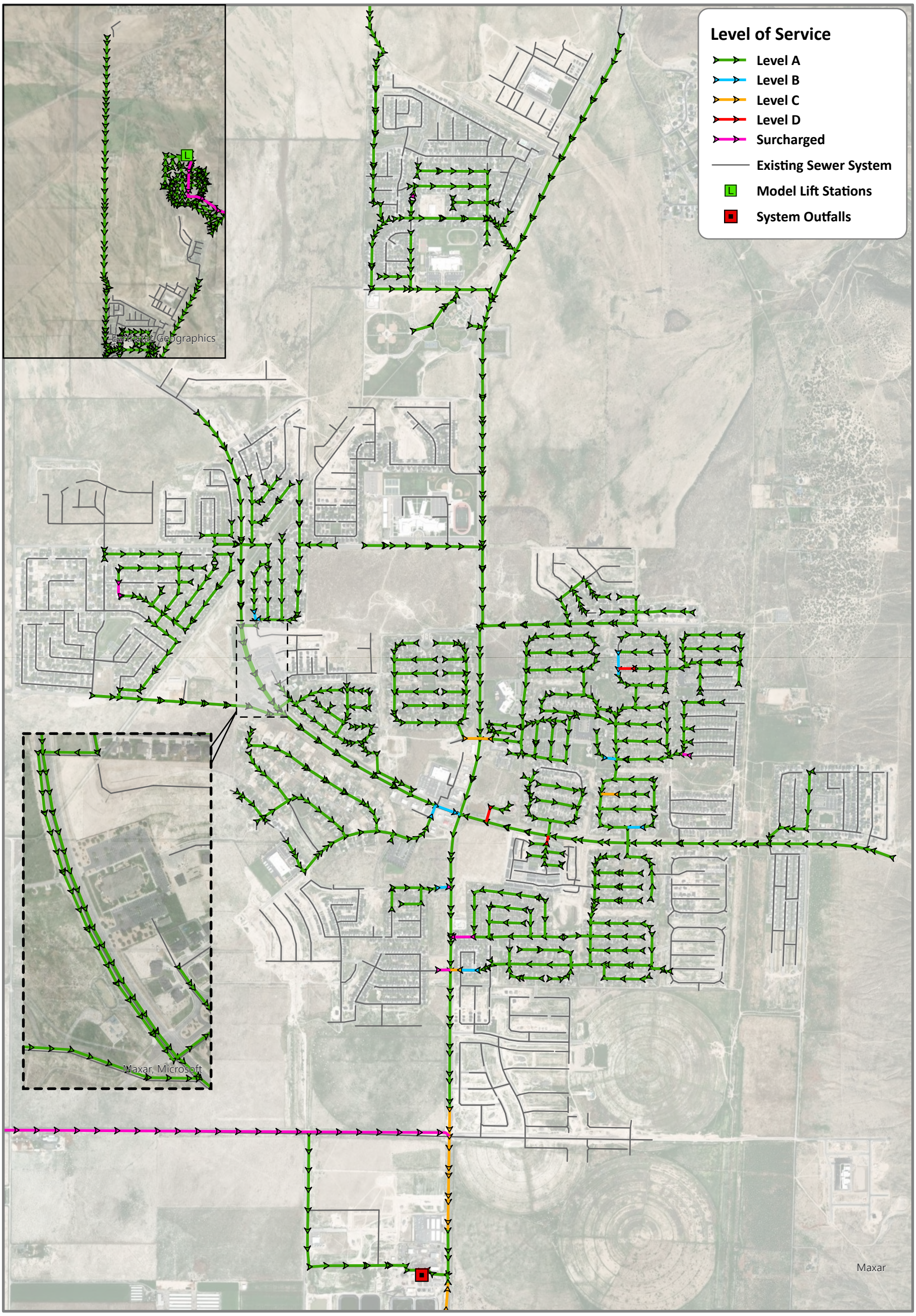

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Locator Map Not to Scale

N

0 500 1,000

Feet

1 inch = 1,750 feet

EXISTING WASTEWATER SYSTEM
SOUTH SERVICE AREA
LEVEL OF SERVICE

WASTEWATER SYSTEM MASTER PLAN
Eagle Mountain City | Utah, UT

Date: 6/17/2025

West Service Area (WSA)

Pipes

All existing pipes are within the LoS A criteria.

Manholes

There are no known issues with existing manholes, and it is presumed that all existing manholes have a LoS A.

Lift Stations and Force Mains

Pole Canyon LS is the only lift station in the WSA. The peak flow condition for a lift station is the capacity of the pumps. No peak factor was applied to the lift stations.

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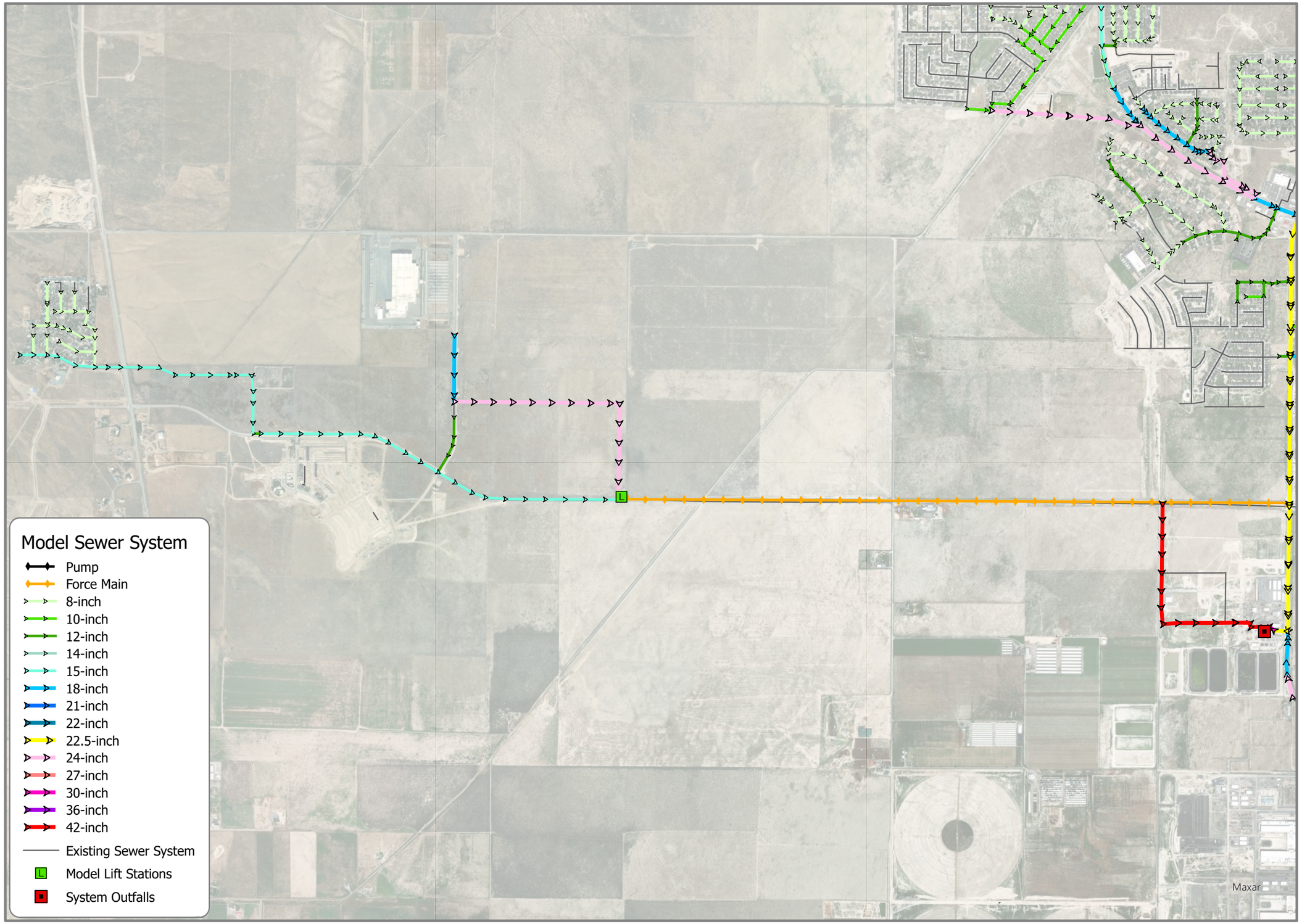

N

0 500 1,000

Feet

1 inch equals 1,874 feet

Locator Map Not to Scale

Eagle Mountain City
Utah, UT

EXISTING WASTEWATER SYSTEM

WEST SERVICE AREA

DIAMETER (IN)

WASTEWATER SYSTEM MASTER PLAN

Date: 6/16/2025

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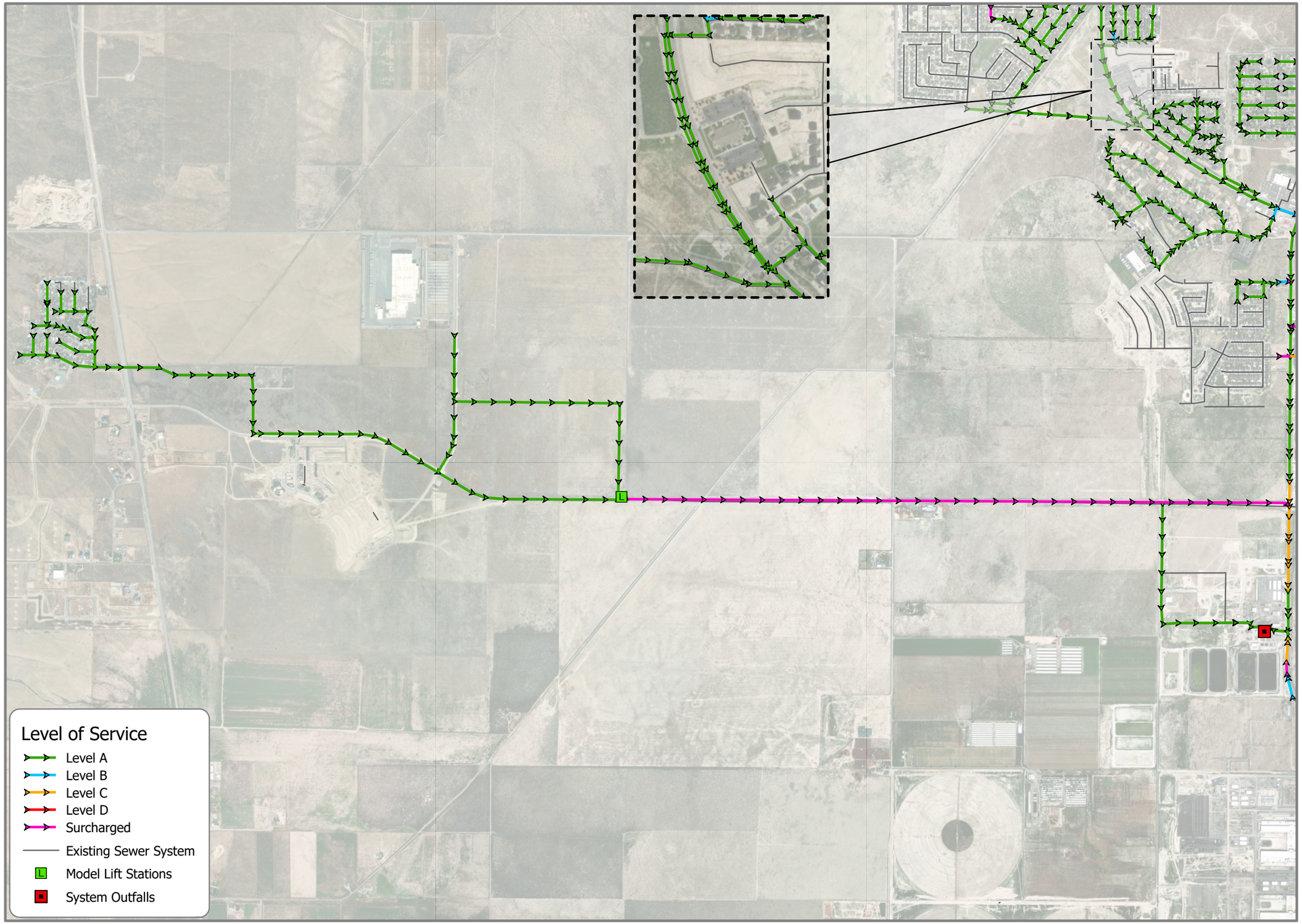

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0 500 1,000

Feet

1 inch equals 1,874 feet

Locator Map Not to Scale

Eagle Mountain City
Utah, UT

EXISTING WASTEWATER SYSTEM

WEST SERVICE AREA

LEVEL OF SERVICE

WASTEWATER SYSTEM MASTER PLAN

Date: 6/17/2025

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PROJECTED CONDITIONS WITH EXISTING INFRASTRUCTURE

The existing infrastructure was evaluated for flows anticipated with future development and growth.

Current septic users were not anticipated to connect to the wastewater system.

New industrial or commercial users should be evaluated on an individual basis as wastewater flows vary significantly depending on the type of industry.

Tyson Foods has an agreement to discharge up to 700 gpm into the wastewater system. Currently they average only 57 gpm. For the projected flows a value of 75 gpm with a peak factor of 2.0 was used. Tyson Foods has a holding tank so that flows are discharged between the hours of 10pm and 5am. This is to ensure that their flows will not compound with residential peak flows.

Generally speaking, the EMC wastewater infrastructure is relatively new. However, with time the infrastructure may experience inflow and infiltration, and pipe and manhole deterioration. It is recommended that EMC monitor their system for these conditions as the infrastructure ages with time. Infiltration is expected to remain low due to percolating soils. Inflow should be minimal with routine maintenance.

All areas south of the existing WWTP are lower in elevation. There is one industrial user in this area that pumps flows north to the WWTP.

Projected ERU's for undeveloped areas that do not have approved plans, were approximated by using a factor of 3.4 ERU/Acre. If areas are known to be planned for a lower or higher density, this value may be revised for given areas which may also reduce the amount of anticipated flows. An increase in ERU counts for a given area will affect the LoS for the wastewater system. A few of the areas have partially been developed. Only the areas where the majority of the area has not been developed are included. See the figure below showing the undeveloped areas ERU counts.

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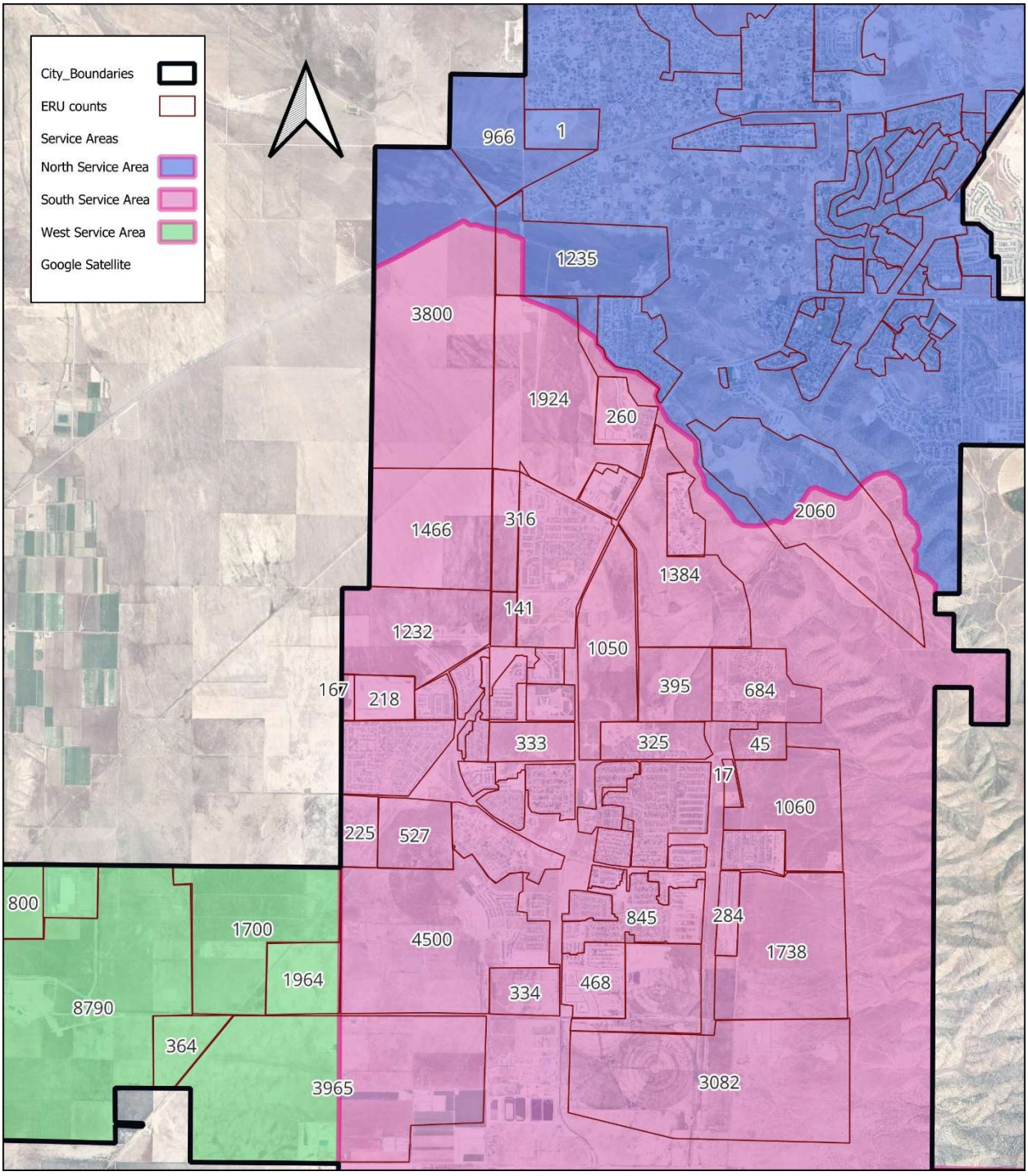

Figure 7 - Future ERU Estimates

The table below shows the added ERU's per service area as shown above. Note that the "other" areas are ones that will not be able to be conveyed by gravity with the existing trunklines and will either need an additional trunkline or lift stations to pump flows to the existing WWTP.

Table 8 - ERU's for Existing Service Areas

	Current ERU's	Added ERU's	Total ERU's at Build-out
NSA	8,027	3,473	11,500
SSA	6,744	26,956	33,700
SSA other		7,900	7,900
WSA	134	13,666	13,800
WSA other		4,000	4,000
Total			**71,000**

North Service Area (NSA)

TSSD Trunkline

All flows from the NSA are conveyed East through the TSSD Trunkline to TSSD. The trunkline diameter pipe as it leaves EMC is 21". As it approaches TSSD it transitions to 24" and 30" pipe. The existing model conditions for this stretch of pipe is approaching LoS B in some pipes which means that it is nearly at capacity now. Additional flows would cause additional pipe segments to exceed LoS A.

South Service Area (SSA)

Pony Express Trunkline

All flows from the SSA are conveyed south through the Pony Express Trunkline to EMC WWTP. The largest diameter pipe is 22.5" with slopes of 0.027% or greater. This slope is determined from the existing shape files and is less than the minimum slope for 24" pipe which is 0.077%. Assuming the shape files are accurate, this means that the 22.5" pipe is at a lesser slope than the minimum slope. The existing model has this trunkline currently conveying 6,744 ERU's which is at a LoS of C according to the model near the WWTP. A 22.5" pipe with 0.027% slope should be able to carry 6,176 ERU's with a LoS A (67% full). The additional anticipated ERU's needed to be conveyed through this pipe for the SSA based on projected growth is nearly 27,000. The existing Pony Express Trunkline cannot accommodate the additional anticipated flows.

West Service Area (WSA)

Pole Canyon Trunkline

Currently flows from the WSA are conveyed west to the EMC WWTP by means of a 12" force main. With planned development in the WSA this force main will be replaced with a deep gravity sewer. The largest pipe diameters being 36" and 42" with a slope of 0.082% or greater. Anticipated development would bring the number of ERU's to be conveyed in this pipeline to 13,755 ERU's. Using the ERU Capacity Table included earlier in this report, the capacity of 36" and 42" pipe would be 27,712 and 41,803 ERU's respectively. The planned pipe diameters for this trunkline are adequate.

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IMPROVEMENTS NEEDED/RECOMMENDATIONS

JWO Engineering, PLLC evaluated the existing model as well as EMC projected growth and development plans for the wastewater system. Several improvements are needed for the wastewater system in order for EMC to continue growing and meet wastewater needs.

Improvement recommendations have been broken down by service area and discussed below. It is also recommended that the service area boundaries be revised with the proposed trunkline additions. Exhibits for build-out or projected conditions with proposed trunklines are included for each service area below.

PROJECTED CONDITIONS MODEL

Advanced Engineering and Environmental Services, LLC (AE2S) modeled the wastewater system with proposed trunklines and projected flows using Infoworks. A standard peak factor of 2.0 was used for projected flow conditions. Peak flows were evaluated for the proposed wastewater system to maintain a LoS A.

Projected ERU's for undeveloped areas that do not have approved plans, were approximated by using a factor of 3.4 ERU/Acre. If areas are known to be planned for a lower or higher density, this value may be revised for given areas which may also reduce the amount of anticipated flows. Once diameters are determined based on anticipated flows and ERU counts, any future development should be within the estimated ERU counts. An increase in ERU counts for a given area will affect the LoS for the wastewater system.

Current septic users were not anticipated to connect to the wastewater system in this model.

New industrial or commercial users should be evaluated on an individual basis as wastewater flows vary significantly depending on the type of industry.

Tyson Foods has an agreement to discharge up to 700 gpm into the wastewater system. Currently they average only 57 gpm. For the projected flows a value of 75 gpm with a peak factor of 2.0 was used. Tyson Foods has a holding tank so that flows are discharged between the hours of 10pm and 5am. This is to ensure that their flows will not compound with residential peak flows.

A new trunkline on the East side (East Trunkline) was added to facilitate flows from the existing 15" sewer line in Airport Road over to the East bench. This trunkline is within the SSA and will not connect to the Pony Express Trunkline, but will go directly to the EMC WWTP. This pipe will accommodate all developments East of this pipeline as well as conveying the flows from Airport Road. Flows from areas to the northwest of Airport Road will also be conveyed in this trunkline with a branch line. This is to help alleviate the flows in the Pony Express Parkway trunkline as it is already nearly at capacity and developments are continuing to be approved and constructed. See the figure below for the area this trunkline will collect from as well as the estimated ERU counts.

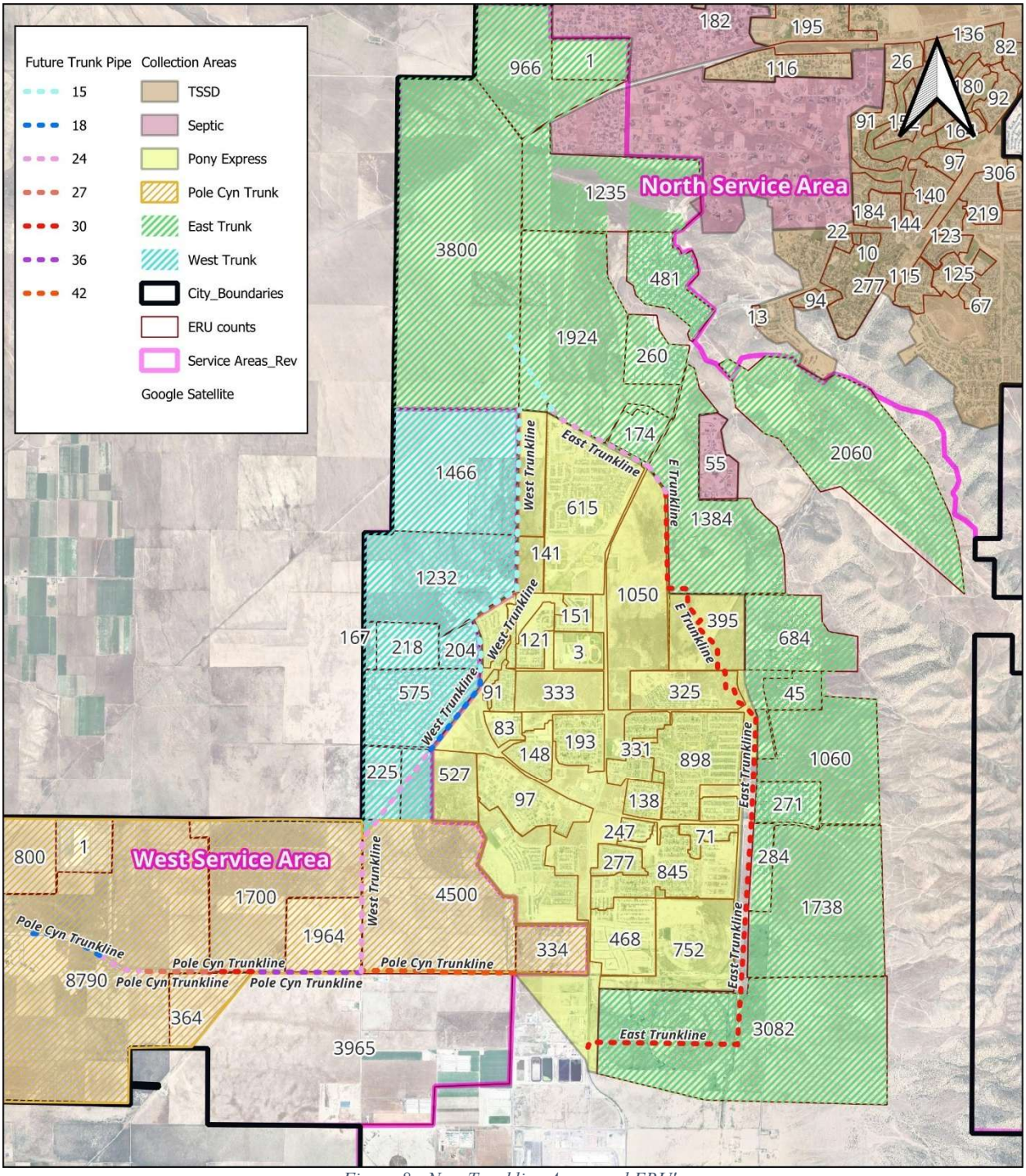

Figure 8 - New Trunkline Areas and ERU's

An additional trunkline was also added on the east side of the WSA (West Trunkline) to intercept flows from Brandon Park and other future developments in the area by gravity to help alleviate the flows into Pony Express Parkway Trunkline. This new trunkline will tie into the new Pole Canyon

Trunkline and be part of the WSA. The new West Trunkline will service the areas west of the trunkline. See the figure above for the collection area of this trunkline. Existing private lift stations remain in this model. If the West Trunkline is desired to accommodate Pinnacles and Brylee Farms by gravity and eliminate the private lift stations, it will need to be at a depth of 20’ at Aviator Avenue. An additional branch line will need to be constructed within Aviator Avenue to both Pinnacles and Brylee Farms lift stations. To eliminate the Rose Ranch lift station, the depth of the proposed sewer lines for that development will need to be known to determine the depth of the trunkline along the Lehi-Fairfield Road. It is estimated that a depth of 11’ will be needed at Williard Peak Drive to collect flows from Brandon Park development.

Lone Tree LS was previously modeled as conveying flows to the NSA or TSSD as that is the existing condition. EMC had indicated that these flows in the future would be pumped to Old Airport Road and conveyed through the East Trunkline to EMC WWTP. This would happen by constructing a new force main from the existing lift station to Old Airport Road. This project is not anticipated to happen within the next 5 years. The buildout model has moved these flows to the SSA which would be collected by the existing 15” pipe in Airport Road.

All areas south of the existing WWTP will need to be pumped to the WWTP as that area is lower in elevation. It may be favorable to have regional lift stations by geography. This can be determined as these areas are better determined for actual land use and developed.

The area west of the existing WWTP will need to have its own trunkline, which may include a lift station and force main to reach the existing WWTP.

The figure below shows the revised service area boundaries based on the new trunklines and collection areas discussed above.

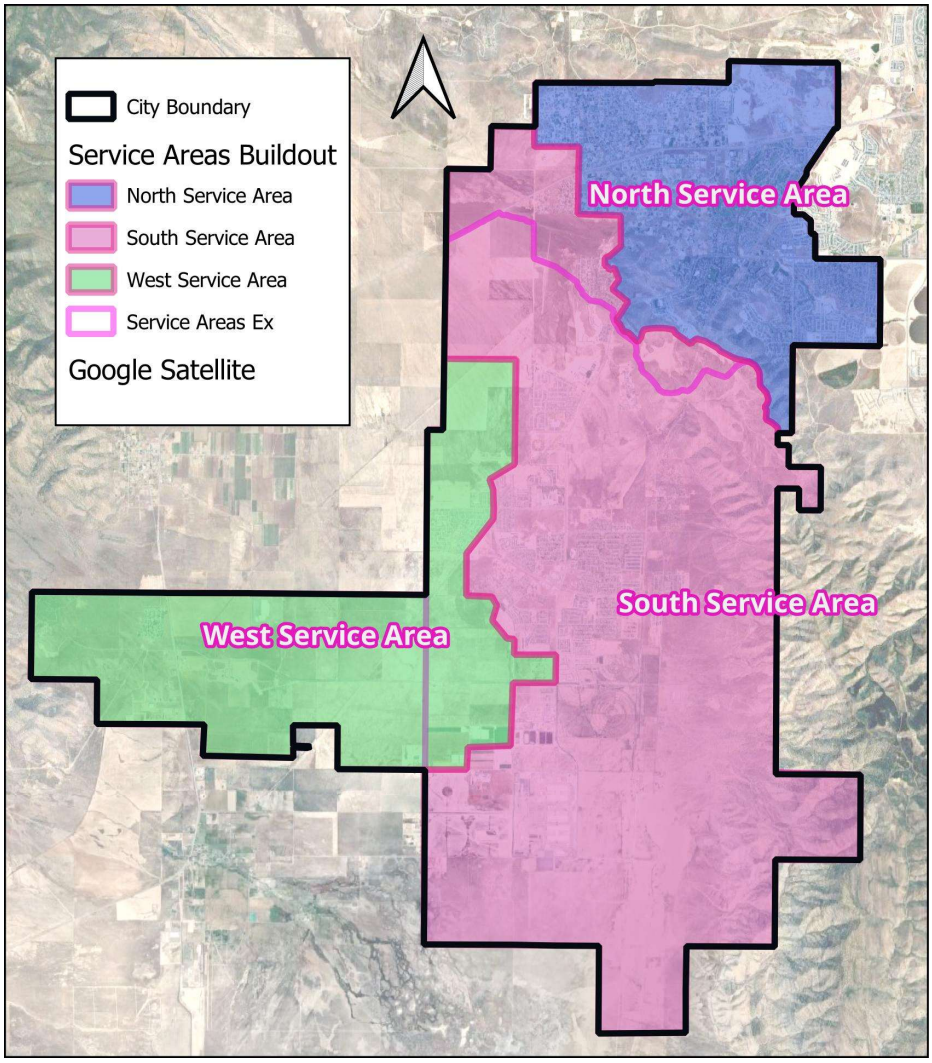

Figure 9 - Buildout Service Area Boundaries

Locations and numbers of manholes will need to follow Utah Administrative Code R317-3-3-Sewers, Section 2.6. Exact number of manholes for proposed pipes will be determined by topography, slopes, curves in the roads, changes in diameter, changes in direction and confluences of pipes. Numbers of manholes were estimated in the model.

As the service area boundaries have been revised, the number of additional ERU's is adjusted as well. The table below shows the number of ERU's added to each service area based on the revised boundaries and trunklines.

The ERU counts that are under "other" will either need to be pumped to the existing WWTP or have a separate trunkline and were not included in the model.

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Table 9 - Projected ERU's per Build-out Service Areas

	Total Aniticipated ERU's at Build-out
NSA	7,800
SSA	28,500
SSA other	7,900
WSA	22,700
WSA other	4,000
Total	**71,000**

North Service Area (NSA)

Pipes

No additional flows were added as this area is considered to be built out. Lone Tree flows were moved to the SSA. If there are any areas where significant growth is expected, these flows should be added and a model run again. The pipes in Silverlake are still a concern to address and verify GIS data is correct. This model does not account for any inflow or infiltration. As the wastewater system ages, it will be necessary to keep inflow and infiltration to a minimum to ensure there are no surcharge conditions. Any industrial or commercial users using large amounts of water should be evaluated and the model run again to ensure LoS A capacities are not exceeded. All other existing pipes are within the LoS A criteria.

Looking forward, it is recommended that EMC consider lining the existing TSSD trunkline in Pony Express with CIPP (cast in place pipe). The timing of this project would be determined by the quality of the existing pipe and or detection of significant inflow and infiltration. It is not anticipated that this project would be necessary within the next 5 years. For Master planning purposes, a CIPP lined pipe would not affect modeling results.

Manholes

There are no known issues with existing manholes, and it is presumed that all existing manholes have a LoS A. Existing manholes should be monitored for signs of deterioration. Manholes exhibiting deterioration should be noted and monitored to be scheduled for future lining or replacement.

Lift Stations and Force Mains

Lone Tree Lift Station flows were modeled in the SSA for buildout. The peak flow condition for a lift station is the capacity of the pumps. No peak factor was applied to the lift stations.

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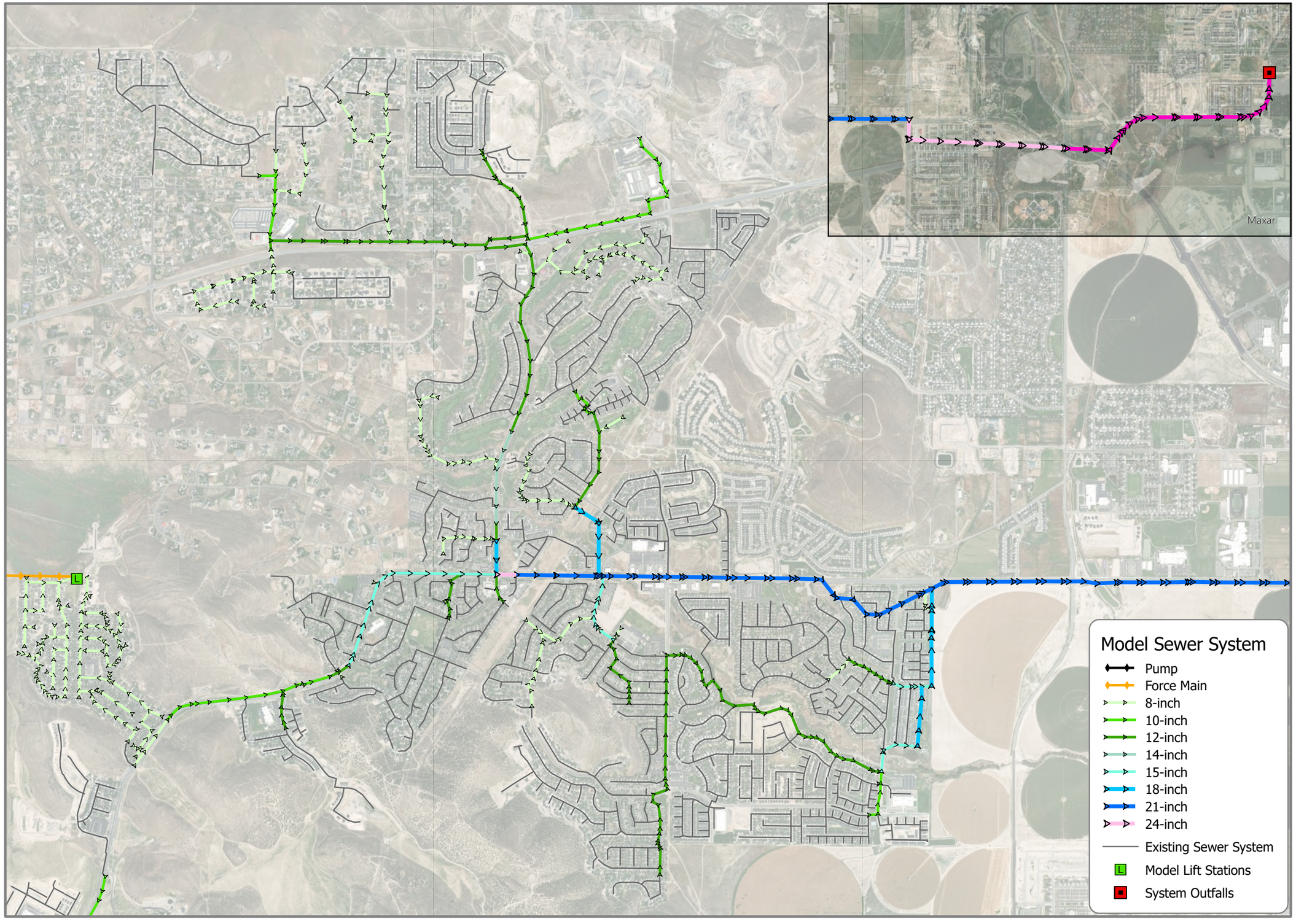

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Feet

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Locator Map Not to Scale

Eagle Mountain City
Utah, UT

FUTURE WASTEWATER SYSTEM

NORTH SERVICE AREA

DIAMETER (IN)

WASTEWATER SYSTEM MASTER PLAN

Date: 6/17/2025

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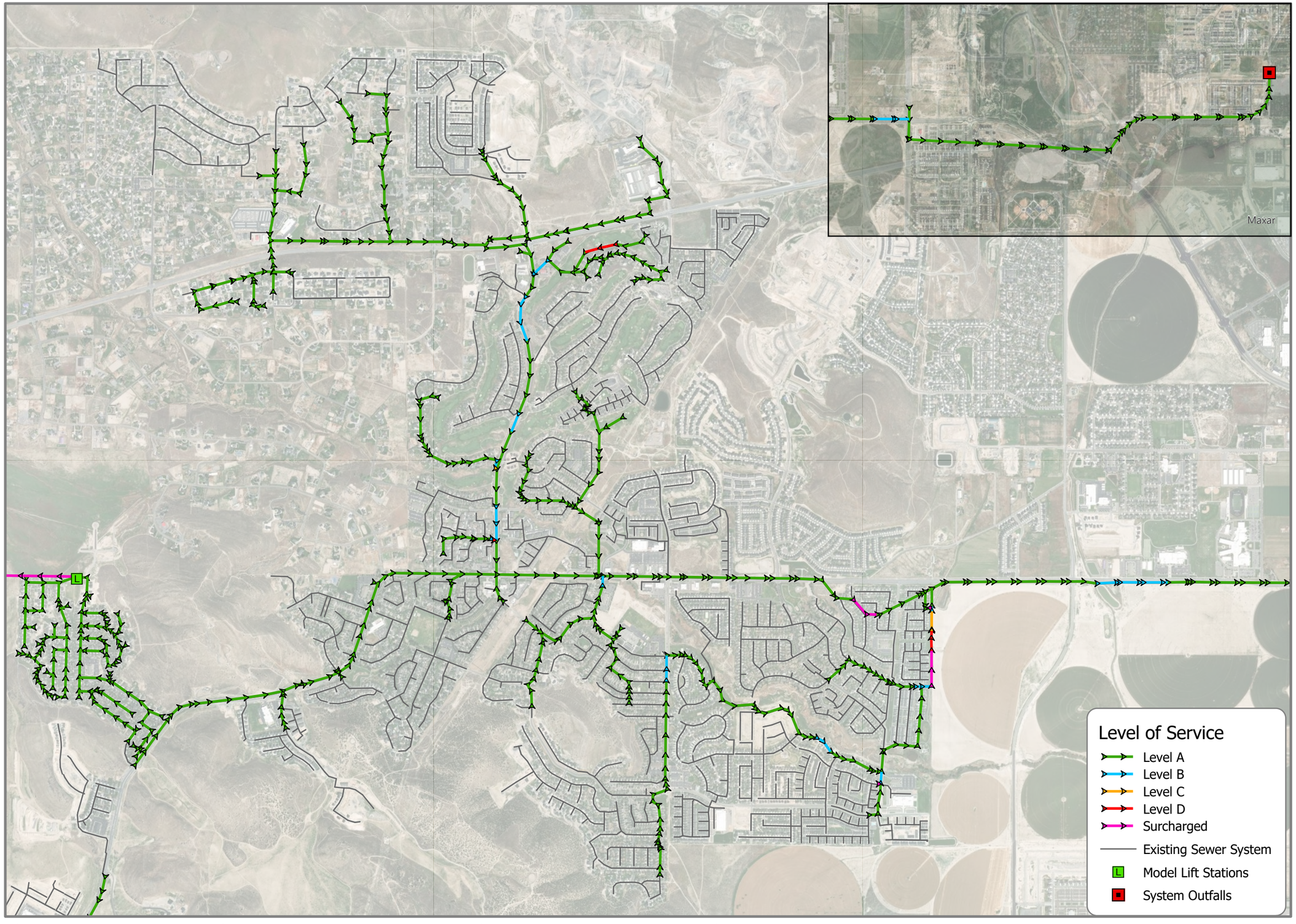

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FUTURE WASTEWATER SYSTEM

NORTH SERVICE AREA

ANTICIPATED LEVEL OF SERVICE

WASTEWATER SYSTEM MASTER PLAN

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South Service Area (SSA)

Pipes

As noted in the existing conditions model, the pipe sections south of Pole Canyon Blvd in Pony Express Parkway are still of concern. With projected flows these same pipes are at LoS C and D. Some existing flows are no longer flowing to the Pony Express Trunkline and have been modeled in the West and East Trunklines. However, there are still undeveloped areas that would contribute to the Pony Express Trunkline. There are still several places of confluence shown at LoS C and should be verified for elevations. All other existing pipes are within the LoS A criteria.

Manholes

There are no known issues with existing manholes, and it is presumed that all existing manholes have a LoS A.

Lift Stations and Force Mains

The West Trunkline picks up the private lift station flows from Brylee Farms, Rose Ranch and Pinnacles. The peak flow condition for the remaining lift stations is the capacity of the pumps. No peak factor was applied to the lift stations.

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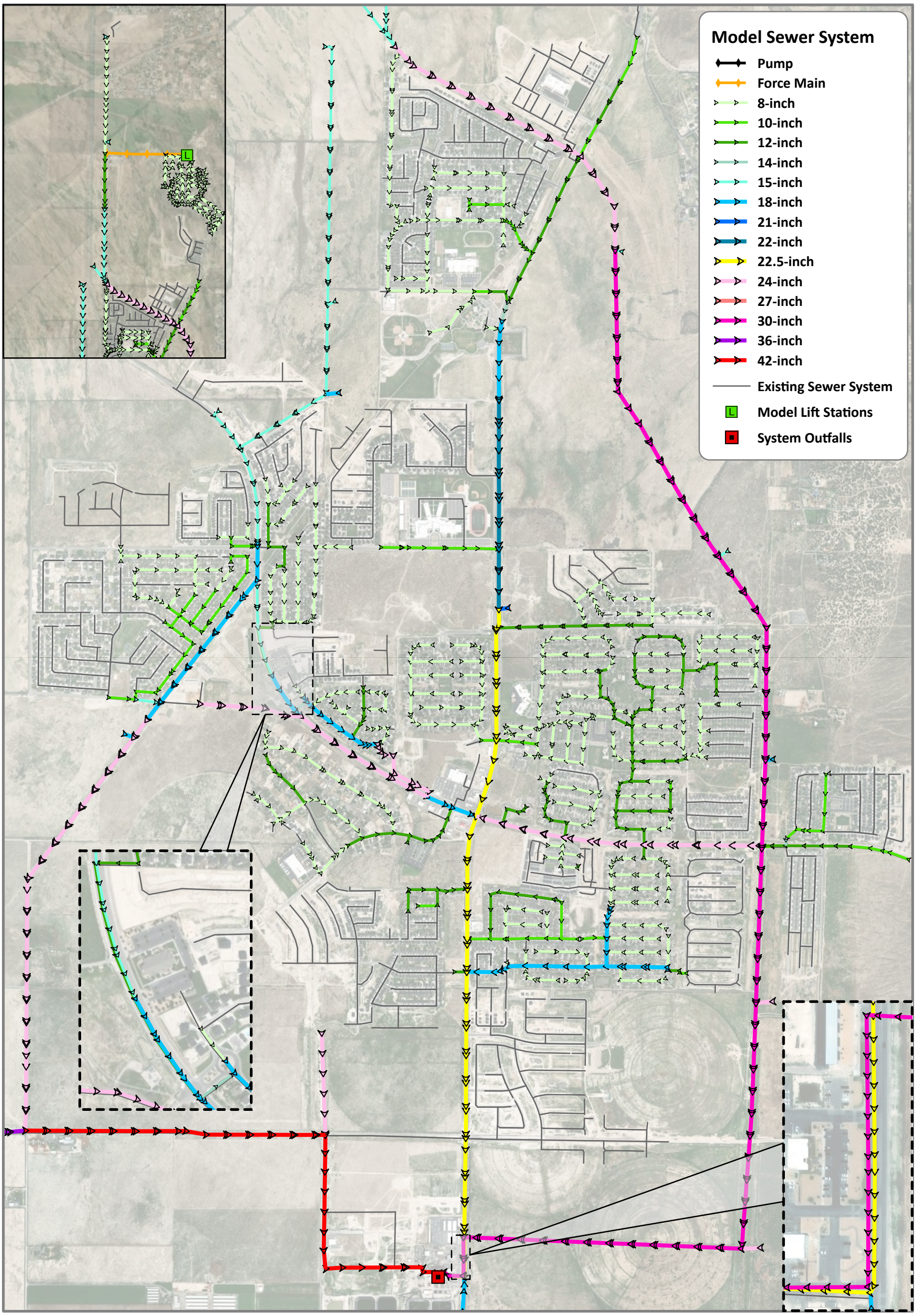

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FUTURE WASTEWATER SYSTEM SOUTH SERVICE AREA DIAMETER (IN)

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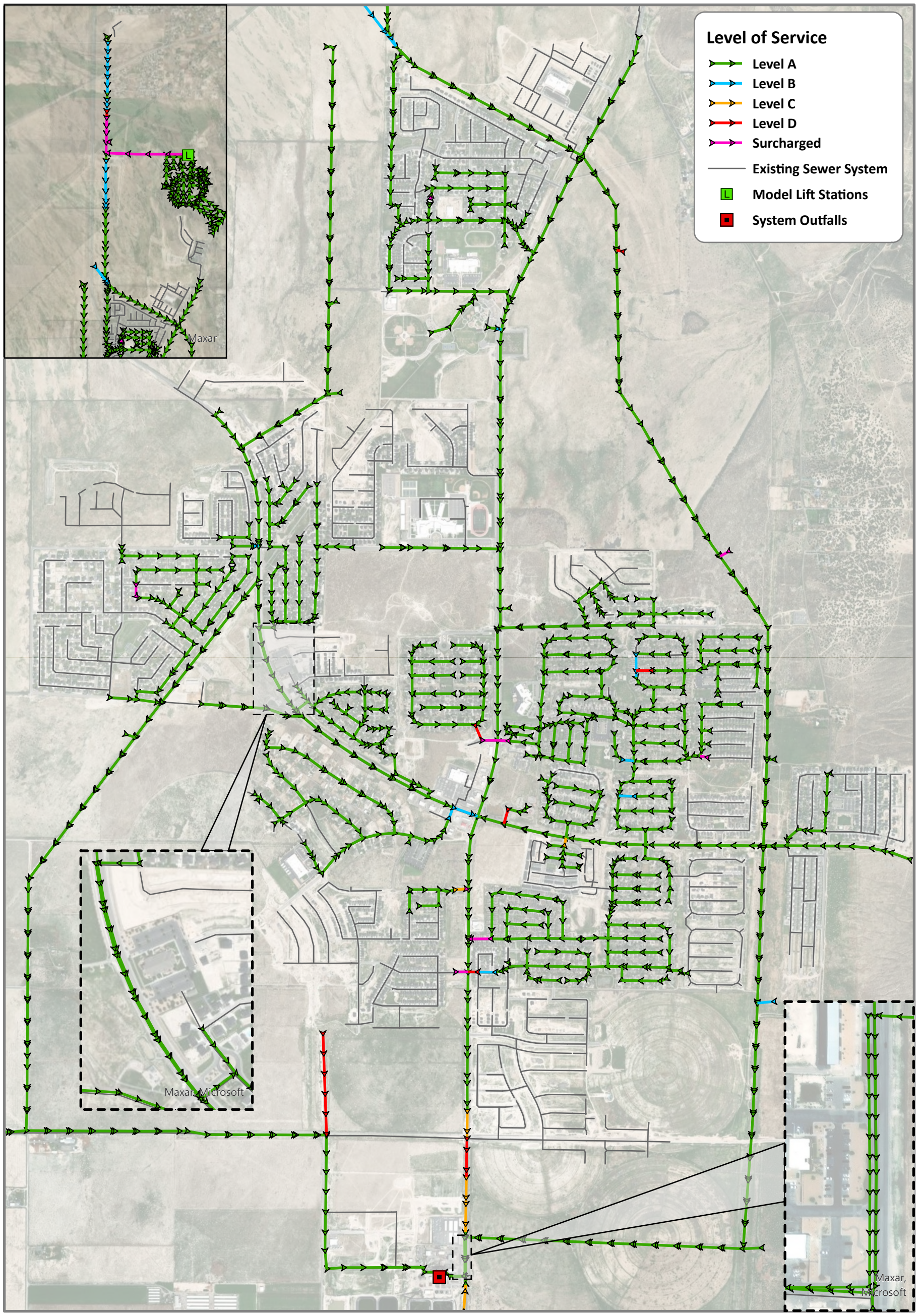

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West Service Area (WSA)

Pipes

The proposed Pole Canyon Trunkline was designed as a 36" pipe. This was based on peak flows from OWR or Firefly with an ERU of 220 gpd, peak factor of 2.5, and meeting the condition of not exceeding 75% full. This calculation did include the recently annexed 300 Acres and the proposed Tract development and was a peak flow of 5,686 gpm, or average flow of 2,275 gpm. This was defined in the ARMDA agreement though it is not the city standard. If a peak factor of 2.0 is used the peak flow is 4,549 gpm. A 36" pipe flowing 50% full with a slope of 0.00082 and using an N value of 0.013, the capacity is 4,286 gpm, which would require the pipe diameter to be 42". Pipes upstream of 16000 West, where the new West trunkline connects are adequately sized for LoS A criteria.

The build out wastewater model used a 42" diameter pipe downstream of the proposed West Trunkline would be at LoS A with the additional West Trunkline flows. A portion of the 18" Pole Canyon pipeline is at a LoS B, just past 50% capacity. This is due to the alternative design criteria in the ARMDA agreement. As the LoS criteria in this report had not been set forth prior to the Firefly development, the ARMDA agreement criteria will be followed. Additional flows from the Harmony development will enter the wastewater system at a 24" stub as the trunkline turns south to the WWTP. All other pipes are within the LoS A criteria.

Manholes

There are no known issues with existing manholes, and it is presumed that all existing manholes have a LoS A.

Lift Stations and Force Mains

With the Pole Canyon Trunkline, the Pole Canyon LS will no longer be in service. The depth of the West Trunkline will determine if the Brylee Farms, Pinnacles and Rose Park LS are still needed.

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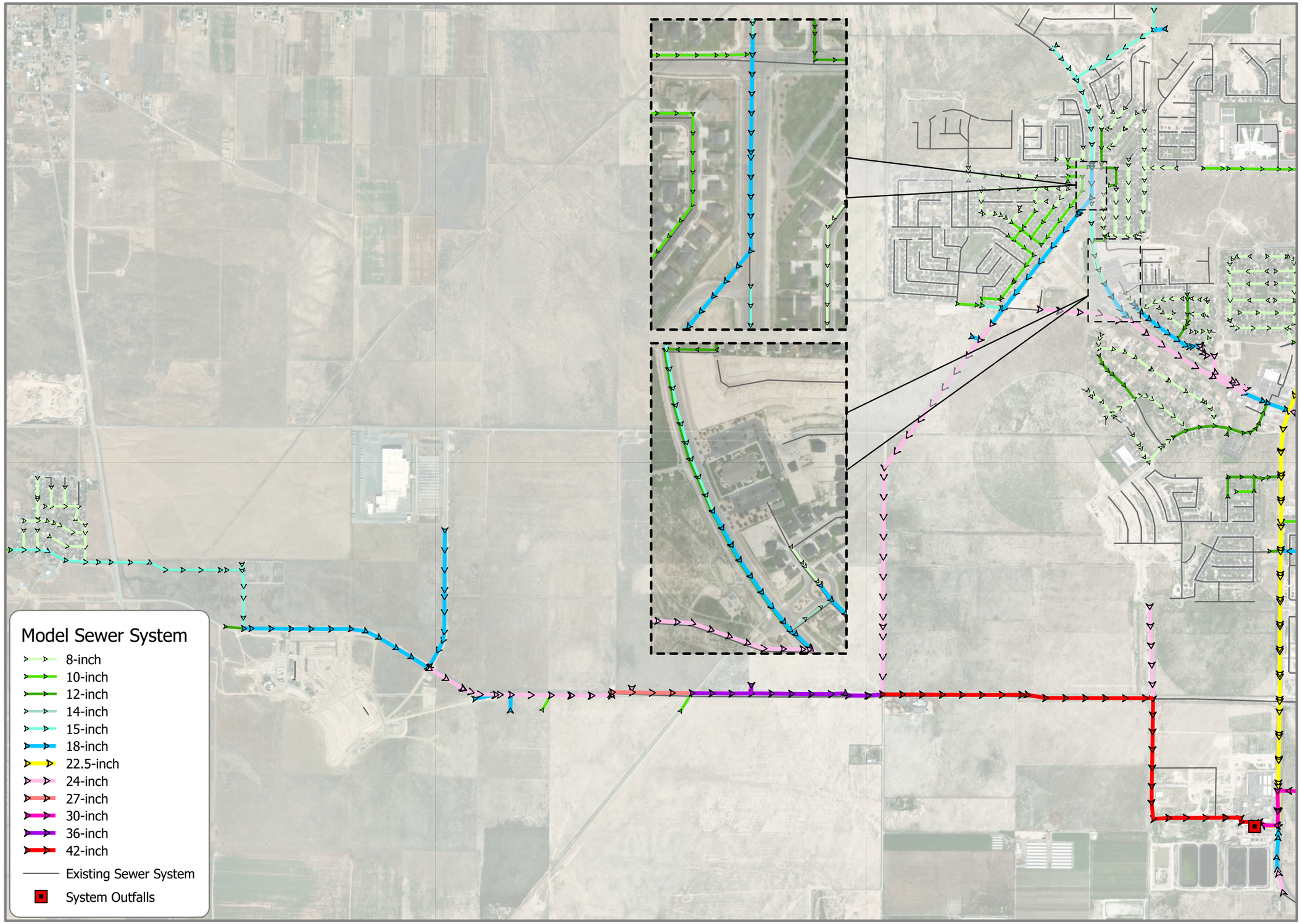

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FUTURE WASTEWATER SYSTEM

WEST SERVICE AREA

DIAMETER (IN)

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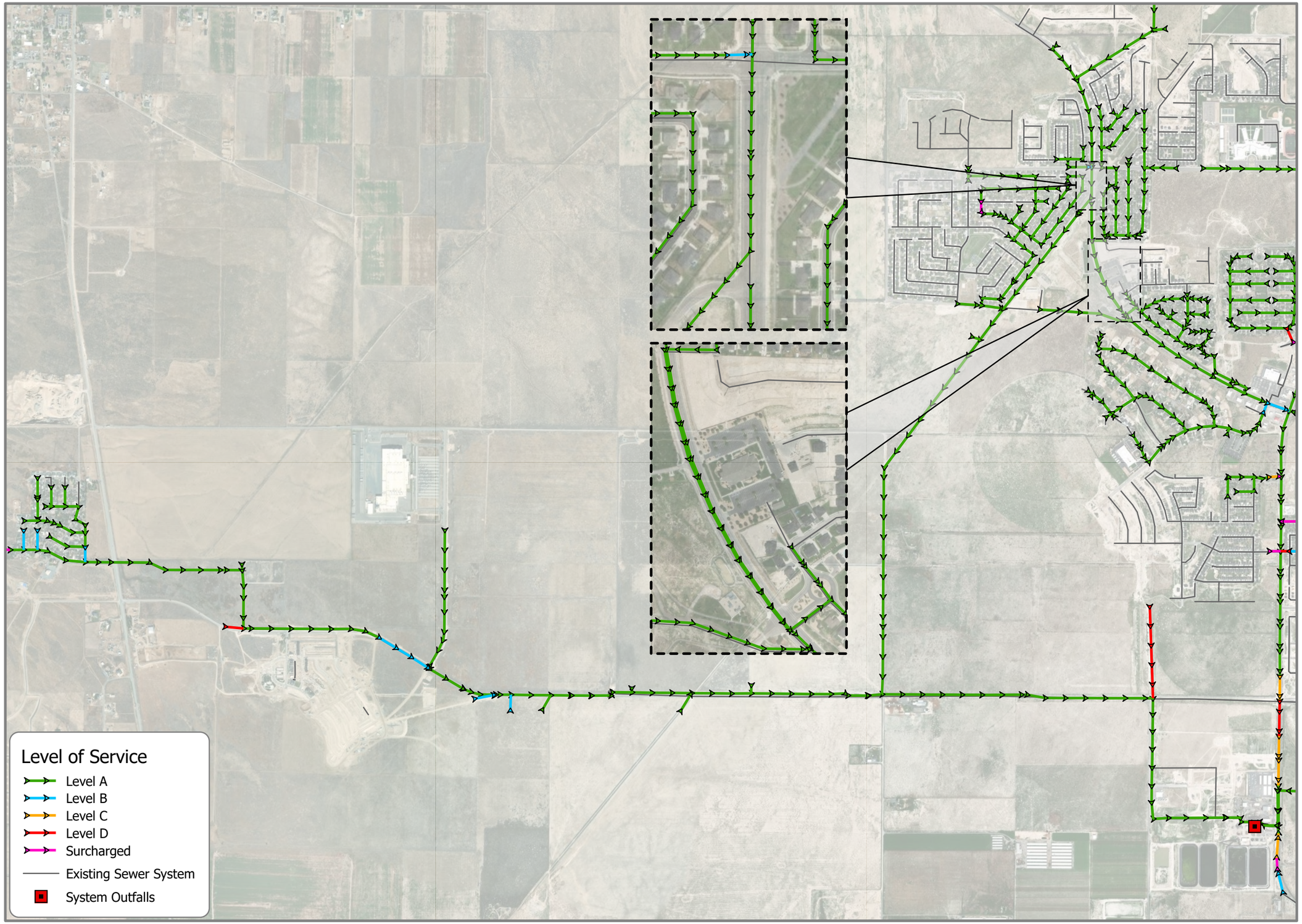

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FUTURE WASTEWATER SYSTEM

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Treatment Plant

The EMC WWTP has recently been expanded to accommodate flows of 2.4 MGD with construction being nearly complete. Currently the WWTP is under design for additional capacity to be able to accommodate an additional 6.0 MGD bringing the WWTP capacity to 8.0 MGD. The average total flows treated by the WWTP for the last 2 months is about 1.5 MGD. While the current capacity is 2.4 MGD by flow it should be noted that for loading it is already nearly at capacity. With some modifications to the existing oxidation ditch system it is anticipated that the capacity of the existing plant can be 2.0 MGD by flow.

The SSA added an additional 896 ERU's in 2023 and is anticipated to continue growing rapidly. The WSA added 2 ERU's in 2023 but is anticipated to add 500 residential units or ERU's each year with anticipated development beginning in 2025.

The anticipated build-out population for EMC is 240,000. Using a value of 65 gpcd the projected flows to be treated would be 15.6 MGD, or 71,009 ERU's. This is for all of EMC residents. The WWTP will not be treating flows from the NSA. The NSA is nearly at build-out with flows of 1.76 MGD. There are approximately 280 ERU's to be added with residential lots and commercial or industrial areas. With Lone Tree lift station being pumped to the SSA, this removes 481 ERU's from the NSA. The anticipated NSA projected flows based on these conditions would be 1.72 MGD.

There are also several areas that are septic and not anticipated to connect to the wastewater system. It is estimated that there will be approximately 822 lots or ERU's that will remain on septic service. These septic users would account for 0.18 MGD. With the NSA and septic users combined it is nearly 2MGD, leaving approximately 14.0 MGD to be treated by the EMC WWTP for build-out conditions.

The Figures below show these anticipated flows both in ERU's and MGD. The ERU count based on 65 gpcd is 71,009, which is nearly the same as the ERU's calculated by anticipated growth for flows. The total anticipated ERU's at buildout based on areas and a density of 3.4 ERU/Acre was 70,744 ERU's. As these anticipated values are based on alternative methods, they still come very close to the same value. While the values could potentially vary due to actual commercial or industrial users, it shows that both methods come to a similar value. A value of 71,000 ERU's for build-out will be used.

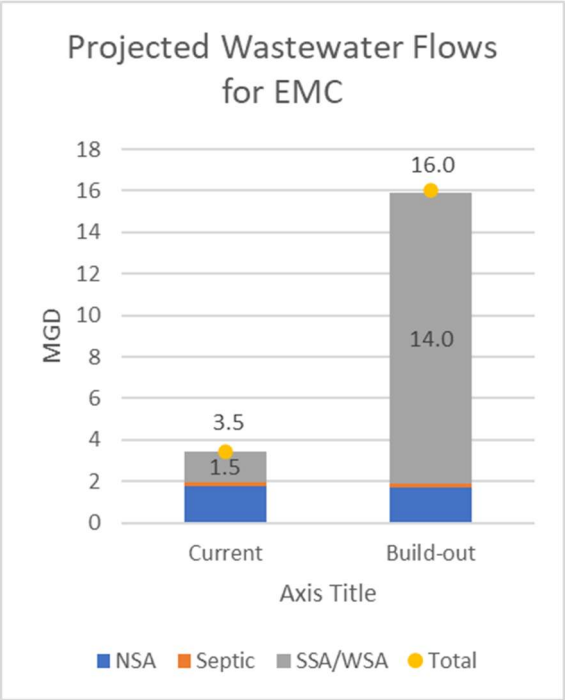

Figure 10 - Projected Wastewater Flows in MGD

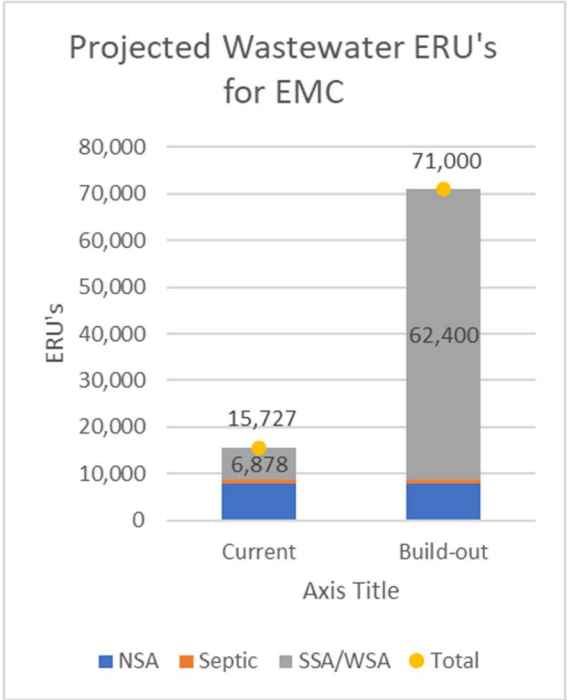

Figure 11 - Projected Wastewater Flows in ERU's

A key issue in treatment plant expansion is the lead time to procure large electrical equipment including transformers and switch gear. These are currently expected to take up to 2 years to obtain. An initial task in the plant expansion design should be determining the electrical power requirement and beginning the process of procuring additional supply from the power company.

PROPOSED FEATURE COSTS

Estimated costs for the proposed improvements are shown in the tables below. All costs are shown in 2025 dollars. Numbers of manholes are estimated and may vary from the number shown in the table below. Cost will be affected by pipe depth and these additional costs are accounted for in the estimates below. All projects are recommended to be completed within the next five years to support continued growth rates.

Pipe Segments and Manholes

Pipe segments for each trunkline are listed by reach.

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Table 10 –Estimated Improvement Costs for East Trunkline

East Trunkline		Pipe	DS MH			Est		Mobilization	Traffic	Contingency	Engineering	Total
REACH	LF	Dia	Depth	Slope	Piping Cost	#MH	MH cost		Control			
Airport Rd to Pony Express	3,800	24"	10'	0.718%	$1,368,000	11	$121,000	$ 148,900	$ 98,274	$ 434,044	$ 325,533	$ 2,495,750
Pony Express to turn	1,155	24"	10'	0.077%	$ 415,800	4	$ 44,000	$ 45,980	$ 30,347	$ 134,032	$ 100,524	$ 770,682
south to Eagle Quest	3,334	30"	8'	0.265%	$1,283,590	9	$ 99,000	$ 138,259	$ -	$ 380,212	$ 285,159	$ 2,186,220
east to Eagle Quest	718	30"	23'	0.057%	$ 987,250	2	$ 48,000	$ 103,525	$ -	$ 284,694	$ 213,520	$ 1,636,989
south into EQ	578	30"	16'	0.057%	$ 311,542	2	$ 26,000	$ 33,754	$ -	$ 92,824	$ 69,618	$ 533,738
diagonal east in EQ	684	30"	16'	0.057%	$ 553,356	2	$ 36,000	$ 58,936	$ -	$ 162,073	$ 121,555	$ 931,919
diagonal west in EQ	247	30"	12'	0.057%	$ 133,133	1	$ 13,000	$ 14,613	$ -	$ 40,187	$ 30,140	$ 231,073
diagonal east in EQ	1,106	30"	15'	0.057%	$ 596,134	3	$ 39,000	$ 63,513	$ -	$ 174,662	$ 130,996	$ 931,919
south to Aviator Way	832	30"	9'	0.057%	$ 320,320	3	$ 33,000	$ 35,332	$ -	$ 97,163	$ 72,872	$ 558,687
east on Aviator Way	286	30"	12'	0.057%	$ 154,154	1	$ 13,000	$ 16,715	$ 11,032	$ 48,725	$ 36,544	$ 280,171
south into Sunset Flats	590	30"	8'	0.119%	$ 227,150	2	$ 22,000	$ 24,915	$ -	$ 68,516	$ 51,387	$ 393,968
east in Sunset Flats	235	30"	12'	0.057%	$ 90,475	1	$ 11,000	$ 10,148	$ -	$ 27,906	$ 20,929	$ 160,457
south diagonal east in SF	533	30"	10'	0.057%	$ 205,205	2	$ 22,000	$ 22,721	$ -	$ 62,481	$ 46,861	$ 359,268
diagonal east out of SF	263	30"	16'	0.057%	$ 212,767	1	$ 18,000	$ 23,077	$ -	$ 63,461	$ 47,596	$ 364,900
diagonal across util	492	30"	22'	0.057%	$ 676,500	2	$ 48,000	$ 72,450	$ 47,817	$ 211,192	$ 158,394	$ 1,214,353
south to EM Blvd	3,662	30"	8'	0.478%	$1,409,870	10	$110,000	$ 151,987	$ -	$ 417,964	$ 313,473	$ 2,403,294
from EM Blvd South	7,325	30"	8'	0.124%	$2,820,125	20	$220,000	$ 304,013	$ -	$ 836,034	$ 627,026	$ 4,807,198
west to Pony Express	5,300	30"	8'	0.429%	$2,040,500	15	$165,000	$ 220,550	$ -	$ 606,513	$ 454,884	$ 3,487,447
south to WWTP	705	30"	8'	0.057%	$ 271,425	2	$ 22,000	$ 29,343	$ 19,366	$ 85,533	$ 64,150	$ 491,817
											Total	$24,239,852

Table 11 –Estimated Improvement Costs for West Trunkline

West Trunkline		Pipe	DS MH			Est		Mobilization	Traffic	Contingency	Engineering	Total
REACH	LF	Dia	Depth	Slope	Piping Cost	#MH	MH cost		Control			
south to E Desert Rd	6,274	15"	12'	0.711%	$1,568,598	17	$187,000	$ 175,560	$ -	$ 482,789	$ 362,092	$ 2,776,039
SW on E Desert Rd to EM Blvd	1,861	15"	12'	0.635%	$ 465,218	5	$ 55,000	$ 52,022	$ 34,334	$ 151,643	$ 113,733	$ 871,950
south on EM Blvd to Aviator Way	1,809	15"	12'	0.642%	$ 587,948	5	$ 65,000	$ 65,295	$ 43,095	$ 190,334	$ 142,751	$ 1,094,422
south on EM Blvd to Lehi-Fairfield	660	18"	12'	0.330%	$ 184,822	2	$ 22,000	$ 20,682	$ 13,650	$ 60,289	$ 45,217	$ 346,660
SW on Lehi-Fairfield to Williard Pea	2,737	18"	11'	0.432%	$ 766,357	8	$ 88,000	$ 85,436	$ 16,916	$ 239,177	$ 179,383	$ 1,375,269
SW on Lehi-Fairfield to 4000 N	3,107	24"	12'	0.213%	$1,118,610	9	$ 99,000	$ 121,761	$ 24,109	$ 340,870	$ 255,652	$ 1,960,002
SW on Lehi-Fairfield to boundary	850	24"	13'	0.077%	$ 428,178	3	$ 39,000	$ 46,718	$ 9,250	$ 130,787	$ 98,090	$ 752,023
south to Tiffany lane	4,626	24"	14'	0.262%	$2,331,554	13	$169,000	$ 250,055	$ 33,007	$ 695,904	$ 521,928	$ 4,001,450
											Total	$13,177,814

Table 12 –Estimated Improvement Costs for Pole Canyon Trunkline

Pole Canyon Trunkline		Pipe	DS MH			Est		Mobilization	Traffic	Contingency	Engineering	Total
REACH	LF	Dia	Depth	Slope	Piping Cost	#MH	MH cost		Control			
to Tyson conn	2,569	18"	10'	0.728%	$ 719,186	7	$ 77,000	$ 79,619	$ 52,548	$ 232,088	$ 174,066	$ 1,334,507
to straight Pole Canyon	1,521	24"	10'	0.366%	$ 547,409	5	$ 55,000	$ 60,241	$ 39,759	$ 175,602	$ 131,702	$ 1,009,712
to Pole Canyon LS	2,307	27"	10'	0.129%	$ -	7	$ 77,000	$ 7,700	$ 5,082	$ 22,446	$ 16,834	$ 129,062
to Lehi-Fairfield conn	1,639	30"	10'	0.143%	$ 631,027	5	$ 55,000	$ 68,603	$ 45,278	$ 199,977	$ 149,983	$ 1,149,866
to 1600 W/West Trunkline	3,878	36"	10'	0.376%	$1,648,095	3	$ 33,000	$ 168,109	$110,952	$ 490,039	$ 367,529	$ 2,817,725
to Magnolia	5,332	42"	18'	0.071%	$5,598,600	3	$ 54,000	$ 565,260	$373,072	$ 1,647,733	$ 1,235,800	$ 9,474,464
											Total	$15,915,336

Lift Stations and Force Mains

The Pole Canyon Trunkline is already under construction and should be complete before needing to upsize the Pole Canyon LS. In the case that the trunkline is not online in time, the estimated cost of adding a new upsized generator, additional pump and upgrading the impeller and motors on the 2

existing pumps at Pole Canyon Lift Station would be approximately $500,000. This cost includes materials as well as mobilization, engineering, and contingency costs.

Treatment Plant

The cost of increasing the WWTP capacity using MBR treatment for an additional 6.0 MGD is estimated to be about $120,000,000 depending on peaking factors and what treatment level is required. As the WWTP will service both WSA and SSA, growth in each service area would need to be evaluated to determine the cost sharing proportions. This cost includes labor, materials, engineering, and contingency as well as additional electrical source capacity.

EAGLE MOUNTAIN CITY

2025 WASTEWATER IFFP REPORT

Prepared by:

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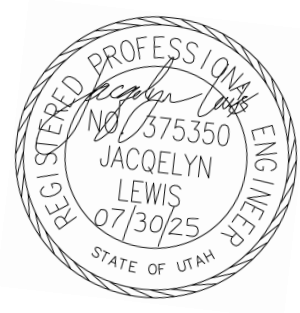

July 2025

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EXECUTIVE SUMMARY

JWO Engineering, PLLC was contracted to complete a wastewater Impact Fee Facilities Plan (IFFP) Eagle Mountain City (EMC). This report uses information from the 2025 Wastewater Master Plan and will evaluate costs for necessary infrastructure for wastewater conveyance and treatment within the next five years for EMC as well as a budget for these projects. This is based on projected growth as explained in the 2025 Wastewater Master Plan.

An IFFP fills the requirements established by Utah code Title 11 Chapter 36a, the "Impact Fees Act," and will assist EMC in determining impact fees to fund necessary capital improvements for future anticipated growth.

The following table is a summary of projects, and their estimated costs that are listed in the 2025 Wastewater Master Plan to be completed within the next 5 years for EMC. Please refer to the 2025 Wastewater Master Plan for a complete list of recommended projects and their estimated costs. Estimated costs in this table are concept level estimates based on 2025 costs. In the Budgeting section of this report, the costs were adjusted using an assumed inflation rate for each year. Actual costs will be determined by the project details and economic conditions at the time of the work being carried out. Please see the Exhibits within this report depicting the proposed pipeline projects.

Table 1 – Recommended Collection Improvements Within Next 5 Years

Collection Improvement Project	2025 Estimate (Millions)
East Trunkline	$ 24.24
West Trunkline	$ 12.14
Pole Canyon Trunkline	$ 15.92
Annual GIS updates (5yr)	$ 0.01
Total for next 5 years	$ 52.30

Table 2 - Recommended Treatment Improvements Within Next 5 Years

Treatment Improvement Project	2025 Estimate (Millions)
WWTP 6 MGD Expansion	$ 120.00
Total for next 5 years	$ 120.00

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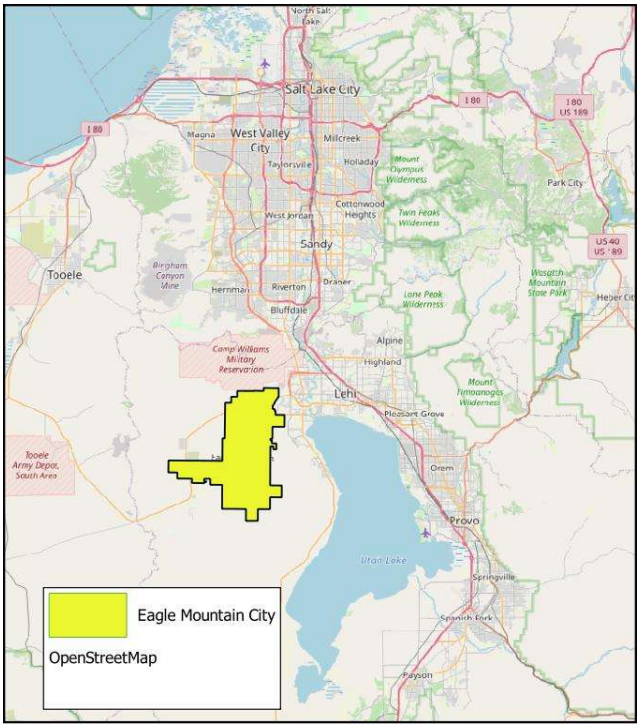

Figure 1 - Vicinity Map

BACKGROUND

Please see the 2025 Wastewater Master Plan for more detailed information. Eagle Mountain City (EMC) located in Utah County near Utah Lake as shown in the vicinity map above and is one of the fastest growing cities in the US. The average household size in the state of Utah is 3.09. EMC has an average household size of 4.37 people, one of the highest in the nation.

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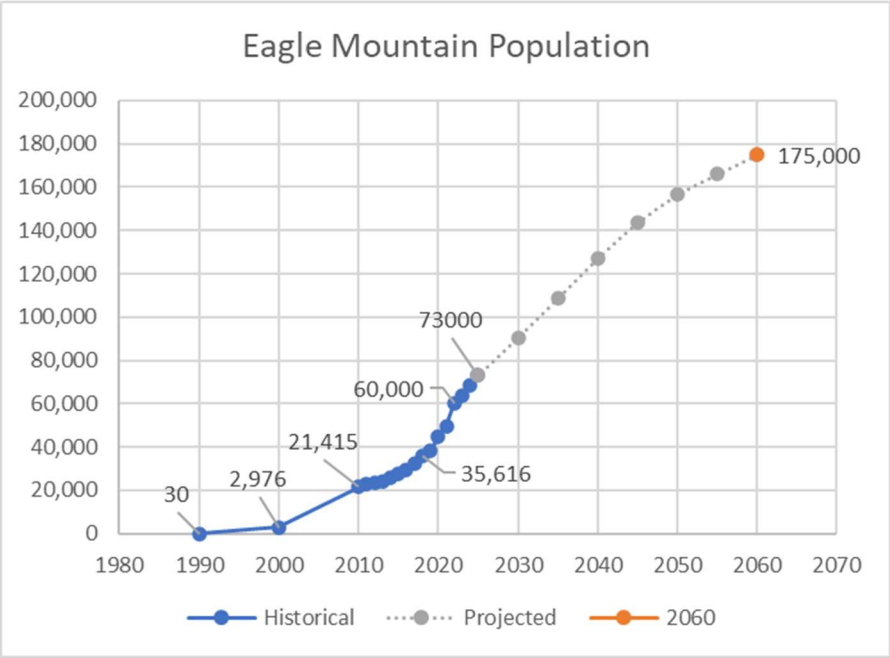

Figure 2 - Eagle Mountain City Population Chart

The figure above depicts the anticipated growth of EMC with a population of 175,000 by 2060. The buildout population is expected to be 240,000.

EMC's wastewater system contains three separate service areas designated as the North Service Area (NSA) the South Service Area (SSA) and the West Service Area (WSA). These service areas are approximate and may vary with continued development and improvements. The NSA conveys flows to the East and are treated by Timpanogos Special Services District. Flows from the SSA and WSA flow South and East respectively to the existing WWTP to be treated by EMC. The flows treated by EMC are treated and disposed of by means of Rapid Infiltration Basins (RIBs). These service areas were recently adjusted with the 2025 Wastewater Master Plan and are shown in the figure below.

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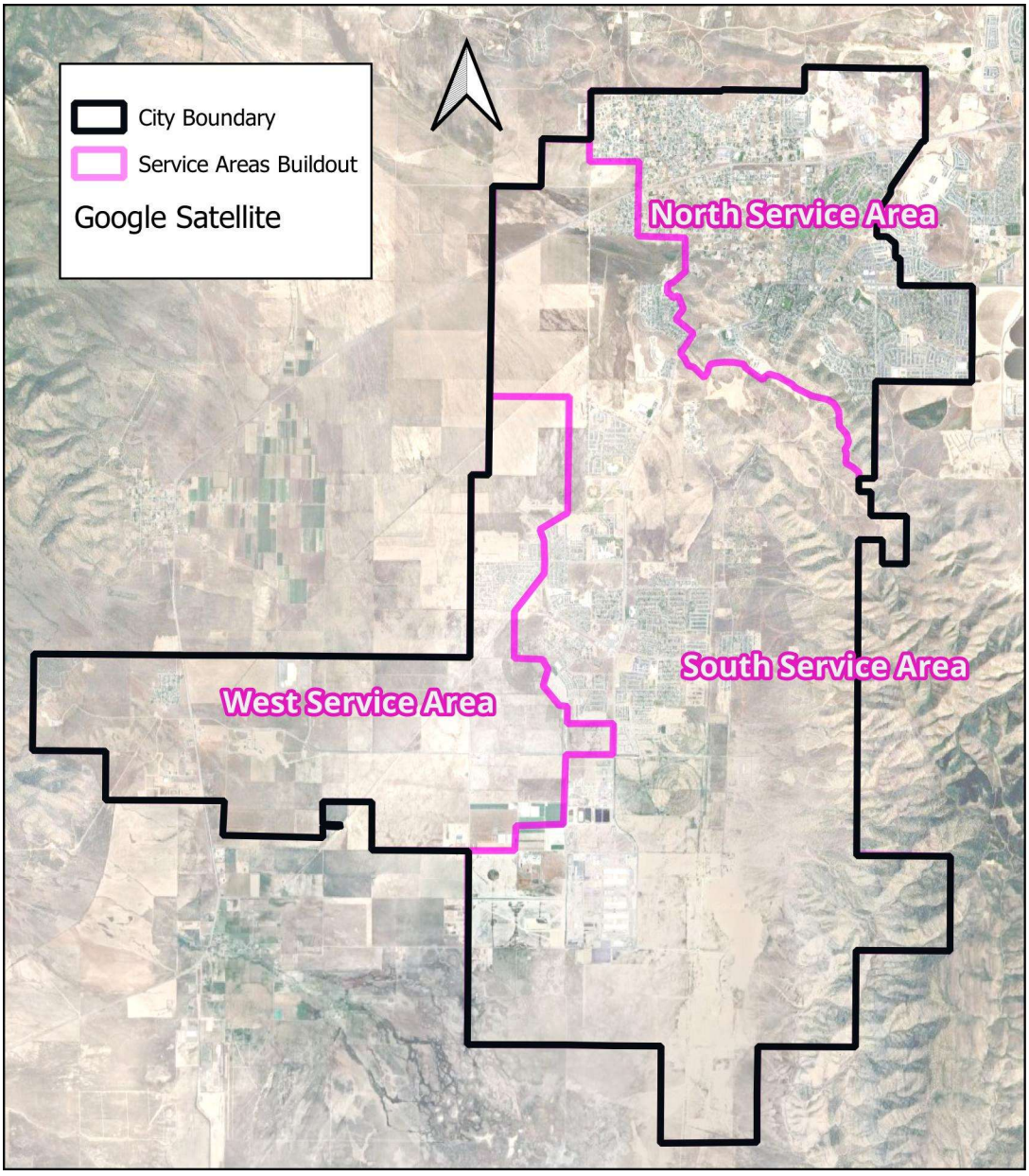

Figure 3 - Service Areas

EXISTING REPORTS

Current available reports addressing EMC's wastewater situation include the 2025 Wastewater Master Plan, EM WWTP Flows and Loads Report, 2024 EMC WSA WW IFFP, EMC Impact Fee Facilities Plan Report from 2012 (IFFP 2012), 2018 (IFFP 2018), and 2022 (IFFP 2022). Eagle Mountain General Plan (2018) was also used for future land use and density populations. Some data from these existing reports was used in our assessment of the existing and proposed EMC wastewater water facility conditions.

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EQUIVALENT RESIDENT CONNECTIONS (ERC'S)

An Equivalent Residential Connection (ERC) alternatively referred to as an Equivalent Residential Unit (ERU) represents the design flowrate from one residential connection. The 2025 Wastewater Master Plan established an ERC value of 220 gallons per day.

Current ERU's were obtained from EMC and are shown in the table below.

Table 3 - Existing ERU Count

	Current # ERU's
NSA	8,027
SSA	6,744
WSA	134

IMPACT FEE FACILITIES PLAN

Impact fees look up to 5 years ahead for what infrastructure will be needed based on anticipated growth. With impending continual growth, all improvement projects should begin as soon as possible to alleviate capacity concerns for the existing wastewater system. Improvements were organized into potential improvements projects. Exact project items included in each project may vary as deemed appropriate or necessity warrants. The table below shows the projects needed for anticipated growth as well as the estimated needed capacity within the next 5 years. Actual needed capacities may vary and require additional projects to be completed earlier than shown. An anticipated construction year is also listed for each project. Projected costs are shown for each year assuming 4% inflation for each year after 2025.

Table 4 - Total Improvement Costs

Improvement Project	2025 Estimate (Millions)	Estimated Construction Year	Cost with Inflation (Millions)	Anticipated %Capacity Needed in Next 5 years
East Trunkline	$ 24.24	2025	$ 24.24	15%
West Trunkline	$ 12.14	2026	$ 12.63	50%
Pole Canyon Trunkline	$ 15.92	2026	$ 16.55	30%
WWTP 6 MGD Expansion	$ 120.00	2026	$ 124.80	

The figure below shows the 2025 Wastewater Master Plan proposed trunklines with the recommended diameter.

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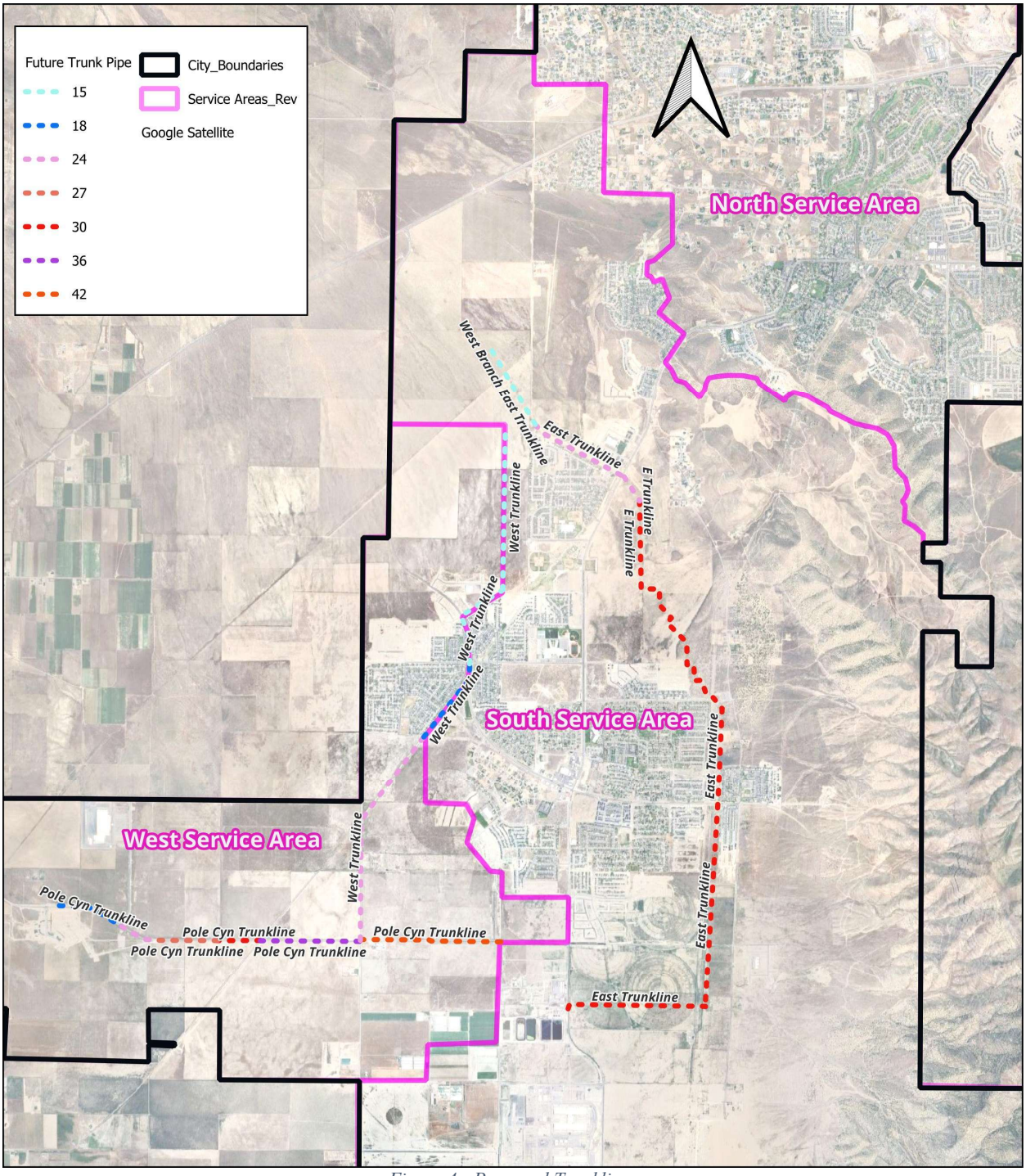

Figure 4 - Proposed Trunklines

To help understand what areas are included with each trunkline, the following exhibit shows each area as well as estimated ERU's for sub-areas for build-out conditions. Areas that have approved plans show the number of ERU's based on those plans. Areas without approved plans

were estimated by the area and a value of 3.4 ERU/Acre as established in the 2025 Wastewater Master Plan.

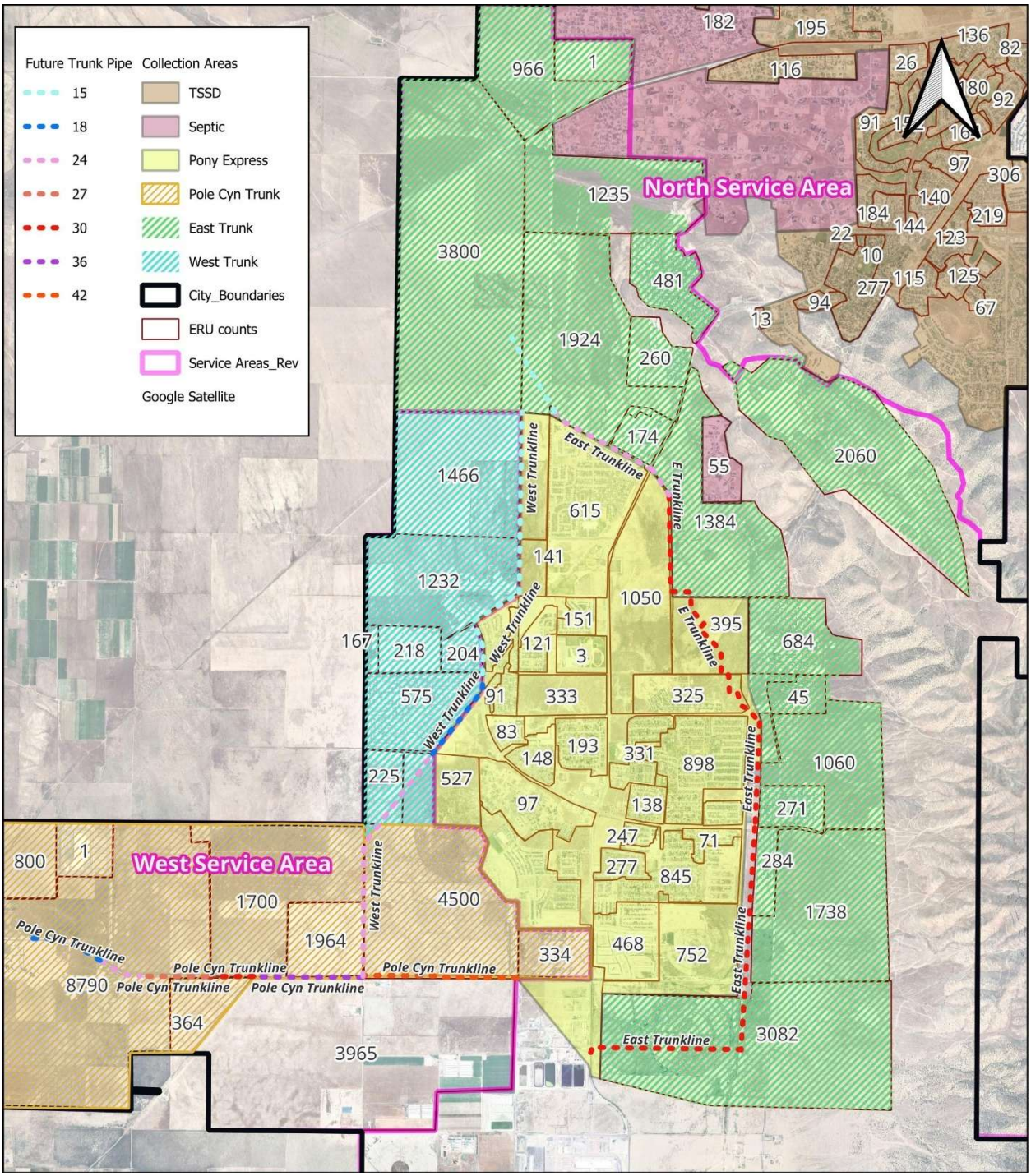

Figure 5 - Proposed Trunklines with Areas and ERU's

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The table below shows the estimated ERU's at build-out for each trunkline that conveys flows to EMC WWTP. "Other" ERU's are not able to be conveyed by the existing or proposed trunklines. These areas will require their own trunkline and or lift stations to be conveyed to the existing WWTP. It is assumed that existing septic homes will remain on septic systems. Pole Canyon Trunkline will also convey West Trunkline flows.

For additional details on projected flows to the EMC WWTP, please see the Technical Memorandum Report titled, "EM WWTP Flows and Loads" by AE2S.

Table 5 - ERU's per Trunkline for Build-out

SA	Trunkline	Total Aniticipated ERU's at Build-out
SSA	Pony Exp Trunk	9,000
SSA	East Trunk	19,500
SSA	Other	7,900
SSA	Septic	55
WSA	Pole Cyn Trunk*	18,600
WSA	West Trunk	4,100
WSA	Other	4,000
WSA	Septic	48
Total		**63,000**

BONDS AND REIMBURSEMENTS

EMC has not provided JWO Engineering, PLLC with existing bond agreement information. However, if there are existing bond agreements they should be accounted for.

BUDGETING

In order to have funds available for the projects anticipated within the next 5 years, a budget needs to be established. The table below shows the estimated cost each year with inflated costs. While actual construction years and projects may vary, using these costs will help Eagle Mountain City plan for continued growth at an accelerated rate.

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Table 6- Annual Budgets

Construction Year	Budget (Millions)
2025	$ 24.24
2026	$ 153.98
2027	$ -
2028	$ -
2029	$ -
2030	$ -
Average Annual Budget	$ 29.70

RECOMMENDATIONS

It is recommended that EMC update their GIS files to accurately depict the current completed infrastructure of EMC. The GIS files should be kept up to date as new wastewater infrastructure is added to EMC. Efforts should also be made to update the existing GIS files to reflect actual elevations and pipe diameters. A budget of $2,000/year is included in the collection fees.

Improvement projects to be completed within the next 5 years are shown in the table below.

Table 7 - Next Five Years Collection Project Estimates

Collection Improvement Project	2025 Estimate (Millions)
East Trunkline	$ 24.24
West Trunkline	$ 12.14
Pole Canyon Trunkline	$ 15.92
Annual GIS updates (5yr)	$ 0.01
Total for next 5 years	$ 52.30

Table 8 - Next Five Years Treatment Project Estimates

Treatment Improvement Project	2025 Estimate (Millions)
WWTP 6 MGD Expansion	$ 120.00
Total for next 5 years	$ 120.00

The estimated average annual budget is just under $30 million for these projects. JWO Engineering, PLLC recommends that Eagle Mountain City break the treatment plant costs out due to the size of

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that item and budget $6 million annually for the next five years for the non-treatment wastewater projects. The impact fee for the treatment portion of the wastewater could be based on ERU's. 6MGD with an ERU of 220 gal/day should provide for an additional 27,000 ERU's. An impact fee cost would be in the $16 to $20 per gallon range or $3520 to $4400 per ERU. The treatment portion of the fee would account for the treatment costs and the impact fee for the other wastewater improvements should be evaluated based on the number of units anticipated to be completed in each service area vs the costs for the infrastructure.

It is recommended that within 5 years Eagle Mountain City re-evaluate the wastewater improvement needs as well as anticipated construction years and costs.