

REPRESENTAÇÃO GRÁFICA EM PROJETOS DE ARQUITETURA DA PAISAGEM

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FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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1 ALGUNS PADRÕES DE NORTE E ESCALA GRÁFICA

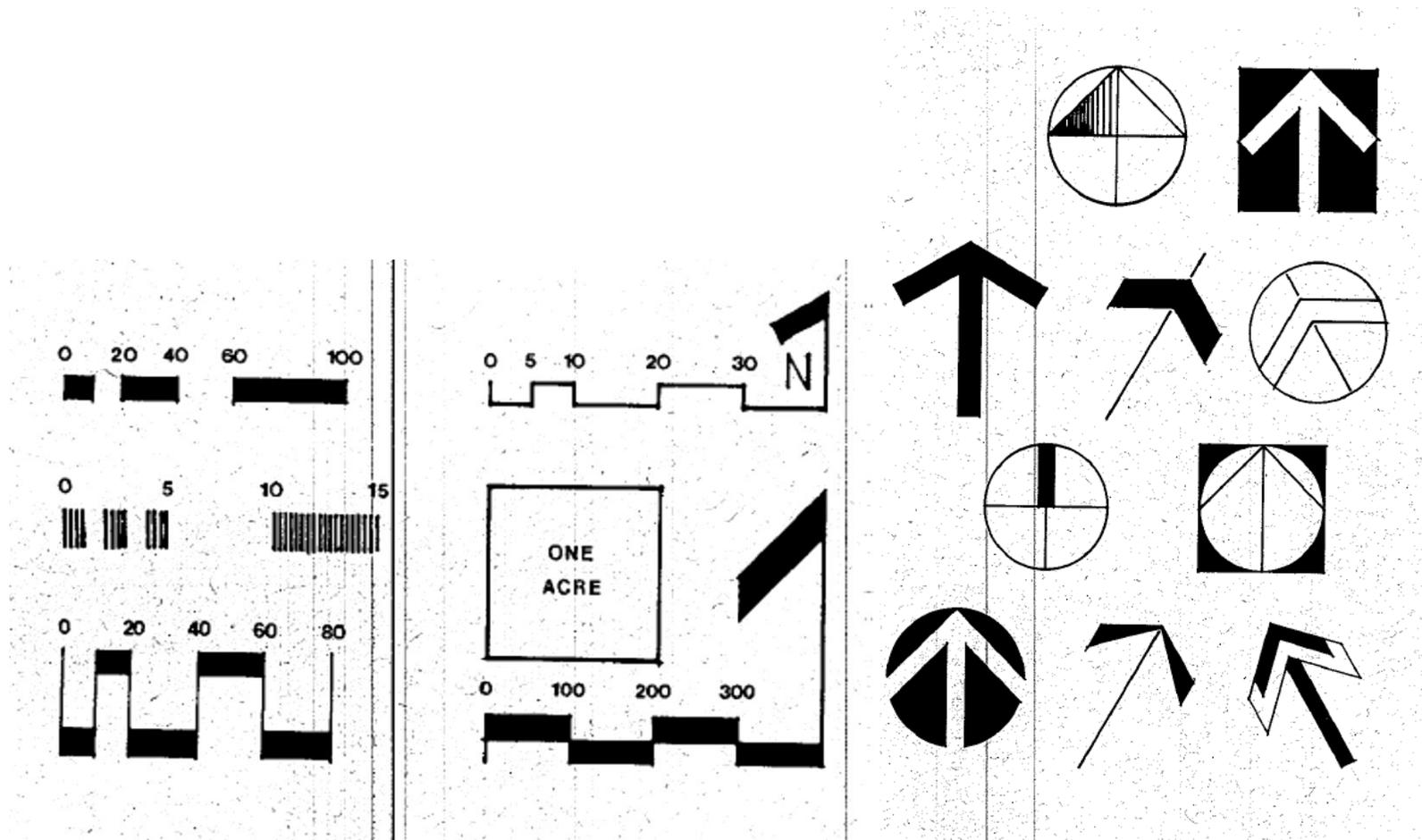


Figura 1-. FONTE: Reid, G. (2002). *Landscape Graphics*. New York: Watson-Guption.

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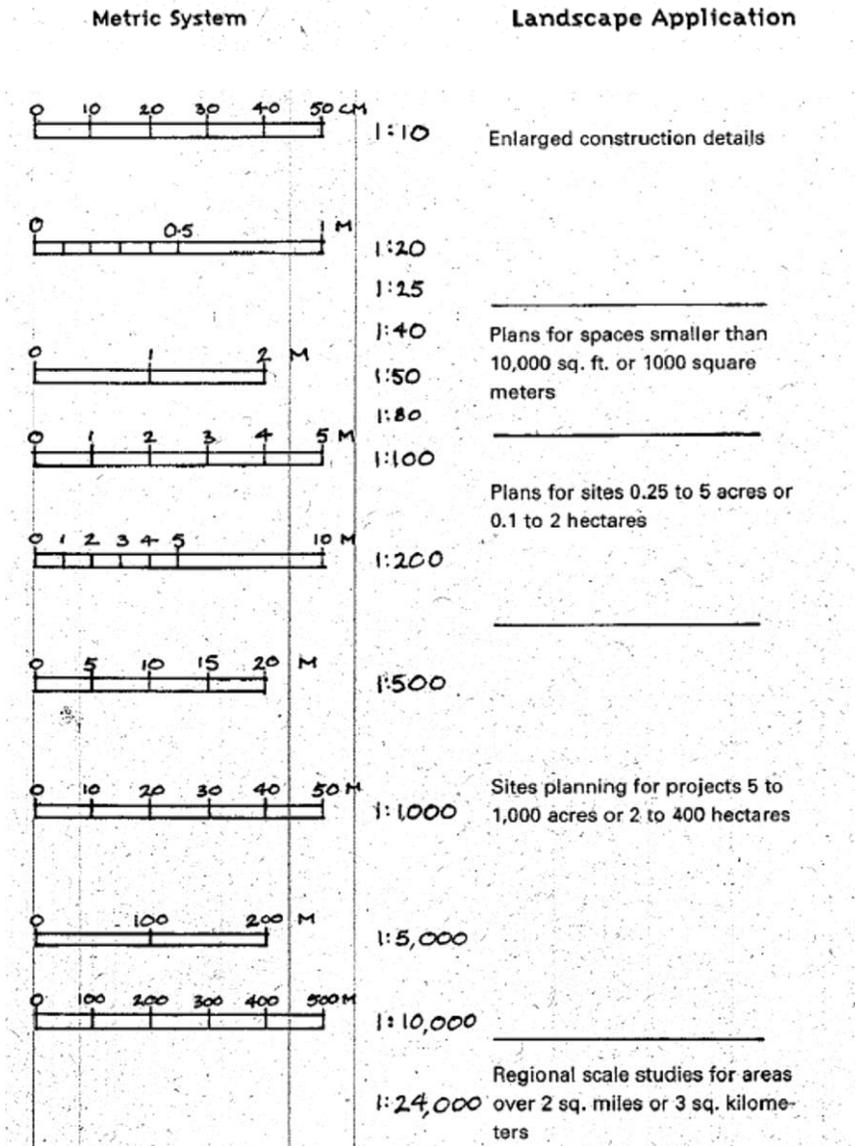


Figura 2- Padrão de utilização das escalas gráficas - conforme escala do desenho e área da região representada, escolhe-se um comprimento de escala mais adequado.. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption.

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2 CALIGRAFIA DE ARQUITETO - DICAS

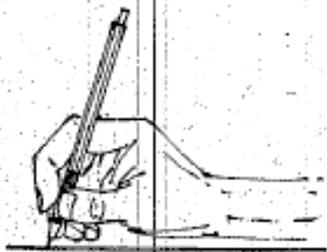
Para a letra:

A B C D E F G H I J K L M N N O P Q R S S T U V W
X Y Z 1 2 3 4 5 6 7 8 9 0

(LEFT OF THE CENTER ROW
(IS THE 2/3 ROW WHICH GIVES
(A SLIGHTLY RAISED MIDDLE
(GUIDELINE

Tipo de pegada:

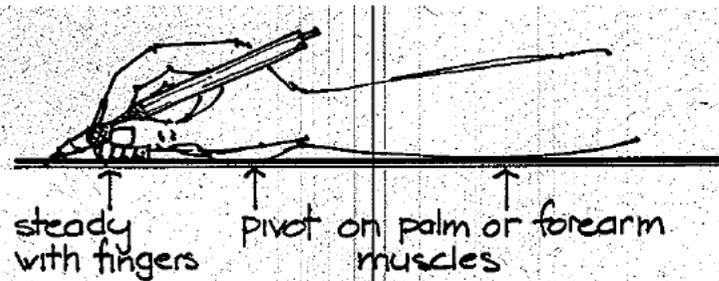
Wrong: Pencil too vertical.



Right: Pencil held at a low angle.



Não mova os dedos. Use o fim da palma ou os músculo do ante-braço como pivô.



Repare na leve inclinação pra cima das horizontais...

A small wrist movement may be necessary for horizontals. Remember: Make thin verticals with strong ends and thick, dark horizontals. As the lead wears down, simply rotate the pencil slightly to place the new chiseled side against the vertical guide and thus maintain the narrow verticals.

E F H I L T

Diagonal strokes and circular strokes are done with an even pressure. Some variations of line width will occur as a result of direction change. Do not move wrist or arm position. Move the vertical guide away and use quick, confident strokes with adequate pressure.

A K M N V W X Y Z
B C D O P Q R R S S

Figura 3- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption.

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3 DICAS DE DESENHO À MÃO

Sobre a adequação dos traços:

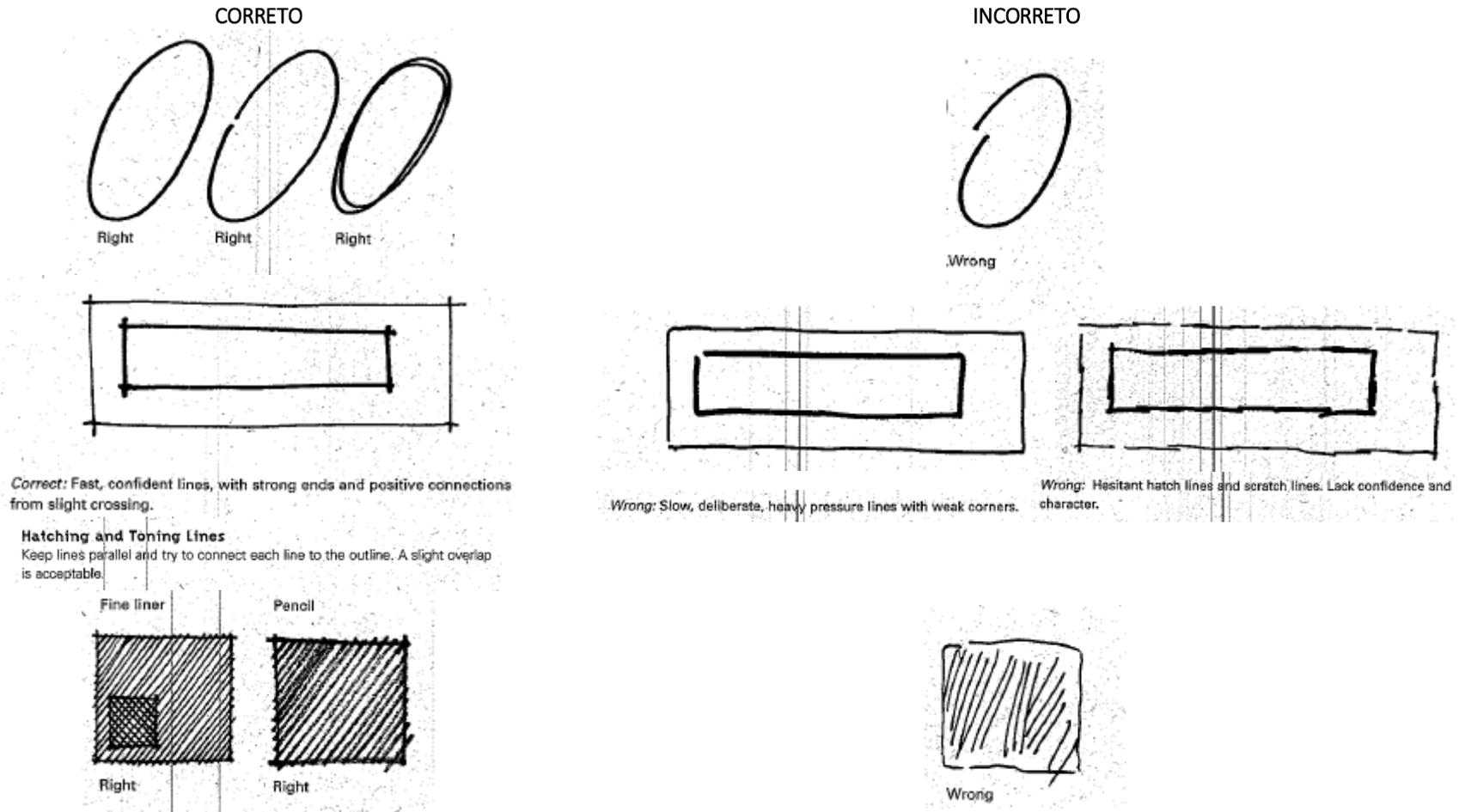


Figura 4 - FONTE: Reid, G. (2002). *Landscape Graphics*. New York: Watson-Guption

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Para conseguir desenhar retas e curvas longas com traços contínuos, lembre-se de ajustar a postura: nem seu punho, nem seu antebraço tocam o papel. Seu punho também não se dobra (só de dobra quando se faz traços curtos, menores que 3cm e traços de hachuras, por exemplo). Todo o braço faz o movimento usando o cotovelo e ombro como pivô. Seu dedo mínimo (mindinho) ajuda a dar estabilidade deslizando sobre a folha.

Não adequado
Don't curl your fingers under or hold the pencil in a "death grip."



Adequado

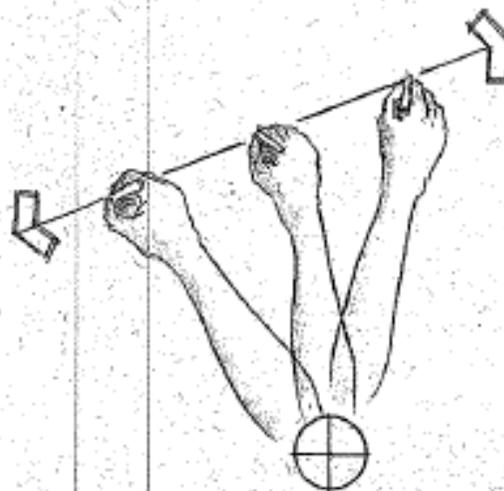


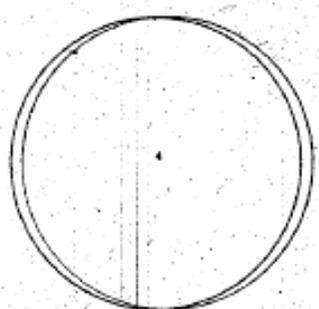
Figura 5- FONTE: Reid, G. (2002). *Landscape Graphics*. New York: Watson-Guption

4 REPRESENTAÇÃO GRÁFICA EM PROJETO

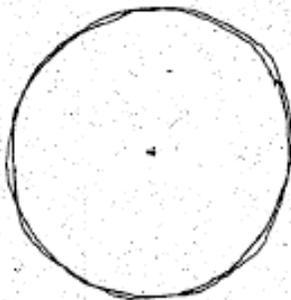
4.1 VEGETAÇÕES EM PLANTA

Quick Trees

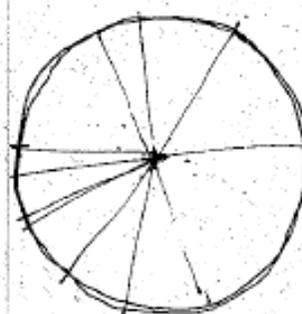
These are the fastest symbols for deciduous trees and adapt very well to the application of color. Start with a light circle template guideline. Always place a dot in the center.



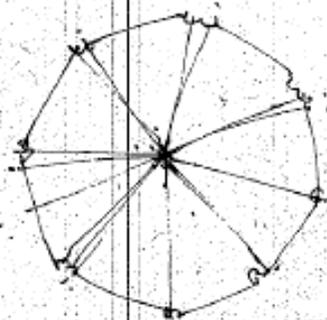
Single or double circle template outline



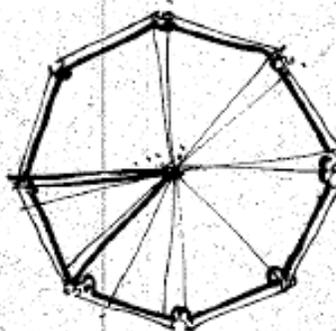
Freehand double outline



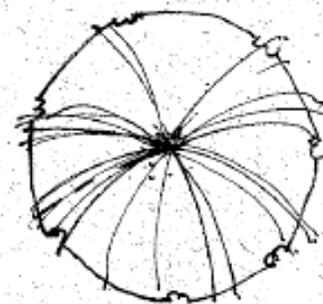
Double outline with a few radial lines



Outline with small Ws connected to double radial lines



Thick and thin double outline



Outline with curved radial lines

Figura 6- Representação simplificada de árvores em plantas "árvores rápidas".

FONTE: Reid, G. (2002). *Landscape Graphics*. New York: Watson-Guption

Foliage texture trees

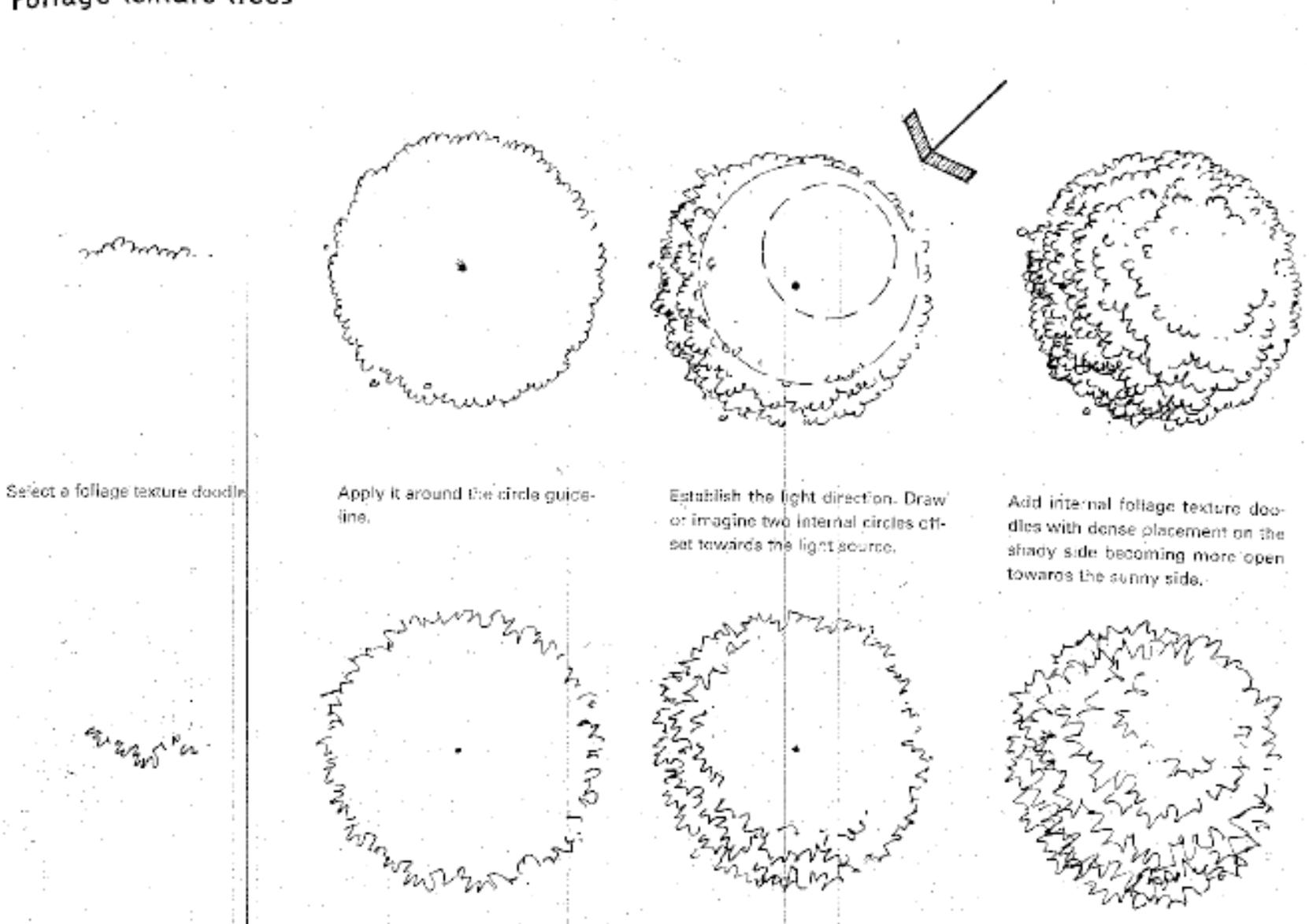


Figura 7 - Representação de árvores indicando desenho simplificado de folhagem.. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

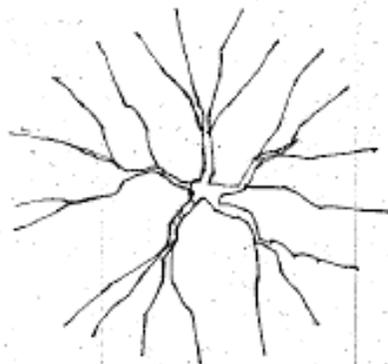
Branch pattern trees

Good for showing winter effects, layering other symbols underneath, or simply adding contrast to outline plant symbols:

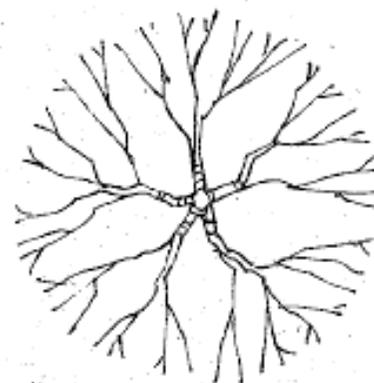
Sequence



Start with five main branches within the circle guideline.



Add secondary branches starting at an internal branch and finishing at the guideline.



More small branches emphasize the edge.

Other branched trees

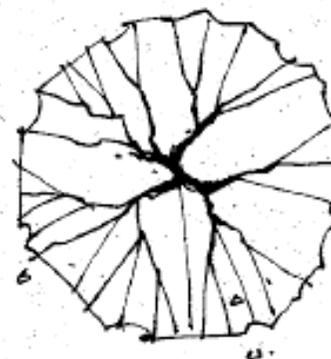
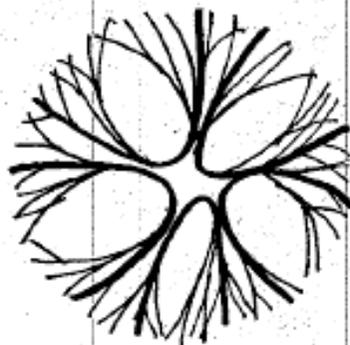
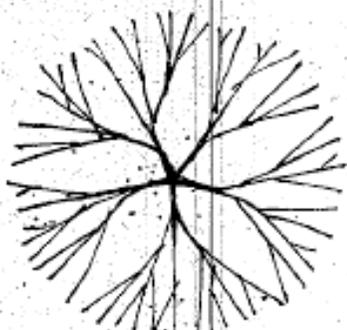


Figura 8- FONTE: Reid, G. (2002). *Landscape Graphics*. New York: Watson-Guption

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Branched pattern trees for larger scale plans 1/4" = 1'-0" or 1:50

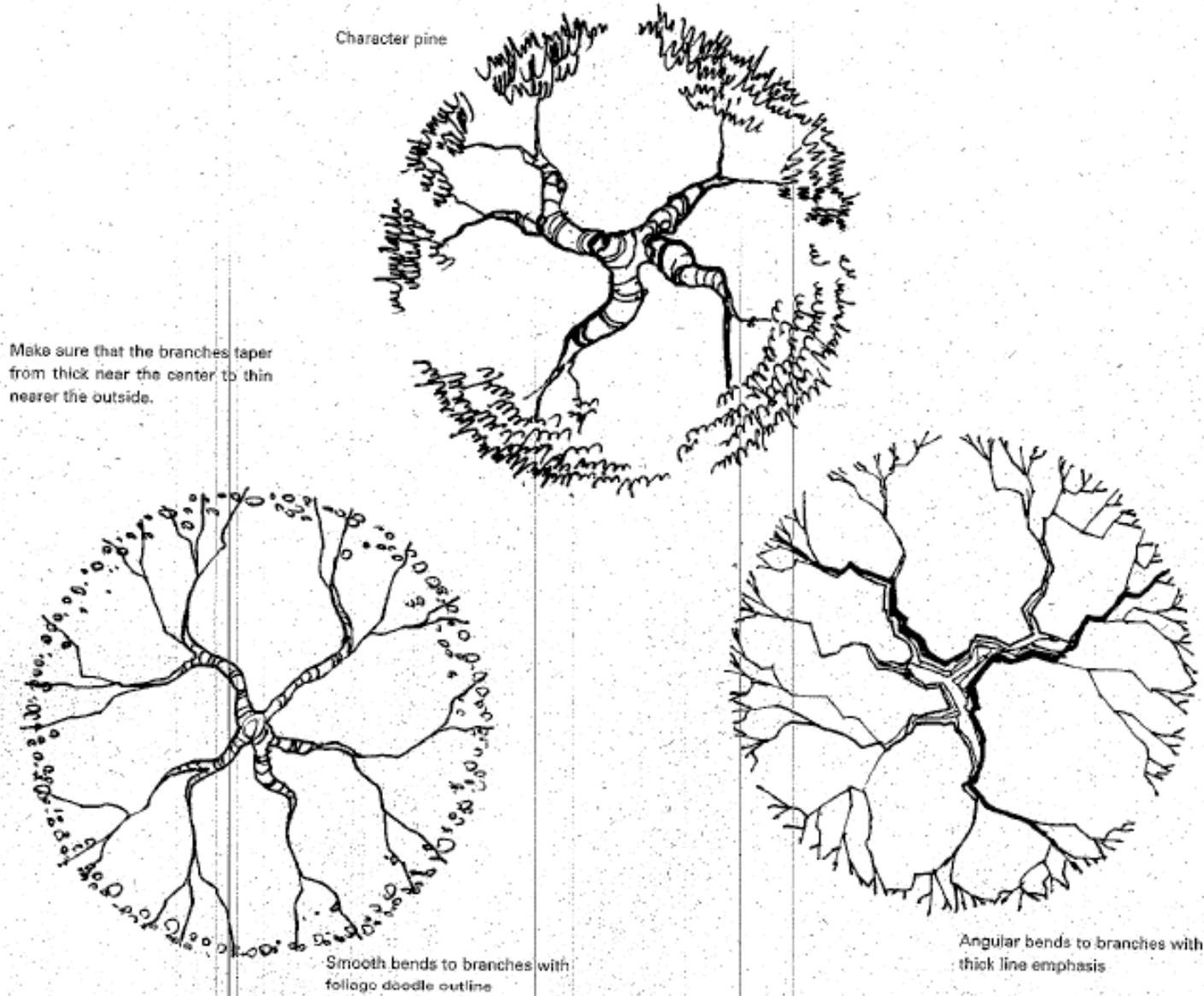
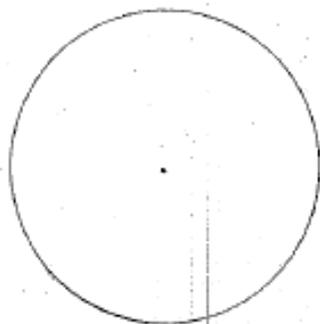
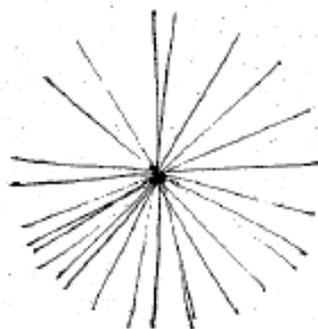


Figura 9- Representação de árvores com indicação do tronco mais detalhado.
FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

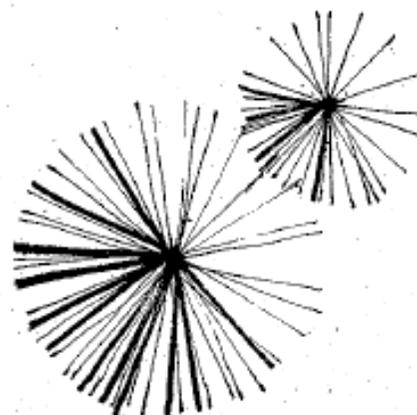
Coniferous trees



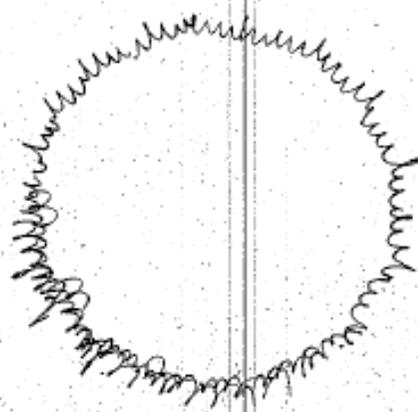
As usual start with a light guide-line center point.



Place freehand lines from one side to the other directly through the center point.



Add more lines from the center to the edge on the shady side. A few thicker lines add character.



Other quick symbols for conifers

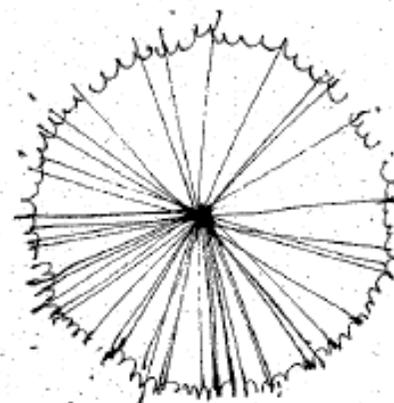
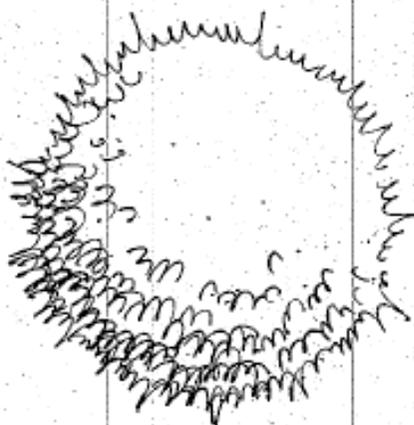


Figura 10- Representação de coníferas simplificadas e mais detalhadas. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Tropical Plants

Bold, coarse, textured foliage

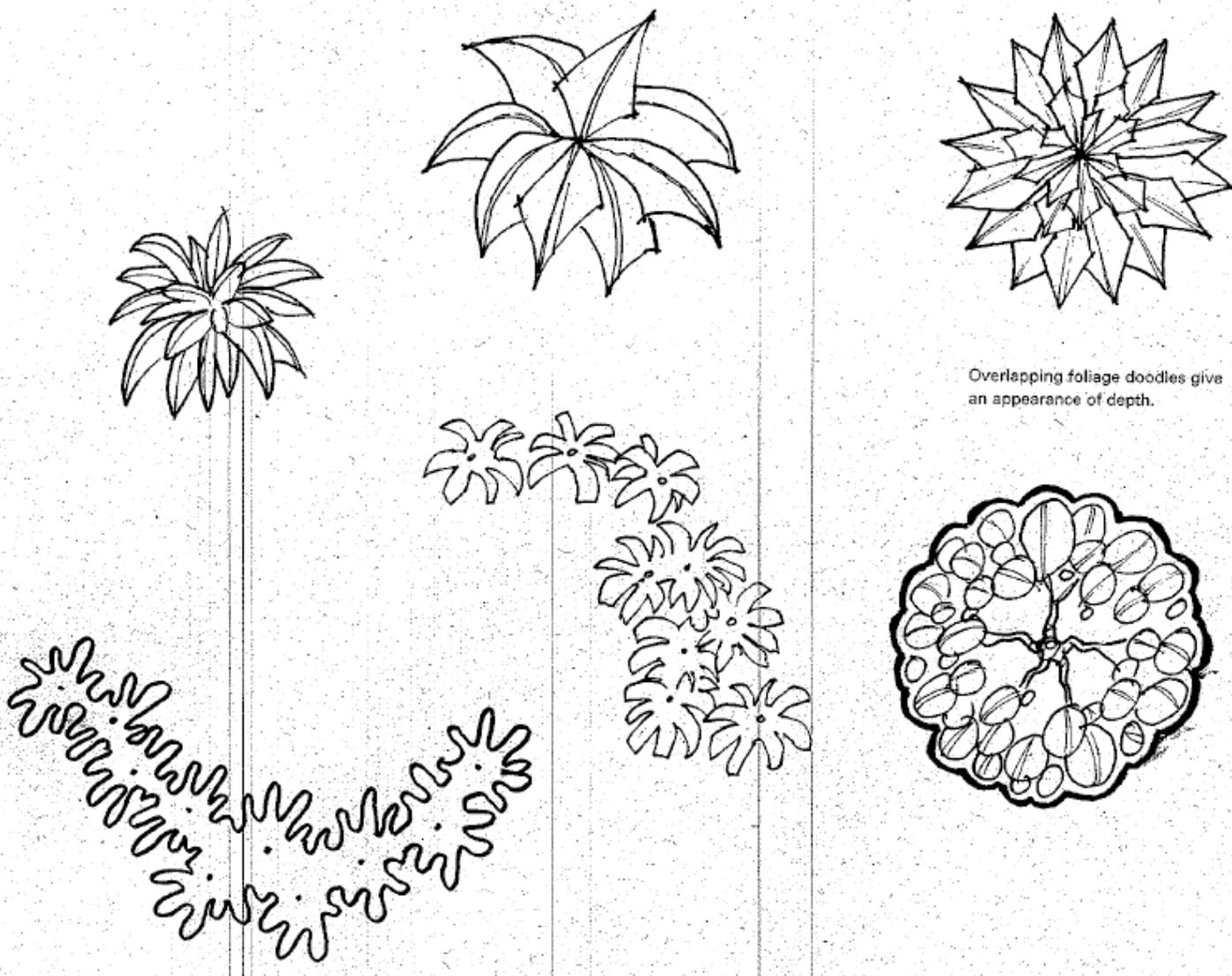


Figura 11- Plantas tropicais representadas com suas folhagens sendo destacadas. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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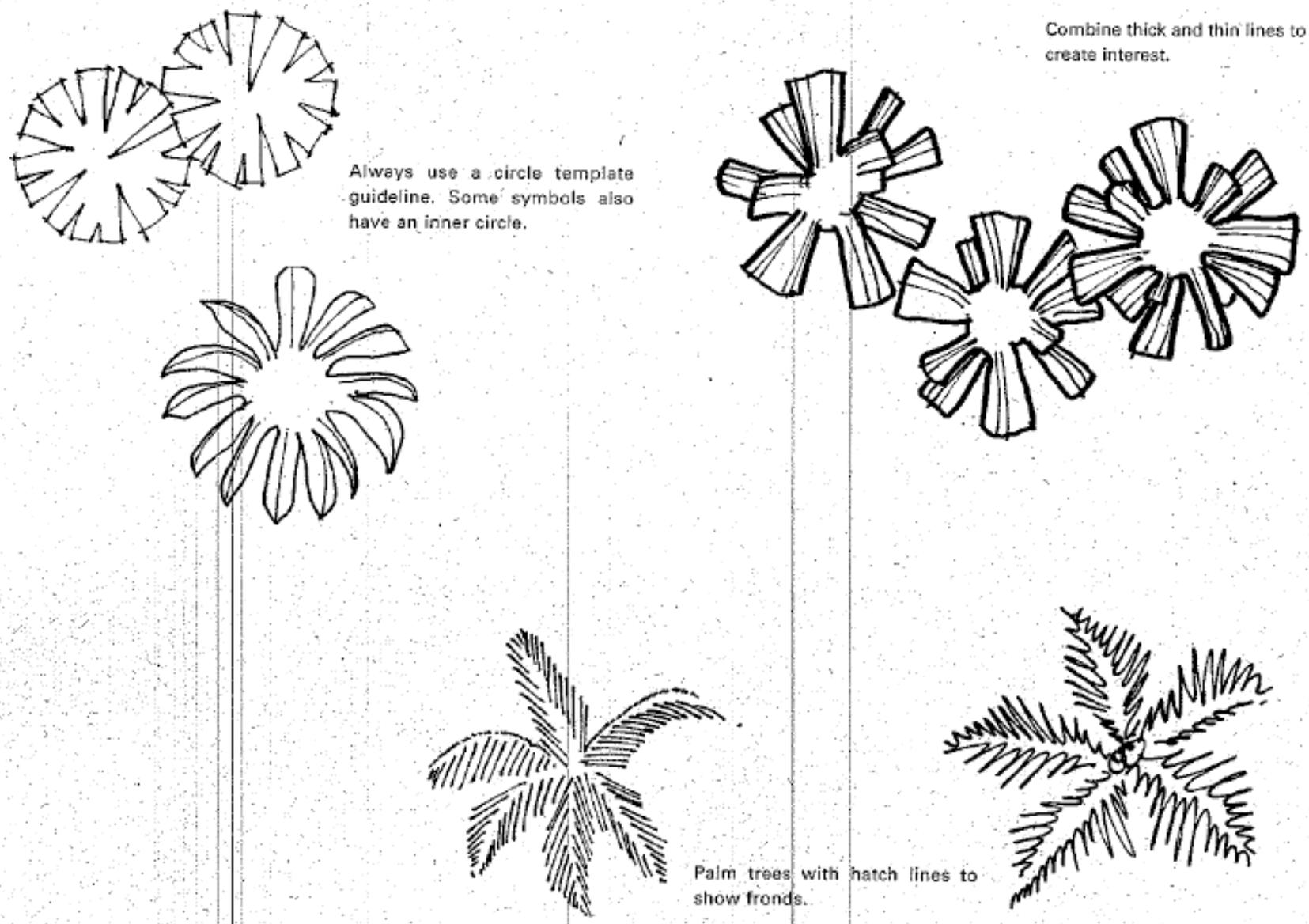


Figura 12- "Plantas tropicais" -palmeiras. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Desert Plants

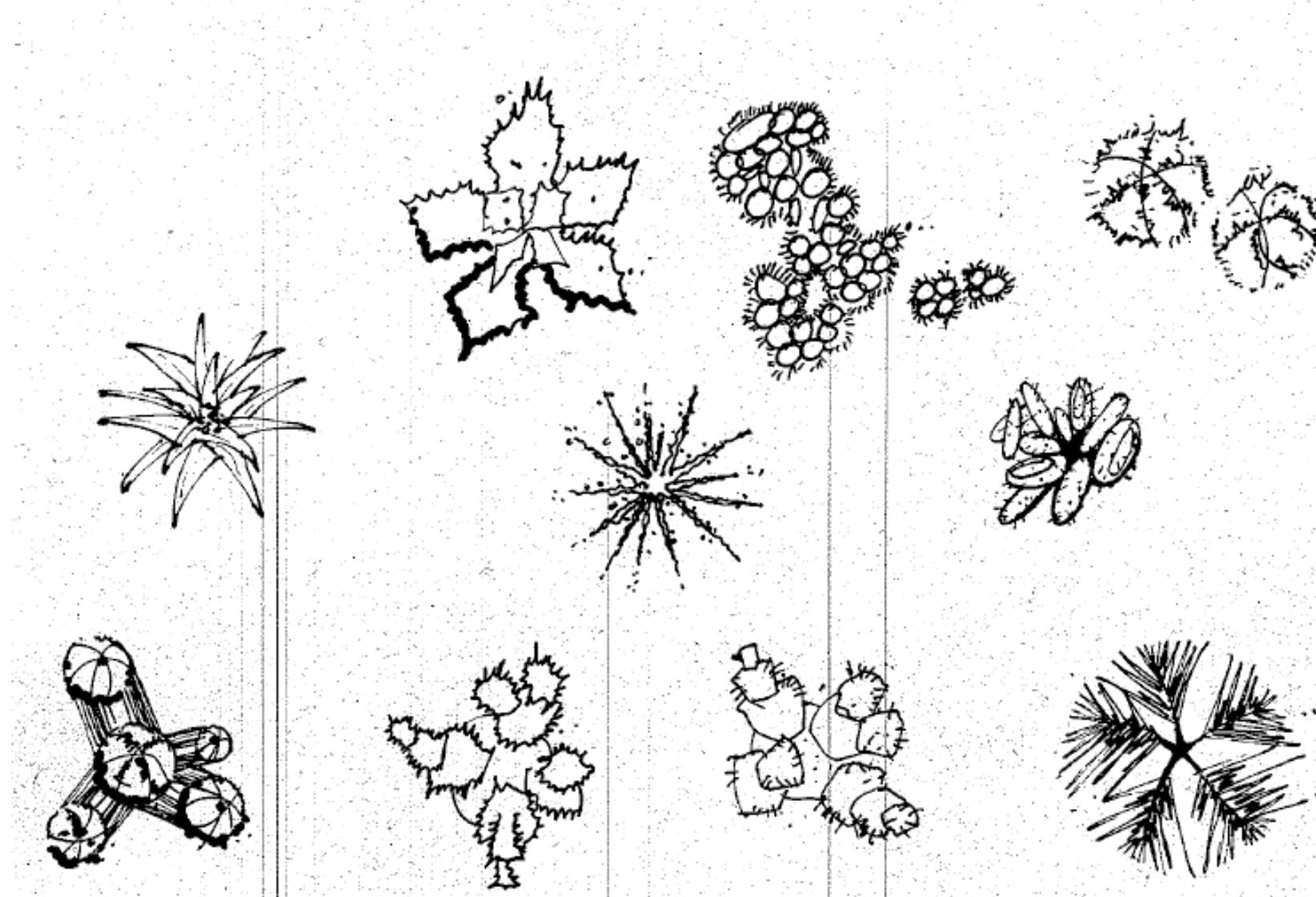


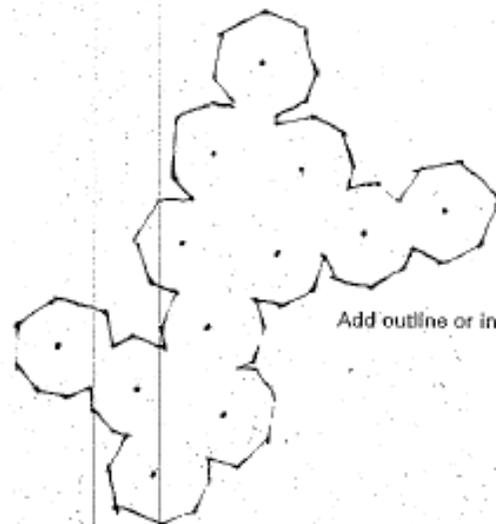
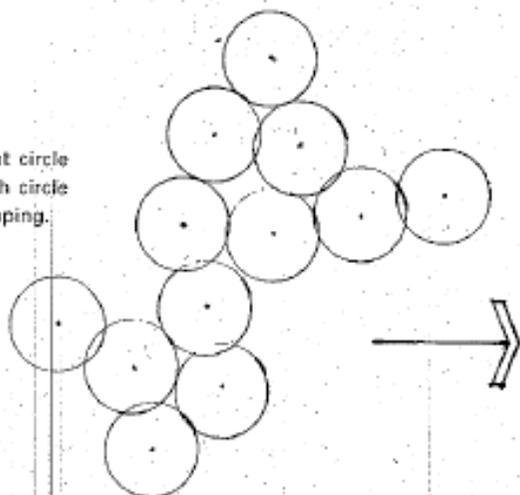
Figura 13-“Plantas do Deserto”. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Shrubs

These can be drawn using smaller replicas of tree symbols. Usually these would be in larger groups.

Start with a cluster of light circle template outlines with each circle touching or slightly overlapping.



Add outline or internal texture.

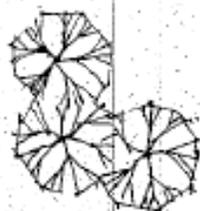


Figura 14-
Representação de
arbustos.
FONTE: Reid, G.
(2002). *Landscape
Graphics*. New York:
Watson-Guption

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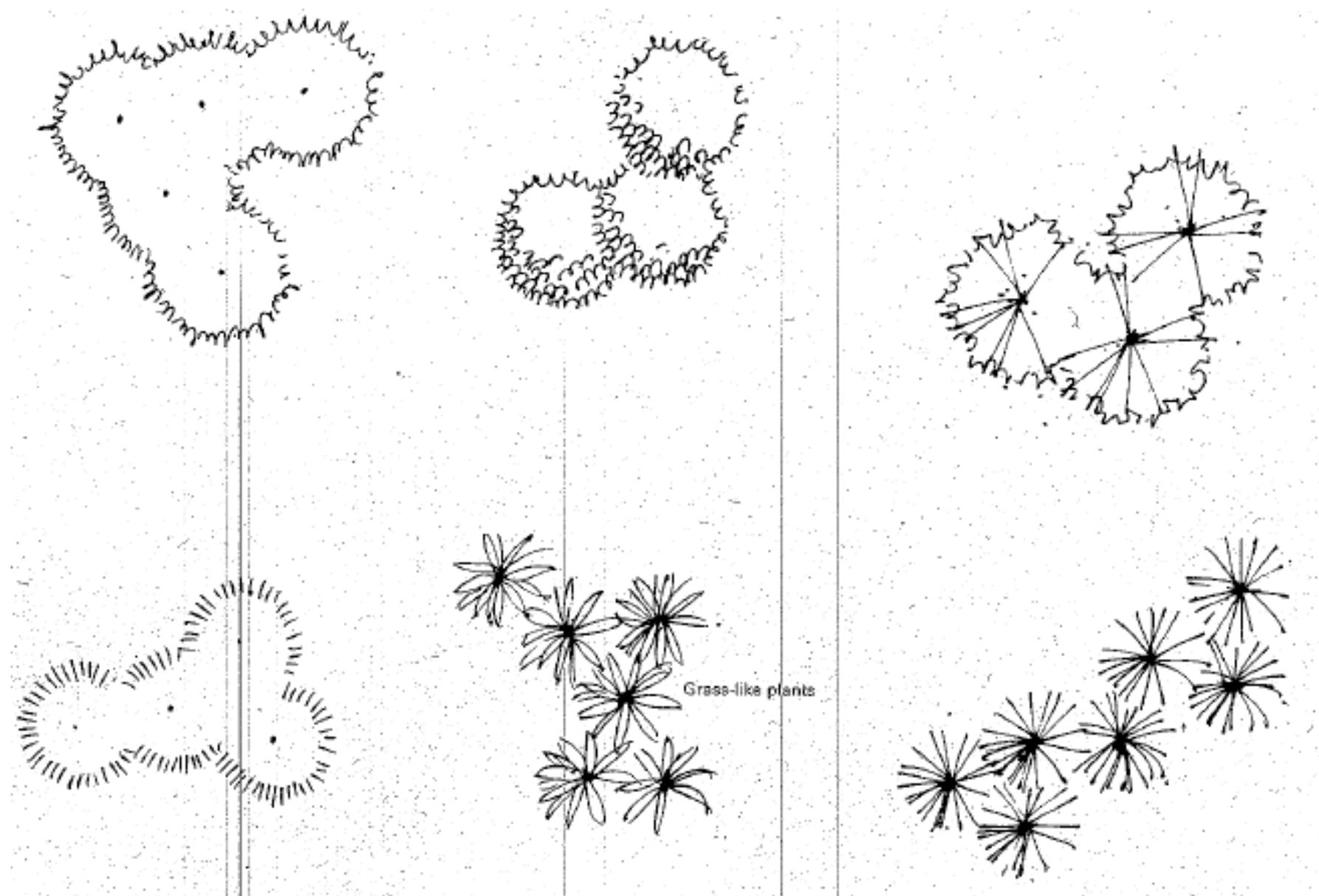


Figura 15- Representação de arbustos. FONTE: Reid, G. (2002). *Landscape Graphics*. New York: Watson-Guption

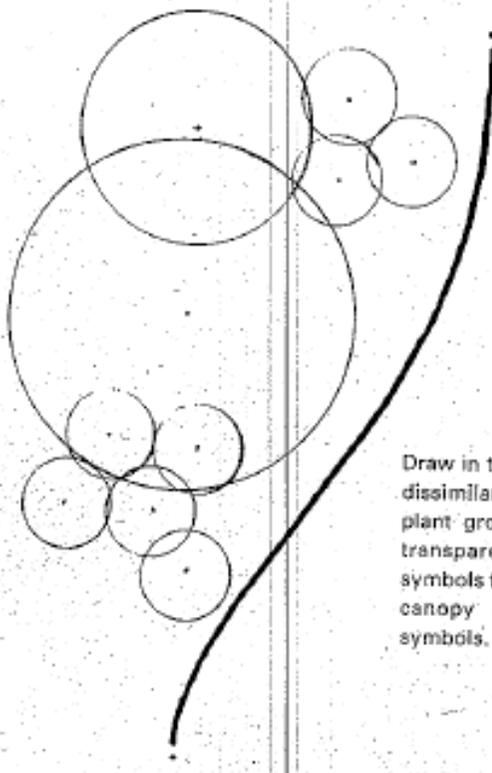
Composite Planting Plan

When putting all the plants together you need to think about **layering**, **symbol identity** and **tonal balance**.

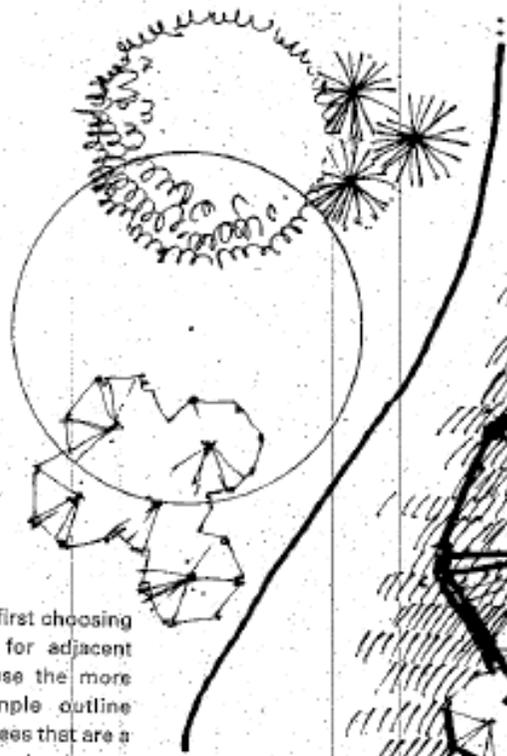
Layering is where some symbols overlap or appear to be underneath others. **Symbol identity** refers to the ease of distinguishing one group of plants from another.

Tonal balance is the contrasting densities of lines or tones of lines. This is less important if you intend to add color but becomes very important if your plan has to read well in black and white.

Pencil in the sizes and placements of plants with the circle template. Larger plants usually overlap smaller ones.



Draw in the shrubs first choosing dissimilar symbols for adjacent plant groups and use the more transparent or simple outline symbols for larger trees that are a canopy over other landscape symbols.



Add the trees and ground cover last, making decisions on how much texture and tone are needed. Try different pen sizes.

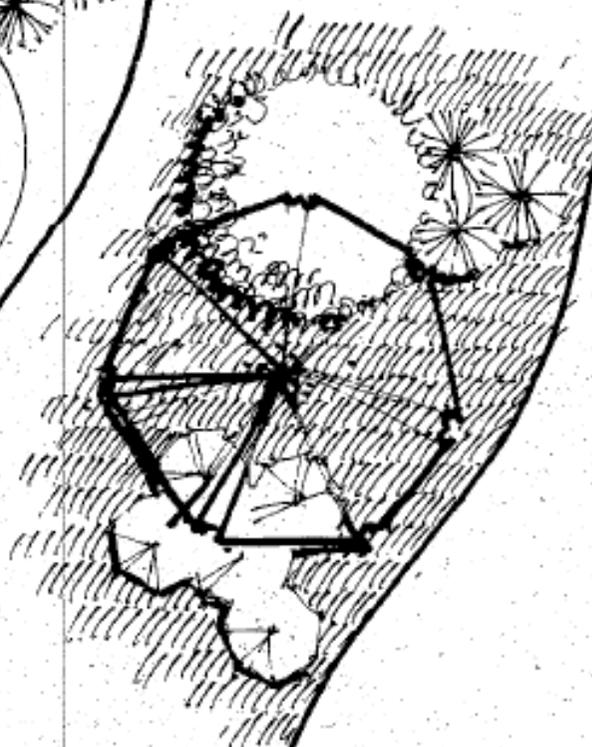


Figura 16 - Composição de vegetações representadas em plantas de projeto. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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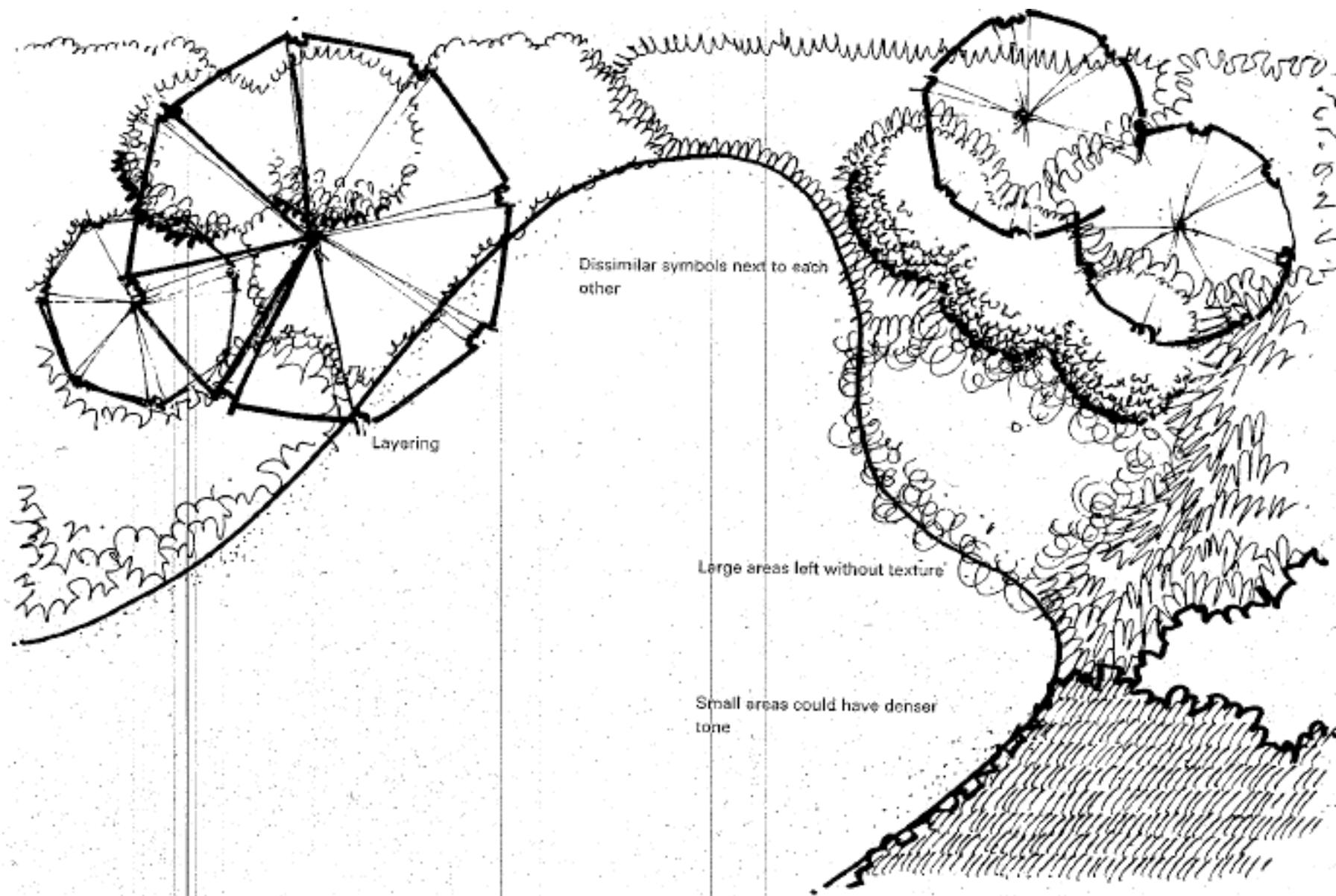


Figura 17- - Composição de vegetações representadas em plantas de projeto. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Shadowing

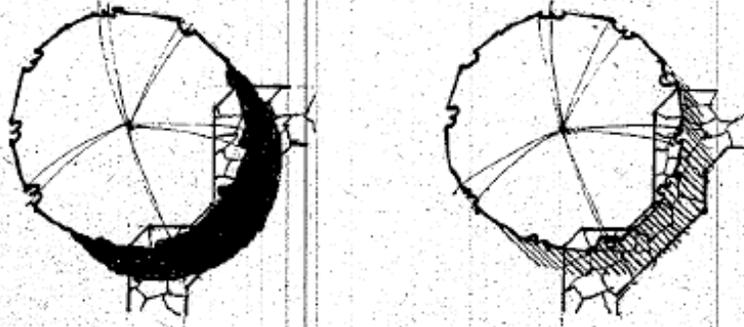
It is not necessary to add shadows to all plans but dark shadows add a dimension of depth to your plan and can give hints to the some of the vertical interest in the design.

Shadow direction

Because we are used to the light coming from above, it is important to cast the shadows **down** to the left or right. This creates the most powerful three-dimensional visual impact, lifting the features off the page. If the north indication is pointing up, as it should be on landscape plans, then this downward or southerly shadow direction is realistic for southern-hemisphere countries where the sun follows a northern arc and unrealistic for northern-hemisphere countries where the sun follows a southern arc. So in the northern hemisphere it is better to favor graphic impact over realism. The one exception would be if you are doing a solar study where shadow patterns are a critical part of the design message. In this case cast the shadows exactly as the sun direction and angle dictate. In any case, all the shadows on the one drawing must follow the same light direction.

Shadow density

The most powerful shadows are solid black, a very dark gray or a very dark blue.



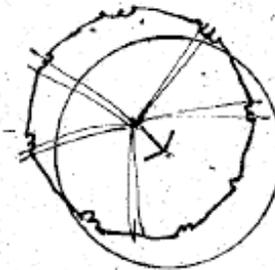
Shadows can also be done with a directional hatch or with a medium tone marker. They lose some of their impact, but have the advantage of allowing some ground elements to show through. Do not mix solid black shadows and toned shadows on the same drawing.

Shadows from plants

Establish a light direction.



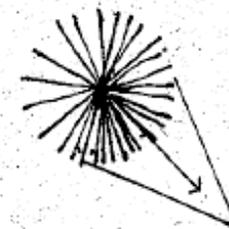
Let's assume that most plants have a somewhat rounded form. Place a circle template that matches the plant size over the symbol. Slide the template away from the light source a little and draw a guideline.



Fill in the space that looks like a new moon between the guideline and the tree symbol.



For plants that have a somewhat pyramidal form, draw a cone-like outline in place of the "new moon" outline.



The in-fill looks best if the outline is irregular.

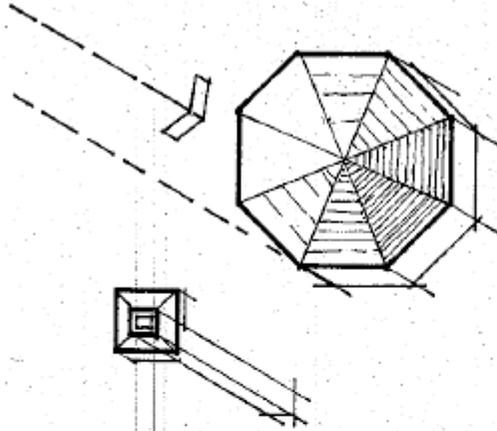


Figura 18 – Sombras em planta. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guptill

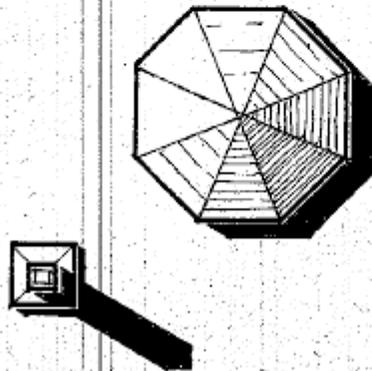
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Shadows from buildings and landscape structures

Establish the light direction as with plant shadowing. Draw lines parallel to the light direction from the corners of the structure.



Taller objects cast longer shadows so the length of these lines should be in proportion to the height of the top corner from the ground. Finish off the shadow shape with lines parallel to the top edge of the structure.



Fill in the shadow zone leaving a thin white space between the shadow and the object to maintain the object edge.

Expressing ground forms with shadows

Shadow shape will need to be adjusted when the ground is sloping or stepped and when the shadow falls on top of other landscape forms.

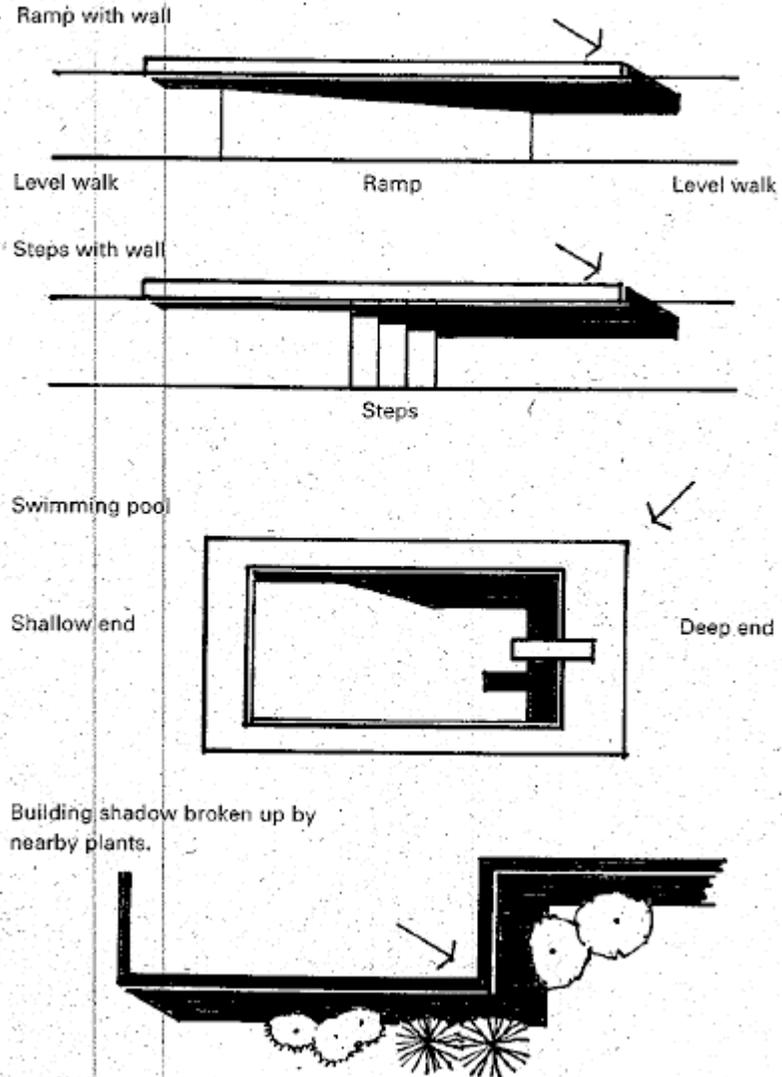


Figura 19 – Sombras em planta. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Fast shadows using markers

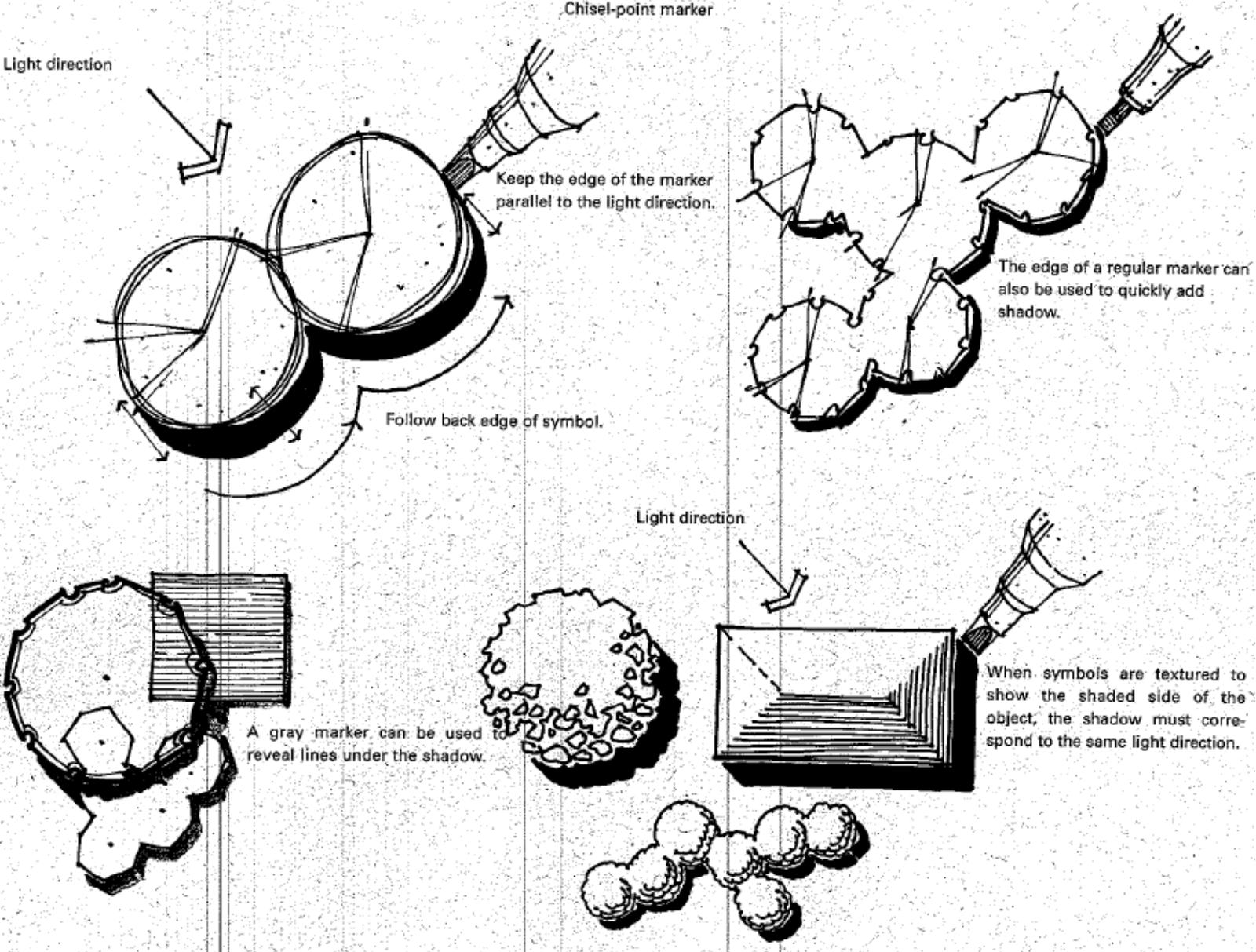


Figura 20 – Sombras em planta usando marcadores. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guipill

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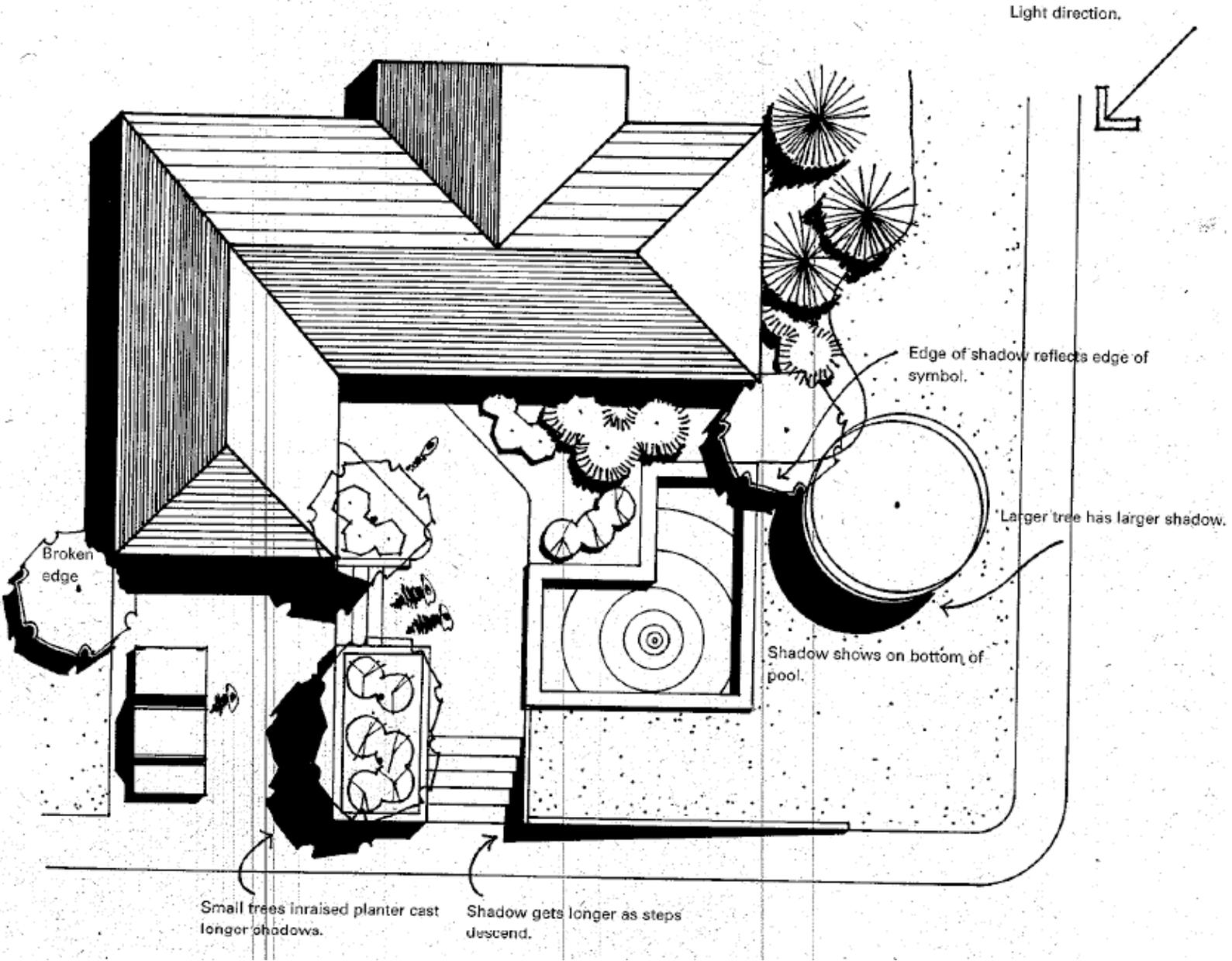


Figura 21 – Composição de sombras em uma planta. FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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4.2 VEGETAÇÕES EM ELEVAÇÃO

Fast outline trees

Each of these symbols can be done in 10 to 20 seconds. If you are taking more than 30 seconds then you need to loosen up.

Vary the line weight for interest and add a few "why not?" dots.

Focus mainly on form and size. Don't be too concerned about texture. These symbols are very abstract.

These outline trees are good for quick preliminary sketches and as middle or background elements in perspective.

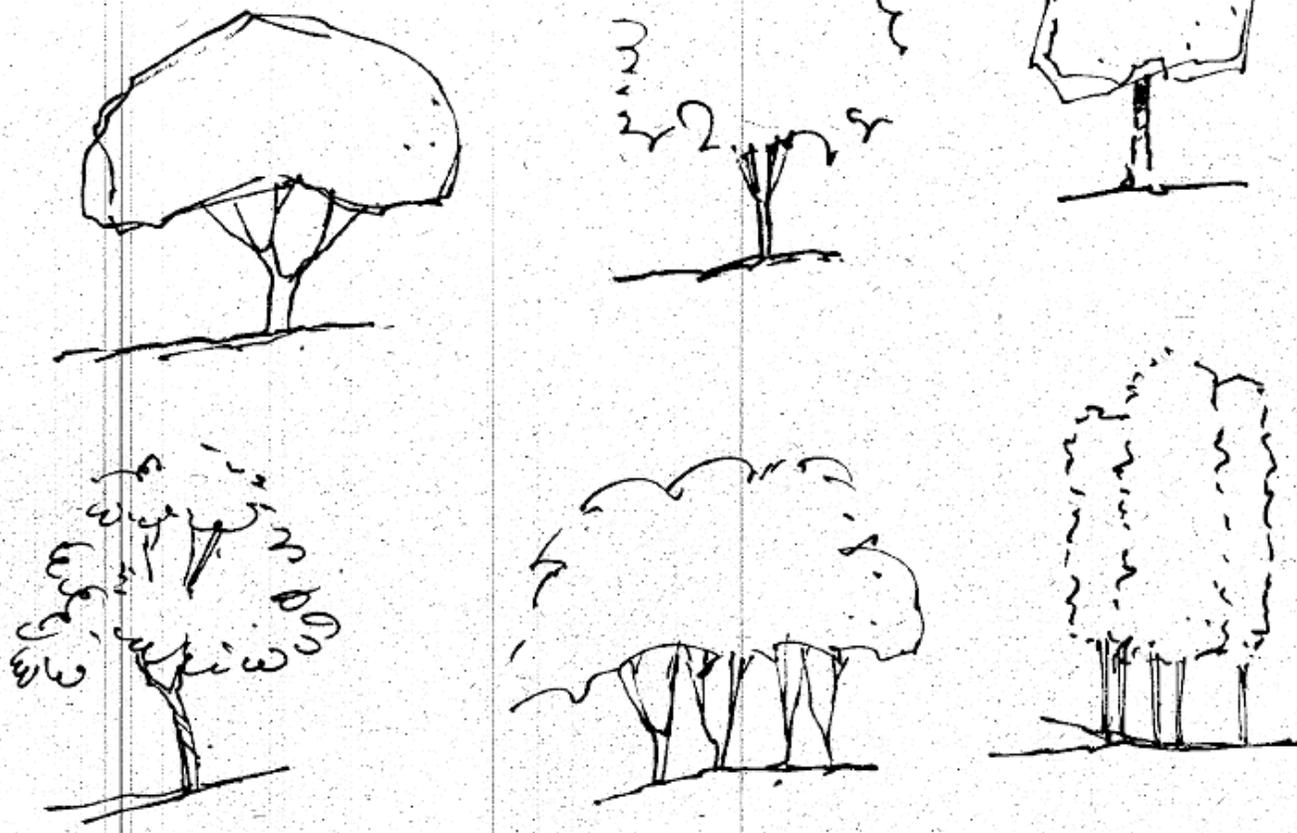


Figura 22- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Foliage texture trees

Each one of these trees was drawn with a different texture doodle. Choose a doodle that will express the foliage character, then repeat it loosely around the outline of the tree.

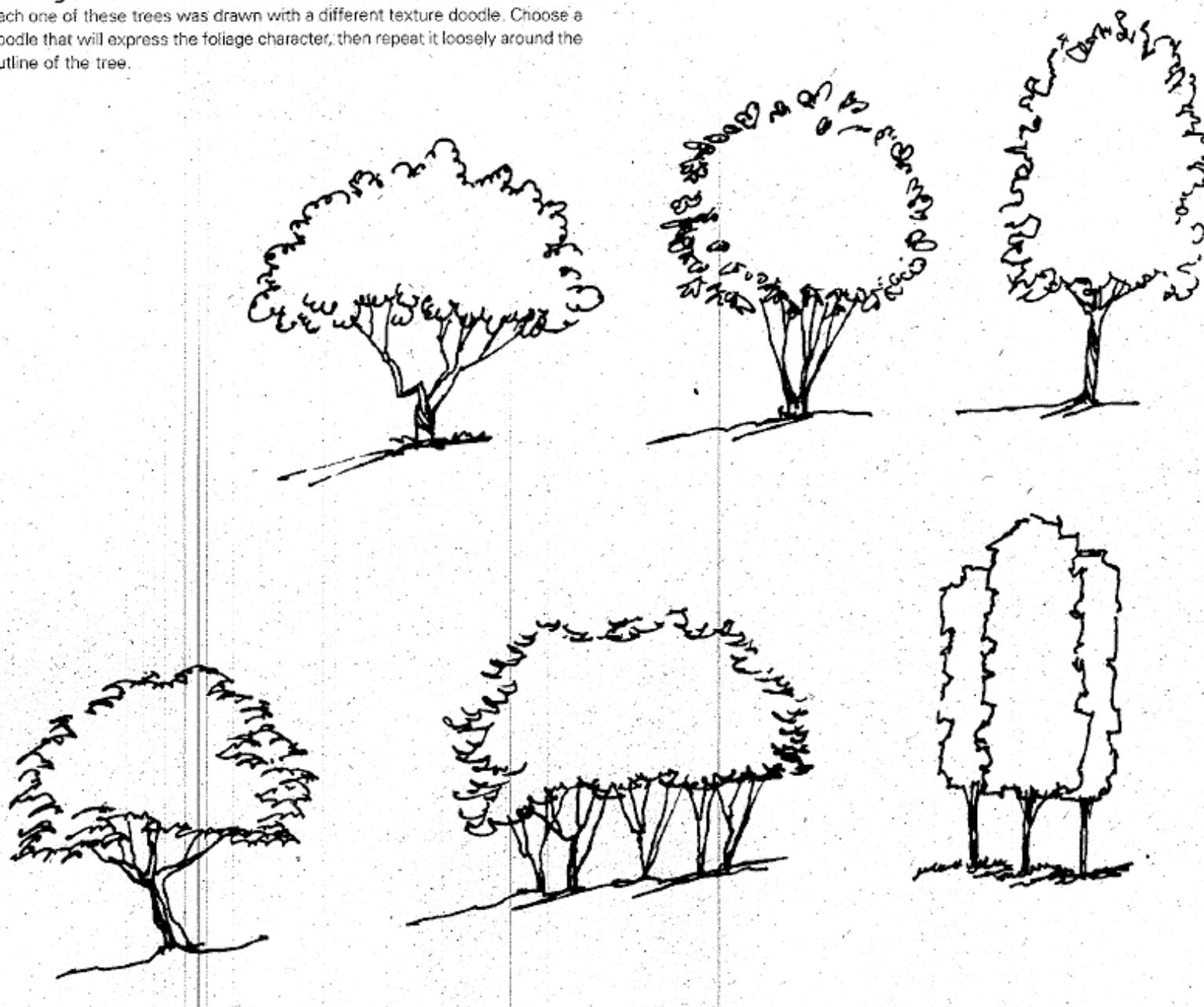
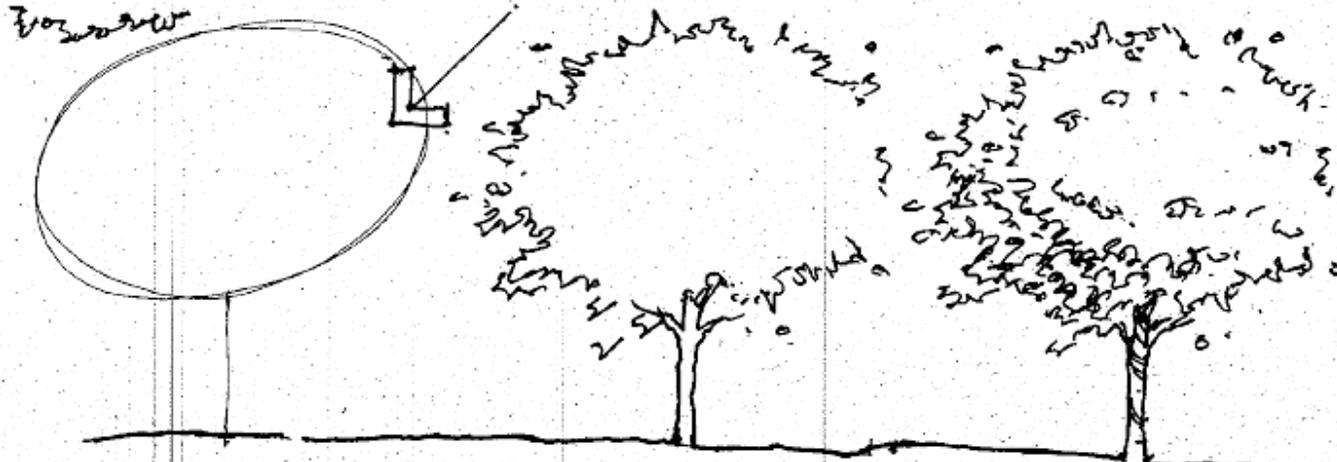


Figura 23- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Expressing light quality

If you have a little more time it is very effective to use texture build-up to express the light direction. These trees are good for the middle ground and closer. Follow the suggested sequence.



1. Lightly outline the form of the tree and select a light direction.

2. Repeat the doodle on some of the outline to define the tree's form.

3. Build up denser clusters on the shady side and bottom of the tree.

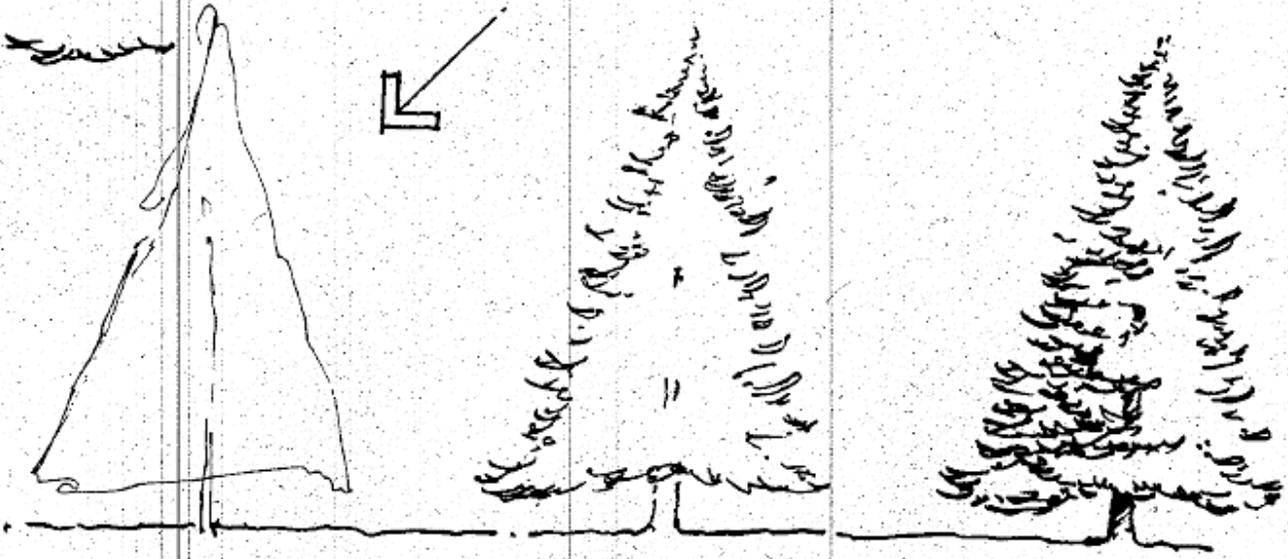


Figura 24- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Texturing tips

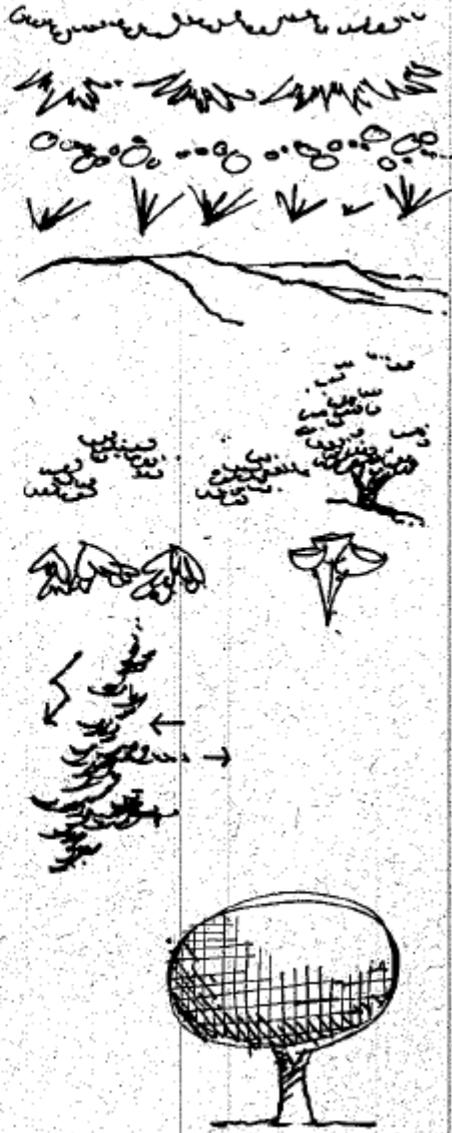
Create loose lines or doodles that have an interesting character and variation of size or direction.

Try to make random clusters with some doodles overlapping others. Avoid evenly spaced doodles.

Apply a back and forth, zig-zag action where white space appears to penetrate your clustering. Avoid rigid, lined-up doodles.

Express the light direction by keeping the upper parts of the tree very open with few doodles.

Yes



No



Figura 25- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Figura 26- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Branch pattern trees

Tree symbols with branching patterns take more time than outline trees but give an interesting sense of realism and adapt well to color application.

The major branches must get thinner towards the outer edge of the tree. A guideline is helpful to structure the limits of the branching. Notice the different branching characters.

They are appropriate as middle ground elements and are a good choice if you need to reveal architectural elements behind them. They also may be used to communicate the winter form of deciduous trees.

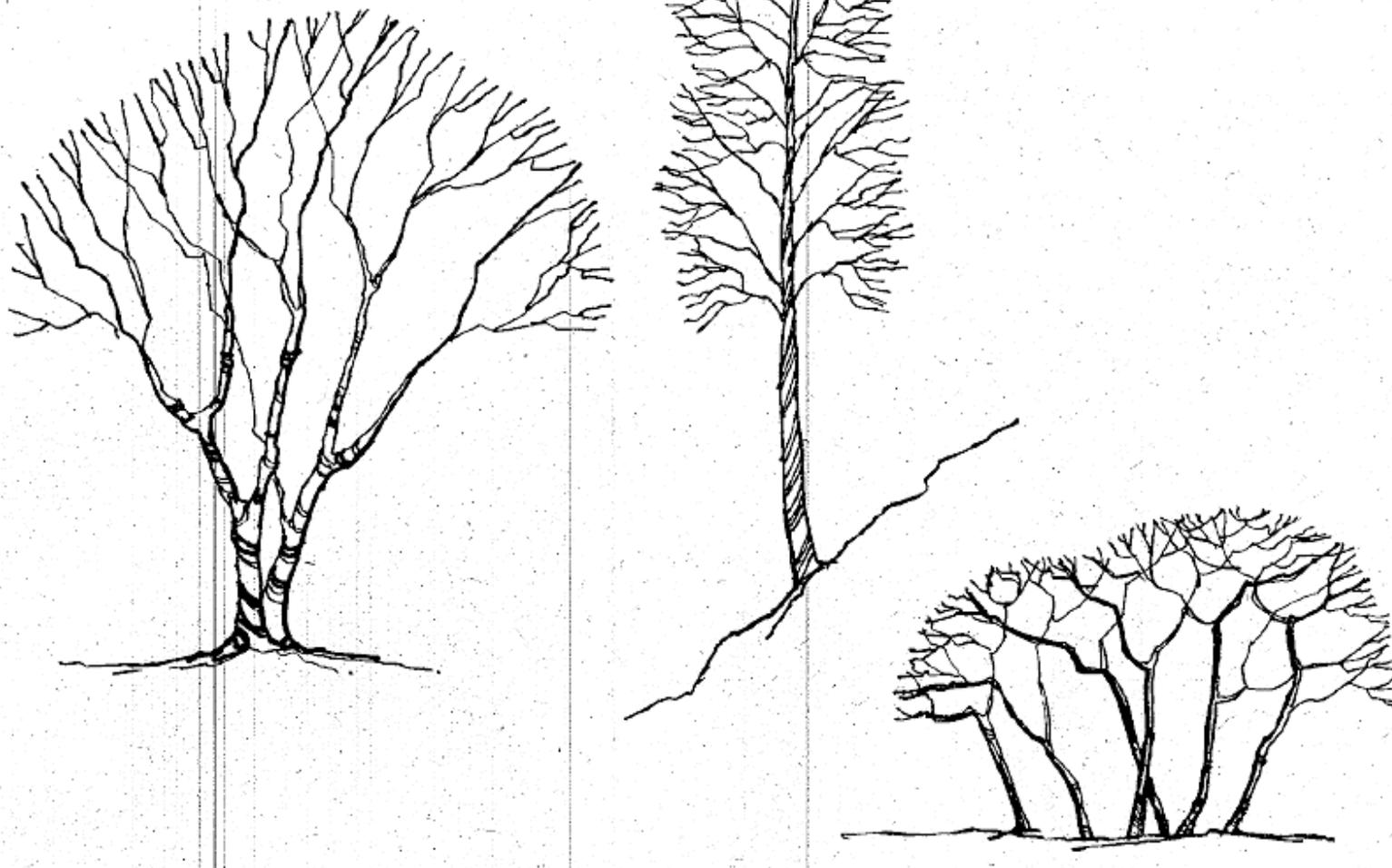


Figura 27- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Coniferous trees

Most coniferous trees such as pine, spruce, or fir have sharp needles and a spiky texture.

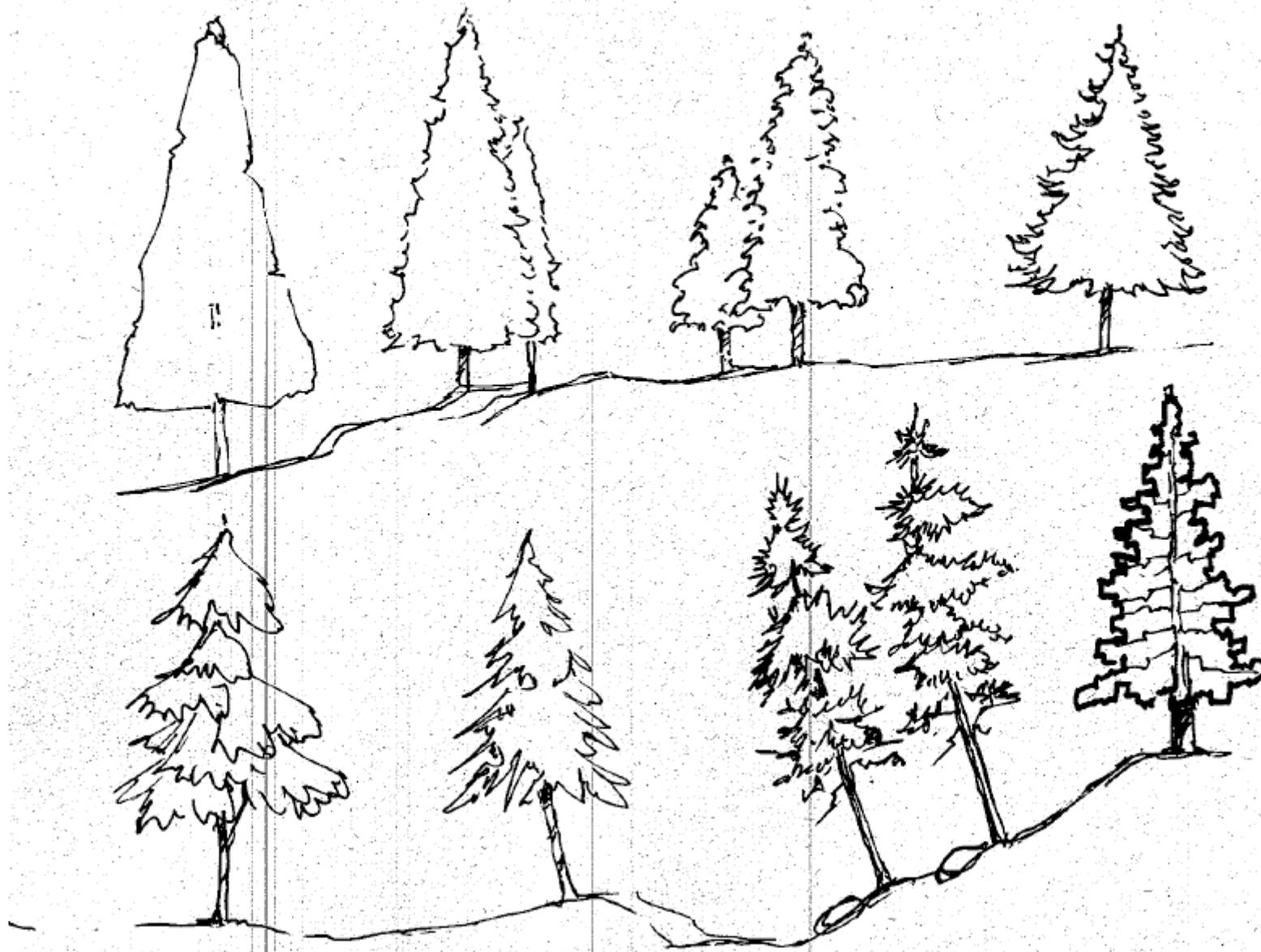


Figura 28- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Coniferous trees



Figura 29- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Flowers, grasses and ground covers

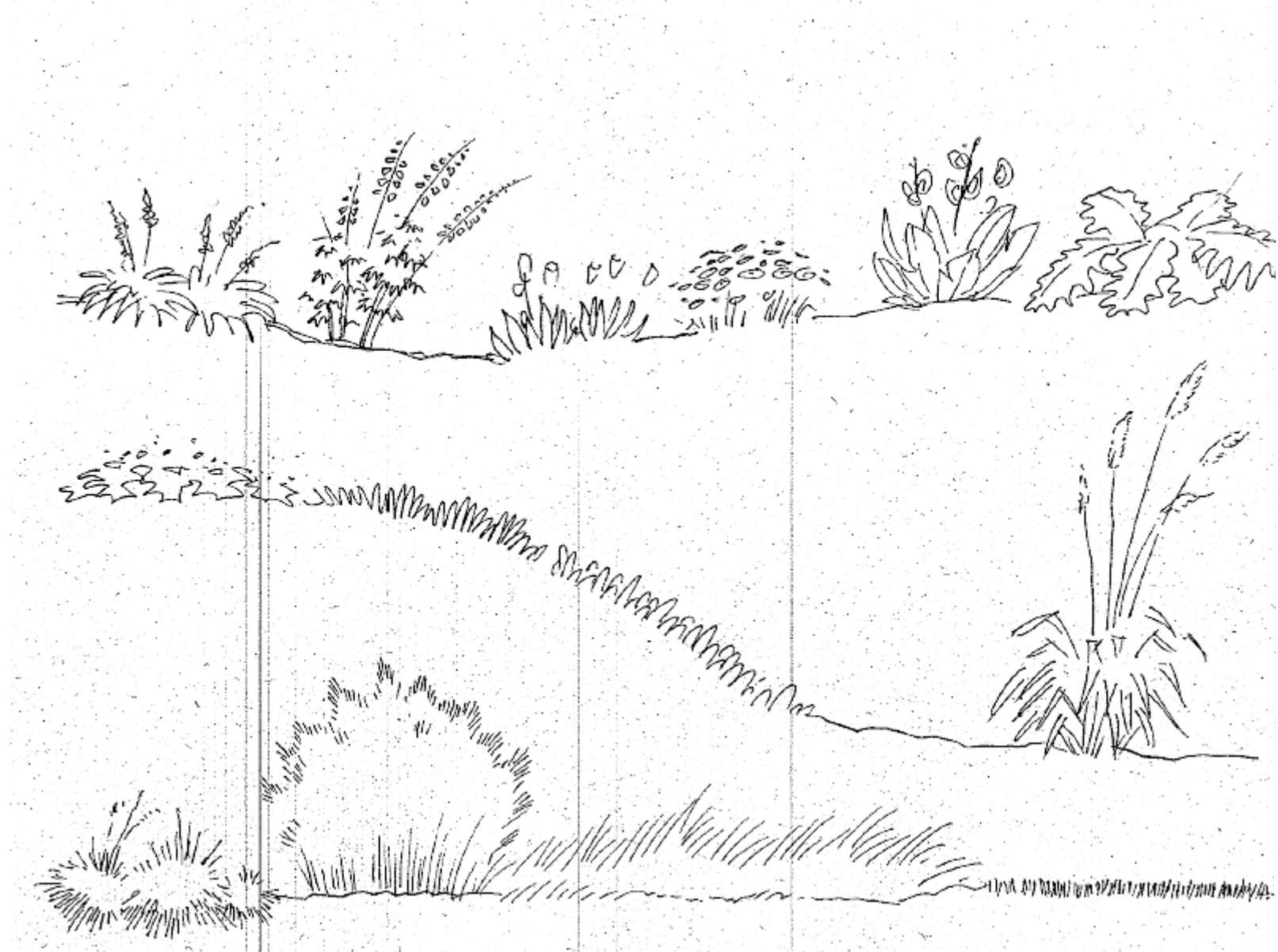


Figura 30- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Shrubs

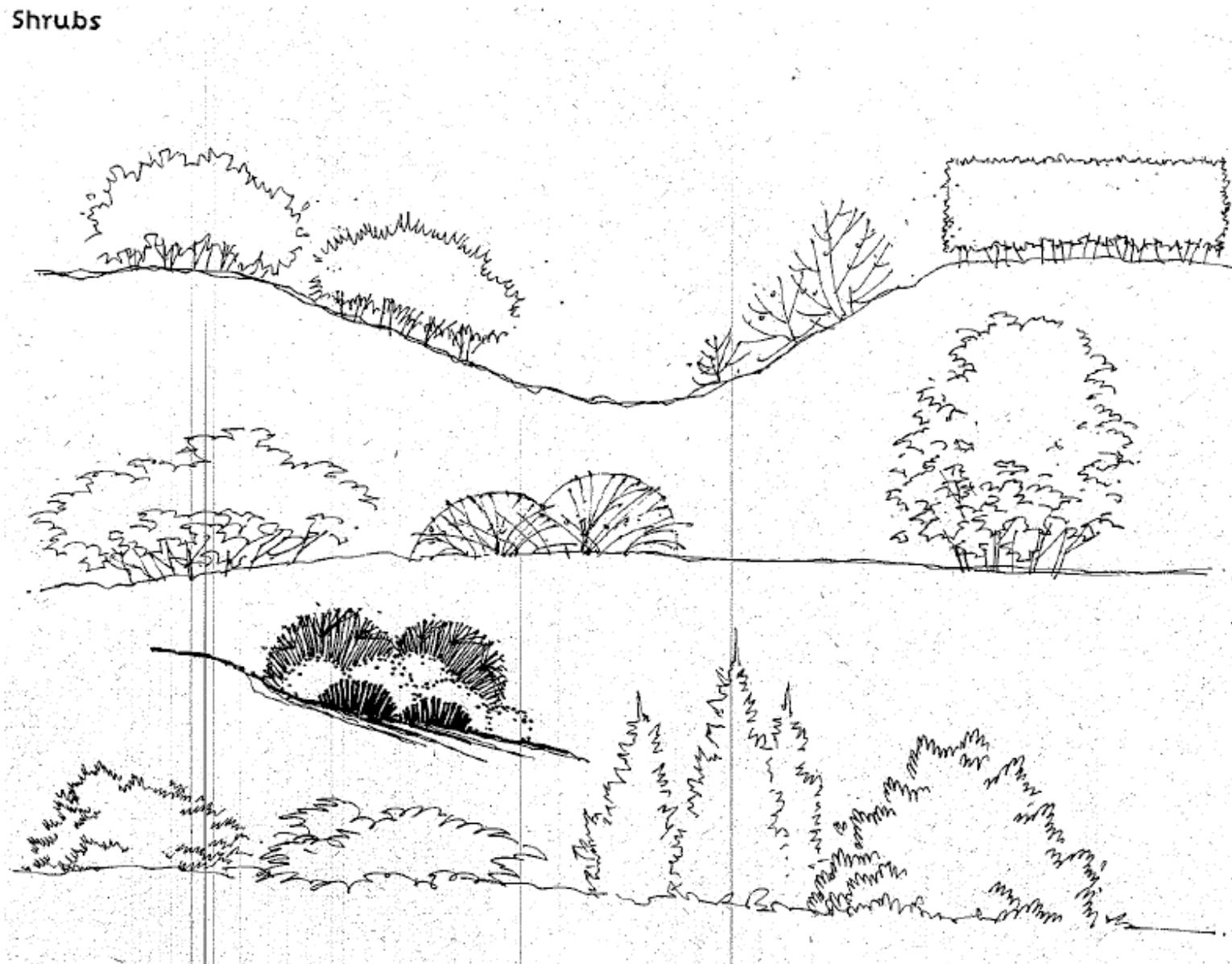


Figura 31- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Palms

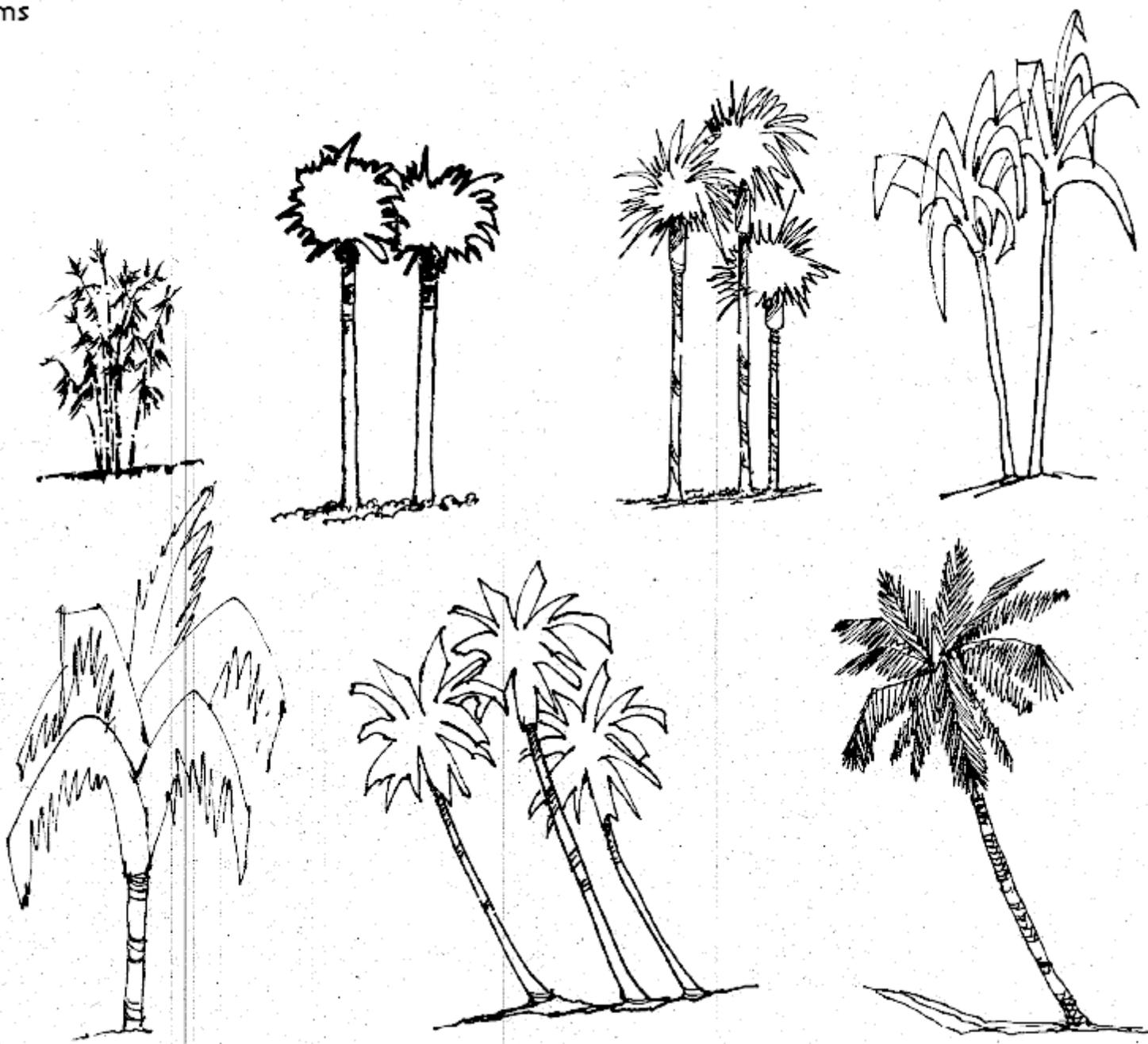


Figura 32- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

Tropical and indoor plants



Figura 33- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guptill

Tropical and indoor plants

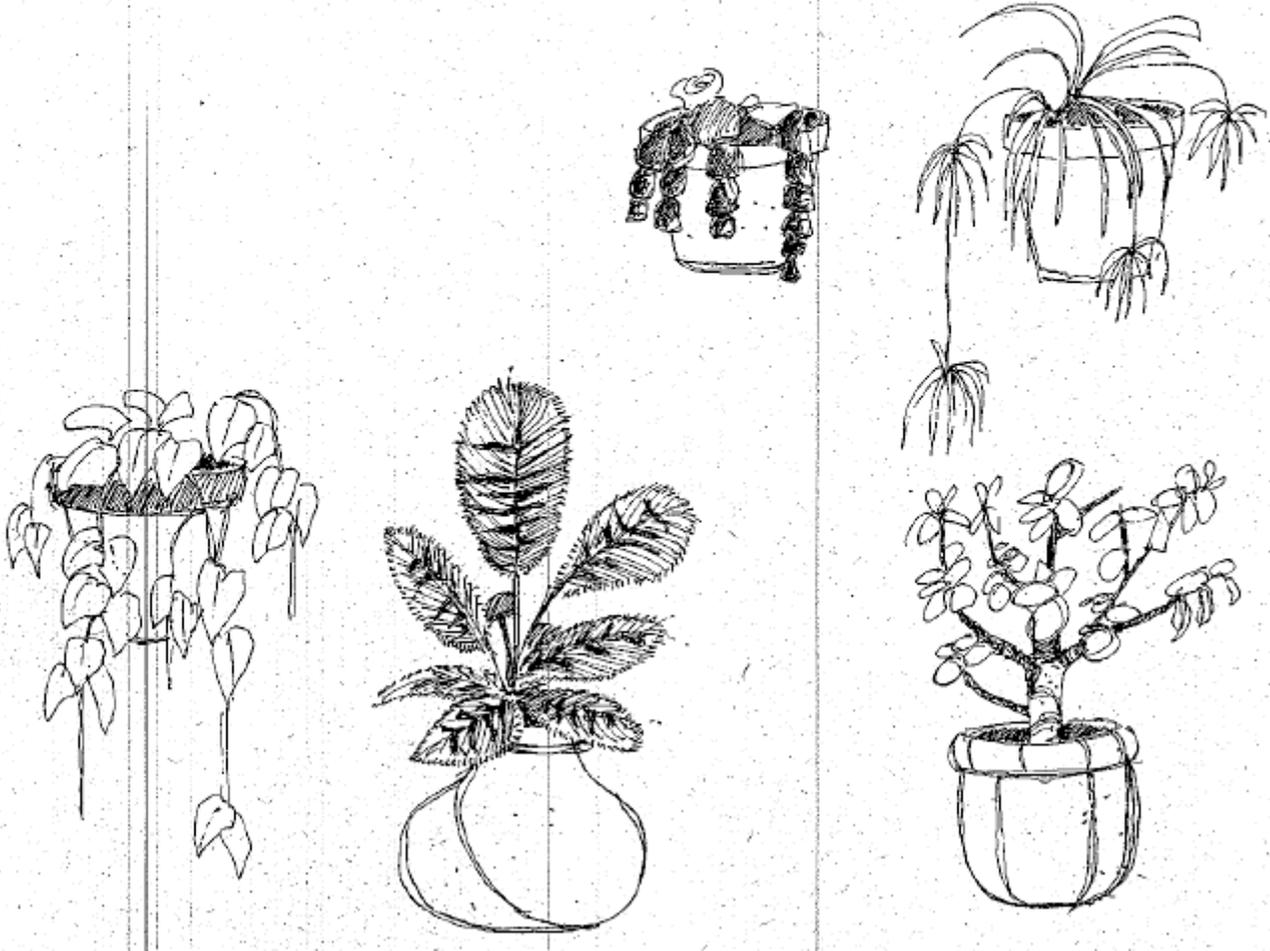


Figura 34- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guptill

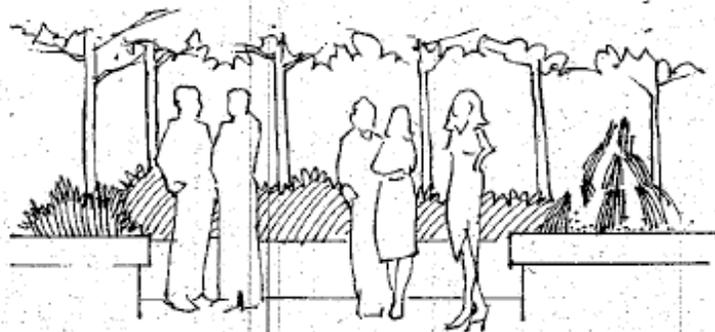
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4.3 DESENHANDO PESSOAS

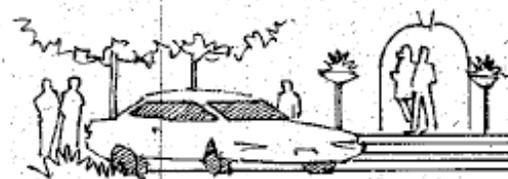
Always place people in sections and perspectives. Human figures bring a drawing to life and convey the image of a well-designed space. They tell us many things about function, scale and mood.

Mood

Most of the people in your drawing should be in groups interacting with each other. Try to draw them looking happy and relaxed to create an inviting mood.



People sitting on walls or climbing stairs or otherwise interacting with their environment emphasize the interesting functional opportunities in the space.



Scale

We are very accustomed to sizing things up quickly by comparing them to the human figure. With people included, the space will be recognized immediately as small and intimate or expansive and grand.

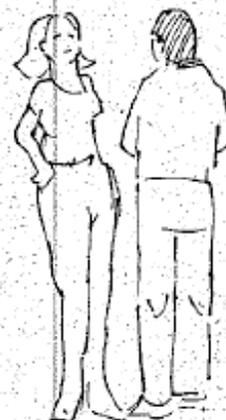


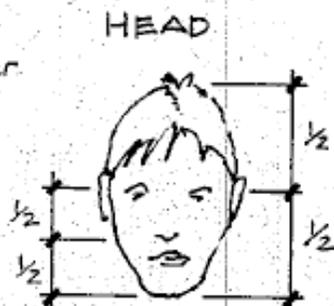
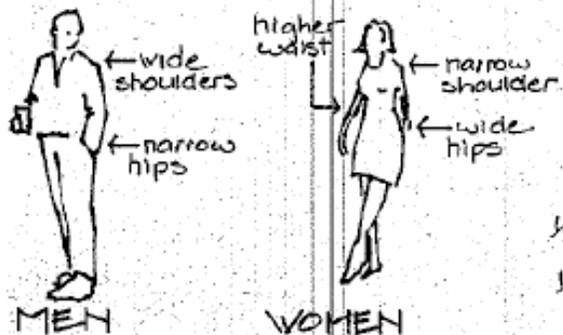
Figura 35- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guptill

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How to draw people.

People are difficult to draw because the human figure is complex and any distortion becomes blatantly obvious. Here are some basic rules of proportion that can help you get started.

Establish the height of the person with one mark on the ground plane and another directly above it. Divide the distance into seven equal spaces. The head takes up one space. Now draw in the torso so that the waist is 3/7 from the top. Add legs and feet.



Draw from life.

Freehand drawing of people takes a lot of practice. A good exercise is to sit in a crowded public space and do quick sketches of people in different situations

Trâce people.

The quickest route to drawing people well is to trace from magazines, photographs or other illustrations. The next page gives some helpful pointers on composition and placement. This is followed by a tracing file which you should photo-reduce and enlarge to expand the scale range.

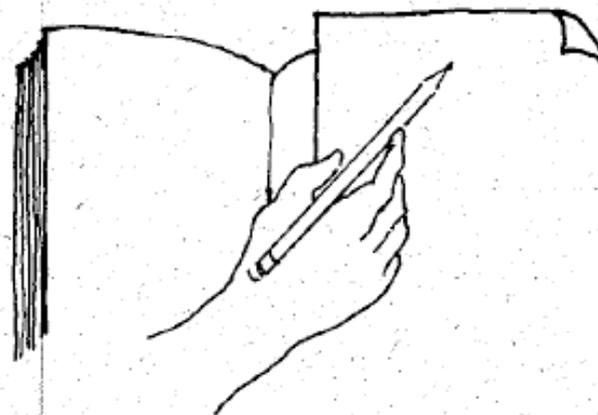


Figura 36- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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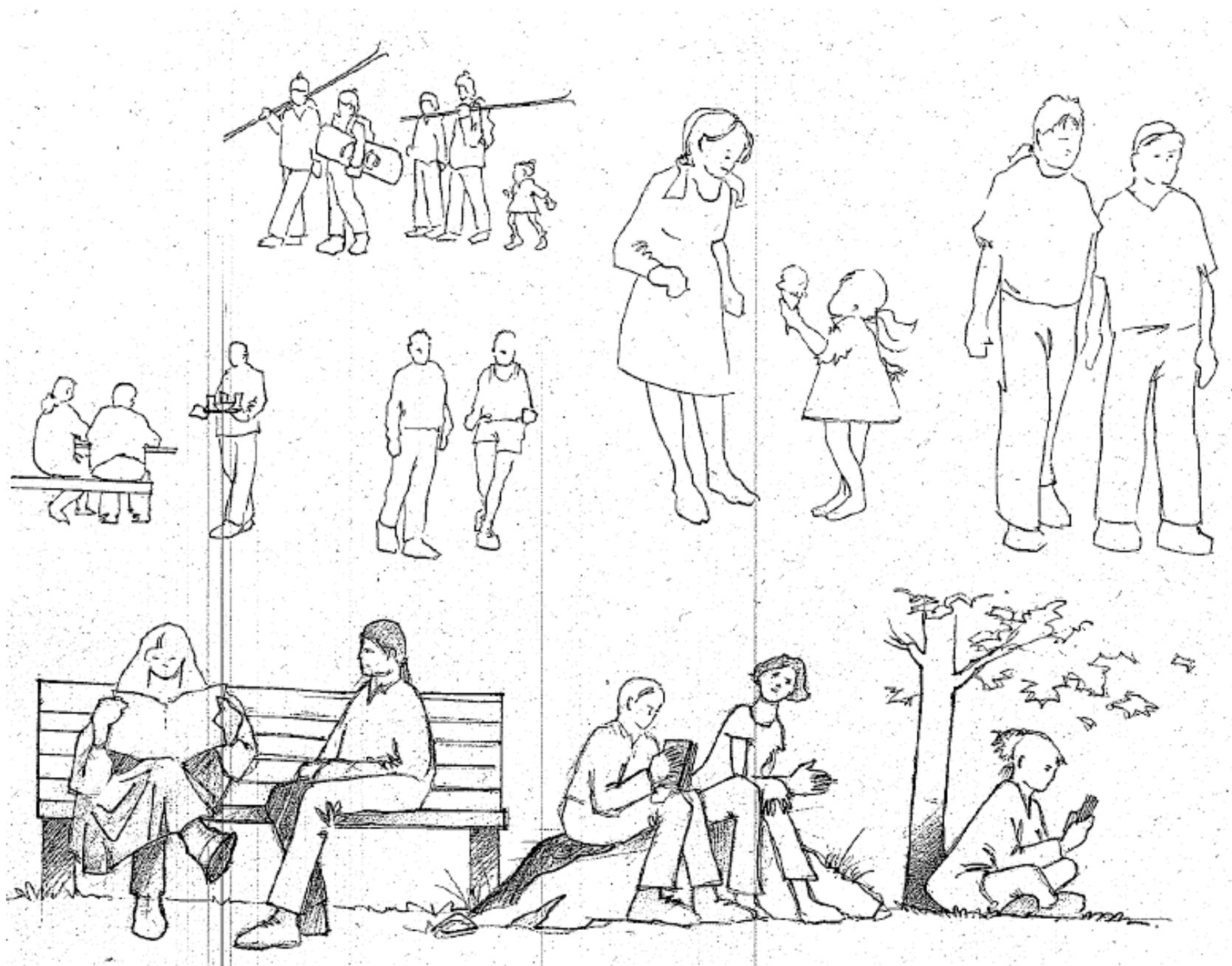


Figura 37- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Figura 38- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

4.4 VISTAS EM CORTE

Essential Characteristics

The **section-elevation** shows the cut surfaces with a prominent profile line as well as vertical landscape elements a selected distance beyond the profile line. Everything is drawn to scale. The horizontal and vertical scales are usually (but not always) the same. How much to show beyond the cut line depends on the type of space or object and the message; however it is easiest to show elements only a short distance from the cut line as in this example.

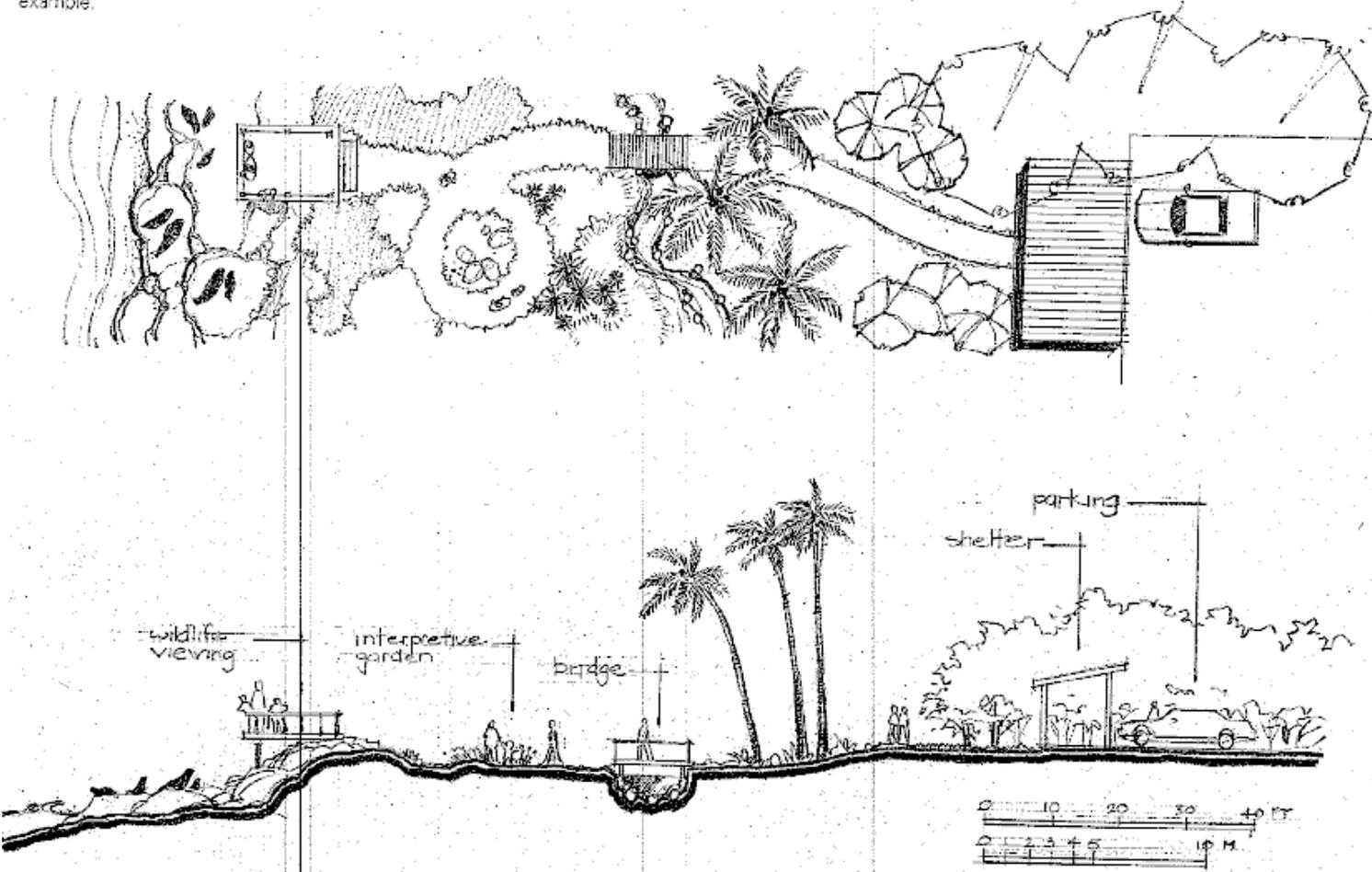


Figura 39- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guptill

Drawing a Section from a Plan

1. On an overlay, draw a cut line (AA) through the area to be shown in section. Using known vertical information, place marks on the line corresponding to each vertical elevation. In this case, each contour line represents five more feet above pond level.

2. Remove the overlay and construct a series of horizontal lines above (and below) to represent even increments of vertical change. You may use the same scale or one, which multiplies the horizontal scale by 1.5 or 2 for exaggeration. At each mark on the base line, draw a vertical guideline and mark with a dot where it intersects the correct elevation. Join the dots.

3. On another overlay, sketch the appropriate landscape features at their correct heights. Make the section line bold.

Medium: 2B pencil

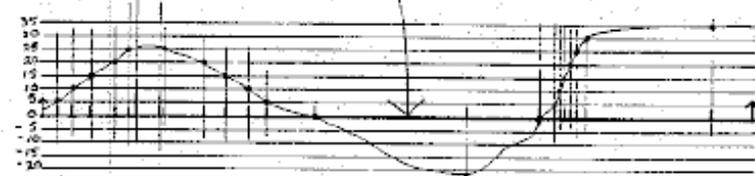
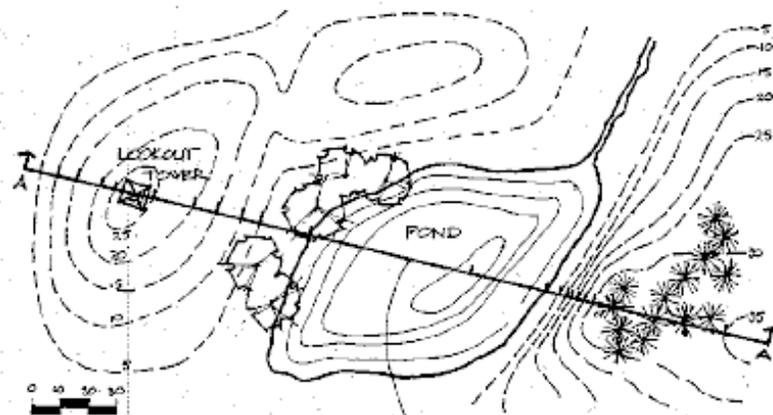


Figura 40- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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Applications

The examples shown in the rest of this chapter demonstrate the main purposes for drawing section-elevations.

1. To illustrate vertical elements and relationships

For sections showing people, activities, and the built environment, it is best to keep the vertical and horizontal scale the same to avoid unrealistic distortions

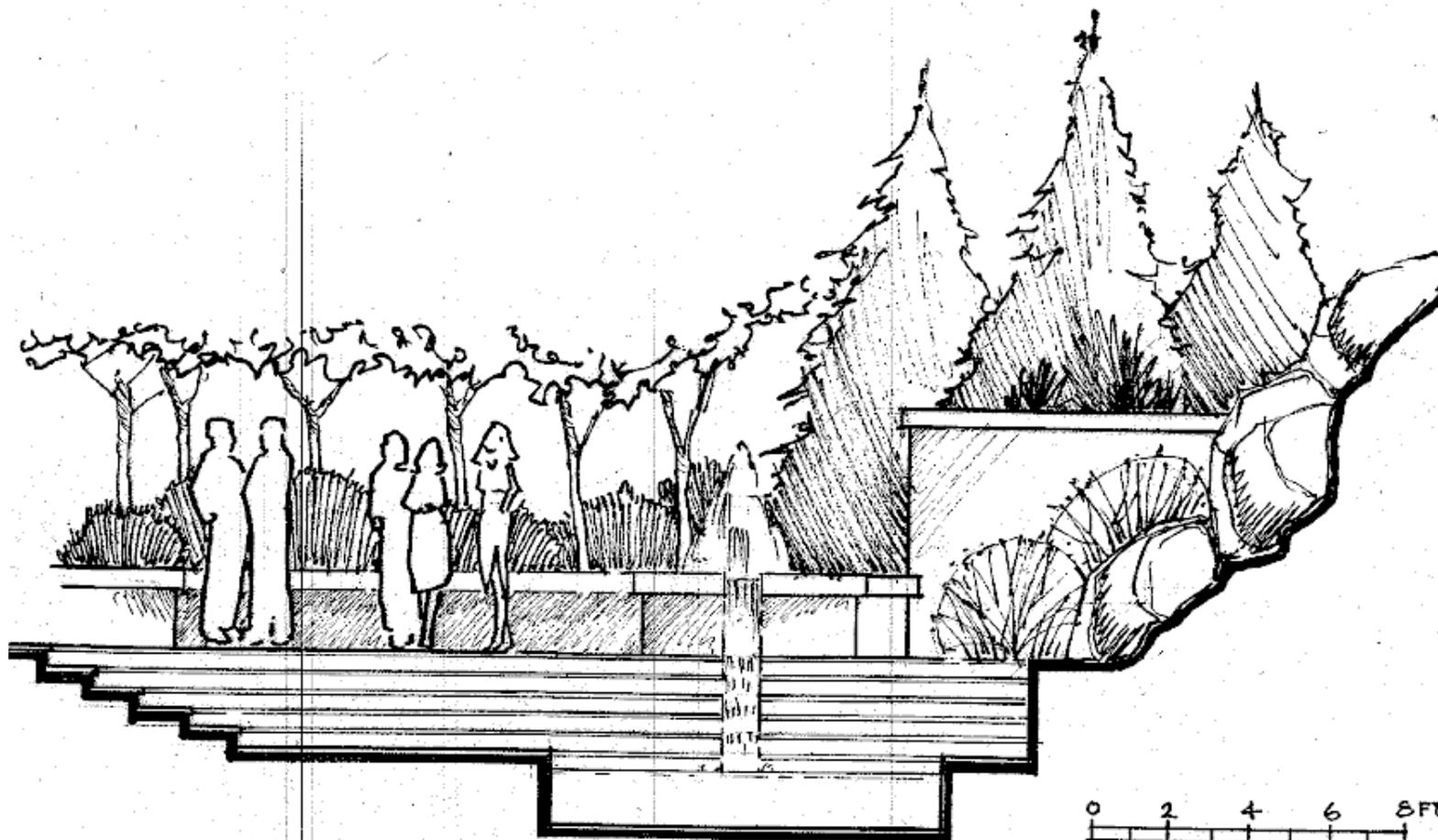


Figura 41- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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2.To analyze views

Sight line studies often require the analysis of vertical elements as they relate to screening or opening of views from a specific vantage point in the landscape.

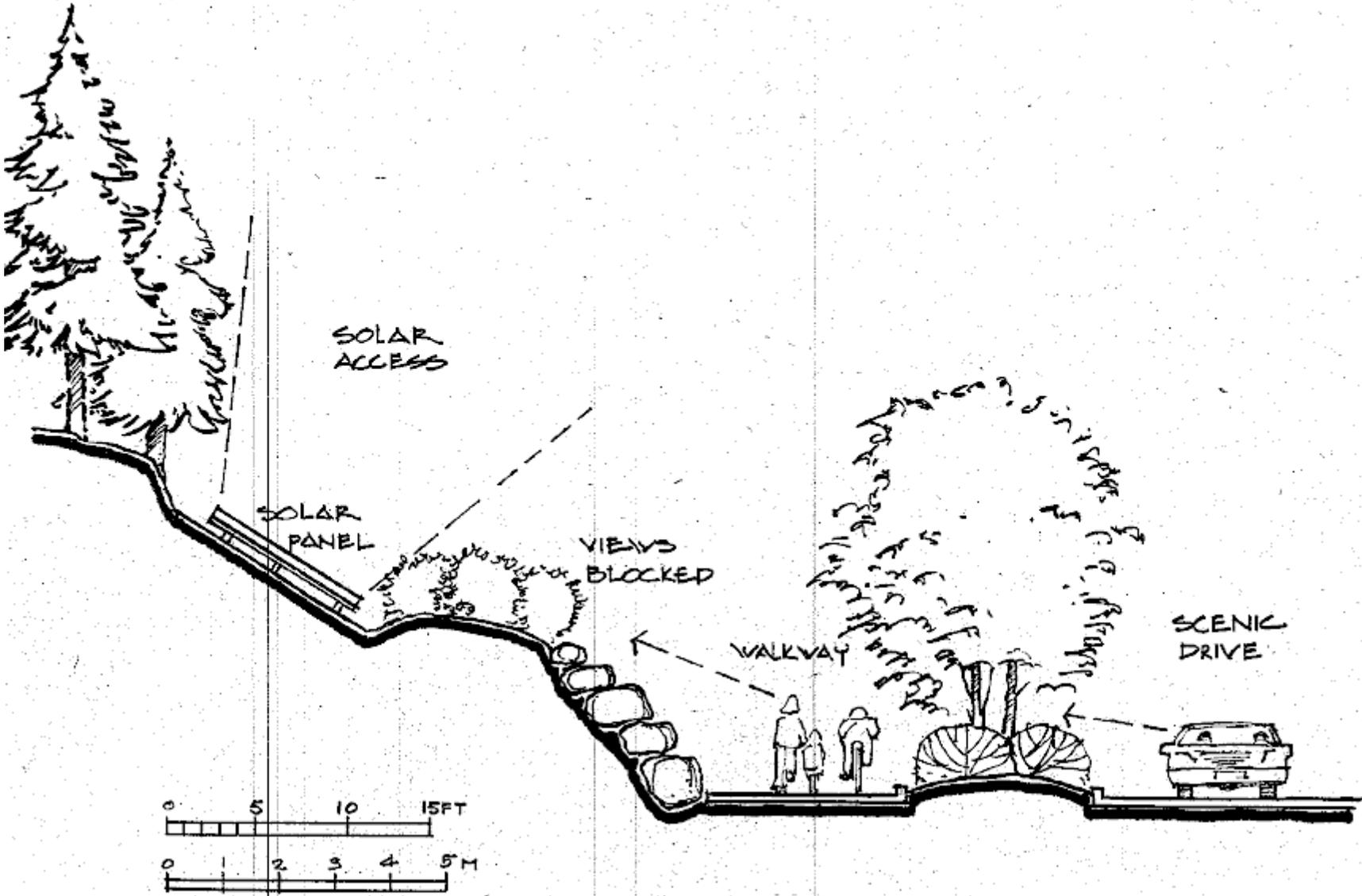


Figura 42- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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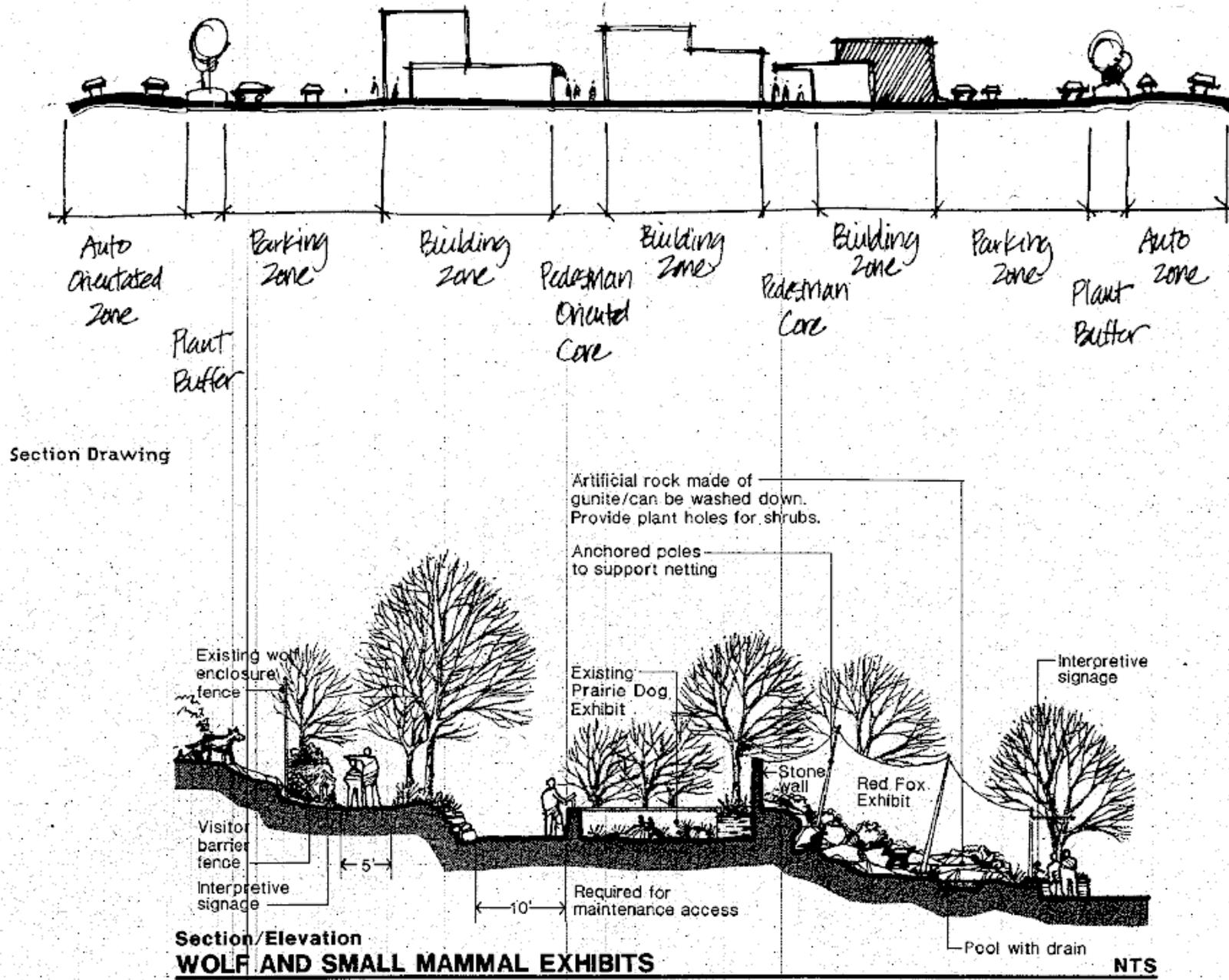


Figura 43- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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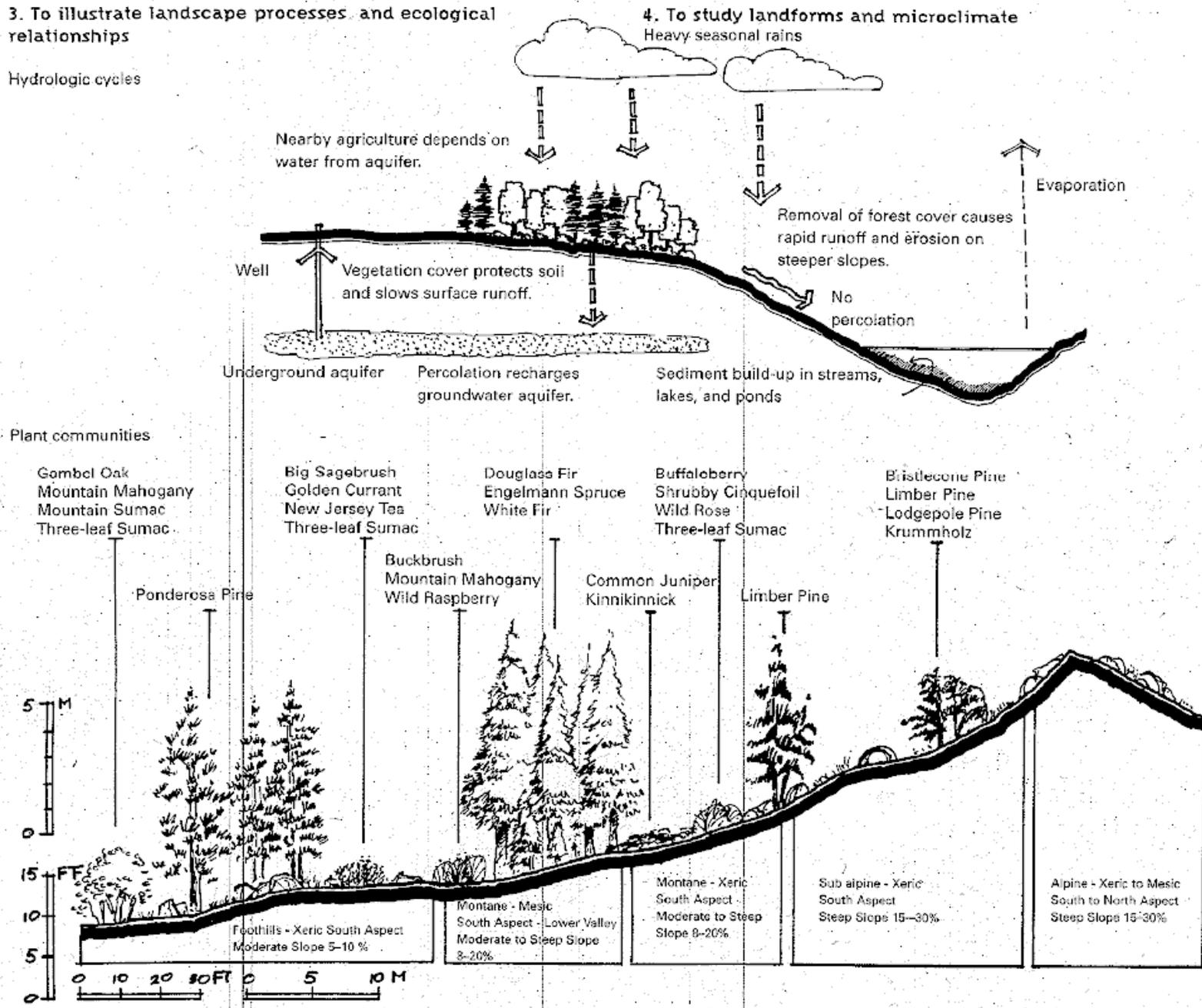


Figura 44- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption

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5. To reveal elements hidden in plan view

Caves, overhangs, depths of water bodies, and underground features are some of the elements that are impossible to show in plan view

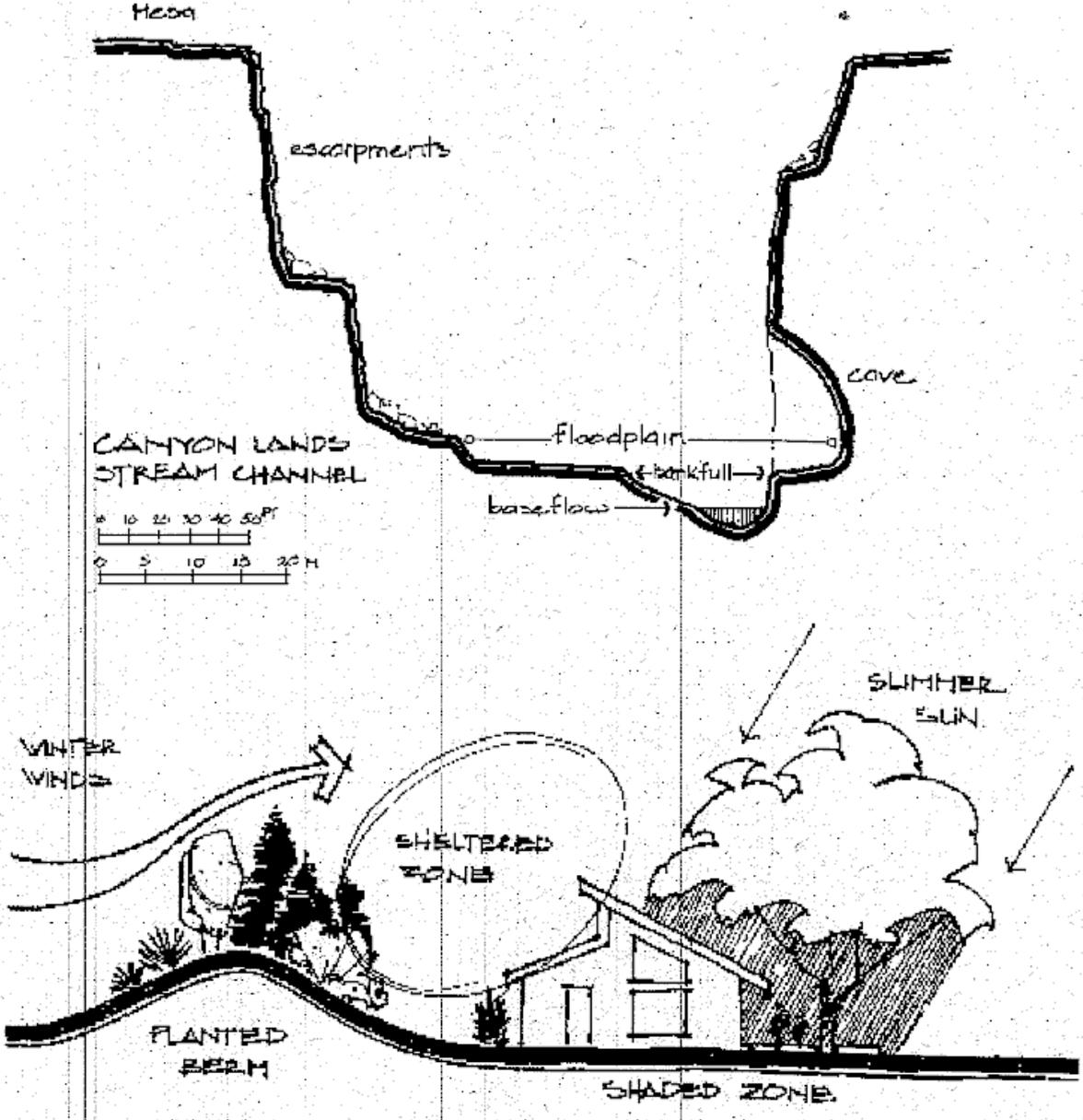


Figura 45- FONTE: Reid, G. (2002). Landscape Graphics. New York: Watson-Guption