ARE Mindset 4.0 Study Guide:

ANALYSIS OF THE GENERAL TEST DIRECTIONS FOR THE GRAPHIC VIGNETTES

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Site Zoning Study Guide
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This new 78 page Study Guide is the most detailed breakdown of the Site Zoning Vignette available. It includes a comprehensive analysis of the vignette's requirements, illustrated methods, and a modular practice exercise. It is loaded with both practical advice and highly technical information.

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The General Test Directions are perhaps the most asinine aspect of the entire ARE. It strains credulity to expect the candidate to carefully read and mentally unpack everything contained here under the time pressure of an actual test.

The only time there is a legitimate probability that a candidate can read and understand these instructions is before the test during their preparation.

That's why I created this guide. To help you get in the right frame of mind for undertaking the graphic vignettes.

There is a lot of useful insight to be gained from a careful reading, and doing so may help you avoid tragic mistakes.

It would be nice if these were printed in the study guides.

Leaving them out is so surprisingly unhelpful to candidates that it is hard to imagine that their absence is anything other than purposeful.
GENERAL TEST DIRECTIONS TRANSCRIBED
[I've numbered each sentence for the sake of my comments]

(1) In order to ensure precision and accuracy of measurement, each vignette type is intended to assess a limited set of design skills, knowledges, and abilities. (2) As you solve the problems posed by the vignettes, therefore, you will be asked to focus on specific design issues rather than to confront all of the design issues that a particular problem might represent.

(3) You should read the directions given for each vignette carefully in order to familiarize yourself with the scope of the vignette and the nature of the problem that it presents. (4) In order to give yourself the best opportunity to demonstrate your ability, you should plan your work on a vignette so that it can be completed within the time available.

(5) In addition to the vignette directions, other task information is provided, such as program and code requirements, that is needed for solving the problem posed by the vignette. (6) The requirements established by these materials are to be observed since they will be used in scoring the vignette. You should not consider outside information that conflicts with the requirements presented in the vignette, such as knowledge of code requirements in a particular jurisdiction. (7) The problems presented by the vignettes are intended to be straightforward and solvable using the information provided. You should not assume that any unstated unusual conditions exist.

(8) Differences in preferred work styles and degrees of comfort with using a computer as a design tool may dictate different strategies for different candidates in working out and recording solutions to vignettes. (9) Some may wish to work out and refine solutions on the screen using the tools provided, while others may wish to develop solutions on scratch paper and then use the tools to reproduce the solutions on the screen for recording and scoring.

(10) You may not use reference materials other than those provided in the vignette directions, texts, or other documents during the examination. (11) You may use the scratch paper that has been provided, but you must turn it in at the end of the examination. (12) YOU ARE NOT TO USE ANY OTHER PAPER.

(13) Your solution to each problem will be scored, as appropriate, on the basis of responsiveness to code and program requirements, technical soundness, and adherence to principles of sound design logic.
COMMENTS

Item 1. - In order to ensure precision and accuracy of measurement, each vignette type is intended to assess a limited set of design skills, knowledges, and abilities. It is important to understand that the vignettes are constructed in accordance with testing and measurement practices of the Education Industry. In industry terms each vignette including the scoring mechanism, the delivery methods, and the actual contents is an instrument.

Each vignette is designed to be precise - identical inputs (solutions) must produce identical outputs (scores). The quest for precision is almost certainly one of the reasons that the test was moved from human scoring to computer scoring.

Each vignette is designed to be accurate – it strives to measure exactly what it proposes to measure. For example if a vignette seeks to measure the candidate’s ability to lay out parking spaces, then it needs to be constructed so that laying out the parking spaces does not depend on determining occupancy and then calculating the spaces.

As item 1 states, each vignette is constructed to remove such dependencies by limiting its scope.

Item 2. - As you solve the problems posed by the vignettes, therefore, you will be asked to focus on specific design issues rather than to confront all of the design issues that a particular problem might represent.

The vignettes are not designed to measure how much you know.

Instead they are designed to determine if you can perform the specific tasks specified in the vignette.

In the real world a good design is subtle and layered. The issues it seeks to address are practically infinite.

On the ARE there are only a few dozen issues within each vignette, and the required solution is unimaginative and purely literal.

For example in the real world, a parking layout might seek circulation which consists of right turns rather than left turns. On the ARE striving to implement such best practices is counter-productive. A right hand layout will not compensate for an error elsewhere in your solution any more than a left hand or mixed layout will. Furthermore developing a right hand layout is likely to take more time. Anything that takes more time than an acceptable alternative reduces your chance of passing.

Item 3. - You should read the directions given for each vignette carefully in order to familiarize yourself with the scope of the vignette and the nature of the problem that it presents.

The only way to learn what you are being asked to do is by reading the directions carefully (equally important is learning what you are not being asked to do).

However, “familiarizing yourself” is not enough. You need to know what is and isn't required to maximize your chance of success.
The most consistent way to gain that knowledge is to read and take comprehensive notes.

The time to start reading and taking the notes on the material is before the test using NCARB's practice vignettes. This will:

- Improve your reading and note taking skills.
- Improve your knowledge of the general vignette requirements.
- Help you understand the specific requirements of the test vignette.
- Help you identify important differences between the requirements of the test vignette and NCARB's practice vignettes.

Your test results will reflect your level of preparation. Start preparing early.

**Item 4. - In order to give yourself the best opportunity to demonstrate your ability, you should plan your work on a vignette so that it can be completed within the time available.**

The time to plan your work is during preparation. Develop a consistent and repeatable process for solving the vignette.

The process should have these phases:

1. Identifying all the specific and general vignette requirements.
2. Collecting information on each requirement.
3. Analyzing each requirement.
4. Checking your identification, collection, and analysis.
5. Drawing the solution.
6. Checking the solution against your analysis.

During preparation, you should develop a time table for completing each of these phases. You can use NCARB's practice vignette to rehearse the mechanics of the process. You can use alternative practice vignettes to check your timetable against the allotted time for the vignette.
**Item 5.** In addition to the vignette directions, other task information is provided, such as program and code requirements, that is needed for solving the problem posed by the vignette.

There is no reason to mentally distinguish between the program, code and directions for the vignette. All are equally important. Together they make up all the requirements for the vignette. You must know and meet all of them.

The most consistent way to do this is taking comprehensive notes (as discussed *Item 3*).

Unlike a multiple choice question, you are creating a solution not recalling an answer.

Everything needed to create the answer is provided to you, criteria, workspace, and tools. All you need to do is execute.

**Item 6.** The requirements established by these materials are to be observed since they will be used in scoring the vignette. You should not consider outside information that conflicts with the requirements presented in the vignette, such as knowledge of code requirements in a particular jurisdiction.

Notice how they lumped all that stuff together as "requirements." Like I said, that's the way to think about it. "Directions," "Program," and "Code" are just convenient handles for organizing your notes.

For Example, even though IBC is a reference for the ARE do not apply it to the vignette. Remember the vignette has limited requirements (see *Item 1*).

Now look *Item 6* again. It tells you that the program, code, and directions are what is used for scoring the vignette.

Now look *Item 6* yet again.

It tells you not to consider outside information.

So, Don't do it.

Never.

Ever.
Item 7. - The problems presented by the vignettes are intended to be straightforward and solvable using the information provided. You should not assume that any unstated unusual conditions exist.

The required answers are more or less trivial compared to real world problems. That's why you are expected to solve them in a short period of time.

Looking at an ARE question or Vignette, coming up with an obvious answer, and then thinking, "Yes, but..." is the kiss of death on the test.

Let this be a reminder the ARE is different from actual architectural practice and requires an entirely different mindset from that which makes for a great architect.

The best part of this item is that once you understand it, you need not be paranoid.

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Paranoia will destroy ya.

--The Kinks
Item 8. - Differences in preferred work styles and degrees of comfort with using a computer as a design tool may dictate different strategies for different candidates in working out and recording solutions to vignettes.

This points out a key concept that should guide your preparation: the computer software is primarily designed for recording your solution.

That's why it's not like AutoCAD. While it may be frustrating until you become familiar with the tools the software provides, it means that if a certain level of accuracy isn't readily achievable with the software, then that level of accuracy is not relevant to scoring the vignette.

This is important. If you are spending time trying to get a detail of your solution "correct" and finding it difficult due to the limitations of the tools, it is probably not an issue with the software. It is an issue with where you are focusing your energy. (Handrails on the ramp vignette are famous for this).

The software tools for each vignette are designed to accurately record what is being scored. What cannot be accurately recorded by the software is almost certainly not scored.

Item 9. - Some may wish to work out and refine solutions on the screen using the tools provided, while others may wish to develop solutions on scratch paper and then use the tools to reproduce the solutions on the screen for recording and scoring.

For most people, drawing out your solutions on paper means that you are trying to design rather than solve the problem.

Before you enter the testing room, you should have a method for solving the problem efficiently.

Before you enter the testing room, you should have practiced to the point where you can solve the problem "by the numbers" using a repeatable method.

You should be comfortable enough with the software that it is more efficient to draw your solution directly with the tools than to draw and translate.
Item 10. - You may not use reference materials other than those provided in the vignette directions, texts, or other documents during the examination.

Maybe, this was added by the lawyers.

Technically you've been given fair warning against using crib notes...not that they would really do any good on a vignette with requirements you haven't seen.

On the other hand, barring candidates from bringing in legitimate reference materials is actually doing them a favor. If having a handbook would actually improve your efficiency in solving the vignette then you are ill prepared.

If you think that having a handbook would help your chances of passing then you don't have the right mindset.

As they pointed out, everything you need is there in the requirements (directions, program, and code).

Don't get sidetracked. See Item 7.

Item 11. - You may use the scratch paper that has been provided, but you must turn it in at the end of the examination.

An absolutely useless instruction...since there is almost zero chance of you reading it during the test.

Item 12. - YOU ARE NOT TO USE ANY OTHER PAPER.

As I mentioned at the beginning, the directions are an asinine element of the ARE. The most useless instruction from the candidate's standpoint is the one that is given prominence. The candidate didn't bring any extra paper into the exam room to use.

It is either a huge editorial error which has survived for nearly twenty years or a deliberate red-herring.

The program and directions contain the answer.

From the Tao Te ARE.
**Item 13.** - Your solution to each problem will be scored, as appropriate, on the basis of responsiveness to code and program requirements, technical soundness, and adherence to principles of sound design logic.

These are the three major categories of scoring criteria.

This is my take on each of the three:

**Responsiveness to code and program requirements:**
- Does the drawing show all the required elements?
- Does it provide the required relationships?
- Does it avoid prohibited relationships?

**Technical Soundness:**
- Are the elements drawn accurately within the limitations of the software and the limits of a tolerance factor?
- Are the required relationships drawn accurately within the limitations of the software and the limits of a tolerance factor?
- Are the prohibited relationships drawn accurately within the limitations of the software and the limits of a tolerance factor?

**Sound design logic:**
- Does the solution have attributes which the test software assumes all passing solutions to have?
- Can the computerized scoring determine if the solution meets the requirements based on those assumptions?

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**The Sound Design Logic Debate (short version):**

"Sound design logic" has historically been used to justify a belief that "good architectural practice" is part of what the ARE tests. You will see it invoked in threads at [www.areforum.org](http://www.areforum.org) to require diffusers over doors, stacking toilet rooms, and providing roof slopes steeper than the minimum required for the sake of snow loads.

"Sound design logic" has been used to justify introducing additional "secret" requirements into vignette solutions. For better or worse, the late Norman Dorf encouraged this belief among ARE candidates despite the fact that it goes against everything previously stated in the General Test Directions, and against good test design, and is contrary to how a test would be designed to withstand legal challenges to its validity as is the case with the ARE. In short, it's been used to anthropomorphize the computer into a biased human grader.

Instead I believe that "sound design logic" is intended to allow an absurd (in a formal logical sense) solution to fail even when it is "responsive" and "technically sound." Particularly at the point where the software cannot determine compliance.
The Sound Design Logic Debate (continued):

Picture things like an extremely convoluted system of drives for Site design, or a roof vignette that used 30 different roof planes all of which meet correctly.

"Sound design logic" should be interpreted in a way that is consistent with the rest of the general test directions, i.e. items 1, 2, 3, 5, 6, and 7. It should also be interpreted as being consistent with the scoring mechanism (aka the computer). Finally it should be interpreted in keeping with establishing and maintaining the test's validity.

Due to the interdependence of solution elements, a detailed unwritten requirement (such as slopes for snow loads) would be inappropriate for a graphic vignette. The proper slope for a roof is dependent upon many other factors, and picking one over the other is a matter of professional judgment and opinion not fact.

The ARE is not testing professional judgment (see item 1) but rather explicit knowledges and skills. Having unwritten requirements would require candidates to guess.

Guessing as to requirements is entirely contrary to what architects are licensed to do. Indeed when it comes to the ARE the Site Zoning Vignette explicitly shows that literal interpretation of requirements is deemed a necessary skill by the ARE specification.

Remember, whatever "sound design logic" is, it is something that a computer can understand.
What you should take away

Take Away: NCARB did not write the ARE at an eighth grade level.

Technical vocabulary and complex sentence construction used right from the get go.

Look at Item 1. In order to ensure precision and accuracy of measurement, each vignette type is intended to assess a limited set of design skills, knowledges, and abilities.

It jumps right into statistical speak - even though statistics is not a required part of the architects education and certainly the average eight grader is not exposed to the mathematical concepts of "precision" and "accuracy."

BTW, "knowledges" isn't even in MS-Word's dictionary.

Look at the grammar of Item 2. As you solve the problems posed by the vignettes, therefore, you will be asked to focus on specific design issues rather than to confront all of the design issues that a particular problem might represent.

1. It switches from third person to second person
2. Starts with adverbial adjunct that requires you to imagine a future time which you may not have encountered because you have never taken an ARE test.
3. Uses the adverbial conjunct "therefore" but to conjoin not phrases within the sentence as would be indicated by the placement of "therefore" one third of the way into the sentence where normally what preceded it would be the premise for a following conclusion. Instead it links it to the preceding sentence (written in third person).
4. Just to make sure your English is up to snuff, you then get the Future Progressive Tense in "you will be asked."
5. Of course you won't actually be asked anything, let alone be queried while you are trying to solve the problem. Though if you took it literally within the context of Item 12, you might expect a proctor or the computer to provide you additional information.
6. Then to top it all off, you are given information about a hypothetical situation involving "all the design issues" and if you miss "rather than" you may not realize that the hypothetical case is one that you should not use directly as a basis for your decisions. Now I don't know about you, but when I'm skimming test instructions, "all the design issues" is going to catch my eye more quickly than "rather than."

Of course the thing about paper that's in ALLCAPS will probably catch my attention first. Even though it's absolutely useless.

I'll add that numbering the requirements as I did at the start goes a long way toward increasing readability and understanding.

Making them a list would probably do even more. But NCARB didn't, and with good reason.

For fun analyze the rest of the Directions. It's good practice for reading and understanding them.
Take Away: The reading comprehension skills required to understand the ARE are significant and I believe the ARE tests reading comprehension.

I believe the ARE tests reading comprehension on purpose.

An architect needs to be able to read and understand complex code requirements. You're getting your license to protect the public from hazards not poor aesthetics.

Even if it is not purposeful, the ARE simulates the complexity of modern codes, standards, and other related documents.

It's not just the General Test Directions that are complex. Look at the Program from the Site Zoning Practice Vignette.

Remember you have to read and unpack all of this in just a few minutes in order to generate the required solution within the allotted time.

Remember software will not let you look at the program page and the drawing area at the same time.
**Take Away:** Ncarb Does not really want you to read the General Test Directions very badly. They contain critical information that provides insight into the test. Detailed knowledge and understanding of the General Test Directions increases a candidate's chance of passing the test relative to another candidate who remains wholly or partially unaware of the Directions.

In other words, detailed knowledge of the General Test Directions may substitute for some portion of the actual architectural skills and knowledge that the test seeks to measure.

"YOU ARE NOT TO USE ANY OTHER PAPER" is a deliberate red-herring. It jumps off the page at a candidate in a hurry and creates the perception that the information in the directions is trivial.

Notice that the whole paper issue is specific to the actual test conditions not to the practice vignettes where the candidate can actually take time to read it. It sets you up to assume that the rest of the instructions say things like "No food and drinks," or "Turn off your cell phone," or even "Raise your hand if you need to pee."

Not only are the General Test Directions absent from all the current study guides, but they are absent from the ARE STUDY GUIDE: GRAPHIC DIVISIONS VERSION 3.1 even though it includes a sample of the frigg’n confidentiality agreement.
Not only is the text of the General Test Instructions absent from the guide, but it is not even indicated to be an additional linked page in the general description of the Index Screen and how to use it.

So here’s the evidence:

1. The General Test Directions have not been printed in NCARB’s recent study guides.
2. They were not acknowledged in the 3.1 Study Guide.
3. They are not acknowledged as existing in NCARB’s software tutorials.
4. They are so complex, that a candidate is extremely unlikely to read and analyze them under test conditions.
5. If a candidate spends time reading and analyzing the m during the test, they might significantly reduce their chances of passing.
6. All this despite the fact that the general directions provide detailed useful information that helps candidates understand the context of the test and how it differs from architectural practice and that this understanding is likely to increase their odds of success.
KEEP PRACTICING!
You should be able to Draw stupid things with the "move, adjust" tool.

It is worth a little time getting used to the fact it's not AutoCAD.

Being comfortable with the tools will pay off over the course of all eleven vignettes.

Joe D's Test Tip:
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