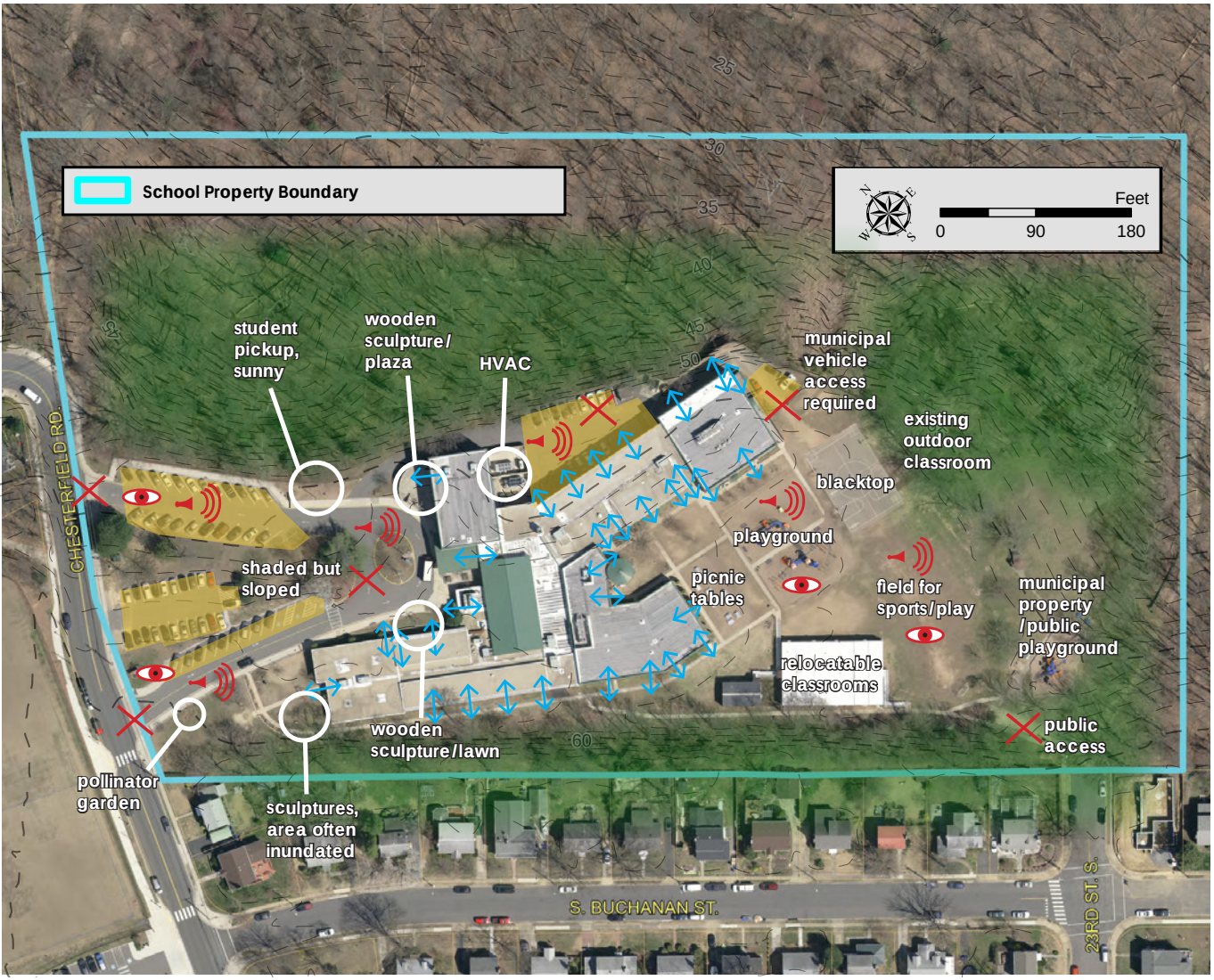
EMERGENCY SCHOOLYARD DESIGN VOLUNTEERS

ELEMENTARY SCHOOL — NORTHERN VIRGINIA

This Northern Virginia public school has 732 enrolled students in grades pre-kindergarten through 5th, totally 34 classes (including when at half capacity). The goal was for each class to be able to go outside for learning and for lunchtime. The school hoped to explore temporary and permanent solutions, with the goal of giving teachers better access to more functional outdoor spaces. The assisting design volunteers offered a number of temporary and long-term solutions which could each accommodate nearly 70% of the school's enrollment.

Site Analysis Considerations



Parking areas

Potential Hazard Area

Visual Distractions

Noisy Areas

Shade

School or classroom entrance

Elementary School
Arlington, Virginia

School Characteristics

Students

- 732 enrolled students in grades PK-5
- 34 total classes, even at 1/2 capacity the class number remains the same
- Requested spaces for each class to be able to go outside for learning and lunch
- Requested temporary and permanent solutions
- Requested goal of giving teachers better access to more functional outdoor spaces

School Grounds

- 15 acres, suburban
- Cars and buses most active at the start of the school day and the end of the school day (8 am and 2:40 pm)
- Potential hazards from surrounding woods, including an unfenced wooded area
- Mulched playground area with play equipment
- Paved basketball court
- Existing wooded outdoor classroom
- Longer periods of bus activity during COVID

Climate

- Rain, snow, and heat all factors to consider
- There are approximately 30 days a year with disruptive weather events
- Most rainfall occurs in May and early June, with a total yearly average of 43 inches
- Average daytime highs per month: Jan, 43; Feb, 47; March, 56; Apri, 67; May, 75; June, 84; July, 88; August, 87; September, 80; October, 68; November, 58; December, 47
- 201 average sunny days per year

Elementary School
Arlington, Virginia

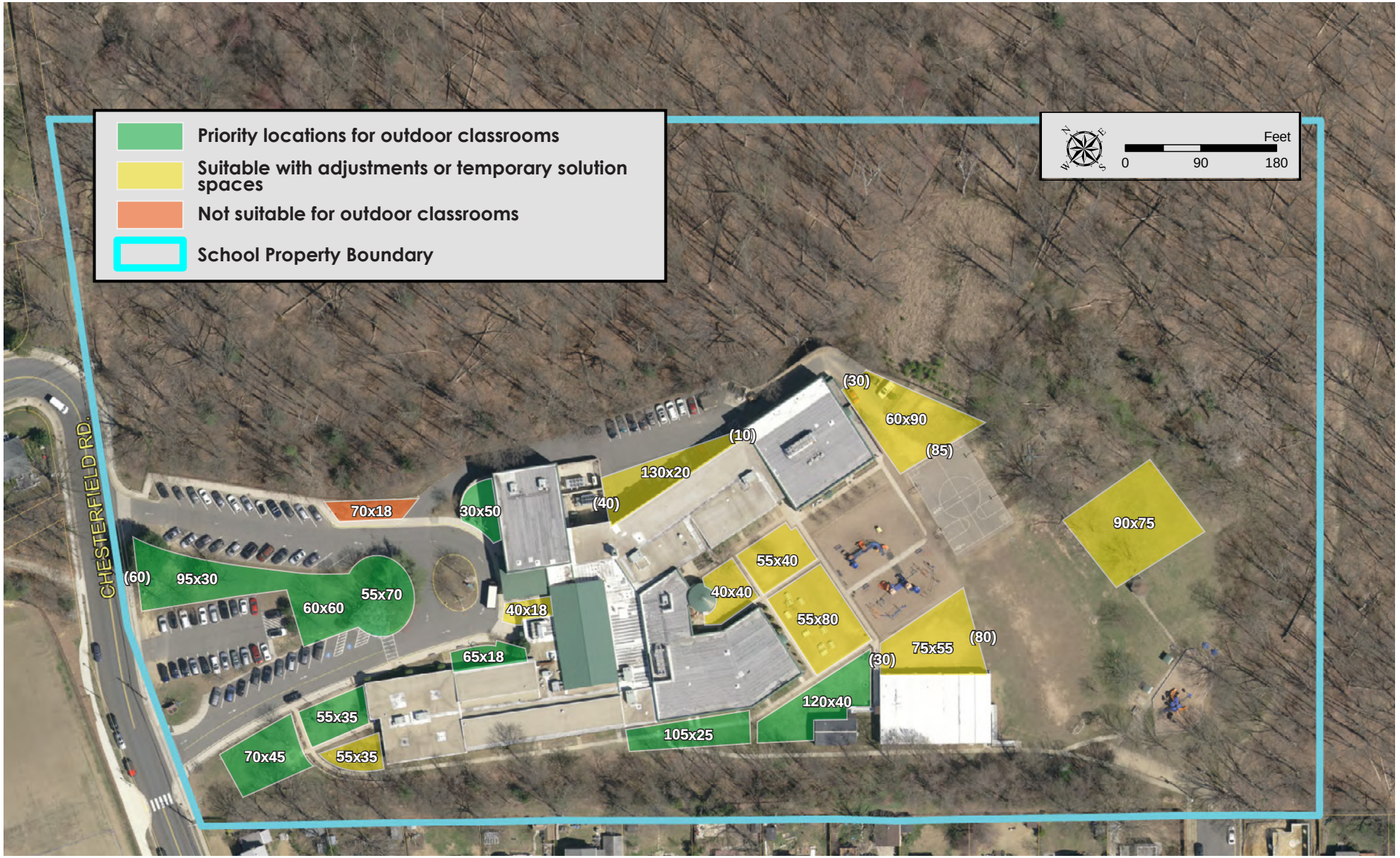
Site Photographs

Photographs supplied by Wendy Goyert

1. Open lawn space by moveable classrooms
2. Shaded area outside of classrooms with direct outdoor access
3. Sheltered concrete-paver plaza by front entrance to school
4. Lawn by side entrance to school near the pollinator garden
5. Shaded and sloped area between parking lots
6. Wide concrete-paver plaza by gymnasium entrance
7. School's existing outdoor classroom
8. Large, municipally-owned open space accessible for student use adjacent to small gazebo and public playground

Potential for Outdoor Expansion

Elementary School
Arlington, Virginia

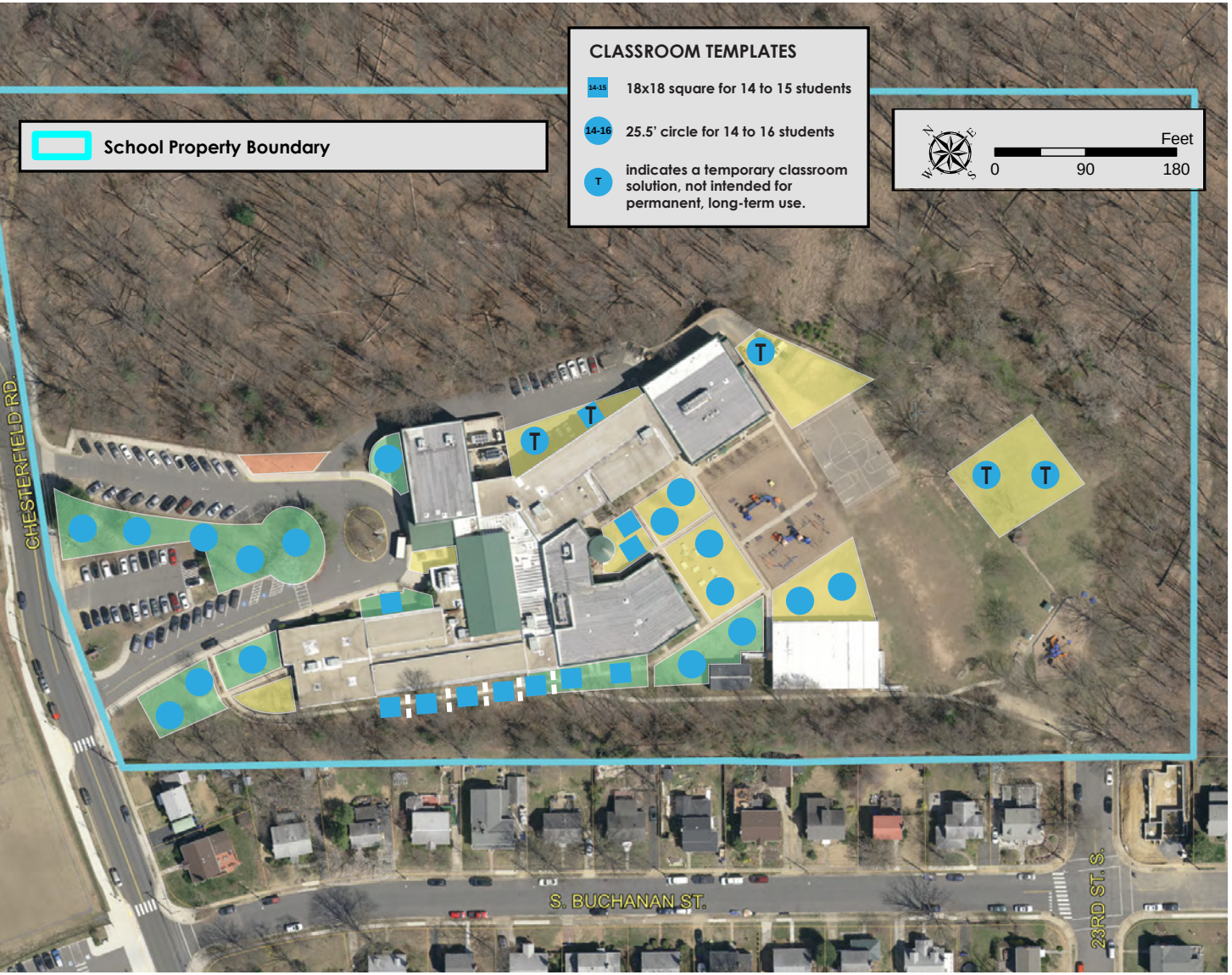


NOTE: These diagrams are intended to provide visual concepts to assist schools in planning. They are neither intended nor may be used for construction. Green Schoolyards America, Earth Island Institute, the Emergency Schoolyard Design Volunteers, and the partners of the National COVID-19 Outdoor Learning Initiative do not assume responsibility or liability for the technical accuracy of drawings or for any unauthorized use.

Potential Outdoor Classrooms
Using Existing Tree Canopy and Shade for Mild Weather

Elementary School
Arlington, Virginia

Scenario #1: Low Cost



Climate Considerations

- Local climate varies seasonally
- Classes will require protection from sun, rain, and snow and appropriate clothing to keep everyone warm and dry

Climate Adaptation Strategies

- Use outdoor classrooms as "Plan A" when the weather is nice; go inside or online when it is raining or too cold
- Place seating in areas where existing tree canopies provide morning or afternoon shade, and away from street to reduce noise

Use and Augment Existing Infrastructure

- Use areas with shade trees and add low cost seating (mats, stumps, benches, and/or existing desks/tables)
- Utilize the school's existing garden and access to the municipal space in the SE
- Preserve space for gardening and nature play
- Stagger classroom use to allow all 34 classes to have outside time

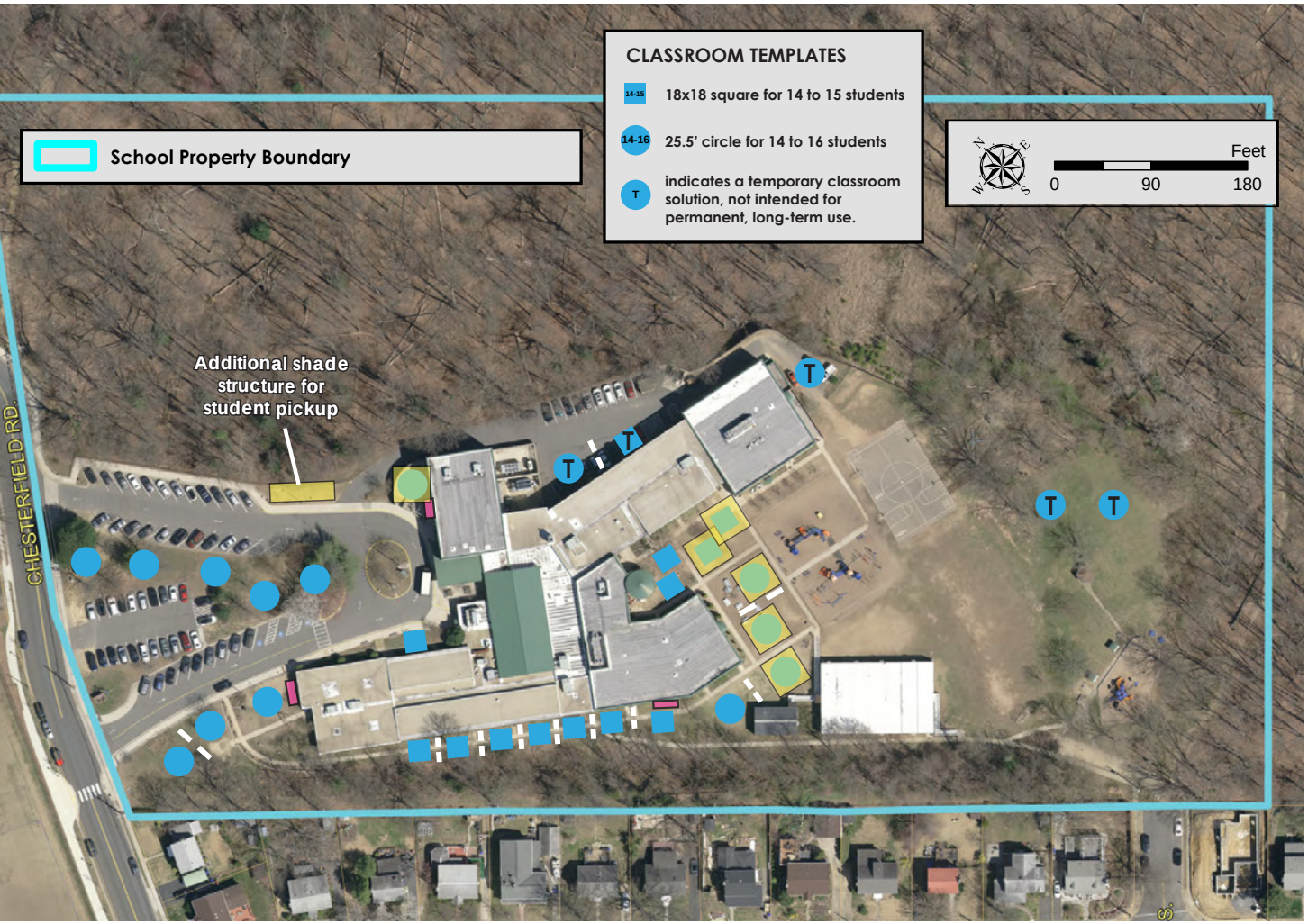
Scenario #1: Outdoor Capacity

- Max: 501 students in all 32 seating areas
- Total capacity: 68% of enrolled students
- 79 students in 5 temporary areas

Potential Outdoor Classrooms
Providing Light Shelter for Sun, Rain, or Snow

Elementary School
Arlington, Virginia

Scenario #2: Moderate Cost



(6) natural screen or divider (straw bales, willow, potted plants or other)
(6) 30' x 30' shade canopy
(3) Storage cart or box

Climate Considerations

Build on Scenario #1

- Install shelters to protect from rain, snow, and sun. Ideal shelters could be adjustable in height to allow winter sun.
- Add outdoor heaters and/or provide rain and snow gear so students will be dry and warm when weather is wet and cold

Climate Adaptation Strategies

- Use outdoor classrooms as "Plan A" when the weather is nice or in mild rain and snow; go inside or online when it is too cold or harsh

Use and Augment Existing Infrastructure

- Add low cost seating (mats, stumps, benches, and/or existing desks/tables)
- Install shelters to protect from rain, snow, and sun in areas away from street
- Add storage sheds for class materials
- Preserve and activate space for gardening and nature play
- Stagger classroom use to allow all 34 classes to have outside time

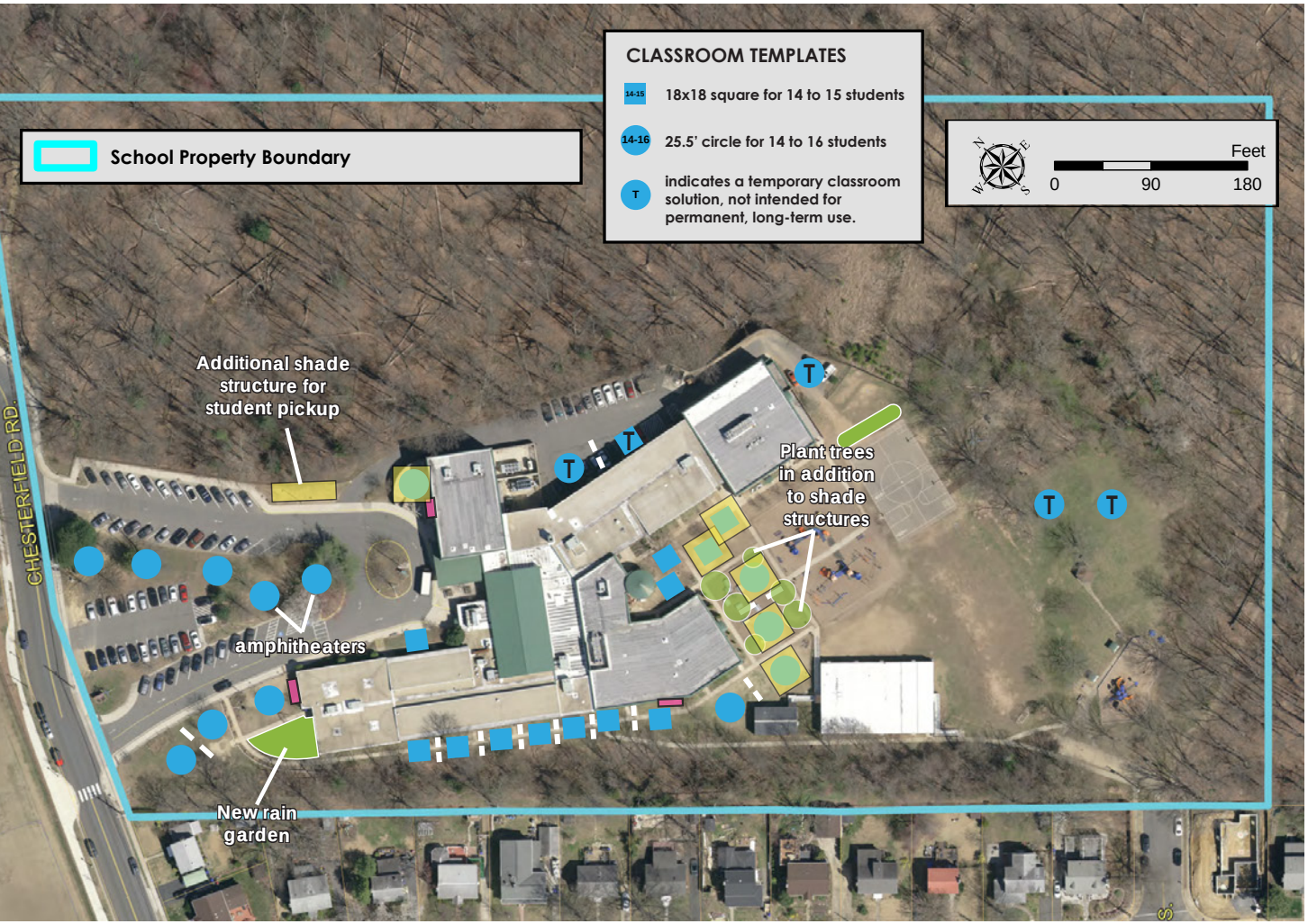
Scenario #2: Outdoor Capacity

- Max: 501 students (68% of total students) in all 32 seating areas
- 95 students in 6 shaded areas
- 79 students in 5 temporary areas

Potential Outdoor Classrooms
Providing Infrastructure to Support School Programs

Elementary School
Arlington, Virginia

Scenario #3: Green Infrastructure Investment



(6) natural screen or divider (straw bales, willow, potted plants or other) | (5) 30' x 30' shade canopy | (3) Storage cart or box | New or increased vegetation

Climate Considerations

Build on Scenario #2

- Add or increase vegetation, including trees to provide shade
- Provide potted trees for green views and to divide outdoor class areas, to be replanted in ground later

Climate Adaptation Strategies

- Use outdoor classrooms as "Plan A" when the weather is nice or in mild rain and snow; go inside or online when it is too cold or harsh

Use and Augment Existing Infrastructure

- Preserve and activate space for gardening and nature play
- Leave room and flexibility for long-term outdoor classroom vision ideas
- Stagger classroom use to allow all 34 classes to have outside time

Scenario #3: Outdoor Capacity

- Max: 501 students (68% of total students) in all 32 seating areas
- 95 students in 6 shaded areas
- 79 students in 5 temporary areas