CONSTRUCT T-HANGAR & T-HANGAR TAXILANES

FOR THE WARSAW MUNICIPAL AIRPORT
CONTRACT NO. 17-023A-1
ADDENDUM NO. 2

April 27, 2018

Addendum No. 2 consists of the following clarifications, changes, additions, etc.

Attachments:

- Attachment 1: Prebid Meeting Minutes and Sign In Sheet (6 pages)
- Revised Notice to Bidders page 2
- Revised Proposal Form pages 1 through 4
- Revised Plan Sheets: G-001, G-002, C-503, E-101, E-102, E-401

Bidding Questions: The following are questions that have been submitted to the Burns & McDonnell project manager, in writing via email, with their subsequent responses.

1. Plan sheet A-201-0 shows a 9" typ. roof overhang on both end walls. Verify if this is the intent and if so is soffit panel to be supplied to close off for finish.
   RESPONSE: The intent is to match the adjacent T-hangar. The adjacent T-hangar appears to not have an overhang at the end walls, therefore, the new T-hangar is not required to have an overhang at the end walls. The 9" (TYP) note on ELEVATION 1 and ELEVATION 2 on Sheet A-201 may be ignored.

2. Plan sheet @-201-0 shows two different dimensions for the roof panel extension above the bi-fold doors. One dimension is 10" and the other dimension is 12". Specifications 133419 2.07 A says 12" overhang beyond the face of the bi-fold doors. Which is it?
   RESPONSE: 12" is correct.

3. Section 133419 2.06 C.5 & 6 refer to galvanized secondary material. Our company utilizes red oxide primed material as our standard. Is this acceptable?
   RESPONSE: Specification Section 13 34 19, Article 2.06, Paragraph C states: "Secondary Framing: Manufacturer's standard secondary framing members, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Fabricate framing from cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet prepainted with coil coating, unless otherwise indicated, to comply with the following: ……."

   Note that "Manufacturer's standard secondary framing members….." are permitted, but these secondary members are expected to be cold formed steel sheet members that are galvanized for longer life. If hot rolled secondary members are used, they could be red oxide primed material.

4. Section 133419 2.11 B. 9 states electric operator motor shall be 120/24V single phase. Our company utilizes a 230 V single phase motor as standard. Is this acceptable?
   RESPONSE: Section 133419 2.11 B. 9 has been removed. As stated in specification section 083613, the electrical characteristics of the motor shall be 115V single phase. 240V motors are acceptable, however, contractor shall coordinate required circuit breaker ampacity and poles with contractor provided overhead door motors.

5. What size is the precast storm inlet-1?
   RESPONSE:
   Detail 4 on Sheet C-503 has been revised to provide additional information regarding the inlet, including the size.

6. Does the electrical service have 2 meter sockets?
   RESPONSE:
   The existing meter has one meter socket which also contains meter breakers in the same individual enclosure. Connect to existing meter per Sheet G-002 and coordinate with the utility company.

7. Can you provide a cad file for the grading?
   RESPONSE:
   The CAD files will not be available during bidding but can be provided upon request from the successful bidder after the project has been awarded.

8. The geotech report states that there should be 18" of low volume change material under the building slab, should this extend 5' beyond the building footprint?
   RESPONSE:
   On the east and west ends of the hangar, extend the low volume change material under the building slab 5' beyond the building footprint. Along the north and south hangar door sides, provide a smooth transition to the apron pavement subgrade section directly at the building footprint line. If a continuous/strip building foundation is provided, transition to the apron pavement subgrade at the face of the foundation.

9. The building pad area is not getting fly ash treated subgrade, correct?
   RESPONSE:
   See the response to Question No. 10 of this Addendum.

10. Is lime screenings acceptable for low volume change material?
    RESPONSE:
    Lime screenings are not allowed. Sheet C-501 depicts the pavement typical sections which include 6" of P-209 Crushed Aggregate Base Course and 12" of Fly Ash Stabilized Subgrade. For the hangar slabs, per the geotechnical report, the hangar slabs are to have a minimum of P-209 6" crushed

aggregate base course below the 6" concrete floor slab with the remainder of the 18" of Low Volume Change (LVC) to be attained by Fly Ash Stabilization.

11. The bid item for 15" reinforced concrete pipe is 230 LF. There is a profile for about 100 LF and there is another run on the south side of that totaling approximately another 30 LF. Is 230 LF correct?
    RESPONSE:
    The linear footage of 15" RCP is 133 LF and has been revised accordingly on the attached revised Notice to Bidders, Proposal Form and Sheet G-001.

12. In Section 011100 - Summary of Work, Section 2.02 B it states "Final design shall be signed and sealed by a licensed structural engineer and electrical engineer... The electrical drawings appear to be engineered and stamped. Are there any engineering requirements for the electricians on this project?
    RESPONSE:
    All references in the Project Manual and Plans regarding sealed drawings by an electrical engineer shall be removed. The requirement for a sealed final design of the building and foundations remains as stated in the Project Manual.

13. Because of the better availability could cement be used in lieu of fly ash stabilization?
    RESPONSE:
    Cement stabilization will not be allowed for this project. The previous project at the airport utilized fly-ash stabilization and this project is consistent with what was constructed previously.

14. Could you please clarify the Pre-bid Meeting Agenda Item 7 line F. on equipment heights (15') as it relates to building erection? The building is approx. 16' tall at the ridge. Is a crane allowed for structural steel erection?
    RESPONSE:
    If any equipment anticipated to be used on the project will exceed 15', the submittal of additional 7460-1 forms will be required by the FAA. The submittals will require coordinates and equipment height for the perimeter of the footprint that the Contractor proposes for equipment setup, which would include crane setup. BMCD can assist the Contractor with the submittal of the 7460's during the procurement phase once the Contractor provides the aforementioned information.

Changes:

Project Manual
Replace Section 1 – Notice to Bidders -2 with the attached revised Section 1 – Notice to Bidders -2.

Replace Proposal Form – Pages PF-1 through PF-4 with the attached revised PF-1 through PF-4.

Delete section 133419 2.11 A 3.a. and Replace with the following:
"Locate hardware according to DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames." Note: New locksets shall match the locksets of the existing airport t-hangars."

Delete the last sentence of Section 133419 2.11 B.4 and Replace with the following:
"Note: New locksets shall match the locksets of the existing airport t-hangars."

Remove section 133419 2.11 B.9 from Project Manual.

Clarifications:

Item P-158 Fly Ash Treated Subgrade –The 18" Fly Ash Treated Subgrade cannot be constructed in one lift. The maximum lift thickness allowable is 12 inches.

Plans:

Replace Sheet G-001 with the attached revised Sheet G-001

Replace Sheet G-002 with the attached revised Sheet G-002

Replace Sheet C-503 with the attached revised Sheet C-503.

Replace Sheet E-101 with the attached revised Sheet E-101.

Replace Sheet E-102 with the attached revised Sheet E-102.

Replace Sheet E-401 with the attached revised Sheet E-401.

Acknowledge receipt and acceptance of this addendum in the appropriate space below.

Ryan Lorton, PE
Project Manager
Burns & McDonnell

_____
Name of Firm

_____
Signature of Authorized Person of Above Firm

_____
Title

_____
Date

Meeting Minutes

BURNS McDONNELL

Meeting Subject: WARSAW MUNICIPAL AIRPORT PREBID CONFERENCE
Meeting Date: April 24, 2018
Meeting Start Time: 10:00 AM
Project Name: Construct T-Hangar & T-Hangar Taxilanes
MoDOT No.: 17-023A-1
BMcD No.: 102431

Meeting comments denoted in italics.

1. **Introductions**
   A. City of Warsaw Staff
   B. MoDOT Aviation Staff
   C. Burns & McDonnell
   D. Attendees

2. **Scope of Work**
   A. Description of the work:
      a. Base Bid: 6-Unit T-Hangar & Associated Taxilanes
      b. Bid Alternate 1: 2-Unit T-Hangar & Associated Taxilanes
      c. Bid Alternate 2: Compression Joint Seals for 6-Unit T-Hangar Associated Taxilanes
      d. Bid Alternate 3: Compression Joint Seals for 2-Unit T-Hangar Associated Taxilanes
   B. Review contract time:
      a. Procurement Period: 75 calendar days
      Question: Does procurement period start after Shop Drawings are approved?
      Answer: Yes.
      b. Base Bid: 100 calendar days
      c. Bid Alternate 1: 30 calendar days
      d. Bid Alternates 2 and 3: no additional calendar days
   C. Phasing (see sheet G-100):
      a. Phase 1: 100 calendar days
         - Work outside of the southernmost taxilane OFA
      b. Phase 2: 30 calendar days
         - Work that impacts access to the south half of the southernmost hangar
   D. Liquidated damages: $1,500/calendar day

3. **Bidding of Project**
   A. Bid Opening: Publicly opened and read on May 8, 2018, 2:00 P.M. at the City Council Chambers, City Hall, 181 W. Harrison, Warsaw, Missouri 65355.
   B. Anticipated Notice-To-Proceed: summer 2018. Bids may be held up to 120 days from the Bid Opening.
   C. Award of project is contingent upon the Owner receiving Federal funding assistance.
   D. A Bid Guarantee in the amount of 5% of the Bid is required at the time of the Bid submittal.

4. Federal & State Wage Rates

5. DBE Participation

A. Goal for Contract: 5.0%

B. Good Faith Effort: Bidder must demonstrate that they made good faith efforts to achieve participation with DBE firms. This requires that the bidder show that it took all necessary and reasonable steps to secure participation by certified DBE firms.

Actions constituting evidence of good faith efforts are described in Appendix A to 49 CFR Part 26. Such actions include but are not limited to:

* Soliciting DBE participation through all reasonable and available means. This may include public advertisements and phone calls/faxes to known certified DBE firms.
* Consult State Department of Transportation office to obtain a list of certified DBE firms.
* Selecting portions of the work that increases the likelihood that DBE firms will be available to participate.
* Providing DBE firms with sufficient information and time to review the project plans and specifications.
* Document all contacts with DBE firms. This includes name, address, phone number, date of contact, and record of conversation/negotiation.

6. Buy American Certification

A. Bidder must comply with Title 49 U.S.C., Section 50101.

7. Operational Safety & Security

A. Construction limits on access & safety plans
B. Safety & object free areas
C. Impacts to airport and tenant operations
D. Vehicle operation on the AOA (runway incursions)
E. Staging areas and haul routes
F. Equipment heights (15-feet)
G. Air spacing update
    a. 7460s have been filed and awaiting FAA response.
H. FOD & dust control
I. Security (none provided by Airport)
J. Non-compliance (removal/suspension of work from project)

8. Air traffic Operations

A. No interruptions to airfield operations

9. Issuing NOTAMS

A. Airport to issue NOTAMs (72-hours prior)

10. Keys to Bidding

A. Bids submitted to City
B. Geotechnical Information
C. Performance Specifications

- See 011100 – T-Hangar Metal Building, structural footings and electrical final designs shall be sealed by a licensed structural engineer and electrical engineer registered in the State of Missouri.
- Critical submittals – T-hangar buildings, foundation, electrical and concrete mix designs
- Technical requirements – see *Materials* section of specifications
  Question: Will a substitute for P-209 base rock be considered?
  Answer: No. This project is receiving Federal dollars and the use of the FAA technical specifications are required and therefore P-209 is required.

11. Contract Modification Process

A. Point of Contact is Construction Observer
B. City of Warsaw approval is required for any change orders or additional work performed

12. Utilities

A. Locates required prior to start of construction

13. Environmental Permits

A. Stormwater – > 1 acre. MDNR permit (MORA12066) has been issued.
B. Erosion control – check after every rain event
   Question: Is the Contractor required to maintain SWPPP items?
   Answer: Yes, the Contractor is responsible for following and maintaining requirements of the SWPPP.

14. Keys to Construction

A. Timely processing of Submittals.
   i. Successfully obtaining the necessary proper P-501 and P-610 Alkali Silica Reactivity testing documentation in a timely manner.
   ii. All test results need to be current within 6 months of time of submittal unless otherwise indicated in the specifications.
B. Coordination with Owner and Engineer.
C. Contractor prepared Safety Plan Compliance Document (SPCD).
E. Adherence to Schedule and Phasing.
   i. Prompt schedule updates.
F. Execution of subgrade stabilization following promptly by base rock installation.
G. Protection of Pavements
H. Paving Operations.
I. Execution of Foundation, Hangar and Electrical Work.
J. Final Clean Up.
K. Safety: Safety is the highest priority for this project. All of the Contractor's and subcontractor's employees shall be familiar with the CSPP and SPCD prior to working at the airport.

15. Miscellaneous

A. All questions or requests for clarifications must be submitted in writing (via email) to BMCD:
   Attn: Ryan Lorton
   Project Manager
   Ph: 816-447-9822
   Email: rblorton@burnsmcd.com

All questions requests for information shall be submitted to BMCD no later than 5:00 P.M. May 2, 2018 (CT).

16. Open Discussion

Question: Is water available on site?
Answer: Water is not available on site.

Question: Is water available in Warsaw?
Answer: Yes, water is available in Warsaw for purchase.

Meeting Attendance Sheet

BURNS McDONNELL

Meeting Subject: WARSAW MUNICIPAL AIRPORT PREBID CONFERENCE
Meeting Date: April 24, 2018 Meeting Start Time: 10:00 AM
Project Name: Construct T-Hangar & T-Hangar Taxilanes
MoDOT No.: 17-023A-1
BMcD No.: 102431

Name	Organization Name	Phone Number	E-Mail Address
RYAN LORTON	BURNS & McDONNELL	913-296-3995	rblorton@burnsmcd.com
Darrell B. GOTH	MoDOT	573-526-7913	darrell.goth@modot.mo.gov.
Randy Pogue	city of Warsaw	660-438-5522	r.pogue@welcometowarsaw.com
Jessica Kendall	City of Warsaw	660-438-5222	jessica.kendall@welcometowarsaw.com
TRACY LORENZ	SEPTAGON CONST.	660-827-5955	tlorenz@septagon.com
BOB SIELKY	KCI CONSTRUCTION	314-200-6496	JMORROW@KCICONSTRUCTION.COM JSCHENK@KCICONSTRUCTION.COM
Steve Morrow	Bricklayers Local 15	417-353-5896	bacchapter10@sbcglobal.net
DAVID F WILLETTE	Cement Masons Local 518	4178304550	dwillette@opemia518.org
JAMES STOPPEL	STOPPEL EXCAVATING	660-287-3174	STOPPEL@STOPPELEXCAVATING.com
BRIAN BURKS	EMERY SAPP & Sons, Inc.	573-445-8331	brian.burks@emerysapp.com
Remington Koch	Curtiss - Manes - Schulte	573-257-7870	remington@cms-gc.com
Robert Burdick	Embree Electric	660-281-1636	robert@embreeelectric.com

Meeting Attendance Sheet *(continued)*

Page 2

Name	Organization Name	Phone Number	E-Mail Address
Lloyd Bay	Witec Elec	816-743-0770	John@witecinc.com
John W. Stok/ASA	Rothwell Const, Inc	816-377-4952	john@rothwell-construction.com
Kevin Totten	" "	816-372-58[illegible]	[illegible]@[illegible]
Justin Samson	G&S Electrical Cont.	~~660-815-4041~~ 660-886-2240	Gseci@att.net
Kyle Eichler	Do-Rite Const. & Excavating	660-281-0012	kyle@do-riteconstruction.com
Zach Bell	Lake RecHarge and Fire	573-480-6511	NANCY@LakeRecHarge.com
JIMBO RILEY	IronWORKERS #10 KCMO	660-815-7765	springfield@ironworkers10.com
Robert Andreini	M.A.C. Corp	816-215-2430	[illegible]@mac-const.com
Jake Tiemann	Reinhold Electric	314-604-6837	Jake@reinholdelectric.com
Larry G. Mudd	PosTOaK AgriBusiness	660-909-6423	posToak.ag@gmail.com

BASE BID (6-UNIT T-HANGAR & ASSOCIATED TAXILANES)				
ITEM NO.	**BID ITEM NO.**	**DESCRIPTION OF WORK**	**UNIT**	**EST QTY**
1	P-102-2.1	TRAFFIC CONTROL	LS	1
2	P-105-2.1	MOBILIZATION	LS	1
3	P-152-4.1	UNCLASSIFIED EXCAVATION	CY	1,970
4	P-152-4.2	UNSUITABLE EXCAVATION	CY	300
5	P-156-5.1	TEMPORARY SEEDING AND MULCHING	AC	1
6	P-156-5.2	INSTALLATION AND REMOVAL OF SILT FENCE	LF	400
7	P-156-5.3	SEDIMENT REMOVAL	CY	100
8	P-156-5.4	STABILIZED CONSTRUCTION ENTRANCE	EA	1
9	P-156-5.5	INSTALLATION AND REMOVAL OF COMPOST FILTER SOCK	LF	60
10	P-156-5.6	INLET PROTECTION	EA	2
11	P-158-8.1	12" FLY ASH TREATED SUBGRADE	SY	1,850
12	P-158-8.2	18" FLY ASH TREATED SUBGRADE	SY	885
13	P-158-8.3	FLY ASH	TON	240
14	P-209-8.1	6" CRUSHED AGGREGATE BASE COURSE	SY	2,735
15	P-501-8.1a	PORTLAND CEMENT CONCRETE PAVEMENT (6")	SY	1,340
16	P-501-8.2	PORTLAND CEMENT CONCRETE PAVEMENT (7”)	SY	460
17	P-605-5.1	JOINT SEALING FILLER	LF	2,755
18	P-620-5.1	TAXIWAY MARKING (YELLOW)	SF	186
19	P-620-5.2	TAXIWAY MARKING (BLACK)	SF	372
20	D-701-5.1	15" DIAMETER REINFORCED CONCRETE PIPE	LF	133
21	D-701-5.2	15" DIAMETER FLARED END SECTION	EA	3
22	D-751-5.3	INLETS	EA	1
23	T-901-5.1	SEEDING	AC	2.5
24	T-905-5.1	TOPSOIL (OBTAINED ON SITE)	SY	4,175
25	T-908-5.1	MULCHING	AC	2.5
26	SP-1	T-HANGAR METAL BUILDING SYSTEM (6-UNIT)	LS	1
27	SP-2	T-HANGAR FOUNDATIONS & FLOOR (6-UNIT)	LS	1
28	SP-3	T-HANGAR ELECTRICAL REQUIREMENTS (6-UNIT)	LS	1

PROPOSAL FORM
CITY OF WARSAW, MISSOURI
State Block Grant Project No. 17-023A-1

TO: City Administrator
City of Warsaw, Missouri

The undersigned, in compliance with the request for bids for construction of the following Project:

Contruct T-Hangar & T-Hangar Taxilanes:

hereby proposes to furnish all labor, permits, material, machinery, tools, supplies and equipment to faithfully perform all work required for construction of the Project in accordance with the project manual, project drawings and issued Addenda within the specified time of performance for the following prices:

BASE BID (6-UNIT T-HANGAR & ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNIT	EST QTY	UNIT PRICE		EXTENSION	
					DOLLARS	CTS	DOLLARS	CTS
1	P-102-2.1	TRAFFIC CONTROL	LS	1				
2	P-105-2.1	MOBILIZATION	LS	1				
3	P-152-4.1	UNCLASSIFIED EXCAVATION	CY	1,970				
4	P-152-4.2	UNSUITABLE EXCAVATION	CY	300				
5	P-156-5.1	TEMPORARY SEEDING AND MULCHING	AC	1				
6	P-156-5.2	INSTALLATION AND REMOVAL OF SILT FENCE	LF	400				
7	P-156-5.3	SEDIMENT REMOVAL	CY	100				
8	P-156-5.4	STABILIZED CONSTRUCTION ENTRANCE	EA	1				
9	P-156-5.5	INSTALLATION AND REMOVAL OF COMPOST FILTER SOCK	LF	60				
10	P-156-5.6	INLET PROTECTION	EA	2				
11	P-158-8.1	12" FLY ASH TREATED SUBGRADE	SY	1,850				
12	P-158-8.2	18" FLY ASH TREATED SUBGRADE	SY	885				
13	P-158-8.3	FLY ASH	TON	240				
14	P-209-8.1	6" CRUSHED AGGREGATE BASE COURSE	SY	2,735				
15	P-501-8.1a	PORTLAND CEMENT CONCRETE PAVEMENT (6")	SY	1,340				
16	P-501-8.2	PORTLAND CEMENT CONCRETE PAVEMENT (7”)	SY	460				
17	P-605-5.1	JOINT SEALING FILLER	LF	2,755				

18	P-620-5.1	TAXIWAY MARKING (YELLOW)	SF	186				
19	P-620-5.2	TAXIWAY MARKING (BLACK)	SF	372				
20	D-701-5.1	15" DIAMETER REINFORCED CONCRETE PIPE	LF	133				
21	D-701-5.2	15” DIAMETER FLARED END SECTION	EA	3				
22	D-751-5.3	INLETS	EA	1				
23	T-901-5.1	SEEDING	AC	2.5				
24	T-905-5.1	TOPSOIL (OBTAINED ON SITE)	SY	4,175				
25	T-908-5.1	MULCHING	AC	2.5				
26	SP-1	T-HANGAR METAL BUILDING SYSTEM (6-UNIT)	LS	1				
27	SP-2	T-HANGAR FOUNDATIONS & FLOOR (6-UNIT)	LS	1				
28	SP-3	T-HANGAR ELECTRICAL REQUIREMENTS (6-UNIT)	LS	1				

TOTAL BASE BID *(Numeral Format).....* $_____._____

TOTAL BASE BID
(Written Format)..... _____

_____

BID ALTERNATE NO. 1 (2-UNIT T-HANGAR & ASSOCIATED TAXILANES)								
ITEM NO.	**BID ITEM NO.**	**DESCRIPTION OF WORK**	**UNIT**	**EST QTY**	**UNIT PRICE**		**EXTENSION**	
					DOLLARS	**CTS**	**DOLLARS**	**CTS**
29	P-105-3.1	MOBILIZATION	LS	1				
30	P-152-4.1	UNCLASSIFIED EXCAVATION	CY	285				
31	P-152-4.2	UNSUITABLE EXCAVATION	CY	45				
32	P-158-8.1	12" FLY ASH TREATED SUBGRADE	SY	390				
33	P-158-8.2	18" FLY ASH TREATED SUBGRADE	SY	250				
34	P-158-8.2	FLY ASH	TON	60				
35	P-209-8.1	6" CRUSHED AGGREGATE BASE COURSE	SY	640				
36	P-501-8.1a	PORTLAND CEMENT CONCRETE PAVEMENT (6")	SY	265				
37	P-501-8.2	PORTLAND CEMENT CONCRETE PAVEMENT (7")	SY	110				
38	P-605-5.1	JOINT SEALING FILLER	LF	570				
39	P-620-5.1	TAXIWAY MARKING (YELLOW)	SF	21				
40	P-620-5.2	TAXIWAY MARKING (BLACK)	SF	42				
41	SP-1	T-HANGAR METAL BUILDING SYSTEM (2-UNIT)	LS	1				
42	SP-2	T-HANGAR FOUNDATIONS & FLOOR (2-UNIT)	LS	1				
43	SP-3	T-HANGAR ELECTRICAL REQUIREMENTS (2-UNIT)	LS	1				

TOTAL BID ALTERNATE NO. 1 *(Numeral Format)*..... $_____._____

TOTAL BID ALTERNATE NO. 1
(Written Format)..... _____

_____

BID ALTERNATE NO. 2 (COMPRESSION JOINT SEALS FOR 6-UNIT T-HANGAR & ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNIT	EST QTY	UNIT PRICE		EXTENSION	
					DOLLARS	CTS	DOLLARS	CTS
1	P-604-6.1	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	2,755				

TOTAL BID ALTERNATE NO. 2 *(Numeral Format).....* $_____.____

TOTAL BID ALTERNATE NO. 2
(Written Format)..... _____

_____

BID ALTERNATE NO. 3 (COMPRESSION JOINT SEALS FOR 2-UNIT T-HANGAR & ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNIT	EST QTY	UNIT PRICE		EXTENSION	
					DOLLARS	CTS	DOLLARS	CTS
1	P-604-6.1	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	570				

TOTAL BID ALTERNATE NO. 3 *(Numeral Format).....* $_____.____

TOTAL BID ALTERNATE NO. 3
(Written Format)..... _____

_____

TOTAL BID SUM: BASE BID & BID ALTERNATE NO(S). ____: *(Numeral)* $_____

TOTAL BID SUM: BASE BID &
BID ALTERNATE. NO(S). ___: *(Written Format):* _____

_____

ABBREVIATIONS

@	AT
=	EQUALS
%	PERCENT
A/C	ADVISORY CIRCULAR
AC	ACRES
ACI	AMERICAN CONCRETE INSTITUTE
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GAUGE
B1	BORING HOLE NUMBER
BM	BENCHMARK
CLR	CLEAR
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
CTAF	COMMON TRAFFIC ADVISORY FREQUENCY
CTR	CENTERED
C. TO C.	CENTER TO CENTER
CY	CUBIC YARDS
DIA.	DIAMETER
DWG.	DRAWING
E	EAST, EASTING
EA	EACH
EL/ELEV	ELEVATION
EX	EXISTING
EW	EACH WAY
FFE	FINISH FLOOR ELEVATION
FL	FLOW LINE
FAA	FEDERAL AVIATION ADMINISTRATION
FES	FLARED END SECTION
FOD	FOREIGN OBJECT DAMAGE OR DEBRIS
GA	GAUGE
HDPE	HIGH DENSITY POLYETHYLENE
HORZ	HORIZONTAL
IBC	INTERNATIONAL BUILDING CODE
INC	INCORPORATED
INV	INVERT
KSI	KIPS PER SQUARE INCH
KV	KILOVOLTS
L	LEFT
LF	LINEAR FEET
LLC	LIMITED LIABILITY CORPORATION
LS	LUMP SUM
MAX	MAXIMUM
MIN	MINIMUM
MISC.	MISCELLANEOUS
MODOT	MISSOURI DEPARTMENT OF TRANSPORTATION
N	NORTH, NORTHING
NAVAID	NAVIGATIONAL AID
N/E	NORTHING/EASTING
NE	NORTHEAST
NO	NUMBER
NOTAM	NOTICE TO AIRMEN
NW	NORTHWEST
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFA	OBJECT FREE AREA
OFF	OFFSET
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PAC	PRIMARY AIRPORT CONTROL
PCC	PORTLAND CEMENT CONCRETE
PI	POINT OF INTERSECTION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS/RIGHT
R/W,RWY	RUNWAY
RCP	REINFORCED CONCRETE PIPE
RSA	RUNWAY SAFETY AREA
S	SOUTH
SAC	SECONDARY AIRPORT CONTROL
SD	STORM DRAIN
SE	SOUTHEAST
SF	SQUARE FEET
STA	STATION
STD	STANDARD
ST/SD	STORM
SW	SOUTHWEST
SY	SQUARE YARDS
TBM	TEMPORARY BENCHMARK
TSA	TAXIWAY SAFETY AREA
TYP	TYPICAL
T/W,TWY	TAXIWAY
UD	UNDERDRAIN
UE	UNDERGROUND ELECTRIC
US	UNITED STATES
USGS	UNITED STATES GEOLOGICAL SURVEY
VC	VERTICAL CURVE
VERT	VERTICAL
W	WEST

GENERAL NOTES:

1. THE SCOPE OF THIS PROJECT IS TO CONSTRUCT A NEW T-HANGAR AND TAXILANES SOUTH OF EXISTING T-HANGAR.
2. THE PROJECT SHALL BE COMPLETED WITHIN 100 CALENDAR DAYS FROM THE NOTICE-TO-PROCEED FOR THE BASE BID, AND AN ADDITIONAL 35 CALENDAR DAYS IF BID ALTERNATE IS SELECTED. A NOTICE-TO-PROCEED SHALL BE ISSUED TO PROCURE THE T-HANGAR STRUCTURES WITH A 135 CALENDAR DAY ALLOWANCE.
3. SEVEN DAYS PRIOR TO THE PRECONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE THE AIRPORT MANAGER AND THE ENGINEER WITH THE PROJECT CONSTRUCTION SCHEDULE THAT SHALL IDENTIFY TASKS AND ANTICIPATED DATES FOR COMPLETION.
4. THE CONTRACTOR SHALL MAINTAIN ON THE SITE ONE SET OF REDLINE "AS CONSTRUCTED" DRAWINGS. THE SET SHALL BE DELIVERED TO THE ENGINEER NO LATER THAN SEVEN (7) CALENDAR DAYS AFTER THE FINAL INSPECTION.
5. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS IN THE PROJECT MANUAL.
6. ALL WORKMANSHIP AND MATERIAL SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEER.
7. LIMITS OF WORK SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO BEGINNING WORK. ANY DISCREPANCIES SHALL BE RECORDED AND DISCUSSED WITH THE ENGINEER PRIOR TO BEGINNING WORK.
8. THE CONTRACTOR SHALL REMOVE STANDING WATER FROM THE PROJECT WORK LIMITS AS NECESSARY TO PROTECT THE UTILITY, SUBGRADE, SUBBASE, AND/OR BASE COURSE OF THE PROPOSED PAVEMENT AREAS, SURROUNDING PAVEMENT-TO-REMAIN, OR OTHER COMPLETED WORKS. NO DIRECT OR SEPARATE PAYMENT SHALL BE MADE FOR THIS DEWATERING EFFORT AS THE COST IS INCIDENTAL TO THE PROJECT.
9. THE CONTRACTOR SHALL CONTACT ALL ASSOCIATED UTILITY COMPANIES AND AGENCIES PRIOR TO COMMENCEMENT OF WORK FOR THE LOCATION OF UTILITIES.
10. THE LOCATIONS OF STRUCTURES AND UNDERGROUND UTILITIES AS INDICATED HAVE BEEN OBTAINED FROM EXISTING RECORDS AND FIELD SURVEYS. UNDERGROUND STRUCTURES AND UTILITIES MAY BE PRESENT WHICH ARE NOT DOCUMENTED OR LOCATED.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY EXISTING STRUCTURES, UTILITIES, AND SURVEY INFORMATION, AND TO TAKE NECESSARY PRECAUTIONS DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL FIELD-CHECK ALL EXISTING CONDITIONS AND BE THOROUGHLY FAMILIAR WITH THE SITE BEFORE ANY WORK COMMENCES. ANY DISCREPANCIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER BEFORE ANY FURTHER WORK COMMENCES. IN THE EVENT AN UNEXPECTED UTILITY OR STRUCTURE INTERFERENCE IS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.
12. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ITEMS NOT TO BE DAMAGED DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED OR DISTURBED ITEMS TO THE SATISFACTION OF THE OWNER.
13. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT THEIR OWN EXPENSE ALL UTILITY (WATER, ELECTRICITY & GAS) HOOK-UPS PURSUANT TO THE EXECUTION OF THE PROJECT.

LEGEND:

- CONTRACTOR ACCESS ROUTE TO WORK SITE
- CONTRACTOR'S STAGING AREA
- AIRPORT PROPERTY LINE
- EXISTING STORM DRAIN
- TEST BORING
- CP# — CONTROL POINT
- CMP — CORRUGATED METAL PIPE
- REMOVE CORRUGATED METAL PIPE
- NEW 6" CONCRETE PAVEMENT (1 / C-501)
- EXISTING CONCRETE PAVEMENT
- EXISTING 4' WOVEN WIRE FENCE WITH BARBED WIRE
- SILT FENCE (1 / C-503)
- COMPOST FILTER SOCK (2 / C-503)
- A1 — THICKENED EDGE ISOLATION JOINT (A1 / C-501)
- A2 — THICKENED EDGE ISOLATION JOINT AT STRUCTURE (A2 / C-501)
- B — HINGED CONTRACTION JOINT (B / C-501)
- C — DOWELED CONTRACTION JOINT (C / C-501)
- D — DUMMY CONTRACTION JOINT (D / C-501)
- E — DOWELED CONSTRUCTION JOINT (E / C-501)
- REINFORCED CONCRETE PANEL (4 / C-501)
- NEW 7" CONCRETE PAVEMENT (6 / C-501)

no.	date	by	ckd	description
0	4/3/18	JC	RL	ISSUED FOR BID
1	4/27/18	JC	RL	ADDENDUM #2

BASE BID (6-UNIT T-HANGAR & ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNITS	ESTIMATED QUANTITY	AS-BUILT QUANTITY
		CONSTRUCT T-HANGAR & T-HANGAR TAXILANES			
1	P-102-2.1	TRAFFIC CONTROL	LS	1	
2	P-105-2.1	MOBILIZATION	LS	1	
3	P-152-4.1	UNCLASSIFIED EXCAVATION	CY	1970	
4	P-152-4.2	UNSUITABLE EXCAVATION	CY	300	
5	P-156-5.1	TEMPORARY SEEDING AND MULCHING	AC	1	
6	P-156-5.2	INSTALLATION AND REMOVAL OF SILT FENCE	LF	400	
7	P-156-5.3	SEDIMENT REMOVAL	CY	100	
8	P-156-5.4	STABILIZED CONSTRUCTION ENTRANCE	EA	1	
9	P-156-5.5	INSTALLATION AND REMOVAL OF COMPOST FILTER SOCK	LF	60	
10	P-156-5.6	INLET PROTECTION	EA	2	
11	P-158-8.1	12" FLY ASH TREATED SUBGRADE	SY	1850	
12	P-158-8.2	18" FLY ASH TREATED SUBGRADE	SY	885	
13	P-158-8.3	FLY ASH	TON	240	
14	P-209-8.1	6" CRUSHED AGGREGATE BASE COURSE	SY	2735	
15	P-501-8.1a	PORTLAND CEMENT CONCRETE PAVEMENT (6")	SY	1340	
16	P-501-8.2	PORTLAND CEMENT CONCRETE PAVEMENT (7")	SY	460	
17	P-605-5.1	JOINT SEALING FILLER	LF	2755	
18	P-620-5.1	TAXIWAY MARKING (YELLOW)	SF	186	
19	P-620-5.2	TAXIWAY MARKING (BLACK)	SF	372	
20 (1)	D-701-5.1	15" DIAMETER REINFORCED CONCRETE PIPE	LF	133	
21	D-701-5.2	15" DIAMETER FLARED END SECTION	EA	3	
22	D-751-5.3	INLETS	EA	1	
23	T-901-5.1	SEEDING	AC	2.5	
24	T-905-5.1	TOPSOIL (OBTAINED ON SITE)	SY	4175	
25	T-908-5.1	MULCHING	AC	2.5	
26	SP-1	T-HANGAR METAL BUILDING SYSTEM (6-UNIT)	LS	1	
27	SP-2	T-HANGAR FOUNDATIONS & FLOOR (6-UNIT)	LS	1	
28	SP-3	T-HANGAR ELECTRICAL REQUIREMENTS (6-UNIT)	LS	1	

BID ALTERNATE NO. 1 (2-UNIT T-HANGAR ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNITS	ESTIMATED QUANTITY	AS-BUILT QUANTITY
		CONSTRUCT T-HANGAR & T-HANGAR TAXILANES			
29	P-105-3.1	MOBILIZATION	LS	1	
30	P-152-4.1	UNCLASSIFIED EXCAVATION	CY	285	
31	P-152-4.2	UNSUITABLE EXCAVATION	CY	45	
32	P-158-8.1	12" FLY ASH TREATED SUBGRADE	SY	390	
33	P-158-8.2	18" FLY ASH TREATED SUBGRADE	SY	250	
34	P-158-8.2	FLY ASH	TON	60	
35	P-209-8.1	6" CRUSHED AGGREGATE BASE COURSE	SY	640	
36	P-501-8.1a	PORTLAND CEMENT CONCRETE PAVEMENT (6")	SY	265	
37	P-501-8.2	PORTLAND CEMENT CONCRETE PAVEMENT (7")	SY	110	
38	P-605-5.1	JOINT SEALING FILLER	LF	570	
39	P-620-5.1	TAXIWAY MARKING (YELLOW)	SF	21	
40	P-620-5.2	TAXIWAY MARKING (BLACK)	SF	42	
41	SP-1	T-HANGAR METAL BUILDING SYSTEM (2-UNIT)	LS	1	
42	SP-2	T-HANGAR FOUNDATIONS & FLOOR (2-UNIT)	LS	1	
43	SP-3	T-HANGAR ELECTRICAL REQUIREMENTS (2-UNIT)	LS	1	

BID ALTERNATE NO. 2 (COMPRESSION JOINT SEALS FOR 6-UNIT T-HANGAR ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNITS	ESTIMATED QUANTITY	AS-BUILT QUANTITY
		CONSTRUCT T-HANGAR & T-HANGAR TAXILANES			
1	P-604-6.1	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	2755	

BID ALTERNATE NO. 3 (COMPRESSION JOINT SEALS FOR 2-UNIT T-HANGAR ASSOCIATED TAXILANES)

ITEM NO.	BID ITEM NO.	DESCRIPTION OF WORK	UNITS	ESTIMATED QUANTITY	AS-BUILT QUANTITY
		CONSTRUCT T-HANGAR & T-HANGAR TAXILANES			
1	P-604-6.1	COMPRESSION JOINT SEALS FOR CONCRETE PAVEMENTS	LF	570	

STATE OF MISSOURI — RYAN B. LORTON — NUMBER PE-2004017211 — PROFESSIONAL ENGINEER

RYAN B. LORTON
PROFESSIONAL ENGINEER
PE-2004017211

FOR BID - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

date	detailed
11-27-2017	B. HEADY
designed	checked
J. COOPER	R. LORTON

WARSAW MISSOURI

WARSAW MUNICIPAL AIRPORT
WARSAW, MISSOURI

CONSTRUCT T-HANGAR & T-HANGAR TAXILANES
LEGEND, ABBREVIATIONS, AND SUMMARY OF QUANTITIES

project	MoDOT Proj No.
102431	17-023A-1

drawing **G-001** rev. **1**

sheet 2 of 24 sheets

file 102431G-001.dwg

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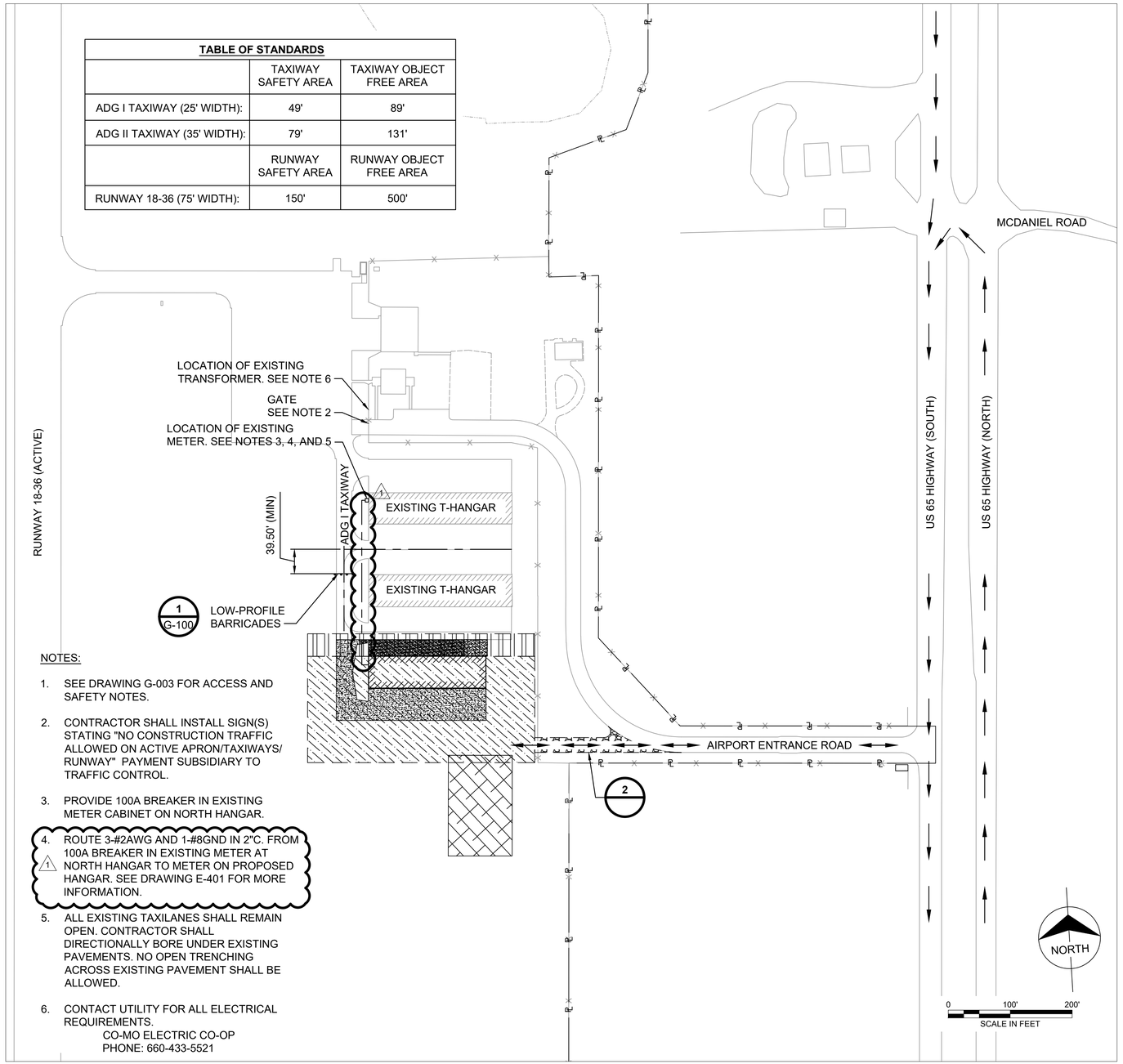
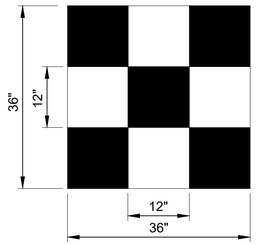
TABLE OF STANDARDS		
	TAXIWAY SAFETY AREA	TAXIWAY OBJECT FREE AREA
ADG I TAXIWAY (25' WIDTH):	49'	89'
ADG II TAXIWAY (35' WIDTH):	79'	131'
	RUNWAY SAFETY AREA	RUNWAY OBJECT FREE AREA
RUNWAY 18-36 (75' WIDTH):	150'	500'



NOTES:

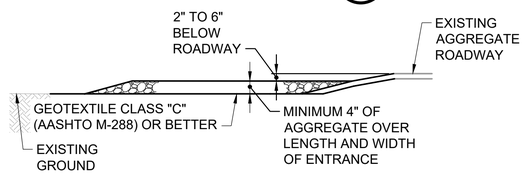
1. SEE DRAWING G-003 FOR ACCESS AND SAFETY NOTES.
2. CONTRACTOR SHALL INSTALL SIGN(S) STATING "NO CONSTRUCTION TRAFFIC ALLOWED ON ACTIVE APRON/TAXIWAYS/ RUNWAY" PAYMENT SUBSIDIARY TO TRAFFIC CONTROL.
3. PROVIDE 100A BREAKER IN EXISTING METER CABINET ON NORTH HANGAR.
4. (1) ROUTE 3-#2AWG AND 1-#8GND IN 2"C. FROM 100A BREAKER IN EXISTING METER AT NORTH HANGAR TO METER ON PROPOSED HANGAR. SEE DRAWING E-401 FOR MORE INFORMATION.
5. ALL EXISTING TAXILANES SHALL REMAIN OPEN. CONTRACTOR SHALL DIRECTIONALLY BORE UNDER EXISTING PAVEMENTS. NO OPEN TRENCHING ACROSS EXISTING PAVEMENT SHALL BE ALLOWED.
6. CONTACT UTILITY FOR ALL ELECTRICAL REQUIREMENTS.
   CO-MO ELECTRIC CO-OP
   PHONE: 660-433-5521



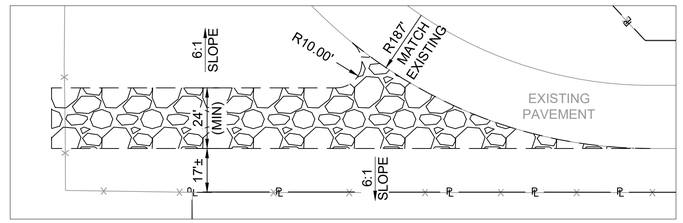
NOTES:

1. ALL WARNING DEVICES SHALL MEET THE REQUIREMENTS OF PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL WARNING LIGHTS SHALL BE KEPT IN OPERATIONAL ORDER BY CONTRACTOR.
3. THE LAYOUTS ARE A MINIMUM REQUIREMENT NECESSARY TO ASSIST CONTRACTOR IN DETERMINING COST FOR PROVIDING NECESSARY TRAFFIC CONTROL. THE CONTRACTOR MAY ADD ADDITIONAL WARNING DEVICES UPON APPROVAL OF THE ENGINEER.

VEHICLE WARNING FLAG DETAIL 1



PROFILE



PLAN VIEW

NOTES:

1. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE.
2. STONE - CRUSHED AGGREGATE (1" OR LESS) OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 4" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
3. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.
4. THE SIDE SLOPES OFF THE CONSTRUCTION ENTRANCE SHALL BE 6' HORIZONTAL TO 1' VERTICAL OR FLATTER AND SHALL BE SEEDED AND MULCHED.
5. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCESS THROUGH THE FENCE AT THE LOCATION SHOWN ON THIS SHEET AND THE CONTRACTOR SHALL RESTORE THE FENCE TO THE PRE-CONSTRUCTION CONDITION AT THE CONCLUSION OF THE PROJECT.

STABILIZED CONSTRUCTION ENTRANCE DETAIL 2

LEGEND:

- CONTRACTOR ACCESS ROUTE TO WORK SITE
- CONTRACTOR'S STAGING AREA
- ℄ AIRPORT PROPERTY LINE
- PHASE 1 WORK AREA
- PHASE 2 WORK AREA
- STABILIZED CONSTRUCTION ENTRANCE 2

OVERALL PHASING PLAN NOTES:

1. RUNWAY, APRON AND NORTH TAXILANES SHALL REMAIN OPEN FOR THE DURATION OF THE PROJECT. DURING PHASE 2, A PORTION OF THE SOUTHERNMOST EXISTING TAXILANE WILL BE CLOSED.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK. THE CONTRACTOR SHALL INSPECT ALL TRAFFIC CONTROL DEVICES PRIOR TO BEGINNING AND COMPLETING EACH DAY'S WORK TO ENSURE PROPER LOCATION AND OPERATION. ALL TRAFFIC CONTROL DEVICES FOUND TO BE OUT OF LOCATION AND/OR INOPERABLE SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO COMPLETING EACH DAY'S WORK.
3. BARRICADES SHALL BE PLACED WHERE INDICATED ON THE PHASING PLANS. BARRICADES ARE NOT SHOWN TO SCALE, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE NUMBER OF BARRICADES FOR THE PROJECT.
4. PRIOR TO OPENING A CONSTRUCTION AREA TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL COMPLETELY REMOVE ALL FOD FROM THE WORK AREAS. THE CONTRACTOR SHALL COORDINATE AN INSPECTION OF THE AREA TO BE OPENED WITH THE ENGINEER AND THE AIRPORT MANAGER. AFTER APPROVAL FROM THE AIRPORT MANAGER, THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES.

RYAN B. LORTON
PROFESSIONAL ENGINEER
PE-2004017211

no.	date	by	ckd	description
0	4/3/18	JC	RL	ISSUED FOR BID
1	4/27/18	JC	RL	ADDENDUM #2

FOR BID - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
LICENSEE NO. 000165

date	detailed
11-27-2017	B. HEADY
designed	checked
J. COOPER	R. LORTON

WARSAW MISSOURI

WARSAW MUNICIPAL AIRPORT
WARSAW, MISSOURI

CONSTRUCT T-HANGAR & T-HANGAR TAXILANES
ACCESS AND SAFETY PLAN

project	MoDOT Proj No.
102431	17-023A-1

drawing **G-002** – rev. **0**

sheet 3 of 24 sheets

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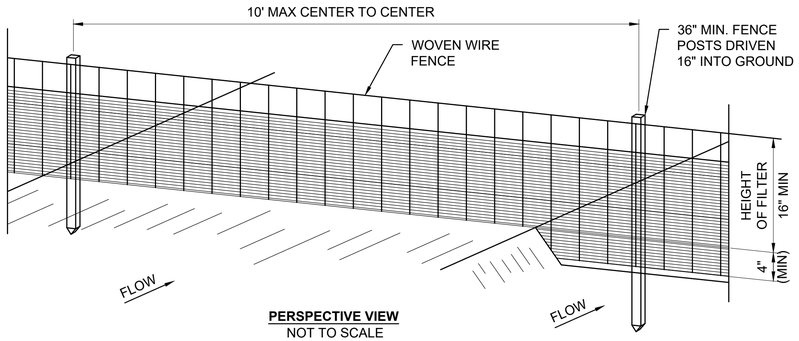
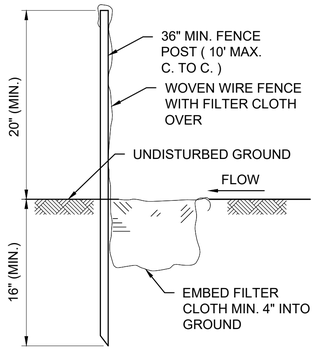


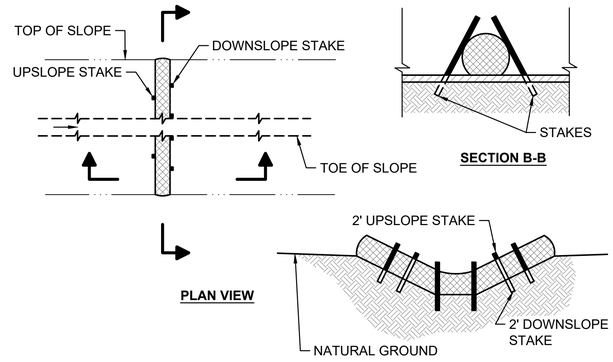
PERSPECTIVE VIEW
NOT TO SCALE



NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER- LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. POSTS: 2" HARDWOOD
   FENCE: WOVEN WIRE 14-1/2 GA. 6" MAX. MESH OPENING.
   FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL.
   PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

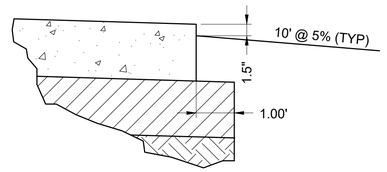
SILT FENCE 1



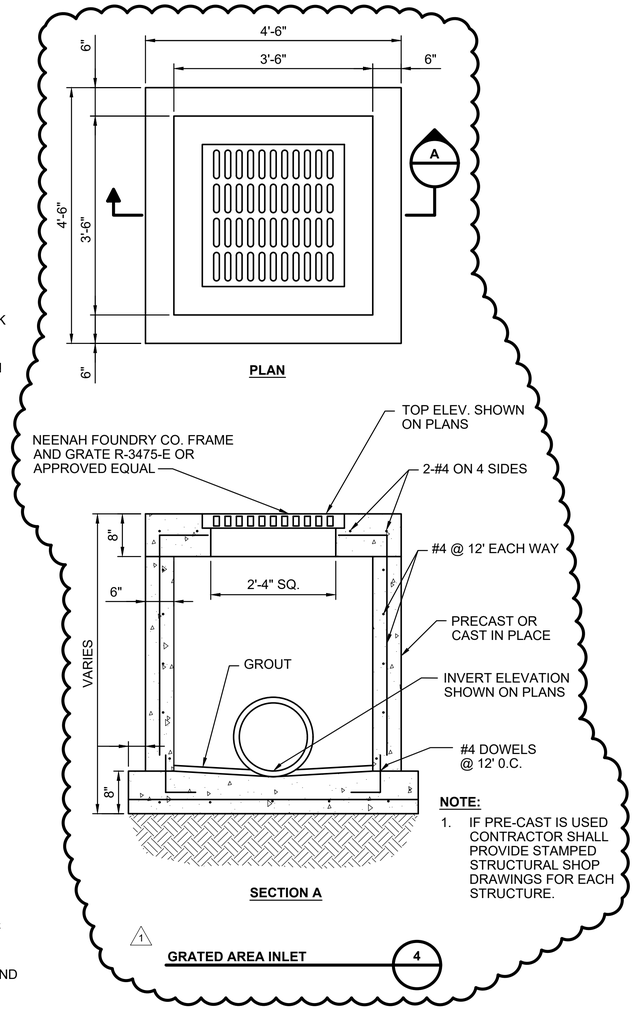
NOTES:

1. USE MINIMUM 12" DIAMETER SOCK.
2. USE 2' WOODEN STAKES WITH A 2" x 2" NOMINAL CROSS SECTION.
3. INSTALL SOCK TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND SOCK AND SCOUR DITCH SLOPES OR AS DIRECTED BY ENGINEER.
4. INSTALL A MINIMUM OF 2 UPSLOPE STAKES AT AN ANGLE TO WEDGE SOCK TO BOTTOM OF DITCH.
5. COMPOST FILTER SOCK INSTALLED ON CONCRETE SHALL BE ANCHORED BY SANDBAGS.

COMPOST FILTER SOCK 2



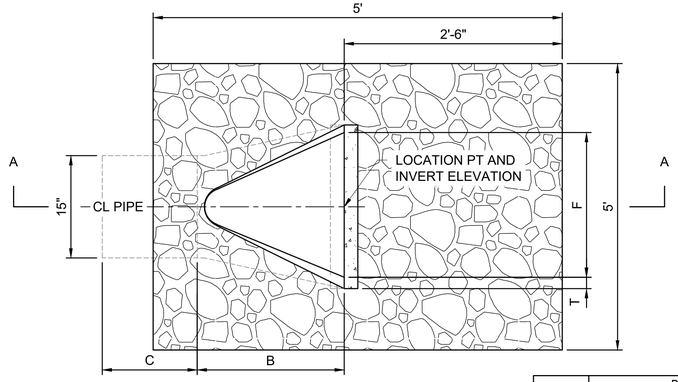
TYPICAL EDGE OF PAVEMENT 3



NOTE:

1. IF PRE-CAST IS USED CONTRACTOR SHALL PROVIDE STAMPED STRUCTURAL SHOP DRAWINGS FOR EACH STRUCTURE.

1 **GRATED AREA INLET** 4

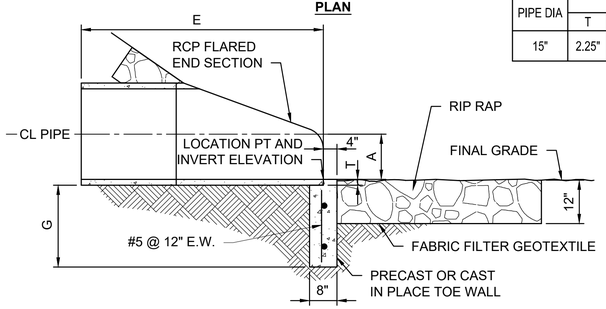


PLAN

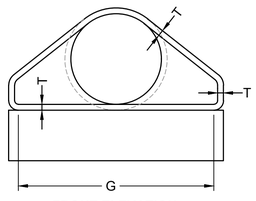
NOTES:

1. WHEN PIPE CENTERLINE AND DITCH CENTERLINE INTERSECTION IS APPROX. PERPENDICULAR, EXTEND RIPRAP UP SIDE SLOPE OPPOSITE PIPE DISCHARGE TO HEIGHT LEVEL WITH TOP OF PIPE.
2. PLACE RIPRAP AT ALL END SECTIONS.

PIPE DIA	DIMENSIONS (INCHES)						
	T	A	B	C	E	F	G
15"	2.25"	6"	27"	46"	73"	30"	24"

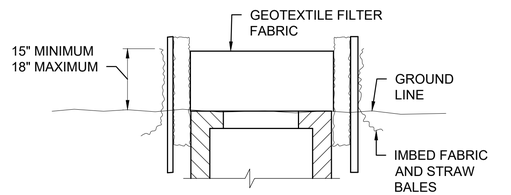


SECTION A-A

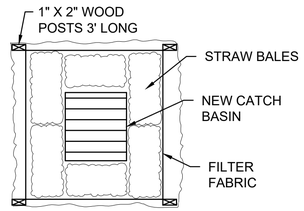


FRONT ELEVATION

FLARED END SECTION WITH RIPRAP PROTECTION 5



SECTION



PLAN

NOTE:

STRAW BALES SHALL BE PLACED AROUND INLET GRATE. BALES SHALL BE IMBEDDED 4" INTO GROUND AND SECURELY STAKED IN PLACE.

INLET PROTECTION 6

no.	date	by	ckd	description
0	4/3/18	JC	RL	ISSUED FOR BID
1	4/27/18	JC	RL	ADDENDUM #2

FOR BID - NOT FOR CONSTRUCTION

BURNS McDONNELL
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816-333-9400
LICENSEE NO. 000165

date	detailed
11-27-2017	B. HEADY
designed	checked
J. COOPER	R. LORTON

Warsaw MISSOURI

WARSAW MUNICIPAL AIRPORT
WARSAW, MISSOURI

CONSTRUCT T-HANGAR & T-HANGAR TAXILANES
DRAINAGE AND EROSION CONTROL DETAILS

project	MoDOT Proj No.
102431	17-023A-1

drawing **C-503** — rev. **1**

sheet 16 of 24 sheets
file 102431C-500.dwg

STATE OF MISSOURI
RYAN B. LORTON
NUMBER PE-2004017211
PROFESSIONAL ENGINEER

RYAN B. LORTON
PROFESSIONAL ENGINEER
PE-2004017211

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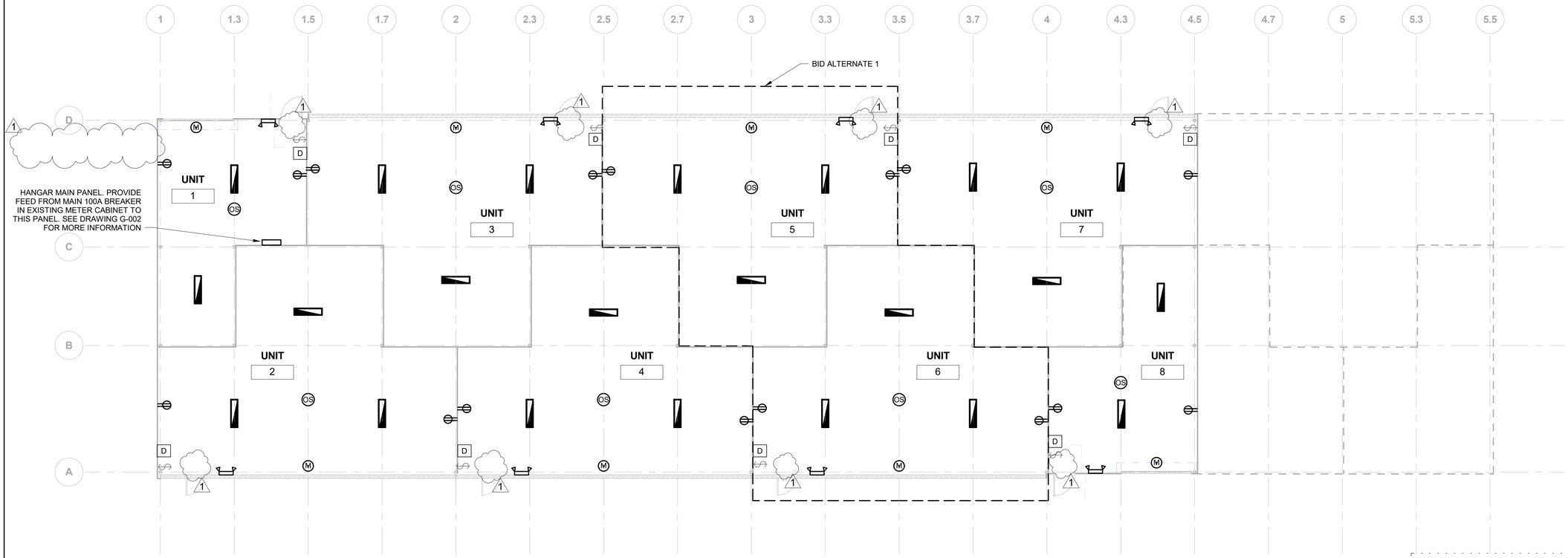
LEGEND:

- SURFACE DUPLEX, NEMA 5-20R
- 1'X4' L1 TYPE LIGHTING FIXTURE, MOUNTED AT 14' AFF, UON. SEE DRAWING E-401 FOR FIXTURE TYPE.
- $3 — TOGGLE SWITCH
  - DEMARCATION
  - 3: 3-WAY
- (M) OVERHEAD DOOR CONTROLLER. PROVIDE MOTOR CONNECTION PER MANUFACTURER'S RECOMMENDATIONS
- 1 — EMERGENCY BATTERY BACKUP FIXTURE
- [D] DOOR CONTROLLER
- (OS) OCCUPANCY SENSOR
- PANELBOARD

GENERAL NOTES:

1. SEE SPECIFICATION 26 00 00 FOR DESIGN REQUIREMENTS.
2. ALL CONDUCTORS SHALL BE RUN IN CONDUIT, AND ALL CONDUIT SHALL BE ROUTED SURFACE EXPOSED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. ALL NEW PANELBOARDS SHALL BE FIELD MARKED USING WARSAW MUNICIPAL AIRPORT STANDARDS TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. ELECTRICAL SUBCONTRACTOR SHALL COORDINATE WITH OVERHEAD DOOR SUPPLIER REGARDING ELECTRICAL REQUIREMENTS OF ACTUAL EQUIPMENT PROVIDED.
5. MOUNTING HEIGHT FOR LIGHT FIXTURES SHALL BE FROM THE BOTTOM OF FIXTURES TO THE FINISHED FLOOR OR GRADE.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH NEC (NFPA 70), NFPA 72, NFPA 101, AND UNIFORM FACILITY CRITERIA, OR TECHNICAL LETTERS, IN ADDITION TO LOCAL CODES AND ORDINANCES.
7. ALL GROUNDING SHALL COMPLY WITH NFPA 70, ARTICLE 250 FOR ELECTRICAL SYSTEMS AND NEC ARTICLE 800 AND TIA-607-B FOR TELECOMMUNICATIONS SYSTEMS.
8. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR TO ALL ELECTRICAL, TELECOMMUNICATIONS AND SECURITY EQUIPMENT SIZED PER NEC ARTICLE 250.
9. ALL CONDUCTORS SHALL BE COPPER.
10. AIC RATING LISTED ON ELECTRICAL EQUIPMENT IS A MINIMUM RATING.
11. NO DEMARCATION OR SWITCH 'LEG' ON SWITCH INDICATES THAT THE SWITCH CONTROLS ALL OF THE FIXTURES WITHIN THE SAME ROOM.
12. BASE BID INCLUDES (6) UNITS. ADD ALTERNATE 1 IS SHOWN BELOW AND INCLUDES (2) ADDTIONAL UNITS. THE (2) ADDITIONAL UNITS SHALL MATCH TYPICAL ELECTRICAL LAYOUTS AS SHOWN ON THIS DRAWING.



1 ELECTRICAL FLOOR PLAN

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

no.	date	by	ckd	description
0	4/3/18	SS		ISSUED FOR BID
1	4/27/18	SS		ADDENDUM #2

FOR BID - NOT FOR CONSTRUCTION

BURNS McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MISSOURI 64114
816-333-9400
BMCD LICENSE NO

date	detailed
02/02/18	D. BRUEMMER
designed	**checked**
D. BRUEMMER	C. PLUMMER

WARSAW MUNICIPAL AIRPORT
WARSAW, MISSOURI

PROJECT DESCRIPTION
ELECTRICAL FLOOR PLAN

project	MoDOT Project No.
102431	17-23A-1

drawing **E-101 — 1** rev.

sheet 22 of 24 sheets

file BMcD 2017 MECHANICAL TEMPLATE

STATE OF MISSOURI
STEVEN D STRATTON
NUMBER PE-2006024920
PROFESSIONAL ENGINEER

Apr 27 2018

STEVEN D. STRATTON
ELECTRICAL ENGINEER
PE-2006024920

LEGEND:

A1 TYPE LIGHTING FIXTURE, MOUNTED ON ROOF OF HANGAR. PROVIDE POWER FROM MAIN HANGAR PANEL AS SHOWN ON DRAWING E-401. SEE DRAWING E-401 FOR FIXTURE TYPE.

GENERAL NOTES:

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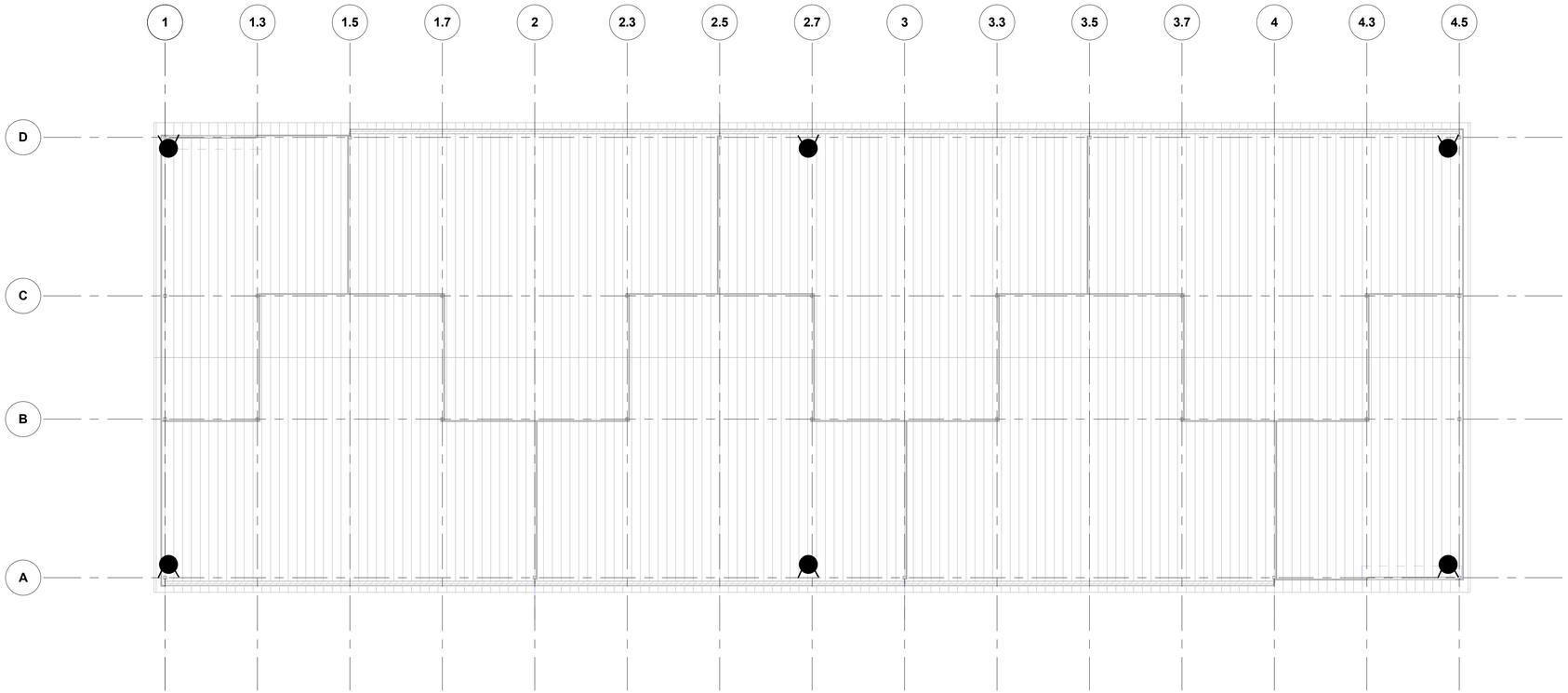

1 ELECTRICAL ROOF PLAN
SCALE: 1/8" = 1'-0"

no.	date	by	ckd	description
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1	4/27/18	SS		ADDENDUM #2

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date	detailed
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designed	**checked**
D. BRUEMMER	C. PLUMMER

WARSAW MUNICIPAL AIRPORT
WARSAW, MISSOURI

PROJECT DESCRIPTION
ELECTRICAL ROOF PLAN

project	MoDOT Project No.
102431	17-23A-1

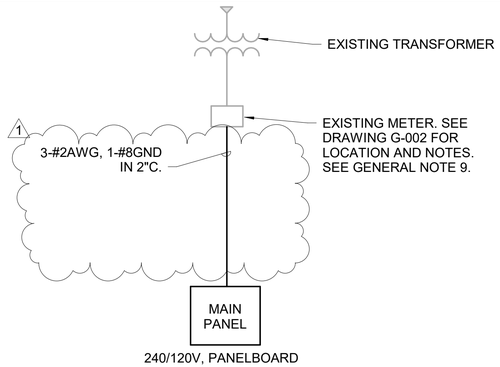
drawing **rev.**
E-102 — 1

sheet 23 **of** 24 **sheets**
file BMcD 2017 MECHANICAL TEMPLATE

STATE OF MISSOURI
STEVEN D. STRATTON
NUMBER PE-2006024920
PROFESSIONAL ENGINEER

Apr 27 2018

STEVEN D. STRATTON
ELECTRICAL ENGINEER
PE-2006024920



1 ONE-LINE DIAGRAM

SCALE:NTS

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7. ALL CONDUCTORS SHALL BE COPPER.
8. AIC RATING LISTED ON ELECTRICAL EQUIPMENT IS A MINIMUM RATING.
9. CONTACT UTILITY FOR ALL ELECTRICAL REQUIREMENTS.

   CO-MO ELECTRIC CO-OP
   PHONE: 660-433-5521

PANELBOARD: MAIN PANEL

LOCATION: UNIT 1 | **VOLTAGE:** 240/120V | **A.I.C. RATING:** 10000
SUPPLY FROM: | **PHASE:** 1 | **MAINS TYPE:** MCB
MOUNTING: SURFACE | **WIRES:** 3 | **MAINS RATING:** 100 A
ENCLOSURE: NEMA 1 | **MCB RATING:** 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	UNIT 1 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.	909	1200			2#12AWG, 1-#12GND IN 1/2"C.	UNIT 1 DOOR	1	20	2
3	20	1	UNIT 2 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.			909	1200	2#12AWG, 1-#12GND IN 1/2"C.	UNIT 2 DOOR	1	20	4
5	20	1	UNIT 3 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.	909	1200			2#12AWG, 1-#12GND IN 1/2"C.	UNIT 3 DOOR	1	20	6
7	20	1	UNIT 4 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.			909	1200	2#12AWG, 1-#12GND IN 1/2"C.	UNIT 4 DOOR	1	20	8
9	20	1	UNIT 5 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.	909	1200			2#12AWG, 1-#12GND IN 1/2"C.	UNIT 5 DOOR	1	20	10
11	20	1	UNIT 6 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.			909	1200	2#12AWG, 1-#12GND IN 1/2"C.	UNIT 6 DOOR	1	20	12
13	20	1	UNIT 7 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.	909	1200			2#12AWG, 1-#12GND IN 1/2"C.	UNIT 7 DOOR	1	20	14
15	20	1	UNIT 8 LIGHTS AND RECEPTACLES	2#12AWG, 1-#12GND IN 1/2"C.			909	1200	2#12AWG, 1-#12GND IN 1/2"C.	UNIT 8 DOOR	1	20	16
17	20	1	FLOOD LIGHTING	2#12AWG, 1-#12GND IN 1/2"C.	1200	0			--	SPACE	--	--	18
19	20	1	SPARE				0	0	--	SPACE	--	--	20
21	20	1	SPARE		0	0			--	SPACE	--	--	22
23	20	1	SPARE				0	0	--	SPACE	--	--	24
25	--	--	SPACE	--	0	0			--	SPACE	--	--	26
27	--	--	SPACE	--			0	0	--	SPACE	--	--	28
29	--	--	SPACE	--	0	0			--	SPACE	--	--	30
31	--	--	SPACE	--			0	0	--	SPACE	--	--	32
33	--	--	SPACE	--	0	0			--	SPACE	--	--	34
35	--	--	SPACE	--			0	0	--	SPACE	--	--	36
37	--	--	SPACE	--	0	0			--	SPACE	--	--	38
39	--	--	SPACE	--			0	0	--	SPACE	--	--	40
41	--	--	SPACE	--	0	0			--	SPACE	--	--	42
				TOTAL LOAD:	9636 VA		8436 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	18072 VA
TOTAL ESTIMATED DEMAND LOAD:	12312 VA
TOTAL CONNECTED CURRENT:	75 A
TOTAL ESTIMATED DEMAND...	51 A
DEMAND WITH EXPANSION:	62 A

LIGHT FIXTURE SCHEDULE

FIXTURE	LAMP INFORMATION			FIXTURE INFORMATION					
TYPE	WATTAGE	TYPE	COLOR TEMP	FIXTURE LUMENS	VOLTAGE	LOAD	DESCRIPTION	MOUNTING	MANUFACTURER
A1	183	LED	4000 K	17300 lm	120 V	183 VA	LED FLOOD LIGHT WITH INTEGRAL PHOTOCELL, BLACK, HMF DISTRIBUTION, DARK BRONZE FINISH	SURFACE, ROOF	LITHONIA - DSFX3
L1	190	LED	4000 K	19800 lm	120 V	190 VA	1' X 4' ENCLOSED AND GASKETED INDUSTRIAL, 95% REFLECTIVE HIGHLY SPECULAR ALUMINUM, FROSTED, IMPACT-RESISTANT ACRYLIC SHIELD	CEILING, RECESSED	H.E. WILLIAMS - EGL2

no.	date	by	ckd	description
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date	detailed
11/07/17	D. BRUEMMER
designed	**checked**
D. BRUEMMER	C. PLUMMER

WARSAW MUNICIPAL AIRPORT
WARSAW, MISSOURI

PROJECT DESCRIPTION
ELECTRICAL ONE-LINES AND SCHEDULES

project	MoDOT Project No.
102431	17-23A-1

drawing **rev.**

E-401 — 1

sheet 24 **of** 24 **sheets**

file BMcD 2017 MECHANICAL TEMPLATE