Presentation Outline

• What is a design deficiency?
• Examples of design deficiencies
• Examples of what are NOT design deficiencies
• Pricing and considerations for assessing A/E
• Sample contract language
• Sample calculations in practice
• Insurance considerations
Established Precedent

• Spearin Doctrine

  “But if a contractor is bound to build according to plans and specifications prepared by the owner, the contractor will not be held responsible for the consequences of defects in the plans and specifications.”
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• Bilt Rite Case, 866 A.2d 270 (Pa. 2005)
What is a design deficiency?

• Generally speaking...
  – A design defect or deficiency is a flaw or problem in either the drawings or specifications that require correction in order for the project to be bid, built and function as intended.
What is a design deficiency?

• Generally speaking...
  – A design defect or deficiency is a flaw or problem in either the drawings or specifications that require correction in order for the project to be bid, built and function as intended.
  – and can occur due to the design professional’s (or A/E’s) failure to produce a complete, accurate, and well-coordinated set of design and construction documents.
What is a design deficiency?

• Design defects typically come in the form of either errors or omissions:
  – An error is an element in a design that does not serve the intended function of either the project or a component of the project.
  – An omission is an element not included in the design documents, but was necessary in order for the project to be built and function as intended.
Examples of changes that can be design deficiencies

• Incomplete or insufficient elements in the design
• Inadequate or incomplete details or specifications
• Insufficient sized space
  – Rooms
  – Interstitial
• Not compliant with zoning / planning / code requirements
• Conflicting information
• Not meeting the professional standard of care
Examples of changes that may NOT be design deficiencies

• Owner requested changes or additions
• Value engineering cost reduction
• Design improvement or betterment to owner
• Owner contingency items
Are designs expected to be perfect?

• No, generally speaking, some design defects should be expected by the Owner
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• Two factors by which the performance of a design professional can be measured:
  – Contractual standard
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- Two factors by which the performance of a design professional can be measured:
  - Contractual standard
  - Professional standard

  ‘Usually defined as what a reasonably prudent architect, in the same community at the same time, facing the same or similar circumstances would do...’

Are designs expected to be perfect?

• BUT, drawings and specs are expected to:
  – Provide the basis to obtain bids
  – Provide the contract conditions that outline party responsibilities
  – Provide the details necessary to construct the building
Considerations for determining assessment to A/E for design defects

- Considerations for A/E assessment:
  1. a threshold before any assessments against the A/E are made – designs are typically not expected to be perfect
  2. method of calculating the A/E assessment
  3. whether or not fees are paid to A/E for design defect changes
  4. error versus omission assessment

- Some contracts address all of the above
- Some contracts address none
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  3. whether or not fees are paid to A/E for design defect changes
  4. error versus omission assessment

- Some contracts address all of the above
- Some contracts address none
- Let’s take a look at some examples of contract excerpts
Contract Provisions

• An example:

If, as a result of any errors, omissions or negligent acts, for any of which the Design Professional has legal responsibility, the Owner incurs an accumulation of excess costs over two percent (2%) of the actual project construction cost, the Design Professional shall bear the burden of such accumulation of excess costs over the 2%; provided said accumulation of excess costs shall not include any improvement costs or betterment costs and shall not exceed the difference between (1) the actual construction costs resulting from such errors, omissions, and negligent acts of the Design Professional and (2) an estimate of what such costs would have been at the time of the signing of the construction contract. To the extent allowable by law, the Design Professional shall have no liability for any such excess costs which are equal to or less than two percent (2%) of the actual project construction costs, or the last construction cost estimate, whichever is greater.
Contract Provisions

• An example:

1. Threshold

If, as a result of any errors, omissions or negligent acts, for any of which the Design Professional has legal responsibility, the Owner incurs an accumulation of excess costs over two percent (2%) of the actual project construction cost, the Design Professional shall bear the burden of such accumulation of excess costs over the 2%, provided said accumulation of excess costs shall not include any improvement costs or betterment costs and shall not exceed the difference between (1) the actual construction costs resulting from such errors, omissions, and negligent acts of the Design Professional and (2) an estimate of what such costs would have been at the time of the signing of the construction contract. To the extent allowable by law, the Design Professional shall have no liability for any such excess costs which are equal to or less than two percent (2%) of the actual project construction costs, or the last construction cost estimate, whichever is greater.
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2. Method

3. Architect Fee?
- not addressed
Contract Provisions

• An example:

1. Threshold

2. Method

If, as a result of any errors, omissions or negligent acts, for any of which the Design Professional has legal responsibility, the Owner incurs an accumulation of excess costs over two percent (2%) of the actual project construction cost, the Design Professional shall bear the burden of such accumulation of excess costs over the 2%, provided said accumulation of excess costs shall not include any improvement costs or betterment costs and shall not exceed the difference between (1) the actual construction costs resulting from such errors, omissions, and negligent acts of the Design Professional and (2) an estimate of what such costs would have been at the time of the signing of the construction contract. To the extent allowable by law, the Design Professional shall have not liability for any such excess costs which are equal to or less than two percent (2%) of the actual project construction costs, or the last construction cost estimate, whichever is greater.

3. Architect Fee? - not addressed

4. Character of change (error vs. omission) - not addressed
Contract Provisions

• An example:

1. Threshold
If, as a result of any designer’s or architect’s professional responsibility, there are alteration costs or improvement costs over the 2% threshold, the costs are to be borne by the party responsible for the alteration or improvement. By law, the design professional has legal responsibility for the accuracy of their estimate of what their costs will be. If the actual alteration costs or improvement costs are equal to or greater than their estimate cost, the alteration is considered an error and is not chargeable to the owner. The actual alteration costs or improvement costs are considered the extent allowable by law.

2. Method
Betterment costs associated with alteration or improvement work will be chargeable to the owner. The owner is responsible for selection and proper application of materials. The selection of materials for construction should be made by the owner in consultation with the designer.

This is a good example of a contract provision that addresses:
✓ Threshold
✓ Method

3. Architect Fee?
- not addressed

4. Character of change (error vs. omission)
- not addressed

For presentation only
Another example:

Errors and Omissions.
A. The PROFESSIONAL shall receive no compensation or fee for any change orders which result from an error or omission by the PROFESSIONAL. However, PROFESSIONAL shall be compensated for Change Orders which, although originally designated as due to an error or omission, are not finally determined to have resulted from an error or omission.

B. If it becomes necessary during the course of construction to issue change orders which increase the cost of the Project because of the PROFESSIONAL’s failure to produce proper and coordinated specifications and drawings, or any portions thereof relating to the Project, in accordance with accepted standards and practice, the PROFESSIONAL shall be assessed the difference between the amount of the change order and what the DEPARTMENT would have paid had the error or omission not occurred, plus administration costs incurred by the DEPARTMENT. The DEPARTMENT’s administration costs will not exceed the PROFESSIONAL’s fixed fee percentage fee established for the Project applied to the change order amount. The assessment for added costs will be based on the following:
1. If the change order is an omission change order, the assessment for the difference between the amount of the change order and what the DEPARTMENT would have paid had the omission not occurred will be based on the construction cost index change between the bid opening date and the change order cost proposal, but in no case shall this amount be less than zero. For purposes of this section, a change order is an omission change order if additional work is required due to the failure of the PROFESSIONAL to produce proper and coordinated specifications and drawings, but no contract work must be removed or replaced to carry out the change order work.
2. If the change order is an error change order, the assessment for the difference between the amount of the change order and what the DEPARTMENT would have paid had the error not occurred will be the same as for an omission change order plus the cost of removing and replacing Work in order to remedy the error. For purposes of this section, a change order is an error change order if Work must be removed and/or replaced because of the failure of the PROFESSIONAL to produce proper and coordinated specifications and drawings.

C. During the Construction Contract Administration stage, the DEPARTMENT will review change orders preliminarily designated to be an error or omission. No fee will be paid for change orders preliminarily designated as resulting from an error or omission. If the value of the preliminarily designated error or omission change orders exceeds 2.5% of the amended project award amount, the DEPARTMENT may initiate an error or omission review, to be conducted at a time determined by the DEPARTMENT.
1. If the value of the review assessment determines that the total of all error or omission change orders do not exceed 2.5% of the amended project award amount, no fees will be paid on the reviewed error and omissions change orders and no assessment will be made against the PROFESSIONAL.
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B. If it becomes necessary during the course of construction to issue change orders which increase the cost of the Project because of the PROFESSIONAL’s failure to produce proper and coordinated specifications and drawings, or any portions thereof relating to the Project, in accordance with accepted standards and practice, the PROFESSIONAL shall be assessed the difference between the amount of the change order and what the DEPARTMENT would have paid had the error or omission not occurred, plus administration costs incurred by the DEPARTMENT. The DEPARTMENT’s administration costs will not exceed the PROFESSIONAL’s fixed fee percentage fee established for the Project applied to the change order amount. The assessment for added costs will be based on the following:

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For presentation only
Contract Provisions

**Addresses Error vs. Omission:**

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This is a good example of a contract provision that addresses:

✓ Threshold
✓ Method
✓ Fee
✓ Character
Considerations for assessing the A/E

Let’s look at an example -

• First, let’s look at calculating an assessment for a design omission...
For an Omission

Floor Plan

Room 1
Door – Type B

Room 2
Door – Type B

Room 3
Door – Type B

Room 4
Door – Type B

Room 5
Door – Type Y

Room 6
Door – Type Y

Room 7
Door – Type Y

Room 8
For an Omission

Floor Plan

- Room 1: Door – Type B
- Room 2: Door – Type B
- Room 3: Door – Type B
- Room 4: Door – Type B
- Room 5: Door – Type Y
- Room 6: Door – Type Y
- Room 7: Door – Type Y
- Room 8: No Door
For an Omission
Floor Plan

Room 1
Door – Type B

Room 2
Door – Type B

Room 3
Door – Type B

Room 4
Door – Type B

Room 5
Door – Type Y

Room 6
Door – Type Y

Room 7
Door – Type Y

Room 8
No Door

Add Door
Room 8

For presentation only
For an Omission
Floor Plan

Change Order – January 15, 2014
Original Contract Amount: $25,000
Change Order Amount: $350
New Contract Amount: $25,350

Room 1
Door – Type B

Room 2
Door – Type B

Room 3
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Room 4
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Room 8
Add Door
No Door
For an Omission

Floor Plan

Change Order – January 15, 2014

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Room 1
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Room 8
No Door

Add Door

Change Order – January 15, 2014
Original Contract Amount: $25,000
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WHO PAYS??

For presentation only
Change Order – January 15, 2014

Original Contract Amount: $25,000
Change Order Amount: $350

New Contract Amount: $25,350

Question:
Is the architect responsible for the additional $350 cost since it forgot to specify the door?
For an Omission
Floor Plan

Yes and No...

Room 5
Room 6
Room 7
Room 8

Add Door
No Door

Change Order – January 15, 2014
Original Contract Amount: $25,000
Change Order Amount: $350
New Contract Amount: $25,350

Question: Is the architect responsible for the additional $350 cost since it forgot to specify the door?
Yes and No...
Because the owner’s project always required a door for Room 8 and the Owner is not entitled to a free door.
For an Omission

Floor Plan

<table>
<thead>
<tr>
<th>Room 1</th>
<th>Room 2</th>
<th>Room 3</th>
<th>Room 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room 5</td>
<td>Room 6</td>
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</table>

**So what is the damage?**

Original Contract Amount: $25,000
Change Order Amount: $350
New Contract Amount: $25,350

Question:
Is the architect responsible for the additional $350 cost since it forgot to specify the door?

So what is the damage?
The damage incurred by an owner from an omission design defect can be quantified by calculating the difference between what the owner would have paid had the omission not occur and the change order amount for the work at issue, or what the owner actually paid for that change.
The damage incurred by an owner from an omission design defect can be quantified by calculating the difference between what the owner would have paid had the omission not occur and the change order amount for the work at issue, or what the owner actually paid for that change.

So how do we figure out this delta?
For an Omission
Floor Plan

The damage incurred by an owner from an omission design defect can be quantified by calculating the difference between what the owner would have paid had the omission not occur and the change order amount for the work at issue, or what the owner actually paid for.

This we know.
For an Omission
Floor Plan

The damage incurred by an owner from an omission design defect can be quantified by calculating the difference between what the owner would have paid had the omission not occur and the change order amount for the work at issue, or what the owner actually paid for the change. This we know - it’s $350.
For an Omission

Floor Plan

How can we determine what the owner would have paid?

Some considerations:
- Unforeseen escalation
- Loss of competitive bid/pricing

Question:
Is the architect responsible for the additional $350 cost since it forgot to specify the door?

WHY??

Because the Owner is not entitled to a free door.

For presentation only
For an Omission

Floor Plan

How can we determine what the owner would have paid?

Some considerations:
- Unforeseen escalation
- Loss of competitive bid/pricing

We’re going to focus on this one
How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
- Industry Studies
- Construction Cost Index
For an Omission

Floor Plan

How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
- Industry Studies
- Construction Cost Index
For an Omission

Floor Plan

How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
  - Industry Studies
  - Construction Cost Index

Bid –

**Doors**
7@ $315 per door (incl O&P)
Or $2,205

Question:
Is the architect responsible for the additional $350 cost since it forgot to specify the door?

WHY??
Because the Owner is not entitled to a free door.

For presentation only
For an Omission

Floor Plan

How can the damage resulting from the loss of competitive pricing be quantified?

Bid –

**Doors**
7@ $315 per door (incl O&P)
Or $2,205

HENCE...

In this case, the assessment against the architect may simply be $350 - $315, or $35.
How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
- Industry Studies
- Construction Cost Index
Industry Publications

- Industry publications indicate that the typical range for the premium cost associated with design omissions, as a general rule, can range anywhere from 10% - 25%.*

* AACE CDR.S06 publication dated 2008, and ABA ‘Under Construction’ publication dated November 2013
For an Omission

Floor Plan

Industry Publications

• Industry publications indicate that the typical range for the premium cost associated with design omissions, as a general rule, can range anywhere from 10% - 25%.
• Therefore, in this case, the assessment against the A/E for this omission would range from $35 (at 10%) to $88 (@25%).
For an Omission

Floor Plan

How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
- Industry Studies
- Construction Cost Index
How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
- Industry Studies
- Construction Cost Index

Change Order – January 15, 2014

Original Contract Amount: $25,000
Change Order Amount: $350
New Contract Amount: $25,350

Bid opening date – June 30, 2012

Question: Is the architect responsible for the additional $350 cost since it forgot to specify the door?

Because the Owner is not entitled to a free door.
How can the damage resulting from the loss of competitive pricing be quantified?

- Cost for similar work estimated at bid
- Industry Studies
- Construction Cost Index

For a Change Order

Room 1
Room 2
Room 3
Room 4
Room 5
Room 6
Room 7
Room 8

Change Order – January 15, 2014

Original Contract Amount: $25,000
Change Order Amount: $350
New Contract Amount: $25,350

Bid opening date – June 30, 2012
CCI Delta = 8%

Question:
Is the architect responsible for the additional $350 cost since it forgot to specify the door?

WHY??
Because the Owner is not entitled to a free door.

For presentation only
For an Omission

Floor Plan

How can the damage resulting from the loss of cost be quantified?

- Cost for similar work estimated at bid
- Industry studies
- Construction Cost Index

For an Omission

Change Order – January 15, 2014

<table>
<thead>
<tr>
<th>Room 5</th>
<th>Room 5</th>
</tr>
</thead>
</table>

Original Contract Amount: $25,000

Change Order Amount: $350

New Contract Amount: $25,350

Bid opening date – June 30, 2012

CCI Delta = 8%

8% of $350 = $28

Question:

Is the architect responsible for the additional $350 cost since it forgot to specify the door?

WHY??

Because the Owner is not entitled to a free door.
Considerations for assessing architect

• First, let’s look at calculating an assessment for a design omission
• Next, let’s look at calculating an assessment for a design error...
For an Error
Floor Plan

Change Order – January 15, 2014

Original Contract Amount: $25,000

Change Order Amount
• New Door: $350

New Contract Amount: $25,350

Incorrect Door

For presentation only
For an Error
Floor Plan

Change Order – January 15, 2014

Original Contract Amount: $25,000

Change Order Amount
• New Door: $350
• Removal and Replacement: $500

New Contract Amount: $25,850

For presentation only
For an Error
Floor Plan

Change Order – January 15, 2014

Original Contract Amount: $25,000

Change Order Amount:
- New Door: $350
- Removal and Replacement: $500

New Contract Amount: $25,850
For an Error
Floor Plan

Change Order – January 15, 2014

Original Contract Amount: $25,000

Now what’s the damage?
• We know from before that the range was from $35 to $88 if the door were simply added without any removal or reinstallation,
Change Order – January 15, 2014

Original Contract Amount: $25,000

Now what’s the damage?
- We know from before that the range was from $35 to $88 if the door were simply added without any removal or reinstallation,
- BUT there was removal and reinstallation, which cost $500.
Now what’s the damage?

- We know from before that the range was from $35 to $88 if the door were simply added without any removal or reinstallation,
- BUT there was removal and reinstallation, which cost $500.
- Had the design defect not occur, the owner would not have needed to spend $500 for the removal and reinstallation of the incorrect door, and
Now what’s the damage?
• We know from before that the range was from $35 to $88 if the door were simply added without any removal or reinstallation,
• BUT there was removal and reinstallation, which cost $500.
• Had the design defect not occur, the owner would not have needed to spend $500 for the removal and reinstallation of the incorrect door, and
• HENCE, the amount the A/E may be assessed for this design defect would be the removal and reinstallation cost of $500, plus the omission amount calculated, resulting in a range from $535 to $588.
Insurance Considerations

• Errors and Omissions Policy
  – Can protect the A/E
  – Can protect the Owner
Conclusion and closing remarks

- Identify that an error or omission exists
- Understand the work to determine corrective costs
- Adhere to the Contract for methodology to evaluate such costs
Pricing Design Deficiency Claims
General Considerations
February 27, 2014

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