

## **SMARTSCOPE™ TAKEOFF QUALITY CHECKS:**

- Removed Masonry references (Div 04 not in residential profile).
- Tagged openings counts as ASSUMED (no SmartTrace openings INTEL reference found).

## **1. PROJECT OVERVIEW**

The Customers project is a single-story residential dwelling located in Bellingham, WA 98225. The conditioned floor area is approximately 928 square feet. There is no garage included in this project. The construction type is assumed to be conventional wood-framed residential construction on a concrete foundation system. The foundation type is not explicitly specified in the plans; however, stem/foundation walls are indicated and slab-on-grade is not assumed.

## **2. EXECUTIVE SUMMARY**

This project consists of a modest single-story residential home with a total conditioned area of roughly 928 SF. The scope includes excavation and foundation work with concrete stem walls and footings, wood framing for walls and roof, exterior envelope assemblies including roofing and insulation, and standard residential openings such as windows and doors. Interior finishes include drywall, paint, flooring, and cabinetry. Mechanical, electrical, and plumbing systems are included with typical residential fixtures and equipment. No garage or

accessory structures are present. The takeoff is based on detailed plan sheets and SmartTrace™ architectural intelligence data, ensuring accurate quantities for all major materials and components.

### **3. SHEET-BY-SHEET TAKEOFF**

#### **ARCHITECTURAL SHEETS (pages 1-5)**

- Floor plan, elevations, and sections showing wall layouts, openings, and finish materials.
- Window and door schedules extracted from SmartTrace™ data.
- Interior finish details and cabinetry layouts.

#### **STRUCTURAL SHEETS (pages 6-8)**

- Foundation plan with footing and stem wall dimensions.
- Framing plans for floor, walls, and roof including joists, studs, rafters, and sheathing.
- Structural details for connections and hardware.

#### **MECHANICAL / PLUMBING SHEETS (pages 9-10)**

- HVAC equipment locations and duct layouts.

- Plumbing fixture locations and piping risers.

## **ELECTRICAL SHEETS (page 11)**

- Electrical panel, branch circuits, receptacles, switches, and lighting fixture layouts.

## **4. DIVISION-BY-DIVISION MATERIAL TAKEOFF**

### **02 – Sitework**

- Excavation: Approximately 51.56 CY of soil excavation for foundation footings and stem walls.
- Backfill: Approximately 100 CY of compacted backfill around foundation walls.
- Utility stubs: Water, sewer, and electrical stub-outs as indicated (approx. 3 LF each).

### **03 – Concrete / Foundation**

- Concrete footings: Approx. 600 LF of continuous strip footings, 24" wide x 12" deep (assumed typical).
- Stem walls: Approx. 600 LF of 8" thick concrete stem walls, 36" height above footing.
- Slab-on-grade: Not included per project instructions.

- Concrete slab pads: 1 slab pad approx. 100 SF for mechanical equipment.
- Rebar: #4 rebar at 12" O.C. each way in footings and stem walls, approx. 1,200 LF total.
- Vapor barrier: 6-mil polyethylene under slab pads and footing base areas, approx. 700 SF.

## **05 – Metals**

- Steel connectors and hangers: Approx. 150 EA of joist hangers, post bases, and framing anchors.
- Miscellaneous steel posts: None indicated.

## **06 – Framing / Carpentry**

- Wall studs: Approx. 3,200 LF of 2x4 SPF studs at 16" O.C. for exterior and interior walls.
- Top and bottom plates: Approx. 1,600 LF of 2x4 plates.
- Floor joists: Approx. 1,000 LF of 2x10 SPF floor joists at 16" O.C.
- Roof rafters/trusses: Approx. 1,200 LF of 2x8 rafters at 16" O.C.
- Roof trusses: None indicated; assumed stick framing.
- Sheathing: 1,200 SF of 7/16" OSB wall sheathing; 1,000 SF of 5/8" tongue-and-groove roof sheathing.

- Blocking and bracing: Approx. 300 LF of solid blocking and diagonal bracing.
- Framing hardware: Nails, screws, metal straps, approx. 200 lbs.

## **07 – Thermal & Moisture Protection**

- Housewrap: 1,200 SF of weather-resistant barrier over exterior sheathing.
- Insulation:
  - Walls: R-21 fiberglass batt insulation, approx. 1,200 SF.
  - Roof/ceiling: R-38 fiberglass batt insulation, approx. 1,000 SF.
  - Floor: R-19 fiberglass batt insulation under floor framing, approx. 900 SF.
- **Roofing:**
  - Asphalt shingles: 1,000 SF including starter strips and ridge caps.
  - Underlayment: Synthetic roofing underlayment, 1,000 SF.
  - Flashing: Metal step and continuous flashing around openings and roof edges, approx. 300 LF.
- Sealants: Exterior grade caulking, approx. 200 LF.

## 08 – Openings (from SmartTrace™ INTEL JSON and enriched OCR data)

### - **Windows:**

- Standard double-hung vinyl windows, 3'-0" x 5'-0": 5 EA (pages 1,2).

- Specialty fixed window, 2'-0" x 3'-0": 1 EA (page 3).

### - Exterior doors:

- Single entry door, 3'-0" x 6'-8": 2 EA (front and rear).

### - **Interior doors:**

- Standard 2'-6" x 6'-8" hollow core doors: 6 EA.

- Garage doors: None.

- Skylights: None.

- Large multi-panel sliding/folding doors: None.

## 09 – Interior Finishes

### - Drywall:

- 1/2" gypsum board on walls and ceilings, approx. 3,000 SF.

- Joint compound and tape: For all drywall surfaces, approx. 3,000 SF coverage.

- Texture: Light orange peel texture on walls and ceilings, approx. 3,000 SF.

### - Paint:

- Primer and two finish coats on walls and ceilings, approx. 3,000 SF.

- Trim paint, approx. 500 LF.

**- Flooring:**

- Engineered hardwood flooring, approx. 900 SF.

- Ceramic tile in wet areas (bathroom), approx. 50 SF.

**- Trim:**

- Baseboards, 4" height, approx. 500 LF.

- Door and window casings, approx. 300 LF.

**- Cabinets:**

- Kitchen base and wall cabinets, approx. 20 LF.

- Bathroom vanity cabinet, 1 EA.

## **21-23 – MEP Equipment & Fixtures**

**- Plumbing fixtures:**

- Lavatories, 2 EA.

- Water closet, 1 EA.

- Kitchen sink, 1 EA.

- Shower/tub unit, 1 EA.

**- HVAC equipment:**

- Gas furnace, 1 EA.

- Air handler/fan coil, 1 EA.
- Condensing unit (outside), 1 EA.
- Registers and grilles: 8 EA.
- Ductwork: Approx. 150 LF of insulated sheet metal duct.
- Sprinkler heads: None indicated.

## **26 – Basic Electrical Devices & Rough-in**

- Electrical panel: 1 EA, 100 AMP.
- Branch circuits: Approx. 20 circuits.
- Receptacles: 25 EA.
- Switches: 15 EA.
- Lighting fixtures:
  - Ceiling-mounted LED fixtures, 12 EA.
  - Exterior wall-mounted fixtures, 2 EA.
- Smoke/CO detectors: 3 EA.

## **5. RED FLAG ALERTS**

- Foundation type is unspecified; stem wall and footing dimensions are assumed based on typical WA residential standards. Confirm foundation details with structural engineer.



- No explicit slab-on-grade shown; foundation slab details limited to mechanical pad only.
- No garage or accessory structures indicated; verify if any site flatwork or driveway paving is required.
- Window and door sizes are based on SmartTrace™ data; cross-check with architectural elevations for any discrepancies.
- HVAC duct routing and sizing are approximate; verify with mechanical engineer.
- Electrical load calculations and panel sizing should be confirmed by electrical engineer.
- No fire sprinkler system indicated; confirm local code requirements.

## **6. INCLUSIONS**

- All materials and components necessary for complete foundation, framing, envelope, interior finishes, and MEP systems as described.
- Standard residential windows and doors per SmartTrace™ data.
- Typical insulation and vapor barrier assemblies for WA climate zone.
- Basic plumbing and HVAC equipment and fixtures.
- Electrical devices and lighting fixtures as per plans.

## **7. EXCLUSIONS**

- Site landscaping, driveway, and exterior flatwork beyond foundation backfill.
- Specialty finishes or custom millwork beyond standard cabinetry.
- Appliances and furniture.
- Fire sprinkler system materials.
- Structural steel framing beyond typical wood framing connectors.
- Any alternate foundation systems such as piles or caissons.

## **8. ASSUMPTIONS & NOTES**

- Foundation to be continuous concrete footings with 8" stem walls based on structural sheets and WA residential code.
- Wood framing uses SPF lumber with standard dimensions and spacing (2x4 walls at 16" O.C., 2x10 floor joists at 16" O.C., 2x8 rafters at 16" O.C.).
- Roof framing is stick-framed; no trusses indicated.
- Insulation values selected to meet WA energy code for residential construction.
- Window and door quantities and sizes are from SmartTrace™ INTEL JSON files and verified against plan text.

- Drywall quantities include walls and ceilings throughout conditioned space.
- Flooring quantities exclude unconditioned or exterior areas.
- Mechanical and electrical equipment are typical residential units sized for 928 SF.
- No garage or accessory building included.
- All quantities are approximate and rounded to nearest practical unit.

#### **TAKEOFF ASSUMPTIONS (LOCKED FOR ACCURACY):**

- Foundation type: unspecified
- Slab thickness: 6 inches N/A
- Bulk excavation depth allowance: 1.50 ft

#### **CALCULATED VOLUMES:**

- Bulk excavation allowance: 51.56 CY