



STATE OF UTAH - DEPARTMENT OF ADMINISTRATIVE SERVICES

**Division of Facilities Construction and Management**

**DFCM**

## **STANDARD LOW BID PROJECT**

**March 28, 2007**

# **CAMPGROUND IMPROVEMENTS ANTELOPE ISLAND STATE PARK**

**DIVISION OF PARKS & RECREATION  
SYRACUSE, UTAH**

DFCM Project Number 06138510

MGB+A The Grassli Group  
145 West 200 South  
Salt Lake City, Utah 84101

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Fairpark Map

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 Certification for Payment dated May 25, 2005.

Technical Specifications :

Drawings:

**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>**

## NOTICE TO CONTRACTORS

Sealed bids will be received by the Division of Facilities Construction and Management (DFCM) for:

**CAMPGROUND IMPROVEMENTS - ANTELOPE ISLAND STATE PARK**  
**DIVISION OF PARKS & RECREATION – SYRACUSE, UTAH**  
**DFCM PROJECT NO. 06138510**

Bids will be in accordance with the Contract Documents that will be available on at 10:00 AM on Wednesday, March 28, 2007 and distributed in electronic format only on CDs from DFCM at the Wasatch Building at the Utah State Fairpark, approximately 155 North 1000 West, Salt Lake City, Utah and on the DFCM web page at <http://dfcm.utah.gov>. For questions regarding this project, please contact Brent Lloyd, DFCM, at 801-538-3471. No others are to be contacted regarding this bidding process. The construction budget for this project is \$215,000.00.

A **mandatory** pre-bid meeting will be held at 2:00 PM on Tuesday, April 3, 2007 at Bridger Bay Campground, Antelope Island State Park, Syracuse, Utah. Please allow sufficient time to check in at the entrance station and drive across the causeway. All bidders wishing to bid on this project are required to attend this meeting.

Bids will be received until the hour of 3:00 PM on Wednesday, April 11, 2007, at the Wasatch Building at the Utah State Fairpark, approximately 155 North 1000 West, Salt Lake City, Utah. Refer to the map on the DFCM website for directions ([http://dfcm.utah.gov/downloads/fairpark\\_map.pdf](http://dfcm.utah.gov/downloads/fairpark_map.pdf)). Bids will be opened and read aloud in the Wasatch Building at the Utah State Fairpark. NOTE: Bids must be received at the Wasatch Building at the Utah State Fairpark by the specified time.

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 and Management reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of DFCM.

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT  
Marla Workman, Contract Coordinator  
4110 State Office Building, Salt Lake City, Utah 84114

## **PROJECT DESCRIPTION**

This project involves improvements to approximately 16 campsites at Antelope Island State Park Bridger Bay Campground including fire pits, serving tables, and pre-fabricated picnic pavilions as detailed on the plans and specifications. Some sites will be designated ADA accessible and will require special signage and detail.

Camping at Antelope Island State Park is very popular in the spring and fall when the weather is cooler; therefore, the construction window for this project is between July 1, 2007 and August 31, 2007. However, the campground will be in use by patrons to the park during the construction period requiring the contractor to use adequate safety precautions necessary to protect the public from construction hazards, to be considerate of quiet hours, and be professional in conduct.

**PROJECT SCHEDULE**

<b>PROJECT NAME:</b>		<b>CAMPGROUND IMPROVEMENTS - ANTELOPE ISLAND STATE PARK</b>		
		<b>DIVISION OF PARKS &amp; RECREATION – SYRACUSE, UTAH</b>		
<b>DFCM PROJECT NO.</b>		<b>06138510</b>		
<b>Event</b>	<b>Day</b>	<b>Date</b>	<b>Time</b>	<b>Place</b>
Bidding Documents Available	Wednesday	March 28, 2007	10:00 AM	Wasatch Building Utah State Fairpark Approx 155 North 1000 West Salt Lake City, UT or DFCM web site *
<b>Mandatory</b> Pre-bid Site Meeting	Tuesday	April 3, 2007	2:00 PM	Bridger Bay Campground Antelope Island State Park Syracuse, UT
Last Day to Submit Questions	Thursday	April 5, 2007	2:00 PM	Email questions to Brent Lloyd at <a href="mailto:brentlloyd@utah.gov">brentlloyd@utah.gov</a>
Addendum Issued Responding to Questions (if needed)	Monday	April 9, 2007	2:00 PM	DFCM web site *
Prime Contractors Turn In Bid and Bid Bond	Wednesday	April 11, 2007	3:00 PM	Wasatch Building Utah State Fairpark Approx 155 North 1000 West Salt Lake City, UT **
Sub-contractor List Due	Thursday	April 12, 2007	3:00 PM	DFCM 4110 State Office Bldg SLC, UT Fax 801-538-3677
Substantial Completion Date	Friday	August 31, 2007	4:00 PM	

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

\*\* **Due to the ongoing construction on Capitol Hill and the anticipated shortage of parking during 2007, all bids will be received and opened at the Wasatch Building at the Utah State Fairpark. Refer to map on the DFCM web site for directions ([http://dfcm.utah.gov/downloads/fairpark\\_map.pdf](http://dfcm.utah.gov/downloads/fairpark_map.pdf))**



### 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 "Instructions to Bidders", in compliance with your invitation for bids for the **CAMPGROUND IMPROVEMENTS - ANTELOPE ISLAND STATE PARK – DIVISION OF PARKS & RECREATION - SYRACUSE, UTAH – DFCM PROJECT NO. 06138510** 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: \_\_\_\_\_

**BASE BID:** 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)

**UNIT PRICE:** Per picnic site (not to include ADA accessible sites)

\_\_\_\_\_ DOLLARS (\$\_\_\_\_\_)  
(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete by **August 31, 2007**, should I/we be the successful bidder, and agree to pay liquidated damages in the amount of **\$250.00** 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 \_\_\_\_\_

BID FORM  
PAGE NO. 2

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 the 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 the 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

# INSTRUCTIONS TO BIDDERS

## 1. Drawings and Specifications, Other Contract Documents

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

## 2. Bids

Before submitting a bid, each contractor 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 Invitation to Bid prior to the deadline for 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 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.**

## 3. Contract and Bond

The Contractor's Agreement will be in the form found 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.

**4. 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 contracts for a period of up to three years.

**5. 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 Project Manager 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 posted on DFCM’s web site at <http://dfcm.utah.gov>. Neither the 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.

**6. Addenda**

Addenda will be posted on DFCM’s web site at <http://dfcm.utah.gov>. Contractors are responsible for obtaining information contained in each addendum from the web site. Addenda issued prior to the submittal deadline shall become part of the bidding process and must be acknowledged on the bid form. Failure to acknowledge addenda may result in disqualification from bidding.

**7. 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. 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.

**8. DFCM Contractor Performance Rating**

As a contractor completes each DFCM project, DFCM, the architect/engineer and the using agency will evaluate project performance based on the enclosed “DFCM Contractor Performance Rating” form. The ratings issued on this project will not affect this project but may affect the award on future projects.

**9. 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.

**10. Right to Reject Bids**

DFCM reserves the right to reject any or all Bids.

**11. Time is of the Essence**

Time is of the essence in regard to all the requirements of the Contract Documents.

**12. Withdrawal of Bids**

Bids may be withdrawn on written request received from bidder prior to the time fixed for opening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

**13. 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.

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

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

**15. 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 DFCM as part of the requirements for award of the Project.

**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****INSTRUCTIONS 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 SUBCONTRACTOR LIST SHALL NOT BE DISCLOSED UNTIL THE CONTRACT HAS BEEN AWARDED.**



Division of Facilities Construction and

SUBCONTRACTORS LIST
FAX TO 801-538-3677

PROJECT TITLE: \_\_\_\_\_

Caution: You must read and comply fully with instructions.

Table with 4 columns: TYPE OF WORK, SUBCONTRACTOR, "SELF" OR "SPECIAL EXCEPTION", SUBCONTRACTOR BID AMOUNT, CONT. LICENSE #

We certify that:

- 1. This list includes all subcontractors as required by the instructions, including those related to the base bid as well as any alternates.
2. We have listed "Self" or "Special Exception" in accordance with the instructions.
3. All subcontractors are appropriately licensed as required by State law.

FIRM: \_\_\_\_\_

DATE: \_\_\_\_\_

SIGNED BY: \_\_\_\_\_

NOTICE: FAILURE TO SUBMIT THIS FORM, PROPERLY COMPLETED AND SIGNED, AS REQUIRED IN THESE CONTRACT DOCUMENTS, SHALL BE GROUNDS FOR DFCMS REFUSAL TO ENTER INTO A WRITTEN CONTRACT WITH BIDDER. ACTION MAY BE TAKEN AGAINST BIDDERS BID BOND AS DEEMED APPROPRIATE BY DFCM. ATTACH A SECOND PAGE IF NECESSARY.

# **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.



## **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 source's 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%

CONTRACTOR'S AGREEMENT  
PAGE NO. 2

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 by \_\_\_\_\_. 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 Invitation to Bid, 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

<b>Agency:</b> _____
<b>Agent:</b> _____
<b>Address:</b> _____
<b>Phone:</b> _____

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 - (Owner) 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:

\_\_\_\_\_
\_\_\_\_\_

The Owner acknowledges receipt of the following closeout and transition materials:

- As-built Drawings O & M Manuals Warranty Documents Completion of Training Requirements

A list of items to be completed or corrected (Punch List) 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 amount of \_\_\_\_\_(Twice the value of the punch list work) shall be retained to assure the completion of the punch list work.

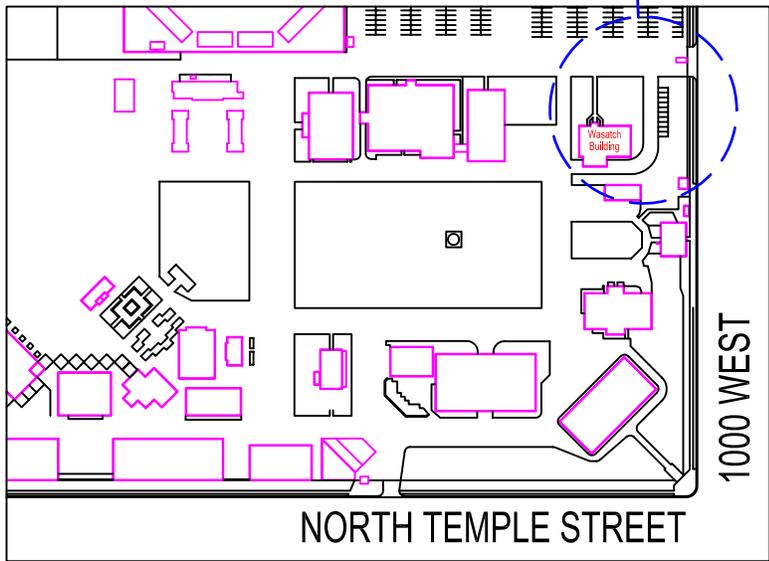
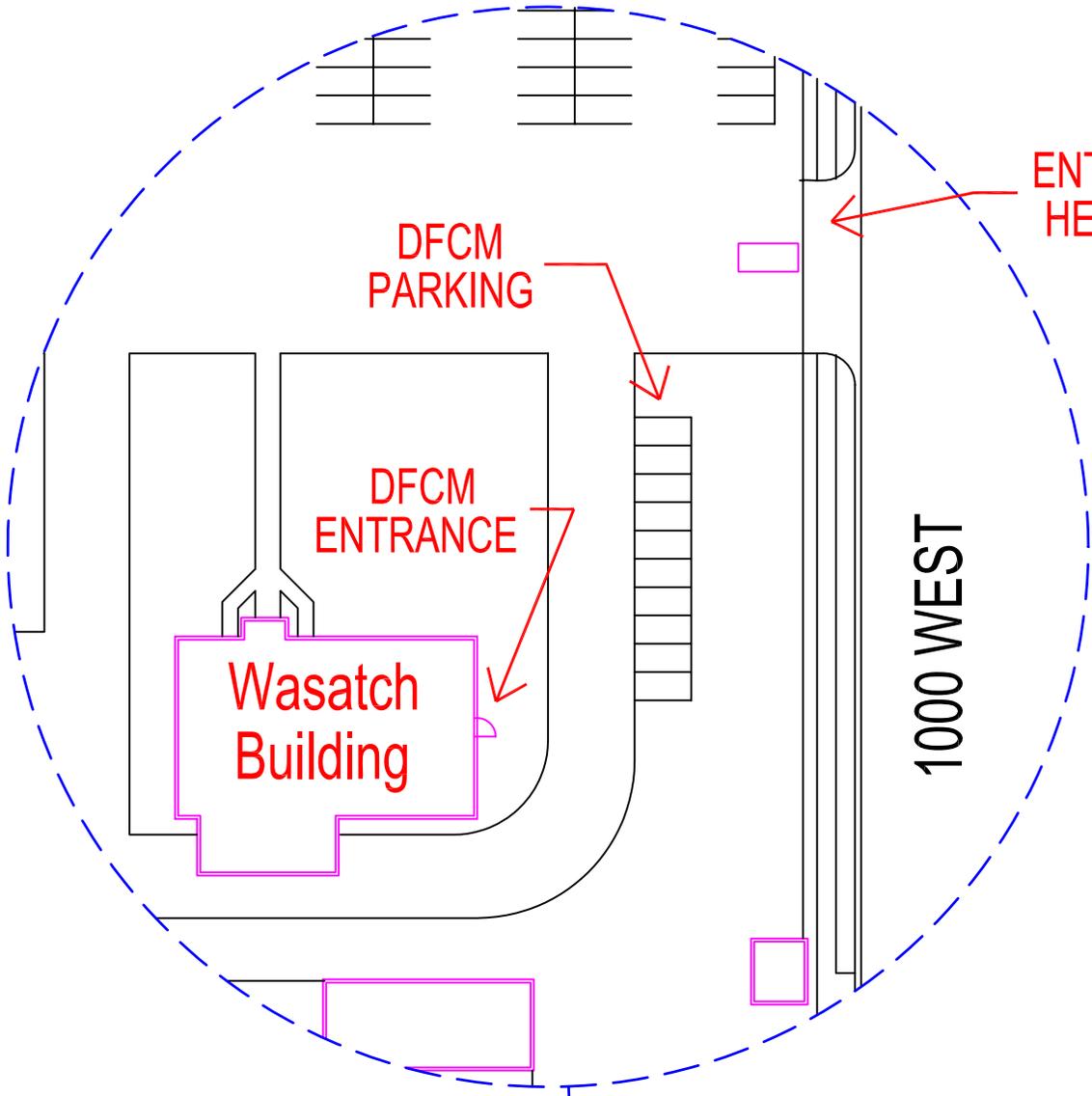
The Contractor shall complete or correct the Work on the list of (Punch List) items appended hereto within \_\_\_\_\_ calendar days from the above date of issuance of this Certificate. The amount withheld pending completion of the list of items noted and agreed to shall be: \$\_\_\_\_\_. If the list of items is not completed within the time allotted the Owner has the right to be compensated for the delays and/or complete the work with the help of independent contractor at the expense of the retained project funds. If the retained project funds are insufficient to cover the delay/completion damages, the Owner shall be promptly reimbursed for the balance of the funds needed to compensate the Owner.

CONTRACTOR (include name of firm) by: (Signature) DATE

A/E (include name of firm) by: (Signature) DATE

USING INSTITUTION OR AGENCY by: (Signature) DATE

DFCM (Owner) by: (Signature) DATE



UTAH STATE  
FAIR PARK



DFCM Temporary Location

## SECTION 02110 – GRADING

### 1.0 GENERAL REQUIREMENTS

- A. Separation of these specifications into divisions and sections is for convenience only and is not intended to establish limits of work.
- B. Consult index to be certain that the set of documents and specifications is complete. Report omissions of discrepancies to the Landscape Architect.

### 2.0 RELATED WORK

- A. Section 02180 - Compaction Control and Testing
- B. Section 02190 - Cast-in-place Concrete

### 3.0 SCOPE OF WORK

- A. The drawings indicate the new finished grade elevations. The new contours shall be considered correct to within 1/2 of the contour interval. The contractor shall verify all elevations and satisfy himself as to their correctness by visiting the site of the proposed work and examining the actual conditions prior to bidding. Any discrepancies noted shall be discussed with the landscape architect prior to bidding.
- B. Uniformly grade areas within the contract limits under this section, including all transitions zones. Smooth finished grades within specified tolerances. Establish uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

### 4.0 QUALITY ASSURANCE

- A. Operations shall be ordered suspended, by the Contractor, Landscape Architect or City Engineer, at any time when plans are not followed and/or damage has occurred or is expected. No substantial work suspension may be made without permission of the Landscape Architect or City Engineer.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods for proper performances of the work of this Section.
- C. Immediately remove from site all materials that do not comply with the specified requirements, and promptly replace with materials that meet the specified requirements.

### 5.0 REFERENCE STANDARDS

### 6.0 INSPECTIONS

- A. All areas will be continually inspected by the owner, city engineer, building inspector and landscape architect for compliance with the drawings and the newly established contours as shown.
- B. All subgrades shall be cut to shape to receive the final materials as called for in the drawings. An on site inspection will be made at the conclusion of the grading operation to

determine the completeness and accuracy of the subgrade elevations. Any discrepancies noted at this time will be corrected immediately before any new work is allowed to be installed.

## 7.0 PRODUCT/MATERIALS

- A. Untreated Base Course: Refer Section 02190 - Cast-in-Place Concrete
- B. Backfill material for the berms shall be approved by the Landscape Architect.

## 8.0 EXECUTION

- A. Grading consists of excavating, shaping, adding gravel and compaction, of the Untreated Base Course material to match the proposed grading and drainage plans as shown on the drawings.
- B. Determine the location of existing utilities. Call "Blue Stakes" prior to any grading operations. These existing utilities are shown on the grading plans as approximate locations only. Should uncharted or incorrectly charted utilities be encountered during the grading operation, consult with the landscape architect immediately for directions as to procedure. Cooperate with the owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility owner. Do not interrupt existing utilities serving facilities occupied and used by the owner or others, except when permitted in writing by the landscape architect and only after temporary utility services have been provided.
- C. Contractor shall be liable for all damage to properties which may be damaged or injured by his agents or employees.
- D. Damage to telephone lines will be repaired by the utility company with the costs of such repairs being paid for by the contractor.

## 9.0 GUARANTEE

- A. The contractor shall be responsible for maintaining all established grades in a smooth and uniform slope as shown on the drawings until such work is accepted by the owner.

SECTION 02200 - EXCAVATION, GRADING, FILLING

PART I - GENERAL

1.1 RELATED DOCUMENTS:

- A. The general and supplementary general conditions shall apply to all work under this section.
- B. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work.
- C. Consult the index to be certain that the set of documents and specifications is complete. Report omissions or discrepancies to the Landscape Architect before bidding.

1.2 SUMMARY:

- A. Unless otherwise indicated, items of work are inclusive of all labor, material, equipment and supplies in performing all operations in connection with excavation, grading and filling and all site work and preparation of subgrade in strict accordance with this section of specifications and applicable drawings.
- B. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- C. Submit Contractor's construction schedule of anticipated work time to facilitate timely visits for review of work.
- D. Work under this section of specifications shall include coordination of all work with all other sections of these specifications. Provide all labor, equipment and material in connection with excavation, placement of fill and backfill for all site grading required to perform entire scope of work.

1.3 QUALITY ASSURANCE:

- A. Installer Qualifications: Licensed firm regularly engaged in excavation, grading and filling similar to that required for project.

PART II - PRODUCT

2.1 GENERAL SITE BACKFILL AND FILL:

- A. Backfill and fill materials shall be free of clay, rock or gravel larger than 2" in any dimension within 6" of finish rough grade. Below 6", the fill material shall not contain elements that exceed any dimension 1/2 the depth of the loose compacted layer. Material shall be well graded with a maximum of 15% passing #200 sieve and be approved by Landscape Architect. Debris, waste, frozen materials, vegetable matter and other deleterious matter are not acceptable.
- B. "Untreated Base Course" in the "Standard Specifications for Road and Bridge Construction, State of Utah", 1992 edition (as amended), gradation shall be as follows:

<u>Size</u>	<u>% by Weight Passing Sieve</u>		
1	100		
1/2	70	-	100

4	41	-	68
16	21	-	41
50	10	-	27
200	4	-	13

### PART III - EXECUTION

#### 3.1 GRADES:

- A. The drawings indicate the existing elevations and new finished grade elevations. The contractor shall verify all elevations and actual conditions prior to bidding. Any discrepancies noted shall be discussed with the Landscape Architect prior to proceeding with construction.
- B. Proposed elevations are shown at points where the existing contour is changed. A subgrade of 5 1/2 inches below the finished grade is required in the initial grading phases. At points where concrete, asphalt or other materials are required, allowances must be made for the depth of the materials.

#### 3.2 GRADING:

- A. Uniformly grade all areas including adjacent transition areas. Smooth finished surface to specified tolerances as follows:
  - 1. Lawn areas: Areas to receive topsoil to be not more than 0.10 feet above or below the required subgrade elevations.
  - 2. Concrete Surfaces: Shape surface of areas under walks to line, grade and cross-section, with finish surface not more than 0.10 feet above or below the required subgrade elevations.
  - 3. Asphalt Pavement: Shape surface of areas under pavement to line, grade and cross-section, with finish surface not more than 0.05 feet above or below the required subgrade elevations.
- B. After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.
- C. Protect newly graded and compacted areas from traffic and erosion, and keep free of trash, debris, and rocks. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.
- D. Where graded and compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, re-shape and compact to required density prior to further construction.

#### 3.3 SITE EXCAVATION:

- A. Determine proposed location of sewer, water, electrical and underground telephone cables. Coordinate earthwork activities with the contractors of these utilities. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Landscape Architect immediately for directions as to procedure. Cooperate with owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of owner. Do not interrupt existing utilities serving facilities occupied and used by the owner or others, except when permitted in writing by

Landscape Architect and then only after temporary utility services have been provided. Contractor shall be liable for all damage to properties which may be damaged or injured by his agents or employees.

- B. Excavation consists of removal and legal disposal of material encountered to obtain required subgrade elevation.
- C. Do not bring explosives onto site or use in work without prior written permission from the owner.
- D. Unauthorized excavation consists of removing of materials beyond indicated subgrade elevations or dimensions without specific direction of Landscape Architect. Lean concrete fill may be used to bring elevations to proper position, only when acceptable to Landscape Architect. Backfill and compact unauthorized excavations, as specified.
- E. Barricade open excavations and post with warning lights for safety. Operate warning lights during hours from dusk to dawn each day. Protect structures, utilities, sidewalks, pavements and other facilities immediately adjacent to excavations from damage caused by settlement, lateral movement, undermining, washout and other hazards. Take precautions and provide necessary bracing and shoring to guard against movement or settlement of existing improvements or new construction. Contractor is entirely responsible for strength and adequacy from damage or injury caused by the lack thereof or by movement or settlement.
- F. Stability of sides: Slope sides of excavations over 4' deep to angle of repose of material excavated; otherwise, shore and brace where sloping is not possible either because of space restrictions or stability of materials excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfilling, by scaling, benching, shelving or bracing. Take precautions to prevent slides or cave-ins when excavations are made in locations adjacent to backfilled excavations, and when sides of excavations are subjected to vibrations from vehicular traffic or the operation of machinery or any other source.
- G. Perform earthwork in a manner to prevent surface water and subsurface or ground water from flowing into excavations and to prevent water from flooding project site and surrounding water using dewatering methods which will prevent softening of foundation bottoms, undercutting footings and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, sumps, suction and discharge line and other dewatering system components necessary to convey water away from excavations. Convey water removed from excavations and rain water to collecting or runoff areas. Provide and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.
- H. Stockpile satisfactory excavated materials, if necessary, as shown on drawings, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage. Locate and retain material away from edge of excavations, even though such excavations may be sheeted and braced, to prevent cave-ins.
- I. Excavate unsatisfactory soil materials encountered that extend below required elevations, to additional depth directed by the Landscape Architect. Such additional excavation, provided it is not due to fault or neglect of contractor, will be measured as directed by the Landscape Architect and paid for by owner as change in the work. Where removal of unsatisfactory soil materials is due to fault or negligence of contractor in his performance of shoring and bracing, material storage, or other specified requirements, excavate resulting unsatisfactory soil material and replace with satisfactory soil material at no additional cost to owner.

- J. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

#### 3.4 BACKFILL:

- A. Fill Material - Use material as directed for each area of classification listed below.
  - 1. In excavation, use excavated or borrow material that has been approved by Landscape Architect.
  - 2. Under grassed areas use excavated or borrow material that has been tested and approved.
  - 3. Under walks, curbs and gutters, asphalt, and concrete paving use untreated base course material.
  - 4. Under steps use untreated base course material.
- B. Fill excavation as promptly as work permits but not until completion of the following:
  - 1. Acceptance of construction below finish grade by Landscape Architect.
  - 2. Inspection, testing, approval, and recording locations of underground utilities.
  - 3. Removal of concrete formwork.
  - 4. Removal of shoring and bracing, and backfilling of voids with satisfactory materials.
  - 5. Removal of trash and debris.
- C. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface. When existing ground surface has density less than that specified under "Compaction" for the particular area calcification, break-up the ground surface, pulverize, moisture-condition to the optimum moisture content, and compact to required depth and percentage of maximum density.
- D. All untreated base course, granular backfill and material shall be compacted in layers of 8" loose layers where large vibratory rollers are available to compact the material. Layers of backfill and fill material shall not exceed 4" loose layers where hand compactors must be used. Before compaction, moisten or dry each layer as necessary to obtain the optimum moisture content. Compact each layer to required percentage of maximum density for each classification specified herein. Fill or backfill shall not be placed on surfaces that are muddy, frozen or otherwise improperly prepared. Backfill and fill material shall be placed evenly adjacent to structures and to required elevations.

#### 3.5 COMPACTION:

- A. Perform compaction of soil materials for untreated base course, backfills and fills using suitable soil compaction equipment for materials to be compacted on work area locations. Control soil compaction during construction for compliance with percentage of maximum density specified for each area classification.

- B. All fill materials shall be compacted in the field to an in-place unit weight equal to a specified percentage of maximum unit weight equal to a specified percentage of the maximum unit weight as determined in the laboratory by ASTM D-1557-78. Specified percentages of the maximum density of dry density for the various classifications of compacted fill are as follows and shall be at optimum moisture. Compaction in field may be determined by the nuclear method #8-924 of UDOT.
1. Compacted untreated base course, fill for walks, curbs and gutters, steps, pavement and asphalt paving: Compact the top 6" of the subgrade base course in 6" loose lifts to a unit weight to 95% of the maximum unit weight specified above and placed as specified herein.
  2. Compacted fill for unpaved areas: Compact the top 6" of subgrade and all other disturbed subgrade and each layer in 6" loose lifts to fill to 85% of the maximum density.
  3. Compaction tests to determine acceptability of backfill placed may be taken by the landscape architect using standard procedures of the American Society of Testing Materials or the American Association of State Highway and Transportation Officials (AASHTO). If the fill or backfill so tested does not meet the requirements of these specifications, they shall be paid for by the contractor and the fill shall be re-excavated and the backfill replaced in accordance with these specifications.
- C. All untreated base course, granular backfill and material shall be compacted in layers of 8" loose layers where large vibratory rollers are available to compact the material. Layers of backfill and fill material shall not exceed 4" loose layers where hand compactors must be used. Before compaction, moisten or dry each layer as necessary to obtain the optimum moisture content. Compact each layer to required percentage of maximum density for each classification specified herein. Fill or backfill shall not be placed on surfaces that are muddy, frozen or otherwise improperly prepared. Backfill and fill material shall be placed evenly adjacent to structures and to required elevations.
- D. MOISTURE CONTROL:
1. Subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or subsequent to compaction operations. Remove and replace or scarify and air dry soil material that is too wet to permit compaction to specified density. All compaction shall be at optimum moisture.
  2. Soil that has been removed because it is too wet to permit compaction may be stockpiled or spread where directed by Landscape Architect and permitted to dry. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory value, as determined by moisture-density relation tests. When accepted by the Landscape Architect, soil material may be used in compacted backfill or fill. Contractor shall stock pile on site, any excess soil acquired through excavation, grading, or any other operation.

### 3.6 COMPACTION TESTING:

- A. Contractor shall take necessary tests to assure himself that standards called for are complied with. Each test failing to meet the specified standard shall be paid for by the Contractor. Owner reserves the right to make additional tests for Owner's information at Owner's expense.

- B. Curbs, gutters, sidewalks - 1 test per lift per each 40 lin. ft.
  - C. Flatwork (concrete) - 1 test per lift per each 1000 sq ft.
  - D. Backfill against walls - 1 test per lift per each 50 lin. ft.
  - E. Utility trenches - 1 test per lift per inch 40 lin. ft.
  - F. Submit copies of the test results in accordance to the General Conditions of this specification.
- 3.7 EXISTING TOPSOIL: Topsoil removed for the purpose of grading for construction shall be removed and stockpiled in areas shown on drawings. This topsoil constitutes approximately 4"-6" of the existing surface soils. Contractor shall consult landscape architect concerning deeper soils that may be used for topsoil.
- 3.8 CLEAN-UP: Contractor shall be responsible for the clean-up, removal and legal disposal of all debris and unsuitable fill or other materials from the construction areas, or areas impacted by his presence.
- 3.9 GUARANTEE:
- A. All work shall be guaranteed for compliance with the contract requirements, including replacement for a period of (1) one year from date of substantial completion. If unsatisfactory conditions or damage develops in the period stipulated by the guarantee and is due to neglect, faulty materials or workmanship, the contractor shall immediately place it in satisfactory condition. All guarantees shall be in writing and worded as approved by the landscape architect.

End of Section 02200

## SECTION 02226 - EXCAVATION, BACKFILLING AND COMPACTION

### PART I - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. The general and supplementary general conditions shall apply to all work under this section.
- B. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work.
- C. Consult the index to be certain that the set of documents and specifications is complete. Report omissions or discrepancies to the landscape architect before bidding.

#### 1.2 SUMMARY:

- A. The work covered by this section of the specifications consists of furnishing all labor, material, equipment and supplies in performing all operations in connection with excavating, backfilling and compaction of all site work and preparation of underlayment in strict accordance with this section of specifications and applicable drawings.
- B. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- C. Submit Contractor's construction schedule of anticipated work time to facilitate timely visits for review of work.
- D. Work under this section of specifications shall include coordination of all work with all other sections of these specifications.

#### 1.3 QUALITY ASSURANCE:

- A. Installer Qualifications: Licensed firm regularly engaged in successful execution of excavation, backfilling and compaction for utilities similar to that required for project.

### PART II - PRODUCTS

#### 2.1 BACKFILL AND FILL

- A. Backfill and fill materials shall be free of clay, rock or gravel larger than 2" in any dimension within 6" of finish rough grade. Below 6", the fill material shall not contain elements that exceed any dimension 1/2 the depth of the loose compacted layer. Material shall be well graded with a maximum of 15% passing #200 sieve and be approved by Architect / Landscape Architect. Debris, waste, frozen materials, vegetable matter and other deleterious matter are not acceptable.
- B. Pea Gravel: Use for underlayment of piping, overlayment and general backfill.
- C. Sand: Use for backfill over pipe and around manholes. Use with care as piping and structures may tend to float with compaction.

### PART III - EXECUTION

### 3.1 EXCAVATION:

- A. Determine proposed location of sewer, water, electrical and underground telephone cables. Coordinate earthwork activities with the contractors of these utilities. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Architect / Landscape Architect immediately for directions as to procedure. Cooperate with owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of owner. Do not interrupt existing utilities serving facilities occupied and used by the owner or others, except when permitted in writing by Architect / Landscape Architect and then only after temporary utility services have been provided. Contractor shall be liable for all damage to properties which may be damaged or injured by his agents or employees.
- B. Excavation consists of removal and legal disposal of material encountered to obtain required subgrade elevation.
- C. Do not bring explosives onto site or use in work without prior written permission from the owner.
- D. Unauthorized excavation consists of removing of materials beyond indicated subgrade elevations or dimensions without specific direction of Architect / Landscape Architect. Lean concrete fill may be used to bring elevations to proper position, only when acceptable to Architect / Landscape Architect. Backfill and compact unauthorized excavations, as specified.
- E. Barricade open excavations and post with warning lights for safety. Operate warning lights during hours from dusk to dawn each day. Protect structures, utilities, sidewalks, pavements and other facilities immediately adjacent to excavations from damage caused by settlement, lateral movement, undermining, washout and other hazards. Take precautions and provide necessary bracing and shoring to guard against movement or settlement of existing improvements or new construction. Contractor is entirely responsible for strength and adequacy from damage or injury caused by the lack thereof or by movement or settlement.
- F. Stability of sides: Slope sides of excavations over 4' deep to angle of repose of material excavated; otherwise, shore and brace where sloping is not possible either because of space restrictions or stability of materials excavated. Maintain sides and slopes of excavations in a safe condition until completion of backfilling, by scaling, benching, shelving or bracing. Take precautions to prevent slides or cave-ins when excavations are made in locations adjacent to backfilled excavations, and when sides of excavations are subjected to vibrations from vehicular traffic or the operation of machinery or any other source.
- G. Perform earthwork in a manner to prevent surface water and subsurface or ground water from flowing into excavations and to prevent water from flooding project site and surrounding water using dewatering methods which will prevent softening of foundation bottoms, undercutting footings and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, sumps, suction and discharge line and other dewatering system components necessary to convey water away from excavations. Convey water removed from excavations and rain water to collecting or runoff areas. Provide and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.
- H. Stockpile satisfactory excavated materials, if necessary, as shown on drawings, until required for backfill or fill. Place, grade and shape stockpiles for proper drainage. Locate

and retain material away from edge of excavations, even though such excavations may be sheeted and braced, to prevent cave-ins.

- I. Excavate unsatisfactory soil materials encountered that extend below required elevations, to additional depth directed by the Architect / Landscape Architect. Such additional excavation, provided it is not due to fault or neglect of contractor, will be measured as directed by the landscape architect and paid for by owner as change in the work. Where removal of unsatisfactory soil materials is due to fault or negligence of contractor in his performance of shoring and bracing, material storage, or other specified requirements, excavate resulting unsatisfactory soil material and replace with satisfactory soil material at no additional cost to owner.
- J. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

### 3.2 BACKFILL:

- A. Set piping on smooth graded trench bottoms cupped out for pipe bells and valve bodies, etc. Support pipe along entire length.
- B. Initially backfill and mechanically compact to midpoint of pipe.
- C. Do not cover any joints until any pressure test are completed.
- D. Further place and compact in layers not to exceed 12" of moistened material.
- E. Bring backfill up to finish grade or to within 8" of finish grade if other trades have landscape or flat concrete work to do.
- F. Fill Material - Use material as directed for each area of classification listed below.
  - 1. In excavation, use excavated or borrow material that has been approved by Architect / Landscape Architect.
  - 2. Under grassed areas use excavated or borrow material that has been tested and approved.
  - 3. Under walks, curbs and gutters, asphalt, and concrete paving use untreated base course material.
  - 4. Under steps use untreated base course material.
- G. Fill excavation as promptly as work permits but not until completion of the following:
  - 1. Acceptance of construction below finish grade by Architect / Landscape Architect.
  - 2. Inspection, testing, approval, and recording locations of underground utilities.
  - 3. Removal of concrete formwork.
  - 4. Removal of shoring and bracing, backfilling of voids with satisfactory materials.
  - 5. Removal of trash and debris.

### 3.3 COMPACTION:

- A. Perform compaction of soil materials for untreated base course, backfills and fills using suitable soil compaction equipment for materials to be compacted on work area locations. Control soil compaction during construction for compliance with percentage of maximum density specified for each area classification.
- B. All fill materials shall be compacted in the field to an in-place unit weight equal to a specified percentage of maximum unit weight as determined in the laboratory by ASTM D-1557-78. Specified percentages of the maximum density of dry density for the various classifications of compacted fill are as follows and shall be at optimum moisture. Compaction in field may be determined by the nuclear method #8-924 of UDOT.
  - 1. Compacted untreated base course, fill for walks, curbs and gutters, steps, pavement and asphalt paving: Compact the top 6" of the subgrade base course in 6" loose lifts to a unit weight to 95% of the maximum unit weight specified above and placed as specified herein.
  - 2. Compacted fill for unpaved areas: Compact the top 6" of subgrade and all other disturbed subgrade and each layer in 6" loose lifts to fill to 90% of the maximum density.
  - 3. Compaction tests to determine acceptability of backfill placed may be taken by the Architect / Landscape Architect using standard procedures of the American Society of Testing Materials or the American Association of State Highway and Transportation Officials (AASHTO). If the fill or backfill so tested does not meet the requirements of these specifications, they shall be paid for by the contractor and the fill shall be re-excavated and the backfill replaced in accordance with these specifications.
- C. All untreated base course, granular backfill and material shall be compacted in layers of 8" loose layers where large vibratory rollers are available to compact the material. Layers of backfill and fill material shall not exceed 4" loose layers where hand compactors must be used. Before compaction, moisten or dry each layer as necessary to obtain the optimum moisture content. Compact each layer to required percentage of maximum density for each classification specified herein. Fill or backfill shall not be placed on surfaces that are muddy, frozen or otherwise improperly prepared. Backfill and fill material shall be placed evenly adjacent to structures and to required elevations.
- D. Moisture Control:
  - 1. Subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or subsequent to compaction operations. Remove and replace or scarify and air dry soil material that is too wet to permit compaction to specified density. All compaction shall be at optimum moisture.
  - 2. Soil that has been removed because it is too wet to permit compaction may be stockpiled or spread where directed by landscape architect and permitted to dry. Assist drying by disecting, harrowing or pulverizing until moisture content is reduced to a satisfactory value, as determined by moisture-density relation tests. When accepted by the Architect / Landscape Architect, soil material may be used in compacted backfill or fill. Contractor shall stock pile on site, any excess soil acquired through excavation, grading, or any other operation.

### 3.4 COMPACTION TESTING:

- A. Contractor shall take necessary tests to assure himself that standards called for are complied with. Each test failing to meet the specified standard shall be paid for by the Contractor. Owner reserves the right to make additional tests for Owner's information at Owner's expense.
  - B. Curbs, gutters, sidewalks - 1 test per lift per each 40 lin ft.
  - C. Flatwork (concrete) - 1 test per lift per each 1000 sq ft.
  - D. Backfill against walls - 1 test per lift per each 50 lin ft.
  - E. Utility trenches - 1 test per lift per inch 40 lin ft.
  - F. Submit copies of the test results in accordance to the General Conditions of this specification.
- 3.5 Existing Topsoil: Topsoil removed for the purpose of excavation, backfilling and compaction for utilities shall be removed and stockpiled in areas shown on drawings. This topsoil constitutes approximately 4"-6" of the existing surface soils. Contractor shall consult Architect / Landscape Architect concerning deeper soils that may be used for topsoil.
- 3.6 Clean-up: Contractor shall be responsible for the clean-up, removal and legal disposal of all debris and unsuitable fill or other materials from the construction areas, or areas impacted by his presence.

End of Section 02226

## SECTION 02520 - PORTLAND CEMENT CONCRETE PAVING

### PART I - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. The general and supplementary general conditions shall apply to all work under this section.
- B. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work.
- C. Consult the index to be certain that the set of documents and specifications is complete. Report omissions or discrepancies to the Landscape Architect before bidding.

#### 1.2 SUMMARY:

- A. The work covered by this section of the specifications consists of furnishing all labor, material, equipment and supplies in performing all operations in connection with concrete flatwork, curbs, curb and gutters, concrete steps and all site work and preparation of subgrade in strict accordance with this section of specifications and applicable drawings.
- B. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- C. Submit Contractor's construction schedule of anticipated work time to facilitate timely visits for review of work.
- D. Work under this section of specifications shall include coordination of all work with all other sections of these specifications.

#### 1.3 QUALITY ASSURANCE:

- A. **Manufacturer's Qualifications:** Licensed firms regularly engaged in manufacture of concrete products of types, materials, and sizes required, whose products have been in satisfactory use in similar service.
- B. **Installer Qualifications:** Licensed firm regularly engaged in successful installation of concrete similar to that required for project.

#### 1.4 SUBMITTALS:

- A. **Product Data:** Submit manufacturer's technical product data and installation instructions for concrete materials and products.

### PART II - PRODUCT

- 2.1 Concrete shall utilize Portland type cement, meeting ASTM C-150, type II low alkali. There shall be a single source throughout the job. Use one brand of cement for all exposed work.
- 2.2 Aggregate shall conform to ASTM C-33. Maximum aggregate size shall be 3/4" maximum for all work. Use one source of aggregate for all exposed work.
- 2.3 Air entrainment for all exterior concrete shall be ASTM C-260-77; 6 1/2% +/- 1 1/2%.

- 2.4 Water used in mixing the concrete will be clean, potable and free from injurious amounts of alkali, acid, and organic matter.
- 2.5 CONCRETE: All work shall contain a minimum of 6 ½ bags of cement per cubic yard and shall have a 28 day minimum strength of 4000 psi. Slump shall be 2"-3". Maximum water to cement ratio content shall be 0.45.
- 2.6 PREMOLDED EXPANSION JOINT FILLER: Provide fiber composition complying with ASTM D-1751-73 (1978). Joint filler shall be ½ inch in thickness.
- 2.7 CURING COMPOUND: shall meet ASTM C309. IMPORTANT NOTE: THIS MATERIAL MUST CONTAIN EXTRA ULTRA VIOLET INHIBITOR AND FUGITIVE DYE. NO OTHER EXCEPTION.
- 2.8 WELDED WIRE MESH: 6" x 6" W1.4 x W1.4 gauge welded wire mesh only where noted on drawings conforming to ASTM A-185. All laps and ties shall be in accordance with ACI 318-83 and overlap 1 mesh and be tied.
- 2.9 Sealer shall be a penetrating sealer of silane or siloxane type.
- 2.10 Use chairs or small, solid concrete aggregate blocks specifically made for the purpose to properly position slab reinforcements. Tie reinforcements to blocks.
- 2.11 SLEEVES: Provide sleeves under concrete or through concrete before placing concrete as directed on the plans for installation of irrigation pipe and wiring. Conform to required depths.
- 2.12 Aggregates for untreated base course shall conform to specifications.
- 2.13 REBAR: AH steel shall conform to ASTM A615, grade 60 (fy-60 ksi]. Provide 30 bar diameter overlap at all joints. All rebar shall be protected with a minimum of 3" concrete cover.

### PART III - EXECUTION

- 3.1 FORMS:
- A. All forms shall be built mortar-tight and of sufficient rigidity to prevent distortion due to the pressure of the concrete and other loads incident to the construction operations, including vibration. Forms shall be constructed and maintained so as to prevent the opening of joints due to shrinkage of the lumber. Forms shall be designed for a fluid density of 150 pounds per cubic foot, and in addition, a five-fold allowance of 50 pounds per square foot on horizontal surfaces. Deflection of the forms shall be sufficient cause for rejection of the work.
  - B. Forms shall be so constructed that the finished concrete shall be of the shape and dimensions shown of the drawings and true to line and grade. Forms to comply with ACI 347. Do not place concrete until reinforcement and forms are approved by architect.
  - C. Unless otherwise shown or specified, construct form work for exposed concrete surfaces with plywood, or other panel type materials acceptable to architect, to provide continuous, straight, smooth exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without bow deflection or failure.
  - D. All forms shall be set and maintained true to the lines established until the concrete is sufficiently hardened. Forms shall remain in place for periods which shall be determined

as hereinafter specified. When forms appear to be unsatisfactory in any way, either before or during the placing of concrete, the architect shall order the work stopped until the defects have been corrected. If at any stage of the work, during or after placing, the concrete should cause to fall below the form, the concrete affected shall be removed. The shape, strength, rigidity, water tightness and surface smoothness of reused forms shall be maintained at all times. Any warped or bulged lumber must be immediately removed from the work.

- E. The forms for sidewalk curbs, curb walls, curb and gutters and steps may be of steel or selected wood, free from warps, bends, or other deformations. Wood forms shall be at least 2 inches thick and of the depth required, and shall be surfaced on the side facing the concrete and on the top edge. The forms shall be held firmly in place with stakes and shall be true to line and grade.

### 3.2 EXPANSION JOINTS:

- A. All joints shall be perpendicular to the subgrade and at right angles to the longitudinal axis of the curb and gutter, and shall entirely separate the adjacent sections of concrete. Expansion joints shall be constructed at 20 feet maximum on center for all sidewalk flat work and 40 feet maximum on center for curb and gutters and curbs and at all radius points, or as shown on drawings.

### 3.3 CONTRACTION CONTROL JOINTS:

- A. Flat Work: Contraction joints shall be constructed to form a square module based upon the width of the material. For example, a five foot sidewalk will have contraction joints every five feet shown on drawings. Contraction joints shall be tooled with a 1/4 depth of slab, maximum 1/4" width and maximum 1/2" radius.
- B. If joint pattern is not shown, provide joints not exceeding 10 feet in either direction and located to conform to bay spacing wherever possible (at column centerlines, etc.).
- C. Curb and Gutter and Curbs: Construct contraction joints by using steel templates not less than one-eighth inch nor more than three-sixteenth inch in thickness. Remove the template as soon as the concrete has set sufficiently to hold its shape.

### 3.4 CONCRETE MIXING:

- A. Transit mix with a minimum mixture of one minute plus 15 seconds for each cubic yard in excess of one yard. Concrete shall be mixed only in such quantities as are required for immediate use. Concrete that has not been placed within 60 minutes of the time the materials were put into the mixing drum or concrete that has developed an initial set shall not be used.
- B. Ready mixed concrete will be subject to the provisions in ASTM C94 regarding batching, mixers and agitators, mixing and delivery, inspection consistency and air content and certification of batches, unless a higher standard is called for.

### 3.5 PLACING CONCRETE:

- A. Before preparation for placing of concrete, all sawdust, chips and other construction debris and extraneous matter shall be removed from the interior of the forms. The reinforcement shall be thoroughly cleaned of ice, dirt, and loose rust, mill scale or other scaling. Latter shall be removed from place of deposit before concrete is placed unless otherwise permitted by the architect. All laitance and other unsound material shall be removed from hardened concrete before additional concrete is added. Concrete shall be

mixed and placed within the time limitations specified herein. Where a schedule for pouring concrete is shown on the drawings, no deviation will be permitted there from unless approved by the architect in writing. Place all concrete within one (1) hour after water is added to mix.

- B. Placing operations may be postponed when in the opinion of the landscape architect impending weather conditions may result in rainfall or low temperature which will impair the quality of the finished work. In case rainfall should occur after placing operations are started, the contractor shall provide ample covering to protect the work.
- C. Wherever it is necessary to continue the mixing, placing, and finishing of concrete after daylight hours, the site of the work shall be adequately lighted so that operations are plainly visible. In general, every effort shall be made to enable finishing to be done in daylight.
- D. While handling concrete, care must be taken to avoid segregation of the ingredients.
- E. Chutes, troughs, or pipes used as aids in placing concrete shall be arranged and used so that the ingredients of the concrete will not be separated. Chutes and troughs shall be of metal or metal-lined. When steep slopes are necessary, the chutes shall be equipped with baffle boards or a reversed section at the outlet.
- F. All chutes, troughs, and pipes shall be kept clean and free from coatings or hardened mortar by a thorough flushing with water before and after each placement. Water used for flushing shall be discharged outside of the forms.
- G. The concrete shall be deposited as nearly as possible in its final position and shall not be caused to flow laterally in the form any considerable distance. Each pour shall be completed in a continuous operation with no interruptions in excess of 45 minutes between the placing of continuous portions and in any case, each layer shall be placed and compacted before the preceding layer has taken initial set.
- H. Vibrate all concrete used in pouring steps, curb walls, and curb and gutters, unless extrusion method is used. Do not vibrate forms, reinforcing, or create grout pools.
- I. All concrete truck "clean out" shall be hauled off site at expense of contractor.

### 3.6 FINISHING CONCRETE:

- A. Concrete shall be screeded, floated as necessary, to produce a smooth surface and broomed or brushed with a moderately stiff brush perpendicular to the flow of traffic to produce a surface as described on construction drawings.

### 3.7 CURING AND SEALING OF PAVEMENT:

- A. The entire surface of the pavement, curbs and curb and gutters shall be uniformly sprayed with the designated curing and sealing compound below as early as concrete will properly allow.
- B. Spread curing compound at manufacturer's recommendation. Do not pond or apply an excess spread of material for it will cause yellowing. Yellowing shall be removed and the curing and sealing material replaced at contractor's expense.
- C. Apply sealer to concrete flatwork thirty to forty five days after concrete placement.
- D. Curing compound and sealer can be applied by means of an inexpensive low pressure sprayer, (20-30 pounds pressure), fitted with neoprene hose, gaskets and washers.

- E. Spread in two (2) directions at right angles.
- F. In lieu of the above, concrete may be cured for 7 days with minimum 6 mil. polyethylene plastic, properly taped and anchored, then apply "Siloc-Seal" which shall be as per mfg.'s recommendations at maximum 125 sq. ft./gal. or apply Sonneborn "Kure and Seal" as per mfg.'s recommendations in 2 coats at 200 sq. ft./gal./ea. coat.

### 3.8 PROTECTION OF CONCRETE:

- A. The contractor shall protect the concrete work against all damage and markings. Barricades shall be placed at the proper locations to prevent traffic from using or marking the completed work.
- B. When it is necessary to provide for traffic crossing, the contractor shall, at his expense, construct suitable and substantial crossings to bridge over the concrete, satisfactory to the architect. Newly laid concrete shall be protected from damage by rain or hail.

### 3.9 REMOVAL OF FORMS:

- A. All concrete shall be inspected for quality before forms are removed. Remove forms in manner not to damage concrete.
  - 1. When struck by a carpenter's hammer, it shall ring like stone.
  - 2. When frozen concrete is suspected, test by trying to drive an 8d nail into it to see if water comes to surface when heated by a blow torch.

### 3.10 PATCHING:

- A. As soon as the forms are removed, all projected wire or metal devices that have been used for holding the forms in place, and which pass through the body of the concrete shall be removed or cut back. Lips of mortar and all irregularities caused by form joints shall be removed. All small holes, depressions, and voids that show up on the removal of the forms shall be filled with cement mortar mixed in the same proportions as that used in the body of the work unless specified otherwise by architect. In patching larger holes and honeycombs, all coarse or broken material shall be chipped away until a dense, uniform surface of concrete is exposed. Feathered edges shall be cut away to form face perpendicular to the surface. All surfaces of the cavities shall be saturated thoroughly with water, after which a thin layer of neat cement mortar shall be applied. The mortar shall be one part Portland Cement and two parts of sand which shall be thoroughly tamped into place. The mortar shall be pre-shrunk by mixing it approximately 20 minutes before using. The length may be varied in accordance with the brand of cement used, temperature, humidity, and other local conditions. The surface of this mortar shall be floated with a wooden float before initial set takes place, and shall be neat and workmanlike in appearance. The patch shall be kept moist for a period of 3 days. After curing, patches on exposed surfaces shall be rubbed to blend and match color with surrounding concrete.
- B. For patching large or deep areas, coarse aggregate shall be added to the patching material and special precautions shall be taken to insure a dense well-bonded, and properly cured patch. Patches shall be finished as required for the balance of the structure.

### 3.11 TESTING:

- A. Testing laboratory at owner's expense will furnish, make and test three (3) concrete cylinders for each 20 cubic yards strength test per ASTM C 31-83. Contractor shall cure

and store these cylinders per ASTM C 39-83a, at contractor's expense. Lab will transport at the job site these cylinders to laboratory. Owner will pay for the compression test(s). The testing lab on this project will be selected by Architect from Owner's approved list of pre-qualified testing laboratories.

- B. Testing Lab shall make slump and air tests and other tests for every 20 cubic yards to maintain required standards called for and additionally when directed.
- C. If the average strength of the laboratory control cylinder falls below the minimum compressive strength called for in specifications, or if more than ten percent of the individual tests fall below the minimum compressive strength called for, the Architect shall have the right to order core tests in accordance with ASTM C-42 or load tests in accordance with ACI at the contractor's expense.
- D. Lab to forward copy of all tests to owner and contractor and also to the Architect.

### 3.12 COLD AND HOT WEATHER CONCRETING:

- A. Except by specific written authorization, concreting operations shall not be continued when a descending air temperature, in the shade and away from artificial heat, falls below 40 degrees F; nor shall operations be resumed until ascending air temperature, in the shade and away from artificial heat reaches 35 degrees F. When specific written authorization is given to permit concreting operations at temperatures below those specified above, the contractor shall furnish heating equipment to heat the aggregates and water. The use of chemical additives to prevent freezing will not be permitted. The contractor shall furnish heating equipment capable of producing concrete which will have a temperature of at least 60 degrees F., and not more than 80 degrees F., at the time of placing. In such cases, the aggregates shall be heated prior to placing in the mixer as provided herein. Do not use calcium chloride. Heating operations authorized shall be in an effort to continue progress of the work, and shall be at the contractor's expense.
- B. Heating methods which alter the entrainment of the specified amount of air in the concrete shall not be used.
- C. Concrete placed during weather exceeding 80 degrees F. shall be placed following the recommendations outlined in ACI publications 305R78 (Standard Recommended Practice for Hot Weather Concreting) unless a higher standard is called for.
- D. When concrete is being placed during cold weather, and the air temperature may be expected to drop below 35 degrees F., the air temperature surrounding the concrete shall be maintained at a temperature of 60 degrees F. for at least 72 hours, and at no less than 40 degrees F. for a period of not less than 7 days. Follow ACI #306R77 unless a higher standard is called for.
- E. The contractor shall assume all risk in connection with placing concrete in cold weather, and shall be responsible for the protection of the concrete placed during cold weather. Permission given to place concrete in cold weather shall in no way relieve the contractor of responsibility for proper results. Any concrete injured by frost action shall be removed and replaced at the contractor's expense.

### 3.13 DEFECTIVE CONCRETE:

- A. Cause of rejection: The presence of areas of excessive honeycombing, pitting, spalling, alligatoring etc., shall be considered sufficient cause for rejection of the concrete. Upon written notice from the Architect that a given concrete has been rejected, the contractor shall remove and rebuild the structure in part of wholly as directed and approved by the Architect at the contractor's expense. However, the contractor shall not be responsible for

any damages caused by the owner.

3.14 DELIVERY INFORMATION:

- A. All tickets shall be given to the job foreman and shall be held in a particular file so they are readily available. Note exact location of concrete on job. Architect/Engineer shall be allowed to review the tickets at any time.
- B. The following information shall be given on each delivery ticket for each load of concrete:
  - 1. Number of cubic yards.
  - 2. The exact amount of cement (by weight or quantity).
  - 3. The amount of sand (by weight or quantity).
  - 4. The amount of gravel (by weight or quantity).
  - 5. The amount of mixing water including moisture in aggregates (by weight of quantity).
  - 6. The locations of the concrete place, i.e., footings, columns, slabs; north, east, south, west, southeast, northwest, etc.
  - 7. Amount of slump in inches (taken with a slump cone not estimated).
  - 8. Type of cement.
  - 9. Amount of air entrainment when delivered at job site.
  - 10. Do aggregates meet ASTM specified - yes or no. Indicate maximum size aggregate.
  - 11. Amount and brand (or ASTM) of admixture other than air entraining agent (if any). For use only when approved by the landscape architect in writing.
  - 12. If water is added at job site, note amount.
  - 13. Finishes shall be as shown on drawings.

3.14 GUARANTEES:

- A. All work and materials shall be guaranteed for compliance with the contract requirement, including replacement for a period of (2) years from date of substantial completion. If unsatisfactory conditions (cracking, spalling and pitting damage develops in the period stipulated by the guarantee and is due to neglect, faulty materials or workmanship, the contractor shall immediately place it in satisfactory condition. All guarantees shall be in writing to the owner and worded as approved by the Landscape Architect.

End of Section 02520

## SECTION 02863 - FIRE RING

### PART I - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. The general and supplementary general conditions shall apply to all work under this section.
- B. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work.
- C. Consult the index to be certain that the set of documents and specifications is complete. Report omissions or discrepancies to the Landscape Architect before bidding.

#### 1.2 SUMMARY:

- A. The work covered by this section of the specifications consists of furnishing all labor, material, equipment and supplies in performing all operations in connection with fire rings and all site work in strict accordance with this section of specifications and applicable drawings.
- B. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- C. Submit Contractor's construction schedule of anticipated work time to facilitate timely visits for review of work.
- D. Work under this section of specifications shall include coordination of all work with all other sections of these specifications.

#### 1.3 QUALITY ASSURANCE:

- A. **Manufacturer's Qualifications:** Licensed firms regularly engaged in manufacture of fire rings products of types, materials, and sizes required, whose products have been in satisfactory use in similar service.
- B. **Installer Qualifications:** Licensed firm regularly engaged in successful installation of fire rings similar to that required for project.

#### 1.4 SUBMITTALS:

- A. **Product Data:** Submit manufacturer's technical product data and installation instructions for fire ring materials and products.

### PART II - PRODUCT

- 2.1 Provide fire rings for campsite by WGS (phone (801) 392-6250) item Fire Chef Sr. or approved equal. Provide shop drawings.
- 2.2 Provide fire rings for group/pavilions by Pilot Rock #FA-30 or approved equal.

### PART III - EXECUTION

- 3.1 Install as per manufacturer's recommendations and as per details.

3.2 Install fire ring in concrete ring with 2" air space between concrete and fire ring as shown on detail. Provide four (4) metal spacers on fire ring to insure air space.

3.3 GUARANTEE:

- A. All work shall be guaranteed for compliance with the contract requirements, including replacement for a period of (1) one year from date of substantial completion. If unsatisfactory conditions or damage develops in the period stipulated by the guarantee and is due to neglect, faulty materials or workmanship, the contractor shall immediately place it in satisfactory condition. All guarantees shall be in writing and worded as approved by the landscape architect.

End of Section 02863

## SECTION 02875 - MAIN SHELTER

### PART I - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. The general and supplementary general conditions shall apply to all work under this section.
- B. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work.
- C. Consult the index to be certain that the set of documents and specifications is complete. Report omissions or discrepancies to the Landscape Architect before bidding.

#### 1.2 SUMMARY:

- A. The work covered by this section of the specifications consists of furnishing all labor, material, equipment and supplies in performing all operations in connection with main shelter and all site work in strict accordance with this section of specifications and applicable drawings.
- B. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- C. Submit Contractor's construction schedule of anticipated work time to facilitate timely visits for review of work.
- D. Work under this section of specifications shall include coordination of all work with all other sections of these specifications.

#### 1.3 QUALITY ASSURANCE:

- A. Manufacturer's Qualifications: Licensed firms regularly engaged in manufacture of shelter products of types, materials, and sizes required, whose products have been in satisfactory use in similar service.
- B. Installer Qualifications: Licensed firm regularly engaged in successful installation of shelters similar to that required for project.

#### 1.4 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical product data and installation instructions for main shelter materials and products.

### PART II - PRODUCT

- 2.1 Provide hexagon shelter by Poligon #Hex365. Provide Double Eagle tile on shelter roof - color green.
- 2.2 Poligon all-metal shelters shall be designed in strict accordance with the Uniform Building Code (1988 edition) using a minimum Live Load of 30 psf, a minimum Wind Load based on a 100 mph wind speed load at the projected area of the roof, and a Seismic (earthquake) Load based on Zone 4.

### PART III - EXECUTION

- 3.1 Structure shall be surface mounted over internal anchor bolts. All structural framing shall be steel tubes or structural steel sections with cover plates to form a clean appearance. Since all connections will bolt together, field welding shall not be required. Bolts shall be concealed within the tubing where possible. All steel members of the structure shall be designed in strict accordance with the requirements of the "American Institute of Steel Construction" (AISC) Specifications and the "American Iron and Steel Institute" (AISI) Specifications for Cold Formed Members.
- 3.2 The steel frame shall be factory prime painted with a rust inhibitive modified alkyd primer according to Steel Structures Painting Council. Frame to be finish painted in the field with two (2) coats alkyd enamel, semi-gloss, color - vanilla.
- 3.3 Install Double Eagle Tile on shelter roof as per manufacturer's recommendations.
- 3.4 GUARANTEE:
  - A. All work shall be guaranteed for compliance with the contract requirements, including replacement for a period of (1) one year from date of substantial completion. If unsatisfactory conditions or damage develops in the period stipulated by the guarantee and is due to neglect, faulty materials or workmanship, the contractor shall immediately place it in satisfactory condition. All guarantees shall be in writing and worded as approved by the landscape architect.

End of Section 02875

## SECTION 17000- PRE-FABRICATED ITEMS

### PART I - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. The general and supplementary general conditions shall apply to all work under this section.
- B. Separation of these specifications into sections is for convenience only and is not intended to establish limits of work.
- C. Consult the index to be certain that the set of documents and specifications is complete. Report omissions or discrepancies to the Landscape Architect before bidding.

#### 1.2 SUMMARY:

- A. The work covered by this section of the specifications consists of furnishing all labor, material, equipment and supplies in performing all operations in connection with prefabricated items and all site work in strict accordance with this section of specifications and applicable drawings.
- B. Any minor items of labor or materials not specifically noted on the drawings or specifications; but obviously necessary for the proper completion of the work, are to be considered as incidental to and are to be included in the contract.
- C. Submit Contractor's construction schedule of anticipated work time to facilitate timely visits for review of work.
- D. Work under this section of specifications shall include coordination of all work with all other sections of these specifications.
- E. For complex, pre-fabricated systems, upon completion of the project submit the following to the owners:
  - 1. One digital copy and 3 prints of "as-built" drawing showing all buried utilities, vaults, connections, and equipment for the item. Drawings shall be to scale with dimensions indicating exact location of underground lines from permanent structures.
  - 2. Three (3) owner's operation manuals indicating information for operation and maintenance of the pump system, data sheets, and as built system drawings.

#### 1.3 QUALITY ASSURANCE:

- A. **Manufacturer's Qualifications:** Licensed firms regularly engaged in manufacture of specified products of types, materials, and sizes required, whose products have been in satisfactory use in similar service.
- B. **Installer Qualifications:** Licensed firm regularly engaged in successful installation of products similar to that required for project.

#### 1.4 SUBMITTALS:

- A. **Product Data:** Submit manufacturer's technical product data and installation instructions for specified materials and products.

- B. Shop Drawings: Submit shop drawings for specified materials, size, locations, and connections.
- C. Maintenance Data: Submit maintenance data and parts lists for specified materials and products. Include this data, product data, shop drawings, and record drawings in maintenance manual; in accordance with requirements of Division 1.

## PART II - PRODUCT

- 2.1 Refer to drawings for specified pre-fabricated items. Contractors shall submit color samples for approval prior to installation.

## PART III - EXECUTION

- 3.1 Install according to manufacturer's recommendations.
- 3.2 GUARANTEE:
  - A. All work shall be guaranteed for compliance with the contract requirements, including replacement for a period of (1) one year from date of substantial completion. If unsatisfactory conditions or damage develops in the period stipulated by the guarantee and is due to neglect, faulty materials or workmanship, the contractor shall immediately place it in satisfactory condition. All guarantees shall be in writing and worded as approved by the landscape architect.

End of Section 17000