Designing for Distance

Voting Facilities

Process Changes

RI Case Study

URI VOTES
Facility Selection Limitations

Possible COVID-19 Challenges:
✓ Restrictions on facility type (e.g., schools, nursing homes).
  ✓ Certain facilities are deemed unusable for public safety.

✓ Reduced facility quantities.
  ✓ Fewer facilities willing to participate.
  ✓ Fewer facilities able to participate.

✓ Increased space requirements.
  ✓ Social distancing for voters and poll workers.
  ✓ Additional space around voting equipment.
Adjusted Space Requirements

How much space is required to reasonably fit 5 privacy booths?

Traditionally: 208 sq. ft.

Socially Distanced: 1,056 sq. ft.

6 ft. social distancing assumed from the edge of each person. 2 sq. ft. of space is included for voters to occupy and 3 ft. are included for travel paths.
New Jersey Space Requirements

How much space is required to hold 8 voting booths, 2 check-in stations, 1 accessible BMD, 1 ballot box, 1 sanitization area, and 2 chairs for observers with social distancing in place?

4,128 sq. ft.  2,949 sq. ft.
Other Challenges with Social Distancing

A "Straight forward" polling location:

Traditional Layout

Socially Distanced Layout
Other Challenges with Social Distancing

A challenging polling location:

Traditional Layout

Socially Distanced Layout
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Processing Changes and Vote Times

How will vote times be impacted by additional or changed processes required for voter and poll worker safety?

✔ **Social Distancing:** How will social distancing and reduced resource capacities impact vote time?

✔ **Equipment Sanitization:** How will the addition of sanitization processes impact vote time?

✔ **Regulation Changes:** Are two poll workers still required to check voters in?

✔ How can election administrators prepare for these changes?
Social Distancing

Social distancing is likely to increase the physical length of lines forming at polling locations.

An increase in required space for people and equipment means a reduction in resource capacities.

Resource allocation must be reconsidered with more focus on location size and layout.
Equipment Sanitization

Different strategies will have different impacts on voting systems (e.g., cleaning devices after each use, cleaning devices once an hour).

Sanitization staff will be exposed to uncleaned surfaces for extended durations.

Resource capacity is reduced during sanitization processes.
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RI Case Study
Rhode Island 2020 PPP Case Study

Considerations:
✓ 47 Open Polling Locations
✓ Social Distancing Precautions in Place
✓ Periodic Sanitization of Equipment

Analysis:
✓ Worker Exposure
✓ Impact on Vote Time
✓ Resource Allocation
Updating Layout and Setup Techniques

- Social Distancing
- Flow Management
- Reduced Capacity

- Line Control
- Reduced Staffing
- Equipment Sanitization
Simulating the Election
Simulation Results

Resources

<table>
<thead>
<tr>
<th></th>
<th>Poll Pads</th>
<th>Voting Booths</th>
<th>Ballot Scanners</th>
<th>Sanitation Workers</th>
<th>Disaffiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>4</td>
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<tr>
<td>Maximum</td>
<td>8</td>
<td>18</td>
<td>4</td>
<td>4</td>
<td>8</td>
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</tbody>
</table>

Results

- **Average Vote Time**
  - Minimum: 5.28
  - Maximum: 29.53

- **Maximum Vote Time**
  - Minimum: 9.15
  - Maximum: 140.29

- **Average Line**
  - Minimum: 1
  - Maximum: 30

- **Sanitization Exposure**
  - Minimum: 3.83%
  - Maximum: 78.84%
Results

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Results

Average Vote Time
- Minimum: 5:28
- Maximum: 29:53

Maximum Vote Time
- Minimum: 9:13
- Maximum: 1:10:29

Average Line
- Minimum: 1
- Maximum: 30

Sanitization Exposure
- Minimum: 3.83%
- Maximum: 78.84%
Simulation Analysis

**Simulated Turnout:** 39,450  
25% Total Turnout * 20% In-Person

**Actual Turnout:** 21,449  
17.2% Total Turnout * 17.2% In-Person

- ✔️ Six locations were identified to have long lines.
- ✔️ Nine locations were identified to have sanitization exposure rate over 60%.
- ✔️ Six locations were identified to have inadequate space for the recommendation.
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COVID-19 Planning Tool

Simulate your in person Election Day(s) to help make more informed decisions with COVID-19.

A visual simulation model is a powerful tool that enables users to explore the relationship between polling place layout design and the flow of voters through the system. With COVID-19, social distancing is required to 'smooth the curve' and keep those participating in on-site democracy safe. These health and safety factors create an environment where layout planning, line balancing, and resource allocations are

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