



#### NOTICE TO ALL BIDDERS

# ADDENDUM NO. 4 (FINAL ADDENDUM) TO TUCSON AIRPORT AUTHORITY TUCSON INTERNATIONAL AIRPORT

# DBB1 – End Around Taxiway TAA Project No. 1011910210119102 AIRFIELD SAFETY ENHANCEMENT (ASE) PROGRAM DESIGN BID BUILD 1 SERVICES

April 29, 2021

In accordance with the Bid Documents, Bidders on the above-referenced project are hereby notified that the following Addendum, dated April 29, 2021 shall be made a part of the Bid Documents. The Bidder shall acknowledge receipt of this addendum on the Bid Form.

#### **GENERAL**

- 1. Revised Pay Item F-162-5.5. Updated Bid Schedule corresponding to Addendum No. 4.
- 2. Contractor to contact Reproductions Inc. for Sheet CS1.120 identified in this addendum.
- The Bid Form is due by 2:00 p.m. Local Tucson Time, Wednesday, May 5, 2021 at the TAA Administration Building, 7250 S. Tucson Boulevard, Suite 300, Tucson, AZ 85756.

# PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

F-162 Chain Link Fence

Section 162-4.4, revised lump sum to reflect <u>Procurement and Installation of a New</u> Rolling Gate (160') Section 162-5.2 Revised Pay Item. Revise Item F-162-5.5 to read "Procure New Rolling Gate (160') for Permanent Ascent Taxilane – per lump sum"

#### **PROJECT PLANS**

The following revised Volume 1 Contract Drawings are included in this Addendum.

Sheet CS1.120: Revised to indicate New Gate for Permanent Ascent Taxilane.

The following revised Volume 2 Contract Drawings are included in this Addendum

None.

# **RESPONSES TO QUESTIONS**

(Paraphrased by TAA for clarity)

1. <u>Question:</u> Can you confirm that the BAK system itself includes all on-site inspection services to be provided by the manufacturer as part of their package?

Answer: Relative to the DBB1 contractor, select BAK system components <u>and</u> associated on-site inspection services to be provided by the manufacturer **are government furnished**. Select BAK system components and associated on-site inspection

services to be provided by the manufacturer will be procured separately in accordance with Book 2, Part 3 MCCA Technical Specifications, Section 34 74 20 BAK-12/14M SYSTEM INSTALLATION.

2. <u>Question:</u> On the Tucson Water portion of the project on Sheet 3 of 3 there is a note for each pipeline profile shown to "Restrain All Joints." Is this required just for the pipe lowering sections or is the entire pipeline from station 1+00.00 to 17+00.00 required to be restrained?

Answer: The restrained joints are required for vertical realignment sections. See Exhibit 1 – Waterline Realignment issued in Addendum No. 3 for vertical realignment sections at both the temporary and permanent alignments.

# **MISCELLANEOUS**

The following documents are hereby provided as part of the addendum:

1. Updated Bid Form

BID SCHEDULE I (AIP) - BASE BID						
ITEM UNIT						
LINE No.	No.	DESCRIPTION	APPROX. QTY.	UNIT	PRICE	EXTENDED AMOUNT
		CIVIL				
1	C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	1	LS		
2	C-102-5.1	Temporary Air and Water Pollution, Soil Erosion and Siltation Control (1%)	1	LS		
3	C-105-6.1	Mobilization (10%)	1	LS		
4	GTP-50.1	Location of Underground Utilities	1	LS		
5	GTP-60.01.1	Remove & Dispose 8-Inch Cement Asbestos Pipe	250	LF		
6 7	GTP-60.02.1 GTP-60.03.1	Remove & Relocate Existing FAA Survey Marker  8-Inch DIP Waterline	2,523	LS LF		
8	GTP-60.03.1 GTP-60.04.1	1-Inch Air Release Valve	2,523	EA		
9	GTP-60.05.1	8-Inch Gate Valve, Box & Cover	4	EA		
10	GTP-60.06.1	Riprap (D50 = 6", 12-Inch Depth) underlain w/ Erosion Control Geosynthetic Fabric		SY		
11	GTP-60-07.1	22-Inch Steel Pipe Casing, Plug Both Ends (Open Cut)	789	LF		
12	MC-001-9.1	Traffic Control and Airfield Safety and Security (5%)	1	LS		
13	MC-001-9.2	Additional Safety Measures	1	AL	\$50,000.00	
14	P-101-5.1	Removal of Existing Concrete Pavement Full Depth (Approx. 7-9 inches) and Stockpile on Site	88,743	SQ.YD		
15	P-101-5.2	Removal of Existing Concrete Pavement Full Depth (Approx. 16 inches) and Stockpile on Site	8,380	SQ.YD		
16	P-101-5.3	Removal of Existing Asphalt Pavement Full Depth (Approx. 20-inches) and Stockpile on Site	57,164	SQ.YD		
17	P-101-5.4	Removal of Miscellaneous Pavement, Variable Depth and stockpile on Site	3,103	SQ.YD		
18	P-101-5.5	Allowance for Unforeseen Demolition	1	AL	\$10,000.00	
19	P-101-5.6	Removal Temporary Asphalt	2,010	SQ. YD		
20	P-101-5.7	Removal of Pavement Markings	893	SQ.FT	4	
21	P-101-5.8	Allowance Joint and Crack Repair	2 022	AL	\$25,000.00	
23	P-101-5.9 P-149-5.1	Cold Milling Building Demolition	2,032 43,465	SQ. YD SQ.FT		
24	P-149-5.2	Shade Structure Demolition	810	SQ.FT		
25	P-149-5.3	Former Fire Station Site Removal	1	LS		
26	P-150-5.2	Removal of 24" Storm Drain	367	LF		
27	P-150-5.3	Removal of 36" Storm Drain	121	LF		
28	P-150-5.4	Removal of 54" Storm Drain	277	LF		
29	P-150-5.5	Removal of Catch Basin	4	EA		
30	P-150-5.6	Removal of Sewer Service	601	LF		
31	P-150-5.7	Removal of Water Service	603	LF		
32 33	P-150-5.8 P-150-5.9	Removal of Gas Service  Removal of Abandoned Vault	687 6	LF EA		
34	P-150-5.10	Chain Link Fence Removal	655	LF		
35	P-150-5.11	Tree Removal	3	EA		
36	P-150-5.12	Median Barrier Curb Removal	200	LF		
37	P-152-4.1	Unclassified Excavation	152,740	CY	-	
38	P-152-4.2	Offsite Disposal	129,390	CY		
39	P-152-4.3	Removal/Replacement of Unsuitable/Unstable Subgrade	30,590	CY		
40	P-209-5.1	Aggregate Base Course	37,404	CU. YD		
41	ADOT 409-5 1	Aggregate Base Course, Class 2 (4-inch)  Asphalt Access Road	260	CU. YD		
42 43	ADOT 409-5.1 P-401-8.1	Asphalt Surface Course	441 14,784	TON		
43	P-401-8.1 P-401-8.2	Bituminous Shoulder Repair	14,784	AL	\$25,000.00	
45	P-403-8.1	Asphalt Base Course	10,484	TON	,==,====	
46	P-403-8.2	Asphalt Surface Course (Shoulder Only)	7,666	TON		
47	P-501-8.2	PCC Pavement (7.0 inches)	187	SQ YD		
48	P-501-8.3	PCC Pavement (8.0 inches)	84	SQ YD		
49	P-501-8.7	PCC Pavement - Reinforced (8.0 inches)	212	SQ YD		
50	P-602-5.1	Emulsified Asphalt Prime Coat (Temporary Ascent)	51,200	GAL		
51 52	P-603-5.1 P-608-8.1	Emulsified Asphalt Tack Coat  Asphalt Surface Treatment – 2:1 dilution rate	6,003 11,960	GAL SY		
52	P-620-5.1	Permanent Pavement Marking, Reflective	32,305	SQ. FT.		
-		5		_		
54	P-620-5.2	Permanent Pavement Marking, Non-Reflective	38,653	SQ. FT.		

56							
F1425-5.3   Werhelds Gate (1267)			LF	578	8' Chain-Link Fence with Barbed Wire	F-162-5.1	56
F1-182-5.4   Relocate Rolling Gate (1897) for Temporary Ascent Tauliane			EA	2	52-5.2 Pedestrian Gate	F-162-5.2	57
F15255   Procure New Rolling Sate (1607) for Permanent Ascent Taxillane			EA	1	52-5.3 Vehicle Gate (26')	F-162-5.3	58
60			LS	1	Relocate Rolling Gate (158') for Temporary Ascent Taxilane	F-162-5.4	59
62	,		LS	1	Procure New Rolling Gate (160') for Permanent Ascent Taxilane	F-162-5.5	60
63				600	01-5.1 18-inch RGRCP Cl. V Storm Drain	D-701-5.1	61
64	,		LF	1,160	01-5.2 24-inch RGRCP Cl. V Storm Drain	D-701-5.2	62
66   D-701-5.1   Catch Basin, ADOT Std Det C15.80 MOD   6   EA			LF	1,208	01-5.3 36-inch RGRCP Cl. V Storm Drain	D-701-5.3	63
66			LF	1,146	01-5.4 42-inch RGRCP Cl. V Storm Drain	D-701-5.4	64
68			LF	162	01-5.5 54-inch RGRCP Cl. V Storm Drain	D-701-5.5	65
B8			EA	6	51-5.1 Catch Basin, ADOT Std Det C-15.80 MOD	D-751-5.1	66
Fig.   D-751-5.4   Aircraft Rated Storm Drain Manhole Cap   2   EA   1   1   1   1   1   1   1   1   1			EA	2	51-5.2 In-Line Catch Basin	D-751-5.2	67
To			EA	3	51-5.3 Aircraft Rated Storm Drain Manhole	D-751-5.3	68
T-901-5.1   Seeding			EA	2	51-5.4 Aircraft Rated Storm Drain Manhole Cap	D-751-5.4	69
Remove and Salvage Existing Edge Light and Isolation Transformer. Demolish Fixture Base   L-100-5.2   Excavate and Remove Existing Conductors Sack to Next Adjacent Light Fixture or Handhole, Condult to Remain.   2,935   LF			EA	22	52-5.1 Prefabricated Concrete End Section	D-752-5.1	70
Temporary Mirfeld Lighting Cable Jumpers   Linos.5.1   EA   Linos.5.1   EA   Linos.5.2   Excavate and Remove Existing Conductors Sack to Next Adjacent Light Fixture or Handhole, Conductor Nermain.   Conductors Sack to Next Adjacent Light Fixture or Handhole, Conductor Nermain.   Conductors Sack to Next Adjacent Light Fixture or Handhole, Conductors Sack to Next Adjacent Light Fixture or Handhole, Conductor Nermain.   Conductors Sack to Next Adjacent Light Fixture or Handhole, Conductor Nermain.   Conductors Sack to Next Adjacent Light Fixture or Handhole, Conductor Nermain.   Conductor Ne			Acre	66	01-5.1 Seeding	T-901-5.1	71
1.100-5.1   Remove and Salvage Existing Edge Light and Isolation Transformer. Demolish Fixture Base   Excavate and Remove Existing Conduit and Conductor   10,155   LF			BTOTAL	CIVIL SU	·		
1.100-5.2					ELECTRICAL		
1.100-5.2					Remove and Salvage Existing Edge Light and Isolation Transformer Demolish		
10.105.2   Excavate and Remove Existing Conductors   10.155   LF   1.105.3   Remove Existing Conductors Back to Next Adjacent Light Fixture or Handhole, Conduct to Remain.   2,935   LF			EA	45	10-5.1	L-100-5.1	72
Texas			LF	10.155		L-100-5.2	73
1.100-5.4   Remove and Salvage Airfield Guidance Sign and Isolation Transformer. Remove Sign Base.   3					Remove Existing Conductors Back to Next Adjacent Light Fixture or Handhole		
1.100-5.4   Sign Base.   3   EA			LF	2,935	10-53	L-100-5.3	74
1.100-5.4   Sign Base.   3   EA					Remove and Salvage Airfield Guidance Sign and Isolation Transformer. Remove		
1-100-5.5   to Remain.   2			EA	3	10-5.4	L-100-5.4	75
To Remain.   Temporary Airfield Lighting Cable Jumpers   3,000   LF					Remove and Salvage Airfield Guidance Sign and Isolation Transformer. Sign Base		
Remove and Salvage Existing Taxiway/Runway Edge Light and Transformer. Install Temporary Blank Cover on Fixture Base.   20			EA	2	to Remain.	L-100-5.5	/6
Temporary Blank Cover on Fixture Base.   20   EA			LF	3,000	00-5.6 Temporary Airfield Lighting Cable Jumpers	L-100-5.6	77
Temporary Blank Cover on Fixture Base.   10   EA			- A	20	Remove and Salvage Existing Taxiway/Runway Edge Light and Transformer. Install	1 100 5 5	70
Demolish MALSR Fixture Base Can after FAA has Removed Existing MALSR Light Fixture and Isolation Transformer. Provide Storage Container for Salvaged FAA MALSR Equipment.   EA MALSR Equipment.			EA	20	Temporary Blank Cover on Fixture Base.	L-100-5.7	78
Biliang			EA	10	00-5.8 Remove and Salvage Existing Base Can Cover. Demolish Fixture Base.	L-100-5.8	79
MALSR Equipment.   Remove and Salvage Existing MALSR Splice Box and Control Cabinet. Remove   1					Demolish MALSR Fixture Base Can after FAA has Removed Existing MALSR Light		
Remove and Salvage Existing MALSR Splice Box and Control Cabinet. Remove   Existing Concrete Structure.   1   EA			EA	1	00-5.9 Fixture and Isolation Transformer. Provide Storage Container for Salvaged FAA	L-100-5.9	80
Existing Concrete Structure.   1					MALSR Equipment.		
Existing Concrete Structure   Structure			FΔ	1	Remove and Salvage Existing MALSR Splice Box and Control Cabinet. Remove	1-100-5 1	<b>Q1</b>
B3					Existing Concrete Structure.	£ 100 5.1	- 01
Sa			EA	3	·	L-100-5.1	82
Second   Complete for ASOS Temporary Power.   Second   Complete fo			EA	1	()-5 12   I	L-100-5.1	83
Remove and Salvage Existing Runway Guard Light and Isolation Transformer.   1   EA							
SEA     Demolish Base Can   1   EA     EA			EA	11		L-100-5.1	84
19,075   LF			EA	1	0-5 14	L-100-5.1	85
87         L-108-5.2         L-824, Type C, 1/C #8AWG, 5kV Cable         13,695         LF           88         L-108-5.3         (1) 15kV 1-1/C #2 Cu Type MV 90 Concentric Neutral Cable         2,760         LF           89         L-108-5.4         #10 AWG Copper Clad Steel Pull Wire (Tensil Strength 400lbs. Min.)         2,760         LF           90         L-108-5.5         3-1/C #4, 12 PR #19, #6 GND         460         LF           91         L-108-5.6         1-#10 3kV Trigger, 1-#12 White Neutral (THWN CU), 2-#12 Black Interlock Switch (THWN CU)         230         LF           92         L-110-5.1         Single-way (1) - 2" Conduit, Slurry Encased         17,045         LF           93         L-110-5.2         Single-way (1) - 2" Conduit, Concrete Encased         690         LF           94         L-110-5.3         Multiple-way (2) - 4" Conduit, Slurry Encased         1,185         LF           95         L-110-5.4         Multiple-way (2) - 4" Conduit, Concrete Encased         1,925         LF           96         L-110-5.5         Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder         185         LF				40.075		1 400 5 4	0.6
88       L-108-5.3       (1) 15KV 1-1/C #2 Cu Type MV 90 Concentric Neutral Cable       2,760       LF         89       L-108-5.4       #10 AWG Copper Clad Steel Pull Wire (Tensil Strength 400lbs. Min.)       2,760       LF         90       L-108-5.5       3-1/C #4 , 12 PR #19, #6 GND       460       LF         91       L-108-5.6       1-#10 3KV Trigger, 1-#12 White Neutral (THWN CU), 2-#12 Black Interlock Switch (THWN CU)       230       LF         92       L-110-5.1       Single-way (1) - 2" Conduit, Slurry Encased       17,045       LF         93       L-110-5.2       Single-way (1) - 2" Conduit, Concrete Encased       690       LF         94       L-110-5.3       Multiple-way (2) - 4" Conduit, Slurry Encased       1,185       LF         95       L-110-5.4       Multiple-way (2) - 4" Conduit, Concrete Encased       1,925       LF         96       L-110-5.5       Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder       185       LF					- The state of the	_	
89       L-108-5.4       #10 AWG Copper Clad Steel Pull Wire (Tensil Strength 400lbs. Min.)       2,760       LF         90       L-108-5.5       3-1/C #4, 12 PR #19, #6 GND       460       LF         91       L-108-5.6       1-#10 3KV Trigger, 1-#12 White Neutral (THWN CU), 2-#12 Black Interlock Switch (THWN CU)       230       LF         92       L-110-5.1       Single-way (1) - 2" Conduit, Slurry Encased       17,045       LF         93       L-110-5.2       Single-way (1) - 2" Conduit, Concrete Encased       690       LF         94       L-110-5.3       Multiple-way (2) - 4" Conduit, Slurry Encased       1,185       LF         95       L-110-5.4       Multiple-way (2) - 4" Conduit, Concrete Encased       1,925       LF         96       L-110-5.5       Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder       185       LF				-			
90 L-108-5.5 3-1/C #4, 12 PR #19, #6 GND 460 LF  91 L-108-5.6 1-#10 3KV Trigger, 1-#12 White Neutral (THWN CU), 2-#12 Black Interlock Switch (THWN CU)  92 L-110-5.1 Single-way (1) - 2" Conduit, Slurry Encased 17,045 LF  93 L-110-5.2 Single-way (1) - 2" Conduit, Concrete Encased 690 LF  94 L-110-5.3 Multiple-way (2) - 4" Conduit, Slurry Encased 1,185 LF  95 L-110-5.4 Multiple-way (2) - 4" Conduit, Concrete Encased 1,925 LF  96 L-110-5.5 Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder 185 LF							
91 L-108-5.6					,		
91 L-108-5.6 (THWN CU)  92 L-110-5.1 Single-way (1) - 2" Conduit, Slurry Encased  93 L-110-5.2 Single-way (1) - 2" Conduit, Concrete Encased  94 L-110-5.3 Multiple-way (2) - 4" Conduit, Slurry Encased  95 L-110-5.4 Multiple-way (2) - 4" Conduit, Concrete Encased  96 L-110-5.5 Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder  185 LF			LF	460		L-108-5.5	90
92     L-110-5.1     Single-way (1) - 2" Conduit, Slurry Encased     17,045     LF       93     L-110-5.2     Single-way (1) - 2" Conduit, Concrete Encased     690     LF       94     L-110-5.3     Multiple-way (2) - 4" Conduit, Slurry Encased     1,185     LF       95     L-110-5.4     Multiple-way (2) - 4" Conduit, Concrete Encased     1,925     LF       96     L-110-5.5     Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder     185     LF			LF	230	18-5 6	L-108-5.6	91
93       L-110-5.2       Single-way (1) - 2" Conduit, Concrete Encased       690       LF         94       L-110-5.3       Multiple-way (2) - 4" Conduit, Slurry Encased       1,185       LF         95       L-110-5.4       Multiple-way (2) - 4" Conduit, Concrete Encased       1,925       LF         96       L-110-5.5       Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder       185       LF			1.5	17.045	, ,	L-110 F 1	۵2
94 L-110-5.3 Multiple-way (2) - 4" Conduit, Slurry Encased 1,185 LF  95 L-110-5.4 Multiple-way (2) - 4" Conduit, Concrete Encased 1,925 LF  96 I-110-5.5 Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder 185 LF							
95 L-110-5.4 Multiple-way (2) - 4" Conduit, Concrete Encased 1,925 LF  96 L-110-5 Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder  185 LF					0 / 1 /		
96 I-110-5 5 Single-way, (1) - 2" Conduit, Slurry Encased - Retro-fit In Existing Asphalt Shoulder							
1 96   1-110-55   ° ''`'   185   IF			LF	1,925	, , , , ,	L-11U-5.4	95
Tavement			LF	185	10-55 1 3 7 7 7	L-110-5.5	96
97 L-110-5.6 Single-way (1) - 3" Conduit, Concrete Encased 165 LF			1 F	165		1-110-5 6	97
98 L-110-5.7 Single-way (1) - 3" Conduit, Concrete Encased 105 El 500 LF							
99 L-110-5.8 Multiple-way (2) - 4" Conduit, Directional Bore 295 LF							
100 L-110-5.9 Multiple-way (2) - 4" Conduit, Directional BirG 2,115 LF							
101 L-110-5.10 Multiple-way (2) - 4" Conduit, Stuffy Encased at 48" BFG 2,113 LF							
New Handhole Prefabricated Concrete 2'x3'x3' with Owner Provided Aircraft					New Handhole Prefabricated Concrete 2'x3'x3' with Owner Provided Aircraft		
102 L-115-5.1 Rew Handing, Flerabilitated Controlled 2.33.3 with owner Florided AirCraft 12 EA Rated Lid, Furnished and Installed			EA	12	15-5 1 I	L-115-5.1	102
New FAA Manhole Type L Air Craft Rated (5'x5'x3') Furnished and Installed with					New FAA Manhole Type I. Air Craft Rated (5'x5'x3') Furnished and Installed with		
103 L-115-5.2 Aircraft Rated Lid 7 EA			EA	7	15-57	L-115-5.2	103
104 L-115-5.3 Provide and Install Cable Racks and Tag all Existing Circuits in Existing Handhole 1 EA			EA	1	Provide and Install Cable Racks and Tag all Existing Circuits in Existing Handhole	L-115-5.3	104

105	L-125-5.1	New Elevated L-804(L) LED Runway Guard Light w/ On/Off Switch and Isolation Transformer on New L-867 Base Can	4	EA	
106	L-125-5.2	New In-Pavement L-852D(L) MIRL LED Runway Edge Light (Bi-Directional W/W) and Isolation Transformer on New L-868 Base Can w/ Multi-Hole Adapter Rings	3	EA	
107	L-125-5.3	New Size 3 L-858(L) LED 2-Module Guidance Sign and Isolation Transformer, on New Concrete Sign Base	8	EA	
108	L-125-5.4	New Size 3 L-858(L) LED 3-Module Guidance Sign and Isolation Transformer, on New Concrete Sign Base	9	EA	
109	L-125-5.5	New Size 3 L-858(L) LED 4-Module Guidance Sign and Isolation Transformer, on New Concrete Sign Base	4	EA	
110	L-125-5.6	New Elevated L-861T(L) LED Taxiway Edge Light and Isolation Transformer on New L-867 Base Can	162	EA	
111	L-125-5.7	New Elevated L-861T(L) LED Taxiway Edge Light and Isolation Transformer on New L-867 Base Can - Retrofit in Existing Asphalt	6	EA	
112	L-125-5.8	Elevated L-861T(L) LED Taxiway Edge Light (with Stem and Frangible Coupling) and Isolation Transformer - Spares	12	EA	
113	L-125-5.9	Enlarged Gravel Sump for Base Cans	17	EA	
114	L-125-5.10	New In-Pavement L-852T(L) LED Taxiway Edge Light and Isolation Transformer on New L-868 Base Can	3	EA	
115	L-125-5.11	Install New 15" L-868C Base Can with 2" Extension for Reinstallation (by FAA) of Salvaged MALSR Approach Light. Activities Required for Testing and Commissioning Included.	1	EA	
116	L-125-5.12	Relocate Existing MALSR Splice Box and Control Cabinet to New Concrete Foundation	1	EA	
117	L-125-5.13	Splice New MALSR Light Fixture Power and Trigger Cables in Existing Junction Box	2	EA	
118	L-125-5.14	New Size 3 Sign Panel in Existing Sign	11	EA	
119	L-125-5.15	New Size 3 L-858(L) LED 2-Module Guidance Sign and Isolation Transformer, on New Concrete Base - Retrofit in Existing Asphalt	1	EA	
120	L-125-5.16	New Size 3 L-858(L) LED 8-Module (4-Mod + 4-Mod), Airfield Guidance Sign and Isolation Transformer, on New Concrete Sign Base	3	EA	
121	L-125-5.17	Install Salvaged Runway Guard Light and Isolation Transformer on New L-867 Base Can, Extend Conduit and Conductor from Previous Location.	1	EA	
122	L-125-5.18	New L-867B Base Can with Blank Cover	3	EA	
123	L-125-5.19	New Cast-In-Place Concrete sign Base for Future 2 Module, Size 3 Sign	1	EA	
124	L-125-5.20	L-868 Spacer Rings/Base Can Extension Package	1	LS	
125	Sec 27000-1	Pull String and 24-Strand Single-Mode Armored Fiber Optic Cable	13,225	LF	
126	Sec 27000-2	1" 3 Cell Innerduct	12,750	LF	
			ELECTRICAL SU	BTOTAL	
		SCHEI	DULE I - BASE BIE	TOTAL	

	Bid Schedule I - AIP Additive Alternative # 1					
127						
	SCHEDULE I - BID ADDITIVE ALTERNATIVE #1 TOTAL					

		BID SCHEDULE II (MCCA) - BASE BID (AI	rm/De-Ar	m Pad	1)	
		BID SCHEDOLE II (MICCA) - BASE BID (AI	III/ DE-AI	iii i au	·)	
ı					ı	
LINE No.	ITEM No.	DESCRIPTION	APPROX. QTY.	UNIT	UNIT PRICE	EXTENDED AMOUNT
1	C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	1	LS	TRICE	EXTENDED AMOUNT
2	C-102-5.1	Erosion Control (1%)	1	LS		
3	C-105-6.1	Mobilization (10%)	1	LS		
4	GTP-50.1	Location of Underground Utilities	1	LS		
5	MC-001-9.1	Traffic Control and Airfield Safety and Security (5%)	1	LS		
6	02 41 00-01	Asphalt Pavement Demolition and Stockpile on Site	12,910	SQ.YD		
7	02 41 00-02	Removal of Existing Bollard	13	EA		
8	02 41 00-03	Removal of 6"x6" Concrete Curb	948	LF		
9	02 41 00-04	Removal of Existing Cattle Guard Structure	2	EA		
10	02 41 00-05	Removal of Existing Edge Light	27	EA		
11	02 41 00-06	Demolish Existing Concrete Pavement	7,356	SQ.YD		
12	02 41 00-07	Demolish Existing BAK Systems	1	LS		
13	34 73 19-01	Jet Blast Deflector Foundation	321	CU. YD.		
14	26 56 20-1	L-824, Type C, 1/C #8 AWG, 5kV Cable	3,400	LF		1
15	26 56 20-8	New Elevated L-861T(L) LED Taxiway Edge Light and Isolation Transformer on New L-867 Base Can	35	EA		
16	32 01 11.51-01	Removal of Pavement Markings	4,304	SQ.FT		
17	32 01 19.61-01	Joint Sealing	7,975	LF		
18	32 01 19.61-02	Sealing for Joint or Crack Repairs	250	LF		
19	32 01 29.61 -01	Partial Depth Patching of Rigid Paving	800	SQ.FT		
20	32 11 20	Aggregate Base Course	650	CU. YD		
21	32 11 23	Aggregate Base Course	509	CU. YD		
22	32 12 13	Emulsified Asphalt Prime Coat	3,427	GAL		
23	32 12 15.13	Shoulder Asphalt Pavement	664	TON		1
24 25	32 13 14.13-01 32 13 14.13-02	Concrete Pavement (13 inches)  Concrete Pavement (13 inches) - Reinforced	5,400 451	SQ. YD.		
26	32 13 14.13-02	Replacement of Existing Concrete Pavement (12-inch)	36	SQ. YD.		
27	32 17 23-01	Permanent Pavement Marking, Reflective	7,037	SQ. FT		
28	32 17 23-02	Permanent Pavement Marking, Non-Reflective	10,509	SQ.FT		
29	33 71 02-1	Single-way (1) - 2" Conduit, Slurry Encased	2,500	LF		
30	ADOT 303-5.1	Aggregate Base Course, Class 2	805	CU. YD		
31	ADOT 409-5.1	Asphalt Access Road	1,574	TON		
32	F-162-5.1	8' Chain-Link Fence with Barbed Wire	717	LF		
33	F-162-5.2	Pedestrian Gate	1	EA		
34	P-101-5.9	Cold Milling	32	SQ. YD		
35	P-150-5.1	Removal of 8" Storm Drain	159	LF		
36	P-150-5.10	Removal of Chain Link Fence	731	LF		
37	31 00 00 - 01	Unclassified Excavation	9790			
38	31 00 00 - 02	Offsite Disposal	6,600	CU.YD		1
39	31 00 00 - 03	Removal/Replacement of Unsuitable/Unstable Subgrade	1,960	CU.YD		
40	P-209-5.1	Aggregate Base Course	1,888	CU. YD		
41	P-401-8.1	Asphalt Surface Course	724	TON		
42	P-403-8.1	Asphalt Surface Course (Shoulder Only)	905	TON		
43	P-403-8.2	Asphalt Surface Course (Shoulder Only)	316	TON		+
44 45	P-501-8.4	PCC Pavement (13.0 inches) PCC Pavement (14.5 inches)	40	SQ. YD.		+
46	P-501-8.5 P-501-8.6	PCC Pavement (14.5 inches)  PCC Pavement (16.5 inches)	94 102	SQ. YD.		+
47	P-501-8.8	PCC Pavement (18.5 micries)  PCC Pavement - Reinforced (13.0 inches)	102	SQ. YD.		
48	P-501-8.9	PCC Pavement - Reinforced (14.5 inches)	16	SQ. YD.		
49	P-501-8.10	PCC Pavement - Reinforced (14.5 inches)	19	SQ. YD.		
50	P-602-5.1	Emulsified Asphalt Prime Coat	4,107	GAL		†
51	P-603-5.1	Emulsified Asphalt Tack Coat	500	GAL		
52	P-605-5.1	Joint Sealing Filler	1,843	LF		
53	P-620-5.1	Permanent Pavement Marking, Reflective	3,157	SQ. FT		
54	P-620-5.2	Permanent Pavement Marking, Non-Reflective	1,884	SQ. FT		
55	T-901-5.1	Seeding	6	Acre		
		SUI	BTOTAL ARM/DE	-ARM PAD		
		SCHEDULE II - MCCA BASE BID	ARM / DE-ARM F	AD TOTAL		

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		BID SCHEDULE II (MCCA) - BASE BID (BAK 14	INFRAS	ΓRUCT	URE)	
		, ,			,	
56	C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	1	LS		
57	C-102-5.1	Erosion Control (1%)	1	LS		
58	C-105-6.1	Mobilization (10%)	1	LS		
59	GTP-50.1	Location of Underground Utilities	1	LS		
60	MC-001-9.1	Traffic Control and Airfield Safety and Security (5%)	1	LS		
61	26 05 00.00 40-1	Safety Switch 100A Rated, 600V, including FRN-R-70 Fuses	1	EA		
62	26 05 00.00 40-2	Stepdown Transformer, 15kVA, 480V-208Y/120V	1	EA		
63	26 05 00.00 40-3	Install lighting conduit and cable	1	LS		
64	26 05 00.00 40-4	Install receptacles, conduit and cable	1	LS		
65	26 05 00.00 40-5	Install power distribution conduit and cable	1	LS		
66	26 05 00.00 40-6	Install New 480V, 3 phase metered section with service disconnect (braced at 14KAIC, Nema 3R) and grounding	1	EA		
67	26 05 00.00 40-7	Portable generator for shut down at TEP Connection for the BAK	1	AL	\$6,000.00	
68	02 41 00-05	Removal of Existing Edge Light	6	EA		
69	26 51 00-1	Wall Mounted LED Fixture, 4' Length	6	EA		
70	26 51 00-2	Wall Mounted LED Fixture, 2' Length	4	EA		
71	26 52 00.00 40-1	Wall Mounted Emergency Light	2	EA		
72	26 56 20-2	L-824, Type C, 2/C #8 AWG, 5kV Cable	200	LF		
73	26 56 20-3	3-1/C #250kcmil, 600V, XHHW-2, #1/0 GND	2600	LF		
74	26 56 20-4	L-810(L) Dual, LED, Obstruction Light	2	EA		
75	26 56 20-5	New In-Pavement L-852D(L) LED Runway Edge and Isolation Transformer on New	4	EA		
		L-868 Base Can w/ Multi-Hole Adapter Rings  New In-Pavement L-852D(L) LED Runway Edge and Isolation Transformer on				
76	26 56 20-6	New L-868 Base Can w/ Multi-Hole Adapter Rings - Retrofit in Existing Asphalt	6	EA		
77	26 56 20-7	New In-Pavement L-852T(L) LED Taxiway Edge and Isolation Transformer on New L-868 Base Can w/ Multi-Hole Adapter Rings - Retrofit in Existing Asphalt	1	EA		
78	26 56 20-9	New Elevated L-861T(L) LED Taxiway Edge Light and Isolation Transformer on New L-867 Base Can - Retrofit in Existing Asphalt	1	EA		
79	26 56 20-10	New Size 4 L-858T(L) LED 1-Module Arresting Gear Marker Sign and Isolation Transformer, on New Concrete Base	2	EA		
80	33 05 23.13-1	Multiple - way, (2)-3" Conduit, Directional Bore	730	LF		
81	33 71 02-1	Single-way (1) - 2" Conduit, Slurry Encased	800			
82	33 71 02-2	Single-way, (1)-2" Conduit, Concrete Encased	675	LF		
83	33 71 02-3	Single-way, (1)-2" Conduit, Slurry Encased - Retro-fit in Existing Asphalt Shoulder Pavement	800	LF		
84	33 71 02-4	Multiple-way, (2)-3" Conduit, Slurry Encased	1670	LF		
85	33 71 02-5	Multiple-way, (1)-2" Conduit, (1)-4" Conduit, Slurry Encased	250	LF		
86	33 71 02-6	New Handhole, Prefabricated Concrete 2'x3'x3' Aircraft Rated, Furnished and Installed with Aircraft Rated Lid	7			
87	33 71 02-7	Multiple-way, (2)-4" Conduit, Slurry Encased	190	LF		
88	33 71 02-8	Multiple-way, (2)-4" Conduit, Concrete Encased	360	LF		
89	33 71 02-9	TEP Utility Service Coordination	1			
90 91	34 70 20-01 P-101-5.2	BAK-12/14M System Installation Removal Existing Asphalt Pavement Full Depth (Approx. 7 inches) and Stockpile	4729	LS SQ.YD		
92	P-101-5.3	on Site  Remove Existing Asphalt Pavement Full Depth (Approx. 20-inch) and Stockpile on	8176			
93	P-101-5.8	Site Allowance for Joint and Crack Repair		AL	\$10,000.00	
94	P-101-5.8 P-101-5.9	Cold Milling	1092	SQ.YD	\$10,000.00	
95	P-152-4.1	Unclassified Excavation	720			
96 97	P-152-4.3	Removal/Replacement of Unsuitable/Unstable Subgrade	150			
	P-209-5.1	Aggregate Base Course	2734	CU. YD		
98	P-401-8.1	Asphalt Surface Course	73		622.000.00	
99	P-401-8.2	Bituminous Shoulder Repair	1000	AL	\$32,000.00	
100	P-403-8.1	Asphalt Surface Course (Shoulder Only)	1903	TON		
101 102	P-403-8.2 P-501-8.1	Asphalt Surface Course (Shoulder Only)  Full Strength Runway Pavement - PCC (15.5-inch)	974 6669	TON SQ. YD		

	SCHEDULE II - MCCA BASE BID BAK 14 INFRASTRUCTURE TOTA					
	SUBTOTAL BAK 14 INFRASTRUCTU					
109	109 T-901-5.1 Seeding 3 Acre					
108	P-621-5.1	Sawcut Grooves	5447	SQ. YD		
107	107 P-620-5.2 Permanent Pavement Marking, Non-Reflective 1143 SQ. FT.					
106	106 P-620-5.1 Permanent Pavement Marking, Reflective 374					
105	105 P-605-5.1 Joint Sealing Filler 6900 LF					
104	104 P-603-5.1 Emulsified Asphalt Tack Coat 596 GA					
103	P-602-5.1	Emulsified Asphalt Prime Coat	5739	GAL		

	Bid Schedule II - MCCA Additive Alternative # 1 - Jet Blast Wall					
110	C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	1	LS		
111	111 34 73 19-02 Jet Blast Deflector 892 LF					
	SCHEDULE II - MCCA BID ADDITIVE ALTERNATIVE #1 TOTAL					

Bid Schedule II - MCCA Additive Alternative # 2 - Gate B						
112	C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	1	LS		
113	C-102-5.1	Erosion Control (1%)	1	LS		
114	C-105-6.1	Mobilization (10%)	1	LS		
115	GTP-50.1	Location of Underground Utilities	1	LS		
116	MC-001-9.1	Traffic Control and Airfield Safety and Security (5%)	1	LS		
117	02 41 00-01	Asphalt Pavement Demolition and Stockpile on Site	5435	SQ.YD		
118	26 56 20-1	L-824, Type C, 1/C #8 AWG, 5kV Cable	600	LF		
119	26 56 20-2	L-824, Type C, 2/C #8 AWG, 5kV Cable	160	LF		
120	26 56 20-8	New Elevated L-861T(L) LED Taxiway Edge Light and Isolation Transformer on New L-867 Base Can	15	EA		
121	26 56 20-11	New In-Pavement L-852T(L) LED Taxiway Edge and Isolation Transformer on New L-868 Base Can w/ Multi-Hole Adapter Rings	2	EA		
122	32 01 11.51-01	Removal of Pavement Markings	241	SQ.FT		
123	32 01 19.61-01	Joint Sealing	2322	LF		
124	32 11 20	Aggregate Base Course	191	CU. YD		
125	32 11 23	Aggregate Base Course	125	CU. YD		
126	32 12 13	Emulsified Asphalt Prime Coat	1882	GAL		
127	32 13 14.13-01	Concrete Pavement (13-inch)	1211	SQ. YD.		
128	32 13 14.13-02	Concrete Pavement (13-inch) - Reinforced	505	SQ. YD.		
129	32 12 15.13	Shoulder Asphalt	163	TON		
130	33 71 02-1	Single-way, (1)-2" Conduit, Slurry Encased	490	LF		
131	33 71 02-2	Single-way, (1)-2" Conduit, Concrete Encased	145	LF		
132	33 71 02-3	Single-way, (1)-2" Conduit, Slurry Encased - Retro-fit in Existing Asphalt Shoulder Pavement	120	LF		
133	ADOT 409-5.1	Asphalt Access Road	536	TON		
134	ADOT 303-5.1	Aggregate Base Course, Class 2	274	CU. YD		
135	31 00 00 - 01	Unclassified Excavation	160	CU. YD		
136	31 00 00 - 03	Removal/Replacement of Unsuitable/Unstable Subgrade	40	CU. YD		
137	P-209-5.1	Aggregate Base Course	183	CU. YD		
138	P-403-8.2	Asphalt Surface Course (Shoulder Only)	119	TON		
139	P-620-5.1	Permanent Pavement Marking, Reflective	2007	SQ. FT.		
140	P-620-5.2	Permanent Pavement Marking, Non-Reflective	2652	SQ. FT.		
		SCHEDULE II - MCCA BID ADDITIV	E ALTERNATIVE	#2 TOTAL		

	Bid Schedule II - MCCA Additive Alternative #3 - BAK 14 ACCESS ROADS						
141	C-100-14.1	Contractor Quality Control Program (CQCP) (3%)	1	LS			
142	C-102-5.1	Erosion Control (1%)	1	LS			
143	ADOT 303-5.1	Roadway Aggregate Base Course	132	CU. YD			
144	ADOT 409-5.1	Roadway Asphaltic Concrete	258	TON			
145	P-602-5.1	Emulsified Asphalt Prime Coat	593	GAL			
146	146         P-620-5.1         Roadway Pavement Marking         72         SQ. FT.						
	SCHEDULE II - MCCA BID ADDITIVE ALTERNATIVE #3 TOTAL						



### **Item F-162 Chain-Link Fence**

#### DESCRIPTION

**162-1.1** This item shall consist of furnishing and erecting a chain-link fence in accordance with these specifications, the details shown on the plans, and in conformity with the lines and grades shown on the plans or established by the RPR.

#### **MATERIALS**

- **162-2.1 Fabric.** The fabric shall be woven with a 9-gauge galvanized steel wire in a 2-inch mesh and shall meet the requirements of ASTM A392, Class II.
- **162-2.2 Barbed wire.** Barbed wire shall be 2-strand 12-1/2 gauge zinc-coated wire with 4-point barbs and shall conform to the requirements of ASTM A121, Class 3, Chain Link Fence Grade.
- **162-2.3 Posts, rails, and braces.** Line posts, rails, and braces shall conform to the requirements of ASTM F1043 or ASTM F1083 as follows:
  - Galvanized tubular steel pipe shall conform to the requirements of Group IA, (Schedule 40) coatings conforming to Type A, or Group IC (High Strength Pipe), External coating Type B, and internal coating Type B or D.
  - Roll Formed Steel Shapes (C-Sections) shall conform to the requirements of Group IIA, and be galvanized in accordance with the requirements of ASTM F1043, Type A.
  - Hot-Rolled Shapes (H Beams) shall meet the requirements of Group III, and be galvanized in accordance with the requirements of ASTM F1043, Type A.
  - Aluminum Pipe shall conform to the requirements of Group IB.
  - Aluminum Shapes shall conform to the requirements of Group IIB.
  - Vinyl or polyester coated steel shall conform to the requirements of ASTM F1043, Paragraph 7.3, Optional Supplemental Color Coating.
  - Composite posts shall conform to the strength requirements of ASTM F1043 or ASTM F1083. The strength loss of composite posts shall not exceed 10% when subjected to 3,600 hours of exposure to light and water in accordance with ASTM G152, ASTM G153, ASTM G154, and ASTM G155.
  - Posts, rails, and braces furnished for use in conjunction with aluminum alloy fabric shall be aluminum alloy or composite.
  - Posts, rails, and braces, with the exception of galvanized steel conforming to ASTM F1043 or ASTM F1083, Group 1A, Type A, or aluminum alloy, shall demonstrate the ability to withstand testing in salt spray in accordance with ASTM B117 as follows:
  - External: 1,000 hours with a maximum of 5% red rust.
  - Internal: 650 hours with a maximum of 5% red rust.



The dimensions of the posts, rails, and braces shall be in accordance with Tables I through VI of Federal Specification RR-F-191/3.

- **162-2.4 Gates.** Gate frames shall consist of aluminum alloy pipe and shall conform to the specifications for the same material under paragraph 162-2.3. The fabric shall be of the same type material as used in the fence.
- **162-2.5** Wire ties and tension wires. Wire ties for use in conjunction with a given type of fabric shall be of the same material and coating weight identified with the fabric type. Tension wire shall be 7-gauge marcelled steel wire with the same coating as the fabric type and shall conform to ASTM A824.

All material shall conform to Federal Specification RR-F-191/4.

- 162-2.6 Miscellaneous fittings and hardware. Miscellaneous steel fittings and hardware for use with zinc-coated steel fabric shall be of commercial grade steel or better quality, wrought or cast as appropriate to the article, and sufficient in strength to provide a balanced design when used in conjunction with fabric posts, and wires of the quality specified herein. All steel fittings and hardware shall be protected with a zinc coating applied in conformance with ASTM A153. Miscellaneous aluminum fittings for use with aluminum alloy fabric shall be wrought or cast aluminum alloy. Barbed wire support arms shall withstand a load of 250 pounds applied vertically to the outermost end of the arm.
- **162-2.7 Concrete.** Concrete shall meet the requirements listed in Specification P-610 Concrete for Miscellaneous Structures.
- **162-2.8 Marking.** Each roll of fabric shall carry a tag showing the kind of base metal (steel, aluminum, or aluminum alloy number), kind of coating, the gauge of the wire, the length of fencing in the roll, and the name of the manufacturer. Posts, wire, and other fittings shall be identified as to manufacturer, kind of base metal (steel, aluminum, or aluminum alloy number), and kind of coating.

# **CONSTRUCTION METHODS**

**162-3.1 General.** The fence shall be constructed in accordance with the details on the plans and as specified here using new materials. All work shall be performed in a workmanlike manner satisfactory to the RPR. The Contractor shall layout the fence line based on the plans. The Contractor shall span the opening below the fence with barbed wire at all locations where it is not practical to conform the fence to the general contour of the ground surface because of natural or manmade features such as drainage ditches. The new fence shall be permanently tied to the terminals of existing fences as shown on the plans. The Contractor shall stake down the woven wire fence at several points between posts as shown on the plans.

The Contractor shall arrange the work so that construction of the new fence will immediately follow the removal of existing fences. The length of unfenced section at any time shall not exceed 300 feet . The work shall progress in this manner and at the close of the working day the newly constructed fence shall be tied to the existing fence.

**162-3.2 Clearing fence line.** Clearing shall consist of the removal of all stumps, brush, rocks, trees, or other obstructions that will interfere with proper construction of the fence. Stumps within the cleared area of the fence shall be grubbed or excavated. The bottom of the fence shall be placed a uniform distance above ground, as specified in the plans. When shown on the plans or as directed by the RPR, the existing fences which interfere with the new fence location shall be removed by the Contractor as a part of the construction work unless such removal is listed as a separate item in the bid schedule. All holes remaining after post and stump removal shall be refilled with suitable soil, gravel, or other suitable material and compacted with tampers.



The cost of removing and disposing of the material shall not constitute a pay item and shall be considered incidental to fence construction.

**162-3.3 Installing posts.** All posts shall be set in concrete at the required dimension and depth and at the spacing shown on the plans.

The concrete shall be thoroughly compacted around the posts by tamping or vibrating and shall have a smooth finish slightly higher than the ground and sloped to drain away from the posts. All posts shall be set plumb and to the required grade and alignment. No materials shall be installed on the posts, nor shall the posts be disturbed in any manner within seven (7) days after the individual post footing is completed.

Should rock be encountered at a depth less than the planned footing depth, a hole 2 inches larger than the greatest dimension of the posts shall be drilled to a depth of 12 inches. After the posts are set, the remainder of the drilled hole shall be filled with grout, composed of one part Portland cement and two parts mortar sand. Any remaining space above the rock shall be filled with concrete in the manner described above.

In lieu of drilling, the rock may be excavated to the required footing depth. No extra compensation shall be made for rock excavation.

- **162-3.4 Installing top rails.** The top rail shall be continuous and shall pass through the post tops. The coupling used to join the top rail lengths shall allow for expansion.
- **162-3.5 Installing braces.** Horizontal brace rails, with diagonal truss rods and turnbuckles, shall be installed at all terminal posts.
- **162-3.6 Installing fabric.** The wire fabric shall be firmly attached to the posts and braced as shown on the plans. All wire shall be stretched taut and shall be installed to the required elevations. The fence shall generally follow the contour of the ground, with the bottom of the fence fabric no less than one inch or more than 4 inches from the ground surface. Grading shall be performed where necessary to provide a neat appearance.

At locations of small natural swales or drainage ditches and where it is not practical to have the fence conform to the general contour of the ground surface, longer posts may be used and multiple strands of barbed wire stretched to span the opening below the fence. The vertical clearance between strands of barbed wire shall be 6 inches or less.

- 162-3.7 Electrical grounds. Electrical grounds shall be constructed at 500 feet intervals. The ground shall be accomplished with a copper clad rod 8 feet long and a minimum of 5/8 inches in diameter driven vertically until the top is 6 inches below the ground surface. A No. 6 solid copper conductor shall be clamped to the rod and to the fence in such a manner that each element of the fence is grounded. Installation of ground rods shall not constitute a pay item and shall be considered incidental to fence construction. The Contractor shall comply with FAA-STD-019, Lightning and Surge Protection, Grounding, Bonding and Shielding Requirements for Facilities and Electronic Equipment, paragraph 4.2.3.8, Lightning Protection for Fences and Gates, when fencing is adjacent to FAA facilities.
- **162-3.8 Cleaning up.** The Contractor shall remove from the vicinity of the completed work all tools, buildings, equipment, etc., used during construction. All disturbed areas shall be seeded per T-901.



#### METHOD OF MEASUREMENT

- **162-4.1** Chain-link fence will be measured for payment by the linear foot. Measurement will be along the top of the fence from center to center of end posts, excluding the length occupied by gate openings.
- **162-4.2** Gates will be measured as complete units.
- **162-4.3** The lump sum amount for Relocating the Rolling Gate (158') for Temporary Ascent Taxilane shall account for all associated temporary fence which is considered incidental to this pay item, including but not limited to Type D fencing and gate relocation (for rolling, pedestrian, and vehicle gates).
- 162-4.4 The lump sum amount for Procuring a New Rolling Gate (160') for Permanent Ascent Taxilane shall account for all design, procurement and installation of the gate. The line item includes, but is not limited to gate, roller mechanism and guides, end posts and all associated appurtenances to make the installation fully functional and secure. The contactor must submit shop drawings of the rolling gate and all appurtenances to TAA for review and approval. For the permanent Ascent Taxilane condition, a new vehicle gate will be installed adjacent to the new rolling gate, paid for separately in accordance with line Item F-162-5.3. All associated temporary fence including but not limited to Type D fencing, as required to maintain a secure perimeter during construction, is considered incidental to this lump sum pay item.

#### **BASIS OF PAYMENT**

- 162-5.1 Payment for chain-link fence will be made at the contract unit price per linear foot.
- 162-5.2 Payment for vehicle or pedestrian gates will be made at the contract unit price for each gate.

The price shall be full compensation for furnishing all materials, and for all preparation, erection, and installation of these materials, and for all labor equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item F-162-5.1	8' Chain-Link Fence with Barbed Wire - per linear foot
Item F-162-5.2	Pedestrian Gate - per each
Item F-162-5.3	Vehicle Gate (26') – per each
Item F-162-5.4	Relocate Rolling Gate (158') for Temporary Ascent Taxilane – per lump sum
Item F-162-5.5	Procure New Rolling Gate (160') for Permanent Ascent Taxilane – per lump sum

# REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A121 Standard Specification for Metallic-Coated Carbon Steel Barbed Wire



ASTM A153	Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A392	Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
ASTM A491	Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric
ASTM A824	Standard Specification for Metallic-Coated Steel Marcelled Tension Wire for Use with Chain Link Fence
ASTM B117	Standard Practice for Operating Salt Spray (Fog) Apparatus
ASTM F668	Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and other Organic Polymer Coated Steel Chain-Link Fence Fabric
ASTM F1043	Standard Specification for Strength and Protective Coatings on Steel Industrial Fence Framework
ASTM F1083	Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
ASTM F1183	Standard Specification for Aluminum Alloy Chain Link Fence Fabric
ASTM F1345	Standard Specification for Zinc 5% Aluminum-Mischmetal Alloy Coated Steel Chain-Link Fence Fabric
ASTM G152	Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G153	Standard Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials
ASTM G155	Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials

Federal Specifications (FED SPEC)

FED SPEC RR-F-191/3 Fencing, Wire and Post, Metal (Chain-Link Fence Posts, Top Rails and Braces)

FED SPEC RR-F-191/4 Fencing, Wire and Post, Metal (Chain-Link Fence Accessories)

FAA Standard

FAA-STD-019 Lightning and Surge Protection, Grounding, Bonding and Shielding

Requirements for Facilities and Electronic Equipment

FAA Orders

5300.38 AIP Handbook

# **END OF ITEM F-162**



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