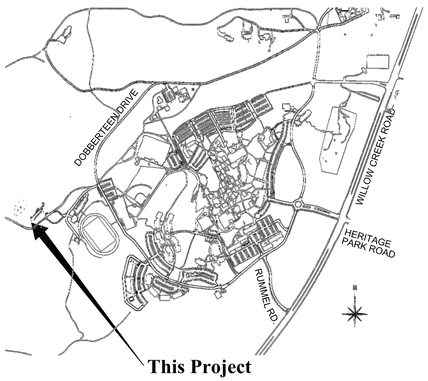
Project Description

Embry-Riddle Aeronautical University intends to construct a drone observation building consisting of an observation room and a storage/workroom area.

Site / Vicinity Map



Graphic Standards

NORTH ARROW INDICATOR

DETAIL DESIGNATOR (NUMBER / SHEET)

BUILDING SECTION DESIGNATOR (LETTER / SHEET)

REVISION DESIGNATOR (NUMBER)

TYPICALLY INDICATES EXISTING DOOR & FRAME TO BE REMOVED

TYPICALLY INDICATES EXISTING DOOR & FRAME TO REMAIN

#/SHEET — ELEVATION DESIGNATOR

DESCRIPTIVE NOTE DESIGNATOR

ROOM NUMBER / FINISH DESIGNATOR

/ LETTER — DOOR NUMBER DESIGNATOR

DOOR TYPE DESIGNATOR

WINDOW TYPE DESIGNATOR

GRID LINE DESIGNATOR

TYPICALLY INDICATES PROPOSED DOOR & FRAME - REFER TO DOOR SCHEDULE

IMPROVEMENTS FOR

EMBRY-RIDDLE

Drone / UAS Building

Project Information

OWNER:	Embry-Riddle Aeronautical University 3700 Willow Creek Road Prescott, AZ 86301	PH: 928-777-6600 FAX: 928-777-3950 CONTACT: Carl Beumer beumerc@erau.edu
PREPARED BY:	W. Alan Kenson & Associates, P.C. P.O. Box 11593 Prescott, AZ 86304	PH: 928-443-5812 FAX: 928-443-5815 CONTACT: Alan Kenson waka@cableone.net
CONTRACTOR:	To be determined	
SCOPE OF WORK:	New Drone Observation Building	
PROJECT ADDRESS:	3700 Willow Creek Road, Prescott, AZ 86301 (APN: 106-03-004)	
ZONING:	BG - PAD	
OCCUPANCY:	B (Educational Facility for students above the 12th grade) , Non-Separated	
CONSTRUCTION TYPE:	II-B Non Sprinklered	
PROPOSED BUILDING AREA:	492 S.F.	

Sheet Index

Architect:

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ARCHITECTURE & PLANNING

Jan 12, 2018 - 1:10pm

REVISIONS	BY

REGISTERED ARCHITECT — CERTIFICATE NO. 25646 — W. ALAN KENSON — Date Signed 01/12/18 — ARIZONA — EXPIRES: 6/30/18

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ARCHITECTURE & PLANNING

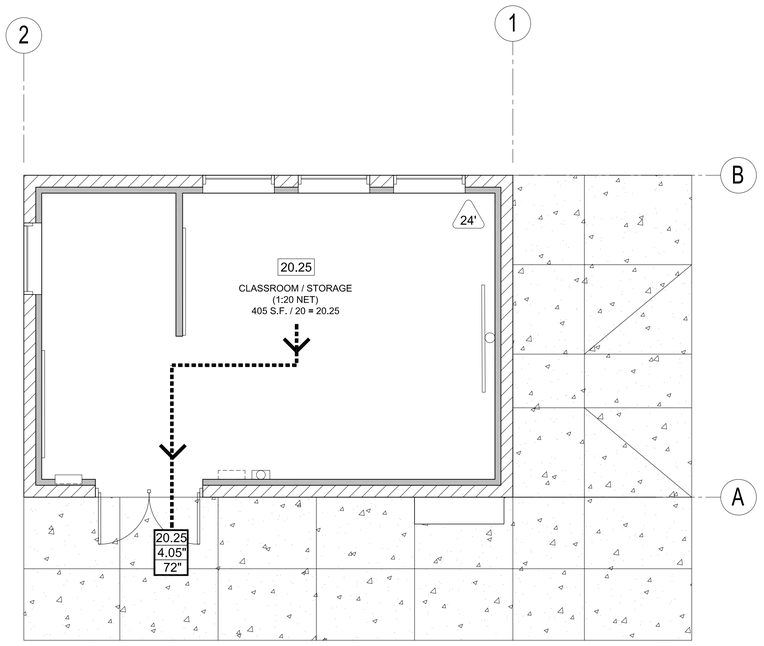
DRAWING: Cover Sheet

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 12th, 2018
JOB NO.	700
SHEET	CS1

NOTE:
- PROVIDE A 6"x9" BLUE TACTILE 'EXIT' SIGN AS MANUFACTURED BY 'SIMPLY EXIT SIGNS (#SE-1980)' OR EQUAL COMPLYING WITH ADA SECTION 703 ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. SIGN SHALL BE MOUNTED 60" A.F.F. TO THE BOTTOM OF THE HIGHEST LINE OF TACTILE CHARACTERS.



A1 Occupancy / Egress Floor Plan

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

Plan North

Accessibility Notes

1. ACCESS TO THESE FACILITIES SHALL BE AT PRIMARY ENTRANCES.
2. THE SLOPE OF PUBLIC WALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 2%.
3. WALKING SURFACES GREATER THAN 2% SHALL BE SLIP RESISTANT.
4. PROVIDE A 44"x60" MINIMUM LANDING ON THE STRIKE SIDE OF THE ENTRANCE DOOR WITH 44" MINIMUM WIDTH IN THE DIRECTION OF TRAVEL.
5. WALLS SHALL EXTEND 18" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARDS THE OCCUPANT.
6. RAMPS SHALL HAVE A NON-SLIP SURFACE.
7. RAMPS SHALL BE A MINIMUM OF 36" WIDE.
8. EVERY REQUIRED EXIT DOORWAY SHALL BE SIZED FOR A DOOR NOT LESS THAN 36" WIDE BY NOT LESS THAN 6'-8" HIGH CAPABLE OF OPENING 90 DEGREES AND MOUNTED SO THE CLEAR WIDTH OF THE EXIT WAY IS 32" MINIMUM.
9. THRESHOLDS TO BE A MAXIMUM OF 1/4" ABOVE ADJACENT FLOOR FINISH. ONE-HALF INCH THRESHOLD MAY BE USED IF BEVELED PER A.D.A. STANDARDS.
10. MAXIMUM EFFORT TO OPERATE A DOOR SHALL NOT EXCEED 5 POUNDS.
11. THE BOTTOM 10 INCHES OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE.
12. PROVIDE LEVER TYPE HARDWARE, PANIC BARS, PUSH AND PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE. (30" TO 44" A.F.F.)

Egress Legend:

- EXIT ACCESS
- (A) ACCESSORY USE (NO OCCUPANCY)
- [XX] ROOM OCCUPANCY LOAD
- (XX) SUBTOTAL OCCUPANCY LOAD
- [XX] OCCUPANCY TOTAL
  [XX] REQUIRED EXIT WIDTH (FACTOR = 0.2)
  [XX] PROVIDED EXIT WIDTH
- <# > WORST CASE TRAVEL DISTANCE

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR
CLASSROOM	20 NET

Occupant load

NOTE:
GROSS SQUARE FOOTAGE LISTED BELOW
DOES NOT INCLUDE ACCESSORY AREAS.

CLASSROOMS/LABS: 405 SQ. FT 20 OCCUPANTS

NOTE: SHARED BUILDING RESTROOMS ARE LOCATED APPROXIMATELY 450' AWAY. NEW TOILET FIXTURES ARE NOT REQUIRED.

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
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KENSON
Date Signed 01/12/18
ARIZONA U.S.A.
EXPIRES: 6/30/18

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ARCHITECTURE & PLANNING

DRAWING: Code Summary and Occupancy / Egress Floor Plan

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 12th, 2018
JOB NO.: 700
SHEET: CS2

Jan 12, 2018 - 1:10pm

Descriptive Keynotes

1. EXISTING DRONE / FLYING STATION, TYPICAL.
2. PROPOSED ADA PARKING SPACE, REFER TO SHEET A1.1.
3. PROPOSED BUILDING.
4. EXISTING CONCRETE SLAB.
5. EXISTING COVERED OBSERVATION AREA.
6. EXISTING SOCCER LOCKER / RESTROOM BUILDING.
7. EXISTING MAINTENANCE BUILDING.
8. EXISTING ELECTRICAL TRANSFORMER, REFER TO ELECTRICAL PLANS.
9. EXISTING AGGREGATE BASE COURSE ROAD.
10. EXISTING PAVED ROAD.
11. EXISTING PAVED PARKING LOT.
12. EXISTING AGGREGATE BASE COURSE PARKING LOT.
13. EXISTING J-JON.
14. EXISTING STORAGE CONTAINER.
15. EXISTING SOCCER FIELD.
16. UNDERGROUND IT CONDUIT, REFER TO LOW VOLTAGE SITE PLAN.
17. UNDERGROUND ELECTRICAL CONDUIT, REFER TO ELECTRICAL SITE PLAN.
18. PROPOSED ELECTRICAL SERVICE ENTRANCE SECTION, REFER TO ELECTRICAL PLANS.
19. ELECTRICAL TRANSFORMER PROVIDED BY OWNER, REFER TO ELECTRICAL PLANS.
20. CONDENSING UNIT, REFER TO MECHANICAL PLANS.
21. EXCAVATE AND REMOVE ALL VEGETATION IN ITS ENTIRETY.
22. EXISTING CARPET PAD.
23. LOCATION FOR J-JON PROVIDED BY CONTRACTOR.
24. LOCATION OF 6 YARD TRASH DUMPSTER PROVIDED BY CONTRACTOR.
25. 6' TALL TEMPORARY CHAIN LINK FENCING BY CONTRACTOR
26. CONTRACTOR PARKING AREA. 6 SPACES AVAILABLE. CONTRACTOR TO PROVIDE SIGNAGE DESIGNATING SPACES FOR CONSTRUCTION PARKING.
27. PROVIDE APPROXIMATELY 4" OF COMPACTED A.B.C. OVER COMPACTED NATIVE SOIL, REFER TO SHEET A1.1.
28. UNDERGROUND ELECTRICAL AND IT CONDUITS, REFER TO ELECTRICAL AND LOW VOLTAGE PLANS.

A1 Site / Construction Access Plan

Scale: 1"=30'-0"

Plan North

Jan 12, 2018 - 1:10pm

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
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W. ALAN KENSON
Date Signed 01/12/18
ARIZONA U.S.A.
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ARCHITECTURE & PLANNING

DRAWING: Site / Construction Access Plan

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

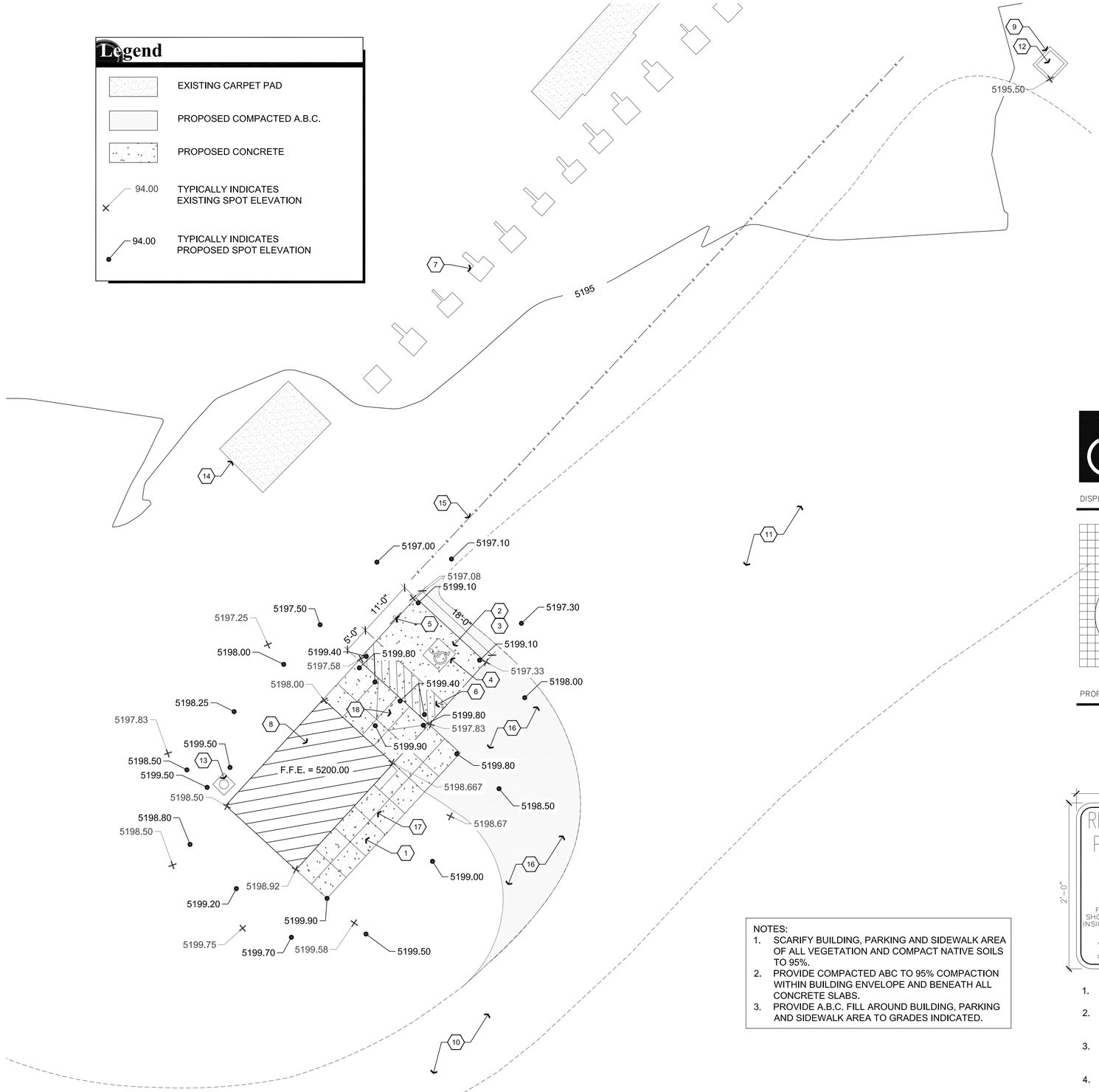
DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 12th, 2018
JOB NO.	700
SHEET	A1.0

Legend

- EXISTING CARPET PAD
- PROPOSED COMPACTED A.B.C.
- PROPOSED CONCRETE
- 94.00 — TYPICALLY INDICATES EXISTING SPOT ELEVATION
- 94.00 — TYPICALLY INDICATES PROPOSED SPOT ELEVATION

Descriptive Keynotes

1. PROVIDE CONCRETE SIDEWALK, REFER TO STRUCTURAL PLANS.
2. PROPOSED 4" CONCRETE SLAB, W/ #3 @ 2'-0" O.C. EACH WAY OVER 4" COMPACTED A.B.C. PROVIDE 8" TURNDOWN AT PERIMETER.
3. THE MAXIMUM SLOPE OF THE A.D.A. ACCESSIBLE PARKING AREA SHALL NOT EXCEED 2%.
4. PROVIDE A.D.A. APPROVED SYMBOL OF ACCESSIBILITY PAVEMENT MARKING, TYPICAL.
5. PROVIDE PARKING SIGNAGE IN ACCORDANCE WITH A.D.A. REQUIREMENTS, REFER TO DETAIL B1, THIS SHEET.
6. PROVIDE 4" WIDE YELLOW PAINTED STRIPING AT UNLOADING AREA IN ACCORDANCE WITH A.D.A. REQUIREMENTS.
7. EXISTING DRONE / FLYING STATION, TYPICAL.
8. PROPOSED BUILDING.
9. EXISTING CONCRETE SLAB.
10. EXISTING AGGREGATE BASE COURSE ROAD.
11. EXISTING AGGREGATE BASE COURSE PARKING LOT.
12. EXISTING J-JON.
13. CONDENSING UNIT, REFER TO MECHANICAL PLANS.
14. EXISTING CARPET PAD.
15. EXISTING WOOD FENCE.
16. PROVIDE APPROXIMATELY 4" OF COMPACTED A.B.C. OVER COMPACTED NATIVE SOIL.
17. TYPICALLY INDICATES TOOLED CONTROL JOINT.
18. PROVIDE ADA COMPLIANT RAMP.



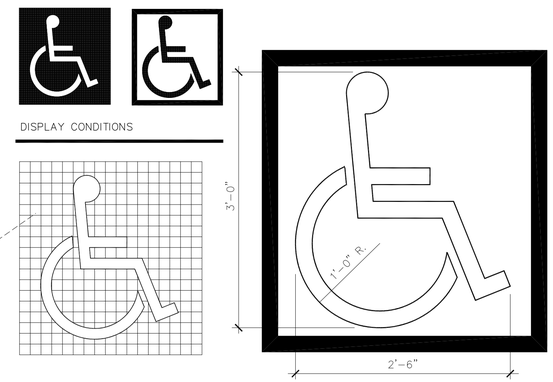
A2 Grading / Site Plan

Scale: 1"=10'-0"

Plan North

NOTES:
1. SCARIFY BUILDING, PARKING AND SIDEWALK AREA OF ALL VEGETATION AND COMPACT NATIVE SOILS TO 95%.
2. PROVIDE COMPACTED ABC TO 95% COMPACTION WITHIN BUILDING ENVELOPE AND BENEATH ALL CONCRETE SLABS.
3. PROVIDE A.B.C. FILL AROUND BUILDING, PARKING AND SIDEWALK AREA TO GRADES INDICATED.

DISPLAY CONDITIONS

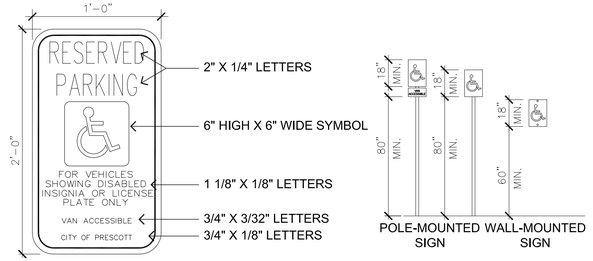


PROPORTIONS

SYMBOL @ PARKING SPACE

B2 ADA Symbol of Accessibility

Not to Scale



1. THE SIGN PLATE SHALL BE A MINIMUM OF 12"x24" WITH A THICKNESS OF .080 ALUMINUM CONSTRUCTION.
2. THE SIGN FACE SHALL HAVE A WHITE REFLECTIVE BACKGROUND WITH A BLUE LEGEND. (STANDARD 3M SCOTCHLITE SIGN FACE NUMBER R7-32 OR EQUIVALENT, WITH BLUE SCREEN PRINTED LETTER AS SHOWN ABOVE.)
3. ALL ACCESSIBLE PARKING SPACES SHALL BE IDENTIFIED BY A SIGN ON A CITY APPROVED STATIONARY POST OR WALL LOCATION. THESE SIGNS SHALL NOT BE OBSCURED.
4. ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED FOR PHYSICALLY DISABLED BY A SIGN SHOWING THE INTERNATIONAL WHEELCHAIR SYMBOL IN COLOR SCHEME ON CONTRASTING BACKGROUND.
5. THE SIGN SHALL HAVE THE MINIMUM VERBIAGE OF "RESERVED PARKING" AND INTERNATIONAL WHEELCHAIR SYMBOL.

B1 Accessible Parking Sign

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

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/12/18
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EXPIRES: 6/30/18

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ARCHITECTURE & PLANNING

DRAWING: Demolition Site Plan and Grading / Site Plan

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 12th, 2018
JOB NO.	700
SHEET	A1.1

Jan 12, 2018 - 1:11pm

Legend

- 2'x2' ACOUSTIC PANEL CEILING [ACT-1]
- 2x2 LED TROFFER LIGHT FIXTURE
- NEW 2'x2' HVAC SUPPLY DIFFUSER
- NEW 2'x1' HVAC RETURN
- EMERGENCY EXIT SIGN WITH BATTERY BACK-UP
- (SP) SPEAKER

NOTE:
REFER TO ELECTRICAL AND MECHANICAL PLANS.

Descriptive Keynotes RCP & Roof

1. PROVIDE SUSPENDED CEILING. GRID TO BE INSTALLED 8" BELOW ROOF TRUSSES, TYPICAL. [ACT-1]
2. LIGHT FIXTURES SHOWN FOR QUANTITY AND LOCATION ONLY, TYPICAL. REFER TO ELECTRICAL PLANS.
3. HVAC SUPPLY, TYPICAL. REFER TO MECHANICAL PLANS.
4. HVAC RETURN, TYPICAL. REFER TO MECHANICAL PLANS.
5. EMERGENCY EXIT SIGN WITH BATTERY BACKUP.
6. HVAC UNIT ABOVE CEILING, REFER TO MECHANICAL PLANS.
7. PROVIDE SHEET METAL GUTTER. [M-3]
8. PROVIDE SHEET METAL DOWNSPOUT, TYPICAL OF 4. [M-2]
9. PROVIDE 5/8" PLYWOOD SHEATHING ATTACH WITH PLYCLIPS, REFER TO GENERAL STRUCTURAL NOTES.
10. PROVIDE 24 GAUGE SIGNATURE 200 LOKSEAM METAL ROOF PANEL OVER 30# ROOFING FELT, OVER 1/2" OSB SHEATHING.
11. LOCATION OF FUTURE CATWALK, REFER TO STRUCTURAL PLANS.
12. RIDGE.
13. PROVIDE SHEET METAL ROOF CAP.

Air Barrier

NOTE:
PROVIDE AN AIR BARRIER PER THE 2012 IECC SECTION C402.4.1

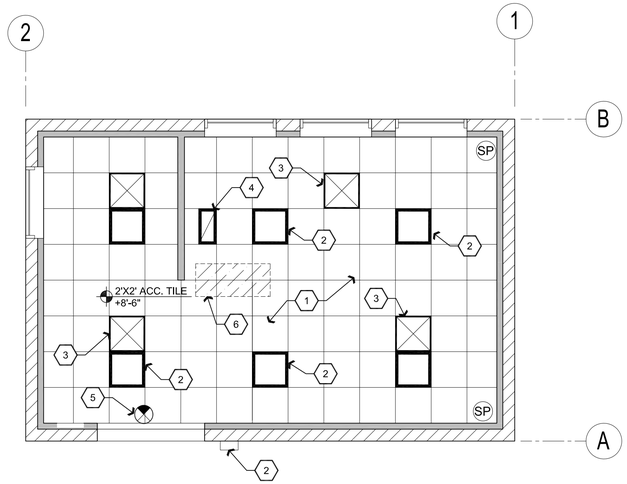
1. AIR LEAKAGE - THE CODE ALLOWS THE USE OF AIRFLOW RETARDERS (HOUSE WRAPS) OR OTHER SOLID MATERIALS AS ACCEPTABLE METHODS TO MEET THIS REQUIREMENT. TO BE EFFECTIVE, THE BUILDING THERMAL SEAL MUST BE:
   - IMPERMEABLE TO AIR FLOW.
   - CONTINUOUS OVER THE ENTIRE BUILDING ENVELOPE.
   - ABLE TO WITHSTAND THE FORCES THAT MAY ACT ON IT DURING AND AFTER CONSTRUCTION.
   - DURABLE OVER THE EXPECTED LIFETIME OF THE BUILDING.
   - ALL SEAMS AND EDGES MUST BE SEALED/TAPED PER MANUFACTURER'S SPECIFICATIONS.
2. BUILDING THERMAL ENVELOPE - THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED OR OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL, SUITABLE FILM OR SOLID MATERIAL:
   - ALL JOINTS, SEAMS AND PENETRATIONS.
   - SITE BUILT WINDOWS, DOORS AND SKYLIGHTS.
   - OPENINGS BETWEEN WINDOW AND DOOR ASSEMBLIES AND THEIR RESPECTIVE JAMBS AND FRAMING.
   - UTILITY PENETRATIONS.
   - DROPPED CEILINGS OR CHASES ADJACENT TO THE THERMAL ENVELOPE.
   - KNEE WALLS.
   - WALLS AND CEILINGS SEPARATING A GARAGE FROM CONDITIONED SPACES.
   - BEHIND TUBS AND SHOWERS ON EXTERIOR WALLS.
   - COMMON WALLS BETWEEN DWELLING UNITS.
   - OTHER SOURCES OF INFILTRATION.
3. FENESTRATION AIR LEAKAGE - WINDOW, SKYLIGHT AND SLIDING GLASS DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM PER SQUARE FOOT, AND SWINGING DOORS NO MORE THAN 0.5 CFM. SPECIFICATION SHALL BE LISTED ON THE MANUFACTURER LABEL.

Descriptive Keynotes

1. PROVIDE INTERIOR WALL, REFER TO WALL TYPES LEGEND FOR TYPE OF CONSTRUCTION.
2. PROVIDE EXTERIOR WALL, REFER TO WALL TYPES LEGEND FOR TYPE OF CONSTRUCTION.
3. PROVIDE ELECTRICAL SERVICE ENTRANCE SECTION, REFER TO ELECTRICAL PLANS.
4. PROVIDE TYPE 2A10BC FIRE EXTINGUISHER IN SURFACE MOUNTED WALL CABINET.
5. PROVIDE DOOR, REFER TO DOOR SCHEDULE. (TYPICAL)
6. PROVIDE WINDOW, REFER TO WINDOW TYPES. (TYPICAL)
7. TABLE PROVIDED BY OWNER, TYPICAL.
8. TYPICALLY INDICATES TOOLED CONCRETE CONTROL JOINT.
9. PROVIDE 4" THICK CONCRETE SIDEWALK W/ #3 @ 3'-0" O.C. EACH WAY OVER 4" COMPACTED A.B.C. PROVIDE 8" MINIMUM TURNDOWN ON SIDES.
10. PROVIDE HVAC CONDENSER, REFER TO MECHANICAL PLANS.
11. PROVIDE RECESSED ELECTRIC PANEL, REFER TO ELECTRICAL PLANS.
12. SURFACE MOUNTED IT ENCLOSURE BY OWNER.
13. INSTALL WHITEBOARD, PROVIDED BY OWNER, AND ALL REQUIRED BACKING.
14. PROVIDE ADA COMPLIANT RAMP.
15. INSTALL MONITOR, PROVIDED BY OWNER, AND ALL REQUIRED BACKING.

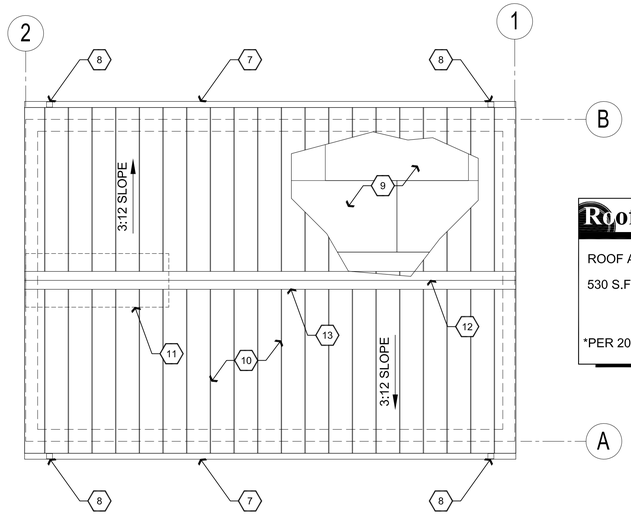
Wall Types Legend

- (A) EXTERIOR CMU WALL: PROVIDE 8" SOLID GROUTED CMU WALL WITH TYVEK VAPOR BARRIER ON INTERIOR FACE WITH 2x4 WOOD STUD FURRING @ 1'-4" O.C. WITH 1/2" GPDW ON EXPOSED SIDE. PROVIDE R11 BATT INSULATION.
- (B) INTERIOR 2x4 STUD WALL: PROVIDE ONE LAYER 1/2" GPDW ON EACH SIDE OF 2x4 WOOD STUDS @ 1'-4" O.C.



A2 Reflected Ceiling Plan

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



Roof Drain Leader Sizes

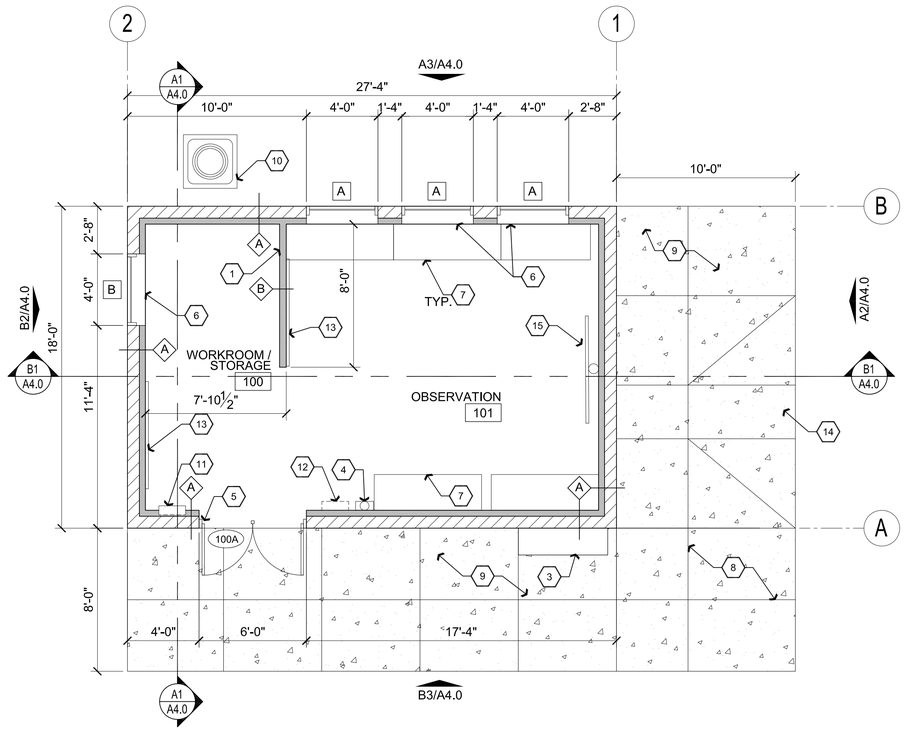
ROOF AREA : 530 S.F.

530 S.F. x 3" RAINFALL P.H. =
(1) 3"x4" LEADERS REQUIRED *
(4) 3 1/2"x4" LEADERS PROVIDED

*PER 2012 IPC SECTION 1106 (TABLE 1106.2)

A1 Roof Plan

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



B1 Reference / Dimension / Wall Types Plan

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

Plan North

Jan 12, 2018 - 1:17pm

REVISIONS	BY

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ARCHITECTURE & PLANNING

DRAWING: Reference / Dimension / Wall Types Plan.
Reflected Ceiling Plan and Roof Plan

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 12th, 2018
JOB NO.	700
SHEET	A2.0

Materials schedule

XX- #

CODE	MATERIAL	LOCATION	MANUFACTURER	SPECIFICATION
ACT-1	ACOUSTICAL CEILING TILE	REFER TO THE REFLECTED CEILING PLANS	ARMSTRONG	ASTM C 36; 2'x2' #770 NON DIRECTIONAL SQUARE LAY-IN TILE, WHITE SUSPENDED GRIDS; 15/16" METAL WHITE
CMU-1	CMU SMOOTH FACE	EXTERIOR		8"x8"x16" SMOOTH FACE (INTEGRAL COLOR TO MATCH SOCCER LOCKER / RESTROOM BUILDING)
CMU-2	CMU CENTER SCORED	EXTERIOR ACCENT BAND		8"x8"x16" CENTER SCORED (INTEGRAL COLOR TO MATCH SOCCER LOCKER / RESTROOM BUILDING)
CMU-3	CMU SPLIT FACE	EXTERIOR ACCENT BAND		8"x8"x16" SPLIT FACE (INTEGRAL COLOR TO MATCH SOCCER LOCKER / RESTROOM BUILDING)
CS-1	CONCRETE SEALER	ALL NEW INTERIOR CONCRETE	GENERAL POLYMERS	4409 WB POLYURETHANE SATIN RESIN
CS-2	CMU SEALER	EXTERIOR SIDE OF EXTERIOR WALLS	PROSOCO	SILOXANE SEALER
M-1	METAL ROOF PANEL	ROOF	MBCI	24 GAUGE SIGNATURE 200 LOKSEAM METAL ROOF PANEL COLOR: DESERT SAND
M-2	DOWNSPOUTS	EXTERIOR	MBCI	3 1/2x4 BOX DOWNSPOUT,26 GAUGE, PRE-PAINTED, COLOR: DESERT SAND (SIGNATURE 200)
M-3	RAIN GUTTER	EXTERIOR	MBCI	3x4 BOX GUTTER, 26 GAUGE, PRE-PAINTED, COLOR: DESERT SAND (SIGNATURE 200)
M-4	RAKE TRIM	EXTERIOR	MBCI	26 GAUGE, PRE-PAINTED, COLOR: DESERT SAND (SIGNATURE 200)
PT-1	PAINT	INTERIOR WALLS	SHERWIN WILLIAMS	SW 6099 SAND DOLLAR
PT-2	PAINT	EXTERIOR WOOD TRIM	SHERWIN WILLIAMS	SW (MV) 39528 SATIN
PT-3	PAINT	HOLLOW METAL DOORS AND FRAMES	SHERWIN WILLIAMS	SW 6102 PORTABELLO
RB-1	4" RUBBER BASE	ALL AREAS	ARMSTRONG OR ROPPE	4" COVED, BLACK (PROVIDED AND INSTALLED BY CONTRACTOR)

Room Finish Schedule

NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING	HEIGHT
100	WORKROOM	F1	B1	W1	C1	8'-6"
101	OBSERVATION	F1	B1	W1	C1	8'-6"

FLOOR:
F1 SEALED CONCRETE CS-1

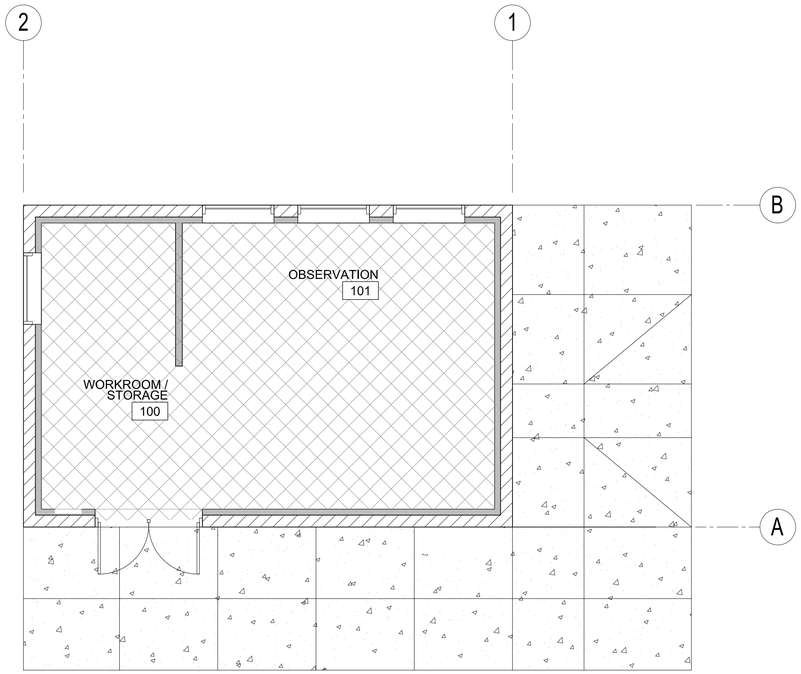
BASE:
B1 RUBBER BASE RB-1

WALLS:
W1 PAINTED GPDW PT-1

CEILING:
C1 2x2 ACOUSTICAL LAY-IN PANEL ACT-1

Legend

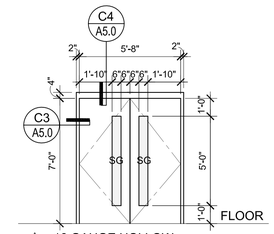
SEALED CONCRETE (REFER TO SPECIFICATIONS)



A1 Room Finish Plan

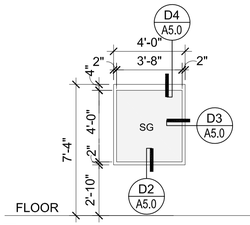
Scale: 1/4"=1'-0"

Plan North

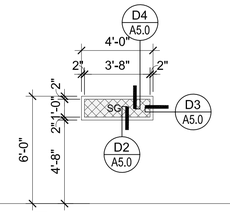


A 16 GAUGE HOLLOW METAL DOOR WITH 14 GAUGE HOLLOW METAL FRAME WITH CLEAR INSULATED SAFETY GLASS

NOTE: THIS DOOR WILL HAVE A REMOVABLE MULLION



A 1/4" DUAL-PANE 1" LOW-E, CLEAR, INSULATED SAFETY GLAZING IN 14 GAUGE HOLLOW METAL FRAME



B 1/4" DUAL-PANE 1" LOW-E, CLEAR, INSULATED SAFETY GLAZING WITH WIRE MESH IN 14 GAUGE HOLLOW METAL FRAME

OPENING TO BE PROVIDED ADDITIONAL PROTECTION WITH 1/4" PLEXIGLAS WITH METAL FRAME ON EXTERIOR SIDE OF OPENING. FRAME SHALL HAVE REMOVABLE END SUCH THAT PLEXIGLAS CAN BE REPLACED.

A2 Door and Window Elevations

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

Plan North

Hardware Schedule

HW SET: 11 PAIR DOORS HMD X HMF
DOORS: 100A
EACH TO HAVE

QTY	DESCRIPTION	MANUFACTURER
6	HINGES FBB168 4.5 X 4.5 NRP 626	STANLEY
1	STOREROOM 9K3 7D 15D S3 626	BEST
1	PERMANENT CORES BY OWNER	BEST
1	SET FLUSHBOLTS MANUAL EXTENSION 458-12" 626	IVES
1	DUST PROOF STRIKE DP1 626	IVES
2	CLOSER 4040 H CUSH 689	LCN
2	KICK PLATE 12" X 34" 630	TRIMCO
1	WEATHER-STRIP 303AS 72" X 84"	PEMKO
2	SWEEP 315CN-36"	PEMKO
1	THRESHOLD 271A 72" X 5" X 1/4" MS/ES ALUM	PEMKO

NOTE: HONEYWELL ACCESS SYSTEM WILL BE PROVIDED WHEN FUTURE BUILDING ADDITION IS CONSTRUCTED

Door Schedule

NO.	ROOM NAME	SIZE	TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HARDWARE TYPE
100A	WORKROOM	(2) 2'-10"x7'-0"	C	HM	PAINT	HM	PAINT	01

NOTES:

1. ALL EXIT DOORS & HARDWARE SHALL COMPLY WITH THE 2012 I.B.C.
2. DOOR THRESHOLDS SHALL HAVE A MAX HEIGHT OF 1/2" FOR H.C. ACCESSIBILITY. THRESHOLD SHALL HAVE A MAXIMUM RISE OF 1/4" AND 1/2" RISE WHEN BEVELED WITH MAXIMUM 1:2 SLOPE.
3. ALL GLAZING IN DOORS SHALL BE SAFETY GLAZING.
4. ALL INTERIOR DOORS SHALL BE OPERABLE FOR EMERGENCY EXITING PURPOSES WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE NOR EFFORT.
5. ALL GLAZING WITHIN 24" OF OPENINGS SHALL BE SAFETY GLASS.
6. IF A DOOR HAS A CLOSER, THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.
7. DOOR HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. HARDWARE REQUIRED FOR DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISH FLOOR.
8. DOOR OPENING FORCE SHALL BE: 5lbf MAX INTERIOR HINGED, SLIDING OR FOLDING DOORS; FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/12/18
ARIZONA U.S.A.
EXPIRES: 6/30/18

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ARCHITECTURE & PLANNING

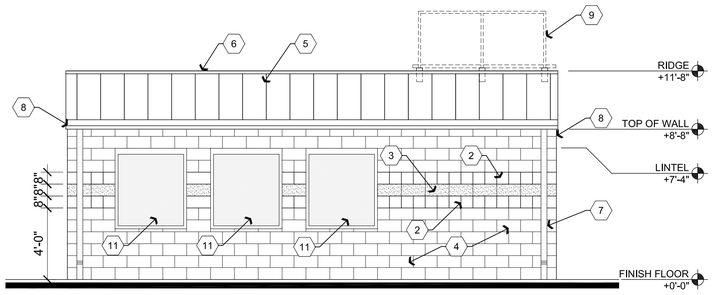
DRAWING: Door and Window Elevations, Room Finish Plan and Schedules

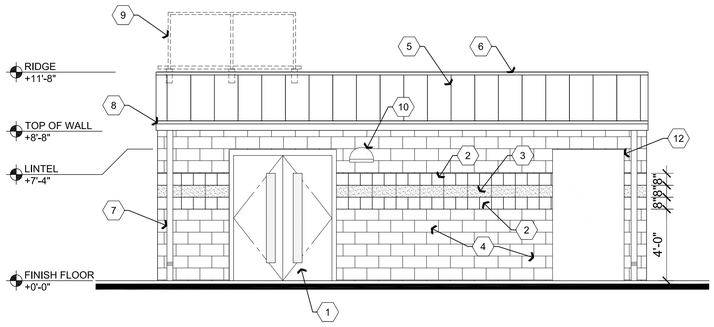
PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 12th, 2018
JOB NO.: 700
SHEET: A3.0

Jan 12, 2018 - 1:17pm





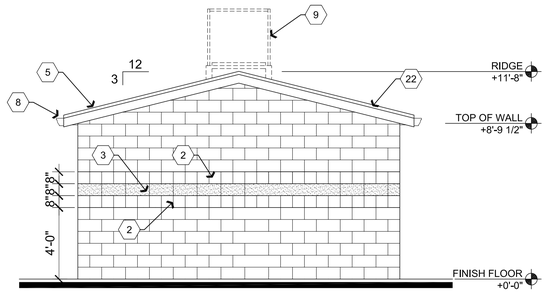
Descriptive Keynotes

1. PROVIDE DOOR, REFER TO REFERENCE FLOOR PLAN AND DOOR SCHEDULE.
2. PROVIDE 8"x8"x16" CENTER SCORED CMU, REFER TO STRUCTURAL PLANS. CMU-2
3. PROVIDE 8"x8"x16" SPLIT FACE CMU, REFER TO STRUCTURAL PLANS. CMU-3
4. PROVIDE 8"x8"x16" SMOOTH FACE CMU, REFER TO STRUCTURAL PLANS. CMU-1
5. PROVIDE 24 GAUGE SIGNATURE 200 LOKSEAM METAL ROOF PANEL OVER 30# ROOFING FELT, OVER 1/2" OSB SHEATHING. M-1
6. PROVIDE SHEET METAL RIDGE CAP.
7. PROVIDE SHEET METAL DOWNSPOUT. M-2
8. PROVIDE SHEET METAL GUTTER. M-3
9. LOCATION OF FUTURE CATWALK.
10. LIGHT FIXTURE, REFER TO ELECTRICAL PLANS.
11. EXTERIOR WINDOW, TYPICAL. REFER TO REFERENCE FLOOR PLAN AND WINDOW TYPES.
12. ELECTRIC SERVICE ENTRANCE SECTION. REFER TO ELECTRICAL PLANS.
13. EXTERIOR WALL, REFER TO WALL TYPES.
14. PROVIDE R38 CLOSED CELL SPRAY FOAM ATTIC INSULATION.
15. PROVIDE CONCRETE SIDEWALK, REFER TO ARCHITECTURAL SITE PLAN.
16. PRE-FAB TRUSSES, REFER TO TRUSS MANUFACTURERS LAYOUT AND CALCULATIONS.
17. INTERIOR WALL, REFER TO WALL TYPES.
18. PROVIDE SUSPENDED CEILING, TYPICAL. ACT-1
19. FOOTING, REFER TO STRUCTURAL PLANS.
20. CONCRETE SLAB, REFER TO STRUCTURAL PLANS.
21. HVAC LOCATION.
22. PROVIDE RAKE TRIM. M-4

A3 North Elevation

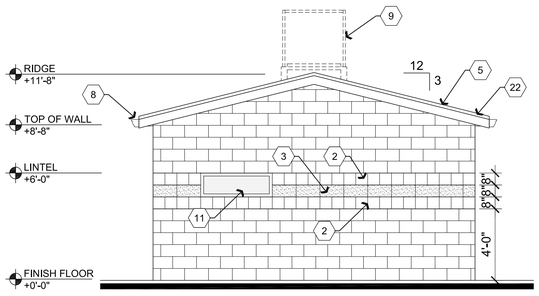
Scale: 1/4"=1'-0"

TRUSSES AT 8' 9 1/2
CEILING 8'-6"



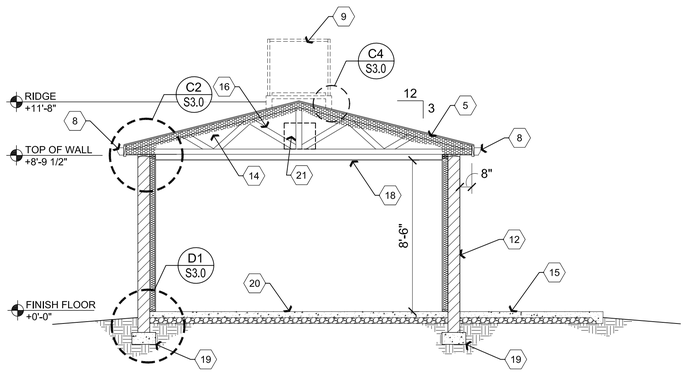
B3 South Elevation

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



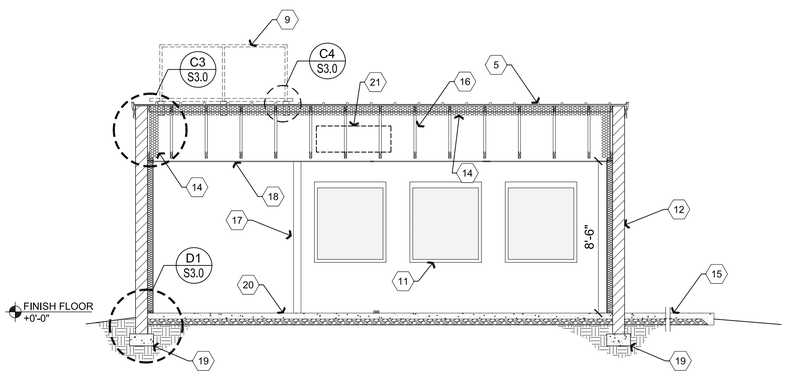
A2 East Elevation

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



B2 West Elevation

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



A1 Building Section

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

B1 Building Section

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

Jan 12, 2018 - 1:18pm

REVISIONS	BY

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ARCHITECTURE & PLANNING

REGISTERED ARCHITECT
CERTIFICATE NO.
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KENSON
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ARIZONA U.S.A.
EXPIRES: 6/30/18

DRAWING: Building Sections

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	L.O.
CHECKED BY	W.A.K.
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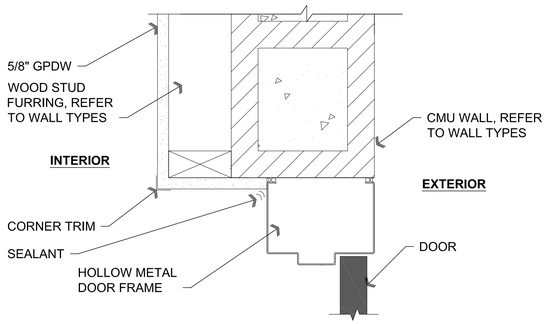
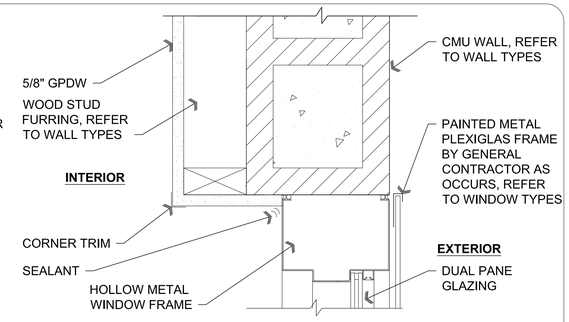


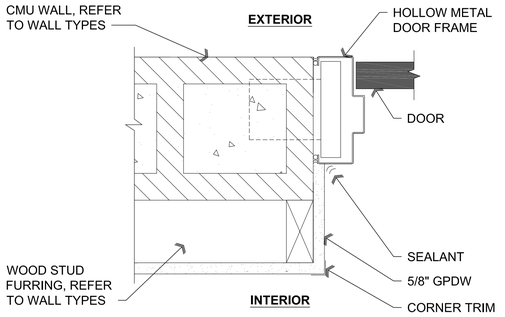
C4 Hollow Metal Door Head

SCALE: 3" = 1'-0"



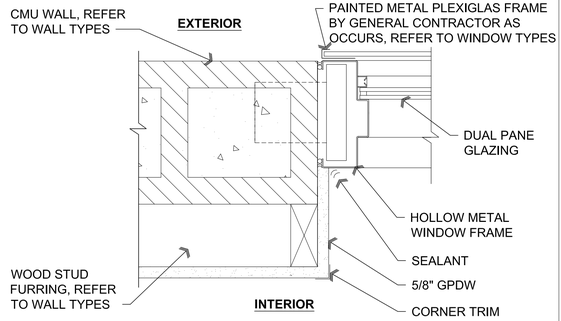
D4 Hollow Metal Window Head

SCALE: 3" = 1'-0"



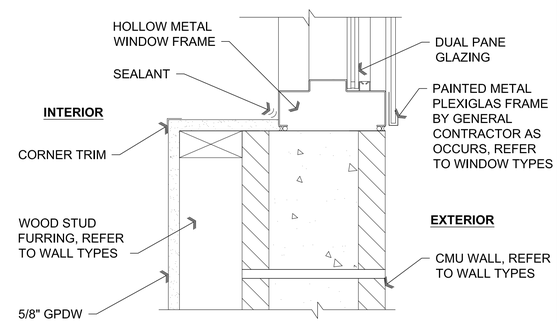
C3 Hollow Metal Door Jamb

SCALE: 3" = 1'-0"



D3 Hollow Metal Window Jamb

SCALE: 3" = 1'-0"



D2 Hollow Metal Window Sill

SCALE: 3" = 1'-0"

Jan 12, 2018 - 1:18pm

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SHEET:

A5.0

Specifications

00 - PROCUREMENT AND CONTRACTING REQUIREMENTS	
00 70 00 - GENERAL CONDITIONS	
	General Conditions of the Contract for Construction, AIA Document A201, 2007 Edition, is made a part of the Construction Documents by reference. A copy of the referenced document is available for inspection at the office of the Architect.
01 - GENERAL REQUIREMENTS	
01 30 00 - ADMINISTRATIVE REQUIREMENTS	
Shop Drawings	One (1) paper copy of Shop Drawings and/or Catalog Cut Sheets and one (1) electronic file are to be submitted to the Architect for review and approval. The Architect will review the shop drawings and affix a stamp to the electronic file, indicating the findings of the review and return to the Contractor. The Contractor shall correct and resubmit as necessary. Required for all products and samples and materials to be included in the project.
Meetings	Contractor shall hold construction progress meetings at jobsite every other week. Representatives from owner, architect, contractor, and any relative subcontractor or suppliers shall attend. Contractor shall take minutes of the meetings and distribute to all attendees.
Portable Toilet Facility	Contractor to maintain portable toilet facility throughout construction period.
Dumpster	Contractor to provide dumpster throughout construction period.
Samples	Three (3) samples of each color or style of the products to be submitted to the Architect.
01 50 00 - TEMPORARY FACILITIES AND CONTROLS	
Designated Areas	Owner shall provide designated areas for the contractor's employee parking, material storage and staging. Contractor shall control his employees, sub-contractors and material suppliers from parking in un-designated areas.
Protection	Contractor shall take All necessary precautionary measures to protect their work and ensure the safety of workmen, public and property. Neither the Owner nor Architect shall have any responsibility or control of construction means, methods, techniques, sequences or procedures affecting job-site safety, or for safety precautions and programs. contractor shall legally defend and hold harmless the Owner and Architect from all such claims.
Contractor's Responsibility	The Contractor shall supervise and direct the work, and be solely responsible for and have control over all methods, techniques and procedures necessary for the proper execution of the work. Where the work of this agreement affects owner's utilities, fire alarm, fire suppression or controls systems, the contractor shall give the owner a minimum of 24 hours advance notice. The Contractor shall supervise and direct the work, and be solely responsible for and have control over all methods, techniques and procedures necessary for the proper execution of the work. Where the work of this agreement affects owner's utilities, fire alarm, fire suppression or controls systems, the contractor shall give the owner a minimum of 24 hours advance notice. The Contractor shall be responsible to the owner for the acts and omissions of the Contractor's employees, agents, sub-contractors, and their agents, employees, and other persons performing portions of the work under a contract with the Contractor to the fullest extent permitted by law. The Contractor shall indemnify and hold harmless the Owner, the Owner's consultants, agents and employees of any of them from and against claims, damages, losses and expenses including but not limited to attorney's fees arising out of or resulting from performance of the work, provided that such claim damages, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury or destruction of tangible property other than the work itself, including loss of use resulting therefrom, but only to the extent caused in whole or in part by negligent acts or omissions of the contractor, a sub-contractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable regardless of whether or not such damage, claim, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this paragraph.
Material	The Contractor warrants that unless otherwise specified, all materials and equipment shall be new, free from defects, suitable for the intended purpose, and in conformance with laws in effect on the date of this agreement.
Substitution	Substitution of any materials or manufacturer requires prior approval by architect. Refer to owner's bidding general conditions for question timeline.
01 70 00 - EXECUTION REQUIREMENTS	
General	Contractor shall field verify all existing conditions and lay out all of the work prior to starting construction on any part of the work. As a minimum contractor shall verify: - all dimensions, both horizontal and vertical - Utility locations, buried and overhead - existing conditions affecting this project
Conflicts	If Contractor discovers an existing condition which differs from that shown (or is not shown), Contractor shall immediately notify the Architect.
Cutting and Demolition	In all cases, exercise extreme care in cutting operations and perform such operations under adequate supervision by competent mechanics skilled in the applicable trade. Openings shall be neatly cut and shall be kept as small as possible to avoid unnecessary damage. careless and/or avoidable cutting damage, etc. will not be tolerated and the contractor will be held responsible for such avoidable or willful damage.
Patching and Refinishing	All replacing, patching and repairing of materials and surfaces cut or damaged in the execution of the work shall be performed by experienced mechanics of the specific trades involved. Such repairing and/or patching shall be done with the applicable materials in a manner that all surfaces so replaced, etc. will, upon completion of the work, match the surrounding similar surfaces.
Locations	Walls - paint all affected walls, interior and exterior from corner to corner. (e.g. if you install a door in an existing frame, you need only to paint the door and frame, but if you install a door and frame, paint the entire wall to match existing) Gypsum wall board ceilings - Paint the entire ceiling of the room affected. (e.g. if anything is installed in/on/through the ceiling of a room, paint the ceiling of that room) Roofs - Replace portion of roof covering as required to flash new assembly. If roof warranty is still in effect, Contractor issuing warranty shall perform the required work. All patching and refinishing will be performed in a manner such that at the completion of the work, it shall not be obvious where an item was removed from, or added to.
Disposal	Remove all materials noted on the drawings and all miscellaneous materials which will be rendered useless with removal of the item noted. Unless specifically noted otherwise, materials shall become the property of the contractor and shall be removed from the site in a legal and safe manner. Patch and repair all adjacent surfaces such that at the completion of the work, it shall not be obvious where an item was removed from or added to. Final appearance shall be totally acceptable to the owner. Contractor shall provide and maintain his own trash receptacles, unless specifically directed otherwise. All surplus materials become the property of the contractor. Remove all trash, rubbish and surplus materials from the site and dispose of in a legal and safe manner.
As-Builts	Contractor shall maintain a clean set of drawings at the job site that is specifically set aside for recording: - all differences between the work as shown on the drawings and the work installed. - All work added or deleted during the course of construction - Exact measurements of all buried and/or concealed work (e.g. conduit below slab, conduit and data cable below raised platforms, conduit in walls etc.) All recordings shall be neat and legible. Stamp this set of drawings 'As-Built drawings' and list as a minimum, the name, address and telephone number of the General Contractor and all major sub-contractors. (e.g. electrical, HVAC, etc.) At the completion of the project as prerequisite for final payment, Contractor shall turn these as-builts over to the owner.
Final Cleaning	After the construction of each phase and before occupancy, thoroughly clean the space by dusting the sills, washing windows, vacuuming the carpet and replace all HVAC filters. Clean site areas of any refuse created in the scope of work.
03 - CONCRETE	
03 30 00 CAST-IN-PLACE-CONCRETE	
General	Refer to general structural notes on the engineering drawings. Shall supersede this section.
Mix Design	Concrete Mix # 160X109 in Winter and #160X149 in Summer as produced by Hanson products.
	Curing compound provided on all slabs per ACI and ASTM specifications.
04 - MASONRY	
General	Refer to structural plans
08 - OPENINGS	
08 11 00 - METAL DOORS & FRAMES and WINDOW FRAMES	
General	Provide 16 gauge hollow metal doors with 14 gauge hollow metal frames as shown on the drawings per steel door institute standards. Provide 14 guage hollow metal window frames as shown on the drawings.
08 14 00 - WOOD DOORS	
General	Provide wood veneer doors per schedule.
08 70 00 - HARDWARE	
General	Refer to hardware schedule.
08 80 00 - GLAZING	
General	Provide and install glass and glazing as indicated on the drawings and specified herein. Comply with building code, safety standard for architectural glazing materials and consumer products safety commission.
09 - FINISHES	
09 29 00 - GYPSUM BOARD	
General	Installation and application of materials to be in accordance with the latest printed instructions of the U.S. gypsum company or approved equal. After finishing, make joints invisible. No gaps or voids between gypsum board units or between drywall and adjacent work unless otherwise detailed. Not more than 1/8" in 10'-0" deviation from true plane, plumb and level in finished work.
Gypsum Board	ASTM C 36; regular types except where special types are required. Minimum 5/8" thick. Texture: Light Skip Trowel.
09 90 00 - PAINTING	
General	Painting products shall be specified from Sherwin Williams.
Paint Specification	Interior Drywall: 1. Primer to be one coat of PVA Drywall primer and sealer, white 2. Finish to be two coats of ProMar 200 Zero VOC Interior Latex, Eggshell
	Hollow Metal Door and Frames: 1. Primer to be one coat of B66W00310-Pro Industrial Pro-Cryl Universal Acrylic Primer, Off White 2. Finish to be two coats of A76W00051 Solo Int/Ext 100% Acrylic Semi-Gloss
	CMU: Prosoco Siloxane Sealer, two coats with a 6" drape
Interior Concrete Sealer	Sherwin Williams General Polymers 4409 WB Polyurethane Satin Resin, one coat

Jan 12, 2018 - 1:20pm

REVISIONS	BY

REGISTERED ARCHITECT
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PROJECT: ERAU Drone / UAS Building
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APN: 106-03-004

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 12th, 2018
JOB NO.: 700
SHEET:

A6.0

GENERAL REQUIREMENTS:

1. THE STRUCTURAL SYSTEMS AND MEMBERS DEPICTED HEREIN HAVE BEEN DESIGNED PRIMARILY TO SAFEGUARD AGAINST MAJOR STRUCTURAL DAMAGE AND LOSS OF LIFE., NOT TO LIMIT DAMAGE OR MAINTAIN FUNCTION (IBC SECTION 101.3).

2. THESE DRAWINGS, HAVE BEEN PERFORMED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ARCHITECTS IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKMEN WHO HAVE A WORKING KNOWLEDGE OF THE INTERNATIONAL BUILDING CODE CONVENTIONAL FRAMING REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION R FRAMING ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS USED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, AND SHALL COORDINATE ALL DETAILS.

4. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

   TYPICAL DETAILS AND NOTES ARE NOT NECESSARILY INDICATED ON THE PLANS, BUT SHALL APPLY NONE-THE-LESS, WHERE NO DETAILS ARE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.

5. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

   CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT.

6. ANY INSPECTIONS, SPECIAL (IBC CHAPTER 17) OR OTHERWISE THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR BY THESE PLANS SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY OR THE BUILDING DEPARTMENTS. SITE VISITS BY THE ARCHITECT DO NOT CONSTITUTE AN OFFICIAL INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.

7. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATION. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DRAWINGS SHALL BE FLAGGED UPON HIS REVIEW. VERIFY ALL DIMENSIONS WITH ARCHITECT. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM ORIGINAL CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED WHICH AR NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER THE ARCHITECT'S REVIEW UNLESS NOTED ACCORDINGLY. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER REGISTERED IN THE APPROPRIATE STATE. THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO ORIGINAL DRAWINGS. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY. REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ALLOW 5 WORKING DAYS FOR THE ARCHITECT'S REVIEW. ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE ARCHITECT'S RECORDS.

BASIS FOR DESIGN:

1. BUILDING CODE: 2012 EDITION OF THE IBC WITH CITY/COUNTY AMMENDMENTS

   OCCUPANCY CATEGORY - II

2. VERTICAL LOADS:

LOCATION	LIVE LOAD	DEAD LOAD
ROOF	30 PSF (SNOW)	15 PSF

3. SEISMIC DESIGN PARAMETERS

ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
IMPORTANCE FACTOR	Ie = 1.00
SITE CLASS	D
SEISMIC DESIGN CATEGORY	C
SPECTRAL RESPONSE ACCELERATIONS	Sms = 0.532, Sm1 = 0.244
SPECTRAL RESPONSE COEFFICIENTS	Sds = 0.355, Sd1 = 0.163
HORIZONTAL SHEAR TRANSFER ELEMENTS:	
STEEL DECK - FLEXIBLE DIAPHRAGM(S)	R = 3.5
VERTICAL SHEAR TRANSFER ELEMENTS:	
INTERMEDIATE MASONRY SHEARWALL(S)	R = 3.5

4. WIND DESIGN PARAMETERS

ULTIMATE WIND SPEED	115 MPH (3 SECOND GUST)
WIND EXPOSURE	B
IMPORTANCE FACTOR	Iw = 1.00
INTERNAL PRESSURE COEFFICIENT	-0.18
ULTIMATE COMPONENT & CLADDING PRESSURE	24.6 PSF
NET UPLIFT ON ROOF	5 PSF

FOUNDATION NOTES:

1. IN LIEU OF A GEOTECHNICAL REPORT: THE FOUNDATION HAS BEEN DESIGNED ACCORDING TO THE RECOMMENDATIONS OF CHAPTER 18 OF THE IBC.

2. THE SOIL DESIGN VALUES LISTED BELOW HAVE BEEN APPROVED BY THE CITY/COUNTY BUILDING DEPARTMENT, CONTINGENT THAT THE SOIL ON THE SITE PREDOMINATELY CONSISTS OF SAND AND / OR GRAVEL.

   SPECIFIC SOIL CLASSIFICATIONS SHOULD BE ONE OF THE FOLLOWING: SANDY GRAVEL OR GRAVEL (GW OR GP), SAND (SW AND SP), SILTY SAND (SM), CLAYEY SAND (SC), SILTY GRAVEL (GM), OR CLAYEY GRAVEL (GC). THESE SOIL CLASSIFICATIONS CAN BE FOUND IN TABLE 1804.2 OF CHAPTER 18 OF THE IBC. VERIFICATION OF SOIL CLASSIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR.

   VERIFICATION OF SOIL CLASSIFICATION IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE SOIL DESIGN VALUES FOR THE FOUNDATION ARE:

ALLOWABLE BEARING PRESSURE	1500 PSF
ALLOWABLE LATERAL BEARING PRESSURE	150 PSF/FT
ALLOWABLE LATERAL SLIDING COEFFICIENT	0.25
LATERAL BAKCFILL PRESSURE (UNRESTRAINED)	30 PSF/FT
LATERAL BACKFILL PRESSURE (RESTRAINED)	50 PSF/FT
SITE CLASS	D

3. A ONE-THIRD INCREASE IN BEARING PRESSURES IS ALLOWED WITH SEISMIC OR WIND LOAD COMBINATIONS, LATERAL BEARING AND LATERAL SLIDING RESISTANCE MAY BE COMBINED.

FOUNDATION BEARING DEPTH
18" BELOW FINISH GRADE

   ALL FOUNDATIONS SHALL BEAR COMPACTED ENGINEERED FILL 18 INCHES MINIMUM BELOW FINISH GRADE. GRADE IS DEFINED AS TOP OF SLAB FOR INTERIOR FOOTINGS AND LOWEST ADJACENT GRADE WITHIN 5 FEET OF THE BUILDING FOR PERIMETER FOOTINGS. WHERE EXTERIOR PAVING OR CONCRETE IS DIRECTLY ADJACENT TO BUILDING, GRADE IS DEFINED AS TOP OF EXTERIOR PAVING AT LEAST 5 FEET FROM BUILDING. CONCRETE FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF LOOSE DEBRIS OR UN-COMPACTED MATERIAL AT TIME OF CONCRETE PLACEMENT.

4. CONCRETE SLABS ON GRADE SHALL BE SUPPORTED ON A 4 INCH LAYER OF SELECT FILL MATERIAL. FILL MATERIAL SHOULD BE MOISTENED, BUT NOT SATURATED JUST PRIOR TO PLACING CONCRETE.

CONCRETE

1. CONCRETE MIX DESIGN:
   CONCRETE MIX # 160X109 IN WINTER AND #160X149 IN SUMMER AS PRODUCED BY HANSON PRODUCTS.

2. MINIMUM 28 DAY CONCRETE STRENGTH SHALL BE AS FOLLOWS:

USE	CONCRETE STRENGTH	REMARKS
FOUNDATIONS	2500 PSI	DESIGNED FOR 2500 PSI
CONCRETE SLABS ON GRADE	3000 PSI	W/O INSPECTION

3. ALL NORMAL WEIGHT CONCRETE SHALL BE REGULAR WEIGHT OF 150 POUNDS PER CUBIC FOOT USING HARD-ROCK AGGREGATES. AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM 067 FOR 3/4 INCH, ASTM C57 FOR 1 INCH AND ASTM C467 FOR 1-1/2 INCH AGGREGATE.

4. TENSION LAP SPLICES OF REINFORCING STEEL IN CONCRETE SHALL BE AS FOLLOWS:

REBAR SIZE	STANDARD LAP
#3	20"
#4	32"
#5	39"

   NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE ARCHITECT. LATEST ACI CODE AND DETAILING MANUAL APPLY. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES.

5. ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS 'CLEAR' OR 'CLR' ARE TO CENTER OF STEEL. MINIMUM COVER FOR NON-PRESTRESSED CONCRETE REINFORCING SHALL BE AS FOLLOWS:

LOCATION	MINIMUM COVER	TOLERANCE
CAST AGAINST EARTH (FOOTINGS)	3"	±3/8"
SLABS ON GRADE	1 1/2"	±1/4"
EXPOSED TO EARTH OR WEATHER - #5 AND SMALLER	1 1/2"	±3/8"

6. MAXIMUM SLUMP FOR ALL CONCRETE SHALL BE 4 INCHES. SLUMP FOR EXTERIOR SLABS SHALL BE 6 INCHES. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH ALKALINE SOIL, AND TYPE II ELSEWHERE.

7. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY.

8. CONCRETE PLACEMENT AND QUALITY SHALL BE PER RECOMMENDATIONS IN ACI 614, ACI 301 AND 318. MECHANICALLY VIBRATE ALL CONCRETE WHIEN LACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND AND UNDER FLOOR DUCTS, ETC. CAST CLOSURE POUR, WHERE SHOWN ON PLANS AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED. REMOVE ALL DEBRIS FROM FORMS BEFORE PLACING CONCRETE.

   ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC., SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.

9. ALL CONCRETE SLABS ON GRADE SHALL BE DIVIDED INTO AREAS BY CONTROL JOINTS (KEYED OR SAW CUT) SUCH THAT ONE SLAB AREA DOES NOT EXCEED 250 SQUARE FEET, OR BE MORE THAN TWO TIMES LONGER THAN THE SLAB AREA WIDTH. THE FOUNDATION PLAN SHOWS A SUGGESTED METHOD OF CONTROL JOINT LAYOUT. IT IS RECOMMEND THAT SAW CUTS BE MADE WITHIN 16 HOURS OF CONCRETE BATCHING.

   KEYED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING, ALL OTHER JOINTS MAY BE SAW CUT.

9. HORIZONTAL PIPES AND ELECTRICAL CONDUITS SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE AND SLABS ON GRADE EXCEPT WHERE SPECIFICALLY APPROVED OR NOTED BY THE ARCHITECT. PIPES AND CONDUITS SHALL NOT IMPAIR THE STRENGTH OF THE WORK.

10. FLY ASH MAY BE USED ONLY IF PERMITTED BY ARCHITECTURAL SPECIFICATIONS AND SHALL BE LIMITED TO 18 PERCENT OF CEMENTITIOUS MATERIALS AND SHALL HAVE A REPLACEMENT FACTOR OF 1.2 RELATIVE TO CEMENT REPLACED. NO FLY ASH ADDITIVES SHALL BE USED IN FLATWORK OR ARCHITECTURALLY EXPOSED CONCRETE.

11. COLD/HOT WEATHER CONCRETE CONSTRUCTION: PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND 306.

MASONRY (CONCRETE BLOCK):

MINIMUM 28 DAY MASONRY STRENGTH SHALL BE 1500 PSI.

1. VERTICAL REINFORCING: #4 AT 32 INCHES ON CENTER FULL HEIGHT OF WALL, CENTERED IN GROUTED CELL AND AT ALL WALL INTERSECTIONS, CORNER, WALL ENDS, JAMBS, OVER LINTELS, AND EACH SIDE OF CONTROL JOINTS (MINIMUM UNLESS NOTED OTHERWISE ON PLANS/DETAILS). TIE AT 8'-0" VERTICALLY, WITH SINGLE WIRE LOOP TIE OR EQUIVALENT. DOWEL ALL REINFORCING TO FOUNDATION WITH DOWELS TO MATCH AND LAP VERTICAL WALL OR COLUMN REINFORCING.

2. CONTROL JOINTS: UNLESS NOTED OTHERWISE ON THE PLANS, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0". CONTROL JOINTS SHALL NOT OCCUR AT WALL CORNERS, INTERSECTIONS, ENDS, WITHIN 24" OF CONCENTRATED POINTS OF BEARING OR JAMBS, OR OVER OPENINGS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.

3. HORIZONTAL REINFORCING: (MINIMUM UNLESS NOTED OTHERWISE ON PLANS/DETAILS) 2-#4 BARS IN CENTER OF 16 INCH DEEP MINIMUM CONTINUOUS GROUTED BOND BEAM AT ELEVATED FLOOR AND ROOF LINES. FOR 8 INCH THICK WALLS, ONE #4 BAR IN CENTER OF 8 INCH DEEP CONTINUOUS GROUTED BOND BEAM AT INTERVALS NOT TO EXCEED 48 INCHES ON CENTER AND AT TOP OF PARAPET OR FREE STANDING WALLS.

   HORIZONTAL BARS AT TOP OF PARAPET OR FREE STANDING WALLS SHALL BE PLACED 8" DOWN FROM THE TOP IN AN UPSIDE DOWN BOND BEAM BLOCK.

   PLACE HORIZONTAL BARS CONTINUOUS THROUGH CONTROL JOINTS. PROVIDE BENT BARS PER TYPICAL DETAILS TO MATCH HORIZONTAL BOND BEAM REINFORCING, AT CORNERS AND WALL INTERSECTION TO MAINTAIN BOND BEAM CONTINUITY.

4. TENSION LAP SPLICES OF REINFORCING STEEL IN MASONRY SHALL BE AS FOLLOWS:

REBAR SIZE	STANDARD LAP	RETAINING WALLS (AT FACE OF WALL)
#4	24"	30"
#5	30"	46"
#6	43"	55"

5. REINFORCING PLACEMENT TOLERANCES: ALL DIMENSIONS SHOWING THE LOCATION OF REINFORCING STEEL NOT NOTED AS 'CLEAR' OR 'CLR' ARE TO CENTER OF STEEL. TOLERANCES FOR PLACEMENT OF VERTICAL REINFORCING SHALL BE (+/-) 1/2" PERPENDICULAR TO WALL AND (+/-) 2" ALONG THE LENGTH OF THE WALL. PROVIDE 1/2" CLEARANCE BETWEEN MASONRY UNITS AND REINFORCING AND REINFORCING RUNNING IN THE SAME DIRECTION. LAPS MAY BE BESIDE OR OVER THE REINFORCING BEING SPLICED.

6. BLOCK QUALITY: CONCRETE BLOCK SHALL BE HOLLOW LIGHTWEIGHT LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM 90-75 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI. USE BOND BEAM UNITS AT HORIZONTAL REINFORCING.

7. MORTAR: MORTAR MIX SHALL CONFORM TO REQUIREMENTS OF THE IBC STANDARDS TYPE M OR S. MORTAR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.

8. GROUT: GROUT SHALL CONFORM TO REQUIREMENTS OF CHAPTER 21 OF THE IBC FOR COARSE GROUT. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. ALL CELLS IN CONCRETE BLOCKS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID. ALL GROUT SHALL BE MECHANICALLY VIBRATED.

9. GROUT LIFTS OF 5 FEET OR LESS IS RECOMMENDED. FOR HIGHER GROUT LIFTS, CLEANOUTS (3"x3") AT THE BOTTOM OF ALL VERTICALLY REINFORCED CELLS SHALL BE PROVIDED. IN ADDITION, MECHANICAL DEVICES SHALL BE USED TO POSITION AND SECURE REINFORCING WHEN GROUT LIFTS EXCEED 5 FEET IN HEIGHT. IN SOLID GROUTED MASONRY, CLEANOUTS SHALL NOT BE SPACED MORE THAN 32" O.C.

   BLOCK CONSTRUCTION: ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNLESS OTHERWISE NOTED) WITH ALL VERTICAL CELLS IN ALIGNMENT.

10. MISCELLANEOUS LINTELS:

    FOR MISCELLANEOUS OPENINGS (4'-8" OR LESS) NOT SHOWN ON PLANS OR IN A SCHEDULE, BUT REQUIRED BY OTHER DISCIPLINES (MECHANICAL, ELECTRICAL, PLUMBING, ETC.) THE FOLLOWING OPTIONS MAY BE USED IN 8" MASONRY WALLS.

    OPTION #1: GROUTED REINFORCED MASONRY LINTEL: REINFORCE WITH (2) #4 HORIZONTAL BARS IN BOTTOM OF BOND BEAM OR LINTEL BLOCK AND SHALL BE GROUTED SOLID TO A MINIMUM DEPTH OF 12 INCHES. ALL LINTEL REINFORCING AND GROUT SHALL EXTEND 16 INCHES PAST JAMBS.

    OPTION #2: DOUBLE ANGLE LINTELS: USE (2) L3.5x3.5x1/4 BACK -TO-BACK. PROVIDE 12" MINIMUM OF GROUT OVER LINTELS. BEARING FOR STEEL ANGLE LINTELS SHALL BE 4" (+/-) 1" AT EACH JAMB.

    OPTION #3: POWERS STEEL LINTEL: PS8-8 GROUT LINTEL 8" DEEP. BEARING FOR POWERS STEEL LINTELS SHALL BE 4" (+/-) 1" AT EACH JAMB.

    THESE LINTELS, OR THE OPENING THEY SPAN, SHALL NOT BE PLACED SO AS TO INTERFERE WITH THE REQUIREMENTS OF OTHER STRUCTURAL ELEMENTS (I.E. BOND BEAMS, LINTELS, CONTROL JOINTS, CONCENTRATED POINTS OF BEARING, ETC.) WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT.

    SOLID GROUT SHALL BE PROVIDED BETWEEN WEBS AND MASONRY FACE SHELLS FOR FULL LENGTH OF ALL STEEL LINTELS. MORTAR MAY BE USED FOR GROUT FOR THIS PURPOSE ONLY. FACE UNITS, SOAPS, ROMANS, ETC., SHALL BE LAID WITH FULL HEAD AND BED JOINTS.

REINFORCING STEEL:

1. ASTM A615 GRADE 60 (FY = 60 KSI) DEFORMED BARS FOR ALL BARS #5 AND LARGER. ASTM A615 GRADE 40 (FY = 40 KSI) DEFORMED BARS FOR ALL BARS #4 AND SMALLER. GRADE 60 DEFORMED BARS SHALL BE USED FOR CONCRETE WALLS, BEAMS, ELEVATED SLABS AND COLUMN REINFORCING.

2. WELDING OF REINFORCING BARS SHALL BE MADE ONLY TO ASTM A706 GRADE 60 BARS AND ONLY USING E90 SERIES RODS. WELDING OF REINFORCING BARS SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.

3. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

SPECIAL INSPECTION:

1. THE CONTRACTOR SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION OF CERTAIN TYPES OF WORK. PER IBC SECTION 1704 AND THE ARCHITECT, SPECIAL INSPECTION IS (IS NOT) REQUIRED AS FOLLOWS:

TYPE OF WORK	REQUIRED	REMARKS
CONCRETE SLAB ON GRADE	NO	DESIGN BASED ON f'c=1500 PSI
CONCRETE FOUNDATIONS	NO	DESIGN BASED ON f'c=1500 PSI
REINFORCING STEEL FOR ALL CONCRETE / MASONRY THAT REQUIRES INSPECTION	YES	PRIOR TO PLACEMENT OF CONCRETE OR GROUT
EPOXY / EXPANSION ANCHORS	YES	DURING INSTALLATION OF ANCHORS
MASONRY (CMU)	YES	DURING PLACEMENT OF GROUT

   SPECIAL INSPECTIONS NOT LISTED ABOVE ARE NOT REQUIRED.

2. DESIGNATION OF SPECIAL INSPECTOR:

   A. FOR STRUCTURAL ITEMS LISTED ABOVE, THE SPECIAL INSPECTOR SHALL BE, OR WORK UNDER THE DIRECT SUPERVISION OF THE ARCHITECT.

   B. THE OWNER, AT HIS OPTION, MAY DESIGNATE AN ALTERNATE SPECIAL INSPECTOR, OBTAIN THE REQUIRED CERTIFICATE(S), AND MAKE THE NECESSARY NOTIFICATIONS TO ALL PARTIES INVOLVED. THE ALTERNATE SPECIAL INSPECTOR SHALL BE A LICENSED STRUCTURAL ENGINEER (OR GEOTECHNICAL ENGINEER FOR GEOTECHNICAL ITEMS) OR AN ICBO CERTIFIED SPECIAL INSPECTOR.

   C. TO SCHEDULE ANY SPECIAL INSPECTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SPECIAL INSPECTOR AT LEAST ONE DAY IN ADVANCE.

3. QUALITY ASSURANCE PROGRAM:

   A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

   B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

Jan 12, 2018 - 1:20pm

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/12/18
ARIZONA U.S.A.
EXPIRES: 6/30/18

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ARCHITECTURE & PLANNING

DRAWING: General Structural Notes

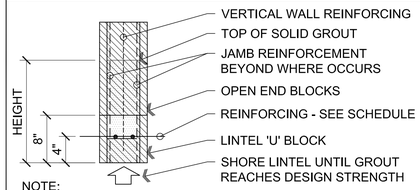
PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 12th, 2018
JOB NO.: 700
SHEET:

S1.0

Masonry Lintel (ML) Schedule

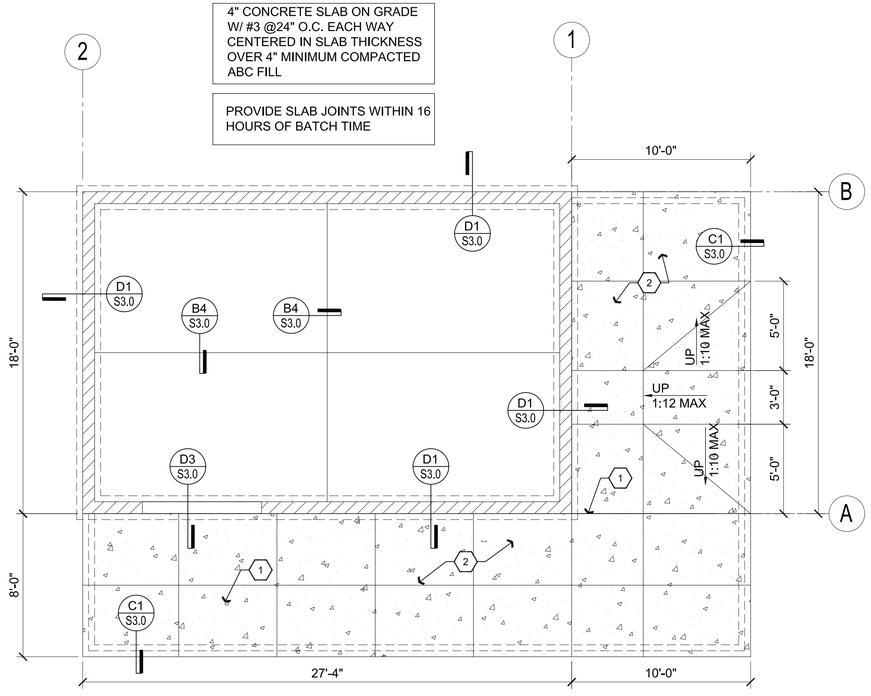


NOTE:
1. VERTICAL REINFORCING TO MATCH AND LAP WALL REINFORCING PER G.S.N.
2. EXTEND GROUT, OPEN END MASONRY UNITS AND REINFORCING 2'-0" PAST EACH JAMB. USE CORNER BARS WHERE 2'-0" CANNOT BE ACHIEVED.

MARK	HEIGHT	REINFORCING
ML1	16"	(2) #4 HORIZONTAL

Descriptive Keynotes

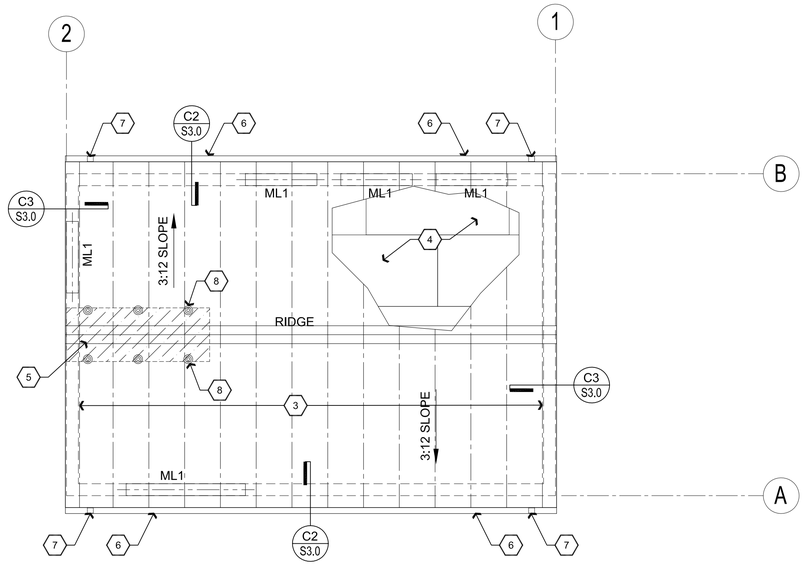
1. TYPICALLY INDICATES TOOLED CONCRETE CONTROL JOINT.
2. PROVIDE 4" THICK CONCRETE SIDEWALK W/ #3 @ 3'-0" O.C. EACH WAY OVER 4" COMPACTED A.B.C. PROVIDE 8" MINIMUM TURNDOWN ON SIDES.
3. PROVIDE PRE-MANUFACTURED STANDARD TRUSS.
4. PROVIDE 5/8" PLYWOOD SHEATHING ATTACH WITH PLYCLIPS, REFER TO GENERAL STRUCTURAL NOTES.
5. LOCATION OF FUTURE CATWALK.
6. PROVIDE SHEET METAL GUTTER.
7. PROVIDE SHEET METAL DOWNSPOUT, TYPICAL OF 4.
8. DEKTITE FLASHING, REFER TO DETAIL C4/S3.0, TYPICAL.



A1 Foundation Plan

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

Plan North



B1 Roof Framing Plan

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

Plan North

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CERTIFICATE NO. 25646
W. ALAN KENSON
DATE SIGNED 01/12/18
ARIZONA U.S.A.
EXPIRES: 6/30/18

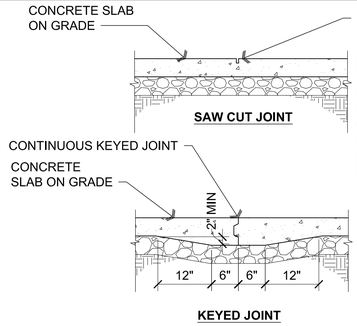
DRAWING: Structural Foundation plan

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

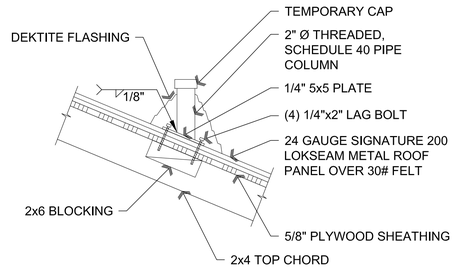
DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 12th, 2018
JOB NO.	700
SHEET	S2.0

Jan 12, 2018 - 1:20pm



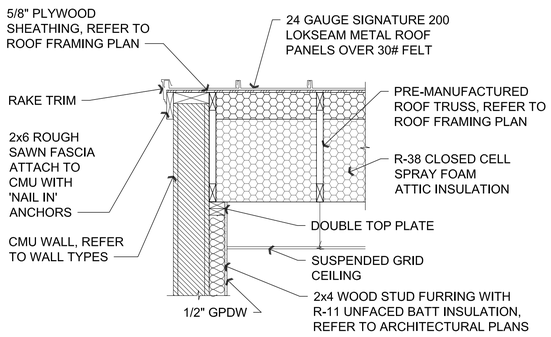
B4 Control Joints in Concrete Slab on Grade

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



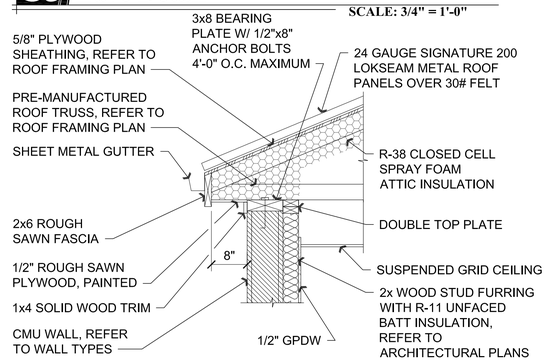
C4 Pipe Flashing

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



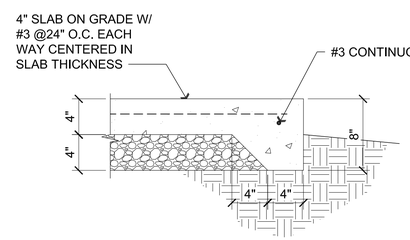
C3 Eave Detail

SCALE: 3/4" = 1'-0"



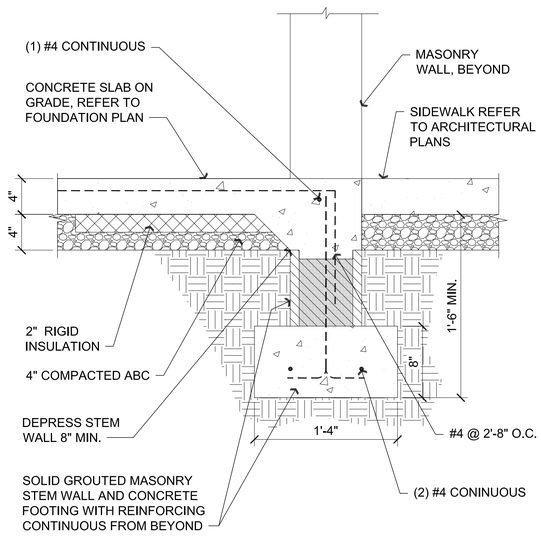
C2 Eave Detail

SCALE: 3/4" = 1'-0"



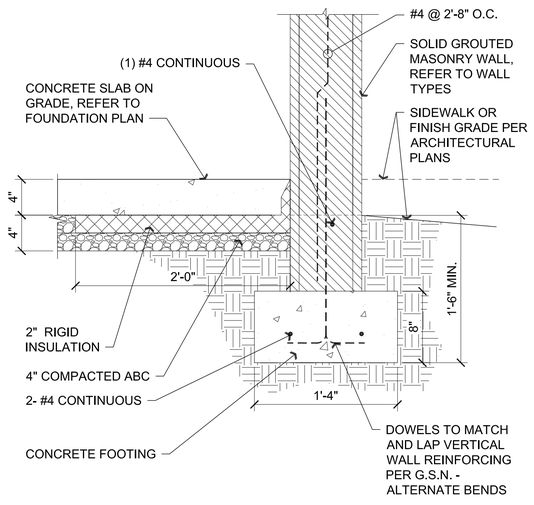
C1 Turndown at Sidewalk

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



D3 Footing at Door Opening

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



D1 Footing

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

Jan 12, 2018 - 1:21pm

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www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Details

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 12th, 2018
JOB NO.	700
SHEET	S3.0

COORDINATION NOTES

1 – COORDINATE OPENING'S FOR GRILLES, REGISTERS, DIFFUSERS AND DUCTWORK WITH FRAMING CONTRACTOR PRIOR TO ROUGH–IN.

2 – COORDINATE EXACT LOCATION OF ALL GRILLES, REGISTERS AND DIFFUSERS WITH ARCHITECTURAL PLANS.

3 – LIGHTING & SPRINKLER HEADS TAKE PRECEDENCE OVER DIFFUSER LOCATION. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS TO DIFFUSERS TO AVOID ANY CONFLICT WITH LIGHTING LAYOUT & SPRINKLER HEADS.

4 – CONTRACTOR TO COORDINATE THERMOSTAT LOCATIONS WITH OWNER & ARCHITECT PRIOR TO MOUNTING.

5 – ALL THERMOSTATS ARE TO BE MOUNTED AT A HEIGHT OF 48" TO 54" ABOVE THE FLOOR LEVEL FOR DISABLED ACCESS.

GENERAL REQUIREMENTS

1 – PROVIDE CLEARANCES AS PER MANUFACTURER'S RECOMMENDATIONS.

2 – PITCH CONDENSATE DRAIN LINE 1/8" PER 12" RUN TOWARDS TERMINATION. INSULATE IN CONDENSATE DRAIN LINE WITH 3/8" CLOSED CELL "ARMIFLEX" TUBE INSULATION, TO PREVENT CONDENSATE DRIP.

3 – PRIOR TO THE CONTRACTOR ORDERING OR SETTING ANY AIR CONDITIONING EQUIPMENT, DUCTWORK, OR AIR DEVICE, HE SHALL VERIFY LOCATION OF PLACEMENT WITH STRUCTURAL DRAWINGS AND CONFIRM WEIGHTS, DISCHARGE CONFIGURATION, SIZES, ELECTRICAL CHARACTERISTICS AND ANY OTHER DIMENSIONAL DATA WHICH MIGHT AFFECT THE SUCCESSFUL INSTALLATION OF THE EQUIPMENT.

4 – KEEP ALL VENTS THROUGH ROOF AND EXHAUST DISCHARGE DUCTS A MINIMUM OF 10'–0" FROM OUTSIDE AIR INTAKES OR WINDOWS AND FROM ALL VERTICAL PORTIONS OF THE BUILDING.

DUCT CONSTRUCTION NOTES

1 – ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH "ASHRAE GUIDE" AND "SMACNA STANDARDS" AND IN CONFORMANCE WITH REQUIREMENTS OF LOCAL BUILDING, MECHANICAL AND ENERGY CONSERVATION CODES. WHERE MORE THAN ONE REGULATION OR CODE APPLIES, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

2 – FLEXIBLE DUCTWORK SHALL COMPLY WITH THE CLASS I REQUIREMENTS OF THE NFPA BULLETIN NO. 90A AND SHALL BE INSULATED WITH 1" FIBERGLASS, SUPPORTED BY HELICALLY WOUND STEEL WIRE WITH REINFORCED METALIZED OUTER JACKET RATED FOR USE IN PLENUMS. ATTACHMENT SHALL BE WITH WORM DRIVE CLAMPS. LENGTH SHALL NOT EXCEED 10'–0", EXCEPT AS APPROVED BY ARCHITECT.

3 – PROVIDE MANUAL BALANCING DAMPER AT EACH BRANCH DUCT TAKE OFF.

4 – ALL DUCTWORK JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTION ON DUCTWORK SHALL BE LISTED AND LABELED BY UL 181A OR 181B TAPES AND MASTICS.

5 – ALL AIR SUPPLY AND RETURN DUCTS LOCATED IN CONDITIONED SPACES OR UNCONDITIONED SPACES SEPARATED FROM BUILDING EXTERIOR SHALL HAVE A MIN. R–5 INSULATION VALUE. ALL AIR SUPPLY AND RETURN DUCTS LOCATED IN UNCONDITIONED SPACES NOT SEPARATED FROM BUILDING EXTERIOR SPACES OR EXTERIOR DUCTS SHALL HAVE A MIN. R–8 INSULATION.

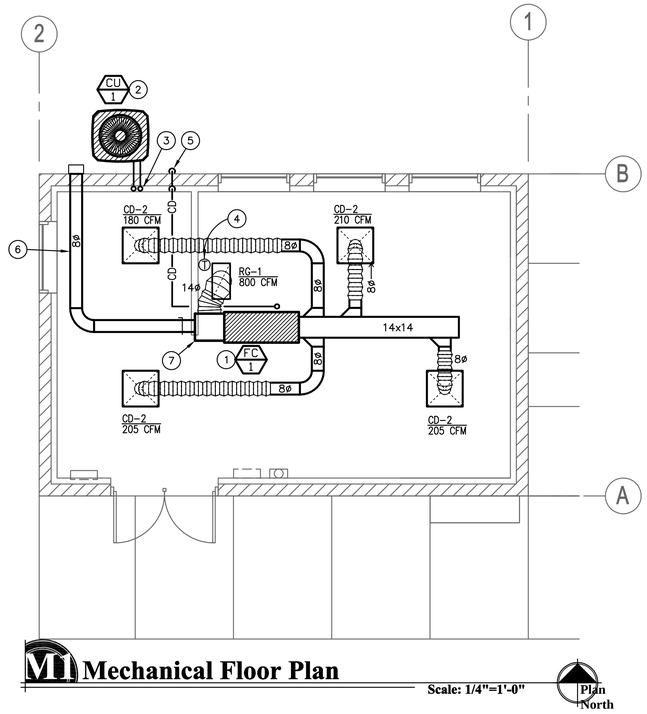
6 – PROVIDE RADIUS ELBOWS, TURNING VANES, AND SPLITTER DAMPERS IN BRANCHES AND EXTRACTORS WHERE APPLICABLE.

7 – TURNING VANES SHALL BE INSTALLED IN ALL MITERED ELBOWS.

8 – BRANCH DUCT SERVING DIFFUSERS SHALL BE SIZE AS INDICATED. PROVIDE INCREASER OR SHEET METAL PLENUM TO CONNECT TO DIFFUSER AS REQUIRED.

9 – ALL DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS. IF DUCT LINER IS USED FOR INSULATION, CONTRACTOR SHALL INCREASE DUCT SIZE ACCORDINGLY.

10 – HANGERS FOR SHEET METAL DUCTWORK SHALL BE INSTALLED AS REQUIRED BY 2012 IMC.



M1 **Mechanical Floor Plan** Scale: 1/4"=1'-0"

Plan North

KEYNOTES

1. NEW HORIZONTAL HEAT PUMP FAN COIL UNIT SUPPORTED FROM STRUCTURE. MAINTAIN ALL NECESSARY CLEARANCES AND MAINTENANCE ACCESS REQUIREMENTS. ROUTE AND CONNECT REFRIGERANT LINES FROM CONDENSING UNIT.
2. OUTDOOR CONDENSING UNIT ON 4" PRE–MANUFACTURED PAD. PAD SHALL BE A MINIMUM OF 4" LARGER ON ALL SIDES OF UNIT.
3. SLEEVE REFRIGERANT PIPING THROUGH WALLS AND ROUTE TO CORRESPONDING COIL. SIZE, INSULATE AND INSTALL PIPING PER MANUFACTURER'S RECOMMENDATIONS. FOLLOW MANUFACTURER'S PIPING GUIDE FOR ANY PIPING LENGTHS OVER 50 FEET. INSULATE REFRIGERANT PIPING PER SPECIFICATIONS.
4. PROVIDE HEATING/COOLING PROGRAMMABLE THERMOSTAT ON WALL AT 48" ABOVE FINISHED FLOOR. VERIFY EXACT LOCATION AND MOUNTING HEIGHT WITH ARCHITECT/OWNER.
5. EXTEND NEW 3/4" TYPE 'M' COPPER CONDENSATE DRAIN PIPING FROM UNIT CONNECTION AND ROUTE TO EXTERIOR. SLOPE ALL DRAIN PIPING AT A MINIMUM 1/8" PER FOOT TOWARD DISCHARGE LOCATION.
6. EXTEND 8ø OUTSIDE AIR DUCT FROM UNIT RETURN PLENUM TO OUTSIDE AIR INTAKE (FAMCO #SWV8A). BALANCE OUTSIDE AIR AS SHOWN ON SCHEDULE.
7. LINED RETURN PLENUM WITH RETURN AND OUTSIDE AIR CONNECTIONS. PROVIDE BALANCING DAMPERS ON EACH.

2012 IMC Table 403.3
Outside Air Ventilation Calculation

FC-1

Occupancy Class	People Outdoor Airflow Rate (Rp)	Area Outdoor Airflow Rate (Ra)	Occupant Density (#/1000 sf)	Area (Az)	Zone Population (Pz)	Vbz
Office Areas	5	0.06	5	232	1.16	20
Storage Areas	0	0.12	0	156	0	19
Balance FC-1 to 48 CFM					Breathing Zone Outdoor Airflow	38
					Zone Distribution Effectivness (IMC Table 403.3.1.2)	0.8
					Zone Outdoor Airflow	48

NOTE: UPON RECEIPT OF OWNER PROVIDED HVAC EQUIPMENT AND ACCESSORIES BY THE GENERAL CONTRACTOR AND HVAC CONTRACTOR, THESE CONTRACTORS WILL TAKE FULL AND COMPLETE RESPONSIBILITY FOR THESE ITEMS. ANY OWNER PROVIDED EQUIPMENT AND / OR ACCESSORIES THAT ARE LOST, STOLEN, DAMAGED OR DESTROYED WILL BE REPLACED BY THE CONTRACTORS AT THEIR OWN EXPENSE.

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Jul 27, 2017 - 11:00am

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Registered Professional Engineer (Retired) 33491 WILLIAM MARK ODELL Date Signed 01/09/18 ARIZONA U. S. A. Expires 3/31/19

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MECHANICAL SPECIFICATIONS

GENERAL REQUIREMENTS
GENERAL PROVISIONS WHICH MAKE SPECIFIC REFERENCE TO ELECTRICAL DIVISION ONLY ARE INCLUDED HEREIN FOR CLARITY AND SIMPLIFICATION OF SPECIFICATIONS WRITING AND ARE NOT PART OF THE MECHANICAL WORK. THE WORK OF DIVISION 15, MECHANICAL, IS SUBJECT TO THE CONDITIONS OF THE CONDITIONS OF THE CONTRACT, DIVISION 1, GENERAL REQUIREMENTS, AND APPLICABLE REQUIREMENTS OF OTHER PORTIONS OF THE CONTRACT DOCUMENTS. EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS AND COORDINATE THE MECHANICAL WORK ACCORDINGLY.

INTENT
IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED WITHOUT ADDITIONAL EXPENSE TO THE OWNER. SHALL THERE APPEAR TO BE DISCREPANCIES OR QUESTIONS OF INTENT IN THE CONTRACT. DOCUMENTS, REFER THE MATTER TO THE ARCHITECT FOR HIS DECISION BEFORE ORDERING ANY MATERIALS OR EQUIPMENT OR BEFORE THE START OF ANY RELATED WORK. THE DECISION OF THE ARCHITECT SHALL BE FINAL, CONCLUSIVE AND BINDING.

DRAWINGS AND DATA
DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE OF WORK AND TO INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTS, CONDUITS, PIPING AND FIXTURES. THEY ARE NOT INTENDED TO SHOW EVERY OFFSET OR FITTINGS OR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING INSTALLATION OF THE WORK. LOCATION OF ALL ITEMS NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. EXACT LOCATIONS NECESSARY TO SECURE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT PROJECT AND SHALL HAVE OVAL OF ARCHITECT BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS. IF SO DIRECTED BY ARCHITECT, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF WORK. INCLUDE MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION AND OPERATION OF A SYSTEM OR PIECE OF EQUIPMENT IN BID PRICE.

CODES
INCLUDE IN WORK, WITHOUT EXTRA COST TO OWNER, LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS) REQUIRED TO COMPLY WITH APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS. DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, ORDINANCES, STANDARDS AND STATUTES. CODES, ORDINANCES, STANDARDS AND STATUES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH DRAWINGS OR SPECIFICATIONS. FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS AND CODES ARE MINIMUM REQUIREMENTS:

A. APPLICABLE CITY, COUNTY, AND STATE MECHANICAL, ELECTRICAL, GAS, PLUMBING, HEALTH AND SANITARY CODES, LAWS AND ORDINANCES.
B. 2012 INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS.
C. REGULATIONS, PERMITS, INSPECTIONS: COMPLY WITH ALL APPLICABLE CODED, RULES AND REGULATIONS. ALL MATERIALS, EQUIPMENT AND WORK MUST CONFORM TO THE UNIFORM MECHANICAL CODE. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES.

GENERAL
MATERIALS AND EQUIPMENT STANDARD PRODUCTS OF A REPUTABLE MANUFACTURER REGULARLY ENGAGED IN MANUFACTURE OF THE SPECIFIED ITEMS. WHERE MORE THAN ONE UNIT IS REQUIRED OF ANY ITEM, FURNISHED BY THE SAME MANUFACTURER, EXCEPT WHERE SPECIFIED OTHERWISE. INSTALL MATERIAL AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SHOULD VARIANCE BETWEEN PLANS AND SPECIFICATIONS OCCUR WITH THESE, CONTACT ARCHITECT IMMEDIATELY SO THAT VARIATIONS IN INSTALLATION CAN BE KNOWN BY ALL PARTIES CONCERNED. PROVIDE EQUIPMENT FROM MANUFACTURER WHOSE PRODUCTS HAVE LOCAL REPRESENTATION.

EXECUTION
PROTECT EXISTING ACTIVE SERVICES (WATER, GAS, SEWER, ELECTRIC) WHEN ENCOUNTERED, AGAINST DAMAGE FROM CONSTRUCTION WORK. DO NOT PREVENT OR DISTURB OPERATION OF ACTIVE SERVICES WHICH ARE TO REMAIN. IF WORK MAKES TEMPORARY SHUTDOWNS OF SERVICES UNAVOIDABLE, CONSULT WITH OWNER AS TO DATES, PROCEDURES, AND ESTIMATED DURATION OF AT LEAST 10 WORKING DAYS IN ADVANCE OF DATE WHEN WORK IS TO BE PERFORMED. ARRANGE WORK FOR CONTINUOUS PERFORMANCE TO ASSURE THAT EXISTING OPERATING SERVICES WILL BE SHUT DOWN ONLY DURING THE TIME REQUIRED TO MAKE NECESSARY CONNECTIONS. IF A SYSTEM CANNOT SHUT DOWN, INSTALL TEMPORARY BYPASSES OR JUMPERS UNTIL CONNECTIONS ARE COMPLETE. CONTRACTOR RESPONSIBLE FOR ALL COSTS INCURRED BY ABOVE SHUTDOWNS, INCLUDING BYPASS OR JUMPER INSTALLATIONS, FOR WORK PERFORMED UNDER THIS SECTION. IF EXISTING ACTIVE UTILITY SERVICES ARE ENCOUNTERED WHICH REQUIRE RELOCATION, MAKE REQUEST TO PROPER AUTHORITIES FOR DETERMINATION OF PROCEDURES. PROPERLY TERMINATE EXISTING SERVICES TO BE ABANDONED IN CONFORMANCE WITH REQUIREMENTS OF AUTHORITIES. WHERE CONNECTIONS OR DISRUPTIONS ARE MADE TO EXISTING SYSTEMS, REACTIVATE, REFILL, AND RECHARGE ALL COMPONENTS AND RESTORE SYSTEMS TO OPERATING CONDITIONS AT TIME OF DISRUPTION.

GUARANTEE
EACH COMPLETE SYSTEM GUARANTEED BY CONTRACTOR FOR A PERIOD OF ONE YEAR, FROM DATE OF ACCEPTANCE OF WORK BY OWNER IN WRITING, TO BE FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP, AND TO PERFORM SATISFACTORILY UNDER ALL CONDITIONS OF LOAD OR SERVICE. THE GUARANTEES PROVIDE THAT ANY ADDITIONAL CONTROLS, PROTECTIVE DEVICES, OR EQUIPMENT BE PROVIDED AS NECESSARY TO MAKE THE SYSTEM OF EQUIPMENT OPERATE SATISFACTORILY, AND THAT ANY FAULTY MATERIALS OR WORKMANSHIP BE REPLACED OR REPAIRED. ON FAILURE OF GUARANTOR TO DO THE ABOVE AFTER WRITTEN NOTICE FROM OWNER, THE OWNER MAY HAVE THE WORK DOWN AT THE COST OF GUARANTOR. LOSS OF REFRIGERANT IS CONSIDERED A DEFECT IN WORKMANSHIP AND/OR EQUIPMENT, TO BE CORRECTED AS REQUIRED AT NO EXTRA COST TO THE OWNER.

PROVIDE EXTENDED FIVE (5) YEAR FACTORY PARTS & LABOR WARRANTY ON ALL AIR CONDITIONING COMPRESSORS.

AIR CONDITIONING, HEATING AND VENTILATING

SCOPE
WORK UNDER THIS SECTION INCLUDES FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE REMODELING, INSTALLATION AND PLACING INTO OPERATION THE HEATING, VENTILATING AND AIR CONDITIONING WORK AS SPECIFIED HEREIN AND INDICATED ON THE DRAWINGS.

VERIFICATION OF DIMENSIONS:
SCALED AND FIGURED DIMENSIONS ARE APPROXIMATE ONLY. BEFORE PROCEEDING WITH WORK, CAREFULLY CHECK AND VERIFY AT THE SITE, AND RESPONSIBLE FOR PROPERLY FITTING EQUIPMENT AND MATERIALS TOGETHER AND TO THE STRUCTURE IN SPACES PROVIDED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND MANY OFFSETS, BENDS, SPECIAL FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED. CAREFULLY STUDY DRAWINGS AND PREMISES I ORDER TO DETERMINE BEST METHODS, EXACT LOCATIONS, ROUTES AND BUILDING OBSTRUCTIONS, PRESERVE HEADROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.

CUTTING AND PATCHING:
CUT EXISTING WORK AND PATCH AS NECESSARY TO PROPERLY INSTALL THE NEW WORK. AS THE WORK PROGRESSES, LEAVE NECESSARY OPENINGS, HOLES AND CHASES, ETC., IN THEIR CORRECT LOCATIONS. IF THE REQUIRED OPENINGS, HOLES AND CHASES ETC., ARE NOT IN THEIR CORRECT LOCATIONS, MAKE THE NECESSARY CORRECTIONS AT NO COST TO THE OWNER. AVOID EXCESSIVE CUTTING AND DO NOT CUT STRUCTURAL MEMBERS WITHOUT CONSENT OF ARCHITECT.

REGULATIONS, PERMITS & INSPECTIONS
COMPLY WITH ALL APPLICABLE CODES, RULES AND REGULATIONS. ALL MATERIALS, EQUIPMENT AND WORK MUST CONFORM TO THE INTERNATIONAL MECHANICAL CODE. OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND LICENSES. WHEN REQUIRED BY CODE, ALL WORK MUST BE INSPECTED AND APPROVED BY LOCAL AUTHORITIES.

DUCTWORK
ALL DUCTWORK FABRICATED AS PER LATEST INTERNATIONAL MECHANICAL CODE REQUIREMENTS AND SMACNA MANUAL. EXTENSION OF EXISTING DUCTWORK SHALL BE MADE WITH SOME MATERIAL. DUCTWORK SHALL BE CONSTRUCTED OF NEW HOT-DIPPED GALVANIZED SHEET METAL ASTM A-120 FOR EACH SIDE, WITH 1", 1 1/2 LB. DENSITY DUCT LINER. TAPE ALL CROSS-JOINTS IN SHEET METAL DUCT WITH HARDCAST. TAKE-OFF FITTINGS SHALL BE CONICAL SPIN-IN WITH QUADRANT DAMPER. TURNING VANES SHALL BE INSTALLED IN ALL MITERED ELBOWS.

FLEXIBLE DUCT
FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTION TO AIR DISTRIBUTION DEVICES, BUT SHALL NOT EXCEED 6 FEET IN LENGTH. FLEXIBLE DUCT SHALL HAVE A MINIMUM R-8 INSULATION VALUE.

DUCT INSULATION
DUCT SIZES ON DRAWINGS ARE "CLEAR INSIDE." INCREASE SHEET METAL SIZES ACCORDINGLY FOR LINED DUCTWORK. ADHESIVE AND INSULATING MATERIALS SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS MAXIMUM 25 FOR FLAME SPREAD AND 50 FOR SMOKE DEVELOPED. ADHESIVES SHALL BE WATERPROOF.

DUCT INSULATION SCHEDULE:
CONCEALED RECTANGULAR LINED
CONCEALED ROUND LINED

DUCTS IN CONDITIONED SPACE OR UNCONDITIONED SPACE SEPARATED FROM BUILDING EXTERIOR :
RECTANGULAR LINED DUCTWORK - SEMI-RIGID GLASS FIBER INSULATION, 1 1/2 PCF,
1 1/2" THICK, THERMAL CONDUCTIVITY AT 75°. MAXIMUM 0.17 BTU/IN./SQ. FT./DEG./HR. MINIMUM "R-VALUE" SHALL BE 6.0.

DUCTS IN UNCONDITIONED SPACE OR EXTERIOR;
LINED DUCTWORK - SEMI-RIGID GLASS FIBER INSULATION, 1 1/2 PCF, 2" THICK, THERMAL CONDUCTIVITY AT 75°. MAXIMUM 0.13 BTU/IN./SQ. FT./DEG./HR. MINIMUM "R-VALUE" SHALL BE 8.0.

EXTERIOR DUCT SHALL BE SEALED WATER TIGHT.

ACCEPTABLE MANUFACTURERS
THE FOLLOWING IS A LIST OF MANUFACTURERS WHOSE EQUIPMENT AND HVAC MATERIALS ARE ACCEPTABLE, SUBJECT TO CONFORMANCE WITH CONTRACT DOCUMENTS. VERIFY THAT THE EQUIPMENT WILL MEET ALL CAPACITIES, SPACE ALLOCATIONS, AND THAT THE WEIGHTS WILL NOT EXCEED STRUCTURAL DESIGN LOADS.

SPLIT SYSTEM HEAT PUMPS: TRANE
GRILLES, REGISTERS, DIFFUSERS: KRUEGER, METAL-AIRE, TITUS, FLEXIBLE DUCT: GENFLEX, THERMAFLEX, OR EQUIVALENT.
DUCT AND PIPE INSULATION: KNAUF, OWENS-CORNING, MANVILLE, CERTAIN-TEED, PPG.

AIR SYSTEM BALANCING
AIR SYSTEMS AND AIR DISTRIBUTION TEST AND BALANCE: THE CONTRACTOR SHALL INCLUDE IN HIS BID THE BALANCING AND TESTING OF HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS TO BALANCE, ADJUST AND TEST AIR MOVING EQUIPMENT AND AIR DISTRIBUTING OR EXHAUSTING SYSTEMS AS HEREIN SPECIFIED. PROVIDE CERTIFIED REPORT.

INSTRUCTIONS/O&M MANUAL
THE CONTRACTOR SHALL INSTRUCT THE OWNER IN THE PROPER OPERATION AND MAINTENANCE OF ALL INSTALLED HVAC EQUIPMENT. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF TWO (2) BOUND OPERATING AND MAINTENANCE MANUALS TO THE OWNER AT THE COMPLETION OF THE PROJECT. THE MANUAL SHALL INCLUDE: CONTROL AND/OR INTERLOCK WIRING DIAGRAMS, SEQUENCE OF OPERATION, PREVENTATIVE MAINTENANCE ITEMS, AND A PARTS LIST WITH THE NOMENCLATURE, MAINTENANCE SCHEDULE, AND NAME, ADDRESS AND PHONE NUMBER OF THE LOCAL PRODUCT REPRESENTATIVE.

Jul 27, 2017 - 11:00am

SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

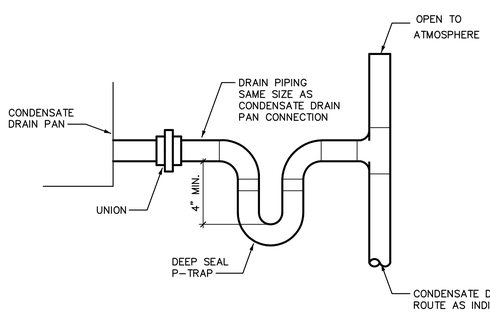
FAN COIL UNIT										CONDENSING UNIT (95° AMBIENT)											
EQUIP. NO.	MANUF.	MODEL NO.	NOMINAL TONS	CFM	OA CFM	EXT. S.P. IN WG	FAN H.P.	AUX. HEAT KW	VOLTS/ PHASE	WEIGHT LBS	EQUIP. NO.	MANUF.	MODEL NO.	MAX. AMPS (MCA)	MAX. FUSE (AMPS)	VOLTS/ PHASE	COOLING CAPACITY TOTAL MBH	COOLING CAPACITY SENS. MBH	ENT. AIR TEMP DB (F)	ENT. AIR TEMP WB (F)	MIN. SEER	HEATING CAPACITY 70 (F) EAT 17 (F) AMB.	WEIGHT LBS	REMARKS
FC-1	TRANE	TAM4AOA24	2	800	42	0.5	1/4	4	240/1	116	CU-1	TRANE	4TWR6024	14	25	230/1	24.0	18.2	80	67	16.0	14.6	174	SEE NOTES 1-14

1. INSTALL UNIT PER MANUFACTURER'S WRITTEN DIRECTIONS. SLEEVE PIPING PENETRATIONS THRU WALL, SEAL WATERTIGHT AND PROVIDE ESCUTCHEONS.
2. UNIT SHALL BE PROVIDED WITH TRANE #TCONT800 TOUCH SCREEN PROGRAMMABLE THERMOSTAT.
3. FAN COIL SHALL BE HORIZONTAL TYPE.
4. PROVIDE 5-YEAR COMPRESSOR WARRANTY ON ALL COMPRESSORS.
5. PROVIDE UNIT COMPLETE WITH ALL NECESSARY OVERLOADS AND CONTROL COMPONENTS.
6. PROVIDE CONDENSING UNIT WITH #TAYASCT501A ANTI-SHORT CIRCUIT TIMER.
7. PROVIDE CONDENSING UNIT WITH #BAYISLT101 RUBBER ISOLATOR KIT.
8. PROVIDE CONDENSING UNIT WITH #BAYCCHT302 CRANKCASE HEATER KIT.
9. PROVIDE FAN COIL UNIT WITH #BAYLOAM107 LOW AMBIENT KIT.
10. PROVIDE FAN COIL UNIT WITH #BAYHHKIT001A HORIZONTAL HANGER KIT.
11. PROVIDE FAN COIL UNIT WITH #BAYSPEKT200A SINGLE POINT POWER ENTRY KIT.
12. PROVIDE FAN COIL UNIT WITH #BAYINSKT175A SOUND INSULATION KIT.
13. PROVIDE FAN COIL UNIT WITH #BAYEAAC04++1 AUX. 4KW ELECTRIC HEATER
14. OWNER SHALL PURCHASE AND HAVE MECHANICAL EQUIPMENT THAT IS MANUFACTURED BY TRANE OR AMERICAN STANDARD DELIVERED TO JOBSITE. MECHANICAL CONTRACTOR SHALL CONFIRM EQUIPMENT TO BE PURCHASED PRIOR TO ORDERING.

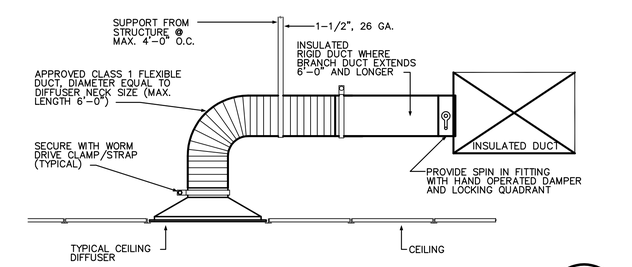
GRILLES/REGISTERS/DIFFUSERS SCHEDULE

MARK	DESCRIPTION	MODULE SIZE	TYPE	OBD	FRAME	MATERIAL	FINISH	MANUF.	MODEL	REMARKS
CD-1	SUPPLY	24" x 24"	SQUARE CEILING	NO	T-BAR	STEEL	WHITE	TITUS	TMS	6ø NECK
CD-2	SUPPLY	24" x 24"	SQUARE CEILING	NO	T-BAR	STEEL	WHITE	TITUS	TMS	8ø NECK
CD-3	SUPPLY	24" x 24"	SQUARE CEILING	NO	T-BAR	STEEL	WHITE	TITUS	TMS	10ø NECK
RG-1	FILTER RETURN GRILLE	24" x 12"	SINGLE DEFLECTION FILTER RETURN	NO	T-BAR	STEEL	WHITE	TITUS	8FF	W/ HINGED 1" FILTER FRAME

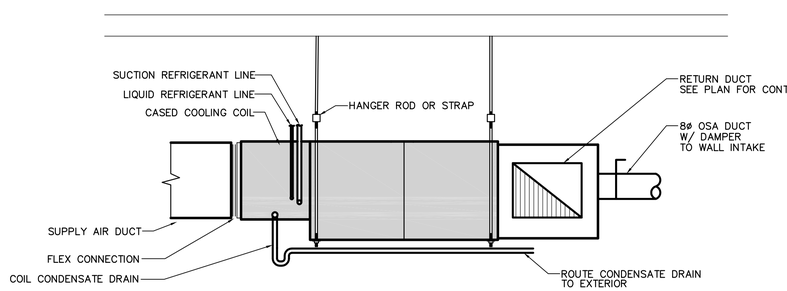
NOTES:
1. NECK SIZE SHOWN ON PLANS AND CORRESPONDS TO DUCT CONNECTION SIZE.
2. CONTRACTOR SHALL PROVIDE SQUARE TO ROUND ADAPTERS AS REQUIRED FOR INSTALLATION.
3. MOUNTING HEIGHT OF GRILLES AND EXACT LOCATION OF ALL DIFFUSERS TO FIELD COORDINATED AND APPROVED BY OWNER.
4. VERIFY MAKE, MODEL AND COLOR OF ALL DEVICES WITH OWNER.



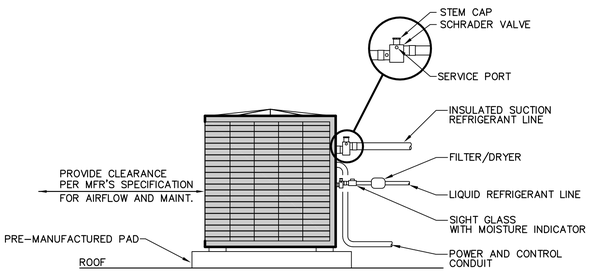
CONDENSATE PIPING AT UNIT DETAIL — 3 / M2.0
NOT TO SCALE



BRANCH DUCT TAKE-OFF DETAIL — 1 / M2.0
NOT TO SCALE



HORIZONTAL FAN COIL DETAIL — 4 / M2.0
NOT TO SCALE



CONDENSING UNIT DETAIL — 2 / M2.0
NOT TO SCALE

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Date Signed 01/08/18
ARIZONA U.S.A.
Expires 3/31/19

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ARCHITECTURE & PLANNING

DRAWING: Mechanical Details & Specifications
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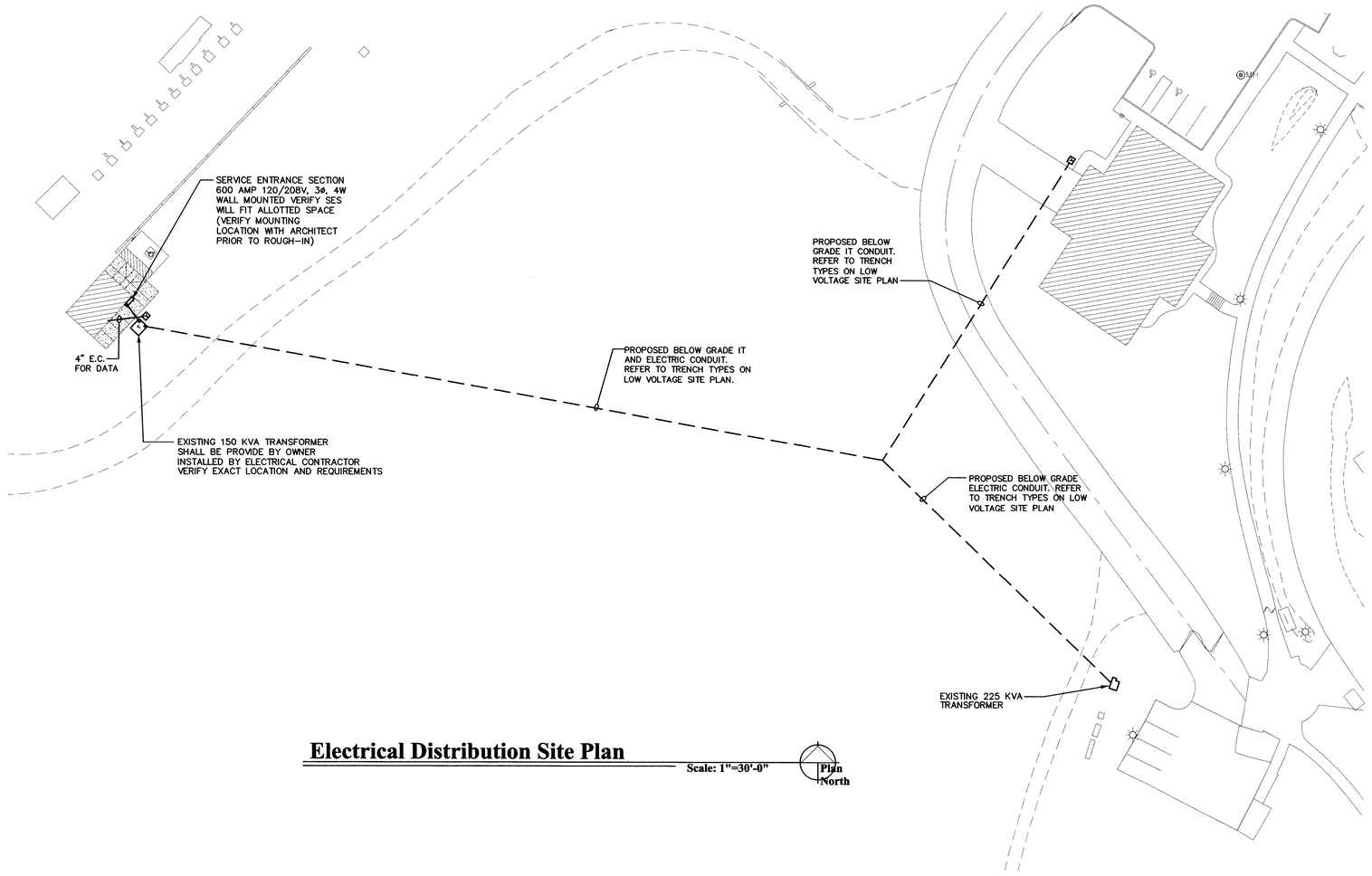
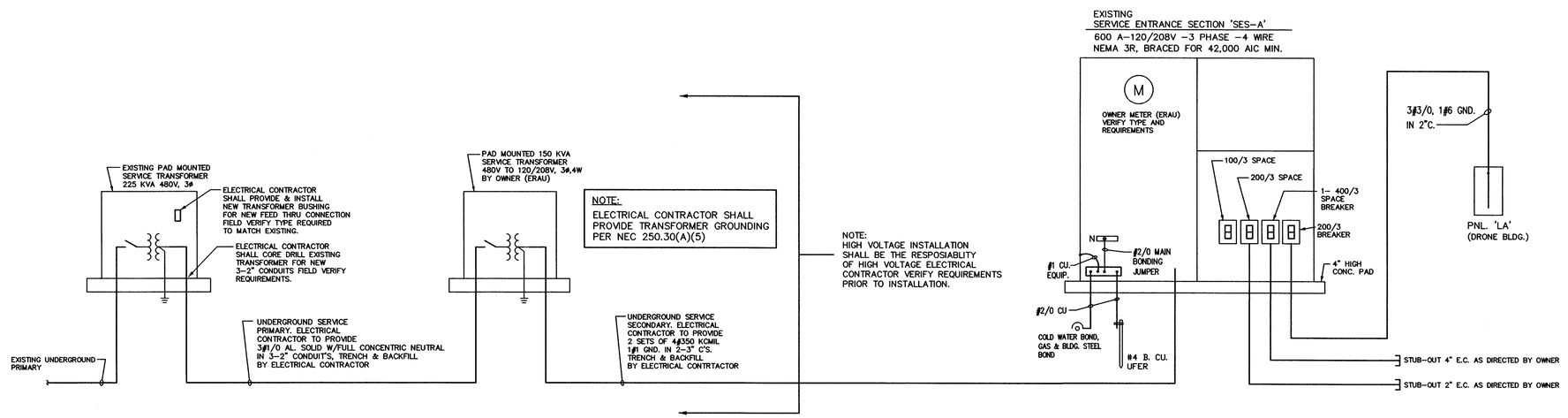


Electrical Distribution Site Plan

Scale: 1"=30'-0"

Plan North



ELECTRICAL ONE-LINE DIAGRAM

N.T.S.

Jan 05, 2018 - 4:05pm

REVISIONS	BY

Arizona Professional Engineering Registration
CERTIFICATE NO. 7450
ANGELO OSSANNA
Date Signed 11/7/17
ARIZONA, U.S.A.

EXPIRES 12/30/2018

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ARCHITECTURE & PLANNING

WAKA REGISTERED

DRAWING: Electrical Distribution Site Plan And One-Line Diagram

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	R.A.
CHECKED BY	A.O.
DATE	8-20-2017
JOB NO.	700
SHEET	E1.1

ELECTRICAL SYMBOLS

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT

- A/a — FLUORESCENT FIXTURE, WITH FIXTURE DESIGNATED BY LETTER. SMALL LETTER INDICATES SWITCH LEG
- NL — NIGHT LIGHT– NOT SWITCHED OR EMERGENCY
- FLUORESCENT STRIP FIXTURE.
- CEILING OR WALLMOUNTED FIXTURE.
- PC — PORCELAIN PULL CHAIN FIXTURE
- J — JUNCTION BOX
- JUNCTION BOX WITH FLEX CONNECTION.
- SINGLE FACE EXIT SIGN– NOT SWITCHED
- DOUBLE FACED EXIT SIGN– NOT SWITCHED.
- TWO HEAD EMERGENCY LIGHT WITH BATTERY.
- S — SINGLE POLE SWITCH, + 48" A.F.F. (20A–120/277V)
- S_3 — THREE WAY SWITCH, + 48" A.F.F. (20A–120/277V)
- S_4 — 4–WAY SWITCH +48" AFF (20A–120/277V)
- S_P — SWITCH AND PILOT LIGHT (20A–120–/277V)
- S_K — SINGLE POLE SWITCH, KEY OPERATED (20A)
- WALL OR CEILING MOUNTED MOTION SENSOR MANUFACTURE BY LAVITON
- DIMMER CONTROL, + 48" A.F.F. TYPE, RATING AS NOTED
- DUPLEX RECEPTACLE, + 18" A.F.F. (20A)
- DUPLEX RECEPTACLE ABOVE COUNTER, VERIFY HEIGHT. (20A)
- FOURPLEX RECEPTACLE, + 18" A.F.F. (20A)
- HALF SWITCHED DUPLEX RECEPTACLE (20A)
- SPECIAL RECEPTACLE – SIZE & TYPE AS NOTED
- POWER / PHONE / DATA FLUSH FLOOR OUTLET
- TELEPHONE OUTLET PLASTER RING AT + 18" A.F.F. HUBBELL #P12 COVERPLATE. 3/4"C TO CEILING SPACE UNLESS SHOWN WITH HOMERUNS.
- DATA SYSTEM OUTLET, 4" SQUARE BOX AND COVERPLATE, 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUN, + 18" A.F.F.
- TELE/DATA COMBO OUTLET, 4" SQUARE BOX AND COVERPLATE, 3/4" C. TO CEILING SPACE UNLESS SHOWN WITH HOMERUN, + 18" A.F.F.
- CABLE TELEVISION (CATV) OUTLET PLASTER RING AT + 18" A.F.F. U.N.O. HUBBELL COVERPLATE. 3/4"C TO CEILING SPACE UNLESS SHOWN WITH HOMERUNS.
- T — TELPHONE SYSTEM CONDUIT HOMERUN WITH NYLON PULLWIRE (1"C MIN UNO)
- TV — CLOSED CIRCUIT TV (CCTV) OUTLET SAME AS CATV OUTLET
- REMOTE CONTROL STATION @ +48" AFF
- DISCONNECT SWITCH, FUSE PER EQUIPMENT MANUFACTURERS RECOMMENDATION. OUTSIDE NEMA 3R – N.F. = NON–FUSED.
- COMBINATION STARTER AND FUSIBLE DISCONNECT SWITCH SIZE AS NOTED
- E — EQUIPMENT TERMINATION CONNECTION POINT VERIFY EXACT LOCATION LOAD AND VOLTAGE AS NOTED
- MOTOR
- SM — THERMAL PROTECTED SWITCH
- MOTOR STARTER – SHADING INDICATES F.B.O.
- DISTRIBUTION PANELBOARD.
- BRANCH CIRCUIT PANELBOARD.
- CONDUIT BELOW FLOOR OR UNDERGROUND
- CONDUIT IN WALL OR ABOVE CEILING
- HOMERUN TO PANEL
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT STUB–OUT, MARK AND CAP AS DIRECTED
- GROUND WIRE (SIZE AS NOTED) EXTENDED AND CONNECTED TO APP'D GROUND

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL NO.	VOLTS	LAMPS	MOUNTING	FINISH	REMARKS
A	RAB LIGHTING PANEL 2'x2' – 41N 4000K	120	39.5 WATT LEDS	LAY–IN	STANDARD	PANEL 2' x 2' LED – 4000 COLOR TEMP.
B	SPAULDING – LAREDO SERIES LMC–30LU–3K–3–1	120	LEDS – 35 WATT	WALL–TO MATCH EXISTING	BRONZE	LED EXTERIOR WALL MOUNTED LUMINAIRE M–VOLT 40K
	LITHONIA LHQM S W 1 R 120 H	120	LED & (2) 6W HAL. FURN'D. WITH UNIT	WALL– 12" ABOVE DOOR	WHITE HOUSING RED LETTER	COMBINATION EMERGENCY/EXIT LIGHT WITH LEAD–CAL. BATTERY

NOTES: (1) VERIFY ALL FINAL MOUNTING HEIGHTS WITH ARCHITECT.

SPECIFICATIONS

1. PRIOR TO SUBMITTING BID, SUBCONTRACTORS SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND VISIT THE CONSTRUCTION SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS UNDER WHICH HE WILL HAVE TO OPERATE AND WHICH IN ANY WAY AFFECTS THE WORK UNDER HIS CONTRACT. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS PART.
2. THE SUBCONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND /OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THE CONTRACT. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, ELEVATIONS AND BUILDING DETAILS. VERIFY LOCATION OF ALL OUTLETS, SWITCHES, AND WALL MOUNTED LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS AND ACTUAL CONDITIONS. VERIFY ALL CEILING TYPES WITH ARCHITECTURAL DRAWINGS BEFORE ORDERING FIXTURES.
4. PRIOR TO ROUGH–IN AND FINAL CONNECTION, VERIFY ELECTRICAL CHARACTERISTICS AND EXACT LOCATION OF EQUIPMENT.
5. GROUT AND SEAL ALL CONDUIT PENETRATIONS OF WALLS AND FLOOR SLABS TO PRESERVE FIRE RATING AND WATERTIGHT INTEGRITY.
6. ALL WIRING TO BE INSTALLED IN RACEWAYS. TYPE OF RACEWAY SHALL BE AS REQUIRED BY CODE. MINIMUM CONDUIT SIZE SHALL BE 1/2".
7. BRANCH CIRCUIT WIRING SHALL BE THHN/THWN INSULATION. PANEL FEEDERS SHALL BE TYPE XHHW. OR THHN/THWN ALL WIRE SHALL BE COPPER. MINIMUM WIRE SIZE SHALL BE #12.
8. PROVIDE CODE SIZED BOND WIRE IN ALL EMT, FLEXIBLE CONDUIT, MC, OR AC CABLES.
9. ALL ELECTRICAL EQUIPMENT SHALL BE NEW , U.L. APPROVED AND COMMERCIAL GRADE.
10. WIRE RATED FOR 150° CENTIGRADE SHALL BE USED FOR ALL INCANDESCENT LIGHTING FIXTURES.
11. ALL ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL CODE, (N.E.C.), AND ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES.
12. PROVIDE TYPEWRITTEN DESCRIPTIVE PANEL DIRECTORIES

FIRE WALL/FLOOR PENETRATION

ALL PENETRATIONS OF FIRE RESISTIVE FLOORS OR SHAFT WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALL–ATION DETAIL THAT CONFORM TO UNDERWRITERS LABOR–ATORY'S LISTINGS FOR THROUGH PENETRATION FIRESTOP SYSTEMS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DETAILS WHICH SHOW COMPLETE CONFORMANCE WITH THE LISTING TO THE ARCHITECT AND SUCH DRAWINGS SHALL BE AVAILABLE TO THE LOCAL GOVERNING INSPECTORS. THE DRAWINGS SHALL BE SPECIFIC FOR EACH PENETRATION WITH ALL VARIABLES DEFINED.

ALL WIRING #6 AWG AND LARGER SHALL BE XHHW COPPER. #8 AWG AND SMALLER SHALL BE THHN/THWN COPPER

OUTLET MOUNTING HEIGHTS PER AMERICAN DISABILITY ACT

SWITCHES	+48" (MAX)
RECEPTACLES	+18" (MIN.)
TELEPHONE/DATA	+18" (MIN.)
SIDE REACH	+54" (MAX)

PANELBOARD LA SCHEDULE

MAINS: 200A MLO
VOLTAGE: 120/208V, 3Φ, 4W
TYPE: SQ. D OR EQUAL (COMMERCIAL GRADE)
LOAD–VA
LOCATION: SEE PLAN
MOUNTING: RECESSED
MIN. A.I.C.: 22/10K SERIES RATED

	CIRCUIT DESCRIPTION	BKR.	CIR. NO.	ØA	ØB	ØC	CIR. NO.	BKR.	CIRCUIT DESCRIPTION
*	LIGHTS	20/1	1	296			2	20/1	RECEPT'S.
	FAN COIL UNIT AH–1	30/3	3		2150		4		
	1/4 HP + 4KW AUX. HTR.		5			2150	6		
	RECEPTACLE – IT EQUIPMENT	20/1	7	800			8		
			9	540			10	25/2	COND'G. UNIT CU–1
	SPARE		11		1456		12		14.0 MCA, 208V, 1Φ
			13			1456	14		SPACE
			15				16		
			17				18		
			19				20		
	SPACE		21				22		
			23				24		
			25				26		
			27				28		
			29				30		
			31				32		
			33				34		
			35				36		
			37				38		
			39				40		
			41				42		
	TOTAL LOAD PER PHASE:			2356	4506	4146	HI# 4506 / 120 = 37.6 AMPS		

PANELBOARD SYMBOLS

- * CONTINUOUS DUTY/LARGEST MOTOR @ 125%
- ● PROVIDE BREAKER W/ HANDLE "LOCK–ON" DEVICE
- ◆ CIRCUIT VIA TIMECLOCK
- ▲ CIRCUIT VIA PHOTOCELL
- □ HACR TYPE CIRCUIT BREAKER
- ⬡ KITCHEN EQUIPMENT @ 65% per nec 220–20
- ○ EXISTING BREAKER W/ EXISTING LOAD
- △ NEW BREAKER W/ NEW LOAD

GENERAL LIGHTING NOTES:

1. CONTRACTOR SHALL VERIFY ALL MOUNTING HEIGHTS EXACT LOCATION AND REQUIREMENTS OF ALL LIGHTING FIXTURES AND SWITCHES WITH OWNER PRIOR TO ROUGH–IN.
2. NIGHT LIGHTS (NL), EMERGENCY & EXIT LIGHT FIXTURES SHALL BE CONNECTED TO UNSWITCHED LEG OF CIRCUIT.
3. ROMAX IS NOT ALLOWED.

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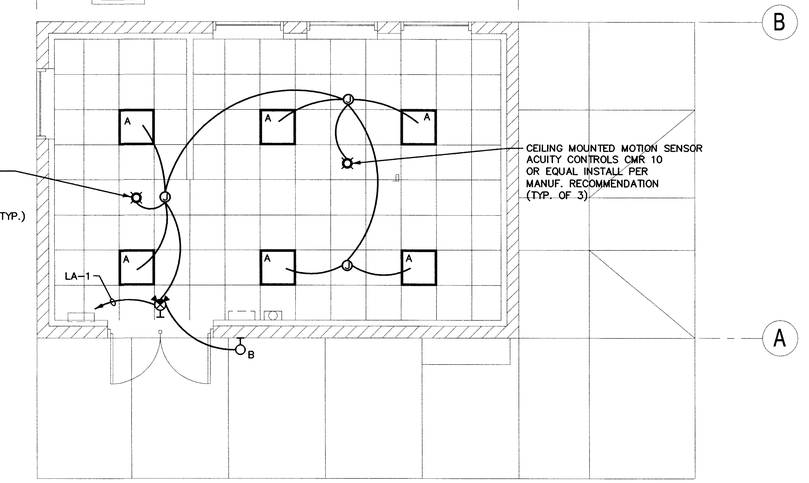
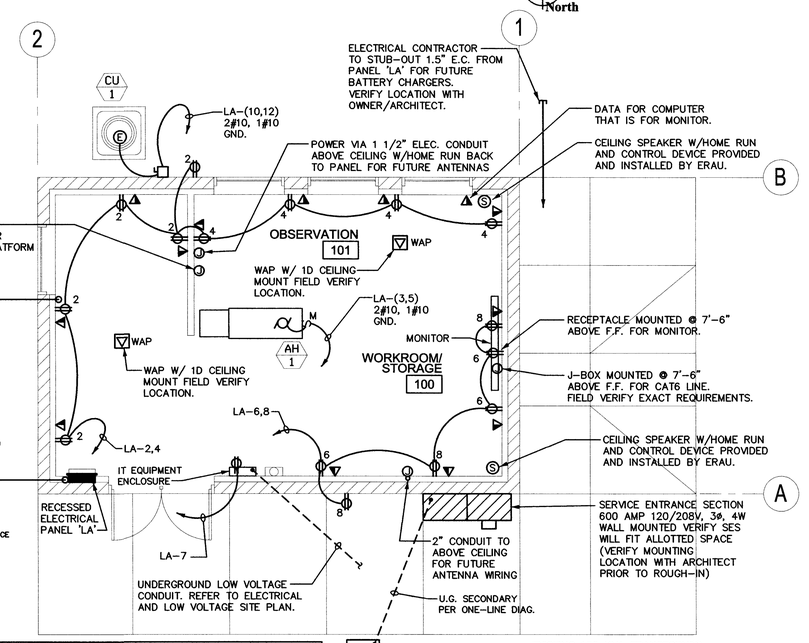


Lighting Floor Plan

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

Plan North



GENERAL POWER NOTES:

1. CONTRACTOR SHALL VERIFY ALL MOUNTING HEIGHTS EXACT LOCATION AND REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT AND DEVICES WITH OWNER PRIOR TO ROUGH–IN.
2. ALL RECEPTACLES AT RESTROOM LAVATORIES TO BE GFCI TYPE INSTALLED AT +48" A.F.F.
3. ALL RECEPTACLES IN AREAS WITH–IN 6'–0" OF A SINK SHALL BE GFCI TYPE PER NEC
4. EXTERIOR & ROOF MOUNTED MAINT. RECEPT'S. SHALL BE WP, GFCI TYPE PER NEC
5. VERIFY THE EXACT LOCATIONS OF ALL TELEPHONE OUTLETS, DATA OUTLETS AND SPECIAL SYSTEMS OUTLETS WITH THE ARCHITECT/OWNER PRIOR TO ROUGH–IN.

Power Floor Plan

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

Plan North

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ARCHITECTURE & PLANNING

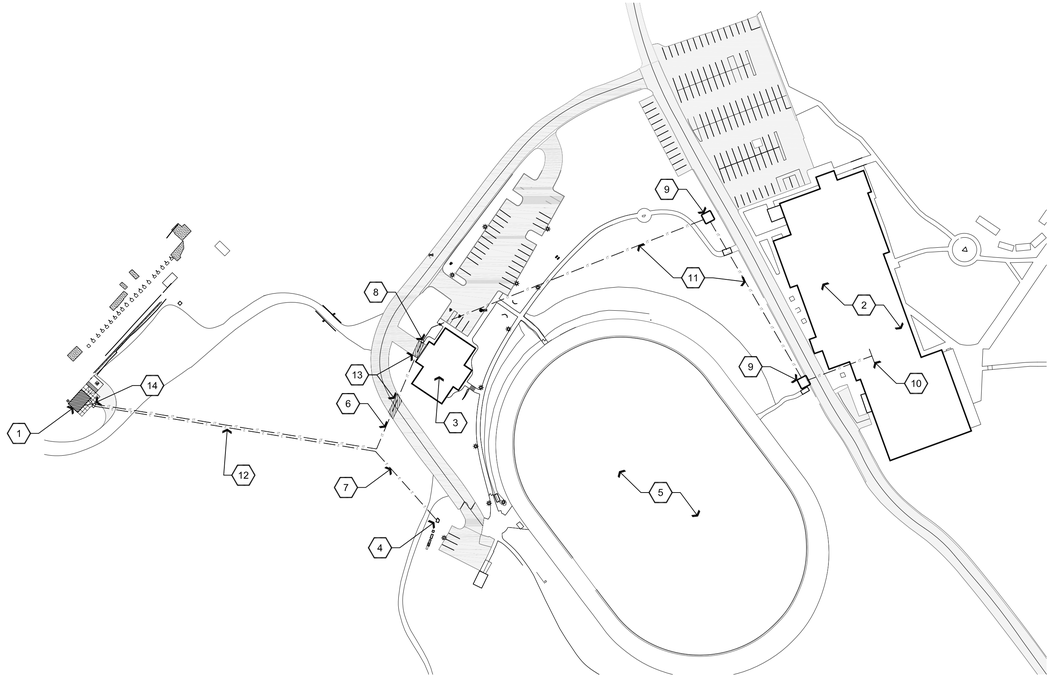
DRAWING: Lighting & Power Floor Plan With Fixture Schedule & Notes

PROJECT: ERAU Drone / UAS Building 3700 Willow Creek Road Prescott, AZ 86301

APN: 106-03-004

DRAWN BY	R.A.
CHECKED BY	A.O.
DATE	8-20-2017
JOB NO.	700
SHEET	E1.2

Jan 11, 2018 - 6:08pm



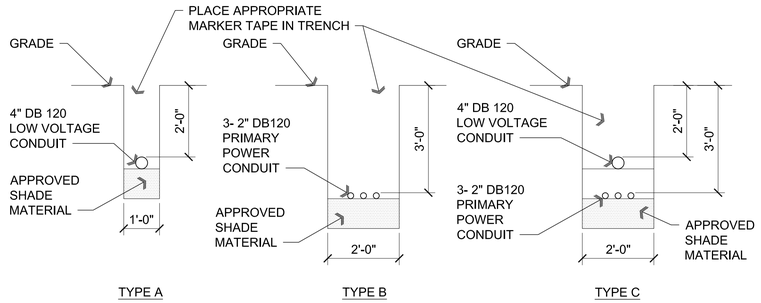
A2 Site / Conduit Map

Scale: 1"=100'-0"

Plan North

Descriptive Keynotes

1. PROPOSED DRONE BUILDING.
2. EXISTING BUILDING 80.
3. EXISTING BUILDING 90.
4. EXISTING ELECTRICAL TRANSFORMER.
5. EXISTING SOCCER FIELD.
6. PROPOSED UNDERGROUND IT CONDUIT. REFER TO TRENCH DETAIL 'TYPE A'.
7. PROPOSED UNDERGROUND ELECTRICAL CONDUIT. REFER TO ELECTRICAL PLANS AND TRENCH DETAIL 'TYPE B'
8. CONTRACTOR SHALL PROVIDE & INSTALL A NEW 3'x3' DATA VAULT OVER EXISTING DATA CONDUITS AND EXTEND NEW 4" CONDUIT AS DIRECTED BY OWNER. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN WITH OWNER.
9. EXISTING BELOW GRADE JUNCTION BOX.
10. EXISTING RACK MOUNTED LIU.
11. EXISTING BELOW GRADE IT CONDUIT.
12. PROPOSED UNDERGROUND IT AND ELECTRICAL CONDUIT. REFER TO ELECTRICAL PLANS AND TRENCH DETAIL 'TYPE C'.
13. SAWCUT, REMOVE AND REPLACE ASPHALT PAVING TO MATCH EXISTING.
14. CONTRACTOR SHALL PROVIDE AND INSTALL A NEW 3'x3' DATA VAULT AND EXTEND NEW 4" CONDUIT INTO NEW DRONE BUILDING AS DIRECTED BY OWNER. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH -IN WITH OWNER.



A1 Trench Details

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

Data / Communications:

Outside Plant (OSP) copper & fiber

- Install 12sm Systimax TeraSpeed (or approved equivalent) from existing rack mounted LIU in Bldg-80 Rm-107 to existing wall mounted LIU in Bldg-90 Rm-101.
- Install 12sm Systimax TeraSpeed (or approved equivalent) from existing wall mounted LIU in Bldg-90 Rm-101 to new wall mounted LIU in Hubbell RE4X IT enclosure in Bldg-Drone Rm-100.
- Install 12-pr osp rated copper cable from existing wall mounted lightning protector in Bldg-90 Rm-101 to new lightning protector in Hubbell RE4X IT enclosure and extend to new 24-port CAT6 patch panel in Bldg-Drone Rm-100.
- Terminate all fibers with LC connectors.
- Remove existing 6mm fiber from Bldg-80 to Bldg-90.
- Pull back existing 25pr copper from Bldg-90 to allow new pull box addition, then pull back into Bldg-90 & re-terminate to lightning protector.
- Supply qty-5 1m LC-LC sm and qty-5 3m LC-LC sm duplex fiber patch cords

Horizontal copper

- Pull, terminate, and test a total of 41 new data cables per remodel program.
- Terminate horizontal data cables to new 48-port CAT6 patch panel in new Hubbell RE4X IT enclosure in room 100.
- Supply 15ft and 2ft blue CAT6 patch cables. Quantity of each length patch cables supplied shall equal the total number of data ports installed.

General

- Use blue colored CAT6 cable and jacks for data ports.
- Internal building cables shall be routed in framed walls and above ceiling. Cables may be neatly suspended in enclosed ceiling areas using cable hangers. Cable molding and/or surface mounted conduit is acceptable if the cabling can not be routed in walls and/or above ceiling. Match existing wall colors with all surface mounted items.
- IT head end equipment will be owner supplied.

IT HEAD END EQUIPMENT (OWNER SUPPLIED)

QUANTITY	MFG	PRODUCT	PRODUCT DESCRIPTION
1	CISCO	WS-C3650-48FQ-S	CISCO CATALYST 3650 48 PORT FULL POE 4X10G UPLINK IP BASE
1	CISCO	CON-SNT-WSC354QS	SNTC-8X5XNBD CISCO CATALYST 3650 48 PORT FULL POE 4X1
2	CISCO	PWR-C2-1025WAC/2	1025W AC CONFIG 2 SECONDARY POWER SUPPLY
2	CISCO	C3650-STACK-KIT	CISCO CATALYST 3650 STACK MODULE
2	CISCO	GLC-LH-SM=	GE SFP LC CONNECTOR LX/LH TRANSCEIVER
2	CISCO	MR42-HW	MERAKI MR42 CLOUD MANAGED AP
2	CISCO	LIC-ENT-5YR	MERAKI MR ENTERPRIXSE LICENSE, 5 YEARS
1	APC	BE650G1	APC BACK-UPS 650

IT PORT COUNTS

LOCATION	DESCRIPTION	DATA PORTS	NOTES
100	WORKROOM / STORAGE	16	5@3D; 1@1D-WAP
101	OBSERVATION	13	4@3D; 1@1D-WAP
102	OFFICE	6	2@3D
103	OFFICE	6	2@3D
TOTAL: 41			

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/12/18
ARIZONA U.S.A.
EXPIRES: 6/30/18

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ARCHITECTURE & PLANNING

DRAWING: Low Voltage Site Plan and Details

PROJECT: ERAU Drone / UAS Building
3700 Willow Creek Road
Prescott, AZ 86301

APN: 106-03-004

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 12th, 2018
JOB NO.: 700
SHEET: LV1.0

Jan 12, 2018 - 1:21pm