

**CITY OF VANCOUVER**



# **Records Management Needs Assessment FINAL REPORT**

**August 15, 2003**

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Ms. Susan Willmott  
City of Vancouver  
PO Box 1995  
Vancouver, WA 98668

Dear Susan:

PTI is pleased to present the final version of the Records Management Needs Assessment. This report presents the results of the needs assessment conducted from May 2003 through July 2003. It documents the City's key records management needs, and recommends an action plan for addressing these needs. This report also identifies software vendors whose solutions could potentially satisfy the City's requirements.

We have provided five hard copies, one electronic copy in PDF format, and electronic copies of the individual documents (MS Word and PowerPoint formats) that comprise the assessment.

Thank you once again for the hard work you and the team put into this assessment. It was a pleasure working with you.

Sincerely,

Dan Borgen  
Co-CEO  
Pacific Technologies, Inc.

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# RECORDS MANAGEMENT NEEDS ASSESSMENT

In May of 2003, the City of Vancouver's Development Review Services (DRS) Department engaged Pacific Technologies, Inc. (PTI) to assess the Department's needs with respect to records and document management.

## Overview

The effort centered on identifying strengths and limitations of current systems and processes, understanding existing document management processes, and defining critical requirements for future systems. This work also included input from stakeholders in other departments, as the Department acknowledged that City-wide needs are a critical input into consideration of future improvements.

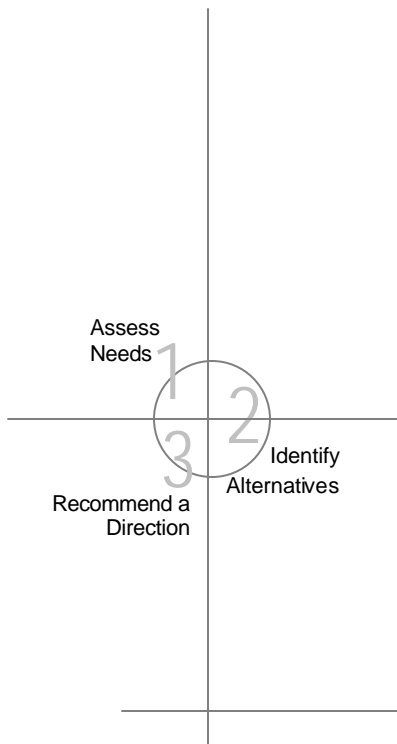
DRS' desired outcome for this project was a recommended course of action for addressing the shortcomings of current records management/document management automation. This report presents PTI's recommendations.

PTI supported the effort through interviews, focus groups, and workshops involving over 20 City stakeholders. (For detailed notes on the output from these efforts, see Appendix A and Appendix B.) Notably, PTI's work involved direct collaboration with the Records Management Sponsor Team, a group that includes DRS senior management, representatives from multiple DRS functional areas, the City IT manager, the City Media Services manager, and the Citywide Records Manager. Additionally, PTI researched the vendor marketplace for records management/document management systems.

This report documents DRS and City documentation records management needs, and recommends an action plan for addressing these needs. We have organized it as follows:

- A. Statement of Need
- B. Market Overview
- C. Alternatives
- D. Recommendations
- E. Next Steps
- F. Appendix A: Focus Group Notes
- G. Appendix B: Document Management Process Workshop Notes
- H. Appendix C: Functional Requirements
- I. Appendix D: Project Participants
- J. Appendix E: Vendor Overview

**Conclusion: PTI recommends that the City of Vancouver pursue a formal procurement process for a new records management system for DRS. This system must meet established key requirements and be capable of serving other departments in the future.**



# [ DRS Statement of Need ]

## RECORDS MANAGEMENT NEEDS ASSESSMENT

Several key issues emerged from PTI's interviews and focus groups. These include:

- ◆ **Critical records cannot efficiently or consistently be found:**
  - Records exist in multiple formats, systems and locations
  - No standardized check-out system exists
- ◆ **Customer service sometimes suffers as records requestors must be sent from one department to another**
- ◆ **Records management procedures are not standardized; teams and individuals do not adhere to consistent and agreed-upon policies**
- ◆ **With approximately 220,000 pieces of paper generated each year, including 'rolled' plans, physical storage space is running out. Potential impacts include:**
  - Increased frequency of losing records during relocation — and the potential for legal liabilities
  - Fragmentation of the records inventory, exacerbating inefficiencies and further impacting customer service

# Key Requirements

## RECORDS MANAGEMENT NEEDS ASSESSMENT

Stakeholders articulated dozens of functional requirements for new records management systems. Key mandatory requirements include:

- ◆ Ability to capture and store paper documents from e-size images (ideally up to 36" x 42") to sticky-notes
- ◆ Ability to store and view electronic documents in multiple native formats, including PDF, TIFF, Word, Excel, AutoCAD, and JPG
- ◆ Ability to interface or integrate with Tidemark, but not at the exclusion of integration with other City information systems or future permit management systems
- ◆ Allows multiple forms of indexing, including address, parcel number, project name, project number, dates and document type
- ◆ Allows a records search using multiple criteria at once
- ◆ Manages check-in, check-out and simultaneous use of electronic documents
- ◆ Supports Internet/intranet access with appropriate security

Refer to Appendix C for a complete list of mandatory, desirable and optional system requirements.

# Market Overview

## RECORDS MANAGEMENT NEEDS ASSESSMENT

PTI performed market research to identify potential providers of records management solutions. The following are established vendors who have provided systems to the public sector:

- ◆ Documentum, Inc.
- ◆ Optika, Inc.
- ◆ Filenet Corporation\*
- ◆ DMC Inc./Questys\*
- ◆ Zasio Enterprises, Inc.
- ◆ Novasoft/C-Image
- ◆ 170 Systems
- ◆ Legato
- ◆ Network One (Application Service Provider and Authorized Reseller of Filenet and Legato)

### Notes:

\*Both Filenet and Questys have been previously integrated with the City's permit management system, Tidemark Permit\*Plus.

Please see Appendix E for additional vendor information and preliminary cost estimates.

# Alternatives

## RECORDS MANAGEMENT NEEDS ASSESSMENT

To address the needs identified, PTI defined several alternatives for addressing the City's records management needs. These included:

- ◆ **Alternative A: Expand Use of Network One**
- ◆ **Alternative B: Pursue Sole Source Procurement with a Software Vendor**
- ◆ **Alternative C: Pursue Formal Procurement Process**
- ◆ **Alternative D: Pursue Abbreviated Procurement Process**
- ◆ **Alternative E: Do Nothing**

The pages that follow further define and discuss pros and cons of each alternative.

# Alternative A: Expand Use of Network One

## RECORDS MANAGEMENT NEEDS ASSESSMENT

**Description: Expand the contract with Network One to address DRS' critical records management requirements.**

### ***Pros:***

- ◆ As a current service provider, Network One may be especially motivated to succeed
- ◆ A known commodity
- ◆ Minimizes procurement costs
- ◆ The potential advantages of outsourcing apply

### ***Cons:***

- ◆ May not meet all of the City's mandatory (or even desirable) requirements
- ◆ The City may have less direct control over the solution and service levels
- ◆ Documents are likely kept offsite
- ◆ Outsourcing contracts are usually complex and tend to increase in cost over time

# Alternative B: Pursue Sole Source Procurement

## RECORDS MANAGEMENT NEEDS ASSESSMENT

**Description: Enter into a contract with the vendor most capable of meeting DRS' requirements, as determined by PTI's market research analysis.**

### *Pros:*

- ◆ Relative to the outsourced Network One alternative, offers more control over the solution and service levels
- ◆ Minimizes procurement cost and time

### *Cons:*

- ◆ May be difficult to justify within sole-source guidelines
- ◆ Relative to competitive procurement approaches, increases risk of sub-optimal choice in terms of cost and service
- ◆ Staff may feel disenfranchised by not being directly involved in selection
- ◆ No opportunity to “kick the tires”
- ◆ Increased potential that needs of non-DRS departments go unmet
- ◆ Increased risk of vendor protest
- ◆ Requires change to an unknown commodity

# Alternative C: Pursue Formal Procurement Process

## RECORDS MANAGEMENT NEEDS ASSESSMENT

**Description: Publish an RFP to procure an off-the-shelf or outsourced solution.**

### ***Pros:***

- ◆ Relative to sole-source approach, greater chance of optimal solution in terms of cost and service
- ◆ Relative to Network One alternative, offers more control over the solution and service levels
- ◆ Offers opportunity for greater staff involvement
- ◆ Lower potential that needs of non-DRS departments go unmet
- ◆ Low risk of vendor protest

### ***Cons:***

- ◆ Requires change to an unknown commodity
- ◆ Relatively high procurement costs and time

# Alternative D: Pursue Abbreviated Procurement Process

## RECORDS MANAGEMENT NEEDS ASSESSMENT

**Description:** Invite a short-listed set of vendors to demonstrate their solutions and enter into a contract with the highest scorer.

### *Pros:*

- ◆ Relative to sole-source approach, greater chance of optimal solution in terms of cost and service
- ◆ Relative to Network One alternative, offers more control over the solution and service levels
- ◆ Offers opportunity for greater staff involvement
- ◆ Potentially represents balance of due diligence and expedited procurement

### *Cons:*

- ◆ Requires change to an unknown commodity
- ◆ Increased risk of vendor protest
- ◆ May be difficult to justify within City's procurement guidelines

# Alternative E: Do Nothing

## RECORDS MANAGEMENT NEEDS ASSESSMENT

**Description: Continue to use existing document management/records management solutions and do not procure new systems.**

***Pros:***

- ◆ “Business as usual” — will not stress the organization with change
- ◆ Minimizes short-term costs

***Cons:***

- ◆ “Business as usual”
- ◆ Does not address City’s critical document management/records management needs

# Recommendations

## RECORDS MANAGEMENT NEEDS ASSESSMENT

A review of the preceding alternatives with the Sponsor Team led to consensus that **Alternative C — pursuit of a formal procurement process — is the best course of action. Reasons include:**

- ◆ **A formal procurement process allows significant stakeholder participation in selection and would invite a thorough head-to-head comparison of records management solutions**
- ◆ **Pursuit of an abbreviated procurement process would violate the City's procurement policies**
- ◆ **Sole sourcing to a software vendor or via expansion of Network One's services would exceed the City's \$35,000 threshold for sole-source procurements**
- ◆ **The 'Do Nothing' alternative is not truly an option, as current records management systems are not meeting critical business needs**

# Recommendations

## RECORDS MANAGEMENT NEEDS ASSESSMENT

PTI further recommends that DRS formally decide prior to drafting a Request for Proposals whether or not to allow responses from application service providers (ASPs) or only proposals for commercial, off-the-shelf systems. Pros and cons of a 'dual-purpose' RFP include:

### *Pros:*

- ◆ A dual-purpose RFP potentially increases the overall number of solutions from which to choose
- ◆ The City's current ASP for records management — Network One — would be allowed to propose an expanded ASP solution

### *Cons:*

- ◆ The RFP is more complex; some forms and questions must be duplicated, and others must be specifically tailored for two different types of responses
- ◆ Proposals are more difficult to compare on an apples-to-apples basis
- ◆ The ASP model is relatively unproven for records management; Vancouver is the only major municipality\* in Washington or Oregon that currently uses an ASP for records management

\*Municipality of population greater than 90,000

# Recommendations

## RECORDS MANAGEMENT NEEDS ASSESSMENT

To promote the success of records management at DRS and the City at-large, PTI recommends the following:

- ◆ **Establish a records management policy team responsible for setting records management standards for the City**
- ◆ **Consider funding a position dedicated to records management within DRS. Responsibilities would include:**
  - Maintaining an up-to-date inventory of paper records and their physical location
  - Monitoring compliance to records management standards
  - Becoming an 'expert user' of the new records management systems

## Next Steps

### RECORDS MANAGEMENT NEEDS ASSESSMENT

#### DRS' next steps include:

- ◆ Obtain budget appropriation to procure a solution
- ◆ Formalize the decision to draft a single-purpose RFP or a dual-purpose RFP addressing both procured and outsourced (i.e., ASP) solutions
- ◆ Establish a project governance plan for the procurement process
- ◆ Develop requirements for vendor qualifications, software implementation, software maintenance, etc.
- ◆ Define evaluation criteria and an evaluation process
- ◆ Draft the RFP
- ◆ Evaluate proposals
- ◆ Identify finalists
- ◆ Conduct vendor demos
- ◆ Choose a vendor

**RECORDS  
 MANAGEMENT  
 NEEDS  
 ASSESSMENT**

Appendix A: Focus  
 Group Notes

This appendix presents the transcribed notes from the focus groups conducted at the beginning of the project.

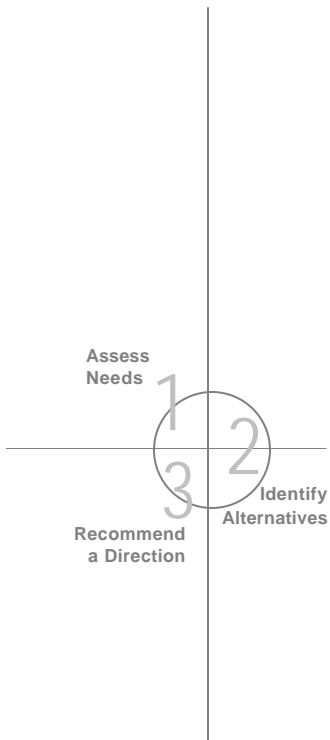
**FOCUS GROUP NOTES – BUILDING PERMIT SPECIALISTS, PLANS EXAMINERS, BUILDING INSPECTORS, AND CODE ENFORCEMENT**

**STRENGTHS**

- ◆ Cross-referencing works okay in Tidemark
- ◆ Categorization and assignment of project ID works well
- ◆ Ability to ID cases by various indexes works well
- ◆ People and institutional knowledge of what records exist
- ◆ Basement clean-up and integration with County files has helped - almost all archived paper is in place
- ◆ Standardization with County has helped
- ◆ Imaged archives available via Internet is a big help

**ISSUES**

- ◆ Multiple formats in multiple systems in multiple locations:
  - Have to know which system your project is in to find it
  - Some projects are spread across multiple systems
  - Some important history is missing:
    - When original fiche was scanned, not all data was captured
    - At different times, different standards were used for what to capture
    - Today, quality of history is inconsistent
- ◆ Conversion of Canofile to on-line system had tech problems – some documents got compressed and are difficult to read
- ◆ Historical problems with indexing have made document retrieval very difficult
- ◆ County records for annexed areas cause problems:
  - Some have not been incorporated into the City’s system – this is in process
  - Records organized differently
  - Didn’t provide all the files – City staff still have to go to County for research
- ◆ Policy and procedures not broadly established– teams and individuals do things differently
- ◆ Policy and procedures not well documented
- ◆ No check-out system – particularly a problem for rolled plans
- ◆ Where check-out systems exist they are not consistently followed
- ◆ Storage for approved rolled plans is not well organized
- ◆ Lots of email sent looking for things
- ◆ Difficult to enforce confidentiality requirements – entire files are locked up and can be difficult to get to
- ◆ Lots of history is missing from Tidemark – it just points you to microfilm
- ◆ Label inconsistency (property, address, and parcel)



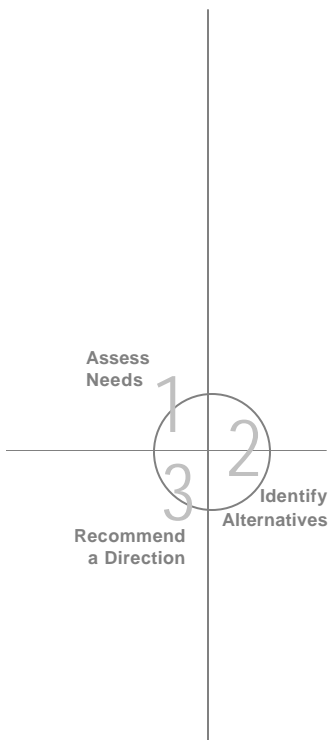
**RECORDS  
 MANAGEMENT  
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 ASSESSMENT**

Appendix A: Focus  
 Group Notes

- ◆ Physical filing by address can be cumbersome
- ◆ Shortage of personnel for scanning/managing documents
- ◆ No gatekeeper/checkout for records

**REQUIREMENTS**

- ◆ System should be “self service” for external stakeholders, e.g., can search for documents online (or by PC at City facility) by address
- ◆ Ability to search and retrieve by multiple indexes (up to 10 at least)
- ◆ Ability to attach documents of all sizes and shapes (including “scraps of paper”) for storage in a single virtual location
- ◆ Ability to instantly retrieve documents/files in event of a disaster
- ◆ System can be backed up in a timely manner at a “hot site”
- ◆ Need to have enough physical space
- ◆ Ability to tie correspondence with a parcel
- ◆ Ability to support digital signature
- ◆ Ability to search on address ranges
- ◆ Ability to have date be a search criterion
- ◆ Ability to search on multiple criteria at once
- ◆ Ability to perform text searches on archived files (and existing archived files)
- ◆ Ability to electronically annotate documents/records
- ◆ Ability to quickly scan poor quality originals and obtain legible results
- ◆ Ability to generate an audit trail for annotations and search on author/time/date
- ◆ Ability to integrate with Tidemark, but not at the exclusion of integration with other permit management systems
- ◆ Ability to support “redaction” of name, address
- ◆ Supports electronic routing of documents
- ◆ Ability to store/retrieve rolled plans electronically
- ◆ Ability to generate every week a list of documents that can be legally destroyed
- ◆ Ability to open an electronic case at the onset of a case (so the electronic file can be generated as you go)
- ◆ UI and usability consistent with current Web applications (shouldn’t be a significant learning curve)
- ◆ Supports bar-code based check-out of files



**FOCUS GROUP NOTES – ZONING PLANNERS, LAND USE PLANNERS, AND ENGINEERS**

**RECORDS  
 MANAGEMENT  
 NEEDS  
 ASSESSMENT**

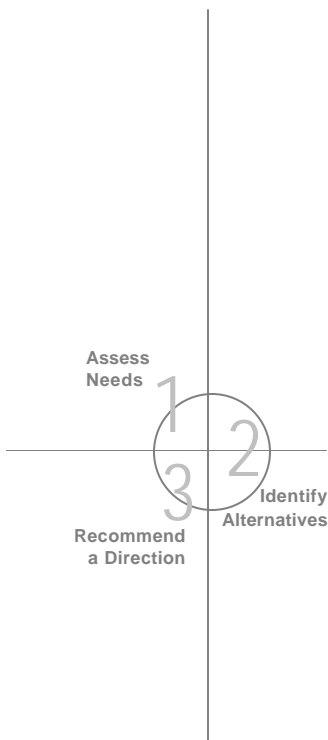
Appendix A: Focus  
 Group Notes

**STRENGTHS**

- ◆ Tidemark works well for:
  - Plan review
  - Who has what (activities menu)
  - Tracking
  - Tie in to County GIS
- ◆ All as-builts have been scanned
- ◆ Utilized for history
- ◆ Good system in place for planning
- ◆ Folders
- ◆ Sub-folder
- ◆ For any sent items, letters distributed, etc.
- ◆ All hard-copy planning files are located in one building
- ◆ All construction services working files become archive files (complete since '86) – all indexed via Access database (construction tracking system)
- ◆ No centralized indexing system
- ◆ All parts of engineering file kept in one location (hard copy)
- ◆ County GIS helpful for:
  - Property ownership
  - Easement research
  - Counter planners

**ISSUES**

- ◆ Groups don't know what each other have, where to find things
- ◆ Unclear, inconsistent policies regarding:
  - Record ownership
  - Location
  - Search criteria/access
- ◆ Redundant storage of records/documents:
  - As-builts
  - Plan sets
- ◆ Redundant copies hold different annotations
- ◆ Running out of space
- ◆ Inconsistent configuration for viewing/printing documents
- ◆ Have to hand photocopy plan sets today to provide to customers on request



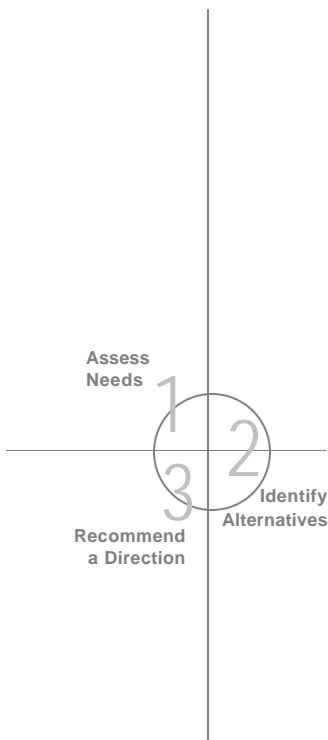
**RECORDS  
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 ASSESSMENT**

Appendix A: Focus  
 Group Notes

- ◆ No access to RJN (maintenance management/inventory system) for data like:
  - Manhole excavation
  - Utility information
- ◆ Rely on institutional knowledge (i.e., who you know) to get the information you need; will become worse as people retire
- ◆ Developers agreements are hard to keep track of, resulting in:
  - Outstanding liability issues
  - Sizing issues
  - Expenditure and expire
- ◆ Multiple identifying schemes have complicated retrieval of documents/records
- ◆ No certainty that public information requests are being fully met
- ◆ Impact on customer service – as requestors are sent from one department to another
- ◆ All security intervention must be handled manually – possibility, too, that people can “walk off” with fiche
- ◆ Lack of direction for use of Internet regarding records and document management

**REQUIREMENTS**

- ◆ Capture all documents from e-size images to post-its and electronic documents: Word, Excel, AutoCad, JPEG, etc.
- ◆ Supports work flow for particular document types (e.g., approved plans)
- ◆ Integrates with Tidemark and GIS (provides documents based on map coordinates) and potentially RJN
- ◆ Indexes by:
  - Address
  - Project #
  - Parcel #
  - Project Name #
  - Subdivision
  - Contractor
  - Developer
  - Inspector
  - Date built
  - Work order #
  - City project #
- ◆ Fuzzy search:
  - Wild cards
  - Ranges based on index criteria
  - Soundex
  - Can ignore address prefixes/suffixes, etc.
- ◆ Capable of enforcing data entry standards based on document type
- ◆ Provides validation edits for key fields
- ◆ Capable of serving as a central index for City-wide documents



**RECORDS  
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Appendix A: Focus  
 Group Notes

- ◆ Supports Internet/intranet access with appropriate security
- ◆ Supports text search
- ◆ Helps manage documents retention cycle
- ◆ Must scan small format duplex documents
- ◆ Allows annotation with audit trails
- ◆ Capable of enforcing document ID schemes/standards
- ◆ Vision:
  - Distinguish between work process uses and archive. Work processes will be difficult to change. More comfort with small format documents in work processes.
  - Archiving:
    - Scan from today forward, high-level index history
    - City-established minimum for scanning history, departments can do more if they want
  - Many areas not ready for or comfortable with front-end integration right away – perhaps consider a pilot project
  - As an adjunct to a limited document management solution, create a City-wide index

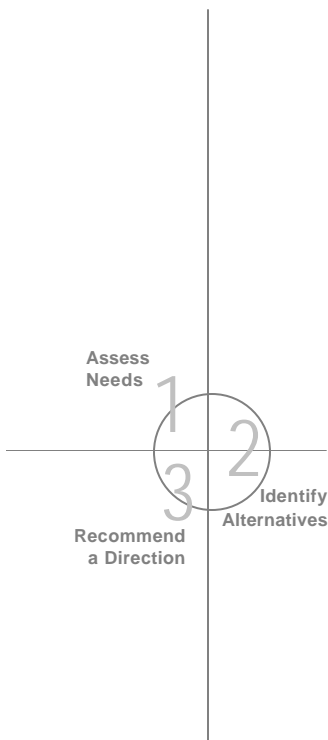
**FOCUS GROUP NOTES: SUPERVISORS, CITY-WIDE RECORDS COORDINATORS, TRANSPORTATION, CONSTRUCTION AND IT PROGRAM COORDINATORS**

**STRENGTHS**

- ◆ Network online document center:
  - Documents are easy to retrieve
  - Useful indexes (address, permit type, permit number)
- ◆ Physical location – centralizing them in the past year
- ◆ People who work with engineering records are familiar with what’s there and what isn’t
- ◆ Permit team is experienced and knows how to track down what files are where and where histories are
- ◆ City is ready to take RM to the next level
- ◆ Rae is one-person in charge of central records
- ◆ IT supports RM and automating RM
- ◆ Strong relationship with the State
- ◆ State is now acknowledging electronic images as acceptable storage within retention schedules
- ◆ Building records files are appropriately purged as soon as possible
- ◆ Building inspection has a documented procedure for what records to retain/dispose

**ISSUES**

- ◆ Locating civil records more than 20 years old
- ◆ Locating land use records more than 5 years old
- ◆ As of Canofile era, there was a loss of standardized record-keeping



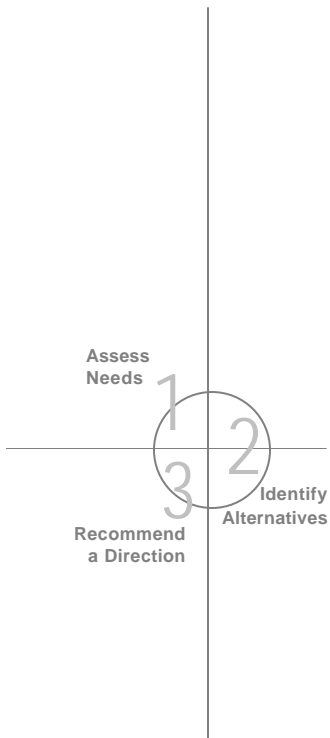
**RECORDS  
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Appendix A: Focus  
 Group Notes

- ◆ Lack of physical storage space... may only have 2 years left before leasing additional space or expanding into other City facilities
- ◆ Records filing and maintenance was historically an after-the-fact exercise
- ◆ When records are physically moved, things get lost (complicated also by a lack of standard processes/procedures – potential of liability issues)
- ◆ Short-term storage of building inspections records is running out... may have less than a year left
- ◆ Not a common and consistent policy for closing out cases
- ◆ Network One is potentially expensive if City's needs expand
- ◆ Only certain departments have access to certain information
- ◆ Lack of dedicated staff resources for records management, and for implementing RM system
- ◆ Network One isn't linked with Tidemark
- ◆ No department-wide RM policies/procedures
- ◆ Current plans/records are subject to being lost/misplaced
- ◆ Takes days, sometimes, to fulfill public disclosure requests
- ◆ City isn't quite as ready to handle apparent increase in public disclosure requests
- ◆ Takes a long time for internal staff to track down records related to previous use
- ◆ Difficult to produce histories of emails on projects... no policy or process for how or where to retain emails
- ◆ Lack of indexed records historically
- ◆ Projects names change over time and aren't always cross-referenced; makes locating records difficult
- ◆ Each group doing its own thing with respect to storage/retrieval
- ◆ May need to look at what's required of customers and simplifying it (could save time, money and space for the City)

**REQUIREMENTS**

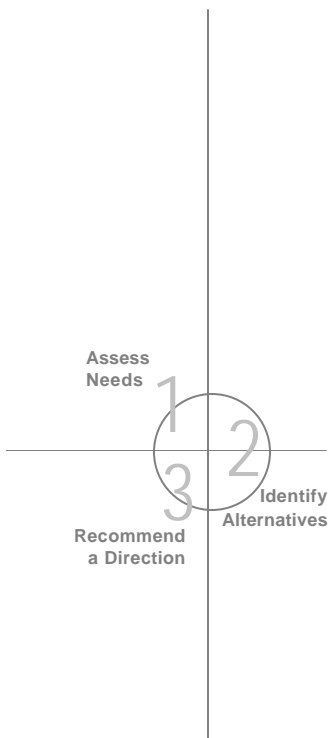
- ◆ Capture all records and correspondence associated both with cases and general DRS matters
- ◆ Variety of indexing/search options:
  - Address
  - Parcel #
  - Permit #/Case #
  - Permit type
  - Names
  - Role (e.g., owner, applicant, etc.)
  - Project name
  - Dates
  - Audit information (e.g., person who scanned)
- ◆ Easy to use
- ◆ Everything available on the desktop– all history is in the system
- ◆ Needs to meet State-mandated requirements so paper can be eliminated



**RECORDS  
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Appendix A: Focus  
 Group Notes

- ◆ Needs to integrate with Tidemark
- ◆ Supports work flow in areas that are not covered by Tidemark
- ◆ Supports retention management for paper and electronic documents
- ◆ Tracks check-in and check-out of paper documents
- ◆ Manages check-in/out and simultaneous use of electronic documents
- ◆ Routes documents for standardized work processes might not need electronic routing of plans
- ◆ Web interface and public access with security
- ◆ Group and user level security for documents
- ◆ Role-based security
- ◆ Redaction capabilities
- ◆ Supports document annotation, red-lining, sticky notes, with audit trails
- ◆ Provides viewer for:
  - Word
  - DWG
  - DXF
  - PDF
  - TIFF
  - Microsoft Office (i.e., Excel, Word, etc.)
- ◆ Supports/enforces standards and work processes
- ◆ Supports text search
- ◆ Need OCR capability
- ◆ Ability to scan poor quality originals
- ◆ Tech requirements:
  - Preference for Microsoft (Windows OS) and SQL Server DBMS
  - HP/Unix/Oracle less desirable
  - SAN compatible
- ◆ Vision:
  - Near term focus on back-end (5 years of history would be minimal) records management, history conversion, archiving
  - Longer term – revamp work flows from the front end



This appendix presents transcribed notes from workshops that documented existing document management processes within DRS.

## OPPORTUNITIES FOR BUSINESS PROCESS IMPROVEMENT

### RECORDS MANAGEMENT NEEDS ASSESSMENT

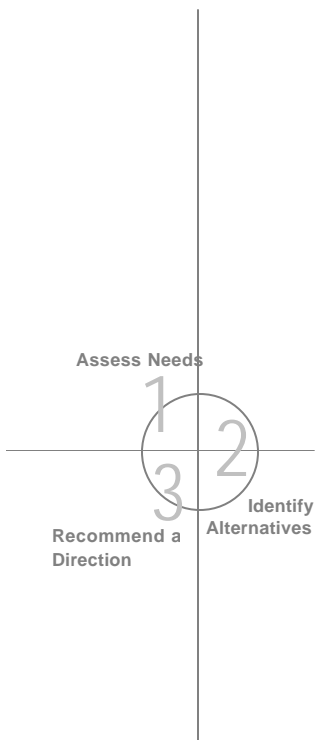
Appendix B:  
 Document  
 Management  
 Process Workshop  
 Notes

### BUILDING

- ◆ Move away from hard copy signature toward electronic approval/e-signature – this will reduce:
  - Need for additional hard copies
  - Need for filing
  - Need for space
  - Processing time
- ◆ Reduce reliance on different hard copy filing mechanisms – utilize a central electronic repository for:
  - Permits
  - Letters
  - Certificates of occupancy
  - Correction notices
- ◆ Scan plans to reduce storage requirements and provide alternative/back-up access mechanisms
- ◆ Make documents accessible via the Web to improve customer service

### PLANNING

- ◆ Make plans accessible via the Web to enhance customer service
- ◆ Scan hard copy with signature – reduce archival space requirements
- ◆ General comment – develop DRS-wide policies for:
  - What gets scanned and when
  - How long to retain
  - What gets retained
  - Purge procedures
  - Location
  - Legal requirements
  - Coordination with central records
  - Individual areas of responsibilities
  - Standard sizing



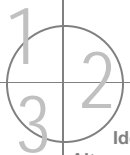
**DOCUMENTS**

**RECORDS  
 MANAGEMENT  
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 ASSESSMENT**

Appendix B:  
 Document  
 Management  
 Process Workshop  
 Notes

|                                     | <b>Building</b> | <b>Planning</b> | <b>Engineering</b> | <b>Administration</b> | <b>Code Enforcement</b> |
|-------------------------------------|-----------------|-----------------|--------------------|-----------------------|-------------------------|
| Permit (file)                       | ✓               | ✓               | ✓                  |                       |                         |
| Correction notice                   | ✓               |                 |                    |                       |                         |
| Building plan                       | ✓               |                 |                    |                       |                         |
| Engineering plan                    |                 |                 | ✓                  |                       |                         |
| Staff report                        |                 | ✓               |                    |                       | ✓                       |
| Site plan                           | ✓               | ✓               |                    |                       |                         |
| Certificate of occupancy            | ✓               |                 |                    |                       |                         |
| Engineering recordable document     |                 |                 | ✓                  |                       |                         |
| Sub-division PLAT                   |                 | ✓               |                    |                       |                         |
| Short PLAT                          |                 | ✓               |                    |                       |                         |
| Final inspection report             | ✓               |                 |                    |                       |                         |
| Plans examiners document            | ✓               |                 |                    |                       |                         |
| Water and sewer connection document |                 |                 | ✓                  |                       |                         |
| Citation – tags & stop work order   | ✓               |                 |                    |                       | ✓                       |
| Application                         | ✓               | ✓               | ✓                  |                       |                         |
| Correspondence                      | ✓               | ✓               | ✓                  | ✓                     | ✓                       |
| Public notice                       |                 | ✓               |                    |                       | ✓                       |
| Financial record                    |                 |                 | ✓                  | ✓                     | ✓                       |
| Photos                              |                 | ✓               |                    |                       | ✓                       |
| Videotape                           |                 | ✓               |                    |                       | ✓                       |
| Certificate of concurrency          |                 | ✓               | ✓                  |                       |                         |

Assess Needs



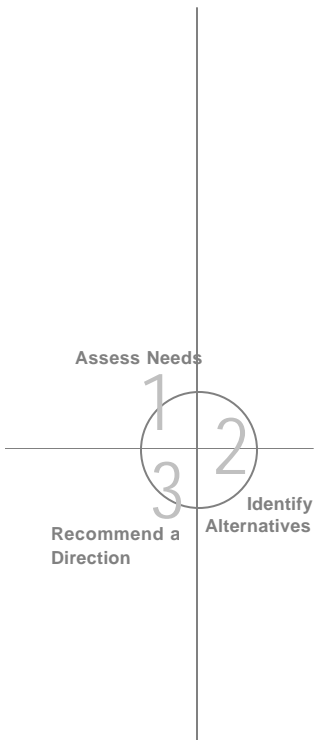
Identify Alternatives

Recommend a Direction

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Appendix B:  
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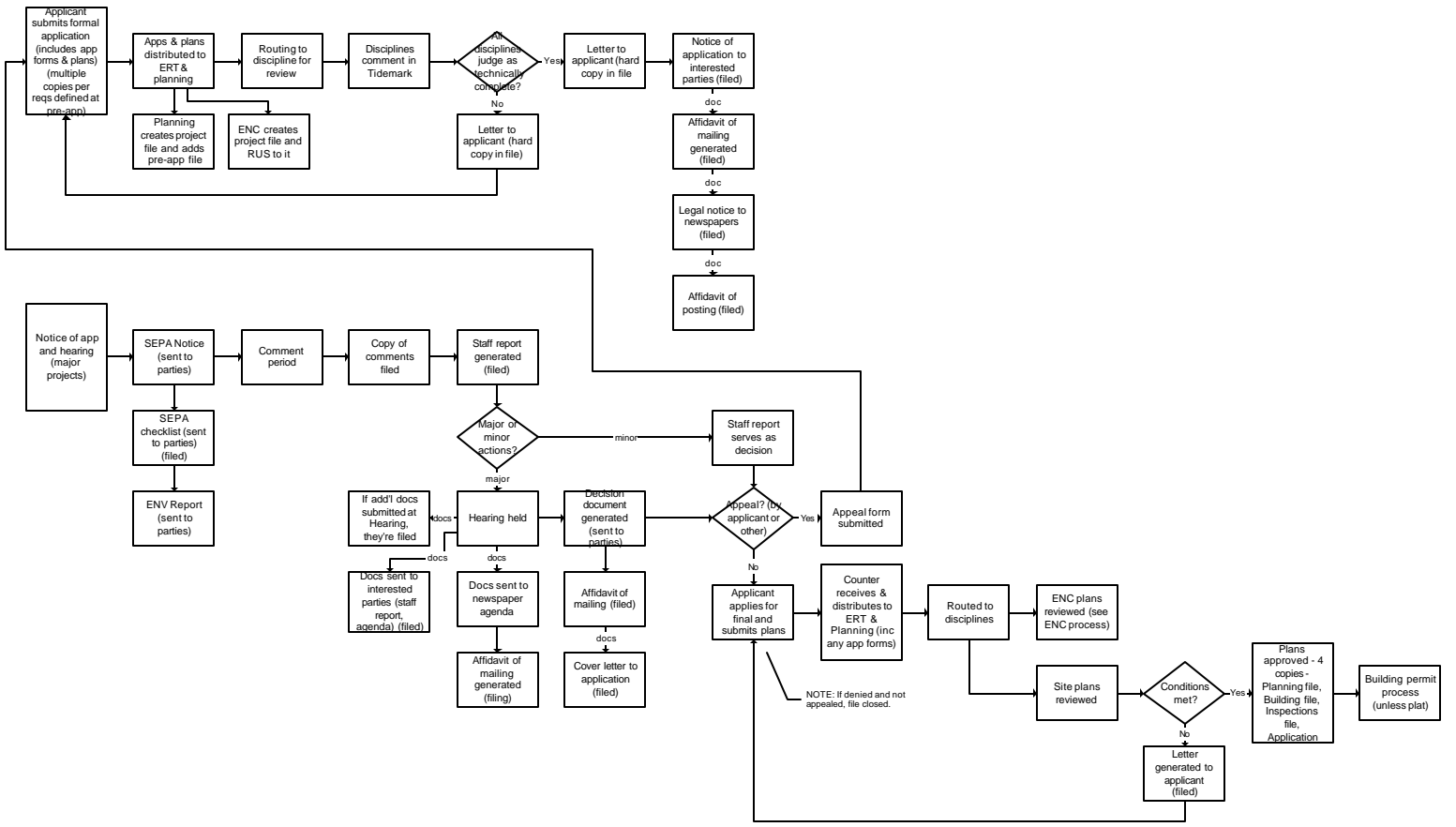
|                                  | Building | Planning | Engineering | Administration | Code Enforcement |
|----------------------------------|----------|----------|-------------|----------------|------------------|
| Engineering (file)               |          |          | ✓           |                |                  |
| Hearing decision                 |          | ✓        |             |                | ✓                |
| Resolution                       |          | ✓        | ✓           |                |                  |
| Ordinance                        |          | ✓        | ✓           |                |                  |
| Administration (file)            |          |          |             | ✓              |                  |
| Notice and orders                |          |          |             |                | ✓                |
| Tow hearings                     |          |          |             |                | ✓                |
| Impound and vehicle registration |          |          |             |                | ✓                |
| Criminal documents               |          |          |             |                | ✓                |



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Appendix B:  
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**SITE PLAN**



Assess Needs



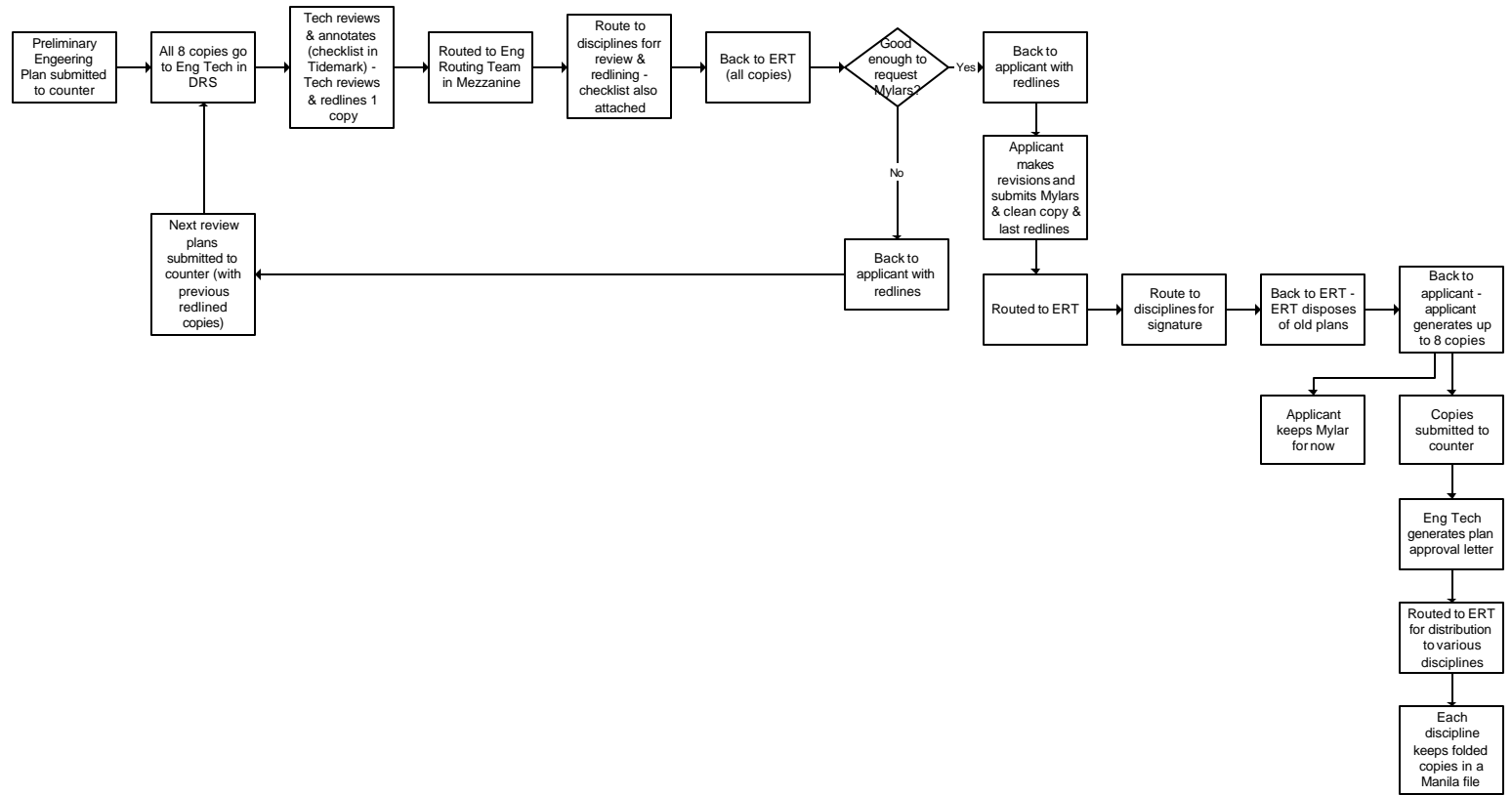
Recommend a Direction

Identify Alternatives

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**ENGINEERING**



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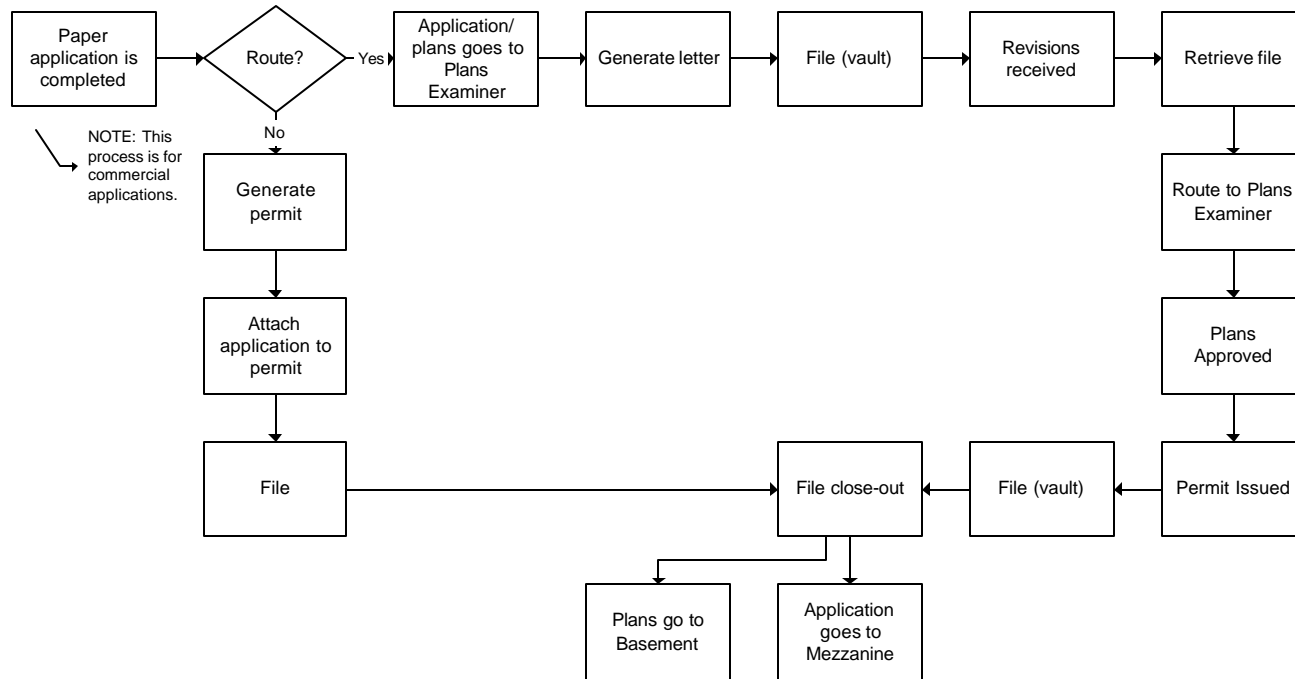


Recommend a  
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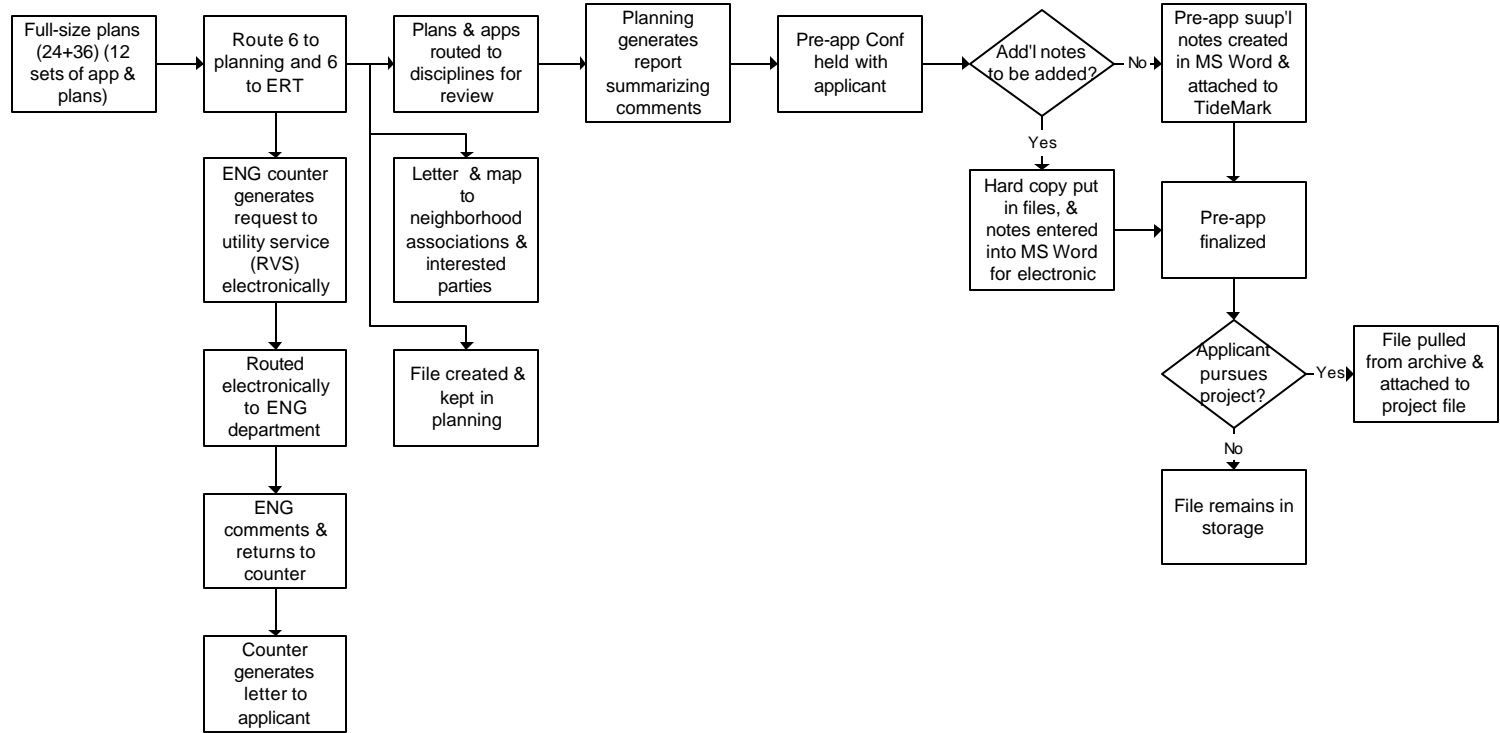
Identify Alternatives

Recommend a Direction

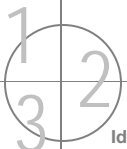
**PLANNING / PRE-APPROVAL**

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This appendix presents the final list of mandatory, desirable and optional functional requirements defined by City staff.

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Appendix C:  
 Functional  
 Requirements

| 1     | GENERAL REQUIREMENTS   | PRIORITY  |
|-------|--|-----------|
| 1.1   | Easy to use; user interface and usability consistent with current Web applications (shouldn't be a significant learning curve)                                   | Mandatory |
| 1.2   | Provides security by:  |           |
| 1.2.1 | • Group level  | Mandatory |
| 1.2.2 | • User level   | Mandatory |
| 1.2.3 | • Role   | Mandatory |
| 1.2.4 | • Document type  | Mandatory |
| 1.2.5 | • Organizational unit  | Mandatory |
| 1.3   | System prevents destruction of records by non-authorized personnel   | Mandatory |
| 1.4   | Ability to interface or integrate with Tidemark, but not at the exclusion of integration with other City information systems or future permit management systems | Mandatory |
| 1.5   | Integrates with GIS (provides documents based on map coordinates) and potentially RJN (maintenance management system)  | Desirable |
| 1.6   | Supports Internet/intranet access with appropriate security  | Mandatory |
| 1.8   | Needs to meet State-mandated requirements for replacing paper  | Mandatory |
| 1.9   | Supports the following technical requirements:   |           |
| 1.9.1 | • Microsoft (Windows OS) and SQL Server DBMS   | Desirable |
| 1.9.2 | • HP/Unix/Oracle less desirable  | Optional  |
| 1.9.3 | • SAN compatible   | Desirable |
| 1.10  | Ability to record an audit trail of activity in the system (e.g., person who scanned a particular document)  | Optional  |
| 2     | SCANNING/STORING REQUIREMENTS  | PRIORITY  |
| 2.1   | Ability to capture all records and correspondence associated both with cases and general DRS matters   | Mandatory |
| 2.2   | Ability to capture and store paper documents from e-size images (ideally up to 36" x 42") to sticky-notes  | Mandatory |
| 2.3   | Ability to store electronic documents in multiple native formats, including PDF, TIFF, Word, Excel, AutoCAD, and JPG   | Mandatory |
| 2.4   | Ability to open an electronic case at the onset of a project so that the electronic file can be generated as the project proceeds                                | Desirable |
| 2.5   | Ability to scan from multiple locations  | Mandatory |
| 2.6   | Ability to quickly scan poor quality originals and enhance legibility  | Desirable |
| 2.7   | Easily upgrades to newer scanning technologies without compromising document quality   | Mandatory |
| 2.8   | Ability to scan plans up to 100 pages  | Desirable |
| 2.9   | Provides auto-feed functionality for letter- and legal-sized documents   | Mandatory |
| 2.10  | Provides auto-feed functionality for non-standard documents of all sizes   | Desirable |

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Appendix C:  
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|          |  |                 |
|----------|--|-----------------|
| 2.11     | Ability to scan double-sided documents without manual intervention                               | Mandatory       |
| 2.12     | Supports OCR scanning  | Mandatory       |
| 2.13     | Ability to capture index information via the scanning process (assuming OCR capability)          | Mandatory       |
| 2.14     | Supports digital signatures  | Desirable       |
| <b>3</b> | <b>INDEXING REQUIREMENTS</b>   | <b>PRIORITY</b> |
| 3.1      | Indexes by:  |                 |
| 3.1.1    | • Address  | Mandatory       |
| 3.1.2    | • Project #  | Mandatory       |
| 3.1.3    | • Parcel #   | Mandatory       |
| 3.1.4    | • Project name   | Mandatory       |
| 3.1.5    | • Permit #/Case #  | Mandatory       |
| 3.1.6    | • Work order #   | Optional        |
| 3.1.7    | • Subdivision name   | Desirable       |
| 3.1.8    | • Contractor   | Optional        |
| 3.1.9    | • Developer  | Optional        |
| 3.1.10   | • Inspector  | Optional        |
| 3.1.11   | • Role (e.g., property owner, applicant, etc.)   | Desirable       |
| 3.1.12   | • Dates (e.g., date received, date approved, date built)   | Desirable       |
| 3.1.13   | • Document type (e.g., electrical permit, plan, certificate of occupancy, etc.)                  | Desirable       |
| 3.1.14   | • Document format (e.g., JPG, DWG, Word, etc.)   | Desirable       |
| 3.2      | Ability to index the physical location of hard copy files  | Desirable       |
| 3.3      | Capable of enforcing document ID schemes/standards through data entry validation                 | Mandatory       |
| <b>4</b> | <b>ROUTING/DISTRIBUTION REQUIREMENTS</b>   | <b>PRIORITY</b> |
| 4.1      | Supports electronic routing of documents   | Desirable       |
| 4.2      | Supports work flow for particular document types (e.g., approved plans)                          | Desirable       |
| 4.3      | Supports work flow in areas that are not covered by Tidemark                                     | Desirable       |
| 4.4      | Routes documents for standardized work processes that might not need electronic routing of plans | Desirable       |
| 4.5      | Supports/enforces standards and work processes   | Desirable       |
| 4.6      | Provides email link to scanned documents for distribution purposes                               | Mandatory       |
| 4.7      | For security purposes, ability to block specific documents from being copied or distributed      | Mandatory       |
| <b>5</b> | <b>RETRIEVAL REQUIREMENTS</b>  | <b>PRIORITY</b> |
| 5.1      | Ability to view all documents retrieved from any networked PC                                    | Mandatory       |
| 5.2      | Ability to perform text searches on active files   | Desirable       |
| 5.3      | Ability to perform text searches on archived files (i.e., not active)                            | Desirable       |
| 5.4      | Ability to search on all indexes (up to 10 at least), and search on multiple criteria at once    | Mandatory       |

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Appendix C:  
 Functional  
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|          |   |                 |
|----------|---|-----------------|
| 5.5      | Supports “fuzzy” searches:  |                 |
| 5.5.1    | • Wild cards  | Mandatory       |
| 5.5.2    | • Ranges based on index criteria, including address ranges  | Mandatory       |
| 5.5.3    | • Soundex   | Desirable       |
| 5.5.4    | • Can ignore address prefixes/suffixes, etc.  | Mandatory       |
| 5.5.5    | • Provides flexible search capabilities (including AND, OR, ALL, NOT, etc.)   | Desirable       |
| 5.6      | Ability to retrieve documents in the same scale in which they were scanned/fiched   | Mandatory       |
| 5.7      | Ability to print/copy all documents retrieved in various sizes/formats  | Mandatory       |
| 5.8      | Block documents from retrieval based on security level  | Mandatory       |
| 5.9      | Provides viewer for:  | Mandatory       |
| 5.9.1    | • Word  | Mandatory       |
| 5.9.2    | • JPG   | Mandatory       |
| 5.9.3    | • DWG   | Mandatory       |
| 5.9.4    | • DXF   | Mandatory       |
| 5.9.5    | • PDF   | Mandatory       |
| 5.9.6    | • TIFF  | Mandatory       |
| 5.9.7    | • Microsoft Office (i.e., Excel, Word, etc.)  | Mandatory       |
| 5.10     | Provides zoom-in/zoom-out capability from 25% to 300%   | Mandatory       |
| 5.11     | Ability to support “redaction” of name, address   | Mandatory       |
| 5.12     | Supports bar-code based check-in and check-out of hard-copy documents   | Desirable       |
| 5.13     | Manages check-in, check-out and simultaneous use of electronic documents  | Mandatory       |
| 5.14     | System should be “self service” for external stakeholders, e.g., can search for documents online (or by PC at City facility) by address | Desirable       |
| <b>6</b> | <b>ANNOTATION REQUIREMENTS</b>  | <b>PRIORITY</b> |
| 6.1      | Supports electronic redlining of letter- or legal-sized documents   | Desirable       |
| 6.2      | Supports electronic redlining of e-sized documents (e.g., plans)  | Optional        |
| 6.3      | Ability to generate an audit trail for annotations and search on author/time/date of annotations  | Optional        |
| <b>7</b> | <b>ARCHIVAL REQUIREMENTS</b>  | <b>PRIORITY</b> |
| 7.1      | System can alert personnel when a document or file has been “active” for over <i>n</i> months   | Desirable       |
| 7.2      | System can alert personnel when it is time to send hard copy records to the State   | Desirable       |
| 7.3      | System automatically updates information on the location and archival status of records that were sent to the State                     | Desirable       |
| <b>8</b> | <b>PURGING/DESTRUCTION REQUIREMENTS</b>   | <b>PRIORITY</b> |
| 8.1      | Ability to track retention schedules of electronic and hard-copy documents  | Mandatory       |
| 8.2      | System can alert personnel when it is time to purge/destroy   | Mandatory       |

Assess  
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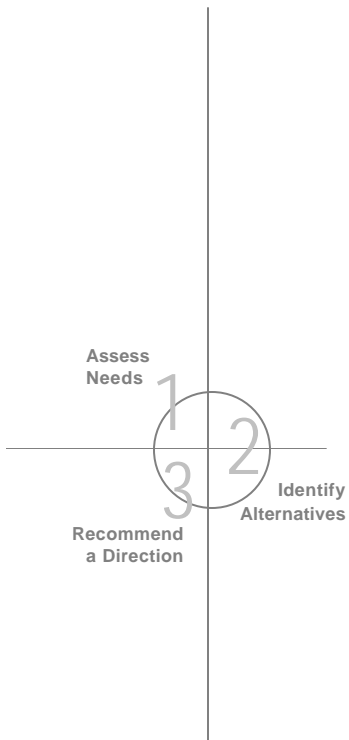
Identify  
Alternatives

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a Direction

|     |   |           |
|-----|---|-----------|
|     | records   |           |
| 8.3 | System can alert personnel when a document must be shredded and not just disposed | Desirable |
| 8.4 | Ability to generate printed form/report that lists files that are being destroyed | Desirable |

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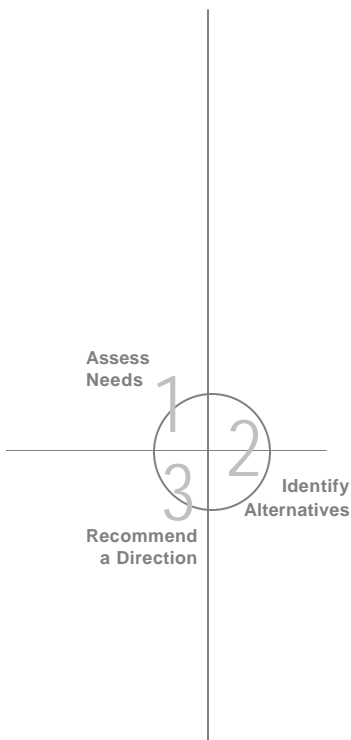
Appendix C:  
 Functional  
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Appendix D:  
 Project Participants

| Name              | Title                                    |
|-------------------|--|
| Ali, Zulfi        | Information Technology Project Manager   |
| Becker, Jen       | DRS Permit Specialist                    |
| Crum, Angel       | DRS Admin & Policy Staff Assistant       |
| Derby, Sharon     | DRS Lead Engineering Specialist          |
| Devlin, Linda     | DRS/LRP Tidemark/IT Coordinator          |
| Eiken, Chad       | DRS Planning Supervisor                  |
| Gilbride, Patrick | Information Technology Manager           |
| Henry, Michelle   | DRS Engineering Technician               |
| Lenhart, Terry    | Long Range Planning Administration       |
| Mason, Donna      | Media Services Manager                   |
| McJilton, Raelyn  | Citywide Records Manager                 |
| Merrill, Mike     | DRS Admin & Policy Supervisor            |
| Nail, Nancy       | DRS Planning Staff Assistant             |
| Olinger, Kris     | Public Works Engineering Division        |
| Papajohn, Jonna   | DRS Building/Inspection Office Assistant |
| Peterson, Cindy   | DRS Chief Building Official              |
| Potter, Angie     | DRS Lead Permit Specialist               |
| Renteria, Alice   | DRS Planning Staff Assistant             |
| Rosdahl, Mike     | DRS Engineering Technician               |
| Scott, Dave       | DRS Manager                              |
| Thompson, Valerie | DRS Building/Inspection Staff Assistant  |
| Tuntland, Tracy   | DRS Engineering Supervisor               |
| Vasquez, Larry    | DRS Permitting Supervisor                |
| Willmott, Susan   | DRS Project Manager                      |



## INTRODUCTION

This appendix provides additional detail on PTI's market research. It is organized as follows:

- ◆ A. Vendor data
- ◆ B. Preliminary cost estimates

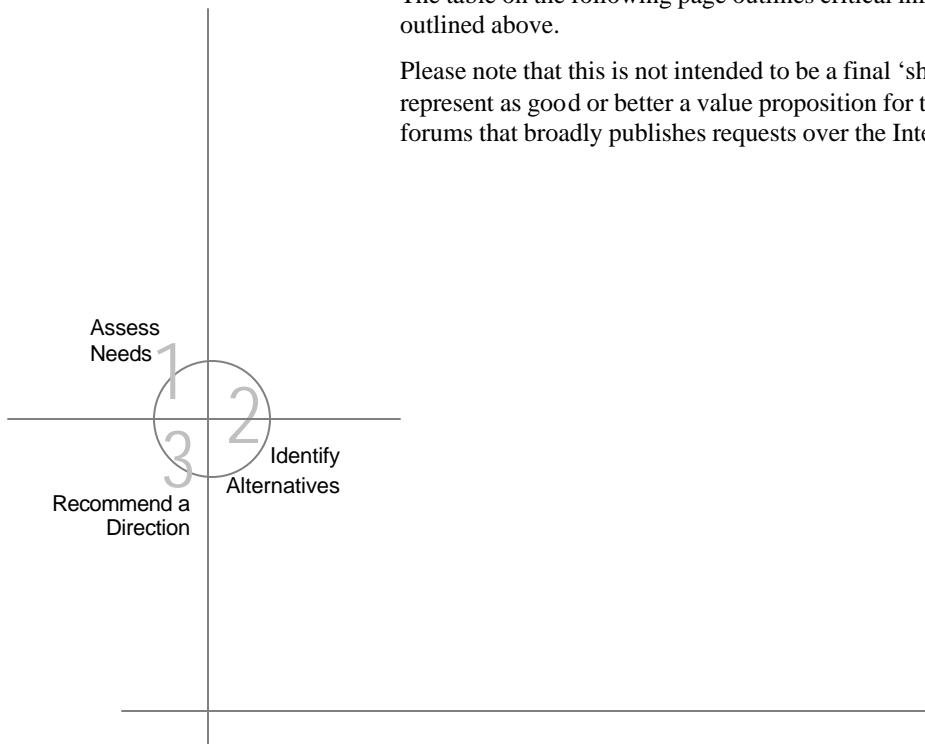
## VENDOR DATA

The document management software marketplace is historically very fragmented. Hundreds of vendors provide solutions that address some combination of imaging, storage, retrieval, archiving, or retention management. For our market research, PTI selected vendors that met one or more of the following criteria:

- A) Customer base includes public sector clients
- B) Customer base includes major municipalities in Oregon or Washington
- C) Solution has been previously integrated with Tidemark Permit\*Plus (according to Accela representative)

The table on the following page outlines critical information for each vendor identified by PTI. The "Criteria Met" column refers to the criteria outlined above.

Please note that this is not intended to be a final 'short list' of vendors to receive an RFP from the City. Other solutions may exist that could represent as good or better a value proposition for the City as those listed here. As a result, we recommend that the City advertise the RFP in forums that broadly publishes requests over the Internet, (e.g., Onvia or Bidnet.)



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Appendix E:  
Vendor Overview

| Vendor              | Headquarters         | Closest Field Offices                     | Years in Business | Web Address            | Phone        | Criteria Met | Distinguishing Characteristics   |
|---------------------|----------------------|---|-------------------|------------------------|--------------|--------------|--|
| 170 Systems         | Cambridge, MA        | Cambridge, MA                             | 13                | www.170systems.com     | 617-621-0900 | A            | <ul style="list-style-type: none"> <li>• Exclusively Oracle-based; integrates with Oracle applications</li> <li>• "Intelligent Document Technology" allows process automation through direct interaction with documents</li> </ul>       |
| Documentum          | Pleasanton, CA       | Bellevue, WA                              | 13                | www.documentum.com     | 425-646-2398 | A            | <ul style="list-style-type: none"> <li>• Comprehensive solution set includes tools for document management, records management and web content management</li> </ul>   |
| Filenet Corporation | Costa Mesa, CA       | Portland, OR and Kirkland, WA             | 21                | www.filenet.com        | 425-893-7000 | A, B, C      | <ul style="list-style-type: none"> <li>• Comprehensive solution set includes tools for document management, records management and web content management</li> <li>• Previously integrated with Tidemark (Henrico County, CA)</li> </ul> |
| Legato              | Mountain View, CA    | Bellevue, WA                              | 15                | www.legato.com         | 425-653-7000 | A            | <ul style="list-style-type: none"> <li>• Strong emphasis on disaster recovery and automated archiving</li> <li>• Oracle strategic partner</li> </ul>   |
| Network One         | Portland, OR         | Portland, OR                              | 20                | www.net1.com           | 888-722-6663 | A, B         | <ul style="list-style-type: none"> <li>• Current service provider to City of Vancouver</li> <li>• Offers ASP solution and resells Filenet, Legato</li> </ul>   |
| Novasoft/C-Image    | Berkshire, England   | Burlington, MA (Firm has resellers in CA) | 14                | www.cimagenovasoft.com | 781-221-0365 | A, B         | <ul style="list-style-type: none"> <li>• Solution set includes both document management and records management</li> </ul>  |
| Optika, Inc.        | Colorado Springs, CO | Colorado Springs, CO                      | 15                | www.optika.com         | 719-548-9800 | A            | <ul style="list-style-type: none"> <li>• Solution set includes both document management and records management</li> </ul>  |
| Questys             | Mission Viejo, CA    | Mission Viejo, CA                         | 23                | www.questys.com        | 949-855-6885 | A, C         | <ul style="list-style-type: none"> <li>• Strong emphasis on full text search capabilities</li> <li>• Previously integrated with Tidemark (City of Pasadena, CA)</li> </ul>   |
| Zasio Enterprises   | Boise, ID            | Boise, ID                                 | 16                | www.zasio.com          | 208-375-8000 | A, B         | <ul style="list-style-type: none"> <li>• Primary focus on records management -- supports tracking of physical inventory (e.g., file folder and box tracking)</li> </ul>  |

Assess Needs



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Appendix E:  
Vendor Overview

**PRELIMINARY COST ESTIMATES**

Estimated cost ranges for a document management/records management solution are as follows. These high-level estimates are based on public-sector cost proposals submitted by firms such as Filenet and Optika.

| Cost   | Low              | High               |
|--|------------------|--------------------|
| <b>One-Time Costs*</b>                           | <b>\$600,000</b> | <b>\$1,000,000</b> |
| Scanners   | \$80,000         | \$115,000          |
| Optical Drives & Servers                         | \$40,000         | \$75,000           |
| Image Capture Software                           | \$10,000         | \$15,000           |
| Application Software                             | \$60,000         | \$100,000          |
| Implementation Services                          | \$235,000        | \$350,000          |
| Training   | \$25,000         | \$45,000           |
| Conversion (Up to 600,000 documents)             | \$150,000        | \$300,000          |
| <b>Recurring Costs (15% of One-Time Costs)**</b> | <b>\$90,000</b>  | <b>\$150,000</b>   |

Notes:

\*One-time costs do not include internal staffing, (e.g., project manager or staff to temporarily backfill the jobs of subject matter experts who are working on the project).

\*\*Recurring costs include support and maintenance fees for hardware and software, subsequent training, and periodic assistance with conversion of historical files. Recurring costs also do not include implementation costs associated with major document management software upgrades that DRS may undertake.

