Town Works Public Works Department - Work Order App

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152-126 Introduction to System Analysis
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February 8, 2026

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Introduction

The purpose of this feasibility study is to evaluate whether the proposed project should move forward to development. The system aims to digitize the process of sending work orders to the maintenance crews by replacing work requests with a mobile application. The application will allow crews to receive assignments, log completed repairs, and upload photos of their work. This report evaluates the project's feasibility from four perspectives: technical, operational, economic, and schedule.

Technical Feasibility

The proposed system requires two application interfaces: one for the department staff to create and manage work orders, and another for maintenance crews to receive assignments and upload the updates. Apps with multiple user interfaces are common across a variety of industries and existing development platforms support these types of features. This indicates that the services needed are widely available for implementation. The app will require external services for its creation. It must be built from scratch with the migration of existing work order files representing the greatest technical challenge. The difficulty of this task will depend on the number and condition of the existing records. Although IT staff already manage internal systems, additional training will be required to help staff support and maintain the app. Potential risks include application failures during early implementation and incorrect user input during the period of training. These risks can be mitigated by implementing the system alongside existing paper process during the initial deployment, allowing a fallback option in case an issue appears.
Feasibility: Technically feasible with training and phased rollout.

Operational Feasibility

The system can replace paper work orders after an initial test period, allowing users to get acquainted with the application. As a daily work tool, the system will simplify reporting work and reviewing tasks for crews. Digital work orders will significantly reduce the time spent sending and receiving assignments, enhancing productivity, and management. Maintenance crews will require training, but the adoption is expected to be high due to the user-friendly interface and use of familiar mobile devices. The department staff will replicate their current paper work within the application, which should be manageable due to the system's similarity to existing processes. Operational risks include resistance to change or inconsistent system use. The

risks can be mitigated by providing extended training to supervisors, enabling them to help crew members and encouraging them to consistently use the application.

Feasibility: Operationally feasible, adoption expected to be high.

Economic Feasibility

Although the project requires development, training, and maintenance costs, it is feasible because of the long-term benefits, such as improved service quality and increased productivity, compensating for these expenses. Costs include development, training time, and ongoing maintenance. As a result, the system is expected to increase crew efficiency, reduce delays while assigning work, and improve daily output. After implementation, IT staff will manage updates and maintenance. The system will be scalable and can support city growth by allowing additional crews and work orders to be managed efficiently. These improvements can be reflected in residents' satisfaction through faster repairs and improved public infrastructure. To solve lower system usage than expected, user feedback should be collected to identify areas for improvement.

Feasibility: Economically feasible, benefits compensate costs. Especially when it comes to productivity.

Schedule Feasibility

The development time frame is realistic. The project timeline will depend on the time taken by the development process and implementation can be divided into phases to allow operations to continue while developing the app. The initial development should focus on the core features of the application such as work order submission, offline data synchronization, correct API communication, and photo uploads of finished work as evidence. Once these features are stable, additional enhancement can be added to improve user experience, which will lead to constant support. Potential delays may occur while proceeding with the data migration, but these can be minimized by organizing documentation and submitting work orders ahead of schedule completion times as an option to avoid lack of assignments to work with.

Feasibility: Schedule feasible, with some risk from data migration.

Recommendations – Revise

Overall, this application is technically feasible and offers significant operational and economic benefits. However, there are some challenges such as data migration, user adoption, and long-term maintenance that require further review. Further development will likely be

necessary to refine features and improve usability. For these reasons, it is recommended that the project **proceeds with revisions,** allowing costs, benefits, and implementation risks to be reconsidered before full development.