

Section 2

Change Order Revised Project Work Plan

Change Order Number:	1
Date:	6-28-17
Description of Change:	Due to the close proximity of each of these communities and the high level of radio interoperability required between these public safety agencies, Highland Park and University Park are considering the possibility of developing a shared land-mobile radio system. To achieve this, University Park wants to be included in the Highland Park radio project scope of work provided by Black & Veatch. Accordingly, with Highland Park's permission Black & Veatch has revised the original Highland Park project work plan attached in this Change Order to include University Park. The additional University Park scope of work is estimated to require an additional 192 hours of labor and has resulted in the extension of the Phase I scheduled completion date from the end of September to mid-November. The original Highland Park contract includes 260 hours of professional time. By this change order, the 260 hours has been increased to 452 hours.
Change Order Amount:	\$36,027.13
Adjusted Contract Value:	\$84,897.54
Change Order Initiated by:	Town of Highland Park in conjunction with the City of University Park
Special Considerations:	The two entities have agreed that Highland Park will be the contracting entity for this entire project. Black & Veatch invoices will be sent solely to Highland Park who will pay the Black & Veatch invoices and request appropriate reimbursement from the City of University Park for their portion of each invoice.

Black & Veatch	Town of Highland Park
Approved By:	Approved By:
Printed Name:	Printed Name:
Title:	Title:
Date:	Date:

2.1 Joint Statement of Work (Revised 6-30-17)

This work plan has been revised to include the City of University Park Texas who is now in the process of exploring the development and implementation of a new land-mobile radio communication system. Due to the close proximity of each of the two communities and the high level of radio interoperability required between their public safety agencies, Highland Park and University Park are considering the possibility of developing and implementing a new shared radio communication system. Accordingly, University Park wishes to be a stakeholder and participant in the project work plan previously developed for Highland Park.

University Park has received a proposal for a new radio system from Motorola / Crosspoint Communications. As part of this combined Highland Park / University Park project work plan Black & Veatch is to review the Motorola proposal to determine if it might address the needs and requirements of both University Park and Highland Park after they are identified during this study.

The following work plan is segmented into the various project tasks that make up the first phase of the project.

Revised Phase I Project Work Plan

2.1.1 Task 1 – Project Initiation

Task 1 includes several different activities required to get the project initiated properly. It will include the following steps:

- 1) Conduct a project Kick-off Meeting with the project participants to present and discuss the scope and goals of the project and the information that would be collected.

The deliverables for this task will include the kick-off meeting with Project Teams from Highland Park and University Park. It will also include delivery of a preliminary project timeline. Black & Veatch will develop a PowerPoint presentation to lead the discussion this meeting.

2.1.2 Task 2 – Understand Current System Environment

To make the most efficient use of time, Task 2 is generally initiated after the kick-off meeting. This will include visiting each of the existing radio tower sites and dispatch centers currently used. The purpose of this will be to determine the condition of the existing facilities (towers, equipment shelters, power systems) and how they might possibly support future system solution options. Black & Veatch will document each of the sites and compile the data for the report.

The deliverable for this task will be the site visits to facilities currently used and other potential sites that may be an option to support future radio communications systems. Information collected from these site visits will be consolidated and presented in the “current system environment” section of the needs analysis report. This will include visits at radio system infrastructure sites in both Highland Park and University Park.

2.1.3 Task 3 – Discuss Future Needs with Radio Users

Black & Veatch will meet with each of the departments individually to discuss radio communications needs and requirements in future systems. These meetings typically last from

1 to 3 hours. This proposal includes a revised total of 8 discussion sessions to include meeting with University Park Departments. These sessions will be held as follows:

- 1) Highland Park Department of Public Safety
- 2) Highland Park Public Safety Dispatch Operations
- 3) Highland Park Public Works / Utilities Departments
- 4) University Park Police Department
- 5) University Park Fire Department
- 6) University park Public Safety Dispatch Operations
- 7) University Park Public Works Departments

The eighth session is included to support any additional sessions that may be required that might be identified during the data collection process.

Black & Veatch's typical approach to these sessions includes an agenda that will help guide the conversations and encourage additional dialogue. This methodology is used to collect as much information as possible regarding how each department operates, the radio functionality required in any new system solution, and what additional functionality may be useful to improve first responder safety, service to the community, and overall productivity. Typical agenda items for these meetings include the following:

- Introduction of the department including general responsibilities, size of the department, sub-departments, facilities utilized, managed, or maintained by the department, hours of operation (system loading requirements), etc.
- Open discussion about other communications systems (cell phones, pagers, etc.) used to support operations in that department
- Quantities of radio users currently and expected future growth
- General issues with current system
- Radio system RF coverage requirements and coverage issues with the current system
- Interoperability requirements (both internal and external)
- Mobile radio requirements, features, and configurations
- Portable radio requirements and features
- Control / base station requirements and configurations
- Features "required" and features "desired" in new system
- Open discussion and opinions on the new system and tools that could increase their productivity

Meeting with dispatch operations personnel will include many of the same items listed above but would also include a few more items:

- Discussion about the different support systems used such as any CAD interfaces to the radio system
- Logging recorder systems and incident reconstruction, instant recall recording, and future needs and requirements
- Fire station alerting system and future requirements
- Interoperability with outside agencies – dispatch point of view

- Radio system coverage – dispatch point of view
- Dispatch redundancy and back-up processes and procedures

Deliverables for this task will be conducting the meetings with the participating Highland Park and University Park departments and compiling the information received for the report to be delivered.

2.1.4 Task 4 – Discussions with Potential System Partners

One of the goals of this project is to identify the different options available to each of these entities in regards to system infrastructure and technology. If Highland Park and University Park decide to partner on a joint system solution, then jointly they would need to consider opportunities to partner with an existing infrastructure operator. They would need to consider many issues such as usage fees and how a particular system owned by others accommodates the needs and requirements of the users as identified during this study. Radio system coverage to be provided in both Highland Park and University Park is one of the most important concerns. There may be an opportunity to develop their own shared radio system or alternatively to possibly leverage and expand an existing system in their area. Such options would need to be researched. This proposal includes time for discussions with up to 3 potential partners. Additional potential partners can be added at additional cost if needed.

It is most likely that the list of system potential system operators would include the City of Dallas / Dallas County, Dallas Area Rapid Transit (DART), and then possibly another system operator such as Metrocrest or GMRS (Garland, Mesquite, Rowlett, Sachse) each of whom just recently implemented new 700 MHz trunked radio systems with expansion capabilities. DART's system is already in place however the new Dallas / Dallas County system may take the next several years before it is fully implemented and accepted however there may be an interim solution to be considered. Each of these options will be discussed.

Discussions with these potential partners would be either through face to face meetings or conference calls depending on that agencies availability or preference of Highland Park and University Park. For the purpose of the proposal, face to face meetings will be included. It is expected that representatives of both Highland Park and University Park would attend these exploratory meetings along with Black & Veatch. Black & Veatch would develop an agenda for these meetings that would include the following:

- Request for an overall description of the system being considered
- Discussion regarding future plans for the system being considered
- Current capacity of the system being considered and other “outside” users of the system
- Current system coverage and lists of tower sites near Highland Park and University Park of the system being considered
- Dispatch console direct connectivity options of the system being considered
- Any established user fee schedules
- Partnering agreements and decision making involvement
- System limitations to partnering agencies

Deliverables for this task will include meeting with up to three potential system partners and documentation of the information received to be presented in the report.

2.1.5 Task 4.1 – Review University Park Proposed Solution

The City of University Park has received a radio system solution proposed by Motorola / Crosspoint Communications. As part of this study, Black & Veatch will review this proposal to identify whether it could meet the needs and requirements of both Highland Park and University Park as identified in Task 3 above. Items in the proposal that will be reviewed will include:

- Radio system expansion capabilities
- Ability to connect with other systems and interoperability challenges
- Radio system coverage guarantees
- System pricing

2.1.6 Task 4.2 – MOU Assistance

In the event that a joint system between Highland Park and University Park is a viable solution, Black & Veatch will provide assistance in the development of a memorandum of understanding between Highland Park and University Park. This task will include development of a base document that both Highland Park and University Park can begin with and refine as required to reach a mutual agreement. It should be noted that MOUs can become complex and encounter political considerations which can require extensive amounts of time to resolve. Black & Veatch has proposed a fixed amount of professional time and in the event that MOU development consumes more time than expected, Black & Veatch will stop work and notify the cities that additional time will be needed to complete the MOU development.

2.1.7 Task 5 – Individually Owned System Alternatives

Upon completion of the internal and external discussions, site visits, and a review of the data collected, Black & Veatch staff will begin analyzing the collected information for the purpose of objectively developing radio system alternatives that address both Highland Park and University Park's needs. Not only will solutions be evaluated regarding a partnering solution, but B&V will also consider a system that is implemented and operated by Highland Park independently and also by University Park independently.

This would include possibly the conceptual design of a system alternative that is implemented and owned by Highland Park or by University Park. It would need to satisfy all of the needs and requirements identified in previous tasks including interoperability with surrounding agencies in the near term and in the future. Budgetary cost estimates will be developed and all of this information will be included in the final assessment report.

2.1.8 Task 6 – Development of Needs Analysis Report - Draft

As part of the report development, Black & Veatch will meet with the project team to review the different radio system coverage scenarios presented by each of the systems evaluated. This will help the Team identify which solution best serves each entity in regards to coverage. In this same meeting, participation costs required of the different system alternatives will also be discussed. This meeting will take place either in Highland Park or University Park and will include utilizing Black & Veatch coverage design tools interactively to review the different coverage scenarios and signal levels expected.

In Task 6 Black & Veatch will consolidate all of the information and begin development of the Needs Analysis Report. The report will consist of the following sections:

- Section 1 – Executive Summary
- Section 2 – Project Methodology

- Section 3 – Current System Environment
- Section 4 – Needs and Requirements
- Section 5 – Potential Partner Evaluation
- Section 6 – System Alternatives and Budgetary Cost Estimates
- Section 7 – Black & Veatch Recommendations and Next Steps.

The report will be prepared in a draft format initially and will be provided to the project team for its review. The final version will be developed once the project team has had the opportunity to review and comment on the draft and Task 7 described below has been completed.

2.1.9 Task 7 –Discussion of Findings and System Alternatives

Black & Veatch staff will develop a PowerPoint Presentation that summarizes its findings and recommendations. This will help guide the Team through the report and allow the opportunity for making additions and deletions from the final report. The deliverable for this task will be the PowerPoint presentation that addresses the following:

- **Current System Environment** – This will include information collected from the different departments regarding the current system. It will provide a system description and information about the existing operation listed by the users. It will list current system issues encountered with RF coverage, interoperability, radio equipment condition, system capacity, and any other issues identified during the discussions with the departments.
- **Needs and Requirements** – These slides will address information listed by the users as to what they need and would like to see in the new system. They will discuss required and desired features and will show where radio system coverage needs to be improved along with any other requirements mentioned during the data collection process.
- **Potential System Partner Evaluation** – This section of the presentation will provide an overview of the partnering solutions evaluated. It will show a description of the three different systems considered and the advantages and disadvantages of both Highland Park and University Park operating on these systems for comparison purposes. It will discuss the limitations of the partnership including both Highland Park and University Park's participation in the decision making process in regards to system management and the ongoing costs for these solutions.
- **Individually Owned System Alternatives** – After analyzing the information collected, Black & Veatch will identify potential system solutions that would be implemented and owned by Highland Park or University Park. This portion of the presentation will provide a high level description of each radio system alternative. It will summarize the advantages and disadvantages of each alternative with respect to the needs and requirements identified and the costs of ownership.
- **Preliminary Recommendations and Cost Estimates** – These slides will provide an overview of the Black & Veatch recommendations. It will include a ranking of the different options based on how well a certain solution meets the needs of the departments and the costs for the alternatives.

2.1.10 Task 8 – Prepare Final Report and Deliver to Highland Park & University Park

Once Black & Veatch has received all of the suggested comments and changes, Black & Veatch will prepare and deliver the final version of the report to both Highland Park and University Park. Tentatively, four (4) printed copies of the final Needs Assessment Report will be provided along with an electronic copy to both Highland Park and University Park.

2.1.11 Task 9 – Presentations to Highland Park & University Park

Once the report has been finalized, Black & Veatch will prepare a PowerPoint presentation for Highland Park Town Council and University Park City Council. These presentations will be similar to that presented in Task 7 but would also include collective changes made by the project team after its review and this version would be condensed for the Town and City Councils. Black & Veatch will make the presentation and address relevant questions that the Council or Town Management may have at the meeting.

Additional Cost to include University Park in Phase I of the project

BLACK & VEATCH TECHNICAL SERVICES CONTRACT				June 28, 2017
Phase I Needs Analysis Project				
City of University Park				
Phase I				
Direct Engineering Expenses	Hours	Rate	Subtotal	
Vice President General Manager	0	\$ 250.00	\$ -	
Director	0	\$ 200.00	\$ -	
Managing Consultant	192	\$ 185.00	\$ 35,520.00	
Senior Consultant	0	\$ 170.00	\$ -	
Administrative Assistant	0	\$ 70.00	\$ -	
Total			\$ 35,520.00	\$ 35,520.00
Travel and Per Diem Expenses				
		Rate	Subtotal	
0	Round Trip Airline Fares #1 @	\$ 480.00	\$ -	
0	Round Trip Airline Fares #2 @	\$ 400.00	\$ -	
0	Man Days per Diem @	\$ 170.00	\$ -	
0	Days Rental Vehicle @	\$ 120.00	\$ -	
840	Miles @	\$ 0.58	\$ 483.00	
Total			\$ 483.00	\$ 483.00
General and Administrative Fee				
		5%	\$ 24.15	\$ 24.15
Miscellaneous Expenses				
				\$ -
Total				\$ 36,027.15