

SECTION 01 33 00**SUBMITTALS****PART 1: GENERAL****1.01 CONSTRUCTION SCHEDULE**

- A. Prepare and submit detailed progress schedules, schedule of values and shop drawing and sample submittal schedules to American Water (AW). The schedule shall be in bar graph form and shall include, as a minimum, the following separate activities:
1. Physical construction (identifying mobilization, demobilization, setup time, lags, etc.).
 2. Issuance by Contractor of purchase orders for material and equipment and submittal of shop drawings and samples to the AW Project Manager.
 3. Review by AW Project Manager for each submittal of samples and shop drawings. Unless otherwise approved by the AW Project Manager, allow ten (10) working days for AW Project Manager to review each submittal.
 4. Fabrication time for materials and equipment.
 5. Delivery of materials and equipment.
 6. Installation of materials and equipment.
 7. Testing, start-up and training for individual pieces of equipment or entire systems as appropriate.
 8. Weather affected activities. The Contractor schedule should explicitly indicate how many days are allocated to downtime due to inclement weather.
 9. Outages or interruptions of AW's facilities required to perform work.
 10. Demolition or removal work under this Contract.
- B. Activity durations shall represent the best estimate of elapsed time considering the scope of the Work involved in the activity and the resources planned for accomplishing the activity expressed in working days.
- C. Activity descriptions shall clearly define the scope of work associated with each activity.

- D. Detail the construction work schedule to an extent that progress can be readily monitored on a weekly basis. In general, the construction work shall be detailed such that no construction activity shall have duration greater than fifteen (15) work days. As a minimum, each activity shall be coded by:
 - 1. Activity type (i.e., submittal, AW Project Manager's review, material order material delivery, excavation, pilot hole drilling, well testing, pipeline installation, etc.).
 - 2. Responsibility (i.e., Contractor, Contractor A, Contractor B, AW, Engineer, etc.).
 - 3. Area (i.e., Pilot Wells, Production Wells, sitework, etc.).
- E. Develop the construction schedule as necessary to properly control and manage the project. The above schedule development requirements are a minimum.
- F. The preliminary progress schedule shall be submitted in a bar graph format and shall include, as a minimum, a graphic representation of all significant activities and events involved in the construction of the project. The graphic representation and statement must clearly depict and describe the sequence of activities planned by the Contractor, their interdependence and the time estimated to perform each activity.

1.02 FINALIZING SCHEDULES

- A. Prepare to present and discuss at the preconstruction meeting, the schedules submitted in accordance with this specification. Unless additional information is required to be submitted by the Contractor, the AW Project Manager will, within 15 working days of the preconstruction conference, provide comments to the Contractor. Then resubmit the affected schedules addressing the AW Project Manager's comments.
- B. Approval of the final schedules by the AW Project Manager is advisory only and shall not relieve the Contractor of responsibility for accomplishing the work within the Contract Time. Omissions and errors in the approved schedule shall not excuse performance less than that required by the Subcontract. Approval by the AW Project Manager in no way makes AW an insurer of the success of those schedules or liable for time or cost overruns flowing from shortcomings in such schedules.

1.03 REQUIREMENTS FOR CONFORMING TO SCHEDULE

- A. Take such steps as will be necessary to improve progress, if, in the opinion of the AW Project Manager, the Contractor falls behind the progress schedule. AW Project Manager may require Contractor to increase the number of shifts and/or overtime operations, days of work, and/or the amount of construction planned, and to submit for approval such supplementary schedule or schedules as may be deemed necessary to demonstrate the manner in which the agreed

rate of progress will be regained, all without additional cost to AW. An updated cash flow schedule will be required in this occurrence and will be provided with the supplementary schedules referenced above.

1.04 UPDATING SCHEDULES

- A. Submit to the AW Project Manager monthly updates of the schedules required per this specification section. Be prepared to discuss the monthly update at the subsequent monthly job meeting if such meetings are to be held.
- B. Progress and shop drawing schedule updates shall reflect the progress to date by providing actual start dates for activities started, actual finish dates for completed activities, and identifying out of sequence work, schedule logic changes and any circumstances or events impacting the current schedule. The updates shall also contain the Contractor's best estimate of the remaining duration for activities not complete as of the date of the update. All graphic presentations and other information required per the initial submittal of these schedules shall be provided with each update.
- C. The cash flow schedules shall be updated to reflect any changes.

1.05 ADJUSTMENT OF PROGRESS SCHEDULE AND CONTRACT TIME

- A. If the Contractor desires to make changes in the method of operating which affect the approved progress schedule, notify the AW Project Manager in writing stating what changes are proposed and the reason for the change. If the AW Project Manager approves these changes, revise and submit for approval, without additional cost to AW, all of the affected portions of the schedule.
- B. Shop drawings and samples which are not approved on the first submittal or within the schedule time shall be immediately rescheduled, as well as any work which fails to pass specified tests or has been rejected.
- C. The Contract Time will be adjusted only for causes specified in the General Conditions. In the event the Contractor requests an adjustment of the Contract Time, furnish such justification and supporting evidence as the AW Project Manager may deem necessary for a determination as to whether the Contractor is entitled to an adjustment of Contract Time under the provisions of the General Conditions. The AW Project Manager will, after receipt of such justification and supporting evidence, make findings of fact and will advise the Contractor in writing. If the AW Project Manager finds that the Contractor is entitled to any adjustment of the Contract Time, the AW Project Manager's determination as to the total number of days adjustment shall be based upon the currently approved progress schedule and on all data relevant to the adjustment. The Contractor acknowledges and agrees that actual delays in activities which, according to the progress schedule, do not affect the Subcontract completion date shown by the critical path in the schedule will not be the basis for an adjustment of Contract Time.

- D. From time to time it may be necessary for the progress schedule and/or Contract Time to be adjusted by AW to reflect the effects of job conditions, weather, technical difficulties, strikes, unavoidable delays on the part of AW , and other unforeseeable conditions which may indicate schedule and/or Contract Time adjustments. Under such conditions, the AW Project Manager shall direct the Contractor to reschedule the work and/or Contract Time to reflect the changed conditions. Revise the construction schedule accordingly. No additional compensation shall be made to the Contractor for such changes except as provided in the General Conditions. Unless otherwise directed, take all possible actions to minimize any extension to the Contract Time and any additional cost to AW.

1.06 PERFORMANCE EXECUTION PLAN (PEP)

- A. When required by AW, the Contractor shall prepare and submit a Project Execution Plan that provides specific details as to how the Contractor intends to perform the proposed scope of work. At a minimum the PEP will provide the following details:
1. A brief description of the proposed project.
 2. A narrative detailing the Contractor's responsibilities and services.
 3. A narrative detailing the tasks that are the responsibility of AW.
 4. Details of any proposed deviations from AW standard specifications and details.
 5. List of Contractor's exclusions.
 6. Key assumptions and clarifications.
 7. Project administration, including a communications plan that provides details on how meetings, outage notices, change orders, and payment requests will be communicated.
 8. Project submittals
 9. Design and engineering plan, including permitting requirements.
 10. Construction plan.
 11. Vendor and subcontracting plan.
 12. Project schedule and preliminary milestone dates.
 13. Operational considerations, including system shut downs.
 14. Project budget.

15. Safety considerations.
 16. Project risks, including operational constraints, construction risks, safety risks, schedule risks, process risks, and cost overrun risks.
 17. Commissioning, start-up, and training plan.
- B. Upon review and approval by both the Contractor and AW, the PEP will be signed by both parties and work will be permitted to proceed.

1.07 QA/QC PLAN

- A. When required by AW, the Contractor shall prepare and submit a Quality Assurance/Quality Control (QA/QC) Plan that provides specific details as to how the Contractor will monitor and evaluate the project to ensure compliance with the project plans and specifications. The QA/QC plan shall be project specific and shall include, but not be limited to, the following key elements:
1. Quality Management and Responsibilities.
 2. Qualified Employees.
 3. Project Quality Plan.
 4. Inspections and Testing.
 5. Control and Prevention of Nonconformance.
 6. Training.
 7. Project Documentation.
 8. Project Closeout.
- B. The QA/QC Plan may be submitted as part of the PEP.

1.08 SHOP DRAWINGS

- A. Contractor shall prepare and submit a Submittal Log for review and approval by AW.
- B. Promptly supply to the AW Project Manager for approval, shop drawings with details and schedules for all items as noted in the Drawings and/or Specifications and/or required by the AW Project Manager. Submittals are required for all equipment and materials to be installed on the job. Contractor shall assume that all submittals will be reviewed and returned by AW within 10 business days.

- C. One (1) copy of all drawings, schedules and brochures shall be submitted for approval. Each submittal shall have the job name on it. Shop drawings may be submitted to AW electronically.
- D. Submittals smaller than 8-1/2 by 11-inches shall be secured to paper 8-1/2 by 11-inches.

1.09 SAMPLES

- A. When required by the AW Project Manager or where noted in other Sections of these Specifications, samples of materials shall be submitted for approval.

1.10 PRE-CONSTRUCTION VIDEO/ELECTRONIC PHOTOS

- A. If required by AW, and prior to mobilization at the site, furnish to the AW Project Manager on DVD a video recording of all planned construction areas, material storage areas, areas adjacent to these areas, including but not limited to, streets, driveways, sidewalks, curbs, ditches, fencing, railing, visible utilities, retaining structures and adjacent building structures. The purpose of the video is to document existing conditions and to provide a fair measure of required restoration. Care should be taken to record all existing conditions which exhibit deterioration, imperfections, structural failures or situations that would be considered substandard. Notify the AW Project Manager when the video is to be taken to provide the AW Project Manager an option to be on site during the documenting of the project area.
- B. The video shall be high quality, color and in an approved electronic format. Temporary lighting shall be provided as necessary to properly video areas where natural lighting is insufficient (indoors, shadows, etc.). The video shall include an audio soundtrack to provide the following information:
 - 1. Detailed description of location being viewed referenced to Contract Drawings (i.e., well location, building designation, pipeline route etc.)
 - 2. Direction (N, S, E, W, looking up, looking down, etc.) of camera view
 - 3. Date, time, temperature, environmental conditions during recording.
 - 4. Where required by AW Project Manager, electronic photographs of specific locations shall be provided to supplement the electronic video.
- C. Any areas not readily visible by video/photo methods shall be described in detail. Unless otherwise approved by AW Project Manager, video shall not be performed during inclement weather or when the ground is covered partially or totally with snow, ice, leaves, etc.
- D. As many recordings or photos as are necessary to satisfy the requirements of this section shall be prepared. The original documents shall be submitted to the AW Project Manager accompanied by a detailed log of the contents of each

DVD. The log should include location descriptions with corresponding file name to facilitate the quick location of information contained on the DVDs. The DVDs will be maintained by the AW Project Manager during construction and may be viewed at any time by Contractor upon request. Upon final acceptance, the DVDs will become the permanent property of AW .

1.11 PROGRESS PAYMENTS

- A. The detailed arrangement for submittal of progress payments shall be discussed at the preconstruction meeting. In general, progress payments shall be submitted monthly in AIA format to the AW Project Manager. The progress payment request shall be based on the unit prices and should provide the percentage of completion, total dollar value completed, dollar value completed prior to the current payment, and the amount requested for this progress payment for each line item contained in the schedule of values.

Progress payment requests for material and/or equipment suitably stored but not yet incorporated into the work shall not be permitted by AW. Payment will not be made to the Contractor if, upon inspection by the AW Project Manager, it is determined that the material and/or equipment does not conform to the requirements of the Contract Documents including proper storage, receipt of approved shop drawings, receipt of any special guarantees, bonds, insurance coverage, any evidence of damage or imperfections, etc.

CONTRACTOR'S DAILY REPORTS

- B. If requested by the AW Project Manager or the AW Representative, prepare and submit daily reports containing the following information:
1. The number of craftsmen and hours worked of each Contractor,
 2. The number of hours worked by each trade,
 3. The number of hours worked of each type of equipment,
 4. A description of work activities performed,
 5. A description of any material or equipment deliveries,
 6. Description of obstructions encountered,
 7. The temperature and weather conditions.
 8. Downtime due to equipment failure.
 9. Detail cause for work delays.

- C. The daily reports shall be submitted on a daily basis, by the end of the next business day.
- D. Information provided on the daily report shall not constitute notice of delay or any other notice required by the Contract Documents. Notice shall be as required therein.

1.12 OPERATING AND MAINTENANCE INSTRUCTION MANUALS

- A. Prepare complete written maintenance and operating instructions covering any equipment provided under this Contract. Divide the operating instructions into basic sections according to type of equipment.
- B. Instructions shall describe all equipment and controls, their purpose, and their operation and use. Include maintenance checklists for use by AW 's personnel and a complete listing of replacement parts with pertinent information relative to ordering such parts.
- C. Submit instructions in duplicate draft form for review by the AW Project Manager at least eight weeks prior to initial operation and in final form within thirty days after return of one copy of the draft with the AW Project Manager's notations.
- D. Prior to release of Final Payments, revise and resubmit copies of the instructions to accord with any changes in procedures or equipment made during start-up or initial operation. Resubmittals are also required for changes made during the guarantee period.

PART 2: PRODUCTS

2.01 TESTING DATA CERTIFICATES

- A. Product testing shall comply with all respective AWWA or ASTM standards. The certificates of compliance shall be electronically scanned and submitted by E-mail to the AW Project Manager or by submitting the hard copy originals to the AW Project Manager.

PART 3: EXECUTION

(Not Used)

END OF SECTION 01 33 00