Bid, Planning and Pre-Construction Checklist

Checklist Use

The Bid, Planning and Pre-Construction Checklist is to be completed by personnel assigned to the project team. This team will verify various responsibilities for the company and other contractors as the information pertains to those items noted. In addition, this checklist may be used for development of a bid proposal.

Individual sections of the checklist will be completed by specifically assigned team members and then consolidated into a master list as a documentation guide for reference during the duration of the project.

The checklist used for each project may be an altered version of the company standard Bid, Planning and Pre-Construction Checklist to reflect the type of work involved for the project. Any adaption to the standard Planning and Pre-Construction Checklist is at the discretion of the project manager.

Specifications and Drawings

The items within this checklist are based on the specifications and drawings included as part of the contract award dated \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and all associated addenda and incorporated correspondence. Check to make sure that documents issued for construction are dated and have the same revision numbers that appear on bid proposal documents.

Project

|  |  |
| --- | --- |
| Project Name: | Project Number: |
| Client: | Owner: |
| Contract Manager: | General Contractor: |
| Site Location: | |
|  | |

Project Schedule

The project’s proposed start date is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The anticipated end date for the project is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

This project schedule duration is\_\_\_\_months.

Plans, Specifications, Codes, Standards, and Practices Quick Reference

List below any plan, spec, code, standard, or practice where activities are not normal for company construction, fabrication, assembly, and installation.

|  |  |  |
| --- | --- | --- |
| Plan/Spec/Code/Std. | Section | Comment |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Contract Scope Analysis

Identify the responsible contractor orentity for each of the work areas listed.

|  |  |
| --- | --- |
| Description | Responsible Contractor or Entity |
| Process Piping |  |
| Cryogenic Distribution |  |
| Industrial Water System |  |
| Process Cooling Water |  |
| D.I. Water System |  |
| Chemical Distribution |  |
| HVAC |  |
| Sheet Metal |  |
| Plumbing |  |
| Excavation and Backfill |  |
| Automatic Fire Sprinkler |  |
| Fire Stand Pipe System |  |
| Motor Starters |  |
| Instrumentation |  |
| Insulation |  |
| Painting |  |
| Color Coding |  |
| Pipe Identification and Valve Tags |  |
| Test, Adjust, and Air Balance |  |
| Test, Adjust, and Water Balance |  |
| Power Wiring |  |
| Control and Interlock Wiring with Composite Diagrams |  |
| Access Panels |  |
| Concrete Work |  |
| Cutting and Patching |  |
| Rough Framing |  |
| Sheet Rock |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Normal Exclusions

The following table identifies those items we normally EXCLUDE from our responsibility. Have the items in the following table been excluded from Company Name responsibility? Mark the appropriate column.

|  |  |  |
| --- | --- | --- |
|  | Excluded? | |
| Item Description | Yes | No |
| Architectural Cutting and Patching |  |  |
| Architectural Sheet Metal and Flashing |  |  |
| Beam Penetrations |  |  |
| Broom Cleaning |  |  |
| Burn Boxes, Furnish and Install |  |  |
| Ceiling Tile Removal |  |  |
| Clean Room Welding |  |  |
| Concrete Core Drilling |  |  |
| Concrete Work |  |  |
| Confined Space Training |  |  |
| Containment Pans |  |  |
| Costs for Storage of Owner-Furnished Equipment |  |  |
| Cutting and Patching of Building |  |  |
| Design, Materials, and Fabrication of Seismic Restraints for Equipment Provided by Others |  |  |
| Water for Flushing and Testing |  |  |
| Disconnects and Motor Starters |  |  |
| Drawings We Develop (Usually for Internal Company Activity) |  |  |
| Electrical Power and Control Wiring |  |  |
| Excavation and Site Work |  |  |
| Fabrication or Installation of Structural Steel Supports |  |  |
| Factory Source Inspections |  |  |
| Fire Protection |  |  |
| Heat Tracing |  |  |
| Hoses with Disconnects |  |  |
| Humidifiers and their Installation into Ductwork |  |  |
| Instrument Air |  |  |
| Instrument Calibration |  |  |
| Instrumentation and Controls |  |  |
| Insulation of Owner-Provided Equipment |  |  |
| Labor for Pre-Commissioning and Commissioning Assistance |  |  |
| Materials Required for Installation of Instrumentation and Controls |  |  |
| Monitoring and Life Safety Systems |  |  |
| Overtime Premiums |  |  |
| Painting: Prime, Finish and Touch-Up |  |  |
| Permit Fees |  |  |
| PLCs, Computers, and Programming for Control Systems |  |  |
| Power for Heat Tracing |  |  |
| Roof, Cut and Patch |  |  |
| Scrubbed Exhaust Systems, Scrubbers, and Penetrations to Scrubber Duct |  |  |
| Spare Parts for Equipment Provided by Others |  |  |
| Start-Up and Commissioning of Owner-Provided Equipment |  |  |
| Storage Space, Material, etc. |  |  |
| Structural Supports, Framing or Lintel for Openings Necessary for Mechanical  Piping, Ducts, etc. |  |  |
| Testing, Adjusting and Balancing for Air, Water, and Steam Systems |  |  |
| Trench Drains |  |  |
| Variable Frequency Drives and Motor Control Centers |  |  |
| Vibration Isolation for Owner-Furnished Equipment |  |  |
| VOC Unit and Connections |  |  |
| Warranty Beyond One (1) Year from Beneficial Occupancy and/or Use |  |  |
| Radiograph (X-Ray) Weld Inspection |  |  |
|  |  |  |
|  |  |  |

Subcontractors

Identify all project subcontractors with whom we will be required to work and coordinate project activities.

|  |  |  |
| --- | --- | --- |
| Subcontractor | Responsible for | Coordinating Activity |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Are the following documents part of our record?

|  |  |  |  |
| --- | --- | --- | --- |
| Subcontractor | Billing Format | Insurance Certification | Performance Bond |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Additional subcontractor-related considerations

|  |  |  |  |
| --- | --- | --- | --- |
| Question | Yes | No | Comment |
| Are we requiring release of lien with subcontractor payments? |  |  |  |
| Are any equipment suppliers going to be treated as subcontractors and fees (detainment) withheld? |  |  |  |
|  |  |  |  |
|  |  |  |  |

Materials and Equipment

Note all materials and equipment we will furnish in the following tables.

|  |  |  |  |
| --- | --- | --- | --- |
|  | We Furnish? | |  |
| Item | Yes | No | Explanation |
| Procurement |  |  |  |
| Unloading |  |  |  |
| Storage and/or Protection |  |  |  |
| Installation |  |  |  |
| Start-up |  |  |  |
| Commission |  |  |  |
| Warrant |  |  |  |

Equipment We Will Furnish

|  |  |
| --- | --- |
| Item Description | Quantity |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Equipment Furnished by Others for Which We Will Be Responsible

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Responsible? | | Explain if Not a Normal Responsibility |
|  | Yes | No |  |
| Receiving and Storing at Jobsite |  |  |  |
| Rig, Set, Anchor, Grout (as needed) |  |  |  |
| Installed by Contractor |  |  |  |
| Warranty |  |  |  |
| Component |  |  |  |
| Trim Pipe Installation |  |  |  |
| Start-Up Assistance |  |  |  |
| Calibration |  |  |  |
| Wiring |  |  |  |
| Control Air |  |  |  |
| Controllers |  |  |  |
|  |  |  |  |

Early Items, Materials and Equipment Requirements

Identify any items, material or equipment that will be required for early construction activities.

|  |  |
| --- | --- |
| Items, Materials, or Equipment Required | Quantity |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Long Lead Items

|  |  |
| --- | --- |
| Material or Equipment Description | Vendor |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Structural Penetrations, Pads, Inertia Blocks, Tags, Supports, Anchors, Seismic, Hangers, etc.

For each item below, indicate whether we will provide it, and, if not, the name of the contractor that will provide it.

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Contractor |
| Piping Penetrations |  |  |  |
| Fire-Safe Materials |  |  |  |
| Coring through Waffle Decks and Penetrating, Cutting and Patching of Raised Flooring |  |  |  |
| Location and Size of Concrete Pads and Inertia Blocks |  |  |  |
| Perform the Concrete Work |  |  |  |
| Provide Pipe Labels |  |  |  |
| Pipe Identification Required at\_\_\_\_\_\_\_\_\_\_\_Intervals |  |  |  |
| Include Valve Tags for Every Valve |  |  |  |
| Structural Steel Supports and Braces for Piping Mains, Laterals and Hangers |  |  |  |
| Include Associated Pipe Racks, Auxiliary Steel and Seismic Bracing |  |  |  |
| Seismic Calculations and “Stamp” on Drawings |  |  |  |
| Seismic Calculations and “Stamp” for Piping |  |  |  |
| Seismic Calculations and “Stamp” for Equipment |  |  |  |
| Seismic Calculations and “Stamp” for Other Items |  |  |  |
| Hanger Materials Cadmium Plated In/Outside Building |  |  |  |
| Supports Include Cush-Clamp To Secure Pressure Systems |  |  |  |
| Provide Embedded Device Attachments |  |  |  |
| Vibration Isolation |  |  |  |
| Install Control Devices Provided by Others |  |  |  |
| Furnish and Install Non-Control Devices (Indicators, etc.) |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Material Storage

|  |  |  |
| --- | --- | --- |
| Description |  | |
| Will material storage be provided by the owner? | Yes | No |
| What class of space will be provided? |  | |
| Where will this space be located? |  | |

General Conditions

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Comment/Spec Section/ Time/Other |
| Scheduling: Is a formal critical path included in project documentation? |  |  |  |
| Coordination: Who will be responsible for managing the coordination with turn-key vendors and other trades to conduct detail piping design, clash detection, and schedule sequencing? |  |  |  |
| Protocol Training: Is there a requirement for protocol training? |  |  | Hours: |
| Safety: Are we to provide safety professionals for the duration of the field installation, required by project conditions? |  |  |  |
| What safety issues are we responsible for, specific by project requirements, identify. |  |  | Spec section: |
| 1. Is special safety equipment required for the project? |  |  |  |
| 2. Is this equipment owned by the company? |  |  |  |
| 3. Will safety equipment be rented? If so, what are the fees? |  |  | $ |
| 4. Are the fees noted in #3 above included in the project budget? |  |  |  |
| Detailing: Will we provide orthographic and as-built drawings for piping distribution? |  |  | Hand-drawn  Other  AutoCAD |
| Drug Testing: Will drug screening be required? |  |  | By Whom? |
| Permits and Fees: Are the costs for permits and fees included? |  |  | Which ones? |

QA/QC Requirements

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Comment |
| 1. Will the owner have independent inspector? |  |  | Who? |
| 2. Will the mechanical contractor perform examinations? |  |  | Reports to: |
| 3. How many examiners will be assigned to the project? |  | |  |
| 4. Will the mechanical contractor be required to perform any source audits or examinations? |  |  |  |
| 5. Are there any issues with the specifications as related to quality (QA/QC)? |  |  |  |
| Explanation of issues noted in #5 above: | | | |

Warranties

|  |  |  |
| --- | --- | --- |
| Warranty Description | Yes | No |
| Will this project require any warranty other than our standard one year against defects in materials or workmanship? |  |  |
| Explanation: | | |

Refuse Disposal and Hazardous Waste

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Comment |
| Is the mechanical contractor responsible for disposal of hazardous and non-hazardous waste? |  |  | Who: |
| Is decontamination required? |  |  | Who: |
| Who will provide Personal Protective Equipment? |  | |  |
| Is the mechanical contractor responsible for clean-up and refuse disposal beyond normal work area operations and for disposing derbies into an on-site bin provided by others? |  |  | Explain: |

Existing Site Conditions

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Comments |
| Will we be required to provide any additional structural equipment or piping supports? |  |  |  |
| Will owner shut down, drain, and make safe all equipment and piping systems that may be required for performing demolition, modification, and connection work? |  |  |  |
| Who is responsible for removal of walls, building structure components or utilities for us to complete our work? |  | |  |
| Who will provide project hoists, cranes, booms, man-lifts, and derricks for our work? |  | |  |
| Are site borings available? |  |  |  |
| Is there rock to excavate? |  |  |  |
| Who is performing water removal if required? |  | |  |
| Are there any special insurance coverage requirements, such as: explosion, collapse, underground by us? |  |  |  |
| Will special insurance coverage be provided? |  |  | By whom? |
| Is there an insurance requirement for materials and equipment furnished by others? |  |  |  |

Labor

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Comment |
| In the opinion of the project supervisor, are the labor units and total labor adequate? |  |  |  |
| What is the ratio of foreman to journeymen? |  | |  |
| Are wage scales used average for the life of project? |  |  |  |
| For above $ Base %PT1 Fringes |  |  |  |
| At 21 days per calendar month, how many working days are there in the life of the contract? |  | |  |
| In the supervisor’s opinion, are the man-days adequate? |  |  |  |
| Are working foremen estimated? |  |  | Number: |
| Are non-working foremen estimated? |  |  | Number: |
| What is the estimated average crew size? |  | | Number: |
| What is the estimated peak crew size? |  | | Number: |
| What support craft are estimated? |  | |  |
| In the supervisor’s opinion, are the man-days adequate for support craft? |  |  |  |
| Will company work rules be supplied to each worker when reporting to work? |  |  | If no, explain: |
| Signature form required for receipt of work rules? |  |  |  |
| Have company work rules been posted at the project site? |  |  |  |
| Have company safety rules been posted at the project site? |  |  |  |
| Availability of Labor | | | |
| Description | Min. No. | Max. No. | Source |
| 1. Plumbers |  |  |  |
| 2. Fitters |  |  |  |
| 3. Sheet Metal Workers |  |  |  |
| 4. Availability of quality mechanics? |  | |  |
| 5. Availability of key foremen and mechanics? |  | |  |
| 6. Our relationship with the UA at the local level? |  | |  |
| 7. Our relationship with SMWIA at local level? |  | |  |

Key Personnel

|  |  |  |
| --- | --- | --- |
| Position | Name | Start Date |
| Project Manager |  |  |
| Project Supervisor |  |  |
| Fitter Foreman |  |  |
| Plumber Foreman |  |  |
| Sheet Metal Foreman |  |  |
| Project Engineer |  |  |
| Purchasing Agent |  |  |
| Accountant |  |  |
| Payroll Clerk |  |  |
| Detailer |  |  |
| Detailer |  |  |
| Detailer |  |  |
| Timekeeper |  |  |
| Warehouseman |  |  |
| Secretary |  |  |
| Quality Control Manager |  |  |
| QC Examiner |  |  |
| QC Examiner |  |  |
| Safety Professional |  |  |
| Safety Professional |  |  |
| Other |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Changes to Company Procedures or Practices

If non-standard procedures or practices are adopted for this project, explain below.

|  |
| --- |
|  |
|  |
|  |
|  |

Shift Premium and Overtime

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Explanation |
| Are premium portions and overtime for field and staff personnel included representing field and ship labor on 6-day, 10 hours? |  |  |  |
| Is a man loading schedule included in the project documentation? |  |  | Documentation section: |
|  |  |  |  |

Payroll

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Explanation |
| Are there any requirements for payroll under collective bargaining agreements that would require use of a different payroll procedure? |  |  |  |
| Are certified payrolls required? |  |  |  |
| Will a new unemployment account need to be set up? |  |  |  |
| Have there been any changes in state funding for Workmen’s Compensation? |  |  |  |
| Will a new state withholding account be needed? |  |  |  |
| Are there any special procedures for layoff/termination checks? |  |  |  |
| Will special payroll handling procedures be used? |  |  |  |
| Are any special procedures required for sales and payroll tax consideration? If so, identify the exact location of the project site, including city, county, and state. |  |  |  |
| Is a local bank account required? |  |  | Signature authorization: |

Project Contract

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Explanation |
| Have all contract provisions been finalized and a fully executed contract delivered to the company’s home office? |  |  |  |
| If a fully executed contract has not been delivered to the company home office, what is the status? |  | |  |
| What type of contract is being used? |  | | Fixed fee  Cost plus  Guaranteed maximum |
| If it’s a cost plus or a cost reimbursable contract, how do we determine cost? |  | |  |
| Will we receive advance payment? |  |  | Amount? |
| if we receive advance payment, is there a bond or bank guarantee requirement? |  |  |  |
| Are there any ambiguities regarding accounting in the contract provisions? |  |  |  |

Insurance and Legal

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Yes | No | Explanation |
| Is the company covered by the owner’s or general contractor’s builders risk policy? |  |  |  |
| If covered, do we have a copy of the builders risk certificate on file with home office Legal? |  |  |  |
| Is the company legally qualified to do business in the state of the contract? |  |  |  |
| Does the company have the necessary state contractors licenses? |  |  |  |
| Have all state licenses and permits been obtained? |  |  |  |
| If the contract is under an owner-controlled insurance policy, has home office Accounting been notified? |  |  |  |
| Has the contract been reviewed by home office Legal? If not, why? |  |  |  |
| What are current sales tax requirements? |  |  |  |
| Are there any minority/special hiring reporting requirements by contract? |  |  |  |
| Are there any special risk factors in this contract not normally encountered? |  |  |  |
| By agreement, will we receive payment for the following: |  |  |  |
| 1. Materials stored on site? |  |  |  |
| 1. Materials stored off site? |  |  |  |
| How much is the amount of retention? |  | | $ |
| Can we bill for retention reduction? |  |  | When? |
| Is billing pre-approval required? |  |  |  |
| Will invoices be forwarded to the project site from the home office? |  |  |  |
| How may invoice copies are required by the client, and what is the dissemination? |  |  |  |
| Does the client or contract identify any special billing format? |  |  |  |
| If required, has the billing breakdown been prepared? |  |  |  |
| Is the billing breakdown going to provide positive cash flow for the project, at a minimum? |  |  |  |
| If a cost reimbursable-type contract, what are the cost substantiation requirements? |  | |  |
| If a cost reimbursable-type contract, will any overhead be allocated or billed? |  |  |  |
| If a cost reimbursable-type contract, will small tools be part of job costs? |  |  |  |
| If small tools will not be part of job costs, will they be billed as a percentage of labor costs? |  |  |  |
| Does the billing procedure require a lien waver? |  |  |  |
| Is special project mobilization needed? |  |  |  |
| If needed, is special project mobilization billable as a separate line item? |  |  |  |
| When will the first billing be submitted? |  | |  |
| What is the billing distribution? |  | |  |
| Will mobilization be billed? |  |  |  |
| What is the percent of retention to be withheld? |  |  |  |
| Can the retention percentage be reduced? |  |  | If so, when? |
|  |  |  |  |
|  |  |  |  |