

Archispeak/English Dictionary

By Elizabeth Stuhlsatz and the BAC Community, with special thanks to Terry Duffy

Active Systems: (noun) Tools and approaches for designing for human comfort that rely on mechanical or electrical, or other energy-requiring systems. Examples would be a gas-powered furnace, an air conditioning unit, solar panels, and hot water heaters. See Passive Systems.

Adaptive Reuse: (noun) A design project that uses an existing structure as a base, (as opposed to ground-up construction, which starts from nothing) and redesigns it to some extent—this can be anything from small changes up to a total gutting of the interior and extensive additions/renovations.

Architect's Scale: a measuring system (or the actual ruler used in measuring it) which is divided into feet and inches. When drawing to scale, common scales are: $1/8" = 1'$ (or one eighth of an inch equals one foot), $1/4" = 1'$, and $1/2" = 1'$. See Engineer's Scale, Drawing to Scale.

As-Built: (adjective frequently used as a noun) Describes a set of drawings (possibly including plans, sections, or elevations) that reflect the current state of the building or site, before any changes or proposals are made. As-built drawings should include accurately measured dimensions. *We went out the job site today to take measurements so we can create the as-builts. Once we know what's there to work with, we'll start designing the renovation.*

Axonometric Drawing: (noun) A method of drawing a 3-D object to imply a 3-D view that differs from a perspective drawing. All lines parallel in the object are also parallel in the drawing; this can make the drawing seem distorted. Sometimes referred to as “axons.”

BIM: (noun) Building Information Modeling: an integrated set of concepts and software related to rendering and constructing a design. Essentially BIM is computer data (usually in 3-D) about the project that can be shared by the designer and the contractor, and is easier to manipulate by both than traditional CAD data. The most popular software package in use for BIM is currently Revit. (pronounced to rhyme with “limb,” not “B-I-M.”)

Biomimicry: (noun) A method or philosophy of design that patterns itself after nature. It can use literal shapes of natural objects, or principles of natural “design.” For example, *airplane wings can be shaped to look more birds' wings. Or, spider silk, which is very strong, can be studied to learn how to build stronger building materials.*

Bubble Diagram: (noun) A method for loosely planning out the spaces/rooms in a design by sketching them in rough shapes, instead of designing down the fine details. It is used to propose schematic relationships in architectural space. *My bubble diagram shows that the dining room should be near the kitchen.*

CA: (noun) Contract Administrator or Construction Administrator. The person in a design firm in charge of managing the process of seeing the design through to construction and interacting with the contractors. Can also stand for Construction Administration.

CAD: (noun) Computer Aided Design; software that allows 2-D and 3-D rendering of designs. The most common program is currently AutoCAD. Using CAD is referred to as drafting or rendering.

CDs: (noun) Construction Drawings, Construction Documents, Contract Drawings, or Contract Documents. The finely detailed set of drawings sent by the architect to the contractor that the contractor uses to actually build the design.

Codes: (noun) Building codes, usually determined by the state, regulate health, safety, welfare, and access issues.

Concept: (noun) The “big idea” that the design project is trying to express/explore/test. Ideally, every part of the project can be described in terms of the concept, from the materials choices, to the site design, to the floor plan. The concept may originate from the site analysis. The final project translates it into a built form.

Concept Drawing/Model: (noun) An abstract visual expression of the concept. These can be a rough sketch or a polished model, but they are attempting to convey an idea, not something that can be built.

Contour Lines: (noun) are drawn on topographic maps to show elevation and how steep the slope of the land is. The lines connect points at the same elevation, usually in reference to sea level. If you are hiking on a mountain and walked following a contour line, you would stay at the same elevation. If you walked across contour lines perpendicularly, you would either be climbing or descending. The closeness of the lines also provides information; the closer the lines are together, the steeper the slope will be. (See: Topography)

Deciduous: (adjective) Deciduous trees lose their leaves during periods of adverse weather conditions, such as winter or droughts, as opposed to evergreen trees, which keeps their leaves (or needles) all year long. Knowing which type of tree species you are dealing with is an important consideration in landscape design.

Detail: (noun) A drawing of a portion of a design enlarged to show more information, usually with labels indicating materials, dimensions, finishes, scale, and construction methods. Can also be a verb, to detail—to create these drawings.

Detailing: (noun) A branch of knowledge within architecture, it implies a knowledge of how building materials work with each other and the environment at places where they join together, for example when a wall meets a roof. Detailing is also the ability to create detail drawings that reflect this knowledge.

Diagram: (noun or verb) An abstract visual expression of an idea or set of information, or as a verb, to create such an expression. A diagram is not a literal representation of reality (like a photograph). It instead focuses on a specific aspect (of the building, the site, the idea) and tries to convey important ideas through simplified drawings, symbols, maps, colors, or shapes. Diagrams can simplify a complex idea, can show the relation of parts of ideas to whole ideas, or a series of diagrams can look at several different aspects of one larger idea and how they relate to each other.

Documentation: (noun) The collection of information about the existing site or building for a project, with no attempt at analysis and no conclusions drawn. It may consist of photographs, maps, or raw data. Documentation is often a first step towards site analysis, but these concepts are distinctly different, as analysis attempts to make conclusions from the information documented. See Site/Building Analysis).

Drainage: (noun) The movement of water on a site.

Drainage Structures or Systems: (noun) Designed and built elements that direct the flow of water on the site. Open or surface drainage structures, such as gutters, swales, or ditches, move water over land. Closed or subsurface structures direct the flow of water underground.

Drawing to Scale: (noun or verb) The process of creating an accurate, realistic drawing of an object that is bigger than the page or screen it is drawn on. Scale drawings preserve all the measurements of the larger object, but the measurements are proportionally shrunk down. To do so, a specific scale is used (See “Architect’s Scale” and Engineer’s Scale.”) For example, if you are creating a scale drawing of a 4 foot by 4 foot cube, and your scale is 1” = 1', you will draw a cube 4 inches by 4 inches. The scale of the drawing should always be listed on the page or screen so the viewer knows what scale was used.

Elevation: (noun) 1. A drawing showing an object essentially as if you’re looking straight at it, but it is not in 3-D. 2. The altitude of a location relative to a reference point, such as sea level.

Engineer’s Scale: (noun) A measuring system (or the actual ruler used in measuring it) which is divided into feet and tenths of a foot, not the traditional inches. When drawing to scale, one typically uses scales that are 1"= 10', (or one inch equals ten feet), 1" = 20', 1" = 50'. Fractions of a foot in engineer's scale are expressed as decimals. This means that ten feet four inches in architect’s scale would be expressed as 10.33 feet in engineer’s scale.

Envelope: (noun) A building’s outer shell, including its walls, roof, and floor, seen as a whole: also called its “skin,” though this usually just means the walls and roof. The “facades” refer to the walls on the various sides of the building (the east façade), but not the roof or floor. See Skin, Façade.

Erosion: (noun) The removal of soil, rocks, and plants, due to weather such as rain, storm water runoff, or wind, or due to human use of the site.

Extrude: (verb) To translate 2-D information or forms into 3-dimensional form and space, by “pulling” them up and out into 3-D. It is also the operation one uses with a Play-Doh pumper to make Play-doh forms. *In her final model, she extruded the square shapes of her concept drawing up into a series of towers.*

Fabric: (noun) In architecture, refers to the parts/elements, the materials, that make up a whole; usually in a larger urban context. *The Back Bay is an urban fabric made up of townhouses and a regular street grid.*

Façade: (noun) Usually the front of the building, but it can be any side. *The west façade of the cathedral is the most ornate.* It’s also used to describe the side of a building when one material is a cover or veneer for another, as in *The front of the building is a brick façade over structural steel columns.* However, the word does not automatically have the metaphoric connotation of “falseness” as when we say “her face was just a façade.”

Figural Space: (noun) This concept refers to the three-dimensional qualities of how a space has been designed. First, imagine filling a room with water. Then freeze the water and take the ice out as one unit. That ice is the shape of the space in the room. Certain spaces have been designed to make you aware of “the shape of the ice.” They don’t just feel like floors and walls; they feel like containers of space. The “ice” has an interesting shape and you experience this in the space. These spaces are described as “figural spaces.” The Pantheon in Rome is an example, as is the Christian Science Center Plaza in Boston. If a place does not make you aware of being in a shaped space, if you can’t imagine “what the ice would look like,” it is not figural. City Hall Plaza in Boston is not figural.

Fill: (noun) Refers to soil added to a site to alter the level of its surface (see Grading). *We added six tons of fill to the lower end of the site.* Fill can also refer generally to the whole area that has been altered by adding the soil. *The land by the school is fill; none of it is original. It used to be a swamp.*

Finished Grade: (noun) The completed surfaces of lawns, walks, roads, etc., after design work has been done on the site. See Natural Grade, Grading.

Footprint: (noun) Literally, the size and/or shape of the space on the site occupied by the building. *The home’s footprint is a 1 000 sq. ft. rectangle; the renovations will add an additional 500 sq. ft. on the east side.*

Metaphorically, it is the impact the building has on its site and the larger environment. *This renovation, by using recycled materials, has a much smaller footprint than our average projects.*

Gradient: (noun) The degree of inclination of a surface, road or pipe, usually expressed as a percentage.

Grading: (noun) The modification of the natural ground surface. Grading can either lower the ground level or raise it. This can be done for drainage purposes and to establish a sense of space in a designed landscape.

Green Roof: (noun) A roof system that uses plantings on the roof of a building, from moss up to full-grown trees. This has many environmental benefits from preventing water run-off, saving on heating and cooling costs, providing users with a roof garden, and providing birds a place to roost in the city.

GIS: (noun) Geographic Information Systems: this refers to a set of concepts for collecting, processing, and presenting data on geography and other spatially linked information, such as demographics. There are many different GIS software programs. GIS data is often presented as a series of maps accompanied by other tables or charts. GIS software allows for research and analysis of geographical data.

Hydrologic Cycle (Water Cycle): (noun) The natural cycle of water movement, from rainfall, to rivers/oceans, to evaporation back into the clouds, to rainfall. Human development disturbs this cycle in a number of ways which can increase the severity of floods. It is therefore important to design the site with an awareness of cycles of water movement.

HVAC: (noun) Heating, Ventilating, and Air Conditioning. (pronounced either H-V-A-C or H-vack)

Illustrator: (noun) A software program, part of the Adobe Creative Suite (Adobe CS), which can be used to create diagrams.

Impervious: (adjective) Used to describe a surface that does not allow water to pass through it, such as asphalt and concrete. These surfaces cause water runoff. It is considered better practice, wherever possible, to use pervious/permeable surfaces and allow water to be absorbed into the ground.

InDesign: (noun) A software program, part of the Adobe Creative Suite (Adobe CS), used for document creation, such as portfolios, pin-up boards, posters, pamphlets, and papers: essentially any document where the goal is combining words and images.

Invasive: (adjective) describes plants that are not native to the region in which they are growing, and therefore have a tendency to push out the native plants. It is generally considered good practice to use native species in laying out plantings.

Iterate: (verb) Literally, to repeat, but when used in a studio class means “to repeat with variations,” or to take an idea and develop it further by recreating it until an “a-ha” moment happens. *I did five iterations of my model; one used circles, one squares, and three had different sizes of triangles. I realized my fourth iteration was the strongest expression of my idea and so I iterated it again, adding more triangles.*

Laser Cutter: (noun) A tool for creating 3-D physical models. The laser cutter machine takes a CAD file and uses a laser to etch the lines of the drawings onto a material such as cardboard or balsa wood.

LEED: (noun) “Leadership in Energy and Environmental Design” is a set of standards for green building design and construction. A building can be LEED rated, and a designer can be LEED certified. There are different ratings levels/certifications, as well as specialty areas within LEED. (pronounced to rhyme with “reed.”)

Language: (noun) A building “speaks” a “language” of a certain style through its motifs, ornaments, layout, etc. *The language of the home is colonial, but there are references in it that speak to the Victorian period as well.*

Lynchian Analysis: (noun) A method of site analysis, described by Kevin Lynch in his book *The Image of the City*, which is used in many studio projects. It breaks an urban area down into five key concepts: paths, edges, districts, nodes, and landmarks. *Paths* are the important routes of travel (by any means—foot, car, train, etc.) *Edges* mark significant boundaries. *Districts* are noticeable segments of the city with their own character. *Nodes* are gathering points. *Landmarks* are significant features such as monuments. The point of the exercise is not only to document these five elements, but to create an understanding of the community and what is important in the space.

Massing: (noun) The general size and shape of a building, which may be worked out before any of the fine details. A massing model, which shows the rough shape and proportions of a building, can be created.

Master Plan: (noun) A large-scale plan that shows the theme and general arrangement of a design; a distinct feature of master plans is that they avoid specific details. They describe the scope and scale of the land and buildings, or the adjacencies among buildings, or a general circulation diagram. It may also give general guidance on approved styles and themes, and building usages. Master plans often include a written document that spells out possible completion dates, the strategic goals of the project, or the future vision of the organization. As a verb, to create such a plan.

Materials Board: (noun) Usually as part of an Interior Architecture studio project, students create a presentation board including swatches of their fabric and material choices, pictures of inspirational/influential furniture, and colors or patterns they will integrate into their interior space.

Mixed-Use: (adjective) A mixed-use building or development includes a variety of spaces such as residential units, stores, and restaurants.

Natural Grade: (noun) The undisturbed natural surface of the ground.

Orthogonal Drawing: (noun or verb) Drawings of floor plans, sections, elevations, and axonometric drawings. While this can refer to drawings done by hand or on the computer, the term orthogonal drawing at the BAC often means hand-drafting.

Parti: (noun) the main concept or idea that informs and shapes the designer's process and the design itself. There can also be a parti drawing or parti model, just as there is a concept drawing. (pronounced par-TEE).

Passive Systems: (noun) Tools and approaches to designing for human comfort that do not rely on mechanical or electrical systems. Examples of passive systems may be adding insulation to keep a building warm, orienting a building so its windows face south for better lighting, or planting trees to keep a building shaded during summer. The goal of passive systems is to reduce reliance on active systems, such as air conditioning, to save energy. See Active Systems.

Permeability: (noun) The ability of the soil to absorb water. It is good practice in working with the site to permit soils to absorb surface runoff water. A synonym for permeable which is frequently used is "pervious."

Perspective Drawing: (noun or verb) A method of 3-D drawing in which lines which are parallel in the real world converge on a vanishing point in the drawing to give the illusion of depth. Imagine a highway disappearing off into the distance.

pH: (noun) A measure of alkalinity or acidity. A pH of 7 is neutral, ranges from 0-7 are acidic, and from 7- 14 are alkaline (also known as basic.) A pH value of 6.5 in the soil is desirable, since it helps many food plants grow.

Phases of Design: (noun) the design process usually passes through a few recognizable phases. The terms for these phases are commonly used in the field and in classes at the BAC. 1. *Conceptual Design Phase:* the beginnings of the design process, where the vision and the scope of the design is established, usually in an abstract manner. 2. *Schematic Design Phase:* often abbreviated as SD, it is less abstract. In it, the designer does studies that establish which spaces will be adjacent to each other, and begins to establish the scale and general shape of the design. In SD, the designer works through rough sketches and models, and often purposely avoids making specific decisions about details and materials in order to look at the big picture. 3. *Design Development:* often abbreviated as DD, this phase is a refinement of the strongest ideas from SD. The designer makes specific decisions about scale, systems, materials, and textures. 4. *Construction Documents/Final Design:* In a firm, the design is brought to a level of detail where it could be turned over to contractors to be built. In a class, the design is completed and presented to the class.

Phenomenology: (noun) A philosophy whose main focus, in the context of architecture, is on the subjective sensory experience of the user, and the unique reality of individual places.

Photoshop: (noun) A software program, part of the Adobe Creative Suite (Adobe CS), used to alter or clean up existing images, to correct color, to create collages by combining images, or to add details such as captions or diagrams to images.

Pinups/Crits: (noun) In studio, students present their work regularly by “pinning up” (quite literally putting it up on the wall) and receiving feedback from their instructor and guest critics in sessions known as “crits.”

Plan: (noun) The plan is a drawing that shows a flat bird’s eye view of the layout of a space. In plans of buildings, it’s called a floor plan, and shows the space as if the roof were removed, and the walls were cut four feet above the ground; the walls are rendered as thick black lines.

Poché: (verb or noun) Literally, “to poché” is to darkly color in the areas on a plan which should be read as walls, so they stand out and are more easily read as solid objects. Poché also refers to the dark shading itself. Poché also has a more abstract meaning. If a building has particularly thick walls, and the architect designs to make the user aware of those walls (for example, by using niches, alcoves, and deep windows that cut into the walls), this design approach may be called “poché.” Pronounced “po-SHAY.”

Process Drawings/Models: (noun) Work that shows the concept or the project developing. These can be quite rough, but they represent the stages of the student’s ideas being iterated and expressed. They are not yet the final project, but they are more developed than the concept drawing. It is important that this work is included in the portfolio.

Precedents: (noun) Previous designs, buildings, artworks, or even abstract ideas, which have inspired or may provide a model for the current work. A precedent study is an analysis of these precedents, through images or words, or usually both.

Program: (noun, and also a verb, “to program.” See Programming.) The set of constraints on and requirements for the design, both quantitative and qualitative. For example, the program for a house might include that it needs to hold 3 bedrooms, have a large kitchen, a fireplace, fit onto a small narrow lot, cost less than a certain amount to build, have a view to the water, etc.

By extension, it can also be used to mean “the practical specifics of the project” in contrast with “the concept of the design,” as in: *Student: “I want to design a school, with 12 classrooms, and...” Instructor: “Wait, it’s too early to focus on the program. What’s your concept?”*

Programming: The process of determining the program. This can be done by interviewing the clients, conducting site analysis, analyzing precedents, drawing bubble diagrams, and doing preliminary schematic design.

Redline: (verb) to mark up a plan (section, elevation, or set of drawings) with corrections, additions, suggestions, so that the corrections can be added. Redlining can be done by hand or by software. The process of fixing these corrections is often called “picking up redlines.” *The principal of my firm redlined the construction drawings, and I entered the changes into AutoCAD.*

Retention Pond: (noun) A man-made pond-like area used to collect storm water runoff and control storm water flow. Retention ponds may have a permanent pool of standing water. Similar structures, known as Detention Ponds, dry out over time.

Revit: (noun) A 3-D software program used in BIM rendering.

Runoff: (noun) After a rainstorm, rain water will evaporate, percolate into the soil, flow off the site, or drain to some point on the site. The water that flows off the site is called runoff. Good site design practice tries to minimize runoff.

Schematic Design: (noun) Roughly planning out the design—for example, at this stage, you might think about what goes where, but not its final appearance.

Section: (noun) A type of 2-D drawing: imagine it as a vertical plane cutting through a space; the section drawing shows what is in the vertical plan and behind it, but nothing in front of it. Walls are rendered as thick black lines. “Cut lines” on a plan mark where a section has been taken; a section titled “A-B” will extend from points A to B on the plan.

Site (or Building) Analysis: (noun) Studies on the conditions existing at your proposed project. These may include maps, diagrams, observations, and photographs. Site analysis may look at circulation patterns on the site, sun and wind conditions, topography, site usage, and any other relevant research, and then makes observations or draws conclusions from them. Site analysis helps the student formulate a design that responds to the site conditions.

Skin (of the building): (noun) The outer shell, the façade, the exterior.

SketchUp: (noun) A software program that can create and modify 3D forms quickly and fluidly. It has a “library” of looks, textures, and features—for example, you can make your image look hand drawn, or show the daylight and shadows at a specific place and time of the year. For the beginner, SketchUp is probably the quickest program to learn and to get useful results from.

Speak: (verb) How objects/spaces/buildings relate to each other. Or, how the building expresses a style. See entry for “language.” *The ornate furniture speaks to the Louis XV influences on the house.*

Soil Types: (noun) The upper 6-8 inches of soil is referred to as topsoil. Below is a more compact, less fertile layer called subsoil. Soils that are moved in by wind, water, or glaciers are called transported soils.

Starchitect: (noun) Shortened form of “Star-architect,” it refers to an iconic celebrity architect such as Frank Gehry.

Storm Water Management: (noun) Is the process of designing for the collection and disposal of surface and subsurface water running through the site during stormy weather, through the use of the site’s natural features, drainage structures, retention and detention ponds, swales, or other features as needed.

Structures/Structural Systems: (noun) A branch of knowledge that seeks to understand the forces in a building, bridge, or other construction, such as gravity, tension, compression, stress, and strain. Structural analysis of a building or bridge can help determine what type of material to choose in the design, how much of it to use, and how to construct the building or bridge so that it is safe to use. In practice, most of this work is done by structural engineers, but architecture and design studies students will still be introduced to the main principles of this field.

Swale: (noun) A ditch or long depression in the ground, either man-made or naturally occurring, which collects surface water and moves it from one point to another.

Tectonics: (noun) This concept relates to the material and structural relationships of the design, and how those relationships communicate something about the design’s concept as well as how it was constructed. A design is described as “tectonic” if it expresses its structure/materials openly. *My concept of “connection and compression” is communicated tectonically through the connections between the posts and beams and the way the posts touch the ground.*

Topography: (noun) The study of the 3 dimensional features of a surface or site, which can be shown in a topographic map, which is a two dimensional representation of these three dimensional forms. *The topography of the area is mountainous and contains many rivers.*

The Trades: (noun) Term used by contractors, plumbers, electricians, and associated fields to refer to their collective professions. *I’ve been working as a general contractor for years; I hope my extensive experience in the trades will carry over into practice here at the BAC.*

Translation: (noun) The various ways in which the concept is expressed in the project. *My concept was “weaving,” so I translated this through my materials by using lots of wicker furniture.*

Transparency: (noun) A design can be not only literally visually transparent, but also by being conceptually transparent (open, visible, unmistakable) it can signal clearly to the viewer what is its purpose. *The Chinatown Gate is a transparent border between two*

neighborhoods. Glass bus shelters are functionally transparent; you'd never mistake them for anything but an uncomfortable place to wait for a bus.

Typology: (noun) A building type, classified based on various characteristics.
The suburban single-family-home on a big lot with a 2 car garage is the "American Dream," but given our current environmental and economic situation, perhaps we should examine other typologies.

Vernacular: (noun or adjective) The traditional local or regional style, method, and materials used to design and build. Vernacular is not one particular style or method; every region has its own vernacular, for example, New England vernacular, Swiss vernacular, etc. However, architects will refer broadly to "the vernacular" when discussing the general concept of using regionally-specific building methods.

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