Multi-housing

Laundry Room

Concept, Planning & Design Guide
The Laundry Room as an Amenity

Now more than ever, residents are considering common-area laundry rooms as a functional amenity. The location, design, convenience, quality and special features of laundry rooms have significant impact on resident satisfaction…more so than other amenities such as a fitness center, wireless internet or swimming pool.

This architectural guide is WASH’s way of assisting you, from concept and beyond, in developing today’s preferred laundry facilities. Well-designed and maintained laundry rooms will not only be valuable residential amenities, but also sensible, cost-effective property features the owner will appreciate. (See page 11 for information on keeping laundry rooms an amenity.)

Count on WASH for significantly higher quality laundry service.

From assisting you at an early stage of construction to providing top-quality, energy-efficient equipment and outstanding ongoing service, you can count on WASH.

Find out why WASH’s service and accountability continue to rate significantly higher with residents, owners, and property management firms. WASH is unmatched at ensuring that your laundry facilities are a valuable amenity to attract and retain residents.

Put the West’s largest, most innovative, independent laundry service company into your plans. Contact WASH.
The WASH Concept, Planning and Design Guide is developed primarily for multifamily housing. WASH welcomes the opportunity to provide advice and support at an early stage.

The guide is organized in three sections.

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**SECTION 1: Laundry Room Planning**

Explains how to determine laundry room location(s), number of laundry machines needed and room size. It also provides design guidelines and recommendations.

**SECTION 2: Requirements and Specifications**

Contains requirements and specifications for constructing a laundry room including instructions, important considerations, charts and illustrations.

**SECTION 3: Sample Layouts**

Features WASH’s recommendations to ensure that your laundry rooms function as a valuable residential amenity. Includes design ideas for different sized laundry rooms along with summary profiles of their features.
Laundry Room Planning

In designing laundry rooms, location is the primary concern. Choosing appropriate placement contributes strongly to the perception of the laundry facilities as an amenity.

USE THE 3-STEP FORMULA IN THIS SECTION TO DETERMINE LAUNDRY ROOM LOCATION, EQUIPMENT NEEDS AND ROOM SIZE.

STEP 1: Location Guidelines

Residents prefer laundry rooms to be within easy walking distances from their units. Long walking distances to laundry rooms decrease resident satisfaction. The laundry rooms should be near main traffic patterns and not in secluded or remote areas that pose security problems.

IMPORTANT:
Surveys and experience have shown that properties with multiple laundry rooms conveniently placed throughout the community are preferred and more widely used by residents than one central laundry room.

Determining Location and Number of Laundry Rooms

<table>
<thead>
<tr>
<th>Community</th>
<th>Preferred Laundry Installation</th>
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<tbody>
<tr>
<td>Low Rise</td>
<td>A sufficient number of laundry rooms for each block or wing of units. If possible, ensure that the maximum distance from any unit to the nearest laundry room does not exceed 200-250 feet.</td>
</tr>
<tr>
<td>High Rise</td>
<td>One laundry room on each floor (provided there are a minimum of eight units per floor); more per floor if the distance from any unit is greater than 300 feet.</td>
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STEP 2: Equipment Needs

Washers Recommended
Energy and water-efficient commercial washers are recommended.

Dryers Recommended
There should always be one energy-efficient single load dryer for each washer. When more than one dryer is required in a laundry room, stacked dryers or combo stack washer / dryer may be used. Double load dryers are less energy efficient and may slow the laundry completion process when used to dry less than a double wash load.

Use the following guidelines and the requirements chart to determine equipment needed for EACH laundry room location. To increase resident satisfaction, it is always better to plan for more laundry equipment than the minimum requirements.

Guidelines for Number of Machines
Number of machines in a laundry room are affected by the following:

- Resident profile (families, singles, elderly)
- Price charged for using machines (low prices encourage use)
- Proximity of units to laundry room

Use the following guidelines and the requirements chart to determine equipment needed for EACH laundry room location. To increase resident satisfaction, it is always better to plan for more laundry equipment than the minimum requirements.

STEP 3: Room Size

Use the following general guidelines to estimate the minimum recommended room size:

1. Determine the number of machines required for an individual laundry room by utilizing the guidelines in STEP 1: Location Guidelines and STEP 2: Equipment Needs.

EXAMPLE: A laundry room located within a 225-foot radius of 36 units with a primarily family profile calls for a minimum of 3 washers and 3 dryers.

2. Multiply the number of machines by a minimum accepted guideline of 25 square feet floor space per machine.
   (Stacked dryers use the floor space of one machine.)

3. Folding tables, sinks, chairs, etc., may require additional space.

4. Consult with ADA guidelines to ensure accessibility and ease of use for disabled residents.

WASH is available to assist you in suggesting laundry room locations and sizes, as well as determining the exact number and types of machines needed.

### Minimum Equipment Requirements

<table>
<thead>
<tr>
<th>Predominant Resident Profile*</th>
<th>Washers &amp; Dryers per using unit**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families</td>
<td>1 pair W/D per 8-12 units</td>
</tr>
<tr>
<td>Younger Working Adults</td>
<td>1 pair W/D per 10-15 units</td>
</tr>
<tr>
<td>Older Working Adults</td>
<td>1 pair W/D per 15-20 units</td>
</tr>
<tr>
<td>Students</td>
<td>1 pair W/D per 25-40 students</td>
</tr>
<tr>
<td>Senior Citizens</td>
<td>1 pair W/D per 25-40 units</td>
</tr>
</tbody>
</table>

*Resident profile is the major factor for determining equipment needs; use other factors as adjustments. The above guidelines are based upon the predominant resident profile. Occupancy often tends to be a mix of different types of residents.

**To determine units that may use laundry facilities: take the number of units without in-unit washer and dryer connections; add to that number the number of units with washer and dryer connections.
**Washers**  In large facilities, washers and dryers may be arranged in banks or clusters. Smaller rooms should be arranged in 2 x 2 or 4 x 4 groupings.

**Security**  Laundry rooms should be designed to eliminate personal danger. This includes planning entry ways on main traffic patterns along with using glass walls or panels, when possible, to provide total visibility and eliminate screened areas.

**Seating**  Adequate seating should be provided, especially when the predominant resident profile is senior citizens.

**Folding Area**  A minimum of 6 square feet (2' x 3') of table top space is needed for one user to fold clothes. The greater the number of dryers in a room, the greater the need for folding space. It is better to have too much folding space than too little, plan accordingly.

**Floor and Drainage**  Always use concrete with a troweled finish and slope toward the floor drain.

**Passage/Service Space**  Provide ample room for passage around equipment and furnishings. Always allow adequate room for machines to be serviced.

**Water Heater**  Should be placed near washers and protected by proper fire rated walls.

**Lighting**  Energy-efficient or fluorescent lighting is recommended. Rooms should be well illuminated with fixture selection suitable to room size.

**Sinks**  Not required, yet may be included. Design to provide for occasional overflowing from misuse.

**Dryers**  Start with dryer location when developing room layout. Dryers should be situated on an outside wall whenever possible for most efficient venting. Walls behind dryers must meet required fire ratings.
Requirements and Specifications

Electrical installation should conform to National Electric Code and applicable local regulations.

WASHERS

1. **Wiring**  
   Washers require an individual 3-wire, grounded, 120 volt, 60 hertz electrical circuit protected by a 20 amp breaker or circuit breaker. Two washers per 20 amp circuit.

2. **Receptacles**  
   Equip with a three prong polarized plug. Ground according to local and national codes.

SINGLE & STACKED DRYERS

1. **Electric Dryer Circuits**  
   Provide each machine with a separate circuit from the main panel to each dryer. For stacked electric dryers, both upper and lower dryers require individual electric service. Each dryer’s own line cord must be connected to a separate branch 3-wire, 60 hertz 220 single phase circuit fused at 30 amps on each side of the line NEMA 10-30R or NEMA 14-30R.  
   **NOTE:** Do not connect 220/240 volt dryers to 110, 115, or 120 volt circuits.

2. **Gas Dryer Circuits**  
   Use a regular 3-wire, grounded, 120 volt, 60 hertz electrical circuit protected by a 20 amp breaker, equivalent fusetron or circuit breaker, two dryers per 20 amp circuit.

3. **Ground**  
   In accordance with manufacturer’s instructions to appropriate local and national codes.

Gas Requirements

Installations must conform with American National Standards of the National Fuel Gas Code, and local codes and ordinances. (Consult local gas company.)

**IMPORTANT:** If LP or manufactured gas is used, follow specifications of the manufacturer and the local gas company.

LAUNDRY ROOM GAS SUPPLY LINES

1. **Pipe Size Requirements**  
   Requirements vary according to length of run from meter and the number of dryers and other gas appliances on the supply line. Check local building codes and consult local gas company for pipe size requirements.

2. **BTU/hr. as Basis For Pipe Size**  
   For each single load dryer use 30,000 BTU/hr.; for each double load dryer use 100,000 BTU/hr. If gas supply for water heaters and dryers is combined, add total number of BTU/hr. input for water heaters and for dryers. Consult local gas company for applicable conversion chart.
Dryer Gas Outlets

1. **Single Load Dryers**  Install capped off gas stubs 12” above floor for each dryer.

2. **Stacked Dryers**  Provide separate outlet for each dryer. Install capped off gas stubs 28 to 48” above floor for each dryer.

3. **Double Load Dryers**  Single or stacked dryers are recommended. If double load dryers are used, install capped off gas stubs 60” above the floor for each dryer.

Plumbing Requirements

1. **Floor Drainage**  Install minimum 2” floor drain in appropriate area of laundry room to catch any water overflow. Pitch floor to drain.

2. **Washer Piping**  Install approved pipe and hot and cold hose bib faucets for each washer in sizes per local building codes.

3. **Washer Drainage**  Drain each washer into an approved 2” standpipe. Trap each standpipe. Provide clean out access. Connect standpipes to appropriate sized drain lines.

See local codes.
Dryer/Venting Exhaust Systems

VENTING SYSTEM REQUIREMENTS

1. **Preferred Venting System**  Dryers should be vented individually to the outside whenever possible.

2. **Recommended Ducting**  Round rigid metal ducting is recommended. Use of flexible ducting requires precautions and is discouraged.

3. **Common Ducting Systems**  When length of duct run or number of turns in system exceed maximum limitations recommended by manufacturer, a common ducting system may be needed. See local codes. For high rise buildings, a stack exhaust outlet may be used. IMPORTANT: Provide for periodic cleaning, including access to turns and straight runs of duct installed in enclosed areas. Special attention is needed for roof caps on vertical installations and other areas where user cannot be expected to make frequent cleanings.

4. **Minimizing Ductwork**  The shortest and straightest vent run from dryer to termination is always the most efficient. Long ductwork, numerous elbows, branch entries and duct enlargements all create dynamic pressure losses or resistance to air flow. These also affect accumulation of lint in ducts.

**NOTE:** Any obstacle in the exhaust system will reduce dryer efficiency.
**WARNING**: To reduce the risk of fire, the dryer MUST BE EXHAUSTED OUTDOORS.

- The dryer vent must not be connected into any gas vent, chimney, wall, ceiling, or concealed space of a building.
- Do not use an exhaust hood with a magnetic latch.
- Do not install flexible metal vent in enclosed walls, ceilings or floors.
- 4" (10.2 cm) heavy metal vent and clamps must be used.
- Use clamps to seal all joints. Vent must not be connected or secured with screws or other fastening devices which extend into the interior of the vent. Do not use duct tape.

**IMPORTANT**: Observe all governing codes and ordinances. Use a heavy metal vent. Rigid metal vent is recommended to prevent crushing and kinking.

Flexible metal vent must be fully extended and supported when the dryer is in its final position. Remove excess flexible metal vent to avoid sagging and kinking that may result in reduced airflow and poor performance.

An exhaust hood should cap the vent to prevent rodents and insects from entering the home or business.

Exhaust hood must be at least 12" (30.5 cm) from the ground or any object that may be in the path of the exhaust (such as flowers, rocks or bushes).
MAKE-UP AIR

Design Considerations  Fresh air is needed in enormous quantities for proper operation of equipment in any laundry room. This design necessity is often forgotten, ignored or mismanaged. Adequate air must be brought into the room to replace the air exhausted by dryers. In most areas of the country, make-up air becomes a problem in the winter months when doors and windows, normally open during summer months, are closed.

IMPORTANT:  Particular attention should be paid when the laundry facilities are located near air-tight fire doors which shut off make-up air.

Make-up Air Requirements
- (The 1000 to 1 rule) Minimum of one square inch of free air is required for each 1000 BTUs that are being consumed in the laundry room (see chart below).
- Though water heaters do not require nearly as much make-up air, an adequate amount must be provided.
- Assume greatest BTUs in relation to equipment size and manufacturer’s specifications.
- When possible, use air within the building, as outside air must be preheated during cold weather.
- Provide louvers or other means to meet minimum make-up air requirements; in cold climates, louvers or openings should be located on interior walls of laundry room.
- In enclosed environments, fans will be required; base requirements on a rate of 250 CFM for single load dryers or 750 CFM for double load dryers.
Keeping the Laundry Room an Amenity

WASH’s 3-Step Program

1. **Start with the best equipment**  With WASH, you are assured only the best, brand-name, energy-efficient equipment is installed. Our washers and dryers have specially designed security features to discourage theft and ensure accountability. Both card systems and coin-operated machines are available.

2. **Keep prices at market**  Your washer & dryer vend price not only impacts laundry room profits, it influences resident satisfaction and usage of your laundry facilities. Price below market and you may increase resident satisfaction, but you’ll cut into your profits. Price too high and you’ll make more per cycle, but residents may go outside the property to do their laundry. WASH can assist properties with a market analysis to determine the right vend price.

3. **Give the best service possible**  Besides furnishing and installing equipment, WASH provides repair and other services to minimize laundry room down time and ensure your laundry room is operating to maximum efficiency. With WASH’s GPS routing technology, we can typically respond to service calls within 12 business hours or less.

Now that you’ve designed the best, rely on WASH to keep your laundry rooms an amenity.

800.421.6897 ext. 1600
www.washlaundry.com
This is a conveniently located, functional laundry room utilizing two energy-efficient washers and dryers. Each dryer is separately vented to the outside. Both washers and dryers are positioned to allow maintenance access. Although room size was a design consideration, the work space is not cramped and there is a folding table. Safety is a design factor, with glass panels allowing corridor visibility. The overall design promotes an almost home-like laundry environment.
PROFILE: Layout 2. 6 x 6 Laundry Room

Layout 2 shows a conveniently located, well-designed six washer and six dryer laundry room. It is near main resident traffic patterns. Light and ventilation are more than adequate. The arrangement of the room, planters and furnishings contribute to its visual attractiveness.

There are adequate washers and dryers matching the guidelines for this type of property.

The dryers are next to the exterior wall for the shortest, most efficient outside venting. Stacked dryers are used for energy efficiency and space savings. The table for folding clothes is of sufficient size and is readily accessible. There is room behind the equipment, and it is situated for easy maintenance.