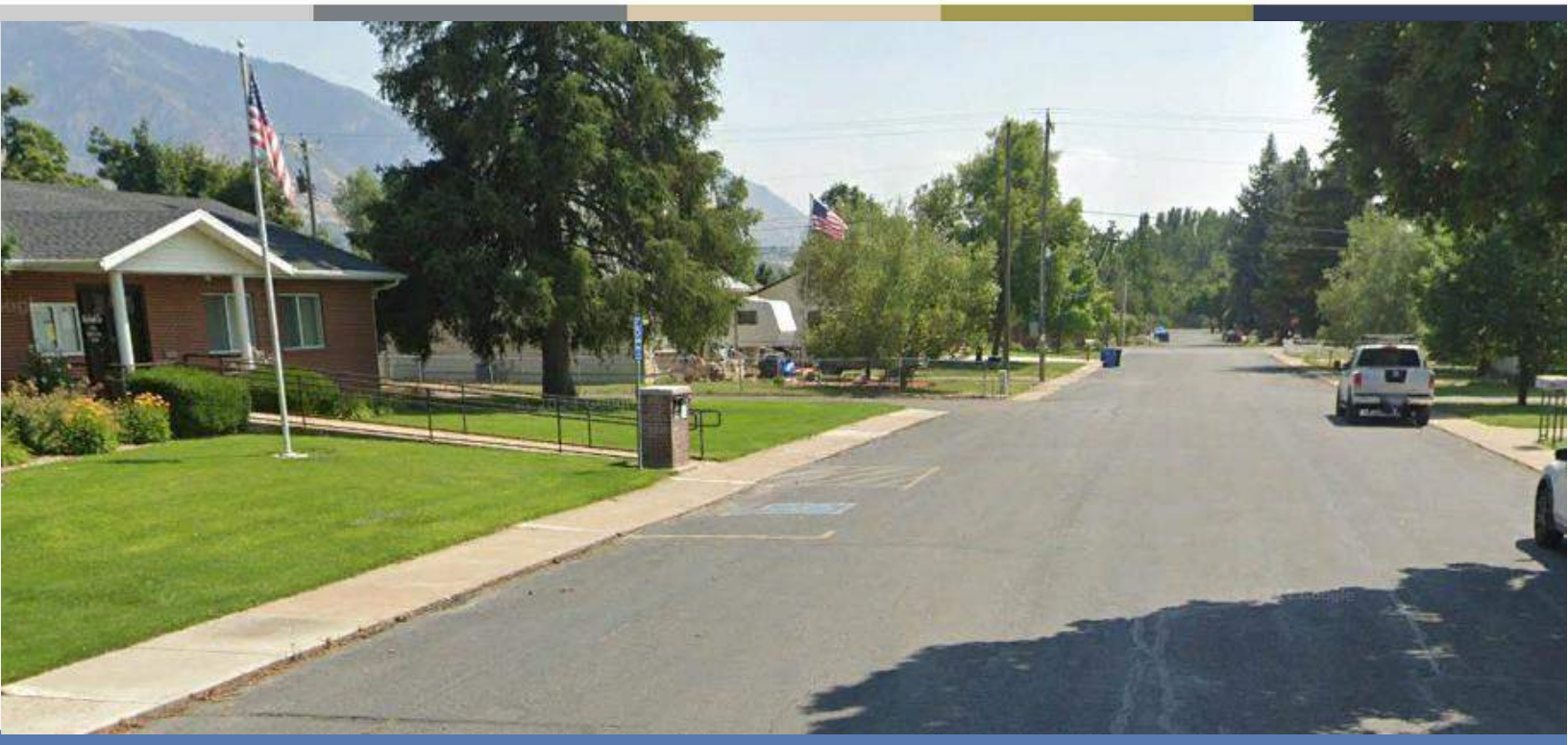
River Heights
CITY



RIVER HEIGHTS CITY

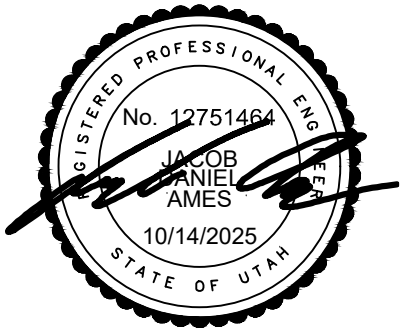
TRANSPORTATION MASTER PLAN

SEPTEMBER 2025

EXECUTIVE SUMMARY

River Heights City has a roadway system is based on the grid, which facilitates interconnectivity and accessibility. Currently they are experiencing passable levels of service throughout the City, and with few opportunities to expand and develop this means that there is not an immediate need for roadway projects. It is presumed that most of the growth in the coming years will be from traffic going through River Heights from other communities. This plan includes a roadway capital Improvements plan (RCIP) that if implemented will connect gaps in the existing grid system, maintain desirable level of service and improve safety conditions.

Projecting out 5 and 20 years it is determined that the roadway network will continue to function at passable levels of service with or without the projects listed in the RCIP. It also shows that these projects will facilitate an increase in connectivity and traffic options for River Heights City.



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INTRODUCTION

River Heights City is located in central Cache County Utah, southeast of Logan City and north of Providence. This Transportation Master Plan is to give the City and its residents direction forward to prepare the City for the future transportation needs based on land use and projected population growth. This plan will focus on the needs of River Heights City but will also account for potential impacts from neighboring communities.

Included in this report will be a capital improvements plan highlighting certain projects that will help the City increase safety, connectivity and account for traffic flow. This plan will allow the City to plan ahead and budget for these projects to bring them to fruition at an appropriate time schedule.

Figure 1: River Heights Aerials

River Heights is approximately 370 acres of land that is mostly built out with little room for future development without annexation. The City is mostly zoned as residential with small pockets of commercial on the west side bordering Logan City. This TMP assumes that there won't be significant residential zoning upsizing, for example changing from single home residential to condos. This provides a basis for the understanding that traffic patterns are not likely to change in a significant way.

Representatives from the City Council, public works department and planning and zoning commission were involved in discussing and determining the City's priorities for the City and it's citizens. These goals included preparing the city for future growth and development, maintaining a functioning level of service.

PURPOSE OF THE TRANSPORTATION MASTER PLAN

This transportation masterplan (TMP) was set forth by the River Heights City government to evaluate the conditions and efficiency of the current roadway system and prepare for future growth conditions. River Heights desires to maintain and promote a transportation system that allows for multiple modes of transportation and reduce traffic congestion for residential and commercial uses. This TMP will be used as a 20-year planning guide to increase transportation efficiency.

GOALS OF THE TRANSPORTATION MASTERPLAN

The transportation masterplan is intended to be used as a planning guide for the next 20 years. The following are goals for this masterplan to meet:

- Anticipate and prepare for city growth and expansion.
- Identify roadways that will require upgrades.
- Preserve needed future transportation corridors early.
- Improve transportation mobility and efficiency throughout the city.
- Relieve the stress of existing roadways and intersections.
- Provide a balanced transportation network that includes improving the city's roadway connectivity.
- Coordinate with neighboring jurisdictions and on-going regional traffic studies.
- Identify cross-sections for required roadway widths.
- Promote bicyclist and pedestrian mobility.

By accomplishing these goals the River Heights community will benefit from increased communication, coordination, and integration across the transportation system. Thus, this TMP will be a useful tool in aiding River Heights in providing a proactive effort in planning and maintaining its transportation network.

TRAFFIC ANALYSIS

Traffic modeling is the primary tool used for traffic analysis in the TMP. Traffic modeling software, Synchro 11 was used to evaluate and project traffic conditions. It incorporates growth rates and allows options to analyze the effect of changes proposed in the RCIP. This provides the most realistic traffic conditions for existing and future scenarios.

Traffic counting camaras were set up at key intersections along roads determined to be the busiest or most well connected per conversations with City officials and staff. These roads include:

- 1000 East
- 600 East
- 400 East
- River Heights Blvd
- 400 South
- 600 South
- 700 South
- 800 South

Traffic camaras were used to determine the traffic movements at key intersections. This information is critical for modeling traffic to match the existing conditions and to project future traffic behaviors. Traffic sensors were used to determine peak hours traffic volumes and speeds. Peak hour is a term used to describe the highest amount of traffic to occur within a 60-minute period. This is used to analyze the needs that various roadways have and how this model can be used to mitigate potential problems.

LEVEL OF SERVICE

Level of Service (LOS) is a rated designation reflecting the functionality of a roadway or intersection. LOS range from A, which traffic is virtually unimpeded, to F, where the traffic volumes exceed the occupancy of the roadway. Typically, municipalities try to maintain an LOS rating of D or better. These gradings are useful in determining the efficiency of the roadway system in specific areas. The projected

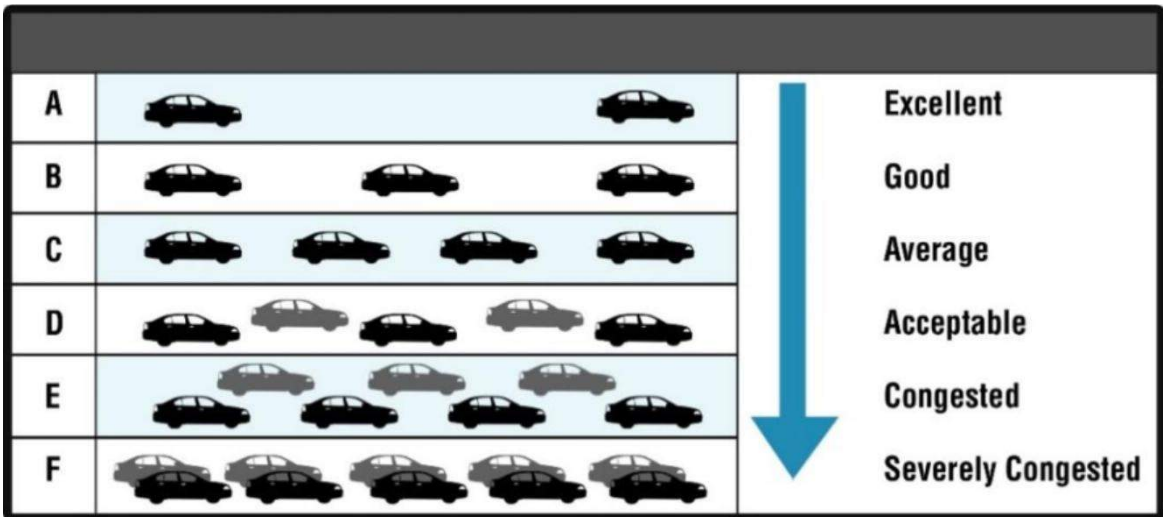

Figure 2: Level of Service Diagram

EXISTING CONDITIONS

Currently River Heights City is a local community of just over 2,000 residents nestled in their own pocket of central Cache County. Their largest trip generators within the City are River Heights Elementary School, and local church buildings. Their commercial district is on the far west side of City tied directly into Logan's commercial district along 100 East. There is through traffic from outside communities that contributes to traffic volumes but they are mostly kept to 100 East and 1000 East.

There is one existing signalized intersection at 700 South and 100 East, an intersection shared with Logan City. The remaining intersections are stop controlled with 4-way stops at 600 East and 600 South, 600 East and 400 South, and 400 East and 600 South.

The existing conditions show that traffic volumes and turning movements on the roads listed previously show average levels of service or better everywhere except 100 East between 700 South and 800 South which is classified as acceptable. This means that for the traffic volumes gathered the existing roadway is capable of handling. These conditions indicate that there is not an immediate need for traffic improvements.

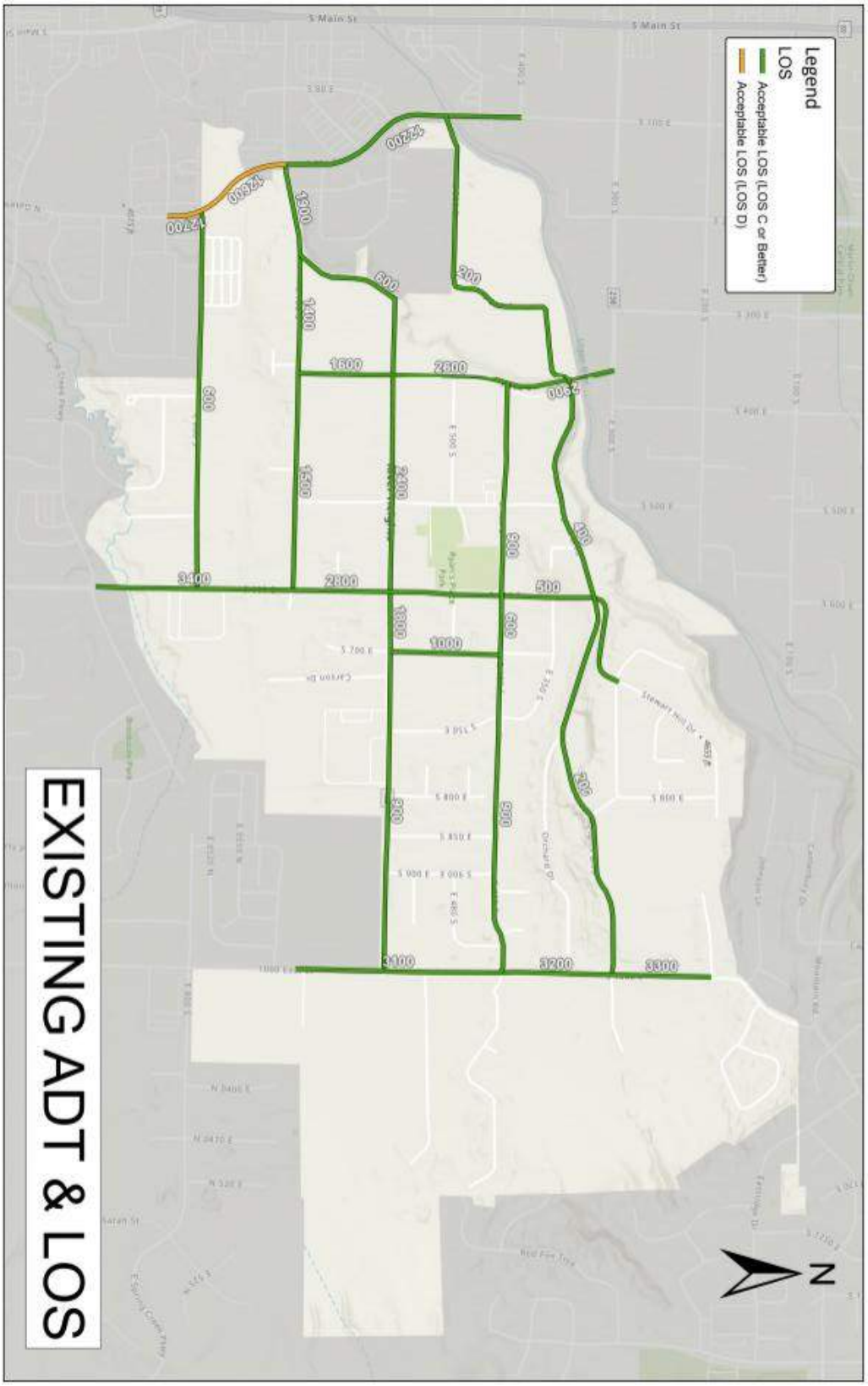

Figure 3: Existing ADT & LOS

TRAVEL DEMAND MODEL

A travel demand model was used to project how future growth and potential improvement projects would affect the existing conditions. We used generalized growth rates applied to the existing data and trip generation software to create this model. We modeled for 5 and 20 year projects with both a "No Change" option and a RCIP project implemented option.

5 YEAR "NO CHANGE" (2030)

This model shows little changes in traffic operations over the course of five years without implementing any of the changes in the RCIP.

20 YEAR "NO CHANGE" (2045)

This model shows projected growth over the course of twenty years without implementing any of the changes in the RCIP will still hold to acceptable standards.

Because of the lack of change in levels of service there is not a need for projects that would build roads out to wider or increased lanes or modify intersections to include or increase roundabouts or signalized intersections. Instead the RCIP projects focus on connectivity and safety.

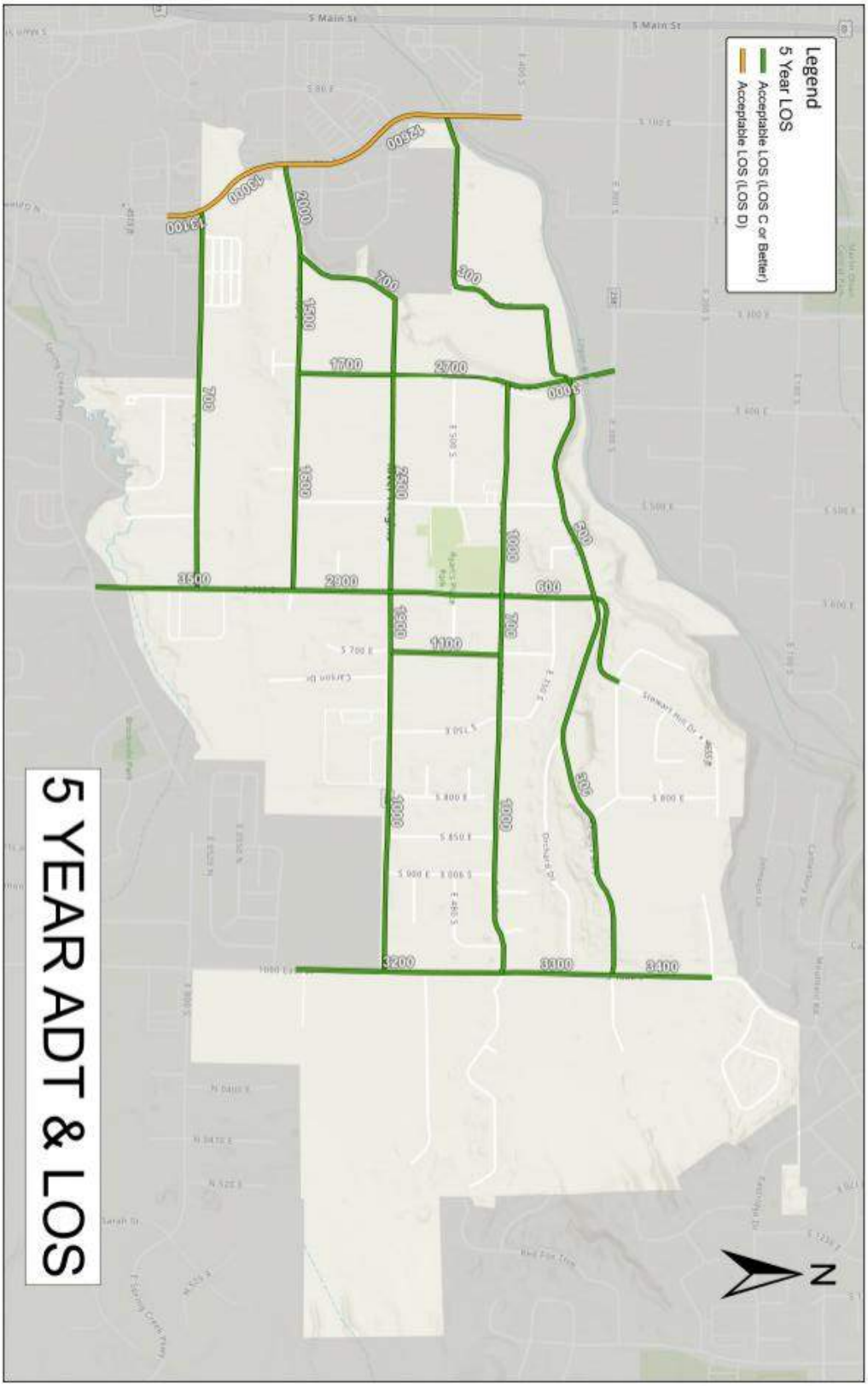

Figure 4: 5 Year ADT & LOS

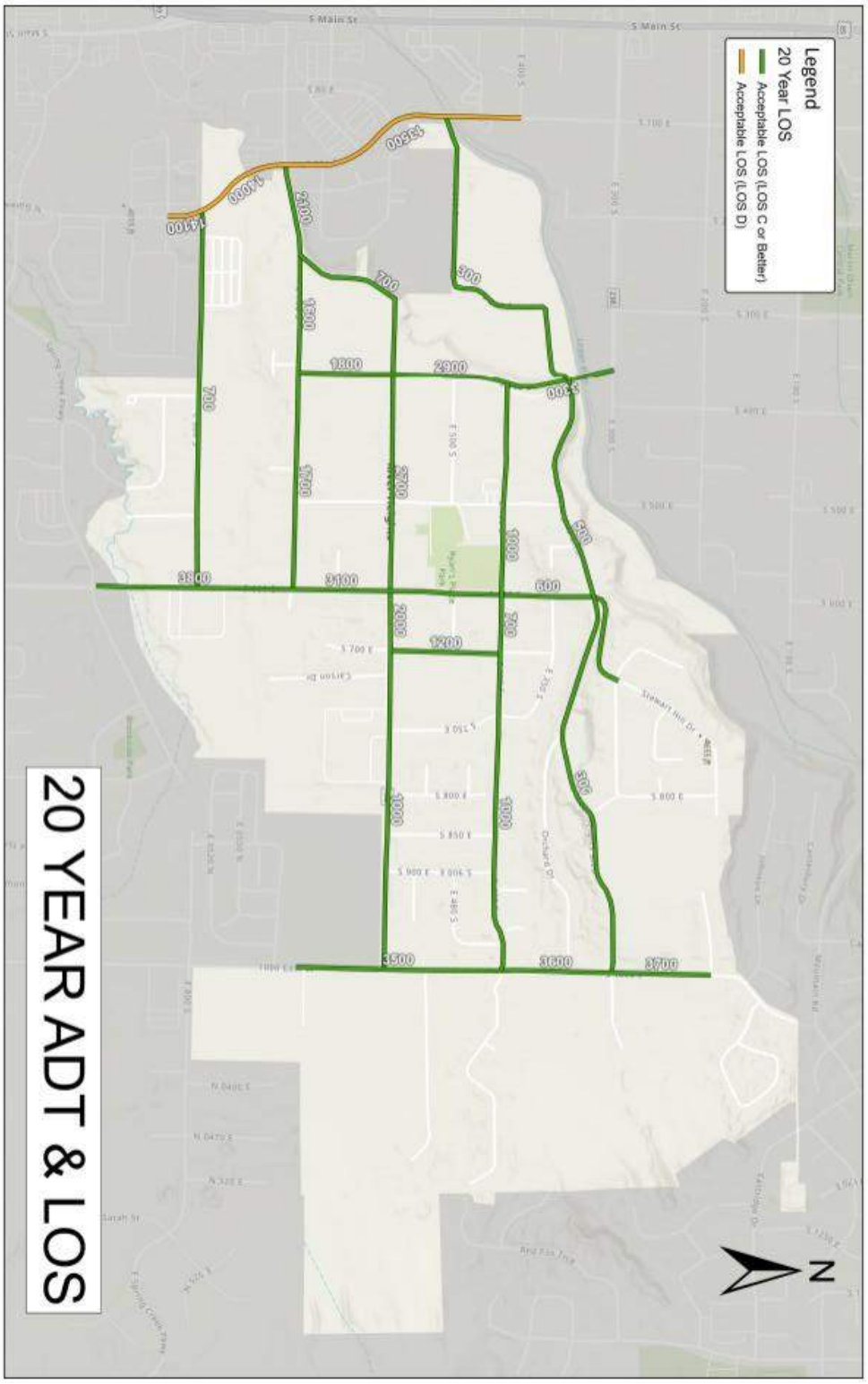

Figure 5: 20 Year ADT & LOS

5 YEAR WITH RCIP CHANGES

This model shows increased connectivity and congestion relief over the course of five years the changes in the RCIP are implemented. The changes may not be enough to suggest a need to have them implemented in five years time.

20 YEAR WITH RCIP CHANGES

This model shows significant changes from the “No Change” option at twenty years. This suggests that the changes proposed in the RCIP would improve conditions and be worth while completing in the next twenty years.

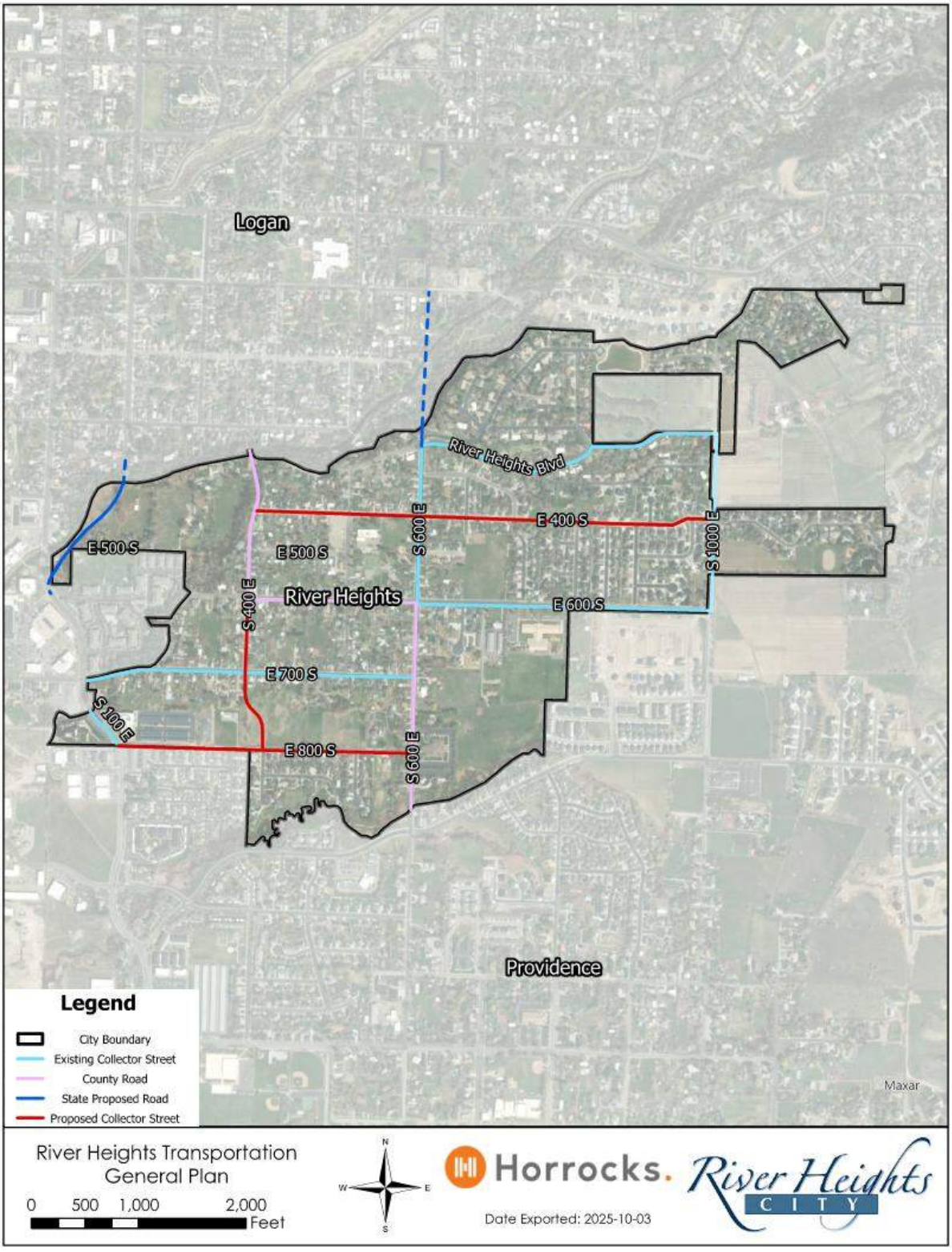

Figure 6: River Heights Transportation General Plan

ROADWAY CLASSIFICATIONS

Roadway classifications create a design standard to allow a road to function efficiently based on the anticipated traffic volumes. These roadway designations are to be applied when the roadway is being updated or development occurs in adjacent to it. For the purposes of this plan we are implementing two different road classifications; Collector Street and Minor Street. Only two classifications are being used due to the volumes found during data collection, city layout and utilization. The only exception to these classifications is 100 East, which is mostly in Logan City and is consistent to their standards.

- **Collector Street –** Collector Streets will be used for larger capacity roadways that will primarily get people in and out of the City. They will utilize the 66-Foot right of way cross-section.

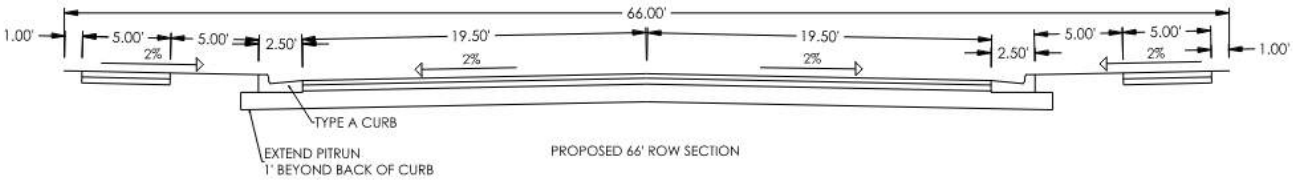

Figure 7: Proposed 66' ROW Section

- **Minor Street –** Minor Streets are all other streets that feed to the collector streets. They will use the 60-foot right of way cross-section.

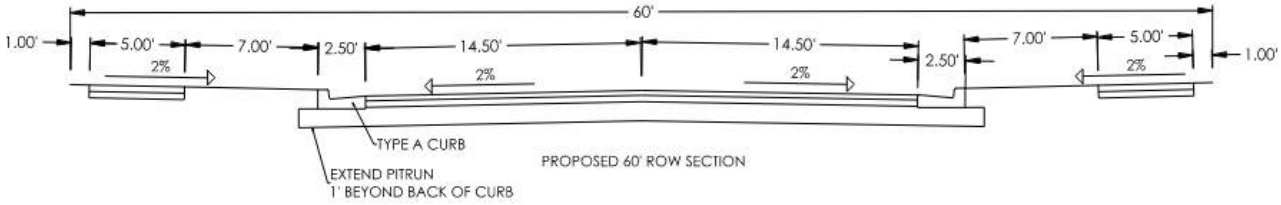

Figure 8: Proposed 60' ROW Section

- Partial Roadway Cross-Section – This section is to be used with future developments. As many developments are only responsible for the part of the road they are developing on, this detail will protect the City from having roads that are too narrow for two cars to safely pass each other.

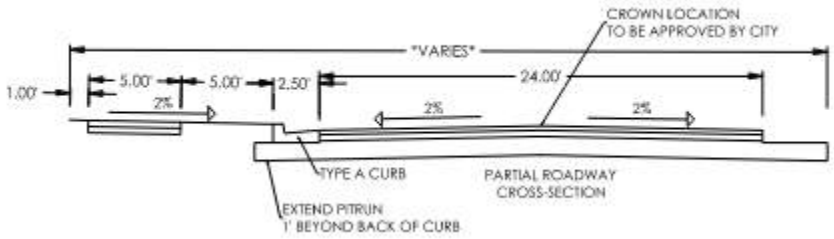

Figure 9: Partial Roadway Cross-Section

STATE PROJECTS

In concurrence with this masterplan UDOT has conducted a regional masterplan to relieve congestion on US 89-91 in downtown Logan. This plan focused on roadway projects outside of the main corridor to give commuters more options that should take some of the above-mentioned traffic volume. One segment of this plan includes connecting 100 East to 200 East in the western portion of River Heights called Riverdale.

The River Heights plan is separate from the UDOT plan mentioned above, and as such no modeling for these proposed projects was included in the extents of this masterplan. As such no conclusive statements can be made regarding their impact in this masterplan.

River Heights City has taken an official stance of opposition to this project citing that they find no benefit to the city or its residents. In their resolution opposing the project, attached in the Appendix A, “alternative alignments exist that are less costly, less environmentally destructive, and less disruptive to the community than the proposed crossing”.

ACTIVE TRANSPORTATION

River Heights plans to accommodate opportunities for active transportation options. This includes travel lanes wide enough to share with non-motorized traffic and trails along the borders of the city.

Most of the trails on the active transportation plan (see image) are along roadways, particularly 66 foot right-of-way roads that are to be built wide enough to share room on the travel lane for motorized traffic to move past cyclists that share the road. The new typical sections also call for wider sidewalks changing from the previous requirement of 4 foot wide sidewalks to 5 foot. This small change makes the sidewalks more accommodating to pedestrians by making easier for people to move side by side or cross each other.

The size and build out of the city limits the opportunities for dedicated stand alone trails. The planned trails include a trail on the south side of Logan River and through Quinley’s Garden.

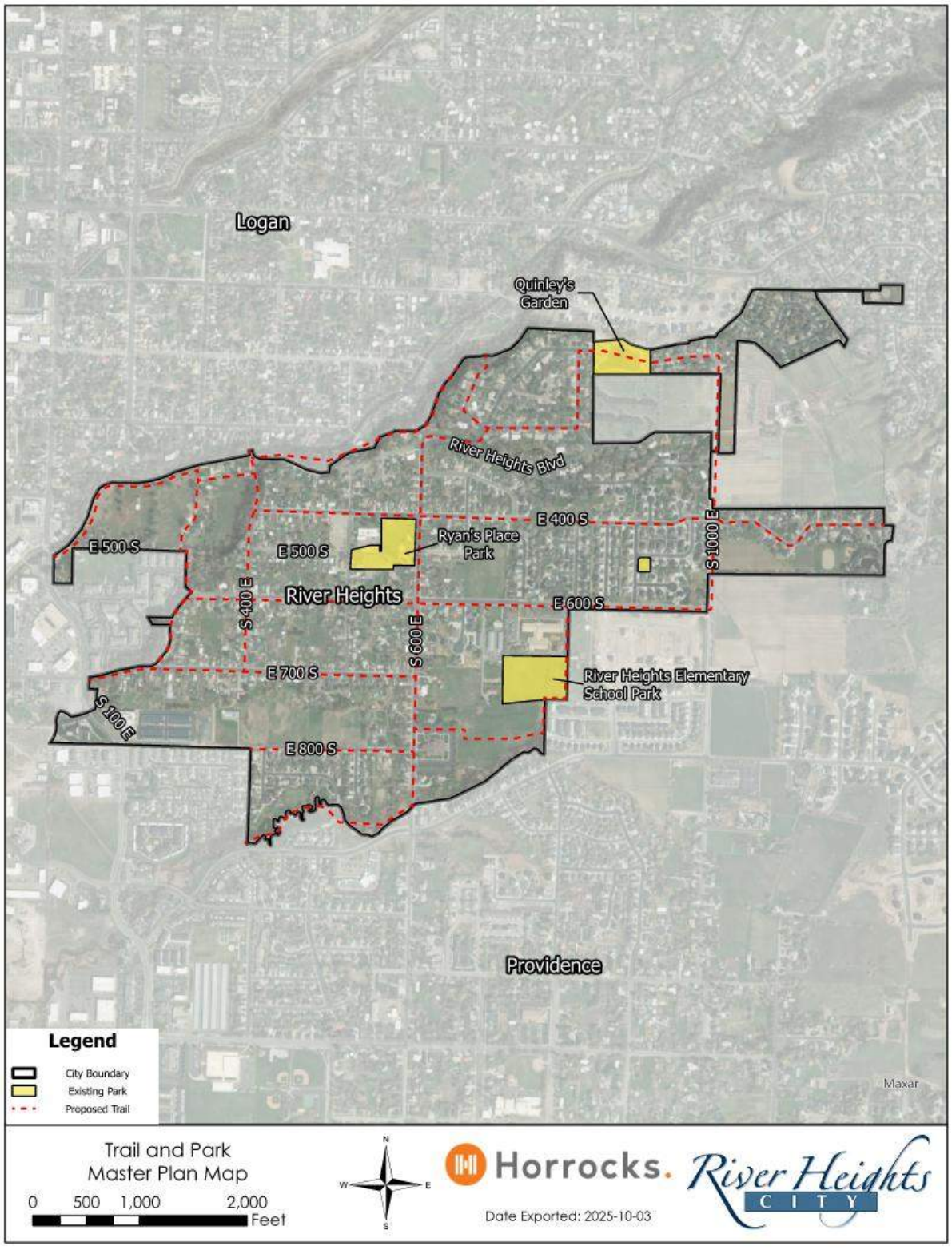

Figure 10: Trail and Park Masterplan Map

ROADWAY CAPITAL IMPROVEMENT PLAN

The projects selected for the Roadway Capital Improvements Plan were determined by the model and based on areas of concern set forth by City officials and staff. Four projects were selected for this RCIP, three are to improve connectivity by connecting gaps in the city grid system and the other is for safety improvements.

- **400 South from 850 East to 750 East –** This project is to connect 400 South providing another route from 1000 East to 400 East, which is a pivotal corridor into Logan City.
- **800 South from Stone Creek Drive to 100 East –** This will provide another entrance to the commercial zone in the City and to downtown Logan City from 600 East. This will provide some relief to 700 South.
- **700 East from 400 South to 600 South –** This route continues to complete the grid and will provide another egress/regress route to River Heights Elementary School, a major contributor to traffic volumes in the area.
- **River Heights Blvd from 400 East to approximately 450 East** – Current roadway is a one-way road with unsafe conditions that include insufficient sight triangles at the 400 East intersection, steep running roadway slopes and close proximity to the Logan River that is just to the north of River Heights Blvd. There are mainly three methods that can be used to improve these conditions; Widen the road and retain the south bank of the river and add a left turn lane on 400 East, maintain the road as a one way road and clear the sight triangles, or finally close the road in this section and create a cul-de-sac or hammer turn around on River Heights Blvd. The last option would negatively impact traffic flows and connectivity and therefore is not recommended. Any of these options would increase safety at this intersection.

The following table has been generated to assist the city in their planning process. These project costs and time lines are high level estimates, not a guarantee. Time lines were given based on priorities of safety and direct impact to the community of River Heights. Final Cost includes the projection of five percent for each year from now rounded up to the nearest $10,000.

	PROJECT	ESTIMATED COST	YEAR	FINAL COST
1	400 SOUTH FROM 850 EAST TO 750 EAST	$300,000	2033	$440,000
2	800 SOUTH FROM STONE CREEK DRIVE TO 100 EAST	$300,000	2037	$530,000
3	700 EAST FROM 400 SOUTH TO 600 SOUTH	$400,000	2040	$840,000
4	RIVER HEIGHTS BLVD FROM 400 EAST TO APPROXIMATELY 450 EAST	$1,700,000	2033	$5,030,000

Table 1: Roadway Capital Improvement Plan Cost Estimates

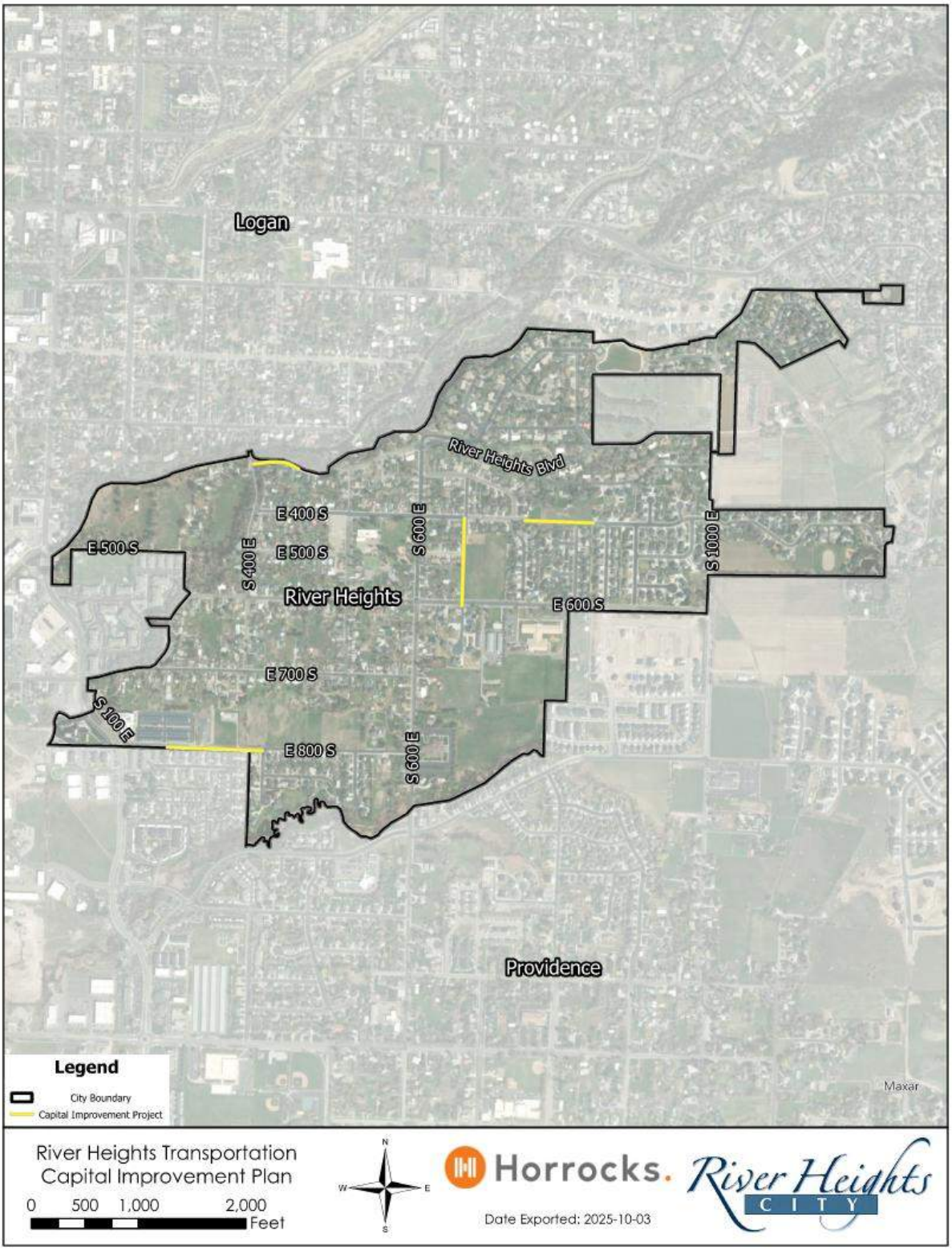

Figure 11: River Heights Transportation Capital Improvement Plan

CONCLUSION

River Heights is a tight community with limited space and limited development opportunities. Existing conditions meet acceptable levels of service and provide connective routes to provide accessibility throughout the city for motorized and non-motorized users. It is recognized that River Heights is in the middle of the Cache County metropolitan area and that transportation needs routes and connections with the neighboring municipalities. River Heights will work these municipalities to maintain efficient connections with the understanding that the interests of River Heights City will be their highest priority.

This plan indicates that the City will enjoy passable levels of services in roadways and intersections for the next 20 years under the assumptions that no significant zoning changes occur. The Roadway Capital Improvements Plan shows projects that will assist the City maintain or improve future conditions for their residents and commuters. River Heights will prioritize good working conditions for their roads to provide safe transportation conditions for all their users.