



## Planning Commission Meeting

Thursday, April 28, 2016

Meeting held at the Saratoga Springs City Offices  
1307 North Commerce Drive, Suite 200, Saratoga Springs

### AGENDA

#### Commencing at 6:30 P.M.

1. Pledge of Allegiance.
2. Roll Call.
3. Public Input – Time has been set aside for any person to express ideas, concerns, comments, questions or issues that are not listed on the agenda. Comments are limited to three minutes.
4. Public Hearing: Rezone and Concept Plan, ABC Great Beginnings, located at the NW Corner of Redwood Road and Aspen Hills Blvd., ABC Great Beginnings Holdings, LLC (Johnny Anderson), applicant. - Presented by Kara Knighton.
5. Public Hearing: Preliminary Plat, Western Hills Phases 2 & 3, located approximately 150 W Aspen Hills Blvd., Ridgepoint Management Group, LLC, applicant. - Presented by Jamie Baron.
6. Public Hearing: Updates to the Transportation Master Plan and associated Impact Fee Facilities Plan. - Presented by Gordon Miner and Horrocks Engineering.
7. Public Hearing: General Code Amendments, Section 19.06 Large Lot Landscaping. - Presented by Kimber Gabryszak.
8. Work Session: Discussion of Code and Vision. Presented by Kimber Gabryszak.
9. Approval of Minutes:
  - a. March 14, 2016.
10. Reports of Action
11. Commission Comments
12. Director's Report:
  - a. Council Actions
  - b. Applications and Approval
  - c. Upcoming Agendas
  - d. Other
13. Motion to enter into closed session for the purchase, exchange, or lease of property, pending or reasonably imminent litigation, the character, professional competence, the deployment of security personnel, devices or systems or the physical or mental health of an individual.
14. Adjourn.

**PLEASE NOTE: The order of items may be subject to change with the order of the planning commission chair. One or more members of the Commission may participate electronically via video or telephonic conferencing in this meeting.**

In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify the City Recorder at 766-9793 at least one day prior to the meeting.



**Rezone and Concept Plan  
ABC Great Beginnings  
Thursday, April 28, 2016  
Public Hearing**

Report Date:	Thursday, April 21, 2016
Applicant:	ABC Great Beginnings Holdings, LLC (Johnny Anderson)
Owner:	SOA Investments LTD
Location:	NW corner of Aspen Hills Boulevard and Redwood Road
Major Street Access:	Redwood Road
Parcel Number(s) & Size:	58:023:0168; ~3.63 acres
Parcel Zoning:	Agriculture (A)
Adjacent Zoning:	R-3, R-14, MU, and A
Current Use of Parcel:	Vacant, undeveloped
Adjacent Uses:	Low and High Density Residential, and commercial
Previous Meetings:	PC WS (3/24/2016), CC WS (3/29/2016)
Previous Approvals:	N/A
Type of Action:	Legislative
Land Use Authority:	City Council
Future Routing:	City Council
Author:	Kara Knighton, Planner I

**A. Executive Summary:**

The applicant, on behalf of the property owner, is requesting a Rezone from Agriculture to Mixed Use consistent with the Land Use Plan designation of Mixed Use in the General Plan for ~3.63 acres located at the northwest corner of Aspen Hills Boulevard and Redwood Road. In conjunction with this request, the applicant is also requesting input on a concept plan for a mixed use development comprised of apartments, retail, and office space.

**Recommendation:**

**Staff recommends that the Planning Commission conduct a public hearing on the ABC Great Beginnings rezone, take public comment, review and discuss the proposal, and choose from the options in Section "H" of this report.** Options include forwarding a positive recommendation, forwarding a negative recommendation, or continuing the application to a later meeting.

**B. Background:**

The rezone and concept plan applications were received by the City on March 7, 2016 for a mixed use development located at the northwest corner of Aspen Hills Boulevard and Redwood Road.

**Development Review Committee**

The Development Review Committee reviewed the concept plan on March 14, 2016 and had the following comments.

- Where will the dumpster be located?
- Access is a concern off of Redwood Road; the proposal appears to be for full access, is UDOT going to allow full access movement?
- As the Land Use map supports the proposal, but Proposition 6 does not the City Council has full discretion on whether to approve or deny the rezone request. Due to this situation a Development Agreement may be required or desirable.
- Grading is a concern.
- Fencing may be required between the project, Hillcrest condos, and Western Hills.
- Due to the projects proximity to Camp Williams shorter light poles may be required.

**Planning Commission Work Session**

The Planning Commission provided informal feedback to the applicant concerning the proposed rezone and concept plan at a work session on March 24, 2016. The draft minutes from that meeting are attached.

**City Council Work Session**

The City Council provided informal feedback to the applicant concerning the proposed rezone and concept plan at a work session on March 29, 2016. The draft minutes from that meeting are attached.

Following the Planning Commission and City Council work sessions the City received a resubmittal on April 12, 2016 that addressed some of the DRC, PC, and CC's comments. The number of apartments was decreased from 41 to 31, balconies for each unit were added, and the dumpster locations were identified.

**C. Specific Request:**

The applicant is requesting the MU zone for the entire 3.63 acres at the northwest corner of Aspen Hills Boulevard and Redwood Road for a development consisting of residential, retail, and office space.

The proposal includes 4,200 sq. ft. of future office space, 3,800 sq. ft. for a future restaurant, and two 11,315 sq. ft. buildings each consisting of three stories. The southern 11,315 sq. ft. building proposes child care on the first floor with the top two floors as residential. The eastern 11,315 sq. ft. building proposes retail on the first floor with the top two floors as residential. A landscaped fenced play area is proposed on the southern end of the child care building.

Each residential floor is proposed to have eight apartments per floor composing 32 units with one of those units proposed as a fitness center for a total of 31 apartments. The residential density of 31 apartments over the 3.5 acres [3.63 acres – sensitive lands (detention basin)] equates to ~8.85 ERUs/acre. Each proposed unit has a balcony that measures 4' x 16'.

The applicant is requesting a 25% parking reduction. Please see parking analysis in the Planning Review Checklist attached as Exhibit “3.”

**D. Process:**

**Rezone**

Section 19.17.03 of the City Code outlines the requirements for a rezone requiring all rezoning applications to be reviewed by the City Council after receiving a formal recommendation from the Planning Commission. The City Council is the Land Use Authority for rezones and may - after holding a public hearing - approve, deny, or continue the rezone decision. Rezones are subject to the provisions of Chapter 19.13, Development Review Processes.

**Concept Plan**

Section 19.17.02 states “Petitions for changes to the City’s Zoning Map to all land use zones shall be accompanied by an application for Concept Plan Review or Master Development Agreement approval pursuant to Chapter 19.13 of this Code.”

The applicant has submitted a concept plan for the proposed development. Per Section 19.13 of the City Code, the process for a concept plan includes an informal review of the Concept Plan by both the Planning commission and the City Council. The reviews shall be for comment only, no public hearing is required and no recommendation or action made.

**E. Community Review:**

The Rezone portion of this application has been noticed as a public hearing in the *Daily Herald*, City website, and Utah Public Notice Website, and mailed notices have been sent to all property owners within 300 feet of the subject property at least 10 days prior to this meeting. As of the date of this report, public input was provided during the public input sessions at the Planning Commission and City Council. The concept plan does not require a public hearing.

**F. General Plan:**

The parcel is designated as MU on the Land Use Map. The General Plan states the following concerning the MU Land Use designation.

*e. Mixed Use. The Mixed Use designation is designed to provide for developments that have a combination of well integrated residential, professional office and commercial uses. It is expected that developments in the Mixed Use areas will be among the most difficult in the City to design. As such, it is also expected that teams of highly sophisticated design and marketing professionals will be involved in the preparation of development plans in the Mixed Use areas.*

*In addition to the residential and retail based commercial uses, the Mixed Use district is intended to accommodate professional office space in the City. Office components should be included as an integral part of developments in this district so as to capitalize on the benefits that can be enjoyed with a mixture of distinct but complimentary land-uses.*

*The residential component shall be designed and integrated so as to complement the surrounding commercial activity. While not required, it is anticipated that dwelling units will be located in shared residential/commercial structures so as to preserve first-floor and other prime commercial spaces for retail activities. Open spaces and recreational features shall be designed for the use and enjoyment of both the commercial patrons and the development's residents.*

*A mix of approximately 1/3 residential, 1/3 commercial and 1/3 professional office use in the Mixed Use designation is the goal. The City will review each proposal on an individual basis to determine an acceptable ratio for the residential, commercial and professional office components.*

*Developments in these areas shall contain landscaping and recreational features as per the City's Parks, Recreation, Trails, and Open Space Element of the General Plan. In this land use designation, it is estimated that a typical acre of land may contain 6 equivalent residential units (ERU's).*

**Staff conclusion:**

The proposed development is generally consistent with the General Plans vision for the MU zone. As the General plan anticipates, the project proposes "residential/ commercial structures so as to preserve first-floor and other prime commercial spaces for retail activities." The project is currently heavy on the residential side with the overall building square footage at 59% with commercial, office, and retail taking the remaining 41%. Overall, however, the concept embodies what a mixed use development should be.

Note that Proposition 6 placed a 7% cap on this type of multi-family development in the City. The City is currently exceeding the 7% cap due to projects with vested rights prior to the adoption of Proposition 6. There is ambiguity, however, as the General Plan also explicitly encourages these types of mixed commercial/residential structures. The general plan is advisory- as compared to binding- so this topic is open for discussion.

**G. Code Criteria:**

*Rezoning is a legislative decision; therefore, the Council has significant discretion when making a decision on such requests. Because of this legislative discretion, the Code criteria below are guidelines and are not binding.*

**Rezoning and General Plan Amendments**

Section 19.17.04 outlines the requirements for a rezoning, and states:

The Planning Commission and City Council shall consider, but not be bound by, the following criteria when deciding whether to recommend or grant a general plan, ordinance, or zoning map amendment:

1. the proposed change will conform to the Land Use Element and other provision of the General Plan;  
*Generally consistent: The application is generally consistent with the goals of the future land use map in the General Plan as outlined in Section F of the staff report.*
2. the proposed change will not decrease nor otherwise adversely affect the health, safety, convenience, morals, or general welfare of the public;  
*Consistent: The rezone proposal offers a product type that is currently not offered anywhere in the City. Additional applications (e.g. Preliminary Plat and Site Plan) with appropriate conditions and management will work together to mitigate any potential negative impacts.*
3. the proposed change will more fully carry out the general purposes and intent of this Title and any other ordinance of the City; and  
*Consistent: The application does not negatively impact development of the site; the proposed mixed use is consistent with the intended use of this area. The proposed project exemplifies what the mixed use zone should be.*
4. in balancing the interest of the petitioner with the interest of the public, community interests will be better served by making the proposed change.  
*Consistent: This type of development is currently not offered anywhere in the City and thus provides a greater variety of housing and commercial product to the public.*

#### H. Recommendation and Alternatives:

Staff recommends that the Planning Commission give the applicant informal feedback and direction on the Concept Plan.

Staff also recommends that the Planning Commission conduct a public hearing on the rezone, take public input, discuss the rezone, and choose from the following options.

#### Option 1 – Positive Recommendation

*(Staff supports this option)*

“I move to **forward a positive recommendation** to the City Council for the ABC Great Beginnings Rezone with the Findings and Conditions in the Staff Report dated April 28, 2016.”

#### Findings

1. The Rezone will not result in a decrease in public health, safety, and welfare as outlined in Section F of this report, which section is hereby incorporated by reference.
2. The rezone is consistent with Section 19.17.04 of the Code, as articulated in Section G of this report, which section is hereby incorporated by reference.

#### Conditions:

1. All conditions of the City Engineer shall be met, including but not limited to those in the Staff report in Exhibit 1.

2. The Rezone shall not be recorded until a Development Agreement has been signed. The Development Agreement shall conform generally with the draft development agreement attached to this staff report and shall require the developer to install and maintain in perpetuity the Redwood Road trail and associated landscaping improvements and bury all power lines on the property and any immediately adjacent parcels.
3. Any other conditions or changes as articulated by the Planning Commission:

---



---

#### **Alternative 1 - Continuance**

The Planning Commission may also choose to continue the item. "I move to **continue** the ABC Great Beginnings Rezone to another meeting on [May 12, 2016] with direction to the applicant and Staff on information and / or changes needed to render a decision, as follows:

1. \_\_\_\_\_
2. \_\_\_\_\_

#### **Alternative 2 – Negative Recommendation**

The Planning Commission may also choose to forward a negative recommendation to the City Council for the application. "I move to **forward a negative recommendation** to the City Council for the ABC Great Beginnings Rezone with the Findings below:

1. The ABC Great Beginnings Rezone is not consistent with the General Plan, as articulated by the Planning Commission: \_\_\_\_\_, and/or,
2. The ABC Great Beginnings Rezone is not consistent with Section 19.17.04 of the Code, as articulated by the Planning Commission: \_\_\_\_\_, and/or

#### **I. Attachments:**

- |   |              |
|---|--------------|
| 1. City Engineer's Report                               | (page 7)     |
| 2. Property to be Rezoned – Location Map & Current Zone | (page 8)     |
| 3. Planning Review Checklist                            | (page 9-12)  |
| 4. Boundary description                                 | (page 13)    |
| 5. Concept Plan   | (page 14)    |
| 6. Elevations   | (page 15)    |
| 7. Planning Commission work session minutes 3/24/2016   | (page 16-18) |
| 8. City Council work session minutes 3/29/2016          | (page 19-21) |

## Planning Commission Staff Report

**Author:** Gordon Miner, City Engineer  
**Subject:** ABC Great Beginnings – Concept Plan  
**Date:** April 28, 2016  
**Type of Item:** Concept Plan Review



### Description:

**A. Topic:** The applicant has submitted a concept plan application. Staff has reviewed the submittal and provides the following recommendations.

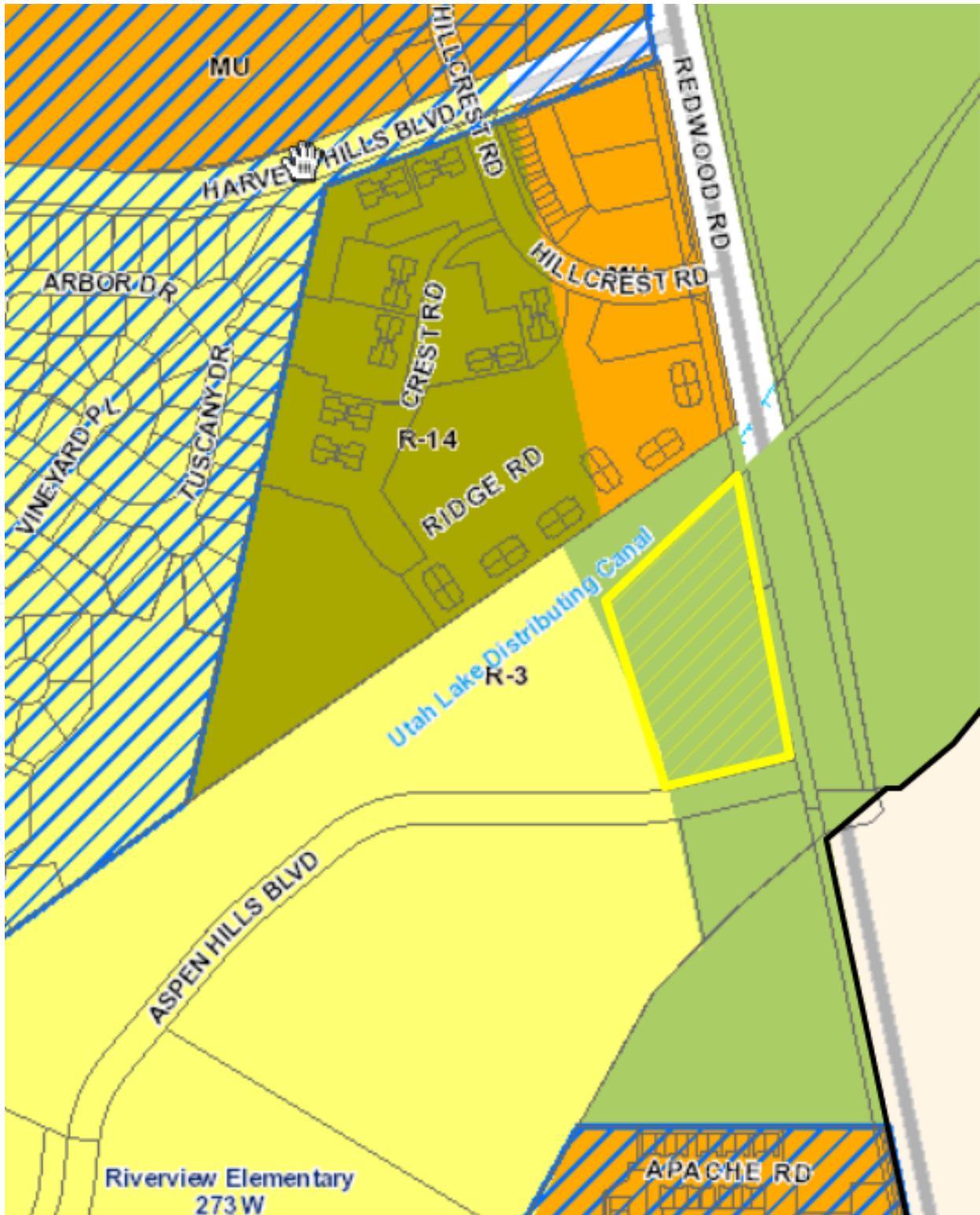
### B. Background:

*Applicant:* ABC Great Beginnings  
*Request:* Concept Plan  
*Location:* NW Corner Redwood Rd & Aspen Hills Blvd  
*Acreage:* 3.63 acres - 1 lot

**C. Recommendation:** Staff recommends the applicant address and incorporate the following items for consideration into the development of their project and construction drawings.

### D. Proposed Items for Consideration:

- A. Prepare construction drawings as outlined in the City's standards and specifications and receive approval from the City Engineer on those drawings prior to receiving Final approval from the City Council.
- B. Consider and accommodate existing utilities and drainage systems into the project design. Access to existing facilities shall be maintained throughout the project.
- C. Comply with the Land Development Codes regarding the disturbance of 30%+ slopes.



## APPLICATION REVIEW CHECKLIST

### Application Information

---

<b>Date Received:</b>	March 7, 2016
<b>Project Name:</b>	ABC Great Beginnings
<b>Project Request / Type:</b>	Rezone and Concept Plan
<b>Body:</b>	City Council
<b>Meeting Type:</b>	Public Hearing
<b>Applicant:</b>	ABC Great Beginnings Holdings, LLC. (Johnny Anderson)
<b>Owner (if different):</b>	SOA Investments LTD
<b>Location:</b>	NW corner of Redwood Road and Aspen Hills Blvd
<b>Major Street Access:</b>	Redwood Road
<b>Parcel Number(s) and size:</b>	58:023:0168; 3.627561 acres
<b>General Plan Designation:</b>	Mixed Use (MU)
<b>Zone:</b>	Agriculture (A)
<b>Adjacent Zoning:</b>	R-3, R-14, MU, and A
<b>Current Use:</b>	Vacant, undeveloped
<b>Adjacent Uses:</b>	Low and High Density Residential, and Commercial
<b>Previous Meetings:</b>	N/A
<b>Land Use Authority:</b>	City Council
<b>Future Routing:</b>	N/A
<b>Planner:</b>	Kara Knighton, Planner I

### Section 19.13 – Application Submittal

---

- Application Complete: Yes
- Rezone Required: Yes
  - Zone: Agricultural designation to Mixed Use (MU)
- General Plan Amendment required: No
- Additional Related Application(s) required: None

### Section 19.13.04 – Process

---

- DRC: 3/14/2016
- Neighborhood Meeting: Will be required with preliminary plat or site plan.
- PC: 4/28/2016
- CC: 5/17/2016

---

## General Review

---

### Fire Department

- Development shall meet all applicable IFC 2012 edition and local codes and standards

### Development Review Committee

- Where will the dumpster be located?
- Access is a concern off of Redwood Road; the proposal appears to be for full access, is UDOT going to allow full access movement?
- As the Land Use map supports the proposed, but Proposition 6 does not the City Council has full discretion on whether to approve or deny the rezone request. Due to this situation a Development Agreement may be required.
- Grading is a concern.
- Fencing may be required between the project, Hillcrest condos, and Western Hills.
- Due to the projects proximity to Camp Williams shorter light poles may be required.

---

## Code Review

---

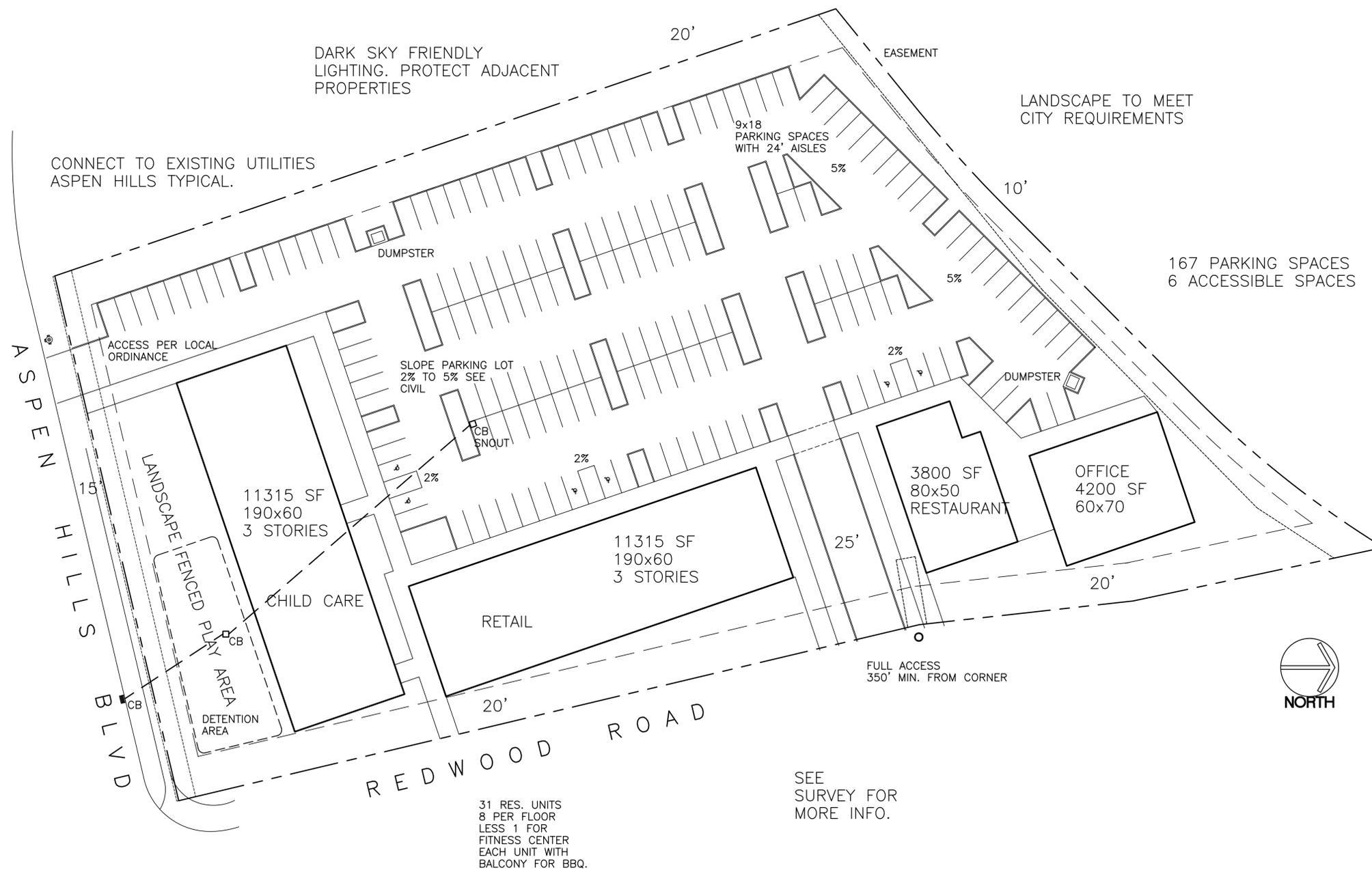
- 19.04, Land Use Zones: **Complies, or compliance to be verified with future applications.**
  - Zone: Mixed Use (**Proposed**)
  - Purpose/ Intent: **Proposed.** Mix of approximately 1/3 residential, 1/3 commercial, and 1/3 professional office. The proposal includes a restaurant, office space, a child care center, retail space, and residential units above the retail and child care space. The proposal is currently heavy on the residential end accounting for 59% of the project with the remainder 41% comprised of commercial and office space.
  - Use: **Can comply.**
    - Child Care- Conditional use. A conditional use permit will be required with Site Plan.
    - Multi-family: Permitted.
    - Office: Conditional or Permitted. The type of office space is not specified. Will be reviewed at time of site plan.
    - Restaurant: Deli and sit down restaurants are permitted. The type of restaurant is not specified. Will be reviewed at time of site plan.
    - Retail: Various types of retail are permitted. The type of retail is not specified. Will be reviewed at time of site plan.
  - Density: **Complies.** 14 ERU's per acre maximum. The residential is proposed at 31 units per 3.6 acres which is 8.54 units/ acre. If we remove the detention pond (sensitive lands) from the base acreage the calculation is 31 units per 3.5 acres which is 8.86 units/ acre.
  - Minimum lot sizes: **Complies.** Nonresidential is a minimum of one acre. The parcel is 3.63 acres.
  - Setbacks: **Complies.**
    - Front: Complies. 20' minimum; 20' provided.
    - Side: Complies. 10' minimum; 10' provided.
    - Rear: Complies. 20' minimum; 70' provided.
    - Corner lots: Complies. 15' minimum; 45' provided.
  - Lot width: **Complies.** Only single family homes in this zone have a lot width requirement.

- Lot Frontage: **Complies**. 100' of frontage along a public or private street. The project has 640' of frontage along Redwood Road and 280' of frontage along Aspen Hills Blvd.
  - Lot Coverage: **Complies**. 50% coverage maximum. 30,630 sq. ft. / 158,097 sq. ft. = 19.37% coverage.
  - Height: **Complies**. 4 stories maximum; 3 stories is proposed on two of the buildings and one story is proposed on the other two buildings.
  - Dwelling/Building size: **Complies**. 1,000 sq. ft. minimum per dwelling. 32 units (one of which is a fitness center) are proposed on 45,260 sq. ft. which results in ~1,414 sq. ft. per unit. (This calculation does not account for the area that will be taken up by stairs and hallways).
  - Landscaping: **Complies**, the minimum requirement is 25 percent of total project area. All sensitive lands shall be protected as part of the landscaped area of any development. The landscape ratio in this project is 35%.
  - Sensitive Lands: A detention pond is proposed at the southern end of the site.
  - Trash: Two dumpster locations have been identified. Please see analysis below (Section 19.14) for further details.
- 19.05, Supplemental Regulations: **Complies**.
    - Flood Plain: **Complies**, the parcel is not within the flood plain.
    - Water & sewage: Will connect to city infrastructure.
    - Transportation Master Plan: **Complies**, no conflict with Transportation Master Plan. ROW for the Redwood Trail has been preserved.
    - Property access: The lot has access onto a public street.
- 19.06, Landscaping and Fencing: **Compliance to be verified with future applications**.
    - Landscaping Plan: A landscape plan is required with Preliminary, Site Plan, and Final Plat.
    - Screening & Fencing:
      - Any retaining walls over 4' in height shall require a building permit.
      - Semi-private fencing is required along property lines abutting open space, parks, trails, and easement corridors.
    - Screening at Boundaries of Residential zones:
      - For mixed use developments abutting residential zones an opaque fence or wall shall be installed and maintained along lot lines.
    - Clear Sight Triangle: Shall remain clear. Will be reviewed for compliance at time of Preliminary, Site Plan, and Final Plat.
- 19.09, Off Street Parking: **Can comply**.
    - General Provisions: Need to provide the material, maintenance and lighting of parking areas. Will be reviewed at time of site plan.
    - Parking Requirements / Design: **Can comply**. The applicants are asking for a 25% shared parking reduction.
    - Dimensions: **Complies**, 9' x 18' parking spaces with 24' aisles minimum. The project proposes 90 degree parking stalls 9' x 18' with 24' aisles.
    - Accessible: The project proposes 167 parking stalls, 6 of which are ADA. Will be reviewed further during site plan.

- Landscaping: Will be reviewed at time of site plan.
- Pedestrian Walkways & Accesses: **Complies**. Minimum of 10 feet wide walkways if parking lots larger than 75,000 sq. ft. The parking lot is currently 71,709 sq. ft. The project may shift slightly from concept to site plan; will be reviewed further during site plan.
- Shared Parking: **Can comply**. The applicants are asking for a 25% shared parking reduction.
- Minimum Requirements: Can comply.
  - 11315 square feet for child care, requires 1 stall per staff member and 1 per 5 children. The project proposes 45 parking stalls for the child care center consisting of 15 employees and 150 children.
  - 11315 square feet for retail, 4 stalls required per 1,000 sq. ft. requiring 46 parking stalls.
  - 3800 square feet for restaurant, 1 stall per 100 sq. ft. requiring 38 parking stalls.
  - 4200 square feet for office, 4 stalls per 1000 sq. ft. for professional office space (medical requires 5 per 1,000 sq. ft.). 17-21 parking stalls will be required.
  - Dwelling, above commercial - 31 units proposed, 2.25 stalls per unit requiring 70 stalls.
  - Overall: 220 stalls required and the project provides 167 including 6 accessible stalls. The applicant is asking for a 25% parking reduction.
- 19.12, Subdivisions: **Compliance to be verified with future applications.**
  - General: Phasing is currently anticipated for this project.
  - Procedure / submittal requirements: A Preliminary Plat, and Final Plat will be required. If the project is going to be a condominium the condominium process in 19.12.04 will apply.
  - Phasing: Phasing will be reviewed during Preliminary Plat.
- Section 19.13, Process: **Compliance to be verified with future applications.**
  - General Considerations: The Land Use map designates this parcel as Mixed Use. The project will connect to City utilities.
  - Notice / Land Use Authority: The City Council is the Land Use Authority for rezones.
  - Development Agreement: A development agreement will be required as part of the rezone.
  - Payment in Lieu of Open Space: None proposed.
- 19.18, Signs: None proposed.
- 19.27, Addressing: Addressing will be required for Final Plat and Site Plan.



PROJECT SUMMARY	
GROSS LAND AREA	158,097 SF 3.63 ACRES
GROSS BUILDING AREA FOOTPRINT	30,800 SF
LAND TO BUILDING RATIO	5.13
NO. OF PARKING SPACES	167
NO. OF PARKING FOR OFFICE 4,200 SF	21
NO. OF PARKING RESTAURANT 3,800 SF	38
NO. OF PARKING RETAIL 11,315 SF	46
NO. OF PARKING CHILDCARE 150C/15S	45
NO. OF PARKING MULTIFAMILY 31 UNITS 2ND AND 3RD FLOORS	70
TOTAL PARKING REQ. 25% SHARED PARKING PROVIDED	220 165 167
OFFICE/CHILDCARE	15,515 SF
RETAIL/RESTAURANT	15,115 SF
MULTIFAMILY 31 UNITS	45,260 GSF
TOTAL GROSS SF	75,890 SF
LANDSCAPE RATIO (IN PROPERTY) WITHOUT FENCED AREA	55,588 SF 35% 30%



**Fred C. Cox,  
Architect**

4466 Early Duke St.  
West Valley City,  
Utah 84120-5723

Phone: 801-968-3733  
Fax: 801-966-3778  
Email: fcc@fredccox.com

THIS DOCUMENT IS FOR CITY APPROVAL OF THE PROJECT NOTED AND IS ALSO FOR CONSTRUCTION. ACTUAL SITE DIMENSIONS COULD VARY. USE OF THIS DOCUMENT FOR ANY OTHER PROJECT IS NOT PERMITTED.



ABC GREAT BEGINNINGS

UTAH COUNTY PARCEL  
580230168

ASPEN HILLS BLVD AND  
REDWOOD ROAD  
SARATOGA SPRINGS, UTAH

SITE PLAN

SCALE: 1" = 30'-0"

APRIL 12, 2016  
152401-A01-D612

**A0.1**

**Fred C. Cox,  
Architect**

4466 Early Duke St.  
West Valley City,  
Utah 84120-5723

Phone: 801-968-3733  
Fax: 801-966-3778  
Email: fcc@fredccox.com

THIS DOCUMENT IS FOR CITY APPROVAL  
OF THE PROJECT NOTED AND IS ALSO FOR  
CONSTRUCTION. ACTUAL SITE DIMENSIONS  
COULD VARY. USE OF THIS DOCUMENT FOR  
ANY OTHER PROJECT IS NOT PERMITTED.



SEE GRADING. FOOTINGS TO BE BELOW FROST DEPTH  
STEP FOOTINGS AND/OR FOUNDATION WHERE REQUIRED

E A S T / W E S T / N O R T H / S O U T H E L E V A T I O N S

6' TALL  
MATCHING  
DUMPSTER  
SCREEN  
WHERE  
OCCURS

DARK BRONZE ANOD. ALUMINUM  
1" INSULATED LOW-E STOREFRONT  
SYSTEM WITH MED. STYLE DOORS.  
TEMPER DOORS AND ANY WINDOW  
WITHIN 24" TO THE SIDE OF A  
CLOSED DOOR OR 18" OFF FLOOR  
SINGLE HUNG WINDOWS TO MATCH

BLADE AND PAINTED SHOP ENTRANCE  
TRADITIONAL SIGNAGE

PREFINISHED METAL  
BALCONIES/RAILING/FLOWER BOXES

PREFINISHED PAINTED  
SINGLE HUNG WINDOWS

"SUNBRELLA" CANVAS TYPE  
AWNINGS

ANTIQUE STYLE ACCENT  
LIGHTING (DARK SKY)

4'x16' METAL BALCONY  
EACH UNIT

E.I.F.S. CORNICE TO MATCH  
PALE YELLOW SPLIT-FACED CMU  
MOUNTAIN RED ATLAS BRICK OR  
SIERRA MIST BLOCK AT ENDS  
AND MIDDLE BAYS

PALE YELLOW SPLIT-FACED  
CONCRETE BLOCK WAINSCOT

ALTERNATE COLORED SCORED  
WALL MATERIAL AT 2, 4, 6, AND 8  
BAYS WITH ACCENT BASE BELOW.

ALTERNATE COLORED SPLIT-FACED  
WALL MATERIAL AT 3 AND 7  
BAYS WITH ACCENT BASE BELOW.

DARK BRONZE STORE FRONT  
SYSTEM WITH LOW-E GLASS

PALE YELLOW SPLIT-FACED  
CONCRETE BLOCK WAINSCOT  
BASE ACCENT MATERIAL WITH  
BEVELED SMOOTH CAP

**ABC GREAT BEGINNINGS**

**UTAH COUNTY PARCEL  
580230168**

**ASPEN HILLS BLVD AND  
REDWOOD ROAD  
SARATOGA SPRINGS, UTAH**

**ELEVATIONS  
OVERALL**

SCALE: 1" = 10'-0"

APRIL 12, 2016  
152401-A31-D612

**A3.1**

**7. Work Session: Rezone and Concept Plan for ABC Great Beginnings, located at NW corner of Redwood Road and Aspen Hills Blvd., ABC Great Beginnings Holdings, LLC. (Johnny Anderson) – Applicant.**

Kara Knighton presented the item. The applicant is requesting approval of a Rezone to change the zone of the property from Agriculture to Mixed Use to match the Land Use Plan designation of Mixed Use in the General Plan. The proposal includes 4,200 sq. ft. of future office space, 3,800 sq. ft. for a future restaurant, and two 11,400 sq. ft. buildings each consisting of three stories. The southern building proposes child care on the first floor with the top two floors as residential. The eastern building proposes retail on the first floor with the top two floors as residential. A landscaped fenced play area is proposed on the south end of the child care building. The project proposes 41 apartments on the 3.63 acre lot, at approximately 1,112 sq. ft. per unit. The dwelling size complies with Code.

Johnny Anderson, applicant, was present.

Sandra Steele said her biggest concern was for amenities. There are some balconies but not on every unit and no dimensions. She noted places where when people didn't have somewhere to put things like BBQ's they will chain them up outside. There is no area for play for the apartment tenants.

Johnny Anderson said their intention is to make the childcare play area available to residents with a key code or something in the evenings and weekends.

Sandra Steele said if they don't want to put in the balconies if they could provide a place that had some BBQ's, maybe a covered area, something like that as an amenity. She asked on the landscaping, do parking lot islands count as required space.

Sarah Carroll replied yes, but not in public right-of-way park strips. Because they have frontage on Redwood Road if that stays in their property they get credit for that but the park strip along Aspen Hills is a public right-of-way and does not count.

Sandra Steele asked what was inside the dotted line in the play area.

Johnny Anderson they were asked to draw that in for a possible future drainage area. The whole play area is the entire area south of the building.

Sandra Steele is concerned that leaves no outside space for picnic area for those residents. People there will want a little outdoor space and to take it all up with childcare may be a little excessive.

Johnny Anderson took note and commented they usually put in larger play areas than what was required.

Sandra Steele asked if both buildings would be the same look and materials.

Johnny Anderson replied that they would start in the south but would want the restaurant to go up soon. They would want a similar feel.

Sandra Steele noted they are already short on parking and some spaces would be needed for garbage surround and accessible parking.

Johnny Anderson asked if the .25 shared is a hard rule, the parking needs for child care center are different, the busy times are drop off and pick up times. The rest of the day is nothing but staff parking. He thinks there would be a lot of empty parking spots in there.

Sandra Steele noted that is the maximum allowed in our Code. Sandra is always concerned about shared parking but with apartments above you need some kind of designated parking for those units not shared with the child care center. If several tenants stay at home and can't get the parking spaces they want it will be a problem. She suggests that shared parking not be in residential parking.

Mark Christensen would say preserving business parking would be more important.

Sandra Steele noted if she had to walk from the far end as a resident she would be upset.

Kirk Wilkins commented that anyone renting here would know they didn't have a designated space. He wondered what the target market was.

Johnny Anderson replied that it would be someone that would want to be close to child care, or the school. Hopefully people who don't want to commute and have an office space there.

Mark Christensen noted it's also close to the trail system and Shay Park.

Ken Kilgore asked how we know when we reach the 2% limit of prop 6.

Sarah Carroll responded that the general plan is advisory. We keep track and when we exceed it we have to be considerate when we look at applications. She would recommend that when we do we have good justification to give residents. This area is on our master plan and we put a lot of thought as to what uses

are good in what locations. It's good to see something like this come in. it's something we don't yet offer in the city. The question might be is it beneficial enough in the City to exceed the 2%.

Ken Kilgore agrees these things are good for the city. He is looking ahead to when we have the public hearing that we should have a good argument to explain why this is a good thing.

Sarah Carroll mentioned they may have a good turn out when it comes to a public hearing you can't predict to much in the future but you have to consider it.

Ken Kilgore asked the staff to advise Planning Commission in the future when we exceed the limits.

Sarah Carroll noted they do have a lot of single family coming on in the future.

Kirk Wilkins agreed that it would help to see those numbers.

Ken Kilgore wanted to know why the zoning maps and land use maps don't always equate.

Sarah Carroll noted that the zoning map is what is currently zoned and the Land Use Map is a guide for development. The zoning map is catching up to the Land Use Map.

Mark Christensen mentioned one thing we identified in the budget process is putting money aside to have outside consulting help us update the General Plan which would include an update of the Land Use Map.

Hayden Williamson had a concern with this mixed use that outside our normal distribution of mixed use, he would be more comfortable with this if this was closer to the 30/30/30.

Johnny Anderson asked if it was because residential has lower parking requirements.

Hayden Williamson gave a history of the proposition 6 and noted that if they do this they would be violating the residential referendum.

Johnny Anderson asked if office had a higher parking requirement than residential.

Sarah Carroll responded that residential are based on per unit. Office is per sq. ft. It is a hard rule for the 25%.

Ken Kilgore thought maybe it's something we consider that the ratio be different for the mixed uses.

Johnny Anderson commented that most residents are using the parking during the evening and the businesses use the parking during the day so he wonderers if that would allow for some more give in the parking space for the different use times.

Kirk Wilkins feels that's a valid argument.

Sandra Steele felt this was multifamily but they aren't asking for things they usually do for multifamily like open space. Maybe this is something different than multifamily and should be treated differently.

Sarah Carroll noted that as the code is today they could not request more than 25% shared parking. If the Planning Commission had a different recommendation the staff could look into that.

Hayden Williamson requested that staff look into the shared parking as this is an overall benefit to the city. He would like to make it so he could have more retail. Over parking is a problem for the city.

Sandra Steele said we don't want to make exceptions that will affect other developments adversely. Other mixed uses may not have the same mix of business; he has child care that only needs permanent parking for employees.

Mark Christensen commented that if this redevelops sometime in the future it could change to something else and to reduce the parking now could limit redevelopment down the road.

Ken Kilgore feels a lot of parking calculations were for commercial type usage, this is different and the parking usage is different, between residential and commercial maybe, it's something to ask staff to look at. Other places like Regional Commercial and Neighborhood Commercial should maintain the same parking formulas.

Kirk Wilkins noted given this is a legislative decision there is more leeway.

Johnny Anderson asked if anyone knew how close they were beyond the 2%.

Mark Christensen said we could meet with the applicant at another time to discuss this because it is more complex.

David Funk did want to comment that we shouldn't penalize him because of what other people have done and secondly where we are looking for this, have we filled in all the apartment areas and not residential (single family) areas. We shouldn't penalize them because they are building before the single family areas are completed. This is in the appropriate area and if that's what's built up first, of course we've gone over the limit. The 2% is not really an issue at this time.

Johnny Anderson said he is not building 4 buildings at once and if there is more single family coming online it may even out.

Sandra Steele noted one thing that might help residential vs office is to take the second floor and make it office above retail and residential on top floor. She was concerned about showing a storm drain going from the catch basin from the street under the childcare building. We don't allow utilities like that to go under a building.

Johnny Anderson explained the architect missed that and they were aware.

David Funk commented that parking was one of his big concerns. It made no difference if it was childcare or retail, they would have about the same parking either way. So even if they took that off, 0 for child care, it still wouldn't meet parking requirements.

Johnny Anderson noted that is why they are requesting the 25% for shared parking.

Sarah Carroll said they would be able to meet it with the shared parking they are proposing, if they didn't have the parking requirement for childcare as high.

Kara Knighton noted they are still 4% shy which is why they are requesting a reduction in parking.

Johnny Anderson noted a childcare this size in West Valley that has only 20 spaces that is more than sufficient.

Hayden Williamson noted some retail spots we have that are under spaced.

Kara Knighton noted they figured one space for each employee and one spot for every 5 children.

Mark Christensen noted that what if the restaurant is a high demand and needs more parking, which is the problem. It depends on the uses, some are far more intensive. It makes perfect sense in its current use but it could change.

Sandra Steele said if you have retail you could have another restaurant go in that could take up more parking than another retail shop. We have to be careful about reducing parking.

Johnny Anderson asked if they adjust things to accommodate the parking spaces that are in there, would he get support on the 25% reduction.

**8. Approval of Minutes:**  
**a. February 25, 2016**

**Motion made by Hayden Williamson to approve the minutes of February 25, 2016. Seconded by David Funk. Aye: Sandra Steele, David Funk, Hayden Williamson, Kirk Wilkins, Ken Kilgore, Brandon MacKay. Motion passed 6 - 0.**

**9. Reports of Action.** – No Reports were needed tonight.

**10. Commission Comments.** – No Commissioner Comments tonight.

**11. Director's Report:**

**a. Council Actions**

- Cowboy rezone was approved

**b. Applications and Approval**

- Notes included in packet.
- Final plat approvals for Hillcrest Building O and Riverbend Townhomes 3A & B

**c. Upcoming Agendas**

- Bicycle and pedestrian master plan and setbacks on other code items.

**d. Other**

Sandra Steele had a note about code enforcement for Legacy Farms signs and she wonders what the status of enforcement on the Legacy Farms trailer is.

Mark Christensen noted they were supposed to be moving the trailer. Kimber Gabryszak spoke with them that they were allowed to keep the trailer on site but a different place than where it is. Kimber has worked with them that they will be allowed to keep it somewhere on site as it held some equipment.

Daniel McRae was introduced to Planning Commission as a new Engineer with the city.

CITY OF SARATOGA SPRINGS  
CITY COUNCIL MEETING MINUTES

Tuesday, March 29, 2016  
City of Saratoga Springs City Offices  
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

**City Council Work Session**

**Call to Order:** 6:05 p.m. by Mayor Jim Miller

Present Council Members Michael McOmber, Stephen Willden, Shellie Baertsch, and Chris Porter.

Excused Council Member Bud Poduska

Staff City Manager Mark Christensen, City Attorney Kevin Thurman, Assistant City Manager Spencer Kyle, Planning Director Kimber Gabryszak, Fire Chief Jess Campbell, Finance Manager Chelese Rawlings, City Engineer Gordon Miner, Capital Facilities Manager Mark Edwards, City Planner Kara Knighton, City Recorder Cindy LoPiccolo

**Live Fire Training Facility Discussion.**

Fire Chief Jess Campbell opened discussion concerning the proposal for a live fire training site for Council feedback.

Firefighter / Paramedic Blaine Coombs identified two possible sites for development of the training site as the area north of the south Fire Station, and at the Public Works site, and outlined the pros and cons for each site, described the appearance, plan and use of the proposed semi-permanent structure. In response to Council Member Baertsch, Firefighter / Paramedic Coombs affirmed the facility could be relocated, they have been working with Assistant City Manager Kyle and City Manager Christensen on the master planning of the Public Works area, only common combustibles would be used as an emission source during training, their goal is to be functional for live fire training in October.

Council Members commented in support of the live fire training facility, that at this time the best location would be adjacent the South Fire Station on Ring road, have open meeting and invite public review, and plan to relocate to the Public Works site when the facility size increases. Mayor Miller recommended staff plan ahead to save space at the Public Works site, make necessary parking and water line improvements.

**ABC Great Beginning Concept Plan and Rezone Discussion.**

City Planner Kara Knighton introduced the ABC Great Beginnings Rezone and Concept Plan application concerning 3.63 acres located at the northwest corner Redwood Road and Aspen Hills Blvd, on the north end of the city. Planner Knighton reported this is a request for rezone to change the zone of the property from Agriculture (A) to Mixed Use (MU) to match the Land Use Plan designation of Mixed Use in the General Plan. The proposal concept includes 4,200 sq. ft. of future office space, 3,800 sq. ft. for a future restaurant, and two 11,400 sq. ft. three story buildings – one with a child care center on the main level and residential units on the top two stories, and the other with retail commercial on the main level and top two residential. The project proposes 41 apartment units, proposed landscaping meets the 25% requirement, parking meets requirements, the applicant is requesting a 25% shared parking allotment, there will be full access onto Aspen Hills Blvd. with potential full access onto Redwood Road pending UDOT approval.

John Anderson, representing ABC Great Beginnings, reported they have modified the proposed plan and are considering 32 to 36 residential units and would be able to meet the parking requirement, and they have had preliminary conversations with UDOT and UDOT is comfortable with the access.

53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86

Council Member Porter noted residents have spoken out against density, however, the City's master plan designates this area mixed use, the concept presented is attractive, in review of the site and other developments along Redwood Blvd. he believes this is what was visualized, supports the reduction in units; his concerns are the possibility of only one access unless they obtain UDOT approval, the zoning of the adjacent Western Hills parcel, and would possibly support only a 15% shared parking reduction. Director Gabryzak affirmed the Western Hills property is still zoned R-3, staff can review for parking and landscaping for transition.

~~Council Member Willden commented if the mixed-use zoning was not already on the general plan it would not be a consideration, his preference is an increase in office space or commercial and limit the residential, noted he believes this project to be unique in the City. Representative Anderson responded to Council Member Willden's inquiry the apartments would be for rent.~~

Council Member McOmber noted the general plan designating mixed-use was put in place 9-10 years ago; with infrastructure and utility requirements he is more comfortable at 31 residential units; the second access point would be beneficial to residents and traffic; pointed out the City meets all national parking standards and does not allow developers to under park, however, he is not supportive of the request for reduction as local restaurants have very high visitation. Council Member McOmber further commented this is a great mixed use project, when the zone was created this is what it was designed for, it is the trend for younger generations and the City should offer this type of product in the City giving more people options.

In response to Council Member Baertsch, representative Anderson commented they plan on making the playground available to the residents, possibly with a key card, and one of the conditions for residents is a background check. Council Member Baertsch commented the playground should be considered part of the business and not landscaping, residents would not be able to allow visitors children use the playground making it not fully open to the residents, however, recommended mitigation by the addition of personal spaces such as balconies and roof top gardens. Council Member Baertsch commented she does not support 25% shared parking due to the number of customers, and the City must also plan for the future in the event the use is changed from a day care center to other offices, retail or restaurants. Council Member Baertsch thanked the applicant and wished them success.

Mayor Miller thanked the Applicant.

**Budget Review/Discussion – FY 2016-2021.** Mayor Miller deferred Budget Review to the Policy Session.

**Adjournment:** The Work Session adjourned at 7:00 p.m. to the Policy Session.

---

**Policy Meeting**

**Call to Order:** Mayor Jim Miller called the Policy Session to order at 7:00 p.m.

**Roll Call:**

Present Council Members Stephen Willden, Michael McOmber, Shellie Baertsch, and Chris Porter.

Excused/Absent Council Member Bud Poduska

Staff Present City Manager Mark Christensen, City Attorney Kevin Thurman, Spencer Kyle Assistant

City Manager, Police Chief Andrew Burton, Planning Director Kimber Gabryszak, Finance

101 Manager Chelese Rawlings, City Engineer Gordon Miner, Capital Facilities Manager Mark  
 102 Edwards, City Recorder Cindy LoPiccolo

104 Mayor Miller tabled Action Item 2 concerning Tickville Wash Facilities Reimbursement Agreement R16-22 to  
 105 the next meeting.

107 Invocation by Council Member McOmber

108 Pledge of Allegiance led by Council Member Porter

109  
 110 **Public Input:**

111  
 112 Mayor Miller invited public input.

113  
 114 Patrick Costin, Aspen Hills, commented in support of the live fire training facility; concerned with possible spill  
 115 over parking from the ABC New Beginnings project unto Aspen Hills Blvd., supports the commercial, requested  
 116 limited residential.

117  
 118 Brandon Beatty, Aspen Hills, commented in support of commercial in the ABC New Beginnings project,  
 119 concerned with ingress and egress, traffic, parking; requested the City's assistance in regard to speeding and  
 120 traffic control affecting Aspen Hills.

121  
 122 Rich Anderson, Aspen Hills, commented the proposed day care center project will perpetuate the am and pm  
 123 heavy traffic in the area, concurred with Mr. Costin's statement of Aspen Hills Blvd. becoming a parking lot.

124  
 125 **Awards and Recognitions:**

126  
 127 Mayor Miller presented the oath of office to new officer Dana Wallace and Chief Burton presented Officer  
 128 Wallace with a Certificate of Commission.

129  
 130 Chief Burton announced the promotion of Detective Zach Robinson to Corporal, and promotion of Corporal  
 131 Roger Williams to Sergeant, and presented each with a Certificate of Promotion and new rank pins, and invited  
 132 the Officer wives to pin their badges. The Mayor and Council congratulated and thanked the officers for their  
 133 service. Council Member Baertsch commended and thanked the officers on behalf of her neighbors for their  
 134 response and handling of their daughter's accident.

135  
 136 Josh McHale, Account Executive, and Brent Oakeson, Loss Prevention Specialist, representing Utah Local  
 137 Governments Trust (ULGT), presented a 2015 Trust Accountability Program (TAP) Award to the City,  
 138 recognizing the City for successful loss control practices, noted the Trust serves 550 government agencies and  
 139 less than 100 qualify for this award, and thanked the City for being one of the standouts.

140  
 141 Budget Presentation - Finance Manager Chelese Rawlings presented a five year budget summary with update of  
 142 possible pay plan projections, and five year projections based on what was discussed at the retreat concerning  
 143 their future needs.

144  
 145 Council Member Willden thanked staff for the information noting the overall positive balance over the  
 146 upcoming five years, with only culinary and secondary water showing negative balances. Finance Manager  
 147 Rawlings responded this may be because of fund balance being used for projects. Council Member Willden  
 148 reported the methodology was developed and presented by the City's consultant, and although he was very  
 149 critical of the approach up front, he is informed and comfortable with the approach and where he is  
 150 recommending taking us is the right direction in his opinion.

151  
 152 Council Member McOmber commented most of his questions have been answered during his and Council  
 153 Member's participation on the Compensation Sub-Committee, thanked staff for addressing his request for long  
 154 term projections and City Manager recommendations and going through the exercise of allocating in the years



**Preliminary Plat  
Western Hills Phases 2 & 3  
April 28, 2016  
Public Hearing**

Report Date:	April 21, 2016
Applicant:	Ridgepoint Management Group LLC
Owner:	Western Hills 1 LLC
Location:	Approximately 150 W Aspen Hill Blvd
Major Street Access:	Aspen Hills Blvd
Parcel Number(s) & Size:	58:023:0028 – 14.3 acres 58:023:0229 – 14.94 acres Total – 29.24 acres
Parcel Zoning:	R-3
Adjacent Zoning:	A, R-3 PUD, R-14, MU
Current Use of Parcel:	Vacant
Adjacent Uses:	Vacant, Condominiums, Town Homes, Church, City Park, Single-Family Residential
Previous Meetings:	None for this application
Previous Approvals:	None for this application
Type of Action:	Administrative
Land Use Authority:	City Council
Future Routing:	City Council
Author:	Jamie Baron, Planner I

**A. Executive Summary:** This is a request for approval of the Western Hills Phases 2 & 3 Preliminary Plat which consists of 16.025 acres in the R-3 zone and includes 39 lots.

**Recommendation:**

**Staff recommends that the Planning Commission conduct a public hearing on the Western Hills Phases 2 & 3 Preliminary Plat, take public comment, review and discuss the proposal, and choose from the options in Section “H” of this report.** Options include forwarding a positive recommendation, forwarding a negative recommendation, or continuation.

**B. Background:** On August 7, 2015, the City received a Preliminary Plat application for Western Hills Phases 2 & 3.

On May 5, 2015, the City Council held a work session to discuss the open space of the project. The parcel contains a berm that is the remainder of a former rail road track. Due to the large amount of un-improved open space on the berm, the option for a financial contribution from the developer to the adjacent Shay Park was suggested in lieu of landscaping and amenities for the entire open space area. (see Exhibit 6)

The option stated that the developer would be responsible for a financial contribution of \$3.33 per square foot for the required 15% of open space. The costs of the trail and other open space improvements shown on the attached landscaping plans would then be deducted and the difference would be paid to the City to be used towards Shay Park.

The current application is for a portion of the entire property. Based on the fee-in-lieu option, the financial obligation for each phase is outlined below.

Phase	Area	Required Open Space (15%)	Financial Contributions \$3.33 per sq. ft.
Phase 2	376,543 sq. ft.	56,482 sq. ft.	\$188,085.06*
Phase 3	321,500 sq. ft.	48,225	\$160,589.25*
Total	698,043 sq. ft.	104,707	\$348,674.31*

*\*This amount will be reduced by actual improvement costs spent by the developer within these open space areas. Receipts and invoices shall be submitted to the City for verification of funds spent.*

**C. Specific Request:** This is a request for Preliminary Plat approval for Western Hills Phases 2 & 3; a 39 lot subdivision in the R-3 zone. The property is 16.025 acres, with a density of 2.57 units per acre.

**D. Process:** Section 19.13.04 of the City Code states that Preliminary Plats require a public hearing with the Planning Commission and that the City Council is the Land Use Authority.

**E. Community Review:** Per 19.13.04 of the City Code, this item has been noticed in *The Daily Herald*, and each residential property within 300 feet of the subject property was sent a letter at least ten calendar days prior to this meeting. As of the completion of this report, the City has not received any public comment regarding this application.

**F. General Plan:** The Future Land Use map designates the site as Low Density Residential. The General Plan states that areas designated as low Density Residential are “designed to provide areas for residential subdivisions with an overall density of 1 to 4 units per acre. This area is to be characterized by neighborhoods with streets designed to the City’s urban standards, single-family detached dwellings and open spaces.”

**Staff conclusion: Consistent.** The proposed preliminary plat consists of single-family lots at a density of 2.57 units per acre, which is consistent with the General Plan designation.

**G. Code Criteria:**

- **19.04, Land Use Zones – Can Comply.**
  - Setbacks: **Can Comply.** The side set backs on knuckle lots is indicated as 10'. The setback detail should comply with the following requirements:
    - 25' front
    - 8' min/ 20' combined side yard
    - 20' Street side
    - 25' rear
- **19.06, Landscaping – Can Comply.**
  - The open space will be City owned and maintained after it is improved and dedicated to the City. The landscape plans have been reviewed by the Parks department.
  - The landscape plans shall met all conditions of the Parks department.
    - Ornamental grasses only in the shrub beds of the gazebo area.
    - No weed barrier
    - No drip lines
    - Meet the LS-7 City standard for irrigation of the shrub bed areas.
    - Amenities shall match those in Shay Park
    - Meet all City standards
- **19.12, Subdivisions – Complies.**
- **19.13, Process – Complies.**
- **19.27, Addressing – Can Comply.**
  - Addressing is required for Final Plat.

For complete analysis, see the attached Planning Review Checklist, Exhibit 3.

**H. Recommendation and Alternatives:**

Staff recommends that the Planning Commission conduct a public hearing, take public input, discuss the application, and choose from the following options.

**Staff Recommended Option – Positive Recommendation**

“I move to **forward a positive recommendation** of the Western Hills Phases 2 & 3 Preliminary Plat to the City Council, as outlined in Exhibit 4, with the Findings and Conditions in the Staff Report dated April 21, 2016:”

**Findings**

1. The application is consistent with the General Plan, as articulated in Section “F” of the staff report, which section is incorporated by reference herein.
2. The application complies with the criteria in sections 19.04, 19.06, 19.12, 19.13, 19.27 of the Development Code, as articulated in Section “G” of the staff report, which section is incorporated by reference herein.

**Conditions:**

1. All conditions of the City Engineer shall be met, including but not limited to those in the Staff report in Exhibit 1.
  2. The Western Hills Phases 2 & 3 Preliminary Plat is recommended for approval as shown in the attachment to the Staff report in Exhibit 4.
  3. All conditions of the parks department shall be met on all open space to be dedicated to the City.
  4. The side setbacks shall be 8’ min/ 20’ combined on the Setback Detail.
  5. Open Space improvements for each phase shall be deducted from the financial contribution of each phase and the remainder shall be paid to the City prior to recordation of each phase.
  6. The financial contribution for phase 2 shall be \$188,085.06, minus any deductions from open space improvements in phase 2.
  7. The financial contribution for phase 3 shall be \$160,589.25, minus any deductions from open space improvements in phase 3.
  8. Any other conditions or changes as articulated by the Planning Commission:
- 

**Alternative 1 - Continuance**

The Planning Commission may also choose to continue the item. “I move to **continue** the Western Hills Phases 2 & 3 Preliminary Plat amendment to another meeting on [DATE], with direction to the applicant and Staff on information and / or changes needed to render a decision, as follows:

1. \_\_\_\_\_
2. \_\_\_\_\_

**Alternative 2 – Negative Recommendation**

The Planning Commission may also choose to forward a negative recommendation of the application. “I move to **forward a negative recommendation** of the Western Hills Phases 2 & 3 Preliminary Plat to the City Council with the Findings below:

1. The Western Hills Phases 2 & 3 Preliminary Plat is not consistent with the General Plan, as articulated by the Planning Commission: \_\_\_\_\_, and/or,
2. The Western Hills Phases 2 & 3 Preliminary Plat is not consistent with Section [19.04, 19.06, 19.12, 19.13] of the Code, as articulated by the Planning Commission: \_\_\_\_\_.

**J. Attachments:**

1. City Engineer's Report (pages 6-7)
2. Location & Zone Map (page 8)
3. Planning Review Checklist (pages 9-13)
4. Preliminary Plat (pages 14-19)
5. Landscape Plans (pages 20-27)
6. Financial Contributions letter (pages 28-29)
7. Approved trail plans (pages 30-35)

# Planning Commission Staff Report

**Author:** Gordon Miner, City Engineer  
**Subject:** Western Hills Subdivision Phase 2 & 3  
**Date:** April 28, 2015  
**Type of Item:** Preliminary Plat Approval



## Description:

**A. Topic:** The Applicant has submitted a preliminary plat application. Staff has reviewed the submittal and provides the following recommendations.

## B. Background:

*Applicant:* Ridgepoint Management Group, LLC  
*Request:* Preliminary Plat Approval  
*Location:* 350 W Aspen Hills Blvd  
*Acreage:* 8.645 acres - 20 lots

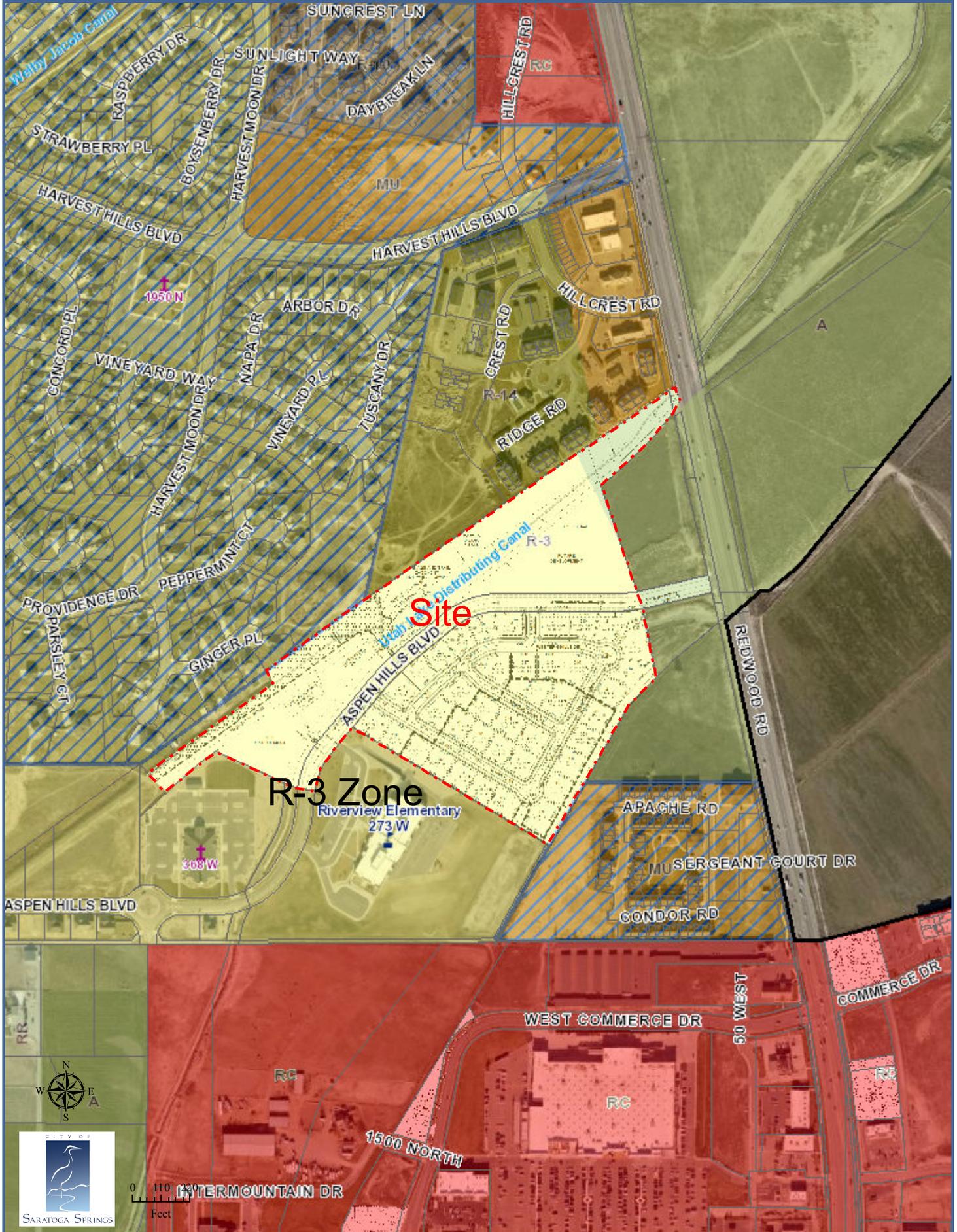
**C. Recommendation:** Staff recommends the approval of preliminary plat subject to the following conditions:

## D. Conditions:

- A. Meet all engineering conditions and requirements as well as all Land Development Code requirements in the preparation of the final plat and construction drawings. All application fees are to be paid according to current fee schedules.
- B. All review comments and redlines provided by the City Engineer during the preliminary process are to be complied with and implemented into the final plat and construction plans.
- C. Final plats and plans shall include an Erosion Control Plan that complies with all City, UPDES and NPDES storm water pollution prevention requirements. Project must meet the City Ordinance for Storm Water release (0.2 cfs/acre for all developed property) and shall identify an acceptable location for storm water detention. All storm water must be cleaned as per City standards to remove 80% of Total Suspended Solids and all hydrocarbons and floatables.
- D. Project shall comply with all ADA standards and requirements.
- E. Half width dimensions shall be shown for Redwood Road

- F. Developer shall provide plans for and complete all improvements within pedestrian corridors.
- G. Developer shall prepare and submit easements for all public facilities not located in the public right-of-way

# Western Hills - Zoning and Location Map





**APPLICATION REVIEW CHECKLIST**  
(8/20/2014 Format)

**Application Information**

---

**Date Received:** 4/13/2016 - Resubmittal  
**Project Name:** Western Hills Subdivision Phase 2 &3  
**Project Request / Type:** Preliminary Plat & Final Plat  
**Body:** Planning Commission  
**Meeting Type:** Public Hearing at PC  
**Applicant:** Ridgepoint Management Group LLC  
**Owner (if different):** Western Hills 1 LLC  
**Location:** 1700 N 200 W (Approximate)  
**Major Street Access:** Redwood Rd, Aspen Hills Blvd  
**Parcel Number(s) and size:** 58:023:0228 – 14.3 AC  
58:023:0229 – 14.94 AC  
Total – 29.24  
**General Plan Designation:** Low Density Residential  
**Zone:** R-3 Low Density Residential  
**Adjacent Zoning:** MU, R-14, A, R-3  
**Current Use:** Vacant  
**Adjacent Uses:** Single Family Residential, Condominiums,  
Town Homes, Elementary School, LDS Chapel  
**Previous Meetings:** Preliminary Plat Phase 1 6-15-10 (PC) 6-22-10(CC),  
Final Plat Phase 1 8-24-10 (CC)  
LDS Chapel 12-8-11 (PC) 1-3-12(CC)  
Preliminary Plat Phase 1C 4-24-14(PC 5-6-14(CC)  
Concept Plan for Residential Subdivision  
5-8-14(PC) 6-3-14(CC)  
Open Space Discussion 5-5-15 (CC work session)  
**Land Use Authority:** City Council  
**Future Routing:** City Council  
**Planner:** Jamie Baron

**Section 19.13 – Application Submittal**

---

- Application Complete: yes
- Rezone Required: No
- General Plan Amendment required: No

**Section 19.13.04 – Process**

---

- DRC:
  - 8-24-15: Comments: Better phasing plan needed to indicate which improvements are tied to what phase. DA needed to tie down phasing and improvements, including off-site OS improvements.
  - 10-12-15: Comments: The area where the two trails meet needs to be done in the first phase and then phase from there toward the Park. The section of open space east of the crossing of the trails needs to be included in the phasing plan. The storm drainage easement on the south side may have been included as open space all ready and need to make sure that it's not being used as open space for more than one project.
  - 1-4-16: Recommend consideration of realignment of street and/or trail crossing for more logical connection. Require replacement of fruit-bearing trees with non-bearing trees in park in order for City to consider acceptance. Verify in writing what improvements will be installed, instead of "to be determined by property owner."
- UDC: N/A
- Neighborhood Meeting: N/A
- PC: Scheduled for 4/28/2016
- CC: Tentatively scheduled for 5/17/2016

---

## General Review

---

### Building Department

- Setback detail; corner side yard can be 20 feet
- Lot numbering: start with phase 2, numbering in the 200's

### Fire Department

- Turnarounds on cul-de-sacs and dead-ends more than 150' in length
  - Use new cul-de-sac detail (96 feet drivable surface, 125 feet total diameter)
- Fire hydrant locations, maximum separation of 500 feet

### GIS / Addressing

- Rosewood Drive is a duplicate of an existing road name. Needs addresses.

### Additional Recommendations:

- Aspen Hills Blvd must be dedicated and recorded prior to final plat approval

---

## Code Review

---

- 19.04, Land Use Zones
  - Zone: R-3
  - Use: Permitted Use - Single Family Residential
  - Density: Up to 3 units per acre allowed. Complies. Phase 2 is 8.644 acres with 20 lots (2.31 units per acre). Phase 3 is 7.381 acres with 19 lots (2.57 units per acre).
  - Setbacks: **Can Comply**. The side set backs on knuckle lots is indicated as 10'. The setback detail should comply with the following requirements:
    - 25' front

- 8' min/ 20' combined side yard
    - 20' Street side
    - 25' rear
  - Lot width: 70' wide required at front setback. **Complies.** All lots are 70' or wider at the front setback.
  - Lot Frontage: 35' required on a public or private street. **Complies.** All lots have 35' for more of frontage on a public street.
  - Lot size: 10,000 square feet minimum. **Complies.** All lots are 10,000 square feet or larger.
  - Lot coverage: 50% maximum. To be reviewed at building permit.
  - Dwelling/Building size: minimum of 1,250 square feet of living space required above grade. To be reviewed at building permit.
  - Height: 35' maximum. To be reviewed at building permit.
  - Landscaping: See below
  - Open Space: 15% required. **Complies.**
    - Phase 2 includes 1.481 acres of open space (17.13%) within 8.644 acres.
    - Phase 3 includes 1.107 acres of open space (15%) within 7.381 acres.
  - Sensitive Lands: No more than 50% of required open space. **Complies.** Phase 2 contains 14.32 % (8,871 square feet of the 376,543 square foot phase) of sensitive lands and Phase 3 contains 58.65 % (28,286 square feet of the 321,500 square foot phase) sensitive lands. Phase 3 is over the 50%, however the total of sensitive lands for both phases is 33.73 % (37,157 square feet of the 698,043 project are) sensitive lands.
  - Trash: individual cans will be used
- 19.05, Supplemental Regulations
    - Flood Plain; N/A
    - Water & sewage: will connect to City infrastructure
    - Transportation Master Plan: No plats or buildings shall be where a future street is located on the Master Transportation Plan. **Complies** – no lots will block a planned road
    - Minimum height of dwellings: no more than 10% of the main floor area is allowed below grade. To be reviewed at building permit.
    - Property access: all lots have access onto a public street.
  - 19.06, Landscaping and Fencing
    - Landscaping Plan: All conditions of the Parks Department shall be met. **Can Comply.** The following changes are required.
      - Ornamental grasses only in the shrub beds
      - No weed barrier
      - No drip lines, see City standard LS-7
      - Amenities shall match those in Shay Park.
      - Meet all City Standards
    - Additional Requirements: Park strips shall be landscaped by the abutting property owner, except those that have a rear property line abutting Aspen Hills Blvd. Those park strips will be landscaped by the developer and maintained by the City.
    - Fencing & Screening:



- Double access lots are not permitted with the exception of corner lots. **Complies.** The plan does not propose any double access lots.
    - Arterials: Subdivisions along arterials shall comply with the adopted arterial cross section. **Complies.** There are no arterials adjacent to the development.
- Section 19.13, Process
  - General Considerations:
    - General Plan: Low density Residential. **Complies**
    - Natural Features: Canal and berm
    - Community & Public Facilities:
  - Notice / Land Use Authority: The City Council is the land use authority for preliminary plats. Newspaper and mailed notices required for preliminary plat public hearing with planning commission
  - Development Agreement / MDA: N/A
- 19.18, Signs: None proposed
- 19.27, Addressing
  - Duplicates: No duplications of street names or numbers used as names within the boundaries of the city shall be approved. **Complies.** There are no duplicate street names.
  - Addressing: Addresses are required for Final Plat.
    - The addresses for the lots are as follows
      - Lot 201 – 197 W
      - Lot 202 – 207 W
      - Lot 203 – 1741 N
      - Lot 204 – 1751 N
      - Lot 205 – 1761 N
      - Lot 206 – 152 W
      - Lot 207 – 138 W
      - Lot 208 – 126 W
      - Lot 209 – 102 W
      - Lot 210 – 92 W
      - Lot 211 – 78 W
      - Lot 212 – 1772 N
      - Lot 213 – 1764 N
      - Lot 214 – 1754 N
      - Lot 215 – 93 W
      - Lot 216 – 107 W
      - Lot 217 – 119 W
      - Lot 218 – 131 W
      - Lot 219 – 149 W
      - Lot 220 – 188 W

REVISIONS		
DESCRIPTION	DATE	SHEETS AFFECTED

**OWNER / DEVELOPER**  
 DESERT PEAK MANAGEMENT  
 GROUP 947 South 500 East,  
 SUITE 100  
 American Fork, UT 84003  
 OFFICE: 801-764-9000

**CITY STANDARD NOTES**

- Contractor shall field verify locations and invert elevations of existing manholes and other utilities before staking or constructing any new sewer lines.
- Contractor shall field verify locations and invert elevations of existing storm drain structures and other utilities before staking or construction any new storm drain lines.
- All construction shall comply to the Standard Technical Specifications and Drawings for the City of Saratoga Springs, Utah.
- Existing Utilities have been noted to the best of the Engineer's knowledge, it is the owners and contractors responsibility to locate utilities in the field and notify Engineer and City if discrepancies exist.
- Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the City for review and approval.
- The City reserves the right to conduct post-installation inspections to verify compliance with the City's requirements and approved lighting plan commitments, and if deemed appropriate by the City, to require remedial action at no expense to the City.
- All exterior lighting shall meet IESNA full-cutoff criteria unless otherwise approved by the City.

**GENERAL**

- All work shall be done in accordance with the specifications and/or requirements of the Saratoga Springs Public Works Department.
- A pre-construction conference will be held a minimum of 3 working days prior to start of work. All contractors, subcontractors and/or utility contractors, Saratoga Springs City Public Works and the City's Engineer should be present.
- All lot dimensions and easements are to be taken from the Plat.
- All construction stakes must be requested a minimum of three (3) working days prior to planned use.

**PROJECT LEGEND**

- PROJECT BENCHMARK IS SW COR SECTION 11 ELEV = 4262.32
- PROPOSED SEWER MANHOLE
- PROPOSED WATER VALVE
- PROPOSED PRESSURIZED IRRIGATION VALVE
- PROPOSED FIRE HYDRANT
- DRAINAGE CHANNEL/ STREET FLOW DIRECTION
- PROPOSED LIGHT POLE
- BOUNDARY LINE
- SECTION LINE
- LOT LINE
- PUBLIC UTILITY EASEMENT
- EXISTING EDGE OF PAVEMENT
- CONSTRUCT 8" CULINARY WATER LINE (PVC C-800)
- CONSTRUCT 10" CULINARY WATER LINE (PVC C-800)
- CONSTRUCT STORM DRAIN RCP
- CONSTRUCT 8" IRRIGATION WATER LINE (PVC C-900 PURPLE)
- CONSTRUCT 8" IRRIGATION WATER LINE (PVC C-900 PURPLE)
- CONSTRUCT SEWER LINE (SDR 35 SEWER PIPE)

# SITE DEVELOPMENT CONSTRUCTION PLANS

## WESTERN HILLS

### SUBDIVISION PHASE 2 & 3

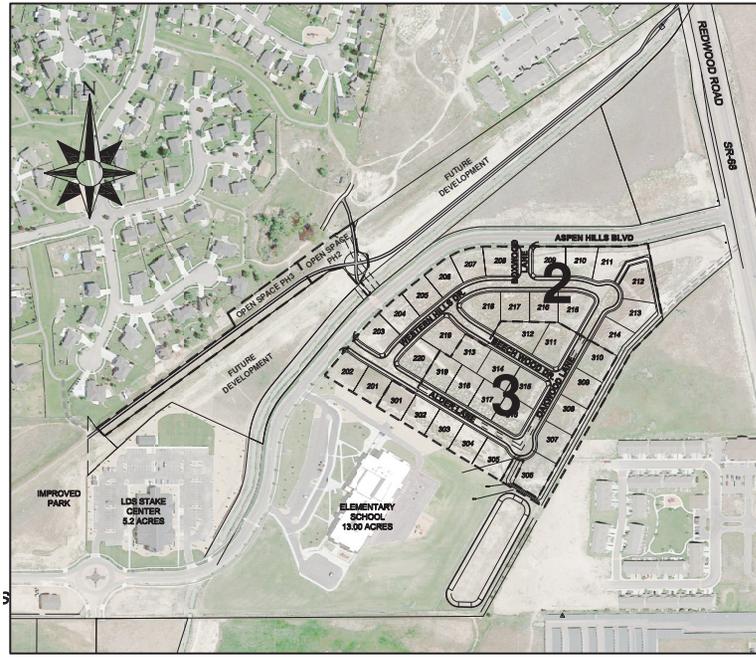
LOCATION

SECTION 11, TOWNSHIP 5 SOUTH, RANGE 1 WEST,  
 SALT LAKE BASE AND MERIDIAN  
 SARATOGA SPRINGS CITY, UTAH COUNTY, STATE OF UTAH

APRIL 2016



**VICINITY MAP**  
Not To Scale



DATA TABLE BY PHASE

PHASE	AREA (sq ft.)	AREA (Ac.)	OPEN SPACE (Ac.)	% OPEN SPACE	NUMBER OF LOTS	ROW AREA (Ac.)	% ROW AREA	IMPERVIOUS AREA (Ac.)	% IMPERVIOUS AREA	LOT AREA (Ac.)	DENSITY (U./Ac.)	Sensitive Land (SF)	% Sensitive Land
PHASE 2	376943	8.644	1.481	17.13	20	1.993	23.06	3.563	41.22	2.163	2.31	8671	14.32
PHASE 3	321500	7.381	1.102	15.00	19	1.561	21.01	2.586	36.32	4.493	2.27	28286	58.66
OVERALL	698043	16.025	2.529	15.78	39	3.544	22.12	6.190	38.63	18.770	2.43	37157	33.73

**SHEET INDEX**

SHEET	DESCRIPTION
1	COVER
AS-1	ALTA SURVEY COVER
AS-2	ALTA SURVEY
SP01 - SP02	SUBDIVISION PLAT - PHASE 2
C-1	EXISTING / DEMOLITION PLAN
C-2	FINAL OVERALL SITE PLAN
C-3	OVERALL GRADING & DRAINAGE PLAN
C-4	OVERALL UTILITY PLAN
C-4.1	UTILITY PHASING
PP-1	PLAN & PROFILE ALDER LANE 10+00-13+00
PP-2	PLAN & PROFILE ALDER LANE 13+00 - END
PP-3	PLAN & PROFILE WESTERN HILLS DRIVE 30+00 - 35+00
PP-4	PLAN & PROFILE WESTERN HILLS DRIVE 35+00 - END
PP-5	PLAN & PROFILE OAKWOOD LANE 20+00 - 24+00
PP-6	PLAN & PROFILE OAKWOOD LANE 24+00 - END
PP-7	PLAN & PROFILE BEECH WOOD DRIVE 40+00 - END
PP-8	PLAN & PROFILE BOXWOOD DRIVE
PP-9	PLAN & PROFILE WEST TRAIL
EC01 - EC04	EROSION CONTROL PLAN & DETAILS
SS-1	STRIPING / SIGNING PLAN
F-1	FENCING PLAN
DT01 - DT07	CONSTRUCTION DETAILS
LS1.1 - LS1.5	LANDSCAPE PLAN
LS2.1	IRRIGATION PLAN
LS3.1	LANDSCAPE & HARDSCAPE DETAILS
LS4.1	IRRIGATION DETAILS

VERIFY SCALE  
 ORIGINAL DRAWING  
 IS ONE OF THE  
 THIS SHEET ADJUST  
 SCALE ACCORDINGLY

DESIGN: T. KENISON  
 DRAWN: T. KENISON  
 CHECK: V. HANSEN  
 APPROV: V. HANSEN

NO. DATE REVISION BY

WESTERN HILLS SUBDIVISION  
 SARATOGA SPRINGS, UTAH  
 COVER SHEET

PROJ: 15-399-11  
 DATE: 4-04-2016  
 SHEET

01

Western Hills Residential Concept Area

Area North of Aspen Hills Blvd

A parcel of land located in the Southwest Quarter of Section 11 and the Southeast Quarter of Section 10, Township 5 South, Range 1 West, Salt Lake Base and Meridian, in the City of Saratoga Springs, Utah County, Utah. Said parcel being more particularly described as follows:

Beginning at the southerly corner of Lot 1206 Harvest Hills Planned Unit Development Plat F, as shown on the recorded plat in the office of the Utah County Recorder, said point located S89°39'03"W 1.09 feet and North 652.13 feet from the Southwest Corner of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running thence N53°45'00"E 589.46 feet; thence N30°09'41"W 52.31 feet; thence N53°14'55"E 464.30 feet; thence S12°38'05"W 3.54 feet; thence N55°25'00"E 1415.61 feet; thence S12°02'03"E 83.62 feet to the beginning of a non-tangent curve to the right having a radius of 520.79 feet; thence along the arc of said curve 122.82 feet, passing through a central angle of 13°30'44", chord bears S38°17'20"W 122.53 feet; thence S45°02'42"W 141.06 feet to the beginning of a curve to the right having a radius of 720.40 feet; thence along the arc of said curve 74.00 feet, passing through a central angle of 5°53'06", chord bears S47°59'09"W 73.96 feet; thence S50°55'42"W 60.73 feet; thence S18°48'59"E 42.39 feet; thence S18°48'00"E 385.98 feet to the northerly right of way of Aspen Hills Blvd and the beginning of a non-tangent curve to the right, having a radius of 266.00 feet; thence along the arc of said curve 61.54 feet, passing through a central angle of 13°15'18", chord bears S83°22'20"W 61.40 feet; thence West 466.84 feet to the beginning of a curve to the left having a radius of 334.00 feet; thence along the arc of said curve 227.76 feet, passing through a central angle of 39°04'18", chord bears S70°27'51"W 223.38 feet; thence S50°55'42"W 196.51 feet to the beginning of a curve to the left, having a radius of 984.00 feet; thence along the arc of said curve 194.07 feet, passing through a central angle of 11°18'00", chord bears S45°16'42"W 193.75 feet; thence S39°37'42"W 302.05 feet to the beginning of a curve to the left, having a radius of 334.00 feet; thence along the arc of said curve 195.09 feet, passing through a central angle of 33°28'00", chord bears S22°53'42"W 192.33 feet more or less to the boundary of Western Hills phase 1-B; thence N65°24'16"W 343.76 feet; thence S53°30'54"W 84.23 feet; thence S47°43'19"W 159.10 feet; thence N46°27'58"W 99.18 feet to the point of beginning. Containing 14.173 acres, more or less.

Area South of Aspen Hills Blvd

A parcel of land located in the Southwest Quarter of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, in the City of Saratoga Springs, Utah County, Utah. Said parcel being more particularly described as follows:

Beginning at a point on the southerly right of way of Aspen Hills Blvd., located N89°39'03"E 782.25 feet along the section line and North 528.37 feet from the Southwest Corner of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running thence N39°37'42"E 170.30 feet to the beginning of a curve to the right having a radius of 916.00 feet; thence along the arc of said curve 180.66 feet, passing through a central angle of 11°18'00", chord bears N45°16'42"E 180.36 feet; thence N50°55'42"E 196.51 feet to the beginning of a curve to the right having a radius of 266.00 feet; thence along the arc of said curve 181.39 feet, passing through a central angle of 39°04'18", chord bears N70°27'51"E 177.90 feet; thence East 466.84 feet to the beginning of a curve to the left having a radius of 334.00 feet; thence along the arc of said curve 77.77 feet, passing through a central angle of 13°20'27", chord bears N83°19'47"E 77.59 feet; thence N76°39'33"E 6.70 feet; thence S11°20'43"E 266.63 feet; thence S44°30'03"W 156.12 feet; thence S29°14'03"W 608.59 feet; thence N59°02'24"W 878.39 feet to the point of beginning. Containing 14.31 acres, more or less.

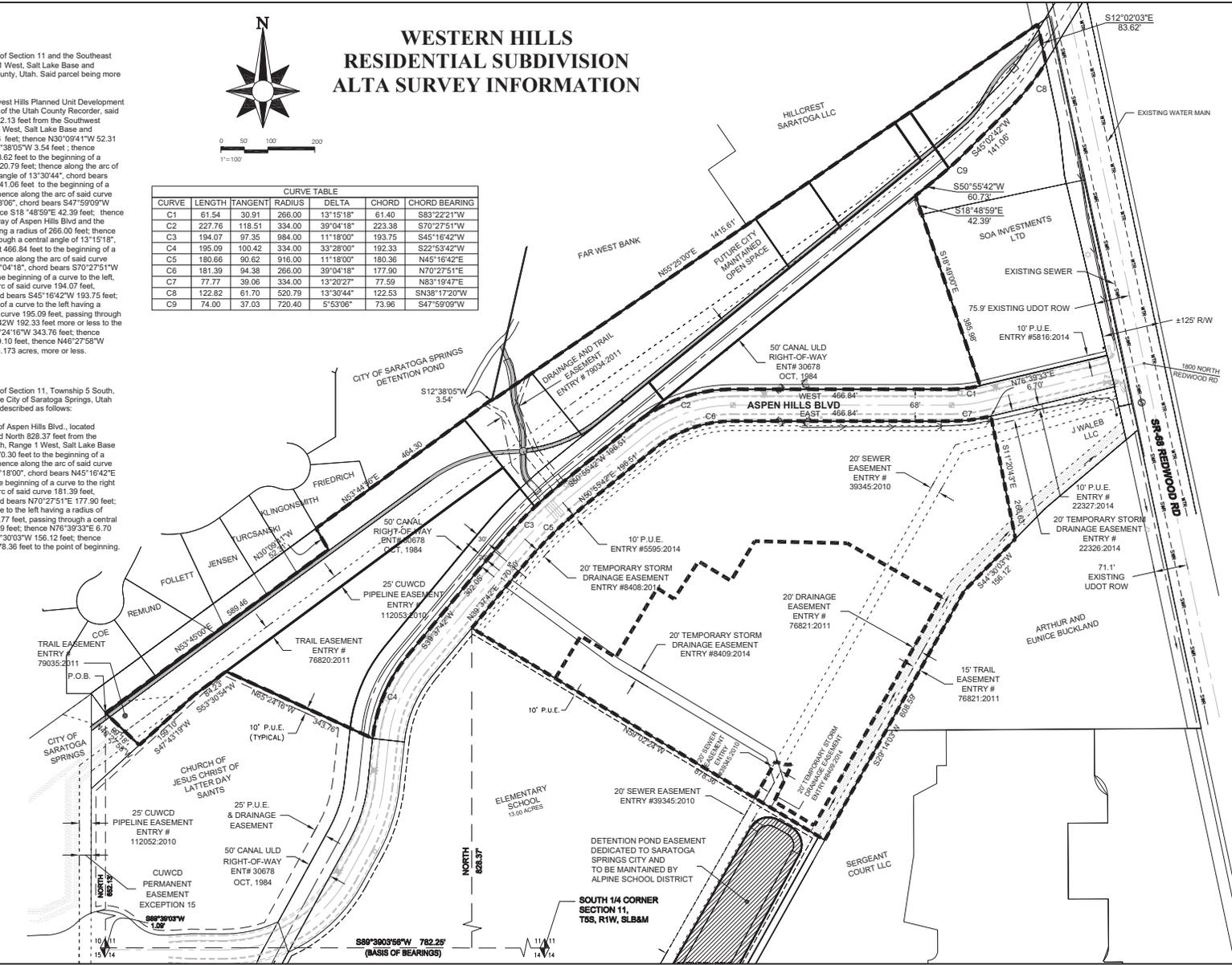


# WESTERN HILLS RESIDENTIAL SUBDIVISION ALTA SURVEY INFORMATION

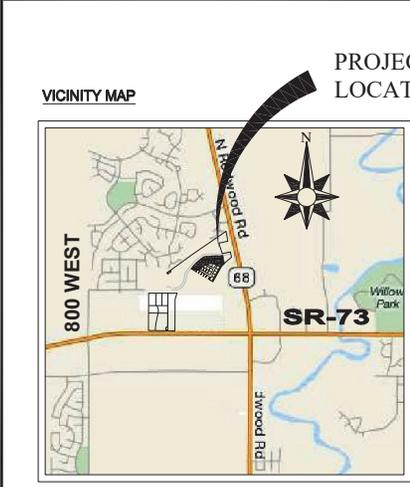
CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
C1	61.54	30.91	266.00	13°15'18"	61.40	S83°22'21"W
C2	227.76	118.51	334.00	39°04'18"	223.38	S70°27'51"W
C3	194.07	97.35	984.00	11°18'00"	193.75	S45°16'42"W
C4	195.09	100.42	334.00	33°28'00"	192.33	S22°53'42"W
C5	180.66	90.62	916.00	11°18'00"	180.36	N45°16'42"E
C6	181.39	94.38	266.00	39°04'18"	177.90	N70°27'51"E
C7	77.77	39.06	334.00	13°20'27"	77.59	N83°19'47"E
C8	122.82	61.70	520.79	13°30'44"	122.53	S38°17'20"W
C9	74.00	37.03	720.40	5°53'06"	73.96	S47°59'09"W

**LEGEND**

- 10 11 EXISTING SECTION CORNER (FOUND)
- 15 14 (AS DESCRIBED)
- PHASE 1 BOUNDARY LINE
- STREET CENTERLINE
- BUILDING SETBACK LINE
- PUBLIC UTILITY EASEMENTS
- STREET MONUMENTS
- MONUMENT TO MONUMENT TIE
- PROPERTY CORNER
- EXISTING STREET LIGHT



VERIFY SCALE ORIGINAL DRAWING DATE OF ISSUE THIS SHEET ADJUST SCALE ACCORDINGLY	DESIGN: T. KENSON DRAWN: T. KENSON CHECK: V. HANSEN NO. DATE REVISION	42 WEST 100 SOUTH, SUITE 1 SALT LAKE CITY, UTAH 84119 TEL: (801) 756-4488 FAX: (801) 756-5259	H & H ENGINEERING & SURVEYING, INC.	WESTERN HILLS SUBDIVISION SARATOGA SPRINGS, UTAH ALTA SURVEY PROJ: 15-399-11 DATE: 2-16-2016 SHEET: AS-1
---	---	--	--	---



**PROJECT LOCATION**

**WESTERN HILLS SUBDIVISION - PHASE 2**

LOCATED IN A PORTION OF THE SOUTHWEST QUARTER SECTION 11, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN SARATOGA SPRINGS CITY, UTAH COUNTY, UTAH

**PLAT NOTES**

- PLAT MUST BE RECORDED WITHIN 24 MONTHS OF FINAL PLAT APPROVAL, OR FOR PHASED DEVELOPMENTS, WITHIN 24 MONTHS OF RECORDED OF MOST RECENT PHASE.
- THE INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO ALL CITY STANDARDS, REGULATIONS, AND ORDINANCES.
- PRIOR TO BUILDING PERMITS BEING ISSUED, SOIL TESTING STUDIES MAY BE REQUIRED ON EACH LOT AS DETERMINED BY THE CITY BUILDING OFFICIAL.
- PLAT IS SUBJECT TO MASTER DEVELOPMENT AGREEMENT NO. \_\_\_\_\_.
- PLAT IS SUBJECT TO "INSTALLATION OF IMPROVEMENTS AND BOND AGREEMENT NO. \_\_\_\_\_" WHICH REQUIRES THE CONSTRUCTION AND WARRANTY OF IMPROVEMENTS IN THIS SUBDIVISION. THESE OBLIGATIONS RUN WITH THE LAND AND ARE BINDING ON SUCCESSORS, AGENTS, AND ASSIGNS OF DEVELOPER. THERE ARE NO THIRD-PARTY RIGHTS OR BENEFICIARIES UNDER THIS AGREEMENT.
- BUILDING PERMITS WILL NOT BE ISSUED UNTIL ALL IMPROVEMENTS HAVE BEEN INSTALLED AND ACCEPTED BY THE CITY IN WRITING; ALL IMPROVEMENTS CURRENTLY MEET CITY STANDARDS; AND BONDS ARE POSTED BY THE CURRENT OWNER OF THE PROJECT PURSUANT TO CITY CODE.
- NO BUILDING PERMITS SHALL BE ISSUED UNTIL ALL IMPACT AND CONNECTIONS FEES ARE PAID IN FULL PER CITY REGULATIONS IN EFFECT AT THE TIME OF BUILDING PERMIT ISSUANCE.
- ALL OPEN SPACE AND TRAIL IMPROVEMENTS LOCATED HEREIN ARE TO BE INSTALLED BY OWNER AND MAINTAINED BY A HOMEOWNERS ASSOCIATION UNLESS SPECIFIED OTHERWISE ON EACH IMPROVEMENT.
- REFERENCES HEREIN TO DEVELOPER OR OWNER SHALL APPLY TO BOTH, AND ANY SUCH REFERENCE SHALL ALSO APPLY TO SUCCESSORS, AGENTS, AND ASSIGNS.
- NO CITY MAINTENANCE SHALL BE PROVIDED FOR STREETS DESIGNATED AS "PRIVATE" ON THIS PLAT.
- A GEOTECHNICAL REPORT HAS BEEN COMPLETED BY \_\_\_\_\_ WHICH ADDRESSES SOIL AND GROUNDWATER CONDITIONS. PROVIDES ENGINEERING DESIGN CRITERIA, AND RECOMMENDS MITIGATION MEASURES IF PROBLEMATIC CONDITIONS WERE ENCOUNTERED. THE REPORT IS ON FILE WITH \_\_\_\_\_ AND THE CITY. THE CITY ASSUMES NO LIABILITY OR RESPONSIBILITY FOR ANY RELIANCE ON THE INFORMATION OR LACK THEREOF IN THE REPORT.
- AGRICULTURAL USES, OPERATIONS, AND RIGHTS ARE ADJACENT TO OR NEAR THE PLAT AND LOTS. THE LOTS IN THIS PLAT ARE SUBJECT TO THE SIGHTS, SOUNDS, ODORS, NUISANCES AND ASPECTS ASSOCIATED WITH AGRICULTURAL OPERATIONS, USES, AND RIGHTS. THESE USES AND OPERATIONS MAY OCCUR AT ALL TIMES OF THE DAY AND NIGHT INCLUDING WEEKENDS AND HOLIDAYS. THE CITY IS NOT RESPONSIBLE OR LIABLE FOR THESE USES AND WILL NOT RESTRICT ANY GRANDFATHERED AGRICULTURAL USE FROM CONTINUING TO OCCUR LAWFULLY.

**BOUNDARY DESCRIPTIONS**

**Western Hills Subdivision Lot Area**

A parcel of land located in the Southwest Quarter of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, in the City of Saratoga Springs, Utah County, Utah. Said parcel being more particularly described as follows:

Beginning at a point on the southerly right of way of Aspen Hills Blvd., located N89°39'03"E 792.25 feet along the section line and North 828.37 feet from the Southwest Corner of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running thence N39°37'42"E 170.30 feet to the beginning of a curve to the right having a radius of 916.00 feet; thence along the arc of said curve 180.66 feet, passing through a central angle of 11°18'00", chord bears N45°16'42"E 180.36 feet; thence N50°55'42"E 196.51 feet to the beginning of a curve to the right having a radius of 266.00 feet; thence along the arc of said curve 191.39 feet, passing through a central angle of 39°04'18", chord bears N70°27'51"E 177.90 feet; thence East 466.84 feet to the beginning of a curve to the left having a radius of 334.00 feet; thence along the arc of said curve 77.77 feet, passing through a central angle of 13°20'27", chord bears N81°19'47"E 77.59 feet; thence N 76°39'33" E 6.70 feet; thence S11°20'43"E 266.63 feet to the southeasterly boundary of the Western Hills 3 LLC Property; thence S44°30'03"W 156.12 feet; thence S29°14'03"W 606.59 feet; thence N59°02'24"W 174.48 feet; thence N29°17'53"E 90.03 feet to the beginning of a non-tangent curve to the left having a radius of 55 feet; thence along the arc of said curve 36.09 feet, passing through a central angle of 37°35'45", chord bears S79°15'08"E 35.45 feet; thence S25°27'40"W 87.66 feet; thence S59°02'24"E 99.44 feet; thence N29°14'03"E 557.99 feet; thence N60°22'07"W 103.46 feet; thence N60°24'58"W 129.28 feet; thence N88°45'16"W 197.05 feet; thence S30°57'36"W 98.56 feet; thence N59°02'24"W 72.27 feet to the beginning of a curve to the right having a radius of 238.00 feet; thence along the arc of said curve 8.54 feet, passing through a central angle of 2°03'18", chord bears N58°00'45"W 8.54 feet; thence S33°00'54"W 95.64 feet; thence N5 74°23"E 42.47 feet; thence S30°57'36"W 171.54 feet; thence N59°02'24"W 87.65 feet; thence S30°57'36"W 105.00 feet to the northerly boundary of the Alpine School District property; thence N59°02'24"W 207.94 feet to the point of beginning.

Containing 8.033 acres more or less and 20 building lots.

**Western Hills Subdivision Open Space Area**

A parcel of land located in the Southwest Quarter of Section 11 Township 5 South, Range 1 West, Salt Lake Base and Meridian, in the City of Saratoga Springs, Utah County, Utah. Said parcel being more particularly described as follows:

Beginning at a point which is located N89°39'03"E 739.42 feet and North 1143.77 feet from the Southwest Corner of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running thence N36°14'55"W 88.49 feet; thence N53°44'56"E 170.53 feet; thence S12°38'05"W 3.54 feet; thence N55°23'07"E 68.85 feet; thence S08°46'55"E 98.80 feet; thence S70°33'43"E 35.29 feet; thence S06°52'47"E 39.90 feet; thence S27°50'52"W 60.88 feet; thence S41°47'34"E 53.05 feet to the beginning of a non-tangent curve to the right having a radius of 984.00 feet; thence along the arc of said curve 12.84 feet, passing through a central angle of 0°44'52", chord bears S47°50'00"W 12.84 feet; thence N41°51'39"W 131.02 feet; thence S75°30'48"W 48.12 feet; thence S53°40'30"W 71.52 feet to the point of beginning.

Open Space 3 containing 0.612 acres, more or less.

**SURVEYOR'S CERTIFICATE**

I, Victor E. Hansen, do hereby certify that I am a registered Land Surveyor and that I hold a license, Certificate No. 176695, in accordance with the Professional Engineers and Land Surveyors Licensing Act found in Title 58, Chapter 22 of the Utah Code. I further certify that by authority of the owners, I have made a survey of the tract of land shown on this plat and described below, have subdivided said tract of land into lots, streets, and easements, have completed a survey of the property described on this plat in accordance with Utah Code Section 17-23-17, have verified all measurements, and have placed monuments as represented on the plat. I further certify that every existing right-of-way and easement grant of record for underground facilities, as defined in Utah Code Section 54-8a-2, and for other utility facilities, is accurately described on this plat, and that this plat is true and correct to the best of my knowledge. I also certify that I have filed, or will file within 90 days of the recording of this plat, a map of the survey I have completed with the Utah County Surveyor.

**BOUNDARY DESCRIPTIONS**

Open Space 3 containing 0.612 acres, more or less.  
Lot Area Containing 8.033 acres (SEE LOT AREA DESCRIPTION TO THE LEFT)

Total Acres: **8.645** more or less. # of Lots: **20** units.

Date: \_\_\_\_\_  
Victor E. Hansen

**OWNER'S DEDICATION**

Know all men by these presents that \_\_\_\_\_, the undersigned owner(s) of the above described tract of land having caused same to be subdivided into lots and streets to be hereafter known as

**WESTERN HILL SUBDIVISION - PHASE 2**

do hereby dedicate for the perpetual use of the public and/or City all parcels of land, easements, right-of-way, and public amenities shown on this plat as intended for public and/or City use. The owner(s) voluntarily defend, indemnify, and save harmless the City against any easements or other encumbrance on a dedicated street which will interfere with the City's use, maintenance, and operation of the street. The owner(s) voluntarily defend, indemnify, and hold harmless the City from any damage claimed by persons within or without this subdivision to the extent to have been caused by the owner's alterations of the ground surface, vegetation, drainage, or surface or sub-surface water flows within this subdivision or by owner's establishment of construction of the roads within this subdivision. In witness whereof \_\_\_\_\_ have hereunto set this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_\_\_\_.

WESTERN HILLS 1, LLC  
BY: TRISTAR IRREVOCABLE TRUST  
ITS: MANAGER

BRAD A. JENSEN, TRUSTEE

**LLC ACKNOWLEDGEMENT**

STATE OF UTAH  
County of Utah  
On this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_\_\_\_, personally appeared before me \_\_\_\_\_, who being by me duly sworn did say that he/she is the Manager of \_\_\_\_\_, a Utah limited liability company, and that the foregoing instrument was duly authorized by the Member/Managers of said limited liability company.

My commission expires: \_\_\_\_\_ Notary Public residing at \_\_\_\_\_

**APPROVAL BY LEGISLATIVE BODY**

The City Council of the City of Saratoga Springs, County of Utah, approves this subdivision subject to the conditions and restrictions stated hereon, and hereby accepts the Dedication of said streets, easements, and other parcels of lands intended for the public purpose of the perpetual use of the public.  
This \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_\_\_\_.

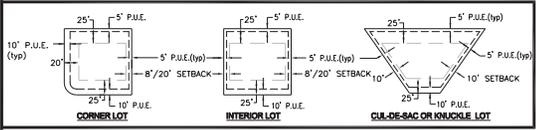
City Mayor \_\_\_\_\_ Attest \_\_\_\_\_  
City Recorder (See Seal Below)

**WESTERN HILLS SUBDIVISION PHASE 2**

LOCATED IN THE SOUTHWEST QUARTER SECTION 11, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN SARATOGA SPRINGS CITY, UTAH COUNTY, UTAH

SURVEYOR'S SEAL	CITY ENGINEERS SEAL	CLERK-RECORDER SEAL
_____	_____	_____

**TYPICAL SETBACK & P.U.E. DETAILS**



BY SIGNING THIS PLAT THE FOLLOWING UTILITY COMPANIES ARE APPROVING THE: (A) BOUNDARY, COURSE, DIMENSIONS, AND INTENDED USE OF THE RIGHT-OF-WAY AND EASEMENT GRANTS OF RECORD; (B) LOCATION OF EXISTING UNDERGROUND AND UTILITY FACILITIES; (C) CONDITIONS OR RESTRICTIONS GOVERNING THE LOCATION OF THE FACILITIES WITHIN THE RIGHT-OF-WAY, AND EASEMENT GRANTS OF RECORD, AND UTILITY FACILITIES WITHIN THE SUBDIVISION. "APPROVING" SHALL HAVE THE MEANING IN UTAH CODE SECTION 10-9A-803(4)(c)(ii). THE FOLLOWING NOTES ARE NOT ENDORSED OR ADOPTED BY SARATOGA SPRINGS AND DO NOT SUPERSEDE CONFLICTING PLAT NOTES OR SARATOGA SPRINGS POLICIES.

**ROCKY MOUNTAIN POWER**

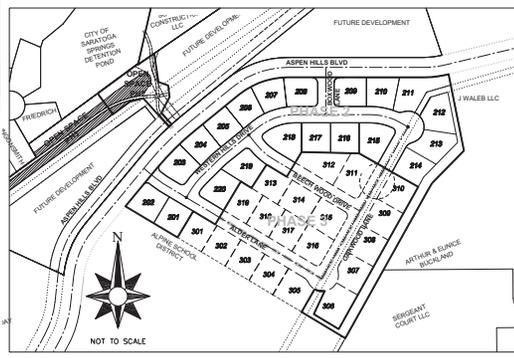
1. PURSUANT TO UTAH CODE ANN. 54-3-27 THIS PLAT CONVEYS TO THE OWNER(S) OR OPERATORS OF UTILITY FACILITIES A PUBLIC UTILITY EASEMENT ALONG WITH ALL THE RIGHTS AND DUTIES DESCRIBED THEREIN.  
2. PURSUANT TO UTAH CODE ANN. 17-27a-603(4)(c)(ii) ROCKY MOUNTAIN POWER ACCEPTS DELIVERY OF THE PUE AS DESCRIBED IN THIS PLAT AND APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS AND APPROXIMATES THE LOCATION OF THE PUBLIC UTILITY EASEMENTS, BUT DOES NOT WARRANT THEIR PRECISE LOCATION. ROCKY MOUNTAIN POWER MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT AFFECT ANY RIGHT THAT ROCKY MOUNTAIN POWER HAS UNDER:  
a. A RECORDED EASEMENT OR RIGHT-OF-WAY.  
b. THE LAW APPLICABLE TO PRESCRIPTIVE RIGHTS.  
c. TITLE 54, CHAPTER 54, DAMAGE TO UNDERGROUND UTILITY FACILITIES OR  
d. ANY OTHER PROVISION OF LAW.  
APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, A.D. 20\_\_\_\_

BY: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
ROCKY MOUNTAIN POWER

**QUESTAR GAS COMPANY**

QUESTAR APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. QUESTAR MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT CONSTITUTE ABROGATION OR WAIVER OF ANY OTHER EXISTING RIGHTS, OBLIGATIONS OR LIABILITIES PROVIDED BY LAW OR EQUITY. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL OR ACKNOWLEDGMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH IN THE OWNERS DEDICATION AND THE NOTES AND DOES NOT CONSTITUTE A GUARANTEE OF PARTICULAR TERMS OF NATURAL GAS SERVICE. FOR FUTURE INFORMATION PLEASE CONTACT QUESTAR'S RIGHT-OF-WAY DEPARTMENT AT 800-366-6532.  
APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

BY: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
QUESTAR GAS COMPANY



<b>CENTURY LINK</b> Approved this _____ day of _____, A.D. 20____	<b>PLANNING DIRECTOR APPROVAL</b> Reviewed by the Planning Director on this _____ day of _____, A.D. 20____	<b>LAND USE AUTHORITY</b> Approved by the Land Use Authority on this _____ day of _____, A.D. 20____	<b>SARATOGA SPRINGS ATTORNEY</b> Approved by Saratoga Springs Attorney on this _____ day of _____, A.D. 20____
<b>COMCAST CABLE TELEVISION</b> Approved this _____ day of _____, A.D. 20____	<b>SARATOGA SPRINGS ENGINEER APPROVAL</b> Approved by the City Engineer on this _____ day of _____, A.D. 20____	<b>FIRE CHIEF APPROVAL</b> Approved by the Fire Chief on this _____ day of _____, A.D. 20____	<b>LEHI CITY POST OFFICE</b> Approved by Post Office Representative on this _____ day of _____, A.D. 20____
<b>CENTURY LINK</b>	<b>PLANNING DIRECTOR</b>	<b>LAND USE AUTHORITY</b>	<b>SARATOGA SPRINGS ATTORNEY</b>
<b>COMCAST CABLE TELEVISION</b>	<b>SARATOGA SPRINGS ENGINEER</b>	<b>FIRE CHIEF APPROVAL</b>	<b>LEHI CITY POST OFFICE</b>
<b>CENTURY LINK</b>	<b>PLANNING DIRECTOR</b>	<b>LAND USE AUTHORITY</b>	<b>SARATOGA SPRINGS ATTORNEY</b>
<b>COMCAST CABLE TELEVISION</b>	<b>SARATOGA SPRINGS ENGINEER</b>	<b>FIRE CHIEF APPROVAL</b>	<b>LEHI CITY POST OFFICE</b>
<b>CENTURY LINK</b>	<b>PLANNING DIRECTOR</b>	<b>LAND USE AUTHORITY</b>	<b>SARATOGA SPRINGS ATTORNEY</b>
<b>COMCAST CABLE TELEVISION</b>	<b>SARATOGA SPRINGS ENGINEER</b>	<b>FIRE CHIEF APPROVAL</b>	<b>LEHI CITY POST OFFICE</b>

**H&H**  
ENGINEERING & SURVEYING, INC.  
42 NORTH 200 EAST, SUITE 1  
AMERICAN FORK, UTAH 84003  
TEL: (801) 756-2438  
FAX: (801) 756-3499

# WESTERN HILLS SUBDIVISION

## PHASE 2

LOCATED IN A PORTION OF THE SOUTHWEST QUARTER SECTION 11,  
TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN  
SARATOGA SPRINGS CITY, UTAH COUNTY, UTAH

**CURVE TABLE**

CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
C7	23.78	15.22	15.00	90°48'59"	21.36	S04°57'45"E
C8	26.02	13.04	172.00	8°40'06"	26.00	S54°42'21"E
C9	22.97	14.42	15.00	87°44'23"	20.79	N07°05'24"E
C10	47.99	24.06	228.00	12°03'32"	47.96	S39°14'59"W
C11	99.14	48.62	915.76	6°12'10"	99.08	S43°32'49"W
C12	88.44	34.24	916.00	4°16'51"	88.42	S48°47'17"W
C13	48.93	24.48	286.00	10°31'03"	48.78	S59°11'14"W
C14	117.23	59.58	286.00	25°19'07"	116.29	S74°04'19"W
C15	15.33	7.67	265.88	3°18'13"	15.33	S88°20'54"W
C16	31.42	20.00	20.00	90°00'00"	28.28	N45°00'00"W
C17	22.48	11.25	228.00	5°38'57"	22.47	S48°05'14"W
C18	48.95	24.57	228.00	12°18'08"	48.86	S57°04'46"W
C19	80.66	40.76	228.00	20°18'10"	80.24	S73°21'55"W
C20	25.87	12.95	228.00	6°30'00"	25.85	S86°45'00"W
C21	23.56	15.00	15.00	90°00'00"	21.21	N45°00'00"E
C22	23.56	15.00	15.00	90°00'00"	21.21	S84°37'42"W
C23	34.49	17.28	228.00	8°40'06"	34.46	S54°42'21"E
C24	31.42	20.00	20.00	90°00'00"	28.28	S45°00'00"W
C25	23.56	15.00	15.00	90°00'00"	21.21	S45°00'00"W
C26	77.57	39.17	228.00	19°29'39"	77.20	N80°15'10"W
C27	12.31	6.16	228.00	3°05'39"	12.31	N88°57'31"W
C28	22.70	11.87	31.50	41°16'54"	22.71	S88°03'09"E
C29	42.38	22.31	55.00	44°09'14"	41.34	N86°36'59"W
C30	20.24	10.23	55.00	21°04'59"	20.12	N53°59'52"W
C31	49.84	26.78	55.00	51°59'19"	48.15	N17°29'46"W
C32	84.99	38.99	55.00	87°42'22"	81.28	N42°35'48"W
C33	25.59	13.55	31.50	46°32'20"	24.89	S52°54'03"W
C34	24.54	18.01	15.00	93°43'42"	21.89	N17°13'58"W
C35	77.76	39.56	172.00	25°54'11"	77.10	N77°02'59"W
C36	112.99	58.62	172.00	37°08'15"	110.97	S71°10'52"W
C37	23.84	15.28	15.00	91°04'01"	21.41	S69°42'44"W
C38	64.60	32.64	182.00	20°20'07"	64.26	S48°52'20"E
C39	75.46	38.05	286.00	18°10'01"	75.15	S47°54'06"E
C40	23.63	15.07	15.00	90°15'12"	21.29	N53°52'42"W
C41	16.96	8.49	172.00	5°38'57"	16.95	S48°05'14"W
C42	32.48	16.29	172.00	10°49'11"	32.43	S39°52'09"W
C43	24.48	15.95	15.00	93°29'58"	21.85	S12°12'25"E
C44	77.77	39.06	334.00	13°20'27"	77.59	N83°19'47"E
C45	8.54	4.27	238.00	2°03'18"	8.54	N58°02'45"W
C46	78.07	39.36	979.77	4°36'03"	78.65	S48°37'45"W
C47	181.39	94.38	286.00	39°04'18"	177.59	N02°27'51"E
C48	180.66	90.62	916.00	11°18'00"	180.38	N45°16'42"E
C49	36.09	18.72	55.00	37°35'45"	35.45	S79°16'08"E
C50	12.84	6.42	984.00	0°44'52"	12.84	S47°50'00"W

**CENERLINE CURVE TABLE**

CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
CL1	30.28	15.16	200.00	8°40'06"	30.23	S54°42'21"E
CL2	49.98	25.12	200.00	14°19'09"	49.85	S38°07'10"W
CL3	19.12	9.87	200.00	5°38'57"	19.71	S48°05'14"W
CL4	73.19	36.97	210.00	19°58'06"	72.82	S49°03'21"E
CL5	136.39	70.96	200.00	39°04'18"	133.76	S70°27'51"E
CL6	103.27	52.81	200.00	29°35'02"	102.12	N75°12'29"W

**LEGEND**

10, 11 EXISTING SECTION CORNER (FOUND)  
13, 14 (AS DESCRIBED)

PHASE 1 BOUNDARY LINE

STREET CENTERLINE

BUILDING SETBACK LINE

PUBLIC UTILITY EASEMENTS

PHASE LINES

PROPOSED STREET MONUMENT

MONUMENT TO MONUMENT

PROPERTY CORNER

PROPOSED FIRE HYDRANT

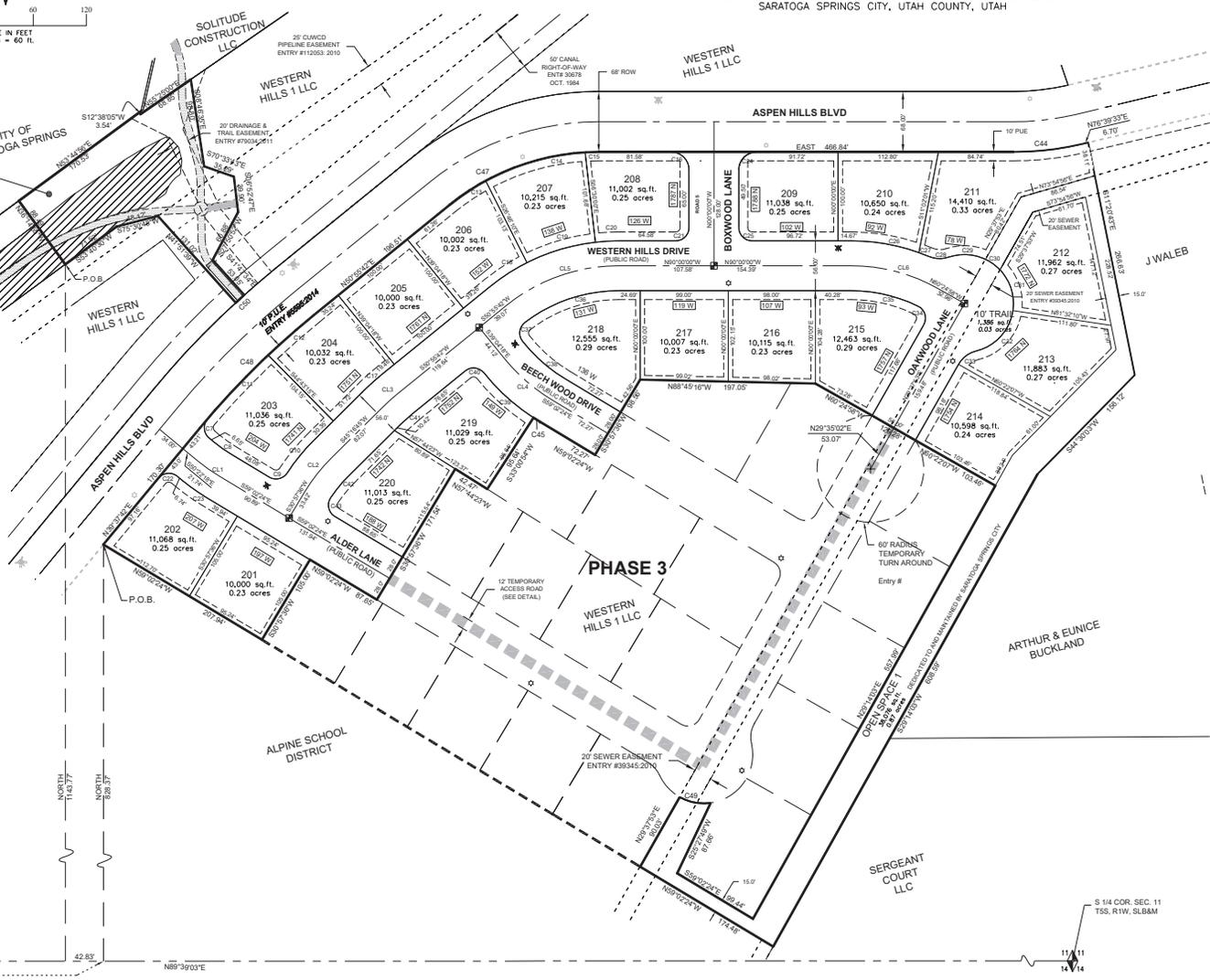
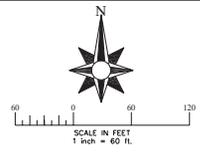
PROPOSED STREET LIGHT

TRAIL

SENSITIVE LANDS AREA

**NOTES:**

- NO DRIVEWAYS ARE PERMITTED ON BOXWOOD LANE FOR LOTS 208 AND 209.
- THE DRIVEWAY FOR LOT 202 MUST BE AT LEAST 90' AWAY FROM ASPEN HILLS BLVD AT THE NORTHEAST SIDE OF THE LOT.
- NO DRIVEWAY ACCESS ONTO ALDER LANE IS PERMITTED FOR LOT 203.
- NO LOTS ARE ALLOWED TO FRONT ONTO ASPEN HILLS BLVD.



Western Hills Residential Concept Area

Area North of Aspen Hills Blvd

A parcel of land located in the Southwest Quarter of Section 11 and the Southeast Quarter of Section 10, Township 5 South, Range 1 West, Salt Lake Base and Meridian, in the City of Saratoga Springs, Utah County, Utah. Said parcel being more particularly described as follows:

Beginning at the southerly corner of Lot 1205 Harvest Hills Planned Unit Development Plat F-A, as shown on the recorded plat in the office of the Utah County Recorder, said point located S89°39'03"W 1.09 feet and North 652.13 feet from the Southwest Corner of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running thence N53°45'00"E 589.46 feet; thence N30°09'41"W 52.31 feet; thence N53°44'56"E 464.30 feet; thence S12°38'05"W 3.54 feet; thence N55°29'00"E 68.85 feet; thence S08°46'35"E 98.80 feet; thence S70°33'43"E 35.29 feet; thence S30°52'47"E 39.80 feet; thence S27°50'52"W 80.88 feet; thence S41°47'34"E 53.07 feet to the beginning of a non-tangent curve to the left, having a radius of 984.00 feet; thence along the arc of said curve a length of 12.84 feet, passing through a central angle of 00°44'52"; chord bears S47°50'00"W 12.84 feet; thence N41°51'39"W 131.02 feet; thence S75°30'48"W 48.12 feet; thence S53°40'30"W 71.52 feet; thence S53°40'30"W 881.99 feet; thence N46°27'58"W 38.23 feet to the point of beginning.

Containing 1.719 acres, more or less.

Area South of Aspen Hills Blvd

A parcel of land located in the Southwest Quarter of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, in the City of Saratoga Springs, Utah County, Utah. Said parcel being more particularly described as follows:

Beginning at a point on the southerly right of way of Aspen Hills Blvd, located N89°39'03"E 782.25 feet along the section line and North 828.37 feet from the Southwest Corner of Section 11, Township 5 South, Range 1 West, Salt Lake Base and Meridian, and running thence N39°37'42"E 170.30 feet to the beginning of a curve to the right having a radius of 916.00 feet; thence along the arc of said curve 180.66 feet, passing through a central angle of 11°18'00"; chord bears N45°16'42"E 180.36 feet; thence N50°55'42"E 186.51 feet to the beginning of a curve to the right having a radius of 266.00 feet; thence along the arc of said curve 181.33 feet, passing through a central angle of 39°04'18"; chord bears N70°27'51"E 177.90 feet; thence East 468.84 feet to the beginning of a curve to the left having a radius of 334.00 feet; thence along the arc of said curve 77.77 feet, passing through a central angle of 13°20'27"; chord bears N83°19'47"E 77.59 feet; thence N76°39'33"E 6.70 feet; thence S11°20'43"E 266.63 feet; thence S44°30'33"W 156.12 feet; thence S29°14'15"W 608.60 feet; thence N69°12'24"W 678.36 feet to the point of beginning. Containing 14.31 acres, more or less.

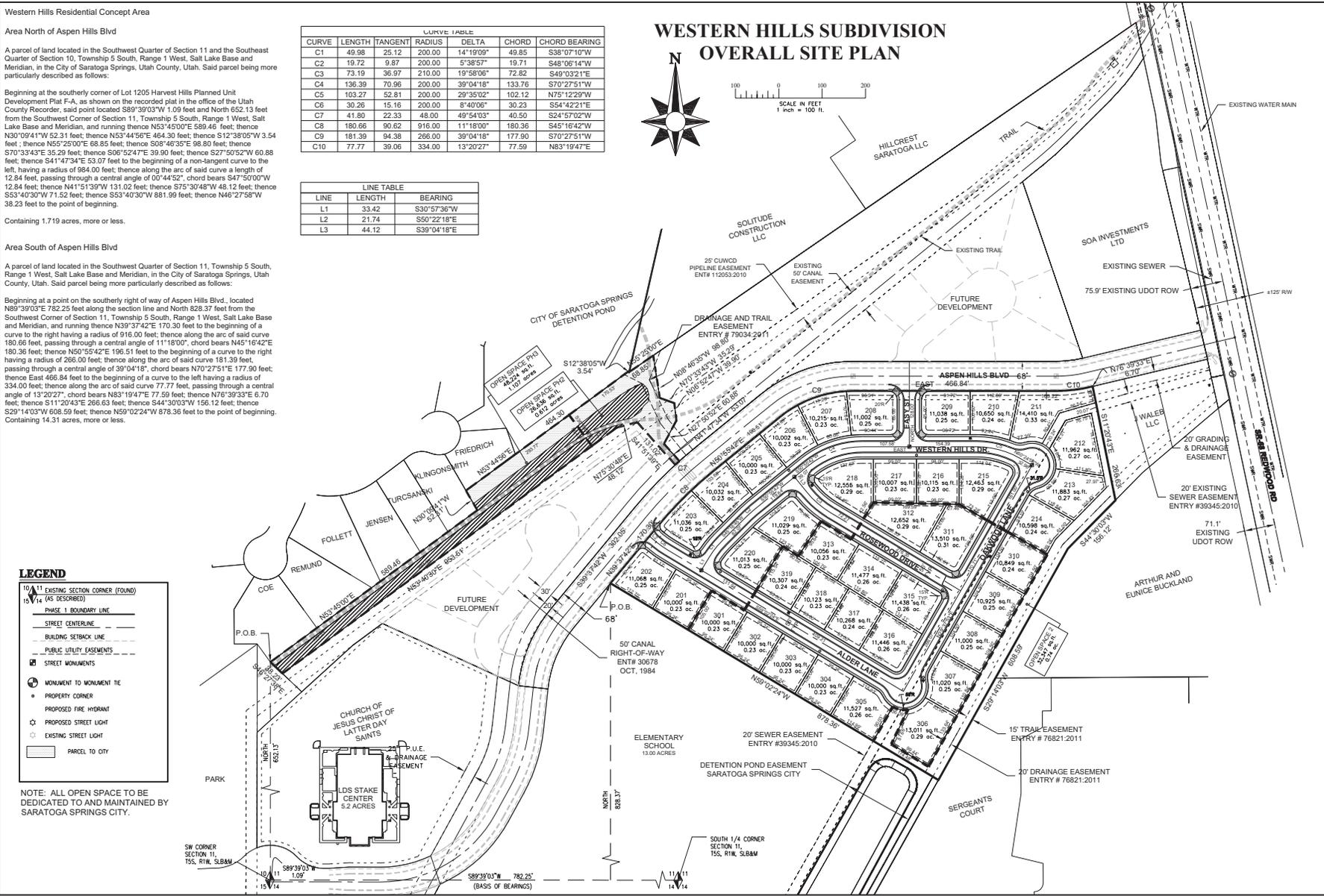
CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
C1	49.98	25.12	200.00	14°19'09"	49.85	S38°07'10"W
C2	19.72	9.87	200.00	5°38'57"	19.71	S48°06'14"W
C3	73.19	36.97	210.00	19°58'06"	72.82	S49°03'21"E
C4	136.39	70.96	200.00	39°04'18"	133.76	S70°27'51"W
C5	103.27	52.81	200.00	29°35'02"	102.12	N75°12'29"W
C6	30.26	15.16	200.00	8°40'06"	30.23	S54°42'21"E
C7	41.80	22.33	40.00	49°54'03"	40.50	S24°57'02"W
C8	180.66	90.62	916.00	11°18'00"	180.36	S45°16'42"W
C9	181.39	94.38	266.00	39°04'18"	177.90	S70°27'51"W
C10	77.77	39.06	334.00	13°20'27"	77.59	N83°19'47"E

LINE	LENGTH	BEARING
L1	33.42	S30°57'36"W
L2	21.74	S50°22'18"E
L3	44.12	S39°04'18"E

# WESTERN HILLS SUBDIVISION OVERALL SITE PLAN



SCALE IN FEET  
1 inch = 100 ft.



**LEGEND**

- 10/11 EXISTING SECTION CORNER (FOUND)
- 15/14 (AS DESCRIBED)
- PHASE 1 BOUNDARY LINE
- STREET CENTERLINE
- BUILDING SETBACK LINE
- PUBLIC UTILITY EASEMENTS
- STREET MONUMENTS
- MONUMENT TO MONUMENT LINE
- PROPERTY CORNER
- PROPOSED FIRE HYDRANT
- PROPOSED STREET LIGHT
- EXISTING STREET LIGHT
- PARCEL TO CITY

NOTE: ALL OPEN SPACE TO BE DEDICATED TO AND MAINTAINED BY SARATOGA SPRINGS CITY.

DESIGN	T. KENISON	NO.	DATE	REVISION	BY
DRAWN	T. KENISON				
CHECKED	V. HANSEN				
APPROVED	V. HANSEN				

**H&H**  
ENGINEERING & SURVEYING, INC.

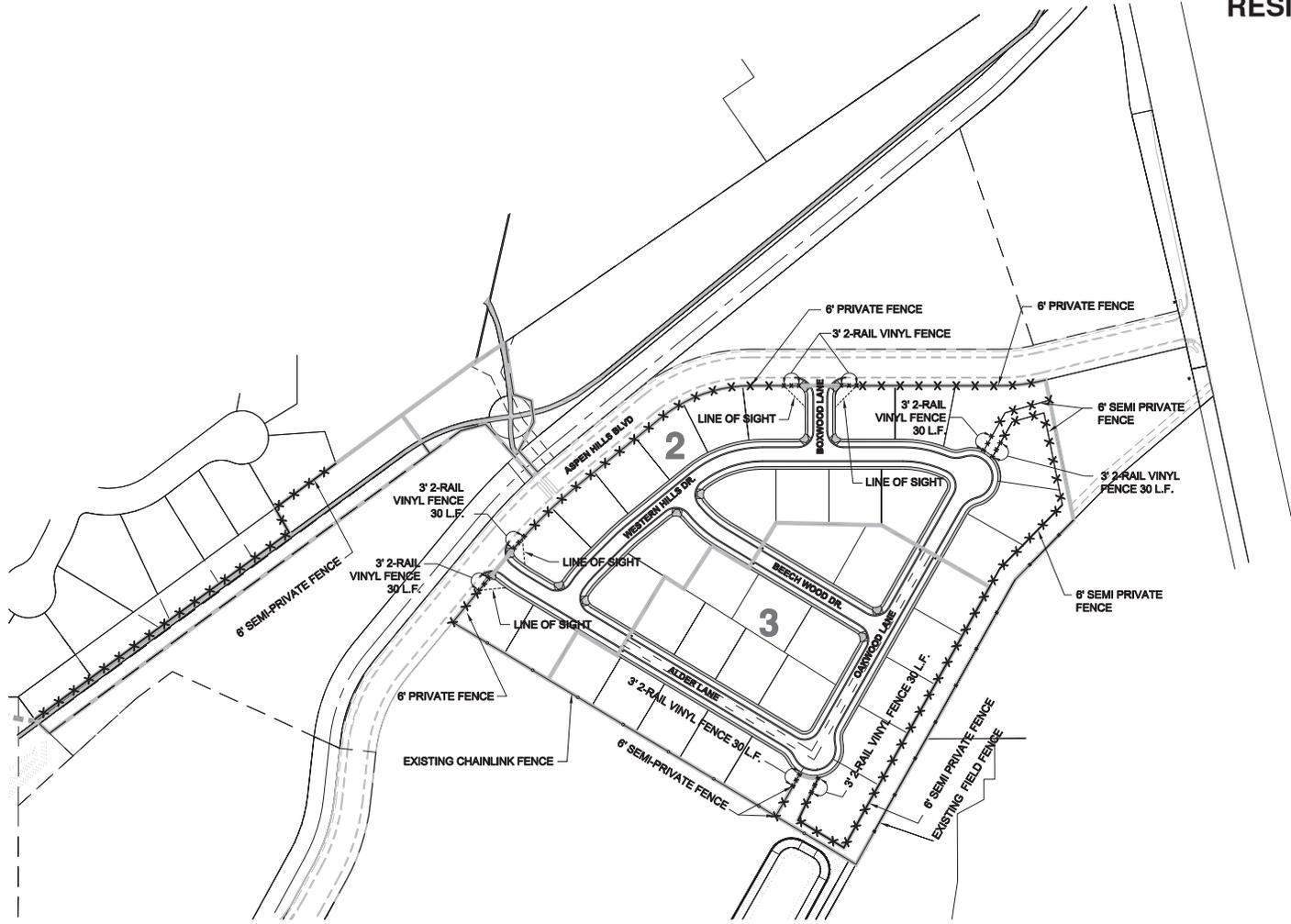
WESTERN HILLS SUBDIVISION  
SARATOGA SPRINGS, UTAH

**OVERALL SITE PLAN**

PROJ 15-399-11  
DATE 04-20-16  
SHEET C-2

PRELIMINARY SITE DEVELOPMENT  
CONSTRUCTION PLANS

# WESTERN HILLS RESIDENTIAL SUBDIVISION FENCING PLAN



LEGEND	
	BOUNDARY LINE
	PHASE LINE
	PUBLIC UTILITY EASEMENT
	6' SEMI PRIVATE FENCE
	3' 2-RAIL VINYL FENCE

DESIGN: T. KENISON	NO.	DATE	REVISION	BY
DRAWN: T. KENISON				
CHECK: V. HANSEN				
APPROV: V. HANSEN				
<b>H&amp;H</b> ENGINEERING & SURVEYING, INC.				
WESTERN HILLS SUBDIVISION SARATOGA SPRINGS, UTAH				
FENCING PLAN				
PROJ:	15-399-11			
DATE:	4-04-2016			
SHEET:	F-01			

**SEED MIX SPECIFICATIONS**

- PART GENERAL**
- 101 SECTION INCLUDES
- A. PREPARATION OF SUBSOIL.
  - B. FERTILIZING.
  - C. SEEDING.
  - D. MAINTENANCE.
- 102 REFERENCES
- A. STANDARDS OF OFFICIAL SEED ANALYSIS OF NORTH AMERICA.
  - B. ANSIZ 761, AMERICAN STANDARD FOR NURSERY STOCK.
- 103 IDENTIFICATION
- A. WEEDS: INCLUDES CHEATGRASS (BROMUS TETRASTACHYON), DANDELION (RANUNCULUS ACUTIFOLIUS), CRACKGRASS (BROMUS BRASILIENSIS), RED START (LAMBQUARTER), CHEEKWEED (CRESS, CRABGRASS, CANADIAN TURTLE, SETOGRASS, PORSCH OAK, BLACKBERRY, TANNY RACONER, JOHNSON GRASS, FERTILE, SETOGRASS, HORSE WEE, KNOWNED BENT GRASS, WILD GAMBIE, PERENNIAL SOREBEL, AND PHRAGMITES.
- 104 SUBMITTALS
- A. SEE APPROPRIATE SECTIONS OF THE CONTRACT DOCUMENTS FOR SUBMITTAL PROCEDURES.
  - B. CERTIFICATION: SUBMIT CERTIFICATION OF GRASS SPECIES AND LOCATION OF SEED SOURCE.
  - C. MAINTENANCE DATA: INCLUDE MAINTENANCE INSTRUCTIONS, CUTTING METHOD AND MAXIMUM HEIGHT, TIME, APPLICATION FREQUENCY, AND RECOMMENDED COVERAGE OF FERTILIZER.
- 105 QUALITY ASSURANCE
- A. SEEDS
    - 1. VENDOR: COMPANY SPECIALIZING IN SUPPLYING SEED WITH A MINIMUM FIVE YEARS EXPERIENCE, AND CERTIFIED BY THE STATE OF UTAH.
    - 2. INSTALLER QUALIFICATIONS: COMPANY APPROVED BY THE SEED VENDOR.
  - B. TREES AND SHRUBS
    - 1. VENDOR: COMPANY SPECIALIZING IN GROWING AND CULTIVATING TREES AND SHRUBS WITH A MINIMUM FIVE YEARS EXPERIENCE, AND CERTIFIED BY THE STATE OF UTAH.
    - 2. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN INSTALLING AND PLANTING TREES AND APPROVED BY TREE SUPPLIER.
  - 106 REGULATORY REQUIREMENTS
    - A. COMPLY WITH REGULATORY AGENCIES FOR FERTILIZER AND HERBICIDE COMPOSITION.
    - B. PROVIDE CERTIFICATE OF COMPLIANCE FROM AUTHORITY HAVING JURISDICTION INDICATING APPROVAL OF FERTILIZER AND HERBICIDE MIXTURE.
  - 107 MAINTENANCE SERVICE
    - A. FURNISH SERVICE AND MAINTENANCE OF SEEDED OR SOO AREAS UP TO THE END OF WARRANTY AND UNTIL ACCEPTED BY THE CITY.
- PART PROJECTS**
- 108 MATERIALS
- A. RESTORING NATIVE GRASS SEED
    - 1. NATIVE GRASS MIX: NATIVE GRASS SEED SHALL BE FRESH, CLEAN, NEW CROP SEEDS, MECHANICALLY PREENED TO THE SPECIFIED PROPORTIONS. NATIVE GRASS SEED SHALL BE A BLEND OF THE SEED TYPES AS NOTED IN THE SEED MIX LEGEND.
    - 2. STANDARD: GRASS SEEDS SHALL COMPLY WITH STANDARDS OF OFFICIAL SEED ANALYSIS OF NORTH AMERICA - FOR 100% PURITY, 80% GERMINATION AND 1% (MAXIMUM) WEED SEED (00% PLS).
    - 3. DELIVERY: SEED SHALL BE DELIVERED TO THE SITE IN ORIGINAL UNOPENED CONTAINERS, BEARING THE RESULTS OF ANALYSIS AND GERMINATION PERCENTAGE AND A CERTIFICATE OF PURITY OR RELEASE BY A COUNTY AGRICULTURE COMMISSIONER.
    - 4. SEED TO BE APPLIED BY HYDRALIC METHOD SHALL BE MIXED WITH WOOD CHIP MULCH, FERTILIZER AND POLYMER AT 50 POUNDS PER 100 SQUARE FEET.

**SEED MIX LEGEND**

TYPE	DESCRIPTION	QUANTITY
TYPE 1 - GRASS MIX (WHEAT)	SLENDER WHEAT GRASS (AGROPERON TRICHACALUM)	275
	BLUESKY WHEAT GRASS (AGROPERON SPECIATUM)	275
	SHEEP FESCUE (FESTUCA OVINA)	400
	CANDLER WHEAT GRASS (AGROPERON SMITHII)	650
	WESTERN WHEAT GRASS (AGROPERON SMITHII)	275
	GREEN NEELERGRASS (STIPA VIRIDULA)	275
	PROSTRATE SUMMER CYPRESS (KOCIPIA PROSTRATA)	200
	BLANCKET FLOWER (GALEA OFFICINALIS)	150
	BLUE FLAX (LINUM LEWISII)	150
	RED WOOD ANCHOR (ARTEMISIA TRIDENTATA TRIDENTATA)	015
	RUBBER RABBITGRASS (CITRYOTHAMNIS NAUSEOSUS)	650
	WINTERFEST (CYATHODES LANATA)	200
<b>TOTALS</b>		<b>3020</b>

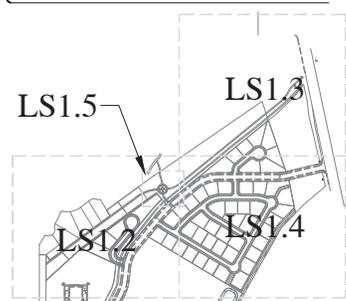
  

PLANTING RATE (Pounds of Pure Live Seed / Acre)	BROADCAST	HYDRALIC	PERCENTAGE
	275	200	13.75%
	400	600	40.00%
	650	650	20.94%
	275	200	13.75%
	275	200	13.75%
	200	150	10.00%
	150	150	7.50%
	015	015	0.75%
	650	625	1.00%
	200	100	10.00%
<b>TOTALS</b>	<b>3020</b>	<b>2700</b>	<b>100.00%</b>

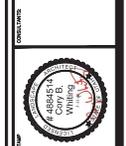
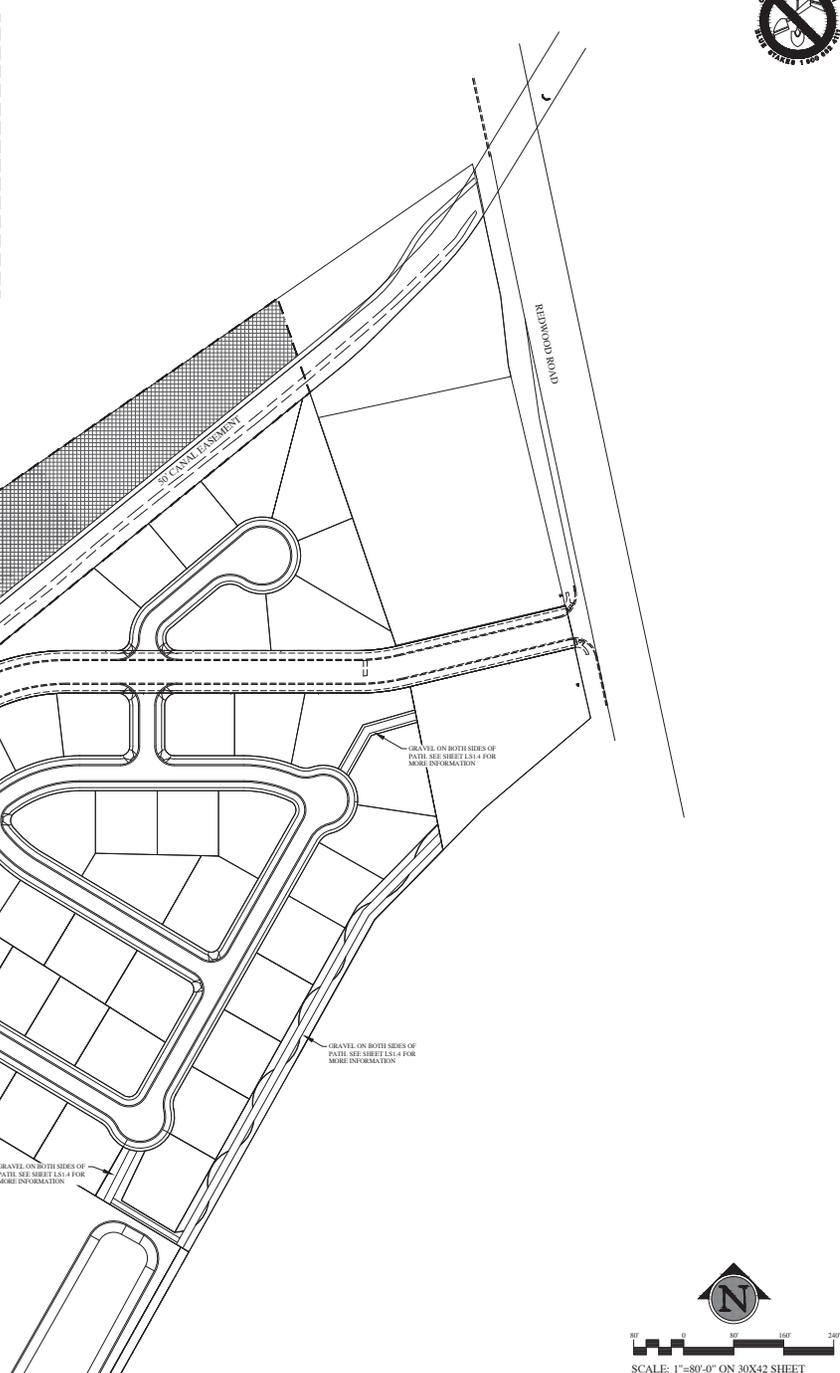
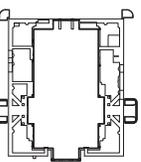
  

PLANTING RATE (Pounds of Pure Live Seed / Acre)	BROADCAST	PERCENTAGE
	50	36.40%
	80	26.25%
<b>TOTALS</b>	<b>130</b>	<b>100.00%</b>

**KEY MAP**



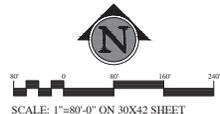
- PART EXISTING**
- 109 EXAMINATION
- A. VERIFY THAT PREPARED SOIL BASE IS ARE READY TO RECEIVE THE WORK OF THIS SECTION.
- 102 PREPARATION
- A. PREPARE SUB-GRADE IN ACCORDANCE WITH ALL CITY STANDARDS AND SPECIFICATIONS.
  - B. PLACE TOPSOIL WHERE REQUIRED.
- 103 PLANTING SEED
- A. SEEDING
    - 1. OFF-SITE RESTORATION: ALL OFF-SITE WORK THROUGH AREAS THAT ARE COVERED WITH NATIVE GRASSES SHALL BE RE-SEEDED WITH NATIVE GRASS SEED, AS REQUIRED, AS RECORDED HEREIN.
    - 2. SEEDING SHALL NOT BE PERFORMED WHEN THE WIND VELOCITY EXCEEDS 5 MILES PER HOUR, OR IS DETERMINED INFERMENTAL TO THE UNIFORM DISTRIBUTION OF SEED.
    - 3. GRADE PLANTING AREAS SMOOTH EVEN SURFACE WITH A LOOSE, UNIFORM FINE TEXTURE. ROLL AND RAKE AND REMOVE ROCKS AND HELL IN DEPRESSIONS AS REQUIRED.
    - 4. SEED SHALL BE APPLIED BY HYDRALIC METHOD THROUGH WITH HYDRALICSEEDER AT THE COVERAGE RATE RECOMMENDED BY THE SEED VENDOR. SEED MAY BE APPLIED BY BROADCAST OR BROADCAST METHOD AT THE DISCRETION OF THE OWNER.
    - 5. RATE OF APPLICATION
    - 6. NATIVE GRASS SEEDS SHALL BE APPLIED AT A COVERABLE ACCEPTABLE RATE TO OBTAIN 70% GROWTH AND ACCEPTANCE AT END OF WARRANTY PERIOD.
    - 7. ALL MATERIALS MUST BE AT LEAST 48 HOURS FOR NUTRIENT PRIOR TO APPLICATION.
    - 8. RESTORE PREPARED AREAS TO SPECIFIED CONDITION IF FROGGER OR OTHERWISE DISTURBED AFTER FINAL GRADING AND PRIOR TO PLANTING.
- 104 MAINTENANCE REQUIREMENTS FOR NATIVE AREA DURING WARRANTY PERIODS
- A. FURNISH SERVICE AND MAINTENANCE OF RESTORED AREA UNTIL 70% COVERAGE IS ESTABLISHED AND ACCEPTED BY THE CITY.
  - B. AREA MUST BE FREE OF SOON OF EROSION AND INVASIVE SPECIES.
  - C. AREA MUST BE KEPT FREE OF LITTER AND MOVED AND THINNED AS REQUIRED IN THE FALL OF EACH YEAR.
- 105 WARRANTY
- A. ALL LANDSCAPING WILL BE COVERED BY A WARRANTY FOR A PERIOD OF ONE TO TWO YEARS OR UNTIL ACCEPTED BY THE CITY.
  - B. SEEDING AREAS: AT THE END OF THE WARRANTY PERIOD, SEEDING AREAS SHALL HAVE A 70 PERCENT COVERAGE OF FULL ESTABLISHED GROWTH FREE OF ALL NOXIOUS WEEDS.
  - C. PLANTING OF WARRANTY PERIOD: REPLANT AREAS SHOWING ROOT GROWTH FROM THE DATE OF THIS SPEC, AND HOLED OR SETTLED AREAS WITHIN 60 DAYS OF WRITING NOTICE. PLANT WITH MATERIALS OF THE KIND AND AGE PLANTED IN THE GROWING REGION, WITH NEW WARRANTY COMMENCING ON THE DATE OF PLANTING. ALL CORRECTIVE WORK WILL BE AT NO ADDITIONAL COST TO THE OWNER.



**WESTERN HILLS SUBDIVISION OPEN SPACE**  
 SARATOGA SPRINGS, UTAH

**LANDSCAPE PLAN**  
 CITY SUBMITTAL PLAN,  
 NOT FOR CONSTRUCTION

DRAWN BY: CBW  
 CHECKED: CBW  
 DATE: 10-22-15  
 REVISION: 3-11-16  
 JOB NO.: 15-155  
 SHEET: **LS1.1**



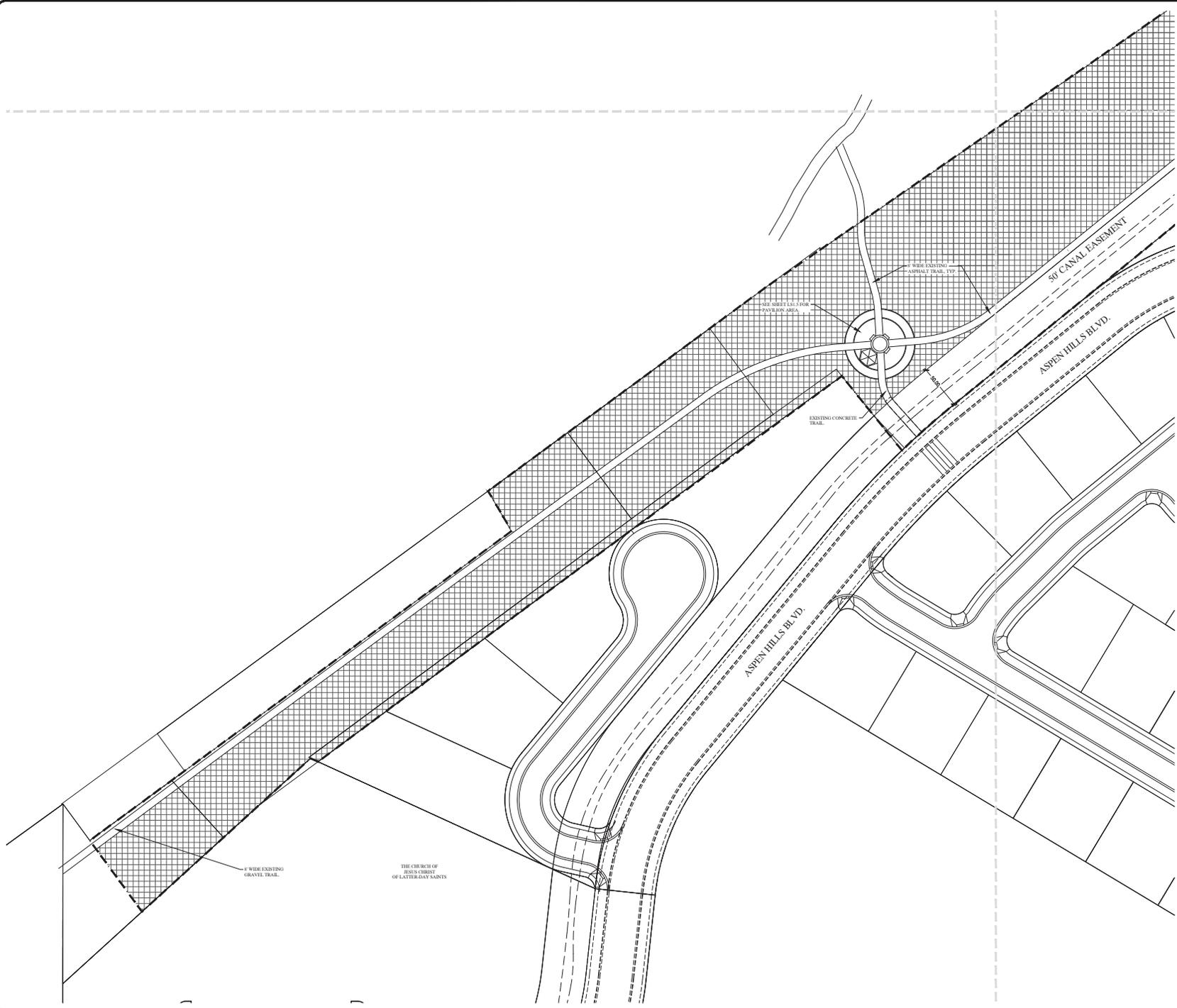


WESTERN HILLS SUBDIVISION OPEN SPACE  
SARATOGA SPRINGS, UTAH

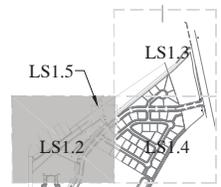
LANDSCAPE PLAN  
CITY SUBMITTAL PLAN  
NOT FOR CONSTRUCTION

DESIGNED BY: CBW  
CHECKED BY: CBW  
DATE: 10-22-15  
REVISION: 3-11-16  
JOB NO.: 15-155

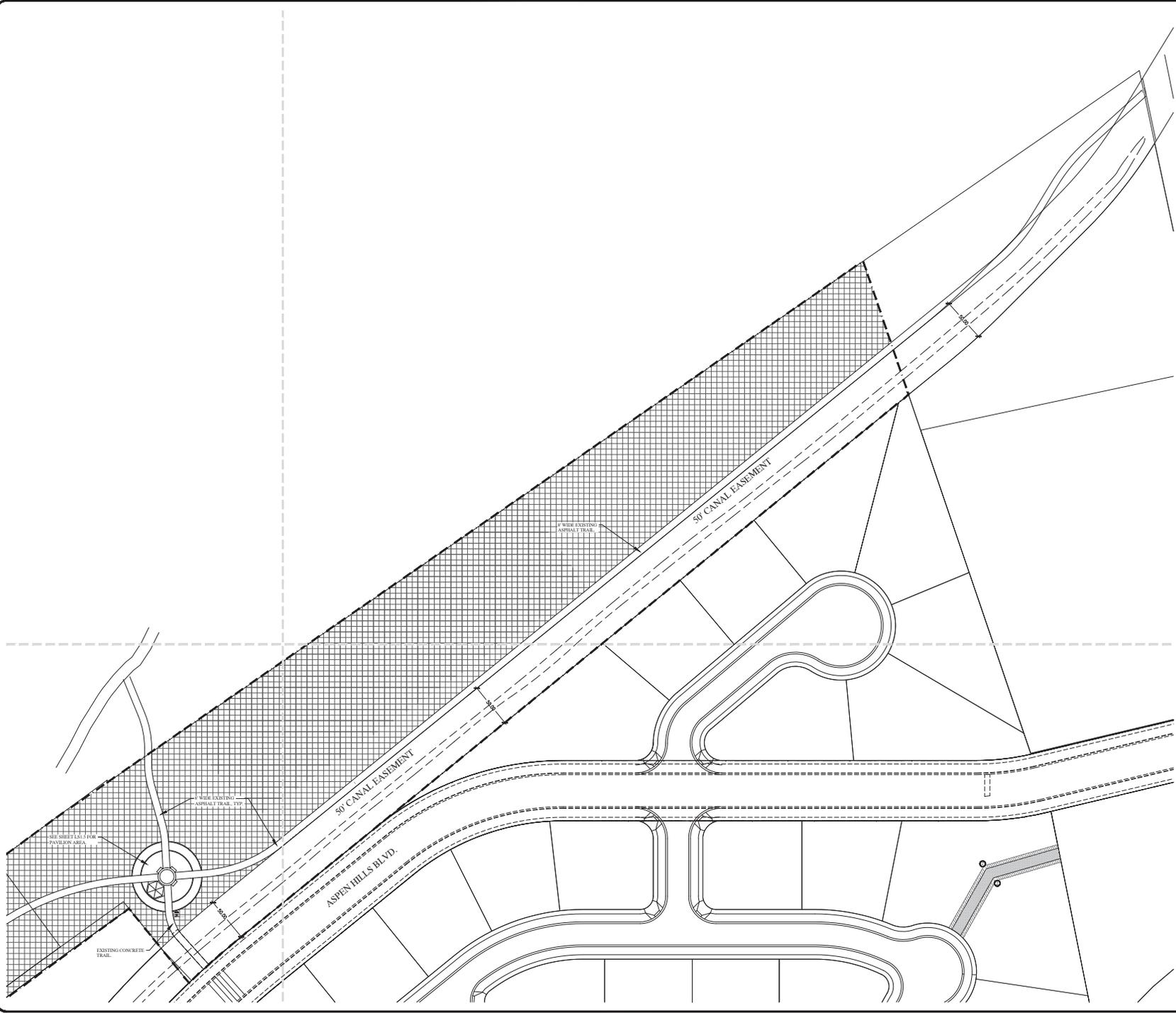
SHEET NO.: LS1.2



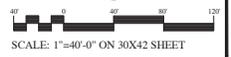
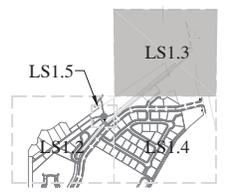
KEY MAP



SCALE: 1"=40'-0" ON 30X42 SHEET



**KEY MAP**



SCALE: 1"=40'-0" ON 30X42 SHEET



WESTERN HILLS SUBDIVISION OPEN SPACE  
SARATOGA SPRINGS, UTAH

LANDSCAPE PLAN  
CITY SUBMITTAL PLAN  
NOT FOR CONSTRUCTION

DATE: 10-22-15  
REVISION: 3-11-16  
JOB NO.: 15-155  
SHEET: LS1.4

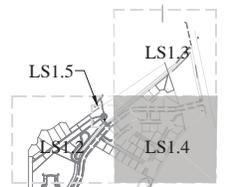


CONCRETE TRAIL, SEE CIVIL PLANS  
7" W/4" CONCRETE CURB, TYP. SEE DETAIL 56311

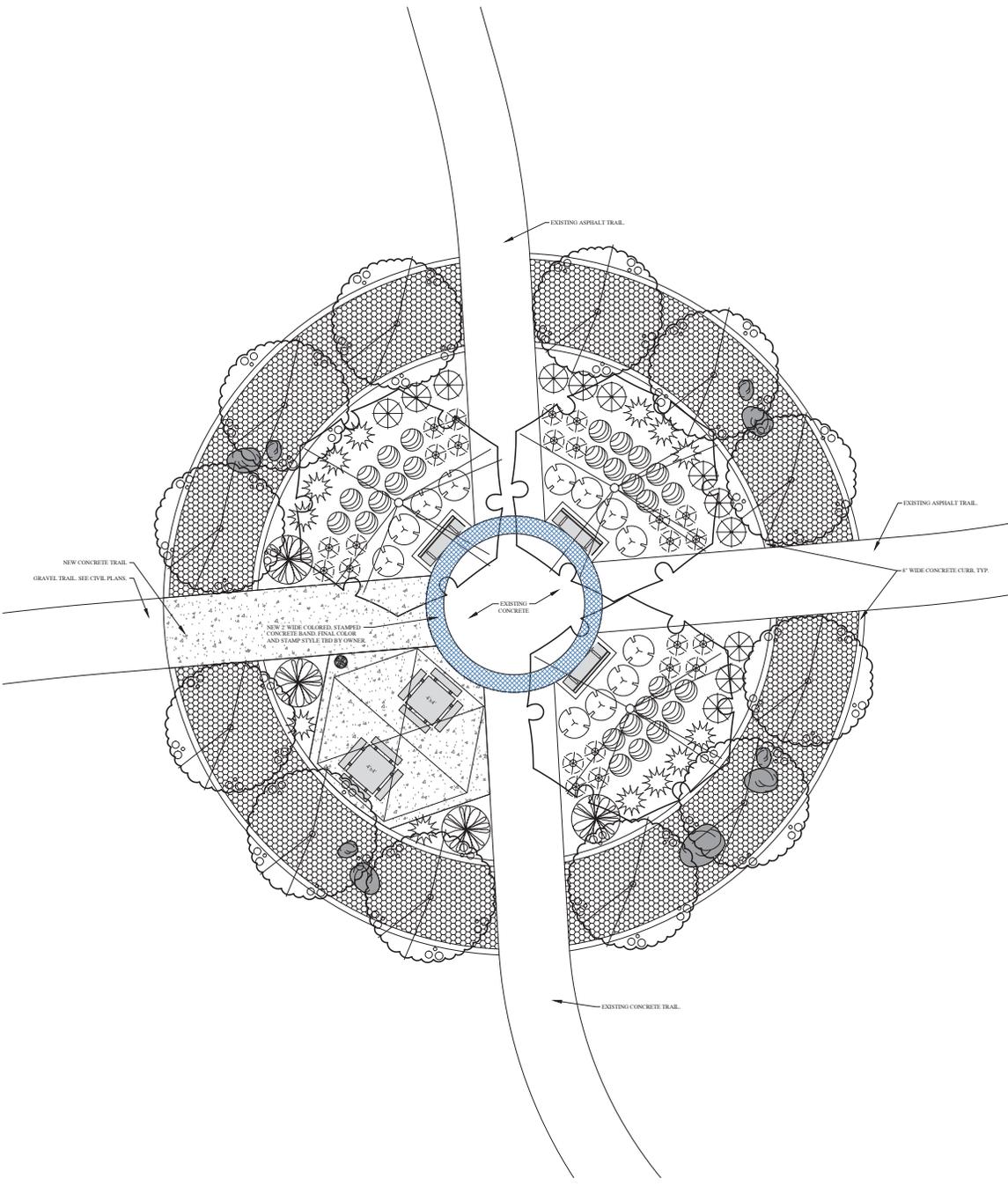
GRAVEL LEGEND

- 6" DEPTH OF 2" TO 4" (NO. 10) DOUBLE WASHED NEPHI CORBEL (AVAILABLE FROM STAGER PAVING) OR SOT TO DOWN CORBEL (AVAILABLE FROM NEPHI SANDSTONE); INSTALL OVER DEWITT PRO'S WEED BARRIER FABRIC.
- 3" DEPTH OF 3/4" TO 1 1/2" (NO. 10) DOUBLE WASHED NEPHI CORBEL (AVAILABLE FROM STAGER PAVING); INSTALL OVER DEWITT PRO'S WEED BARRIER FABRIC.

KEY MAP



SCALE: 1"=40'-0" ON 30X42 SHEET



HARDSCAPE LEGEND

- WABASH VALLEY PINK TABLE MODEL... 4" WIDE CONCRETE CURB... 8" WIDE X 6" DEEP CONCRETE CURB...

TREE LEGEND

- ACER PLATANODES KEITHFORM... MALUS X SPRING SNOW...

SHRUB LEGEND

- CARYOPHYTIS CLANDONENSIS... CALAMAGROSTIS X ACTU... MAHONIA AGRI-COLEM-CONTRACTA...

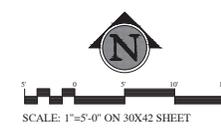
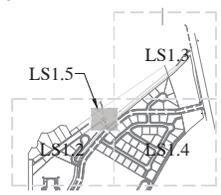
LANDSCAPE NOTES

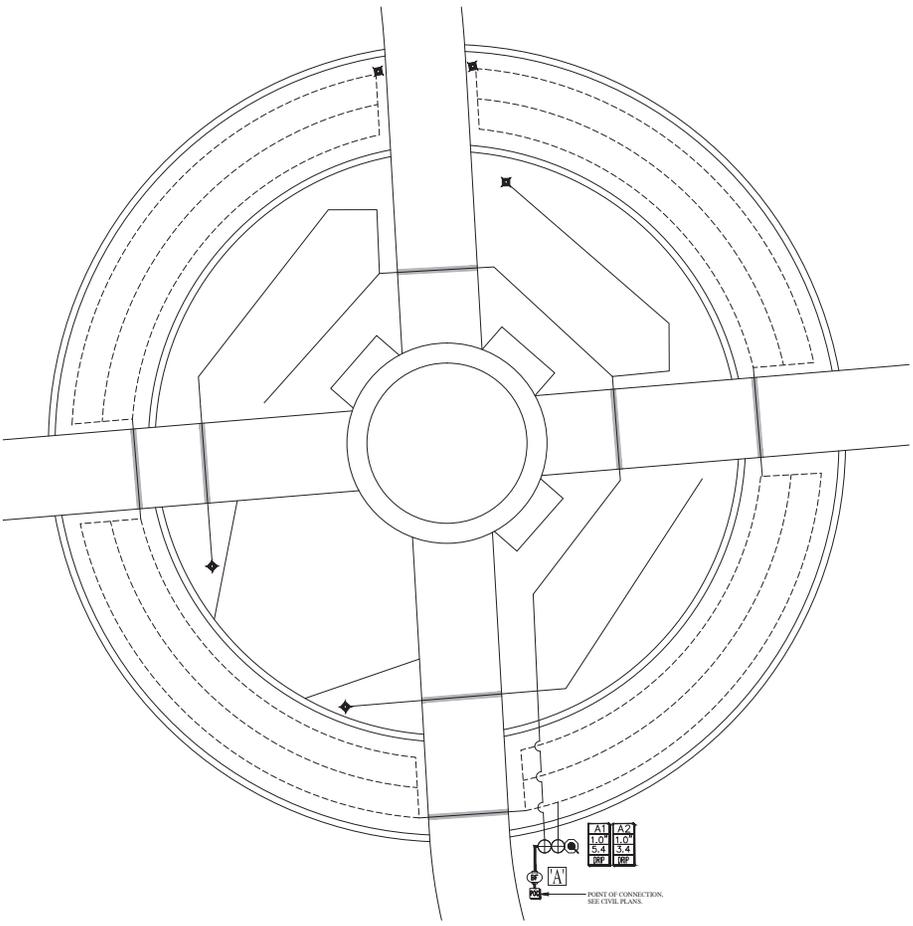
- 1. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS... 2. PLANT MATERIAL TO BE INSTALLED PER PLANT LEGEND...

GENERAL NOTES

- 1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED GRADES... 2. CONTRACTOR AND/OR OWNER IS RESPONSIBLE TO VERIFY CORRECT PROPERTY LINES...

KEY MAP





IRRIGATION LEGEND									
SYMBOL	MANUFACTURER-MODEL NUMBER	PAT.	R.D.	PSI	GPM	DRIP	DETAILS	REMARKS	
NOT SHOWN	PIPER PERMADUR 1/2" x 1/2" x 1/2" (3/4")			30		1.0	011		
NOT SHOWN	PIPER PERMADUR 1/2" x 1/2" x 1/2" (3/4")			30		1.0	011		
NOT SHOWN	PIPER PERMADUR 1/2" x 1/2" x 1/2" (3/4")			30		1.0	011		
[A]	CONTROLLER: RAINBIRD POP-UP SIZE CONTROLLER AS REQUIRED BY 1" MOUNTED OUTSIDE. INSTALL IN WEATHERPROOF LOCKING CABINET. INSTALL A RAINBIRD RAIN SENSOR.						7	COORDINATE LOCATION WITH OWNER.	
[B]	1" POINT OF CONNECTION FROM CULINARY SERVICE LINE.						1.2	EMBO VALVE BOX	
[C]	1/2" WILKINS RPZ BACKFLOW PREVENTER WITH BLOW OUT KIT. COORDINATE LOCATION WITH CIVIL PLANS.						1.2	REFERENCE DETAILS	
[D]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						5	IN UP END VALVE BOX	
[E]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						9	EMBO VALVE BOX	
[F]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[G]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[H]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[I]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[J]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[K]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[L]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[M]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[N]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[O]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[P]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[Q]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[R]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[S]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[T]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[U]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[V]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[W]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[X]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[Y]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	
[Z]	1/2" RAINBIRD CHECK COUPLER VALVE. WORK 1/2" IN.						13	EMBO VALVE BOX	

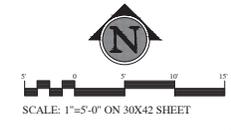
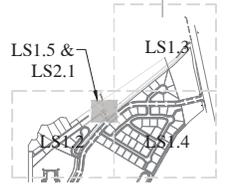
DRIP EMITTER LEGEND		
PLANT TYPE	EMITTER QTY	EMITTER TYPE
GRASSES	2	XR-200 (50PH)
ALL SHRUBS	2	XR-200-N (50PH)
TREES	2	PC-60 (60PH)

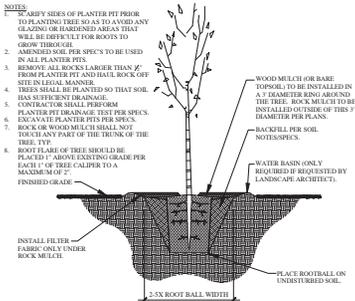
NOTE:  
1. EMITTER LISTED ARE AVAILABLE FROM RAINBIRD  
2. IN ADDITION TO THE TWO PC-60 EMITTERS, TREES SHALL HAVE METFORM 1L-36-14 DRIPPERS INSTALLED AROUND THE EXPECTED MATURE CANOPY PER PLANS & DETAILS.



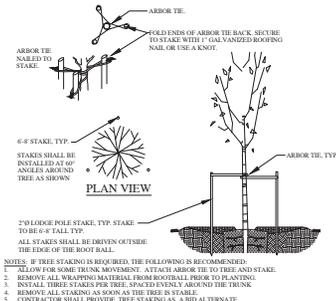
- ### IRRIGATION NOTES
- ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND/OR COUNTY CODES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS.
  - CONTRACTOR SHALL HAVE ALL UTILITIES MAILED AND RECORDED BEFORE DIGGING. ANY DAMAGE TO THE UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF CONTRACTOR WITH EXTRA LIST TO THE OWNER.
  - PROVIDE AN AS-BUILT RECORDABLE DRAWING TO OWNER SHOWING ALL DRAINS, VALVES, AND PIPES. PROVIDE INSTRUCTIONS TO MAINTENANCE PERSONNEL FOR WINTERIZATION. SPRINKLER SYSTEM TO BE BLOWN OUT WITH AN AIR COMPRESSOR EXCEPT.
  - CONTRACTOR SHALL ONLY USE COMMERCIAL GRADE PRODUCTS AND IS RESPONSIBLE FOR ENSURING ACCURATE CONTENTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR DESIGN AND INSTALLATION PURPOSES.
  - LANDSCAPE CONTRACTOR SHALL PROVIDE AND INSTALL SLEEVES FOR ALL PIPES AND WIRES UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE INSIDE. ALL WIRE SHALL BE IN SEPARATE SLEEVES UNLESS SHOWN. ALL CONTROL WIRE SHALL BE INSTALLED IN CLASS 200 PIPE. PLACE JUNCTION BOXES WHERE NECESSARY TO MINIMIZE LONG RUNS OR AT DIRECTIONAL CHANGES AS NECESSARY.
  - ALL SLEEVES INSTALLED SHALL BE DOCT TAPED TO PREVENT DIRT OR OTHER DEBRIS ENTERING PIPE. ALL SLEEVES SHALL BE IDENTIFIED BY WOOD OR PVC STAKES AND BE PLAYS PAINTED WITH MARKING PAINT. REMOVE STAKES ON IRRIGATION SYSTEM COMPLETE.
  - MAIN LINES SHALL BE 1" OR 1.5" UNLESS OTHERWISE NOTED. ALL LATERAL LINES SHALL BE NO SMALLER THAN 3/4" UNLESS NOTED ON PLANS. PIPES SHALL HAVE NO MORE THAN THE FOLLOWING: 1/2" MAX. A.G.P. AND 1/2" PIPE MAX. R.O.M. ADJUST LOCATION OF MAINLINE AND LATERAL LINES AS NECESSARY IN ORDER TO AVOID PLANT ROOTS, UTILITY LINES, TREES AND SHRUBS DIRECTLY OVER MAINLINE AND LATERAL LINES. ADJUST PIPING LAYOUT AS NECESSARY TO AVOID NEW OR EXISTING UTILITIES PER THE CIVIL OR ELECTRICAL ENGINEERS PLANS.
  - MAIN LINES SHALL BE 12" DEEP MIN. NO ROCK GREATER THAN 3/4" DIAMETER SHALL BE ALLOWED IN TRENCHES.
  - PLACE PIPES, VALVE BOXES AND ALL OTHER SPRINKLER CONSTRUCTION IN LANDSCAPE AREAS. ALL PIPES SHALL BE ON PROPERTY OF OWNER. ROOT CUTTING VALVE BOXES AS NECESSARY IN ORDER TO AVOID TREES AND SHRUBS PER PLANTING PLAN.
  - AT OWNER'S REQUEST AND PER AN APPROVED THE LANDSCAPE ARCHITECT SHALL VISUALLY INSPECT ALL TRENCHES PRIOR TO BACKFILLING. CONTRACTOR SHALL GIVE LANDSCAPE ARCHITECT MIN. 72 HR. NOTICE BEFORE INSPECTION IS TO BE MADE. CONTRACTOR SHALL PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING.
  - ACTUAL INSTALLATION OF IRRIGATION SYSTEM MAY VARY SOMEWHAT FROM PLANS. CONTRACTOR IS RESPONSIBLE TO MAKE NECESSARY ADJUSTMENTS TO ENSURE PROPER COVERAGE OF ALL LANDSCAPE AREAS.
  - VALVE BOXES SHALL BE INSTALLED AND GRADED TO A MIN. 4" AWAY FROM WALKS AND WALLS.
  - DRIP LINES SHALL BE FLEXIBLE AIR PVC TUBING 1/2" G.P.H. FOR DRIP AREAS REQUIRING A G.P.M. USE 1/2" TUBING AND FOR DRIP AREAS REQUIRING 1/2" G.P.H. CONTRACTOR TO VERIFY PLANT QUANTITIES ON EACH DRIP LINE AND SIZE PIPE ACCORDINGLY.
  - CONTRACTOR TO INSTALL 1/2" MEDIUM TUBING 1/2" OR 3/4" OR 1" DIAMETER PIPE AROUND TREES AS NOTED IN THE PLANS AND DETAILS.
  - POWER TO CONTROLLER TO BE PROVIDED BY ELECTRICAL CONTRACTOR. OWNER TO SPECIFY EXACT LOCATION OF CONTROLLER. CONTROLLER TO BE MOUNTED IN WEATHERPROOF LOCKING WALL MOUNTED CABINET PER MANUFACTURER'S INSTRUCTIONS. LANDSCAPE CONTRACTOR SHALL ENSURE THE CONTROLLER IS GROUNDED PER LOCAL CODE AND PER MANUFACTURER'S SPEC.
  - IF THE SIZING PROVIDED AT THE POINT OF CONNECTION EXCEEDS 1/2" PSI, INSTALL A BRASS PRESSURE REDUCER IN LINE WITH THE RPZ PER MANUFACTURER'S SPEC. INSTALL THE RPZ AND PRESSURE REDUCER IN A LOCKING METAL CABINET. ADJUST PRESSURE AS REQUIRED FOR NORMAL OPERATION OF THE IRRIGATION SYSTEM.

### KEY MAP

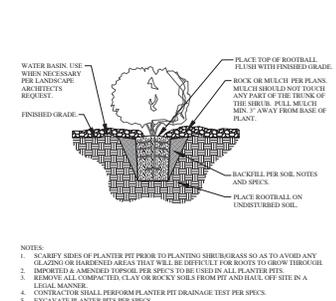




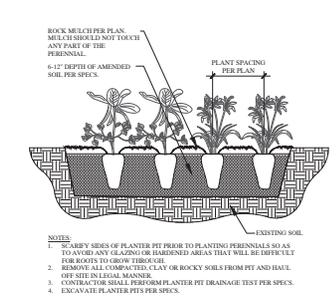
1 DECIDUOUS TREE PLANTING SCALE: 1/8\"/>



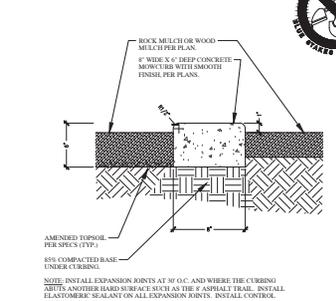
2 DECIDUOUS TREE STAKING (ALTERNATE) SCALE: 1/8\"/>



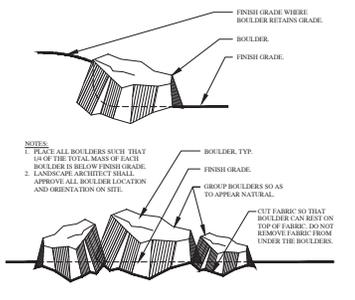
3 SHRUB & ORNAMENTAL GRASS PLANTING SCALE: 1/8\"/>



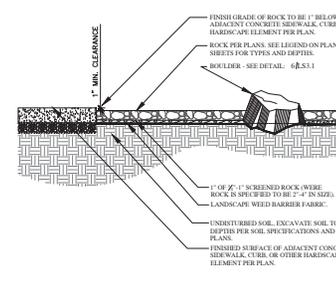
4 PERENNIAL GRASS PLANTING SCALE: 1/8\"/>



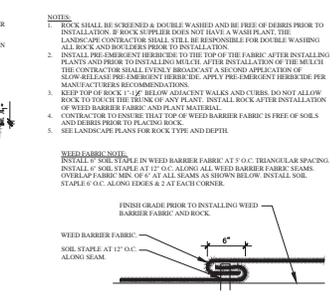
5 8\"/>



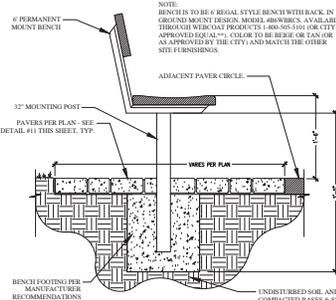
6 BOULDER PLACEMENT SCALE: 1/8\"/>



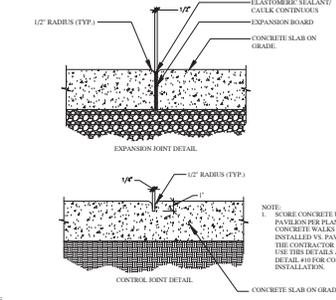
7 ROCK AND WEED BARRIER FABRIC WITH BOULDER SCALE: 1/8\"/>



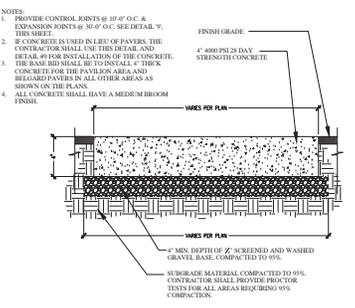
8 BENCH POP OUT DETAIL SCALE: 1/8\"/>



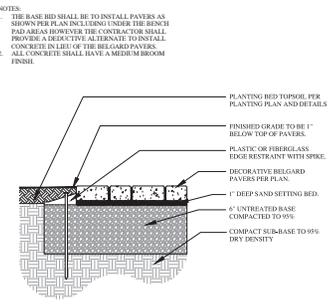
9 CONTROL & EXPANSION JOINT DETAIL SCALE: 1/8\"/>



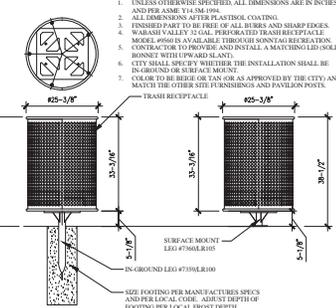
10 SIDEWALK AND PAVILION CONCRETE DETAIL SCALE: 1/8\"/>



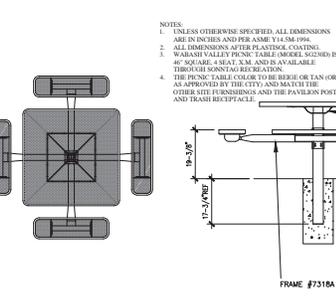
11 PAVER INSTALLATION W/EDGE RESTRAINT SCALE: 1/8\"/>



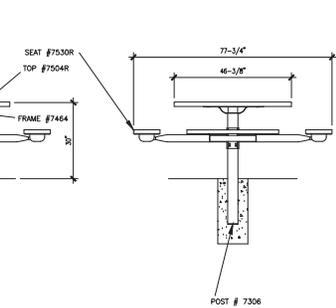
12 TRASH RECEPTACLE DETAIL SCALE: 1/8\"/>



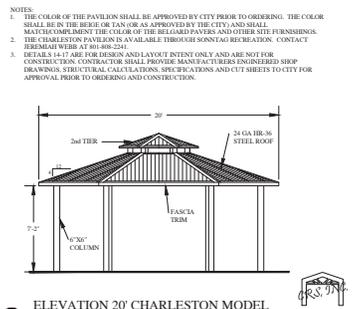
13 PICNIC TABLE DETAIL SCALE: 1/8\"/>



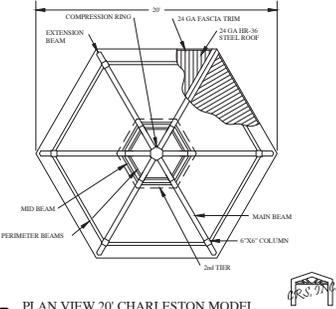
14 ELEVATION 20' CHARLESTON MODEL SCALE: 1/8\"/>



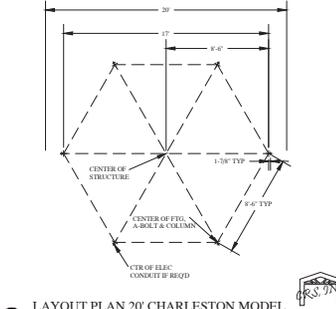
15 PLAN VIEW 20' CHARLESTON MODEL SCALE: 1/8\"/>



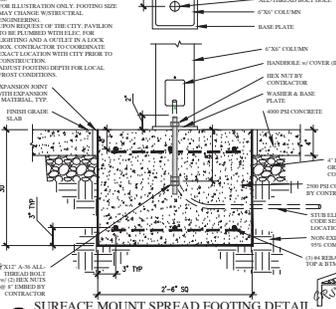
16 LAYOUT PLAN 20' CHARLESTON MODEL SCALE: 1/8\"/>



17 SURFACE MOUNT SPREAD FOOTING DETAIL SCALE: 1/8\"/>



18 ELEVATION 20' CHARLESTON MODEL SCALE: 1/8\"/>



19 PLAN VIEW 20' CHARLESTON MODEL SCALE: 1/8\"/>



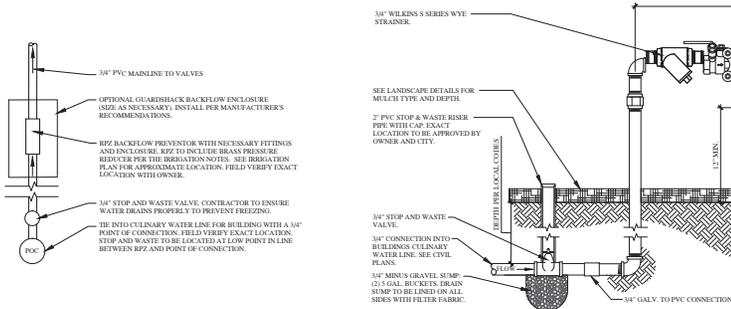
20 SURFACE MOUNT SPREAD FOOTING DETAIL SCALE: 1/8\"/>



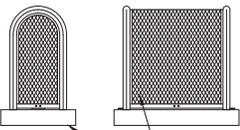
WESTERN HILLS SUBDIVISION OPEN SPACE  
SARATOGA SPRINGS, UTAH

LANDSCAPE AND HARDSCAPE DETAILS  
CITY SUBMITTAL PLAN  
NOT FOR CONSTRUCTION

DESIGNED BY: CBW  
CHECKED BY: CBW  
DATE: 10-22-15  
REVISION: 3-11-16  
JOB NO: 15-155  
SHEET: LS.3.1



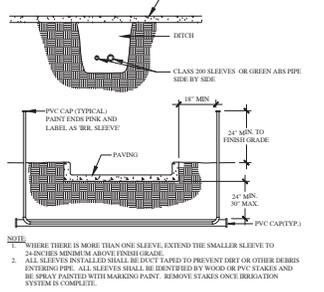
3/4" POINT OF CONNECTION SCALE: 1/8" = 1'-0"



3/4" RZ BACKFLOW PREVENTOR SCALE: 1/8" = 1'-0"



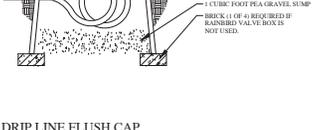
OPTIONAL STANDARD GUARD SHACK ENCLOSURE SCALE: 1/8" = 1'-0"



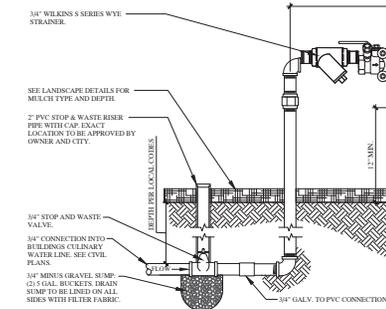
1" DRIP CONTROL ZONE KIT SCALE: 1/8" = 1'-0"



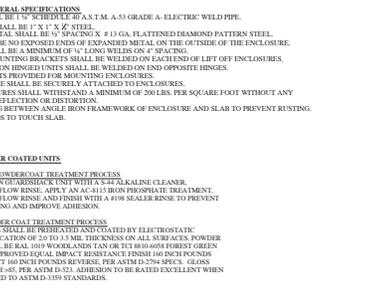
DRIP LINE FLUSH CAP SCALE: 1/8" = 1'-0"



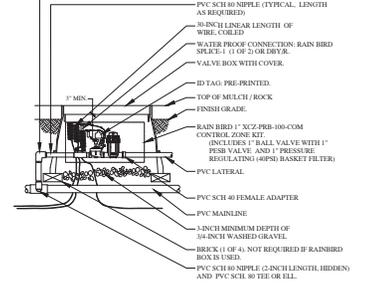
ROYAL RAINDROPS TREE DRIP SCALE: 1/8" = 1'-0"



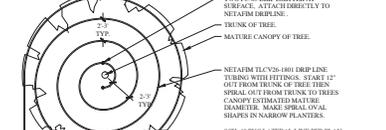
RAINBIRD CONTROLLER WITH SENSOR SCALE: 1/8" = 1'-0"



TRENCH SECTION SCALE: 1/8" = 1'-0"



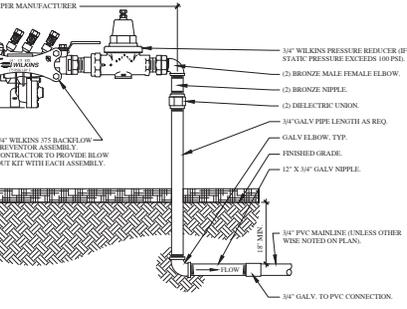
PIPE, WIRE, AND TRENCH SCALE: 1/8" = 1'-0"



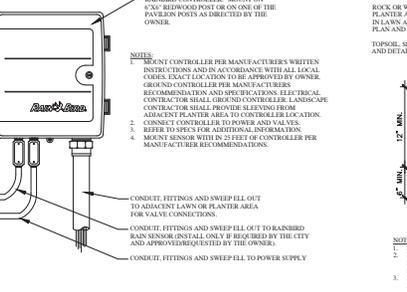
DRIP EMITTER SCALE: 1/8" = 1'-0"



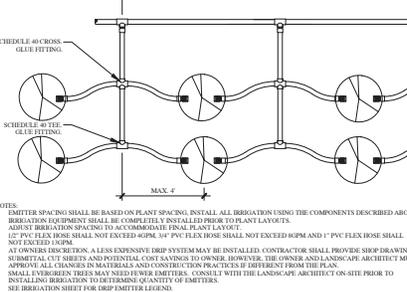
TREE DRIP WITH FULL PLANTING UNDER CANOPY SCALE: 1/8" = 1'-0"



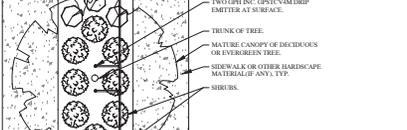
RAINBIRD CONTROLLER WITH SENSOR SCALE: 1/8" = 1'-0"



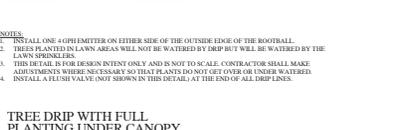
TRENCH SECTION SCALE: 1/8" = 1'-0"



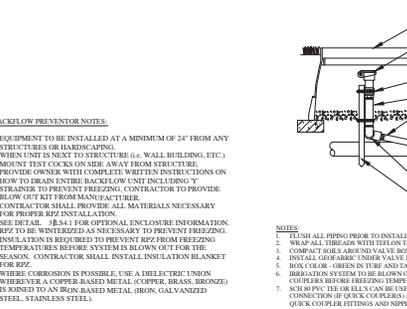
PIPE, WIRE, AND TRENCH SCALE: 1/8" = 1'-0"



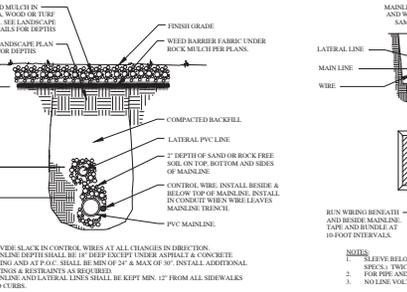
DRIP EMITTER SCALE: 1/8" = 1'-0"



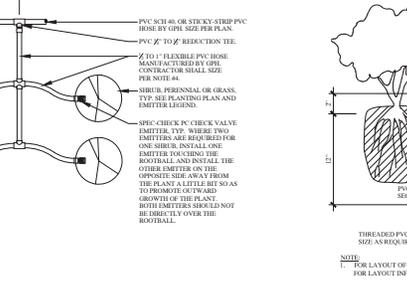
TREE DRIP WITH FULL PLANTING UNDER CANOPY SCALE: 1/8" = 1'-0"



QUICK COUPLER VALVE SCALE: 1/8" = 1'-0"



RAINBIRD CONTROLLER WITH SENSOR SCALE: 1/8" = 1'-0"



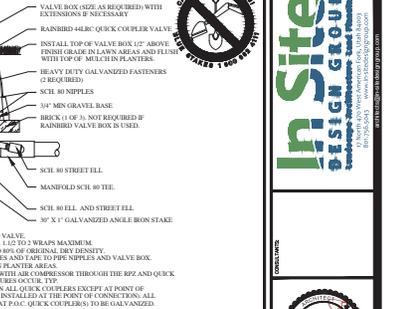
TRENCH SECTION SCALE: 1/8" = 1'-0"



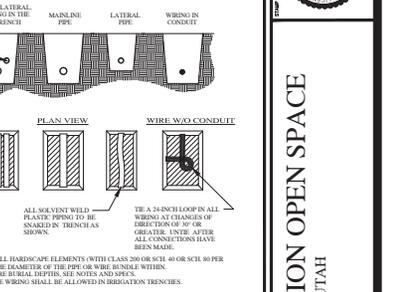
PIPE, WIRE, AND TRENCH SCALE: 1/8" = 1'-0"



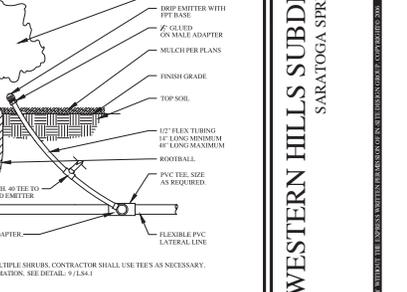
DRIP EMITTER SCALE: 1/8" = 1'-0"



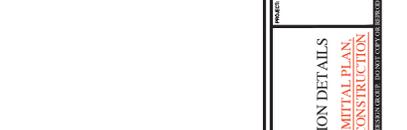
RAINBIRD CONTROLLER WITH SENSOR SCALE: 1/8" = 1'-0"



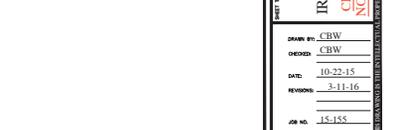
TRENCH SECTION SCALE: 1/8" = 1'-0"



PIPE, WIRE, AND TRENCH SCALE: 1/8" = 1'-0"



DRIP EMITTER SCALE: 1/8" = 1'-0"



TREE DRIP WITH FULL PLANTING UNDER CANOPY SCALE: 1/8" = 1'-0"



WESTERN HILLS SUBDIVISION OPEN SPACE SARATOGA SPRINGS, UTAH

IRRIGATION DETAILS CITY SUBMITTAL PLAN NOT FOR CONSTRUCTION

DATE: 10-22-15  
REVISION: 3-11-16  
JOB NO: 15-155  
L.S.4.1



CITY OF  
SARATOGA SPRINGS

May 8, 2015

Western Hills 1, LLC  
Attn: Ron Johnston  
PO Box 1166  
Pleasant Grove, UT 84062

Re: Western Hills Open Space

Dear Mr. Johnston,

This letter is being provided to outline the direction given regarding the Western Hills Open Space during the City Council Work Session that was held on May 5, 2015. The Council reviewed several topics related to the open space and their direction is outlined below.

Landscaping:

The vegetation may remain as-is and disturbed areas shall be re-vegetated. If Central Utah Water Conservancy District had an agreement with the land-owner to re-vegetate, that does not involve the City. The City will require re-vegetation of that area by the applicant.

Trails:

Construct an 8' wide aggregate trail on top of the berm to match what is planned in "Shay Park" up to the "break" in the berm that lines up with the canal crossing. East of the "break" continue with an 8' wide asphalt trail adjacent to the canal right of way. A plaza is suggested just north of the canal crossing to tie all the trail segments together. Construct an 8' wide concrete trail northeast of the development to connect to the trail behind the school.

Amenities:

The applicants total cost of improvements may be based on \$3.33 per square foot for the required 15% open space (this amount is used to determine improvement costs when payment in lieu of open space is requested). Although the plans indicate 32% open space, this cost would apply only to the required 15% open space (approximately 4.26 acres or 185,566 square feet) for a total of ~\$617,934. After improving the trails on and around the berm, the trail that connects to the school, and re-vegetating disturbed areas, the remainder could be used towards park amenities in "Shay Park."

Property Ownership:

The Council recommended that all of the open space be dedicated to the City and that the City own and maintain all of it. The City would also maintain the park strips along Aspen Hills Blvd. in locations where lots do not front the road.

Fencing:

Fencing was not discussed by the City Council at the work session. However, the code requires semi-private fencing around trails and open space.

If you have any questions, please feel free to contact me.

Thank you,

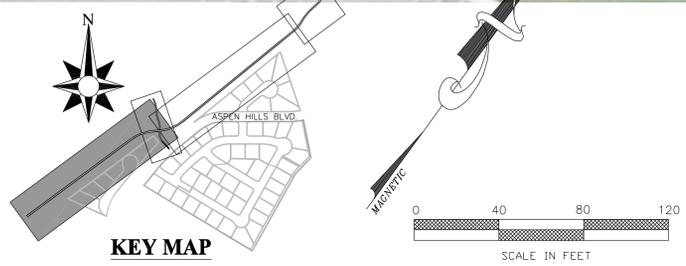
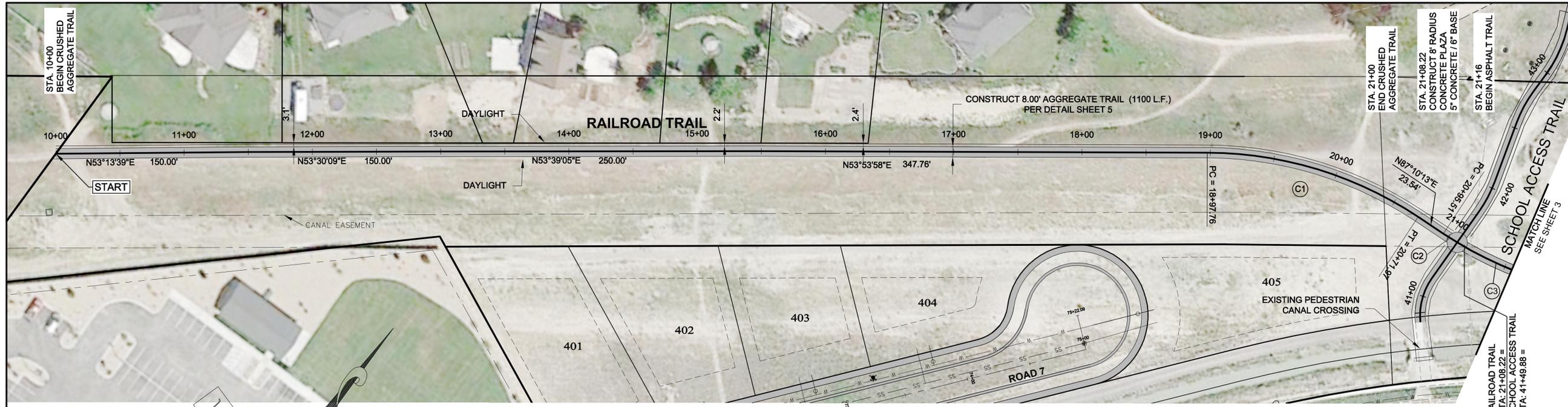
A handwritten signature in cursive script that reads "Sarah Carroll".

Sarah Carroll  
Senior Planner

Attachments:

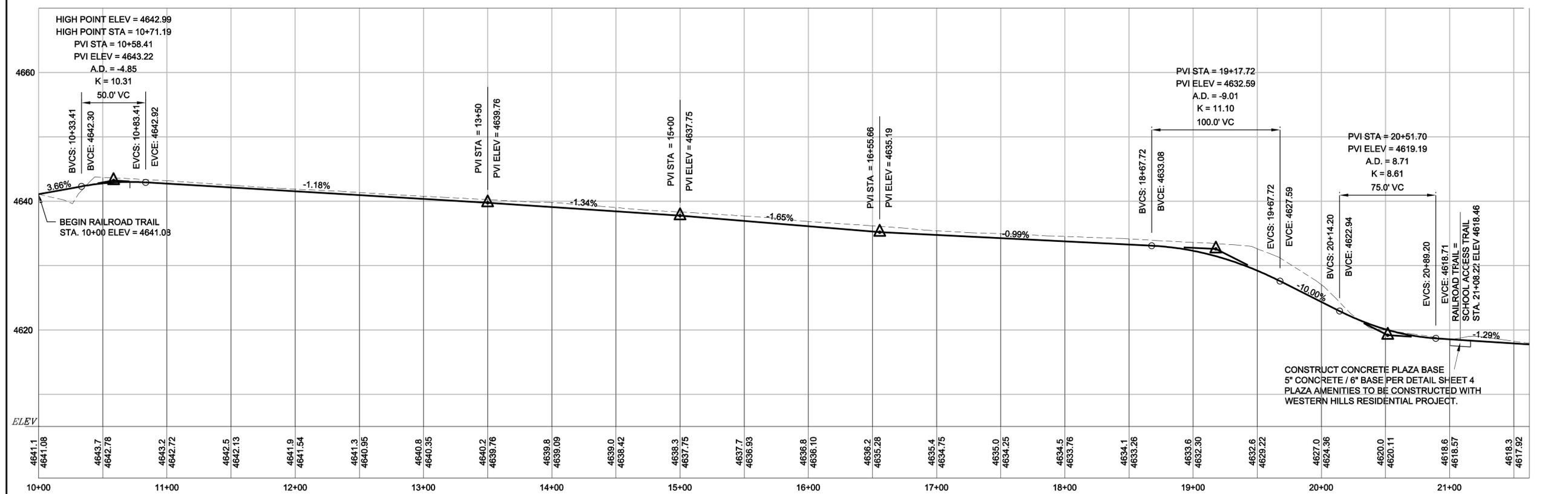
- Conceptual Subdivision Plan





CURVE TABLE						
CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
C1	174.21	89.64	300.00	33°16'15"	171.77	S70°32'06"W
C2	12.72	6.36	300.00	2°25'44"	12.72	N85°57'21"E
C3	177.04	91.18	300.00	33°48'47"	174.49	N67°50'06"E

**RAILROAD TRAIL**



VERIFY SCALE  
 BAR IS ONE INCH IN ORIGINAL DRAWING.  
 0 1' IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DESIGN: T. KENISON  
 DRAWN: T. KENISON  
 CHECK: V. HANSEN  
 APRVD: V. HANSEN

NO. DATE REVISION BY

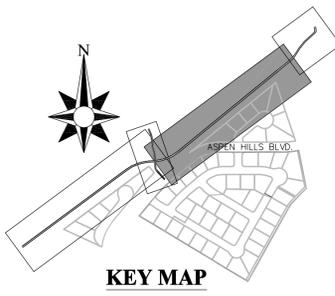
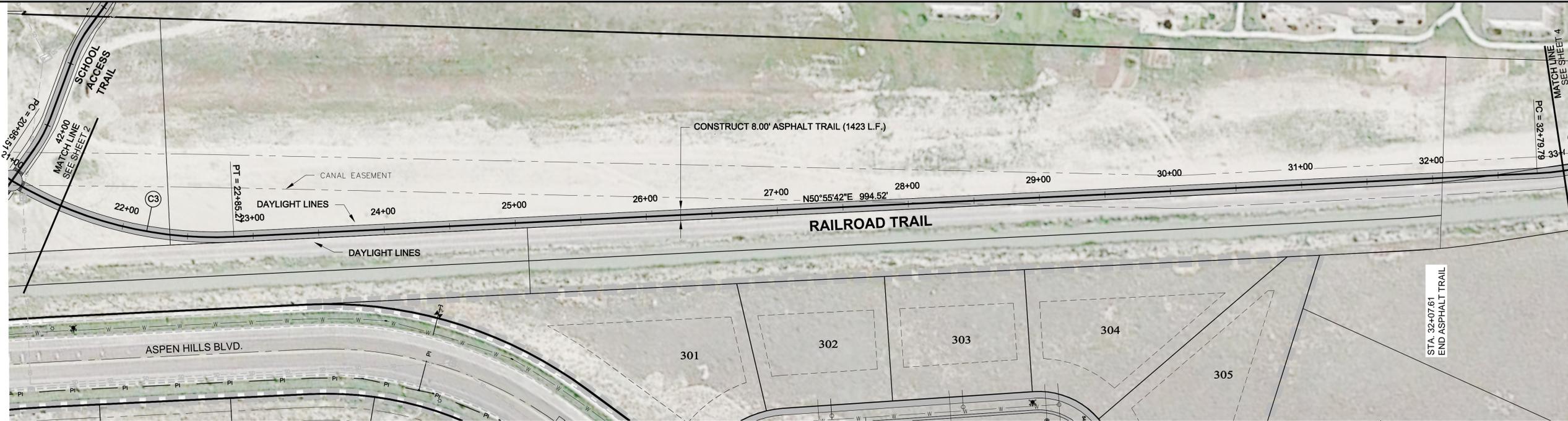
42 NORTH 200 EAST, SUITE 1  
 AMERICAN FORK, UTAH 84003  
 TEL: (801) 756-2488

**H&H ENGINEERING & SURVEYING, INC.**

WESTERN HILLS SUBDIVISION  
 SARATOGA SPRINGS, UTAH

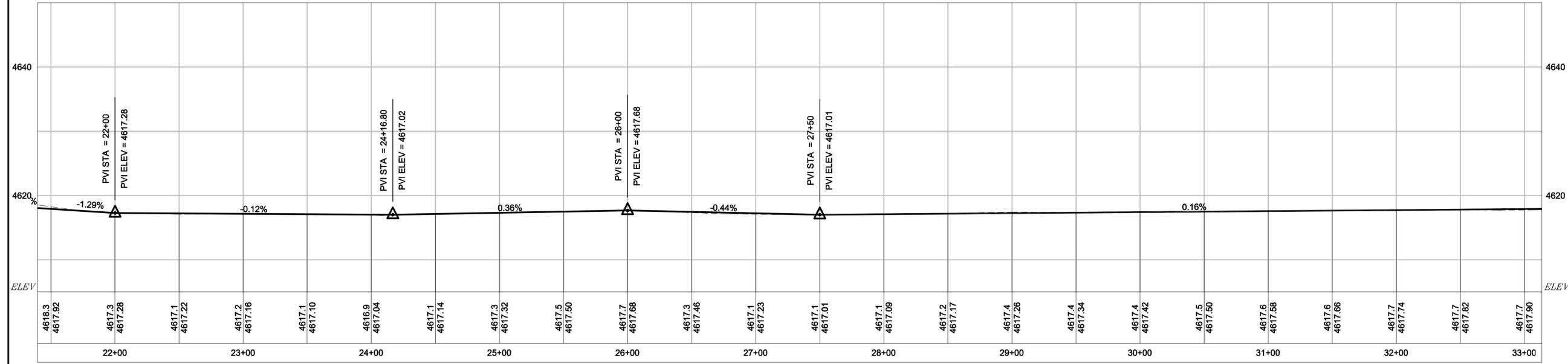
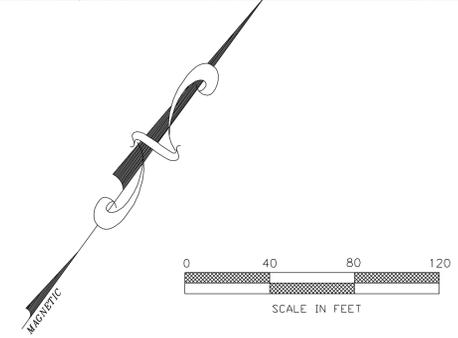
**RAILROAD TRAIL  
 PLAN & PROFILE SHEET**

PROJ: 15-399-11  
 DATE: 07-07-2015  
 SHEET: 02



CURVE TABLE						
CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
C1	174.21	89.64	300.00	33°16'15"	171.77	S70°32'06"W
C2	12.72	6.36	300.00	2°25'44"	12.72	N85°57'21"E
C3	177.04	91.18	300.00	33°48'47"	174.49	N67°50'06"E

**RAILROAD TRAIL**



VERIFY SCALE  
 BAR IS ONE INCH IN  
 ORIGINAL DRAWING.  
 IF NOT ONE INCH ON  
 THIS SHEET, ADJUST  
 SCALES ACCORDINGLY.

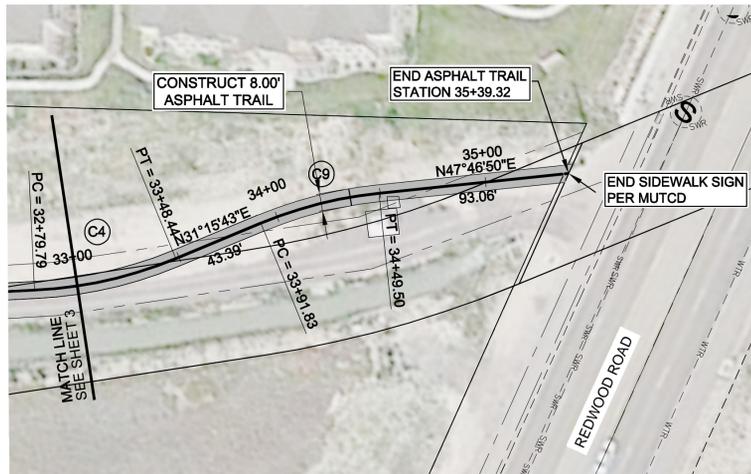
DESIGN: T. KENISON  
 DRAWN: T. KENISON  
 CHECK: V. HANSEN  
 APRVD: V. HANSEN

42 NORTH 200 EAST, SUITE 1  
 AMERICAN FORK, UTAH 84003  
 TEL: (801) 756-2488

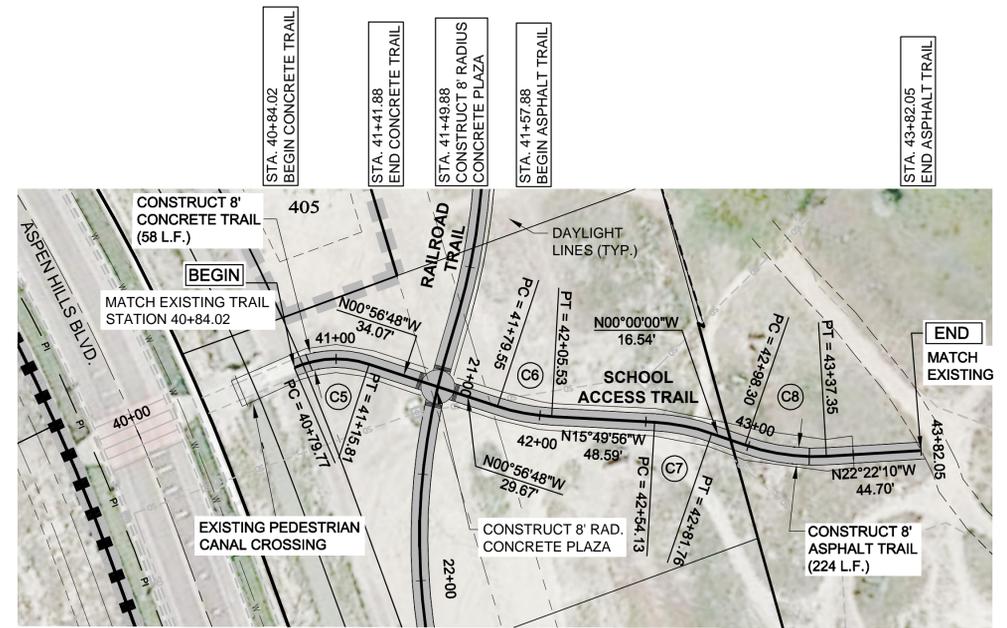
**H&H**  
**ENGINEERING & SURVEYING, INC.**

WESTERN HILLS SUBDIVISION  
 SARATOGA SPRINGS, UTAH  
**RAILROAD TRAIL**  
**PLAN & PROFILE SHEET**

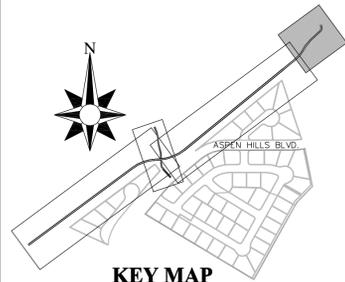
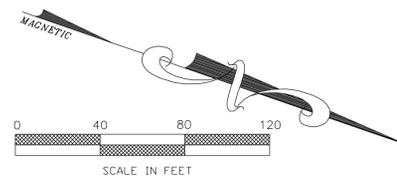
PROJ: 15-399-11  
 DATE: 07-07-2015  
 SHEET: **03**



CURVE TABLE						
CURVE	LENGTH	TANGENT	RADIUS	DELTA	CHORD	CHORD BEARING
C4	68.65	34.67	200.00	19°40'00"	68.31	N41°05'42"E
C5	28.69	14.75	50.00	32°52'41"	28.30	S17°23'09"E
C6	25.98	13.06	100.00	14°53'07"	25.91	N08°23'22"W
C7	27.63	13.90	100.00	15°49'56"	27.54	S07°54'58"E
C8	39.04	19.77	100.00	22°22'10"	38.79	N11°11'05"W
C9	57.66	29.03	200.00	16°31'08"	57.46	S39°31'16"W

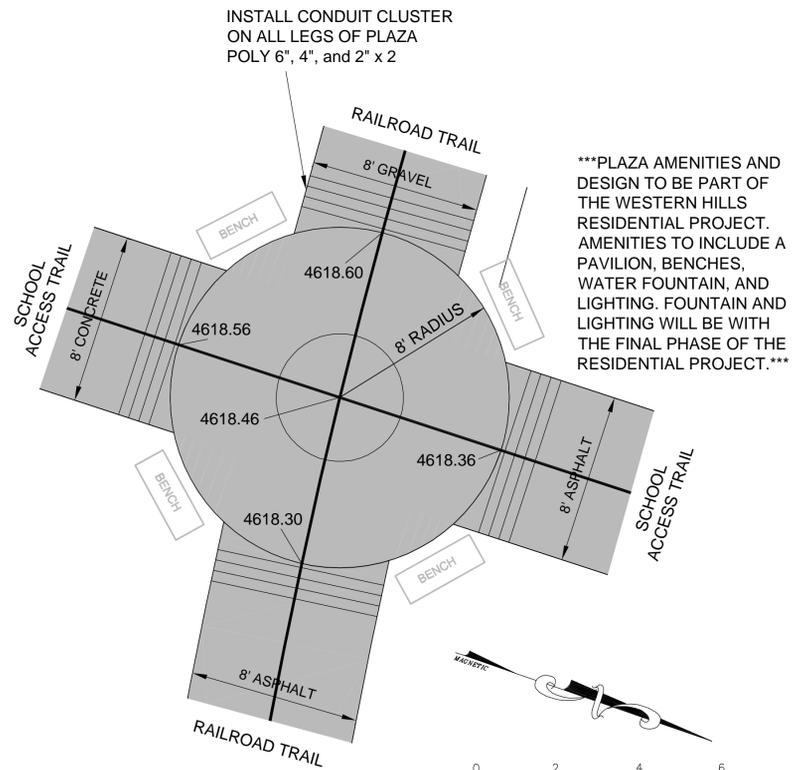
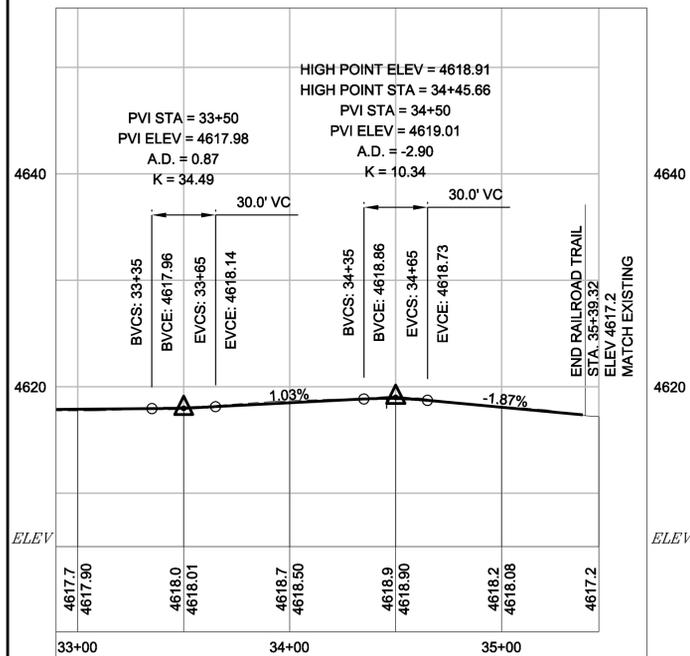


SCHOOL ACCESS TRAIL

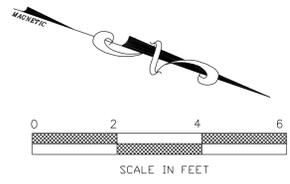


KEY MAP

RAILROAD TRAIL

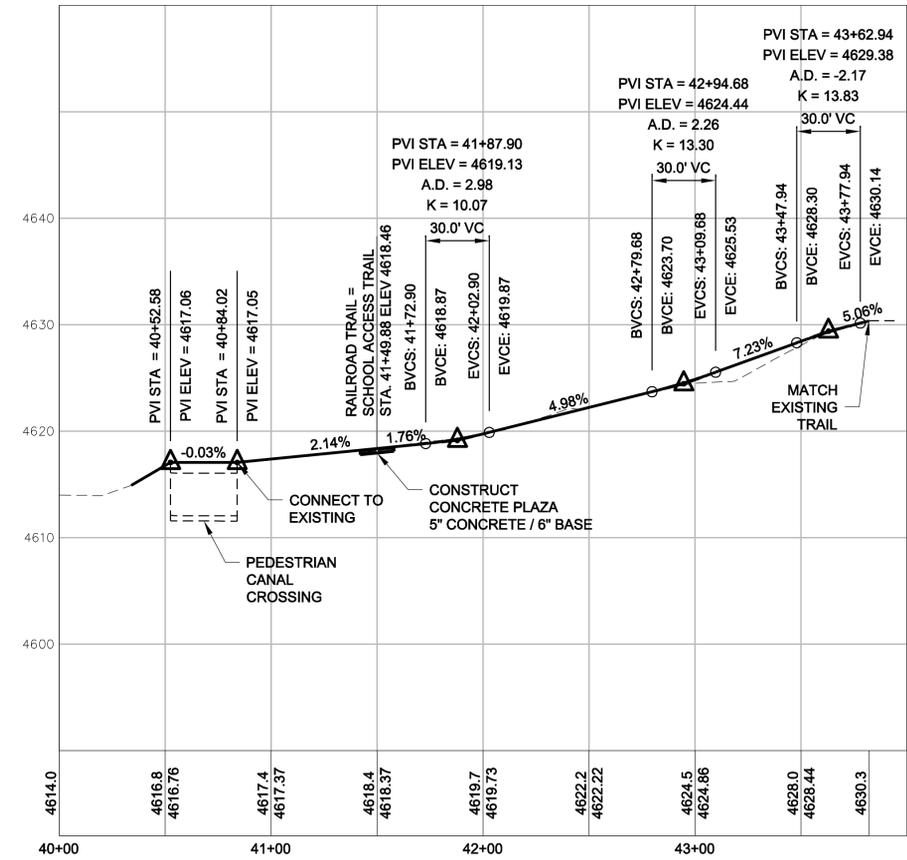


CONCRETE PLAZA BASE  
5" CONCRETE / 6" BASE



\*\*\*PLAZA AMENITIES AND DESIGN TO BE PART OF THE WESTERN HILLS RESIDENTIAL PROJECT. AMENITIES TO INCLUDE A PAVILION, BENCHES, WATER FOUNTAIN, AND LIGHTING. FOUNTAIN AND LIGHTING WILL BE WITH THE FINAL PHASE OF THE RESIDENTIAL PROJECT.\*\*\*

INSTALL CONDUIT CLUSTER ON ALL LEGS OF PLAZA  
POLY 6", 4", and 2" x 2



VERIFY SCALE  
BAR IS ONE INCH IN ORIGINAL DRAWING.  
0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

PROJ: 15-399-11  
DATE: 07-07-2015  
SHEET: 04

WESTERN HILLS SUBDIVISION  
SARATOGA SPRINGS, UTAH

DESIGN: T. KENISON  
DRAWN: T. KENISON  
CHECK: V. HANSEN  
APPROV: V. HANSEN

42 NORTH 200 EAST, SUITE 1  
AMERICAN FORK, UTAH 84003  
TEL: (801) 756-2488

H&H ENGINEERING & SURVEYING, INC.

NO. DATE REVISION BY

**RAILROAD TRAIL**

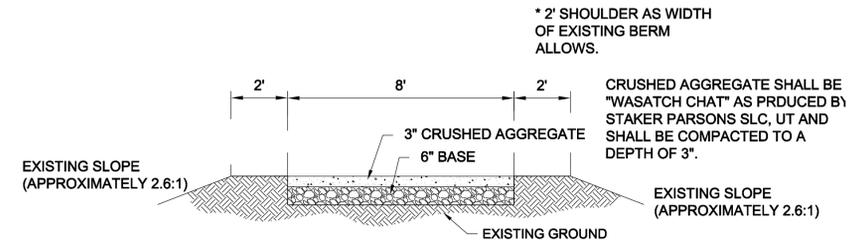
STATION	AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	CUT	FILL	CUT	FILL	CUT	FILL
10+00	4.83	0.33				
10+25	0.00	48.20	2.23	22.47	2.23	22.47
10+50	5.60	8.51	2.59	26.25	4.83	48.72
10+75	4.67	1.46	4.75	4.61	9.58	53.33
11+00	4.70	1.25	4.34	1.25	13.92	54.58
11+25	4.07	1.48	4.06	1.26	17.98	55.85
11+50	4.01	3.43	3.74	2.27	21.72	58.12
11+75	4.33	2.24	3.86	2.62	25.58	60.74
12+00	4.65	1.62	4.16	1.79	29.74	62.53
12+25	4.67	2.24	4.32	1.79	34.06	64.31
12+50	4.57	2.58	4.28	2.23	38.34	66.55
12+75	4.33	3.06	4.12	2.61	42.46	69.16
13+00	4.08	3.81	3.89	3.18	46.35	72.34
13+25	4.02	4.34	3.75	3.77	50.09	76.11
13+50	4.08	4.58	3.75	4.13	53.85	80.24
13+75	4.26	5.01	3.86	4.44	57.71	84.68
14+00	4.40	6.32	4.01	5.24	61.72	89.92
14+25	4.26	6.19	4.01	5.79	65.73	95.71
14+50	4.03	5.72	3.84	5.51	69.57	101.23
14+75	3.90	5.22	3.67	5.06	73.25	106.29
15+00	4.15	5.40	3.73	4.92	76.97	111.21
15+25	4.66	5.74	4.08	5.16	81.05	116.37
15+50	5.08	6.07	4.51	5.47	85.57	121.84
15+75	4.73	6.70	4.55	5.91	90.11	127.75
16+00	5.82	4.06	4.88	4.98	94.99	132.74
16+25	4.60	6.76	4.82	5.01	99.82	137.75
16+50	4.70	7.08	4.31	6.41	104.13	144.16
16+75	4.68	6.13	4.34	6.12	108.47	150.27
17+00	4.66	5.07	4.32	5.18	112.79	155.46
17+25	4.44	5.38	4.21	4.84	117.00	160.30
17+50	4.32	6.08	4.06	5.30	121.06	165.60
17+75	4.58	6.34	4.12	5.75	125.18	171.35
18+00	5.39	5.76	4.61	5.60	129.80	176.95
18+25	5.14	6.77	4.88	5.80	134.67	182.75
18+50	4.59	7.68	4.50	6.69	139.17	189.44
18+75	4.76	7.30	4.33	6.93	143.50	196.37
18+97.76	5.65	9.51	4.39	7.08	147.89	203.45
19+00	5.83	9.84	0.48	0.80	148.36	204.26
19+50	68.11	0.00	69.05	9.11	217.41	213.37
20+00	118.86	6.72	176.83	6.10	394.24	219.47
20+50	4.99	0.57	116.51	6.57	510.75	226.04
20+71.97	5.25	0.00	4.18	0.23	514.93	226.27
20+75	5.21	0.00	0.59	0.00	515.52	226.27
20+95.51	5.05	0.05	3.90	0.02	519.41	226.29
21+00	5.22	0.41	0.85	0.04	520.26	226.33
21+00.22	5.24	0.41	0.04	0.00	520.30	226.34
21+08.22	5.92	0.25	1.64	0.10	521.95	226.43
21+16.22	6.84	0.97	1.87	0.18	523.82	226.61
21+50	5.57	0.06	7.70	0.64	531.52	227.25
22+00	4.89	0.40	9.63	0.43	541.15	227.67
22+50	3.81	1.21	8.03	1.52	549.18	229.19
22+85.27	4.40	0.78	5.35	1.32	554.53	230.51
23+00	4.89	0.43	2.53	0.33	557.06	230.84
23+25	4.77	0.47	4.47	0.42	561.53	231.25
23+50	4.54	0.63	4.31	0.51	565.84	231.76
23+75	4.32	0.79	4.11	0.65	569.95	232.42
24+00	3.81	1.00	3.76	0.83	573.71	233.24
24+25	4.03	0.73	3.63	0.80	577.34	234.05
24+50	4.34	0.49	3.87	0.57	581.22	234.61
24+75	4.85	0.28	4.25	0.36	585.47	234.97
25+00	4.97	0.38	4.54	0.31	590.01	235.28
25+25	4.61	0.16	4.43	0.25	594.45	235.53
25+50	4.66	0.13	4.29	0.13	598.74	235.66
25+75	4.71	0.10	4.34	0.11	603.08	235.77
26+00	4.64	0.16	4.33	0.12	607.40	235.89
26+25	4.26	0.53	4.12	0.32	611.52	236.21
26+50	4.96	0.67	4.27	0.55	615.79	236.76
26+75	4.35	1.08	4.31	0.81	620.10	237.57
27+00	4.82	0.74	4.24	0.84	624.34	238.41
			4.22	0.64	628.57	239.05

**RAILROAD TRAIL**

27+25	4.30	0.64	4.40	0.41	632.97	239.46
27+50	5.21	0.26	4.74	0.26	637.71	239.72
27+75	5.03	0.29	4.52	0.35	642.23	240.07
28+00	4.74	0.47	4.46	0.39	646.70	240.46
28+25	4.90	0.37	4.65	0.27	651.35	240.73
28+50	5.15	0.21	4.77	0.11	656.12	240.84
28+75	5.16	0.03	4.65	0.04	660.77	240.88
29+00	4.88	0.06	4.65	0.04	665.42	240.92
29+25	5.16	0.02	4.78	0.08	670.19	241.00
29+50	5.16	0.15	4.71	0.31	674.91	241.31
29+75	5.02	0.51	4.55	0.54	679.45	241.85
30+00	4.80	0.66	4.47	0.65	683.92	242.50
30+25	4.85	0.75	4.59	0.67	688.51	243.18
30+50	5.06	0.70	4.69	0.64	693.20	243.82
30+75	5.07	0.69	4.68	0.63	697.88	244.45
31+00	5.03	0.67	4.60	0.63	702.48	245.08
31+25	4.91	0.68	4.43	0.69	706.91	245.77
31+50	4.66	0.80	4.27	0.77	711.18	246.55
31+75	4.56	0.87	4.20	0.81	715.38	247.36
32+00	4.53	0.89	4.15	0.82	719.54	248.18
32+25	4.44	0.88	4.04	0.85	723.57	249.04
32+50	4.28	0.96	3.73	1.05	727.30	250.09
32+75	3.77	1.31	0.66	0.24	727.96	250.33
32+79.79	3.66	1.41	2.65	1.14	730.61	251.46
33+00	3.47	1.58	7.58	1.77	738.20	253.24
33+48.44	5.03	0.35	0.29	0.02	738.49	253.26
33+50	5.06	0.33	4.81	0.16	743.29	253.42
33+75	5.32	0.02	3.20	0.08	746.49	253.50
33+91.83	4.94	0.25	1.50	0.06	748.00	253.56
34+00	4.91	0.16	9.07	0.31	757.07	253.87
34+49.50	4.91	0.18	0.09	0.00	757.16	253.87
34+50	4.93	0.18	4.72	0.23	761.88	254.10
34+75	5.28	0.32	5.03	0.26	766.91	254.36
35+00	5.59	0.24	5.25	0.26	772.16	254.63
35+25	5.76	0.33	1.87	0.11	774.03	254.73
35+42.55	0.00	0.00	0.00	0.00	774.03	254.73
35+50	0.00	0.00	0.00	0.00	774.03	254.73
35+63.46	0.00	0.00	0.00	0.00	774.03	254.73

**SCHOOL ACCESS TRAIL**

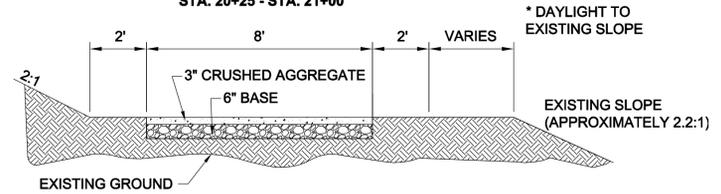
STATION	AREAS Square Feet		VOLUMES Cubic Yards		CUMULATIVE VOLUMES Cubic Yards	
	CUT	FILL	CUT	FILL	CUT	FILL
40+00	0.00	0.00	8.14	0.00	8.14	0.00
40+50	8.79	0.00	9.25	0.00	17.39	0.00
40+79.77	7.99	0.00	2.34	0.00	19.73	0.00
40+87.12	9.16	0.00	4.36	0.00	24.09	0.00
41+00	9.09	0.00	5.18	0.00	29.27	0.00
41+15.81	8.52	0.00	7.88	0.08	37.16	0.08
41+41.88	7.80	0.17	2.17	0.04	39.33	0.12
41+50	6.66	0.09	1.70	0.02	41.03	0.14
41+57.88	4.98	0.03	3.85	0.01	44.88	0.15
41+79.55	4.60	0.00	3.46	0.09	48.34	0.24
42+00	4.67	0.23	0.90	0.08	49.24	0.31
42+05.53	4.22	0.49	6.62	0.54	55.87	0.86
42+50	3.83	0.17	0.58	0.03	56.44	0.89
42+54.13	3.73	0.24	3.94	0.70	60.38	1.59
42+81.76	3.92	1.09	2.84	0.70	63.22	2.29
42+98.30	5.34	1.20	0.32	0.08	63.54	2.38
43+00	4.95	1.42	7.10	2.13	70.64	4.51
43+37.35	5.51	1.64	2.66	0.47	73.31	4.97
43+50	5.85	0.35	3.43	0.21	76.73	5.18
43+81.63	0.00	0.00	0.00	0.00	76.73	5.18



**AGGREGATE TRAIL DETAIL**

CUT / FILL UNDER 12"

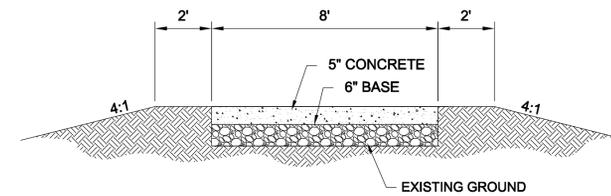
STA. 10+00 - STA. 19+50  
STA. 20+25 - STA. 21+00



**AGGREGATE TRAIL DETAIL**

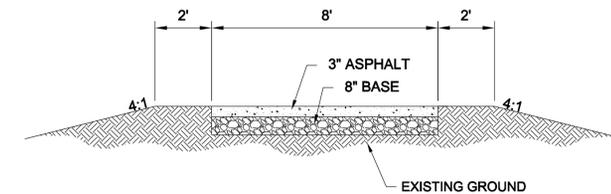
CUT / FILL OVER 12"

STA. 19+50 - 20+25



**CONCRETE TRAIL DETAIL**

STA. 40+84 - STA. 41+42



**ASPHALT TRAIL DETAIL**

STA. 41+58 - STA. 43+82  
STA. 21+16 - STA. 35+39

TRAIL/MATERIAL TYPE	LENGTH (L.F)	OVERALL CUT (CUBIC YARDS)	OVERALL FILL (CUBIC YARDS)
TOTAL AGGREGATE TRAIL	1,100	552.11	231.36
TOTAL CONCRETE TRAIL	58	19.77	0.08
TOTAL ASPHALT TRAIL	1,647	242.51	27.48

**GENERAL**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS OF THE SARATOGA SPRINGS PUBLIC WORKS DEPARTMENT.
- A PRE-CONSTRUCTION CONFERENCE WILL BE HELD A MINIMUM OF 3 WORKING DAYS PRIOR TO START OF WORK. ALL CONTRACTORS, SUBCONTRACTORS AND/OR UTILITY CONTRACTORS, SARATOGA SPRINGS CITY PUBLIC WORKS AND CITY'S ENGINEER SHOULD BE PRESENT.
- ALL CONSTRUCTION STAKES MUST BE REQUESTED A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO PLANNED USE.
- SCARIFY AND COMPACT SUBGRADE TO 95% COMPACTION MDD (MAX DRY DENSITY) (8" MINIMUM)

VERIFY SCALE  
BAR IS ONE INCH IN ORIGINAL DRAWING.  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DESIGN: T. KENISON  
DRAWN: T. KENISON  
CHECK: V. HANSEN  
APPROVED: V. HANSEN

42 NORTH 200 EAST, SUITE 1  
AMERICAN FORK, UTAH 84003  
TEL: (801) 756-2488

**H&H**  
ENGINEERING & SURVEYING, INC.

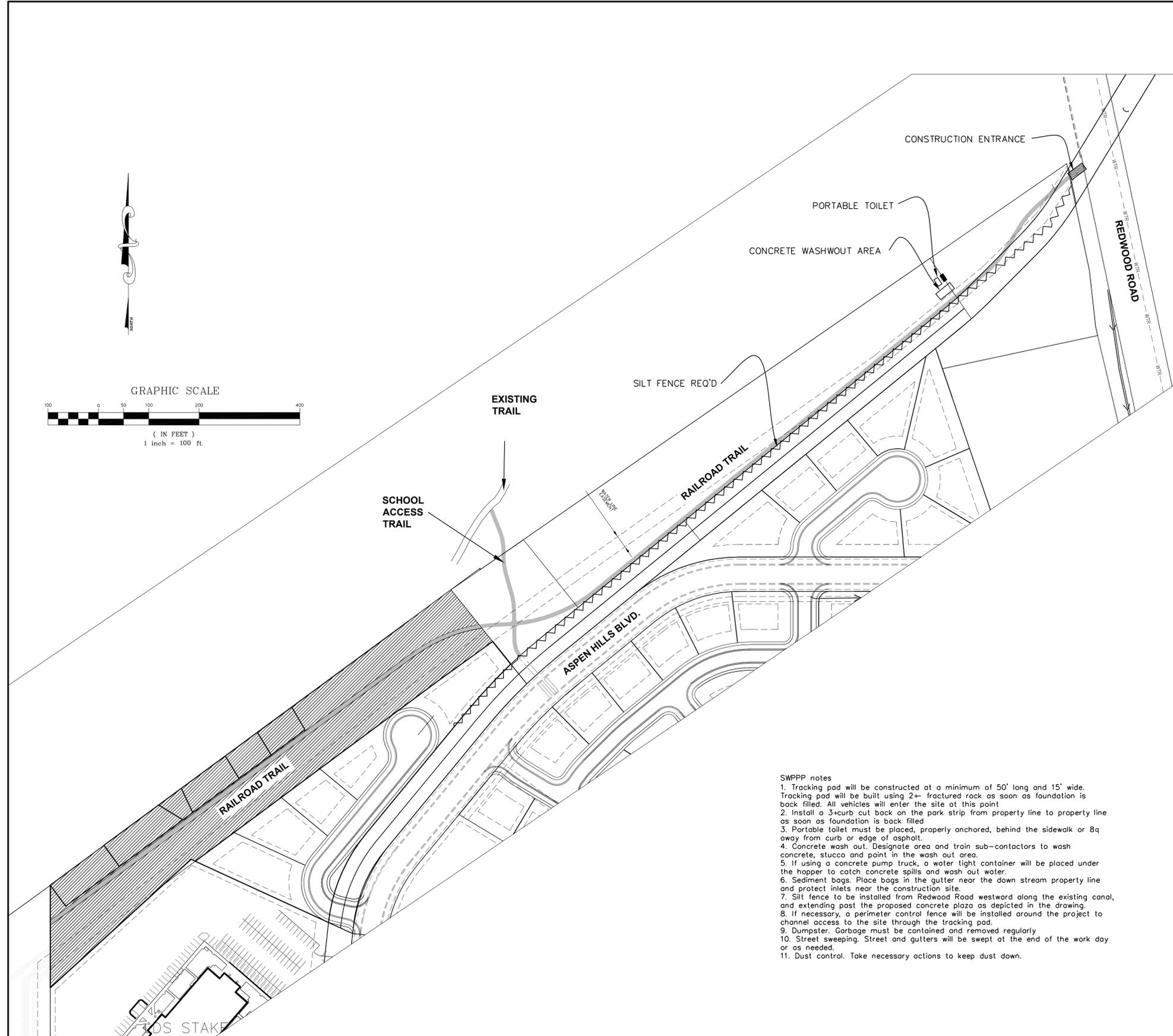
WESTERN HILLS SUBDIVISION  
SARATOGA SPRINGS, UTAH

DETAIL SHEET

1  
PROJ: 15-399-11  
DATE: 07-07-2015  
SHEET

05

SITE DEVELOPMENT CONSTRUCTION PLANS  
**WESTERN HILLS TRAIL**  
**SWPP PLAN**



LEGEND

-  BOUNDARY LINE
-  TRAIL
-  PUBLIC UTILITY EASEMENT
-  PROPOSED SILT FENCE
-  PROTECT EXISTING VEGETATION

SWPPP notes

1. Tracking pad will be constructed at a minimum of 50' long and 15' wide. Tracking pad will be built using 2+ fractured rock as soon as foundation is back filled. All vehicles will enter the site at this point.
2. Install a 3' curb cut back on the park strip from property line to property line as soon as foundation is back filled.
3. Portable toilet must be placed, properly anchored, behind the sidewalk or 8q away from curb or edge of asphalt.
4. Concrete wash out. Designate area and train sub-contractors to wash concrete, stucco and paint in the wash out area.
5. If using a concrete pump truck, a water tight container will be placed under the hopper to catch concrete spills and wash out water.
6. Sediment bogs. Place bogs in the gutter near the down stream property line and protect inlets near the construction site.
7. Silt fence to be installed from Redwood Road westward along the existing canal, and extending past the proposed concrete plaza as depicted in the drawing.
8. If necessary, a perimeter control fence will be installed around the project to channel access to the site through the tracking pad.
9. Dumpster. Garbage must be contained and removed regularly.
10. Street sweeping. Street and gutters will be swept at the end of the work day or as needed.
11. Dust control. Take necessary actions to keep dust down.

<p>VERIFY SCALE          BAR IS ONE INCH IN          ORIGINAL DRAWING.          0          IF NOT ONE INCH ON          THIS SHEET, ADJUST          SCALES ACCORDINGLY.</p>	<p>DESIGN T. KENISON          DRAW T. KENISON          CHECK V. HANSEN          APRVD V. HANSEN</p>	<p>NO. DATE REVISION BY</p>	<p>42 NORTH 200 EAST, SUITE 1          AMERICAN FORK, UTAH 84003          TEL: (801) 756-2488</p> <p style="font-size: 2em; font-weight: bold; text-align: center;">H&amp;H</p> <p style="text-align: center;">ENGINEERING &amp; SURVEYING, INC.</p>
<p>WESTERN HILLS SUBDIVISION          SARATOGA SPRINGS, UTAH</p>		<p style="text-align: center;">SWPP PLAN</p>	
<p>PROJ 15-399-11          DATE 07-07-2015          SHEET</p>		<p style="text-align: right; font-size: 1.5em; font-weight: bold;">06</p>	

# Planning Commission Staff Report

**Author:** Gordon Miner, City Engineer  
**Subject:** Updates to the Transportation Master Plan and associated Impact Fee Facilities Plan  
**Date:** April 28 2013



## **Description:**

**A. Topic:** Updates to the Transportation Master Plan and associated Impact Fee Facilities Plan

## **B. Background:**

The main purpose was to complete the Impact Fee Facilities Plan and Impact Fee Analysis in order to update the City's impact fee ordinance. This was a result of the growth and development in the City over the past 5 years.

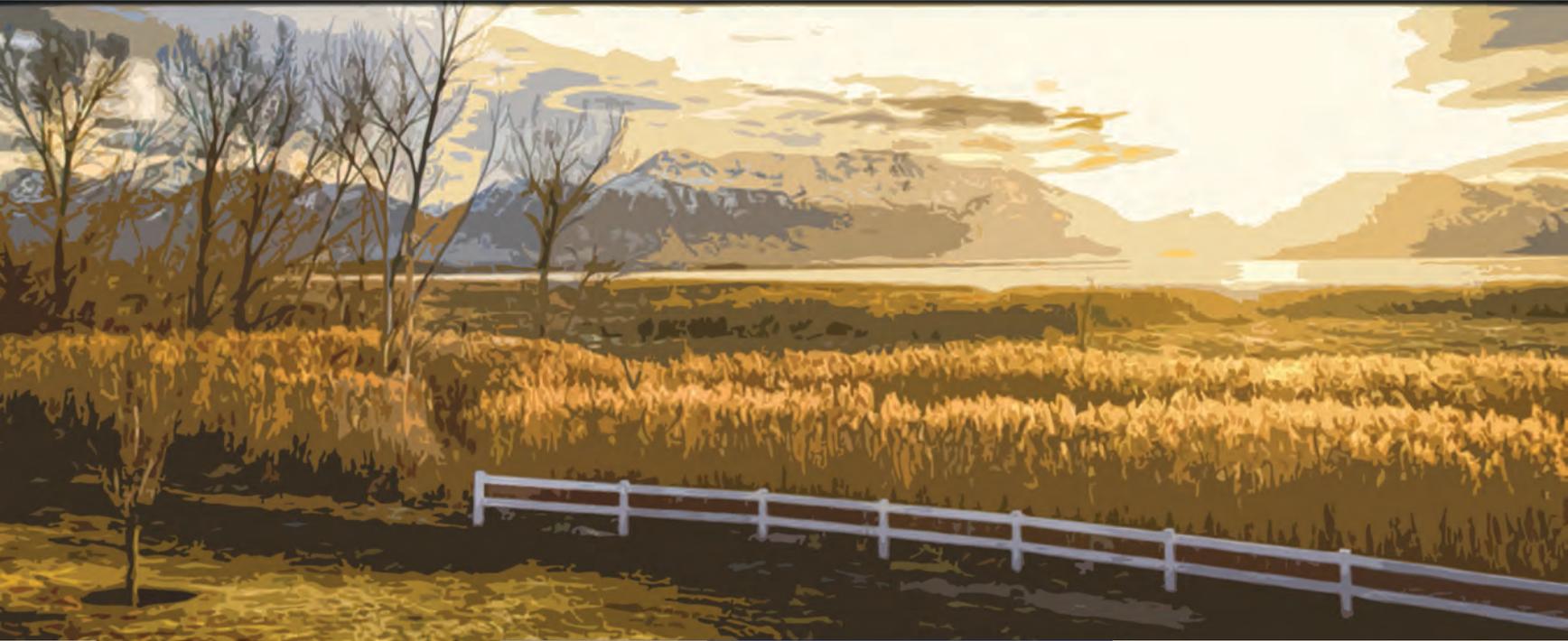
The decision was made to update the Transportation Master Plan in conjunction with the IFFP for the following reasons:

1. The old plan was completed in 2012 and it was determined the base assumption data was outdated for an accurate impact fee study.
2. Since completion of the 2012 Master Plan the city has built several new roads including Pony Express Parkway and UDOT has completed the Pioneer Crossing Extension. These, and other projects, have changed travel patterns in the City, again rendering the original base assumptions invalid.
3. MAG has completed a new round of transportation planning in 2015 referred to as TransPlan40. This new regional planning needed to be incorporated into the City's transportation planning and an updated Transportation Master Plan was the most effective way to do that.
4. The MAG travel demand model, which forms the basis of the travel demand assumptions for the future, has been updated since the adoption of the last master plan and it was felt that in order to complete an impact fee analysis, the best available data should be used. This required the City to update the master plan using the latest MAG travel demand model data.
5. The City has seen the need for a street typical section for a local collector type street. Currently, the City has a local street section, which is intended for residential streets where through traffic is not expected. The next lowest classification is a Collector street which is not intended to include residential driveways. The City wishes to add a classification that is a wider roadway within a residential area that connects a residential development to the collector or arterial roadway network but still allows residential driveways.

**C. Recommendation:** Staff recommends the approval of the Updates to the Transportation Master Plan and associated Impact Fee Facilities Plan.



SARATOGA SPRINGS



SARATOGA SPRINGS  
**TRANSPORTATION MASTER PLAN**

**HORROCKS**  
  
ENGINEERS



# Executive Summary

---

## Introduction

Saratoga Springs is located in northwestern Utah County and is a rapidly growing community. According to the 2010 census, the City has been one of the fastest growing cities in Utah by percent growth over the past decade. This rapid growth is expected to continue into the future. With rapid growth comes increased traffic and the potential that the roadway network in the City will fail to meet the needs of the growing population. The purpose of this document is to provide a transportation plan that will meet the needs of the residents of Saratoga Springs through the year 2040.

## Existing Conditions

The City has an estimated population of approximately 24,000 residents and is the single highest growth city by percentage of new housing units in Utah. Despite this rapid growth, there remain vast amounts of land that is undeveloped.

The roadways in the City have been classified as Principal Arterials, Major Arterials, Minor Arterials, Collector Streets, and Local roads. Each of these classifications serves a specific purpose in the roadway network and each is important to a complete system. The roadway network in Saratoga Springs is operating at acceptable levels under the existing conditions with all roadways and traffic signals performing at Level of Service (LOS) D or better as shown in [Section 3.0](#).

Alternative modes of transportation are important to the City but are currently limited. There is a trails network in the City which provides pedestrian and bicycle facilities but has areas where the trails are not continuous. The transit system consists of one express bus route between Saratoga Springs and Salt Lake City.

## Future Conditions

Saratoga Springs is expected to grow to a population of approximately 80,000 by the year 2040. This growth will put strain on the existing roadway network and if no improvements are made many of the roads in the City will reach LOS F. A recommended roadway network has been developed which will meet the travel demands of the future population and allow the roadways to perform at LOS D or better. This roadway network is compatible with the regional transportation planning efforts of Mountainland Association of Governments (MAG) discussed in [Section 4.0](#). Roadway cross-sections are presented that will meet the needs of each of the roadway functional classification providing appropriate shoulder and lane widths as well as safe and attractive side treatments.

As part of the transportation network, the trails system proposed will provide greater access to the community via bicycle and pedestrian modes of transportation. Disconnected trails will need to be connected and more trails offered to provide for better service to non-motorized traffic. Each of the road cross-sections along trails routes provides bicycle lanes for commuter and recreational bicyclists.

A new transit network, which incorporates the long range planning of MAG, will include bus routes internal to the City, more express routes, Bus Rapid Transit (BRT), light rail, and as part of the MAG “Vision”, commuter rail.

## Alternatives Evaluation and Recommendations

In order to provide a comprehensive roadway network to accommodate future growth, the roadway classifications in the City had to be expanded. In addition to the existing functional classifications, two new roadway types were added, Freeway and Parkway. These two classifications will assist in moving traffic efficiently through the City relieving the pressure on the arterial and collector streets.

Access management is an important part of transportation planning as it aids in allowing each roadway classification in performing its proper function. Each roadway must find a balance between providing good mobility with reasonable access to adjacent land uses. The higher the roadway classification (Freeway being the highest), the less access and greater mobility. Local streets provide the best access and the least mobility.

Safety should be the number one priority when designing and constructing roads. Wherever possible offset intersections should be avoided and driveways should be constructed that avoid the need for drivers to back out into traffic. Intersections improvements should be considered where warranted. The Manual on Uniform Traffic Control Devices (MUTCD) provides warrants for both traffic signals and stop signs. Each intersection considered for improvement should be studied using these warrants before improvements are made. In some cases it may be advantageous to consider roundabouts as an alternative to stop signs or traffic signals, this is discussed in detail in [Section 4.4](#). Each intersection should be considered and studied individually.

Traffic calming is a way to improve safety and livability on the local street network. Where applicable, traffic calming may be considered in response to resident requests. Each traffic calming case is different and a thorough study of the area under consideration should be performed in order to determine if traffic calming is appropriate and which type of traffic calming measure will be most effective (see [Section 4.5](#)).

Corridor preservation techniques, discussed in [Section 4.6](#), should be employed to ensure that future development does not hinder the construction of a good transportation network. Some methods that may be employed to preserve right-of-way for future roads include developer incentives and agreements, exactions, fee simple acquisitions, transfer of development rights and density transfers, land use controls, and purchase of options and easements.

As the City grows and developments are planned it is important that the impacts of these developments be assessed and managed. The mechanism for ensuring such action is the Traffic Impact Study (TIS). A TIS should be required on most developments in the City prior to issuance of a building permit. A TIS will

allow the City to determine site specific impacts including internal circulation, access issues, and adjacent roadway and intersection impacts. Traffic Impact Studies are discussed in detail in [Section 4.7](#).

## Special Considerations

Several of the proposed roadways in the City deserve special consideration and are discussed in [Section 4.10](#). These include Mountain View Corridor Freeway, Foothill Parkway, Hidden Valley Freeway, and SR-73. Each of these roadways is unique and poses a specific set of challenges for design and construction. The Mountain View Corridor Freeway and Hidden Valley Freeway are proposed on the MAG long range transportation plan and should be the first of these major roads constructed. Foothill Parkway is a southern extension of the MAG project that will serve the residents on the south end of the City with an alternate corridor to Redwood Road for north-south traffic. SR-73 is proposed a six-lane freeway facility after the Hidden Valley Freeway is completed to allow for better east-west mobility. Each of these projects will require extensive coordination with UDOT and other agencies.

## Potential Funding Sources

In order to keep up with the increasing transportation demand in the City, it is essential that Saratoga Springs explore and pursue multiple sources of transportation funding. The potential sources of funding available are federal funding in the form of the UDOT administered Statewide Transportation Improvement Program, state funding from fuel taxes, registration fees, driver's license fees etc., local funding from general fund revenues, and impact fees associated with development. See [Section 5.0](#) for more details.



# Table of Contents

1.0	Introduction .....	1
2.0	Existing Conditions.....	3
2.1	Existing Socioeconomic Conditions.....	3
2.2	Existing Land Use .....	4
2.3	Existing Roadway Functional Classification .....	6
2.4	Existing Traffic Volumes and Level of Service .....	6
2.4.1	<i>Roadway Level of Service</i> .....	6
2.4.2	<i>Intersection Level of Service</i> .....	7
2.4.3	<i>Existing Operating Conditions</i> .....	9
2.5	Alternative Transportation Modes .....	9
2.5.1	<i>Non-Motorized Traffic</i> .....	9
2.5.2	<i>Transit</i> .....	10
3.0	Future Conditions .....	13
3.1	Future Socioeconomic Conditions .....	13
3.2	Future Land Use .....	14
3.3	Travel Model Development .....	16
3.4	Projected Traffic Volumes and Conditions .....	16
3.4.1	<i>Existing Conditions</i> .....	16
3.4.2	<i>No-Build Conditions</i> .....	16
3.4.3	<i>Recommended 2040 Roadway Conditions</i> .....	17
3.5	Alternative Transportation Modes .....	20
3.5.1	<i>Non-Motorized Traffic</i> .....	20
3.5.2	<i>Transit</i> .....	22
4.0	Alternatives Evaluation and Recommendations.....	26
4.1	Roadway Functional Classification.....	26
4.2	Access Management .....	30
4.2.1	<i>Principles of Access Management</i> .....	30
4.2.2	<i>Roadway Network and Access Management Standards</i> .....	32



# SARATOGA SPRINGS

## Transportation Master Plan

### 2016

- 4.3 Safety ..... 33
  - 4.3.1 Driveways..... 34
  - 4.3.2 Offset Intersections..... 34
- 4.4 Intersection Improvements ..... 34
  - 4.4.1 Stop Sign Warrants ..... 34
  - 4.4.2 Traffic Signal Warrants ..... 35
  - 4.4.3 Roundabout Intersections..... 35
- 4.5 Traffic Calming ..... 38
  - 4.5.1 Types of Traffic Calming Measures ..... 38
- 4.6 Corridor Preservation ..... 43
  - 4.6.1 Corridor Preservation Techniques ..... 43
- 4.7 Traffic Impact Studies ..... 44
- 4.8 Agency Coordination..... 45
- 4.9 Planned Roadway Improvements..... 45
- 4.10 Special Considerations ..... 49
  - 4.10.1 Mountain View Corridor (2100 North to 400 South)..... 49
  - 4.10.2 Foothill Parkway (400 South to Redwood Road)..... 51
  - 4.10.3 Hidden Valley Freeway..... 51
  - 4.10.4 SR-73..... 52
- 5.0 Potential Funding Sources ..... 54
  - 5.1 Federal Funding ..... 54
  - 5.2 State Funding ..... 57
  - 5.3 Local Funding ..... 57
  - 5.4 Impact Fees..... 57
- 6.0 Appendix..... 59

## List of Figures

Figure 1-1 Area Map .....	2
Figure 2-1 Developed and Undeveloped Land.....	5
Figure 2-2 Existing Roadway Network .....	11
Figure 2-3 Existing Daily Traffic Volumes and LOS.....	12
Figure 3-1 General Plan Land Use Plan .....	15
Figure 3-2 2040 No-Build Traffic Volumes and LOS.....	18
Figure 3-3 Transportation Master Plan.....	19
Figure 3-4 Trails Master Plan (Map 3).....	21
Figure 3-5 Concept Pioneer Crossing Extension Cross-Section.....	24
Figure 3-6 Transit Projects – 2040 Metropolitan Transportation Plan.....	25
Figure 4-1 Roadway Typical Sections .....	28
Figure 4-2 Mobility vs. Access by Functional Classification .....	31
Figure 4-3 Typical Roundabout Design .....	36
Figure 4-4 Speed Table.....	40
Figure 4-5 Chicane.....	41
Figure 4-6 Partial Road Closure Traffic Calming Measure .....	41
Figure 4-7 Mountain View Corridor Extension Example.....	50
Figure 4-8 Foothill Parkway Cross-Section.....	51
Figure 4-9 Hidden Valley Freeway Concept.....	53
Figure 5-1 Utah State Functional Classification Map.....	56

## List of Tables

Table 2-1 Top Ten Utah Cities by 10 Year Housing Unit Growth Rate Percentage.....	4
Table 2-2 Freeway LOS Capacity Criteria in Vehicles per Day.....	7
Table 2-3 Arterial LOS Capacity Criteria in Vehicles per Day .....	7
Table 2-4 Collector LOS Capacity Criteria in Vehicles per Day.....	7
Table 2-5 Signalized Intersection LOS Criteria .....	8
Table 2-6 Un-signalized Intersection LOS Criteria.....	8
Table 2-7 Existing Trails.....	10
Table 3-1 Saratoga Springs City Projected Population Growth .....	14
Table 3-2 2040 Proposed Trail Network .....	22
Table 4-1 Access Spacing Based on Functional Classification.....	33
Table 4-2 Saratoga Springs City Recommended Transportation Improvements .....	45



# 1.0 Introduction

---

The City of Saratoga Springs is an exciting new fast growing community located on the northwest shore of Utah Lake in the center of Utah’s Wasatch Front Metropolitan Area (see [Figure 1-1](#)). The City was incorporated in December of 1997. From its very beginning, the City experienced rapid growth and continues to be one of the fastest growing communities in the state. According to the US census bureau, Saratoga Springs had grown in population from 1,003 in 2000 to 17,781 in 2010. This represents an average annual growth rate of 167 percent for the 2000 to 2010 decade. When compared to the whole of Utah County, which has an average annual growth rate of 4 percent over the same time period, it is clear that Saratoga Springs is one of the fastest growing cities in Utah County. In 2014, the population was 24,356.

The last update to The Saratoga Springs General Plan, including the Transportation Element, was in October 2005. An update to the Transportation Master Plan was adopted by ordinance in August 2010. Also in 2010, the City annexed approximately 2,500 acres into its boundaries while implementing significant land use changes. As a result of this annexation, the City has updated its General Plan Land Use Map, and has commenced an update to its Capital Facility Plans as well as an evaluation of its impact fees. This resulted in an effort to provide an updated Transportation Master Plan (TMP). In 2012, an update to the TMP (as well as minor adjustments in 2013) included to enable development of the roadway portion of the Capital Facilities Plan (CFP) by providing a plan to provide capacity to accommodate the expected growth in the City’s transportation system. This TMP acts as an update to incorporate the most recent population projections as well as any changes to the Capital Facilities Plan.

Figure 1-1 Area Map





## 2.0 Existing Conditions

---

A thorough documentation of the City's existing conditions was performed in order to evaluate the City's transportation system and update the Transportation Element of the City's General Plan (TMP) to address the City's current and future needs. The data collected for this TMP update includes:

- **Key roadway traffic volumes**
- **Socioeconomic conditions**
- **Land use and zoning**
- **Signal locations and timings**
- **Roadway classifications/widths/cross sections**
- **Public transit routes**
- **Bicycle/pedestrian trails**

This data forms the basis for analyzing the existing transportation system as well as providing the foundation to project future traffic conditions.

### 2.1 Existing Socioeconomic Conditions

Socioeconomic data used in the transportation analysis was obtained from the City and Mountainland Association of Governments (MAG). The MAG travel demand model was modified to more accurately estimate the travel demand in the City. The MAG travel demand model consists of various Traffic Analysis Zones (TAZ). Each TAZ contains information on the number of households, employment opportunities, and average income levels within the TAZ. This data is used to generate trips originating in each TAZ and assigned to the roadway network where they will be attracted to a destination within another TAZ. The MAG travel demand model predicts regional travel patterns; however, the TAZ structure must be modified to more accurately reflect traffic on the local city level. The TAZ structure within the Saratoga Springs area was modified by splitting the existing large TAZ into smaller, more uniform TAZ and verifying the accuracy of the socioeconomic data contained within each TAZ.

The City's current population is estimated at around 24,400 residents<sup>1</sup>. The 2000 to 2010 decade saw considerable growth in Saratoga with an increase in residential housing units from 301 to 4,685 (1,456 percent). The City is issuing a number of permits for residential dwelling units monthly and is the single highest growth city by percentage of new housing units in Utah (see [Table 2-1](#)). As a region, the northern Utah County area has experienced rapid development and growth in recent years and this trend is projected to continue into the foreseeable future.

---

<sup>1</sup> Based on United States Census Bureau

**Table 2-1 Top Ten Utah Cities by 10 Year Housing Unit Growth Rate Percentage**

City Name	Housing Unit Count		Comparison	
	2010	2000	10 Year Chg.	10 Yr. % Chg.
<b>Saratoga Springs</b>	<b>4,685</b>	<b>301</b>	<b>4,384</b>	<b>1,456</b>
Herriman	6,022	459	5,563	1,212
Eagle Mountain	5,546	598	4,948	827
Cedar Hills	2,441	721	1,720	239
West Haven	3,324	1,220	2,104	172
Syracuse	6,534	2,601	3,933	151
Nibley	1,451	580	871	150
Lehi	13,064	5,280	7,784	147
Spanish Valley CDP	190	78	112	144
Washington	7,546	3,199	4,347	136

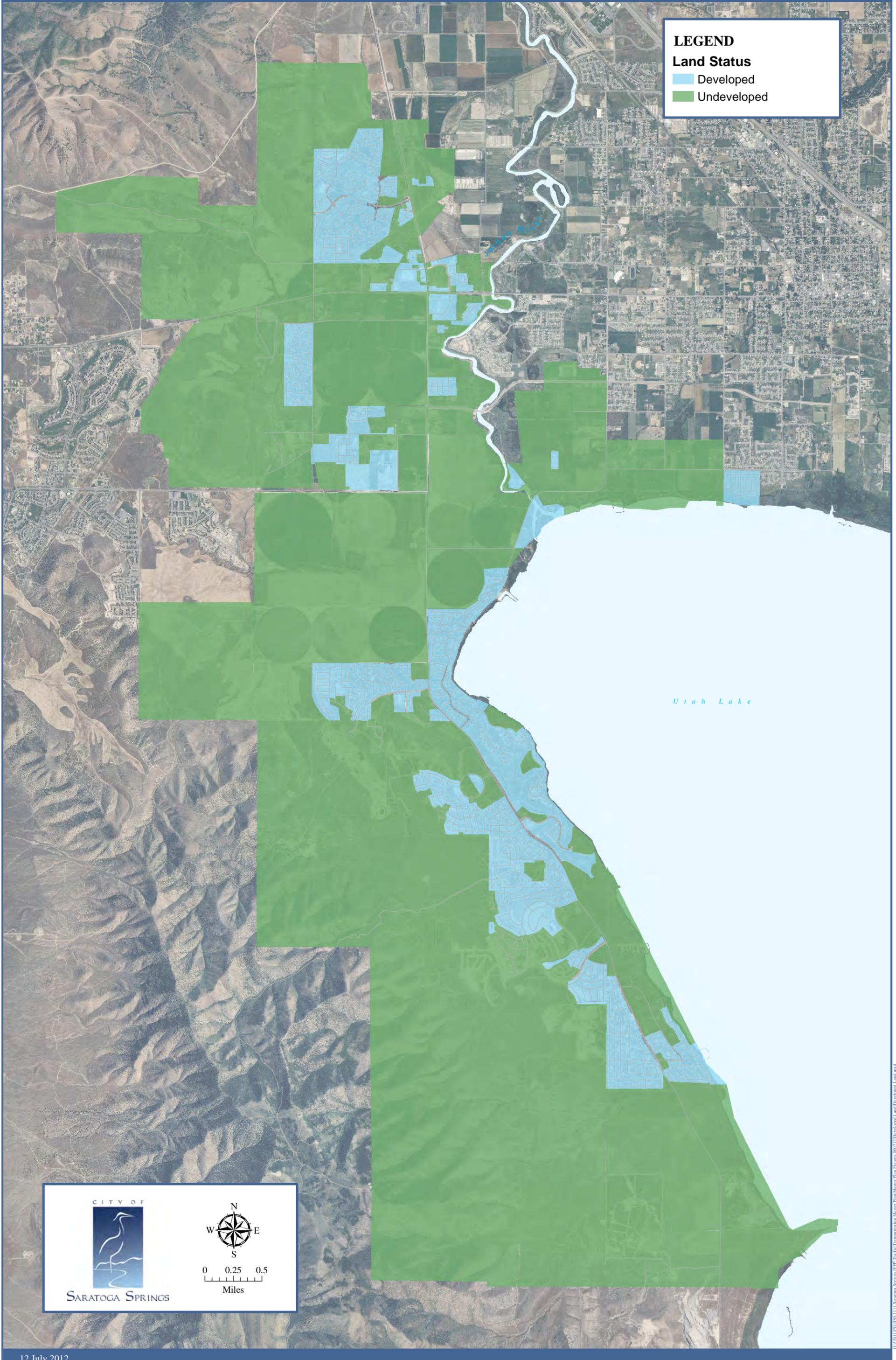
Source: 2010 State of Utah Official Census

## 2.2 Existing Land Use

Traffic patterns and demand are directly related to land use and development density. A small percent of the land area within the City has been developed or is under development. There are still several large parcels that remain, as well as numerous smaller tracts of land that will one day be developed. Several of the major owners of the undeveloped land in the annexation boundary of the City are:

- **Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter-day Saints**
- **Waldo Co.**
- **Collins Brothers Oil Co.**
- **Ireco Incorporated**
- **DCP Saratoga LLC**
- **School and Institutional Trust Lands Administration (SITLA)**

Figure 2-1 Developed Land



## 2.3 Existing Roadway Functional Classification

The roadways in Saratoga Springs have been classified as Principal Arterials, Major Arterials, Minor Arterials, Collector, Minor Collector and Local streets. The existing roadway network consists of several major regional Utah Department of Transportation (UDOT) roadways including SR-73 running East-West through the City connecting Eagle Mountain and Lehi, SR-68 (Redwood Road) running North-South connecting the City with Salt Lake County on the North, and SR-145 (Pioneer Crossing) which connects I-15 at American Fork Main Street to Redwood Road in Saratoga Springs. In addition to the UDOT roads, Saratoga Springs owns and maintains a number of local and regional collector streets such as Pony Express Parkway (between Redwood Road and Eagle Mountain), 800 West, and 400 North. On November 20, 2011 SR-73 from Redwood Road to the west bank of the Jordan River underwent a jurisdictional transfer (located in the appendix) where the City has taken over ownership and maintenance responsibility for this portion of the roadway from the Utah Department of Transportation (UDOT). The traffic signal located at the intersection of SR-73 and SR-68 will remain under UDOT jurisdiction. Jurisdiction of the signal at SR-73 and East Commerce Drive was transferred from UDOT to the City on December 15, 2015. The existing roadway network including functional type is shown in [Figure 2-2](#).

## 2.4 Existing Traffic Volumes and Level of Service

Adequacy of an existing street system can be quantified by assigning Levels of Service (LOS) to major roadways and intersections. As defined in the *Highway Capacity Manual (HCM)*, a document published by the Transportation Research Board (TRB), LOS serves as the traditional form of measurement of a roadway's functionality. The TRB identifies LOS by reviewing elements such as the number of lanes assigned to a roadway, the amount of traffic using the roadway, and the amount of delay per vehicle traveling on the roadway and at the intersections. Levels of service range from A (free flow) to F (complete congestion).

### 2.4.1 Roadway Level of Service

Roadway LOS is used as a planning tool to quantitatively represent the ability of a particular roadway to accommodate the travel demand. [Table 2-2](#) Through [Table 2-4](#) were used as a guide for quantifying LOS and subsequently the conditions of each of the major roadways in the City and are based on HCM principles and regional experience. LOS D is approximately 80 percent of a roadway's capacity and is a common goal for urban streets during peak hours. After discussions with city staff it was determined that adopting the industry standard of LOS D for urbanized areas was acceptable for future planning. Attaining LOS C would be potentially cost prohibitive and may present societal impacts such as additional lanes and wider street cross-sections. LOS D suggests that for most times of the day, the roadways will be operating at well below capacity. The peak times of day will likely experience moderate congestion characterized by a higher vehicle density and slower than free flow speeds. A four lane freeway facility can accommodate 70,000 vehicles per day at LOS D, adding two additional lanes will increase this threshold by 40,000 vehicles to 110,000 vehicles per day. Arterial streets can handle significantly less traffic at LOS D, a seven lane arterial (6 travel lanes and one center turn lane) can accommodate approximately 50 percent of the traffic of a freeway of similar lane configuration (55,000 versus 110,000). Similarly, much

capacity is lost when reducing the number of arterial lanes by one in each direction, which will result in a 17,700 vehicle per day reduction in LOS D capacity. Collector streets are designed at lower speeds than arterials and are not as strictly access controlled. Again this results in a loss of capacity when compared to arterial streets. A 3 lane collector street will be able to move 1,700 less vehicles per day than a 3 lane arterial street. Removing the center turn lane on a collector will result in a loss of capacity of 1,300 vehicles per day.

**Table 2-2 Freeway LOS Capacity Criteria in Vehicles per Day**

Lanes	LOS C	LOS D	LOS E
4	60,000	70,000	80,000
6	95,000	110,000	140,000

**Table 2-3 Arterial LOS Capacity Criteria in Vehicles per Day**

Lanes	LOS C	LOS D	LOS E
3	12,400	15,100	17,700
5	28,500	32,800	40,300
7	43,000	50,500	63,400

**Table 2-4 Collector LOS Capacity Criteria in Vehicles per Day**

Lanes	LOS C	LOS D	LOS E
2	9,700	12,100	14,500
3	10,800	13,400	16,100

### 2.4.2 Intersection Level of Service

Whereas roadway LOS considers an overall picture of a roadway to estimate operating conditions, intersection LOS looks at each individual movement at an intersection and provides a much more precise method for quantifying operations. Since intersections tend to be a source of bottlenecks in the transportation network, a detailed look into the delay at each intersection should be performed on a regular basis. The methodology for calculating delay at an intersection is outlined in the *Highway Capacity Manual* and the resulting criteria for assigning LOS to signalized and un-signalized intersections are outlined in [Table 2-5](#) and [Table 2-6](#) respectively. As in the case with roadways, LOS D is considered the industry standard for intersections in an urbanized area. LOS D at an intersection corresponds to an average control delay of 35-55 seconds per vehicle for a signalized intersection and 25-35 seconds per vehicle for an un-signalized intersection.

At a signalized intersection, the average vehicle will be stopped for less than 55 seconds. This is considered an acceptable amount of delay to experience during the times of the day when roadways are most congested. As a general rule, traffic signal cycle lengths (the length of time it takes for a traffic signal to cycle through each movement in turn) are kept below 90 seconds. An average delay of less than 55

seconds suggests that in most cases, no vehicles will have to wait more than one cycle before proceeding through an intersection.

Un-signalized intersections are generally stop controlled. Areas where there is a predominate major street may be two-way stop controlled, meaning only the minor street traffic must stop. In cases where traffic volumes are more even or where sight distances may be limited, four-way stop controlled intersections are common. LOS for an un-signalized intersection is assigned based on the average control at the worst approach (always a stopped approach) of the intersection. An un-signalized intersection operating at LOS D means that the average vehicle waiting at one of the stop controlled approaches will wait no longer than 35 seconds before proceeding through the intersection. This delay may be caused by large volumes of traffic on the major street resulting in fewer gaps in traffic for a vehicle to turn into, or from queued vehicles waiting at the stop sign.

**Table 2-5 Signalized Intersection LOS Criteria**

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

*Note: LOS for signalized intersections is the average of all approaches*

**Table 2-6 Un-signalized Intersection LOS Criteria**

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

*Note: LOS for an un-signalized intersection is for the worst approach only*

Each of the eight traffic signals in the City was analyzed. These signals are all on UDOT owned roadways with the exception of the signal at Commerce Drive and SR-73. Ownership of this signal was recently transferred from UDOT to the City. Once the current warranty period expires, the City will be responsible for the maintenance of this signal (the jurisdictional transfer agreement is shown in the appendix). The existing signal locations are shown in [Figure 2-2](#).

### 2.4.3 Existing Operating Conditions

As part of this TMP, 2016 traffic counts were collected from the Utah Department of Transportation (UDOT) which included average annual daily traffic (AADT) volumes defined in *Traffic on Utah Highways*, and manual traffic counts were also performed on many of the City owned roadways within Saratoga Springs in 2016. [Figure 2-3](#) illustrates Saratoga Springs' 2010-2012 traffic volumes on selected major streets and their corresponding LOS. Based on the analysis of these traffic count data, there are currently no major concerns with the Saratoga Springs roadway network or intersections because they are all operating at LOS D or better.

## 2.5 Alternative Transportation Modes

Alternative transportation modes to passenger vehicles are an important part of the overall transportation system. A complete transit system may include bus, bus rapid transit (BRT), light rail, commuter rail, and van share facilities. Non-Motorized traffic includes pedestrians, bicyclists, hikers, horse-back riders, and joggers/walkers. These modes of transport should be accommodated wherever feasible in a vibrant and sustainable transportation system.

### 2.5.1 Non-Motorized Traffic

Non-motorized traffic is also very important and Saratoga Springs is committed to providing a trails network for bicycle and pedestrian traffic for both recreational and other trips. Saratoga Springs is a recreational hotspot on the west side of Utah Lake due to its proximity to Utah Lake and many off-road biking and hiking trails in the western mountains.

Trails serve many purposes from recreational uses to commuting to and from work and home. They also serve a diverse group of users including children, bicyclists, walkers/joggers, and equestrian users. In November 2011, Saratoga Springs adopted their current Parks, Recreation, Trails, and Open Space Master Plan. The master plan sought to inventory the City's existing facilities as well as provide recommendations for future parks, trails, recreational programs, etc. Saratoga Springs recognized that trails are a vital portion of any good transportation network; therefore this TMP should be supplemented by the Trails portion of the Parks, Recreation, Trails, and Open Space Master Plan.

The Trails Master Plan found that approximately 71 percent of the City population uses the trails system and that the Saratoga Springs residents rate a trails system as 4 out of 5 in terms of importance to the community. 78 percent of the residents responding to a survey also noted that they would use the trails system more if it was more complete and connected. Saratoga Springs currently has approximately 11 miles of trails within the City, which corresponds to approximately 0.50 miles per 1,000 population. The existing trails are listed in [Table 2-7](#) and are also shown in [Figure 3-4](#). The trails are classified as urban, rural, multipurpose, and wilderness. There are also a number of Home Owners Association (HOA) maintained trails within the City. These trails may connect to the overall trail network providing greater access and mobility between neighborhoods and the trail system. The Utah Lakeshore trail runs, as the name suggests, along the shores of Utah Lake in the south west area of the City. It is the longest rural trail in the City at 3.3 miles in length. The Utah Lakeshore Trail is currently not a continuous trail as its construction has largely followed the development of the lakeshore area. The longest urban trail is the

Redwood Road Trail at 2.2 miles. This trail runs adjacent to Redwood Road and was first constructed as part of the Saratoga Springs Development (SSD) project. The Parks Master Plan makes the following recommendations for trails classifications:

- **Urban Trails:** 12' meandering concrete trails, along arterial roadways and canal parkways, ADA accessible and provide maintenance access.
- **Rural Trails:** 12' concrete for lakeside and riverside access, 8' concrete in riparian areas and 12' asphalt in upland areas, ADA accessible and provide maintenance access.
- **Multipurpose Trails:** 12' wide soft-surface for power line corridors, mountain trails, ATV trails, and equestrian use.
- **Wilderness Trails:** 12' asphalt trails in developed areas and 8-10' soft-surface trails in undeveloped areas, recreational use.

**Table 2-7 Existing Trails**

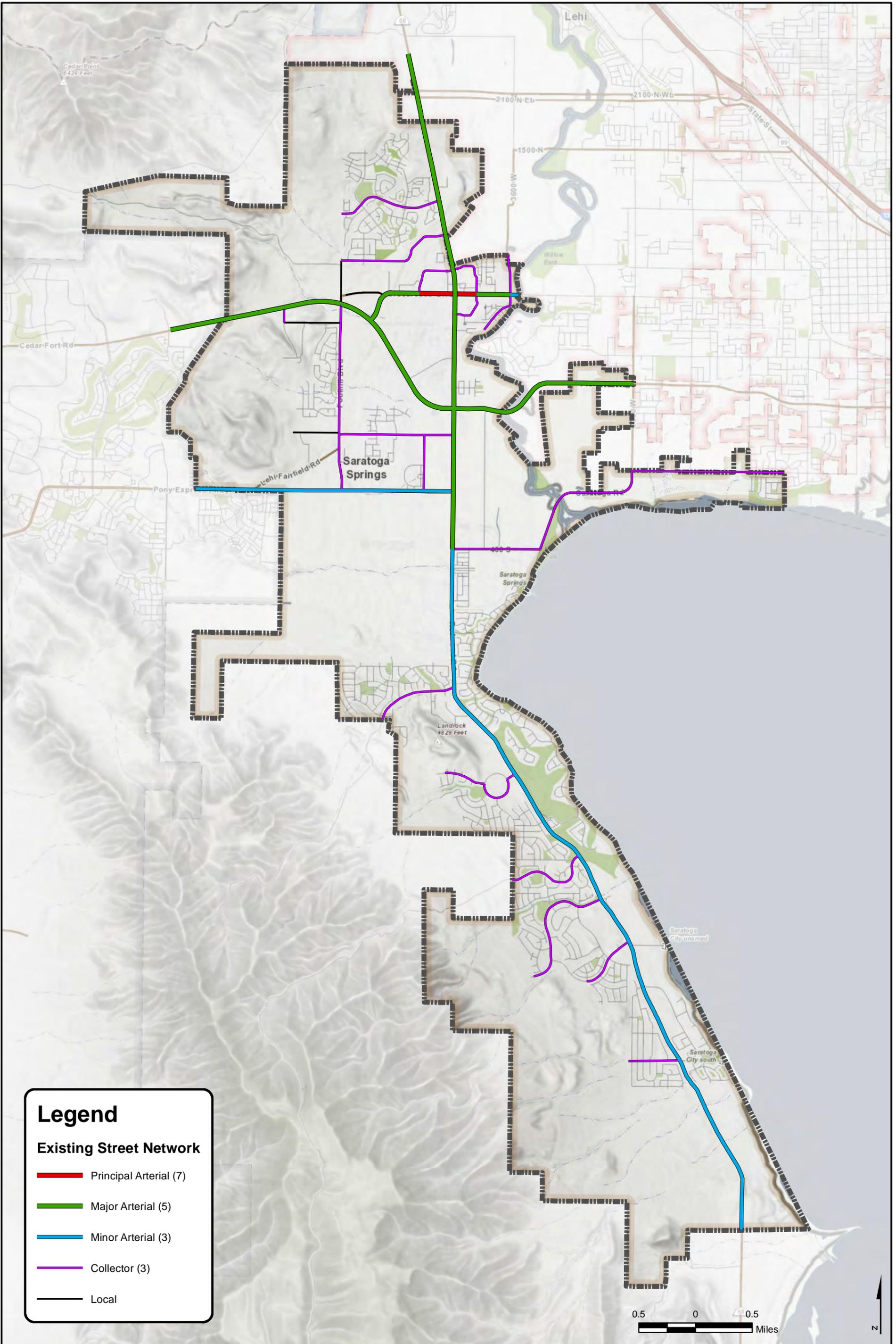
Trail Identification	Existing Miles	Trail Type
Utah Lake Shoreline Trail	3.3	Rural Trail
Redwood Road Trail	2.2	Urban Trail
800 West Trail	0.8	Rural Trail
Jordan River Trail East	0.4	Rural Trail
Welby Jacobs Canal Trail (Aspen Hills Trail)	0.9	Rural Trail
Harbor Parkway Trail	0.4	Urban Trail
Sage Hills Trail	0.5	Urban Trail
Canal Trail (Jacob Ranch Power Trail)	0.6	Wilderness Trail
Grand View Blvd. Trail	0.7	Urban Trail
Provo River Parkway	1.1	Rural Trail
Other	0.2	Varies
<b>Total</b>	<b>11.1</b>	

Source: Saratoga Springs Parks, Recreation, Trails, and Open Space Master Plan 2011

### 2.5.2 Transit

The Utah Transit Authority (UTA) is the provider of public transportation throughout the Wasatch Front. It operates fixed route buses, express buses, BRT lines, ski buses, light rail, and commuter rail. In this capacity, UTA is responsible for the operation of the transit network in Saratoga Springs. It is the responsibility of the City to promote transit operations and planning in order to provide public transportation options to its residents.

Saratoga Springs currently has a very limited transit system. One popular express route (Route 806) currently runs from Saratoga Springs to downtown Salt Lake City. This route is scheduled to be modified in December 2012 in conjunction with the UTA FrontRunner project. The new route 806 will run from Saratoga Springs to the Lehi FrontRunner station. Maps for both the existing and future route 806 can be found in the appendix of this report.

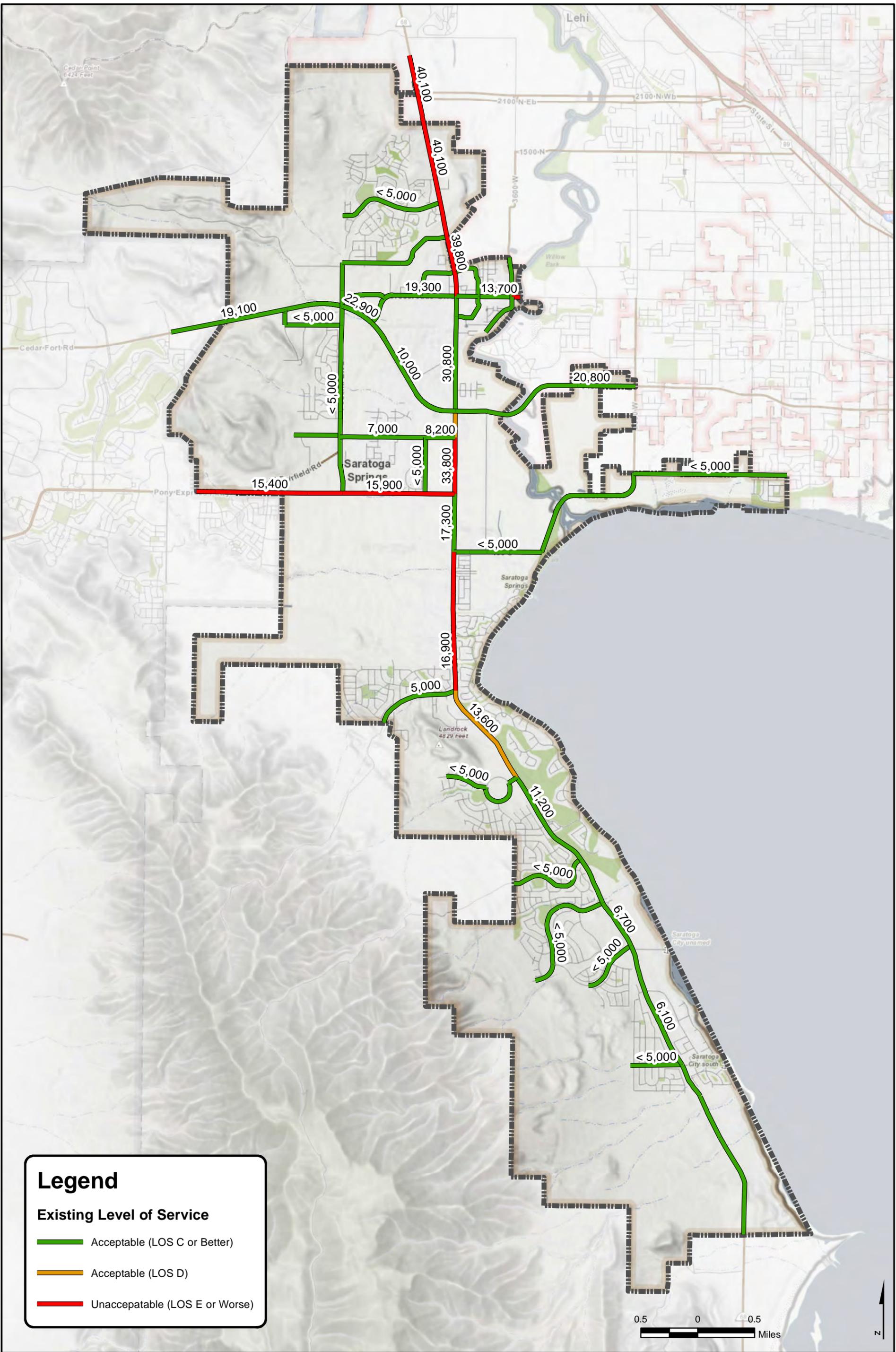


**Legend**

**Existing Street Network**

- Principal Arterial (7)
- Major Arterial (5)
- Minor Arterial (3)
- Collector (3)
- Local

C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\59 - Transportation Master Plan Update\GIS\Horrocks\Mk02\_Existing Functional Class.mxd, 3/4/2016 1:21:52 PM, kevinc



**Legend**

**Existing Level of Service**

- Acceptable (LOS C or Better)
- Acceptable (LOS D)
- Unacceptable (LOS E or Worse)

C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\59 - Transportation Master Plan Update\GIS\Horrocks\Mxd\03\_Existing\_Level\_of\_Service.mxd, 3/4/2016 2:52:20 PM, kevinc



## 3.0 Future Conditions

---

Future traffic patterns and the resulting operating conditions of a roadway network are directly related to land use planning and socioeconomic conditions. As traffic is not restricted to the Saratoga Springs area, and many of the roadways within the City act as regional east-west roads linking Eagle Mountain and Lehi, the socioeconomic and land use data in the neighboring cities must also be considered when projecting future traffic conditions within the City. Thus, socioeconomic information was obtained from Mountainland Association of Governments (MAG).

### 3.1 Future Socioeconomic Conditions

The projected socioeconomic data used in this study comes mostly from the MAG travel demand model which is based upon the best available statewide data provided by the Governor’s Office of Planning and Budget (GOPB). This data was supplemented and verified using the data provided by Zion’s Bank as part of the IFFP and the City planning department in the form of the adopted General Plan Land Use map and Zoning map (see [Figure 3-1](#)). This information is considered the best available for predicting future travel demand; however, land use planning is a dynamic process and the assumptions made in this report should be used as a guide and should not supersede other planning efforts.

Based on the current land use, zoning, demographics, and growth patterns, Saratoga Springs is expected to grow to approximately 79,000 residents by the year 2040 ([Table 3-1](#)). This forecasted growth will place increased pressure on the City’s infrastructure including its street system. Saratoga Springs is also committed to increasing its commercial, office, and retail base providing greater opportunity for its residents to live, work, and play in the City. This growth will have considerable impact on traffic volumes. The projected traffic volumes for the planning year 2040 show a corresponding increase with traffic growth of up to 550 percent on many of the City’s arterial and collector roads.

**Table 3-1 Saratoga Springs City Projected Population Growth**

<b>Year</b>	<b>Population</b>	<b>Population Change</b>	<b>Population Change %</b>
2000	1,003	-	-
2006	10,750	9,747	972%
2010	17,781	7,186	65%
2020	33,514	15,733	88%
2030	58,496	24,982	75%
<b>2040</b>	<b>78,987</b>	<b>20,491</b>	<b>35%</b>

Source: Governor’s Office of Planning and Budget & Mountainland Association of Governments

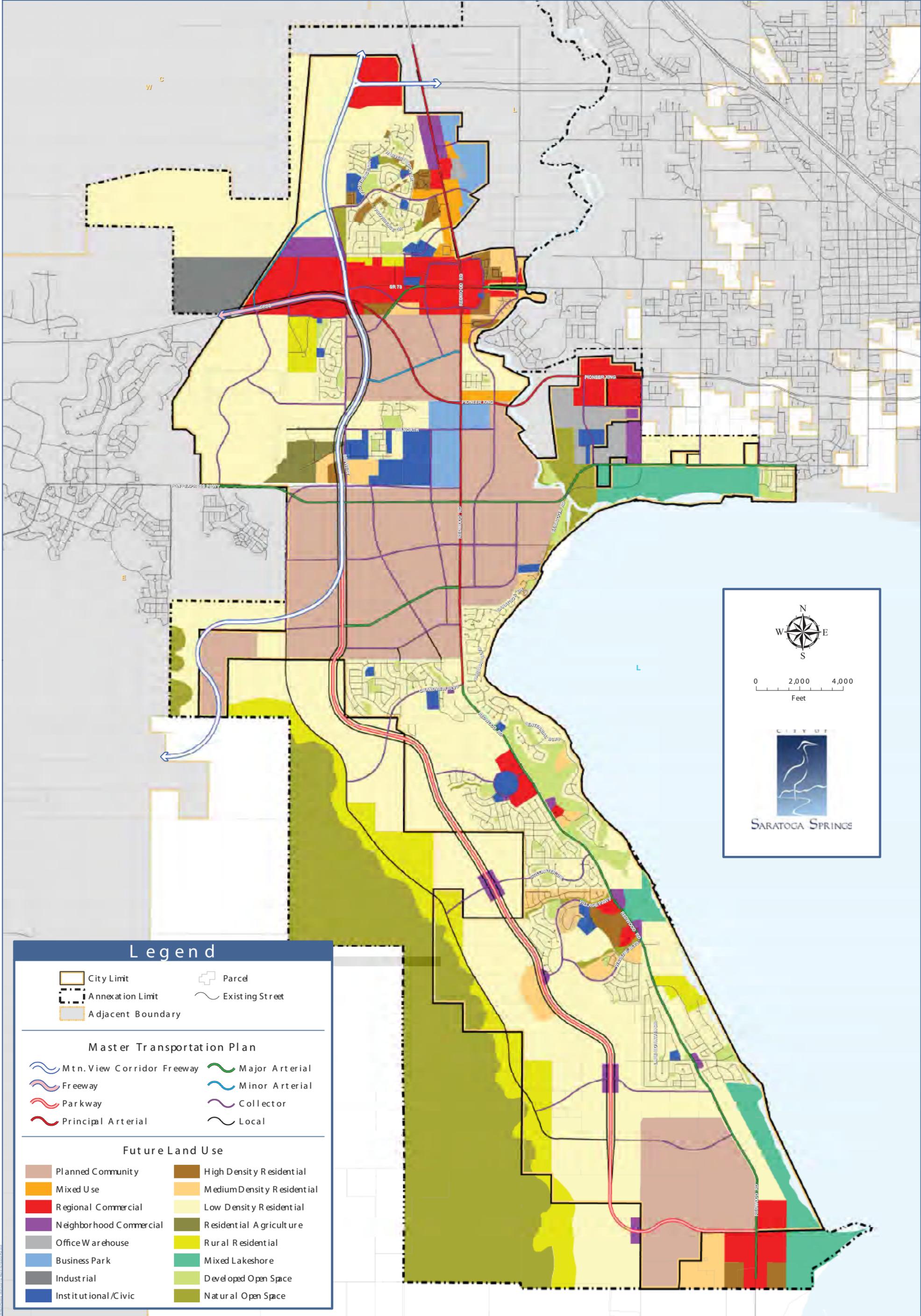
Saratoga Springs aims to plan for and encourage responsible and sustainable growth in the City. Today’s transportation system should not only accommodate existing travel demands, but should also have built-in capacity to account for the demand which will be placed on the system in the future. While considering the socioeconomic data used in this report and the anticipated growth in the City, some precautions should be considered. First, the TAZ specific socioeconomic data only approximates the boundary conditions of the City and is based on data provided by MAG and the City’s planning documents. Second, actual values may vary somewhat as a result of the large study area of the regional travel demand model which includes the unincorporated areas around Saratoga Springs. Therefore the recommendations in this report represent a planning level analysis and should not be used for construction of any project without review and further analysis.

As the designated Metropolitan Planning Organization (MPO) for the Utah Valley area, MAG, organized in 1972, is largely responsible for regional transportation planning in the three county region of Summit, Wasatch and Utah counties. In this capacity, MAG produces a 30 year Long Range Transportation Plan (LRTP) and a 5 year Transportation Improvement Program (TIP). Both of these products are constrained by reasonably available revenue. As a result, the LRTP does not always include the regional facility improvements which are planned by local communities. This TMP makes great efforts to supplement the regional plans produced by MAG and to provide direction for future regional planning efforts that will include Saratoga Springs City.

### 3.2 Future Land Use

In its General Plan Land Use Map, the City has sites planned for low, medium, and high density residential, neighborhood and regional parks, schools, commercial and office uses as well as large research and development properties. There are also a number of planned communities in the General Plan Land Use Map which are currently in the planning phase. These areas were identified and reviewed individually in addition to the MAG land use assumptions.

Figure 3-1 General Land Use Plan



**Legend**

- City Limit
- Annexation Limit
- Adjacent Boundary
- Parcel
- Existing Street

**Master Transportation Plan**

- Mtn. View Corridor Freeway
- Freeway
- Parkway
- Principal Arterial
- Major Arterial
- Minor Arterial
- Collector
- Local

**Future Land Use**

- Planned Community
- Mixed Use
- Regional Commercial
- Neighborhood Commercial
- Office Warehouse
- Business Park
- Industrial
- Institutional/Civic
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Residential Agriculture
- Rural Residential
- Mixed Lakeshore
- Developed Open Space
- Natural Open Space

### 3.3 Travel Model Development

Projecting future travel demand is a function of projected land use and socioeconomic conditions. The MAG travel demand model was used to predict future traffic patterns and travel demand. The travel demand model was modified to reflect better accuracy through the Saratoga Springs area in by creating smaller TAZ and a more accurate and extensive roadway network. Existing conditions were simulated in the travel demand model and compared to the observed traffic count data to get a reasonable base line for future travel demand. Once this effort was completed, future land uses and socioeconomic data was input into the model to predict the roadway conditions for the design year 2040. 2040 was selected as the design year in order to be consistent with the MAG planning process. The 2040 Metropolitan Transportation Plan (available at [www.mountainland.org](http://www.mountainland.org)) was adopted by the Mountainland MPO Regional Planning Committee on May 5, 2011. The transportation plan is a guide to maintain and enhance the regional transportation system for urbanized Utah County.

### 3.4 Projected Traffic Volumes and Conditions

The resulting outputs of the travel demand model were made up of traffic volumes on all of the classified streets in the City and surrounding area. This data was used to identify the need for future roadway improvements to accommodate the projected growth in the City. A number of modeled alternatives were reviewed by the Planning Commission and City Council to establish the recommended roadway network for 2040. The following three scenarios were analyzed in detail to assess the travel demand and resulting network performance in the City:

#### 3.4.1 Existing Conditions

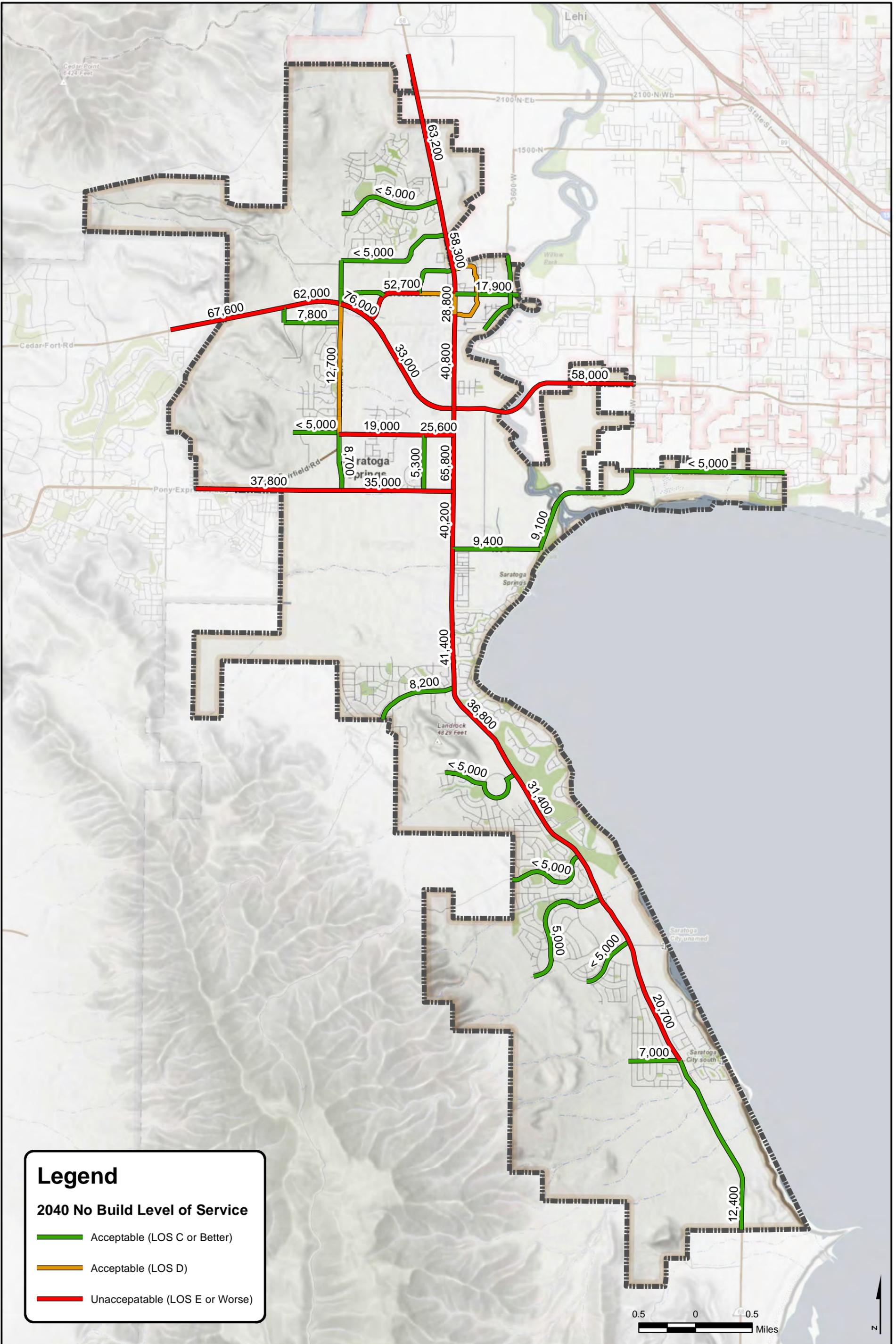
The 2016 existing conditions analysis relied heavily on existing traffic count data on the major roadways in the City. This data included daily traffic volumes and peak hour traffic volumes. This analysis provided the opportunity to identify any existing deficiencies in the system and to provide a baseline for future demand. The existing roadway conditions have been previously identified in [Figure 2-3](#).

#### 3.4.2 No-Build Conditions

A no-build scenario is intended to show what the roadway network would be like in the future if no action is taken to improve the City roadway network. The travel demand model was again used to predict this condition by applying the future growth and travel demand to the existing roadway network. As shown in [Figure 3-2](#), if no improvements are made to Saratoga Springs' transportation infrastructure, projected traffic volumes for the planning year 2040 will significantly lower the LOS of many of the major streets throughout the City. Improvements will need to be made as growth occurs in order to preserve the quality of life for Saratoga Springs' residents and to maintain an acceptable LOS on City streets and intersections. These improvements will also provide a sound street system that will support the City's growing economic base. LOS for signals is very difficult to predict so far out into the future. It is expected that the signals in the City will continue to operate at LOS D or better as traffic patterns change and new roadways are added to the network. It is recommended that the intersections in the City be regularly monitored and signal timings adjusted as needed to maintain acceptable operating conditions.

### 3.4.3 Recommended 2040 Roadway Conditions

Areas of future concern in Saratoga Springs' street system were identified using traffic models of existing and projected traffic volumes to evaluate existing and projected level of service conditions. A recommended roadway network was created for the planning year 2040. This network was developed through a series of iterations with input from City staff, planning commission and city council. The final recommended roadway network seeks to balance accommodating demand through the year 2040 with fiscal responsibility while also considering the planning efforts of MAG and the neighboring cities. Many of the major land owners and neighboring jurisdictions to the City, including Suburban Land Reserve (SLR), Inc., SITLA, Lehi City, Eagle Mountain City, and UDOT were consulted and their input welcomed and considered during this planning process. The culmination of this analysis as well as the efforts of the Planning Commission and City Council is shown as a recommended 2040 roadway network in [Figure 3-3](#). It is expected that the roadway network recommended in this document will perform at an acceptable LOS through the planning year 2040. This will help in preserving the quality of life and economic vitality of the City. The specific details of the recommended roadway network are discussed more extensively in [Section 4.0](#).

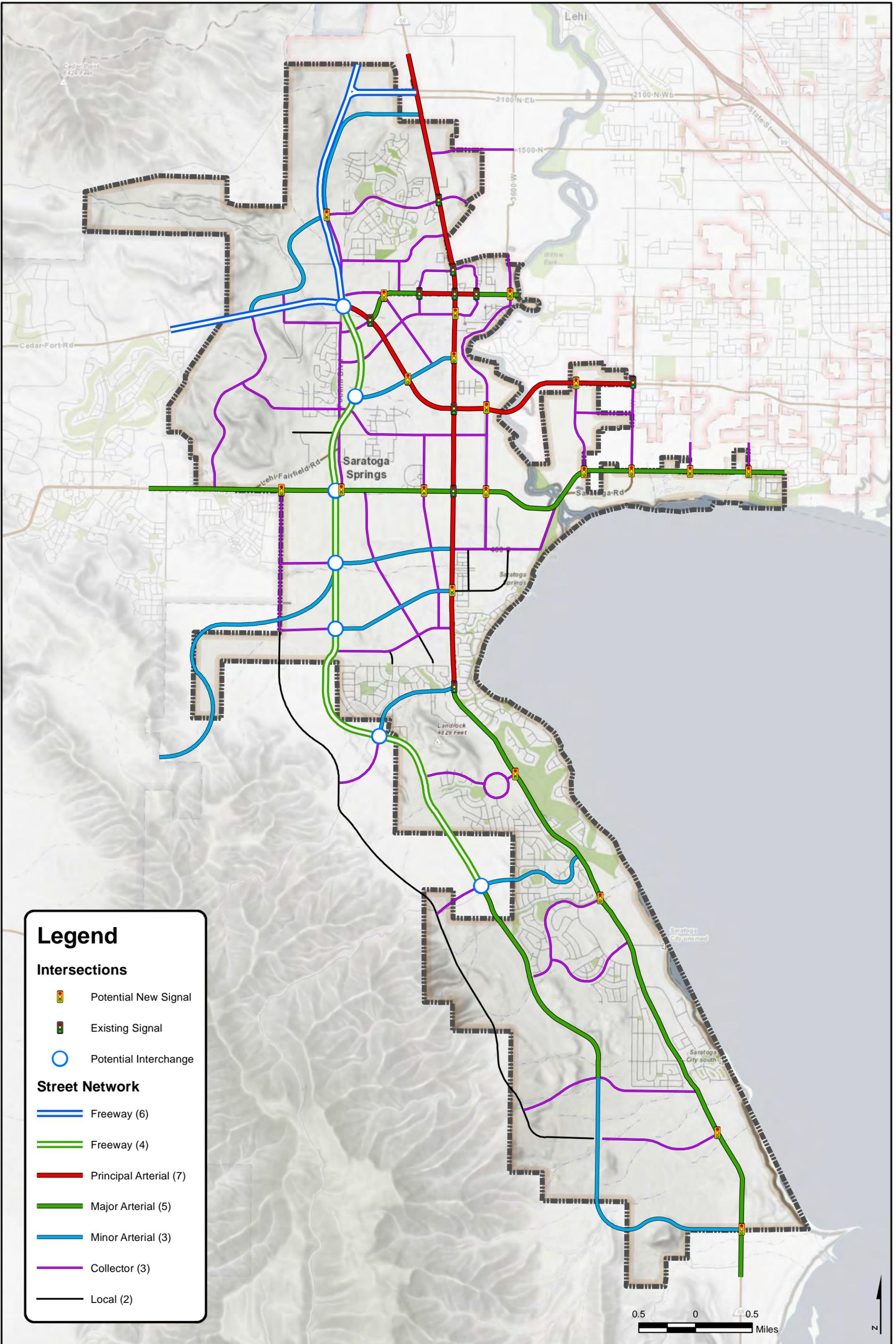


**Legend**

**2040 No Build Level of Service**

- Acceptable (LOS C or Better)
- Acceptable (LOS D)
- Unacceptable (LOS E or Worse)

C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\99 - Transportation Master Plan Update\GIS\Horrocks\Mxd\04\_2040 No Build Level of Service.mxd, 1/18/2016 3:01:32 PM, kevinc



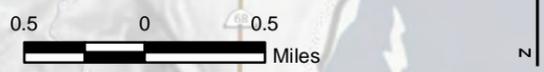
**Legend**

**Intersections**

-  Potential New Signal
-  Existing Signal
-  Potential Interchange

**Street Network**

-  Freeway (6)
-  Freeway (4)
-  Principal Arterial (7)
-  Major Arterial (5)
-  Minor Arterial (3)
-  Collector (3)
-  Local (2)



C:\2013\1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\59 - Transportation Master Plan Update\GIS\Horrocks\Mxd\05\_Future\_Network.mxd, 2/17/2016 1:37:31 PM, kevinc

## 3.5 Alternative Transportation Modes

Accommodating alternative modes of transportation than the passenger vehicle is a vital consideration when planning a livable and sustainable community. As a vibrant and growing city it is important for Saratoga Springs to continue to plan for improved transit, trails, and pedestrian facilities. These facilities, whilst improving the overall quality of life in the City, will also aid in relieving congestion and increasing the lifespan of the City's roadway network.

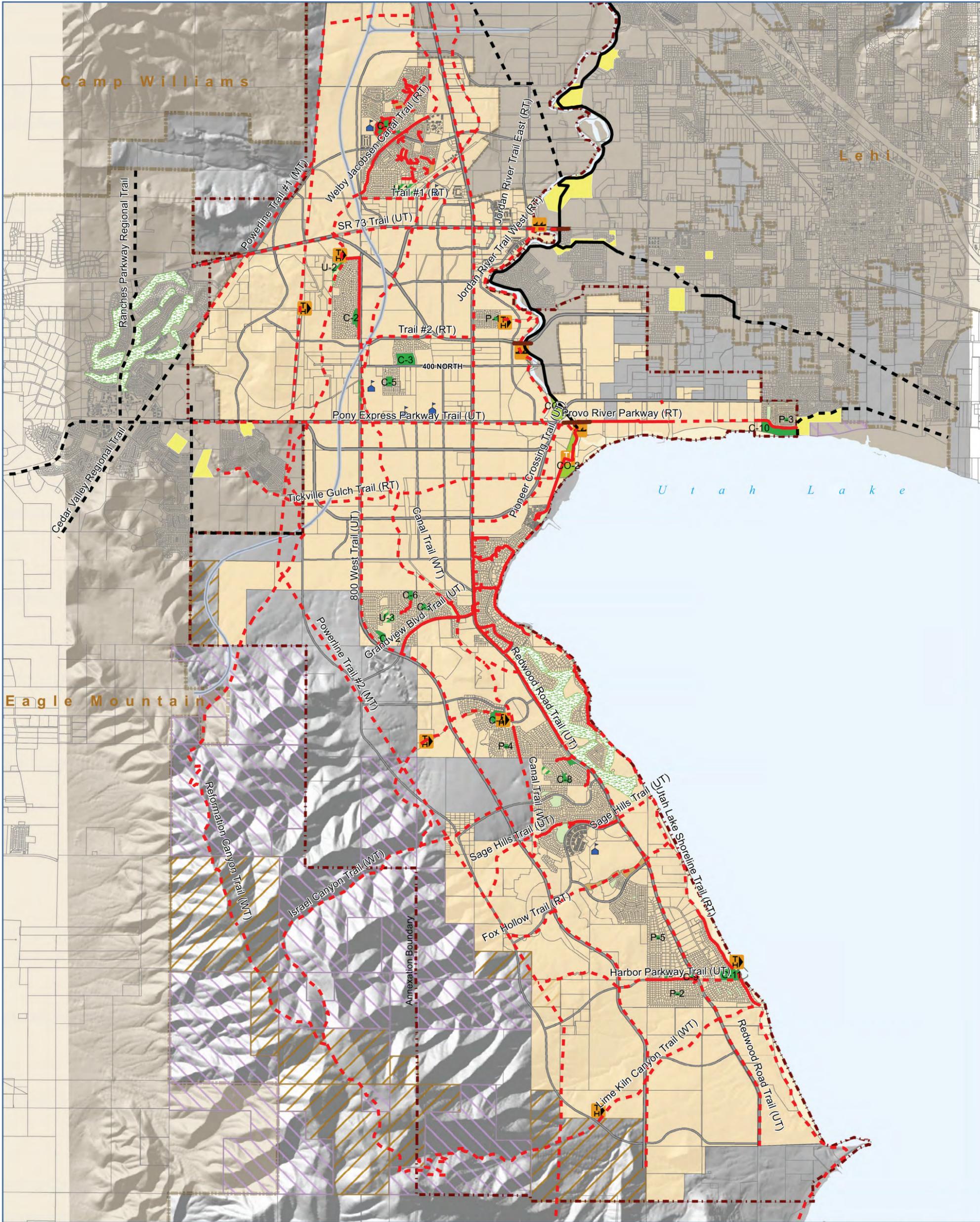
### 3.5.1 Non-Motorized Traffic

Pedestrian safety is an important feature of the TMP. The recommended typical roadway sections include an 8 foot wide side-walk (5 foot on collector and local streets) with park strips varying from 9 to 16 feet. These figures are based on the classification of the roadway and serve to provide a buffer for pedestrians from vehicular traffic creating a more sustainable and walkable community.

The Parks, Recreation, Trails, and Open Space Master Plan should be used to guide the transportation planning efforts in terms of trails and pedestrian facilities in the future. Specifically, the trails portion of the master plan includes several recommendations, which are reiterated in the TMP as priorities for the future planning in the City. The recommendations in the Trails Master Plan can be categorized into two main ideas:

- **Completing the existing trails network by filling in existing gaps**
- **Constructing new trails in areas where the trails system is not connected because growth has not occurred there yet**

In order to create a more connected and complete trails system each of the non-local roads that appear on both the Transportation Master Plan and the Trails Master Plan (shown in [Figure 3-4](#)) will include a 5' bicycle lane on each side of the road. This will provide a system where bicyclists and pedestrians can be separated, an important and desirable safety enhancement. The Trails Master Plan recommends that an additional 60 miles of trails be constructed in the future to maintain the existing 0.62 miles per 1,000 population ratio in 2040. The design guidelines set forth in the Trails Master Plan should be followed when planning and constructing the additional trails. [Table 3-2](#) lists the proposed trail network for 2040. The largest project on the list is the construction of 8.2 miles of additional urban trail completing the Redwood Road Trail. This will extend the trail from its existing location adjacent to the Saratoga Springs Development to the City limits in both the north and south directions along Redwood Road. The largest completely new trail on the plan is the Powerline #2 trail at 6.1 miles. This is a multipurpose trail that will follow the power corridor on the west edge of the City. The largest rural trail project is the 800 West trail extension intended to add 7.3 miles to the existing trail which will continue the trail south along the future Foothill Parkway. There are also 7 miles of additional trail planned for the Canal wilderness trail.



**Legend**

- Trails**
- Existing Trailhead
  - Proposed Trailhead
  - Proposed Canoe Put In/Take Out
  - Existing
  - Proposed
  - Existing (Lehi/Eagle Mtn.)
  - Proposed (Lehi/Eagle Mtn.)
  - Proposed Bridge
- Trail Types:** MT - Multi-purpose Trail, RT - Rural Trail, UT - Urban Trail, WT - Wilderness Trail
- Schools
  - County Park
  - Golf Course
  - Open Space
  - Private Park (HOA)
  - Unconstructed City Park
  - Public Park
  - Parks Outside of City
  - Federal Land
  - Utah Dept. of Natural Resources
  - Annexation Boundary

- Community Parks**
- C-1 Harvest Hills Park
  - C-2 Sunrise Meadows Park
  - C-3 Neptune Park
  - C-4 Jacob's Ranch Trialhead
  - C-5 Sunset Haven Park
  - C-6 Ponside Park (Benches)
  - C-7 Saratoga Hills Park
  - C-8 Summerhill Park
  - C-9 Wayman Park
  - C-10 Loch Lomond Park/Wetlands
  - C-11 Marina Park
  - C-12 Benches Nature Park

- Pocket Parks**
- P-1 Dalmore Meadows Park
  - P-2 Mountain Moon Park
  - P-3 Loch Lomond Park
  - P-4 Jacob's Ranch Park
  - P-5 Lake Vista Park
  - P-6 Panarama Park

- Unconstructed City Parks**
- U-1 Shay Park
  - U-2 Sunrise Meadows Park
  - U-3 Benches
- County Parks**
- CO-1 RC Airplane Park
  - CO-2 Inlet Park

Note: Park names are for ease of discussion only. Official park names are in process.



**Figure 3-4 Existing and Planned City Trails**  
Saratoga Springs Parks, Recreation, Trails, and Open Space Master Plan

15 Nov 2011



**Table 3-2 2040 Proposed Trail Network**

Trail Identification	Existing Miles	Proposed Miles	Total Miles	Trail Type
Utah Lake Shoreline Trail	3.3	4.0	7.3	Rural Trail
Redwood Road Trail	2.2	8.2	10.4	Urban Trail
800 West Trail	0.8	7.3	8.1	Rural Trail
Jordan River Trail East	0.4		0.4	Rural Trail
Jordan River Trail West		2.1	2.1	Rural Trail
Welby Jacobs Canal Trail	0.9	3.4	4.3	Rural Trail
SR 73 Trail		2.6	2.6	Urban Trail
Powerline Trail #1		1.4	1.4	Multipurpose Trail
Powerline Trail #2		6.1	6.1	Multipurpose Trail
Lime Kiln Canyon Trail		1.8	1.8	Wilderness Trail
Harbor Parkway Trail	0.4	1.4	1.8	Urban Trail
Sage Hills Trail	0.5	1.2	1.7	Urban Trail
Fox Hollow Trail		1.8	1.8	Rural Trail
Israel Canyon Trail		0.3	0.3	Wilderness Trail
Reformation Canyon Trail		0.5	0.5	Wilderness Trail
Canal Trail	0.6	7.0	7.6	Wilderness Trail
Grand View Blvd. Trail	0.7		0.7	Urban Trail
Pony Express Parkway Trail		2.8	2.8	Urban Trail
Pioneer Crossing Trail		1.3	1.3	Urban Trail
Tickville Gulch Trail		2.3	2.3	Rural Trail
Trail #1		0.8	0.8	Rural Trail
Trail #2		1.0	1.0	Rural Trail
Provo River Parkway	1.1	0.8	1.9	Rural Trail
Other	0.2	2.4	2.6	
<b>Total</b>	<b>11.1</b>	<b>60.5</b>	<b>71.6</b>	

Source: Saratoga Springs Parks, Recreation, Trails, and Open Space Master Plan 2011

### 3.5.2 Transit

Saratoga Springs does not and is not likely to operate and maintain its own transit system. The combined efforts of UTA, MAG, and the City will largely dictate the nature of a future expanded transit system. The City should be actively involved in promoting transit as a viable and attractive alternative transportation mode in the City. These planning and lobbying efforts will assist in procuring the necessary funding and support to develop, implement, and maintain a sustainable transit system.

The existing UTA bus line Route 806 Eagle Mountain/Saratoga Springs to SLC Express is unlikely to continue to meet the growing needs of the City in the future and may be supplemented by an additional express bus specifically between Saratoga Springs and Salt Lake City. As more population floods into the

City in the future, the need for an express bus for commuters travelling to and from the south end of Utah County (Orem-Provo) should also be considered. Additional bus routes will likely be added by UTA as the city expands and should be restricted to collectors and arterial streets.

Due to the relatively large distances between the residential developments to the north and south and the commercial/retail center at Commerce Drive, a local bus system connecting these two areas may be beneficial as time progresses and population increases. This would allow those who prefer public transit to commute from the residential south to either work or shop in the commercial/retail district. As more commercial/retail zones develop in the City, further local bus routes should be considered linking these areas. A local bus system also allows more flexibility for captive riders (those with no other means of transportation) to live, play, and work/shop at a greater distance increasing their housing and employment options.

The MAG regional transit plan for 2040 was released in May 2011 and shows a planned Bus Rapid Transit (BRT) line providing a transit connection from Eagle Mountain to Lehi by the year 2030. BRT is a relatively new public transportation alternative in Utah. In July 2008, UTA opened its first MAX BRT line. The line currently operates along 3500 South between the 3300 South Light Rail station and Magna. BRT is often referred to as light rail with rubber tires as it can and often does operate in a dedicated guide way, separate from traffic. BRT offers limited stops and traffic signal priority, significantly decreasing route travel times. In the immediate future, UTA will begin operating additional BRT routes along 5600 West in Salt Lake County and along University Parkway on Orem. Several other BRT routes are identified in the MAG regional transit plan including one in Saratoga Springs. The MAG transit plan can be seen in [Figure 3-6](#).

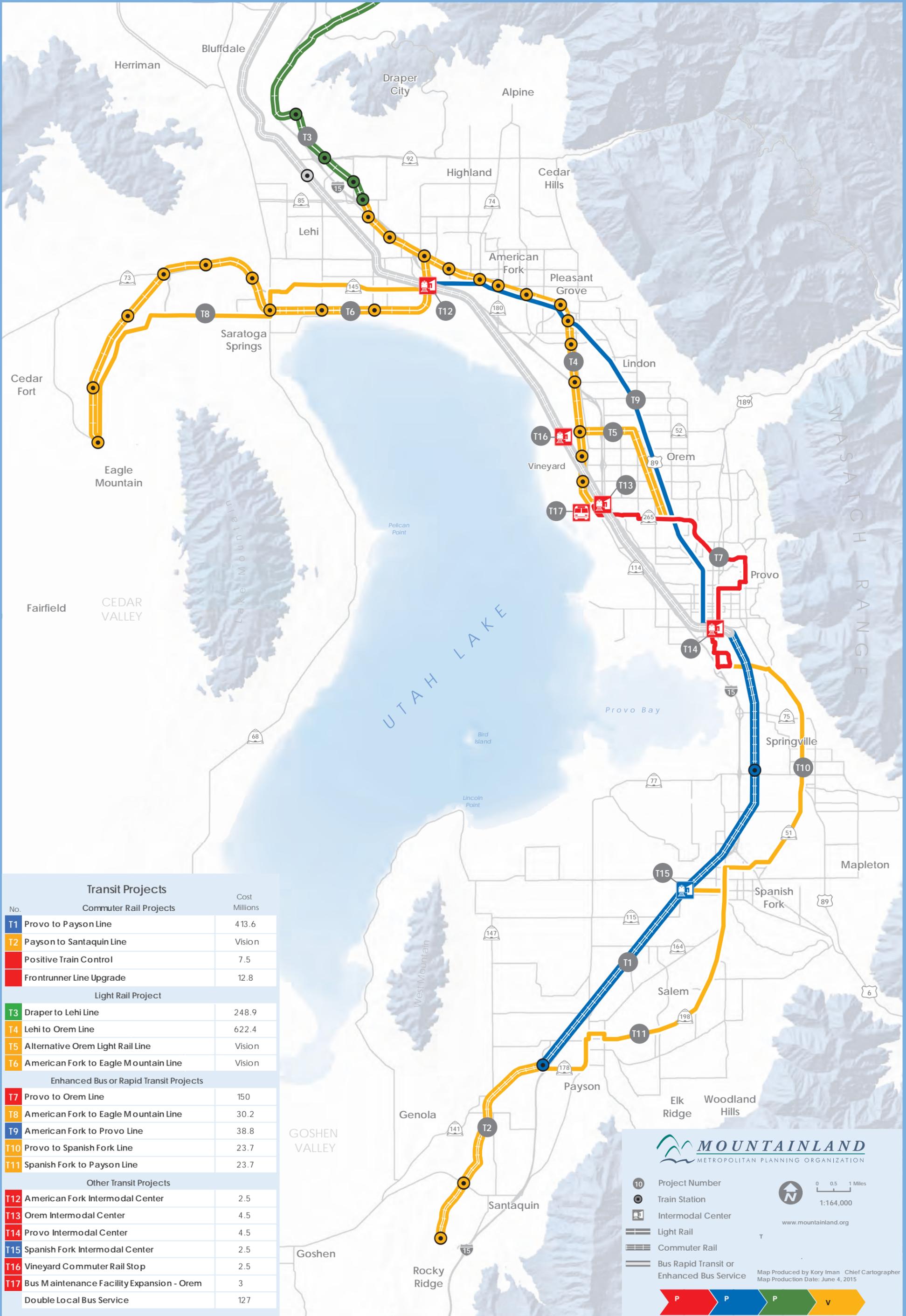
Light Rail (TRAX) has been operating in Salt Lake County for more than a decade. There are currently three lines in operation with two more under construction and are expected to open before 2015. There are no existing or under construction TRAX lines in Utah County. According to the MAG regional plan, the first TRAX line in Utah County will be an extension of the planned Draper line (expected to be completed in 2015) and is not anticipated to come online before 2030. Due to the importance of a transit network to Saratoga Springs, and at the request of several major land holders in the City, a TRAX line is being proposed as part of the TMP. This line will connect the Draper line extension to Saratoga Springs. The City is committed to promoting this TRAX line and coordinating with landowners, UTA and MAG to implement this transit improvement. [Figure 3-5](#) shows a concept design for the Pioneer Crossing Extension including a TRAX line and frontage roads. The four lane mainline would consist of 12' travel lanes (2 in each direction) separated by a 12' landscaped median. To the left of the travel lanes, (in the case of the Pioneer Crossing extension the south side) is a 30' right-of-way reserved for light rail TRAX trains or commuter rail (FrontRunner). This would be room enough to provide one track in each direction. An 8' trail is provided on the north side of the road (right in the diagram) in another 30' right-of-way. On each side of the road is an 18' frontage road with on street parking what will provide access to adjacent properties.

**Figure 3-5 Concept Pioneer Crossing Extension Cross-Section**



The most recent addition to the Utah statewide transportation system is UTA’s FrontRunner commuter rail line. The line connects Salt Lake, Davis, and Weber counties with stations in Salt Lake City, Woods Cross, Farmington, Layton, Clearfield, Roy, and Ogden. Each station has a connection to the TRAX and bus networks. FrontRunner is a push/pull locomotive system, which can travel up to 79 mile per hour. Construction is currently underway on an extension to the line (scheduled to open early 2013) that will expand the service from Salt Lake City to Provo. Future planned expansions will add service to Brigham City in the north and Payson in the South. Part of the MAG *Vision* plan which extends beyond 2040 includes a FrontRunner line connecting Saratoga Springs, Eagle Mountain, Cedar Fort, and Fairfield to the Lehi and Santaquin planned FrontRunner stations.

An essential consideration of a good transportation system is the ability to seamlessly transfer from one transportation mode to the next. This could be from car to commuter rail, bike to bus, or foot to light rail. Each of these transfers must be accomplished efficiently in order for a transit system to be attractive to users. One way to accomplish exceptional connectivity is with an intermodal center. Intermodal centers are transit hubs where multiple modes of transportation converge and passengers enter using one form of transportation and leave by another. Transfers can occur between as many modes as the physical space can permit. As part of the TRAX line proposal, the City is also planning an intermodal hub close to the Pioneer Crossing Extension that may provide a connection to each of the transportation modes planned in the City.

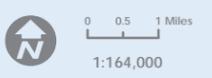


### Transit Projects

No.	Commuter Rail Projects	Cost Millions
T1	Provo to Payson Line	413.6
T2	Payson to Santaquin Line	Vision
	Positive Train Control	7.5
	Frontrunner Line Upgrade	12.8
Light Rail Project		
T3	Draper to Lehi Line	248.9
T4	Lehi to Orem Line	622.4
T5	Alternative Orem Light Rail Line	Vision
T6	American Fork to Eagle Mountain Line	Vision
Enhanced Bus or Rapid Transit Projects		
T7	Provo to Orem Line	150
T8	American Fork to Eagle Mountain Line	30.2
T9	American Fork to Provo Line	38.8
T10	Provo to Spanish Fork Line	23.7
T11	Spanish Fork to Payson Line	23.7
Other Transit Projects		
T12	American Fork Intermodal Center	2.5
T13	Orem Intermodal Center	4.5
T14	Provo Intermodal Center	4.5
T15	Spanish Fork Intermodal Center	2.5
T16	Vineyard Commuter Rail Stop	2.5
T17	Bus Maintenance Facility Expansion - Orem	3
	Double Local Bus Service	127



10 Project Number  
● Train Station  
■ Intermodal Center  
▬ Light Rail  
▬ Commuter Rail  
▬ Bus Rapid Transit or Enhanced Bus Service



www.mountainland.org

Map Produced by Kory Iman Chief Cartographer  
Map Production Date: June 4, 2015





## 4.0 Alternatives Evaluation and Recommendations

After evaluating the existing and future conditions, several recommendations to meet future travel demand are outlined in this section.

### 4.1 Roadway Functional Classification

A major reason for transportation planning is to provide adequate transportation solutions for connectivity with the surrounding region while at the same time preserving the quality of life of the residents in the City. The key to maintaining this balance exists in the ability to adequately plan for major corridors that minimize through traffic in neighborhoods, while at the same time coordinating land use and transportation plans that capitalize on the efficient movements of people and goods. To accomplish this objective, this TMP defines a hierarchy of streets known as a Functional Classification of Streets. The following street classifications have been selected by Saratoga Springs for inclusion in the TMP:

- Freeway
- Parkway
- Principal Arterial
- Major Arterial
- Minor Arterial
- Collector
- Local Road

Each of these roadway classifications has a specific purpose and function. Access and mobility are competing functions. This recognition is fundamental to the design of roadway systems that preserve public investments, contribute to traffic safety, reduce fuel consumption and vehicle emissions, and do not become functionally obsolete. Suitable functional design of the roadway system also preserves the private investment in residential and commercial development.

A typical trip on an urban street system can be described as occurring in identifiable steps. These steps can be sorted into a definite hierarchy with respect to how the competing functions of mobility and access are satisfied. For example, the primary purpose of an arterial street is to move large volumes of traffic at higher speeds and provide access to collector roads and higher density retail and commercial land uses. Some key arterial streets that currently traverse the City of Saratoga Springs include Redwood Road, Pioneer Crossing, and SR-73. At the low end of the hierarchy are local streets that provide good access to abutting properties, but provide limited opportunity for through movement. Collector roads provide a transition between arterials and local roadways by providing both access and traffic moving capacity.



# SARATOGA SPRINGS

## Transportation Master Plan

2016

Examples of existing collector roads within the City include Harvest Hills Blvd or Parkway Blvd. Collector type facilities serve moderate traffic volumes at moderate speeds. At the highest end of the hierarchy are freeway facilities that provide good mobility by limiting and controlling access to the roadway, thereby reducing conflicts that slow the flow of through traffic.

Roadway specialization simply means using each individual street facility to perform the desired mix of functions of access or movement. This is accomplished by classifying highways with respect to the amount of access or mobility they are to provide and then identifying and using the most effective facility to perform that function.

Many of the major streets in Saratoga Springs pass through residential areas with homes fronting the roadways. The typical street section (or street width) has been designed to lessen the impacts of needed roadway widening improvements to these homes. The typical cross-sections and configurations showing total right-of-way width, pavement width, number of travel lanes, and side treatments (such as sidewalk and park strip) are illustrated in [Figure 4-1](#).

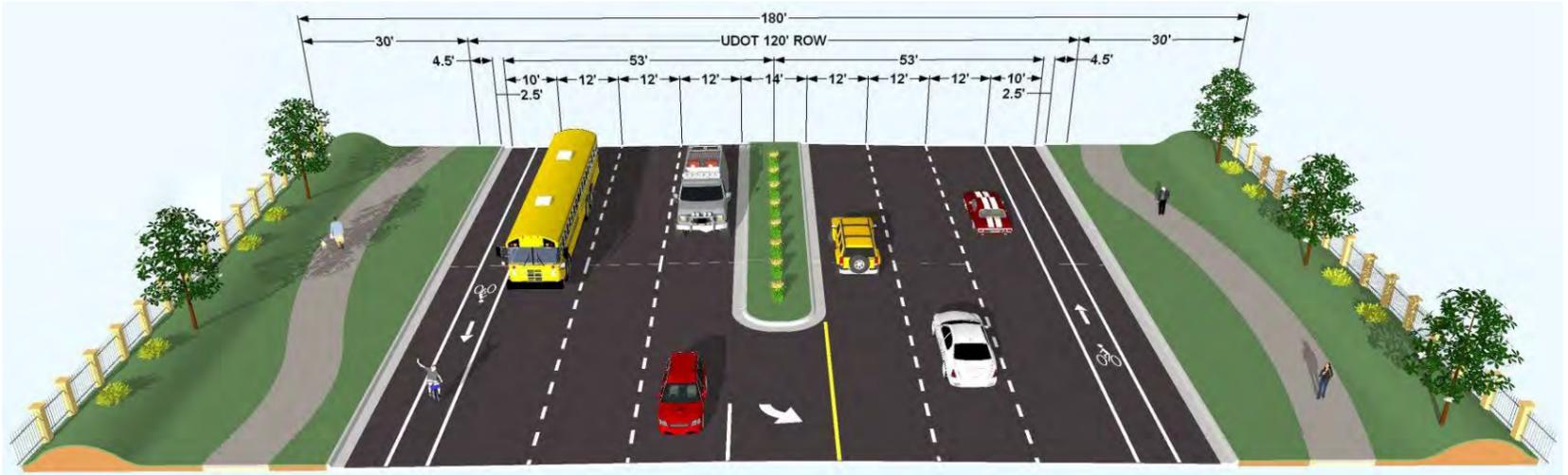
Impacts to adjacent properties can be limited by applying minimal typical sections to stretches of roadway between intersections. Typically, intersections are choke points in a traffic system. Capacity can be maximized by providing sufficient left and right turn pockets to accommodate at least the average expected peak hour queue as well as lane widths at intersections. Treatments at intersections are discussed further in the section below entitled Intersection Improvements. Pedestrian and bicycle traffic should also be considered in the design of major roadways as discussed below.

The major arterial roadways that service vehicles traveling to and from Eagle Mountain and east Utah County are predominantly used by through travelling traffic that do not originate or terminate their trips in Saratoga Springs. These high traffic volumes will continue to strain Saratoga Springs' east-west traffic facilities, particularly as population continues to increase in Lehi and Eagle Mountain.

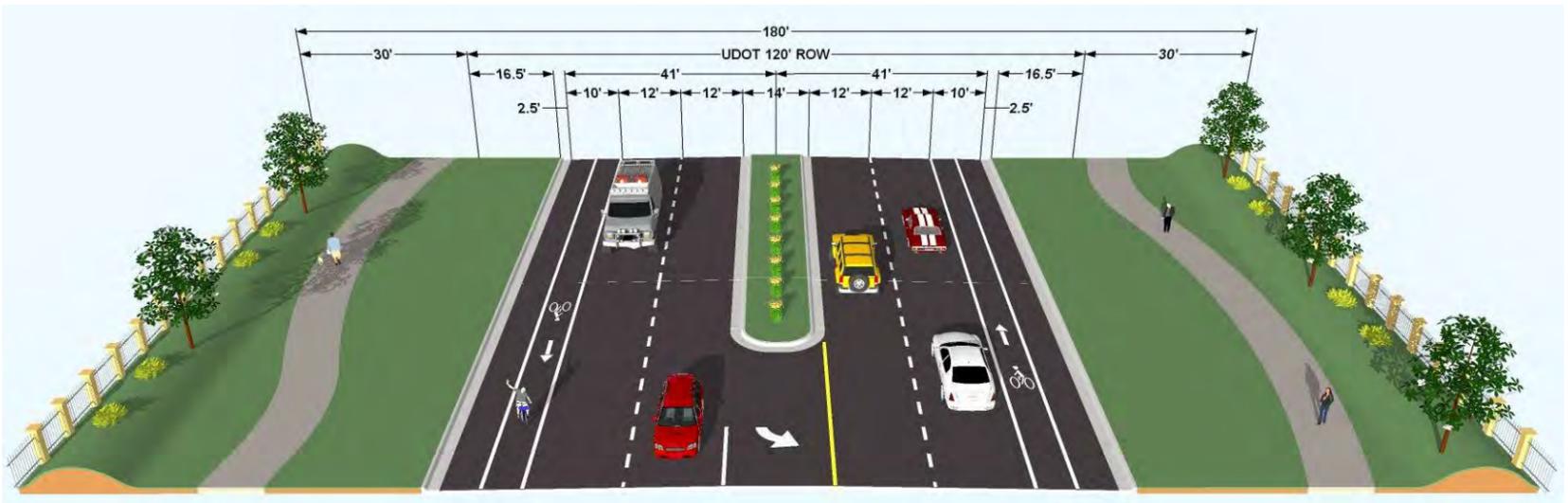


Figure 4-1 Roadway Typical Sections

### 7-Lane Principal Arterial



### 5-Lane Major Arterial



### 3-Lane Minor Arterial

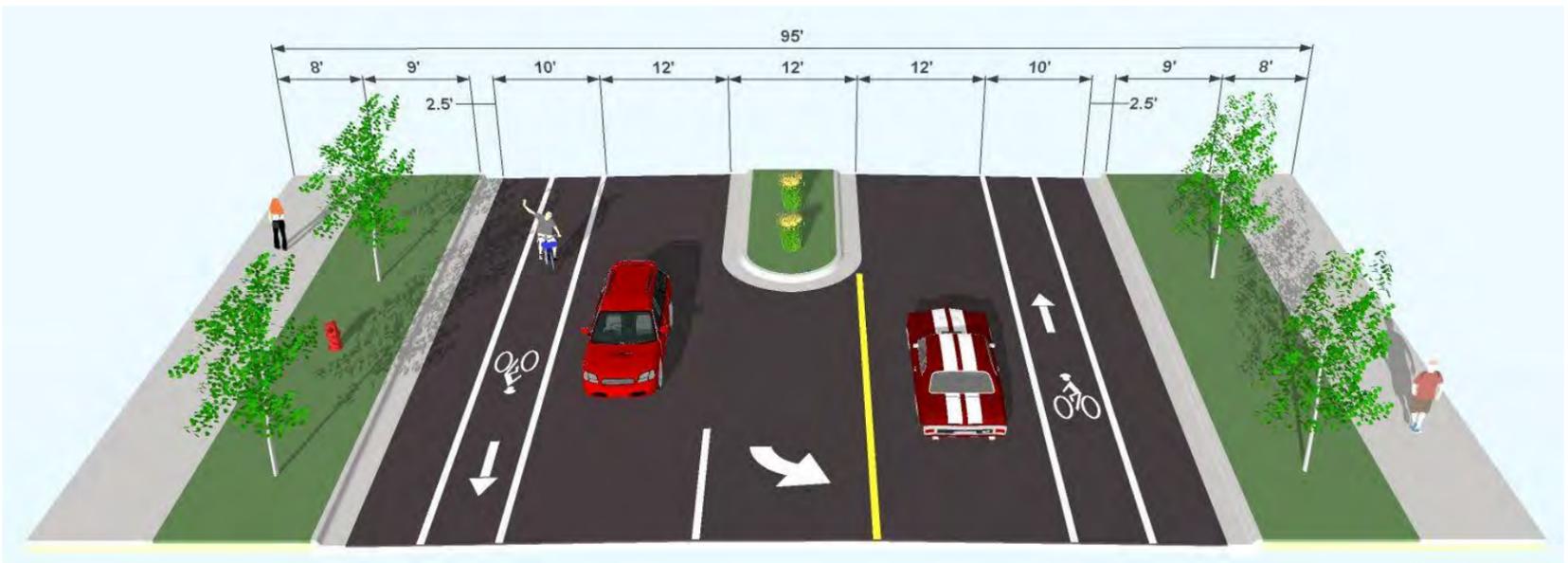
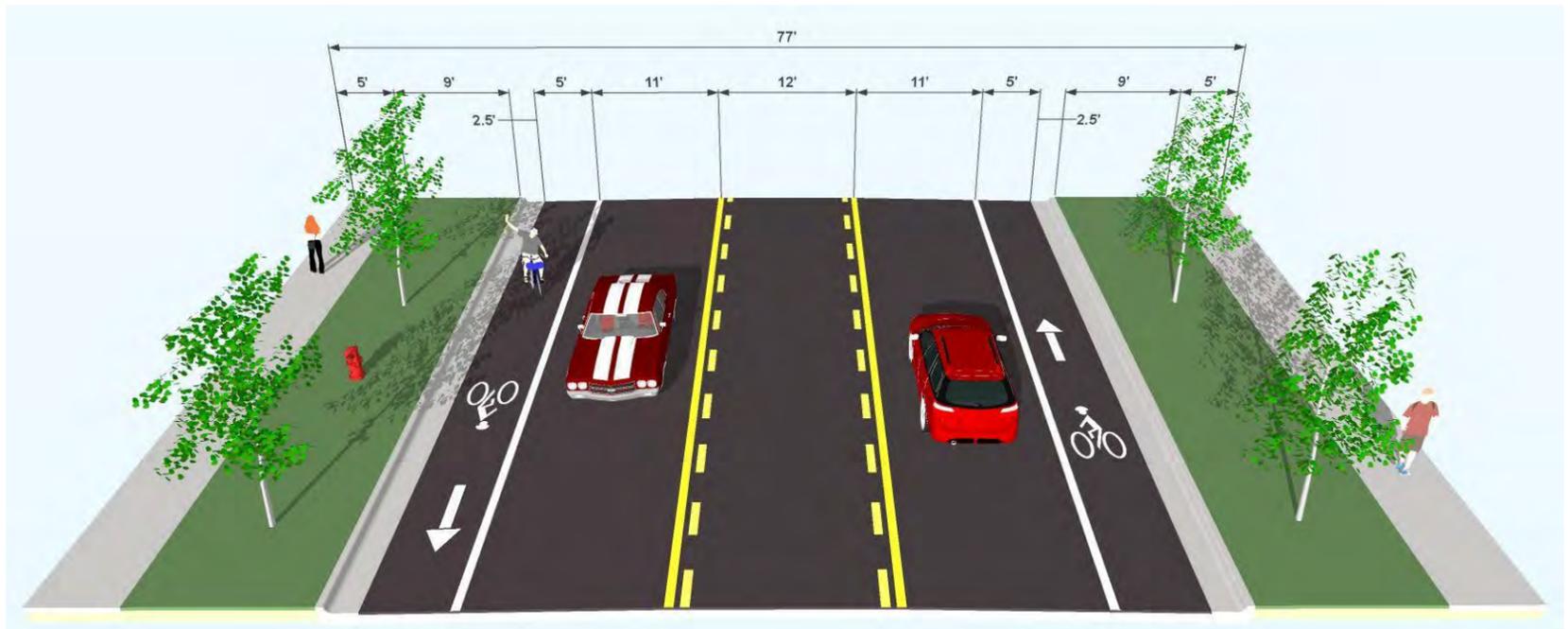
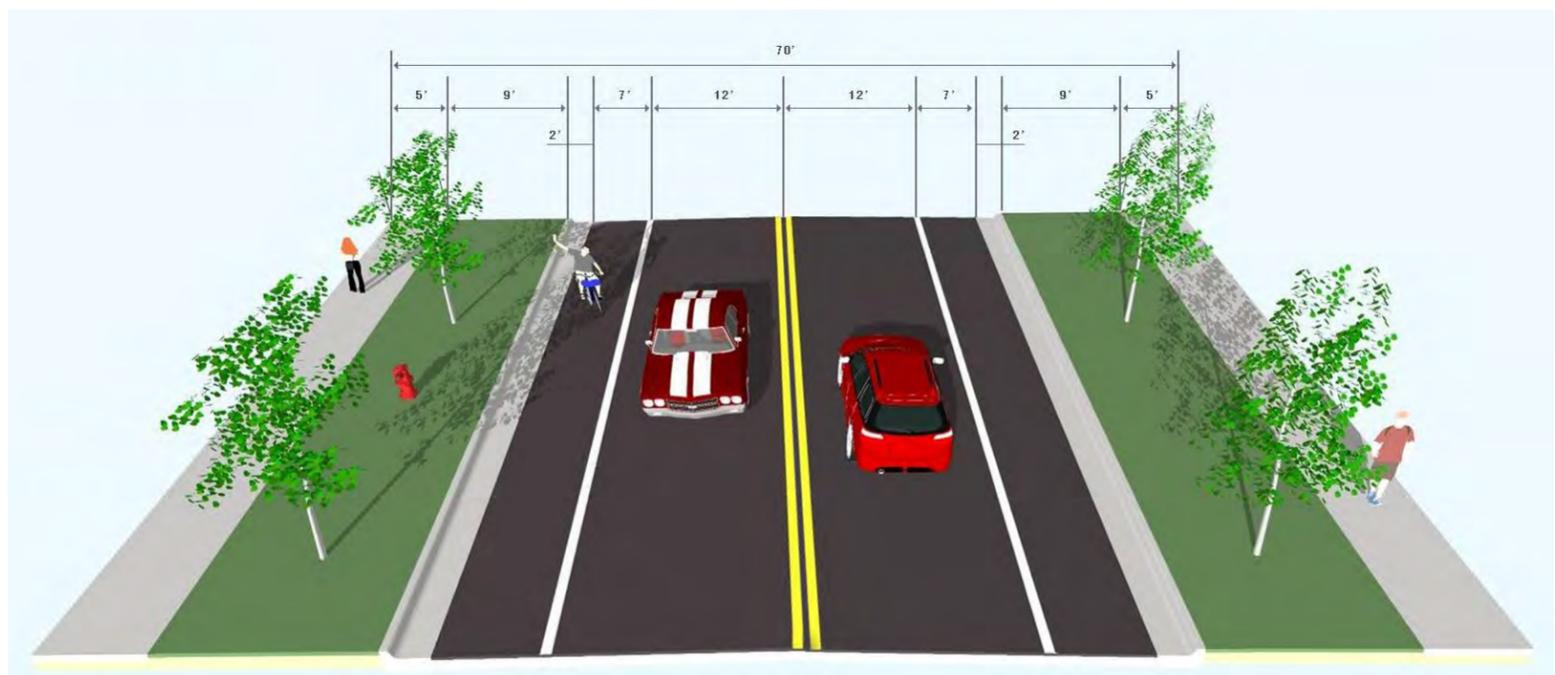


Figure 4-1 Continued

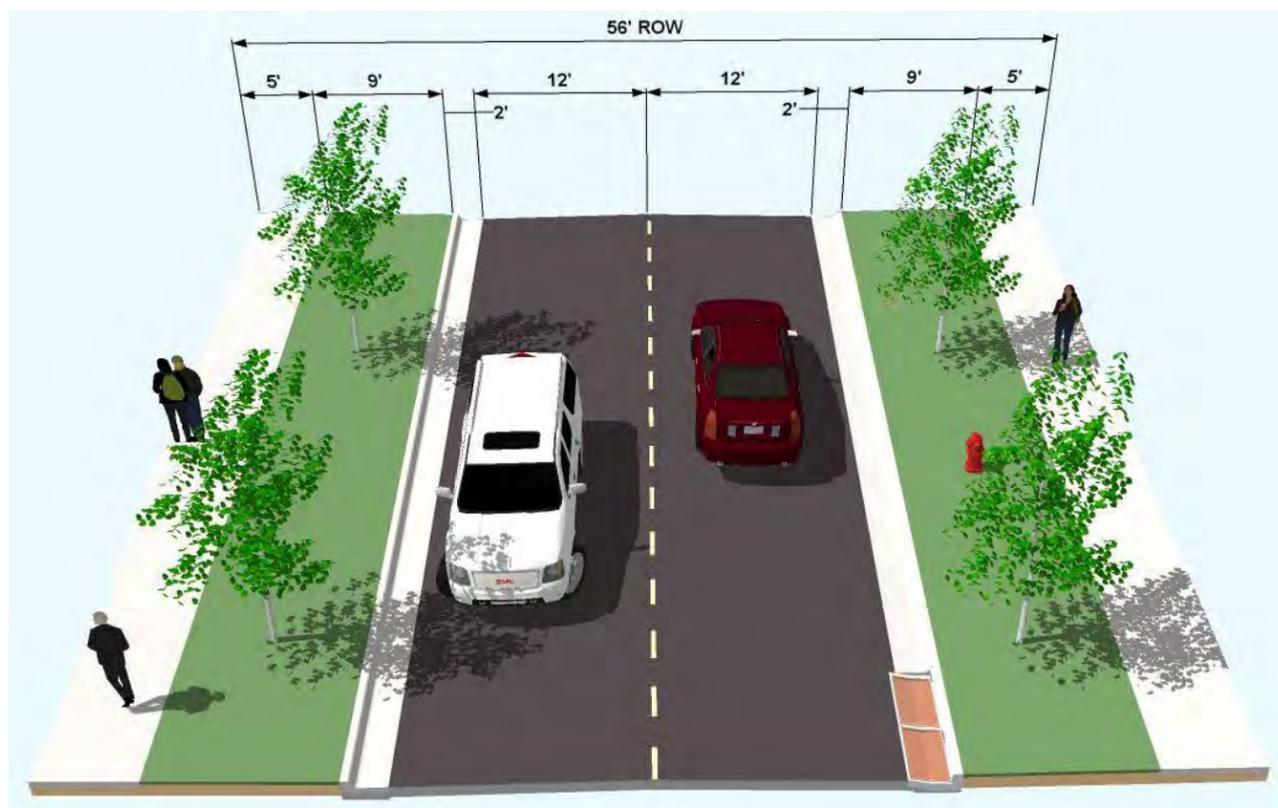
**3-Lane Collector**



**2-Lane Collector**



**Local Street**



## 4.2 Access Management

Access management is the practice of coordinating the location, number, spacing, and design of access points to minimize site access conflicts and maximize the traffic capacity and safety of a roadway. Uncoordinated growth along major travel corridors often results in strip development and a proliferation of access points. In many of these instances, each individual development along the corridor has its own access driveway. Numerous access points along major travel corridors create unnecessary conflicts between turning and through traffic which causes delays and accidents. Numerous benefits are derived from controlling the location and number of access points to a roadway. Those benefits include:

- Improving overall roadway safety
- Reducing the total number of vehicle trips
- Decreasing interruptions in traffic flow
- Minimizing traffic delays and congestion
- Maintaining roadway capacity
- Extending the useful life of roads
- Avoiding costly highway projects
- Improving air quality
- Encouraging compact development patterns
- Improving access to adjacent land uses
- Enhancing pedestrian and bicycle facilities

### 4.2.1 Principles of Access Management

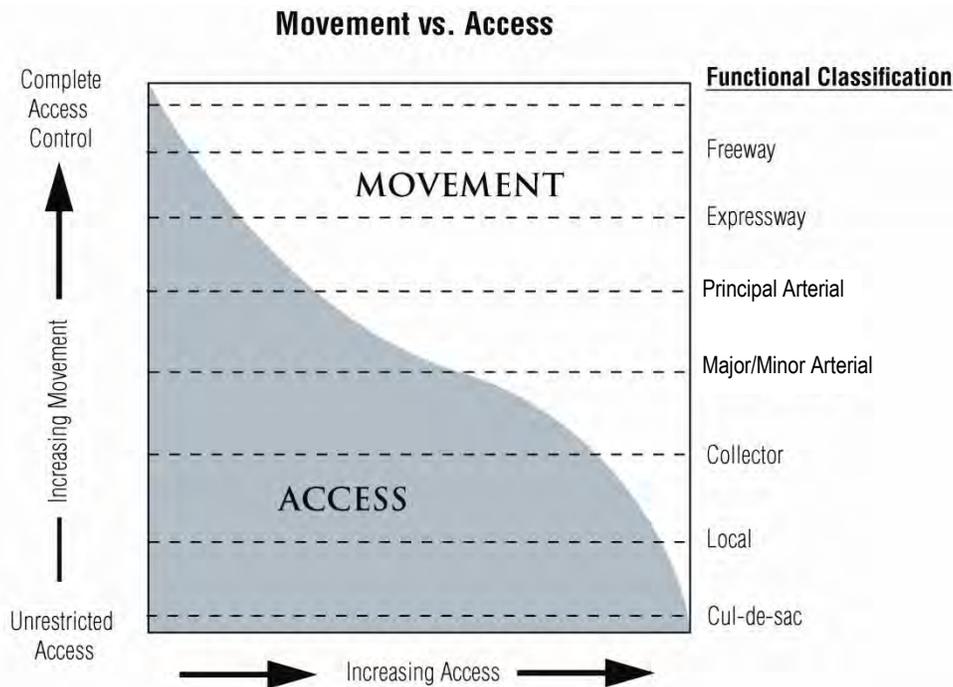
Constantly growing traffic congestion, concerns over traffic safety, and the ever increasing cost of upgrading roads have generated interest in managing the access to not only the highway system, but to surface streets as well. Access management is the process that provides access to land development while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. Access management attempts to balance the need to provide good mobility for through traffic with the requirements for reasonable access to adjacent land uses.

Arguably the most important concept in understanding the need for access management is to insure the movement of traffic and access to property is not mutually exclusive. No facility can both move traffic efficiently and provide unlimited access at the same time. [Figure 4-2](#) shows the relationship between mobility, access, and the functional classification of streets. The extreme examples of this concept are freeways and cul-de-sacs. Freeways move traffic very well with few opportunities for access, while the cul-de-sac has unlimited opportunities for access, but doesn't move traffic very well. In many cases, accidents and congestion are the result of streets trying to serve both mobility and access at the same time.

A good access management program will accomplish the following:

- Limit the number of conflict points at driveway locations
- Separate conflict areas
- Reduce the interference of through traffic
- Provide sufficient spacing for at-grade, signalized intersections
- Provide adequate on-site circulation and storage

**Figure 4-2 Mobility vs. Access by Functional Classification**



Access management attempts to put an end to the seemingly endless cycle of road improvements followed by increased access, increased congestion, and the need for more road improvements.

Poor planning and inadequate control of access can quickly lead to an unnecessarily high number of direct accesses along roadways. The movements that occur on and off roadways at driveway locations, when those driveways are too closely spaced, can make it very difficult for through traffic to flow smoothly at desired speeds and levels of safety. The American Association of State Highways and Transportation Officials (AASHTO) state that “the number of accidents is disproportionately higher at driveways than at other intersections...thus their design and location merits special consideration.” Studies have shown that anywhere between 50 and 70 percent of all crashes that occur on the urban street system are access related.

Fewer direct accesses, greater separation of driveways, and better driveway design and location are the basic elements of access management. There is less occasion for through traffic to brake and change

lanes in order to avoid turning traffic when these techniques are implemented uniformly and comprehensively.

Consequently, with good access management, the flow of traffic will be smoother and average travel speeds higher, with less potential for crashes. Before and after analyses by the Federal Highway Administration (FHWA), show that routes with well managed access can experience 50 percent fewer accidents than comparable facilities with no access controls.

Through the development review and approval process, the City will evaluate proposed access points using the principles described above.

#### 4.2.2 Roadway Network and Access Management Standards

The access management concepts and standards presented below are consistent with guidelines established by the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), the Transportation Research Board (TRB), and the Institute of Transportation Engineers (ITE).

There are a number of access management techniques that can be used to preserve or enhance the capacity of a roadway. Specific techniques for managing access are discussed in this section and illustrated with examples. Not all techniques will apply to every situation. Some of them are more appropriate to less developed rural areas of the City, whereas others are more appropriate in the urban areas. In the urban areas, the techniques can be applied when existing sites are redeveloped or when negotiations with landowners are successful. Therefore, it is up to the City to determine what will work best based in each situation.

##### 4.2.2.1 Number of Access Points

Controlling the number of access points or driveways from a site to a roadway reduces potential conflicts between cars, pedestrians, and bicycles. Each parcel should normally be allowed one access point and commercial properties should be required to share access where possible. Provisions can be made in the local land use regulations to allow for more than one access point where special circumstances would require additional accesses.

##### 4.2.2.2 Spacing of Access Points

Establishing a minimum distance between access points reduces the number of points a driver has to observe and reduces the opportunity for conflicts. Spacing requirements should be based on the classification and design speed of the road, the existing and projected volume of traffic as a result of the proposed development, and the physical conditions of the site. Minimum spacing standards should be applied to both residential and commercial/industrial developments.

To ensure efficient traffic flow, new signals should be limited to locations where the progressive movement of traffic will not be impeded significantly. Uniform, or near uniform, spacing of signals is essential for the progression of traffic. As a minimum, signals should be spaced no closer than one-quarter

mile (1,320 feet) on any street. On principal arterial streets, signaled should be placed no closer than one-half mile (2,640 feet).

Un-signalized accesses are far more common than signalized accesses. They affect all kinds of activity, not merely large activity centers. Traffic operational factors lead towards wider spacing of driveways (especially medium- and higher-volume driveways) include weaving and merging distances, stopping sight distance, acceleration rates, and storage distance for back-to-back left turns. From a spacing perspective, these driveways should be treated the same as public streets. Sound traffic engineering criteria indicates that 500 feet or more should be provided between full-movement un-signalized accesses.

Restricted access movement (i.e., right-in/right-out access) can provide for additional access to promote economic development with minimum impact to the roadway facility. This type of access should be spaced to allow for a minimum of traffic conflicts and provide distance for deceleration and acceleration of traffic in and out of the access. Restricting access on roads may create double frontage lots. This can be mitigated through landscape buffering. The UDOT recommended access spacing requirements are based on the functional classification of the roadway facility and are shown in [Table 4-1](#).

**Table 4-1 Access Spacing Based on Functional Classification**

Functional Classification	Minimum Signal Spacing (ft.)*	Minimum Un-signalized Full-Movement Access Spacing (ft.)*	Minimum Right-In/Right-Out Access Spacing (ft.)*	Residential Driveways Permitted
Principal Arterial	2,640	660	350	No
Major Arterial	2,640	660	330	No
Minor Arterial	1,320	500	250	No
Collector	1,320	500	250	Discouraged
Residential Local	NA	125	100	Yes

\*Distances to be measured from center of driveway to center of driveway

### 4.3 Safety

One of the main goals of the TMP and long term transportation planning in general is to envision traffic growth and provide for adequate facilities as the need arises. Constructing these future facilities to make possible safe operations is of equal importance. As a result, all of these facilities should be constructed and maintained to applicable design and engineering standards such as those set forth in Saratoga Springs City ordinances, the American Association of State Highway Transportation Officials (AASHTO) "Policy on Geometric Design of Highways and Streets," and the Manual on Uniform Traffic Control Devices (MUTCD). This includes implementing applicable Americans with Disabilities Act (ADA) standards and school zone treatments.

#### 4.3.1 Driveways

One safety item that deserves attention is the interaction of driveways on collector and arterial streets. Where accesses do exist on these roadways, sufficient space should be provided to allow vehicles to turn around on site so that they always exit the driveway facing the street. For example, private residences ought to have circular type driveways in order to safely enter and exit the driveway with ease. Backing maneuvers into busy streets can be very dangerous as this is not a typical action drivers expect. On-street parking on busy streets should be parallel to traffic where possible as opposed to perpendicular to traffic to avoid dangerous backing maneuvers into traffic.

#### 4.3.2 Offset Intersections

Offset intersections often have negative impacts on traffic flow and can potentially create capacity problems at intersections where the left turn storage areas overlap, forcing queued vehicles into through traffic lanes. Aligning access on both sides of the street will minimize conflict points in the roadway and provided safer and more efficient traffic flow. Offset intersections should be avoided wherever possible.

### 4.4 Intersection Improvements

As traffic volumes increase throughout the community, intersection design will become more critical. Proper intersection design will typically facilitate larger traffic flows without widening existing roadway cross-sections. This can minimize impacts to adjacent properties. Therefore, emphasis was placed on identifying critical intersections during the traffic modeling process.

Intersections are a critical element to future functionality. Intersections should provide sufficient turn lanes and adequate queuing lengths. In the future, many intersections throughout the City may require signalization in order to maintain a desirable LOS (see [Figure 3-3](#)). Stop signs and traffic signals should not be used where not warranted. Studies have shown that in areas where there forms of control have been installed, and not warranted, that the motoring public will disregard the control measure and therefore the right-of-way assignments at that location. This disregard for traffic control devices causes hazardous locations and a general disregard for other traffic control measures in the area.

#### 4.4.1 Stop Sign Warrants

The MUTCD should be used as the standard for determining how and when a stop sign is installed. As stated in the MUTCD, "Stop signs should be used if engineering judgment indicates that one or more of the following conditions exist:

- **Intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;**
- **Street entering a through highway or street;**
- **Un-signalized intersection in a signalized area; and**
- **High speeds, restricted view, or crash records indicate a need for control by the stop sign.**

The number of vehicles that are required to stop should be minimized if at all possible to preserve capacity and functionality of the roadway network; therefore, when deciding which road to stop, the street

carrying the lowest volume of traffic should be chosen. Less restrictive traffic control such as a yield sign can be used as an alternative to stop signs if at all possible to minimize delays. Yield signs should also be installed per the MUTCD guidelines. Stop signs should not be used to control speed, but to designate right-of-way at intersecting roadways. Multi-way stop control may be used as a safety measure at intersections where the volume of traffic is approximately equal for all approaches and where safety is of concern, or as an interim measure where a traffic signal is justified and has yet to be installed. Engineering judgment and the guidelines outlined in the MUTCD should be used to determine the appropriate application of stop and yield signs.

#### 4.4.2 Traffic Signal Warrants

Traffic signals should not be installed unless at least one or more of the eight traffic signal warrants (as outlined in the MUTCD) have been met. Even if warrants are met for a particular intersection, justification for should still be based on information obtained through engineering studies and comparisons with the requirements set forth in the MUTCD. As stated in the MUTCD, “the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.” The eight warrants outlined in the MUTCD include the following:

- **Warrant 1: Eight-Hour Vehicular Volume**
- **Warrant 2: Four-Hour Vehicular Volume**
- **Warrant 3: Peak Hour**
- **Warrant 4: Pedestrian Volume**
- **Warrant 5: School Crossing**
- **Warrant 6: Coordinated Signal System**
- **Warrant 7: Crash Experience**
- **Warrant 8: Roadway Network**

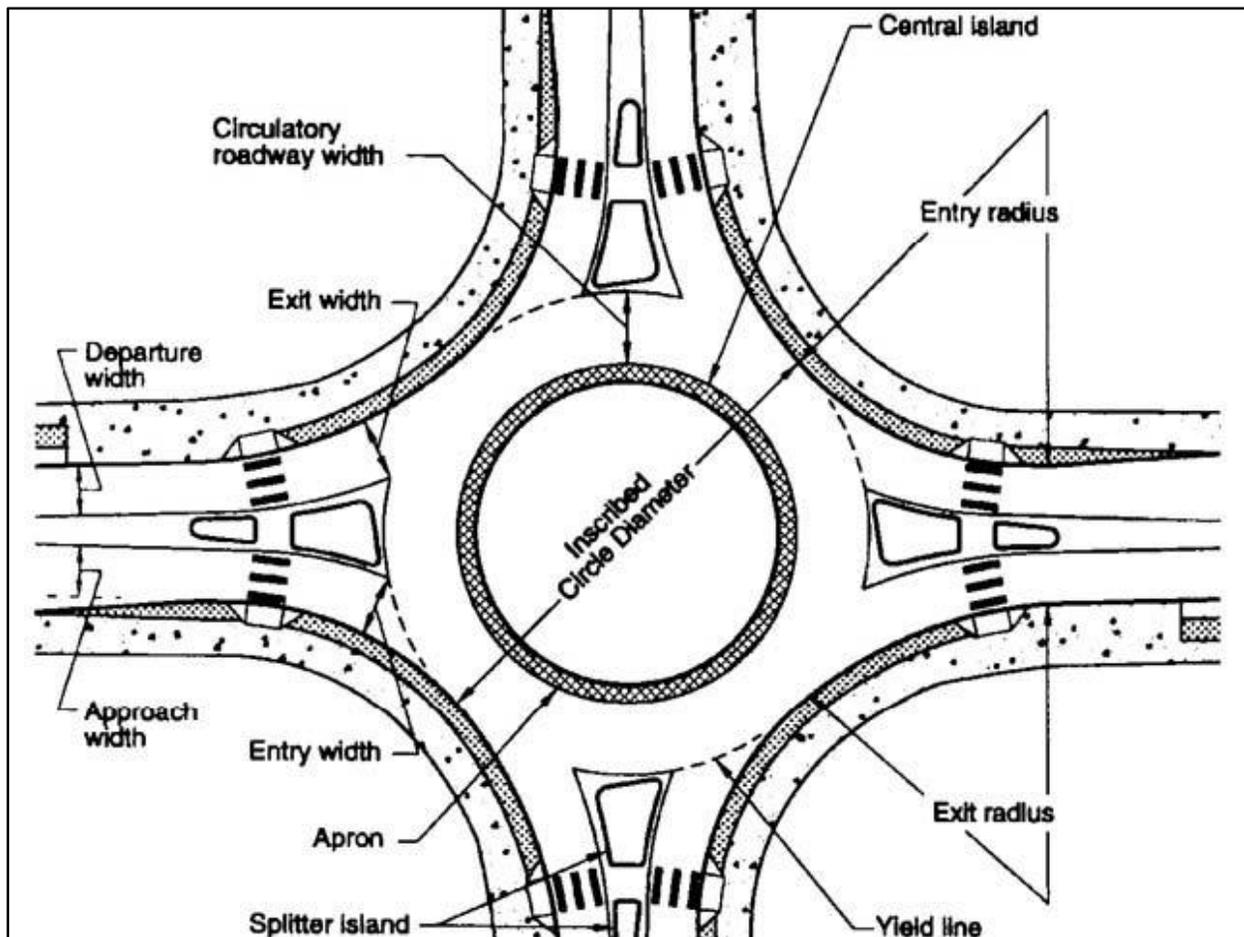
#### 4.4.3 Roundabout Intersections

Many communities in the United States are beginning to embrace the concept of roundabouts. A roundabout is an intersection control measure used successfully in Europe and Australia for many years. A roundabout is composed of a circular, raised, center island with deflecting islands on the intersecting streets to direct traffic movement around the circle. Traffic circulates in a counter-clockwise direction making right turns onto the intersecting streets. There are no traffic signals; rather, entering traffic yields to vehicles already in the roundabout.

Advantages of roundabouts include reduced traffic delays, increased safety and reduced right-of-way requirements. They can reduce delays compared to a signalized intersection due to the stop phase being eliminated. At the same time, roundabouts can improve safety because the number of potential impact points, and the number of conflict points the driver must monitor, are both substantially reduced over a conventional four-way intersection. Properly designed roundabouts can also accommodate emergency vehicles, trucks, and snow plowing equipment.

Unlike the typical New England “traffic circle” or “rotary,” design standards for roundabouts are very specific and the Federal Highway Administration (FHWA) has prepared a design guide for modern

roundabouts in the United States. Development of a roundabout will only occur as a result of an intersection study performed by a qualified Traffic Engineer and when the minimum capacity and design criteria are met. The FHWA has determined that the maximum flow rate that a roundabout can accommodate depends on the geometric elements (circle diameter, number of lanes, etc.), the circulating flow (vehicles going around the circle), and entry flow (vehicles entering the circle). A single lane roundabout can accommodate up to 1,800 vehicles per hour and a double lane roundabout can accommodate up to 3,400 vehicles per hour. [Figure 4-3](#) shows an example of a typical single lane roundabout design.



**Figure 4-3 Typical Roundabout Design**

The National Transportation Research Board examined traffic delays before and after roundabouts were installed at eight intersections in the United States. The study determined that delays (the time spent stopped and moving up to the intersection) decreased on average by 78 percent and 76 percent during the AM Peak Hour and PM Peak Hour, respectively. The results indicate that roundabouts can reduce congestion in certain circumstances. In addition, the FHWA studied safety characteristics of a sample of eleven roundabouts in the United States. The agency determined that the number of personal injury accidents and property damage-only accidents decreased 51 percent and 29 percent, respectively, after

roundabouts replaced conventional intersections. Roundabouts are an appropriate solution for certain problem intersections in the region.

There are numerous reasons for selecting a roundabout as a preferred alternative, with each reason carrying its own considerations and trade-offs. Below are some potential applications or roundabouts<sup>2</sup>:

- **New Residential Subdivisions**

Developers have begun to use roundabouts in residential subdivisions with increasing frequency. Roundabouts provide a variety of operational and aesthetic benefits and create a sense of place that is attractive to developers and homeowners.

- **Urban Centers**

Roundabouts may be considered an optimal choice in situations where existing or planned access-management strategies along a corridor facilitate U-turn movements at nearby intersections.

- **Suburban Municipalities and Small Towns**

Smaller municipalities are often ideal locations to consider roundabouts. Right-of-way is often less constrained, traffic volumes are lower, and the aesthetic opportunities for landscaping and gateway treatments are enticing. Existing operational and/or safety deficiencies can also often be addressed.

- **Rural Settings and Small Communities**

Safety may often be the driving factor over capacity in making a roundabout an appealing choice. Within small communities along an extended highway, a roundabout is ideal for supporting speed reductions.

- **Schools**

Roundabouts may be an optimal choice for intersection control in the vicinity of schools. One primary benefit is the reduction of vehicle speeds in and around the roundabout. Roundabouts improve pedestrian crossing opportunities, providing mid-block refuge and the ability for pedestrians to focus on one direction of traffic at a time.

- **Interchanges**

Situations where an intersection ramp terminal has the potential for a high proportion of left-turn flows from the off-ramps and to the on-ramps may be ideal candidate for a roundabout.

- **Commercial Developments**

Roundabouts in commercial developments provide for a central focus point for a development and enhance aesthetic qualities. They are also capable of processing high volumes of traffic.

---

<sup>2</sup> Source: NCHRP Report 672, Roundabouts: An Informational Guide Second Edition

- **Unusual Geometry**

Intersections with unusual geometric configurations, intersection angles, or more than four legs are often difficult to manage operationally. Roundabouts are a proven traffic control device in such situations, effectively managing traffic flows without the need for costly expenditures on unique signal controller equipment or unusual signal timing.

- **Closely Spaced Intersections**

Roundabouts balance traffic flows and manage queue lengths between closely spaced intersections.

The City of Saratoga Springs will consider roundabouts as an intersection alternative at specific locations pending more detailed traffic analysis as needs arise through the development process.

## 4.5 Traffic Calming

Street patterns are typically developed in response to the desires of the community at the time of construction. In Utah, the history of using a grid system for planning and development purposes started long ago and has proven efficient for moving people and goods throughout a network of surface streets. However, the nature of a grid system with wide and often long, straight roads can result in excessive speeds. For that reason, traffic calming measures (TCMs) can be implemented to reduce speeds on residential roadways. Saratoga Springs is an exception to the Utah grid system and as such has fewer problems with long, wide, straight street sections that can contribute to high speeds and unsafe conditions. Traffic Calming is however still applicable to many neighborhood or local streets and should be at least given consideration on the City's local and residential streets on a case by case basis where applicable. It is strongly recommended that as the City grows and traffic calming becomes a more pressing issue, the City implements a Traffic Calming Program for dealing with traffic calming requests and addressing issues relating to traffic calming as they arise.

The Institute of Transportation Engineers (ITE) has established a definition for traffic calming that reads "Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users." Altering driver behavior includes lowering of speeds, reducing aggressive driving, and increasing respect for non-motorized street users.

### 4.5.1 Types of Traffic Calming Measures

There are several types of TCMs that can be grouped into three categories depending on the level of control or effect on traffic flow and speeds. Category One measures are the least restrictive, while Category Three are the most dramatic. These categories are outlined in further detail below. Several factors can influence the choice of TCMs used including the location, street classification, street geometry, adjacent land uses, public transit needs, budget, climate, aesthetics, and community preferences.

#### 4.5.1.1 *Category One – Traffic Control Devices*

Traffic control devices consist of signs, signals, and pavement markings to regulate, warn, guide, and provide information to drivers. Examples include regulator signs (i.e., speed limit signs), warning signs (i.e., pedestrian warning signs), traffic signals, etc. Often traffic control devices are overused as TCMs. Though the function of traffic calming devices is often similar to that of TCMs, specific traffic control devices should not be overused to communicate different purposes. One of the primary purposes of traffic control devices is to inform drivers of traffic laws and specific right-of-ways in order to maintain order and safety. Overuse of such traffic control devices diminishes their intended purpose. For example, the MUTCD states that “stop signs should not be used for speed control.” When used following the guidelines outlined in the MUTCD, traffic control devices can assist as part of roadway/intersection designs to calm traffic where necessary.

#### 4.5.1.2 *Category Two – Street Modification*

Street modification TCMs include actions that physically alter the vertical or horizontal alignment of the roadway. Vertical changes include speed humps, speed tables, raised intersections, etc. Horizontal changes include chicanes and lateral shifts. Other street modifications TCMs include constrictions (i.e., narrowing, pinch points, islands, chokers, etc.), narrow pavement widths (i.e., medians, edge treatments, bulb-outs, etc.), entrance features, roundabouts, small corner radii, street closures, and streetscaping (i.e., surface textures and colors, landscaping, street trees, street furniture, etc.). [Figure 4-4](#) shows an example of a speed table. [Figure 4-5](#) is an example of a chicane used for traffic calming. [Figure 4-6](#) shows a partial road closure.

Figure 4-4 Speed Table



Figure 4-5 Chicane



Figure 4-6 Partial Road Closure Traffic Calming Measure



#### *4.5.1.3 Category Three – Route Modification*

Route modifications consist of altering available routes of traffic flow. Examples include one-way streets, diverters, closures, and turn prohibitions. Instead of attempting to alter drivers' behavior (Categories One and Two), route modification TCMs attempt to alter drivers' routes altogether.

#### *4.5.1.4 Streetscaping*

Streetscaping includes the planning and placement of items such as street furniture, lighting, art, trees, landscaping, and side treatments along streets and intersections. Although streetscaping can be implemented without traffic calming, TCMs need a certain element of streetscaping to be functional. Streetscaping softens the appearance of speed humps or tables and enhances the aesthetics of roundabouts and constrictions, etc. Landscaping and other roadside treatments make street closures more effective and safer by highlighting the presence of the measure.

#### *4.5.1.5 Other Considerations*

Spacing is an important consideration for TCMs. If TCMs are too far apart (greater than 600 to 1000 feet), speeding can occur between the measures. TCMs should be spaced 200 to 300 feet apart so vehicles will not have sufficient distance to accelerate between measures.

Other considerations when deciding which TCMs to install include snow removal maintenance and emergency vehicle access. Some TCMs may decrease the efficiency of both snow removal and/or emergency vehicle access, for example speed humps or tables, etc.

#### *4.5.1.6 Installation of Traffic Calming Measures*

When deciding to implement TCMs, the decision should be based on engineering merits of a TCM application, as opposed to public clamor. An engineering study that documents the need for such measures and the nature of the traffic problem via speed and volume measurements should be the determining factor.

The next step should be to propose TCMs that are capable of solving the problem and matching the terrain, climate and nature of the street in question. One or several measures could then be implemented on a temporary basis subject to performance evaluations and neighborhood review. Before implementing these improvements on a more permanent basis, the final step would be to compare the before and after studies for speed and volume changes to see if the TCMs have performed as expected.

In order to make any of the TCMs effective, traffic calming must be community based and as wide spread as possible. For example, the repercussions of traffic calming on one street can result in higher speeds on adjacent streets due to a shift in travel patterns. The need for a community based traffic calming plan is fundamental to the quality of life for the citizens of the community; hence, a more detailed and formal traffic calming plan should be implemented that more specifically addresses appropriate applications, suggests warrants for the installation of different TCMs, and outlines suitable installation procedures of different TCMs.

It is recommended that Saratoga Springs City develops a traffic calming plan and as the City begins to implement TCMs, the latest engineering information should be consulted to ensure that the plan contains the latest and best recommendations. ITE is the definitive resource on traffic calming issues and produces a significant amount of literature on the subject. A complete discussion on the latest TCMs and related issues can be found at <http://www.ite.org/traffic/index.asp>.

## 4.6 Corridor Preservation

Corridor preservation is an important transportation planning tool that agencies should use and apply to all future transportation corridors. There are several new transportation facilities that have been identified in the TMP. In planning for these future facilities, corridor preservation techniques should be employed. The main purposes of corridor preservation are to:

- **Preserve the viability of future options,**
- **Reduce the cost of these options, and**
- **Minimize environmental and socio-economic impacts of future implementation.**

Corridor preservation seeks to preserve the right-of-way needed for future transportation facilities and prevent development which might be incompatible with these facilities. This is primarily accomplished by the community's ability to apply land use controls such as zoning and approval of developments. Adoption of the TMP by Saratoga Springs City is a commitment to citizens and future leaders in the community that the identified future corridors will be the ultimate location for transportation facilities.

Perhaps, the most important elements of corridor preservation are ensuring that the corridors are preserved in the correct location and that they meet the applicable design and right-of-way standards for the type of facility being preserved. As the master plan does not define the exact alignment of each future corridor, it becomes the responsibility of the City to make sure that the corridors are correctly preserved. This will have to be accomplished through the engineering and planning reviews done within the City as development and annexation requests are approved that involve properties within or adjacent to the future corridors.

### 4.6.1 Corridor Preservation Techniques

Some examples of specific corridor preservation techniques that may be most beneficial and easily implemented include the following:

- **Developer Incentives and Agreements:** Public agencies can offer incentives in the form of tax abatements, density credits, or timely site plan approvals to developers who maintain property within proposed transportation corridors in an undeveloped state.
- **Exactions:** As development proposals are submitted to the City for review, efforts should be made to exact land identified within the future corridors. Exactions are similar to impact fees, except they are paid with land rather than cash.
- **Fee Simple Acquisitions:** This will most likely consist of hardship purchases or possible city acquisition of property identified within the corridors. Parcels obtained in fee title can later be sold at market value to the owner of the transportation facility when construction begins.



- **Transfer of Development Rights and Density Transfers:** Government entities can provide incentives for developers and landowners to participate in corridor preservation programs using the transfer of development rights and density transfers. This is a powerful tool in that there seldom is any capital cost to local governments.
- **Land Use Controls:** This method allows government entities to use police power to regulate intensity and types of land use. Zoning ordinances are the primary controls over land use and the most important land use tools available for use in corridor preservation programs.
- **Purchase of Options and Easements:** Options and easements allow government agencies to purchase interests in property that lies within highway corridors without obtaining full title of the land. Usually, easements are far less expensive than fee title acquisitions.

## 4.7 Traffic Impact Studies

As growth occurs throughout the City, the City will evaluate the impacts of proposed developments on the surrounding transportation networks prior to giving approval to build. This will be accomplished by requiring that a Traffic Impact Study (TIS) be performed for any development in the City based on City staff recommendations. A TIS will allow the City to determine the site specific impacts of a development including internal site circulation, access issues, and adjacent roadway and intersection impacts. In addition, a TIS will assist in defining possible impacts to the overall transportation system in the vicinity of the development. The area and items to be evaluated in a TIS include key intersections and roads as determined by the City Engineer on a case by case basis. Other items that should be included in a TIS include:

- **A description of the project site and study area boundaries including a site plan and study area map showing the proposed project access locations and connections to the adjacent road network.**
- **A description of existing and proposed land uses within the study area including a discussion of the project land use.**
- **A description of existing and proposed key roadways and intersections in the study area including lane configurations and traffic controls.**
- **A discussion of trip generation, distribution, and assignment methodologies and assumptions.**
- **A level of service (LOS) and capacity analysis of existing traffic levels and conditions for key roadway segments and intersections.**
- **A LOS and capacity analysis of background traffic levels and conditions (existing traffic plus additional traffic projected from normal growth rates and from other known developments in the study area at the time of completion) for key roadway segments and intersections.**
- **A LOS and capacity analysis of background plus project traffic levels and conditions (background traffic plus projected traffic associated with the proposed project) for key roadway segments and intersections.**
- **A safety analysis for key roadways and intersections including applicable accident histories.**
- **Any applicable yield sign, stop sign, multi-way stop signs, and traffic signal warrant analyses.**
- **A determination of the street system's ability to accommodate projected traffic levels.**
- **An identification of impacts to the existing street system as a result of the project.**

- A discussion of improvements to be implemented as part of the project to accommodate project traffic such as roadway and intersection widening to provide exclusive turn lanes or modifications to traffic controls.
- A discussion of mitigation measures to be implemented to restore or improve traffic operations to an acceptable LOS on any key roadway segments or at key intersections within the study area.

Each TIS will be conducted by a qualified Traffic Engineer chosen by the City at the developer cost. The City Engineer will determine the scope of each TIS, based on the UDOT Traffic Impact Study Requirements found in the appendix of this report, and will review its contents once complete and provide comments. Upon receiving approval from the City Engineer, the TIS requirement related to the development will be satisfied. If a developer feels that his or her project does not meet the requirements to have a TIS completed, then the developer will need to provide documentation stating his or her case which will be reviewed by the City Engineer.

## 4.8 Agency Coordination

As many of the roads in Saratoga Springs City are either owned by or connect into roads that are owned by other agencies such as UDOT, neighboring cities, and Utah County, a close working relationship should be maintained between these different jurisdictions and the City to ensure that roadway projects are not only coordinated but consistent.

## 4.9 Planned Roadway Improvements

A number of roadway improvements have been recommended to occur between now and the year 2040. These recommendations are based on travel demand volume predictions and available capacity of each roadway. Each of these improvements should be implemented as a result of increasing traffic volumes due to future development. [Table 4-2](#) outlines these recommended improvements. This table will be regularly updated by the City as plans for development change and become adopted.

**Table 4-2 Saratoga Springs City Recommended Transportation Improvements**

Type of Improvement	Roadway or Location	Jurisdiction(s)
Widen Arterial (7 Lanes)	Redwood Road (SR-68): Northern Border to Grandview Blvd	UDOT
Widen Arterial (5 Lanes)	Redwood Road (SR-68): Grandview Blvd to Southern Border	UDOT
Widen Arterial (5 Lanes)	Pony Express: Redwood Road to Western Boarder	Saratoga Springs
Widen to 6 Lane Freeway	Cedar Fort Road (SR-75): Mountain View Corridor Frontage to Western Border	UDOT
New 6 Lane Freeway	Mountain View Corridor: Northern Border to SR-75	UDOT



# SARATOGA SPRINGS

## Transportation Master Plan

2016

Type of Improvement	Roadway or Location	Jurisdiction(s)
New 6 Lane Freeway	2100 North Connection: Eastern Border to Mountain View Corridor	UDOT
New Minor Arterial	Harvest Hill Blvd Extension to Cedar Fort Road (SR-75)	Saratoga Springs
New Collector	New Road: Pioneer Crossing (SR-145) to Foothill Blvd	Saratoga Springs
New Collector	Commerce Drive Connection: Redwood Road (SR-68) to Crossroads Blvd	Saratoga Springs
New Collector	New Road: Commerce Drive to Pioneer Crossing (SR-145)	Saratoga Springs
New Collector	New Road: Crossroads Blvd to Market Street	Saratoga Springs
New Collector	Riverside Drive Extension: End of Existing to Pioneer Crossing (SR-145)	Saratoga Springs
Widen Arterial (5 Lanes)	Crossroads Blvd: Commerce Drive to Eastern Border	Saratoga Springs
Widen Arterial (5 Lanes)	Pony Express Extension: Redwood Road (SR-68) to Riverside Drive	Saratoga Springs
New Collector (Widen Existing)	Talus Ridge Drive: Foothill Drive to Legacy Farms New Road	Saratoga Springs
New Collector	Legacy Farms New Road: Cedar For Road (SR-75) to Pony Express Parkway	Saratoga Springs
New Collector	600 West: Pony Express to 1000 South	Saratoga Springs
New Minor Arterial	400 South: Redwood Road (SR-68) to Mountain View Corridor	Saratoga Springs
New Minor Arterial	800 South: Redwood Road (SR-68) to Mountain View Corridor	Saratoga Springs
New Traffic Signal	Signal: Crossroads Blvd & Riverside Drive	Saratoga Springs
New Traffic Signal	Signal: Crossroads Blvd & New Road (Project 10)	Saratoga Springs
New Traffic Signal	Signal: Commerce Drive & Redwood Road (SR-68)	UDOT
New Traffic Signal	Signal: Market Street & Redwood Road (SR-68)	UDOT
New Traffic Signal	Signal: Market Street & Pioneer Crossing (SR-145)	UDOT
New Traffic Signal	Signal: Riverside Drive & Pioneer Crossing (SR-145)	UDOT
New Traffic Signal	Signal: 800 South (Project 18) & Redwood Road (SR-68)	UDOT



# SARATOGA SPRINGS

## Transportation Master Plan

2016

Type of Improvement	Roadway or Location	Jurisdiction(s)
New Minor Arterial	New Roadway: Redwood Road (SR-68) (approx.. 1800 North) to Harvest Hills	Saratoga Springs
New 4 Lane Freeway	Mountain View Corridor Extension: Cedar Fort Freeway (SR-75) to Stillwater Drive	UDOT
New Major Arterial	Mountain View Corridor Extension: Stillwater Drive to New Road South of Harbor Park Way	UDOT
New Minor Arterial	Mountain View Corridor Extension: New Road South of Harbor Park Way to Redwood Road (SR-68)	UDOT
New Collector	New Roadway South of Harbor Park Way: Redwood Road to Bonneville Drive	Saratoga Springs
New Collector	Bonneville Drive: Pony Express Pkwy to 800 South	Saratoga Springs
New Local Road	Bonneville Drive: 800 South to Mountain View Corridor Extension	Saratoga Springs
New Collector	Bonneville Drive: Mountain View Corridor to Redwood Road (SR-68)	Saratoga Springs
New Collector	400 South: Mountain View Corridor to Bonneville Drive	Saratoga Springs
New Minor Arterial	800 South: Mountain View Corridor to Bonneville Drive	Saratoga Springs
New Collector	200 South: Pony Express Pkwy to 1000 South	Saratoga Springs
New Collector	1000 South: Redwood Road (SR-68) to Mountain View Corridor	Saratoga Springs
New Collector (Realignment)	400 North Realignment West of Grand Sierra Way to Talus Ridge Drive	Saratoga Springs
New Minor Arterial	Market Street: Pioneer Crossing (SR-145) to Mountain View Corridor	Saratoga Springs
New Collector	Crossroads Blvd. Extension: Pioneer Crossing (SR-145) to Foothill Blvd.	Saratoga Springs
New Collector	Aspen Hills Blvd. to Crossroads Blvd.	Saratoga Springs
New Minor Arterial	Hidden Valley Highway: Mountain View Corridor to Western Border	UDOT
Widen Arterial (7 Lanes)	Pioneer Crossing (SR-145): Eastern Border to Cedar Fort Road (SR-73)	UDOT
New/Widen Arterial (5 Lanes)	Pony Express Extension: Riverside Drive to Eastern Border	Saratoga Springs
Widen Collector	Saratoga Road: Pony Express Extension to Pioneer Crossing (SR-175)	Saratoga Springs
Widen Collector	1700 West: Pony Express Extension to Pioneer Crossing (SR-175) (Saratoga Springs Portion)	Saratoga Springs



# SARATOGA SPRINGS

## Transportation Master Plan

2016

Type of Improvement	Roadway or Location	Jurisdiction(s)
Widen Collector	7750 North: Saratoga Road to 1700 West	Saratoga Springs
Widen Arterial (3 Lanes)	Grandview Blvd: Redwood Road (SR-68) to Mountain View Corridor	Saratoga Springs
New Collector	Grandview Blvd: Mountain View Corridor to Bonneville Drive	Saratoga Springs
Collector Connection	Ring Road: Finish loop roadway	Saratoga Springs
Widen Arterial (3 Lanes)	Stillwater Drive: Redwood Road (SR-68) to Mountain View Corridor	Saratoga Springs
New Collector	Stillwater Drive: Mountain View Corridor to Bonneville Drive	Saratoga Springs
Collector Extension	Wildlife Blvd Extension to Village Parkway	Saratoga Springs
New Collector	400 North: Redwood Road (SR-68) to Riverside Drive	Saratoga Springs
New Traffic Signal	Traffic Signal: Pioneer Crossing (SR-145) and Riverside Drive	UDOT
New Traffic Signal	Traffic Signal: Pony Express Pkwy and Bonneville Drive	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and Foothill Blvd.	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and 200 West	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and Riverside Drive	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and Saratoga Road	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and 1700 West	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and 1100 West	Saratoga Springs
New Traffic Signal	Traffic Signal: Pony Express Pkwy and Lake Road	Saratoga Springs
New Traffic Signal	Traffic Signal: Redwood Road (SR-68) and Ring Road	UDOT
New Traffic Signal	Traffic Signal: Redwood Road (SR-68) and Village Pkwy	UDOT
New Traffic Signal	Traffic Signal: Redwood Road (SR-68) and Bonneville Drive	UDOT

## 4.10 Special Considerations

A few specific locations on Saratoga Springs City's street network may require some unique improvements to resolve traffic issues at these sites. These areas are identified below along with the unique characteristics of each location.

### 4.10.1 Mountain View Corridor (2100 North to 400 South)

Mountain View Corridor from 2100 North to 400 South runs through a substantial portion of property managed by Suburban Land Reserve, Inc. (SLR). SLR has in place a development agreement for their property in the City and has been involved in the transportation planning process as it pertains to their property. The Mountain View Corridor extension is proposed on the MAG 2020-2040 metropolitan transportation plan as part of phase 3 (2031-2040). The facility is expected to be a full freeway facility with appropriate design guidelines and interchange spacing as recommended by UDOTs access management standards. This project will need extensive environmental clearance and the City will need to coordinate with UDOT when it comes time to begin that process. It is likely that the Mountain View Corridor extension will include six, 12' wide travel lanes, three in each direction with appropriate shoulders and clearance zones. The facility will probably be posted at 65 mph consistent with other freeway facilities in the valley and the northern portion of Mountain View Corridor. It is expected that Mountain View Corridor will carry 38,000 vehicles per day in 2040. This roadway has been studied multiple times over the past few years by MAG. Three of these studies are listed below and can be accessed online at the following locations:

- **MAG West Lake Vision Study**  
<http://mountainland.org/site/articles/view/1232>
- **Lake Mountain Transportation Study**  
<http://mountainland.org/site/articles/view/1220>
- **Utah County East-West Study**  
<http://mountainland.org/site/articles/view/1231>

As an option, one-way frontage roads with slip ramps providing freeway access may be considered as an alternative to traditional diamond interchanges. This alternative will provide greater exposure to commercial development along the freeway corridor and allow for commercial strips along the length of the freeway rather than large commercial nodes at just the freeway interchanges. Another advantage of this concept has been exhibited on the Salt Lake County portion of Mountain View Corridor. This section has been phased to build the frontage road system (currently under construction) before the freeway portion is constructed. The frontage roads provide enough capacity for the immediate needs and allow for development adjacent to the corridor while also reserving enough right-of-way for the freeway section to be constructed when traffic volumes justify it in the future. **Figure 4-7** gives an example of Mountain View Corridor in Salt Lake County and represents an idea of how the MVC extension may look in Saratoga Springs. It is anticipated that this cross-section can be constructed within a 300 foot right-of-way. The initial construction phase could include only the one-way frontage roads shown in the initial construction picture. These frontage roads will accommodate near term growth and move traffic up and down the



corridor for the short term. As development and population increases, the freeway section of the roadway could be completed in the preserved right-of-way between the frontage roads as shown in the full freeway build-out example.

Figure 4-7 Mountain View Corridor Extension Example

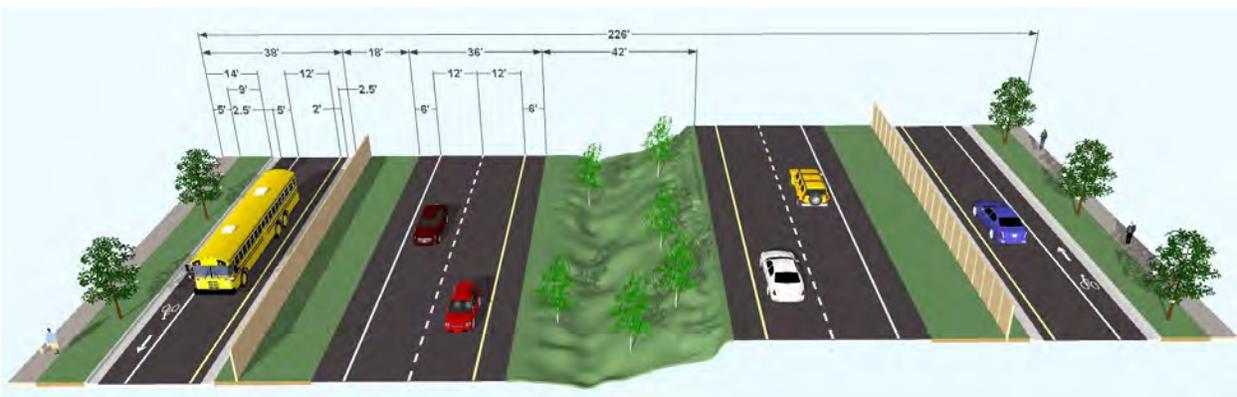


#### 4.10.2 Foothill Parkway (400 South to Redwood Road)

Foothill Parkway from 400 South to Redwood Road will be part of the UDOT Mountain View Corridor expansion expected before 2040. The City has expressed a desire to build this facility as a 4 lane Parkway similar in design and functionality to Legacy Parkway in Davis County. The City is also planning a frontage road system that will parallel the parkway and will allow the MVC extension to be access controlled with interchanges rather than signals. Foothill Parkway will likely be posted at 55mph. It is expected that the Foothill Parkway will carry 35,000 vehicles per day in 2040.

An important feature of the Foothill Parkway is the frontage road system. As discussed previously a one-way frontage system would allow for a strip type commercial area along the corridor rather than a node at traffic signals. This allows for commercial rather than residential land uses to be zoned immediately adjacent to what will become a major traffic facility. Also, it provides the opportunity of constructing the frontage roads to address short term capacity needs before traffic volumes dictate that the Parkway section be constructed. **Figure 4-8** shows a conceptual cross-section for the Foothill Parkway. The conceptual cross-section shows the frontage road system, which provides a buffer between the Parkway and adjacent land uses. There is also a large landscaped median intended not only to separate opposing traffic but also to provide room for capacity improvements should they be needed beyond the design year of this document.

**Figure 4-8 Foothill Parkway Cross-Section**



#### 4.10.3 Hidden Valley Highway

As population increases in Saratoga Springs and also in Eagle Mountain, the need for greater east-west mobility through the area will increase rapidly. Two major east-west facilities are planned in the TMP, the Hidden Valley Highway and the SR-73 freeway. The preferred order of construction for these two projects is that the Hidden Valley Highway will be constructed first as part of the Mountain View Corridor Extension. The SR-73 project will then follow as population and development dictates. It is expected that the Hidden Valley Highway will carry around 5,000 vehicles per day in 2040.

The Hidden Valley Highway is intended as a limited access highway facility connecting Eagle Mountain with Saratoga Springs. A system to system interchange will connect Hidden Valley Freeway with Mountain View Corridor at approximately 400 South. The Hidden Valley Highway will likely be posted at 55mph due

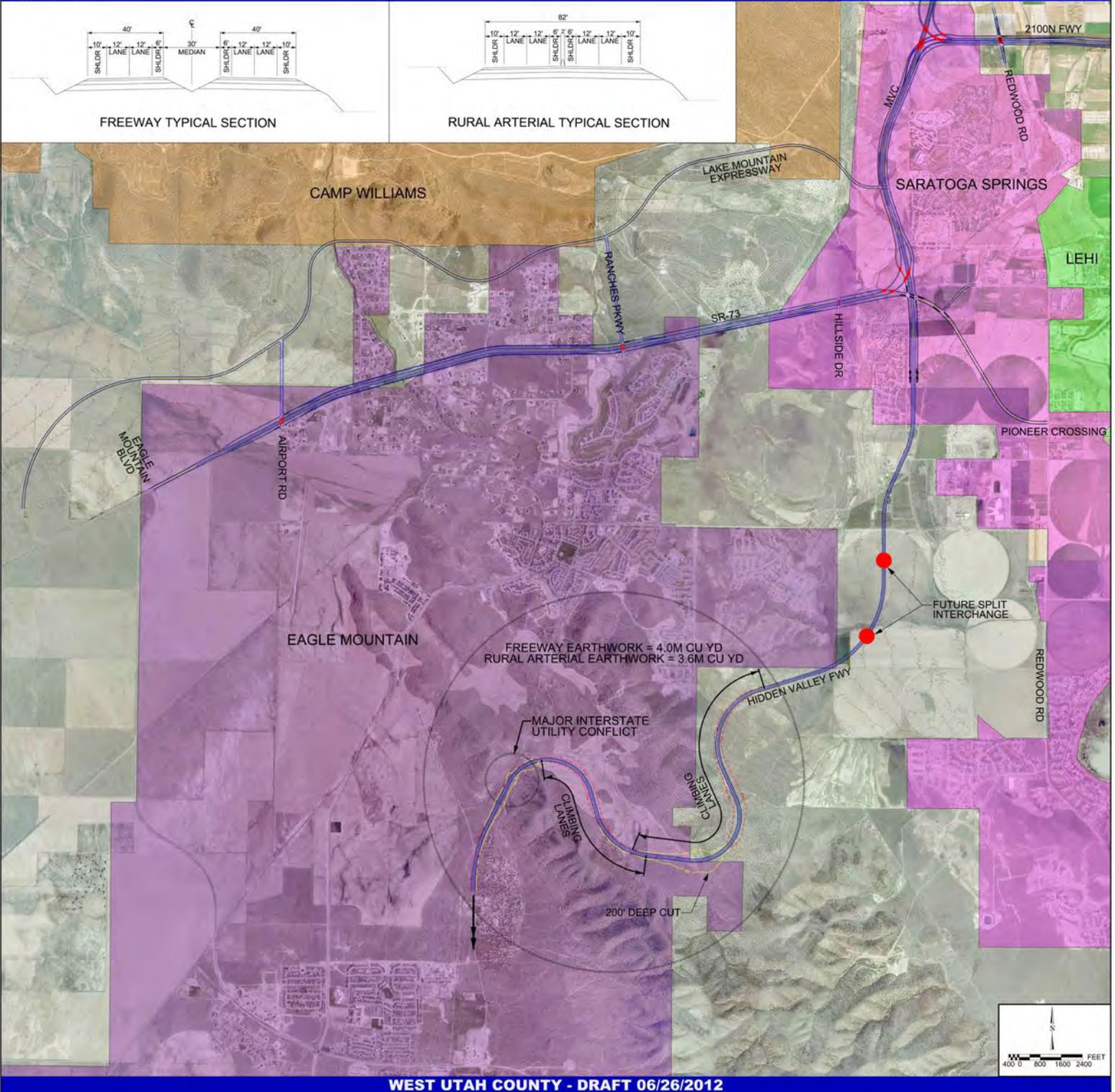
to topographic restrictions but will be access controlled like other highway facilities in the county with appropriate interchange spacing in compliance with UDOT standards. [Figure 4-9](#) shows one alternative alignment and a cross section for the Hidden Valley Highway. This conceptual plan does not include Foothill Parkway extension although the Foothill Parkway facility would still be required as shown on the Transportation Master Plan map ([Figure 3-3](#)).

#### 4.10.4 SR-73

SR-73 will eventually need to be converted to a six lane freeway facility. This improvement is a capacity improvement to east-west movement through the City. SR-73 is currently being widened from two lanes to four lanes in sections between Saratoga Springs and Eagle Mountain. Upgrading the section of roadway from the future Mountain View Corridor to approximately Ranches Parkway in Eagle Mountain is a long term planning project. Substantial environmental clearance will likely be required and it is recommended that this project be considered after the completion of the Hidden Valley Freeway. It is expected that SR-73 will carry 85,000 vehicles per day in 2040.

SR-73 has not been rigorously access controlled in the past as it was classified as a two lane rural highway. The rapid population growth in the area in recent years has necessitated and will continue to demand stricter access control. As such, many of the access points that currently exist may need to be cut off from the roadway. A potential mitigation to the removal of these access points would be to again construct a frontage road system or Collector-Distributor (C-D) road system paralleling the freeway. This would, as in the other cases previously discussed, provide greater access to properties adjacent to SR-73, provide a buffer between the freeway and adjacent land uses, and eliminate the need for large footprint interchanges by providing access via slip ramps.

Figure 4-9





## 5.0 Potential Funding Sources

Funding sources for transportation are essential if Saratoga Springs City recommended improvements are to be built. Presently there are four main sources of revenue available to Saratoga Springs City: federal funding, state funding, local general funding, and impact fees. The following paragraphs further describe these various transportation funding sources available to the City.

### 5.1 Federal Funding

Federal monies are available to cities and counties through the federal-aid program. The funds are administered by the Utah Department of Transportation (UDOT). In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) funds projects for any roadway with a functional classification of a collector street or higher as established on the Utah State Functional Classification Map ([Figure 5-1](#)). STP funds can be used for both rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the State in urban areas. Another portion of the STP funds can be used for projects in any area of the State at the discretion of the State Transportation Commission. Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Committee reviews the applications and then a portion of those are passed to the State Transportation Commission. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities, and water runoff mitigation. Other federal and state trails funds are available from the Utah State Parks and Recreation Program.

MAG accepts applications for federal funds through local and regional government jurisdictions. Transportation related projects are selected for funding every two years by the MAG Technical Advisory and Regional Planning committees. The selected projects form the Transportation Improvement Program (TIP). In order to receive funding, projects should include one or more of the following aspects:

Congestion Relief – spot improvement projects intended to improve Levels of Service and/or reduce average delay along those corridors identified in the Regional Transportation Plan as high congestion areas.

- **Mode Choice** – projects improving the diversity and/or usefulness of travel mode other than single occupant vehicles.
- **Air Quality Improvements** – projects showing demonstrable air quality benefits.
- **Safety** – improvements to vehicular, pedestrian, and bicyclist safety.



# SARATOGA SPRINGS

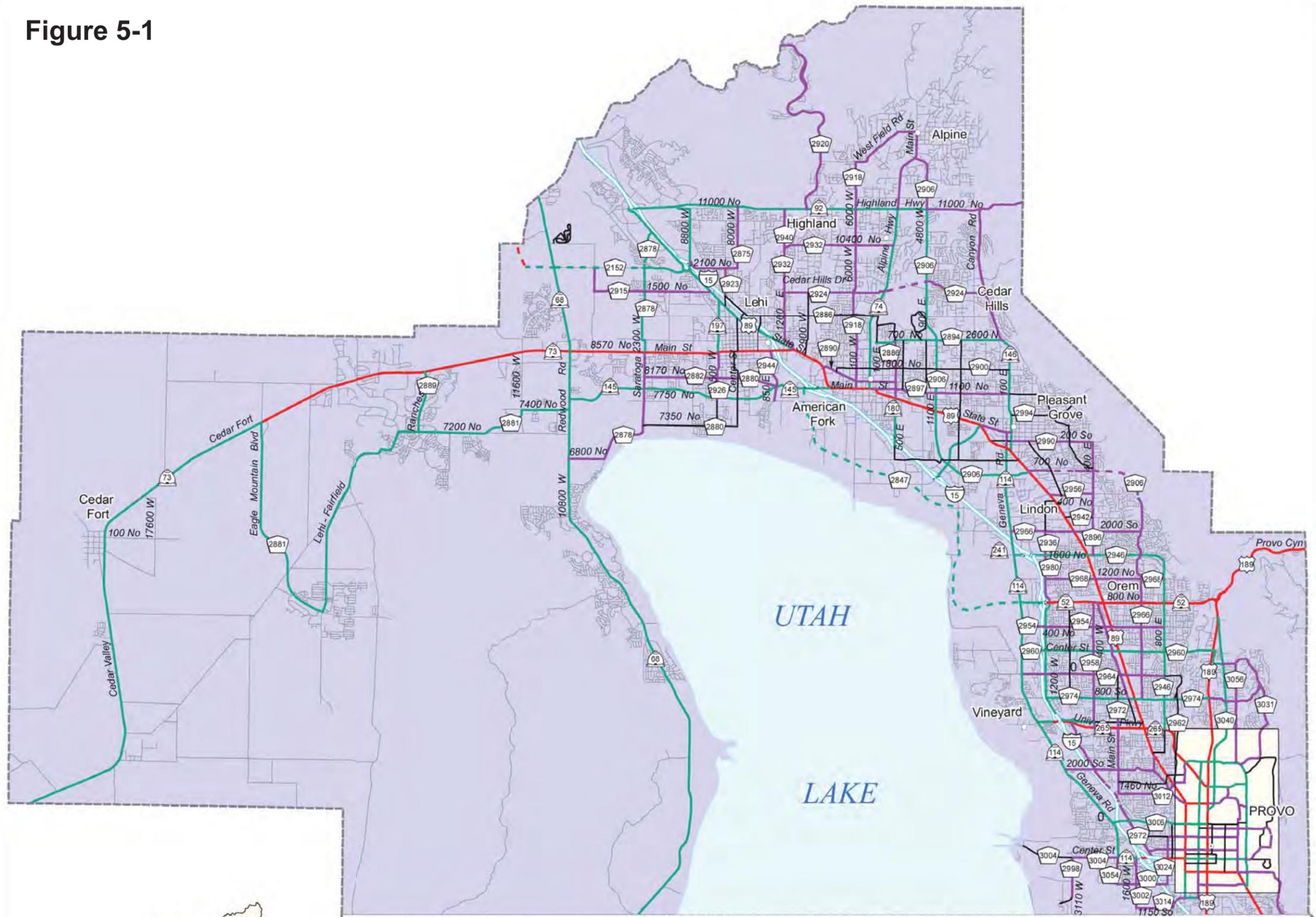
## Transportation Master Plan

2016

Since the adoption of the TMP in 2013, the City has had great success in procuring federal funding through the TIP selection process. The following lists the projects selected in the TIP process for 2014 and 2016.

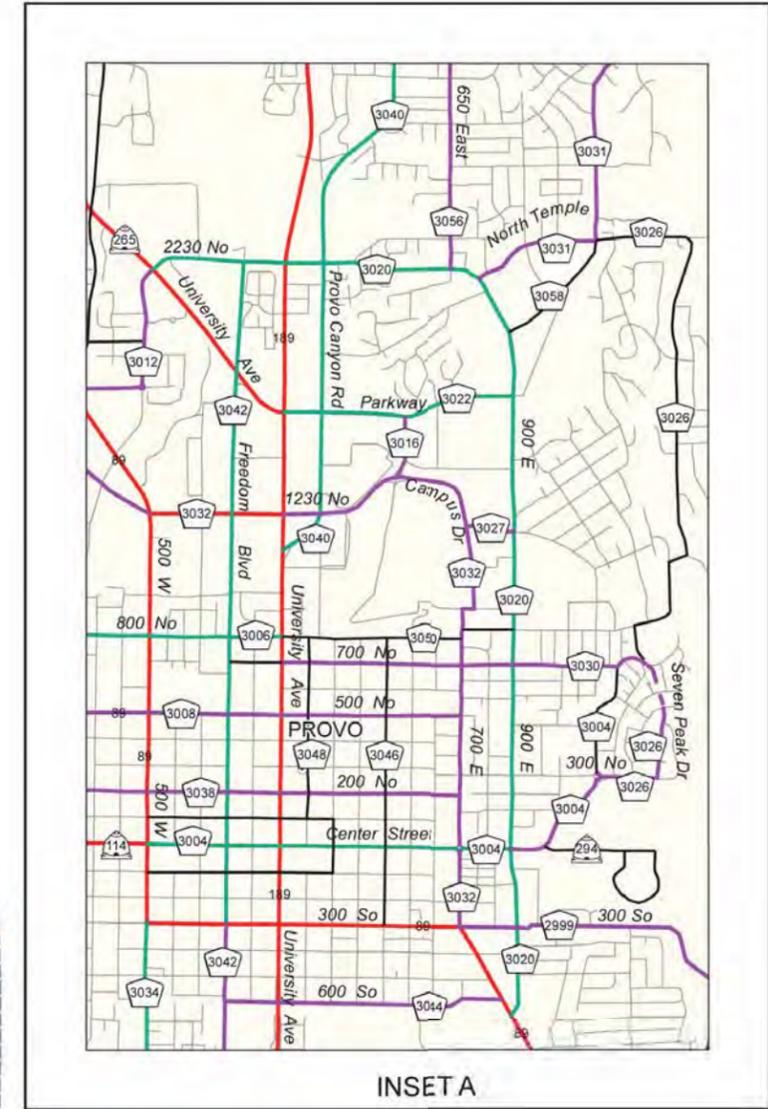
- **Redwood Road Trail**
- **Crossroads Boulevard Widening**
- **Utah Lakeshore Trail: Hot Pots and Amanda Lane**

Figure 5-1



Match Line To Sheet 2

SHEET 1



INSET A

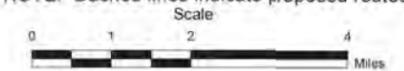


Utah County

**PROVO - OREM URBAN AREA  
FUNCTIONAL CLASS SYSTEM**

- Utah County, Utah
- Interstate
- Other Principal Arterial
- Minor Arterial
- Collector
- Local
- Federal Aid Urban Area Boundary

NOTE: Dashed lines indicate proposed routes



## 5.2 State Funding

The distribution of State Class B and C Program monies is established by State Legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Seventy-five percent of these funds are kept by UDOT for their construction and maintenance programs. The rest is made available to counties and cities. As many of the roads in Saratoga Springs, it is in the interests of the City that staff be aware of the procedures used by UDOT to allocate those funds and to be active in requesting the funds be made available for UDOT owned roadways in the City.

Class B and C funds are allocated to each city and county by a formula based on population, road mileage, and land area. Class B funds are given to counties, and Class C funds are given to cities and towns. Class B and C funds can be used for maintenance and construction projects; however, thirty percent of those funds must be used for construction or maintenance projects that exceed \$40,000. The remainder of these funds can be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

## 5.3 Local Funding

Most cities utilize general fund revenues for their transportation programs. Another option for transportation funding includes the creation of special improvement districts. These districts are organized for the purpose of funding a single specific project that benefits an identifiable group of properties. Another source of funding used by cities includes revenue bonding for projects felt to benefit the entire community.

Private interests often provide resources for transportation improvements. Developers construct the local streets within subdivisions and often dedicate right-of-way and participate in the construction of collector/arterial streets adjacent to their developments. Developers can also be considered a possible source of funds for projects through the use of impact fees. These fees are assessed as a result of the impacts a particular development will have on the surrounding roadway system, such as the need for traffic signals or street widening.

## 5.4 Impact Fees

Impact fees are a way for a community to obtain funds to assist in the construction of infrastructure improvements resulting from and needed to serve new growth. The premise behind impact fees is that if no new development occurred, the existing infrastructure would be adequate. Therefore, new developments should pay for the portion of required improvements that result from new growth. Impact fees are assessed for many types of infrastructure and facilities that are provided by a community, such as roadway facilities. According to state law, impact fees can only be used to fund growth related system improvements

To help fund needed roadway improvements, impact fees should be established. These fees are collected from new developments in the City to help pay for improvements that are needed to the roadway system



# SARATOGA SPRINGS

## Transportation Master Plan

2016

due to growth. At the culmination of the Transportation Master Planning process, a citywide IFFP will be developed according to state law to determine the appropriate impact fee values for the City.



## 6.0 Appendix

---

## **Meeting Schedule**

The Planning Commission and City Council held a series of Joint Work Session Meetings to discuss the General Plan, including the Land-Use Element, Land-Use Map, and Transportation Map. These meetings occurred on January 24<sup>th</sup> and 31<sup>st</sup>, 2012, February 16<sup>th</sup> and 21<sup>st</sup>, 2012, and March 1<sup>st</sup>, 8<sup>th</sup> and 14<sup>th</sup>, 2012. Each meeting agenda was published and posted, and property owners as well as residents were allowed to attend and provide input.

On March 29<sup>th</sup>, 2012 the Planning Commission held a public hearing on this item and forwarded a positive recommendation to the City Council. Council Adopted the TMP map on April 17<sup>th</sup>.

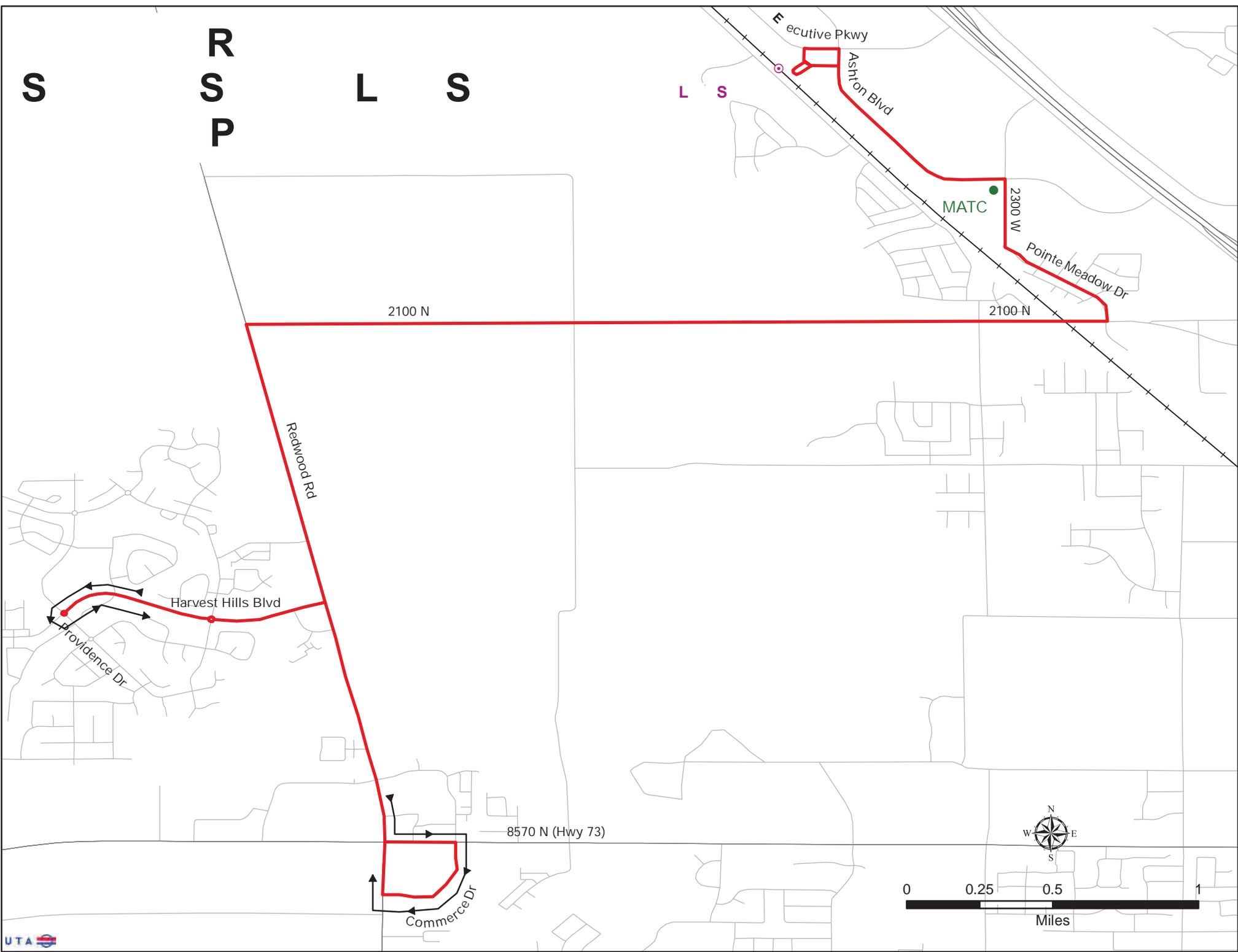
The work sessions for the Transportation element of the general plan were held on August 21<sup>st</sup> for City Council and August 23<sup>rd</sup>, for Planning Commission. PC will voted on August 23<sup>rd</sup> and sent a positive recommendation to City Council who adopted the transportation element of the general plan on September 4<sup>th</sup>.

Meetings were held with land holders and adjacent municipalities to discuss the transportation element of the general plan and solicit feedback on the following days:

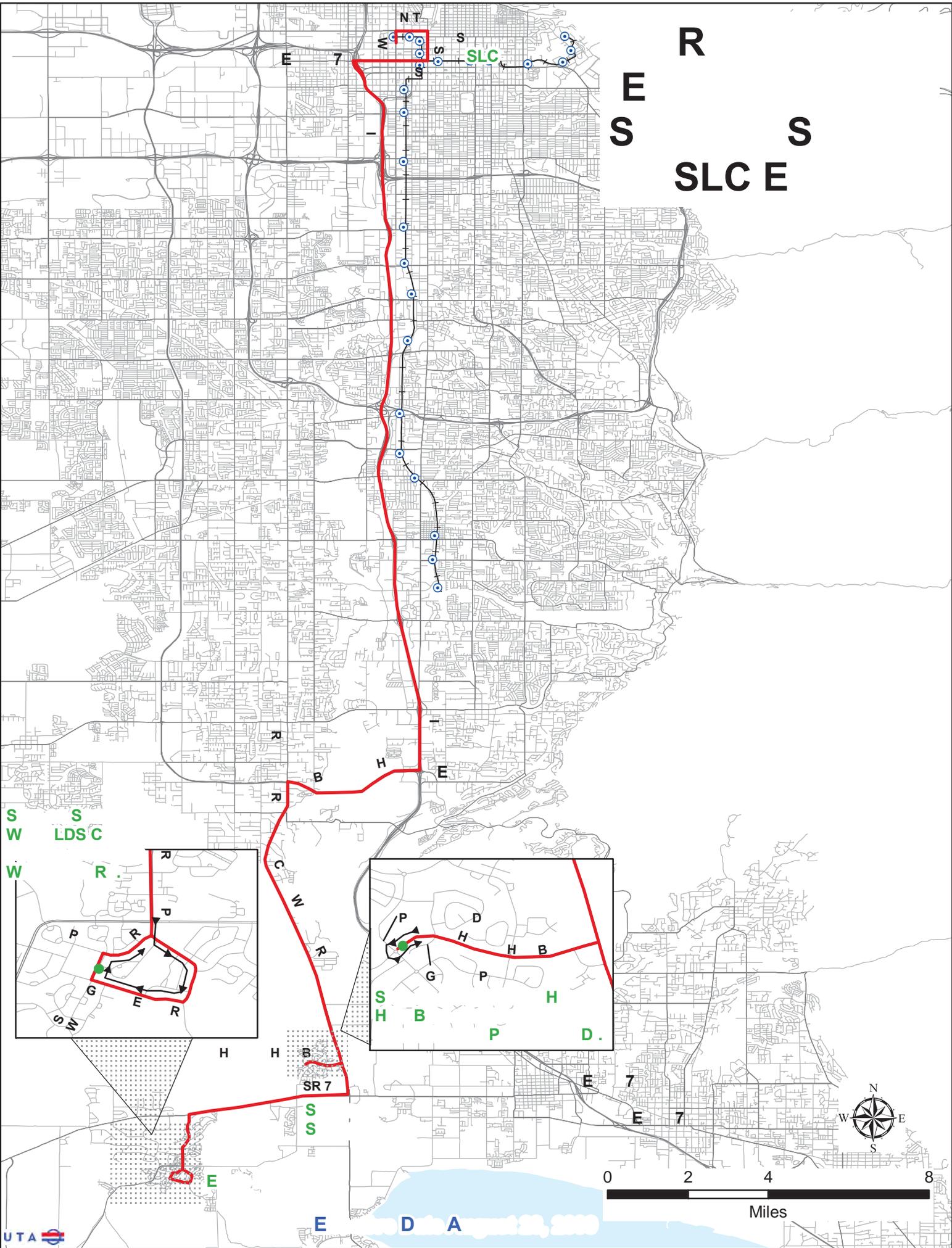
- ≠ Ray Whitchurch; IBI Group - April 3<sup>rd</sup> 2012
- ≠ Ron Phillips, Ari Bruening, Jesse Fairbanks, Robert Grow, Warren Peterson; FLR – March 23<sup>rd</sup> 2012
- ≠ Shane Marshall; UDOT Region 3 – March 23<sup>rd</sup> 2012
- ≠ Bart Cima, Scott Bolton; IBI Group – March 21<sup>st</sup> 2012
- ≠ Chris Trusty, Steve Mumford; Eagle Mountain City – March 22<sup>nd</sup> 2012
- ≠ Lorin Powell; Lehi City – March 21<sup>st</sup> 2012

In addition, Horrocks Engineers met regularly with City Staff to discuss the transportation element of the general plan and address comments or concerns.

# S R S P L S



# R E S S L C E



128514

- 15719

COOPERATIVE AGREEMENT  
Transfer of SR-73 to  
Saratoga Springs City Jurisdiction  
SARATOGA SPRINGS CITY  
Federal ID No. 87-0575087

S-0073(24)36

71387

**COOPERATIVE AGREEMENT**

Nov THIS COOPERATIVE AGREEMENT, made and entered into this 30 day of Nov, 2011 by and between the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as "UDOT," and SARATOGA SPRINGS CITY, a municipal corporation of the State of Utah created, hereinafter referred to as the "CITY",

**RECITALS**

WHEREAS, UDOT desires to transfer ownership and full jurisdiction of a portion of SR-73 in Saratoga Springs to the CITY, beginning at SR-68 (Redwood Road) and ending at the West side of the Jordan River, the City of Saratoga Springs East City Limits a distance of 0.571 + miles; and

THIS COOPERATIVE AGREEMENT is written to set out the terms and conditions under which the jurisdictional transfer shall be performed.

NOW, THEREFORE, it is agreed by and between the parties hereto as follows:

1. UDOT agrees to release payment in the form of a ONE TIME LUMP SUM AMOUNT OF \$27,700.00 equal to the equivalent of one (1) year of UDOT's maintenance and pavement preservation budget. The noted funds will be forwarded to the CITY at the time of jurisdictional transfer to be used at the CITY's discretion.

**TOTAL ESTIMATED COST TO UDOT \$27,700.00**

2. UDOT further agrees to provide snow removal for SR-73 through the winter season of 2011-2012. All snow removal services will cease upon the end of season 2012. Beginning 2012-2013, all snow removal services for SR-73 will become the sole responsibility of the CITY. All other operations and maintenance responsibilities, services, needs and costs become the sole responsibility of the CITY effective upon the execution of the jurisdictional transfer. CITY agrees to assume ownership and all maintenance responsibilities associated with the above noted route and to relieve UDOT from any and all maintenance responsibilities and liability associated with said maintenance.

3. UDOT further agrees to continue to maintain the traffic signal located at the intersection of SR-73 and SR-68. UDOT further agrees to maintain the existing traffic signal located at SR-73 and East Commerce Drive until Dec. 15, 2015. The street lighting at this location will continue to be owned and maintained by the CITY as those responsibilities are currently defined.

**COOPERATIVE AGREEMENT**

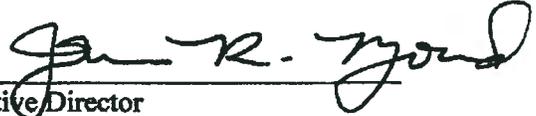
Transfer of SR-73 to  
Saratoga Springs City Jurisdiction  
**SARATOGA SPRINGS CITY**  
Federal ID No. 87-0575087

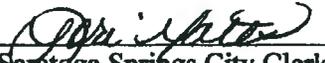
**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**SARATOGA SPRINGS CITY,  
STATE OF UTAH**

**UTAH DEPARTMENT OF  
TRANSPORTATION**

  
\_\_\_\_\_  
Mayor,  
Saratoga Springs City

  
\_\_\_\_\_  
Executive Director  
Utah Department of Transportation

  
\_\_\_\_\_  
Saratoga Springs City Clerk

\_\_\_\_\_  
UDOT Secretary

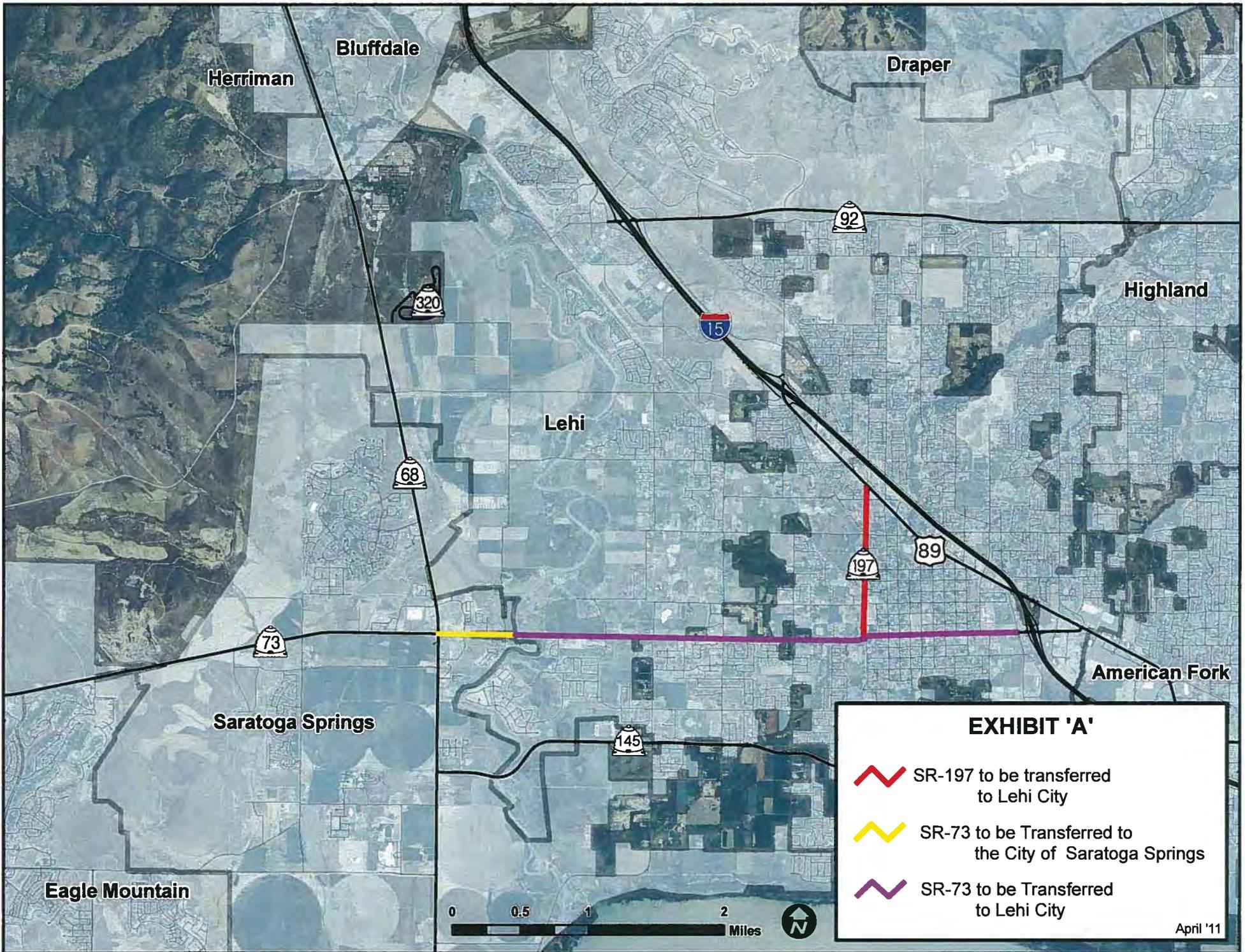
Date: November 23, 2011

Date: \_\_\_\_\_



**COMPTROLLER OFFICE**  
  
\_\_\_\_\_  
Contract Administrator

Date: 12-21-11



Herriman

Bluffdale

Draper

Highland

Lehi

American Fork

Saratoga Springs

Eagle Mountain

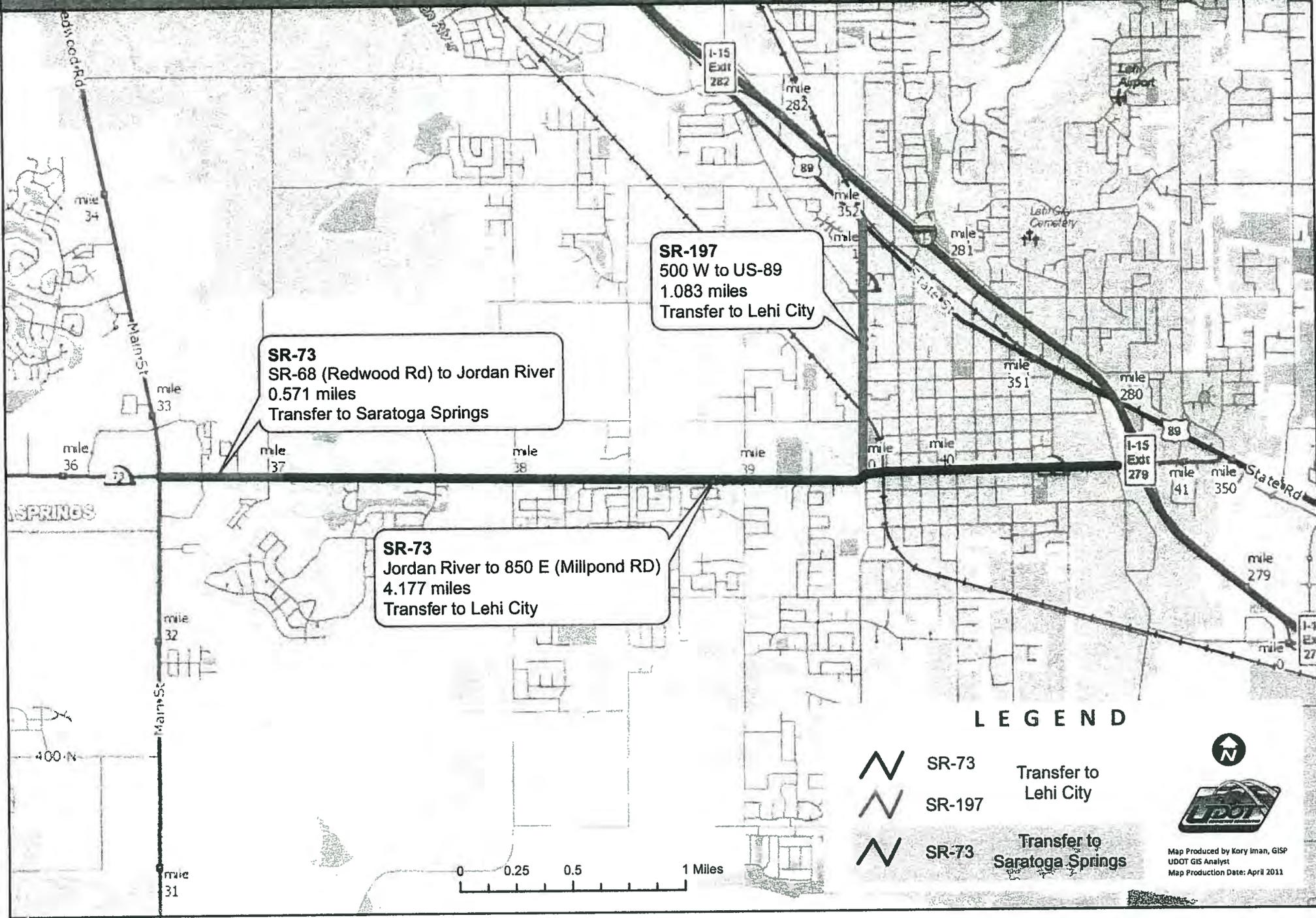
**EXHIBIT 'A'**

-  SR-197 to be transferred to Lehi City
-  SR-73 to be Transferred to the City of Saratoga Springs
-  SR-73 to be Transferred to Lehi City



April '11

# JURISDICTIONAL TRANSFER OF SR-73 & SR-197



**SR-73**  
 SR-68 (Redwood Rd) to Jordan River  
 0.571 miles  
 Transfer to Saratoga Springs

**SR-197**  
 500 W to US-89  
 1.083 miles  
 Transfer to Lehi City

**SR-73**  
 Jordan River to 850 E (Millpond RD)  
 4.177 miles  
 Transfer to Lehi City

## LEGEND

-  SR-73 Transfer to Lehi City
-  SR-197 Transfer to Lehi City
-  SR-73 Transfer to Saratoga Springs



Map Produced by Kory Iman, GISP  
 UDOT GIS Analyst  
 Map Production Date: April 2011

2009-243

Corridor Preservation along Pioneer Crossing Road  
from SR-68 to US-89

✓ CITY OF SARATOGA SPRINGS

098907

Federal ID No. 870575087

LEHI CITY

Federal ID No. 876000240

AMERICAN FORK CITY

Federal ID No. 876000209

UTAH COUNTY

Federal ID No. 876000312

COOPERATIVE AGREEMENT

10610

**THIS COOPERATIVE AGREEMENT**, made and entered into this 12<sup>th</sup> day of May, 2009, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as "**UDOT**" and **CITY OF SARATOGA SPRINGS, LEHI CITY, AMERICAN FORK CITY**, and **UTAH COUNTY**, all of which are Municipal Corporations in the State of Utah, hereinafter referred to as the "**LOCAL AGENCY**",

**WITNESSETH:**

**WHEREAS**, the parties hereto desire to establish and preserve a corridor along the proposed Pioneer Crossing Road alignment from SR-68 in Saratoga Springs to US-89 in American Fork City, Utah County, to facilitate traffic flow, to be in accordance with each **LOCAL AGENCY**'s current Transportation Plan, and to be in accordance with **UDOT**'s Access Management Standards and practices. See attached map of Pioneer Crossing Road.

**NOW THEREFORE**, it is agreed by and between the parties hereto as follows:

1. The following intersections are identified as existing, proposed, or future traffic signal locations along Pioneer Crossing Road within the respective city limits or within Utah County:

- SR-68 (Saratoga Springs) (Proposed)
- 300 East approx. (Saratoga Springs)/  
10400 West approx. (County) (Proposed)
- 3400 West approx. (Lehi) (Proposed)
- 2300 West (Lehi)/9550 West (County) (Proposed)
- 1700 West (Lehi)/9150 West (County) (Proposed)
- 1100 West (Lehi)/8730 West (County) (Proposed)
- 500 West (Lehi)/8350 West (County) (Proposed)
- Center St. (Lehi)/8000 West (County) (Proposed)
- 300 East (Lehi) (Proposed)
- 600 East approx. (Lehi) (Future)
- 850 East/Mill Pond Road (Lehi) (Proposed)
- Vineyard Connector (American Fork) (Proposed)

Corridor Preservation along Pioneer Crossing Road  
from SR-68 to US-89

**CITY OF SARATOGA SPRINGS**

Federal ID No. 870575087

**LEHI CITY**

Federal ID No. 876000240

**AMERICAN FORK CITY**

Federal ID No. 876000209

**UTAH COUNTY**

Federal ID No. 876000312

- Interstate 15 SB ramps (American Fork) (Existing to be modified)
- Interstate 15 NB ramps (American Fork) (Existing to be modified)
- 600 West (American Fork) (Proposed)
- US-89 (American Fork) (Existing)

The intersections of SR-68, 1700 West, and 850 East have been identified in the Pioneer Crossing Traffic Study as locations where traffic signals will be built as part of the project, even though they have not been warranted by the normal warranting process.

The intersection of 300 East will be eliminated when the future 600 East (approx.) intersection is constructed. If there is a traffic signal at the 300 East intersection, it will be "relocated" to 600 East (approx.).

2. Proposed traffic signals listed in #1 above except for SR-68, 1700 West, and 850 East will not be installed until warranted by **UDOT**. No other access to Pioneer Crossing Road will be allowed except for the existing UTA Park and Ride facility in the northeast quadrant of the I-15/Pioneer Crossing Road interchange. This access will become a permanent right in/out only access during construction. It is understood that it may be necessary to restrict certain types of traffic movements at any intersection in order to maintain traffic flow and improve safety through the corridor as agreed upon by the parties hereto.

3. A **UDOT** Highway Access Management Standards Category 3 is established for this corridor with modifications as follows: Minimum traffic signal spacing is 2,640 feet except as noted in #1 above. All of the intersections listed above shall be prepared for signalization during construction of Pioneer Crossing Road, consisting of underground conduit and junction boxes, and may be opened to traffic without signalization.

4. Pioneer Crossing Road is hereby designated as a Limited Access facility.

5. The parties hereto shall consider the concepts contained herein during the development of any master plans in this area and work towards the common goal of this Agreement.

6. In the event there are changes in the concepts or provisions covered by this Agreement, a modification to this Agreement approved in writing by both parties hereto is required to place them in effect.

Corridor Preservation along Pioneer Crossing Road  
from SR-68 to US-89

**CITY OF SARATOGA SPRINGS**

Federal ID No. 870575087

**LEHI CITY**

Federal ID No. 876000240

**AMERICAN FORK CITY**

Federal ID No. 876000209

**UTAH COUNTY**

Federal ID No. 876000312

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**ATTEST:**

By: *[Signature]*  
Title: RECORDER  
Date: 12/30/08

(IMPRESS SEAL)



**CITY OF SARATOGA SPRINGS, a**  
Municipal Corporation in the State of Utah

By: *[Signature]*  
Title: Mayor  
Date: 12/30/08

**ATTEST:**

By: *[Signature]*  
Title: Recorder  
Date: 1/20/09

(IMPRESS SEAL)

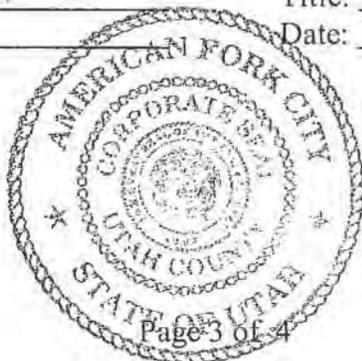
**LEHI CITY, a**  
Municipal Corporation in the State of Utah

By: *[Signature]*  
Title: Mayor  
Date: 1-20-09

**ATTEST:**

By: *[Signature]*  
Title: CITY RECORDER  
Date: 4/13/09

(IMPRESS SEAL)



**AMERICAN FORK CITY, a**  
Municipal Corporation in the State of Utah

By: *[Signature]*  
Title: Mayor  
Date: 4/13/09

Corridor Preservation along Pioneer Crossing Road  
from SR-68 to US-89

**CITY OF SARATOGA SPRINGS**

Federal ID No. 870575087

**LEHI CITY**

Federal ID No. 876000240

**AMERICAN FORK CITY**

Federal ID No. 876000209

**UTAH COUNTY**

Federal ID No. 876000312

**ATTEST:**

**UTAH COUNTY, a**  
Municipal Corporation in the State of Utah

By: Linda Strickland  
Title: Con Clerk  
Date: 5/12/09

By: Ann A. Estabrook  
Title: Utah County Commissioner  
Date: May 12, 2009



(IMPRESS SEAL)

\*\*\*\*\*

**RECOMMENDED FOR APPROVAL: UTAH DEPARTMENT OF TRANSPORTATION**

By: K.A. Shreeve  
Utilities/Railroads Coordinator

By: [Signature]  
Region Director

Date: 5/26/09

Date: 5-26-09

**APPROVED AS TO FORM:**

**COMPROLLER OFFICE**

This Form Agreement has been previously approved as to form by the office of Legal Counsel for the Utah Department of Transportation.

By: [Signature]  
Contract Administrator  
Date: 6/4/09

9959

**COOPERATIVE AGREEMENT**

**THIS AGREEMENT**, made and entered into this 10<sup>th</sup> day of Feb, 2009,  
by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as  
“**UDOT**” and **LEHI CITY**, a Municipal Corporation in the State of Utah, hereinafter referred to as  
the “**CITY**”,

**WITNESSETH:**

**WHEREAS**, the parties hereto desire to establish and preserve a corridor along SR-68 from  
1800 North to 2600 North in Lehi City, Utah County, to facilitate traffic flow, to be in accordance  
with the **CITY**'s Master Transportation Plan approved June 10, 2008, and to be in accordance with  
**UDOT**'s Access Management Standards and practices.

**NOW THEREFORE**, it is agreed by and between the parties hereto as follows:

1. The following locations are identified as existing, warranted/under design, or proposed  
traffic signal installations along SR-68 within Lehi city limits and within Saratoga  
Springs city limits that pertain to this agreement:

- SR-73 (Saratoga Springs) (Existing)
- North Commerce Dr. (Saratoga Springs) (Proposed)
- Harvest Hills Blvd. (Saratoga Springs) (Under design)
- 1500 North (Lehi address but in Saratoga Springs) (Proposed)
- 1900 North, approx. (Lehi) (Proposed)
- 2100 North (Lehi) (Proposed)
- 2350 North, approx. (Lehi) (Proposed)
- 2600 North (Lehi) (Under design)

2. Except for the proposed traffic signal locations, there will be no access permitted between  
1900 North and 2600 North. Proposed traffic signals will not be installed until warranted by **UDOT**.

3. It is understood that it may be necessary to restrict certain types of traffic movements at  
any intersection or access in order to maintain traffic flow and improve safety through the corridor  
as agreed upon by the parties hereto. Both parties agree to the prohibition of direct access to SR-68  
within Lehi's city limits.

4. Segments of the highway which are currently designated as No Access, Limited Access,  
or Regular Right-of-Way are unchanged by this Agreement.

5. The parties hereto shall consider the concepts contained herein during the development of any master plans in this area and work towards the common goal of this Agreement.

6. In the event there are changes in the concepts or provisions covered by this Agreement, a modification to this Agreement approved in writing by both parties hereto is required to place them in effect.

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**ATTEST:**

By: *Cornie Ashton*  
Title: Recorder  
Date: 1-27-09

**LEHI CITY CORPORATION**, a  
Municipal Corporation in the State of Utah  
By: *Howard Johnson*  
Title: Mayor  
Date: 1-27-09

(IMPRESS SEAL)

\*\*\*\*\*

**RECOMMENDED FOR APPROVAL: UTAH DEPARTMENT OF TRANSPORTATION**

By: *KA Rygle*  
Utilities/Railroads Coordinator  
Date: 2/9/09

By: *DK*  
Region Director  
Date: 2-10-09

**APPROVED AS TO FORM:**

This Form Agreement has been previously approved as to form by the office of Legal Counsel for the Utah Department of Transportation.

**COMPTROLLER OFFICE**

By: *Cherise Young*  
Contract Administrator  
Date: 3/2/09

9753

**COOPERATIVE AGREEMENT**

**THIS COOPERATIVE AGREEMENT**, made and entered into this 20<sup>th</sup> day of October, 2008, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as "**UDOT**" and **CITY OF SARATOGA SPRINGS**, a Municipal Corporation in the State of Utah, hereinafter referred to as the "**CITY**",

**WITNESSETH:**

**WHEREAS**, the parties hereto desire to establish and preserve a corridor along SR-73 from 2000 West to the Jordan River in the City of Saratoga Springs, Utah County, to facilitate traffic flow, to be in accordance with the City's Transportation Master Plan adopted by ordinance 28 October 2008, and to be in accordance with UDOT's Access Management Standards and practices.

**NOW THEREFORE**, it is agreed by and between the parties hereto as follows:

1. The following locations are identified as existing, warranted, or proposed traffic signal installations along SR-73:

- Saratoga Parkway (1400 West) (Proposed)
- 800 West (Warranted)
- West Commerce Drive (Proposed)
- SR-68 (Existing)
- East Commerce Drive (Proposed)
- 400 East (Proposed)

The intersection of SR-73 at Foothill Blvd. is expected to be constructed as part of the Mountain View Corridor road connection with SR-73. At that time the traffic signal which will be existing at 800 West will be "relocated" to Foothill Blvd.

2. Proposed traffic signals listed in #1 above will not be installed until warranted by **UDOT**. Additional traffic signals along SR-73 are not anticipated at this time, but intersections other than those listed in #1 above may be considered on an individual basis and studied by **UDOT**. These intersections may include Hillside Drive (1200 West) and 400 West. Even if these intersections are studied and warranted in the future by **UDOT**, there is no guarantee they will be signalized. It is understood that it may be necessary to restrict certain types of traffic movements at any intersection or access in order to maintain traffic flow and improve safety through the corridor as agreed upon by the parties hereto.

3. The current **UDOT** Highway Access Management Standards Category from the west city limit to a point about 1500 feet west of SR-68 is 2, meaning minimum traffic signal spacing is 5,280 feet, minimum street spacing is 1,000 feet, and minimum access spacing is 1,000 feet. From a point about 1500 feet west of SR-68 to a point about 475 feet west of 9248 West (Lehi), the Access Management Standards Category is 4, meaning minimum traffic signal spacing of 2,640 feet, minimum street spacing is 660 feet, and minimum access spacing is 500 feet. Both parties will strive to maintain traffic signal, street, and access spacing according to the current Access Management Standards. Reasonable exceptions may be reviewed by both agencies and variances may be granted if approved by both agencies.

4. Segments of the highway which are currently designated as No Access, Limited Access, or Regular Right-of-Way are unchanged by this Agreement.

5. The parties hereto shall consider the concepts contained herein during the development of any master plans in this area and work towards the common goal of this Agreement.

6. In the event there are changes in the concepts or provisions covered by this Agreement, a modification to this Agreement approved in writing by both parties hereto is required to place them in effect.

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**ATTEST:**

By: *Dani Morrow*  
Title: City Recorder  
Date: 12/17/08

**CITY OF SARATOGA SPRINGS**, a  
Municipal Corporation in the State of Utah

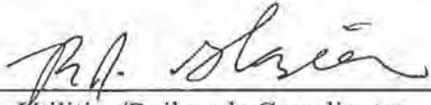
By: *Jonathan L. Fisher*  
Title: Mayor  
Date: 12/17/08

(IMPRESS SEAL)



\*\*\*\*\*

**RECOMMENDED FOR APPROVAL: UTAH DEPARTMENT OF TRANSPORTATION**

By:   
Utilities/Railroads Coordinator

Date: 12/23/08

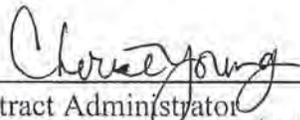
By:   
Region Director

Date: 12-29-08

**APPROVED AS TO FORM:**

This Form Agreement has been previously approved as to form by the office of Legal Counsel for the Utah Department of Transportation.

**COMPTROLLER OFFICE**

By:   
Contract Administrator

Date: 1/7/09

9757

**COOPERATIVE AGREEMENT**

**THIS COOPERATIVE AGREEMENT**, made and entered into this 28<sup>th</sup> day of October, 2008, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as “**UDOT**” and **CITY OF SARATOGA SPRINGS**, a Municipal Corporation in the State of Utah, hereinafter referred to as the “**CITY**”,

**WITNESSETH:**

**WHEREAS**, the parties hereto desire to establish and preserve a corridor along SR-68 from 5200 South to 2600 North in the City of Saratoga Springs, Utah County, to facilitate traffic flow, to be in accordance with the City’s Transportation Master Plan adopted by ordinance 28 October 2008, and to be in accordance with UDOT’s Access Management Standards and practices.

**NOW THEREFORE**, it is agreed by and between the parties hereto as follows:

1. The following locations are identified as existing, warranted, or proposed traffic signal installations along SR-68:

- Foothill Blvd. (5200 South) (Proposed)
- Bonneville Drive (4700 South) (Proposed)
- Harbor Park Way (4000 South) (Proposed)
- Village Parkway (2900 South) (Proposed)
- Ring Road, a.k.a. Lariat Blvd. (2000 South) (Proposed)
- Grandview Blvd. (1400 South) (Proposed)
- 800 South (Proposed)
- Center St. (Proposed)
- Pioneer Crossing Blvd. (Warranted via Pioneer Crossing Traffic Study)
- South Commerce Dr. (Proposed)
- SR-73 (Existing)
- North Commerce Dr. (Proposed)
- Harvest Hills Blvd. (Warranted)

The intersection of SR-68 at the east-west segment of the Mountain View corridor (2800 North) is not currently within the Saratoga Springs city boundaries but may be in the future. It is a proposed traffic signal location and is included here for information only.

2. Proposed traffic signals listed in #1 above will not be installed until warranted by **UDOT**. Additional traffic signals along SR-68 are not anticipated at this time, but intersections other than those listed in #1 above may be considered for signalization on an individual basis when studied by **UDOT**. Any intersections of this nature are not guaranteed to be signalized. It is understood that it may be necessary to restrict certain types of traffic movements at any intersection or access in order to maintain traffic flow and improve safety through the corridor as agreed upon by the parties hereto.

3. The current **UDOT** Highway Access Management Standards Category for the entire length of SR-68 within the **CITY** is 4, meaning minimum traffic signal spacing is 2,640 feet, minimum street spacing is 660 feet, minimum access spacing is 500 feet. Both parties will strive to maintain traffic signal, street, and access spacing according to the current Access Management Standards. Reasonable exceptions may be reviewed by both agencies and variances may be granted if approved by both agencies.

4. Segments of the highway which are currently designated as No Access, Limited Access, or Regular Right-of-Way are unchanged by this Agreement.

5. The parties hereto shall consider the concepts contained herein during the development of any master plans in this area and work towards the common goal of this Agreement.

6. In the event there are changes in the concepts or provisions covered by this Agreement, a modification to this Agreement approved in writing by both parties hereto is required to place them in effect.

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**ATTEST:**

**CITY OF SARATOGA SPRINGS**, a  
Municipal Corporation in the State of Utah

By: *[Signature]*  
Title: CITY RECORDER  
Date: 12/17/08

By: *[Signature]*  
Title: Mayor  
Date: 12/17/08

(IMPRESS SEAL)



\*\*\*\*\*

**RECOMMENDED FOR APPROVAL: UTAH DEPARTMENT OF TRANSPORTATION**

By: *[Signature]*  
Utilities/Railroads Coordinator  
Date: 12/23/08

By: *[Signature]*  
Region Director  
Date: 12-29-08

**APPROVED AS TO FORM:**

**COMPTROLLER OFFICE**

This Form Agreement has been previously approved as to form by the office of Legal Counsel for the Utah Department of Transportation.

By: *[Signature]*  
Contract Administrator  
Date: 1/7/09

# T D T I I S R

This memo and preceding information is prepared to assist an access permit applicant fulfilling the requirement of performing a traffic impact study when requesting access to a state highway. Each permit application is unique. The agreed requirements of traffic study and assessment may vary accordingly as agreed to by the Department and the applicant and/or their representative who will perform the traffic study.

**Please refer to the Department document, *Accommodation of Utilities and the Control and Protection of State Highway Rights of Way: Section 7, State Highway Access* for full information concerning the grant of access application requirements. A downloadable copy of the document is available on the Department website at <http://www.udot.utah.gov>.**

The following are taken from the Utah state rule 930-6, Accommodation of Utilities and the Control and protection of State Highway Rights of Way. Statements for this guideline are also added which do not appear in the Rule.

## 7.2.5 Preparing The Access Application

### Pre-Application/Concept Meeting

Prior to submitting a permit application, contact the appropriate Department Region or District office for information about the application process and the type of information required. The applicant is advised to consult with the Region Permit Officer during a pre-application meeting to determine the appropriate access category, permit application level, and traffic impact study requirements, and scope for the project.

### Permit Level

The level of application required is based upon the size and magnitude of the proposed project applying for a permit. Threshold criteria for different levels of projects have been developed to avoid placing an undue burden on applicants with small projects, while ensuring that large projects with significant impacts are thoroughly evaluated.

Four application levels have been developed based on site-generated traffic of AADT and or peak hour volumes. Each level defines specific threshold elements related to required applicant site plan elements, permitting process, permitting schedule, applicant fees, traffic study requirements, and other permit related issues. The information and level of detail required to review an application will vary according to the type and usage of the access connection requested and will be determined based on the thresholds outlines in, Table 7.2-2: Guidelines for Access Permit Levels. The Region Permit Officer, Traffic Engineer and/or designee will determine the Permit Application Level based on preliminary data supplied by the applicant.

A Traffic Impact Study (TIS) is required of all access permit applications. The purpose of the TIS is to identify system and immediate area impacts associated with the proposed connection(s). Identification of impacts and appropriate mitigation measures allows the Department to assess the existing and future system safety, performance, maintenance, and capacity needs.

Determination of the extent of the TIS study area is at the determination of the attending Region Traffic Engineer and /or other Department employees. The study area, depending on the size and

intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

The TIS shall, at a minimum, incorporate traffic engineering principles and the standards as presented in this Rule. Additional requirements and investigation may be imposed upon the applicant as necessary.

Likely information presented in the TIS may include, but is not limited to, site location and proposed access point(s), phased and/or full development trip generation, connection point design elements, adjacent and relevant development, existing and future traffic volumes, assessment of the system impacts, and mitigation measures as appropriate.

The applicant will be responsible for performance and delivery of an acceptable traffic impact study. The TIS should be performed by an individual or entity demonstrating capability to analyze and report mobility, traffic engineering elements, and design elements as necessary for the application study area and site design. The TIS should be prepared directly, or by direct supervision by a State of Utah Licensed Professional Engineer. The Region Traffic Engineer may waive the licensing requirement for Permit Level I and II, and may also waive the Utah Licensure requirement.

#### 7.2.6 Application Review

For an access permit, submit one complete application with attachments to the Region Permits Officer at the appropriate Department Region Office. The Region Permits Officer is the primary contact for the applicant with the Department throughout the process. Direct inquiries regarding a permit application or review, are directed to the Region Permit Officer.

#### 7.2.11 Traffic Impact Studies

##### Need for Traffic Impact Study

A traffic study is necessary to identify, review, and make recommendations for mitigation of the potential impacts a development may have on the roadway system. Physical characteristics and operational characteristics of the roadway are typically identified. The Region Permits Officer and/or Region Traffic Engineer determine the need for a traffic impact study.

An applicant may be required to submit a traffic study for any proposed access or connection within an area identified by the Department. Area definition may be defined by, but not limited to, an identified safety problem, accident review, congested locations, or as a result of a change in land use and/or access in accordance with an access permit application. The study area may also be defined by a travel time boundary, area of influence, physical boundaries, or political boundaries.

##### Purpose of the Traffic Impact Study

TIS are intended to:

- Document whether or not the access request can meet the standards and requirements of this Rule and other applicable regulations.
- Analyze appropriate location, spacing, and design of the access connection(s) necessary to mitigate the traffic.

- Analyze operational impacts on the highway and permissible under the highway's assigned access category and in accordance with applicable requirements and standards of this Rule.
- Recommend the need for any improvements to the adjacent and nearby roadway system to maintain a satisfactory level of service and safety and to protect the function of the highway system while providing appropriate and necessary access to the proposed development.
- Assure that the internal traffic circulation of the proposed development is designed to provide safe and efficient access to and from the adjacent and nearby roadway system consistent with the purpose of this Rule.
- Analyze and recommend the means for land uses to minimize their external transportation costs to the traveling public through traffic improvements necessitated by that development as well as making the fullest use of alternative travel modes.

#### Traffic Impact Study Requirements

When a Traffic Impact Study is required (See Table 7.2-2), prepare the study according to the Department Traffic Impact Study Requirements. The appropriate Region Traffic Engineer in consultation with the permit applicant will determine the traffic study area limits.

All existing and proposed access points, driveways and streets, shall be identified for each site, including access on the opposite side of the site and within the influence area of the proposed site access. The influence area will be defined by the Region Traffic Engineer and/or designee. Each access will be labeled for proposed accesses as P1, P2, P3... and existing accesses as E1, E2, E3,...

A C P S H R W  
T 7.  
G A P L

P T A L	T	T I T L E T L I T	T I S R
I	<p>Projected site traffic &lt; 100 ADT</p> <p>No proposed modifications to traffic signals or elements of the roadway</p>	<p>Single Family &lt; 10 units</p> <p>Apartment &lt; 15 units</p> <p>Lodging &lt; 11 occupied rooms</p> <p>General Office &lt; 9,000 square feet</p> <p>Retail &lt; 2,500 square feet</p>	<p>YES</p> <p>Conditions Apply</p>
II	<p>Projected site traffic between 100 and 3,000 ADT</p> <p>Projected peak hour traffic &lt; 500</p> <p>Minor modifications to traffic signals or elements of the roadway</p>	<p>Single Family 10 to 315 units</p> <p>Apartment 15 to 450 units</p> <p>Lodging 11 to 330 occupied rooms</p> <p>General Office 9,000 to 270,000 sq. ft.</p> <p>Retail 2,500 to 70,000 sq. ft.</p> <p>Gas Station 1 to 18 fueling positions</p> <p>Fast Food 1,000 to 6, 000 sq. ft.</p> <p>Restaurant 1,000 to 26,000 sq. ft.</p>	YES
III	<p>Projected site traffic between 3,000 and 10,000 ADT</p> <p>Projected peak hour traffic between 500 and 1,200</p> <p>Proposed installation or modification to traffic signals or elements of the roadway, regardless of project size</p>	<p>Single Family 315 to 1,000 units</p> <p>Apartment 450 to 1,500 units</p> <p>Lodging 330 to 1,100 occupied rooms</p> <p>General Office 270,000 to 900,000 sq. ft.</p> <p>Retail 70,000 to 230,000 sq. ft.</p> <p>Fast Food 6,000 to 20, 000 sq. ft.</p>	YES
IV	<p>Projected site traffic &gt; 10,000 ADT</p> <p>Proposed installation /modification of two or more traffic signals, addition of travel lanes to State Highway or proposed modification of freeway interchange, regardless of project size</p>	<p>Single Family &gt; 1,000 units</p> <p>Apartment &gt; 1,500 units</p> <p>Lodging &gt; 1,100 occupied rooms</p> <p>General Office &gt; 900,000 square feet</p> <p>Retail &gt; 230,000 square feet</p>	YES

## Permit Level / Traffic Study level I

Project ADT < 100 trips.

No proposed modifications to traffic signals or roadway elements or geometry.

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

1. Study Area.

Defined by Region Permits Officer and/or Region Traffic Engineer.

The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.

Study area may be limited to or include property frontage and include neighboring and adjacent parcels. Identify site, cross, and next adjacent up and down stream access points within access category distance of property boundaries.

2. Design year.

Opening day of project.

3. Analysis Conditions and Period

Identify site traffic volumes and characteristics.

Identify adjacent street(s) traffic volume and characteristics.

4. Identify right-of-way, geometric boundaries and physical conflicts.

Investigate existence of federal or state, no access or limited access control line.

5. Generate access point capacity analysis as necessary.

Analyze site and adjacent road traffic for the following time periods: weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (per roadway peak and site peak).

6. Design and Mitigation.

Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

## **Permit Level / Traffic Study Level II**

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

### **Project ADT 100 to 500 trips.**

1. Study Area.  
Defined by Region Permits Officer or Region Traffic Engineer.  
The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.  
  
Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections
2. Design Year.  
Opening day of project.
3. Analysis Period.  
Identify site and adjacent road traffic for weekday A.M. and P.M. peak hours.
4. Data Collection  
Identify site and adjacent street roadway and intersection geometries.  
Identify adjacent street(s) traffic volume and characteristics.
5. Conflict / Capacity Analysis  
Diagram flow of traffic at access point(s) for site and adjacent development.  
Perform capacity analysis as determined by Region Traffic Engineer.
6. Right-of-Way Access  
Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
7. Design and Mitigation  
Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

### **Project ADT 500 to 3,000 trips or peak hour < 500 trips.**

Any proposed modification to traffic signals or roadway elements or geometry.

1. Study Area.  
Defined by Region Permits Officer or Region Traffic Engineer.  
The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections.

2. Design Year.  
Opening day of project and five year after project completion. Document and include all phases of development (includes out pad parcels).
3. Analysis Period.  
Analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (adjacent roadway peak and site peak).
4. Data Collection
  - a. Daily and Turning Movement counts.
  - b. Identify site and adjacent street roadway and intersection geometries.
  - c. Traffic control devices including traffic signals and regulatory signs.
  - d. Traffic accident data
5. Trip Generation.  
Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.
6. Trip Distribution and Assignment  
Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.
7. Conflict / Capacity Analysis.  
Diagram flow of traffic at access point(s) for site and adjacent development.  
Perform capacity analysis for daily and peak hour volumes
8. Traffic Signal Impacts. For modified and proposed traffic signals:
  - a. Traffic Signal Warrants as identified.
  - b. Traffic Signal drawings as identified.
  - c. Queuing Analysis
9. Right-of-Way Access  
Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
10. Design and Mitigation.  
Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

## Permit Level / Traffic Study Level III

Project ADT 3,000 to 10,000 trips or peak hour traffic 500 to 1,200 trips.

Proposed installation or modification to traffic signals or roadway elements or geometry, regardless of project size or trip generation.

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

1. Study Area.

Defined by Region Permits Officer or Region Traffic Engineer

The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.

Intersection of site access drives with state highways and any intersection within 1/2 mile of property line on each side of project site.

2. Design Year.

Opening day of project, five years and twenty years after opening. Document and include all phases of development (includes out pad parcels).

3. Analysis period.

For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

4. Data Collection.

- a. Daily and Turning movement counts.
- b. Identify site and adjacent street roadway and intersection geometries.
- c. Traffic control devices including traffic signals and regulatory signs.
- d. Automatic continuous traffic counts for at least 48 hours.
- e. Traffic accident data.

5. Trip Generation.

Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.

6. Trip Distributions and Assignment.

Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

7. Capacity Analysis.

- a. Level of Service (LOS) for all intersections.
- b. LOS for existing conditions, design year without project, design year with project.

8. Traffic Signal Impacts. For proposed Traffic Signals:

- a. Traffic Signal Warrants as identified.
- b. Traffic Signal drawings as identified.

- c. Queuing Analysis.
  - d. Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
  - e. Traffic Coordination Analysis
9. Right-of-Way Access  
Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
10. Accident and Traffic Safety Analysis. Existing vs. as proposed development.
11. Design and Mitigation.  
Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

### **Permit Level / Traffic Study Level IV**

Project ADT greater than 10,000 trips or peak hour traffic > 1,200 vehicles per hour.  
Proposed installation or modification of two or more traffic signals, addition of traffic lanes or modification of freeway interchange.

The traffic study shall, at a minimum, incorporate traffic engineering principles and standards as presented in the State Highway Access Management Rule, Department standards, and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

The Region Permits officer and/or the Region Traffic Engineer determine the need and requirements for a traffic impact study.

1. Study Area.  
Defined by Region Permits Officer or Region Traffic Engineer  
The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary, based on travel time, may be identified as a ten or twenty minute travel time or even by market area influence.  
  
Intersection of site access drives with state highways and any intersection within 1/2 mile of property line of each side of project site and any intersection or freeway interchange impacted by more than 500 peak hour trips.
2. Design Year.  
Opening day of project, five years and twenty years after opening. Document and include all phases of development (includes out pad parcels).
3. Analysis period.  
For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours. Identify special event peak hour as necessary (adjacent roadway peak and site peak).
4. Data Collection.
  - a. Daily and Turning movement counts.
  - b. Identify site and adjacent street roadway and intersection geometries.
  - c. Traffic control devices including traffic signals and regulatory signs.

- d. Automatic continuous traffic counts for at least 48 hours.
  - e. Traffic accident data.
5. Trip Generation  
Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.
  6. Trip Distributions and Assignment.  
Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.
  7. Capacity Analysis.
    - a. Level of Service (LOS) for all intersections.
    - b. LOS for existing conditions, design year without project, design year with project.
  8. Traffic Signal Impacts. For proposed traffic signals:
    - a. Traffic Signal Warrants as identified.
    - b. Traffic Signal drawings as identified.
    - c. Queuing Analysis.
    - d. Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
    - e. Traffic Coordination Analysis.
  9. Right-of-Way Access  
Identify right-of-way, geometric boundaries and physical conflicts. Investigate existence of federal or state, no access or limited access control line.
  10. Accident and Traffic Safety Analysis. Existing vs. as proposed develop.
  11. Design and Mitigation.  
Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

## STUDY AND REPORT FORMAT

The Traffic impact study should follow the recommended format below. Traffic impact studies shall be presented by a firm or individual recognized by the Department of Transportation as capable of performing a traffic analysis and when necessary, include engineered drawings based on Department standards drawings and specifications.

- (1) INTRODUCTION AND SUMMARY
- (2) PROPOSED PROJECT
- (3) STUDY AREA CONDITIONS
- (4) ANALYSIS OF EXISTING CONDITIONS
- (5) PROJECTED TRAFFIC
- (6) TRAFFIC ANALYSIS
- (7) CONCLUSIONS
- (8) RECOMMENDATIONS
- (9) APPENDICES
  - a) Traffic Counts
  - b) Traffic Capacity Analysis
  - c) Accident Summary
  - d) Request for change of access (if applicable)

### (10) FIGURES AND TABLES

The following items shall be documented in the study:

- a) Site location – showing area roadways
- b) Site Plan  
Identify geometric / physical concerns relating to area, site and specific access points. Include adjacent street and access points.
- c) Existing roadway and traffic control features (number of lanes, lane widths, alignment, location of traffic signals, signs) Include off-system features as related to site plan and access point(s).
- d) Existing daily volumes (directional if possible) and peak hour turning volumes. Discuss traffic characteristics (vehicle mix, % make-up and any special vehicle requirements).
- e) Collision diagram summary.
- f) Site generated trip summary. Discuss trip/vehicle make-up and any special vehicle requirements. Discuss trip reduction strategies if applicable.
- g) Directional distribution of site generated traffic.
- h) Assignment of Non-site related traffic (existing, background and future). Document both existing and committed development, and when appropriate other background planned development traffic. Assignment of total future non-site traffic for design year.
- i) Assignment of Site Traffic
- j) Traffic Capacity Analysis  
Projected levels of service without the project – coincide with development phase years.  
Projected levels of service with the project (by development phase years)  
Recommended mitigation / improvement

(Scaled schematic drawings illustrating alignment, number of lanes, lane widths, signing, pavement markings. If traffic signal modifications are proposed, signal phasing, signal head locations, lane marking shall be shown.)

09.18.2013

---

**T**  
Jeremy Lapin, P.E.  
City Engineer

Steven Lord  
Project Manager

**R**  
Saratoga Springs  
Transportation Element of  
the General Plan  
Amendment

**P I**

The purpose of this memorandum is to amend the Saratoga Springs Transportation Element of the General Plan adopted in September of 2012. The reason for the amendment is the result of a traffic impact study (TIS) performed by Hales Engineering in conjunction with a development by DR Horton in the vicinity of 400 South and Old Saratoga Road east of Redwood Road. The developer wishes to downgrade two master planned roads from Collector streets to local streets in the development. Horrocks has reviewed the TIS performed and agrees that making the proposed changes should not greatly impact the overall road network in Saratoga Springs. Care must be taken during the approval process for the development to ensure that certain internal roads are calmed to discourage use by pass-through traffic. Details of the proposal and findings are found in the following paragraphs.

**P D**

DR Horton proposes a residential development, which is currently under city review. The development is located on the east side of Redwood Road and South of 400 South. This development consists of a mix of single family and multi-family dwellings totaling approximately 993 units. The development proposes that the future 600 South and the future Riverside Drive (running north-south) be downgraded to local streets from Collector streets. It is presumed that this proposal is to allow homes to front these two streets as the City access management guidelines prohibit residential driveways on Collector streets.

**T I S R**

The results and recommendations shown in the traffic impact study appear to be derived using sound traffic engineering principles and give a good representation of the traffic conditions that can be expected as the area develops. Horrocks has made no attempt to recreate the results and recommendations found in the TIS. However, Horrocks has found no reason to question the results and recommendations based on the validity of the assumptions outlined in the TIS.

---

Saratoga Springs Transportation Element of the General Plan Amendment

**T** 801-763-5100  
801-763-5101

2162 Grove Parkway  
Pleasant Grove, UT

www.horrocks.com  
stevenl@horrocks.com

**HORROCKS**  
ENGINEERS

The TIS indicates that each of the study intersections will operate at acceptable levels through the year 2040 provided the intersection at Redwood Road and 400 South is signalized. The transportation element of the general plan does not call for a signal at 400 South as there is currently no agreement between the City and the Utah Department of Transportation (UDOT) to install a traffic signal at this location. It appears that a traffic signal at this location will meet the access management standards established for UDOT owned roadways and would therefore likely be permitted provided the requisite signal warrants are met.

The projected traffic volumes provided by Hales Engineering in the TIS and in the TMP Amendment memo dated August 30, 2013 appear to be reasonable for the roads within the study area. Hales Engineering commissioned modifications to the travel demand model within the vicinity of the development to assess the impact of downgrading the roads from Collector streets to local streets. Again, Horrocks has made no attempt to recreate the results but from the assumptions discussed in the memo and TIS, has found no reason to question the validity of the recommendations. The memo indicates that by downgrading the roads from Collectors to local streets, traffic will be diverted to 400 South or Pony Express Parkway. This will increase the volume of traffic on 400 South, Pony Express Parkway and Redwood Road north of the development but is not likely to result in these roads reaching capacity by the year 2040.

Downgrading the future 600 south must be done with care as this is the most direct route for vehicles to travel from the west side of Redwood Road, connecting a future interchange on the proposed Foothill Boulevard with the east side of Utah County. In order to ensure that 600 South is only used by local traffic and not by regional pass-through traffic, 600 south should be considered for traffic calming. The City has recently undergone a review of its traffic calming procedures. These procedures should be followed when reviewing and approving the development.

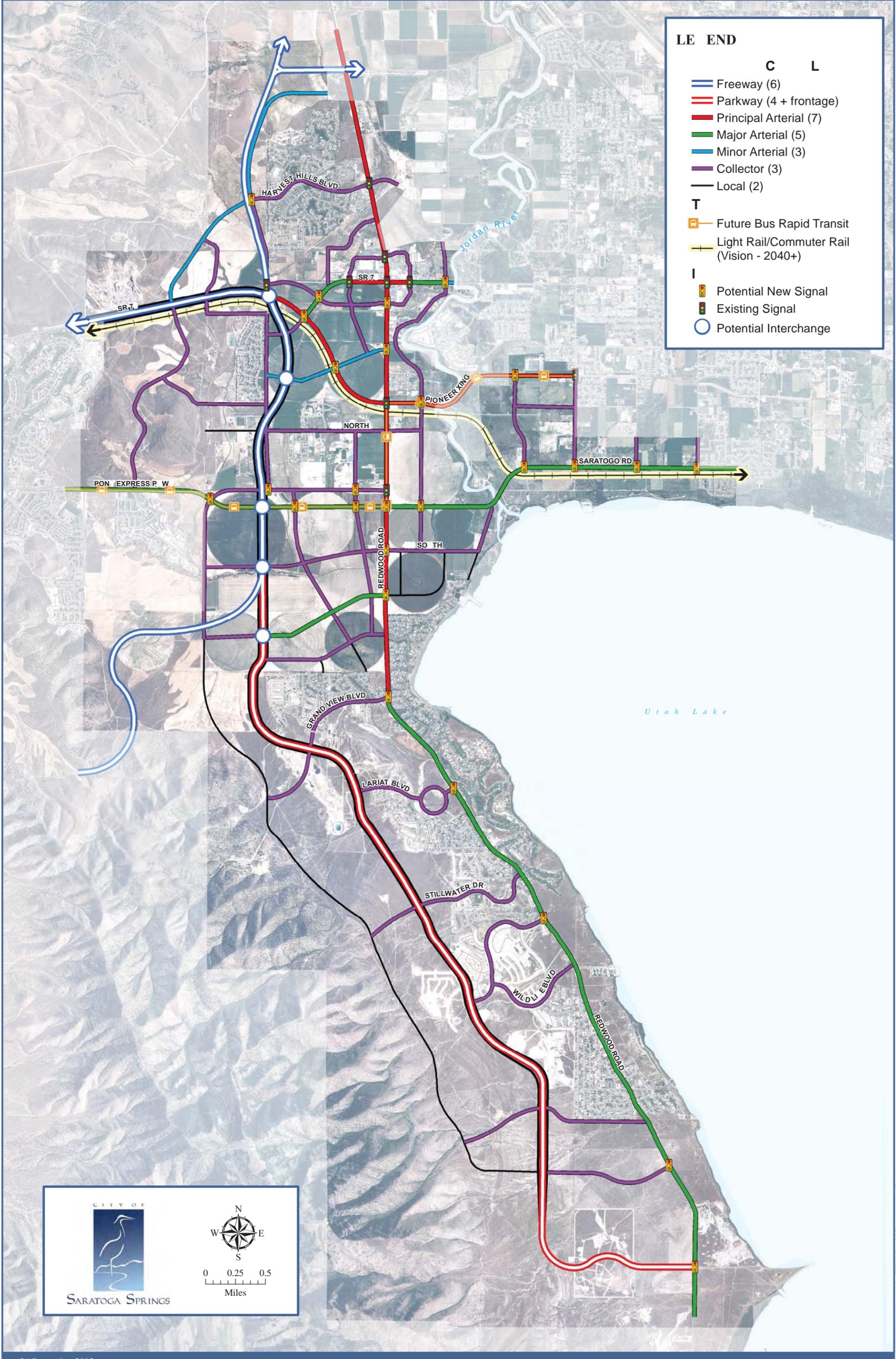
## C

Attached to this memo are updated figures and tables reflecting the changes to the Transportation Element of the General Plan as proposed with the DR Horton development. In this memorandum Horrocks Engineers is not providing a recommendation that these changes should or should not be made, only affirming that it is unlikely that these changes will significantly

impact the overall roadway network within the City. The attached figures, tables and pages are intended to replace the corresponding figures, tables and pages found within the Transportation Element of the General Plan adopted September 2012.



Figure 4-1 Transportation Master Plan



**LE END**

<b>C</b>	<b>L</b>
	Freeway (6)
	Parkway (4 + frontage)
	Principal Arterial (7)
	Major Arterial (5)
	Minor Arterial (3)
	Collector (3)
	Local (2)
<b>T</b>	
	Future Bus Rapid Transit
	Light Rail/Commuter Rail (Vision - 2040+)
<b>I</b>	
	Potential New Signal
	Existing Signal
	Potential Interchange

0 0.25 0.5  
Miles

*City of Saratoga Springs – Transportation Master Plan  
An Element of the General Plan*

- ≠ A safety analysis for key roadways and intersections including applicable accident histories.
- ≠ Any applicable yield sign, stop sign, multi-way stop signs, and traffic signal warrant analyses.
- ≠ A determination of the street system’s ability to accommodate projected traffic levels.
- ≠ An identification of impacts to the existing street system as a result of the project.
- ≠ A discussion of improvements to be implemented as part of the project to accommodate project traffic such as roadway and intersection widening to provide exclusive turn lanes or modifications to traffic controls.
- ≠ A discussion of mitigation measures to be implemented to restore or improve traffic operations to an acceptable LOS on any key roadway segments or at key intersections within the study area.

Each TIS will be conducted by a qualified Traffic Engineer chosen by the City at the developer cost. The City Engineer will determine the scope of each TIS, based on the UDOT Traffic Impact Study Requirements found in the appendix of this report, and will review its contents once complete and provide comments. Upon receiving approval from the City Engineer, the TIS requirement related to the development will be satisfied. If a developer feels that his or her project does not meet the requirements to have a TIS completed, then the developer will need to provide documentation stating his or her case which will be reviewed by the City Engineer.

#### **4.8 Agency Coordination**

As many of the roads in Saratoga Springs City are either owned by or connect into roads that are owned by other agencies such as UDOT, neighboring cities, and Utah County, a close working relationship should be maintained between these different jurisdictions and the City to ensure that roadway projects are not only coordinated but consistent.

#### **4.9 Planned Roadway Improvements**

A number of roadway improvements have been recommended to occur between now and the year 2040. These recommendations are based on travel demand volume predictions and available capacity of each roadway. Each of these improvements should be implemented as a result of increasing traffic volumes due to future development. **Table 4-2** outlines these recommended improvements. This table will be regularly updated by the City as plans for development change and become adopted.

**Table 4-2 Saratoga Springs City Recommended Transportation Improvements**

Type of Improvement <sup>1</sup>	Roadway or Location	From	To	Jurisdiction(s)
New Major Arterial	Pioneer Crossing Extension	Redwood Rd	800 West & SR-73	UDOT
New Major Arterial	SR-73 Realignment	Commerce Rd (West)	Pioneer Crossing Extension	UDOT
New Major Arterial	Saratoga Rd	Redwood Rd	2300 West	UDOT
New Major Arterial	New Pony Express Pkwy	Future Bonneville Collector (1200 West)	Redwood Rd	UDOT

*City of Saratoga Springs – Transportation Master Plan  
An Element of the General Plan*

<b>Type of Improvement<sup>1</sup></b>	<b>Roadway or Location</b>	<b>From</b>	<b>To</b>	<b>Jurisdiction(s)</b>
Widen to Major Arterial	Redwood Rd	Saratoga Rd	Stillwater Dr	UDOT
Widen to Major Arterial	Saratoga Rd (1900 S Lehi)	2300 West	East City-Limits	UDOT
Widen to Major Arterial	Pony Express Pkwy	West City-Limit	Future Bonneville Collector (1200 West)	UDOT
Add Center Turn Lane to Collector	Pony Express Pkwy	1200 West	Redwood Road	City
New Collector	SR-73 Realignment	800 West	Pioneer Crossing Extension	City
New Collector	Wildlife Blvd	Village Pkwy	Harrier Dr	City
New Traffic Signal	Redwood Rd & Lariat Blvd			UDOT
New Traffic Signal	New Pony Express Pkwy & Redwood Rd			UDOT
New Traffic Signal	SR-73 Realignment & Pioneer Crossing Extension			UDOT
New Traffic Signal	Redwood Rd & Commerce Dr (South)			UDOT
New Traffic Signal	New Pony Express Pkwy & Old Pony Express Pkwy			UDOT
New Traffic Signal	Grandview Boulevard & Redwood Road			UDOT
Future Freeway	MVC (2100 North)	MVC	East City-Limits	UDOT
Future Freeway	Mountain View Corridor (MVC)	North City- Limits	SR-73	UDOT
Future Freeway	SR-73	West City-Limits	MVC	UDOT
Future Freeway	Mountain View Corridor (MVC)	SR-73/Pioneer Extension	400 South	UDOT
Future Freeway	Hidden Valley Freeway	West City-Limits	MVC (400 South)	UDOT
Future System to System Interchange	MVC & 2100 North MVC Freeway			UDOT
Future System to System Interchange	MVC & SR-73/ Pioneer Extension			UDOT
Future System to System Interchange	Hidden Valley Freeway & Foothill Pkwy			UDOT
Future Interchange	MVC & 800 North			UDOT
Future Interchange	MVC & Pony Express			UDOT
Future Parkway	Foothill Parkway	400 South	Redwood Road (near Pelican Point)	UDOT
Future Interchange	MVC Parkway & 1000 South			UDOT
New Major Arterial	1000 South	Future Foothill Pkwy	Redwood Rd	City
New Minor Arterial	800 North	800 West	Redwood Rd	City
New Minor Arterial	2000 North	SR-73	East City-Limits	City

*City of Saratoga Springs – Transportation Master Plan  
An Element of the General Plan*

Type of Improvement <sup>1</sup>	Roadway or Location	From	To	Jurisdiction(s)
Widen to Major Arterial	SR-73	Commerce Road (East)	West bank of Jordan River	City
Widen to Major Arterial	Redwood Rd	Stillwater Dr	South City-Limit	UDOT
Widen to Principle Arterial	Pioneer Crossing	Redwood Rd	East City-Limits	UDOT
Widen to Principle Arterial	Redwood Rd	North City- Limits	Grandview Blvd	UDOT
New Collector	Future Bonneville Collector	Foothill Parkway	Redwood Road	City
New Collector	South Collector	Bonneville Local	Redwood Road	City
New Collector	Stillwater Dr	Bonneville Local	Sunrise Cir	City
New Collector	Grandview Blvd	Bonneville Local	Foothill Parkway	City
New Collector	Parkway Blvd (1000 S)	Foothill Parkway	Redwood Road	City
New Collector	1000 South	1200 West	Foothill Parkway	City
New Collector	400 South	1200 West	400 East	City
New Collector	1200 West	1000 South	New Pony Express Pkwy	City
New Collector	600 West	1200 South	Old Pony Express Pkwy	City
New Collector	Thunder Blvd	1000 South	Old Pony Express Pkwy	City
New Collector	Riverside Drive	Saratoga Road	Jordan Ridge Blvd	City
New Collector	400 North	Redwood Road	Riverside Drive	City
New Collector	Silverlake Pkwy	Pony Express Pkwy	SR-73	City
New Collector	600 North	Silverlake Pkwy	800 West	City
New Collector	Harvest Hills Blvd	2000 North	Sunflower Way	City
New Collector	Harvest Hills Blvd	Redwood Road	East City-Limits	City
New Collector	800 West	Commerce Dr (South)	Harvest Hills Blvd	City
New Collector	Commerce Dr (South)	800 West	Redwood Road	City
New Collector	Commerce Dr (West)	800 North	SR-73	City
New Collector	2900 West (Lehi)	Saratoga Rd	Pioneer Crossing	City
New Collector	600 N (1300 South Lehi)	2900 West (Lehi)	2300 West (Lehi)	City
New Collector	Hillside Dr	SR-73	Mountain Arterial (2000 North)	City
Widen Collector	Thunder Blvd	Old Pony Express Pkwy	400 North	City
Widen Collector	Riverside Drive	SR-73	North City-Limits	City
Widen Collector	400 North	800 West	Redwood Road	City
Widen Collector	800 West	Old Pony Express Pkwy	1200 North	City
Widen Collector	1200 North	SR-73	800 West	City
Widen Collector	2300 West (Lehi)	Saratoga Rd	Pioneer Crossing	City
Widen Collector	1700 West (Lehi)	Saratoga Rd	North City-Limits	City
Widen Collector	1100 West (Lehi)	Saratoga Rd	North City-Limits	City
New Traffic Signal/ Roundabout	Old Pony Express Pkwy & 800 West			City

*City of Saratoga Springs – Transportation Master Plan  
An Element of the General Plan*

Type of Improvement <sup>1</sup>	Roadway or Location	From	To	Jurisdiction(s)
New Traffic Signal	Redwood Rd & 400 South			UDOT
New Traffic Signal/ Roundabout	Old Pony Express Pkwy & 200 West			City
New Traffic Signal	Saratoga Rd & 1700 West Lehi			UDOT
New Traffic Signal	Saratoga Rd & 2300 West Lehi			UDOT
New Traffic Signal	Saratoga Rd & 2900 West Lehi			UDOT
New Traffic Signal	Redwood Rd & 800 North			UDOT
New Traffic Signal	Pioneer Crossing Extension & 800 North			UDOT
New Traffic Signal	SR-73 Realignment & 1200 North			UDOT
New Traffic Signal	Saratoga Rd & 400 East			UDOT
New Traffic Signal	Saratoga Rd & 1100 West Lehi			UDOT
New Traffic Signal	New Pony Express Pkwy & 200 West			UDOT
New Traffic Signal	Redwood Rd & Village Pkwy			UDOT
New Traffic Signal	Pioneer Crossing & Riverside Dr			UDOT
New Traffic Signal	Pioneer Crossing & 2900 West Lehi			UDOT
New Traffic Signal	New Pony Express Pkwy & 600 West			UDOT
New Traffic Signal	Harvest Hills & 2000 North			City
New Traffic Signal	Old SR-73 & Riverside Dr			City
New Traffic Signal	Redwood Rd & 600 South (1000 South)			UDOT
New Traffic Signal	Redwood Rd & Foothill Pkwy			UDOT
New Traffic Signal	Redwood Rd & Future Bonneville Collector			UDOT

#### **4.10 Special Considerations**

A few specific locations on Saratoga Springs City’s street network may require some unique improvements to resolve traffic issues at these sites. These areas are identified below along with the unique characteristics of each location.



# Impact Fee Facilities Plan

---

## Introduction

The purpose of an Impact Fee Facilities Plan (IFFP) is to identify public facilities that are needed to accommodate development, and to determine which projects may be funded with impact fees. Utah law requires communities to prepare an IFFP prior to preparing an impact fee analysis and establishing an impact fee. According to Title 11, Chapter 35a-302 of the Utah Code, the IFFP is required to identify the following:

- **The existing level of service**
- **A proposed level of service**
- **Any excess capacity to accommodate future growth at the proposed level of service**
- **The demands placed on existing public facilities by new development**
- **A proposed means by which the local political subdivision will meet those demands**
- **A general consideration of all potential revenue sources to finance the impacts on system improvements**

This analysis incorporates the information provided in the Saratoga Springs Transportation Master Plan (TMP) regarding the upcoming demands on the existing infrastructure facilities that will require improvements to accommodate future growth and provide an acceptable LOS. Reference should be made to the previous chapters for additional information on the evaluation methodology and how the projections were made.

This section focuses on the improvements that are projected to be needed over the next ten years. Utah law requires that any impact fees collected for those improvements be spent within six years of being collected. Only capital improvements are included in this plan; all other maintenance and operation costs are assumed to be covered through the City’s General Fund as tax revenues increase as a result of additional development.

## Existing Level of Service (11-36a-302.1.a.i)

According to the Impact Fee Act, level of service is defined as “the defined performance standard or unit of demand for each capital component of a public facility within a service area.” The LOS of a roadway segment or intersection is used to determine if capacity improvements are necessary. LOS is measured on a roadway segment using its daily traffic volume and at an intersection based on the average delay per vehicle. A standard of LOS D was chosen as the acceptable LOS for Saratoga Springs City. This allows for speeds at or near free-flow speeds, but with less freedom to maneuver. At intersections, LOS D means that vehicles should not have to wait more than one cycle to proceed through the intersection and

experience delays less than 35 seconds, according to the Highway Capacity Manual 2010. **Table 1** below summarizes the maximum capacities for roadway segments used by Saratoga Springs City.

**Table 1: LOS D Capacity Criteria in Vehicles per Day**

Lanes	Arterial	Collector
2	5,500	5,000
3	13,000	11,500
5	30,500	NA
7	46,000	NA

### Intersection Standards

The performance of intersections has a large effect on the level of service of the roadway network. Intersections have different stop controls such as: no control, stop controlled, signal, roundabout, or be controlled in another way. The level of service for each type of intersection is calculated in a different way. Intersection improvements will be necessary in order to maintain the desired level of service. One method to reduce costs is to coordinate the placement of signal wiring, foundations, and other features, with roadway construction before the placement of the actual traffic signals and other elements. The costs of these intersection improvements has been included in the roadway network cost estimates included in **Table 4**. The total costs for the full installation of these intersection improvements may be postponed depending on the specific needs of the intersections in the future based on on-going analysis.

### Trips

The unit of demand for transportation impact is the PM peak hour trip. A PM peak hour trip is defined by the Institute of Transportation Engineers (ITE) as a single or one-directional vehicle movement to or from a site between the hours of 4pm and 6pm. The total traffic impact of a new development can be determined by the sum of the total number of trips generated by a development during the pm peak hour. This trip generation number or impact can be estimated for an individual development using the ITE Trip Generation Manual (currently 8<sup>th</sup> edition). This publication uses national data studied over decades to assist traffic engineering professionals to determine the likely impact of new development on transportation infrastructure.

There is a minor discrepancy in the way ITE calculates trips, and the way trips or roadway volumes are calculated in the travel demand modelling used in the Saratoga Springs TMP. This discrepancy is explained by the model roadway volumes and capacities being calculated using daily traffic volumes rather than trips on the roadway. Essentially this means that a travel demand model “trip” or unit of volume is counted once as a vehicles leaves home, travels on the road network and then arrives at work. This vehicles will only be counted as it travels on the roadway network. The ITE Trip Generation method uses driveway counts as its measure of a trip. Therefore a vehicle making the same journey will be counted once as it leaves home and once again as it arrives at work for a total of 2 trips. This can be rectified simply by adjusting the ITE Trip Generation rates by one half.

An additional consideration is that certain types of developments do not generate primary trips or trips that originated for the sole purpose of visiting that development. An example of a primary trip is a home

based work trip where someone leaves their house with the express purpose of going to work. This primary trip has been generated by a combination of the home the trip originated in and the place of occupation where the trip is terminated. Thus it is easily understood that the impact of this trip should be attributed to the housing development and workplace development, without either of these locations, the trip doesn't happen. Some trips are not primary trips, they are defined as pass-by trips. This essentially means that the trip (crossing the driveway of a development) was generated by a driver deciding to make a stop on their way to their primary destination. Good examples of pass-by trips are someone that stops at the gas station on their way to work (a gas station is a pass-by trip) or a driver that is enticed to stop at a fast food restaurant as they drive by because the HOT DONUTS sign is illuminated (the fast food restaurant is a pass-by trip). Pass-by trips do not add traffic to the roadway and therefore do not create additional impact. Each land use type in the ITE Trip Generation Manual has a suggested reduction for pass-by trips where applicable. In each case, the trip reduction rate has been applied to the trip generation rate used in this IFFP.

### System Improvements and Project Improvements

---

As described in the TMP, there are four primary classifications of roads, including local streets, collectors, arterials, and freeways/expressways. Saratoga Springs City classifies street facilities based on the relative amounts of through and land-access service they provide. Local streets primarily serve land-access functions, while freeways and expressways are primarily meant for mobility. Each classification may have a variable amount of lanes, which is a function of the expected traffic volume and serves as the greatest measure of roadway capacity.

Improvements to collectors and arterials are considered "system improvements" according to the Utah Impact Fee Law, as these streets serve users from multiple developments. System improvements may include anything within the roadway such as curb and gutter, asphalt, road base, lighting, and signing for collectors and arterials. These projects are eligible to be funded with impact fees and are included in this IFFP.

### Proposed Level of Service (11-36a-302.1.a.ii)

The proposed level of service provides a standard for future roadway conditions to be evaluated against. This standard will determine whether or not a roadway will need improvements or not. According to the Utah Impact Fee Law, the proposed level of service may:

1. Diminish or equal the existing level of service
2. Exceed the existing level of service if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service; or
3. Establish a new public facility if, independent of the use of impact fees, the political subdivision or private entity provides, implements, and maintains the means to increase the existing level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

This IFFP will not make any changes to the existing level of service, and LOS D will be the standard by which future growth will be evaluated.

## Existing Capacity to Accommodate Future Growth (11-36a-302.1.a.iii)

An important element of the IFFP is the determination of excess capacity on the roadway network. Excess capacity is defined as the amount of available capacity on any given street in the roadway network under existing conditions. This capacity is available for new development in the city before additional infrastructure will be needed. This represents a buy-in component from the City as the existing residents/property owners/developers have already paid for these improvements. New roads do not have any excess capacity and roads which are not under City jurisdiction have their capacity information removed from the calculations. For the existing roadway segments under Saratoga Springs jurisdiction which are included in the impact fee calculation, the excess capacity is shown in [Table 2](#).

**Table 2 Excess Capacity Calculations**

Project	Location	Existing Capacity	Existing Volume	Excess Capacity	Excess Capacity %
2	Pony Express: Redwood Road to Western Boarder (400 North)	13,000	15,900	-2,900	-22%
12	Crossroads Blvd: Commerce Drive to Eastern Border	13,000	13,700	-700	-5%

## Demands Placed on Facilities by New Development (11-36a-302.1.a.iv)

To meet the requirements of the Utah Impact Fee law, to “identify demands placed upon existing public facilities by new development activity at the proposed level of service” and to “identify the means by which the political subdivision or private entity will meet those growth demands”, the following steps were completed and are explained in further detail in the following sections:

1. **Existing Demand** – The traffic demand at the present time was estimated using traffic counts and population data.
2. **Existing Capacity** – The capacity of the current roadway network was estimated using the calculated LOS.
3. **Existing Deficiencies** – The deficiencies in the current network were identified by comparing the LOS of the roadways to the LOS standard.
4. **Future Demand** – The future demand on the network was estimated using development projections.
5. **Future Deficiencies** – The deficiencies in the future network were identified by comparing the calculated future LOS with the LOS standard.
6. **Recommended Improvements** – Recommendations were made that will help meet future demands.

## Existing Roadway Network Conditions

### *Conversions of Growth and Development Projections to Trip Generations*

The basis of the future travel demand was projected using the Mountainland Association of Governments (MAG) Travel Demand Model (TDM). The MAG TDM models the entire Wasatch Front from north of Ogden to south of Spanish Fork. The entire region is split into Traffic Analysis Zones (TAZ). Each TAZ includes socio-economic and land use data provided by MAG and the City. Variables included in the model come directly from the Utah Governor’s Office of Management and budget such as total population, total households, household size, total employment as well as average income.

The TDM generates traffic based on this data for each TAZ. The MAG TDM provides a regional model with large TAZ’s. With the large TAZ’s, it is difficult to apply the model directly to the local streets in the City. To improve accuracy, the TAZ’s inside Saratoga Springs were split to better simulate traffic conditions within the city as shown in [Figure 1](#). The outputs from the model include peak hour trips and daily traffic volumes on each of the roadways in Saratoga Springs.

The MAG TDM was calibrated to fit existing traffic conditions in Saratoga Springs City. The method used to calibrate the model was to use traffic counts throughout the City. Traffic counts were collected from UDOT and include annual average daily traffic (AADT) volumes as defined in *Traffic on Utah Highways*. On City owned roadways, traffic counts were either provided by Saratoga Springs City or were manually counted as part of this TMP. [Figure 2](#) shows the count locations throughout the City used for model calibration. Once collected, the data within each TAZ is updated so the model produces similar traffic patterns within the City. The two variables used to update each TAZ are total households and total employment. For each TAZ, [Table 3](#) shows the total households and total employment for each TAZ in 2015, 2025, and 2040 for all TAZ’s in Saratoga Springs.

**Table 3: Total Households and Total Employment for Each TAZ in Saratoga Springs**

TAZ ID	Total Households			Total Employment		
	2015	2025	2040	2015	2025	2040
1751	330	613	873	12	48	43
1754	254	504	728	79	131	180
1755	9	64	180	0	225	530
1781	0	0	235	0	0	6
1782	0	108	225	0	101	562
1784	7	98	321	8	44	465
1786	818	1158	1556	92	409	1380
1787	334	453	627	340	718	1103
1788	0	128	367	0	49	381
1789	183	507	792	604	750	910
1790	0	39	84	0	110	334
1791	2	69	203	0	158	614



# SARATOGA SPRINGS

## Impact Fee Facilities Plan

March 2016

TAZ ID	Total Households			Total Employment		
	2015	2025	2040	2015	2025	2040
1792	25	113	256	90	436	1003
1793	7	66	362	0	305	908
1794	0	175	837	6	14	60
1795	1	74	369	0	5	145
1796	2	252	919	0	5	5
1797	556	828	1120	25	38	54
1798	364	364	364	18	18	17
1799	0	199	505	0	6	14
1800	24	167	501	34	44	55
1801	94	182	266	127	148	166
1802	211	462	744	35	85	294
1803	73	255	544	23	57	151
1804	16	82	271	0	112	197
1805	116	302	498	5	8	91
1806	236	558	942	13	22	64
1807	96	312	628	7	19	213
1808	2	247	515	0	6	408
1809	0	130	940	0	4	650
1811	0	87	244	5	787	3783
1818	0	876	2649	0	166	238
1819	191	520	921	20	292	1455
2245	0	10	372	0	6	6
2264	0	59	432	0	2	298
2265	32	104	210	2	6	71
2266	50	163	328	4	10	111
2267	38	124	250	3	7	85
2268	145	344	581	7	13	40
2269	66	232	494	21	51	138
2270	45	158	338	14	35	94
2271	121	265	425	19	48	169
2272	2	17	52	4	4	5
2273	23	158	473	32	41	51
2275	0	255	494	0	10	23
2276	0	0	289	0	0	8
2277	0	0	125	0	0	3
2278	1	64	234	0	1	1



# SARATOGA SPRINGS

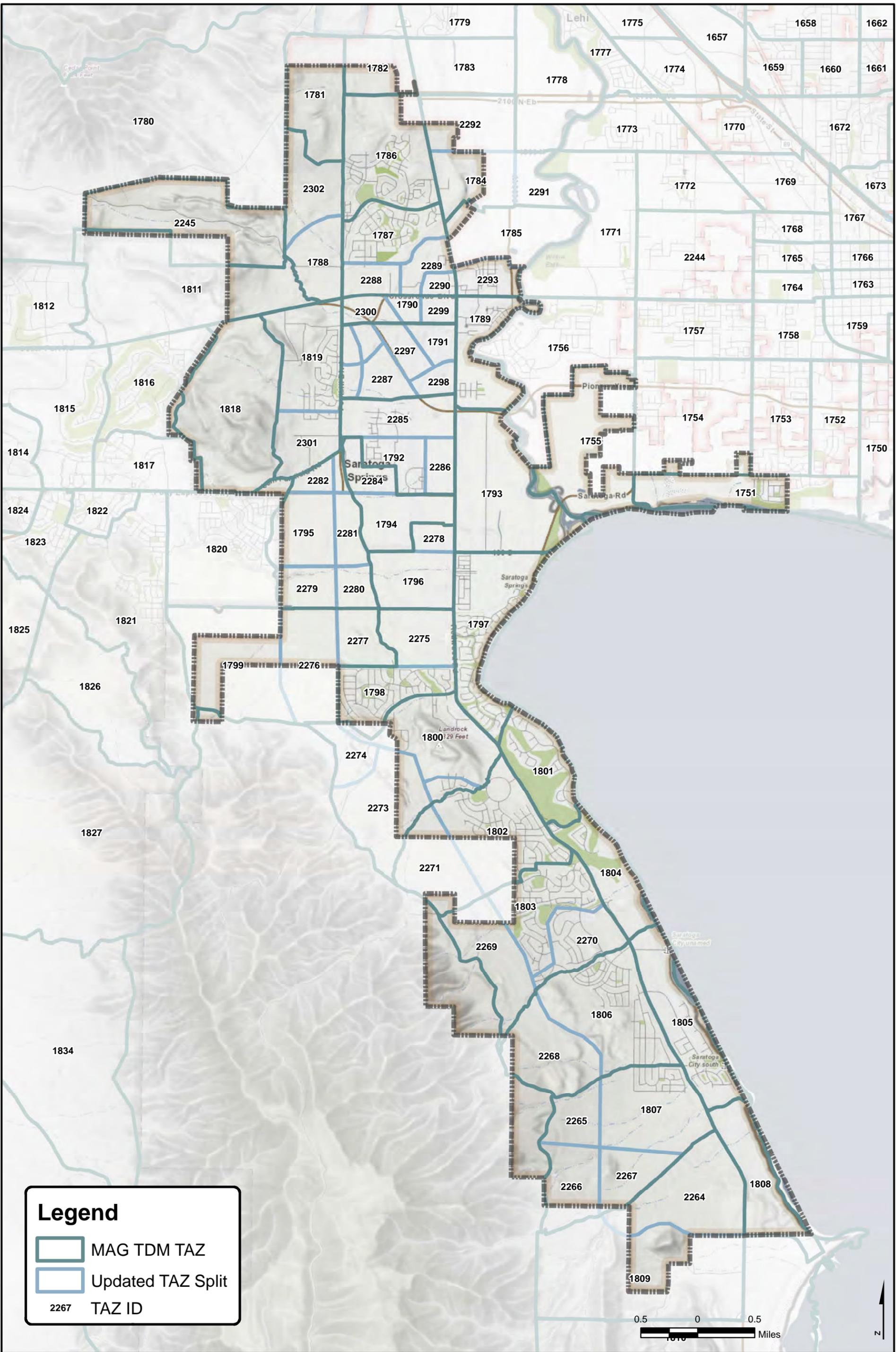
## Impact Fee Facilities Plan

March 2016

TAZ ID	Total Households			Total Employment		
	2015	2025	2040	2015	2025	2040
2279	0	41	204	0	2	80
2280	0	27	132	0	1	52
2281	0	33	163	0	1	64
2282	0	17	87	0	1	34
2283	0	9	44	0	0	17
2284	0	78	377	2	7	27
2285	43	193	437	153	745	1713
2286	16	72	163	57	278	639
2287	3	94	276	0	215	833
2288	128	173	239	129	275	421
2289	128	173	140	130	275	423
2290	53	71	99	53	113	175
2292	8	111	363	9	51	528
2293	159	135	220	33	333	333
2294	1	33	98	0	76	297
2295	1	29	85	0	66	258
2296	1	31	90	0	70	271
2297	2	78	229	0	178	693
2298	2	53	157	0	122	474
2299	1	51	108	0	140	427
2300	1	74	157	0	205	624
2301	102	278	492	10	156	778
2302	0	152	438	0	57	455

### *Existing Functional Classification and Level of Service*

The existing functional classification used in the MAG Travel Demand Model is shown in [Figure 3](#). The LOS was calculated for each roadway and intersection according to the guidelines explained in the Level of Service section and a LOS map is included in [Figure 4](#).



**Legend**

- MAG TDM TAZ
- Updated TAZ Split
- 2267 TAZ ID

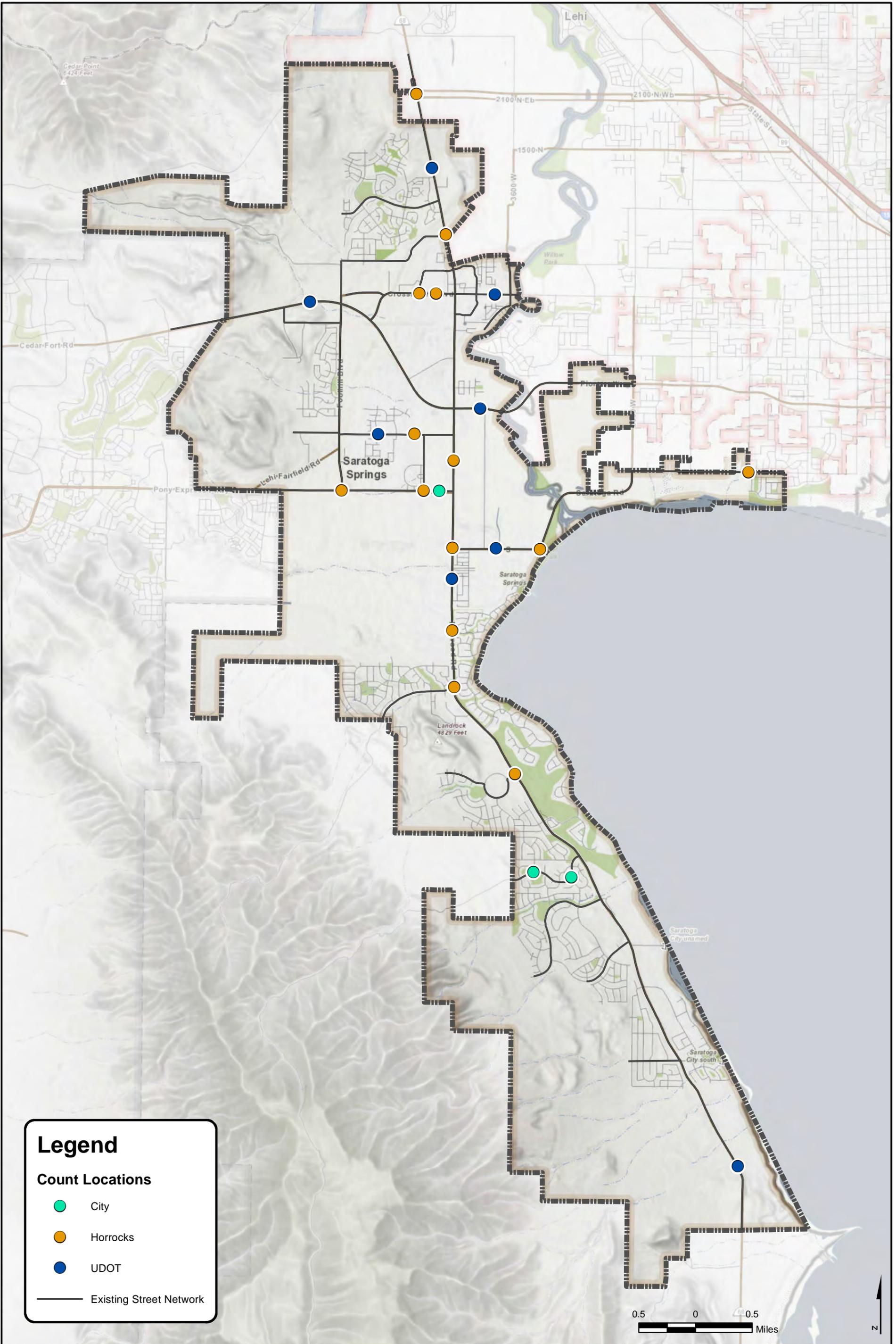


2162 West Grove Parkway  
 Suite 400  
 Pleasant Grove, UT 84062  
 (801) 763-5100

**TAZ Structure**  
 Saratoga Springs Impact Fee Facilities Plan

DATE	4/4/2016
DRAWN	
Figure 1	

C:\2013\PG-163-1301 Saratoga Springs Gen Eng 2013\59 - Transportation Master Plan Update\GIS\Horrocks\Mxd\07\_TAZ.mxd, 4/4/2016 3:44:58 PM, kevinc



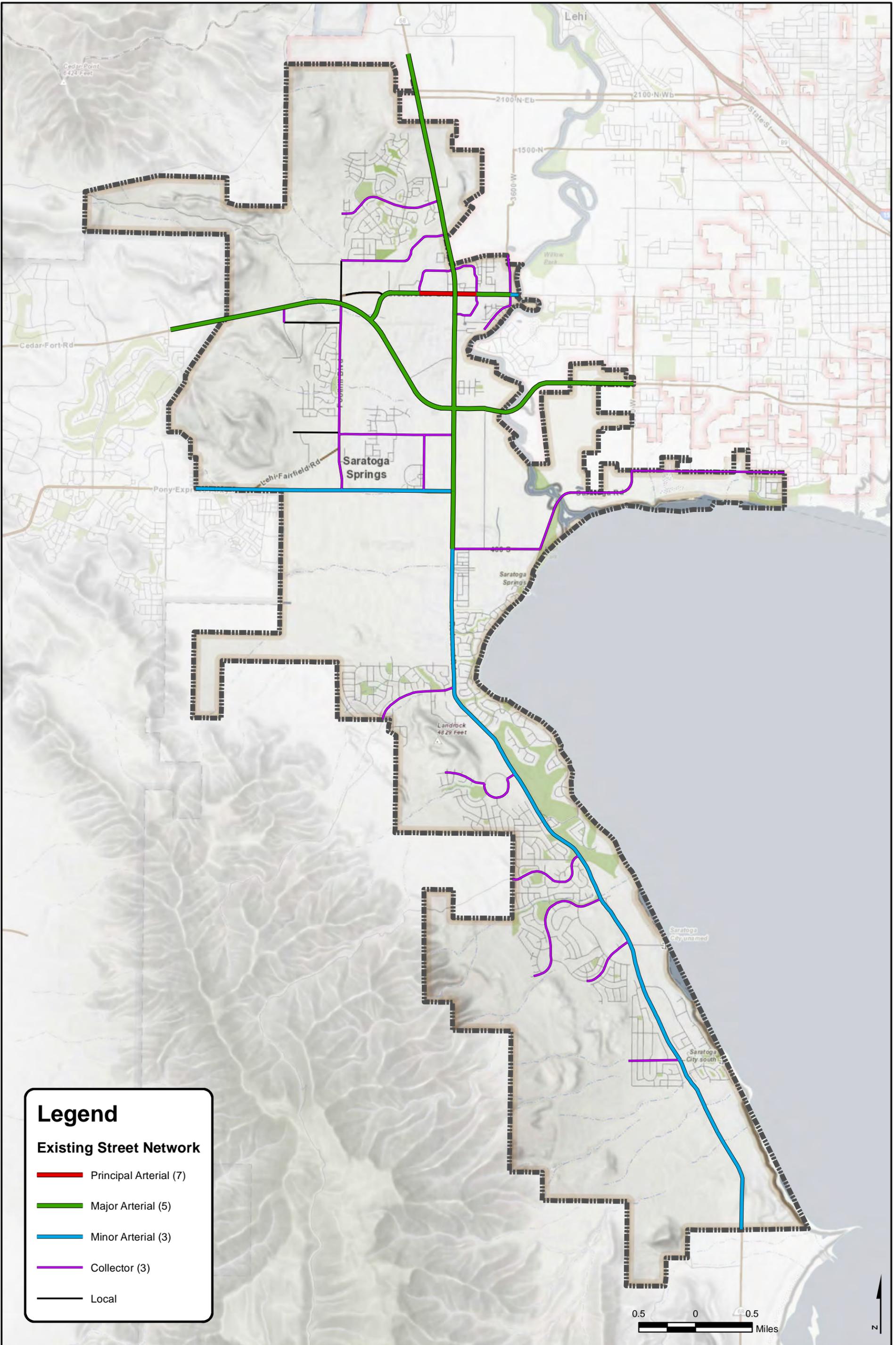
**Legend**

**Count Locations**

- City
- Horrocks
- UDOT

— Existing Street Network

C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\99 - Transportation Master Plan Update\GIS\Horrocks\Mxd\01\_Count\_Data.mxd\_3/4/2016 1:17:17 PM.kevinc



C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\59 - Transportation Master Plan Update\GIS\Horrocks\Mk02\_Existing Functional Class.mxd, 3/4/2016 1:21:52 PM, kevinc

**Legend**

**Existing Street Network**

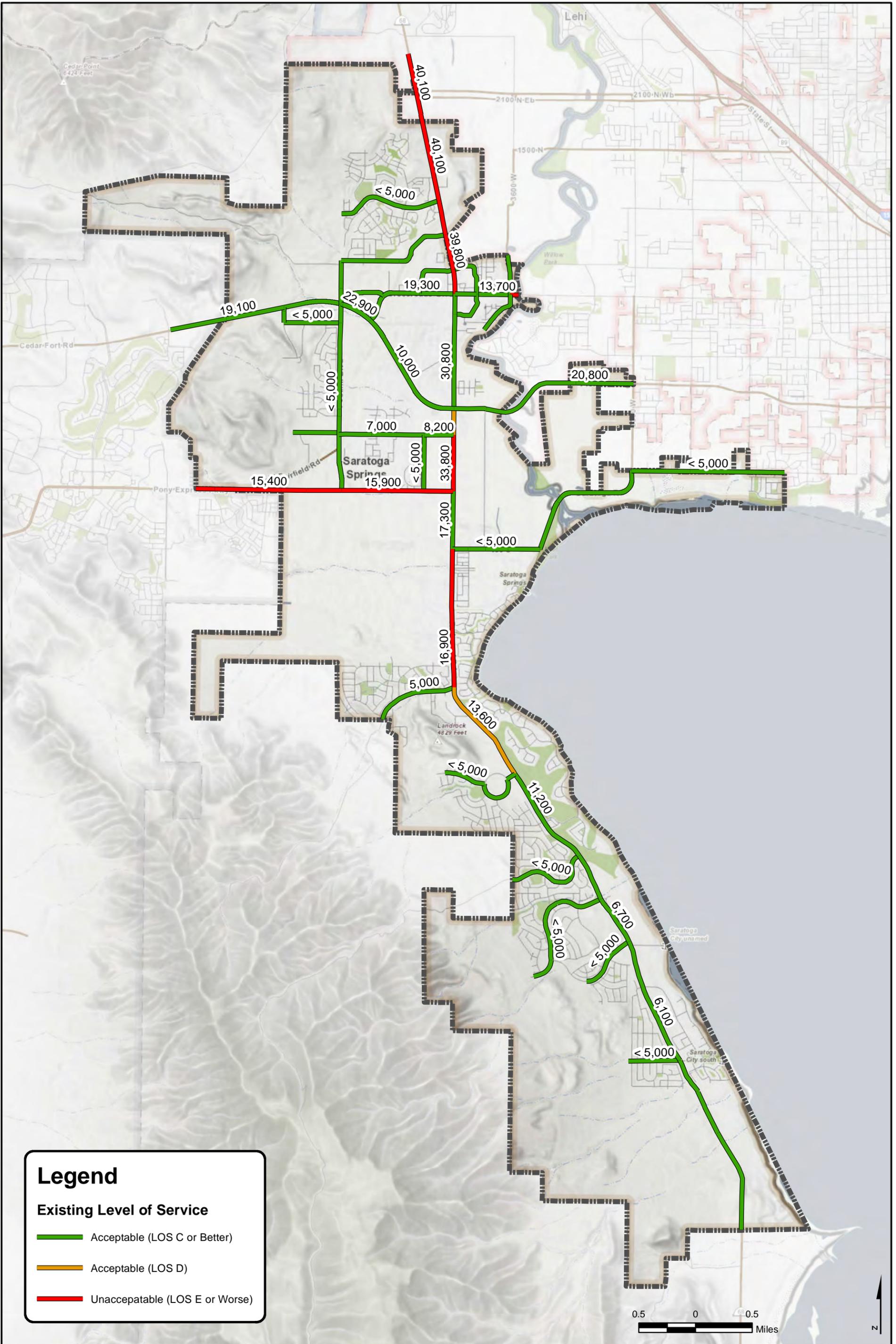
- Principal Arterial (7)
- Major Arterial (5)
- Minor Arterial (3)
- Collector (3)
- Local



2162 West Grove Parkway  
Suite 400  
Pleasant Grove, UT 84062  
(801) 763-5100

**Existing Roadway Network**  
Saratoga Springs Impact Fee Facilities Plan

DATE	3/4/2016
DRAWN	KJC
Figure 3	



**Legend**

**Existing Level of Service**

- Acceptable (LOS C or Better)
- Acceptable (LOS D)
- Unacceptable (LOS E or Worse)

C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\99 - Transportation Master Plan Update\GIS\Horrocks\Mxd\03\_Existing\_Level\_of\_Service.mxd, 3/4/2016 2:52:20 PM, kevinc

### *Mitigations to Existing Capacity Deficiencies*

Using LOS D as the threshold for roadway improvements in **Figure 4** (Indicated by red lines), the following shows the roadways that have existing capacity deficiencies:

#### **Roadway Segments at or below LOS E:**

- **Redwood Road (SR-68):** Northern Border to Crossroads Blvd.
- **Redwood Road (SR-68):** 400 North to Pony Express
- **Redwood Road (SR-68):** 400 South to Grandview Blvd.
- **Pony Express:** Redwood Road (SR-68) to Western Border
- **Crossroads Blvd:** Riverside Drive to Eastern Border

In most cases, roadway capacity improvements are achieved by adding travel lanes. In some cases additional capacity can be gained by striping additional lanes where the existing pavement width will accommodate it. This can be accomplished by eliminating on street parking, creating narrower travel lanes, and adding two-way left turn lanes where they don't currently exist. For all roadway capacity improvements, it is recommended to investigate other mitigation methods before widening the roadway.

At signalized intersections, methods to improve intersection LOS include additional left and right turning lanes and signal timing improvements. The only intersection below LOS D is at Weaver Lane and Angel Street. The solution for this intersection would be to install a traffic signal with an exclusive northbound left turn lane.

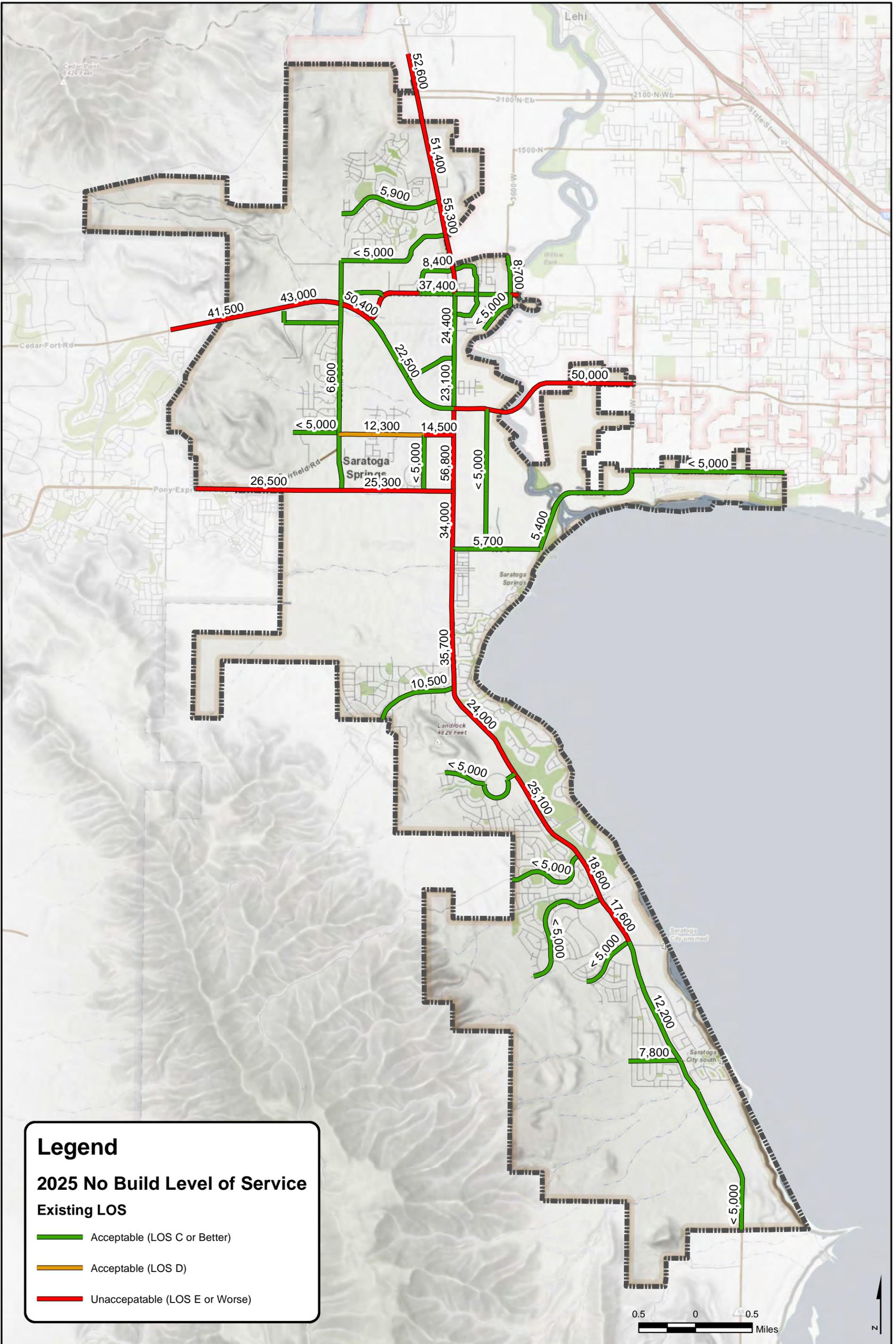
### *Future Roadway Network Conditions*

By calibrating the MAG Travel Demand Model to fit the existing traffic conditions in Saratoga Springs City, the model is prepared to project traffic volumes into the future. There are two future models used for this TMP. The first model used was to identify potential capacity deficiencies, called the 2025 No Build Model. The other model used was the 2025 Master Plan Solution Model, which includes all future projects to improve the deficiencies in the 2025 No Build Model.

### *No Build Level of Service*

A no-build scenario is intended to show what the roadway network would be like in the future if no action is taken to improve the City roadway network. The travel demand model was again used to predict this condition by applying the future growth and travel demand to the existing roadway network. As shown in **Figure 5**, the following roadways would perform at LOS E or worse if no action were taken by 2025 to improve the roadway network:

- **Redwood Road (SR-68):** Northern Border to Crossroads Blvd.
- **Redwood Road (SR-68):** Pioneer Crossing (SR-145) to Wildlife Blvd.
- **Crossroads Blvd.:** Commerce Drive to Pioneer Crossing (SR-145)
- **Pioneer Crossing (SR-145):** Eastern Border to Redwood Road (SR-68)
- **Pioneer Crossing (SR-145):** Crossroads Blvd. to Foothill Blvd.
- **Cedar Fort Road (SR-73):** Foothill Blvd. to Western Border
- **400 North:** Redwood Road (SR-68) to 200 West
- **Pony Express:** Redwood Road (SR-68) to Western Border



**Legend**

**2025 No Build Level of Service**

**Existing LOS**

- Acceptable (LOS C or Better)
- Acceptable (LOS D)
- Unacceptable (LOS E or Worse)

C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\59 - Transportation Master Plan Update\GIS\Horrocks\Map08\_2025 No Build Level of Service.mxd, 3/4/2016 1:28:59 PM, lexinc

## 10-Year Improvement Plan

---

Although projects will be completed as growth and development occurs throughout the city, the existing and no build scenarios are used as a basis to predict the necessary projects to include in the IFFP. For the purposes of this IFFP, only projects that will be completed within the next ten years will be considered. **Table 4** shows the projects that are forecasted to be needed in the next ten years. This table includes all of the projects regardless of their eligibility for impact fee expenditure. The portion of the project, which is impact fee eligible is indicated in the **Saratoga Springs City %** and **Saratoga Springs City Total** columns. **Figure 6** shows the projects needed between now and 2025 to meet the demands placed on the roadway network by new development.

## Infrastructure Required to Meet Demands of New Development (11-36a-302.1.a.v)

### Project Cost Attributable to Future Growth

---

**Table 4** shows the project costs attributable to new growth as a percentage of the total project costs as defined in the previous section. Each project in **Table 4** exists due to future growth but the cost that should be shared by new development through the assessment of impact fees varies depending on the owner of the road, the funding available, and the roadway classification. Where the project is likely to be completed using MAG funding, the Saratoga Springs City impact fee eligible portion of the project is only the amount of money the City will need to find as their required “matching funds”, in this case, 6.77% of the total project cost. UDOT projects will be funded entirely with state funds and are therefore not eligible for impact fee expenditure. Road widening projects are considered 100% impact fee eligible as any work on these roads will only be needed as volumes increase as a result of new development. New, city-owned roads are variable depending on the road classification. The cost attributable to new growth and potentially impact fee eligible is defined as the portion of the roadway cross section in excess of the standards for a minor collector. This is based on the premise that a minor collector cross section serves the needs of the localized development which directly access the new road. This portion will be paid for by the individual development, which accesses the new road. Any improvement due to growth that requires a cross section beyond a minor collector would be considered a capacity improvement and is therefore impact fee eligible. The City responsibility cost for each new road is determined as the percentage of the total project cost beyond a local street classification. For example, a collector street is 33% more costly than a local street so the City responsible (impact fee eligible) portion of a new Collector is 33%.

There are additional costs included in each cost estimate based on a percentage of the construction costs. The four additional costs include contingency, mobilization, preconstruction engineering, and construction engineering. The percentages used for the additional costs may vary as these values are estimated for each individual project. These estimates are based on the concept cost estimate values used by UDOT. Contingency accounts for the items not estimated during the concept cost estimate. Examples include roadway striping, utility placement, and survey. Contingency costs can range up to 25% based on the number of items not estimated. Mobilization is the preparation before construction begins

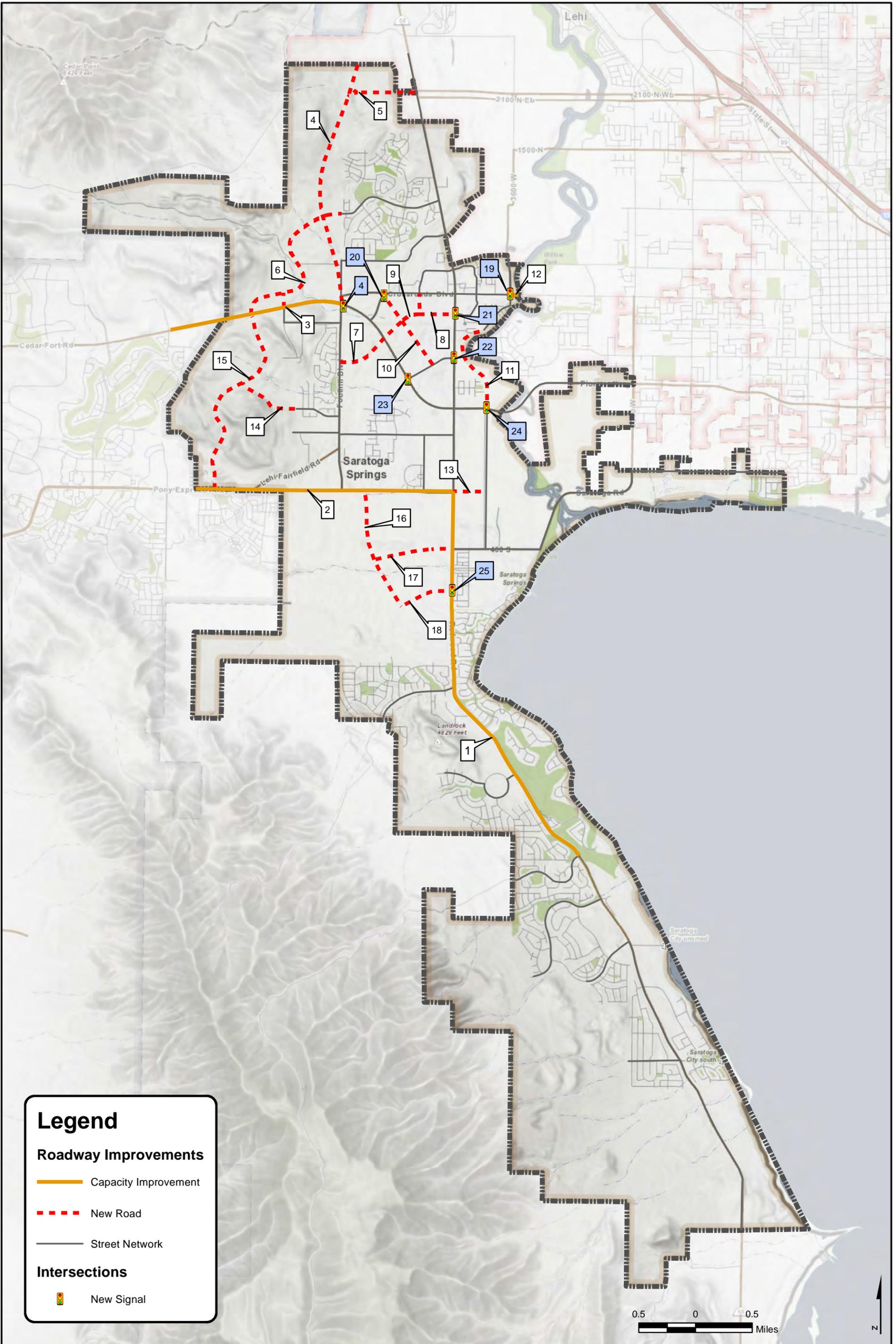


# SARATOGA SPRINGS

## Impact Fee Facilities Plan

March 2016

on a project. It is recommended that a value between 7-10% be used and 5-7% be used for larger projects (greater than \$5,000,000). The value used for mobilization was 10%. Preconstruction engineering is based on the complexity of the project as well as the construction costs. It is recommended that for local projects the preconstruction costs can range up to 16% of the construction costs. For the cost estimates included in this IFFP, a value of 10% was used. Construction engineering includes the construction management and additional design necessary during construction. Recommended costs for local projects range up to 16% and a value of 10% was used for the cost estimates included in the IFFP.



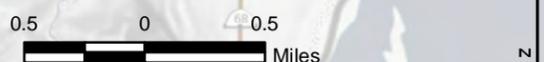
**Legend**

**Roadway Improvements**

- Capacity Improvement
- - - New Road
- Street Network

**Intersections**

- New Signal



C:\2013\PC-1631301\_Saratoga\_Springs\_Gen\_Eng\_2013\59 - Transportation Master Plan Update\GIS\Horrocks\Mxd\10\_IFFP Projects.mxd, 3/4/2016, 2:26:07 PM, kevinc



# SARATOGA SPRINGS

## Impact Fee Facilities Plan

March 2016

Table 4: Impact Fee Facilities Plan 2015-2025

Project	Location	Total Price	Funding Source	Saratoga Springs City %	Saratoga Springs City Total
1	Redwood Road (SR-68): Pony Express to Stillwater Drive	\$30,400,000	UDOT	0%	\$0
2	Pony Express: Redwood Road to Western Boarder	\$5,300,000	Saratoga Springs	100%	\$5,300,000
3	Cedar Fort Road (SR-75): Mountain View Corridor Frontage to Western Border	\$54,500,000	UDOT	0%	\$0
4	Mountain View Corridor Frontage Roads: Northern Border to SR-75	\$45,000,000	UDOT	0%	\$0
5	2100 North Connection: Eastern Border to Mountain View Corridor Frontage Roads	\$20,454,500	UDOT	0%	\$0
6	Harvest Hill Blvd Extension to Cedar Fort Road (SR-75)	\$8,580,000	Saratoga Springs	33%	\$2,860,000
7	New Road: Pioneer Crossing (SR-145) to Foothill Blvd	\$2,340,000	Saratoga Springs	33%	\$780,000
8	Commerce Drive Connection: Redwood Road (SR-68) to Crossroads Blvd	\$2,535,000	Saratoga Springs	33%	\$845,000
9	New Road: Commerce Drive to Pioneer Crossing (SR-145)	\$2,048,000	Saratoga Springs	33%	\$683,000
10	New Road: Crossroads Blvd to Market Street	\$3,900,000	Saratoga Springs	33%	\$1,300,000
11	Riverside Drive Extension: End of Existing to Pioneer Crossing (SR-145)	\$4,631,000	Saratoga Springs	33%	\$1,544,000
12	Crossroads Blvd: Commerce Drive to Eastern Border	\$5,849,000	Saratoga Springs	100%	\$5,849,000
13	Pony Express Extension: Redwood Road (SR-68) to Riverside Drive	\$1,500,000	Saratoga Springs	33%	\$525,000
14	Talus Ridge Drive: End of Existing to Legacy Farms New Road	\$2,925,000	Saratoga Springs	33%	\$975,000
15	Legacy Farms New Road: Cedar For Road (SR-75) to Pony Express Parkway	\$9,263,000	Saratoga Springs	33%	\$3,088,000
16	600 West: Pony Express to 800 South	\$5,655,000	Saratoga Springs	33%	\$1,885,000
17	400 South: Redwood Road (SR-68) to 600 West	\$3,608,000	Saratoga Springs	33%	\$1,203,000
18	800 South: Redwood Road (SR-68) to 600 West	\$2,438,000	Saratoga Springs	33%	\$813,000
19	Signal: Crossroads Blvd & Riverside Drive	\$279,000	Saratoga Springs	100%	\$279,000



# SARATOGA SPRINGS

## Impact Fee Facilities Plan

March 2016

Project	Location	Total Price	Funding Source	Saratoga Springs City %	Saratoga Springs City Total
20	Signal: Crossroads Blvd & New Road (Project 10)	\$279,000	Saratoga Springs	100%	\$279,000
21	Signal: Commerce Drive & Redwood Road (SR-68)	\$279,000	UDOT	0%	\$0
22	Signal: Market Street & Redwood Road (SR-68)	\$279,000	UDOT	0%	\$0
23	Signal: Market Street & Pioneer Crossing (SR-145)	\$279,000	UDOT	0%	\$0
24	Signal: Riverside Drive & Pioneer Crossing (SR-145)	\$279,000	UDOT	0%	\$0
25	Signal: 800 South (Project 18) & Redwood Road (SR-68)	\$279,000	UDOT	0%	\$0
<b>Total</b>		<b>\$212,880,000</b>			<b>\$28,208,000</b>

### Project Cost Attributable to 10-Year Growth

Using the travel demand model mentioned in previous chapters it is possible to estimate the number of PM trips originating or terminating in Saratoga Springs for the existing and future conditions. The difference between the future PM trips and the existing PM trips (the number of new trips in the City) becomes the denominator in the equation used to calculate the impact fee cost per PM peak hour trip for new development. The City of Saratoga Springs currently generates approximately **4,926** one-way PM peak hour trips. In 2040 this number is expected to increase to **29,746**, an increase of **504%**. The projected 2025 PM peak hour trip number for Saratoga Springs City is **11,526**, a **133%** increase on today's value.

**Table 5** includes the calculations to determine the reduction in the impact fee for existing roadways due to existing deficiencies. The reduction is based on the percentage of the added capacity already filled by the existing traffic volume. This proportion of the existing over capacity volume of the added capacity cannot be funded using Impact Fees.

**Table 5: Impact Fee Reduction due to Existing Deficiencies**

Project	Location	Added Capacity	Volume Over Existing Capacity	Impact Fee Reduction %
2	Pony Express: Redwood Road to Western Boarder	17,500	2,900	17%
12	Crossroads Blvd: Commerce Drive to Eastern Border	17,500	700	4%

Included in **Table 6** is the percent Pass-Through traffic for all project roadways. A vehicle trip is considered pass-through when the origin and the destination for a specific trip occurs outside the city limits. For all growth within Saratoga Springs, there is a certain percentage of new trips which are considered pass-

through. This percentage is determined using the MAG Travel Demand Model. The Travel Demand Model determines pass-through traffic by keeping track of the origin, destination and path for each vehicle trip generated. When the vehicle trip uses a roadway in Saratoga Springs and the origin and destination of that trip is located outside of Saratoga Springs, that trip is considered a pass-through trip. Since a pass-through trip does not originate for terminate within the city, it cannot be paid for with impact fees. The proportion of pass-through traffic not attributable to impact fees is the proportion of pass-through traffic to the added capacity of the roadway.

**Table 6: Pass-Through Traffic Calculation**

Project	Location	Added Capacity	Pass-Through Volume	Impact Fee Reduction %
2	Pony Express: Redwood Road to Western Border	17,500	4,180	24%
6	Harvest Hill Blvd Extension to Cedar Fort Road (SR-75)	11,500	1,054	9%
7	New Road: Pioneer Crossing (SR-145) to Foothill Blvd	11,500	55	1%
8	Commerce Drive Connection: Redwood Road (SR-68) to Crossroads Blvd	11,500	871	8%
9	New Road: Commerce Drive to Pioneer Crossing (SR-145)	11,500	630	5%
10	New Road: Crossroads Blvd to Market Street	11,500	85	1%
11	Riverside Drive Extension: End of Existing to Pioneer Crossing (SR-145)	11,500	58	1%
12	Crossroads Blvd: Commerce Drive to Eastern Border	17,500	2,835	16%
13	Pony Express Extension: Redwood Road (SR-68) to Riverside Drive	11,500	3,078	27%
14	Talus Ridge Drive: End of Existing to Legacy Forms New Road	11,500	60	1%
15	Legacy Farms New Road: Cedar For Road (SR-75) to Pony Express Parkway	11,500	80	1%
16	600 West: Pony Express to 800 South	11,500	348	3%
17	400 South: Redwood Road (SR-68) to 600 West	11,500	56	1%
18	800 South: Redwood Road (SR-68) to 600 West	11,500	390	3%

Included in [Table 7](#) is the calculated excess capacity remaining in 2025. The excess capacity is the proportion of the added capacity that is not used in 2025. Since this capacity is not used by 2025, it cannot be paid using impact fees.

**Table 7 Excess Capacity Calculations**

Project	Location	Existing Capacity	2025 Capacity	2025 Volume	Excess Capacity	Excess Capacity %
2	Pony Express: Redwood Road to Western Boarder	13,000	30,500	23,500	7,000	40%
6	Harvest Hill Blvd Extension to Cedar Fort Road (SR-75)	NA	11,500	6,200	6,800	46%
7	New Road: Pioneer Crossing (SR-145) to Foothill Blvd	NA	11,500	5,500	7,500	52%
8	Commerce Drive Connection: Redwood Road (SR-68) to Crossroads Blvd	NA	11,500	6,700	6,300	42%
9	New Road: Commerce Drive to Pioneer Crossing (SR-145)	NA	11,500	7,000	6,000	39%
10	New Road: Crossroads Blvd to Market Street	NA	11,500	8,500	4,500	26%
11	Riverside Drive Extension: End of Existing to Pioneer Crossing (SR-145)	NA	11,500	5,800	7,200	50%
12	Crossroads Blvd: Commerce Drive to Eastern Border	13,000	30,500	20,000	10,500	34%
13	Pony Express Extension: Redwood Road (SR-68) to Riverside Drive	NA	11,500	5,700	7,300	50%
14	Talus Ridge Drive: End of Existing to Legacy Farms New Road	NA	11,500	6,000	7,000	48%
15	Legacy Farms New Road: Cedar For Road (SR-75) to Pony Express Parkway	NA	11,500	8,000	5,000	30%
16	600 West: Pony Express to 800 South	NA	11,500	5,800	7,200	50%
17	400 South: Redwood Road (SR-68) to 600 West	NA	11,500	5,600	7,400	51%
18	800 South: Redwood Road (SR-68) to 600 West	NA	11,500	6,500	6,500	43%

Impact fees can only be collected for the proportion of the added capacity which is used by new development. This can be found by reducing the Saratoga Springs total cost by each of the reduction percentages found in [Table 5](#) – [Table 7](#). [Table 8](#) is a summary table for existing deficiencies, pass-through as well as excess capacity used to calculate the impact fee eligible proportion that will be attributed to each project. According to the Impact Fee law, impact fees cannot be collected on improvements where level of service is improved. For existing roadways where LOS is improved, the impact fee eligible percentage is reduced to 0 percent.

**Table 8: Proportion of Projects Attributed to New Development**

Project	Location	Reduction for Existing Deficiencies	Reduction for Pass-Through	Reduction for Excess Capacity	Impact Fee Eligible Proportion
2*	Pony Express: Redwood Road to Western Boarder	17%	24%	40%	0%
6	Harvest Hill Blvd Extension to Cedar Fort Road (SR-75)	NA	9%	46%	45%
7	New Road: Pioneer Crossing (SR-145) to Foothill Blvd	NA	1%	52%	47%
8	Commerce Drive Connection: Redwood Road (SR-68) to Crossroads Blvd	NA	8%	42%	50%
9	New Road: Commerce Drive to Pioneer Crossing (SR-145)	NA	5%	39%	56%
10	New Road: Crossroads Blvd to Market Street	NA	1%	26%	73%
11	Riverside Drive Extension: End of Existing to Pioneer Crossing (SR-145)	NA	1%	50%	49%
12*	Crossroads Blvd: Commerce Drive to Eastern Border	4%	16%	34%	0%
13	Pony Express Extension: Redwood Road (SR-68) to Riverside Drive	NA	27%	50%	23%
14	Talus Ridge Drive: End of Existing to Legacy Forms New Road	NA	1%	48%	51%
15	Legacy Farms New Road: Cedar For Road (SR-75) to Pony Express Parkway	NA	1%	30%	69%
16	600 West: Pony Express to 800 South	NA	3%	50%	47%
17	400 South: Redwood Road (SR-68) to 600 West	NA	1%	51%	48%
18	800 South: Redwood Road (SR-68) to 600 West	NA	3%	43%	54%

\* Existing Roadway where LOS is Improved and Impact Fee Proportion is 0%

Using the Impact Fee eligible proportions from **Table 8**, the impact fee eligible cost for each project is included in **Table 9**. Also included in Table 8 is the impact fee eligible cost for traffic signals. Traffic signals are implemented based on the traffic signal warrants found in Chapter 4C of the Utah Manual on Uniform Traffic Control Devices (MUTCD). Included in the MUTCD are warrants based of traffic volumes, pedestrian volumes, safety, as well as the roadway network in proximity to the intersection. A traffic signal is not installed without meeting one of the signal warrants included in the Utah MUTCD. Therefore, a reduction in the impact fee due to excess capacity is not included. The calculations are not included in **Table 9**.



# SARATOGA SPRINGS

## Impact Fee Facilities Plan

March 2016

**Table 9: Impact Fee Eligible Costs**

Project	Location	Total Cost	Saratoga Springs City Total	Impact Fee Eligible Proportion	Impact Fee Eligible Cost
1	Redwood Road (SR-68): Pony Express to Stillwater Drive	\$30,400,000	\$0	0%	\$0
2	Pony Express: Redwood Road to Western Boarder	\$5,300,000	\$5,300,000	0%	\$0
3	Cedar Fort Road (SR-75): Mountain View Corridor Frontage to Western Border	\$54,500,000	\$0	0%	\$0
4	Mountain View Corridor Frontage Roads: Northern Border to SR-75	\$45,000,000	\$0	0%	\$0
5	2100 North Connection: Eastern Border to Mountain View Corridor Frontage Roads	\$20,454,500	\$0	0%	\$0
6	Harvest Hill Blvd Extension to Cedar Fort Road (SR-75)	\$8,580,000	\$2,860,000	45%	\$1,287,000
7	New Road: Pioneer Crossing (SR-145) to Foothill Blvd	\$2,340,000	\$780,000	47%	\$367,000
8	Commerce Drive Connection: Redwood Road (SR-68) to Crossroads Blvd	\$2,535,000	\$845,000	50%	\$423,000
9	New Road: Commerce Drive to Pioneer Crossing (SR-145)	\$2,048,000	\$683,000	56%	\$382,000
10	New Road: Crossroads Blvd to Market Street	\$3,900,000	\$1,300,000	73%	\$949,000
11	Riverside Drive Extension: End of Existing to Pioneer Crossing (SR-145)	\$4,631,000	\$1,544,000	49%	\$757,000
12	Crossroads Blvd: Commerce Drive to Eastern Border	\$5,849,000	\$5,849,000	0%	\$0
13	Pony Express Extension: Redwood Road (SR-68) to Riverside Drive	\$1,500,000	\$525,000	23%	\$121,000
14	Talus Ridge Drive: End of Existing to Legacy Forms New Road	\$2,925,000	\$975,000	51%	\$497,000
15	Legacy Farms New Road: Cedar For Road (SR-75) to Pony Express Parkway	\$9,263,000	\$3,088,000	69%	\$2,131,000
16	600 West: Pony Express to 800 South	\$5,655,000	\$1,885,000	47%	\$886,000
17	400 South: Redwood Road (SR-68) to 600 West	\$3,608,000	\$1,203,000	48%	\$577,000
18	800 South: Redwood Road (SR-68) to 600 West	\$2,438,000	\$813,000	54%	\$439,000
19	Signal: Crossroads Blvd & Riverside Drive	\$279,000	\$279,000	100%	\$279,000



Project	Location	Total Cost	Saratoga Springs City Total	Impact Fee Eligible Proportion	Impact Fee Eligible Cost
20	Signal: Crossroads Blvd & New Road (Project 10)	\$279,000	\$279,000	100%	\$279,000
21	Signal: Commerce Drive & Redwood Road (SR-68)	\$279,000	\$0	0%	\$0
22	Signal: Market Street & Redwood Road (SR-68)	\$279,000	\$0	0%	\$0
23	Signal: Market Street & Pioneer Crossing (SR-145)	\$279,000	\$0	0%	\$0
24	Signal: Riverside Drive & Pioneer Crossing (SR-145)	\$279,000	\$0	0%	\$0
25	Signal: 800 South (Project 18) & Redwood Road (SR-68)	\$279,000	\$0	0%	\$0
<b>Total</b>		<b>\$212,880,000</b>	<b>\$28,208,000</b>		<b>\$9,374,000</b>

## Proposed Means to Meet Demands of New Development (11-36a-302.2)

All possible revenue sources have been considered as a means of financing transportation capital improvements needed as a result of new growth. This section discusses the potential revenue sources that could be used to fund transportation needs as a result of new development.

Transportation routes often span multiple jurisdictions and provide regional significance to the transportation network. As a result, other government jurisdictions or agencies often help pay for such regional benefits. Those jurisdictions and agencies could include the Federal Government, the State Government or UDOT, or MAG. The City will need to continue to partner and work with these other jurisdictions to ensure the adequate funds are available for the specific improvements necessary to maintain an acceptable LOS. The City will also need to partner with adjacent communities to ensure corridor continuity across jurisdictional boundaries (i.e., arterials connect with arterials; collectors connect with collectors, etc.).

Funding sources for transportation are essential if Saratoga Springs City recommended improvements are to be built. The following paragraphs further describe the various transportation funding sources available to the City.

### Federal Funding

Federal monies are available to cities and counties through the federal-aid program. UDOT administers the funds. In order to be eligible, a project must be listed on the five-year Statewide Transportation Improvement Program (STIP).

The Surface Transportation Program (STP) funds projects for any roadway with a functional classification of a collector street or higher as established on the Functional Classification Map. STP funds can be used for both rehabilitation and new construction. The Joint Highway Committee programs a portion of the STP funds for projects around the state in urban areas. Another portion of the STP funds can be used for projects in any area of the state at the discretion of the State Transportation Commission. Transportation Enhancement funds are allocated based on a competitive application process. The Transportation Enhancement Committee reviews the applications and then a portion of the application is passed to the State Transportation Commission. Transportation enhancements include 12 categories ranging from historic preservation, bicycle and pedestrian facilities and water runoff mitigation. Other federal and state trail funds are available from the Utah State Parks and Recreation Program.

MAG accepts applications for federal funds through local and regional government jurisdictions. The MAG Technical Advisory and Regional Planning committees select projects for funding annually. The selected projects form the Transportation Improvement Program (TIP). In order to receive funding, projects should include one or more of the following aspects:

- **Congestion Relief** – spot improvement projects intended to improve Levels of Service and/or reduce average delay along those corridors identified in the Regional Transportation Plan as high congestion areas
- **Mode Choice** – projects improving the diversity and/or usefulness of travel modes other than single occupant vehicles
- **Air Quality Improvements** – projects showing demonstrable air quality benefits
- **Safety** – improvements to vehicular, pedestrian, and bicyclist safety

### State/County Funding

---

The distribution of State Class B and C Program monies is established by State Legislation and is administered by the State Department of Transportation. Revenues for the program are derived from State fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. Seventy-five percent of these funds are kept by UDOT for their construction and maintenance programs. The rest is made available to counties and cities. As many of the roads in Saratoga Springs fall under UDOT jurisdiction, it is in the interests of the City that staff is aware of the procedures used by UDOT to allocate those funds and to be active in requesting the funds be made available for UDOT owned roadways in the City.

Class B and C funds are allocated to each city and county by a formula based on population, centerline miles, and land area. Class B funds are given to counties, and Class C funds are given to cities and towns. Class B and C funds can be used for maintenance and construction projects; however, thirty percent of those funds must be used for construction or maintenance projects that exceed \$40,000. The remainder of these funds can be used for matching federal funds or to pay the principal, interest, premiums, and reserves for issued bonds.

In 2005 the state senate passed a bill providing for the advance acquisition of right-of-way for highways of regional significance. This bill would enable cities in the county to better plan for future transportation needs by acquiring property to be used as future right-of-way before it is fully developed and becomes

extremely difficult to acquire. UDOT holds on account the revenue generated by the local corridor preservation fund but the county is responsible to program and control monies. In order to qualify for preservation funds, the City must comply with the Corridor Preservation Process found at the following link [www.udot.utah.gov/public/ucon](http://www.udot.utah.gov/public/ucon) and also provided in the appendix of this report. Currently, Saratoga Springs City uses Class C funding for their transportation projects.

### City Funding

---

Some cities utilize general fund revenues for their transportation programs. Another option for transportation funding is the creation of special improvement districts. These districts are organized for the purpose of funding a single specific project that benefits an identifiable group of properties. Another source of funding used by cities includes revenue bonding for projects intended to benefit the entire community.

Private interests often provide resources for transportation improvements. Developers construct the local streets within subdivisions and often dedicate right-of-way and participate in the construction of collector/arterial streets adjacent to their developments. Developers can also be considered a possible source of funds for projects through the use of impact fees. These fees are assessed as a result of the impacts a particular development will have on the surrounding roadway system, such as the need for traffic signals or street widening.

General fund revenues are typically reserved for operation and maintenance purposes as they relate to transportation. However, general funds could be used if available to fund the expansion or introduction of specific services. The City of Saratoga Springs currently uses Class C funding for their transportation improvements. Providing a line item in the City budgeted general funds to address roadway improvements, which are not impact fee eligible is a recommended practice to fund transportation projects should other funding options fall short of the needed amount.

General obligation bonds are debt paid for or backed by the City's taxing power. In general, facilities paid for through this revenue stream are in high demand amongst the community. Typically, general obligation bonds are not used to fund facilities that are needed as a result of new growth because existing residents would be paying for the impacts of new growth. As a result, general obligation bonds are not considered a fair means of financing future facilities needed as a result of new growth.

Certain areas might require different needs or methods of funding other than traditional revenue sources. A Special Assessment Area (SAA) can be created for infrastructure needs that benefit or encompass specific areas of the City. Creation of the SAA may be initiated by the municipality by a resolution declaring the public health, convenience, and necessity requiring the creation of a SAA. The boundaries and services provided by the district must be specified and a public hearing held prior to creation of the SAA. Once the SAA is created, funding can be obtained from tax levies, bonds, and fees when approved by the majority of the qualified electors of the SAA. These funding mechanisms allow the costs to be spread out over time. Through the SAA, tax levies and bonding can apply to specific areas in the City needing to benefit from the improvements.

## Interfund Loans

---

Since infrastructure must generally be built ahead of growth, it must sometimes be funded before expected impact fees are collected. Bonds are the solution to this problem in some cases. In other cases, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project. As impact fees are received, they will be reimbursed. Consideration of these loans will be included in the impact fee analysis and should be considered in subsequent accounting of impact fee expenditures.

## Developer Dedications and Exactions

---

Developer dedications and exactions can both be credited against the developer's impact fee analysis. If the value of the developer dedications and/or exactions are less than the developer's impact fee liability, the developer will owe the balance of the liability to the city. If the dedications and/or exactions of the developer are greater than the impact fee liability, the city must reimburse the developer the difference.

## Developer Impact Fees

---

Impact fees are a way for a community to obtain funds to assist in the construction of infrastructure improvements resulting from and needed to serve new growth. The premise behind impact fees is that if no new development occurred, the existing infrastructure would be adequate. Therefore, new developments should pay for the portion of required improvements that result from new growth. Impact fees are assessed for many types of infrastructures and facilities that are provided by a community, such as roadway facilities. According to state law, impact fees can only be used to fund growth related system improvements.

## Necessity of Improvements to Maintain Level of Service

According to State statute, impact fees must only be used to fund projects that will serve needs caused by future development. They are not to be used to address present deficiencies. Only projects that address future needs are included in this IFFP. This ensures a fair fee since developers will not be expected to address present deficiencies.

## Impact Fee Certification (11-36a-306)

According to state law, this report has been prepared in accordance with Utah Code Title 11 Chapter 36 titled "Impact Fees Act". This report relies upon the planning, engineering, land use and other source data provided by the City and their designees and all results and projections are founded upon this information.

In accordance with Utah Code Annotate, 11-36a-306(1), Horrocks Engineers, certifies that this impact fee facilities plan:

1. Includes only the cost of public facilities that are:
  - a. Allowed under the Impact Fees Act; and
  - b. Actually incurred; or
  - c. Are projected to be incurred or encumbered within six years of the day on which each impact fee is paid;
2. Does not include:



# SARATOGA SPRINGS

## Impact Fee Facilities Plan

March 2016

- a. Costs of operation and maintenance of public facilities
  - b. Cost of qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service supported by existing residents;
  - c. An expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. Complies in each and every relevant respect with the Impact Fees Act.

This certification is made with the following limitations:

1. All of the recommendations for implementing this IFFP of IFA are followed in their entirety by the City.
2. If any portion of the IFFP is modified or amended in any way, this certification is no longer valid.
3. All information presented and used in the creation of this IFFP is assumed to be complete and correct, including any information received from the City or other outside source



## Planning Commission Staff Report

### Code Amendments

#### 19.06. Landscaping

Thursday, April 14, 2016

#### Public Hearing

Report Date:	Thursday, April 21, 2016
Applicant:	Staff and Subcommittee Initiated
Previous Meetings:	Code Subcommittee Meetings Planning Commission Work Session August 13, 2015 City Council Work Session August 18, 2015 Planning Commission Work Session September 10, 2015 Planning Commission Public Hearing September 24, 2015 Planning Commission Work Session April 14, 2016
Land Use Authority:	City Council
Future Routing:	Public Hearing(s) with City Council
Author:	Kimber Gabryszak, Planning Director

#### A. Executive Summary:

In the fall of 2015, the Planning Commission reviewed potential changes to landscaping requirements for large lots. Among other changes, the proposal at the time included an amendment to permit lots larger than 1/3 acre to only landscape 1/3 acre, leaving the remainder in a native state. The other portions were moved to the City Council, and the large-lot amendment was tabled at that time. This portion has been brought back to the Planning Commission for additional discussion and consideration.

#### Recommendation:

**Staff recommends that the Planning Commission conduct a public hearing, take public comment, discuss the proposed amendments, and vote to forward a positive recommendation to the City Council on all or some of the amendments with or without modifications, as outlined in Section H of this report.** Alternatives include continuance to a future meeting or a negative recommendation for all or some of the amendments.

**B. Background:** The City Code has required residential lots to be fully landscaped for over nine years. Front yards are required to be landscaped within one year of occupancy, and backyards within two years. Due to increased code enforcement, issues have arisen with the landscaping of large lots. For example, many lots along Redwood Road in the south of the city that exceed one half acre have only been partially landscaped, however in these cases complete landscaping may not make sense as the native landscaping on the lots matches well with existing native landscaping along the road.

The Planning Commission held a work session on September 10, 2015 to discuss potential solutions, and at their September 24, 2015 hearing, the Planning Commission discussed a proposal to allow large lots to only landscape a portion of their lots, at that time 1/3 acre, and expressed concern over the potential for inequity due to water rates. The Planning Commission tabled the amendment, and requested additional information on the water rate structure. They also discussed the potential to increase the required landscaped area from 1/3 acre to 1/2 acre.

The originally proposed amendment, increased from 1/3 acre to 1/2 acre, is attached as Exhibit 1. Minutes from the September 10, 2015 work session and September 24, 2015 public hearing are attached as Exhibits 2 and 3. Water rate information was also provided to the Commission following these meetings.

During the legislative session, a bill was proposed that would have limited the abilities of Cities to require landscaping. City code amendments for landscaping were put on hold pending the conclusion of the legislative session; the proposed bill was amended several times but ultimately did not pass.

The planning commission held a work session on April 14, 2016, and discussed the code language. The commission appeared to support the increase to 1/2 acre, and directed staff to return for a public hearing.

**C. Specific Request:** The proposed amendment is summarized below, with details in Exhibit 1.

- 19.06 –
  - Amend single-family landscaping standards to address large lots and require all lots over 1/2 acre to landscape at least 1/2 acre, and all lots under 1/2 acre to completely landscape.

**D. Process:** Section 19.17.03 of the Code outlines the process and criteria for an amendment:

1. The Planning Commission shall review the petition and make its recommendation to the City Council within thirty days of the receipt of the petition.  
*Complies. There is no application as this is Staff initiated, and is being presented to the Commission for a recommendation.*
2. The Planning Commission shall recommend adoption of proposed amendments only where it finds the proposed amendment furthers the purpose of the Saratoga Springs Land Use Element of the General Plan and that changed conditions make the proposed amendment necessary to fulfill the purposes of this Title.  
*Complies. Please see Sections F and G of this report.*
3. The Planning Commission and City Council shall provide the notice and hold a public hearing as required by the Utah Code. For an application which concerns a specific parcel of property, the City shall provide the notice required by Chapter 19.13 for a public hearing.  
*Complies. Please see Section E of this report.*
4. For an application which does not concern a specific parcel of property, the City shall provide the notice required for a public hearing except that notice is not required to be sent to property owners directly affected by the application or to property owners within 300 feet of the property included in the application.

*Complies. Please see Section E of this report.*

**E. Community Review:** Per Section 19.17.03 of the City Code, this item has been noticed as a public hearing in the *Daily Herald*; as these amendments affect the entire City, no mailed notice was required. A public hearing with the City Council will be held and noticed at a later date.

**F. General Plan:**

**Land Use Element – General Goals**

The General Plan has stated goals of responsible growth management, the provision of orderly and efficient development that is compatible with both the natural and built environment, establish a strong community identity in the City of Saratoga Springs, and implement ordinances and guidelines to assure quality of development.

*Staff conclusion: consistent. The proposed changes will still assure quality of development, maintain community identity, and integrate better with the natural environment.*

**G. Code Criteria:**

**Code amendments are a legislative decision; therefore the City Council has significant discretion when considering changes to the Code.**

The criteria for an ordinance (Code) change are outlined below, and act as guidance to the Council, and to the Commission in making a recommendation. Note that the criteria are not binding.

**19.17.04 Consideration of General Plan, Ordinance, or Zoning Map Amendment**

The Planning Commission and City Council shall consider, but not be bound by, the following criteria when deciding whether to recommend or grant a general plan, ordinance, or zoning map amendment:

1. The proposed change will conform to the Land Use Element and other provisions of the General Plan;  
*Consistent. See Section F of this report.*
2. the proposed change will not decrease nor otherwise adversely affect the health, safety, convenience, morals, or general welfare of the public;  
*Consistent. The amendments will ensure clear and consistent standards for landscaping, while providing flexibility to property owners that will not adversely affect the health and welfare of the general public.*
3. the proposed change will more fully carry out the general purposes and intent of this Title and any other ordinance of the City; and  
*Consistent. The stated purposes of the Code are found in section 19.01.04:*
  1. The purpose of this Title, and for which reason it is deemed necessary, and for which it is designed and enacted, is to preserve and promote the health, safety, morals, convenience, order, fiscal welfare, and the general welfare of the City, its present and future inhabitants, and the public generally, and in particular to:
    - a. encourage and facilitate the orderly growth and expansion of the City;

- b. secure economy in governmental expenditures;
- c. provide adequate light, air, and privacy to meet the ordinary or common requirements of happy, convenient, and comfortable living of the municipality's inhabitants, and to foster a wholesome social environment;
- d. enhance the economic well-being of the municipality and its inhabitants;
- e. facilitate adequate provisions for transportation, water, sewer, schools, parks, recreation, storm drains, and other public requirements;
- f. prevent the overcrowding of land, the undue concentration of population, and promote environmentally friendly open space;
- g. stabilize and conserve property values;
- h. encourage the development of an attractive and beautiful community; and
- i. promote the development of the City of Saratoga Springs in accordance with the Land Use Element of the General Plan.

*The proposed amendments will provide flexibility in landscaping while also maintaining an attractive community. The amendment will also secure economy in governmental expenditures by reducing the need for code enforcement on large lots.*

- 4. in balancing the interest of the petitioner with the interest of the public, community interests will be better served by making the proposed change.

***Consistent.** The amendments will provide additional flexibility for the landscaping on large lots, however will also be fair by requiring minimum landscaping, and well-maintained an attractive community. Community interests will also be protected by requiring consistency with the fire code and weed abatement.*

**H. Recommendation / Options:**

**Staff Recommended Motion – Positive Recommendation**

The Planning Commission may choose to forward a **positive recommendation** on all or some of the amendments to the Code Sections listed in the motion, as proposed or with modifications:

Motion: “Based upon the evidence and explanations received today, I move to forward a **positive** recommendation to the City Council for the proposed amendments to Section 19.05 with the Findings and Conditions below:

**Findings:**

- 1. The amendments are consistent with Section 19.17.04.1, General Plan, as outlined in Sections F and G of this report and incorporated herein by reference.
- 2. The amendments are consistent with Section 19.17.04.2 as outlined in Section G of this report and incorporated herein by reference.
- 3. The amendments are consistent with Section 19.17.04.3 as outlined in Section G of this report and incorporated herein by reference.
- 4. The amendments are consistent with Section 19.17.04.4 as outlined in Section G of this report, and incorporated herein by reference.

**Conditions:**

1. The amendments shall be edited as directed by the Commission: \_\_\_\_\_
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_

**Alternative A – Continuance**

Vote to **continue** all or some of the Code amendments to the next meeting, with specific feedback and direction to Staff on changes needed to render a decision.

Motion: “I move to continue the amendments to Section 19.06 of the Code to the [May 12, 2016] meeting, with the following direction on additional information needed and/or changes to the draft:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Alternative B – Negative Recommendation**

Vote to forward a **negative** recommendation to the City Council for all or some of the proposed Code amendments.

**Motion:** “Based upon the evidence and explanations received today, I move to forward a **negative** recommendation to the City Council for the proposed amendments to Sections 19.06 of the Code with the Findings below:

**Findings**

1. The amendments do not comply with Section 19.17.04(1), General Plan, as articulated by the Commission: \_\_\_\_\_
2. The amendments do not comply with Section 19.17.04, sub paragraphs 2, 3, and/or 4 as articulated by the Commission: \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**I. Exhibits:**

1. 19.06 – working landscaping amendments

**19.06.08. Single Family Residential and Park Strip Landscaping Requirements.**

1. Single Family Residential Lots

a. All residential lots in all zones except A and RA-5 that are one-half acre in size or smaller shall have the front yards, and street-side yards for corner lots, landscaped within one year, and interior side and back yards within two years after (whichever is less restrictive):

- i. receiving a Certificate of Occupancy; or
- ii. once ownership is established by the current owner.

b. All residential lots in all zones except A and RA-F that are larger than one-half acre must landscape a minimum of one-half acre.

- i. The one-half acre may include structure footprints, driveways, parking areas, and other lot improvements that fall within a contiguous one-half acre area.
- ii. Areas outside of the landscaped one-half acre may remain in a native state, and shall be maintained in compliance with nuisance and fire requirements.
- iii. That portion of the landscaping that falls within the front yard, and street-side yard for corner lots, shall be landscaped within one year, and that portion of landscaping within interior side and back yards shall be landscaped within two years after (whichever is less restrictive):
  - 1. receiving a Certificate of Occupancy; or
  - 2. once ownership is established by the current owner.

b.c. All landscaped areas shall be completely landscaped per the definition of Landscaping in Section 19.02, with the following exceptions:

- i. Bare dirt, meaning ground with no planting, hardscape, rock, or other cover, may occur in limited quantities when in conjunction with features including gardens and trellis areas.
- ii. Trees and shrubs are permitted to have a ring of bare dirt around the trunk and beneath the drip line of the canopy.

e.d. At least 25% of landscaping in front yards and corner street side yards shall consist of non-rock planter beds, shrubs and grasses, or other non-hardscape and non-rock landscaping.

e.e. Artificial turf is not permitted in front or corner street side yards.

e.f. No trees shall be planted directly under or in close proximity to power lines, poles, or utility structures unless:

- i. the power company or owner of the power line gives written consent; and
- ii. the maximum height or width at maturity of the tree species planted is less than 5 feet to any pole, line, or structure.

2. Park strips.

a. Park strips shall be landscaped when the front yard is landscaped for a residential dwelling, or when site improvements are completed for a non-residential project, and shall thereafter be perpetually maintained by the property owner who abuts the

- park strip. Only the following shall be installed in park strips: turf, trees, shrubs or other plants, mulch, live plant vegetation (other than trees) below three feet in height, landscape rock, cobble, and removable pavers. When landscape rock, cobble, or pavers are used, at least thirty percent of each park strip shall contain plantings.
- b. Weeds, dead vegetation, fruit trees, fruit and vegetable gardens, gravel, asphalt, concrete, and large boulders are prohibited in park strips.
  - c. Four foot wide concrete walkways are allowed in the park strip when the walkway lines up with the main walkway to the front door.

**City of Saratoga Springs**  
**Planning Commission Meeting**  
**April 14, 2016**

Regular Session held at the City of Saratoga Springs City Offices  
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

---

**Minutes**

**Present:**

Commission Members: Kirk Wilkins, Sandra Steele, Hayden Williamson, David Funk, Ken Kilgore, Troy Cunningham, Brandon MacKay

Staff: Sarah Carroll, Kevin Thurman, Nicolette Fike, Gordon Miner, Mark Christensen

Others: Kyle Cook, Stan Steele, Richard Brockmyer, Corey Anderson

**Call to Order** - 6:32 p.m. by Chairman Kirk Wilkins

1. **Pledge of Allegiance** - led by Kyle Cook

2. **Roll Call** – A quorum was present

3. **Public Input**

**Public Input Open** by Chairman Kirk Wilkins

No public input was given tonight.

**Public Input Closed** by Chairman Kirk Wilkins

4. **Public Hearing: Transportation Master Plan Amendment. --- Item Continued to April 28<sup>th</sup> meeting.**

5. **Public Hearing: Bicycle & Pedestrian Study & Master Plan.**

Sarah Carroll introduced Kyle Cook and Richard Brockmyer, Consultants from Fehr and Peers, who explained some of the details of the project.

Kyle Cook gave an overview of the process they went through for the study. He then noted the vision and goals they had. Continuity was a key goal along with increasing transportation safety and making it a routine component of city planning. He noted some of the things learned from community outreach and surveys that were the basis of the plans that were developed.

Richard Brockmyer reviewed the proposed system improvements and prioritization such as trails, sidewalks, bike parking, crosswalk options, and support facilities. He noted a section of the report dedicated to maintenance costs. He noted the online web map they had developed

**Public Hearing Open** by Chairman Kirk Wilkins

Cory Anderson asked about bike parking requirements added to the code. He bikes to work every day as do others in his office. He suggested incentives for businesses that allow for bike parking, a reduction in their credits for parking spaces. He notes that people that bike to work don't want to leave their bikes outside; they are too expensive, so he would like a way for them to provide parking inside the building.

Richard Brockmyer commented that there are both short and long term suggested biking requirements.

**Public Hearing Closed** by Chairman Kirk Wilkins

Sandra Steele asked if they had included Camp Williams in any of their planning (Consultants replied no) because for connectivity they would like to see a trail all the way around the Camp and part of that would go through our community. She asked if they did any studies for mountain biking, more than just the soft trails. She asked if the study indicated how many would bike to work if there were facilities.

Kyle Cook noted that the questions weren't asked in that way but noted that 80% cited lack of complete infrastructure that prevents them from biking and walking. With that you can infer that having the infrastructures and support facilities would help.

Sandra Steele commented that because we are a linear city some of the things that work in other cities may not work with ours. She is concerned about the amount of money that would need to be spent to provide some of the facilities. Developers won't want to provide something that doesn't get used. She thought the code changes were overkill; in Lindon they do a percentage for parking.

Kyle Cook replied that it's common to have a concern about putting undue burden on businesses to provide the racks and things. It's something the City needs to decide how far they want to go. Bike parking alone is not going to really encourage people to bike; it's more a combination of things.

Sandra Steele likes the percentage for public parking spaces that you have. She would like to look at something similar to disabled parking standards, it would look cleaner, not one at every business store front. She understands 50 ft. from the front door but disabled parking needs to take precedence and it should be noted that it should. Sandra asked why is it required to be concrete and noted that Lindon has theirs as a hard surface.

Kyle Cook replied that they would be ok with hard surface.

Richard Brockmyer commented that it's a best practice, putting it on equal footing with parking.

Sandra Steele noted she asked because thinking in the future, if they find they are under-bicycle-parked, it may be easier to put it on asphalt without tearing it up and putting in concrete. She asked when they did measurements if they took into consideration tricycles some seniors and disabled ride.

Kyle said they didn't include those directly, they looked at typical designs, in most instances you could use them for a tricycle too.

Sandra Steele noted when there could be cases of it impeding accessible parking. She noted Lindon did not require covers for outdoor parking; maybe a certain percentage could meet the code. But we need to remember keeping the 80" clearance. Sandra noted when business uses change they would have to meet new code and put in parking. Also it may require wider sidewalks that we may need to start requiring. She asked who would be responsible for lighting, the City or Businesses. She is concerned that it could be considered business un-friendly because of the cost they need to incur. Would big business want to come here or go to another area that didn't require as much? You need to consider the sq. ft. those inside lockers take up. You are paying per sq. ft. per year for that space being taken up. When we get commuter light rail she agrees with more parking there than any other use.

Mark Christensen commented that it is a changing trend especially for the millennial generation and people that like to bike to work. They heard comments earlier tonight to the fact. It's an HR question of how can we provide those amenities for our employees so they can have those opportunities. Having those amenities available will pull in a certain demographic. It's a lifestyle change for the community that will be driven by demand. Human resource practices today are driving a lot of these suggestions.

Sandra Steele thinks the sizes of the business will drive the need.

Mark Christensen said they had this conversation with another developer recently, we don't know what business will come in next as uses can change. Perhaps what is in there today doesn't need it but by not requiring it we've prevented our future from having adequate resources.

David Funk noted that he lived near Portland which is a biking community. It is a great idea to provide indoor facilities and that we ought to reduce their requirement for auto parking. If it converts to another use, they already have the indoor facilities to continue to use. We are definitely a different city than Portland, but we are set up for light rail and biking in the future, so everything should flow to the Redwood Road corridor so it will be easier to pick up a bus or light rail. He is a little concerned about some of the future walking and biking trails. He has found it unfriendly getting between locations currently. He noted three areas he was concerned about on the map. One was where Foothill Blvd. meets with Pioneer Crossing (an area where an accident has occurred). A second area was the high school on the east side. (It was clarified that there was a sidewalk from the high school east to Redwood Road.) Third he was looking at near the new Smiths and Pioneer Crossing, especially from the high school over to that area. He noted Jordan river Parkway is something a lot of people like to use and as many parts of the city as possible should be connected to that. He sees the two most important areas to provide connectivity to are Redwood Road corridor and Jordan River Parkway Trail.

Mark Christensen noted when D.R. Horton finishes the phases in Legacy Farms; one of them will include a widening and expansion of 400 South that will help provide that connectivity.

Hayden Williamson would be opposed to requiring bicycle parking. There are compelling reasons why business would want parking and then we don't need to mandate it. They should decide if they need it. He would be in favor of incentivizing or letting them substitute some bike parking for regular parking.

Troy Cunningham commented that a few of his avid cycling friends like the bike plans. Cyclists want connectivity and places to stop along the way to eat or rest. He looked at bike lockers in other areas. He wonders whether or not businesses may find this unfriendly and would be in favor of some sort of offset for parking.

Ken Kilgore asked if we were to put the plan in place how it would influence UDOT to getting things built.

Gordon Miner noted it's a cooperative effort with UDOT, we express our desires and they try to accommodate as best they can.

Mark Christensen commented that for non-motorized things there are different grants and funding we can look at. MAG has some grants we could use. We definitely have a need for it and we will be looking at a lot of different funds for it. The more we do that puts structure in place, it will give us leverage to look for partners. When we go to MAG for funding it's about tying the right funding to the right project. The Redwood Road expansion is different. But the trail from Pioneer Crossings to Legacy Farms is going to be a conversation they are having. Having these plans in place will help prioritize this.

Gordon Miner noted that at the next meeting the Master Transportation Plan will be presented and they can see some of the plans there.

Sarah Carroll noted that they do have a Master Plan that is a tool when they are coordinating with them. She noted the path under Pioneer Crossing that was able to be added because they had that on their master plan. When we have bike trails shown on our plans and we are able to show that as priority it helps. We do have employees that like to bike and they have commented on the connectivity, as that improves you will see more bikers as the safety and convenience rises.

Mark Christensen noted it's a lifestyle a lot of people are moving towards. We are going to have to meet it from an HR standpoint. We need to start down the path and continue to make incremental changes. But if we don't have the connectivity then we are never going to make the steps. As we add more and more bike lanes and trails we will see it used more.

Hayden Williamson asked if we had any indication of what percentage of the residents would bike if they felt the right circumstances were in place.

Kyle Cook replied that those that were interested in taking the bike survey are those that are interested in biking to begin with. They can't say for sure. But the majority of the respondents noted that being outdoors and healthy were of interest.

Richard Brockmyer commented that about 80% of the population was interested but concerned. There is a percentage that will never bike no matter what, but a large percentage right now that this plan is focused on, are interested but don't feel safe with the conditions now.

Mark Christensen commented that this is looking forward and as we can build these modes of transportation it may help draw different types of employers here.

Ken Kilgore commented on the cross sections, has it been studied that it's actually a safer design.

Richard Brockmyer says there is literature that supports that more separation is better especially at higher speeds.

Kyle Cook mentioned it's less about space and more about volume and level of comfort that comes with that.

Ken Kilgore just wants to make sure that whatever we put in is indeed safer.

Kyle Cook responded that the most important thing is to provide that space. The white line is not going to stop an errant driver but you can decide what you want to do with that space like curb.

Richard Brockmyer noted that at a certain point it's better to totally separate it.

Gordon Miner noted the general idea is about separation. On freeway it's 12 feet on a local street it can be down to 10 feet. The concept here is just the higher volume of vehicles the more separation.

Ken Kilgore agrees with the concerns about cost to business when requiring parking. But sees a different way than Commissioner Williamson that yes we want our city to be bicycle friendly. He noted how it didn't hurt business in cities where it became a priority, like Portland. As for locker facilities, he thinks we can encourage it, but be sensitive to types of businesses. If it's not high tech offices it may not be necessary. Because of the way Saratoga is laid out it may be a very good place for biking.

Brandon MacKay noted that for his business in order to attract millennials you need to have these types of amenities. He commented on the need for soft trails and mountain biking. It has tons of possibility here in Saratoga. He noted he just had lunch with the School Bike team and it's the highest growth sport in the state. The high school here has the second largest team in Utah. Soft trail single track would make Saratoga a destination. Due strictly to the topography here it's a great opportunity for an attraction point in the City and a great place for our youth. Mountain biking is a great youth sport to provide a life of opportunity.

Kirk Wilkins noted that Eagle Mountain has some great trails and he would like to see some connectivity to that. He asked if we would do anything with bike locks, we have to accommodate it. He likes the idea that we don't increase the huge requirements for businesses without a tradeoff.

Sandra Steele noted on Riverside dr. there are roundabouts, when you come to those the bike trails have a concrete stop where you have to come back out into traffic. Perhaps there should be some type of mechanism where the bike lane would be continuous.

Mark Christensen noted those were designed specifically to slow traffic down. There is some inherent sharing of the road. At the point of full build out it may need to be addressed further.

Sandra Steele thinks we may need to look at standards for roundabouts in the future that include this. Along the lake for connectivity, she noted homes that had not put in hard surface trails. We need some way that our teams look for the trails in the individual custom homes that were required.

Sarah Carroll noted at the next meeting they will be seeing the update to the Transportation Master Plan and there are some different alignments on there that don't necessarily coordinate with the maps you are seeing tonight so staff recommended a condition that those coordinate with the upcoming Master Transportation Plan.

Hayden Williamson asked about maintenance cost and wanted an idea of what it was.

Kyle Cook noted typical costs for plowing, sweeping, resurfacing. It took into account centerline distance at build out, hard or soft surfaces, distance, facility types, and typical unit cost for maintenance at build out.

Mark Christensen noted the amount typically used on trail maintenance. He also mentioned a lot of the network hubs they are looking at are state budgeted, a lot of trails are maintained by HOA's also.

Hayden Williamson said this is money coming out of our pocket so we do need to be careful.

Sarah Carroll mentioned that they need to make a motion on this tonight and reviewed conditions. There are two suggested conditions:

- a. The bicycle parking code shall be removed and replaced with a paragraph identifying required bike parking is a general goal, and staff shall be directed to return later with a revised code amendment reflecting appropriate parking requirements.
- b. A revised Transportation Map is scheduled for a public hearing with the Planning Commission April 28th, road locations on the maps within the Bicycle And Pedestrian Map shall be updated to reflect the revised Transportation Master Plan.

Sandra Steele wants to continue this because there are some issues but would comment that City Council should see this also for a work session because they will have things to look at.

Kevin Thurman noted that they can't direct that Council have a work session but staff could speak with City Council to see if they are interested in a work session on this issue.

Ken Kilgore is ok with the Master Plan but perhaps there are issues with the code.

Sandra Steele is not ok with the Master Plan, there are some omissions that have been made, that she commented on earlier.

**Motion made by Hayden Williamson to Table the Bicycle and Pedestrian Study and Master plan until after staff has had a Work Session with City Council and come back to us with updates based upon comments we made today and comments that Council will make. Seconded by Troy Cunningham.**

David Funk is concerned that they are saying that staff has to meet with City Council with a work session. We can't tell them they have to do that.

Mark Christensen said they can suggest, but it's City Council's meeting to decide.

Ken Kilgore thinks a lot of these are just details that don't seem to need a whole work session. Shouldn't we be able to decide this, it's either obvious or not that it's important. We should be able to work it out

ourselves and not ask City Council before we decide. Perhaps we need to approve the Plan and not the code yet. Why does it require City Council to look at before we decide?

Hayden Williamson feels that he is in favor of tabling it and having City Council look at it in a work session. He feels it should have come to us first as a work session then they could do the work and come back to us. He thinks tonight should be considered as a work session.

Kevin Thurman suggested that they make their recommendation. It is a legislative communication.

Kirk Wilkins asked if Commissioner Williams would consider amending the motion to reflect that we feel more to continue it to have more time to consider it.

Ken Kilgore believes we should give City Council a clear recommendation.

Kevin Thurman also recommends that they give a recommendation.

**The Motion was Amended by Hayden Williamson: To continue the Bicycle and Pedestrian Study and Master Plan to a future date as determined by staff.**

**The Amendment was accepted by the Second, Troy Cunningham.**

Sarah Carroll asked if they wanted to give specific direction, or just everything they have discussed.

Hayden Williamson said everything they have discussed.

(1. Review the items discussed by the Planning Commission today. )

**Aye: Sandra Steele, David Funk, Hayden Williamson, Kirk Wilkins, Ken Kilgore, Troy Cunningham, Brandon MacKay. Motion passed 7 - 0.**

**6. Work Session: Code Amendments for Large Lot Landscaping.**

Sarah Carroll reviewed the Code amendments. Due to increased code enforcement, issues have arisen with the landscaping of large lots. With larger than ½ acre lots complete landscaping may not make sense as the native landscaping on the lots matches well with existing native landscaping along the road. The Planning Commission previously discussed allowing large lots to only landscape a portion of their lot and also expressed concern over inequity of water rates. The proposed amendment is to: Amend single-family landscaping standards to address large lots and require all lots over ½ acre to landscape at least ½ acre, and all lots under ½ acre to completely landscape.

Ken Kilgore commented that most of the complaints have been that many of the larger lots (1-5 acres) are not meeting the requirement. So if we add this in it doesn't necessarily take care of the complaints. He wondered about grandfathering.

Sarah Carroll replied that currently we are requirement the whole lot so there wouldn't be any grandfathering but it would change the enforcement to just ½ acre.

Kevin Thurman noted that this is less restrictive than currently. For a grandfathered use you would have had to meet the old code at some point.

Kirk Wilkins asked the size of lots were that had complaints.

Sarah Carroll replied they were 1-5 acres.

Troy Cunningham mentioned one resident got a fine for his yard not being landscaped but it was due to the fact that the flood wiped out his landscaping.

Ken Kilgore remembered that there was an extension created to help in those situations.

Sarah Carroll said there is an extension request where people can explain their situation and it can be taken into consideration.

Mark Christensen remarked that this is a legitimate question for people, what are they required to maintain.

There is an equity question and it's a legislative decision more than a staff recommendation issue. We do need clarification as we deal with it as a staff for enforcement.

Kirk Wilkins asked where the ½ acre came from.

Mark Christensen noted it started with ⅓ and some felt they should have to do more.

Ken Kilgore noted ⅓ put undue burden on the small guy and not let the bigger lots pay their fair share.

Kirk Wilkins would like to see the data, how many properties are above ½ acre or ⅓

Mark Christensen noted that for those that have the large lots it's a big issue. It can be a lot of land to take care of.

Kirk Wilkins noted that he had been looking around other cities and saw several larger 1 acre lots that were not necessarily landscaped but were maintained.

Sandra Steele thinks we should consider that we allow xeriscaping and they don't have to landscape in a manner that we usually think of. If you have a ½ acre lot and a ¼ acre lot next to you, that smaller lot should have some natural protection from weeds.

Mark Christensen noted that is true whether it's a large lot or a vacant lot. He pointed out that in HOA's typically you won't see this as much; typically you see it outside of HOA's. There are some areas where this is a big issue.

Sarah Carroll noted having a specific amount in the code; most of the R3 zones have less than 10,000 sq. ft. lots. So the ½ acre was larger than the standard lot in the city but there were different concerns about the fairness so staff increased it to ½ acre and the commission can choose either or make a suggestion.

Mark Christensen mentioned that now they may not be impacting anyone if they don't have anyone around them, but as development moves in near them it will.

Sarah Carroll showed another area where larger lots have landscaped part of the lots. Is it realistic to require them to do all of the landscaping?

Ken Kilgore favors ½ acre because of the way water rates work right now. A property owner that has a larger lot will be able to water a lot without going over their allotment, and it helps the beautification of the city.

Sandra Steele agreed with that.

Kirk Wilkins thought the ½ was a little high.

Ken Kilgore mentioned the concern is based on the complaints that the city received that the larger lots were not landscaped. And it didn't make sense to do the whole things but if it comes to cost the larger lots pay less because they get additional water credits for having a larger lot. The smaller lots have to do more watering to meet their ½ acre and go over their allotment. This evens it out a little.

Hayden Williamson commented that it's only a concern if we are requiring everyone to landscape their back yard. If we are focusing on impacts, if I chose to not landscape and have bare dirt I'm not impacting anyone. He didn't think we should have a requirement to landscape backyards.

Ken Kilgore replied that then it goes back to fire hazards and weed control.

Hayden Williamson commented that we need to change it to regulating impacts like weeds and fire abatement.

Sarah Carroll commented about the weed comments and each yard gets a water allocation per size of the lot and if you go over usage you pay more. If you have a larger lot and you never go over the allotment but the initial fee is larger for a larger lot. So you may never go over the allotment but the fee is larger to begin with. That should be taken into consideration.

Kevin Thurman noted it is a legislative decision, and just because it says you don't have to landscape it all doesn't mean you can't landscape it all. To have different rates depending on how much you landscape is a slippery slope.

Sarah Carroll noted if we take out the discussion of fair utility fees, and just look at what is appropriate in the larger lots to landscape. Utilities can be another discussion as the city progresses.

Ken Kilgore mentioned that Commissioner Williamsons point is a whole other discussion on if we even enforce backyard landscaping.

Sandra Steele said there are impacts if you don't do your back yard. Aesthetics is a big one, especially for neighbors looking down on it.

Mark Christensen mentioned we haven't noted landscaping of backyards for tonight; this discussion is not meeting the description of the agenda item.

Hayden Williamson feels it's all covered in the same section of the code and we need to look at it as an impact standpoint all around.

Sandra Steele is concerned that if we don't require something in the backyards, it impacts the neighbors, with water runoff for instance.

Hayden Williamson replied that landscaping is not the only way to handle runoff.

Kevin Thurman reminded the commissioners that talking about backyard landscaping is not an item on the agenda tonight; we can bring that back at another time. It goes against the Open Public Meetings Act.

Kirk Wilkins directed commissioners to return to topic.

Sarah Carroll recommended that we hear from each commissioner in which way they are leaning. They could take a vote on if they want another topic to come back for discussion at a later time.

Ken Kilgore is in favor of ½, he disagrees with removing landscape from backyards but he knows several have commented on public hearings that there are citizens that are concerned about backyards so he agrees that it could come back as a discussion.

Troy Cunningham is in favor of ½ acre, and backyards being landscaped.

Hayden Williamson is in favor of ⅓ acre and we need to discuss backyards.

Kirk Wilkins is in favor of ⅓ acre and would be in favor of bringing backyards for discussion.

David Funk is in favor of ½ acre and has no problem bringing backyard for discussion but leans towards having it landscaped.

Brandon MacKay is in favor of ½ acre.

Sandra Steele is in favor of ½ acre and believes anytime one of them has a concern it deserves to be heard.

**7. Work Session: Discussion of Code and Vision.** – No discussion on this item was needed.

**8. Approval of Minutes:**

**a. March 24, 2016**

**Motion made by Sandra Steele to approve the minutes of March 24, 2016. Seconded by David Funk.**

**Aye: Sandra Steele, David Funk, Hayden Williamson, Kirk Wilkins, Ken Kilgore, Brandon MacKay. Abstain: Troy Cunningham. Motion passed 6 - 0.**

**9. Reports of Action.**

There were no reports tonight.

**10. Commission Comments.**

Hayden Williamson asked when they bring back Backyards that they bring back some ideas that would say what kind of codes it would impact.

Kirk Wilkins also suggested looking at other cities that don't require backyard landscaping.

Sandra Steele wanted to thank members of the commission who served on the bicycle committee.

**11. Director's Report:**

**a. Council Actions**

- ABC Great Beginnings work session
- Home occupation code was approved

**b. Applications and Approval**

- Several new applications and resubmittals.
- Staff approved hillcrest condos o and lakeside 27 tup for temp sales trailer

**c. Upcoming Agendas**

- Code amendments
- Western Hills phases 2 &3 preliminary plat
- ABC Great Beginnings Rezone
- Accessory dwelling unit code amendment work session
- Master Transportation Plan

**d. Other**

**12. Motion to enter into closed session.** No need for closed session.

**13. Meeting Adjourned at 9:09 p.m. by Chairman Kirk Wilkins**

---

Date of Approval

---

Planning Commission Chair  
Kirk Wilkins

---

Nicolette Fike, Deputy City Recorder