



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

Division of Facilities Construction and Management

DFCM

Request For Bids For Construction Services

Two-Stage Bidding Process

Stage II

Invitation to Bid

November 16, 2005

PERIMETER SECURITY IMPROVEMENTS DRAPER PRISON

DEPARTMENT OF CORRECTIONS DRAPER, UTAH

DFCM Project No. 05082100

DFCM/DIO

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Current copies of the following documents are hereby made part of these contract documents by reference. These documents are available on the DFCM web site at <http://dfcm.utah.gov> or are available upon request from DFCM:

DFCM General Conditions dated May 25, 2005

DFCM Application and Certificate for Payment dated May 25, 2005

Technical Specifications:

Drawings:

Department of Corrections Attachments:

Contractor Clearance Information

Outside Contractor Rules and Regulations

Contractor Conduct Code

The Agreement and General Conditions dated May 25, 2005 have been updated from versions that were formally adopted and in use prior to this date. The changes made to the General Conditions are identified in a document entitled Revisions to General Conditions that is available on DFCM's web site at <http://dfcm.utah.gov>

INVITATION TO BID

**ONLY CONTRACTORS PREVIOUSLY SHORT-LISTED DURING STAGE I
ARE ALLOWED TO BID ON THIS PROJECT**

The State of Utah - Division of Facilities Construction and Management (DFCM) is requesting bids for the construction of the following project:

PERIMETER SECURITY IMPROVEMENTS - DRAPER PRISON
DEPARTMENT OF CORRECTIONS – DRAPER, UTAH
DFCM PROJECT NO: 05082100

The removal of the existing microwave and electronic shock vibration system. Installation of a new perimeter security system that will contain a fence array type system and microwave system. The system shall incorporate software and/or meteorological devices to compensate for environmental changes resulting from wind and precipitation and supply the necessary “real-time” data to the system processor. Construction cost estimate: \$500,000.00

Company	Contact	Fax
Engineered Control Systems	Bob Ellis	509-483-5102
EO Integrated Systems Inc.	Don Rochon	586-752-5270
Integrated Security Corporation	William Proden	248-926-9070

The bid documents will be available on Wednesday, November 16, 2005 in hard copy and electronic format from DFCM at 4110 State Office Building, Salt Lake City, Utah 84114, telephone (801)538-3018 and on the DFCM web page at <http://dfcm.utah.gov>. For questions regarding this project, please contact Vic Middleton, Project Manager, DFCM, at (801)-971-0504. No others are to be contacted regarding this project.

A **MANDATORY** pre-bid meeting and site visit will be held at 10:00 AM on Friday, November 18, 2005 at the Administration Building, Draper Prison. All short listed prime contractors wishing to bid on this project must attend this meeting. Security clearance required for all persons wishing to attend pre-bid (see attached Contractor Clearance Information).

Bids must be submitted by 3:00 PM on Wednesday, November 30, 2005 to DFCM, 4110 State Office Building, Salt Lake City, Utah 84114. Bids will be opened and read aloud in the DFCM Conference Room, 4110 State Office Building, Salt Lake City, Utah. Note: Bids must be received at 4110 State Office Building by the specified time. The contractor shall comply with and require all of its subcontractors to comply with the license laws as required by the State of Utah.

A bid bond in the amount of five percent (5%) of the bid amount, made payable to the Division of Facilities Construction and Management on DFCM’s bid bond form, shall accompany the bid.

The Division of Facilities Construction & Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of the State.

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT
MARLA WORKMAN, CONTRACT COORDINATOR
4110 State Office Bldg., Salt Lake City, Utah 84114

STAGE II BIDDING PROCESS

ONLY CONTRACTORS PREVIOUSLY SHORT-LISTED DURING STAGE I ARE ALLOWED TO BID ON THIS PROJECT

1. Invitational Bid Procedures

Invitation to Bid: DFCM will notify each short-listed firm via e-mail and/or fax when a project is ready for construction services.

Bid Documents: Bidding documents including plans and specifications (if applicable) may be obtained by accessing DFCM's web page at <http://dfcm.utah.gov> or at DFCM's office 4110 State Office Building, Salt Lake City, Utah 84114.

Mandatory Pre-Bid Site Meeting: If required, the schedule contained in this document will indicate the date, time, and place of the mandatory pre-bid site meeting. At this meeting, contractors will receive additional instructions about the project and have an opportunity to ask questions about project details. If a firm fails to attend a pre-bid site meeting labeled "Mandatory" they will not be allowed to bid on the project.

Written Questions: The schedule contained in this document will indicate the deadline for submitting questions in writing to the DFCM Representative pertaining to this project.

Final Addendum: The schedule contained in this document will indicate the deadline for DFCM issuing the final addendum clarifying questions and changes to the scope of work. Contractors are responsible for obtaining and responding to information contained in the addenda.

Submitting Bids: Bids must be submitted to DFCM, 4110 State Office Building, Salt Lake City, Utah 84114 by the deadline indicated on the schedule contained in this document. Bids submitted after the deadline will not be accepted. Bids will be opened at DFCM on the date, time, and place indicated on the schedule. (Additional information pertaining to bidding is contained later in this document). It is your responsibility to allow for the time needed to park on Capitol Hill as recent construction activity has made the parking more difficult. Identification is required to enter the building.

Subcontractors List: The firm selected for the project must submit a list of all subcontractors by the deadline indicated on the schedule contained in this document. (Additional information pertaining to subcontractor lists is contained later in this document)

2. Drawings and Specifications, Other Contract Documents

Drawings and Specifications, as well as other available Contract Documents, may be obtained as stated in the Notice to Contractors.

3. **Bids**

Before submitting a bid, each bidder shall carefully examine the Contract Documents; shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the bid the cost of all items required by the Contract Documents. If the bidder observes that portions of the Contract Documents are at variance with applicable laws, building codes, rules, regulations or contain obvious erroneous or uncoordinated information, the bidder shall promptly notify the DFCM Representative and the necessary changes shall be accomplished by Addendum.

The bid, bearing original signatures, must be typed or handwritten in ink on the Bid Form provided in the procurement documents and submitted in a sealed envelope at the location specified by the Notice to Contractor's prior to the published deadline for the submission of bids.

Bid bond security, in the amount of five percent (5%) of the bid, made payable to the Division of Facilities Construction and Management, shall accompany bid. **THE BID BOND MUST BE ON THE BID BOND FORM PROVIDED IN THE PROCUREMENT DOCUMENTS IN ORDER TO BE CONSIDERED AN ACCEPTABLE BID.**

If the bid bond security is submitted on a bid bond form other than the DFCM's required bid bond form, and the bid security meets all other legal requirements, the bidder will be allowed to provide an acceptable bid bond by the close of business on the next business day following notification by DFCM of submission of a defective bid bond security. **Note: A cashier's check cannot be used as a substitute for a bid bond.**

4. **Contract and Bond**

The Contractor's Agreement will be in the form bound in the specifications. The Contract Time will be as indicated in the bid. The successful bidder, simultaneously with the execution of the Contract Agreement, will be required to furnish a performance bond and a payment bond, both bearing original signatures, upon the forms provided in the procurement documents. The performance and payment bonds shall be for an amount equal to one hundred percent (100%) of the Contract Sum and secured from a company that meets the requirements specified in the requisite forms. Any bonding requirements for Subcontractors will be specified in the Supplementary General Conditions.

5. **Listing of Subcontractors**

Listing of Subcontractors shall be as summarized in the “Instructions and Subcontractor’s List Form”, which are included as part of these Contract Documents. The subcontractors list shall be delivered to DFCM or faxed to DFCM at (801)538-3677 within 24 hours of the bid opening. Requirements for listing additional subcontractors will be listed in the Contract Documents.

DFCM retains the right to audit or take other steps necessary to confirm compliance with requirements for the listing and changing of subcontractors. Any contractor who is found to not be in compliance with these requirements is subject to a debarment hearing and may be debarred from consideration for award of contract for a period of up to three years.

6. **Interpretation of Drawings and Specifications**

If any person or entity contemplating submitting a bid is in doubt as to the meaning of any part of the drawings, specifications or other Contract Documents, such person shall submit to the DFCM Representative a request for an interpretation thereof. The person or entity submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by Addenda duly issued and a copy of such Addenda will be mailed or delivered to each person or entity receiving a set of documents. Neither DFCM nor A/E will be responsible for any other explanations or interpretations of the proposed documents. A/E shall be deemed to refer to the architect or engineer hired by DFCM as the A/E or Consultant for the Project.

7. **Addenda**

Any Addenda issued during the time of bidding shall become part of the Contract Documents made available to the bidders for the preparation of the bid, shall be covered in the bid, and shall be made a part of the Contract.

8. **Award of Contract**

The Contract will be awarded as soon as possible to the lowest, responsive and responsible bidder, based on the lowest combination of base bid and acceptable prioritized alternates, provided the bid is reasonable, is in the interests of the State of Utah to accept and after applying the Utah Preference Laws in U.C.A. Title 63, Chapter 56. The DFCM reserves the right to waive any technicalities or formalities in any bid or in the bidding. Alternates will be accepted on a prioritized basis with Alternate 1 being highest priority, Alternate 2 having second priority, etc.

9. **DFCM Contractor Performance Rating**

DFCM will evaluate the performance of the Contractor. This evaluation may include comments from the User. The Contractor will have an opportunity to review and comment on the evaluation. Evaluations, including the Contractor's comments, may be considered in future selection in the evaluation of the Contractor's past performance.

10. **Licensure**

The Contractor shall comply with and require all of its Subcontractors to comply with the license laws as required by the State of Utah.

11. **Right to Reject Bids**

DFCM reserves the right to reject any or all Bids.

12. **Time is of the Essence**

The completion deadline for this project is **180 Calendar Days after the date of the notice to proceed**. Failure to meet the completion deadline may result in a poor performance rating from DFCM which may have a negative impact on your firm's ability to obtain future work with the state of Utah and may also result in liquidated damages being assessed. Time is of the essence in regard to all the requirements of the Contract Documents.

13. **Withdrawal of Bids**

Bids may be withdrawn on written request received from bidders within 24 hours after the bid opening if the contractor has made an error in preparing the bid.

14. **Product Approvals**

Where reference is made to one or more proprietary products in the Contract Documents, but restrictive descriptive materials of one or more manufacturer(s) is referred to in the Contract Documents, the products of other manufacturers will be accepted, provided they equal or exceed

the standards set forth in the drawings and specifications and are compatible with the intent and purpose of the design, subject to the written approval of the A/E. Such written approval must occur prior to the deadline established for the last scheduled addenda to be issued. The A/E's written approval will be in an issued Addendum. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design as determined by the A/E.

15. **Financial Responsibility of Contractors, Subcontractors and Sub-subcontractors**

Contractors shall respond promptly to any inquiry in writing by the DFCM to any concern of financial responsibility of the Contractor, Subcontractor or Sub-subcontractor.

16. **Debarment.**

By submitting a bid, the Contractor certifies that neither it nor its principals, including project and site managers, have been, or are under consideration for, debarment or suspension, or any action that would exclude such from participation in a construction contract by any governmental department or agency. If the Contractor cannot certify this statement, attach to the bid a detailed written explanation which must be reviewed and approved by the DFCM as part of the requirements for award of the Project.

**Division of Facilities Construction and Management**

PROJECT SCHEDULE

Stage II = Two-Stage Bidding Process

PROJECT NAME:		PERIMETER SECURITY IMPROVEMENTS - DRAPER PRISON DEPARTMENT OF CORRECTIONS – DRAPER, UTAH		
DFCM PROJECT #:		05082100		
Event	Day	Date	Time	Place
Stage II Bidding Documents Available	Wednesday	November 16, 2005	8:00 AM	DFCM, 4110 State Office Bldg, SLC, UT and DFCM web site *
Mandatory Pre-bid Site Meeting:	Friday	November 18, 2005	10:00 AM	Administration Building** Draper Prison Draper, UT
Last Day to Submit Questions	Wednesday	November 23, 2005	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
Final Addendum Issued	Monday	November 28, 2005	4:00 PM	DFCM, 4110 State Office Bldg, SLC, UT or DFCM web site*
Prime Contractors Turn in Bid and Bid Bond / Bid Opening in DFCM Conference Room	Wednesday	November 30, 2005	3:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
Subcontractors List Due	Thursday	December 1, 2005	3:00 PM	DFCM, 4110 State Office Bldg, SLC, UT
Project Completion Date		180 Calendar Days		

* DFCM's web site address is <http://dfcm.utah.gov>

** See Department of Corrections Clearance Submittal Information Attachment



Division of Facilities Construction and Management

BID FORM

NAME OF BIDDER _____ DATE _____

To the Division of Facilities Construction and Management
4110 State Office Building
Salt Lake City, Utah 84114

The undersigned, responsive to the "Notice to Contractors" and in accordance with the Request for Bids for the **PERIMETER SECURITY IMPROVEMENTS – DRAPER PRISON – DEPARTMENT OF CORRECTIONS – DRAPER, UTAH – DFCM PROJECT NO. 05082100** and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: _____

For all work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

_____ DOLLARS (\$_____)

(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete within **180 calendar days** after the date of the Notice to Proceed, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$500.00** per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.

Enclosed is a 5% bid bond, as required, in the sum of _____

The undersigned Contractor's License Number for Utah is _____

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in Contract Documents, and deliver acceptable Performance and Payment bonds in the prescribed form in the amount of 100% of the Contract Sum for faithful performance of the contract. The Bid Bond attached, in the amount not less than five percent (5%) of the above bid sum, shall become the property of the Division of Facilities Construction and Management as liquidated damages for delay and additional expense caused thereby in the event that the contract is not executed and/or acceptable 100% Performance and Payment bonds are not delivered within time set forth.

Type of Organization:

(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws:

Respectfully submitted,

Name of Bidder

ADDRESS:

Authorized Signature

BID BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed, (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the STATE OF UTAH, hereinafter referred to as the "Obligee," in the amount of \$ _____ (5% of the accompanying bid), being the sum of this Bond to which payment the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted to Obligee the accompanying bid incorporated by reference herein, dated as shown, to enter into a contract in writing for the _____ Project.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that if the said principal does not execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the principal, then the sum of the amount stated above will be forfeited to the State of Utah as liquidated damages and not as a penalty; if the said principal shall execute a contract and give bond to be approved by the Obligee for the faithful performance thereof within ten (10) days after being notified in writing of such contract to the Principal, then this obligation shall be null and void. It is expressly understood and agreed that the liability of the Surety for any and all defaults of the Principal hereunder shall be the full penal sum of this Bond. The Surety, for value received, hereby stipulates and agrees that obligations of the Surety under this Bond shall be for a term of sixty (60) days from actual date of the bid opening.

PROVIDED, HOWEVER, that this Bond is executed pursuant to provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals on the date indicated below, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

DATED this _____ day of _____, 20_____.

Principal's name and address (if other than a corporation):

By: _____

Title: _____

Principal's name and address (if a corporation):

By: _____

Title: _____
(Affix Corporate Seal)

Surety's name and address:

By: _____
Attorney-in-Fact (Affix Corporate Seal)

STATE OF _____)
COUNTY OF _____) ss.

On this ___ day of _____, 20_____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20_____.
My Commission Expires: _____
Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General

**Division of Facilities Construction and Management****INSTRUCTION AND SUBCONTRACTORS LIST FORM**

The three low bidders, as well as all other bidders that desire to be considered, are required by law to submit to DFCM within 24 hours of bid opening a list of **ALL** first-tier subcontractors, including the subcontractor's name, bid amount and other information required by Building Board Rule and as stated in these Contract Documents, on the following basis:

PROJECTS UNDER \$500,000 - ALL SUBS \$20,000 OR OVER MUST BE LISTED
PROJECTS \$500,000 OR MORE - ALL SUBS \$35,000 OR OVER MUST BE LISTED

- Any additional subcontractors identified in the bid documents shall also be listed.
- The DFCM Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law.
- List subcontractors for base bid as well as the impact on the list that the selection of any alternate may have.
- Bidder may not list more than one subcontractor to perform the same work.
- Bidder must list "Self" if performing work itself.

LICENSURE:

The subcontractor's name, the type of work, the subcontractor's bid amount, and the subcontractor's license number as issued by DOPL, if such license is required under Utah Law, shall be listed. Bidder shall certify that all subcontractors, required to be licensed, are licensed as required by State law. A subcontractor includes a trade contractor or specialty contractor and does not include suppliers who provide only materials, equipment, or supplies to a contractor or subcontractor.

BIDDER LISTING 'SELF' AS PERFORMING THE WORK:

Any bidder that is properly licensed for the particular work and intends to perform that work itself in lieu of a subcontractor that would otherwise be required to be on the subcontractor list, must insert the term 'Self' for that category on the subcontractor list form. Any listing of 'Self' on the sublist form shall also include the amount allocated for that work.

'SPECIAL EXCEPTION':

A bidder may list 'Special Exception' in place of a subcontractor when the bidder intends to obtain a subcontractor to perform the work at a later date because the bidder was unable to obtain a qualified or reasonable bid under the provisions of U.C.A. Section 63A-5-208(4). The bidder shall insert the term 'Special Exception' for that category of work, and shall provide documentation with the subcontractor list describing the bidder's efforts to obtain a bid of a qualified subcontractor at a reasonable cost and why the bidder was unable to obtain a qualified subcontractor bid. The Director must find that the bidder complied in good faith with State law requirements for any 'Special Exception' designation, in order for the bid to be considered. If awarded the contract, the Director shall supervise the bidder's efforts to obtain a qualified subcontractor bid. The amount of the awarded contract may not be adjusted to reflect the actual amount of the subcontractor's bid. Any listing of 'Special Exception' on the sublist form shall also include amount allocated for that work.

INSTRUCTIONS AND SUBCONTRACTORS LIST FORM
Page No. 2

GROUND FOR DISQUALIFICATION:

The Director may not consider any bid submitted by a bidder if the bidder fails to submit a subcontractor list meeting the requirements of State law. Director may withhold awarding the contract to a particular bidder if one or more of the proposed subcontractors are considered by the Director to be unqualified to do the Work or for such other reason in the best interest of the State of Utah. Notwithstanding any other provision in these instructions, if there is a good faith error on the sublist form, at the sole discretion of the Director, the Director may provide notice to the contractor and the contractor shall have 24 hours to submit the correction to the Director. If such correction is submitted timely, then the sublist requirements shall be considered met.

CHANGES OF SUBCONTRACTORS SPECIFICALLY IDENTIFIED ON SUBLIST FORM:

Subsequent to twenty-four hours after the bid opening, the contractor may change its listed subcontractors only after receiving written permission from the Director based on complying with all of the following criteria.

- (1) The contractor has established in writing that the change is in the best interest of the State and that the contractor establishes an appropriate reason for the change, which may include, but not is not limited to, the following reasons: the original subcontractor has failed to perform, or is not qualified or capable of performing, and/or the subcontractor has requested in writing to be released.
- (2) The circumstances related to the request for the change do not indicate any bad faith in the original listing of the subcontractors.
- (3) Any requirement set forth by the Director to ensure that the process used to select a new subcontractor does not give rise to bid shopping.
- (4) Any increase in the cost of the subject subcontractor work is borne by the contractor.
- (5) Any decrease in the cost of the subject subcontractor work shall result in a deductive change order being issued for the contract for such decreased amount.
- (6) The Director will give substantial weight to whether the subcontractor has consented in writing to being removed unless the Contractor establishes that the subcontractor is not qualified for the work.

EXAMPLE:

Example of a list where there are only four subcontractors:

TYPE OF WORK	SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION"	SUBCONTRACTOR BID AMOUNT	CONT. LICENSE #
ELECTRICAL	ABCD Electric Inc.	\$350,000.00	123456789000
LANDSCAPING	"Self"	300,000.00	123456789000
CONCRETE (ALTERNATE #1)	XYZ Concrete Inc	298,000.00	987654321000
MECHANICAL	"Special Exception" (attach documentation)	Fixed at: 350,000.00	(TO BE PROVIDED AFTER OBTAINING SUBCONTRACTOR)

**PURSUANT TO STATE LAW - SUBCONTRACTOR BID AMOUNTS CONTAINED IN THIS
SUBCNTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.**

FUGITIVE DUST PLAN

The Contractor will fill out the form and file the original with the Division of Air Quality and a copy of the form with the Division of Facilities Construction & Management, prior to the issuance of any notice to proceed.

The Contractor will be fully responsible for compliance with the Fugitive Dust Control Plan, including the adequacy of the plan, any damages, fines, liability, and penalty or other action that results from noncompliance.

Utah Division of Air Quality

April 20, 1999

**GUIDANCE THAT MUST BE CONSIDERED IN DEVELOPING AND SUBMITTING A
DUST CONTROL PLAN FOR COMPLIANCE WITH R307-309-3, 4, 5, 6, 7**

Source Information:

1. Name of your operation (source): provide a name if the source is a construction site.

2. Address or location of your operation or construction site.

3. UTM coordinates or Longitude/Latitude of stationary emission points at your operation.

4. Lengths of the project, if temporary (time period).

5. Description of process (include all sources of dust and fugitive dust). Please, if necessary, use additional sheets of paper for this description. Be sure to mark it as an attachment.

6. Type of material processed or disturbed.

7. Amount of material processed (tons per year, tons per month, lbs./hr., and applicable units).

8. Destination of product (where will the material produced be used or transported, be specific, provide address or specific location), information needed for temporary relocation applicants.

9. Identify the individual who is responsible for the implementation and maintenance of fugitive dust control measures. List name(s), position(s) and telephone number(s).

10. List, and attach copies of any contract lease, liability agreement with other companies that may, or will, be responsible for dust control on site or on the project.

Description of Fugitive Dust Emission Activities
(Things to consider in addressing fugitive dust control strategies.)

1. Type of activities (drilling and blasting, road construction, development construction, earth moving and excavation, handling and hauling materials, cleaning and leveling, etc).
2. List type of equipment generating the fugitive dust.
3. Diagram the location of each activity or piece of equipment on site. Please attach the diagram.
4. Provide pictures or drawings of each activity. Include a drawing of the unpaved/paved road network used to move loads “on” and “off” property.
5. Vehicle miles travels on unpaved roads associated with the activity (average speed).
6. Type of dust emitted at each source (coal, cement, sand, soil, clay, dust, etc.)
7. Estimate the size of the release area at which the activity occurs (square miles). For haul or dirt roads include total miles of road in use during the activity.

Description of Fugitive Dust Emission Controls on Site

Control strategies must be designed to meet 20% opacity or less on site (a lesser opacity may be defined by Approval Order conditions or federal requirements such as NSPS), and control strategies must prevent exceeding 10% opacity from fugitive dust at the property boundary (site boundary) for compliance with R307-309-3.

1. Types of ongoing emission controls proposed for each activity, each piece of equipment, and haul roads.
2. Types of additional dust controls proposed for bare, exposed surfaces (chemical stabilization, synthetic cover, wind breaks, vegetative cover, etc).
3. Method of application of dust suppressant.
4. Frequency of application of dust suppressant.
5. Explain what triggers the use of a special control measure other than routine measures already in place, such as covered loads or measures covered by a permit condition (increase in opacity, high winds, citizen complaints, dry conditions, etc).
6. Explain in detail what control strategies/measures will be implemented off-hours, i.e., Saturdays/Sundays/Holidays, as well as 6 PM to 6 AM each day.

Description of Fugitive Dust Control Off-site

Prevent, to the maximum extent possible, deposition of materials, which may create fugitive dust on public and private paved roads in compliance with R307-309-5, 6, 7.

1. Types of emission controls initiated by your operation that are in place “off” property (application of water, covered loads, sweeping roads, vehicle cleaning, etc.).

2. Proposed remedial controls that will be initiated promptly if materials, which may create fugitive dust, are deposited on public and private paved roads.

Submit the Dust Control Plan to:

Executive Secretary
Utah Air Quality Board
POB 144820
15 North 1950 West
Salt Lake City, Utah 84114-4820

Phone: (801) 536-4000
FAX: (801) 536-4099

Fugitive Dust Control Plan Violation Report

When a source is found in violation of R307-309-3 or in violation of the Fugitive Dust Control Plan, the source must submit a report to the Executive Secretary within 15 days after receiving a Notice of Violation. The report must include the following information:

1. Name and address of dust source.
2. Time and duration of dust episode.
3. Meteorological conditions during the dust episode.
4. Total number and type of fugitive dust activities and dust producing equipment within each operation boundary. If no change has occurred from the existing dust control plan, the source should state that the activity/equipment is the same.
5. Fugitive dust activities or dust producing equipment that caused a violation of R-307-309-3 or the sources dust control plan.
6. Reasons for failing to control dust from the dust generating activity or equipment.
7. New and/or additional fugitive dust control strategies necessary to achieve compliance with R307-309-3, 4, 5, 6, or 7.
8. If it can not be demonstrated that the current approved Dust Control Plan can result in compliance with R307-309-3 through 7, the Dust Control Plan must be revised so as to demonstrate compliance with 307-309-3 through 7. Within 30 days of receiving a fugitive dust Notice of Violation, the source must submit the revised Plan to the Executive Secretary for review and approval.

Submit the Dust Control Plan to:

Executive Secretary	Phone: (801) 536-4000
Utah Air Quality Board	FAX: (801) 536-4099
POB 144820	
15 North 1950 West	
Salt Lake City, Utah 84114-4820	

Attachments: DFCM Form FDR R-307-309, Rule 307-309

CONTRACTOR'S AGREEMENT

FOR:

THIS CONTRACTOR'S AGREEMENT, made and entered into this ____ day of _____, 20__, by and between the DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT, hereinafter referred to as "DFCM", and _____, incorporated in the State of _____ and authorized to do business in the State of Utah, hereinafter referred to as "Contractor", whose address is _____.

WITNESSETH: WHEREAS, DFCM intends to have Work performed at _____.

WHEREAS, Contractor agrees to perform the Work for the sum stated herein.

NOW, THEREFORE, DFCM and Contractor for the consideration provided in this Contractor's Agreement, agree as follows:

ARTICLE 1. SCOPE OF WORK. The Work to be performed shall be in accordance with the Contract Documents prepared by _____ and entitled "_____"

The DFCM General Conditions ("General Conditions") dated May 25, 2005 on file at the office of DFCM and available on the DFCM website, are hereby incorporated by reference as part of this Agreement and are included in the specifications for this Project. All terms used in this Contractor's Agreement shall be as defined in the Contract Documents, and in particular, the General Conditions.

The Contractor Agrees to furnish labor, materials and equipment to complete the Work as required in the Contract Documents which are hereby incorporated by reference. It is understood and agreed by the parties hereto that all Work shall be performed as required in the Contract Documents and shall be subject to inspection and approval of DFCM or its authorized representative. The relationship of the Contractor to the DFCM hereunder is that of an independent Contractor.

ARTICLE 2. CONTRACT SUM. The DFCM agrees to pay and the Contractor agrees to accept in full performance of this Contractor's Agreement, the sum of _____ DOLLARS AND NO CENTS (\$_____.00), which is the base bid, and which sum also includes the cost of a 100%

Performance Bond and a 100% Payment Bond as well as all insurance requirements of the Contractor. Said bonds have already been posted by the Contractor pursuant to State law. The required proof of insurance certificates have been delivered to DFCM in accordance with the General Conditions before the execution of this Contractor's Agreement.

ARTICLE 3. TIME OF COMPLETION AND DELAY REMEDY. The Work shall be Substantially Complete within _____ (___) calendar days after the date of the Notice to Proceed. Contractor agrees to pay liquidated damages in the amount of \$_____ per day for each day after expiration of the Contract Time until the Contractor achieves Substantial Completion in accordance with the Contract Documents, if Contractor's delay makes the damages applicable. The provision for liquidated damages is: (a) to compensate the DFCM for delay only; (b) is provided for herein because actual damages can not be readily ascertained at the time of execution of this Contractor's Agreement; (c) is not a penalty; and (d) shall not prevent the DFCM from maintaining Claims for other non-delay damages, such as costs to complete or remedy defective Work.

No action shall be maintained by the Contractor, including its or Subcontractor or suppliers at any tier, against the DFCM or State of Utah for damages or other claims due to losses attributable to hindrances or delays from any cause whatsoever, including acts and omissions of the DFCM or its officers, employees or agents, except as expressly provided in the General Conditions. The Contractor may receive a written extension of time, signed by the DFCM, in which to complete the Work under this Contractor's Agreement in accordance with the General Conditions.

ARTICLE 4. CONTRACT DOCUMENTS. The Contract Documents consist of this Contractor's Agreement, the Conditions of the Contract (DFCM General Conditions, Supplementary and other Conditions), the Drawings, Specifications, Addenda and Modifications. The Contract Documents shall also include the bidding documents, including the Notice to Contractors, Instructions to Bidders/Proposers and the Bid/Proposal, to the extent not in conflict therewith and other documents and oral presentations that are documented as an attachment to the contract.

All such documents are hereby incorporated by reference herein. Any reference in this Contractor's Agreement to certain provisions of the Contract Documents shall in no way be construed as to lessen the importance or applicability of any other provisions of the Contract Documents.

ARTICLE 5. PAYMENT. The DFCM agrees to pay the Contractor from time to time as the Work progresses, but not more than once each month after the date of Notice to Proceed, and only upon Certificate of the A/E for Work performed during the preceding calendar month, ninety-five percent (95%) of the value of the labor performed and ninety-five percent (95%) of the value of materials furnished in place or on the site. The Contractor agrees to furnish to the DFCM invoices for materials purchased and on the site but not installed, for which the

Contractor requests payment and agrees to safeguard and protect such equipment or materials and is responsible for safekeeping thereof and if such be stolen, lost or destroyed, to replace same.

Such evidence of labor performed and materials furnished as the DFCM may reasonably require shall be supplied by the Contractor at the time of request for Certificate of Payment on account. Materials for which payment has been made cannot be removed from the job site without DFCM's written approval. Five percent (5%) of the earned amount shall be retained from each monthly payment. The retainage, including any additional retainage imposed and the release of any retainage, shall be in accordance with UCA 13-8-5 as amended. Contractor shall also comply with the requirements of UCA 13-8-5, including restrictions of retainage regarding subcontractors and the distribution of interest earned on the retention proceeds. The DFCM shall not be responsible for enforcing the Contractor's obligations under State law in fulfilling the retention law requirements with subcontractors at any tier.

ARTICLE 6. INDEBTEDNESS. Before final payment is made, the Contractor must submit evidence satisfactory to the DFCM that all payrolls, materials bills, subcontracts at any tier and outstanding indebtedness in connection with the Work have been properly paid. Final Payment will be made after receipt of said evidence, final acceptance of the Work by the DFCM as well as compliance with the applicable provisions of the General Conditions.

Contractor shall respond immediately to any inquiry in writing by DFCM as to any concern of financial responsibility and DFCM reserves the right to request any waivers, releases or bonds from Contractor in regard to any rights of Subcontractors (including suppliers) at any tier or any third parties prior to any payment by DFCM to Contractor.

ARTICLE 7. ADDITIONAL WORK. It is understood and agreed by the parties hereto that no money will be paid to the Contractor for additional labor or materials furnished unless a new contract in writing or a Modification hereof in accordance with the General Conditions and the Contract Documents for such additional labor or materials has been executed. The DFCM specifically reserves the right to modify or amend this Contractor's Agreement and the total sum due hereunder either by enlarging or restricting the scope of the Work.

ARTICLE 8. INSPECTIONS. The Work shall be inspected for acceptance in accordance with the General Conditions.

ARTICLE 9. DISPUTES. Any dispute, PRE or Claim between the parties shall be subject to the provisions of Article 7 of the General Conditions. DFCM reserves all rights to pursue its rights and remedies as provided in the General Conditions.

ARTICLE 10. TERMINATION, SUSPENSION OR ABANDONMENT. This Contractor's Agreement may be terminated, suspended or abandoned in accordance with the General Conditions.

ARTICLE 11. DFCM'S RIGHT TO WITHHOLD CERTAIN AMOUNT AND MAKE USE THEREOF. The DFCM may withhold from payment to the Contractor such amount as, in DFCM's judgment, may be necessary to pay just claims against the Contractor or Subcontractor at any tier for labor and services rendered and materials furnished in and about the Work. The DFCM may apply such withheld amounts for the payment of such claims in DFCM's discretion. In so doing, the DFCM shall be deemed the agent of Contractor and payment so made by the DFCM shall be considered as payment made under this Contractor's Agreement by the DFCM to the Contractor. DFCM shall not be liable to the Contractor for any such payment made in good faith. Such withholdings and payments may be made without prior approval of the Contractor and may be also be prior to any determination as a result of any dispute, PRE, Claim or litigation.

ARTICLE 12. INDEMNIFICATION. The Contractor shall comply with the indemnification provisions of the General Conditions.

ARTICLE 13. SUCCESSORS AND ASSIGNMENT OF CONTRACT. The DFCM and Contractor, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement, and to partners, successors, assigns and legal representatives of such other party with respect to all covenants, provisions, rights and responsibilities of this Contractor's Agreement. The Contractor shall not assign this Contractor's Agreement without the prior written consent of the DFCM, nor shall the Contractor assign any moneys due or to become due as well as any rights under this Contractor's Agreement, without prior written consent of the DFCM.

ARTICLE 14. RELATIONSHIP OF THE PARTIES. The Contractor accepts the relationship of trust and confidence established by this Contractor's Agreement and covenants with the DFCM to cooperate with the DFCM and A/E and use the Contractor's best skill, efforts and judgment in furthering the interest of the DFCM; to furnish efficient business administration and supervision; to make best efforts to furnish at all times an adequate supply of workers and materials; and to perform the Work in the best and most expeditious and economic manner consistent with the interests of the DFCM.

ARTICLE 15. AUTHORITY TO EXECUTE AND PERFORM AGREEMENT. Contractor and DFCM each represent that the execution of this Contractor's Agreement and the performance thereunder is within their respective duly authorized powers.

ARTICLE 16. ATTORNEY FEES AND COSTS. Except as otherwise provided in the dispute resolution provisions of the General Conditions, the prevailing party shall be entitled to reasonable attorney fees and costs incurred in any action in the District Court and/or appellate body to enforce this Contractor's Agreement or recover damages or any other action as a result of a breach thereof.

PERFORMANCE BOND
(Title 63, Chapter 56, U. C. A. 1953, as Amended)

That _____ hereinafter referred to as the "Principal" and _____, a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ and authorized to transact business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah, hereinafter referred to as the "Obligee," in the amount of _____ DOLLARS (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____, for the approximate sum of _____ Dollars (\$ _____), which Contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall faithfully perform the Contract in accordance with the Contract Documents including, but not limited to, the Plans, Specifications and conditions thereof, the one year performance warranty, and the terms of the Contract as said Contract may be subject to Modifications or changes, then this obligation shall be void; otherwise it shall remain in full force and effect.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the state named herein or the heirs, executors, administrators or successors of the Owner.

The parties agree that the dispute provisions provided in the Contract Documents apply and shall constitute the sole dispute procedures of the parties.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the Provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____

(Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____

Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney in-fact of the above-named Surety Company and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General

PAYMENT BOND

(Title 63, Chapter 56, U. C. A. 1953, as Amended)

KNOW ALL PERSONS BY THESE PRESENTS:

That _____ hereinafter referred to as the "Principal," and _____, a corporation organized and existing under the laws of the State of _____ authorized to do business in this State and U. S. Department of the Treasury Listed (Circular 570, Companies Holding Certificates of Authority as Acceptable Securities on Federal Bonds and as Acceptable Reinsuring Companies); with its principal office in the City of _____, hereinafter referred to as the "Surety," are held and firmly bound unto the State of Utah hereinafter referred to as the "Obligee," in the amount of _____ Dollars (\$ _____) for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written Contract with the Obligee, dated the _____ day of _____, 20____, to construct _____ in the County of _____, State of Utah, Project No. _____ for the approximate sum of _____ Dollars (\$ _____), which contract is hereby incorporated by reference herein.

NOW, THEREFORE, the condition of this obligation is such that if the said Principal shall pay all claimants supplying labor or materials to Principal or Principal's Subcontractors in compliance with the provisions of Title 63, Chapter 56, of Utah Code Annotated, 1953, as amended, and in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise it shall remain in full force and effect.

That said Surety to this Bond, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder, or the specifications or drawings accompanying same shall in any way affect its obligation on this Bond, and does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to the Work or to the specifications or drawings and agrees that they shall become part of the Contract Documents.

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Title 63, Chapter 56, Utah Code Annotated, 1953, as amended, and all liabilities on this Bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20____.

WITNESS OR ATTESTATION:

PRINCIPAL:

By: _____ (Seal)

Title: _____

WITNESS OR ATTESTATION:

SURETY:

By: _____ Attorney-in-Fact (Seal)

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 20____, personally appeared before me _____, whose identity is personally known to me or proved to me on the basis of satisfactory evidence, and who, being by me duly sworn, did say that he/she is the Attorney-in-fact of the above-named Surety Company, and that he/she is duly authorized to execute the same and has complied in all respects with the laws of Utah in reference to becoming sole surety upon bonds, undertakings and obligations, and that he/she acknowledged to me that as Attorney-in-fact executed the same.

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires: _____

Resides at: _____

NOTARY PUBLIC

Agency: _____
Agent: _____
Address: _____
Phone: _____

Approved As To Form: May 25, 2005
By Alan S. Bachman, Asst Attorney General



CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT _____ PROJECT NO: _____

AGENCY/INSTITUTION _____

AREA ACCEPTED _____

The Work performed under the subject Contract has been reviewed on this date and found to be Substantially Completed as defined in the General Conditions; including that the construction is sufficiently completed in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the State of Utah can occupy the Project or specified area of the Project for the use for which it is intended.

The DFCM accepts the Project or specified area of the Project as Substantially Complete and will assume full possession of the Project or specified area of the Project at _____ (time) on _____ (date).

The DFCM accepts the Project for occupancy and agrees to assume full responsibility for maintenance and operation, including utilities and insurance, of the Project subject to the itemized responsibilities and/or exceptions noted below:

A list of items to be completed or corrected is attached hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereof.

The Contractor shall complete or correct the Work on the list of items appended hereto within _____ calendar days from the above date of issuance of this Certificate. The amount withheld pending completion of the list of items noted and agreed to shall be: \$ _____.

CONTRACTOR (include name of firm) by: _____ DATE

A/E by: _____ DATE

USING INSTITUTION OR AGENCY by: _____ DATE

DFCM by: _____ DATE

cc: Parties Noted
DFCM, Director

Utah Department of Corrections

(DRAPER SITE)

OUTSIDE CONTRACTOR RULES AND REGULATIONS

- 1.1 All contractors, workers, architects, etc. must have picture identification on their person while working at the Prison. A Utah Driver's License or Driver's License Division I. D. is preferred, but we will accept pictured military I. D., etc.
2. No unlocked vehicles may be left unattended.
3. No running vehicles may be left unattended.
4. No keys may be left in vehicles.
5. Park all vehicles and equipment away from fences - a minimum of 50 feet.
6. No blue chambray (light blue denim) or solid white work shirts may be worn.
7. No blue denim jackets may be worn.
8. Do not run - especially toward or away from any fence line.
9. Absolutely No "visiting" with inmates.
10. Nothing may be given to inmates. Giving contraband to inmates is a felony.
11. Nothing may be taken from inmates.
12. No tools may be left unattended. Unattended tools will be confiscated.
13. Do not throw away broken or worn out saw blades of any kind at the prison site. Dispose of them off property, at your home, shop, or office, or you may give them to the security officer.
14. Explosive cartridges for Hilti guns, etc. must be locked up and/or strictly supervised at all times. Cartridge "clips" shall be disposed of away from prison property. This also includes individual load shell casings. If you have a Hilti gun, etc. in your equipment, the gate security officer for your construction site must be notified.
15. No weapons, ammunition, explosives, drugs, alcoholic beverages, poisons, acids or other dangerous objects or hazardous substances are allowed on prison property. Required prescription "medicines" can be carried in limited daily dosages only.

Utah Department of Corrections

CONTRACTOR'S CODE OF CONDUCT

As an independent contractor working with or around inmates at the Utah State Prison, I understand and agree to observe the following policies:

1. While on duty, I will visually carry my ID with me.
2. I will respect and protect the civil and legal rights of all offenders.
3. I will be respectful, courteous and civil with staff and inmates, and shall not use coarse, loud, indecent, profane or unnecessarily harsh language nor do anything that might incite any person to violence while on the Institution premises-
4. I will meet standards established in my job description and report conditions or circumstances that would prevent me from performing my job effectively or completing my assigned tasks, I shall bring to the supervisor's attention unclear instructions or procedures.
5. I will not engage in "horseplay" or playing of pranks while on the premises.
6. I will not violate any Federal, State or local laws or ordinances.
7. I will report any facts, information or evidence relating to a criminal offence or case in accordance with established department procedures.
8. I will not knowingly falsify, enter, or cause to be entered, any inaccurate, false or improper information on Institutional documents.
9. I will surrender all departmental property issued to me upon termination of my assignment.
10. I will give any department property or evidence that has been found or recovered to my immediate supervisor.
11. I will not consume, nor otherwise use any intoxicants, nor be intoxicated, while on Institutional assignments. I will not have in my possession any of these substances or any item they would impact the safety or control of the institution.
12. I will not bring any over the counter medications except for what is needed for that day, tobacco products, alcohol, firearms, ammunition or drugs onto prison property or to an inmate under jurisdiction of Utah State Corrections.
13. I will not fraternize with, nor develop personal relationships with offenders. when

CONTRACTOR CLEARANCE INFORMATION

The following information must be submitted to Department of Corrections 48 hours prior to gaining access into the prison facility:

Name:

Date of Birth:

Social Security Number:

Drivers License Number:

Submit to: Doug Wright at e-mail dwright@utah.gov or fax to 801-545-5523 attn: Doug Wright

DFCM PROJECT NO. 05082100

**DRAPER PRISON
CORRECTIONAL FACILITY**

**NORTH & SOUTH POINT
SITE PERIMETER
SECURITY SPECIFICATIONS**

SECTION 13800- PERIMETER DETECTION SYSTEM

PART 1- GENERAL

1.01 DESCRIPTION

A. GENERAL:

- 1. Furnish all labor, materials, tools, equipment, and services for all intrusion detection systems as indicated in accordance with provisions of Contract Documents.**
- 2. Completely coordinate with work of all other trades.**
- 3. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation.**
- 4. See Division 1 for General Requirements.**

1.02 QUALITY ASSURANCE

A. SCOPE

1. The purpose of this project is to install and provide all labor, materials and equipment for a fully operational exterior perimeter microwave intrusion detection barrier.
2. Microwave sensors and a fence array system shall be incorporated into the system and used as separate zones.
3. No variances of the equipment outlined in performance shall be accepted.
4. The prospective bidders shall meet the minimum specification found herein and shall respond line by line to the entire document demonstrating the bidders understanding as well as with its conformity or non conformity to each individual line item of the specification. The contractor shall provide and install a perimeter security system for the purpose of detecting entry into a designed security area. The perimeter security system is to be installed complete with appropriate controls, wiring and mounting hardware per the manufacturer's recommendations. All installation work shall be accomplished in a professional manner under the direction of a manufacturer trained installer. The manufacturer trained installer must have training within 1 year of installation and show certificate of completion.

B. SYSTEM DESCRIPTION

1. The perimeter security system shall be a combined electronic shock vibration or strain sensitive type system and microwave system. The system shall incorporate either software and/or meteorological devices or both to compensate for environmental changes resulting from wind and precipitation and supply the necessary “real-time” data to the system processor.
2. The successful bidder shall provide an operating perimeter security system complete with central monitoring computer, processor, controlled weather notification device (if required), sensor cable, microwave heads, accessories and such other peripheral equipment as the site may require. The perimeter security system shall detect perimeter intrusion attempts and indicate alarms on a color graphic display on a central monitoring computer with flashing alarm zones and audio annunciation of alarms. The perimeter security system shall monitor the microwave and fence array separately and, provide “priority” alarms when both microwave and fence array have been tripped within one zone or adjacent zones. The central processor shall provide command and control capabilities for CCTV cameras via serial port communications, on screen video of alarmed zones and a hard copy printout of alarm activity (event logging), including times alarms received and acknowledged on the system hard drive memory and/or system printer. The system shall provide zone associations, zone access timeout, mandatory alarm classification and system status reports.
3. The successful bidder must address the condition of the Draper site perimeter fences and specify in their submittal how they will address the “noise” the fences make specific to the fence array. The bid must include a solution to the fence noise problems and microwave offset problems.

C. GENERAL SYSTEM SPECIFICATIONS

1. The successful bidder shall provide Project Site Drawings locating perimeter devices, power supplies, power connections, wire size, conductor, termination location etc to be installed for review and modification, comment by UDC.
2. The successful bidder shall list and provide a description of annunciated zones (zone ID)
3. The perimeter protection system shall operate as a zoned supervised intrusion detection connecting to an alarm annunciation system to alert security personnel of an attempted intrusion into the secured area.
4. Each detection zone shall be no more than 300 feet in length for identification purposes.
5. Each microwave zone shall be monitored by one (1) TX and RX microwave array. Multiple heads, zones within zones, or zones to cover offsets will not be approved for this project.
6. Each microwave zone shall have a corresponding fence zone.
7. The entire fence intrusion system must be provided by one manufacturer or supplier.

8. It is the responsibility of contractor to remove all existing above ground conduit and cabling.
9. Provide 40 hours technical/factory training to five (5) UDC Electronic Security staff at no cost to UDC (including travel, per diem, rental cars). A minimum of two training courses offered.
- 10 Provide 24 hours end user training to UDC enforcement staff
11. Provide 2 year warranty for parts and labor for entire security system.
12. Provide factory trained 24-hour service for warranty period. Technicians must be factory trained to provide service.
13. All 110 volt and low voltage power supplies must be located remotely from fence line, (in towers or in control rooms) and have UPS back-up. Must show power requirement and use properly sized power supplies and UPS. The bidder may use a single power supply for multiple microwaves.

D. FENCE ARRAY SPECIFICATIONS

1. The bidder must inspect all existing fences and tighten as required to meet their manufacturers specifications for the system being bid. The cost of any fence tensioning, top rails, bottom rails, pull posts must be included in this bid.
2. A field sensor array shall be installed on the fence fabric, concertina, razor ribbon, and barbed wire as required. The sensor cable shall be mounted on the fence material, concertina, razor ribbon, barbed wire, or other such media using UV resistant cable ties.
3. The length of a detection zone shall be no more than 300 feet in length.
4. Under normal environmental conditions, including seasonal extremes (see defined* wind conditions and attachment #2), the total perimeter alarm system should not average more than one (1) false alarm per week per segment, and should not average more than one nuisance alarm per week per segment, while maintaining proper detection sensitivity. (The average daily wind gust at the Draper Prison is 44.4 MPH. The system shall be designed to no more than one false alarm in winds up to 39.96 MPH)
5. The manufacturer or supplier shall furnish and install all materials for a complete operative fence intrusion detection system which is designed to detect **CUT**, and/or climb movement on the chain link fence.
6. The sensor cable shall be complete with “state-of-the-art” electronic circuitry that is capable of discriminating between environmentally generated fence movement and intrusion related disturbances.
7. All sensor cable shall be UV resistant to sunlight and rated for direct burial cable attached at 12” intervals. (ties to be provided by sensor manufacturer).

8. The fence cut and fence movement detection shall have equal sensitivity throughout its entire length.

9. The entire sensor system shall be capable of being installed in extreme radio frequency interference (RFI) or electromagnetic interference (EMI) environments without any affect on normal operating characteristics.

10. The entire sensor system shall be fully supervised and an alarm shall be generated if any cable is cut, shorted to ground or each other (tampered with). The individual zone tampered with shall be indicated on the control board. Tamper alarms shall continue until the tamper is corrected.

11. All processors shall be 100% solid state, conformal coated and solder masked with plug-in connections for quick field removal and replacement. The processor unit shall include controller and transponder modules and shall contain all required electronics, standby battery, power supply and other as accessories as necessary. The processor unit shall contain power on indicator with power-reset switch. The processor shall be housed in a cast aluminum enclosure with a grounding stud. All openings shall be gasketed and sealed.

12. The sensor array system shall be capable of operating to specification in fog, rain, snow, or other adverse weather conditions. The sensor cable/device shall be capable of operating at -40 degree to +158 degree F. Fence sensors shall require no field calibration and or routine maintenance and adjustment. The manufacturer must be able to demonstrate non-degraded sensor performance in actual field operation.

13. All cable connections (sensor and field wiring) shall be connected to the processor with removable plug-in terminal blocks. All input/output lines shall be protected from lightning with gas discharge arrestors and semi conductor transorbs, effective against both high energy and fast rise transients (90 volts @ 5000 amperes).

14. The fence array system false alarm rate will be well within the criteria set for such

as outlined in the U.S. Nuclear Regulatory Commission Guide #5.44 (Task SG479-4), dated May 1980. A brief outline of that guide follows:

Under normal environmental conditions, including seasonal extremes, the total perimeter alarm system should not average more than one false alarm per week per segment, and should not average more than one nuisance alarm per week per segment, while maintaining proper detection sensitivity. Where the segment can be fully observed at all times, either visually or by closed circuit television, the false alarm and nuisance alarm rate may be increased to one alarm per day per segment.

E. MICROWAVE SYSTEM SPECIFICATIONS

1. Design of microwave system including offsets must be approved by UDC
2. Microwave beam width must be narrower than double fence width (Cannot overlap into fence fabric).
3. Microwave offsets must have an overlap from one zone to another by at least 5 feet.
4. The perimeter microwave system shall operate as a zoned supervised intrusion detection connecting to an alarm annunciation system to alert security personnel of an attempted intrusion into the secured area.
5. The microwave system shall be completely solid state circuitry that is capable of discriminating between natural environmental conditions and intrusion related to disturbances.
6. The enclosure for the microwave shall be of all metal construction. The rain shield shall be a seamless integral part of the housing that will provide water flow paths and eliminates ice formation.
7. The entire sensor system shall be capable of being installed in extreme radio frequency interference (RFI) or electromagnetic interference (EMI) environments without any affect on normal operating characteristics.
8. The microwave enclosure shall provide access through the rear of the unit to the sensor electronics for adjustment and replacement without requiring the head to be removed or realigned.
9. The microwave detection system shall be field adjustable to allow changing the area of protection from 10 to 600 feet in range.
10. The microwave detection system shall be capable of being powered from an external power source of 12-16 VDC and shall not draw in excess of 75 mA.
11. The entire sensor system shall be capable of detecting tampering with in any portion of the system.
12. The microwave units shall utilize a printed circuits antennae. Parabolic antennae are not acceptable. The polarization plane of the antenna can be selected to enhance signal isolation when units are operated in close proximity or in a stacked array.
13. For applications requiring stacked microwave, the unit shall have the ability to rotate the printed circuit antennae to provide a vertical detection pattern on the lower unit and a horizontal pattern on the top unit.
14. The receiver shall contain a pre-amplifier to set higher fade margins.

15. The system sensitivity shall be field adjustable by means of one sensitivity control.
16. The microwave unit shall provide minimum of 6 field selectable modulation channels.
17. The microwave detection system shall contain LED indications which will indicate: Transmitter ON, alarm wrong modulation channel, and system jamming.
18. The receiver shall provide an LED array for proper alignment of unit.
19. The electronics circuitry portion to the receiver shall provide an output usable by an external audio amplifier that will allow an operator to actually hear the disturbance caused in the microwave pattern by the penetrating intruder, regardless of whether the system in a normal or alarm state.
20. The electronic circuitry portion of the sensor system shall provide isolated and/or supervised intrusion alarm relay contact output normally open (N.O.), or normally closed (N.C.), with and adjustable pulse width of 0.5 sec.to15.0 sec.
21. The perimeter protection system shall use digital signal processing microwave barrier sensors either singly stacked or in dual stacked configurations as per the drawings with the units operating in the X-Band frequency (10.525 GHz).
22. Each detection zone shall be no more than 300 in length for identification purposes.
23. Alarms are to be provided for each receiver via three separate relay outputs. To be identified as a minimum are the following alarms and alarm types:
 - a. Zone Alarm
 - b. Intrusion Alarm
 - c. Masking Alarm
 - d. Insufficient Signal Alarm
 - e. Successful "Receiver test"
 - f. Channel Alarm
 - g. Tamper Alarm
 - h. Radome (microwave cover removal)
 - i. Unit tilted
 - j. Cut of end of line supervisory signal either to the transmitter or receiver of a balanced alarm line input (cut or short circuit)
Short of end of line supervisory signal either to the transmitter or receiver of a balanced alarm line input
 - k. Trouble/Fault Alarm
 - l. Low Battery
 - m. High battery (high charge output)
 - n. MAIN AC/DC Power off for more than 3 hours
 - o. Low/High internal temperature alarms
 - p. RF or BF Oscillator fault on transmitter
24. Digital Signal Processing Microwave Barrier (TX/RX Pair)

25. The Active Encoded Digital Signal Processing Bistatic Microwave sensor shall be both CE, IC, and FCC listed and made for use outdoors.
26. The system shall have an Operating Temperature Range from -40 deg. F to + 160 deg. F (-40 deg. C to +75 deg. C.)
27. Operating relative Humidity shall be 0 to 100%.
28. The system shall operate on X-Band Frequency.
29. Each microwave barrier shall have a minimum of 16 modulation frequencies available that must start at 700 Hz. The single channel amplitude shall be 50 Hz, switch selectable.
30. To facilitate installation and control of the shape and the dimension of the protection field as well as to avoid as much as possible environmental influences that are adjacent to the protected area, the microwave barrier shall feature antennas that have linear polarization with very high directivity and gain.
31. The Microwave Barrier Range's range shall be a maximum of 300' per device.
32. The same part number microwave heads shall be used to eliminate different length/range microwave heads.
33. Using a laptop or PC connected to the barrier itself either at the barrier location or remotely through an RS-485 data bus highway, time and date may be set by the installer or adjusted as needed by the user.
34. The Microwave Transmitters shall have a Synchronization Input/Output Terminal in each transmitter, allowing for 2 or more barriers to be synchronized together.
35. The Microwave barrier shall have the provision for it to perform a self test and Long loop test.
36. A Tamper Switch shall supervise the position or removal of the Radome covers.
37. A Tilt-Switch shall be integrated within the unit signaling an alarm if the head is displaced from the original position horizontally. Vertical displacement creates a traditional alarm.
38. The heads shall incorporate a temperature control, and temperature sensor, producing a fault condition every time that the prescribed Manufacturer's low or high temperature limits are exceeded. Alarms will be signaled to the fault relay output and will also be logged into the unit's historical event memory buffer.
39. Receiver Alarm LED Indicators, on-board; 3 indicators, with 3 separate relay outputs
 - a. Alarm Relay Output State
 - b. Fault Relay Output State
 - c. Main Tamper Relay Output State
40. A built-in Receiver Alignment LED array and Installer Alignment Interface allows for the adjustment and alignment by the installer of the Barrier without any specific tools

41. Built-in Audible walk test and alignment buzzer with visual indicators
42. System detects target speed form 0 cm/sec to 15 m/sec (0 on/sec to 5.9"/sec)
43. System shall have adjustments for:
 - a. Pre-Alarm Threshold
 - b. Alarm Threshold
 - c. Masking Threshold
 - d. Fuzzy Side Target Discrimination (FSTD)
44. The barriers feature an RS-485 output for connection to a PC or Laptop either at the head or remotely via an RS-485 bus loop. With a PC or laptop loaded with the Manufacturer's Maintenance/Installation/Monitoring software suite, one may perform advanced adjustments to the system as well as read the alarm and event history memory contained in the barrier.
45. The software when used with the application running and with a PC or Laptop connected to the barrier shall:
46. Allow the installer to set up and manage the system, set up time/date, sensitivity.
47. Feature Password Protection
48. Monitors in real-time the signals being received by the receiving head
 - a. Show the Field Signal Level Value
 - b. Show the internal Battery voltage
 - c. Show the internal Temperature
 - d. Show the AGC Voltage
 - e. Show the Signal Threshold
 - f. Show the levels of the Anti-Masking Thresholds
49. Allows one to retrieve from the system's memory the historical data stored in the receiving head, the last recorded 256 events seen by the receiver. The list of events stored and accessible to the installer or user is as follows:
 - a.. Event Sequence Number
 - b. Event Type
 - c . Time and Date of the Event

System Technical Values
50. View from the system's "Monitor Event file" within the receiving head the last 100 records of event signal levels, each representing a 2.5 second slice of the event along with time and date
- 51 . View both the Historical and Monitor event files as well as the capability to downloaded to the PC Software Application this data for storage and analysis.
52. A PC equipped with the Manufacturer's software shall allow the installer to adjust, analyze and program the detector either at the equipment location or remotely via an RS-485 data highway, analyzing the various fingerprints for alarm. These stored fingerprints or behavioral profiles shall trigger a valid alarm when a matched signal is received, and shall not be limited to:
 - a. Creation of an alarm condition upon the detection of a person "Crawling", or "Rolling"
 - b. Creation of an alarm condition upon the detection of a person "Walking"
 - c. Creation of an alarm condition under a Person "Running"
 - d. Creation of an alarm condition upon the detection of a person trying to slow walk across the system
 - e. Discriminate "Side target" signals as disturbances
53. The system shall feature technology to avoid any tunneling or masking of the detector

Auxiliary Power Supply that provides back-up power to the perimeter protection equipment arrays for a period of no less than 24 hours during a power outage before the facilities auxiliary power supply (generator) starts. Power supplies shall be located indoors not in transcloasures.

54. By using the remote test and system set-up software, system diagnostics as well as equipment configurations may be performed from anywhere, including off-site, as long as an RS-485 serial bus connects all heads with a local PC or modem, and that remote access is granted from off-site.

55. The system shall be powered by Altronix AL600ULX or equal power supplies (See attachment #3).

56. Each transmitter/receiver sector shall be complete with the basic transmitter/receiver, cable, connectors, mounting post, mounting hardware, locking mounting bracket, junction boxes and other equipment as required for a complete and functional unit.

57. Each unit shall be equipped with features as required to initiate an alarm or tamper condition if an attempt is made to compromise the sensor system. Tamper conditions shall report as a Tamper Event and not an Alarm event.

58. Each transmitter/receiver unit and accessories shall be designed for exterior use and be enclosed in a weatherproof enclosure. All major replaceable electronic components shall be accessible for maintenance, alignment, operational checks, without major disassembly of the unit in the field.

59. Individual transmitter or receiver elements shall be accessible for replacement and alignment through the prior removal of their respective window assembly.

60. All points of removal which can provide susceptibility for compromise of the system shall be equipped with a tamper switch; (radome covers, junction boxes, etc.).

61. The prospective bid respondent shall provide a brief summary of previous experience with the installation of outdoor perimeter intrusion detection devices.

62. The prospective bid respondent shall provide a list of referrals of customers for whom they have installed outdoor perimeter intrusion detection devices.

63. The prospective bidder shall provide individual certificates of training attesting to the installers' expertise covering the installation and servicing of the equipment being provided.

64. Installers field test and system function step by step as summarized herein.
Fast Walk: Walk rapidly between the transmitter and receiver.

65. Slow Walk: Walk slowly between the transmitter and receiver, one step at a time, stopping for 2 seconds and making another step, and so on.

66. Fast Belly Crawl: Rapidly crawl on your belly at both the midway point and at several points throughout the detection pattern, repeating the procedure as well near the receiver and the transmitter (but outside of the dead zone area that is approximately 5-6 m (16-20 feet) minimum away from the receive and transmit heads).

67. Slow Belly Crawl: Slowly crawl on you belly at both the midway point and at several points throughout the detection patter, repeating the procedure as well near the receiver and the transmitter (but outside of the dead zone area that is approximately 5-6 m (16-20 feet) minimum away from the receive and transit heads).

68. Tamper: Remove transmitter cover. Repeat the same procedure for the receiver.

a. Verify all adjustments and settings using a Laptop or PC either at the head or in the security center via an RS-485 loop or on site laptop: analyze historical and monitor data: system stores 256 Last alarms, 100 patterns

69. The system shall meet all requirements at the following ambient temperatures and humidity (actual site conditions)

- a. Maximum ambient temperature: 130 degrees F.
- b. Minimum ambient temperature: -30 degrees F.
- c. Relative humidity: 0 percent to 100 percent.

F. CENTRAL MONITORING COMPUTER SYSTEM

1. The central monitoring computer shall have a 500 Gbyte minimum hard disk drive, color monitor touch screen, video card, high-density diskette drive, zip drive, CD ROM drive and a printer. The software shall be capable of constantly monitoring the site for intrusions regardless of the operation being performed within the system software. The systems software will provide a custom site map with flashing alarm zones, audio for each alarm. **The central monitoring system shall have the capability to indicate “priority” alarms (alarms where both the microwave and fence array are tripped in the same or adjacent zones).** The central monitoring computer shall have “data log” retention of alarm activity on the computer hard drive as well as a hard copy printout of alarm activity on the system printer. The site monitoring system shall provide multi-level password access and have software adjustable sensitivity settings for each zone from the monitoring computer keyboard, no field adjustments required. The site monitoring system shall include software adjustable event/condition zoning for each zone or software adjustable dual domain zoning for each zone from the central computer keyboard. Event/conditions zoning will allow individual zones to be accessed when activities occur (such as vehicle/pedestrian gates) during a software programmable time period. The site monitoring system shall have software adjustable rain, precipitation, wind adjustment capabilities for each zone from the monitoring computer keyboard. No field adjustments required for weather. The central processor shall load the Draper Site security systems unique defaults any time the processor is started or re-booted. The central processor/s shall be a redundant (Tower 2 and Tower 7) to allow command and control to be taken over in the event of a catastrophic event in the main control center. All central processing and monitoring components shall be protected by UPS and power conditioning equipment

G. INSTALLATION REQUIREMENTS

1. All installation will be done after pre-built drawings are approved by UDC.

Install all exterior intrusion devices in accordance with the manufacturer's written instructions.

2. The zones will be laid out with consideration to elevation changes and to assure that equipment is installed properly and devices are added to meet needs of changing terrain to limit anyone crawling under the detection pattern, following the manufacturer's guidelines. Offset problems shall be corrected by relocating mounting poles.

3. Provide all tools required for the alignment and installation of all components.

4. All wiring (signal cables, etc.) shall be installed in rigid metallic or underground plastic conduits as applicable, except as noted below.

5. Wiring between the surface detection device, and the junction boxes for the MW shall be installed in flexible cap wire conduit.

a. Conduit Size:

1. Where indicated on the drawings: Conduit size indicated are the minimum size to be provided, increase conduit size as required so that conduit fill does not exceed the percent fill indicated in National Electric Code.

2. If conduit size is not indicated on the drawings, size the conduit so that the conduit fill does not exceed the percent fill indicated in the National Electric Code.

3. The minimum size shall not be smaller than 3/4inch electric trade size.

4. PVC conduit may be used in underground installations only.

6. The communication wiring from the exterior devices to the annunciator at the shall be via 4 conductor, 18 ga. shielded, flooded cable minimum. Communications wiring shall be supplied from the same manufacturer as the system array (no substitute wiring).

7. The contractor shall be responsible for all building penetrations and the running of conduit from each zone to required junction boxes to the control panel.

8. Make connections and splices at the individual devices or junction boxes only.

9. Use markers to identify conductors at terminal strips (designations shall correspond with point to point wiring diagrams).

10. Install nameplates, screwed or riveted, not glued indicating zone number on each surface area intrusion detection unit.

11. The power of this system shall be taken from designated AC power and/or emergency back-up power circuits as designated providing a minimum of 24 hour battery standby in case of AC Main failure with UPS.

12. All screws or fasteners utilized on any exposed component of this project shall be of the security type, security screw fastener, or equal. Two (2) tools for each security-fastening device shall be turned over to the owner at the completion of the project.

13. The bidder shall not disable or remove any existing detection devices, zones, or systems until such time as the new system is on line, tested and accepted by UDC. If zone(s) are made

inoperable, the contractor shall arrange for UDC security staff to “sit” on that zone until such zone(s) are operational. Such arrangements shall be at the contractors expense.

H. TESTING

1. Test each system and zone systematically.
2. Perform simulated escape attempts listed below at 30-ft intervals within each zone and at the beginning and end of each zone unless otherwise directed.
3. Each penetration into the detection area shall produce an alarm. If it does not, correct the problem, make adjustments, etc., then wait 120 seconds and repeat at the same location. If misses are repeated in the same location, the entire zone must be reevaluated, corrected and tested until no tests go undetected. The simulated escape attempts shall be performed by a person weighing 100 lbs. to 180 lbs. Terminate each attempt upon detection. Corrective action for zone misses must be approved by UDC

GUIDLINE FOR TESTING

These tests shall be conducted in front of the owner or approving party. Test intrusion detection at 30 - 100 ft. intervals, depending on the length of the protection zone. Retest and adjust as many times as necessary to satisfy the owner that the system operates as specified.

“To note: crawling close to the receive and transmit heads of the barriers from 15-18 feet away will see little if any detection coverage: detection is assured by the overlap areas of barriers installed perpendicular to each other following the manufacturer’s installation guidelines.”

Walk Test: Walk slowly across the detection zone perpendicular to the detection zone

Run Test: Run quickly across the detection zone perpendicular to the detection zone.

Crawl Test: Crawl as low as possible on hands and knees across the detection zone perpendicular to the detection zone. Crawl on your belly at both the midway point and at several points throughout the detection pattern, repeating the procedure as well as doing so near the receiver and the transmitter (but outside of the dead zone area that is approximately 5-6 m (16-20 feet) minimum away from the receive and transmit heads).

Slow Crawl Test: Repeat above test, but crawling slowly.

Slow Walk Test: Walk slowly, moving only 4” forward at a time, waiting one second and continuing, repeating the process.

Aluminum Test Ball: Drag ball at both the midway point and at several points throughout the detection pattern, repeating the procedure as well as doing so near the receiver and the transmitter (but outside of the dead zone area that is approximately 5-6 m (16-20 feet) minimum away from the receive and transmit heads).

All fence arrays must pass a cut and climb test on each fence panel where array is installed

Overall annunciation test
Alarm
Tamper
Fault

*** Definitions:**

Normal wind condition – The system shall be designed to have zero false alarms in winds up to 90% on the recorded average daily highest wind gust. **39.96 MPH** (see attachment #2)

Cut test – Testing shall be conducted at each fence panel where fence array is installed. Testing is conducted by tapping with a metal screwdriver or similar object generating a noise similar to a cut. Tap the fence panel four times (for a count setting of 4), at about a once per second rate. On the fourth tap the processor shall show an alarm.

Climb test - Testing shall be conducted at each fence panel where fence array is installed. Testing is conducted using someone weighing in the range of 100-130 pounds. The subject climbs the fence at various locations. The processor shall show an alarm at each attempt.

1.03 SUBMITTALS

Shop Drawings: Will be required when attachment or modification to any existing structure or entity.

Product data:

Technical data sheets on each component of system:

All product will need to be approved by UDC prior to installation.

I. Submittals Package

Submit a line by line conformance to the entire specification shown.

a. Submit the shop drawings including proposed zone layout with distances, communication cable runs, overall site layout plan, AC/DC power locations product data sheets, certificates of equipment training and proof of the bid respondents adherence to an ISO 9000/2001(9001/2000) quality control program endorsed by the installation Company.

b. Submit a statement that there will be no equipment installed and adjusted or serviced by sub-contractors, except for any excavation or ground work that will be performed.

c. Shop Drawings: Composite wiring and/or schematic diagrams of the complete system as proposed to be installed pertaining to this installation as well as how the equipment will interface to annunciation equipment.

1.04 WARRANTY (See GENERAL CONDITIONS 9.4.2)

1.05 OPERATING AND MAINTENANCE DATA:

- A. System must be commissioned and certified by a factory trained technician prior to owner acceptance.**
- B. All O & M manuals and training must be complete prior to owner acceptance.**

1.02 A. ATTACHMENT #1

SPECIFICATIONS FOR CHAIN LINK FENCING

I. CHAIN LINK FENCING

The following subparagraphs represent suggested guidelines in evaluating the installation of new, or preparation of existing, chain link fencing upon which A FPS will be mounted.

II. FRAMEWORK

A. CORNER POSTS, END POSTS, AND PULL POSTS

All posts in this category should meet the following minimum specifications.

1. 2 7/8" O.D. galvanized schedule 40 pipe. (For fences up to 12' high)
2. 4" O.D. galvanized schedule 40 pipe. (For fences over 12' high)
3. All posts to be plumb within 5 degrees (+ 1 degree) in two planes.
4. All posts should be able to pass a pull test when a force of 48 pounds is applied perpendicular to the fence at the top of the post. The post should not deflect more than 1 inch at the location where the force is applied.
5. Diagonally brace corner posts, pull posts, and end posts to adjacent line posts with truss rods (3/8" diameter.) and turnbuckles, installed between top of one post and bottom of the other.

B. LINE POSTS

All posts in this category should meet the following minimum specifications.

1. 2 3/8" O.D. galvanized schedule 40 pipe. (For fences up to 12' high)
2. 2 7/8" O.D. galvanized schedule 40 pipe. (For fences over 12' high)
3. Space posts equidistant in the fence-line, with a maximum of 10' on center.
4. All posts to be plumb within 5 degrees (+ 1 degree) in two planes.
5. All posts should be able to pass a pull test when a force of 48 pounds is

perpendicular to the fence at the top of the post. The post should not deflect more than 1 inch at the locations where the force is applied.

C. TOP RAIL (OPTIONAL)

Install top rails continuously through post caps or extension arms. Rails should meet the following minimum requirements.

1. 1.660" O.D. galvanized schedule 40 pipe.
2. Each joint where the top rail meets a post should be secured such that no perceivable movement between the two pieces takes place when the fence fabric is flexed. This can be accomplished by press fittings, spot welding, etc.

D. BOTTOM AND INTERMEDIATE RAILS (OPTIONAL)

Install bottom and intermediate rails one piece between posts and flush with posts on fabric side. Rails should meet the following minimum requirements.

1. 1.660" O.D. galvanized schedule pipe.
2. Each joint where the top rail meets a post should be secured such that no perceivable movement between the two pieces takes place when the fence fabric is flexed. This can be accomplished by: press fittings, spot welding, etc.

E. TENSION WIRES (OPTIONAL)

Wire that is installed horizontally to provide a stiffening effect to the fabric should be secured at each and every post in such a fashion that will not allow any perceivable movement between it and the post when the fabric is flexed. This can be accomplished with wire ties or metal straps.

F. FABRIC

The type of fabric recommended is not as critical as how the fabric is installed. Care and attention to this portion of the installation is mandatory. Fabric and its installation should meet the following minimum specifications.

1. 9 GA galvanized steel, 2" mesh chain link.
2. 11 GA vinyl coated steel, 2" mesh chain link.
3. Selvages: Top side twisted and barbed; Bottom side knuckled.
4. Thread stretcher bars through fabric using one bar for each gate and end post, and two for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 (-0)(+1/2)" when a 30-pound pull is exerted perpendicular to the center of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced no farther than 15" O.C. Fasten the fabric to the steel framework with 9 GA. steel wire ties spaced no further than 12" O.C. for all posts, rails, braces, and tension wires. Tighten stretcher bar bands, wire ties, and any other fasteners very securely. Fabric should not be free to move along the framework.

G. CLIMB-OVER DETERRENT HARDWARE

Any and all material and hardware used on top of the fence should meet the following minimum specifications:

1. Any extension arms or outriggers attached to post tops should have a tight press-fit or should be spot welded. No loose or rattling equipment will be allowed.
2. When barbed wire is used, each strand will be taut and tightly secured at

each support.

3. Barbed tape (Man Barrier, Razor Ribbon, etc.) will be secured to the fence in such a way that any movement of the tape by wind will not cause any audible noise to be generated.

H. GATES

Perimeter gate frames should consist of rigid structural material with necessary horizontal and vertical bracing to provide adequate support and rigid attachment of fabric and hardware accessories. All gate hardware accessories should be firmly attached with minimum free-play and/or wear. Double gates should have stops that provide a rigid anchor. Any locking hardware should not be subject to free movement caused by wind. All sliding gate track hardware, supports, guides, and accessories should not have excessive free-play that could cause rattling due to gate movement during windy periods.

1.02B ATTACHMENT #2 Draper Site Wind Report

Week Ending	Max MPH
11/22/03	49.5
11/29/03	46.9
12/6/03	52.1
12/13/03	46.9
12/20/03	50.4
12/27/03	46.1
1/3/04	66.6
1/10/04	46.1
1/17/04	15.3
1/24/04	29.0
1/31/04	52.9
2/7/04	44.4
2/14/04	24.8
2/21/04	53.8
2/28/04	49.5
3/6/04	44.4
3/13/04	27.3
3/20/04	41.9
3/27/04	48.7
4/3/04	40.1
4/10/04	51.3
4/17/04	38.5
4/24/04	49.5
5/1/04	49.5

5/8/04	39.3
5/15/04	61.5
5/22/04	46.1
5/29/04	41.0
6/5/04	29.8
6/12/04	47.8
6/19/04	42.7
6/26/04	46.1
7/3/04	47.8
7/10/04	49.5
7/17/04	43.6
7/24/04	49.5
7/31/04	46.1
8/7/04	56.4
8/14/04	29.8
8/21/04	45.2
8/28/04	47.8
9/4/04	42.7
9/11/04	39.3
9/18/04	55.5
9/25/04	60.6
10/2/04	54.6
10/9/04	62.5
10/16/04	39.3
10/23/04	53.8
10/30/04	41.0
11/6/04	27.3
11/13/04	35.9
11/20/04	23.9
11/27/04	47.8
12/4/04	34.1
12/11/04	80.3
12/18/04	30.7
12/25/04	35.9
1/1/05	56.4
1/8/05	55.5
1/15/05	47.8
1/22/05	32.5
1/29/05	31.6
2/5/05	33.2
2/12/05	29.8

1.02 C ATTACHEMENT #3
Altronix: Power Supply/Charger

AL600ULX
Power Supply/Charger

Overview

Model AL600ULX power supply converts a 115VAC 60Hz input, to a 6 amp of continuous supply current @ 12VDC or 24VDC non-power limited output.

Agency Listings

- UL Listed for Access Control Systems (UL294), Power Supplies for Fire Protective Signaling Systems (UL1481). CUL Listed - CSA Standard C22.2 No.205-M1983, Signal Equipment File # S4707.
- CSFM - California State Fire Marshal Approved. File # 7315-1335:104.
- MEA - NYC Department of Buildings Approved. File # 168-92-E Vol. III.
- FM Approved.
- NFPA 72 Compliant.

Features/Specifications

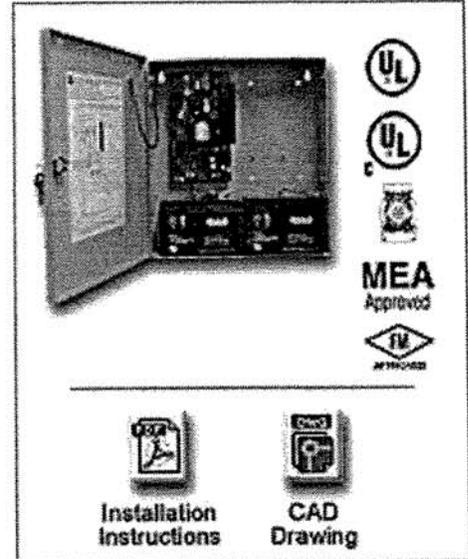
- 12VDC or 24VDC selectable output.
- 6 amp of continuous supply current.
- 115VAC 60Hz, 1.9 amp input.
- Filtered and electronically regulated outputs.
- Short circuit and thermal overload protection.
- Built-in charger for sealed lead acid or gel type battery backup.
- Maximum charge current .7 amp.
- Zero voltage drop upon transfer to battery backup.
- AC input and DC output LED indicators.
- AC fail supervision (form "C" contact rated @ 1 amp 28VDC).
- Low battery and battery presence supervision (form "C" contact rated @ 1 amp 28VDC).
- Lifetime Warranty.

Enclosure

- Accommodates up to two (2) 12VDC/7AH batteries.
- Dimensions: 13.5"H x 13"W x 3.25"D
- 1/2 and 3/4 combination knockouts.

Similar Altronix Products

- AL300ULX 2.5 amp @ 12 or 24 VDC.
- AL400ULX 4 amp @ 12VDC or 3 amp @ 24VDC.
- AL1012ULX 10 amp @ 12VDC.
- AL1024ULX 10 amp @ 24VDC.



Division	Section Title	Pages
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DIVISION 1 - GENERAL REQUIREMENTS

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SECTION 01230 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

- 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

SECTION 01290 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 1 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 1 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 1 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - 2. Divisions 2 through 16 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
- D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.3 USE CHARGES

- A. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- B. Electric Power Service: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

1.4 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

1.5 QUALITY ASSURANCE

- A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 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.
- B. Related Sections include the following:
 - 1. Division 1 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.

SECTION 01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of building or structure.
 - 2. Salvage of existing items to be reused or recycled.
- B. Related Sections include the following:
 - 1. Division 1 Section "Summary" for use of premises, and phasing, and Owner-occupancy requirements.
 - 2. Division 1 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.
 - 3. Division 1 Section "Cutting and Patching" for cutting and patching procedures.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

SECTION 01781 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Sections include the following:
 - 1. Division 1 Section "Summary of Multiple Contracts" for coordinating Project Record Documents covering the Work of multiple contracts.
 - 2. Division 1 Section "Closeout Procedures" for general closeout procedures.
 - 3. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 4. Divisions 2 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of marked-up Record Prints.
- B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit one copy of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

SECTION 01330 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 1 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 1 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - 4. Division 1 Section "Closeout Procedures" for submitting warranties.
 - 5. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 6. Division 1 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 7. Division 1 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.
 - 8. Divisions 2 through 16 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. General: Architect will not provide electronic copies of CAD Drawings of the Contract Drawings for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that requires sequential activity.

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Type of the Contract.
3. Owner-furnished products.
4. Use of premises.
5. Owner's occupancy requirements.
6. Work restrictions.
7. Specification formats and conventions.

- B. Related Sections include the following:

1. Division 1 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Ogden 2nd District Court
4th Floor Build-out of Shelled Space
DFCM Number 04028150

1. Project Location: 2525 Grant Ave. Ogden, Utah 84401

- B. Owner: State of Utah
Division of Facilities Construction Management
4110 State Office Building
Salt Lake City, Utah 84114

1. Owner's Representative: Dan Clark

- C. Architect: Scott P. Evans – Architect & Associates P.C.
1987 So. 1200 East
Bountiful, Utah 84010

- D. The Work consists of the following:

1. **The Work includes the finishing of 4th floor shelled space into one courtroom, a multipurpose room, judge's chambers, etc.**

SECTION 01250 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 1 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
- B. Related Sections include the following:
 - 1. Division 1 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 1 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

SECTION 01420 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

SECTION 01600 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 1 Section "Alternates" for products selected under an alternate.
 - 2. Division 1 Section "References" for applicable industry standards for products specified.
 - 3. Division 1 Section "Closeout Procedures" for submitting warranties for Contract closeout.
 - 4. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.4 SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

SECTION 01731 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Division 1 Section "Selective Demolition" for demolition of selected portions of the building.
 - 2. Divisions 2 through 16 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - 3. Division 7 Section "Through-Penetration Firestop Systems" for patching fire-rated construction.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
 - 1. Primary operational systems and equipment.
 - 2. Air or smoke barriers.
 - 3. Fire-suppression systems.
 - 4. Mechanical systems piping and ducts.
 - 5. Control systems.
 - 6. Communication systems.
 - 7. Conveying systems.
 - 8. Electrical wiring systems.
 - 9. Operating systems of special construction in Division 13 Sections.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform

SECTION 01770 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.
- B. Related Sections include the following:
 - 1. Division 1 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
 - 3. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 4. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 5. Division 1 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
 - 6. Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 5. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 6. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 7. Complete startup testing of systems.

SECTION 01782 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
 - 1. Operation manuals for systems, subsystems, and equipment.
 - 2. Maintenance manuals for the care and maintenance of products, materials, and finishes systems and equipment.
- B. Related Sections include the following:
 - 1. Division 1 Section "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.
 - 2. Division 1 Section "Closeout Procedures" for submitting operation and maintenance manuals.
 - 3. Division 1 Section "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 - 4. Divisions 2 through 16 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 SUBMITTALS

- A. Final Submittal: Submit three copies of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 15 days after final inspection.
 - 1. Correct or modify each manual to comply with Architect's comments. Submit 3 copies of each corrected manual within 15 days of receipt of Architect's comments.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

