01 3300 Submittal Procedures

Attachment A, Construction Submittal Log

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Instructions to Users

1. This Section is required for all LANL projects utilizing specifications.
2. The **design agency must tailor this template** to provide the combined technical and quality related input from the specs. In order to tailor and complete this input template the preparer shall:

* Delete items (rows) not applicable to a particular project or acquisition
* Rows consolidated (bundling) – where submittals are logically provided together, the submittals have been bundled in the log. The bundled submittals that are provided under a single submittal transmittal form are reviewed as a single package. Further bundling may be prescribed by the EOR by editing the log. If desiring to use suffixes or other method to indicate submittals to be sent in together, then the column’s automated pre-numbered set-up can be deleted/overwritten.
* Add additional rows for spec sections and their submittals created by the design agency
* Validate template entries
* Finalize sequential numbering of submittals.

“Submittal Schedule” Column: When a LANL Master Spec (LMS) Section explicitly sets time-of-submittal, this column should match. When the LMS Section is mute, template data reflects Standards Program best judgment. This schedule identified in this column should be followed by the Constructor and should be reflected in the 01 3300 Submittal Schedule provided by the Contructor. Assure the following:

1. At point of Project Spec issuance, schedule must match all Section expectations.
2. Modification of submittal timing at any time is not a design change but is administrative (perhaps with schedule, technical, and/or quality impacts, positive or negative).
3. Modification of template by Constructor: Changes shall be highlighted to reviewers using redline strikeout in MS Word. If template update for future project benefit is appropriate, suggest to Standards Manager along with whether LMS Section is suboptimal.

“Submittal Type” Column: This column is provided as reference for the Contractor to generally describe the submittal. If the Contructor does not believe the submittal should be of the type shown and submits under a different type then shown no design change is required and confirmation will be provided by the Design Agency review and if applicable the LANL Reviewer.

“Submittal Category” Column: See 01 3300 definitions on these categories.

“LANL Reviewer” Column: This column is used to show who the LANL reviewer is when routing the submittal. When LANL is the Design Agency this column should be filled out to identify the reviewers for all “Action” submittals and as needed for any other Submittal Category. When LANL is not the Design Agency this column is used to communicate when LANL requires a review of a submittal in addition to the Design Agency. Reviews performed by LANL should be considered “critical reviews”. Reviews should not be prescribed in the event that a LANL SME or organization needs to receive a submittal for reference or future use, but to perform a review. When prescribing reviews and reviewers consider that time it takes to perform the review and how it affects the project. This column has been pre-filled out with acronym names from Table 2 to indicate the typical submittals that require critical reviews and reviewers. LANL Project Eng and SME reviewers (e.g., ES-EPD Stds POC or Team Leader) may jointly agree to decrease or increase the number of reviews due to factors such as:

* 1. Small project size/scope
  2. Design agency history
  3. Constructor history (if known)
  4. Whether needed for LEED or HPSB documentation
  5. Whether needed for nuclear quality documentation

When a LANL Review is prescribed it is standard that the review is conducted after the Design Agency has reviewed and approved the submittal. When requested the Constructor, PM or any other entity my request a concurrent review. The Project Eng shall evaluate and implement the request if determined appropriate.

Table 2 “LANL Reviewers” is to be completed and provided to Records Management to identify who will act as the LANL Reviewers so automatic routing can be conducted when the submittal is received from the Constructor.

NOTE: This template may not be 100% complete or accurate, and will be improved over time if users provide feedback to the Standards Manager or [stdsweb@lanl.gov](mailto:stdsweb@lanl.gov)

For design-build projects only: completion of this submittal log is specification/design dependent and therefore the responsibility of the SUBCONTRACTOR'S Design Agency. SUBCONTRACTOR shall provide a draft submittal log at the 60% and submit with the specification package for LANL review. SUBCONTRACTOR will submit the revised schedule at final design stage (90%) for LANS review. LANL has the final say on which submittals shall receive a LANL Review.

When design for specialties is deferred to after permitting/construction start, submittals for such design shall be added by Subcontractor.

This template is available in Word online at <http://engstandards.lanl.gov/specs.shtml#01>

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Table 1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SUBMITTAL SCHEDULE** | | | | | | | |
| A | Per Subcontract Schedule | S | Prior to Shipment | Z | When Required | SANN | Semi Annual |
| B | Prior to Balance of Payment | U | Prior to Use | ANN | Annually | WKLY | Weekly |
| F | Prior to Fabrication | W | Prior to Commencing Work | DAY | Daily | WRR | Implemented at work release level on Blanket Agreements |
| M | Prior to Mobilization | X | Prior to Purchase | MON | Monthly | BI-WKLY | Every 2 weeks |
| N | Prior to Notice to Proceed | Y | Prior to Progress Payment for Each Specific Task | QRTLY | Quarterly | C | Closeout |
| PI | Post Installation | PC | Prior to Commissioning | I | After Inspection or Testing | [X] | Less than or equal to the number of day shown |
|  |  |  |  |  |  |  |  |
| **SUBMITTAL TYPE REQUIRED** | | | | | | | |
| D | Drawings | ED | Electrical Diagrams | P | Prints as PDFs | SD | Shop Drawings |
| EM | Electronic media | II | Installation Instructions | PD | Performance Data - Curves | SP | Spare Parts and Maintenance Materials |
| CA | Calculations | ML | Materials/Parts List/Design Mixes | PH | Photographs | TR | Test Reports |
| CD | Catalog Data | OM | Operations & Maintenance Data | RD | Project Record Documents | WA | Warranties |
| CT | Certifications | OT | Other | S | Sample | (2) | (-) indicates quantity |
| F | Form | O | Original | SC | Samples/Colors | P | Procedures |
| **SUBMITTAL CATEGORY** | | | | | | | |
| A | Action | | | | | | |
| C | Closeout | | | | | | |
| DD | Delegated Design (incorporates LANL design review specific process, tracks separately from Action submittals) | | | | | | |
| I | Informational | | | | | | |
| SD | Sustainable Design (incorporates DOE/LEED/LANL-specific sustainable design requirements, tracks info separately from Action submittals) | | | | | | |

Table 2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LANL REVIEWERS** | | | | | |
| ***Discipline*** | ***Acronym*** | ***Name[[1]](#footnote-1)*** | ***Discipline*** | ***Acronym*** | ***Name*** |
| **LBO DESIGN REVIEWERS**[[2]](#footnote-2) | | | **FIELD ENGINEERS** | | |
| ES Architecture | A |  | FE Lead | FE-L |  |
| ES Civil | C |  | FE Civil/Structural/Architectural | FE-CSA |  |
| ES Structural | S |  | FE Mechanical | FE-M |  |
| ES Mechanical | M |  | FE Electrical | FE-E |  |
| ES Electrical | E |  | **UTILITIES** | | |
| ES Fire Protection | FP |  | ES-UI Water | UI-W |  |
| ES Fire Alarm | FA |  | ES-UI Electric | UI-E |  |
| ES Instrumentation and Controls | I&C |  | ES-UI Traffic | UI-T |  |
| ES Welding | W |  | ES-UI Natural Gas | UI-NG |  |
| ES Pressure Safety | PS |  | UI Building Automation Control | UI-BAS |  |
| ES Bridge Crane | BC |  | NIE Telecommunication Services | NIE-TS |  |
| ES Project Engineer | PE |  |  |  |  |
| **FOD RESPRESENTATIVES** | | | **OTHER** | | |
| Facility Design Authority Representative | FDAR |  | EPC-CP Environmental Compliance | EPC-CP |  |
| System Engineer[[3]](#footnote-3) | SE |  | PIO-SU Commissioning | Cx |  |
|  |  |  | PIO-STR | STR |  |
| **IBC INSPECTORS** | | | Security | SEC |  |
| IBC Lead | IBC-L |  | Quality Assurance Group Representative | QA |  |
| IBC Electrical | IBC-E |  | Subcontractor Technical Representative | STR |  |
| IBC Mechanical | IBC-M |  | Project Manager | PM |  |
| IBC Welding | IBC-W |  | Sustainability Group | SUS |  |
| IBC Structural | IBC-S |  | Environmental Compliance Water Quality | EPC-WQ |  |
| IBC Civil | IBC-C |  | ES-FP AHJ Fire Protection | AHJ-FP |  |
|  |  |  | ES-FP AHJ Fire Alarm | AHJ-FA |  |
|  |  |  | Maintenance Site Services Work Control | MSS-WC |  |

* Where reviewer is not required.

| **Submittal  No.** | **Submittal Description** | **Reference** | **Submittal Schedule** | | **Submittal Type** | **Submittal Category** | **LANL Reviewer**  **(For LANL  Use Only)** | **LANL Metadata Codes (For LANL Use Only)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Exhibit D**  **Technical Specifications for Engineering Services** |  |  | |  |  |  |  |
| **01 1117[[4]](#footnote-4)** | **Work by Owner – Self Perform** |  |  | |  |  |  |  |
|  | N/A - NO SUBMITTALS REQUIRED |  |  | |  |  | - |  |
| **01 2500** | **Substitution Procedure** |  |  | |  |  |  |  |
|  | Substitution requests |  |  | |  | Submit form with the  Div 02-48[[5]](#footnote-5) submittal affected | Div 02-48 submittal reviewer |  |
| **01 3300** | **Submittal Procedures** |  |  | |  |  |  |  |
|  | N/A - NO SUBMITTALS REQUIRED |  |  | |  |  | - |  |
| **01 3545** | **Water Discharge Requirements** |  |  | |  |  |  |  |
|  | N/A - NO SUBMITTALS REQUIRED |  |  | |  |  | - |  |
| **01 4000** | **Quality Requirements [Non-Nuclear Projects]** |  |  | |  |  |  |  |
|  | Project Quality Assurance Plan | 1.4.A | W | | OT | A | PE[[6]](#footnote-6), STR, QA |  |
|  | Qualification data for testing agencies | 1.4.B | W | | CT | A | PE |  |
|  | Test and Inspection Plan (TIP) | 1.4.C | F | | OT | A | PE, All FEs |  |
|  | Test and Inspection reports | 1.4.E |  | |  | Submit under Div 02-48 spec[[7]](#footnote-7) | Div 02-48 submittal reviewer |  |
|  | Licenses and Certificates | 1.4.F |  | |  | Submit under Div 02-48 spec | Div 02-48 submittal reviewer |  |
|  | For IBC work, submit a Statement of Responsibility | 1.4.H | W | | CT | A | S |  |
| **01 4000** | **Quality Requirements [Nuclear Projects]** |  |  | |  |  |  |  |
|  | [Project Quality Assurance Plan] | 1.4.A | W | | OT | A | PE |  |
|  | Qualification data for testing agencies | 1.4.B | W | | CT | A | PE |  |
|  | Test and Inspection Plan (TIP) | 1.4.C | F | | OT | A | PE |  |
|  | Verification of Inspection and Test Plans (VIT) - A VIT Plan is only required for work identified as Safety Related (i.e., Safety Class, Safety Significant, or OHC) | 1.4.D | W | | OT | A | PE |  |
|  | Test and Inspection Reports: Prepare and submit certified (signed/endorsed) written Test and Inspection reports | 1.4.F | W | | TR | A | PE |  |
|  | Licenses and Certificates: For LANL's records, submit copies of licenses, certifications, correspondence, records, and similar documents used to establish compliance with standards and regulations that pertain to performance of the Work | 1.4.G | Y | | CT | A | PE |  |
|  | For IBC work, each Subcontractor and Subtier responsible for the fabrication or erection of a main wind- or seismic-force-resisting system, designated seismic system, or a wind- or seismic-resisting component listed in the Statement of Special Inspections must submit a Statement of Responsibility per ESM Chapter 16 Section IP Att H to LANL | 1.4.H | W | | CT | A | FE-CSA, IBC-CSA |  |
| **01 4115** | **Pressure Safety Submittals** |  |  | |  |  |  |  |
|  | Welding/brazing/fusing procedure specifications (WPS) with associated procedure qualification records (PQRs) | 1.3.A.1 | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Qualification of examiner(s) in accordance with the code of record. | 1.3.A.2 | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Qualification and evaluation of unlisted components in accordance with the code of record. | 1.3.A.3 | W | | P | A (Submit under Div 02-48 spec) | PS | PS |
|  | CMTRs showing material traceability material tensile test results (where required by the code of record) and conformance with code of record. | 1.3.A.4 | W | | P | A (Submit under Div 02-48 spec) | PS | PS |
|  | The maximum allowable working pressure or rating for all components of the pressure system(s) | 1.3.A.5 | X | | P | A (Submit under Div 02-48 spec) | PS | PS |
|  | Documentation of welds/brazes as required by the code of record. | 1.3.B.1 | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Weld/braze examination forms in accordance with ESM Chapter 13 on welding and NDE | 1.3.B.2 | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Other non-destructive evaluation (NDE) data reports | 1.3.B.3 | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Examiner reports | 1.3.B.4 | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Code leak-test reports, witnessed and signed by LANL owner’s inspector | 1.3.B.5 | I | | P, TR | A (Submit under  Spec 22 0813) | PS | PS |
|  | The fabricator shall provide the information of the “as built” condition | 1.3.C.1 | C | | P | C (Submit under  01 7839) | PE |  |
|  | Pressure safety documentation required by LANL Engineering Standards Manual STD-342-100 Chapter 17, Pressure Safety, ADMIN-1-4, *New System Document Requirements* showing those items that pertain to the work defined in this Specification and Project | 1.3.C.2 | C | | P | C | PS | PS |
| **01 4216** | **Definitions** |  |  | |  |  |  |  |
|  | N/A – NO SUBMITTALS REQUIRED |  |  | |  |  | - |  |
| **01 4444** | **Offsite Welding and Joining Requirements** |  |  | |  |  |  |  |
|  | Welding/Brazing Procedure Specification (WPS) with the associated Procedure Qualification Records (PQRs) | 1.2.A.1 | W | | P | A (Submit under Div 02-48 spec) | W |  |
|  | Welding/Brazing/Performance Qualification Records (WPQR) (Note: for each individual welder as one submittal for any WPQR submitted in a batch that is rejected only resubmit rejected WPQRs) | 1.2.A.2 | W | | P | A (Submit under Div 02-48 spec) | W |  |
|  | Weld Filler Material Control Procedure | 1.2.A.3 | W | | P | A (Submit under Div 02-48 spec) | W |  |
|  | Fill Material (certified Material Test Reports) | 1.2.A.4 | W | | TR,CT | A (Submit under Div 02-48 spec) | W |  |
|  | Post Weld Heat Treatment Procedures (where applicable) | 1.2.A.5 | W | | P | A (Submit under Div 02-48 spec) | W |  |
|  | Inspector Qualification Records | 1.2.A.6 | W | | P | A (Submit under Div 02-48 spec) | W |  |
|  | Inspection Procedures | 1.2.A.7 | W | | P | A (Submit under Div 02-48 spec) | W |  |
|  | Inspection reports and weld maps | 1.2.A.8 | I | | P | A (Submit under Div 02-48 spec) | FE-CWI |  |
| **01 4455** | **Onsite Welding and Joining Requirements** |  |  | |  |  |  |  |
|  | N/A - NO SUBMITTALS REQUIRED when using LANL Welding Program |  |  | |  |  |  |  |
| **01 4631** | **Welding of B31 Piping** |  |  | |  |  |  |  |
|  | Installation, Operation & Maintenance Manual; Product Data; Design Data | 1.2.B.1  1.2.B.2 1.2.B.3 | F | | II, OM, CD, CT | A (Submit under Div 02-48 spec) | [PS] | PS |
|  | Before fabrication, submit NDE (non-destructive examination) procedures | 1.2.C | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Prior to receiving materials submit the Material Control Procedure | 1.2.D | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Provide all submittals required by Section 01 4115, *Pressure Safety Submittals*, for the as-constructed configuration | 1.2.E |  | |  | Submit per 01 4115 | - |  |
| **01 4731** | **Flange Assembly for B31 Systems** |  |  | |  |  |  |  |
|  | Before fabrication, submit NDE (non-destructive examination) | 1.4.B | W | | P | A (Submit under Div 02-48 spec) | W | PS |
|  | Prior to receiving materials, submit the Material Control Procedure | 1.4.C | W | | P | A (Submit under Div 02-48 spec) | W, PS | PS |
|  | Provide all submittals required by Section 01 4115, *Pressure Safety Submittals*, for the as-constructed configuration | 1.4.D |  | |  | Submit per 01 4115 | - |  |
| **01 5705** | **Temporary Controls and Compliance Requirements** |  |  | |  |  |  |  |
|  | SWPP | 1.2.A.1.a | W | | OT | A | EPC-CP |  |
|  | USEPA NOI | 1.2.A.1.b | W | | OT | A | EPC-CP |  |
|  | USEPA NOT | 1.2.A.1.c | Z | | OT | A | EPC-CP |  |
|  | Provide information as necessary to obtain the NMED NOI | 1.2.A.2 | W | | OT | A | EPC-CP |  |
|  | Traffic Control Plan | 1.2.A.3 | W | | P | A | UI-T |  |
| **01 6000** | **Product Requirements** |  |  | |  |  |  |  |
|  | N/A-NO SUBMITTALS REQUIRED |  |  | |  |  | - |  |
| **01 7700** | **Closeout Procedures** |  |  | |  |  |  |  |
|  | Product Data: For cleaning agents | 1.4.A | U | | P | SD (Submit under Div 02-48 spec) | - |  |
|  | Construction Subcontractor’s list of Incomplete Items (Punch List): Initial submittal at Substantial Completion | 1.4.B | B | | P, RD | A | PE, PM, STR |  |
|  | Certified list of Incomplete Items: Final submittal at Final Completion | 1.4.C | B | | P, RD | A | PE, PM, STR |  |
|  | Field Report: For pest control inspection | 1.5.B | B | | P, TR | C | STR |  |
|  | Schedule of Maintenance Material Items | 1.6.A |  | |  |  | - |  |
|  | Substantial Completion Procedures: Punch list | 1.7.A | B | | ML, M | C | - |  |
|  | [Closeout submittals specified in other Division 01 Sections] | 1.7.B.2 |  | |  | C (Submit under Div 01 specs) | Div 01 spec reviewer |  |
|  | [Closeout submittals specified Divisions 02-48] | 1.7.B.3 |  | |  | C (Submit under Div 02-48 spec) | Div 02-48 spec reviewer |  |
|  | Maintenance material submittals Divisions 02-48 | 1.7.B.4 |  | |  | C (Submit under Div 02-48 spec) | Div 02-48 spec reviewer |  |
|  | [Test/adjust/balance records] | 1.7.B.5 | See above | | P, TR | C (Submit per 23 0593) | Cx |  |
|  | [Sustainable design submittals required in Section 01 8113.13 *Sustainable Design Requirements – LEED for New Construction and Major Renovations* and in individual sections] | 1.7.B.6 | See above | | P | SD (Submit under Div 02-48 spec) | SUS |  |
|  | Procedures Prior to Substantial Completion: Complete the following | 1.7.C | minimum of 10 days prior | | RD | A | PE, PM, STR |  |
|  | Inspection: Submit a written request to the LANL Construction STR for inspection to determine Substantial Completion | 1.7.D | minimum of 10 days prior | | TR | A | PE, PM, STR |  |
|  | Final Application for Payment according to Exhibit B, Special Conditions | 1.8.A.1 | Prior to Final Completion | | RD, O | A | PE, PM, STR |  |
|  | Certified List of Incomplete Items: Certified copy of LANL’s Substantial Completion inspection list of items to be completed or corrected (punch list) | 1.8.A.2 | Prior to Final Completion | | RD | A | PE, PM, STR |  |
|  | [Pest-control final inspection report] | 1.8.A.3 | Prior to Final Completion | | TR | C | STR |  |
|  | [Notice of Termination for termination of the NPDES SWPPP permit] | 1.8.A.4 | Prior to Final Completion | | OT | C (Submit under 01 5705) | See Spec Reviewer |  |
|  | Inspection: Submit a written request for final inspection to determine acceptance | 1.8.B | minimum of 10 days prior | | TR | A | - |  |
|  | Partial Occupancy: Submit properly executed warranties that completed and occupied or used by LANL during construction period by separate agreement with Construction Subcontractor | 1.10.B | within [15] days of completion | | WA | C | - |  |
|  | Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file | 1.10.C.4 | within [15] days of completion | | EM, WA | C | - |  |
|  | Provide additional copies of each warranty to include in operation and maintenance manuals | 1.10.D | within [15] days of completion | | WA, OM | C | - |  |
| **01 7823** | **Operation and Maintenance Data** |  |  | |  |  |  |  |
| n/a | Manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals if review is required. |  |  | |  |  | - |  |
| **01 7839** | **Project Record Documents** |  |  | |  |  |  |  |
|  | Initial Submittal | 1.3.A.1.a | B | | P, EM | C | PE, All FEs |  |
|  | Final Submittal | 1.3.A.1.b | B | | P, EM | C | PE, All FEs |  |
|  | Record Specifications | 1.3.B | B | | EM, RD | C | PE |  |
|  | Record Product Data | 1.3.C | B | | EM, RD | C | PE |  |
|  | Record Calculations | 1.3.D | B | | CA, EM | C | PE |  |
|  | Miscellaneous Record Submittals | 1.3.E | B | | EM, RD | C | PE |  |
|  | Reports | 1.3.F | B | | RD | A | - |  |
| **01 8113.13** | **Sustainable Design** |  |  | |  |  |  |  |
|  | Sustainable Design Documentation Submittals | 1.6.B |  | |  |  |  |  |
|  | Environmental Product Declarations complying with LEED requirements | 1.6.B.1 | Y | | P | SD | - | SD |
|  | Documentation for products that comply with LEED requirements for multi-attribute optimization | 1.6.B.2 | Y | | P | SD | - | SD |
|  | Sustainability reports for products that comply with LEED requirements for raw material and source extraction reporting | 1.6.B.3 | Y | | P | SD | - | SD |
|  | Documentation for products that comply with LEED requirements for leadership extraction practices | 1.6.B.4 | Y | | P | SD | - | SD |
|  | Material ingredient reports for products that comply with LEED requirements for material ingredient reporting | 1.6.B.5 | Y | | ML | SD | - | SD |
|  | Documentation for products that comply with LEED requirements for material ingredient optimization | 1.6.B.6 | Y | | P | SD | - | SD |
|  | Documentation for products that comply with LEED requirements for product manufacturer supply chain optimization | 1.6.B.7 | Y | | P | SD | - | SD |
|  | Product data for adhesives and sealants used inside the weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials | 1.6.B.8 | Y | | P, TR | SD | - | SD |
|  | Product data for paints and coatings used inside the weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials | 1.6.B.9 | Y | | P, TR | SD | - | SD |
|  | Laboratory test reports for flooring, indicating compliance with requirements for low-emitting materials | 1.6.B.10 | Y | | TR | SD | - | SD |
|  | Laboratory test reports for products containing composite wood or agrifiber products or wood glues, indicating compliance with requirements for low-emitting materials | 1.6.B.11 | Y | | TR | SD | - | SD |
|  | Laboratory test reports for ceilings, walls, and thermal insulation, indicating compliance with requirements for low-emitting materials | 1.6.B.12 | Y | | TR | SD | - | SD |
|  | Construction Indoor-Air-Quality (IAQ) Management | 1.6.B.13 | Y | | OT | SD | - | SD |
|  | IAQ Assessment | 1.6.B.14 | Y | | OT | SD | - | SD |
|  | Qualification Data: For LEED coordinator | 1.7.A | Y | | CT | I | - | SD |
|  | Project Materials Cost Data | 1.7.B |  | |  |  |  |  |
|  | Plumbing | 1.7.B.1 | Y | | OT | I | - | SD |
|  | Mechanical | 1.7.B.2 | Y | | OT | I | - | SD |
|  | Electrical | 1.7.B.3 | Y | | OT | I | - | SD |
|  | Specialty items, such as elevators and equipment | 1.7.B.4 | Y | | OT | I | - | SD |
|  | SD Action Plans | 1.7.C |  | |  |  |  |  |
|  | List of proposed products with Environmental Product Declarations | 1.7.C.1 | X | | ML | I | - | SD |
|  | List of proposed products complying with requirements for multi-attribute optimization | 1.7.C.2 | X | | ML | I | - | SD |
|  | List of proposed products complying with requirements for raw material and source extraction reporting | 1.7.C.3 | X | | ML | I | - | SD |
|  | List of proposed products complying with requirements for leadership extraction practices | 1.7.C.4 | X | | ML | I | - | SD |
|  | List of proposed products complying with requirements for material ingredient reporting | 1.7.C.5 | X | | ML | I | - | SD |
|  | List of proposed products complying with requirements for material ingredient optimization | 1.7.C.6 | X | | ML | I | - | SD |
|  | List of proposed products complying with requirements for product manufacturer supply chain optimization | 1.7.C.7 | X | | ML | I | - | SD |
|  | Waste management plan | 1.7.C.8 | W | | P | I | - | SD |
|  | Construction IAQ management plan | 1.7.C.9 | W | | P | I | - | SD |
|  | SD Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with sustainable design action plans | 1.7.D | Y | | OT | I | - | SD |
| **01 8734** | **Seismic Qualification of Nonstructural Components (IBC)** |  |  | |  |  |  |  |
|  | Qualification Data: For testing agency and professional engineer, as applicable | 1.6.A | W | | CT | I | - |  |
|  | Manufacturer Seismic Qualification Data: Documentation for [\_\_\_\_\_\_\_\_\_\_\_\_\_], accessories, and subcomponents | 1.6.B | X | | OT | I | - |  |
|  | Qualification Testing: Documentation for a component(s) qualified by the qualification-testing method: CoC with evidence | 1.7.B | C | | CT, TR | A | S |  |
|  | Qualification Analysis: Documentation for a component(s) qualified by the qualification-analysis method: CoC with evidence | 1.7.C | C | | CT, CA | A | S |  |
|  | Combination of Qualification Methods: Documentation for a component(s) qualified by a combination of qualification methods: CoC with evidence | 1.7.D | C | | CT, TR, CA | A | S |  |
|  |  |  |  | |  |  |  |  |
| **02 4115** | **Electrical Demolition** |  |  | |  |  |  |  |
|  | Shop Drawings | 1.3.A.1 | M & W | | SD | A | - |  |
|  | Project Record Documents ( ) | 1.3.A.2 | C | | RD | C | [E] |  |
| **02 4119** | **Selective Structure Demolition** |  |  | |  |  |  |  |
|  | Submit with project record documents and showing actual locations of utilities | 1.2A |  | |  | A |  |  |
| **03 3001** | **Reinforced Concrete** |  | |
|  | [Quality Control Plan] | [1.5.2] | 1 month before initial placement | | P | A | [S] |  |
|  | Request to use a testing agency that is not currently approved by LANL (also applies to subtier concrete fabricators and batch plants; must be approved before such agency can be used) | 1.5.F | 3 months before initial placement | | P | A | [S], IBC-S |  |
|  | [Test data on materials and concrete mixtures] | [1.6.2.2.e] | 1 month before initial placement | | TR | A | [S] |  |
|  | [Quality control program of the concrete supplier] | [1.6.2.2.f] | 1 month before initial placement | | P | A | [S] |  |
|  | Formwork and Formwork Accessories |  |  | |  |  |  |  |
|  | Drawings and procedures for installation and removal of reshoring and backshoring | 2.1.2.1.d | 1.5 months before formwork installation. | | D | A | [S] |  |
|  | Data on formwork release agent or formwork liners | 2.1.2.1.e,  & 2.2.D herein | 15 work days before formwork installation. | | CD | A |  |  |
|  | Shop drawings for formwork | 2.1.2.2.a | 15 work days before formwork installation. | | SD | A | [S] |  |
|  | Design calculations for formwork shoring, reshoring, and backshoring | 2.1.2.2.b | 15 work days before formwork installation. | | CA | A | [S] |  |
|  | Data sheet on form ties | 2.1.2.2.c | 15 work days before formwork installation. | | CD | A | [S] |  |
|  | Data sheet on isolation/ expansion joint materials | 2.1.2.2.d | 15 work days before formwork installation | | CD | A | [S] |  |
|  | Data sheet on waterstop materials and splices; C of C from manufacturer that waterstops meet specified requirements | 2.1.2.2.e,  and 2.2.I herein | 15 work days before formwork installation | | CD, CT | A | [S] |  |
|  | Reinforcement and reinforcement supports |  |  | |  |  |  |  |
|  | CMTRs for each delivery traceable to the bundle tags by heat (or lot) number | 3.1.1.1.a, &  1.6.G herein | Upon receipt of delivery | | CT | A | IBC-S |  |
|  | Placing drawings showing fabrication dimensions and locations for placement of reinforcement and supports | 3.1.1.1.b | 1 month before reinforce- ment placement | | D | A | [S] |  |
|  | List of splices indicated in Subcontract Documents | 3.1.1.1.c | 1 month before reinforcement placement | | ML | A | [S] |  |
|  | Copy of CRSI Plant Certification | 3.1.1.1.g | 15 work days before planned shipment date | | CT | A |  |  |
|  | Concrete mixtures |  |  | |  |  |  |  |
|  | Standard Mix Designs (i.e., Pre-Approved Mix Designs) |  |  | |  |  |  |  |
|  | Test report(s) indicating aggregate correction factor (determined IAW ASTM C 231) | 2.7.H herein | Prior to first concrete placement | | TR | A | [S] |  |
|  | Delivery ticket (for each batch of concrete).  NOTES:   1. Content of ticket shall be legible, and shall comply with ASTM C94 14.1 with the following changes /exceptions:   14.1.7: LATM Mix No. of the concrete in conformance with that employed in job specifications.  14.2.2: Amount of cement.  14.2.3 – 14.2.5: Delete / Not necessary.  14.2.6: Amount of admixtures  14.2.12: Delete / Not necessary.  Additional content: Water/cementitious material ratio (w/cm), and the amount of water that can be added at the jobsite with exceeding w/cm  Any/ all water added at the jobsite shall be witnessed by a LANL technical representative (e.g., field engineer, inspector, etc.). | 4.3.2, and  ASTM C94 14.1 | At the completion of each day’s placement(s) | | ML | I | [S] |  |
|  | Alternative Mix Designs |  |  | |  |  |  |  |
|  | Mixture proportions and characteristics.  If different mixtures are to be used for different portions of proposed Work, C of C confirming that each mixture complies with the indicated mixture requirements. | 4.1.2.1; 2.7.C herein; and ACI 318, 26.4.3.1(d) | 15 work days before placement | | ML | A | [S] |  |
|  | Mixture proportion data (i.e., calculation of f ‘ cr, and, if applicable, the field-test records used for this; and field-test data, or trial mixtures, used to establish average compressive strength).  Strength test records shall be < 2-years old. | 4.1.2.2, and 4.2.3.4.a or 4.2.3.4.b; 2.7.B herein; and ACI  318, 26.4.3.1(b) | 15 work days before placement | | CA, TR | A | [S] |  |
|  | Information on types, classes, producers’ names, and plant locations for cementitious materials; types, pit or quarry locations, producers’ names, gradings, and properties required by ASTM C33 for aggregates; types, brand names, and producers’ names for admixtures; and source of supply for water and ice, and properties required by ASTM C1602 for water.  Except for admixtures, test results confirming conformance to applicable specifications shall not be older than 90 days. Test results for aggregate soundness, abrasion, and reactivity may be older than 90 days, but not older than 1 year, provided test results for the other properties specified in ASTM C33 indicate that aggregate quality has not changed.  C of C confirming the source of the concrete materials (except for admixtures), that test results confirm conformance to applicable specifications, and confirming that ALL concrete materials used to develop mixture proportions correspond to those to be used in the proposed Work. | 4.1.2.3; 1.5.C and 2.7.B herein; and ACI 318, 26.4.3.1(c) | 1 month before placement | | ML, CT | A | [S] |  |
|  | Field-test or trial-mixture records, and data on material and mixture proportions  Strength test records shall be < 2-years old | 4.1.2.4, 4.1.2.5, and ACI 26.4.3.1(b) | 15 work days before placement | | TR | A | [S] |  |
|  | Documentation indicating compliance with the specified requirements for sulfate resistance | 4.2.2.7.a | 15 work days before the initial placement | | CT | I | [S] |  |
|  | Documentation verifying compliance with specified requirements for freezing and thawing exposure | 4.2.2.7.b | 15 work days before the initial placement | | CT | I | [S] |  |
|  | Documentation verifying compliance with specified requirements for low permeability | 4.2.2.7.c | 15 work days before the initial placement | | CT | I | [S] |  |
|  | Documentation verifying compliance with specified requirements for corrosion resistance | 4.2.2.7.d | 15 work days before the initial placement | | CT | I | [S] |  |
|  | Delivery ticket (for each batch of concrete).  NOTES:   1. Content of ticket shall comply with ASTM C94 14.1 and be legible. 2. In addition to content required by ’14.1,’ the ticket shall also indicate w/cm, and the amount of water that can be added at the jobsite with exceeding w/cm.   Any/ all water added at the jobsite shall be witnessed by a LANL technical representative (e.g., field engineer, inspector, etc.). | 4.3.2, and  ASTM C94 14.1 | At the completion of each day’s placement(s) | | ML | I | [S] |  |
|  | Handling, placing, and constructing |  |  | |  |  |  |  |
|  | Quality-control Test and inspection reports | 5.1.2.1.a | Within 1 month after placement | | TR | A | [S]  IBC-S |  |
|  | Proposed method of measuring concrete temperature | 5.1.2.1.b,  5.3.6.5 | 15 work days before the initial placement | | P | A | [S] |  |
|  | Qualifications of finishing sub-tier /-contractor and flatwork finishers for finishing unformed surfaces | 5.1.2.1.c,  5.3.4.1; &  3.7.C.1 | 15 work days before the initial placement | | CT | A |  |  |
|  | Shop drawings of placing, handling, and constructing methods | 5.1.2.1.d | 15 work days before the initial placement | | SD | A | [S] |  |
|  | Notification of concrete placement.  NOTE: As soon as, if not prior to, “notification” is given /submitted, ensure the associated tests and inspections are coordinated properly /adequately | 5.1.2.1.e | 48 hours before initial placement, and at least 24 hours before subsequent ones | | OT | I | IBC-S |  |
|  | Request for acceptance of preplacement activities to ensure the preplacement activities are properly inspected | 5.1.2.1.f | 48 hours before placement | | OT | A | FE-CSA |  |
|  | Description of conveying equipment | 5.1.2.2.a | 15 work days before the initial placement | | P | I | FE-CSA |  |
|  | Proposed method for removal of stains, rust, efflorescence, and surface deposits | 5.1.2.2.b,  5.3.7.6 | 15 work days before performing the work | | P | A | [S] |  |
|  | Proposed wet-weather protection activities.  Project EOR and/or LANL STR can waive this submittal if concreting will not be (or was not) performed during “wet weather.” | 5.1.2.2.c,  5.3.2.1.a | 48 hours before placement | | P | A | [S]  FE-CSA |  |
|  | Hot-weather Implementation Plan.  Project EOR and/or LANL STR can waive this submittal if concreting will not be (or was not) performed during “hot weather.” | 5.1.2.2.d &  3.8.A herein | 5 work days before placement | | P | A | [S]  FE-CSA |  |
|  | Cold-Weather Implementation Plan.  Project EOR and/or LANL STR can waive this submittal if concreting will not be (or was not) performed during “cold weather.” | 5.1.2.2.e &  3.8.A herein | 5 work days before placement | | P | A | [S]  FE-CSA |  |
|  | Sample finish (for finishing formed surfaces when /if matching sample finish is required). | 5.1.2.2.f | 5 work days before beginning finishing | | S | A |  |  |
|  | Specification and manufacturer’s data on surface retarder used in producing exposed-aggregate finish and method of use | 5.1.2.2.g,  5.3.4.2.i | 5 work days before beginning finishing | | CD | A | [S] |  |
|  | Request to use, and specification and data on, bonding agents other than cement grout for two-course slabs | 5.1.2.3.b,  5.3.4.2.f | 5 work days before beginning finishing | | OT, CD | A | [S] |  |
|  | Proposed method for underwater placement | 5.1.2.3.c,  5.3.2.4 | 5 work days before placement | | P | A | [S]  FE-CSA |  |
| **03 3021** | **Reinforced Concrete – High Confidence** |  |  | |  |  |  |  |
|  | Subcontractor Quality Assurance (QA) Plan (QAP) including all subtier Subcontractors. | 1.5.A.1.a | W | | RD | A | S? |  |
|  | Commercial Grade Dedication Plans as required, and as included within 03 3021 in accordance with QAP. | 1.5.A.1.b | W, X | | RD | A | S? |  |
|  | An inspection or Verification of Inspection and Test (VIT) Plan that complies with QAP. | 1.5.A.1.c | W | | RD | A | FE-CSA |  |
|  | Documentation required by VIT Plan such as logs and results of tests and inspections performed. | 1.5.A.1.d | Z | | OT, TR | A | S? |  |
|  | Documentation that testing agencies have been approved. | 1.5.A.1.e | W | | CT | A | S |  |
|  | Documentation that testing agencies have an NQA-1-compliant quality program. | 1.5.A.1.f | W | | CT | A | S? |  |
|  | Concrete supplier QAP/Quality Control Program and applicable Implementing Procedures. | 1.5.A.1.g | W | | RD | A | S? |  |
|  | Testing agency test and inspection results to LANL and concrete supplier. | 1.5.A.1.h | Within 3 days of inspection/ tests | | TR, OT | A | S  FE-CSA |  |
|  | Formwork and Formwork Accessories | 1.5.A.2 |  | |  |  |  |  |
|  | Drawings and procedures for installation and removal of reshoring and backshoring. | 1.5.A.2.a | W | | D, II | A | S |  |
|  | Data sheet on formwork release agent or formwork liners. | 1.5.A.2.b | X | | CD | A | S |  |
|  | Design calculations, and drawings for formwork, shoring and reshoring. | 1.5.A.2.c | W | | CA, D | A | S |  |
|  | Data sheet on form ties. | 1.5.A.2.d | X | | CD | A | S |  |
|  | Data sheet and sample of expansion joint materials (sealer and filler). | 1.5.A.2.e | X | | CD, S | A | S |  |
|  | Data sheet on form-facing materials. | 1.5.A.2.f | X | | CD | A | S |  |
|  | Steel Reinforcement, Reinforcement Supports, Embeds and Accessories | 1.5.A.3 |  | |  |  |  |  |
|  | Reinforcing-bar manufacturer’s CMTRs. | 1.5.A.3.a | X | | TR | A | S / FE-CSA |  |
|  | Shop drawings. | 1.5.A.3.b | W | | SD | A | S / FE-CSA |  |
|  | CMTRs for other construction materials such as, pre-stress strands, Form Savers, cadwelds, etc. Mechanical splice submittals shall also be provided with ICC ESRs. | 1.5.A.3.c | X | | TR, OT | A | S / FE-CSA |  |
|  | CMTRs for steel embedments in concrete. | 1.5.A.3.d | X | | TR | A | S / FE-CSA |  |
|  | Concrete Mix Designs | 1.5.A.4 |  | |  |  |  |  |
|  | Concrete mix design(s) (other than pre-approved mixes). | 1.5.A.4.a | W | | ML, TR, PD, OT | A | S / FE-CSA |  |
|  | Handling, Placing, and Constructing | 1.5.A.5 |  | |  |  |  |  |
|  | Concrete placement records including location map. | 1.5.A.5.a | WKLY | | RD | A | S |  |
|  | Concrete cylinder test reports and charts. | 1.5.A.5.b | BI-WKLY | | TR, RD | A | S / FE-CSA |  |
|  | Location map showing location of reinforcing bars by lot/heat number. | 1.5.A.5.c | W | | RD | A | S |  |
|  | Reports for construction and removal of forms and reshoring. | 1.5.A.5.d | WKLY | | OT, RD | A | S |  |
|  | Plan identifying location, duration and magnitude of construction loads on completed floors, members, or walls. | 1.5.A.5.e | W | | OT, CA | A | S |  |
|  | Plan identifying location, duration and magnitude of construction load, prior to placement of load. | 1.5.A.5.f | W | | OT, CA | A | S |  |
|  | Cold-Weather Plan. | 1.5.A.5.g | W | | OT | A | S / FE-CSA |  |
|  | Hot-Weather Plan. | 1.5.A.5.h | W | | OT | A | S / FE-CSA |  |
|  | Description of conveying equipment. | 1.5.A.5.i | U | | OT | A | S / FE-CSA |  |
|  | Hazardous/inclement weather placement protection plan | 1.5.A.5.j | W | | OT | A | S |  |
|  | Method of measuring concrete surface temperature changes. | 1.5.A.5.k | W | | OT | A | S |  |
|  | Method for removal of stains, rust, efflorescence, and surface deposits | 1.5.A.5.l | W | | OT | A | S |  |
|  | Qualifications of finishing Subcontractor and flatwork finishers (ACI flatwork certification). | 1.5.A.5.m | W | | CT | A | S |  |
|  | One legible copy of the batch ticket for each load of concrete. | 1.5.A.5.n | DAY | | RD | A | S |  |
|  | Documentation proving compliance with the LANL-approved mix design. | 1.5.A.5.o | U | | CT | A | S |  |
|  | Thermal Control Plan for each mass-concrete placement. | 1.5.A.5.p | W | | OT, CA | A | S / FE-CSA |  |
|  | CMTR and/or CoC for sand in scrub coat (for repair of surface defects other than tie holes). | 1.5.A.5.q | X | | TR, CT | A | S |  |
|  | Records/ Records Management | 1.5.B and C |  | |  |  |  |  |
|  | Records: The Subcontractor QAP shall address record documentation | 1.5.B | Z, C | | RD | A | S |  |
|  | When not otherwise required, submit each document used to establish compliance with standards and regulations that pertain to performance of the Work | 1.5.C | Y | | CT, P, RD, TR | A | S |  |
|  | Design mix of each class of concrete lab test reports for design mix for concrete | 1.2.A.2 1.2.A.3 | X | | ML, TR | A | C` |  |
|  | Batch tickets | 1.2.A.4 | PI | | CT | A | FE-CSA |  |
|  | Test reports of concrete field testing | 1.2.A.5 | PI | | TR | A | FE-CSA |  |
| **03 4100** | **Precast Structural Concrete** |  |  | |  |  |  |  |
|  | Product Data: For each type of product indicated | 1.5.A | F | | CD | A | [S]  FE-CSA |  |
|  | Design Mixtures: For each precast concrete mixture. | 1.5.B | F | | ML, TR | A | S |  |
|  | Shop Drawings | 1.5.C | F | | SD | A | S FE-CSA |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.5.D.1 |  | |  | A |  |  |
|  | Welder Performance Qualification Records (WPQR) | 1.5.D.2 |  | |  | A |  |  |
|  | Inspector qualification records | 1.5.D.3 |  | |  | A |  |  |
|  | Inspection procedures | 1.5.D.4 |  | |  | A |  |  |
|  | Weld inspection report(s) and weld map(s) | 1.5.D.5 |  | |  | A |  |  |
|  | [For prestressed precast structural concrete provide required minimum compressive strength for stated stages of construction.] | 1.5.E | F | | OT, RD | A | [S] |  |
|  | [For post-tensioned precast structural concrete indicate type, size, details and location of post-tensioning anchorages.] | 1.5.F | F | | OT, RD | A | S |  |
|  | Samples | 1.5.G | F | | S, SC | A | PE |  |
|  | Handling procedures, and [erection plan] [PE-stamped erection plan, and calculations that provide the technical basis for what is shown on the erection plan]. | 1.5.H | S | | II | A | [S] |  |
|  | Delegated Design Submittal | 1.5.I | F | | CA, D | DD | S |  |
|  | [Fire Resistance Calculations] | 1.5.J | F | | CA | A | S |  |
|  | [LEED Product Data: for recycling content]. | 1.6.A.1 | Z | | P | SD | - | SD |
|  | [LEED Design Mixtures for Credit ID 1]. | 1.6.A.2 | S | | ML | SD | - | SD |
|  | [LEED Product Data: For adhesives and sealants, including printed statement of VOC content] | 1.6.A.3 | U | | P | SD | - | SD |
|  | Qualification Data: For [Installer] [fabricator] [testing agency] | 1.7.A | F, W | | CT | I | - |  |
|  | Manufacturer’s Material Certificates | 1.7.B | W | | CT | I | - |  |
|  | Material Test Reports: Certified suppliers test reports for aggregates | 1.7.C | F | | TR | I | - |  |
|  | Source quality-controlreports | 1.7.D | W | | TR | I | - |  |
|  | Field quality-control reports | 1.7.E |  | | TR | I | FE-CSA |  |
|  | [Jack Calibration Records (in accordance with PCI-MNL-116 5.2.7).] | 1.7.F | W | | CT, TR | I | - |  |
|  | Maintenance Data: For Precast Structural Concrete | 1.8.A | Z | | OM | C | - |  |
|  | [Project Records: Including jacking and tensioning records.] | 1.8.B | C | | RD | C | - |  |
|  | Warranties | 1.8.C | C | | WA | C | - |  |
| **03 6000** | **Grouting** |  |  | |  |  |  |  |
|  | Product Data on grout, fine aggregate, and [\_\_\_\_\_\_\_\_]. | 1.4.A | X | | CD | A | [S] FE-CSA |  |
|  | Manufacturer's Installation Instructions for mixing, handling, surface preparation and placing epoxy type and non-shrink type grouts. | 1.4.B | W | | II | A | [S] FE-CSA |  |
|  | Manufacturer's CoC Certify [non-shrink cementitious grout] and [ \_\_\_\_ ] meet or exceed [ASTM C 1107] and [ \_\_\_\_ ]. | 1.4.C | X | | CT | A | [S] |  |
|  | Mix Design: Proposed mix design [of each class of grout] | 1.4.D | W | | ML | A | [S] |  |
|  | Field Quality-Control Results: Results of Subcontractor-furnished tests [and inspections] | 1.4.E | PI | | TR | A | [S] FE-CSA |  |
|  | Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements related to recycled content and point of origin of materials | 1.5.A | Z | | P, CT | SD | - | SD |
| **03 6021** | **Grouting – High Confidence** |  |  | |  |  |  |  |
|  | Subcontractor Quality Assurance (QA) Plan (QAP) including all subtier Subcontractors. | 1.5.A.1.a | W | | RD | A | S |  |
|  | Commercial Grade Dedication Plans and Report/Package for material(s) not obtained from an approved supplier. | 1.5.A.1.b | X | | RD | A | S |  |
|  | Verification of Inspection and Test (VIT) Plan that complies with all requirements indicated in 03 6021. | 1.5.A.1.c | W | | RD | A | S |  |
|  | Documentation required by VIT Plan such as logs and results of tests and inspections performed. | 1.5.A.1.d | Z, C | | OT, TR | A | S |  |
|  | Documentation that testing agencies have been approved. | 1.5.A.1.e | W | | CT | A | S |  |
|  | Documentation that testing agencies have an NQA-1-compliant quality program. | 1.5.A.1.f | W | | CT | A | S |  |
|  | Grout supplier QAP/Quality Control Program and applicable Implementing Procedures. | 1.5.A.1.g | X | | RD | A | S |  |
|  | Qualification records for inspection and test personnel. | 1.5.A.1.h | W | | CT | A | S |  |
|  | Testing agency test and inspection results to LANL and grout supplier. | 1.5.A.1.i | Within few days of inspection/ tests | | TR, OT | A | S, FE-CSA |  |
|  | Manufacturer’s Information | 1.5.B |  | |  |  |  |  |
|  | Product Data on material(s). | 1.5.B.1 | X | | CD | A | S |  |
|  | Installation Instructions for mixing, handling, surface preparation and placing the material(s) | .2 | W | | II | A | S |  |
|  | CoC for material(s) certifying indicated properties met. | 1.5.B.3 | X | | CT | A | S |  |
|  | CMTRs as indicated in 03 3021. | 1.5.B.4 | X | | TR | A | S |  |
|  | Records/ Records Management | 1.5.C |  | |  |  | - |  |
|  | When not otherwise required, submit each document used to establish compliance with standards and regulations that pertain to performance of the Work | 1.5.C | Y | | CT, P, RD, TR | A | S |  |
|  |  |  |  | |  |  |  |  |
| **04 2220** | **Reinforced Unit Masonry** |  |  | |  |  |  |  |
|  | Product Data for each type of product | 1.3.A | X | | CD | A | [S] [FE-CSA] [IBC-S] |  |
|  | Shop drawings for Masonry Units and Reinforcing Steel | 1.3.B | W | | SD | A | [S] [FE-CSA] [IBC-S] |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.3.C.1 | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.3.C.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.3.C.3 | W | | CT | A | W |  |
|  | Inspection Procedures | 1.3.C.4 | W | | P | A | W |  |
|  | Shop drawings with weld details/symbols | 1.3.C.5 | W | | SD | A | IBC-W |  |
|  | Qualification Data: For Subcontractor’s testing agency (for quality control). | 1.4.A | W | | CT | I | - |  |
|  | Written acceptance of submittals prior to the use of mix designs, materials, [and] construction procedures. | 1.4.B | X | | OT | I | - |  |
|  | Material Certificates for each item indicated on 04 2220. | 1.4.C | X | | CT | I | - |  |
|  | Mix Designs or each mortar and grout mix | 1.4.D | W | | ML | I | - |  |
|  | Statement of Compressive Strength of Masonry | 1.4.E | W | | RD | I | - |  |
|  | Test Reports for Reinforcing Bars for each material type. | 1.4.F | W | | TR | I | - |  |
|  | Weather-Related Construction Procedures | 1.4.G | W | | OT | I | FE-CSA |  |
|  | Manufacturer's Certificate: Material Resource Certificates | 1.5.A | C | | CT | SD | - | SD |
|  | Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products   * + - * 1. Salvaged, refurbished, and reused products.         2. Products with recycled material content.         3. Regional products.         4. [\_\_\_\_\_\_\_\_.] | 1.5.B | C | | OT | SD | - | SD |
|  |  |  |  | |  |  |  |  |
| **05 0520** | **Post-Installed Concrete and Grouted-Masonry Anchors – Normal Confidence** |  |  | |  |  |  |  |
|  | The following eight items aren’t required for anchors that are tabulated in 05 0520. Each item is for each product. | 1.5.A | - | | - | - | - |  |
|  | Evaluation Report (ER) | 1.5.A.1 | X | | P | A | [S] IBC-S |  |
|  | Technical documentation | 1.5.A.2 | X | | CD | A | [S] |  |
|  | For adhesive anchors, information on adhesives | 1.5.A.3 | X | | CD | A | [S] IBC-S |  |
|  | For adhesive anchors information on anchor elemnt | 1.5.A.4 | X | | CD | A | [S] IBC-S |  |
|  | Shipping, handling, and packaging procedures | 1.5.A.5 | X | | CD | A | [S] |  |
|  | Cleaning and coating documentation | 1.5.A.6 | X | | CD | A | [S] |  |
|  | Quality Assurance program | 1.5.A.7 | X | | OT | A | [S] |  |
|  | COC certifying product meets requirements of 05 0520. | 1.5.A.8 | X | | CT | A | [S] |  |
| **05 0521** | **Post Installed Concrete Anchors -- High Confidence** |  |  | |  |  |  |  |
|  | CMTR and C of C for anchor and its components | 1.6.A.1.a | X | | TR,CT | A | S |  |
|  | Manufacturer’s printed installation instructions (MPII). | 1.6.B.1.a | W | | II, P | A | S, IBC-S |  |
|  | Installer-training documentation per 05 0521. | 1.6.B.1.b | W | | CT | A | S |  |
|  | A Verification of Inspection and Test (VIT) Plan per 01 4000 | 1.6.B.1.c | W | | RD | A | S |  |
|  | Qualification records for inspection and test personnel per 01 4000 | 1.6.B.1.d | W | | CT | A | S |  |
|  | Installation inspection record and Test Inspection Record and Failed anchor documentation per 05 0521 | 1.6.B.1.e | PII | | OT, TR | A | S, IBC-S |  |
| **05 1000** | **Structural Metal Framing** |  |  | |  |  |  |  |
|  | Product Data: For each type of product. | 1.6.A | W | | P | A | [S],  FE-CSA |  |
|  | Shop Drawings (include weld details/symbols). | 1.6.B | W | | SD | A | [S], [W],  FE-CSA |  |
|  | Erection drawings | 1.6.C | F, W | | D | A | [S], FE-CSA |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.6.D.1 | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.6.D.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.6.D.3 | W | | CT | A | W |  |
|  | Inspection Procedures | 1.6.D.4 | W | | P | A | W |  |
|  | Shop drawings with weld details/symbols | 1.6.D.5 | W | | SD | A | IBC-W |  |
|  | CMTRs , | 1.6.E | X | | TR | A | [S], [W] |  |
|  | Delegated Design Submittal: structural-steel connections indicated to comply with design loads | 1.6.F | F, W | | SD, D, CA | DD | S |  |
|  | Qualification Data | 1.7. A | X | | TR | I | - |  |
|  | Paint Compatibility Certificates | 1.7.B |  | |  | I | - |  |
|  | Product Test Reports | 1.7.C |  | |  | I | - |  |
|  | Survey of existing conditions | 1.7.D | F, W | | P | I | - |  |
|  | Product Data | 1.8.A | W | | P | SD | - | SD |
|  | Laboratory Test Reports for Credit IEQ 4.2: | 1.8.B | W | | P, TR | SD | - | SD |
| **05 1305** | **Stainless Steel** |  |  | |  |  |  |  |
|  | CMTR(s) | 1.4.A.1 | X | | TR | A | [S] |  |
|  | Material Safety Data Sheets (MSDS) | 1.4.A.2 | W | | P | A | ENV |  |
| **05 2100** | **Steel Joist Framing** |  |  | |  |  |  |  |
|  | Product Data for each type of joist, accessory, and product | 1.5.A | X | | CD | A | [S], FE-CSA |  |
|  | Joist manufacturer’s calculations | 1.5.B | F, W | | CA | A | S |  |
|  | Joist drawings | 1.5.C | F, W | | SD | A | S, FE-CSA |  |
|  | Joist manufacturer’s certification | 1.5.D | F, W | | CT | A | S |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.5.E.1 | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.5.E.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.5.E.3 | W | | CT | A | W |  |
|  | Inspection procedures | 1.5.E.4 | W | | P | A | W |  |
|  | Show drawings | 1.5.E.5 | W | | SD | A | IBC-W |  |
|  | Qualification Data | 1.6.A | F, W | | CT | I | [S] |  |
|  | Mill Certificates: For each type of bolt | 1.6.B | X | | P | I | - |  |
|  | Field quality-control reports | 1.6.C | PI | | TR | I | - |  |
|  | Product Data | 1.7.A | B | | P | SD | - | SD |
|  | Laboratory Test Reports for Credit IEQ 4.2 | 1.7.B | B | | TR | SD | - | SD |
| **05 3000** | **Metal Decking** |  |  | |  |  |  |  |
|  | Product data: for each type of deck, accessory, and product indicated. | 1.4.A | X | | CD | A | [S], FE-CSA |  |
|  | Installation Drawings | 1.4.B | W | | D | A | S, FE-CSA |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.4.C.1 | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.4.C.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.4.C.3 | W | | CT | A | W |  |
|  | Inspection procedures | 1.4.C.4 | W | | P | A | W |  |
|  | Show drawings | 1.4.C.5 | W | | SD | A | IBC-W |  |
|  | Qualification Data | 1.5.A | W | | CT | I | - |  |
|  | Certified material test reports | 1.5.B | X | | CT | I | - |  |
|  | Product Test Reports | 1.5.C | X | | TR | I | - |  |
|  | Independent Evaluation Reports | 1.5.D | X | | P, TR | I | FE-CSA |  |
|  | Field quality-control reports | 1.5.E | WKLY | | OT | I | FE-CSA |  |
|  | Product Data | 1.6.A | W | | P | SD | - | SD |
|  | Laboratory Test Reports | 1.6.B | W | | P, TR | SD | - | SD |
| **05 4000** | **Cold-Formed Metal Framing** |  |  | |  |  |  |  |
|  | Installation Drawings­­ | 1.4.A | W | | D | A | [S] |  |
|  | Product Data / Test Reports for CFS members and connectors and mechanical fasteners. | 1.4.B | X | | CD, TR | A | [S] FE-CSA |  |
|  | Shop Drawings | 1.4.C | F, W | | SD | A | [S] FE-CSA |  |
|  | Component Assemblies pertaining to LFRS the following: | 1.4.D | W, X | | P, II, CD | A | S |  |
|  | WPS(s) and supporting PQR(s) | 1.4.D.1 | W | | P | A | W |  |
|  | Mechanical fastener installation procedures, and product data on hold-downs | 1.4.D.2 1.4.D.3 | X | | II, CD | A | S  FE-CSA |  |
|  | Other Than Component Assemblies pertaining to LFRS: mechanical fastener installation procedures, and product data on hold-downs. | 1.4.E.1  1.4.E.2 | W, X | | P, II, CD | A | S |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.4.E.3.a | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.4.E.3.b | W | | CT | A | W |  |
|  | Inspector qualification records | 1.4. E.3.c | W | | CT | A | W |  |
|  | Inspection procedures | 1.4. E.3.d | W | | P | A | W |  |
|  | Show drawings | 1.4. E.3.e | W | | SD | A | IBC-W |  |
|  | Qualifications/ Qualification Data | 1.5.F | F, W | | CT | I | - |  |
|  | Mill Certifications for steel sheet. | 1.5.B | X | | CT | I | - |  |
|  | Manufacturer's Certificate | 1.6.A | X | | CT | SD | - | SD |
|  | Product Cost Data | 1.6.B | Y | | P | SD | - | SD |
| **05 5000** | **Metal Fabrications** |  |  | |  |  |  |  |
|  | Product data for:   * 1. nonslip aggregates/aggregate surface finishes.   2. metal nosings and treads and p.   3. paint products | 1.5.A | X | | CD | A | [S] |  |
|  | Shop drawings | 1.5.B | F, W | | SD | A | [S], FE-CSA |  |
|  | Samples for verification: For each type and finish of extruded [nosing] [and] [tread]. | 1.5.C | U | | S | A | - |  |
|  | Delegated-Design: For [ladders] [and] [alternating tread devices] | 1.5.D | F, W | | CA | DD | [S] |  |
|  | Welding Procedures Specification (WPS(s) with the associated and Procedure Qualification Record (PQR(s). | 1.5.E.1 | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.5.E.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.5.E.3 | W | | CT | A | W |  |
|  | Inspection Procedures | 1.5.E.4 | W | | P | A | W |  |
|  | Shop drawings with weld details/symbols | 1.5.E.5 | W | | SD | A | IBC-W |  |
|  | Qualification Data for qualified professional engineer | 1.6.A | F | | P | I | - |  |
|  | Mill Certificates | 1.6.B | F | | P, CT | I | FE-CSA |  |
|  | Paint Compatibility Certificates | 1.6.C | W | | P, CT | I | - |  |
|  | Research/Evaluation Reports: For load-bearing proprietary products, | 1.6.D | X | | P, CT | I | - |  |
|  | Product Data: Indicating percentages by weight of postconsumer and pre-consumer recycled content for products having recycled content. | 1.7.A | W | | P | SD | - | SD |
|  | Manufacturer's certificate: Certify products meet or exceed specified sustainable design requirements | 1.7.B | X | | P, CT | SD | - | SD |
|  | Product cost data: Submit cost of products to verify compliance with Project sustainable design requirements. | 1.7.C | X | | P | SD | - | SD |
| **05 5213** | **Pipe and Tube Railing** |  |  | |  |  |  |  |
|  | 1. Product Datafor manufacturer’s product line of mechanically connected railings, railing brackets, anchoring cement and paint products | 1.5.A | X | | CD | A | [S], FE-CSA |  |
|  | Shop Drawings | 1.5.B | F, W | | SD | A | [S], FE-CSA |  |
|  | WPS(s) with the associated PQR(s). | 1.5.C.1 | W | | CT | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.5.C.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.5.C.3 | W | | CT | A | W |  |
|  | Inspection Procedures | 1.5.C.4 | W | | P | A | W |  |
|  | Shop drawings with weld details/symbols | 1.5.C.5 | W | | SD | A | IBC-W |  |
|  | Samples: For each type of exposed finish required | 1.5.E | F, X | | S, SC | A | - |  |
|  | Sustainable Design: Manufacturer’s Certificates | 1.6.A | X | | P, CT | SD | - | SD |
|  | Sustainable Design: Product Cost Data | 1.6.B | Y | | P | SD | - | SD |
|  | Paint Compatibility Certificates | 1.7.A | X | | CT | I | - |  |
|  | Research/Evaluation Reports: For load-bearing proprietary products. | 1.7.B | X | | P | I | FE-CSA |  |
| **05 5313** | **Bar Gratings** |  |  | |  |  |  |  |
|  | Product data for clips, anchorage devices and paint. | 1.4.A | X | | CD | A | [S], FE-CSA |  |
|  | Shop Drawings | 1.4.B | F, W | | SD | A | [S] |  |
|  | Delegated-Design Submittal: For gratings | 1.4.C | F, W | | CA | DD | [S] |  |
|  | Welding Procedure Specification (WPS) and supporting Procedure Qualification Record (PQR) | 1.4.D.1 | W | | CT | A | W |  |
|  | Welder Performance Qualification Records (WPQR) | 1.4.D.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.4.D.3 | W | | CT | A | W |  |
|  | Inspection Procedures | 1.4.D.4 | W | | P | A | W |  |
|  | Shop drawings with weld details/symbols | 1.4.D.5 | W | | SD | A | W |  |
|  | Mill Certificates | 1.5.A | W | | CT |  |  |  |
|  | Paint compatibility certificates. | 1.5.B | X | | CT | I | - |  |
|  | Product Data: Indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content. | 1.6.A | X | | P, CD | SD | - | SD |
|  | Materials resources certificates | 1.6.B.1 | X | | P, CT | SD | - | SD |
|  | Indoor air quality certificates | 1.6.B.2 | X | | P, CT | SD | - | SD |
|  |  |  |  | |  |  |  |  |
| **06 1000** | **Rough Carpentry** |  |  | |  |  |  |  |
|  | Product data | 1.3.A | X | | CD | A | FE-CSA |  |
|  | Fastener Patterns: full size templates for fasteners in exposed framing | 1.3.B | F | | SD | A |  |  |
|  | Material certificates for dimension lumber | 1.4.A | F | | CT | I |  |  |
|  | Evaluation Reports from ICC-ES | 1.4.B | F | | CT | I | FE-CSA |  |
|  | Chain-of-custody certificates | 1.5.A | F | | CT, RD | SD |  | SD |
|  | Product data for adhesives, documentation including printed statement of VOC content | 1.5.B | F | | RD | SD |  | SD |
|  | Product data for composite wood products, documentation indicating that product contains no urea formaldehyde | 1.5.C | F | | RD | SD |  | SD |
|  | Laboratory Test Reports | 1.5.D | F | | TR | SD |  | SD |
|  | Warranty Documentation: chemical treatment manufacturer’s standard warranty | 1.6.A | Z | | WA | C | - |  |
| **06 2000** | **Finish Carpentry** |  |  | |  |  |  |  |
|  | Shop drawings of architectural woodwork | 1.3.A.1 | F | | SD | A | [FE-CSA] |  |
|  | Catalog data for hardware and specialty items. | 1.3.A.2 | F | | CD | A | [FE-CSA] |  |
|  | Chain-of-custody certificates | 1.3.B.1 | F | | CT | SD | - | SD |
|  | Engineered Wood Products compliance documents | 1.3.B.2 | F | | P | SD | - | SD |
|  | Product Data for adhesives, documentation including printed statement of VOC content | 1.3.B.3 | F | | CD | SD | - | SD |
|  | Product data for recycled content | 1.3.B.4 | F | | CD | SD | - | SD |
|  | Product data for USDA BioPreferred Products | 1.3.B.5 | F | | CD | SD | - | SD |
|  | Laboratory Test Reports | 1.3.C | F | | TR | SD | - | SD |
| **06 4100** | **Architectural Wood Casework** |  |  | |  |  |  |  |
|  | Shop drawings of architectural woodwork | 1.3.A.1 | F | | SD | A | [FE-CSA] |  |
|  | Catalog data for hardware and specialty items. | 1.3.A.2 | F | | CD | A | [FE-CSA] |  |
|  | Chain-of-custody certificates i | 1.3.B.1 | FR | | CT | SD | - | SD |
|  | Engineered Wood Products compliance documents | 1.3.B.2 | F | | CT | SD | - | SD |
|  | Product Data for adhesives, documentation including printed statement of VOC content | 1.3.B.3 | F | | CD | SD | - | SD |
|  | Product data for recycled content | 1.3.B.4 | F | | CD | SD | - | SD |
|  | Product data for USDA BioPreferred Products | 1.3.B.5 | F | | CD | SD | - | SD |
|  | Laboratory Test Reports | 1.3.C | Z | | TR | SD | - | SD |
|  |  |  |  | |  |  |  |  |
| **07 0150.19** | **Preparation for Re-Roofing** |  |  | |  |  |  |  |
|  | Product Data: for each type of product indicated | 1.6.A.1 | X | | P, CD | A | [FE-CSA] |  |
|  | Temporary Roofing: Include Product Data and description of temporary roofing system. If temporary roof will remain in place, submit surface preparation requirements needed to receive permanent roof, and submit a letter from roofing membrane manufacturer stating acceptance of the temporary membrane and that its inclusion will not adversely affect the roofing system’s resistance to fire and wind [or its FM Global rating]. | 1.6.A.2 | X | | CD | A | - |  |
|  | Test and Evaluation Reports: Fastener pull-out test report. | 1.6.B | Z | | TR | A | [FE-CSA] |  |
|  | Field Quality Control: Landfill records: Records: Indicate receipt and acceptance of hazardous wastes, such as asbestos-containing material, by a landfill facility licensed to accept hazardous wastes. | 1.6.C | C | | RD | A | - |  |
|  | Special Procedure: Photographs and Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. LANL STR will obtain government approved camera and approved permission forms prior to taking of photographs or videotape. | 1.6.D.1 | W | | PH | A | - |  |
|  | Qualification Statements: For installer [including certificate that Installer is licensed to perform asbestos abatement] [and] [is approved by warrantor of existing roofing system]. | 1.6.E. | W | | CT | A | - |  |
| **07 0155** | **Roof Patching** |  |  | |  |  |  |  |
|  | Installation instructions | 1.2.A.1 | W | | P | A |  |  |
| **07 1113** | **Bituminous Dampproofing** |  |  | |  |  |  |  |
|  | Product data For each type of product indicated. Include recommendations for method of application, primer, number of coats, coverage or thickness, and protection course | 1.3.A.1 | X | | CD | A | [FE-CSA] |  |
|  | Material Certificates For each product, signed by manufacturers | 1.3.A.2 | S | | CT | A | - |  |
|  | Manufacturer’s installation instructions: Submit special procedures and perimeter conditions requiring special attention | 1.3.B.1 | W | | II | I | [FE-CSA] |  |
|  | Sustainable Design Submittals: Product Data For dampproofing, including printed statement of VOC content. | 1.3.C.1 | S | | CD | SD | - | SD |
| **07 1326** | **Self-Adhering Sheet Waterproofing** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A.1 | X | | CD | A | [A]  FE-CSA |  |
|  | Shop Drawings | 1.3.A.2 | F | | SD | A | - |  |
|  | Product Test Reports | 1.3.A.3 | S | | TR | A | FE-CSA |  |
|  | Manufacturer’s Installation Instructions | 1.3.A.4 | W | | II | A | - |  |
|  | Manufacturer’s Certificate | 1.3.A.5 | S | | CT | A | - |  |
|  | Special warranties | 1.3.A.6 | C | | WA | C | - |  |
|  | Sustainable Design Submittals: Manufacturer’s Certificate | 1.3.B.1 | X | | CT | SD | - | SD |
|  | Materials resources certificates | 1.3.B.1.a | X | | CT | A | - |  |
|  | Close Out Submittals – Warranty Documentation | 1.2.C.1 | C | | WA | C | - |  |
| **07 2100** | **Thermal Insulation** |  |  | |  |  |  |  |
|  | Product data | 1.3.A | X | | CD | A | [FE-CSA] |  |
|  | Manufacturer’s Certification | 1.3.B | S | | CT | A | - |  |
|  | Product Test Reports | 1.3.C | S | | TR | A | - |  |
|  | Research/Evaluation Reports | 1.3.D | S | | TR | A | - |  |
|  | Material Safety Data Sheets (MSDS): Submit MSDS for each adhesive product. | 1.3.E | S | | TR | A | - |  |
|  | SUSTAINABLE DESIGN  Product data indicating percentages by weight of postconsumer and pre-consumer recycled content for products having recycled content. | 1.4.A | S | | CD | SD | - | SD |
|  | Statement indicating costs for each product having recycled content. | 1.4.A.1 | X | | CT | SD | - | SD |
| **07 2400** | **Exterior Insulation and Finish Systems** |  |  | |  |  |  |  |
|  | Product data: Manufacturer’s technical data for each component of exterior insulation and finish system | 1.6.A | X | | CD | A | FE-CSA |  |
|  | Installation instructions: Manufacturer’s literature indicating installation specifications and procedures | 1.6.B | W | | II | A | FE-CSA |  |
|  | Shop drawings | 1.6.C | F | | SD | A | FE-CSA |  |
|  | Samples: 24-inch square panels for each type of finish-coat color and texture indicated, prepared using same tools and techniques intended for actual work including [custom trim, each profile,] [and] [an aesthetic reveal] | 1.6.D | Z | | S | A | - |  |
|  | Qualification Data: For [Installer] [fabricator/erector] | 1.7.A | W | | CT | I | - |  |
|  | Manufacturer Certificates: Signed by EIFS manufacturer certifying the following:   * + - 1. EIFS substrate is acceptable to EIFS manufacturer.   Accessory products installed with EIFS, including [joint sealants,] [flashing,] [water resistant barriers,] [trim,] <Insert accessory> whether or not furnished by EIFS manufacturer and whether or not specified in this section, are acceptable to EIFS manufacturer. | 1.7.B | F | | CT | I | - |  |
|  | Product Certificates: For cementitious materials and aggregates and for insulation | 1.7.C | F | | CT | I | - |  |
|  | Product Test Reports: For each EIFS assembly and component, for tests performed by a qualified testing agency | 1.7.D | F | | TR | I | - |  |
|  | Field quality-control reports [and special inspection reports] | 1.7.E | By LANL | | OT | I | [FE-CSA] |  |
|  | Evaluation Reports: For EIFS, including insulation [fasteners,] [flexible membrane flashing,] from ICC-ES | 1.7.F | F | | TR | I | FE-CSA |  |
|  | Sample Warranty: For manufacturer’s special warranty. | 1.7.G | F | | WA | I | - |  |
|  | Manufacturer’s Certificate: Certify products meet or exceed specified sustainable design requirements. | 1.8.A | F | | CT | SD | - | SD |
|  | Product Data: For solvent cements and adhesive primers, documentation including printed statement of VOC content | 1.8.B | F | | CD | SD | - | SD |
|  | Laboratory Test Reports: For solvent cements and adhesive primers, documentation indicating that products comply with testing and product requirements of 40 CFR 59, Subpart D (EPA Method 24), National Volatile Organic Chemical Emission Standards for Architectural Coatings | 1.8.C | F | | TR | SD | - | SD |
|  | Maintenance Data: Include maintenance data for EIFS in maintenance manuals | 1.9.A | B | | OM | C | - |  |
|  | Warranty: Executed copy of Manufacturer’s Special Warranty in accordance with Paragraph 1.15 | 1.9.B | B | | WA | C | - |  |
|  | Extra Materials: Furnish materials in accordance with Paragraph 1.16 | 1.9.C | B | | ML | C | - |  |
| **07 4113** | **Metal Roof Panels** |  |  | |  |  |  |  |
|  | Product data | 1.5.A | X | | CD | A | - |  |
|  | Shop drawings | 1.5.B | W | | SD | A | [FE-CSA] |  |
|  | Samples | 1.5.C | X | | S | A | - |  |
|  | Manufacturer’s Certificates: Signed by manufacturer certifying that roof panels comply with energy performance requirements specified in “Performance Requirements” Article. | 1.5.D | X | | CT | A | - |  |
|  | Evidence of meeting performance requirements. | 1.5.D.1 | F | | CT | A | - |  |
|  | Product Test Reports | 1.5.E | F | | TR | A | - |  |
|  | Field Quality Control Reports | 1.5.F | Z | | OT | A | - |  |
|  | sustainable design  Product Test Reports for roof panels, indicating that panels comply with solar reflectance index requirement. | 1.6.A | W | | TR | SD | - | SD |
|  | Product Data: indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content. | 1.6.B | W | | CD | SD | - | SD |
|  | Statement indicating costs for each product having recycled content. | 1.6.B.1 | W | | CT | SD | - | SD |
|  | Maintenance Data | 1.7.A | C | | OM | C | - |  |
|  | Warranty | 1.7.B | C | | WA | C | - |  |
| **07 5050** | **Membrane Roofing General Provisions** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | S,CD | A | - |  |
|  | Installation instructions | 1.3.A.3 | W | | II | A | - |  |
|  | Retrofit shop drawings | 1.3.A.4 | F | | D | A | - |  |
|  | Warranty | 1.3.A.5 | C | | WA | C | - |  |
|  | Water intrusion plan | 1.3.A.6 | Z | | OT | A | - |  |
|  | Qualifications | 1.3.A.7 | W | | CT | A | - |  |
| **07 5213.13** | **Atatic-Polypropylene Modified-Bitumen Roofing, Cold-Applied** |  |  | |  |  |  |  |
|  | Material List | 1.4.A | X | | ML | A | - |  |
|  | Product Data | 1.4.B | X | | CD | A | FE-CSA |  |
|  | Shop Drawings | 1.4.C | F | | SD | A | FE-CSA |  |
|  | Selection Samples | 1.4.D | X | | SC (2 for each) | A | - |  |
|  | Verification Samples | 1.4.E | W | | SC (2 for each) | A | - |  |
|  | Manufacturers Certificates | 1.4.F | S | | CT | A | - |  |
|  | Product Test Reports | 1.4.G | X | | TR | A | - |  |
|  | Research/Evaluation Reports | 1.4.H | X | | TR | A | FE-CSA |  |
|  | Manufacturer’s Instructions | 1.4.I | W | | II | A | FE-CSA |  |
|  | Qualification Data | 1.4.J | W | | CT | A | - |  |
|  | Product Test Reports for roof materials, indicating that roof materials comply with Solar Reflectance Index requirement | 1.5.A | S | | TR | SD | - | SD |
|  | Product Data for adhesives and sealants, including printed statement of VOC content | 1.5.B | S | | CD | SD | - | SD |
|  | Manufacturer’s documentation of Energy Star labeled roofing materials. | 1.5.C | S | | CD | SD | - | SD |
|  | Maintenance Data to include in maintenance manuals | 1.6.A | C | | OM | C | - |  |
|  | Copy of the membrane manufacturer’s warranty covering materials | 1.6.B.1 | C | | WA | C | - |  |
|  | Copy of the Roofing Subcontractor’s warranty covering workmanship | 1.6.B.2 | C | | WA | C | - |  |
| **07 5217** | **Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing Cold-Applied** |  |  | |  |  |  |  |
|  | Material List: List shall include all products and accessories to be incorporated into the finished roof system: Insulation, Cover boards, APP base and cap sheets, Adhesives, Flashing systems, Accessories (primers, cements, fabric, caulking) | 1.4.A | X | | ML | A | - |  |
|  | Product Data: Manufacturer’s data sheets on each product to be used, including: | 1.4.B | - | | - | - | FE-CSA |  |
|  | Preparation instructions and recommendations | 1.4.B.1 | W | | II | A | FE-CSA |  |
|  | Storage and handling requirements and recommendations | 1.4.B.2 | S | | OT | A | - |  |
|  | Specifications and general recommendations from manufacturers of modified bitumen roofing system materials to include the types of roofing required | 1.4.B.3 | X | | OT | A | - |  |
|  | Material safety data sheets for all roofing materials to be used | 1.4.B.4 | W | | OT | A | - |  |
|  | Shop Drawings | 1.4.C | F | | SD | A | FE-CSA |  |
|  | Roof system and base flashing configuration | 1.4.C.1 | F | | D | A | - |  |
|  | Penetration details | 1.4.C.2 | F | | D | A | - |  |
|  | Termination details | 1.4.C.3 | F | | D | A | - |  |
|  | Fastening Patterns | 1.4.C.4 | F | | D | A | - |  |
|  | Tapered insulation design | 1.4.C.5 | F | | D | A | - |  |
|  | Selection Samples | 1.4.D | X | | SC (2) | A | - |  |
|  | Verification Samples | 1.4.E | S | | SC (2) | A | - |  |
|  | Manufacturers Certificates | 1.4.F | X | | CT | A | - |  |
|  | Evidence of complying with requirements | 1.4.F.1 | S | | CT | A | - |  |
|  | Product Test Reports | 1.4.G | X | | TR | A | - |  |
|  | Research/Evaluation Reports | 1.4.H | X | | TR | A | - |  |
|  | Manufacturer’s Instructions | 1.4.I | W | | II | A | - |  |
|  | Qualification Data | 1.4.J | W | | CT | A | - |  |
|  | Sustainable Design: Product Test Reports for roof materials, indicating that roof materials comply with Solar Reflectance Index requirement | 1.5.A | S | | TR | SD | - | SD |
|  | Sustainable Design: Product data for adhesives and sealants, including printed statement of VOC content | 1.5.B | S | | CD | SD | - | SD |
|  | Sustainable Design: Submit Manufacturer’s documentation of Energy Star labeled roofing materials | 1.5.C | S | | CD | SD | - | SD |
|  | Maintenance data: for roofing system, to include in roofing manuals | 1.6.A | C | | OM | C | - |  |
|  | Membrane Manufacturer’s warranty covering materials | 1.6.B.1 | C | | WA | C | - |  |
|  | Roofing Subcontractors Warranty covering workmanship | 1.6.B.2 | C | | WA | C | - |  |
| **07 6200** | **Sheet Metal Flashing and Trim** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A | X | | CD | A | FE-CSA |  |
|  | Shop Drawings: Include details for forming, joining, supporting, and securing sheet metal flashing and trim, including pattern of seams, termination points, fixed points, expansion joints, expansion-joint covers, edge conditions, special conditions, and connections to adjoining work. | 1.3.B.1 | F | | SD | A | FE-CSA |  |
|  | Samples for Initial Selection Purposes: Submit manufacturer’s color charts and texture variations for specified sheet materials to be exposed as finished surfaces | 1.3.B.2 | X | | SC | A | - |  |
|  | Certificate of Fabricator qualifications | 1.4.A.1 | S | | CT | I | - |  |
|  | Certificate of Installer qualifications | 1.4.A.2 | W | | CT | I | - |  |
|  | Manufacturer’s Certificate: Certify products meet or exceed specified sustainable design requirements.] | 1.5.A | S | | CT | SD | - | SD |
|  | Sustainable Design: Material Resources Certificates:  Certify recycled material content for recycled content products | 1.5.B. | S | | CT | SD | - | SD |
|  | Maintenance Data: For sheet metal flashing, trim and accessories to include in maintenance manuals | 1.6.A | C | | OM | C | - |  |
|  | Sample of special warranty | 1.6.B | C | | WA | C | - |  |
| **07 7100** | **Roof Specialties** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A | X | | CD | A | - |  |
|  | Shop drawings for roof accessories | 1.3.B | F | | SD | A | - |  |
|  | Coordination Drawings: roof plans | 1.3.B.1 | F | | SD | A | - |  |
|  | Samples | 1.3.C | X | | S | A | - |  |
|  | Manufacturer’s Installation instructions | 1.3.D | W | | II | A | FE-CSA |  |
|  | Manufacturer’s Certificate | 1.4.A | S | | CT | SD | - | SD |
|  | Materials Resources Certificates:  1. certify recycled material content for recycled content products. | 1.4.B | S | | CT | SD | - | SD |
|  | Operation and Maintenance Data | 1.5.A | PC | | OM | C | - |  |
|  | Warranty | 1.5.B | C | | WA | C | - |  |
| **07 8400** | **Firestopping** |  |  | |  |  |  |  |
|  | Product data; Schedule,Evaluation for electrical boxes; Manufacturer’s Certificate; Engineering Judgements; Manufacture’s Installation Instructions | 1.4.A, B, C, D, E, F | X | | CD | A | - |  |
|  | Qualification Data | 1.5.A | W | | CT | I | FP |  |
|  | Product Test Reports/Testing Agency System Number(s) | 1.5.B |  | |  | I |  |  |
|  | Material Safety Data Sheets for each product supplied | 1.5.C | W | | ML | I | - |  |
|  | Materials Resources Certificates: | 1.6.A | W | | CT | SD | - | SD |
|  | Indoor Air Quality Certificates: | 1.6.B | W | | CT | SD | - | SD |
|  | Laboratory Test Reports | 1.6.C | C | | TR | SD | - | SD |
|  | Complete maintenance material and detailed instructions for repair/modifications for each product supplied | 1.7.A | C | | OM, SP | C | - |  |
|  | Installer Certificates | 1.7.B | C | | CT | C | FP |  |
|  | [Subcontractor Inspection Report] | 1.7.C | C | | OT | C | FP |  |
| **07 9200** | **Joint Sealants** |  |  | |  |  |  |  |
|  | Product data | 1.4.A | X | | P, CD | A | A |  |
|  | Joint Sealant Schedule to include: 1. Joint sealant application, joint location, and designation.  2. Joint sealant manufacturer and product name.  3. Joint sealant formulation.  4. Joint sealant color. | 1.4.B | X | | OT | A |  |  |
|  | Samples for initial selection. | 1.4.C | X | | S, SC | A | PE |  |
|  | Samples for verification | 1.4.D | W | | S, SC | A | PE |  |
|  | Manufacturer’s Certifications | 1.5.A | X | | CT | A |  |  |
|  | Material Safety Data Sheets (MSDS) | 1.5.B | W | | OT | A |  |  |
|  | Product test reports | 1.5.C | X | | TR | A |  |  |
|  | Manufacturer’s installation instructions | 1.5.D | W | | II | A | FE-CSA |  |
|  | Qualification data | 1.5.E | W | | CT | A |  |  |
|  | Product data | 1.6.A | X | | CD | SD |  | SD |
|  | Manufacturer’s certificate | 1.6.B | W | | CT | SD |  | SD |
|  | Volatile organic compound (VOC) compliance certifications | 1.6.C | W | | CT | SD |  | SD |
|  | Warranty | 1.7.A | C | | WA | C |  |  |
|  |  |  |  | |  |  |  |  |
| **08 1100** | **Metal Doors and Frames** |  |  | |  |  |  |  |
|  | Product Data: For each type of product. Include construction details, material descriptions, core descriptions, fire-resistance ratings, and finishes. | 1.5.A.1 | X | | CD | A | A |  |
|  | Shop drawings for fabrication and installation of steel door and frames. | 1.5.B | F | | SD | A | FE-CSA |  |
|  | Samples for Initial Selection: For hollow-metal doors and frames with factory-applied color finishes. | 1.5.C | X | | S, S/C | A | PE |  |
|  | Samples for Verification: finishes, construction | 1.5.D | W | | S, S/C | A | - |  |
|  | Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule. | 1.5.E | F | | ML | A | - |  |
|  | Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency. | 1.6.A | W | | TR | I | FE-CSA |  |
|  | Oversize Construction Certification: For assemblies required to be fire-rated and exceeding limitations of labeled assemblies. | 1.6.B | W | | CT | I | - |  |
| **08 1213** | **Hollow Metal Frames** |  |  | |  |  |  |  |
|  | Product Data: For each type of product. Include construction details, material descriptions, fire-resistance ratings, and finishes. | 1.5.A.1 | X | | CD | A | A |  |
|  | Shop drawings | 1.5.B | F | | SD | A | FE-CSA |  |
|  | Samples for Initial Selection: For hollow metal frames with factory-applied color finishes. | 1.5.C | X | | S, SC | A | PE |  |
|  | Samples for Verification: Finishes | 1.5.D.1 | W | | S, SC | A | PE |  |
|  | Samples for Verification: Fabrication | 1.5.D.2 | F | | S, SC | A | PE |  |
|  | Product Schedule: For hollow metal frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule. | 1.5.E | F | | ML | A | - |  |
|  | Product Test Reports: For each type of hollow metal frame assembly, for tests performed by a qualified testing agency. | 1.6.A | W | | TR | I | FE-CSA |  |
|  | Oversize Construction Certification: For assemblies required to be fire-rated and exceeding limitations of labeled assemblies. | 1.6.B | W | | CT | I | PE |  |
| **08 1400** | **Wood Doors** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | CD | A | A |  |
|  | Color and finish samples | 1.3.A.2 | X | | S,SC | A | A |  |
|  | Shop drawings | 1.3.A.3 | F | | SD | A | FE-CSA |  |
|  | Warranty | 1.3.A.4 | C | | WA | A | - |  |
|  | Chain-of-custody certificates indicating if products comply with forest certification requirements | 1.3.B.1 | W | | CT | SD | - | SD |
|  | Product Data for adhesives, documentation including printed statement of VOC content | 1.3.B.2 | W | | CD | SD | FE-CSA | SD |
|  | Product data for USDA BioPreferred Products | 1.3.B.3 | W | | CD | SD | FE-CSA | SD |
|  | Laboratory Test Reports | 1.3.B.4 | W | | TR | SD | FE-CSA | SD |
| **08 3323** | **Overhead Coiling Doors** |  |  | |  |  |  |  |
|  | Product Data for each type and size of overhead coiling door and accessory | 1.4.A | X | | CD | A | A |  |
|  | Shop drawings for each installation and for special components not dimensioned or detailed in manufacturer's product data | 1.4.B | F | | SD | A | FE-CSA |  |
|  | Samples for Initial Selection: Manufacturer's finish charts showing full range of colors and textures available for units with factory-applied finishes | 1.4.C | X | | S, SC | A | - |  |
|  | Samples for Verification: For each type of exposed finish on the following components, in manufacturer's standard sizes | 1.4.D | W | | S, SC | A | - |  |
|  | Qualification Data: For Installer. | 1.5.A | W | | CT | I | - |  |
|  | Oversize Construction Certification: For door assemblies required to be fire-rated and that exceed size limitations of labeled assemblies. | 1.5.B | X | | CT | I | - |  |
|  | Sample Warranty: For special warranty. | 1.5.C | X | | WA | I | - |  |
|  | Operation and maintenance data | 1.6.A | PC | | OM | C | - |  |
|  | Manufacturer’s standard labor and material warranty | 1.6.B. | C | | WA | C | - |  |
| **08 4113** | **Aluminum-Framed Entrances and Storefronts** |  |  | |  |  |  |  |
|  | Catalog data | 1.5.A.1 | X | | CD | A | A |  |
|  | Calculations or load tables | 1.5.A.2 | F | | CA | A | - |  |
|  | Shop drawings | 1.5.A.3 | F | | SD | A | FE-CSA |  |
|  | Samples | 1.5.A.4 | X | | (2)S | A | PE |  |
|  | Manufacturer’s standard warranty | 1.5.A.5 | C | | WA | A | - |  |
| **08 5113** | **Aluminum Windows** |  |  | |  |  |  |  |
|  | Catalog data | 1.5.A.1 | X | | P, CD | A | A |  |
|  | Product data indicating window performance metrics including U-Factor, Solar Heat Gain Coefficient (SHGC), and Air Leakage | 1.5.A.2 | X | | P, CD | A | - |  |
|  | Shop drawings | 1.5.A.3 | F | | SD | A | FE-CSA |  |
|  | Warranty | 1.5.A.4 | C | | WA | A | - |  |
|  | Product data indicating recycled content of aluminum | 1.5.B.1 | X | | CD | SD | - | SD |
| **08 7100** | **Door Hardware** |  |  | |  |  |  |  |
|  | Catalog data | 1.5.A | X | | CD | A | [A] FE-CSA |  |
|  | Materials list of final hardware schedule | 1.5.B | X | | ML | A | - |  |
|  | Final Hardware schedule | 1.5.C | S | | ML | A | - |  |
|  | 5 year warranty on materials and installation workmanship | 1.6.A | C | | WA | C | - |  |
|  | Manufacturer’s standard materials and workmanship. Warranty for electromechanical door operators | 1.6.B | C | | WA | C | - |  |
|  | Complete set of specialized tools and maintenance instructions | 1.6.C | C | | OM | C | - |  |
| **08 8000** | **Glazing** |  |  | |  |  |  |  |
|  | Catalog data on glass types | 1.4.A.1 | X | | CD | A | [A] FE-CSA |  |
|  | Catalog data on glazing compounds | 1.4.A.2 | X | | CD | A | [A] FE-CSA |  |
|  | Product data on glazing performance | 1.4.A.3 | X | | CDP | I | - |  |
|  | Manufacturer’s certifications that glazing meets or exceeds requirements. | 1.3.A.4 | S | | CT | A | - |  |
|  | Glazing compound manufacturer’s installation instructions | 1.4.A.5 | W | | II | A | - |  |
|  | Samples | 1.4.A.6 | X | | S | A | PE |  |
|  | Three-inch-long beads of glazing sealant for color selection | 1.4.A.7 | X | | SC | A | - |  |
|  | Manufacturer’s standard labor and material replacement warranty | 1.4.A.8 | C | | WA | A | - |  |
|  | LEED Credit: Product data for credit | 1.5.A | X | | CD | SD | - | SD |
|  |  |  |  | |  |  |  |  |
| **09 2116** | **Gypsum Board Systems** |  |  | |  |  |  |  |
|  | Catalog data on metal framing, gypsum board, joint tape, joint compound and texturing materials | 1.3.A.1 | X | | CD | A | A |  |
|  | Gypsum manufacturer’s documentation of recycled content for gypsum board | 1.3.A.2 | X | | CD | A | - |  |
|  | Gypsum manufacturer’s documentation of buyback and/or recycling program | 1.3.A.3 | X | | CT | A | - |  |
|  | Manufacturer’s written certification that all materials are free of asbestos | 1.3.A.4 | S | | CT | A | - |  |
|  | Manufacturer’s installation instructions | 1.3.A.5 | W | | II | A | FE-CSA |  |
|  | Twelve inch square sample of gypsum board with texture finish | 1.3.A.6 | W | | S | A | PE |  |
| **09 5100** | **Acoustical Ceilings** |  |  | |  |  |  |  |
|  | [Product Data] | 1.5.A | X | | CD | A | - |  |
|  | Shop Drawings | 1.5.B | F | | SD | A | - |  |
|  | [Samples: Submit two [\_\_\_\_x\_\_\_] inch in size of ceiling grid and panel, illustrating finishes and color.] | 1.5.C | S | | S | A | - |  |
|  | Manufacturer’s installation instructions | 1.5.D | W | | II | A | - |  |
|  | Delegated-Design Submittal: For seismic restraints for ceiling systems | 1.5.E | Z, W | | CA | A, DD | - |  |
|  | Independent Evaluation Reports: For each acoustical panel ceiling suspension system [and fastener type], from ICC-ES or similar | 1.5.F | X | | TR | A | - |  |
|  | Field quality-control reports | 1.5.G | C | | OT | A | - |  |
|  | Manufacturer’s Certificate: Certify products meet or exceed specified sustainable design requirements. | 1.6.A | X | | CT | SD | - | SD |
|  | Materials Resources Certificates:  1. Certify source and origin for [salvaged] [and] [reused] products. 2. Certify recycled material content for recycled content products.  3. Certify source for local and regional materials and distance from Project site. | 1.6.A.1 | X | | CT | SD | - | SD |
|  | Indoor Air Quality Certificates: certify volatile organic compound content for each interior sealant and related primer. | 1.6.A.2 | X | | CT | SD | - | SD |
|  | Operation and maintenance data | 1.7.A | C | | O M | C | - |  |
|  | Warranty documentation | 1.7.B | C | | WA | C | - |  |
|  | Project records documentation | 1.7.C | C | | RD | C | - |  |
|  | Furnish [\_\_\_\_\_\_\_\_] sq ft of extra [tile] [panels] [metal pans] to the LANL Subcontract Technical Representative (STR), or | 1.8.A | C | | SP | A | - |  |
|  | Furnish [\_\_\_\_\_\_\_\_] percent of total acoustic unit area of extra [tile] [panels] [metal pans] to the LANL Subcontract Technical Representative (STR). | 1.8.B | C | | SP | A | - |  |
| **09 6500** | **Resilient Flooring** |  |  | |  |  |  |  |
|  | Product data | 1.3.A | X | | CD | A | - |  |
|  | Samples | 1.3.B | S | | S/SC | A | - |  |
|  | Manufacturer’s installation instructions. | 1.3.C | W | | II | A | - |  |
|  | Sustainable Design: certification that percentage of recovered materials will be at least equal to amount specified in Part 2 for applicable material | 1.4.A | X | | CT | SD | - | SD |
|  | Sustainable Design: Indoor air quality certificates | 1.4.B | X | | CT | SD | - | SD |
|  | Closeout Submittals: Provide manufacturer’s cleaning and maintenance information | 1.5.A | C | | OM | C | - |  |
|  | Maintenance Material: At least 5% of calculated area of flooring materials of each type specified | 1.5.B | C | | OM | C | - |  |
| **09 8613** | **Sheet Carpeting** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | CD | A | - |  |
|  | Manufacturer’s certificate | 1.3.A.2 | S | | CT | A | - |  |
|  | Manufacturer’s installation instructions | 1.3.A.3 | W | | II | A | - |  |
|  | Four carpet tiles | 1.3.A.4 | X | | S | A | - |  |
|  | Shop drawings | 1.3.A.5 | F | | SD | A | - |  |
|  | Maintenance data | 1.3.A.6 | C | | OM | A | - |  |
|  | Submit manufacturer’s documentation of recycled content for each product | 1.3.B.1 | X | | CD | SD | - | SD |
|  | Submit documentation of manufacturer’s buyback, and/or recycling program | 1.3.B.2 | X | | CD | SD | - | SD |
|  | Submit manufacturer’s documentation that carpet cushion and adhesives meet the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) Testing Programs (Green Label) or comply with the following total volatile organic compounds (VOC) emissions criteria | 1.3.B.3 | S | | CD | SD | - | SD |
|  | Maintenance Instructions | 1.3.C.1 | C | | OM | C | - |  |
|  | Provide [5 percent] of required quantity of carpet tiles of each color selected in their original containers | 1.3.C.2 | C | | SP | C | - |  |
|  | Project written warranty for all labor and materials, signed by Subcontractor, Installer | 1.3.C.3 | C | | WA | C | - |  |
| **09 6816** | **Sheet Carpeting** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | CD | A | - |  |
|  | Manufacturer's certificate: products meet or exceed specified requirements and tests. | 1.3.A.2 | S | | CT | A | - |  |
|  | Manufacturer’s certificate; materials are asbestos-free and lead paint-free. | 1.3.A.3 | S | | CT | A | - |  |
|  | Four 12 by 12 inch samples carpet samples of proposed color and pattern | 1.3.A.4 | X | | (4)S | A | - |  |
|  | Shop drawings including seaming plan, method of joining seams, direction of carpet | 1.3.A.5 | F | | SD | A | - |  |
|  | Manufacturer’s documentation of recycled content for each product | 1.3.B.1 | X | | CD | SD | - | SDS |
|  | Documentation of manufacturer’s buyback, and/or recycling program | 1.3.B.2 |  | | CD | SD | - | SD |
|  | Manufacturer’s documentation that adhesives, seam sealers, carpet and cushion meet the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) Testing Programs (Green Label) or comply with the following total volatile organic compounds (VOC) emissions criteria | 1.3.B.3 | S | | CD | SD | - | SD |
|  | Maintenance procedures | 1.3.C.1 | C | | OM | C | - |  |
|  | Provide overrun of 5 percent of carpeting calculated amount (other than scrap pieces) of each color and type specified, over and above amount needed for proper installation and unavoidable waste | 1.3.C.2 | C | | SP | C | - |  |
|  | Project warranty for all labor and materials, signed by Subcontractor, Installer and Manufacturer | 1.3.C.3 | C | | WA | C | - |  |
| **09 6900** | **Access Flooring** |  |  | |  |  |  |  |
|  | Product Data: Unless providing exactly as specified, submit data for grid system, panels, and accessories; electrical resistance characteristics and ground connection requirements | 1.5.A | X | | CD | A | - |  |
|  | Shop Drawings | 1.5.B | F | | SD | A | - |  |
|  | Samples: Submit two [\_\_\_\_x\_\_\_\_] inch in size of floor grid and panel, illustrating finishes and color.] | 1.5.C | X | | (2) S/SC | A | - |  |
|  | Manufacturer's Certificate: Certify products meet or exceed specified requirements. | 1.5.D | S | | CT | A | - |  |
|  | [Delegated Design Submittals: Seismic design calculations, bearing the seal of a licensed New Mexico Professional Engineer, demonstrating that the proposed floor systems meets requirements for seismic performance.] | 1.5.E | F | | SD | DD | - |  |
|  | Manufacturer's Installation Instructions: Submit special procedures, perimeter conditions requiring special attention, and [\_\_\_\_\_\_\_\_] | 1.5.F | W | | II | A | - |  |
|  | Field quality-control reports | 1.5.G | Z | | OT | A | - |  |
|  | Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements | 1.6.A | X | | CT | SD | - | SD |
|  | Materials Resources Certificates | 1.6.A.1 | X | | CT | SD | - | SD |
|  | Certify source and origin for [salvaged] [and] [reused] products | 1.6.A.1.a | X | | CT | SD | - | SD |
|  | Certify recycled material content for recycled content products. | 1.6.A.1.b | X | | CT | SD | - | SD |
|  | Certify source for local and regional materials and distance from Project site. | 1.6.A.1.c | X | | CT | SD | - | SD |
|  | Indoor Air Quality Certificates: Certify volatile organic compound content for each interior [adhesive] [and] [sealant] and related primer. | 1.6.A.2 | X | | CT | SD | - | SD |
|  | Operation and Maintenance Data | 1.7.A | C | | O M | C | - |  |
|  | Warranty Documentation | 1.7.B | C | | WA | C | - |  |
|  | Project Records Documentation | 1.7.C | C | | RD | C | - |  |
|  | Extra Stock Materials | 1.7.D | C | | SP | C | - |  |
| **09 9100** | **Painting** |  |  | |  |  |  |  |
|  | Catalog data manufacturer's catalog data, label analysis, volatile organic compound (VOC) content, and application instructions for each material proposed for use | 1.3.A.1 | X | | CD | A | - |  |
|  | Qualification Data | 1.3.A.2 | W | | CT | A | - |  |
|  | Samples | 1.3.A.3 | X | | SC | A | - |  |
|  | Sustainable Design: Certificate of compliance for specified post-consumer content | 1.3.B.1 | X | | CT | SD | - | SD |
|  | Sustainable Design: product data indicating compliance with USDA bio-based content standards | 1.3.B.2 | X | | CD | SD | - | SD |
|  | Sustainable Design: List the VOC content of each product | 1.3.B.3 | X | | CD | SD | - | SD |
|  | Maintenance Material: Extra Stock Material: Provide 1 extra gallon of each type, color, and surface texture to LANL. Label each container with color texture, room locations, in addition to the manufacturer’s label. | 1.3.C.1 | C | | SP | C | - |  |
|  |  |  |  | |  |  | - |  |
| **10 1405** | **Signage, Exterior** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A | X | | CD | A | - |  |
|  | Shop drawings | 1.3.B | F | | SD | A | - |  |
|  | Manufacture’s installation instructions | 1.3.C | W | | IIP |  | - |  |
|  | Samples | 1.3.D | X | | S/SC | A | - |  |
|  | Manufacturer’s recommended care and cleaning methods including precautions against harmful cleaning materials and methods | 1.4.A | C | | OM | C | - |  |
|  | Manufacturer’s warranty documents | 1.4.B | C | | WA | C | - |  |
| **10 1410** | **Interior Signage** |  |  | |  |  |  |  |
|  | Shop drawings | 1.3.A | F | | SD | A | - |  |
|  | Samples | 1.3.B | X | | S/SC | A | - |  |
|  | Schedule of Signs | 1.3.C | F | | ML | A | - |  |
|  | Manufacturer’s recommended maintenance methods | 1.4.A | C | | OM | C | - |  |
|  | Manufacturer’s warranty documentation | 1.4.B | C | | WA | C | - |  |
|  | Template file to end-user as described in 2.2.E.2 | 1.4.C | C | | OT | C |  |  |
|  | Six (6) suction cup tools for changing inserts in the aluminum frame | 1.4.D | C | | OM | C | - |  |
| **10 2113.13** | **Metal Toilet Compartments** |  |  | |  |  |  |  |
|  | Product data | 1.4.A | X | | CD | A | - |  |
|  | [Shop drawings] | 1.4.B | F | | SD | A | - |  |
|  | [Samples for Initial selection: For each type of toilet compartment material indicated. Include Samples of hardware and accessories involving material and color selection] | 1.4.C | X | | S | A | - |  |
|  | [Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated: 1. Each type of material, color, and finish required for toilet compartments, prepared on 6-inch square Samples of same thickness and material indicated for Work. 2. Each type of hardware and accessory] | 1.4.D | S | | S | A | - |  |
|  | [Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material] | 1.4.E | X | | ML | A | - |  |
|  | Product Certificates: For each type of toilet compartment | 1.5.A | X | | CT | I | - |  |
|  | [Maintenance Data: For toilet compartments to include in maintenance manuals] | 1.6.A | C | | OM | C | - |  |
|  | [Maintenance Materials: Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents] | 1.6.B.1 | C | | SP | C | - |  |
|  | [Maintenance Materials: Door Hinges: One hinge with associated fasteners] | 1.6.B.2 | C | | SP | C | - |  |
|  | [Maintenance Materials: Latch and Keeper: One latch and keeper with associated fasteners] | 1.6.B.3 | C | | SP | C | - |  |
|  | [Maintenance Materials: Door Bumper: One door bumper with associated fasteners] | 1.6.B.4 | C | | SP | C | - |  |
|  | [Maintenance Materials: Door Pull: One door pull with associated fasteners] | 1.6.B.5 | C | | SP | C | - |  |
|  | [Maintenance Materials: Fasteners: 10 fasteners of each size and type] | 1.6.B.6 | C | | SP | C | - |  |
| **10 2800** | **Toilet & Bath Accessories** |  |  | |  |  |  |  |
|  | Product Data  1. | 1.5.A | X | | CD | A | - |  |
|  | [Samples: full size, for each accessory item to verify design, operation, and finish requirements. | 1.5.B | X | | S | A | - |  |
|  | Product Schedule | 1.5.C | S | | ML | A | - |  |
|  | Manufacturer’s Certificate | 1.6.A | X | | CT | SD | - | SD |
|  | Materials Resources certificates. | 1.6.A.1 | X | | CT | SD | - | SD |
|  | Indoor Air Quality Certificates. | 1.6.A.2 | X | | CT | SD | - | SD |
|  | Warranty: Sample of special warranty | 1.7.A | C | | WA | I | - |  |
|  | Maintenance data: for toilet and bath accessories to include in maintenance manuals. | 1.8.A | C | | OM | C | - |  |
| **10 4400** | **Fire Protection Specialties** |  |  | |  |  |  |  |
|  | Catalog data | 1.2.A.1 | X | | CD | A | [FP] |  |
|  | [Shop drawings] | 1.2.A.2 | F | | SD | A | [FP] |  |
|  |  |  |  | |  |  | - |  |
| **11 5311.08** | **Glovebox Design** |  |  | |  |  |  |  |
|  | Submittals listed in Att.4 and in accordance w the requirements of Exh I – Lower Tier Services Plan | 1.7.B | Z | | P | A | PE |  |
| **11 5311.10** | **Glovebox Fabrication** |  |  | |  |  |  |  |
|  | Submittals listed in Att.2 | 1.7 & 1.8 | Z | | P | A | - |  |
| **11 5311.12** | **Glovebox Installation** |  |  | |  |  |  |  |
|  | Submittals in accordance with the requirements of Exh I | 1.6.B | Z | | P | A | - |  |
|  | Certified Material Test Report or Certificates of Conformance. | 1.6.C | W | | P, CT,TR | A | - |  |
|  | Submittals detailed elsewhere in spec section | 1.6.D | W | | P | A | - |  |
|  | QA Manual | 1.7.A | W | | P | A | - |  |
|  | Per the supplier QA Manual: |  |  | |  |  | - |  |
|  | Fabrication and Quality Control (QC) Procedures | 1.7.B.1 | F | | P | A | - |  |
|  | Personnel Certifications. | 1.7.B.2 | F | | P | A |  |  |
|  | Test Reports. | 1.7.B.3 | F | | P, TR | A |  |  |
|  | Material Certifications. | 1.7.B.4 | F | | P, CT | A | - |  |
|  | As-Built Drawings. | 1.7.B.5 | Z | | D | A | - |  |
|  | QA Document Package. | 1.7.B.6 | w/shipment | | (3)P | A | - |  |
|  | Weld Map. | 1.7.B.7 | w/shipment | | D | A | - |  |
| **11 5311.14** | **Glovebox Gloves** |  |  | |  |  |  |  |
|  | Description of Quality Assurance program and procedures to LANL | 1.5.B.1 | SANN | | P | A | - |  |
|  | Certificate of Conformance. | 1.5.C.1 | w/shipment | | P | A | - |  |
|  | Lot test results | 1.5.D.1 | w/shipment | | P | A | - |  |
|  | Material continuity | 1.5.D.1.a | F | | ML | A | - |  |
|  | Visual inspection | 1.5.D.1.b | w/shipment | | OT | A | - |  |
|  | Air tightness | 1.5.D.1.c | w/shipment | | OT | A | - |  |
|  | Resistance to nitric acid | 1.5.D.1.d | F | | OT | A | - |  |
|  | Aging tests | 1.5.D.1.e | F | | OT | A | - |  |
|  | Results of mechanical properties testing | 1.5.D.1.f | F | | OT | A | - |  |
|  | Lead equivalency measurement | 1.5.D.1.g | ANN | | OT | A | - |  |
|  | Certification to applicable portions of the ASTM standards D120, F1236, F640 | 1.5.D.2 | F | | CT, P | A | - |  |
|  | 5 pairs of gloves and prototype test results per Section 2.5.A.3. | 1.5.E.1 | w/shipment | | (5)P, S | A | - |  |
|  | Verify compliance with all of the inspection. | 1.5.E.2 | U | | OT | A | - |  |
|  | Verify that the manufacturer has ensured that the shipment of gloves. | 1.5.E.3 | U | | OT | A | - |  |
|  | Maintain records of inspections. | 1.5.F.1 | Z | | OT | A | - |  |
| **11 5311.16** | **Glovebox Feedthroughs, Hermetically Sealed** |  |  | |  |  |  |  |
|  | Product data | 1.5.B | X | | P | A | - |  |
|  | Design Data | 1.5.C.1.a | F | | P | A | - |  |
|  | Material certifications | 1.5.C.2.a | Z | | P, CT | A | - |  |
|  | Certified Material Test Reports (CMTR’s) | 1.5.C.2.b | Z | | P, TR | A | - |  |
|  | Documentation for potting material. | 1.5.C.2.c | Z | | P | A | - |  |
|  | Quality Assurance/Quality Control: Test Reports | 1.5.C.3 | Z | | OT, TR | A | - |  |
|  | Documentation. | 1.5.C.3.a | Z | | P | A | - |  |
|  | Test reports/data sheets | 1.5.C.3.b | Z | | P, TR | A | - |  |
|  | Manufacturer’s Instructions | 1.5.C.4.a | Z | | P, II | A | - |  |
|  | Qualification Statements | 1.5.C.5 | Z | | P | A | - |  |
| **11 5311.17** | **Glovebox Instrumentation** |  |  | |  |  |  |  |
|  | Provide documentation of ISO 9001 certification | 1.6.A.1 | N | | CT | A | - |  |
|  | Provide a copy of QA plan identifying procurement, design, fabrication, test and inspection, material traceability and non-conformity controls for approval by LANL prior to subcontract award | 1.6.A.2 | N | | RD, P | A | - |  |
|  | Catalog data and certificates of conformance (COC) for all instrumentation. | 1.6.A.3 | Z | | CD | A | - |  |
|  | Provide CMTRs (alloy designations) for all process-wetted surfaces, consisting of legible copies of mill test reports indicating chemical analysis, physical test data, and heat number. COCs may be provided in lieu of CMTRs with prior LANL approval. | 1.6.A.4 | F | | P, TR | A | - |  |
|  | Calibration certification traceable to NIST standards for all instrumentation | 1.6.A.5 | Z | | CT | A | - |  |
|  | Detailed installation instructions for the model of instrument supplied. | 1.6.A.6 | Z | | II | A | - |  |
|  | Functional test procedures and reports for all instrumentation. | 1.6.A.7 | Z | | TR | A | - |  |
|  | Manufacturer’s operation and maintenance instructions for the model of instrument supplied. | 1.6.A.8 | Z | | O, M | C | - |  |
|  | Helium leak test report for all instruments located outside the glovebox boundary and interfacing with the glovebox atmosphere. Provide test reports with signatures by personnel who either performed or witnessed the helium leak test and who hold either Level II or Level III certification in accordance with ASNT SNT-TC-1A. | 1.6.A.9 | Z | | TR | A | - |  |
|  | Operating procedures, maintenance procedures, service schedules, recommended spare parts, and warranties. | 1.6.A.10 | Z | | O, M, OT, SP, WA | C | - |  |
|  | Manufacturer’s assembly drawings, wiring diagrams, and electrical schematics. | 1.6.A.11 | Z | | D, ED | A | - |  |
| **11 5311.18** | **Glovebox Atmosphere Regenerable Purification Systems** |  |  | |  |  |  |  |
|  | ISO 9001 certification in accordance with Section 1.6 | 1.5.A.1 | Z | | OT, CT | A | - |  |
|  | Uncontrolled copy of the supplier’s QA plan. | 1.5.A.2 | Z | | P | A | - |  |
|  | Helium leak test | 1.5.A.3 | Z | | OT, TR | A | - |  |
|  | Helium leak test procedure per ASTM E498 | 1.5.A.4 | F | | OT | A | - |  |
|  | Test reports with signatures by personnel | 1.5.A.5 | Z | | O, TR | A | - |  |
|  | NDE certifications for test personnel for approval, prior to testing | 1.5.A.6 | W | | CT | A | - |  |
|  | CMTRs (alloy designations) | 1.5.A.7 | F | | P | A | - |  |
|  | Calibration data | 1.5.A.8 | W | | P | A | - |  |
|  | Circuit wiring diagrams and electrical schematics | 1.5.A.9 | Z | | D | A | - |  |
|  | Supplier's installation instructions | 1.5.A.10 | Z | | II, P | A | - |  |
|  | Functional test procedure | 1.5.A.11 | W | | P | A | - |  |
|  | Catalog data | 1.5.A.12 | X | | CD, P | A | - |  |
|  | Performance Data/Curves | 1.5.A.13 | Z | | PD | A | - |  |
|  | Documentation of cleaning techniques | 1.5.A.14 | Z | | P | A | - |  |
|  | Drawings | 1.5.A.15 | Z | | (3)D | A | - |  |
|  | Operation and maintenance instructions | 1.5.A.16 | S | | (2) P | C | - |  |
| **11 5311.19** | **Chemical Resistant Coatings for Gloveboxes** |  |  | |  |  |  |  |
|  | Product Data: Manufacturer’s technical data for specified coating. | 1.5.A | W | | P | A | - |  |
|  | Installation Instructions: Manufacturer's literature indicating installation Sections and procedures for specified coating | 1.5.B | W | | II, P | A | - |  |
|  | Procedures: As listed under Para 1.9 Quality Assurance and Quality Control. | 1.5.C | W | | P | A | - |  |
|  | Material Certifications: As listed under paragraph 1.9 Quality Assurance and Quality Control. | 1.5.D | W | | CT, P | A | - |  |
|  | Samples: Three sample coupons that have been coated per this Section. The coupons must be 6" x 6" and constructed of 7 gauge 304L stainless steel. One side of the coupon must be coated with specified coating and the other side masked or polished to match original finish | 1.5.E | W | | S | A | - |  |
|  | Informational Submittals |  |  | |  |  | - |  |
|  | As listed under paragraph 1.9 Quality Assurance and Quality Control:   * Personnel certifications * Test reports * Inspection reports * Dimensional inspection reports * Supplier certifications | 1.6.A | W | | CT, TR | I | - |  |
|  | Certificate of Conformance: A certificate of conformance must be provided and signed by the Subcontractor. This certificate must state that the glovebox coatings have been applied and tested in accordance with this Section and, if applicable, the Subcontract documents and that the final product fully complies with all technical requirements of the Subcontract. | 1.6.B | W | | CT | I | - |  |
|  | Sustainable design submittals |  |  | |  |  | - |  |
|  | Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements. | 1.7.A | W | | CT | SD | - | SD |
|  | Product Data: For coating and primer, documentation including printed statement of VOC content. | 1.7.B | W | | P | SD | - | SD |
|  | Laboratory Test Reports: For coating and primer, documentation indicating that products comply with testing and product requirements of 40 CFR 59, Subpart D (EPA Method 24) National Volatile Organic Chemical Emission Standards for Architectural Coatings, if met. | 1.7.C | W | | TR | SD | - | SD |
|  | Closeout Submittals |  |  | |  |  | - |  |
|  | Shop Traveler: Completed document as listed under paragraph 1.9 Quality Assurance and Quality Control. | 1.8.A | S | | OT | C | - |  |
|  | Quality Assurance Document Package: As listed under paragraph 1.9 Quality Assurance and Quality Control. | 1.8.B | S | | RD | C | - |  |
|  |  |  |  | |  |  | - |  |
| **12 3100** | **Manufactured Metal Casework** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A | - |  |
|  | Manufacturer’s installation instructions | 1.3.A.4 | W | | P, II | A | - |  |
|  | Samples | 1.3.A.3 | X | | P,SC | A | - |  |
|  | Shop drawings | 1.3.A.2 | F | | D | A | - |  |
|  | Sustainable Design:  Manufacturer’s Certificates | 1.3.B.1 | X | | P, CT | SD | - | SD |
|  | Sustainable Design:  Materials Resources Certificates | 1.3.B.1.a | X | | P, CT | SD | - | SD |
|  | Sustainable Design:  Indoor Air Quality Certificates | 1.3.B.1.b | X | | P, CT | SD | - | SD |
|  | Sustainable Design:  Product Cost Data | 1.3.B.2 | Y | | P | SD | - | SD |
|  | Operations and Maintenance Data | 1.3.C.1 | C | | OM | C | - |  |
|  | Manufacturer’s Warranty Documentation | 1.3.C.2 | C | | P, WA | C | - |  |
|  |  |  |  | |  |  | - |  |
| **13 3419** | **Metal Building Systems** |  |  | |  |  |  |  |
|  | Product Data:  for each type of building component. | 1.7.A | X | | P | A | - |  |
|  | Metal roof and wall panels, and foarmed-insulation-core metal panels. | 1.7.A.1 a-c | X | | CD, D, OT | A | [S] |  |
|  | Metal soffit panels, translucent roof panels, roof ventilators, and louvers. | 1.7.A.1 d-g | X | | CD, D, OT | A | - |  |
|  | Shop/Erection Drawings | 1.7.B | X | | P, D | A | - |  |
|  | Anchor-Rod Plans and Structural Framing Drawings | 1.7.B.1, 1.7.B.2 | F, W | | SD, D | A | [S] |  |
|  | Metal [Roof] [and] [Wall] Panel Layout Drawings | 1.7.B.3 | F, W | | SD, D | A | [S] |  |
|  | Accessory Drawings | 1.7.B.4 | F, W | | SD, D | A | - |  |
|  | Samples for Initial Selection | 1.7.C.1 | X, F, S | | S, SC | A | - |  |
|  | Samples for verification | 1.7.C.2 | F, S | | S, SC | A | - |  |
|  | Manufacture’s Letter of Design Certification | 1.7.D.1 | F | | CT | DD | [S] |  |
|  | Manufacture’s structural-design calculations for the building . | 1.7.D.2 | F | | CA | DD | [S] |  |
|  | Anchor rod placement plan, column reactions [and] [\_\_\_\_\_\_] | 1.7.D.3 | W | | D, OT | DD | [S] |  |
|  | Qualification Data: for [erector] [manufacturer] [land surveyor]. | 1.8.A | F, W | | CT | I | [S] |  |
|  | Manufacture’s Erector Certificates: For qualified erector, | 1.8.B | W | | CT | I | [S] |  |
|  | [Subcontractor’s Material Test Reports] | 1.8.C | X | | TR | I | [S] |  |
|  | [Source quality-control reports] | 1.8.D | X | | OT | I | [S] |  |
|  | [Manufacturer’s Installation Instructions | 1.8.E | W | | II | I | [S] |  |
|  | [Installed Building Surveys] | 1.8.F | PI | | OT, CT | I | [S] |  |
|  | [Sample Warranties: For special warranties.] | 1.8.G | W | | WA | I | - |  |
|  | [Manufacturer’s Certificate: Certify products meet or exceed specified sustainable design requirements] | 1.9.A | C | | CT | SD | - | SD |
|  | [Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products] | 1.9.B | Y | | P | SD | - | SD |
|  | [Maintenance Data: for metal panel finishes | 1.10.A | PIC | | OM | C | - |  |
|  | [Warranties: Normal and special warranties.] | 1.10.B | PIC | | WA | C | - |  |
|  | [Section 01 7839 *Project Record Documents*: Record actual locations of concealed components and utilities.] | 1.10.C | PIC | | RD | C | - |  |
| - | - | - | - | | - | - | - |  |
|  |  |  |  | |  |  |  |  |
| **21 1313** | **Wet-Pipe Sprinkler Systems** |  |  | |  |  |  |  |
|  | Hydraulic Calculations; seismic design documents; catalog data; installation instructions; shop drawings. | 1.4.A 1.4.B  1.4.C  1.4.E  1.4.F | W | | P, D | A | FP |  |
|  | Welding Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) (Note: Required per current year NFPA 13) | 1.4.D.1 | W | | CT | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.4.D.2 | W | | CT | A | W |  |
|  | Inspector qualification records; | 1.4.D.3 | W | | CT | A | W |  |
|  | Inspection procedure | 1.4.D.4 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s). | 1.4.D.5 | W | | SD | A | W |  |
|  | Installation Instructions | 1.4.E | W | | P, II | A | - |  |
|  | Shop Drawings | 1.4.F | F | | SD | A | FP |  |
|  | Test Reports | 1.4.G | C | | P, TR | C | FP, Cx |  |
|  | Operation and Maintenance Manual: | 1.4.H | P C | | P | C | - |  |
|  | Project Record Drawings (As-Built) | 1.4.I | C | | EM | C | FP, FE-M |  |
| **21 1316** | **Dry-Pipe Sprinkler Systems** |  |  | |  |  |  |  |
|  | Hydraulic Calculations; seismic design documents; catalog data; installation instructions | 1.4.A 1.4.B 1.4.C 1.4.E | W | | P, D | A | FP, FE-M |  |
|  | Catalog Data with selected options marked. | 1.4.C | X | | P, CD | A | - |  |
|  | Welding Procedure Specifications (WPS) wit the associated Procedure Qualification Records (PQRs) (Note: Required per current year NFPA 13) | 1.4.D.1 | W | | CT | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.4.D.2 | W | | CT | A | W |  |
|  | Inspector qualification records; | 1.4.D.3 | W | | CT | A | W |  |
|  | Inspection procedure | 1.4.D.4 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.4.D.5 | W | | SD | A | W |  |
|  | Installation Instructions. | 1.4.E | W | | P, II | A |  |  |
|  | Shop Drawings | 1.4.F | F | | SD | A | FP |  |
|  | Test Reports | 1.4.G | C | | P, TR | A | FP, Cx |  |
|  | Operation and Maintenance Manual | 1.4.H | P C | | P | C | - |  |
|  | Project Record Drawings (as-builts) on CD’s and prints reflecting as-built conditions and calculations | 1.4.I | at closeout | | P, EM | C | FP, FE-M |  |
| **21 1319** | **Preaction Sprinkler Systems** |  |  | |  |  |  |  |
|  | Hydraulic Calculations; seismic design documents; catalog data; shop drawings. | 1.4.A.1  1.4.B 1.4.C | W | | P, CA | A | FP |  |
|  | Welding Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs). Certifications for welders in accordance with NFPA 13 | 1.4.D.1 | W | | CT | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.4.D.2 | W | | CT | A | W |  |
|  | Inspector qualification records; | 1.4.D.3 | W | | CT | A | W |  |
|  | Inspector procedures | 1.4.D.4 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.4.D.5 | W | | SD | A | W |  |
|  | Installation Instructions | 1.4.E | W | | P, II | A | FP |  |
|  | Shop Drawings | 1.4.F | F | | D | A | FE-M |  |
|  | Test Reports | 1.4.G | PC | | P, TR | A | Cx |  |
|  | Operation and Maintenance Manual | 1.4.H | C | | P | C | - |  |
|  | Project Record Drawings (As-Built) on CD’s and prints indicating as-built conditions | 1.4.I | C | | EM | C | FE-M |  |
| **21 1326** | **Deluge Fire-Suppression Sprinkler Systems** |  |  | |  |  |  |  |
|  | Hydraulic Calculations; seismic design documents; catalog data | 1.4.A 1.4.B  1.4.C | W | | P, CA | A | FP |  |
|  | Welding Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.4.D.1 | F | | P | A | W |  |
|  | Welding Performance Qualfication Records (WPQR) | 1.4.D.2 | F | | P | A | W |  |
|  | Inspector qualification records | 1.4.D.3 | W | | CT | A | W |  |
|  | Inspector procedures | 1.4.D.4 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.4.D.5 | W | | SD | A | W |  |
|  | Installation Instructions | 1.4.E | W | | P | A | FP |  |
|  | Shop Drawings | 1.4.F | F | | D | A | Cx |  |
|  | Test Reports | 1.4.G | PC | | P, TR | A | - |  |
|  | Operation and Maintenance Manual | 1.4.H | C | | P | C | FE-M |  |
|  | Project Record Drawings (As-Built) | 1.4.I | C | | D, EM | C | FP |  |
| **21 2200** | **Clean Agent Fire-Extinguishing Systems** |  |  | |  |  |  |  |
|  | Product data | 1.3.A | X | | CD | A | FP |  |
|  | Shop and Layout Drawings | 1.3.B | F | | SD | A | FP |  |
|  | Complete flow calculations | 1.3.C | F | | P, EM | A | FP |  |
|  | An egress time study per NFPA 2001 | 1.3.D | F | | CA | A | FP |  |
|  | Design Documents, calculations, drawings and Test and inspection plan | 1.3.E  1.3.E.1 1.3.E.2 1.3.E.3 1.3.E.4 | W | | P, D | A | FP |  |
|  | Catalog Data with selected options noted | 1.3.F | X | | P, CD | A | FP, FE-M |  |
|  | Materials Part List (Bill of Materials) | 1.3.G | W | | P | A | PE |  |
|  | Test Reports | 1.3.H | PC | | P, TR | A | FP, Cx |  |
|  | Operation and Maintenance Manual | 1.4.A | C | | P | C | - |  |
|  | Project Record Drawings (As-Built) | 1.4.B | C | | D,EM | C | FP, FE-M |  |
|  |  |  |  | |  |  |  |  |
| **22 0529** | **Hangers and Supports for Plumbing Piping and Equipment** |  |  | |  |  |  |  |
|  | Product data for each type of product indicated | 1.3.A | X | | P | A |  |  |
|  | Shop Drawings | 1.3.B | W | | SD | A | [M], S, W |  |
|  | Welding Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.3.C | F | | P, CT | A | W |  |
|  | Welding Performance Qualfication Records (WPQR) | 1.3.C | F | | P, CT | A | W |  |
|  | Inspector qualification records | 1.3.C | W | | CT | A | W |  |
|  | Inspector procedures | 1.3.C | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.3.C | W | | SD | A | W |  |
| **22 0535** | **Electric Heat Tracing** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | P, CD | A | FE-E |  |
|  | Shop Drawings | 1.3.A.2 | W | | DSD | A | FE-E |  |
|  | Installation Instructions | 1.3.A.3 | W | | P, II | A | - |  |
|  | Operation and Maintenance Instructions | 1.3.A.4 | P C | | P, OM | A | - |  |
|  | Warranty | 1.3.A.5 | C | | P, WA | A | - |  |
|  | Records of inspections, tests, and adjustments | 1.3.A.6 | Z | | P, TR | A | [CM] |  |
| **22 0548.23** | **Vibration and Seismic Controls for Mechanical Systems** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A | X | | CD, OT | A | [S] |  |
|  | Shop drawings | 1.3.B | F | | SD | A | [S] |  |
|  | Welding Procedure Specification (WPS) with the associatedPQR(s | 1.3.C.1 | F | | P | A | W |  |
|  | Welding Performance Qualfication Records (WPQR) | 1.3.C.2 | F, W | | CT | A | W |  |
|  | Inspector qualification records | 1.3.C.3 | W | | CT | A | W |  |
|  | Inspector procedures | 1.3.C.4 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.3.C.5 | W | | SD | A | W |  |
|  | Delegated-Design Submittal | 1.3.D | W | | CA, D, TR | DD, A | [S] |  |
|  | Coordination Drawings | 1.4.A | W | | D | I | [S] |  |
|  | Field quality-control reports | 1.4.B | Z, PI | | OT | I | FE-M |  |
| **22 0554** | **Identification for Plumbing, HVAC, and Fire Piping and Equipment** |  |  | |  |  |  |  |
|  | Product Data | 1.4.A | X | | CD | A | - |  |
|  | Equipment Label Schedule | 1.4.B | W | | ML | A | FE-M |  |
|  | [Valve numbering scheme] | 1.4.C | W | | ML | A | - |  |
|  | [Valve Schedules; for each piping system to include in maintenance manuals.] | 1.4.D | W | | ML | A | - |  |
| **22 0713** | **Plumbing and HVAC Insulation** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A | X | | CD | A | FE-M |  |
|  | Manufacturer’s Installation Instructions | 1.3.B | W | | P, II | A | - |  |
| **22 0813** | **Testing Piping Systems** |  |  | |  |  |  |  |
|  | Test plan | 1.6.A.1 | W | | TR | A | Cx, PS | PS |
|  | Test reports | 1.6.B.1 | DAY | | P, TR | A | Cx, FE-M | PS |
| **22 0816** | **Disinfection of Potable Water Piping** |  |  | |  |  |  |  |
|  | Free chlorine concentration | 1.4.A.1 | Z | | TR | A | UI-W, EPC-WQ |  |
|  | Bacterial Quality Test | 1.4.A.2 | Z | | TR | A | UI-W, EPC-WQ |  |
|  | Residual free chlorine concentration, after flushing chlorinated water | 1.4.A.3 | Z | | TR | A | UI-W, EPC-WQ |  |
| **22 1100** | **Facility Water Distribution** |  |  | |  |  |  |  |
|  | Catalog data , installation instructions | 1.2.A.1 1.2.A.3 | X | | P, CD | A | - |  |
|  | [Shop drawings] | 1.2.A.2 | F | | SD | A | FE-M |  |
|  | Field quality-control test reports | 1.2.B.1 | MON | | TR | I | FE-M |  |
|  | Operation and Maintenance Data | 1.2.C.1 | C | | OM | C | - |  |
| **22 1316** | **Sanitary Waste and Vent Piping** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A | - |  |
|  | Manufacturer’s Instructions | 1.3.A.2 | W | | P, II | A | - |  |
| **22 1343.16** | **Facility Wet-Well Packaged Sewage Pumping Stations (Interior)** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P | A | UI-W |  |
|  | Pump curves | 1.3.A.2 | X | | P | A | UI-W |  |
|  | Operation and maintenance data | 1.3.A.3 | C | | P | C | - |  |
|  | Warranties | 1.3.A.4 | C | | P | C | - |  |
| **22 1413** | **Facility Storm Drainage Piping** |  |  | |  |  |  |  |
|  | Catalog data, Installation instructions | 1.2.A.1 1.2.A.2 | X | | P, CD | A | - |  |
|  | Welding Procedure Specification (WPS) with the associated PQR(s) | 1.2.A.3 | F | | P | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.2.A.3 | F | | P | A | W |  |
| **22 1500** | **Compressed-Air Systems** |  |  | |  |  |  |  |
|  | Performance data, catalog data, installation instructions | 1.5.A.1 1.5.A.2  1.5.A.4 | X | | P, CD | A | M, [PS] | PS |
|  | Welding Procedure Specification (WPS) with the associated PQR(s) | 1.5.A.3 | F | | P | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.6.A.3 | F | | P | A | W |  |
|  | Materials/Parts List | 1.5.A.5 | W | | P, ML | A | Cx |  |
|  | Warranties | 1.5.A.6 | C | | P, WA | A | - |  |
|  | Examination processes and qualifications | 1.5.A.7 | W | | P, CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.6.A | W | | SD | A | W |  |
|  | Manufacturer’s data report form for ASME pressure vessels | 1.6.B | U | | CT, TR | I | M, PS | PS |
|  | Operational and Maintenance data | 1.7.A | C | | OM | C | - |  |
|  | Installation examination evidence documentation | 1.7.B | C | | P | C | M |  |
| **22 3700** | **Domestic Water Heaters** |  |  | |  |  |  |  |
|  | Product Data | 1.3.A | X | | CD | A | - |  |
|  | Shop Drawings | 1.3.B | F | | SD | A | - |  |
|  | Product Certificates | 1.3.D | X | | P, CT | A | - |  |
|  | Test Reports | 1.3.E | WKLY | | P, TR | A | - |  |
|  | Water Heater Labeling | 1.3.F | C | | P | A | - |  |
| **22 4200** | **Plumbing Fixtures** |  |  | |  |  |  |  |
|  | Product Data, Manufacturer’s Installation Instructions, Manufacturer’s Certificate | 1.3.A.  1.3.B  1.3.C | X | | S,P | A | - |  |
|  | Operation and Maintenance Data | 1.4.B | C | | P | C | - |  |
|  |  |  |  | |  |  |  |  |
| **23 0593** | **Testing, Adjusting, and Balancing for HVAC** |  |  | |  |  |  |  |
|  | Date of expiration of AABC or NEBB certification, TAB instruments that are to be used and calibration dates | 1.4.A.1  1.4.A.2 | PC | | P | A | Cx |  |
|  | Proposed TAB procedures, together with the TAB schematic drawings and Report Forms, for review. | 1.4.A.3 | PC | | P | A | Cx |  |
|  | Field Reports , Final Test Reports | 1.4.A.4 1.4.A.5 | Z | | P | A | FE-M |  |
| **23 0800** | **Commissioning of HVAC** |  |  | |  |  |  |  |
|  | Acceptance test procedures | 1.5.A.1 | PC | | P, PD | I | Cx |  |
|  | Functional testing reports and performance testing reports | 1.5.A.2 | Z | | TR, PD | I | Cx |  |
|  | I&C and BAS submittals | 1.5.A.3 | A | | OT | I | - |  |
|  | Instrument calibration reports | 1.5.A.4 | PC | | TR | I | Cx |  |
|  | Vendor Data: Operation and maintenance manuals | 1.5.A.5 | A | | OM | I | - |  |
|  | Other Documentation: Project record and as-built documentation including design documents revised or updated during the Cx process | 1.5.A.6 | A | | RD | I |  |  |
| **23 1123** | **Facility Natural Gas Piping** |  |  | |  |  |  |  |
|  | Catalog data on pipe materials | 1.2.A.1 | X | | P, CD | A | FE-M |  |
|  | Welding/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.2.A.2 | F | | P | A | W |  |
|  | Welding/Fusing Performance Qualifcation Records (WPQR) | 1.2.A.2 | F | | P | A | W |  |
|  | Inspector qualification records | 1.2.A.2 | W | | CT | A | W |  |
|  | Inspector procedures | 1.2.A.2 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.2.A.2 | W | | SD | A | W |  |
| **23 2113** | **Hydronic Piping** |  |  | |  |  |  |  |
|  | Catalog data and Installation instructions | 1.4.A.1 | X | | P, CD | A | FE-M |  |
|  | Welding/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.4.A.3 | F | | P | A | W |  |
|  | Welding/Fusing Performance Qualifcation Records (WPQR) | 1.4.A.4 | F | | P | A | W |  |
|  | Examination processes and forms and examiner qualifications for LANL review prior to commencing work | 1.4.A.5 | W | | CT | A | FE-M |  |
|  | Follow Section 01 4115 Pressure Safety Submittals regarding required documentation | 1.4.B.1 | Z | | P | C | PS | PS |
|  | Installation examination evidence documentation required by Article 3.1 of this Section | 1.4.B.1.a | PI | | TR | C | FE-M |  |
| **23 2215** | **Steam and Condensate Heating Piping and Specialties** |  |  | |  |  |  |  |
|  | Catalog data, Product description, Manufacturer’s catalog information | 1.2.A.1  1.2.A.2  1.2.A.3 | X | | P, CD | A | PE |  |
|  | Welding/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.2.A.4 | F | | P |  | W |  |
|  | Welding/Fusing Performance Qualifcation Records (WPQR) |  | F | | P | A | W |  |
| **23 2300** | **Refrigerant Piping** |  |  | |  |  |  |  |
|  | Product Data | 1.4.B.3 | X | | CD | A | FE-M |  |
|  | Unlisted due to component type: Design data per ASME B31.5 Section 526.2 | 1.4.B.4.a | F | | CA | A | PS | PS |
|  | Unlisted due to material of construction: Design data per ASME B31.5 Section 523.1.2 | 1.4.B.4.b | F | | CA | A | PS | PS |
|  | NDE (non-destructive examination) procedures | 1.4.C | F | | P | A | W |  |
|  | Prior to receiving materials, submit the Material Control Procedure | 1.4.D | X | | P | A |  |  |
|  | Welding/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.2.A.4 | F | | P | A | W |  |
|  | Welding/Fusing Performance Qualifcation Records (WPQR) |  | F | | P | A | W |  |
| **23 2500** | **HVAC Water Treatment** |  |  | |  |  |  |  |
|  | Flushing plan | 1.5.A | W | | P | A | EPC-CP |  |
|  | Catalog data of flushing and chemical water treatment and equipment | 1.5.B | W | | P, CD | A | - |  |
|  | Material list of all chemicals to be used. | 1.5.G | W | | P | A | EPC-WQ |  |
|  | Manufacturer’s Field Reports | 1.5.H | PI | | P | A | Cx |  |
|  | Operation and Maintenance Data | 1.7 | C | | OM | C | - |  |
| **23 3101** | **HVAC Ducts** |  |  | |  |  | - |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A | FE-M |  |
|  | Shop drawings | 1.3.A.2 | F | | SD | A | FE-M [M] |  |
|  | Test Reports | 1.3.A.3 | WKLY | | P, TR | A | FE-M |  |
|  | Welding/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.3.A.5 | F | | P | A | W |  |
|  | Welding/Fusing Performance Qualifcation Records (WPQR) | 1.2.A.2 | F | | P | A | W |  |
| **23 3225** | **Bag-in Bag-out Housings** |  |  | |  |  | - |  |
|  | Fire Screen catalog data indicating materials of construction and mesh size | 1.3.A.1.a | X | | CD | A | M |  |
|  | Prefilters | 1.3.A.2 |  | |  |  | - |  |
|  | Catalog data indicating the filter efficiency and pressure drop at rated capacity, Certificate of Conformance (CoC) | 1.3.A.2.a  1.3.A.2.b | X | | CD | A | M |  |
|  | Moisture Separator | 1.3.A.3 |  | |  |  |  |  |
|  | Product Data/Drawings: CoC that the moisture separator conforms to AG-1, section FA and to the purchase specs | 1.3.A.3.a  1.3.A.3.d | Z | | SD | A | M |  |
|  | Installation and maintenance instructions | 1.3.A.3.b | Z | | II, OM | C | - |  |
|  | Storage and handling instructions | 1.3.A.3.c | Z | | OM | A | - |  |
|  | Chemical Absorbers | 1.3.A.4 |  | |  |  |  |  |
|  | Table or drawing giving outline dimensions of the cell CMTRs of materials used in construction; Adsorbent type with applicable test reports | 1.3.A.4.a | Z | | SD | A | M |  |
|  | Welding/Brazing/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.3.A.4.d | F | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualifcation Records (WPQR) |  | F | | P | A | W |  |
|  | All qualification reports (seismic and filling method) | 1.3.A.4.e | S | | TR | A | M |  |
|  | Certification of performance (resistance and leak test) | 1.3.A.4.f | S | | TR | A | M |  |
|  | Residence time | 1.3.A.4.g | S | | TR | A | M |  |
|  | Certification of the appropriate flow rate | 1.3.A.4.h | S | | CT | A | M |  |
|  | Filter Train | 1.3.A.5 |  | |  |  |  |  |
|  | Catalog data, Certification of Conformance (CoC) | 1.3.A.5.a | X | | CD | A | M |  |
|  | Materials / Parts lists | 1.3.A.5.d | Z | | ML | A | Cx |  |
|  | Shop Drawings | 1.3.A.5.e | Z | | SD | A | M |  |
|  | Test report of pressure decay leak test | 1.3.A.5.f | S | | TR | A | FE-M |  |
|  | Test report for the airflow distribution qualification test | 1.3.A.5.g | S | | TR | A | M |  |
|  | Test report for the air-aerosol mixing uniformity test | 1.3.A.5.h | S | | TR | A | M |  |
|  | Test report for sampling manifold qualification test | 1.3.A.5.i | S | | TR | A | M |  |
|  | Warranties | 1.3.A.5.j | C | | WA | A | - |  |
| **23 3300** | **Air Duct Accessories** |  |  | |  |  |  |  |
|  | Product data, Shop drawings for shop fabricated items | 1.2.A  1.2.B | X | | P | A | FE-M [W] |  |
|  | Welding/Brazing/Fusing Procedure Specification (WPS) with the associated PQR(s) | 1.2.E | F | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualifcation Records (WPQR) | 1.2.F | F | | P | A | W |  |
|  | Operations and Maintenance Data | 1.4.A | C | | OM | C | - |  |
| **23 3400** | **HVAC Fans** |  |  | |  |  |  |  |
|  | Product data for each type of product | 1.5.A. | X | | PD | A | [M] |  |
|  | Shop Drawings | 1.5.B. | F | | D | A | - |  |
|  | Operation and Maintenance Data | 1.7.A | C | | OM | C | - |  |
| **23 3816** | **Fume Hoods** |  |  | |  |  |  |  |
|  | Product data | 1.5.B | X | | PPD | A | M |  |
|  | Shop drawings; Wiring diagrams | 1.5.C.1  1.5.C.2 | F | | D | A | M |  |
|  | Certification of start-up function | 1.5.E.1 | F | | CT | A | Cx |  |
|  | Test report | 1.5.E.2 | WKLY | | TR | A | Cx |  |
|  | Manufacturer’s installation and assembly instructions | 1.5.E.1 | W | | P, II | A | -- |  |
|  | Operation and Maintenance | 1.5.E.2 | W | | P | A |  |  |
| **23 4133.13** | **HEPA Filters – ASME AG-1, Section FC** |  |  | |  |  |  |  |
|  | Certification documentation | 1.6.A.1 | Y | | P, CT | A | M |  |
|  | Certified performance test results by the manufacturer | 1.6.B.1 | Y | | CT,TR | A | M |  |
|  | COC | 1.6.B.3 | Y | | CT | A | M |  |
|  | Warranty documentation | 1.6.B.4 | C | | WA | A | - |  |
|  | Certified performance test results by the FTF | 1.6.C.1 | Y | | CT, TR | A | M |  |
| **23 4133.16** | **HEPA Filters – ASME AG-1, Section FK, Special** |  |  | |  |  |  |  |
|  | Certification documentation | 1.6.A.1 | Y | | P, CT | A | M |  |
|  | Certified performance test results by the manufacturer | 1.6.B.1 | Y | | CT, TR | A | M |  |
|  | QA plan identifying procurement, fabrication, test & inspection, material traceability and non‑conformity controls for approval. | 1.6.B.2 | X, Z | | P | A | QA |  |
|  | COC that is signed or otherwise authenticated and stating specific information listed | 1.6.B.3 | Y | | CT | A | M |  |
|  | Warranty documentation | 1.6.B.4 | C | | WA | A | - |  |
|  | Certified performance test results by the FTF | 1.6.C.1 | Y | | CT, TR | A | M |  |
| **23 4133.19** | **HEPA Filters – Auxiliary Nuclear Grade** |  |  | |  |  |  |  |
|  | Certified performance test results by the manufacturer | 1.6.A.1 | Y | | CT, TR | A | M |  |
|  | QA plan identifying procurement, fabrication, test & inspection, material traceability and non‑conformity controls for approval. | 1.6.A.2 | X, Z | | P | A | QA |  |
|  | Documentation showing that the filter meets the design requirements of Article 1.5, including material requirements of Article 2.3 | 1.6.A.3 | F | | CD, P | A | M |  |
|  | Certification that all custom-built filter housings are fabricated and leak tested to meet the requirements of this Section. Examples of such documents include inspection and leak test procedures and reports | 1.6.A.4 | S | | CT, TR | A | M |  |
|  | CoC that is signed or otherwise authenticated and stating specific information listed | 1.6.A.5 | Y | | CT | A | M |  |
|  | Warranty Documentation | 1.6.A.6 | Y | | WA | A | - |  |
|  | Certified performance test results by the FTF | 1.6.B.1 | Y | | CT-TR | A | M |  |
| **23 6200** | **Packaged Compressor and Condenser Units** |  |  | |  |  |  |  |
|  | Product Data | 1.5.A | X | | P | A | M, I&C |  |
|  | Field quality-control reports | 1.6.B | PI | | OT | I | FE-M |  |
|  | Warranty: Sample of special warranty | 1.6.C | Y | | WA | I | - |  |
|  | Operation and Maintenance Data: For compressor and condenser units to include in emergency, operation, and maintenance manuals | 1.7.A | C | | OM | C | - |  |
|  | Refrigeration Appliance Inventory Form: Complete form as required by LANL (e.g., procedure ENV-ES-QP-311.8) | 1.7.B | C | | RD | C | - |  |
| **23 7413** | **Packaged, Outdoor, Central Station** |  |  | |  |  |  |  |
|  | Product Data: Shop Drawings; Details of equipment assemblies; Diagrams for power, signal, and control wiring | 1.2.A | X | | CD | A | - |  |
|  | Field quality-control reports | 1.3.C | MON | | RD | I | FEM |  |
|  | Sample Warranty: For special warranty | 1.3.D | Y | | WA | I | - |  |
|  | Operation and Maintenance Data | 1.4.A | C | | OM | C | - |  |
|  | Refrigeration Appliance Inventory Form: Complete form as required by LANL (e.g., procedure ENV-ES-QP-311.8) | 1.4.B | C | | RD | C | - |  |
| **23 8123** | **Computer-Room Air-Conditioners** |  |  | |  |  |  |  |
|  | Product data | 1.4.A | X | | OT | A | M, [I&C] |  |
|  | Color Samples: For unit cabinet, discharge grille, and exterior louver and for each color and texture specified | 1.4.D | X | | SC | A | M |  |
|  | Field quality-control reports | 1.5.B | MON | | P | I | FE-M |  |
|  | Sample Warranty: For special warranty | 1.5.C | Z | | WA | I | - |  |
|  | Operation and Maintenance Data | 1.6.A | C | | OM | C | - |  |
|  | Refrigeration Appliance Inventory Form: Complete form as required by LANL (e.g., procedure ENV-ES-QP-311.8) | 1.6.B | C | | RD | C | - |  |
| **23 8239** | **Unit Heaters** |  |  | |  |  |  |  |
|  | Product Data | 1.4.A | X | | P |  | E, M |  |
|  | Field quality-control reports | 1.5.B | MON | | P | I | FE, M, E |  |
|  | Operation and Maintenance Data | 1.6.A | C | | OM | C | - |  |
|  |  |  |  | |  |  |  |  |
| **25 5000** | **Integrated Automated Facility Controls** |  |  | |  |  |  |  |
|  | BAS system manufacturer and subcontract information | 1.3.A.1 | With Bid | | P | A | IC |  |
|  | Shop drawings: Electrical Ladder Diagrams; The sequence of operation; bill of materials | 1.3.A.3.a  1.3.A.3.a.1 1.3.A.3.a.2 1.3.A.3.a.3 | F | | SD, P, D | A | IC, UI-BAS |  |
|  | Catalog data sheets shall be provided for each different piece of equipment | 1.3.A.3.b | X | | CD | A | IC, UI-BAS |  |
|  | Point verification and sensor calibration forms for all points and sensors that are installed as part of the BAS. | 1.3.A.3.c | PC | | F | A | Cx |  |
|  | All graphic slides proposed for use | 1.3.A.3.d | PC | | P | A | IC, UI-BAS, Cx |  |
|  |  |  |  | |  |  |  |  |
| **25 0519** | **Low Voltage Electrical Conductors and Cables For BAS Electrical Systems** |  |  | |  |  |  |  |
|  | Catalog Data: BAS wire, cable and compression connectors | 1.3.A.1 1.3.A.2 1.3.A.3 | x | | CD | A | - |  |
| **25 0529** | **Hangers and Supports for Building Automation Systems** |  |  | |  |  |  |  |
|  | Product data on cable hook devices | 1.5.A | X | | CD | A | - |  |
| **25 0533** | **Raceways and Boxes for BAS Electrical Systems** |  |  | |  |  |  |  |
|  | Catalog Data describing surface metal raceway | 1.2.A.1 | X | | CD | A | - |  |
|  | Catalog Data describing wire way | 1.2.A.2 | X | | CD | A | - |  |
| **25 0553** | **Identification for BAS Electrical Systems** |  |  | |  |  |  |  |
|  | N/A |  |  | |  |  | - |  |
| **26 0519** | **Low Voltage Electrical Power Conductors and Cables** |  |  | |  |  |  |  |
|  | Certification of the Subcontractor’s tool and instrument calibration program | 1.3.A | C | | CT | A | FE-E |  |
|  | Field test records on tool and instrument calibration, termination torque records, cable pulling, and Field Quality Control inspection reports and tests results. | 1.4.A.1 | C | | TR | C | FE-E |  |
|  | Documentation of 10% witness of torqueing per Field Quality Control article | 1.4.B | C | |  |  | - |  |
| **26 0526** | **Grounding and Bonding for Electrical Systems** |  |  | |  |  |  |  |
|  | Documentation of quality control inspections performed under this specification | 1.2.A.1 |  | |  |  | - |  |
| **26 0529** | **Hangers and Supports for Electrical Systems** |  |  | |  |  |  |  |
|  | Catalog Data: for each type of product specified. | 1.4.A.1 | X | | CD, P | A | - |  |
| **26 0533** | **Raceway and Boxes for Electrical Systems** |  |  | |  |  |  |  |
|  | Catalog Data: describing floor boxes. | 1.3.A.1 | X | | CD | A | - |  |
|  | Catalog Data: describing surface metal raceway. | 1.3.A.2 | X | | CD | A | - |  |
|  | Catalog Data: describing wireway. | 1.3.A.3 | X | | CD | A | - |  |
| **26 0536** | **Cable Trays for Electrical Systems** |  |  | |  |  |  |  |
|  | Catalog Data: manufacturer's data | 1.3.A.1 | X | | CD | A | - |  |
|  | Installation Instructions | 1.3.A.2 | W | | II | A | - |  |
| **26 0548.16** | **Seismic Controls for Electrical Systems** |  |  | |  |  |  |  |
|  | Product Data for each type of product | 1.3.A | X | | CD, OT | A | [S] |  |
|  | Welding Procedure Specification (WPS(s) and Procedure Qualification Record (PQR)with the associated PQR | 1.3.B.1 | WF | | P | A | W |  |
|  | Welding Performance Qualification Records (WPQR) | 1.3.B.2 | W | | CT | A | W |  |
|  | Inspector qualification records | 1.2.B.3 | W | | CT | A | W |  |
|  | Inspector procedures | 1.2.B.4 | W | | CT | A | W |  |
|  | Welding inspection report(s) and weld map(s) | 1.2.B.5 | W | | SD | A | W |  |
|  | Delegated-Design Submittal | 1.3.C | W | | CA, D, TR | DD | [S] |  |
|  | Coordination Drawings | 1.4.A | W | | D | I | [S] |  |
|  | Qualification Data for professional engineer | 1.4.B | W | | CT | I | - |  |
|  | Field quality-control reports | 1.4.C | Z, PI | | OT | I | - |  |
| **26 0553** | **Identification for Electrical Systems** |  |  | |  |  |  |  |
|  | Electrical identification schedule | 1.2.A.1 | W | | P | A | E, FE-E |  |
| **26 0700** | **Induction Motors – 500HP and Smaller** |  |  | |  |  |  |  |
|  | Catalog Data for each motor furnished loose | 1.4.A.1 | X | | CD | A | E |  |
|  | Installation Instructions | 1.4.A.2 | W | | II | A | - |  |
|  | Operation and Maintenance Data | 1.4.B.1 | C | | P | C | - |  |
| **26 0813** | **Electrical Acceptance Testing** |  |  | |  |  |  |  |
|  | Certifications: name and qualifications of the ETA | 1.4.A.1 | W | | CT | A | [E] |  |
|  | Certifications: quality assurance program of the ETA | 1.4.A.2 | W | | CT | A | [E] |  |
|  | Certifications: instrument calibration program of the ETA | 1.4.A.3 | W | | CT | A | [E] |  |
|  | Certifications: electrical safety program of the ETA | 1.4.A.4 | W | | CT | A | [E] |  |
|  | Certifications: name and qualifications of the lead engineer or engineering technician performing the required testing services. | 1.4.A.5 | W | | CT | A | [E] |  |
|  | Test Plans: acceptance and system functions test plan for each item of equipment or system to be field tested at least 45 days prior to planned testing date. | 1.4.A.6 | U | | P | A | [E], Cx |  |
|  | Test Reports: certified copies of inspection reports, test reports, and system function tests. | 1.4.A.7 | Z | | O TR | A | [E], Cx |  |
| **26 2213** | **Low Voltage Distribution Transformers** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A | X | | PCD | AA | E |  |
|  | Operation and maintenance instructions | 1.3.B | C | | CD | A | - |  |
| **26 2300** | **Low Voltage Switchgear** |  |  | |  |  |  |  |
|  | Catalog data describing each type low-voltage switchgear, circuit breaker, accessory item, and component specified | 1.4.B | X | | P, CD | A | E |  |
|  | Installation instructions | 1.4.C | W | | P, II | A | E |  |
|  | Performance Data/Curves including time-current curves for each circuit breaker | 1.4.D | C | | CD | A | - |  |
|  | Shop Drawings for each low-voltage switchgear assembly | 1.4.E | F | | SD | A | E |  |
|  | Seismic submittal | 1.4.F.1 | F | | SD | A | S |  |
|  | Wiring Diagrams | 1.4.G | F | | P | A | E |  |
|  | Certified production test reports. | 1.4.H | W | | TR | A | - |  |
|  | Operations and Maintenance Instructions | 1.4.I | C | | OM | A | - |  |
| **26 2413** | **Switchboards** |  |  | |  |  |  |  |
|  | Catalog Data: describing each type | 1.3.A.1 | X | | CD | A | E |  |
|  | Installation Instructions | 1.3.A.2 | W | | II | A | - |  |
|  | Operation and maintenance instructions | 1.3.A.3 | C | | OM | A | - |  |
|  | Performance Data/Curves: Time-current curves for each circuit breaker | 1.3.A.4 | C | | CD | A | - |  |
|  | Shop drawings for each switchboard | 1.3.A.5 | F | | SD | A | E |  |
|  | Test Reports: Results of factory production tests | 1.3.A.6 | C | | TR | A |  |  |
| **26 2416** | **Panelboards** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | CD | A | E |  |
|  | Installation Instructions | 1.3.A.2 | W | | II | A | - |  |
|  | Operation and Maintenance Instructions | 1.3.A.3 | C | | OM | C |  |  |
| **26 2419** | **Motor Control Centers** |  |  | |  |  |  |  |
|  | Catalog Data | 1.4.A.1 | X | | CD | A | E |  |
|  | Shop drawings for each MCC | 1.4.A.2 | F | | SD | A | E |  |
|  | Wiring Diagrams | 1.4.A.3 | W | | D | A | E |  |
|  | Seismic: Certification: Submit certified test report of IEEE Std C37.20.7 tests | 1.4.A.5 | S | | P, TR | A | S |  |
|  | Seismic: Installation Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified below in “QUALITY ASSURANCE” | 1.4.A.6 | S | | P, II | A | - |  |
|  | Operation and maintenance instructions | 1.4.B.1 | C | | P, OM | C | - |  |
|  | Test and Inspection Records: Records of inspections, tests, and adjustments performed under FIELD QUALITY CONTROL | 1.4.B.2 | C | | P, TR | C | FE-E |  |
| **26 2500** | **Enclosed Bus Assemblies** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | CD | A | E |  |
|  | Shop Drawings | 1.3.A.2 | F | | SD | A | - |  |
|  | Installation Instructions | 1.3.A.5 | W | | P, II | A | - |  |
|  | Operation and Maintenance Instructions | 1.3.B.1 | C | | P, OM | I | - |  |
| **26 2713** | **Electricity Metering** |  |  | |  |  |  |  |
|  | Catalog data and manufacturer's technical data | 1.3.A.1 | X | | CD | A | UI-E |  |
|  | Installation instructions | 1.3.A.2 | W | | II | A | - |  |
|  | Operation and maintenance instructions | 1.3.A.3 | C | | OM | C | - |  |
| **26 2726** | **Wiring Devices** |  |  | |  |  |  |  |
|  | Catalog data | 1.2.A.1 | X | | CD | A | [E] |  |
| **26 2816** | **Enclosed Switches and Circuit Breakers** |  |  | |  |  |  |  |
|  | Product date:Manufacturer's technical data | 1.3.A.1 | X | | CD | A | - |  |
|  | Installation Instructions | 1.3.A.2 | W | | II | A | - |  |
| **26 2913** | **Enclosed Controllers** |  |  | |  |  |  |  |
|  | Catalog data: manufacturer's technical data | 1.3.A.1 | X | | CD | A | PE |  |
|  | Installation instructions | 1.3.A.2 | W | | II | A | - |  |
|  | Operation and maintenance instructions | 1.3.A.3 | C | | OM | A | - |  |
|  | Wiring diagram | 1.3.A.4 | X | | SD | A | E |  |
| **26 2923** | **Variable Frequency Motor Controllers** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.B.1 | X | | CD | A | E |  |
|  | Certification | 1.3.B.2 | X | | CT | A | - |  |
|  | Shop Drawings: shop drawings for each VFD | 1.3.B.3 | F | | SD | A | [M] |  |
|  | Installation Instructions | 1.3.B.4 | W | | II | A | - |  |
|  | Operation and Maintenance Instructions | 1.3.B.5 | C | | OM | A | - |  |
|  | Test Reports: results of required factory tests. | 1.3.B.6 | W | | P, TR | A | [M] |  |
|  | Parameter Settings | 1.3.C.1 | C | | P | C | - |  |
| **26 3334** | **Stored Emergency Power Supply System** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | CD | A | E |  |
|  | Certification: Submit certification that the supplied SEPSS complies with this specification as require by NFPA 111. | 1.3.A.2 | X | | CT | A | E |  |
|  | Installation Instructions | 1.3.A.3 | W | | II | A | - |  |
|  | Operation and Maintenance Instructions | 1.3.A.4 | C | | OM | C | - |  |
|  | Test Reports: submit factory test data on the completed system as required by NFPA 111 | 1.3.A.5 | C | | TR | A | - |  |
|  | Test Reports: submit reports of installation acceptance inspections and tests required by NFPA 111. | 1.3.A.6 | C | | TR | A | - |  |
| **26 3353** | **Static Uninterruptible Power Supply** |  |  | |  |  |  |  |
|  | Battery sizing calculations | 1.3.A.1.a | F | | P, CA | A | E |  |
|  | UPS selection calculations | 1.3.A.1.b | F | | P, CA | A | E |  |
|  | Coordination study for UPS prepared in accordance with IEEE Std 242 | 1.3.A.1.c | W | | P | A | - |  |
|  | Catalog Data | 1.3.A.2 | X | | CD | A | E |  |
|  | Certification by manufacturer’s field technical representative that the subcontractor has installed, adjusted, and tested the UPS according to the manufacturer’s recommendations. | 1.3.A.3 | W | | P, CT | A | - |  |
|  | Installation Instructions | 1.3.A.4 | W | | P | A | - |  |
|  | O&M instructions | 1.3.A.5 | C | | OM | C | - |  |
|  | Shop Drawings for each UPS | 1.3.A.6 | F | | SD | A | E |  |
|  | Test Reports: Detailed description of proposed factory test factory production tests specified in NEMA PE 1, and field test procedures | 1.3.A.7.a | C | | TR | A | [E] |  |
|  | Test Reports: Factory and field reports in booklet form | 1.3.A.7.b | C | | TR | A | [E] |  |
|  | Wiring Diagrams: detailed schematic wiring diagrams | 1.3.A.8 | W | | D | A | E |  |
| **26 4100** | **Facility Lightning Protection** |  |  | |  |  |  |  |
|  | Catalog data | 1.4.A.1 | X | | CD | A | E |  |
| **26 4115** | **Lightning Protection for Explosive Facilities** |  |  | |  |  |  |  |
|  | Catalog data | 1.4.A.1 | X | | CD | A | E |  |
|  | Calculated values for the soil contact resistance of the proposed grounding electrode system | 1.4.A.2 | W | | CA | A | E |  |
| **26 4300** | **Surge Protective Devices** |  |  | |  |  |  |  |
|  | Catalog Data | 1.2.A | X | | CD | A | - |  |
|  | Installation Instructions | 1.2.B | W | | II | A | - |  |
| **26 5100** | **Interior Lighting** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A | E |  |
|  | Performance Curves/Data | 1.3.A.2 | X | | CD | A | - |  |
| **26 5200** | **Emergency Lighting** |  |  | |  |  |  |  |
|  | Catalog data describing emergency lighting. | 1.3.A.1 | X | | P, CD | A | [FP] |  |
|  | Performance Curves/Data: certified photometric data for emergency lighting unit. | 1.3.A.2 | X | | P, PD | A | [FP] |  |
| **26 5600** | **Exterior Lighting** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | CD | A | [E] |  |
|  | Performance Curves/Data | 1.3.A.2 | X | | CD | A | - |  |
|  |  |  |  | |  |  |  |  |
| **27 1000** | **Structured Cabling** |  |  | |  |  |  |  |
|  | Qualifying certifications of cable installer(s) | 1.6.A | W | | CT, P | A | NIE-TS |  |
| 2 | Detailed as-built drawings of structure and cable routing | 1.6.B | C | | P,D | A | - |  |
| 3 | FLUKE LinkWare Test Results (NOTE: Subcontractor is required to physically submit FLUKE LinkWare test results to LANL NIE-TS.) | 1.6.C | C | | FLUKE TESTER | A | NIE-TS |  |
| 4 | Electronic test results on all Category 5E or 6A UTP and fiber cables for conformance | 1.6.D | C | |  | A | NIE-TS |  |
| **27 1500.18** | **Protected Transmission System Rough-In** |  |  | |  |  |  |  |
|  | Certifications of the qualifications of the fiber-optic cable installers. | 1.5.A.1 | W | | P, CT | A | NIE-TS |  |
|  | Detailed as-built documents and records | 1.5.A.2 | C | | P, D | A | - |  |
|  | FLUKE LinkWare Test Results (NOTE: Subcontractor is required to physically submit FLUKE LinkWare test results to LANL NIE-TS.) | 1.6.A | C | | FLUKE TESTER | C | NIE-TS |  |
| **27 3000** | **Voice Communications** |  |  | |  |  |  |  |
|  | Catalog data | 1.4.A.1 | X | | CD | A | [NIE-TS] |  |
|  | Wiring diagram; Calculations | 1.4.A.2 1.4.A.3 | W | | D, CA | A | NIE-TS |  |
|  | As-built documents and records | 1.4.A.5 1.4.A.6 | C | | P, D | A | - |  |
|  | Test and inspection report for the completed installation. | 1.4.A.7 | Y | | P, II | A | - |  |
|  |  |  |  | |  |  |  |  |
| **28 0528** | **Pathways for Electrical Security** |  |  | |  |  |  |  |
|  | Test Reports | 1.5.A.1 | Y | | P, TR | A | - |  |
|  | As-Built Drawings | 1.5.A.2 | C | | D | A | - |  |
| **28 1321** | **Administrative Access Control System Rough-In** |  |  | |  |  |  |  |
|  | Catalog Data: manufacturer's data | 1.5.A.1 | X | | P | A | - |  |
|  | Test Reports: Provide inspection and test reports | 1.5.A.2 | Y | | P, TR | A | - |  |
|  | As-Built Drawings | 1.5.A.3 | C | | P, D | A | - |  |
| **28 4600** | **Fire Detection and Alarm** |  |  | |  |  |  |  |
|  | Certifications: Fire alarm installing firm and system technician. | 1.5.A | NTP+30 | | CT | A | FP |  |
|  | Certification of compatibility:  System battery capacity calculations;  Voltage drop calculations;  Design/Installation Drawings;  Catalog Data;  Installation Instructions;  Materials and Parts List | 1.5.A.3  1.5.B.1.a  1.5.B.1.b  1.5.B.2  1.5.B.3  1.5.B.4  1.5.B.5 | W | | CT, CA, SD, LL, ML | A | FP |  |
|  | Pre-test FACP input/output matrix | 1.5.B.6.a | A | | SD, P | DD | FP |  |
|  | Final test FACP input/output matrix and program | 1.5.B.6.b | A | | SD, P | DD | FP |  |
|  | Operating and instruction manuals | 1.5.B.7.a | C | | OM | DD | FP |  |
|  | Pre-final test Report | 1.5.C.1 | A | | TR | DD | FP |  |
|  | Final Test Plan | 1.5.C.2 | A | | P | DD | FP |  |
|  | Record of Completion | 1.5.C.3 | C | | TR | DD | FP |  |
|  | Project Record Documents | 1.5.D | C | | PR | DD | FP |  |
|  | Warranties | 1.5.E | Y | | WA | DD | FP |  |
|  |  |  |  | |  |  |  |  |
| **31 2000** | **Earth Moving** |  |  | |  |  |  |  |
|  | Certifications from an independent testing laboratory that pipe bedding materials meet the specification | 1.4.A.1 | X | | P, CT | A | - |  |
|  | Certifications from an independent testing laboratory that base course materials, crushed stone or crushed or screened gravel meet the spec | 1.4.A.2 | X | | P, CT | A | - |  |
|  | Test reports of field-testing material  compaction | 1.4.A.3 | PI | | P, TR | A | CM-CSA |  |
|  | Test reports of field-testing of tracing wire continuity | 1.4.A.4 | PI | | P, TR | A | CM-CSA |  |
|  | Catalog data on identification tape and tracing wire | 1.4.A.5 | X | | P, CD | A | C |  |
| **31 2323.33** | **Flowable Fill** |  |  | |  |  |  |  |
|  | Material certifications | 1.3.A.1 | X | | P, CT | A | - |  |
|  | Provide design mixes and test reports. | 1.3.A.3 | W | | ML, TR | A | C |  |
|  | Batch tickets. | 1.3.A.2 | PI | | P, TR | A | CM-CSA |  |
|  | Field test reports. | 1.3.A.4 | PI | | P, TR | A | CM-CSA |  |
|  |  |  |  | |  |  |  |  |
| **32 1216** | **Asphalt Paving** |  |  | |  |  |  |  |
|  | Material certifications | 1.2.A.1 | W | | P, CT | A | - |  |
|  | Proposed design mix | 1.2.A.2 | W | | ML | A | - |  |
|  | Laboratory test reports for design mix for bituminous pavement. | 1.2.A.3 | W | | P-TR | A | - |  |
|  | Aggregate quality testing | 1.2.A.3.a | W | | P, TR | A | - |  |
|  | Certification from the testing laboratory responsible for material analysis and field testing | 1.2.A.4 | W | | CT, P | A | - |  |
|  | Certification that testing personnel are in compliance with ASTM D 3666 | 1.2.A.5 | W | | CT, P | A | - |  |
|  | Traffic analysis, vehicle loadings, and structural design. | 1.2.A.6 | W | | P | A | - |  |
|  | Detailed plan for temporary traffic control markings and traffic signs | 1.2.A.7 | W | | P, D | A | - |  |
|  | Detailed plan for permanent traffic control markings and traffic signs | 1.2.A.8 | W | | P, D | A | - |  |
| **32 3100** | **Fences and Gates** |  |  | |  |  |  |  |
|  | Catalog data on fabric, posts, accessories, fittings, and hardware | 1.3.A.1 | X | | P, CD | A | - |  |
| **32 3113** | **Chain Link Fences and Gates** |  |  | |  |  |  |  |
|  | Catalog data. | 1.3.A.1 | X | | P, CD | A | - |  |
|  | Copies of batch tickets for each load of concrete. | 1.3.A.2 | WKLY | | (2)P | A | - |  |
| **32 8400** | **Planting Irrigation** |  |  | |  |  |  |  |
|  | Catalog data for all equipment | 1.3.A.1 | X | | P, CD | A | - |  |
|  | Installation instructions | 1.3.A.2 | W | | P, II | A | - |  |
|  | Operating and maintenance manual | 1.3.A.3 | C | | P, OM | C |  |  |
|  | Prepare a zone chart for each controller | 1.3.A.3.a | F | | D, P | A | - |  |
|  | Irrigation plan | 1.3.A.4 | F | | D | A | - |  |
|  | Record Drawing | 1.3.A.5 | Z | | D | A | - |  |
| **32 9219** | **Seeding** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A | - |  |
|  | Certification: certified seed bag tags and copies of seed invoices identified by project name. | 1.3.A.2 | Y | | S, P, CT | A | - |  |
|  | Installation instructions | 1.3.A.3 | W | | P, II | A | - |  |
| **32 9223** | **Sodding** |  |  | |  |  |  |  |
|  | Sod certification | 1.2.A.1 | W | | CT | A | - |  |
|  | Sodding schedule | 1.2.A.2 | W | | OT | A | - |  |
|  | Sample of materials | 1.2.A.3 | X | | S | A | - |  |
| **32 9300** | **Plants** |  |  | |  |  |  |  |
|  | Planting schedule dates and type of work to be performed. Correlate to provide specified maintenance periods. Once schedule is accepted, document reasons for delays or changes and revise dates only as approved by LANL STR. | 1.3.A.1 | W | | P, II | A | - |  |
|  | Materials list with installation instructions | 1.3.A.2 | W | | P | A | - |  |
|  | Catalog data | 1.3.A.3 | X | | P, CD | A | - |  |
|  |  |  |  | |  |  |  |  |
| **33 0513** | **Manholes and Structures** |  |  | |  |  |  |  |
|  | Certifications; Materials | 1.4.A.1 | W | | P, CT | A | - |  |
|  | [NMED approved septic tank list certification number] | 1.4.A.2 | W | | P, CT | A | - |  |
|  | [Level alarm system product data and installation instructions] | 1.4.A.3 | X | | P, II | A | - |  |
|  | Manhole exfiltration test results | 1.4.A.4 | Within 5 working days of successful test | | P, TR | A | - |  |
| **33 0530** | **Coatings and Linings for Utilities** |  |  | |  |  |  |  |
|  | Material Certification | 1.3.A.1 | W | | CT | A | - |  |
|  | Test and Inspection Results | 1.3.A.2 | Z | | TR | A | - |  |
| **33 1000** | **Water Utilities** |  |  | |  |  |  |  |
|  | Catalog data | 1.4.A.1 | X | | P, CD | A |  |  |
|  | Installation instructions for valves and accessories | 1.4.A.2 | W | | P, II | A |  |  |
|  | Existing system pressure calculations | 1.4.A.3 | F | | P | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.4.A.4 | W | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) |  | W | | P | A | W |  |
|  | [Horizontal Direction Drilling] | 1.4.A.5 | W | | P | A |  |  |
|  | Tracing wire continuity test report | 1.4.A.6 | Z | | P, TR | A |  |  |
|  | Catalog data on identification tape and tracing wire | 1.4.A.7 | X | | P, CD | A |  |  |
| **33 1300** | **Disinfection of Potable Water Piping** |  |  | |  |  |  |  |
|  | Free chlorine concentration | 1.4.A.1 | Z | | TR | A |  |  |
|  | Bacterial Quality Test | 1.4.A.2 | Z | | TR | A |  |  |
|  | Residual free chlorine concentration, after flushing chlorinated water | 1.4.A.3 | Z | | TR | A |  |  |
| **33 3000** | **Sanitary Sewerage Utilities** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.3.A.2 | W | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) |  | W | | P | A | W |  |
|  | [Horizontal Directional Drilling] | 1.3.A.3 | W | | P | A |  |  |
|  | Tracing wire continuity test report | 1.3.A.4 | Z | | P, TR | A |  |  |
| **33 3200** | **Wastewater Utility Pumping Stations** |  |  | |  |  |  |  |
|  | Catalog data | 1.3.A.1 | X | | P, CD | A |  |  |
|  | Power and Control cables | 1.3.A.2 | W | | P | A |  |  |
|  | Pump curves | 1.3.B.1 | W | | P | A |  |  |
|  | Operation and maintenance data | 1.3.B.2 | C | | P, OM | C |  |  |
|  | Theory of operation | 1.3.B.2.a | C | | P | C |  |  |
|  | Test procedure | 1.3.B.2.b | C | | P | C |  |  |
|  | Warranties | 1.3.A.3 | C | | P, WA | C |  |  |
| **33 4000** | **Storm Drainage Utilities** |  |  | |  |  |  |  |
|  | Catalog data on pipe materials, fittings, and accessories | 1.3.A.1 | X | | P, CD | A |  |  |
|  | Installation instructions for accessories | 1.3.A.2 | W | | P, II | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.3.A.3 | W | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.3.A.4 | W | | P | A | W |  |
| **33 5100** | **Natural-Gas Distribution** |  |  | |  |  |  |  |
|  | Catalog data of pipe materials | 1.3.A.1 | X | | P, CD | A |  |  |
|  | Certified material inspection report for steel pipe | 1.3.A.2 | F | | P | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.3.A.3 | W | | P | A | [W], [UI-NG] |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.3.A.4 | W | | P | A | W |  |
|  | [Horizontal directional Drilling] | 1.3.A.5 | W | | P | A |  |  |
|  | [Pipe pigging inspection report] | 1.3.A.6 | WKLY | | P | A |  |  |
|  | [Tracing wire continuity test report] | 1.3.A.7 | Z | | P, TR | A |  |  |
|  | Catalog data on identification tape [and tracing wire] | 1.3.A.8 | X | | P, CD | A |  |  |
|  | Total connected natural gas load in BTU’s/hr heat input requirement for each connected device (BTU’s/hr), and pressure (psig) requirement at building wall | 1.3.A.9 | F | | P, CA | A |  |  |
| **33 6300** | **Steam Energy Distribution** |  |  | |  |  |  |  |
|  | Catalog data | 1.4.A.1 | X | | P, CD | A |  |  |
|  | Certified material test report for the pipe | 1.4.A.2 | F | | P, CT | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.4.A.3 | W | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.4.A.4 | W | | P | A | W |  |
|  | Installation instructions | 1.4.A.5 | W | | P, II | A |  |  |
|  | Plan and profile for steam/condensate piping system | 1.4.A.6 | W | | D | A |  |  |
|  | Thermal Expansion calculation | 1.4.A.7 | W | | P, CA | A |  |  |
| **33 7119** | **Electrical Underground Ducts and Manholes** |  |  | |  |  |  |  |
|  | Catalog Data describing pre-cast manholes, manhole frames and lids, ladders, and cable racks | 1.3.A.1 | W | | SD, CD | A | UI-E |  |
|  | Test Reports: duct blockage tests | 1.3.A.2 | Z | | TR | A | UI-E |  |
|  | Project Record documents | 1.3.B.1 | C | | P | C | UI-E |  |
| **33 7311** | **Pad-Mounted Transformer Rough-In** |  |  | |  |  |  |  |
|  | N/A |  |  | |  |  |  |  |
| **33 7711** | **Pad-Mounted Switch Rough-In** |  |  | |  |  |  |  |
|  | N/A |  |  | |  |  |  |  |
| **33 8126** | **Communication Underground Ducts, Manholes, and Handholes** |  |  | |  |  |  |  |
|  | Catalog Data | 1.3.A.1 | X | | P, CD | A | NIE-TS |  |
|  | Project Record Documents | 1.3.B.1 | C | | P, D | C | - |  |
|  |  |  |  | |  |  |  |  |
| **40 0504** | **Process Piping** |  |  | |  |  |  |  |
|  | Materials Catalog Data | 1.4.B.1 | X | | CD | A | [PS] |  |
|  | Materials Design Data, Evaluations, and Calculations | 1.4.B.2 | X | | P, CA | A | P[S] |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.4.C.1 | F | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.4.C.2 | F | | P | A | W |  |
|  | Fabrication: Installation Instructions | 1.4.C.3 | F | | II | A | - |  |
|  | Fabrication: Procedures | 1.4.C.4 | F | | II | A | - |  |
|  | Fabrication: Test and Inspection Plan | 1.4.C.5 | F | | P | A | - |  |
|  | Fabrication: Test Reports | 1.4.C.6 | MON | | TR | A | - |  |
|  | Fabrication: Certifications | 1.4.C.7 | F | | CT | A | - |  |
|  | Operation & Maintenance Manual | 1.4.D.1 | C | | OM | C | - |  |
|  |  |  |  | |  |  |  |  |
| **41 2213.13** | **Bridge Cranes** |  |  | |  |  |  |  |
|  | Certification of previous crane installations | 1.3.B.1 | W | | P, CT | A | BC |  |
|  | Certifications for structural steel. Certifications for all electrical and mechanical components; Cerification of required inspection and load testing. | 1.3.B.2  1.3.B.3  1.3.B.4 | F | | P, CT | A | BC |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.3.B.5 | F | | P | A | W |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) |  | F | | P | A | W |  |
|  | Certificate that the crane contains no asbestos, lead paint, polychlorinated biphenyl’s (PCB’s), or elemental mercury. Chromates shall be avoided where feasible. | 1.3.B.6 | W | | P, CT | A |  |  |
|  | Product Data | 1.3.C | X | | P-CD | A |  |  |
|  | Manufacturer's installation instructions | 1.3.D | X | | P, II | A |  |  |
|  | Performance Data | 1.3.E | W | | P,PD | A |  |  |
|  | Shop drawings: Structural; crane arrangement drawings; Bridge drive and hoist arrangement drawings | 1.3.F  1.3.F.1  1.3.F.2  1.3.F.3 |  | |  |  |  |  |
|  | Electrical shop drawings | 1.3.F.4 | F | | D | A |  |  |
|  | Design Data: | 1.3.G |  | |  |  |  |  |
|  | Calculations | 1.3.G.1  1.3.G.2.a  1.3.G.2.b | F | | P, CA | A |  |  |
|  | Operation and maintenance data | 1.3.H | at closeout | | P, OM | C |  |  |
|  | Written 24 month parts and labor warranty | 1.3.I | C | | P, WA | C |  |  |
| **41 2225** | **Hoist and Trolleys** |  |  | |  |  |  |  |
|  | Quality assurance plan | 1.5.A.1 | Z | | P | A |  |  |
|  | Design data | 1.5.A.2 | F | | P | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.5.A.3 | F | | P | A | W |  |
|  | Certification of previous hoist or trolley installations | 1.5.A.4 | X | | P, CT | A |  |  |
|  | Certified Material Test Reports and Certifications for structural steel | 1.5.A.5 | F | | P, CT | A |  |  |
|  | Certifications for all electrical and mechanical components | 1.5.A.6 | F | | P, CT | A |  |  |
|  | Certification of required inspection and load testing | 1.5.A.7 | F | | P, CT | A |  |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.5.A.8 | F | | P | A | W |  |
|  | Inspection Test Reports and inspector personnel certifications | 1.5.A.9 | WKLY | | P, TR | A |  |  |
|  | Manufacturer’s assembly, installation, maintenance, and troubleshooting instructions including: | 1.5.A.10 | W | | P, II | A |  |  |
|  | Information for authorized service facilities and parts distributor | 1.5.A.10.a | W | | P | A |  |  |
|  | Parts lists | 1.5.A.10.b | W | | P | A |  |  |
|  | Recommended spare parts | 1.5.A.10.c | W | | P | A |  |  |
|  | Lubrication requirements and acceptable substitutes | 1.5.A.10.d | W | | P | A |  |  |
|  | Maintenance requirements and schedules for all equipment | 1.5.A.10.e | W | | P | C |  |  |
|  | Safety procedures | 1.4.A.10.f | W | | P | A |  |  |
|  | Proper operation of all equipment | 1.5.A.10.g | W | | P | A |  |  |
|  | Routine maintenance procedures | 1.5.A.10.h | C | | P | C |  |  |
|  | Assembly drawings and descriptive literature | 1.5.A.10.i | W | | D | A |  |  |
|  | Wiring schematics | 1.5.A.10.j | W | | D | A |  |  |
|  | [Shop Drawings, Catalog Cut sheets] | 1.5.A.11 | F | | SD | A |  |  |
|  | Structural steel fabrication drawings | 1.5.A.11.a | F | | D | A |  |  |
|  | Hoist or trolley drawings (Plans, Sections and Elevations) | 1.5.A.11.b | F | | D | A |  |  |
|  | Electrical drawings (plans, sections, elevations) | 1.5.A.11.c | Z | | D | A |  |  |
|  | Wiring diagrams: Drawings to include the following: | 1.5.A.11.d | Z | | D | A |  |  |
|  | Manufacturer’s name | 1.5.A.11.d.1 | Z | | D | A |  |  |
|  | Model number | 1.5.A.11.d.2 | Z | | D | A |  |  |
|  | Rating | 1.5.A.11.d.3 | Z | | D | A |  |  |
|  | Hook-speed/hook-load curves (hoisting and lowering) | 1.5.A.11.d.4 | Z | | D | A |  |  |
|  | Motor-speed/ torque and current curves | 1.5.A.11.d.5 | Z | | D | A |  |  |
|  | Evidence of experience | 1.5.A.12 | X | | P | A |  |  |
|  | Document inspections performed on the hoist or trolley systems | 1.5.A.13 | WKLY | | P | A |  |  |
|  | Certified Material Test Reports or Certificates of Conformance | 1.5.A.14 | Z | | P | A |  |  |
|  |  |  |  | |  |  |  |  |
| **43 3113.37** | **High Efficiency Gas Purification Filters** |  |  | |  |  |  |  |
|  | Submittal of QA plan | 1.5 | Z | | OT | A |  |  |
|  | Certificate of Conformance. The CoC shall include: | 1.5.A.1 | F | | P, CT | A |  |  |
|  | Copy of the filter manufacturer’s QA plan | 1.5.A.1.a | F | | P, CT | A |  |  |
|  | Certification that filters and filter housing have been designed manufactured and constructed in accordance with manufacturer’s QA plan and Section 1.6 | 1.5.A.1.b | Y | | P, CT | A |  |  |
|  | Certification documentation showing that the filter meets the design requirements | 1.5.A.1.c | Y | | P, CT | A |  |  |
|  | Certification that any custom built filter housing was fabricated and leak tested to meet the requirements of this specification. | 1.5.A.1.d | Y | | P, CT | A |  |  |
|  | Purchased item identified by model number | 1.5.A.1.e | Y | | P | A |  |  |
|  | Statement that the filter housing meets the leak test requirements | 1.5.A.1.f | Y | | P | A |  |  |
|  | Purchase Order (PO) number | 1.5.A.1.g | Y | | P | A |  |  |
|  | Any approved changes, waivers, or deviations from this specification | 1.5.A.1.h | Z | | P | A |  |  |
|  | Installation Instructions | 1.5.A.2 | W | | P, II | A |  |  |
|  | Warranty documentation | 1.5.A.3 | C | | P, WA | C |  |  |
| **43 4113** | **Gas and Liquid Pressure Vessels** |  |  | |  |  |  |  |
|  | Reference to LANL Project I.D. Number, LANL Subcontract Number. LANL may choose to waive some of these submittals if the Supplier has been granted prior approval by LANL for recent Subcontract submittals | 1.5.A.1 | Z | | P | A |  |  |
|  | Design drawings, calculations, and supporting data prior to beginning pressure vessel fabrication. | 1.5.B.1 | F | | D, P, CA | A |  |  |
|  | Quality Assurance/ Quality Control | 1.5.C | X | | OT | A |  |  |
|  | Uncontrolled copy of QA manual for LANL approval | 1.5.C.1 | X | | (1)P | A |  |  |
|  | Notifications | 1.5.C.2 | W | | P | A |  |  |
|  | Lower Tier Services Plan | 1.5.C.3 | F | | P | A |  |  |
|  | Fabrication Schedule | 1.5.C.4 | F | | P | A |  |  |
|  | Material Control Procedure | 1.5.C.5 | X | | P | A |  |  |
|  | Material control procedure to be used in the execution of the work. | 1.5.C.5.a | F | | P | A |  |  |
|  | Heat Numbers: Note heat numbers on weld maps | 1.5.C.5.b | Y | | D, P | A |  |  |
|  | Fabrication Procedures: a copy of: | 1.5.C.6 | W | |  | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.5.C.6.a | F | | P | A | W |  |
|  | Welding & NDE Personnel Listing | 1.5.C.6.c | W | | P | A |  |  |
|  | Liquid Penetrant Test Procedure | 1.5.C.6.d | W | | P | A |  |  |
|  | Radiographic Test Procedure, and | 1.5.C.6.e | W | | P | A |  |  |
|  | Leak Test Procedure | 1.5.C.6.f | W | | P | A |  |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.5.C.7.a | F | | P | A | W |  |
|  | NDE Personnel Certifications | 1.5.C.7.b | W | | P, CT | A |  |  |
|  | Material certifications for steel | 1.5.C.7.c | W | | P, CT | A |  |  |
|  | Supplier’s ASME “Certificate of Compliance,” | 1.5.C.7.d | W | | P, CT | A |  |  |
|  | Test Reports: a copy of: | 1.5.C.8 | S | | TR | A |  |  |
|  | Liquid Penetrant Test Report | 1.5.C.8.a | S | | P, TR | A |  |  |
|  | Radiographic Test Report, and | 1.5.C.8.b | S | | P, TR | A |  |  |
|  | Hydrostatic Leak Test Report | 1.5.C.8.c | S | | P, TR | A |  |  |
|  | Shipping Submittals: a copy of | 1.5.C.9 | S | | OT | A |  |  |
|  | Supplier’s vessel Cleaning Procedure | 1.5.C.9.a | S | | P | A |  |  |
|  | Supplier’s Packaging Procedure | 1.5.C.9.b | S | | P | A |  |  |
|  | Bill of Lading with shipment | 1.5.C.9.c | Y | | P | A |  |  |
|  | Nonconformances | 1.5.D | Y | | OT | A |  |  |
|  | Written request to LANL for any proposed technical changes. | 1.5.D.1 | W | | P | A |  |  |
|  | Warranty | 1.5.E | C | | WA | A |  |  |
| **43 4116** | **Atmospheric Tanks and Vessels** |  |  | |  |  |  |  |
|  | Reference to LANL Project ID Number, LANL Subcontract Number, Storage Tank Number, Storage Tank Title, and Drawing Number on correspondence. | 1.5.B | Z | | P | A |  |  |
|  | Drawings, Calculations and Supporting Data | 1.5.B.1 | F | | D, CA | A |  |  |
|  | Design drawings, calculations, and supporting data prior to beginning storage tank fabrication. | 1.5.B.1.a | F | | P, D,CA | A |  |  |
|  | Quality Assurance/Quality Control | 1.5.B.2 | F | | OT | A |  |  |
|  | Uncontrolled copy of the Supplier’s QA manual for LANL approval | 1.5.B.2.a | F | | P | A |  |  |
|  | Notifications | 1.5.B.2.b | W | | OT | A |  |  |
|  | Lower Tier Services Plan | 1.5.B.2.c | F | | P | A |  |  |
|  | Fabrication Schedule | 1.5.B.2.d | F | | P | A |  |  |
|  | Material Control Procedure | 1.5.B.2.e | F | | P | A |  |  |
|  | Welding/Brazing/Fusing Procedure Specifications (WPS) with the associated Procedure Qualification Records (PQRs) | 1.5.B.2.f.i | F | | P | A | W |  |
|  | Welding & NDE Personnel Listing | 1.5.B.2.f.iii | F | | P | A |  |  |
|  | Liquid Penetrant Test Procedure | 1.5.B.2.f.iv | F | | P | A |  |  |
|  | Radiographic Test Procedure | 1.5.B.2.f.v | F | | P | A |  |  |
|  | Leak Test Procedure | 1.5.B.2.f.vi | F | | P | A |  |  |
|  | Certifications: a copy of: | 1.5.B.2.g | F | | CT | A |  |  |
|  | Welding/Brazing/Fusing Performance Qualification Records (WPQR) | 1.5.B.2.g.i | F | | P | A | W |  |
|  | NDE Personnel Certifications | 1.5.B.2.g.ii | F | | P, CT | A |  |  |
|  | Material certifications | 1.5.B.2.g.iii | F | | P, CT | A |  |  |
|  | Test Reports: a copy of: | 1.5.B.2.h | S | | P, TR | A |  |  |
|  | Liquid Penetrant Test Report | 1.5.B.2.h.i | S | | P, TR | A |  |  |
|  | Radiographic Test Report. | 1.5.B.2.h.ii | S | | P, TR | A |  |  |
|  | Leak Test Report. | 1.5.B.2.h.iii | S | | P, TR | A |  |  |
|  | Shipping Submittals: a copy of: | 1.5.B.2.i | Y | | OT | A |  |  |
|  | Supplier’s vessel Cleaning Procedure | 1.5.B.2.i.i | Y | | P | A |  |  |
|  | Supplier’s Packaging Procedure. | 1.5.B.2.i.ii | S | | P | A |  |  |
|  | Bill of Lading with the storage tank shipment. | 1.5.B.2.i.iii | Y | | P | A |  |  |
|  | Nonconformances | 1.5.B.3 | S | | OT | A |  |  |
|  | Warranty | 1.5.B.4 | at closeout | | P, WA | C |  |  |

1. Name indicates the actual reviewer assigned for the Project. This column is to completed after the Project Specification is completed by the EOR. [↑](#footnote-ref-1)
2. ES-EPD Design Reviewers shall be approved LBO reviewers when applicable. [↑](#footnote-ref-2)
3. System Engineers may be required for more than one discipline, consult the FDAR and where more than one use the SE-[DISCIPLINE] nomenclature to designate. [↑](#footnote-ref-3)
4. Where no numbering is provided for a submittal the row is either provided as reference information and no submittal is required, or that submittal is provided under a different specification. Numbering indicates the submittal is required under the spec. [↑](#footnote-ref-4)
5. Div 02-48 – this refers to the Division Specifications 02 (Existing Conditions) through Division 48 (Electrical Power Generation) [↑](#footnote-ref-5)
6. When the PE is assigned he/she may determine to perform the review, and/or delegate the review to other LANL Reviewer(s). [↑](#footnote-ref-6)
7. Submit Under Div 02-48 – indicates the submittals of this type should be listed and submitted under the Division Specification. Should the Division Specification not list the submittal, but it is required by code or otherwise, use the columns indicating submittal schedule, type and category shown here and submit under the Division 02-48 Specification. [↑](#footnote-ref-7)