Spec review: HVAC (Division 23)

iowa_jessie_parker.pdf · 386 pages · sections reviewed: 23 05 00 Basic Hvac Requirements, 23 05 05 Hvac Demolition For Remodeling, 23 05 93 Testing, Adjusting, And Balancing, 23 07 13 Ductwork Insulation, 23 31 00 Ductwork, 23 33 00 Ductwork Accessories, 23 37 00 Air Inlets And Outlets + Divisions 00–01

> **41 high-impact items** that can affect your price or disqualify the bid, 224 items in total. Every item links to the page in the spec book. This report helps you read the spec; it does not replace your own review.

Top 10 items for your bid

1. **Hazardous Materials Verification and Asbestos Liability** — Shifts the risk of asbestos discovery and investigation costs entirely to the subcontractor despite provided reports. p. 5, 30
2. **Aggressive 25-Day Mechanical Equipment Procurement Window** — Extremely short lead-time window for equipment creates high risk of schedule delays and liquidated damages. p. 28
3. **Warranty Start Date Fixed at Substantial Completion** — Requires purchasing extended warranties at sub's expense if equipment is started early for construction use. p. 104, 263
4. **Mandatory Overtime and Acceleration at Contractor Expense** — Sub must pay for increased crews or overtime to meet milestones without additional compensation. p. 104, 122
5. **Full Responsibility for Unshown Control and Power Wiring** — Forces sub to carry costs for all 120V/24V wiring not explicitly detailed on electrical drawings. p. 96, 255
6. **Mandatory X-Ray of Slabs and Damage Liability** — High cost for specialized scanning and unlimited financial liability for accidental utility damage during drilling. p. 274
7. **Strict Seal Class A and Mandatory Leak Testing** — Increases labor for sealing all ductwork regardless of pressure and carries risk of re-testing costs. p. 286, 293
8. **Architect/Engineer Site Visit Reimbursement from Retainage** — Direct financial penalty deducted from retainage for troubleshooting or failed inspections. p. 265, 268
9. **Substitution Redesign Costs and Waiver of Claims** — Sub must pay for A/E redesign fees and waives all future cost claims if a substitution is used. p. 105, 107
10. **Final 1% and Retainage Withheld for Closeout** — Impacts cash flow by tying up significant funds until all training, O&Ms, and checklists are verified. p. 110, 111, 140

Questions to ask before bidding (RFI)

1. Can the 25-day procurement window be extended for long-lead items like AHUs or VAV boxes? p. 28
2. Will the Owner provide a specific Liquidated Damages dollar amount, as the draft agreement is currently blank? p. 46
3. Are there specific insulation thicknesses required for the ductwork, as the specs refer only to drawings? p. 284
4. Does the 25-foot dedicated clearance zone above switchboards apply if the structural ceiling is lower than 25 feet? p. 291

5. Is the HVAC sub responsible for the cost of the fire watch if the alarm is disabled for construction? p. 116
6. Will the Owner provide the specific background check criteria and associated costs per employee? p. 92, 115
7. Are remote-controlled volume dampers required for all inaccessible dampers, or only where access doors are impossible? p. 296
8. Confirm if the 15-day submittal review period is included in or in addition to the 25-day procurement window. p. 28, 126

All findings by category

Materials, brands and substitutions (21)

HIGH	Substitution requests must be submitted by the date/time in the Notice to Bidders; late requests are only considered via Change Order for unavailability or Owner advantage. *“a substitute product will be considered when written request is received by the date and time identified in Section 00 1113... Substitution requests received after the specified date will be viewed in the context of a Change Order”*	p. 105 01 2500
HIGH	Subcontractor must pay for all redesign costs, detailing, and construction changes caused by their requested substitution if approved. *“firm will pay for any changes to the building design, including Design Professional’s design, detailing, and construction cost caused by the requested substitution”*	p. 105 01 2500
HIGH	Substitution requests for unnamed manufacturers must be submitted by the specific date listed in the project manual via email. *“submit a request for substitution for any manufacturer not named by the date specified in this project manual. Substitution requests shall be emailed to the Issuing Officer”*	p. 131 01 6000
MEDIUM	Strict procedures for product substitutions must be followed during the bidding or construction phase. *“01 2500 - Substitution Procedures”*	p. 5 01 2500
MEDIUM	Substitution requests for specific products must be submitted by April 24, 2026, following Section 01 2500 procedures. *“Substitute product will be considered if a written request is received by 2:00 PM, April 24, 2026, prior to bid opening.”*	p. 14 00 1113
MEDIUM	Iowa sales tax exemption applies; do not include tax in bid. *“Do not include Iowa sales tax or use tax, or any local option sales tax, on construction materials in determining your bid prices.”*	p. 17 3.02.A
MEDIUM	Substitution requests must be submitted prior to bid opening. *“a substitute product will be considered when a written request is received as specified in the Notice to Bidders... prior to bid opening.”*	p. 19 3.012.A

MEDIUM	Prohibition of products containing CFCs or HCFCs; preference for low-VOC, low-emission, and locally manufactured products. *“Do not use products having any of the following characteristics: 1. Made using or containing CFC’s or HCFC’s... contractor shall give preference to products that: 1. If used on interior, have lower emissions”*	p. 131 01 6000
MEDIUM	Substitutions for unnamed manufacturers must be submitted for written approval at least ten days prior to the bid opening. *“unnamed manufacturers... may be used if approval is secured in writing from the Architect/Engineer not later than ten days prior to the bid opening.”*	p. 264 23 0500
MEDIUM	Strict IAQ and duct cleanliness protocols required, including MERV 8 filters on all openings if equipment runs during construction. *“MERV 8 filtration media shall be used to protect each return air grille or opening... all ductwork shall be capped or sealed with sheet metal caps, polyethylene film, or other airtight protective.”*	p. 270 23 0500
MEDIUM	Specific brands required for FSK tape; no substitutions allowed without prior written permission from the Architect/Engineer. *“Tape all joints with Royal Tapes #RT 350 (216-439-7229), Venture Tape 1525CW, or Compac Type FSK. No substitutions will be accepted without written permission from the Architect/Engineer.”*	p. 284 23 0713
MEDIUM	Snap lock seams are strictly prohibited for rectangular ductwork. *“Snap lock seams are not permitted.”*	p. 287 23 3100
MEDIUM	Turning vanes must meet specific C-value performance (below 0.26/0.27) and be independently tested. EZ Rail II or equal is named. *“C-value independently tested at below 0.26. EZ Rail II by Sheet Metal Connectors or equal.”*	p. 287 23 3100
MEDIUM	Specific named manufacturers for slide-on flanged transverse joint systems: Ductmate, Nexus, or Mez. Others require prior approval. *“Manufacturers: a) Ductmate Industries - 25/35/45 b) Nexus c) Mez d) Other manufacturers must submit test data... and receive Architect/Engineer's approval before any fabrication begins.”*	p. 288 23 3100
MEDIUM	Ribbed and lightweight round/oval ducts are prohibited. Minimum gauges must meet SMACNA Chapter 3. *“Ribbed and lightweight duct are not permitted.”*	p. 288 23 3100
MEDIUM	If a manual damper is inaccessible and a ceiling door is not possible, a remote-controlled volume control device must be provided. *“When manual volume dampers are located above an inaccessible ceiling and an access door cannot be installed, provide a remote-controlled volume control device for operation of the damper.”*	p. 296 23 3300
MEDIUM	Grille blades must have steel friction pivots; plastic pivots are prohibited. *“Blades shall have steel friction pivots to allow for blade adjustment, plastic pivots are not acceptable.”*	p. 298 23 3700

MEDIUM	Flat-oval inlets are prohibited for flexible duct connections; requires sheet metal transitions. *“Flat-oval inlets are not acceptable for connection to flexible ducts... Provide sheet metal oval-to-round transitions where required.”*	p. 299 23 3700
MEDIUM	Diffuser back pans must be one-piece stamped; welded inlets or corners are prohibited. *“The back pan shall be one piece 22 gauge stamped and shall include an integral inlet. (Welded inlets and corner joints are not acceptable).”*	p. 299 23 3700
LOW	Crimped joints are prohibited for round/oval ductwork. *“Crimped joints are not permitted.”*	p. 288 23 3100
LOW	Dampers in insulated ducts require specific stand-off mounting hardware for regulators. *“On insulated ducts, mount quadrant regulators on stand-off mounting brackets, bases, or adapters.”*	p. 295 23 3300

Warranties (7)

HIGH	All warranties must start at Substantial Completion, not equipment startup. Contractor must pay for any necessary extensions. *“All warranties start at Project Substantial Completion, Contractor will be required to provide from this date and not the startup date of the equipment. Contractor will not be compensated for any cost related to purchasing extended warranties.”*	p. 104 01 1202
MEDIUM	Substitutions must carry the exact same warranty as the specified product. *“Same warranty will be furnished for proposed substitution as for specified product.”*	p. 107 01 2500
MEDIUM	Storage methods must strictly comply with manufacturer warranty conditions to remain valid. *“Comply with manufacturers’ warranty conditions, if any. ... Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight”*	p. 132 01 6000
MEDIUM	Standard one-year warranty starts from final acceptance or when the system is used for the benefit of any party other than the contractor. *“Provide one-year warranty... commence on the date of final acceptance, unless a whole or partial system... is put into use for the benefit of any party other than the installing contractor.”*	p. 263 23 0500
MEDIUM	Provide 90-day extended warranty after report receipt, including 24 man-hours of onsite service for rechecks or resetting devices at Owner's request. *“The TAB Contractor shall include an extended warranty of 90 days after owner receipt of a completed balancing report... This warranty shall provide a minimum of 24 manhours of onsite service time.”*	p. 276 23 0593

LOW	Warranties must be notarized and organized by specification section; delayed work requires updated warranty start dates. *“Verify that documents are in proper form, contain full information, and are notarized... Items of work delayed beyond date of Substantial Completion, provide updated submittal... listing date of acceptance as start of warranty period”*	p. 137 01 7700 - 3.04
LOW	Contractor must return for seasonal adjustments to controls and systems during the one-year warranty period. *“Contractor shall adjust the mechanical systems and controls at season changes during the one year warranty period, as required, to provide satisfactory operation.”*	p. 268 23 0500

Testing, commissioning and certifications (27)

HIGH	Complete all state-required inspections (Boiler, Water Heater, Energy Code) and upload documentation to Procore. *“Ensure all state inspections have been completed by the authority having jurisdiction. Upload documentation of all test/inspections to Procore.”*	p. 136 01 7700 - 3.01
HIGH	All construction activity must stop in areas served by an air system during the TAB (Testing, Adjusting, and Balancing) process. *“All construction activities in all spaces served by the air system shall stop... Testing, adjusting, and balancing work shall not commence until all construction activity is stopped.”*	p. 270 23 0500
HIGH	Mandatory X-ray of structural floor slabs before any cutting or drilling to avoid rebar and utilities. *“All penetrations shall be X-rayed prior to cutting and/or drilling to avoid rebar or utilities encased in floor construction.”*	p. 274 23 0505
HIGH	All duct systems must meet Seal Class A regardless of pressure class, including all seams and penetrations. *“All ducts systems, regardless of pressure class, shall be Seal Class A as defined by Section 5-1 of SMACNA HVAC Air Duct Leakage Test Manual”*	p. 293 23 3100
HIGH	Mandatory leak testing for all exterior ductwork. Interior ductwork may be tested at the contractor's expense if the Engineer deems leakage excessive. *“All exterior ductwork shall be tested... leak tests will be required if, in the opinion of the Architect/Engineer, the leakage appears excessive. Leak test shall be at the Contractor's expense”*	p. 293 23 3100
MEDIUM	HVAC subcontractor must provide professional testing, adjusting, and balancing services for the mechanical systems. *“23 0593 - Testing, Adjusting, and Balancing”*	p. 7 23 0593
MEDIUM	HVAC sub must perform equipment startups, BAS check-out, and Test and Balance (TAB) within specific tight windows in July/August. *“Equipment Startups... BAS Check-Out... Test and Balance MEPs”*	p. 28 00 3113

MEDIUM	HVAC sub must perform all testing and balancing. *“All test and balancing shall be the responsibility of this contractor.”*	p. 96 01 1200 1.09.D.9
MEDIUM	HVAC sub must lead VAV refurbishment reporting, coordinating electrical verification data from the Electrical sub. *“A report shall be developed by Bid Package #04 and the results of electrical verifications should be added to the documentation and reporting.”*	p. 96 01 1200 1.09.D.10
MEDIUM	Contractor must perform all public and private utility locates. *“All contractors are responsible for all their own utility locates. This shall include both public and private locates.”*	p. 100 01 1201 1.04.A
MEDIUM	Contractor is liable for emergency response fees if they trigger a false fire alarm. *“If the fire alarm system is activated and there is not an emergency the Contractor responsible for the false activation shall be responsible to pay for all resulting owner incurred expenses such as Emergency Response fees.”*	p. 103 01 1202
MEDIUM	Mandatory fire watch if fire alarm is disabled for more than four hours; requires 2-day advance written notice. *“Fire watch is to be performed any time the fire alarm is disabled for more than four hours... Written notice must be received two (2) working days prior to scheduling of fire watch.”*	p. 116 01 3100
MEDIUM	Subcontractor must provide incidental labor and facilities to support testing agencies, including access, handling samples, and providing storage/curing for test samples. *“Provide incidental labor and facilities: To provide access to work to be tested/inspected. To obtain and handle samples at the site... To provide storage and curing of test samples.”*	p. 128 01 4000 - 3.04.D
MEDIUM	Subcontractor is responsible for the cost of all re-testing required due to work that does not conform to the contract documents. *“Re-testing required because of non-conformance to specified requirements shall be paid for by the Contractor.”*	p. 128 01 4000 - 3.04.F
MEDIUM	Contractor must provide factory personnel for owner training and create a DVD video recording of all instruction sessions. *“Provide verbal and written instructions to the Owner's representatives by FACTORY PERSONNEL... Contractor shall make a DVD video recording of instructions to the Owner.”*	p. 267 23 0500
MEDIUM	TAB agency must be certified by and meet the specific performance guarantee programs of AABC, NEBB, or TABB. *“Warranty/Guarantee must meet one of the following programs: TABB International Quality Assurance Program, AABC National Project Performance Guarantee, NEBB's Conformance Certification.”*	p. 276 23 0593
MEDIUM	All testing instruments must have been calibrated within six months of the actual project testing date.	p. 278 23 0593

	“Instruments shall be calibrated within six months of testing performed for project, or more recently if recommended by the instrument manufacturer.”	
MEDIUM	Materials must meet strict air erosion ratings at 5,000 fpm minimum per UL 181. *“Rated velocity on coated air side for air erosion in accordance with UL 181 at 5,000 fpm minimum.”*	p. 282 23 0713
MEDIUM	Insulation cannot be installed until ductwork pressure/leak testing is completed and verified. *“Install materials after ductwork has been tested.”*	p. 283 23 0713
MEDIUM	Flexible duct must meet specific acoustic insertion loss values across seven octave bands; submittals must include these ratings for all sizes. *“Submittals shall include insertion losses ratings per sizes and lengths listed below regardless of sizes shown on the drawings.”*	p. 290 23 3100
MEDIUM	Must notify Architect/Engineer five business days before pressure testing; failure to notify may result in a mandatory re-test. *“Contractor shall notify the Architect/Engineer five business days prior to pressurizing ductwork for testing. Failure to notify... may require the contractor to repeat the duct pressure test”*	p. 293 23 3100
MEDIUM	Outdoor equipment must pass rain intrusion testing per UL 1995 Section 58. *“All air handling and distribution equipment mounted outdoors shall be designed to prevent rain intrusion into the airstream... using the rain test apparatus described in Section 58 of UL 1995.”*	p. 297 23 3700
LOW	All engineering documents for the project must be prepared by a Professional Engineer licensed in the State of Iowa. *“I am a duly licensed professional engineer under the laws of the State of Iowa.”*	p. 3 00 0107
LOW	Subcontractor is responsible for utility locate charges for ground penetrations. *“Contractor requesting the locate will be responsible for the locate charge.”*	p. 116 01 3100
LOW	Subcontractor must notify the Construction Manager and lab 24 hours before any work requiring testing or inspection occurs. *“Notify Construction Manager and laboratory 24 hours prior to expected time for operations requiring testing/inspection.”*	p. 128 01 4000 - 3.04.D.4
LOW	Adjust all HVAC equipment to ensure smooth and unhindered operation. *“Adjust operating products and equipment to ensure smooth and unhindered operation.”*	p. 135 01 7300
LOW	Contractor must provide duct test holes as needed for the TAB (Testing and Balancing) agency. *“Provide duct test holes where indicated and as required for testing and balancing purposes.”*	p. 296 23 3300

Submittals, mock-ups and closeout documents (43)

MEDIUM	Contractor must use a specific web-based construction management system for project documentation and communication. *“01 3100.01 - Web Based Construction Management”*	p. 5 01 3100.01
MEDIUM	Bidders must provide Targeted Small Business (TSB) pre-bid contact information if required by the project documents. *“If Targeted Small Business Pre-Bid Contact information is called for, it shall accompany the Bid submission.”*	p. 13 00 0116
MEDIUM	A signed Certificate of Site Visit must be submitted with the bid if a site visit was mandated. *“If Certificate of Site Visit form is called for, it shall accompany the Bid submission.”*	p. 13 00 0116
MEDIUM	Disclose all subcontractors and suppliers within 48 hours of bid. *“A bidder... shall disclose to the state agency awarding the contract the names of all subcontractors and suppliers who will work on the project being bid, within forty-eight (48) hours.”*	p. 20 3.017.B
MEDIUM	All subcontractors and suppliers must be identified within 48 hours of the bid deadline. *“The Trade Contractor must identify all Subcontractors and Suppliers within 48 hours of the published date and time for which bids must be submitted”*	p. 35 00 4116
MEDIUM	Owner approval is required to change subcontractors; any price reduction from a change will be deducted from the contract. *“Subcontractors and suppliers may not be changed without the approval of the Owner... Any reduction in subcontractor or supplier price as a result of the change... shall be deducted”*	p. 35 00 4116
MEDIUM	Bidders must submit Targeted Small Business (TSB) contact information and dollar amounts with the bid. *“Subcontractor Targeted Small Business Enterprise Pre-Bid Contact Information, including subcontractor and dollar amount to be subcontracted, is to accompany the Bid submission.”*	p. 40 00 4116.02
MEDIUM	A detailed submittal schedule in Excel is due within five business days of the agreement. *“The submittal schedule shall be submitted to the CM within five (5) business days of receipt of Owner/Prime Contractor Agreement... Submittal Schedule shall be prepared in an Excel spreadsheet.”*	p. 103 01 1202
MEDIUM	Substitution requests require a point-by-point comparative data analysis between the proposed and specified product. *“Point-by-point comparative data prepared by contractor and attached - REQUIRED BY A/E”*	p. 106 01 2500
MEDIUM	Time and Material tickets must be submitted daily to the Construction Manager for verification.	p. 108 01 2600

	“Time and Material tickets must be submitted daily to the Construction Manager for verification.”	
MEDIUM	Must include a specific line item for closeout paperwork in the Schedule of Values worth at least 1% of contract or $1,000. *“include a line item for closeout paperwork for a value of no less than 1% of the total contract value or $1,000, whichever is greater.”*	p. 110 01 2900
MEDIUM	The closeout paperwork line item cannot be billed until the certificate of final completion is fully executed. *“The closeout paperwork line item may only be billed once the certificate of final completion has been fully executed.”*	p. 111 01 2900
MEDIUM	Mandatory use of Procore for all project data, submittals, RFIs, and financial documents. Subcontractors must provide their own hardware and internet connectivity. *“The Owner and Contractor shall utilize Procore Technologies, Inc. Procore system for electronic submittal of all data and documents... Procore shall be the primary means of project information submission and management.”*	p. 118 01 3100.01
MEDIUM	Detailed daily construction reports must be prepared and submitted weekly, including labor counts, equipment, and testing activities. *“Daily Construction Reports: Submitted at weekly intervals... Prepare a daily construction report recording... Count of personnel... Equipment... Material Deliveries... Equipment or system tests and startups.”*	p. 123 01 3200 - 3.04
MEDIUM	Shop drawings must be original, drawn-to-scale interpretations. Reproducing or tracing contract documents to create shop drawings is strictly prohibited. *“Prepare accurate, drawn-to-scale, original shop drawing documentation... Do not reproduce the Contract Documents to create shop drawings.”*	p. 125 01 3300
MEDIUM	Subcontractors must stamp and sign submittals certifying they have verified field dimensions and coordinated with adjacent construction work. *“Apply Contractor’s stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements”*	p. 126 01 3300
MEDIUM	Manufacturers must provide field staff for startup and testing if specified in Div 23; reports must be submitted within 30 days. *“require material or product suppliers or manufacturers to provide qualified staff personnel to observe... startup of equipment, test, adjust and balance... Submit report in duplicate within 30 days.”*	p. 128 01 4000 - 3.05
MEDIUM	Must provide extra materials, spare parts, tools, and software as defined in Division 23 sections to receive final payment. *“Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections. Deliver to project site; obtain receipt prior to final payment.”*	p. 131 01 6000

MEDIUM	Submit Test and Balance (TAB) records and complete all system startup testing prior to Substantial Completion. *“Complete startup testing of systems. Submit test/adjust, balance records.”*	p. 136 01 7700 - 3.02
MEDIUM	Maintain and update record drawings weekly, including horizontal/vertical locations of concealed and underground utilities. *“Record information concurrent with construction progress, not less than weekly... Measured horizontal and vertical locations of underground utilities and appurtenances... concealed in construction.”*	p. 137 01 7700 - 3.03
MEDIUM	Provide comprehensive O&M manuals in indexed PDF format including performance curves, engineering data, and replacement part nomenclature. *“Assemble each manual into a composite electronically indexed file... Include performance curves, with engineering data and tests... Complete nomenclature and model number of replacement parts.”*	p. 137 01 7700 - 3.05/3.07
MEDIUM	Provide color-coded as-installed wiring and piping diagrams, valve tag charts, and control diagrams. *“Include color coded wiring diagrams as installed... Provide control diagrams by controls manufacturer as installed. Provide contractor’s coordination drawings, with color coded piping diagrams as installed.”*	p. 138 01 7700 - 3.07
MEDIUM	Provide formal training for Owner personnel using qualified instructors and approved written agendas. *“Train in operation and maintenance of systems... Submit written agenda to Construction Manager for approval prior to scheduling training. Engage qualified instructors.”*	p. 139 01 7700 - 3.08
MEDIUM	General Contractor must provide and manage a web-based project software site and provide user licenses for the Architect/Engineer through the warranty phase. *“The General Contractor shall provide a web-based project software site for the purpose of hosting and managing project communication... Provide web-based project software user licenses for use by the Architect/Engineer.”*	p. 259 23 0500
MEDIUM	O&M manuals must be searchable PDFs with active bookmarks and links, including all approved shop drawings with engineer comments inserted after each item. *“All text shall be searchable. Bookmarks shall be used... All bookmark titles shall include the nomenclature used in the construction documents and shall be an active link... Include Architect's/Engineer's shop drawing review comments.”*	p. 266 23 0500
MEDIUM	Final report must include custom schematic drawings for every system identifying all testing points cross-referenced to report forms. *“Include in the final report a schematic drawing showing each system component, including balancing devices, for each system... identify all testing points and cross-reference these points to the report forms.”*	p. 276 23 0593

MEDIUM	Submit a Duct Leakage Test Summary Report following SMACNA HVAC Duct Leakage Test Manual guidelines upon completion of pressure testing. *“the Contractor shall submit an air duct leakage test summary report as outlined in the SMACNA HVAC Duct Leakage Test Manual.”*	p. 286 23 3100
LOW	O&M manuals and attic stock must be procured and submitted within 10 days after substantial completion. *“O&M & Attic Stock Procurement | 10 [days] | 07-Oct-26 | 20-Oct-26”*	p. 29 00 3113
LOW	HVAC sub must provide a marked-up plan showing location/condition of existing radiant panels and VAVs. *“Contractor shall provide a marked-up plan identifying the location and condition of existing radiant ceiling panels and VAVs.”*	p. 96 01 1200 1.09.D.8
LOW	Submit daily logs to the Construction Manager. *“Trade Contractor shall complete a daily log for each work day on site and submit to Construction Manager.”*	p. 99 01 1201 1.02.W
LOW	Contractor must provide both electronic and hard copies of O&Ms and as-built drawings. *“All Contractors will be required to provide electronic copies as well as hard copies of all O&M’s and as-built drawings.”*	p. 104 01 1202
LOW	Detailed cost breakdowns are required from the contractor, subcontractors, and all suppliers. *“Contractor and subcontractor agree to provide and require all suppliers to provide a detailed breakdown of labor, labor burden, materials, installation, rental, and fuel costs.”*	p. 108 01 2600
LOW	Shop drawings must be submitted as CAD (.dwg) files or PDF via Procore. *“Shop drawing and design data documents shall be submitted as cad .dwg files or PDF attachments to the Procore submittal work flow process and form.”*	p. 120 01 3100.01
LOW	A revised progress schedule must be submitted with every application for payment. *“Submit revised progress schedule with each application for payment.”*	p. 122 01 3200 - 3.02.B
LOW	Contractor must take and submit preconstruction, periodic, and completion photographs via Procore. *“Take additional photographs as required to record existing damage to site, structure, equipment, or finishes... Take photographs after date of Substantial Completion for submission as project record documents.”*	p. 123 01 3200 - 3.05
LOW	Submittals must be processed through Procore. Subcontractors will be invited to the platform after the Notice of Intent to award. *“Submittals will be electronically submitted through Procore. Contractor will be invited to join web-based program after issue of Notice of Intent to award.”*	p. 125 01 3300
LOW	Physical samples must be submitted for functional/aesthetic review, and a photograph of the sample must be uploaded to Procore.	p. 126 01 3300

	“Photograph of submitted samples, along with transmittal sheet, shall be uploaded as a submittal in Procore.”	
LOW	Restore all existing and permanent facilities used during the construction process to their original or specified condition. *“Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.”*	p. 129 01 5000 - 1.05.A
LOW	Written request required before cutting structural, weather-exposed, or sight-exposed elements. *“Submit written request in advance of cutting or altering elements which affect: 1. Structural integrity... 2. Integrity of weather-exposed... 4. Visual qualities of sight exposed elements.”*	p. 134 01 7300
LOW	Furnish a list of spare parts with current pricing and recommended quantities for owner storage. *“Provide list of original manufacturer’s spare parts, current prices, and recommended quantities to be maintained in storage.”*	p. 139 01 7700 - 3.07
LOW	Contractor is responsible for the Architect/Engineer's costs to re-review submittals if the initial submission is incomplete or non-compliant. *“If the first submittal is incomplete or does not comply... the Contractor shall be responsible to bear the cost for the Architect/Engineer to recheck and handle the additional shop drawing submittals.”*	p. 261 23 0500
LOW	Submittals must specifically include both 'Out of Package' and 'Installed-Compressed 25%' K and R-values for fiberglass wrap. *“Submit both "Out of Package" and "Installed-Compressed 25%" K and R-values.”*	p. 283 23 0713
LOW	Physical color chips are required for Architect selection; electronic charts are strictly prohibited. *“Where color selection by Architect is necessary, provide physical color chips for color selection directly to the Architect. Electronic color charts are not acceptable.”*	p. 297 23 3700

Labor: prevailing wage, apprenticeship, licensing, certified payroll (13)

HIGH	Bidders must be registered with the Iowa Labor Commissioner as a Contractor per Chapter 91C. *“Bidder hereby certifies that the Bidder is registered with the Iowa Labor Commissioner as a Contractor as required by Chapter 91C, Code of Iowa.”*	p. 35 00 4116
MEDIUM	Bidders must comply with non-discrimination clauses and targeted small business participation goals. *“00 4116.01 - Non Descrimination Clause Information ... 00 4116.02 - Targeted Small Business Information”*	p. 5 00 4116

MEDIUM	Must provide Iowa Contractor Registration Number on bid form. *“The company's Federal I.D. Number and the Iowa Contractors Registration Number shall be included in the Bid Form.”*	p. 16 3.01.H
MEDIUM	Contractors with business exceeding $10,000 must develop an Affirmative Action Program and comply with state EEO reporting. *“The contractor, subcontractor, vendor and supplier will develop an Affirmative Action Program... will furnish and file compliance reports within such time and upon such forms as provided by the Equal Employment Opportunity Officer”*	p. 38 00 4116.01
MEDIUM	All workers must pass a background check before entering the campus. *“All construction workers must have a background check completed prior to entering the campus to perform work.”*	p. 92 01 1200 1.08.B
MEDIUM	Onsite superintendent or lead foreman required at all times during work. *“An onsite Superintendent or lead foreman is required during any time that work is being performed to coordinate their work and work with other trades.”*	p. 98 01 1201 1.02.N
MEDIUM	Mandatory background checks for all on-site employees and subcontractors; requires submission of SSN and Driver's License info. *“Background checks must be performed on all on site employees, including sub-contractors... Information required may include: Last Name, First Name... Social Security #.”*	p. 115 01 3100
MEDIUM	Provide trained flag persons and lighting/flares if construction operations encroach on public traffic lanes. *“Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.”*	p. 130 01 5000 - 3.02.A
LOW	Non-discrimination Clause information must be submitted with the bid if requested. *“If Non-discrimination Clause information is called for, it shall accompany the Bid submission”*	p. 13 00 0116
LOW	Davis Bacon prevailing wages are not required for this project. *“Davis Bacon Wages will not apply to this project.”*	p. 14 00 1113
LOW	Preference given to Iowa domestic labor and products. *“a preference shall be given to Iowa domestic labor, products produced and provisions grown within the state of Iowa.”*	p. 21 3.020.A
LOW	Nonresident bidders from states with labor preferences must maintain detailed worker records for three years. *“Nonresident Bidders domiciled in a state or country with a resident labor force preference shall make and keep, for a period of not less than three years, accurate records of all workers employed”*	p. 36 00 4116
LOW	Workers must wear clothing that distinguishes them from inmates. *“Contractor shall wear clothing of a different color, pattern, fashion, etc. as to distinguish themselves from inmates.”*	p. 93 01 1200 1.08.P

Bonds, insurance and payment terms (20)

HIGH	Subcontractor must comply with specific insurance certificate requirements and provide payment/performance bonds. *“00 2113.02 - Sample Contractor Certificate of Insurance ... 00 6000 - Payment Bond and Performance Bond Forms”*	p. 5 00 6000
HIGH	A Bid Bond must be included with the bid submission if specified in the project requirements. *“If Bid Bond is called for, it shall accompany the Bid submission.”*	p. 13 00 0116
HIGH	Submit 5% bid security with the bid. *“The Bid Security shall be in the form of a Bid Bond, Certified check, or Cashier’s check in an amount not less than five percent (5%) of the maximum value of the Bid.”*	p. 17 3.05
HIGH	Performance and Payment Bonds required upon contract award. *“Bidder who is offered a contract will... file an approved surety company’s Performance Bond, Payment Bond and the Insurance Certificates.”*	p. 18 3.05.B
HIGH	A bid security of 5% of the total bid amount must be uploaded with the bid submission. *“Bid Security – 5% of total Bid amount (to be uploaded with bid submission)”*	p. 33 00 4116
HIGH	Include all fees, permits, freight, hoisting, and scaffolding in the bid. *“Trade Contractor shall include all applicable fees, permits, freight, hoisting, scaffolding, clean up, supervision, overhead, etc. to perform his work.”*	p. 98 01 1201 1.02.F
HIGH	Final 1% of contract plus retainage is withheld until all closeout checklists, O&Ms, and training are verified. *“In order to process the 99% payment (100% pay app less closeout and retainage)... In order to process the 100% payment and Retainage payment... the following information [is needed].”*	p. 140 Checklist
HIGH	Contractor must reimburse the Architect/Engineer for site visits related to troubleshooting, workmanship issues, or premature final inspections via contract retainage deductions. *“Contractor shall reimburse the Owner on a time and materials basis for services rendered at the Architect/Engineer's standard hourly rates... costs incurred... will be deducted from the Contractor's contract retainage.”*	p. 268 23 0500
MEDIUM	A bid security of 5% of the total bid amount is required in the form of a bond or certified check. *“The Bid shall be accompanied by a Bid Security as set forth in the Instructions to Bidders in the amount of 5% of the total bid amount.”*	p. 14 00 1113
MEDIUM	Insurance must be maintained for the entire life of the contract. *“All such insurance policies shall remain in full force and effect for the entire life of this Contract and shall not be canceled or changed except after thirty (30) days written notice.”*	p. 23 3.022.A.1

MEDIUM	Construction materials are exempt from State and Local sales and use taxes; do not include these in the bid price. *“Taxes on construction materials shall NOT be included in the bid amounts.”*	p. 33 00 4116
MEDIUM	A Bid Bond is required for this project. While a specific ConsensusDocs form is provided as a reference, other standard forms acceptable to the State of Iowa are permitted. *“A Bid Bond form will be required on this project. An amended ConsensusDocs 262 is attached for reference... other standard forms are acceptable to the State of Iowa.”*	p. 42 00 4313
MEDIUM	The project uses a modified ConsensusDocs 802 agreement form, which dictates specific legal and financial terms for the contract. *“The Form of Agreement to be used on this project is a modified ConsensusDocs 802. A sample is attached following this page.”*	p. 45 00 5200
MEDIUM	Performance and payment bonds are required for the project; standard forms acceptable to the State of Iowa are permitted. *“Performance and payment bonds to be used on this project, ConsensusDocs 260 and 261 are attached for reference... other standard forms are acceptable to the State of Iowa.”*	p. 85 00 6000
MEDIUM	Contractor responsible for all permits except the general building permit. *“The owner will provide the general building permit only. All other permits required for completion of contractor’s scope of work... are the responsibility of said contractor.”*	p. 98 01 1201 1.02.G
MEDIUM	Change order mark-ups are capped at 15% for self-performed work and 5% for sub-tier work. *“Fifteen (15) percent maximum for work directly performed by employees... Five (5) percent maximum for work performed or passed through by a Subcontractor.”*	p. 108 01 2600
MEDIUM	Retainage is set at 3% of the value of work performed. *“Payments will be made to the extent of the value of the work performed in the previous month less a retainage amount of 3% of the value of the work performed.”*	p. 111 01 2900
MEDIUM	Final payment requires Consent of Surety and affidavits of payment/release of liens. *“AIA Document G706, “Contractor's Affidavit of Payment of Debts and Claims.” ... AIA Document G707, “Consent of Surety to Final Payment.””*	p. 111 01 2900
LOW	The project is exempt from Iowa Sales Tax; bids should exclude these costs. *“This project is exempt from Iowa Sales Tax.”*	p. 14 00 1113
LOW	Schedule of Values must be submitted in Procore within 14 days of the agreement. *“Submit original Schedule of Values in Procore within 14 days after date of Owner-Trade Contractor Agreement.”*	p. 110 01 2900

Schedule, liquidated damages and work hours/phasing (26)

HIGH	Bid security forfeited as liquidated damages if contract not executed. *“Upon failure to comply, the Bid Security shall be forfeited as liquidated damages.”*	p. 18 3.05.B
HIGH	Project substantial completion is required by October 7, 2026, with final owner occupancy by October 22, 2026. *“Substantial Completion by – 10/07/2026... Owner Occupancy (October 22nd)”*	p. 27 00 3113
HIGH	Mechanical equipment procurement is allocated only 25 days, which may be insufficient for long-lead items. *“Mechanical Equipment (TBD) | 25 [days] | 16-Jun-26 | 21-Jul-26”*	p. 28 00 3113
HIGH	Standard hours are 7:00 AM to 5:00 PM. Contractor must pay for overtime/increased crews if needed to meet milestones. *“The Contractor shall provide, at their expense, increased work crews and/or overtime necessary to meet the scheduled milestones.”*	p. 104 01 1202
HIGH	Contractor must accelerate work at their own expense if milestones are missed, including increasing manpower or work hours as directed by the Construction Manager. *“If the bid package contractor does not meet the handoff milestones... the bid package contractor shall take measures to increase work forces, increase work hours... at no additional cost to the Owner.”*	p. 122 01 3200 - 3.01.B
HIGH	Project is phased; a separate balancing report is required after the completion of each individual phase. *“Project will be constructed in phases. Provide balancing report after each phase is complete.”*	p. 276 23 0593
MEDIUM	Construction is anticipated to start May 08, 2026, and must be completed by October 07, 2026. *“The Iowa Department of Administrative Services anticipates construction to begin on May 08, 2026, and end on October 07, 2026.”*	p. 14 00 1113
MEDIUM	Submit a proposed construction schedule to the Construction Manager at least 48 hours before the pre-construction meeting. *“A proposed construction schedule shall be submitted by all Trade Contractors to the Construction Manager no later than 48 hours prior to the pre-construction meeting.”*	p. 27 00 3113
MEDIUM	Work is phased across 2nd Floor, 1st Floor, and Ground Floor with overlapping durations. *“2nd Floor... 1st Floor... Ground Floor”*	p. 28 00 3113
MEDIUM	Partial occupancy of three 2nd-floor offices is required by August 28, 2026, ahead of project completion. *“Partial Occupancy for (3) offices by 8/28/2026”*	p. 29 00 3113

MEDIUM	Substantial completion target date is October 7, 2026. *“Target date to provide substantial completion is October 7, 2026.”*	p. 91 01 1200 1.03.B
MEDIUM	After-hours work must be supervised and performed at no extra cost. *“Any work necessary to be performed after the regular working hours shall be supervised and shall be done at no additional cost to the Owner.”*	p. 98 01 1201 1.02.N
MEDIUM	Strict deadline for work performed before June 30th; must be submitted by July 15th. *“Any request for payment for work completed prior to June 30th of any year needs to be submitted by July 15th of the same calendar year.”*	p. 110 01 2900
MEDIUM	Specific notification timelines for Capitol Complex work: 10 days for tunnel shutdowns, 3 days for other disruptions (noise, odors, HVAC). *“Notice for tunnel repairs must be received... a minimum of ten (10) working days before the work is to occur... All other notices must be received... a minimum of three (3) working days prior.”*	p. 115 01 3100
MEDIUM	Contractors have a strict 48-hour window to dispute any revised master schedules issued via Procore. *“After an updated master construction schedule has been issued via Procore, Contractors will have 48 hours to dispute the new schedule.”*	p. 122 01 3200 - 3.01.D
MEDIUM	The review period for each submittal is 15 days, which must be accounted for in the HVAC procurement schedule. *“For each submittal review, allow 15 days excluding delivery time to and from the contractor.”*	p. 126 01 3300
MEDIUM	If on-site parking is inadequate, the contractor must provide and pay for additional off-site parking for personnel. *“When site space is not adequate, provide additional off-site parking.”*	p. 130 01 5000 - 3.01.C
MEDIUM	Contractor must provide 7 days' notice before covering walls or ceilings; failure to do so may result in withheld payments until access is provided. *“Contractor shall provide seven (7) calendar days' notice to the Architect/Engineer prior to: 1. Covering exterior walls... 2. Installing hard or suspended ceilings... Architect/Engineer may not recommend further payments... until such time as full access has been provided.”*	p. 264 23 0500
MEDIUM	Costs for additional site visits by the Architect/Engineer due to the project not being ready for final observation will be deducted from Contractor's retainage. *“if the Architect/Engineer finds the job not ready for the final observation... costs incurred by the Architect/Engineer's additional time and expenses will be deducted from the Contractor's contract retainage.”*	p. 265 23 0500
MEDIUM	HVAC systems must run continuously for one week before occupancy to dehumidify construction materials; cooling areas must stay below 60% RH. *“Operate all HVAC systems continuously for at least one week prior to occupancy to bring construction materials to suitable moisture levels. Areas with mechanical cooling shall be maintained below 60% RH.”*	p. 268 23 0500

MEDIUM	Must provide temporary connections to keep existing systems active; 48-hour notice required for any system draining. *“Provide temporary connections to maintain existing systems in service during construction... Obtain permission from the Owner at least 48 hours before partially or completely draining system.”*	p. 273 23 0505
LOW	Standard work hours are 07:00 AM to 05:00 PM, Monday through Friday. *“Work hours are from 07:00 AM to 05:00 PM, Monday through Friday unless arrangements are made in advance.”*	p. 92 01 1200 1.05.A
LOW	Attend two joint planning meetings and provide weekly 4-week look-ahead schedules. *“Prime Contractor shall participate in a minimum of two (2) joint planning meetings... provide the Construction Manager scheduling information with regards to progress and work to be performed in the next 4 (four) weeks.”*	p. 101 01 1201 1.05.A
LOW	Trade contractors must submit change order estimates within 7 calendar days at no cost to the project. *“The Trade Contractor will prepare and submit an estimate within 7 calendar days. Estimates shall be provided for the project at no cost, regardless of acceptance or rejection.”*	p. 108 01 2600
LOW	Preliminary schedule outline is due 48 hours before the pre-construction meeting. *“Submit preliminary outline to the Construction Manager no later than 48 hours prior to the pre-construction meeting.”*	p. 122 01 3200 - 3.02.A
LOW	Provide and maintain temporary sanitary facilities and enclosures starting from the time of project mobilization. *“Provide and maintain required facilities and enclosures. Provide at time of project mobilization.”*	p. 129 01 5000 - 1.03.A

Scope boundaries and coordination with other trades (51)

HIGH	Mechanical and Plumbing work is designated as Bid Package 04 (BP 04). *“BP 04 Description: Mechanical and Plumbing Bidder proposes and agrees to perform all work as described in the Construction Documents”*	p. 34 00 4116
HIGH	Provide coordinated drawings for congested areas; CM decisions on conflicts are final. *“Contractor shall prepare coordinated drawings in areas of congestion... Construction Manager will determine how such conflicts should be resolved... make any changes required to eliminate such conflict without additional costs.”*	p. 101 01 1201 1.04.W
HIGH	Mechanical Contractor is responsible for all wiring not shown on electrical drawings but required for mechanical systems, including 120V and 24V control wiring. *“All wiring not shown on the electrical drawings, but required for mechanical systems, is the responsibility of the Mechanical Contractor.”*	p. 255 23 0500

HIGH	Equipment installed without verified service access coordination will be removed and reinstalled at the contractor's sole expense. *“Installation of equipment or devices without regard to coordination of access requirements... will result in removal and reinstallation of the equipment at the Contractor's expense.”*	p. 269 23 0500
HIGH	Drawings do not show all items to be removed; Contractor must visit site to verify full scope before bidding. *“THE DRAWINGS ARE INTENDED TO INDICATE THE GENERAL SCOPE OF WORK AND DO NOT SHOW EVERY PIPE, DUCT, OR PIECE OF EQUIPMENT THAT MUST BE REMOVED.”*	p. 272 23 0505
HIGH	Contractor is financially liable for any damage to existing conduits or cables during slab cutting. *“This Contractor is responsible for all costs incurred in repair, relocations, or replacement of any cables, conduits, or other services if damaged without proper investigation.”*	p. 274 23 0505
HIGH	HVAC sub must provide replacement sheaves for motors and trim pump impellers for non-VFD pumps based on TAB instructions. *“Contractor responsible for each motor shall also be responsible for replacement sheaves... Contractor responsible for pump shall trim impeller to final duty point as instructed by this contractor on all pumps not driven by a VFD.”*	p. 278 23 0593
HIGH	Strict prohibition of ductwork in electrical/telecom rooms and a 25-foot dedicated clearance zone above electrical switchboards. *“Do not install ducts or other equipment above electrical switchboards or panelboards. This includes a dedicated space extending 25 feet from the floor to the structural ceiling”*	p. 291 23 3100
HIGH	Bidding constitutes a guarantee that all ceiling types and air devices have been coordinated. *“Submission of Bid indicates ceiling and air inlet and outlet types have been coordinated.”*	p. 298 23 3700
MEDIUM	HVAC subcontractor is responsible for demolition of existing mechanical systems as part of the remodeling scope. *“23 0505 - HVAC Demoltion for Remodeling”*	p. 7 23 0505
MEDIUM	HVAC subcontractor must review Architectural Reflected Ceiling Plans (A3.00-A3.02) for coordination of diffusers, grilles, and equipment with ceiling layouts. *“A3.00 REFLECTED CEILING PLAN - LOWER LEVEL; A3.01 REFLECTED CEILING PLAN - LEVEL 1; A3.02 REFLECTED CEILING PLAN - LEVEL 2”*	p. 10 00 0115
MEDIUM	HVAC scope includes demolition work across three levels as indicated on M100, M101, and M102. *“M100 LOWER LEVEL DEMOLITION PLAN - HVAC; M101 LEVEL 1 DEMOLITION PLAN - HVAC; M102 LEVEL 2 DEMOLITION PLAN - HVAC”*	p. 10 00 0115
MEDIUM	HVAC subcontractor must coordinate with Electrical drawings (E220-E222) for equipment power requirements and (E230-E232) for systems/controls	p. 11 00 0115

	wiring. *“E220 LOWER LEVEL FLOOR PLAN - POWER... E230 LOWER LEVEL FLOOR PLAN - SYSTEMS”*	
MEDIUM	An asbestos testing report dated March 4, 2026, is available; HVAC subs must review this for potential abatement needs during demolition or equipment replacement. *“An existing asbestos testing report for Project, prepared by Atlas Technical Consultants LLC, dated March 4, 2026, is available for viewing as attached at the end of this section.”*	p. 30 00 3126
MEDIUM	HVAC subcontractor is responsible for obtaining and paying for all project-specific permits and inspections related to their trade. *“Trade Contractor is responsible for any other applicable project specific permits and inspections.”*	p. 32 00 3143
MEDIUM	Alternate 01 requires pricing for the replacement of thermostats. *“ALT 01 Description: Thermostat Replacement Bidder proposes and agrees to perform all work as described in the Construction Documents”*	p. 35 00 4116
MEDIUM	Contractor must provide all temporary facilities, including trailers, power, and task lighting, as determined necessary for their own scope. *“Provide all temporary facilities required for this scope of work including trailer, trailer power, telephone, secured storage, temporary power for work, temporary and task lighting for work, etc.”*	p. 91 01 1200 1.04.A.4
MEDIUM	HVAC sub is responsible for all thermostat low voltage wiring, wire mold, and controls. *“All low voltage wiring, wire mold, and controls work shall be the responsibility of this contractor.”*	p. 96 01 1200 1.09.D.7
MEDIUM	Protect building envelope openings from weather and security breaches. *“This Contractor is responsible to protect all openings made to the existing buildings envelope... protection shall include but is not limited to protection against; rain, snow, wind infiltration, security and temperature fluctuations.”*	p. 99 01 1201 1.02.X
MEDIUM	Contractor responsible for all cutting and patching for their scope. *“All contractors/vendors are responsible for their own cutting and patching unless otherwise specified.”*	p. 100 01 1201 1.04.D
MEDIUM	Mandatory daily cleanup; potential requirement to provide 1 cleaner per 5 workers. *“Daily cleanup (broom clean) of dust and debris... each Trade Contractor shall provide 1 employee for each 5 employees on the project to clean all work areas.”*	p. 102 01 1201 1.06.A
MEDIUM	Contractor must provide protection for floors, walls, and ceilings in occupied spaces. Any damage caused will be charged back to the responsible contractor. *“Each Contractor working in Owner occupied space will provide necessary means of protection to floors, walls, ceilings, equipment as required to*	p. 103 01 1202

	accomplish work... All damage performed during this work will be charged to the responsible contractor."	
MEDIUM	Contractor must provide portable generators for any tools or equipment requiring more than 120V power. *"Contractor will be responsible to provide portable generators or an alternative power source for all tools and equipment that require a power source higher than 120 Volt."*	p. 103 01 1202
MEDIUM	Subcontractor must certify that the substitution will not affect dimensions, functional clearances, or the progress of other trades. *"Proposed substitution does not affect dimensions and functional clearances... Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule."*	p. 107 01 2500
MEDIUM	HVAC equipment must be secured with anchorage designed to withstand vibration and physical distortion. *"Secure products in place with positive anchorage devices designed and sized to withstand stress, vibration, physical distortion, or disfiguration."*	p. 127 01 4000 - 3.01.G
MEDIUM	Contractor is responsible for the costs of installing, maintaining, and removing temporary utilities, ensuring no disruption to the facility's continuous service. *"The Contractor shall pay for installation, maintenance, and removal of temporary utilities. Temporary utilities shall not disrupt the Facility's need for continuous service."*	p. 129 01 5000 - 1.02.B
MEDIUM	Provide all necessary barriers and barricades to protect the public, workers, and existing property. *"Provide barriers to prevent unauthorized entry to construction areas... and to protect existing facilities and adjacent properties from damage during construction operations."*	p. 130 01 5000 - 3.03.A
MEDIUM	Provide waste collection containers and legally dispose of all construction debris off-site; do not allow waste to accumulate. *"Provide waste collection containers in sizes adequate to handle waste from construction operations... remove waste materials from project site and legally dispose of them."*	p. 130 01 5000 - 3.04
MEDIUM	Sensitive HVAC components must be stored in weather-tight, climate-controlled enclosures. *"Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to the product."*	p. 132 01 6000
MEDIUM	HVAC sub is responsible for providing openings in elements of work for all mechanical penetrations. *"Execute cutting, fitting, and patching to complete work, and to: ... Provide openings in elements of work for penetrations of mechanical and electrical work."*	p. 134 01 7300
MEDIUM	Must seal all voids around ducts and pipes and maintain the integrity of wall, ceiling, and floor construction.	p. 134 01 7300

	“Fit work tight to pipes, sleeves, ducts, conduit and other penetrations through surfaces. Maintain integrity of wall, ceiling or floor construction; completely seal voids.”	
MEDIUM	Must use masonry saws or core drills for penetrations in rigid materials; no impact demolition allowed. *“Cut rigid materials using masonry saw or core drill. Cut masonry and concrete materials using masonry saw or core drill.”*	p. 134 01 7300
MEDIUM	Contractor must provide all necessary fittings, valves, and accessories required for a complete system even if they are not explicitly shown on diagrammatic drawings. *“certain basic items, such as fittings, boxes, valves, unions, etc., may not be shown, but where required... for proper installation of the work, such items shall be furnished and installed.”*	p. 258 23 0500
MEDIUM	HVAC contractor must remove, store, and replace mechanical items where other trades temporarily remove ceilings or walls. *“Where ceilings, walls, partitions, etc., are temporarily removed and replaced by others, This Contractor shall remove, store, and replace equipment, devices, fixtures, pipes, ducts, systems, etc.”*	p. 272 23 0505
MEDIUM	Must install temporary filters on all OA intakes within 100 feet of construction and clean any dust-affected systems. *“Install temporary filter media over outside air intakes which are within 100 feet of the limits of construction. This Contractor shall complete any cleaning required for existing systems.”*	p. 274 23 0505
MEDIUM	Must provide high-density insulation inserts at all trapeze hangers and round duct clamps to prevent crushing and maintain vapor barrier. *“Provide high-density insulation inserts on rectangular ducts at trapeze duct hangers to prevent crushing of insulation. Provide high-density insulation inserts with clamp-on round ducts... Maintain continuous vapor barrier through the hanger.”*	p. 284 23 0713
MEDIUM	Contractor must provide and coordinate ceiling access doors for any duct accessories or equipment requiring maintenance located above inaccessible ceilings. *“Where duct access doors are located above inaccessible ceilings, provide ceiling access doors. Coordinate location with the Architect/Engineer.”*	p. 296 23 3300
LOW	Subcontractors must follow specific notification procedures if suspected hazardous materials are encountered during selective demolition. *“Section 02 4119 'Selective Structure Demolition' for notification requirements if materials suspected of containing hazardous materials are encountered.”*	p. 30 00 3126
LOW	HVAC sub must provide blank sheet metal plates to the flooring contractor for capping abandoned floor boxes. *“This contractor shall provide blank sheet metal plates to the Bid Package #02 for capping of the abandoned floor box locations.”*	p. 96 01 1200 1.09.D.11

LOW	Motorized scissor lifts are prohibited without prior approval from the Construction Manager. *“The use of motorized scissor lifts will not be allowed except under special circumstances and must have prior approval from the Construction Manager.”*	p. 103 01 1202
LOW	Contractor must provide own cleanup, brooms, and shovels. Debris must be removed to a central dumpster daily. *“Each Prime Contractor to provide brooms, shovels and other equipment for cleanup for their respective scope of work... All primes shall remove debris on a daily basis.”*	p. 103 01 1202
LOW	HVAC sub must coordinate space and supports for diagrammatic mechanical work to ensure maintenance accessibility. *“Coordinate space requirements, supports, and installation of mechanical and electrical work, which are indicated diagrammatically on drawings... Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.”*	p. 112 01 3100
LOW	Subcontractor must verify all field measurements against shop drawings and manufacturer instructions before installation. *“Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.”*	p. 127 01 4000 - 3.01.F
LOW	Must provide means to remove mud from vehicle wheels before entering public streets. *“Provide means of removing mud from vehicle wheels before entering streets.”*	p. 130 01 5000 - 3.01.H
LOW	HVAC equipment must be packaged to maintain factory calibration during shipment. *“Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.”*	p. 131 01 6000
LOW	HVAC sub must remove all abandoned items and debris from concealed spaces (e.g., above ceilings). *“Remove debris and abandoned items from area and from concealed spaces.”*	p. 134 01 7300
LOW	Removed items belong to Owner; Contractor must move them to a designated location or dispose of them if unwanted. *“MECHANICAL ITEMS REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER. CONTRACTOR SHALL PLACE ITEMS RETAINED BY THE OWNER IN A LOCATION COORDINATED WITH THE OWNER.”*	p. 274 23 0505
LOW	TAB contractor must patch insulation and restore vapor barriers after cutting for test probes. *“After testing and balancing is complete, close probe holes and patch insulation with new materials as specified. Restore vapor barrier and finish as specified.”*	p. 277 23 0593
LOW	Install 26 gauge galvanized sheet metal corner protection angles for all externally insulated ducts extending to a floor or curb.	p. 284 23 0713

	“Provide 2" wide, 24" high, 26 gauge, galvanized sheet metal corner protection angles for all externally insulated ductwork extending to a floor or curb.”	
LOW	HVAC contractor is responsible for installing access doors provided by other trades. *“Coordinate and install access doors provided by others.”*	p. 296 23 3300
LOW	Contractor must provide manual volume dampers on duct take-offs for multiple connections. *“Provide manual volume dampers on duct take-off to diffusers when there are multiple connections to a common duct.”*	p. 300 23 3700

Conflicts, gaps and items to clarify (RFI) (16)

HIGH	Hazardous materials information is present; HVAC sub must verify if duct insulation or equipment contains asbestos before demolition. *“00 3126 - Existing Hazardous Material Information”*	p. 5 00 3126
HIGH	Bidders must perform their own investigations regarding hazardous materials; the provided asbestos report is for convenience and is not a warranty of existing conditions. *“They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations... but are not a warranty of existing conditions.”*	p. 30 00 3126
HIGH	The provided sample agreement pages are blank or marked as 'DRAFT', leaving specific terms like liquidated damages and insurance limits undefined. *“DRAFT”*	p. 46 00 5200
HIGH	Bid the more extensive requirement if conflicts exist in drawings or manuals. *“Where conditions conflict in the project manual or project drawings... When in doubt figure the more extensive requirement.”*	p. 98 01 1201 1.02.I
HIGH	Subcontractor waives all future claims for additional costs related to an accepted substitution once the request is submitted. *“Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.”*	p. 107 01 2500
HIGH	Starting work constitutes acceptance of existing conditions and substrates; HVAC sub must verify structural support for equipment before installation. *“Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.”*	p. 133 01 7300
HIGH	Contractor must pay for all changes required by inspectors or code compliance made after the contract is let, without additional cost to the Owner. *“All changes to the system made after letting of the contract, to comply with codes or requirements of Inspectors, shall be made by the Contractor*	p. 257 23 0500

	without cost to the Owner."	
HIGH	The specific insulation thickness and locations are not in the spec; they are located on the drawings. *"Refer to Ductwork Application Schedule on Drawings for scheduling of insulation."*	p. 284 23 0713
MEDIUM	Highest requirement controls in case of document conflict. *"the terms resulting in the highest requirements for Bidder performance shall control."*	p. 24 3.026.A
MEDIUM	Additional change procedures are located in ConsensusDocs 802, Article 8, which must be reviewed. *"Please refer to Article 8 of CONSENSUSDOCS 802- STANDARD FORM OR AGREEMENT BETWEEN OWNER AND TRADE CONTRACTOR for additional Change Procedures."*	p. 109 01 2600
MEDIUM	Owner may choose to reduce payment instead of requiring replacement for non-conforming work. *"If, in the option of the Owner, it is not practical to remove and replace the work, Architect will direct an appropriate remedy or recommend adjusted payment."*	p. 128 01 4000 - 3.03.B
MEDIUM	Contractor must resolve all document deficiencies with the Design Team before awarding subcontracts or ordering materials; work performed prior is at Contractor's risk. *"The Contractor shall resolve all reported deficiencies with the Architect/Engineer prior to awarding any subcontracts, ordering material, or starting any work... Any work performed prior to receipt of instructions... will be done at the Contractor's risk."*	p. 257 23 0500
MEDIUM	If the contractor's staff cannot adequately train the owner, the contractor must pay for the Architect/Engineer to perform the training. *"If the Contractor does not have staff that can adequately provide the required instructions the Contractor shall include in the bid an adequate amount to reimburse the Owner for the Architect/Engineer to perform these services."*	p. 267 23 0500
LOW	Subcontractor must adhere to the higher standard if plans and specifications exceed the requirements of the State Building Codes. *"All construction, materials and methods shall comply with the State Building Codes, except where plans and specifications establish a higher standard."*	p. 32 00 3143
LOW	RFIs must include suggested solutions and impact on cost/time; Architect has 7 working days to respond. *"Trade Contractor's suggested solution(s). If Trade Contractor's solution(s) impact the Contract Time or the Contract Sum, Trade Contractor shall state impact in the RFI... Allow seven (7) working days for Design Professional's response."*	p. 114 01 3100
LOW	If manufacturer instructions conflict with contract documents, the subcontractor must request clarification before proceeding.	p. 127 01 4000 - 3.01.C

“Should manufacturer's instructions conflict with contract documents, request clarification from the engineer prior to proceeding.”