Appendix

Ace Landscape Architects
Construction Services Manual

Summary of Major Items

1. Prepare a budget of all time and expenses allocated for Ace’s construction services contract. Monitor time and expenses on a weekly basis and keep the project manager or principal advised on the progress and problems.

2. Be thoroughly familiar with the plans, specifications, and contracts, including all requirements for the construction schedule, quality of work, and coordination between contractor, owner, and Ace.

3. Visit the site to determine the nature and extent of existing improvements. Note in writing any preexisting conditions that do not match the survey, as well as any damage or vandalism.

4. To the extent permitted in Ace’s agreement with the owner, conduct a pre-bid meeting to clarify the plans and specifications, form of the contract, schedules, and other important items. Require each bidder to document acceptance of existing site conditions in the bid submittal.

5. To the extent permitted in our agreement with the owner, conduct a pre-construction meeting after the bid award, on the site with plans and specifications, to confirm the requirements pertaining to quality and schedule. Require the contractor to verify that all specified materials and products have been located and that the contractor has covered all required labor, taxes, permits, fees, inspections, and tests.

6. Prepare a complete checklist of all construction activities and product submittals that will have to be reviewed for acceptance by Ace on behalf of the owner.

7. Develop and follow a direct and logical communication process. Communicate directly with the contractor’s project manager and site superintendent. Get twenty-four-hour telephone numbers.

8. Develop and practice good communication and documentation techniques. When in doubt, write it down as a field report, memo, or transmittal. Anticipate, think out, and express yourself clearly and thoroughly. Go beyond the immediate issue and
consider its impact on the project as a whole.

9. Make prompt and fair decisions. Consider alternatives when possible. Stand by your decisions when you are right. Be honest and correct your decisions when you are wrong.

10. Write up all discussions, meetings, and telephone conversations dearly and completely, send copies to all concerned parties, and file a copy in the project digital and hard-copy files or in the project manual. Make a photographic record to back up observations when you believe a photographic record may be important. If the budget does not allow recording every conversation or communication in a formal way, keep a detailed journal and send out routine correspondence weekly or biweekly.

11. Promptly review all change orders submitted by the contractor. Review your approval or disapproval with the owner, and if the changes are accepted, process and incorporate the changes into the contract documents.

12. Promptly review all RFIs submitted by the contractor. Develop a response and return it to the contractor within 48 hours if possible.

13. Follow and document a legally acceptable trail whenever you are considering stopping work.

14. Prepare a post-construction follow-up report. Document crisis events and changes to Ace's procedures. Review guarantees, operations, and maintenance instructions with the owner. Photograph the project for public relations efforts and discuss its award potential with the project manager.

15. Always act with the highest degree of honesty, integrity, and fairness as a representative of Ace.

Construction Services Manual

I. Key Issues

A. Design: Construction reflects design intent.
B. Responsibility: To Ace, to the client, and to the contractor
C. Professionalism: Knowledge, decision, fairness

II. Duties and responsibilities

A. Ace Landscape Architects

1. Preconstruction planning

   a. Prepare a budget of all time and fees allocated in the construction services contract. Review the budget
with the project manager. Monitor the schedule weekly and review progress with the project manager.
b. Check the plans and specifications thoroughly. Get corrective action by the project manager if there are discrepancies or problems.
c. Verify existing site conditions with those shown on the plans.
d. Review the construction contract between the owner and the contractor. Verify that the contract includes the authority for Ace's services during construction.
e. Obtain all phone numbers of key people involved with the construction contract.
f. Obtain a list of all subcontractors.
g. Obtain a construction schedule from the contractor.

2. Construction compliance with the contract documents
a. Observe and inform. Avoid using works such as supervise, inspect, or control. They imply Ace's responsibility for the contractor's work.
b. Be thoroughly familiar with the construction documents.


4. Schedule site review visits in advance as much as possible. Reduce extra visits. Be sure that the contractor is prepared for your visit. Use a weekly meeting format whenever possible.

5. Develop cooperation and mutual respect with the contractor. Mutual respect improves communication and facilitates negotiated compromises.

6. Be decisive.
a. Stand by the decision.
b. Anticipate decisions. Avoid spending time in research or deliberation, but do not hesitate to let the contractor know that you will get back to him or her if you do not readily know the answer to a question.
c. Offer alternatives to the contractor.

7. Suggestions for effective construction review communication:
a. Establish a contact person for client and contractor.
b. Approach all situations with an open mind.
c. Resolve the problem for the good of the project.
d. Maintain design integrity.
e. Anticipate anxiety in both yourself and others. Do not deal from emotions at any time. Try not to lose your temper. Be professional, fair, and understanding at the same time.
f. Strive to have all situations clearly stated, properly and promptly documented, and provide correspondence to all concerned.
g. Be specific and do not deal in wide-ranging generalities.
h. Refer to current work and do not bring up past negative experiences.
i. Be sure you talk to the right person. Is he or she in a decision-making capacity?
j. Be sure that the time is right to discuss a particular situation.
k. Make sure that the proposed solution is doable.
l. Be extremely patient. You may have to discuss, evaluate, or even re-word communications at various times.
m. Be sure that both you and your listener are paying attention to the problem at hand and that you are not wandering from the subject.
n. Do not pass on incomplete information, and do not accept incomplete information.
o. Make sure that both you and the person you are dealing with are interpreting words and phrases of construction jargon in exactly the same way.
p. If at any time a sketch or drawing can be used to clarify the situation, use one. Enter the drawing in the project file or project manual.
q. Do not carry out an obviously foolish or questionable interpretation. Check out the information and ask for clarification from a principal, project manager, or other experienced person at Ace. Be sure that the interpretation makes sense before you act on it.
r. Be sure that it is clearly your responsibility to act and not someone else’s.
s. Keep the owner and client informed and current on all construction activities and decisions.
t. Thoroughly think out all proposed changes and how they will affect other construction elements not yet completed.

B. Owner
1. Government or institutional clients may require their representative to be frequently involved. They can expedite approvals and resolutions.
2. Limit direct contract between owner and contractor unless the owner wants is familiar with construction and wants to be directly and positively involved.
3. You may have to educate an owner who is unfamiliar with construction practices.
4. The owner always has the right to make changes in the project.

C. Contractor
1. Must fulfill the contract requirements.
2. Provides on-site review and continuous supervision of his work.
3. Coordinates with all trades and subcontractors.
4. Has bottom-line accountability.
5. Has direct participation with Ace's landscape architects during site visits.
6. Receives and distributes all of Ace's communication.
7. Resolves conflicts between subcontractors.

D. Regulatory agencies
1. Are involved as required by laws and codes.
2. Ensure code compliance.
3. Observe that the contractor is carrying out inspections required by local jurisdictions and agencies.
4. Make note of any special inspections that may be required.

III. Quality compliance
A. Hold and attend scheduled project site meetings.
B. Bidder prequalification, pre-bid conferences, pre-construction conference
C. Have a pre-construction site review to
1. Verify existing conditions.
2. Record damages that may have been previously made to existing facilities.
3. Identify changes to the base conditions used for the design
work and determine the impact to the contractor and our construction services contract. Advise the project manager.

D. Performance, payment, and other types of bonds are supplied by the contractor to the owner.

E. Site visit verification letter
   1. The letter shall be included in the bid documents and signed by the bidder.
   2. The letter attests that the bidder has visited the site and is familiar with all visible site conditions and these conditions are covered by the bid.

F. Bid award letter
   1. Sent to the selected contractor for his signature.
   2. Contractor has located all specified materials, products, and equipment and has covered all required labor, taxes, permits, inspections, and tests.

G. Develop a checklist of construction and coordination required for on-site reviews.
   1. Obtain written construction schedule from the contractor.
   2. Timeliness of being on site is critical, so become involved in pre-construction meetings and progress meetings with the contractor and sub consultants. Keep informed about the work, decisions, changes, and schedules of the contractor and how these decisions may impact our work.
   3. Inform other sub consultants when they need to renew construction activities.
   4. Include the names and phone numbers of all subcontractors.
   5. List major work items and materials to be approved and determine when they will be ready for review. Include the following topics:
      a. Site clearing, preparation and layout
      b. Grading and drainage
      c. Paving (asphalt, concrete, other)
      d. Walls, steps, ramps, edges, and other hardscape elements
      e. Irrigation
      f. Planting
      g. Other construction
   6. Note: Under each heading, include the points of
construction requiring review, e.g.:

Walls
a. Footings, excavation
b. Footings, reinforcing steel placement
c. Footings, concrete placement
d. Masonry, etc.
e. Finishes
f. Painting

H. Review for approval all samples and shop drawings. Use the Ace form for approval.

1. Review all items required by the specifications.
2. If an item submittal is not required by the contract documents, and it is critical to the design, request a sample from the contractor. The contractor does not have to provide it; however, you should try to convince the contractor that prior sample approval could be helpful to you and the project owner and may result in a better project.

I. What to do when you observe a compliance problem:

1. Discuss it on site with the contractor and verbally notify the contractor that the item is not in compliance. Ask the contractor what he or she is going to do to bring the item into compliance.
2. Follow up promptly with written documentation.
3. Distribute a copy of the documentation to all concerned parties and the project file.
4. Obtain a resolution for compliance.
5. Involve the appropriate Ace project manager or principal.

IV. Construction documentation

A. Clear communication and accurate records

1. Maintain a construction services manual. (Who's who, phone numbers, project written records.)
2. Keep records in chronological order. Follow the policies and procedures of the client or owner.
3. Be concerned for any item that may result in additional costs or in a legal situation.

B. Meeting notes, conversation notes, and correspondence

1. Take minutes of all construction-related meetings and
distribute promptly. Use the Ace forms provided in this manual.

a. The notes do not have to be elaborate, but they should be accurate and succinct.
b. Ask for concurrence of information.
c. Correspondence must follow up verbal communication. Distribute copies to all appropriate persons.

2. Essential information
   a. Date and location of meeting; starting and ending times; name, position, and employer of all those in attendance; distribution list for copies; a complete record of the substance of all important statements.

3. Telephone records: same information as for minutes

C. Field reports
   1. Summarize, document, and communicate on-site observations. Use the Ace forms provided in this manual.
   2. Interpret or clarify work.
   3. Evaluate completed work prior to final acceptance review.
      a. Acceptable workmanship and materials
      b. Unacceptable workmanship and materials

4. Content
   a. Brief and to the point
   b. References to plans and specs (sheet, page numbers)
   c. Diagrams and sketches
   d. Weather conditions
   e. Standard reference information
   f. Who did what

5. Distribute ASAP after site visit. Use email and transmitted hard copy if necessary.


7. Consider using a camera for documenting observations and problems. Take before-and-after shots. Store the digital files.

D. Change orders
   1. Modifies plans or specifications.
   2. Becomes a legally binding part of contract.
3. Owner must approve.

4. Process
   a. Initiation of request for change order. Often the change order is initiated because the contractor wants approval prior to working out the costs.
   b. Proposal of changes and cost changes by contractor.
   c. Review by Ace with recommendation.
   d. Owner reviews and signs. Contractor reviews and signs.

5. Can be standard form or by letter. Public clients normally have a specific form. Ace frequently uses the appropriate AIA standard form.

6. Include supplementary drawings if needed.

7. The basic information usually contained on a standard change order includes the following:
   a. The change order number (most often sequential to enhance the chronological record of the project); date; project name and reference number; owner; contractor and original contract reference date; description of contract changes; cost effect (addition or deduction); time effect; previous original contract amount; calendar or project schedule changes; and signature lines and dates for owner and contractor.
   b. Sometimes change orders are only for project schedule changes, often caused by rain delays, and cost changes in the contract are not a part of the change order request.

E. Field orders
   1. Field orders are used for minor changes that may or may not affect the cost. Use the Ace forms provided in this manual.
   2. Field orders are made by landscape architect as the owner's agent. If possible, always seek authorization by the owner before making a field change.
      a. Limited by a maximum cost overrun allowed by owner.
      b. Use carefully, for immediate decisions.
   3. Are usually verbal, and must be followed by a letter or memo.
   4. May eventually be incorporated into a change order and
included in the contract documents.

5. If minor changes do not affect the price, cost, or completion time, the Ace representative can authorize by letter, memo, or bulletin.
   a. Notify owner and contractor.
   b. Copy to file.

F. Inspection and certification reports

1. The requirements for these reports must be specified in the contract documents or by public reviewing agents.
2. All reports are entered in the construction file.

G. Punch list

1. Itemizes work to be done or corrected to complete the project. Use the Ace forms provided in this manual.
2. Usually made to verify a request for final payment or for completion.
3. Contractor to request five days in advance.
4. The punch list usually includes the following information:
   a. Project name and reference identification; date of the review; date and reason for the punch list (final acceptance review, substantial completion, start of the maintenance period, etc.); brief descriptive statements that identify the nonconforming items or workmanship (each should be separately identified); and copy distribution.

H. Stopping the work for unacceptable work by the contractor.

1. **Warning 1**: Inform the contractor verbally that the work as installed will not be approved. Follow promptly with a written document.
2. **Warning 2**: If the unsatisfactory work continues, inform the contractor verbally that the work is still not acceptable. Follow promptly with a written document. Discuss the situation with the owner. Request the owner's input and concurrence regarding the questionable work.
3. If there is no change in the situation, prepare a letter to stop the work of the contractor. Advise the contractor that any further work from the time of the receipt of the letter will not be approved for payment; nor will the unsatisfactory work previously performed be approved for payment. It is very helpful if the letter is signed by both
Ace and the owner. The owner's concurrence is required.

4. Resolve the issue. Involve the appropriate Ace project manager or principal.

V. Project completion

A. Process

1. Pre-final review and punch list
2. Final review to confirm satisfactory completion
3. Landscape architect sends written notice to owner indicating that the project has been completed in compliance with the contract documents. Landscape architect recommends acceptance of the work.
4. Owner writes his formal acceptance of the project.
5. Final payment is recommended.

B. Certificate of substantial completion

1. Minor work needs to be done.
2. Owner must occupy the project.
3. Must have all regulatory requirements met.
   a. Code compliance
   b. Agency certificate of occupancy
4. Ace uses the appropriate AIA standard form for certificate of substantial completion.

C. Review of record drawings or as-builts submittal by the contractor and preparation of as-builts if our contract require as-built preparation:

1. Accuracy is critical.
2. Important for owner's operation and maintenance of project.
3. Contractor to record, on a plan set, all amended items or changes at the time of the construction change.
4. Landscape architect reviews record drawings periodically.
5. Must be complete before final review and acceptance.

D. Submittal of required documents

1. Lien waivers
2. Bonds
3. Operation and maintenance manuals
4. Warranties and guarantees

VI. Post-construction follow-up
A. Under contract---landscape architect/owner
   1. Evaluation of establishment, maintenance, and monitoring periods
   2. Recommendations for improvement
   3. New job development

B. Informal review---not under contract
   1. Notify owner of project status.
   2. Not billable.
   3. Good PR.

C. Write a construction wrap-up report
   1. Identify all crisis events and how they were resolved.
   2. Design concepts for future use on other projects. See that the changes are implemented.
   3. Describe procedures developed on the project that will streamline future design and construction operations.

D. Maintain a photographic record of construction.
   1. Documentation of unacceptable work
   2. Public relations and promotional photographs

E. Evaluate the project in a meeting with the Ace project manager, principal, and designers in terms of the project's award potential.