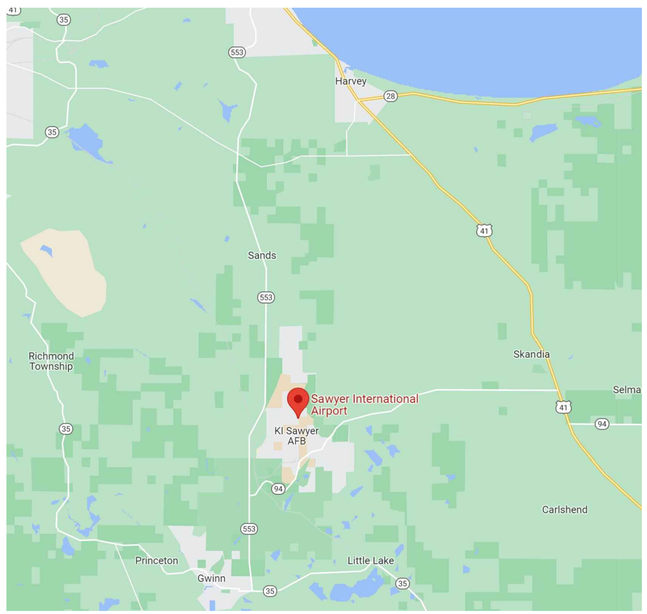
SAWYER INTERNATIONAL AIRPORT (MQT)
SCREENING EQUIPMENT DEPLOYMENT SERVICES (SEDS)

TASK ORDER: 70T04021D7672N032
CONTRACT NUMBER: 70T04021D7672N003

SMITHS WATERFALL CPSS
ISSUE FOR CONSTRUCTION
10 MAY 2022

INDEX OF DRAWINGS

REV. NO.	REV. DATE	ORIG. DATE	SHEET NO.	SHEET TITLE
GENERAL				
0		05/10/22	G-001	COVER SHEET AND INDEX
ARCHITECTURAL				
0		05/10/22	A-001	ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES
0		05/10/22	A-002	CT EQUIPMENT ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES
0		05/10/22	A-100	AIRPORT OVERALL PLAN
0		05/10/22	APD101	MAIN TERMINAL CHECKPOINT FLOOR PLAN – DEMOLITION
0		05/10/22	APN101	MAIN TERMINAL CHECKPOINT FLOOR PLAN – FINAL
0		05/10/22	ARN101	MAIN TERMINAL CHECKPOINT EQUIPMENT PLAN – FINAL
ELECTRICAL				
0		05/10/22	E-001	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES
0		05/10/22	E-002	ELECTRICAL DETAILS
0		05/10/22	E-003	SMITHS DETECTION HI-SCAN CT SCANNER ELECTRICAL DETAILS
0		05/10/22	E-004	TELECOM CABLING ONE-LINE DIAGRAM
0		05/10/22	E-201	ELECTRICAL SPECIFICATIONS
0		05/10/22	E-202	ELECTRICAL SPECIFICATIONS
0		05/10/22	E-203	TELECOMMUNICATIONS SPECIFICATIONS
0		05/10/22	EPD101	MAIN TERMINAL CHECKPOINT ELECTRICAL PLAN – DEMOLITION
0		05/10/22	EPN101	MAIN TERMINAL CHECKPOINT ELECTRICAL PLAN – FINAL
0		05/10/22	E-601	ELECTRICAL PANEL SCHEDULES



GWINN, MICHIGAN

1 LOCATION MAP
SCALE: NOT TO SCALE

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

SAWYER INTERNATIONAL AIRPORT (MQT)

AT EQUIPMENT

RAPISCAN AT

- 100 — RAPISCAN 620DV AT
- 101 — RAPISCAN 620DV 1'–8" INFEED ROLLER
- 102 — RAPISCAN 620DV 3'–3" ROLLER
- 103 — RAPISCAN 620DV AVS
- 104 — RAPISCAN 620DV AUTOMATED LANE

SMITHS

- 10 — SMITHS 6040aTiX
- 11 — 6040i 2'–0" INFEED ROLLER
- 12 — 6040i 6'–8" EXIT ROLLER
- 13 — 6040i/aTiX 4'–0" EXTENSION ROLLER
- 14 — 6040i/aTiX 6'–0" EXTENSION ROLLER
- 15 — SMITHS 6040aTiX AVS
- 16 — SMITHS 6040aTiX AUTOMATED LANE

NON–PROPRIETARY

- 140 — MANUAL DIVERSION ROLLER (MDR)

LEGACY – RAPISCAN

- 150 — RAPISCAN 520B
- 151 — 520B 3'–3" ROLLER
- 152 — 520B 6'–0" ROLLER SLIDE
- 153 — 520B 2'–0" LOADING TABLE

LEGACY – SMITHS

- 160 — SMITHS 6040i

AIT EQUIPMENT

L3

- 200 — AIT L3 ProVision
- 201 — AIT2 L3 ProVision2

ROHDE & SCHWARZ

- 202 — AIT ROHDE & SCHWARZ
- 203 — R&S AIT TCOP

WTMD EQUIPMENT

CEIA

- 210 — WTMD CEIA
- 210 — WTMD CEIA EZHD

GARRETT

- 211 — WTMD GARRETT

METOREX

- 212 — WTMD METOREX

ETD & BLS EQUIPMENT

VARIOUS

- 300 — GE ITEMISER
- 301 — IONTRACK ITEMISER
- 302 — SMITHS IONSCAN 400B
- 303 — SMITHS IONSCAN 500DT
- 304 — SMITHS IONSCAN DOCUMENT SCANNER
- 305 — IMPLANT SCIENCES QS–B220 ETD
- 306 — ETD (GENERIC)
- 307 — BLS (GENERIC)

ANCILLARY

PODIUMS & STANDS

- 400 — EXISTING TDC PODIUM
- 401 — E–CAT (IDEMIA)
- 402 — STSO PODIUM
- 403 — TDC PODIUM

SECONDARY SCREENING

- 405 — CHAIR/STOOL
- 406 — ETD/BLS CABINET
- 407 — ETD SEARCH TABLE (FISHER HAMILTON (LH); FISHER HAMILTON (RH))
- 408 — ETD MOBILE CABINET (KLN OR FISHER HAMILTON)

TABLES, BENCHES, BINS

- 500 — 24"x 24" STAINLESS STEEL TABLE
- 501 — 30"x 48" STAINLESS STEEL TABLE
- 502 — 30"x 60" STAINLESS STEEL TABLE
- 503 — 30"x 72" STAINLESS STEEL TABLE
- 504 — BENCH
- 505 — BIN CART
- 506 — WANDING MAT

BARRIERS & STANCHIONS

- 600 — BARRIER (1'–0")
- 601 — BARRIER (2'–0")
- 602 — BARRIER (3'–0")
- 603 — BARRIER (4'–0")
- 604 — ADA GATE – ACCESS GATE
- 605 — LAVI STRAP STANCHION
- 606 — LAVI 48" HARD STANCHION
- 607 — LAVI 60" HARD STANCHION
- 608 — LAVI 72" HARD STANCHION
- 609 — BELTRAC SWINGING GATE
- 610 — LAVI LOCKING SWING GATES (42" / 36")

OTHER EQUIPMENT

- 620 — 36" WIDE CABINET
- 701 — HAZMAT
- 621 — LOCKERS
- 622 — IT RACK
- 623 — PRIVACY CURTAIN (AS APPROVED BY TSA HQ)
- 624 — LEGACY TSA.S3
- 625 — LEGACY TSA.S3–A
- 626 — LEGACY CUSTOM KI SYSTEM
- 627 — LAVI–PRIVACY BOOTH

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS.

B. VERIFY DELIVERY ROUTE AND CLEARANCES FOR MOVING EQUIPMENT INTO OR OUT OF BUILDING.

C. SCHEDULE DELIVERY TIME WITH LOCAL TSA AND THE AIRPORT IN ADVANCE.

D. MAKE MODIFICATIONS TO BUILDING DOORS, FRAMES, RAMPS, STAIRS, ETC., IF NECESSARY FOR BRINGING IN EQUIPMENT.

E. X–RAY OR GPR (GROUND PENETRATING RADAR) FLOOR PRIOR TO CUTTING OR CORING TO ENSURE THERE ARE NO IN–SLAB OBSTRUCTIONS.

F. SEAL FLOOR PENETRATIONS WITH FIRE RATED SEALANT OR AS REQUIRED TO MAINTAIN EXISTING FIRE RATING.

G. WHEN RELOCATING AT2 X–RAY OR AIT UNITS, INCLUDE ALL COMPONENTS OF THE LANE TO BE RELOCATED, SUCH AS HIGH SPEED CONVEYORS (HSC), INFEEDS, OUTFEEDS, CO LOCATED ETD AND EXTENSION ROLLERS.

H. PATCH AND REPAIR OR REPLACE FINISHES DAMAGED TO MATCH EXISTING SURFACES AS REQUIRED BY EQUIPMENT INSTALLATION, RELOCATION OR REMOVAL.

I. CONTRACTOR TO ORDER TSA–FURNISHED ANCILLARY EQUIPMENT AND SECURITY SCREENING EQUIPMENT VIA LOCAL TSA THROUGH THE REMAG PROCESS. ANY CHANGES TO EQUIPMENT OR EQUIPMENT QUANTITIES WILL REQUIRE ANOTHER REMAG REQUEST SENT BY LOCAL TSA.

J. MAINTAIN MANUFACTURER'S CLEARANCE REQUIREMENTS FOR ALL TSA SECURITY SCREENING EQUIPMENT.

K. ALL DECOMMISSIONED TIP READY X–RAY AND CTs SHALL BE SHIPPED TO THE TSA LOGISTICS CENTER IN GRAPEVINE, TX FOR DISPOSAL. ROLLERS/COMPONENTS OF AT2s AND CTs NOT REUSED SHALL BE RETURNED TO TSA HQ.

L. CONTRACTOR TO INSTALL TSA–FURNISHED ANCILLARY EQUIPMENT.

M. LOCATE THE WTMD, ADA GATE, AIT AND/OR BARRIERS WITHIN THE SPACE AVAILABLE BETWEEN THE X–RAY DOMES WITH GAPS LESS THAN OR EQUAL TO 6 INCHES.

N. FURNITURE, FIXTURES, AND ANCILLARY EQUIPMENT NOT REUSED SHALL BE RETURNED TO OWNER.

O. CHECKPOINT COMPONENTS SUCH AS EQUIPMENT, FURNITURE, FIXTURES AND BUILDING COMPONENTS, ETC. THAT ARE NOT NOTED ON THE DRAWINGS TO BE REMOVED OR RELOCATED SHOULD REMAIN AS IS.

P. EXISTING CCTV CAMERAS SHOULD NOT BE ABLE TO VIEW INSIDE THE PRIVATE SCREENING ROOM OR THE REMOTE RESOLUTION ROOM FROM THE SIDE OR ABOVE. KI BAFFLES SHOULD BE PROVIDED FOR THE TOP OF THE ROOMS IF THEY CAN SUCCESSFULLY BLOCK VIEWING IN LIEU OF ADJUSTING OR RELOCATING THE CAMERAS. COORDINATE WITH CCTV OWNER. RE: E–001.

Q. RE–USE EXISTING CHAIRS FROM THE DEMO TO FINAL PHASE.

ABBREVIATIONS & ACRONYMS

ADA	AMERICAN DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIT	ADVANCED IMAGING TECHNOLOGY
ARCH	ARCHITECTURAL
AT	ADVANCED TECHNOLOGY
AUTO	AUTOMATIC
AVS	ALTERNATE VIEWING STATION
BLDG	BUILDING
BLS	BOTTLE & LIQUID SCANNER
CAT	CREDENTIAL AUTHENTICATION TECHNOLOGY
CCTV	CLOSED CIRCUIT TELEVISION
CKPT	CHECKPOINT
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
CT	COMPUTED TOMOGRAPHY
EDS	EXPLOSIVE DETECTION SYSTEM
EQUIP	EQUIPMENT
ETD	EXPLOSIVE TRACE DETECTION
ETP	EXPLOSIVE TRACE PORTAL
EXT	EXTENSION
EXIST	EXISTING
FDRS	FIELD DATA RECORDING SYSTEM
FIN FLR	FINISH FLOOR
FIS	FEDERAL INSPECTION SYSTEM
FSD	TSA FEDERAL SECURITY DIRECTOR
GC	GENERAL CONTRACTOR
HHMD	HAND HELD METAL DETECTOR
HSC	HIGH SPEED CONVEYOR
HQ	HEADQUARTERS
INTL	INTERNATIONAL
LEO	LAW ENFORCEMENT OFFICER
LVL	LEVEL
MAINT	MAINTENANCE
NDS	NETWORK DISPLAY STAND
NIC	NOT IN CONTRACT
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OPNG	OPENING
OPS	OPERATORS
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PAX	PASSENGERS
POC	POINT OF CONTACT
PWD	PASSENGERS WITH DISABILITIES
REF	REFERENCE
RE:	REGARDING
ReMAG	REQUIREMENTS MANAGEMENT ADVISORY GROUP
REQD	REQUIRED
ROW	REMOTE OPERATOR WORKSTATION
SF	SQUARE FEET
SO	SCANNING OPERATOR
SOW	SCOPE OF WORK
SS	STAINLESS STEEL
SSCP	SECURITY SCREENING CHECKPOINT
STSO	SUPERVISORY TRANSPORTATION SECURITY OFFICER
TDC	TRAVEL DOCUMENT CHECKER
TEMP	TEMPORARY
TERM	TERMINAL
TRX	THREAT IMAGE PROJECTION READY X–RAY
TSO	TRANSPORTATION SECURITY OFFICER
TSA HQ	TSA HEADQUARTERS
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WTMD	WALK THROUGH METAL DETECTOR

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive
Houston, Texas 77042
Tel 713–821–2100
Fax 713–266–7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
12352T
License Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT
CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170–10901–002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES

A-001

COPYRIGHT © 2011, LAN INC.
2011–09–19 Rev.

CT EQUIPMENT

IDSS

720	IDSS DETECT 1000
721	IDSS DIVEST ROLLER
722	IDSS INPUT POWERED CONVEYOR
723	IDSS HIGH SPEED CONVEYOR (HSC)
724	IDSS AUTOMATIC DIVERTER
725	IDSS EXIT ROLLER
726	IDSS VIEWING STATION
727	IDSS ALTERNATE VIEWING STATION

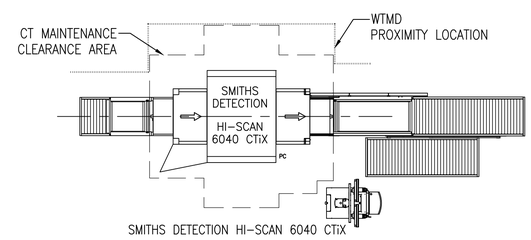
L3

740	L3 CLEARSCAN
741	L3 POWERED ENTRANCE ROLLER
742	L3 TUNNEL EXTENSION
743	L3 EXIT DECISION BUFFERS
744	L3 AUTOMATED DIVERTER
745	L3 GRAVITY ROLLER
746	L3 SHIELD BARRIER
747	L3 OPERATOR STATION

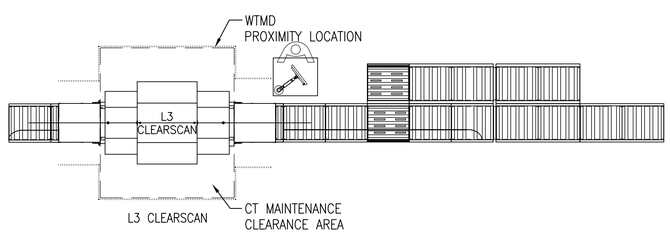
SMITHS

760	SMITHS DETECTION HI-SCAN 6040 CTiX
761	SMITHS ROLLER CONVEYOR
762	SMITHS ASCENDING SPACING MODULE
763	SMITHS DESCENDING MODULE WITH HIGH THREAT
764	SMITHS DIVERTER
765	SMITHS EXIT ROLLER CONVEYOR MODULES
766	SMITHS EXIT ROLLER (2M)
767	SMITHS MANUAL DIVERTER KIT (MDR)
768	SMITHS OPERATOR STATION
769	SMITHS IT CABINET
770	SMITHS ALTERNATE VIEWING STATION

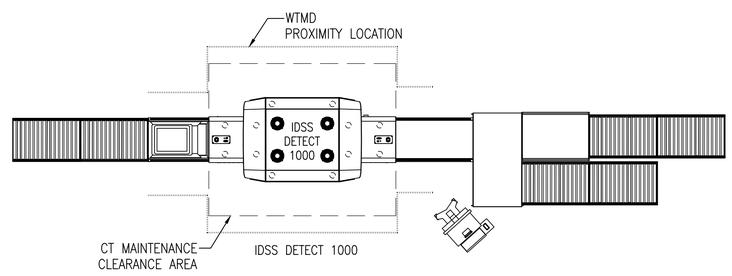
CT EQUIPMENT TYPICAL CONFIGURATION



SMITHS DETECTION HI-SCAN 6040 CTiX



L3 CLEARSCAN



IDSS DETECT 1000

NOT TO SCALE

GENERAL NOTES

A. FIELD VERIFY EXISTING CONDITIONS.

B. VERIFY DELIVERY ROUTE AND CLEARANCES FOR MOVING EQUIPMENT INTO OR OUT OF BUILDING. REFER TO SHEET A-100 FOR TERMINAL/CHECKPOINT SPECIFIC DELIVERY ROUTES.

C. SCHEDULE DELIVERY TIME WITH LOCAL TSA AND THE AIRPORT A MINIMUM OF 10 DAYS IN ADVANCE.

D. MAKE MODIFICATIONS TO BUILDING DOORS, FRAMES, RAMPS, STAIRS, ETC., IF NECESSARY FOR BRINGING IN EQUIPMENT.

E. X-RAY OR GPR (GROUND PENETRATING RADAR) FLOOR PRIOR TO CUTTING OR CORING TO ENSURE THERE ARE NO IN-SLAB OBSTRUCTIONS.

F. SEAL FLOOR PENETRATIONS WITH FIRE RATED SEALANT OR AS REQUIRED TO MAINTAIN EXISTING FIRE RATING. ABANDONED FLOOR PENETRATIONS TO BE CAPPED WITH A FIRE RATED ABANDONMENT PLUG FOR FUTURE ACCESS BY OWNER.

G. WHEN RELOCATING AT2 X-RAY OR AIT UNITS, INCLUDE ALL COMPONENTS OF THE LANE TO BE RELOCATED, SUCH AS HIGH SPEED CONVEYORS (HSC), INFEEDS, OUTFEEDS, CO LOCATED ETD AND EXTENSION ROLLERS.

H. PATCH AND REPAIR OR REPLACE FINISHES DAMAGED TO MATCH EXISTING SURFACES AS REQUIRED BY EQUIPMENT INSTALLATION, RELOCATION OR REMOVAL. EXISTING BOLT HOLES 3/8" OR SMALLER, EPOXY PATCHING IS ACCEPTABLE.

I. CONTRACTOR TO ORDER TSA-FURNISHED ANCILLARY EQUIPMENT AND SECURITY SCREENING EQUIPMENT VIA LOCAL TSA THROUGH THE REMAG PROCESS. ANY CHANGES TO EQUIPMENT OR EQUIPMENT QUANTITIES WILL REQUIRE ANOTHER REMAG REQUEST SENT BY LOCAL TSA.

J. MAINTAIN MANUFACTURER'S CLEARANCE REQUIREMENTS FOR ALL TSA SECURITY SCREENING EQUIPMENT.

K. ALL DECOMMISSIONED TIP READY X-RAY AND CTs SHALL BE SHIPPED TO THE TSA LOGISTICS CENTER IN GRAPEVINE, TX FOR DISPOSAL. ROLLERS/COMPONENTS OF AT2s AND CTs NOT REUSED SHALL BE RETURNED TO TSA HQ.

L. CONTRACTOR TO INSTALL TSA-FURNISHED ANCILLARY EQUIPMENT.

M. LOCATE THE WTMD, ADA GATE, AIT AND/OR BARRIERS WITHIN THE SPACE AVAILABLE BETWEEN THE X-RAY DOMES WITH GAPS LESS THAN OR EQUAL TO 6 INCHES.

N. FURNITURE, FIXTURES, AND ANCILLARY EQUIPMENT NOT REUSED SHALL BE RETURNED TO TSA HEADQUARTERS.

O. CHECKPOINT COMPONENTS SUCH AS EQUIPMENT, FURNITURE, FIXTURES AND BUILDING COMPONENTS, ETC. THAT ARE NOT NOTED ON THE DRAWINGS TO BE REMOVED OR RELOCATED SHOULD REMAIN AS IS.

P. RE-USE EXISTING CHAIRS FROM THE DEMO TO FINAL PHASE.

ABBREVIATIONS & ACRONYMS

ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AIT	ADVANCED IMAGING TECHNOLOGY
ARCH	ARCHITECTURAL
AT	ADVANCED TECHNOLOGY X-RAY
AUTO	AUTOMATIC
AVS	ALTERNATE VIEWING STATION
BLDG	BUILDING
BLS	BOTTLE LIQUID SCANNER
BOS	BOTTOM OF STEEL
CAT	CREDENTIAL AUTHENTICATION TECHNOLOGY
CCTV	CLOSED CIRCUIT TELEVISION
CKPT	CHECKPOINT
CL	CENTERLINE
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
CT	COMPUTED TOMOGRAPHY
EDS	EXPLOSIVE DETECTION SYSTEM
EQUIP	EQUIPMENT
ETD	EXPLOSIVE TRACE DETECTION
ETP	EXPLOSIVE TRACE PORTAL
EXT	EXTENSION
EXIST	EXISTING
FDRS	FIELD DATA RECORDING SYSTEM
FIN FLR	FINISH FLOOR
FIS	FEDERAL INSPECTION SYSTEM
FSD	TSA FEDERAL SECURITY DIRECTOR
GC	GENERAL CONTRACTOR
HHMD	HAND HELD METAL DETECTOR
HSC	HIGH SPEED CONVEYOR
HQ	HEADQUARTERS
INTL	INTERNATIONAL
LEO	LAW ENFORCEMENT OFFICER
LVL	LEVEL
MAINT	MAINTENANCE
NDS	NETWORK DISPLAY STAND
NIC	NOT IN CONTRACT
OEM	ORIGINAL EQUIPMENT MANUFACTURER
OPNG	OPENING
OPS	OPERATORS
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PAX	PASSENGERS
POC	POINT OF CONTACT
PVS	PRIMARY VIEWING STATION
PWD	PASSENGERS WITH DISABILITIES
REF	REFERENCE
RE:	REFER TO
REMAG	REQUIREMENTS MANAGEMENT ADVISORY GROUP
REQD	REQUIRED
ROW	REMOTE OPERATOR WORKSTATION
SF	SQUARE FEET
SO	SCANNING OPERATOR
SOW	SCOPE OF WORK
SS	STAINLESS STEEL
SSCP	SECURITY SCREENING CHECKPOINT
STSO	SUPERVISORY TRANSPORTATION SECURITY OFFICER
TDC	TRAVEL DOCUMENT CHECKER
TEMP	TEMPORARY
TERM	TERMINAL
TOS	TOP OF STEEL
TRX	THREAT IMAGE PROJECTION READY X-RAY
TSO	TRANSPORTATION SECURITY OFFICER
TSA HQ	TSA HEADQUARTERS
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
WTMD	WALK THROUGH METAL DETECTOR

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT
CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

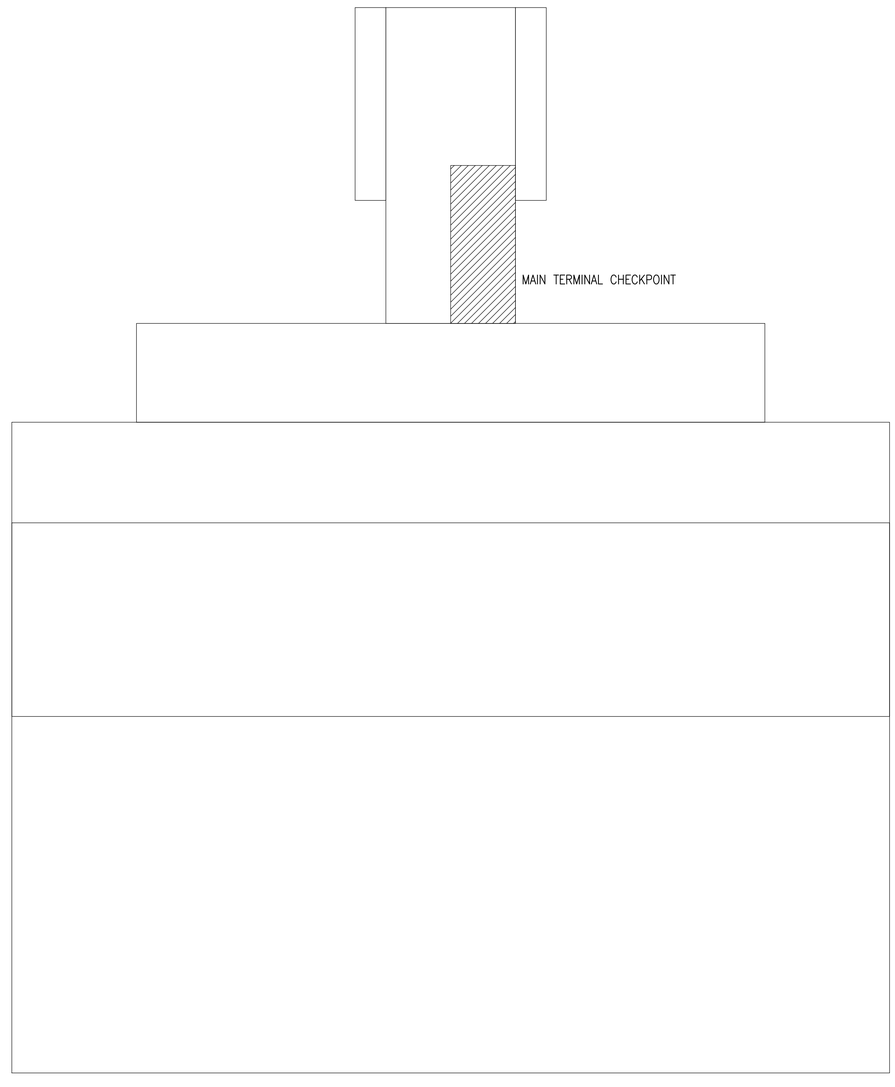
MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE
CT EQUIPMENT ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES

A-002

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.



1 **AIRPORT OVERALL PLAN**

SCALE: NOT TO SCALE

GENERAL SHEET NOTES

A. SCHEDULE DELIVERY TIME WITH LOCAL TSA AND AIRPORT AUTHORITY 10 DAYS IN ADVANCE.

B. FLOORING SHALL BE PROTECTED WITH TWO LAYERS OF 3/4" PLYWOOD HAVING A STAGGERED JOINT CONFIGURATION. IN AREAS WITH CARPET FLOORING, ONE LAYER OF 3/4" PLYWOOD SHOULD BE USED TO PREVENT CARPET DAMAGE.

C. REPAIR OR REPLACE FINISHES DAMAGED BY EQUIPMENT INSTALLATION AS REQUIRED.

D. VERIFY DELIVERY ROUTE CLEARANCES FOR MOVING EQUIPMENT INTO OR OUT OF THE BUILDING.

E. CONTRACTOR PERFORMING THE TRANSPORTATION PROCEDURES SHALL VERIFY THE TOTAL HEIGHT OF THE EQUIPMENT CRATES AND COMPARE WITH THE EXIT DOOR FRAMING HEIGHTS BEFORE COMMENCING OPERATIONS.

F. CONTRACTOR SHALL VERIFY THE SHORTEST AND MOST EFFECTIVE DELIVERY PATH FOR ALL THE EQUIPMENT FROM DROP OFF POINT TO THE FINAL LAYOUT AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

G. EQUIPMENT SUPPORTED BY A MINIMUM OF FOUR LEGS ARE TO BE TRANSPORTED ON FOUR WHEELS AT 1720 MAX. LBS PER LEG OR WHEEL.

H. CONTRACTOR SHALL ANCHOR EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, CURRENT BUILDING CODES, AND STRUCTURAL DETAILS.

I. DELIVER EQUIPMENT CURBSIDE. TRANSPORT DIRECTLY INTO THE CHECKPOINT. CHECKPOINTS ARE LOCATED ON THE FIRST FLOOR.

N PLAN NORTH

N TRUE NORTH

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT
CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

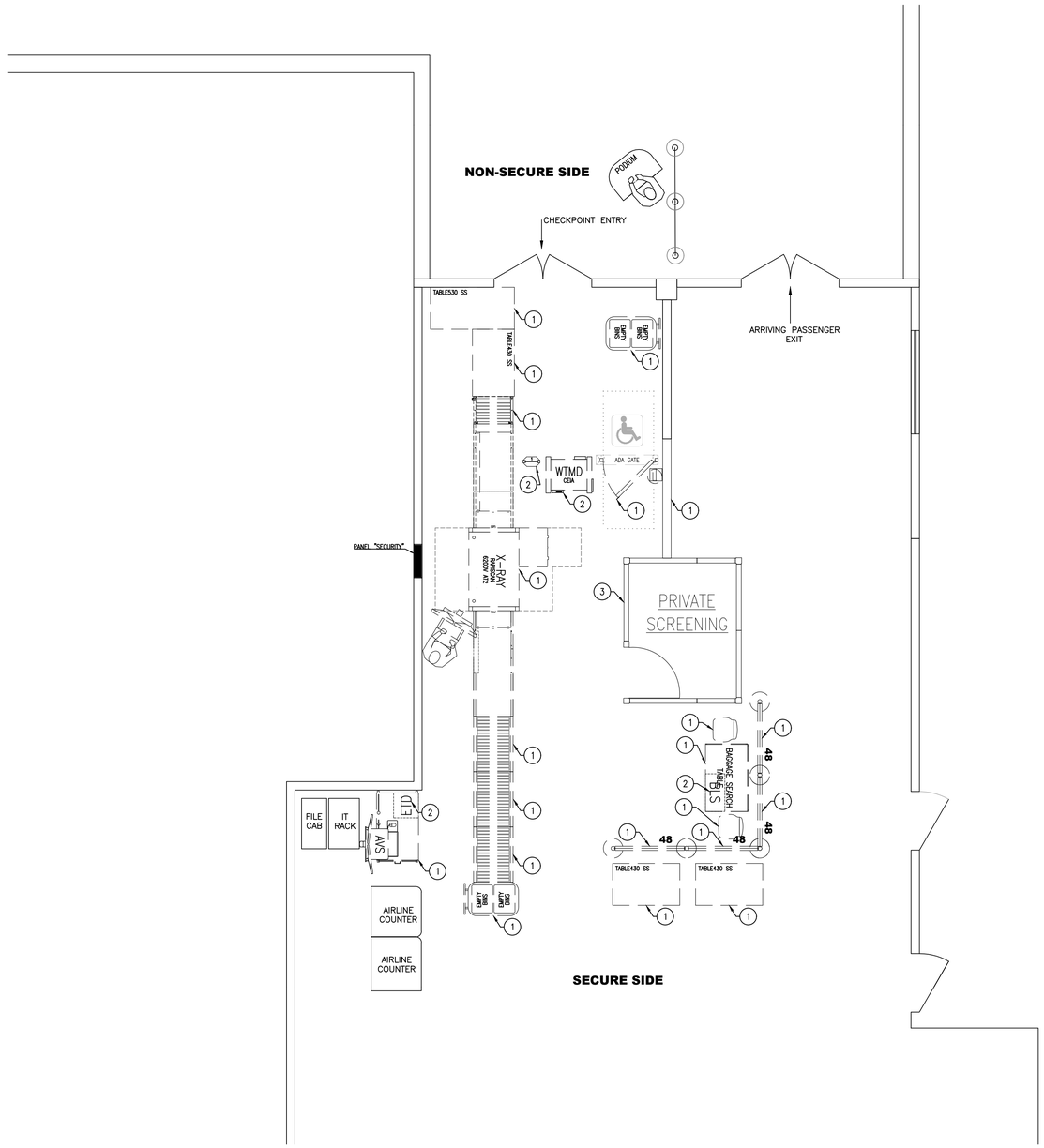
MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE
AIRPORT OVERALL PLAN

A-100

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.



1 MAIN TERMINAL CHECKPOINT FLOOR PLAN - DEMOLITION

SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

A. REFER TO SHEET A-001, AND A-002 FOR EQUIPMENT DESCRIPTIONS, TAGS, ABBREVIATIONS, AND GENERAL NOTES.

B. ANY PRIMARY TSA SCREENING EQUIPMENT NOT DIMENSIONED OR NOTED BY THE CONTRACTOR IS ASSUMED TO BE INSTALLED PER THE MOST CURRENT DESIGN PLANS.

NOTES BY SYMBOL "#"

1. REMOVE EQUIPMENT.
2. RELOCATE EQUIPMENT PER APN101.
3. AIRPORT RELOCATING PRIVATE SCREENING ROOM AND EXTENDING WALL.

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

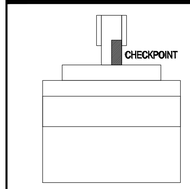
2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202



KEY PLAN

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE

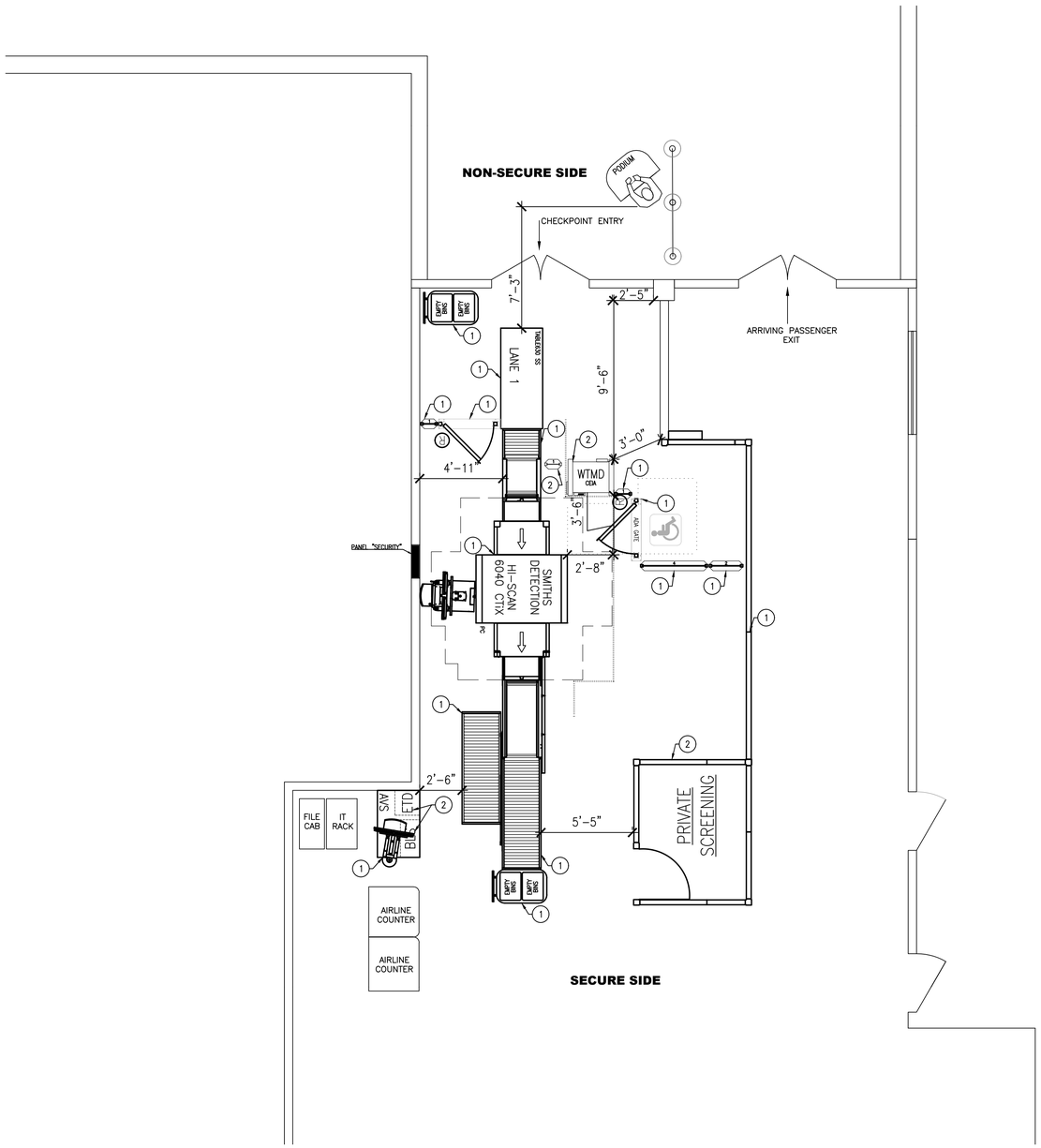
MAIN TERMINAL CHECKPOINT FLOOR PLAN - DEMOLITION

PLAN NORTH

TRUE NORTH

APD101

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.



1 MAIN TERMINAL CHECKPOINT FLOOR PLAN - FINAL

SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

A. REFER TO SHEET A-001, AND A-002 FOR EQUIPMENT DESCRIPTIONS, TAGS, ABBREVIATIONS, AND GENERAL NOTES.

B. ANY PRIMARY TSA SCREENING EQUIPMENT NOT DIMENSIONED OR NOTED BY THE CONTRACTOR IS ASSUMED TO BE INSTALLED PER THE MOST CURRENT DESIGN PLANS.

NOTES BY SYMBOL "(#)"

1. PROVIDE EQUIPMENT.
2. RELOCATED EQUIPMENT REF. APD101.

PLAN NORTH

TRUE NORTH

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

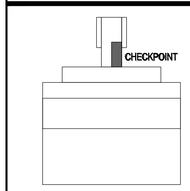
INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
05/10/22

MQT

SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202



KEY PLAN

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

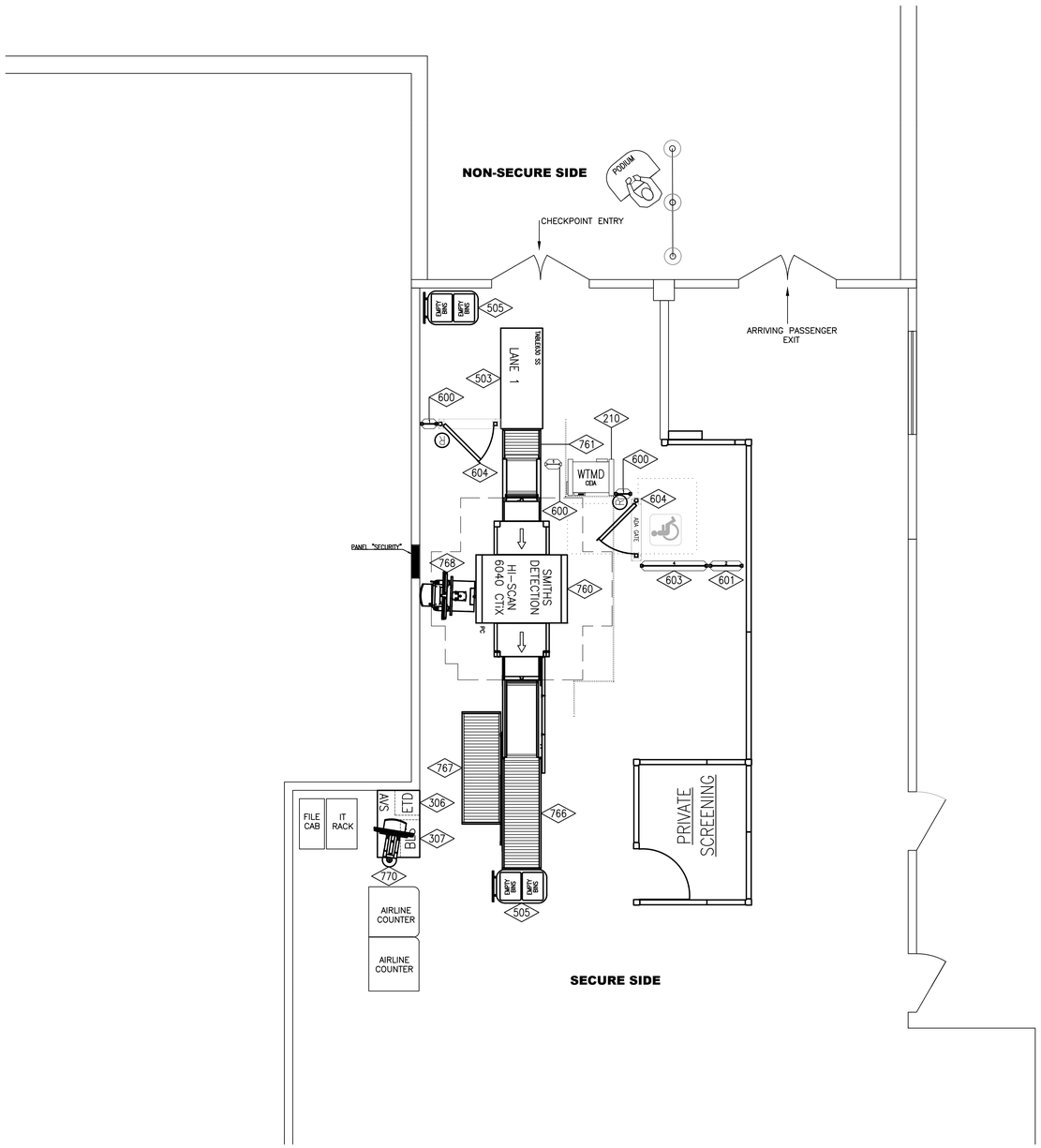
LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE

MAIN TERMINAL CHECKPOINT FLOOR PLAN - FINAL

APN101

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.



1 MAIN TERMINAL CHECKPOINT EQUIPMENT PLAN - FINAL

SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

A. REFER TO SHEET A-001, AND A-002 FOR EQUIPMENT DESCRIPTIONS, TAGS, ABBREVIATIONS, AND GENERAL NOTES.

B. ANY PRIMARY TSA SCREENING EQUIPMENT NOT DIMENSIONED OR NOTED BY THE CONTRACTOR IS ASSUMED TO BE INSTALLED PER THE MOST CURRENT DESIGN PLANS.

EQUIPMENT AND FURNISHINGS
MAIN TERMINAL CHECKPOINT – RELOCATED EQUIPMENT

DESCRIPTION	TAG	QTY	RELOCATED	INSTALLED
WTMD CEIA	210	1	BY OEM/TSA	–
ETD (GENERIC)	306	1	BY OEM/TSA	–
BLS (GENERIC)	307	1	BY OEM/TSA	–
BARRIER (1'-0")	600	1	BY OEM/TSA	–

EQUIPMENT AND FURNISHINGS
MAIN TERMINAL CHECKPOINT – PROVIDED EQUIPMENT

DESCRIPTION	TAG	QTY	RELOCATED	INSTALLED
30"x 72" STAINLESS STEEL TABLE	503	1	–	BY OEM/TSA
BIN CART	505	2	–	BY OEM/TSA
BARRIER (1'-0")	600	2	–	BY OEM/TSA
BARRIER (2'-0")	601	1	–	BY OEM/TSA
BARRIER (4'-0")	603	1	–	BY OEM/TSA
ADA GATE – ACCESS GATE	604	2	–	BY OEM/TSA
SMITHS DETECTION HI-SCAN 6040 CTiX	760	1	–	BY OEM/TSA
SMITHS ROLLER CONVEYOR	761	1	–	BY OEM/TSA
SMITHS EXIT ROLLER (2M)	766	1	–	BY OEM/TSA
SMITHS MANUAL DIVERTER KIT (MDR)	767	1	–	BY OEM/TSA
SMITHS OPERATOR STATION	768	1	–	BY OEM/TSA
SMITHS ALTERNATE VIEWING STATION	770	1	–	BY OEM/TSA

PLAN NORTH

TRUE NORTH

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

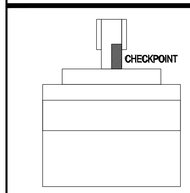
2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
05/10/22

MQT
SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202



KEY PLAN

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

MAIN TERMINAL CHECKPOINT EQUIPMENT PLAN - FINAL

ARN101

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.

ELECTRICAL SYMBOLS

CIRCUITING AND WIRING

- CIRCUIT ABOVE GRADE.
- CIRCUIT BELOW SLAB OR GRADE OR CAST IN SLAB ABOVE GRADE.
- "LA"–2 — HOME RUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED. CIRCLE ON END OF HOME RUN INDICATES DIRECT CONNECTION TO EQUIPMENT.
- CONDUIT STUB UP.
- CONDUIT STUB DOWN.
- S_3 — WALL SWITCH, SPST, 20A, 277/120V, VERTICALLY MOUNTED 48" AFF, UNLESS OTHERWISE NOTED. "2" DENOTES DPST, "3" DENOTES THREE–WAY, "4" DENOTES FOUR–WAY, "K" DENOTES KEY OPERATED, "M" DENOTES MOTOR RATING, "P" DENOTES PILOT LIGHT, "S" DENOTES OCCUPANCY SENSOR, "t" DENOTES TIMER, "WP" DENOTES WEATHER PROOF, LOWER CASE LETTERS DENOTE SWITCHING SCHEME.

LIGHTING

- A / A — CEILING MOUNTED LIGHT FIXTURE. ADJACENT UPPERCASE LETTER DENOTES FIXTURE TYPE, LOWER CASE DENOTES SWITCHING SCHEME, HATCH DENOTES FIXTURE PROVIDED WITH BATTERY BACKUP OR ON EMERGENCY CIRCUIT.
- WALL MOUNTED LINEAR LIGHT FIXTURE.
- WALL MOUNTED LIGHT FIXTURE.
- EXIT SIGN, ARROWS AS INDICATED. DARKENED AREA DENOTES LIGHTED FACE.
- EMERGENCY EGRESS FLOOD LIGHT WITH BATTERY PACK.

COMMUNICATIONS

- W — TELEPHONE OUTLET, VERTICALLY MOUNTED 18" AFF, UNLESS OTHERWISE NOTED. "W" DENOTES WALL PHONE MOUNTED 54" AFF WITH FACE PLATE DESIGNED FOR WALL MOUNTED PHONE. "P" DENOTES PAY PHONE OUTLET MOUNTED 42" AFF.
- DATA OUTLET MOUNTED VERTICALLY 18" AFF, UNLESS OTHERWISE NOTED.
- COMBINATION TELEPHONE AND DATA OUTLET VERTICALLY MOUNTED 18" AFF UNLESS OTHERWISE NOTED.

FIRE PROTECTION

- S — SMOKE DETECTOR.
- F — MANUAL PULL STATION.
- F — ALARM HORN AND STROBE.
- F — ALARM STROBE ONLY.

MISCELLANEOUS

- T — THERMOSTAT.
- S — CEILING MOUNTED SPEAKER.
- PUSH–BUTTON, MOUNTED AT 48" AFF, UNLESS OTHERWISE NOTED.
- C — CEILING MOUNTED SURVEILLANCE CAMERA.
- W — WALL MOUNTED SURVEILLANCE CAMERA.
- CR — CARD READER.
- OS — CEILING MOUNTED OCCUPANCY SENSOR.
- J T — FLOOR MOUNTED JUNCTION BOX. "IG" DENOTES ISOLATED GROUND CIRCUIT. "T" DENOTES TELEPHONE AND DATA WIRING.
- J — WALL MOUNTED JUNCTION BOX.
- J — CEILING MOUNTED JUNCTION BOX.
- C — CLOCK OR CLOCK RECEPTACLE.

POWER

- SIMPLEX WALL RECEPTACLE, VERTICALLY MOUNTED 18" AFF, UNLESS OTHERWISE NOTED. NEMA 5–20R, 20A, 125V.
- GFI — DUPLEX WALL RECEPTACLE, VERTICALLY MOUNTED 18" AFF, UNLESS OTHERWISE NOTED. NEMA 5–20R, 20A, 125V. "GFI" DENOTES GROUND FAULT INTERRUPTING, "WP" DENOTES WEATHER PROOF.
- QUADRUPLEX WALL RECEPTACLE, VERTICALLY MOUNTED 18" AFF, UNLESS OTHERWISE NOTED. NEMA 5–20R, 20A, 125V.
- SPECIAL PURPOSE WALL RECEPTACLE, VERTICALLY MOUNTED 18" AFF, UNLESS OTHERWISE NOTED. NEMA CONFIGURATION AS INDICATED.
- DISCONNECT SWITCH. ADJACENT TEXT DENOTES AMPERES/POLES/FUSE. "NF" DENOTES NON–FUSED. EX–"200/3/NF".
- SWITCHBOARD, DISTRIBUTION PANEL OR BRANCH PANEL BOARD. CHARACTERISTICS AS INDICATED ON PANEL SCHEDULE.
- T — DRY–TYPE TRANSFORMER.

SPECIAL PURPOSE DEVICES

- A — WALL MOUNTED OUTLETS WITH DEVICES AS NOTED OR INDICATED BY ADJACENT LETTER AND REFERENCED TO POWER/DATA OUTLET CONFIGURATION SCHEDULE.
- A — MULTIPLEX OR RECESSED FLOOR BOX WITH DEVICES AS NOTED OR INDICATED BY ADJACENT LETTER AND REFERENCED TO POWER/DATA OUTLET CONFIGURATION SCHEDULE.
- A — DUAL COMPARTMENT POWER/COMMUNICATIONS POLE WITH DEVICES AS SHOWN, NOTED OR INDICATED BY ADJACENT LETTER AND REFERENCED TO POWER/DATA OUTLET CONFIGURATION SCHEDULE.
- A — 36" HIGH, FLOOR SUPPORTED, DUAL COMPARTMENT POWER/COMMUNICATIONS POLE WITH DEVICES AS SHOWN, NOTED OR INDICATED BY ADJACENT LETTER AND REFERENCED TO POWER/DATA OUTLET CONFIGURATION SCHEDULE.
- A — SURFACE MOUNTED RACEWAY WITH DEVICES AS NOTED OR INDICATED BY ADJACENT LETTER AND REFERENCED TO POWER/DATA OUTLET CONFIGURATION SCHEDULE.
- A — 6" OR 8" RECESSED POKE–THRU WITH DEVICES AS BY ADJACENT LETTER AND REFERENCED TO POWER/DATA OUTLET CONFIGURATION SCHEDULE.

ABBREVIATIONS

ABBR.	DESCRIPTION
A	AMPERES
AC	ALTERNATING CURRENT
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CURRENT
AIT	ADVANCED IMAGING TECHNOLOGY
AL	ALUMINUM
AT	ADVANCED TECHNOLOGY X–RAY
AVS	ALTERNATE VIEWING STATION
AWG	AMERICAN WIRE GAUGE
BLS	BOTTLED LIQUID SCANNER
C	CONDUIT
CKT	CIRCUIT
COMM	COMMUNICATIONS
DC	DIRECT CURRENT
DIA	DIAMETER
DISC	DISCONNECT
E	EXISTING
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ETD	EXPLOSIVE TRACE DETECTOR
EX EXIST	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
G,GND	GROUND, GROUND WIRE
GFI	GROUND FAULT INTERRUPTER
GF/CI	GOVERNMENT FURNISHED/CONTRACTOR INSTALLED
GF/GI	GOVERNMENT FURNISHED/GOVERNMENT INSTALLED
GFR	GROUND FAULT RELAY
HP	HORSEPOWER
IG	ISOLATED GROUND
IN	INCH
IT	INFORMATION TECHNOLOGY
J–BOX	JUNCTION BOX
KCMIL	1000 CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT–AMPS
KW	KILOWATT
KWH	KILOWATT–HOUR
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MGB	MAIN GROUNDING BAR
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N	NEUTRAL, NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
P	POLE(S)
PH	PHASE
PR	PAIR
PSR	PRIVATE SCREENING ROOM
QTY	QUANTITY
RE:	REFER TO
REF	REFERENCE
SPEC	SPECIFICATION
SS	STAINLESS STEEL, SANITARY SEWER
STSO	SUPERVISORY TRANSPORTATION SECURITY OFFICER
TDC	TRAVEL DOCUMMENT CHECKER
TSO	TRANSPORTATION SECURITY OFFICER
TYP	TYPICAL
TMGB	TELECOMMUNICATION MAIN GROUNDING BAR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
U/F	UNDER FLOOR
U/G	UNDER GROUND
U/S	UNDER SLAB
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT–AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIDTH
WP	WEATHER PROOF
WTMD	WALK–THRU METAL DETECTOR
XFMR	TRANSFORMER

GENERAL NOTES

ELECTRICAL

A. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED EQUIPMENT LOCATIONS.

B. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND LOCAL ORDINANCES.

C. ALL ELECTRICAL EQUIPMENT IS EXISTING UNLESS OTHERWISE NOTED.

D. EXISTING ELECTRICAL INFORMATION SHOWN BASED ON THE LATEST AVAILABLE SITE SURVEY INFORMATION AND DOCUMENTATION. CONTRACTOR TO FIELD VERIFY ALL ELECTRICAL INFORMATION SHOWN INCLUDING LOCATIONS OF EXISTING PANELS AND ROUTING OF NEW BRANCH CIRCUITS BEFORE PLACING THEIR BID.

E. REMOVE CONDUCTORS OR CABLE FROM ALL ABANDONED CONDUIT.

F. WHERE FLOOR MOUNTED J–BOXES ARE REMOVED, CUT CONDUIT FLUSH WITH FLOOR AND SEAL OPENING WITH A UL LISTED SYSTEM HAVING A FIRE RATING EQUAL TO EXISTING FLOOR.

G. WHERE POKE–THRU FITTINGS ARE REMOVED, SEAL OPENING WITH A UL LISTED SYSTEM HAVING A FIRE RATING EQUAL TO EXISTING FLOOR. REPAIR OR PATCH FLOOR COVERING TO MATCH EXISTING.

H. WHERE CORE DRILLING OF FLOOR IS REQUIRED, X–RAY EXISTING FLOOR SLAB TO AVOID EXISTING CONDUIT, REBAR, OR PLUMBING LOCATED IN THE SLAB. GROUND–PENETRATING RADAR (GPR) MAY BE USED IF ACCEPTABLE TO AIRPORT AUTHORITY.

I. MAINTAIN 2'–0" RADIUS DISTANCE BETWEEN ALL EXISTING FLOOR DEVICES THAT PENETRATE FLOOR FOR ALL NEW FLOOR PENETRATIONS.

J. ALL CORE DRILLING TO BE DONE AT NIGHT, AND COORDINATED WITH LOCAL AIRPORT AUTHORITY AS PART OF IMPACT NOTICE PROCESS. COORDINATE ALL SCANNING/X–RAY ACTIVITY AND CORE DRILLING WITH LOCAL AIRPORT AUTHORITY AS PART OF IMPACT NOTICE PROCESS.

K. COORDINATE AND MAINTAIN A MINIMUM SEPARATION DISTANCE IN EACH DIRECTION OF 2 INCHES FROM ASSOCIATED AND/OR NEARBY EQUIPMENT. KEEP ALL NEW ELECTRICAL DEVICES OUT FROM UNDER THE DOME SECTION OF THE NEW X–RAY UNIT.

L. ELECTRICAL CONDUIT SHALL NOT BE INSTALLED WITHIN 18" OF A WTMD.

M. REUSE EXISTING FLOOR PENETRATIONS AND CONDUIT WHERE POSSIBLE. ENLARGE PENETRATIONS AS NECESSARY FOR NEW DEVICES.

N. LOCATE ALL NEW POWER AND DATA RECEPTACLES CLEAR OF TSA PERSONNEL AND PASSENGER WALK PATHS.

O. LOCATIONS OF DEVICES SERVING TSA EQUIPMENT SHOWN ON PLAN VIEWS INDICATE DEVICE TYPE AND CIRCUITING. FOR PRECISE LOCATIONS REFER TO DIMENSIONED EQUIPMENT PLANS ON ARCHITECTURAL DRAWINGS AND EQUIPMENT DETAILS ON SHEETS E–002 AND E–003.

P. UNLESS OTHERWISE NOTED. REVISE, RELOCATE, AND RECONNECT EXISTING POWER AND DATA CONNECTIONS TO RELOCATED OR REPLACED EQUIPMENT. EXTEND EXISTING CONDUIT AS REQUIRED, AND FIELD VERIFY EXISTING COMMUNICATIONS CABLING TO ENSURE CABLES HAVE SUFFICIENT LENGTH TO EXTEND TO NEW LOCATION WITHOUT SPLICING. IF CABLES ARE OF ADEQUATE LENGTH, EXTEND CABLES TO NEW LOCATION. IF EXISTING CABLE LENGTH IS INADEQUATE, REMOVE EXISTING CABLES BACK TO SOURCE AND PROVIDE NEW CABLES FROM OUTLET TO SOURCE.

Q. RELOCATE EXISTING WIRED SECURITY DURESS ALARM SWITCHES AND CONFIRM NEW LOCATION WITH AIRPORT AUTHORITY PRIOR TO INSTALLATION. EXTEND EXISTING CONDUIT AS REQUIRED, AND FIELD VERIFY EXISTING ALARM CABLING TO ENSURE CABLES HAVE SUFFICIENT LENGTH TO EXTEND TO NEW LOCATION WITHOUT SPLICING. IF CABLES ARE OF ADEQUATE LENGTH, EXTEND CABLES TO NEW LOCATION. IF EXISTING CABLE LENGTH IS INADEQUATE, REMOVE EXISTING CABLES BACK TO SOURCE AND PROVIDE NEW CABLES FROM OUTLET TO SOURCE. PROVIDE ALARM CABLE BELDEN CABLE 88444, 2 PAIR, TWISTED PLENUM RATED CABLE, 22 GAUGE, CAT 5, OR TSA OFFICE OF SECURITY SPECIFIED EQUIVALENT. COORDINATE NEW ALARM SWITCH TYPE WITH EXISTING SWITCHES, LOCAL TSO, AND/OR AIRPORT SECURITY.

R. DO NOT SHARE NEUTRALS ON EQUIPMENT AND RECEPTACLE CIRCUITS.

S. COORDINATE ELECTRICAL DEVICE COVERPLATE FINISH WITH TSA AND LOCAL AIRPORT AUTHORITY.

T. PROVIDE TYPEWRITTEN LABELS ON ELECTRICAL OUTLETS INDICATING DEVICE SERVED, PANEL, AND CIRCUIT.

U. FOR EACH DATA OUTLET INDICATED, PROVIDE AN RJ45/568B, CATEGORY 6, DATA JACK AND CATEGORY 6, PLENUM RATED CABLE FROM DATA JACK TO EXISTING IT CABINET TERMINATE WITH CONNECTOR SUITABLE FOR EXISTING PATCH PANEL. ROUTE CABLES IN CONDUIT IN EXPOSED OR UNFINISHED AREAS OR WHERE REQUIRED BY LOCAL AIRPORT AUTHORITY. SUPPORT CABLE WITH J–HOOKS OR CABLE TRAY IN ENCLOSED, FINISHED AREAS. J–HOOKS SHALL ONLY BE USED IN T1 WITH PERMISSION FROM AIRPORT IT OR SPECIAL SYSTEM TEAMS IN ADC. J–HOOKS ARE NOT TO BE USED IN T2.

V. CIRCUIT TAGS MAY NOT NECESSARILY INDICATE DEDICATED CIRCUITS IN THE REFERENCED PANEL, BUT MAY INDICATE A SHARED CIRCUIT.

W. FOR EQUIPMENT CORDS EXPOSED GREATER THAN 12", PROVIDE LENGTH REQUIRED OF WIREMOLD CORDUCT 1200, NEUTRAL COLOR, TO CONCEAL AND PROTECT CORD.

X. RELOCATE EXISTING SECURITY CAMERAS AND/OR ADJUST AIMING AS REQUIRED BY SECURITY CAMERA OWNER. REFER TO A–001. COORDINATE ANY SECURITY CAMERA AIMING ADJUSTMENTS WITH AIRPORT OPERATIONS.

Y. DISCONNECT AND REMOVE POWER, CONTROL, AND COMMUNICATIONS WIRING BACK TO SOURCE FOR ASSOCIATED DEVICE OR EQUIPMENT BEING REMOVED UNDER THIS WORK. COORDINATE WITH TSA AND AIRPORT AUTHORITY PRIOR TO DISCONNECTION.

Z. FLOOR MOUNTED ELECTRICAL RECEPTACLES AND DATA OUTLETS LOCATED IN POSSIBLE TRAFFIC PATHS WILL BE RECESSED AND INSTALLED AS ON SHEET E–003.

AA. WHERE EXISTING DEVICES ARE REMOVED, MODIFY CIRCUIT AS NECESSARY SUCH THAT EXISTING DEVICES ON THE CIRCUIT WHICH ARE REMAINING CONTINUE TO BE OPERATIONAL.

AB. PROVIDE ALL 20 AMP BRANCH CIRCUITS WITH A MINIMUM OF (2) #12, #12G, IN 3/4" CONDUIT. INCREASE CONDUCTOR SIZES TO ACCOUNT FOR VOLTAGE DROP IN ACCORDANCE WITH THE FOLLOWING TABLE:

CIRCUIT LENGTH	CONDUCTOR	GROUND
0 TO 100 FT	#12	#12
100 TO 200 FT	#10	#10

CIRCUIT LENGTH IS THE ONE WAY DISTANCE FROM THE PANEL TO THE LOAD ALONG THE RACEWAY PATH. FOR THIS TABLE, THE MAXIMUM VALUES ARE 16 AMPS CIRCUIT LOAD, 3% VOLTAGE DROP AND 200' MAXIMUM BRANCH CIRCUIT LENGTH. THIS TABLE IS BASED ON COPPER CONDUCTORS FROM NEC TABLE 9. THE AMPACITY OF EACH CONDUCTOR SIZE IS BASED ON NEC TABLE 310.16. UNITS ARE IN AMERICAN WIRE GAUGE (AWG) AND ENGLISH FEET (FT).

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713–821–2100
Fax 713–266–7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
05/10/22

MQT
SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

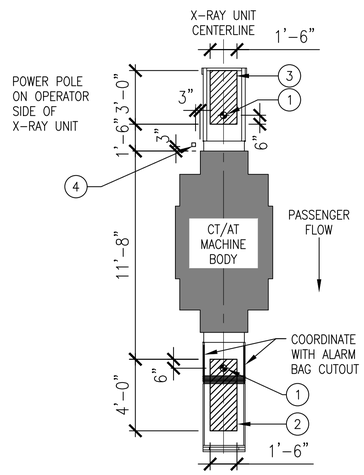
MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170–10901–002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

ABBREVIATIONS SYMBOLS AND GENERAL NOTES

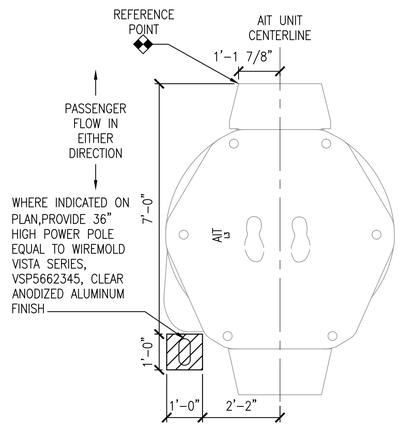
E-001

COPYRIGHT © 2011, LAN INC.
2011–09–19 Rev.



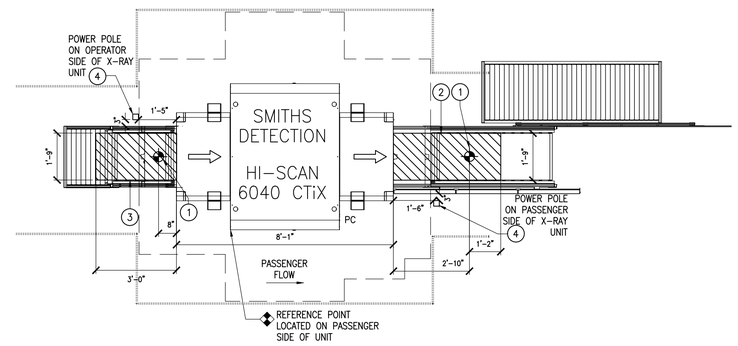
1 GENERAL CT UNIT - ELECTRICAL

SCALE: 1/4"=1'-0"



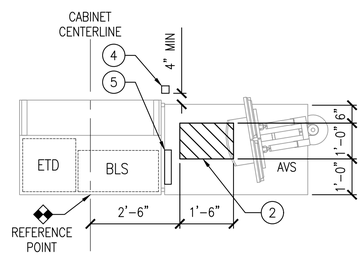
2 L3 AIT UNIT - ELECTRICAL

SCALE: 1/2"=1'-0"



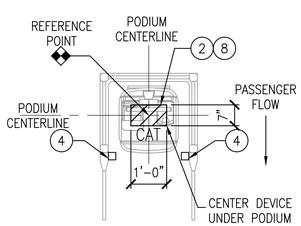
3 CT SMITHS 6040 CTiX - ELECTRICAL

SCALE: 3/8"=1'-0"



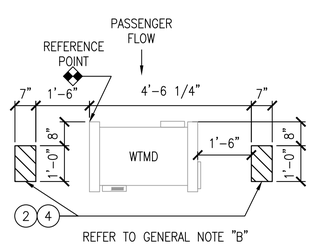
4 AVS/ETD/BLS ELECTRICAL

SCALE: 1/2"=1'-0"



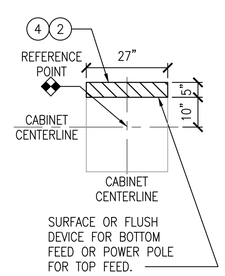
5 CAT/STSO - ELECTRICAL

SCALE: 1/2"=1'-0"



6 WTMD - ELECTRICAL

SCALE: 1/2"=1'-0"



7 IT/SERVER CABINET - ELECTRICAL

SCALE: 1/2"=1'-0"

GENERAL SHEET NOTES

A. COORDINATE DEVICE LOCATIONS WITH EQUIPMENT LOCATIONS AS INDICATED ON THE ARCHITECTURAL PLANS. COORDINATE LOCATION AND CLEARANCE REQUIREMENTS WITH MANUFACTURER, LOCAL TSA, AND AIRPORT PERSONNEL. MAINTAIN A 2" MINIMUM CLEARANCE FROM WALLS, TABLE LEGS, EQUIPMENT ENCLOSURES, SECURITY GATES, ETC AND ANY OTHER OBSTRUCTION THAT WOULD LIMIT DISCONNECTING MEANS ACCESS REQUIRED BY CODE TO THE RECEPTACLES AND OUTLETS. LOCATE RECEPTACLES AND OUTLETS TO ENSURE THAT THEY ARE CLEAR OF PATHWAYS FOR PASSENGER AND TSA PERSONNEL.

B. DISTANCE FROM RECEPTACLE TO WTMD SHALL NOT EXCEED MAXIMUM CORD LENGTH OF 6'-0". PROVIDE THE WTMD RECEPTACLE UNDER THE OUTFEED CONVEYOR OR IN THE POWER POLE OF THE X-RAY UNIT. WHERE THIS LOCATION WOULD EXCEED THE WTMD CORD LENGTH, PROVIDE THE WTMD RECEPTACLE UNDER THE INFEED CONVEYOR OF THE AT X-RAY UNIT. IF NEITHER LOCATION IS AVAILABLE PROVIDE THE WTMD RECEPTACLE AS INDICATED IN DETAIL 6, THIS SHEET. FIELD VERIFY PLUG TYPE OF THE WTMD AND PROVIDE MATCHING RECEPTACLE TYPE. ALIGN WTMD ELECTRICAL CONNECTION TOWARDS RECEPTACLE. ALL RECEPTACLE OUTLETS SHALL BE PLACED AS TO PROVIDE ACCESS TO DISCONNECTING MEANS AND PREVENT USE OF WIRE MOLD.

C. ALIGN INDIVIDUAL SURFACE MOUNTED RECEPTACLES LOCATED UNDER THE X-RAY UNIT ROLLERS/CONVEYORS ALONG A LINE PARALLEL WITH THE CENTERLINE OF THE X-RAY UNIT.

D. ALIGN INDIVIDUAL SURFACE MOUNTED RECEPTACLES LOCATED UNDER THE ETD TABLE ALONG A LINE PARALLEL WITH THE LONG DIMENSION (BACK) OF THE ETD TABLE.

E. PROVIDE THE AIT RECEPTACLE UNDER THE INFEED, OR OUTFEED CONVEYOR OF THE AT X-RAY UNIT AS INDICATED ON THE NEW WORK PLANS. IF NEITHER LOCATION IS AVAILABLE PROVIDE THE AIT RECEPTACLE AS INDICATED IN DETAIL 2A OR 2B, THIS SHEET.

NOTES BY SYMBOL "◯"

1. PREFERRED LOCATION OF SURFACE OR FLUSH DEVICE.
2. ACCEPTABLE LOCATION OF SURFACE OR FLUSH DEVICE WITHIN HATCHED AREA.
3. ACCEPTABLE ALTERNATE LOCATION OF SURFACE OR FLUSH DEVICE SERVING WTMD IF PREFERRED LOCATION EXCEEDS 13'-0" CORD LENGTH.
4. PREFERRED LOCATION OF POWER POLE. COORDINATE POWER POLE LOCATION WITH ANY INTERFERING CEILING EQUIPMENT SUCH AS LIGHT FIXTURES, DIFFUSERS, GRILLES, SPRINKLER HEADS, ETC.
5. FOR EACH ETD/BLS/AVS RECEPTACLE, PROVIDE A UL LISTED POWER STRIP EQUAL TO APC MODEL P6H. MOUNT POWER STRIP TO THE ETD TABLE USING SCREWS THROUGH THE OFFSET MOUNTING HOLES ON THE REAR OF THE POWER STRIP.
6. LOCATION OF RECEPTACLE OUTSIDE PRIVATE SCREENING ROOM TO BE FIELD VERIFIED WITH TSA AND AIRPORT AUTHORITY.
7. LOCATION OF RECEPTACLE WHEN MULTIPLE AIT WORKSTATIONS ARE BEING INSTALLED.
8. INSTALL POKE THRU DEVICES IN ACCORDANCE WITH DETAIL 2, SHEET E-003.
9. HATCHED AREA INDICATES WHERE NO DEVICE MAY BE LOCATED.
10. PREFERRED LOCATION OF POWER POLE. COORDINATE POWER POLE LOCATION WITH ANY INTERFERING CEILING EQUIPMENT SUCH AS LIGHT FIXTURES, DIFFUSERS, GRILLES, SPRINKLER HEADS, ETC. MUST BE LOCATED AT LEAST 4" AWAY FROM THE CT. POWER POLE LOCATIONS NOT LISTED AS PREFERRED OR ALTERNATE ARE NOT ACCEPTABLE.
11. ALTERNATE LOCATION OF POWER POLE. COORDINATE POWER POLE LOCATION WITH ANY INTERFERING CEILING EQUIPMENT SUCH AS LIGHT FIXTURES, DIFFUSERS, GRILLES, SPRINKLER HEADS, ETC. MUST BE LOCATED AT LEAST 4" AWAY FROM THE CT. POWER POLE LOCATIONS NOT LISTED AS PREFERRED OR ALTERNATE ARE NOT ACCEPTABLE

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
License Number
05/10/22
Date

MQT

SAWYER INTERNATIONAL AIRPORT

CATEGORY II

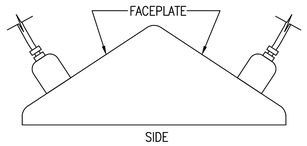
U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

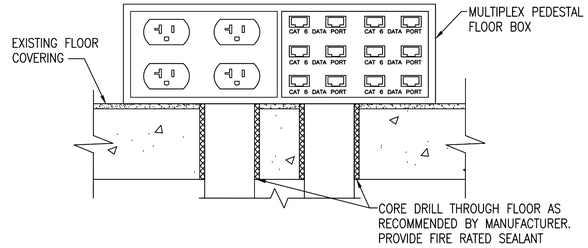
MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE
ELECTRICAL DETAILS

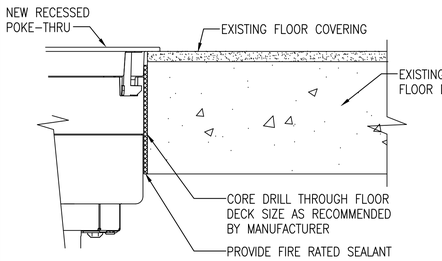
E-002

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.

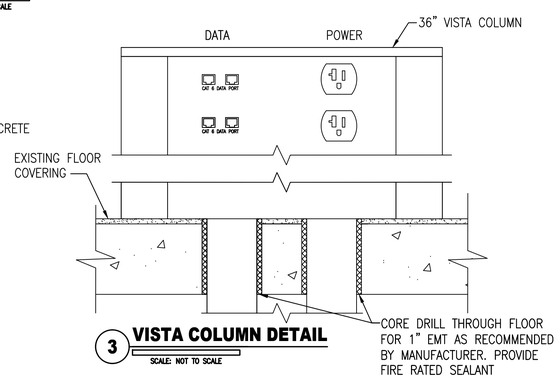




1 MULTIPLEX FLOOR BOX
SCALE: NOT TO SCALE



2 RECESSED POKE-THRU INSTALLATION
SCALE: NOT TO SCALE



3 VISTA COLUMN DETAIL
SCALE: NOT TO SCALE

POWER REQUIREMENTS		
EQUIPMENT	MAX NUMBER OF EQUIPMENT ALLOWED PER DEDICATED CIRCUIT	NOTES
TDC [CAT/E GATE/BAT]	1	PROVIDE 20A DUPLEX RECEPTACLE, 2 LOCATIONS PER LANE
WTMD	10	WTMD OEM POWER REQUIREMENTS VARY. PROVIDE L5-15R OR SIMPLEX RECEPTACLE, FIELD VERIFY
AT X-RAY-CT 1/ADR	1	PROVIDE 20A DUPLEX RECEPTACLE
CT 2/PVS	1	PROVIDE 20A DUPLEX RECEPTACLE
QUEUING CONVEYOR/DIVERTER/OTHER SYSTEM COMPONENTS	2	PROVIDE 20A DUPLEX RECEPTACLE, MAY BE SHARED WITH CO-LOCATED ETD OUTLET WITHIN THE SAME MODULE SET
AIT	1	PROVIDE 20A SIMPLEX RECEPTACLE
CT SCANNER	1	PROVIDE 120V, 30A/1P CIRCUIT. PROVIDE L5-30R RECEPTACLE.
AVS/ETD/BLS	1	PROVIDE 20A DUPLEX RECEPTACLE
CO-LOCATED ETD	2	PROVIDE 20A DUPLEX RECEPTACLE, MAY BE SHARED WITH CO-LOCATED ETD OUTLET WITHIN THE SAME LANE
PRIVATE SCREENING ROOM	1	PROVIDE 20A DUPLEX RECEPTACLE INSIDE OF PRIVATE SCREENING ROOM
STSO PODIUM	2	PROVIDE 20A DUPLEX OUTLET
IT CABINET	1	PROVIDE 30A L5-30R OR L6-30R RECEPTACLE, FIELD VERIFY
DURESS ALARM RECEIVER PANEL	2	CIRCUITS SHARED CAN BE MORE THAN TWO THROUGHOUT CHECKPOINT BUT ONLY CAN INSTALL TWO REPEATERS PER DUPLEX
DURESS ALARM REPEATER PANEL	2	CIRCUITS SHARED CAN BE MORE THAN TWO THROUGHOUT CHECKPOINT BUT ONLY CAN INSTALL TWO PER DUPLEX

GENERAL SHEET NOTES

A. THERE ARE FOUR (4) TYPES OF TSA APPROVED METHODS FOR ELECTRICAL DISTRIBUTION TO SSCP EQUIPMENT. THESE ARE LISTED BELOW. PROVIDE POWER AND DATA CONNECTIONS TO TSA EQUIPMENT AS INDICATED ON THE FLOOR PLANS. SHOULD THE DEVICE TYPE INDICATED ON THE FLOOR PLANS BE UNDESIRABLE BASED ON SITE CONDITIONS, PROVIDE ALTERNATE DEVICES AS DIRECTED BY TSA:

- RECESSED POWER/DATA POKE THRU DEVICES FOR THE FLOOR AND NON-SURFACE MOUNTED DEVICES FOR THE WALL.
- FLUSH POWER/DATA POKE THRU DEVICES FOR THE FLOOR AND NON-SURFACE MOUNTED DEVICES FOR THE WALL.
- SURFACE MOUNTED PEDESTALS/MONUMENTS FOR THE FLOOR AND WALL (TOMBSTONE).
- POWER/DATA POLES.

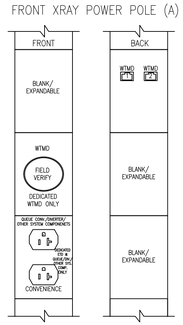
B. NOTE THAT THE POWER AND DATA OUTLET CONFIGURATIONS INDICATED ON THIS SHEET ARE FOR RECESSED POKE-THRU AND SURFACE MOUNTED PEDESTAL INSTALLATIONS, BUT ALSO APPLY TO FLOOR BOXES, POWER POLES, AND WALL MOUNTED OUTLETS AS INDICATED ON THE FLOOR PLANS.

C. RECESSED POKE-THRU DEVICES SHOWN ON THESE DETAILS ARE BASED ON WIREMOLD EVOLUTION SERIES MODEL 6AT.

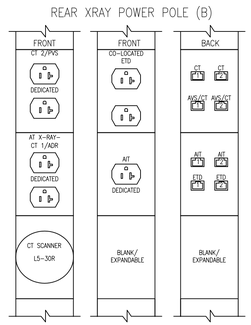
D. SURFACE MOUNTED PEDESTAL DEVICES SHOWN ON THESE DETAILS ARE BASED ON HUBBELL PEDESTAL SERIES FR680 AND FR480.

E. VERIFY OUTLET DEVICE TYPE FOR DEDICATED CIRCUITS WITH OEM TYP.

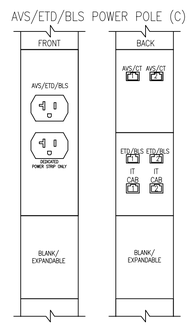
F. SMITHS SERVER DATA LINE SHALL RUN FROM 'CONFIGURATION B' TO 'CONFIGURATION C' FOR THE CT SERVER.



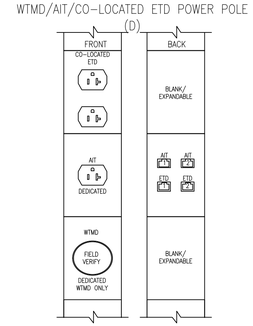
4 FRONT XRAY CONFIGURATION "A"
SCALE: NOT TO SCALE



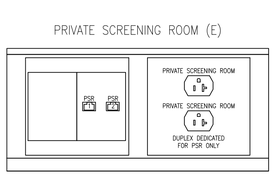
5 REAR XRAY CONFIGURATION "B"
SCALE: NOT TO SCALE



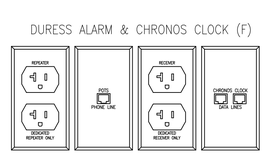
6 AVS/ETD/BLS CONFIGURATION "C"
SCALE: NOT TO SCALE



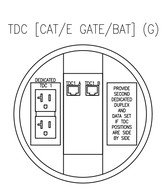
7 AIT/CO-LOCATED ETD CONFIGURATION "D"
SCALE: NOT TO SCALE



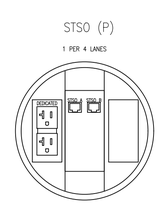
8 PRIVATE SCREENING ROOM CONFIGURATION "E"
SCALE: NOT TO SCALE



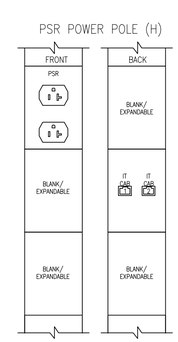
9 DURESS ALARM & CHRONOS CLOCK CONFIGURATION "F"
SCALE: NOT TO SCALE



10 TDC/CAT CONFIGURATION "G"
SCALE: NOT TO SCALE



11 STSO CONFIGURATION "P"
SCALE: NOT TO SCALE



12 PSR CONFIGURATION "H"
SCALE: NOT TO SCALE

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

SMITHS DETECTION HI-SCAN CT SCANNER ELECTRICAL DETAILS

E-003

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.

DEVICE/NAME/SPACE	DATA CABLING REQUIREMENT
AT2 CT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 2–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (1) PRIMARY (1) REDUNDANT, MAINTAIN LANE ASSOCIATION
CT L3	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 2–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (1) PRIMARY (1) REDUNDANT, MAINTAIN LANE ASSOCIATION
IDSS CT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 4–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (2) PRIMARY (2) REDUNDANT, MAINTAIN LANE ASSOCIATION
ANALOGIC CT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 4–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (2) PRIMARY (2) REDUNDANT, MAINTAIN LANE ASSOCIATION
SMITHS CT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 4–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (2) PRIMARY (2) REDUNDANT, MAINTAIN LANE ASSOCIATION
GILARDONI CT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 4–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (2) PRIMARY (2) REDUNDANT, MAINTAIN LANE ASSOCIATION
RAPISCAN CT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT 4–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO AVS, (2) PRIMARY (2) REDUNDANT, MAINTAIN LANE ASSOCIATION
CT SERVER	2–CAT 6A ROUTED DIRECT, NOT THROUGH PATCH PANEL TO CT, (1) PRIMARY (1) REDUNDANT
AIT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT
WTMD	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT
ETD AND ETD @ AIT	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT
BLS	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT
TDC & CAT BPSS ETD	4–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT @ TDC, (1) PRIMARY (1) REDUNDANT @ ETD.
STSO	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT
PRIVATE SCREENING ROOM INTERIOR	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT
PANIC DURESS	VERIFY HEAD END, USE COMMON FEED AT XRAY.
PANIC DURESS RECEIVER	VERIFY LOCATION, (1) POTS LINE FOR ANALOG CONNECTION.
KRONOS	2–CAT 6A ROUTED TO TSA IT CABINET, (1) PRIMARY (1) REDUNDANT

A DATA REQUIREMENTS TABLE

SCALE: NOT TO SCALE

GENERAL NOTES

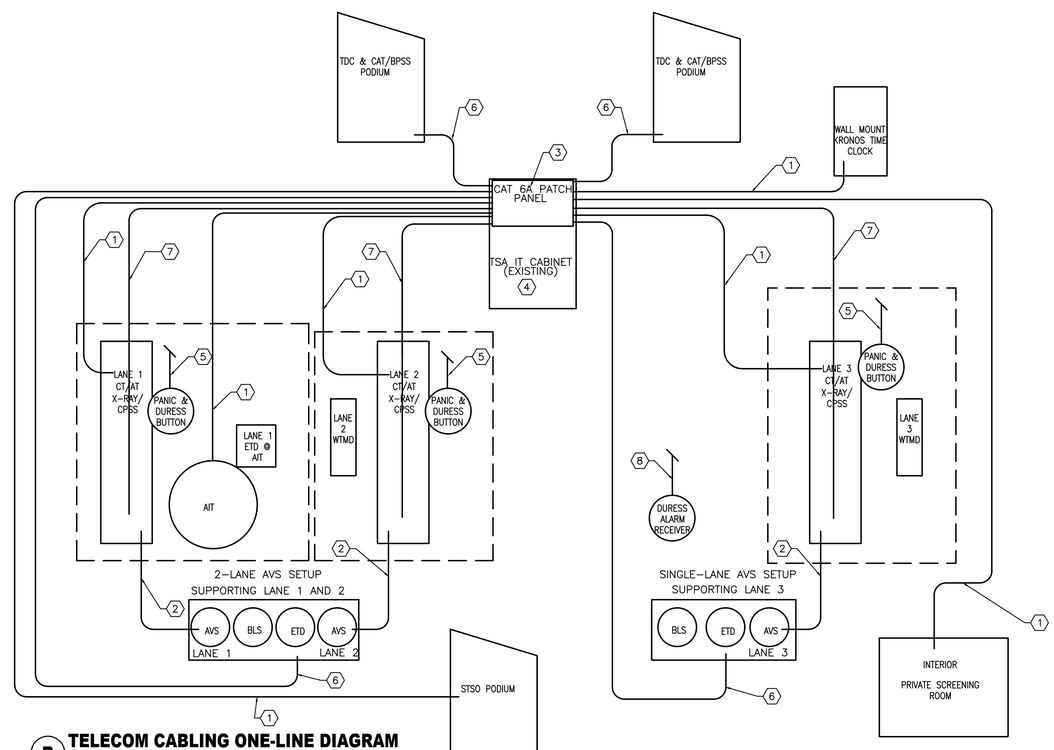
1. DIAGRAM SHOWN AS TYPICAL 3–LANE CONFIGURATION, REFERENCE DIAGRAM FOR CONNECTIVITY SCHEDULES ONLY. VERIFY EACH UNIQUE AIRPORT EQUIPMENT LAYOUT, AND EACH CORRESPONDING TSA DEVICE'S CABLING REQUIREMENTS.
2. PATCH CABLES FROM EQUIPMENT (DEVICE END) TO HORIZONTAL CONNECTION (FLOOR POKE OUTLET, POWER POLE OUTLET) PROVIDED UNDER THE INSTALLATION TECHNICIANS SCOPE OF WORK. PROVIDE CABLING AT A MINIMUM OF 12 FEET IN LENGTH TO ACCOMMODATE CONNECTIVITY.
3. PATCH CABLES FROM ALL THE OTHER EQUIPMENT (DEVICE ENDS) TO THE HORIZONTAL CONNECTION (FLOOR POKE OUTLET, POWER POLE OUTLET) PROVIDED UNDER THE INSTALLATION TECHNICIANS SCOPE OF WORK.
4. PATCH CABLES FROM ALL THE TSA IT CABINET PORTS (PATCH PANEL ENDS) TO ACTIVE SWITCH AND NETWORK EQUIPMENT PROVIDED UNDER THE INSTALLATION TECHNICIANS SCOPE OF WORK BUT INSTALLED BY TSA OR AN APPROVED TSA NETWORK VENDOR.
5. FOR AIRPORTS WITH EXISTING CAT 6A PATCH PANELS AND CABLING, PROVIDE CAT 6A RATED CABLE FOR ANY REMOVED, RELOCATED, OR NEW DATA CABLING. ANY EXISTING DATA CABLING NOT RELOCATED OR REMOVED TO REMAIN IN PLACE. PROVIDE CAT 6A DATA CABLING FOR ANY NEW TECHNOLOGY / EQUIPMENT THAT REQUIRES CAT 6A DATA COMMUNICATION.
6. PROVIDE CAT5/5e FOR ALL OTHER AIRPORTS THAT IMPLEMENT AND MAINTAIN CAT5/5e STANDARDS, AND IF IT MEETS DATA REQUIREMENTS OF THE EQUIPMENT SERVED.
7. ALL EXISTING AND NEW CABLING THAT IS INSTALLED AND IS ANTICIPATED TO BE UTILIZED FOR ACTIVE COMPONENTS SHALL BE CERTIFIED/RE–CERTIFIED USING A LEVEL IV, 600MHZ CAPABLE, FLUKE DTX CABLE ANALYZER OR EQUIVALENT. ALL TESTS SHALL BE SPECIFIC FOR THE RATING OF THE INSTALLED CABLE INFRASTRUCTURE, WHETHER CAT 5E, CAT 6 OR CAT 6A. CONTRACTOR TO CONFIRM THE CALIBRATION CERTIFICATES ARE ALSO SUBMITTED WITH THE TEST RESULTS. TESTER MUST BE CALIBRATED MEETING NIST STANDARDS, AND HAVE BEEN CALIBRATED AT LEAST ONCE IN THE PREVIOUS 12 MONTHS PRIOR TO THE CURRENT TESTS AND RESULTS. CONTRACTOR TO SUBMIT CERTIFIED TEST RESULTS IN DIGITAL AND HARDCOPY FORMAT AS NOTED WITHIN THE SPECIFICATIONS.

NOTES BY SYMBOL "⬡"

1. (2) CAT 6A UTP CABLES ROUTED FROM THE TSA IT CABINET TO EACH DEVICE AS NOTED. TERMINATE ALL CAT 6A CABLE ON THE OUTLET END WITH A MODULAR RJ–45 CAT 6A RATED 568B JACK CONTAINED IN POKE OR FACEPLATE AS NOTED ON THE DRAWINGS. CONTRACTOR TO TERMINATE TSA CABINET END TO A CAT 6A RATED MODULAR RACK MOUNTED PATCH PANEL.
2. (4) CAT 6A UTP CABLE ROUTED FROM AVS TO CT/AT AS NOTED ON THE ONE LINE DIAGRAM. TERMINATE BOTH DEVICE ENDS WITH A MODULAR RJ–45 CAT 6A RATED 568B JACK. TELECOM/ELECTRICAL CONTRACTOR SHALL COORDINATE INSTALLATION WITH SITE LEAD AND MANUFACTURER. (NO REDUCTION OF CABLE COUNT IS ALLOWED)
3. CONTRACTOR TO PROVIDE NEW PATCH PANELS(S) IN QUANTITY AS INDICATED ON THE DRAWINGS. PATCH PANEL SHALL HAVE A RATING OF CAT 6A.
4. EXISTING TSA IT CABINET, SHOWN FOR REFERENCE ONLY.
5. PANIC DURESS BUTTON, CONTRACTOR TO FIELD VERIFY HEAD–END LOCATION FOR TERMINATION OF ANY NEW WIRING. UTILIZE COMMUNICATIONS PATHWAY TO "CT/AT" LOCATION.
6. (2) CAT 6A UTP CABLES ROUTED FROM THE TSA IT CABINET TO EACH DEVICE AS NOTED. TERMINATE ALL CAT 6A CABLE ON THE OUTLET END WITH A MODULAR RJ–45 CAT 6A RATED 568B JACK CONTAINED IN POKE OR FACEPLATE AS NOTED ON THE DRAWINGS. CONTRACTOR TO TERMINATE TSA CABINET END TO A CAT 6A RATED MODULAR RACK MOUNTED PATCH PANEL.
7. (6) CAT 6A UTP CABLES ROUTED FROM THE TSA IT CABINET TO EACH DEVICE AS NOTED. TERMINATE ALL CAT 6A CABLE ON THE OUTLET END WITH A MODULAR RJ–45 CAT 6A RATED 568B JACK CONTAINED IN POKE OR FACEPLATE AS NOTED ON THE DRAWINGS. CONTRACTOR TO TERMINATE TSA CABINET END TO A CAT 6A RATED MODULAR RACK MOUNTED PATCH PANEL.
8. STANDARD SINGLE POTS PHONE LINE TO DURESS ALARM RECEIVER LOCATION. (LOCATIONS TBD).

"TYPICAL" 3–LANE TSA CHECKPOINT WIRING DIAGRAM WITH (1) AIT

(THIS IS A TYPICAL CONFIGURATION AND MAY NOT MATCH THE EXACT AIRPORT DESIGN REQUIREMENTS, REFERENCE FLOOR PLAN FOR EXACT EQUIPMENT REQUIREMENTS AND CONFIGURATIONS):



B TELECOM CABLING ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713–821–2100
Fax 713–266–7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
05/10/22

MQT

SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170–10901–002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

TELECOM CABLING ONE-LINE DIAGRAM

E-004

COPYRIGHT © 2011, LAN INC.
2011–09–19 Rev.

ELECTRICAL SPECIFICATIONS

SECTION 260500 - COMMON WORK RESULTS FOR ELECTRICAL

1.1 GENERAL

A. DESCRIPTION: WORK SHALL CONSIST OF FURNISHING ALL LABOR, EQUIPMENT, SUPPLIES, AND MATERIALS, UNLESS OTHERWISE SPECIFIED, NECESSARY FOR THE INSTALLATION OF COMPLETE ELECTRICAL SYSTEMS AS REQUIRED BY THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS, SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT. THE WORK SHALL ALSO INCLUDE THE COMPLETION OF THOSE DETAILS OF ELECTRICAL WORK NOT MENTIONED OR SHOWN WHICH ARE NECESSARY FOR THE SUCCESSFUL OPERATION OF ALL ELECTRICAL SYSTEMS.

1.2 DRAWINGS AND SPECIFICATIONS

A. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND OUTLETS, LOCATIONS OF PANELBOARDS AND OTHER WORK. INFORMATION SHOWN ON THE DRAWINGS IS DIAGRAMMATIC; HOWEVER, THE ARCHITECT/ENGINEER WILL NOT PERMIT REVISING THE CIRCUITING SHOWN WITHOUT SPECIFIC APPROVAL. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER; WORK REQUIRED BY EITHER SHALL BE AS BINDING AS IF REQUIRED FOR BY BOTH. DATA PRESENTED ON THE DRAWINGS IS AS ACCURATE AS PLANNING CAN DETERMINE, BUT ACCURACY IS NOT GUARANTEED AND CONTRACTOR'S FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ARCHITECTURAL DRAWINGS AND SPECIFICATIONS; ADJUST ALL WORK TO CONFORM TO ALL CONDITIONS SHOWN THEREIN. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS. USE ACTUAL BUILDING DIMENSIONS.

B. PRIOR TO SUBMITTING A COST PROPOSAL, VISIT THE SITE OF THE JOB AND ASCERTAIN ALL CONDITIONS AFFECTING THE PROPOSED INSTALLATION. INCLUDE ALLOWANCES FOR COSTS AND SCHEDULE EFFECTS ARISING FROM FIELD CONDITIONS.

C. DISCREPANCIES BETWEEN DIFFERENT PLANS, BETWEEN PLANS AND SPECIFICATIONS, BETWEEN SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THIS INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. IN THE EVENT SUCH DISCREPANCIES EXIST, AND THE ARCHITECT/ENGINEER IS NOT SO NOTIFIED, THE ADJUDICATION OF RESPONSIBILITY SHALL BE SOLELY AT THE DISCRETION OF THE ARCHITECT/ENGINEER.

1.3 SUBMITTALS

A. SUBMIT COPIES OF SHOP DRAWINGS AND PRODUCT DATA FOR THE FOLLOWING ITEMS: WIRING DEVICES, POKE-THRU ASSEMBLIES, POWER POLES, FLOORBOXES, ENCLOSED SWITCHES, DRY TYPE TRANSFORMERS AND PANELBOARDS. SUBMIT ONLY FOR PRODUCTS WHERE REQUIRED BY TECHNICAL SPECIFICATIONS SECTIONS. SUBMITTALS NOT REQUIRED WILL BE RETURNED WITHOUT ACTION.

B. CONTRACTOR AGREES THAT SUBMITTALS PROCESSED BY THE ARCHITECT/ENGINEER ARE NOT CHANGE ORDERS; THAT THE PURPOSE OF SUBMITTALS IS TO DEMONSTRATE TO THE ARCHITECT/ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT; AND THAT THE CONTRACTOR DEMONSTRATES THIS UNDERSTANDING BY CLEARLY INDICATING THE EQUIPMENT AND MATERIAL PROPOSED FOR APPLICATION, AND BY DETAILING THE PROPOSED FABRICATION AND INSTALLATION METHODS.

C. CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONS (WHICH CONTRACTOR SHALL CONFIRM AND CORRELATE), FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, AND COORDINATION OF HIS WORK WITH THAT OF OTHER TRADES. THE CONTRACTOR SHALL CHECK AND VERIFY ALL MEASUREMENTS AND REVIEW SHOP DRAWINGS BEFORE SUBMITTING THEM. IF ANY DEVIATIONS FROM THE SPECIFIED REQUIREMENTS FOR ANY ITEM OF MATERIAL OR EQUIPMENT EXIST, SUCH DEVIATION SHALL BE EXPRESSLY STATED IN WRITING AND INCORPORATED AS PART OF THE SUBMITTAL.

D. NO EQUIPMENT OR MATERIALS SHALL BE INSTALLED OR STORED AT THE JOBSITE UNTIL SUBMITTALS FOR SUCH EQUIPMENT OR MATERIALS HAVE BEEN GIVEN REVIEW ACTION PERMITTING THEIR USE.

1.4 RECORD DRAWINGS

A. MAINTAIN A CONTRACT SET OF ELECTRICAL DRAWINGS AT THE SITE. NEATLY MARK ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DRAWINGS. USE A COLOR THAT CONTRASTS WITH THE PRINTS. THIS SHALL BE A SEPARATE SET OF DRAWINGS, NOT USED FOR CONSTRUCTION PURPOSES, AND SHALL BE KEPT UP TO DATE AS THE JOB PROGRESSES AND SHALL BE MADE AVAILABLE FOR INSPECTION BY THE ARCHITECT/ENGINEER AT ALL TIMES. UPON COMPLETION OF THE CONTRACT, THIS SET OF RECORD DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT/ENGINEER.

B. ALL POKE-THRU, FLOOR MONUMENTS AND/OR POWER POLES LOCATIONS SHALL BE DIMENSIONED ON PLANS.

1.5 REGULATORY REQUIREMENTS

A. CONFORM TO THOSE EDITIONS OF THE FOLLOWING AS CURRENTLY ADOPTED BY THE LOCAL CODE ENFORCEMENT AUTHORITY:

1. NFPA 70, NATIONAL ELECTRICAL CODE (NEC).
2. TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG).
3. IEEE C2.
4. INTERNATIONAL BUILDING CODE INCLUDING LOCAL AMENDMENTS, AND APPLICABLE REQUIREMENTS OF THE LOCAL FIRE DEPARTMENT, PREVENTION BUREAU, OR FIRE MARSHALL.

B. OBTAIN ELECTRICAL PERMITS, PLAN REVIEW, AND INSPECTIONS FROM AUTHORITY HAVING JURISDICTION. PROVIDE ALL NOTICES NECESSARY IN CONNECTION THEREWITH, AND PAY ALL FEES.

C. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, STATUTES, OR ORDINANCES IN EFFECT. APPLICABLE CODES, ORDINANCES, STANDARDS AND STATUTES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN, OR CONFLICT WITH, THE DRAWINGS AND SPECIFICATIONS.

1.6 MATERIALS AND EQUIPMENT

A. MATERIALS AND EQUIPMENT: ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED, EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE INDICATED BY THE CONTRACT DOCUMENTS.

B. COMPATIBILITY WITH AVAILABLE SPACE: EQUIPMENT LAYOUTS SHOWN ARE BASED ON USE OF EQUIPMENT AS SPECIFIED. IF THE CONTRACTOR CHOOSES EQUIPMENT AVAILABLE FROM ANY OTHER MANUFACTURER LISTED AS AN ACCEPTABLE MANUFACTURER, OR OFFERS EQUIPMENT UNDER THE PROVISION FOR SUBSTITUTIONS, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FIRST ASCERTAINING THAT THE OFFERED EQUIPMENT CAN BE INSTALLED IN THE SPACE AVAILABLE WITH AMPLE CLEARANCES FOR MAINTENANCE.

C. ALL EQUIPMENT AND MATERIALS INSTALLED SHALL BE NEW, UNLESS OTHERWISE SPECIFIED. EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS AND/OR SPECIFIED, MANUFACTURED PRODUCTS SHALL BE STANDARD CATALOGED ITEMS WHICH HAVE BEEN IN PRODUCTION FOR A PERIOD NOT LESS THAN TWO (2) YEARS PRIOR TO DATE FOR RECEIPT OF BIDS OR PROPOSALS.

D. DEFECTIVE OR DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED, PRIOR TO FINAL ACCEPTANCE, IN A MANNER ACCEPTABLE TO THE ARCHITECT/ENGINEER OR OWNER AND AT NO ADDITIONAL COST TO THE OWNER.

E. ALL ELECTRICAL MATERIALS SHALL BE ACCEPTABLE FOR INSTALLATION ONLY IF LABELED OR LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AND IF ACCEPTED BY LOCAL AUTHORITIES.

F. ALL MAJOR EQUIPMENT COMPONENTS SHALL HAVE THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER, AND SERIAL NUMBER PERMANENTLY ATTACHED IN A CONSPICUOUS LOCATION.

1.7 STORAGE AND PROTECTION

A. STORE PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, WITH SEALS AND LABELS INTACT AND LEGIBLE. STORE SENSITIVE PRODUCTS IN WEATHER-TIGHT ENCLOSURES; MAINTAIN WITHIN TEMPERATURE AND HUMIDITY RANGES REQUIRED BY MANUFACTURER'S INSTRUCTIONS.

1.8 PRODUCT OPTIONS

A. PRODUCTS SPECIFIED BY REFERENCE STANDARDS OR BY DESCRIPTION ONLY: ANY PRODUCT MEETING THOSE STANDARDS.

B. PRODUCTS SPECIFIED BY NAMING ONE OR MORE MANUFACTURERS WITH A PROVISION FOR SUBSTITUTIONS: SUBMIT A REQUEST FOR SUBSTITUTION FOR ANY MANUFACTURER NOT SPECIFICALLY NAMED.

C. PRODUCTS SPECIFIED BY NAMING ONE OR MORE MANUFACTURERS WITHOUT A PROVISION FOR SUBSTITUTIONS: PRODUCTS OF NAMED MANUFACTURERS MEETING SPECIFICATIONS; NO OPTIONS, NO SUBSTITUTIONS ALLOWED.

1.9 WARRANTY

A. THE ENTIRE ELECTRICAL SYSTEM INSTALLED UNDER THIS CONTRACT SHALL BE LEFT IN PROPER WORKING ORDER. REPLACE, AT NO ADDITIONAL COST TO THE OWNER, ANY WORK, MATERIALS, OR EQUIPMENT WHICH EVIDENCES DEFECTS IN DESIGN, CONSTRUCTION, OR WORKMANSHIP WITHIN ONE YEAR, OR AS SPECIFICALLY NOTED ELSEWHERE IN THESE SPECIFICATIONS, FROM DATE OF FINAL ACCEPTANCE.

1.10 WORKMANSHIP

A. WORKMANSHIP SHALL CONFORM TO HIGHEST INDUSTRY STANDARDS FOR EACH TRADE INVOLVED IN COMPLETION OF THE WORK.

B. CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS SELECTED TO PERFORM THE WORK SHALL BE WELL VERSED AND SKILLED IN THE TRADES INVOLVED.

C. THE ARCHITECT/ENGINEER MUST ACCEPT ANY CHANGES OR DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS IN WRITING. ALL ERRORS IN INSTALLATION SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR. ALL SPECIALTIES SHALL BE INSTALLED AS DETAILED ON THE DRAWINGS. WHERE DETAILS OR SPECIFIC INSTALLATION REQUIREMENTS ARE NOT PROVIDED, MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED.

D. UPON COMPLETION OF WORK, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED COMPLETE, THOROUGHLY CHECKED, CORRECTLY ADJUSTED, AND LEFT READY FOR INTENDED USE OR OPERATION. ALL WORK SHALL BE THOROUGHLY CLEANED AND ALL RESIDUES SHALL BE REMOVED FROM SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE DELIVERED IN UNBLEMISHED CONDITION.

E. CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION, INCLUDING ALL REQUIRED LABOR, MATERIAL, CARTAGE, INSURANCE, PERMITS, AND TAXES.

F. THE CONTRACTOR SHALL SCHEDULE HIS WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTION. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND ALL INTERRUPTIONS SHALL REQUIRE A 72-HOUR PRIOR APPROVAL BY THE AIRPORT AUTHORITY. THE CONTRACTOR SHALL BE PREPARED TO PERFORM ALL WORK DURING SERVICE INTERRUPTION AT PREMIUM TIME.

1.11 CHASES, OPENINGS, CUTTING AND PATCHING

A. CAREFULLY LAY OUT ALL WORK IN ADVANCE SO AS TO ELIMINATE WHERE POSSIBLE, CUTTING, CHANNELING, CHASING, OR DRILLING OF FLOORS, WALLS, PARTITIONS, CEILINGS AND ROOFS. ANY DAMAGE TO THE BUILDING, STRUCTURE, PIPING, DUCTS, EQUIPMENT OR ANY DEFACED FINISH SHALL BE REPAIRED BY SKILLED MECHANICS OF THE TRADES INVOLVED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ARCHITECT/ENGINEER. ANY NECESSARY CUTTING, CHANNELING, DRILLING OR WELDING AS REQUIRED FOR THE PROPER SUPPORT, CONCEALMENT, INSTALLATION OR ANCHORING OF RACEWAYS, OUTLETS, OR OTHER ELECTRICAL EQUIPMENT SHALL BE PERFORMED IN A CAREFUL MANNER, AND AS APPROVED.

B. ALL OPENINGS MADE IN FIRE-RATED WALLS, FLOORS, OR CEILINGS SHALL BE PATCHED AND MADE TIGHT IN A MANNER TO CONFORM TO THE FIRE RATING FOR THE U.L. RATED ASSEMBLY.

C. ALL PENETRATIONS REQUIRED THROUGH EXISTING MASONRY OR CONCRETE CONSTRUCTION SHALL BE CORE DRILLED AT MINIMUM SIZE REQUIRED. PRECAUTIONS SHALL BE TAKEN WHEN DRILLING TO PREVENT DAMAGE TO STRUCTURAL CONCRETE. THE CONTRACTOR SHALL OBTAIN PERMISSION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH CUTTING OR DRILLING.

D. SLEEVE SEALS: PROVIDE SLEEVE SEALS FOR PENETRATIONS LOCATED IN FOUNDATION WALLS BELOW GRADE, OR IN EXTERIOR WALLS. SEALS SHALL BE MODULAR MECHANICAL TYPE AS MANUFACTURED BY THUNDERLINE CORP. CONSISTING OF INTERLOCKING SYNTHETIC RUBBER LINKS SHAPED TO CONTINUOUSLY FILL ANNULAR SPACE BETWEEN RACEWAY AND SLEEVE, CONNECTED WITH BOLTS AND PRESSURE PLATES WHICH CAUSE RUBBER SEALING ELEMENTS TO EXPAND WHEN TIGHTENED, PROVIDING WATERTIGHT SEAL.

1.12 ELECTRICAL COMPLETION

A. SUBMIT CERTIFICATES OF FINAL INSPECTION AND ACCEPTANCE FROM AUTHORITIES HAVING JURISDICTION.

B. SYSTEMS TESTING AND START-UP: PROVIDE ALL COMPLETION SERVICES, INCLUDING FINAL SYSTEMS AND/OR SUBSYSTEMS PERFORMANCE VERIFICATION, TO ENSURE THAT ALL SYSTEMS FUNCTION AS SPECIFIED BEFORE AUTHORIZING OWNER OR TENANT OCCUPANCY AND BEFORE ACCEPTING CERTIFICATES OF PARTIAL OR TOTAL SUBSTANTIAL COMPLETION.

C. CLEAN UP: REMOVE ALL MATERIALS, SCRAP, AND DEBRIS, RELATIVE TO THE ELECTRICAL INSTALLATION, AND LEAVE THE PREMISES AND ALL EQUIPMENT IN A CLEAN, ORDERLY CONDITION. ANY COSTS TO THE OWNER FOR CLEAN UP OF THE SITE WILL BE CHARGED AGAINST THE CONTRACTOR.

1.13 EXAMINATION

A. FIELD VERIFY MEASUREMENTS AND CIRCUITING ARRANGEMENTS.

B. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES. MAINTAIN ELECTRICAL CONTINUITY TO REMAINING WIRING AND EQUIPMENT.

C. REMOVAL DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND/OR EXISTING RECORD DOCUMENTS. REPORT DISCREPANCIES TO ARCHITECT/ENGINEER BEFORE DISTURBING EXISTING INSTALLATION.

D. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO BE AWARE OF EXISTING CONDITIONS AND SHALL INCLUDE IN HIS BID AN ALLOWANCE FOR THE REMOVAL AND RELOCATION OF EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, OR OTHER EQUIPMENT AS INDICATED ON THE PLANS OR AS REQUIRED TO COORDINATE AND ADAPT NEW AND EXISTING ELECTRICAL SYSTEMS TO ALL OTHER WORK REQUIRED ON THIS PROJECT.

1.14 PREPARATION

A. PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS. USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.

B. EXISTING ELECTRICAL SERVICE AND TELEPHONE SYSTEM: MAINTAIN EXISTING SYSTEMS IN SERVICE UNTIL NEW SYSTEMS ARE ACCEPTED OR AS OTHERWISE INDICATED. DISABLE SYSTEMS ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. SCHEDULE ANY OUTAGES WITH THE AIRPORT AUTHORITY AT LEAST 72 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA. CONTRACTOR SHALL NOT LEAVE THE SITE WITHOUT RESTORING THE OPERATION OF ALL SYSTEMS.

1.15 REMOVAL AND EXTENSION OF EXISTING ELECTRICAL WORK

A. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.

B. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY.

C. REMOVE EXPOSED ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES.

D. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLET BOXES IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVED. PROVIDE BLANK COVER FOR ABANDONED OUTLET BOXES THAT ARE NOT REMOVED.

E. DISCONNECT AND REMOVE ELECTRICAL DEVICES AND EQUIPMENT SERVING UTILIZATION EQUIPMENT THAT HAS BEEN REMOVED.

F. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK. PROVIDE MODIFICATIONS TO ASSURE THAT CIRCUITS OR SYSTEMS WIRING SHALL NOT PASS THROUGH OUTLET OR JUNCTION BOXES THAT MAY BE RENDERED INACCESSIBLE BY CHANGES MADE TO THE BUILDING.

G. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS THAT ARE TO REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.

H. EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS AS SPECIFIED.

I. WHERE THE REUSE OF EXISTING CONDUITS, OUTLETS, JUNCTION BOXES, ETC. IS PERMISSIBLE, MAKE CERTAIN THAT THE WIRING FOR THEM IS CONTINUOUS FROM OUTLET TO OUTLET.

J. CONNECT NEW WORK TO EXISTING WORK IN A MANNER THAT WILL ASSURE PROPER RACEWAY GROUNDING THROUGHOUT IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE.

K. EXISTING CONDUITS, WIRES, DEVICES, FIXTURES, ETC. THAT ARE TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.

L. IF HAZARD MATERIALS ARE ENCOUNTERED THE CONTRACTOR SHALL STOP WORK AND REPORT FINDINGS TO THE ARCHITECT/ENGINEER.

1.16 CLEANING AND REPAIR

A. CLEAN AND REPAIR EXISTING MATERIALS AND EQUIPMENT THAT REMAIN OR ARE TO BE REUSED.

B. PANELBOARDS: CLEAN EXPOSED SURFACES AND CHECK TIGHTNESS OF ELECTRICAL CONNECTIONS. REPLACE DAMAGED CIRCUIT BREAKERS AND PROVIDE CLOSURE PLATES FOR VACANT POSITIONS. PROVIDE TYPED CIRCUIT DIRECTORY SHOWING REVISED CIRCUITING ARRANGEMENT.

1.17 INSTALLATION

A. THE CONTRACTOR SHALL PERFORM ALL CUTTING, CHANNELING, CHASING, DRILLING, ETC. AS REQUIRED TO INSTALL OR REMOVE ELECTRICAL EQUIPMENT IN AREAS OF REMODELING. THIS WORK SHALL BE PERFORMED SO AS TO MINIMIZE DAMAGE TO PORTIONS OF WALL FINISHES, SURFACES, PLASTERING, OR THE STRUCTURES WHICH ARE TO BE REUSED, RESURFACED, PLASTERED, OR PAINTED.

B. CAREFULLY COORDINATE WITH THE REQUIRED REMODELING WORK, CUTTING AND PATCHING, ETC. PERFORMED BY OTHER TRADES. REMOVE OR RELOCATE EXISTING ELECTRICAL CONDUITS, WIRES, DEVICES, FIXTURES, AND OTHER EQUIPMENT AS NECESSARY.

1.18 TESTING, ACCEPTANCE AND CERTIFICATIONS

A. THE CONTRACTOR SHALL PROVIDE THE NECESSARY FIELD-TESTING AND STARTUP SERVICES FOR ALL ELECTRICAL EQUIPMENT PROVIDED UNDER THIS CONTRACT EXCEPT AS NOTED OTHERWISE. THE FIELD-TESTING AND STARTUP SERVICES SHALL BE IN ACCORDANCE WITH EACH EQUIPMENT MANUFACTURER'S WRITTEN RECOMMENDATIONS. NO TESTING SHALL BE PERFORMED WHICH IN ANY WAY BE IN CONFLICTS WITH THE MANUFACTURER'S RECOMMENDATIONS AND WHICH WILL ADVERSELY AFFECT ANY MANUFACTURER'S WARRANTIES.

B. IF THE CONTRACTOR FINDS DURING THE TESTING THAT ANY PIECE OF EQUIPMENT DOES NOT SATISFACTORILY PASS THE REQUIRED FIELD TEST, THE ARCHITECT/ENGINEER SHALL BE PROMPTLY NOTIFIED AND THE CONTRACTOR SHALL TAKE THE NECESSARY ACTIONS FOR THE PROMPT REPAIR OR REPLACEMENT AS RECOMMENDED BY ARCHITECT/ENGINEER, THE EQUIPMENT SHALL THEN BE RETESTED. THIS PROCESS SHALL BE REPEATED, IF NECESSARY, UNTIL THE EQUIPMENT SATISFACTORILY PASSES THE REQUIRED TESTS.

1.19 GROUND RESISTANCE TEST

A. UPON COMPLETION OF INSTALLATION OF ELECTRICAL GROUNDING SYSTEM, TEST GROUND RESISTANCE TO EARTH IN ACCORDANCE WITH ANSI/IEEE81. WHERE TEST SHOW RESISTANCE TO GROUND OVER 5 OHMS, TAKE APPROPRIATE ACTION TO REDUCE THE RESISTANCE TO 5 OHMS OR LESS.

1.20 CONDUCTOR INSULATION TEST

A. PRIOR TO ENERGIZING, FEEDERS TO AND FROM TRANSFORMERS, SWITCHBOARDS, AND PANELBOARDS, AND BRANCH CIRCUIT CONDUCTORS 4 AWG AND LARGER FROM PANELBOARDS INSTALLED UNDER THIS PROJECT ARE TO BE TESTED WITH A 500-VOLT INSULATION MEGOHM METER TO DETERMINE INSULATION RESISTANCE LEVELS. ALL FIELD TEST DATA IS TO BE RECORDED, CORRECTED TO A BASELINE TEMPERATURE AND FURNISHED TO THE PROJECT MANAGER. A TEST IS TO INCLUDE MEGGERING FOR ONE MINUTE BETWEEN CONDUCTORS AND BETWEEN EACH CONDUCTOR AND GROUND. CABLES ARE TO BE MEGGERED AFTER INSTALLATION WITH CABLES DISCONNECTED AT BOTH ENDS. INSULATION TEST VALUES SHALL MEET OR EXCEED THE VALUES GIVEN BELOW.

SECTION 260519 - LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

1.1 BUILDING WIRE AND CABLE

A. CONDUCTOR: COPPER

B. INSULATION VOLTAGE RATING: 600 VOLTS.

C. INSULATION: NFPA 70, TYPE THHN/THWN RATED 90 DEGREES C.

1.2 METAL CLAD CABLE

A. CONDUCTOR: COPPER

B. INSULATION VOLTAGE RATING: 600 VOLTS.

C. INSULATION TEMPERATURE RATING: 75 DEGREES C.

D. INSULATION MATERIAL: THERMOPLASTIC.

E. ARMOR MATERIAL: STEEL

F. ARMOR DESIGN: INTERLOCKED METAL TAPE

1.3 PREPARATION

A. COMPLETELY AND THOROUGHLY SWAB RACEWAY BEFORE INSTALLING WIRE.

B. METAL CLAD CABLE MAY BE USED ONLY FOR OUTLET-TO-OUTLET BRANCH CIRCUIT WIRING IN STUD PARTITIONS OR CASEWORK; AND FOR BRANCH CIRCUIT DROPS FROM A LOCAL JUNCTION BOX ABOVE THE CEILING INTO A STUD WALL, CASEWORK, OR POWER POLE.

1. USES NOT PERMITTED INCLUDE BRANCH CIRCUIT HOME RUNS OR EXPOSED INSTALLATIONS.

1.4 INSTALLATION

A. USE SOLID CONDUCTOR FOR FEEDERS AND BRANCH CIRCUITS 12 AWG AND SMALLER.

B. USE SOLID OR STRANDED CONDUCTOR FOR FEEDERS AND BRANCH CIRCUITS 10 AWG.

C. USE STRANDED CONDUCTOR FOR FOR FEEDERS AND BRANCH CIRCUITS 8 AWG AND LARGER.

D. USE STRANDED CONDUCTORS FOR CONTROL CIRCUITS. ALL CONTROL WIRE ENDS SHALL BE TINNED OR FITTED WITH CRIMP-ON CONNECTORS.

E. USE CONDUCTOR NOT SMALLER THAN 12 AWG FOR POWER AND LIGHTING CIRCUITS.

F. USE 10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET TO THE FIRST FIXTURE OR DEVICE.

G. PULL ALL CONDUCTORS INTO RACEWAY AT SAME TIME. WIRE PULLING SHALL BE PERFORMED THROUGH THE SYSTEM IN SUCH A MANNER AS TO NOT EXCEED THE MAXIMUM TENSILE STRENGTH OF THE CABLE BEING PULLED AS ALLOWED BY NEC AND, OR THE CABLE MANUFACTURER. PULLING COMPOUND SHALL BE NON-CONDUCTIVE AND SHALL DRY TO A FINE LUBRICATING POWDER.

H. WHERE A BRANCH CIRCUIT EXTENDS THROUGH A RECEPTACLE OUTLET, ALL CONNECTING CONDUCTORS SHALL BE PIGTAILED SO AS TO PREVENT DOWNSTREAM LOADS FROM BEING CONDUCTED BY RECEPTACLE.

I. USE SUITABLE WIRE PULLING LUBRICANT FOR BUILDING WIRE 4 AWG AND LARGER.

J. SUPPORT CABLES ABOVE ACCESSIBLE CEILING, USING SPRING METAL CLIPS OR METAL CABLE TIES TO SUPPORT CABLES FROM STRUCTURE. CEILING SUSPENSION SYSTEM OR SUSPENDED GRID SYSTEMS SHALL NOT BE ALLOWED TO PROVIDE SUPPORT FOR CABLE WIRING SYSTEMS. DO NOT ALLOW CABLE TO REST ON CEILING PANELS.

K. NEATLY TRAIN AND LACE WIRING INSIDE BOXES, EQUIPMENT, AND PANELBOARDS.

L. USE SPLIT BOLT CONNECTORS FOR COPPER CONDUCTOR SPLICES AND TAPS, 6 AWG AND LARGER. TAPE UNINSULATED CONDUCTORS AND CONNECTOR WITH ELECTRICAL TAPE TO 150 PERCENT OF INSULATION RATING OF CONDUCTOR.

M. USE SOLDERLESS PRESSURE CONNECTORS WITH INSULATING COVERS FOR COPPER CONDUCTOR SPLICES AND TAPS, 8 AWG AND SMALLER.

N. USE INSULATED SPRING WIRE CONNECTORS WITH PLASTIC CAPS FOR COPPER CONDUCTOR SPLICES AND TAPS, 10 AWG AND SMALLER.

1.5 WIRE AND CABLE COLOR CODING

A. WIRE NO. 6 AWG AND SMALLER SHALL BE FACTORY COLOR-CODED. WIRE NO. 4 AWG AND LARGER MAY BE COLOR-CODED BY FIELD PAINTING OR COLOR TAPING OF 6-INCH LENGTH OF EXPOSED ENDS. CONDUCTORS HAVING WHITE, GRAY, WHITE WITH COLORED STRIPE, GREEN OR GREEN WITH COLORED STRIPE SHALL NOT BE USED TO INDICATE OTHER THAN NEUTRAL OR GROUNDING.

120/208 VOLTS	277/480 VOLTS
A = BLACK	A = BROWN
B = RED	B = ORANGE
C = BLUE	C = YELLOW
NEUTRAL = WHITE	NEUTRAL = GRAY
GROUND = GREEN	GROUND = GREEN

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

1.1 GENERAL

A. FOR ALL ALTERATIONS OR EXTENSIONS OF EXISTING SYSTEMS REQUIRED UNDER THIS PROJECT, PERFORM ALL WORK REQUIRED TO ESTABLISH AND MAINTAIN CONTINUITY OF NEUTRAL AND EQUIPMENT GROUNDING SYSTEMS IN CONFORMITY WITH NFPA 70 AND APPLICABLE SPECIFIC REQUIREMENTS.

B. GROUND EACH SEPARATELY DERIVED SYSTEM NEUTRAL TO THE NEAREST EFFECTIVELY GROUNDED BUILDING STRUCTURAL STEEL MEMBER. IF EFFECTIVELY GROUND STRUCTURAL STEEL NOT AVAILABLE, GROUND TO THE MAIN COLD WATER LINE WITHIN FIVE FEET OF THE BUILDING ENTRANCE. BOND THE NEUTRAL TO THE LOCAL METAL COLD WATER LINE AND EXPOSED STRUCTURAL STEEL AS REQUIRED IN ARTICLE 250 OF THE NEC.

C. BOND TOGETHER SYSTEM NEUTRALS, SERVICE EQUIPMENT ENCLOSURES, EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT, METAL RACEWAY SYSTEMS, GROUNDING CONDUCTOR IN RACEWAYS AND CABLES, RECEPTACLE GROUND CONNECTORS, AND PLUMBING SYSTEMS.

1.2 PERFORMANCE REQUIREMENTS

A. GROUNDING SYSTEM RESISTANCE: 5 OHMS MAXIMUM.

1.3 WIRE

A. MATERIAL: STRANDED COPPER.

B. GROUNDING ELECTRODE CONDUCTOR: SIZE TO MEET NFPA 70 REQUIREMENTS.

1.4 INSTALLATION

A. EXPOSED GROUNDING CONNECTIONS SHALL BE MADE BY MEANS OF APPROVED BRONZE CLAMPS: BUNDY HYDROID OR EQUIVALENT.

SECTION 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

1.1 REQUIREMENTS

A. FASTEN HANGER RODS, CONDUIT CLAMPS, AND OUTLET AND JUNCTION BOXES TO BUILDING STRUCTURE USING RECAST INSERT SYSTEM, EXPANSION ANCHORS, PRESET INSERTS, BEAM CLAMPS, OR SPRING STEEL CLIPS.

B. USE TOGGLE BOLTS OR HOLLOW WALL FASTENERS IN HOLLOW MASONRY, PLASTER, OR GYPSUM BOARD PARTITIONS AND WALLS; EXPANSION ANCHORS OR PRESET INSERTS IN SOLID MASONRY WALLS; SELF-DRILLING ANCHORS OR EXPANSION ANCHOR ON CONCRETE SURFACES; SHEET METAL SCREWS IN SHEET METAL STUDS; AND WOOD SCREWS IN WOOD CONSTRUCTION.

C. DO NOT FASTEN SUPPORTS TO PIPING, DUCTWORK, MECHANICAL EQUIPMENT, OR CONDUIT.

D. DO NOT USE POWDER-ACTUATED ANCHORS.

E. CONDUITS SHALL NOT BE SUPPORTED FROM THE SUPPORT WIRES OF SUSPENDED CEILING SYSTEMS

F. ELECTRICAL DEVICES OR EQUIPMENT SHALL NOT BE HUNG FROM THE ROOF DECK.

G. FABRICATE SUPPORTS FROM STRUCTURAL STEEL OR STEEL CHANNEL, RIGIDLY WELDED OR BOLTED TO PRESENT A NEAT APPEARANCE. USE HEXAGON HEAD BOLTS WITH SPRING LOCK WASHERS UNDER ALL NUTS.

H. IN WET LOCATIONS, INSTALL FREESTANDING ELECTRICAL EQUIPMENT ON CONCRETE PADS.

I. INSTALL SURFACE-MOUNTED PANELBOARDS WITH MINIMUM OF FOUR ANCHORS. PROVIDE STEEL CHANNEL SUPPORTS TO STAND CABINET ONE INCH OFF WALL.

J. BRIDGE STUDS TOP AND BOTTOM WITH CHANNELS TO SUPPORT FLUSH-MOUNTED PANELBOARDS IN STUD WALLS.

1.2 EQUIPMENT BASES

A. PROVIDE CONCRETE EQUIPMENT BASES FOR ALL FLOOR-MOUNTED ELECTRICAL EQUIPMENT ON A CONCRETE FLOOR. DIMENSIONS SHALL BE 4 INCHES HEIGHT WITH WIDTH AND LENGTH PROVIDING 4 INCHES OF PROJECTION OF BASE BEYOND OUTLINE DIMENSION OF SUPPORTED EQUIPMENT.

SECTION 260533 - RACEWAY AND BOXES FOR ELECTRICAL SYSTEM

1.1 CONDUIT REQUIREMENTS

A. MINIMUM SIZE: 1/2 INCH (EXCEPT THAT BRANCH CIRCUIT HOME RUNS TO PANELBOARD TO BE NOT LESS THAN 3/4 INCH) UNLESS OTHERWISE SPECIFIED.

B. OUTDOOR LOCATIONS, ABOVE GRADE: USE RIGID STEEL CONDUIT OR INTERMEDIATE METAL CONDUIT WHERE EXPOSED UP TO 8'-0" ABOVE FINISHED GRADE. USE ELECTRICAL METALLIC TUBING ABOVE 8'-0" ABOVE FINISHED GRADE.

C. WET AND DAMP LOCATIONS: USE RIGID STEEL CONDUIT, INTERMEDIATE METAL CONDUIT OR, ELECTRICAL METALLIC TUBING.

D. DRY LOCATIONS:

1. CONCEALED: USE RIGID STEEL CONDUIT OR INTERMEDIATE METAL CONDUIT OR ELECTRICAL METALLIC TUBING.
2. EXPOSED: USE RIGID STEEL CONDUIT OR INTERMEDIATE METAL CONDUIT UP TO 8'-0" ABOVE FINISHED FLOOR AND ELECTRICAL METALLIC TUBING ABOVE 8'-0".

1.2 CONDUIT INSTALLATION

A. INDENTER, PUSH-ON, DIE CAST, OR PRESSURE CAST ZINC ALLOY, WHITE METAL OR POT METAL FITTINGS SHALL NOT BE USED.

B. EMT CONNECTIONS IN DRY LOCATIONS SHALL BE CONCRETE-TIGHT STEEL DOUBLE SETSCREW WITH INSULATED THROAT OR STEEL COMPRESSION GLAND TYPE.

C. RIGID AND INTERMEDIATE CONDUIT CONNECTIONS SHALL BE CONCRETE-TIGHT THREADED TYPE WITH INSULATED THROAT.

D. EMT CONDUIT CONNECTIONS IN WET LOCATIONS SHALL BE INSULATED THROAT COMPRESSION CONNECTORS.

E. FLEXIBLE METALLIC TUBING CONNECTORS SHALL BE THOMAS & BETTS TITE-BITE.

F. CONDUIT SHALL NOT BE MOUNTED ON DUCTWORK OR OTHER MECHANICAL EQUIPMENT EXCEPT WHERE NECESSARY TO MAKE CONNECTIONS TO ELECTRICAL DEVICES THAT ARE PART OF OR MOUNTED ON SUCH EQUIPMENT. WHERE CONDUIT MUST BE INSTALLED ON EQUIPMENT, DO NOT COVER ACCESS DOORS, CONTROLS, REMOVABLE PANELS, OR OTHERWISE HINDER NORMAL MAINTENANCE AND REPAIR OF THE EQUIPMENT. WHERE IT IS NECESSARY TO MAKE CONDUIT CONNECTIONS TO EQUIPMENT MOUNTED ON VIBRATION MOUNTS, FLEXIBLE CONNECTION SHALL BE USED.

G. DO NOT SUPPORT CONDUIT WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE USED FOR TEMPORARY SUPPORTS

H. DO NOT ATTACH CONDUIT TO CEILING SUPPORT WIRES. SUSPENDED CEILING GRIDS SHALL NOT BE USED AS A MEANS OF SUPPORTING WIRING SYSTEMS.

I. ROUTE CONDUIT PARALLEL AND PERPENDICULAR TO WALLS.

J. MAINTAIN 12-INCH CLEARANCE BETWEEN CONDUIT AND SURFACES WITH TEMPERATURES EXCEEDING 104 DEGREES F.

K. INSTALL NO MORE THAN EQUIVALENT OF THREE 90-DEGREE BENDS BETWEEN BOXES. USE CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS. USE FACTORY ELBOWS FOR BENDS IN METAL CONDUIT LARGER THAN 2-INCH SIZE.

L. AVOID MOISTURE TRAPS; PROVIDE JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN CONDUIT SYSTEM.

M. PROVIDE SUITABLE FITTINGS TO ACCOMMODATE EXPANSION AND DEFLECTION WHERE CONDUIT CROSSES SEISMIC, CONTROL AND EXPANSION JOINTS.

N. PROVIDE SUITABLE PULL STRING IN EACH EMPTY CONDUIT EXCEPT SLEEVES AND NIPPLES.

1.3 INTERFACE WITH OTHER PRODUCTS

A. INSTALL CONDUIT TO PRESERVE FIRE RESISTANCE RATING OF PARTITION ASSEMBLIES AND OTHER ELEMENTS.

B. ROUTE CONDUIT THROUGH ROOF OPENINGS FOR PIPING AND DUCTWORK OR THROUGH SUITABLE ROOF JACK WITH PITCH POCKET.

1.4 OUTLET BOXES

A. SHEET METAL OUTLET BOXES: NEMA OS 1, GALVANIZED STEEL.

1. RECEPTACLES AND SPECIAL ELECTRICAL SYSTEM DEVICES SHALL BE MOUNTED IN 4" SQUARE BOXES OF 25 CUBIC INCH MINIMUM CAPACITY, SUITABLY FITTED WITH APPROPRIATE COVERS WHERE NECESSARY TO SET FLUSH WITH THE FINISHED SURFACE.

B. CAST BOXES: NEMA FB 1, TYPE FS, ALUMINUM OR CAST IRON, PROVIDE GASKETED COVER BY BOX MANUFACTURER. PROVIDE THREADED HUBS.

1.5 EXAMINATION

A. VERIFY EXACT LOCATIONS OF BOXES PRIOR TO ROUGH-IN.

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
Engineer
123527
Registration Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT
CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE
ELECTRICAL SPECIFICATIONS

E-201

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.

1.6 BOX INSTALLATION

A. ELECTRICAL BOXES ARE SHOWN ON DRAWINGS IN PREFERRED LOCATIONS AS INDICATED IN THE LATEST VERSION OF THE TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG). IF REQUIRED DUE TO SITE CONSTRAINTS, ADJUST BOX LOCATIONS WITHIN THE ACCEPTABLE AREAS INDICATED IN THE LATEST VERSION OF THE TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG).

B. INSTALL PULL BOXES AND JUNCTION BOXES ABOVE ACCESSIBLE CEILINGS AND IN UNFINISHED AREAS ONLY.

C. INACCESSIBLE CEILING AREAS: INSTALL OUTLET AND JUNCTION BOXES NO MORE THAN 6 INCHES FROM CEILING ACCESS PANEL.

D. COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF OUTLETS.

E. USE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS.

F. LOCATE FLUSH MOUNTING BOX IN MASONRY WALL TO REQUIRE CUTTING OF MASONRY UNIT CORNER ONLY. COORDINATE MASONRY CUTTING TO ACHIEVE NEAT OPENING.

G. DO NOT INSTALL FLUSH MOUNTED BOXES BACK-TO-BACK IN WALLS; PROVIDE MINIMUM 6 INCHES SEPARATION. PROVIDE MINIMUM 24 INCHES SEPARATION IN ACOUSTIC OR FIRE RATED WALLS.

1. FIRE RATED WALLS: IF ACCEPTABLE TO THE LOCAL AUTHORITY, BOXES MAY BE SPACED A MINIMUM OF 6 INCHES APART IF WRAPPED WITH UL CATEGORY CLIV PUTTY PADS TO PROVIDE A 1 OR 2 HOUR RATED FIRE STOP.

H. USE STAMPED STEEL BRIDGES TO FASTEN FLUSH MOUNTING OUTLET BOX BETWEEN STUDS.

I. USE ADJUSTABLE STEEL CHANNEL FASTENERS FOR HUNG CEILING OUTLET BOX.

J. DO NOT FASTEN BOXES TO CEILING SUPPORT WIRES.

K. SUPPORT BOXES INDEPENDENTLY OF CONDUIT.

L. USE GANG BOX WHERE MORE THAN ONE DEVICE IS MOUNTED TOGETHER. DO NOT USE SECTIONAL BOX. USE GANG BOX WITH PLASTER RING FOR SINGLE DEVICE OUTLETS.

M. USE CAST BOXES IN EXTERIOR LOCATIONS EXPOSED TO THE WEATHER AND IN INTERIOR WET LOCATIONS.

N. USE CAST FLOOR BOXES FOR INSTALLATIONS IN SLAB ON GRADE; FORMED STEEL BOXES ARE ACCEPTABLE FOR OTHER INTERIOR INSTALLATIONS. SET FLOOR BOXES LEVEL.

SECTION 260534 - FLOOR BOXES FOR ELECTRICAL SYSTEMS

1.1 MANUFACTURERS - FLOOR BOXES AND FLOOR- MOUNTED SERVICE FITTINGS

A. ACCEPTABLE MANUFACTURERS: WIREMOLD, HUBBELL.

1.2 FLOOR BOXES

A. FLOOR BOXES: NEMA OS 1, SEMI-ADJUSTABLE.

B. SHAPE: RECTANGULAR.

1.3 FLOOR-MOUNTED SERVICE FITTINGS

A. SURFACE TOMBSTONE TYPE SERVICE FITTING FOR COMBINATION RECEPTACLES AND COMMUNICATIONS/DATA CABLING: SATIN ALUMINUM HOUSING WITH STAINLESS STEEL DEVICE PLATES FOR RECEPTACLES AND COMMUNICATIONS/DATA PORTS AS INDICATED ON DRAWINGS.

B. POKE-THROUGH ASSEMBLY TYPE SERVICE FITTINGS: UL LISTED AS FIRE-RATED POKE-THROUGH DEVICE; INCLUDE FIRE STOPS AND SMOKE BARRIERS IN THROUGH-FLOOR COMPONENTS AS INDICATED ON DRAWINGS. TERMINATE IN 4-INCH SQUARE BY 2-1/2 INCH DEEP JUNCTION BOX.

1.4 EXAMINATION

A. VERIFY EXACT LOCATIONS OF FLOOR BOXES PRIOR TO ROUGH-IN.

B. VERIFY THAT FLOOR BOXES ARE ADJUSTED PROPERLY.

C. VERIFY THAT FLOOR BOXES AND FLOOR-MOUNTED SERVICE FITTINGS ARE IN THE PREFERRED LOCATIONS AS INDICATED IN THE LATEST VERSION OF THE TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG). IF REQUIRED DUE TO SITE CONSTRAINTS, ADJUST BOX LOCATIONS WITHIN THE ACCEPTABLE AREAS INDICATED IN THE LATEST VERSION OF THE TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG).

1.5 PREPARATION

A. CLEAN DEBRIS FROM FLOOR BOXES.

1.6 INSTALLATION

A. INSTALL DEVICES PLUMB AND LEVEL.

B. CONNECT WIRING DEVICE GROUNDING TERMINAL TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.

C. CONNECT WIRING DEVICES BY WRAPPING CONDUCTOR AROUND SCREW TERMINAL.

D. X-RAY FLOOR SLAB PRIOR TO SAW CUTTING OR CORE DRILLING FLOOR. GROUND-PENETRATING RADAR (GPR) MAY BE USED IF ACCEPTABLE TO AIRPORT AUTHORITY.

SECTION 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

1.1 GENERAL

A. DEGREASE AND CLEAN SURFACES TO RECEIVE NAMEPLATES AND TAPE LABELS.

B. INSTALL NAMEPLATES AND TAPE LABELS PARALLEL TO EQUIPMENT LINES.

C. SECURE NAMEPLATES TO EQUIPMENT FRONTS USING SCREWS, RIVETS, OR PERMANENTLY BONDING EPOXY GLUE.

D. EMBOSSED TAPE OR SELF-STICKING ADHESIVE BACKED NAMEPLATES WILL NOT BE PERMITTED FOR ANY APPLICATION.

1.2 WIRE MARKERS

A. DESCRIPTION: TAPE TYPE WIRE MARKERS.

B. LOCATIONS: EACH CONDUCTOR AT PANELBOARD GUTTERS, PULL BOXES, OUTLET AND JUNCTION BOXES, AND EACH LOAD CONNECTION.

C. IDENTIFY ALL BRANCH CIRCUIT NUMBERS OF THE CONDUCTORS CONTAINED IN JUNCTION AND PULL BOXES BY BLACK INDELIBLE MARKER PEN ON THE EXTERIOR OF THE BOX COVER.

D. PROVIDE NAMEPLATES OF MINIMUM LETTER HEIGHT LISTED BELOW:

1. PANELBOARDS: 1/4 INCH; IDENTIFY EQUIPMENT DESIGNATION. 1/8 INCH; IDENTIFY VOLTAGE RATING AND SOURCE. INSCRIPTIONS SHALL INDICATE THE PANEL NAME, VOLTAGE, PHASE, WIRE, FEEDER SIZE AND FEEDER SOURCE.
2. TRANSFORMERS: 1/4 INCH; IDENTIFY EQUIPMENT DESIGNATION. 1/8 INCH; IDENTIFY PRIMARY AND SECONDARY VOLTAGES, PRIMARY SOURCE, AND SECONDARY LOAD AND LOCATION.
3. DEVICE PLATES: USE KORY OR BROTHER TYPE TAPE LABELS ON THE EXTERIOR OF EACH WALL PLATE TO IDENTIFY THE CIRCUIT SERVING THE DEVICE.
4. COLOR AND SIZE OF NAMEPLATES SHALL MATCH AIRPORT STANDARDS AND SPECIFICATIONS.

SECTION 262200 - LOW VOLTAGE TRANSFORMERS

1.1 MANUFACTURERS - DRY TYPE TRANSFORMERS

A. ACCEPTABLE MANUFACTURERS: CUTLER HAMMER, GENERAL ELECTRIC, SQUARE D, SIEMENS, HAMMOND POWER SOLUTIONS OR PER MANUFACTURER STATED IN AIRPORT STANDARDS AND SPECIFICATIONS.

1.2 TWO-WINDING TRANSFORMERS

A. DESCRIPTION: NEMA ST 20, FACTORY-ASSEMBLED, AIR-COOLED DRY TYPE TRANSFORMERS, COPPER WINDINGS, RATINGS AS INDICATED.

B. INSULATION SYSTEM AND AVERAGE WINDING TEMPERATURE RISE FOR RATED KVA AS FOLLOWS:

1. 1-15 KVA: CLASS 185 WITH 115 DEGREES C RISE.
2. 16-500 KVA: CLASS 220 WITH 115 DEGREES C RISE.

C. WINDING TAPS:

1. TRANSFORMERS LESS THAN 15 KVA: TWO 5 PERCENT BELOW RATED VOLTAGE, FULL CAPACITY TAPS ON PRIMARY WINDING.
2. TRANSFORMERS 15 KVA AND LARGER: TWO 2-1/2% FULL CAPACITY TAPS ABOVE AND FOUR 2-1/2% FULL CAPACITY TAPS BELOW RATED PRIMARY VOLTAGE.

D. SOUND LEVELS: NEMA ST 20.

E. MOUNTING:

1. 1-15 KVA: SUITABLE FOR WALL MOUNTING.
2. 16-75 KVA: SUITABLE FOR WALL, FLOOR, OR TRAPEZE MOUNTING.
3. LARGER THAN 75 KVA: SUITABLE FOR FLOOR MOUNTING.

1.3 INSTALLATION

A. USE FLEXIBLE CONDUIT 2 FEET MINIMUM LENGTH, FOR CONNECTIONS TO TRANSFORMER CASE. MAKE CONDUIT CONNECTIONS TO SIDE PANEL OF ENCLOSURE.

B. MOUNT FLOOR-MOUNTED TRANSFORMERS ON VIBRATION ISOLATING PADS SUITABLE FOR ISOLATING THE TRANSFORMER NOISE FROM THE BUILDING STRUCTURE.

C. MEASURE PRIMARY AND SECONDARY VOLTAGES AND MAKE APPROPRIATE TAP ADJUSTMENTS.

SECTION 262416 - PANELBOARDS

1.1 MANUFACTURERS - PANELBOARDS

A. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, CUTLER-HAMMER, SQUARE D, SIEMENS OR PER MANUFACTURER STATED IN AIRPORT STANDARDS AND SPECIFICATIONS.

1.2 BRANCH CIRCUIT PANELBOARDS.

A. DESCRIPTION: NEMA PB1, CIRCUIT BREAKER TYPE, LIGHTING AND APPLIANCE BRANCH CIRCUIT PANELBOARD.

B. PANELBOARD BUS: COPPER, RATINGS AS INDICATED. PROVIDE COPPER GROUND BUS IN EACH PANELBOARD. PROVIDE INSULATED GROUND BUS WHERE SCHEDULED.

C. MAIN BREAKERS SHALL BE INDIVIDUALLY MOUNTED. BRANCH MOUNTED MAIN BREAKERS WILL NOT BE ALLOWED.

D. MINIMUM INTEGRATED SHORT CIRCUIT RATING: SHALL BE ADEQUATE FOR THE AVAILABLE FAULT CURRENT AT THE PANEL. SERIES RATED EQUIPMENT WILL NOT BE ACCEPTABLE.

E. MOLDED CASE CIRCUIT BREAKERS: NEMA AB 1, BOLT-ON TYPE THERMAL MAGNETIC TRIP CIRCUIT BREAKERS, WITH COMMON TRIP HANDLE FOR ALL POLES. DO NOT USE TANDEM CIRCUIT BREAKERS.

F. CABINET FRONT: CABINET FRONT SHALL BE DOOR-IN-HINGED COVER TYPE METAL DIRECTORY FRAME, AND FLUSH LOCK ALL KEYED ALIKE OR PER TYPE STATED IN AIRPORT STANDARDS AND SPECIFICATIONS. FINISH IN MANUFACTURER'S STANDARD GRAY ENAMEL.

1.3 INSTALLATION

A. HEIGHT: 6 FEET TO TOP OF PANELBOARD; INSTALL PANELBOARDS TALLER THAN 6 FEET WITH BOTTOM NO MORE THAN 4 INCHES ABOVE FLOOR.

B. PROVIDE FILLER PLATES FOR UNUSED SPACES IN PANELBOARDS.

C. MEASURE STEADY STATE LOAD CURRENTS AT EACH PANELBOARD FEEDER; REARRANGE CIRCUITS IN THE PANELBOARD TO BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER. MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS.

D. PROVIDE TYPED CIRCUIT DIRECTORY FOR EACH BRANCH CIRCUIT PANELBOARD. REVISE DIRECTORY TO REFLECT CIRCUITING CHANGES REQUIRED TO BALANCE PHASE LOADS, OR TO INDICATE CHANGES AS THE RESULT OF REMODELING.

SECTION 262723 - INDOOR SERVICE POLES

1.1 MANUFACTURERS - INDOOR SERVICE POLES

A. ACCEPTABLE MANUFACTURERS: WIREMOLD, HUBBELL.

1.2 INDOOR SERVICE POLES

A. MAIN BODY: TWO-CHANNEL COMPARTMENTALIZED STEEL OR ALUMINUM CONSTRUCTION. MATERIAL TO MATCH AIRPORT STANDARD FINISHES IN AREA OF INSTALLATION.

B. FINISH: COLOR TO MATCH AIRPORT STANDARD FINISHES IN AREA OF INSTALLATION.

C. COVER PLATES: MATERIAL AND COLOR TO MATCH AIRPORT STANDARD FINISHES IN AREA OF INSTALLATION.

D. FOOT: SUITABLE FOR FLOOR FINISH.

E. RECEPTACLES, COMMUNICATIONS AND DATA JACKS AS INDICATED ON DRAWINGS.

F. WIRE UTILITY COLUMN WITH 12 AWG COPPER CONDUCTOR TO OUTLET BOX ATTACHED TO TOP OF POLE.

G. FLEXIBLE CABLE ASSEMBLY WITH CONNECTOR FOR BRANCH CIRCUIT CONNECTORS.

H. TRIM PLATES FOR CLOSING CEILING OPERATIONS.

1.3 EXAMINATION

A. VERIFY THAT THE INSTALLATION OF CEILING SUSPENSION SYSTEM IS COMPLETE.

B. VERIFY THAT FLOOR COVERING INSTALLATION IS COMPLETE.

C. VERIFY THAT BRANCH CIRCUIT WIRING INSTALLATION IS COMPLETED, TESTED, AND READY FOR CONNECTION TO WIRING DEVICES.

D. VERIFY THAT UTILITY POLES ARE IN THE PREFERRED LOCATIONS AS INDICATED IN THE LATEST VERSION OF THE TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG). IF REQUIRED DUE TO SITE CONSTRAINTS, ADJUST UTILITY POLES LOCATIONS WITHIN THE ACCEPTABLE AREAS INDICATED IN THE LATEST VERSION OF THE TRANSPORTATION SECURITY ADMINISTRATION CHECKPOINT REQUIREMENTS AND PLANNING GUIDE (CRPG).

1.4 INSTALLATION

A. INSTALL UTILITY POLE PLUMB AND LEVEL.

SECTION 262726 - WIRING DEVICES

1.1 MANUFACTURERS - RECEPTACLES

A. ACCEPTABLE MANUFACTURERS: LEVITON, PASS & SEYMOUR, COOPER WIRING DEVICES, HUBBELL, BRYANT.

1.2 RECEPTACLES

A. DESCRIPTION: NEMA WD 1, HEAVY-DUTY GENERAL USE RECEPTACLE.

B. DEVICE BODY: NYLON FACE. COLOR TO MATCH AIRPORT STANDARD FINISHES FOR AREA OF INSTALLATION.

C. RECEPTACLE: AS INDICATED ON DRAWINGS.

1.3 WALL PLATES

A. COVER PLATE: MATERIAL AND COLOR TO MATCH AIRPORT STANDARD FINISHES FOR AREA OF INSTALLATION.

SECTION 262813 - FUSES

1.1 MANUFACTURERS - FUSES

A. ACCEPTABLE MANUFACTURERS: BUSSMANN, LITTELFUSE, GENERAL ELECTRIC, GOULD, RELIANCE.

1.2 FUSE REQUIREMENTS

A. FUSES PROTECTING POWER PANELS AND DRY TYPE TRANSFORMERS SHALL BE DUAL ELEMENT TIME-DELAY TYPE. FUSES SHALL BE AS FOLLOWS (BUSSMANN NUMBERS ARE INDICATED FOR REFERENCE):

1. 200 AMPS OR LESS - CLASS RK5 FUSETRON FRN-R (250V), FRS-R (600V)
2. 225 AMPS TO 600 AMPS - CLASS J LOW-PEAK LPJ (600V)

SECTION 262819 - ENCLOSED SWITCHES

1.1 MANUFACTURERS - FUSIBLE AND NON-FUSIBLE SWITCH ASSEMBLIES

A. ACCEPTABLE MANUFACTURERS: CUTLER HAMMER, GENERAL ELECTRIC, SQUARE D, SIEMENS.

B. DESCRIPTION: NEMA KS 1, TYPE HD ENCLOSED LOAD INTERRUPTER KNIFE SWITCH. HANDLE LOCKABLE IN OFF POSITION. POSITIVE TYPE INTERLOCK DOOR. HORSEPOWER RATED (NOTE THAT HP RATING OF SWITCH MUST BE EQUAL TO OR GREATER THAN HP RATING OF MOTOR OR EQUIVALENT EQUIPMENT LOADS).

C. FUSE PROVISIONS ON FUSIBLE SWITCHES: DESIGNED TO ACCOMMODATE NEMA FUN, CLASS R AND J FUSES.

1.2 ENCLOSURES

A. FABRICATION: NEMA KS 1.

1. INTERIOR DRY LOCATIONS: TYPE 1.
2. EXTERIOR LOCATIONS: TYPE 3R.

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
registration number
05/10/22
date

MQT
SAWYER INTERNATIONAL AIRPORT
CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

ELECTRICAL SPECIFICATIONS

E-202

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.

TELECOMMUNICATION SPECIFICATIONS

SECTION 271513 - COMMUNICATIONS COPPER HORIZONTAL CABLING

PART 1 GENERAL

1.1 SUMMARY

A. SECTION CONSISTS OF FURNISHING ALL EQUIPMENT, SUPPLIES AND MATERIALS, TOOLS, SERVICES AND FACILITIES AND IN PERFORMING INSTALLATION OF HORIZONTAL CABLING AND OUTLETS IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS, EXCEPT AS SPECIFICALLY NOTED OTHERWISE.

B. ALL WORK SHALL COMPLY WITH BICSI, EIA-TIA AND TSA STANDARDS FOR INSTALLATION.

C. THE WORK OF THIS SECTION SHALL INCLUDE, BUT NOT BE LIMITED TO INSTALLATION OF THE FOLLOWING:

1. TELECOMMUNICATIONS CONNECTORS.
2. TELECOMMUNICATIONS OUTLETS AND FACEPLATES.
3. CATEGORY 6, UNSHIELDED TWISTED-PAIR HORIZONTAL DATA CABLES.

1.2 REFERENCES

A. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST ISSUE OF ALL INDUSTRY STANDARDS, PUBLICATIONS, OR REGULATIONS REFERENCED IN THIS SECTION.

B. ANSI/TIA/EIA-568-B.1 AND ADDENDA - COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD PART 1 GENERAL REQUIREMENTS.

C. ANSI/TIA/EIA-568-B.2 AND ADDENDA - COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD PART 2 BALANCED TWISTED PAIR.

D. ANSI/TIA/EIA-568-B.2-1 AND ADDENDA - COMPONENT SPECIFICATIONS AND REFERENCE TO B.1 FOR INSTALLATION GUIDELINES.

E. ANSI/EIA/TIA-569 B AND ADDENDA - COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAYS AND SPACES.

F. ANSI/TIA/EIA-606-A AND ADDENDA - ADMINISTRATION STANDARD FOR THE TELECOMMUNICATIONS INFRASTRUCTURE OF COMMERCIAL BUILDINGS.

G. ANSI/TIA/EIA-607-A AND ADDENDA - GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS IN COMMERCIAL BUILDINGS.

H. NFPA 70 - NATIONAL ELECTRICAL CODE.

I. TSA STANDARDS AND CHECKPOINT REQUIREMENTS AND PLANNING GUIDE. (CRPG)

J. CONTRACTOR TO REFERENCE CONSTRUCTION DRAWINGS FOR PROJECT SPECIFIC SPECIFICATION REQUIREMENTS.

K. CONTRACTOR TO REVIEW TELECOM CABLING ONE LINE DIAGRAM FOR SPECIFIC DEVICE CABLING REQUIREMENTS FROM THE TSA CABINET TO EQUIPMENT ENDS, AS WELL AS ANY POINT TO POINT EQUIPMENT CABLING REQUIREMENTS.

L. CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ANY SITE SPECIFIC, AIRPORT, CITY AND STATE INSTALLATION STANDARDS AND CODES. ALL SITE SPECIFIC STANDARDS AND GUIDELINES MAY NOT BE SHOWN ON CONSTRUCTION DRAWING SETS.

M. CONTRACTOR TO REFERENCE ELECTRICAL DRAWINGS FOR PATHWAY DEVICE SPECIFICATIONS AND COORDINATION.

1.3 INSTALLATION

A. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN COMPLIANCE WITH TIA/EIA CATEGORY 6 TELECOMMUNICATIONS STANDARDS, AS SPECIFIED IN THE REFERENCES SECTION.

B. THE INSTALLATION SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE NEC, OSHA AND THE RULES, REGULATIONS AND REQUIREMENTS OF THE FCC.

C. THE INSTALLATION SHALL COMPLY WITH FEDERAL, CITY, COUNTY AND STATE LAWS, ORDINANCES, REGULATIONS, AND CODES APPLICABLE TO THE INSTALLATION.

D. THE LOCATIONS OF STUB-UPS, OUTLETS, PANELS, EQUIPMENT RACKS AND OTHER RELATED PRODUCTS AS INDICATED ON THE DRAWINGS ARE APPROXIMATELY CORRECT AND ARE UNDERSTOOD TO BE SUBJECT TO SUCH REVISION AS MAY BE FOUND NECESSARY OR DESIRABLE AT THE TIME OF INSTALLATION. CONTRACTOR SHOULD HAVE PRECISE AND DEFINITE LOCATIONS ACCEPTED BY THE OWNER BEFORE PROCEEDING WITH THE INSTALLATION.

E. HORIZONTAL CABLING SHALL NOT BE SPLICED BUT MUST BE CONTINUOUS FROM THE TSA IT CABINET TO THE DEVICE EQUIPMENT END.

F. THE PROXIMITY OF HORIZONTAL CABLING TO ELECTRICAL FACILITIES THAT GENERATE HIGH LEVELS OF ELECTROMAGNETIC INTERFERENCE (EMI) SHALL BE TAKEN INTO ACCOUNT. THESE FACILITIES INCLUDE, BUT ARE NOT LIMITED TO COPIERS, MOTORS, TRANSFORMERS AND FLUORESCENT LIGHTING. TIA/EIA 569 STANDARDS SHALL PROVIDE SEPARATION REQUIREMENTS.

G. THE MAXIMUM PULLING TENSIONS FOR 4-PAIR, 24 AWG HORIZONTAL UTP CABLES SHOULD NOT EXCEED 25 POUNDS PER CABLE.

H. ALL HORIZONTAL CABLES SHALL BE TERMINATED ACCORDING TO THE TIA/EIA T568B WIRING SCHEME.

I. THE CONNECTING HARDWARE USED SHALL BE INSTALLED TO PROVIDE MINIMAL SIGNAL IMPAIRMENT BY PRESERVING WIRE PAIR TWISTS AS CLOSELY AS POSSIBLE TO THE POINT OF MECHANICAL TERMINATION. THE AMOUNT OF UNTWISTING IN A PAIR AS A RESULT OF TERMINATION TO CONNECTING HARDWARE SHALL BE NO GREATER THAN 0.25 INCHES.

PART 2 PRODUCTS

2.1 GENERAL

A. PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE DURING STORAGE AT THE SITE AND THROUGHOUT THE CONSTRUCTION PERIOD. EQUIPMENT AND MATERIALS SHALL BE PROTECTED DURING SHIPMENT AND STORAGE AGAINST PHYSICAL DAMAGE, DIRT, MOISTURE, COLD AND RAIN. IF ITEMS ARE DAMAGED, DO NOT INSTALL, BUT TAKE IMMEDIATE STEPS TO OBTAIN REPLACEMENT.

2.2 HORIZONTAL CABLING

A. GENERAL

1. THE CABLE SHALL MEET ALL REQUIREMENTS OF ANSI/TIA/EIA-568B.
2. THE CABLE SHALL MEET ALL REQUIREMENTS OF ANSI/ICEA PUBLICATION S-80-576 THAT ARE APPLICABLE TO FOUR-PAIR INSIDE WIRING CABLE FOR PLENUM WITHIN A BUILDING.
3. HORIZONTAL DATA CABLING SHALL BE CATEGORY 6, 4-PAIR UTP CABLING WITH MANUFACTURES TRANSMISSION CHARACTERISTICS SPECIFIED UP TO 250 MHZ.
4. PLENUM RATED CABLE SHALL BE USED IN PLENUM RATED SPACES.

B. MANUFACTURER:

1. SIEMON CABLING SOLUTIONS
2. COMMSCOPE UNIPRISE
3. OR APPROVED EQUIVALENT.

2.3 TELECOMMUNICATION OUTLET/CONNECTIONS

A. GENERAL

1. THE TELECOMMUNICATIONS OUTLET/CONNECTORS SHALL CONSIST OF 8-POSITION, MODULAR RJ-45 JACKS FOR DATA AND VOICE.
2. ALL OUTLETS SHALL BE PRODUCED BY THE SAME MANUFACTURER AND SHALL BE DESIGNED TO SNAP INTO AND OUT OF THE FACEPLATE.
3. THE OUTLETS SHALL TERMINATE THE HORIZONTAL CABLES USING INSULATION DISPLACEMENT TYPE CONTACTS (IDC).
4. THE OUTLETS SHALL SUPPORT TIA/EIA T568B COLOR-CODING FOR TERMINATING THE HORIZONTAL CABLES.
5. THE VOICE AND DATA OUTLETS SHALL BE HIGH-DENSITY MODULAR JACKS FOR HIGH-SPEED NETWORK APPLICATIONS USING DATA TRANSMISSION RATES WITH FREQUENCIES UP TO 250 MHZ.
6. THE OUTLETS SHALL BE ANSI/TIA/EIA 568B CERTIFIED AND FULLY COMPLY WITH ANSI/TIA/EIA- 568B TRANSMISSION REQUIREMENTS.
7. MANUFACTURER:

a. SIEMON CABLING SOLUTIONS
b. COMMSCOPE UNIPRISE
c. OR APPROVED EQUIVALENT

2.4 OUTLET FACEPLATES

A. STANDARD FACEPLATE

1. GENERAL

a. PROVIDE WALL, RECESSED AND FLUSH FLOOR POKE, MONUMENT, MOUNTED FACEPLATES FOR THE WORKSTATION OUTLETS AS SHOWN ON THE DRAWINGS. FACEPLATE COLORS SHALL MATCH ELECTRICAL AND EXISTING CONDITIONS. FACEPLATES SHALL BE COORDINATED WITH TSA AND AIRPORT OFFICIALS.
b. ALL UNUSED PORTS SHALL BE FILLED WITH BLANK INSERTS.
c. ALL FACEPLATE TYPES SHALL PROVIDE DESIGNATION LABELS WITH PROTECTIVE CLEAR PLASTIC COVERS, OR EQUIVALENT, FOR CIRCUIT IDENTIFICATION.
d. DESIGNATION LABELS FOR FACEPLATES SHALL BE TYPED AND NOT HANDWRITTEN.

2. MANUFACTURER:

a. SIEMON CABLING SOLUTIONS
b. COMMSCOPE UNIPRISE
c. OR APPROVED EQUIVALENT.

PART 3 EXECUTION

3.1 CABLE AND CONDUIT INSTALLATION REQUIREMENTS

A. PRIOR TO CUTTING, DRILLING, CORING, OR OTHERWISE DISRUPTING ANY EXISTING STRUCTURAL ENTITY, THE CONTRACTOR MUST COORDINATE WITH THE AIRPORT AND TSA TO DETERMINE IF THERE IS THE PRESENCE OF ANY HAZARDOUS MATERIALS SUCH AS ASBESTOS, LEAD BASED PAINTS OR ANY OTHER TYPE OF CONTAMINATED BUILDING MATERIALS.

B. ALL CEILING AND FLOOR PENETRATIONS MUST BE PROPERLY FIRE-STOPPED TO MAINTAIN THE FIRE RATING PRIOR TO PENETRATIONS.

C. CONTRACTOR TO COORDINATE ALL PATHWAYS AND PATHWAY DEVICES WITH THE ELECTRICAL CONTRACTOR PRIOR TO ROUGH IN.

3.2 TESTING AND VISUAL INSPECTION CABLE INFRASTRUCTURE

A. VISUALLY INSPECT CONNECTIONS ON CABLE TO INSURE PROPER COMPLIANCE WITH EIA/TIA 568B TERMINATION.

1. CONNECTORS MARKED AS CAT 6 COMPLIANT.
2. PROPER COLOR-CODING CHECKED ON CONNECTORS.
3. PAIRS SHALL HAVE NO MORE THAN 1/2" OF FACTORY TWIST AT ANY CONNECTING POINT.
4. OUTER SHEATH SHALL EXTEND BEYOND THE POINT OF PHYSICAL RESTRAINT OR CLAMP ON ANY CONNECT.

B. INSPECT ALL EXPOSED PORTIONS OF THE CABLE TO INSURE A MINIMUM OF 4 TIMES THE CABLE DIAMETER BEND RADIUS AT ANY POINT.

C. ENSURE NO CABLE BUNDLES OR TIE POINTS DISPLAY KINKS, SHARP BENDS, CREASING OR DEFORMATION OF OUTER SHEATH, OR SIGNS OF EXCESSIVE PULLING FORCE.

D. EQUIP ALL CONDUIT ENDS WITH BUSHING OR OTHER ABRASIONS PREVENTING DEVICES. CAT 6, FIRE RATING, AND UL CLASSIFICATIONS SHALL BE PRESENT ON ALL CABLES.

E. ENSURE PROPER CABLE IDENTIFICATION NUMBER, WIRING CLOSET, AND OTHER NECESSARY MARKINGS ARE VISIBLE AT EACH END OF SINGULAR CABLES AND AT EACH MULTI-PAIR TRANSITION OR CROSS-CONNECTION POINT OR JUMPER. LABELS SHALL BE MADE WITH A FACTORY PRINTER APPROVED FOR THE PURPOSE AND WILL BE PLACED AS CLOSE AS PRACTICABLE TO THE TERMINATION POINT AT EACH END (NOT MORE THAN 2 INCHES FROM END OF THE SHEATH AND THE EXPOSED TWISTED PAIR). PRINTED INFORMATION ON LABEL SHOULD FACE UPWARD FOR EASE OF READING.

3.3 CERTIFICATION REQUIREMENTS

A. ALL EXISTING CATEGORY CAT 6 CABLE MUST BE TESTED AND SHALL BE IN COMPLIANCE TO CAT 6 STANDARDS AS PER TIA/EIA TSB 67. CATEGORY 6 CABLE SHALL BE IN COMPLIANCE TO 6 STANDARDS AS PER TIA/EIA TSB 67. ALL CABLE TESTING SHALL BE ACCOMPLISHED WITH A LEVEL 2-TEST SET CAPABLE OF 250 MHZ OR HIGHER FOR CERTIFICATION.

3.4 TESTING FIBER OPTIC CIRCUITS

A. TESTING WILL INVOLVE ALL FIBER OPTIC MATERIAL AND COMPONENTS COMPRISING THE BACKBONE SYSTEM. TESTING SHOULD INCLUDE ALL LC CONNECTING HARDWARE IN THE IDFS AND MDF. ACCEPTABLE LEVELS OF ATTENUATION FOR TERMINATED FIBER CABLES ARE DEFINED AS THOSE THAT ARE EQUAL TO OR FALL BELOW EXPECTED LEVELS. EXPECTED LEVELS ARE DETERMINED BY CALCULATING THE ATTENUATION OF THE CABLE ACCORDING TO MANUFACTURER'S SPECIFICATIONS (AND ITS KNOWN LENGTH) AND BY ADDING TO THAT CALUE 0.8 DB LOSS FOR EACH PAIR OF MATED LC CONNECTORS. IF ATTENUATION VALUES OF THE EQUIPMENT ARE IN EXCESS, THE INSTALLER WILL CORRECT AND RETEST.

B. TEST ALL FIBERS IN BOTH DIRECTIONS. THE PROPER TOOL TO PERFORM FIBER OPTIC TESTING IS AN OPTICAL TIME DOMAIN REFLECTOMETER (OTDR) OR APPROVED OPTICAL LOSS TEST SET OPERATING AT BOTH 1310 AND 1550 NM WAVELENGTH.

SECTION 281300 - ACCESS CONTROL

PART 1 GENERAL

1.1 SUMMARY

A. SECTION INCLUDES SECURITY DURESS DEVICES AND CONTROL PANEL, AND SIGNAL AND CONTROL WIRING.

B. ALL WORK SHALL COMPLY WITH BICSI, EIA-TIA AND TSA STANDARDS FOR INSTALLATION.

1.2 REFERENCES

A. NATIONAL FIRE PROTECTION ASSOCIATION:

1. NFPA 262 - STANDARD METHOD OF TEST FOR FLAME TRAVEL AND SMOKE OF WIRES AND CABLES FOR USE IN AIR-HANDLING SPACES.
2. NFPA 70 - NATIONAL ELECTRIC CODE
3. NFPA 101 - LIFE SAFETY CODE

B. LOCAL AIRPORT AMENDMENTS.

C. BICSI STANDARDS (REFER TO TELECOMMUNICATIONS SPECIFICATIONS)

D. TSA STANDARDS AND CHECKPOINT REQUIREMENTS AND PLANNING GUIDE. (CRPG)

E. CONTRACTOR TO REFERENCE CONSTRUCTION DRAWINGS FOR PROJECT SPECIFIC SPECIFICATION REQUIREMENTS.

1.3 SYSTEM DESCRIPTION

A. SECURITY ACCESS SYSTEM: PANIC AND DURESS BUTTONS LOCATED ON EACH X-RAY LANE FOR USE BY TSA PERSONNEL IN THE EVENT OF AN EMERGENCY.

B. CONTRACTOR TO USE EXISTING DEVICES AND WIRING WHEREVER POSSIBLE.

1.4 QUALITY ASSURANCE

A. PROVIDE WIRING MATERIALS LOCATED IN PLENUMS WITH PEAK OPTICAL DENSITY NOT GREATER THAN 0.5, AVERAGE OPTICAL DENSITY NOT GREATER THAN 0.15, AND FLAME SPREAD NOT GREATER THAN 5 FEET (1.5 M) WHEN TESTED IN ACCORDANCE WITH NFPA 262.

B. PERFORM WORK IN ACCORDANCE WITH NEC, LOCAL CITY, BICSI, AND MANUFACTURER'S REQUIREMENTS.

C. MAINTAIN ONE COPY OF EACH DOCUMENT ON SITE.

D. CONTRACTOR TO ENSURE MATCHING SYSTEM DEVICES AND COMPLETE INTEGRATION AND FUNCTIONALITY INTO CURRENT AIRPORT SYSTEM.

1.5 QUALIFICATIONS

A. MANUFACTURER: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS DOCUMENTED EXPERIENCE.

B. INSTALLER: CERTIFIED SECURITY SYSTEM INSTALLER WITH SERVICE FACILITIES WITHIN 100 MILES OF PROJECT.

PART 2 PRODUCTS

2.1 PANIC DURESS BUTTONS

A. MANUFACTURERS:

1. MATCH EXISTING CONDITIONS.
2. OR APPROVED EQUIVALENT.

2.2 WIRE AND CABLE

A. MANUFACTURERS:

1. BELDEN
2. WEST PENN
3. OR APPROVED EQUIVALENT.

PART 3 EXECUTION

3.1 INSTALLATION.

A. INSTALL CONDUIT AND WIRING CONNECTIONS TO PANIC AND DURESS DEVICES.

3.2 FIELD QUALITY CONTROL

A. TEST IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

SECTION 282300 - VIDEO SURVEILLANCE

PART 1 GENERAL

1.1 SUMMARY

A. SECTION INCLUDES STATIONARY CAMERAS, CONTROL EQUIPMENT, AND ACCESSORIES.(NEW)

B. RE-POSITION EXISTING CAMERA LOCATIONS TO MEET THE LANE ADJUSTMENTS TO ENSURE PROPER LANE COVERAGE.

C. ALL WORK SHALL COMPLY WITH BICSI, EIA-TIA AND TSA STANDARDS FOR INSTALLATION.

1.2 REFERENCES

A. TSA STANDARDS AND CHECKPOINT REQUIREMENTS AND PLANNING GUIDE. (CRPG)

B. CONTRACTOR TO REFERENCE CONSTRUCTION DRAWINGS FOR PROJECT SPECIFIC SPECIFICATION REQUIREMENTS.

1.3 SYSTEM DESCRIPTION

A. DESCRIPTION: VIDEO SURVEILLANCE AND MONITORING AT POINTS AS INDICATED ON DRAWINGS.

B. CAPACITY:

1. CAMERAS: TBD.
2. MONITORS: DISTRIBUTED OVER NETWORK, AS REQUIRED.

C. CONFIGURATION: ALL CAMERAS SHALL MATCH EXISTING AIRPORT SYSTEMS.

D. CONTRACTOR/INTEGRATOR SHALL BE RESPONSIBLE FOR INTEGRATING NEW DEVICES INTO EXISTING SYSTEMS, INCLUDING ADDED STORAGE CAPACITIES AND HEADEND UPGRADES IF NEEDED.

1.4 QUALIFICATIONS

A. MANUFACTURER: COMPANY SPECIALIZING IN MANUFACTURING PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE YEARS EXPERIENCE, AND WITH SERVICE FACILITIES WITHIN 100 MILES OF PROJECT.

B. INSTALLER: AUTHORIZED INSTALLER OF SPECIFIED MANUFACTURER WITH SERVICE FACILITIES WITHIN 100 MILES OF PROJECT.

1.5 ENVIRONMENTAL REQUIREMENTS

A. CONFORM TO MANUFACTURER'S STANDARD SERVICE CONDITIONS DURING AND AFTER INSTALLATION OF COMPONENTS.

1.6 FIELD MEASUREMENTS

A. VERIFY FIELD MEASUREMENTS PRIOR TO FABRICATION.

1.7 MAINTENANCE SERVICE

1.8 MAINTENANCE OF VIDEO SURVEILLANCE SYSTEM FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.

PART 2 PRODUCTS

2.1 CAMERAS

A. MANUFACTURERS:

1. AXIS
2. PELCO
3. OR APPROVED EQUIVALENT.

B. PRODUCT DESCRIPTION: GENERAL PURPOSE VIDEO CAMERA FOR INTERIOR APPLICATIONS.

C. HOUSING: ALL HOUSINGS SHALL BE DOME STYLE, WITH ENVIRONMENTAL ENCLOSURES FOR GARAGE AND EXTERIOR LOCATIONS.

PART 3 EXECUTION

3.1 INSTALLATION

A. GROUND AND BOND VIDEO SURVEILLANCE EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATION.

3.2 ADJUSTING

A. ADJUST MANUAL LENS IRISES TO MEET LIGHTING CONDITIONS. AIM CAMERAS FOR OPTIMUM COVERAGE AND PER OWNER'S REQUIREMENTS

END OF SECTION

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
05/10/22

MQT
SAWYER INTERNATIONAL AIRPORT
CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

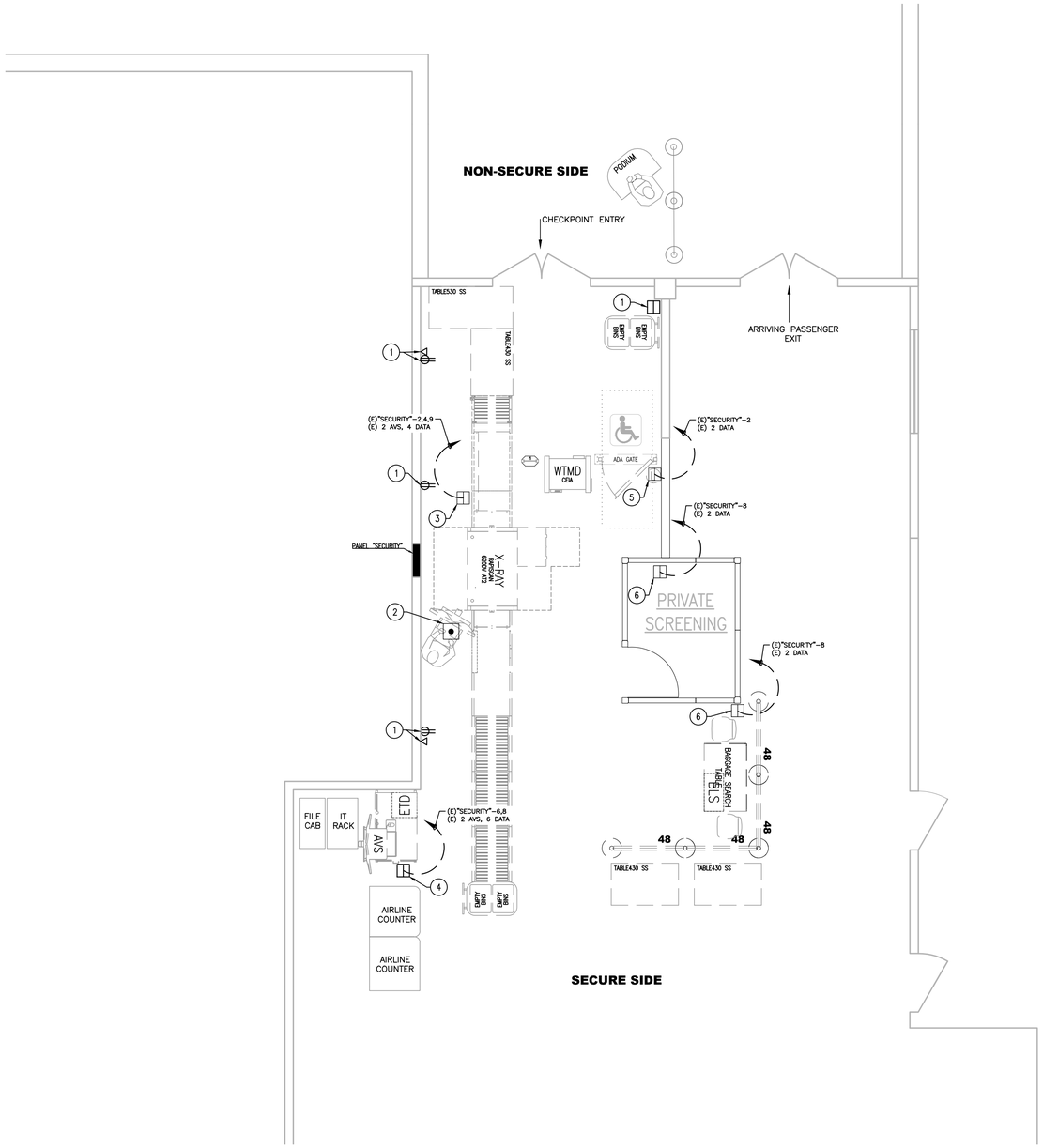
MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE
TELECOMMUNICATIONS SPECIFICATIONS

E-203

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.



1 MAIN TERMINAL CHECKPOINT ELECTRICAL PLAN - DEMOLITION

SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

A. REFER TO SHEET A-001, A-002, AND E-001 FOR EQUIPMENT DESCRIPTIONS, TAGS, ABBREVIATIONS, AND GENERAL NOTES.

B. REFER TO E-003 FOR ELECTRICAL DEVICE CONFIGURATION TYPE.

C. ELECTRICAL DEVICES AT THIS CHECKPOINT IS FED BY ELECTRICAL PANEL "SECURITY", LOCATED WITHIN THE CHECKPOINT, APPROXIMATELY 5' FROM LANE 1.

D. FIELD VERIFY CIRCUITS, PANEL, AND IT CABINET LOCATIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES. IT CABINET IS LOCATED WITHIN THE CHECKPOINT, APPROXIMATELY 10' FROM LANE 1.

E. REFER TO SHEETS E-002 AND E-004 FOR GENERAL ELECTRICAL NOTES AND PREFERRED DEVICE LOCATIONS.

F. REFER TO SHEET E-601 FOR THE PANEL SCHEDULES.

G. CIRCUITS NOTED WITH (E) ARE EXISTING CIRCUITS TO REMAIN OR RELOCATED AS NOTED.

DEMOLITION NOTES BY SYMBOL "(#)"

1. EXISTING POWER, DATA OUTLET(S) AND/OR DURESS ALARM SHALL REMAIN; NO NEW WORK REQUIRED.

2. COORDINATE WITH AIRPORT AUTHORITY AND LOCAL TSA TO RELOCATE DURESS ALARM.

3. DE-ENERGIZE, REMOVE AND RETAIN POWER POLE. RETAIN EXISTING CIRCUIT(S) AND (2) AVS (4) DATA OUTLETS FOR RELOCATION AS SHOWN ON SHEET EPN101.

4. DE-ENERGIZE AND REMOVE CIRCUIT "SECURITY"-8 TO THE NEAREST DEVICE. RETAIN EXISTING POWER POLE, CIRCUIT "SECURITY"-6, AND (2) AVS (4) DATA OUTLETS. REFER TO SHEET EPN101 FOR ADDITIONAL WORK. REMOVE (2) DATA OUTLETS AND CABLING FOR RELOCATION AS SHOWN ON SHEET EPN101.

5. DE-ENERGIZE AND REMOVE POWER POLE. REMOVE EXISTING CIRCUIT TO THE NEAREST DEVICE. RETAIN DATA OUTLETS FOR RELOCATION AS SHOWN ON SHEET EPN101.

6. DE-ENERGIZE, REMOVE AND RETAIN POWER POLE. RETAIN EXISTING CIRCUIT(S) AND (2) DATA OUTLETS FOR RELOCATION AS SHOWN ON SHEET EPN101.

PLAN NORTH

TRUE NORTH

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

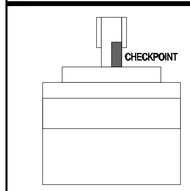
INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT

SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202



KEY PLAN

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

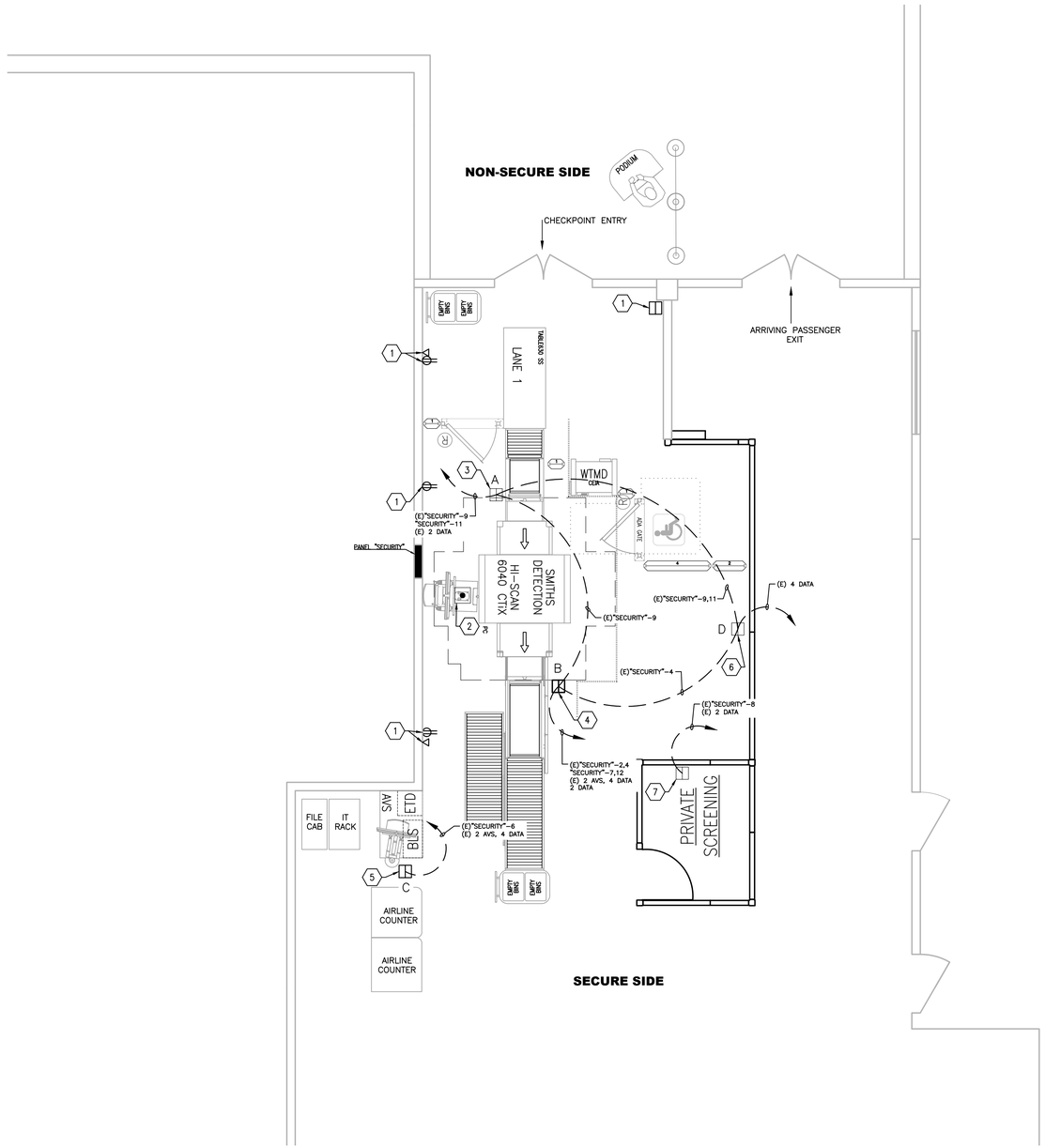
LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM

SHEET TITLE

MAIN TERMINAL CHECKPOINT ELECTRICAL PLAN - DEMOLITION

EPD101

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.



1 MAIN TERMINAL CHECKPOINT ELECTRICAL PLAN - FINAL

SCALE: 1/4"=1'-0"

GENERAL SHEET NOTES

A. REFER TO SHEET A-001, A-002, AND E-001 FOR EQUIPMENT DESCRIPTIONS, TAGS, ABBREVIATIONS, AND GENERAL NOTES.

B. REFER TO E-003 FOR ELECTRICAL DEVICE CONFIGURATION TYPE.

C. ELECTRICAL DEVICES AT THIS CHECKPOINT IS FED BY ELECTRICAL PANEL "SECURITY", LOCATED WITHIN THE CHECKPOINT, APPROXIMATELY 5' FROM LANE 1.

D. FIELD VERIFY CIRCUITS, PANEL, AND IT CABINET LOCATIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES. IT CABINET IS LOCATED WITHIN THE CHECKPOINT, APPROXIMATELY 10' FROM LANE 1.

E. REFER TO SHEETS E-002 AND E-004 FOR GENERAL ELECTRICAL NOTES AND PREFERRED DEVICE LOCATIONS.

F. REFER TO SHEET E-601 FOR THE PANEL SCHEDULES.

G. CIRCUITS NOTED WITH (E) ARE EXISTING CIRCUITS TO REMAIN OR RELOCATED AS NOTED.

NEW WORK NOTES BY SYMBOL "⟨#⟩"

1. EXISTING POWER, DATA OUTLET(S) AND/OR DURESS ALARM SHALL REMAIN; NO NEW WORK REQUIRED.

2. COORDINATE WITH AIRPORT AUTHORITY AND LOCAL TSA TO RELOCATE DURESS ALARM.

3. RELOCATE EXISTING POWER POLE AND CIRCUIT SHOWN. PROVIDE CIRCUIT SHOWN. RELOCATE (2) DATA OUTLETS, PROVIDE NEW CABLING IF EXISTING IS SHORT IN LENGTH. ENSURE DEVICE CONFIGURATION MATCHES "CONFIGURATION A" DETAIL 4 AS SHOWN ON SHEET E-003.

4. PROVIDE POWER POLE AND CIRCUITS SHOWN. RELOCATE EXISTING CIRCUITS SHOWN. EXTEND CIRCUIT "SECURITY"-9 FROM THE 'A' LOCATION. RELOCATE (2) AVS (4) DATA OUTLETS, PROVIDE NEW CABLING IF EXISTING IS SHORT IN LENGTH. PROVIDE (2) ADDITIONAL DATA OUTLETS AND CABLING TO THE IT CABINET. ENSURE DEVICE CONFIGURATION MATCHES "CONFIGURATION B" DETAIL 5 AS SHOWN ON SHEET E-003.

5. RETAIN EXISTING CIRCUIT AND (2) AVS (4) DATA OUTLETS. ENSURE DEVICE CONFIGURATION MATCHES "CONFIGURATION C" DETAIL 6 AS SHOWN ON SHEET E-003.

6. RELOCATE EXISTING POWER POLE. EXTEND "SECURITY"-9,11 FROM 'A' LOCATION AND "SECURITY"-4 FROM 'B' LOCATION. RELOCATE (4) DATA OUTLETS, PROVIDE NEW CABLING IF EXISTING IS SHORT IN LENGTH. ENSURE DEVICE CONFIGURATION MATCHES "CONFIGURATION D" DETAIL 7 AS SHOWN ON SHEET E-003.

7. RELOCATE EXISTING POWER POLE AND CIRCUIT. RELOCATE (2) DATA OUTLETS, PROVIDE NEW CABLING IF EXISTING IS SHORT IN LENGTH. ENSURE DEVICE CONFIGURATION MATCHES "CONFIGURATION H" DETAIL 12 AS SHOWN ON SHEET E-003.

PLAN NORTH

TRUE NORTH

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

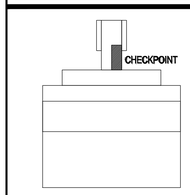
2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT
SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202



KEY PLAN

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

MAIN TERMINAL CHECKPOINT ELECTRICAL PLAN - FINAL

EPN101

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.

PANEL NO.	SECURITY - EXISTING	TYPE BRANCH CIRCUIT PANEL	LOCATION 10' FROM LANE 1
SERVICE VOLTAGE	208Y/120V,3PH,4W	PHASE BUS RATING 60 AMPS	MOUNTING SURFACE
MAIN BREAKER SIZE	60 AMP MCB	NEUTRAL BUS RATING 60 AMPS	
		SHORT CIRCUIT RATING 10000 AIC	

CIRCUIT	DESCRIPTION	LOAD AMP	BREAKER POLE	BREAKER AMP	VOLT AMPS A	VOLT AMPS B	VOLT AMPS C	CKT. NO.	CKT. NO.	VOLT AMPS A	VOLT AMPS B	VOLT AMPS C	BREAKER POLE	BREAKER AMP	LOAD AMP	DESCRIPTION	CIRCUIT
	SPARE	0.0	1	20				1	2	55			1	20	0.5	WTMD	20-2
	SPARE	0.0	1	20				3	4		1800		1	20	15.0	AT LANE 1	20-2
20-2	EMERGENCY RED OUTLETS	3.0	1	20			360	5	6			710	1	20	5.9	AVS/BLS/ETD	20-2
	SPARE	0.0	1	20				7	8	500			1	20	4.2	EXISTING LOAD	20-2
20-2	CONVEYOR	2.5	1	20		300		9	10		360		1	30	3.0	PRIVATE SCREEN RM	30-2
	SPARE	0.0	1	20				11	12				1	30	0.0	SPARE	
	SPACE	0.0						13	14	1000			2	30	9.6	IT CABINET	30-2
	SPACE	0.0						15	16		1000						
	SPACE	0.0						17	18						0.0	SPACE	
	SPACE	0.0						19	20						0.0	SPACE	
	SPACE	0.0						21	22						0.0	SPACE	
	SPACE	0.0						23	24						0.0	SPACE	

TOTAL PHASE A: 1555 VOLT-AMPS		TOTAL CONNECTED LOAD:	6.1 KVA
TOTAL PHASE B: 3460 VOLT-AMPS	MAXIMUM PHASE CURRENT: 28.8 AMPS	ESTIMATED DEMAND LOAD:	6.1 KVA
TOTAL PHASE C: 1070 VOLT-AMPS		ESTIMATED DEMAND LOAD:	16.9 AMPS

1 PANEL SCHEDULE "SECURITY" - EXISTING

SCALE: NOT TO SCALE

PANEL NO.	SECURITY - REVISED	TYPE BRANCH CIRCUIT PANEL	LOCATION 10' FROM LANE 1
SERVICE VOLTAGE	208Y/120V,3PH,4W	PHASE BUS RATING 60 AMPS	MOUNTING SURFACE
MAIN BREAKER SIZE	60 AMP MCB	NEUTRAL BUS RATING 60 AMPS	
		SHORT CIRCUIT RATING 10000 AIC	

CIRCUIT	DESCRIPTION	LOAD AMP	BREAKER POLE	BREAKER AMP	VOLT AMPS A	VOLT AMPS B	VOLT AMPS C	CKT. NO.	CKT. NO.	VOLT AMPS A	VOLT AMPS B	VOLT AMPS C	BREAKER POLE	BREAKER AMP	LOAD AMP	DESCRIPTION	CIRCUIT
	SPARE	0.0	1	20				1	2	**500**			1	20	4.2	**LANE 1 - PVS (5-20R DUPLEX)**	20-2
	SPARE	0.0	1	20				3	4		**1920**		1	20	16.0	**LANE 1 - AIT (5-20R SIMPLEX)**	20-2
20-2	EMERGENCY RED OUTLETS	3.0	1	20			360	5	6			710	1	20	5.9	**LANE 1 - AVS/BLS/ETD (5-20R DUPLEX)**	20-2
20-2	**LANE 1 - AT X-RAY CT1 (5-20R DUPLEX)**	1.5	1	20	**180**			7	8	**360**			1	20	3.0	**LANE 1 - PRIVATE SCREENING ROOM (5-20R DUPLEX)**	20-2
20-2	**LANE 1 - CONVEYOR & CO-LOCATED ETD (5-20R DUPLEX)**	5.9	1	20		**710**		9	10		360		1	30	3.0	PRIVATE SCREEN RM	30-2
20-2	**LANE 1 - WTMD (L5-15R)**	0.5	**1**	**20**			**55**	11	12			**2800**	1	30	23.3	**LANE 1 - CT SCANNER (L5-30R)**	30-2
	SPACE	0.0						13	14	1000			2	30	9.6	IT CABINET	30-2
	SPACE	0.0						15	16		1000						
	SPACE	0.0						17	18						0.0	SPACE	
	SPACE	0.0						19	20						0.0	SPACE	
	SPACE	0.0						21	22						0.0	SPACE	
	SPACE	0.0						23	24						0.0	SPACE	

TOTAL PHASE A: 2040 VOLT-AMPS		TOTAL CONNECTED LOAD:	10.0 KVA
TOTAL PHASE B: 3990 VOLT-AMPS	MAXIMUM PHASE CURRENT: 33.2 AMPS	ESTIMATED DEMAND LOAD:	10.0 KVA
TOTAL PHASE C: 3925 VOLT-AMPS		ESTIMATED DEMAND LOAD:	27.6 AMPS

2 PANEL SCHEDULE "SECURITY" - REVISED

SCALE: NOT TO SCALE

BRANCH CIRCUIT SCHEDULE			
15-2	(2) 12 AWG, 12 AWG GND, 3/4" C.	15-3	(3) 12 AWG, 12 AWG GND, 3/4" C.
20-2	(2) 12 AWG, 12 AWG GND, 3/4" C.	20-3	(3) 12 AWG, 12 AWG GND, 3/4" C.
25-2	(2) 10 AWG, 10 AWG GND, 3/4" C.	25-3	(3) 10 AWG, 10 AWG GND, 3/4" C.
30-2	(2) 10 AWG, 10 AWG GND, 3/4" C.	30-3	(3) 10 AWG, 10 AWG GND, 3/4" C.
35-2	(2) 8 AWG, 10 AWG GND, 3/4" C.	35-3	(3) 8 AWG, 10 AWG GND, 3/4" C.
40-2	(2) 8 AWG, 10 AWG GND, 3/4" C.	40-3	(3) 8 AWG, 10 AWG GND, 3/4" C.
45-2	(2) 8 AWG, 10 AWG GND, 3/4" C.	45-3	(3) 8 AWG, 10 AWG GND, 3/4" C.
50-2	(2) 8 AWG, 10 AWG GRD, 3/4" C.	50-3	(3) 8 AWG, 10 AWG GRD, 3/4" C.
60-2	(2) 6 AWG, 10 AWG GRD, 3/4" C.	60-3	(3) 6 AWG, 10 AWG GRD, 3/4" C.
70-2	(2) 4 AWG, 8 AWG GRD, 1" C.	70-3	(3) 4 AWG, 8 AWG GRD, 1" C.
80-2	(2) 4 AWG, 8 AWG GRD, 1" C.	80-3	(3) 4 AWG, 8 AWG GRD, 1" C.
90-2	(2) 3 AWG, 8 AWG GRD, 1" C.	90-3	(3) 3 AWG, 8 AWG GRD, 1 1/4" C.
100-2	(2) 3 AWG, 8 AWG GRD, 1" C.	100-3	(3) 3 AWG, 8 AWG GRD, 1 1/4" C.

3 BRANCH CIRCUIT SCHEDULE

SCALE: NOT TO SCALE

GENERAL SHEET NOTES

A. PANEL SCHEDULE INFORMATION FOR EXISTING PANELS IS TAKEN FROM FIELD OBSERVATIONS OF EXISTING PANEL DIRECTORIES AND/OR AS-BUILTS. FIELD VERIFY EXISTING CONDITIONS.

B. THE CONTRACTOR SHALL VERIFY SPARE CAPACITY AVAILABLE ON EXISTING PANELS IN ACCORDANCE WITH NEC 220.87 BEFORE CONNECTION TO NEW LOADS.

C. CIRCUIT DESCRIPTIONS SHOWN BOLD ARE PROPOSED CIRCUITS OR EXISTING CIRCUITS WITH A MODIFIED LOAD. REFER TO SHEET EPN101 FOR MORE INFORMATION.

D. LABEL ALL CIRCUITS AT DEVICE WITH PANEL NAME AS SOME DEVICES CONTAIN CIRCUITS FROM MULTIPLE PANELS.

NEW WORK NOTES BY SYMBOL "⟨#⟩"

1. PROVIDE A 20A/1P CIRCUIT BREAKER AS SHOWN, MATCH PANEL OEM AND AIC RATING.

leidos

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

2925 Briarpark Drive
Houston, Texas 77042
Tel 713-821-2100
Fax 713-266-7182

INTERIM REVIEW ONLY
Document incomplete: not intended for regulatory approval, permit, or construction.
MASON D. MCINTIRE
123527
Registration Number
05/10/22
Date

MQT

SAWYER INTERNATIONAL AIRPORT

CATEGORY II

U.S. DEPARTMENT OF HOMELAND SECURITY
601 SOUTH 12TH STREET, ARLINGTON, VA 22202

MARK	DATE	DESCRIPTION
0	05/10/22	ISSUE FOR CONSTRUCTION

LAN PROJECT NUMBER: 170-10901-002
DESIGNED BY: EPS
DRAWN BY: EPS
CHECKED BY: MDM
SHEET TITLE

ELECTRICAL PANEL SCHEDULES

E-601

COPYRIGHT © 2011, LAN INC.
2011-09-19 Rev.