

MEMO TO: Finance, Administration, and Communications Committee

FROM: Jonny Chambers, TIS Director

DATE: March 24, 2020

SUBJECT: Smart City Foundations and Strategic Update

I. RECOMMENDED ACTION

None currently, this is a review of the Smart City imitative progress to date only for the Finance and Administration Committee of the Whole

II. DEPARTMENT CONTACTS

Jonny Chambers, TIS Director

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III. DESCRIPTION/BACKGROUND

At the request of Council and based on increasing interest from the Redmond community at large, the City has been building towards understanding our opportunities to implement Smart City technologies. The purpose of this memo and attachment is to summarize findings and identify Council questions for an upcoming Study Session on this topic.

The Smart City initiative is currently jointly owned by Public Works, Planning and TIS, and it is clear that every City department could ultimately benefit from wise investments. The City is currently preparing proposals for additional spending in 2020 as well as one-time and on-going spending in 21-22. Council input will be exceptionally valuable in helping staff prioritize funding levels and timing should we proceed further with this Smart Cities initiative.

Phase I

Work in Phase I comprised extensive research to identify and compile City assets that could support Smart City projects (e.g. conduit, fiber, poles, lighting systems and more) as well as a Smart City Symposium, where before we reached out via a survey to City Staff, business, education and other communities of interest to understand more about their views. We then asked for input from attendees as to what constitutes a Smart City and Redmond centric priorities. This work happened in parallel with the cable franchise renewals project, where we reached out via a web survey to residential communities, which is another important initiative with respect to realizing a Smart City – the cable providers own and manage an extensive network of fiber that could be a core enabler for any projects we progress. Phase I work was carried out in collaboration with River Oaks Communications, under contract with the City.

The Redmond Smart City report is a primary deliverable from Phase 1 of the City's efforts to date, in summary it outlines:

- Potential strategic directions for future work phases, including consideration of the governance structures needed to select and operationalize strategies.
- Community input on potential investment areas including transportation, smart parking, and environmental monitoring.
- A high-level inventory of physical assets that would provide the network communications foundation for further technology investments in things like sensors, 5G, and the like.
- A proposed Phase II engagement with River Oaks which is open to change based on direction, overall prioritization versus other projects and programs, and available funding.

Alignment with the Cable Franchise Renewals process

A key tie-in to our Smart City work is the parallel effort on the Cable Franchise Renewals with Comcast and Frontier, both of which will renew in 2020. The City is also having discussions with CenturyLink, who is a provider of internet services to the City. Beyond cable TV, these providers could support future City objectives for fiber networks. Fiber networks are critical to a successful Smart City program – they provide high-speed, low latency network backbones for devices and services that we could bring online. Today the City primarily uses its own fiber to support our traffic signals, but we are exploring how we can connect our SCADA systems as well. SCADA systems manage critical utilities like water and wastewater. Beyond traffic signals and SCADA there is a multitude of other things we could do.

The existing City-owned fiber network is aging and does not currently serve several areas of the City where we run City facilities or provide service. Fiber is a critical utility for the City. There are many options with vendors including managed services, laying new fiber and managing it ourselves, and more. The City needs to make investments to expand, modernize and maintain fiber – its own and vendor supplied.

Any future funding related to fiber would be a combination of one-time and ongoing amounts to pay for new capital assets, professional services relating to implementations, and ongoing maintenance and operations. In the 19-20 budget, Council approved \$200,000 of one-time funding to scope out a fiber management plan, which includes an allocation for some fiber repairs. The City is exploring how we can kick off the development of this plan in 2020. Upon completion, the plan would provide our overall approach to maintaining and expanding the City's fiber investments as well as related costs. We are working on a proposal on a fiber management plan.

In summary, our research is telling us there are opportunities to leverage experience, seek strategic partners and develop mapping platforms to categorize City assets, implement the deployment of fiber, manage and lease City assets, deploy Smart City infrastructure and benefit public safety, education, healthcare, public services and transportation -- all of which can drive a smart economy.

Potential Next Steps

An objective following the planned Study Session, and subject to Council direction, is to propose Phase II of the Smart City Program which would set up the structures and follow on work that would formally support Smart City goals and priorities. This work would include: research into and incorporate Smart City Symposium results, Best Practices in other cities, establishment of a Smart City Steering Committee, identify Innovation Zones for 3 Pilot Projects, hold a Vendor Tech Summit, RFIs and RFPs creation and oversight for Pilot Projects, and analyze Responses from Providers, amongst other deliverables.

The process to Develop, Draft and Negotiate Agreements between the City and Providers for the 3 Pilot Projects and the Implementation of the 3 Pilot Projects would occur in Smart City Phase III in 2021 unless the City wanted to accelerate and budget for those Tasks for 2020. Based on the existing relationship with River Oaks, and their extensive knowledge of the City's infrastructure, we propose to continue this work with this vendor.

Questions for Council from City staff/River Oaks:

- Please provide input on what the community has prioritized to date as potential investments. Are there elements we need to emphasize more or less?
- What high-level success measures would you propose for Smart City investments in general or for any of the proposed projects?
- Do you think there is anything missing, if so, what?
- Building upon the Smart City work to date directed by the Mayor and City Council, and Public Works interest in developing a Strategy for a Fiber Management Asset Plan, what questions does City Council have regarding Smart City next steps and milestones?

IV. PREVIOUS DISCUSSIONS HELD

Date	Action / Committee Presentation
Mar, 2019	Community Strategic Plan Council Retreat
Aug 13, 2019	Study Session, Cable Franchise Renewal, Community Strategic Plan
Jan, 2020	Community Strategic Plan Council Retreat

V. IMPACT

A. Service/Delivery:

N/A

B. Fiscal Note:

N/A

VI. ALTERNATIVES TO STAFF RECOMMENDATION

N/A

VII. TIME CONSTRAINTS

None

VIII. LIST OF ATTACHMENTS

Attachment A: Final report on Smart City research to date.