**ADDENDUM 1R IS ONLY PROVIDING A LEGIBLE SHEET E200 (ADD1-7, ATTACHMENT #2) AND E300 (ADD 1-8, ATTACHMENT #3). **

MILITARY DEPARTMENT
STATE of NEBRASKA
LINCOLN, NEBRASKA

11 August 2017
14 August 2017

NEBRASKA ARMY NATIONAL GUARD
CATS PHYSICAL FITNESS FACILITY

at

Camp Ashland Training Site
220 County Road A
Ashland, NE 68003

PROJECT NO. 31040282

A D D E N D U M N O. 1R

The original specifications and drawings on the STATE OF NEBRASKA REQUEST for PROPOSAL FORM for the project noted above are amended as noted in this Addendum No. 1.

Receipt of this Addendum shall be acknowledged by inserting its number and date in the space provided on the Bid Form.

ADDENDUM NO. 1 R

NOTE TO ALL PLANHOLDERS: Please insert this Addendum into your copy of the Contract Documents for the above named project.

The following changes to the Contract Documents are issued by the CFMO-CMB and shall have the same force and affect as though a part of the original issue.

THE RECEIPT DATE, TIME and LOCATION of the BID PROPOSAL submission HAVE NOT CHANGED.

ITEM NO.

ADD 1-1 Pre-Bid Meeting Sign-In Sheet
A. Refer to the sign-in sheet, attachment #1.

ADD 1-2 General Clarification: Permit and Inspections
A. Permits from local and state jurisdictions are not required.
B. Inspections from local and state jurisdictions are not required. Project Manager and Design Team will conduct inspections as required.

ADD 1-3 Sheet C410, Site Plan - Utility
A. Refer to Plan Key Note 26.01- Revise note to read: "ALT - A4: 4" PVC Conduit with pull rope in new trench separated from new gas line minimum of 5'-0". Bore under track at two locations as shown. Stub up outside Building 450 and inside new structure."
B. Refer to Detail N16, Plan Key Note 33.01 - Clarification: Black Hills is only approved contractor to install gas line. Revise Contact information for Black Hills Energy to: Dave Chase. Telephone: 402-440-9318. Email: Dave.Chase@Blackhillscorp.com.

ADD 1-4 Sheet A115, Floor Plan

A. Refer to Plan Key Note 08.05 - Revise note to read: "ALT-A3: Aluminum frame window. General contractor to provide J-trim, and brake metal as necessary to finish around window frame."

ADD 1-5 Sheet A430, Exterior Elevations

A. Refer to Plan Key Note 08.02 - Revise note to read: "ALT-A3: Aluminum frame window. General contractor to provide J-trim, and brake metal as necessary to finish around window frame."
B. Refer to Detail J6, Enlarged Elevation of Flood Gate (Base Bid):
   1. Clarification: All flood gates in Base Bid Shown on North and South Elevations are custom fabricated steel flood gates to be shop fabricated. Alternate #5: Delete custom steel flood gates and tracks and add manufactured flood gates per specifications.

ADD 1-6 Sheet A530, Building Sections

A. Refer to Plan Key Note 08.05 - Revise note to read: "ALT-A3: Aluminum frame window. General contractor to provide J-trim, and brake metal as necessary to finish around window frame."

ADD 1-7 Sheet E200, Floor Plan Power

A. See attached revised electrical floor plan with changes in revision clouds. Attachment #2.

ADD 1-8 Sheet E300, Electrical Riser Diagram, Symbols and Project Notes

A. See attached revised electrical riser diagram. Attachment #3.

ADD 1-9 Reference Proposal, Sheet P-2 and P-2A

A. Reference Page P-2, Alternate Bid Item #3 - Revise to read: "Add Aluminum Frame Windows at North and South Elevations."
B. Reference Page P-2A
   1. Alternate Bid Item #4 - Revise to read: "Add Network Conduit."
   2. Alternate Bid Item #5 - Revise to read: "Add Flood Gates."
   3. Alternate Bid Item #6 - Revise to read: "Add Athletic Flooring."
C. Refer to attached Bid Proposal Form. Attachment #4.

ADD 1-10 Specification Section 00800 - Project Requirements

A. Delete Paragraph 18.1
B. Add:
   1. Electrical Power Service: Electrical power from Owner's existing system is available for the use without metering and without payment of use charges. Provide connections and extensions of services as required for construction. The Owner's electrical power is not to be used for temporary heat. If the Contractor wants to use electrical heat, the electrical usage for this heat must be separately metered and the Owner reimbursed. (Fans supporting and or blowing tempered air from temporary fossil fuel heat sources would be included in Owner provided power. The intent is for the Owner's electrical power to not be used for temporary heating systems requiring electricity due to the high BTU generated.) All electrical power for cooling will be by Contractor. Abuse of Owner's power will result in a written warning for correction by the General Contractor. If corrections are not made, notification and resulting termination of owner's service provided to the project and contractor(s). Contractor will then be responsible for providing power for construction related activities.
   2. **Contractor shall separately meter temporary electric heat (if required) and reimburse the Owner.**
   3. Water Service: Water is available at building site and may be utilized for normal construction activities without payment of use charges.

ADD 1-11 Specification Section 01 2100 - Allowances

A. See attachment specification, attachment #5.

ADD 1-12 Specification Section 01 2300 - Alternates

A. Paragraph 3.01, A, 3. ABI # 3 - Revise to read: "Add Aluminum Frame Windows at North and South Elevations."

B. Paragraph 3.01, A, 3. ABI # 3, a. - Revise to read: "Base Bid: Reference Sheet A115, Detail A7, Floor Plan and Sheet A430, Details A8 and E8, North and South Elevations, provide new structure without aluminum frame windows."

C. Paragraph 3.01, A, 3. ABI # 3, b. - Revise to read: "Alternate #3: Reference Sheet A115, Detail A7, Floor Plan and Sheet A430, Details A8 and E8, North and South Elevations, provide new structure with aluminum frame windows."

ADD 1-13 Specification Section 01 3000 - Administrative Requirements

A. Paragraph 3.05, C, 1, a - Revise to read: "General Contractor to contact Submittal Exchange Representative for current quote".

ADD 1-14 Specification Section 03 3300 - Cast in Place Concrete Walls

A. See attached specification, attachment #6.

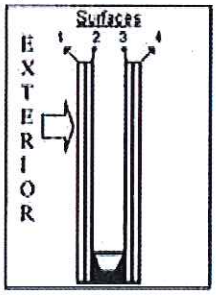
ADD 1-15 Specification Section 07 6100 - Preformed Wall and Roof Panel System

A. Refer to section 2.01, A – Include All Weather Insulated Panels, Metl-Span CF MESA Insulated Metal Wall Panel and Metl-Span CFR Insulated Metal Roof Panel as approved manufacturers.

ADD 1-16 Specification Section 08 4313 - Aluminum Framed Storefronts and 08 8000 - Glazing

A. Revise glass performance values per the table:

Make-up:
¼" CLEAR ES 73(2)
½" AIRSPACE
¼" CLEAR



Transmittance	
Visible Light:	75%
Solar Energy:	56%
Reflectance	
Visible Light (Exterior)	16%
Visible Light (Interior)	17%
Solar Energy:	14%
ASHRAE U-Value	
Winter Nighttime:	.33
Summer Daytime:	.32
Shading Coefficient:	.72
Solar Factor (SHGC):	.63

B. Glass to be fully tempered.

ADD 1-17 Specification Section 09 6566 - Indoor Athletic Surfacing

A. Delete specification section in its entirely.

B. Add attached specification section 09 6450, Indoor Resilient Athletic Surfacing, attachment #7.

ADD 1-18 Specification Section 13 3419 – Metal Building Systems

A. Refer to section 2.01, A – Include Metallic Building Company and Varco Pruden Buildings; a BlueScope Steel Company as approved manufacturers.
B. Paragraph 2.04, A, 6 - Revise paragraph to read: "All primary framing members to be primer painted red. Contractor to apply second coat of matching primer on primary structure from finish floor to 8'-0" above finish floor."
C. Paragraph 2.04, B, 2 - Revise paragraph to read: "All end-wall framing members to be primer painted red. Contractor to apply second coat of matching primer on end-wall framing from finish floor to 8'-0" above finish floor."
D. Clarification: All primary structural members to be primer finish with second coat applied by General Contractor after the building is enclosed. All secondary members normally galvanized under manufacturers standard specification will remain galvanized, unpainted.

THIS ADDENDUM SHALL BE ATTACHED TO AND MADE A PART OF THE DRAWINGS AND SPECIFICATIONS AND SHALL BE ACKNOWLEDGED WITH THE BIDDER'S PROPOSAL.

DARYL L. BOHAC
MAJOR GENERAL The Adjutant General

End of Addendum No. 1

Attachments: Seven (7)

#1 - Pre-Bid Meeting Sign-In Sheet
#2 - Drawing Sheet E200
#3 - Drawing Sheet E300
#4 - Bid Proposal Form
#5 - Specification 01 2100 - Allowances
#6 - Specification 03 3300 - Cast-In-Place Concrete Walls
#7 - Specification 09 6450 - Indoor Resilient Athletic Surfacing

Nebraska Military Department

Construction and Facilties Management Office

JFHQ Building, 2433 NW 24th Street, Lincoln, Nebraska 68524-1801

(402) 309-8450 (main) (402) 309-7480 (fax)

CATS PHYSICAL FITNESS FACILITY

PRE-BID MEETING 9:30 AM AUGUST 3, 2017

Name	Agency/Company	Phone Number	E-mail Address
MSG David Nanfito Don Rosenbaum	Camp Ashland Point of Contact	402-309-7250	david.m.nanfito.mil@mail.mil
Mr. Kevin Hittle, AIA KH	SSH Architecture	402-483-2893	Kevin@ssh-arch.com
CPT Daniel Sandoz NA	CFMO Business Manager	402-309-8453	daniel.c.sandoz.mil@mail.mil
Dave Egr DE	CFMO Project Manager	402-309-8462	david.m.egr.nfg@mail.mil
Robert DeMoss RWD	CFMO Contracts Officer	402-309-8473	robert.w.demoss2.nfg@mail.mil
Chris Hull	Winn Construction Co	402-932-5298	chris@winnvet.com
Fred Peruche	WINN Construction Co.	402-657-4358	Fred@winnvet.com
Mac Hunt	CFMO Project Manager	402-309-8470	mclainhunt@outlook.com
Tyler Pulec	Cheever Const.	(402) 432-8856	tpulec@cheeverconstruction.com
Kelly Schroer	Kidwell	402-817-3475	Kschroer@kidwellinc.com
Nick McCafferty	Rogge	402-441-3100	nickm@roggeinc.com
Keith White	F&B Constructors	402-592-7430	kwhite@fandbconstructors.com
Jeff George	Construct, Inc.	402-571-7600	jgeorge@constructinc.com
Mike Kistler	Fireguard	402-490-0705	mike.kistler@fireguardusa.com
Jeff Dinzole	Siemens	402-312-6934	jeff.dinzole@siemens.com
Scott Wieczorek	DR Anderson	402-572-7350	BIDS@DRANDERSON.com
Robin Spangler	Lacey Construction Inc.	402-443-1112	bids@laceyinc.com
Randy Bahmer	Elkhorn West Construction	402-315-9557	Randy.B@elkhornwest.com
Jeff Johnston	Pella Windows	402-672-4555	jeffjohnston@pella.marvin.com
Ben Lassek	R.F.C Const	402-551-2744	ben@rfcconstruction.com
Don Renner	JEC	402-809-7285	donald.g.renner.mil@mail.mil
Noah Mosher	Premier Electric	(402) 618-2036	noah.premierelectric@gmail.com

Attachment #1

Name	Agency/Company	Phone Number	E-mail Address
Dane Mangel	Chalco Mechanical	402-214-6559	dane@chalcomechanical.com
Kyle Teplitsky	K1 ELECTRICAL CONTRACTING	402-598-8581	K1CONTRACTING@YMAIL.COM
DENNIS KRECKLOW	NEARNG TLC	402 309 7273	

Attachment #1

EQUIPMENT CONNECTION SCHEDULE

GENERAL NOTES

- SEE APPROVED SUBMITTALS FOR EXACT REQUIREMENTS/ACTUAL LOCATIONS
- ANY ELECTRICAL COSTS, DUE TO SUBSTITUTION FOR SPECIFIED EQUIPMENT, SHALL BE INCURRED BY THE MC AT NO ADDITIONAL EXPENSE TO THE OWNER
- EQUIPMENT TO BE FURNISHED/INSTALLED BY OTHERS. POWER FEED & FINAL CONNECTIONS/INTERCONNECTIONS BY EC
- LOW-VOLTAGE CONTROL WIRE BY OTHERS
- ALL NECESSARY DISCONNECT SWITCHES INSTALLED AHEAD OF EQUIPMENT CONTROL BY EC

(X-#)		DATA						WIRING			CONNECTION					
DESIGNATION	DESCRIPTION	KILOWATTS	HORSEPOWER	MCA	MOCP	VOLTAGE	PHASE	CONDUCTORS	GROUNDING	RACEWAY	PLUG	MEMA CONFIG.	DIRECT	DISCONNECT SWITCH	MOTOR STARTER	NOTES
EF-1	EXHAUST FAN		2		25	240	1	2-#10	#10	3/4"			X	COMBINATION START/DISCONNECT	COMBINATION START/DISCONNECT	1
F-1	FURNACE			12.8	20	120	1	2-#12	#12	3/4"			X	STE		

NOTES

1. PROVIDE WITH HOA CONTROL, LED INDICATOR LIGHTS, AND PUSHBUTTON START/STOP.

M9 | ELECTRICAL CONNECTION SCHEDULE

E200 | SCALE: NONE

SHEET NOTES

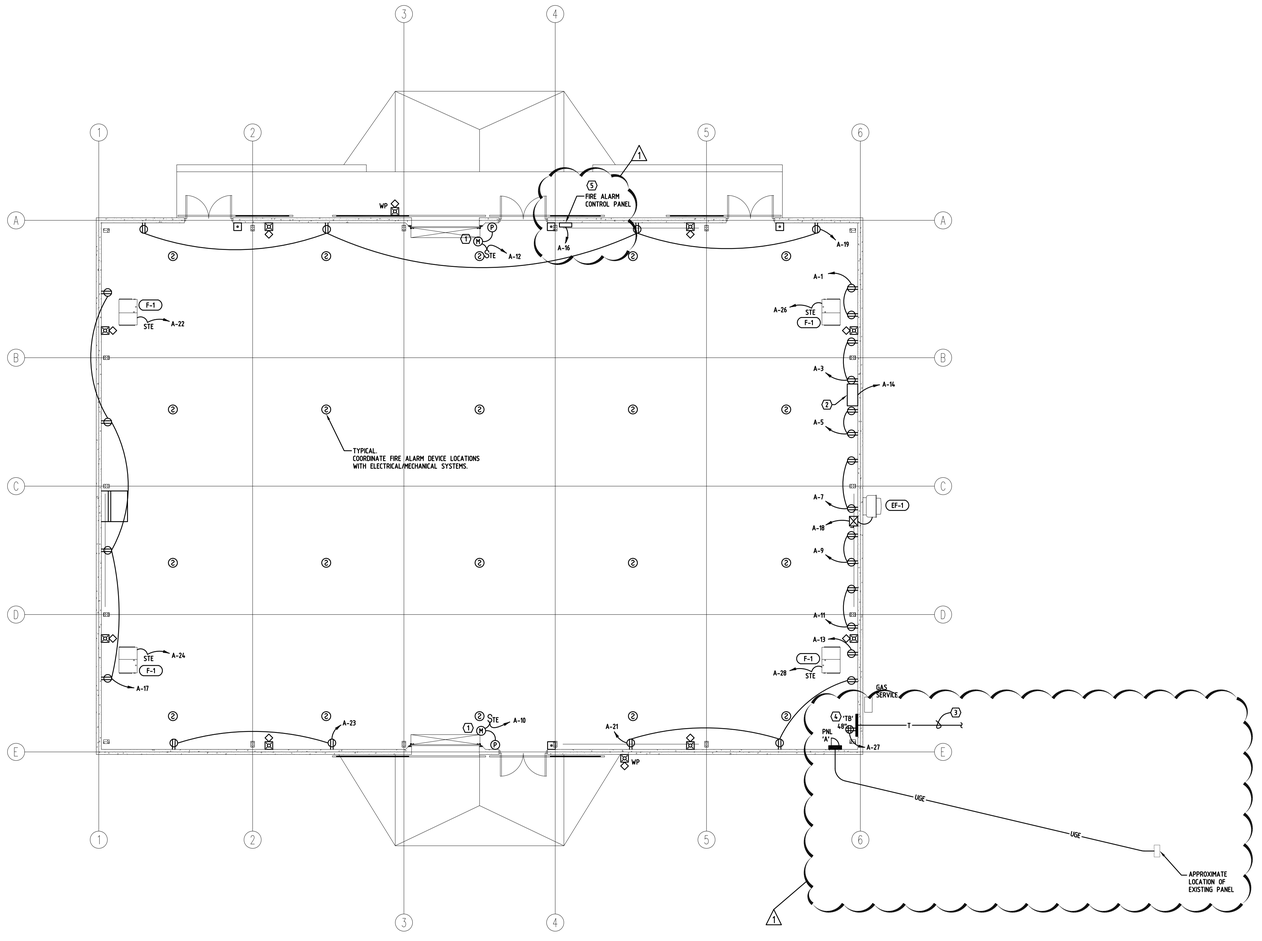
KEY NOTE SYMBOL = (X)

GENERAL NOTES

A. ALL BRANCH CIRCUITS SHALL HAVE A SEPARATE GREEN GROUND WIRE AND SEPARATE NEUTRAL WIRE.

KEY NOTES

1. OVERHEAD DOOR OPERATOR. ALL WIRING, CONDUIT AND CONNECTIONS BY ELEC. CONTR. THIS INCLUDES ALL LOW-VOLTAGE WIRING/CONNECTIONS. OPERATOR, CONTROLS, AND ASSOCIATED ITEMS INSTALLED BY DOOR CONTRACTOR.
2. CO2 DETECTION SYSTEM BY MECH. CONTR. PROVIDE 120V. CONNECTION INTERLOCK WIRING FROM CONTROL PANEL TO EF-1 AND DAMPER MOTORS BY EC. PROVIDE #12 IN 3/4"C. COORDINATE REQUIREMENTS WITH MECH. CONTRACTOR.
3. ROUTE 1-12PR CAT 3 IN 4" NETWORK CONDUIT. SEE CIVIL PLANS FOR CONDUIT LOCATION AND ROUTING. THIS WORK TO BE INCLUDED IN ALT. #4.
4. TERMINATION BOARD - 4'X4'X3/4" PLYWOOD WITH 2 COATS FIRE RETARDANT PAINT. PROVIDE GROUND BAR 12"X4" AND SECURE TO BOARD WITH APPROVED HARDWARE. TERMINATE 12PR CAT 3 TO 66 BLOCK. PROVIDE TELEPHONE LINE PROTECTOR AND GROUND TO BAR WITH #6 CU GND. CONNECT GROUND BAR TO ELECTRICAL SERVICE GROUND WITH #6 CU.
5. ROUTE 1-CAT 5E CABLE TO 'TB' AND TERMINATE TO 66 BLOCK FOR EMERGENCY CALLOUT.



A1 | FLOOR PLAN - POWER

E200 | SCALE: 1/8"=1'-0"

PANEL A

MAINS RATING	INTERUP	VOLTAGE	PHASE	WIRE	KAIC	MOUNT
225	MLO	120/240	1	3	22	SURFACE

GENERAL NOTES

- COPPER BUS / 100% RATED COPPER NEUTRAL

NOTES	VA	DESCRIPTION	BRKR AMP	POLE	CIRCUIT	PHASE	CIRCUIT	BRKR POLE	BRKR AMP	DESCRIPTION	VA	NOTES
-	1200	EXERCISE EQUIPMENT RECEPTS	20	1	1	A	2	1	20	WEST LIGHTING BANK	1400	-
	1200	EXERCISE EQUIPMENT RECEPTS	20	1	3	C	4	1	20	CENTER LIGHTING BANK	1400	
	1200	EXERCISE EQUIPMENT RECEPTS	20	1	5	A	6	1	20	EAST LIGHTING BANK	1400	
	1200	EXERCISE EQUIPMENT RECEPTS	20	1	7	C	8	1	20	EXTERIOR LIGHTING	250	
	1200	EXERCISE EQUIPMENT RECEPTS	20	1	9	A	10	1	20	SOUTH OVERHEAD DOOR	1000	
	1200	EXERCISE EQUIPMENT RECEPTS	20	1	11	C	12	1	20	NORTH OVERHEAD DOOR	1000	
	1200	EXERCISE EQUIPMENT RECEPTS	20	1	13	A	14	1	20	CO2 DETECTOR	200	
	500	CEILING FANS	30	1	15	C	16	1	20	FACP	200	1
	800	WEST RECEPTS	20	1	17	A	18	2	25	EF-1	2496	
	800	NORTH RECEPTS	20	1	19	C	20	-	-	-	-	
	600	SOUTH RECEPTS	20	1	21	A	22	1	20	NORTH-WEST F-1	1536	
	600	SOUTH RECEPTS	20	1	23	C	24	1	20	SOUTH-WEST F-1	1536	
	600	LCP	20	1	25	A	26	1	20	NORTH-EAST F-1	1536	
	600	TELEPHONE BOARD	20	1	27	C	28	1	20	SOUTH-EAST F-1	1536	
					29	A	30					
					31	C	32					
					33	A	34					
		SPARE	20	1	35	C	36	1	20	SPARE		
		SPARE	20	1	37	A	38	1	20	SPARE		
		SPARE	20	1	39	C	40	1	20	SPARE		
		SPARE	20	1	41	A	42	1	20	SPARE		

NOTES

1. PROVIDE HANDLE LOCK.

A13 | PANEL SCHEDULE

E200 | SCALE: NONE

1 ADDENDUM #1 - 8/10/2017

B17 | SHEET NOTES

E200 | SCALE: NONE

SSH ARCHITECTURE
Architecture and Construction Consulting Services
123 So. 84th, Suite A, Lincoln, Nebraska 68510
(402) 483-2893
FAX: (402) 483-6499 E-MAIL: corp@ssh-arch.com

Camp Ashland Training Site
Physical Fitness Facility
220 County Road A
Ashland, Nebraska 68003

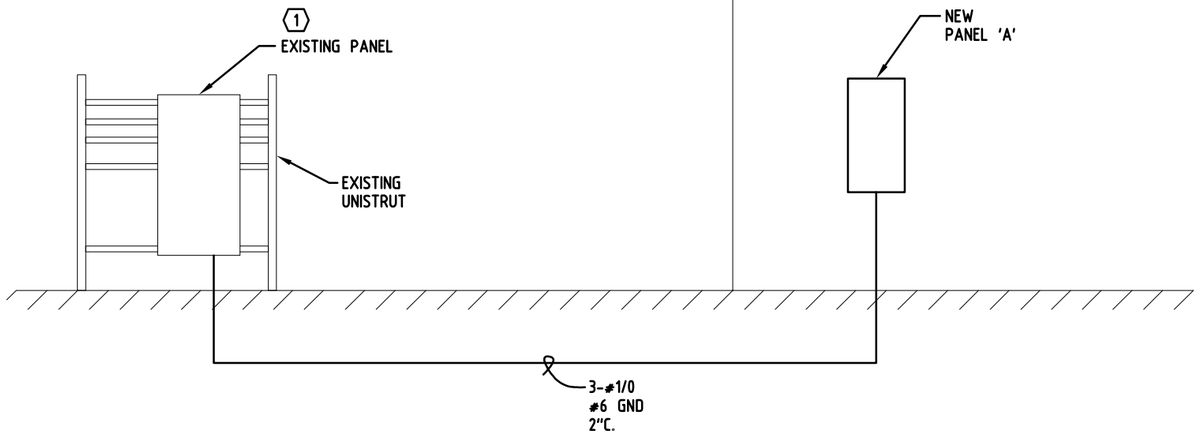
DATE: 05/01/2015
REVIEWED BY:
PROJECT NO.: 1420

DRAWING TITLE:
FLOOR PLAN - POWER

SHEET NO.:
E200

AES ADVANCED ENGINEERING SYSTEMS
www.a-e-sys.com PROJECT # (15-009)
4630 ANTELOPE CREEK RD STE 200 P: 402-488-0075
LINCOLN, NE 68506 F: 402-488-0272

Attachment #2



ONE-LINE DIAGRAM NOTES

KEY NOTE SYMBOL = ⟨X⟩

GENERAL NOTES

A. VISIT JOB SITE & ADAPT TO ACTUAL SITE CONDITIONS.

B. STATE LAW REQUIRES THAT ALL PERSONS, PRIOR TO DIGGING ANY HOLE OR TRENCH, SHOULD CONTACT THE "DIGGERS HOTLINE OF NEBRASKA" NUMBER AT 1-800-331-5666.

C. UTILITY LOCATIONS ARE SUBJECT TO INTERPRETATION. THEY ARE APPROXIMATE & NO GUARANTEE IS MADE AS TO THEIR ACCURACY, FURTHER VERIFICATION MAY BE REQUIRED.

D. ALL CONDUCTORS SHALL BE COPPER.

KEY NOTES

1. NEMA 3R SQUARE 'D' - 150A. MCB 120/240V. 1PH 3W WITH 1-20/2, 2-20/1, AND 26 SPACES. PROVIDE 1-150/2 BRANCH BREAKER TO SERVE NEW PANEL 'A'.

A8	ELECTRICAL RISER DIAGRAM
E300	SCALE: NONE

4630 Antelope Creek Rd Ste 200 • Lincoln, NE 68506 • P: 402-488-0075 • F: 402-488-0272 • www.a-e-sys.com

ADVANCED ENGINEERING SYSTEMS

PROJECT: CAMP ASHLAND TRAINING SITE - PHYSICAL FITNESS FACILITY

PROJECT #: 15-009

DATE: 08/10/2017

ADDENDUM: #001

SHEET: E300

NUMBER: 1 of 1

PROPOSAL
from: _____ (contractor)

TO:

Daryl L. Bohac
Major General, The Adjutant General
Military Department, State of Nebraska
2433 NW 24th Street
Lincoln, NE 68524-1801

The undersigned, being familiar with local conditions affecting the cost of the work, and the Proposed Contract documents, including the Advertisement for Bids, Notice to Bidders, Instructions to Bidders, Proposal, Proposed Contract, Contract, Performance And Payment Bond, Form of Appointment of Purchasing Agent, Form of Exempt Sales/Use Tax Certificate, General Conditions, Supplemental Conditions, and Specifications and Plans all on file in the **Construction & Facilities Management Office, Nebraska Army National Guard, 2433 NW 24th Street, Lincoln, Nebraska 68524-18524**, hereby proposes to furnish all plant, equipment, transportation, materials, tools, labor and skills necessary and required to perform all work as described in the Proposed Contract Documents entitled:

CATS PHYSICAL FITNESS FACILITY

at

CAMP ASHLAND, 220 COUNTY RD A, ASHLAND, NE 68003

SCOPE OF WORK:

The CATS Physical Training Facility Project consists of all labor, materials, supervision, equipment, site work, mechanical work, electrical work, licenses, permits and the like to construct a facility for the intended use at the Camp Ashland Training Site. The project will include but is not limited to concrete demolition and replacement, project specific utilities, installation of a pre-engineered metal building structure, concrete foundation and side walls, pre-finished insulated metal roof and wall panels, hollow metal doors, frames, hardware, overhead doors, aluminum windows, flood barriers at wall penetrations, artificial turf flooring, mechanical systems and electrical. The 7000 SF metal building will be utilized as a field house for mass physical training as well as other ancillary uses.

PROPOSAL

In accordance with the Proposed Contract documents including the following **Addenda** issued and attached:

Addendum #___, dated: _____, Bidder's acknowledgement: _____

Addendum #___, dated: _____, Bidder's acknowledgement: _____

For the contract sum of:

Base Bid:_____, $_____._____
(Bidder will enter base bid amount in both words and numerals)

For the following **Alternate Bid Items**:

Alternate Bid Item #1: Architectural Concrete Flood Walls

_____ $_____._____
(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #2: Delete High Bay Fluorescent Lights and Add High Bay LED Lights

_____ $_____._____
(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #3: Add Aluminum Frame Windows at North and South Elevations.

_____ $_____._____
(Bidder will enter bid amount in both words and numerals)

Additional ABIs for this project are listed on the enclosed following page (page P2A)

For the following **Unit Price Items** to add or delete the following work:

Unit Price Item #1:

N/A_____ $_____._____/_____
(Bidder will enter bid amount in both words and numerals) (enter price per unit of measure in numerals)

Unit Price Item #2:

N/A_____ $_____._____/_____
(Bidder will enter bid amount in both words and numerals) (enter price per unit of measure in numerals)

Unit Price Item #3:

N/A_____ $_____._____/_____
(Bidder will enter bid amount in both words and numerals) (enter price per unit of measure in numerals)

Additional UPIs for this project are listed on the enclosed following page (page P2A)

For the base bid and all items above, the amount shown in words will govern.

The undersigned agrees to complete all work within _____ **calendar days** following the award of the Contract.

Additional Alternative Bid Items:

For the following Alternate Bid Items:

Alternate Bid Item #4: Add Network Conduit

_____ $_____._____

(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #5: Add Flood Gates

_____ $_____._____

(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #6: Add Athletic Flooring

_____ $_____._____

(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #7: None

_____ $_____._____

(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #8: None

_____ $_____._____

(Bidder will enter bid amount in both words and numerals)

Alternate Bid Item #9: None

_____ $_____._____

(Bidder will enter bid amount in both words and numerals)

PROPOSAL

The undersigned states that they are complying with, and will continue to comply with, fair labor standards in the pursuit of their business and in the execution of the Contract.

The undersigned acknowledges having reviewed provisions outlined for exemption of payment of sales taxes to the State of Nebraska and also understands the requirements for registration of any and all non-resident contractors and subcontractors with the Nebraska Department of Revenue.

Bid security in the amount of $_____ as described in the Instructions to Bidders is required and is attached to this Proposal. In submitting this bid, the Bidder understands the Nebraska Military Department, State of Nebraska reserves the right to reject any or all bids, waive informalities and that this bid may not be withdrawn during the period of sixty (60) days following the scheduled closing time for receipt of the bids.

_____
Name of Firm

An Individual ( )
A Co-Partnership ( )
A Corporation ( )

_____
Date

_____
Raised or Embossed Corporate Seal and State of Incorporation

_____
Principal Signature

NOTE: If Bidder is a partnership, list the names of all partners below:

_____
Printed Name of Principal

_____
Printed Name of Partner

_____
Title

_____
Printed Name of Partner

_____
Street Address

_____
Printed Name of Partner

_____
City, State, ZIP Code

_____
Federal I.D. or Social Security Number

_____
Phone

_____
email

SECTION 01 2100

ALLOWANCES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Discovery allowances.

1.02 DISCOVERY ALLOWANCES

A. The General contractor shall include $5,000 in base bid to cover unforeseen conditions which may arise during the course of construction. The Discovery Allowance shall be used only as directed for the Owner's purpose and only by issuance of Discovery Allowance Directives that indicate amounts to be charged to the allowance.
   1. Discovery allowance is added to cover potential costs to remove water from footing excavation during construction.

B. Authorized use of the Discovery Allowance will include; Contractors related costs and reasonable overhead and profit margins per Section 01 2000.

C. At Project Close-out, credit unused amounts remaining in the Discovery Allowance to the Owner by Change Order.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 03 3300

CAST-IN-PLACE CONCRETE WALLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. **BASE BID (CONCRETE WALLS)**

B. Cast-in-place concrete including form facings, reinforcement accessories, concrete materials, concrete mixture design, placement procedures and finishes.

1.02 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag and silica fume; subject to compliance with requirements.

B. Design Reference Sample: Sample designated by Architect in the Contract Documents that reflects acceptable surface quality and appearance of cast-in-place concrete.

C. Reveal: Projection of coarse aggregate from matrix or mortar after completion of exposure operations.

1.03 SUBMITTALS

A. Refer to Division 01 Administrative Requirements, for submittal procedures.

B. Product Data: For each type of product indicated.

C. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
   1. Indicate amounts of mixing water to be withheld for later addition at Project site.

D. Formwork Shop Drawings: Not Required.

E. Placement Schedule: Submit concrete placement schedule before start of placement operations. Include locations of all joints including construction joints.

F. Samples: For each of the following materials:
   1. Form ties.

G. Samples for Verification: Not Required.

H. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:

I. Material Certificates: For each of the following, signed by manufacturer:
   1. Cementitious materials.
   2. Admixtures.
   3. Form materials and form-release agents.
   4. Repair materials.

J. Minutes of pre-installation conference.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548.
   1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program.

2. Personnel performing laboratory tests shall be an ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

C. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

D. Field Sample Panels: Not Required.

E. Mockups: Not Required.

F. Pre-installation Conference: Convene one week before starting work of this section.
1. Before submitting design mixtures, review concrete design mixture and examine procedures for ensuring quality of concrete materials. Require representatives of each entity directly concerned with cast-in-place concrete to attend, including the following:
   a. Contractor's superintendent.
   b. Cast-in-place concrete subcontractor.
2. Review concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction joints, forms and form-removal limitations, reinforcement accessory installation, concrete repair procedures and protection of cast-in-place concrete.

PART 2 PRODUCTS

2.01 FORM-FACING MATERIALS

A. General: Comply with Section 03 3000 "Cast-in-Place Concrete" for formwork and other form-facing material requirements.

B. Form-Facing Panels for As-Cast Finishes: Steel, glass-fiber-reinforced plastic, or other approved non-absorptive panel materials that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

C. Form-Facing Panels for As-Cast Finishes: Exterior-grade plywood panels, non-absorptive, that will provide continuous, true, and smooth concrete surfaces, medium-density overlay, Class 1, or better, mill-applied release agent and edge sealed, complying with DOC PS 1.

D. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will provide surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.

E. Pan-Type Forms: Glass-fiber-reinforced plastic or formed steel, stiffened to resist plastic concrete loads without detrimental deformation.

F. Chamfer Strips: Not Required.

G. Form Joint Tape: Not Required.

H. Form Joint Sealant: Not Required.

I. Sealer: Penetrating, clear, polyurethane wood form sealer formulated to reduce absorption of bleed water and prevent migration of set-retarding chemicals from wood.

J. Form-Release Agent: Commercially formulated colorless form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of those surfaces.
1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

K. Surface Retarder: Chemical liquid set retarder, for application on form-facing materials, capable of temporarily delaying final hardening of newly placed concrete surface to depth of reveal specified.

L. Form Ties: Fiberglass or metal surface snap ties.

2.02 STEEL REINFORCEMENT AND ACCESSORIES

A. General: Comply with Section 03 3000 "Cast-in-Place Concrete" for steel reinforcement and other requirements for reinforcement accessories.

B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded-wire fabric in place; manufacture according to CRSI's "Manual of Standard Practice."
   1. Where legs of wire bar supports contact forms, use gray, all-plastic or CRSI Class 2, stainless-steel bar supports.

2.03 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand and source, throughout Project:
   1. Portland Cement: ASTM C 150, Type I/II gray. Supplement with the following:
      a. Fly Ash: ASTM C 618, Class C or F.
      b. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
      c. Silica Fume: ASTM C 1240, amorphous silica.

B. Normal-Weight Aggregates: ASTM C 33, Class 5M coarse aggregate or better, graded. Provide aggregates from a single source with documented service record data of at least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.
   1. Maximum Coarse Aggregate Size: 3/4 inch
   2. Gradation: Uniformly graded.

C. Normal-Weight Fine Aggregate: ASTM C 33 or ASTM C 144, manufactured or natural sand, from same source for entire Project.

D. Water: Potable, complying with ASTM C 94/C 94M except free of wash water from mixer washout operations.

2.04 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
   1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
   2. Retarding Admixture: ASTM C 494/C 494M, Type B.
   3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
   4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
   5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
   6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.05 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
   1. For integrally colored concrete, curing compound shall be pigmented type approved by color pigment manufacturer.
   2. For concrete indicated to be sealed, curing compound shall be compatible with sealer.

2.06 REPAIR MATERIALS

A. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

B. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements.
   1. Types I and II, non-load bearing or IV and V, load bearing, for bonding hardened or freshly

mixed concrete to hardened concrete.

2.07 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of cast-in-place concrete proportioned on basis of laboratory trial mixture or field test data, or both, according to ACI 301.
   1. Use a qualified independent testing agency for preparing and reporting proposed design mixtures based on laboratory trial mixtures.

B. Proportion concrete mixtures as follows:
   1. Compressive Strength (28 Days): 4000 psi.
   2. Maximum Water-Cementitious Materials Ratio: 0.46.
   3. Slump Limit: 4 inches for concrete with verified slump of 2 to 4 inches
   4. Air Content: 5-1/2 percent, plus or minus 1.5 percent at point of delivery for 1-1/2-inch nominal maximum aggregate size.
   5. Air Content: 6 percent, plus or minus 1.5 percent at point of delivery for 3/4-inch nominal maximum aggregate size.

C. Cementitious Materials: For cast-in-place concrete exposed to deicers, limit percentage, by weight, of cementitious materials other than portland cement according to ACI 301 requirements.

D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.

E. Admixtures: Use admixtures according to manufacturer's written instructions.

F. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.

2.08 CONCRETE MIXING

A. Ready-Mixed or Site-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and furnish batch ticket information.
   1. Clean equipment used to mix and deliver cast-in-place concrete to prevent contamination from other concrete.
   2. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

PART 3 EXECUTION

3.01 FORMWORK

A. General: Comply with Section 03 3000 "Cast-in-Place Concrete" for formwork, embedded items, and shoring and re-shoring.

B. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast-in-place surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood rustications, keyways, reglets, recesses, and the like, for easy removal.
   1. Seal form joints and penetrations at form ties with form joint tape or form joint sealant to prevent cement paste leakage.
   2. Do not use rust-stained steel form-facing material.

C. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

D. Square exterior corners and edges of cast-in-place concrete.

E. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

F. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt,

and other debris just before placing concrete.

G. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

H. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

I. Coat contact surfaces of forms with surface retarder, according to manufacturer's written instructions, before placing reinforcement.

3.02 REINFORCEMENT AND INSERTS

A. General: Comply with Section 03 3000 "Cast-in-Place Concrete" for fabricating and installing steel reinforcement. Securely fasten steel reinforcement and wire ties against shifting during concrete placement.

B. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.03 REMOVING AND REUSING FORMS

A. Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.
   1. Schedule form removal to maintain surface appearance that matches approved mockups.
   2. Cut off and grind glass-fiber-reinforced plastic form ties flush with surface of concrete.

B. Leave formwork for beam soffits, joists, slabs, and other structural elements that support weight of concrete in place until concrete has achieved at least 70 percent of 28-day design compressive strength. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

C. Clean and repair surfaces of forms to be reused in the Work. Apply new form-release agent.

D. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets.

3.04 JOINTS

A. Construction Joints: Install construction joints true to line with faces perpendicular to surface plane of cast-in-place concrete so strength and appearance of concrete are not impaired.
   1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated.
   2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete**.** Align construction joint within rustications attached to form-facing material.
   3. Locate joints for beams, slabs, joists, and girders in the middle third of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
   4. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
   5. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
   6. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

B. Contraction Joints: Form weakened-plane contraction joints true to line with faces perpendicular to surface plane of cast-in-place concrete so strength and appearance of concrete are not impaired.

3.05 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, form-release agent, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
   1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Deposit concrete continuously between construction joints. Deposit concrete to avoid segregation.
   1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
   2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 303.1.
   3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. Do not permit vibrators to contact forms.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
   1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
   2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents.
   4. Do not use chemical accelerators unless otherwise specified and approved in design mixtures.

F. Hot-Weather Placement: Comply with ACI 301 and as follows:
   1. Maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
   2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.06 AS-CAST FORMED FINISHES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections exceeding specified limits on formed-surface irregularities.

3.07 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 for hot-weather protection during curing.

3.08 REPAIRS, PROTECTION AND CLEANING

A. Protect corners, edges and surfaces of cast-in-place concrete from damage; use guards and barricades.

B. Protect cast-in-place concrete from staining, laitance and contamination during remainder of construction period.

C. Clean cast-in-place concrete surfaces to remove stains, markings, dust and debris.

END OF SECTION

SECTION 09 6450

INDOOR RESILIENT ATHLETIC SURFACING

PART 1 - GENERAL

1.1 *SECTION INCLUDES*

A. Supply and installation of the indoor resilient multipurpose surfacing

B. Application of the game lines

C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

A. Product Data: Manufacturer's promotional brochures, specifications and installation instructions

B. Samples:
   1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
   2. Submit color samples of all the available game line paint colors for selection and approval.

C. Closeout Submittals:
   1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
   2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

A. Qualifications:
   1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
   2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
   3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
   4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

B. Certifications:
   1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing: Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures

1.4 DELIVERY, STORAGE AND HANDLING

A. Delivery: Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.

B. Storage: Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface. Do not stack rolls.

1.5 ***PROJECT/SITE CONDITIONS***

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F_F) of 50 and an (F_L) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.

I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.

K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 ***WARRANTY***

A. Materials: The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation: The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 ***ADDITIONAL MATERIALS***

A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

PART 2 - PRODUCTS

2.1 *MANUFACTURERS*

A. The basis of the design for the indoor resilient multipurpose surfacing is **Dropzone Speckle** as provided by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*.

A. Dropzone Speckle. 8mm recycled non-laminated rubber flooring.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	…….	Roll Width 4ft – Tile 2ft x 2ft
Length	…….	Specify length (min. 15 ft)
Total Thickness	…….	8 mm
Weight	…….	1.92 lbs/sq.ft.
Tensile Strength	ASTM D412	200 minimum
Static Load	ASTM F970	1000 p.s.i (modified test)
Coefficient of Friction	ASTM 2047	>.9
Chemical Resistance	ASTM F925	Excellent
Ambient Noise Reduction	ASTM C423	.10
Impact Sound Insulation	ASTM E492	.45 minimum
Thermal Conductivity	ASTM C518	Approximate .406
Sound Transmission	ASTM 413	.45 minimum

2. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
3. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

PART 3 - EXECUTION

3.1 *EXAMINATION*

A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.

B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.

C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.

D. Verify that there is a stable room temperature of at least 65°F.

E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

F. *Direct Full Spread Adhering to Concrete Subfloor* : moisture content less than 92 % RH when tested per ASTM F2170. Use only manufacturer recommended Multi-Poxy adhesive.

G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor,

Architect, and End User prior to installation.

H. Verify that the concrete subfloor surface pH level is within the 7 - 9 range.

I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

A. Sand the entire surface of the concrete slab.

B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.

C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *OPTIONS FOR MOISTURE MITIGATION*

A. For projects with moisture conditions higher than the specified tolerances, **TARKOLAY** may be used for conditions that do not 98% per ASTM F2170. Use only approved adhesive as directed by the manufacturer. Tarkolay is available for roll goods only.

3.4 *INSTALLATION*

A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.

B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.

C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.

D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.

E. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"

B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"

C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

END OF SECTION