

SCOPE OF SERVICES PROPOSAL

For

5G Strategic Action Plan for the City of McKinney, Texas

McKinney, TX

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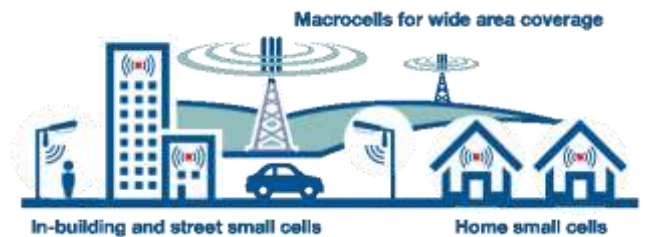
October 4, 2019

We want to thank you for selecting HR Green to be your consultant on this important project. We are excited to work with you in taking the steps outlined in our RFQ response. In this DRAFT Scope of Services Proposal, we are following the approach that we presented in our RFQ response and in our presentation to City staff.

We have derived the Scope of Work and their associated Tasks from our RFQ response, discussions with the City, and our experience in providing similar services for other communities. We have divided this work into two separate Phases and sixteen identified Tasks depicting each tasks associated costs. As presented, this study provides a compressive approach to the project. As such, we look forward to reviewing the DRAFT Scope of Services Proposal with you and refining same to best meet the needs and expectations of the City.

Project Understanding

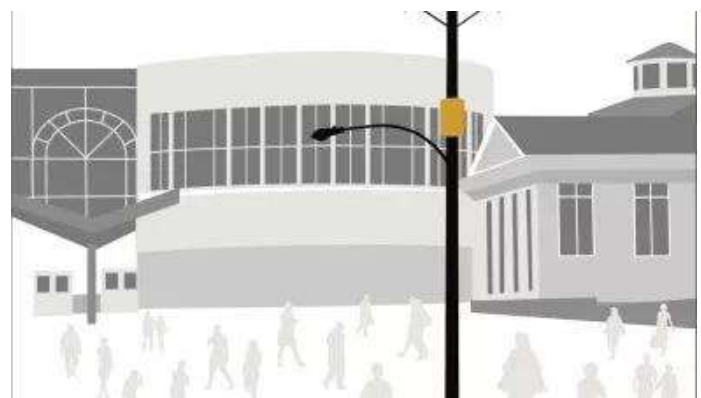
Our understanding is that the City of McKinney, in their 5G Strategic Action Plan, desires a phased approach. The first Phase develops applicable standards and processes (health risks, policies, fiber Master Plan etc.). These will be guiding baselines that can be used across the City and in the pilot projects.



The second Phase focuses on the pilot projects in your Economic Development (MEDC) properties to drive Economic Development and work through Smart City and 5G options, implementing the work done in Phase I. Phase II will lead to designs and financial options that will be implemented in the Pilot Projects.

Project Approach

Technology, when done well, can be a powerful accelerator to compliment the many strengths that have made McKinney one of the most desirable cities in America. Our Approach is focused not only on developing your 5G/Small Cell strategy, but on leveraging these building blocks to further differentiate McKinney as a great place to live, work, visit and grow your business.



You shared with us the City of McKinney’s 5G Strategic Plan Guiding Principles. These principles are the core directives for the creation of a future-proofed technology framework meeting the priorities established by the City.

HR Green will leverage our past project successes to execute a well-defined project structure that addresses these priorities while providing deliverable and progress milestone at each step of the journey.

Phase I is about baselines. These include: Evaluating health risks and your options for managing the related issues; clarifying 5G/Small Cell regulations (including the areas that you can control and define); developing policy necessary to support the steps you take; defining how colocation will be done; analyzing your costs to develop realistic rates; and developing ROW management tools. These baselines can then be used and further refined in the Phase II Pilot Projects (and then applied to the rest of the City).

Your economic development land (MEDC) provides an ideal opportunity to initiate a pilot project (Phase II). This will help us identify consensus for successfully accomplishing the tasks you identified in your RFQ. creating the needed land development and planning; walking you through Smart street light options, include the Smart City/IoT options that best fit McKinney; helping you find the ownership/partnership models that will work the best for the City; addressing funding opportunities that are available (from policy, partnerships and possibly from grants (although those are very scarce)) and continuing to monitor and manage health risk issues. These are all critical pieces of your 5G/Small Cell strategy, and we will develop them with you as we lead the pilot projects.



This development will become a key economic development driver for the City. Through the expansion of technology services, the development (and the City) **will be** a national leader in 5G development. This should result in a meaningful long-term impact on the developers’ ability to recruit future quality tenants such as high-tech, aerospace and other desired occupants.

Below is the proposed Scope of Work and Tasks necessary to complete this work.

Scope of Work and Tasks

PHASE I – DEVELOP BASELINES

McKinney is currently receiving permits for Small Cell placement, and current Texas law and FCC regulations allow for only limited community control. Fortunately, we believe we are still very “early in the game” as frequencies (aka, spectra) are being assigned and power requirements are being engineered.

Once 5G deployments truly get underway, there will be many points of conflict and negotiations going on rapidly for each carrier to gain the best advantage as quickly as possible. To some extent, we understand a number of carriers, particularly Verizon and Sprint, are already extending their fiber network extensively in anticipation of the electronics (antennae and hardware) being better defined.

Until then, since the federal regulations allow (and will continue to allow) cell infrastructure to be placed with minimal



Recent Example of Poorly Managed Wireless Infrastructure Deployments

restrictions by local governments, it has been in most cases easier to simply install a new antenna than it is to work with a competitor (AT&T, Verizon, T-Mobile, etc.) to co-locate on a pole. HR Green will work with McKinney to develop policies, to not only manage these rollouts, but to create fiber master plans that enable community growth.

We will work with McKinney officials to create a multi-faceted strategy that controls your broadband and wireless future and maintains leverage in possible negotiations with carriers. We will:

1. Move expeditiously to update zoning, design standards, ordinances, and other regulations (including SB1004 and other ongoing legal challenges in Texas and other jurisdictions) that address issues of importance to your community. Where possible, ensure that McKinney fully recovers its costs in managing permitting activities.
2. Standardize aesthetic requirements, including pre-approval of antenna, equipment cabinet and street furniture designs where appropriate.
3. Evaluate current body of knowledge regarding any health concerns from 5G/Small Cell (see below).
4. Create and operationalize management systems to manage rights-of-way inside the City's residential and commercial districts; manage the process of permit review, inspection and related services, and ensure consistency of service.

Kickoff Meeting

We recommend beginning the process with a kickoff meeting in which we discuss the process, determine paths of communication, finalize the planned schedule and clarify the goals and risks. To limit costs, we will do this with a combination of people in McKinney and remote participants calling in.

▷ DELIVERABLE:

- One kickoff meeting

Task 1 – Evaluate Health Concerns

As 5G technology rolls out nationally, some communities have faced public backlash related to real or perceived health risks. We have worked with our clients to help them understand the FCC's OET Bulletin 65 and 56 (which govern allowable exposure limits for cellular equipment) and to incorporate the current scientific work on issues in this space. We will help McKinney address this crucial issue.

▷ DELIVERABLE:

- Report on FCC guidelines
- Integrate findings in proposed McKinney policies
- Evaluate methodology and processes to help assure compliance with current regulatory guidelines

Task 2 – Review/Revise 5G/Small Cell Policy and Design Standards

HR Green will assist in creating a policy or design manual supplement for the City that establishes standards of design, construction and installation of antenna and street pedestals, location and spacing; color, height, and decorative pole requirements; colocation; aesthetic requirements; view preservation; streetscape; and infrastructure density. Specifications will outline features such as location (depth and alignment), antenna,

pole, mast arm, luminaire, duct bank construction, equipment cabinet, conduit, trenching, foundation, spacers, backfill and inspection requirements. This specification manual will be developed in conjunction with the Engineering Department, and include drafting and revisions to create a final document.

▷ **DELIVERABLE:**

- Small Cell infrastructure policy
- Specification manual

Task 3 – Conduct Cost Recovery Study

The FCC order seeks to limit how much local governments can charge wireless providers in Small Cell deployments for things such as application and permitting fees, fees related to accessing public rights-of-way and/or rental fees for Small Cell colocation on existing structures. However, the order does specify fee caps for one-time applications and annual fees. The safe harbor amounts are:

- (a) \$500 for a single up-front application that includes up to five Small Wireless Facilities, with an additional \$100 for each Small Wireless Facility beyond five, and
- (b) \$270 per Small Wireless Facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally owned structures in the ROW.

HR Green will conduct a detailed cost study for Small Cell deployments to both inform fee calculations and to act as a resource for defending those fees should wireless providers challenge them. We will request information from the City regarding personnel and hours – these will be the source of costs (as opposed to HR Green observation).

▷ **DELIVERABLE:**

- Completed analysis of cost deployment

Task 4 – Develop ROW Policies and Fiber Master Plan

McKinney must act quickly to protect its valuable right-of-way. HR Green has helped other communities to address this critical infrastructure through policy AND through proactive outreach and management of the provider community. Our unique approach allows McKinney to leverage both the carrot and the stick to effectively lead the provider community into compliance with the city's goals.

Task 4.1 – Create and Map Fiber Key Arterials

The City is ahead of many communities in having a strong and comprehensive GIS system. We will request information that will provide the data necessary to develop a map for managing ROW, check where there are questions and add restriction designations. To be clear, HR Green does not plan to create or field inspect map information. Rather, to be sensitive to budget constraints, we plan to assimilate the City's existing data. Then, we will request the City review this map to check to make sure the data is correct and up to date and to ensure the layouts and restrictions make sense. This will create a comprehensive tool to defend the policies and processes that manage the City's ROW. This map will be used in the operational process and be a living document that will be updated as deployments and moves that occur.

▷ **DELIVERABLE:**

- Route maps representing conduit counts/sizing

Task 4.2 – Conduit Design Guidelines and Construction Specifications

HR Green will create design guidelines that establish design standards and construction specifications for the installation of duct banks, conduit and associated access points. The design guidelines and specifications will outline location (depth and alignment), duct bank construction, conduit, trenching, spacers, backfill and inspection requirements. This specification manual will be developed in conjunction with the City Engineer’s department and drafting and revisions to create a final document.

▷ DELIVERABLE:

- Design guidelines and construction specifications for new arterial corridors

PHASE II - PILOT PROJECTS

It is our belief through our initial discussions that the City desires to pursue a Public-Private Partnership to enable the rapid and ubiquitous deployment of 5G to the City’s Economic Development parcels. Navigating the complexity of such a partnership will require effective outreach to the carrier community in order to understand their concerns, position the City for success and ultimately select the right partner to advance this important initiative.

We recommend the following approach:

1. Evaluate current City assets and establish strategic goals that can be utilized in the deployment of an advanced network and will guide RFP development.
2. Conduct effective outreach to the development community to understand desired levels of service and future needs.
3. Determine “Smart City” objectives from the community’s perspective to ensure that any selection includes providers able to meet the community’s long-term goals for advance technology in the area.
4. Develop and execute vendor selection processes to ensure the City selects the right partner. HR Green’s relationships with national providers will help to ensure the City has a range of choices to position the project for best success and allow you to evaluate project outcomes as a potential revenue source for the community.

Task 1 – Kickoff Meeting

We recommend beginning the process with a kickoff meeting in which we discuss the process, determine paths of communication, finalize the planned schedule and clarify the goals and risks.

▷ DELIVERABLE:

- One kickoff meeting

Task 2 – Evaluate and Recommend Smart City Alternatives

The HR Green team will evaluate advanced and “Smart” community technologies that may be needed by the City to advance both its Smart City goals. The evaluation will include meeting with key stakeholders both inside City government and with key stakeholders that include likely developers of EDC parcels. We will identify key application priorities necessary to be included in the future task execution of the project.

▷ DELIVERABLES:

- Three days of meetings with City staff, developers and key anchor institutions
- Initial evaluation of possible smart community technologies applicable to the project

Task 3 – Manage Provider Selection Processes

The HR Green team will represent McKinney in its sourcing, evaluation and selection of providers. The RFP will include a review of the developed high-level design and desired outcomes in order to allow providers to compete equally and to maximize benefits. Our team will act as owner’s rep and support bid letting, hold pre-bid conferences that may occur, oversee vendor inquiries, and assist in formatting timely responses to questions that may arise. Our team can provide its professional opinion upon review of the various responses and formulate recommendations of choice to be acted upon by the City.

▷ DELIVERABLES:

- Prepare RFP materials and conduct pre-RFP outreach to maximize the potential response from local and national providers
- Conduct formal, pre-RFP meeting
- Facilitate RFP response, including grading criteria, to formalize the selection process.

Task 4 – Review Site Level Financial Models

Based on the preferred ownership and operation models identified in the Vendor Selection Task, HR Green will analyze costs and revenues associated with projected conduit and duct bank deployment. Using base cost information and modeling, HR Green will work with City staff to develop and/or review financial models showing cash flow and ROI for proposed alternatives.

▷ DELIVERABLE:

- Spreadsheets calculating CapEx expenditures to purchase and deploy conduit and fiber paths
- Spreadsheets displaying a financial model including preferred marketing and ownership/IRU lease alternatives

Task 5 – Create Conduit Lease and Financial Model

HR Green will analyze projected conduit and duct bank deployment methods and costs. Using base cost information and modeling, our team will develop proposed sale/lease models designed to enable McKinney to create an “enterprise-like” fund that is capable of creating City assets at minimal cost and creating a revolving fund that is capable of financing future asset expansion.

▷ DELIVERABLE:

- Spreadsheets demonstrating typical cost of implementation per linear foot for specified build types identified in the specification manual
- Spreadsheet creating a financial model including up front and sale/IRU (Indefeasible Right of Use) lease alternatives (long-term leases)

Task 6 – Provider Outreach and Coordination

HR Green will conduct meetings with the City’s private communication carriers and private fiber owners with communications operations in the City. Meetings will gather provider input on proposed specifications and determine the interest of providers to participate in the deployment of conduit. We will share proposed conduit specifications with providers and seek input on proposed deployment methods. HR Green staff will negotiate on behalf of the City and according to the financial models developed in Task 3 of this phase.

▷ DELIVERABLE:

- Identification of levels of need from major providers
- Creation of agreements in principal regarding cost and deployment methods

Task 7 – Final Engineering Design

If required, HR Green will represent the City to work with the selected Provider to create final communication designs that accommodate both provider and community objectives. On project closeout, we will transfer to McKinney all geodatabase files, map documents and other files in their original format.

▷ DELIVERABLE:

- A CD set will be printed for each project area including construction documents, bills of material, etc., dependent on forms of ownership and participation by public and private partners.

Task 8 – Negotiate with Selected Vendors

Negotiate with Selected Vendors - HR Green will work with the City to negotiate the final form and function of an agreement, resulting in a formal Letter of Intent (LOI). HR Green will not provide legal representation, but can provide introductions to legal counsel experienced in these agreements to provide legal services.

▷ DELIVERABLES:

- Ongoing assistance to develop proposed contributions by City and Provider
- Ongoing assistance to develop the form of proposed revenue sharing between the City and the Provider

Task 9 – Project Management and Contingency

Our project manager will be responsible for coordination of the project, including regular update (timing to be determined at kickoff) and communication with the City’s designated points of contact. We also think it is a good idea to build in a reasonable amount of contingency.

▷ DELIVERABLE:

- Project Management and contingency

Project Pricing

Phase / Task	Costs
Phase I – Develop Baselines	
Kickoff Meeting	\$4,400
TASK 1 - Evaluate Health Concerns	\$6,766
TASK 2 - Review/Revise 5G Policy & Design Standards	\$9,268
TASK 3 - Conduct Cost Recovery Study	\$9,856
TASK 4 - Develop ROW Policies & Fiber Master Plan	
TASK 4.1 - Create and Map Key Fiber Arterials	\$13,176
TASK 4.2 - Conduit Design Guidelines & Construction Specifications	\$9,806
Project Management & Travel (3 meeting days, incl. Kickoff)	\$5,700
TOTAL PHSAE I	\$ 58,972
Phase II – Pilot Projects	
TASK 1 – Kickoff Meeting	\$4,400
TASK 2 – Evaluate and Recommend Smart City Alternatives	\$12,200
TASK 3 – Manage Provider Selection Process/Preliminary Design	\$23,900
TASK 4 - Review Financial Models	\$5,900
TASK 5 - Create Conduit Lease Financial Model	\$7,040
TASK 6 – Provider Outreach (Cost Sharing & Participation)	\$17,852
TASK 7 - Final Engineering Design	\$9,900
TASK 8 - Negotiate with Select Vendors	\$14,128
TASK 9 - Contingency/Project Management	\$14,330
TASK 10 – Travel (5 meeting days, incl. Kickoff)	\$7,500
TOTAL PHASE II	\$ 117,150