CITY OF MESA
MESA, ARIZONA

MESA FALCON FIELD AIRPORT (FFZ)
MIDFIELD CROSSOVER TAXIWAY EAST AND
REALIGNMENT OF TAXIWAYS D7 AND D8

PROJECT NO. CP0994EAST
FAA AIP No. 03-04-0023-035-2023

ADDENDUM NO. 1

05/08/2023

In reference to the Approved Plans and Specifications for the subject project, please note the following items which shall be added or changed:

PROPOSAL ACKNOWLEDGEMENT and BID SCHEDULE (8 pages)

ITEM NO. 1: In the Bid Proposal, **remove** and **replace** the PROPOSAL ACKNOWLEDGEMENT and BID SCHEDULE in its entirety with the revised and attached labeled ADDENDUM NO. 1.

The bid schedule is being re-issued by this addendum to revised line-item No. 94 from L-125j to L-130 as the ALCMS item was updated.

TECHNICAL SPECIFICATIONS

ITEM NO. 2: In the Approved Specifications, **remove** and **replace** ITEM L-125 INSTALLATION OF AIRPORT 1 LIGHTING SYSTEMS in its entirety with the revised and attached labeled ADDENDUM NO. 1.

Under Section 125-5.1 Basis of Payment, the following line item was deleted: Item L-125j Install L-890 ALCMS, Complete – per each. This item will be added to the L-130 specification.

ITEM NO. 3: In the Approved Specifications, **add** specification ITEM L-130 AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM labeled as attached ADDENDUM NO. 1

This specification further defines the ALCMS installation.

PLANS

ITEM NO. 4: In the Approved Plans, **remove** and **replace** the plan set in its entirety with the revised and attached labeled as approved on 05-08-2023.

Based on the above items the following sheets have been modified as noted:

Sheet 1 of 52 (A-270520), Drawing G001 – COVER SHEET. Approval date is 05-08-2023.

*The City of Mesa APPROVED COPY stamp was updated to reflect approval of the plan set **ADDENDUM NO. 1**.*

Sheet 2 of 52 (A-270521), Drawing G002 - INDEX OF DRAWINGS AND SUMMARY OF APPROXIMATE QUANTITIES. Line item L-125j was replacd with L130a in the SUMMARY OF ESTIMATED QUANTITIES.

The ALCMS item was removed from L-125 and added to the L-130 specification.

Sheet 52 of 52 (A-270571), Drawing E253 - ELECTRICAL DETAILS. Note 3 shall read "CONTRACTOR SHALL INSTALL L-827 MONITORING BOXES FOR EACH CCR. MONITORING SHALL INCLUDE IRMS AND OUTPUT MONITORING. COMBO BOXES SHALL ALSO BE INSTALLED FOR EACH NAVAID THAT WILL BE CONTORLLED BY THE ALCMS."

Further definition of the required equipment for the ALCMS was given.

LIST OF ATTACHMENTS:

- PROPOSAL ACKNOWLEDGEMENT and BID SCHEDULE (8 pages)
- ITEM L-125 INSTALLATION OF AIRPORT 1 LIGHTING SYSTEMS (6 pages)
- ITEM L-130 AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (18 pages)
- PLANS (52 pages)

_____
Contractor's Signature

_____
Date

Note: A signed copy of this Addendum shall be returned with the Contractor's proposal and/or the Contractor shall acknowledge this Addendum in the space provided on the Proposal.

CITY OF MESA
MESA, ARIZONA

PROPOSAL ACKNOWLEDGEMENT

ADDENDUM NO. 1

MIDFIELD CROSSOVER TAXIWAYS AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST / FAA A.I.P. 03-04-0023-035-2023

PROPOSAL to the City Engineer of the City of Mesa,
In compliance with the Advertisement for Bids, the undersigned bidder:

Having examined the contract documents, site of work, and being familiar with the conditions to be met, hereby submits the following Proposal for furnishing the material, equipment, labor and everything necessary for the completion of the Work listed and agrees to execute the contract documents and furnish the required bonds and certificates of insurance for the completion of said Work, at the locations and for the prices set forth herein.

Understands that construction of this project shall be in accordance with all applicable Uniform Standard Specifications and Standard Details except as otherwise required by the Project Plans and Project Specific Provisions.

Understands that the Proposal shall be submitted with a Proposal guarantee of cash, certified check, cashier's check, or surety bond for an amount of not less than ten percent (10%) of the amount bid.

Agrees that upon receipt of Notice of Award from the City of Mesa, the undersigned bidder will execute the contract documents with no exceptions.

Work shall be completed within 230 consecutive calendar days, beginning with the day following the start date specified in the Notice to Proceed.

Acknowledges that bid prices submitted include all applicable sales and/or use taxes, and no further compensation will be approved for these items.

The Bidder hereby acknowledges receipt of and agrees that the submitter's Proposal is based on the following Addenda:

CITY OF MESA
MESA, ARIZONA

MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST
FAA AIP 03-04-0023-035-2023
BID SCHEDULE
ADDENDUM NO. 1

ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL PRICE
Schedule 1 Realignment of Taxiways D7 and D8				
1. GP-50a	Construction Survey and Staking	LUMP SUM	$ LUMP SUM	$
2. GP-100a	Contractor Quality Control Program (CQCP)	LUMP SUM	$ LUMP SUM	$
3. GP-100b	FAA Paving QC/QA Workshop	LUMP SUM	$ LUMP SUM	$
4. GP-102a	AZPDES Permit Compliance and SWPPP	LUMP SUM	$ LUMP SUM	$
5. GP-105a	Mobilization	LUMP SUM	$ LUMP SUM	$
6. GTP-10a	Existing Utility Locates	LUMP SUM	$ LUMP SUM	$
7. GTP-20a	Airfield Traffic Control and Barricades	LUMP SUM	$ LUMP SUM	$
8. P-101a	Sawcut Asphalt Pavement (4")	1,370 LF	$	$
9. P-101b	Sawcut Asphalt Pavement (2")	135 LF	$	$
10. P-101c	Asphalt Pavement Removal (Full Depth, 4")	3,300 SY	$	$
11. P-101d	Asphalt Pavement Shoulder Removal (Full Depth, 2")	3,255 SY	$	$
12. P-101e	Asphalt Pavement Removal (Partial Depth, 2")	800 SY	$	$
13. P-101f	Remove Storm Sewer Pipe	416 LF	$	$
14. P-101g	Remove Inlet/Outlet with Grate	2 EA	$	$
15. P-152a	Unclassified Excavation	4,235 CY	$	$
16. P-152b	Unclassified Excavation for Subgrade (8" depth)	1,395 CY	$	$
17. P-152c	Embankment for Undercut	500 CY	$	$
18. P-208a	Aggregate Base Course (10" Thick)	3,550 SY	$	$

CITY OF MESA
MESA, ARIZONA

MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST
FAA AIP 03-04-0023-035-2023
BID SCHEDULE
ADDENDUM NO. 1

ITEM NO.	DESCRIPTION	QUANTITY		UNIT PRICE	TOTAL PRICE
19. P-222a	Soil Sterilization	6,270	SY	$	$
20. P-401a	Asphalt Surface Course (3/4", 4" Thick)	3,425	SY	$	$
21. P-401b	Asphalt Surface Course (3/4", 3" Thick)	2,845	SY	$	$
22. P-401c	Asphalt Surface Course (3/4", 2" Thick)	795	SY	$	$
23. P-603a	Emulsified Asphalt Tack Coat	425	GAL	$	$
24. P-620a	Surface Preparation (Obliterations)	855	SF	$	$
25. P-620b	Marking (Temporary)	13,785	SF	$	$
26. P-620c	Marking (Permanent)	13,785	SF	$	$
27. D-701a	23"x14" Class V RCP	575	LF	$	$
28. D-710a	Rip Rap (D50=6", T=2') Underlain w/ Filter Fabric	10	CY	$	$
29. D-751a	Inlet Structure with Grate	4	EA	$	$
30. D-751b	Outlet Structure with Grate	4	EA	$	$
31. T-901a	Seeding with Hydromulch	6	AC	$	$
32. L-108a	Install #8 AWG L-824C, 5000V Wire	5,950	LF	$	$
33. L-108b	Install #6 AWG, Bare Copper Counterpoise Including Ground Rods and Terminations	5,400	LF	$	$
34. L-108c	Install #10 AWG XHHW, 600V Wire	10,000	LF	$	$
35. L-110a	Install 1-2" SCH 40 PVC Conduit (DEB)	3,400	LF	$	$
36. L-110b	Install 1-2" SCH 40 PVC Conduit (CE)	450	LF	$	$
37. L-110c	Install 2-2" SCH 40 PVC Conduit (DEB)	900	LF	$	$

CITY OF MESA
MESA, ARIZONA

MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST
FAA AIP 03-04-0023-035-2023
BID SCHEDULE
ADDENDUM NO. 1

ITEM NO.	DESCRIPTION	QUANTITY		UNIT PRICE	TOTAL PRICE
38. L-110d	Install 2-2" SCH 40 PVC Conduit (CE)	200	LF	$	$
39. L-110e	Install 4-2" SCH 40 PVC Conduit (CE)	260	LF	$	$
40. L-115a	Remove Junction Box, Complete	8	EA	$	$
41. L-115b	Install L-867E Junction Box, Complete	8	EA	$	$
42. L-125a	Remove Base Mounted Runway/Taxiway Light, Complete	31	EA	$	$
43. L-125b	Remove L-858 Guidance Sign, Complete	6	EA	$	$
44. L-125c	Install L-861T LED Taxiway Edge Light, Complete	36	EA	$	$
45. L-125d	Install L-861 LED Runway Edge Light, Complete	1	EA	$	$
46. L-125e	Install L-858 LED Guidance Sign, Size 1, 2 Module, Complete	1	EA	$	$
47. L-125f	Install L-858 LED Guidance Sign, Size 1, 3 Module, Complete	4	EA	$	$
48. L-125g	Install L-858 LED Guidance Sign, Size 1, 4 Module, Complete	2	EA	$	$
49. L-125h	Install L-804 LED Runway Guard Light, Complete	4	EA	$	$
50. L-125i	Install L-853 Retroreflective Marker, Surface Mounted, Complete	8	EA	$	$
TOTAL BASE BID SCHEDULE 1 (Items 1 through 50)					$

BID ALTERNATES

BID ALTERNATE #1					
Schedule 2 Midfield Crossover Taxiway East					
51. GP-50a	Construction Survey and Staking	LUMP SUM	$	LUMP SUM	$
52. GP-100a	Contractor Quality Control Program (CQCP)	LUMP SUM	$	LUMP SUM	$

CITY OF MESA
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MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST
FAA AIP 03-04-0023-035-2023
BID SCHEDULE
ADDENDUM NO. 1

ITEM NO.	DESCRIPTION	QUANTITY		UNIT PRICE	TOTAL PRICE
53. GP-102a	AZPDES Permit Compliance and SWPPP	LUMP SUM		$ LUMP SUM	$
54. GP-105a	Mobilization	LUMP SUM		$ LUMP SUM	$
55. GTP-10a	Existing Utility Locates	LUMP SUM		$ LUMP SUM	$
56. GTP-20a	Airfield Traffic Control and Barricades	LUMP SUM		$ LUMP SUM	$
57. P-101a	Sawcut Asphalt Pavement (4")	230	LF	$	$
58. P-101b	Sawcut Asphalt Pavement (2")	65	LF	$	$
59. P-101d	Asphalt Pavement Shoulder Removal (Full Depth, 2")	440	SY	$	$
60. P-101e	Asphalt Pavement Removal (Partial Depth, 2")	85	SY	$	$
61. P-152a	Unclassified Excavation	1,825	CY	$	$
62. P-152b	Unclassified Excavation for Subgrade (8" depth)	1,300	CY	$	$
63. P-152c	Embankment for Undercut	500	CY	$	$
64. P-208a	Aggregate Base Course (10" Thick)	3,480	SY	$	$
65. P-222a	Soil Sterilization	5,835	SY	$	$
66. P-401a	Asphalt Surface Course (3/4", 4" Thick)	3,325	SY	$	$
67. P-401b	Asphalt Surface Course (3/4", 3" Thick)	2,510	SY	$	$
68. P-401c	Asphalt Surface Course (3/4", 2" Thick)	85	SY	$	$
69. P-603a	Emulsified Asphalt Tack Coat	340	GAL	$	$
70. P-620b	Marking (Temporary)	4,520	SF	$	$
71. P-620c	Marking (Permanent)	4,520	SF	$	$

CITY OF MESA
MESA, ARIZONA

MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST
FAA AIP 03-04-0023-035-2023
BID SCHEDULE
ADDENDUM NO. 1

ITEM NO.	DESCRIPTION	QUANTITY		UNIT PRICE	TOTAL PRICE
72. D-701a	23"x14" Class V RCP	520	LF	$	$
73. D-710a	Rip Rap (D50=6", T=2') Underlain w/ Filter Fabric	10	CY	$	$
74. D-751a	Inlet Structure with Grate	4	EA	$	$
75. D-751b	Outlet Structure with Grate	4	EA	$	$
76. T-901a	Seeding with Hydromulch	3	AC	$	$
77. L-108a	Install #8 AWG L-824C, 5000V Wire	5,000	LF	$	$
78. L-108b	Install #6 AWG, Bare Copper Counterpoise Including Ground Rods and Terminations	4,000	LF	$	$
79. L-108c	Install #10 AWG XHHW, 600V Wire	2,000	LF	$	$
80. L-110a	Install 1-2" SCH 40 PVC Conduit (DEB)	3,100	LF	$	$
81. L-110b	Install 1-2" SCH 40 PVC Conduit (CE)	300	LF	$	$
82. L-110c	Install 2-2" SCH 40 PVC Conduit (DEB)	325	LF	$	$
83. L-110d	Install 2-2" SCH 40 PVC Conduit (CE)	55	LF	$	$
84. L-110e	Install 4-2" SCH 40 PVC Conduit (CE)	75	LF	$	$
85. L-115b	Install L-867E Junction Box, Complete	3	EA	$	$
86. L-125a	Remove Base Mounted Runway/Taxiway Light, Complete	1	EA	$	$
87. L-125c	Install L-861T LED Taxiway Edge Light, Complete	41	EA	$	$
88. L-125d	Install L-861 LED Runway Edge Light, Complete	1	EA	$	$
89. L-125e	Install L-858 LED Guidance Sign, Size 1, 2 Module, Complete	1	EA	$	$
90. L-125g	Install L-858 LED Guidance Sign, Size 1, 4 Module, Complete	2	EA	$	$

CITY OF MESA
MESA, ARIZONA

MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CITY OF MESA PROJECT NO. CP0994EAST
FAA AIP 03-04-0023-035-2023
BID SCHEDULE
ADDENDUM NO. 1

ITEM NO.	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL PRICE
91. L-125h	Install L-804 LED Runway Guard Light, Complete	4 EA	$	$
92. L-125k	Install L-858 LED Guidance Sign, Size 1, 1 Module, Complete	1 EA	$	$
TOTAL BASE BID SCHEDULE 2 (Items 51 through 92)				$

BID ALTERNATE #2

Schedule 3 Install Airfield Lighting Control and Monitoring System (ALCMS)

93. GP-105a	Mobilization	LUMP SUM	$ LUMP SUM	$
94. L-130a	Install L-890 ALCMS, Complete	LUMP SUM	$ LUMP SUM	$
TOTAL BASE BID SCHEDULE 3 (Item 93 through 94)				$

This signed Proposal is submitted by _____,
a corporation organized under the laws of the State of _____, a partnership consisting of
_____ or individual trading
as: _____; of the City of _____, and is the
holder of Arizona State Contractor's License: Classification _____
No. _____.

Joint venture bid proposals will not be accepted for projects bidding in the amount (for base bid) of less than $5 million dollars.

Contractors are reminded it is a violation of State law to submit a bid if not properly licensed. Bids submitted without designating the Contractor's license classification and number, in the spaces provided above, shall be rejected. Bids submitted by Contractors without the required license shall be rejected.

Contractor acknowledges by signing below that bid prices submitted include all applicable sales and/or use taxes, and no further compensation shall be approved for these items. Per MAG 102.3, payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished in accordance with the contract at the unit bid price in the proposal. If there is a conflict between the unit bid price and the unit price extension for a particular pay item, the unit prices shall govern, per MAG 102.5. Also, per MAG 102.7, a proposal shall be considered irregular and may be rejected if there are unauthorized additions, statements, conditional or alternate bids, or irregularities of any kind.

Respectfully submitted,

_____
Firm

_____
Federal Tax ID Number

_____
Address

_____
City, State and Zip Code

_____
Phone

_____
Fax

_____
By (Signature Required)

_____
Name and Title (Print)

_____
Email Address

ITEM L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

DESCRIPTION

125-1.1 This item shall consist of airport lighting systems furnished and installed in accordance with this specification, the referenced specifications, and the applicable advisory circulars (ACs). The systems shall be installed at the locations and in accordance with the dimensions, design, and details shown in the plans. This item shall include the furnishing of all equipment, materials, services, and incidentals necessary to place the systems in operation as completed units to the satisfaction of the RPR.

EQUIPMENT AND MATERIALS

125-2.1 GENERAL.

a. Airport lighting equipment and materials covered by Federal Aviation Administration (FAA) specifications shall be certified under the Airport Lighting Equipment Certification Program in accordance with AC 150/5345-53, current version. FAA certified airfield lighting shall be compatible with each other to perform in compliance with FAA criteria and the intended operation. If the Contractor provides equipment that does not performs as intended because of incompatibility with the system, the Contractor assumes all costs to correct the system for to operate properly.

b. Manufacturer's certifications shall not relieve the Contractor of their responsibility to provide materials in accordance with these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

c. All materials and equipment used shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Clearly mark each copy to identify pertinent products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be clearly made with arrows or circles (highlighting is not acceptable). The Contractor shall be responsible for delays in the project accruing directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be submitted in electronic PDF format, tabbed by specification section. The RPR reserves the right to reject any or all equipment, materials or procedures, which, in the RPR's opinion, does not meet the system design and the standards and codes, specified herein.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

EQUIPMENT AND MATERIALS

125-2.2 CONDUIT/DUCT. Conduit shall conform to Specification Item L-110 Airport Underground Electrical Duct Banks and Conduits.

125-2.3 CABLE AND COUNTERPOISE. Cable and Counterpoise shall conform to Item L-108 Underground Power Cable for Airports.

125-2.4 TAPE. Rubber and plastic electrical tapes shall be Scotch Electrical Tape Numbers 23 and 88 respectively, as manufactured by 3M Company or an approved equal.

125-2.5 CABLE CONNECTIONS. Cable Connections shall conform to Item L-108 Installation of Underground Cable for Airports.

125-2.6 RETROREFLECTIVE MARKERS. Retroreflective markers shall be type L-853 and shall conform to the requirements of AC 150/5345-39.

125-2.7 RUNWAY AND TAXIWAY LIGHTS. Runway and taxiway lights shall conform to the requirements of AC 150/5345-46. Lamps shall be of size and type indicated, or as required by fixture manufacturer for each lighting fixture required under this contract. Filters shall be of colors conforming to the specification for the light concerned or to the standard referenced.

Lights

Type	Class	Mode	Style	Option	Base	Filter	Transformer	Notes
L-861T	2	1	NA	4	L-867	Blue	L-830 Size per Manufacturer	LED
L-861	2	1	NA	4	L-867	White	L-830 Size per Manufacturer	LED

125-2.8 RUNWAY AND TAXIWAY SIGNS. Runway and Taxiway Guidance Signs should conform to the requirements of AC 150/5345-44.

Signs

Type	Size	Style	Class	Mode	Notes
L-858L/Y	1	2	2	2	LED
L-858R	1	2	2	2	LED

125-2.9 RUNWAY END IDENTIFIER LIGHT (REIL). Not required.

125-2.10 PRECISION APPROACH PATH INDICATOR (PAPI). Not required.

125-2.11 CIRCUIT SELECTOR CABINET. The circuit selector cabinet shall meet the requirements of AC 150/5345-5, Type L-847, four circuit control as indicated, Class A, indoor, Rating 1, for 6.6 amperes.

125-2.12 LIGHT BASE AND TRANSFORMER HOUSINGS. Light Base and Transformer Housings should conform to the requirements of AC 150/5345-42. Light bases shall be Type L-867, Class 1B, Size B shall be provided as indicated or as required to accommodate the fixture or device installed thereon. Base plates, cover plates, and adapter plates shall be provided to accommodate various sizes of fixtures.

125-2.13 ISOLATION TRANSFORMERS. Isolation Transformers shall be Type L-830, size as required for each installation. Transformer shall conform to AC 150/5345-47.

INSTALLATION

125-3.1 INSTALLATION. The Contractor shall furnish, install, connect and test all equipment, accessories, conduit, cables, wires, buses, grounds and support items necessary to ensure a complete and operable airport lighting system as specified here and shown in the plans.

The equipment installation and mounting shall comply with the requirements of the National Electrical Code and state and local code agencies having jurisdiction.

The Contractor shall install the specified equipment in accordance with the applicable advisory circulars and the details shown on the plans.

125-3.2 TESTING. All lights shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance. The test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The fixtures shall illuminate properly during each portion of the test.

125-3.3 SHIPPING AND STORAGE. Equipment shall be shipped in suitable packing material to prevent damage during shipping. Store and maintain equipment and materials in areas protected from weather and physical damage. Any equipment and materials, in the opinion of the RPR, damaged during construction or storage shall be replaced by the Contractor at no additional cost to the owner. Painted or galvanized surfaces that are damaged shall be repaired in accordance with the manufacturer's recommendations.

125-3.4 ELEVATED AND IN-PAVEMENT LIGHTS. Water, debris, and other foreign substances shall be removed prior to installing fixture base and light.

A jig or holding device shall be used when installing each light fixture to ensure positioning to the proper elevation, alignment, level control, and azimuth control. Light fixtures shall be oriented with the light beams parallel to the runway or taxiway centerline and facing in the required direction. The outermost edge of fixture shall be level with the surrounding pavement. Surplus sealant or flexible embedding material shall be removed. The holding device shall remain in place until sealant has reached its initial set.

METHOD OF MEASUREMENT

125-4.1 Reflective markers will be measured by the number installed as completed units in place, ready for operation, and accepted by the RPR. Runway and taxiway lights will be measured by the number of each type installed as completed units in place, ready for operation, and accepted by the RPR. Guidance signs will be measured by the number of each type and size installed as completed units, in place, ready for operation, and accepted by the RPR. Runway End Identifier Lights shall be measured by each system installed as a completed unit in place, ready for operation, and accepted by the RPR.

Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR. Abbreviated Precision Approach Path Indicator shall be measured by each system installed as a completed unit, in place, ready for operation, and accepted by the RPR.

BASIS OF PAYMENT

125-5.1 Payment will be made at the Contract unit price for each complete runway or taxiway light, guidance sign, reflective marker, runway end identification light, precision approach path indicator, or abbreviated precision approach path indicator installed by the Contractor and accepted by the RPR. This payment will be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item L-125a	Remove Base Mounted Runway/Taxiway Light, Complete – per each
Item L-125b	Remove L-858 Guidance Sign, Complete – per each
Item L-125c	Install L-861T LED Taxiway Edge Light, Complete – per each
Item L-125d	Install L-861 LED Runway Edge Light, Complete – per each
Item L-125e	Install L-858 LED Guidance Sign, Size 1, 2 Module, Complete – per each
Item L-125f	Install L-858 LED Guidance Sign, Size 1, 3 Module, Complete – per each
Item L-125g	Install L-858 LED Guidance Sign, Size 1, 4 Module, Complete – per each
Item L-125h	Install L-804 LED Runway Guard Light, Complete – per each
Item L-125i	Install L-853 Retroreflective Marker, Surface Mounted, Complete – per each
~~Item L-125j~~	~~Install L-890 ALCMS, Complete – per each~~
Item L-125k	Install L-858 LED Guidance Sign, Size 1, 1 Module, Complete – per each

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.

Advisory Circulars (AC)

AC 150/5340-18	Standards for Airport Sign Systems
AC 150/5340-26	Maintenance of Airport Visual Aid Facilities
AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-5	Circuit Selector Switch
AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-28	Precision Approach Path Indicator (PAPI) Systems

AC 150/5345-39	Specification for L-853, Runway and Taxiway Retroreflective Markers
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories
AC 150/5345-44	Specification for Runway and Taxiway Signs
AC 150/5345-46	Specification for Runway and Taxiway Light Fixtures
AC 150/5345-47	Specification for Series to Series Isolation Transformers for Airport Lighting Systems
AC 150/5345-51	Specification for Discharge-Type Flashing Light Equipment
AC 150/5345-53	Airport Lighting Equipment Certification Program

Engineering Brief (EB)

EB No. 67	Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures

****END OF ITEM L-125****

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ITEM L-130 AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM

INTRODUCTION

130-1.1 QUALIFICATIONS.

a. The ALCMS manufacturer shall be listed in the FAA Approved Equipment List, AC 150/5345-53 (current edition) as a FAA approved supplier of L-890 Airfield Lighting Computer and Monitoring Systems in accordance with AC 150/5345-56 (current edition).

130-1.2 PROJECT SCOPE.

a. The ALCMS Manufacturer shall furnish and commission a complete and functional computerized distributed control and monitoring airfield lighting system based on an industry standard Ethernet network.

b. This project shall include software, programming, computers, manuals, on-site commissioning, on-site testing, on-site training and any other materials, tools and equipment to provide a fully functional system to the satisfaction of the owner.

130-1.3 PROJECT COORDINATION.

a. The ALCMS Manufacturer shall provide an experienced and qualified Engineering, Sales and Service staff to support the contractor and airport throughout the installation and life of the system.

b. The project shall follow this basic cycle of events:

	MILESTONE	DESCRIPTION
1.	Submittal	The ALCMS Manufacturer shall submit ALCMS specifications to the contractor.
2.	Submittal Review and Approval	Submittal is reviewed by the contractor, airport, and engineer(s).
3.	Production Release	The ALCMS Manufacturer shall release approved system to manufacturing.
4.	Demo CD 35% Software Completion	The ALCMS Manufacturer shall send to the contractor, airport, and engineers a Demo CD of the planned layout of the touchscreen that will be used for the control of the ALCMS system.
5.	Production	System is manufactured.
6.	Production Testing	System is tested by the ALCMS Manufacturer.
7.	Factory Acceptance Testing	System is available for Factory Acceptance Testing (FAT) witnessed by airport/owner.

	MILESTONE	DESCRIPTION
8.	Shipment of system	Approved system is shipped to installation site.
9.	Installation	Contractor installs equipment and completes external wiring.
10.	Commissioning	The ALCMS Manufacturer shall arrive at installation site to complete commissioning of system and verify contractor installation and wiring.
11.	System Readiness Check	The ALCMS Manufacturer shall perform a system readiness check to verify proper operation of all equipment prior to cut over.
12.	System Cut-over	The ALCMS Manufacturer and Contractor shall cut over the new system and bring it on-line and operational.
13.	System Acceptance Testing	System is available for System Acceptance Testing (SAT) which shall be witnessed the by airport/owner and/or engineer.
14.	Manuals / As-Built drawings	The ALCMS Manufacturer shall issue operator manuals, maintenance manuals and ATC manuals and final as-built drawings.
15.	On-Site Training	The ALCMS Manufacturer shall complete on-site training of maintenance, Operations, and ATC personnel.
16.	Final Owner Acceptance	Upon completion of all contractual requirements, system is accepted in writing by the airport/owner.
17.	Warranty and Support	The ALCMS Manufacturer shall provide warranty and support per the contractual requirements.

130-1.4 FACTORY ACCEPTANCE TEST (FAT).

a. Before shipment, the ALCMS system shall be assembled as an operating system at the ALCMS Manufacturer's test facilities.

b. At a minimum, the FAT shall allow for one (1) day of testing and review but may require additional time depending on the results of the testing.

c. During the FAT, minor software comments shall be finalized and incorporated into the final system.

130-1.5 CONTRACTOR INSTALLATION REQUIREMENTS

a. The contractor shall be responsible for the physical installation of all associated ALCMS components. At a minimum, this includes the Constant Current Regulators (CCRs), computer

cabinets, Touchscreen control stations and Distributed Control and Monitoring Equipment (DCME).

b. The Contractor shall furnish, install, relocate, connect and test all equipment, equipment accessories, conduit cables, wires, buses, grounds and support necessary to insure a complete and operable electrical distribution facility for the airport lighting system as specified in the submittal package.

c. The equipment installation and mounting shall comply with the requirements of the National Electrical Code and local code agency having jurisdiction.

130-1.5.1 WIRE AND CONNECTIONS

a. The Contractor shall make all necessary electrical connections at each location in accordance with the ALCMS manufacturer's wiring diagrams.

b. All wires called out in the drawings associated with equipment that is to be controlled or monitored should be pulled, terminated and dressed at the appropriate terminal blocks and at the associated equipment.

c. The Contractor shall leave sufficient extra wire length on each control/monitoring lead to make future changes in connections at the terminal block.

130-1.5.2 MARKING AND LABELING

a. All equipment, control wires, terminal blocks, etc., shall be tagged, marked or labeled as specified below:

1. Wire Identification: The Contractor shall furnish and install labels or identifying tags on all control wires at the point where they connect to the control equipment or to the terminal blocks.

2. Wire labels, if used, shall be of the self-sticking, pre-printed type and of the manufacturer's recommended size for the wire involved. Identification markings designated in the plans shall be followed.

3. Tags, if used, shall be nonferrous metal or plastic. Each tag shall be securely tied to the proper wire by a nonmetallic cord or plastic wire tie.

130-1.5.3 INSTALLATION OF DATA CABLES

a. The Contractor shall install, terminate and test all data cables required for the project. This includes all of the following components: Data cables, terminal cabinets and jumper cables.

b. All associated data cables shall be tested upon completion of the cable installation and termination of connectors.

c. Tests shall include verification of point-point continuity of each wire.

d. All test data shall be recorded and included in a test report that shall be submitted to the engineer for approval.

e. Commissioning of the system shall not begin until all test reports are submitted and approved and a copy provided to ALCMS Manufacturer.

130-1.5.4 CONTRACTOR HARD WIRE DATA CABLE INSTALLATION

a. The Contractor shall install, terminate and test all hard-wire communications required for the project. This includes all of the following components:

1. ALCMS manufacturer specified data cable
2. Data cable termination panels
3. Data cable jumper cables
4. Connectors / couplings
5. Junction boxes

b. All associated cabling, splices and jumper cable shall be tested upon completion of the cable installation and termination of connectors.

c. Tests shall include verification that the signal strength loss is within acceptable limits versus the distance of the cable pull.

d. All test data shall be recorded and included in a test report that shall be submitted to the engineer for approval.

e. Commissioning of the system shall not begin until all test reports have been submitted and approved.

130-1.5.5 CONTRACTOR WIRELESS COMMUNICATION EQUIPMENT INSTALLATION

a. The antenna and lightning protection shall be approved by the ALCMS manufacturer for use with their systems.

b. The antenna mast shall be provided and installed by the electrical contractor.

c. The supply, installation and termination of the interconnecting cable (between the antenna and wireless communication equipment) and associated equipment including connectors and couplings shall be the responsibility of the contractor.

d. The Contractor shall install and terminate all wireless communication equipment required for the project. This includes all of the following components:

1. Antenna(s)
2. Antenna mast(s)
3. RF cable

4. RF connectors
5. Antenna Lightning arrestors
6. Ground connections
7. Wireless Communication Module (Mounted in ARFF building and control tower near Antennas)
8. CAT 5/6 Ethernet cables

e. All associated RF equipment, including antennas and RF cables, shall be tested upon completion of the cable installation and termination of connectors.

f. The tests shall include an impedance check of the RF cable and a VSWR (Voltage Standing Wave Ratio) test.

g. All test data shall be recorded and included in a test report that shall be submitted to the engineer for approval.

h. Commissioning of the system shall not begin until all test reports have been submitted and approved by the ALCMS manufacturer.

130-1.6 ALCMS MANUFACTURER COMMISSIONING

a. The ALCMS Manufacturer shall perform the following installation and commissioning tasks:

1. Verify Contractor connections including power, control and monitoring.
2. Verify proper labeling of equipment.
3. Verify communication connections.
4. Perform system testing including control, monitoring and diagnostics.
5. Training on ALCMS related equipment.
6. Perform System Acceptance Testing (SAT).

130-1.7 SYSTEM ACCEPTANCE TEST (SAT)

a. Following the final installation and commissioning of the system, the ALCMS Manufacturer shall perform a demonstration of the system performance. This demonstration shall include the following:

1. Lighting control functions
2. Monitoring functions
3. Alarm functions
4. Print and Display functions

b. The ALCMS Manufacturer shall develop a SAT test plan in accordance with the specifications and issue this to the contractor for approval from the airport engineer.

c. The SAT shall be witnessed by owner representatives, the contractor and the engineer.

130-1.8 MANUALS

130-1.8.1 MAINTENANCE MANUALS

a. The ALCMS Manufacturer shall provide four (4) hard copies of the operation and maintenance manuals that are hard-covered and suitable for daily operation and maintenance of the system. The manuals shall include the following information:

1. Operational overview and system description
2. Graphical User Interface (GUI) Screen operation
3. System Block Diagram
4. Detailed external wiring diagrams (Electrical Contractor wiring)
5. Detailed input/output terminal diagrams
6. Detailed assembly drawings and wiring diagrams
7. Original Equipment Manufacturer (OEM) Manuals

b. The manuals shall be spiral bound or supplied in 3-ring binders. The cover of each binder shall be labeled with all project-related information.

130-1.8.2 FAA AIR TRAFFIC CONTROL MANUALS

a. The ALCMS Manufacturer shall provide four (4) hard copies of the operation manuals for Air Traffic Controller (ATC) use. The manuals shall be hard-covered and suitable for daily operation of the system. At a minimum, the manuals shall include the following information:

1. Touchscreen operation (graphical user interface)
2. Touchscreen maintenance (i.e. calibration)

b. The manuals shall be spiral bound or supplied in 3-ring binders. The cover of each binder shall be labeled with all project-related information.

130-1.9 AS-INSTALLED DRAWINGS

a. The ALCMS Manufacturer shall provide six (6) hard copies of As-Installed drawings after system acceptance. The As-Installed drawings shall include the following information:

1. System Block Diagram (1-line drawings)
2. System External Wiring Diagrams
3. Assembly Drawings
4. Assembly Wiring Diagrams

b. The As-Installed drawings shall be 11" X 17" in size and shall be spiral bound or supplied in 3-ring binders. The cover of each binder shall be labeled with all project-related information.

130-1.10 ON-SITE TRAINING

a. The ALCMS Manufacturer shall provide to the contractor a final training course syllabus and training schedule thirty (30) days before on-site training.

b. All training sessions shall be held in a facility provided by the airport. This facility should have tables, chairs, projection screen and sufficient space to lay out manuals and drawings. The ALCMS Manufacturer shall provide all required visual aids and projectors.

130-1.10.1 FAA TRAINING

a. The ALCMS Manufacturer shall provide two (2), 1 hour User Training Class for Air Traffic Control (ATC) personnel. ATC Training Coordinator should be present for both classes. This training shall include discussion and review of the following:

1. ALCMS General System Overview
2. Touchscreen Operations
3. Using the Control System (GUI)
4. Command and Control Sequences
5. Alarm and Warning Messages
6. Failsafe Conditions
7. Granting Local Control to the Vaults

b. Training classes for FAA ATC personnel should be limited to a maximum of 4-6 people per class.

130-1.10.2 MAINTENANCE TRAINING

a. The ALCMS Manufacturer shall provide one (1), 8 hour (one day) training class for maintenance personnel. This training shall include discussion and review of the following:

1. System Block Diagram
2. System Assemblies and Wiring Diagrams
3. Touchscreen Operation
4. Graphical User Interface (GUI) Screens
5. Maintenance and Troubleshooting
6. Granting Local Control to the Vaults
7. Power Up and Power Down Sequences
8. Failsafe Operations
9. Implementing Airfield Lighting Changes
10. Maintenance Report Generation

b. Training classes for maintenance personnel should be limited to a maximum of 4-6 people per class.

130-1.11 OWNER SYSTEM ACCEPTANCE AND WARRANTY START DATE

a. Upon successful completion of the SAT and on-site training the owner shall issue the ALCMS Manufacturer a written notice of system acceptance within five (5) working days.

b. The date the final acceptance letter is received or five (5) days following successful completion of the SAT (whichever occurs first) represents the start of the warranty period. Please refer to the Warranty section for more information regarding the ALCMS warranty guarantee.

130-1.12 SYSTEM WARRANTY

a. All equipment shall be warranted against defects in workmanship, hardware and software for a period of one (1) year from final acceptance of the system.

b. During this time period the ALCMS manufacturer shall provide all parts, labor and technical support with the following conditions:

1. The manufacturer shall correct by repair or replacement, at its option, equipment or parts which fail because of mechanical, electrical or physical defects, provided that the goods have been properly handled and stored prior to installation, properly installed and properly operated after installation, provided further that Buyer gives manufacturer written notice of such defects after delivery of the goods to Buyer.

2. The manufacturer may examine any goods upon which a claim is made in the same condition as when defect therein is discovered, and may require the return of the goods to establish any claim.

3. The manufacturer's liability under no circumstances shall exceed the contract price of goods claimed to be defective.

130-1.13 SYSTEM SERVICE AND SUPPORT

a. The ALCMS Manufacturer shall provide technical assistance and support during the warranty period.

b. The ALCMS Manufacturer shall provide a 7 day a week / 24 hours a day support phone line.

c. The ALCMS Manufacturer shall provide technical phone support within four (4) hours of the initial call.

d. The ALCMS Manufacturer shall provide free phone consultation and technical support as required during the warranty period and if necessary shall be on-site within 48 hours.

e. At the request of the airport/owner, the ALCMS Manufacturer shall provide information about preventative maintenance programs and extended warranty packages.

130-1.14 SPARE PARTS

a. A recommended spare parts list shall be included with the Submittal including part numbers and pricing. These prices shall be valid for (12) months from date of system acceptance.

EQUIPMENT AND MATERIALS

130-2.1 GENERAL

a. The ALCMS system shall be a PC-based system. The ALCMS system shall meet the requirement of AC 150/5345-56B. The ALCMS shall include Type B monitoring (control only) and have a Type A failsafe system (preset).

b. An fiber optic communication network shall be used for data transfer between the electrical vault, control tower, and any other designated work station location.

c. At a minimum the system shall have the following major components:

1. Touchscreen control stations located in control tower cab, and in vault building.
2. Equipment enclosures containing PC components, power supplies, and any other required equipment. Enclosures shall be located in vault building and in tower equipment room.

d. The system shall monitor the operation of the various lighting systems per AC 150/5345-10 (current edition) requirements.

e. The ALCMS system shall contain all hardware and software necessary to control the following constant current regulators, airfield lighting, and NAVAIDS:

Control Type	Item
L-828 Constant Current Regulator – 3 Step	CCR 1 – Rwy 4R/22L Edge CCR 2 – Rwy 4L/22R Edge CCR 3 – Taxiway D West Edge CCR 4 – Taxiway D East Edge CCR 5 – Taxiway E West Edge CCR 6 – Taxiway E East Edge CCR 7 – RGL
Contactor – On/Off Control	Beacon Windcone PAPI 4R PAPI 22L PAPI 4L PAPI 22R REIL 4R REIL 22L REIL 4L REIL 22R

130-2.2 UNINTERRUPTABLE POWER SUPPLY

a. Provide uninterruptable power supplies for all components of the ALCMS system, including touch screen control stations, communications equipment, all PC or PLC components, and other miscellaneous components.
b. Uninterruptable power supplies shall provide power to keep all components of the ALCMS system operational for a minimum of 10 minutes in the event of a power failure.

130-2.3 COMMUNICATION NETWORK

a. The tower, and electrical vault computers shall communicate with each other via the following communication networks.

1. Existing fiber optic communications network.

130-2.4 PRESET FAILSAFE

a. Upon a failsafe condition, all ALCMS controlled devices must switch to a pre-defined state.

b. The pre-defined failsafe state shall be per the table below:

Circuit	Failsafe Step
CCR 1 – Rwy 4R/22L Edge CCR 2 – Rwy 4L/22R Edge CCR 3 – Taxiway D West Edge CCR 4 – Taxiway D East Edge CCR 5 – Taxiway E West Edge CCR 6 – Taxiway E East Edge CCR 7 – RGL	2
CCR 8 – Spare CCR 9 – Spare	OFF
Beacon	ON
Windcone PAPI 4R PAPI 22L PAPI 4L PAPI 22R REIL 4R REIL 22L REIL 4L REIL 22R	ON

GRAPHICAL USER INTERFACE OPERATION

130-3.1 GENERAL

a. The Tower Touchscreen display shall control and monitor the airfield lighting system. The display shall show real-time information on the operational status of the airfield lighting systems.

b. The Touchscreen control stations shall consist of multiple Touchscreen 'pages' each with a specific function. These Touchscreen 'pages' are defined as follows:

1. **Preset**: Consists of pre-defined preset buttons used to simplify airfield lighting control commands.
2. **Runway Lights**: Consists of runway control touch buttons used to individually control runway circuits. Multiple runway pages may be necessary for airports with several runways.
3. **Taxiway Lights**: Consists of taxiway control touch buttons used to individually control taxiway circuits if required.
4. **Utilities**: Consists of miscellaneous functions for calibrating the Touchscreen, granting lighting control to other locations, setting the date and time, etc.

c. All preset and control configurations shall be defined by the airport/owner in conjunction with Air Traffic Control requirements.

d. The ALCMS manufacturer shall provide preset tables to be used by the airport/owner to define the configuration settings.

130-3.2 OVERVIEW OF OPERATION

a. Airfield lighting control commands are entered into the system by touching the corresponding touch button on the Touchscreen video display. When a command is entered, the Touchscreen shall respond by graphically displaying the button as being depressed and change the button color.

b. The associated circuit graphics shall alternately flash indicating the airfield lighting section that shall be affected when this command is "confirmed".

c. Once confirmed, the Tower Touchscreen shall register the command, generate a data instruction and transmit the command to the vault computer for implementation. The command is also simultaneously transmitted to the maintenance computer and all other computers connected to the network.

d. The tower Touchscreen shall receive confirmation from the vault that the corresponding equipment has responded to the control command and displays the current system status on the Touchscreen display.

e. In the event that communications is lost between the tower and vault, an alarm is indicated at each computer location.

f. In the event of a predefined alarm condition, the effected airfield lighting circuit graphic shall flash red and an audible alarm tone shall alert operators to the alarm condition.

130-3.3 ALCMS ALARM FUNCTIONS

130-3.3.1 TOUCHSCREEN AUDIBLE ALARM

a. The audible alarm shall sound at each Touchscreen display when an alarm condition occurs. In addition, the 'ALARM ACK' button shall flash and the associated airfield circuit graphics shall change to red.

b. The audible alarm shall stop automatically after three (3) seconds unless the 'ALARM ACK' button is pressed.

c. If the alarm is not acknowledged, the audible shall cease for sixty (60) seconds while the 'ALARM ACK' continues to flash. If the 'ALARM ACK' is still not pressed after the sixty (60) seconds, the audible shall sound again for three (3) seconds.

d. This sequence shall repeat indefinitely until the alarm is acknowledged.

130-3.3.2 CIRCUIT ALARMS

a. The ALCMS shall continuously monitor the status of all of the circuits per the monitoring requirements as specified previously.

b. If there are any monitoring discrepancies (i.e. incorrect CCR output current, loss of primary power) an alarm shall be generated at the Touchscreen display for the associated circuit.

130-3.4 TOUCHSCREEN PRESET SEQUENCES

a. The Touchscreen control station shall allow simultaneous airfield lighting circuit changes to be accomplished using preset lighting sequences.

b. The preset lighting sequences shall be defined by the airport in airfield lighting preset tables.

c. Each preset lighting change shall be based on the following operator inputs:

1. **Active Runway Selection:** Operator selects the runway(s) that shall be active. This is based on runway direction (i.e. "RWY 9")
2. **Day/Night Setting:** Operator selects the day/night setting. The day/night setting shall control the intensity of the circuits.
3. **Visibility:** Operator selects a single visibility setting that is based upon the current airport visibility.
4. **Confirm/Reject:** Operator selects the 'CONFIRM' button to accept the preset selections and initiate the lighting change. Operator selects the 'REJECT' button to cancel the selections and make another preset selection.

d. Upon confirmation of the preset selections, the intensity of all the circuits associated with the preset condition shall automatically change to match the visibility requirement.

e. The preset visibility setting of the CCRs is based on FAA document 7110.65X. Presets shall also be coordinated with the airport and the FAA to properly define airfield lighting operational usage.

f. The visibility settings shall include Intensity and Preset Invalid monitoring. This indicates when a preset or intensity setting on the airfield is different than the selected preset intensity.

g. According to FAA document 7110.65X, the visibility settings for the 5-step CCRs shall be based on the following table:

Visibility	Day (Brightness step)	Night (Brightness step)
Less than 1 mile	5	4
1 to but not including 2 miles	4	3
2 to but not including 3 miles	3	3
3 to 5 miles inclusive	0	2
More than 5 miles	0	1

5-step Regulators

h. According to FAA document 7110.65X, the visibility settings for the 3-step CCRs shall be based on the following table:

Visibility	Day (Brightness step)	Night (Brightness step)
Less than 1 mile	3	2
1 to but not including 2 miles	0	1
2 to but not including 3 miles	0	1
3 to 5 miles inclusive	0	1
More than 5 miles	0	1

3-step Regulators

i. According to FAA document 7110.65X, the visibility settings for the 1-step CCRs shall be based on the following table:

Visibility	Day (Brightness step)	Night (Brightness step)
Less than 1 mile	1	1
1 to but not including 2 miles	0	1
2 to but not including 3 miles	0	1
3 to 5 miles inclusive	0	1
More than 5 miles	0	1

1-step Regulators

j. According to FAA document 7110.65X, the visibility settings for the Rotating Beacon shall be based on the following table:

Visibility	Day (Brightness step)	Night (Brightness step)
Less than 1 mile	ON	ON
1 to but not including 2 miles	ON	ON
2 to but not including 3 miles	ON	ON
3 to 5 miles inclusive	OFF	ON
More than 5 miles	OFF	ON

Beacon

k. The visibility settings for CCR #9 (Rwy Guard Lights) shall be based on the following table:

Visibility	Day (Brightness step)	Night (Brightness step)
Less than 1 mile	3	2
1 to but not including 2 miles	3	1
2 to but not including 3 miles	3	1
3 to 5 miles inclusive	3	1
More than 5 miles	3	1

Rwy Guard Lights Regulator

130-3.5 GRAPHICAL AIRPORT PICTORIAL

a. The ALCMS display screens shall display a graphical pictorial representation of the airport runways, taxiways and other requested airport features.

b. When there is a change in lighting system status, the appropriate graphical detail shall indicate the status by changing color.

130-3.6 VAULT EMERGENCY GENERATOR CONTROL

a. The ALCMS shall provide control of the emergency diesel generator located in the airfield lighting vault from all of the control stations.

b. The ALCMS shall provide one (1) dry-contact output point at the Vault.

c. The ALCMS shall close the output to command the generator ON and open the output to turn the generator OFF.

d. Locating and wiring of the output points within the Generator equipment shall be completed by the Contractor in coordination with the airport/engineer and equipment manufacturer (if required).

130-3.7 VAULT AUTOMATIC TRANSFER SWITH (ATS) AND GENERATOR MONITORING

a. The ALCMS system shall provide the digital inputs to monitor the following feedback points:

1. Utility Available
2. Utility On-line
3. Generator Available
4. Generator On-line
5. Generator Alarm

b. Locating and wiring of the monitoring points within the ATS and generator equipment shall be completed by the contractor in coordination with the airport/engineer and equipment manufacturer.

130-3.8 BEACON CONTROL

a. The ALCMS shall provide control of the rotating beacon from the Tower ALCMS node.

b. The ALCMS shall provide one (1) dry-contact output point at the Tower. The contact shall be rated 1A at 120Vac (min.).

c. The ALCMS shall close the output to command the beacon ON and open the output to turn the beacon OFF. The contractor shall provide an interface relay/contactor to connect power to the beacon.

d. Locating and wiring of the output points within the Beacon equipment shall be completed by the Contractor in coordination with the airport/engineer and equipment manufacturer.

e. The contractor shall install a photoelectric cell on the tower cab roof. The ALCMS shall be configured to allow automatic (photoelectric cell) control or manual control of the rotating beacon. The ALCMS system shall be equipped with an input node for the photoelectric cell.

130-3.9 NAVIGATIONAL AID CONTROL

a. The ALCMS shall provide control of the rotating beacon, windcone, PAPIs and REILs from all of the control stations.

b. The ALCMS shall provide one (1), dry-contact output point(s) at the Vault for each NAVAID.

c. The ALCMS shall close the output to command the device ON and open the output to turn the device OFF.

d. Locating and wiring of the output points within the device shall be completed by the Contractor in coordination with the airport/engineer and equipment manufacturer

130-3.10 RADIO CONTROL ENABLED CONTROL METHODOLOGY

a. The ALCMS shall provide an interface to the L-854 radio control equipment.

b. One (1) button labeled "Radio Control" will be programmed to allow air-to-ground radio control after normal Tower operating hours.

c. When the radio control button is pressed, all preset settings are changed for radio operations according to the preset control methodology.

d. Radio Control preset lighting settings shall be specified by the airport.

130-3.10.1 RADIO CONTROL INTERFACE

1. The ALCMS system shall provide three (3) inputs for Radio Control commands. Radio Control inputs shall be connected to the control system at the vault.

2. The ALCMS shall monitor the inputs and adjust the airfield lighting according to the Radio Control preset table.

3. The ALCMS shall only monitor for the radio control inputs when the "Radio Control" button is enabled at the Tower.

4. Locating and wiring of Radio Control output points shall be completed by the contractor in coordination with the airport/engineer and equipment manufacturer (if required).

130-3.10.2 RADIO CONTROL OPERATIONS

1. The ALCMS system shall interface to the Radio Controller and control the airfield lighting according to the preset control table below.

Touchscreen Button Name	Circuit(s) to Control	Default Step	Low (3 click)	Medium (3 click)	High (3 click)
Radio Control Enabled	CCR 1 – Rwy 4R/22L Edge CCR 2 – Rwy 4L/22R Edge CCR 7 – RGL	1	1	2	3
	CCR 3 – Taxiway D West Edge CCR 4 – Taxiway D East Edge CCR 5 – Taxiway E West Edge CCR 6 – Taxiway E East Edge	OFF	1	2	3
	CCR 7 – Spare CCR 8 – Spare	OFF	OFF	OFF	OFF
	Beacon	AUTO	AUTO	AUTO	AUTO
	Windcone PAPI 4R PAPI 22L PAPI 4L PAPI 22R REIL 4R REIL 22L REIL 4L REIL 22R	OFF	ON	ON	ON

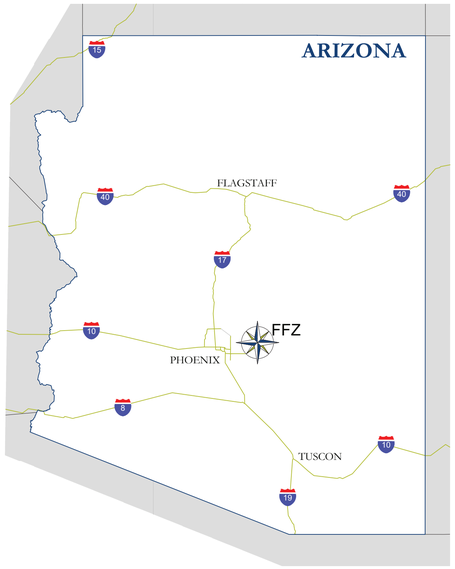
BASIS OF PAYMENT

130-4.1 Payment will be made at the lump sum unit prices. These prices shall be full compensation for furnishing all materials and for all preparation and installation of these materials, and for all labor, equipment, tools, and incidentals, including communications cables and equipment, necessary to complete this item.

Payment will be made under:

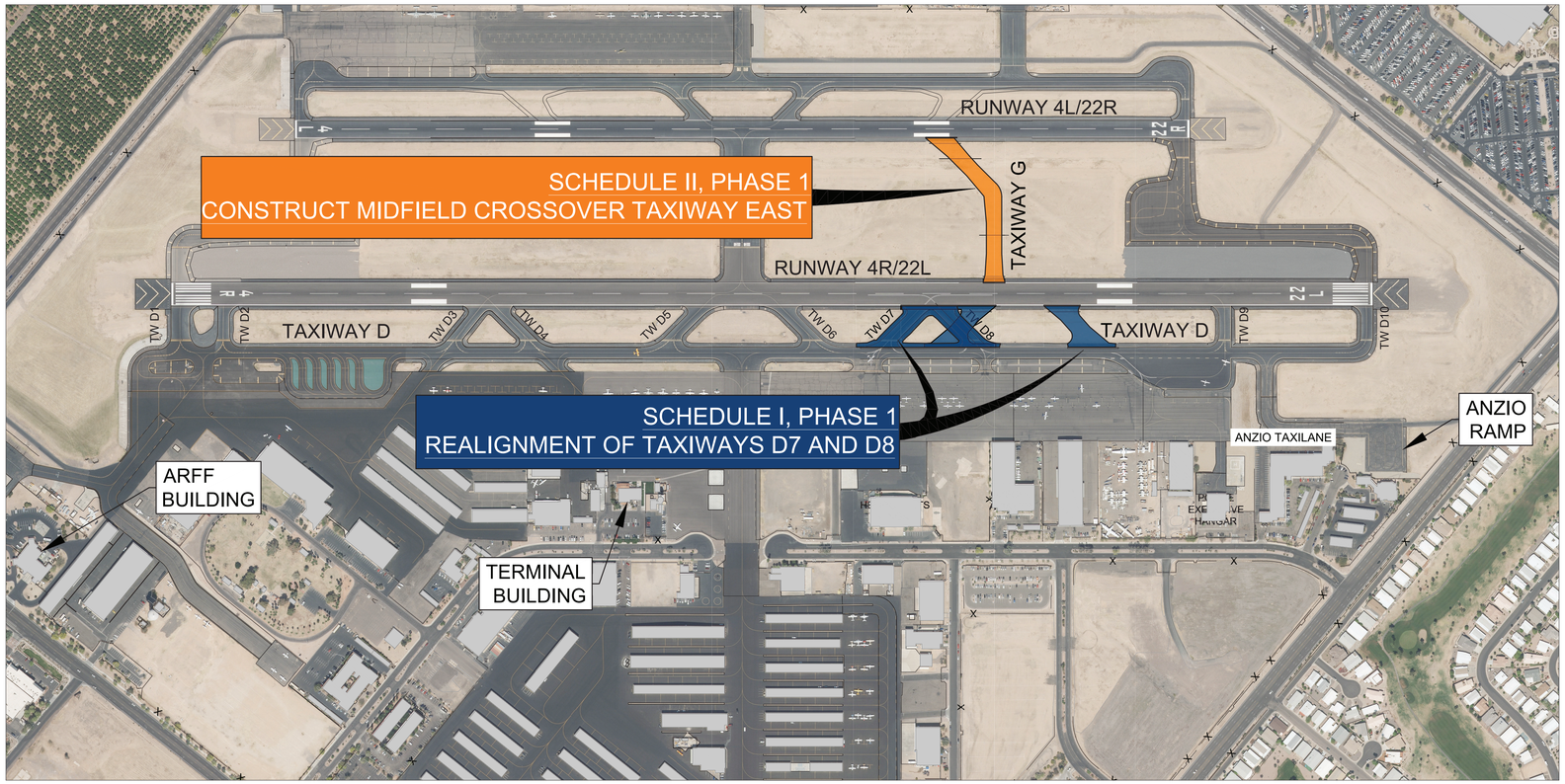
Item L-130a Install L-890 ALCMS, Complete – per lump sum

****END OF ITEM L-130****



CONSTRUCTION PLANS FOR IMPROVEMENTS TO
FALCON FIELD AIRPORT
MESA, ARIZONA
A.I.P. PROJECT NO. 03-04-0023-035-2023
CITY OF MESA DESIGN PROJECT NO. CP0994EAST

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8



APPROVED COPY
CITY OF MESA: ENGINEERING DEPARTMENT
PLAN APPROVAL DOES NOT CONSTITUTE AN APPROVAL OR PERMIT FOR VIOLATION OF ANY PROVISIONS OF THE MAG UNIFORM STANDARD SPECIFICATIONS & DETAILS AS AMENDED BY THE CITY OF MESA.
BY: Kristen Cribb DATE: 05-08-2023
Approved to include Addendum No. 1

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FALCON FIELD AIRPORT

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Mesa - Falcon Field Airport

• SCHEDULE I •
REALIGNMENT OF TAXIWAYS D7 AND D8

• SCHEDULE II •
CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST

• SCHEDULE III •
INSTALL AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS)

GRAPHIC SCALE
300 0 300 600
(IN FEET)
1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 59241 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

COVER SHEET

DRAWING G001

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 1 OF 52

CATALOG NUMBER: A-270520

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G001-COVR.DWG

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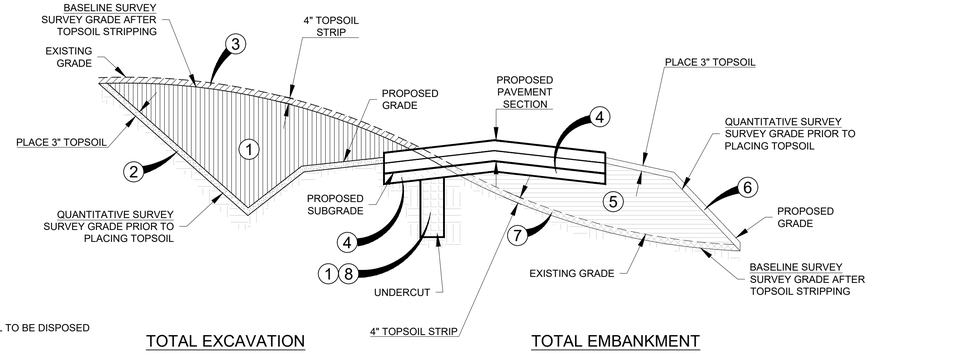
SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNITS	SCHEDULE I		SCHEDULE II		SCHEDULE II	
			ESTIMATE	AS BUILT	ESTIMATE	AS BUILT	ESTIMATE	AS BUILT
GP-50a	CONSTRUCTION SURVEY AND STAKING	LS	1		1		0	
GP-100a	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	LS	1		1		0	
GP-100b	FAA PAVING QC/QA WORKSHOP	LS	1		0		0	
GP-102a	AZPDES PERMIT COMPLIANCE AND SWPPP	LS	1		1		0	
GP-105a	MOBILIZATION	LS	1		1		1	
GTP-10a	EXISTING UTILITY LOCATES	LS	1		1		0	
GTP-20a	AIRFIELD TRAFFIC CONTROL AND BARRICADES	LS	1		1		0	
P-101a	SAWCUT ASPHALT PAVEMENT (4")	LF	1,370		230		0	
P-101b	SAWCUT ASPHALT PAVEMENT (2")	LF	135		65		0	
P-101c	ASPHALT PAVEMENT REMOVAL (FULL DEPTH, 4")	SY	3,300		0		0	
P-101d	ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")	SY	3,255		440		0	
P-101e	ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")	SY	800		85		0	
P-101f	REMOVE STORM SEWER PIPE	LF	416		0		0	
P-101g	REMOVE INLET/OUTLET WITH GRATE	EA	2		0		0	
P-152a	UNCLASSIFIED EXCAVATION	CY	4,235		1,825		0	
P-152b	UNCLASSIFIED EXCAVATION FOR SUBGRADE (8" DEPTH)	CY	1,395		1,300		0	
P-152c	EMBANKMENT FOR UNDERCUT	CY	500		500		0	
P-208a	AGGREGATE BASE COURSE (10" THICK)	SY	3,550		3,480		0	
P-222a	SOIL STERILIZATION	SY	6,270		5,835		0	
P-401a	ASPHALT SURFACE COURSE (3/4", 4" THICK)	SY	3,425		3,325		0	
P-401b	ASPHALT SURFACE COURSE (3/4", 3" THICK)	SY	2,845		2,510		0	
P-401c	ASPHALT SURFACE COURSE (3/4", 2" THICK)	SY	795		85		0	
P-603a	EMULSIFIED ASPHALT TACK COAT	GAL	425		340		0	
P-620a	SURFACE PREPARATION (OBLITERATIONS)	SF	855		0		0	
P-620b	MARKING (TEMPORARY)	SF	13,785		4,520		0	
P-620c	MARKING (PERMANENT)	SF	13,785		4,520		0	
D-701a	23"X14" CLASS V RCP	LF	575		520		0	
D-710a	RIP RAP (D50=6", T=2') UNDERLAIN W/ FILTER FABRIC	CY	10		10		0	
D-751a	INLET STRUCTURE WITH GRATE	EA	4		4		0	
D-751b	OUTLET STRUCTURE WITH GRATE	EA	4		4		0	
T-901a	SEEDING WITH HYDROMULCH	AC	6		3		0	
L-108a	INSTALL #8 AWG L-824C, 5000V WIRE	LF	5,950		5,000		0	
L-108b	INSTALL #6 AWG, BARE COPPER COUNTERPOISE INCLUDING GROUND RODS AND TERMINATIONS	LF	5,400		4,000		0	
L-108c	INSTALL #10 AWG XHHW, 600V WIRE	LF	10,000		2,000		0	
L-110a	INSTALL 1-2" SCH 40 PVC CONDUIT (DEB)	LF	3,400		3,100		0	
L-110b	INSTALL 1-2" SCH 40 PVC CONDUIT (CE)	LF	450		300		0	
L-110c	INSTALL 2-2" SCH 40 PVC CONDUIT (DEB)	LF	900		325		0	
L-110d	INSTALL 2-2" SCH 40 PVC CONDUIT (CE)	LF	200		55		0	
L-110e	INSTALL 4-2" SCH 40 PVC CONDUIT (CE)	LF	260		75		0	
L-115a	REMOVE JUNCTION BOX, COMPLETE	EA	8		0		0	
L-115b	INSTALL L-867E JUNCTION BOX, COMPLETE	EA	8		3		0	
L-125a	REMOVE BASE MOUNTED RUNWAY/TAXIWAY LIGHT, COMPLETE	EA	31		1		0	
L-125b	REMOVE L-858 GUIDANCE SIGN, COMPLETE	EA	6		0		0	
L-125c	INSTALL L-861T LED TAXIWAY EDGE LIGHT, COMPLETE	EA	36		41		0	
L-125d	INSTALL L-861 LED RUNWAY EDGE LIGHT, COMPLETE	EA	1		1		0	
L-125e	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 2 MODULE, COMPLETE	EA	1		1		0	
L-125f	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 3 MODULE, COMPLETE	EA	4		0		0	
L-125g	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 4 MODULE, COMPLETE	EA	2		2		0	
L-125h	INSTALL L-804 LED RUNWAY GUARD LIGHT, COMPLETE	EA	4		4		0	
L-125i	INSTALL L-853 RETROREFLECTIVE MARKER, SURFACE MOUNTED, COMPLETE	EA	8		0		0	
L-125k	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 1 MODULE, COMPLETE	EA	0		1		0	
L-130a	INSTALL L-890 ALCMS, COMPLETE	LS	0		0		1	

EARTHWORK SUMMARY

AREA DESCRIPTION	CUT (CY)	FILL (CY)
SCHEDULE I		
UNCLASSIFIED EXCAVATION	3,735	625
UNCLASSIFIED EXCAVATION FOR UNDERCUT	500	500
P-152a UNCLASSIFIED EXCAVATION	4,235	
P-152B UNCLASSIFIED EXCAVATION FOR SUBGRADE	1,395	
P-152c EMBANKMENT FOR UNDERCUT		500
SCHEDULE II		
UNCLASSIFIED EXCAVATION	1,325	645
UNCLASSIFIED EXCAVATION FOR UNDERCUT	500	500
P-152a UNCLASSIFIED EXCAVATION	1,825	
P-152B UNCLASSIFIED EXCAVATION FOR SUBGRADE	1,300	
P-152c EMBANKMENT FOR UNDERCUT		500



NOTE:
1. EXCESS MATERIAL TO BE DISPOSED OFFSITE..

1 EARTHWORK CALCULATIONS DETAIL (EXCAVATION)
NOT TO SCALE

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

NOTES:

1. P-152a UNCLASSIFIED EXCAVATION QUANTITY INCLUDES THE REMOVAL OF EXISTING BASE MATERIAL AND SOIL BELOW THE EXISTING ASPHALT OR NATIVE SOIL TO REACH THE ELEVATION OF THE TOP OF SUBGRADE. ALSO INCLUDED IN THE UNCLASSIFIED EXCAVATION IS ANY UNDERCUT (OVEREXCAVATION) NECESSARY TO MITIGATE UNSUITABLE SUBGRADE MATERIAL. THE UNDERCUT QUANTITY WAS ASSUMED TO BE ONE FOOT OF MATERIAL OVER ONE-QUARTER OF THE PAVED TAXIWAY AND TAXIWAY SHOULDER AREA.
2. P-152b UNCLASSIFIED EXCAVATION FOR SUBGRADE QUANTITY INCLUDES THE PROCESSING AND COMPACTION OF THE 8" OF SUBGRADE DIRECTLY BELOW THE PROPOSED P-208 MATERIAL. AREAS THAT ARE REMOVED AS UNDERCUT AND REPLACED AS EMBANKMENT FOR UNDERCUT SHALL NOT ALSO RECEIVE PAY FOR P-152b.
3. P-152c EMBANKMENT FOR UNDERCUT QUANTITY REPRESENTS THE ASSUMED EMBANKMENT NECESSARY TO REPLACE UNSUITABLE SUBGRADE MATERIAL(UNDERCUT).
4. ANY UNSUITABLE MATERIAL OR UNCLASSIFIED EXCAVATION MATERIAL NOT USED IN UNDERCUT OR EMBANKMENT OPERATIONS SHALL BE REMOVED AND DISPOSED OF OFF SITE BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO P-152a.
5. THE UNDERCUT QUANTITY ASSOCIATED WITH P-152a AND P-152c WILL NOT BE PAID FOR WITHOUT PRIOR APPROVAL OF THE UNSUITABLE SUBGRADE LIMITS BY THE RPR PRIOR TO MATERIAL REMOVAL.
6. P-222 SOIL STERILIZATION IS TO BE APPLIED IN LOCATIONS WERE NEW PAVEMENT IS INSTALLED OUTSIDE OF EXISTING PAVEMENT AREAS.

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID
2	J.B.W.	05/08/23	ADDENDUM NO 1

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS Date Signed 5/08/23 ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

INDEX OF DRAWINGS AND SUMMARY OF APPROXIMATE QUANTITIES

DRAWING: G002

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET: 2 OF 52

CATALOG NUMBER: A-270521

DATE SAVED: 5/8/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G002-INDX.DWG

GENERAL NOTES

1. IF DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, OR REPRESENT A SIGNIFICANT DIFFERENCE BETWEEN THE PROJECT SPECIFICATIONS/CONSTRUCTION PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL CONTACT THE RESIDENT PROJECT REPRESENTATIVE (RPR) IMMEDIATELY.

2. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.

3. WHENEVER, IN THE PROJECT SPECIFICATIONS/CONSTRUCTION PLANS, THE WORDS "PROVIDE", "FURNISH", "INSTALL", "FURNISH AND INSTALL", OR SIMILAR WORDS ARE USED, IT SHALL BE UNDERSTOOD THAT THE INTENT OF THE PROJECT SPECIFICATIONS/CONSTRUCTION PLANS IS TO PROVIDE FOR THE CONSTRUCTION AND COMPLETION IN EVERY DETAIL THE WORK DESCRIBED. IT IS FURTHER INTENDED THAT THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, SUPPLIES, TESTING, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE DRAWINGS (PLANS), PROJECT SPECIFICATIONS, AND TERMS OF THE CONTRACT.

4. CONTRACTOR SHALL KEEP A SET OF AS-BUILT DRAWINGS ON-SITE AND MAKE AVAILABLE TO THE RPR AT ALL TIMES. AS-BUILT SET SHALL BE SUBMITTED TO THE RPR AT THE COMPLETION OF THE JOB. CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING ALL AS-BUILT INFORMATION DURING THE PROJECT. THE CONTRACTOR SHALL NOTE, AND BRING TO THE RPR'S ATTENTION, ANY DISCREPANCIES BETWEEN THE PROJECT SPECIFICATIONS/CONSTRUCTION PLANS AND ACTUAL FIELD CONDITIONS.

5. ALL DAMAGE TO UTILITIES, PAVEMENT, EQUIPMENT, OR STRUCTURES FROM CONSTRUCTION ACTIVITIES SHALL BE IMMEDIATELY REPORTED TO THE RPR. THE RPR SHALL DETERMINE WHETHER REPAIR OR REPLACEMENT IS NECESSARY. ALL REPAIR METHODS SHALL BE SUBMITTED TO THE RPR FOR REVIEW AND APPROVAL PRIOR TO INITIATING THE WORK. REPAIRS SHALL BE MADE AT NO ADDITIONAL COST TO THE SPONSOR AND TO THE APPROVAL OF THE RPR.

6. THE CONTRACTOR SHALL PROVIDE WORKMANSHIP AND MATERIALS THAT ARE OF GOOD QUALITY AND COMPLY WITH THE REQUIREMENTS OF THE FAA SPECIFICATIONS FOR AIRPORT CONSTRUCTION AND/OR CURRENT UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION AS PUBLISHED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS AND AS AMENDED BY THE CITY OF MESA. ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE AMENDED SPECIFICATIONS AND DETAILS OR AS DIRECTED BY THE RPR ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

7. SWEEPER(S) SHALL BE AVAILABLE AT ALL TIMES TO CLEAN FOREIGN OBJECT DEBRIS (FOD) FROM HAUL ROUTE OR OTHER AREAS ADJACENT TO CONSTRUCTION ACTIVITY. CONTRACTOR SHALL CONSTANTLY MONITOR AIRCRAFT MOVEMENT AREAS FOR FOD AND IMMEDIATELY REMOVE ALL DEBRIS.

8. THE CONTRACTOR SHALL COORDINATE WORK SCHEDULES TO PREVENT ANY CONFLICTING WORK CONDITIONS WITH THE CITY OF MESA UTILITY, TRANSPORTATION AND AIRPORT CREWS.

9. INSPECTIONS WILL BE PROVIDED BY THE CITY OF MESA. THE CONTRACTOR SHALL NOTIFY THE RPR AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION.

10. THE CONTRACTOR SHALL HAVE A MINIMUM OF ONE (1) CURRENT COPY OF THE APPROVED PLANS (INCLUDING ANY CHANGE ORDERS, SUPPLEMENTAL AGREEMENTS, FIELD DIRECTIVES, ETC.), ONE (1) CURRENT COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON SITE AT ALL TIMES.

11. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE RPR.

12. DIMENSIONING FOR LAYOUTS AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWINGS. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE RPR FOR CLARIFICATION AND RECORD DIMENSIONS ON AS-BUILT DRAWINGS

PERMITTING

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO PAY FOR THE COST TO OBTAIN ALL PERMITS REQUIRED.

2. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL PERMITS REQUIRED FOR THE PROJECT TO THE RPR, FOR HIS REVIEW.

3. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CITY OF MESA'S ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM (AZPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE AND SUBMIT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSURE IT'S COMPLIANCE WITH THE AZPDES PERMIT AT ALL TIMES. THE CONTRACTOR SHALL BE REQUIRED TO FILE FOR A NOTICE OF INTENT TO DISCHARGE (NOI) PRIOR TO THE NOTICE TO PROCEED (NTP), AND FOR A NOTICE OF TERMINATION (NOT) AFTER CONSTRUCTION IS COMPLETED.

4. THE CONTRACTOR IS ADVISED THAT A DUST CONTROL PERMIT AND A DUST CONTROL PLAN MAY BE REQUIRED BY THE MARICOPA COUNTY AIR QUALITY DEPARTMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THIS PERMIT, IF NECESSARY, AND COMPLY WITH IT'S REQUIREMENTS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A COPY OF THE DUST CONTROL PERMIT AND DUST CONTROL PLAN TO THE CITY FOR REVIEW.

SITE ACCESS AND STAGING

1. DURING CONSTRUCTION, THE CONTRACTOR SHALL MINIMIZE DISTURBANCES TO ALL CONSTRUCTION AREAS AND ACCESS ROUTES. THIS INCLUDES EQUIPMENT AND VEHICULAR RUTS CREATED IN ANY PAVEMENTS, ANY HAUL/ACCESS ROADS, OR ANY INFIELD/SAFETY AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES OR ROADS. REPAIRS SHALL BE MADE AT NO ADDITIONAL COST TO THE SPONSOR AND TO THE SATISFACTION OF THE RPR. HAUL ROUTE BRIDGES SHALL BE CONSTRUCTED AT HAUL ROUTES CROSSING EXISTING AIRFIELD PAVEMENT. COSTS ASSOCIATED WITH HAUL BRIDGE CONSTRUCTION WILL BE CONSIDERED INCIDENTAL TO MOBILIZATION.

2. BEFORE ESTABLISHING SITE ACCESS AND HAUL ROUTES, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE RPR. WHEN POSSIBLE, ACCESS/HAUL ROUTES SHALL UTILIZE EXISTING ROADS. THE CONTRACTOR SHALL MAINTAIN AIRPORT SECURITY AT ALL TIMES.

3. CONTRACTOR SHALL BE REQUIRED TO PROVIDED NON-POTABLE WATER FOR CONSTRUCTION PURPOSES. CONTRACTOR SHALL BE RESPONSIBLE FOR STORAGE OF NON-PORTABLE WATER. ANY STRUCTURES ERECTED IN SUPPORT OF WATERING OPERATIONS SHALL MEET FAA FAR PART 77 CLEARANCES FOR ALL AIRCRAFT AND BE APPROPRIATELY LIT AS A HAZARD TO THE FLYING PUBLIC. NON-PORTABLE WATER USED SHALL BE INCIDENTAL TO THE PROJECT BID ITEMS.

4. DURING ANY NIGHTTIME OPERATIONS ALL AREA LIGHTING SHALL FACED IN DIRECTIONS AS DIRECTED BY THE RPR. AT NO TIME SHALL LIGHT PLANTS BE LEFT RUNNING WHEN CONSTRUCTION OPERATIONS ARE NOT IN PROCESS.

5. ALL AREAS THAT ARE DISTURBED BY CONTRACTOR OPERATIONS, SHALL BE SEEDED PER T-901 SEEDING AND EROSION CONTROL.

6. ALL CONTRACTOR EMPLOYEES SHALL BE REQUIRED TO PARK IN THE CONTRACTORS DESIGNATED STAGING AREA ONLY AND SHALL BE DRIVEN TO THE PROJECT SITE BY DESIGNATED CONSTRUCTION VEHICLES.

7. CRAWLER TRACKED VEHICLES SHALL NOT BE ALLOWED ON PAVED SURFACES. TRACKED VEHICLES MUST BE MOVED ACROSS PAVED SURFACES ON A WHEELED VEHICLE.

8. WHENEVER CONSTRUCTION TRAFFIC IS REQUIRED TO CROSS AN ACTIVE RUNWAY, TAXIWAY, TAXILANE, OR INTERRUPT NORMAL TRAFFIC FLOW ON APRONS OR RAMPS, THE CONTRACTOR SHALL PROVIDE FLAGGERS AT THE CROSSING(S) AS REQUIRED BY THE CONSTRUCTION PHASING DRAWINGS OR AS DIRECTED BY THE RPR OR THE AIRPORT (INCIDENTAL TO ITEM C-105).

UTILITIES

1. PRIOR TO COMMENCING WORK, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY AGENCIES, UTILITY NOTIFICATION CENTERS, AND TO FIELD VERIFY THE LOCATIONS AND DEPTHS, THROUGH UTILITY LOCATES AND POTHOLES, OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS, STAGING, AND HAUL ROUTE AREAS.

2. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL NOT BE SCALED FOR EXACT LOCATION. LOCATION OF EXISTING DUCT BANK, CIRCUITING, UTILITIES AND STRUCTURES SHOWN ON THESE DRAWINGS IS BASED ON AVAILABLE INFORMATION AND IS NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL OF THESE ITEMS ARE SHOWN.

3. CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE APPROPRIATE UTILITY AGENCIES WHEN WORKING ON OR WITHIN THE PROXIMITY OF AN AGENCIES UTILITY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

4. ANY INTERRUPTION OF AN EXISTING SYSTEM OR UTILITY SERVICE SHALL BE COORDINATED AND APPROVED BY THE AIRPORT AND THE AUTHORITY, AGENCY, OR UTILITY HAVING JURISDICTION, PRIOR TO STARTING WORK INCLUDING CONTACTING THE AIRPORT AND FAA.

5. CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES. REPAIRS DEEMED NECESSARY BY THE RPR WILL BE COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE SPONSOR. SEE SECTION 50 OF THE PROJECT SPECIFICATIONS AND THE "CONSTRUCTION STAKING AND LAYOUT" NOTES CONTAINED IN THESE GENERAL NOTES SHEETS FOR ADDITIONAL NOTES REGARDING UTILITY LOCATES.

SUBMITTALS

1. THE CONTRACTOR SHALL SUBMIT A DETAILED LISTING OF ALL SUBMITTALS (E.G., MIX DESIGNS, MATERIAL CERTIFICATION, AND PRODUCT INFORMATION) AND SHOP DRAWINGS REQUIRED BY THE TECHNICAL SPECIFICATIONS.

2. THE CONTRACTOR SHALL REVIEW THE PROJECT SPECIFICATIONS SECTION 100-05 FOR SUBMITTAL SCHEDULE REQUIREMENTS.

TRAFFIC CONTROL

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING ALL REQUIRED TRAFFIC CONTROL FOR THE PROJECT'S ACCESS LOCATIONS, INCLUDING ANY REQUIREMENTS OF ADOT, CITY OF MESA, OR MARICOPA COUNTY. ALL ASSOCIATED COSTS ARE INCIDENTAL TO CONSTRUCTION AND WILL NOT BE PAID SEPARATELY.

MATERIAL SUPPLY AND DISPOSAL

1. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE AIRPORT PROPERTY AT NO COST TO THE SPONSOR UNLESS OTHERWISE DIRECTED BY THE SPONSOR.

EROSION CONTROL

1. THE STORMWATER BMPS SHOWN IN THE ISSUED FOR CONSTRUCTION EROSION CONTROL SHEETS ARE TO BE USED AS A GUIDE FOR THE CONTRACTOR WHEN DEVELOPING HIS/HER STORMWATER POLLUTION PREVENTION PLAN. FIELD CONDITIONS MAY WARRANT MORE, LESS OR DIFFERENT BMP INSTALLATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP A STORMWATER AND EROSION CONTROL PLAN THAT MEETS ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS ASSOCIATED WITH THE STORMWATER PERMIT.

2. SILT AND SEDIMENT SHALL BE REMOVED AFTER EACH SUBSTANTIAL RAINFALL.

3. NEGATIVE IMPACTS TO DOWNSTREAM AREAS CAUSED BY CONSTRUCTION ARE TO BE MONITORED AND CORRECTED BY THE CONTRACTOR. ANY OFF-SITE CLEAN-UP, DIRECTED BY RPR (INCLUDING STREET CLEANING), SHALL BE COMPLETED WITHIN 24-HOURS OF WRITTEN INSTRUCTION, OR RISK CONSTRUCTION STOPPAGE.

4. TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL SUCH TIME AS ALL TRIBUTARY-DISTURBED AREAS ARE SUFFICIENTLY STABILIZED IN THE OPINION OF THE RPR, TO MINIMIZE EROSION POTENTIAL.

5. WHEN TEMPORARY EROSION CONTROL MEASURES ARE REMOVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP AND REMOVAL OF ALL SEDIMENT AND DEBRIS FROM ALL DRAINAGE AND OTHER PUBLIC FACILITIES.

6. ALL AREAS FOR SEEDING SHALL BE TILLED TO BREAK UP ROOTING RESTRICTIVE LAYERS, HAVE A MINIMUM OF 4" OF TOPSOIL REAPPLIED, AND THEN BE HARROWED, AND ROLLED OR PACKED, TO PREPARE THE REQUIRED FIRM SEED BED.

QUANTITIES

1. ALL STATED QUANTITIES ARE CONSIDERED APPROXIMATE. ACTUAL QUANTITIES WILL BE DETERMINED BY THE RPR FROM WORK IN-PLACE.

2. ACTUAL RATES OF APPLICATION WILL BE DETERMINED BY THE RPR.

3. ALL PAVEMENT REMOVAL SHALL BE MEASURED AND PAID TO NEAT LINE DIMENSIONS.

4. IF THE CONTRACTOR CHOOSES TO OVERBUILD PAVEMENT LAYERS BEYOND THE DIMENSIONS SHOWN ON THE PLANS FOR CONSTRUCTABILITY, NO PAYMENT WILL BE MADE FOR THIS ADDITIONAL MATERIAL.

5. THE FOLLOWING RATES WERE USED TO CALCULATE ESTIMATED QUANTITIES:

   5.1. ASPHALT REMOVAL IS BASED ON SQUARE YARD REGARDLESS OF ASPHALT DEPTH.

   5.2. BITUMINOUS TACK COAT AT THE RATE OF 0.10 GAL. PER SQUARE YARD PER LIFT.

CONSTRUCTION STAKING AND LAYOUT

1. THE CONTRACTOR SHALL PROVIDE VERIFICATION SURVEY TO RPR FOR ALL LOCATIONS WHERE PROPOSED CONSTRUCTION WILL TIE INTO ANY EXISTING STRUCTURES AND PAVEMENTS. THIS SURVEY SHALL BE USED FOR VERIFICATION OF EXISTING CONDITIONS AND SHALL BE SUBMITTED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES IN THE AREAS OF THE EXISTING INFRASTRUCTURE. WORK IN THESE AREAS SHALL NOT BE ALLOWED TO COMMENCE UNTIL THIS SURVEY VERIFICATION HAS BEEN SUPPLIED BY THE CONTRACTOR TO THE RPR AND HAS PROVIDED ACCEPTANCE, BASED ON A TIMELY REVIEW OF THE VERIFICATION SURVEY.

2. REQUIRED VERIFICATION/AS-BUILT SURVEY SHALL BE PROVIDED ELECTRONICALLY IN AN APPROVED FORMAT AND SHALL INCLUDE POINT NUMBER, NORTHING, EASTING, ELEVATION, AND DESCRIPTION (PNEZD, COMMA DELIMITED FORMAT).

3. DAILY FIELD SURVEY NOTES SHALL BE GIVEN TO THE RPR SO THAT PERIODIC CHECKS FOR CONFORMANCE WITH PLAN GRADES, ALIGNMENTS, AND GRADE TOLERANCES CAN BE REVIEWED.

4. SUBGRADE BLUE TOPS AT 50-FOOT STATIONS WITH A 50-FOOT OFFSET DISTANCE (MAXIMUM) AND AT THE EDGE OF PAVEMENT.

5. SUBBASE AND BASE COURSE BLUE TOPS AT 50-FOOT STATIONS WITH A 50-FOOT OFFSET DISTANCE (MAXIMUM) AND AT THE EDGE OF PAVEMENT.

6. PAVEMENT AREAS:

   6.1. EDGE OF PAVEMENT HUBS AND TACKS (FOR STRINGLINE BY CONTRACTOR) AT 100-FOOT STATIONS

   6.2. BETWEEN LIFTS AT 25-FOOT STATIONS FOR RUNWAYS (EACH PAVING LANE WIDTH), TAXIWAYS (EACH PAVING LANE WIDTH), AND HOLDING AREAS (EACH PAVING LANE WIDTH)

   6.3. AFTER FINISH PAVING OPERATIONS AT 50-FOOT STATIONS (FOR GRADE ACCEPTANCE VERIFICATION) AT ALL PAVED AREAS AT THE EDGE OF EACH PAVING LANE AND ALL GRADE BREAKS PRIOR TO NEXT PAVING LOT

   6.4. SHOULDER AND SAFETY AREA BLUE TOPS AT 50-FOOT STATIONS AND AT ALL BREAK POINTS WITH MAXIMUM OF 50-FOOT OFFSETS

7. ADDITIONAL STAKES OR MARKINGS SHALL BE REQUIRED AT AN INTERVAL TO CLEARLY DEFINE GRADES FOR SUB-GRADE AND ALL MATERIAL LIFTS REQUIRED FOR THE PAVEMENT STRUCTURE INCLUDING ALL SUBBASES, BASES, AND PAVEMENTS. ADDITIONAL STAKING AND CONTROLS SHALL BE PLACED AS NEEDED FOR CONSTRUCTION TO MEET THE DESIGN AS REQUIRED BY THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS. IN ADDITION TO LOCATIONS STATED ABOVE, STAKING FOR LAYOUT AND SURVEY FOR GRADE VERIFICATIONS SHALL BE PROVIDED AT LOCATIONS OF ALL SPOT ELEVATIONS WHEN PROVIDED FOR IN THE PLANS.

8. THE ESTABLISHMENT OF SURVEY CONTROL AND/OR REESTABLISHMENT OF SURVEY CONTROL SHALL BE BY A STATE LICENSED LAND SURVEYOR.

9. CONTROLS AND STAKES DISTURBED OR SUSPECT OF HAVING BEEN DISTURBED SHALL BE CHECKED AND/OR RESET AS DIRECTED BY THE RPR WITHOUT ADDITIONAL COST TO THE OWNER.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 59247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GENERAL NOTES

DRAWING G003

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 3 OF 52

CATALOG NUMBER: A-270522

DATE SAVED: 2/25/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G003-GENR.DWG

MASTER LEGEND

SITE

- EXISTING PAVEMENT
- EXISTING CENTERLINE
- 1385 EXISTING INDEX CONTOUR
- 1386 EXISTING INTERMEDIATE CONTOUR
- 1385 PROPOSED INDEX CONTOUR
- 1386 PROPOSED INTERMEDIATE CONTOUR
- PROJECT GRADING LIMITS
- EXISTING SWALE FLOW LINE
- X EXISTING FENCE
- XXXXXXXXXXXX INDICATED PAINT OBLITERATION ITEM
- ASPHALT PAVEMENT REMOVAL
- ASPHALT PAVEMENT SHOULDER REMOVAL
- ASPHALT PAVEMENT REMOVAL
- FULL DEPTH ASPHALT PAVEMENT
- FULL DEPTH ASPHALT PAVEMENT
- PARTIAL DEPTH ASPHALT PAVEMENT
- EXISTING PAINT
- PROPOSED WHITE PAINT
- PROPOSED YELLOW PAINT
- PROPOSED GREEN PAINT
- PROPOSED BLACK PAINT

GENERAL INFORMATION

- PACS - PRIMARY AIRPORT CONTROL STATION
- SACS - SECONDARY AIRPORT CONTROL STATION
- PROJECT TEMPORARY SURVEY CONTROL POINT
- RUNWAY END MONUMENT
- B-01 BORE/CORE HOLES
- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRCRAFT ROUTE
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- X AOA FENCE
- FLASHER BARRICADE
- RUNWAY CLOSURE X
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS
- 1384.40 / 1384.38 DESIGN ELEVATION / EXISTING ELEVATION
- 230.50 / 230.47 PROFILE BAND
- EXISTING ELEVATION
- PROPOSED ELEVATION

STORM SEWER

- PROPOSED STORM PIPE
- PROPOSED INLET / OUTLET STRUCTURE
- PROPOSED RIPRAP (D50 = 9", T = 18")
- STORM PIPE
- C EXISTING STORM INLET
- EXISTING STORM FLARED END SECTION (F.E.S.)

EROSION CONTROL

- SA HM SEEDING WITH HYDROMULCH
- SCE STABILIZED CONSTRUCTION ENTRANCE
- IP INLET PROTECTION

ELECTRICAL

- EXISTING TAXIWAY EDGE LIGHT
- EXISTING RUNWAY EDGE LIGHT
- EL ELECTRICAL LINE TO BE REMOVED
- RUNWAY EDGE LIGHT TO BE REMOVED
- TAXIWAY EDGE LIGHT TO BE REMOVED
- JUNCTION BOX TO BE REMOVED

ABBREVIATIONS

AB	ABANDONED
AC	ACRE
ADG	AIRPORT DESIGN GROUP
ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION
ARFF	AIRPORT RESCUE AND FIRE FIGHTING
AOA	AIRPORT OPERATIONS AREA
APS	ARIZONA PUBLIC SERVICE CO.
BMPS	BEST MANAGEMENT PRACTICES
BP	BEGINNING POINT OF ALIGNMENT
C	CURVE
CL	CENTERLINE
CY	CUBIC YARD
Δ	DELTA ANGLE
DIP	DUCTILE IRON PIPE
DIW	DIRTY INDUSTRIAL WASTE
E	EASTING COORDINATE
EA	EACH
EDB	ELECTRICAL DUCT BANK
EF	EACH FACE EL ELEVATION
EL	ELECTRICAL LINES
EOP	EDGE OF PAVEMENT
EP	ENDING POINT OF ALIGNMENT
EW	EACH WAY
FAA	FEDERAL AVIATION ADMINISTRATION
FES	FLARED END SECTION
FFZ	FALCON FIELD AIRPORT
FID	FLIGHT INFORMATION DUCT (FAA)
FOD	FOREIGN OBJECT DEBRIS
FOMO	FIXED OR MOVEABLE OBJECT
GAL	GALLON
HDPE	HIGH DENSITY POLYETHYLENE PIPE
ID	INSIDE DIAMETER
ILS	INSTRUMENT LANDING SYSTEM
INV	INVERT
INT	INTERSECTION
JFD	JET FUEL DISTRIBUTION
L	LENGTH
LF	LINEAL FEET
LLWAS	LOW LEVEL WIND SHEAR ALERT SYSTEM
LS	LUMP SUM
MGAL	THOUSAND GALLON
MH	MANHOLE
MO	MONTH
N	NORTHING COORDINATE
NGS	NATURAL GAS
NO.	NUMBER
NOAA	NATIONAL OCEANOGRAPHIC & ATMOSPHERIC ADMINISTRATION
NIC	NOT IN THIS CONTRACT
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD LINES
OS	OFFSET FROM ALIGNMENT
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PB	ELECTRICAL PULL BOX
PC	POINT OF CURVATURE
PCR	POINT OF REVERSE CURVATURE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PPVC	PERFORATED UNDERDRAIN PIPE
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVATURE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
ROFA	RUNWAY OBJECT FREE AREA
RPR	RESIDENT PROJECT REPRESENTATIVE
RPZ	RUNWAY PROTECTION ZONE
RSA	RUNWAY SAFETY AREA
RW	RUNWAY
SAF	SANITARY SEWER (FORCE MAIN)
SAG	SANITARY SEWER (GRAVITY)
SDG	STORM WATER DRAINAGE (GRAVITY)
SF	SQUARE FEET
SHT	SHEET
SOI	SAND/OIL INTERCEPTOR
SPA	SPACES
STA	STATION
STL	STEEL
SY	SQUARE YARD
T1F	TYPE 1 DE-ICING FLUID
TW	TAXIWAY
TOFA	TAXIWAY OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA
TYP	TYPICAL
UG	UNDERGROUND
UMH	UNDERDRAIN MANHOLE
VC	VERTICAL CURVE
VSR	VEHICLE SERVICE ROAD
WMD	WASTE WATER MANAGEMENT
WWF	WELDED WIRE FABRIC

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS Date Signed 3/06/23 ARIZONA, U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

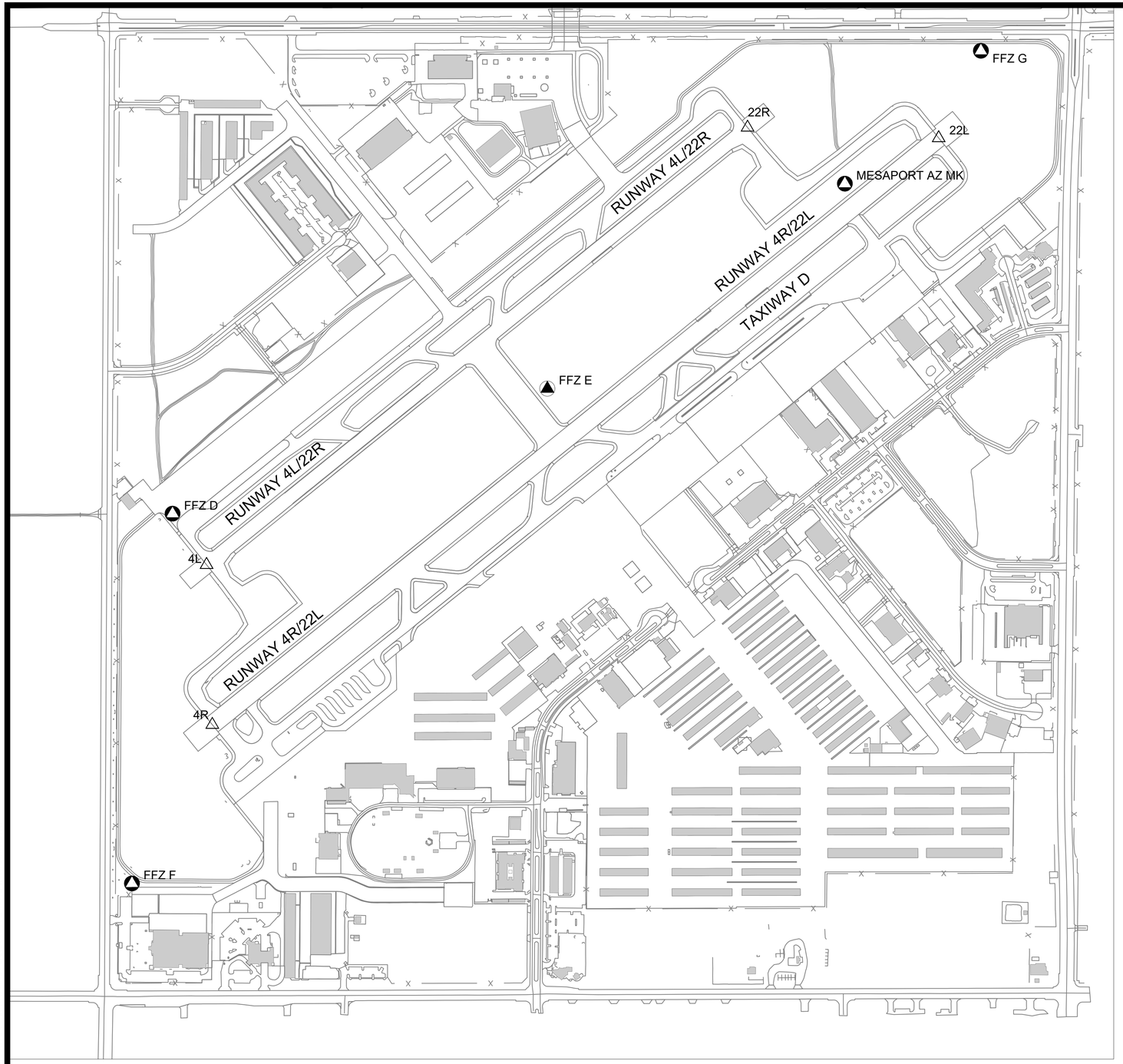
MASTER LEGEND AND ABBREVIATIONS

DRAWING: G004

SHEET: 4 OF 52

CATALOG NUMBER: A-270523

DATE SAVED: 2/24/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G004-LGND.DWG



PROJECT DATUM STATEMENT

COORDINATE SYSTEM: NAD83 (2011)
ARIZONA STATE PLANE CENTRAL ZONE 0202 (MODIFIED SEE BELOW)
UNITS: INTERNATIONAL SURVEY FEET (iFT)
GEOID MODEL: GEOID18

PROJECT COORDINATES ARE MODIFIED STATE PLANE GROUND COORDINATES.
PROJECT BROUGHT TO GROUND AT STATION FFZ E (PACS)

LAT: 33°27'39.36620" N
LONG: 111°43'41.07146" W

GROUND SCALE FACTOR: 1.0001575300

ELLIPSOID HEIGHT: 1281.18 FT
NAVD88 ELEVATION: 1378.17 FT (VERTICAL BM)

FFZ E, THE PRIMARY AIRPORT CONTROL STATION (PACS), IS TO BE HELD AS THE SITE VERTICAL BENCHMARK.

LAST SURVEY WAS COMPLETE BY JVIATION ON 10/22/2022

SURVEY NOTES:

1. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL VERIFY AIRPORT AND PROJECT CONTROL POINTS PRIOR TO CONSTRUCTION ACTIVITIES AND REPORT DISCREPANCIES TO THE ENGINEER.
3. CONTRACTOR SHALL PROTECT AND PRESERVE THE AIRPORT SURVEY CONTROL STATIONS.
4. IF THE PROJECT TEMPORARY SURVEY CONTROL IS DISTURBED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING NEW TEMPORARY CONTROL POINTS AS NECESSARY.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

GRAPHIC SCALE
150 0 150 300
(IN FEET)
1 " = 300' FULL SIZE
1" = 150' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

AIRPORT SURVEY CONTROL DATA

POINT NAME	PID	NORTHING	EASTING	ELEVATION	DESCRIPTION
FFZ E (PACS)	DL6293	895288.66	757514.78	1378.17 (BM)	STAINLESS STEEL ROD
MESAPORT AZ MK (SACS)	DU2236	896408.25	759139.46	1390.55 (V)	BRASS CAP
FFZ D (SACS	AC6815	894605.59	755467.48	1364.23 (P)	BRASS CAP
FFZ G (SACS)	DL6295	897134.04	759882.69	1390.50 (G)	STAINLESS STEEL ROD
FFZ F (SACS)	DL6294	892585.52	755245.75	1363.20 (G)	STAINLESS STEEL ROD

(BM) ELEVATION BENCHMARK, (G) GPS DERIVED ELEVATION, (P) PUBLISHED ELEVATION, (V) VERIFIED ELEVATION

RUNWAY END DATA

RW END	NORTHING	EASTING	ELEVATION	DESCRIPTION
04R	893454.76	755685.81	1365.5 (G)	BRASS TAB - WOOLPERT 2018
22L	896659.62	759653.71	1394.0 (G)	BRASS CAP
04L	894328.23	755654.49	1365.7 (G)	BRASS CAP
22R	896717.20	758609.74	1386.1 (G)	BRASS CAP

(BM) ELEVATION BENCHMARK, (G) GPS DERIVED ELEVATION, (P) PUBLISHED ELEVATION

SURVEY LEGEND

- PACS - PRIMARY AIRPORT CONTROL STATION
- SACS - SECONDARY AIRPORT CONTROL STATION
- RUNWAY END MONUMENT

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
60775
VICTOR
ARMENTA
DATE SIGNED 3-8-23
ARIZONA U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

SURVEY CONTROL PLAN

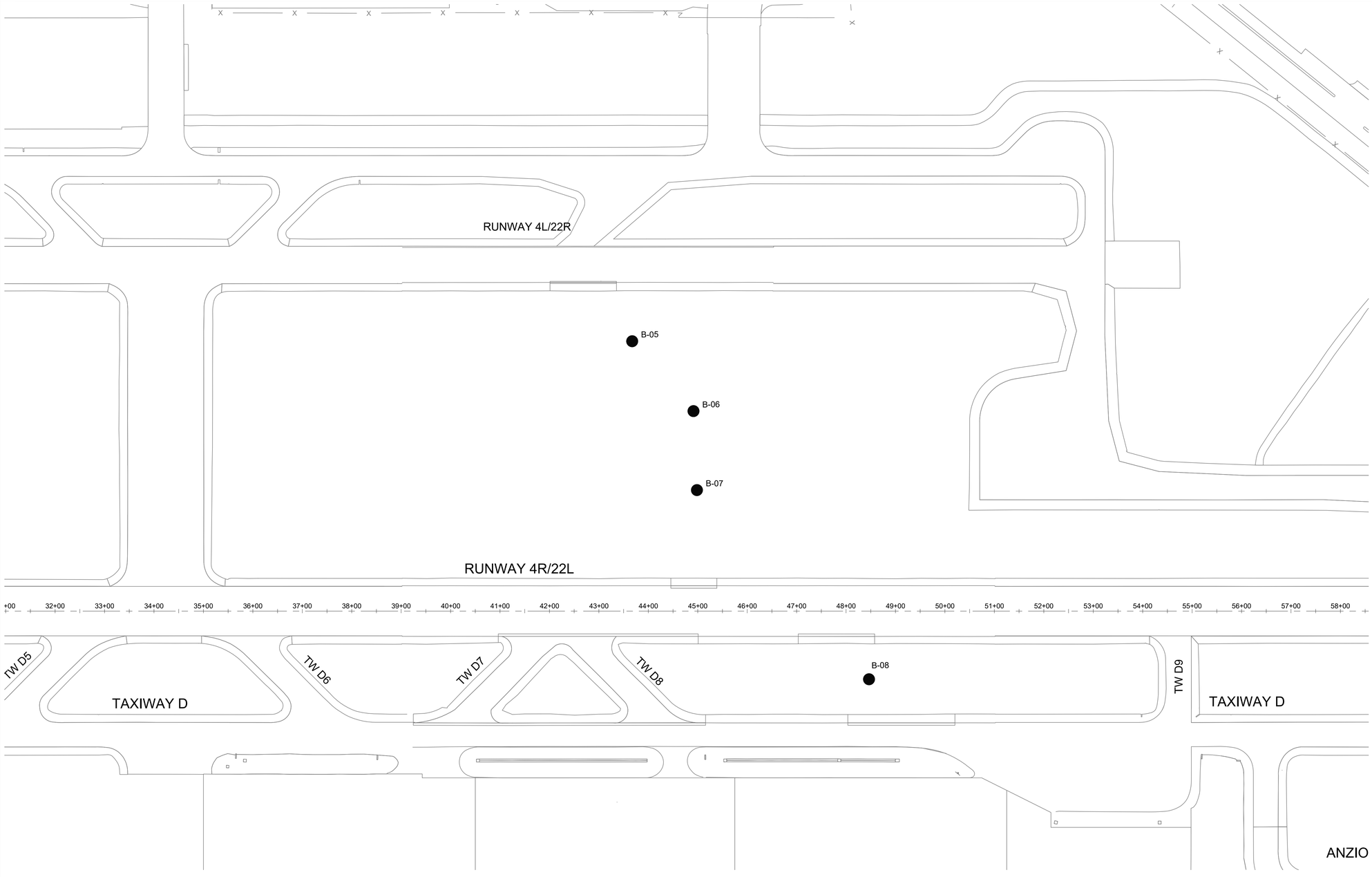
DRAWING G005

SHEET 5 OF 52

CATALOG NUMBER: A-270524

L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G005-SURV.DWG

DATE SAVED: 3/8/23



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

GEOTECHNICAL LEGEND

B-1 BORE HOLE LOCATION

GEOTECHNICAL INVESTIGATION NOTES

1. FIELD INVESTIGATION COMPLETED ON 01/12/23 BY SPEEDIE AND ASSOCIATES.
2. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.
3. REFER TO CONSTRUCTION SAFETY PLAN FOR SAFETY REQUIREMENTS.
4. THE BORING INFORMATION PROVIDED IS FOR INFORMATIONAL PURPOSES ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING EXISTING CONDITIONS AS NECESSARY PRIOR TO THE START OF CONSTRUCTION.

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 100' FULL SIZE
1" = 50' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE NO.
69247
JON BRYCE WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: ---
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GEOTECHNICAL INVESTIGATION PLAN AND BORE LOG LOCATIONS

DRAWING G020

SHEET 6 OF 52

CATALOG NUMBER: A-270525

DATE SAVED: 3/2/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G020-BORE.DWG

SOIL LEGEND

SAMPLE DESIGNATION		DESCRIPTION	
	AS	**Auger Sample**	A grab sample taken directly from auger flights.
	BS	**Large Bulk Sample**	A grab sample taken from auger spoils or from bucket of backhoe.
	S	**Spoon Sample**	Standard Penetration Test (ASTM D-1586) Driving a 2.0 inch outside diameter split spoon sampler into undisturbed soil for three successive 6-inch increments by means of a 140 lb. weight free falling through a distance of 30 inches. The cumulative number of blows for the final 12 inches of penetration is the Standard Penetration Resistance.
	RS	**Ring Sample**	Driving a 3.0 inch outside diameter spoon equipped with a series of 2.42-inch inside diameter, 1-inch long brass rings, into undisturbed soil for one 12-inch increment by the same means of the Spoon Sample. The blows required for the 12 inches of penetration are recorded.
	LS	**Liner Sample**	Standard Penetration Test driving a 2.0-inch outside diameter split spoon equipped with two 3-inch long, 3/8-inch inside diameter brass liners, separated by a 1-inch long spacer, into undisturbed soil by the same means of the Spoon Sample.
	ST	**Shelby Tube**	A 3.0-inch outside diameter thin-walled tube continuously pushed into the undisturbed soil by a rapid motion, without impact or twisting (ASTM D-1587).
	--	**Continuous Penetration Resistance**	Driving a 2.0-inch outside diameter "Bullnose Penetrometer" continuously into undisturbed soil by the same means of the spoon sample. The blows for each successive 12-inch increment are recorded.

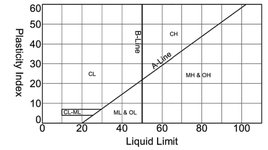
CONSISTENCY			RELATIVE DENSITY	
Clays & Silts	Blows/Foot	Strength (tons/sq ft)	Sands & Gravels	Blows/Foot
Very Soft	0 - 2	0 - 0.25	Very Loose	0 - 4
Soft	2 - 4	0.25 - 0.5	Loose	5 - 10
Firm	5 - 8	0.5 - 1.0	Medium Dense	11 - 30
Stiff	9 - 15	1 - 2	Dense	31 - 50
Very Stiff	16 - 30	2 - 4	Very Dense	> 50
Hard	> 30	> 4		

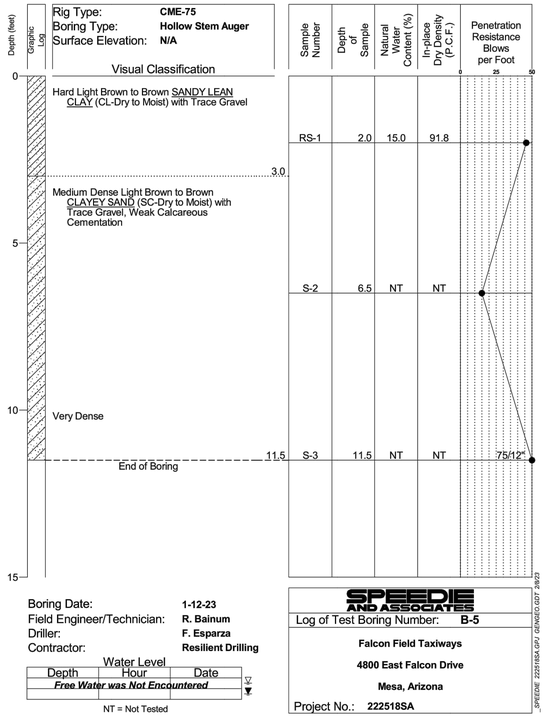
MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS: MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE			GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE			SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS: MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL OR MODIFIED SYMBOLS MAY BE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS OR TO PROVIDE A BETTER GRAPHICAL PRESENTATION OF THE SOIL

MATERIAL SIZE	PARTICLE SIZE Lower Limit mm	Lower Limit Sieve Size ♦	Upper Limit mm	Upper Limit Sieve Size ♦
SANDS Fine	0.075	#200	0.42	#40
Medium	0.420	#40	2.00	#10
Coarse	2.000	#10	4.75	#4
GRAVELS Fine	4.75	#4	19	0.75" ×
Coarse	19	0.75" ×	75	3" ×
COBBLES	75	3" ×	300	12" ×
BOULDERS	300	12" ×	900	36" ×

♦U.S. Standard ×Clear Square Openings





Boring Date: 1-12-23
Field Engineer/Technician: R. Bainum
Driller: F. Esparza
Contractor: Resilient Drilling

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

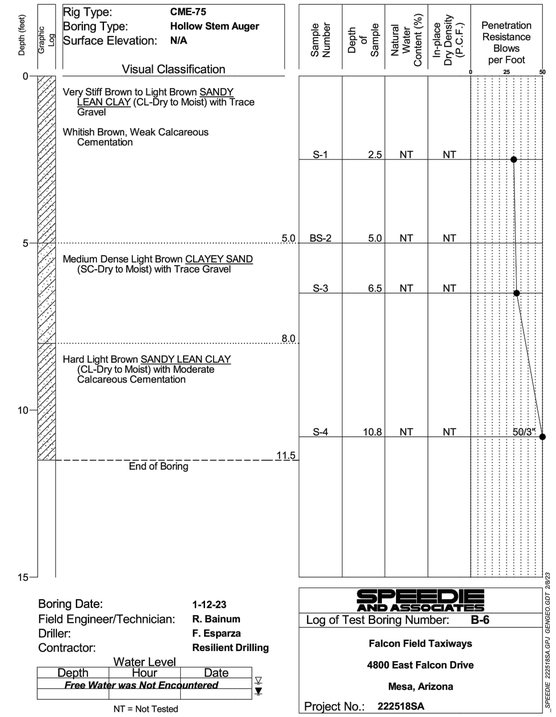
SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-5**

Falcon Field Taxiways
4800 East Falcon Drive
Mesa, Arizona

Project No.: **222518SA**

_SPEEDIE 222518SA.GPJ GENGEO.GDT 3/8/23



Boring Date: 1-12-23
Field Engineer/Technician: R. Bainum
Driller: F. Esparza
Contractor: Resilient Drilling

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

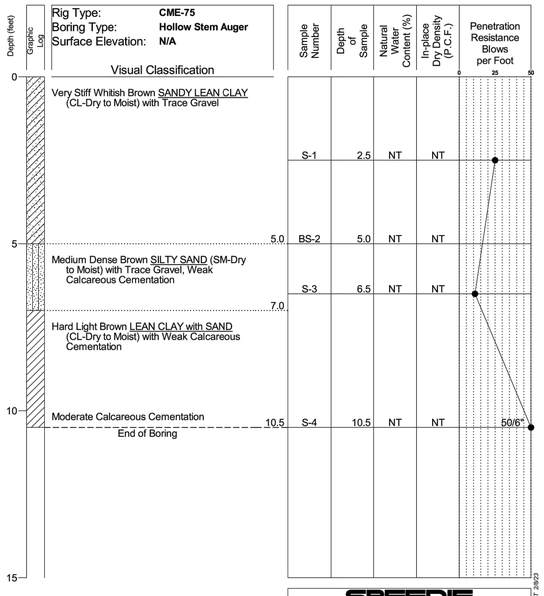
SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-6**

Falcon Field Taxiways
4800 East Falcon Drive
Mesa, Arizona

Project No.: **222518SA**

_SPEEDIE 222518SA.GPJ GENGEO.GDT 3/8/23



Boring Date: 1-12-23
Field Engineer/Technician: R. Bainum
Driller: F. Esparza
Contractor: Resilient Drilling

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

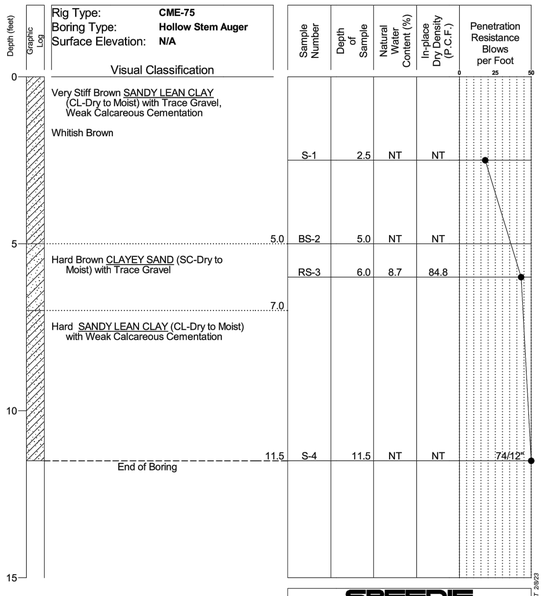
SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-7**

Falcon Field Taxiways
4800 East Falcon Drive
Mesa, Arizona

Project No.: **222518SA**

_SPEEDIE 222518SA.GPJ GENGEO.GDT 3/8/23



Boring Date: 1-12-23
Field Engineer/Technician: R. Bainum
Driller: F. Esparza
Contractor: Resilient Drilling

Water Level

Depth	Hour	Date
Free Water was Not Encountered		

NT = Not Tested

SPEEDIE AND ASSOCIATES

Log of Test Boring Number: **B-8**

Falcon Field Taxiways
4800 East Falcon Drive
Mesa, Arizona

Project No.: **222518SA**

_SPEEDIE 222518SA.GPJ GENGEO.GDT 3/8/23

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 59247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GEOTECHNICAL INVESTIGATION BORE LOGS

DRAWING: G021

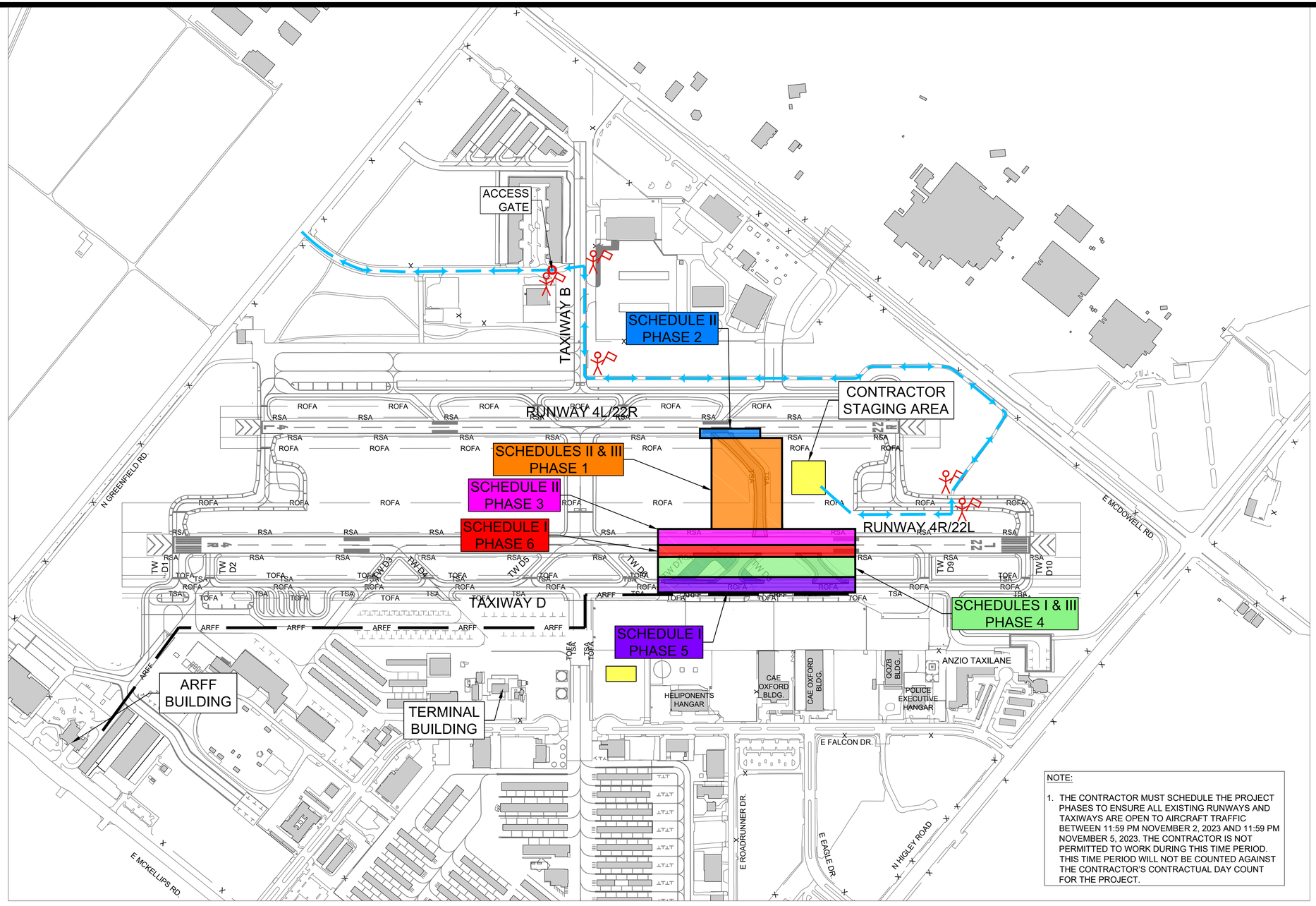
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: _____
PROJ. NO.: CP0994

SHEET: 7 OF 52

CATALOG NUMBER: A-270526

DATE SAVED: 3/2/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G020-BORE.DWG

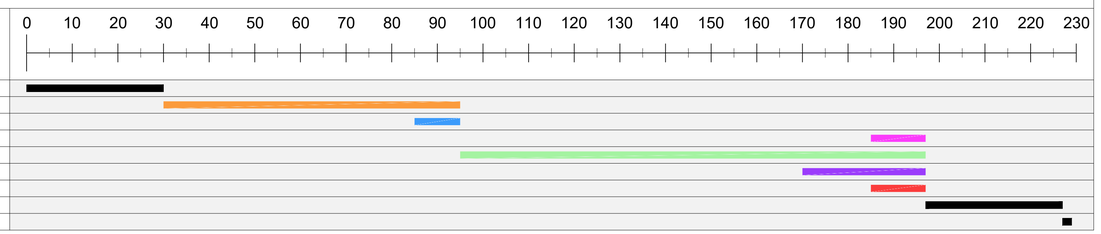


NOTE:

1. THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

PROJECT SCHEDULE

SCHEDULE / PHASE	DURATION
ADMINISTRATIVE PHASE	30 CALENDAR DAYS
SCHEDULES II & III, PHASE 1	65 CALENDAR DAYS
SCHEDULE II, PHASE 2	10 CALENDAR DAYS
SCHEDULE II, PHASE 3	12 CALENDAR DAYS
SCHEDULES I & III, PHASE 4	102 CALENDAR DAYS
SCHEDULE I, PHASE 5	27 CALENDAR DAYS
SCHEDULE I, PHASE 6	12 CALENDAR DAYS
PERMANENT PAINT DELAY	30 CALENDAR DAYS
PERMANENT PAINT	2 CALENDAR DAYS



SAFETY & OBJECT FREE AREAS

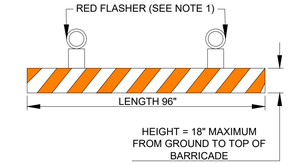
RUNWAY 4R/22L B-II	
RUNWAY SAFETY AREA (RSA)	75' FROM RW CENTERLINE
RUNWAY EXTENDED SAFETY AREA (RSA)	300' FROM RW END
RUNWAY OBJECT FREE AREA (ROFA)	250' FROM RW CENTERLINE
RUNWAY 4L/22R B-I	
RUNWAY OBJECT FREE AREA (RSA)	60' FROM RW CENTERLINE
RUNWAY EXTENDED SAFETY AREA (RSA)	240' FROM RW END
RUNWAY OBJECT FREE AREA (ROFA)	125' FROM CENTERLINE
TAXIWAYS G, D7 AND D8 (ADG II, TDG-2A)	
TAXIWAY SAFETY AREA (TSA)	79'
TAXIWAY OBJECT FREE AREA (TOFA)	124'

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRPLANE HAUL ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLGGER / GATE GUARD
- CONTRACTOR GATE ACCESS



1. FLASHER BARRICADES WILL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR AT ALL TIMES. CONTRACTOR SHALL ALSO PROVIDE SPARE BARRICADES, BATTERIES, AND LIGHT BULBS FOR MAINTENANCE DURING NIGHTTIME HOURS.
2. LOW-PROFILE BARRICADES TO BE PLACED WITH 10' INTERVALS ADJACENT TO CONSTRUCTION, AS DIRECTED BY THE RPR/FALCON FIELD.
3. BARRICADES ARE TO BE PLACED IN LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE RPR/FALCON FIELD THROUGHOUT ALL PHASES OF THE PROJECT. THE BARRICADE LOCATIONS PROVIDED ON THIS SHEET SHALL REMAIN THROUGHOUT CONSTRUCTION. ADDITIONAL BARRICADES WILL BE REQUIRED ACROSS PHASE SPECIFIC AREAS OF CLOSED PAVEMENT, AND ARE SHOWN ON PHASING SHEETS.
4. FLASHER BARRICADES WILL BE REQUIRED ALONG THE EDGE OF ANY VERTICAL DROP OFF GREATER THAN 3". AIRPORT OPERATIONS WILL ISSUE NOTAM TO ADVISE AIRCRAFT OF THIS CONDITION
5. FLASHER BARRICADES ARE TO BE ADEQUATELY WEIGHTED SO THEY WILL REMAIN IN PLACE DURING TIMES OF HIGH WINDS OR AS APPROVED BY THE RPR/FALCON FIELD.

1 FLASHER BARRICADE
NTS

GRAPHIC SCALE
300 0 300 600
(IN FEET)
1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69241 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CONSTRUCTION SAFETY DRAWING OVERALL SCHEDULES AND PHASE PLAN

DRAWING G050

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 8 OF 52

CATALOG NUMBER: A-270527

DATE SAVED: 3/10/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\0000-FFZ-MCTE-G050-CPLN.DWG

1. COORDINATION

ALL COORDINATION WILL TAKE PLACE THROUGH THE RPR/FALCON FIELD. NO CLOSURES WITHIN THE MOVEMENT AREAS WILL BE PERMITTED WITHOUT A NOTAM IN PLACE FOR EACH SPECIFIC CLOSURE. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL GIVE 72 HOURS ADVANCE NOTICE TO THE RPR/FALCON FIELD FOR FILING OF ALL NOTAMS.

A WEEKLY CONSTRUCTION PROGRESS MEETING WILL BE REQUIRED TO DISCUSS ALL OPERATIONAL SAFETY TOPICS THAT HAVE BEEN AFFECTED OR WILL BE AFFECTED IN THE NEAR FUTURE.

ANY CHANGES TO SCOPE OR SCHEDULE MUST BE NOTIFIED TO THE RPR IMMEDIATELY. ALL PARTIES WILL EVALUATE THE IMPACT OF THE CHANGE AND WILL DETERMINE THE MEASURES NEEDED TO MAINTAIN A SAFE CONSTRUCTION SITE.

THE FAA AIR TRAFFIC OPERATORS WILL BE NOTIFIED IMMEDIATELY IF ANY CHANGES AFFECT AIRCRAFT MOVEMENT. ALL COMMUNICATIONS WITH THE FAA TOWER WILL BY HANDLED BY AIRPORT OPERATIONS.

AIRPORT RUNWAYS AND TAXIWAYS SHOULD REMAIN IN USE BY AIRCRAFT TO THE MAXIMUM EXTENT POSSIBLE.

AIRCRAFT USE OF AREAS NEAR THE CONTRACTOR'S WORK SHOULD BE CONTROLLED TO MINIMIZE DISTURBANCE TO THE CONTRACTOR'S OPERATION.

CONSTRUCTION THAT IS WITHIN THE SAFETY AREA OF AN ACTIVE RUNWAY, TAXIWAY, OR APRON MUST BE PERFORMED WHEN THE RUNWAY, TAXIWAY, OR APRON IS CLOSED OR USE-RESTRICTED AND INITIATED ONLY WITH PRIOR PERMISSION FROM THE AIRPORT OPERATOR AND WITH PROPER NOTAMS IN PLACE.

THE CONTRACTING OFFICER, AIRPORT OPERATOR, OR OTHER DESIGNATED AIRPORT REPRESENTATIVE MAY ORDER THE CONTRACTOR TO SUSPEND OPERATIONS; MOVE PERSONNEL, EQUIPMENT, AND MATERIALS TO A SAFE LOCATION; BARRICADE ANY OPEN TRENCHES AND STAND BY UNTIL AIRCRAFT USE IS COMPLETED.

2. PHASING

THIS PROJECT CONSISTS OF 3 PHASES. SEE CONSTRUCTION SAFETY DRAWINGS FOR PHASING REQUIREMENTS.

3. AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION ACTIVITY

ALL WORK WITHIN AIRPORT OPERATIONS AREA (AOA) SHALL CONFORM TO ADVISORY CIRCULAR 150/5370-2G, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

CONTRACTOR SHALL ADHERE TO REQUIREMENTS AS MENTIONED ON THIS SHEET, THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPP), AND CONSTRUCTION SAFETY DRAWINGS. THESE REQUIREMENTS INCLUDE, BUT ARE NOT LIMITED TO, LIFE & SAFETY ACCESS ROUTES, AIRCRAFT ROUTES, PEDESTRIAN ROUTES, CONSTRUCTION ACCESS ROUTES, CONSTRUCTION LIMITS, AND BARRICADE LOCATIONS.

4. CONTRACTOR ACCESS

CONTRACTOR HAS ACCESS TO ONE (1) GATE TO ENTER THE AIRPORT. SEE CONSTRUCTION SAFETY DRAWINGS FOR GATE LOCATION. CONTRACTOR SHALL PROVIDE A GATE GUARD AT THIS GATE AT ALL TIMES WHEN GATE IS NOT CLOSED AND LOCKED.

CONTRACTOR MOVEMENT SHALL BE RESTRICTED TO THE PRE-DETERMINED ACCESS ROUTES AS SHOWN ON CONSTRUCTION SAFETY DRAWINGS.

ALL VEHICLES AND EQUIPMENT OPERATING IN THE AOA MUST BE IDENTIFIED CLEARLY WITH 8-INCH (MINIMUM) BLOCK-TYPE CHARACTERS OF A CONTRASTING COLOR AND EASY TO READ.

ALL VEHICLES AND EQUIPMENT OPERATING IN THE AOA MUST HAVE FLAG (DAY ONLY) OR BEACON (DAY AND NIGHT) ATTACHED TO THE VEHICLE.

VEHICLE TRAFFIC LOCATED IN OR CROSSING AN ACTIVE MOVEMENT AREA MUST BE ESCORTED BY AIRPORT OPERATIONS WHO WILL BE IN RADIO CONTACT WITH THE TOWER. THE DRIVER, THROUGH PERSONAL OBSERVATION, SHOULD CONFIRM THAT NO AIRCRAFT IS APPROACHING THE VEHICLE POSITION. CONTRACTOR PERSONNEL MAY OPERATE IN THE MOVEMENT AREA WITHOUT TWO-WAY RADIO COMMUNICATION PROVIDED A NOTAM IS ISSUED CLOSING THE AREA AND THE AREA IS PROPERLY MARKED TO PREVENT INCURSIONS. CONTINUOUS MONITORING IS REQUIRED ONLY WHEN EQUIPMENT MOVEMENT IS NECESSARY IN CERTAIN AREAS. CONTRACTOR SHALL NOT COMMUNICATE DIRECTLY WITH THE TOWER OR CTAF. ALL TOWER COMMUNICATION SHALL BE PERFORMED BY AIRPORT OPERATIONS.

CONTRACTOR IS REQUIRED TO NOTIFY AND COORDINATE WITH THE RPR AND AIRPORT OPERATIONS PRIOR TO ENTERING ANY ACTIVE SURFACE SAFETY AREAS OR OBJECT FREE AREAS.

CONTRACTOR, SUBCONTRACTOR, AND SUPPLIER EMPLOYEES OR ANY UNAUTHORIZED PERSONS ARE RESTRICTED FROM ENTERING AN AIRPORT AREA THAT WOULD BE HAZARDOUS.

5. WILDLIFE MANAGEMENT

CONTRACTOR SHALL ADHERE TO ALL WILDLIFE MANAGEMENT PRACTICES AS STATED IN ADVISORY CIRCULAR 150/5200-33B, HAZARDOUS WILDLIFE ATTRACTIONS ON OR NEAR AIRPORTS, AND CERTALERT 98-08, GRASSES ATTRACTIVE TO HAZARDOUS WILDLIFE.

CONTRACTOR IS RESPONSIBLE FOR COMPLETING A DAILY INSPECTION FOR TRASH, FOREIGN OBJECTS, AND STANDING WATER ON THE CONSTRUCTION SITE THAT MIGHT ATTRACT WILDLIFE.

CONTRACTOR SHALL MAINTAIN ALL FENCES AND GATES THROUGHOUT THE PROJECT TO THE SATISFACTION OF THE RPR.

CONTRACTOR SHALL NOTIFY THE RPR WHEN A WILDLIFE SIGHTING HAS OCCURRED ON THE PROJECT SITE.

6. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

CONTRACTOR SHALL KEEP ALL PAVEMENTS IN THE AOA INCLUDING APRONS, TAXIWAYS, AND RUNWAYS FREE FROM FOD AT ALL TIMES TO PREVENT ANY DEBRIS FROM BEING INGESTED INTO AN AIRCRAFT'S ENGINE OR ANY DEBRIS FROM BEING LAUNCHED DUE TO JET BLAST.

CONTRACTOR IS REQUIRED TO CONTINUOUSLY MONITOR AND MAINTAIN FOD TO THE SATISFACTION OF THE RPR.

PRIOR TO OPENING ANY PAVEMENT TO AIRCRAFT, THE CONTRACTOR, RPR, AND AIRPORT OPERATIONS SHALL CONDUCT A SWEEP OF THE PAVEMENT TO VERIFY THAT THE PAVEMENT IS FREE FROM FOD.

THE CONTRACTOR IS ADVISED THAT DUST CONTROL, CLEANUP OF ACTIVE PAVEMENTS, TRACKING DEBRIS ONTO ACTIVE PAVEMENT AND GENERAL JOBSITE CLEANLINESS IS A SERIOUS SAFETY CONCERN. FOREIGN OBJECT DEBRIS (FOD) IS CONSIDERED AS ANY ITEM THAT COULD POSSIBLY IMPACT THE OPERATIONS OF AN AIRPORT OR ROADWAY. FOD COULD CAUSE INJURY OR DEATH THROUGH INGESTION IN MOVING AIRCRAFT ENGINES. SPECIFIC ITEMS OF CONCERN INCLUDE, BUT ARE NOT LIMITED TO; ANY PACKAGING FROM MATERIAL INSTALLATION, GRAVEL LEFT ON ACTIVE PAVEMENTS, DUST TRACKED ONTO ACTIVE PAVEMENTS, HAND TOOLS, HARDWARE DROPPED, ETC.

7. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT

CONTRACTOR SHALL NOTIFY RPR AND AIRPORT EMERGENCY PERSONNEL IF HAZARDOUS MATERIALS ARE ENCOUNTERED ON THIS PROJECT.

8. NOTIFICATION OF CONSTRUCTION ACTIVITIES

AGENCY NAME	AGENCY TYPE	TELEPHONE
AIRPORT EMERGENCY	24 HOUR AIRPORT OPERATIONS	(640) 540-6612 OR 911
MESA POLICE DEPARTMENT	SHERIFF / POLICE	(480) 644-2211 OR 911
MESA FIRE DEPARTMENT	FIRE RESCUE	(480) 644-2211 OR 911
MOUNTAIN VISTA MEDICAL CENTER	GENERAL HOSPITAL	(480) 358-6100 OR 911
AIRPORT ADMINISTRATION/ BADGING	AIRPORT ADMINISTRATION	(480) 644-2450
AIRPORT OPERATIONS	AIRPORT OPERATIONS	(480) 644-2450

BEFORE BEGINNING ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR MUST, THROUGH THE RPR AND AIRPORT OPERATIONS, GIVE NOTICE USING THE NOTICE TO AIRMEN (NOTAM) SYSTEM OF PROPOSED LOCATION, TIME, AND DATE OF COMMENCEMENT OF CONSTRUCTION. ALL NOTAMS SHALL BE ISSUED BY RPR/FALCON FIELD. UPON COMPLETION OF WORK AND RETURN OF ALL SUCH AREAS TO STANDARD CONDITIONS, THE CONTRACTOR MUST COORDINATE WITH THE RPR AND VERIFY THE CANCELLATION OF ALL NOTICES ISSUED VIA THE NOTAM SYSTEM. THROUGHOUT THE PROJECT DURATION , THE CONTRACTOR MUST:

A. BE AWARE OF AND UNDERSTAND THE SAFETY PROBLEMS AND HAZARDS DESCRIBED IN ADVISORY CIRCULAR 150/5370-2G, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
B. CONDUCT ACTIVITIES SO AS NOT TO VIOLATE ANY SAFETY STANDARDS CONTAINED IN ADVISORY CIRCULAR 150/5370-2G OR ANY OF THE REFERENCES THEREIN.
C. INSPECT ALL CONSTRUCTION AND STORAGE AREAS AS OFTEN AS NECESSARY TO BE AWARE OF CONDITIONS.
D. PROMPTLY TAKE ALL ACTIONS NECESSARY TO PREVENT OR REMEDY ANY UNSAFE OR POTENTIALLY UNSAFE CONDITIONS AS SOON AS THEY ARE DISCOVERED.
E. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS, PROVISIONS, AND PROCEDURES OUTLINED IN CONSTRUCTION SAFETY PHASING PLAN.

8. NOTIFICATION OF CONSTRUCTION ACTIVITIES (CONTINUED)

ANY CHANGES TO SCOPE OR SCHEDULE MUST BE NOTIFIED TO THE RPR AND AIRPORT OPERATIONS SO THAT NOTAMS CAN BE ISSUED, MAINTAINED, AND CANCELED.

IN AN EVENT OF AN EMERGENCY, CONTRACTOR SHALL NOTIFY THE RPR, AIRPORT OPERATIONS, AND AIRPORT EMERGENCY.

9. INSPECTION REQUIREMENTS

CONTRACTOR SHALL COMPLETE A DAILY INSPECTION FOR SAFETY ON THE PROJECT SITE BY COMPLETING THE CHECKLIST PROVIDED IN ADVISORY CIRCULAR 150/5370-2G, APPENDIX D, CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST.

THE CONTRACTOR, RPR AND AIRPORT OPERATIONS MUST PERFORM ONSITE INSPECTIONS THROUGHOUT THE PROJECT, WITH IMMEDIATE REMEDY OF ANY DEFICIENCIES, WHETHER CAUSED BY NEGLIGENCE, OVERSIGHT, OR SCOPE CHANGE.

CONTRACTOR SHALL COMPLETE A FINAL INSPECTION FOR SAFETY ON THE PROJECT SITE AT THE END OF EACH PHASE.

10. APPROACH CLEARANCE TO RUNWAYS

RUNWAY THRESHOLDS MUST PROVIDE AN UNOBSTRUCTED APPROACH SURFACE OVER EQUIPMENT AND MATERIALS. (REFER TO CHAPTER 3 IN ADVISORY CIRCULAR 150/5300-13A, AIRPORT DESIGN, FOR GUIDANCE.

11. RUNWAY AND TAXIWAY VISUAL AIDS

FLASHER BARRICADES, ARE TO BE PLACED AS DETAILED IN THE PLANS AND IN ALL DESIGNATED AREAS AS SHOWN ON THE CONSTRUCTION SAFETY DRAWINGS.

APPROVED FLASHER BARRICADES SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR.

CONTRACTOR TO COVER ALL TAXIWAY EDGE LIGHTS, TAXIWAY SIGNS, RUNWAY SIGNS, AND APRON EDGE LIGHTS FOR AREAS CLOSED BY NOTAM TO THE APPROVAL OF THE RPR.

12. MARKING AND SIGNS FOR ACCESS ROUTES

ALL REQUIRED SIGNS AND MARKINGS SHALL CONFORM TO ADVISORY CIRCULAR 150/5340-18G, STANDARD FOR AIRPORT SIGN SYSTEMS, OR THE FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

ALL SIGNS ADJACENT TO AREAS USED BY AIRCRAFT MUST COMPLY WITH THE FRANGIBLE REQUIREMENTS AS STATED IN ADVISORY CIRCULAR 150/5220-23A, FRANGIBLE CONNECTIONS.

13. HAZARD MARKINGS AND LIGHTING

PRIOR TO CLOSING ANY AREAS IN THE AOA TO AIRCRAFT OR EMERGENCY TRAFFIC, CONTRACTOR MUST CLEARLY DEFINE CLOSED AREAS WITH WARNING LIGHTS, BARRICADES, CLOSED 'X' MARKINGS, RCMS, AND FLAGS TO THE APPROVAL OF THE RPR. CONTRACTOR TO REFER TO CONSTRUCTION SAFETY DRAWINGS.

HAZARDOUS AREAS ON THE MOVEMENT AREA WILL BE MARKED WITH FLASHER BARRICADES. THESE BARRICADES RESTRICT ACCESS AND MAKE HAZARDS OBVIOUS TO AIRCRAFT, PERSONNEL, AND VEHICLES. DURING PERIODS OF LOW VISIBILITY AND AT NIGHT, IDENTIFY HAZARDOUS AREAS WITH RED FLASHING LIGHTS.

OPEN TRENCHES AND EXCAVATIONS MUST BE PROMINENTLY MARKED WITH RED OR ORANGE FLAGS AND LIGHTS AS APPROVED BY THE RPR.

14. PROTECTION OF RUNWAY AND TAXIWAY AREAS

SAFETY AREAS - CONTRACTOR SHALL NOT IMPEDE ON THE SAFETY AREAS WITHOUT A CLOSURE OF THE RUNWAY/TAXIWAY BY MEANS OF A NOTAM.

OBJECT FREE AREAS - CONTRACTOR SHALL NOT PLACE EQUIPMENT, MATERIAL, OR STOCKPILES IN THIS AREA. ALL OBJECTS OR MATERIALS ADJACENT TO THIS AREA SHALL BE PROPERLY MARKED/LIT PER ADVISORY CIRCULAR 150/5370-2G. CONTRACTOR CANNOT WORK IN ACTIVE TAXIWAY OBJECT FREE AREA WITHOUT WING WALKERS TO MAINTAIN A 5' CLEARANCE FROM THE WINGSPAN OF THE AIRCRAFT TO CONSTRUCTION EQUIPMENT OR MATERIAL.

OBSTACLE FREE ZONE- CONTRACTOR TO PREVENT PERSONNEL, MATERIAL, AND/OR EQUIPMENT FROM PENETRATING THE OBSTACLE FREE ZONE AS DEFINED IN ADVISORY CIRCULAR 150/5300-13A.

15. AIRPORT SECURITY

CONTRACTOR SHALL ADHERE TO AIRPORT SECURITY REQUIREMENTS AT ALL TIMES. SECURITY IDENTIFICATION BADGES AND RELATED AIRPORT FAMILIARIZATION REQUIREMENTS ARE MANDATORY. KEY CONSTRUCTION SUPERINTENDENTS AND ANY OTHER PERSONNEL DEEMED NECESSARY BY THE AIRPORT SHALL BE REQUIRED TO BE BADGED BY THE AIRPORT, AT THE EXPENSE OF THE CONTRACTOR PRIOR TO CONSTRUCTION. UNBADGED CONSTRUCTION PERSONNEL SHALL BE ESCORTED AT ALL TIMES DURING AIRSIDE CONSTRUCTION.

16. OTHER LIMITATIONS ON CONSTRUCTION

PROHIBITING OPEN-FLAME WELDING OR TORCH CUTTING OPERATIONS UNLESS ADEQUATE FIRE SAFETY PRECAUTIONS ARE PROVIDED AND THESE OPERATIONS HAVE BEEN AUTHORIZED BY THE AIRPORT OPERATOR (AS TAILORED TO CONFORM TO LOCAL REQUIREMENTS AND RESTRICTIONS).

PROMINENTLY MARKING OPEN TRENCHES, EXCAVATIONS, AND STOCKPILED MATERIALS AT THE CONSTRUCTION AND LIGHTING THESE OBSTACLES DURING HOURS OF RESTRICTED VISIBILITY AND DARKNESS.

MARKING AND LIGHTING CLOSED, DECEPTIVE, AND HAZARDOUS AREAS ON AIRPORTS, AS APPROPRIATE. CONSTRAINING STOCKPILED MATERIAL TO PREVENT ITS MOVEMENT AS A RESULT OF THE MAXIMUM ANTICIPATED AIRCRAFT BLAST AND FORECAST WIND CONDITIONS.

NO USE OF TALL EQUIPMENTS (CRANES, CONCRETE PUMPS, AND SO ON) UNLESS A FAA 7460-1 DETERMINATION LETTER IS ISSUED FOR SUCH EQUIPMENT.

NO USE OF ELECTRICAL BLASTING CAPS ON OR WITHIN 1,000' OF THE AIRPORT PROPERTY.

NO USE OF FLARE POTS WITHIN THE AOA.

17. DUST CONTROL

CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST FROM THE CONSTRUCTION SITE AT ALL TIMES. CONTRACTOR SHALL HAVE A WATER TRUCK AND OPERATOR AVAILABLE 24 HOURS A DAY TO CONTROL DUST. THE PROJECT'S LOCATION IS NEAR ACTIVE RUNWAYS AND HIGHWAYS AND IS IN A LOCATION THAT EXPERIENCES HIGH WIND. IT IS CRITICAL FOR THE CONTRACTOR TO KEEP DUST TO AN ABSOLUTE MINIMUM BOTH DURING CONSTRUCTION, AND AFTER CONSTRUCTION UNTIL THE EXPOSED SURFACES CONTAIN SUSTAINABLE VEGETATION. CONTRACTOR SHALL PROVIDE THE RPR AND AIRPORT OPERATIONS WITH A CONTACT FOR 24 HOUR DUST CONTROL.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CONSTRUCTION SAFETY PLAN SAFETY NOTES

DRAWING G051

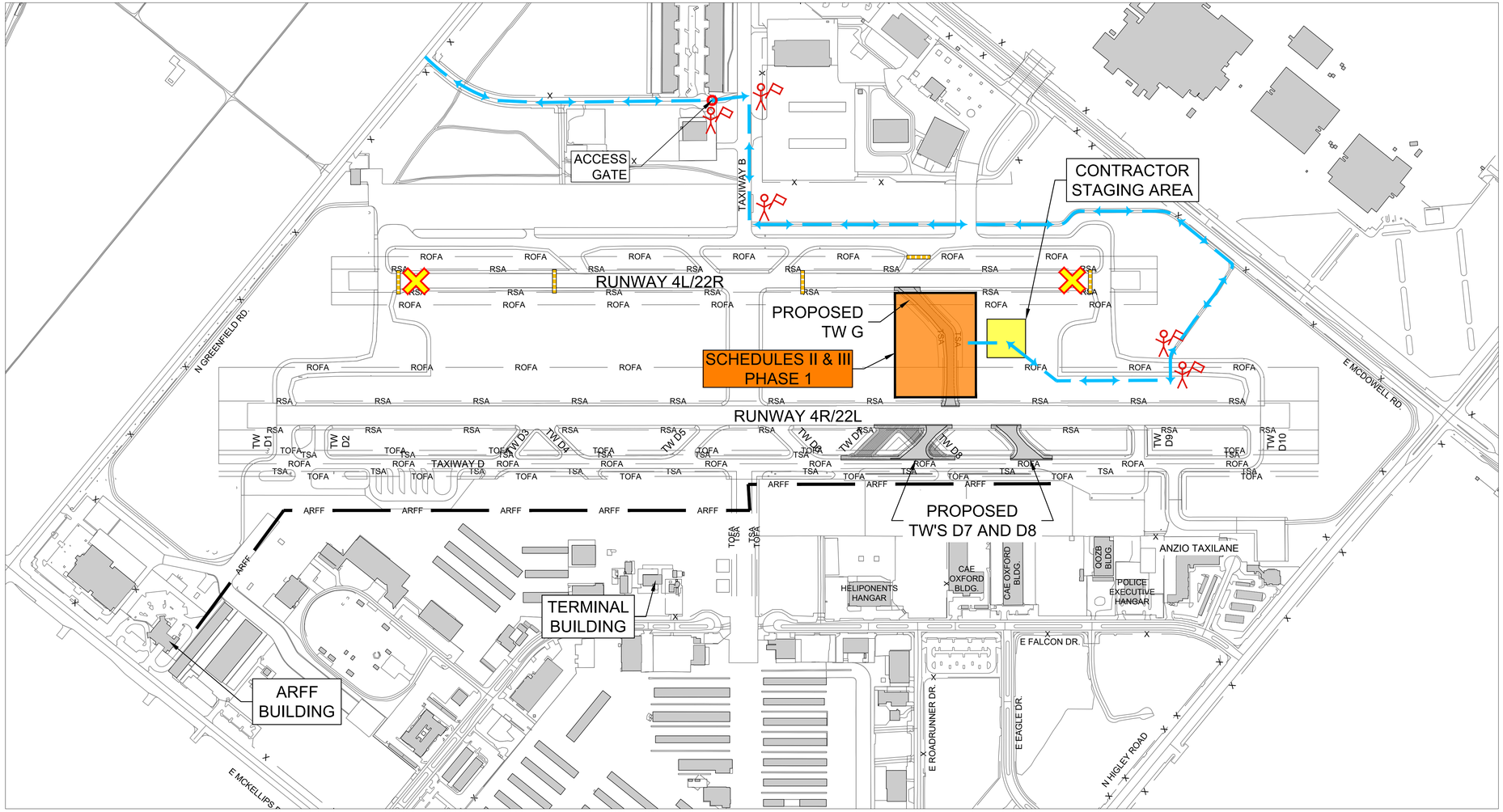
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 9 OF 52

CATALOG NUMBER: A-270528

DATE SAVED: 2/25/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G051-SAFE.DWG



CONSTRUCTION PHASING NOTES

SCHEDULES II & III / PHASE 1

DURATION

65 CALENDAR DAYS

CONTRACTOR ACCESS TIMES

ACCESS TO APPROVED WORK AREAS SHALL BE FROM 6PM TO 6AM.

THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

ALL AIRPORT OPERATIONS AREAS SHALL REMAIN OPEN AND UNAFFECTED DURING THIS SCHEDULE WITH THE FOLLOWING EXCEPTIONS:

- LIMITS SHOWN WITHIN THE PHASE ARE CLOSED

MAJOR WORK TO BE COMPLETED

SITE PREPARATION
1. EROSION CONTROL MEASURES

EARTHWORK
1. CLEARING AND GRUBBING
2. SUBGRADE PREPARATION
3. OVER EXCAVATION (IF NECESSARY)

PAVEMENT SECTION
1. AGGREGATE BASE COURSE
2. ASPHALT PAVEMENT
3. TEMPORARY PAINT
4. PERMANENT PAINT (AFTER 30 DAY CURE PERIOD)

SITE RECLAMATION
1. SEEDING
2. EROSION CONTROL MEASURES

ELECTRICAL
1. ALCMS INSTALLATION

NOTES

1. THE CONTRACTOR WILL PROVIDE GATE GUARDS AT THE CONTRACTOR ACCESS INTO THE AOA. GATE GUARDS AND FLAGGERS MUST BE BADGED BY THE AIRPORT. ALL COSTS TO PROVIDE GATE GUARDS AND FLAGGERS, INCLUDING BADGING, IS INCIDENTAL TO OTHER PAY ITEMS.
2. THE CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND EMERGENCY VEHICLES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO THE RUNWAY AT ALL TIMES.
4. NO WORK, OPEN EXCAVATIONS, EQUIPMENT, STOCKPILES, OR PERSONNEL ARE ALLOWED IN THE SAFETY AREAS OR OBJECT FREE AREAS FOR ANY ACTIVE TAXIWAY OR SAFETY AREAS FOR AN ACTIVE RUNWAY WHEN THE AIRPORT IS OPEN. ANYTHING LEFT IN THE RUNWAY OBJECT FREE AREA WILL REQUIRE PRIOR APPROVAL FROM FALCON FIELD AND THE RPR.
5. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM AIRPORT OPERATIONS.
6. CONSTRUCTION MARKERS SHALL BE INSTALLED PER PHASING PLANS AND AS REQUIRED BY AC 150/5370-2G OR AS DIRECTED BY THE RPR/FALCON FIELD.
7. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2G.
8. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN APPROVED BY THE AIRPORT AND LOCAL JURISDICTION, AND A WORK PLAN FOR THIS SCHEDULE OF WORK.
9. THE CONTRACTOR SHALL HAVE A SWEEPER ON SITE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTES, CONSTRUCTION ACCESS POINTS, OR AREAS ADJACENT TO CONSTRUCTION. WHEN HAULING MATERIALS AND EQUIPMENT ARE CROSSING THE ACTIVE APRON.
10. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE RPR/FALCON FIELD, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED ALONG THE HAUL ROUTES OR CONSTRUCTION ACCESS ROUTES TO THE PROJECT SITE. HAUL ROADS WILL BE MAINTAINED AND RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO EXPENSE TO THE SPONSOR.
11. PRIOR TO ACCEPTANCE AND OPENING OF AN AREA TO AIRCRAFT, ALL FINAL GRADING MUST BE COMPLETED. THIS INCLUDES, FINE GRADING AND SEED PLACEMENT.
12. ACCESS TO WORK AREAS WILL BE BY HAUL ROUTES ONLY.
13. ANY STRUCTURES, LIGHTS, SIGNS, OR OTHER ITEMS TO REMAIN SHALL BE PROTECTED USING METHODS APPROVED BY THE RPR/FALCON FIELD.
14. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. EDGE LIGHTS IN CLOSED AREAS SHALL BE TURNED OFF USING JUMPERS OR COVERED. ADEQUATE LIGHTING, IN THE OPINION OF THE RPR/FALCON, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. CONTRACTOR METHOD FOR COVERING OF LIGHTS AND SIGNS SHALL BE APPROVED BY RPR/FALCON FIELD. SHALL PREVENT DAMAGE TO THE EQUIPMENT AND SHALL BE SECURED TO PROTECT AGAINST JET BLAST AND MUD.
15. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPERS AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
16. MATERIAL STORAGE WITHIN THE PROJECT LIMITS MUST BE APPROVED BY THE RPR/FALCON FIELD.
17. HAUL ROUTES TO AND FROM THE PROJECT SITE MUST BE APPROVED BY THE RPR/FALCON FIELD.
18. OPERATIONS WITHIN THE AIRPORT OPERATIONS AREA (A.O.A.) MUST BE APPROVED BY THE RPR/FALCON FIELD.
19. SEE SAFETY PLAN FOR SPECIFIC SAFETY REQUIREMENTS.
20. ASPHALT PAVING FOR SCHEDULE II PHASE 1 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE II PHASE 2.
21. ALL WORK FOR SCHEDULE II, PHASE 1 SHALL BE COMPLETED AT NIGHT. ALL NECESSARY LIGHT PLANTS AND OTHER ADDITIONAL SAFETY PRECAUTIONS SHALL BE CONSIDERED INCIDENTAL TO MOBILIZATION.
22. THE WORK AREA SHALL NOT EXTEND CLOSER TO RUNWAY 4R/22L THAN 80 FEET FROM THE CENTERLINE OF THE RUNWAY, AND CLOSER TO RUNWAY 4L-22R THAN 65 FEET FROM THE CENTERLINE OF THE RUNWAY. THE CONTRACTOR SHALL PLACE STAKES OR OTHER HIGHLY VISIBLE MARKERS APPROVED BY THE RPR/FALCON FIELD AT THE PHASE LIMITS DENOTING THESE AREA, SPACED 5 FEET ON CENTER FOR THE FULL LENGTH OF THE PHASE LIMITS.
23. NO STOCKPILES OR EQUIPMENT SHALL BE LEFT IN THE RUNWAY OBJECT FREE AREA OF EITHER RUNWAY OUTSIDE WORKING HOURS.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRPLANE HAUL ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS
- RUNWAY CLOSURE X

1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS Date Signed 3/29/23 ARIZONA, U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

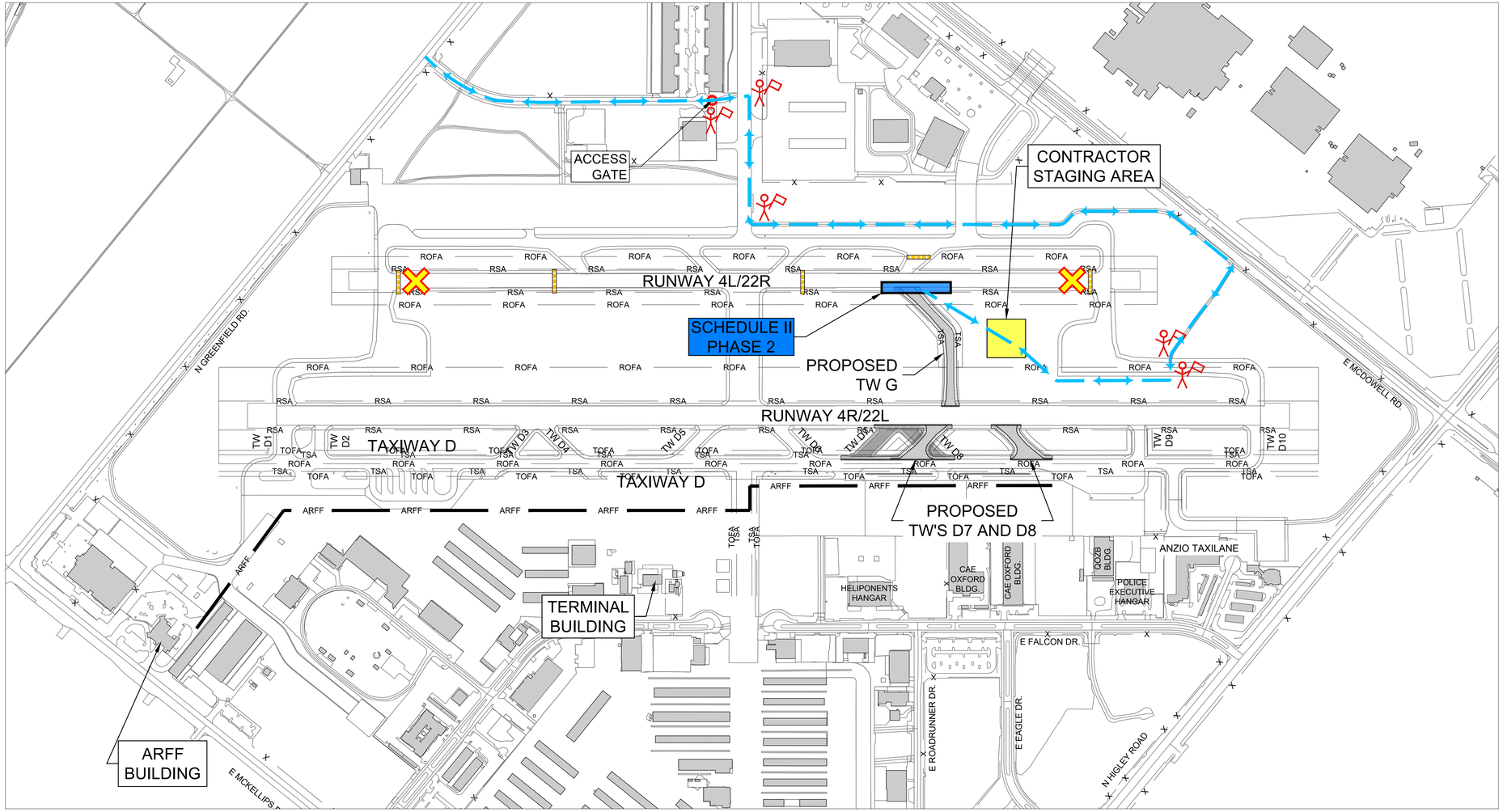
CONSTRUCTION SAFETY DRAWING
SCHEDULE II, PHASE 1

DRAWING G052

SHEET 10 OF 52

CATALOG NUMBER: A-270529

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G052-PHAS.DWG



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRPLANE HAUL ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS
- RUNWAY CLOSURE X

CONSTRUCTION PHASING NOTES

SCHEDULE II / PHASE 2

DURATION

10 CALENDAR DAYS

CONTRACTOR ACCESS TIMES

24 HOUR ACCESS TO APPROVED WORK AREAS

THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

ALL AIRPORT OPERATIONS AREAS SHALL REMAIN OPEN AND UNAFFECTED DURING THIS SCHEDULE WITH THE FOLLOWING EXCEPTIONS:

- RUNWAY 4L/22R WILL BE CLOSED TO AIRCRAFT OPERATIONS

SCHEDULE II PHASE 2 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE II PHASE 1

MAJOR WORK TO BE COMPLETED

SITE PREPARATION
1. INSTALL BARRICADES/COVER SIGNS
2. EROSION CONTROL MEASURES
3. PARTIAL DEPTH PAVEMENT REMOVAL

EARTHWORK
1. CLEARING AND GRUBBING
2. SUBGRADE PREPARATION
3. OVER EXCAVATION (IF NECESSARY)

PAVEMENT SECTION
1. AGGREGATE BASE COURSE
2. ASPHALT PAVEMENT
3. TEMPORARY PAINT
4. PERMANENT PAINT (AFTER 30 DAY CURE PERIOD)

SITE RECLAMATION
1. SEEDING
2. EROSION CONTROL MEASURES

NOTES

1. THE CONTRACTOR WILL PROVIDE GATE GUARDS AT THE CONTRACTOR ACCESS INTO THE AOA. GATE GUARDS AND FLAGGERS MUST BE BADGED BY THE AIRPORT. ALL COSTS TO PROVIDE GATE GUARDS AND FLAGGERS, INCLUDING BADGING, IS INCIDENTAL TO OTHER PAY ITEMS.
2. THE CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND EMERGENCY VEHICLES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO THE RUNWAY AT ALL TIMES.
4. NO WORK, OPEN EXCAVATIONS, EQUIPMENT, STOCKPILES, OR PERSONNEL ARE ALLOWED IN THE SAFETY AREAS OR OBJECT FREE AREAS FOR ANY ACTIVE TAXIWAY OR SAFETY AREAS FOR AN ACTIVE RUNWAY WHEN THE AIRPORT IS OPEN.
5. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM AIRPORT OPERATIONS.
6. CONSTRUCTION MARKERS SHALL BE INSTALLED PER PHASING PLANS AND AS REQUIRED BY AC 150/5370-2G OR AS DIRECTED BY THE RPR/FALCON FIELD.
7. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2G.
8. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN APPROVED BY THE AIRPORT AND LOCAL JURISDICTION, AND A WORK PLAN FOR THIS SCHEDULE OF WORK.
9. THE CONTRACTOR SHALL HAVE A SWEEPER ON SITE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTES, CONSTRUCTION ACCESS POINTS, OR AREAS ADJACENT TO CONSTRUCTION. WHEN HAULING MATERIALS AND EQUIPMENT ARE CROSSING THE ACTIVE APRON.
10. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE RPR/FALCON FIELD, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED ALONG THE HAUL ROUTES OR CONSTRUCTION ACCESS ROUTES TO THE PROJECT SITE. HAUL ROADS WILL BE MAINTAINED AND RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO EXPENSE TO THE SPONSOR.
11. PRIOR TO ACCEPTANCE AND OPENING OF AN AREA TO AIRCRAFT, ALL FINAL GRADING MUST BE COMPLETED. THIS INCLUDES, FINE GRADING AND SEED PLACEMENT.
12. ACCESS TO WORK AREAS WILL BE BY HAUL ROUTES ONLY.
13. ANY STRUCTURES, LIGHTS, SIGNS, OR OTHER ITEMS TO REMAIN SHALL BE PROTECTED USING METHODS APPROVED BY THE RPR/FALCON FIELD.
14. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. EDGE LIGHTS IN CLOSED AREAS SHALL BE TURNED OFF USING JUMPERS OR COVERED. ADEQUATE LIGHTING, IN THE OPINION OF THE RPR/FALCON, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. CONTRACTOR METHOD FOR COVERING OF LIGHTS AND SIGNS SHALL BE APPROVED BY RPR/FALCON FIELD. SHALL PREVENT DAMAGE TO THE EQUIPMENT AND SHALL BE SECURED TO PROTECT AGAINST JET BLAST AND MUD.
15. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPERS AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
16. MATERIAL STORAGE WITHIN THE PROJECT LIMITS MUST BE APPROVED BY THE RPR/FALCON FIELD.
17. HAUL ROUTES TO AND FROM THE PROJECT SITE MUST BE APPROVED BY THE RPR/FALCON FIELD.
18. OPERATIONS WITHIN THE AIRPORT OPERATIONS AREA (A.O.A.) MUST BE APPROVED BY THE RPR/FALCON FIELD.
19. SEE SAFETY PLAN FOR SPECIFIC SAFETY REQUIREMENTS.
20. ASPHALT PAVING FOR SCHEDULE II PHASE 2 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE II PHASE 1.

GRAPHIC SCALE
300 0 300 600
(IN FEET)
1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

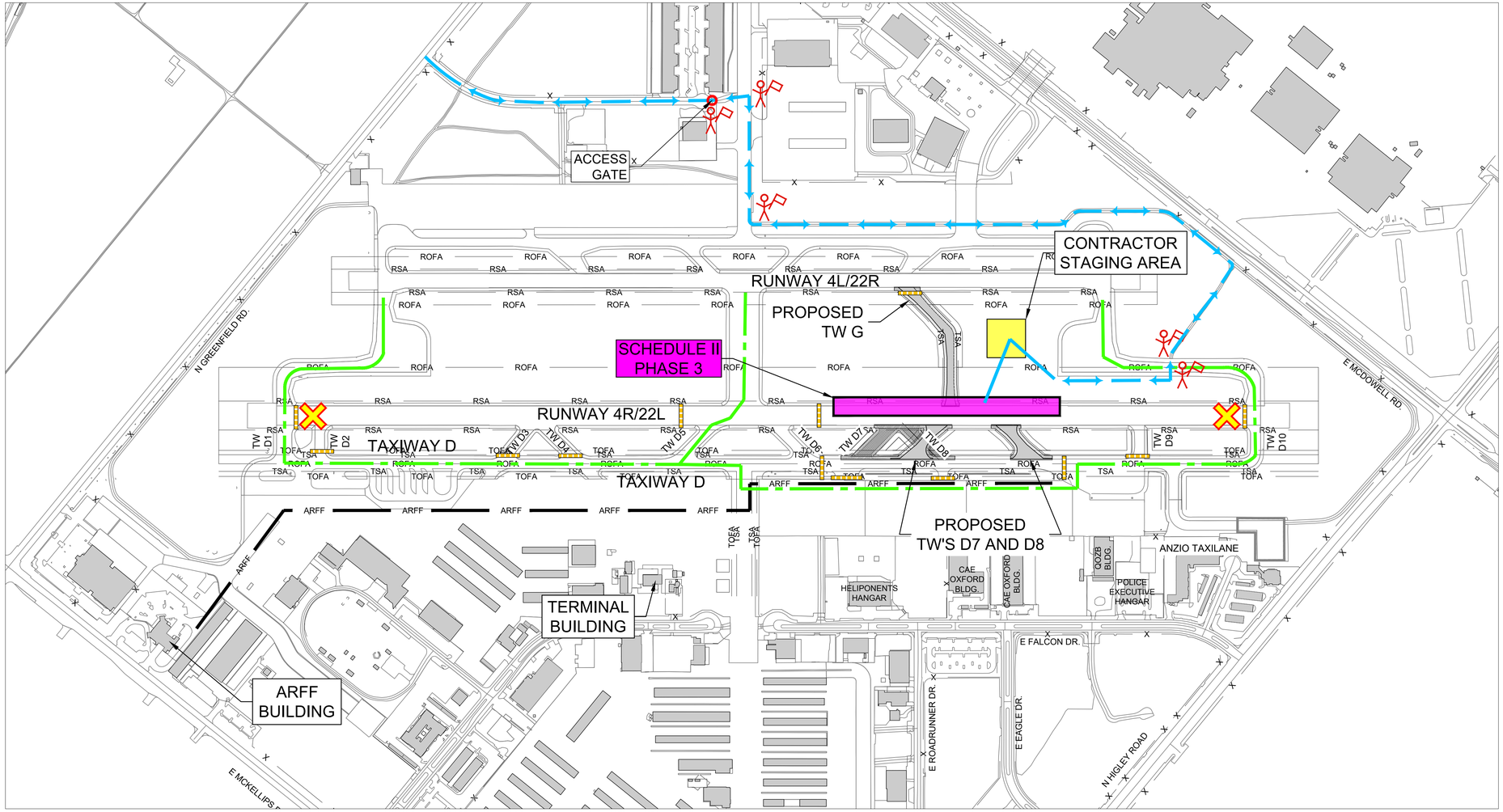
CONSTRUCTION SAFETY DRAWING
SCHEDULE II, PHASE 2

DRAWING G053

SHEET 11 OF 52

CATALOG NUMBER: A-270530

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G053-PHAS.DWG



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRCRAFT ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS
- RUNWAY CLOSURE X

CONSTRUCTION PHASING NOTES

SCHEDULE II / PHASE 3

DURATION

12 CALENDAR DAYS

CONTRACTOR ACCESS TIMES

24 HOUR ACCESS TO APPROVED WORK AREAS

THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

ALL AIRPORT OPERATIONS AREAS SHALL REMAIN OPEN AND UNAFFECTED DURING THIS SCHEDULE WITH THE FOLLOWING EXCEPTIONS:

- LIMITS SHOWN WITHIN THE PHASE ARE CLOSED

MAJOR WORK TO BE COMPLETED

SITE PREPARATION
1. EROSION CONTROL MEASURES

EARTHWORK
1. CLEARING AND GRUBBING
2. SUBGRADE PREPARATION
3. OVER EXCAVATION (IF NECESSARY)

PAVEMENT SECTION
1. AGGREGATE BASE COURSE
2. ASPHALT PAVEMENT
3. TEMPORARY PAINT
4. PERMANENT PAINT (AFTER 30 DAY CURE PERIOD)

SITE RECLAMATION
1. SEEDING
2. EROSION CONTROL MEASURES

NOTES

1. THE CONTRACTOR WILL PROVIDE GATE GUARDS AT THE CONTRACTOR ACCESS INTO THE AOA. GATE GUARDS AND FLAGGERS MUST BE BADGED BY THE AIRPORT. ALL COSTS TO PROVIDE GATE GUARDS AND FLAGGERS, INCLUDING BADGING, IS INCIDENTAL TO OTHER PAY ITEMS.
2. THE CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND EMERGENCY VEHICLES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO THE RUNWAY AT ALL TIMES.
4. NO WORK, OPEN EXCAVATIONS, EQUIPMENT, STOCKPILES, OR PERSONNEL ARE ALLOWED IN THE SAFETY AREAS OR OBJECT FREE AREAS FOR ANY ACTIVE TAXIWAY OR SAFETY AREAS FOR AN ACTIVE RUNWAY WHEN THE AIRPORT IS OPEN. ANYTHING LEFT IN THE RUNWAY OBJECT FREE AREA WILL REQUIRE PRIOR APPROVAL FROM FALCON FIELD AND THE RPR.
5. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM AIRPORT OPERATIONS.
6. CONSTRUCTION MARKERS SHALL BE INSTALLED PER PHASING PLANS AND AS REQUIRED BY AC 150/5370-2G OR AS DIRECTED BY THE RPR/FALCON FIELD.
7. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2G.
8. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN APPROVED BY THE AIRPORT AND LOCAL JURISDICTION, AND A WORK PLAN FOR THIS SCHEDULE OF WORK.
9. THE CONTRACTOR SHALL HAVE A SWEEPER ON SITE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTES, CONSTRUCTION ACCESS POINTS, OR AREAS ADJACENT TO CONSTRUCTION. WHEN HAULING MATERIALS AND EQUIPMENT ARE CROSSING THE ACTIVE APRON.
10. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE RPR/FALCON FIELD, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED ALONG THE HAUL ROUTES OR CONSTRUCTION ACCESS ROUTES TO THE PROJECT SITE. HAUL ROADS WILL BE MAINTAINED AND RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO EXPENSE TO THE SPONSOR.
11. PRIOR TO ACCEPTANCE AND OPENING OF AN AREA TO AIRCRAFT, ALL FINAL GRADING MUST BE COMPLETED. THIS INCLUDES, FINE GRADING AND SEED PLACEMENT.
12. ACCESS TO WORK AREAS WILL BE BY HAUL ROUTES ONLY.
13. ANY STRUCTURES, LIGHTS, SIGNS, OR OTHER ITEMS TO REMAIN SHALL BE PROTECTED USING METHODS APPROVED BY THE RPR/FALCON FIELD.
14. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. EDGE LIGHTS IN CLOSED AREAS SHALL BE TURNED OFF USING JUMPERS OR COVERED. ADEQUATE LIGHTING, IN THE OPINION OF THE RPR/FALCON, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. CONTRACTOR METHOD FOR COVERING OF LIGHTS AND SIGNS SHALL BE APPROVED BY RPR/FALCON FIELD. SHALL PREVENT DAMAGE TO THE EQUIPMENT AND SHALL BE SECURED TO PROTECT AGAINST JET BLAST AND MUD.
15. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPERS AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
16. MATERIAL STORAGE WITHIN THE PROJECT LIMITS MUST BE APPROVED BY THE RPR/FALCON FIELD.
17. HAUL ROUTES TO AND FROM THE PROJECT SITE MUST BE APPROVED BY THE RPR/FALCON FIELD.
18. OPERATIONS WITHIN THE AIRPORT OPERATIONS AREA (A.O.A.) MUST BE APPROVED BY THE RPR/FALCON FIELD.
19. SEE SAFETY PLAN FOR SPECIFIC SAFETY REQUIREMENTS.
20. ASPHALT PAVING FOR SCHEDULE II PHASE 3 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE I PHASES 4, 5, AND 6.

1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CONSTRUCTION SAFETY DRAWING
SCHEDULE II, PHASE 3

DRAWING G054

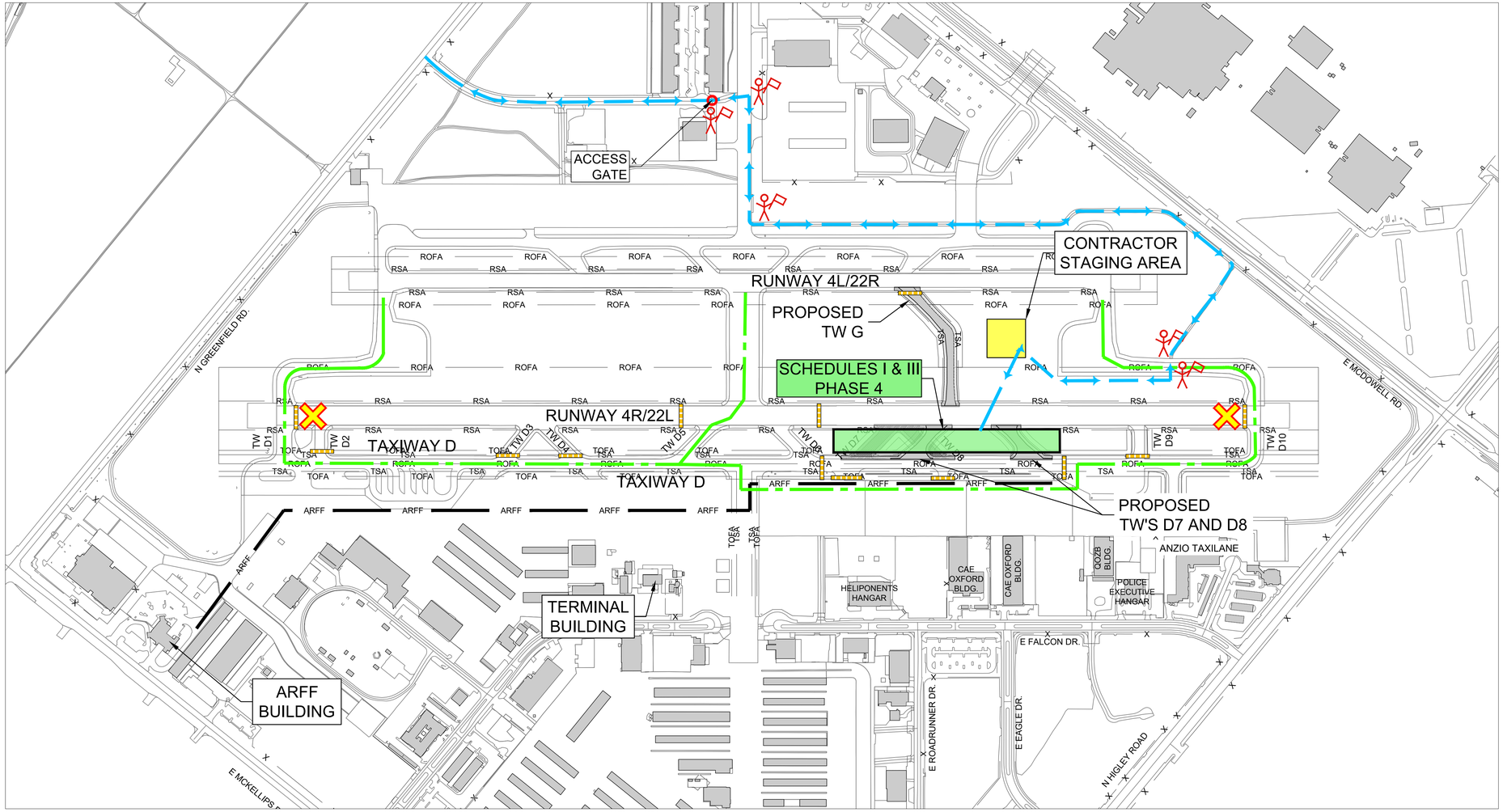
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 12 OF 52

CATALOG NUMBER: A-270531

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G054-PHAS.DWG



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRPLANE HAUL ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS

CONSTRUCTION PHASING NOTES

SCHEDULES I & III / PHASE 4

DURATION

102 CALENDAR DAYS

CONTRACTOR ACCESS TIMES

ACCESS TO APPROVED WORK AREAS SHALL BE FROM 6PM TO 6AM.

THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

ALL AIRPORT OPERATIONS AREAS SHALL REMAIN OPEN AND UNAFFECTED DURING THIS SCHEDULE WITH THE FOLLOWING EXCEPTIONS:

- LIMITS SHOWN WITHIN THE PHASE ARE CLOSED

MAJOR WORK TO BE COMPLETED

SITE PREPARATION
1. EROSION CONTROL MEASURES

EARTHWORK
1. CLEARING AND GRUBBING
2. SUBGRADE PREPARATION
3. OVER EXCAVATION (IF NECESSARY)

PAVEMENT SECTION
1. AGGREGATE BASE COURSE
2. ASPHALT PAVEMENT
3. TEMPORARY PAINT
4. PERMANENT PAINT (AFTER 30 DAY CURE PERIOD)

SITE RECLAMATION
1. SEEDING
2. EROSION CONTROL MEASURES

ELECTRICAL
1. ALCMS INSTALLATION

NOTES

1. THE CONTRACTOR WILL PROVIDE GATE GUARDS AT THE CONTRACTOR ACCESS INTO THE AOA. GATE GUARDS AND FLAGGERS MUST BE BADGED BY THE AIRPORT. ALL COSTS TO PROVIDE GATE GUARDS AND FLAGGERS, INCLUDING BADGING, IS INCIDENTAL TO OTHER PAY ITEMS.
2. THE CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND EMERGENCY VEHICLES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO THE RUNWAY AT ALL TIMES.
4. NO WORK, OPEN EXCAVATIONS, EQUIPMENT, STOCKPILES, OR PERSONNEL ARE ALLOWED IN THE SAFETY AREAS OR OBJECT FREE AREAS FOR ANY ACTIVE TAXIWAY OR SAFETY AREAS FOR AN ACTIVE RUNWAY WHEN THE AIRPORT IS OPEN. ANYTHING LEFT IN THE RUNWAY OBJECT FREE AREA WILL REQUIRE PRIOR APPROVAL FROM FALCON FIELD AND THE RPR.
5. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM AIRPORT OPERATIONS.
6. CONSTRUCTION MARKERS SHALL BE INSTALLED PER PHASING PLANS AND AS REQUIRED BY AC 150/5370-2G OR AS DIRECTED BY THE RPR/FALCON FIELD.
7. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2G.
8. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN APPROVED BY THE AIRPORT AND LOCAL JURISDICTION, AND A WORK PLAN FOR THIS SCHEDULE OF WORK.
9. THE CONTRACTOR SHALL HAVE A SWEEPER ON SITE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTES, CONSTRUCTION ACCESS POINTS, OR AREAS ADJACENT TO CONSTRUCTION. WHEN HAULING MATERIALS AND EQUIPMENT ARE CROSSING THE ACTIVE APRON.
10. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE RPR/FALCON FIELD, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED ALONG THE HAUL ROUTES OR CONSTRUCTION ACCESS ROUTES TO THE PROJECT SITE. HAUL ROADS WILL BE MAINTAINED AND RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO EXPENSE TO THE SPONSOR.
11. PRIOR TO ACCEPTANCE AND OPENING OF AN AREA TO AIRCRAFT, ALL FINAL GRADING MUST BE COMPLETED. THIS INCLUDES, FINE GRADING AND SEED PLACEMENT.
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14. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. EDGE LIGHTS IN CLOSED AREAS SHALL BE TURNED OFF USING JUMPERS OR COVERED. ADEQUATE LIGHTING, IN THE OPINION OF THE RPR/FALCON, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. CONTRACTOR METHOD FOR COVERING OF LIGHTS AND SIGNS SHALL BE APPROVED BY RPR/FALCON FIELD. SHALL PREVENT DAMAGE TO THE EQUIPMENT AND SHALL BE SECURED TO PROTECT AGAINST JET BLAST AND MUD.
15. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPERS AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
16. MATERIAL STORAGE WITHIN THE PROJECT LIMITS MUST BE APPROVED BY THE RPR/FALCON FIELD.
17. HAUL ROUTES TO AND FROM THE PROJECT SITE MUST BE APPROVED BY THE RPR/FALCON FIELD.
18. OPERATIONS WITHIN THE AIRPORT OPERATIONS AREA (A.O.A.) MUST BE APPROVED BY THE RPR/FALCON FIELD.
19. SEE SAFETY PLAN FOR SPECIFIC SAFETY REQUIREMENTS.
20. ASPHALT PAVING FOR SCHEDULE I PHASE 4 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE I PHASES 5 AND 6.
21. ALL WORK DURING PHASE 4 THAT IS NOT CONCURRENT WITH SCHEDULE I PHASES 5 SHALL BE COMPLETED AT NIGHT DURING THE SPECIFIED HOURS. NO EQUIPMENT OR STOCKPILES SHALL BE LEFT IN THE PHASE 3 WORK AREA.
22. THE WORK AREA SHALL NOT EXTEND CLOSER TO RUNWAY 4R/22L THAN 80 FEET FROM THE CENTERLINE OF THE RUNWAY, AND CLOSER TO TAXIWAY D THAN 60 FEET FROM THE CENTERLINE OF THE TAXIWAY. THE CONTRACTOR SHALL PLACE STAKES OR OTHER HIGHLY VISIBLE MARKERS APPROVED BY THE RPR/FALCON FIELD AT THE PHASE LIMITS DENOTING THESE AREA, SPACED 5 FEET ON CENTER FOR THE FULL LENGTH OF THE PHASE LIMITS.
21. ALL WORK FOR SCHEDULE I, PHASE 4 SHALL BE COMPLETED AT NIGHT. ALL NECESSARY LIGHT PLANTS AND OTHER ADDITIONAL SAFETY PRECAUTIONS SHALL BE CONSIDERED INCIDENTAL TO MOBILIZATION.

1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 6924 JON BRYCE WEEKS Date Signed 3/29/23 ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CONSTRUCTION SAFETY DRAWING
SCHEDULE I, PHASE 4

DRAWING G055

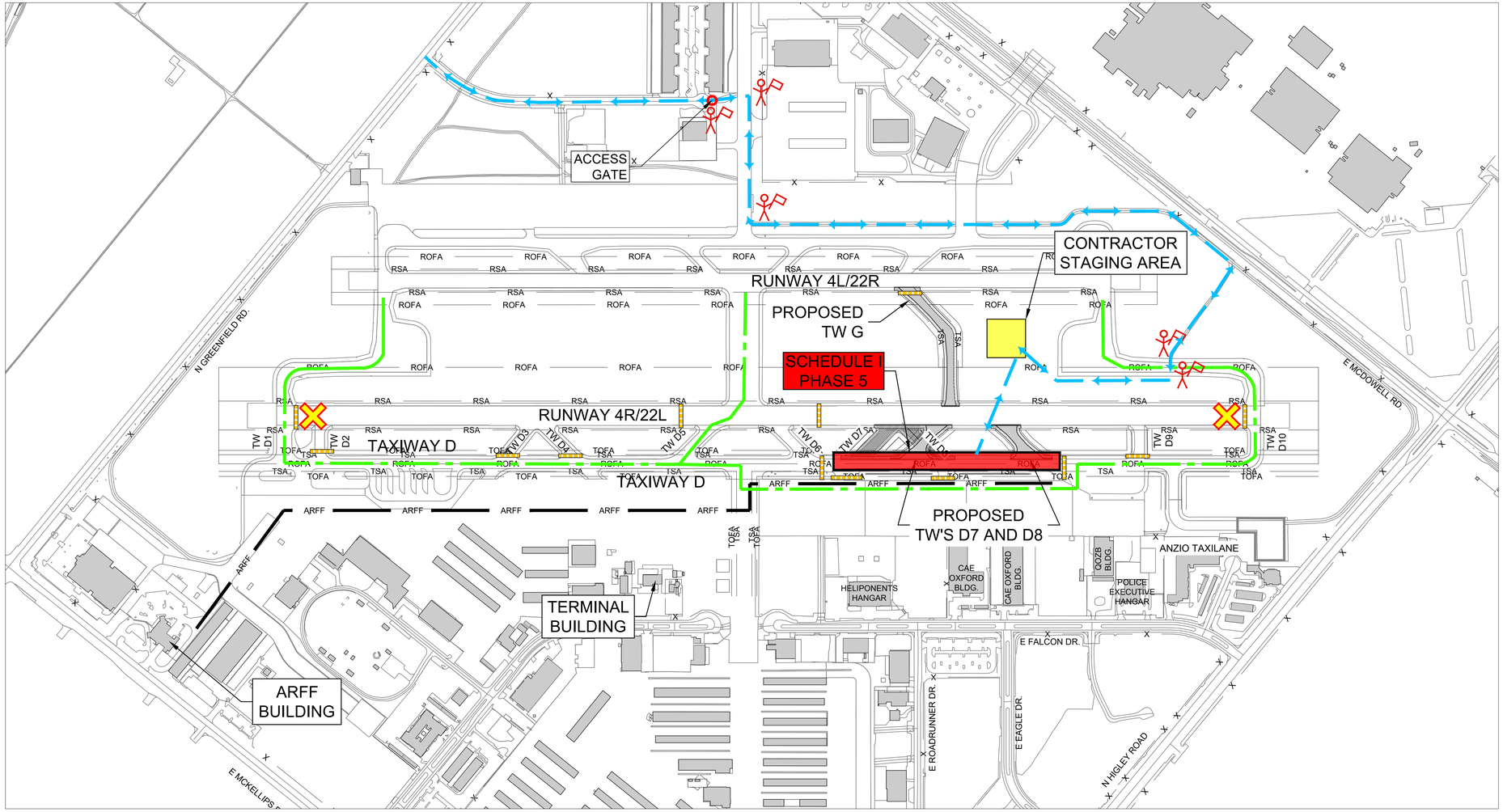
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 13 OF 52

CATALOG NUMBER: A-270532

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G055-PHAS.DWG



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRCRAFT ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS

CONSTRUCTION PHASING NOTES

SCHEDULE I / PHASE 5

DURATION

27 CALENDAR DAYS

CONTRACTOR ACCESS TIMES

ACCESS TO APPROVED WORK AREAS SHALL BE FROM 6PM TO 6AM.

THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

ALL AIRPORT OPERATIONS AREAS SHALL REMAIN OPEN AND UNAFFECTED DURING THIS SCHEDULE WITH THE FOLLOWING EXCEPTIONS:

- LIMITS SHOWN WITHIN THE PHASE ARE CLOSED

MAJOR WORK TO BE COMPLETED

SITE PREPARATION
1. EROSION CONTROL MEASURES

EARTHWORK
1. CLEARING AND GRUBBING
2. SUBGRADE PREPARATION
3. OVER EXCAVATION (IF NECESSARY)

PAVEMENT SECTION
1. AGGREGATE BASE COURSE
2. ASPHALT PAVEMENT
3. TEMPORARY PAINT
4. PERMANENT PAINT (AFTER 30 DAY CURE PERIOD)

SITE RECLAMATION
1. SEEDING
2. EROSION CONTROL MEASURES

NOTES

1. THE CONTRACTOR WILL PROVIDE GATE GUARDS AT THE CONTRACTOR ACCESS INTO THE AOA. GATE GUARDS AND FLAGGERS MUST BE BADGED BY THE AIRPORT. ALL COSTS TO PROVIDE GATE GUARDS AND FLAGGERS, INCLUDING BADGING, IS INCIDENTAL TO OTHER PAY ITEMS.
2. THE CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND EMERGENCY VEHICLES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO THE RUNWAY AT ALL TIMES.
4. NO WORK, OPEN EXCAVATIONS, EQUIPMENT, STOCKPILES, OR PERSONNEL ARE ALLOWED IN THE SAFETY AREAS OR OBJECT FREE AREAS FOR ANY ACTIVE TAXIWAY OR SAFETY AREAS FOR AN ACTIVE RUNWAY WHEN THE AIRPORT IS OPEN. ANYTHING LEFT IN THE RUNWAY OBJECT FREE AREA WILL REQUIRE PRIOR APPROVAL FROM FALCON FIELD AND THE RPR.
5. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM AIRPORT OPERATIONS.
6. CONSTRUCTION MARKERS SHALL BE INSTALLED PER PHASING PLANS AND AS REQUIRED BY AC 150/5370-2G OR AS DIRECTED BY THE RPR/FALCON FIELD.
7. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2G.
8. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN APPROVED BY THE AIRPORT AND LOCAL JURISDICTION, AND A WORK PLAN FOR THIS SCHEDULE OF WORK.
9. THE CONTRACTOR SHALL HAVE A SWEEPER ON SITE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTES, CONSTRUCTION ACCESS POINTS, OR AREAS ADJACENT TO CONSTRUCTION. WHEN HAULING MATERIALS AND EQUIPMENT ARE CROSSING THE ACTIVE APRON.
10. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE RPR/FALCON FIELD, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED ALONG THE HAUL ROUTES OR CONSTRUCTION ACCESS ROUTES TO THE PROJECT SITE. HAUL ROADS WILL BE MAINTAINED AND RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO EXPENSE TO THE SPONSOR.
11. PRIOR TO ACCEPTANCE AND OPENING OF AN AREA TO AIRCRAFT, ALL FINAL GRADING MUST BE COMPLETED. THIS INCLUDES, FINE GRADING AND SEED PLACEMENT.
12. ACCESS TO WORK AREAS WILL BE BY HAUL ROUTES ONLY.
13. ANY STRUCTURES, LIGHTS, SIGNS, OR OTHER ITEMS TO REMAIN SHALL BE PROTECTED USING METHODS APPROVED BY THE RPR/FALCON FIELD.
14. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. EDGE LIGHTS IN CLOSED AREAS SHALL BE TURNED OFF USING JUMPERS OR COVERED. ADEQUATE LIGHTING, IN THE OPINION OF THE RPR/FALCON, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. CONTRACTOR METHOD FOR COVERING OF LIGHTS AND SIGNS SHALL BE APPROVED BY RPR/FALCON FIELD. SHALL PREVENT DAMAGE TO THE EQUIPMENT AND SHALL BE SECURED TO PROTECT AGAINST JET BLAST AND MUD.
15. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPERS AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
16. MATERIAL STORAGE WITHIN THE PROJECT LIMITS MUST BE APPROVED BY THE RPR/FALCON FIELD.
17. HAUL ROUTES TO AND FROM THE PROJECT SITE MUST BE APPROVED BY THE RPR/FALCON FIELD.
18. OPERATIONS WITHIN THE AIRPORT OPERATIONS AREA (A.O.A.) MUST BE APPROVED BY THE RPR/FALCON FIELD.
19. SEE SAFETY PLAN FOR SPECIFIC SAFETY REQUIREMENTS.
20. ASPHALT PAVING FOR SCHEDULE I PHASE 5 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE I PHASE 6 AND SCHEDULE II PHASE 3.
21. ALL WORK FOR SCHEDULE I, PHASE 5 SHALL BE COMPLETED AT NIGHT. ALL NECESSARY LIGHT PLANTS AND OTHER ADDITIONAL SAFETY PRECAUTIONS SHALL BE CONSIDERED INCIDENTAL TO MOBILIZATION.

1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69241 JON BRYCE WEEKS Date Signed 3/29/23 ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CONSTRUCTION SAFETY DRAWING
SCHEDULE I, PHASE 5

DRAWING G056

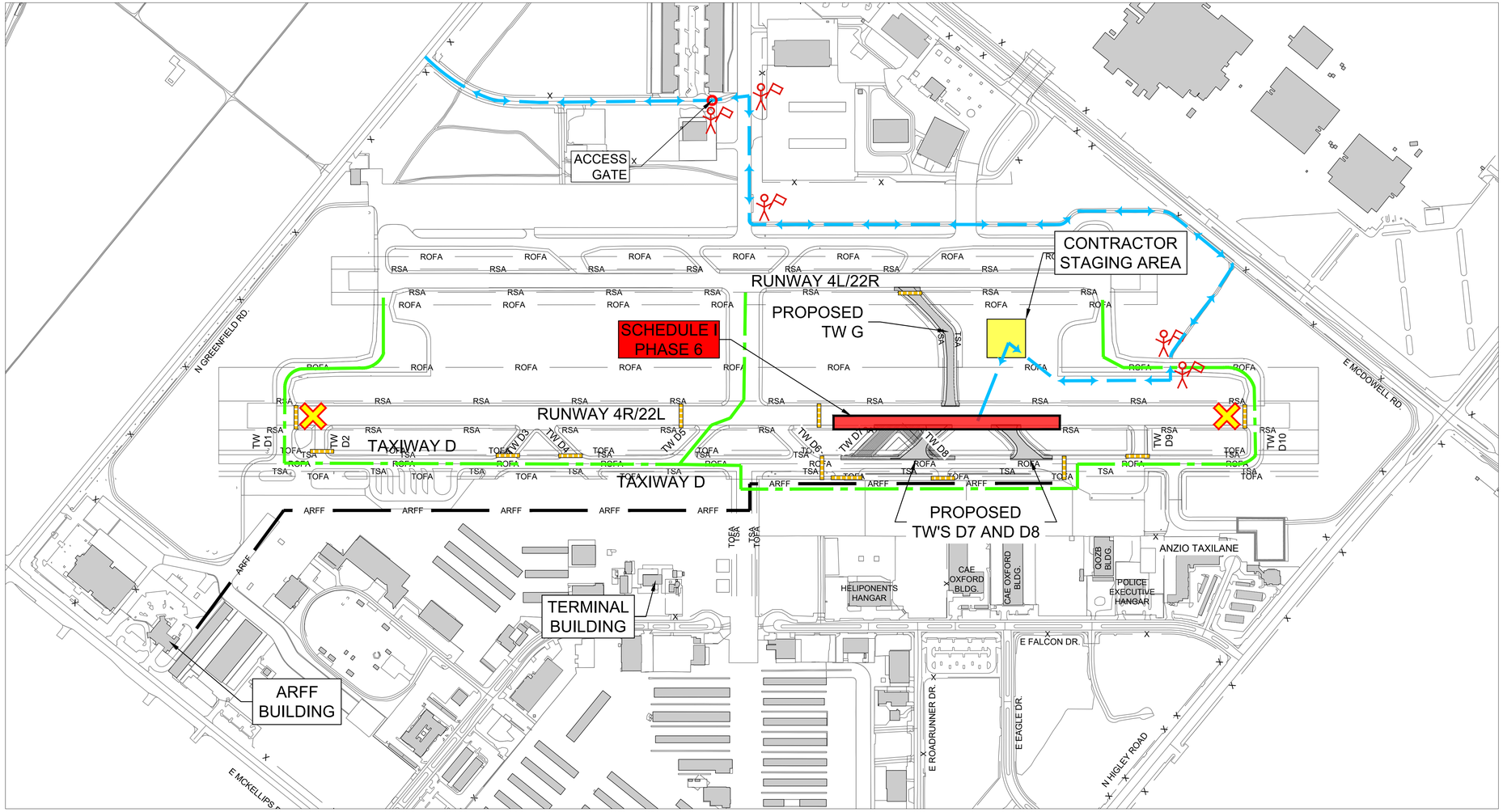
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 14 OF 52

CATALOG NUMBER: A-270533

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G056-PHAS.DWG



CONSTRUCTION PHASING NOTES

SCHEDULE I / PHASE 6

DURATION

12 CALENDAR DAYS

CONTRACTOR ACCESS TIMES

24 HOUR ACCESS TO APPROVED WORK AREAS

THE CONTRACTOR MUST SCHEDULE THE PROJECT PHASES TO ENSURE ALL EXISTING RUNWAYS AND TAXIWAYS ARE OPEN TO AIRCRAFT TRAFFIC BETWEEN 11:59 PM NOVEMBER 2, 2023 AND 11:59 PM NOVEMBER 5, 2023. THE CONTRACTOR IS NOT PERMITTED TO WORK DURING THIS TIME PERIOD. THIS TIME PERIOD WILL NOT BE COUNTED AGAINST THE CONTRACTOR'S CONTRACTUAL DAY COUNT FOR THE PROJECT.

ALL AIRPORT OPERATIONS AREAS SHALL REMAIN OPEN AND UNAFFECTED DURING THIS SCHEDULE WITH THE FOLLOWING EXCEPTIONS:

- LIMITS SHOWN WITHIN THE PHASE ARE CLOSED

MAJOR WORK TO BE COMPLETED

SITE PREPARATION
1. EROSION CONTROL MEASURES

EARTHWORK
1. CLEARING AND GRUBBING
2. SUBGRADE PREPARATION
3. OVER EXCAVATION (IF NECESSARY)

PAVEMENT SECTION
1. AGGREGATE BASE COURSE
2. ASPHALT PAVEMENT
3. TEMPORARY PAINT
4. PERMANENT PAINT (AFTER 30 DAY CURE PERIOD)

SITE RECLAMATION
1. SEEDING
2. EROSION CONTROL MEASURES

NOTES

1. THE CONTRACTOR WILL PROVIDE GATE GUARDS AT THE CONTRACTOR ACCESS INTO THE AOA. GATE GUARDS AND FLAGGERS MUST BE BADGED BY THE AIRPORT. ALL COSTS TO PROVIDE GATE GUARDS AND FLAGGERS, INCLUDING BADGING, IS INCIDENTAL TO OTHER PAY ITEMS.
2. THE CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND EMERGENCY VEHICLES AT ALL TIMES.
3. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO THE RUNWAY AT ALL TIMES.
4. NO WORK, OPEN EXCAVATIONS, EQUIPMENT, STOCKPILES, OR PERSONNEL ARE ALLOWED IN THE SAFETY AREAS OR OBJECT FREE AREAS FOR ANY ACTIVE TAXIWAY OR SAFETY AREAS FOR AN ACTIVE RUNWAY WHEN THE AIRPORT IS OPEN. ANYTHING LEFT IN THE RUNWAY OBJECT FREE AREA WILL REQUIRE PRIOR APPROVAL FROM FALCON FIELD AND THE RPR.
5. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO THE CONTRACTOR WITHOUT PRIOR APPROVAL FROM AIRPORT OPERATIONS.
6. CONSTRUCTION MARKERS SHALL BE INSTALLED PER PHASING PLANS AND AS REQUIRED BY AC 150/5370-2G OR AS DIRECTED BY THE RPR/FALCON FIELD.
7. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2G.
8. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN APPROVED BY THE AIRPORT AND LOCAL JURISDICTION, AND A WORK PLAN FOR THIS SCHEDULE OF WORK.
9. THE CONTRACTOR SHALL HAVE A SWEEPER ON SITE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTES, CONSTRUCTION ACCESS POINTS, OR AREAS ADJACENT TO CONSTRUCTION. WHEN HAULING MATERIALS AND EQUIPMENT ARE CROSSING THE ACTIVE APRON.
10. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE RPR/FALCON FIELD, THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED ALONG THE HAUL ROUTES OR CONSTRUCTION ACCESS ROUTES TO THE PROJECT SITE. HAUL ROADS WILL BE MAINTAINED AND RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT NO EXPENSE TO THE SPONSOR.
11. PRIOR TO ACCEPTANCE AND OPENING OF AN AREA TO AIRCRAFT, ALL FINAL GRADING MUST BE COMPLETED. THIS INCLUDES, FINE GRADING AND SEED PLACEMENT.
12. ACCESS TO WORK AREAS WILL BE BY HAUL ROUTES ONLY.
13. ANY STRUCTURES, LIGHTS, SIGNS, OR OTHER ITEMS TO REMAIN SHALL BE PROTECTED USING METHODS APPROVED BY THE RPR/FALCON FIELD.
14. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. EDGE LIGHTS IN CLOSED AREAS SHALL BE TURNED OFF USING JUMPERS OR COVERED. ADEQUATE LIGHTING, IN THE OPINION OF THE RPR/FALCON, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. CONTRACTOR METHOD FOR COVERING OF LIGHTS AND SIGNS SHALL BE APPROVED BY RPR/FALCON FIELD. SHALL PREVENT DAMAGE TO THE EQUIPMENT AND SHALL BE SECURED TO PROTECT AGAINST JET BLAST AND MUD.
15. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPERS AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
16. MATERIAL STORAGE WITHIN THE PROJECT LIMITS MUST BE APPROVED BY THE RPR/FALCON FIELD.
17. HAUL ROUTES TO AND FROM THE PROJECT SITE MUST BE APPROVED BY THE RPR/FALCON FIELD.
18. OPERATIONS WITHIN THE AIRPORT OPERATIONS AREA (A.O.A.) MUST BE APPROVED BY THE RPR/FALCON FIELD.
19. SEE SAFETY PLAN FOR SPECIFIC SAFETY REQUIREMENTS.
20. ASPHALT PAVING FOR SCHEDULE I PHASE 6 SHALL BE COMPLETED CONCURRENTLY WITH SCHEDULE I PHASE 5 AND SCHEDULE II PHASE 3.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AIRCRAFT ROUTE
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- X — AOA FENCE
- FLASHER BARRICADE
- FLAGGER / GATE GUARD
- CONTRACTOR GATE ACCESS
- RUNWAY CLOSURE X

1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

CONSTRUCTION SAFETY DRAWING SCHEDULE I PHASE 6

DRAWING G057

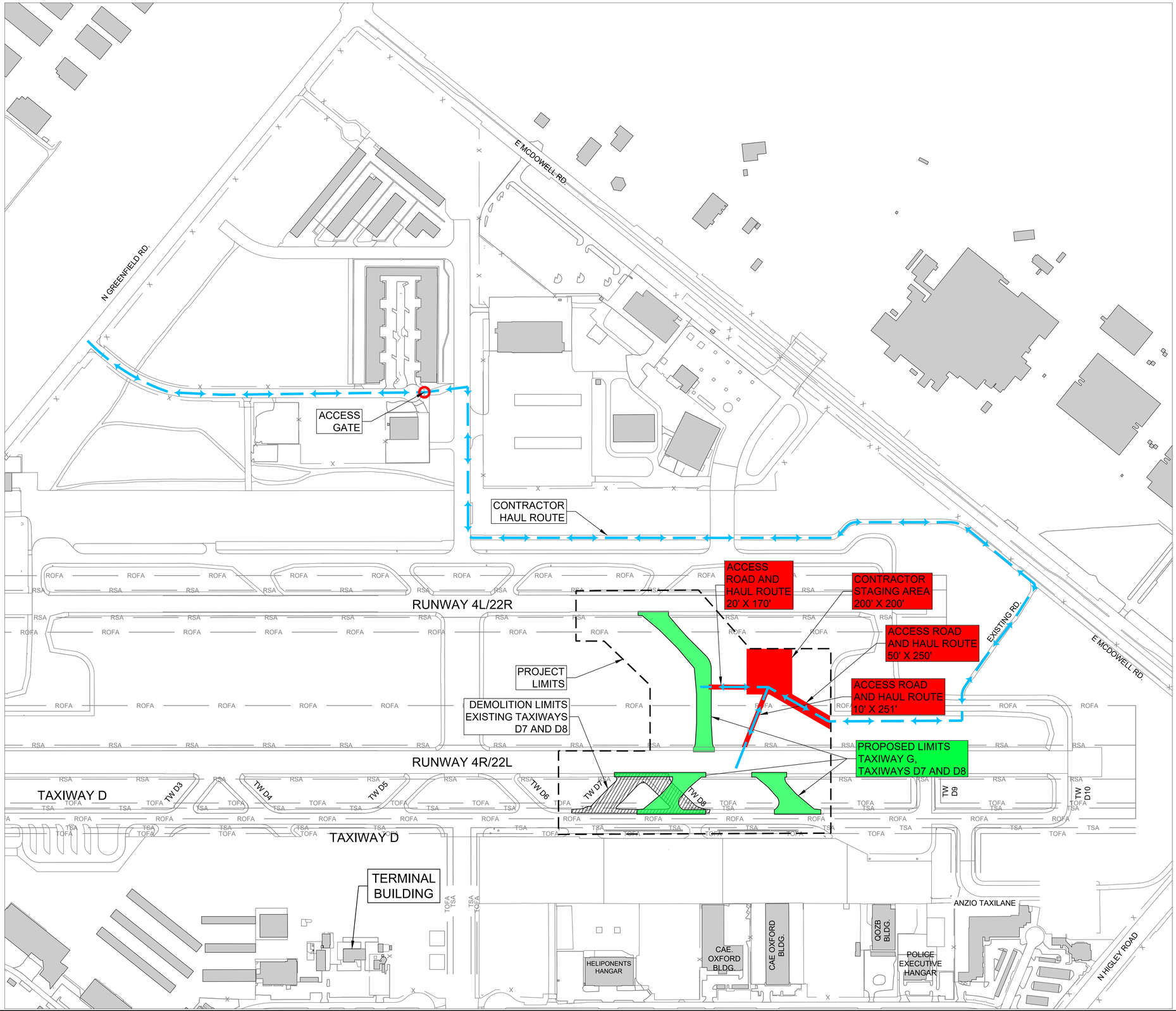
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 15 OF 52

CATALOG NUMBER: A-270534

DATE SAVED: 3/29/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G057-PHAS.DWG



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

OVERALL PHASING LEGEND

- CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
- AOA FENCE
- CONTRACTOR GATE ACCESS

GRAPHIC SCALE
300 0 300 600
(IN FEET)
1 " = 300' FULL SIZE
1" = 600' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ENVIRONMENTAL PLAN

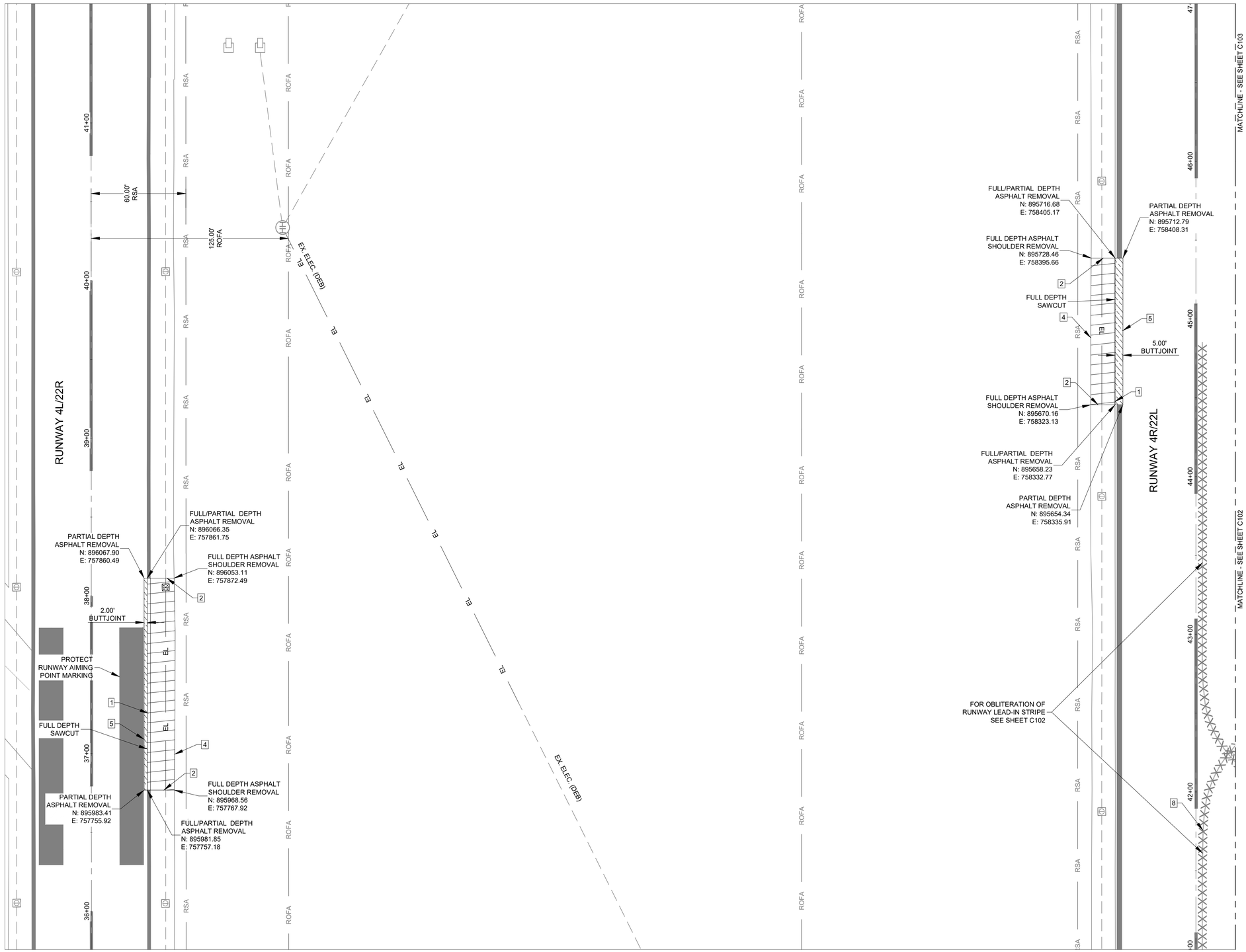
DRAWING G060

SHEET 16 OF 52

CATALOG NUMBER: A-270535

L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\000-FFZ-MCTE-G060-ENVR.DWG

DATE SAVED: 3/2/23

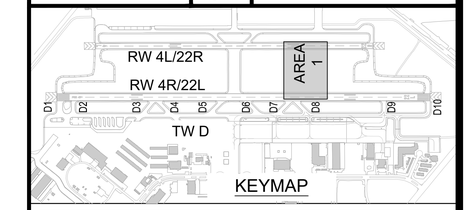


DEMOLITION ITEMS

1	P-101a SAWCUT ASPHALT PAVEMENT (4")	230 LF.
2	P-101b SAWCUT ASPHALT PAVEMENT (2")	65 LF.
4	P-101d ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")	440 SY.
5	P-101e ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")	85 SY.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



KEYMAP

DEMOLITION LEGEND

- ASPHALT PAVEMENT REMOVAL (FULL DEPTH, 4")
- ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")
- ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")
- XXXXXXXX — INDICATED REMOVAL / PAINT OBLITERATION ITEMS
- EL — ELECTRICAL LINE TO BE REMOVED
- EL(AB) — ABANDONED ELECTRICAL LINE TO BE REMOVED
- RUNWAY EDGE LIGHT TO BE REMOVED
- TAXIWAY EDGE LIGHT TO BE REMOVED
- JUNCTION BOX TO BE REMOVED
- RUNWAY GUARD LIGHT TO BE REMOVED
- AIRFIELD GUIDANCE SIGN TO BE REMOVED

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER OFF-SITE DISPOSAL OF ALL WASTE MATERIALS GENERATED FROM THE PROJECT. ALL COSTS ARE INCIDENTAL TO RESPECTIVE REMOVAL BID ITEM.
2. ALL REMOVAL NORTHING AND EASTINGS ARE APPROXIMATE.
3. PAVEMENT REMOVAL SHALL BE MEASURED AND PAID TO NEAT LINE DIMENSIONING.
4. ANY PAVEMENT DAMAGED DURING REMOVAL OUTSIDE THE PROPOSED REMOVAL LIMITS SHALL BE SQUARED OFF, BY SAW CUTTING, TO THE SATISFACTION OF THE RPR. ALL COSTS ASSOCIATED WITH THE ADDITIONAL REMOVAL AND RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL PROTECT ALL UNDERGROUND AND OVERHEAD UTILITIES AT ALL TIMES UNLESS OTHERWISE NOTED. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
6. ALL ASPHALT REMOVED SHALL BE TAKEN FROM THE AIRPORT PROPERTY AND PROPERLY DISPOSED AT NO ADDITIONAL COST TO THE SPONSOR.
7. IF EXISTING PAVEMENT IS DAMAGED BY HAUL OPERATIONS, THE CONTRACTOR SHALL REPAIR THE PAVEMENT AT NO ADDITIONAL COST TO THE SPONSOR.
8. CONTRACTOR TO SAW CUT ALONG THEORETICAL EDGE TO PRODUCE A CLEAN FACE FOR PAVING. SEE GEOMETRY SHEET C201 - C203 FOR THEORETICAL EDGES.
9. SEE SHEET C650 FOR GENERAL PAINT NOTES AND OBLITERATION NOTES.
10. SEE SHEETS E101 - E103 FOR ADDITIONAL INFORMATION ON ELECTRICAL REMOVAL.
11. PROTECTED UTILITIES ARE TO REMAIN UNDISTURBED. CONTRACTOR TO MILL AND PAVE AROUND, PROTECT UTILITIES MATCHING EXISTING GRADES.
12. CONTRACTOR MAY DISPOSE OF ASPHALT MILLINGS IN A LOCATION APPROVED BY THE AIRPORT REPRESENTATIVE IF SATISFACTORY GRADATION AND UNIFORMITY CAN BE ACHIEVED. OTHERWISE, THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL DEMOLISHED ASPHALT PAVEMENT AT AN APPROVED OFFSITE LOCATION.
13. CONTRACTOR TO PROTECT ALL PAVEMENT MARKINGS TO REMAIN DURING PAVEMENT MARKING OBLITERATION AT NO COST TO THE AIRPORT.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 59247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

DEMOLITION PLAN
AREA 1 (SCHEDULE II)

DRAWING C101

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

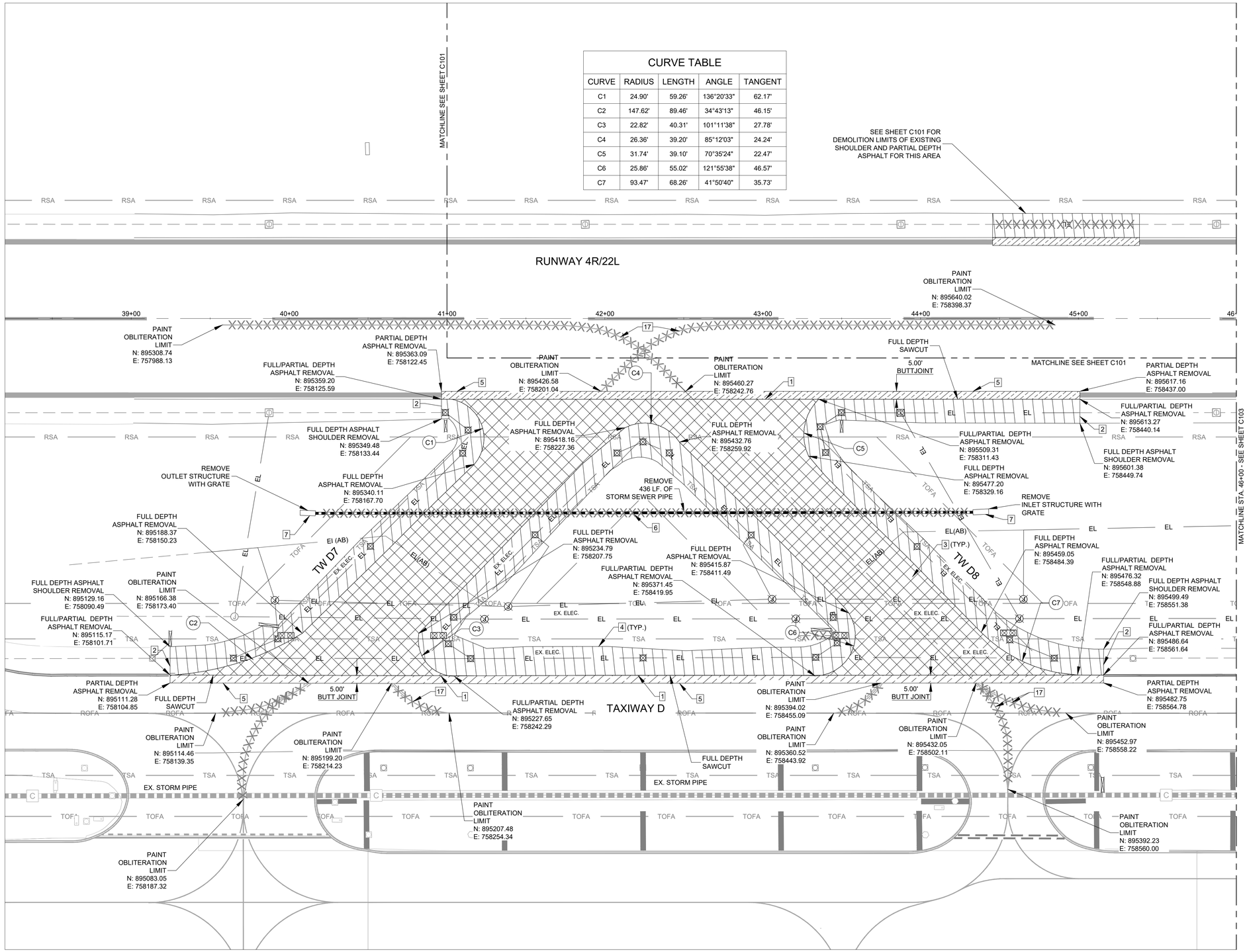
ACTIVITY:
PROJ. NO.: CP0994

SHEET 17 OF 52

CATALOG NUMBER: A-270536

DATE SAVED: 3/31/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\010-FFZ-MCTE-C101-DEMO.DWG

CURVE TABLE				
CURVE	RADIUS	LENGTH	ANGLE	TANGENT
C1	24.90'	59.26'	136°20'33"	62.17'
C2	147.62'	89.46'	34°43'13"	46.15'
C3	22.82'	40.31'	101°11'38"	27.78'
C4	26.36'	39.20'	85°12'03"	24.24'
C5	31.74'	39.10'	70°35'24"	22.47'
C6	25.86'	55.02'	121°55'38"	46.57'
C7	93.47'	68.26'	41°50'40"	35.73'



DEMOLITION ITEMS

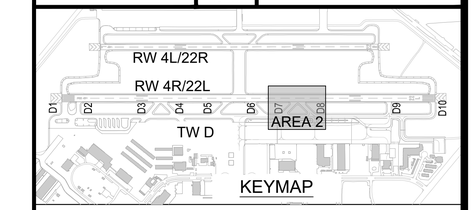
1	P-101a SAWCUT ASPHALT PAVEMENT (4")	995 LF.
2	P-101b SAWCUT ASPHALT PAVEMENT (2")	65 LF.
3	P-101c ASPHALT PAVEMENT REMOVAL (FULL DEPTH, 4")	3,300 SY.
4	P-101d ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")	2,560 SY.
5	P-101e ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")	580 SY

DEMOLITION ITEMS

6	P-101f REMOVE STORM SEWER PIPE	416 LF.
7	P-101g REMOVE INLET/OUTLET WITH GRATE	2 EA.
17	P-620a SURFACE PREPARATION (OBLITERATION)	580 SF.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



DEMOLITION LEGEND

- ASPHALT PAVEMENT REMOVAL (FULL DEPTH, 4")
- ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")
- ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")
- XXXXXXXX INDICATED REMOVAL / PAINT OBLITERATION ITEMS
- EL — ELECTRICAL LINE TO BE REMOVED
- EL(AB) — ABANDONED ELECTRICAL LINE TO BE REMOVED
- RUNWAY EDGE LIGHT TO BE REMOVED
- TAXIWAY EDGE LIGHT TO BE REMOVED
- JUNCTION BOX TO BE REMOVED
- RUNWAY GUARD LIGHT TO BE REMOVED
- AIRFIELD GUIDANCE SIGN TO BE REMOVED

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER OFF-SITE DISPOSAL OF ALL WASTE MATERIALS GENERATED FROM THE PROJECT. ALL COSTS ARE INCIDENTAL TO RESPECTIVE REMOVAL BID ITEM.
2. ALL REMOVAL NORTHING AND EASTINGS ARE APPROXIMATE.
3. PAVEMENT REMOVAL SHALL BE MEASURED AND PAID TO NEAT LINE DIMENSIONING.
4. ANY PAVEMENT DAMAGED DURING REMOVAL OUTSIDE THE PROPOSED REMOVAL LIMITS SHALL BE SQUARED OFF, BY SAW CUTTING, TO THE SATISFACTION OF THE RPR. ALL COSTS ASSOCIATED WITH THE ADDITIONAL REMOVAL AND RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL PROTECT ALL UNDERGROUND AND OVERHEAD UTILITIES AT ALL TIMES UNLESS OTHERWISE NOTED. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
6. ALL ASPHALT REMOVED SHALL BE TAKEN FROM THE AIRPORT PROPERTY AND PROPERLY DISPOSED AT NO ADDITIONAL COST TO THE SPONSOR.
7. IF EXISTING PAVEMENT IS DAMAGED BY HAUL OPERATIONS, THE CONTRACTOR SHALL REPAIR THE PAVEMENT AT NO ADDITIONAL COST TO THE SPONSOR.
8. CONTRACTOR TO SAW CUT ALONG THEORETICAL EDGE TO PRODUCE A CLEAN FACE FOR PAVING. SEE GEOMETRY SHEET C201 - C203 FOR THEORETICAL EDGES.
9. SEE SHEET C650 FOR GENERAL PAINT NOTES AND OBLITERATION NOTES.
10. SEE SHEETS E101 - E103 FOR ADDITIONAL INFORMATION ON ELECTRICAL REMOVAL.
11. PROTECTED UTILITIES ARE TO REMAIN UNDISTURBED. CONTRACTOR TO MILL AND PAVE AROUND, PROTECT UTILITIES MATCHING EXISTING GRADES.
12. CONTRACTOR MAY DISPOSE OF ASPHALT MILLINGS IN A LOCATION APPROVED BY THE AIRPORT REPRESENTATIVE IF SATISFACTORY GRADATION AND UNIFORMITY CAN BE ACHIEVED. OTHERWISE, THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL DEMOLISHED ASPHALT PAVEMENT AT AN APPROVED OFFSITE LOCATION.
13. CONTRACTOR TO PROTECT ALL PAVEMENT MARKINGS TO REMAIN DURING PAVEMENT MARKING OBLITERATION AT NO COST TO THE AIRPORT.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 59247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

DEMOLITION PLAN
AREA 2 (SCHEDULE I)

DRAWING C102

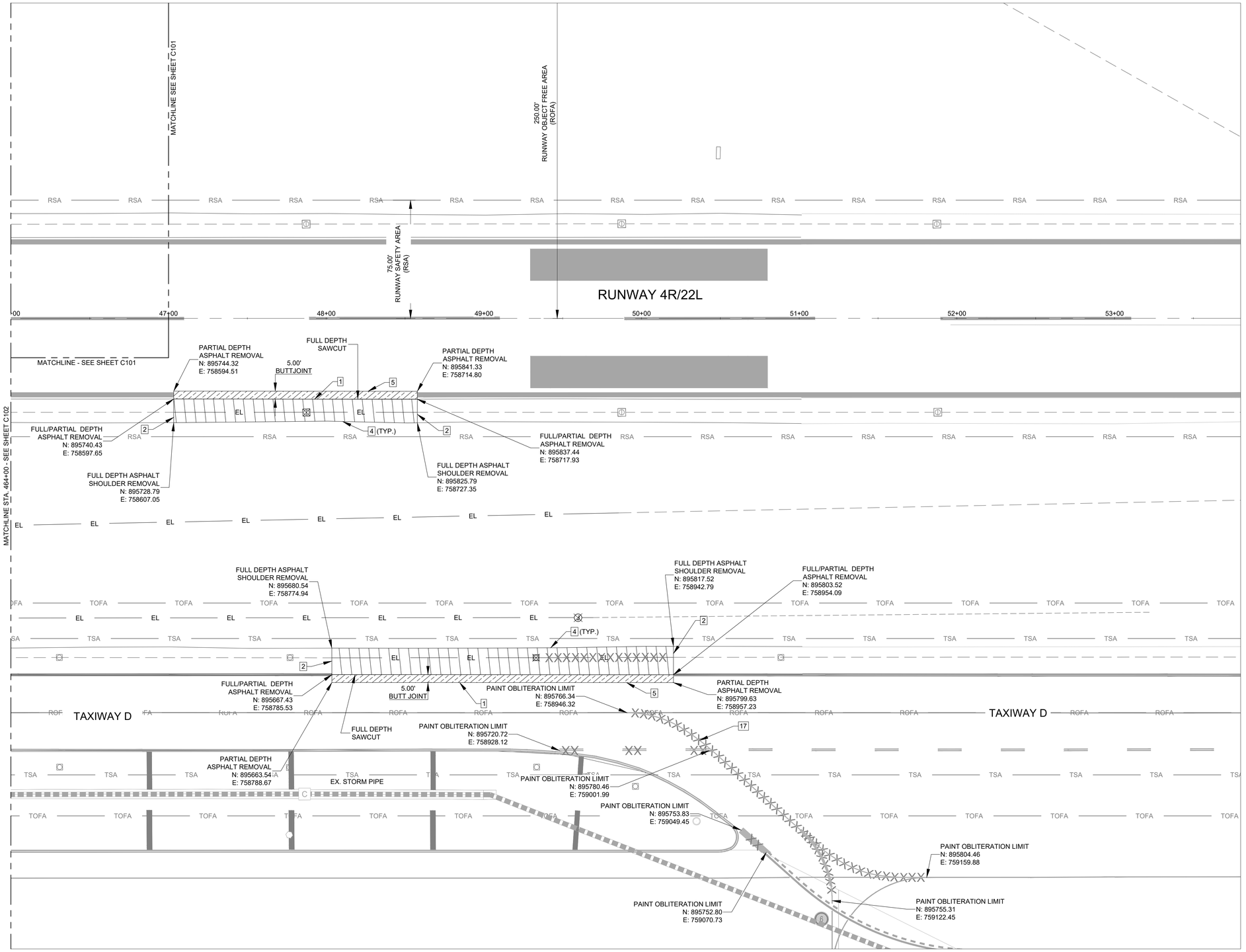
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: ---
PROJ. NO.: CP0994

SHEET 18 OF 52

CATALOG NUMBER: A-270537

DATE SAVED: 3/31/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\010-FFZ-MCTE-C102-DEMO.DWG



DEMOLITION ITEMS

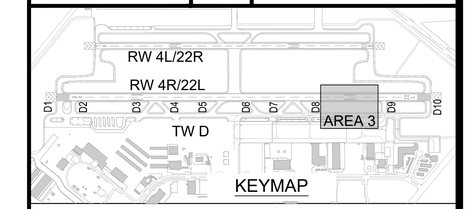
1	P-101a SAWCUT ASPHALT PAVEMENT (4")	375 LF.
2	P-101b SAWCUT ASPHALT PAVEMENT (2")	70 LF.
4	P-101d ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")	695 SY.
5	P-101e ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")	220 SY.

DEMOLITION ITEMS

17	P-620a SURFACE PREPARATION (OBLITERATION)	275 SF.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



DEMOLITION LEGEND

- ASPHALT PAVEMENT REMOVAL (FULL DEPTH, 4")
- ASPHALT PAVEMENT SHOULDER REMOVAL (FULL DEPTH, 2")
- ASPHALT PAVEMENT REMOVAL (PARTIAL DEPTH, 2")
- XXXXXXXX — INDICATED REMOVAL / PAINT OBLITERATION ITEMS
- EL — ELECTRICAL LINE TO BE REMOVED
- EL(AB) — ABANDONED ELECTRICAL LINE TO BE REMOVED
- RUNWAY EDGE LIGHT TO BE REMOVED
- TAXIWAY EDGE LIGHT TO BE REMOVED
- JUNCTION BOX TO BE REMOVED
- RUNWAY GUARD LIGHT TO BE REMOVED
- AIRFIELD GUIDANCE SIGN TO BE REMOVED

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER OFF-SITE DISPOSAL OF ALL WASTE MATERIALS GENERATED FROM THE PROJECT. ALL COSTS ARE INCIDENTAL TO RESPECTIVE REMOVAL BID ITEM.
2. ALL REMOVAL NORTHING AND EASTINGS ARE APPROXIMATE.
3. PAVEMENT REMOVAL SHALL BE MEASURED AND PAID TO NEAT LINE DIMENSIONING.
4. ANY PAVEMENT DAMAGED DURING REMOVAL OUTSIDE THE PROPOSED REMOVAL LIMITS SHALL BE SQUARED OFF, BY SAW CUTTING, TO THE SATISFACTION OF THE RPR. ALL COSTS ASSOCIATED WITH THE ADDITIONAL REMOVAL AND RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL PROTECT ALL UNDERGROUND AND OVERHEAD UTILITIES AT ALL TIMES UNLESS OTHERWISE NOTED. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
6. ALL ASPHALT REMOVED SHALL BE TAKEN FROM THE AIRPORT PROPERTY AND PROPERLY DISPOSED AT NO ADDITIONAL COST TO THE SPONSOR.
7. IF EXISTING PAVEMENT IS DAMAGED BY HAUL OPERATIONS, THE CONTRACTOR SHALL REPAIR THE PAVEMENT AT NO ADDITIONAL COST TO THE SPONSOR.
8. CONTRACTOR TO SAW CUT ALONG THEORETICAL EDGE TO PRODUCE A CLEAN FACE FOR PAVING. SEE GEOMETRY SHEET C201 - C203 FOR THEORETICAL EDGES.
9. SEE SHEET C650 FOR GENERAL PAINT NOTES AND OBLITERATION NOTES.
10. SEE SHEETS E101 - E103 FOR ADDITIONAL INFORMATION ON ELECTRICAL REMOVAL.
11. PROTECTED UTILITIES ARE TO REMAIN UNDISTURBED. CONTRACTOR TO MILL AND PAVE AROUND, PROTECT UTILITIES MATCHING EXISTING GRADES.
12. CONTRACTOR MAY DISPOSE OF ASPHALT MILLINGS IN A LOCATION APPROVED BY THE AIRPORT REPRESENTATIVE IF SATISFACTORY GRADATION AND UNIFORMITY CAN BE ACHIEVED. OTHERWISE, THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL DEMOLISHED ASPHALT PAVEMENT AT AN APPROVED OFFSITE LOCATION.
13. CONTRACTOR TO PROTECT ALL PAVEMENT MARKINGS TO REMAIN DURING PAVEMENT MARKING OBLITERATION AT NO COST TO THE AIRPORT.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) — CERTIFICATE NO. 69247 — JON BRYCE WEEKS — 3/29/23 — Date Signed — ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

DEMOLITION PLAN
AREA 3 (SCHEDULE I)

DRAWING C103

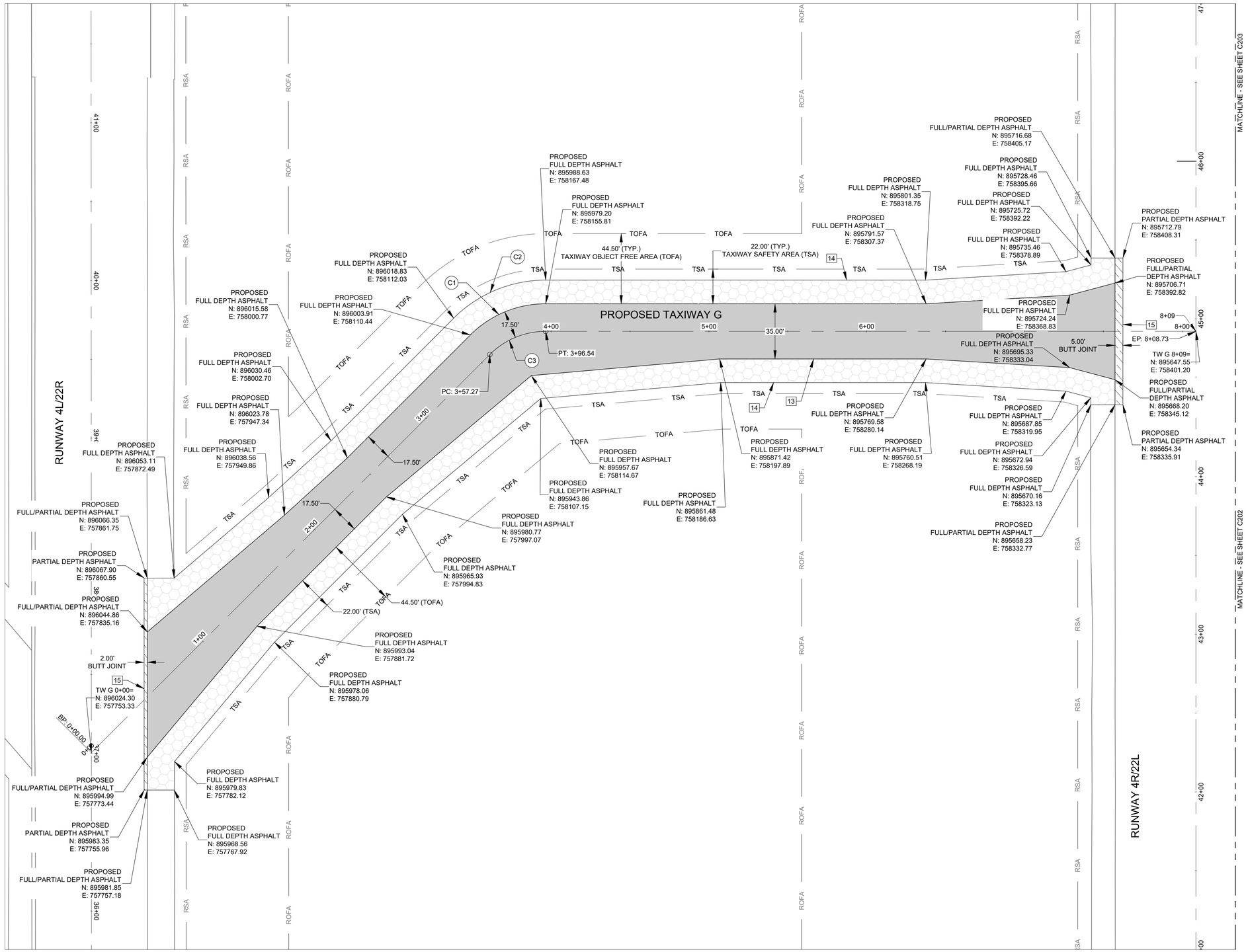
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: ____
PROJ. NO.: CP0994

SHEET 19 OF 52

CATALOG NUMBER: A-270538

DATE SAVED: 3/31/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\010-FFZ-MCTE-C102-DEMO.DWG

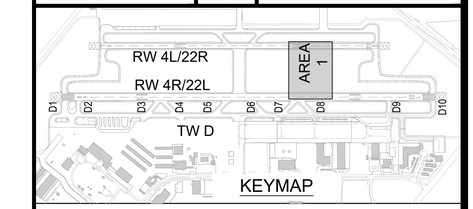


CONSTRUCT ITEMS

11	P-208a AGGREGATE BASE COURSE (6" THICK)	3,480 SY.
12	P-222a SOIL STERILIZATION	5,835 SY.
13	P-401a ASPHALT SURFACE COURSE (3/4" , 4" THICK)	3,325 SY.
14	P-401b ASPHALT SURFACE COURSE (3/4" , 3" THICK)	2,510 SY.
15	P-401c ASPHALT SURFACE COURSE (3/4" , 2" THICK)	85 SY.
16	P-603a EMULSIFIED ASPHALT TACK COAT	340 GAL.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



KEYMAP

GEOMETRY LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT

NOTES

1. CONTRACTOR TO USE SURVEY CONTROL POINTS AS SHOWN ON SHEET G005 SURVEY CONTROL LAYOUT.
2. ALL LINE AND CURVE CALLOUTS ARE AT EDGE OF ASPHALT UNLESS OTHERWISE NOTED.
3. THE GEOMETRY SHOWN ON THESE SHEETS REPRESENT THEORETICAL PAVEMENT EDGES. UNLESS OTHERWISE DIRECTED BY THE RPR, THE CONTRACTOR SHALL CONSTRUCT THE PAVEMENT SECTION TO THE EXISTING ASPHALT PAVEMENT EDGES.
4. SEE SHEETS G050 - G056 FOR CONSTRUCTION PHASING.
5. SEE SHEETS C220 FOR TYPICAL PAVEMENT SECTIONS.
6. SEE SHEETS C601 - C603 FOR PAVEMENT MARKING INFORMATION.
6. ANY PAVEMENT DAMAGE DURING CONSTRUCTION OUTSIDE THE PROPOSED PROJECT REMOVAL LIMITS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES.

CURVE TABLE

CURVE	RADIUS	LENGTH	ANGLE	TANGENT
C1	67.50'	53.01'	44°59'52"	27.96'
C2	82.50'	64.79'	44°59'52"	34.17'
C3	50.00'	39.27'	45°00'00"	20.71'

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 59241 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GEOMETRY PLAN
AREA 1 (SCHEDULE II)

DRAWING C201

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 20 OF 52

CATALOG NUMBER: A-270539

DATE SAVED: 3/3/23
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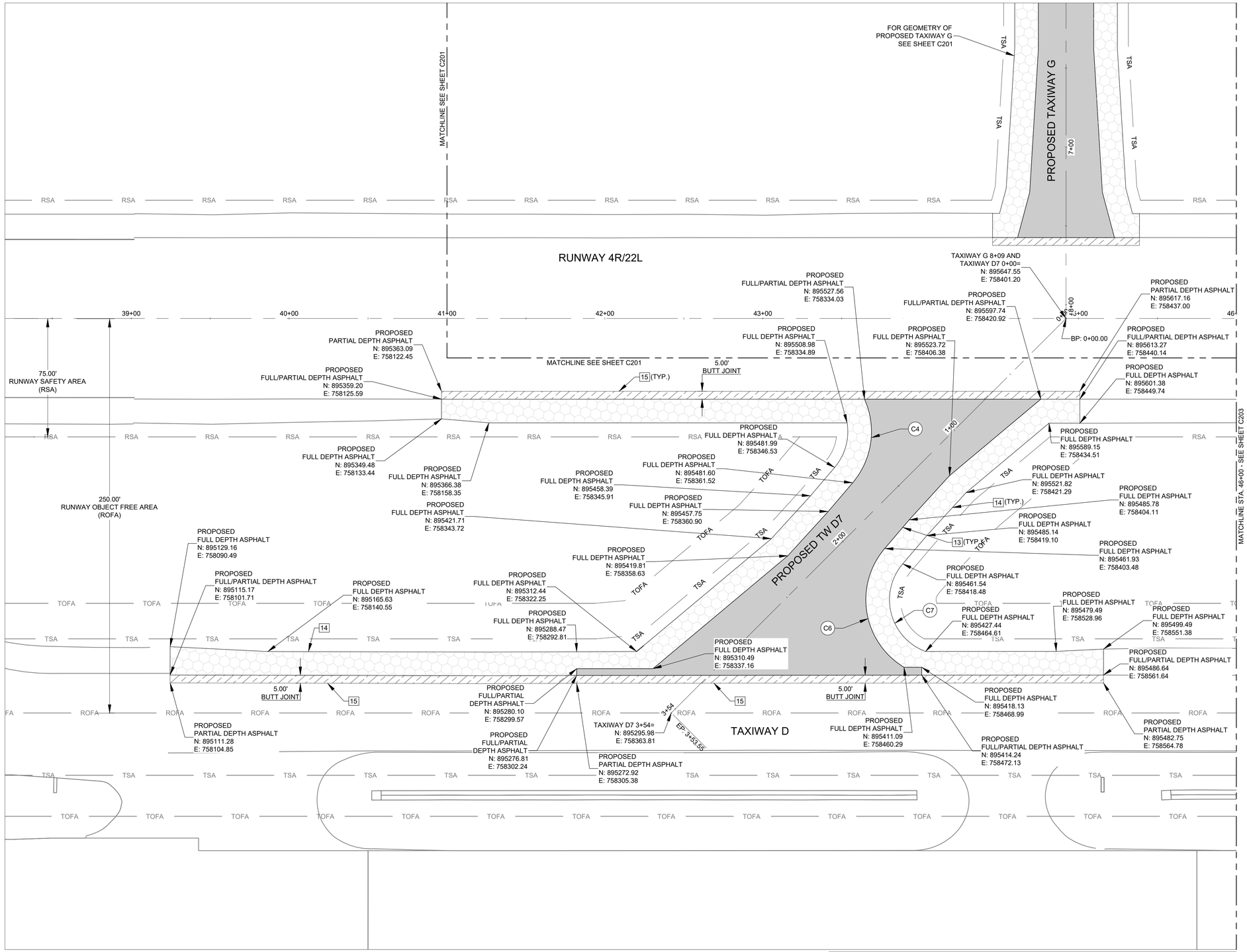
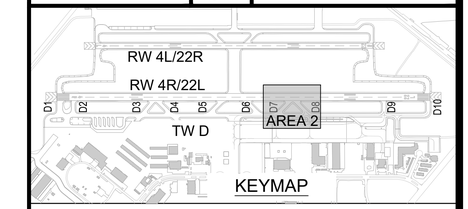


CONSTRUCT ITEMS

11	P-208a AGGREGATE BASE COURSE (6" THICK)	1,780 SY.
12	P-222a SOIL STERILIZATION	3,680 SY.
13	P-401a ASPHALT SURFACE COURSE (3/4" , 4" THICK)	1,715 SY.
14	P-401b ASPHALT SURFACE COURSE (3/4" , 3" THICK)	1,965 SY.
15	P-401c ASPHALT SURFACE COURSE (3/4" , 2" THICK)	580 SY.
16	P-603a EMULSIFIED ASPHALT TACK COAT	230 GAL.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



GEOMETRY LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT

NOTES

1. CONTRACTOR TO USE SURVEY CONTROL POINTS AS SHOWN ON SHEET G005 SURVEY CONTROL LAYOUT.
2. ALL LINE AND CURVE CALLOUTS ARE AT EDGE OF ASPHALT UNLESS OTHERWISE NOTED.
3. THE GEOMETRY SHOWN ON THESE SHEETS REPRESENT THEORETICAL PAVEMENT EDGES. UNLESS OTHERWISE DIRECTED BY THE RPR, THE CONTRACTOR SHALL CONSTRUCT THE PAVEMENT SECTION TO THE EXISTING ASPHALT PAVEMENT EDGES.
4. SEE SHEETS G050 - G056 FOR CONSTRUCTION PHASING.
5. SEE SHEETS C220 FOR TYPICAL PAVEMENT SECTIONS.
6. SEE SHEETS C601 - C603 FOR PAVEMENT MARKING INFORMATION.
6. ANY PAVEMENT DAMAGE DURING CONSTRUCTION OUTSIDE THE PROPOSED PROJECT REMOVAL LIMITS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES.

CURVE TABLE

CURVE	RADIUS	LENGTH	ANGLE	TANGENT
C4	50.00'	56.52'	64°46'04"	31.71'
C5	35.00'	30.33'	49°38'53"	16.19'
C6	50.00'	86.70'	99°20'43"	58.90'
C7	35.00'	67.23'	110°03'35"	50.04'

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 59247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GEOMETRY PLAN
AREA 2 (SCHEDULE I)

DRAWING C202

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

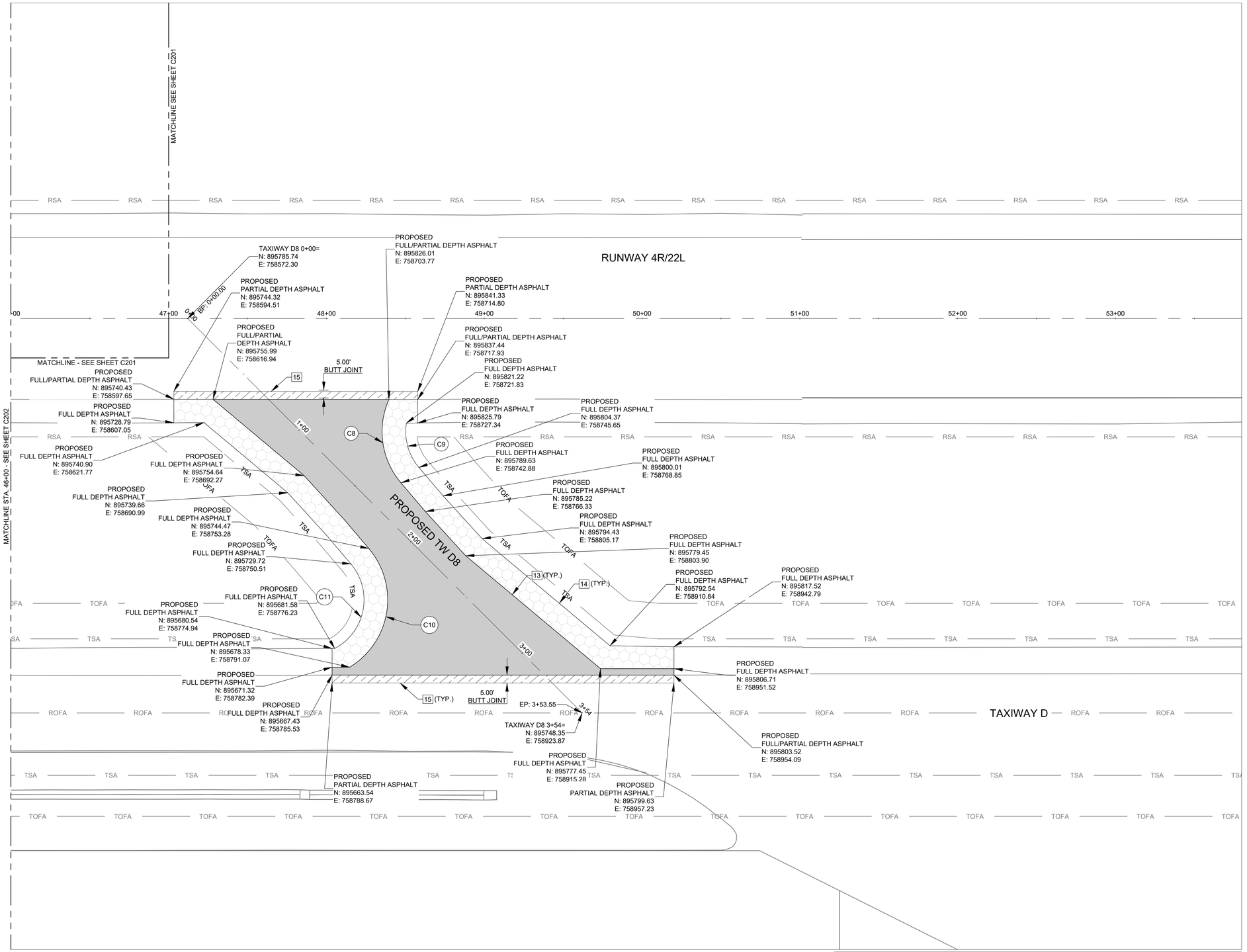
ACTIVITY:
PROJ. NO.: CP0994

SHEET 21 OF 52

CATALOG NUMBER: A-270540

L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\020-FFZ-MCTE-C202-GMTY.DWG

DATE SAVED: 3/3/23

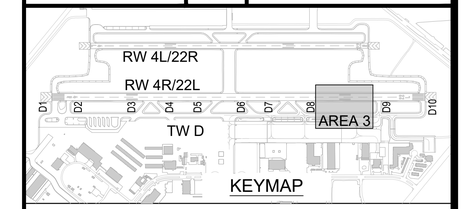


CONSTRUCT ITEMS

11	P-208a AGGREGATE BASE COURSE (6" THICK)	1,770 SY.
12	P-222a SOIL STERILIZATION	2,590 SY.
13	P-401a ASPHALT SURFACE COURSE (3/4" , 4" THICK)	1,710 SY.
14	P-401b ASPHALT SURFACE COURSE (3/4" , 3" THICK)	880 SY.
15	P-401c ASPHALT SURFACE COURSE (3/4" , 2" THICK)	215 SY.
16	P-603a EMULSIFIED ASPHALT TACK COAT	195 GAL.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



GEOMETRY LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT

NOTES

1. CONTRACTOR TO USE SURVEY CONTROL POINTS AS SHOWN ON SHEET G005 SURVEY CONTROL LAYOUT.
2. ALL LINE AND CURVE CALLOUTS ARE AT EDGE OF ASPHALT UNLESS OTHERWISE NOTED.
3. THE GEOMETRY SHOWN ON THESE SHEETS REPRESENT THEORETICAL PAVEMENT EDGES. UNLESS OTHERWISE DIRECTED BY THE RPR, THE CONTRACTOR SHALL CONSTRUCT THE PAVEMENT SECTION TO THE EXISTING ASPHALT PAVEMENT EDGES.
4. SEE SHEETS G050 - G056 FOR CONSTRUCTION PHASING.
5. SEE SHEETS C220 FOR TYPICAL PAVEMENT SECTIONS.
6. SEE SHEETS C601 - C603 FOR PAVEMENT MARKING INFORMATION.
6. ANY PAVEMENT DAMAGE DURING CONSTRUCTION OUTSIDE THE PROPOSED PROJECT REMOVAL LIMITS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES.

CURVE TABLE

CURVE	RADIUS	LENGTH	ANGLE	TANGENT
C8	50.00'	56.35'	64°34'41"	31.60'
C9	35.00'	30.10'	49°16'37"	16.05'
C10	50.00'	86.60'	99°14'02"	58.78'
C11	35.00'	62.60'	102°29'08"	43.60'

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE
53247
JON BRYCE WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GEOMETRY PLAN
AREA 3 (SCHEDULE I)

DRAWING C203

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 22 OF 52

CATALOG NUMBER: A-270541

DATE SAVED: 3/3/23
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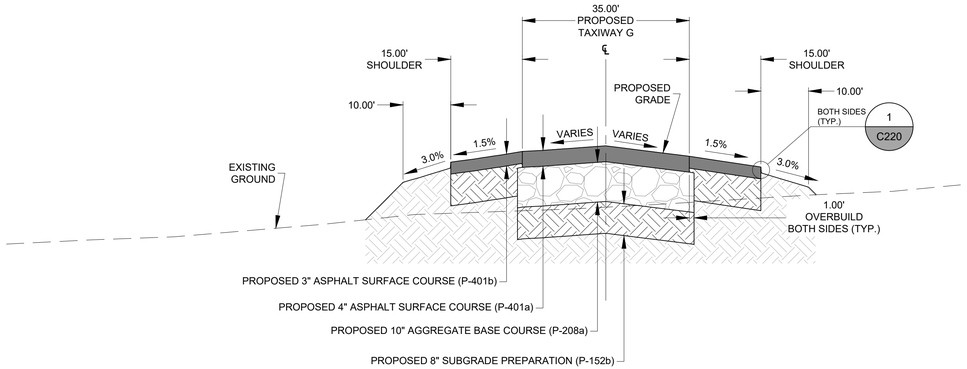
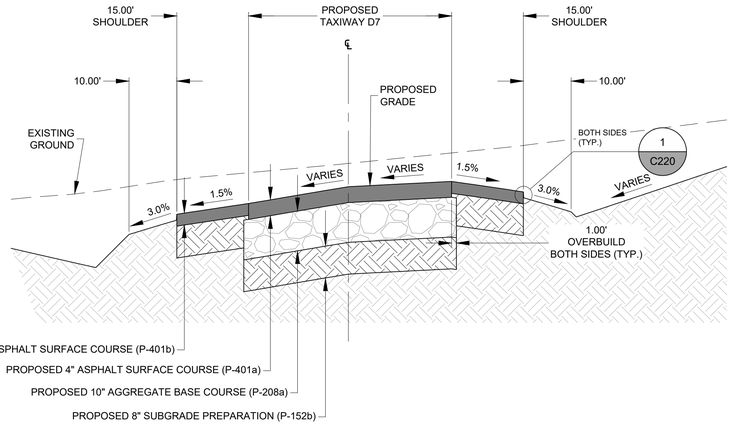


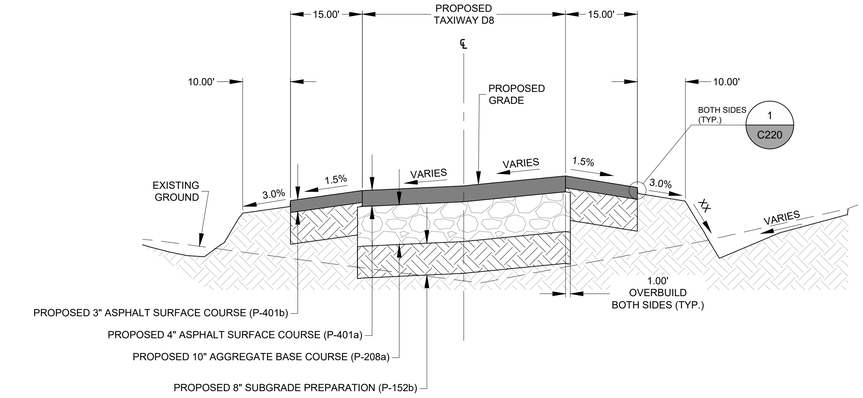
A — TYPICAL SECTION A-A (TAXIWAY G)

Scale: N.T.S.



B — TYPICAL SECTION B-B (TAXIWAY D7)

Scale: N.T.S.

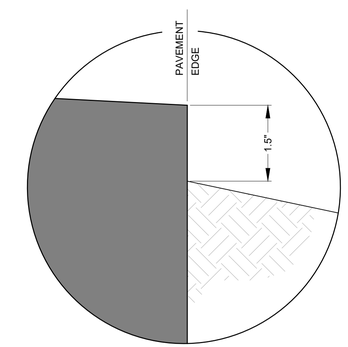


C — TYPICAL SECTION C-C (TAXIWAY D7)

Scale: N.T.S.

NOTES:

1. THE PROPOSED 6" AGGREGATE BASE COURSE IS TO BE OVERBUILT ONE FOOT OUTSIDE OF THE 4" ASPHALT SURFACE COURSE LIMITS.



1 — PAVEMENT DROP OFF DETAIL

Scale: N.T.S.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) — CERTIFICATE — 69247 — JON BRYCE WEEKS — 3/06/23 — Date Signed — ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

TYPICAL SECTIONS

DRAWING: C220

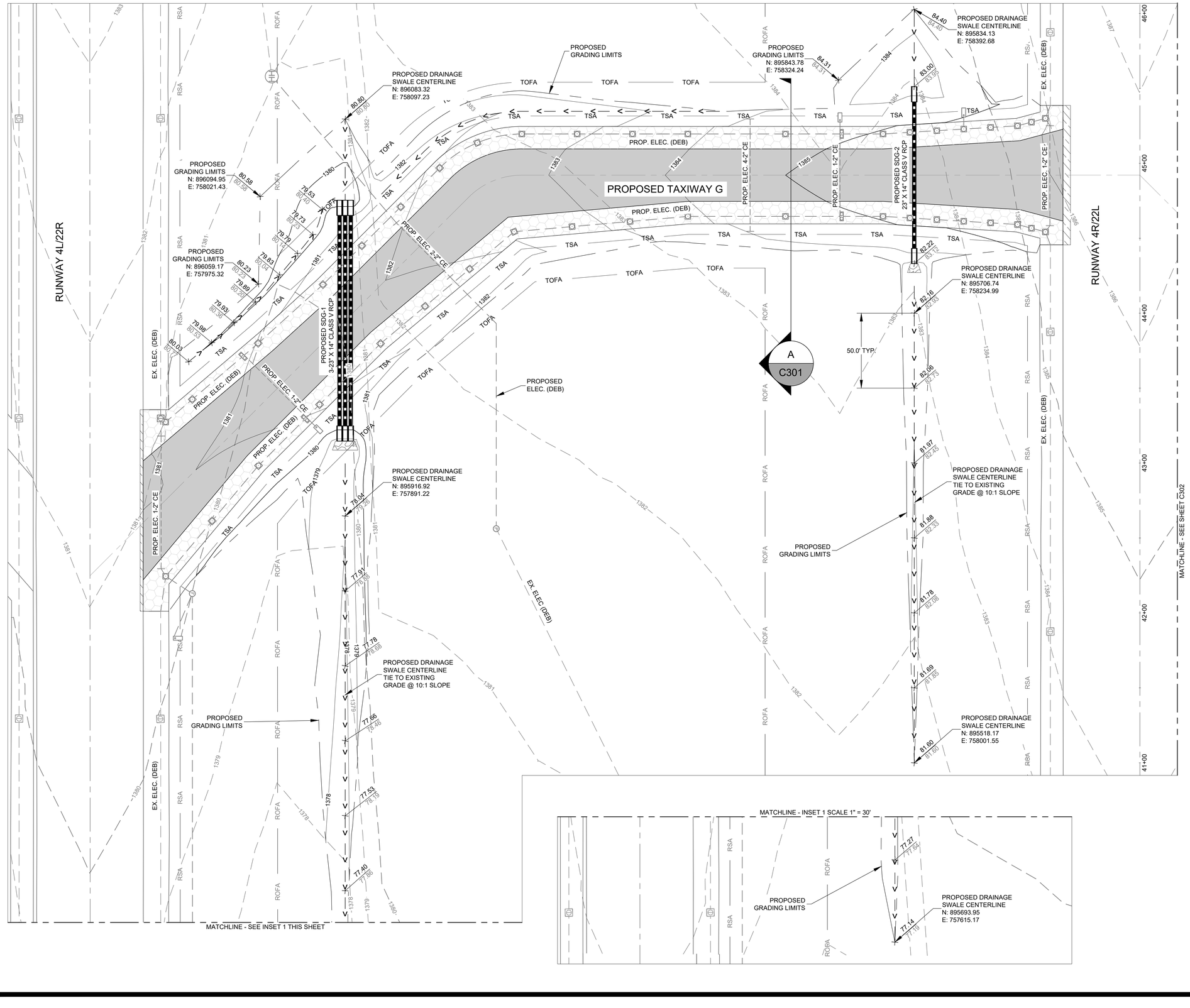
ACTIVITY: _____
PROJ. NO.: CP0994

SHEET: 23 OF 52

CATALOG NUMBER: A-270542

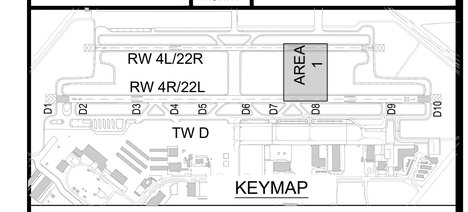
DATE SAVED: 3/3/23

L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\022-FFZ-MCTE-C220-TYPS.DWG



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



KEYMAP

GRADING LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT
- 1385 — EXISTING INDEX CONTOUR
- 1386 — EXISTING INTERMEDIATE CONTOUR
- 1385 — PROPOSED INDEX CONTOUR
- 1386 — PROPOSED INTERMEDIATE CONTOUR
- PROJECT GRADING LIMITS
- PROPOSED SWALE

NOTES:

1. LIMITS OF GRADING ARE APPROXIMATE AND DO NOT CONSTITUTE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE SPONSOR.
2. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY HIS OPERATIONS OUTSIDE OF THE GRADING LIMITS, INCLUDING ENGINEERED IDENTIFIED STAGING AREAS, STOCKPILES AREAS, AND HAUL ROUTES. ALL RESTORATION SHALL BE AT CONTRACTOR'S EXPENSE AND INCLUDES, BUT IS NOT LIMITED TO, MINOR GRADING, TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
3. CONTRACTOR SHALL USE CAUTION AND PROTECT ALL EXISTING UNDERGROUND UTILITIES.
4. PROPOSED CONTOURS REFLECT FINAL DESIGN ELEVATIONS. IN NON-PAVEMENT AREAS, FINAL ELEVATIONS SHALL INCLUDE DEPTH OF FINAL TOPSOIL LAYER.
5. SEE SHEET C220 FOR TYPICAL SECTIONS.
6. SEE SHEETS C321 - C323 FOR PROPOSED SPOT ELEVATION PLAN.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer — CERTIFICATE — 58247 — JON BRYCE WEEKS — 3/06/23 — Date Signed — ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GRADING AND DRAINAGE PLAN AREA 1 (SCHEDULE II)

DRAWING: C301

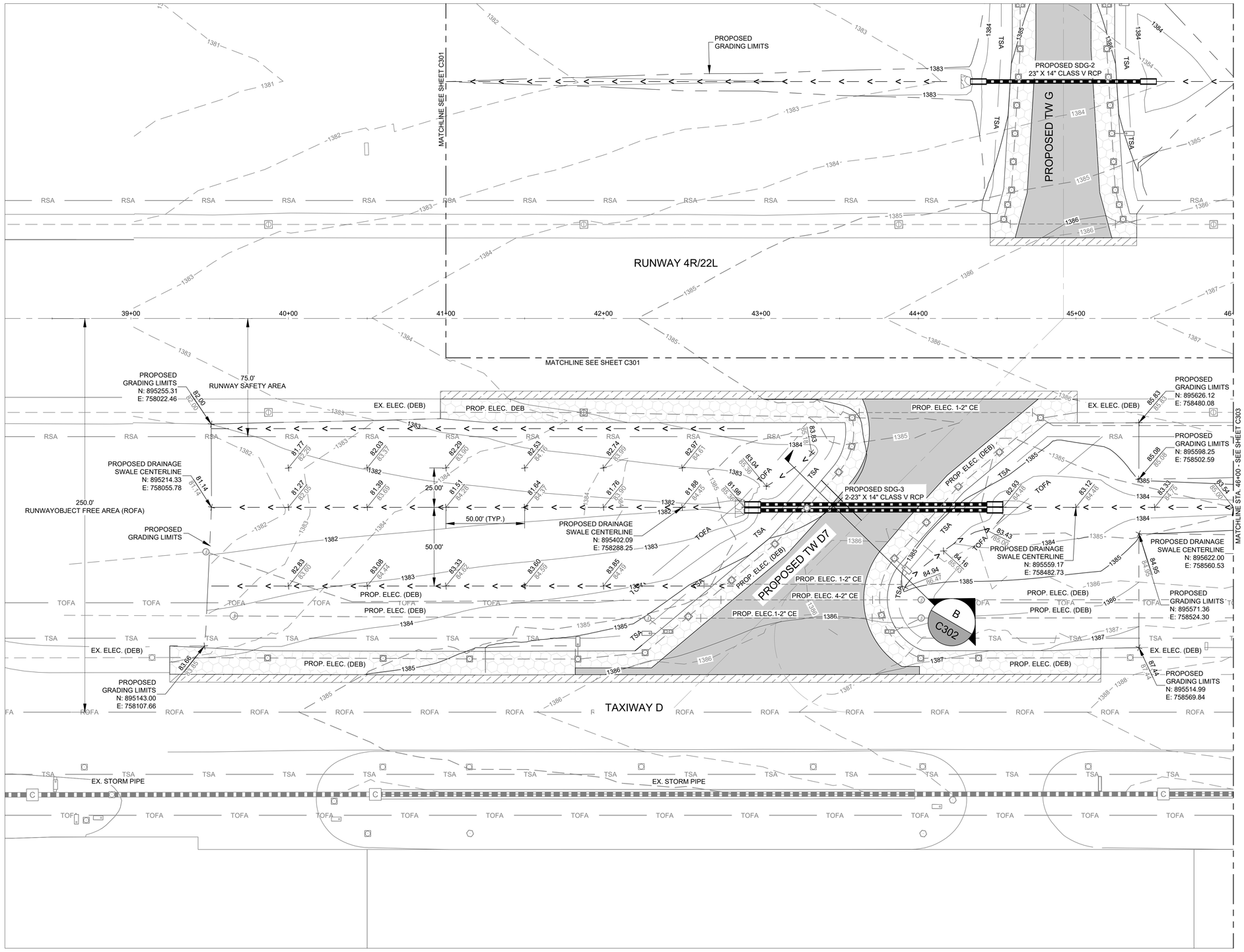
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

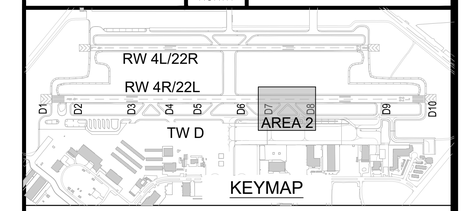
ACTIVITY: ____
PROJ. NO.: CP0994

SHEET 24 OF 52

CATALOG NUMBER: A-270543

DATE SAVED: 3/8/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\030-FFZ-MCTE-C301-GRAD.DWG





NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

GRADING LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT
- 1385 EXISTING INDEX CONTOUR
- 1386 EXISTING INTERMEDIATE CONTOUR
- 1385 PROPOSED INDEX CONTOUR
- 1386 PROPOSED INTERMEDIATE CONTOUR
- PROJECT GRADING LIMITS
- PROPOSED SWALE

NOTES:

1. LIMITS OF GRADING ARE APPROXIMATE AND DO NOT CONSTITUTE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE SPONSOR.
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3. CONTRACTOR SHALL USE CAUTION AND PROTECT ALL EXISTING UNDERGROUND UTILITIES.
4. PROPOSED CONTOURS REFLECT FINAL DESIGN ELEVATIONS. IN NON-PAVEMENT AREAS, FINAL ELEVATIONS SHALL INCLUDE DEPTH OF FINAL TOPSOIL LAYER.
5. SEE SHEET C220 FOR TYPICAL SECTIONS.
6. SEE SHEETS C321 - C323 FOR PROPOSED SPOT ELEVATION PLAN.

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE NO.
69241
JON BRYCE WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GRADING AND DRAINAGE PLAN AREA 2 (SCHEDULE I)

DRAWING C302

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 25 OF 52

CATALOG NUMBER: A-270544

DATE SAVED: 3/10/23
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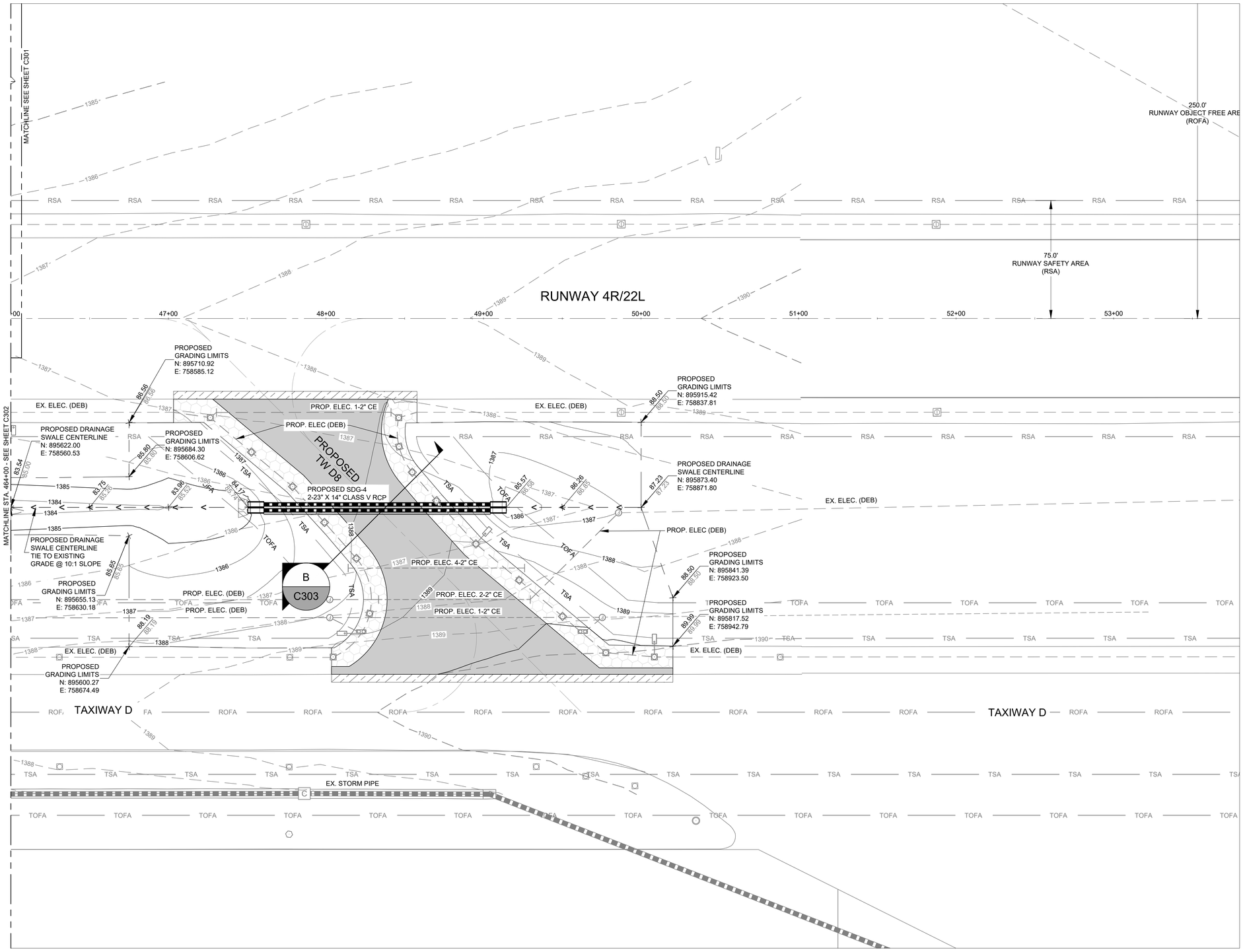
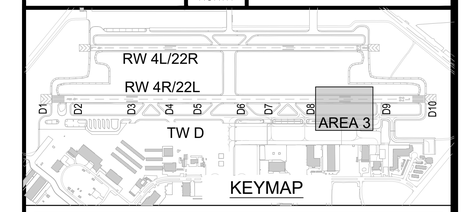


NORTH

BENCHMARK:

FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



GRADING LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT
- 1385 EXISTING INDEX CONTOUR
- 1386 EXISTING INTERMEDIATE CONTOUR
- 1385 PROPOSED INDEX CONTOUR
- 1386 PROPOSED INTERMEDIATE CONTOUR
- PROJECT GRADING LIMITS
- PROPOSED SWALE

NOTES:

1. LIMITS OF GRADING ARE APPROXIMATE AND DO NOT CONSTITUTE LIMITS OF DISTURBANCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE SPONSOR.
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3. CONTRACTOR SHALL USE CAUTION AND PROTECT ALL EXISTING UNDERGROUND UTILITIES.
4. PROPOSED CONTOURS REFLECT FINAL DESIGN ELEVATIONS. IN NON-PAVEMENT AREAS, FINAL ELEVATIONS SHALL INCLUDE DEPTH OF FINAL TOPSOIL LAYER.
5. SEE SHEET C220 FOR TYPICAL SECTIONS.
6. SEE SHEETS C321 - C323 FOR PROPOSED SPOT ELEVATION PLAN.

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE NO.
59247
JON BRYCE
WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

GRADING AND DRAINAGE PLAN AREA 3 (SCHEDULE I)

DRAWING C303

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 26 OF 52

CATALOG NUMBER: A-270545

DATE SAVED: 3/10/23
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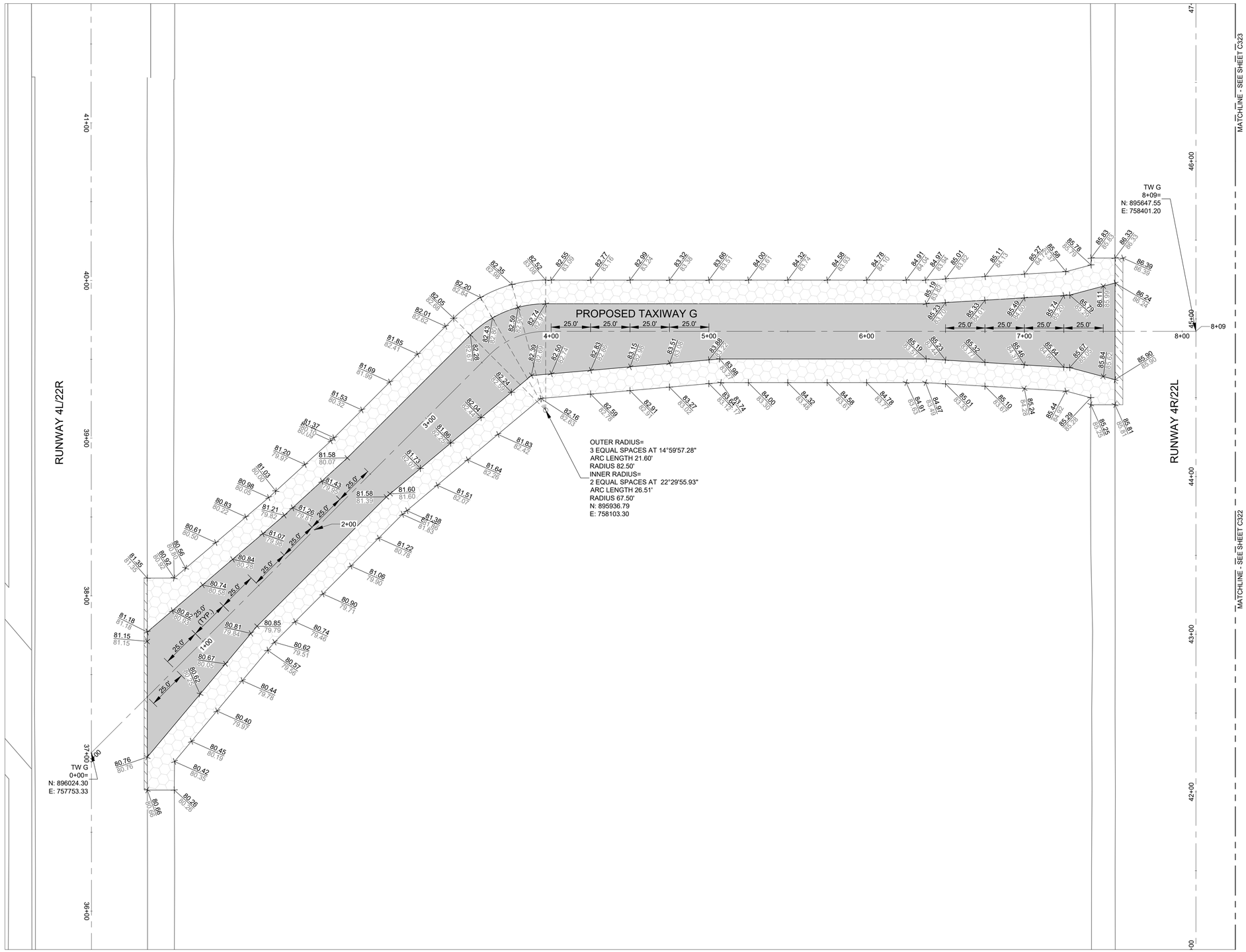
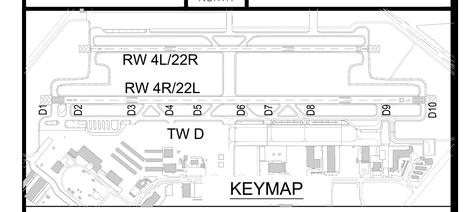


NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



SPOT ELEVATION LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT
- ×1384.40 / 1384.38 — DESIGN ELEVATION / EXISTING ELEVATION

NOTES:

1. ALL SPOT ELEVATIONS ARE AT FINISHED PAVEMENT GRADE UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED BY THEIR OPERATIONS OUTSIDE OF THE GRADING LIMITS AT THEIR OWN EXPENSE.
3. SEE SHEET C220 - C303 FOR TYPICAL SECTIONS.
4. SEE SHEETS C301 - C303 FOR GRADING.
5. SEE SHEETS C400 AND C401. FOR TAXIWAY H, D7 AND D8 PLAN AND PROFILES.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) — CERTIFICATE — 59241 — JON BRYCE WEEKS — 3/06/23 — Date Signed — ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

SPOT ELEVATION PLAN
AREA 1 (SCHEDULE II)

DRAWING: C321

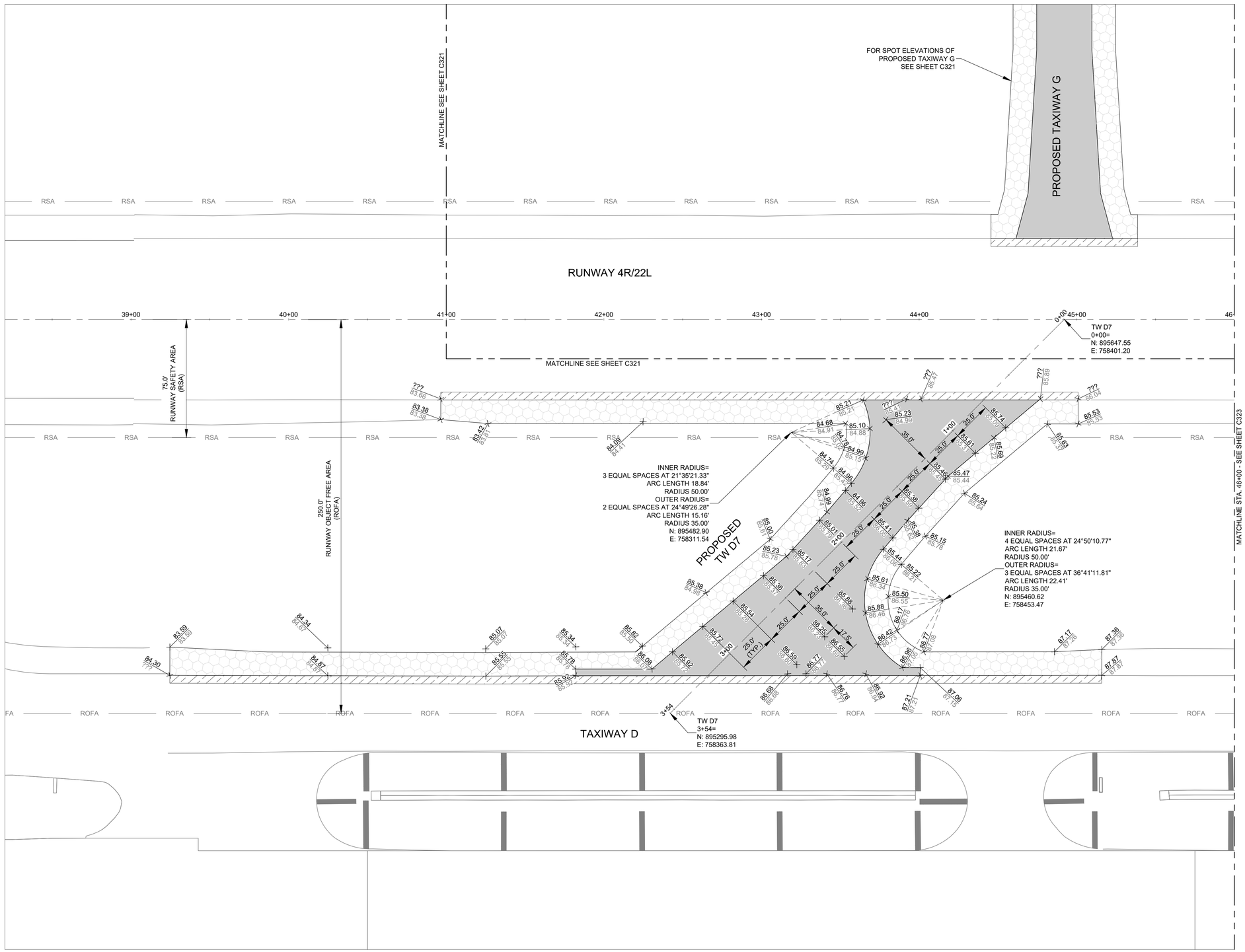
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

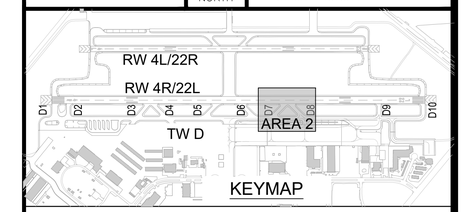
ACTIVITY:
PROJ. NO.: CP0994

SHEET: 27 OF 52

CATALOG NUMBER: A-270546

DATE SAVED: 3/2/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\032-FFZ-MCTE-C321-SPOT.DWG





NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

SPOT ELEVATION LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT
- 1384.40 / 1384.38 — DESIGN ELEVATION / EXISTING ELEVATION

NOTES:

1. ALL SPOT ELEVATIONS ARE AT FINISHED PAVEMENT GRADE UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED BY THEIR OPERATIONS OUTSIDE OF THE GRADING LIMITS AT THEIR OWN EXPENSE.
3. SEE SHEET C220 - C303 FOR TYPICAL SECTIONS.
4. SEE SHEETS C301 - C303 FOR GRADING.
5. SEE SHEETS C400 AND C401. FOR TAXIWAY H, D7 AND D8 PLAN AND PROFILES.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 25' FULL SIZE
1" = 50' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE
69247
JON BRYCE
WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

SPOT ELEVATION PLAN
AREA 2 (SCHEDULE I)

DRAWING
C322

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET
28 OF 52

CATALOG NUMBER:
A-270547

DATE SAVED: 3/2/23
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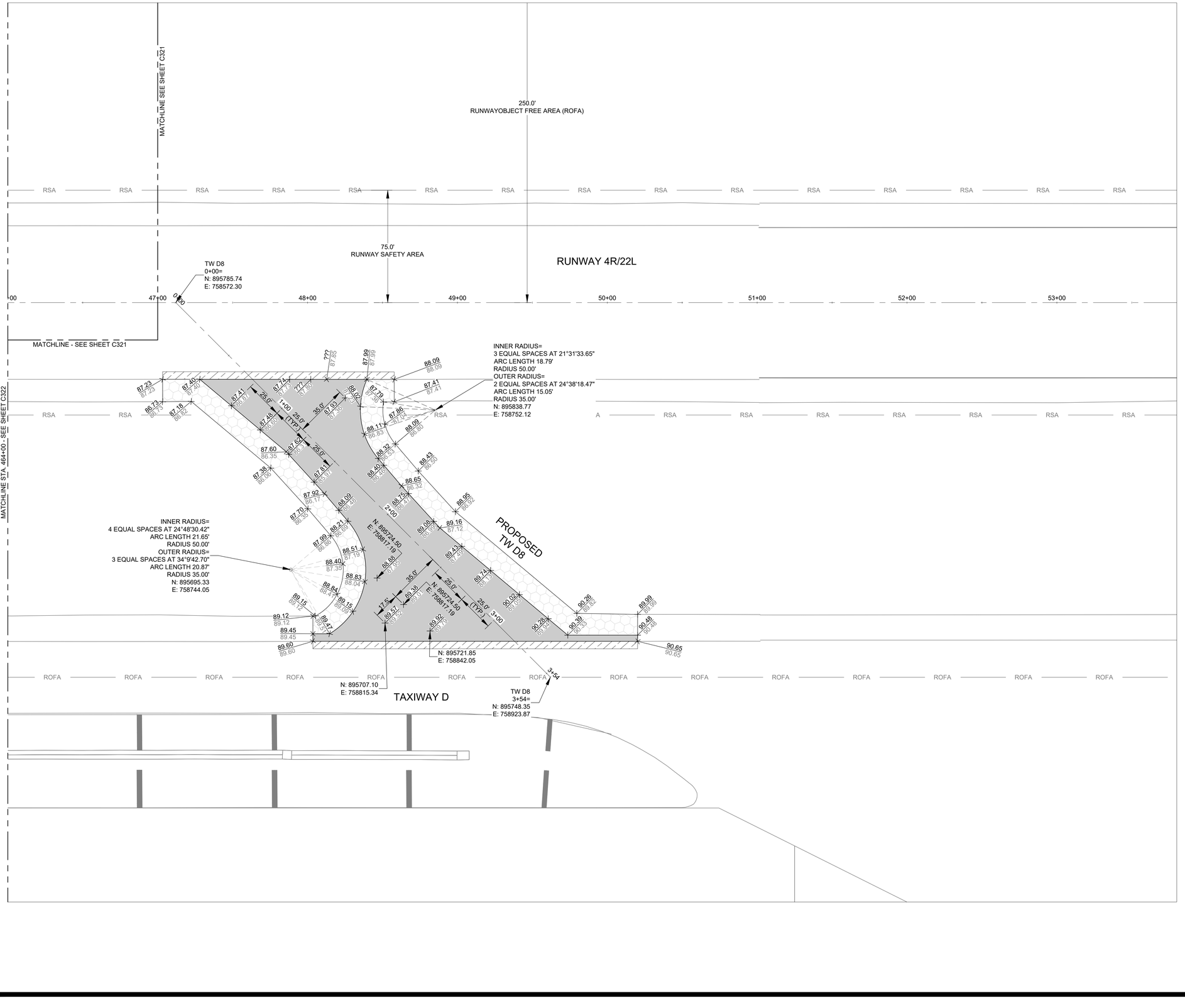
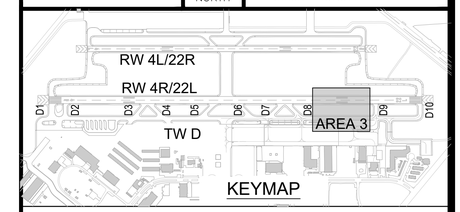


NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



SPOT ELEVATION LEGEND

- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY, 4")
- FULL DEPTH ASPHALT PAVEMENT (TAXIWAY SHOULDERS, 3")
- 2" PARTIAL DEPTH ASPHALT PAVEMENT
- 1384.40 / 1384.38 — DESIGN ELEVATION / EXISTING ELEVATION

NOTES:

1. ALL SPOT ELEVATIONS ARE AT FINISHED PAVEMENT GRADE UNLESS NOTED OTHERWISE.
2. THE CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED BY THEIR OPERATIONS OUTSIDE OF THE GRADING LIMITS AT THEIR OWN EXPENSE.
3. SEE SHEET C220 - C303 FOR TYPICAL SECTIONS.
4. SEE SHEETS C301 - C303 FOR GRADING.
5. SEE SHEETS C400 AND C401. FOR TAXIWAY H, D7 AND D8 PLAN AND PROFILES.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 25' FULL SIZE
1" = 50' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 89247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

SPOT ELEVATION PLAN
AREA 3 (SCHEDULE I)

DRAWING C323

SHEET 29 OF 52

CATALOG NUMBER: A-270548

DATE SAVED: 3/2/23
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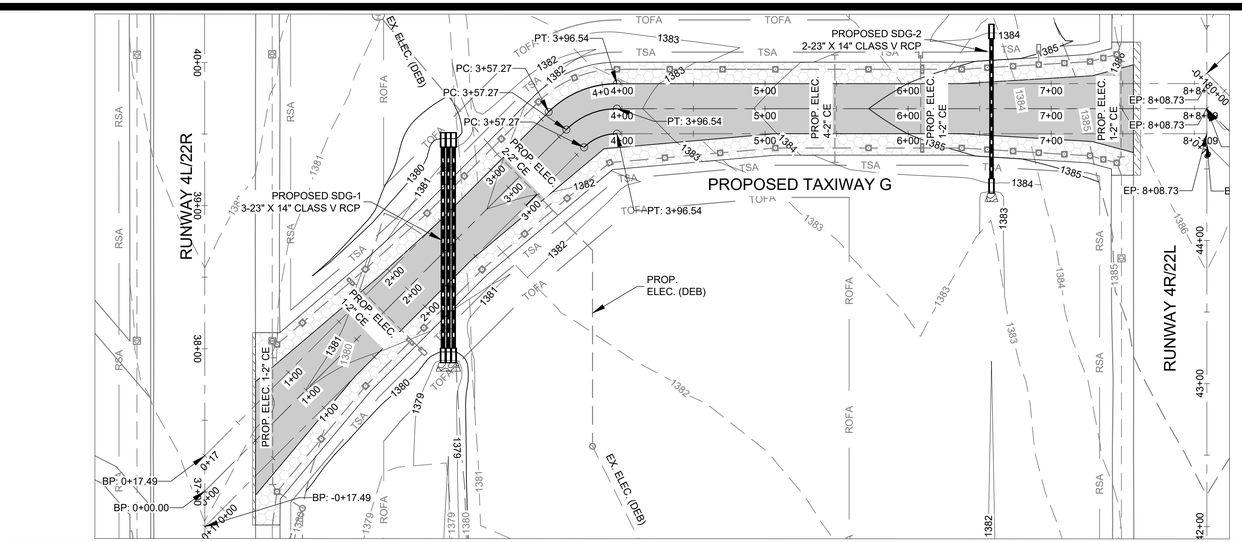
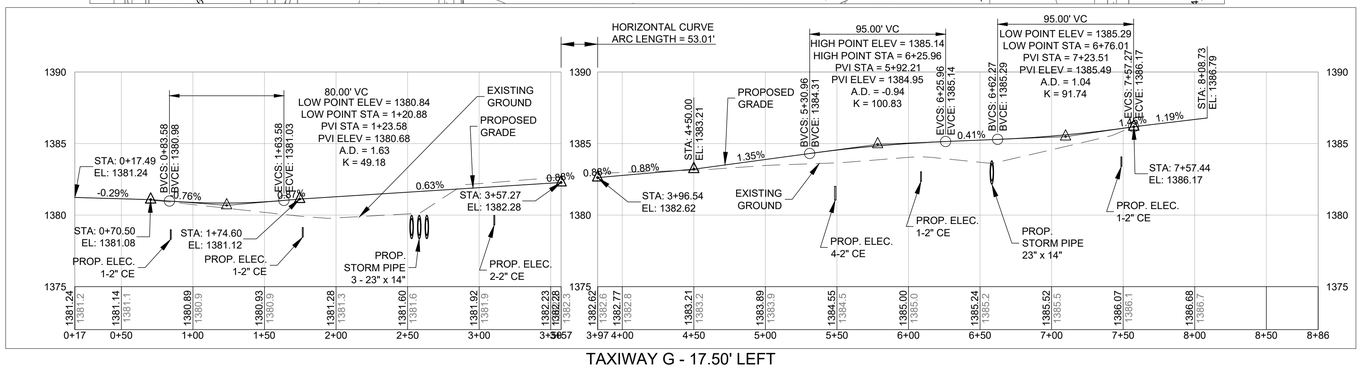
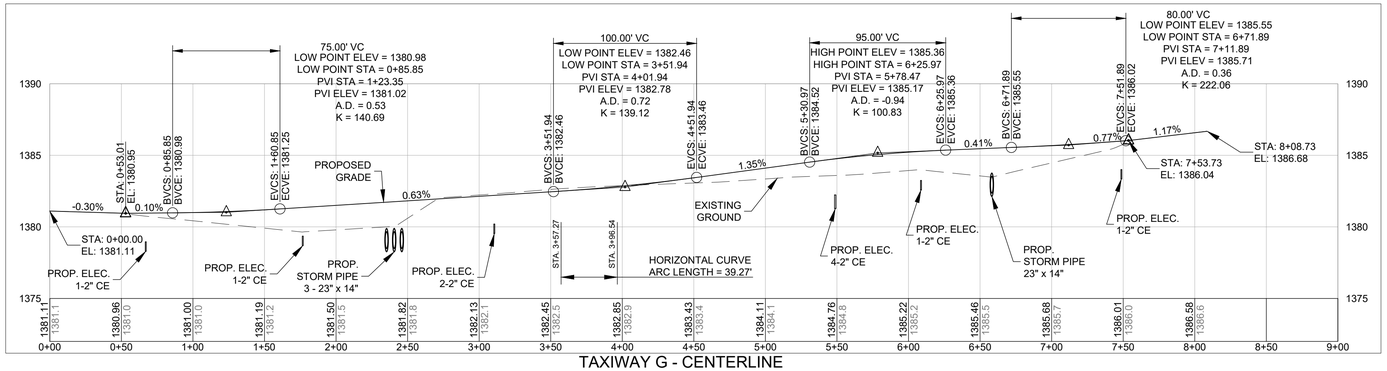
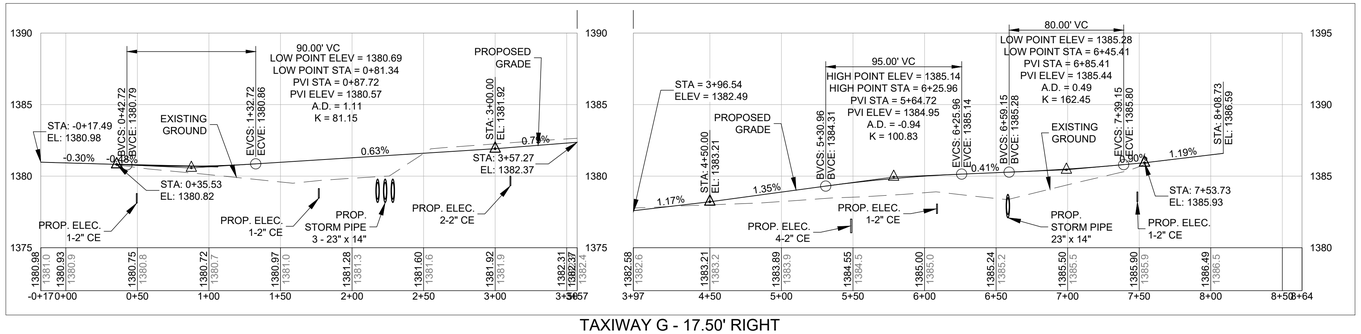




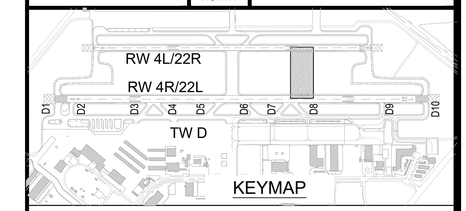
TAXIWAY G - 17.50' LEFT



TAXIWAY G - CENTERLINE



TAXIWAY G - 17.50' RIGHT



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

PROFILE LEGEND

- PROPOSED GRADE
- EXISTING GROUND
- PROFILE BAND (230.50 / 230.47)
- EXISTING ELEVATION
- PROPOSED ELEVATION

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 50' FULL SIZE
1" = 100' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE NO.
69241
JON BRYCE WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

TAXIWAY G
PLAN AND PROFILES

DRAWING: C400

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: _____
PROJ. NO.: CP0994

SHEET: 30 OF 52

CATALOG NUMBER: A-270549

DATE SAVED: 3/8/23

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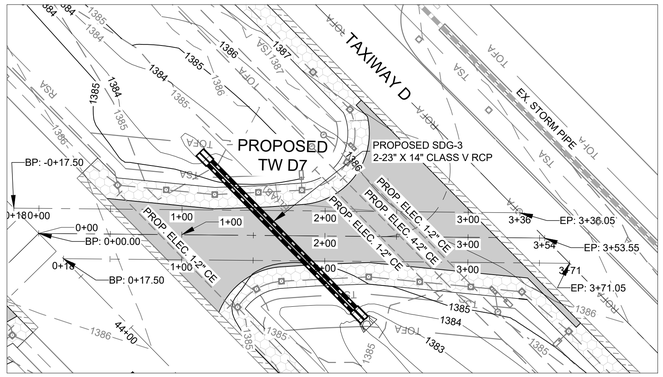
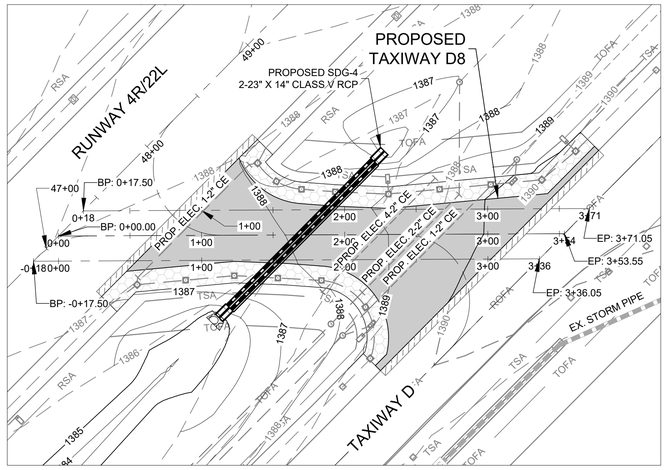
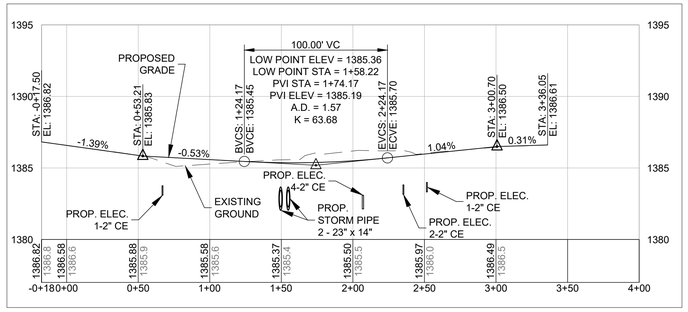
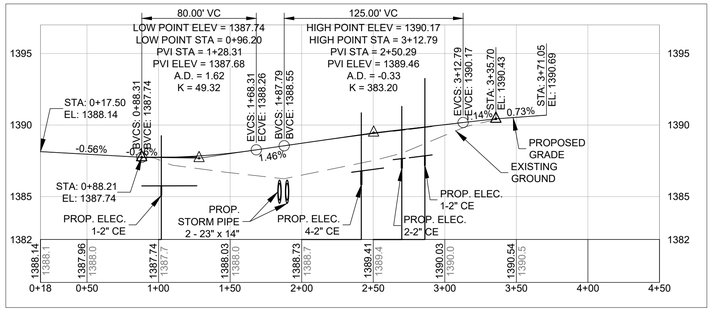


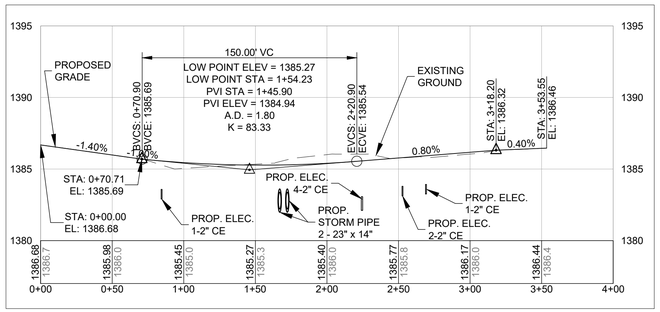




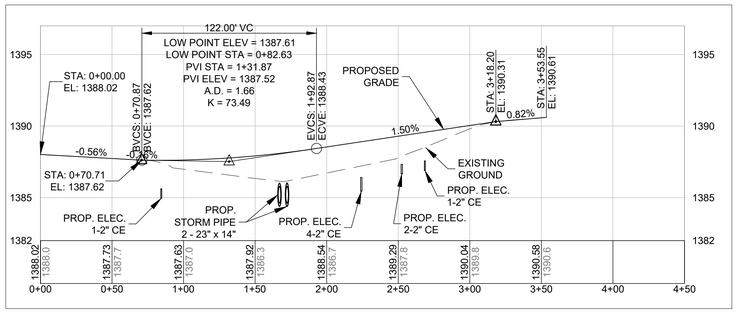
TAXIWAY D7 17.50' LEFT



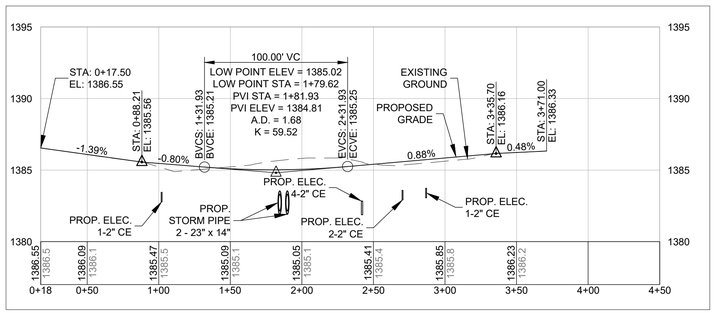
TAXIWAY D8 17.50' LEFT



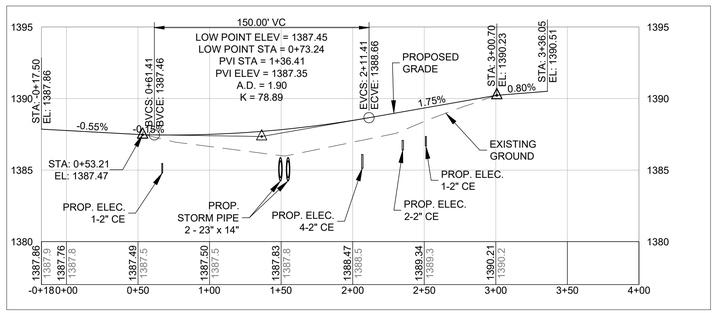
TAXIWAY D7 CENTERLINE



TAXIWAY D8 CENTERLINE



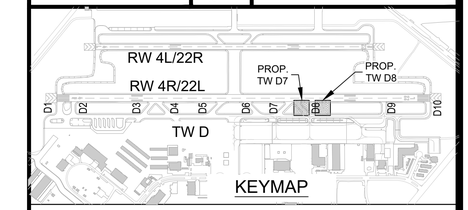
TAXIWAY D7 17.50' RIGHT



TAXIWAY D8 17.50' RIGHT

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

NORTH



KEYMAP

PROFILE LEGEND

- PROPOSED GRADE
- EXISTING GROUND
- PROFILE BAND (230.50 / 230.47)
- EXISTING ELEVATION
- PROPOSED ELEVATION

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 50' FULL SIZE
1" = 100' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69241 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

TAXIWAYS D7 AND D8
PLAN AND PROFILES

DRAWING C401

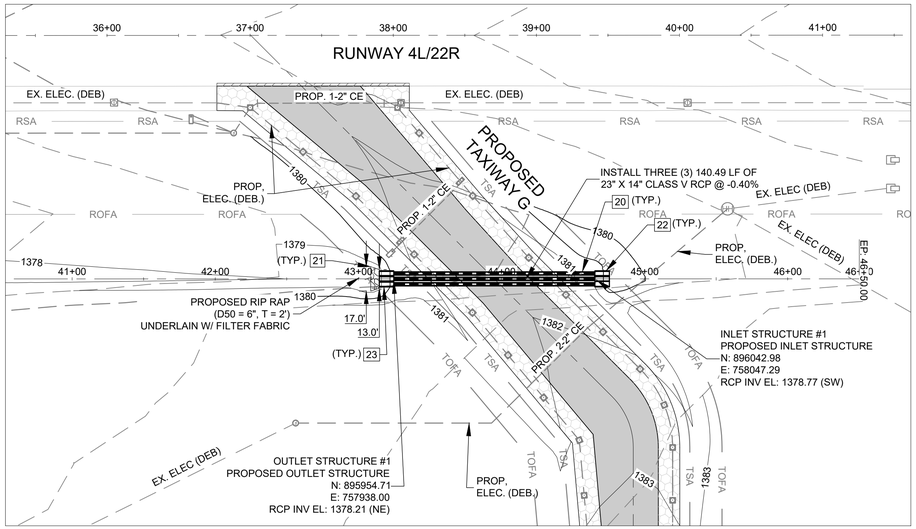
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

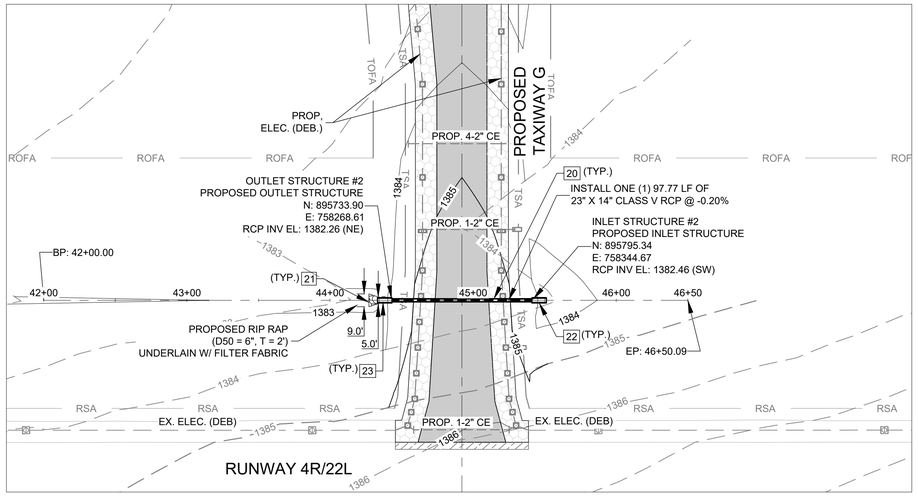
ACTIVITY: _____
PROJ. NO.: CP0994

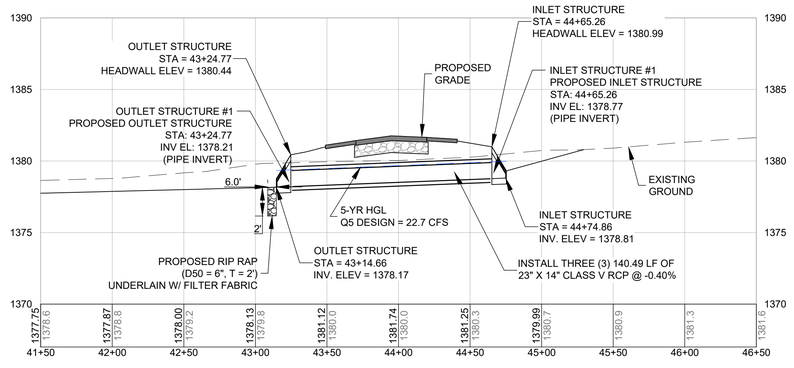
SHEET 31 OF 52

CATALOG NUMBER: A-270550

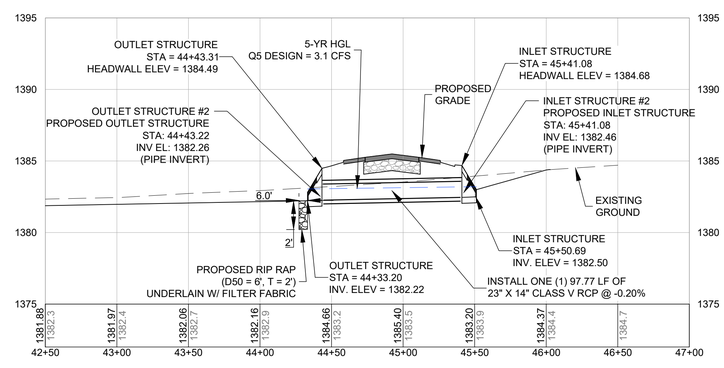
DATE SAVED: 3/8/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\040-FFZ-MCTE-C400-PROF.DWG



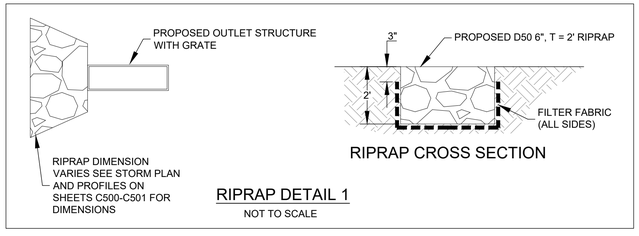




PROFILE VIEW OF SDG-1



PROFILE VIEW OF SDG-2



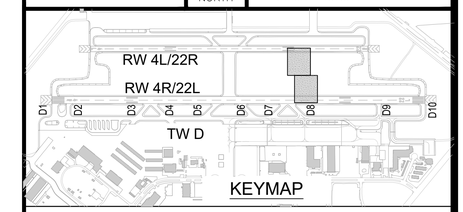
RIPRAP DETAIL 1
NOT TO SCALE

CONSTRUCTION NOTES

20	D-701a 23"x14" CLASS V RCP	520 LF.
21	D-710a RIPRAP (D50=6", T=2') UNDERLAIN W/ FILTER FABRIC	10 CY.
22	D-751a INLET STRUCTURE WITH GRATE	4 EA
23	D-751b OUTLET STRUCTURE WITH GRATE	4 EA

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



STORM LEGEND

- 1385 — EXISTING MAJOR CONTOUR
- 1386 — EXISTING MINOR CONTOUR
- 1385 — PROPOSED MAJOR CONTOUR
- 1386 — PROPOSED MINOR CONTOUR
- SWALE FLOW LINE
- STORM PIPE
- PROPOSED INLET / OUTLET STRUCTURE (SEE DETAILS ON SHEET C550)
- PROPOSED RIPRAP

PROFILE LEGEND

- PROPOSED GRADE
- EXISTING GROUND
- PROFILE BAND (230.50 / 230.47)
- EXISTING ELEVATION
- PROPOSED ELEVATION

NOTES

1. FOR INSTALLATION OF FILTER FABRIC WITH RIPRAP SEE RIPRAP DETAIL 1 ON SHEET C500

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 50' FULL SIZE
1" = 100' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69241 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

STORM PIPE
PLAN AND PROFILE

DRAWING: C500

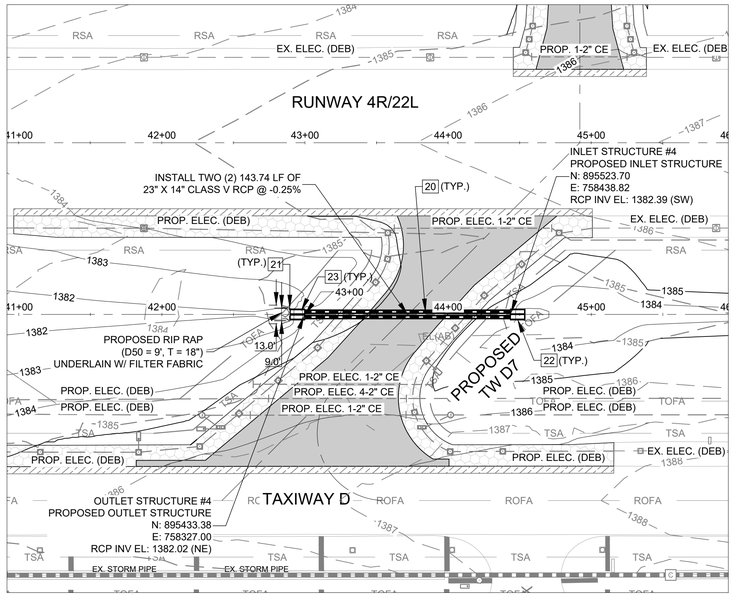
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

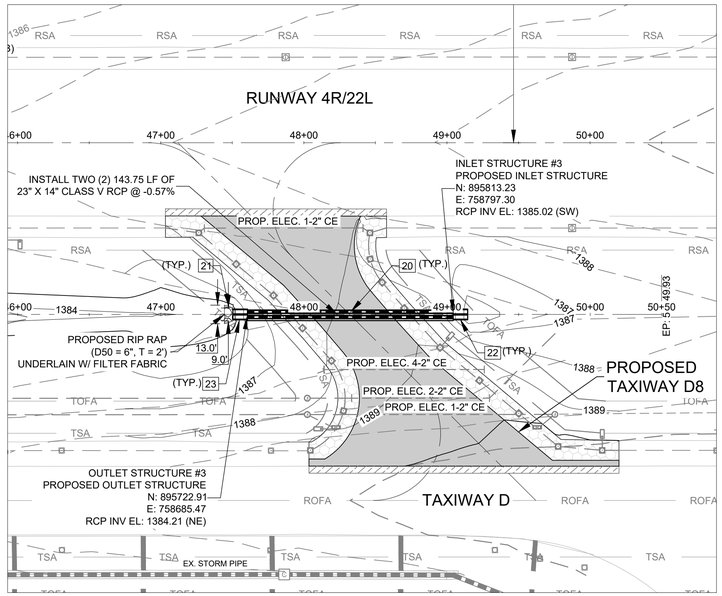
ACTIVITY:
PROJ. NO.: CP0994

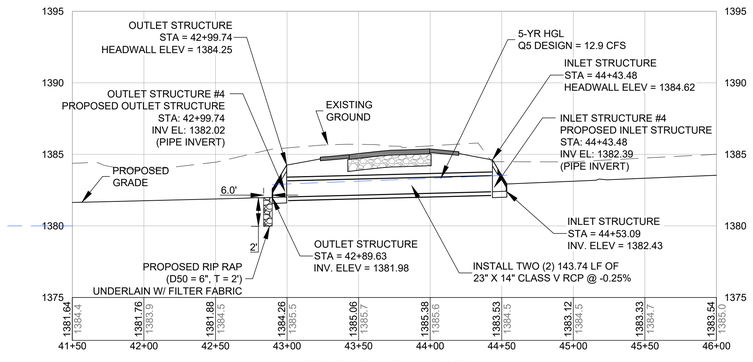
SHEET 32 OF 52

CATALOG NUMBER: A-270551

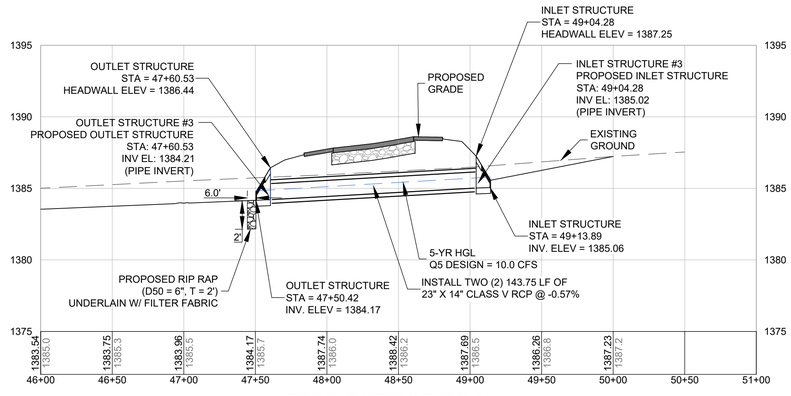
DATE SAVED: 3/8/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\050-FFZ-MCTE-C500-STRM.DWG







PROFILE VIEW OF SDG-3



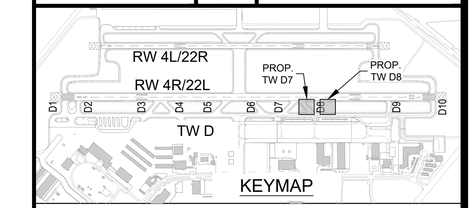
PROFILE VIEW OF SDG-4

CONSTRUCTION NOTES

20	D-701a 23"x14" CLASS V RCP	575 LF.
21	D-710a RIPRAP (D50=6", T= 2') UNDERLAIN W/ FILTER FABRIC	10 CY.
22	D-751a INLET STRUCTURE WITH GRATE	4 EA
23	D-751b OUTLET STRUCTURE WITH GRATE	4 EA

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



KEYMAP

STORM LEGEND

- EXISTING MAJOR CONTOUR (1385)
- EXISTING MINOR CONTOUR (1386)
- PROPOSED MAJOR CONTOUR (1385)
- PROPOSED MINOR CONTOUR (1386)
- SWALE FLOW LINE
- STORM PIPE
- PROPOSED INLET / OUTLET STRUCTURE (SEE DETAILS ON SHEET C550)
- PROPOSED RIPRAP

PROFILE LEGEND

- PROPOSED GRADE
- EXISTING GROUND
- PROFILE BAND (230.50 / 230.47)
- EXISTING ELEVATION
- PROPOSED ELEVATION

NOTES

1. FOR INSTALLATION OF FILTER FABRIC WITH RIPRAP SEE RIPRAP DETAIL 1 ON SHEET C500

GRAPHIC SCALE
50 0 50 100
(IN FEET)
1 " = 50' FULL SIZE
1" = 100' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

STORM PIPE
PLAN AND PROFILE

DRAWING C501

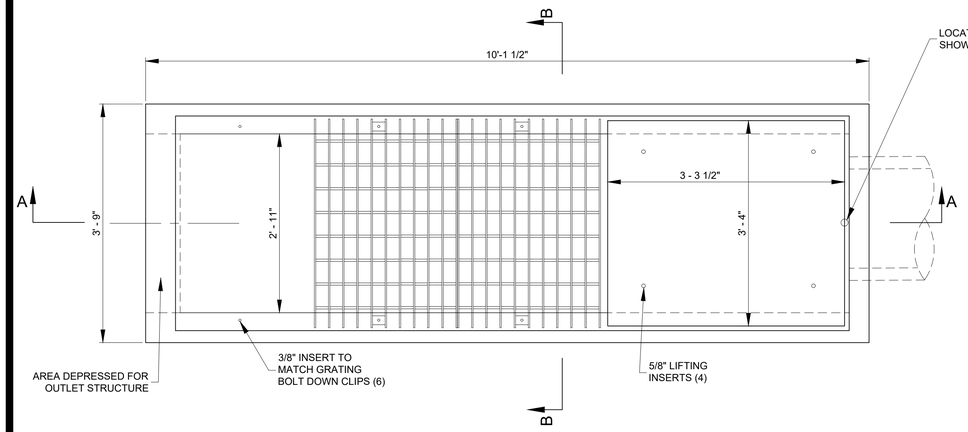
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

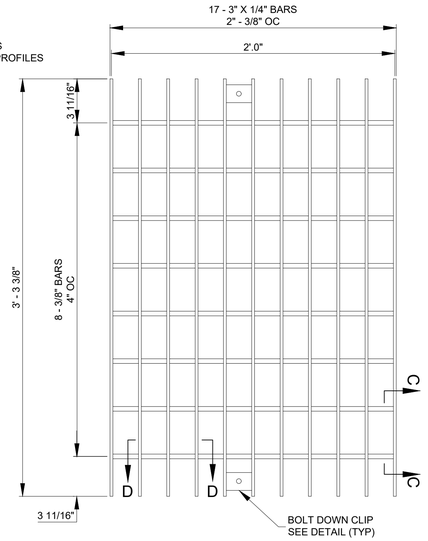
SHEET 33 OF 52

CATALOG NUMBER: A-270552

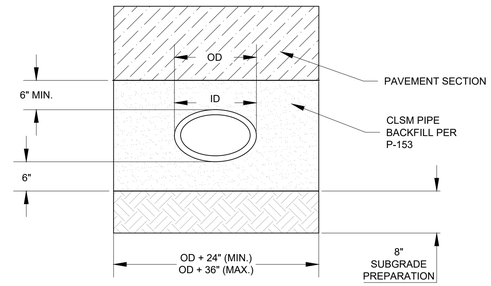
DATE SAVED: 3/8/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CADD\PLANS\050-FFZ-MCTE-C500-STRM.DWG



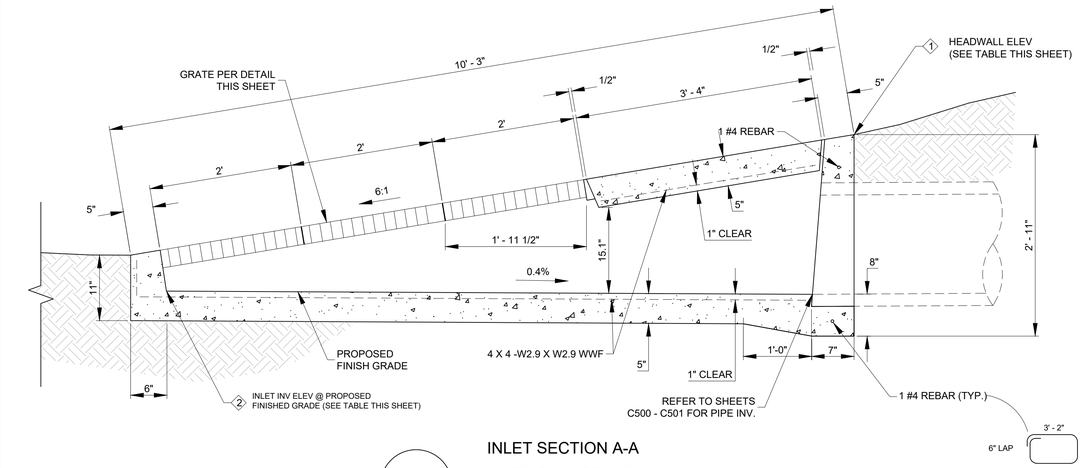
PLAN



GRATE PLAN

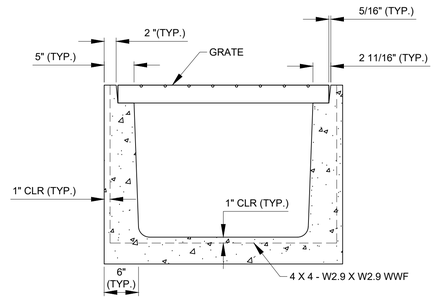


TYPICAL PIPE TRENCH-CLSM BEDDING
N.T.S.

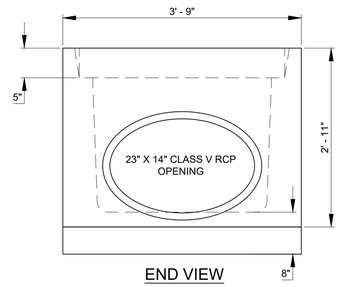


1 INLET SECTION A-A
INLET STRUCTURE
ADOT C-15.90 (MOD) SCALE N.T.S.

1 OUTLET SECTION A-A
OUTLET STRUCTURE
ADOT C-15.90 (MOD) SCALE N.T.S.



SECTION B-B



END VIEW

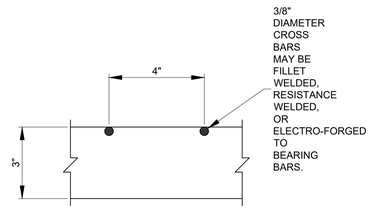
INLET/OUTLET STORM DRAIN PIPE AND HEADWALL ELEVATIONS				
PIPE DESCRIPTION	INLET HEADWALL ELEV. ①	INLET INV. ELEV. ②	OUTLET HEADWALL ELEV. ③	OUTLET INV. ELEV. ④
TAXIWAY H SDG-1, (3 PIPES)	1380.99	1378.81	1380.44	1378.17
TAXIWAY H SDG-2, (1 PIPES)	1384.68	1382.50	1384.49	1382.22
TAXIWAY D7 SDG-3, (2 PIPES)	1384.62	1382.43	1384.25	1381.98
TAXIWAY D8 SDG-4, (2 PIPES)	1387.25	1385.06	1386.44	1384.17

NORTH

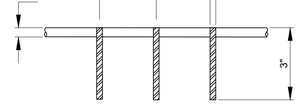
BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

GENERAL NOTES:

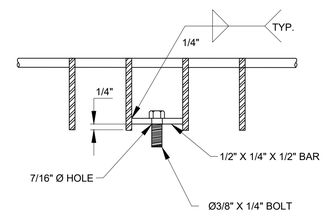
1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR P-610 CONCRETE. THE MINIMUM STRENGTH SHALL BE 4000 PSI.
2. GROUT SHALL BE IN ACCORDANCE WITH MAG SPEC 776' WITH THE EXCEPTION THAT THE WATER CONTENT SHALL BE SUCH THAT THE CONSISTENCY IS PROPER FOR SMOOTH TROWELING, CONSISTENCY SHALL BE VERIFIED BY THE OWNER PRIOR TO APPLICATION.
3. ALL WELDING SHALL BE IN ACCORDANCE WITH ADOT STANDARD SPECIFICATION 604-3.06.
4. THE COMPLETED GRATE SHALL BE GIVEN ONE SHOP COAT OF NO. 1 PAINT.
5. FOUNDATION SOIL AND BACKFILL SHALL BE IN ACCORDANCE WITH SECTION P-152 OF THE TECHNICAL SPECIFICATIONS.



SECTION C-C



SECTION D-D



BOLT DOWN CLIP DETAIL

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE
69247
JON BRYCE
WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

STORM DETAILS

DRAWING C550

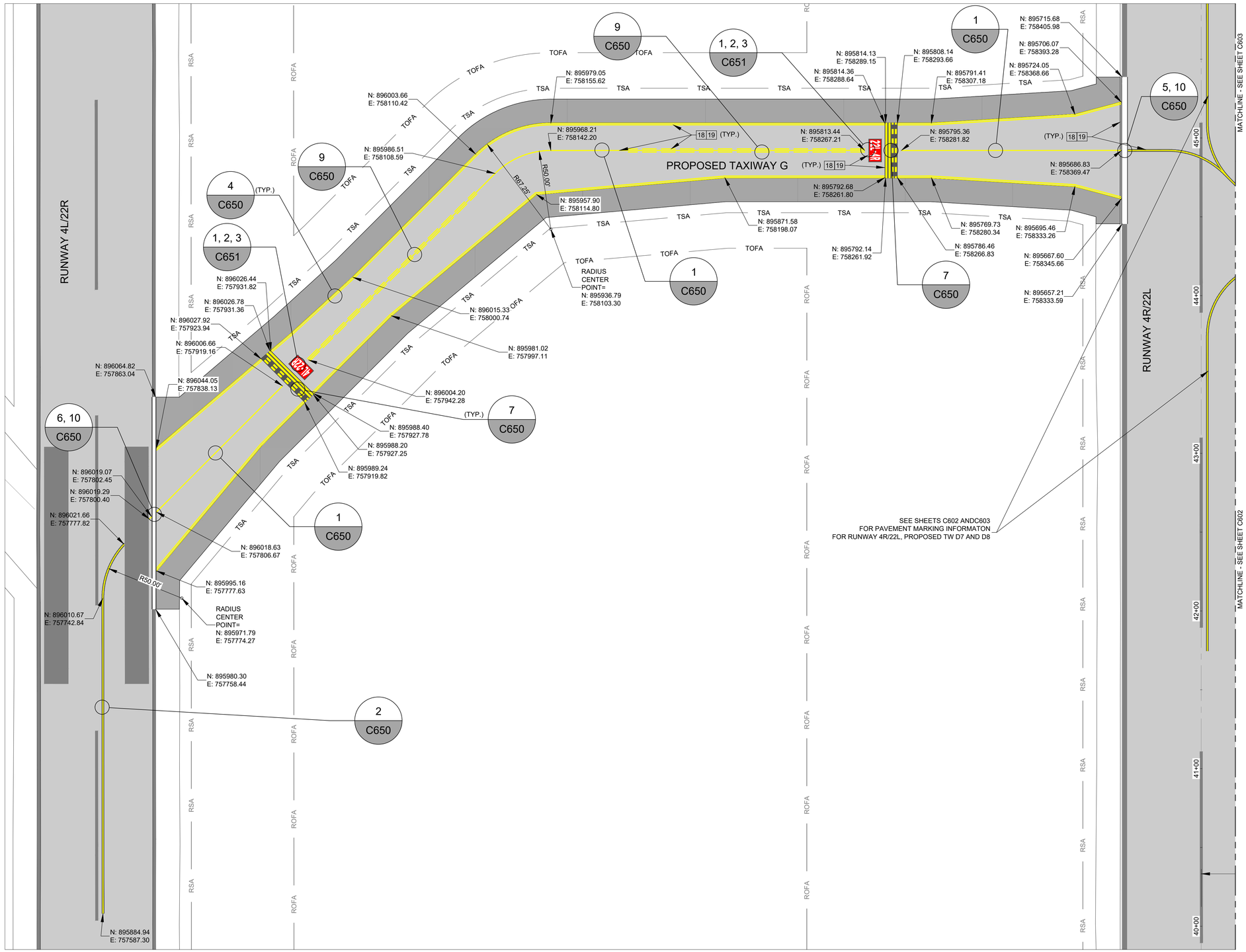
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 34 OF 52

CATALOG NUMBER: A-270553

DATE SAVED: 3/2/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\055-FFZ-MCTE-C550-STRM-DETL.DWG

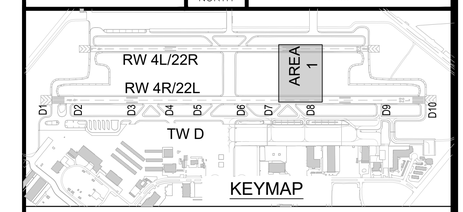


PAVEMENT MARKING ITEMS

18	P-620b MARKING (TEMPORARY)	4,520 SF.
19	P-620c MARKING (PERMANENT)	4,520 SF.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



PAVEMENT MARKING LEGEND

- EXISTING PAINT
- PROPOSED WHITE PAINT
- PROPOSED YELLOW PAINT
- PROPOSED GREEN PAINT
- PROPOSED BLACK PAINT

NOTES:

1. SEE PAINT DETAIL SHEET C650 FOR PAINT DETAILS AND GENERAL PAINT AND OBLITERATION NOTES.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer Certificate No. 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

PAVEMENT MARKING PLAN
AREA 1 (SCHEDULE II)

DRAWING C601

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

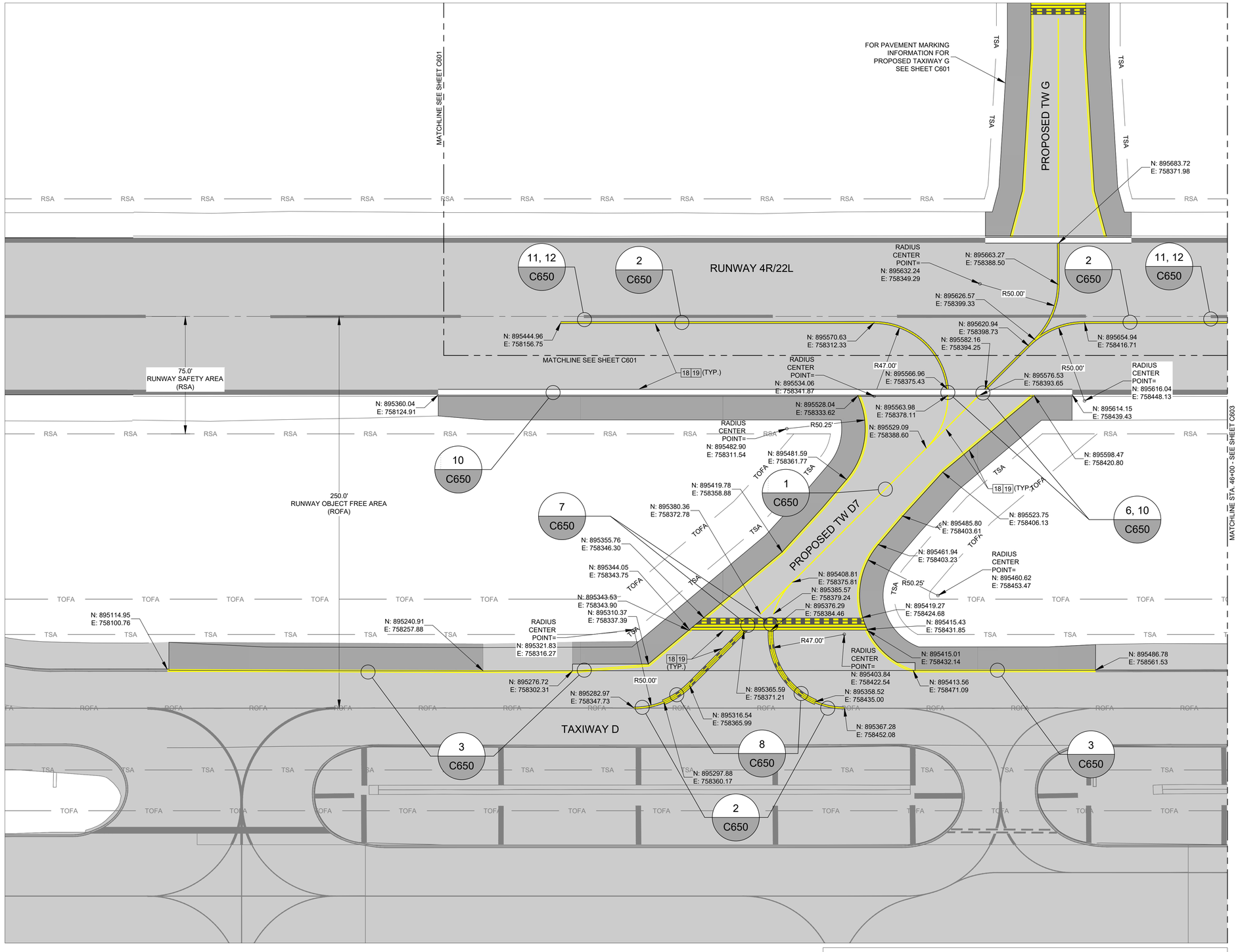
ACTIVITY: —
PROJ. NO.: CP0994

SHEET 35 OF 52

CATALOG NUMBER: A-270554

DATE SAVED: 3/3/23

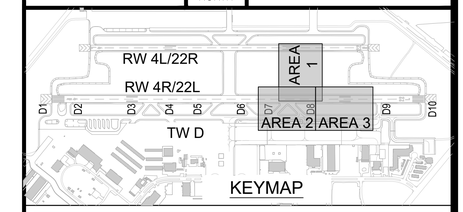
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\060-FFZ-MCTE-C601-PANT.DWG



PAVEMENT MARKING ITEMS		
18	P-620b MARKING (TEMPORARY)	5,392 SF.
19	P-620c MARKING (PERMANENT)	5,392 SF.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



PAVEMENT MARKING LEGEND

- EXISTING PAINT
- PROPOSED WHITE PAINT
- PROPOSED YELLOW PAINT
- PROPOSED GREEN PAINT
- PROPOSED BLACK PAINT

NOTES:

1. SEE PAINT DETAIL SHEET C650 FOR PAINT DETAILS AND GENERAL PAINT AND OBLITERATION NOTES.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69241 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

PAVEMENT MARKING PLAN
AREA 2 (SCHEDULE I)

DRAWING C602

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

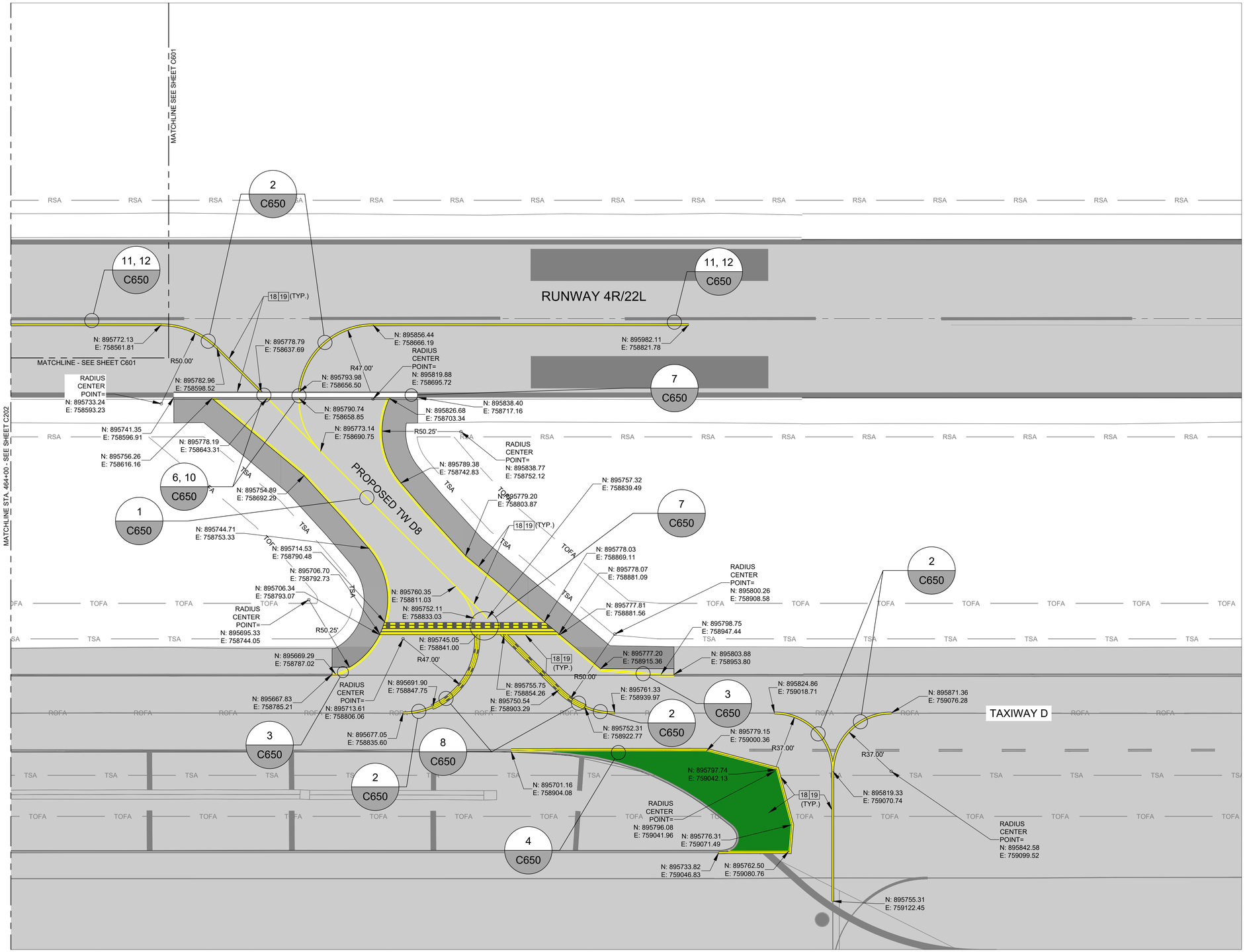
ACTIVITY: ---
PROJ. NO.: CP0994

SHEET 36 OF 52

CATALOG NUMBER: A-270555

L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\060-FFZ-MCTE-C602-PANT.DWG

DATE SAVED: 3/3/23

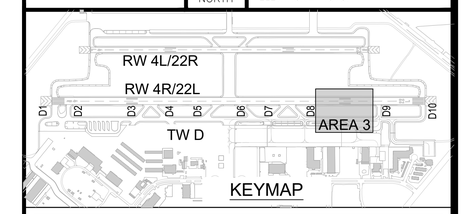


PAVEMENT MARKING ITEMS

18	P-620b MARKING (TEMPORARY)	8,393 SF.
19	P-620c MARKING (PERMANENT)	8,393 SF.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



PAVEMENT MARKING LEGEND

- EXISTING PAINT
- PROPOSED WHITE PAINT
- PROPOSED YELLOW PAINT
- PROPOSED GREEN PAINT
- PROPOSED BLACK PAINT

NOTES:

1. SEE PAINT DETAIL SHEET C650 FOR PAINT DETAILS AND GENERAL PAINT AND OBLITERATION NOTES.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 59247 JON BRYCE WEEKS Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

PAVEMENT MARKING PLAN
AREA 3 (SCHEDULE I)

DRAWING C603

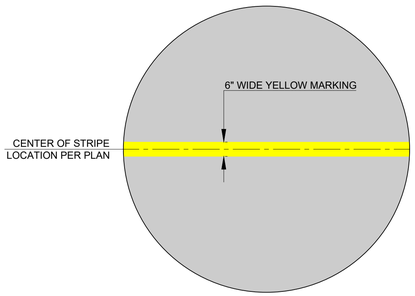
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 37 OF 52

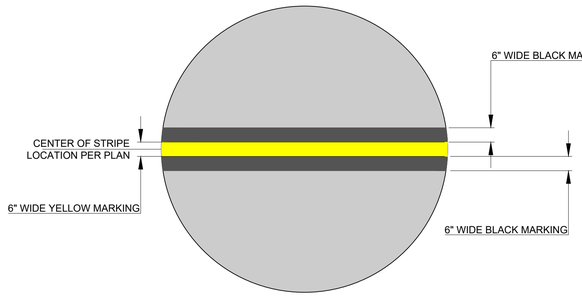
CATALOG NUMBER: A-270556

DATE SAVED: 3/3/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\060-FFZ-MCTE-C602-PANT.DWG



1 TAXIWAY CENTERLINE DETAIL

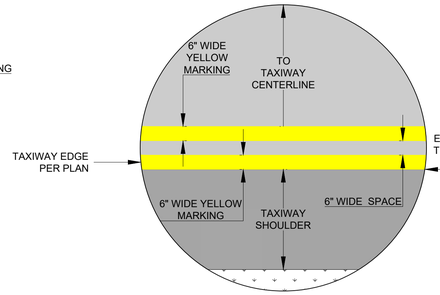
NOT TO SCALE



2 TAXIWAY CENTERLINE DETAIL WITH BLACK PAINT

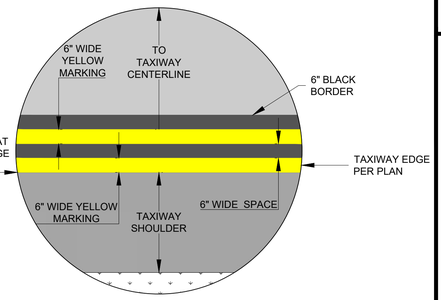
NOT TO SCALE

NOTE:
1. CENTERLINE MARKING SEE NOTE 2.



3 TAXIWAY SOLID EDGE LINE DETAIL

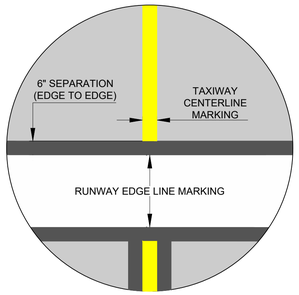
NOT TO SCALE



4 TAXIWAY SOLID EDGE LINE DETAIL WITH BLACK PAINT

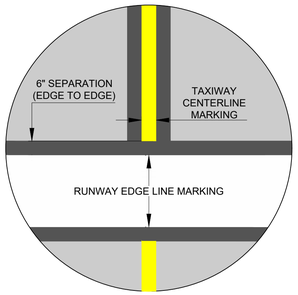
NOT TO SCALE

NOTE:
1. SOLID EDGE LINE MARKING SEE NOTE 2.



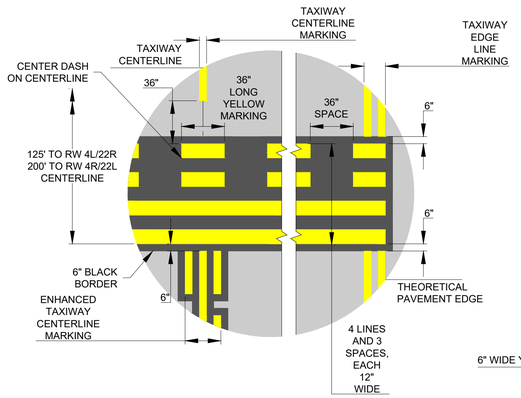
5 TAXIWAY CENTERLINE INTERSECTING RUNWAY EDGE LINE DETAIL

NOT TO SCALE



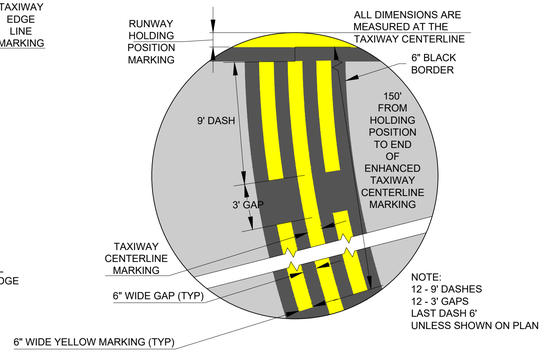
6 TAXIWAY CENTERLINE INTERSECTING RUNWAY EDGE LINE DETAIL WITH BLACK PAINT

NOT TO SCALE



7 RUNWAY HOLDING POSITION DETAIL

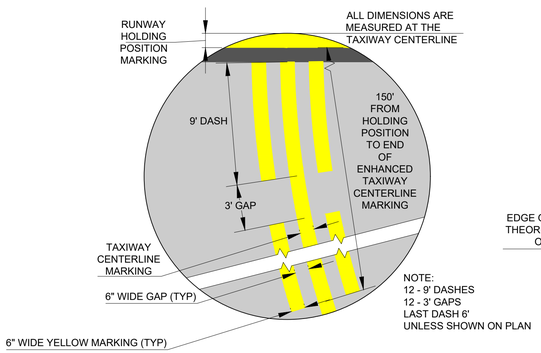
NOT TO SCALE



8 ENHANCED TAXIWAY CENTERLINE DETAIL WITH BLACK PAINT

NOT TO SCALE

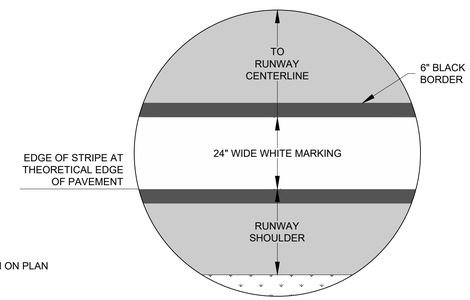
NOTE:
1. ENHANCED TAXIWAY CENTERLINE MARKING SEE NOTE 2.



9 ENHANCED TAXIWAY CENTERLINE DETAIL

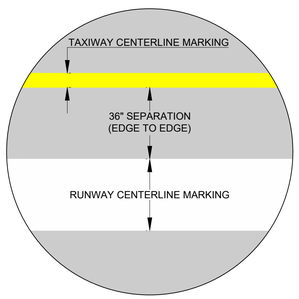
NOT TO SCALE

NOTE:
1. THIS DETAIL IS CURRENTLY NOT USED IN THE BID DOCUMENTS, BUT HAS BEEN LEFT IN THE PLAN SET ENCASE NEEDED DURING CONSTRUCTION.



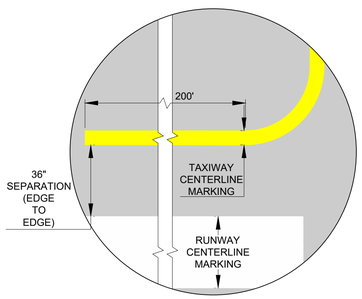
10 RUNWAY EDGE LINE DETAIL

NOT TO SCALE



11 PARALLEL RUNWAY & TAXIWAY CENTERLINE SEPARATION DETAIL

NOT TO SCALE



12 TAXIWAY LEAD IN LINE DETAIL

NOT TO SCALE

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

GENERAL MARKING NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL TAXIWAY MARKINGS SHALL BE YELLOW AND ALL RUNWAY MARKINGS SHALL BE WHITE IN ACCORD WITH SPECIFICATION P-620.
2. ALL STRIPING WILL HAVE A BLACK BORDER AT THE DIMENSIONS INDICATED ON THE DETAILS UNLESS STRIPING IS BEING APPLIED TO NEW ASPHALT PAVEMENT.
3. CONTRACTOR WILL BE REQUIRED TO REPAINT ANY MARKINGS THAT ARE OUTSIDE THE PROJECT WORK LIMITS WHICH ARE DAMAGED BY THE CONTRACTORS OPERATIONS. REPAINTING OF THESE DAMAGED AREAS WILL BE AT THE CONTRACTORS EXPENSE.
4. PERMANENT APPLICATION OF PAINT WILL BE APPLIED 30 DAYS AFTER THE INITIAL TEMPORARY APPLICATION. RATES OF APPLICATION SHALL BE AS SPECIFIED IN SECTION P-620.
5. ALL PERMANENT MARKINGS SHALL BE APPLIED DURING DAYLIGHT HOURS ONLY.
6. GLASS BEADS SHALL BE APPLIED TO ALL TEMPORARY AND PERMANENT PAVEMENT MARKINGS. APPLICATION RATES AND GLASS BEAD TYPE SHALL BE AS SPECIFIED IN ITEM P-620. GLASS BEADS SHALL NOT BE APPLIED TO BLACK PAINT.
10. UNLESS OTHERWISE SPECIFIED, ALL TAXIWAY MARKINGS ARE 6" WIDE (YELLOW).
11. FINAL PAINT LAYOUT WILL BE CONFIRMED BY THE AIRPORT PRIOR TO CONSTRUCTION.
12. ALL AREAS SHALL BE THOROUGHLY CLEANED PRIOR TO PLACING PAINT MARKINGS.
13. CONTRACTOR SHALL HAVE A COPY OF THE CURRENT FAA ADVISORY CIRCULAR AC 150/5340-1M "STANDARDS FOR AIRPORT MARKINGS" ON SITE AT ALL TIMES. ANY DISCREPANCY BETWEEN INFORMATION SHOWN ON THE PLAN SHEETS AND THE ADVISORY CIRCULAR SHALL BE COORDINATED WITH THE ENGINEER FOR DIRECTION.
14. ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ACTUAL STRIPING PRESENT IN THE FIELD SHALL BE BROUGHT TO THE ATTENTION OF RPR.

OBLITERATION NOTES

1. PAINT OBLITERATION SHALL BE ACCOMPLISHED BY WATER OR SAND BLASTING OR ANOTHER APPROVED METHOD. TEMPORARY MARKING REMOVAL REQUIRED FOR COORDINATION OF PHASES MAY BE ACCOMPLISHED BY PAINTING OVER THE EXISTING MARKING WITH BLACK PAINT.
2. NO OBLITERATION OF MARKINGS ARE REQUIRED INSIDE PAVEMENT REMOVAL LIMITS.
3. ANY DAMAGE DONE DURING MARKING OBLITERATION OPERATIONS TO PAVEMENTS OR PAVEMENT JOINT/CRACK SEALS SHALL BE REPAIRED BY THE CONTRACTOR, AT HIS EXPENSE, AND TO THE APPROVAL OF THE ENGINEER.

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer — CERTIFICATE NO. 69247 — JON BRYCE WEEKS — 3/06/23 — Date Signed — ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

PAVEMENT MARKING DETAILS

DRAWING C650

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET 38 OF 52

CATALOG NUMBER: A-270557

DATE SAVED: 3/2/23

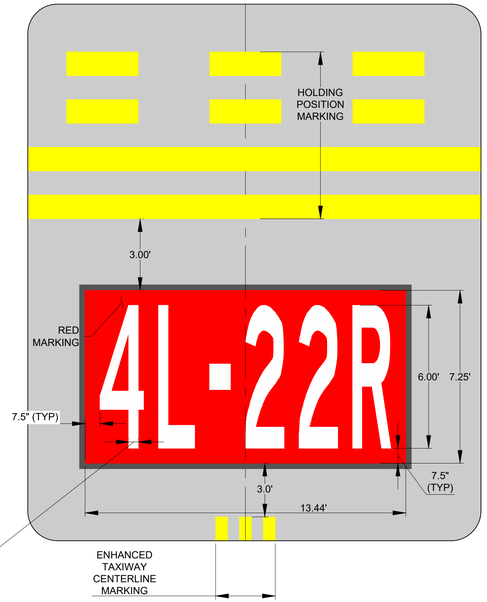
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\065-FFZ-MCTE-C650-PANT-DETL.DWG

HOLDING POSITION NOTES

1. THE CONTRACTOR SHALL PROVIDE STENCILS WHICH WILL REMAIN WITH THE AIRPORT AFTER THE PROJECT COMPLETION. THE CONTRACTOR MUST SUBMIT A TEMPLATE OF THE STENCILS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE STENCILS THROUGHOUT USE AND WILL BE RESPONSIBLE FOR REPLACEMENT IF ANY DAMAGE OCCURS.

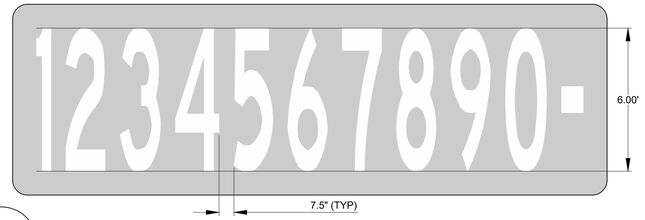
1. DIMENSIONS MAY VARY BASED ON THE SIZES OF STENCILS USED. LARGER WIDTH SIGNS MAY BE NEEDED DEPENDING ON STENCIL WIDTH IN ORDER TO MEET THE INDICATED SPACING REQUIREMENT. COST ADJUSTMENTS WILL NOT BE PERMITTED IF LARGER SIGNS ARE NEEDED DUE TO TO STENCIL WIDTH.

2. TWO PAINT APPLICATIONS WILL BE REQUIRED FOR EACH RUNWAY HOLD POSITION MARKING. THE FIRST APPLICATION SHALL USE THE TEMPORARY PAINT APPLICATION RATE. THE SECOND APPLICATION SHALL USE THE PERMANENT PAINT APPLICATION RATE.



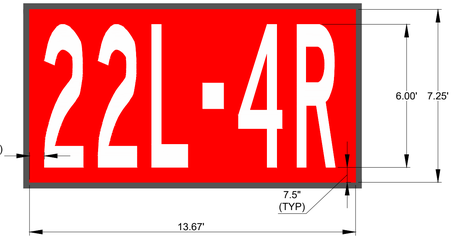
1 HOLDING POSITION DETAIL (TAXIWAYS LESS THAN OR EQUAL 35' WIDE)

DETAIL SCALE: 1" = 3'



2 HOLDING POSITION NUMBERS (TAXIWAYS LESS THAN OR EQUAL 35' WIDE)

DETAIL SCALE: 1" = 3'



3 HOLDING POSITION DETAIL (TAXIWAYS LESS THAN OR EQUAL 35' WIDE)

DETAIL SCALE: 1" = 3'

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 59247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

PAVEMENT MARKING DETAILS

DRAWING C651

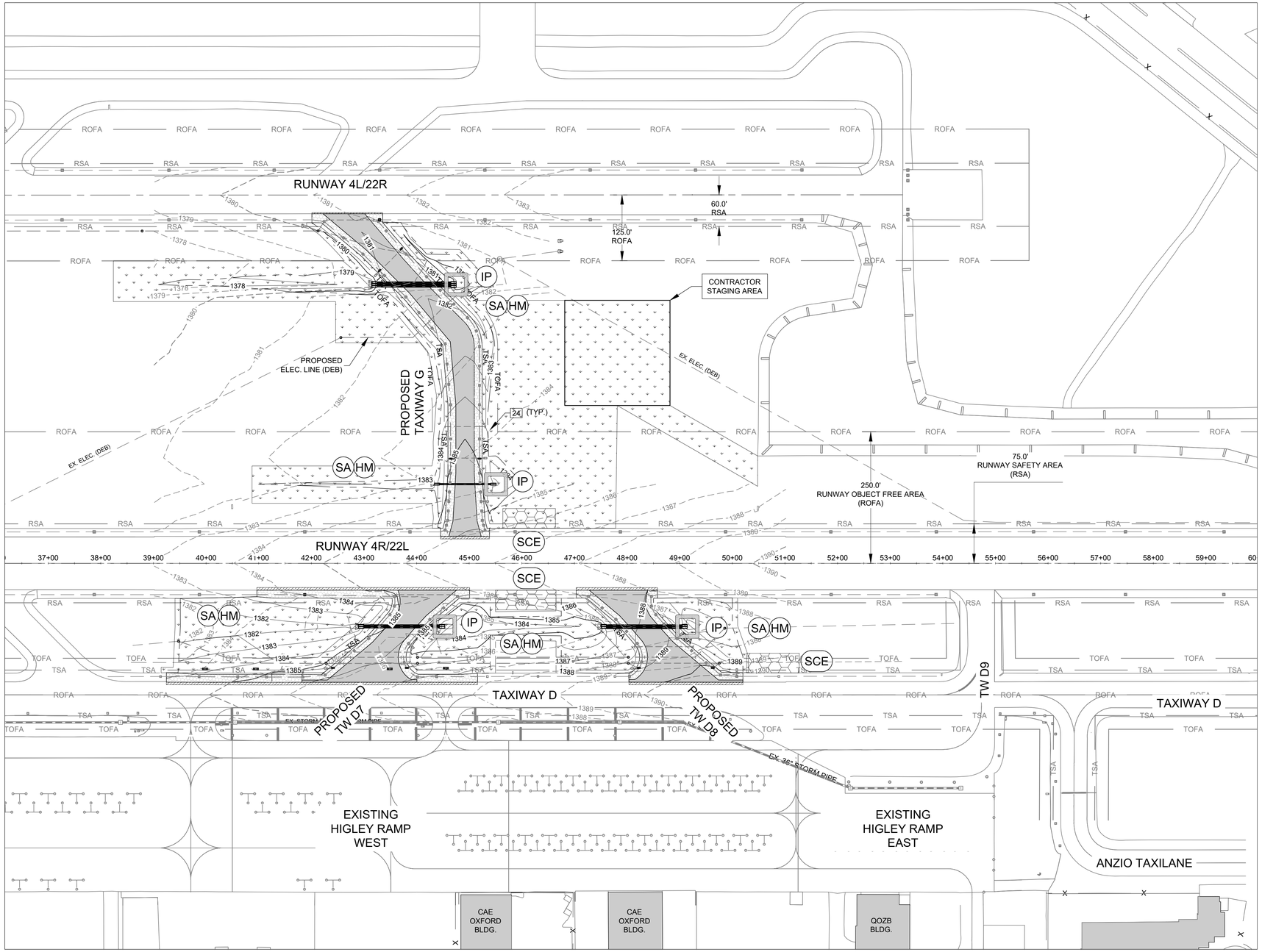
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: ____
PROJ. NO.: CP0994

SHEET 39 OF 52

CATALOG NUMBER: A-270558

DATE SAVED: 3/2/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\0665-FFZ-MCTE-C650-PANT-DETL.DWG

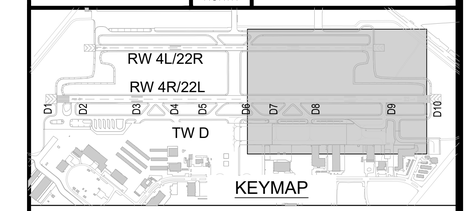


CONSTRUCTION NOTES

24	T-901a SEEDING WITH (HYDROMULCH)	9 AC

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



EROSION CONTROL LEGEND

- 1385 — EXISTING INDEX CONTOUR
- 1386 — EXISTING INTERMEDIATE CONTOUR
- 1385 — PROPOSED INDEX CONTOUR
- 1386 — PROPOSED INTERMEDIATE CONTOUR
- PROJECT GRADING LIMITS
- SA HM — SEEDING WITH HYDROMULCH
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- IP — INLET PROTECTION

NOTES:

1. FOR EROSION CONTROL NOTES, SEE SHEET G003.
2. FOR EROSION CONTROL DETAILS SEE SHEET C750.

GRAPHIC SCALE
100 0 100 200
(IN FEET)
1 " = 100' FULL SIZE
1" = 200' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE NO.
69247
JON BRYCE WEEKS
3/06/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

EROSION CONTROL PLAN

DRAWING C701

ACTIVITY:
PROJ. NO.: CP0994

SHEET 40 OF 52

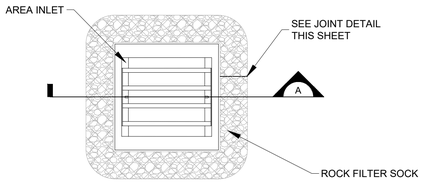
CATALOG NUMBER: A-270559

DATE SAVED: 3/8/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\070-FFZ-MCTE-C701-EROS.DWG

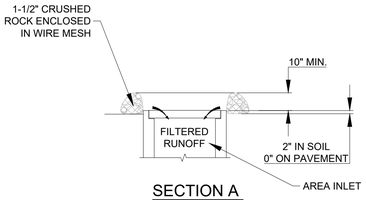
IP

INLET PROTECTION (BMPS-SPC-1)

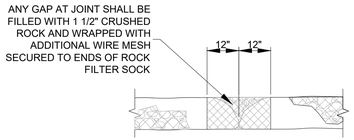
INLET PROTECTION CONTINUED



AREA INLET - PLAN



SECTION A



ROCK FILTER JOINT DETAIL

INLET PROTECTION INSTALLATION NOTES

1. CRUSHED SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL HAVE GRADATION OF 1-1/2" MINUS.
2. WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
3. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
4. ROCK ILTER SOCK SHALL BE CONSTRUCTED IN ONE PIECE OR SHALL BE CONSTRUCTED USING JOINT DETAIL.

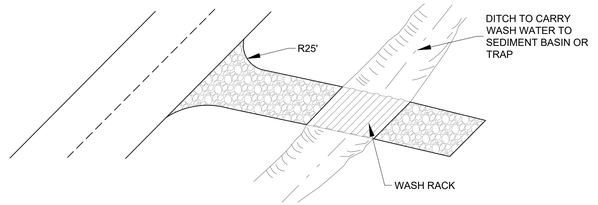
INLET PROTECTION MAINTENANCE NOTES

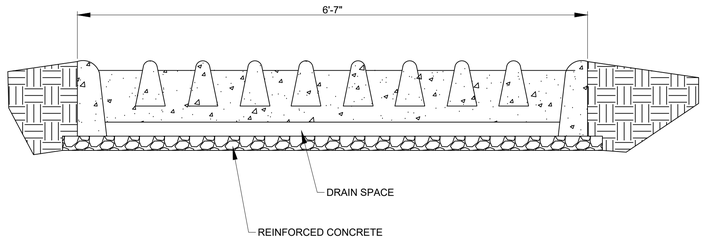
1. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AT THE END OF EACH DAY DURING CONSTRUCTION OR WHEN THE SEDIMENT DEPTH UPSTREAM OF ROCK BERM IS WITHIN 2-1/2 INCHES OF THE CREST.
2. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
3. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, DRILL SEEDED AND CRIMP MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

1 INLET PROTECTION
NOT TO SCALE

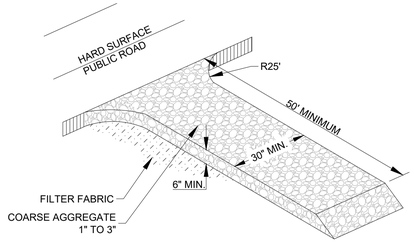
SCE

STABILIZED CONSTRUCTION ENTRANCE (BMP-EC-5)





WASH RACK



2 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

EROSION CONTROL DETAILS

DRAWING C750

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: --
PROJ. NO.: CP0994

SHEET 41 OF 52

CATALOG NUMBER: A-270560

DATE SAVED: 3/2/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\075-FFZ-MCTE-C750-EROS-DETL.DWG

MASTER ELECTRICAL LEGEND

	EXISTING	NEW	DEMOLITION	ADJUST
L-850C R/W EDGE IN PAVEMENT LIGHT				—
L-862 R/W EDGE ELEVATED LIGHT				—
L-862E R/W END ELEVATED LIGHT				—
L-852G R/W IN-PAVEMENT GUARD LIGHT	—		—	—
L-804 R/W ELEVATED GUARD LIGHT			—	—
R/W MALSR LIGHT				
L-861T T/W EDGE LIGHT				
L-853 RETRO-REFLECTIVE MARKER				
L-853 RETRO-REFLECTIVE MARKER ON J-BOX	—		—	—
RUNWAY/TAXIWAY SIGN				—
L-867 JUNCTION BOX (3)				
HAND HOLE	HH	HH	—	HH
ELECTRICAL MANHOLE	EMH	EMH	—	EMH
2" ELECTRICAL CONDUIT (DEB) (1)			—	—
2" ELECTRICAL CONDUIT (CE) (1)			—	—
2" ELECTRICAL CONDUIT (CLSM)	—		—	—
ELECTRICAL DUCT BANK (DEB) (2)			—	—
ELECTRICAL DUCT BANK (CE) (2)			—	—
L-824C CABLE (HASH MARKS INDICATE THE NUMBER OF CONDUCTORS)	2	3	—	—

ABBREVIATIONS LEGEND (NOT ALL ABBREVIATIONS ARE USED)

A	-	AMP	OHT	-	OVERHEAD TELEPHONE
AFF	-	ABOVE FINISHED FLOOR	P	-	PHASE
AFG	-	ABOVE FINISHED GRADE	PAPI	-	PRECISION APPROACH PATH INDICATOR
ATS	-	AUTOMATIC TRANSFER SWITCH	PT	-	POINT OF TANGENCY
BC	-	BARE COPPER	PVC	-	POLYVINYL CHLORIDE CONDUIT
C	-	CONDUIT	REIL	-	RUNWAY END INDICATOR LIGHT
CCR	-	CONSTANT CURRENT REGULATOR	RGL	-	RUNWAY GUARD LIGHT
CE	-	CONCRETE ENCASED	RGS	-	RIGID GALVANIZED STEEL CONDUIT
CKT.	-	CIRCUIT	RE	-	REFER TO
CLSM	-	CONTROLLED LOW STRENGTH MATERIAL	RW	-	RUNWAY
COMM.	-	COMMUNICATION	S	-	SEWER
CONC.	-	CONCRETE	SCHD.	-	SCHEDULE
DEB	-	DIRECT EARTH BURIED	SHT.	-	SHEET
ELEC.	-	ELECTRIC/ELECTRICAL	STA.	-	STATION
EXIST., EX.	-	EXISTING	TDZ	-	TOUCH DOWN ZONE
FAA	-	FEDERAL AVIATION ADMINISTRATION	TW	-	TAXIWAY
F.O.	-	FIBER OPTIC	TYP	-	TYPICAL
GFI	-	GROUND FAULT INTERRUPTING	UE, UGE	-	UNDERGROUND ELECTRICAL
GND., G	-	GROUND	U.G.	-	UNDERGROUND
HDPE	-	HIGH-DENSITY POLYETHYLENE	UON	-	UNLESS OTHERWISE NOTED
kV	-	KILOVOLTS	UT	-	UNDERGROUND TELEPHONE
kW	-	KILOWATTS	V	-	VOLT
MALSR	-	MEDIUM INTENSITY APPROACH LIGHT SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS	VA	-	VOLT AMP
MH.	-	MANHOLE	W	-	WATT, WIRE
N.I.C.	-	NOT IN CONTRACT	W/	-	WITH
NO.	-	NUMBER	WP	-	WEATHERPROOF
OHP	-	OVERHEAD POWER	XFMR	-	TRANSFORMER

R/W LIGHT KEY

C - WHITE
Y - YELLOW
G - GREEN
R - RED

CIRCUIT LEGEND

1. RUNWAY 4L-22R EDGE LIGHTS
2. TAXIWAY D EDGE LIGHTS
3. RGL LIGHTS
4. RUNWAY 4R-22L EDGE LIGHTS

LEGEND NOTES:

1. ALL ELECTRICAL CONDUITS ARE 1-2" SCH. 40 PVC CONDUIT UNLESS IDENTIFIED OTHERWISE.
2. SIZE AND NUMBER OF CONDUITS IN A DUCT BANK ARE AS INDICATED ON PLAN SHEETS.
3. ALL L-867 JUNCTION BOXES ARE SIZE B, 12" DIA. X 24" DEEP WITH 3/8" THICK BLANK COVER, UNLESS OTHERWISE INDICATED.

PROJECT SPECIFIC DEMOLITION NOTES

1. THE CONTRACTOR SHALL REMOVE AND PROPERLY STORE THE RUNWAY/TAXIWAY LIGHTS AND GUIDANCE SIGNS ACCORDING TO THE ELECTRICAL DEMOLITION PLAN SHEETS E100 SERIES. THE STORAGE OF THE LIGHTS AND SIGNS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND IS CONSIDERED INCIDENTAL TO REMOVAL ITEMS. NO SEPARATE PAYMENT WILL BE MADE. ALL ITEMS SHALL BE NEATLY PACKAGED AND TURNED OVER TO THE SPONSOR.
2. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA AND CLOSED PORTIONS OF THE AIRFIELD SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY JUMPER AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
3. PRIOR TO BEGINNING ELECTRICAL DEMOLITION, THE CONTRACTOR SHALL PROVIDE A PLAN TO THE ENGINEER DETAILING THE INSTALLATION OF ALL REQUIRED TEMPORARY JUMPERS. THE PLAN SHALL SHOW THE LOCATIONS AND INSTALLATION TECHNIQUES OF ALL JUMPERS AND SHALL DEMONSTRATE TO THE ENGINEER THE CONTRACTOR'S PLAN TO MAINTAIN THE INTEGRITY OF THE AIRFIELD CIRCUITS FOR THE DURATION OF CONSTRUCTION.
4. THE CONTRACTOR SHALL REMOVE ALL WIRES AND CABLES FROM CONDUITS WHICH ARE TO BE ABANDONED. NO ADDITIONAL PAYMENT WILL BE MADE FOR REMOVAL OF WIRES AND CABLES.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ELECTRICAL NOTES

1. THE PROJECT PAY ITEMS PROVIDED ARE TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THE CONTRACT DOCUMENTS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED WORK TO COMPLETE THE PROJECT, AND IS TO BE INCIDENTAL TO THE COST OF PROJECT PAY ITEMS PROVIDED.
2. WHENEVER, IN THE CONTRACT DOCUMENTS, THE WORDS "PROVIDE", "INSTALL", "FURNISH AND INSTALL", OR SIMILAR WORDS ARE USED, IT SHALL BE UNDERSTOOD THAT THE INTENT OF THE CONTRACT DOCUMENT IS TO PROVIDE FOR THE CONSTRUCTION AND COMPLETION IN EVERY DETAIL THE WORK DESCRIBED. IT IS FURTHER INTENDED THAT THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, SUPPLIES, TESTING, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK IN ACCORDANCE WITH THE DRAWINGS (PLANS), SPECIFICATIONS, AND TERMS OF THE CONTRACT.
3. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, ETC., PRIOR TO COMMENCEMENT OF WORK. THE COST OF PERMITS, LICENSES, ETC. SHALL BE INCIDENTAL TO, AND INCLUDED IN THE BID PRICE FOR THE RESPECTIVE PAY ITEMS.
4. ALL DAMAGE TO UTILITIES OR EXISTING STRUCTURES FROM CONSTRUCTION ACTIVITIES SHALL BE IMMEDIATELY REPORTED TO THE RESIDENT ENGINEER. THE RESIDENT ENGINEER SHALL DETERMINE WHETHER REPAIR OR REPLACEMENT IS NECESSARY. ALL REPAIR METHODS SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INITIATING THE WORK.
5. IN NEW OR EXISTING PAVEMENT ALL CONDUITS, DUCT BANKS, BASE CANS, COUNTERPOISE, GROUND CONDUCTORS, ETC. SHALL BE INSTALLED PRIOR TO PLACEMENT OF THE FINAL LIFT OF PAVEMENT.
6. AIRFIELD SIGNS PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. ADEQUATE LIGHTING, IN THE OPINION OF THE RESIDENT ENGINEER, SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AOA. THE ABOVE ITEMS ARE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS.
7. ALL COMPONENTS OF THE AIRFIELD LIGHTING SYSTEM OUTSIDE OF THE PROJECT AREA AND CLOSED PORTIONS OF THE AIRFIELD SHALL BE OPERATIONAL AT THE END OF EACH WORK SHIFT AND FOR EVERY PERIOD OF LOW VISIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY JUMPER AND OTHER EQUIPMENT NECESSARY TO MAINTAIN AN OPERATIONAL SYSTEM DURING CONSTRUCTION. TEMPORARY JUMPERS SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS BID ITEMS. ALL TEMPORARY JUMPERS SHALL BE INSTALLED IN CONDUIT.
8. CONTRACTOR SHALL BE REQUIRED TO PROVE TO THE SATISFACTION OF THE PROJECT ENGINEER THAT THE LIGHTING SYSTEM IS OPERATIONAL BEFORE LEAVING THE WORK SITE AFTER EVERY WORK SHIFT.
9. THE AIRPORT MAINTENANCE DEPARTMENT'S "LOCKOUT/TAGOUT" PROCEDURE AND NFPA 70E SHALL BE COMPLIED WITH BY THIS CONTRACTOR.
10. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK.
11. EXISTING CONDUIT, DUCT BANK, CIRCUITING, AND UTILITY INFORMATION IS BASED ON "AS-BUILT" AND "RECORD" DRAWINGS AND SITE VISITS BY THE ENGINEER. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL NOT BE SCALED FOR EXACT LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY/AGENCY PRIOR TO STARTING WORK AND STAKE/MARK THE LOCATION OF ALL EXISTING UTILITIES. ANY INTERRUPTION OF AN EXISTING SYSTEM OR UTILITY SERVICE SHALL BE COORDINATED AND APPROVED BY THE AIRPORT AND THE AUTHORITY, AGENCY, OR UTILITY HAVING JURISDICTION PRIOR TO STARTING WORK.
12. ALL REMOVED FIXTURES, BASEPLATES, SPACERS, SIGNS, TRANSFORMERS, ETC. SHALL BE TURNED OVER TO THE AIRPORT'S MAINTENANCE DEPARTMENT. ALL REMOVED CABLES, DUCT, BASECANS, CONCRETE PADS, MANHOLES, ETC. SHALL BE PROPERLY AND LEGALLY DISPOSED OF OFF THE SITE BY THE CONTRACTOR. ALL ITEMS TO BE RELOCATED SHALL BE REMOVED FIRST AND PROPERLY STORED FOR FUTURE INSTALLATION.
13. PROVIDE WORK, EQUIPMENT AND MATERIALS THAT COMPLY WITH FAA REQUIREMENTS, NATIONAL ELECTRICAL CODE, AND ALL LOCAL CODES.
14. PROVIDE PROPER CONSTRUCTION WARNINGS AND BARRICADES PER FAA REQUIREMENTS, AND PRESENT PLANS FOR SAME TO ENGINEER AND AIRPORT OPERATIONS MANAGER FOR APPROVAL PRIOR TO COMMENCING WORK.
15. NOTIFY ENGINEER OF ANY SIGNIFICANT DIFFERENCES BETWEEN DRAWINGS AND FIELD CONDITIONS.
16. DAMAGE TO EXISTING EQUIPMENT NOT ASSOCIATED WITH DEMOLITION FOR THIS PROJECT TO BE REPAIRED AND OPERATIONAL AT CONTRACTOR'S EXPENSE.
17. LOCATION OF EXISTING UTILITIES AND STRUCTURES IS BASED ON THE BEST AVAILABLE INFORMATION AND IS NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UTILITIES ARE SHOWN.
18. WHERE NEW DUCT BANKS OR OTHER UTILITIES ARE NEAR EXISTING UTILITIES THE CONTRACTOR SHALL HAND EXCAVATE AROUND THE EXISTING UTILITIES IN ORDER TO PREVENT DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING ANY UTILITY DAMAGED DURING CONSTRUCTION.
19. THE CONTRACTOR SHALL REMOVE ALL CONDUIT AND CONDUCTORS MARKED FOR REMOVAL ON DEMOLITION SHEETS. ALL ABANDONED/UNUSED CONDUCTORS SHALL BE REMOVED FROM EXISTING CONDUITS IN WHICH NEW CONDUCTORS ARE INSTALLED. NO ABANDONED CONDUCTORS SHALL BE LEFT IN PLACE AT THE COMPLETION OF THE JOB. NO PAYMENT WILL BE MADE FOR REMOVAL OF EXISTING CONDUCTORS. ALL REMOVED WIRE SHALL BE THE PROPERTY OF THE CONTRACTOR.
20. THE CONTRACTOR SHALL KEEP A SET OF AS-BUILT DRAWINGS THAT SHALL BE SUBMITTED TO THE ENGINEER AT THE COMPLETION OF THE JOB. THE CONTRACTOR SHALL NOTE, AND BRING TO THE ENGINEER'S ATTENTION, ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS. REDLINES AND SURVEY AUTOCAD AS-BUILTS SHALL BE PROVIDED UPON COMPLETION.
21. THE DIMENSION BETWEEN LIGHTS SHOWN ON A RADIUS IS DEFINED AS THE CHORD LENGTH. LOCATIONS SHOWN ARE TO THE CENTER OF THE LIGHTING FIXTURE.
22. CONTRACTOR TO FIELD VERIFY ALL ELEVATION ADJUSTMENTS PRIOR TO ORDERING EXTENSION RINGS OR EXCAVATING ELECTRICAL STRUCTURES.
23. AT LOCATIONS WHERE NEW RUNWAY LIGHTS, TAXIWAY LIGHTS, SIGNS, OR CONDUIT ARE TO BE INSTALLED IN EXISTING PAVEMENT THE CONTRACTOR SHALL NEATLY SAWCUT, REMOVE, AND PATCH EXISTING PAVEMENT AS NECESSARY TO ALLOW THE INSTALLATION OF THE NEW EQUIPMENT. PAVEMENT REMOVAL AND PATCHING SHALL BE CONSIDERED INCIDENTAL TO INSTALLATION OF THE NEW EQUIPMENT. NO ADDITIONAL PAYMENT WILL BE MADE FOR PAVEMENT REMOVAL AND PATCHING.
24. THE ELECTRICAL CONTRACTOR SHALL ATTEND THE CONSTRUCTION MEETINGS FOR THE DURATION OF THE PROJECT.
25. ALL ELECTRICAL WORK, INCLUDING CONDUITS, HANDHOLES, GROUNDING, POWER DISTRIBUTION EQUIPMENT, WIRING, JUNCTION BOXES, ETC., PERTAINING TO NAVIGATIONAL AIDS (LOCALIZER, LOCALIZER EQUIPMENT SHELTER, REILS, AND PAPI) SHALL BE CONSTRUCTED IN ACCORDANCE WITH FAA SPECIFICATIONS FAA-C-1217f, FAA-C-1391b, AND FAA-STD-019e IN ADDITION TO THE SPECIFICATIONS CONTAINED WITHIN THE CONTRACT DOCUMENTS.
26. THE CONTRACTOR SHALL MEASURE THE INSULATION RESISTANCE OF ALL AIRFIELD CIRCUITS PRIOR TO STARTING ANY ELECTRICAL WORK. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE A MEGOHMMETER TO THE AIRPORT'S MAINTENANCE DEPARTMENT. THE MEGOHMMETER SHALL BE CAPABLE OF TESTING INSULATION RESISTANCE AT 500V AND 1000V. THE TESTER SHALL BE CAPABLE OF MEASURING RESISTANCE VALUES BETWEEN 0.01MΩ AND 2000MΩ WITH A MINIMUM ACCURACY OF ±1.5%. MEGOHMMETER SHALL BE FLUKE 1503, OR APPROVED EQUAL.
27. THE CONTRACTOR'S OPTION, NEW CONDUIT PROVIDED UNDER EXISTING PAVEMENT MAY BE INSTALLED BY DIRECTIONAL BORING IN LIEU OF CUTTING AN OPEN TRENCH AS DESCRIBED ABOVE. ALL CONDUIT INSTALLED BY DIRECTIONAL BORING SHALL BE SCHEDULE 40 HDPE. HDPE CONDUIT SHALL NOT BE USED OUTSIDE OF DIRECTIONAL BORING APPLICATIONS. ANY DAMAGE TO EXISTING PAVEMENT FROM BORING OPERATIONS (INCLUDING HEAVING) SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE SPONSOR, AND TO THE APPROVAL OF THE ENGINEER.
28. CONDUITS, ELECTRIC LINES, AND DUCT BANKS MARKED FOR REMOVAL ON UTILITY DEMOLITION SHEETS MAY BE ABANDONED IN PLACE IF THEY ARE NOT DISTURBED DURING CONSTRUCTION ACTIVITIES. ANY CONDUIT, ELECTRIC LINES, OR DUCT BANK ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED. NO PAYMENT SHALL BE MADE FOR REMOVAL OF CONDUITS, DUCT BANKS, AND ELECTRIC LINES.
29. THE CONTRACTOR SHALL REMOVE ALL ABANDONED/UNUSED CONDUCTORS AND CABLES FROM EXISTING CONDUITS IN WHICH NEW CONDUCTORS OR CABLES ARE INSTALLED. NO ABANDONED CONDUCTORS OR CABLES SHALL BE LEFT IN PLACE AT THE COMPLETION OF THE PROJECT. NO PAYMENT WILL BE MADE FOR REMOVAL OF EXISTING CONDUCTORS OR CABLES. ALL REMOVED CONDUCTORS AND CABLES SHALL BE THE PROPERTY OF THE CONTRACTOR.

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS Date Signed 3/06/23 ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL LEGEND

DRAWING: E001

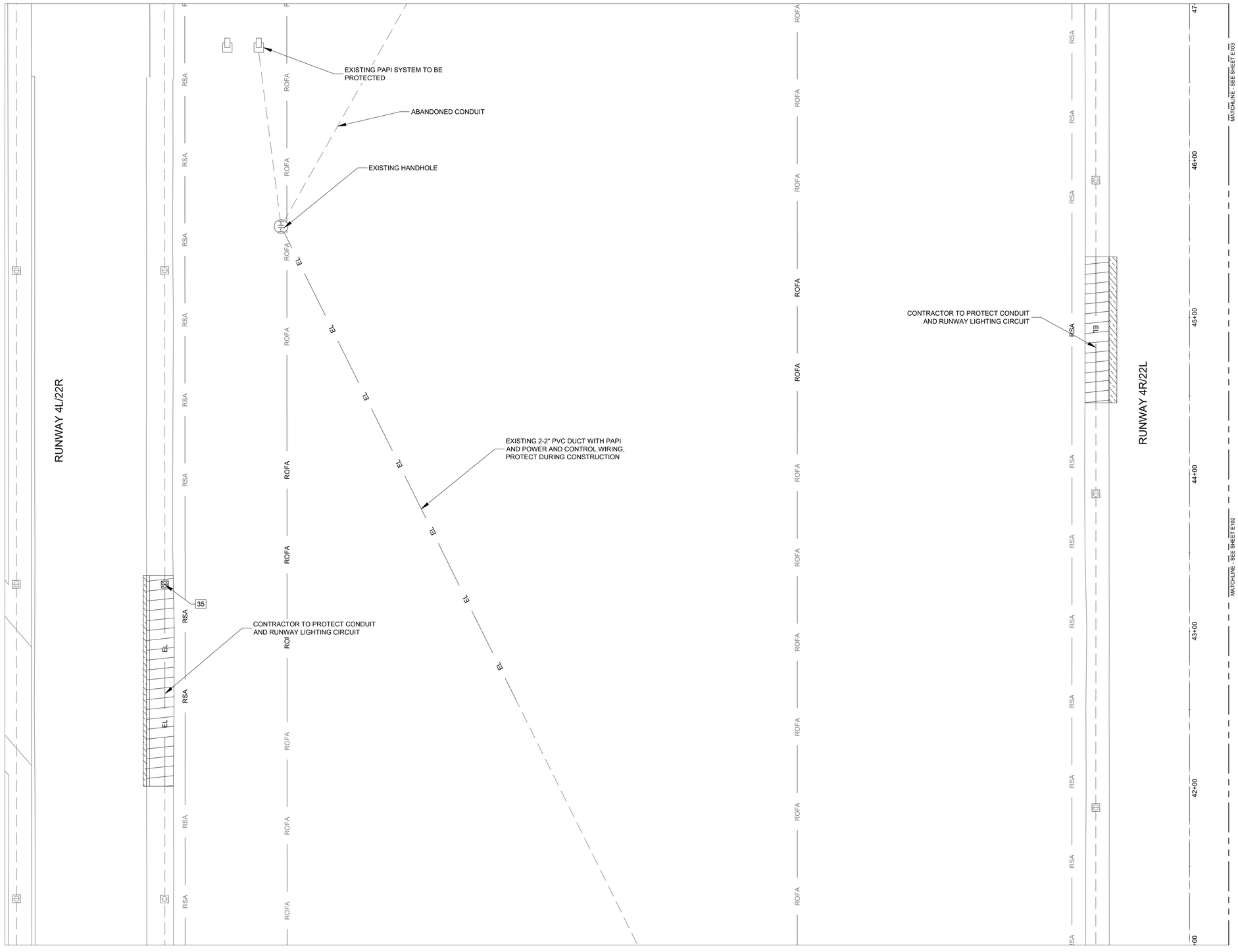
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET: 42 OF 52

CATALOG NUMBER: A-270561

DATE SAVED: 3/10/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\100-FFZ-MCTE-E001-ELEC-LGND.DWG

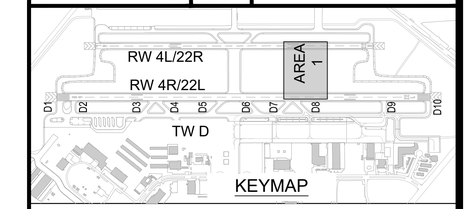


ELECTRICAL DEMOLITION NOTES

35	L-125a REMOVE BASE MOUNTED RUNWAY/TAXIWAY LIGHT, COMPLETE 1 EA.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



ELECTRICAL DEMOLITION LEGEND

	EXISTING TAXIWAY EDGE LIGHT
	EXISTING RUNWAY EDGE LIGHT
EL	REMOVE ELECTRICAL LINES
EL(AB)	ABANDONED ELECTRICAL LINE TO BE REMOVED
	RUNWAY EDGE LIGHT TO BE REMOVED
	TAXIWAY EDGE LIGHT TO BE REMOVED
	JUNCTION BOX TO BE REMOVED
	RUNWAY GUARD LIGHT TO BE REMOVED
	AIRFIELD GUIDANCE SIGN TO BE REMOVED

NOTES:

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND ELECTRICAL NOTES.
2. SEE SHEETS E101 AND E103 FOR ELECTRICAL DEMOLITION SHEETS.
3. SEE SHEETS E201 AND E203 FOR ELECTRICAL LAYOUT PLAN SHEETS.
4. SEE SHEETS E250 - E253 FOR ELECTRICAL DETAILS.
5. ALL CONDUIT AND WIRE REMOVAL AND DISPOSAL IS INCIDENTAL TO THE PROJECT.

CONTRACTOR TO PROTECT ALL EXISTING CONDUIT, WIRE, AND CIRCUITS TO BE REMOVED AS IDENTIFIED IN THE ELECTRICAL DEMOLITION PLANS UNTIL PROPOSED CONDUIT AND WIRE IS INSTALLED TO LIMIT THE SERVICE INTERRUPTION. ONCE CIRCUITS ARE REROUTED THROUGH PROPOSED CONDUIT, EXISTING CONDUIT AND WIRE CAN BE REMOVED.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer — CERTIFICATE NO. 59247 — JON BRYCE WEEKS — Date Signed 3/29/23 — ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL DEMOLITION PLAN AREA 1 (SCHEDULE II)

DRAWING: E101

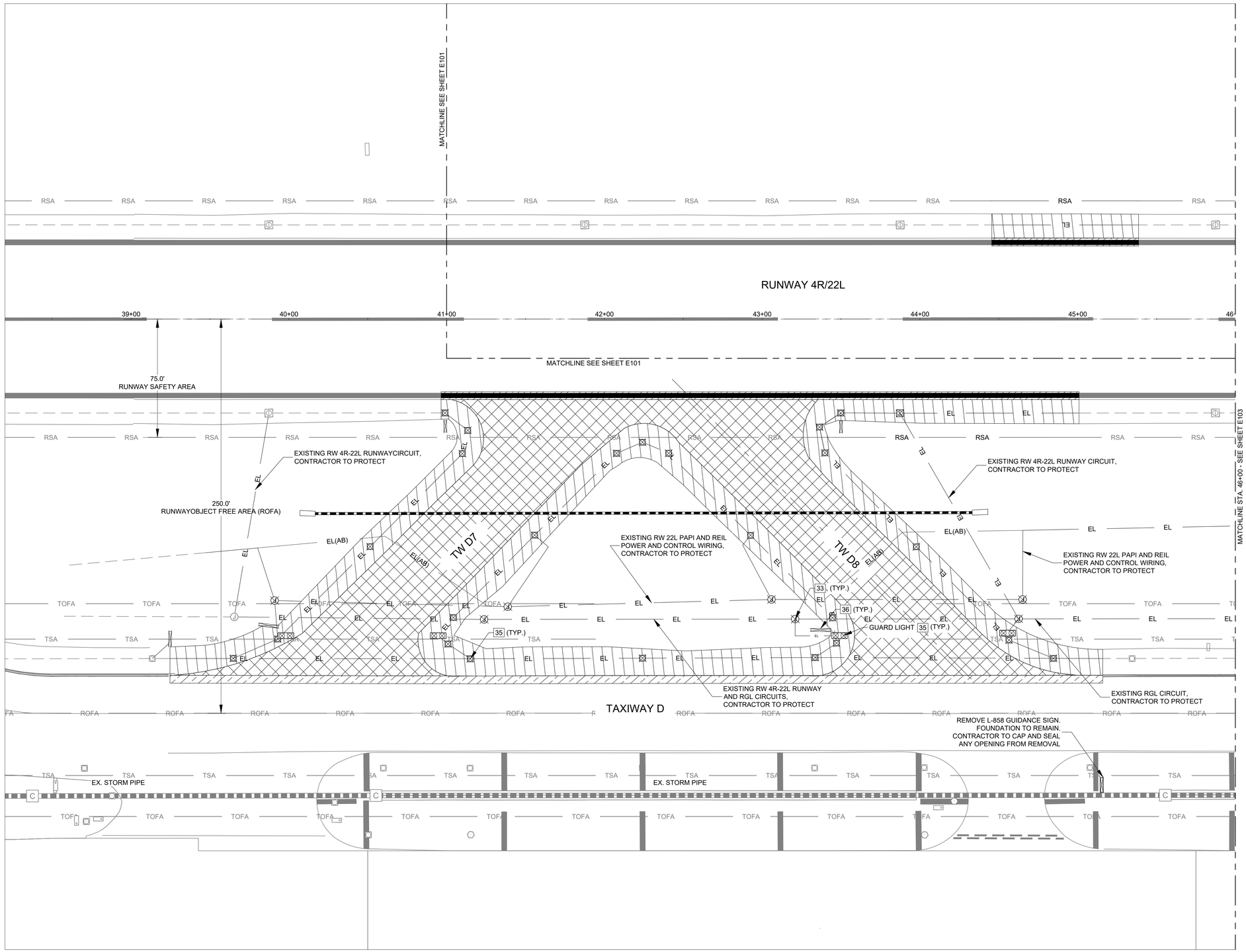
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: PROJ. NO.: CP0994

SHEET: 43 OF 52

CATALOG NUMBER: A-270562

DATE SAVED: 3/31/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\100-FFZ-MCTE-E101-ELEC-DEMO.DWG



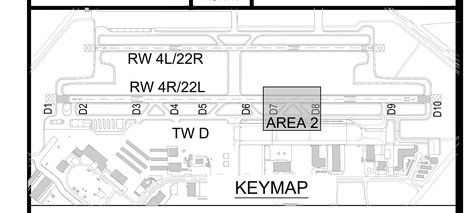
ELECTRICAL DEMOLITION NOTES

33	L-115a REMOVE JUNCTION BOX, COMPLETE	7 EA.
35	* L-125a REMOVE BASE MOUNTED RUNWAY/TAXIWAY LIGHT, COMPLETE	29 EA.
36	L-125b REMOVE L-858 GUIDANCE SIGN, COMPLETE	6 EA.

* NOTE: FOUR EXISTING GUARD LIGHTS ARE QUANTIFIED UNDER THIS PAY ITEM

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



KEYMAP

ELECTRICAL DEMOLITION LEGEND

	EXISTING TAXIWAY EDGE LIGHT
	EXISTING RUNWAY EDGE LIGHT
EL	REMOVE ELECTRICAL LINES
EL(AB)	ABANDONED ELECTRICAL LINE TO BE REMOVED
	RUNWAY EDGE LIGHT TO BE REMOVED
	TAXIWAY EDGE LIGHT TO BE REMOVED
	JUNCTION BOX TO BE REMOVED
	RUNWAY GUARD LIGHT TO BE REMOVED
	AIRFIELD GUIDANCE SIGN TO BE REMOVED

NOTES:

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND ELECTRICAL NOTES.
2. SEE SHEETS E101 AND E103 FOR ELECTRICAL DEMOLITION SHEETS.
3. SEE SHEETS E201 AND E203 FOR ELECTRICAL LAYOUT PLAN SHEETS.
4. SEE SHEETS E250 - E253 FOR ELECTRICAL DETAILS.
5. ALL CONDUIT AND WIRE REMOVAL AND DISPOSAL IS INCIDENTAL TO THE PROJECT.

CONTRACTOR TO PROTECT ALL EXISTING CONDUIT, WIRE, AND CIRCUITS TO BE REMOVED AS IDENTIFIED IN THE ELECTRICAL DEMOLITION PLANS UNTIL PROPOSED CONDUIT AND WIRE IS INSTALLED TO LIMIT THE SERVICE INTERRUPTION. ONCE CIRCUITS ARE REROUTED THROUGH PROPOSED CONDUIT, EXISTING CONDUIT AND WIRE CAN BE REMOVED.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE NO. 69241 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL DEMOLITION PLAN AREA 2 (SCHEDULE I)

DRAWING E102

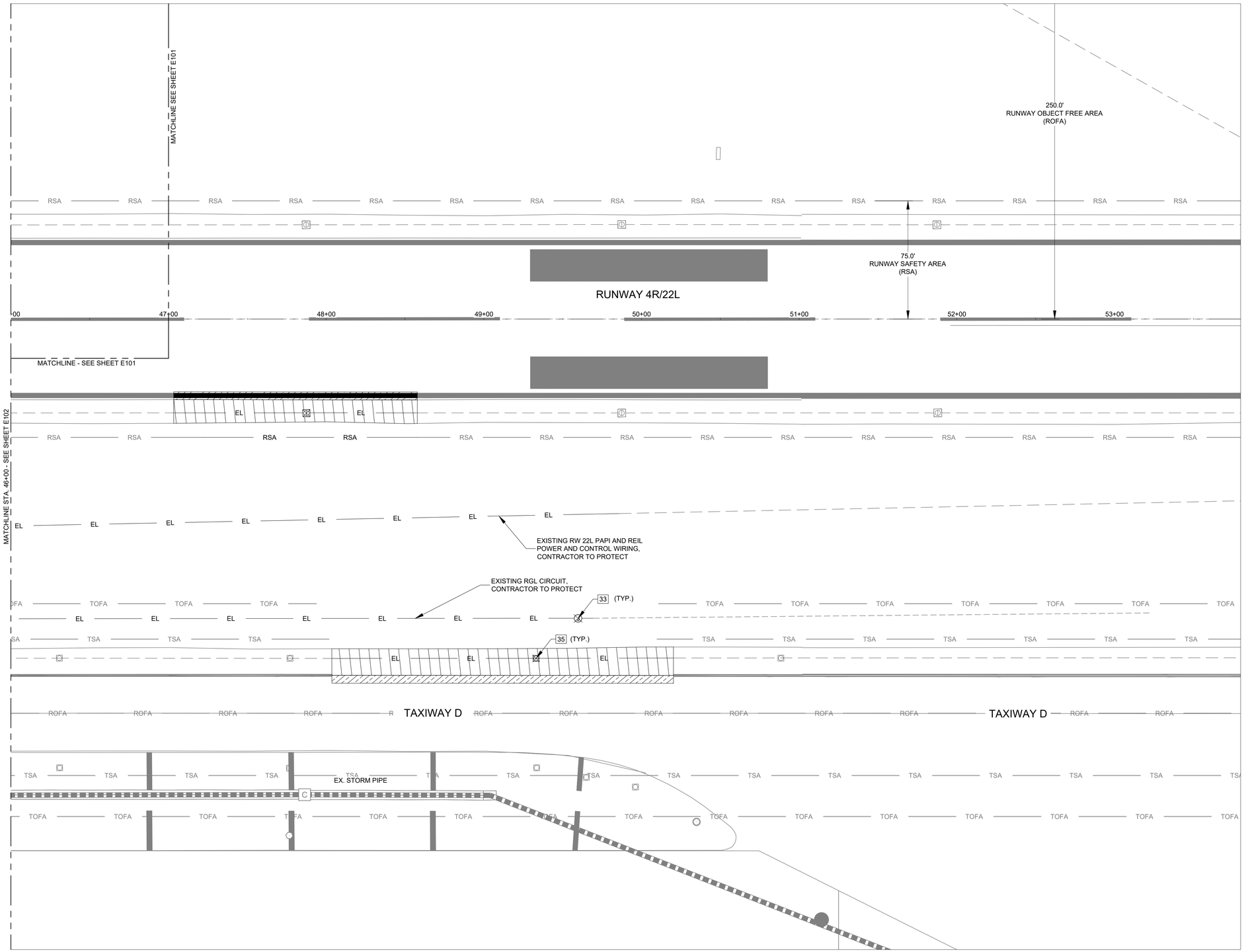
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 44 OF 52

CATALOG NUMBER: A-270563

DATE SAVED: 3/31/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\100-FFZ-MCTE-E102-ELEC-DEMO.DWG

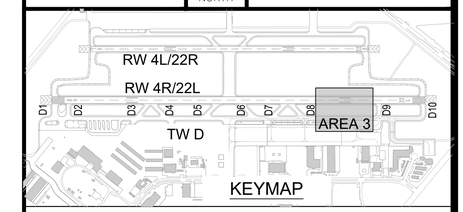


ELECTRICAL DEMOLITION NOTES

33	L-115a REMOVE JUNCTION BOX, COMPLETE	1 EA.
35	L-125a REMOVE BASE MOUNTED RUNWAY/TAXIWAY LIGHT, COMPLETE	2 EA.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



ELECTRICAL DEMOLITION LEGEND

- EXISTING TAXIWAY EDGE LIGHT
- EXISTING RUNWAY EDGE LIGHT
- EL — REMOVE ELECTRICAL LINES
- EL(AB) — ABANDONED ELECTRICAL LINE TO BE REMOVED
- RUNWAY EDGE LIGHT TO BE REMOVED
- TAXIWAY EDGE LIGHT TO BE REMOVED
- JUNCTION BOX TO BE REMOVED
- RUNWAY GUARD LIGHT TO BE REMOVED
- AIRFIELD GUIDANCE SIGN TO BE REMOVED

NOTES:

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND ELECTRICAL NOTES.
2. SEE SHEETS E101 AND E103 FOR ELECTRICAL DEMOLITION SHEETS.
3. SEE SHEETS E201 AND E203 FOR ELECTRICAL LAYOUT PLAN SHEETS.
4. SEE SHEETS E250 - E253 FOR ELECTRICAL DETAILS.
5. ALL CONDUIT AND WIRE REMOVAL AND DISPOSAL IS INCIDENTAL TO THE PROJECT.

CONTRACTOR TO PROTECT ALL EXISTING CONDUIT, WIRE, AND CIRCUITS TO BE REMOVED AS IDENTIFIED IN THE ELECTRICAL DEMOLITION PLANS UNTIL PROPOSED CONDUIT AND WIRE IS INSTALLED TO LIMIT THE SERVICE INTERRUPTION. ONCE CIRCUITS ARE REROUTED THROUGH PROPOSED CONDUIT, EXISTING CONDUIT AND WIRE CAN BE REMOVED.

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL DEMOLITION PLAN
AREA 3 (SCHEDULE I)

DRAWING: E103

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY: ____
PROJ. NO.: CP0994

SHEET: 45 OF 52

CATALOG NUMBER: A-270564

DATE SAVED: 3/31/23
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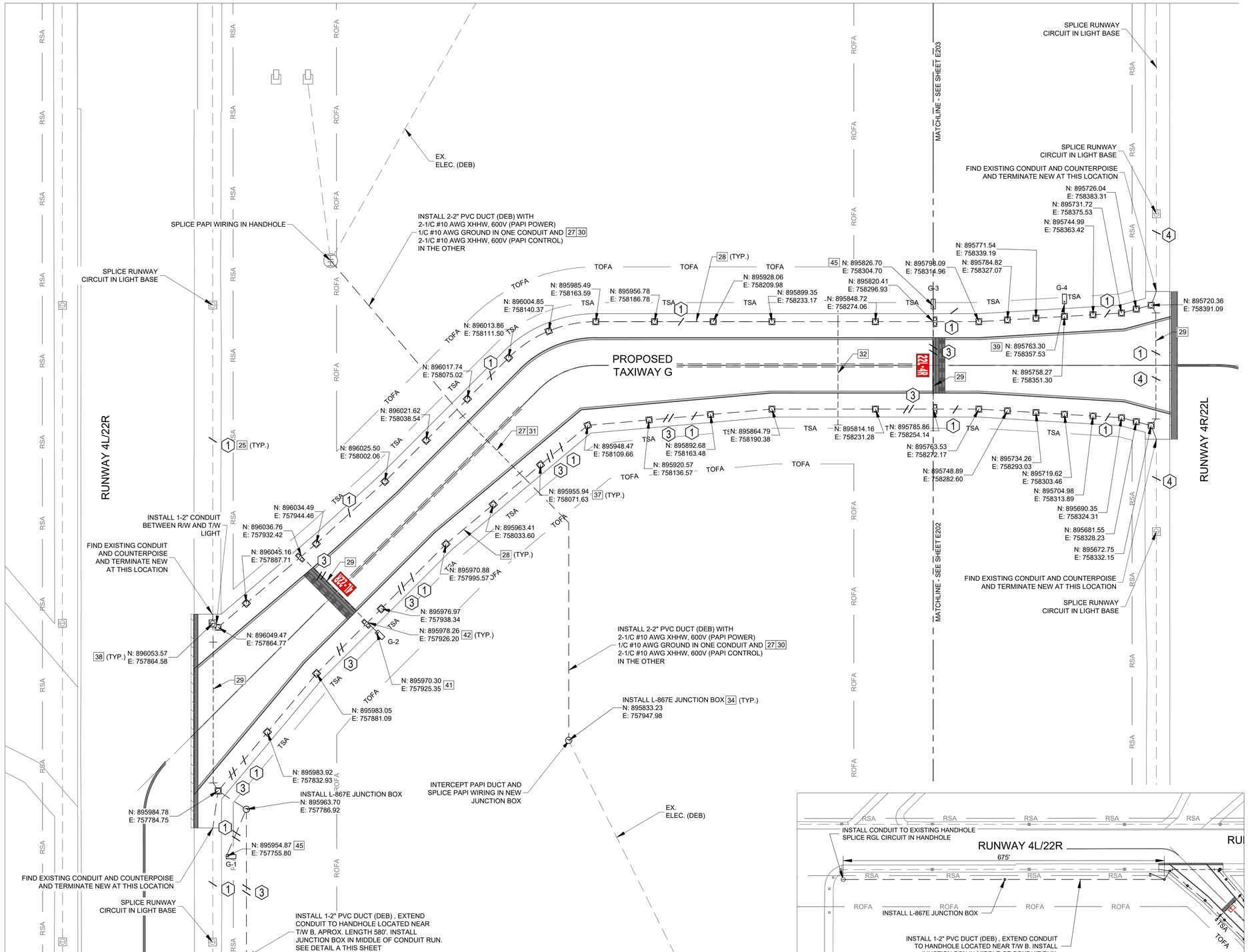
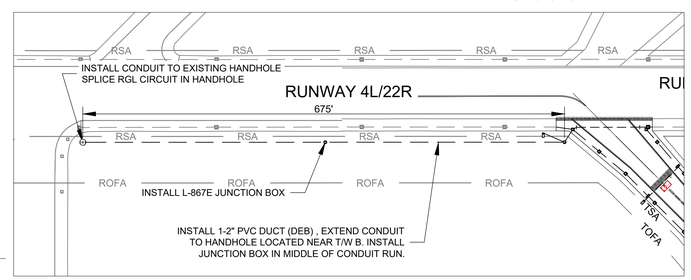




1 DETAIL A
1" = 100'

ELECTRICAL GEOMETRY NOTES

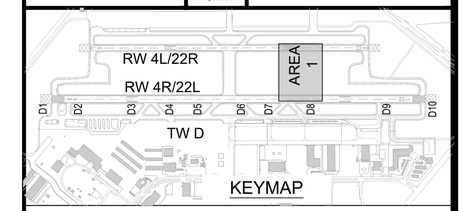
#	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
25	L-108A	INSTALL #8 AWG L-824C, 5000V WIRE	LF	5000
26	L-108B	INSTALL #6 AWG, BARE COPPER COUNTERPOISE INCLUDING GROUND RODS AND TERMINATIONS	LF	4000
27	L-108C	INSTALL #10 AWG XHHW, 600V WIRE	LF	2000
28	L-110A	INSTALL 1-2" SCH 40 PVC CONDUIT (DEB)	LF	3100
29	L-110B	INSTALL 1-2" SCH 40 PVC CONDUIT (CE)	LF	300
30	L-110C	INSTALL 2-2" SCH 40 PVC CONDUIT (DEB)	LF	325
31	L-110D	INSTALL 2-2" SCH 40 PVC CONDUIT (CE)	LF	55

ELECTRICAL GEOMETRY NOTES

#	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
32	L-110E	INSTALL 4-2" SCH 40 PVC CONDUIT (CE)	LF	75
34	L-115B	INSTALL L-867E JUNCTION BOX, COMPLETE	EA	3
37	L-125C	INSTALL L-861T LED TAXIWAY EDGE LIGHT, COMPLETE	EA	41
38	L-125D	INSTALL L-861 LED RUNWAY EDGE LIGHT, COMPLETE	EA	1
39	L-125E	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 2 MODULE, COMPLETE	EA	1
41	L-125G	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 4 MODULE, COMPLETE	EA	2
42	L-125H	INSTALL L-804 LED RUNWAY GUARD LIGHT, COMPLETE	EA	4
45	L-125K	INSTALL L-858 LED GUIDANCE SIGN SIZE 1, 1 MODULE, COMPLETE	EA	1

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



NOTES:

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND ELECTRICAL NOTES.
2. SEE SHEETS E101 AND E103 FOR ELECTRICAL DEMOLITION SHEETS.
3. SEE SHEETS E250 - E253 FOR ELECTRICAL DETAILS.

CIRCUIT LEGEND

1	RUNWAY 4L-22R EDGE LIGHTS
2	TAXIWAY D EDGE LIGHTS
3	RGL LIGHTS
4	RUNWAY 4R-22L EDGE LIGHTS

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 59247 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL GEOMETRY PLAN AREA 1 (SCHEDULE II)

DRAWING: E201

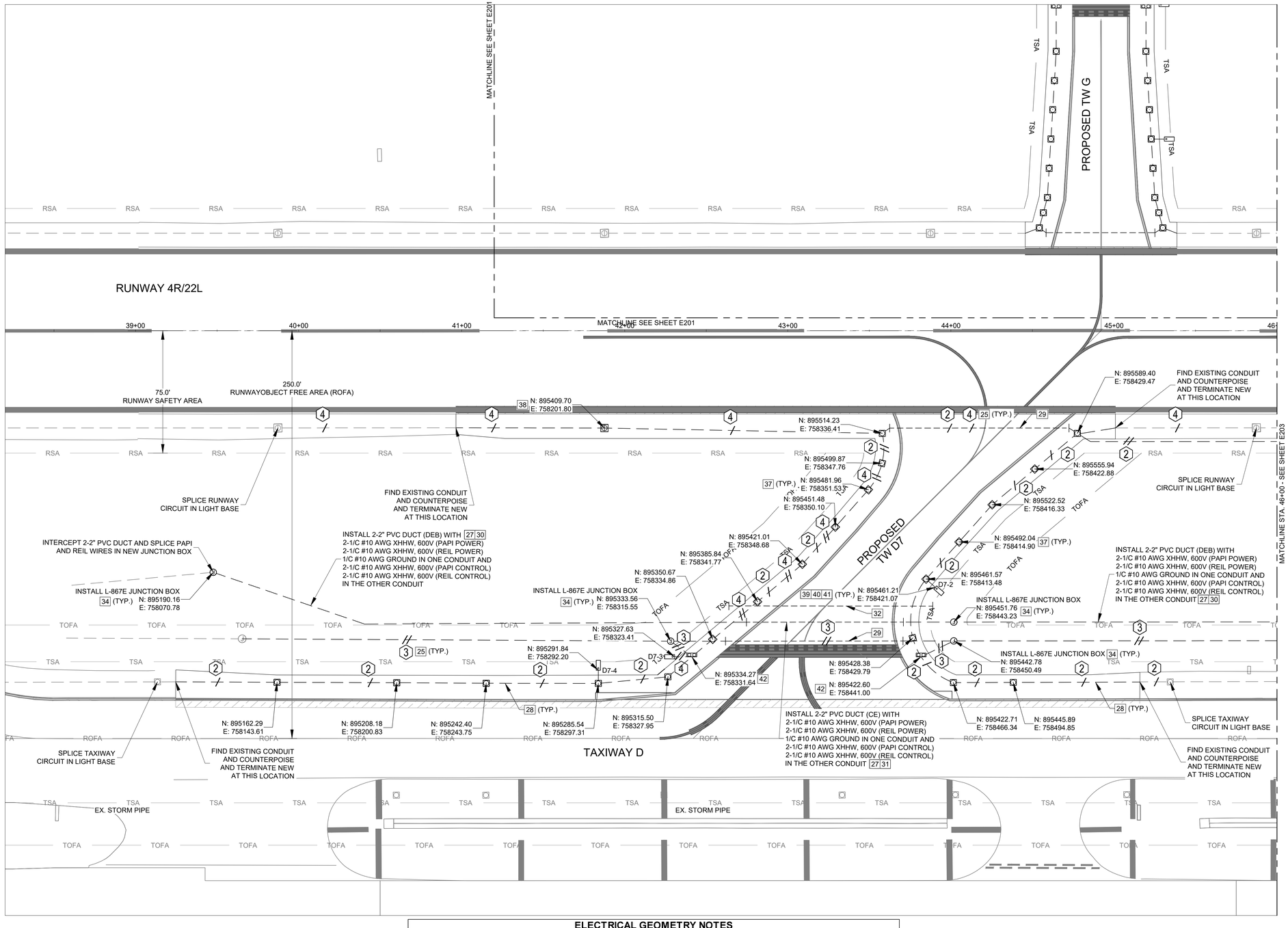
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET: 46 OF 52

CATALOG NUMBER: A-270565

DATE SAVED: 3/31/23
L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\200-FFZ-MCTE-E201-ELEC-GMTY.DWG

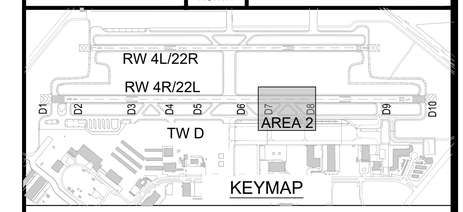


ELECTRICAL GEOMETRY NOTES

#	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
25	L-108A	INSTALL #8 AWG L-824C, 5000V WIRE	LF	3750
26	L-108B	INSTALL #6 AWG, BARE COPPER COUNTERPOISE INCLUDING GROUND RODS AND TERMINATIONS	LF	3500
27	L-108C	INSTALL #10 AWG XHHW, 600V WIRE	LF	6200
28	L-110A	INSTALL 1-2" SCH 40 PVC CONDUIT (DEB)	LF	2400
29	L-110B	INSTALL 1-2" SCH 40 PVC CONDUIT (CE)	LF	225
30	L-110C	INSTALL 2-2" SCH 40 PVC CONDUIT (DEB)	LF	575
31	L-110D	INSTALL 2-2" SCH 40 PVC CONDUIT (CE)	LF	100
32	L-110E	INSTALL 4-2" SCH 40 PVC CONDUIT (CE)	LF	130
34	L-115B	INSTALL L-867E JUNCTION BOX, COMPLETE	EA	4
37	L-125C	INSTALL L-861T LED TAXIWAY EDGE LIGHT, COMPLETE	EA	20
38	L-125D	INSTALL L-861 LED RUNWAY EDGE LIGHT, COMPLETE	EA	1
40	L-125F	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 3 MODULE, COMPLETE	EA	2
41	L-125G	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 4 MODULE, COMPLETE	EA	1
42	L-125H	INSTALL L-804 LED RUNWAY GUARD LIGHT, COMPLETE	EA	2

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



NOTES:

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND ELECTRICAL NOTES.
2. SEE SHEETS E101 AND E103 FOR ELECTRICAL DEMOLITION SHEETS.
3. SEE SHEETS E250 - E253 FOR ELECTRICAL DETAILS.

CIRCUIT LEGEND

1	RUNWAY 4L-22R EDGE LIGHTS
2	TAXIWAY D EDGE LIGHTS
3	RGL LIGHTS
4	RUNWAY 4R-22L EDGE LIGHTS

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil)
CERTIFICATE NO.
69247
JON BRYCE WEEKS
3/29/23
Date Signed
ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL GEOMETRY PLAN AREA 2 (SCHEDULE I)

DRAWING: E202

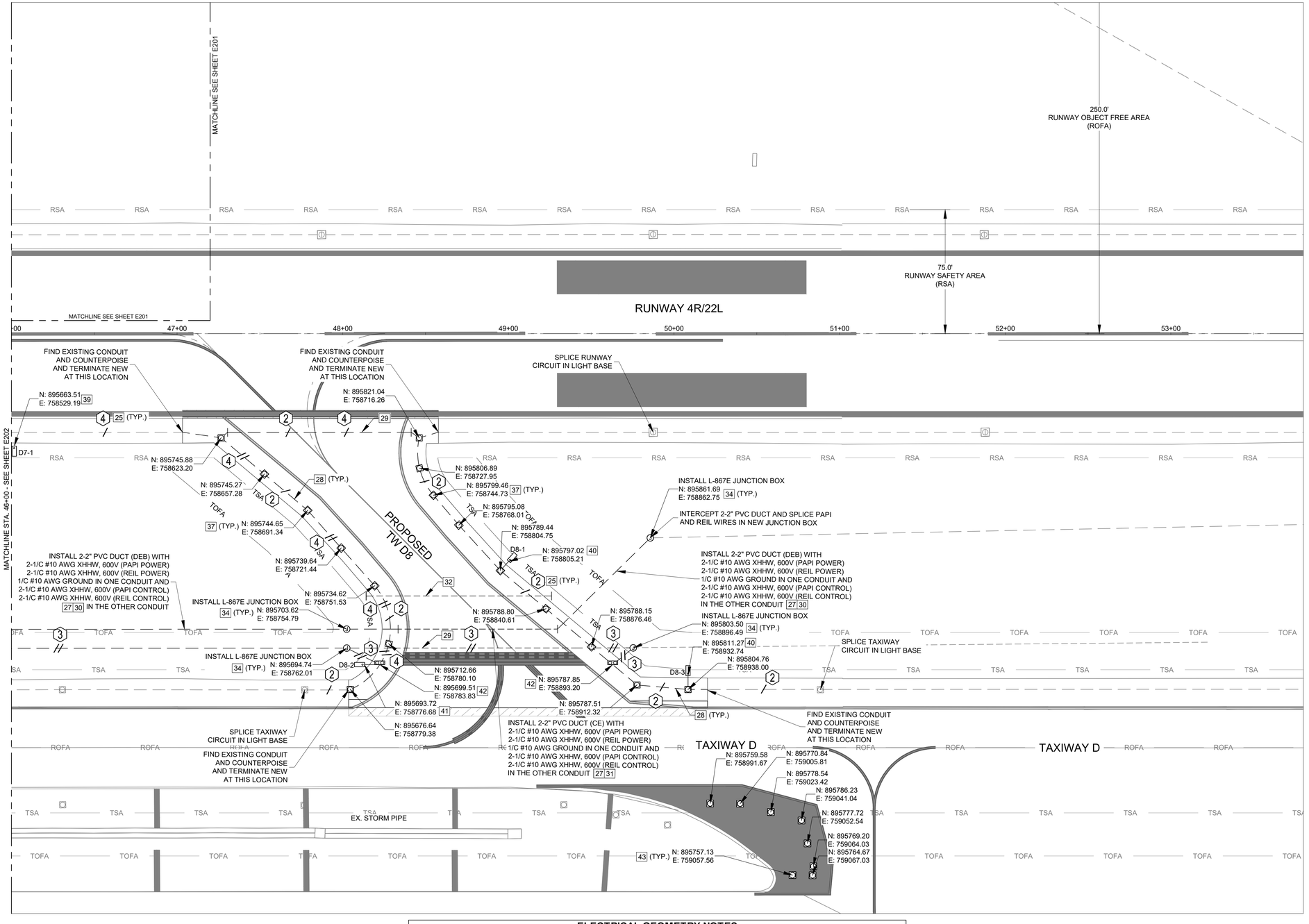
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET: 47 OF 52

CATALOG NUMBER: A-270566

DATE SAVED: 3/31/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CADD\PLANS\200-FFZ-MCTE-E202-ELEC-GMTY.DWG

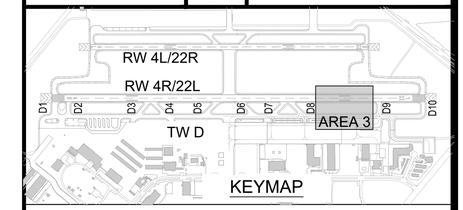


ELECTRICAL GEOMETRY NOTES

#	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
25	L-108A	INSTALL #8 AWG L-824C, 5000V WIRE	LF	2200
26	L-108B	INSTALL #6 AWG, BARE COPPER COUNTERPOISE INCLUDING GROUND RODS AND TERMINATIONS	LF	1900
27	L-108C	INSTALL #10 AWG XHHW, 600V WIRE	LF	3800
28	L-110A	INSTALL 1-2" SCH 40 PVC CONDUIT (DEB)	LF	1000
29	L-110B	INSTALL 1-2" SCH 40 PVC CONDUIT (CE)	LF	225
30	L-110C	INSTALL 2-2" SCH 40 PVC CONDUIT (DEB)	LF	325
31	L-110D	INSTALL 2-2" SCH 40 PVC CONDUIT (CE)	LF	100
32	L-110E	INSTALL 4-2" SCH 40 PVC CONDUIT (CE)	LF	130
34	L-115B	INSTALL L-867E JUNCTION BOX, COMPLETE	EA	4
37	L-125C	INSTALL L-861T LED TAXIWAY EDGE LIGHT, COMPLETE	EA	16
39	L-125E	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 2 MODULE, COMPLETE	EA	1
40	L-125F	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 3 MODULE, COMPLETE	EA	2
41	L-125G	INSTALL L-858 LED GUIDANCE SIGN, SIZE 1, 4 MODULE, COMPLETE	EA	1
42	L-125H	INSTALL L-804 LED RUNWAY GUARD LIGHT, COMPLETE	EA	2
43	L-125I	INSTALL L-853 RETROREFLECTIVE MARKER, SURFACE MOUNTED, COMPLETE	EA	8

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17



NOTES:

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND ELECTRICAL NOTES.
2. SEE SHEETS E101 AND E103 FOR ELECTRICAL DEMOLITION SHEETS.
3. SEE SHEETS E250 - E253 FOR ELECTRICAL DETAILS.

CIRCUIT LEGEND

1. RUNWAY 4L-22R EDGE LIGHTS
2. TAXIWAY D EDGE LIGHTS
3. RGL LIGHTS
4. RUNWAY 4R-22L EDGE LIGHTS

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 " = 30' FULL SIZE
1" = 60' HALF SIZE

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69241 JON BRYCE WEEKS 3/29/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL GEOMETRY PLAN AREA 3 (SCHEDULE I)

DRAWING E203

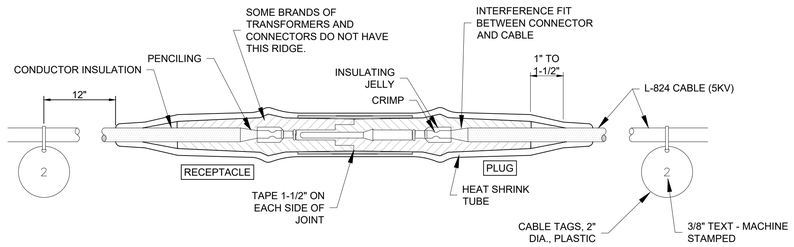
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 48 OF 52

CATALOG NUMBER: A-270567

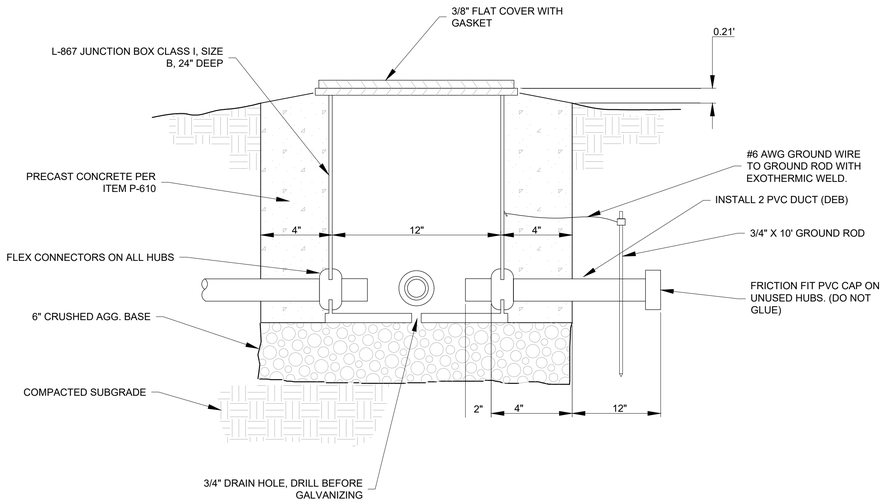
DATE SAVED: 3/31/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\200-FFZ-MCTE-E202-ELEC-GMTY.DWG



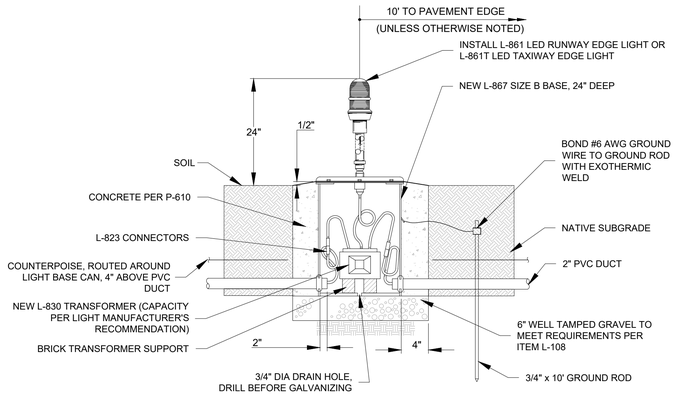
L-823 INSTALLATION INSTRUCTIONS TO SUPPLEMENT THE MANUFACTURERS INSTRUCTIONS

1. CLEAN THE CABLE THOROUGHLY 12" MIN. FROM THE END.
2. REMOVE INSULATION PER MANUFACTURERS INSTRUCTIONS. DO NOT NICK THE CONDUCTOR.
3. INSTALL PIN AND / OR RECEPTACLE WITH A CRIMPING TOOL WHICH MUST BE COMPLETELY CLOSED BEFORE THE TOOL MAY BE REMOVED.
4. BE SURE CABLE AND CONNECTOR FITTINGS ARE CLEAN. COAT THE CABLE INSULATION WITH INSULATING JELLY FROM THE CONNECTOR.
5. CAREFULLY INSERT CABLE INTO CONNECTOR TO THE PROPER DEPTH.
6. CLEAN CONNECTOR AND CABLE INSULATION WITH WAX OR GREASE SOLVENT TO REMOVE SURFACE SILICONE JELLY.
7. SLIP 16 INCH LENGTH OF HEAT SHRINK TUBING WITH INTEGRAL SEALANT ONTO TRANSFORMER LEAD.
8. COMPLETE CONNECTION BY MATING THE PLUG AND RECEPTACLE. CAUTION: BE SURE THE CABLE DOES NOT SLIP OUT WHEN THE CONNECTION IS MADE.
9. APPLY RUBBER TAPE AND VINYL TAPE ONE HALF LAPPED, 1-1/2 INCHES ON EACH SIDE OF JOINT.
10. ANY CONNECTOR WHICH IS CONTAMINATED BY DIRT OR OTHER DAMAGING MATERIAL SHALL BE REMOVED AND NOT REINSTALLED.
11. CENTER HEAT SHRINK OVER THE CONNECTOR. APPLY HEAT EVENLY BEGINNING AT THE CENTER AND WORKING AROUND CABLE TO ENDS. DO NOT OVER HEAT.
12. THE HEAT SOURCE SHALL BE ELECTRIC HEAT GUN OR A PROPANE TORCH WITH A FLAME SPREADER TO BE APPROVED BY THE ENGINEER.
13. CONNECTOR KITS SHALL USE A PULLOVER WATERPROOFING FLAP ON THE CONNECTION, SUCH AS AMERACE SUPER KIT OR INTEGRO COMPLETE KIT. HEAT SHRINK TUBING AND TAPE IS NOT REQUIRED WITH THESE CONNECTORS.
14. ALL L-824 CABLES SHALL BE IDENTIFIED WITH A PLASTIC TAG WITH ITS RESPECTIVE CIRCUIT NUMBER AT ALL ACCESSIBLE LOCATIONS. ALL CABLES WITH L-823 CONNECTORS SHALL HAVE ID TAGS ATTACHED 12" FROM EACH CONNECTOR. IN ADDITION, TAGS SHALL BE PLACED ON ALL CABLES WITHOUT L-823 CONNECTORS 12" FROM CONDUIT OPENINGS IN EACH ELECTRICAL MANHOLE, HAND HOLE, JUNCTION BOX, AND LIGHT BASE.

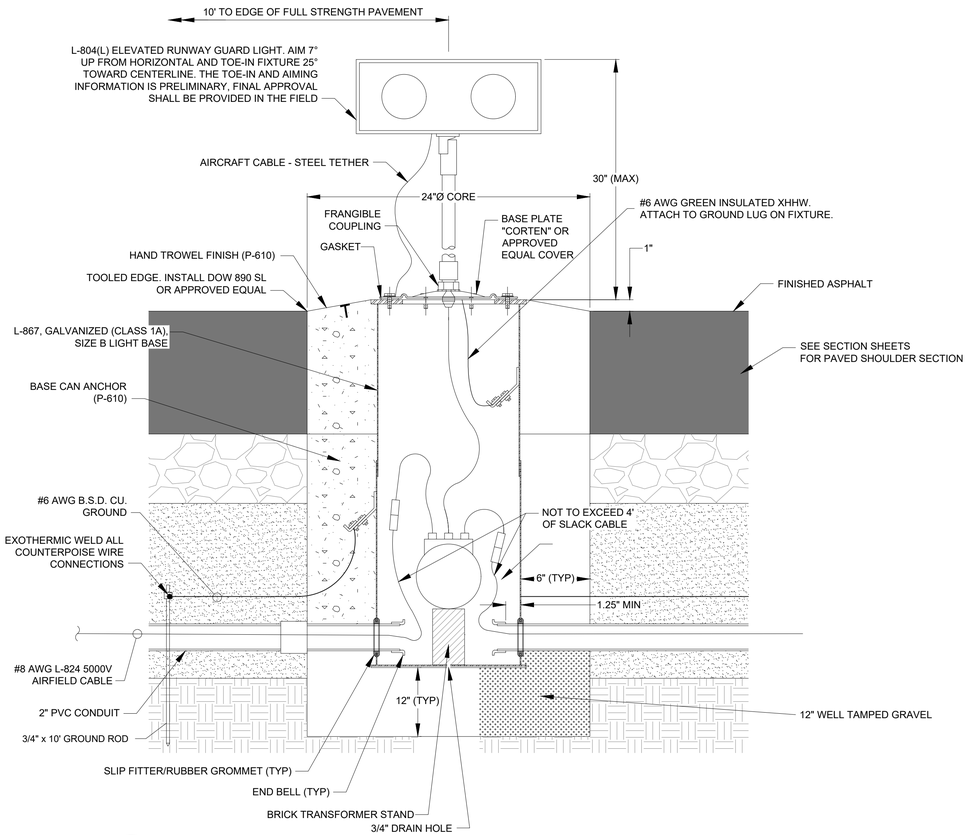
1 L-823 CONNECTOR WATERPROOFING DETAIL
N.T.S.



3 L-867B JUNCTION BOX DETAIL
N.T.S



2 L-861T(L) TAXIWAY EDGE LIGHT DETAIL
N.T.S



4 ELEVATED RUNWAY GUARD LIGHT INSTALLATION IN PAVED SHOULDER
N.T.S

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 59247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL DETAILS

DRAWING E250

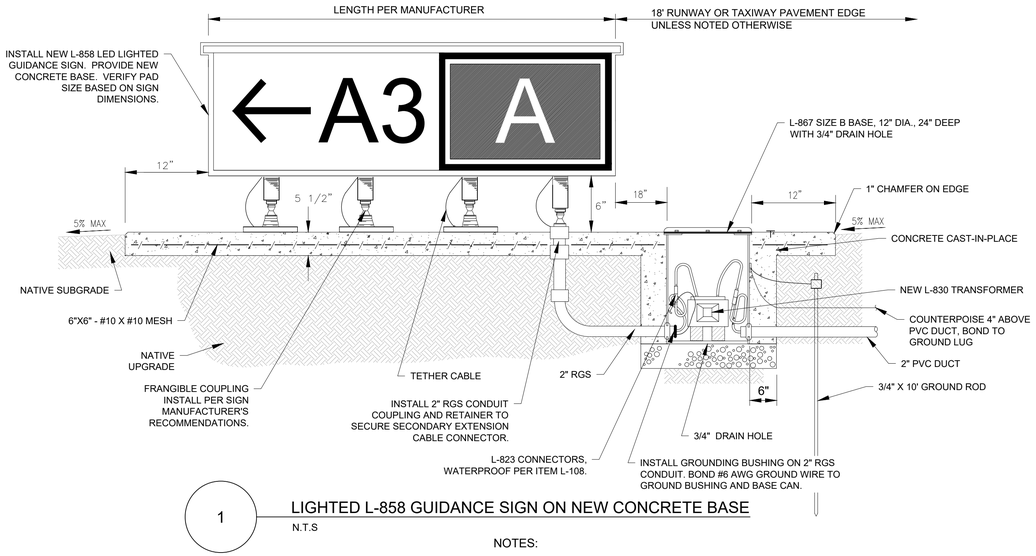
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 49 OF 52

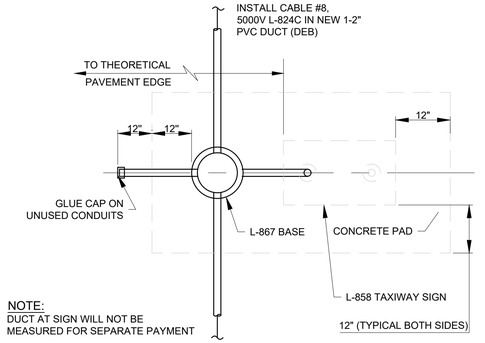
CATALOG NUMBER: A-270568

DATE SAVED: 3/10/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\250-FFZ-MCTE-E250-ELEC-DETL.DWG



1 LIGHTED L-858 GUIDANCE SIGN ON NEW CONCRETE BASE

N.T.S



NOTE:
DUCT AT SIGN WILL NOT BE MEASURED FOR SEPARATE PAYMENT

3 CONDUIT LAYOUT TO TAXIWAY SIGN DETAIL

N.T.S

NOTES:

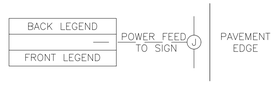
1. ALL LIGHTED SIGNS SHALL BE EQUIPPED WITH LED TYPE LIGHTING WHICH COMPLIES WITH THE REQUIREMENTS OF FAA ENGINEERING BRIEF 67D.
2. ALL NEW SIGNS SHALL CONFORM TO AC 150/5345-44, LIGHTED OR UNLIGHTED, SIZE 1. NUMBER OF SIGN MODULES SHALL BE AS REQUIRED FOR LEGEND. ALL NEW DIRECTIONAL, MANDATORY, AND LOCATION SIGNS SHALL BE LOCATED 20' FROM THE EDGE OF SIGN TO THE PAVEMENT EDGE.
3. THE DETAILS SHOWN IN THE PLANS PROVIDE THE MINIMUM REQUIREMENTS FOR SIGN INSTALLATIONS. THE CONTRACTOR SHALL USE STANDARDS APPLICABLE FOR THE PARTICULAR SIGN MANUFACTURER. THE BOLTING PATTERN, METHOD OF ANCHORING, ETC., SHALL BE PER THE SIGN MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY THE ENGINEER.
4. ALL SIGNS SHALL BE FURNISHED WITH TETHERS. TETHERS SHALL BE 1/8" STAINLESS STEEL AIRCRAFT CABLE WITH A FORMED EYE ON BOTH ENDS. THE TETHER SHALL BE ATTACHED TO THE SIGN AND BASE BY BEING SANDWICHED BETWEEN TWO STAINLESS STEEL FENDER WASHERS, WITH A 1/2" MINIMUM STAINLESS STEEL BOLT. THE TETHER SHALL BE OF SUFFICIENT LENGTH TO HAVE A MINIMUM OF 6" SLACK WHEN ATTACHED BETWEEN THE SIGN AND THE SIGN BASE. ALL TETHERS SHALL BE THE SAME LENGTH.
5. ALL SIGNS SHALL BE ORIENTED SUCH THAT THE LONGITUDINAL CENTERLINE OF THE SIGN IS PERPENDICULAR TO THE RESPECTIVE TAXIWAY/RUNWAY CENTERLINE, UNLESS OTHERWISE NOTED.
6. THE ACTUAL SIGN DIMENSIONS MAY VARY FROM THOSE SHOWN. THE BASE SIZE SHALL BE ADJUSTED TO MATCH THE SIGN.
7. THE CONCRETE SHALL COMPLY WITH SPECIFICATION P-610.
8. CONCRETE STEEL REINFORCEMENT SHALL BE TYPE ASTM A615 GRADE 60. ALL REINFORCEMENT SHALL HAVE A 2" MINIMUM CONCRETE COVER. REINFORCEMENTS MAY BE ADJUSTED TO MISS INTERFERENCES.
9. ALL ANCHOR BOLTS SHALL BE A-36 STEEL, HOT DIP GALVANIZED WHEN CAST INTEGRALLY WITH THE CONCRETE PAD OR STAINLESS STEEL EXPANSION ANCHORS.
10. THE BONDING CONDUCTOR AND SIGN TETHER SHALL NOT BE ATTACHED AT THE SAME ANCHOR BOLT. AN APPROVED MECHANICAL OR COMPRESSION LUG SHALL BE USED TO CONNECT THE BONDING CONDUCTOR TO THE SIGN FLANGE AND SIGN.
11. LAYOUT OF SIGN LEGENDS BY SIGN MANUFACTURER SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
12. INSTALL SIGNS AND FOUNDATIONS LEVEL, PROVIDE GRADING AS REQUIRED. NO ADDITIONAL PAYMENT WILL BE MADE FOR SIGN GRADING.
13. BID ITEM FOR LIGHTED SIGNS SHALL INCLUDE PVC CONDUIT EXTENDED ONE FOOT BEYOND CONCRETE PAD.
14. LOCATION GIVEN FOR SIGNS DENOTES THE MIDDLE OF THE SIGN EDGE ON THE SIDE CLOSEST TO THE RUNWAY OR TAXIWAY EDGE.

AIRPORT GUIDANCE SIGNS

SIGN #	SIGN LEGEND		L-858 SIGN TYPE		MODULES	SIZE	STYLE	CIRCUIT
	FRONT	BACK	FRONT	BACK				
G-1	BLANK	G ↗	---	Y	1	1	2	1
G-2	G 4L-22R	G	L/R	L	4	1	2	1
G-3	G 4R-22L	G	L/R	L	4	1	2	1
G-4	D7↗	BLANK	Y	---	2	1	2	2
D7-1	↖D7	D8↗	Y/L	---	2	1	2	2
D7-2	D7 ↙ D ↗	BLANK	L/Y	---	3	1	2	2
D7-3	D7 4R-22L	D7	L/R	L	4	1	2	4
D7-4	↖D7 D	BLANK	Y/L	---	3	1	2	2
D8-1	D8 ↖ D ↘	BLANK	L/Y	---	3	1	2	2
D8-2	D8 4R-22L	D8	L/R	L	4	1	2	4
D8-3	D D8↗	BLANK	L/Y	---	3	1	2	2

SIGN TYPE LEGEND

Y - BLACK LEGEND ON YELLOW BACKGROUND (L-858Y DIRECTIONAL)
R - WHITE LEGEND ON RED BACKGROUND (L-858R-MANDATORY)
L - YELLOW LEGEND ON BLACK BACKGROUND (L-858L-LOCATION)
B - WHITE LEGEND ON BLACK BACKGROUND (L-858B - RDR)



NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL DETAILS

DRAWING E251

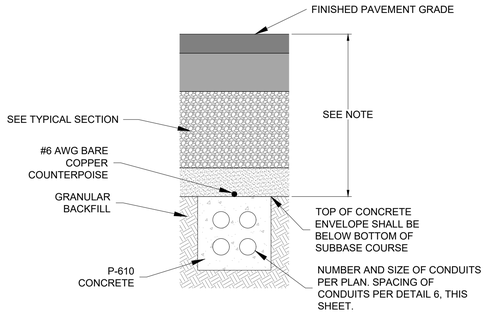
DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 50 OF 52

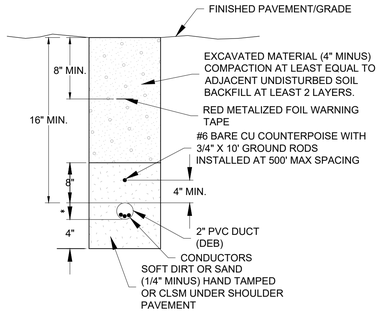
CATALOG NUMBER: A-270569

DATE SAVED: 3/10/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\250-FFZ-MCTE-E250-ELEC-DET1.DWG



NOTE:
THIS DETAIL SHALL BE USED FOR ALL CONCRETE ENCASED DUCT BANKS INSTALLED UNDER NEW PAVEMENT. CONDUIT DEPTH SHALL BE DETERMINED IN FIELD.

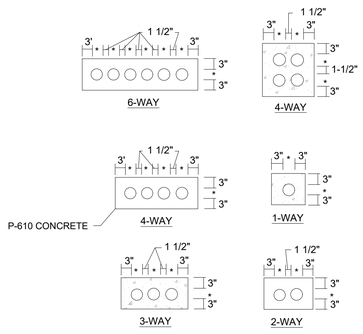
1 DUCT TRENCH (CE) DETAIL
N.T.S



NOTE:
CONDUIT SHALL BE SOFT DIRT OR SAND BACKFILL WHERE CONDUIT IS INSTALLED IN SOIL/SHOULDER. CONDUIT SHALL BE CONCRETE ENCASED UNDER FULL STRENGTH PAVEMENT.

* O.D. OF DUCT (SIZE PER BID ITEM)

2 DUCT TRENCH (DEB) DETAIL
N.T.S.



* O.D. OF DUCT (SIZE PER BID ITEM)

3 TYPICAL DUCT SPACING (CE)
N.T.S.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID

Registered Professional Engineer (Civil) CERTIFICATE 69247 JON BRYCE WEEKS 3/06/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ELECTRICAL DETAILS

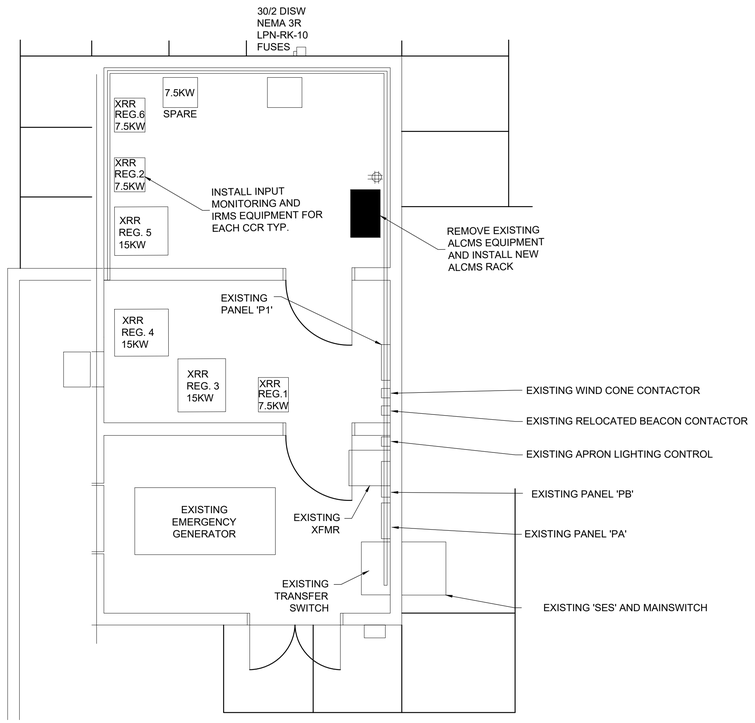
DRAWING E252

ACTIVITY:
PROJ. NO.: CP0994

SHEET 51 OF 52

CATALOG NUMBER: A-270570

DATE SAVED: 3/10/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\250-FFZ-MCTE-E250-ELEC-DETL.DWG

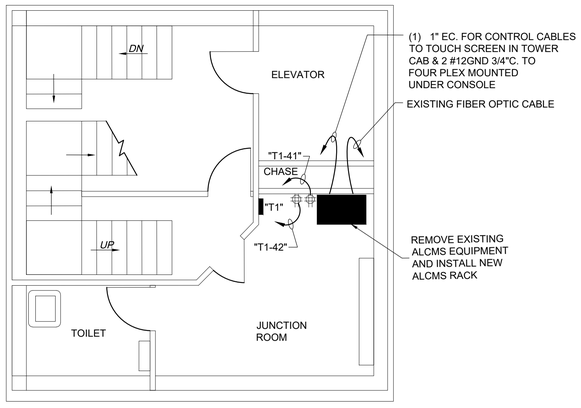


ELECTRICAL VAULT PLAN

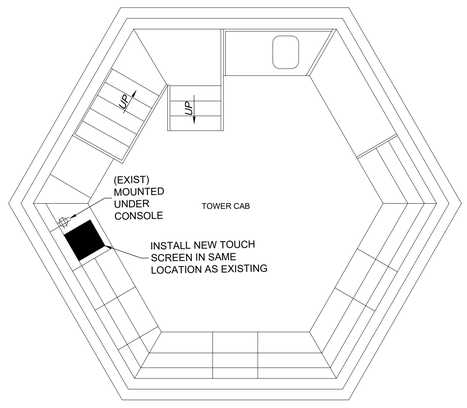
N.T.S.

NOTES:

1. NEW ALCMS SHALL CONFORM TO FAA L-890 SPECIFICATION.
2. SYSTEM SHALL BE PC BASED SYSTEM WITH TOUCH SCREEN CONTROLS.
3. CONTRACTOR SHALL INSTALL L-827 MONITORING BOXES FOR EACH CCR. MONITORING SHALL INCLUDE IRMS AND OUTPUT MONITORING. COMBO BOXES SHALL ALSO BE INSTALLED FOR EACH NAVAID THAT WILL BE CONTROLLED BY THE ALCMS. (2)
4. CONTRACTOR TO USE EXISTING FIBER NETWORK FOR COMMUNICATIONS.



5TH FLOOR



TOWER CAB

CONTROL TOWER POWER PLAN

N.T.S.

NORTH

BENCHMARK:
FFZ E (PACS)
STAINLESS STEEL ROD
ELEVATION= 1378.17

ISSUE RECORD

NO	BY		DESCRIPTION
1	J.B.W.	03/03/23	ISSUED FOR BID
2	J.B.W.	05/08/23	ADDENDUM NO 1

Registered Professional Engineer (Civil) CERTIFICATE NO. 69247 JON BRYCE WEEKS 5/08/23 Date Signed ARIZONA, U.S.A.

CITY OF MESA
ENGINEERING DEPARTMENT

CONSTRUCT MIDFIELD CROSSOVER TAXIWAY EAST AND REALIGNMENT OF TAXIWAYS D7 AND D8

ELECTRICAL DETAILS

DRAWING E253

DRAWN BY: A.P.A.
ENGINEER: J.B.W.
APPROVED BY: J.B.W.

ACTIVITY:
PROJ. NO.: CP0994

SHEET 52 OF 52

CATALOG NUMBER: A-270571

DATE SAVED: 5/8/23 L:\FFZ\MIDFIELD CROSSOVER TAXIWAY\CAD\PLANS\250-FFZ-MCTE-E250-ELEC-DET1.DWG