



GEOG 4195W CAPSTONE

ELDERCARE AND COMMUNITY ACCESSIBILITY IN CAPITOL HILL VILLAGE

BY RACHEL SALOP, FLORA ROY, MADDIE
SMITH, ALEXANDRA LAIR, IZZIE PETRACCI



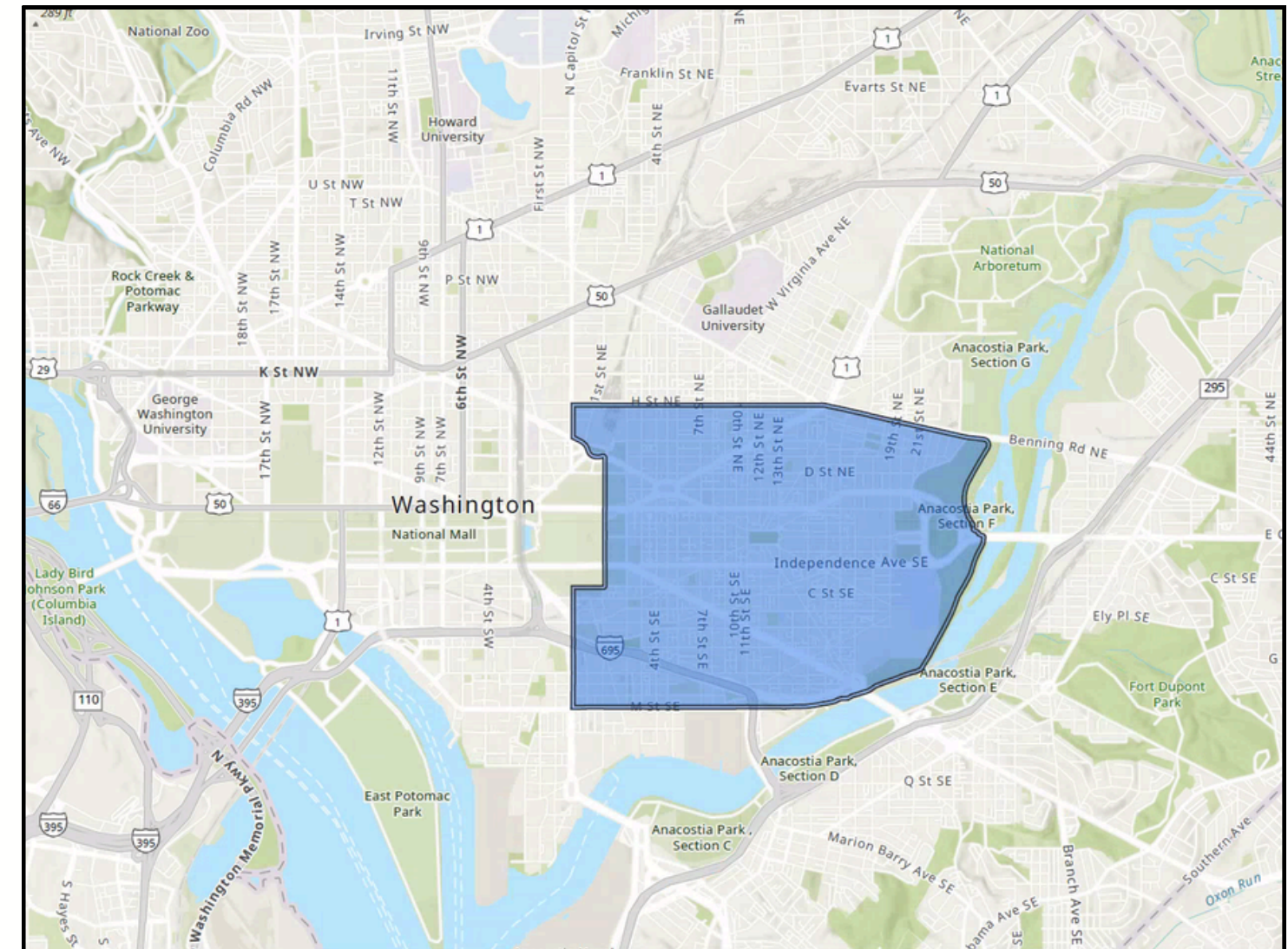
Objectives:

- Assessing proximity to care and community in Capitol Hill Village
 - Mapping accessibility via different modes of transportation
- Identifying social isolation in Capitol Hill Village
- Understanding mental health and well being implications from isolation



What is Capitol Hill Village?

- Capitol Hill Village: Part of the nationwide Village Movement
- Purpose: Volunteers provide support to elderly members within their neighborhoods
- Key Benefit: Enables members to age-in-place in familiar and beloved communities
- Services Provided:
 - Coordination of access to essential services
 - Promotion of community engagement
- Activities Offered: Social, educational, and wellness events
- Mission: Focus on maintaining a sense of community and combating isolation as individuals age



The Problem:



- Issue: Social isolation among Capitol Hill Village community members, an urban elderly group in DC.
- Psychological Impact: Isolation leads to adverse mental health effects.
- Accessibility Barrier: Limited access to critical quality-of-life resources, such as community support and eldercare services.
- Transportation Challenges: Insufficient comprehensive and accessible transportation options exacerbate isolation.
- Concept Identified: "Community Desert" – areas within the city with limited access to:
 - Resources
 - Community spaces
 - Services critical for the elderly
- Root Cause: Distance and accessibility barriers prevent elderly residents from engaging in community activities and accessing needed resources.





Humanistic Geography: Cresswell, Seamon, and Lifeworlds

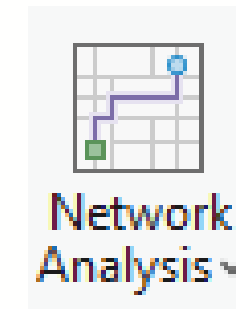
- Body-Ballet and Time-Space Routines: Habitual, preconscious movements shape daily life and provide stability.
- Place-Ballet: Overlapping routines create a shared rhythm, fostering community and a sense of place.
- Mobility Barriers: Disruptions to routines isolate the elderly, breaking their connection to the place-ballet.
- Lifeworld Dimensions: Lifeworlds transcend location, including action, orientation, emotions, and imagination.
- Inclusive Design: Accessibility restores routines, reintegrates individuals, and sustains the community's rhythm.



Washington Square Park, NYC

GIS Methodology:

- Radius Maps
 - Network analyst toolset
 - Specifically, the service area analysis
 - Walking (2km/hr)
 - Driving
 - Public transit
 - TravelTime QGIS Plugin
- Map of nursing home beds
 - Graduated symbols
 - Proportional to bed count
 - Some facilities had none reported



New Network Analysis Type



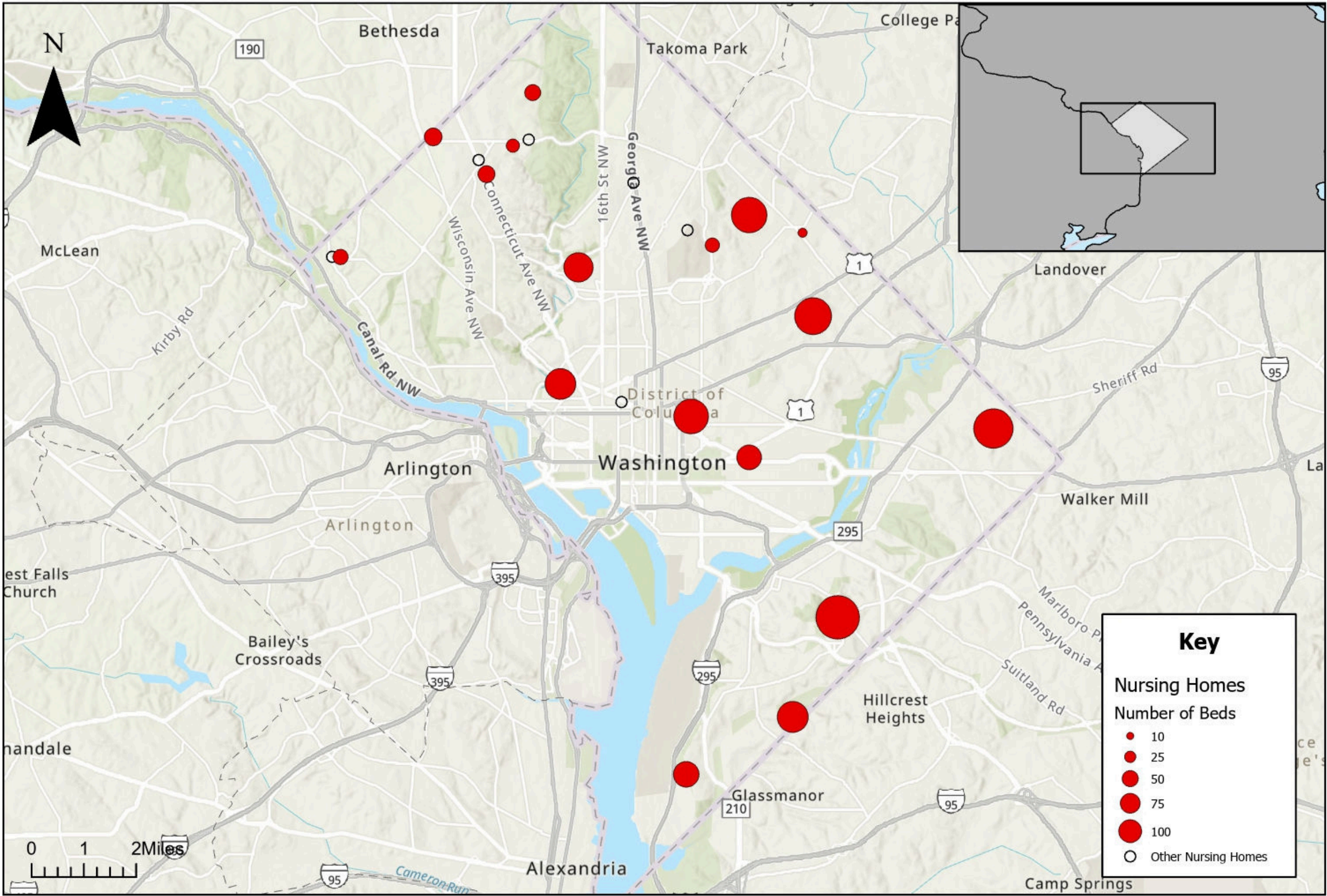
Service Area

Generate drive-time polygons.

Mode:	<Walking Time>	min
Direction:	Away from facilities	Σ
Cutoffs:	30,	



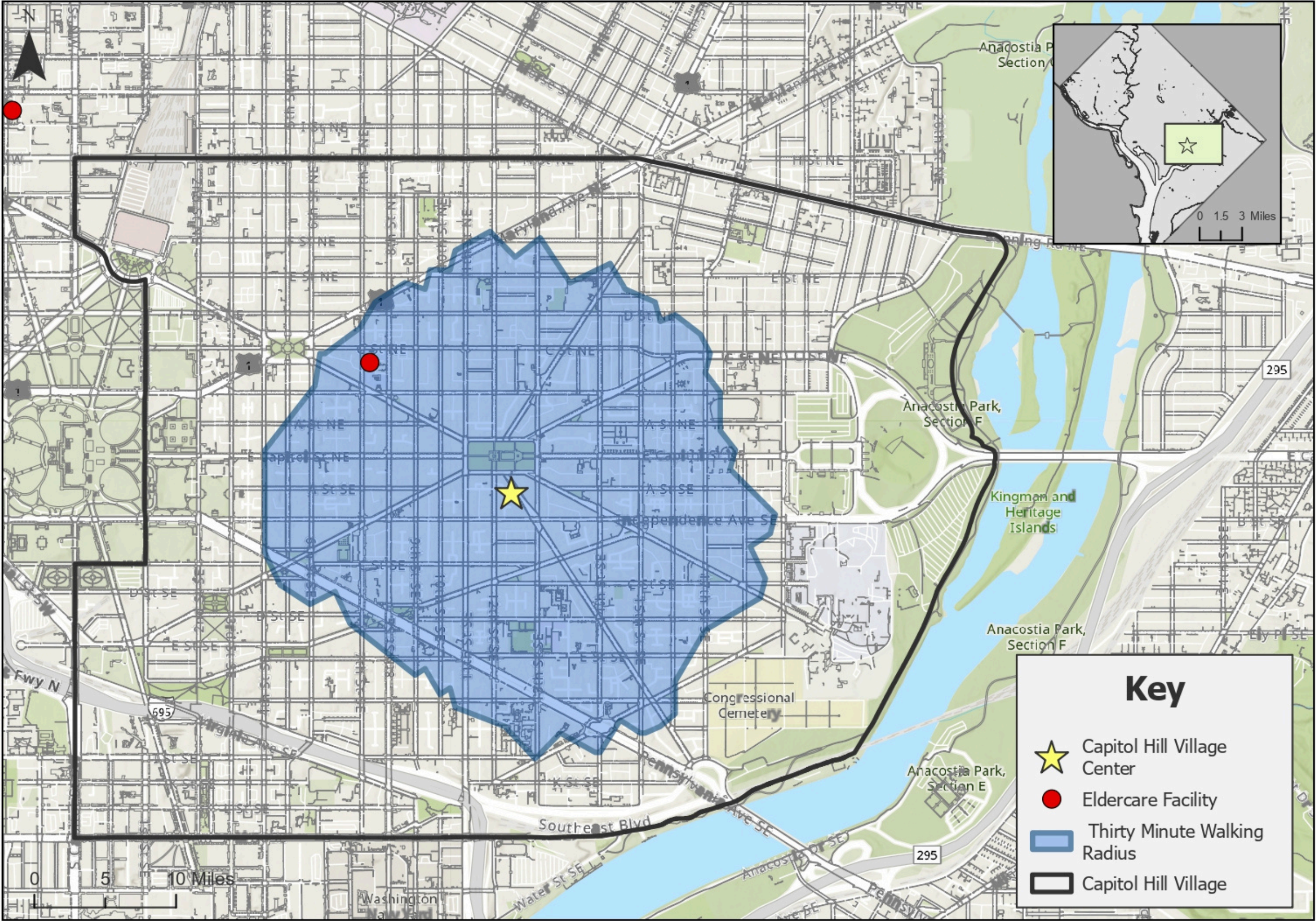
D.C. Eldercare Facility Capacities



Eldercare Facilities Map

Thirty Minute Walking Radius

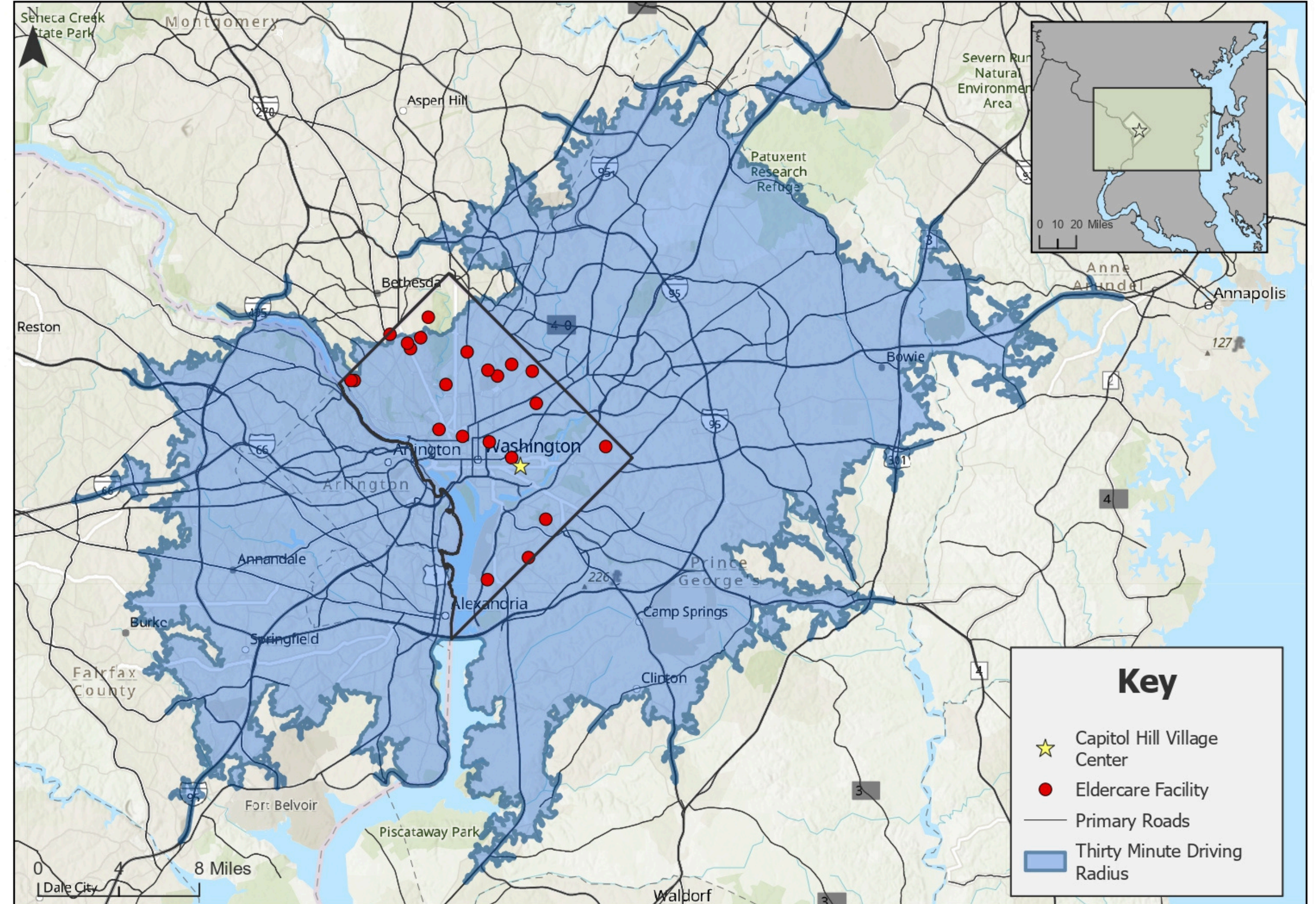
Accessibility Map 1



Authors: Rachel Salop, Maddie Smith, Flora Roy, Alex Lair
Date: Nov. 12 2024
Source: Open Data DC, US Census Bureau
Projection: WGS 1984 Web Mercator (auxiliary sphere)

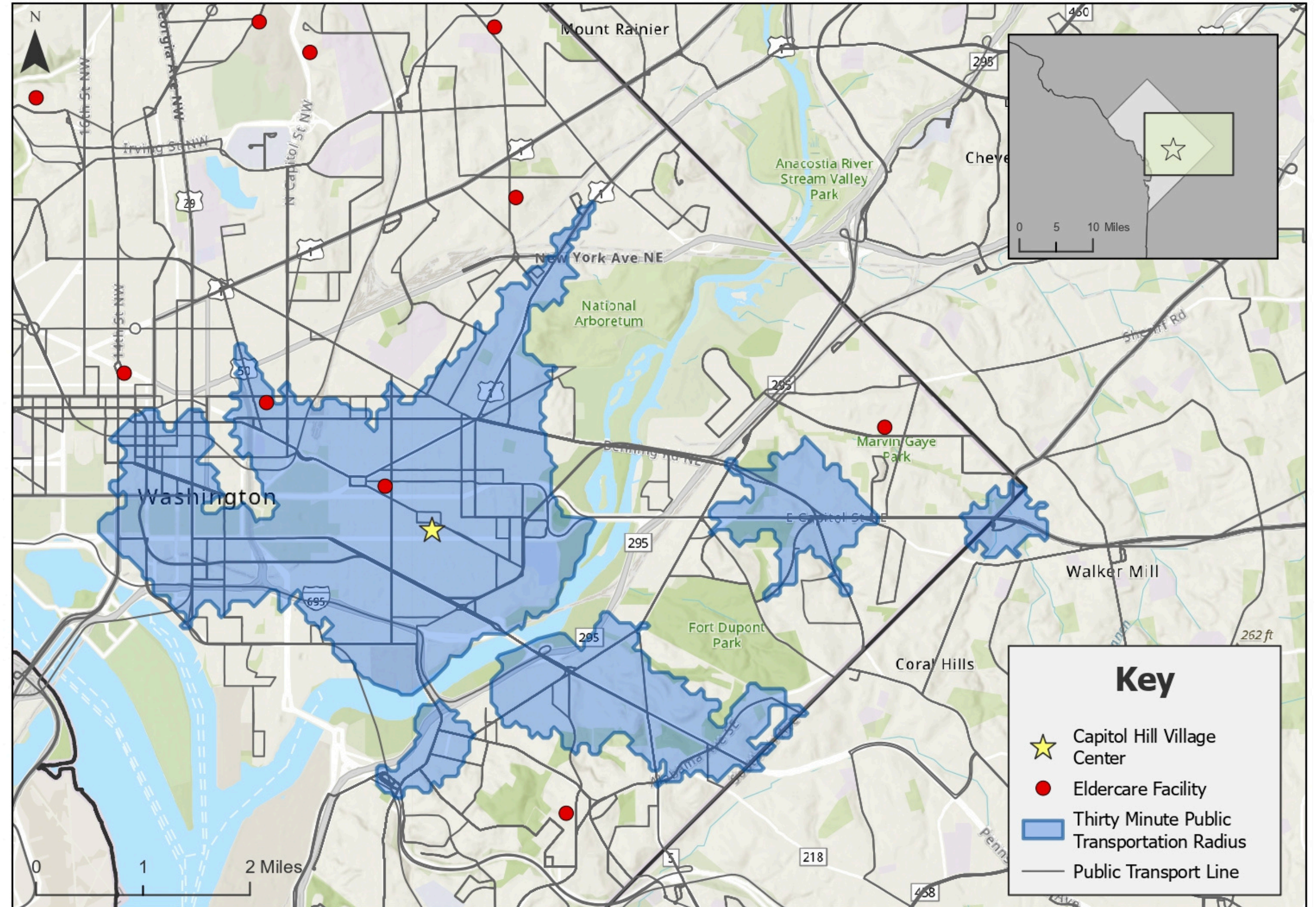
Thirty Minute Driving Radius

Accessibility Map 2



Authors: Rachel Salop, Maddie Smith, Flora Roy, Alex Lair
Date: Nov. 12 2024
Source: Open Data DC, US Census Bureau
Projection: WGS 1984 Web Mercator (auxiliary sphere)

Thirty Minute Public Transportation Radius



Authors: Rachel Salop, Maddie Smith, Flora Roy, Alex Lair
Date: Nov. 12 2024
Source: Open Data DC, US Census Bureau
Projection: WGS 1984 Web Mercator (auxiliary sphere)

Accessibility Map 3

Although Available; Fears with Relation to...

Walking

- Falling
- Robbed
- Lost
- Hit by Car or Bike
- Unable to Hear Horn
 - 47% of the village uses physical assistances (hearing aid, walker, ect.)



Public Transportation

- Robbed or Pick-pocket
- Unsafe
- Get Lost
- Hard to get on or off



Driving/Uber

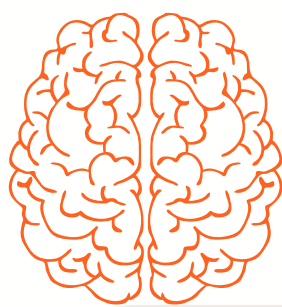
- Carjacking
- Accidents
- Hurt while driving
- Feel Unsafe With Driver
- Misunderstanding the App
- Get followed to get robbed





All these recognized potential dangers or fears promote one to be homebound or the likeliness to tend to stay at home and tending to become less socialized and lead to heightened risks of developing mental illnesses





Two Most Common Mental Illnesses of Elders who are Isolated or Homebound

Depression and Anxiety

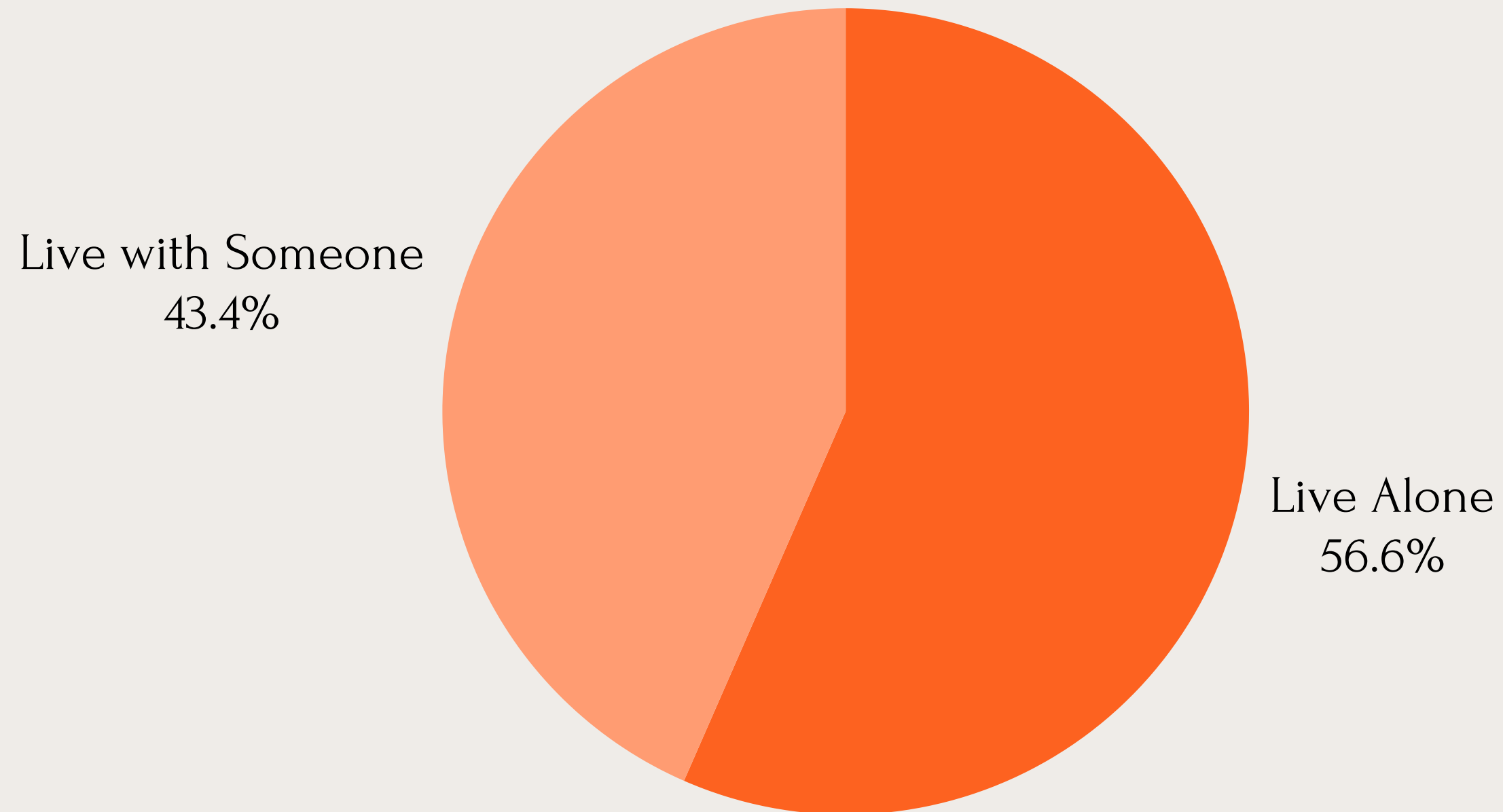
- anxiety affects 3.8% of people over the age of 60 years old
- depression affects 5%-7% of people 60 years old or over
- Potentially lead to Substance abuse
- Activity Avoidance
 - “If I don’t plan anything, I won’t miss anything...”
- Can be caused by a lack of companionship or isolation

Personality Disorders

- Personality disorders are more susceptible to worsening with age include dementia, paranoid, schizoid, schizotypal, obsessive compulsive, borderline, histrionic, narcissistic, avoidant, and dependent, Dr. Rosowsky said at a conference sponsored by the American Society on Aging.
- 40.5% of homebound or limited elderly have psychiatric disorder or illnesses
- 17% go undiagnosed

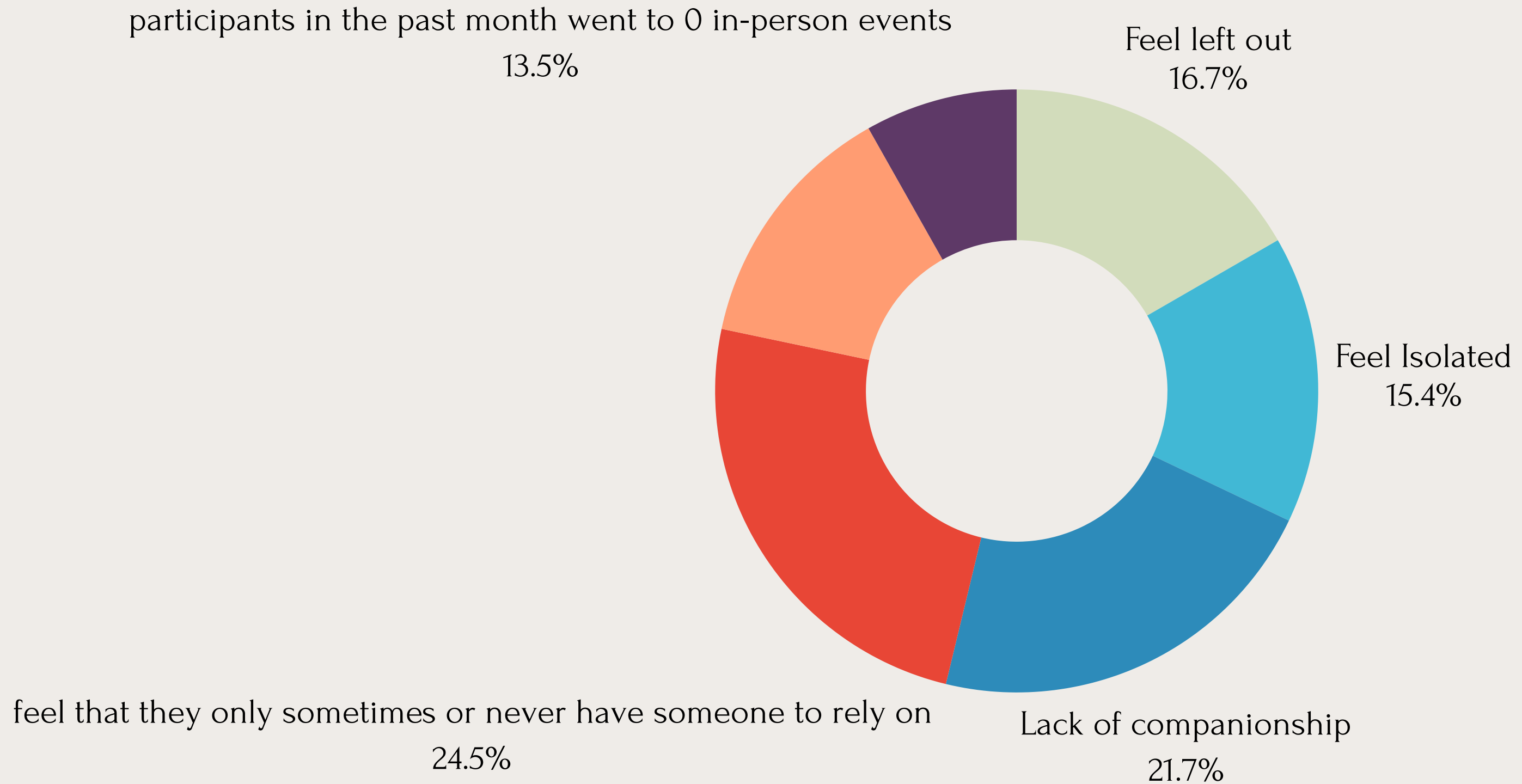


Supporting Data of Potential Mental Illness In CHV



Data is Generalized and Pulled From Village Member Survey Findings - Summer 2024 (195 participant study group/ roughly 35,000 general population) (all data is anonymous)

Supporting Data of Potential Mental Illness In CHV



Current Efforts in Effect

- In March 2023, Capitol Hill Village formed a Sidewalk Safety Team (SST) in response to member concerns over sidewalk hazards and the time sidewalk repairs take.
- Support Groups in the Village
- Variety of Care Services in Village
- Capital Hill Village is Partnered with the Council of Government, which enhances the mobility of Seniors and Individuals with disabilities

Our Ideas for Solutions

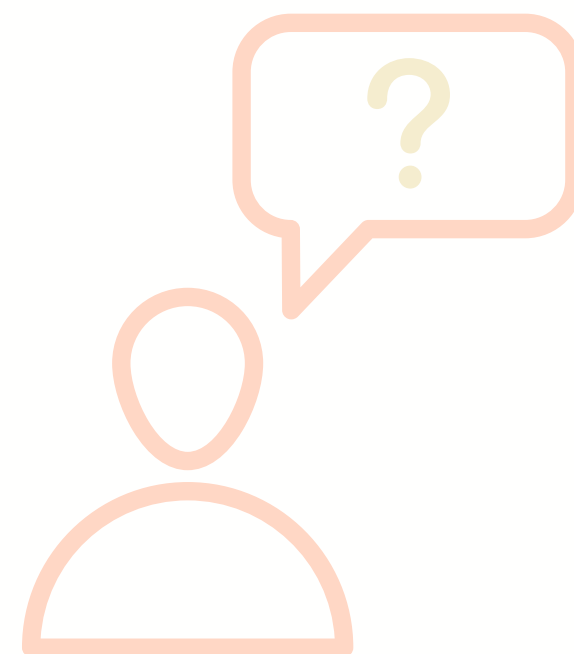
- Provide Free WMATA cards
- Promote more open networking among elderly villages so they feel less isolated
- Create an elderly friendly messaging app for the DMV villages
- Provide IT based information sessions to help and promote the understanding of transportation available to order via their mobile device



Do you have any Ideas???



Questions?





Thank
you!

Work Cited

1. National Center for PTSD. (n.d.). Symptoms of PTSD in older adults. U.S. Department of Veterans Affairs. Retrieved November 5, 2024, from https://www.ptsd.va.gov/professional/treat/specific/symptoms_older_adults.asp
2. National Institute on Aging. (2020, December 23). Social isolation and loneliness in older people pose health risks. National Institutes of Health. Retrieved November 5, 2024, from <https://www.nia.nih.gov/news/social-isolation-loneliness-older-people-pose-health-risks>
3. Cedars-Sinai. (2023, January 30). Anxiety in the golden years: How to cope with anxiety in older adults. Cedars-Sinai. Retrieved November 5, 2024, from <https://www.cedars-sinai.org/blog/anxiety-in-the-golden-years.html>
4. Healthdirect. (2023). Depression in older people. Healthdirect Australia. Retrieved November 5, 2024, from <https://www.healthdirect.gov.au/depression-in-older-people>
5. National Center for Biotechnology Information. (2010). Psychiatric disorders in the elderly: Diagnosis and treatment. PubMed Central (PMC). <https://pmc.ncbi.nlm.nih.gov/articles/PMC3044592/#:~:text=Psychiatric%20disorders%20are%20common%20among,elderly%20are%20dementia%20and%20depression.&text=Dementia%2C%20including%20Alzheimer's%20disease%2C%20is,29%25%20of%20the%20homebound%20population.>
6. Rudenko, A., & Soares, J. C. (2020). Psychiatric and cognitive disorders in the elderly: Clinical considerations and neuroimaging findings. PubMed Central (PMC). <https://pmc.ncbi.nlm.nih.gov/articles/PMC8475927/>
7. Peachtree Wellness Mental Health. (n.d.). Is borderline personality disorder a disability?. Retrieved November 17, 2024, from <https://peachtreewellnessmh.com/is-borderline-personality-disorder-a-disability/#:~:text=The%20effects%20of%20untreated%20borderline,less%20than%20the%20national%20average.>
8. University of Oxford. (2014, May 23). Many mental illnesses reduce life expectancy more than heavy smoking. Oxford University News. <https://www.ox.ac.uk/news/2014-05-23-many-mental-illnesses-reduce-life-expectancy-more-heavy-smoking>