**Ballot Creation System**

- Associate Data
- Layout Data
- Generate Ballot

**System Components**
- Web Based Forms Designer
- Server
- Database

**Key Capabilities**
- Pull data from voter rolls system in a common data format
- Allow for input of candidates and measures
- Design a ballot pulling together data sources
- Output a PDF or like format for printing of paper ballots
- Store ballots and manage ballot creation workflow

**Overall System Complexity**
- MEDIUM

**Required Capabilities - Build**
- Project Management
- User Experience
- Full Stack Software Development
- (Forms Design Engineering)

**Required Capabilities - Run**
- Project Management
- (Forms Designer)
- Full Stack Software Development

**Required Capabilities - Maintain**
- Database Administration
- Identity Management
- Network and OS patching
- Full Stack Software Engineering

**Key System Assumptions**
- Voter rolls information will be a common and understood format and act as an input to the system.
Direct Recording
Electronic system

Present Ballot
Capture Selection
Store Selection

System Components
- Display Device with OS and local storage
- Special Needs Peripherals
- Printer
- Vote Marking Application
- Stand for device with privacy protection

Key Capabilities
- Store Ballot Layouts
- Identify user and present proper Ballot layout
- Present Ballots in multiple languages and in variable resolutions
- Allow user to make selections
- Allow user to verify selections
- Store vote selections
- Print Ballot with selections

Overall System Complexity

VERY HIGH

Required Capabilities - Build
- Project Management
- User Experience
- Full Stack/Mobile Software Development
- (Peripheral Design and Interface)
- (Device / Software Security)
- (Furniture Design)

Required Capabilities - Run
- Project Management
- Hardware Support
- Full Stack /Mobile Software Development

Required Capabilities - Maintain
- Device / Furniture and Peripheral Maintenance
- OS patching
- Full Stack/Mobile Software Engineering

Key System Assumptions
- All voters will vote on a electronic machine with paper ballots as backup
- BMD will not have network connectivity but will store a record of each vote locally for later verification
- Printer will output in a format that the Ballot Counting System can read clearly

Capabilities in parenthesis indicates a special skill
Vote By Mail System

Present Ballot Online
Capture Selections
Print Ballot

System Components
- Web Interface
- Server
- Database

Key Capabilities
- Store Ballot Layouts
- Identify user and present proper Ballot layout
- Present Ballots in multiple languages and in variable resolutions
- Allow user to make selections
- Allow user to verify selections
- Print Ballot with selections

Overall System Complexity

Medium

Required Capabilities - Build
- Project Management
- User Experience
- Full Stack Software Development
- Security

Required Capabilities - Run
- Project Management
- Full Stack Software Development

Required Capabilities - Maintain
- Network and OS patching
- Full Stack Software Engineering
- Security

Key System Assumptions
- Website which allows people to make selections via a web browser and then print this out and mail it in.
- Leverages a lot of logic and code from the Electric Ballot Marking Device (EBMD) project. Assumes both projects leverage the same layout and accessibility work.
Central Ballot Counting System

Scan Ballot
Store Ballot
Store Selections

System Components
- Scanner
- Scanning software
- Physical ballot storage
- Computer with redundant storage

Key Capabilities
- Scan ballots to extract selections
- Physically Store ballots
- Redundantly store ballot selections
- Transmit in process results to central voting system
- Format results for ingestion into a central tabulation system

Overall System Complexity
LOW

Required Capabilities - Build
- Project Management
- User Experience
- Full Stack Software Development
- (Scanner Software Interface)

Required Capabilities - Run
- Project Management
- Full Stack Software Development
- (Scanner / Computer Maintenance)

Required Capabilities - Maintain
- Network and OS patching
- Full Stack Software Engineering
- (Hardware Maintenance)

Key System Assumptions
- Software for scanning and ingestion exists in the open source community already

Capabilities in parenthesis indicates a special skill

Att1 - Voting System Scoping Diagram v2

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Precinct Ballot Counting System

Scan Ballot
Store Ballot
Store Selections

Overall System Complexity

LOW

Required Capabilities - Build
- Project Management
- User Experience
- Full Stack Software Development
- (Scanner Software Interface)

Required Capabilities - Run
- Project Management
- Full Stack Software Development
- (Scanner / Computer Maintenance)

Required Capabilities - Maintain
- Network and OS patching
- Full Stack Software Engineering
- (Hardware Maintenance)

Key System Assumptions
- Software for scanning and ingestion exists in the open source community already
Vote Tabulator System

System Components
- Web Interface
- Server
- Database

Key Capabilities
- Receive votes from ballet counting systems in a common format
- Transform votes into a common and scalable data format
- Store votes
- Provide basic vote count information once stored
- Ingest information from the voter roles system and match to vote information to provide useful information for analysis in the reporting system

Overall System Complexity
LOW

Required Capabilities - Build
- Project Management
- User Experience
- Full Stack Software Development
- Database Engineer

Required Capabilities - Run
- Project Management
- Full Stack Software Development
- Database Engineer

Required Capabilities - Maintain
- Database Administration
- Identity Management
- Network and OS patching
- Full Stack Software Engineering

Key System Assumptions
- System will be designed in a highly fault tolerant and redundant way.

Capabilities in parenthesis indicates a special skill
**Vote Reporting System**

- Store Results
- Transmit Results
- Visualize Results

**System Components**

- Web Interface
- Server
- Database

**Key Capabilities**

- Ingest Vote Information
- Store votes and manage any data retention policies
- Provide a variety of reports and data visualization interfaces to understand voting data
- Send data to other vote tallying systems like the national vote tally systems.

**Overall System Complexity**

**MEDIUM**

**Required Capabilities - Build**

- Project Management
- User Experience
- Full Stack Software Development
- Database Engineer

**Required Capabilities - Run**

- Project Management
- Full Stack Software Development
- Database Engineer

**Required Capabilities - Maintain**

- Database Administration
- Identity Management
- Network and OS patching
- Full Stack Software Engineering

**Key System Assumptions**

- System will manage the votes information for many years so security will be crucial.

*Capabilities in parenthesis indicates a special skill*