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SECTION 01 11 00  
SUMMARY OF WORK

**PART 1 - GENERAL**

**1.01 SUMMARY**

**A. This Section includes the following:**

- a. Work covered by the Contract Documents.
- b. Use of premises.
- c. Coordination.
- d. Specification formats and conventions.
- e. Examination of the projects

**B. Architectural Scope of Work as detailed below;**

Trails West Elementary

Add an ILC restroom within the classroom with space for the student, teacher, caregiver using the changing table, and toilet chair.

Cherry Hills Village Elementary School

Add an ILC restroom within the classroom with space for the student, teacher, caregiver using the changing table, and toilet chair. Provide upper cabinets and base cabinet with sink

Creekside Elementary School

Add an ILC restroom within the classroom with space for the student, teacher, caregiver using the changing table, and toilet chair.

I-Team Ranch

Replace moveable partitions with gypsum walls in classrooms 102, 103, 104, & 105. Remove existing doors and add 20 minute rated wooden doors in each classroom. Remove track for the moveable partitions in each classroom. Add a whiteboard in each classroom.

**C. Mechanical Scope of Work as detailed below;**

Trails West Elementary

Provide new exhaust fan and relocate supply ductwork to serve new restroom. Discharge exhaust ductwork through roof.

Cherry Hills Village Elementary School

Provide new exhaust fan and relocate supply ductwork to serve new restroom. Discharge exhaust ductwork through roof.

Creekside Elementary School

Provide new exhaust fan and relocate supply ductwork to serve new restroom. Discharge exhaust ductwork through roof.

**D. Plumbing Scope of Work as detailed below;**

Trails West Elementary

Provide new plumbing and fixtures for new restroom. Connect to plumbing piping serving adjacent staff toilet.

Cherry Hills Village Elementary School  
Provide new plumbing and fixtures for new restroom. Connect To  
plumbing piping serving adjacent restroom group.

Creekside Elementary School  
Provide new plumbing and fixtures for new restroom. Connect to  
plumbing piping serving adjacent restroom group.

**E. Fire Protection System Scope of Work as detailed below;**

Trails West Elementary  
Relocate and provide new heads for new space layout.

Cherry Hills Village Elementary School  
None

Creekside Elementary School  
Relocate and provide new heads for new space layout.

**F. Electrical Scope of Work as detailed below;**

Remove one 2x2 nightlight fixture. Relocate one 2x2 fixture. Provide  
new wall occupancy/vacancy switches. Rework existing lighting control.  
Provide one additional duplex receptacle.

Trails West Elementary

Remove existing fluorescent fixtures. Relocated existing receptacles and  
fire alarm horn/strobe. Provide new LED downlights and wall  
occupancy/vacancy control. Provide new sink and changing table  
receptacles. Provide new fire alarm detection and strobe devices.

Cherry Hills Village Elementary School

Remove existing fluorescent fixture. Relocated existing receptacle.  
Provide new LED downlights and wall occupancy/vacancy control. Provide  
new sink and changing table receptacles. Provide new fire alarm  
detection and strobe devices.

Creekside Elementary School

Remove existing fluorescent fixtures. Relocate existing receptacle.  
Provide new LED downlights and wall occupancy/vacancy control. Provide  
new sink and changing table receptacles. Provide new fire alarm  
detection and strobe devices.

I-Team Ranch

Existing occupancy switches shall be relocated adjacent to new doors -  
typical for classrooms 102,103,104 and 105. Provide four new standard  
duplex receptacles in the commons area. Provide four controlled  
receptacles (one in each classroom). Provide astronomic time clocks in  
the commons area to operate controlled classroom receptacles.

**1.02 WORK COVERED BY CONTRACT DOCUMENTS**

- A. Project Identification: Small and Misscellenous Projects
- B. Owner: Cherry Creek School District No. 5, 9301 E. Union Ave., Greenwood Village, CO 80111
- C. Architect of Record: LOA Architecture, P.C. 1888 Sherman Street, Suite 425, Denver, CO 80203
- D. Work for this project includes demolition, materials, labor, transportation, security, and other items identified in, or reasonably inferable from the For Construction and Project Manual for the project: dated October 25, 2023.

**1.03 WORK SEQUENCE**

A. Sequence and schedule shall be established by the Contractor to achieve completion dates as specified elsewhere. Critical work sequences and related scheduling requirements are detailed in Section 01 32 00 - Construction Progress Documentation. The Contractor's work plan shall include the activities and restrictions specified in Section 01 32 00 - Construction Progress Documentation and other specification sections.

**1.04 SCHEDULE OF DRAWINGS AND SPECIFICATIONS;**

The Project Manual, and Drawings form the Contract Documents will be included in the Design Development submittal.

**1.05 USE OF PREMISES AND SECURITY**

- a. Driveways and Entrances: Keep surrounding streets, driveways and entrances serving the existing school building available at all times. Do not use these areas for parking or storage of materials.
- b. On-site parking can be used by the Construction Manager/General Contractor for parking during the construction period. Any and all damage to existing parking areas during the construction period shall be repaired by the Construction Manager/General Contractor.

**1.06 SPECIFICATION FORMATS AND CONVENTIONS**

- a. Specification Format: The Specifications are organized into Divisions and Sections using the 33-division format and CSI/CSC's "MasterFormat" numbering system.
  - i. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.

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- b. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations.  
These conventions are as follows:
- i. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
- ii. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Construction Manager/General Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
1. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

#### **1.07 REGULATORY REQUIREMENTS**

- a. The General Contractor has exclusive responsibility for construction means and techniques including compliance with all regulations governing safety and health of employees and the public in the vicinity of construction. The General Contractor shall assess proposed conditions and make all necessary preparations and precautions such as shoring, bracing, scaffolding, and other temporary construction necessary to accomplish the work in full compliance with the requirements of this section.
- b. It shall be the responsibility of the General Contractor to apply for, procure, and pay for all required building permits, licenses, inspections, and all other documentation for compliance required by governing Federal, State, Municipal, and special laws and regulations.

#### **1.08 EXAMINATION OF THE PROJECT**

- A. Failure to visit the schools will in no way relieve the Contractor from necessity of furnishing materials or performing work that maybe required to complete work in accordance with Drawings and Specifications without additional cost to Cherry Creek Schools

#### **PART 2 - PRODUCTS (Not Used)**

#### **PART 3 - EXECUTION (Not Used)**

END OF SECTION 01 11 00

SECTION 01 14 00  
WORK RESTRICTIONS

PART 1 - GENERAL

1.01 SUMMARY:

A. Access to Site:

1. General Contractor to arrange in advance with Cherry Creek Schools.

B. General Contractor to coordinate with Occupants: Allow for continued occupancy of, access to, and egress from non-construction areas in compliance with applicable codes.

1. The existing buildings on this campus will be occupied during construction.

c. Use of Premises: Refer to General Conditions

1. Non-school personnel are prohibited inside of designated contract areas at all times.

1.02 RELATED WORK:

A. Section 01 51 00 Temporary Utilities

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 15 00  
REFERENCE STANDARDS

**PART 1 - GENERAL**

**1.01 SUMMARY:**

A. Work Included:

1. This Section contains a summary of industry-accepted and recognized standards published by trade associations, government and institutional organizations which are referred to in the various Sections of these Specifications or elsewhere in the Contract Documents.
2. Standards listed herein are included in the Contract Documents by this reference, and become a part of the Contract Documents to the same extent as though included in their entirety unless specific limitations are noted in the individual Specifications Sections where the standards are referenced.
3. Listings of reference standards include name and address of the organization publishing the standard, plus the full name and designator of each of the standards referenced herein.
4. If a publication date or edition number is listed with the reference standard, that publication date or edition number shall apply; otherwise, the publication date or edition number in effect at the Contract Date shall apply.
5. Inclusion of reference standards herein does not make the Architect an agent of the publishing agency, nor does it obligate the Architect to perform inspections required by or to enforce rules or regulations contained in the reference standards.

**1.02 REFERENCES:**

- A. Related Documents: General Conditions, Supplementary Conditions, and applicable provisions of Division 1 Sections apply to this Section.
- B. Building Codes: Applicable building codes are listed in Section 01 41 00.
- C. Precedence of Requirements: In the event of a conflict between the requirements of a published reference standard and the specific requirements of the General Conditions, Supplementary Conditions, or other Contract Documents, or between one reference standard and another reference standard, the more stringent requirements shall take precedence.

- D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.01 SCHEDULE OF REFERENCE STANDARDS:**

AA	Aluminum Association 900 19th St., NW, Suite 300 Washington, DC 20006 (202) 862-5100
AABC	Associated Air Balance Council 1518 K St., NW, Suite 503 Washington, DC 20005 (202) 737-0202
AAMA	American Architectural Manufacturers Assoc. 2700 River Rd., Suite 118 Des Plaines, IL 60018 (312) 699-7310
AAN	American Association of Nurserymen 1250 Eye St., NW, Suite 500 Washington, DC 20005 (202) 789-2900
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol St., Suite 225 Washington, DC 20001 (202) 624-5800
ACI	American Concrete Institute P.O. Box 19150 Detroit, MI 48219 (313) 532-2600

AI	Asphalt Institute Research Park Drive P.O. Box 14052 Lexington, KY 40512-4052 (606) 288-4960
AIA	American Institute of Architects 1735 New York Ave., NW Washington, DC 20006 (202) 626-7300
AIHA	American Industrial Hygiene Assoc. 345 White Pond Dr. P.O. Box 8390 Akron, OH 44320 (216) 762-7294
AISC	American Institute of Steel Construction One East Wacker Drive, Suite 3100 Chicago, IL 60601-2001 (312) 670-2400
AISI	American Iron and Steel Institute 1133 Fifteenth St., NW Washington, DC 20005 (202) 452-7100
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018 (212) 354-3300
APA	American Plywood Assoc. P.O. Box 11700 Tacoma, WA 98411 (206) 565-6600
ARMA	Asphalt Roofing Manufacturers Assoc. 6288 Montrose Rd. Rockville, MD 20852 (301) 231-9050
ASA	Acoustical Society of America 500 Sunnyside Blvd. Woodbury, NY 11797 (516) 349-7800
ASC	Adhesive and Sealant Council 1627 K Street, NW, Suite 1000 Washington, DC 20006 (202) 452-1500



ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329 (404) 636-8400
ASME	American Society of Mechanical Engineers 345 East 47th St. New York, NY 10017 (212) 705-7722
ASPE	American Society of Plumbing Engineers 3617 Thousand Oaks Blvd., Suite 210 Westlake, CA 91362 (805) 495-7120
ASSE	American Society of Sanitary Engineering P.O. Box 40362 Bay Village, OH 44140 (216) 835-3040
ASTM	American Society for Testing and Materials 1916 Race St. Philadelphia, PA 19103 (215) 299-5400
AWI	Architectural Woodwork Institute 2310 S. Walter Reed Drive Arlington, VA 22206 (703) 671-9100
AWPA	American Wood Preservers' Assoc. P.O. Box 849 Stevensville, MD 21666 (301) 643-4163
AWS	American Welding Society 550 LeJeune Road, NW P.O. Box 351040 Miami, FL 33135 (305) 443-9353
AWWA	American Water Works Assoc. 6666 W. Quincy Ave. Denver, CO 80235 (303) 794-7711
BHMA	Builders' Hardware Manufacturers Assoc. 355 Lexington Ave., 17th Floor New York, NY 10017 (212) 661-4261

CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Rd. Schaumburg, IL 60173 (312) 517-1200
CTI	Ceramic Tile Institute of America 700 N. Virgil Ave. Los Angeles, CA 90029 (213) 660-1911
DHI	Door and Hardware Institute 7711 Old Springhouse Rd. McLean, VA 22102 (703) 556-3990
DLPA	Decorative Laminate Products Assoc. 600 S. Federal St., Suite 400 Chicago, IL 60605 (312) 922-6222
EIA	Electronic Industries Assoc. 1722 Eye Street, NW, Suite 300 Washington, DC 20006 (202) 457-4900
ETL	ETL Testing Laboratories, Inc. P.O. Box 2040 Route 11, Industrial Park Cortland, NY 13045 (607) 753-6711
FGMA	Flat Glass Marketing Assoc. White Lakes Professional Bldg. 3310 Harrison Topeka, KS 66611 (913) 266-7013
FM	Factory Mutual Research Organization 1151 Boston-Providence Turnpike Norwood, MA 02062 (617) 762-4300
GA	Gypsum Association 810 First Street, NE, Suite 510 Washington, DC 20002 (202) 289-5440
IEEE	Institute of Electrical and Electronic Engineers 345 E. 47th St. New York, NY 10017 (212) 705-7900

IESNA	illuminating Engineering Society of North America 345 E. 47th St. New York, NY 10017 (212) 705-7926
IGCC	Insulating Glass Certification Council c/o ETL Testing Laboratories, Inc. P.O. Box 2042 Route 11, Industrial Park Cortland, NY 13045 (607) 753-6711
MCAA	Mechanical Contractors Association of America 1385 Piccard Dr. Rockville, MD 20832 (301) 869-5800
NAAMM	National Association of Architectural Metal Manufacturers 600 S. Federal St., Suite 400 Chicago, IL 60605 (312) 922-6222
NAPA	National Asphalt Pavement Assoc. Calvert Building, Suite 620 6811 Kenilworth Ave. Riverdale, MD 20737 (301) 779-4880
NBHA	National Builders Hardware Assoc. (Now DHI)
NCMA	National Concrete Masonry Assoc. P.O. Box 781 Herndon, VA 22070 (703) 435-4900
NEC	National Electrical Code (from NFPA)
NECA	National Electrical Contractors Assoc. 7315 Wisconsin Ave. Bethesda, MD 20814 (301) 657-3110
NEMA	National Electrical Manufacturers Assoc. 2101 L St., NW, Suite 300 Washington, DC 20037 (202) 457-8400

NFPA	National Fire Protection Assoc. One Batterymarch Park P.O. Box 9101 Quincy, MA 02269-9101 (617) 770-3000
NPCA	National Paint and Coatings Assoc. 1500 Rhode Island Ave., NW Washington, DC 20005 (202) 462-6272
NRCA	National Roofing Contractors Assoc. One O'Hare Centre 6250 River Road, Suite 8030 Rosemont, IL 60018 (708) 318-6722
PCA	Portland Cement Assoc. 5420 Old Orchard Road Skokie, IL 60077 (312) 966-6200
PCI	Prestressed Concrete Institute 175 W. Jackson Blvd. Chicago, IL 60604 (312) 786-0300
RFCI	Resilient Floor Covering Institute 966 Hungerford Drive, Suite 12-B Rockville, MD 20805 (301) 340-8580
RMA	Rubber Manufacturers Assoc. 1400 K St., NW Washington DC 20005 (202) 682-4800
SDI	Steel Deck Institute P.O. Box 9506 Canton, OH 44711 (216) 493-7886
S.D.I.	Steel Door Institute 30200 Detroit Road Cleveland, OH 44145 (216) 889-0010
SGCC	Safety Glazing Certification Council c/o ETL Testing Laboratories Route 11, Industrial Park Cortland, NY 13045 (607) 753-6711

SIGMA	Sealed Insulating Glass Manufacturers Assoc. 111 E. Wacker Drive Chicago, IL 60601 (312) 644-6610
SJI	Steel Joist Institute 1205 48th Avenue North, Suite A Myrtle Beach, SC 29577 (803) 449-0487
SMACNA	Sheet Metal and Air Conditioning Contractors National Association P.O. Box 70 Merrifield, VA 22116 (703) 790-9890
SSPC	Steel Structures Painting Council 4400 Fifth Ave. Pittsburgh, PA 15213 (412) 268-3327
SWI	Steel Window Institute c/o Christine M. Devor Thomas Associates, Inc. 1230 Keith Building Cleveland, OH 44115 (216) 241-7333
TIMA	Thermal Insulation Manufacturers Assoc. 29 Bank Street Stamford, CT 06901 (203) 324-7533
UL	Underwriters Laboratories 333 Pfingsten Rd. Northbrook, IL 60062 (708) 272-8800
USP	U.S. Pharmacopoeia 12601 Twinbrook Parkway Rockville, MD 20852 (301) 881-0666
WRI	Wire Reinforcement Institute 1760 Reston Parkway, Suite 403 Reston, VA 22090 (703) 790-9790
WSC	Water Systems Council 600 S. Federal St., Suite 400 Chicago, IL 60605 (312) 922-6222

WWPA            Western Wood Products Assoc.  
                  Yeon Building  
                  522 SW 5th Avenue  
                  Portland, OR 97204-2122  
                  (503) 224-3930

W.W.P.A.       Woven Wire Products Assoc.  
                  2515 N. Nordica Ave.  
                  Chicago, IL 60635  
                  (312) 637-1359

**3.02        FEDERAL GOVERNMENT AGENCIES:**

- A.    Names and titles of federal government standard or Specification producing agencies are often abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up to date as of the date of the Contract Documents.

CE            Corps of Engineers  
                  (U.S. Department of the Army)  
                  Chief of Engineers - Referral  
                  Washington, DC 20314  
                  (202) 272-0660

CFR           Code of Federal Regulations  
                  Available from the Government Printing Office  
                  N. Capitol St. between G and H St. NW  
                  Washington, DC 20402  
                  (202) 783-3238

(Material is usually first published in the "Federal Register")

CPSC          Consumer Product Safety Commission  
                  5401 Westbard Ave.  
                  Bethesda, MD 20816  
                  (800) 638-2772

CS            Commercial Standard  
                  (U.S. Department of Commerce)  
                  Government Printing Office  
                  Washington, DC 20402  
                  (202) 377-2000

DOC          Department of Commerce  
                  14th St. and Constitution Ave., NW  
                  Washington, DC 20230  
                  (202) 377-2000

DOT        Department of Transportation  
            400 Seventh St., SW  
            Washington, DC 20590  
            (202) 366-4000

EPA        Environmental Protection Agency  
            401 M St., SW  
            Washington, DC 20460  
            (202) 382-2090

FS         Federal Specification (from GSA)  
            Specifications Unit (WFSIS)  
            7th and D St., SW  
            Washington, DC 20406  
            (202) 472-2205 or 472-2140

NIST       National Institute of Standards and Technology  
            (U.S. Department of Commerce)  
            Gaithersburg, MD 20899  
            (301) 975-2000

OSHA      Occupational Safety and Health Administration  
            (U.S. Department of Labor)  
            Government Printing Office  
            Washington, DC 20402  
            (202) 523-6091

PS         Product Standard of NBS  
            (U.S. Department of Commerce)  
            Government Printing Office  
            Washington, DC 20402  
            (202) 783-3238

**END OF SECTION 01 1500**

SECTION 01 20 00  
PROJECT MEETINGS

**PART 1 - GENERAL**

**1.01 REQUIREMENTS:**

- A. The types and minimum requirements for project meetings are included but not necessarily limited to the following categories:
  - 1. Pre-construction meeting
  - 2. Project and Coordination meetings
  - 3. Specially called meetings
- B. The Owner's Project Manager shall schedule and administer a pre-construction meeting and specially called meetings throughout the progress of the work. The General Contractor will:
  - 1. Prepare agenda for meetings.
  - 2. Distribute written notice of each meeting four days in advance of meeting date.
  - 3. Make physical arrangements for meetings.
  - 4. Preside at meeting.
  - 5. Record the minutes; include significant proceedings and decisions.
  - 6. Reproduce and distribute copies of minutes within three days after each meeting and send to:
    - (a) Participants in the meeting.
    - (b) Parties affected by decisions made at the meeting.
    - (c) Architect
  - 7. Representatives of Contractors, Subcontractors, and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.



C. Preconstruction Meetings:

- a. A meeting will be scheduled by the Architect within ten (10) days following Notice of Award, at which time the Contractor, will submit executed bonds and insurance certificates. Administrative requirements including but not limited to, subcontractor lists, schedule of values, payment applications, change order procedures, sales tax records and project closeout will be reviewed in detail.
- b. Site Mobilization Conference: A meeting will be scheduled by the Architect at the site immediately prior to Contractor move-in. Representatives of the Contractor, Geotechnical Engineer, Owner, and Architect will be present. Job site procedures, to include the following items, will be discussed:
  - 1) Procedures for maintaining record documents
  - 2) Owner's requirements
  - 3) Construction facilities and controls
  - 4) Temporary utilities
  - 5) Security and housekeeping procedures
  - 6) Materials testing
  - 7) Services of Geotechnical Engineer
  - 8) Building layout
  - 9) Use of Architect's Consultants

D. Weekly Progress Meetings:

- c. Regular weekly meetings lasting approximately one hour shall be scheduled at Cherry Creek Educational Services Center. The Contractor's Project Manager and Superintendent, Owner and Architect will be present. Minutes of progress meetings shall be kept and distributed by the Architect. The following items will be discussed:
  - 1) Review and Approval of Previous Meeting Minutes.
  - 2) Review of Work Progress Since Previous Meeting.
  - 3) Review of Problems/Conflicts.
  - 4) Status of Previous Instructions Issued.
  - 5) Review of Off-site Fabrication and Delivery Schedules.
  - 6) Problems Which Impede Construction Schedule.
  - 7) Review Status of Contractor's Construction Schedule.
  - 8) Discuss Procedures to Regain Projected Schedule.
  - 9) Itemize Work for Succeeding Work Period Up to Next Progress Meeting.
  - 10) Coordination of Schedules.
  - 11) Maintenance of Quality Standards.
  - 12) Review Contractor's Submittals.
  - 13) Review Proposed Changes for Effect on Other Trades, Construction Schedule, Completion Date and Costs.
  - 14) Coordination of Owner's Separate Contracts.
  - 15) Work in Progress During Visit.
  - 16) Other Business as Required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 20 00

SECTION 01 28 00  
CUTTING AND PATCHING

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Work Included: Provide all necessary cutting and patching of the Work as required to make materials and components fit together properly; to uncover work to provide for the installation of new work or the inspection of previously installed work; or to remove and replace defective or non-conforming work.

**1.02 REFERENCES:**

- A. Related Documents: Drawings and general provisions of Contract, including General Conditions and other Division-1 Specification Sections, apply to this Section.

**1.03 DEFINITIONS:**

- A. Cutting and Patching: As used herein, the term "cutting and patching" is defined to include, but is not necessarily limited to, demolition and repair of nominally completed and previously existing work in order to accommodate the coordination, installation and uncovering of work for access or inspection and to obtain samples for testing or similar purposes. It is further defined to include integral cutting and patching during manufacturing, fabricating, erecting and installation processes for individual units of work. Drilling to install fasteners and similar operations is not considered cutting and patching.

**1.04 SUBMITTALS:**

- A. Submittal Procedures: Refer to Section 01 33 00.
- B. Proposals:
  - 1. Where prior review of cutting and patching is required, submit proposal well in advance of timework will be performed for Architect's review and confirmation.
  - 2. Include description of why cutting and patching cannot reasonably be avoided, how it will be performed, how structural elements, if any will be affected and reinforced; products to be used; firms and tradesmen to perform work; approximate dates of work; and anticipated results in terms of variations from work as originally completed (structural, operational, visual and other qualities of significance).
  - 3. Where applicable, include cost proposal, suggested alternatives to cutting-and-patching procedure proposed, and description of circumstances which lead to need for cutting and patching.

4. Review by Architect prior to proceeding with proposed cutting and patching does not waive right to later require complete removal and replacement of work found to be cut and patched in an unsatisfactory manner.

**1.05 QUALITY ASSURANCE:**

A. Requirements For Structural Work:

1. Do not cut and patch structural work in manner resulting in reduction of load-carrying capacity or load/deflection ratio.
2. Prior to cutting and patching structural steel, structural concrete, foundation construction, basement or retaining walls, pressurized piping, and equipment, submit proposed procedures for Architect's review.

B. Operational And Safety Limitations:

1. Do not cut and patch operational elements or safety-related components in manner resulting in reduction of capacities to perform as intended or resulting in decreased operational life, increased maintenance, or decreased safety.
2. Prior to cutting and patching primary operational systems and equipment; water, moisture, vapor, air, or smoke barriers; membranes and flashings; noise and vibration control elements and systems; control communication, conveying, and electrical wiring systems; and similar categories, submit proposed procedures and materials for Architect's review.

C. Visual Requirements:

1. Do not cut and patch work which is exposed on the exterior or in occupied spaces of the building in a manner resulting in reduction of visual qualities or substantial evidence of the cut and patch work, both as judged by the Architect.
2. Remove and replace work judged by Architect to be cut and patched in a visually unsatisfactory manner.

D. Installer/Fabricator: Engage original installer or fabricator to perform cutting and patching of masonry, roofing, curtain wall or storefront systems, exterior insulation and finish systems, acoustical ceilings, floor finishes, etc. Where original installer or fabricator is not available, engage recognized expert entities to perform cut and patch work.

**PART 2 - PRODUCTS**

**2.01 MATERIALS:**

- A. Patching Materials: Except as otherwise indicated, provide materials for cutting and patching which will result in equal or better work than the work being cut and patched, in terms of performance characteristics and including visual effect where applicable. Comply with requirements and use materials identical with original materials where feasible and where recognized that satisfactory results can be produced.

**PART 3 - EXECUTION**

**3.01 EXAMINATION:**

- A. Verification of Conditions: Examine areas and conditions under which the work of this Section will be performed. Do not proceed with the work until unsatisfactory conditions have been corrected. Commencement of work implies acceptance of all areas and conditions.

**3.02 PREPARATION:**

- A. Temporary Support: Provide adequate temporary shoring, bracing, or other means of support for work to be cut to prevent failure. Do not endanger other work.
- B. Protection: Provide adequate protection of other work during cutting and patching to prevent damage and provide protection of work from adverse weather exposure.

**3.03 PERFORMANCE:**

- A. General: Employ skilled tradesman to perform cutting and patching. Except as otherwise indicated, proceed with cutting and patching at earliest feasible time in each instance, and perform work promptly.
- B. Cutting:
  - 1. Cut work by methods least likely to damage work to be retained and adjoining work.
  - 2. Review proposed procedure with original installer where possible, and comply with his recommendations.
  - 3. In general, where physical cutting action is required, cut work with sawing and grinding tools, not with hammering and chopping tools. Core drill openings through concrete work.
  - 4. Comply with the requirement of applicable Sections of Division 2 where cutting and patching requires excavating and backfilling.

- C. Patching: Patch with seams, which are durable and as invisible as possible. Comply with specified tolerances for the work. Where feasible, inspect and test patched areas to demonstrate integrity of work.
- D. Restoring:
  - 1. Restore exposed finishes of patched areas, and where necessary, extend finish restoration onto retained adjoining work in a manner, which will eliminate evidence of patching.
  - 2. Where patch occurs in painted surfaces, extend final paint cover over entire unbroken surface containing patch after patched area has received prime and base coats.

END OF SECTION 01 28 00

SECTION 01 31 00  
PROJECT MANAGEMENT AND COORDINATION

**PART 1 - GENERAL**

**1.01 WORK INCLUDED:**

- A. Work specified in this Section includes coordination efforts which must be provided by the contractor to ensure that work by others in the contract designated work area and adjacent areas does not negatively impact the Work and overall project.

**1.02 CONTRACTOR'S RESPONSIBILITIES:**

- A. The construction schedule shall reflect all interfaces and coordination efforts as specified in the General requirements, and other related contracts and procurement documents.
- B. The Owner will establish regular working relations with all contractors working in the same area and areas adjacent to the construction site. The Contractor will attend meetings as described in technical specification section 01 20 00 and coordinate work as described herein.
- C. The Contractor will assign a member of his staff to act as a coordinator, who will work to coordinate the Contractor's work with other trades doing work at the job site.

**1.03 COORDINATION:**

- A. Project Meetings
  - 1. A Pre-Construction Conference is mandatory for all Cherry Creek Schools bond projects, regardless of contract amount or scope.
  - 2. Weekly Project meetings are mandatory for Cherry Creek Schools bond projects.
  - 3. The Construction Manager/General Contractor is responsible for preparing and distributing Meeting Minutes to participants.
  - 4. Cherry Creek Schools Facilities Management Department agenda formats are recommended.
- B. Recorded logs, updated daily, are mandatory for the following administrative activities:
  - 1. Regulatory Requirements; permits and approvals
  - 2. Quality Control; testing and inspection
  - 3. Requests for Information (RFI) and responses
  - 4. Requests for changes or substitutions
  - 5. Architect's Supplemental Instructions/ Field Orders

6. Change Orders

7. Submittals

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

END OF SECTION 01 31 00



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SECTION 01 32 00  
CONSTRUCTION PROGRESS DOCUMENTATION

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. As stipulated in the General Conditions
- B. Construction Photographs: Comprehensive pre-construction photographs and videos are mandatory.
- C. Periodic Site Observation Per Agreement
- D. Progress Schedules and Reports
  - 1. Submit schedule chart with separate listings for each major trade or operation
  - 2. Interval: 3 weeks maximum
  - 3. Indicate complete sequence of construction by activity, identifying work of separate stages and other logically grouped activities.
  - 4. Indicate projected percentage of completion for each item of work at the time of each Application for Progress Payment.
  - 5. Indicate action dates for shop drawings, product data, samples and other required submittals.
  - 6. Show product delivery dates, including those furnished by Owner or Others.
  - 7. Test and Balance to be identified as a separate line item
  - 8. Closeout to be identified as a separate line item
- E. Scheduling of Construction
  - 1. Coordinate with Cherry Creek Schools Project Manager.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

END OF SECTION

SECTION 01 33 00  
SUBMITTAL PROCEDURE

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Work Included:
  - 1. This Section establishes the general procedures and requirements for submittals.
  - 2. Submittals covered under this Section include, but are not necessarily limited to, schedules, reports, product data, shop drawings, samples, and miscellaneous data specifically prepared for the Work by the Construction Manager/General Contractor or any subcontractor, manufacturer, or supplier, to illustrate some portion of the Work.
- B. Related Work: Specific requirements for submittals are included in the individual Specification Sections.
- C. Substitution Procedures in Product Options Section 01 62 00

**1.02 REFERENCES:**

- A. Related Documents: General Conditions, Supplementary Conditions, and applicable provisions of Division 1 Sections apply to this Section.

**1.03 SUBMITTALS REQUIRED**

- A. "Administrative Submittals" are submittals relating to provisions of the Contract Documents, and include but are not limited to:
  - a. Insurance certificates.
  - b. Performance and payment bonds.
  - c. List of subcontractors/material suppliers.
  - d. Construction schedule and updates.
  - e. Quality control plan.
  - f. Schedule of values.
  - g. Submittal schedule.
  - h. Applications for payment.
  - i. Substitution requests.
  - j. Close out documents.
- B. . Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals" and include, but are not limited to:
  - a. Shop drawings.
  - b. Product data.
  - c. Samples.

- C. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

**1.04 DEFINITIONS:**

- A. Product Data: As used herein, the term "product data" includes standard printed information published by the manufacturer describing materials, products, systems, and installation instructions not specifically prepared for this Project, other than designation of selections from among available choices printed.
- B. Shop Drawings: As used herein, the term "shop drawings" includes specially prepared technical data forms including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information NOT in standard printed form for application to more than one project. Supplier's standard component drawings may be submitted if they clearly show the exact items required for the Work, in context with adjacent materials, and with such relationships clearly shown. Shop drawings are not part of Contract Documents.
- C. Samples: As used herein, the term "samples" includes fabricated and unfabricated physical examples of materials, products, and units of work; as complete units or smaller portions of units of work; either for limited visual inspection or, where indicated, for more detailed testing and analysis.
- D. Mock-Ups: As used herein, the term "mock-ups" means special on site or off site forms of samples, which are too large or otherwise inconvenient for handling in transmittal or submittal form.
- E. Miscellaneous Data: As used herein, the term "miscellaneous data" means various documents related directly to the Work, including project photographs, survey data and reports, physical work records, statements of applicability, copies of certificates, bonds, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, security/protection/safety keys, and similar information, devices, materials, which are applicable to the Work but not processed as shop drawings, product data, or samples.

**1.05 QUALITY ASSURANCE:**

- A. Submittal Schedule:
1. Within 10 days after the date of the Notice to Proceed, submit a preliminary Submittal Schedule for the Architect's review.

2. The Submittal Schedule shall be coordinated with the Construction Progress Schedule required by the Conditions of the Contract. The Submittal Schedule shall provide a workable arrangement acceptable to Architect for processing submittals within reasonable amounts of time.
3. Make necessary corrections based on the Architect's review, and resubmit revised Submittal Schedule along with the required Progress Schedule.
4. As the Progress Schedule is changed and/or updated, the Submittal Schedule shall be adjusted accordingly.
5. No extension of time will be granted, nor will consideration be given to claims arising out of the Contractor's failure to submit Shop Drawings, Product Data, Samples or related submittals which do not allow adequate lead time for Architect's review, and also do not allow ample time for revision, resubmission, and subsequent review by Architect as required.
6. Submittals shall be made early enough to allow a fifteen (15) day time period from the received date for review by the Architect. Shop drawing submittals will note verified field-measured dimensions, as-built conditions, or special coordination conditions with other contractors. All on-site measurements shall be made before shop drawings are reviewed by the Architect.

B. Performance:

1. Promptly check each submittal for accuracy, completeness, and applicability, and review, approve, and submit - in sequence according to the Submittal Schedule so as to cause no delay in the Work in the work of the Owner or any separate contractor - all submittals required by the Contract Documents. Identify each submittal to include name of Project, Specification Section, supplier, source, finish, and location of use in the Project.
2. Incomplete or partial submittals will be rejected by the Architect and returned to the Contractor.

C. Verification:

1. By making a submittal to the Architect, the Contractor represents that he has approved such submittals and has determined and verified:
  - (a) The applicability of the submittal to the Project,
  - (b) All quantities and sizes of materials, detailed fabricating dimensions, temporary erection connections or closures, tolerances and the proper fit and mating with adjacent materials,

- (c) Related field measurements and field construction criteria, and
  - (d) Information pertaining to fabrication process and techniques of construction and erection.
- 2. The Contractor further represents that he has checked and coordinated information contained within such submittal with requirements of the Work and of the Contract Documents.
- D. Responsibility: The Contractor shall not be relieved of responsibility for any deviation from requirements of the Contract Documents by the Architect's review of Submittals, unless the Contractor has specifically informed the Architect in writing of such deviation at the time of the submission, and the Architect has taken no written exception to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in submittals by the Architect's review of or action upon such submittals.
- E. Submittal Validity: Submittals submitted which are not required to be submitted or are submitted without the Contractor's approval will not be processed by the Architect, but will be returned to the contractor for his compliance with Contract Document requirements, in which event it shall be deemed that the Contractor has not complied with requirements of the Contract Documents, and the Contractor shall bear responsibility for all delays as if no submittals had been submitted.
- F. Commencement of Work: No portion of the Work requiring submittals shall be commenced until submittals have been acted on by the Architect. All such portions of the Work shall be in accordance with appropriate, required submittals.

**1.06 GENERAL SUBMITTAL REQUIREMENTS:**

- A. Scheduling: Where appropriate in various required administrative submittals, (listing of products, manufacturers, suppliers, subcontractors, and in the Progress Schedule), show principal work-related submittal requirements and time schedules for coordination and integration of submittal activity with related Work.
- B. Coordination and Sequencing: Coordinate preparation and processing of submittals with performance of work so that the Work will not be delayed by submittals. Coordinate and sequence different categories of submittals for the same Work, and for interfacing units of Work, so that one will not be delayed by coordination with another. No extension of time will be allowed because of failure to properly coordinate and sequence submittals.

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- C. Preparation of Submittals: Provide permanent marking on each submittal to identify Project, date, Contractor, subcontractor, submittal name, and similar information to distinguish it from other submittals. Show evidence of Contractor's review by clearly exhibiting check marks and stamped approval marking acceptance, and provide space for the Architect's review or action marking. Package each submittal appropriately for transmittal and handling.
- D. Specific Category Submittal Requirements: Except as otherwise indicated in individual Specifications Sections, comply with general requirements specified herein for each indicated submittal category. Furnish and process intermediate submittals, where required between initial and final, similar to initial submittal(s).
- E. Progress Schedule: Refer to Supplementary Conditions for Progress Schedule requirements.
- F. Daily Reports: Furnish copies of each daily report prepared by the Contractor's Project superintendent to the Architect and the Owner. Transmit reports to the Architect on a daily basis, and to the Owner on a Weekly basis, with copies of each daily report for the preceding week.
- G. Shop Drawings:
1. Furnish newly-prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated), with name of preparer (firm name) indicated thereon. Affix seal of Contractor's or fabricator's design engineer where applicable. Show all dimensions, and note which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards, and special coordination requirements.
  2. Where shop drawings are normally required, and where specifically called for in the Specifications, submit to the Architect one (1) reproducible transparency and four (4) blue-line or blackline prints or each shop drawing and/or schedule required. Reproducible transparency and one print will be returned.
  3. Subsequent submittals(s) if required for correction or confirmation of corrective items shall be same as initial submittal except as otherwise requested by Architect or specified in Conditions of the Contract.
  4. Shop drawings and schedules will be reviewed for general conformance with the design concept contained within the Contract Documents.
  5. Do not allow shop-drawing copies into field without appropriate final approval markings by Architect.
  6. Submit one review copy to Owner at the same time as submitted to the Architect.

7. Maintain one set of reviewed shop drawings at Project Site.

H. Product Data:

1. Collect required data into one submittal for each unit of Work or system. Mark each copy to show which choices and options are applicable to the Project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.
2. Do not submit product data, or allow its use on the Project, until compliance with requirements of Contract Documents has been confirmed by Contractor. Submittals of product data are for information and record, unless otherwise indicated.
3. The initial submittal will be the only submittal required unless returned promptly by the Architect, marked with an action which indicates an observed noncompliance. Submit 7 copies. The Architect will retain sufficient copies for himself and his consultant(s) and return the rest.
4. Do not proceed with installation of materials, products, or systems, until a copy of applicable product data is in the possession of the Installer.
5. Maintain one set of product data for each submittal at Project Site.

I. Samples:

1. Where samples are normally required and where specifically called for in Specifications, submit for the Architect's review, genuine (not facsimile or printed reproduction) examples of the specific material, product, or item for selection from full range of textures, colors, and finishes currently available.
2. Full-size samples are preferable unless otherwise noted; portions are acceptable where submittal of full size samples is not feasible.
3. Submit units identical with final condition of proposed materials or products for the Work. Include full range of samples (not less than 3 units) where unavoidable variations in color or finish may be expected or where range samples are requested.
4. Label or otherwise identify each sample to show generic description, source, product name and manufacturer, limitations, and compliance with standards.

5. Color selection samples: The Contractor will provide a checklist indicating materials where color, texture or finish is subject to selection by the Architect and as defined in the various specification sections. Certain other samples may also be requested for use by the Architect in preparation of color and material sample presentations for the Owner.
  - a. With the checklist, the Contractor shall promptly (30 +/- days after award) assemble and deliver to the Architect two (2) complete collections of all required samples. Upon receipt of a complete collection of samples the Architect will, with reasonable promptness, make the selections and prepare and deliver to the Contractor a schedule covering all items subject to selection. The Architect reserves the right not to make individual determination or selections until all samples of materials are furnished to him.
6. Where color samples or chips are normally required or where called for in Specifications, submit color chips or samples of manufacturer's full spectrum of currently available colors for selection by the Architect. 4" x 4" is the preferred minimum size color chip or sample.
7. Where custom colors are specified or indicated, prepare samples to match Architect's samples.
8. Unless otherwise specified, furnish preliminary submittal of a single set of samples. The initial submittal will be the final submittal unless returned with action which requires resubmittal. Submit two sets of samples for final submittal; one set will be returned to the Contractor.
9. Contractor shall maintain and accurately update a submittal log showing the current status of the submittals. The updated log shall be reviewed with the architect and owner at the project meetings.
- J. Mock-Ups: Where mock-ups are required in individual Sections, it is recognized that there are special types of samples which cannot be readily transmitted as specified for submittals; however, otherwise comply with requirements for samples, and process transmittal forms for mock-ups to provide a record of activity.
- K. Published Standards: Where submittal of published standards is required, except where specified integrally with "Product Data" submittals, submit a single copy for the Architect's use. Where workmanship at the Project site and elsewhere is governed by published standards, furnish additional copies to fabricators, installers and others involved in performance of the Work.
- L. Construction Photographs: Unless otherwise provided in the Contract Documents, the Owner will arrange and pay for construction photographs.



PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 33 00

**SECTION 01 41 00**  
**REGULATORY REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Work Included: This Section contains a list of applicable building codes, mechanical codes, plumbing codes, electrical codes, fire codes, and other regulations applicable to the work.
- B. Related Work:
  - 1. Permits, fees, and tax exempt status of the Owner are referenced in the General Conditions and Supplementary Conditions.
  - 2. Applicable reference standards are specified in Section 01095.
  - 3. Code compliance testing and inspections are referenced in Section 01410.

**1.02 REFERENCES:**

- A. Jurisdictional Agencies: For the purpose of plan review and permitting the following governmental agencies or authorities have jurisdictional and review authority over work associated with installation of utilities.
  - 1. Cherry Creek School District No. 5
- B. Applicable Codes:
  - 1. International Building Code (IBC), 2021
  - 2. International Mechanical Code (IMC), 2021
  - 3. International Plumbing Code (IPC), 2018
  - 4. International Energy Conservation Code (IECC), 2021
  - 5. International Fire Code (IFC), 2021
  - 6. National Electrical Code (NEC), 2020
  - 7. Colorado Gas Fuel Code, 2018
  - 8. International Existing Building Code (IEBC), 2021
  - 9. ICC A117.1 Accessible and Usable Buildings and Facilities, 2021
  - 10. NFPA 170, 2021
  - 11. State of Colorado
    - a.) Division of Fire Safety and Prevention
  - 12. Federal Requirements and guidelines
    - b.) American National Standards Institute Specifications to Make Buildings and Facilities Accessible to and Usable by Physically Handicapped People ADA(ANSI A117.1-1986)
    - c.) National Fire Protection (NFPA) Code applicable sections of current publication.
    - d.) Occupational Safety and Health Administration (OSHA)

- e.) Environmental Protection Agency (EPA)
- 13. Underwriters Laboratories (UL)
- 14. Additional codes, standards, or other requirements as stated within the technical sections of the Specifications or noted on the Drawings.
- C. Conflicts Between Requirements: In the event of a conflict between any of the applicable or stated regulatory requirements or reference standards, or between the regulatory requirement or reference standards and the requirements of the Contract Documents, the more stringent requirements shall take precedence.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

END OF SECTION 01 41 00

SECTION 01 45 00  
QUALITY CONTROL

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Work Included: This Section defines the responsibilities of the various agencies or parties performing testing and inspection services as specified herein or required by the Contract Documents.
- B. Related Work: Additional or specific testing and inspection requirements may be described in the various individual Sections of these Specifications. Failure to list specific testing or inspection requirement in this Section does not relieve the Contractor from providing all tests which are indicated to be his responsibility, or from cooperating with the testing and inspections agency or others who may be performing quality assurance tests or inspections.
- C. Testing and Inspections Agency: Quality assurance testing and inspections will be provided by an independent testing and inspections agency selected and paid for by the Owner.
- D. Limitation of Authority: The testing and inspections agency is not authorized to release, revoke, or alter the requirements of the Contract Documents, or to approve or accept any portion of the Work without the Architect's written consent.

**1.02 REFERENCES:**

- A. Related Documents: As stipulated in Article 4.13. of the General Conditions
- B. Related Documents: Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.
- C. Referenced Standards/Minimum Criteria: Tests shall be made by an accredited testing laboratory. Except as otherwise provided sampling and testing of materials and the laboratory methods and testing equipment shall be in accordance with the latest standards and methods of the American Society of Testing and Materials (ASTM). Where additional or specific information concerning testing methods, sample sizes, etc., is required, requirements are included under the applicable sections of the Specifications.
- C. Perform testing and inspection in manner that will not interfere with Contractor's obligation to comply with requirements of General Conditions and Division 1 - General Requirements, as well as the provision of all applicable laws, codes, ordinances, rules, and regulations.

- D. Conform to general requirements of reference information listed below for testing and inspection as well as specific requirements listed in Specification Sections listed under 1.2 Services in this Section.

1. American Society for Testing and Materials (ASTM):

- (a) ASTM E329-77 (1983) Standard recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.

**1.03 DEFINITIONS:**

- A. Quality Assurance Tests and Inspections: All tests and inspections specified herein or elsewhere in the Contract Documents which are performed by the independent testing and inspections agency to determine compliance of materials, products, equipment, or complete work with the requirements of the Contract Documents.
- B. Code Compliance Tests and Inspections: Mandatory tests or inspections required by codes or ordinances, or by building officials or other authorities having jurisdiction over the Work.
- C. Contractor's Convenience Tests and Inspections: Tests or inspections performed exclusively for the Contractor's convenience or information. Additional concrete test cylinders taken on behalf of the Contractor to determine early break strength are considered Contractor convenience tests.
- D. Re-Testing: Subsequent testing or inspections of the Work or any portion of the Work for which initial testing has indicated non-compliance with the Contract Documents or with applicable codes, ordinances, rules, and regulations.

**1.04 SUBMITTALS:**

- A. Test and Inspection Reports: Copies of all test and inspection reports will be promptly delivered by the testing and inspections agency directly to all interested parties as follows:
1. Owner - one copy
  2. Architect - two copies
  3. Architect's consultant - one copy
  4. Contractor - two copies

**1.05 RESTRICTIONS/CRITICAL CRITERIA:**

- A. Contractor shall provide equipment and facilities required for conducting field tests and for collecting and forwarding samples. Contractor shall not use any materials or equipment represented by samples until tests, if required, have been made and the materials or equipment are found to be acceptable. Any

- product deemed unfit for use shall not be incorporated into the work.
- B. All materials or equipment proposed for use may be tested at any time during their preparation or use. Contractor shall furnish the required samples without charge and shall give sufficient notice of the placing of orders to permit the testing. Products may be sampled either prior to shipment or after being received at the site of the work.
  - C. Control tests of concrete work shall be made at the Owner's expense at such times and number as directed by the Owner.
  - D. Control tests of masonry work including masonry reinforcing shall be made at the Owner's expense at such times and number as directed by the Owner.
  - E. Drilled pier and related concrete operations shall be observed by a Geotechnical Engineer selected and paid by the Owner.
  - F. Control tests of fill and backfill shall be made at the Owner's expense by the  
Geotechnical Engineer Laboratory. The Geotechnical Engineer will make sufficient tests at the expense of the Owner to assure himself that fill and backfill complies with material and compaction requirements in the specifications. Control tests of masonry work shall be made at the Owner's expense in accordance with directions issued by the Owner or Architect.
  - G. Testing of structural welds shall be made at the Owner's expense in accordance with other specific sections of the specifications.
  - H. Control tests of asphaltic concrete paving and base course shall be made at the Owner's expense by the Geotechnical Engineer Laboratory. The Geotechnical Engineer will make sufficient tests to assure himself that asphaltic concrete paving and base course complies with material and compaction requirements in the specifications.
  - I. Other testing:
    - a. Any other tests required by specific sections of the Contract Documents to be paid for by the contractor.
    - b. Any additional tests required because of any tests that fail.
    - c. Proof of Noncompliance: Contractor liable for corrective action which Architect feels is required including complete removal and replacement of defective material.
    - d. Material Substitution: Any tests of material or equipment offered as substitute for specified item on which a test may be required in order to prove its compliance with specifications.
  - J. Records: The contractor shall document and maintain records of all inspections and tests performed whether by the Owner's separate consultants or as required by specific sections of the specifications.

**1.06 QUALITY ASSURANCE**

- A. Testing and Inspection Agency Qualifications - The testing and inspection agency shall have a minimum 5 years continuous experience preceding date of these Contract Documents, and be qualified in accordance with the following American Society for Testing and Materials (ASTM) publications:
1. ASTM D3666-83 Standard Practice for Evaluation of Inspection and Testing Agencies for Bituminous Paving Materials.
  2. ASTM D3740-80 Standard Practice for Evaluation of Agencies engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
  3. ASTM E548-84 Standard Practice for Generic Criteria for Use in the Evaluation of Testing and Inspection Agencies.
  4. ASTM E699-79 (1984) Standard Criteria for Evaluation of Agencies Involved in Testing, Quality Assurance, and Evaluating Building Components in Accordance with Test Methods Promulgated by ASTM Committee E-6.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.01 COOPERATION WITH TESTING AND INSPECTIONS AGENCY:**

- A. Access To The Work: Representatives of the testing and inspections agency or other legally constituted testing or inspections personnel shall have unrestricted access to the site and all other locations where the Work is in progress, including borrow pits batch plants, material yards, or other locations where materials are being obtained or stored.
- B. Facilities For Testing: Provide all necessary facilities required for testing and inspecting the Work, including but not limited to, safe hoists or scaffolding, lighting, lifts, suitable safe storage areas for freshly poured concrete test cylinders, and incidental labor required to assist the testing and inspections agency in field testing or inspections.
- C. Notifications: Notify the testing and inspections agency not less than forty-eight (48) hours prior to tentative date or time when testing and inspection services will be required. Re-confirm date and time not less than twenty-four (24) hours prior to time when such services will be required.

**3.02 TEST AND INSPECTION PROCEDURES:**

- A. General: Gathering of specimens or samples, measuring, and testing of all materials, products, or other work shall be performed according to the procedures of the referenced standard test method.

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- B. Taking Specimens: Unless otherwise indicated, all specimens and samples for testing will be taken by the testing and inspections agency personnel, either at the source of the material or at the site for work in progress.
- C. Delivery of Specimens: Unless otherwise indicated, pick-up and delivery of specimens or samples to the testing and inspections agency's laboratory will be done by the agency's personnel. This includes concrete test cylinders which have been stored on site for the initial curing period.
- D. Re-Testing: When initial tests or inspections indicate non-compliance of the Work or any portion thereof, the non-complying portion shall be removed, replaced, or re-worked (re-compacted in the case of subgrade, fill, or backfill material), and re-tested by the same agency performing the initial test or inspection. Do not proceed with additional work until the non-complying work has re-tested and found to be in compliance.
- E. Additional Or Alternative Tests:
1. The Owner and the Architect reserve the right to require additional or alternative tests or inspections of materials or work for which either has reason to believe may not be in compliance with the requirements of the Contract Documents.
  2. Examples of such additional tests may include, but are not limited to, additional sieve analysis of aggregates or granular fill material; additional field density tests of subgrade, fill, or backfill materials; additional core tests asphaltic concrete paving; additional slump tests of concrete as it is being placed; core tests of in-place structural concrete; load testing of concrete structures; ultrasonic, X-ray, or other non-destructive testing of structural steel; and field cut test strips of membrane roofing.
  3. Payment for additional or alternative tests will be determined as provided herein above.

### **3.03 SCHEDULE OF QUALITY ASSURANCE TESTS AND INSPECTIONS:**

- A. General Notes:
1. Carefully examine the individual Sections of these Specifications for additional or complete quality assurance testing and inspections requirements. Failure to include any test or inspection in this schedule does not relieve the Contractor of his responsibility for timely notification of the testing and inspections agency for quality assurance tests or inspections which may be listed in the individual Sections of the Specifications but not in this schedule.



2. This schedule includes quality assurance tests and inspections only, which will be performed by the selected testing and inspections agency and paid for by the Owner. Code compliance tests and inspections, Contractor's convenience tests and inspections, and additional or alternative tests and inspections requested by the Owner are not included.

B. Soils - Materials and Compaction:

1. Fill and Backfill Materials: Test existing on-site soils and borrow materials proposed for use in filling and backfilling operations as follows:
  - (a) Moisture Content: ASTM D2216
  - (b) Maximum Index Density: ASTM D4253
  - (c) Moisture Density Relations: ASTM D698 (Standard Proctor), ASTM D1557 (Modified Proctor), or ASTM D4253, as specified herein or as applicable for soil types.
  - (d) Plasticity Index: ASTM D4318
  - (e) Particle Size Analysis (borrow materials only): ASTM D422
3. Moisture and Density Analysis: Prepare not less than one optimum moisture and maximum density curve for each type of existing or imported soil proposed for use in filling or backfilling, including structural fill and base courses for paving.
4. Field Tests:
  - (a) Perform field density tests in accordance with ASTM D1556, ASTM D2167, or ASTM D2922.
  - (b) Perform field moisture tests in accordance with ASTM D3017.
5. Test Quantities:
  - (a) Trenching:
    - (1) Perform one field density and moisture test for every 150 lf or major fraction thereof, of trench backfill, taken at the trench bottom and at two ft. vertical intervals in the compacted fill depth. In no case will less than eight tests be made.
    - (2) Where underground utility lines penetrate foundations, perform field density tests at the trench bottom and at every two feet of vertical rise in compacted fill elevation, at points two feet and ten feet in horizontal distance from the foundation wall.

(b) Site Grading and Miscellaneous Fills: One test for every 100 cy of fill and for every foot of vertical rise in compacted fill elevation, but in no case less than two tests for each day's work.

6. Failings: If, based on the testing and inspection agency reports and inspections, compacted subgrade or fills are found to be below specified density, provide additional compaction and testing in accordance with the "Re-Testing" provisions of this Section.

C. Miscellaneous Metal Fabrications:

Visually inspect shop and field welding and bolting of kiln enclosure structural connections. Welds or bolts which do not pass visual inspection will be tested as specified above at the Contractor's expense.

E. Drilled-in Anchors:

- (1) Equipment: Prior to installation of drilled-in anchors, verify that the Contractor has the proper equipment for drilling holes of the required diameter and length in the applicable substrate.
- (2) Epoxy-bonded Anchors: Observe on-site the installation of the first fifty anchors; verify that drilled holes are of proper diameter and depth, that holes are properly cleaned prior to installation of anchors, and that holes are completely filled with properly mixed epoxy after installation.
- (3) Visual Inspection: Visually inspect all anchors after installation to ensure installation perpendicular to the substrate and to proper depth.
- (4) Inspect not less than 20 randomly selected anchors of each type at each structural level for tightness using a method recommended by the testing and inspections agency and approved by the Architect. If at any time the number of rejectable anchors exceeds 5% of that type anchor tested at that level, test all inserts at that level using the same test method. Continue testing at the 100% rate on all succeeding levels until 5% or less of the anchors tested at any level are found to be rejectable. All costs of additional testing shall be borne by the Contractor.

F. Radiographic (X-ray) testing may be substituted for ultrasonic testing at the option of the testing agency and with the approval of the Project Manager.

**END OF SECTION 01 45 00**

SECTION 01 50 00  
TEMPORARY FACILITIES AND CONTROLS

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. This Section includes a description of temporary construction facilities and controls required by the contractor to facilitate construction including temporary electricity and lighting, temporary heat/enclosures, temporary water, temporary sanitary facilities, temporary protective facilities, elevators, scaffolding/runways, construction fence, and temporary controls.
- B. Related Documents: General Conditions, Supplementary Conditions, and applicable provisions of other Division 1 Sections apply to this Section.

**1.02 DESCRIPTION OF WORK:**

- A. General Description: Except as may be otherwise provided by the Owner, furnish, install, pay for, and maintain temporary facilities and utilities for use of all subcontractors and building trades, Owner, and Architect during the duration of the Contract, until Owner occupancy or Substantial Completion, whichever occurs first.
- B. Owner Occupancy:
  - 1. Should the Owner require partial occupancy prior to completion, the prorated percentage of use cost will be mutually agreed prior to the Owner's taking occupancy.
  - 2. Service and repair or rehabilitate permanent equipment and facilities used for temporary work immediately prior to full occupancy, use, or acceptance of the Work or a portion thereof by the Owner.

**1.03 QUALITY ASSURANCE:**

- A. Regulatory Requirements: Comply with the requirements of the following regulatory agencies, except where more stringent requirements are listed herein or otherwise required by the Contract Documents:
  - 1. NFPA 70 - National Electric Code
  - 2. Construction Industry Standards, OSHA 2207
  - 3. South Metro Fire and Rescue
  - 4. Aurora Fire Rescue

**PART 2 - PRODUCTS**

**2.01 RESTRICTIONS/CRITICAL CRITERIA:**

- A. For renovation projects where the existing permanent heating system will be used, the owner will pay for the gas/electricity used. In using the permanent heating system, Contractor shall assume complete responsibility for its proper operation and for correction of any damage which may occur to permanent heating system.
- B. Use of permanent heating system by Contractor shall in no manner compromise the warranty of the system. Warranty of the system will commence at date set in the Certificate of Substantial Completion.
- C. Temporary Water: Contractor shall provide water required in the work as well as temporary connection, plumbing, piping, etc., necessary to convey same to places needed. Bulk water for site grading shall be provided by site grading contractor.
- D. Temporary Sanitary Facilities: Contractor shall provide and maintain, in a neat and sanitary condition, adequate chemical toilet facilities for the use of employees engaged in the work. Any graffiti vandalism on sanitary facilities shall be removed immediately by the Contractor.
- E. Temporary Protective Facilities/Scaffolding and Runways:  
Contractor to provide and maintain protective devices and facilities for protection of public and general protection of workmen on project.
  - a. Provide and maintain fire extinguishers and active fire hydrants where required. Maintain fire lanes to hydrants and other equipment as necessary for proper fire protection during construction.
  - b. Provide temporary walks, scaffolding, platforms, roadways, trench covers, barricades, bulkheads, railings, danger lights and signals, etc. required for work by applicable safety laws and building codes.
  - c. Maintain temporary protective facilities in good condition throughout term of work. Remove at completion of work. Repair and replace work damaged by temporary protective facilities.
- F. Construction Fence: Contractor shall erect construction fencing if required for protection of the public. The fence shall be 6'0" high, constructed of chain link with steel posts at 8'-0" on center, maximum. Top of fence fabric shall be knuckled for safety. Provide gates where required. Gates shall be kept closed and locked after working hours. At completion of exterior work, fences shall be removed from the site.

- G. Field Office and Other Temporary Structures:
  - 1. Provide one Field Office per Package
  - 2. Confirm with Project Manager if use of one school can be used as a Field Office
  - 3. Existing restrooms in the school cannot be used by the Contractor or his/her subcontractors.
  
- H. Security: Provide security program and facilities to protect work from unauthorized entry, vandalism, and theft. Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrance to prevent unauthorized entrance, vandalism, theft and similar violations of security. Verify with owner if a full time security person is required at the site for times when work is not in progress.
  
- J. Temporary Controls - by Contractor:
  - a. Noise Control: Minimize noise at all times near residential areas. All equipment shall be properly muffled. Do not operate noise equipment after hours.
  - b. Dust Control: When construction procedures result in dust which becomes a nuisance to the Owner, private property, or traffic, control said dust.
  - c. Water Control: Provide such means as necessary to control flow of water at the work to prevent damage to the Owner's property and adjacent property.
  - d. Debris Control: Continually police the work to prevent collection and scattering of debris, loose debris, or debris caused by execution of the work.
  - e. Pollution control: Take extreme caution to prevent spilling or littering of water polluting substances. Do not pump any foreign materials into the sanitary or storm sewer collection systems. Provide such labor, equipment, and materials as necessary to remedy such pollution. No burning of debris, nor any other air polluting methods or equipment, shall be allowed.
  - f. Erosion Control: Provide such facilities as might be necessary to prevent erosive damage to the Owner's property or to adjacent properties.

**2.02 OTHER TEMPORARY SERVICES:**

- A. Cleaning:
  - 1. Provide daily sweeping and cleanup of dust, debris, litter, trash containers, and other items required to maintain a clean, orderly, and accessible site. Hauling of debris to legal dump or landfill is required weekly as a minimum.
  - 2. Provide sweeping or cleaning of adjacent streets and walkways as required to prevent accumulation of mud, dust, or soil thereon from construction traffic and personnel.

- B. Watchman Service: Provide watchman service during the period of construction as deemed necessary to protect the Work.

**PART 3 - EXECUTION**

**3.01 MAINTENANCE OF TEMPORARY FACILITIES:**

- A. Temporary Structures: Maintain temporary offices, storage facilities, sanitary facilities, trailers, fences, barricades, and other structures in a neat, orderly appearance for the duration of the Work.
- B. Temporary Utilities and Services: Maintain all temporary piping, wiring, outlets, connections, panelboards, fuel storage facilities according to local, NFPA, and OSHA rules, regulations, or requirements.
- C. Removal of Temporary Facilities:
1. Remove temporary facilities and structures from the site as soon as practicable or when no longer required by the Contractor or subcontractor.
  2. Restore areas occupied by temporary facilities to like new condition, or to match surrounding areas.

**END OF SECTION**

SECTION 01 51 00  
TEMPORARY UTILITIES

PART 1 - GENERAL

1.01 SUMMARY:

- A. Cherry Creek Schools will provide gas, water, electricity, heat/normal ventilation (but not air conditioning) without charge to the Contractor.

- 1. Pay all costs for installation and maintenance and service

1.02 REFERENCES:

- A. Related Documents: As stipulated in the General Conditions

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 51 00

SECTION 01 52 40  
CONSTRUCTION WASTE MANAGEMENT

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. This Section includes administrative and procedural requirements for the following:
  - 1. Disposing of nonhazardous construction waste.
- B. See Section 01 70 00 - Execution Requirements for further construction cleaning requirements.

**1.02 DEFINITIONS**

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.01 PLAN IMPLEMENTATION**

- A. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

**3.02 DISPOSAL OF WASTE**

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 3. The use of the Owner's on site waste disposal receptacles is strictly prohibited.



B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

**END OF SECTION**

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SECTION 01 62 00  
PRODUCT OPTIONS

**PART 1 - GENERAL**

**1.01 SUMMARY:**

A. Work Included:

1. This Section establishes the general procedures and requirements for product substitutions.
2. Submittals covered under this Section include, but are not necessarily limited to, schedules, reports, product data, shop drawings, samples, and miscellaneous data specifically prepared for the Work by the Contractor or any subcontractor, manufacturer, or supplier, to illustrate some portion of the Work.

**1.02 REFERENCES:**

- A. Related Documents: General Conditions, Supplementary Conditions, and applicable provisions of Division 1 Sections apply to this Section.
1. Submittal Procedures - Section 01 33 00.
  2. General Conditions Article 20.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.01 EVALUATION**

- A. Options will be evaluated according to the following criteria:
1. Compliance with Technical Guidelines and intended quality.
  2. Performance record in public schools in Colorado or adjacent states
  3. Life cycle cost
  4. Initial cost
  5. Availability/Impact on construction schedule
  6. Maintenance procedures, access, service parts availability
  7. Risk/ reward
  8. Compatibility with existing, including District-wide considerations.
  9. Ramifications for other components of the finished construction.
  10. Physical size, configuration for the intended use.

**END OF SECTION**

SECTION 01 70 00  
EXECUTION REQUIREMENTS

**PART 1 - GENERAL**

**1.01 SUMMARY**

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. General installation of products.
3. Progress cleaning.
4. Starting and adjusting.
5. Protection of installed construction.
6. Correction of the Work.
7. Landscape Restoration.
8. Protection of Work and Property.
9. Remedies.

B. The Contractor shall provide all materials, equipment and labor necessary to protect the Owners property from damage due to Construction activities. Newly constructed work, unincorporated products & materials, and existing structures shall all be afforded suitable protection.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.01 CONSTRUCTION LAYOUT**

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings. If discrepancies are discovered, notify Architect promptly.

**3.02 PREPARATION**

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a Request for Information (RFI) to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

### 3.03 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect and as noted below.
    - a. Door Hardware:
      - 1) 39.5" AFF for general and panic hardware.
    - b. Drinking Fountains:
      - 1) Low Spout Height: 36" with side approach.
      - 2) High Spout Height: 42".
    - c. Mirrors: 40" AFF (maximum to bottom of glass).
    - d. Accessible Shelves and Coat Hooks: 36" maximum.
    - e. Water Closet Height (to top of toilet seat):
      - 1) 17" maximum.
    - f. Grab Bars:
      - 1) 36" top.
    - g. Toilet Paper Dispenser:
      - 1) 18" min. bottom.

- h. Access Urinal Height: 17" AFF (rim height).
- i. Urinal Flush Control: 33" AFF (maximum height) - ADA location below grab bar
- j. Lavatory Height and Clear Space: 24" knee space, 31" maximum rim height.
- k. Room Signage Height: Not to exceed 60" top of sign.
- 2. Allow for building movement, including thermal expansion and contraction.
- 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### **3.04 PROGRESS CLEANING**

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
- 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
- 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
- 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- 4. Conduct all cleaning operations in compliance with governing authority regulations. Comply with all local ordinances. State and Federal Laws and statutes. Prohibitions include, but are not necessarily limited to:
  - a. Burning or burying of waste materials on the project site.
  - b. Disposal of flammable liquids, acids, caustics or other hazardous

materials by dumping on site or into sanitary sewers, storm sewers, streets or gutters.

- B. Temporary site storage of construction waste shall be in suitable containers. All waste storage shall be housed within the secure construction area.
- C. Site: Maintain Project site free of waste materials and debris.
- D. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- E. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- H. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- I. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- J. Protect all surrounding surfaces which could be damaged by cleaning operations. Remove all protective coverings when cleaning is complete.
- K. Clean all construction areas of waste materials at the end of each work day. Completed areas shall be broom cleaned immediately after completion (while awaiting final cleaning).
- L. Remove from site and properly dispose of all waste concrete, mortar, or other debris no less frequently than once per week.

**3.05 STARTING AND ADJUSTING**

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

**3.06 PROTECTION OF WORK AND PROPERTY**

- A. Demolition, construction, and other operations performed in the course of the work shall not cause deterioration or damage to other adjacent property or utilities, public or private, directly or indirectly.
- B. The Construction Manager/General Contractor shall notify the Architect and DPS Facilities Management immediately when any new construction or existing building or grounds elements are damaged through fire, water, wind, vandalism or construction activities.
- C. Construction operations shall be performed so as to minimize and control dust, dirt, and noise within reasonable limits.
- D. All portions of the existing sites and existing structures or landscaping are intended to remain undisturbed unless otherwise indicated.
- E. Existing sod, trees, plants, bushes, ground cover, and landscaping shall be protected or fully restored or replaced upon completion of construction operations. Plant materials shall be replaced with the species and sizes matching damaged items.
- F. The Construction Manager/General Contractor shall protect all sidewalks, curbs and gutters, and streets adjacent to the properties.
- G. The Construction Manager/General Contractor shall locate all underground utilities and maintain suitable markings to identify their location. All buried utilities including lawn sprinkler systems shall be preserved during the progress of the work unless otherwise indicated.
- H. The locations of buried or above ground utilities are not indicated on the drawings. If any existing buried, or above ground, utility is damaged due to construction activities in relation to the scope of work, they shall be repaired or replaced by the General Contractor.
- I. Construction not specifically required to be modified, or removed for work under this contract and construction shall remain undisturbed throughout the execution of the work. The Contractor shall provide all appropriate means of protection necessary for accomplishment of this objective. Provide protection from natural elements as required.

**3.07 CORRECTION OF THE WORK**

- A. Repair or remove and replace defective construction.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Repair or replace existing finishes, products, equipment, fixtures, etc., which are damaged due to construction operations to their original condition.
- D. Repair exterior building finishes, site pavements, landscaping, fencing, equipment, etc. which are damaged due to construction operations to their original condition.
- E. Repair components that do not operate properly.

**3.08 DAMAGE CAUSED BY UTILITY INTERRUPTION**

- A. Where construction activities require interruption of building systems and/or utilities, the Contractor shall take measures required to prevent the damage of building systems and materials.
  - 1. Construction Manager/General Contractor shall arrange and pay for any hand watering required to sustain sod and plant materials whenever construction activities interrupt site irrigation systems.
  - 2. Construction Manager/General Contractor shall arrange and pay for temporary power to maintain refrigeration systems when perishable foods may be at risk of deterioration.
  - 3. Construction Manager/Contractor shall notify DPS and the Architect one week in advance of planned power outages so that potential risks can be identified.

**3.09 REMEDIES**

- A. The Construction Manager/General Contractor shall be fully responsible for the replacement, restoration, repair, or cleaning of any damage or loss incurred as a result of damage caused by construction activities. Replacement and repair activities shall result in the restoration of damaged areas to conditions existing at the start of construction. At the discretion of the Owner, an equitable settlement value may be established in lieu of correction of damage or loss. This amount shall be deducted from the Contract Amount by Change Order.
- B. Mechanical and electrical equipment required to be removed and reinstalled to accommodate work in the Contract shall be handled with the greatest of care and restored to full operation and function. The Construction Manager/General Contractor shall notify the Architect



immediately in writing if any product intended for relocation and reuse cannot be removed and re-installed without damage which will render it unable to function as intended.

- C. The Construction Manager/General Contractor shall comply with verbal and written instructions of Loss Control Agents of the Owner's Insurer to minimize potentially hazardous procedures and conditions.
- D. The Construction Manager/General Contractor shall take precautions to protect existing concrete and asphalt pavement from damage due to vehicle loads, parking, and storage.
- E. The Construction Manager/General Contractor shall schedule loading to take advantage of pavement material consolidation during cooler temperatures. Minimize loading paved areas during hot weather. Employ plywood (or other suitable method) to distribute wheel loads to the greatest extent possible.
- F. All existing irrigation systems are considered to be fully operational. All damage to sprinkler systems in the vicinity of construction (unless documented as pre-existing) shall be repaired by the Contractor at no additional cost to DPS. Inspections and/or tests of the existing system shall be conducted by the Contractor in the presence of the DPS Project Manager, in order to establish performance criteria for the reinstalled system. Except as waived in writing by the Architect, the performance of the reinstalled system shall be equal to the existing system. The Contractor shall give written notice to the Owner and the Architect prior to dismantling of the existing underground sprinkler systems.
- G. Damaged lawn areas whether damaged by construction activities or lack of water, shall be restored by proper soil preparation and treatment, grading, filling, and the laying of new sod (seeding is not permitted).

### 3.10 SCHEDULES

- A. The Construction Manager/General Contractor shall coordinate work between the various trades and with the Owner and shall provide a schedule of Utility interruptions needed to the Owner. The Owner will review such schedule and direct such modifications as may be needed for the continued operation of the facility.
- B. The Construction Manager/General Contractor shall notify the Owner whenever lawn sprinkling systems must be deactivated and for what duration of time the system must remain shut off.

END OF SECTION 01 7000

SECTION 01 77 00  
CLOSEOUT PROCEDURES

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Work Included: This Section includes administrative procedures and closeout submittals required at Substantial Completion and Final Completion of the Work. Project Record Documents
  - 1. Substantial Completion
  - 2. Final Observation and Acceptance
  - 3. Closeout Submittals
  - 4. Final Completion and Final Payment
  - 5. Demonstrations
  - 6. Mechanical Service and Maintenance
  - 7. Post Construction Inspection
- B. Related Work: Additional specific requirements are specified in the various Sections of Divisions 2 through 33 of these Specifications.

**1.02 DEFINITIONS:**

- A. Contract Closeout: Contract close-out is defined to include general administrative requirements near the end of the Contract Time, in preparation for Final Acceptance, Final Payment, normal completion of the Contract, occupancy by Owner, and similar actions evidencing completion of the Work. Time of closeout is directly related to Substantial Completion, and therefore may be either a single time period for the entire Work or a series of time periods for individual parts of the Work, which have been Certified as Substantially Complete at difference dates. That time variation, if any, shall be applicable to other provisions of this Section.

**PART 2 - PRODUCTS**

**2.01 SUBMITTALS REQUIRED (CONTRACT CLOSE-OUT):**

- A. Evidence of Payments and Release of Liens
  - a. Affidavit of Payment of Debts and Claims: AIA G706
  - b. Affidavit of Release of Liens: AIA G706A
  - c. Consent of Surety to Final Payment: AIA G707
- B. Written Warranties:
  - a. A written warranty addressed to the Owner, properly signed and notarized, warranting that the Contractor and each subcontractor shall remedy any defects due to faulty materials or workmanship and pay for consequential damage resulting there from, which appear in his work within a period of one (1) year from the Date of Substantial Completion.
  - b. Warranties as specified in individual sections of the Specifications. All warranties shall include the name and

address of the Contractor, subcontractor or supplier, the project name, and the item(s) being warranted. Warranties specified under individual sections of the Specification for periods longer than one (1) year shall include payment for consequential damage due to faulty materials or workmanship for full duration of warranty.

- c. Inspection Certificates: Each subcontractor shall, upon completion of the work, secure in triplicate all certificates from any State or local governing body having jurisdiction in dictating that the work is in strict accordance with applicable codes and deliver same to the Contractor for transmittal to the Architect.
- d. Record Drawings and Record Project Manual: Deliver Record Documents to Architect with transmittal letter containing date, project title and number, contractor's name and address, title and number of each record document. Include certification letter that each document is complete and accurate. Submittal shall be signed by Contractor or his authorized representative.
- e. Asbestos Containing Material: Provide a letter certifying that to the best of the Contractor's knowledge and belief, no asbestos containing materials have been incorporated into this project.
- f. Maintenance Manuals: Furnish, in three (3) copies, indexed, in hard cover 3-ring binder with complete literature, complete operating instructions and technical data on all products or equipment requiring same.
- g. Sales and Use Tax Certificates.
- h. Miscellaneous Keys, Switches, Etc.: All loose keys for hose bibs, adjustment keys and wrenches for door closers and panic hardware, keys for electric switches, electrical panels, etc., shall be accounted for, labeled, and turned over to the Owner. Provide evidence of delivery to Owner by signed receipt.
- i. Spare Parts and Materials: As specified in individual sections. Deliver to Owner stating amounts of materials delivered (number of gallons, cases, etc.). Provide evidence of delivery to Owner by signed receipt.

**2.02 RESTRICTIONS/CRITICAL CRITERIA:**

- A. Project Record Documents: Contractor to maintain at the job site, one (1) record copy of the following:
  - a. Drawings
  - b. Project Manual
  - c. Addenda
  - d. Reviewed and Accepted Shop Drawings and Product Data
  - e. Change Orders
  - f. Other Modifications to Contract

- g. Field Test Records
- B. Contractor to record following information on the Record Drawings:
  - a. Location of all new exterior underground utility lines
  - b. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure
  - c. Field changes of dimension and detail
  - d. Changes by addendum, change order, or field order
  - e. Details not on original contract drawings
- C. Contractor to record following information in the Record Project Manual:
  - a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment in each section actually installed
  - b. Changes by addendum, change order or field order
  - c. Other matters not originally specified
- D. Substantial Completion:
  - a. The Contractor submits written verification that project is substantially complete along with Contractor's own Punch List describing remaining incomplete work or work requiring correction
  - b. Should the Architect concur that the work is substantially complete, he will prepare a Punch List that need to be corrected before Final Observation. A Certificate of Substantial Completion with the deficiencies noted will then be issued by the Architect
- E. Final Observation and Acceptance:
  - a. The Contractor submits written verification:
    - 1) Project has been inspected for compliance with Contract Documents
    - 2) Work has been completed in accordance with Contract Documents
    - 3) Equipment and systems have been tested in the presence of Owner's Representative and are operational
    - 4) Project is completed and ready for Final Observation
  - b. Upon receipt of written certification that project is complete, the Architect shall visit the site for purposes of determining completion of the work
- E. Final Completion and Final Payment: Contractor shall submit final Application for Payment to the Architect in accordance with the requirements of the General and Supplementary Conditions. Application shall not be submitted until all contract closeout requirements have been met.
- F. Demonstrations:

- a. Mechanical Systems: Contractor/Mechanical Subcontractor shall instruct the Owner's representative(s) once on the proper operation and maintenance of the mechanical systems. As a minimum, presenting participants shall include Mechanical Contractor, Controls Subcontractor, and major equipment manufacturer's representative. The Design Engineer shall attend this demonstration
- b. These instructions shall be video recorded by the Contractor. At the completion of the instructional periods, a DVD of the video shall be turned over to the Owner for future reference
- c. Electrical Systems: Contractor/Electrical Contractor shall instruct the Owner's representative(s) twice on the proper operation of the entire electrical installation, including any and all special systems provided under this contract. One of the instruction periods shall be for building users.

### **PART 3 - EXECUTION**

#### **3.01 OCCUPANCY PRIOR TO COMPLETION:**

- A. Partial Completion: In accordance with the provisions of the General and Supplemental Conditions, the Owner may find it necessary to occupy or use a portion or portions of the Work for the purpose of storing and installing furnishings or other Owner-furnished fixtures and equipment. Make every reasonable effort to coordinate with Owner's schedule. Areas as they are to be occupied by Owner shall be turned over in a neat, clean condition.

**END OF SECTION**

SECTION 01 78 23  
OPERATION AND MAINTENANCE DATA

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Compile product data and related information appropriate for the maintenance and operation of products furnished.
- B. Prepare operating and maintenance data as specified in this Section and as referenced in other pertinent Sections of Specifications.
- C. Instruct the Cherry Creek Schools personnel in the maintenance of products, in the operation of equipment and systems.
- D. Related Documents: As stipulated in Article 4.10 in the General Conditions.

**1.02 QUALITY ASSURANCE:**

- A. Preparation of data shall be done by personnel:
  - 1. Trained and experience in maintenance and operation the described products.
  - 2. Completely familiar with requirements of this Section.
  - 3. Skilled as a technical writer to the extent required to communicate essential data.
  - 4. Skilled as a draftsman competent to prepare required drawings.

**1.03 SUBMITTALS:**

- A. Prepare data in the form of an instructional manual for use by the Cherry Creek Schools personnel. Two (2) copies are required.
- B. Format:
  - 1. Size: 8½" x 11"
  - 2. Paper: 20 lb minimum, white, for typed pages
  - 3. Text: Manufacturer's printed data or neatly typewritten.
  - 4. Drawings:
    - (a) Provide reinforced punched binder tab; bind in with text.
    - (b) Fold larger drawings to the size of the text pages.
  - 5. Provide fly-leaf for each separate product or for each piece of operating equipment.

6. Cover: Identify each volume with type or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS LIST":

- (a) Title of project and date of completion (month and year).
- (b) Identity of separate systems as applicable.
- (c) Identity of general subject matter covered in the manual.

C. Binders:

- 1. Commercial quality, three-ring binders with durable and cleanable plastic covers shall be provided.
- 2. When multiple binders are used, correlate the data into related consistent groupings.

**1.04 CONTENT OF MANUAL:**

A. A neatly typewritten table of contents shall be provided in each volume, arranged in a systematic order with figures and tables listed. Include the following:

- 1. Name of responsible installing principal contractor, address and telephone number.
- 2. A list of each product required to be included, indexed to the content of the volume.
- 3. List with each product, the name, address, and telephone number of:
  - (a) Maintenance contractor, as appropriate.
  - (b) Identity of the area of responsibility of each.
  - (c) Local source of supply for parts and replacement.
- 4. Identify each product by product name and other identifying symbols.

B. Product Data:

- 1. Include only those sheets that are pertinent to the specific product.
- 2. Annotate each sheet to:
  - (a) Clearly identify the specific project or part installed.
  - (b) Clearly identify the data applicable to the installation.
  - (c) Delete references to inappropriate information.

- C. Drawings:
  - 1. Supplement product data with drawings as necessary to clearly illustrate:
    - (a) Relations of component parts of equipment and systems.
    - (b) Coordinate drawings with information in project record drawings to ensure correct illustration of completed installation.
  - 2. Coordinate drawings with information in project record drawings to ensure correct illustration of completed installation.
  - 3. Do not use project record drawings as maintenance drawings.
- D. Provide written text, as required, to supplement product data for the particular installation:
  - 1. Organize in a consistent format under separate headings for different procedures.
  - 2. Provide a logical sequence of instructions for each procedure.
- E. Provide a copy of each warranty, bond, and service contract issued. Provide information sheet for the Cherry Creek Schools personnel and give:
  - 1. Proper procedures in the event of failure.
  - 2. Instances that might affect the validity of warranties or bonds.

**1.05 MANUAL FOR MATERIAL AND FINISHES:**

- A. Submit 2 copies of complete manual in final form.
- B. Content for architectural products includes applied materials and finishes.
  - 1. Manufacturer's data, giving full information on products.
    - (a) Catalog number, size, and composition.
    - (b) Color and texture designations.
    - (c) Information required for reordering special manufactured products.
  - 2. Instructions for care and maintenance:
    - (a) Manufacturer's recommendation for types of cleaning agents and methods.
    - (b) Cautions against cleaning agents and methods that are detrimental to the product.



- (c) Recommended schedule for cleaning and maintenance.
- 3. Provide instructions for inspection, maintenance, and repair.
- C. Content of moisture-protection and weather-exposed products:
  - 1. Provide manufacturer's date, giving full information on products:
    - (a) Applicable standards.
    - (b) Chemical composition.
    - (c) Details of installation.
  - 2. Provide instructions for inspection, maintenance and repair.

**1.06 MANUAL FOR EQUIPMENT AND SYSTEMS:**

- A. Submit five copies of complete manual in final form.
- B. Content for each unit of equipment and system, as appropriate shall contain:
  - 1. Description of unit and component parts.
    - (a) Function, normal operating characteristics, and limiting conditions.
    - (b) Performance curves, engineering data, and test.
    - (c) Complete nomenclature and commercial number of all replaceable parts.
  - 2. Operating Procedures:
    - (a) Start-up, break-in, routine, and normal operating instructions.
    - (b) Regulation, control, stopping, shutdowns, and emergency instructions.
    - (c) Summer and winter operating instructions.
    - (d) Special operating instructions.
  - 3. Maintenance Procedures:
    - (a) Routine operations.
    - (b) Guide to troubleshooting.
    - (c) Disassembly, repair, and reassembly.
    - (d) Alignment, adjustment and checking.

- 
4. Servicing and Lubrication Schedule, including a list of lubricants required.
  5. Manufacturer's printed operating and maintenance instructions.
  6. Description of sequence of operation by control manufacturer.
  7. Original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
  8. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
- C. Content for each electric and electronic system, as appropriate, shall contain:
1. Description of system and component parts:
    - (a) Function, normal operating characteristics, and limiting conditions.
    - (b) Performance curves, engineering data, and tests.
    - (c) Complete nomenclature and commercial number of replaceable parts.
  2. Operating Procedures:
    - (a) Routine and normal operating instructions.
    - (b) Sequences required.
    - (c) Special operating instructions.
  3. Maintenance Procedures:
    - (a) Routine operations.
    - (b) Guide to troubleshooting.
    - (c) Disassembly, repair and reassembly.
    - (d) Adjustment and checking.
  4. Manufacturer's printed operating and maintenance instructions.
  5. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
- D. Prepare and include additional data when the need for such data becomes apparent during instruction of the Cherry Creek Schools personnel.

**1.07 SUBMITTAL SCHEDULE:**

- A. Submit two copies of preliminary draft of proposed formats and outlines of contents prior to start of work. The Architect will review draft and return one copy with comments.
- B. Submit one copy of complete data in final form 15 days prior to final selection or acceptance. Copy will be returned after final inspection with comments.
- C. Submit specified number of copies of approved data in final form prior to acceptance.

**1.09 FRAMED OPERATING AND MAINTENANCE INSTRUCTIONS:**

- A. All mechanically and electrically operated equipment and controls shall be provided with legible and complete wiring diagrams, schematics, operating instructions, and pertinent preventive maintenance instruction in a sturdy frame with clear glass or plastic cover. Utilize non-fading, permanent media.
- B. Frames shall be located in the same room or service enclosures as the equipment, or in the nearest mechanical or electrical room.
- C. Submit proposed instructions to Architect for review and acceptance prior to installation.

**PART 2 - MATERIALS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

END OF SECTION 01 78 23

SECTION 01 78 39  
PROJECT RECORD DOCUMENTS

**PART 1 - GENERAL**

**1.01 SUMMARY:**

- A. Work Included: This Section includes administrative procedures and closeout submittals required at Substantial Completion and Final Completion of the Work.
- B. Related Work: Additional specific requirements are specified in the various Sections of Divisions 2 through 33 of these Specifications.
- C. Related Documents: General Conditions, Supplementary Conditions, and applicable provisions of Division 1 Sections apply to this Section.
  - 1. Closeout Procedures Section 01 77 00

**1.02 SUBMITTALS:**

- A. Record Documents - General:
  - 1. Additional or specific requirements for Record Documents are indicated in individual Sections of these Specifications.
  - 2. Do not use Record Documents for construction purposes; protect from deterioration and loss in a secure, fire resistive location.
  - 3. Provide access to Record Documents for Architect's reference during normal working hours.
  - 4. Review Record Documents for progress and accuracy at regularly scheduled job progress meetings.
  - 5. Upon completion of mark-up, submit Record Documents to the Architect for the Owner's records.

**1.03 FIELD RECORD DOCUMENTS**

- A. Maintain at the job site one "As Constructed" active record copy:
- B. Record Drawings:
  - 1. Maintain at the Project site during the course of the Work a white print set of Contract Drawings and shop drawings in clean, undamaged conditions, with mark-ups of actual installations which vary substantially from the Work as originally shown.
  - 2. Mark whichever drawing is most capable of showing "field" condition fully and accurately; however, where shop drawings are used for mark up, record a cross-reference at corresponding locations on the Contract Drawings.

3. Mark changes or deviations with red erasable pencil. Where feasible, use other colors to distinguish between variations in separate categories of work.
  4. Record new information which is recognized to be of importance to the Owner, but was not shown on either the Contract Drawings or shop drawings. Give particular attention to concealed work which would be difficult to measure and record at a later date. Note related Change Order or Field Order numbers where applicable.
  5. Record all deviations in sizes, locations, or other features of work from the Contract Documents. It shall be possible, using these drawings, to correctly and easily locate, identify, and establish sizes of all piping, directions of flow, and other features of the Work which will be concealed in finished work or underground.
  6. Establish locations of concealed and underground work by accurate dimensions to column lines or permanent walls, locating all bends or turns, and properly referencing invert elevations and rates of fall.
  7. Organize Record Drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, and other identification on cover of each set.
- C. Record Project Manual:
1. Maintain one copy of Project Manual including Specifications, including Addenda, Change Orders, and similar modifications issued in printed form during construction. Mark up variations of substance in actual Work in comparison with text of Specifications and modifications as issued.
  2. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation.
  3. Note related Record Drawing information and product data where applicable.
  4. Label Record Project Manual with the words "PROJECT RECORD COPY" and the date submitted, stamped or neatly printed in block letters on the cover.
- D. Shop Drawings
- E. Change Orders and other modifications to the Contract
- F. Field Inspection Reports, permits, approvals, test reports, certificates, etc,

- G. Operations and Maintenance Manuals: (See Section 01 78 23)
- H. Maintenance Materials, extra stock, or spare parts required by the various Specifications Sections to the Owner as directed. Submit materials in manufacturer's original packaging or containers. Clearly marked as to color and location in the Work.
- I. Other Documents:
  - 1. Certificates of Compliance with applicable reference standards.
  - 2. Certificates of Inspection or other evidence of compliance with governmental agencies or authorities having jurisdiction over the Work.
  - 3. Warranties, guarantees, and bonds.
  - 4. Certificates of Insurance for products and completed operations.
  - 5. Written consent of Surety.
  - 6. Evidence of payment and release of liens for subcontractors, suppliers, and other goods and services.
  - 7. List of subcontractors, service organizations, and suppliers, including names of contact person, and telephone numbers for office hours and after hours emergency contact.
  - 8. Notarized letter signed by the Contractor acknowledging the date of Substantial Completion or other date or dates established for the commencement of warranties and guarantees.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.01 CAD AND REPRODUCIBLE RECORD DOCUMENTS**

- A. At Contract closeout, the prime consultant is responsible for developing permanent Project Record Documents by transcribing information contained in the Field Record Documents onto original (electronic) media.
- B. As-Constructed Specifications: A single, bookmarked Adobe .pdf file plus one hardcopy printout in 3 ring binders, updated with the following annotations for each component or specification section as appropriate:
  - 1. Per General Conditions Article 4.10 cross reference each specification section to a master list of subcontractor, suppliers, and installers, complete with addresses and telephone numbers.
  - 2. Clearly differentiate between actual installed items and bid

options or substitutions.

3. Identify manufacturer, trade name, catalog number and supplier of each product and item or equipment actually installed.
4. Document installed color, texture, and pattern.
5. Indicate changes made by Addendum, Change Order, Alternate and Field Order.

**3.02 AS-CONSTRUCTED PRODUCT/FINISH/EQUIPMENT SCHEDULES:**

- A. Text, spreadsheet or Database file plus one reproducible plot updated with the following annotations:
1. Manufacturer, trade name, catalog number and supplier of each product and item or equipment actually installed.
  2. Color, texture, pattern.
  3. Changes made by Addendum, Change Order, Alternate, and Field Order.

**3.03 AS-CONSTRUCTED RECORD CONSTRUCTION DRAWINGS**

- A. Adobe .pdf file plus hardcopies plotted on high quality bond paper updated with the following annotations and corrections:
1. Addenda
  2. Bid Alternates accepted/not accepted
  3. Change Orders, Field Orders, Supplemental Instructions
  4. Differing/ Uncovered conditions
  5. Size/position/ dimensional differences exceeding 4 inches
  6. Locations of concealed or buried utilities and systems
  7. Other items not originally indicated.

**3.04 SUPPLEMENTAL DOCUMENTS**

- A. Per CSI Uniform Drawing System
- B. Required As-Constructed Annotations
- C. Cross reference both original document and supplement to each other
- D. Identify supplemental documents in Index/Table of Contents

**3.05 APPROVED SHOP DRAWINGS**

A. Pdf. file plus one hardcopy plot updated per As-Constructed Record Construction Drawings are required.

B. Hardcopy reproduction of original approved shop drawings is required for all other specification sections.

**3.06    SUBMITTAL LOG, COMPLETE WITH REVIEW COMMENTS, CORRECTIONS, AND AUTHORIZATIONS**

**3.07    PROJECT FILES**

A. One complete set of project administration records identified in Section 01 31 00.

B. Correspondence including hard copies of significant e-mail communications.

**3.08    LABEL CLOSEOUT SUBMITTALS TO CLEARLY IDENTIFY**

A. Submittal, including specification section number.

B. Project-specific title

C. Architect or Prime Consultant

D. Owner: Cherry Creek Schools

E. Date

F. "As Constructed" when applicable

**END OF SECTION**