black spectacles

ARE® LIVE

How to Get Started Passing the ARE®

with Mike Newman

TOP TEN TIPS

Tip #1:

Don’t panic.

TOP TEN TIPS - DON'T PANIC

Tip #1: Don't panic.

You know this. And if you don't, you will next time.

There are a million possible questions you could get on any of these topics and there is no way that any one person could possibly know every answer.

Just because it goes poorly, doesn't mean you can't do it, use it as a learning experience and move on.

Equally, just because it goes well does not necessarily mean that you are a brilliant architect. It is about a certain type of competence.

Do not let this become an albatross

TOP TEN TIPS

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Tip #2:

Find your resources

TOP TEN TIPS - RESOURCES

Tip #2: Find your resources

Lots of guidebooks available specific to the ARE

ARE Forum

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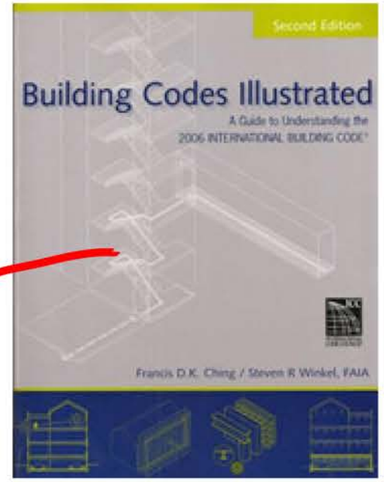
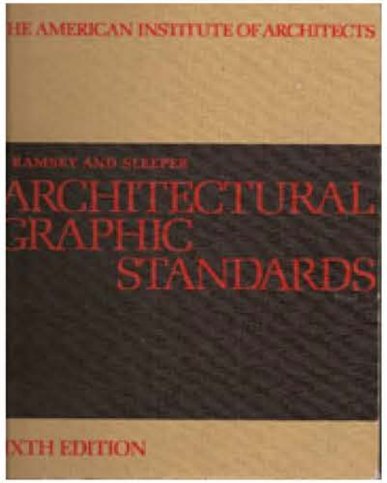
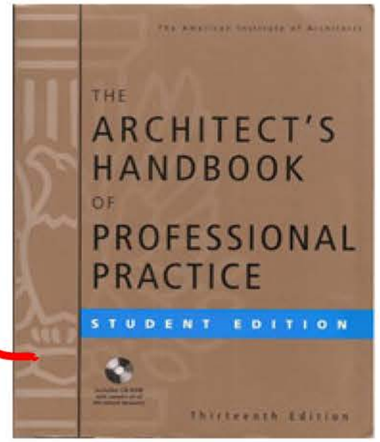
AIA offices

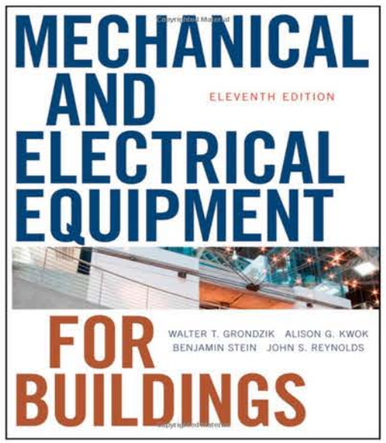
Your firm
(or your friends firm!)

General issue books such as these:









TOP TEN TIPS - RESOURCES

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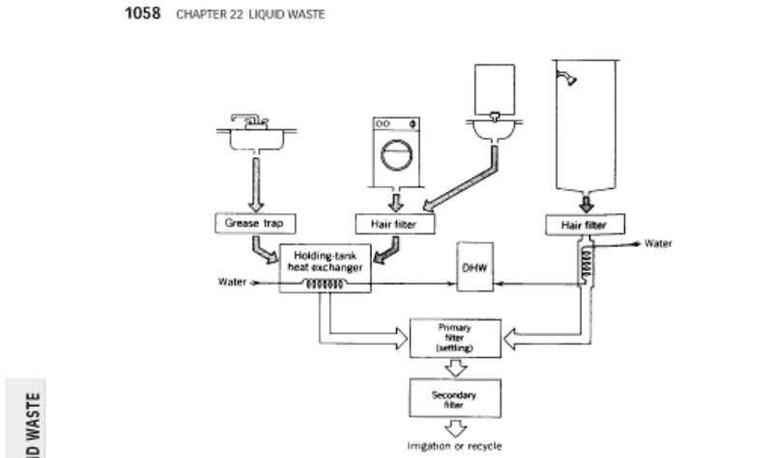
Tip #2: Find Your Resources

MEEB (Mechanical & Electrical Equipment for Buildings)

(You can read it from cover to cover, but that is probably a bit daunting for most of us … try just reading the captions to the images and see if you understand what they are talking about.)



1058 CHAPTER 22 LIQUID WASTE

Fig. 22.54 Sequence of water treatment and heat reclamation for domestic graywater, where such systems might be approved.

WATER AND WASTE

clog the filters and heat exchangers in a graywater recycling system. Similarly, lavatory showers and laundry waste contain lint and hair that must be intercepted quickly. Devices that do so (called *interceptors*) were described in Fig. 22.21.

Currently, building codes tend to sharply limit graywater recycling, generally presume there will be no filtering, and rigidly constrict its use. It is hoped that such restrictions will loosen, with due regard for human health, as conservation of resources becomes more of an imperative than it already is.

(b) Subsurface Irrigation

The 1997 *Uniform Building Code* (Appendix G), notes that water *only from* bathroom lavatories, showers and tubs, and clothes-washing machines and laundry tubs, and *only in* single-family residences, can *only be used for* subsurface "irrigation" on the same site as the residence. The associated use of mandated trench constructions, as a means of avoiding any surface graywater distribution, may deliver very little water to plants.

Site conditions must meet the requirements of Table 22.14 and Fig. 22.55. The bottom of the trenches must be at least 5 feet (1.5 m) *above* the highest known seasonal groundwater. Flow estimates are as follows:

Number of occupants:

two for the first bedroom

one for each additional bedroom

Combined showers, bathtubs, and washbasins, flow per occupant: 25 gal/day (95 L/day)

Laundry, flow per occupant: 15 gal/day (57 L/day)

A holding tank is required with a minimum 50-gal (189-L) capacity. An unvalved overflow must connect to the building sewer (ahead of any septic tank).

The irrigation/disposal field must be divided into a minimum of three valved zones (allowing the occupants to better direct flow rates). The total area of this field is the aggregate length of the perforated pipe times the width of the proposed field. The required area is based on the estimated graywater flow (or size of the holding tank,

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TOP TEN TIPS - RESOURCES

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MEEB (Mechanical & Electrical Equipment for Buildings)

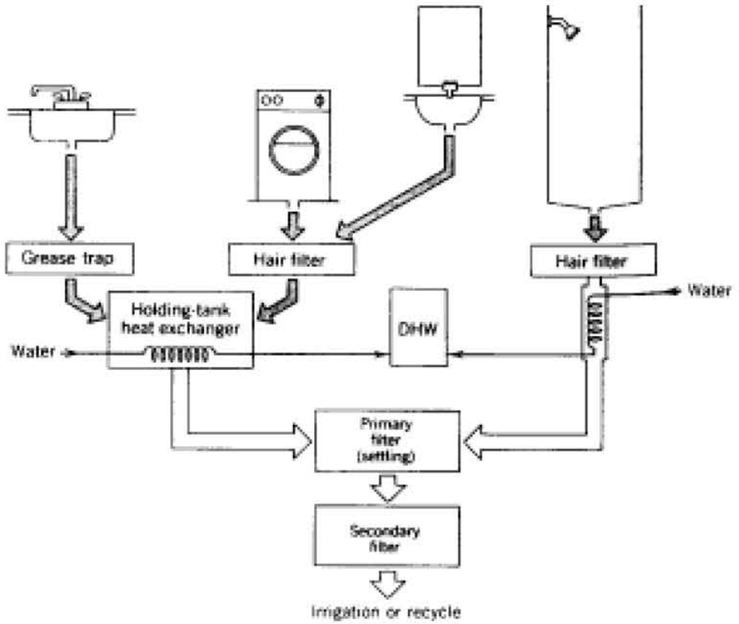

Fig. 22.54 *Sequence of water treatment and heat reclamation for domestic graywater, where such systems might be approved.*

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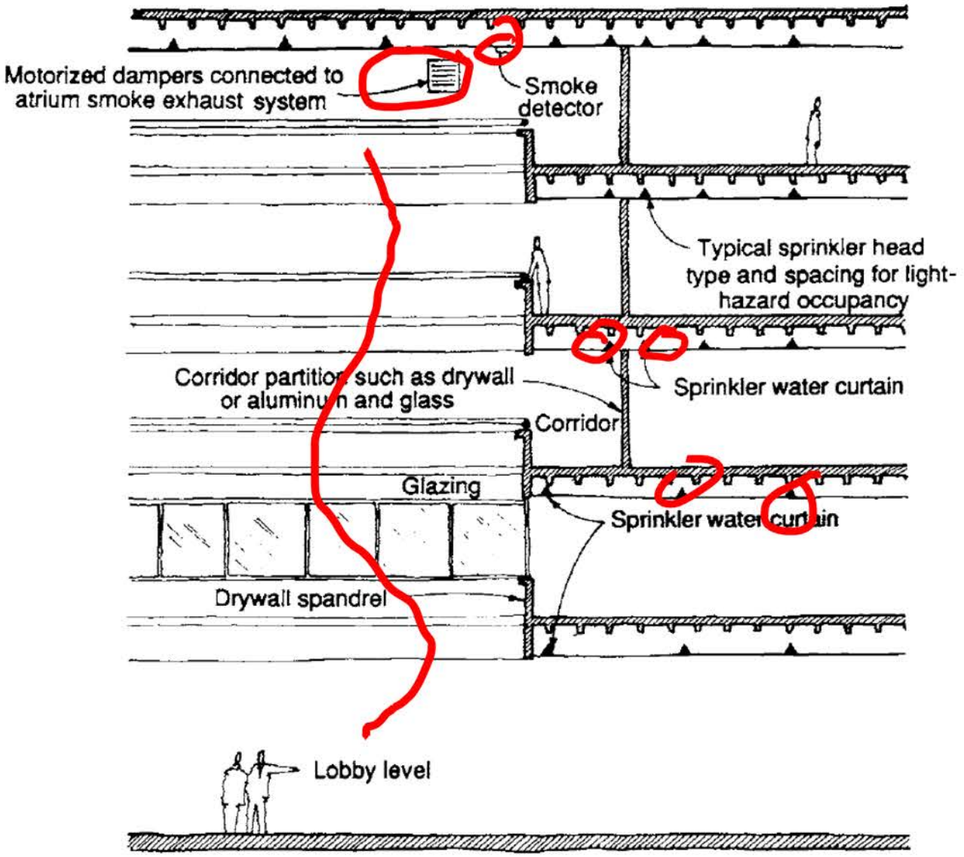

Fig. 24.12 *Fire protection in an atrium-type office building: section showing the detection/suppression system and provisions for smoke control.*

TOP TEN TIPS

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Tip #3 -

Be Strategic.

TOP TEN TIPS - STRATEGY

Tip #3 - Be Strategic

Take the exam to learn the exam

Treat it as a social experience

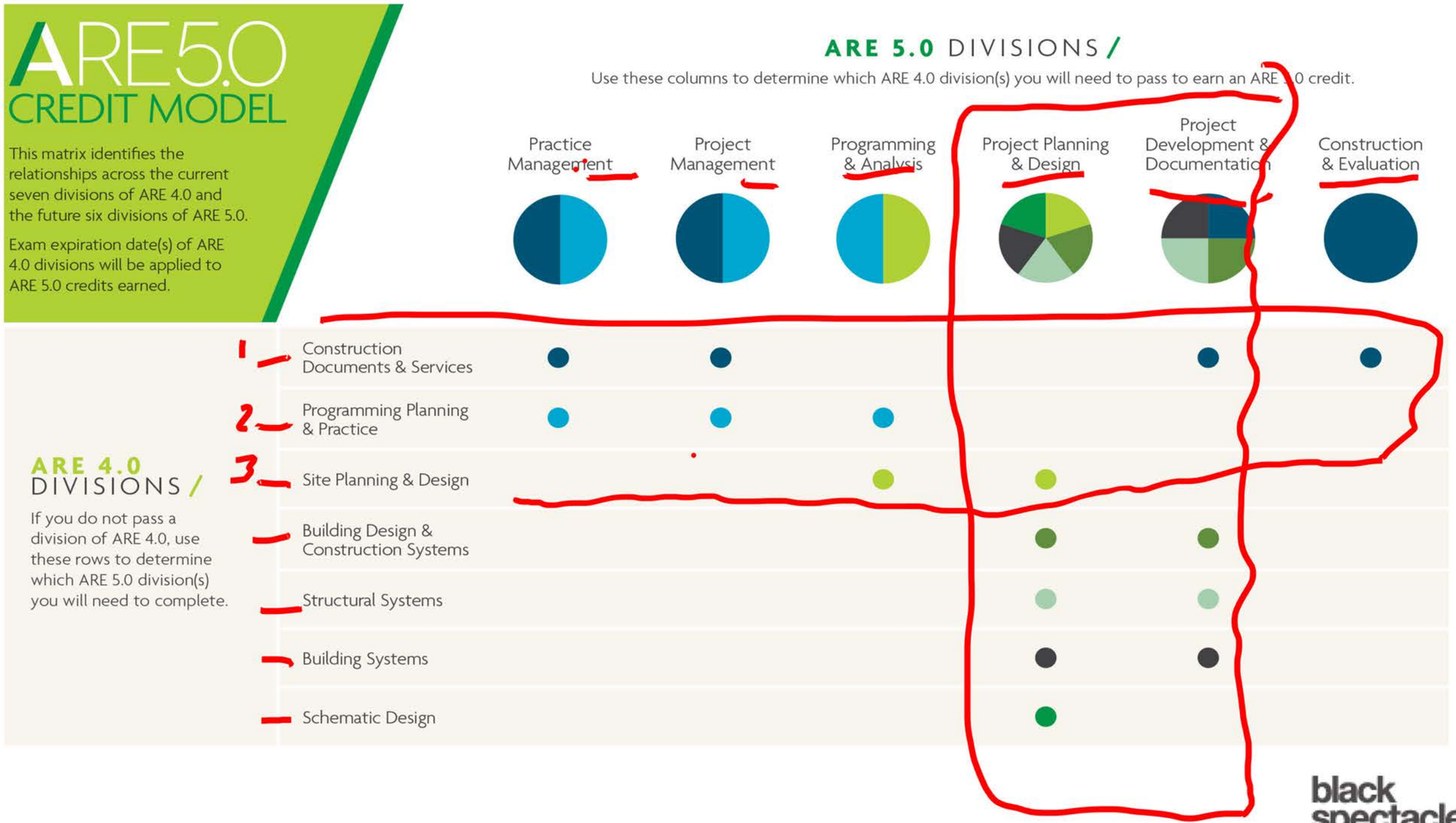
Know the NCARB system and where you sit with-in it
- Rolling clocks
- Transition to 5.0

Best strategy - just do it

TOP TEN TIPS - STRATEGY

—

Tip #3 - Be Strategic



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TOP TEN TIPS - CD&S

Tip #4:

You should generally understand the basics of the contracts under which we all work … i.e. read the contracts.

TOP TEN TIPS - CD&S

—

Tip #4: Understand the basics of the contracts

Architects do “Design Intent”

Contractors do “Means and Methods”

Communication follows the contracts

Site safety and liability

The “essence” of the contract:
- The Work (or scope)
- The Schedule
- The Cost

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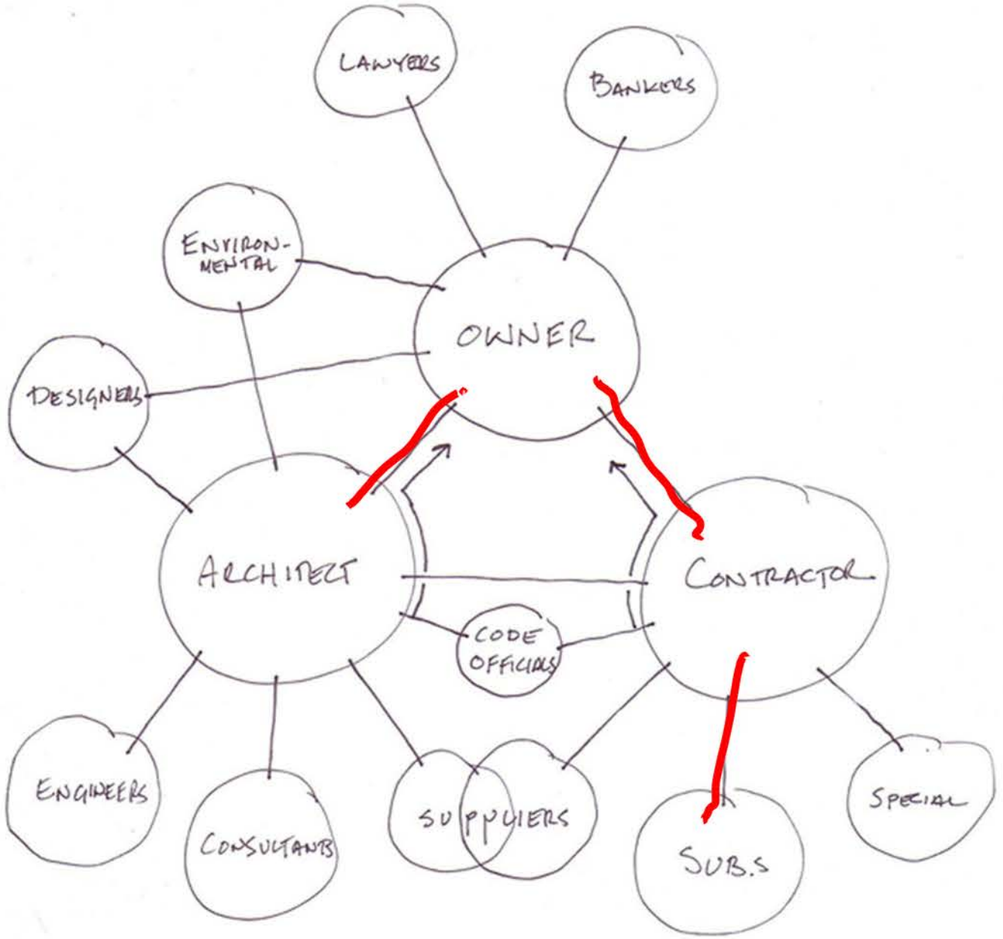

TOP TEN TIPS - CD&S

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Relationships and Contracts

Architects contracts are about …

B101 Owner / Architect Agreement

- Program (scope)
- Fee
- Schedule
- Additional Services
- Process

Architects produce the “Design Intent”

- Standard of Care - Reasonable and Prudent (Competent)
- Architects provide service
- Legal liability is about decision making process
- Architects act reasonably and responsibly
- Architects “endeavor to …”

You can’t promise Beauty or Perfection

Contractor contracts are about …

A101 Owner / Contractor Agreement

- Work (scope)
- Cost
- Schedule
- Requirements
- Product

Contractors control “Means and Methods” to build the Work

- Standard of Care - All about conformance
- Contractors do work
- Legal liability is about results
- Contractors complete work
- Contractors “will achieve …” or “will produce …”

Make manifest the Design Intent(s) and compliance

TOP TEN TIPS

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Tip #5:

You already know structures …

you just have to translate what you know into the special language of engineers

TOP TEN TIPS - STRUCTURES

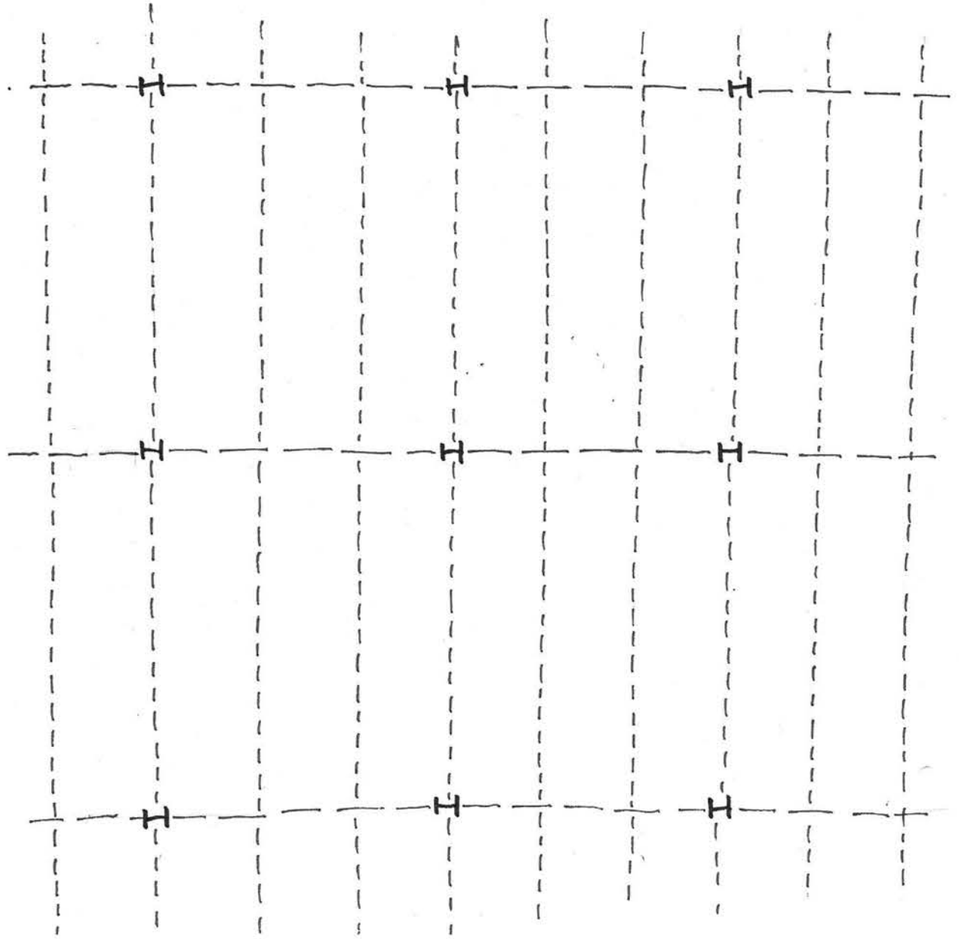
Tip #5: You already know structures …

Concepts are more important than formulas

Try to find the relationship between the basic ideas that you already know and the formulas, often this is more important than any actual math

Engineers will say things as if they are truths, but are actually just ways to simplify complex situations

Don't fret, it won't help



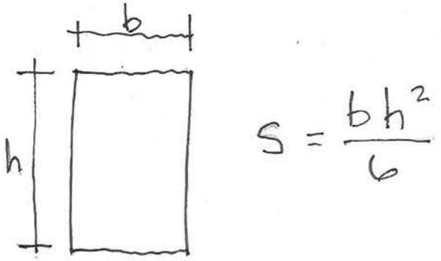
TOP TEN TIPS - STRUCTURES

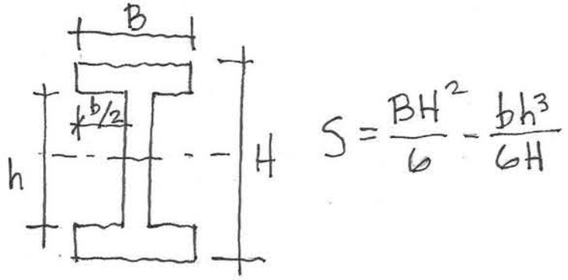
Tip #5: You already know structures ...

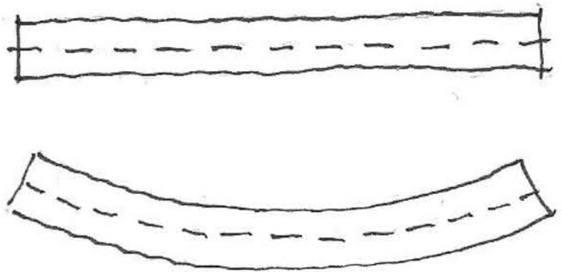
E - Modulas of Elasticity - Material

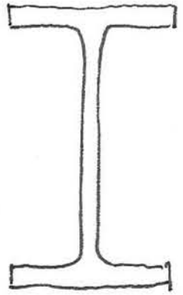
I - Moment of Inertia - Shape

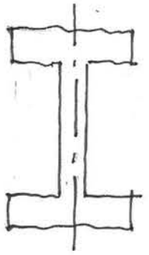
S - Section Modulas - Shape











$S = \frac{B^2(H-h)}{6} + \frac{(B-b)^3 h}{6B}$

TOP TEN TIPS - STRUCTURES

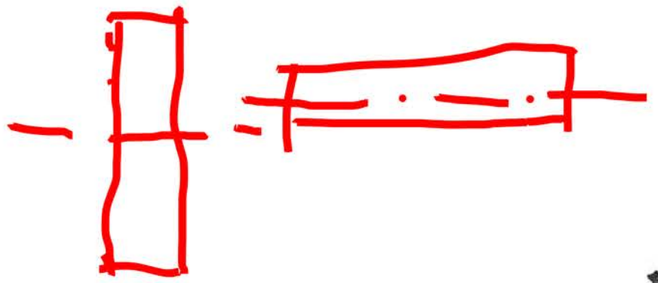
Tip #5: You already know structures …

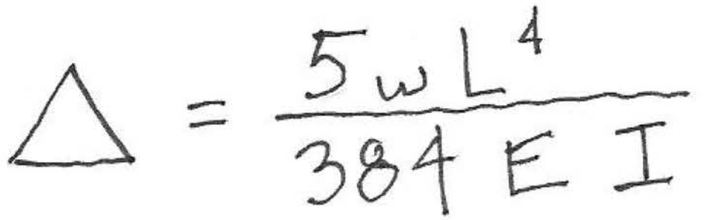
Shear: $F_v = V / A$

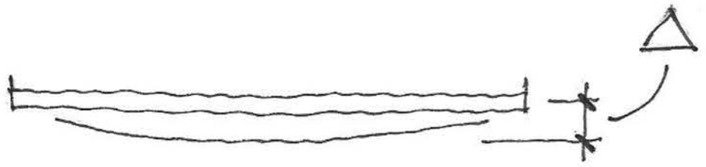
Deflection - change in the member due to loading

Delta = change

Brings together the material consideration, the shape issues and the specific loading issues







TOP TEN TIPS - STRUCTURES

Tip #5: You already know structures ...

and ...

SOH-CAH-TOA

TOP TEN TIPS

Tip #6:

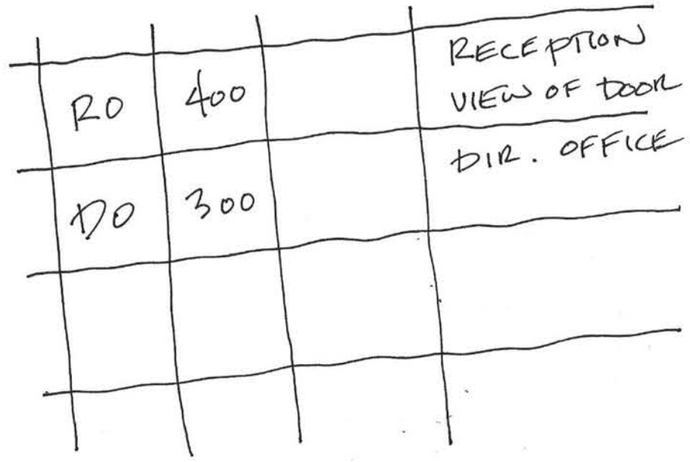
On the exam, no one cares if you are a brilliant designer

Its about simplicity and competence
(health, safety and welfare)

TOP TEN TIPS - SCHEMATIC DESIGN

Tip #6: On the exam, no one cares if you are a brilliant designer - simplicity and competence

1. One thing at a time
2. Keep it simple
3. It is a puzzle, not architecture
4. Have a plan, know what you will do
5. Work it in order:
   - Understand what is going on
   - Analyze and evaluate the program
   - Take useful notes, have a system
   - Graphically diagram it out
   - Roughly place all the components
   - Finalize rooms, place all the doors
   - Review code (dead end corridors, etc.)
   - CHECK



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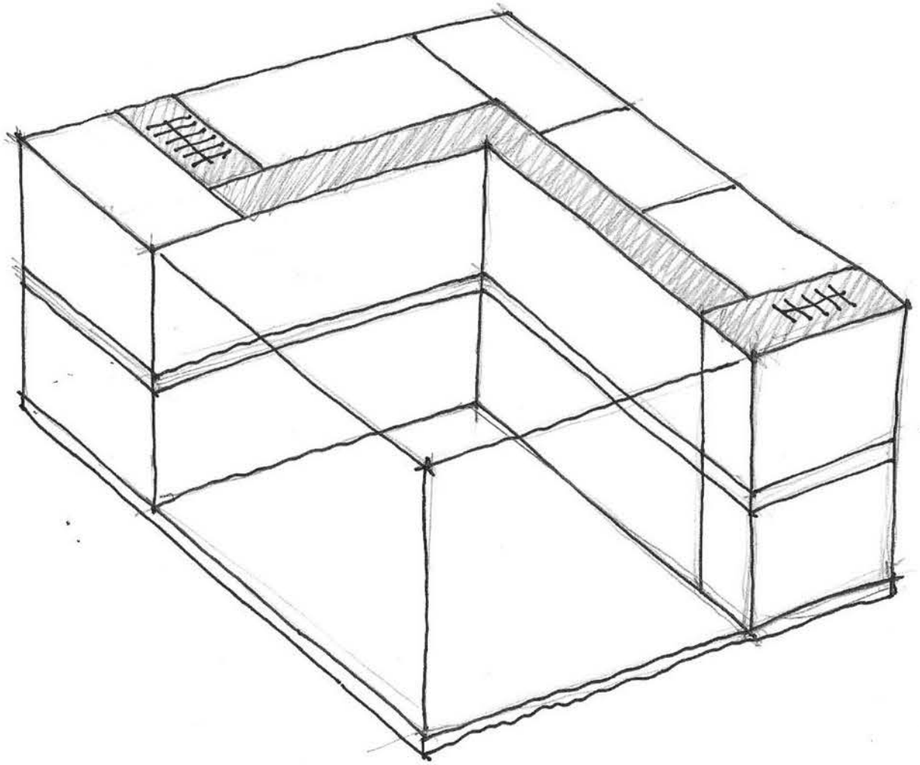

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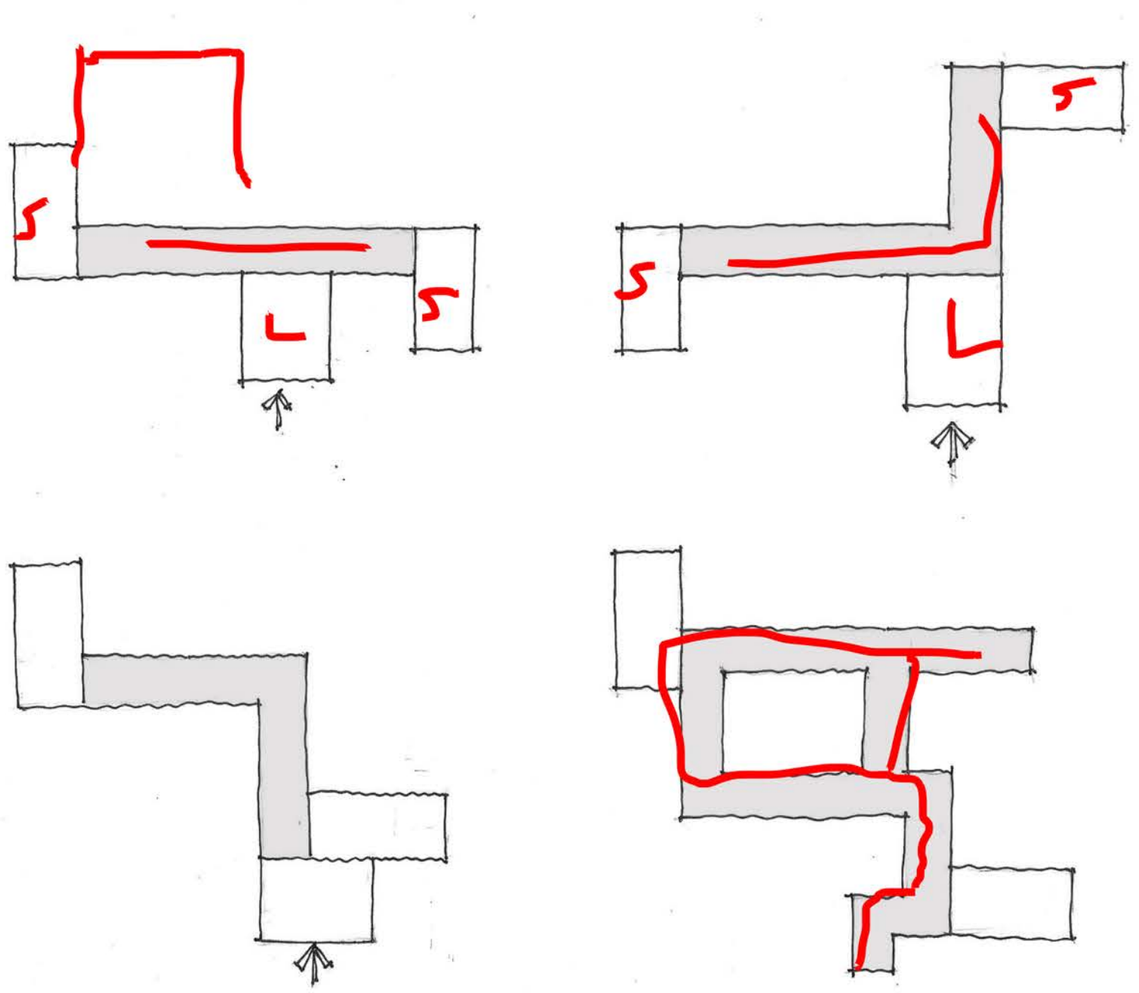

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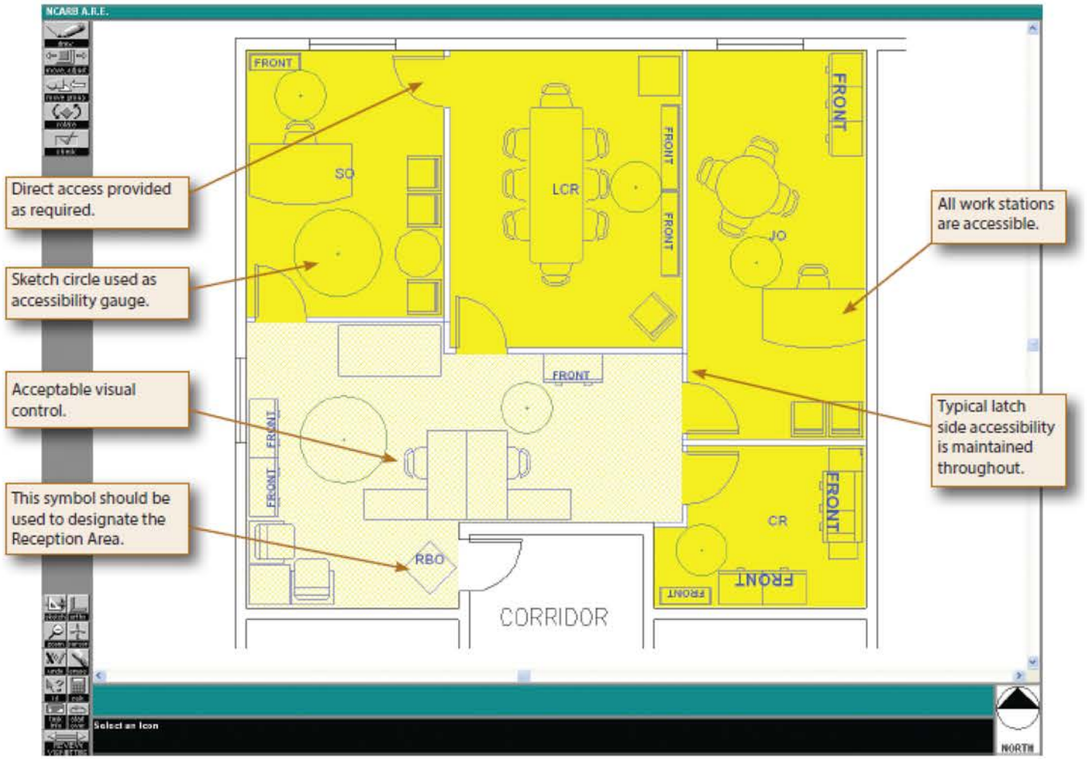

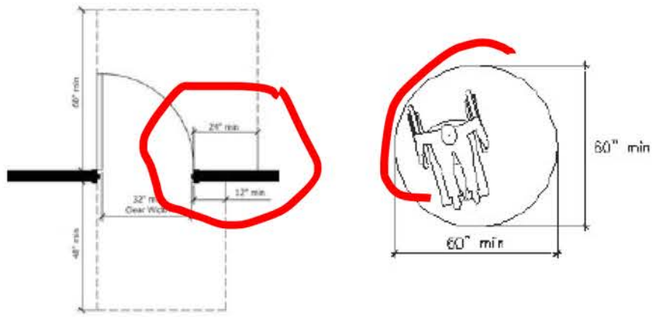

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TOP TEN TIPS

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Tip #7:

Plainsawing versus Quartersawing

TOP TEN TIPS - BDCS

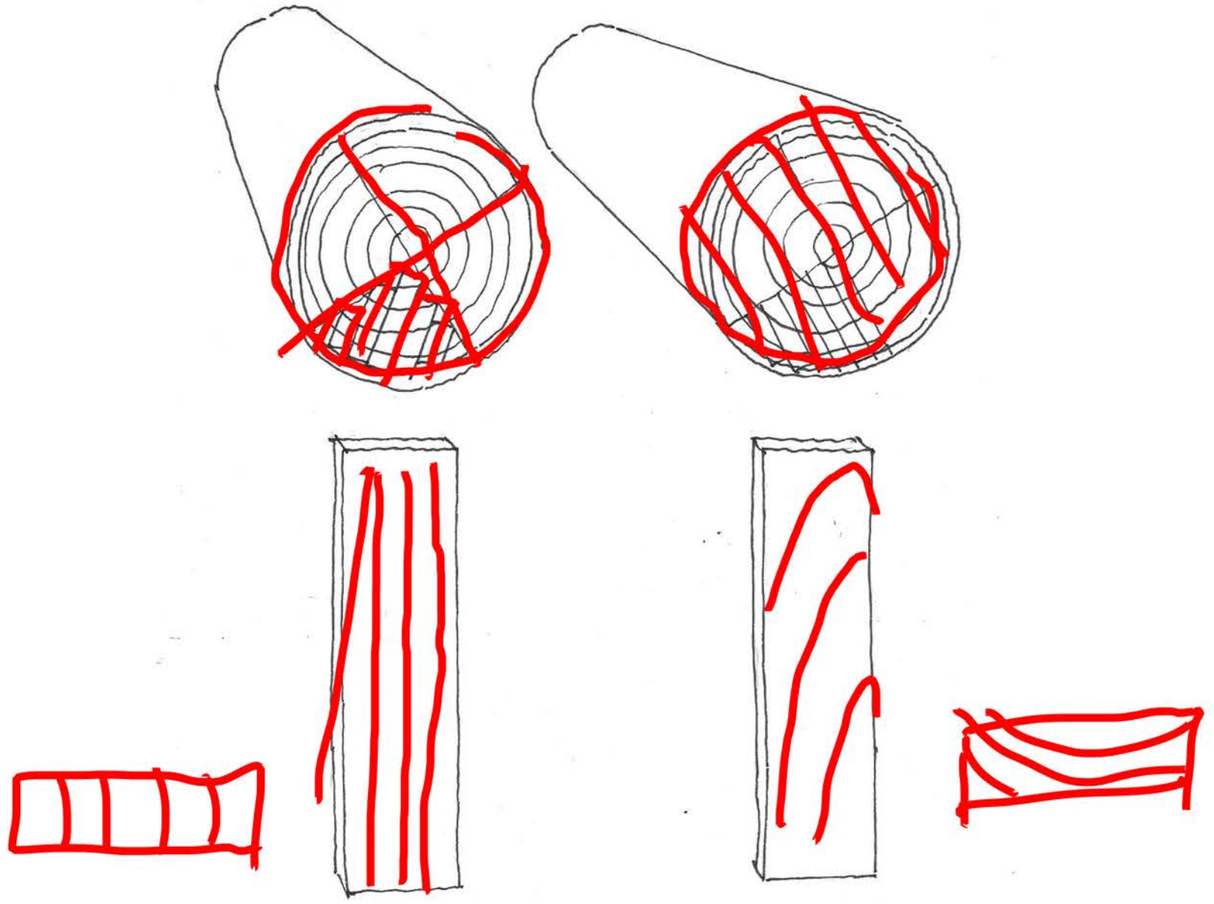
Tip #7: Plainsawing versus Quartersawing

Plainsawn

Quartersawn

Bark, Cambium, Sapwood, Heartwood, Pith

Rings



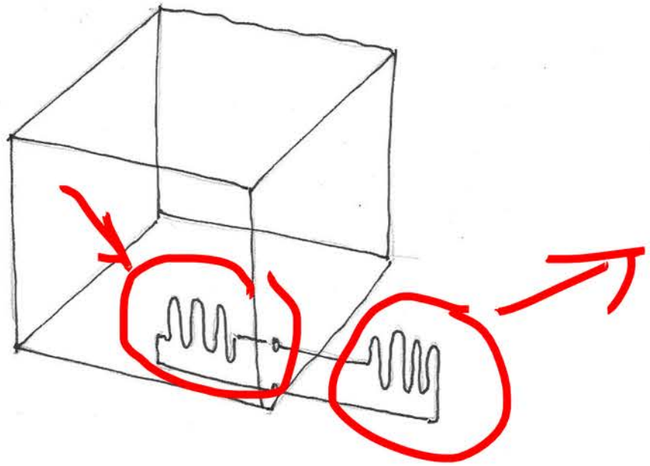
TOP TEN TIPS

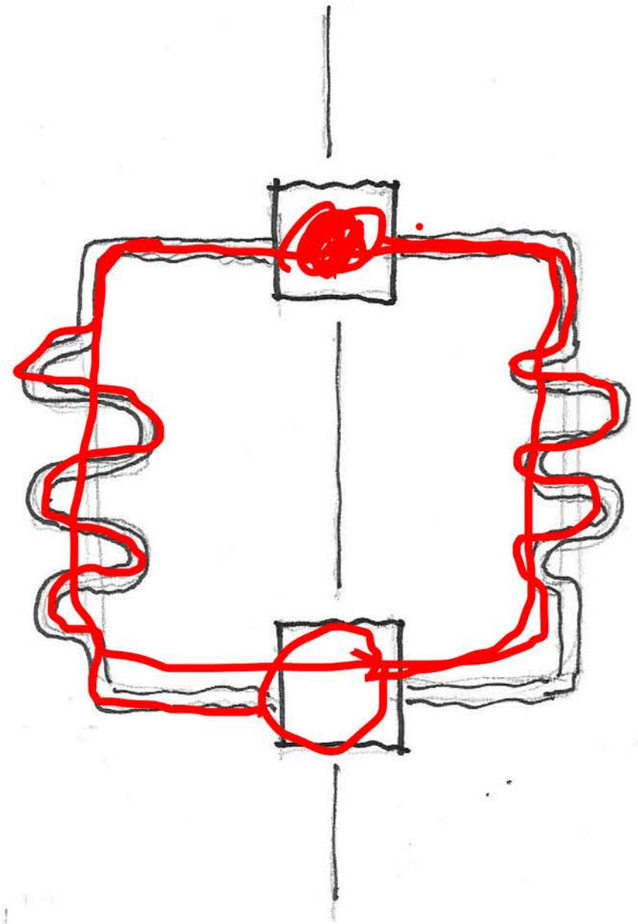
Tip #8:

Heating is easy. Cooling is hard. Know how cooling works.

TOP TEN TIPS - SYSTEMS

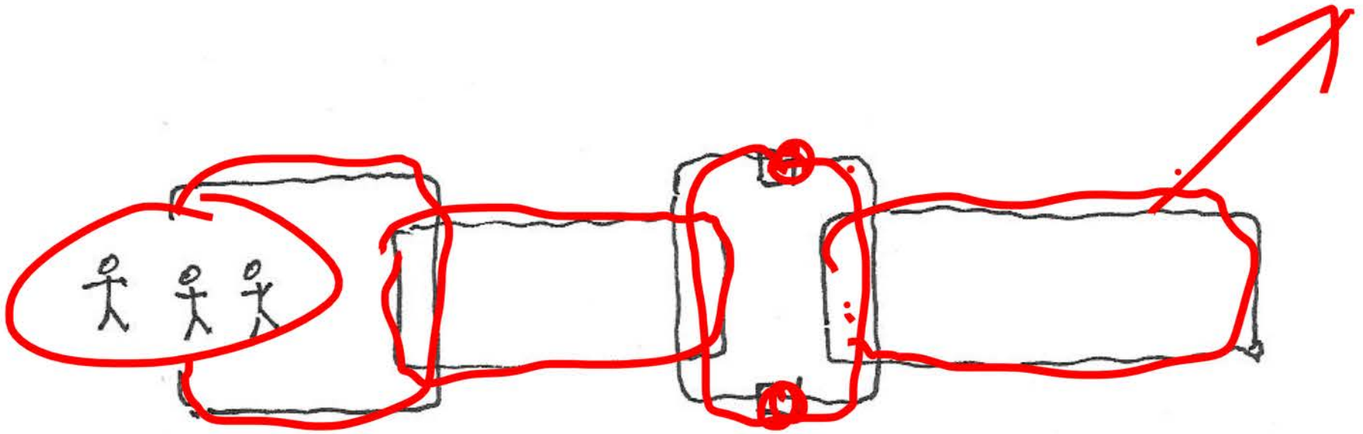
Tip #8: Know how cooling works.





TOP TEN TIPS - SYSTEMS

Tip #8: Know how cooling works.



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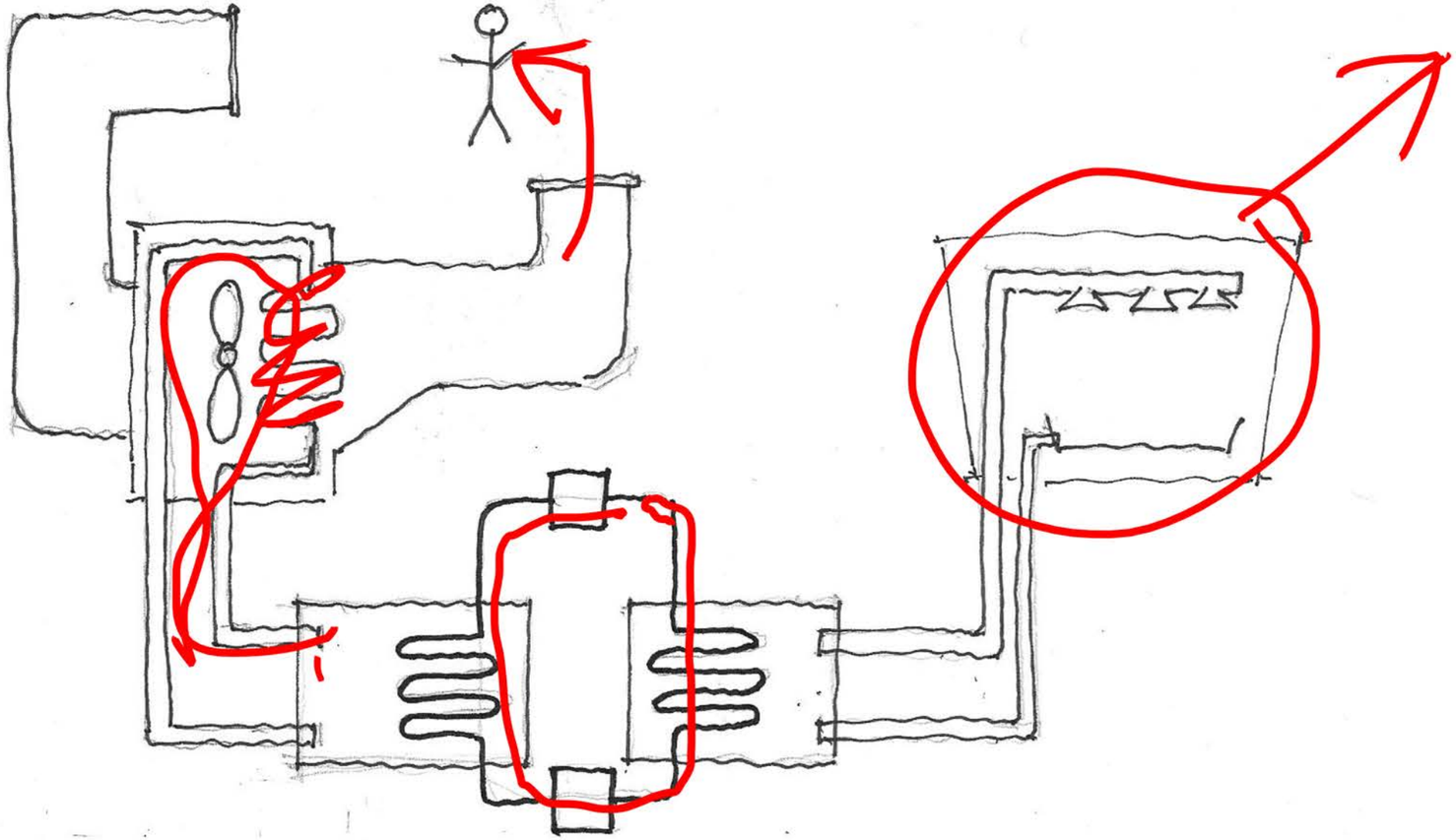

TOP TEN TIPS

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Tip #9:

300 sf to 350 sf per parking space

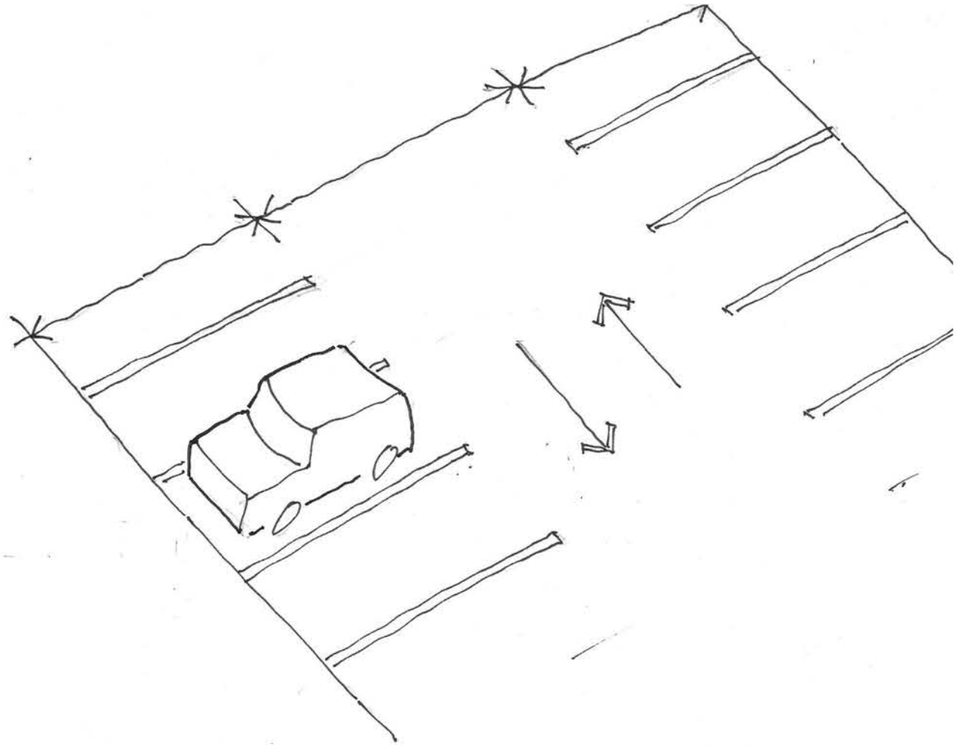
TOP TEN TIPS - SITE

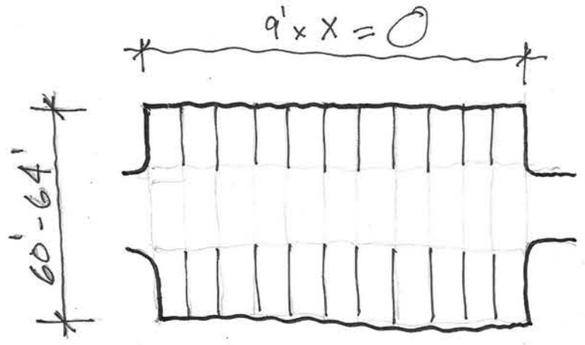
Tip #9: Parking - 300 to 350 sf

Parking space = 9’ x 18’
(maybe 8’-6”, maybe 19’, etc.)
Round it to 10 x 20 (therefore includes little extras)
Add the space for the drive aisle

Therefore, every parking lot you meet on the exam will have ONE dimension between 60’ and 65’

And the other dimension will be 1/2 the number of parking spaces x 9’





TOP TEN TIPS

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Tip #10:

Understand the concepts behind programming

when? who? what?

TOP TEN TIPS - PPP

Tip #10: Understand programming

A. Establish objectives – (i.e. Goals)

B. Collect data, analyze it

C. Create relationships

D. Establish priorities

E. (Re) State the problem

TOP TEN TIPS - PPP_

Function / Form / Economy / Time

Purpose – what is the essential problem?
- (What is it, parking garage? Assembly space? Housing? Classroom? Football field?)

Needs –
- general (aesthetic concepts, big ideas)
- scale / space needs (estimating size)
- relationships (time and efficiency as relates to size - are there ways to double up use?)
- details and specifics

Context
- Codes and viability of concept
- Culture and fit (why this? why here?)
- Opportunities (catchment?)

Net vs. Gross (service and circulation and structure)

Never design while programming (no, really)

Owner sign-off – everyone agrees

Feasibility Study:
- To help the client understand if the project is worth pursuing

Or
- to find an appropriate use for the site