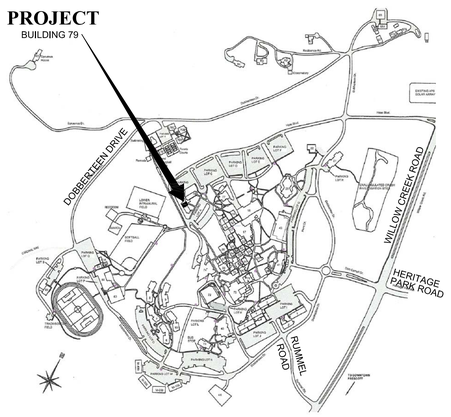
Project Description

Embry-Riddle Aeronautical University intends to build a classroom addition to the North-West side of building 79. The most recent building addition that we will be adding onto is approximately 576 square feet, and the proposed current addition will be 432 square feet. The West wall/windows of the existing newest portion of the building will be removed to create one large classroom, requiring structural engineering. A dropped ceiling will be added to the existing portion of the building as well as the new portion. The exterior of the building additions, roof and walls shall maintain the same appearance as exists. New electrical power, lighting and low voltage will be provided to accommodate the entire classroom furniture layout. An HVAC split system will be utilized for the entire classroom. The existing ductwork in the most recent addition shall be abandoned / removed. New ductwork / diffusers shall be installed above the new dropped ceiling.

Site / Vicinity Map



Graphic Standards

NORTH ARROW INDICATOR

NUMBER / SHEET — DETAIL DESIGNATOR

LETTER / SHEET — BUILDING SECTION DESIGNATOR

NUMBER — REVISION DESIGNATOR

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

AF/ROTC

Building 79 Addition

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:	Classroom Addition	
PROJECT ADDRESS:	3700 Willow Creek Road (Building 79) Prescott, AZ 86301 (APN: 106-03-004)	
ZONE:	BG - PAD	
OCCUPANCY:	B (Educational Facility for students above the 12th grade), Non-Separated	
CONSTRUCTION TYPE:	II-B Non Sprinklered	
BUILDING AREA	Existing: 4,143 S.F. Proposed: 432 S.F. Total: 4,575 S.F.	

Sheet Index

Architect:

W. Alan Kenson & Associates, P.C.

P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304

email: waka@cableone.net
www.kenson-associates.com

ARCHITECTURE & PLANNING

REVISIONS	BY

REGISTERED ARCHITECT — CERTIFICATE NO. 25646 — W. ALAN KENSON — Date Signed 01/25/18 — ARIZONA, U.S.A. — EXPIRES: 6/30/18

W. Alan Kenson & Associates, P.C.

P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304

email: waka@cableone.net
www.kenson-associates.com

ARCHITECTURE & PLANNING

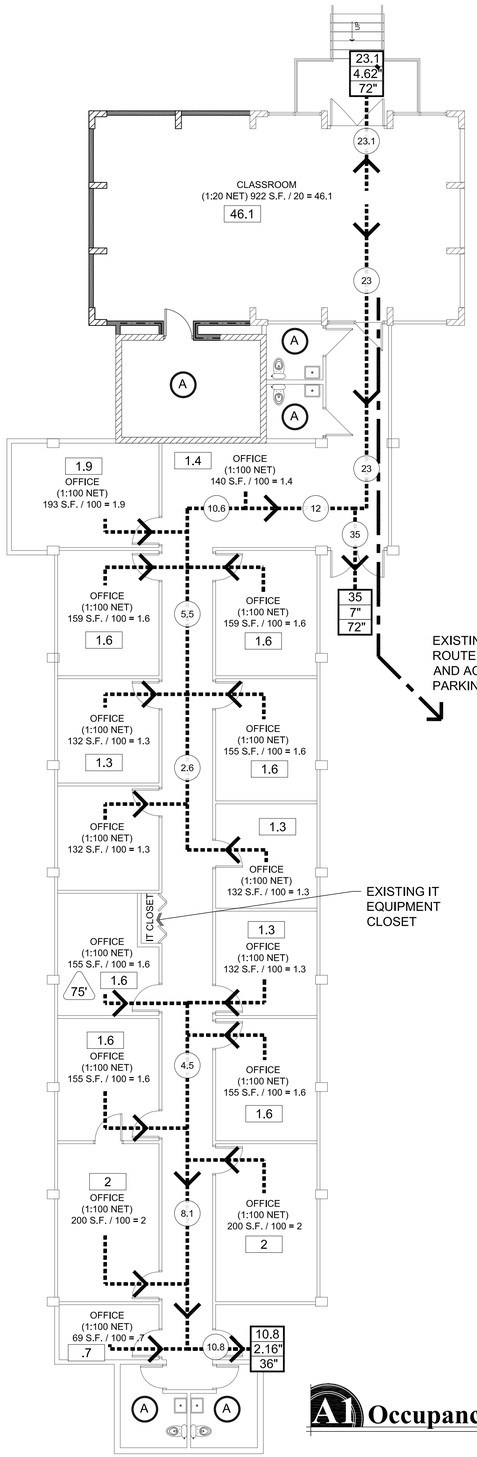
DRAWING: Cover Sheet

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET: CS1

Jan 25, 2018 - 11:01am



A1 Occupancy / Egress Floor Plan

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

Plan North

NOTE:
- PROVIDE A 6"x9" BLUE TACTILE 'EXIT' SIGN AS MANUFACTURED BY 'SIMPLY EXIT SIGNS (#SE-1980)' OR EQUAL COMPLYING WITH ICCA117.1 AND IBC 1011.3 ADJACENT TO EACH DOOR TO AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. SIGN SHALL BE MOUNTED 60" A.F.F. TO THE CENTER OF THE SIGN.

Plumbing Calculations

	OCCUPANCY CLASSIFICATION	OCCUPANCY COUNT	WATER CLOSETS MEN	WATER CLOSETS WOMEN	LAVATORIES MEN	LAVATORIES WOMEN	DRINKING FOUNTAINS
TOTAL REQUIRED	BUSINESS / EDUCATIONAL	69	1	1	1	1	1
	EXISTING		2	2	2	2	

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
OFFICE	100 GROSS

Occupant load

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

OFFICE AREA:	2268 SQ. FT.	23 OCCUPANTS
CLASSROOM:	922 SQ. FT	46 OCCUPANTS
TOTAL:	3,190 SQ. FT.	69 OCCUPANTS

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Code Summary and Occupancy / Egress Floor Plan

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

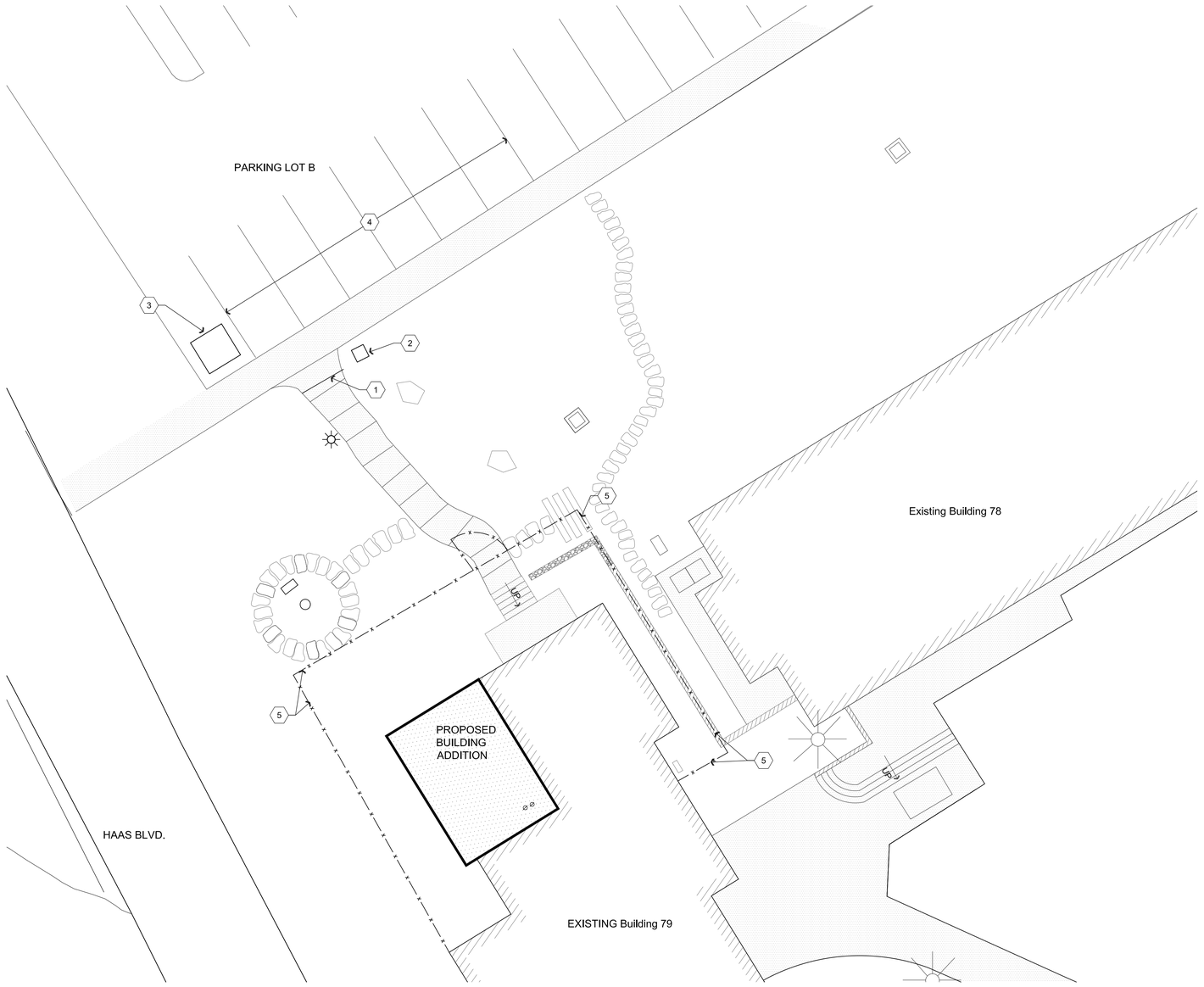
APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET: CS2

Jan 25, 2018 - 11:02am

Descriptive Keynotes

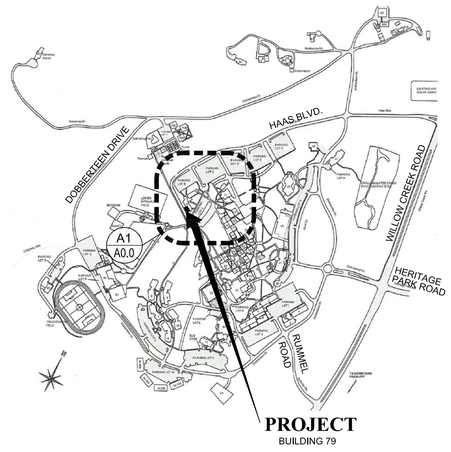
1. PROVIDE BARRICADES WITH SIGNAGE FOR SIDEWALK CLOSURE.
2. LOCATION FOR J-JON.
3. LOCATION OF 6 YARD TRASH DUMPSTER PROVIDED BY CONTRACTOR.
4. CONTRACTOR PARKING AREA. 6 SPACES AVAILABLE. CONTRACTOR TO PROVIDE SIGNAGE DESIGNATING SPACES FOR CONSTRUCTION PARKING.
5. 6' TALL TEMPORARY CHAIN LINK FENCING BY CONTRACTOR.



A1 Construction Access

Scale: 1"=10'-0"

North



B1 Vicinity Map

Scale: N.T.S.

North

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/25/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Reference Floor Plans

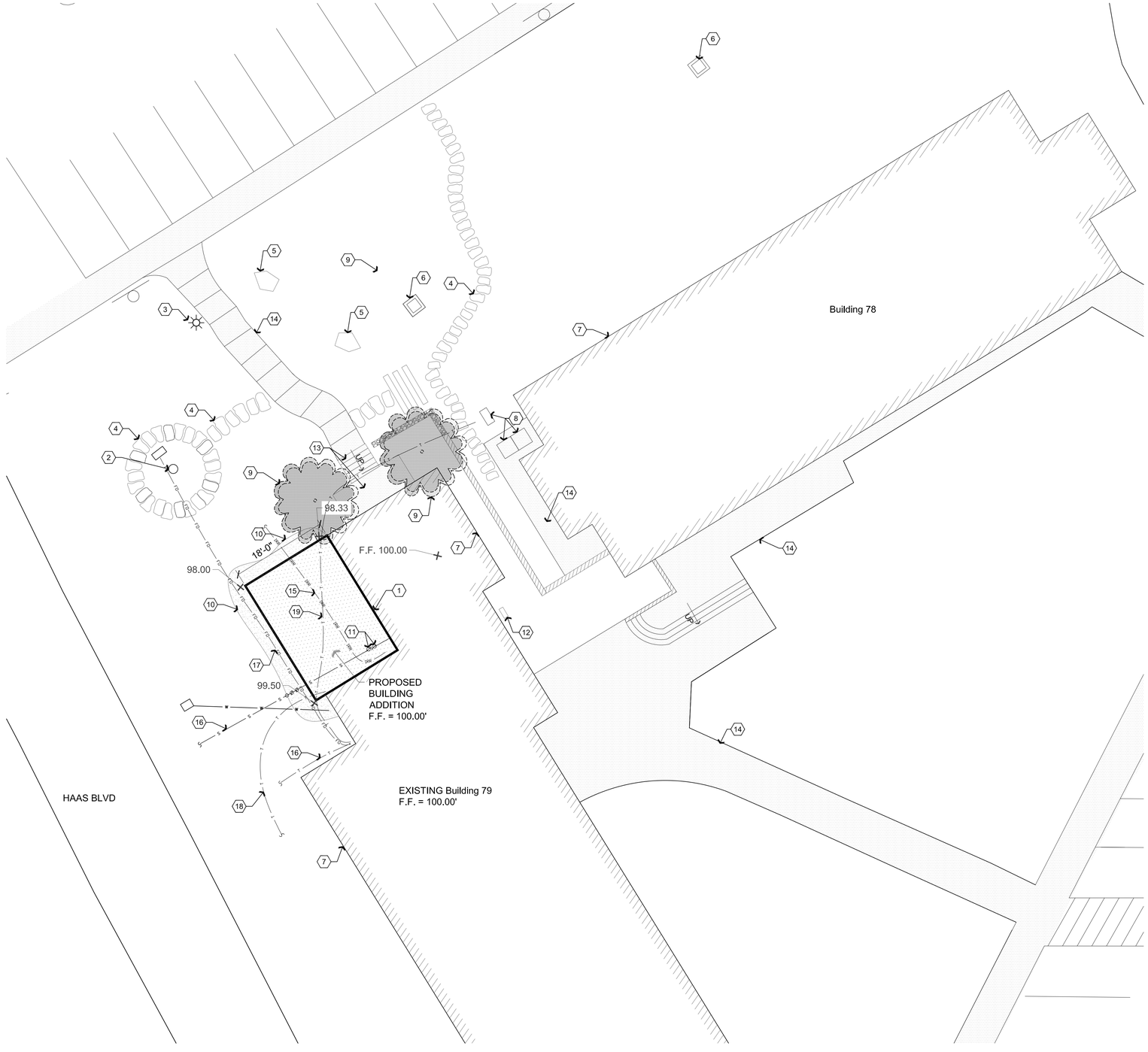
PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET:

A0.0

Jan 25, 2018 - 11:02am



A1 Site Plan

Scale: 1"=10'-0"

North

Descriptive Keynotes

1. PROPOSED BUILDING ADDITION. REMOVE ALL LANDSCAPE ROCK FROM BUILDING FOOTPRINT.
2. EXISTING FLAGPOLE.
3. EXISTING LIGHT.
4. EXISTING FLAGSTONE PATH TO REMAIN.
5. EXISTING LANDSCAPE ROCK.
6. EXISTING ELECTRIC VAULT.
7. EXISTING BUILDING.
8. EXISTING ELECTRICAL TRANSFORMER.
9. EXISTING TREES TO REMAIN.
10. REPLACE LANDSCAPE ROCK AT PERIMETER OF BUILDING ADDITION WITH SALVAGED LANDSCAPE ROCK.
11. EXISTING SEWER CLEANOUT. REFER TO PLUMBING PLANS.
12. EXISTING GAS METER / REGULATOR.
13. EXISTING CONCRETE PORCH AND STAIRS TO REMAIN.
14. EXISTING CONCRETE SIDEWALK TO REMAIN.
15. EXISTING IRRIGATION CONTROL WIRE LINE TO REMAIN.
16. BELOW GRADE ABS WASTE LINE, REFER TO PLUMBING PLANS.
17. EXISTING 4" CONDUIT WITH 6 STRANDS FIBER OPTIC.
18. EXISTING 200 PAIR TELEPHONE DIRECT BURY LINE TO REMAIN.
19. EXISTING 100 PAIR TELEPHONE DIRECT BURY LINE TO REMAIN.

Legend

EXISTING CONCRETE SIDEWALK

94.00 TYPICALLY INDICATES EXISTING SPOT ELEVATION

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN
KENSON
Date Signed 01/25/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

DRAWING: Site Plan

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

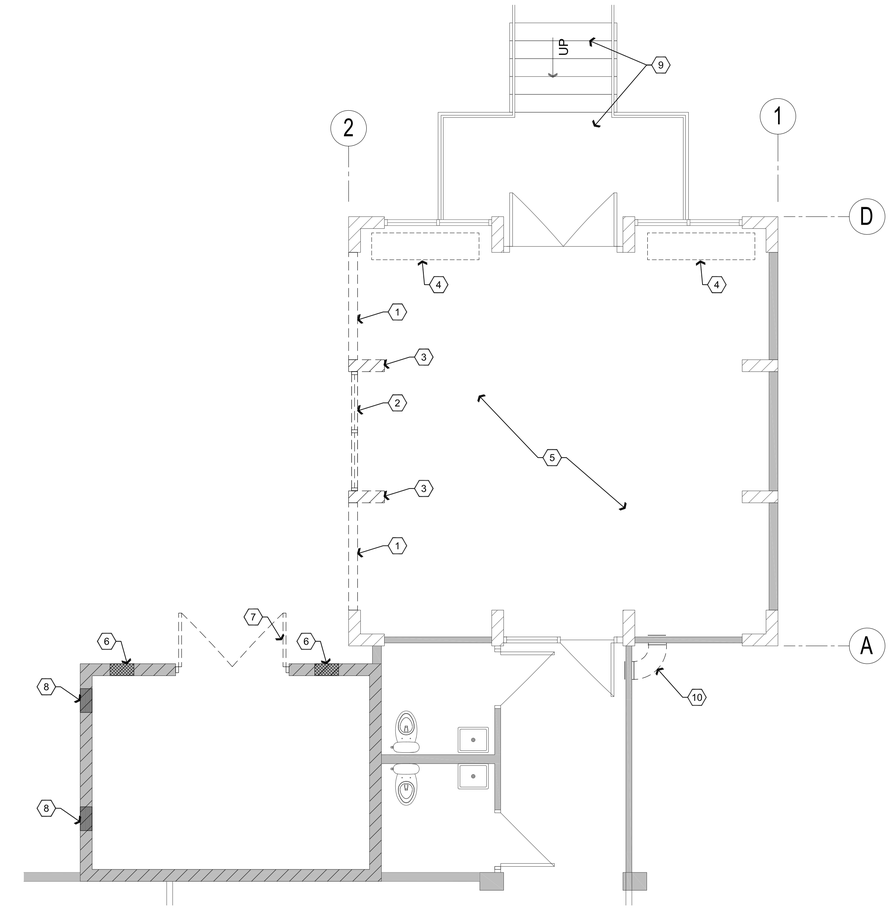
APN: -

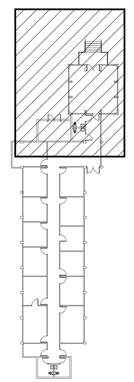
DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 25th, 2018
JOB NO.	705
SHEET	A1.0

Jan 25, 2018 - 11:02am

Descriptive Keynotes

1. REMOVE EXISTING WALL.
2. REMOVE EXISTING WINDOW.
3. REMOVE EXISTING CMU COLUMN.
4. REMOVE EXISTING CASEWORK. TO BE RETURNED TO ERAU.
5. REMOVE EXISTING CARPET.
6. EXISTING VENT TO BE REMOVED, REFER TO MECHANICAL PLANS.
7. REMOVE EXISTING DOUBLE DOORS AND FRAME, REFER TO REFERENCE FLOOR PLAN AND DOOR SCHEDULE.
8. REMOVE 1'-4"x8" PORTION OF BLOCK WALL FOR NEW VENT, REFER TO MECHANICAL PLANS.
9. EXISTING CONCRETE PORCH AND STAIRS TO REMAIN.
10. REMOVE HVAC DUCT AND GRILLS, REFER TO MECHANICAL PLANS.





A1 Demolition Floor Plan Scale: 1/4"=1'-0"

Plan North

C1 Key Plan Scale: N.T.S.

North

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/25/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

DRAWING: Demolition Floor Plan

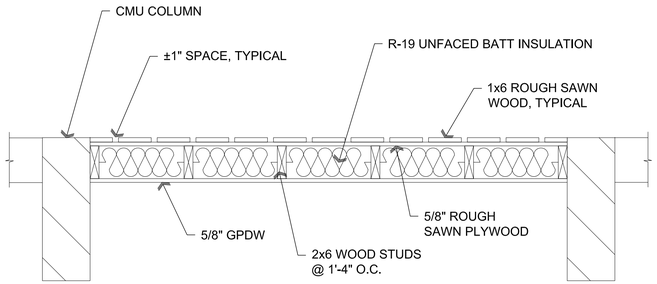
PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET:

A2.0

Jan 25, 2018 - 11:03am



A2 Exterior Wall Detail

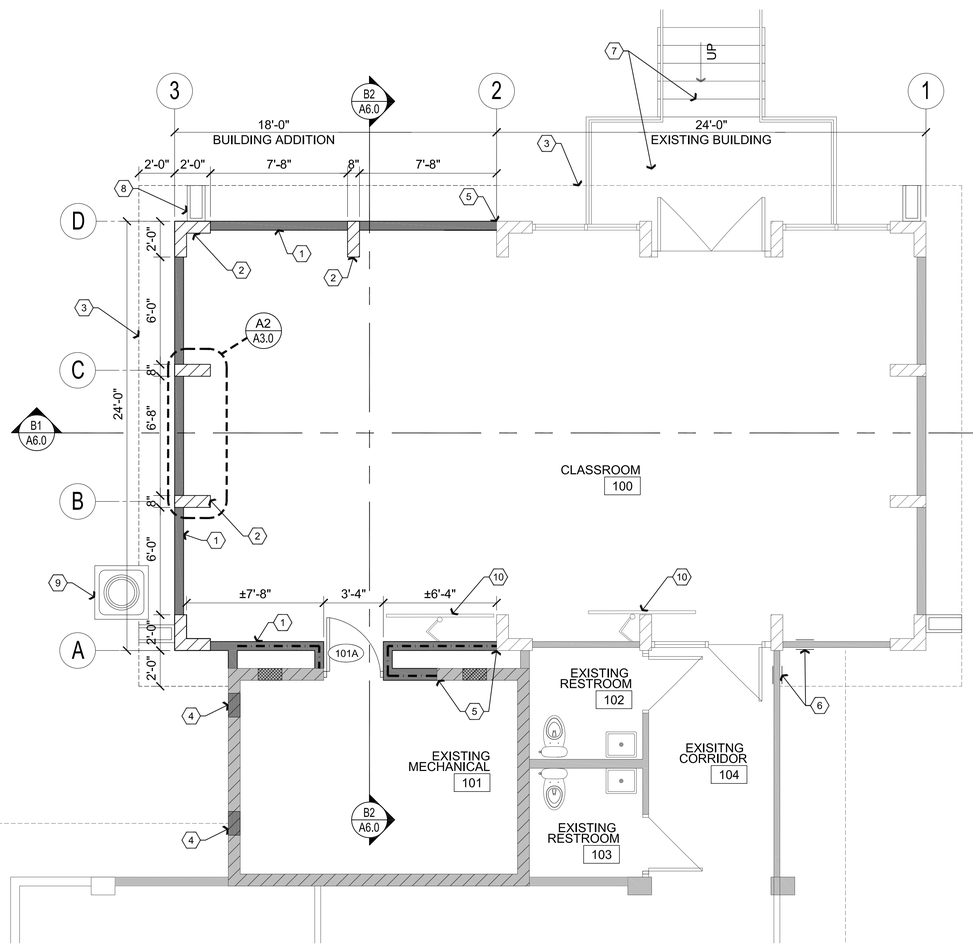
Scale: 1"=1'-0"

Descriptive Keynotes

1. PROVIDE EXTERIOR WALL, REFER TO WALL TYPES.
2. PROVIDE CMU COLUMN / WALL TO MATCH EXISTING, TYPICAL. CMU-1
3. LINE OF ROOF OVERHANG ABOVE.
4. PROVIDE 1'-4"x8" NEW VENTILATION OPENING WITH VENT COVER, REFER TO MECHANICAL PLANS.
5. ALIGN NEW WALL WITH EXISTING WALL.
6. PATCH AND REPAIR INTERIOR AND EXTERIOR WALL TO MATCH EXISTING WHERE HVAC GRILLES / DUCTWORK WERE REMOVED.
7. EXISTING CONCRETE PORCH AND STAIRS TO REMAIN.
8. PROVIDE CONCRETE SPLASH BLOCK. SB-1
9. CONDENSING UNIT, REFER TO MECHANICAL PLANS.
10. INSTALL MONITOR ON RETRACTABLE ARM, PROVIDED BY OWNER, AND ALL REQUIRED BACKING.

Wall Types

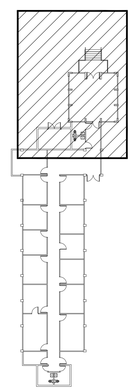
- EXTERIOR WALL : 2x6 WOOD STUD WALL @ 1'-4" O.C. WITH 5/8" GPDW ON INTERIOR SIDE AND EXTERIOR BOARD AND BATTEN, REFER TO DETAIL THIS SHEET. PROVIDE R-19 UNFACED BATT INSULATION.
- EXTERIOR CMU: CMU TO MATCH EXISTING.
- EXISTING EXTERIOR WALL
- EXISTING CMU
- EXISTING STOREFRONT WINDOW
- INTERIOR BEARING / NON BEARING WALL: 2x6 WOOD STUDS @ 1'-4" O.C. W/ 5/8" GPDW ON INTERIOR AND 1/2" O.S.B. ON OPPOSITE SIDE. PROVIDE R-19 UNFACED BATT INSULATION.



A1 Reference / Dimension / Wall Types Floor Plan

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

Plan North



C1 Key Plan

Scale: N.T.S.

North

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Reference Floor Plans

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET: A3.0

Jan 25, 2018 - 11:03am

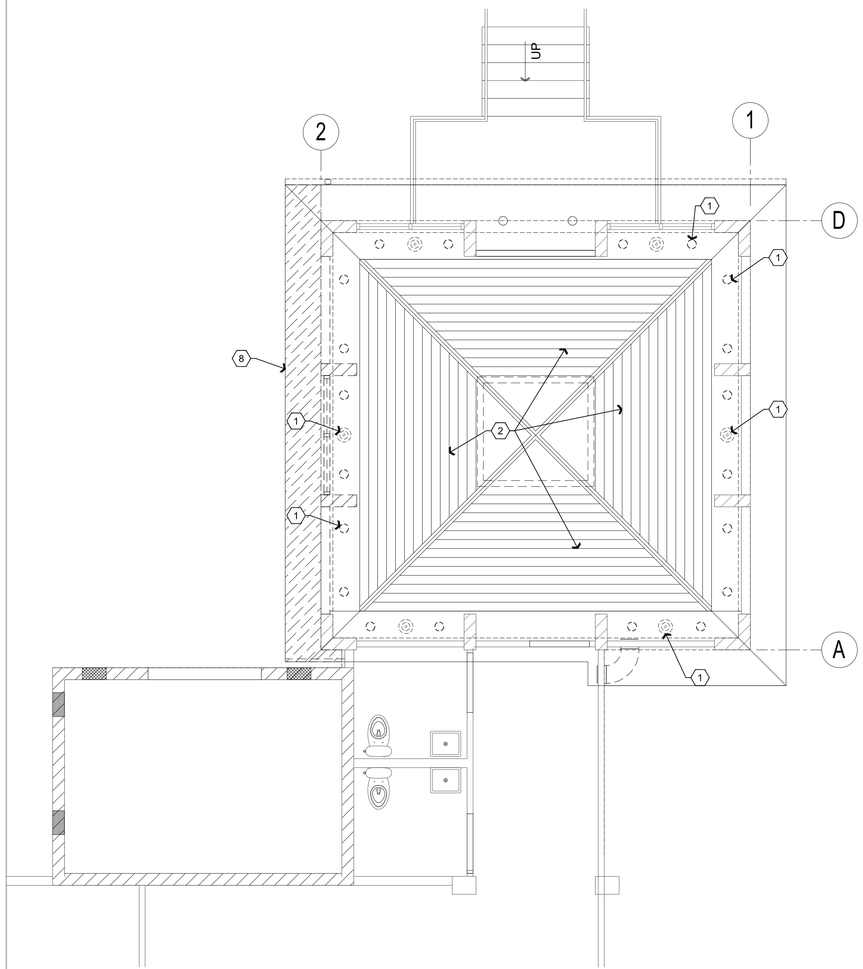
Descriptive Keynotes

1. REMOVE EXISTING LIGHTING AND MECHANICAL DIFFUSERS, TYPICAL.
2. EXISTING WOOD CEILING TO REMAIN.
3. PROVIDE NEW SUSPENDED CEILING SYSTEM. GRID TO BE INSTALLED BELOW EXISTING ROOF / CEILING IN EXISTING PORTION OF BUILDING. ACT-1
4. HVAC SUPPLY, TYPICAL, REFER TO MECHANICAL PLANS.
5. HVAC RETURN, TYPICAL, REFER TO MECHANICAL PLANS.
6. LIGHT FIXTURES SHOWN FOR QUANTITY AND LOCATION ONLY. REFER TO ELECTRICAL PLANS.
7. EXISTING CAN LIGHTS TO REMAIN.
8. REMOVE EXISTING TRUSS TAIL, SOFFIT ETC. AS REQUIRED FOR INSTALLATION OF GIRDER TRUSS.
9. PROVIDE ROOF GUTTER. M-3
10. WOODEN SOFFIT TO MATCH EXISTING.

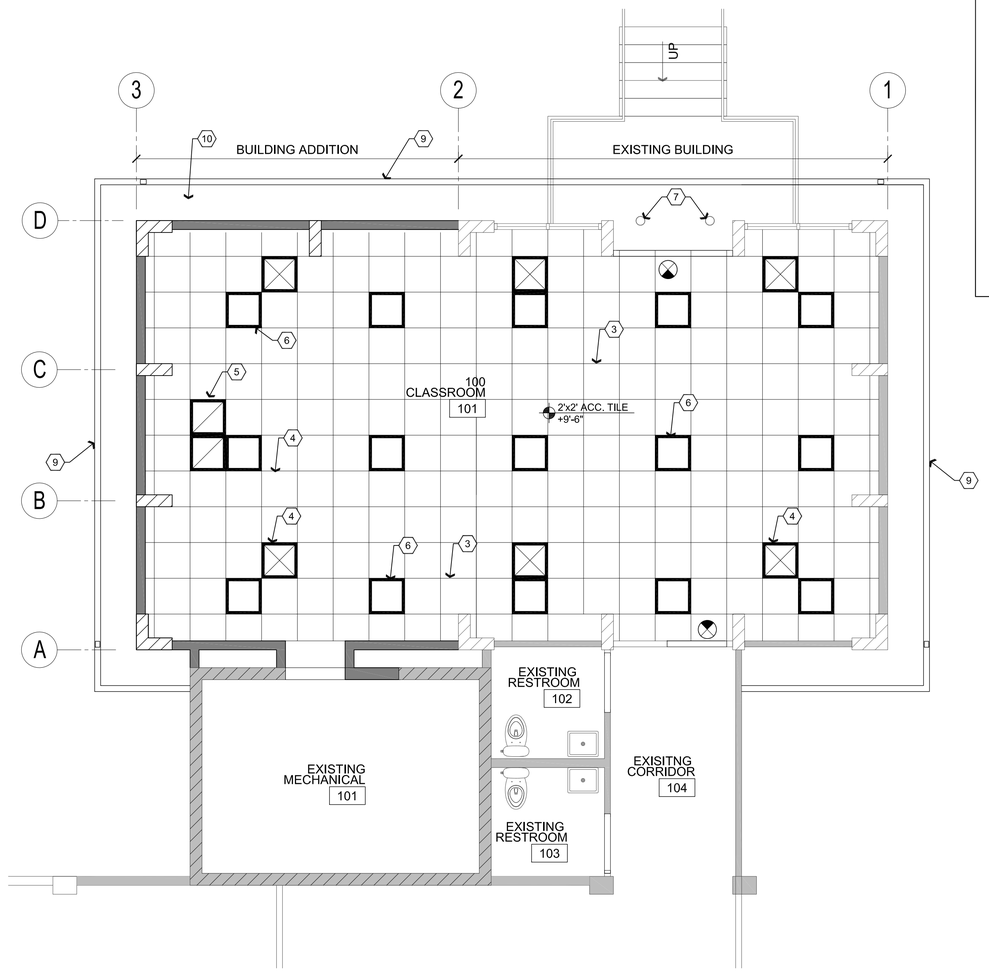
Legend

- NEW 2'x2' ACOUSTIC PANEL CEILING
- NEW 2'x2' LED TROFFER LIGHT FIXTURE
- NEW 2'x2' HVAC SUPPLY DIFFUSER
- NEW 2'x2' HVAC RETURN
- EMERGENCY EXIT SIGN WITH BATTERY BACK-UP

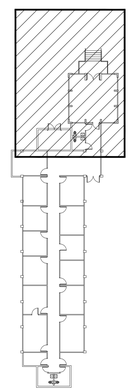
NOTE:
REFER TO ELECTRICAL AND MECHANICAL PLANS.



A1 Demolition Reflected Ceiling Plan
Scale: 1/4"=1'-0"
Plan North



B1 Reflected Ceiling Plan
Scale: 1/4"=1'-0"
Plan North



C1 Key Plan
Scale: N.T.S.
North

Jan 25, 2018 - 11:03am

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN
KENSON
Date Signed 01/25/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

W. Alan Kenson & Associates, P.C.
P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Demolition and Proposed Reflected Ceiling Plan

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET:

A4.0

Descriptive Keynotes

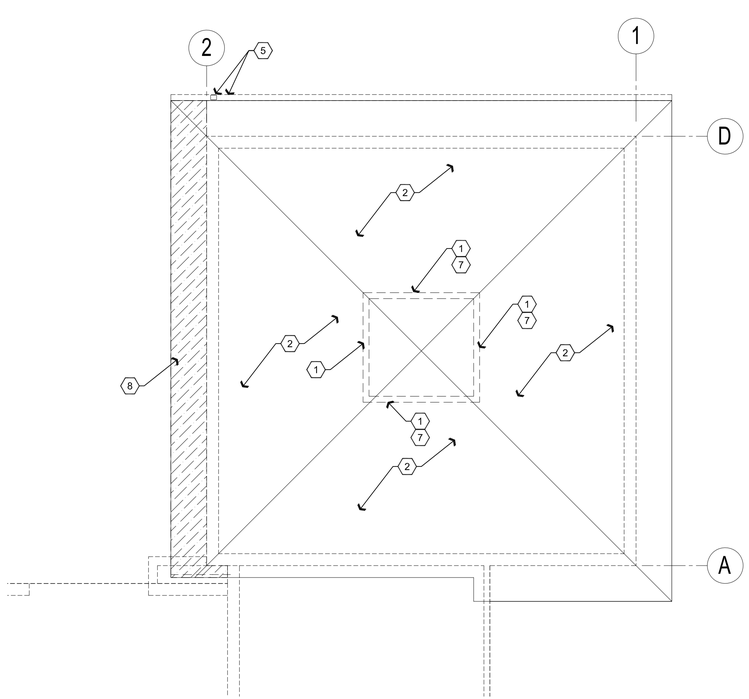
1. REMOVE EXISTING SKYLIGHT.
2. REMOVE EXISTING METAL ROOF.
3. PROVIDE SHEET METAL GUTTER. M-3
4. PROVIDE SHEET METAL DOWNSPOUT, TYPICAL OF 4. M-2
5. REMOVE EXISTING GUTTER / DOWNSPOUT.
6. PROVIDE CRICKET. FLASH TO EXISTING BLOCK WALL.
7. CUT OFF TOP OF BEAM AS REQUIRED.
8. REMOVE EXISTING WOOD FRAMING, SOFFIT ETC. AS REQUIRED FOR INSTALLATION OF DRAG TRUSS.
9. PROVIDE 24 GAUGE SIGNATURE 300 LOKSEAM METAL ROOF PANEL OVER 30# ROOFING FELT, OVER 5/8" OSB SHEATHING OVER NEW OR EXISTING ROOF FRAMING. M-1
10. PROVIDE SNOW BRAKE, REFER TO MATERIALS SCHEDULE. SB-2
11. PROVIDE SHEET METAL HIP CAP.
12. PROVIDE SHEET METAL RIDGE CAP.

Roof Drain Leader Sizes

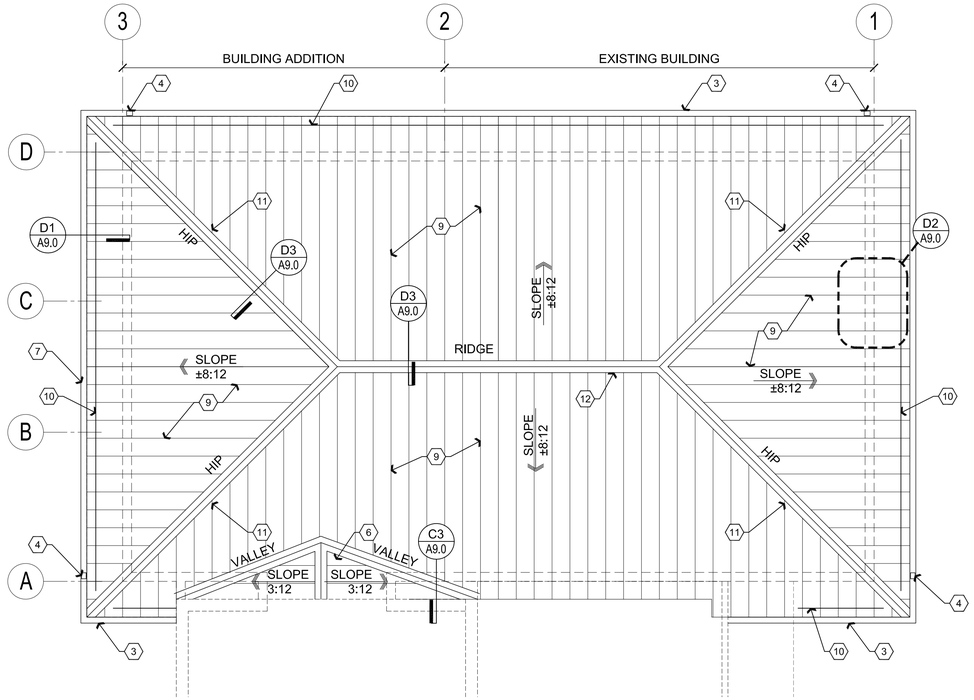
ROOF AREA : 1288 S.F.

1288 S.F. x 3" RAINFALL P.H. =
(1) 2"x3" LEADERS REQUIRED *
(4) 3 1/2"x4" LEADERS PROVIDED

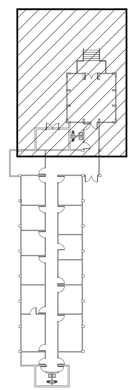
*PER 2012 IPC SECTION 1106 (TABLE 1106.2)



A1 Demolition Roof Plan Scale: 1/4"=1'-0" Plan North



B1 Roof Plan Scale: 1/4"=1'-0" Plan North



C1 Key Plan Scale: N.T.S. North

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Demolition Roof Plan and Roof Plan

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

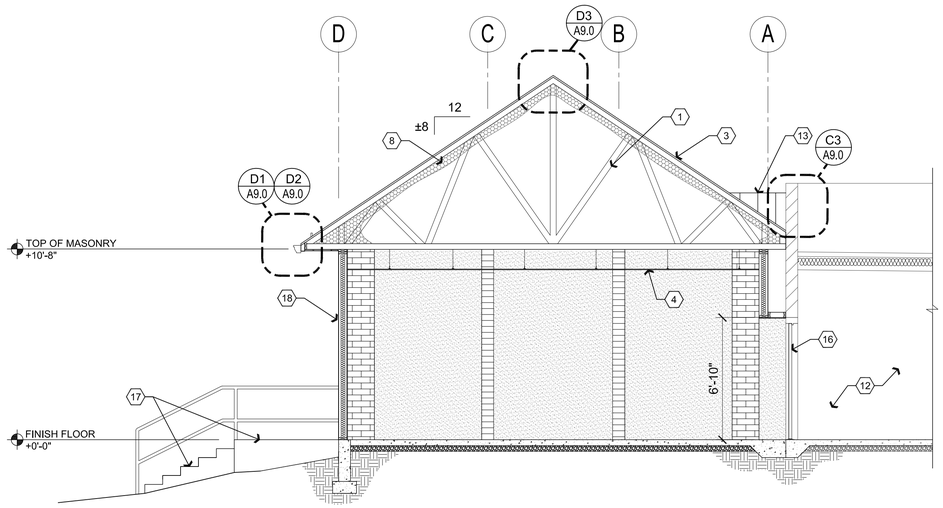
DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET:

A5.0

Jan 29, 2018 - 8:35am

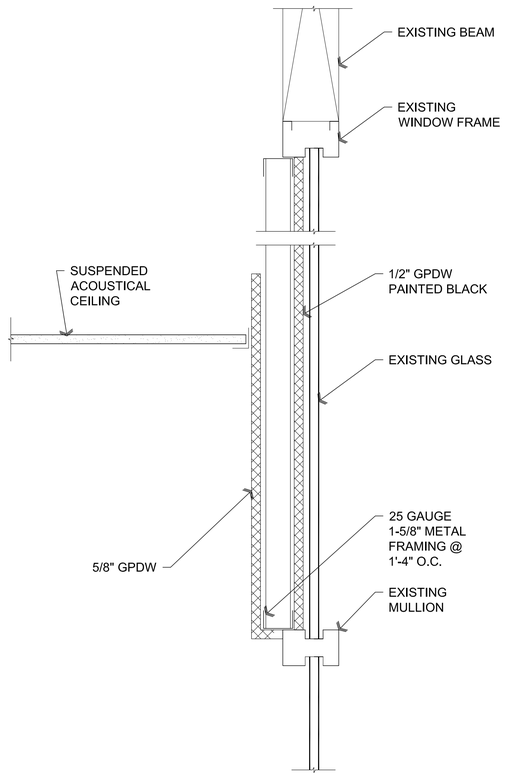
Descriptive Keynotes

1. PRE-FABRICATED TRUSSES.
2. EXISTING ROOF FRAMING.
3. PROVIDE 24 GAUGE SIGNATURE 300 LOKSEAM METAL ROOF PANEL OVER 30# ROOFING FELT, OVER 5/8" OSB SHEATHING OVER NEW OR EXISTING ROOF FRAMING. M-1
4. PROVIDE SUSPENDED CEILING, TYPICAL. ACT-1
5. EXISTING STOREFRONT DOOR.
6. EXISTING STOREFRONT WINDOW.
7. PROVIDE CMU TO MATCH EXISTING. CMU-1
8. PROVIDE R38 CLOSED CELL SPRAY FOAM ATTIC INSULATION.
9. EXISTING INSULATION TO REMAIN.
10. REMOVE EXISTING SKYLIGHT.
11. CUT OFF TOP OF BEAM AS REQUIRED.
12. EXISTING MECHANICAL ROOM.
13. PROVIDE ROOF CRICKET.
14. EXISTING SOFFIT TO REMAIN.
15. EXISTING CEILING TO REMAIN.
16. PROVIDE NEW DOOR AND FRAME, REFER TO REFERENCE FLOOR PLAN AND DOOR SCHEDULE.
17. CONCRETE PORCH AND STAIRS TO REMAIN.
18. EXTERIOR WALL, REFER TO REFERENCE FLOOR PLAN AND WALL TYPES.
19. PROVIDE SNOW BRAKE, REFER TO MATERIALS SCHEDULE. SB-2



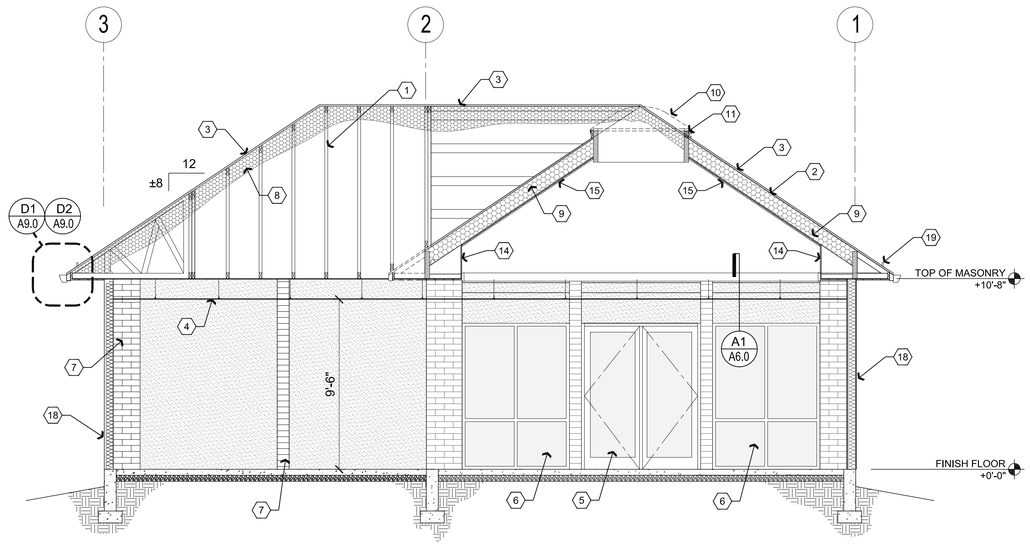
B2 Building Section

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



A1 Window @ Ceiling

SCALE: 3" = 1'-0"



B1 Building Section

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

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Building Sections

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

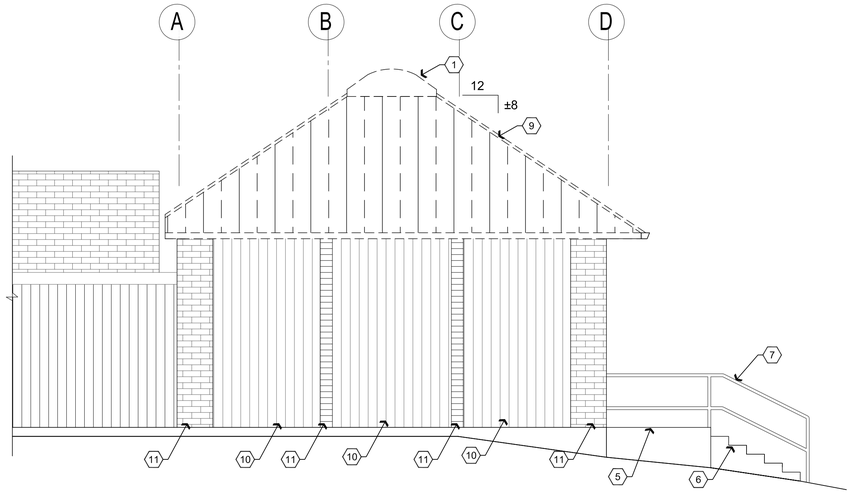
DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO. 705
SHEET

A6.0

Jan 25, 2018 - 11:04am

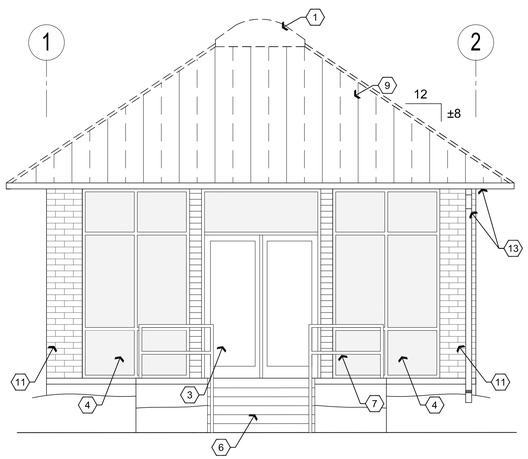
Descriptive Keynotes

1. REMOVE EXISTING SKY LIGHT.
2. REMOVE EXISTING STOREFRONT WINDOW.
3. EXISTING STOREFRONT DOOR TO REMAIN.
4. EXISTING STOREFRONT WINDOW TO REMAIN.
5. EXISTING CONCRETE PORCH TO REMAIN.
6. EXISTING CONCRETE STAIRS TO REMAIN.
7. EXISTING RAILING TO REMAIN.
8. REMOVE EXISTING CMU COLUMN.
9. REMOVE EXISTING METAL ROOFING.
10. EXISTING WALL TO REMAIN.
11. EXISTING CMU TO REMAIN.
12. EXISTING MECHANICAL ROOM.
13. REMOVE EXISTING GUTTER AND DOWNSPOUT.
14. REMOVE EXISTING WALL, REFER TO DEMOLITION FLOOR PLAN.



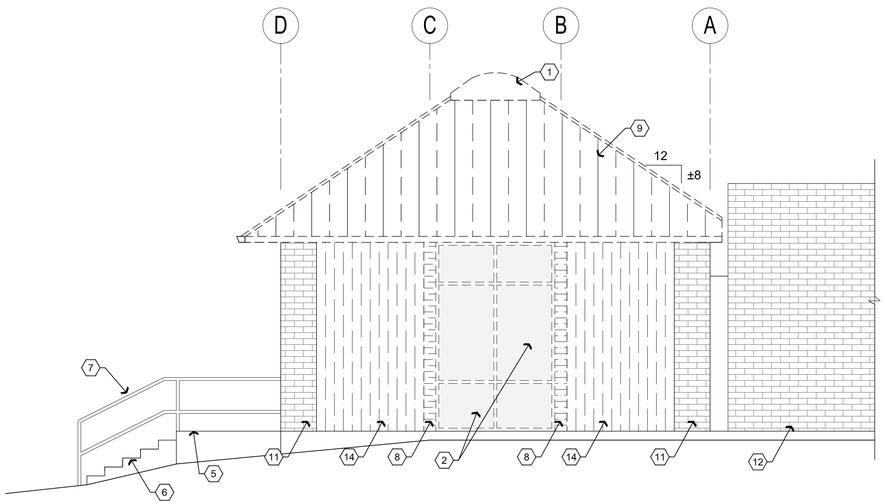
B2 East Elevation - Demolition

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



A1 North Elevation - Demolition

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



B1 West Elevation - Demolition

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

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REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN
KENSON
Date Signed 01/25/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Demolition / Existing Exterior Elevations

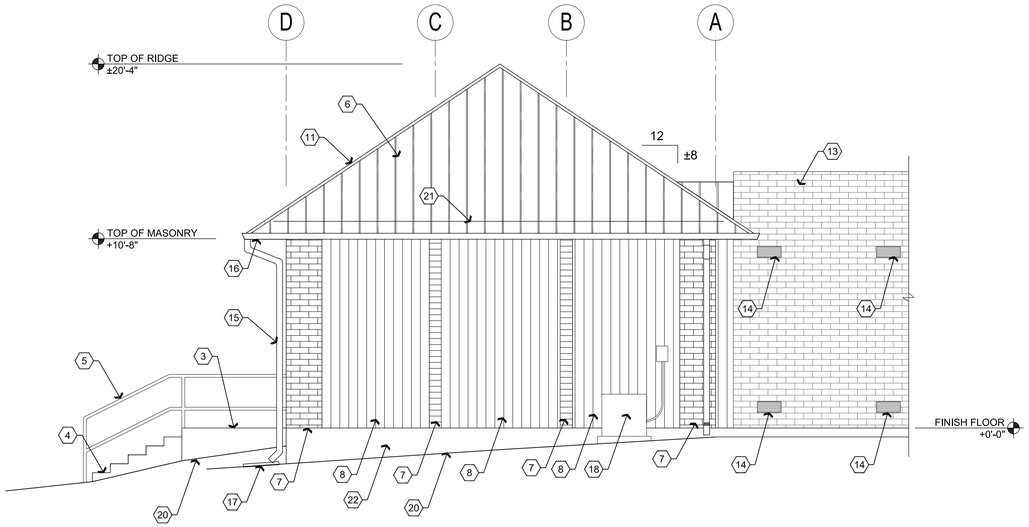
PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET:

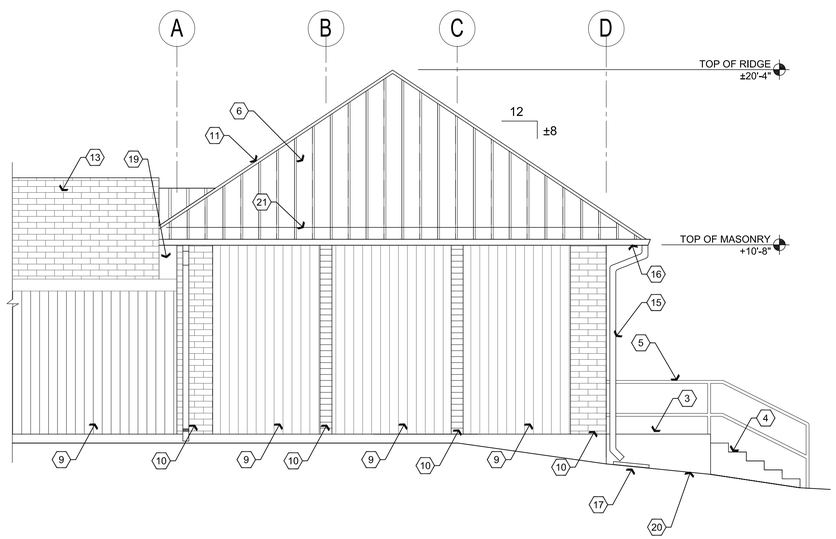
A7.0

Jan 25, 2018 - 11:04am



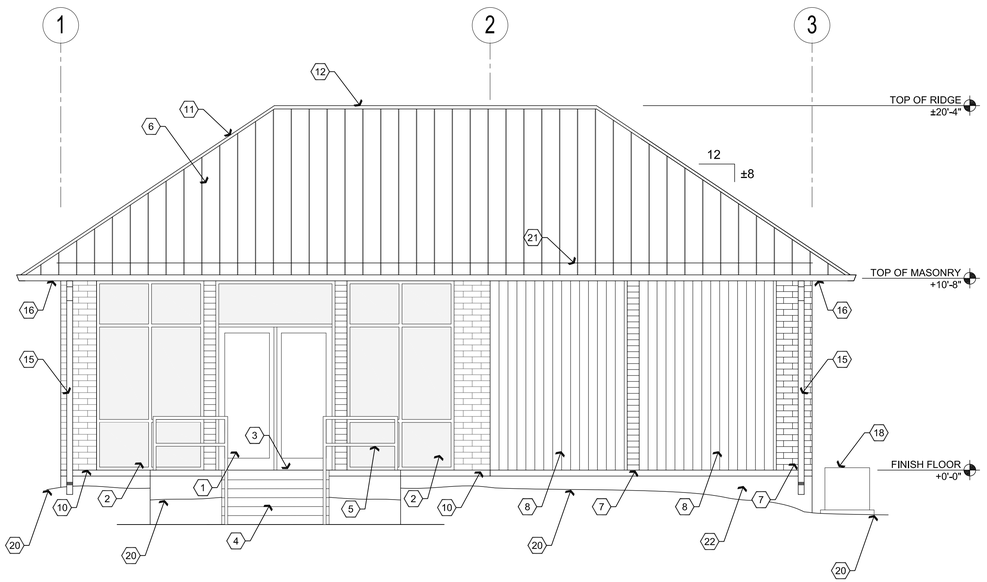
A2 West Elevation

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



A1 East Elevation

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



B1 North Elevation

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

Descriptive Keynotes

1. EXISTING STOREFRONT DOOR TO REMAIN.
2. EXISTING STOREFRONT WINDOW TO REMAIN.
3. EXISTING CONCRETE PORCH TO REMAIN.
4. EXISTING CONCRETE STAIRS TO REMAIN.
5. EXISTING RAILING TO REMAIN.
6. PROVIDE 24 GAUGE SIGNATURE 300 LOKSEAM METAL ROOF PANEL OVER 30# ROOFING FELT, OVER 5/8" OSB SHEATHING OVER NEW OR EXISTING ROOF FRAMING. M-1
7. PROVIDE CMU TO MATCH EXISTING. CMU-1
8. PROVIDE NEW WALL WITH EXTERIOR SIDING TO MATCH EXISTING PAINT, REFER TO WALL TYPES.
9. EXISTING WALL TO REMAIN, RE-PAINT.
10. EXISTING CMU TO REMAIN.
11. PROVIDE SHEET METAL HIP CAP.
12. PROVIDE SHEET METAL RIDGE CAP.
13. EXISTING MECHANICAL ROOM.
14. PROVIDE COMBUSTION AIR VENT, REFER TO MECHANICAL PLANS.
15. PROVIDE SHEET METAL DOWNSPOUT. M-2
16. PROVIDE SHEET METAL GUTTER. M-3
17. PROVIDE CONCRETE SPLASH BLOCK. SB-1
18. PROVIDE HVAC CONDENSER, REFER TO MECHANICAL PLANS.
19. PROVIDE 2x6 EXTERIOR INFILL WALL OF MATCHING CONSTRUCTION WHERE VOID OCCURS.
20. EXISTING / PROPOSED GRADE.
21. PROVIDE SNOW BRAKE, REFER TO MATERIALS SCHEDULE. SB-2
22. PAINTED CONCRETE STEM WALL TO MATCH EXISTING.

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN
KENSON
Date Signed 01/25/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Exterior Elevations

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
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SHEET: A7.1

Jan 25, 2018 - 11:04am

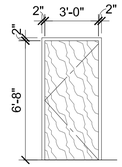
Door Schedule

NO.	ROOM NAME	SIZE	TYPE	DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	HARDWARE TYPE
101A	MECHANICAL	3'-0"x6'-8"	A	SCWD	STAIN	HM	PAINT	1

Hardware Schedule

HARDWARE SET #1 – DOORS 101A
EACH DOOR TO HAVE

QTY	DESCRIPTION		MANUFACTURER
3	HINGE 5BB1 4-1/2 X 4-1/2	652	IVES
1	STOREROOM 9K3 7D 15D S3 L/C	626	BEST
1	OH STOP 454S	626	GLYNN JOHNSON
1	PERIMETER SEAL S88BL-17	BLK	PEMKO
1	DROP SEAL 4131 CRL – 36"	ALUM	PEMKO



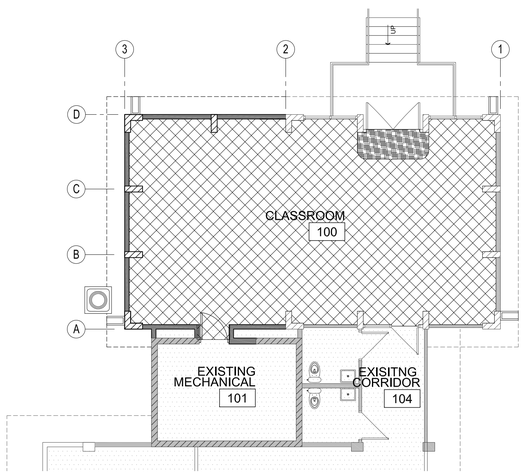
A ALGOMA SCLC-5 SOLID CORE VENEER BIRCH PRE-FINISHED STAIN RA4370, IN 14 GAUGE HOLLOW METAL FRAME

D1 Door Type
Scale: 1/4"=1'-0"

Materials schedule

XX- #

CODE	MATERIAL	LOCATION	MANUFACTURER	SPECIFICATION
ACT-1	ACOUSTIC CEILING TILE	CLASSROOM	ARMSTRONG	ASTM C 36; 2'x2' #770 NON DIRECTIONAL SQUARE LAY-IN TILE, WHITE SUSPENDED GRIDS; 15/16" METAL WHITE
CMU-1	8x4x16 CMU		YAVAPAI BLOCK	WESTERN HERITAGE, AUTUMN RUST, STRIATED
CPT-1	CARPET	CLASSROOM	TANDUS CENTIVA	CRAYON POWERBOND CUSHION RS PRECIOUS METAL #48010 (PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR)
M-1	METAL ROOF PANEL	ROOF	MBCI	24 GAUGE SIGNATURE 300 12" LOKSEAM METAL ROOF PANEL COLOR: COPPER METALLIC
M-2	DOWNSPOUTS	EXTERIOR	MBCI	3 1/2x4 BOX DOWNSPOUT,26 GAUGE, PRE-PAINTED, COLOR: COPPER METALLIC (SIGNATURE 300)
M-3	RAIN GUTTER	EXTERIOR	MBCI	3x4 BOX GUTTER, 26 GAUGE, PRE-PAINTED, COLOR: COPPER METALLIC (SIGNATURE 300)
PT-1	PAINT	CLASSROOM WALLS, EXISTING AND NEW	SHERWIN WILLIAMS	SW6098 PACER WHITE
PT-2	PAINT	EXTERIOR	SHERWIN WILLIAMS	COLOR TO MATCH EXISTING
PT-3	PAINT	HOLLOW METAL DOOR FRAME	SHERWIN WILLIAMS	SW6098 PACER WHITE
RB-1	RUBBER BASE	CLASSROOM	ARMSTRONG OR ROPPE	4" COVED WITH PRE-FORMED CORNERS, BLACK (PROVIDED AND INSTALLED BY CONTRACTOR)
SB-1	SPLASH BLOCK	EXTERIOR DOWNSPOUTS	PHOENIX PRECAST PRODUCTS	SB1224
SB-2	SNOW BRAKE	ROOF	DYNAMIC FASTENERS	DYNA-GUARD SNOW RETENTION SYSTEM WITH A 2" WIDE STRIP OF METAL ROOF PANEL INSERTED.
WM-1	WALK-OFF-MAT	FRONT ENTRY	TANDUS CENTIVA	ABRASIVE ACTION POWER BOND CUSHION CHARCOAL #19100 (PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR)



A1 Room Finish Plan
Scale: 1/8"=1'-0"

Plan North

Room Finish Schedule

NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING	HEIGHT
100	CLASSROOM	F1	B1	W1	C1	9'-6"

FLOOR:
F1 CARPET CPT-1
F2 WALK-OFF-MAT WM-1

BASE:
B1 RUBBER BASE RB-1

WALLS:
W1 PAINTED GPDW

CEILING:
C1 2x2 SUSPENDED ACOUSTICAL TILES ACT-1

TYPICALLY INDICATES CARPET CPT-1

WALK-OFF-MAT WM-1

TYPICALLY INDICATES EXISTING TO REMAIN

Jan 29, 2018 - 11:49am

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

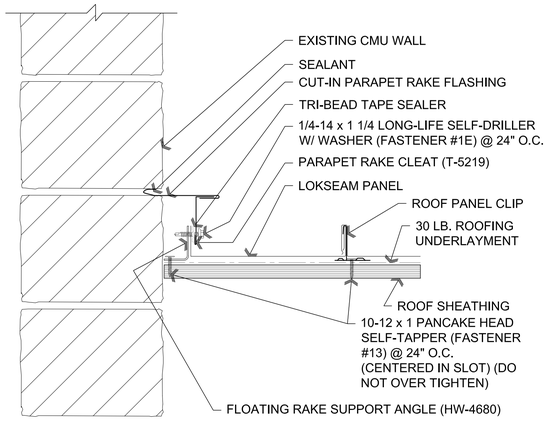
DRAWING: Door Schedule, Room Finish Plan
Materials Schedule

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

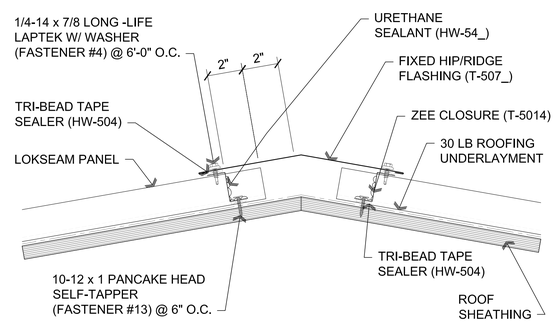
DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET:

A8.0



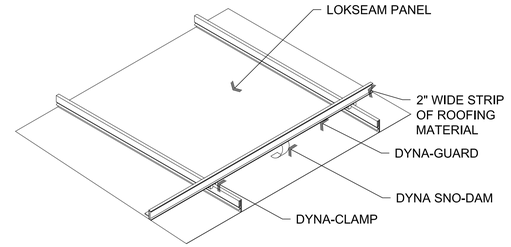
C3 Rake Flashing

SCALE: 3" = 1'-0"



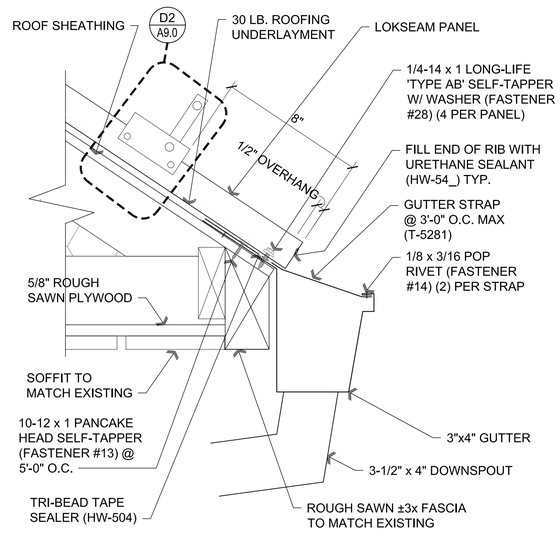
D3 Roof Ridge / Hip

SCALE: 3" = 1'-0"



D2 Snow Brake SB-2

SCALE: N.T.S.



D1 Roof at Gutter

SCALE: 3" = 1'-0"

REVISIONS	BY

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Details

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY	L.O.
CHECKED BY	W.A.K.
DATE	January 25th, 2018
JOB NO.	705
SHEET	A9.0

Jan 25, 2018 - 11:12am

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	
General	Provide 16 gauge hollow metal doors with 14 gauge hollow metal frames as shown on the drawings per steel door institute standards.
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 68 00 - CARPET	
General	Refer to materials & finish schedule and floor finish plan for layout.
Preparation of Surfaces	Inspect surfaces to receive carpet, make tests recommended by manufacturer, take corrective action deemed necessary or notify owner in writing of any condition which could be detrimental to carpet installation, Remove all foreign and incompatible materials and vacuum clean surfaces immediately prior to installation of carpet. Fill cracks, construction joints and other surface imperfections with latex underlayment compound troweled level with adjacent surface. Commencement of work constitutes acceptance of surfaces and responsibility for them.
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

REVISIONS	BY

REGISTERED ARCHITECT
CERTIFICATE NO.
25646
W. ALAN KENSON
Date Signed 01/26/18
ARIZONA, U.S.A.
EXPIRES: 6/30/18

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P 928-443-5812
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ARCHITECTURE & PLANNING

DRAWING: Specifications

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY: L.O.
CHECKED BY: W.A.K.
DATE: January 25th, 2018
JOB NO.: 705
SHEET: A10.0

Jan 25, 2018 - 11:05am

GENERAL STRUCTURAL NOTES

(APPLY UNLESS NOTED OTHERWISE ON PLANS/DETAILS)

GENERAL REQUIREMENTS:

1. THESE DRAWINGS, AND THEIR ASSOCIATED STRUCTURAL CALCULATIONS, HAVE BEEN PERFORMED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEER'S 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 OR 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.
2. 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, AT NO ADDITIONAL COST TO OWNER.
3. 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.
4. 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 AND STRUCTURAL ENGINEER.
5. 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 DEPARTMENT, SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.

BASIS FOR DESIGN:

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

   RISK CATEGORY = II

2. VERTICAL LOADS:

LOCATION	LIVE / SNOW LOAD	DEAD LOAD
ROOF	30 PSF	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:	
PLYWOOD – FLEXIBLE DIAPHRAM(S)	R = 6.5
VERTICAL SHEAR TRANSFER ELEMENTS:	
GYPBOARD SHEARWALL(S)	R = 2.0
PLYWOOD SHEARWALL(S)	R = 6.5

4. WIND DESIGN PARAMETERS (STRENGTH):

ULTIMATE WIND SPEED	115 MPH (3 SECOND GUST)
WIND EXPOSURE	C
IMPORTANCE FACTOR	Iw = 1.00
INTERNAL PRESSURE COEFFICIENT	−0.18
COMPONENT AND CLADDING PRESSURE	20.3 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 BLEOW 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 1806.2 OF CHAPTER 18 OF THE IBC. 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 BACKFILL PRESSURE (UNRESTRAINED)	30 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 FINISHED GRADE

4. ALL FOUNDATIONS SHALL BEAR ON 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.
5. CONCRETE SLABS ON GRADE SHALL BE SUPPORTED ON A 4 INCH LAYER OF SELECT FILL MATERIAL ACCORDING TO THE SPECIFICATIONS OF THE SOIL REPORT. FILL MATERIAL SHOULD BE MOISTENED, BUT NOT SATURATED JUST PRIOR TO PLACING CONCRETE.

CONCRETE:

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

USE:	CONCRETE STRENGTH:	REMARKS:
FOUNDATIONS	4000 PSI	W/O INSPECTION
CONCRETE SLABS ON GRADE	4000 PSI	W/O INSPECTION

2. 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 C67 FOR ¾", ASTM C57 FOR 1" AND ASTM C467 FOR 1½" AGGREGATE.
3. TENSION LAP SPLICES OF REINFORCING STEEL IN CONCRETE SHALL BE AS FOLLOW:

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

   LAP SPLICES FOR BEAMS AND FLOOR SLABS SHALL BE ACCORDING TO CHAPTER 12 OF ACI 318 OR LAP SCHEDULE ON THESE DRAWINGS.

   NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER. 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.

4. 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"	± ⅜"
SLABS ON GRADE	1½"	± ¼"
EXPOSED TO EARTH OR WEATHER – #5 AND SMALLER	1½"	± ⅜"
BEAMS AND COLUMNS (PRIMARY) REINFORCEMENT, TIES, STIRRUPS AND SPIRALS	1½"	⅜"

5. MAXIMUM SLUMP FOR ALL CONCRETE SHALL BE 4". SLUMP FOR EXTERIOR SLABS SHALL BE 6". PORTLAND CEMENT SHALL CONFORM TO ASTM C150. TYPE V CEMENT SHALL BE USED FOR CONCRETE IN CONTACT WITH ALKALINE SOIL, AND TYPE II ELSEWHERE.
6. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY.
7. CONCRETE PLACEMENT AND QUALITY SHALL BE PER RECOMMENDATIONS IN ACI 614, ACI 301 AND ACI 318. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, 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.

8. 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 RECOMMENDED 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 STRUCTURAL ENGINEER. 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.

CONCRETE (CONTINUED):

12. CONCRETE MIXES SHALL BE DESIGNED BY CERTIFIED LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
13. INTERIOR CONCRETE SLABS SHALL BE PLACED OVER MOISTURE BARRIER AS SPECIFIED IN THE PROJECT MANUAL.
14. OWNER REQUIRES CONCRETE MIX #160X109 IN WINTER AND #160X149 IN SUMMER AS PRODUCED BY HANSON PRODUCTS OR EQUAL.

MASONRY (CONCRETE BLOCK):

MINIMUM 28 DAY MASONRY STRENGTH SHALL BE 1500 PSI.

1. VERTICAL REINFORCING: #5 AT 8 INCHES ON CENTER FULL HEIGHT OF WALL, CENTERED IN GROUTED CELL AND AT ALL WALL INTERSECTIONS, CORNERS, 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 INCHES 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
#4	24"
#5	30"
#6	43"

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 (±) ½" PERPENDICULAR TO WALL AND (±) 2" ALONG THE LENGTH OF THE WALL. PROVIDE ½" 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.

   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.

9. 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 24" PAST JAMBS.

    OPTION #2: DOUBLE ANGLE LINTELS: USE (2) L3½X3½X¼ 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 STRUCTURAL ENGINEER.

    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.

    FOR ADDITIONAL INFORMATION AT OPENINGS IN MASONRY WALLS, SEE TYPICAL DETAILS.

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.
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.

WOOD:

1. SAWN LUMBER: FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) OR THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB). ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY. SAWN LUMBER SHALL HAVE THE FOLLOWING MINIMUM GRADE UNLESS NOTED OTHERWISE IN SCHEDULES:

USE:	MATERIAL:
2X4 STUDS	HEM-FIR STUD
2X6 STUDS	HEM-FIR NO. 2
JOISTS, TOP PLATES AND ALL OTHER SAWN LUMBER	DOUGLAS-FIR NO. 2 OR BETTER
BEAMS AND POSTS	DOUGLAS-FIR NO. 2 OR BETTER

2. PLYWOOD: ALL PLYWOOD SHALL BE C-D OR C-C SHEATHING CONFORMING TO STANDARD PS 1-95. LAY UP PLYWOOD WITH FACE GRAIN IN PERPENDICULAR TO SUPPORTS (ON ROOFS WHERE PLYWOOD IS LAID UP WITH FACE GRAIN PARALLEL TO SUPPORTS, USE A MINIMUM OF 5-PLY PLYWOOD, STAGGER JOINTS). ALL NAILING, COMMON NAILS. BLOCKING AT PANEL EDGES WHERE INDICATED ON PLANS. ALL PLYWOOD SHALL BE OF THE FOLLOWING NOMINAL THICKNESS, SPAN/INDEX RATING AND SHALL BE NAILED AS FOLLOWS UNLESS NOTED OTHERWISE ON THE PLANS:

LOCATION:	NOMINAL THICKNESS:	SPAN INDEX RATING:	EDGE ATTACHMENT:	FIELD ATTACHMENT:
WALLS	½" OR ⅜"	24/0	8d AT 6" O.C.	8d AT 12" O.C.
ROOF	⅝"	40/20	10d AT 6" O.C.	10d AT 12" O.C.

   PLYWOOD ALTERNATE: AMERICAN PLYWOOD ASSOCIATION PERFORMANCE RATED SHEATHING MAY BE USED AS AN ALTERNATE TO PLYWOOD WITH PRIOR APPROVAL OF OWNER, ARCHITECT AND ROOFER. IT MAY NOT BE USED ON ROOFS WHERE BUILT-UP ROOF SYSTEM IS TO BE GUARANTEED BY ROOFER. RATED SHEATHING SHALL COMPLY WITH ICBO REPORT NER-108, EXPOSURE 1, AND SHALL HAVE A SPAN RATING EQUIVALENT TO OR BETTER THAN THE PLYWOOD IT REPLACES. ATTACHMENT AND THICKNESS (WITHIN 1/32") SHALL BE THE SAME AS THE PLYWOOD IT REPLACES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

3. GLUED-LAMINATED BEAMS (GLULAM): GLUED-LAMINATED BEAMS SHALL BE DOUGLAS FIR COMBINATION AT 24F-V4 AT SIMPLE SPAN BEAMS AND 24F-V8 AT CANTILEVERED BEAMS WITH THE FOLLOWING MINIMUM PROPERTIES: FB = 2,400 PSI, FV = 190 PSI, FC (PERPENDICULAR) = 650 PSI, E =1,800 KSI. ALL BEAMS SHALL BE FABRICATED USING WATERPROOF GLUE. FABRICATION AND HANDLING PER LATEST AITC AND WCLA STANDARDS. BEAMS TO BEAR GRADE STAMP AND AITC STAMP AND CERTIFICATE. CAMBER AS SHOWN ON DRAWINGS. STANDARD CAMBER IS BASED ON A RADIUS OF CURVATURE OF 2000 FEET.
4. SILL PLATES RESTING ON CONCRETE OR MASONRY WITHIN 12" OF SOIL SHALL BE OF TREATED FIR OR FOUNDATION GRADE REDWOOD. SHEAR WALLS AND EXTERIOR WALL SILLS AT CONCRETE SLAB SHALL HAVE A MINIMUM OF (2) ½"ø ANCHOR BOLTS PER PIECE. PROVIDE ANCHOR BOLT AT 9" MAXIMUM, 4" MINIMUM FROM THE END OF EACH PIECE AT SPLICE OR END OF WALL. MAXIMUM ANCHOR BOLT SPACING SHALL BE 72" ON CENTER UNLESS NOTED OTHERWISE ON PLANS OR DETAILS. ALL ANCHOR BOLTS (OTHER THAN BOLTS FOR HOLDOWNS) SHALL EMBED 7" INTO CONCRETE. ANCHOR BOLTS FOR HOLDOWNS SHALL NOT BE CONSIDERED AS PART OF REQUIRED ANCHOR BOLTS ON SHEAR WALLS. ALL EXTERIOR WALLS SHALL BE SECURED WITH MINIMUM ANCHOR BOLTS. INTERIOR WALLS MAY BE SECURED TO CONCRETE WITH EITHER ANCHOR BOLTS OR POWER DRIVEN SHOT PINS UNLESS NOTED OTHERWISE ON PLANS.
5. GENERAL: DO NOT NOTCH OR DRILL JOISTS, BEAMS OR LOAD BEARING STUDS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT. DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER PARTITIONS. PROVIDE 2" (NOMINAL) SOLID BLOCKING AT SUPPORTS OF ALL JOISTS. UNLESS NOTED OTHERWISE ON PLANS/DETAILS PROVIDE 2X SOLID BLOCKING AT MID-HEIGHT OF BEARING STUD WALLS. ALL NAILING NOT NOTED SHALL BE ACCORDING TO IBC TABLE 2304.9.1. JOIST HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. OR OTHER MANUFACTURER WITH CURRENT ICBO APPROVAL.
6. BOLTING: ALL BOLTS IN WOOD CONNECTIONS SHALL CONFORM TO ASTM A307. BOLTS SHALL BE INSTALLED IN HOLES BORED WITH A BIT 1/16" LARGER THAN THE ø (DIAMETER) OF THE BOLT. BOLTS AND NUTS SEATING ON WOOD SHALL HAVE CUT STEEL WASHERS UNDER HEADS AND NUTS. NICK THREADS TO PREVENT LOOSENING.
7. PREFABRICATED WOOD TRUSSES: PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED TO SUPPORT SELF WEIGHT PLUS LIVE LOAD AND SUPERIMPOSED DEAD LOADS. WHERE ATTIC SPACE CAN BE USED FOR STORAGE, A 40 PSF LIVE LOAD ON THE BOTTOM CHORD SHALL BE INCLUDED IN THE ANALYSIS. BRIDGING SIZE AND SPACING BY TRUSS MANUFACTURER UNLESS NOTED OTHERWISE. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER FOR REVIEW PRIOR TO MANUFACTURE.

   SHOP DRAWINGS SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING POINTS. ALL CONNECTORS SHALL HAVE CURRENT ICBO APPROVAL. ADDITIONAL TRUSSES SHALL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT. PER IBC SECTION 2303.4 AND TPI-1: EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS, THE DESIGN LOADS, AND THE TRUSS SPACING – WITHIN TWO FEET OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD. TOTAL LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/240. FLOOR LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/480.

SPECIAL INSPECTION ITEMS:

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

TYPE OF WORK:	REQUIRED:	REMARKS:
CONCRETE SLAB ON GRADE	NO	DESIGN BASED ON f'c=2500 PSI
CONCRETE FOUNDATIONS	NO	DESIGN BASED ON f'c=2500 PSI
MASONRY (CMU)	YES	DURING PLACEMENT OF GROUT
REINFORCING STEEL FOR ALL CONCRETE/ MASONRY THAT REQUIRES INSPECTION	YES	PRIOR TO PLACEMENT OF CONCRETE OR GROUT
EPOXY ANCHORS	YES	DURING INSTALLATION OF ANCHORS

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 STRUCTURAL ENGINEER OF RECORD – FROST STRUCTURAL ENGINEERING (928)776-4757.
   B. FOR GEOTECHNICAL ITEMS LISTED ABOVE, THE SPECIAL INSPECTOR SHALL BE, OR WORK UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER OF RECORD. SEE GEOTECHNICAL REPORT FOR CONTACT INFORMATION.
   C. 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.
   D. 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 STRUCTURAL ENGINEER OF RECORD. 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.
   C. UPON COMPLETION OF THE ASSIGNED WORK THE STRUCTURAL ENGINEER SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE.

DRAWING INDEX

JOB NO.: 2017-0199 | PROJECT MANAGER: STANFORD L. | CAD OPERATOR: MJS

FROST STRUCTURAL ENGINEERING
1678 Oaklawn Drive, Suite C
Prescott, Arizona 86305
phone: 928.776.4757
fax: 928.776.4931
info@frost-structural.com

REVISIONS	BY

Registered Professional Engineer (Structural) CERTIFICATE NO. 27341 RICHARD K. FROST DATE SIGNED 1.23.18 ARIZONA U.S.A.
EXPIRES 9/30/2020

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: GENERAL STRUCTURAL NOTES

PROJECT: ERAU BUILDING 79 ADDITION
3700 WILLOW CREEK ROAD
PRESCOTT, AZ 86301

PROJECT: .

DRAWN BY
MJS

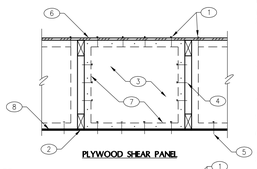
CHECKED BY
STANFORD L.

DATE
1/23/18

SCALE
AS NOTED

JOB NO.
2017-0199

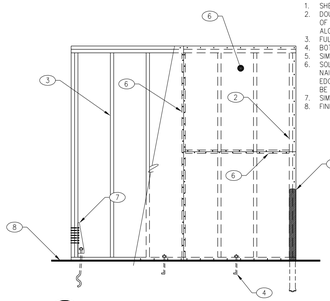
SHEET
S1



KEY NOTES:
1. EDGE NAILING.
2. PREFAB WOOD TRUSS, TRUSS MANUFACTURER SHALL PROVIDE VERTICAL WEB TO MATCH LOCATION OF SHEAR PANEL.
3. ⅜" PLYWOOD SHEAR PANEL WITH 8d AT 6" O.C. AT PANEL EDGES AND 8d AT 12" O.C. AT INTERMEDIATE SUPPORTS.
4. 16d AT 6" O.C. TO TRUSS VERTICAL WEB.
5. 16d TO MATCH EDGE NAILING SPACING.
6. PLYWOOD SHEATHING AS OCCURS.
7. 2X4 AT (4) SIDES.
8. TOP OF WOOD PLATE OR BEAM AS OCCURS.
9. PREFAB BLOCKING PER TRUSS MANUFACTURER. IN-PLANE SHEAR CAPACITY TO BE 200#.

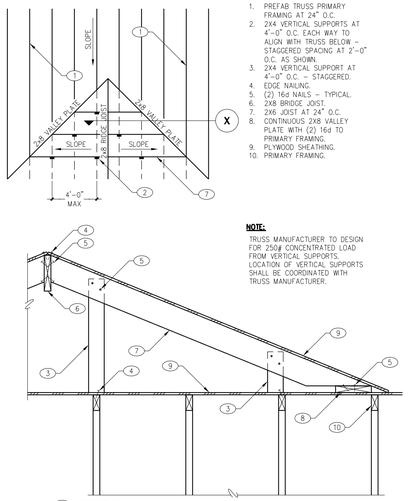
NOTES:
1. FOR CONSTRUCTION BELOW PANEL, SEE PLAN AND DETAILS. BLOCKING IS CONTINUOUS.
2. INDIVIDUAL SHEAR PANEL BLOCKS MAY BE PENETRATED OR OMITTED FOR PASSAGE OF HVAC DUCTS.

T13 ELEVATION – TYPICAL PLYWOOD SHEAR PANEL BLOCKING
02-W0501 — NO SCALE



KEY NOTES:
1. SHEATHING MATERIAL.
2. DOUBLE STUDS AT EACH END OF SHEARWALL. EDGE NAIL ALONG DOUBLE STUDS.
3. FULL HEIGHT WOOD STUDS.
4. BOTTOM PLATE ATTACHMENT.
5. SIMPSON STHD TYPE HOLDOWN.
6. SOLID 2X BLOCKING AND EDGE NAILING REQUIRED AT PANEL EDGES. SHEATHING JOINTS CAN BE HORIZONTAL OR VERTICAL.
7. SIMPSON PHD TYPE HOLDOWN.
8. FINISHED FLOOR.

T14 ELEVATION–TYPICAL 1-STORY SHEARWALL
02-W0602 — NO SCALE



KEY NOTES:
1. PREFAB TRUSS PRIMARY FRAMING AT 24" O.C.
2. 2X4 VERTICAL SUPPORTS AT 4'-0" O.C. EACH WAY TO ALIGN WITH TRUSS BELOW – STAGGERED SPACING AT 2'-0" O.C. AS SHOWN.
3. 2X4 VERTICAL SUPPORT AT 4'-0" O.C. – STAGGERED.
4. EDGE NAILING.
5. (2) 16d NAILS – TYPICAL.
6. 2X8 BRIDGE JOIST.
7. 2X6 JOIST AT 24" O.C.
8. CONTINUOUS 2X8 VALLEY PLATE WITH (2) 16d TO PRIMARY FRAMING.
9. PLYWOOD SHEATHING.
10. PRIMARY FRAMING.

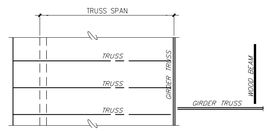
NOTE:
TRUSS MANUFACTURER TO DESIGN FOR 250# CONCENTRATED LOAD FROM VERTICAL SUPPORTS. LOCATION OF VERTICAL SUPPORTS SHALL BE COORDINATED WITH TRUSS MANUFACTURER.

X SECTION

T11 TYPICAL OVERBUILD FRAMING
02-W03 — NO SCALE

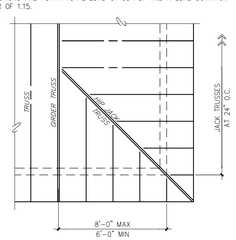
CONNECTION SCHEDULE		
CONDITION	**MAXIMUM SPAN**	**CONNECTION**
TRUSS AT GIRDER TRUSS	32'-0"	SIMPSON THA29 AT BOTTOM CHORD
GIRDER TRUSS AT GIRDER TRUSS	PER PLAN	PER PLAN
GIRDER TRUSS AT WOOD BEAM	PER PLAN	PER PLAN
WOOD BEAM AT GIRDER TRUSS	PER PLAN	PER PLAN

NOTE:
1. CONNECTIONS ARE FOR A TOTAL LOAD OF 55 PSF AND A LOAD DURATION FACTOR OF 1.15.



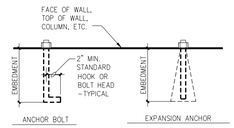
CONNECTION SCHEDULE		
CONDITION	**MAXIMUM SPAN**	**CONNECTION**
JACK TRUSS AT GIRDER TRUSS	8'-0"	SIMPSON LU24 AT BOTTOM CHORD AND 2-16d AT TOP CHORD
JACK TRUSS AT HIP JACK TRUSS	8'-6"	SIMPSON LS30 AT BOTTOM CHORD AND 2-16d AT TOP CHORD
HIP JACK TRUSS AT GIRDER TRUSS	11'-6"	SIMPSON LS70 OR LTHJ AT BOTTOM CHORD AND 2-16d AT TOP CHORD

NOTE:
1. THE SCHEDULE ABOVE ASSUMES THAT THE GIRDER TRUSS IS SET BACK NO MORE THAN 8'-0" FROM THE WALL.
2. CONNECTIONS ARE FOR A TOTAL LOAD OF 55 PSF AND A LOAD DURATION FACTOR OF 1.15.



T12 TYPICAL CONNECTION SCHEDULE FOR PREFAB WOOD TRUSSES
02-W12 — NO SCALE

BOLT SIZE	CAST IN PLACE EMBEDMENT(MINIMUM)		EXPANSION ANCHOR EMBEDMENT(MINIMUM)	
	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL
1/4"ø	4"	4"	2"	1.125"
3/8"ø	5"	4"	3"	1.5"
1/2"ø	7"	4"	4"	2"
5/8"ø	8"	5"	5"	2.5"
3/4"ø	9"	6"	6"	3"
7/8"ø	10"	7"	7"	3.5"
1"ø	11"	8"	9"	4"



KEY NOTES:
ANCHOR OR BOLT DIAMETERS SPECIFIED IN DETAILS OR ON PLANS SHALL MEET THESE MINIMUM REQUIREMENTS FOR EMBEDMENT.

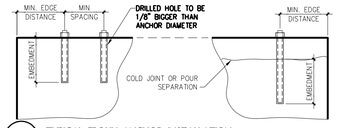
THICKNESS OF DRYPACK DOES NOT APPLY TOWARDS EMBEDMENT.

EXPANSION ANCHOR APPROVALS:
SIMPSON WEDGE-ALL (ESR-1396)
HILTI ANCHORS KWK-BOLT (ESR-1917).
POWERS POWER-STUD (ESR-2818)

T8 TYPICAL ANCHOR BOLT, AND EXPANSION BOLT SCHEDULE
02-S01A — NO SCALE

ALL THREAD SIZE	REBAR SIZE	SPACING OR EDGE DISTANCE	EMBEDMENT DEPTH	SPACING OR EDGE DISTANCE	EMBEDMENT DEPTH
3/8"ø	#3	2" TO 6"	8"	6" MIN.	6"
1/2"ø	#4	2" TO 6"	11"	6" MIN.	6"
5/8"ø	#5	2" TO 7.5"	12"	7.5" MIN.	7"
3/4"ø	#6	2" TO 9"	14"	9" MIN.	9"
7/8"ø	#7	3" TO 10.5"	16"	10.5" MIN.	11"
1"ø	#8	3" TO 12"	20"	12" MIN.	14"

1. CONCRETE: USE HILTI HIT-RE 500-SD ADHESIVE (ESR-2322) OR SIMPSON SET-XP (ESR-2508). MASONRY: USE SIMPSON "SET" ADHESIVE (ESR-1772).
2. INSTALL ALL SYSTEMS ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
3. DO NOT PLACE ALL-THREAD ROD WITHIN MINIMUM EDGE DISTANCE TO FREE EDGE OF CONCRETE OR ADJACENT BOLTS.

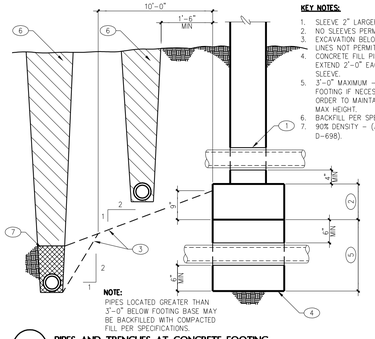


T9 TYPICAL EPOXY ANCHOR INSTALLATION
02-S0102 — NO SCALE

CONNECTION	NAILING	TYPE
JOIST OR TRUSS BEARING ON SILL OR GIRDER	(3) 8d	TOENAIL
BRIDGING TO JOIST	(2) 8d	TOENAIL
SOLE PLATE TO JOIST OR BLOCKING	16d AT 16" O.C.	FACE NAIL
TOP PLATE TO STUD	(2) 16d	END NAIL
STUD TO SOLE PLATE	(2) 16d, END NAIL	–NA–
DOUBLE STUDS	16d AT 24" O.C.	FACE NAIL
DOUBLE TOP PLATES	16d AT 16" O.C.	FACE NAIL
TOP PLATES, LAP AND INTERSECTIONS	(2) 16d	FACE NAIL
CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE	–NA–
CEILING JOISTS TO PLATE	(3) 8d	TOENAIL
CONTINUOUS HEADER TO STUD	(4) 8d	TOENAIL
CEILING JOISTS, LAPS OVER PARTITIONS	(3) 16d	FACE NAIL
CEILING JOISTS TO PARALLEL RAFTERS	(3) 16d	FACE NAIL
RAFTER OR TRUSS TO PLATE	(3) 8d	TOENAIL
1" BRACE TO EACH STUD AND PLATE	(2) 8d	FACE NAIL
BUILT-UP CORNER STUDS	16d AT 24" O.C.	–NA–

NOTE:
1. MINIMUM NAILING SPECIFIED HEREIN SHALL BE PROVDE UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR GENERAL STRUCTURAL NOTES.
2. NAILING NOT NOTED ON THESE PLANS OR DETAILS SHALL BE PER I.B.C. TABLE 2304.9.1.

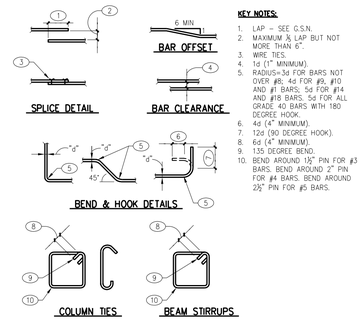
T10 MINIMUM NAILING SCHEDULE – UNLESS NOTED OTHERWISE
02-W01-2012 — NO SCALE



KEY NOTES:
1. SLEEVE 2" LARGER THAN PIPE.
2. NO SLEEVES PERMITTED.
3. EXCAVATION BELOW THESE LINES NOT PERMITTED.
4. CONCRETE FILL PIPE TRENCH – EXTEND 2'-0" EACH SIDE OF SLEEVE.
5. 3'-0" MAXIMUM – STEP FOOTING IF NECESSARY IN ORDER TO MAINTAIN 3'-0" MIN. HEIGHT.
6. BACKFILL PER SPECS.
7. 90% DENSITY – (ASTM D-698).

NOTE:
PIPES LOCATED GREATER THAN 3'-0" BELOW FOOTING BASE MAY BE BACKFILLED WITH COMPACTED FILL PER SPECIFICATIONS.

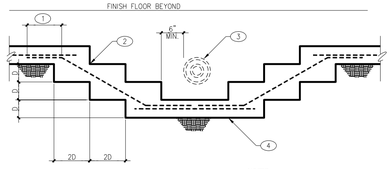
T4 PIPES AND TRENCHES AT CONCRETE FOOTING
02-F03 — NO SCALE



KEY NOTES:
1. LAP – SEE G.S.N.
2. MAXIMUM ⅛ LAP BUT NOT MORE THAN 6".
3. WIRE TIES.
4. 1d (1" MINIMUM).
5. RADIUS=3d FOR BARS NOT OVER #8; 4d FOR #9, #10 AND #11 BARS; 5d FOR #14 AND #18 BARS. 5d FOR ALL GRADE 40 BARS WITH 180 DEGREE HOOK.
6. 4d (4" MINIMUM).
7. 12d (90 DEGREE HOOK).
8. 6d (4" MINIMUM).
9. 135 DEGREE BEND.
10. BEND AROUND ½" PIN FOR #3 BARS. BEND AROUND 2" PIN FOR #4 BARS. BEND AROUND 2½" PIN FOR #5 BARS.

T1 TYPICAL REINFORCING DETAILS
02-C01 — NO SCALE

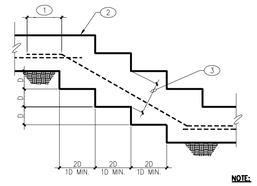
KEY NOTES:
1. MINIMUM LAP PER G.S.N.
2. TOP OF WALL FOOTING.
3. UTILITY CONDUIT THRU STEM WALL AS OCCURS – SEE TYPICAL DETAIL (5A) FOR MORE INFORMATION.
4. REGULAR FOOTING THICKNESS AS SHOWN ON PLAN OR FOOTING SCHEDULE.



NOTES:
D=2'-0" MAXIMUM

T5 ELEVATION – UTILITY CONDUITS THRU STEM WALL
02-F0102 — NO SCALE

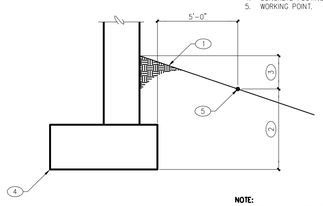
KEY NOTES:
1. MINIMUM LAP PER G.S.N. (24" MIN.) – TYPICAL.
2. TOP OF WALL FOOTING.
3. REGULAR FOOTING THICKNESS AS SHOWN ON PLAN OR FOOTING SCHEDULE.



NOTE:
D = 2'-0" MAXIMUM.

T2 TYPICAL STEP IN CONCRETE FOOTING
02-F01 — NO SCALE

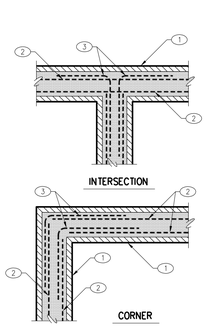
KEY NOTES:
1. SLOPED FINISH GRADE.
2. MINIMUM FOOTING DEPTH PER G.S.N. – 12" MINIMUM.
3. DEEPEN FOOTING AS REQUIRED TO ACCOUNT FOR SLOPED GRADE.
4. CONCRETE FOOTING.
5. WORKING POINT.



NOTE:
FOR ADDITIONAL INFORMATION, SEE PLANS AND DETAILS.

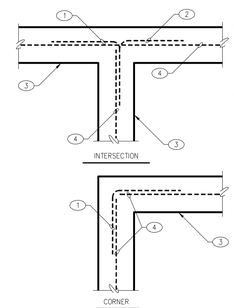
T6 TYPICAL DETAIL FOR FOUNDATION AT SLOPING GRADE
02-F1101 — NO SCALE

KEY NOTES:
1. MASONRY WALL.
2. BOND BEAM REINFORCING.
3. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING – MINIMUM LAP PER G.S.N..



T7 PLAN – CORNER REINFORCING IN MASONRY WALLS
02-M0201 — NO SCALE

KEY NOTES:
1. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING. MINIMUM LAP PER G.S.N.
2. ALTERNATE DIRECTION OF BENDS.
3. CONCRETE STEM WALL OR FOOTING.
4. REINFORCING PER PLANS AND SCHEDULES.



T3 PLAN – CORNER REINFORCING IN CONCRETE FOOTINGS AND/OR CONCRETE STEM WALLS
02-F02 — NO SCALE

JOB NO.: 2017-0199 | PROJECT MANAGER: STANFORD L. | CAD OPERATOR: MJS

FROST STRUCTURAL ENGINEERING
1678 Oaklawn Drive, Suite C
Prescott, Arizona 86305
phone: 928.776.4757
fax: 928.776.4931
info@frost-structural.com

REVISIONS	BY

Registered Engineer (Structural) CERTIFICATE No. 27341 RICHARD K. FROST 1-23-18 STATE OF ARIZONA U.S.A. EXPIRES 9/30/2020

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
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ARCHITECTURE & PLANNING

DRAWING: TYPICAL DETAILS T-SERIES

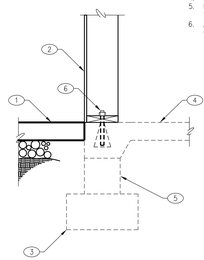
PROJECT: ERAU BUILDING 79 ADDITION
3700 WILLOW CREEK ROAD
PRESCOTT, AZ 86301

PROJECT: .

DRAWN BY	MJS
CHECKED BY	STANFORD L.
DATE	1/23/18
SCALE	AS NOTED
JOB NO.	2017-0199
SHEET	**S1.1**

KEY NOTES:

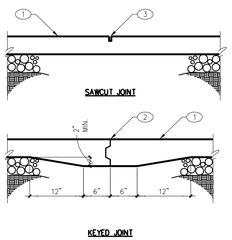
1. CONCRETE SLAB ON GRADE.
2. WOOD STUD WALL.
3. EXISTING CONCRETE FOOTING.
4. EXISTING CONCRETE SLAB.
5. EXISTING MASONRY STEM WALL.
6. ⅝"ø EXPANSION BOLT AT 24" O.C. U.N.O.



105 CONCRETE SLAB AT EXISTING MASONRY WALL
09.1-E-CS-EMW0104 — NO SCALE

KEY NOTES:

1. CONCRETE SLAB ON GRADE.
2. CONTINUOUS KEYED JOINT.
3. SAWCUT: ⅛" WIDE X ¼" SLAB THICKNESS IN DEPTH. CUT SHALL BE MADE SOON ENOUGH TO PREVENT SHRINKAGE CRACKING, BUT NOT SO SOON AS TO CAUSE SPALLING OF THE CONCRETE WHILE SAWING. WORK MUST BE COMPLETE WITHIN 16 HOURS OF CONCRETE PLACEMENT.

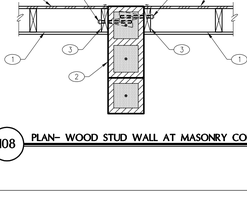


NOTE:
KEYED JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING PLACEMENT UNLESS SPECIFICALLY NOTED ON THE PLANS. "TOOL WET JOINT", "ZIP STRIP", ETC. SHALL MATCH SAWCUT REQUIREMENTS.

101 CONTROL JOINTS IN CONCRETE SLAB ON GRADE
03-CS0101 — NO SCALE

KEY NOTES:

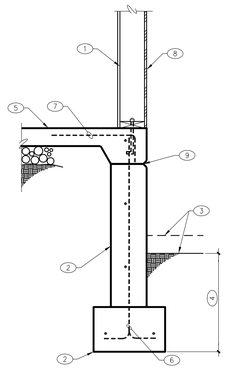
1. WOOD STUD WALL.
2. CONCRETE SLAB.
3. THICKENED SLAB.
4. (2) #4 CONTINUOUS.
5. ⅝"ø X 10" LONG A.B. AT 48" O.C.
6. FOOTING WIDTH PER PLAN.
7. FOOTING DEPTH PER PLAN.



106 WOOD STUD WALL AT THICKENED SLAB
03-WSW-CF0103-1 — NO SCALE

KEY NOTES:

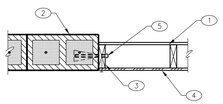
1. WOOD STUD WALL.
2. CONCRETE STEM WALL W/ #4 VERTICAL AT 18" O.C. EACH WAY.
3. SIDEWALK, PAVEMENT OR FINISH GRADE PER ARCHITECTURAL DRAWINGS.
4. MINIMUM FOOTING DEPTH PER G.S.N.
5. CONCRETE SLAB ON GRADE, TOOLED EDGE AT OPENING.
6. #4 VERTICAL AT 24" O.C. EACH WAY.
7. #4 HOOK H=24", V=6" AT 48" O.C.
8. WALL SHEATHING AS OCCURS PER SHEARWALL SCHEDULE.
9. REVEAL IN CONCRETE COLD JOINT TO MATCH EXISTING.



102 WOOD STUD WALL AT CONCRETE FOOTING
03-WSW-CF0305 — NO SCALE

KEY NOTES:

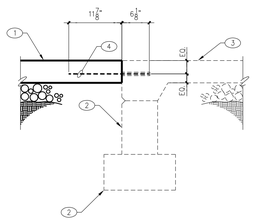
1. WOOD STUD WALL.
2. MASONRY WALL.
3. CONT. 2X PLATE.
4. PLYWOOD SHEATHING.
5. 1/2"ø EXPANSION ANCHOR AT 24" O.C.



107 PLAN- WOOD STUD WALL AT MASONRY WALL
09.2-E-WSW-EMW0102 — NO SCALE

KEY NOTES:

1. CONCRETE SLAB ON GRADE.
2. EXISTING CONCRETE STEM WALL AND FOOTING.
3. EXISTING CONCRETE SLAB ON GRADE.
4. ⅝"ø SMOOTH BAR DOWELS, GREASE EACH END AT 24" O.C.



103 CONCRETE SLAB ON GRADE AT EXISTING CONCRETE SLAB
NO SCALE

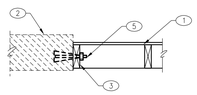
KEY NOTES:

1. WOOD STUD WALL.
2. MASONRY COLUMN PER SCHEDULE.
3. CONTINUOUS 2X PLATE.
4. PLYWOOD SHEATHING.
5. 1/2"ø EXPANSION ANCHOR AT 24" O.C.

108 PLAN- WOOD STUD WALL AT MASONRY COLUMN
NO SCALE

KEY NOTES:

1. WOOD STUD WALL.
2. EXISTING MASONRY WALL.
3. CONT. 2X PLATE.
4. 1/2"ø EXPANSION ANCHOR AT 24" O.C.

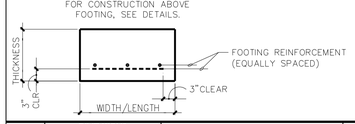


104 PLAN- WOOD STUD WALL AT EXISTING MASONRY WALL
09.2-E-WSW-EMW0102 — NO SCALE

WALL REINFORCING (W) SCHEDULE

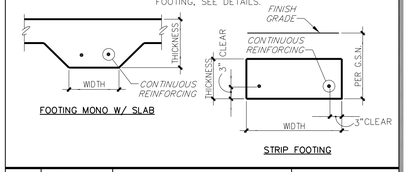
MARK	THICKNESS	REINFORCING	REMARKS
W1	8" MASONRY	#5 AT 8" O.C. CENTERED	SOLID GROUT

CONCRETE FOOTING (F) SCHEDULE



MARK	DIMENSIONS LENGTH	WIDTH	THICKNESS	FOOTING REINFORCING	REMARKS
F1	36"	24"	10"	(6) #4 SHORT DIRECTION (4) #4 LONG DIRECTION	---

CONCRETE WALL FOOTING (WF) SCHEDULE



MARK	DIMENSIONS WIDTH	THICKNESS	FOOTING REINFORCING	FOOTING TYPE
WF1	16"	12"	(2) #4 CONTINUOUS	STRIP
WF2	16"	12"	(2) #4 CONTINUOUS	MONO W/ SLAB

SHEARWALL SCHEDULE

(ALL EXTERIOR WALLS ARE (S) UNLESS NOTED OTHERWISE)

NOTES:
1. SHEARWALL TYPES LISTED BELOW ARE NOT JOB SPECIFIC. SOME TYPES MAY NOT BE USED ON PLANS.
2. BLOCK ALL PANEL EDGES WHERE INDICATED ON SCHEDULE. EDGE NAIL SHEATHING AT BLOCKED EDGES.
3. FRAMING MEMBER SUPPORTING MATERIAL SHALL BE SPACED AT 16" ON CENTER MAXIMUM.
4. ANCHOR BOLTS TO FOUNDATION SHALL BE 10 LONG AND SHALL BE EMBEDDED 7 INCHES INTO CONCRETE. EXPANSION BOLTS OR SHOT PINS MAY BE USED AT INTERIOR WALLS (AWAY FROM EDGE OF SLAB OR SLAB STEPDOWN) PER SUPPLEMENTAL INSTRUCTIONS.
5. A MINIMUM OF 2 ANCHOR BOLTS SHALL BE USED ON EACH BASE PLATE PIECE. PROVIDE 1 ANCHOR BOLT MINIMUM WITHIN 9 INCHES OF EACH END OF EACH PIECE.
6. PROVIDE CONTINUOUS DOUBLE 2X PLATE TOP PLATE AT ALL SHEAR WALLS AND EXTERIOR WALLS. UNLESS NOTED OTHERWISE, LAP SPLICE TOP PLATE A MINIMUM OF 6'-0" WITH 16d NAILS STAGGERED AT 4" ON CENTER (16-16d NAILS TOTAL BETWEEN SPLICE JOINTS).
7. PROVIDE FULL HEIGHT DOUBLE STUDS AT ENDS OF SHEAR WALLS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
8. ELEVATED SHEAR WALLS TO BE FRAMED OVER DOUBLE JOIST OR SOLID BLOCKING UNLESS NOTED OTHERWISE.
9. "L=P.P." DESIGNATES LENGTH OF SHEARWALL (±3").

MARK	SHEATHING MATERIAL	EDGE NAILING	FIELD NAILING	BOTTOM PLATE ATTACHMENT
(S) L=P.P.	MINIMUM ½" OR ⅜" PLYWOOD OR OSB (BLOCKED) ONE SIDE OF WALL	8d COMMON AT 6" O.C.	8d COMMON AT 12" O.C.	CONCRETE: ½"ø A.B. AT 36" O.C.
				WOOD: 16d AT 6" O.C.

MASONRY COLUMN (MC) SCHEDULE

MARK	SIZE	REINFORCING VERTICAL	REINFORCING TIES	REMARKS
MC1	8"X24"	(3) #5	NONE	SOLID GROUT

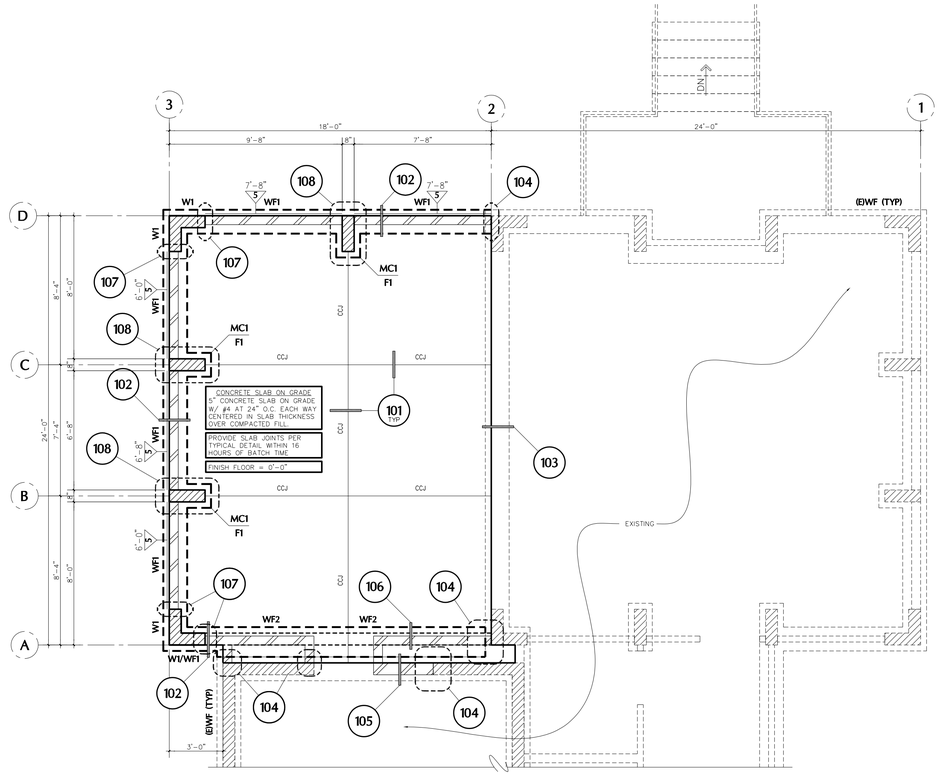
WALL SCHEDULE

-HATCHING INDICATES STRUCTURAL ELEMENT CONTINUES TO THE NEXT LEVEL (VERIFY WITH ARCHITECTURAL DRAWINGS).
-SEE PLAN SCHEDULES, DETAILS, AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.

TYPICAL STEM WALL	8" CMU STEM WALL UP TO 2'-0" RETAINING #4 AT 48" O.C. VERTICAL #4 AT 48" O.C. HORIZONTAL CENTERED IN WALL
AS SEEN ON PLANS	INDICATES-
	6" WOOD STUD WALL. STUDS: 2X6 AT 16" O.C. (1) TRIMMER/(1) KING STUD EACH JAMB U.N.O. BEAM/GIRDER POSTS: DOUBLE STUD (MIN. U.N.O.) SHEARWALL ENDPOSTS: DOUBLE STUD (MIN. U.N.O.)
	8" MASONRY (CMU) WALL. MINIMUM REINFORCING UNLESS NOTED OTHERWISE: VERTICAL: #4 AT 48" O.C. HORIZONTAL: #4 AT 48" O.C. MAXIMUM.
	EXISTING 8" MASONRY (CMU) WALL.

FOUNDATION PLAN NOTES

1. VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS.
2. THE DEPTH OF FOOTING DIMENSION INDICATED IN THE G.S.N. IS A MINIMUM. FOUNDATION CONTRACTOR SHALL COORDINATE WITH THE SOILS REPORT AND OTHER TRADES TO INSURE THAT THESE MINIMUMS ARE SUFFICIENT FOR THE WORK. SEE TYPICAL DETAILS FOR ADDITIONAL REQUIREMENTS.
3. WF1, WF2, ETC. – AS SHOWN ON PLAN INDICATES A CONTINUOUS WALL FOOTING. SEE WALL FOOTING SCHEDULE FOR ADDITIONAL INFORMATION.
4. F1, F2, ETC. – AS SHOWN ON PLAN INDICATES A CONCRETE FOOTING. SEE FOOTING SCHEDULE FOR ADDITIONAL INFORMATION.
5. W1, W2, ETC. – AS SHOWN ON PLAN INDICATES WALL REINFORCING. SEE WALL REINFORCING SCHEDULE FOR ADDITIONAL INFORMATION.
6. MC1, MC2, ETC. – AS SHOWN ON PLAN INDICATES A MASONRY COLUMN. SEE MASONRY COLUMN SCHEDULE FOR ADDITIONAL INFORMATION.
7. CCJ – AS SHOWN ON PLAN INDICATES LOCATION OF EITHER A KEYED OR A SAW CUT CONTROL JOINT IN THE SLAB ON GRADE AT CONTRACTOR'S OPTION. SEE GENERAL STRUCTURAL NOTES AND DETAIL 101.
8. FOR SIDEWALK AND LANDING LOCATIONS, SEE ARCHITECTURAL DRAWINGS.



FOUNDATION PLAN

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

LOCATION OF DETAILS

SHEET	DESCRIPTION	DETAILS
S1.1	TYPICAL DETAILS	T-SERIES
S2	FOUNDATION DETAILS	100-SERIES
S3	FRAMING DETAILS	200-SERIES

JOB NO.: 2017-0199 | PROJECT MANAGER: STANFORD L. | CAD OPERATOR: ###

FROST STRUCTURAL ENGINEERING
1678 Oaklawn Drive, Suite C
Prescott, Arizona 86305
phone: 928.776.4757
fax: 928.776.4931
info@frost-structural.com

REVISIONS	BY

Registered Professional Engineer (Structural) — CERTIFICATE NO. 27341 — RICHARD K. FROST — Date Signed 1/23/18 — ARIZONA U.S.A. — EXPIRES 9/30/2020

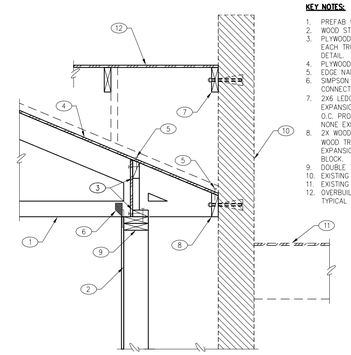
W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: FOUNDATION PLAN

PROJECT: ERAU BUILDING 79 ADDITION
3700 WILLOW CREEK ROAD
PRESCOTT, AZ 86301

PROJECT: .

DRAWN BY	MJS
CHECKED BY	STANFORD L.
DATE	1/23/18
SCALE	AS NOTED
JOB NO.	2017-0199
SHEET	S2

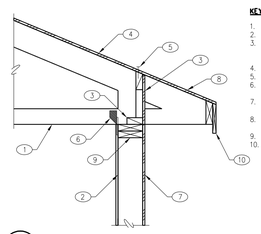


KEY NOTES:

1. PREFAB WOOD TRUSS.
2. WOOD STUD WALL.
3. PLYWOOD BLOCKING BETWEEN EACH TRUSS PER TYPICAL DETAIL.
4. PLYWOOD SHEATHING.
5. EDGE NAILING.
6. SIMPSON H2.5A TYPE CONNECTOR AT EACH TRUSS.
7. 2X6 LEDGER W/ ½"ø X 5" EXPANSION ANCHORS AT 24" O.C. PROVIDE GROUT IF NONE EXISTS.
8. 2X WOOD BLOCKING BETWEEN WOOD TRUSSES W/ (2) ½"ø EXPANSION ANCHORS PER BLOCK.
9. DOUBLE TOP PLATE.
10. EXISTING MASONRY WALL.
11. EXISTING ROOF STRUCTURE.
12. OVERBUILD FRAMING PER TYPICAL DETAIL.

204 PREFAB WOOD TRUSS AT WOOD STUD WALL

NO SCALE



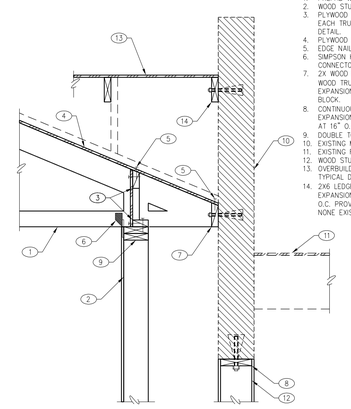
KEY NOTES:

1. PREFAB WOOD TRUSS.
2. WOOD STUD WALL.
3. PLYWOOD BLOCKING BETWEEN EACH TRUSS PER TYPICAL DETAIL.
4. PLYWOOD SHEATHING.
5. EDGE NAILING.
6. SIMPSON H2.5A TYPE CONNECTOR AT EACH TRUSS.
7. WALL SHEATHING AS OCCURS.
8. VERIFY EAVE CONDITION W/ ARCHITECTURAL DRAWINGS.
9. DOUBLE TOP PLATE.
10. FASCIA PER ARCHITECTURAL DRAWINGS.

201 PREFAB WOOD TRUSS AT WOOD STUD WALL

06-WT-WSW0305

NO SCALE

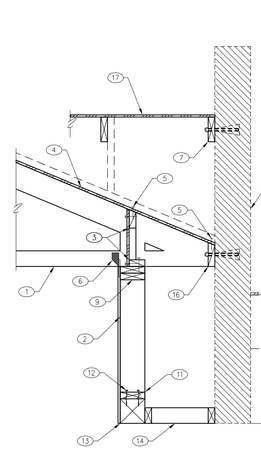


KEY NOTES:

1. PREFAB WOOD TRUSS.
2. WOOD STUD WALL.
3. PLYWOOD BLOCKING BETWEEN EACH TRUSS PER TYPICAL DETAIL.
4. PLYWOOD SHEATHING.
5. EDGE NAILING.
6. SIMPSON H2.5A TYPE CONNECTOR AT EACH TRUSS.
7. 2X WOOD BLOCKING BETWEEN WOOD TRUSSES W/ (2) ½"ø EXPANSION ANCHORS PER BLOCK.
8. CONTINUOUS 2X W/ ½"ø EXPANSION ANCHOR BOLT AT 16" O.C.
9. DOUBLE TOP PLATE.
10. EXISTING MASONRY WALL.
11. EXISTING ROOF STRUCTURE.
12. WOOD STUD INFILL.
13. OVERBUILD FRAMING PER TYPICAL DETAIL.
14. 2X6 LEDGER W/ ½"ø X 5" EXPANSION ANCHORS AT 24" O.C. PROVIDE GROUT IF NONE EXISTS.

205 PREFAB WOOD TRUSS AT WOOD STUD WALL

NO SCALE

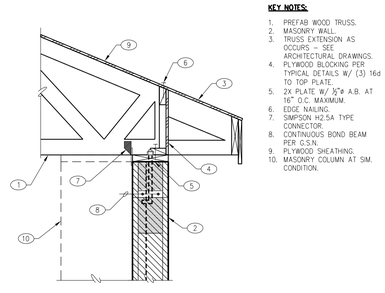


KEY NOTES:

1. PREFAB WOOD TRUSS.
2. WOOD STUD WALL.
3. PLYWOOD BLOCKING BETWEEN EACH TRUSS PER TYPICAL DETAIL.
4. PLYWOOD SHEATHING.
5. EDGE NAILING.
6. SIMPSON H2.5A TYPE CONNECTOR AT EACH TRUSS.
7. 2X6 LEDGER W/ ½"ø X 5" EXPANSION ANCHORS AT 24" O.C. PROVIDE GROUT IF NONE EXISTS.
8. EXISTING OPENING.
9. DOUBLE TOP PLATE.
10. EXISTING MASONRY WALL.
11. 2X BOTTOM PLATE.
12. (2) #10 SCREWS AT 12" O.C.
13. WOOD HEADER.
14. WOOD SOFFIT PER ARCHITECTURAL DRAWINGS.
15. EXISTING ROOF STRUCTURE.
16. 2X WOOD BLOCKING BETWEEN WOOD TRUSSES W/ (2) ½"ø EXPANSION ANCHORS PER BLOCK.
17. OVERBUILD FRAMING PER TYPICAL DETAIL.

202 PREFAB WOOD TRUSS AT WOOD STUD WALL

NO SCALE



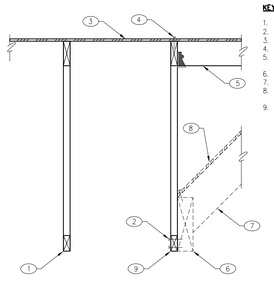
KEY NOTES:

1. PREFAB WOOD TRUSS.
2. MASONRY WALL.
3. TRUSS EXTENSION AS OCCURS - SEE ARCHITECTURAL DRAWINGS.
4. PLYWOOD BLOCKING PER TYPICAL DETAILS W/ (3) 16d TO TOP PLATE.
5. 2X PLATE W/ ½"ø A.B. AT 16" O.C. MAXIMUM.
6. EDGE NAILING.
7. SIMPSON H2.5A TYPE CONNECTOR.
8. CONTINUOUS BOND BEAM PER G.S.N.
9. PLYWOOD SHEATHING.
10. MASONRY COLUMN AT SIM. CONDITION.

206 2X PREFAB WOOD TRUSS AT MASONRY WALL/MASONRY COLUMN

06-WT-MW0102

NO SCALE



KEY NOTES:

1. PREFAB WOOD TRUSS.
2. (2) 16d AT 8" O.C.
3. PLYWOOD SHEATHING.
4. EDGE NAILING.
5. OVERBUILT FRAMING PER TYPICAL DETAIL.
6. EXISTING BEAM.
7. EXISTING WOOD JOIST.
8. EXISTING PLYWOOD SHEATHING.
9. PREFAB DRAG WOOD TRUSS. SEE PLANS FOR LOAD DESIGN FOR TRUSS MANUFACTURER.

203 PREFAB WOOD TRUSS AT EXISTING WOOD BEAM

NO SCALE

PLAN KEYNOTES

1	EXISTING ROOF FRAMING.

WALL SCHEDULE

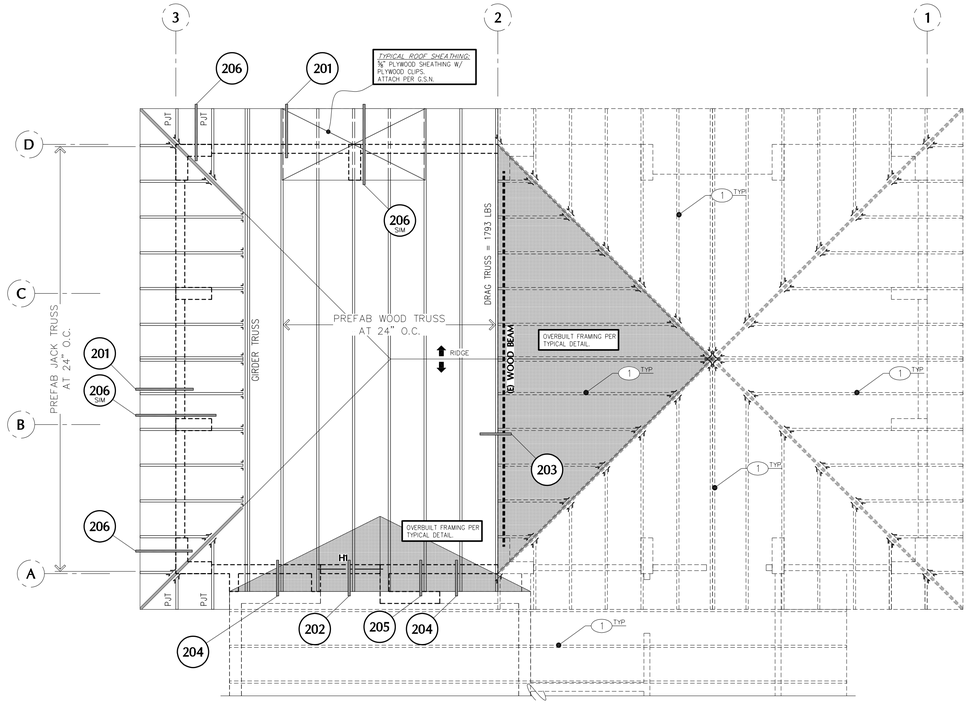
NOTE:	SEE PLAN SCHEDULES, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION.
AS SEEN ON PLANS	INDICATES-
[dashed]	STRUCTURAL WALL BELOW (BEARING WALL, SHEARWALL, OR EXTERIOR WALL).
[dashed]	NON-STRUCTURAL WALL BELOW.

ROOF FRAMING PLAN NOTES

1. VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS.
2. H1, H2, ETC. - AS SHOWN ON PLAN INDICATES A HEADER. SEE HEADER SCHEDULE FOR ADDITIONAL INFORMATION.
3. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITION.
4. FOR CLARITY, ALL ROOF OPENINGS MAY NOT BE SHOWN ON THE ROOF FRAMING PLAN. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL DETAILS.

HEADER (H) SCHEDULE

MARK	SIZE	REMARKS
H1	6X6	---



ROOF FRAMING PLAN

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

LOCATION OF DETAILS

SHEET	DESCRIPTION	DETAILS
S1.1	TYPICAL DETAILS	T-SERIES
S2	FOUNDATION DETAILS	100-SERIES
S3	FRAMING DETAILS	200-SERIES

JOB NO.: 2017-0199 | PROJECT MANAGER: STANFORD L. | CAD OPERATOR: ###

FROST STRUCTURAL ENGINEERING
1678 Oaklawn Drive, Suite C
Prescott, Arizona 86305
phone: 928.776.4757
fax: 928.776.4931
info@frost-structural.com

REVISIONS	BY

Registered Professional Engineer (Structural) CERTIFICATE NO. 27341 RICHARD K. FROST STATE OF ARIZONA U.S.A. EXPIRES 3/30/2020

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: ROOF FRAMING PLAN

PROJECT: ERAU BUILDING 79 ADDITION
3700 WILLOW CREEK ROAD
PRESCOTT, AZ 86301

PROJECT: .

DRAWN BY	MJS
CHECKED BY	STANFORD L.
DATE	1/23/18
SCALE	AS NOTED
JOB NO.	2017-0199
SHEET	S3

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 1 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 6'–0"

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

4 – ALL DUCTWORK JOINTS SHALL BE SEALED WITH WATER–BASED MASTIC.

5 – ALL AIR SUPPLY AND RETURN DUCTS LOCATED IN UNCONDITIONED SPACES (OR ATTIC) SHALL HAVE A MIN. R–8 INSULATION VALUE.

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.

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" ABOVE THE FLOOR LEVEL FOR DISABLED ACCESS.

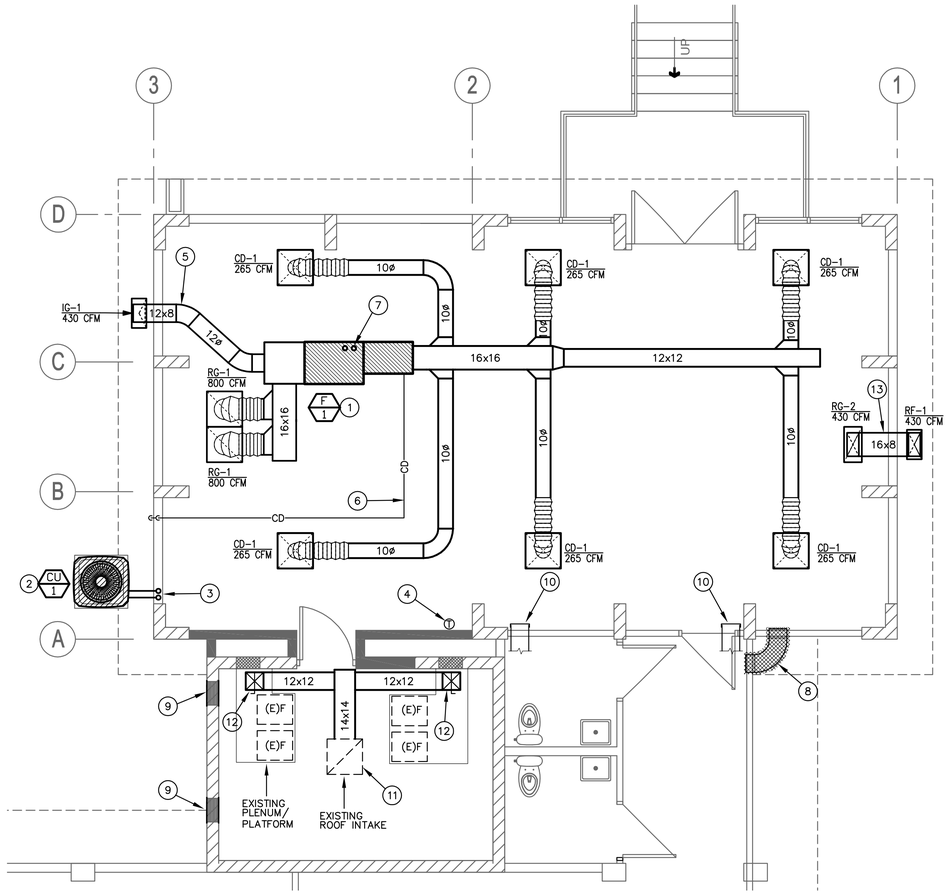
GENERAL REQUIREMENTS

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.



B1 Reference Floor Plan Scale: 1/4"=1'-0"

Plan North

KEYNOTES

1. NEW HORIZONTAL, SEALED COMBUSTION, NATURAL GAS FURNACE ABOVE CEILING. MAINTAIN ALL NECESSARY CLEARANCES AND MAINTENANCE ACCESS REQUIREMENTS. ROUTE AND CONNECT REFRIGERANT LINES FROM CONDENSING UNIT. PROVIDE WITH "MASON" #TYPE 30N COMBINATION SPRING/NEOPRENE ISOLATION HANGERS.
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 WALL 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 OUTSIDE AIR DUCT (WITH BALANCE DAMPER) FROM RETURN PLENUM TO SOFFIT INTAKE GRILLE. BALANCE OUTSIDE AIR AS SHOWN ON SCHEDULE.
6. EXTEND NEW 3/4" TYPE 'M' COPPER CONDENSATE DRAIN PIPING FROM UNIT CONNECTION AND ABOVE CEILING AND THEN DOWN IN EXTERIOR WALL TO EXTERIOR.
7. ROUTE PVC COMBUSTION AIR INTAKE AND VENT PIPING TO CONCENTRIC ROOF TERMINATION PER MANUFACTURER. INSTALLATION SHALL BE IN ACCORDANCE TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE INSTALLED LENGTH AND FITTINGS.
8. REMOVE EXISTING TRANSFER DUCTWORK AND GRILLES.
9. (2) NEW 16x8 COMBUSTION AIR LOUVERS, ONE WITHIN 12" OF CEILING AND ONE WITHIN 12" OF FLOOR. REFER TO COMBUSTION AIR CALCULATION.
10. CAP EXISTING SUPPLY DUCTS IN EXISTING DRYWALL SOFFIT. FIELD VERIFY. REMOVE ALL EXISTING UNUSED DUCTWORK AS REQUIRED.
11. PROVIDE SHEET METAL CAP OVER EXISTING ROOF VENT OPENING, WITH SEALED TIGHT OPENINGS FOR REFIGERANT PIPING PENETRATIONS. EXTEND 14x14 OUTSIDE AIR DUCT FROM ROOF VENT DOWN TO EACH RAISED PLATFORM AS INDICATED.
12. 12x12 OUTSIDE AIR DUCT DOWN TO RAISED PLENUM. PROVIDE MANUAL BALANCING DAMPER IN VERTICAL APPROXIMATELY 48" A.F.F.
13. 16x8 RELIEF DUCT TO RELIEF SOFFIT GRILLE. PROVIDE WITH "GREENHECK" #BR–30 BAROMETRIC RELIEF DAMPER. DAMPER SHALL HAVE COUNTER BALANCE WEIGHT. PROVIDE ACCESS PANEL IN DUCT FOR START UP BALANCING.

EXISTING MECH. ROOM COMBUSTION AIR CALC

TOTAL GAS MBH

(E)FURNACE #1	80 MBH
(E)FURNACE #2	80 MBH
(E)FURNACE #3	80 MBH
(E)FURNACE #4	80 MBH
TOTAL	320 MBH

FOR HORIZONTAL OPENINGS DIRECTLY TO OUTDOORS PROVIDE 1 SQUARE INCH PER 4000 MBH.

320,000 / 4000 = 80 SQUARE INCHES

PROVIDE OPENINGS, ONE SET 12" ABOVE FLOOR AND THE OTHER SET 12" BELOW CEILING EACH WITH A MINIMUM COMBINED OPEN AREA OF 80 SQUARE INCHES.

OPENINGS PROVIDED ARE 16x8 LOUVERS (128 SQAURE INCHES @ 50% FREE AREA, OR 64 SQUARE INCHES EACH)

REVISIONS	BY

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

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
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ARCHITECTURE & PLANNING

DRAWING: Mechanical Floor Plan

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY

CHECKED BY

DATE

JOB NO. 705

SHEET

M1.0

OSE Design Group, LLC
Consulting Engineers
611 West Delano Ave
Prescott, AZ 86301
(928) 443.7353
Project 17101
11759 N. 143rd Ave.
Surprise, AZ 85379
(623) 444-6143

Dec 06, 2017 - 3:16pm

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 AIR CONDITIONERS: 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.

F-1 FURNACE SCHEDULE

MARK	NOMINAL TONS	MFG'R	MODEL #	ORIENTATION	CFM	OSA	E.S.P. ("W.G.)	HEATING CAPACITY INPUT	HEATING CAPACITY OUTPUT	VENT SIZE	VENTING TYPE	FUEL	Min. A.F.U.E.	ELECTRICAL DATA H.P.	ELECTRICAL DATA V/Ø/Hz	FILTER TYPE	WEIGHT W/O COIL	NOTES
F-1	4	TRANE	TUH2C100	HORIZONTAL	1600	430	0.60	100,000	95,000	3"	2-PIPE SEALED	N. GAS	95%	3/4	120/1/60	DISPOSABLE	185	(1)(2)(3)(4)(5)

(1) INSTALL WITH CLEARANCES PER MANUFACTURER'S RECOMMENDATIONS.
(2) SIZE AND INSTALL 2 PIPE VENT PIPING PER MANUFACTURER'S INSTRUCTIONS FOR ACTUAL INSTALLED LENGTHS. PROVIDE CONCENTRIC ROOF OR WALL TERMINATION AS REQUIRED.
(3) PROVIDE LEFT OR RIGHT CONNECTIONS AS REQUIRED FOR ACCESS.
(4) HORIZONTAL UNIT.
(5) OWNER SHALL PURCHASE AND HAVE MECHANICAL EQUIPMENT THAT IS MANUFACTURER BY TRANE OR AMERICAN STANDARD DELIVERED TO JOBSITE. MECHANICAL CONTRACTOR SHALL CONFIRM EQUIPMENT TO BE PURCHASED PRIOR TO ORDERING.

CU-1 CONDENSING UNIT SCHEDULE

MARK	NOMINAL TONS	MFG'R	MODEL #	COOLING CAPACITY TOTAL	COOLING CAPACITY SENS.	DESIGN COND. DB/WB	INDOOR COIL MODEL #	COIL ENT. AIR DB/WB	ELECTRICAL DATA MCA	ELECTRICAL DATA FUSE	ELECTRICAL DATA V / Ø	MINIMUM SEER	REFRIGERANT	WEIGHT (LBS)	NOTES
CU-1	4	TRANE	4TTR5048	43.0	41.0	95/63	SELECTED BY MFG.	80°/63°	26	45	208/1/60	15	R-410A	282	(1)(2)(3)(4)(5)(6)(7)

(1) INSTALL UNIT PER MANUFACTURER'S WRITTEN DIRECTIONS. SLEEVE PIPING PENETRATIONS THROUGH ROOF, SEAL WATERTIGHT AND PROVIDE ESCUTCHEONS.
(2) UNIT SHALL BE PROVIDED WITH TRANE PROGRAMMABLE THERMOSTAT.
(3) PROVIDE 10-YEAR COMPRESSOR WARRANTY AND 5-YEAR FOR OTHER COMPONENTS.
(4) PROVIDE UNIT COMPLETE WITH ALL NECESSARY DISCONNECTS, OVERLOADS AND CONTROL COMPONENTS.
(5) SIZE AND INSTALL ALL REFRIGERANT PIPING PER MFG'RS. INSTRUCTIONS.
(6) PROVIDE INDOOR FAN COIL UNIT COMPLETE WITH MOTOR STARTER AS REQUIRED.
(7) PROVIDE LOW AMBIENT CONTROL KIT FOR OPERATION DOWN TO 30°F.

GRILLES/REGISTERS/DIFFUSERS SCHEDULE

MARK	DESCRIPTION	MODULE SIZE	TYPE	OBD	MOUNTING	MATERIAL	FINISH	MANUF.	MODEL	REMARKS
CD-1	SUPPLY DIFFUSER	24"x24"	SQUARE LOUVERED	NO	T-BAR	STEEL	PER ARCH.	TITUS	TMS	10Ø NECK
IG-1	INTAKE GRILLE	20"x10"	SNGL DFL.	NO	SURFACE	ALUMINUM	PER ARCH.	TITUS	350FL	
RF-1	RELIEF GRILLE	20"x10"	SNGL DFL.	NO	SURFACE	ALUMINUM	PER ARCH.	TITUS	350FL	
RF-2	RELIEF GRILLE	24"x12"	SNGL DFL.	NO	SURFACE	STEEL	PER ARCH.	TITUS	350RLF	
RG-1	FILTERED RETURN GRILLE	24"x24"	SNGL DFL.	NO	SURFACE	STEEL	PER ARCH.	TITUS	350RLF	20Ø NECK HINGED ACCESS, 1" FILTER

(1) PROVIDE FRAME STYLE TO SUIT CEILING TYPE. REFER TO ARCHITECTURAL DRAWINGS.
(2) COORDINATE FINAL SELECTIONS WITH OWNER/ARCHTECT.

NOTE:
UPON RECIEPT OF OWNER PROVIDED HVAC EQUIPMENT AND ACCESSORIES BY THE GENERAL CONTRACTOR AND HVAC CONTRACTOR, THESE CONTRACTORS WILL TAKE FULL 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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Consulting Engineers
611 West Delano Ave
Prescott, AZ 86301
(928) 443.7353
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11759 N. 143rd Ave.
Surprise, AZ 85379
(623) 444-6143

REVISIONS	BY

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

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

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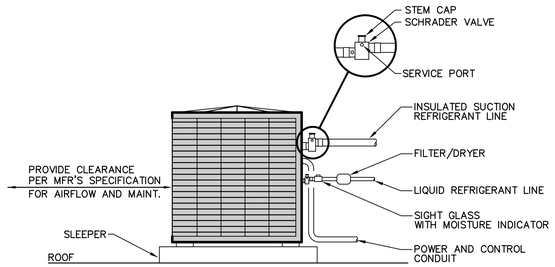
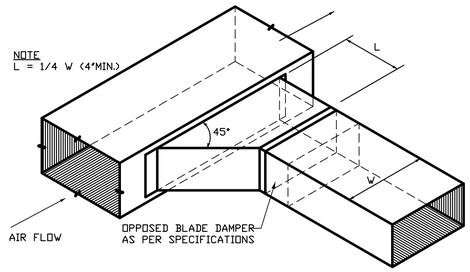


CONDENSING UNIT DETAIL

NOT TO SCALE

1 / M3.0



BRANCH DUCT TAKE-OFF DETAIL

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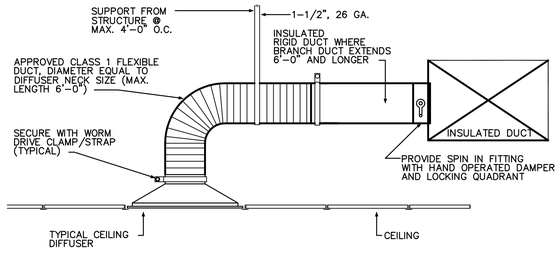
2 / M3.0



BRANCH DUCT TAKE-OFF DETAIL

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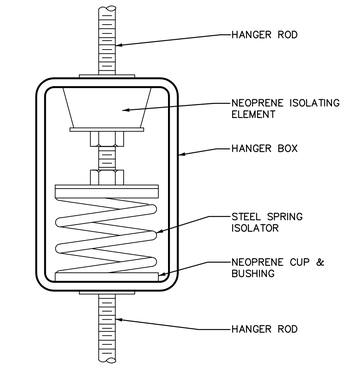
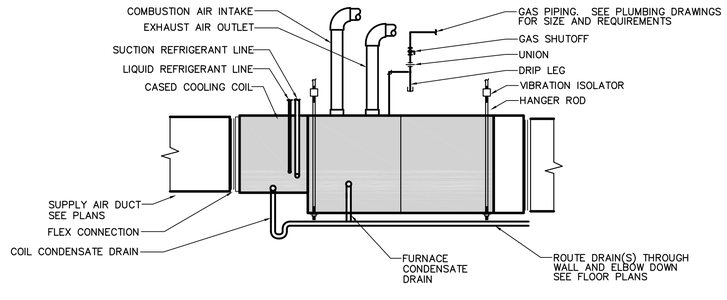
3 / M3.0



FURNACE HANGER DETAIL

NOT TO SCALE

4 / M3.0



HORIZONTAL GAS FURNACE DETAIL

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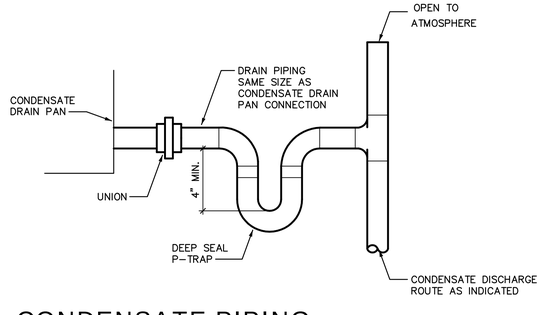

CONDENSATE PIPING AT UNIT DETAIL

NOT TO SCALE

6 / M3.0

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Consulting Engineers

611 West Delano Ave
Prescott, AZ 86301
(928) 443.7353

Project 11701

11759 N. 143rd Ave.
Surprise, AZ 85379
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Registered Professional Engineer
33491
WILLIAM MARK ODELL
Date Signed 04/12/18
ARIZONA U.S.A.
Expires 3/31/19

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Mechanical Details

PROJECT: ERAU Building 79 Addition
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PLUMBING SPECIFICATIONS:

1. GENERAL

1..1 Scope: Work under this section includes coordinating and furnishing all labor and material necessary to install a complete plumbing system as shown and specified and in accordance with the codes. Contractor shall pay for all permits, meters, fees, city inspections, legal notices, etc., as required.

1..2 Submittals: Within 15 days after award of contract, submit 8 copies of all items.

1..3 Record Drawings: Provide a set to the Architect at completion of project.

1..4 Instructions: Provide maintenance manual and instruct Owner in the proper operation and maintenance of the equipment.

1..5 Guarantee: One year on labor, material and equipment.

2. PRODUCTS

2..1.1 Gas Piping:

2..1.1.1 (Above grade, exterior): All pipe sizes, black steel pipe, Schedule 40, wrought steel buttwelded fittings.

2..1.1.2 (Above grade, inside building): Schedule 40 black steel. Pipe fittings shall conform to the following:

Pipe 2" and Smaller: Malleable iron threaded fittings.

Pipe 2–1/2" and Larger: Wrought steel buttwelded fittings.

2..1.2 Sanitary Waste and Vent Piping:

2..1.2.1 Schedule 40 PVC piping conforming to ASTM D–2665–88. Fittings: Drainage fittings to match pipe.

2..2 Valves:

2..2.1 Gas Valves, 1/2" and Smaller: Milwaukee BB–1–102.

2..2.2 Gas Valves, 1" to 1–1/2": Rockwell–Nordstrom #142 with #555 lubricant for natural gas service.

2..2.3 Gas Valves, 2" and Larger: Rockwell–Nordstrom #143 with #555 lubricant for natural gas service.

2..3 Cleanouts:

2..3.1 Exterior Surface Cleanouts: J.R. Smith 4253. Provide 18" x 18" x 6" concrete pad at landscape areas; provide concrete ring below grade at asphalt areas.

2..3.2 Provide all cleanouts with heavy threaded bronze plugs.

2..4 Pipe Hangers and Supports: Fee & Mason Figure 103 clevis hanger for insulated pipe and Figure 104 clevis hanger for cast iron pipe. Install #500 Trisolators on uninsulated copper lines at all hangers and wall penetrations.

2..5 Acceptable Manufacturers: The following is a list of manufacturers whose equipment is acceptable as to manufacturer, subject to conformance with all drawings, specifications and addenda items:

Valves: Milwaukee, Rockwell–Nordstrom, Butterball.

Hangers: Grinnell, Fee & Mason, Elcen, Kin–Line, F & S, B–Line, Michigan.

Drains and Cleanouts: J. R. Smith, Zurn, Josam, Wade, Western.

3. EXECUTION

3..1 Tests and Inspections:

3..1.1 All work to be tested and approved before covering as directed by Architect. Remake all leaking joints.

3..1.2 Gas System: Hold at 50 psi pneumatic for four hours with no pressure loss.

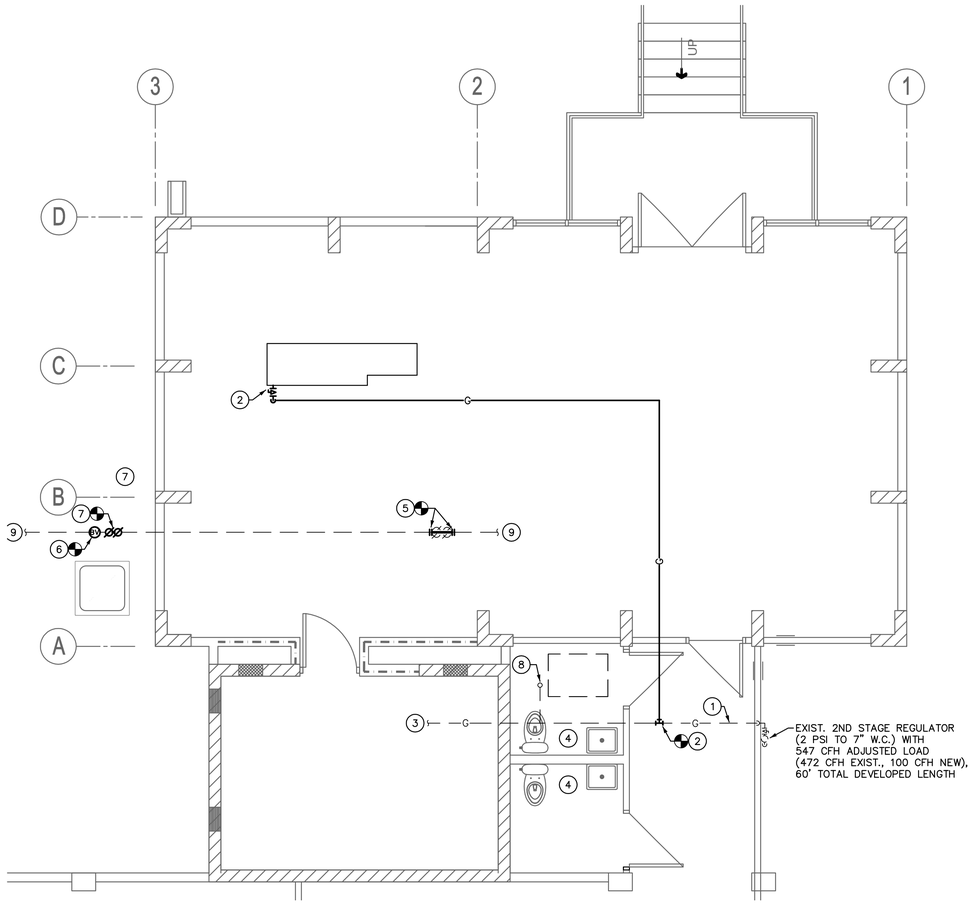
3..1.3 Sanitary Waste and Vent System: Fill with water to highest point in the system and let stand without loss for two hours.

3..2 Flashing, Sleeves and Escutcheon Plates:

3..2.1 Flashing: Supply flashing for all vent pipe and other types of piping through roof to be installed with roofing. Flash vents with Stoneman S1300–4 or with sheet lead weighing not less than 4 pounds per square foot or equal. Extend flashing into roofing at least 10" from vent and turn flashing over and down into vent opening.

3..2.2 Sleeves: Use 20 gauge galvanized steel sleeves around pipes passing through masonry walls and concrete slabs.

3..2.3 Escutcheon Plates: Install cast brass split ring with setscrew at all locations where exposed pipes pass through walls, floors and/or ceilings. Provide polished chrome–plated escutcheons in finished rooms, all others polished brass.



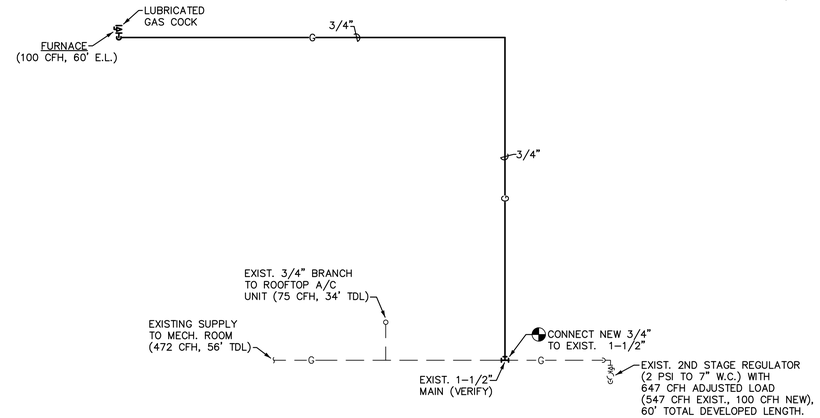
B1 Plumbing Plan

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

Plan North

KEYNOTES

1. CONNECT NEW GAS TO EXISTING GAS MAIN LOCATED ABOVE CEILING. FIELD VERIFY EXACT SIZE & LOCATION OF EXISTING LINE PRIOR TO CONSTRUCTION. ROUTE NEW LINE ABOVE CEILING OVER TO NEW FURNACE AS SHOWN.
2. CONNECT NEW GAS TO NEW ATTIC MOUNTED FURNACE. PROVIDE LUBRICATED GAS COCK & 6" DIRT LEG AT UNIT CONNECTION.
3. EXISTING GAS LINE TO MECH. ROOM TO REMAIN ACTIVE.
4. EXIST. TOILET ROOMS TO REMAIN; NO WORK REQUIRED.
5. REMOVE EXIST. 4" 2–WAY SCO & REPLACE WITH SECTION OF NEW 4" WASTE PIPING.
6. PROVIDE NEW BACKWATER VALVE, LINE SIZE, ON EXISTING BUILDING SEWER TO COMPLY WITH CITY OF PRESCOTT REQUIREMENTS. PROVIDE WITH TRAFFIC RATED COVER.
7. INSTALL NEW 4" 2–WAY SCO ON EXISTING WASTE.
8. EXISTING GAS PIPING RISER TO EXISTING ROOF TOP A/C UNIT TO REMAIN ACTIVE.
9. EXISTING BUILDING WASTE LINE– FIELD VERIFY EXACT SIZE, LOCATION, INVERT & FLOW DIRECTION PRIOR TO CONSTRUCTION.



GAS PIPING SIZED PER 2012 IFGC, TABLE G2413.4(1), WITH 60' TOTAL DEVELOPED LENGTH.

GAS PIPING DIAGRAM

NTS

GAS PIPING NOTES:

1. GAS PIPING SHALL NOT RUN IN HOLLOW CORE OF BLOCK.
2. PROVIDE SHUT–OFF COCK, UNION AND 6" LONG DIRT LEG WITH CAP AT EACH GAS LINE DROP TO APPLIANCE.
3. ALL GAS USING EQUIPMENT TO BE NATURAL FUEL.
4. DO NOT USE FLEXIBLE PIPE CONNECTIONS TO EQUIPMENT.
5. ALL GAS PIPING, MATERIALS, VALVES, FITTINGS, INSTALLATION AND TESTING SHALL COMPLY WITH CHAP. 4, INTERNATIONAL FUEL GAS CODE.
6. VERIFY ALL GAS BTU/H INPUTS WITH ACTUAL BTU/H INPUT OF APPLIANCE SUPPLIED.
7 . ALL GAS LINES INSTALLED THROUGH CMU WALLS, ETC., SHALL BE SLEEVED WITH STEEL PIPE A MINIMUM OF (2) (TWO) PIPE SIZES LARGER THAN THE GAS PIPE.

PLUMBING LEGEND

SYMBOL	ABBR.	DESCRIPTION
	SOC	SHUTOFF COCK
—G—	G	NATURAL GAS PIPING
		POINT OF CONNECTION– NEW TO EXISTING

OSE Design Group, LLC Consulting Engineers
611 West Delano Ave Prescott, AZ 86301 (928) 443.7353
Project 17101
11759 N. 143rd Ave. Surprise, AZ 85379 (623) 444-6143

REVISIONS	BY

Registered Professional Engineer
State of Arizona
33491
WILLIAM MARK ODELL
Date signed 01/24/19
(Corporation Member)
ARIZONA U.S.A.
Expires 3/31/19

W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Plumbing Floor Plan

PROJECT: ERAU Building 79 Addition
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY	
CHECKED BY	
DATE	
JOB NO.	705
SHEET	P1.0

Dec 06, 2017 - 3:16pm

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.
- 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

GENERAL ELECTRIC 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. BRANCH CIRCUIT WIRING SHALL BE THHN/THWN INSULATION. PANEL FEEDERS SHALL BE TYPE XHHW. ALL WIRE SHALL BE COPPER. MINIMUM WIRE SIZE SHALL BE #12.
7. ALL WIRING TO BE INSTALLED IN RACEWAYS. TYPE OF RACEWAY SHALL BE AS REQUIRED BY CODE. "MINIMUM CONDUIT SIZE SHALL BE 1/2". EMT WITH STEEL SET SCREW FITTINGS"
8. PROVIDE CODE SIZED BOND WIRE IN ALL EMT, FLEXIBLE CONDUIT
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

GENERAL ELECTRICAL DEMOLITION NOTES

1. RETURN REMOVED MATERIAL DEEMED SALVAGEABLE TO OWNER'S REPRESENTATIVE. MATERIALS DEEMED NOT SALVAGEABLE SHALL BE REMOVED FROM THE PREMISES.
2. THE CONTRACTOR WILL EXAMINE THE PREMISES AND SATISFIED HIMSELF AS TO EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO PERFORM HIS WORK. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND THE CONTRACTOR SHALL FIELD VERIFY ALL DETAILS OF DEMOLITION.
3. REMOVE ALL EXISTING WIRING DEVICES, LIGHT FIXTURES, WIRE, CONDUIT, DISCONNECTS, ETC., AS NOTED OR INDICATED WITHIN DEMOLITION AREA. (ALL ITEMS MAY NOT BE SHOWN.) REWORK AS NECESSARY ALL CIRCUITING WHICH REQUIRES CONTINUATION THROUGH THE AREA.
4. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED TO REMOVE/RELOCATE ANY EXISTING ELECTRICAL EQUIPMENT SUCH THAT ELECTRIC SHOCK HAZARDS TO WORKMEN ARE ELIMINATED DURING DEMOLITION AND NEW CONSTRUCTION.
5. REMOVED OR DAMAGED CONDUIT, WIRE AND FITTINGS SHALL NOT BE RE–USED
6. WORK REQUIRED FOR EXISTING EQUIPMENT NOTED AS "EXISTING TO BE REMOVED" SHALL INCLUDE:
   - A. SALVAGING OR DISPOSING OF ALL MATERIAL OR EQUIPMENT AS DIRECTED BY OWNER OR OWER'S REPRESENTATIVE.
   - B. REMOVAL OF FEEDER OR CABLING FROM EQUIPMENT TO POINT OF FEED.
   - C. REMOVAL OR RECIRCUITING (AS REQUIRED OR AS NOTED ON PANELS) OF ALL BRANCH CIRCUITING.
   - D. REMOVAL OF ALL FITTINGS, SUPPORTS, BRACKETS, ETC.
   - E. REPAIR AND PATCHING OF WALLS, FLOORS AND CEILINGS TO MATCH EXISTING OR PER ARCHITECT'S INSTRUCTIONS.
   - F. CAPPING OF IN–SLAB FEEDER CONDUITS FLUSH WITH THE FINISHED FLOOR.
   - G. CAPPING OF FEEDER CIRCUITS AT 6" ABOVE OR BELOW THE FLOOR OR CEILING FOR IN–SLAB CONDUITS LOCATED UP NEXT TO A WALL OR FOR CEILING AREA CONDUITS.
   - H. THE OPPOSITE END LOCATION OF ALL EMPTY FEEDER CONDUITS AT SWITCHBOARDS, PANELBOARDS, ETC., SHALL BE MARKED USING AN ENGRAVED BRASS TAG ATTACHED TO THE CONDUIT.
   - I. EXISTING FEEDER CONDUITS SHALL BE REMOVED OR CUT OFF AND ABANDONED IF FOUND TO BE UNSALVAGEABLE BY THE OWNER, ARCHITECT OR ENGINEER.
7. EXISTING EQUIPMENT NOT IMPICITLY SHOWN ON THE DRAWINGS IS INTENDED TO BE "EXISTING TO REMAIN, " UNLESS NOTED OTHERWISE.

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)

ELECTRICAL DESIGN & CADD SERVICES INC.
1600 LAMB LANE
PRESCOTT, AZ. 86305
PH. (928) 776–4900
FAX (928) 776–7800
E–MAIL: EES@CABLEONE.NET
JOB# 17–58

PANELBOARD A SCHEDULE

MAINS: 225 A | VOLTAGE: 120/208V, 3ø, 4W | TYPE: WESTING HOUSE | LOCATION: SEE PLAN | MOUNTING: SURFACE | MIN. A.I.C.: EXISTING

CIRCUIT DESCRIPTION	BKR.	CIR. NO.	ØA	ØB	ØC	CIR. NO.	BKR.	CIRCUIT DESCRIPTION
EXISTING A/C UNIT	XX	1				2	XX	EXISTING A/C UNIT
		3				4		
	3	5				6	3	
		7				8		
		9				10		
		11				12		
EXISTING SUB–FEED PANEL	125	13	2700			14	45	NEW 4–TON A/C COND. UNIT CU–1
		15		2700		16	2	26.0 MCA, 208V, 1ø
	3	17			1656	18	20 / 1	NEW FURNACE FC–1
		19				20		
		21				22		
		23				24		
TOTAL LOAD PER PHASE: EXISTING ESTIMATED LOAD:			19500	19500	19500	HI# 19500 / 120 = 162.5 AMPS		
NEW ADDED LOAD:			3600	3600	1656	HI# 3600 / 120V = 30.0 AMPS		
TOTAL LOAD:			23100	23100	21156	HI# 23100 / 120V = 192.5 AMPS		

PANELBOARD A2 SCHEDULE

MAINS: 100A | VOLTAGE: 120/208, 1ø,3W | TYPE: QO LOAD CENTER | LOCATION: SEE PLAN | MOUNTING: SURFACE | MIN. A.I.C.:

CIRCUIT DESCRIPTION	BKR.	CIR. NO.	ØA	ØB	ØC	CIR. NO.	BKR.	CIRCUIT DESCRIPTION
EXIST. EQUIP.	20 / 1	1				2	20 / 1	EXIST. EQUIP.
		3				4	20 / 1	
		5				6	20	
		7				8	2	
		9				10	60	EXISTING A/C UNIT
SPACE		11				12	2	FIELD VERIFY
RECEPT'S.	20 / 1	13	900			14		SPACE
		15		900		16		
		17				18		
		19				20		
		21				22		
		23				24		
TOTAL LOAD PER PHASE: EXISTING ESTIMATED LOAD:			7800	7800	7800	HI# 7800 / 120 = 65.0 AMPS		
NEW ADDED LOAD:			900	900		HI# 900 / 120V = 7.5 AMPS		
TOTAL LOAD:			8700	8700	7800	HI# 8700 / 120V = 72.5 AMPS		

PANELBOARD SYMBOLS

- ✱ CONTINUOUS DUTY/LARGEST MOTOR @ 125%
- □ HACR TYPE CIRCUIT BREAKER
- ⬡ EXISTING BREAKER W/ NEW LOAD
- ○ EXISTING BREAKER W/ EXISTING LOAD
- △ NEW BREAKER W/ NEW LOAD

REVISIONS	BY

CERTIFICATE # 7450 ANGELO OSSANNA 1/23/18 Date Signed
ARIZONA U.S.A.
EXPIRES 12/30/2018

W. Alan Kenson & Associates, P.C.
P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

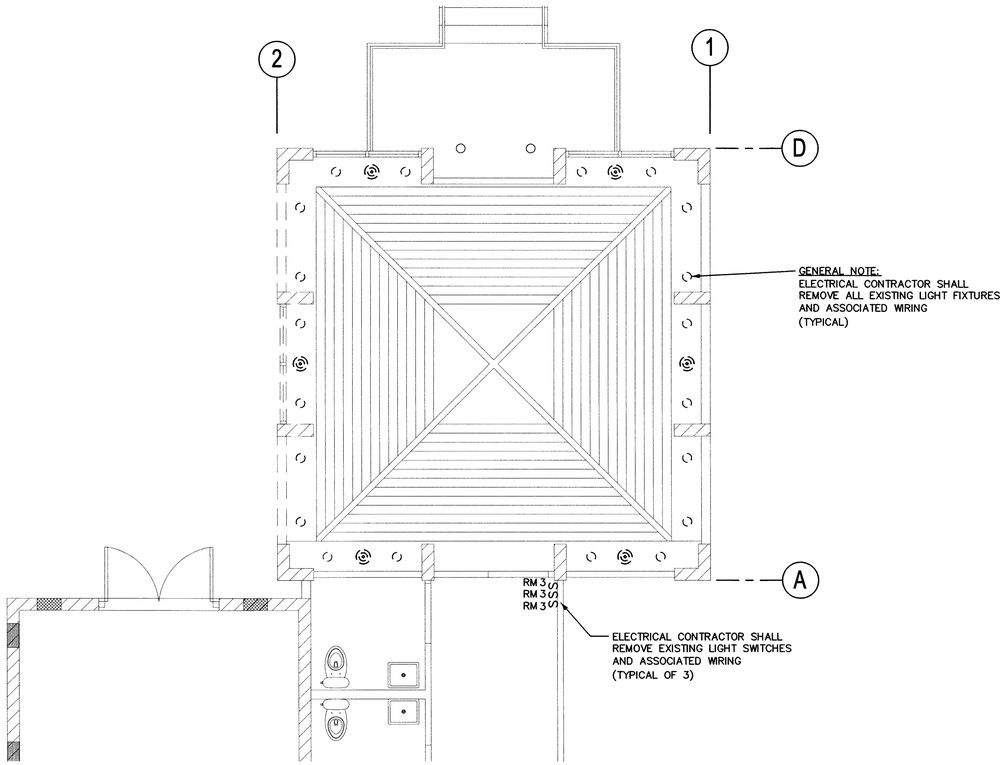
DRAWING: Electrical Symbols, Panel Schedules, Specifications & Notes

PROJECT: ERAU Building 79 Remodel, 3700 Willow Creek Road, Prescott, AZ 86301

APN:

DRAWN BY	R.A.
CHECKED BY	A.O.
DATE	1-25-17
JOB NO.	695
SHEET	E1.0

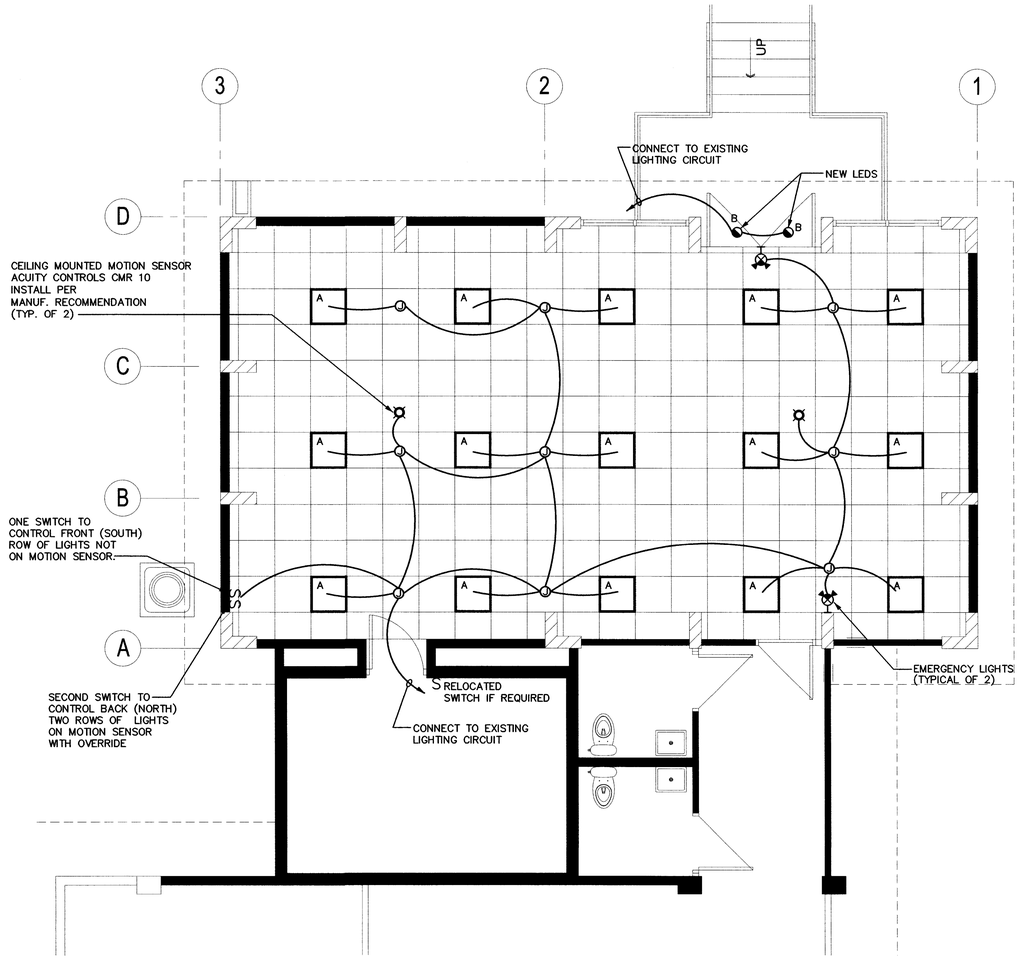
Jan 23, 2018 - 3:19pm



Lighting Demo Floor Plan

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

Plan North



Lighting Floor Plan

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

Plan North

ABBREVIATIONS

EX	EXISTING LIGHT OR DEVICE TO REMAIN
RE	EXISTING LIGHT OR DEVICE TO BE REPLACED OR RELOCATED EXTEND CIRCUITING AS REQUIRED IF NOT SHOWN.
ER	REPLACED OR RELOCATED LIGHT OR DEVICE
RM	REMOVED LIGHT OR DEVICE
A.F.F.	ABOVE FINISHED FLOOR (℄ OF OUTLET)
A.F.G.	ABOVE FINISHED GRADE (℄ OF OUTLET)
E.C.	EMPTY CONDUIT
UNO	UNLESS OTHERWISE NOTED
FBO	FURNISHED BY OTHERS
NL	NIGHT LIGHT
TYP	TYPICAL

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.

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	LITHONIA 6DN6 35/15 L06AR 120 EL	120	18 W 1500L 35K LED	RECESSED	STANDARD	6" LED DOWNLIGHT 1500 LUMENS 3500K DAMP LOCATION W/EMERG. BATTERY BACKUP
EXIT	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.

ELECTRICAL DESIGN & CADD SERVICES INC.
1600 LAMB LANE
PRESCOTT, AZ. 86305
PH. (928) 776-4900
FAX (928) 776-7800
E-MAIL: EES@CABLEONE.NET

JOB# 17-58

Jan 23, 2018 - 3:20pm

REVISIONS	BY

CERTIFICATE NO. 7450 ANGELO OSSANNA Date Signed 11/27/2017 ARIZONA U.S.A.

EXPIRES 12/30/2018

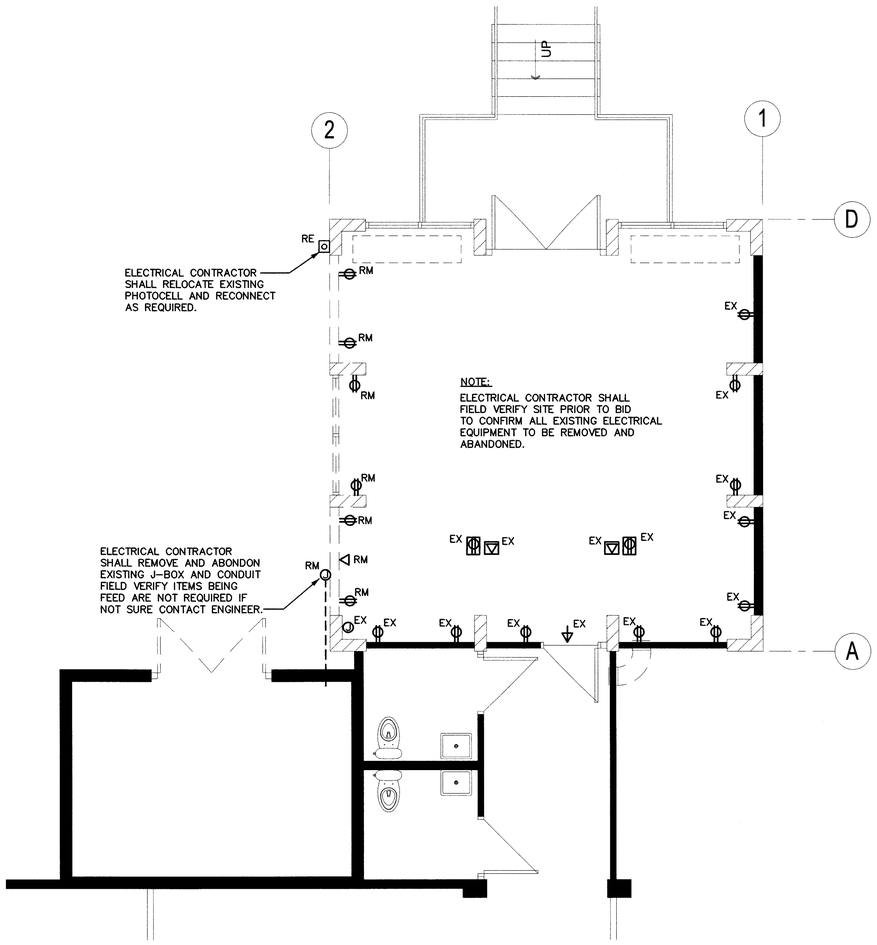
W. Alan Kenson & Associates, P.C.
P.O. Box 11593
Prescott, AZ 86304
P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

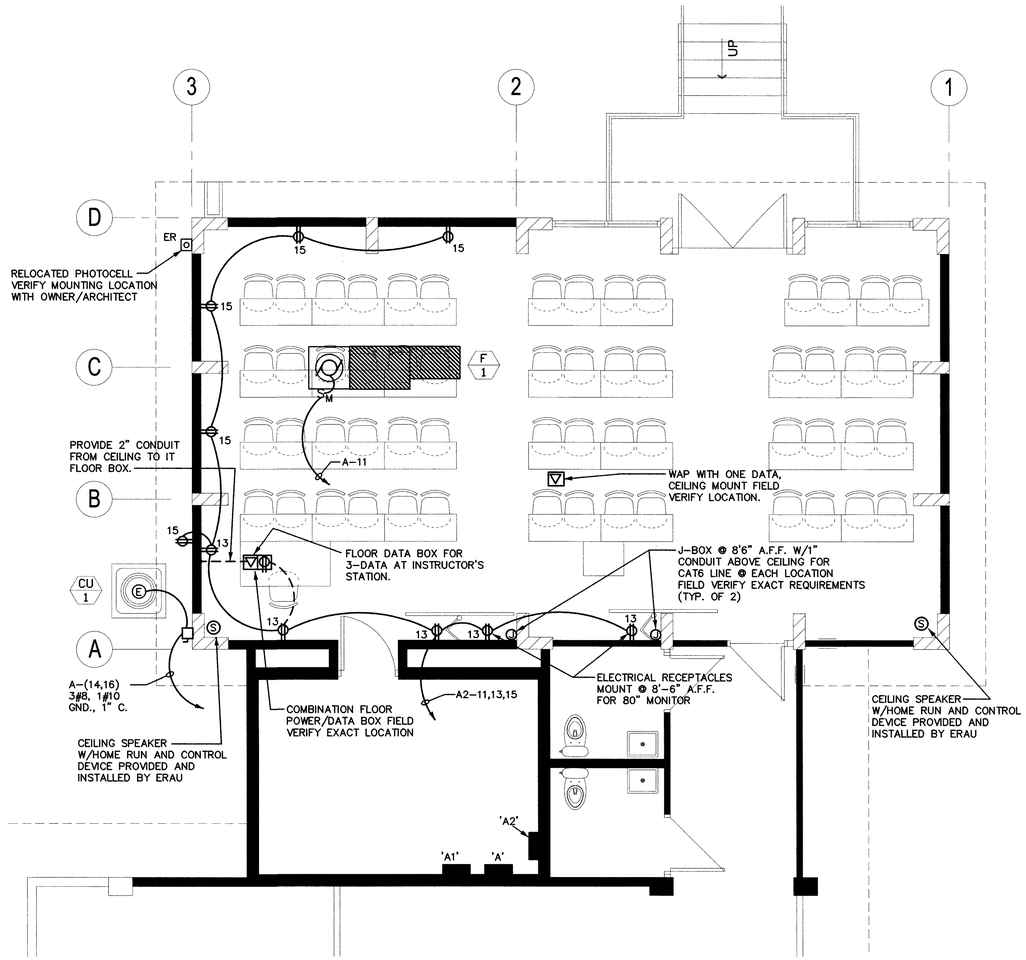
DRAWING: Electrical Lighting Design & Demo Floor Plan

PROJECT: ERAU Building 79 Remodel
3700 Willow Creek Road
Prescott, AZ 86301

APN: -

DRAWN BY	R.A.
CHECKED BY	A.O.
DATE	1-25-17
JOB NO.	695
SHEET	E1.1





Power Demo Floor Plan

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

Plan North

ABBREVIATIONS

EX	EXISTING LIGHT OR DEVICE TO REMAIN
RE	EXISTING LIGHT OR DEVICE TO BE RELOCATED EXTEND CIRCUITING AS REQUIRED IF NOT SHOWN.
ER	RELOCATED LIGHT OR DEVICE
RM	REMOVED LIGHT OR DEVICE
A.F.F.	ABOVE FINISHED FLOOR (℄ OF OUTLET)
A.F.G.	ABOVE FINISHED GRADE (℄ OF OUTLET)
E.C.	EMPTY CONDUIT
UNO	UNLESS OTHERWISE NOTED
FBO	FURNISHED BY OTHERS
NL	NIGHT LIGHT
TYP	TYPICAL

GENERAL NOTE:
ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED OR UNUSED CONDUIT & WIRING ECT. BACK TO PANEL.

NOTE:
ALL IT AND A/V WIRING INSIDE CONCEALED SPACES SHALL BE INSTALLED IN A MINIMUM OF 3/4" CONDUIT. CONDUIT SHALL BE PLASTIC ENT FLEX WITH APPROPRIATE FITTINGS. TERMINATE CONDUIT IN WALLS AT A 1 GANG MUD-RING. STUB CONDUITS INTO ACCESSIBLE CEILING SPACE AND PROVIDE A PULL STRING IN CONDUIT

DATA / COMMUNICATIONS:

HORIZONTAL COPPER

- PULL, TERMINATE, AND TEST A TOTAL OF 4 NEW DATA CABLES PER REMODEL PROGRAM.
- TERMINATE HORIZONTAL DATA CABLES TO EXISTING KRONE PATCH PANEL IN ROOM 123.
- 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 AND WHITE COLORED CAT6 CABLE AND JACKS FOR PHONE 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.

Power Floor Plan

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

Plan North

NOTE:
REFER TO SHEET CS2 FOR EXISTING IT CLOSET ELSEWHERE IN BUILDING

GENERAL POWER NOTES:

1. CONTRACTOR SHALL VERIFY ALL MOUNTING HEIGHTS EXACT LOCATION AND REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT AND DEVICES WITH ENG., OWNER OR ARCHITECT PRIOR TO ROUGH-IN.
2. ELECTRICAL CONTRACTOR SHALL RE-USE EXISTING CIRCUITS WHENEVER POSSIBLE.
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.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE COVER PLATES FOR ALL UNUSED OUTLETS, DATA OUTLETS AND SPECIAL SYSTEMS OUTLETS, FIELD VERIFY DEVICE NOT USED
7. ELECTRICAL CONTRACTOR SHALL VERIFY MECHANICAL EQUIPMENT REQUIREMENTS BREAKER, DISC. & WIRE SIZE WITH MANUFACTURER PRIOR TO ROUGH-IN.

ELECTRICAL DESIGN & CADD SERVICES INC.
1600 LAMB LANE
PRESCOTT, AZ. 86305
PH. (928) 776-4900
FAX (928) 776-7800
E-MAIL: EES@CABLEONE.NET

JOB# 17-58

Jan 24, 2018 - 12:09pm

REVISIONS	BY

CERTIFICATE NO. 7450 ANGELO OSSANNA
Date Signed 1/25/18
ARIZONA U.S.A.
EXPIRES 12/30/2018

W. Alan Kenson & Associates, P.C.
P 928-443-5812
F 928-443-5815
P.O. Box 11593
Prescott, AZ 86304
email: waka@cableone.net
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ARCHITECTURE & PLANNING

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APN: -

DRAWN BY	R.A.
CHECKED BY	A.O.
DATE	1-25-17
JOB NO.	695
SHEET	E1.2