ARIZONA STATE UNIVERSITY

EXHIBIT A
OPERATING MANUAL
FOR
CONSTRUCTION MANAGER AT RISK PROJECTS

(SINGLE PROJECT FORM)
(SUPPLEMENTAL REQUIREMENTS FORM)

Date (type in) Issued:

________________________________________
Request for Qualifications Number ____________

________________________________________
OWNER
ARIZONA BOARD OF REGENTS
for and on behalf of

ARIZONA STATE UNIVERSITY

CMAR

________________________________________
DESIGN PROFESSIONAL

________________________________________

________________________________________

OPERATING MANUAL FOR CONSTRUCTION MANAGER AT RISK PROJECTS (SINGLE PROJECT FORM)(SUPPLEMENTAL REQUIREMENTS FORM) © JUNE 2006 EDITION
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**Arizona State University**

06/23/06

**Operating Manual**

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to

Operating Manual

Specific Terms and Provisions of the Operating Manual

1. Section 1.6 (definition of “CMAR Design Phase Services Contract Documents”): Additional documents not listed in definition that are to be CMAR Design Phase Services Contract Documents:

[NOTE TO USERS: List any additional documents. If there are no additional documents, insert “None”.

2. Section 1.6 (definition of “CMAR Construction Contract Documents”): Additional documents not listed in the definition that are to be CMAR Construction Contract Documents:

[NOTE TO USERS: List any additional documents. If there are no additional documents, insert “None”.

3. Section 1.7: Indicate frequency of progress meetings during Construction Phase as “weekly”, “biweekly” or some other frequency:

4. Section 2.3.2(iv). (Architectural Program)

The following is a list of the minimum items to be included in the Architectural Program by the Design Professional. The Design Professional is obligated under the Operating Manual to deliver all items listed in this Paragraph 4. HOWEVER, THE DESIGN PROFESSIONAL IS NOT OBLIGATED TO DELIVER ANY SPECIFIC ITEM LISTED BELOW IF THE ITEM IS CHECKED AND INITIALED BY DESIGN PROFESSIONAL AND OWNER.

___/___ Design Professional will not prepare an Architectural Program.

The Design Professional will prepare an Architectural Program. The Architectural Program will be a detailed written report on the following subject matters, except the items checked and initialed by Design Professional and Owner:

___/___ 1. Locate and develop existing building drawings for remodeled areas.

___/___ 2. Required size, use, occupancy, and furnishings/equipment requirements of all spaces.
3. Required relationships of spaces to other spaces.

4. Required utility services and other infrastructure needs for all spaces and investigations into available utilities and other infrastructure.

5. Environmental requirements for all spaces.

6. Traffic/circulation requirements within and without the building and building service requirements.

7. Tabulation of all net assignable areas.

8. Explanation of probable required non-assignable spaces.

9. Calculation of probable gross building area(s).


11. Telecommunications analysis for voice, data and video.

12. Site analysis, including utilities, circulation, service, orientation, adjacent structures, etc

13. Program phase cost estimate. A Construction Cost Estimate in accordance with the requirements in the Operating Manual, including, among other requirements, the Construction Cost Estimate must be a conceptual cost estimate prepared using an elemental systems methodology.

All of the above shall be presented in an 8 1/2" X 11" written PROGRAM DEVELOPMENT SUBPHASE REPORT. __________(______) copies of the REPORT shall be required for review and approval.

5. Section 2.3.3(v) (minimum Schematic Design Documents)

The following is a list of the minimum items to be included in the Schematic Design Documents by the Design Professional. The Design Professional is obligated under the Operating Manual to deliver all items listed in this Paragraph 5. HOWEVER, THE DESIGN PROFESSIONAL IS NOT OBLIGATED TO DELIVER ANY SPECIFIC ITEM LISTED BELOW IF THE ITEM IS CHECKED AND INITIALED BY DESIGN PROFESSIONAL AND OWNER.

Design Professional will not prepare Schematic Design Documents.

The Design Professional will prepare Schematic Design Documents. The Schematic Design Documents shall consists of AT LEAST the following, except the items checked and initialed by Design Professional and Owner:

1. Site Plan (Scale: 1" = 40'-0").

   a. Preliminary architectural site plan.

2. Site Survey (Scale: 1/16" = 1'-0"). Survey of site conditions pursuant to Operating Manual Section 2.2.2.

3. Soil boring data and consultant's foundation recommendations, if appropriate. Report on subsurface site conditions pursuant to Operating Manual Section 2.2.2.

4. Structural Plan(s) showing proposed bay arrangements, materials: (Scale: Plan - 1/8" = 1'-0"; Details, Sections 3/8" = 1'0").
a. Typical interior framing details showing intended materials
b. Typical exterior framing detail.
c. Typical column, foundation schedule.
d. Vibration Isolation Review.
e. Section(s).

5. Schematic Floor Plans (Scale: 1/8" = 1'-0").
   a. Using existing building plans and indicated new work, including demolition.
   b. New work, all floor levels
   c. Remodeled areas of existing structures, if any, including demolition, and
   d. Existing building drawings for remodeled areas

6. Exterior elevations

7. Roof details.

8. Diagrammatic building sections (Scale: 1/8" = 1'-0").

9. Typical wall sections to show materials, relationships, construction intent.

10. Typical key architectural details (Scale: 3/8" = 1'-0").

11. Room material and equipment outline.

12. Schematic narrative of design rationale, proposed construction, code analysis, structural systems. Possible review with ASU Public Arts and Design Review Council.

13. Preliminary mechanical equipment room layouts (major equipment only)(Scale: 1/8" = 1'-0").

14. Preliminary one-line HVAC duct layouts and/or preliminary mechanical piping diagram (Scale: 1/8" = 1'-0").

15. Preliminary one-line electrical distribution diagrams (Scale: 1/8" = 1'-0").

16. Preliminary one-line telecommunication distribution diagrams for voice, data and video (Scale: 1/16" = 1'-0").

17. Preliminary draft of Project Manual including Outline specifications (marked up for project) and product cut-sheets.

18. Narrative descriptions of proposed alternative mechanical system(s) electrical system(s), special systems and alternatives being evaluated, recommended or required.

19. Line-item Construction Cost Estimate for schematic design with line item breakdowns for optional items. The Construction Cost Estimate in accordance with the requirements in the Operating Manual (including, among other requirements, the Construction Cost Estimate must be a conceptual cost estimate prepared using an elemental systems methodology) with area breakdowns (net and gross) and analysis

20. Perform an annual energy consumption analysis and develop a summary of the usage of electrical (KW/h/yr.), chilled water (Ton Hrs./yr.), and steam (lbs./yr.) used under normal building operation. Provide a computer printout as back-up.
21 Telecommunications system infrastructure including voice, data and video.

DELIVERABLES: ______ copies of drawing sets, specification and product cut-sheets shall be required for review. Additional drawing sets as required for progress review and submission to local, state and federal code and approved agencies.

6. Section 2.3.4(ii). (minimum Design Development Documents)

The following is a list of the minimum items to be included in the Design Development Documents by the Design Professional. The Design Professional is obligated under the Operating Manual to deliver all items listed in this Paragraph 6. HOWEVER, THE DESIGN PROFESSIONAL IS NOT OBLIGATED TO DELIVER ANY SPECIFIC ITEM LISTED BELOW IF THE ITEM IS CHECKED AND INITIALED BY DESIGN PROFESSIONAL AND OWNER.

Design Professional will not prepare Design Development Documents.

The Design Professional will prepare Design Development Documents. The Design Development Documents shall consists of AT LEAST the following, except the items checked and initialed by Design Professional and Owner:

1. Site Survey (Scale: 1" = 40' - 0") and annotated survey to show items for demolition, removal or relocation

2. Site Plan (Scale: 1/16" = 1' - 0"):
   a. Final contours/grading.
   b. Paving, sidewalk, curb, fence, parking, and other site improvements (showing location and overall dimensions). Construction staging areas.
   c. Retaining walls and details.

3. Foundation Plans (Scale: 1/8" = 1' - 0")
   a. Footing and foundation sizes, reinforcing, elevations.
   b. Below grade concrete wall thickness.
   c. Waterproofing, damp-proofing, drainage - standard details, types.

4. Structural Framing Plans, including (Scale: 1/8" = 1' - 0"):
   a. Horizontal and vertical member size, sample reinforcing.
   b. Typical floor and roof construction details, thicknesses.
   c. Typical exterior wall supports, bracing, ties, reinforcing.
   d. Lateral bracing methods, location.
   e. Fireproofing - NFPA designation.
f. Vibration isolation or other special details.

g. Design live and dead loads tabulated for all floors, areas, and roofs.

5. Exterior wall elevations, all planes (Scale: 1/4" = 1' - 0").

6. Typical wall sections (Scale: 1/2" = 1' 0").

7. Typical roofing and sheet metal details (Scale: 3/8' = 1'- 0").

8. Floor plans, all levels and roofs (Scale: 1/8" = 1' - 0").

  a. Partition type identification.

  b. Smoke and fire compartmentalizing.

  c. Built-ins and fixed equipment shown and noted.

  d. 1/4" scale furniture and movable equipment layouts, for ALL spaces.

9. Stair and elevator details, types (Scale: 3/8" = 1' - 0").

10. Room finish and door schedule for typical areas/spaces.

11. Miscellaneous specialties and equipment schedule.

12. Fixed equipment schedule, locations, service requirements.

13. Plumbing work, plans (Scale: 1/8" = 1' - 0").

  a. Fixture schedule, locations.

  b. Equipment schedule, locations.

  c. Waste and vent riser diagram with types, locations, key sizes.

  d. Water piping, locations (sizes for pipes larger than 1").

14. Roof drainage system and location

15. Fire protection systems.

16. Mechanical systems (Plan Scale: 1/8" = 1' - 0").

  a. Equipment schedule, locations, sizes, types.

  b. Chilled, condenser, hot water, steam, and condensate piping systems, locations, riser diagrams.

  c. Equipment connections and supports - standard details.

17. HVAC piping, locations (sizes for pipes larger than 1") (Scale: 1/8" = 1' - 0").

18. Power distribution diagram (Plan Scale: 1/8" = 1' - 0").

  a. Power distribution equipment schedule, locations.
b. Feeder sizes.

c. Emergency generator size, locations.

d. Uninterruptible power supply equipment size, locations if required.

e. Grounding - standard details (A/E).

19. Interior lighting and power, plans details (Scale: 1/8" = 1' - 0").

a. Fixture and switch locations with identification.

b. Typical receptacle and power outlet locations.

c. Special requirements noted.

20. Motor control schedule with starter and circuit sizing.

21. All telecommunication (voice, data and video) systems and equipment, fire alarm systems, security systems, energy Management systems.

22. Telecommunication (voice, data and video) distribution diagrams in accordance with "Arizona State University New Construction Guidelines and Specifications for Telecommunication Services."


26. Outline specifications (marked-up for Project).

27. Description of proposed alternates and cost estimates for each.

28. Construction Cost Estimate for Design Development design with area breakdowns (net and gross) and analysis. The Construction Cost Estimate must be in accordance with the requirements in the Operating Manual. The Construction Cost Estimate will be in a Schedule of Values format. The line items for each area heading in the Construction Cost Estimate must be conceptual cost estimates prepared using an elemental systems methodology. The area breakdowns (net and gross) will be in CSI format.

28. Based on the design requirements, revise/update the annual Energy Consumption Analysis for the building. Submit the summary results along with the Design Documents.

DELIVERABLES. __________ (_________) copies of drawing sets, specification and product cut-sheets shall be required for review. Additional drawing sets as required for progress review and submission to local, state, and federal code and approved agencies.

7. Section 2.3.5(i). (minimum requirements for Construction Documents)

The Design Professional is obligated under the Operating Manual to deliver a complete set of Construction Documents as required by Section 2.3.5 of the Operating Manual. The DP must include all of the items in this Paragraph 7 in the Construction Documents and in addition must include such
additional items as are required under Section 2.3.5 of the Operating Manual. HOWEVER, THE DP IS NOT OBLIGATED TO DELIVER ANY SPECIFIC ITEM LISTED BELOW IF THE ITEM IS CHECKED AND INITIALED BY DESIGN PROFESSIONAL AND OWNER.

1. Civil Engineering Drawings (Scale: 1" = 30'-0" min.)
   a. Complete engineering plans showing building location, paving, grading, utilities, easements, tunnels, retention areas, drainage, rights-of-way, etc.

2. Site Survey (Scale: 1" = 40'-0"), including proposed staging areas.

3. Landscaping Drawings (Scale: 1" = 30'-0" min.) if appropriate or required:
   a. Complete planting plans and plant schedule.
   b. Complete irrigation plans.
   c. Complete landscape lighting if differs from general site lighting.
   d. Planting details.
   e. Complete landscaping and irrigation specifications.

4. Architectural Site Plan (Scale: 1/16" = 1'-0"):
   a. Final contours/grading.
   b. Building location, paving, sidewalk, curb, fence, parking, and other site improvements (showing location and overall dimensions). Construction staging areas and construction access roads.
   c. Retaining walls and details.
   d. Property lines, including R.O.W. and easements.

5. Exterior wall elevations, all planes (Scale: 1/8" = 1'-0"). Indicate expansion and control joints.

6. Typical wall sections and details (Scale: 1/2" = 1'-0" min.).
   a. Show all caulking and sealant details and flashing details.
   b. Masonry anchoring and reinforcement.

7. Typical roofing and sheet metal details (Scale: 3/8" = 1'-0").
   a. Details specific to this project.

8. Floor plans (Scale: 1/8" = 1'-0" or 1/4' as required), including all work.

9. Interior elevations.

10. Finish Schedule.

11. Miscellaneous specialties and equipment schedule.

12. Fixed equipment schedule, locations, service requirements.

13. Description and details of proposed add-alternates and Cost Estimates for each.
14. Construction Cost Estimate for Construction Documents with area breakdowns (net and gross) and analysis. The Construction Cost Estimate must be in accordance with the requirements in the Operating Manual. The Construction Cost Estimate will be in a Schedule of Values format. The line item for each area heading of the Construction Cost Estimate must be a conceptual cost estimate prepared using an elemental systems methodology. Line items in area breakdowns (net and gross) will be in CSI format.

15. Composite drawings: it shall be the responsibility of the consultant to coordinate the design of the architectural, structural, plumbing, HVAC and electrical work so that interferences among and within the several trades will be avoided.


17. Foundation plans (Scale: 1/8" = 1'-0"):
   a. Footing and foundation sizes, reinforcing, elevations, and schedule.
   b. Below grade concrete wall thickness, wall openings, knock-out panels, beam pockets, and pipe chases.
   c. Waterproofing, damp-proofing, drainage - standard details, types.
   d. General notes.
   e. Any special foundation requirements, including de-watering, pilings, caissons, shoring, etc.

18. Structural Framing Plans, including (Scale: 1/8" = 1'-0"):
   a. Horizontal and vertical member sizes and schedules w/all connection details.
   b. All reinforcing types and sizes in concrete members.
   c. All floor and roof construction details, thicknesses, openings, depressions and slopes.
   d. All exterior wall supports, bracing, ties, reinforcing.
   e. Lateral bracing methods, location.
   g. Expansion joints and control joints.
   h. Isolation or other special details.
   i. Design live and dead loads tabulated for all floors, areas, and roofs.
   j. Design calculations.
   k. General notes.

19. Plumbing work, plans (Scale: 1/8" = 1'-0"):
   a. Fixture schedule, locations (including all handicapped fixtures in accordance with Arizona State Law requirements).
____/ b. Equipment schedule, locations (Scale: 1/4" = 1'0"). Equipment room layouts, with means of access for larger size equipment.

____/ c. Waste and vent riser diagram with types, locations, key sizes.

____/ d. Water piping, locations (sizes for pipes larger than 1"), diagrams.

____/ e. Water and gas meters (sizes and locations).

____/ 20. Roof drainage system and locations.

____/ 21. Storm drain calculations, retention and other means of collecting rain water.

____/ 22. Fire protection systems.

____/ a. Complete alarm systems.

____/ b. Complete sprinkler layouts with risers and head locations (coordinate fully with number 8, a through d).

____/ c. Fire extinguishers.

____/ d. Backflow preventer.

____/ 23. Mechanical systems (Plan Scale: 1/8" = 1'-0"): 

____/ a. Equipment schedule, locations, sizes, types.

____/ b. Chilled, condenser, hot water, steam, and condensate piping systems, locations, riser diagrams.

____/ c. Manual and automatic dampers and fire dampers required by code.

____/ d. Equipment connections and supports - standard details.

____/ e. Outlets, grills, registers properly selected and sized (indicating cfm).

____/ f. Fixture schedules.

____/ g. Flow diagrams; control diagrams.

____/ h. Equipment room layouts (Scale: 1/4" = 1'0").

____/ i. Submit heating and cooling load calculations as per ASHRAE.

____/ j. HVAC plans - equipment room layouts to show location and size of major equipment to scale, means of access for larger size equipment and its replacement, sizes of and locations of air intakes and discharge openings. In critical locations, composite drawings shall be prepared, indicating equipment of all trades involved.

____/ 24. HVAC piping, locations (sizes for pipes larger than 1") Anchors, guides, supports, expansion joints and loops. (Scale: 1/8" = 1'-0").

____/ 25. Plumbing and HVAC piping modifications, locations (sized for pipes larger than 1"), anchors, guides, supports, expansion joints and loops (Scale 1/8" = 1'-0").

____/ 26. Power distribution diagram (Plan Scale: 1/8" = 1'-0"): 
a. Power distribution equipment schedule, locations.

b. Feeder sizes.

c. Emergency generator size, locations.

d. Un-interruptible power supply equipment size, locations if required.

e. Grounding - standard details (A/E).

27. Exterior lighting and power, plans details (Scale: 1/8" = 1'-0"):

a. Fixture and switch locations with identification.

b. Typical receptacle and power outlet locations.

c. Lighting fixture schedule.

d. Riser diagrams from utility source to all equipment showing service switches and disconnects, metering, switchboards, power and lighting panels, motor controls, etc.

e. All cable and wire sizes and conduit sizes.

f. Special requirements noted.


29. All telecommunication (voice, data and video) systems and equipment, fire alarm systems, security systems, energy management systems

30. Final Project Manual

31. Telecommunication distribution diagrams in accordance with "Arizona State University New Construction Guidelines and Specifications for Telecommunication Services."

32. Analysis of code compliance and Americans with Disabilities Act compliance.

33. Fire protections systems needed.

34. Renovation Projects. Clearly differentiate between new and existing construction; visit the site; examine existing documents; request that test pits and observation openings in existing structures be made for determining design and cost.

DELIVERABLES. __________ copies of drawing sets, specification and product cut-sheets shall be required for review. Additional drawing sets as required for progress reviews and submission to local, state and federal code and approved agencies.
8. Section 2  (Design Phase obligations of the Design Professional)

The Design Professional is obligated to perform all of the DP Design Phase obligations in the Design Professional Contract Documents.

9. Section 2.11: [NOTE TO USERS OF THIS DOCUMENT: Please check the applicable box below.]
___ The will be no Early Selected Subcontractors for this Project.
___ There will be Early Selected Subcontractors for this Project in the trades listed below who will participate in the design process during the Design Phase:

[NOTE TO USERS OF THIS DOCUMENT: Please insert a list of major trades that can make a significant contribution during the Design Phase by participating in the Design Phase. The list must be tailored to and justified by the needs of the individual Project. For example: “mechanical, plumbing, electrical, fire sprinklers and glazing”]

10. Section 2.13  Provision on Work Packages

[NOTE TO USERS OF THIS DOCUMENT: Insert the applicable provision and delete the other version.]

2.13 Work Packages  The Owner has determined that the design and construction of the Project will not be divided into Work Packages. Accordingly, the provisions in the Contract Documents relating to Work Packages do not apply.

[OR]

2.13 Work Packages  The Owner has determined that the design and construction of the Project will be divided into Work Packages. The following provisions apply:

2.13.1 The Owner will consult with the CMAR and the DP as to (I) the number of Work Packages, (ii) the content of each Work Package, (iii) the timing and scheduling of design and construction of each Work Package (including, among other matters, establishing a schedule for commencement, prosecution and completion of the Construction Work included in each Work Package), (iv) the coordination among the Work Packages, and (v) any other matters relating to Work Packages. The Owner, the CMAR and the DP shall use their good faith best efforts to reach a consensus on all such matters. As to any such matters on which a consensus is not reached, the Owner shall make a good faith reasonable final determination.

2.13.2 The CMAR Design Phase Services Fee and the CMAR Construction Phase Fee and the Contract Time(s) take into account the division of the Work into Work Packages and the greater scope of services required.

2.13.2 The DP Basic Compensation takes into account the division of Work into Work Packages and the greater scope of services required.

Some of the provisions of the DP Contract Documents, the CMAR Design Phase Services Documents and the CMAR Construction Contract Documents specifically deal with Work Packages. Others provisions do not specifically deal with Work Packages. Because the design and construction of the Project are to be done in Work Packages, all the provisions of all of the foregoing documents shall be reasonably construed and interpreted to cover the division of the design and construction into Work Packages.

11. Section 3  Construction Phase obligations of the Design Professional
The Design Professional is obligated to perform all of the DP Construction Phase obligations in the Operating Manual. The following is a list of the minimum requirements for Project close out documents. This is a minimum and this list does not limit the obligations of the Design Professional under the Design Professional Contract Documents. HOWEVER, THE DP IS NOT REQUIRED TO DELIVER ANY PROJECT CLOSE OUT ITEM LISTED BELOW IF THE ITEM IS CHECKED AND INITIALED BY DESIGN PROFESSIONAL AND OWNER. IF THERE IS NO BLANK TO BE CHECKED OR SPACE FOR INITIALS, THE ITEM IS MANDATORY FOR ALL PROJECTS.

1. A thorough Punch List developed by accompanying the Contractor on a system-by-system, room-by-room inspection to ensure compliance with drawings, specifications and Change Orders

2. Certificate of Substantial Completion

3. DP and Owner final acceptance of all punch list items


5. All guarantees, warranties and extra materials distribution

6. "As-built" drawings

7. AIA Close-Out Documents

8. Final payments to CMAR and DP

9. Final retention release to CMAR

10. Lien releases from subcontractors.

11. State of Arizona Contractor's Affidavit from CMAR

THE DESIGN PROFESSIONAL SHALL ASSIST ASU IN THE PREPARATION OF EACH OF THE FOLLOWING ITEMS CHECKED AND INITIALED BY THE DESIGN PROFESSIONAL AND THE OWNER.

1. Reconciliation of project account.

2. Completion of ABOR Forms 7-7 and 7-8.

3. Vice President for Administrative Services Project Summary Report.

12. Section 3.4.5: Frequency of DP visits to Site and DP progress reports.

[NOTE TO USERS OF THIS DOCUMENT: Please insert “weekly” or some other frequency.]

________________ site visits

________________ progress reports

13. Section 3.9:

Design Professional’s Representative: 

CMAR’s Representative:

Owner’s Representative:

Arizona State University

06/23/2006

Operating Manual for Construction Manager at Risk Projects

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14. **Section 3.32.3**: Number of weather days included in Contract Time(s).

____________________ (____) calendar days

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**OWNER**

ARIZONA BOARD OF REGENTS
on behalf of
ARIZONA STATE UNIVERSITY

By: ________________________________
(Signature)

Name: ________________________________
(Printed)

Title: ________________________________

Date: ________________________________

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**CMAR**

By: ________________________________
(Signature)

Name: ________________________________
(Printed)

Title: ________________________________

Date: ________________________________
DESIGN PROFESSIONAL

By: 
(Signature)

Name: 
(Printed)

Title: 

Date: 

OWNER PROJECT MANAGER

Approval by Owner’s Facilities Capital Program Management Group project manager:

(Signature)

______________________________
NOTE: The information and provisions that go in the numbered blank spaces in this Operating Manual are in the respective numbered paragraph in Appendix A to Operating Manual (Specific Terms and Provisions of the Operating Manual) attached hereto.

NOTE: To assist the Design Professional and the Construction Manager at Risk in identifying provisions relating to them and to those who work for them, the following terms are in bold.

- “Design Professional”, “DP” and “DP Consultant”
- “Construction Manager at Risk”, “CMAR”, “CMAR Representative”, “Subcontractor” and “Early Selected Subcontractor”
- “Owner”, “Owner Representative”

1. GENERAL

1.1 Phases

The Project is divided into two phases.

- **Design Phase.** The Design Phase is the first phase of the Project. During the Design Phase the prime goal of **Owner**, **Design Professional** and **Construction Manager at Risk** is to develop and complete a design for the Project. This is the time period when (i) the DP prepares the Design Submission Documents, provides Construction Cost Estimates, and performs the other activities of the DP in Section 2 of this Operating Manual, (ii) the CMAR advises the Owner and the Design Professional concerning the design of the Project, provides Estimates of Construction Costs and performs the other activities of the CMAR in Section 2 of this Operating Manual.

- **Construction Phase.** During the Construction Phase the prime goal of **Owner**, **CMAR** and **Design Professional** is construction of the Project in accordance with the Construction Documents. This is the time period when the CMAR performs the Construction Work and the DP performs specified administrative services.

The Construction Phase occurs only if during the Design Phase:
(i) the CMAR and the Owner agree on a Guaranteed Maximum Price and related matters,
(ii) CMAR and Owner execute and deliver the CMAR Construction Contract with all the attachments and exhibits thereto,
(iii) CMAR delivers the Payment Bond and the Performance Bond in the forms attached to the General Conditions,
(iv) Owner approves the Construction Documents, and
(v) Owner issues a written directive for CMAR to proceed with the Construction Work.

Until all of the events in (i), (ii), (iii), (iv) and (v) occur there is no Construction Phase, the Owner is not obligated to have the CMAR construct the Project, the CMAR has no right to construct the Project, and the CMAR has no claim against the Owner if the Owner elects to terminate the Project, to not construct the Project, or to not have CMAR construct the Project.

- The Design Phase and the Construction Phase are not mutually exclusive in timing. The Construction Phase may begin before all activities in the Design Phase are completed. Regardless of when the Construction Phase begins, DP and CMAR will remain obligated to complete all actions included in the Design Phase under the DP Contract Documents and the CMAR Design Phase Services Contract Documents.
• The Owner and the CMAR will use separate accounts in their respective financial records for the Design Phase and the Construction Phase. One account will cover the CMAR Design Phase Services Contract and the other will cover the CMAR Construction Contract.

1.2 Relationships and Roles

Attachment 1 is a diagram showing the relationships of Owner, Design Professional and Construction Manager at Risk.

Owner has or will hire a Design Professional to design the Project, provide Construction Cost Estimates and perform the other services as provided in the DP Contract Documents during the Design Phase. During the Construction Phase, the DP will provide certain administrative services and other services as provided in the DP Contract Documents.

Owner has or will hire a Construction Manager at Risk to advise the Design Professional and the Owner on the design of the Project, to provide Construction Cost Estimates and to provide other services under the CMAR Design Phase Services Contract Documents during the Design Phase. If the CMAR Construction Contract is executed by Owner and CMAR and the other conditions in Section 1.1 above are satisfied, then and only then will the CMAR perform the Construction Work during the Construction Phase.

1.3 Common Goal, Team Concept, Processes and Cooperation, Coordination, Collaboration and Communication

Owner, CMAR and DP commit, at all times, to cooperate, coordinate, collaborate and communicate fully with each other and with others involved in the Project, to proceed on the basis of trust, confidence, and good faith and to use their best skill and effort in their activities on the Project.

Owner, CMAR and DP have a common goal because the goal benefits each of them. The goal is design and, if Owner approves, construction of a quality Project meeting the Owner’s needs, within the Owner’s budget, within the Owner’s time schedule, at a reasonable and appropriate cost to Owner and with a reasonable and appropriate fee for DP, DP Consultants, CMAR and Subcontractors. The Subcontractors and DP Consultants will have this common goal also. Owner, CMAR, Subcontractors, DP, and DP Consultants are to think of themselves collectively as a team and individually as a team member. The purpose of the team is to achieve the above goal. In working toward the goal, each team member looks out for its own interest, for the interest of the team and for the interest of each of the other team members.

The primary methods used to achieve this common goal are (i) the processes in the Contract Documents and (ii) cooperation, coordination, collaboration and communication. For example:

• The processes in the Contract Documents are designed to achieve consensus, to reduce risks, to avoid disagreements, and to promote cooperation, coordination, collaboration and communication.

• The CMAR and the DP bring different skills to the Project. During the Design Phase, they communicate frequently and they use those skills cooperatively and collaboratively and they coordinate their activities and communicate frequently to achieve a quality design that maximizes the Owner user group’s approved project elements included in the Project within the portion of the Project Budget available for costs of Construction Work.

• The CMAR, DP and Owner try to anticipate problems during both the Design Phase and the Construction Phase, they communicate promptly and they act quickly and cooperatively and in coordination to avoid potential problems. For problems that actually arise, they identify them as early as possible and act on them quickly. Regardless of its nature, each potential or actual problem is a “team” or “project” problem that the CMAR, the DP and the Owner try to solve together cooperatively and collaboratively and in coordination.

• Owner, DP and CMAR are fully committed to working cooperatively and collaboratively and to coordinate and communicate with each other and with the Owner in good faith throughout the Project. They agree to
communicate frequently so as to assure sharing of knowledge, cooperation, coordination and avoidance or minimalization of problems, disagreements, disputes and claims.

- Each of the CMAR, the DP and the Owner will use its good faith efforts to advise the others as promptly as possible upon learning of any problems, potential problems, discrepancies, conflicts or ambiguities that it determines exist in the Design Submission Documents, the DP Construction Cost Estimates, the CMAR Construction Costs Estimates or that otherwise exist during the Design Phase or during the Construction Phase.

The goal is to work as a team and to cooperate, collaborate, communicate and coordinate. However, this team approach, cooperation, collaboration, communication and coordination will not affect or impair the respective rights and obligations of Owner, DP and CMAR under the DP Contract Documents, the CMAR Design Phase Services Contract Documents or the CMAR Construction Contract Documents.

1.4 Operating Manual

This Operating Manual is a legally binding contract document and is one of the DP Contract Documents. The Design Professional agrees to perform its obligations and to comply with the terms and conditions applicable to the DP under this Operating Manual and the other DP Contract Documents.

This Operating Manual is a legally binding contract document and is one of the CMAR Design Phase Services Contract Documents. The CMAR agrees to perform its obligations and to comply with the terms and conditions applicable to the CMAR during the Design Phase under this Operating Manual and the other CMAR Design Phase Services Contract Documents.

If and when a Guaranteed Maximum Price and related matters are agreed by Owner and CMAR, if the Construction Contract Between Owner and CMAR is executed and delivered by Owner and CMAR, and if the other conditions in Section 1.1 for the Construction Phase are satisfied, then this Operating Manual is one of the CMAR Construction Contract Documents and the CMAR agrees to perform its obligations and to comply with the terms and conditions applicable to the CMAR during the Construction Phase under this Operating Manual and the other CMAR Construction Contract Documents.

Owner agrees to perform its obligations and to comply with the terms and conditions applicable to Owner under this Operating Manual and the other DP Contract Documents, the other CMAR Design Phase Services Contract Documents and, after the CMAR Construction Contract is executed, the other CMAR Construction Contract Documents.

1.5 Section and Exhibit References

Unless otherwise noted any and all references in this Operating Manual, any DP Contract Document, any CMAR Design Phase Services Contract Document or any CMAR Construction Contract Document to sections and to exhibits are references in the respective document. Each exhibit, attachment or appendix to this Operating Manual, each DP Contract Document, each CMAR Design Phase Services Contract Document or each CMAR Construction Contract Document is hereby incorporated herein or therein, respectively, in full.

1.6 Definitions

The following terms shall have their respective designated meanings when used in this Operating Manual, in the other DP Contract Documents, in the other CMAR Design Phase Contract Documents, and in the other CMAR Construction Contract Documents. Terms defined in the other DP Contract Documents, in the other CMAR Design Phase Services Contract Documents, and in the other CMAR Construction Contract Documents will have their respective designated meanings when used in this Operating Manual and in the other DP Contract Documents, the other CMAR Design Phase Services Contract Documents and the other CMAR Construction Contract Documents.

The following definitions are organized into the following categories, but this will not affect or impair their use or meaning in documents:
Definitions relating to the Project

Definitions relating to the Parties, Other Project Participants and the Contract Documents

Definitions relating primarily to the Design Phase

Definitions relating to the Design Phase and the Construction Phase

Definitions relating primarily to the Construction Phase.

DEFINITIONS RELATING TO THE PROJECT

"Project" means each of Owner’s projects identified on the title page of this Operating Manual separately. For additional provisions concerning multiple Projects please see Section 7.

"Project Budget" means the Owner's total budgeted cost to the Owner for the Project, including all sums to be paid to or for the DP, the CMAR, other Owner consultants, furniture, fixtures, and equipment, site acquisition, permit fees, management fees, and other incidentals required to achieve final completion of the Project.

"Project Criteria" means the items developed by, with or for Owner to describe Owner’s program, requirements and objectives for the Project, including, among others, use, space, price, time, site, utility, parking, and expandability requirements. The Project Criteria may include conceptual documents, design criteria, performance requirements, and other Project specific technical materials and requirements prepared by, with or for Owner.

"Site" is the land and other areas on which the Project is located.

"DP Site Information" has the meaning specified in Section 2.2.2.

"CMAR Site Information" has the meaning specified in Section 2.5.3.

DEFINITIONS OF PARTIES, OTHER PROJECT PARTICIPANTS AND CONTRACT DOCUMENTS

"DP" or "Design Professional" means (i) the Design Professional engaged by Owner for the Project, and (ii) its officers, employees, agents, independent contractors and authorized representatives involved in any way in the Project.

"CMAR" or "Construction Manager at Risk" means (i) the construction manager at risk engaged by Owner for the Project and (ii) its officers, employees, agents, independent contractors and authorized representatives involved in any way in the Project. CMAR also includes all persons and entities identified as members of the CMAR Project Team in the CMAR’s response to the Owner’s RFQ described on the cover of this Operating Manual and any substitutes permitted under the terms of the RFQ and this Operating Manual. In addition, for purposes of the DP Contract Documents only, if Owner terminates its contract with the original or any replacement CMAR and elects to proceed with the construction-manager-at-risk method for the Project, then “CMAR” means any replacement CMAR engaged by Owner for the Project or, if the Owner terminates its contract with any CMAR and elects to proceed using the design-bid-build method for the Project, “CMAR” means the design-bid-build contractor selected by Owner.

"Subcontractor" means (i) any consultant retained by CMAR during the Design Phase or the Construction Phase, (iii) any Early Selected Subcontractor (defined in Section 2.11) that participates in the Design Phase, (iii) any person or entity at any tier of relationship to CMAR who performs any part of the Construction Work, on or off Site, directly or indirectly on behalf of the CMAR, (iv) any person or entity at any tier of relationship to CMAR who provides any equipment, material, services or any other item in respect of the Construction Work, on or off site, directly or indirectly on behalf of CMAR, and (v) all officers, employees, agents, independent contractors and authorized representatives of the foregoing. This includes, among others, workers, laborers,
material suppliers, and other persons or entities providing labor, materials and equipment relating to Construction Work.

“DP Consultant” means (i) a consultant engaged directly or indirectly to assist the DP in connection with DP’s activities under the DP Contract Documents as to which consultant the DP has complied with the requirements for engaging a DP consultant in the DP Contract Documents, and (ii) the consultant’s officers, employees, agents, independent contractors and authorized representatives involved in any way in the Project.

“DP Contract Documents” means the following and their respective exhibits, attachments and appendices in the following order of precedence. All are incorporated in full herein by reference.

- Agreement Between Owner and Design Professional (Construction Manager at Risk Form) (including, without limitation, a separate completed Appendix A for each Project)(“DP Agreement”)
- this Operating Manual
- Owner’s Project Criteria
- Owner’s Design Standards issued by Owner to DP
- the Design Submission Documents
- the Construction Documents
- DP’s Construction Cost Estimates
- any written modifications of the foregoing executed by Owner and DP
- Owner’s Request for Qualifications for Design Professional for the Project (“DP RFQ”) and all addenda thereto
- the DP’s proposal or submission of qualifications as required by the DP RFQ
- the Owner’s notice of award
- the DP Final Supplemental Requirements Plan under Section 8.

“CMAR Design Phase Services Contract Documents” means the following and their respective exhibits, attachments and appendices in the following order of precedence. All are incorporated in full herein by reference.

- Construction Manager at Risk Design Phase Services Agreement (Operating Manual Form)(including, without limitation, a separate completed Appendix A for each Project) (“CMAR Design Phase Services Contract”)
- The General Conditions (Construction Manager at Risk)(Operating Manual Form) attached to the CMAR Design Phase Services Contract as Exhibit B thereto (“General Conditions”)
- This Operating Manual for Construction Manager at Risk Projects attached to the CMAR Design Phase Services Contract as Exhibit A thereto (“Operating Manual”)
- Owner’s Design Standards issued by Owner to CMAR
- Upon execution by Owner and CMAR any written modifications of the CMAR Design Phase Services Contract Documents.
- Owner’s Project Criteria and any architectural program developed by Owner and Design Professional.
- The Design Submission Documents from and after their approval by Owner.
- Owner’s Request for Qualifications for Construction Manager at Risk (“CMAR RFQ”) with all addenda and exhibits thereto, the CMAR’s proposal or submission of qualifications as required by the RFQ and Owner’s notice of award.
- the CMAR Final Supplemental Requirements Plan under Section 8
- The following additional documents, if any, are included in the CMAR Design Phase Contract Documents:
“CMAR Construction Contract” means the Construction Contract Between Owner and Construction Manager at Risk in the form of Attachment 2 hereto with all blanks completed, and with all appendices, exhibits and attachments thereto and executed by Owner and CMAR and including any subsequent written modifications thereto executed by Owner and CMAR and including, without limitation, a separate completed Appendix A and Exhibits C, D, E and F for each Project.

“CMAR Construction Contract Documents” means the following and their respective appendices, exhibits and attachments in the following order of precedence. All are incorporated herein by reference.

- The CMAR Construction Contract.
- The General Conditions attached to the CMAR Construction Contract as Exhibit B thereto.
- This Operating Manual attached to the CMAR Construction Contract as Exhibit A thereto (“Operating Manual”).
- Owner’s Design Standards issued by Owner to CMAR
- GMP Schedule attached to the CMAR Construction Contract as Exhibit C thereto.
- Schedule of Values attached to the CMAR Construction Contract as Exhibit D thereto.
- GMP Setting Drawings, Specifications, Assumptions and Clarifications attached to the CMAR Construction Contract as Exhibit E thereto.
- CPM Schedule attached to the CMAR Construction Contract as Exhibit F thereto.
- Upon execution by Owner and CMAR, Change Orders and other written modifications of the CMAR Construction Contract Documents.
- Owner’s Project Criteria developed by Owner and Design Professional and any architectural program developed by Owner and Design Professional.
- The Construction Documents and the other Design Submission Documents from and after their approval by Owner. As the Design Submission Documents are completed and accepted by the Owner, they shall become part of the CMAR Construction Contract Documents as though they were specifically set forth herein at the time of execution of the CMAR Construction Contract.
- The CMAR RFQ with all addenda and exhibits thereto, the CMAR’s proposal or submission of qualifications as required by the RFQ and Owner’s notice of award.
- Performance Bond and Payment Bond.
- Project Manual (defined in Section 2.7.3(iv)(E), as and when issued by the DP, used by the CMAR in preparing the proposed Guaranteed Maximum Price and included in the bid packages for Subcontractors.
- Supplementary General Conditions (defined in Section 2.7.3(iv)(E), as and when issued by the DP, used by the CMAR in preparing the proposed Guaranteed Maximum Price and included in the bid packages for Subcontractors.
- the Final Supplemental Requirements Plan under Section 8
• The following additional documents, if any, are included in the CMAR Construction Contract Documents: 
(List, for example, Unit Price Schedules, CMAR's Allowances, Owner's Permit List, if any, and other CMAR 
Construction Contract Documents).

DEFINITIONS RELATING PRIMARILY TO THE DESIGN PHASE

"Design Phase" is the time period when (i) the DP prepares the Design Submission Documents, provides 
Construction Cost Estimates, and performs the other activities of the DP in Section 2 of this Operating Manual, 
(ii) the CMAR advises the Owner and the Design Professional concerning the design of the Project, provides 
Construction Cost Estimates and performs the other activities of the CMAR in Section 2 of this Operating 
Manual.

"CMAR Design Phase Services" means the activities to be performed by the CMAR under the CMAR Design 
Phase Services Contract Documents.

"CMAR Design Phase Services Fee" will have the meaning specified in Section 5.1 of the CMAR Design 
Phase Services Contract.

"Design Submission Documents" consist of the drawings and specifications prepared at specific subphases 
of the Design Phase by the Design Professional (including, among others, the Architectural Program 
documents, the Schematic Design documents, the Design Development documents, and the Construction 
Documents), Construction Cost Estimates prepared by the Design Professional, and any other documents 
prepared by the Design Professional during the Design Phase.

"Construction Cost Estimate" is an conceptual estimate of costs of the Construction Work that is prepared by 
the DP or the CMAR during the Design Phase that uses an elemental systems method of allocating costs of 
the Construction Work, that contains the level of detail specified by Owner and that otherwise is in a form 
agreed by DP, CMAR and Owner.

DEFINITIONS RELATING TO THE DESIGN PHASE AND THE CONSTRUCTION PHASE

"CMAR Procedures to Implement Owner's Subcontractor Selection Plan" means the procedures proposed 
by Contractor to implement Owner's Subcontractor Selection Plan with such modifications as are agreed by 
Owner and Contractor. The final Contractor Procedures to Implement Owner's Subcontractor Selection Plan 
are in Attachment 4 to this Operating Manual.

"Contingency" for each Project will have the meaning specified in Section 2.7.3(iii).

"GMP Setting Drawings, Specifications, Assumptions and Clarifications" for each Project will have the 
meaning specified in Section 2.7.3(iv)(E).

"Guaranteed Maximum Price" or "GMP" for each Project is the amount that the CMAR guarantees to be the 
maximum amount due the CMAR for performance of all of the Construction Work for the Project, as the GMP 
may be modified from time to time by Change Orders and as otherwise modified from time to time as provided 
in the CMAR Construction Contract Documents. The CMAR guarantees that the Actual Cost of Construction 
Work to be paid by the Owner will not exceed the GMP. If the Actual Cost of the Construction Work exceeds 
the GMP, the CMAR will pay the difference, that is, all costs for performing the Construction Work, which 
exceed the GMP are to be paid by the CMAR and not the Owner. The procedure for setting the GMP is in 
Section 2.7.

"GMP Schedule" for each Project means the schedule showing the breakdown of the GMP and attached to the 
CMAR Construction Contract, as it may be modified as provided in the CMAR Design Phase Services Contract 
Documents and the CMAR Construction Contract Documents. This schedule will be in an elemental systems
format and otherwise in a form mutually agreed by **CMAR** and **Owner** having the level of detail specified by **Owner**.

“**Legal Requirements**” include all regulations, policies and practices of the Arizona Board of Regents and all applicable rules, laws, codes, ordinances and regulations of any governmental or quasi-governmental entity, federal, state and local having jurisdiction over the **DP**, any **DP Consultant**, activities under the **DP Contract Documents**, the **CMAR**, any **Subcontractor**, the **CMAR Design Phase Services**, the **Project** or the **Construction Work**, the practices involved thereunder, or any other action performed by **DP**, any **DP Consultant**, **CMAR** or any **Subcontractor**. Legal Requirements does not include sales, use, consumer, income and other taxes.

“**Work Package**” is a segment of the Construction Work for a Project. This term is operative in the **DP Contract Documents**, the **CMAR Design Phase Services Contract Documents** and the **CMAR Construction Contract Documents** only if the **Owner** has determined to divide the Construction Work for a Project into Work Packages as provided in Section 2.13. The number of Work Packages, the contents of each Work Package and other matters relating to Work Packages are determined in accordance the provision under the heading “Work Packages” in Section 2.13.

**DEFINITIONS RELATING PRIMARILY TO THE CONSTRUCTION PHASE**

“**CMAR Construction Phase Fee**” will have the meaning specified in Section 2.8 of the **CMAR Construction Contract**.

“**Construction Documents**” will have the meaning specified in Section 3.2.5.

“**Construction Phase**” is the time period when the **CMAR** performs the Construction Work for the Project and the **DP** performs specified administrative services. The Construction Phase and the Design Phase may overlap.

“**Construction Work**” means for each Project the activities to be performed by the **CMAR** under the **CMAR Construction Contract Documents**, including, without limitation, procuring and furnishing all materials, equipment, tools, services, and labor reasonably inferable from the **Construction Documents** and the other **CMAR Construction Contract Documents** or from prevailing trade usage and custom to complete all work described in or reasonably inferable from the **Construction Documents** and the other **CMAR Construction Contract Documents**. This includes all work during the actual construction period, the commissioning period and the warranty period. The Construction Work includes, among other items, construction of the Project in accordance with the **Construction Documents** and the other **CMAR Construction Contract Documents**.

“**Actual Costs of Construction Work**” is for each Project the aggregate amount of actual costs for the Construction Work in those categories of costs set forth in the GMP Schedule chargeable to the **Owner** under the provisions of the **CMAR Construction Contract Documents**, provided that:

- the Actual Costs of the Construction Work for each Project to be paid by **Owner** to the **CMAR** shall not exceed the Guaranteed Maximum Price for the Project set forth in the **CMAR Construction Contract Documents**, as such GMP may be modified in accordance with the **CMAR Construction Contract Documents**;
- the Actual Costs of the Construction Work to be paid by **Owner** for Construction Work shall not exceed the Open Book Cost; and
- the Actual Costs of Construction Work to be paid by **Owner** for Construction Work covered by each line item in the GMP Schedule shall not exceed the amount in that line item in the **GMP Schedule**, as the GMP Schedule may be modified as provided in the **CMAR Construction Contract Documents**.

“**Open Book Cost**” is the Actual Cost of the Construction Work as compiled, recorded and substantiated by **CMAR** based on the financial and other records collected and maintained in accordance with Section 3.19.3

“**Savings**” is the positive amount difference, if any, of the Guaranteed Maximum Price for each Project less the Actual Cost of Construction Work for the Project and shall be allocated as set forth in Section 3.5.2. Savings is determined by the **Owner** with such assistance of the **CMAR** as **Owner** requests. Savings is based on the GMP as in effect on the date of Final Completion of the entire Construction Work.
“Day” and “Days” mean calendar days, unless specifically provided otherwise. If a specific day or a period is provided for an action and the specific day or the last day of the period falls on a Saturday, a Sunday or a Federal, State of Arizona, or Owner holiday or other day on which Owner is not open for business, the day shall be the next following day that is not a Saturday, Sunday or Federal, State of Arizona, or Owner holiday or other day on which Owner is not open for business.

“Punch List” are those minor items of the Construction Work identified and listed by Design Professional and agreed to by Owner to be completed by the CMAR after Substantial Completion and prior to Final Completion, which do not prevent the Project from being fully used for the purpose for which it is intended and which will not prevent the issuance of a certificate of occupancy.

“Schedule of Values” means the schedule of values attached to the CMAR Construction Contract, as such schedule may be modified from time to time as provided in the CMAR Construction Contract Documents.

“Substantial Completion” means for each Project the Construction Work, or an agreed portion of the Construction Work that Owner has agreed to accept separately, is sufficiently complete, as determined by the Design Professional's issuance of a Certificate of Substantial Completion, so that Owner can fully occupy and utilize the Project, or the agreed upon portion thereof, for the purposes for which it is intended. Upon Substantial Completion, all Construction Work must be complete except for Punch List items.

“Final Completion” means for each Project 100% completion of all Construction Work noted in or reasonably inferred from the Construction Documents and the other CMAR Construction Contract Documents, including but not limited to, all Punch List work, all record and close-out documents specified in Owner’s Project specifications and Owner training/start up activities.

“Change Order” has the meaning specified in Section 3.33.1.

“Change Directive” has the meaning specified in Section 3.33.2.

1.7 Meetings

The CMAR, Design Professional and Owner shall attend all regular meetings and such additional meetings as are called as provided below.

During the Design Phase all regular meetings will be scheduled by the DP with the agreement of the CMAR and approval of the Owner. All additional meetings will be scheduled by the Owner.

During the Design Phase, the DP will take minutes at each meeting and distribute draft minutes within three (3) business days after each meeting. The CMAR and Owner will promptly review the minutes of each meeting and deliver any comments to the DP. The DP will promptly issue final minutes of each meeting, which shall be approved by DP, CMAR and Owner.

During the Construction Phase there will be (3) progress meetings of the DP, CMAR and Owner. The CMAR shall schedule and conduct the progress meetings during the Construction Phase. The weekly progress meetings will be used to discuss jointly such matters as procedures, progress, scheduling, submittals, requests for information (RFI), any work deficiencies, any other actual problems or potential problems, fixes to and limits on actual problems and ways to avoid, limit or fix potential problems. Owner, DP and CMAR will contribute their good faith efforts in such discussions to find ways (i) to complete the Project within the Contract Time(s) in accordance with the Construction Documents and the other CMAR Construction Contract Documents and within the Guaranteed Maximum Price, (ii) to limit and fix actual problems, (iii) to anticipate and then avoid, limit or fix potential problems, and (iv) to discuss and decide other matters brought up by Owner, DP or CMAR. None of such discussions shall affect or impair the respective rights, responsibilities and obligations of DP, Owner and CMAR under the DP Contract Documents and the CMAR Construction Contract Documents.
During the Construction Phase, special on-site meetings shall be held as requested by the **Owner**, **DP** or **CMAR**.

During the Construction Phase, the **CMAR** will take minutes at each meeting and distribute draft minutes within three (3) business days after each meeting. The **DP** and **Owner** will promptly review the minutes of each meeting and deliver any comments to the **CMAR**. The **CMAR** will promptly issue final minutes of each meeting, which shall be approved by **CMAR**, **DP** and **Owner**.

## 1.8 Compliance with Legal Requirements

The **DP**, **DP Consultants**, **CMAR**, **Subcontractors** and **Owner** will each comply with all applicable Legal Requirements.

## 2. DESIGN PHASE

### 2.1 Design Phase Cooperation, Coordination, Collaboration and Communication

The **Owner**, the **DP** and the **CMAR** will have an initial meeting promptly after selection of the **DP** and the **CMAR** to discuss issues affecting Project administration and to implement procedures to permit the **Owner**, the **DP**, and the **CMAR** to perform their respective obligations under the **CMAR Design Phase Services Contract Documents** and the **DP Contract Documents**. Among other matters to be covered at this meeting will be procedures for efficient interaction among them during the Design Phase so that each can perform its activities, functions and obligations in an efficient, cooperative, coordinated, collaborative and communicative manner. Among other subjects to be covered by the procedures will be:

- Arrangements for collaboration between the **DP** and the **CMAR** in preparing Design Submission Documents, the **DP’s Construction Cost Estimates Costs**, and the **CMAR’s Construction Costs Estimates** as required for the Program Development, Schematic Design, Design Development and Construction Documents subphases and in submitting each set of Design Submission Documents and the related **DP** and **CMAR Construction Cost Estimates** to the **Owner** for review and for comments by the **Owner** and for group discussions among the **DP**, **CMAR** and **Owner**.

- Arrangements that encourage frequent informal interaction, cooperation, coordination, collaboration and communication among the **DP**, the **Owner** and the **CMAR** during the Design Phase, especially between submissions of Design Submission Documents and Construction Cost Estimates, including among other activities, the **CMAR** offering to the **DP** and **Owner** recommendations on the design of the Project and the **DP** using that information in its design work on the Project.

- A schedule for the activities of the **CMAR**, the **Owner** and the **DP** during the Design Phase.

- The plan and procedures for selection of **Subcontractors**. Under **Owner's Subcontractor** selection plan all **Subcontractor** candidates must be prequalified by the **CMAR** as provided in Section 2.10. Then key **Subcontractors** will be early-selected near the beginning of the Design Phase so that they can participate in the Design Phase. **Owner's plan for selection of early-selected Subcontractors** for participation in the Design Phase and the opportunity for an early-selected **Subcontractor** to become the **Subcontractor** selected to do Construction Work for its trade is in Section 2.11. Under **Owner's Subcontractor** selection plan the remainder of the **Subcontractors** will be selected at the end of the Design Phase after the Guaranteed Maximum Price is agreed by **CMAR** and **Owner** and when the Construction Documents are ready. Pre-qualified **Subcontractors** will competitively bid for the Construction Work. This is described in Section 2.12 of the Operating Manual. In addition, to these provisions setting forth **Owner's Subcontractor** selection plan, the **CMAR Procedures to Implement Owner's Subcontractor Selection Plan** in **Attachment 4** to this Operating Manual will be part of the Subcontractor selection process.

- If the **Owner** elects to establish a formal “partnering” process for the Project, another subject to be covered in the initial meeting will be development of partnering procedures for the Design Phase. Partnering is a...
mutual effort by all the parties involved in the Project to cooperate and coordinate efforts in order to achieve
the final result. Partnering requires that all parties use their particular expertise for the mutual benefit of all,
rather than for the benefit of the one. Partnering requires flexibility, the ability to appreciate the positions of
the other parties and to make compromises for the benefit of all. Partnering will be implemented by the
utilization of a formal partnering process developed as described above and presented in a separate
workshop attended by CMAR, Owner, DP and their key participants. Follow up sessions will occur every
three (3) months or as mutually agreed to ensure that all commitments are updated and being followed by
all parties. The cost of this partnering effort during Design Phase will be shared equally by the Owner, the
CMAR, and the DP.

No actions of cooperation, coordination, collaboration or communication or attempted cooperation, attempted coordination, attempted collaboration or attempted communication or failure to cooperate, coordinate, collaborate or communicate on any matter shall affect or impair the respective rights and obligations of Owner, DP and CMAR under the DP Contract Documents and the CMAR Design Phase Services Contract Documents. No failure by one party to perform its obligations under this Section 3 shall excuse a failure of another party to perform any obligation under other provisions of the JOC Contract Documents.

2.2 Design Phase General

2.2.1 The DP shall evaluate the Owner’s preliminary Project Budget in general and the portion of the Owner’s Project Budget available for payment of costs of the Construction Work in particular with the assistance of the CMAR. The Owner shall advise the DP and the CMAR in writing of the amount within the Owner’s Project Budget available for the costs of the Construction Work. The DP’s and the CMAR’s Construction Cost Estimates shall not exceed this amount. The amount within the Owner’s Project Budget available for costs of the Construction Work may be revised only by a writing executed by Owner.

2.2.2 Unless otherwise agreed by the Owner and the DP, the Owner shall retain surveyors, engineers, or other consultants in connection with the following items, provided such information is specifically requested by the DP or the Owner.

(i) A survey of existing site conditions. A complete and accurate survey of the building site and existing improvements including but not limited to the grades and lines of streets, pavements, and adjoining properties, contours of the building site, and full information as to sewer, water, gas, electrical service, telephone lines, or other utilities.

(ii) A report on subsurface investigations. Professional recommendations regarding local conditions accompanied by test borings, or test pits, soil bearing values, percolation tests, air and water pollution tests, ground corrosion, and resistivity tests including necessary operations for determining subsoil, air and water conditions, and chemical, mechanical, laboratory or other tests.

(iii) As-built information in possession of Owner concerning any existing improvements that will remain on the Site and that will be incorporated in the Project, to which the Project will be attached or with which the Project will be interconnected.

(iv) All other tests recommended by DP and mutually agreed to by Owner and DP.

In addition to the above information, the DP shall be responsible for obtaining information concerning conditions of the Site typically obtained within the design professional industry to assess conditions for similar projects and shall advise Owner of any such information obtained by DP that may be significant to the Project.

The Owner will deliver to the DP a copy of the surveys, reports, test results, and any other information described in this Section 2.2.2. Such items, any other information concerning the Site delivered by Owner

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to DP, and all information DP is obligated to obtain on its own initiative are referred to as the “DP Site Information”.

The DP shall thoroughly acquaint itself with all DP Site Information.

By making each submission of any Design Submission Documents (including, without limitation, the Construction Documents) the DP represents and warrants to Owner that DP has examined and evaluated the DP Site Information and has taken the DP Site Information into account in preparing the Design Submission Documents (including, without limitation, the Construction Documents).

The DP shall have the right to rely upon surveys, soil test reports, other test reports and other information obtained by the Owner. However, the DP shall carefully examine all surveys, soil test reports, other test reports and other information whether obtained by the DP or the Owner. The DP shall promptly report to the Owner any errors, omissions or inadequacies or reasonably suspected errors, omissions or inadequacies in such surveys, soil test reports, other test reports and other information of which the DP becomes aware as a result of such examination or otherwise and of any disagreement the DP may have with the conclusions of such surveys, soil test reports, other test reports and other information. The DP and the DP Consultants shall make themselves available to the soils engineer and any other person retained by Owner to prepare any surveys, soils test reports, other test reports or other information.

2.2.3 The Design Professional shall submit to Owner all required Design Submission Documents to describe the Project’s essential elements. The Design Submission Documents required of the Design Professional will include drawings, specifications, and other documents as may be necessary to fully identify the Project scope and materials, together with the DP’s Construction Cost Estimates. The CMAR shall submit to the Owner detailed Construction Cost Estimates as part of each design submission. At the time of each scheduled submission, CMAR, Design Professional and Owner shall meet and confer about the submission. During the meeting, the CMAR and Design Professional shall identify, among other things, the evolution of the design and any significant changes or deviations from previously submitted Design Submission Documents and any changes in the CMAR’s Construction Cost Estimate or the DP’s Construction Cost Estimate. Within three (3) weeks following each design review meeting, Owner shall approve or reject the Design Submission Documents and the CMAR’s Construction Cost Estimate and the DP’s Construction Cost Estimate. Owner may reject in full or in part the Design Submission Documents and Construction Cost Estimates which do not conform with the Owner’s Project Criteria or the overall Project concepts, which are not within the portion of the Project Budget available for payment of costs of the Construction Work or not within the Guaranteed Maximum Price or not consistent with the GMP Setting Drawings, Specifications, Assumptions and Clarifications or for any other reasonable cause consistent with the intent of the DP Contract Documents or the CMAR Design Phase Services Contract Documents, as applicable. Upon such rejection the Design Professional shall redesign or reengineer at its own cost and at no additional cost to Owner the rejected portion of the Design Submission Documents or Construction Cost Estimates. If Owner rejects the CMAR’s Construction Cost Estimate, CMAR shall revise the Construction Cost Estimate at no additional cost, such that it meets Owner’s requirements. All deviations from the Owner’s Project Criteria, the applicable portion of the Project Budget available for payment of Construction Costs, the Guaranteed Maximum Price or the GMP Setting Drawings, Specifications, Assumptions and Clarifications must be approved in writing by the Owner.

2.3 Development of Design Submission Documents and DP’s and CMAR’s Construction Cost Estimates

2.3.1 [Intentionally left blank]

2.3.2 Program Development Subphase

(i) The DP shall review the Owner’s Project Criteria to ascertain the basic requirements for the Project, including but not limited to the following criteria: (a) identified units of facility need; (b) projected enrollment or activity; (c) references to relevant standards appropriate to comparable institutions; (d) discussion of locational determinants; (e) projected utilization for any classrooms or teaching laboratories; (f) estimated net-to-gross ratios; and (g) specified special physical requirements affecting cost.
(ii) After reviewing the Project Criteria the DP shall meet with the Owner and identified facilities users to gain an in depth understanding of Project needs and provide initial feedback to all attendees.

(iii) The DP shall prepare an Architectural Program for review by the Owner and the CMAR and for the Owner's approval, which expands and defines the Project Criteria. Such program shall include all site conditions affecting the Project.

(iv) The Architectural Program shall consist of a detailed written report on the following subject matter:

   (4)

(v) The DP shall work in a collaborative, cooperative, coordinated and communicative manner with the CMAR in developing items defined in Item (iv) above. If agreement by the DP and the CMAR is not attainable, DP and CMAR shall promptly refer the matter to the Owner Representative, and the Owner Representative will make the final determination on the matter.

(vi) The CMAR shall develop and submit to Owner and DP a Construction Cost Estimate.

2.3.3 Schematic Design Subphase

(i) The DP shall review the Architectural Program with the Owner and the CMAR, solicit and receive comments and recommendations from the CMAR and the Owner, confirm the Owner's and the CMAR's understanding of the subject matter, determine any additional, modified or alternative requirements, and obtain the Owner's approval.

(ii) The DP shall provide the Owner with a preliminary evaluation of the requirements of the Project in light of the amount within the Project Budget available for costs of the Construction Work.

(iii) The DP shall review with the Owner and the CMAR alternate methods and approaches to the design and construction of the Project and recommend an approach and jointly decide with the Owner and the CMAR the method best suited to the Owner's requirements and the Project.

(iv) Based upon the Architectural Program, the discussions with the Owner and the CMAR, the amount within the Owner's Project Budget available for costs of the Construction Work, the DP Site Information, the DP shall prepare Schematic Design Documents (SDDs), which will consist of drawings and other documents depicting the scale and relationship of Project components, for review with the Owner and the CMAR and for the Owner's approval.

(v) The Schematic Design Documents (SDDs) shall consist of at least the following:

   (5)

(vi) The DP shall work in a collaborative, cooperative, communicative and coordinated manner with the CMAR in developing items defined in Item (v) above. If agreement by the DP and the CMAR is not attainable, DP and CMAR shall promptly refer the matter to the Owner Representative, and the Owner Representative will make the final determination on the matter.

(vii) The CMAR shall develop and submit to Owner and DP a Construction Cost Estimate.

(viii) The DP and CMAR shall reconcile each of the DP's Construction Cost Estimate and the CMAR's Construction Cost Estimate with the other and both of them with the amount within Owner's Project Budget available for costs of Construction Work. DP and CMAR shall complete the reconciliation not later than seven (7) days after completion of both estimates. This reconciliation shall provide an estimate no greater than the amount within Owner's Project Budget available for costs of Construction Work before the Design Development subphase under Section 2.3.4 may begin.

2.3.4 Design Development Subphase
(i) Based on the Schematic Design Documents (SDDs) and any amendments approved by the Owner to the Architectural Program or the amount within Owner's Project Budget available for costs of Construction Work, the DP shall prepare Design Development Documents (DDs) for review with the Owner and the CMAR and for the Owner's approval. The Design Development Documents shall consist of drawings and other documents to delineate and define the general design of the entire Project, including size and character of architectural, structural, mechanical and electrical systems, materials, and any other Project elements as may be appropriate.

(ii) The Design Development Documents shall consist of at least the following:

(6)

(iii) The DP shall work in a collaborative, cooperative, communicative and coordinated manner with the CMAR in developing items defined in Item (ii) above. If agreement by the DP and the CMAR is not attainable, DP and CMAR shall promptly refer the matter to the Owner Representative, and the Owner Representative will make the final determination on the matter.

(iv) The CMAR shall develop and submit to Owner and DP a Construction Cost Estimate.

(v) The DP and the CMAR shall reconcile the DP's Construction Cost Estimate and the CMAR's Construction Cost Estimate with each other and both of them with the amount within Owner's Project Budget available for costs of the Construction Work. Design Professional and CMAR shall complete the reconciliation not later than seven (7) days after completion of both estimates. This reconciliation shall provide an estimate no greater than the amount within Owner's Project Budget available for costs of Construction Work before the Construction Documents subphase under Section 2.3.5 may begin.

2.3.5 Construction Documents Subphase

(i) Based upon the approved Design Development Documents (DDs) and any further amendments of any kind approved by the Owner, the DP shall prepare detailed Construction Documents (CDs) setting forth the requirements for the construction of the entire Project, including complete Drawings, Specifications, a revised Construction Cost Estimate, and complete bid packages for the CMAR's use for each portion of the Construction Work to be bid separately and, if the Construction Work is to be done in Work Packages, complete sets of bid packages for each Work Package. The DP must be aware of, and conform to, the order of precedence provisions in Section 3.10.3. The Construction Documents are subject to review by the Owner and the CMAR and to approval by the Owner. The Construction Documents shall consist of at least the following:

(7)

(ii) If the GMP has been agreed by Owner and CMAR before completion of the Construction Documents, the Construction Documents will be subject to review by CMAR for conformance with the GMP Setting Drawings, Specifications, Assumptions and Clarifications as provided in Section 2.12.2 and 3.2.5, as applicable.

(iii) All drawings and specifications included in the Construction Documents shall bear the dated signature and seal of the DP. Except as expressly provided in the DP Contract Documents, the DP and the DP Consultants shall be fully responsible for all design provided by them for the Project.

(iv) The DP shall file all documents and obtain all approvals required for design approval by governmental authorities having jurisdiction over the Project and/or designated by the Owner. The Owner will sign applications and pay applicable fees. The DP shall also assure that the Project meets all applicable statutory requirements for public buildings.

2.3.6 DP's Construction Cost Estimates and CMAR's Construction Cost Estimates
(i) The DP will collaborate, cooperate, communicate and coordinate with the CMAR in the CMAR’s development of its Construction Cost Estimates and the Guaranteed Maximum Price. The CMAR will collaborate, cooperate, communicate and coordinate with the DP in the development of its Construction Cost Estimates.

(ii) Each DP Construction Cost Estimate, CMAR Construction Cost Estimate and CMAR Schedule of Values shall include without duplication:

A) All labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Construction Work, whether temporary or permanent, and whether or not incorporated or to be incorporated in the Construction Work. All fixed equipment, site improvements, utility and equipment installations are also included.

B) The cost of labor and materials to be furnished by the Owner calculated at current market rates, including, among others, a reasonable allowance for overhead and profit,

C) The cost of any Owner equipment contract to be assigned by Owner to CMAR or labor for installation for equipment separately provided by Owner which has been designed, specified, selected or specifically provided for by the Design Professional.

D) The Construction Phase Fee;

E) All bond and insurance premiums;

F) All applicable taxes, including, without limitation, applicable sales taxes; and

G) A Contingency.

(iii) The DP Construction Cost Estimates and the CMAR Construction Cost Estimates shall include the costs of the Construction Work and shall not include the CMAR’s Design Phase Services Fee, sums due the Design Professional, the costs of land, rights of way, financing or other costs which are the responsibility of the Owner.

(iv) The DP and the CMAR shall base each of their Construction Cost Estimates on the latest Design Submissions Documents. The DP and the CMAR shall discuss the materials, equipment, component systems and types of construction contemplated by the DP to the extent such items are not in the latest Design Submission Documents.

(v) The CMAR will make any recommendations the CMAR determines necessary or appropriate for modifications in the latest Design Submission Documents or in the items the DP proposes to use.

(vi) Each DP and CMAR Construction Cost Estimate shall be a conceptual estimate of the costs of the Construction Work, shall use an elemental systems method of allocating costs of the Construction Work, shall be in the level of detail specified by Owner and shall otherwise be in a form agreed by DP, CMAR and Owner.

(vii) The requirements in this Item (vii) are in addition to the requirements for CMAR Construction Cost Estimates in this Operating Manual. The CMAR shall prepare its first Construction Cost Estimate as soon as major Project requirements have been identified and update the estimate no less frequently than bimonthly until completion of Schematic Design Documents. Within two weeks of CMAR’s receipt of completed Schematic Design Documents, the CMAR shall prepare a quantity take-off Construction Cost Estimate. The CMAR shall update the quantity take-off Construction Cost Estimate no less frequently than bimonthly. During the Design Development Phase, the CMAR shall prepare a final Construction Cost Estimate preliminary to providing the proposed Guaranteed Maximum Price.

(viii) All DP and CMAR Construction Cost Estimate shall include a Contingency.

(ix) After Owner and CMAR agree on a Guaranteed Maximum Price and in any event during the Construction Documents subphase of the Design Phase, the CMAR shall continually monitor the cost estimates and develop cost estimates to help assure that the cost of the Construction Work remains within both the portion of the Owner’s Project Budget available for costs of the Construction Work and the Guaranteed Maximum Price.
(x) **DP** Construction Cost Estimates and **CMAR** Construction Cost Estimates shall be independently prepared and shall be based on quantitative takeoffs whenever possible and shall be in sufficient depth and organization to be used in preparing budgets based on sub-trades, combinations of sub-trades, building systems, and bid packages. Lump sum estimates are not acceptable.

(xi) **CMAR** shall submit all of its Construction Cost Estimates to the **DP** for review prior to submission of the estimates to **Owner**. **DP** shall submit all of its Construction Cost Estimates to the **CMAR** for review before submission of the estimates to **Owner**. **DP** and **CMAR** shall reconcile their respective cost estimates not later than (7) days after **DP**’s receipt of **CMAR**’s Construction Cost Estimates and **CMAR**’s receipt of **DP**’s Construction Cost Estimate and the respective Design Submission Documents to assure the **Owner** that the **DP**’s and **CMAR**’s estimates are within the portion of the Project Budget available to pay costs of the Construction Work and, when agreed to by **Owner** and **CMAR**, the Guaranteed Maximum Price. If the **DP** and **CMAR** cannot agree on any individual cost items, then the highest identified cost will be utilized and noted as such by the **CMAR** and the **DP** in their respective estimates submitted to the **Owner**.

(xii) After the **CMAR** and the **DP** review each other’s estimates and reconcile them, each of the **DP** and the **CMAR**:

(A) Shall notify the **Owner** if it appears that the **DP**’s Construction Cost Estimate and the **CMAR**’s Construction Cost Estimate will exceed the portion of the Project Budget available to pay costs of the Construction Work or the Guaranteed Maximum Price.

(B) Shall satisfactorily demonstrate the accuracy of its estimate in such detail as shall be reasonably required by the **Owner**.

(C) Shall make reasonable recommendations for corrective action consistent with the portion of the Project Budget available for payment of costs of the Construction Work or the Guaranteed Maximum Price.

(xiii) All costs to correct Design Submission Documents to bring the **DP**’s Construction Cost Estimate within the portion of the Project Budget available to pay the costs of the Construction Work or the Guaranteed Maximum Price and all costs of revising **DP**’s Construction Cost Estimate shall be borne by the **Design Professional**. All costs of revising **CMAR**’s Construction Cost Estimate to bring it within the portion of the Project Budget available to pay the costs of the Construction Work shall be borne by the **CMAR**.

### 2.4. Design Professional Miscellaneous

Most of **DP**’s Design Phase services are located in other provisions of this Operating Manual. These services can be located by looking for the term, **DP**, in bold in the other provisions of this Operating Manual.

The services to be furnished by the **DP** for the Design Phase under the Program Development subphase, Schematic Design subphase, Design Development subphase, and Construction Document subphase shall be rendered in the same sequence as they appear in this Operating Manual. The **DP** shall receive the **Owner**'s written approval of a subphase prior to proceeding into the next subphase.

If the **Owner** requests advice from the **DP**, the **DP** will advise the **Owner** on selection of the **CMAR**. If the **Owner** and the **CMAR** discuss pre-qualification of **Subcontractors** and the **Owner** requests advice from the **DP**, the **DP** shall advise the **Owner** on the acceptability of **Subcontractors** proposed by the **CMAR**.

The **DP** shall provide reasonable collaboration, cooperation, communication and coordination to the **CMAR** in the **CMAR**'s development of its Construction Cost Estimates and its Guaranteed Maximum Price. The **DP** shall provide reasonable assistance to the **CMAR** in the **CMAR**'s preparation and modification of Exhibits C (GMP Schedule), D (Schedule of Values), E ((GMP Setting Drawings, Specifications, Assumptions and Clarifications) and F (CPM Schedule) of the **CMAR** Construction Contract.

If at any time either the **CMAR**'s Construction Cost Estimate or the **DP**'s Construction Cost Estimate (after the prescribed reconciliation process) exceeds the amount within **Owner**'s then current Project Budget available for costs of the Construction Work, or if the **CMAR**’s proposed GMP exceeds the sum of the amount within **Owner**’s then current Project Budget available for costs of the Construction Work or if **Owner** elects to construct the Project using the design-bid-build project delivery method and the bid amount of the lowest
responsive and responsible design-bid-build bidder exceeds the amount within Owner’s then current Project Budget available for costs of the Construction Work, the DP shall at no cost to the Owner:

(i) Revise all or any part of the Project drawings, specifications or both as the Owner may deem advisable for the purpose of reducing the cost of the Construction Work to within the amount available for costs of Construction Work in the Project Budget or within the GMP, as applicable.

(ii) Perform any or all of the services described above as may be necessary to obtain (i) a CMAR Construction Cost Estimate not exceeding the amount within Owner’s current Project Budget available for costs of the Construction Work, (ii) a DP Construction Cost Estimate not exceeding the amount within Owner’s current Project Budget available for costs of the Construction Work, and (iii) a GMP not exceeding the amount within Owner’s then current Project Budget available for costs of the Construction Work.

All costs to correct Design Submission Documents to bring the then estimated Construction Costs back within the portion of the Project Budget available to pay the costs of the Construction Work or the Guaranteed Maximum Price and of preparing DP’s revised Construction Cost Estimate shall be borne by the Design Professional and costs of preparing revised CMAR Construction Cost Estimates shall be borne by the CMAR.

The DP shall review the proposed CPM Schedule prepared by CMAR and provide written comments to Owner and CMAR. DP shall also review and comment upon to CMAR and Owner any proposed modifications to the CPM Schedule.

The DP shall review the proposed Schedule of Values submitted by the CMAR and provide a written evaluation to the Owner. The DP shall seek to protect the Owner from front-end loading or unbalanced pricing, or both, by the CMAR. DP shall also review and comment upon to CMAR and Owner any proposed modifications to the Schedule of Values.

Based on the Design Submission Documents approved by the Owner for use in the bid process for selecting Subcontractors, the DP will do the following in connection with the CMAR’s bid process for selecting Subcontractors:

(i) Prepare complete bid packages for the CMAR’s use for each portion of the Construction Work to be bid separately and, if the Construction Work is done in Work Packages, complete sets of bid packages for each Work Package. DP will issue or make arrangements with a printing service to issue complete bid packages;

(ii) If and to the extent Owner has given its prior approval, provide written interpretations and clarifications of the Owner approved Design Submission Documents requested by the CMAR or any potential bidder; and

(iii) Provide such other reasonable assistance to the CMAR as the CMAR and Owner request.

Award of the CMAR Construction Contract, approval of the GMP and the decision to execute and deliver the CMAR Construction Contract will be made solely by the Owner. Award of the CMAR subcontracts will be made solely by the CMAR, except as specifically provided otherwise in this Operating Manual.

If at any time the Owner terminates the CMAR Design Phase Services Contract or the CMAR Construction Contract for convenience or otherwise, the Owner will have the right to continue the Project on a construction manager at risk basis and the DP will perform its services under the DP Contract Documents with the Owner and any substitute CMAR.

As an alternative to the immediately preceding paragraph, after any termination of a CMAR Design Phase Services Contract or CMAR Construction Contract, the Owner will have the right to proceed with the Project under the design-bid-build project delivery method in which event the DP will provide the Design Phase services under the DP Contract Documents without participation of a CMAR and upon completion of the Construction Documents and their approval by Owner will proceed as follows. In any such case, each reference in the DP Contract Documents to the CMAR will be deemed to be a reference to the construction contractor under the design-bid-build method.

(i) If multiple general contracts have been approved by the Owner for the Project, the DP shall prepare bid documents for prospective bidders.

(ii) Based on the Construction Documents approved by the Owner, the DP shall administer the advertising and distribution to prospective bidders.

(iii) Before bid documents are made available to prospective bidders, the DP shall prepare and submit to the Owner a pre-bid progress construction schedule in form appropriate to the size, complexity and scope of the
Project, to show the major completion milestones required by the Owner. The incorporation of this pre-bid progress construction schedule into the bid documents will be determined only after consultation with the Owner and approval by the Owner.

(iv) The DP and the Owner will hold a pre-bid conference, and the DP shall prepare an agenda appropriate to the size, complexity and scope of the Project. The DP shall also render and deliver to Owner any requested interpretations, clarifications or Addenda in written form.

(v) The DP shall prepare and distribute all Owner-approved interpretations, clarifications or addenda in a manner that will ensure and document receipt by prospective bidders prior to the public bid.

(vi) If requested by the Owner, the DP shall assist the Owner at the public bid by opening, recording and/or certifying bids received.

(vii) The DP shall assist the Owner as requested to review all bids for reasonableness of the bid price, clerical errors, bidder responsiveness and bidder qualifications and shall recommend to the Owner the lowest responsible and responsive bidders.

(viii) The DP shall conduct pre-award conferences with successful bidders, assist the Owner in preparing construction contracts and obtaining full execution thereof and advise the Owner on the acceptability of Subcontractors proposed by contractors.

(ix) Award of the contract for construction will be made solely by the Owner.

(x) In the event the base bid(s) of the lowest responsible and responsive bidder(s) exceed the amount within Owner's current Project Budget available for costs of the Construction Work, the DP shall at no cost to the Owner:

   (A) Revise all or any part of the drawings and/or specifications of the Project that the Owner may deem advisable for the purpose of reducing the project cost to within the amount within Owner's current Project Budget available for costs of the Construction Work.

   (B) Perform any or all of the services described above as may be necessary to obtain a bid(s) not exceeding the amount within Owner's current Project Budget for costs of the Construction Work.

(x) In the event that Owner engages a construction manager-agent in connection with the Project after the Owner decides to proceed under the design-bid-build project delivery method, the CM-A will participate in the steps described in Items (i) through (ix) in a manner prescribed by Owner and the role of the DP will be adjusted accordingly.

2.5 CMAR Miscellaneous

2.5.1 Some of CMAR's Design Phase activities and obligations and some of the terms and conditions applicable to CMAR during the Design Phase are located in other provisions of this Operating Manual and in the other CMAR Design Phase Services Contract Documents. The activities, obligations, terms and conditions can be located by looking for the term, CMAR, in bold.

   (i) CMAR will provide leadership to the Design Professional, CMAR and Owner as a group during the Design Phase for all cost, schedule or alternative systems issues and for all matters that would affect performance of the Construction Work.

   (ii) CMAR will interact with DP and Owner in a collaborative, cooperative, communicative and coordinated manner as provided in this Operating Manual and as otherwise necessary or appropriate.

   (iii) CMAR will attend meetings as provided in Section 1.7.

   (iv) Within 30 days of executing the CMAR Design Phase Services Contract, CMAR will prepare and submit to Owner a Critical Path Method (CPM) master schedule including the Design Phase and the Construction Phase and meeting the requirements in Section 3.16.2. The CPM master schedule shall include three (3) weeks for Owner to review the Design Submission Documents at each subphase of the Design Phase and adequate time for government agency reviews and all other necessary approvals. The schedule shall indicate the dates for the start and completion of the various stages of the Project, including, among others, the dates when Owner information and approvals are required and all necessary shutdowns or suspensions of Owner or separate vendor activities on the Site (if any). The schedule shall allow for multiple bid packages and for Work Packages or portions of the Construction Work to be accepted separately by the Owner if required by Owner. CMAR will update and reissue, throughout the Design Phase and the Construction Phase, the Critical Path Method master
schedule for the Project as necessary and appropriate to reflect adjustments in the schedule. Updates will be subject to approval by Owner.

(v) CMAR will provide Owner and Design Professional, on a monthly basis, a written status report detailing progress during the Design Phase, including, among other matters, whether progress is according to the CPM master schedule. Each report shall include identification of any problems, potential problems or other items that have been identified and that should be addressed or require resolution so as not to jeopardize completion of the Project within Owner’s time schedule.

(vi) CMAR will review and evaluate costs, constructability, schedule, and implications of alternative designs and systems and materials. The CMAR will also:

(A) Do value engineering;
(B) Give advice regarding use of the Site, Site improvements, selection of materials, building systems and equipment;
(C) Make recommendations on construction feasibility, availability of materials and labor, local construction activity as it relates to schedules and time requirements for installation and construction.

(vii) CMAR will perform such “constructability reviews” and “value engineering” and “cash flow projections” as are requested by Owner or as recommended by CMAR or DP and approved by Owner during each subphase of the Design Phase. In addition to any other requests of Owner, in cooperation, collaboration, coordination and communication with the DP, the CMAR shall provide a written constructability review of all drawings and specifications relating to the Program Development, Schematic Design, Design Development and Construction Documents subphases, in a form acceptable to Owner. The constructability review shall (1) minimize areas of conflict, errors, omissions, and overlapping of Construction Work to be performed by Subcontractors, (2) confirm that all the Construction Work has been included in the drawings, (3) endeavor to minimize cost and to value engineer where appropriate, and (4) allow for bid packages and construction in Work Packages or for portions of the Construction Work to be accepted separately by the Owner, as required by the Owner.

(viii) The CMAR shall review the drawings and specifications as they are being prepared and recommend alternative solutions whenever design elements or details affect construction feasibility, schedules or cost. However, nothing contained in this Item (viii) shall be construed to require the CMAR to provide design services.

(ix) The CMAR shall make recommendations to the Owner and the DP regarding the division of work in the drawings and specifications to facilitate the bidding and awarding of subcontracts and, if applicable, to allow for the Construction Work to be done in Work Packages or for separate construction of a portion of the Construction Work to be accepted separately by the Owner. The CMAR’s recommendation shall take into consideration such factors as time of performance, availability of labor, overlapping trade jurisdictions, provisions for temporary facilities, etc.

(x) As provided in Sections 2.3,
(A) CMAR shall prepare and submit to Owner and DP detailed Construction Cost Estimates in order to verify that the anticipated costs of the Construction Work is within the portion of Owner’s Project Budget available to pay costs of the Construction Work.
(B) CMAR shall work with the DP to reconcile any variations between DP’s Construction Cost Estimates and CMAR’s Construction Costs Estimates and any variations of the foregoing from the portion of Owner’s Project Budget available for costs of the Construction Work.

(xi) The CMAR shall implement a cost forecasting, monitoring and control program for the Construction Work. Cost analyses shall include analyses of all trades and Construction Work components making a significant contribution to total costs of the Construction Work. The program shall include development of a cost model, monitoring the design process and periodic cost reviews to identify variances from the cost model. Variances shall be provided to the Owner and Design Professional in a report highlighting the variance and recommending corrective action to be taken.
(xii) The CMAR shall investigate and recommend materials and equipment that could be purchased directly by the Owner; consider long lead time procurement and mass purchasing power in making such recommendations, recommend a schedule for such purchases after coordination with the DP regarding the schedule for preparation of Construction Documents, and upon approval of the direct purchases by Owner expedite and coordinate delivery of these purchases to facilitate their delivery by the required dates.

(xiii) As provided in Section 2.7, CMAR shall prepare for the Project a proposed Guaranteed Maximum Price, a proposed GMP Schedule, proposed GMP Setting Drawings, Specifications, Assumptions and Clarifications, the proposed CMAR construction phase fee, a proposed Schedule of Values, a proposed CPM Schedule and any related documents. The Owner and the CMAR will then follow the process in that section to try to reach agreement on a Guaranteed Maximum Price and related matters.

(xiv) As provided in Sections 2.10, 2.11 and 2.12, CMAR will take the specified actions to select Early Selected Subcontractors and other Subcontractors.

2.5.2 The CMAR will perform its Design Phase services in consideration of the Design Phase Services Fee. The amount and method of payment of the Design Phase Services Fee will be as provided in Section 5.1 of the CMAR Design Phase Services Contract.

2.5.3 The CMAR shall thoroughly acquaint itself with all information provided by the Owner or the Design Professional concerning the conditions of the Site. In addition, the CMAR shall be responsible for obtaining information concerning conditions of the Construction Work typically obtained within the construction industry to assess conditions for similar projects. The CMAR will take this information into account in performing its services during the Design Phase.

The CMAR agrees that before submitting a proposed Guaranteed Maximum Price the CMAR will thoroughly examine (i) the Site, (ii) the current Design Submission Documents, (iii) boring data and all other soils information and as-built data provided to CMAR by Owner or the Design Professional, (iv) all other information provided by Owner or the Design Professional concerning the conditions of the Construction Work, and (v) all information which the CMAR is responsible to obtain under this Section 2.5.3 (the information described in Items (i) through (v) is referred to collectively as the “CMAR Site Information”). The CMAR acknowledges that boring data and other soils information and as-built data made available to it is only a general indication of materials and/or conditions likely to be found adjacent to borings or in existing structures or facilities or other areas. If the CMAR determines that the information is erroneous, inadequate or ambiguous, it shall immediately report its conclusions to the Design Professional and the Owner in writing. If, after determining that the information is erroneous, inadequate, or ambiguous, and after reporting its conclusions to the Owner, the CMAR remains dissatisfied or uninformed, the CMAR shall refrain from submitting a proposed Guaranteed Maximum Price until the matter is resolved. If the CMAR submits a proposed Guaranteed Maximum Price, the CMAR shall be deemed to have waived any claim it may have as the result of the alleged erroneous, inadequate or ambiguous information. By submission of a proposed Guaranteed Maximum Price, CMAR represents and warrants to Owner that CMAR has examined and evaluated the CMAR Site Information and has taken the CMAR Site Information into account in preparing its proposed GMP.

Execution of the CMAR Construction Contract Documents by the CMAR is a representation by the CMAR to the Owner that the CMAR has visited the Site, become familiar with the local conditions under which the Construction Work is to be performed and has correlated personal observations with the requirements of the Construction Documents and the other CMAR Construction Contract Documents.

2.5.4 CMAR will pay any applicable sales, use or similar tax on the CMAR Design Phase Services or CMAR Design Phase Services Fee

2.6 Owner Miscellaneous

2.6.1 The Owner will provide to the DP and the CMAR information regarding requirements for the Project including budget information. The Owner will shall furnish to the DP and the CMAR the Owner’s Project Criteria. The Owner shall furnish to the DP and the CMAR the amount within the Owner’s Project Budget available for the costs of the Construction Work.
2.6.2 The DP shall notify the Owner in writing if the DP requires additional information and of any information provided by the Owner which the DP believes to be unclear or insufficient for the successful completion of the Project.

2.6.3 The Owner, through the DP and consistent with the DP Contract Documents, shall furnish the CMAR a sufficient quantity of documents required for the CMAR to perform its services under the CMAR Design Phase Services Contract Documents during the Design Phase.

2.6.4 The Owner will designate a representative to act on its behalf with respect to the Project ("Owner’s Representative").

2.6.5 The Owner will attend meetings as provided in Section 1.7 and will otherwise interact with the DP and the CMAR as necessary and appropriate.

2.6.6 Owner shall review and approve or reject the DP’s Construction Cost Estimate and the CMAR’s Construction Cost Estimates within three (3) weeks of receipt of the documents, provided the documents are timely delivered to Owner with the respective Design Submission Documents and are delivered to Owner when required under the DP Contract Documents and the CMAR Design Phase Services Contract Documents.

2.6.7 As to all Design Phase activities of the CMAR and the DP, the Owner shall reasonably collaborate, cooperate, communicate and coordinate with the CMAR and the DP to keep the estimated costs of the Construction Work within the applicable portions of the Project Budget available for costs of the Construction Work. In this regard, the Owner will reasonably consider all appropriate and reasonable recommendations of the CMAR and the DP, including, without limitation, recommendations for redesign, deductive alternates, reductions in the Construction Work, value engineering and modifications to the Design Submission Documents.

2.6.8 If the Owner should observe or otherwise become aware of any fault or defect in the Project or non-conformity with the DP Contract Documents, the CMAR Design Phase Services Contract Documents or the CMAR Construction Contract Documents, Owner will give prompt written notice thereof to the DP and the CMAR. Failure of the Owner to notify the CMAR or the DP shall not reduce, change, lessen or alleviate in any way, CMAR’s or DP’s duties and obligations under the CMAR Design Phase Services Contract Documents, the CMAR Construction Contract Documents or the DP Contract Documents, respectively.

2.7 Guaranteed Maximum Price and GMP Schedule

2.7.1 Most of the provisions of this Section 2.7 apply to the Design Phase, but some of them also apply to the Construction Phase. In the event that a CMAR Construction Contract is executed by CMAR and Owner and the other conditions for commencement of the Construction Phase in Section 1.1 are satisfied, the provisions of this Section 2.7 will apply to the Construction Phase as well as the Design Phase.

2.7.2 No Construction Work shall commence until a Guaranteed Maximum Price for the entire Construction Work is agreed in writing by CMAR and Owner and the other conditions for commencement of the Construction Phase in Section 1.1 have been satisfied. If the Construction Work is being done in Work Packages, there will be no GMP for the individual Work Packages.

2.7.3 The following is the process to set the Guaranteed Maximum Price:

(i) At a time determined by the Owner and the CMAR and no later than the conclusion of the Design Development subphase, the CMAR shall propose a Guaranteed Maximum Price for the entire Construction Work. The proposed GMP shall not exceed the amount within the Owner’s Project Budget available for cost of the Construction Work. To do this the CMAR will submit a proposed completed form of the CMAR Construction Contract in the form and setting forth the terms and attaching the documents called for by Exhibit B ("Proposed CMAR Construction Contract").
(ii) This submission of the Proposed CMAR Construction Contract shall include a detailed CPM construction schedule for the entire Construction Work, which shall provide for the expeditious and practicable execution of the Construction Work. The schedule shall be consistent with any previously issued schedules, not to exceed time limits current under the Contract Documents for the entire Construction Work and shall be related to the entire Construction Work and the entire Project to the extent required by the CMAR Design Phase Contract Documents and the CMAR Construction Contract Documents, if and when the latter are executed.

(iii) The proposed GMP and GMP schedule and the final GMP and GMP Schedule will include a contingency (“Contingency”) which may be used by CMAR prior to Final Completion of construction of the Project to cover (i) the amount of any excess of the amount bid by the successful Subcontractor for any Construction Work over the respective amount for that Construction Work in the GMP Schedule, but not Construction Work to be performed by the CMAR, if the CMAR is permitted to self-perform some of the Construction Work and not Construction Work to be performed by any Early Selected Subcontractor that is to perform any of the Construction Work and (ii) the amount of any other Actual Cost of the Construction Work for Construction Work to be performed by a Subcontractor (but not Construction Work to be performed by the CMAR, if the CMAR is permitted to self-perform some of the Construction Work and not Construction Work to be performed by any Early Selected Subcontractor that is to perform any of the Construction Work) and in the case of (ii) with an additional amount of the Contingency being allocated to non-Construction Work items in the GMP Schedule in the same proportion as Construction Work items and non-Construction Work items had in the original GMP Schedule. Anything in the CMAR Construction Contract Documents to the contrary notwithstanding Contingency may not be used to cover the cost of any warranty work under the General Conditions or any other work on the Project after issuance by Owner and DP of the certificate of Final Completion,

(iv) The following are requirements relating to the Proposed CMAR Construction Contract:

(A) The Proposed CMAR Construction Contract is to have attached a proposed GMP schedule in elemental systems format in a form mutually satisfactory to CMAR and Owner and with the level of detail specified by Owner. Before filling in numbers in the proposed GMP schedule, the CMAR will develop the proposed form of the GMP schedule and obtain Owner’s approval of the form or make changes in the proposed forms as requested by the Owner.

(B) The proposed GMP for the entire Construction Work and the proposed GMP schedule must include a Contingency as separate line item.

(C) If the Construction Work is to be done in Work Packages, the proposed GMP must be allocated among the Work Packages in the proposed GMP schedule. This will be done by having a separate vertical column for each Work Package in the proposed GMP schedule (including, without limitation, Contingency) and allocating the amount in each line item among the Work Packages by inserting the appropriate amount in the column for each Work Package.

(D) The Proposed CMAR Construction Contract is also to have a proposed schedule of values (“Schedule of Values”) for the entire Construction Work using an elemental systems allocation of costs and fees. The Schedule of Values shall be based upon the proposed Guaranteed Maximum Price.

(E) The Proposed CMAR Construction Contract is also to have attached a list of the drawings and specifications and other documents used by CMAR in preparing the proposed GMP and a statement of the clarifications and assumptions made by the CMAR to supplement the information in the drawings and specifications (collectively, the “GMP Setting Drawings, Specifications, Assumptions and Clarifications”). The list of drawings, specifications and other documents shall include the project manual (“Project Manual”), the supplementary general conditions (“Supplementary General Conditions”) as and when issued by the DP, and the Owner’s Design Guidelines and Standards. The CMAR shall use the Project Manual, the Supplementary General Conditions and Owner’s Design Guidelines and Standards in preparing the proposed GMP. Each clarification and assumption will be shown in the form of an attached drawing, unless another methodology would more accurately and efficiently set forth the clarification or assumption.
(F) In preparing the clarifications and assumptions that CMAR proposes to be included in the GMP Setting, Drawings, Specifications, Assumptions and Clarifications and to be used by the CMAR in developing the proposed Guaranteed Maximum Price, the CMAR shall consult with the DP and if there are any disagreements as to the clarifications and assumptions between the DP and the CMAR, the disagreements will be discussed by the Owner, the DP and the CMAR.

(G) CMAR and Owner acknowledge that the drawings and specifications will be subject to further development that is consistent with the GMP Setting Drawings, Specifications, Assumptions and Clarifications or reasonably inferable therefrom. The CMAR understands and agrees that if the CMAR and Owner agree on a GMP, the CMAR will be obligated to perform the Construction Work in accordance with the Construction Documents thereafter approved by the Owner (regardless of whether approved by the CMAR) in return for payment by the Owner of an amount equal to the Actual Cost of the Work as documents in the Open Book Cost of the Construction Work up to but not exceeding the Guaranteed Maximum Price, except to the extent that the Construction Documents contain items or details that are not consistent with the GMP Setting Drawings, Specifications, Assumptions and Clarifications and are not reasonably inferable therefrom. Therefore, in determining the proposed GMP the CMAR will take into account this further development of the Design Submission Documents. The Owner and the Design Professional may review and discuss the GMP Setting Drawings, Specifications, Assumptions and Clarifications with the CMAR in evaluating the proposed GMP. Any such review or discussion and any failure to review or comment on or to advise of any errors or omissions in the GMP Setting Drawings, Specifications, Assumptions and Clarifications by the Owner or the Design Professional shall not be a basis for the CMAR to place any responsibility on the Owner or the Design Professional for any deficiency in the accuracy or completeness of the GMP Setting Drawings, Specifications, Assumptions or Clarifications or any error by the CMAR in preparing its proposed GMP. CMAR shall have sole responsibility to assure that the GMP Setting Drawings, Specifications, Assumptions and Clarifications are an accurate and complete statement of the CMAR’s intent.

(v) The Owner will, at its sole discretion, have the option to accept the Proposed CMAR Construction Contract or to request the CMAR to modify one or more items in or attached to the Proposed CMAR Construction Contract. If the CMAR and Owner reach agreement on the items and attachments to be included in the CMAR construction contract, CMAR and the Owner will execute the CMAR construction contract in the form of Exhibit B containing the agreed items and attachments ("CMAR Construction Contract"). In this event, the GMP in the CMAR Construction Contract will be the GMP for the Construction Work and the GMP schedule included in the CMAR Construction Contract will be the GMP Schedule for purpose of the CMAR Construction Contract Documents, as such GMP Schedule is changed from time to time as provided in Sections 2.7.3(viii). This GMP and the GMP Schedule must include the Contingency. Alternatively, the Owner may, in its sole discretion, elect to not execute the proposed CMAR Construction Contract and may also elect to terminate the CMAR Design Phase Services Documents for convenience per Article 7 of the General Conditions.

(vi) Sections 2.12.2 and 3.2.5 contain processes for reconciliation of the Construction Documents with the GMP Setting Drawings, Specifications, Assumptions and Clarifications.

(vii) As part of the process of approving any Change Order, Owner and CMAR shall also agree upon any needed change to the GMP and the GMP Schedule. If the Guaranteed Maximum Price is to be adjusted due to changes in a Change Order, the cost of the changes shall be priced under Section 3.33.4 of this Operating Manual.

(viii) The following are the requirements for and limitations on movement of amounts within the GMP Schedule during the Design Phase and the Construction Phase. Movements of amounts within the GMP Schedule shall not change the GMP. In addition, there are the limits on use of the Contingency set forth in Section 2.7.3(iii) above.

(A) Subject to the requirements and limitations below and the limits on use of the Contingency in Section 2.7.3(iii), the CMAR may move amounts within the GMP Schedule (including, without limitation, the Contingency) from one line to another line and, if the Construction Work is being done in Work Packages, from the vertical column for one Work Package to the vertical column for another Work Package as determined by the CMAR in its good faith reasonable judgment.
(B) In all cases (including movement of any amount from or to the Contingency), before moving any amount in the GMP Schedule and before the discussion and collaboration described below, CMAR shall deliver to Owner written notice of the proposed movement, which shall include:

(I) the amount to be moved;
(II) the line item, and if applicable the Work Package vertical column, from which the amount is being moved;
(III) the line item, and if applicable the Work Package column, to which the amount is being moved; and
(IV) a revised GMP Schedule after moving the amount.

(C) The CMAR shall meet with Owner and DP to discuss and collaborate on the proposed movements. If after the discussion and collaboration, CMAR elects to make one or more of the proposed movements discussed at the meeting with the Owner and the DP, CMAR may do so and shall at the same time deliver a revised GMP Schedule to Owner and the DP showing the movements.

(D) Regardless of any movement of amounts within the GMP Schedule, the CMAR shall have sole responsibility for completing the entire Construction Work within the Contract Time(s) for the entire Construction Work and for an amount not exceeding the Guaranteed Maximum Price and CMAR shall absorb any costs in excess of the Guaranteed Maximum Price.

(E) Anything in this Section 2.7.3(viii) or otherwise in the CMAR Design Phase Services Contract Documents or the CMAR Construction Contract Documents to the contrary notwithstanding:

(I) The only amounts in the GMP Schedule that may be moved are:
- The Contingency; and
- Amounts in line items in the GMP Schedule covering Construction Work to be performed by Subcontractors, but (a) not Construction Work to be performed by the CMAR, if the CMAR is permitted to self-perform any Construction Work and (b) not Construction Work to be performed by an Early Selected Contractor.

(II) Contingency may be used only for purposes authorized in Section 2.7.3(iii); and
(III) As to each line item in the GMP Schedule which covers Construction Work to be performed by a Subcontractor, but not Construction Work to be performed by the CMAR, if the CMAR is permitted to self-perform some of the Construction Work, and not Construction Work to be performed by an Early Selected Subcontractor, the amount in that line item may only be moved to either Contingency or to another line item in the GMP Schedule that covers Construction Work to be performed by a Subcontractor but not to a line in the GMP Schedule that covers Construction Work to be performed by the CMAR, if the CMAR is permitted to self-perform some of the Construction Work, and not to a line item in the GMP Schedule that covers Construction Work to be performed by an Early Selected Subcontractor.

2.8 Owner’s Right to Terminate for Convenience

If at any time before Owner issues a written directive for CMAR to proceed with the Construction Work (regardless of whether before or after the Guaranteed Maximum Price is agreed to by CMAR and Owner executing and delivering the CMAR Construction Contract), it is reasonably apparent to the Owner that the cost of the Construction Work cannot be kept within the portion of the Project Budget available for costs of the Construction Work or the Guaranteed Maximum Price, the Owner will have the right, but not the obligation, to terminate the CMAR Design Phase Services Contract Documents and, if in effect, the CMAR Construction Contract Documents for convenience in accordance with Section 7.1 of the General Conditions.

2.9 Alternates

2.9.1 Upon authorization by the Owner, the DP may include in the Project additive or deductive alternates, or both.

2.9.2 If the Owner has required the DP, after the execution of the DP Contract Documents, to include alternates in the Project, the documented cost of the preparation of those alternates shall be used to negotiate additional compensation for the DP whether the alternates are accepted or rejected.

2.9.4 If the DP elects to include alternates for the purpose of determining cost, or for any other reason, no compensation will be allowed the DP for such alternates.
2.9.5 Alternates shall not render the Project over the amount within Owner’s Project Budget available for costs of the Construction Work or unusable. Therefore, the DP in determining the each Construction Cost Estimate must include the base bid(s) and necessary alternate costs for comparison with the CMAR’s Estimate of Construction Costs and with the amount within the Owner's Project Budget available for payment of the costs of the Construction Work.

2.10 Pre-Qualification of All Subcontractor Candidates

All Subcontractors selected to do Construction Work will be selected on the basis of a combination of qualifications and price. Key Subcontractors selected to participate in the Design Phase may be selected on qualifications only or qualifications and hypothetical pricing, at the election of CMAR.

CMAR will prequalify (based on qualifications only) three (3) Subcontractors in each trade that will be needed to do the Construction Work using the process in this paragraph. The CMAR must submit to Owner a list of proposed Subcontractors together with such information about the qualifications of each proposed Subcontractor as Owner may reasonably request. Owner will have the right to reject any or all of the proposed Subcontractors, provided that Owner must be reasonable in rejecting a proposed Subcontractor.

2.11 Early Selected Subcontractors

If Owner determines that it is advantageous to the Owner, there will be Early Selected Subcontractors in the following trades participate in the design process for the Project during the Design Phase: __________________________ (9) __________________________. Therefore, Subcontractors in these trades will be selected to participate in the Design Phase at the beginning of the CMAR's participation in the Design Phase ("Early Selected Subcontractor").

The Early Selected Subcontractors will be selected using the following procedures.

(i) At least three (3) pre-qualified Subcontractors for each trade will be selected pre-qualified as provided in Section 2.10.

(ii) The CMAR prepares a draft request for proposals ("Early-Selected Subcontractor RFP") for each trade, which includes, among other matters, a request for qualifications, identification of the Subcontractor’s team for the Project, and specification of the Subcontractor’s backlog. The Owner must review and approve the form and content of the Early-Selected Subcontractor RFP.

(iii) The CMAR, the Owner and the DP appoint members of a selection committee ("Early-Selected Subcontractor Selection Committee").

(iv) The Early-Selected Subcontractor Selection Committee approves criteria for evaluating responses. The evaluation criteria are to determine the most qualified Subcontractor for each trade.

(v) The Early-Selected Subcontractor RFP is issued.

(vi) Each competitor submits the requested information. This information is evaluated by the Early-Selected Subcontractor Selection Committee with the help of such analytical support as it determines appropriate. The Early-Selected Subcontractor Selection Committee selects a short list of Subcontractor candidates in each trade to be interviewed.

(vii) The selected Subcontractor candidates are interviewed by the Early-Selected Subcontractor Selection Committee. The Early-Selected Subcontractor Selection Committee evaluates the interviews.

(viii) The Early-Selected Subcontractor Selection Committee uses the evaluation criteria to select the Early Selected Subcontractor for each trade based on its evaluation of the information submitted by the Subcontractor candidates and its evaluation of the Subcontractor candidates interviews.
(ix) The **Owner** retains in its files the form of the Early-Selected Subcontractor RFP, the submissions by the candidates and any other documentation **Owner** considers appropriate.

The **CMAR** will cause each Early Selected Subcontractor to participate in the Design Phase and to give to **Owner** and **CMAR** such advice concerning the design as requested by **Owner** or **CMAR**. The Early Selected Subcontractors will not be paid by **Owner** any fee or any other amount for such services during the Design Phase.

The **Subcontractor** to perform the Construction Work in each trade for which there is an **Early Selected Subcontractor** will be selected as follows:

(i) A bid package will be prepared for the Construction Work for the **Early Selected Subcontractor's** trade and delivered to the selected **Early Selected Subcontractor**. The bid package will be prepared and have the contents as provided in the applicable parts of Sections 2.12.2, 2.12.3 and 2.12.4.

(ii) The **Early Selected Subcontractor** will submit the price for which it proposes to do the Construction Work in the bid package (“**Price Submission**”). The Price Submission must be in a format and contain such information as is required by **CMAR** and **Owner**.

(iii) The **Owner** will select one or more qualified persons to review the Price Submission of each **Early Selected Subcontractor**. The reviewer(s) will report to the **Owner** and the **CMAR** whether the reviewer(s) find the Price Submission to be reasonable and appropriate for the Construction Work to be performed.

(iv) **CMAR** has the responsibility to establish to the **Owner's** satisfaction that the Price Submission of each **Early Selected Subcontractor** is reasonable and appropriate. If the **Owner** is satisfied that the Price Submission is reasonable and appropriate, the **Owner** will advise the **CMAR** that the respective **Early Selected Subcontractor** is selected as **Subcontractor** for the respective portion of the Construction Work. If the **Owner** is not satisfied that the Price Submission is reasonable and appropriate, the **Owner** will so advise the **CMAR** and the **CMAR** will compete the respective portion of the Construction Work in the following manner. There will be a normal **Subcontractor** competition for selection of the Subcontractor for this portion of the Construction Work in accordance with the procedures in Section 2.12, except that, notwithstanding any other provision of the **CMAR Design Phase Services Contract Documents** to the contrary, (A) the Price Submission will be the **Early Selected Subcontractor's** bid for that portion of the Construction Work in the **Subcontractor** bidding process, and (B) the **CMAR** must obtain bids for that portion the Construction Work from two other pre-qualified **Subcontractors**.

**2.12 Other Subcontractors**

2.12.1 For **Subcontractors** not selected under Section 2.11, the **CMAR** shall:

(i) Pre-qualify **Subcontractors** to bid on bid packages in accordance with the pre-qualification procedures established under Section 2.10;

(ii) With the assistance of **Owner** and the **DP**, prepare the bid packages, including, among other items, the necessary bidding information and bidding forms;

(iii) Develop **Subcontractor** interest;

(iv) Establish bidding schedules;

(v) Advertise for bids; and

(vi) Conduct pre-bid conferences to familiarize bidding **Subcontractors** with the bidding documents and management techniques and with any special systems, materials or methods.

If the **CMAR** becomes aware prior to any bid date that less than three (3) pre-qualified **Subcontractors** plan to bid any portion of any bid package or that anticipated bids from previously pre-qualified **Subcontractors** are likely to exceed the current **CMAR's** Estimate of Construction Costs, the Guaranteed Maximum Price or the current Schedule of Values either for the entire Construction Work or, when applicable, for a portion of the Construction Work to be accepted by the **Owner** separately included in the bid package, the **CMAR** shall promptly notify the **Owner**. **CMAR** must make a reasonable effort to obtain a minimum of three (3) bids from pre-qualified **Subcontractors** for each bid package.
2.12.2 The bid packages shall include the Project Manual, the Supplementary General Conditions and the Owner's Design Standards. The Owner will specify the Design Submission Documents to be included in the bid packages. The Design Submission Documents included in the bid packages must have been approved by Owner. Before including the Design Submission Documents in the bid packages, Owner will give CMAR a reasonable opportunity to review the Design Submission Documents proposed to be included in the bid packages. The CMAR may object to the use of these Design Submission Documents only if the CMAR in good faith reasonably believes that there are items or details in or omitted from the Design Submission Documents that the Owner wants to include in the bid packages that make those Design Submission Documents not consistent with the GMP Setting Drawings, Specifications, Assumptions and Clarifications and not reasonably inferable from the GMP Setting Drawings, Specifications, Assumptions and Clarifications. In such case, the CMAR will promptly deliver to Owner a memorandum with supporting documentation setting forth the items or details objected to. The Owner and the CMAR (with such assistance from the DP as may be requested by the Owner) shall use their good faith best efforts to reach a mutually satisfactory resolution of any CMAR objections. As to any such objections on which a mutually satisfactory resolution is not reached, the Owner shall make a good faith reasonable final determination.

As to each of CMAR's objections, if any, as is determined to be valid, Owner will elect one or a combination of the following steps:

(i) adjustment of the Design Submission Documents to be included in the bid packages to remedy the objection; or

(ii) adjustment of the GMP by use of a Change Order to fairly reflect the anticipated increased cost of the objected to item or detail.

The Owner and the CMAR (with such assistance from the DP as may be requested or required) shall use their good faith best efforts to reach a mutually satisfactory resolution of the adjustments to the Design Submission Documents and/or the GMP. If a mutually satisfactory resolution is not reached, the Owner shall make a good faith reasonable final determination.

2.12.3 If the Construction Work is being done in Work Packages, there will be separate bidding process for each Work Package and separate bid packages for each Work Package.

2.12.4 The bid packages shall contain instructions that all bids are to be addressed to the CMAR and not to the Owner. The CMAR shall receive and open bids when advertised, prepare a bid analysis, conduct pre-award conferences, and notify the Owner and Design Professional concerning which bids from pre-qualified Subcontractors the CMAR proposes to accept. The Owner and Design Professional shall be notified of the time and place of all bid openings and shall be permitted to attend such openings with their representatives and guests. If the CMAR proposes to accept a bid other than a low bid, the CMAR shall justify such action in writing to Owner prior to accepting such bid. CMAR shall not accept a bid other than the low bid until after delivering the justification to Owner and written approval by the Owner, with no increase in the GMP.

2.13 Work Packages

3. CONSTRUCTION PHASE

3.1 Cooperation and Coordination During the Construction Phase

At the commencement of the Construction Phase, Owner, CMAR and the Design Professional will have a meeting to review cooperation, coordination and, if applicable, partnering during the Construction Phase and to establish procedures for the Construction Phase, including, among other matters, handling of submittals and scheduling of Site activities. In addition, Owner, CMAR and DP will determine how to implement the following required meetings. The CMAR will schedule and conduct weekly progress meetings at which the Owner, the DP, and the CMAR will discuss jointly such matters as procedures, progress, actual problems, potential
problems, fixes to and limits on actual problems and ways to avoid, limit or fix potential and actual problems. **Owner**, DP and CMAR will contribute their good faith efforts in such discussions to find ways (i) to complete the Project within the Contract Time(s) and within the Guaranteed Maximum Price, (ii) to limit and fix actual problems, and (iii) to anticipate and then avoid, limit or fix potential problems.

If the **Owner** elects “partnering” for the Project, another subject to be covered in the initial meeting will be development of partnering procedures for Construction Phase. Partnering is a mutual effort by all the parties involved in a Project to cooperate and coordinate efforts in order to achieve the final result. Partnering requires that all parties use their particular expertise for the mutual benefit of all, rather than for the benefit of the one. Partnering requires flexibility, the ability to appreciate the positions of the other parties and to make compromises for the benefit of all. Partnering will be implemented by the utilization of a formal partnering process developed as described above and presented in a separate workshop attended by the CMAR, the **Owner**, the Design Professional and their key participants. Follow up sessions will occur every three (3) months or as mutually agreed to ensure that all commitments are updated and being followed by all parties. The cost of this partnering effort during the Construction Phase will be shared equally by the **Owner**, the CMAR, and the DP.

No actions of cooperation, coordination, or attempted cooperation, attempted coordination or failure to cooperate or coordinate on any matter shall affect or impair the respective rights and responsibilities of **Owner**, DP and CMAR under the DP Contract Documents and the CMAR Construction Contract Documents.

### 3.2 General

**3.2.1** The provisions in Section 2 on the Design Phase continue in effect during the Construction Phase and those provision in Section 2 that cover activities or actions during the Construction Phase are applicable to the **Owner**, the DP and the CMAR during the Construction Phase.

**3.2.2** The intent of the CMAR Construction Contract Documents is to include all items and services necessary for the proper execution and completion of the Construction Work. The CMAR Construction Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Construction Work not covered in the CMAR Construction Contract Documents but necessary for the proper completion of the Construction Work will be required unless it is not consistent with the CMAR Construction Contract Documents and is not reasonably inferable therefrom as being necessary to produce the intended results.

**3.2.3** The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings shall not control the CMAR in dividing the Construction Work among Subcontractors or in establishing the extent of the Construction Work to be performed by any trade.

**3.2.4** Neither the authority to act given to the DP and the **Owner**, either individually or collectively, in the DP Contract Documents or the CMAR Construction Contract Documents nor any decision made by them in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility by them to the CMAR or any Subcontractor.

**3.2.5** The “Construction Documents” are the Design Submission Documents (i) prepared and designated by the DP as the Construction Documents, (ii) approved by the **Owner** as the Construction Documents, and (iii) reviewed by the CMAR and adjusted to the extent, if any, as provided in this Section 3.2.5 or in Section 2.12.2.

The Construction Documents are the plans and specifications that are to be used to perform the Construction Work.

All amendments and modifications of the Construction Documents must be approved in writing by **Owner** and are subject to the same review by CMAR and adjustment process as apply to the original Construction Documents and as described below. Upon completion of that process and written approval by **Owner** the amendments and modifications become part of the Construction Documents.
If the Design Submission Documents used in Subcontractor bid packages in accordance with Section 2.12.2 comply with the three requirements in the definition of Construction Documents above, they will be the Construction Documents.

Any other Design Submission Documents that DP and Owner determine to designate and approve as Construction Documents must be delivered to CMAR. Owner will give CMAR a reasonable opportunity to review the Design Submission Documents. CMAR may object to the Design Submission Documents becoming the Construction Documents only if the CMAR in good faith reasonably believes that there are items or details in or omitted from the Design Submission Documents that make the Design Submission Documents not consistent with the GMP Setting Drawings, Specifications, Assumptions and Clarifications and not reasonably inferable from the GMP Setting Drawings, Specifications, Assumptions and Clarifications. In such case, the CMAR will promptly deliver to Owner a memorandum with supporting documentation setting forth the items or details objected to. The Owner and the CMAR (with such assistance from the DP as may be requested by the Owner) shall use their good faith best efforts to reach a mutually satisfactory resolution of any CMAR objections. As to any such objections on which a mutually satisfactory resolution is not reached, the Owner shall make a good faith reasonable final determination.

As to each of CMAR’s objections, if any, as is determined to be valid, Owner will elect one or a combination of the following steps:

(i) adjustment of the Design Submission Documents to remedy the objection; or

(ii) adjustment of the GMP by use of a Change Order to fairly reflect the anticipated increased cost of the objected to item or detail.

The Owner and the CMAR (with such assistance from the DP as may be requested or required) shall use their good faith best efforts to reach a mutually satisfactory resolution of the adjustments to the Design Submission Documents and/or the GMP. If a mutually satisfactory resolution is not reached, the Owner shall make a good faith reasonable final determination.

3.3 Owner Miscellaneous

3.3.1 If the Owner should observe or otherwise become aware of any fault or defect in the Project or non-conformity with the Construction Documents or the other CMAR Construction Contract Documents, Owner will give prompt written notice thereof to the CMAR. Failure of the Owner or Owner’s representative to notify the CMAR shall not reduce, change, lessen or alleviate in any way, CMAR’s duties and obligations under the CMAR Construction Contract Documents.

3.3.2 Owner shall, throughout the performance of the Construction Work, cooperate with CMAR and perform Owner’s responsibilities, obligations and services in a timely manner so as not to delay or interfere with CMAR’s performance of the Construction Work and CMAR’s other obligations under the CMAR Construction Contract Documents.

3.3.3 Owner’s Representative shall be responsible for processing Owner-supplied information and approvals or rejections in a timely manner to permit CMAR to fulfill its obligations under the CMAR Construction Contract Documents. Owner’s Representative shall also provide CMAR with reasonably prompt notice if it observes any failure on the part of CMAR to fulfill its contractual obligations, including errors, omissions or defects in the performance of the Construction Work. Failure of the Owner or Owner’s representative to notify the CMAR shall not reduce, change, lessen or alleviate in any way, duties and obligations under the CMAR Construction Contract Documents.

3.3.4 The Owner shall review documents submitted by the CMAR and shall render decisions pertaining thereto without unreasonable delay.

3.3.5 Owner is responsible for all work performed at the Project by other parties under the Owner’s control. Owner shall contractually require such parties to cooperate and coordinate their activities with
CMAR so as not to interfere unreasonably with CMAR’s ability to complete the Construction Work in a timely manner and consistent with the CMAR Construction Contract Documents.

3.4 Design Professional Miscellaneous

3.4.1 The DP will provide administration of the Project on behalf of the Owner as described in the DP Contract Documents.

3.4.2 In interacting with the CMAR, the DP will be a representative of the Owner during the Design Phase and the Construction Phase (including, without limitation, until the two-(2) year warranty period has expired). The DP is not the “Owner’s Representative” as such term is used in the DP Contract Documents, the CMAR Design Phase Services Contract Documents or the CMAR Construction Contract Documents. The DP and the CMAR shall advise and consult with the Owner. All instructions and communications by the DP to the CMAR shall be copied to the Owner.

3.4.3 The DP will have authority to act on behalf of the Owner only to the extent provided in the DP Contract Documents. The extent of the duties, responsibilities and limitations of authority of the DP as a representative of the Owner during construction shall not be modified or extended without the written consent of the Owner and the DP, which consent of the DP shall not be unreasonably withheld.

3.4.4 The DP shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Construction Work, for the acts and/or omissions of the CMAR, any design-bid-build contractor, any Subcontractor, or any other persons performing any of the Construction Work.

3.4.5 The DP shall make _______ (12) visits to the site, unless otherwise specified by the Owner, to be knowledgeable about the progress and quality of the Construction Work and to determine if the Construction Work is proceeding in accordance with the Construction Documents. On the basis of these on-site observations, the DP shall keep the Owner informed of the progress of the Construction Work and endeavor to guard the Owner against defects and deficiencies in the Construction Work and failure of the Construction Work to conform with the Construction Documents. Field administration and observation of the Construction Work shall include the DP’s Consultants in the fields of architectural, structural, mechanical, electrical, site and other engineering fields. The DP shall require each DP Consultant to provide such field administration and observation as required in Exhibit B to the DP Agreement and incorporated herein by reference on such schedule as the Owner may require during the Construction Phase. _______ (12) progress reports, including an analysis of the quality, and progress of the Construction Work and anticipated delays, shall be submitted by the DP to the Owner during the Construction Phase. DP shall advise the CMAR of any anticipated delays reported to Owner. Said reports shall be based on the personal first hand observations by DP, its staff, and the DP Consultants.

3.4.6 Based on the CMAR’s Payment Applications, the Schedule of Values, and the DP’s site visits, the DP shall determine the amounts payable to the CMAR and shall certify progress for payments within seven (7) days after receipt of the CMAR’s Payment Applications. Certificates for Payment will be issued only for Construction Work that has actually been performed in accordance with the Construction Documents. Within seven (7) days after receipt of the CMAR’s Payment Applications, the DP shall specify in writing DP’s reasons for withholding any Certificates for Payment, in full or in part, as set forth in Section 3.21. The DP shall also maintain a record of any types of encumbrances or claims made by Subcontractors and advise the Owner of such encumbrances or claims.

3.4.7 The DP shall be the initial interpreter of the requirements of the Construction Documents. The DP shall render written interpretations within seven (7) calendar days of receipt of any written request from the Owner or the CMAR. The interpretations shall be consistent with the intent of and reasonably inferable from the Construction Documents.

3.4.8 Within seven (7) calendar days following receipt of written notice of a claim or controversy between the Owner and the CMAR relating to the Construction Documents, the DP shall either request additional information from the Owner and/or CMAR regarding their position on the claim or issue an initial written
determination. If the DP requests additional information as set forth herein, the DP shall issue an initial written determination within seven (7) calendar days after the DP receipt of such information.

3.4.9 The DP shall review and approve Submittals, Shop Drawings, Product Data, Samples, and other required submissions of the CMAR. Such submissions shall be approved only if they are in conformance with the design concept of the Project and in full compliance with Construction Documents. Submissions of CMAR shall be acted on and returned to CMAR within ten (10) days of receipt. For complex submittals, the DP will have two ten (10) day review cycles. If review and approval are not timely, the DP shall notify the CMAR or CMAR and the Owner in writing stating the reason for the delay. Resubmittal shall be acted on and returned to the CMAR within ten (10) days, except on complex submittals with significant deficiencies, wherein the submittal turnaround time shall be two ten (10) day review cycles. The DP’s approval of a specific item or component shall not indicate approval of an assembly of which the item is a component.

3.4.10 The DP shall review and analyze all requests for Change Orders including any documents offered to substantiate such requests. The DP shall fully evaluate the merit and requested costs related to each Change Order request, submit timely written recommendations to the Owner, assist the Owner in negotiations and prepare and issue those Change Orders approved by the Owner.

3.4.11 The DP shall assure that no changes in the Construction Documents are made by any person without prior written consent of the Owner. The DP may approve and direct minor changes in the Construction Documents not affecting the Project value, the Contract Time(s), or the GMP or, if the Owner has terminated the CMAR and elected to proceed on a design-bid-build basis, the Contract Price, but shall inform the Owner in writing in advance of such approvals or directions.

3.4.12 The DP and the Owner shall each have the authority to reject Construction Work which, in their respective opinion, does not conform to the Construction Documents or the other CMAR Construction Contract Documents, including applicable codes, statutes, or local or national standards, and shall notify each other and CMAR of the reasons for rejection. The DP and the Owner shall each have the authority to require special inspection or testing but will take such action only after consultation with the other. The DP has authority to direct the CMAR to uncover portions of the Construction Work, as provided in Section 3.8.7.

3.4.13 If the CMAR refuses or fails to prosecute the Construction Work, or any part thereof, with such diligence as will ensure its completion within the Contract Time(s) or any extension thereof, or fails to complete the Construction Work within the Contract Time(s), or refuses to correct defective Construction Work or Construction Work that does not conform to the Construction Documents and the other CMAR Construction Contract Documents, the DP shall immediately notify the Owner upon the DP becoming aware of the situation and the DP shall consult with the Owner to resolve design issues, if any, involved in the situation.

3.4.14 Upon notification by the Owner, the DP shall conduct inspections to determine the dates of Substantial Completion and Final Completion, shall receive, review, certify for correctness, and completeness, and transmit to the Owner all manuals, warranties, "as-built" drawings, "as-built" schedules, spares, and other items to be furnished by the CMAR under the Contract Documents, and issue the Certificate for Final Payment.

3.4.15 Prior to Final Payment to the CMAR, the DP shall review all outstanding claims which have not been settled and shall prepare a written report outlining the background and status of such claims, including, without limitation, the details of DP’s analysis to date and the DP’s recommendations as to the ultimate disposition of each claim.

3.4.16 The DP shall perform all other responsibilities necessary to carry out the general intent and specific provisions of the DP Contract Documents and to fulfill the DP’s role under the DP Contract Documents, or to obtain the full compliance by the CMAR with the CMAR Construction Contract Documents.

3.4.17 If the Owner furnishes keys to the DP to provide access to Owner’s property, the DP shall assure that no such keys are duplicated, and shall return all such keys upon request of the Owner or prior to
receipt of final payment, whichever is earlier. If the DP fails to return all keys furnished to it, the DP shall be responsible for and shall pay all costs (including materials and labor of Owner's personnel or others) associated with rekeying (removal of tumblers and insertion of new tumblers) or replacement of old locks which could be opened with keys furnished to the DP, and the parties agree that such cost may be deducted in full or in part from any funds remaining to be paid under the terms of the DP Contract Documents or any other amounts due by Owner to DP, with any balance due immediately from the DP to the Owner.

3.5 **CMAR Miscellaneous**

3.5.1 Some of CMAR's Construction Phase activities and obligations and some of the terms and conditions applicable to CMAR during the Construction Phase are located in other provisions of this Operating Manual and in the other CMAR Construction Contract Documents. The activities, obligations, terms and conditions can be located by looking for the term, CMAR, in bold.

3.5.2 During the Construction Phase, the CMAR shall complete the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents in return for payment by Owner of the Actual Costs of Construction Work, provided that in no event shall the aggregate payments by Owner to CMAR for Construction Work exceed the Guaranteed Maximum Price. All Savings will be allocated to the Owner, and CMAR will receive none of the Savings.

3.5.3 Unless otherwise provided in the CMAR Construction Contract Documents to be the responsibility of Owner or a separate contractor, CMAR's Construction Phase services shall include, without limitation: team management and coordination, scheduling, cost controls and change order management, submittal process management, subcontracting, field management, safety program, close-out process, and warranty period services. This shall include providing through itself or its Subcontractors all necessary supervision, labor, inspection, testing, start-up, material, equipment, machinery, temporary utilities, and other temporary facilities to permit CMAR to complete all Construction Work in accordance with the Construction Documents and the other CMAR Construction Contact Documents.

3.5.4 CMAR shall perform all construction activities efficiently and with the requisite expertise, skill, quality and competence to satisfy the requirements of the Construction Documents and the other CMAR Construction Contract Documents.

3.5.4 The CMAR shall provide Owner and Design Professional, on a monthly basis, a written status report detailing the progress of the Construction Work during the Construction Phase, including whether the Work is proceeding according to schedule. Each report during the Construction Phase shall include: An updated Critical Path Method (CPM) master schedule; an updated Construction Work cash flow projection for the duration of the Project; copies of the CMAR's Superintendent's daily site reports made during the preceding month; identification of discrepancies, conflicts, or ambiguities existing in the Construction Documents that require resolution; identification of any health and safety issues that have arisen in connection with the Construction Work; and identification of other items that require resolution so as not to jeopardize CMAR's ability to complete the Construction Work for the Guaranteed Maximum Price and within the Contract Time(s).

3.5.5 During the Construction Phase, CMAR shall maintain the (CPM) master schedule and shall promptly prepare a proposed updated (CPM) master schedule and submit it to DP and Owner for their review and approval whenever events occur or are likely to occur that require changes in the (CPM) master schedule. The (CPM) master schedule for the Construction Phase is the same and a continuation of the (CPM) master schedule used for the Design Phase and shall indicate the dates for the start and completion of the various stages of the Construction Work, including the dates when Owner information and approvals are required and all necessary shutdowns or suspensions of Owner or separate vendor activities on the Site (if any).

3.5.6 The CMAR shall provide leadership to the CMAR and Subcontractors during the Construction Phase for all matters relating to the Construction Work. The CMAR agrees to furnish efficient business
administration and superintendence and to use its best efforts to complete the Construction Work in an expeditious and economical manner.

3.5.7 The CMAR's Representative and the CMAR Superintendent shall be at the Site at all times when Construction Work is being performed and shall have the necessary expertise and experience required to supervise the Construction Work. CMAR's Representative shall communicate regularly with Owner and DP and shall be vested with the authority to act on behalf of CMAR. CMAR's Representative and CMAR's Superintendent may only be replaced with the mutual written agreement of Owner and CMAR. Notwithstanding the foregoing, the CMAR's Representative and CMAR's Superintendent will be replaced upon reasonable request of the Owner.

3.5.7 CMAR shall only employ Subcontractors who are properly licensed and fully committed to performing the Construction Work consistent with the Construction Documents and the other CMAR Construction Contract Documents and with the same degree of skill, quality and competence as CMAR.

3.5.8 CMAR is fully responsible for its Subcontractors' work and any acts and omissions in connection with the performance of its Subcontractor's work. Nothing in the CMAR Construction Contract Documents is intended or shall be deemed to create any legal or contractual relationship between Owner and a Subcontractor. In addition, nothing in the CMAR Construction Contract Documents is intended or shall be deemed to create any third-party beneficiary rights.

3.5.9 CMAR is responsible for coordinating the activities of all Subcontractors.

3.5.10 If Owner is performing other work with separate contractors under its control as part of the Project or as a separate project, CMAR agrees to cooperate and coordinate its Construction Work with the work of Owner's separate contractors so that the Project and any separate project(s) on which the separate contractors are working can be completed in an orderly and coordinated manner reasonably free of significant disruption to any party. In this regard:

(i) The Owner reserves the right to award other contracts related to the Project, or to perform certain work itself. The Owner also reserves the right to award other contracts unrelated to the Project but involving work in the vicinity of the Project or to perform unrelated work itself. Such other work may or may not be known to the Owner or disclosed to the CMAR prior to the date of the CMAR Design Phase Services Contract Documents or the CMAR Construction Contract Documents. The CMAR shall afford the Owner and other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work and shall properly coordinate its Construction Work with theirs in such manner as the Owner Representative may direct. The CMAR shall also assure at its own cost reasonable access of other contractors to the Site and their work.

(ii) Upon request of the CMAR, the Owner will provide the CMAR with a copy of all plans, specifications, schedules and other data relating to other contracts or work. The CMAR shall thoroughly examine these documents and shall within three (3) days of completing such examination notify the Owner in writing of any conflicts with the Construction Work to be performed by the CMAR. In no event shall such notice be given so late as to interfere with or delay the Construction Work to be performed by the CMAR. Failure of the CMAR to request, review, or provide written notice as provided above shall constitute a waiver of any objections or claims the CMAR may have as a result of the necessity to coordinate the CMAR's Construction Work with other activities.

(iii) Should the CMAR sustain any damage through any act or omission of any other contractor, CMAR shall have no claim or cause of action against the Owner for such damage and hereby waives any such claim. The CMAR does not waive any claim or cause of action against any other contractor or subcontractor to recover any and all damages sustained by reason of the acts or omissions of such other contractor. The phrase “acts or omissions” as used in this section shall include, but not be limited to, any reasonable delay by any such other contractors, whether due to negligence, gross negligence, inadvertence or any other cause.
(iv) Should the CMAR cause damage to the work or property of any other contractor or of the Owner, the CMAR shall upon receiving due notice promptly attempt to settle with such other contractor or the Owner by agreement, repair or otherwise to resolve the dispute. If such separate contractor sues or initiates a proceeding against the Owner on account of any damage alleged to have been caused by the CMAR, the Owner shall notify the CMAR who, at Owner's option, shall defend such proceedings or pay the costs of Owner defending such proceedings, and if any judgment or award against the Owner arises therefrom the CMAR shall pay or satisfy it and shall reimburse the Owner for all attorney's fees and court or other costs which the Owner has incurred.

3.5.11 CMAR shall keep the Site free from debris, trash and construction wastes to permit CMAR to perform its Construction Work efficiently, safely, and so as not to interfere with the use of any adjacent land areas, including the reasonable aesthetic appearance of the jobsite and all storage/staging areas. Upon Substantial Completion of the entire Construction Work or a portion of the Construction Work to be accepted separately by the Owner, CMAR shall remove all debris, materials, wastes, equipment, machinery and tools from the Construction Work to permit Owner to occupy the entire Construction Work or portion of the Construction Work for the use for which it is intended.

3.5.12 Any changes affecting previously approved Construction Work shall require prior written approval of the Owner.

3.6 CMAR Control of Construction Work

3.6.1 CMAR shall at all times exercise complete and exclusive control over the means, methods, sequences and techniques of construction.

3.6.2 The CMAR shall supervise and direct the work of its employees and Subcontractors and coordinate the Construction Work with the activities and responsibilities of the Owner and the Design Professional to complete the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents and within the Contract Time(s).

3.6.3 The CMAR shall establish an on-site organization and lines of authority in order to carry out the overall plans for completion of the Construction Work.

3.7 Daily Log

3.7.1 The CMAR shall maintain a daily log of construction activities for each calendar day during the Construction Phase, using a form approved by the DP, CMAR and Owner. The CMAR shall document all activities at the Site, including:

(i) Weather conditions showing the high and low temperatures during work hours, the amount of precipitation received on the Site, and any other weather conditions which adversely affect Construction Work at the Site;

(ii) Soil conditions which adversely affect Construction Work at the Site;

(iii) The hours of operation by CMAR and individual Subcontractor personnel;

(iv) The number of CMAR and Subcontractor personnel present and working at the Site, by subcontract and trade, and updated schedule activity number.

(v) The equipment active or idle at the Site;

(vi) A description of the Construction Work being performed at the Site by updated schedule activity number.

(vii) Any delays, disruptions or unusual or special occurrences at the Site;
(viii) Materials received at the Site; and
(ix) A list of all visitors at the Site.

3.7.2 The CMAR shall provide copies of the daily logs to the Owner on a weekly basis. The daily log will not satisfy any requirement in the CMAR Construction Contract Documents of written notice to the Owner.

3.8 Supervision and Construction Procedures

3.8.1 The CMAR shall supervise and direct the Construction Work, using the CMAR’s best skill and attention. The CMAR shall be solely responsible for the coordination and accomplishment of all portions of the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents.

3.8.2 The CMAR shall be responsible to the Owner for the acts and omissions of all persons included in the definitions of CMAR and Subcontractor.

3.8.3 The CMAR shall not be relieved from its obligation to perform the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents either by the activities or duties of the DP or by inspections, tests or approvals required or performed by persons other than the CMAR. Nothing contained in this Section 3.8.3 shall preclude the CMAR from asserting any rights it may have under the CMAR Construction Contract Documents in the event of unreasonable delays to the CMAR in the making of any inspections, test, approvals, or other action by the DP upon which the CMAR is dependent.

3.8.4 The CMAR shall employ a competent Construction Superintendent who is Owner-approved and necessary assistants, who shall be in attendance at the Site during the progress of the Construction Work. The CMAR shall also employ the CMAR Representative and CMAR Senior Representative who are Owner-approved together with such additional engineering and clerical support as may be reasonably required and appropriate to the stage of construction. The superintendent and representatives shall not be changed except with the consent of the Owner, unless the superintendent or representative proves to be unsatisfactory to the CMAR or ceases to be in its employ. The superintendent and representatives shall represent the CMAR and all communications given to either representative shall be binding on the CMAR. All oral communications shall be confirmed in writing.

3.8.5 The CMAR shall at all times enforce strict discipline and good order among its employees and its Subcontractors’ employees and shall not allow employment on the Construction Work of any unfit person or anyone not skilled in the task assigned to him or her.

3.8.6 The CMAR shall at all times allow the Owner, Design Professional, or any other designated representatives access to the Construction Work to observe progress and inspect the quality of work and conformance to the Construction Documents and the other CMAR Construction Contract Documents.

3.8.7 Any Construction Work required to be observed or inspected, as applicable, by the Design Professional and/or the Owner prior to being covered, which is covered without prior observation or inspection, as applicable, or without prior consent of the Design Professional and the Owner, must be uncovered and recovered by the CMAR, if requested by the Design Professional or the Owner, at no cost to Owner, notwithstanding the provisions of Section 3.8.8.

3.8.8 CMAR shall notify the Owner and Design Professional in writing at least 24 hours prior to the time at which the Owner or Design Professional must be present to perform an inspection or observation, as applicable. Failure to provide such notice shall make the CMAR solely responsible for all consequences of non-inspection and non-observation and any required access to the Construction Work.

3.9 Administration
Except where expressly provided to the contrary in the Contract Documents, the **CMAR's Representative**, the **Owner's Representative** and the **DP's Representative** shall forward all communications in writing and all documents simultaneously to the other two representative as listed below:

<table>
<thead>
<tr>
<th>Design Professional's Representative:</th>
<th>CMAR's Representative:</th>
<th>Owner's Representative:</th>
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<tbody>
<tr>
<td>(13)</td>
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### 3.10 Construction Documents

**3.10.1** The **CMAR** shall study and compare the Construction Documents in advance of beginning each portion of the Construction Work and immediately report to the **Design Professional** and **Owner** any material error, inconsistency, conflict, ambiguity, or omission that is discovered.

**3.10.2** The drawings included in the Construction Documents are intended to show general arrangements, design and extent of Construction Work and are not intended to serve as shop drawings. Where required, the **CMAR** shall perform no portion of the Construction Work without approved shop drawings, product data or samples. Any Construction Work performed in violation of this requirement will be solely at the **CMAR's** risk regardless of **Design Professional's** and/or **Owner's** knowledge of such Construction Work.

**3.10.3** In the event of any conflict or ambiguity the Construction Documents shall be interpreted as being complementary, requiring a complete Project or designated portion thereof to be accepted separately by the **Owner**. Any requirement occurring in any one of the Construction Documents is as binding as though occurring in all Construction Documents. Generally, the specifications address quality, types of materials and contractual conditions while the drawings show placement, sizes, and fabrication details of materials. In the event of any conflict in the Construction Documents, the priorities stated below shall govern:

(i) Addenda shall govern over all other Construction Documents and subsequent addenda shall govern over prior addenda only to the extent modified.

(ii) In case of conflict between drawings and specifications, the specifications shall govern.

(iii) Conflicts within the drawings:

   (A) Schedules, when identified as such, shall govern over all other portions of the drawings.

   (B) Specific notes shall govern over all other notes and all other portions of the drawings, except the schedules described in Item (iii)(A) above.

   (C) Larger scale drawings shall govern over smaller scale drawings.

   (D) Figured or numerical dimensions shall govern over dimensions obtained by scaling.

(iv) Conflicts within the specifications: This Operating Manual shall govern over all sections of the specifications except for specific modifications to this Operating Manual that may be stated in supplementary general conditions or addenda. No other section of the specifications shall modify this Operating Manual.

(v) If provisions of codes, safety orders, Construction Documents, referenced manufacturer's specifications or industry standards are in conflict, the more restrictive or higher quality shall govern.

(vi) In the event of any conflict or ambiguity, the **CMAR** shall request an interpretation by the **DP** before performing the Construction Work.
3.10.4 If the Construction Documents are not complete as to any minor detail of a required construction system or with regard to the manner of combining or installing of parts, materials, or equipment, but there exists an accepted trade standard for good and skillful construction, such detail shall be deemed to be an implied requirement of the Construction Documents in accordance with such standard. "Minor detail" shall include the concept of substantially identical components, where the price of each such component is small even through the aggregate cost or importance is substantial and shall also include a single component which is incidental, even though its cost or importance may be substantial. The quality and quantity of the parts or material so supplied shall conform to trade standards and be compatible with the type, composition, strength, size, and profile of the parts or materials otherwise set forth in the Construction Documents.

3.11 Submittals, Drawings and Shop Drawings

3.11.1 The CMAR shall maintain at the Site, for the use of the Owner and of the Design Professional, one copy of all drawings, specifications, bulletins, addenda, Change Orders, field orders, approved shop drawings, approved submittals, supplementary instructions, requests for information, catalog data, manufacturers' operating and maintenance instructions, certificates, warranties, guarantees and other contract related documents and their modifications, if any, in good order and marked daily by the CMAR to record all approved changes made during construction. These shall be turned over to the Design Professional by the CMAR at the time of Substantial Completion for the purpose of assembling and correlating the material for use by the Owner.

3.11.2 The CMAR shall submit to the Design Professional, with such promptness as to cause no delay in the Construction Work or in the work of any other contractor, all submittals and shop drawings as required by the Construction Documents and the other CMAR Construction Contract Documents or as necessary to illustrate details of the Construction Work.

3.11.3 Each submittal and shop drawing must be accompanied by a transmittal letter containing a list of the titles and numbers of the shop drawings. Each series shall be numbered consecutively for ready reference and each submittal and shop drawing shall be marked with the following information:

(i) Date of submission
(ii) Name of Project
(iii) Location of Project
(iv) Branch of Construction Work (specification section)
(v) Project number
(vi) Name of submitting CMAR
(vii) Name of Subcontractors
(viii) Revision number

3.11.4 All Subcontractor submittals and shop drawings shall be reviewed by the CMAR prior to being submitted to the Design Professional and shall bear a written statement by the CMAR that the submittals and shop drawings are consistent with the Construction Documents and other CMAR Construction Contract Documents or if not totally consistent shall bear a written statement indicating all deviations from the Construction Documents and other CMAR Construction Contract Documents. Any submittals or shop drawings submitted without the statements will be returned for resubmission; the submittals or shop drawings will be considered as not having been submitted, and any delay caused thereby shall be the CMAR's sole responsibility. This review by CMAR of Subcontractor submittals and shop drawings shall not be construed as CMAR approval of the design therein except that it shall be a representation that the letter accompanying the submittal or shop drawings does indicate all deviations from the Construction Documents and other Contract Documents as required by Section 3.11.5.
3.11.5 The CMAR shall include with submittals and shop drawings, a written statement indicating all deviations from the Construction Documents and other CMAR Construction Contract Documents. Failure to so notify the Design Professional of such deviations will be grounds for subsequent rejection of the related Construction Work or materials. If, in the opinion of the Design Professional, the deviations are not acceptable, the CMAR must furnish the item as specified or as indicated on the drawings included in the Construction Documents and in accordance with the other CMAR Construction Contract Documents.

3.11.6 It is the CMAR’s obligation and responsibility to check all of its submittals and shop drawings and to be fully responsible for them and for coordination with connecting Construction Work. Submittals and shop drawings shall indicate in detail all parts of an item of Construction Work, including, without limitation, erection and setting instructions and engagements with work of other trades or other separate contractors.

3.11.7 By reviewing or submitting submittals and/or shop drawings, the CMAR thereby represents that it has determined and verified availability, field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that it has checked and coordinated each submittal and/or shop drawing with the requirements of the Construction Documents and other CMAR Construction Contract Documents. If any specified material item or part is not available, the CMAR shall so indicate to the Design Professional.

3.11.8 The Design Professional shall review and approve submittals and shop drawings and return them to the CMAR within ten (10) days of receipt unless otherwise previously agreed in writing. For scheduling purposes, the CMAR must assume a ten (10) day review period for each submittal or set of shop drawings. For complex submittals, the CMAR must assume two ten (10) day review cycles. If review and approval are delayed beyond ten (10) days, the Design Professional shall notify the CMAR and the Owner in writing stating the reason for the delay. Approval shall not relieve the CMAR from the responsibility for deviations from the Construction Documents or other CMAR Construction Contract Documents, unless it has been called to the Design Professional's attention, in writing, at the time of submission. Any modification will be approved only if it is in the interest of the Owner to effect an improvement in the Construction Work and does not increase the Guaranteed Maximum Price or Contract Time(s). Any such modification is subject to all other provisions of the Construction Documents and the CMAR Construction Contract Documents and is without prejudice to any and all rights under any surety bond.

3.11.9 If the Design Professional returns a submittal or shop drawing to the CMAR with the notation "rejected", "revise and resubmit", or "approved as noted", the CMAR, so as not to delay the Construction Work, shall promptly submit a submittal or shop drawing conforming to the requirements of the Construction Documents and other Contract Documents and indicating in writing on the submittal or shop drawing and on the transmittal what portions of the resubmittal have been altered in order to meet with the approval of the Design Professional. Any other differences between the resubmittal and the prior submittal shall also be indicated on the shop drawing and on the resubmittal as a special note.

3.11.10 No extension of time will be granted to the CMAR because of its failure to submit submittals or shop drawings in ample time to allow for review, possible resubmittals and approval. Fabrication of Construction Work shall not commence until the CMAR has received written approval. The CMAR shall furnish prints of its approved submittals and shop drawings to all the Subcontractors whose work is in any way related to the Construction Work. Only prints bearing this approval will be allowed on the Site.

3.12 Product Samples, Tests and Certificates

3.12.1 The CMAR shall furnish product samples of all items requested or required by the specifications. Product samples shall be properly identified and submitted with such promptness as to cause no delay in Construction Work or in the work of any other contractor and to allow time for consideration by the Design Professional and the Owner. CMAR shall submit product samples to the Design Professional and/or Owner for review and approval in accordance with Section 3.11 above and this Section 3.12.

3.12.2 Each product sample must be accompanied by a letter of transmittal containing the following information:
3.12.3 The CMAR shall furnish to the Design Professional a certificate stating that material or equipment submitted complies with the Construction Documents and the other Contract Documents. If a certificate originates with the manufacturer, the CMAR shall endorse it and submit it to the Design Professional together with a statement of compliance in its own name.

3.12.4 No tests, inspections, observations or approvals performed or given by the Owner or the Design Professional or others acting for the Owner or any agency of Federal, State or local government nor any acts or omissions by the Owner or the Design Professional in administering the CMAR Construction Contract Documents shall relieve the CMAR from its duty to perform the Construction Work in accordance with the Construction Documents, the other CMAR Construction Contract Documents and applicable law.

3.12.5 Unless the Design Professional is requested at the time of submittal to return samples at the CMAR's expense, rejected samples will be destroyed.

3.12.6 After delivery of materials, the Design Professional may make such tests, as it deems necessary, with samples required for such tests being furnished by and at the cost of the CMAR. Any test is for the benefit of the Owner and shall not relieve CMAR of the responsibility for providing quality control measures to assure that Construction Work strictly complies with the Construction Documents and the other CMAR Construction Contract Documents. No test shall be construed as implying acceptance of materials, work, workmanship, equipment, accessories or any other item or thing.

3.12.7 On the basis of the test results, materials, workmanship, equipment or accessories may be rejected even though general approval has been given. If items have been incorporated in Construction Work, the Design Professional and Owner shall each have the right to cause their removal and replacement by items meeting Construction Document and the other CMAR Construction Contract Documents requirements or to demand and secure appropriate reparation to the Owner from the CMAR.

3.13 Legal Requirements

3.13.1 CMAR shall perform all Construction Work in accordance with all applicable Legal Requirements and shall provide all notices applicable to the Construction Work.

3.13.2 The Guaranteed Maximum Price or Contract Time(s) of performance or both shall be adjusted to compensate CMAR for any unforeseen changes in the Legal Requirements affecting the performance of the Construction Work.

3.14 Government Approvals and Permits

Unless otherwise provided in the Contract Documents, CMAR shall obtain and pay for all necessary permits, approvals, licenses, government charges and inspection fees required for the prosecution of the Construction Work by any government or quasi-government entity having jurisdiction over the Project.
3.15 **As-Built Drawings**

3.15.1 Prior to Final Completion, the CMAR shall complete and turn over to the Design Professional the as-built drawings for review by the Design Professional. The as-built drawings shall consist of a set of drawings, which clearly indicate all field changes that were made to adapt to field conditions, field changes resulting from Change Orders and all buried and concealed installation of piping, conduit and utility services. All buried and concealed items both inside and outside the facility shall be accurately located on the as-built drawings as to depth and in relationship to not less than two permanent features such as interior or exterior wall faces. The as-built drawings shall be clean and all changes, corrections, and dimensions shall be given in a neat and legible manner in a contrasting color.

3.15.2 For any changes or corrections in the Construction Work made subsequent to Substantial Completion, such revisions shall be submitted to the Design Professional as part of the as-built drawings submitted under this Section 3.15.1.

3.16 **Schedule and Coordination**

3.16.1 The CMAR shall schedule and coordinate the work of all of the Subcontractors on the Project including their use of the Site. The CMAR shall keep the Subcontractors informed of the Project construction schedule to enable the Subcontractors to plan and perform the Construction Work properly.

3.16.2 The schedule for the performance of the Construction Work shall be a CPM schedule with reasonable detail including a time scaled network and computer printout in accordance with the following requirements:

(i) no activity shall be longer than twenty-one (21) calendar days in length except fabrication and delivery activities:

(ii) each activity must be logically tied to another activity to show its interdependency with other activities:

(iii) installation activities must be logically tied to submittal/approval, fabrication and delivery:

(iv) only a single critical path shall be designated.

3.16.3 The CMAR shall prepare and keep current, for the Design Professional's approval, a time schedule of submittals which is coordinated with the CMAR's construction schedule and allows the Design Professional the specified time to review submittals.

3.16.4 The CMAR's schedules shall be revised monthly to reflect ACTUAL conditions in the field. A copy of the revised schedule and narrative report including a description of current and anticipated problem areas, delaying factors and their impact and corrective action taken or proposed to be taken shall be submitted with each Application for Payment. The submittal of an acceptable updated CPM schedule is a condition precedent to the processing of any application for payment made by CMAR. Owner's review of the CPM schedule update shall not be construed as relieving CMAR of its complete and exclusive control over the means, methods, sequences, and techniques of construction. The CMAR understands that the updated CPM schedule will be the basis for the analysis and granting of time extensions in accordance with Section 3.32 of this Operating Manual.

3.16.5 In addition to the monthly update, the CMAR's schedules shall also be revised at appropriate intervals as required by the conditions of the Construction Work or as directed by the Owner with a printed and electronic copy submitted to the Owner and Design Professional in a format acceptable to the Owner.

3.16.6 The CMAR shall perform the Construction Work within the identified times of the most recent schedule and consistent with the established Contract Time(s).
3.16.7 The parties agree that if the CMAR submits an original or updated schedule which shows the Project and/or individual milestone(s) completing earlier than required by the Contract Documents (the then adjusted Contract Time(s)), the differences between the forecasted early completion and the required completion shall be considered Project-owned float available for use by both the Owner and the CMAR.

3.16.8 Since float time within the schedule is jointly owned, no time extensions will be granted nor delay damages paid until a delay occurs which extends the Construction Work beyond the adjusted Contract Time(s). Since float time within the construction schedule is jointly owned, it is acknowledged that Owner-caused delays on the Project may be offset by Owner-caused time savings. In such an event, the CMAR shall not be entitled to receive a time extension or delay damages until all Owner-caused timesavings are exceeded and the contractual completion date or milestone date is also exceeded.

3.16.9 It is agreed that no time extensions shall be granted nor delay damages paid unless the delay is clearly demonstrated by the updated construction schedule current as of the month the change was issued or the delay occurred and which delay cannot be mitigated, offset, or eliminated through such actions as revising the intended sequence of work or other reasonable means.

3.17 CMAR’s Responsibility for Project Safety

3.17.1 As among CMAR, DP and Owner, CMAR shall have sole responsibility for safety at the Construction Work Site, except that DP and Owner will have responsibility for the acts and omissions of their respective officers and employees.

3.17.2 CMAR recognizes the importance of performing the Construction Work in a safe manner so as to prevent damage, injury, death or loss to (i) all individuals at or in the vicinity of the Construction Work, whether working or visiting the Project or Campus; (ii) any Construction Work, including, without limitation, materials and equipment incorporated or stored on or off Site; and (iii) all other or adjacent property, whether owned by Owner or other persons. As among CMAR, DP and Owner, CMAR assumes sole responsibility for implementing and monitoring all safety precautions and programs related to the performance of the Construction Work. CMAR shall, prior to commencing construction, designate a safety manager with the necessary qualifications and experience to supervise the implementation and monitoring of all safety precautions and programs related to the Construction Work. The safety manager shall make routine daily inspections of the Site and shall hold at least weekly safety meetings with CMAR’s personnel and its Subcontractors.

3.17.3 CMAR and its Subcontractors shall comply with all Legal Requirements relating to safety, as well as any Owner specific safety requirements set forth in the CMAR Construction Contract Documents, which do not violate any applicable Legal Requirements. CMAR will immediately report, in writing, to Owner’s Representative and, if required by applicable Legal Requirements, all government or quasi-government authorities having jurisdiction over matters involving the Construction Work, any injury, death, loss, damage or accident occurring at the Site. Without limiting the foregoing, CMAR shall, and shall cause each Subcontractor to, comply with worker health and safety requirements in Environmental Law and OSHA. In addition, CMAR shall take all reasonable necessary and appropriate steps to assure the health and safety of persons occupying any part of the facility in which the Construction Work Site is located or in the vicinity of or passing by the Construction Work Site and shall also take all reasonable necessary and appropriate steps to protect from damage or destruction the property of Owner and other persons in any part of the facility in which the Construction Work Site is located or in the vicinity of or passing by the Construction Work Site. Among other actions in this regard CMAR shall comply with the requirements of the applicable fire code.

3.17.4 Please see Section 4.1 of this Operating Manual for definitions of OSHA and Hazardous Substance. If in the course of the Construction Work, any environmental, health or safety concern exists or arises, whether relating to a Hazardous Substance, OSHA or otherwise, then the Construction Work activities related to the concern must be discontinued until the concern is resolved. This means prior to disturbing a suspected Hazardous Substance or otherwise interacting with a potential health or safety hazard, the Owner’s Representative must be notified immediately of the concern. Construction Work shall not resume until approval has been provided by Owner. Close coordination will be maintained between Owner and CMAR so the Project
3.17.5 CMAR's responsibility for safety under this Section 3.17 is not intended to in any way relieve Subcontractors from applicable obligations and responsibilities for complying with all Legal Requirements, including those related to health and safety matters, and taking all necessary measures to implement and monitor all safety precautions and programs to guard against injury, death, losses, damages or accidents resulting from their performance of the Construction Work.

3.17.6 The requirements in this Section 3.17 supplement and are in addition to the other requirements in the Contract Documents.

3.17.7 The CMAR shall provide the requirements and make the assignments of responsibilities for safety precautions and programs for the Construction Work, for temporary Project facilities, and for equipment, materials and services for common use of Subcontractors. CMAR shall assure that the all of this Section 3.17 and the applicable assignments are included in the contract between CMAR and each Subcontractor.

3.17.8 Please see Section 4.1 of this Operating Manual for definitions of Environmental Law, Hazardous Substance and Release. The purpose of this Section 3.17.8 is to deal with a limited number of particular conditions and requirements.

(i) Owner Designated Limited Work Areas. Owner may elect to designate to CMAR specific limitations to the area in which CMAR and Subcontractors are to perform the Construction Work in order to prevent a Release of an existing Hazardous Substance on Owner's property, provided that in such event Owner must make CMAR aware of the existence of the Hazardous Substance on Owner's property and Owner must provide an area free from the Hazardous Substances sufficient for the CMAR and Subcontractors to perform the Construction Work. Whenever Owner does this, CMAR and Subcontractors shall carry out their actions in performing the Construction Work within the specified limited area. In addition, in performing the Construction Work, the CMAR and the Subcontractors shall not, intentionally or accidentally or otherwise, scrape or otherwise disturb the surface of any walls, ceilings, floors or other surfaces or penetrate or otherwise access any walls, ceilings, floors, overheads or other areas adjacent to or outside the designated Construction Work area unless CMAR has requested and obtained written approval from the Owner Representative. Any question about the scope of the permitted Construction Work area must be resolved by the Owner Representative.

(ii) Asbestos Contamination in Owner’s Utility Tunnel System.

**THERE IS ASBESTOS CONTAMINATION IN OWNER’S UTILITY TUNNEL SYSTEM**

A Restricted Access Provision for the Utility Tunnel System is in-place due to asbestos-contamination present in the tunnel floors. Settled dusts on utility lines may also contain asbestos. Signage is located at each tunnel entrance that warns of asbestos. Asbestos is classified as a known human carcinogen and U.S. Occupational Safety and Health Administration regulations are in-place to limit employees’ exposure to airborne asbestos fibers.

CMAR is responsible for compliance with all Environmental Law and OSHA requirements relating to exposure of CMAR’s and Subcontractors’ employees and other workers to this asbestos.

(iii) Other Asbestos. CMAR and each Subcontractor agree to comply with all requirements of Environmental Law and OSHA concerning any other asbestos in the Construction Work area or on the Site.

(iv) Restriction on Use of Asbestos-Containing Materials. Except for asbestos-containing materials specifically approved by Owner as provided below, prior to Final Completion, the CMAR, must deliver to Owner a signed statement that "No asbestos-containing materials were used in the Construction Work". If asbestos-containing material(s) must be used either for historical restoration or performance considerations,
the CMAR must obtain Owner’s written approval before ordering the material. The CMAR will advise Owner’s Representative and the Design Professional of this need. If Owner approves the asbestos containing material, Owner’s Representative will communicate this in writing to CMAR and to Owner’s Facilities Management and Risk Management, including the appearance and type of material, location and purpose so that it can be managed long-term without incidence.

(v) Waste Electric Light Bulbs. Owner voluntarily uses special handling and disposal procedures for all electric light bulbs. Accordingly, all waste electric light bulbs generated from the Construction Work must be handled by CMAR in the following manner. CMAR shall provide labor and materials for proper packaging of the waste electric light bulbs. Owner’s Representative must approve in advance the method of packaging. The packaged waste electric light bulbs will be disposed of as Project Hazardous Waste as provided in Section 4.2.2(iv).

(vi) PCBs. If polychlorinated biphenyl (PCB) containing ballasts, transformers and other electrical equipment are present in a Construction Work area, these items must be handled by CMAR and Subcontractors in the following manner. CMAR shall provide labor and materials for proper packaging of the waste items. The Owner’s Representative must approve in advance the method of packaging. The packaged waste ballasts, transformers and other electrical equipment will be disposed of as Project Hazardous Waste as provided in Section 4.2.2(iv).

CMAR shall check each ballast, transformer and other item of electrical equipment for labeling. If there is a label on the item stating “No PCB’s”, the CMAR may dispose of the item as non-Hazardous Waste. Otherwise CMAR shall package the item as provided in this Section 3.17.8(vi).

(vii) Lead-based paint. Existing building components that may be coated with lead-based paint may not be disposed of by CMAR as construction debris prior to being tested by Owner.

3.18 Site Conditions

3.18.1 Certain provisions relating to Site conditions are in Section 3.5.2.

3.18.2 The CMAR shall immediately, and before such conditions are disturbed, notify the Design Professional and the Owner in writing of concealed or latent physical conditions or subsurface conditions encountered at the Site that were not known by the CMAR, that could adversely affect the cost of the Construction Work or the timely performance thereof, and that either:

(i) differ materially from those indicated by the CMAR Site Information and could not have been discovered by careful examination and investigation of the CMAR Site Information provided or obtained by the time of submission of the proposed Guaranteed Maximum Price or by the date on which the GMP was agreed to in writing by Owner and CMAR; or

(ii) are of an unusual nature, differing materially from those ordinarily encountered in the locale or generally recognized as inherent in Construction Work of the character provided for in the Contract Documents.

The phrase “concealed or latent physical conditions or subsurface conditions encountered at the Site that were not known by the CMAR” include among other matters Hazardous Substances (defined in Section 4 below) and archaeological conditions (described in Section 4.2.7 below) falling within Item (ii) immediately above.

3.18.3 The Design Professional and/or the Owner shall within ten (10) days after receipt of notice from CMAR, or such other reasonable time as necessary, investigate the conditions reported by CMAR under Section 3.18.2. If the Design Professional and/or the Owner find that conditions are so materially different as to support an equitable adjustment in the proposed GMP or the Guaranteed Maximum Price in the CMAR Construction Contract or the Contract Time(s), an equitable adjustment will be accomplished by written change letter in the case of an equitable adjustment to the proposed Guaranteed Maximum Price or by Change Order in the case of an equitable adjustment to the Contract Time(s) or the Guaranteed Maximum Price in the CMAR Construction Contract. Adjustment of the proposed GMP or the GMP in the
CMAR Construction Contract will be for the actual, demonstrated direct cost impact to address the unforeseen condition. Extensions of Contract Time(s) will be considered only when based upon submission of an updated CPM master schedule showing an actual unavoidable delay to the Project critical path resulting from the unforeseen condition. If the DP and/or the Owner determine that no change letter or Change Order will be issued, the Contract Time(s) will not be changed and there will be no change in, as applicable, the proposed GMP or the GMP in the CMAR Construction Contract. Regardless of the outcome, the CMAR shall continue with the Construction Work.

3.18.5 No claim by the CMAR for an increase in the proposed GMP, in the GMP in the CMAR Construction Contract or in the Contract Time(s) shall be allowed without proper advance notice and an adequate opportunity for the Owner to investigate.

3.19 Payment of CMAR, Financial Controls, Open Book Costs and Audit

3.19.1 The Owner shall make payments as provided in the CMAR Construction Contract Documents to the CMAR for the CMAR's performance of the Construction Work of the Actual Cost of Construction Work up to but not exceeding the Guaranteed Maximum Price, as such GMP may be modified as provided in the CMAR Design Phase Services Contract Documents and the CMAR Construction Contract Documents.

3.19.2 All Savings shall be retained by the Owner.

3.19.3 With respect to all Construction Work performed by the CMAR and its Subcontractors under the CMAR Construction Contract Documents, CMAR and each Subcontractor shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management, using accounting and control systems approved by the Owner. During the performance of the Construction Work and for five (5) years after Final Payment, the CMAR shall retain and shall also require all Subcontractors to retain for review and audit, or both, by the Owner all correspondence, meeting minutes, memoranda, electronic media, books, accounts, reports, files, time cards, material invoices, payrolls and evidence of all communications, direct and indirect costs and all other matters relating to the Construction Work. Upon request by the Owner, a legible copy or the original of any or all such records shall be produced by the CMAR at any time during or after the Construction Work as the Owner may request. The CMAR shall submit to the Owner upon request all payrolls, reports, estimates, records and any other data concerning the Construction Work performed or to be performed or concerning materials supplied or to be supplied, as well as Subcontractor payment applications or invoices and such Subcontractor's progress payment checks. The requirements of this Section 3.19.3 shall be included in all contracts between the CMAR and its Subcontractors. The Owner may exercise its rights under this Section 3.19.3 as often as reasonably necessary in the Owner's sole judgment to assure the Owner has a complete and accurate understanding of all Project costs.

3.20 Schedule of Values

The Schedule of Values shall be used as a basis for payment as provided in Sections 3.21 and 3.22. If there are any changes in the Guaranteed Maximum Price, the Schedule of Values will be adjusted accordingly. CMAR shall provide written approval from its surety for the approved Schedule of Values to be used as a basis for monthly progress payments as provided in Sections 3.21 and 3.22.

3.21 Applications for Payment

3.21.1 The CMAR shall deliver to the DP and Owner on the last Day of each month a sworn application for payment in the format specified by Owner. Each application for payment (i) shall be for an amount based on the Schedule of Values and determined by the percentage of completion of the Construction Work, (ii) shall show the percentage of completion of each category of the Construction Work, (iii) shall be accompanied by an acceptable updated CPM master schedule narrative report per Section 3.16, and (iv) shall also be accompanied by a written accounting in a form agreed by CMAR and Owner of the Actual Cost of the Construction Work completed as of the date of the last prior request for payment. In addition, with each application for payment CMAR shall submit such supporting documentation as is necessary or appropriate in the reasonable judgement of Owner to justify all amounts paid to the CMAR under prior applications for
payment. Provided the properly submitted and accurate application for payment and the required accompanying documents are received not later than the last Day of the month, the Owner shall make payment to the CMAR not later than fourteen (14) days after the Owner receives a certificate for payment issued by the Design Professional relating to the CMAR’s application for payment.

3.21.2 The Design Professional, within seven (7) days after receipt of the application for payment, will either issue a certificate for payment to the Owner for such amount as is properly due or issue written notice of the reasons for withholding such a certificate.

3.22 Amount of Progress Payments.

The Owner shall pay the amount in each CMAR request for payment to the extent approved for payment in the DP’s certificate for payment, less retainage as set forth in Section 3.23, provided that the cumulative payment amount before retainage (i) will not exceed the aggregate amount certified by the DP in all of its certificates for payment and, (ii) also will not exceed the percentage of completion of the Construction Work multiplied by the Guaranteed Maximum Price (excluding items of the Guaranteed Maximum Price not subject to retainage), all as set forth in the Schedule of Values. The CMAR Construction Phase Fee shall be paid in accordance with the percentage of completion of the Construction Work.

3.23 Retainage

3.23.1 With respect to the CMAR’s Design Phase Services Fee, no retainage shall be withheld.

3.23.2 With respect all payments for the Construction Work (including, among others, the CMAR Construction Phase Fee), ten percent (10%) retainage shall be withheld until the Construction Work is fifty percent (50%) complete. At that point in time, the Owner will pay one-half (1/2) of the accumulated retainage to the CMAR provided that the Owner has determined that the CMAR is making satisfactory progress on the entire Construction Work and there is no specific cause or claim relating to the Construction Work requiring a greater amount to be withheld. After that point in time, Owner shall retain five percent (5%) of each payment. However, if at any time the Owner determines, at its sole discretion, that satisfactory progress is not being made, ten percent (10%) retention shall be reinstated for all future progress payments under the CMAR Construction Contract Documents pursuant to Owner’s determination. This is in addition to the Owner’s right to withhold payment as defined under Section 3.27. The Owner’s decision concerning satisfactory progress and the existence of specific causes or claims requiring greater retention shall be final. All retainage not withheld by Owner to assure payment of liquidated damages or other Owner claims shall be fully released within thirty (30) Days of the DP’s issuance of a Certificate of Final Completion for the entire Construction Work provided that any retention by the Owner after such thirty (30) days requires a specific written finding of reasons justifying a further delay in payment and the amount will be limited to the amount Owner reasonably expects to incur to pay or discharge the expenses determined by the finding. Retainage will not be released upon Final Completion of individual Work Packages or of a portion of the Construction Work that Owner has agreed to accept separately.

3.24 INTENTIONALLY OMITTED

3.25 Payment for On-Site and Off-Site Materials.

Payment shall be made on account of materials and equipment delivered and suitably stored at the Site for subsequent incorporation in the Construction Work. Payment may be similarly made for materials and equipment suitably stored off the Site, conditioned upon the CMAR furnishing evidence to the Owner that (a) title to the materials and equipment will pass to the Owner upon payment therefore and there are no claims of third parties; (b) the materials and equipment are adequately insured for full replacement value plus delivery with the Owner named as an additional insured on the insurance policy; and (c) such other matters as the Owner may reasonably request in order to protect its interests.

[NOTE TO READERS OF THIS DOCUMENT: Please check the definition of “Subcontractor” in Section 1.6. It is broad and includes among others all suppliers, material men etc.]

3.26 Title to Construction Work

Arizona State University

06/23/2006
The CMAR warrants that title to all Construction Work covered by an application for payment shall pass to the Owner no later than the time of payment. The CMAR further warrants that upon submittal of an application for payment, all Construction Work for which applications for payment have been previously issued and payments received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the CMAR, Subcontractors, or other persons or legal entities making a claim by reason of being a creditor of CMAR or any Subcontractor. CMAR shall provide conditional waivers of lien through the date of the application for payment from each Subcontractor of any tier with each application for payment and when requested by Owner. CMAR shall also provide with each application for payment unconditional waivers of lien through the date of the prior application for payment from each Subcontractor of any tier. As a condition precedent to Final Completion of the entire Construction Work or a portion of the Construction Work that the Owner has agreed to accept separately, the CMAR shall provide unconditional waivers of lien from all Subcontractors.

3.27 Withholding Payment.

The Owner may withhold payment from any application for payment to the extent necessary to protect the Owner from loss because of:

(i) Unsatisfactory job progress as determined by the Owner.

(ii) Disputed Construction Work or materials.

(iii) Defective Construction Work not remedied;

(iv) Claims or other encumbrances filed or reasonable evidence indicating probable filing of claims or other encumbrances by Subcontractors.

(v) Failure of the CMAR to make payment to any Subcontractors within seven (7) days after receipt of each progress payment.

(vi) The CMAR's failure to perform any of its contractual obligations under the CMAR Construction Contract Documents or any other agreement with the Owner.

(vii) Deficiencies or claims asserted by Owner against CMAR arising from any other project.

(viii) Damage to the Owner or a separate contractor caused by the fault or neglect of the CMAR or any Subcontractor to the extent not covered by insurance;

(ix) Reasonable evidence that the entire Construction Work or portion of the Construction Work that the Owner has agreed to accept separately will not be Substantially Complete within the Contract Time(s) due to delay for which the CMAR is responsible, or that the unpaid balance of the Guaranteed Maximum Price will not be adequate to cover completion of the entire Construction Work and liquidated damages for any anticipated unexcused delay for which the CMAR is responsible; or

(x) Any other reason which is in Owner's reasonable judgment disqualifies CMAR from receiving the full amount of the application for payment.

If the above basis for withholding payment is remedied, payment shall be made within fourteen (14) Days for amounts previously withheld. Prior to any withholding pursuant to this Section 3.27, the Owner shall meet with CMAR to discuss potential withholding and attempt in good faith to resolve such issue without the need for withholding.

3.28 Failure of Payment.

If the Owner does not pay the CMAR within fourteen-(14) Days after the date established herein for payment by the Owner, the CMAR may proceed as set forth in Section 7.3 of the General Conditions.
3.29 **Substantial Completion**

When the CMAR believes the entire Construction Work or a portion thereof which the Owner has agreed to accept separately, is Substantially Complete, the CMAR shall notify the Owner and the DP and submit to the Owner and DP a comprehensive list of items to be completed or corrected relating to the entire Construction Work or the portion thereof, as applicable. Within five (5) working days of receipt of the CMAR’s notice and list, the Owner or its representatives, the DP and CMAR will jointly make an observation or inspection, as applicable, to determine whether Substantial Completion has occurred. If it is determined by the Owner that the entire Construction Work or a portion thereof, as applicable, is Substantially Complete, the Owner shall issue the Punch List and the certificate of substantial completion stating the date of Substantial Completion which shall be executed by the Owner or its representatives, the DP and the CMAR. The CMAR shall proceed promptly to complete or correct Punch List items. Failure to include an item on the Punch List does not alter the responsibility of the CMAR to complete all Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents.

3.30 **Final Completion, Final Payment and Conditions to Final Completion, Final Payment and Final Release of Retainage**

3.30.1 Completion of all outstanding Construction Work items noted in the Punch List and other CMAR Construction Contract Documents requirements is required for DP and Owner to certify Final Completion of the entire Construction Work or a portion thereof that the Owner has agreed to accept separately. Requirements also include, but are not limited to, equipment operations training for Owner, satisfaction of the conditions precedent in Section 3.30.2, the CMAR being in compliance with the Construction Documents and the other CMAR Construction Contract Documents as to all matters relating to the Construction Work, submission to and review and approval by DP and Owner of as-built drawings and all record and close out documents as specified in Owner’s project specifications, including but not limited to, all operating manuals, warranties, assignments of warranties from CMAR and Subcontractors and other deliverables required by the Construction Documents and the other CMAR Construction Contract Documents.

3.30.2 Neither final payment nor any final release of retainage as to the entire Construction Work or as to a portion of the Construction Work that Owner has agreed to accept separately shall become due until the CMAR submits to the Owner as to the entire Construction Work or the portion of the Construction Work that Owner has agreed to accept separately:

(i) An affidavit that payrolls, bills for materials and equipment, and other indebtedness incurred in connection with the Construction Work or portion thereof, as applicable, for which the Owner or the Owner’s property might be responsible or encumbered (less amounts withheld by the Owner) have been paid or otherwise satisfied;

(ii) A certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days’ prior written notice has been given to the Owner;

(iii) Consent of surety to the final payment and final release of retainage;

(iv) If required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the CMAR Construction Contract Documents;

(v) Unconditional waivers of lien from all Subcontractors;

(vi) Approval by DP as being accurate and complete the as-built drawings submitted by CMAR under Section 3.15; and

(vii) A written accounting in a form agreed by CMAR and Owner of the Actual Cost of the Construction Work for the entire Construction Work or portion thereof, as applicable. All supporting documentation
justifying Actual Costs of the Work paid or to be paid by Owner required to be delivered by CMAR to Owner under CMAR Construction Contract Documents.

3.30.3 If, after Substantial Completion of the entire Construction Work, Final Completion thereof is materially delayed through no fault of the CMAR or by the issuance of additional Change Orders or Change Directives by the Owner, the Owner may at its sole discretion, upon request of the CMAR, and without terminating the CMAR Construction Contract Documents, make payment of the balance due for that portion of the Construction Work fully and properly completed. If the remaining balance for Construction Work not fully and properly completed is less than the applicable retainage, and if bonds have been furnished, the written consent of surety to payment of the balance for that portion of the Construction Work fully and properly completed shall be submitted by the CMAR to the Owner, and such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims by either the CMAR or the Owner.

3.30.4 Acceptance of final payment by the CMAR shall constitute a waiver of affirmative claims by the CMAR. The making of the final payment by the Owner shall constitute a waiver of claims by the Owner, except those arising from (a) liens, claims, security interests and encumbrances arising out of the Construction Work after final payment; (b) latent defects arising after final payment; or (c) the terms of warranties set forth in or required by the CMAR Construction Contract Documents and other rights provided under Arizona law.

3.31 Allowances

3.31.1 The CMAR shall include in the Guaranteed Maximum Price all allowances stated in the CMAR Design Phase Services Contract Documents and CMAR Construction Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the CMAR shall not be required to employ persons or entities against which the CMAR makes reasonable objection. Unless otherwise provided in the Contract Documents:

(i) Materials and equipment under an allowance shall be selected by the Owner within a reasonable time frame as defined in the Owner approved Project schedule.

(ii) Allowances shall cover the cost to the CMAR of materials and equipment delivered at the Site, less applicable trade discounts. Owner and CMAR shall agree prior to preparation of the CMAR’s first Estimate of Construction Costs whether taxes on allowances will be included in the allowances or in the taxes line item in the Estimates of Construction Costs, the proposed GMP schedule included with the Proposed CMAR Construction Contract, the CMAR Construction Contract, the GMP Schedule and the Schedule of Values;

(iii) Allowances shall not include professional or construction fees, general conditions, bond and insurance premiums;

(iv) Allowances shall cover CMAR’s costs for unloading and handling at the Site, labor, installation costs and other expenses;

(v) Whenever costs are more than or less than allowances, the Guaranteed Maximum Price shall be adjusted accordingly by Change Order in accordance with provisions of Section 3.33. If the actual costs are greater than the allowance, the amount of the Change Order shall reflect the difference between actual costs and the allowance plus the CMAR’s fee on such difference, all as determined in accordance with Section 3.33.

3.32 Time

3.32.1 Both the CMAR and Owner recognize that any time limits set forth in the Contract Documents are of the essence of this Agreement. CMAR agrees that it will timely commence performance of the Construction Work, achieve Substantial Completion and Final Completion of the entire Construction Work and achieve, any interim milestones for Substantial Completion and Final Completion as required by the CMAR Construction Contract Documents. In addition, if the Owner has agreed to separately accept a portion of the Construction
Work, CMAR agrees to achieve Substantial Completion and Final Completion of each portion by the dates agreed by Owner and CMAR.

3.32.2 It is agreed that time is of the essence of each and every portion of the CMAR Construction Contract Documents and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever. Where under the CMAR Construction Contract Documents additional time is allowed for the completion of any Construction Work, the new time limit fixed by such extension shall be of the essence of the CMAR Construction Contract Documents. Failure to achieve any date or time for achievement of Substantial Completion or Final Completion of the entire Construction Work or any portion of the Construction Work that the Owner has agreed to accept separately will result in the assessment of Liquidated Damages, as provided in Section 4 of the CMAR Construction Contract. The per diem amount shall be paid for each and every calendar day that the CMAR shall be in default after the time stipulated in Section 4 of the CMAR Construction Contract for Substantial Completion or Final Completion of the entire Construction Work or a portion of the Construction Work. The amount is fixed and agreed upon by and between the CMAR and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. Said sums may be withheld by the Owner from any amounts due to the CMAR from the Owner, whether as the result of the CMAR Construction Documents or any other obligation between the Owner and the CMAR.

3.32.3 If CMAR is delayed in the performance of the Construction Work (based upon a critical path analysis of the current Owner accepted critical path method (CPM) schedule) due to acts, omissions, conditions, events, or circumstances beyond its reasonable control or prevention and due to no legal fault of its own or those for whom CMAR is responsible under the terms of the CMAR Construction Contract Documents, the time for Substantial Completion or Final Completion, as applicable, of the entire Construction Work or of any portion of the Construction Work the Owner has agreed to accept separately and, to the extent applicable, any interim milestones shall be extended by written Change Order for the amount of time such acts, omissions, conditions, events, or circumstances added to the time to complete the entire Construction Work, portion thereof or interim milestone, as applicable. By way of example only, such acts, omissions, conditions, events, and circumstances which would entitle CMAR to an extension of the Contract Time(s), include acts or omissions of Owner, or anyone under Owner’s control, including separate contractors, changes ordered in the Project by Owner, unforeseeable Project Site conditions (as to Site Conditions only to the extent provided in Section 3.18), wars, floods, labor disputes, unusual delay in transportation, and unusual adverse weather conditions.

The CMAR has included (14) days of weather related delays within the Contract Time(s). If the Construction Work experiences aggregate weather related delays beyond (14) days, then subject to the requirements above in this Section 3.32 the CMAR shall be entitled to an extension of the Contract Time(s) as a result of such additional weather related delays and reimbursement of costs associated with the delay, including general conditions.

3.32.4 CMAR shall be entitled to an appropriate adjustment of its Guaranteed Maximum Price for extended construction general conditions only for delays directly caused by the actions or inactions of the Owner.

3.32.5 Notice of any delay in the Construction Work shall be made in writing by the CMAR to the Design Professional and Owner immediately but in no event later than twenty-four (24) hours after discovery of the event giving rise to the delay. The CMAR shall provide additional details concerning the delay in writing to the Design Professional and the Owner within seven (7) calendar days from the beginning of the delay. Failure to meet these time requirements shall constitute a waiver of and absolutely bar any and all later claims. The detailed notice shall indicate the cause of the delay, the anticipated length of the delay, the probable effect of such delay upon the progress and cost of the Construction Work, and potential mitigation plans. If the cause of the delay is continuing, the CMAR must give written notice every month at the same time it submits the updated progress narrative report to the Design Professional. Within fifteen (15) days after the elimination of any such delay, the CMAR shall submit further documentation concerning the delay and, if applicable, a formal written request covering an extension of the Contract Time(s) for such delay. The written request for time extension shall state the cause of the delay, the number of days extension requested and provide a fully documented analysis of the progress schedule, including any other data demonstrating a delay in the critical path of the entire Construction Work or the portion of the Construction Work the Owner has agreed to accept separately or
individual milestone. If the CMAR does not comply with the notice and documentation requirements set forth above, the claim for delay is waived and absolutely barred.

3.33 Changes to Contract Price and Time

3.33.1 Change Order

After the CMAR Construction Contract is signed, modifications to CMAR Construction Contract Documents may only be made by a written modification executed by Owner and CMAR or by a written Change Order executed by Owner and CMAR, provided that any changes in the Contract Time(s), any changes in the scope of the Construction Work as set forth in the Construction Documents, and any changes to the Guaranteed Maximum Price set in the CMAR Construction Contract may only be made by a written Change Order executed by Owner and CMAR.

(i) By written Change Directive (defined below) at any time, the Owner, may make any changes within the general scope of the Construction Documents and other CMAR Construction Contract Documents, issue additional instructions, require additional or modified Construction Work or direct deletion of Construction Work. The CMAR shall not proceed with any change involving an increase or decrease in cost or time without prior written authorization from the Owner and shall proceed in accordance with the procedures set forth in this Section 3.33. The Owner's right to make changes shall not invalidate the CMAR Construction Contract Documents or relieve the CMAR of any liability. Any requirement of notice to the surety shall be the responsibility of the CMAR. If the CMAR proceeds with any change involving an increase or decrease in cost or time without written authorization as required by this Section 3.33, the CMAR hereby waives all rights or claims CMAR may have as a result of the change.

(ii) “Change Order” means a written instrument issued after execution of the CMAR Construction Contract signed by Design Professional, Owner and CMAR, stating their agreement upon all of the following:

(A) The scope of the change in the Construction Work, the Construction Documents or the other CMAR Construction Contract Documents, as applicable;

(B) The amount of the adjustment, if any, to the Guaranteed Maximum Price (including, without limitation, an Allowance within the GMP) set in the CMAR Construction Contract, as applicable; and

(C) The extent of the adjustment, if any, to the Contract Time(s) of performance set forth in the CMAR Construction Contract Documents.

(iii) All such changes in the Construction Work authorized by applicable Change Order shall be performed under the applicable conditions of the CMAR Construction Contract Documents, and Owner, Design Professional, and CMAR shall negotiate in good faith and as expeditiously as possible on the appropriate adjustments, as applicable. No Guaranteed Maximum Price adjustment on account of a Change Order shall include the CMAR's or any Subcontractor's profit, fee, home office overhead or a formula allocation of indirect costs unless otherwise specifically allowed hereunder, except as allowed in Section 3.33.4.

3.33.2 Change Directives

(i) “Change Directive” is a written order prepared by the Design Professional and signed by Owner, directing a change in the Construction Work prior to agreement on adjustment of the Guaranteed Maximum Price or the Contract Time(s) or both. Upon receipt of a Change Directive, the CMAR shall promptly proceed with the change in the Construction Work and advise the Owner of the CMAR's agreement or disagreement with the proposed method of adjustment of the Guaranteed Maximum Price or the Contract Time(s) or both.

(ii) Owner and CMAR shall negotiate, in good faith and as expeditiously as possible, the appropriate adjustments for the change in the Construction Work, the Construction Documents and the other CMAR Construction Contract Documents in the Change Directive and such agreement shall be effective immediately and recorded by preparation and execution of an appropriate Change Order.
3.33.3 **Minor Changes In The Construction Work**

**Design Professional** may direct minor changes in the Construction Work consistent with the intent of the Construction Documents and the other CMAR Construction Contract Documents providing such changes do not involve an adjustment in the Guaranteed Maximum Price or Contract Time(s) and do not materially affect the design, quality, or performance of the Project. The **Design Professional** shall promptly inform **Owner** and the **CMAR**, in writing, of any such changes, and verify that **CMAR** has recorded such changes on the as-built documents.

3.33.4 **Price, Time, Or Scope Of Work Adjustment**

(i) The cost or credit to the **Owner** in a Change Order resulting from a change in the Construction Work, the Construction Documents or the other CMAR Construction Contract Documents or resulting from the cost of items covered by an Allowance exceeding the amount of the Allowance shall be determined in one or more of the following ways:

(A) By unit prices stated in the CMAR Construction Contract Documents.

(B) By cost, as defined below, properly itemized and supported by sufficient, substantiating data to permit evaluation, plus a fee of ten percent (10%) of items (1) through (5) described below. Such costs shall be itemized by crafts as defined within the schedule of values and limited to the following items directly allocable to the change in the Construction Work:

(1) Cost of materials, including delivery but excluding **Subcontractor**-supplied materials.

(2) Fully-burdened cost of labor, including, but not limited to, payroll taxes, social security, old age and unemployment insurance, vacation and fringe benefits required by agreement or routinely paid by **CMAR**, and worker’s or workman’s compensation insurance, but excluding **Subcontractor’s** labor.

(3) Rental value of equipment and machinery to be established by rental receipts and not to exceed reasonable and customary rates for the locale of the Construction Work. For owned equipment, **CMAR** must prove reasonable rental rate pursuant to actual **Owner**ship costs.

(4) Cost of Subcontracted work calculated as above and **Subcontractor’s** Field Supervision calculated in accordance with paragraph (5) below, plus **Subcontractor’s** insurance and bond premiums as applicable. Insurance and bond premium cost shall not exceed a total of two percent (2%) of **Subcontractor’s** documented cost.

(5) **CMAR**’s Field Supervision not to exceed five percent (5%) of (1), (2) and (4) above; the parties agree that this mark-up shall fully cover all **CMAR** Field Supervision overhead.

(6) **CMAR**’s insurance and bond premiums not to exceed a total of two percent (2%), or documented cost.

(7) All applicable sales tax.

(8) If this method of cost or credit calculation is selected, in no event shall the combined total fee including all levels or tiers of **Subcontractors** exceed twenty percent (20%) of the total direct cost of paragraphs (1), (2), (3) and (4). Field Supervision is to be excluded at all levels for the purposes of the limit imposed by this paragraph.

(C) Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to facilitate evaluations; provided that such lump sum shall not exceed that amount calculated under Section 3.33.4(i)(B) above.

(ii) Any dispute regarding the pricing methodology or cost of a change shall not relieve the **CMAR** from proceeding with the change as directed by the **Owner**. The cost or credit to the **Owner** shall be determined by the **Owner** or its representatives on the basis of Section 3.33.4(i).
(iii) An **Owner**-approved written Change Order shall be full and final settlement of all claims for direct, indirect, delay, disruption, inefficiency and any other consequential costs related to items covered or affected, as well as time extensions. Any such claim not presented by the **CMAR** for inclusion in the Change Order is irrevocably waived.

(iv) If **Owner** and the **CMAR** disagree upon whether **CMAR** is entitled to be paid for any services required by **Owner**, or in the event of any other disagreements over the scope of the Construction Work, the Construction Documents or the other **CMAR** Construction Contract Documents or proposed changes to the Construction Work, the Construction Documents or the other **CMAR** Construction Contract Documents or Contract Time(s), **Owner** and **CMAR** agree to resolve the disagreement consistent with this **Section 3.33** and Article 6 of the General Conditions. As part of the negotiation process, **CMAR** shall furnish **Owner** and **Design Professional** with a good faith estimate of the costs to perform the disputed services in accordance with **Owner's** interpretations. If the parties are unable to agree and **Owner** requests **CMAR** to perform the services in accordance with **Owner's** or **Design Professional's** interpretations of the Construction Documents and the other **CMAR** Construction Contract Documents, **CMAR** shall proceed to perform the disputed services, conditioned upon **Owner** issuing a written order to **CMAR** directing **CMAR** to proceed and specifying **Owner's** or **Design Professional's** interpretation of the services that are to be performed.

3.34 **Emergencies**

In any emergency affecting the safety of persons or property, **CMAR** shall act, at its discretion, to prevent threatened damage, injury or loss. Any change in the Guaranteed Maximum Price or Contract Time(s) or both on account of emergency work shall be determined as provided in **Section 3.33**.

SECTION 4 **ENVIRONMENTAL MATTERS, SAFETY MATTERS AND ARCHAEOLOGICAL MATTERS**

4.1 **Definitions** The following terms will have their respective designated meanings:


"**Hazardous Substance**" means any of the following:

(i) any petroleum, oil, gasoline, kerosene, other petroleum product, flammable substance, volatile organic compound, volatile solvent, explosive, asbestos, polychlorinated biphenyl, dioxin, toxic herbicide or pesticide, radioactive material, radon gas and materials containing formaldehyde;

(ii) any material, substance or waste now or hereafter defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "extremely hazardous wastes," "extremely hazardous substances," "restricted hazardous wastes," "toxic substances," "regulated substances," "solid wastes," "pollutant," or "contaminant" or words of similar import in any Environmental Law;
(iii) any other material, substance or waste now or hereafter classified or regulated as “hazardous” or “toxic” under any Environmental Law;

(iv) any material, substance or waste now or hereafter listed in the United States Department of Transportation Table (49 CFR 172.101) or classified by the United States Environmental Protection Agency as “hazardous” (40 CFR Part 302) or in any successor or replacement tables or classifications as in effect from time to time; and

(v) any Hazardous Waste.

“Hazardous Waste” means “hazardous waste”, as defined in the Resource Conversation and Recovery Act of 1976 and the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) and any successor statutes and any regulations, rules or guidelines promulgated pursuant thereto as in effect from time to time (including, without limitation, any such waste resulting from removal of, demolition of, modifications of or additions to part or all of any existing structure, facility or equipment).

“CMAR Hazardous Waste” means any Hazardous Waste arising during or from the Construction Work that is generated by the acts or omissions of CMAR or a Subcontractor (including, without limitation, a CMAR Release) and that is not Owner Hazardous Waste.

“Owner Hazardous Waste” means Hazardous Waste (i) that consists of Hazardous Substances in any existing structure, facility or equipment on Owner’s property or otherwise present on Owner’s property at commencement of the Construction Work, and (ii) that has become Hazardous Waste due to any part of the Construction Work. However, Owner Hazardous Waste does not include any Hazardous Substance that has become a Hazardous Waste due to any CMAR Release.

“Project Hazardous Waste” means any Hazardous Waste arising on Owner’s property from the Construction Work (including, without limitation, CMAR Hazardous Waste and Owner Hazardous Waste), regardless of:

(i) whether generated by the acts or omissions of Owner, CMAR or a Subcontractor;

(ii) whether it consists of Hazardous Substances that were on or in Owner’s property at commencement of the Construction Work and that have become Hazardous Waste in the course of the Construction Work; and

(iii) whether it consists of Hazardous Substances that are brought on to Owner’s property for or during the Construction Work by CMAR or a Subcontractor and that have become Hazardous Waste in the course of the Construction Work.

“OSHA” means the Federal Occupational Safety and Health Act (29 U.S.C. Section 651 et seq.) and any successor statutes and any regulations, rules or guidelines promulgated pursuant thereto as in effect from time to time.

“Release” means any discharging, disposing, dumping, emitting, emptying, escaping, injecting, leaching, leaking, pouring, pumping, releasing, spilling, or similar action or event.

“CMAR Release” means any Release of a Hazardous Substance on Owner’s property during the Construction Work arising from acts or omissions of CMAR or any Subcontractor, provided that this will include a Release of a Hazardous Substance pre-existing on Owner’s property only if the conditions in item (a) or item (b) below are satisfied:

(a) If the Owner has made CMAR aware of the existence of the Hazardous Substance pre-existing on Owner’s property and if the Owner has provided an area free from the Hazardous Substance sufficient for the CMAR to perform the Construction Work; or

(b) If the Owner has not made CMAR aware of the pre-existing Hazardous Substance on Owner’s property and if the CMAR and/or the Subcontractor failed to acted reasonably when it encountered the Hazardous Substance.

4.2 CMAR Environmental Matters, OSHA Matters and Archaeological Matters
4.2.1 CMAR shall provide or cause to be provided a copy of the definitions in Section 4.1 and of Section 4.2 to each Subcontractor participating in the Construction Work.

4.2.2 General Requirements

(i) Compliance with Environmental Law and OSHA. CMAR shall comply with, and shall cause all Subcontractors to comply with, this Section 4.2 and with all Environmental Law and OSHA applicable to (A) CMAR, (B) Subcontractors, (C) the Construction Work and (D) all of their activities in respect of the Construction Work.

(ii) Hazardous Substances and Hazardous Waste

(A) Hazardous Substances may be transported to and from and stored, used and be present on Owner's property in such quantities as are generally recognized to be usual and customary for performance of the Construction Work.

(B) Hazardous Waste may be generated on Owner's property of such kinds and in such quantities as are generally recognized to be usual and customary in connection with performance of the Construction Work. Hazardous Waste so generated may be stored temporarily on Owner's property.

(C) Prior to Final Completion of the Work, CMAR shall remove or cause to be removed from Owner's property and disposed of in accordance with Environmental Law and OSHA any Hazardous Substances (but not Project Hazardous Waste) brought onto Owner's property during the Construction Work or used in connection with the Construction Work. As provided below, Owner will dispose of Project Hazardous Waste.

(D) Other than as provided in (A), (B) and (C), CMAR shall not, and CMAR shall cause all Subcontractors to not, dispose of, generate, manufacture, process, produce, Release, treat or otherwise store, use or have in or on or transport to or from Owner's property any Hazardous Substance or any Hazardous Waste

(iii) Releases of Hazardous Substances. Upon any Release of any Hazardous Substance in connection with the Construction Work, whether relating to a pre-existing condition on Owner's property (for example, arising from any demolition of, modification of, or addition to any structure, facility or equipment) or relating to acts or omissions of CMAR or a Subcontractor, CMAR shall take any immediate action reasonably necessary to contain the Release, and if the Release is not a CMAR Release, Owner will pay to CMAR the reasonable costs incurred by CMAR in taking such reasonably necessary immediate action necessary to contain the Release. Owner may elect to have CMAR control and carry out any containment, clean-up, removal and remediation activity as to a Release, provided that, if the Release is not a CMAR Release, Owner will pay CMAR for performing such activity and CMAR will not be obligated to begin performing the activity until CMAR and Owner have agreed in writing on the tasks to be performed by CMAR and the amount to be paid to CMAR for performing the activity. Alternatively, Owner shall have the right to elect to control and carry out any containment, clean-up, removal and remediation activity. Regardless of who takes the actions, CMAR shall absorb, without reimbursement from Owner, all costs and expense incurred by CMAR in connection with any CMAR Release. In addition, CMAR shall pay or reimburse Owner for all costs and expenses incurred by Owner relating to any CMAR Release. If the amount is not paid promptly, Owner may offset the amount due against any amount payable by Owner to CMAR under the CMAR Construction Contract Documents or otherwise. Remediation, removal, and other cleanup action arising from any Release shall be in full compliance with Environmental Law and OSHA and shall be subject to Owner's approval. In addition, Owner may require remedial, removal or other cleanup action in excess of applicable minimum requirements of Environmental Law and OSHA (A) as reasonably necessary or appropriate in the judgment of Owner to permit human use and habitation of Owner's property and to permit use of Owner's property as a public university, and (B) as reasonably consistent in the judgment of Owner with such habitation and uses.
(iv) **Project Hazardous Waste.** Owner will arrange for handling, storage and disposal of any Project Hazardous Waste. CMAR will advise Owner promptly of the creation or generation of any Project Hazardous Waste. On an interim basis until Owner can make arrangements, CMAR shall assure proper handling (including, without limitation, segregation from waste that is not Hazardous Waste) and storage of Project Hazardous Waste in full compliance with Environmental Law and OSHA. CMAR shall pay all of Owner’s expenses of storing, handling and disposing of CMAR Hazardous Waste. Owner will deliver a statement to CMAR showing Owner’s expenses, and CMAR will promptly pay such amount to Owner. If the amount is not paid promptly, Owner may offset the amount due against any amount payable by Owner to CMAR under the CMAR Contract Documents or otherwise.

4.2.3 **Notifications to Owner.** CMAR shall notify the Owner’s Representative immediately upon occurrence of any of the following:

(i) any discovery by CMAR or any Subcontractor of any Hazardous Substance in any existing structure, facility or equipment on Owner’s property.
(ii) any Release of any Hazardous Substance on Owner’s property in connection with the Construction Work;
(iii) the creation or generation of any Hazardous Waste resulting from the Construction Work (including, without limitation, Hazardous Waste arising from the removal of, demolition of, modification of, or addition to any existing structure, facility or equipment);
(iv) the need for any remediation or removal of any Hazardous Substance or Hazardous Waste relating to the Construction Work whether relating to a pre-existing condition on Owner’s property or to acts or omissions of CMAR or any Subcontractor; or
(v) any claim, demand, inquiry, investigation, litigation or other action or proceeding by any governmental authority or other person relating to any Hazardous Substance, Hazardous Waste, Environmental Law or OSHA relating to the Construction Work.

Except for immediate action to contain any Release of any Hazardous Substance and except for interim handling and storage of Project Hazardous Waste, CMAR shall not take any action as to any matter in (i), (ii), (iii), (iv) or (v) without the prior written approval of Owner, and Owner shall have the right to elect to control and carry out any such action or matter.

4.2.4 **Archaeological Conditions.** If in the course of performing the Construction Work, the CMAR, any Subcontractor or any of their employees or other persons performing any of the Construction Work encounters any native American burial site or any archaeological artifacts, the CMAR shall immediately and before such burial site or artifacts are disturbed notify Owner’s Representative and suspend any activity of the Construction Work that might disturb the burial site or artifacts. The Owner will evaluate the situation and will decide what action, if any, needs to be taken.

4.3 **Design Professional Environmental, OSHA and Work Site Safety Requirements**

4.3.1 **Asbestos Contamination in Owner’s Utility Tunnel System**

THERE IS ASBESTOS CONTAMINATION IN OWNER’S UTILITY TUNNEL SYSTEM

A Restricted Access Provision for the Utility Tunnel System is in-place due to asbestos-contamination present in the tunnel floors. Settled dusts on utility lines may also contain asbestos. Signage is located at each tunnel entrance that warns of asbestos. Asbestos is classified as a known human carcinogen and OSHA regulations are in-place to limit employees’ exposure to airborne asbestos fibers. DP is responsible for compliance with all Environmental Law and OSHA requirements relating to exposure of DP’s and it’s Consultant’s employees and other personnel to this asbestos.

4.3.2 **Existing Hazardous Substances, Health and Other Safety Concerns by DP and DP Consultants.** If in
the course of performing DP’s obligations, any environmental, health or safety concern exists or arises regarding Hazardous Substances or OSHA, then the activities related to the concern must be discontinued prior to disturbing a suspected Hazardous Substance or otherwise interacting with a potential health or safety hazard. Owner’s Representative must be notified immediately of the concern. Activities by DP and DP Consultants shall not resume until approval has been provided by Owner. Close coordination will be maintained between Owner and DP so the Project schedule is impacted the least amount possible.

4.3.3 Construction Site Safety Requirements and Additional Scope of DP General Indemnity. As between DP and Owner, DP shall have sole responsibility and liability for safety of the employees and other personnel of DP and DP Consultants. Among other actions in this regard, DP shall, and shall cause each DP Consultant to, comply with worker health and safety requirements in Environmental Law and OSHA.

4.3.4 Special Considerations. Without affecting the generality of the remainder of this Section 4 and without implying that the following are the only matters of significance or are more significant than other matters, DP shall comply with the following and DP shall cause each DP Consultant to do the following:

(i) Comply with all requirements of Environmental Law and OSHA concerning asbestos applicable to the activities of DP, DP Consultants and their respective officers, employees, agents and independent contractors relating to the DP Contract Documents.

(ii) Prior to Final Completion, the DP must deliver to Owner a signed statement that “No asbestos-containing materials were specified in the Construction Documents and, to the extent of the actual knowledge of the Design Professional and the officers and employees of the Design Professional that worked on the Project, no asbestos-containing material was used in the Project.” However, if asbestos-containing material is approved by Owner in writing as provided in this subsection, the statement may contain an exception for the specific asbestos-containing material approved by Owner. If asbestos-containing material(s) must be used either for historical restoration or performance considerations, the DP must obtain Owner’s written approval before specifying the material in the Construction Documents. The DP will advise Owner’s Representative of this need. If Owner approves the asbestos containing material, Owner’s Representative will communicate in writing to DP and to Owner’s Representative the appearance and type of material, location and purpose so that it can be managed long-term without incidence.

4.3.5 Limit on Responsibility of DP and DP Consultants. Anything in this Section 4 to the contrary notwithstanding, DP and DP Consultants are not obligated to or responsible for identification, remediation or disposal of any Hazardous Substances on Owner’s property, except to the extent that DP, any DP Consultant or any employee or other personnel of DP or any DP Consultant causes the release of a Hazardous Substance on Owner’s property.

SECTION 5. WEAPONS, EXPLOSIVE DEVICES AND FIREWORKS.

Owner prohibits the use, possession, display or storage of any weapon, explosive device or fireworks on all land and buildings owned, leased, or under the control of Owner or its affiliated or related entities, in all Owner residential facilities (whether managed by Owner or another entity), in all Owner vehicles, and at all Owner or Owner affiliate sponsored events and activities. Notification by CMAR to all persons or entities who are employees, officers, subcontractors, consultants, agents, guests, invitees or licensees of CMAR (“CMAR Parties”) of this policy is a condition and requirement of the CMAR Design Phase Services Contract Documents and CMAR Construction Contract Documents. CMAR further agrees to enforce this contractual requirement against all CMAR Parties. ASU’s policy may be accessed through the following web page: http://www.asu.edu/aad/manuals/dps/dps201-05.html.”

SECTION 6 NON-DISCRIMINATION - GOVERNOR’S EXECUTIVE ORDER 99-4 (AMENDING 75-5)

6.1 The parties agree to comply with all applicable state and federal laws, rules, regulations and executive orders governing equal employment opportunity, immigration, nondiscrimination, including the Americans with Disabilities Act, and affirmative action.
6.2 In connection with the performance of work under this contract, the DP and the CMAR agree to observe Arizona Executive Order 99-4 and all applicable Arizona and Federal Law. DP and CMAR further agree not to discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin or handicap, except to the extent such discrimination is not prohibited by pertinent State or Federal law or Executive Order. In addition, the DP and CMAR agree to actively recruit in accordance with any affirmative action programs applicable to DP and CMAR, respectively. The aforesaid provisions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The DP and CMAR shall post in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause and shall insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

The text of the Arizona Governor’s Executive Order 99-4 follows:

PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS NONDISCRIMINATION IN EMPLOYMENT BY GOVERNMENT CONTRACTORS AND SUBCONTRACTORS.

PART I: Nondiscrimination in employment by government contractors and subcontractors. All government contracting agencies shall include in every government contract hereinafter entered into the following provisions: During the performance of this contract, the contractor agrees as follows:

A. The contractor will not discriminate against any employee or applicant for employment because of race, age, color, religion, sex, sexual orientation or national origin. The contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, age, color, religion, sex, sexual orientation or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

A continued Executive Order No. 75-5 is hereby amended to permit government contractors and subcontractors that are religious organizations to provide employment preferences based upon religion when dealing with a bona fide occupational qualification reasonably necessary to the operation of the religious organization, in accordance with the requirements of Title 41, Chapter 9, Article 4, Arizona Revised Statutes.

Executive Order No. 75-5 prohibits all government contractors and subcontractors for discriminating against any employee or applicant for employment because of race, age, color, religion, sex, sexual orientation or national origin. Executive Order No. 75-5 further requires all government contractors and subcontractors to take affirmative action to insure that applicants are employed and employees are treated during employment without regard to their race, age, color, religion, sex, sexual orientation or national origin.

Arizona's Civil Rights Act, Title 41, Chapter 9, Article 4, does not apply to religious organizations with respect to the employment of individuals of a particular religion to perform work connected with the activities of the employer. It also provides that religious organizations may provide employment preferences based upon a religion when dealing with a bona fide occupational qualification reasonably necessary to the operation of the religious organization. This is consistent with the provisions of the Civil Rights Act of 1964 (42 U.S.C. 2000e, et seq.). In addition, in the Personal Responsibility and Work Opportunity Reconciliation Act, P.L. 104-193, Congress provided that religious organizations are eligible for the receipt of federal funds on the same basis as other private organizations.

B. The contractor will in all solicitations or advertisement for employees placed by or on behalf of the contractor state that all qualified applicants will receive consideration for employment without regard to race, age, color, religion, sex, sexual orientation or national origin.

C. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided by the agency contracting officer advising the labor union or workers’ representative of the contractor’s commitments.
under this Executive Order and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. The contractor will furnish all information and reports required by the contracting agency and will permit access to his books, records and accounts by the contracting agency and the Civil Rights Division for purposes of investigation to ascertain compliance with such rules, regulations and orders.

E. In the event of the contractor’s noncompliance with the non-discrimination clauses of the contract or with any of such rules, regulations or orders of the Arizona Civil Rights Division said noncompliance will be considered a material breach of the contract and this contract may be cancelled, terminated or suspended in whole or in part, and the contractor may be declared ineligible for future government contracts until said contractor has been found to be in compliance with the provisions of this order and the rules and regulations of the Arizona Civil Rights Division, and such sanctions may be imposed and remedies revoked as provided in Part II of this order, and the rules and regulations of the Arizona Civil Rights Division.

F. The contractor will include the provisions of paragraphs A through E in every subcontractor purchase order so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect in the subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the State of Arizona to enter into such litigation to protect the interests of the State of Arizona.

G. Each contractor having a contract containing the provisions prescribed in the section shall file and shall cause each of his subcontractors to file compliance reports with the contracting agency or the Civil Rights Division, as may be directed. Compliance reports shall be filed within such times and shall contain such information as the practices, policies, programs and employment policies, programs and employment statistics of the contractor and each subcontractor and shall be in such form as the Arizona Civil Rights Division may prescribe.

H. Bidders or prospective contractors or subcontractors shall be required to state whether they have participated in any previous contract subject to the provisions of this order or any preceding similar Executive Order and in the event to submit on behalf of themselves and the proposed subcontractors compliance reports prior to, or as in initial part of negotiation of a contract.

I. Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers or providing or supervising apprenticeship or training for such workers, the compliance report shall include such information from such labor unions or agency practices and policies affecting compliance as the contracting agency or Civil Rights Division may prescribe; provided that, to the extent such information is within the exclusive possession of labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to the contractor, the contractor shall so certify the contracting agency as part of its compliance report and shall set forth what efforts he has made to obtain such information.

J. The contracting agency or the Civil Rights Division shall require that the bidder or prospective contractor or subcontractor submit as part of his compliance report a statement in writing signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training with which the bidder or prospective contractor deals with supporting information to the effect that the signer’s practices and policies do not discriminate on the ground of race, color, religion, sex, sexual orientation or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this order or that it consents and agrees that recruitment employment and the terms and conditions of employment under the proposed contract shall be in accordance with the purpose and provisions of this order. In the event that the union or the agency shall refuse to execute such a statement, the compliance shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the contracting agency or the Civil Rights Divisions may require.

PART II. Enforcement

A. Each contracting agency shall be primarily responsible for obtaining compliance with this Executive Order with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the rules of the Civil Rights Division in discharging their
primary responsibility for securing compliance with the provisions of contracts and otherwise with
the terms of this order and the rules and regulations and orders of the Civil Rights Division issued
pursuant to this order. They are directed to cooperate with the Civil Rights Division and to furnish
the Division such information and assistance as it may require in the performance and assistance
of the Division’s functions under this order. They are further directed to appoint or designate from
among the agency personnel compliance officers. It shall be the duty of such officers to first seek
compliance with the objective of this order by conference, conciliation, mediation or persuasion.

B. The Civil Rights Division may investigate the employment practices of any government contractor or
subcontractor or initiate such investigation by the appropriate contracting agency or determine whether or
not the contractual provisions specified in this order have been violated. Such investigations shall be
conducted in accordance with the procedures established by the Civil Rights Division and the
investigating agencies shall report to the Civil Rights Division any action taken or recommended. The Civil
Rights Division may receive and investigate or cause to be investigated complaints by employees or
prospective employees of a government contractor or subcontractor which allege discrimination contrary
to the contractual provisions specified in Part I of this order. If the investigation is conducted for the Civil
Rights Division by a contracting agency that agency shall report to the Civil Rights Division what action
has been taken or its recommended with regard to such complaint.

C. The Civil Rights Division shall use its best efforts directly and through contracting agencies, other
interested state and local agencies, contractors and all other available instrumentality to cause any labor
union engaged in work under government contracts or any agency referring workers or providing or
supervising apprenticeship or training for or in the course of such work or cooperate in the implementation
of the purposes of this order.

D. The Civil Rights Division or any agency, officer or employee in the executive branch of the government
designated by rule, regulation or order of the Civil Rights Division may hold such hearings, public or
private as the Division may deem advisable for compliance, enforcement of educational purposes. The
Civil Rights Division may hold or cause to be held hearings in accordance with rules and regulations
issued by the Civil Rights Division prior to imposing, ordering or recommending the imposition of penalties
and sanctions under this order.

E. No order for debarment of any contractor from further government contracts under this order shall be
made without affording the contractor an opportunity for a hearing.

F. Sanctions and Penalties. In accordance with such rules, regulations or orders as the Civil Rights Division
may issue or adopt, the Civil Rights Division or the appropriate contracting agency may publish or cause
to be published the names of contractors or unions which it has concluded have complied or have failed to
comply with the provisions of this order and with the rules, regulations and orders of the Civil Rights
Division.

1. Contracts may be cancelled in whole or in part, terminated, or suspended absolutely, or continuation
of contracts may be condition upon a program for future compliance approved by the contracting
agency or the Civil Rights Division; provided that any contracting agency shall refrain from entering
into further contracts, extensions or other modifications of existing contracts with any non-complying
contractor until such contractor has established and will carry out personnel and employment
policies in compliance with the provisions of this order.

2. Under rules and regulations prescribed by the Civil Rights Division, each contracting agency shall
make reasonable efforts within a reasonable time limitation to secure compliance with the contract
provisions of this order by methods of conference, conciliation, mediation and persuasion before
proceedings shall be instituted under this order or before a contract shall be cancelled or terminated
in whole or in part under this order for failure of a contractor or subcontractor to comply with the
contract provisions of this order.

G. This Executive Order shall become effective within (60) days of its issuance.

7. SUPPLEMENTAL REQUIREMENTS

The DP will submit to Owner a proposed plan to accomplish the following requirements as they apply to DP
and DP’s Consultants. The CMAR will submit to Owner a proposed plan to accomplish the following
requirements as they apply to CMAR and Subcontractors. Each proposed plan must describe specifically
how the requirements will be accomplished and also contain (i) procedures for tracking activities and
performance in meeting the requirements, (ii) procedures for interim written reports and an end of Project final written report to Owner on activities and performance in meeting the requirements and on problems in meeting the requirements, (iii) procedures for corrective action or adjustment in planned activities in cases of problems in meeting the requirements, (iv) a list of State of Arizona registered apprenticeship program(s) that the CMAR recommends be the recipient(s) of the funds to be donated to apprenticeship programs under Item E below, and (v) the DP’s or CMAR’s recommended interpretation of the following subjects, as applicable:

(i) The meaning of “so long as this would result in services that are comparable in quality and would not result in a material increase in costs of the Project.”

(ii) The meaning of “to the extent persons with the necessary and appropriate skills are reasonably available”.

(iii) Any other interpretations of the requirements.

The proposed plan of the selected DP and CMAR (including the proposed interpretations of items (i) through (iii) immediately above) will be subject to modification at the request of and to approval by Owner. The final supplemental requirements plan (“Final Supplemental Requirements Plan”) will be as mutually agreed to by Owner and DP or CMAR, as applicable, and will be one of the contract documents.

The requirements are:

A. The Owner, the CMAR, the DP, each Subcontractor and each DP Consultant shall include disadvantaged business enterprises in the design, engineering and construction of the Project so long as this would result in services that are comparable in quality and would not result in a material increase in costs of the Project.

B. The DP, each DP Consultant, the CMAR and each Major Subcontractor is required to provide health insurance for their respective full-time employees and to make health insurance coverage available to dependents and to employees who are not full-time to the same extent and on the same terms as offered to other employees. The terms will be the same as the DP’s, the DP Consultant’s, the CMAR’s or the Major Subcontractor’s health insurance program for other employees.

“Major Subcontractor” means the Subcontractors in the following trades: steel, concrete, plumbing, HVAC, electrical, excavation/site work, studs/drywall and any other subcontractor trade that is a major subcontractor due to the nature of the construction work in a particular Project.

C. The CMAR and each Subcontractor are required to use workers who are Arizona residents to do the Construction Work to the extent persons with the necessary and appropriate skills are reasonably available. The CMAR will include in its written reports a schedule showing the residence address of all workers on the Project or alternative documentation acceptable to Owner.

D. The CMAR and each Subcontractor shall provide a ratio of not less than ten percent (10%) apprentices to journeymen in performing the Construction Work on the Project. The apprentices will be from State of Arizona registered apprenticeship programs.

E. The CMAR and each Major Subcontractor are required to contribute an amount equal to one percent (1%) of the CMAR’s or Major Subcontractor’s gross payroll for Construction Work in the Project to fund training for Arizona residents in State of Arizona registered apprenticeship programs. The continuation of a prior practice of funding such apprenticeship programs will be counted against this requirement to the extent of the continuing funding.

The amount in Item E will be included in the Guaranteed Maximum Price for the Project as a separate line item. The CMAR will include as part of each report on these supplemental requirements a schedule showing the gross payroll to date of the CMAR and each Major Subcontractor for the Construction Work. Owner will have the right to audit the CMAR’s and each Major Subcontractor’s payroll amounts. The Owner will impound the amount in Item E and will make payment to the State of Arizona registered apprenticeship program(s) selected by the CMAR and the Major Subcontractors.
Any failure by CMAR, DP, a Subcontractor or a DP Consultant to comply with the requirements in this Section 6.1 or the applicable Final Plan will be a material breach of the CMAR Design Phase Services Contract Documents or the CMAR Construction Contract Documents, as applicable, and the Owner will have all rights and remedies upon occurrence of a material breach (including, without limitation, termination).

Anything in the CMAR Construction Contract Documents to the contrary notwithstanding, compliance in full by the CMAR and each Subcontractor with the CMAR’s Final Plan and the requirements in this Section 8 are conditions precedent of (A) each progress payment under the CMAR Construction Contract Documents, and (B) Final Completion and Final Payment under the CMAR Construction Contract Documents.

This Section 8 is one of provisions that CMAR and DP are obligated to include in its contracts with Subcontractors and DP Consultants, respectively, and that Subcontractors and DP Consultants at each level are required to include in their contracts with Subcontractors and DP Consultants of the next level.

**OWNER**

ARIZONA BOARD OF REGENTS
on behalf of
ARIZONA STATE UNIVERSITY

By: 
(Signature)

Name: 
(Printed)

Title: 

Date: 

**CMAR**

By: 
(Signature)

Name: 
(Printed)

Title: 

Date: 

**DESIGN PROFESSIONAL**


RELATIONSHIPS

- A contract with the architect/engineer
- A separate contract with the CMAR
- CMAR, DP and Owner communicate and interact with each other in a cooperative and constructive manner

ACTIVITIES

Architect/Engineer:

- Design Phase: Performs design services with active CMAR and Owner participation
- Construction Phase: Performs some construction administration
Construction Manager at Risk

- **Design Phase:**
  - Provides Design Phase Services
  - Agrees to perform the Construction Work for a Guaranteed Maximum Price on an **Open Book** basis
  - Manages the bid process to select Subcontractors

- **Construction Phase:** Performs the Construction Work
ATTACHMENT 2
TO OPERATING MANUAL

FORM CONSTRUCTION CONTRACT BETWEEN OWNER AND CONSTRUCTION MANAGER AT RISK

APPLIES TO FOLLOWING PROJECT ONLY:
PROJECT NUMBER: ______________________
PROJECT NAME: ______________________

APPENDIX A
to

Construction Contract Between Owner and Construction Manager at Risk

Specific Terms and Provisions of the Construction Contract

1. Section 2.3: Guaranteed Maximum Price
   ________________ Dollars ($______________)

2. Section 2.8: CMAR Construction Phase Fee
   ________________ Dollars ($______________)

3. Section 2.8: CMAR Construction Phase Fee percentage
   __________ percent (________ %)

4. Section 2.9: Daily amount of general conditions to be paid by Owner for agreed to Owner cased delays
   ________________ Dollars ($______________)

5. Section 4.3.1: Substantial Completion date
   [NOTE TO USERS OF THIS DOCUMENT: This is the date that is 30 days before Owner’s date for Final Completion for the Project. This allows 30 days between Substantial Completion and Final Completion]
   ________________, 2________

6. Section 4.3.4: Interim milestones:

   Part of the Work          Interim Milestone Date
   __________________________
   [NOTE TO USERS OF THIS DOCUMENT: If there are interim milestones, fill in the information below as to each milestone. If there are no interim milestones, insert “None”.]
   __________________________
   __________________________

7. Section 4.6: Per calendar day liquidated damages for failure to meet Substantial Completion date requirements:

   Arizona State University  82  Operating Manual for
Construction Manager at Risk Projects
06/23/2006
8. **Section 4.6**: Per calendar day liquidated damages for failure to meet Final Completion date requirements:

_____________________________ dollars ($____________________)

*[NOTE TO USERS OF THIS DOCUMENT: If liquidated damages are to be applicable to any interim milestone dates set forth in Section 4.3.4, this Section 4.5 will need to be modified accordingly.]*

*[NOTE TO USERS OF THIS DOCUMENT: Insert the applicable version of Section 4.7 and delete the other version.]*

9. **Section 4.7**: Division of Project into Work Packages or not and applicability of provisions on Work Packages or not.

4.7 The **Owner** has determined that the design and construction of the Project will not be divided into Work Packages. Accordingly, the provisions in the Contract Documents relating to Work Packages do not apply. 

*[OR]*

4.7 The **Owner** has determined that the design and construction of the Project will be divided into Work Packages. The provisions on "**Work Packages**" in **Section 2.13** of the Operating Manual apply.

10. Section 7: Representatives of the Parties.

7. **Representatives of the Parties**.

7.1 **Owner's** Representatives.

7.1.1 **Owner** designates __________________________ (Name, address and title) as its Senior Representative ("**Owner's Senior Representative**"), which individual has the authority and responsibility for avoiding and resolving disputes under **Section 6.2** of the General Conditions.

7.1.2 **Owner** designates __________________________ (Name, address and title) as its representative ("**Owner's Representative**" or "**OR**"), which individual has the authority and responsibility set forth in the CMAR Construction Contract Documents.

7.2 **CMAR's** Representatives.

7.2.1 **CMAR** designates __________________________ (Name, address and title) as its Senior Representative ("**CMAR's Senior Representative**"), which individual has the authority and responsibility for avoiding and resolving disputes under **Section 6.2** of the General Conditions.

7.2.2 **CMAR** designates __________________________ (Name, address and title) as its representative ("**CMAR's Representative**") which individual has the authority and responsibility set forth in the CMAR Construction Contract Documents.

7.2.3 **CMAR** designates __________________________ (Name, address and title) as its construction superintendent ("**Construction Superintendent**"), which individual has the authority and responsibility set forth in the CMAR Construction Contract Documents.
7.2.4 CMAR’s representatives and Construction Superintendent, as approved by the Owner, shall not be replaced without the Owner’s prior written approval.

11. Section 9.3

Full street or physical address of each location at which Construction Work will be performed:

CMAR

______________________________

(Signature)

(Printed Name & Title)

Date Signed:____________________

OWNER:

ARIZONA BOARD OF REGENTS
For and on behalf
ARIZONA STATE UNIVERSITY

______________________________

(Signature)

(Printed Name & Title)

Date Signed:____________________
Construction Contract Between Owner and Construction Manager at Risk

NOTE: The information or contract provisions that go in the numbered blank spaces in this contract are in the respective numbered paragraph in Appendix A attached hereto.

Date: ____________________________

Project Name: ____________________________

ASU Project Number: ____________________________

Construction Manager at Risk: ____________________________

Owner: Arizona Board of Regents for and on behalf of Arizona State University

CMAR and Owner hereby agree as follows:

1. General.

1.1 The Operating Manual for Construction Manager at Risk Projects ("Operating Manual") and the General Conditions are attached hereto as Exhibits A and B.

1.2 Please see the Operating Manual for definitions of several defined terms. All terms defined in the Operating Manual or in any of the other CMAR Construction Contract Documents will have the same meanings when used herein. If not specifically defined, terms, words and phrases in the CMAR Construction Contract Documents will have their ordinary and common meaning, with undefined words, phrases and abbreviations interpreted consistent with construction and design industry standards and technical and trade meanings.

1.3 This agreement is the CMAR Construction Contract as defined in the Operating Manual.

1.4 The CMAR Construction Contract Documents are listed in the Operating Manual.

1.5 The CMAR Construction Contract Documents are complementary and must be interpreted in harmony so as to avoid conflict. In the event of any inconsistency, conflict, or ambiguity, the CMAR Construction Contract Documents shall take precedence in the order in which they are listed in the definition of that term in the Operating Manual.

1.6 The CMAR Construction Contract Documents form the entire agreement between Owner and CMAR relating to the Construction Work and the CMAR performance of the Construction Work, are hereby incorporated herein by reference and by incorporation herein are as fully binding on the parties as if repeated herein. CMAR Construction Contract Documents supersede all prior discussions and negotiations. The CMAR Construction Contract Documents may be amended or modified only in writing executed by Owner and CMAR.

2. Construction Work.

2.1 The Owner hereby engages the CMAR to perform the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents. The Owner will perform all obligations of the Owner in the CMAR Construction Contract Documents. The Owner will comply with all terms and conditions of the CMAR Construction Contract Documents applicable to Owner.

2.2 The CMAR agrees to perform the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents. The CMAR will provide such construction services and will also provide all material, equipment, tools, and labor necessary to satisfactorily complete all Construction Work described in and reasonably inferable from the Construction Documents and the other CMAR Construction Contract Documents. The CMAR will perform all obligations of the CMAR in the CMAR Construction Contract.
2.3 The Guaranteed Maximum Price (GMP) for the Construction Work is ___________ Dollars ($__________). The GMP is inclusive of all amounts to be paid by Owner for the Construction Work and includes, without limitation, all sales, franchise privilege, use, consumer and other taxes, all fees, all general conditions, all bond and insurance premiums, and all costs of complying with applicable Legal Requirements, all of which will be paid by CMAR without reimbursement by Owner.

2.4 The GMP Schedule is Exhibit C hereto. The GMP Schedule uses the elemental systems allocation of all costs and fees of the Construction Work.

2.5 The Schedule of Values is Exhibit D hereto.

2.6 The GMP Setting Drawings, Specifications, Assumptions and Clarifications are Exhibit E hereto.

2.7 The detailed CPM Schedule for the Construction Work is Exhibit F hereto.

2.8 The Owner will pay the CMAR a fee for the Construction Phase (“CMAR Construction Phase Fee”). The CMAR Construction Phase Fee is included in the GMP and the GMP Schedule. The CMAR Construction Phase Fee will be ___________ Dollars ($__________). The percentage used to compute the CMAR Construction Phase Fee is ___________ percent (________%) of the CMAR Construction Phase Fee Base Amount. The “CMAR Construction Phase Fee Base Amount” means the sum the amounts in line items in the GMP Schedule covering Construction Work to be performed by Subcontractors or to be self-performed by the CMAR, if the CMAR is permitted to self-perform any Construction Work, as such amounts may be modified from time to time due to changes in the GMP.

2.9 The daily amount payable by Owner to CMAR in accordance with the CMAR Contract Documents for general conditions for agreed to Owner-caused delays in the Project is ___________ Dollars ($__________). This amount includes any amount CMAR believes necessary to cover possible general conditions claims of Subcontractors arising from agreed to Owner-caused delays. In setting the amount to be paid by Owner to CMAR for Owner-caused construction delays, CMAR has taken into account any amount CMAR anticipates that it might need to deal with possible Subcontractor claims for extended general conditions relating to Owner-caused delays. CMAR will be solely responsible and Owner will have no responsibility for claims by Subcontractors for extended general conditions relating to Owner-caused delays. For agreed-to Owner-caused construction delays CMAR will provide all the necessary extended general conditions for the foregoing daily amount. Owner-caused construction delays do not include delays resulting from suspension of the Construction Work by Owner under Section 7.1 of the General Conditions.

3. Ownership of Documents

3.1 The Owner, through its separate agreement with the Design Professional, shall own all drawings, specifications, and other documents and electronic data furnished by DP. CMAR shall have no right or interest in such documents, except for the right to use them in rendering services during the Construction Phase.

3.2 The Owner shall also own any and all Estimates of Construction Costs and other estimates and all schedules, value engineering submissions, or other work product furnished by CMAR or DP to Owner.

4. Contract Time

4.1 Owner and CMAR mutually agree that time is of the essence with respect to the dates and times set forth in the CMAR Construction Contract Documents. CMAR agrees that it will complete the Construction Work within the applicable Contract Times (defined below), as adjusted in accordance with the CMAR Construction Contract Documents. CMAR understands that the time(s) for completion(s) set forth in these documents are essential to the Owner and a material consideration to the Owner in executing this CMAR Construction Contract.
“Contract Time(s)” means, as to the entire Construction Work and as to any portion of the Construction Work that the Owner has agreed to accept separately, (I) the Date of Commencement, (II) any interim milestone dates agreed to by Owner and CMAR, (III) the time for Substantial Completion, and (IV) the time for Final Completion, as specified in this Section 4.

4.2 Date of Commencement. The Construction Work shall commence (hereinafter referred to as the “Date of Commencement”) within five (5) days of CMAR’s receipt of Owner’s notice to proceed for the entire Construction Work, for the first Work Package if the Construction Work is to be done in Work Packages or for a portion of the Construction Work if the Owner has agreed to accept any portion separately, unless the parties mutually agree otherwise in writing. If the Construction Work is done in Work Packages or portions, the Date of Commencement for the entire Construction Work is the Date of Commencement of the first Work Package or first portion.

4.3 Substantial Completion.

4.3.1 Substantial Completion (defined in the Operating Manual) of the entire Construction Work shall be achieved no later than (5) subject to adjustments in accordance with the CMAR Construction Contract Documents.

4.3.2 If the Owner has agreed to accept one or more portions of the Construction Work separately, there will be a separate Substantial Completion Date for each portion. The Substantial Completion Date for each portion will be established by the Owner.

4.3.3 The date for Substantial Completion of the entire Construction Work or for a portion of the Construction Work is referred to as the “Substantial Completion Date”.

4.3.4 To the extent specified below in this Section 4.3.4, interim milestones shall be achieved as follows, subject to adjustments in accordance with the CMAR Construction Contract Documents:

<table>
<thead>
<tr>
<th>Part of the Work</th>
<th>Interim Milestone Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6)</td>
<td></td>
</tr>
</tbody>
</table>

4.4 Final Completion. Final Completion of the entire Construction Work or portion thereof that Owner has agreed to accept separately shall be achieved within thirty (30) calendar days after the date established for Substantial Completion of the entire Construction Work or the portion of the Construction Work, respectively.

4.5 Requirement for Changes to Contract Time(s). Changes to Contract Time(s) may be made only by written Change Order executed by CMAR and Owner.

4.6 Liquidated Damages. CMAR understands that if Substantial Completion of the entire Construction Work or of any portion of the Work that the Owner has agreed to accept separately is not attained by the applicable Substantial Completion Date provided in Section 4.3, as adjusted in accordance with the CMAR Construction Contract Documents (a “Scheduled Substantial Completion Date”), Owner will suffer damages, which are difficult to specify accurately and ascertain. CMAR agrees that if Substantial Completion of the entire Construction Work or of any portion of the Construction Work that the Owner has agreed to accept separately is not attained by the respective Scheduled Substantial Completion Date, CMAR shall pay Owner (7) dollars ($_____) as liquidated damages for each calendar day that Substantial Completion of the entire Construction Work or the portion of the Construction Work that the Owner has agreed to accept separately extends beyond the respective Scheduled Substantial Completion Date. In addition, if Final Completion of the entire Construction Work or of any portion of the Construction Work that the Owner has agreed to accept separately is not attained within the time period prescribed by Section 4.4, CMAR shall pay Owner (8) Dollars ($_____) as liquidated damages for each calendar day that Final Completion extends beyond the required date. The liquidated damages provided herein shall be in lieu of all...
liability for any and all extra costs, losses, expenses, claims, penalties and any other damages, whether special or consequential, and of whatsoever nature incurred by Owner which are occasioned by any delay in achieving Substantial Completion or Final Completion or both of the entire Construction Work or of any portion of the Construction Work that the Owner has agreed to accept separately on or after the respective established date.

4.7 (9)

5. Record Keeping and Financial Controls. With respect to all Construction Work performed by CMAR and its Subcontractors, CMAR and its Subcontractors shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management, using accounting and control systems approved by the Owner. During performance of the Construction Work and for five (5) years after final payment for the entire Construction Work, the CMAR shall retain and shall also require all Subcontractors to retain for review and/or audit by the Owner all correspondence, meeting minutes, memoranda, electronic media, books, accounts, reports, files, time cards, material invoices, payrolls, and evidence of all communications, direct and indirect costs and all other matter related to the Construction Work. Upon request by the Owner, a legible copy or the original of any or all such records shall be produced by the CMAR at any time during or after the Construction Work as the Owner may request. The CMAR shall submit to the Owner upon request all payrolls, reports, estimates, records and any other data concerning Construction Work performed or to be performed and concerning materials supplied or to be supplied, as well as Subcontractor payment applications or invoices and such Subcontractor’s progress payment checks. The requirements of this Section 5.0 shall be included in all contracts between the CMAR and its Subcontractors.

6. Termination and Suspension. The rights of Owner and the CMAR to terminate and suspend this CMAR Construction Contract are in Article 7 of the General Conditions. Among other rights, the Owner has the right to terminate or suspend this CMAR Construction Contract for convenience.

7. Representatives of the Parties. (10)

8. Bonds and Insurance.

8.1 Insurance. CMAR shall procure the insurance coverages required by Article 4 of the General Conditions. Insurance certificates shall be submitted to Owner at the times specified in Section 4.5 of the General Conditions.

8.2 Bonds. CMAR shall provide performance and payment bonds as provided in Section 4.1 of the General Conditions. The bonds shall be in the forms in Exhibit A to the General Conditions.


9.1 Any Subcontractors submitted and approved as pre-qualified by Owner, any Subcontractors selected by bidding, and any Early Selected Subcontractors shall not be replaced without the Owner’s prior written approval. Any additional costs due to an approved change of Subcontractor without a change in the scope of Project or a change in the Construction Documents shall be the CMAR’s responsibility and shall not be the Owner’s responsibility and will not increase the Guaranteed Maximum Price or extent the Contract Time(s).

9.2 CMAR represents that it has the necessary financial resources to fulfill its obligations under the CMAR Construction Contract Documents and has the necessary corporate approvals to execute the CMAR Construction Documents and perform the Construction Work.

9.3 The Construction Work will be performed at the following full street or physical address: (11). CMAR agrees to include this information in its contract with each Subcontractor and to require each Subcontractor at all levels to include this information in each contract with its Subcontractors.

10. Additional Approvals of Arizona Board of Regents and Others. The Project has been given an initial approval by the Arizona Board of Regents (“ABOR”). This approval permits the Owner to proceed through a portion of the design phase of the Project. A second ABOR approval will be required to authorize completion of the design phase. A third ABOR approval is required before Owner may legally obligate itself to construct
and pay for the construction of the Project. In addition to the ABOR approvals, approvals by legislative bodies or others may also be required. Anything in the CMAR Construction Contract Documents to the contrary notwithstanding, any obligation of Owner under the CMAR Construction Contract Documents to complete the design phase and to construct and pay for construction of the Project is subject to Owner obtaining the above-described approvals.

The GMP Schedule, the Schedule of Values, the GMP Setting Drawings, Specifications, Assumptions and Clarifications, and the CPM Schedule attached hereto are intended to supplement and not to modify or change any of the other CMAR Construction Contract Documents. Nothing in the GMP Schedule, the Schedule of Values, the GMP Setting Drawings, Specifications, Assumptions and Clarifications, and the CPM Schedule attached hereto shall or shall be construed to replace or supersede any other provision of any of the other CMAR Construction Contract Documents. If there is a conflict between anything in the GMP Schedule, the Schedule of Values, the GMP Setting Drawings, Specifications, Assumptions and Clarifications, or the CPM Schedule attached hereto and any provision of any other CMAR Construction Contract Document, the provision of the other CMAR Construction Contract Document shall be given effect and the conflicting material in the GMP Schedule, the Schedule of Values, the GMP Setting Drawings, Specifications, Assumptions and Clarifications, or the CPM Schedule attached hereto will not be given effect. Without affecting the generality of the foregoing:

- All costs and expenses of completing the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents and all costs and expenses of performing the CMAR's obligations under the CMAR Construction Contract Documents during the Construction Phase are included in the Guaranteed Maximum Price, and

- Nothing in the GMP Schedule, the Schedule of Values, the GMP Setting Drawings, Specifications, Assumptions and Clarifications, or the CPM Schedule attached hereto shall or shall be construed to relieve CMAR of its obligation to complete the Construction Work in accordance with the Construction Documents and the other CMAR Construction Contract Documents or to relieve CMAR of any of its obligations under any of the other CMAR Construction Contract Documents.

CMAR

______________________________

(Owner)

______________________________

(Signature)

______________________________

(Printed Name & Title)

Date Signed: ____________________

OWNER:

ARIZONA BOARD OF REGENTS

For and on behalf

ARIZONA STATE UNIVERSITY

______________________________

(Signature)

______________________________

(Printed Name & Title)

Date Signed: ____________________
OWNER PROJECT MANAGER

Approval by Owner's Facilities Capital Program Management Group project manager:

__________________________________________
(Signature)

__________________________________________
(Printed Name)
APPLIES TO EACH PROJECT

Exhibit A
to
Construction Contract Between Owner and Construction Manager at Risk

Operating Manual for Construction Manager at Risk Projects

[NOTE: Attach a copy of the Operating Manual, which will be in the same form as attached to the CMAR Design Phase Services Contract]

CMAR

OWNER:
ARIZONA BOARD OF REGENTS
For and on behalf
ARIZONA STATE UNIVERSITY

(Signature)

(Signature)

(Printed Name & Title)

(Printed Name & Title)

Date Signed: __________________________

Date Signed: __________________________

OWNER PROJECT MANAGER

Approval by Owner’s Facilities Capital Program Management Group project manager:

(Signature)
Exhibit B

to

Construction Contract Between Owner and Construction Manager at Risk

General Conditions

[NOTE: Attach a copy of the General Conditions, which will be in the same form as attached to the CMAR Design Phase Services Contract]
Exhibit C
to
Construction Contract Between Owner and Construction Manager at Risk

GMP Schedule

THIS GMP SCHEDULE APPLIES TO FOLLOWING PROJECT ONLY:
PROJECT NUMBER: ______________________
PROJECT NAME: ______________________

[NOTE TO USERS: Attach the GMP Schedule]

CMAR

________________________________________
(Signature)

________________________________________
(Printed Name & Title)

Date Signed: ______________________

OWNER:
ARIZONA BOARD OF REGENTS
For and on behalf
ARIZONA STATE UNIVERSITY

________________________________________
(Signature)

________________________________________
(Printed Name & Title)

Date Signed: ______________________

OWNER PROJECT MANAGER

Approval by Owner’s Facilities Capital Program Management Group project manager:

________________________________________
(Signature)
Exhibit D

to

Construction Contract Between Owner and Construction Manager at Risk

Schedule of Values

THIS SCHEDULE OF VALUES APPLIES TO FOLLOWING PROJECT ONLY:
PROJECT NUMBER: _______________________
PROJECT NAME: _______________________

[NOTE TO USERS: Attach the Schedule of Values]

CMAR

__________________________________________

(Signature)

(Printed Name & Title)

Date Signed: _______________________

OWNER:

ARIZONA BOARD OF REGENTS
For and on behalf
ARIZONA STATE UNIVERSITY

__________________________________________

(Signature)

(Printed Name & Title)

Date Signed: _______________________

OWNER PROJECT MANAGER

Approval by Owner's Facilities Capital Program Management Group project manager:

__________________________________________

(Signature)
Exhibit E
to
Construction Contract Between Owner and Construction Manager at Risk

GMP Setting Drawings, Specifications, Assumptions and Clarifications

THESE GMP SETTING DRAWINGS, SPECIFICATIONS, ASSUMPTIONS AND CLARIFICATIONS APPLY TO THE FOLLOWING PROJECT ONLY:
PROJECT NUMBER: ________________________
PROJECT NAME: ________________________

[NOTE TO USERS: Attach the GMP Setting Drawings, Specifications, Assumptions and Clarifications]

CMAR

___________________________________________

(Signature)

(Printed Name & Title)

Date Signed: ________________________

OWNER:

ARIZONA BOARD OF REGENTS
For and on behalf
ARIZONA STATE UNIVERSITY

___________________________________________

(Signature)

(Printed Name & Title)

Date Signed: ________________________

OWNER PROJECT MANAGER

Approval by Owner’s Facilities Capital Program Management Group project manager:

___________________________________________

(Signature)
Exhibit F

to

Construction Contract Between Owner and Construction Manager at Risk

CPM Schedule

THIS CPM SCHEDULE APPLIES TO THE FOLLOWING PROJECT ONLY:
PROJECT NUMBER: ______________________
PROJECT NAME: ______________________

[NOTE TO USERS: Attach the CPM Schedule]

CMAR

OWNER:
ARIZONA BOARD OF REGENTS
For and on behalf
ARIZONA STATE UNIVERSITY

(Signature)                                           (Signature)

(Printed Name & Title)                                  (Printed Name & Title)

Date Signed: _____________________                      Date Signed: _____________________

OWNER PROJECT MANAGER

Approval by Owner’s Facilities Capital Program Management Group project manager:

(Signature)

__________________________________________
ATTACHMENT 3
TO OPERATING MANUAL

ARIZONA STATE UNIVERSITY
PURCHASING and BUSINESS SERVICES
SUBCONTRACTING REPORT FOR INDIVIDUAL CONTRACTS
(REPORT TO BE SUBMITTED QUARTERLY)

1. Reporting Period: 2. Report Number: 3. Date Submitted:
   from ___________ to ___________ ___________ ___________

4. Contractor Name & Address:

5. ASU Project: /Number/Signature Date:
   Name: ______________________________
   Number: ____________________________
   Signature Date: ______________________

6. Dollar Value of Contract: ____________

7. Total Payment from University: ____________

8. Subcontractor and Payment:
   ________________________________ $ ____________
   ________________________________ $ ____________
   ________________________________ $ ____________
   ________________________________ $ ____________

9. Type Name and Title of the Individual Administering Contract:
   Signature: _______________________ Telephone (____)
   ________________________________

10. Type Name and Title of the Approving Officer
    Signature: ________________________
       _______________________________

GENERAL INSTRUCTIONS

Item 1 The report shall be submitted by the 10th day of the month following close of the reporting period. Reporting periods are: January 1 to March 31, April 1 to June 30, July 1 to September 30, and October 1 to December 31.

Item 2 The initial report shall be identified as Report No 1. Reports shall be consecutively numbered.

Item 3 Date report is completed.

Item 4 Enter information on contractor submitting report.

Item 5 Enter information on the project.

Item 6 Enter the estimated dollar value of the contract. Modify for changes as they occur.

Item 7 Enter cumulative payments received from ASU.

Item 8 Enter name and address of Subcontractor and cumulative payments received.

Item 9 Enter name and title of company individual responsible for administering contract. Signature and telephone number required.

Item 10 The approving officer shall be the senior official of the company responsible for contract performance.
NOTE: SUBMIT REPORT TO THE BUYER IN PURCHASING
ATTACHMENT 4
TO OPERATING MANUAL

CMAR Procedures to Implement Owner’s Subcontractor Selection Plan

[PURCHASING: PLEASE INSERT HERE A COPY OF THE CMAR PROCEDURES SUBMITTED BY CMAR AS PART OF THE RFQ SELECTION PROCESS WITH SUCH MODIFICATIONS AS ARE REQUESTED BY OWNER]