

Field Measurements Guide

<p>Before You Go</p>	<p>1. Gather equipment.</p> <ul style="list-style-type: none"> • Tape measure, at least 25 feet, and marked in feet-inches format, or Disto laser device • Grid paper 11x17" divided into 1/8" or 1/4" squares, or iPaq running PocketCAD • Clipboard or writing surface • Pockets for stashing equipment • Black pencil, sharpener, eraser • Red pencil, sharpener, eraser • Sketching paper • Sketching pen
	<p>2. Gather existing data. Find any existing measurements or documentation that you can, to save yourself work in the field.</p>
	<p>3. Decide on teamwork strategy. If there are several people who will be sharing data about the site, divide into two-person teams. In each team that measures, have one person take measurements and the other person record those measurements. Some different methods of dividing labor:</p> <ul style="list-style-type: none"> • Territory—Each team tackles a different area or facade • XXX—XXX • XXX—XXX
<p>On Site</p>	<p>4. Walk around the building.</p> <ul style="list-style-type: none"> • Get a sense of the area. Look at nearby buildings for similar construction. • Look for elements that will simplify measuring (aligned windows, string courses, symmetries). Notice which elements need only be measured once. • Decide where to take measurements. • Notice any unexpected elements that may complicate measuring (scaffolding, construction, riot police). • Decide how to divide responsibilities among the team.
	<p>5. Draw the item you're measuring. Note: if you have enough time, making a scale drawing on grid paper as you measure will produce more complete results, but it takes much longer.</p> <ul style="list-style-type: none"> • Use a black pencil for structure. • Use separate sheets for plans and elevations. • Draw details or crowded parts on separate sheets.
	<p>6. Take basic measurements.</p> <ul style="list-style-type: none"> • Use a red pencil to record dimensions and dimension lines. • Use feet^{inches} format to save space (14⁶ instead of 14'-6"). • Use either running lines (all measurements from a fixed point) or strings (short measurements each taken from the one before it). <p>Look for and measure:</p> <ul style="list-style-type: none"> • Overall dimensions—width, depth, height • Element dimensions—measure to openings within walls (doors, windows) • Repetitive and typical elements—measure once and note as "typ" for typical (bays, windows, door and window heights, beams) • Regulating lines—certain elements line up with others (stringcourses, openings)

	<p>7. Check measurements. To save frustration back in the office, add the string of measurements in each facade, and compare it to the overall width measurement. They should match. (If you have been making a scale drawing using grid paper or PocketCAD, you can skip this step.)</p>	
<p>If There's Time</p>	<p>8. Label the drawings.</p> <ul style="list-style-type: none"> • Name/address of building • Description of drawing ("Elevation") 	<ul style="list-style-type: none"> • Date of drawing • Team members' names • North arrow on plans
	<p>9. Take detailed measurements. If there's time, measure smaller elements (window frame details, XXX).</p> <p><u>Measuring Inaccessible Areas</u></p> <p>Techniques for measuring distances where you can't get a tape to both ends:</p> <ul style="list-style-type: none"> • Photograph a person of known height standing in front of the building, or holding a stick of known height • Pace off the distance • Compare to a known distance, such as a football field • Use construction elements (bricks, concrete blocks) • Measure the shadow 	
	<p>10. Sketch and measure the surrounding buildings or landscape. Show the relationship of this building's height and mass to the surrounding buildings.</p>	
<p>Back in the Office</p>	<p>11. Make a scale drawing on grid paper. (Skip if using PocketCAD) Try to draw to scale in the field to see if you've omitted any necessary measurements, while you can still gather the missing data.</p>	
	<p>12. Transcribe your notes into a scale drawing. Use vellum or CAD.</p> <ul style="list-style-type: none"> • If working with others, agree on the scale of drawings. • Identify missing or conflicting measurements. • Decide who to send back to the site to gather more measurements. • Compare photos to drawings; did you miss any dimensions? 	
<p>Common Mistakes</p>	<ul style="list-style-type: none"> • Forgetting to watch for cobwebs • Omitting a key dimension in the middle of a string • Measuring details and neglecting the big picture • Trying to represent all dimensions on a single sheet of paper 	
<p>Read More</p>	<p>Chitham, Robert <i>Measured Drawing for Architects</i> The Architectural Press, London 1980 photocopy of Historic American Engineering Record guidelines</p>	