

METROPOLITAN EXPOSITION-RECREATION COMMISSION

RESOLUTION NO. 99-24


Approving issuance of a Request for Proposals (RFP) for Construction Manager/General Contractor (CM/GC) Services for the EXPO Hall "D" Construction Project, contingent upon approval by METRO Contract Review Board of the CM/GC process.

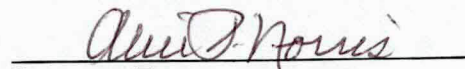
The Metropolitan Exposition-Recreation Commission finds:

1. That Resolution 99-16, authorized issuance of an Architect/Engineer (A/E) RFP for A/E services for the EXPO Hall "D" Construction Project, and
2. In consultation with the Architect/Engineer, the General Manager recommends that a CM/GC process for the construction will benefit the project both financially and in terms of EXPO's events schedule, and
3. That the METRO Council acting as the METRO Contract Review Board must approve use of the CM/GC process for this Project, and
4. That award of the CM/GC construction Project Contract will require the approval of the Commission.

BE IT THEREFORE RESOLVED that the Metropolitan Exposition-Recreation Commission authorizes Staff to issue a Request for Proposals for Construction Manager/General Contractor Services, for the EXPO Hall "D" Construction Project, contingent upon approval by the METRO Contracts Review Board of the CM/GC process.

Passed by the Commission on May 19, 1999.


Chair


Secretary-Treasurer

Approved as to Form:
Daniel B. Cooper, General Counsel


By: Kathleen Pool
Senior Assistant Council

MERC STAFF REPORT

Agenda Item/Issue: Approving issuance of a Request for Proposals for Construction Manager/General Contractor (CM/GC) Services for the EXPO Hall "D" Construction Project, contingent upon approval by METRO Contract Review Board of the CM/GC process.

Resolution No: 99-24

Date: May 19, 1999

Presented by: Chris Bailey

Background: In accordance with Resolution 99-16, MERC Staff issued a Request for Proposals (RFP) on April 9, 1999, for Architectural/Engineering (A/E) Services for the EXPO Hall "D" Construction Project. Integral to that RFP, was the assumption that the Project should be conducted as a CM/GC Project to meet schedule requirements and maximize use of available budget.

Since that time, Staff has received responses from the A/E RFP and is recommending by separate Resolution to the Commission at today's meeting, the approval of the A/E for the project.

Based on the assumptions in the A/E RFP for the utilization of the CM/GC process, Staff requests to subsequently issue the RFP for the CM/GC in accordance with MERC Purchasing Policies and Procedures, and in concert with the stipulations and requirements of the A/E RFP.

Financial and Schedule Considerations: Based on the proposed schedule for the Project with consideration to the time of year and the events schedule, Staff determined that the CM/GC process was the most advantageous for the replacement of Hall "D" to maximize revenue potential and diminish the possibility of weather related and project duration related construction costs.

Funding the Project has been established for both A/E and Construction Services, in the amount of approximately \$15,800,000.

Other Considerations: The CM/GC Process must be authorized by METRO Contract Review Board. "Findings" justifying CM/GC have been reviewed by General Counsel, and have been forwarded to the Operations Committee for subsequent submittal to METRO Contract Review Board for potential approval. Therefore, the MERC Commission may approve a Resolution authorizing the issuance of and RFP for CM/GC contingent upon approval by METRO Contract Review Board.

Upon receipt and evaluation of responses to the RFP, Staff will return to the Commission for potential approval of a CM/GC Contract to effect the construction requirements of the Project.

Recommendation: Staff recommends that the Commission authorize Staff to issue a Request or Proposals for the EXPO Hall "D" Construction Project, in accordance with the MERC Purchasing Policies and Procedures, contingent upon approval by METRO Contract Review Board of the CM/GC process.

REQUEST FOR PROPOSALS

For

**CONSTRUCTION MANAGER/GENERAL CONTRACTOR
SERVICES**

For the

EXPO HALL D CONSTRUCTION

MERC
777 NE MLK, Jr. Blvd
Portland, Oregon 97232

Issued June 1999

REQUEST FOR PROPOSALS
For
CONSTRUCTION MANAGER/GENERAL CONTRACTOR SERVICES
For the
EXPO HALL D CONSTRUCTION

1.0 INTRODUCTION

- 1.1 The Metropolitan Exposition-Recreation Commission (MERC), a commission of Metro, is soliciting written proposals from qualified general contractors to provide Construction Manager/General Contractor (CM/GC) Services for a proposed Construction of a new Expo Hall D. It is the intent of Owner to select a CM/GC who will become a member of a team composed of the Owner, the CM/GC and the Project's Design consultant. The Owner intends to enter into two contracts with the selected CM/GC; a Pre-Construction Services contract on a not-to-exceed fee basis and a Construction Services contract that will include a Fixed Fee (FF) and a Guaranteed Maximum Price (GMP) for the entire scope of the construction work.
- 1.2 The proposed project includes the replacement of Hall D with a new 112,00 square foot facility and completing the code required landscaping in the existing parking area. The work will take place during the ongoing EXPO operations which must continue within the remaining buildings located immediately to the north and south of the Hall D project site.
- 1.3 The CM/GC is being selected early in the Project to provide Owner and the design team with expertise and experience that will assist in project decision making and ensure that procedures are implemented to aggressively manage the construction costs and schedule. The design must allow for economical and efficient methods of construction and construction must allow for the ongoing operations of the EXPO and minimize disruption to the EXPO clients and visitors. Owner seeks the CM/GC who can best provide the services needed to achieve these goals.
- 1.4 An accelerated schedule for the project completion has been established with a project completion date set for March 17, 2001. The construction will occur during on-going operations of the EXPO and will therefore require that the construction activity be completed with minimum disruption to EXPO operations. Other significant objectives of the construction program are safety, work quality and control of construction cost.
- 1.5 While the EXPO Hall D Construction project is underway, the Owner may also carry out other construction and capital improvement projects, which

are funded by sources other than the bond measure. These projects will be outside the scope of the CM/GC's responsibility but will require some level of coordination and cooperation to ensure the success if all projects.

2.0 GENERAL PROPOSAL INFORMATION

- 2.1 Proposals will be received at the MERC Administrative Offices at the Oregon Convention Center, 777 NE Martin Luther King, Jr. Blvd., Portland, Oregon 97232, to the attention of Mark Hunter, July 8, 1999 until 3:00 p.m. Submittals should be clearly marked "Proposal - Construction Manager/General Contractor Services - EXPO Hall D Construction". Each submittal must be submitted in the format described in this RFP.
- 2.2 All information submitted by Proposers shall be public record and subject to disclosure pursuant to the Oregon Public Records Act, except such portions of the proposals for which Proposers request exception from disclosure to the extent permitted by Oregon law.
- 2.3 Owner and its Contractors will not discriminate against any person based on race, color, national origin, sex, sexual orientation, age, religion, physical disability, political affiliation or marital status.
- 2.4 During the performance of the Contract, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin.
- 2.5 A pre-proposal conference and site visit has been scheduled for June 17, 1999 at 2:30 p.m. Those attending should check in at the EXPO Administrative Offices located at 2060 North Marine Drive, Portland, OR 97217.

3.0 PROJECT OVERVIEW

3.1 PROJECT WORK SCOPE

3.1.1 The project site is located at 2060 North Marine Drive, Portland, OR 97217. See Site Plan and preliminary drawings attached as Appendix 1. The project scope includes all labor, equipment and materials necessary to construct the building described as follows:

3.1.2 Replaces the existing 60,000 square foot Hall D with a new 112,000 square foot building that includes:

- .1 72,000 square feet of clear span exhibit space similar to the new Hall E.
- .2 6,000 square feet of conference and lounge space.
- .3 4,000 square feet of upper level administrative office space.
- .4 10,000 square feet of two story lobby with large atrium skylight, ticket office and meeting room space.
- .5 5,000 square feet of commercial kitchen space.
- .6 5,000 square foot connection to Hall C.
- .7 10,000 square feet of storage, service and loading space.
- .8 Level and smooth concrete or raised exhibit hall floor with electrical and signal boxes on 60-ft. centers.
- .9 Hanging operable partitions capable of dividing the exhibit space.
- .10 State of the art technology, including fiber optic capabilities, new lighting controls, computer controlled HVAC system, capacity for audio-visual connections, and telephone internet.
- .11 Site work will include a landscape court in visitor parking area, compliance with Natural Resources Management Plan (NRMP), development of a south parking area complete with nature walk and extensive landscape improvements agreed to with the construction of Hall E.
- .12 Exhibitor and service parking facilities.

3.2 PROJECT BUDGET

3.2.1 The estimated project budget is approximately \$15,800,000 that includes approximately \$1,800,000 in soft costs. The pre-construction services will be included within the soft cost budget. The goal is to build the best building for the set budget.

3.3 SCOPE OF PRE-CONSTRUCTION SERVICES

3.3.1 Pre-construction phase services will be provided under the terms of the sample Personal Services Contract in Appendix 2. It is anticipated that

the specific scope of pre-construction services will be negotiated prior to signing the Pre-construction Services Agreement, based on Proposer's input as well as Owner's requirements. Some of these services will continue into the construction services phase of the project. Services of the CM/GC will include:

- .1 Consult with, advise, assist and provide recommendations to Owner and design team on all aspects of the planning and design of the work.
- .2 Provide information, estimates, schemes, and participate in decisions regarding construction phasing, temporary facilities, temporary access routes/ detours that will create the minimum disruption to the public and EXPO operations. Write a course of construction plan.
- .3 Develop information and participate in decisions regarding value engineering. Provide information on construction materials, methods, systems, phasing, and costs to assist in determinations, which are aimed at providing Owner with the highest quality building within the budget and schedule.
- .4 Provide input to Owner and the design team regarding current construction industry practices, labor market, and materials availability.
- .5 Review in-progress design documents and provide input and advice with respect to construction feasibility, alternative materials/methods, and long-lead material procurements.
- .6 Review completed design documents and suggest modifications to improve completeness or clarity.
- .7 Recommend division of the work to facilitate bidding and award of trade contracts, considering such factors as minimizing disruption of existing operations, improving or accelerating construction completion, minimizing trade jurisdiction disputes, and other related issues.
- .8 Work with Metro's Risk and Contract Division to develop a plan for maximizing minority and women-owned business opportunities in compliance with the objectives of Metro's Minority and Women-owned Businesses Program and MERC's Target Area Program.

.9 Prepare a comprehensive Project CPM schedule and continuously monitor and update the project schedule and recommend adjustments in the design documents or construction bid packaging to ensure completion of the project in the most expeditious manner possible. This will include pre-purchasing and expediting recommendations for long-lead materials in order to meet necessary delivery dates and avoid construction delays.

.10 In cooperation with the project's architect, write a comprehensive Commissioning Plan to be implemented during the course of construction. The Plan shall identify major tasks and the individuals or firms responsible for completing each task.

.11 Work with Owner and the consultant team to maximize energy efficiency, the use of recyclable products to the maximum extent economically feasible and water conservation in the Project. Provide estimating and value engineering support to the Owner's analysis and application for energy related incentive programs offered by local utilities.

.12 Cost Management: Prepare construction cost estimates for the project at appropriate times throughout the design phases of the work. Owner's Project and Construction Managers and the design team will participate fully in the preparation of these cost estimates. At the point in the design phase when the design development drawings are complete, the CM/GC will prepare a construction cost estimate that, when agreed to by Owner, will become the Guaranteed Maximum Price (GMP). The CM/GC will notify Owner's Project and Construction Managers and the design team immediately if their construction cost estimates appear to be exceeding the construction budget or the GMP, once it is established. If Owner and the CM/GC cannot agree on a GMP, Owner reserves the right to terminate the CM/GC's pre-construction services and negotiate the construction of the project with the CM/GC Proposer who received the next highest rating during the RFP evaluations or to publicly bid the work. In the event of early termination, Owner will compensate the CM/GC based on work performed prior to the termination.

3.4 CONSTRUCTION SERVICES

3.4.1 Construction phase services will be under a separate contract and generally be provided under the terms sample Agreement provided in Appendix 3 and the Standard General Conditions provided herein. Duties of the CM/GC will include:

- .1 Solicit and publicly conduct sub-contractor bidding for all construction work except that which is specifically exempted herein or by Owner.
- .2 Maintain a qualified, full time Superintendent and Project Engineer with the needed staff at the job-site to coordinate and provide direction of the work.
- .3 Prepare and maintain a detailed Critical Path Schedule for monitoring project progress and managing the work. Keep Owner's Project and Construction Managers and the design team fully advised of the work progress status. Update CPM on a monthly basis.
- .4 Make available all cost and budget estimates, including supporting materials and records, to Owner's Project and Construction Managers and the design team. Provide monthly reports of actual costs and work progress as compared to estimated cost projections, scheduled work progress, and as a percent of project completion. Explain significant variations and provide information as requested by Owner's Project and Construction Managers or the design team.
- .5 Establish an effective quality control plan for all construction and inspect the work as it is being performed to assure that materials furnished and quality of work performed are in accordance with the plan and construction documents.
- .6 Work with Owner's Project and Construction Managers and the design team to establish and implement procedures for tracking, expediting and processing all shop drawings, catalogs, requests for information and other drawings.
- .7 Establish effective programs for the following; job-site safety, maintaining all job-site records, and labor relations.
- .8 Implement the previously established Minority and Women-Owned Business and Target Area Program. Report as requested the status and results of such Program.
- .9 Prepare and distribute weekly and monthly progress and status reports.
- .10 Review and process all applications for payment by sub-contractors and material suppliers in accordance with the terms of

their contract. Review and resolve, with Owner's participation, all sub-contractors' and/or material suppliers' request for additional costs. CM/GC shall keep Owner informed of all subcontractor modifications. Owner shall approve all changes to the work in excess of the GMP.

.11 Schedule and conduct at least weekly job meetings to ensure orderly progress of the work. Prepare and distribute record of the meetings to meeting attendees, Owner's Project and Construction Managers and the design team.

.12 Resolve, on behalf of Owner with Owner's participation, all disputes that may arise between sub-contractors and/or suppliers as a result of construction and report resolutions to the Owner.

.13 As construction is completed, the CM/GC shall provide the following closeout services:

- a. Coordinate and expedite the submittal of record documents.
- b. Organize and index operations and maintenance manuals.
- c. Assist in securing occupancy permits.
- d. Provide continuing change order review and processing services.
- e. Prepare a project completion report for assistance in turnover of new building to OCC operating department.
- f. Prepare a final report of all construction costs. Assist Owner with audit of final cost report and supply all supporting documentation.
- g. Provide lien waivers from all sub-contractors and material suppliers.
- h. In concert with the Design team, implement the previously written Commissioning Plan.

3.5 SPECIAL REQUIREMENTS

3.5.1 The CM/GC will publicly conduct the sub-bidding of all construction work costing \$75,000 or more, including General Condition's items, which is not specifically exempted herein or by Owner. This will include:

.1 All bids are required to be submitted to a specific location at a specific time and opened/reviewed in the presence of Owner's representative. Bids will be publicly read at a specified time and location. Faxed bids are permitted provided adequate measures are taken to protect their confidentiality prior to bid opening. Upon review of bids received, the CM/GC will make written recommendations for Owner's approval of the low qualified bidder(s). Subcontracts less than \$75,000 requires Owner's review.

.2 In the case of no bidders, no additional advertisement will be required. The CM/GC must attempt to obtain a minimum of three bids, document the process and make a written recommendation for Owner's approval.

.3 In the case of only one bidder, the CM/GC shall review the bid against the GMP estimate and/or other appropriate tests to determine if bid is reasonable and make a written recommendation for Owner's approval. If bid is determined to unreasonable, Cm/GC shall reject the bid and follow "no bidders" procedure.

.4 Solicitations for bids will be advertised at least ten days in advance of the bid opening. Solicitations will be advertised in the Daily Journal of Commerce and at least one other newspaper specifically targeted to reach MBE, WBE, ESB and Target Area audiences. CM/GC will be required to implement the previously developed plan as required in Paragraph 3.3.1.8 of this document.

.5 CM/GC may provide normal layout, clean up and other "pickup work" required to complete the project with its own forces without needing to employ bidding/quoting if approved by Owner.

.6 For those items for which the CM/GC or any of its subsidiaries, other affiliates or businesses in which it has a financial interest intends to bid, such intention must be publicly announced in an approved manner at least 21 days prior to bid. All bids for these items shall be sealed and delivered to the Owner and opened by Owner's representative at an announced time, date, and place.

.7 The CM/GC should attempt to obtain a minimum of three bids for each package of work bid \$5,000 and above and under \$75,000.

3.5.2 The award of sub-contracts by the CM/GC will be subject to the following:

- .1 Owner concurrence in the award of sub-contracts is required
- .2 Advance approval by Owner is required for sole-source contract awards.

3.5.3 Procedures for Changes to all subcontracts within the GMP shall include the following:

- .1 Changes within the GMP to subcontracts between \$25,000 and \$75,000 require review and acknowledgment by Owner.
- .2 Changes within GMP to subcontracts \$75,000 and above require review and approval by Owner.

3.5.4 All changes outside the GMP require Owners prior written approval.

3.5.5 At a minimum, all workers on this project shall be paid in accordance with the provisions of the Prevailing Wage Rates for Public Work Projects in the State of Oregon. See Appendix 4.

3.5.6 CM/GC shall work with Owner's Project and Construction Managers and the design team to incorporate work(s) of art from the projects 1% for Art Program into the design and construction of the building. Some art installation may be integrated into the building's construction. Costs for art and installation are not the responsibility of the CM/GC. The Art Program budget for this project is 1% of the total construction cost.

3.5.7 A schedule of events for the EXPO (which is subject to change) through March of 2001 is included in Appendix 5. The purpose of this schedule is to supply the Contractor with as much event information as may be available to conduct traffic control planning, to be exercised as may be possible during the course of the project, and for the Contractor to plan the performance of work required, as types of work in particular areas during certain events would adversely impact those events. This schedule indicates the name of the event, type of event, location in the Facility, move-in and move-out dates, event dates, times as may be

available, and potential attendance of events currently scheduled. During construction, it will be the responsibility of the Contractor to closely coordinate with designated Facility Staff on a daily basis to prevent or mitigate adverse impacts in relation to accessibility and the conduct of events and operations at the Facility. Modifications in the schedule will be conveyed to the Contractor directly following the implementation of the change, so that work plans may be modified as necessary or possible.

3.5.8 Parking availability will be a significant concern to the Owner during the course of this project. The Owner understands that some current onsite event parking will be reduced or eliminated for a period of time during the construction process. Contractor shall make every effort to maximize onsite parking for the public during the entire course of the project.

4.0 PROJECT ORGANIZATION

- 4.1 Owner is in the process of retaining an Architect/Engineer to lead the design of the project work and provide services through construction completion.
- 4.2 The Owner's contact for this project is the project manager to be appointed in writing by the Metro Executive Officer.

5.0 PROJECT SCHEDULE

- 5.1 The milestones for the project are set forth below. The dates are approximate, but will be followed to the extent reasonably possible. The purpose of this schedule is for proposer information only. Required dates for submittals and any other activities are provided elsewhere in this Request for Proposals. The current project schedule includes the following dates or milestones.

June 11, 1999	Issue RFP for CM/GC
June 17, 1999	Pre-Proposal Conference
July 8, 1999	Proposals due to Owner
Week of July 12, 1999	Interviews of selected finalists
Week of July 19, 1999	CM contract selection/notification
August 1, 1999	CM Contract commencement
September, 1999	Establish GMP
September, 1999	GC Contact executed
April, 2000	Start Construction
March 17, 2001	Complete construction

6.0 PROPOSAL INSTRUCTIONS

6.1. Deadline and Submission of Proposals

Proposers shall submit 10 copies of their proposal to the Owner addressed to:

MERC
777 NE MLK, Jr. Blvd.
Portland, OR 97232
ATTN.: Mark Hunter

And clearly marked "Proposal - Construction Manager/General Contractor Services - EXPO Hall D Construction." Submittals will be returned and not considered if received after 3:00 p.m., July 8, 1999. Postmarks are not acceptable.

Proposers may withdraw their Proposal in person, or by written or telegraphic request prior to the scheduled closing time for submitting Proposals.

6.2. Basis for Proposals

This RFP represents the most definitive statement Owner will make concerning the information upon which the submittals are to be based. Owner will not consider any information, which is not addressed in this RFP, in evaluating the submittals. All questions relating to the RFP should be addressed to Berit Stevenson. Any questions, which in the opinion of Owner warrant a written reply or RFP amendment, will be furnished to all parties receiving this RFP. Owner will not respond to questions received after 3:00 p.m., July 2, 1999.

6.3 Selection Committee

Owner will appoint a Selection Committee to review the submittals received and conduct interviews. The Selection Committee will evaluate information provided in the written proposals and interviews and rank the candidates in order of suitability to meet Owner's needs. Criteria to be used for evaluation are listed in Section entitled Evaluation of Proposals.

6.4 Award of Contract

Owner intends to award Contracts for Pre-Construction Services and Construction Services to the Proposer who, after considering the recommendation of the Selection Committee, Owner finds best fits the

needs of Owner to perform the work in accordance with the requirements set out in this RFP.

7.0 PROPOSAL CONTENTS

7.1 The submittal should contain not more than the equivalent of forty single sided pages of written material (excluding resumes, which should be included in an appendix), describing the ability of the Proposer to perform the work requested. Proposals should be concise and direct. They should be submitted on 8-1/2 x 11-inch paper, with basic text information no smaller than 12-point type. The only exception to this page-size limit is a single 11 x 17-inch sheet for the proposed project schedule and an organization chart. They should be submitted on recyclable, double-sided recycled paper (post-consumer content). No waxed page dividers or non-recyclable materials should be included in the proposal. The submittal should include the following information:

.1 Firm Description

- a. For each firm participating in the proposal, provide a brief narrative description of the firm's history and capabilities. Include CM/GC experience, annual volume figures for the last five years, current firm commitments and current bonding capacity.
- b. Provide a specific description of your firm's safety and drug and alcohol programs, as well as your most recent Workers Compensation Insurance experience modifier.

.2 Experience

- a. Provide a listing, in chronological order and in chart form, of your firm's last completed projects of \$10 million or more (provide a list of at least five). Information on these projects should include the following:
 - (1) Name of the Owner, contact person and current phone number
 - (2) The architect, contact person and current phone number
 - (3) Location of the project and completion date
 - (4) A brief description of the project
 - (5) Amount of Contract award or negotiated GMP
 - (6) Final Contract amount and total volume of change orders
 - (7) Total project claims going to litigation/arbitration and their disposition

b. Provide a listing, in chronological order and in chart format, of your firm's experience with similar projects. Information about the project should follow the format and include the same information required above.

c. Provide a listing of experiences with the CM/GC GMP jobs for the public sector. The listing should follow the format described in the previous section, but should include both the GMP, and the final Cost of the Work. (If the proposer's public CM/GC GMP experience is limited, experience with pure CM, or CM/GC for the private sector may be discussed.)

.3 Staffing

a. Provide a project organization chart showing your proposed staff for this job, including all professional staff involved in project management, corporate administration, engineering and estimating, construction management and onsite supervision.

b. Include resumes for all individuals listed in the chart. Clearly identify field staff versus off-site staff and indicate the approximate percentage each individual will be working on the project during the Pre-construction phase and the Construction phase. The resumes must include each individual's education, work history, length of tenure with the firm and their relevant past experience with similar projects and any experience working with the public sector CM/GC projects.

c. For those individuals that are not full time, describe how and when they will work on the project, as well as which other project responsibilities fill their time. Additionally, describe the prior experience, if any, of the team members working with each other on projects (please be specific) and what roles they will fill on the proposed team for this project.

.3 Project Approach and Management of the Work

In detail, describe your firms' overall plan to complete the project. At a minimum, include the following:

a. Discuss your plan for providing services in the pre-construction, construction and commissioning phases of the project. Include information on management of project costs, schedule, and work quality and safety.

- b. Explain your preliminary approach/ideas on the project phasing. Address the viability of the current scheduled construction completion dates and suggest potential means to accelerate the work to meet or reach completion ahead of the scheduled dates. Provide a preliminary schedule showing your project phasing plan.
- c. Explain how you will approach the cost estimating and value engineering work.
- d. Explain how you intend to establish and maintain good relations and foster open and productive communications with Owner, their Project and Construction Managers, the design team, EXPO staff and sub-contractors
- e. Identify key issues and constraints you foresee in the project. Propose means of resolution of such.
- f. Describe what your experience has been and what your expectations are for labor and materials availability for this project.

.4 Fee Proposal

- a. Submit a fee proposal for the CM/GC services in two parts.
 - i. *Pre-Construction Services*: Provide a not-to-exceed price and a breakdown of hourly rates for personnel involved in the Pre-construction phase of the project. Include an estimate of expenses. This information shall become the basis for the Agreement for Pre-construction Services.
 - ii. *Construction Services*: Identify the fee for construction services in two parts:

Fixed Fee - State the Fixed Fee, as a percentage of the total construction cost, for which your firm would contract to perform the required construction services. Identify what costs you would propose are included in the Fixed Fee. Note if proposed cost items are different than what is stated in the sample contract, which is attached as Appendix 3. Identify all proposed project staff that would be included as a part of the Fixed Fee.

Reimbursables - Based on the staffing shown on the project organization chart and the individuals identified above, provide a detailed estimate (including a breakdown of the monthly

salary of each) of the staffing costs which are not in the Fixed Fee, but will be included within the GMP as a Reimbursable cost of the work for performing construction services. Identify and estimate the cost expenses, other than sub-contract labor and materials cost, which will be included in the Reimbursable costs. A cost range may be used, describing the parameters, which would effect the high and low ends of the range. Note if proposed cost items are different from the sample contract, which is attached as Appendix 3.

c. Describe your proposed method of documenting the line item components of the GMP and the method of determining whether project changes are inside or outside the scope of the GMP.

.5 Project Cost, Schedule and Quality Controls

Describe your proposed methods of managing project costs, schedule and quality controls. Describe your companies accounting system, layout of monthly cost reports, method and forms proposed for monthly invoices, tracking systems and procedures for reporting and controlling costs. Describe your company's scheduling program, monthly updates, three-week look ahead schedules and tracking of changes to the critical path. Also provide a detailed description of your company's quality control program and the testing laboratories you have worked with and your recommended procedures and laboratory for this project.

.6 MBE/WBE/ESB Utilization

Discuss your experience with promoting participation on the part of minority, women-owned and emerging small business enterprises as contractors, subcontractors and suppliers. Explain your approach to obtain maximum participation on this project. Describe how you would propose to maximize the participation of the minority workforce on this project particularly those from the north and inner northeast neighborhoods.

8.0 GENERAL PROPOSAL AND CONTRACT CONDITIONS

8.1 Limitation and Award

This RFP does not commit Owner to the award of a contract, nor to pay any costs incurred in the preparation and submission of Proposals in anticipation of a contract. Owner reserves the right to reject or accept any or all Proposals received as the result of this request, to negotiate with all qualified sources, or to cancel all or part of this RFP.

8.2 Contract Types

Owner intends to award both a Pre-Construction Services Contract and a Construction Services Contract with the selected firm. Copies of the sample contracts are attached as Appendix 2 and 3. Any concerns or recommendations for changes should be included in the Proposal submittal, including an explanation why it is in the best interests of Owner to accept recommended changes. Requests for changes in contract language submitted after selection of the successful Proposer may be treated as a withdrawal of the Proposal. In the event Owner and the successful Proposer do not agree on the terms of a contract, Owner may, at its option, begin negotiations with the Proposer ranked next highest by the Selection Committee.

8.3 Validity Period and Authority

The Proposal shall be considered valid for a period of 60 days and shall contain a statement to that effect. The submittal shall contain the name, title, address and telephone number of an individual or individuals with authority to bind the proposing firm during the period in which Owner is evaluating the submittals.

8.4 Conflict of Interest

A Proposer submitting a Proposal thereby certifies that no officer, agent, or employee of Metro or MERC has a pecuniary interest in the submittal; that the submittal is made in good faith without fraud, collusion, or connection of any kind with any other Proposer; the Proposer is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm.

8.5 Appeals

Appeals of the award of the Contracts should be addressed to the Metro Contracts Administrator, Risk and Contracts Division, 600 NE Grand

Avenue, Portland, Oregon 97232. Appeals shall be submitted in writing within five working days of the postmarked Notice of Award or disqualification. Appeals must describe the specific citation of law, rule, regulation, or practice upon which protest is based. The judgment used in the evaluation by individual members of the Selection Committee is not grounds for appeal.

8.6 Performance and Payment Bonds

Performance and Payment Bonds will be required from the successful Proposer. A Company currently licensed to do business in the State of Oregon, on a form acceptable to Owner and drawn in favor of Owner in an amount not less than the GMP shall issue such bonds.

8.7 Liquidated Damages

Liquidated damages of \$1,000 per day will be assessed for each and every calendar day that substantial completion of the building exceeds March 17, 2001. Liquidated damages are not a penalty; they are a reasonable approximation of the actual damages that would be sustained by Owner by failure of the CM/GC to achieve substantial completion by March 17, 2001. By signing the Construction Services Agreement, the CM/GC acknowledges and accepts, in full, this liquidated damages provision.

9.0 EVALUATION OF PROPOSALS

9.1 Evaluation Procedure

Only submittals received that conform to the requirements of this RFP will be evaluated. The evaluation will be based on the criteria identified in the following section and performed by a Selection Committee appointed by Owner. After review of the written submittals, the Selection Committee will rank the Proposers. The three highest ranking Proposers will be interviewed. Upon completion of the interviews, the Selection Committee will rank the three candidates based both on their written proposal and their interview. The Selection Committee may request clarifying information of any Proposer during the evaluation process which should be provided in a timely manner.

9.2 Evaluation Criteria

The Selection Committee will evaluate information provided in the written Proposals and the interviews to rank the candidates in order of suitability to meet Owner's needs. Criteria to be used for evaluation are

as follows, listed in order of importance with the most important criteria listed first.

A	Project Approach and Management Plan	30 points
B.	CM/GC Project Team	30 points
C.	Firm Experience and Safety	15 points
D.	Fee Proposal	15 points
E.	Project Cost, Schedule and Quality Controls	5 points
F.	Past Utilization of M/WBE Subcontractors	<u>5 points</u>
	Total	100 points

9.3 Evaluation Scoring Process

Each selection committee member will rate each proposal by categorization and percentile scoring for each criterion for short listing purposes.

Interview scores will be based on point distribution scoring by each of the same selection committee members for each criterion with the maximum number of points to be the same as in the short listing process, but distributed by each committee member to each of the proposer's interviewed with the overall total not to exceed the maximum. RFP response short listing scores will not be taken into consideration in this process. The highest cumulative scoring proposer will be selected.

The selection committee members have not yet been selected. The member's names will be made available to proposers prior to interviews taking place. Contact with committee members regarding this RFP will be strictly prohibited once the members have been identified.

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. This section describes the project and the work to be performed under this Contract. Detailed requirements and extent of work are stated in applicable Specification sections and shown on the Drawings.

1.2 ORGANIZATION AND INTERPRETATION OF CONTRACT DOCUMENTS

- A. Specifications and Drawings included in these Contract Documents establish the performance, quality requirements, location and general arrangement of materials and equipment, and establish the minimum standards for quality of workmanship and appearance.
- B. Specification sections have not been divided into groups for work of subcontractors or various trades. Should there be questions concerning the applicability or interpretation of a particular section or part of a section or Drawing, direct questions to the Engineer.
- C. A part of the work that is necessary or required to make each installation satisfactory and operable for its intended purpose, even though it is not specifically included in the Specifications or on the Drawings, shall be performed as incidental work as if it were described in the Specifications and shown on the Drawings.

1.3 DESCRIPTION OF PROJECT

- A. General
 - 1. The work covers construction work specifically shown on the Contract Drawings and described herein.
 - 2. This contract is for the EXPO Hall D Construction.
 - 3. The Contractor shall, except as otherwise specifically stated in applicable parts of these Contract Documents, provide and pay for labor, materials, equipment, tools, construction equipment, facilities, and services necessary for proper execution, testing, and completion of the work.

1.4 PERMITS AND LICENSES

- A. Owner has secured general permits for the project. Copies of the permits are on file at Owner. All requirements set forth by these permits shall be investigated prior to bidding and are to be strictly enforced by Contractor and his agents.
- B. Contractor shall acquire and pay for all specialty permits such as electrical permits, transportation permits, street closure permits, wage and hour regulations permits, and all other permits of a temporary nature relating to the construction of the project.

1.5 USE OF PREMISES

A.

* * * END OF SECTION* * *

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Bid Form: Section 00300
- B. Payments:
- C. Construction Schedules: Section 01310
- D. City of Portland Standard Construction Specifications (Division 2 through Division 6)

1.2 MEASUREMENT OF QUANTITIES

- A. Payments will be made based on measurements of completed work in accordance with the United States Standard Measures, and as set forth in the applicable divisions of the City of Portland Standard Specifications unless otherwise noted.
- B. Volume of materials measured in the vehicles by which they are transported will require computing of the volume of the vehicles to the nearest 0.1 cubic yard for its capacity. Pay quantities will be determined by vehicle measurement at point of delivery with no allowance for settlement of material during transit. Loads shall be level and uniform. Payment will not be made for material in excess of the approved capacity of the vehicle and deductions will be made for loads below approved capacity.
- C. Volume of concrete and masonry in structures will be measured according to neat lines as shown on the Plans or as altered on order by the Engineer or OWNER.
- D. Volume of earthwork, particularly excavation and embankment, will be computed by the average end area method of material in place or by other methods of equivalent accuracy.
- E. Contractor shall make all interim measurements, and determine all interim quantities and amounts of completed work done under the Contract. At the time measurements are made for quantity determination, the Engineer or OWNER shall be present to verify such measurements. From quantity figures so ascertained, it will be Contractor's responsibility to prepare a monthly periodical estimate of the work accomplished to date. This estimate and application for payment shall be submitted to OWNER each month for review not later than the date established at the preconstruction conference. The Engineer and/or OWNER will take measurements

and determine the final quantities for payment with Contractor present to verify such measurements.

1.3 SCOPE OF PAYMENT

A. Quantities listed in the Bid do not govern final payment. Payments to the Contractor will be made only for actual quantities of Contract Items performed in accordance with terms of the Contract and for items of work actually performed under Change Order. Bid Item quantities are estimates only, being given only as the basis for comparison of Bids and OWNER does not warrant, expressly or by implication, that the actual amount of work will correspond therewith. The right to increase or decrease the amount of any class or portion of the work, or to make changes in the work required as may be deemed necessary is reserved by OWNER as provided elsewhere in the specifications. All prospective bidders should note that certain bid items may be included in the Bid Form to establish a unit price should use of those items become necessary during construction. Allowance will not be made for loss of anticipated profits or additional compensation should the use of these items be deemed unnecessary.

B. The Contractor shall accept the compensation, as herein provided, in full payment for furnishing all materials, labor, tools and equipment necessary to the completed work, and for performing all work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the final acceptance by the Owner.

1.4 INITIAL APPLICATION FOR PAYMENT: Prior to the submittal of the first Application for Payment, the contractor shall submit:

- A. Quality Control Plan
- B. List of subcontractors
- C. List of suppliers
- D. Schedule of Values
- E. Contractor's Construction Schedule
- F. Submittal Schedule
- G. List of Contractor's staff assignments
- H. Copies of building permits required to be procured by the Contractor
- I. Copies of licenses from governing authorities
- J. Certificates of insurance and insurance policies
- K. Performance and payment bonds

1.5 SCHEDULE OF VALUES: Refer to General Conditions Article 9.

A. Contractor shall prepare the Schedule of Values as follows:

1. Prepare Line Item Breakdown for lump sum bid items.

Break Contract lump sum bid item amounts down in line items corresponding to each Division Specification Section and in enough detail to facilitate evaluation of Applications for Payment. Break subcontract amounts down into several line items. Round amounts off to the nearest hundred dollars; the total shall equal the Contract Amount.

Breakdown shall be balanced so that progress payments will not create a condition where sufficient funds are not available to complete the work. Contractor shall provide documentation substantiating the cost allocation if the Engineer or OWNER believes that the costs are unbalanced.

2. Arrange the Schedule of Values in a tabular form with columns to indicate the following for each line item:
 - a. Description
 - b. Related specification section
 - c. Name of subcontractor
 - d. Name of manufacturer or fabricator
 - e. Name of supplier
 - f. Change Orders (numbers) that have affected value
 - g. Dollar value
 - h. Percentage of Contract sum to the nearest percent, adjusted to total 100 percent
3. Include the following on the Schedule of Values:
 - a. Project name and location
 - b. Name of the Engineer
 - c. Contractor's name and address

B. The Schedule of Values shall be consistent with:

1. Contractor's Construction Schedule
2. Application for Payment form
3. List of subcontractors
4. List of products
5. Schedule of submittals

C. Submit the Schedule of Values to OWNER for review and approval within thirty (30) days after issuance of Notice to Proceed, but no later than fifteen (15) days before the date scheduled for submittal to the initial Application for Payment. Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives change the Contract Sum.

- D. Upon acceptance of the Schedule of Values by OWNER, it shall be used as a basis for all requests for partial payment.

1.6 APPLICATION FOR PAYMENT

A. Application for Payment Format

Use the AIA Document G702 and Continuation Sheets G703 as the form for the application. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made. Include amounts of Change Orders and Force Account Work issued prior to the last day of the period covered by the application. Show items in accord with Article 8 of the General Conditions. Each item in the Schedule of Values and Applications for Payment shall be complete including total cost and share of overhead and profit.

- B. For each item where an Application of Payment includes products purchased or fabricated and stored, but not installed, provide separate line items for initial cost and installed value.
- C. Temporary facilities and items not a direct cost of Work-in-place may be shown either as separate line items or distributed as general overhead expense.
- D. Where Maintenance Manuals are required, no more than 50% of the applicable portion of the lump sum bid shall be paid prior to receipt of a rough draft of the Maintenance Manual and no more than 90% of the final payment shall be made before receipt of the Maintenance Manual complete.

1.7 WAIVERS OF LIEN: With each application, submit waivers of lien from every entity who may file a lien arising out of the Contract and related to the Work covered by the payment. Submit partial waivers on each item for the amount requested, prior to deduction for retainage. When an application shows completion of an item, submit final or full waivers.

1.8 FINAL PAYMENT APPLICATION: Prior to submitting the application, the contractor shall submit:

- A. Written certification of Final Completion approved by OWNER
- B. Completion of Project Closeout requirements as outlined in the General Conditions
- C. Completion of items specified for completion after Substantial Completion
- D. Transmittal of required Project construction records to Owner
- E. Occupancy permits
- F. Warranties and maintenance agreements
- G. Maintenance instructions
- I. Meter Readings
- J. Final cleaning

- K. Application for reduction of retainage and consent of surety
- L. Punchlist of work remaining and corrections required

1.9 CHANGE ORDER AND FORCE WORK PROCEDURES:

*** * * END OF SECTION * * ***

**SECTION 01030
ALTERNATES**

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

Section 01010 - Summary of Work
Section 01040 - Coordination and Site Conditions

1.2 GENERAL

- A. At the option of the Owner, the Base Bid may be increased or decreased by any of the Alternates. The Owner may accept the Alternates in any order which may appear to be in the Owner's best interest. Coordinate pertinent related work and modify surrounding work as required to complete the project under each alternate designated in the Owner/Contractor Agreement and subsequent Change Orders.
- B. Bidders are required to bid upon all Alternates described herein and denoted on the bid form, Section 00300. The bids shall be lump sum and shall be denoted on the Bid Form by the Bidder as either additive or deductive.
- C. The Owner's decision to exercise any Alternate shall not relieve the Contractor of completion of the Project in accordance with the Time of Completion.
- D. A brief description of each alternate follows. The applicable specification sections apply to the Work under each Alternate.

1.3 DESCRIPTION OF ALTERNATES

A. Alternate Number 1

NAME
Description

RELATED WORK

Section # - Title
Section # - Title
Section # - Title

***** END OF SECTION *****

SECTION 01040

COORDINATION AND SITE CONDITIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Requirements for coordinating and sequencing the work under the Contract and requirements regarding existing site conditions.
- B. Requirements for cutting and patching of new and existing work.

1.2 JOBSITE COORDINATION

- A. The Contractor is responsible for overall coordination of the project.
- B. The project work shall be coordinated with the operation of the OWNER staff so as to maintain employee parking and to minimize traffic congestion and other problems during Convention Center events. Utility location and connections shall be coordinated with the proper utility companies.

1.3 SITE CONDITIONS

A. Information On Site Conditions

- 1. General: Information obtained by the Owner regarding site conditions, topography, subsurface information, groundwater elevations, existing construction of site facilities as applicable, and similar data will be available for inspection at the office of the Engineer upon request. Such information is offered as supplementary information only. Neither the Engineer nor the Owner assumes any responsibility for its accuracy or completeness or for the Contractor's interpretation of such information.
 - a. Where measurement of quantities depends on elevation of existing ground, elevations obtained in the field will be compared with those shown on the Drawings. Variations of 1 foot or less will be ignored, and the profiles shown on the Drawings will be used. Variations greater than 1 foot will be compensated for by holding the shape of the drawn profile but shifting each end vertically upward or downward by the amount of the variation.
- 2. Control Points: Contractor shall establish vertical and horizontal survey control points on structures and improvements located in the vicinity of the work prior to beginning work, and shall check the points for movements when directed by the Engineer. Furnish Engineer with copies of survey notes for each survey and a copy of the layout of survey control points.
- 3. Contractor will provide all field engineering services and record changes in the location, or layout, of permanent structures on the Project Record Documents.

B. Existing Utilities

1. Location

- a. Known utilities and facilities adjacent to or within the work area are shown on the Drawings. The locations shown are taken from existing records and the best information available from existing utility plans; however, it is expected that there may be some discrepancies and omissions in the locations and quantities shown. Those shown are for the convenience of the Contractor only, and no responsibility is assumed by either the Owner or the Engineer for their accuracy or completeness. Contractor's request for additional compensation or Contract time resulting from encountering utilities not shown will be considered as set forth in the General Conditions.
- b. Contractor shall exercise reasonable care to verify locations of utilities and facilities shown on the Drawings and to determine the presence of those not shown. Immediate and adjacent areas where excavations are to be made shall be thoroughly checked by visual examination for indications of underground facilities, and also checked with electronic metal and pipe detection equipment.

2. Contractor's Responsibilities

- a. Where Contractor's operations could cause damage or inconvenience to railway, telegraph, telephone, television, power, oil, gas, water, sewer, or irrigation systems, the Contractor shall make arrangements necessary for the protection of these utilities and services. Replace existing utilities removed or damaged during construction, unless otherwise provided for in these Contract Documents.
- b. Notify utility offices that are affected by construction operations at least 48 hours in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for the utilities.
- c. Contractor shall be solely and directly responsible to owner and operator of such properties for damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of injuries or damage which may result from construction operations under this Contract.
- d. Neither Owner nor its officers or agents shall be responsible to Contractor for damages as a result of Contractor's failure to protect utilities encountered in the work.
- e. In event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental damage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration as promptly as possible and pay for repair. Prevent interruption of utility service unless granted by the utility owner.
- f. In the event Contractor encounters water service lines that interfere with trenching, obtain prior approval of the water utility, cut the service, dig through, and restore service to previous conditions using equal materials.

C. Interfering Structures

1. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground. An attempt has been made to show major structures on the Drawings. While the information has been compiled from the best available sources, its completeness and accuracy cannot be guaranteed.
2. Protect existing structures from damage, whether or not they lie within limits of easements obtained by the Owner. Where existing fences, gates, buildings, or other structure must be removed to properly carry out work, or are damaged during work, restore them to original condition and to the satisfaction of property owner.
3. Contractor may remove and replace in equal or better than original condition, small structures such as fences, that interfere with Contractor's operations.

D. Field Relocation

1. During construction, it is expected that minor relocations of proposed facilities will be necessary. Make such relocations only by direction of the Engineer. If existing structures are encountered that prevent construction as shown, notify the Engineer before continuing with work so Engineer may make necessary field revisions.
2. Where shown or directed by and acceptable to the Engineer, provide relocation of existing facilities to include piping, utilities, equipment, structures, electrical conduit wiring, electrical duct bank, and other miscellaneous items. Use only new materials for relocation of existing facilities. Match materials of existing facilities, unless otherwise shown or specified. Perform relocations to minimize downtime of existing facilities. Install new portions of existing facilities in their relocated position prior to removing existing facilities, unless otherwise accepted by Engineer. Comply with cutting and patching requirements in this section.

E. Easements

1. It is anticipated that required easements and permits will be obtained before construction is started. However, should the procurement of any easement or permit be delayed, schedule work so that operations are confined to areas where easements or permits have been obtained or are not required, until such time as easements and permits have been secured.
2. Before final payment will be authorized, Contractor shall furnish the Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's property.
3. In the event Contractor is unable to secure written releases, inform the Owner of the reasons.
 - a. Owner or its representatives will examine the site, and Owner will direct Contractor to complete work that may be necessary to satisfy terms of the easement.

- b. Should Contractor refuse to do this work, Owner reserves the right to have it done by separate contract and deduct the cost of same from the Contract amount, or require the Contractor to furnish a satisfactory bond in a sum to cover legal claims for damages.
 - c. When Owner is satisfied that work has been completed in agreement with the Contract Documents and terms of easements, the right is reserved to waive the requirement for written release if:
 - 1) Contractor's failure to obtain such statement is due to the grantor's refusal to sign, and this refusal is not based upon any legitimate claims that Contractor has failed to fulfill the terms of the easement, or
 - 2) Contractor is unable to contact or has had undue hardship in contacting the grantor.
- F. Salvage of Materials: Contractor shall salvage materials for Contractor's use where shown on Drawings.
- G. Connecting to Existing Facilities: Unless otherwise shown or specified, determine methods of connecting new work to existing facilities, and obtain Engineer's review and acceptance of connections.
- 1. Determine location, elevation, nature, materials, dimensions, and configurations of existing facilities where necessary for connecting new work.
 - 2. Inspect existing record drawings and shop drawings, conduct exploratory excavations and field inspections, and conduct similar activities as needed.
 - 3. Shutdown of Owner's existing facility prior to connection, if necessary, shall be by Owner or as specified.

1.5 PROJECT MEETINGS

- A. Preconstruction Conference: Within 20 days following execution of Contract but before start of work at the site, Contractor shall meet with Owner and Engineer for discussion of scheduling requirements, procedures for handling shop drawings and other submittals, processing application for payment, and establishing a working understanding among the parties. The conference shall be attended by:
- 1. Contractor's office representative.
 - 2. Contractor's general superintendent.
 - 3. Subcontractors' representatives whom Contractor may desire or Engineer may request to attend.
 - 4. Engineer's representatives.
 - 5. Owner's representatives.

- B. Progress Meetings: Contractor will schedule regular progress meetings to be held once every week to review work progress, schedules, and other matters needing discussion and resolution.

1.6 SEQUENCE OF WORK

A. Operation and Shutdown of Existing Facilities

1. Continuous operation of a minimum of thirty (30) parking spaces is required during the total duration of the contract.
 - a. Schedule and conduct activities to minimize disruption to events at the convention center and employee parking.
 - b. Conduct work outside normal working hours as may be necessary to meet project schedule and avoid undesirable conditions.

- B. Modifications to Existing Facilities: Where existing facilities are to be modified during the course of work, obtain Engineer's review and acceptance of submittals for temporary shutdown, demolition, modification, corrections between new and existing work, and other related work. Conform to other sections as applicable.

- C. Milestone Completion Dates for Portions of Work: Refer to the Proposal for completion dates and Section 1310 Construction Schedule for detailed scheduling requirements.

D. Time of Work

1. No work shall be done between 6:00 p.m. and 7:00 a.m., nor on Sundays or legal holidays, without the written permission of the Owner. However, maintenance or emergency work during these hours may be done without prior permission.
2. Night work may be scheduled by Contractor as regular procedure with the written permission of Owner. Such permission, however, may be revoked at any time if Contractor fails to properly execute and control nighttime work.

- E. Overtime Notice: If Contractor for convenience should desire to carry on work at night or outside regular hours, submit written notice to the Engineer and allow ample time for satisfactory arrangements to be made for inspecting work in progress.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

A. General

1. Execute cutting (including excavating), fitting, or patching of work, required to:
 - a. Make the several parts fit properly.
 - b. Uncover work to provide for installation of specified work.
 - c. Remove and replace defective work or work not conforming to requirements of Contract Documents.
 - d. Remove samples of installed materials as specified for testing.
 - e. Install specified work in existing construction.
2. Perform the following upon written instruction of Engineer:
 - a. Uncover work to provide for Engineer's observation of covered work.
 - b. Remove samples of installed materials for testing.
 - c. Remove work to provide for alteration of existing work.
3. Contractor shall not, without written consent of Engineer:
 - a. Cut or alter work of another contractor.
 - b. Cut structural or reinforcing steel.
 - c. Endanger existing or new structures or facilities.
 - d. Shut down or disrupt existing operations.
4. Materials for replacement of work removed shall comply with applicable sections of these Specifications for corresponding type of work to be done.
5. Provide all tools and equipment required to accomplish cutting and patching.

B. Inspection and Preparation

1. Inspect existing conditions of work, including elements subject to movement or damage during cutting, patching, excavating, and backfilling.
2. After uncovering work, inspect conditions affecting installation of new products.

C. Procedures

1. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances and finishes.
2. Execute demolition as specified in Section DEMOLITION.
3. Execute excavating and backfilling as specified in Section EARTHWORK.
4. Restore work which has been cut or removed; install new products to provide completed work in accordance with specified requirements.

5. Refinish entire surfaces as necessary to provide an even finish.
 - a. Refinish continuous surfaces to nearest intersection.
 - b. Refinish entire assemblies.
6. Restore structures and surfaces damaged that are to remain in the completed work including concrete-embedded piping, conduit, and other utilities.
7. Make restorations with new materials and appropriate methods as specified for new work of similar nature; if not specified, use best recommended practice of manufacturer or appropriate trade association.
8. Restore damaged work so there is a secure and intimate bond or fastening between new and old work. Finish restored surfaces to such planes, shapes, and textures that no transition between new and old work is evident in finished surfaces.

PART 4 PAYMENT

4.1 LUMP SUM BID AND UNIT PRICES

- A. Payment for work in this section will be included as part of the lump sum bid or the unit price bid amounts stated in the Proposal.

* * * END OF SECTION * * *

**SECTION 01045
CUTTING AND PATCHING**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work.

1.2 RELATED SECTIONS

- A. Summary of Work
- B. Section 01340 – Shop Drawings, Product Data and Samples
- C. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to Work of the Section.
 - 2. Advance notification to other Sections of Openings required in Work of those Sections.
 - 3. Limitations on cutting structural members.

1.3 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of project.
 - 2. Integrity of weather-exposed or moisture-resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.
- B. Include in request:
 - 1. Identification of project.
 - 2. Location and description of affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and products to be used.
 - 5. Description of repair of weather exposed or moisture resistant elements.
 - 6. Alternatives to cutting and patching.
 - 7. Effect on Work of Owner or separate Contractor.
 - 8. Date and time Work will be executed.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution under provisions of Section 01630.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of project from damage.
- B. Provide protection for public areas which may be exposed by uncovering Work.
- C. Provide protection for adjacent occupied areas from dust and debris.
- D. Locate and protect existing utilities to remain in place.

3.3 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching, including excavation and fill, to complete Work.
- B. Fit Products together to integrate with other work.
- C. Uncover Work to install ill-timed work.
- D. Remove and replace defective or non-conforming Work.

- E. Remove samples of installed Work for testing when requested.
- F. Provide openings in the Work for penetration of mechanical and electrical Work.

3.4 PERFORMANCE

- A. Execute Work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- B. Employ installers certified in the installation of new weather exposed materials to perform cutting and patching for weather-exposed and moisture-resistant elements and sight-exposed surfaces.
- C. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- D. Restore Work with new products in accordance with requirements of Contract Documents.
- E. Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with firestopping materials.
- G. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01092

REFERENCE STANDARDS

PART 1 GENERAL

1.1 SUMMARY

- A. These specifications and the Contract Drawings list many of the construction industry organizations, professional and technical associations, societies and institutes, and government agencies issuing, promoting, or enforcing standards to which references may be made in the Contract Document, along with the abbreviations commonly used for those references. Also included are certain general requirements for the use of industry standards specified, and for application of the standards in quality control.

1.2 USE OF REFERENCE STANDARDS

- A. Work specified by reference to the published standard or specification of a government agency, technical association, trade association, professional society or institute, testing agency, or other organization shall conform to or surpass the minimum standards of quality for materials and workmanship established by the designated standard or specification.
- B. Where so specified, products or workmanship shall also conform to the additional prescriptive or performance requirements included within the Contract Document to establish a higher or more stringent standard of quality than that required by the referenced standard.
- C. Where the specific date or issue of the standard is not included with the reference to the standard, the edition, including all amendments published and available on the first published date of the Invitation to Bid, shall apply.
- D. Where two or more standards are specified to establish quality, the product and workmanship shall conform to or surpass the requirements of both.
- E. In case of conflict between referenced standards, the more stringent shall apply.
- F. Where both a standard and a brand name are specified for a product in the Contract Document, the proprietary product named shall conform to or surpass the requirements of the specified reference standard. The listing of a trade name in a Contract Document shall not be construed as warranting that such product conforms to the respective reference standard.
- G. Copies of standards:
 1. Copies of applicable referenced standards have not been bound in this Contract Document.

2. Where copies of standards are needed by the Contractor for superintendence and quality control of the work, obtain a copy or copies directly from the publication source and maintain in an orderly manner at the jobsite, available to the Contractor's personnel, subcontractors, Owner, and Engineer.
3. Submittals: Submit for approval the requests to use products conforming to printed standards or publications with a different publication date from that effective under the Contract. Clearly indicate the changes in product or workmanship quality involved in the proposed change, if any, and reasons for the request.

* * * END OF SECTION * * *

SECTION 01310
CONSTRUCTION SCHEDULES

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Summary of Work: Section 01010
- B. Coordination and Site Conditions: Section 01040
- C. Shop Drawings, Project Data and Samples: Section 01340
- D. Schedule of Values: Section 01025

1.2 PRELIMINARY SCHEDULE

- A. The Contractor shall submit within ten (10) days after Notice to Proceed, a preliminary project schedule in graphic form (e.g. bar chart) showing proposed schedule of anticipated progress to include all major operations and items and time of anticipated completion of major portions of the work.
- B. The preliminary schedule shall be accompanied by a narrative work plan which will include the following information:
 - 1. Manpower levels planned to achieve durations shown in the preliminary schedule.
 - 2. Equipment utilization planned for each activity taking place on site.
 - 3. Identification of work planned for overtime or additional shifts.
 - 4. Plans for wet weather work.
 - 5. Identification of critical work or supply activities.
- C. The preliminary schedule will be reviewed within seven (7) days by the Engineer and OWNER. Comments will be forwarded to Contractor for his consideration and action where appropriate. A revised preliminary schedule shall be resubmitted by the Contractor three (3) days after receiving Engineer and OWNER comments, if so required.

1.3 CONSTRUCTION SCHEDULE

- A. The Contractor shall submit within 25 days of Notice to Proceed an overall project schedule in both graphic and tabular form.
- B. The schedule shall utilize an approved standard Critical Path Method (CPM) computer program using either the Arrow Diagram Method (ADM) or Precedence Diagram Method (PDM) which will furnish a mathematical analysis and identification of the critical path.
- C. Reports to be furnished with the CPM schedule will include:

1. Work Item Number in ascending order
 2. Total Float/Early Start in ascending order
 3. Early Start in ascending order
 4. Late start in ascending order
 5. Predecessor report
 6. Successor report
- D. The graphic schedule will be of a format suitable for use by the Contractor and acceptable to OWNER.
- E. The work activities in the CPM will provide a complete sequence of construction, as well as submittal and delivery activity.
- F. Information shown for each activity on the CPM will include description, responsibility, duration, float, early and late start dates, early and late finish dates, preceding and succeeding activities and relationships, percentage complete or remaining duration.
- G. The Construction Schedule will be accompanied by a narrative similar in format provided in the Preliminary Schedule reflecting any refinements or changes to the planning process.
- H. The Engineer and OWNER will review the Construction Schedule and provide comments to the Contractor for appropriate action including potentially revision and resubmittal. Once schedule is determined acceptable by OWNER, this schedule will be designated the initial or zero progress schedule.
- I. Contractor will update the CPM and submit two copies to Engineer on a monthly basis. CPM will be accompanied by a narrative report which will include:
1. Description of work completed during the past month.
 2. Discussion of problem areas including current and anticipated delay factors.
 3. Description of schedule revisions made for this months update.
 4. Actions planned to mitigate delays or to facilitate construction progress.
- J. Contractor will provide electronic copy on computer diskette of the approved progress schedule and each monthly update which will function with approved CPM software program to allow OWNER to analyze impacts on the schedule as required.

1.4 CONTRACTOR TO SCHEDULE WORK

- A. Contractor shall keep the Engineer informed sufficiently in advance of the time and places at which he intends to work in order that the necessary measurements for record and payment may be made with the minimum of inconvenience and delay to both the Engineer and the Contractor.

1.5 TWO WEEK SCHEDULE

- A. Provide to the Engineer, on a weekly basis, a two week schedule using bar chart format in sufficient detail to plan and properly coordinate upcoming work.

1.6 SUBMITTALS BY CONTRACTOR

- A. Submit Preliminary Schedule prior to starting work.
 - 1. Engineer and OWNER will review overall schedule and may return reviewed copy with suggested revisions within 7 days after receipt.
 - 2. If required by the Engineer, contractor shall resubmit a revised preliminary schedule within 3 days after return of reviewed copy.
- B. Submit initial CPM Construction Schedule within 25 days after Notice to Proceed. Include a cash flow summary based on a monthly estimate of revenue with the initial project schedule.
- C. Submit monthly updated CPM Construction Schedule by the seventh day of each month. Updated schedule shall reflect actual progress of the project to within 5 working days prior to submittal.
- D. Submit a Two Week Schedule every week. Deliver to Engineer at the weekly Progress Meeting.
- E. Submit six copies of schedules to Engineer, both initial submittals and revised or updated schedules.

1.7 DISTRIBUTION BY CONTRACTOR

- A. Distribute copies of reviewed schedules to:
 - 1. Job site file
 - 2. Other contractors
 - 3. Subcontractors
 - 4. Other concerned parties

*** * * END OF SECTION * * ***

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Coordination and Site Conditions: Section 01040
- B. Construction Schedules: Section 01310
- C. Contractor's Quality Control: Section 01400
- D. Project Record Documents: Section 01720

1.2 SUBMITTAL REGISTER AND SCHEDULE

- A. Contractor will review the Contract Documents and identify all requirements for submittal of information to the Engineer and OWNER. Contractor will arrange the listing of these submittals in order by section and paragraph beginning with the General Conditions, Supplementary Conditions and finally, the Technical Specifications in numerical order by section and paragraph. This document will be identified as the Submittal Schedule and will include the following information about each required submittal.
 - 1. Specification Section and Paragraph
 - 2. Transmittal Number (leave blank until submittal is made)
 - 3. Description
 - 4. Responsibility (Contractor, Sub or Supplier)
 - 5. Schedule Date - Date on which Contractor plans to submit
 - 6. Approval Required - Date approval is required to deliver the material by required date.
 - 7. Material Required - Date material is needed onsite.
 - 8. Submittal Date - Leave blank until submittal is actually made.
 - 9. Review Status - No Exceptions Taken, Make Corrections Noted, Rejected, Revise and Resubmit, Submit Specified Item.
 - 10. Action Date - Date on which OWNER actually returned the reviewed submittal to Contractor.
 - 11. Comment - Cross reference on notes as required.
- B. The Submittal Schedule will be submitted no later than 10 days after Notice to Proceed and should be coordinated with the information presented in the Construction Schedule.

- C. Sufficient lead time should be allowed for review and approval by OWNER. Allow thirty (30) days for review and approval. Specifically identify those submittals which will require an expedited review process.
- D. The Submittal Schedule upon acceptance by OWNER will form the basis for the Submittal Register. Contractor will keep track of submittals as submitted by sequential number. Contractor will update his submittal Schedule with information from the Submittal Register on a monthly basis and furnish a copy to OWNER.

1.3 SUBMITTALS

- A. All submittals including shop drawings, data and samples shall be submitted attached to a form approved by the Engineer. Location by drawing number and paragraph of specification shall be shown on the form for the product or material being submitted. Each transmittal shall be assigned a unique number in sequential order.
- B. Shop drawings shall be submitted and reviewed in the following manner:
 - 1. Contractor shall review, stamp with his approval and submit postpaid with such promptness as to cause no delay in his work or in that of any other contractor, the required number of copies of all shop drawings, schedules, data, and samples required for the work of the various trades determined necessary by the Engineer, required in the General Conditions and/or described elsewhere in the Project Specifications.
 - 2. Shop drawings shall establish the actual detail of all manufactured or fabricated items. All shall be drawn to scale and be completely dimensioned.
 - 3. Sheet sizes of shop drawings shall be in multiples of 8 1/2 by 11 inches, preferably not exceeding 22 by 34 inches unless there is a special requirement for larger size sheets.
 - 4. Provide on each drawing a clear space for the Engineer's review and approval stamps and comments.
 - 5. Four (4) copies of shop drawings, manufacturer's literature, brochures, catalog cuts, and other pertinent printed matter or data shall be submitted in addition to the number of copies Contractor wishes returned to him.
 - 6. Contractor shall obtain and provide such number of prints or copies of drawings as is required for his field distribution.
 - 7. Shop drawings may be submitted to the Engineer in the form of a reproducible transparency, along with one blackline or blue-line print. Mylars are preferred.
 - 8. The Engineer shall review the shop drawings with reasonable promptness and will affix the Shop Drawing Review Stamp with notations thereon indicating "No Exceptions Taken", "Make Corrections Noted", "Revise and Resubmit", "Rejected" or "Submit Specified Item".

9. When shop drawings and/or other submittals are required to be revised or corrected and resubmitted, Contractor shall make such revisions and/or corrections and resubmit the drawings or other material in the same manner as specified above.
10. It shall be Contractor's responsibility to clearly note on the shop drawings, and in writing specifically call to the Engineer's attention, any changes and deviations that vary from the Contract Drawings and Specifications. No review of the shop drawings by the Engineer shall relieve Contractor of full responsibility and at his own cost and expense to comply with the Contract Documents.
11. If corrections are required, Contractor shall make the corrections required by the Engineer and file with him the same number of corrected copies as indicated above. Contractor shall direct specific attention in writing or, on resubmitted Shop Drawings to revisions other than the corrections requested on previous submissions. The Engineer will return to Contractor copies of drawings in the same manner and number as before.
12. Shop Drawings shall give complete information necessary for the fabrication and installation of all component parts of the equipment, structure, facility, etc. In the case of structural drawings, they shall include the location, type, and size and extent of all welds, if any are necessary. Manufacturer's standard details, catalogues, advertising literature, etc., shall not necessarily constitute all of the shop drawings required for any unit or facility. Additional shop details designed for the particular project shall be furnished when required by the Engineer. Shop drawings of electrical equipment shall include complete diagrams of electrical circuitry.
13. The Engineer's review of and placement of shop drawing review stamp on any shop drawing is understood to be an acceptance of the character of the details and not a check of any dimension or quantity and will not relieve Contractor from responsibility for errors of any sort in shop drawings data or schedules, whether or not such errors are found by the Engineer in his review of such details.
14. No changes will be made in any shop drawing after it has been reviewed except by the consent or direction of the Engineer in writing.

C. Samples shall be submitted in the same manner as shop drawings.

1. Samples to be physical examples to illustrate materials, equipment or workmanship, and to establish standards by which completed work is judged.
 - a. Office samples: of sufficient size and quantity to clearly illustrate
 - (1) Functional characteristics of product or material, with integrally related parts and attachment devices.
 - (2) Full range of color samples.

After review the Engineer will retain two samples and return the remainder to Contractor.

- b. Field samples and mockups

- (1) Erect at project site location acceptable to Engineer.
 - (2) Construct each required sample or mock-up complete, including work of all trades required in finished work.
 - (3) Coordinate sampling of natural materials with Field Engineer.
2. If any test sample fails to meet the specification requirement, all previous approvals will be withdrawn and such materials or equipment, which fail the testing, shall be subject to removal and replacement by Contractor with materials or equipment meeting the specification requirement.
 3. Affected finish work shall not be commenced until the Engineer has given written approval for the field samples.

1.4 CONTRACTOR RESPONSIBILITY

- A. All submittals shall be attached to a "Shop Drawing Transmittal" form approved by the Engineer.
- B. Contractor shall review and approve shop drawings before submittal. Submittal directly from Subcontractor or Suppliers will not be accepted.
- C. By approving and submitting Shop Drawings and Samples, Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated each Shop Drawing with the requirements of the Work and of the Contract Documents and that there is no conflict with other submittals that may affect the work of another contractor of OWNER.
- D. A copy of each approved shop drawing and each approved sample shall be kept in good order by Contractor at the job site and shall be available to the Engineer.

1.5 LIMITATION

- A. Two submittals (initial and revised) of each item requiring samples and/or shop drawings will be reviewed by the Engineer in the regular course of the Contract. However, all subsequent reviews of the same item over two will be reviewed at the expense of Contractor unless the right to an additional review without charge was previously approved in writing by the Engineer. Contractor will be billed by OWNER at the Engineer's current established rates.

1.6 GENERAL PRODUCT REQUIREMENTS

- A. Unless otherwise specifically provided, all workmanship, equipment, and materials incorporated in the work covered by the Contract are to be new and of the best available grade of their respective kinds.
- B. For products specified only by reference standards, select any product meeting standards, by any manufacturer.

- C. For products specified by naming one or more products, but indicating the option of selecting equivalent products by stating "or equivalent" after specified product, Contractor must submit request, as required for substitution, for any product not specifically named.

1.7 SUBSTITUTIONS REVIEW AND APPROVAL PROCEDURE

- A. Engineer will consider formal requests from Contractor for substitution of products in place of those specified. Provide complete list of all products which are proposed for installation as substitutions or product options. Tabulate list by each specification section. The Contractor shall pay any engineering expenses associated with review of substitution requests.
- B. Submit detail request for substitution in accordance with requirements for submittal of shop drawings and the following additional requirements.
 - 1. For construction methods
 - a. Detailed description of proposed method.
 - b. Drawings illustrating methods.
 - 2. Itemized comparison of proposed substitution with product or method specified.
 - 3. Data relating to changes in construction schedule.
 - 4. Accurate cost data on proposed substitution in comparison with product or method specified.
- C. In making request for substitution, Contractor shall specifically represent:
 - 1. He has personally investigated proposed product or method, and determined that it is equivalent or superior in all respects to that specified.
 - 2. He will provide the same guarantee for substitution as for product or method specified.
 - 3. He will coordinate installation of accepted substitution into work, making such changes as may be required for work to be complete in all respects.
 - 4. He waives all claims for additional costs related to substitution which consequently becomes apparent.
 - 5. Cost data is complete and includes all related costs under his Contract.
- D. Substitutions will not be considered if:
 - 1. They are indicated or implied on shop drawings or project data submittals without formal request submitted in accord with Section 01340.
 - 2. Acceptance will require substantial revision of Contract Documents or redesign by the Engineer, without substantial benefit to OWNER.

E. The above shall not be construed to mean that any substitution for materials and equipment will be allowed. The Engineer reserves the right to reject and disapprove any request he deems irregular or not in compliance with the Specifications.

***** END OF SECTION *****

SECTION 01400

CONTRACTOR'S QUALITY CONTROL

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. General Conditions - Article 7 Control and Quality of work and Material.
- B. Technical Specifications pertaining to the work.

1.2 RESPONSIBILITIES

- A. Contractor is primarily responsible for quality control and will provide for sufficient supervision and control measures on a daily basis to ensure that the Work is completed in accordance with the Contract Documents.
- B. OWNER and the Engineer are responsible for quality assurance. Their activities in no way relieve Contractor of his quality control responsibilities.

1.3 REQUIREMENTS

- A. Quality Control Plan - Contractor will prepare and submit a plan of action to establish and maintain a Quality Control Program. The program as a minimum will contain:
 - 1. The quality control organization chart beginning with the responsible corporate officer.
 - 2. The names and qualifications of personnel selected to implement the program onsite.
 - 3. Authority and responsibility of the quality control staff.
 - 4. A breakdown of the schedule of work which includes proposed inspections, tests or other means of controlling the quality of work for each phase.
 - 5. Provides controls for each phase of work by establishing a system of inspections as follows:
 - a. Preparatory Inspection - This inspection will be conducted by Contractor prior to starting any new phase of work. Contractor's Quality Control Manager will review the contract documents to ensure that required materials, equipment and procedures have been submitted and approved, are onsite and checked, that a reasonable, coordinated work plan has been prepared, that all previous work has been completed, inspected and tested as required. Contractor will schedule a preparatory conference with the Engineer to discuss the findings and to develop a material understanding on execution of the work and the quality standards

which will be used. The inspection results and minutes of the conference will be documented by Contractor and a copy furnished to the Engineer. Subsequent to the conference, but prior to start of work, all involved working personnel and inspectors will be briefed on the work plan and the quality standards expected.

- b. Initial Inspection - This joint inspection by Contractor and the Engineer/OWNER Construction Manager will be made as soon as a representative portion of the work has been accomplished. This inspection will be repeated if new crew member(s) are assigned to the work or if acceptable standards of workmanship are not being met. Contractor will, as a minimum, document this inspection in the daily Quality Control Report.
 - c. Followup Inspections - Contractor will perform daily inspections of the work until completion.
6. Establish a system of Quality Control Deficiency Reports to report deficiencies in the work or materials to determine appropriate correction and to track the execution of the correction.

B. Documentation

1. Daily Quality Control Report - This report will be furnished by Contractor in a suitable format on a daily basis over the signature of the Quality Control Manager or onsite Quality Control Representative. It shall be delivered to the onsite OWNER Representative and/or Engineer by 10:00 a.m. on the following work day, and will contain as a minimum:
 - a. Weather
 - b. Manpower (listed by craft for Contractor and total for each Subcontractor)
 - c. Equipment used
 - d. A summary of activity for each shift and evaluation of the workmanship
 - e. A record of any inspections which were made
 - f. Results of tests
 - g. Identification of deficiencies or rejections
 - h. Proposed remedial sections
 - i. Corrective actions taken
 - j. Safety related issues
 - k. Permanent materials deliveries and inspections
2. Preparatory Inspection Meeting Record - This record will be delivered to the onsite OWNER Representative and/or Engineer prior to the start of each phase of work but not later than three work days after the meeting. The hazard analysis separately described in Section 01100 can be delivered at the same time.
3. Test Reports - A record of all tests shall be kept by Contractor on the job site. A copy of all test reports done by Contractor shall be provided to the Engineer and/or OWNER.

4. Quality Control Deficiency Reports - Contractor will prepare a deficiency report on all deficiencies in the work or in the quality of materials. The report will be logged and numbered and submitted to the Engineer and/or Metro along with the recommended remedy. Contractor will track the action through to completion, submitting a final report of inspection on the work in question.

C. Duties and responsibilities of the Quality Control Manager or a designated representative includes:

1. Have the authority to stop or reject work.
2. Be onsite during normal working hours and will be assigned full time to the project.
3. Establish the Quality Control Plan and execute the Quality Control Program.
4. Review all submittals, including shop drawings and materials submittals. Reject those submittals not in accordance with the Contract Documents, approve and submit those which are in accordance. Maintain a jobsite submittal file.
5. Ensure that line, grade, depth and compaction, density and composition of materials are in accordance with the Contract Documents.
6. Ensure that all work to be inspected includes an opportunity for OWNER to check work prior to covering the work.
7. Coordinate required tests and inspections with the Engineer and OWNER's Construction Manager.
8. Inspect the work of Contractor and all Subcontractors.
9. Submit all required quality control documentation and maintain records.
10. Verify that all permanent materials delivered to the jobsite are in accordance with the Contract Documents. Submit certifications and test reports as required.
11. Accompany the Engineer and/or OWNER Construction Manager on jobsite inspections as required.
12. Prepare and submit the project punch lists prior to job completion and acceptance.
13. Furnish representative samples for testing as required by the Contract Documents or OWNER.

1.4 INSPECTION

- A. Contractor will provide continuous inspection over his daily operations, including overtime and additional shifts.

- B. The Engineer and other regulatory agencies may also inspect as required by law and custom. The inspection by any of the above does not relieve Contractor of the requirement to inspect and to produce work in accordance with the plans and specifications. Contractor shall at all times provide safe access and assistance to the Engineer, and other authorized inspectors for inspection of the work.

1.5 TESTING

- A. Contractor will be responsible for all testing which may be required. Contractor will submit the qualifications of an independent test laboratory to provide testing services as required.
- B. The Engineer may conduct additional testing to check on the quality of work, materials or testing.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

The planning, execution and results of Contractor's Quality Control Program are considered incidental to the payment for the work as indicated by the bid items. Failure to comply with the Quality Control Program may result in withholding of all or a portion of the monthly progress payments by OWNER at its discretion and OWNER may use these withheld funds to contract or pay for this work outside of this Contract.

* * * END OF SECTION * * *

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary utilities required during construction.
- B. Temporary construction facilities, including field offices and project signs.
- C. Requirements for security and protection of facilities and property.
- D. Requirements for traffic regulation and access to the work.
- E. Temporary controls for protection of environment.

1.2 SUBMITTALS

A. Temporary Utility Submittals

- 1. Electric power supply and distribution plans.
- 2. Water supply and distribution plans, including metering device.
- 3. Wastewater routing plans including piping, ditches, culverts, etc.

B. Temporary Construction Submittals

- 1. Access roads and parking area plans.
- 2. Storage yard and storage building plans, including gravel surfaced area.
- 3. Fencing and protective barrier locations and details.
- 4. Engineer's field office plans and equipment list.
- 5. Staging area plan and notification of any obstructions encountered during mobilization.

C. Temporary Control Submittals

- 1. Copies of permits or approvals for construction from governing environmental protection agencies.
- 2. Plan for disposal of waste materials.

D. Safety and Protection Submittals

- 1. Copies of permits or approvals for construction activities from governing safety authorities.
- 2. Copies of survey notes taken to establish control points for structures affected by the work, and layout of survey control points.

E. Traffic Routing Submittal: Submit specified plan for temporary traffic routing.

1.3 MOBILIZATION

- A. Use area designated for Contractor's temporary facilities as determined by OWNER.
- B. Notify Owner of obstructions not shown or not readily apparent by visual inspection of the staging area. If such obstructions adversely affect Contractor's operations, proper adjustment to Contract will be considered. Do not remove obstructions without Owner's prior consent.

1.4 TEMPORARY UTILITIES

- A. Permits Obtained by Owner: Copies of permits or approvals for temporary utilities to be obtained by Owner will be made available to Contractor at the preconstruction conference.
- B. Costs After Substantial Completion: Upon acceptance of the work or a portion of the work defined and certified as substantially complete by Engineer, and Owner commences full-time successful operation of the facility or portion thereof, the Owner will bear the cost for utilities used for Owner's operation. Contractor shall continue to pay for utilities used until final acceptance of the work, except as provided herein.
- C. Electric Power
 - 1. Locate and determine the type and amount of electric power available and make arrangements for obtaining temporary electric power service, metering equipment, and pay all costs for the electric power used during the Contract period, except as specifically provided for utilities used by the Owner on portions of the work designated in writing by the Engineer as substantially complete.
 - 2. Temporary electric power installations shall meet construction safety requirements of OSHA, state, and other governing agencies.
 - 3. Cost of electric power used in performance and acceptance testing shall be borne by Contractor.
- D. Water: The contractor will provide temporary facilities and piping required to bring water to the point of use, and remove them when no longer needed. Install an acceptable metering device and pay for water used at the Owner's current rate.
- E. Sewage: Provide and maintain sanitary facilities for Contractor's employees and subcontractors' employees that comply with regulations of local and state health departments.
- F. Telephone
 - 1. Arrange for onsite telephone service for Contractor's use during construction. Costs of installation and monthly bills for Contractor's telephone service shall be borne by the Contractor.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 TEMPORARY CONSTRUCTION

A. Access Roads and Parking: Contractor and Contractor employees shall provide for their own parking.

B. Storage Yards and Buildings

1. Construct temporary storage yards for the storage of products that are not subject to damage by weather conditions. Materials such as pipe, reinforcing and structural steel, shall be stored on pallets or racks, off the ground, and in a manner to allow ready access for inspection and inventory. Temporary gravel surfacing of storage yards must be approved by the Engineer.
2. Erect or provide temporary storage buildings of various sizes needed to protect mechanical and electrical equipment and other materials, as recommended by manufacturers of such equipment and materials.
 - a. Provide environmental control systems that meet recommendations of manufacturers of equipment and materials stored in the buildings.
 - b. Buildings shall be of sufficient size.
 - c. Arrange or partition buildings to provide security for their contents and ready access for inspection and inventory.
 - d. At or near completion of the work, temporary storage buildings shall be dismantled, removed from the site, and remain the property of the Contractor.
3. Store combustible materials (paints, solvents, fuels, etc.) in a well-ventilated building remote from other buildings and out from under the I-5 freeway per the OWNER agreement with ODOT..

C. Fencing and Barricades

1. Security Fence: The Contractor may erect a temporary security fence with gates around the construction site.
2. Barricades: Provide barricades as necessary to prevent unauthorized entry to construction areas, both inside and outside of fenced area. Also provide barricades to protect existing facilities and adjacent properties from potential damage. Locate barriers to enable access by facility operators and property owners.

3.2 SAFETY AND PROTECTION

A. Examination of Existing Facilities

1. After the Contract is awarded and before the commencement of work, Contractor and Engineer shall make a thorough examination of all existing buildings, structures, and other improvements in the vicinity of the work, as applicable, which might be damaged by construction operations.
2. Periodic examinations of existing buildings, structures, and other improvements in the vicinity of the work shall be made jointly by authorized representatives of the Contractor and the Owner. The scope of the examination shall include cracks in structures, settlement, leakage, and similar conditions.
3. Records in triplicate of all observations shall be prepared by the Contractor and each copy of every document shall be signed by the authorized representative of the Owner and of the Contractor. Photographs, as requested by the Owner, shall be made by the Contractor and signed in the manner specified above. One signed copy of every document and photograph will be kept on file in the office of the Engineer.
4. These records and photographs are intended for use as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of the Contractor's operations, and are for the protection of the adjacent property owners, the Contractor, and the Owner.

B. Safety Requirements

1. Contractor shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees) and property during the Contract period. This requirement shall apply continuously and not be limited to normal working hours.
2. Safety provisions shall conform to Federal and State Departments of Labor Occupational Safety and Health Act (OSHA), and other applicable federal, state, county, and local laws, ordinances, codes, requirements set forth herein, and regulations that may be specified in other parts of these Contract Documents. Where these are in conflict, the more stringent requirement shall be followed. Contractor shall become thoroughly familiar with governing safety provisions and shall comply with the obligations set forth therein.
3. Contractor shall develop and maintain for the duration of the Contract, a safety program that will effectively incorporate and implement required safety provisions. Contractor shall appoint a qualified employee who is authorized to supervise and enforce compliance with the safety program.
4. Engineer's duty to conduct construction review of the Contractor's performance is not intended to include a review or approval of the adequacy of Contractor's safety supervisor, safety program, or safety measures taken in, on, or near the construction site.
5. As part of safety program, Contractor shall maintain at its office or other well-known place at the jobsite, safety equipment applicable to the work as prescribed by

the governing safety authorities, and articles necessary for giving first-aid to the injured. Establish procedures for the immediate removal to a hospital or a doctor's care of persons who may be injured on the jobsite.

6. Contractor shall do all work necessary to protect the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes in pedestrian sidewalk or walkway, and trenches or excavations in roadway. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the work.
7. Construct and maintain satisfactory and substantial temporary chain link fencing, solid fencing, railing, barricades or steel plates, as applicable, at all openings, obstructions, or other hazards in streets, sidewalks, floors, roofs, and walkways. Such barriers shall have adequate warning lights as necessary or required for safety.
8. Comply with Owner's safety rules while on Owner's property.
9. If death or serious injuries or damages are caused, the accident shall be reported immediately by telephone or messenger to the Engineer. In addition, Contractor shall promptly report in writing all accidents whatsoever arising out of, or in connection with, the performance of the work whether on or adjacent to the site, giving full details and statements of witnesses.
10. If claim is made by anyone against Contractor or any subcontractor on account of accident, Contractor shall promptly report the facts in writing, giving full details of the claim.
11. Furnish reports of weekly toolbox safety training meetings as completed.

C. Traffic Safety and Access

1. Comply with rules and regulations of the city, state, and county authorities regarding closing or restricting the use of public streets or highways. No public or private road shall be closed, except by written permission of the proper authority. Assure the least possible obstruction to traffic and normal commercial pursuits.
2. Where traffic will pass over backfilled trenches before they are paved, maintain top of trench to allow normal vehicular traffic to pass over. Provide temporary access driveways where required. Cleanup operations shall follow immediately behind backfilling.
3. When flagmen and guards are required by regulation or when deemed necessary for safety, furnish them with approved orange wearing apparel and other regulation traffic control devices.
4. Traffic control procedures and devices used on all local, county, and state rights-of-way shall meet the requirements of the applicable current laws and regulations for traffic control. See 3.3 TRAFFIC REGULATION below.

5. Provide snow removal to facilitate normal vehicular traffic on public or private roads affected by construction. Perform snow removal promptly and efficiently by means of suitable equipment whenever necessary for safety, and as may be directed by proper authority.
 6. Contractor shall leave its night emergency telephone number or numbers with the police department, so that contact may be made easily at all times in case of barricade and flare trouble or other emergencies.
- D. Fire Prevention: Perform all work in a firesafe manner. Furnish and maintain on the site adequate fire fighting equipment capable of extinguishing incipient fires. Comply with applicable federal, local, and state fire prevention regulations. Where these regulations do not apply, follow applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241).
- E. Protection of Work and Property:
1. General
 - a. Contractor shall employ such means and methods necessary to adequately protect public property and property of the Owner against damage. In the event of damage to such property, immediately restore the property to a condition equal to its original condition and to the satisfaction of the Engineer and the owner of said property, and bear all costs thereof.
 - b. Protect stored materials and other items located adjacent to the proposed work.
 2. Finished Construction
 - a. Contractor shall assume the responsibility for protection of finished construction and shall repair and restore any and all damage to finished work to its original or better condition.
 - b. Where responsibility can be fixed, costs for replacement or repair of damaged work shall be charged to the party responsible. If responsibility cannot be fixed, costs shall be prorated among all parties in proportion to their activities at the time the damage was done.
 - c. Prevent wheeling of loads over finished floors, either with or without plank protection, except in rubber-tired wheelbarrows, buggies, or dollies. Protect finished floors and concrete floors exposed as well as those covered with composition tile or other applied surfacing.
 - d. At such time temporary facilities and utilities are no longer required for the work, notify Engineer of intent and schedule for their removal. Remove temporary facilities and utilities from the site as Contractor's property and leave the site in such condition as specified, as shown on the Drawings or as directed by the Engineer.

- e. In unfinished areas, leave the site evenly graded, seeded, or planted as necessary, in a condition that will restore original drainage, and with an appearance equal to or better than original.

3.3 TRAFFIC REGULATION

A. Traffic Routing

1. Prior to starting work at project site, Contractor shall submit traffic routing plans to the Engineer for review and approval showing:
 - a. Sequences of construction affecting the use of roadways.
 - b. Time required for each phase of the work.
 - c. Provisions for decking over excavations or phasing of operations, or a combination of these two methods, to provide necessary access.
2. This provision shall not be construed as preventing the Contractor from proceeding with mobilization of plant and equipment, and from placing orders for materials upon receipt of Notice to Proceed. Contractor shall not be entitled to delays due to "DISAPPROVED" traffic routing plans.

B. Signs and Equipment: Furnish at the site, or convenient to and immediately available to the site, the following signs and equipment:

1. Barricades, as required by the Vehicle Code, in sufficient quantity to safeguard the public and the work.
2. Portable "TOW-AWAY - NO STOPPING" signs, placed where approved by police department and owner.
3. Traffic cones, to delineate traffic lanes to guide and separate traffic movements.

3.4 ENVIRONMENTAL CONTROLS

A. General

1. The Contractor in executing the work shall maintain affected areas within and outside project boundaries free from environmental pollution that would be in violation of federal, state, or local regulations.
2. Do not impair operation of existing sewer systems. Prevent construction material, pavement, concrete, earth, volatile and corrosive wastes, and other debris from entering sewers, pump stations, or other sewer structures. Maintain original site drainage wherever possible.

B. Water Pollution Control

1. Comply with laws, rules, and regulations of the State of Oregon and agencies of the United States Government prohibiting the pollution of lakes, wetlands, streams, or river waters from the dumping of refuse, rubbish, or debris.
2. Divert sewage and waste flow, including stormwater flow, interfering with construction and requiring diversion to sewers leading to a wastewater treatment plant. Do not cause or permit action to occur which would cause an overflow to an existing waterway. Prior to commencing excavation and construction, obtain Engineer's agreement with detailed plans showing procedures intended to handle and dispose of sewage, groundwater, and stormwater flow, including dewatering pump discharges.
3. Contractor shall comply with the procedures outlined in the U.S. Environmental Protection Agency manuals entitled "Guidelines for Erosion and Sedimentation Control Planning and Implementation", "Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity".

C. Dewatering Procedures

1. The Contractor shall construct, maintain, and operate cofferdams, channels, flume drains, sumps, pumps, or other temporary diversion and protection works. Furnish materials required, install, maintain, and operate necessary pumping and other equipment for the environmentally-safe removal and disposal of water from the various parts of the work. Maintain the foundations and parts of the work free from water.
2. Where an excavation extends below the water table, dewater in a manner that will prevent loss of fines from the foundation. Maintain stability of slopes and bottom of the excavation, and perform construction operations in the dry. Use screened wells or equivalent methods for dewatering. Control seepage along the bottom of excavations, which may require ditches and pipe drains leading to sumps from which the water shall be pumped and properly discharged.

D. Waste Material Disposal

1. Excess excavated material not required or suitable for backfill, and other waste material, must be disposed of in accordance with existing regulations.
2. Unacceptable disposal sites include, but are not limited to, sites within a wetland or critical habitat and sites where disposal will have a detrimental effect on surface water or groundwater quality.
3. Contractor shall make his own arrangements for disposal subject to submission of proof that the owner(s) of the proposed site(s) has a valid fill permit issued by the appropriate governmental agency. Submit intended haul route plan, including a map of the proposed route(s). Provide watertight conveyance for liquids, semiliquids, or saturated solids that tend to bleed during transport.
4. Maintain areas covered by the Contract and affected public properties free from accumulations of waste, debris, and rubbish caused by construction operations. Remove excavated materials from the site.

5. Cleaning and disposal shall comply with local ordinances and pollution control laws. Do not burn or bury rubbish or waste materials on the project site. Do not dispose of volatile wastes such as mineral spirits, oil, chemicals, or paint thinner in storm or sanitary drains. Disposal of wastes into streams or waterways is prohibited. Provide acceptable containers for collection and disposal of waste materials, debris, and rubbish.

E. Air Pollution Control

1. Minimize air pollution likely to occur from construction operations by wetting down bare soils during windy periods, requiring proper combustion emission control devices on construction vehicles and equipment, and by shutdown of motorized equipment not in use. Trash burning will not be permitted on the construction site.
2. If temporary heating devices are necessary for protection of the work, they shall be an approved type as specified under Article TEMPORARY UTILITIES.
3. Operations of dumping rock and of carrying rock away in trucks shall be conducted to cause a minimum of dust. Give unpaved streets, roads, detours, or haul roads used in the construction area a dust-preventive treatment, or periodically water to prevent dust. Strictly adhere to applicable environmental regulations for dust prevention.

- F. Noise Control: Minimize noise by executing work using appropriate construction methods and equipment. Provide acoustical barriers so noise emanating from tools or equipment will not exceed legal noise levels.

G. Pest and Rodent Control

1. Comply with local health requirements for pest and rodent control. Cooperate with agencies and companies authorized to spray or provide other treatments to prevent insect outbreaks.
2. Maintain closures of means of entry into finished buildings by rodents. Inspect for rodents during cleaning, remove debris, and treat infested areas to Owner's satisfaction.

PART 4 PAYMENT

4.1 LUMP SUM AND UNIT PRICE BIDS

- A. Payment for work in this section will be included as part of the lump sum and unit price bid amounts stated in the Proposal.

* * * END OF SECTION * * *

SECTION 01600

PRODUCT SHIPMENT, HANDLING, STORAGE, AND PROTECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Requirements and procedures for work necessary for shipment, handling, storage, and protection of material and equipment products.

1.2 SUBMITTALS

- A. Contractor shall submit the following:
 1. Assembly instructions for parts shipped unassembled.
 2. Manufacturer's instructions for unloading, handling, storage, and protection prior to installation, with each shipment of each product type.
 3. Copy of manufacturer's notice of shipment for products critical to project schedule.
 4. Documentation of products in storage, submitted with each progress payment request.

1.3 PREPARATION FOR SHIPMENT

- A. When practical, products shall be factory assembled.
 1. Furnish assembly instructions for parts and assemblies that are shipped unassembled.
 2. Mark or tag the separate parts and assemblies for field assembly.
 3. Cover machined and unpainted parts that may be damaged by the elements with a strippable protective coating.
- B. Package or crate products to provide protection from damage during shipping, handling, and storage.
 1. Mark or tag outside of each package or crate to indicate its purchase order number, bill of lading number, contents by name, name of project and Contractor, equipment number, and approximate weight.
- C. Mark spare parts and special tools to identify the associated products by name, equipment, and part number. Package parts for protection against damage from the elements during shipping, handling, and storage. Ship in boxes or containers marked to indicate the contents and as stated above. Deliver spare parts and special tools before the associated equipment is scheduled for the initial test run.
- D. Contractor shall request a minimum 7-day advance notice of shipment from manufacturers.

- E. Where specified for specific product, factory test results shall be reviewed and accepted before such product is shipped.

1.4 RECEIVING, INSPECTION, AND UNLOADING

- A. Contractor shall record the receipt of products at the jobsite.
- B. Upon receipt of products at the jobsite, Contractor shall inspect for completeness and evidence of damage during shipment.
 - 1. Engineer may be present for inspection.
 - 2. Should there appear to be damage, notify the Engineer immediately and inform the manufacturers and the transportation company.
 - 3. Expedite replacement of damaged, incomplete, or lost items.
- C. After completion of inspection, unload products in accordance with manufacturer's instructions for unloading, or as specified. Do not unload damaged or incomplete products to be returned to manufacturer for replacement, except as necessary to expedite return shipment.

1.5 HANDLING, STORAGE, AND MAINTENANCE

- A. Handle products in accordance with the manufacturer's written recommendations, and in a manner to prevent damage.
- B. Store products prior to installation as recommended by the manufacturer.
 - 1. Store products such as pipe and reinforcing steel off the ground in approved storage yards.
 - 2. Store items subject to damage by the elements, vandalism, or theft in secure buildings.
 - 3. Provide environmentally controlled storage facilities for items requiring environmental control for protection.
 - 4. Storage yards and storage buildings shall conform to requirements of Section 1500 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS.
- C. Provide manufacturer's recommended maintenance during storage, installation, and until products are accepted for use by Owner.
- D. Store products to provide access for inspection and inventory control. Contractor shall document products in storage to facilitate inspection and to estimate progress payments for products delivered but not installed in the work.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

PART 4 PAYMENT

4.1 LUMP SUM AND UNIT PRICE BID

- A. Payment for work in this section will be included as part of the lump sum and unit price bid amounts stated in the Proposal.

***** END OF SECTION *****

**SECTION 01630
SUBSTITUTIONS AND PRODUCT OPTIONS**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Contractor's responsibilities.
- B. Substitutions requested after award of Contract.
- C. Substitutions not permitted.
- D. Product options.

1.2 GENERAL

- A. Owner will consider formal requests from Contractor for substitution of products in place of those specified. Provide complete list of all products which are proposed for installation as substitutions or product options. Tabulate list by each specification section. The Contractor shall pay any engineering expenses associated with review of substitution requests.
- B. The above shall not be construed to mean that any substitution for materials and equipment will be allowed. The Owner reserves the right to reject and disapprove any request they deems irregular or not in compliance with the Specifications.

1.3 CONTRACTORS RESPONSIBILITIES

- A. In making request for substitution, Contractor shall specifically represent:
 - 1. Contractor has investigated proposed product or method and determined that they are equivalent or superior in all respects to that specified.
 - 2. Contractor will provide same guarantee for accepted substitutions as for products specified.
 - 3. Contractor will coordinate installation of accepted substitutions into the Work, making such changes as may be required for the Work to be complete in all respects.
 - 4. Contractor waives all claims for additional costs related to substitutions, which consequently become apparent.
 - 5. Cost data is complete and includes all related costs under the contract.
 - 6. Engineering certification of equivalence and adequacy of proposed structural component substitution will be provided.

1.4 SUBSTITUTION REQUIREMENTS DURING THE BIDDING PERIOD

- A. Submit detailed request for substitution in accordance with requirements for submittal of shop drawings and the following additional requirements
1. For construction methods:
 - a. Detailed description of proposed method.
 - b. Drawings illustrating methods.
 2. Itemized comparison of proposed substitution with product or method specified.
 3. Complete data on each material and system for this project only, substantiating compliance of proposed substitution with the Contract Documents.
 4. Data relating to changes in construction schedule.
 5. Accurate cost data on proposed substitution in comparison with product or method specified.
 6. Complete evidence including certified test results and supporting reports indicating compliance with referenced standards.
 7. A statement from the Product Manufacturer stating that warrantee requirements specified are acceptable and that such a warrantee shall be issued upon successful completion of the project.
- B. All substitution requests shall be received in writing by the Owner within five (5) working days before bid opening. Requests received after this date will not be considered.

1.5 SUBSTITUTIONS REQUESTED AFTER AWARD OF CONTRACT

- A. Substitutions will normally not be considered after the date of Contract, except when required, due to unforeseen circumstances. Within a period of Thirty (30) days after date of Contract, the Owner may, at its option, consider formal written requests for substitution of products in place of those specified, when submitted in accordance with the requirements stipulated herein. To receive consideration, one or more of the following conditions must be documented in any such request.
1. The substitution is required for compliance with final interpretation of code requirements or insurance regulations.

2. The substitution is required due to unavailability of a specified product, through no fault of the Contractor.
3. The substitution is required because subsequent information disclosed the inability of the specified product to perform properly or to fit in the designated space.
4. The substitution is required because it has become clearly evident, in the judgement of the Owner, that a substitute would be substantially in the best interest of the Owner in terms of cost, time, or other considerations.

1.6 SUBSTITUTIONS NOT PERMITTED

A. Substitutions will not be considered if:

1. They are indicated or implied on shop drawings or project data submittals without formal request submitted in accordance with requirement of this Section.
2. Acceptance will require substantial revision of Contract Documents or redesign by the A/E, without substantial benefit to Owner.

1.7 PRODUCT OPTIONS

- A. For products specified only by referenced standards, provide products by any Manufacturer meeting standard specified.
- B. For products specified by naming one or more products, provide any product named. If certain conditional requirements are stipulated, each product must comply with those requirements. Products not specifically named must be approved prior to Contract award. Requests for approval of substitutions are subject to meeting requirements stipulated above.
- C. For products specified by naming a product to match existing products or systems, provide product of the same name. There is no option and no substitution will be allowed.

PART 2 PRODUCTS (Not used)

PART 3 EXECUTION (Not used)

*** END OF SECTION ***

SECTION 01650

TESTING, STARTUP AND OPERATION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Construction Facilities and Temporary Controls: Section 01500
- B. Contract Closeout: Section 01700
- C. Operation and Maintenance Data: Section 01730
- D. Equipment: Division 11
- E. Mechanical: Division 15
- F. Electrical: Division 16

1.2 RESPONSIBILITY

- A. Testing, startup and operation shall not be cause for claims for delay by the Contract and all expenses accruing therefrom, shall be deemed to be incidental to the Contract.
- B. The Contractor shall provide all materials, supplies and labor necessary to efficiently complete the testing, startup and operation.
- C. All power and utility bills shall be paid by the Contractor up to and including the day of final acceptance of the Contract by OWNER. If not paid, these charges shall be treated as claims against the Contractor.
- D. If OWNER chooses to commence operations prior to final acceptance, OWNER will assume payment of all power and utility charges effective the day that operation is assumed by OWNER and notice is given in writing.

1.3 SCHEDULE

- A. Placing all applicable phases of the project in service shall consist of three parts: testing, start up and operations.
- B. Not less than thirty (30) days before anticipated time for beginning the testing, the Contractor will submit to the Engineer for approval, a complete plan for:
 - 1. Schedules for tests.
 - 2. Detail schedules of procedures for startup.
 - 3. Complete schedule of events to be accomplished during startup.
 - 4. Schedule operator training as specified.
 - 5. An outline of work remaining under the Contract that will be carried out concurrently with the operation phases.

1.4 TESTING

- A. Testing shall consist of individual tests and checks made on equipment intended to provide proof of performance of units and proper operation of unit controls together

with such necessary tests whether or not described elsewhere in these Specifications to assure proper alignment, size, condition, capability, strength, proper adjust, lubrication, pressure, hydraulic tests, leakage tests and all other checks deemed necessary by the Engineer to determine that all materials and equipment are of specified quality, properly situated, anchored and in all respects ready for use.

- B. All gravity pipe and pressure piping shall be tested as required by these specifications and applicable codes.
- C. Tests on individual items of equipment, pipelines, vessels, structures, tanks, controls and other items shall be as described in various sections describing such items.
- D. Testing will be done by the Contractor in the presence of an Inspector designated by the Engineer. Records of all official tests will be made by the Inspector.
- E. During tests, the Contractor shall correct any defective work discovered or that is not in first class operating condition.

1.5 STARTUP

- A. Startup shall consist of testing by a simulated operation, all operational equipment and controls. The purpose of these tests shall be to check that all equipment will function under operating conditions, that all interlocking controls and sequences are properly set and that the facility will function as an operating unit.
- B. Checks for leakage of tanks, ponds, piping, valves, gates and all other hydraulic systems and structures will be made.
- C. Factory representatives of all major units shall be present for the startup phase. The test shall continue until it is demonstrated that all disfunction of controls and machinery are corrected.
- D. The startup shall not begin until all tests required by these Specifications have been completed and approved by the Engineer.

1.6 OPERATION

- A. Operation of the facility shall be immediately started after completion of testing and startup and after satisfactory repairs and adjustments have been made and providing supply and disposal facilities furnished by others are available. If these facilities are not available, the plant will be closed down and no further testing or operation by the Contractor will be required. The Contractor, however, will be responsible that all details required by the Contract shall remain in good order until final acceptance of the whole Contract.
- B. The facility will be operated by personnel placed on the project by OWNER who will perform all duties and operate all equipment.
- C. Taking possession and use of the facility shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents.

D. If such prior use increases or causes refinishing of completed work, the Contractor shall be entitled to such extra compensation or extension of time or both, as the Engineer may determine.

*** * * END OF SECTION * * ***

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Adjusted Payments for Delay: Article 3 General Conditions
- B. Payments: Article 9 General Conditions
- C. Certification and Final Payment: Article 9 General Condition
- D. Coordination and Site Conditions: Section 01040
- E. Project Record Documents: Section 01720
- F. Operation and Maintenance Data: Section 01730

1.2 SUBSTANTIAL COMPLETION

A. Contractor

- 1. After testing and startup, submit written certification to Engineer that Project or designated portion of Project is substantially complete.
- 2. Submit punch list of items to be completed or corrected.

B. Engineer will make an inspection after receipt of Contractor's certification, together with OWNER's representative.

C. If it appears to the Engineer and OWNER that work is substantially complete:

- 1. The Engineer may request of and Contractor shall prepare and submit to the Engineer, a list of items to be completed or corrected as determined by the inspection.
- 2. If the Engineer then considers the work to be substantially complete, the Engineer may, with OWNER's approval, issue a Certificate of Substantial Completion, with appropriate conditions, accompanied by a list of the items to be completed and corrected, as verified and amended by Engineer. Omission of any item from the list shall not relieve Contractor from responsibility to complete all the work in accordance with the Contract.
- 3. OWNER occupancy of Project or designated portion of Project:
 - a. OWNER may use all or part of the work within the time designated in the Certificate of Substantial Completion, upon notice to the insurance company or companies as provided in Article 9 of the General Conditions.
- 4. Contractor shall complete all the work within the time designated in the Certificate, or if not so designated within a reasonable time.

D. Should the Engineer and OWNER consider that work is not substantially complete:

1. Engineer shall notify Contractor, in writing stating reasons and list of items.
2. Contractor shall complete work and send second written notice to Engineer and OWNER certifying that Project or designated portion of Project is substantially complete.

E. Warranties: Under Article 7 of the General Conditions guarantee and warranty periods begin with the date of final acceptance. However, in connection with any specific equipment certified by the Engineer as completed and its use or operation thereof for its intended purpose is assumed by OWNER, the warranty period for such equipment shall begin with the beginning date of such use or operation.

1.3 FINAL INSPECTION

A. Contractor shall submit written certification that:

1. Contract Documents have been reviewed.
2. Work has been completed in accordance with Contract Documents.
3. Equipment and systems have been tested in presence of OWNER's representative and are operational.
4. Project is completed, and ready for final inspection.

B. Engineer will make final inspection within a reasonable time after receipt of certification.

C. Should Engineer consider that work is complete in accordance with requirements of Contract Documents, Engineer shall request Contractor to make project closeout submittals.

D. Should Engineer and OWNER consider that work is not complete:

1. Engineer shall notify Contractor, in writing, stating reasons.
2. Contractor shall take immediate steps to remedy the stated deficiencies, and send second written notice to Engineer certifying that work is complete.
3. Engineer will reinspect work.

1.4 REINSPECTION COSTS

In addition to any overtime inspection due under Article 9 of the General Conditions, should Engineer be required to perform second inspections because of failure of work to comply with original certifications of Contractor, OWNER will compensate Engineer for additional services as stated in said article and charge Contractor for such fees at the Engineer's currently established billing rate.

1.5 CLOSEOUT SUBMITTALS

A. Project Record Documents: To requirements of Section 01720.

- B. Guarantees and bonds required by these specifications: See Article 7 of General Conditions and specific equipment or material specifications.
- C. Easement Release: (where applicable).
- D. At the close of the Contract Contractor shall:
 - 1. Pay all utility bills.
 - 2. Remove all electrical, sanitary, gas, telephone, water, offices and any other temporary service equipment that may remain.
 - 3. Arrange for transfer of electrical, water and other applicable utility accounts to OWNER's name.
- E. Deliver evidence of compliance with requirements of governing authorities (where applicable).

1.6 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit final statement of accounting to Engineer.
- B. Statement shall reflect all uncompleted adjustments
 - 1. Additions and deductions resulting from:
 - a. Previous Change Orders.
 - b. Cash Allowances.
 - c. Unit Prices.
 - d. Other Adjustments.
 - e. Deductions for Liquidated Damages.
 - 2. Unadjusted sum remaining due.

1.7 FINAL APPLICATION FOR PAYMENT

Contractor shall submit final application for payment in accordance with requirements of General Conditions and shall reflect the final adjustment of accounts in Paragraph 1.6.

1.8 FINAL CERTIFICATE FOR PAYMENT

- A. Engineer will issue Final Certificate in accordance with provisions of General Conditions.
- B. Should final completion be materially delayed through no fault of Contractor, Engineer may issue a Final Certificate for Payment, in accordance with provisions of General Conditions and existing laws.

1.9 POST-CONSTRUCTION INSPECTION

- A. Prior to expiration of one year from Date of Substantial Completion or Final Acceptance, Engineer may make visual inspection of Project in company with OWNER and

Contractor to determine whether correction of work is required, in accordance with warranty/guarantee provisions of General Conditions.

B. For guarantees beyond one year, Engineer will make inspections at request of OWNER, after notification to Contractor.

C. OWNER will promptly notify Contractor, in writing, of any observed deficiencies.

*** * * END OF SECTION * * ***

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Closeout Submittals: Article 9 General Conditions and Section 01700.
- B. Coordination and Site Conditions: Section 01040
- C. Shop Drawings, Project Data, and Samples: Section 01340
- D. Operation and Maintenance Data: Section 01730

1.2 MAINTENANCE OF RECORD DOCUMENTS

- A. Contractor shall maintain at job site, one record copy of:
 - 1. Contract Drawings.
 - 2. Project Specifications.
 - 3. Addenda.
 - 4. Reviewed Shop Drawings.
 - 5. Change Orders.
 - 6. Other Modifications to Contract.
 - 7. Field Test Records.
 - 8. Operational and Maintenance Data Delivered with Mechanical and Electrical Equipment.
 - 9. Certified Weight Tickets
- B. Store record documents apart from working documents used for construction.
- C. Provide files and shelves for storage of record documents.
- D. Maintain record documents in clean, dry, legible condition.
- E. Do not use record documents for daily construction purposes.
- F. Make record documents available at all times for inspection by Engineer and OWNER.

1.3 RECORDING

- A. Do not permanently conceal any work until required information has been recorded.
- B. Keep record documents current.
- C. Contract Drawings: Legibly mark to record actual construction:
 - 1. Horizontal and vertical location of underground utilities and appurtenances and references to permanent surface improvements.
 - 2. Field changes of dimension and detail.
 - 3. Changes made by Change Order.
 - 4. Details not on original Contract Drawings.
- D. Specifications and Addenda: Legibly mark up each Section to record:
 - 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.

2. Changes made by Change Order.
3. Other matters not originally specified.

E. Shop Drawings: Maintain as record documents; legibly annotate drawings to record changes made after review.

1.4 SUBMITTAL

- A. At completion of project, deliver complete set of all record documents to Engineer.
- B. Accompany submittal with transmittal letter signed by Contractor or his authorized site representative.

*** * * END OF SECTION * * ***

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- A. Testing, Startup and Operation: Section 01650
- B. Shop Drawings, Product Data and Samples: Section 01340
- C. Contract Closeout: Section 01700
- D. Material and Equipment Specified: All Divisions

1.2 REQUIREMENTS

- A. The Contractor shall submit to Engineer two copies of draft operations and maintenance manuals for each major piece of equipment and system component at least 30 days prior to scheduled testing and at least 30 days prior to submitting written notice of substantial completion.
- B. Engineer and OWNER will review and return one copy with comments. If corrections are required, the Contractor will make corrections and resubmit one corrected copy plus corrected pages for the copy in OWNER's possession.
- C. Upon approval, the Contractor will furnish six (6) copies of the Operations and Maintenance Manuals. Complete approval of all required manuals will be a condition for final completion and payment.
- D. The Operations and Maintenance Manuals will include as a minimum the following:
 - 1. Table of Contents.
 - 2. System Description and Functions of Individual Items of Equipment.
 - 3. As Built Layout. Include locations of all elements and wiring diagram of control circuits.
 - 4. Operations and Maintenance Instructions for each major item of equipment. These instructions will clearly identify the equipment actually provided and information pertaining to other models or variations will be lined out. The instructions will include information on:
 - a. Operating conditions
 - b. Installation instructions
 - c. Startup procedures

- d. Shut down procedures
- e. Maintenance instructions
- f. Trouble shooting procedures.

- 5. Maintenance Schedules - Cross reference these schedules to specific paragraphs in the O&M Instructions.
- 6. Spare Parts and lubricants lists
- 7. Warranties

E. Specific requirements for the Electrical Operations and Maintenance Manual are included in Division 16.

1.3 MANUAL ASSEMBLY

- A. Data shall be bound in first quality, heavy, permanent 3-ring type binders.
- B. Manuals shall be assembled and indexed so that information on any piece of equipment can be readily found.

1.4 MAINTENANCE SCHEDULE

- A. Maintenance schedules for each item of equipment will include a "summary of maintenance" substantially in the format as attached:

(Typical Maintenance Summary Form attached)

*** * * END OF SECTION * * ***

TYPICAL MAINTENANCE SUMMARY FORM

1. EQUIPMENT ITEM
2. MANUFACTURER
3. EQUIPMENT IDENTIFICATION NUMBER(S)
4. WEIGHT OF INDIVIDUAL COMPONENTS (OVER 100 POUNDS)
5. NAMEPLATE DATA (hp, voltage, speed, etc.)
6. MANUFACTURER'S LOCAL REPRESENTATIVE

Name _____ Telephone No.

Address

7. MAINTENANCE REQUIREMENTS

Maintenance Operation	Frequency	Lubricant (If Applicable)	Comments
List briefly each maintenance operation required and refer to specific information in manufacturer's standard maintenance manual, if applicable.	List required frequency of each maintenance operation.	Refer by symbol to lubricant list required.	

8. LUBRICANT LIST

Reference Symbol	Shell	Standard Oil	Gulf	Arco	Or Equal
List symbols used in Item 7. above.	List equivalent lubricants, as distributed by each manufacturer for the specific use recommended.				

9. SPARE PARTS. Include your recommendations regarding what spare parts, if any, should be kept on the job. * * * END OF SECTION * * *

APPENDIX 1

**EXPO Hall D
Preliminary Drawings**

APPENDIX 2

Sample Personal Services Contract

Project _____
Contract No. _____

PERSONAL SERVICES AGREEMENT

THIS AGREEMENT made and effective this _____ day of _____, by and between the Metropolitan Exposition-Recreation Commission (MERC) a commission of Metro, hereinafter called "Owner," and _____ hereinafter called "the Contractor."

In exchange for the promises and other consideration set forth below, the parties agree as follows:

1. Duration. This personal services agreement shall be effective _____ and shall remain in effect until and including _____, unless terminated or extended as provided in this Agreement.
2. Scope of Work. Contractor shall provide all services and materials specified in the attached "Exhibit A — Scope of Work," which is incorporated into this Agreement by reference. All services and materials shall be provided by Contractor in accordance with the Scope of Work, in a competent and professional manner. To the extent that the Scope of Work contains additional contract provisions or waives any provision in the body of this Agreement, the Scope of Work shall control.
3. Payment. MERC shall pay Contractor for services performed and materials delivered in the amount(s), manner and at the time(s) specified in the Scope of Work for a maximum sum not to exceed _____ AND _____/100THS DOLLARS (\$_____).
4. Insurance.
 - a. Contractor shall purchase and maintain at the Contractor's expense, the following types of insurance, covering the Contractor, its employees, and agents:
 - (1) Broad form comprehensive general liability insurance covering bodily injury and property damage, with automatic coverage for premises, operations, and product liability. The policy must be endorsed with contractual liability coverage; and
 - (2) Automobile bodily injury and property damage liability insurance.
 - b. Insurance coverage shall be a minimum of \$500,000 per occurrence. If coverage is written with an annual aggregate limit, the aggregate limit shall not be less than \$1,000,000.
 - c. Metro, its elected officials, departments, employees, agents and MERC's Commission and employees shall be named as ADDITIONAL INSUREDS. Notice of

any material change or policy cancellation shall be provided to MERC 30 days prior to the change or cancellation.

d. Contractor, its subcontractors, if any, and all employers working under this Agreement that are subject employers under the Oregon Workers' Compensation Law shall comply with ORS 656.017, which requires them to provide Workers' Compensation coverage for all their subject workers. Contractor shall provide MERC with certification of Workers' Compensation insurance including employer's liability. If Contractor has no employees and will perform the work without the assistance of others, a certificate to that effect may be attached, as Exhibit B, in lieu of the certificate showing current Workers' Compensation.

e. If required by the Scope of Work, Contractor shall maintain for the duration of this Agreement professional liability insurance covering personal injury and property damage arising from errors, omissions, or malpractice. Coverage shall be in the minimum amount of \$500,000. Contractor shall provide to Metro a certificate of this insurance, and 30 days' advance notice of material change or cancellation.

f. Contractor shall provide MERC with a certificate of insurance complying with this article and naming Metro and MERC as an additional insured within fifteen (15) days of execution of this Contract or twenty-four (24) hours before services under this Contract commence, whichever date is earlier.

5. Indemnification. Contractor shall indemnify and hold Metro, its agents, employees and elected officials and MERC's Commissioners and employees harmless from any and all claims, demands, damages, actions, losses and expenses, including attorney's fees, arising out of or in any way connected with its performance of this Agreement, or with any patent infringement or copyright claims arising out of the use of Contractor's designs or other materials by Metro and for any claims or disputes involving subcontractors.

6. Maintenance of Records. Contractor shall maintain all of its records relating to the Scope of Work on a generally recognized accounting basis and allow MERC the opportunity to inspect and/or copy such records at a convenient place during normal business hours. All required records shall be maintained by Contractor for three years after MERC makes final payment and all other pending matters are closed.

7. Ownership of Documents. All documents of any nature including, but not limited to, reports, drawings, works of art and photographs, produced by Contractor pursuant to this Agreement are the property of MERC, and it is agreed by the parties that such documents are works made for hire. Contractor hereby conveys, transfers, and grants to MERC all rights of reproduction and the copyright to all such documents.

8. Project Information. Contractor shall share all project information and fully cooperate with MERC, informing MERC of all aspects of the project including actual or potential problems or defects. Contractor shall abstain from releasing any information or project news without the prior and specific written approval of MERC.

9. Independent Contractor Status. Contractor shall be an independent contractor for all purposes and shall be entitled only to the compensation provided for in this Agreement.

Under no circumstances shall Contractor be considered an employee of MERC. Contractor shall provide all tools or equipment necessary to carry out this Agreement, and shall exercise complete control in achieving the results specified in the Scope of Work. Contractor is solely responsible for its performance under this Agreement and the quality of its work; for obtaining and maintaining all licenses and certifications necessary to carry out this Agreement; for payment of any fees, taxes, royalties, or other expenses necessary to complete the work except as otherwise specified in the Scope of Work; and for meeting all other requirements of law in carrying out this Agreement. Contractor shall identify and certify tax status and identification number through execution of IRS form W-9 prior to submitting any request for payment to MERC.

10. Right to Withhold Payments. MERC shall have the right to withhold from payments due to Contractor such sums as necessary, in MERC's sole opinion, to protect MERC against any loss, damage, or claim which may result from Contractor's performance or failure to perform under this Agreement or the failure of Contractor to make proper payment to any suppliers or subcontractors.

11. State and Federal Law Constraints. Both parties shall comply with the public contracting provisions of ORS chapter 279, and the recycling provisions of ORS 279.545 - 279.650, to the extent those provisions apply to this Agreement. All such provisions required to be included in this Agreement are incorporated herein by reference. Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations including those of the Americans with Disabilities Act.

12. Situs. The situs of this Agreement is Portland, Oregon. Any litigation over this agreement shall be governed by the laws of the State of Oregon and shall be conducted in the Circuit Court of the state of Oregon for Multnomah County, or, if jurisdiction is proper, in the U.S. District Court for the District of Oregon.

13. Assignment. This Agreement is binding on each party, its successors, assigns, and legal representatives and may not, under any circumstance, be assigned or transferred by either party.

14. Termination. This Agreement may be terminated by mutual consent of the parties. In addition, MERC may terminate this Agreement by giving Contractor seven days prior written notice of intent to terminate, without waiving any claims or remedies it may have against Contractor. Termination shall not excuse payment for expenses properly incurred prior to notice of termination, but neither party shall be liable for indirect or consequential damages arising from termination under this section.

15. No Waiver of Claims. The failure to enforce any provision of this Agreement shall not constitute a waiver by MERC of that or any other provision.

16. Modification. Notwithstanding and succeeding any and all prior agreement(s) or practice(s), this Agreement constitutes the entire Agreement between the parties, and may only be expressly modified in writing(s), signed by both parties.

CONTRACTOR

By _____

Title _____

Date _____

MERC

By _____

Title _____

Date _____

APPENDIX 3

Sample Construction Services Agreement

AGREEMENT

Contract No. _____

MERC
777 NE Martin Luther King, Jr. Blvd.
PORTLAND, OREGON 97232

EXPO CENTER Hall D Construction

THIS AGREEMENT made and effective this _____ day of _____, by and between the Metropolitan Exposition-Recreation Commission (MERC) a commission of Metro, hereinafter called "Owner," and _____ hereinafter called "the Contractor."

WITNESSETH:

That the Contractor and Owner for the considerations hereinafter named agree as follows:

1. Scope of Work: The contractor, in consideration of the covenants, agreements, and payments to be performed and made by Owner, hereby covenants and agrees to provide all necessary labor, materials, transportation, equipment, and other means required to execute, construct, and furnish in full compliance with the contract documents, in an expeditious, substantial and workmanlike manner, the work and material hereinafter referred to as "the Work" and described as:

THE EXPO Center Hall D Construction

The Contractor agrees that the following are hereby incorporated by reference and shall be made a part of this Agreement as if fully set forth herein. (1) Owner's Request for Proposal, dated _____ and all subsequent Addenda; (2) The Contractor's response to the Request for Proposal, dated _____; (3) The design development project drawings and specifications, dated _____, which were the basis of the Guaranteed Maximum Price (GMP) proposal; (4) The Contractor's GMP Budget Proposal dated _____, GMP Estimate Summary Sheet dated _____, and Exhibits _____ attached hereto; (5) The Contractor's phasing and scheduling drawings including narratives; (6) Performance and Payment Bonds (Exhibit __, attached hereto).

The foregoing documents are listed in descending order of precedence; conflicts among those documents shall be resolved in favor of the document that occurs earliest in the list. This Agreement shall take precedence over all incorporated documents.

2. Examination of Site: By executing this Agreement, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the

Work is to be performed, and correlated personal observations with the requirements of the contract documents.

3. Time is of the Essence: It is understood that time is of the essence in performing the Work and the Contractor shall provide the necessary equipment and personnel to Substantially complete the entire project by March 17, 2001.

4. Liquidated Damages for Late Completion: The Contractor recognizes that failure to substantially complete the Work by the stipulated date shall result in expense and damage to Owner and shall be a material breach of this Agreement. Because of the difficulty in determining the actual loss and monetary damages to Owner due to failure to substantially complete the Work by the agreed upon substantial completion date, the Contractor agrees to pay Owner, as damages representing a reasonable approximation of the actual damages which Owner would suffer in such event, and not as penalty, **liquidated damages of \$1,000 for each and every calendar day that the work is not complete on the entire project starting March 17, 2001.**

Owner will inspect the work and, within 15 calendar days after receiving written notice from the Contractor that the work is finally complete, either accept the work or reject it and notify the Contractor of work yet to be performed. Owner will make final payment within 30 calendar days after final acceptance of the last element of work to be finally completed.

5. Contractor's Duties and Status: The Contractor recognizes the relationship of trust and confidence established between the Contractor and Owner by this Agreement. He covenants with Owner to furnish the best skill and judgment and to cooperate with the Project's Architect in forwarding the interests of Owner. The Contractor agrees to furnish efficient business administration and superintendence and to use every effort to Keep an adequate supply of workers and materials at all times, and to perform in the best and soundest way and in the most expeditious and economical manner consistent with the interest of owner.

6. Guaranteed Maximum Price: This Agreement is a Contract with a guaranteed maximum price, herein referred to as "GMP." The total construction cost, plus allowances (if any), plus any Owner's contingency plus the fixed fee amount, will constitute the GMP.

• Cost of Work	\$ _____
• Allowances	\$ _____
• Contingency	\$ _____
• Subtotal	\$ _____
• Contractor's Fee (____% of Subtotal)	\$ _____
• Total = GMP	\$ _____

7. Basis of Payment: The basis for payment is the reimbursable costs, as identified hereinafter, plus a Fixed Fee which shall be the full compensation to the Contractor for his services provided that the total payment under the contract shall not exceed the GMP. Owner will review and approve payment requests prior to issuance of payment.

(a) Costs to be Reimbursed: Subject to the limit established by the GMP, Owner agrees to reimburse the Contractor directly for all costs necessarily incurred for the proper execution of the Work, such reasonable costs to include the following items, and to be at rates no higher than the standard paid in the locality of the Work, and as approved by Owner.

(1) Salaries or wages of all craft labor, including field foremen, together with any Social Security and Unemployment Insurance Taxes, State or Federal, and any fringe benefits required by law, labor agreement, or otherwise in connection with the Work.

(2) Salaries of the Contractor's salaried employees when stationed at the field office; employees engaged at shops or on the road and in expediting the production or transportation of materials or equipment together with an agreed upon percentage for fringe benefits. The number of employees is subject to prior agreement and approval of Owner.

(3) It is the intention of the parties that the majority of self performed work authorized by this Contract will be reimbursed and treated as a subcontract. For that portion of the work described as job services the Contractor may use Contractor-furnished craft labor. The Owner will reimburse the Contractor for this craft labor for the direct cost of wages, payroll taxes and fringe benefits plus a 3 percent surcharge to cover the cost of the craft labor administrative expense. In the event the Contractor elects to use hourly employees for non-self performed supervisory work, the 3% surcharge will not apply to the labor charge.

(4) Subsistence and travel costs, for the Contractor's salaried employees stationed in the field office when in direct performance of the work, with prior Owner approval.

(5) Premium overtime costs for any craft labor as referred to in paragraph 7.a.1 of this section, with prior Owner approval for additional work required by Owner when no time extension is allowed.

(6) Field office supplies and services including office supplies, blueprints, messenger services, fax machines, computers, two way radios, telephone, postage, reproduction, photographs and other equipment or materials that shall be approved by Owner following submittal of listing by Contractor of aforementioned items.

(7) Safety, safety awards, safety lunches, drug and alcohol testing, first aid, and temporary fire protection costs.

(8) Jobsite temporary services and facilities including structures (shacks, offices, pedestrian walkways, etc.) sanitation, roads, heat, light, water, air, etc.

(9) Materials, subcontracts, expendable supplies and transportation required for the proper execution of the Work.

(10) Costs of permits, fees, business and occupational, and sales taxes or similar taxes required by law which the Contractor is obligated to pay other than personal property taxes on the Contractor's construction equipment and net income taxes. Costs of licenses, royalties, bond premiums (both Contractor and subcontractor), insurance premiums and computer charges incurred by the Contractor in connection with the Work. Costs of building permits are not included in the GMP.

(11) Transportation of the Contractor's tools, machines, and equipment to the site, the fueling and maintenance thereof during the course of the Work, and the cost of unloading and loading said tools, machines, and equipment.

(12) Reimbursement for use of Contractor owned equipment shall be at a rate to be agreed upon by Owner prior to start of the Work plus cost of fuel and routine maintenance without additional markup. Prior to use of such equipment, the Contractor shall furnish Owner with an analysis of the cost of rental owned by third parties versus Contractor owned rental rates. For those items of Contractor owned equipment for which the total rental is expected to exceed the replacement cost as determined prior to beginning work, Owner will have the right to discontinue further monthly rental payments beyond the replacement value but retain the service of the equipment; reimbursing the Contractor only for fuel and routine maintenance costs.

(13) Rental of equipment owned by third party equipment vendors while it is engaged in Contract Work, plus fuel and routine maintenance at the Contractor's actual cost without markup.

(14) Owner will receive the benefit of all trade and quantity discounts, but no time discounts, allowed by suppliers and taken by the Contractor.

(15) Cost of data processing services at the Contractor's rates established prior to the start of contract work subject to Owner approval.

(16) Costs for "offsite" storage of materials subject to Owner approval.

(b) Contingency: is an amount agreed upon by the parties and included within the GMP. This contingency is expected to be utilized for allowance overages or other items that are specifically approved in writing by Owner. The contingency may only be expended by the Contractor for the Cost of the Work with prior written notification and written consent of the Owner.

(c) Allowances: are those items for which there are unidentifiable risks, incomplete designs, or unknown conditions that have been estimated by the Contractor and included in the GMP. If the final cost of an allowance item is more

or less than the estimated amount, the contingency may be increased or decreased by a commensurate amount. In addition, if the contingency is depleted, then the GMP may be adjusted by Change Order by an amount equal to the difference between the final cost of the allowance item and the estimated allowance amount.

ALLOWANCE ITEMS

(ITEMIZED LISTING OF ALLOWANCES TO BE ATTACHED HERETO)

- (1) The GMP includes the listed allowances. Owner will review the Contractor's proposals for each allowance prior to the Contractor commencing work covered by such allowance.
 - (2) Unless otherwise stated, these allowances cover all costs related to the described items including material, equipment, delivery, taxes, handling costs, installation costs, subcontracts and subcontract modifications which shall be documented and reported to Owner.
 - (3) The Contractor's costs for overhead and fees shall be included in the reimbursable costs and fixed fee stated in Paragraphs 7 and 9 of this Agreement and shall not be included in the allowances.
 - (4) If the final cost of an allowance item is more or less than the estimated allowance, the contingency may be increased or decreased by a commensurate amount. In addition, if the contingency is depleted, then the GMP may be adjusted by Change Order by an amount equal to the difference between the final cost of the allowance item and the estimated allowance amount.
8. Subcontractors: The Contractor agrees to request and accept subcontractors' bids for construction work required for the Work.
9. Contractor's Fee: Owner agrees to pay the Contractor, in addition to the costs to be reimbursed as described herein, as compensation for Contractor services, a fixed fee of \$ _____ which is based on _____% of the Cost of the Work, Allowances (if any) and Contingency at GMP establishment.

Notwithstanding the above, the fixed fee will not change unless the final total construction cost, as adjusted by subsequent change orders and allowance adjustments (if any), increases or decreases the amount of the original construction cost by 10 percent or more. If such increase or decrease occurs, then the fixed fee will be adjusted up or down respectively by the percentage used to establish the fixed fee, but only on that portion of the construction cost above or below the 10% limitation.

Costs Included in the Fixed Fee: The fixed fee shall be the Contractor's sole compensation for profit and certain costs, including but not necessarily limited to costs allocable to:

- a. Salary of the Contractor, if an individual; or salary of any partner, if a partnership or joint venture; or salary of any officer of the Contractor, if a corporation.
- b. Salary of any person employed, during the execution of this Work, in the main office or in any regularly established branch office except as stated in Subparagraph 7.a. (2) of this Agreement.
- c. Overhead or general expenses of any kind, except as these may be expressly included in Paragraph 7 above, in which case they may be included as reimbursable costs or in the fixed fee, but not both.
- d. Interest on capital employed either in the plant or in expenditures of the Work.
- e. Cost of hand tools, canvas and tarpaulins and other such materials consumed in the prosecution of the Work, and depreciation on such tools, canvas and tarpaulins used but not consumed and which shall remain the property of the Contractor.
- f. Cost of preparation of the Contractor's Response to Owner's Request for Proposal, Guaranteed Maximum Price, and Agreement.
- g. Profit.
- h. Any costs in excess of the GMP.

10. Items of Work Furnished by Owner: Certain work, equipment, or building components may be procured by Owner outside of the Agreement. As a part of the Work under this Agreement, the Contractor may also be required to make final mechanical and electrical connections on equipment furnished and/or installed by Owner. The Contractor may also be required to install equipment or components furnished by Owner. It is the intent that the Contractor will be required to manage and coordinate the completion of such work as a part of his services under this Agreement.

11. Discounts: Trade discounts for purchase of materials and services shall accrue to Owner, and cash discounts for prompt payment of invoices shall accrue to the Contractor.

12. Accounting: The Contractor shall check materials and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under this Agreement. Owner shall be afforded access to the Work and to the Contractor's records, correspondence, receipts, vouchers, memoranda, etc., relating to this Agreement at the project site office. Books of account shall be kept in accordance with generally acceptable accounting practices and be subject to audit annually.

13. Progress Payment: The Contractor may submit periodically, but not more than once each month, a request for payment for work performed, materials delivered and stored on the site and progress payment of the Contractor's fixed fee equal to the percentage used to establish the fixed fee times the reimbursable costs for each payment request. Payment requests shall show in detail and as completely as possible, monies paid by the Contractor on account of the cost of the work during the period involved, with copies of payroll for labor, records of equipment used, copies of bills and subcontractors invoices. Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the contract documents. The schedule of values shall allocate the entire GMP among the various pieces of work, except the Contractor's fee, the contingency amount and the allowances shall be shown as separate items. Applications for payment shall show the percentage of completion for each portion of the Work as of the end of the period covered. The percentage of completion shall be the lesser of; (1) the percentage of that portion of the Work that has actually been completed, or (2) the percentage obtained by dividing the expense that has been paid for that portion of the work by that portion of the Work's percentage of the GMP as indicated on the approved schedule of values. Payment requests shall be submitted to Owner, who will promptly verify the correctness thereof for payment. Payment will be due and payable promptly by Owner. Final payment will be processed in the same manner. Progress payments will be made in accordance with General and Supplementary Conditions for payments and retainage.

14. Successors and Assigns: The Agreement shall insure to the benefit of and be binding upon Owner and the Contractor, respectively, and their respective partners, successors, assigns, and legal representatives. Neither Owner nor the Contractor shall have the right to assign, transfer, or sublet his interests or obligations hereunder without written consent of the other party. Owner shall approve subcontractors and subcontracts.

15. Under the same date as this Agreement, the Contractor is furnishing Owner with a corporate surety bond with _____, as surety, in the full amount of the GMP. The said bond shall insure full compliance, full execution and performance of this Agreement by the contractor in accordance with all of its terms and provisions.

16. The Contractor agrees to abide by the requirements of ORS 279.350 governing the payment of prevailing wage rates.

17. The Contractor agrees to comply with all federal and state laws and regulations regarding nondiscrimination in employment, employee benefits, and facilities.

18. The Contractor agrees to seek the participation of Minority and Women Owned Business Enterprises in the prosecution of the Work.

This Agreement and the documents expressly incorporated by reference constitute the parties' entire agreement regarding this matter and supersede all prior agreements or communications regarding the same matter. This Agreement may be modified only by writing signed by an authorized representative of each party.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be duly executed.

MERC

Contractor

Signed: _____

Chairman

Title: _____

Date

Date: _____

Secretary / Treasurer

Date

State of Oregon
Construction Contractors Board
Registration No. _____

Workers' Compensation Insurance
Identification No. _____

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