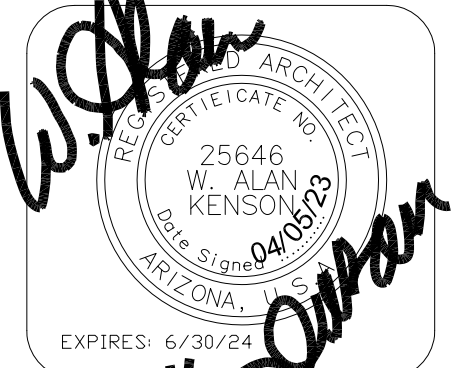


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W. Alan Kenson & Associates, P.C.

P 928-443-5812

F 928-443-5815

P.O. Box 11593

Prescott, AZ 86304

email: wakaarchitect@gmail.com

www.kenson-associates.com

ARCHITECTURE & PLANNING

DRAWING: Cover Sheet

PROJECT: Vakula Garage
226 S. Pleasant St.
Prescott, AZ 86303

APN: 109-01-114A

DRAWN BY L.O.

CHECKED BY W.A.K.

DATE April 5th, 2023

JOB NO. 790

SHEET

CS1

Vakula Garage Addition

PRESCOTT , ARIZONA

Vicinity Map



Project Information

CLIENT: Alex and Maureen Vakula
226 S. Pleasant St.
Prescott, AZ 86303
PH: 928-642-2600
Contact: Alex Vakula
alex@vakulalaw.net

PREPARED BY: W. Alan Kenson & Assoc., P.C.
226 S. Pleasant St.
P.O. Box 11593
Prescott, AZ 86304
PH: 928-443-5812
Contact: Alan Kenson
wakaarchitect@gmail.com

CONTRACTOR: Owner Builder

JOBSITE ADDRESS: 226 S. Pleasant St.
Prescott, AZ 86303

PARCEL NUMBER: 109-01-114A

ZONING: MF-M

CONSTRUCTION TYPE: V

OCCUPANCY: RESIDENTIAL

EXISTING GARAGE: 348 S.F.
PROPOSED GARAGE: 1,074 S.F.

AREA ON PROPERTY SERVED BY THE ELECTRICAL DISTRIBUTION SYSTEM: 5,008 S.F.

Sheet Index

- ARCHITECTURAL**
- CS1** Cover Sheet / Project Information
- A1.0** Grading and Drainage Site Plan
- A2.0** Reference / Dimension / Wall Types Floor Plan Door Schedule and Types
- A3.0** Building Sections / Details
- A4.0** Exterior Elevations
- STRUCTURAL**
- S1** General Structural Notes
- S1.1** Typical Details
- S2** Foundation Plan
- S3** Roof Framing Plan
- S4** Foundation Details
- S5** Framing Details
- ELECTRICAL**
- E1.1** Electrical One-Line Diagram, Panel Schedules and Calc's

Graphic Standards

- EXISTING DOOR
- PROPOSED DOOR
- NORTH ARROW INDICATOR
- DETAIL DESIGNATOR
- BUILDING SECTION DESIGNATOR
- GRID LINE DESIGNATOR
- REVISION DESIGNATOR
- ELEVATION DESIGNATOR
- DESCRIPTIVE NOTE DESIGNATOR
- ROOM NUMBER / FINISH DESIGNATOR
- DOOR NUMBER DESIGNATOR
- DOOR TYPE DESIGNATOR
- WINDOW TYPE DESIGNATOR
- WALL TYPE DESIGNATOR

Deferred Submittal

FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN GARAGE. REFER TO FIRE SPRINKLER PLANS UNDER SEPARATE COVER.

Project Description

THE VAKULAS INTEND TO BUILD A THREE CAR GARAGE ATTACHED TO THEIR EXISTING GARAGE / STORAGE BUILDING WITH ACCESS FROM THE ALLEY.

Architect:

W. Alan Kenson & Associates, P.C.

P 928-443-5812
F 928-443-5815

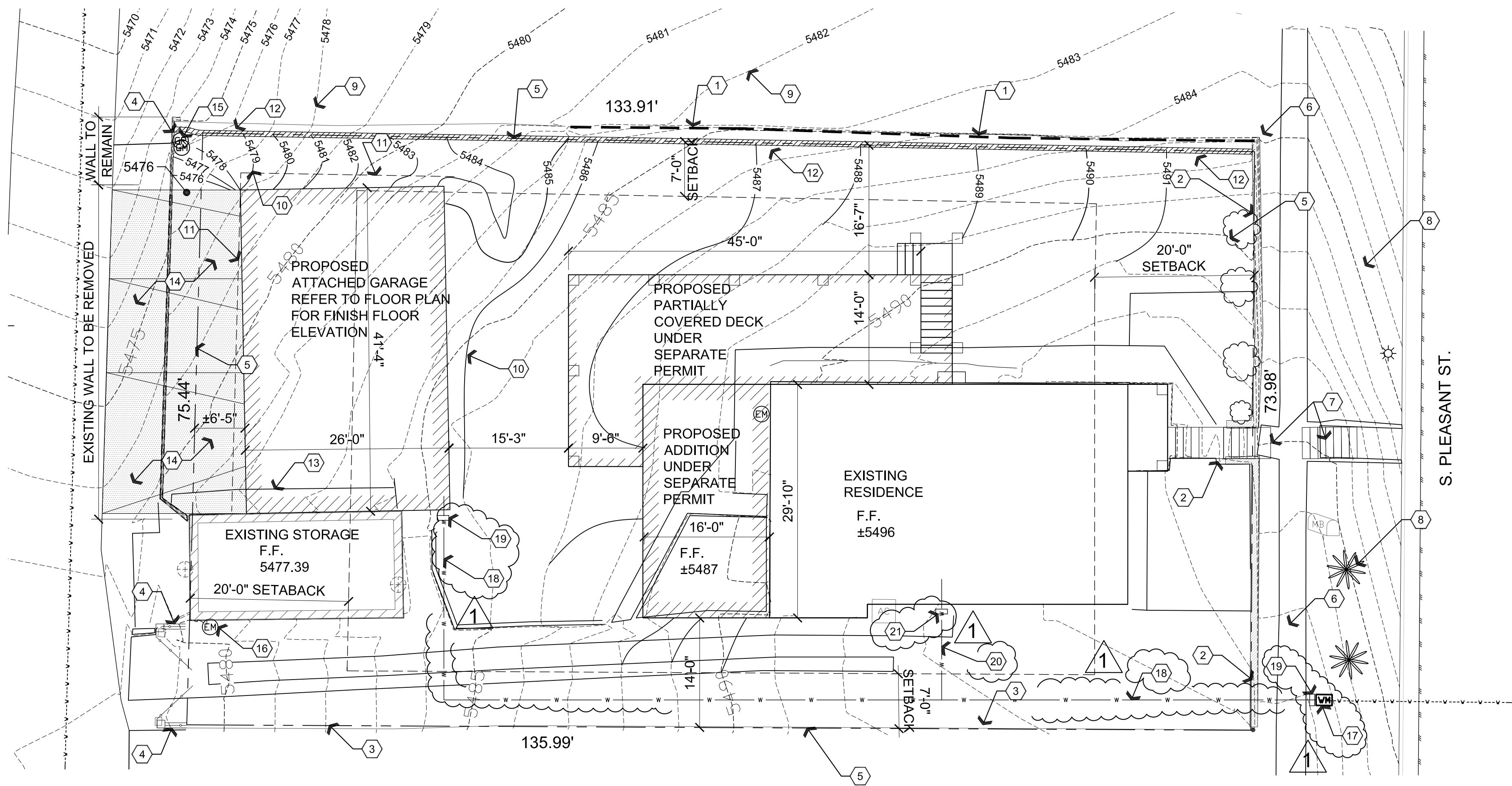
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ARCHITECTURE & PLANNING



Jun 26, 2023 9:11am



NOTE: EROSION AND SEDIMENT CONTROL MEASURES WILL BE PROVIDED DOWNSTREAM OF ALL CONSTRUCTION AND THE CONSTRUCTION ENTRANCE WILL BE STABILIZED OR A SWEEPING PLAN WILL BE PROVIDED.

Descriptive Keynotes

1. EXISTING NORTH CONCRETE WALL TO BE REMOVED.
2. EXISTING EAST CONCRETE WALL TO REMAIN. NEW WOOD PICKET FENCE WILL REPLACE EXISTING WIRE FENCE ON TOP OF WALL. FENCE UNDER SEPARATE PERMIT.
3. EXISTING SOUTH FENCE TO REMAIN AS IS.
4. EXISTING WEST CONCRETE WALL TO REMAIN AS INDICATED. WHERE WALL REMAINS, NEW WOOD PICKET FENCE WILL REPLACE EXISTING WIRE FENCE ON TOP OF WALL. FENCE UNDER SEPARATE PERMIT.
5. PROPERTY LINE.
6. EXISTING SIDEWALK.
7. EXISTING STAIRS.
8. EXISTING LANDSCAPING.
9. EXISTING CONTOUR.
10. PROPOSED CONTOUR.
11. 5' ACCESSORY BUILDING SETBACK.
12. NEW RETAINING WALL UNDER SEPARATE PERMIT.
13. REMOVE EXISTING CONCRETE.
14. PROVIDE 4" CONCRETE SLAB WITH #3 @ 2'-0" O.C. EACH WAY, OVER 4" A.B.C. FROM GARAGE TO PAVED ALLEY, APPROXIMATELY 17'-0"x42'-0".
15. EXISTING NATURAL GAS METER.
16. EXISTING ELECTRICAL SERVICE ENTRANCE SECTION. EXISTING ELECTRICAL SERVICE TO BE REPLACED WITH NEW, REFER TO ELECTRICAL PLANS.
17. EXISTING 3/4" WATER METER TO BE REPLACED WITH 1" WATER METER.
18. 2" PEX WATER LINE BELOW GRADE TO PROPOSED GARAGE.
19. PROVIDE 2" WATER SHUT OFF VALVE IN BELOW GRADE YARD BOX.
20. 1" PEX WATER LINE BELOW GRADE TO EXISTING HOUSE.
21. PROVIDE 1" WATER SHUT OFF VALVE IN BELOW GRADE YARD BOX.

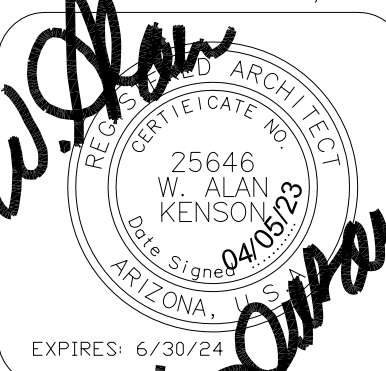
A1 Grading and Drainage / Site Plan

Scale: 1"=10'-0"



| REVISIONS | BY |
|------------------------------------|----|
| City of Prescott Comments 6/5/2023 | LO |

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F 928-443-5815 Prescott, AZ 86304
email: wakaarchitect@gmail.com
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ARCHITECTURE & PLANNING

DRAWING: Proposed Site Plan

PROJECT: Vakula Garage
226 S. Pleasant St.
Prescott, AZ 86303

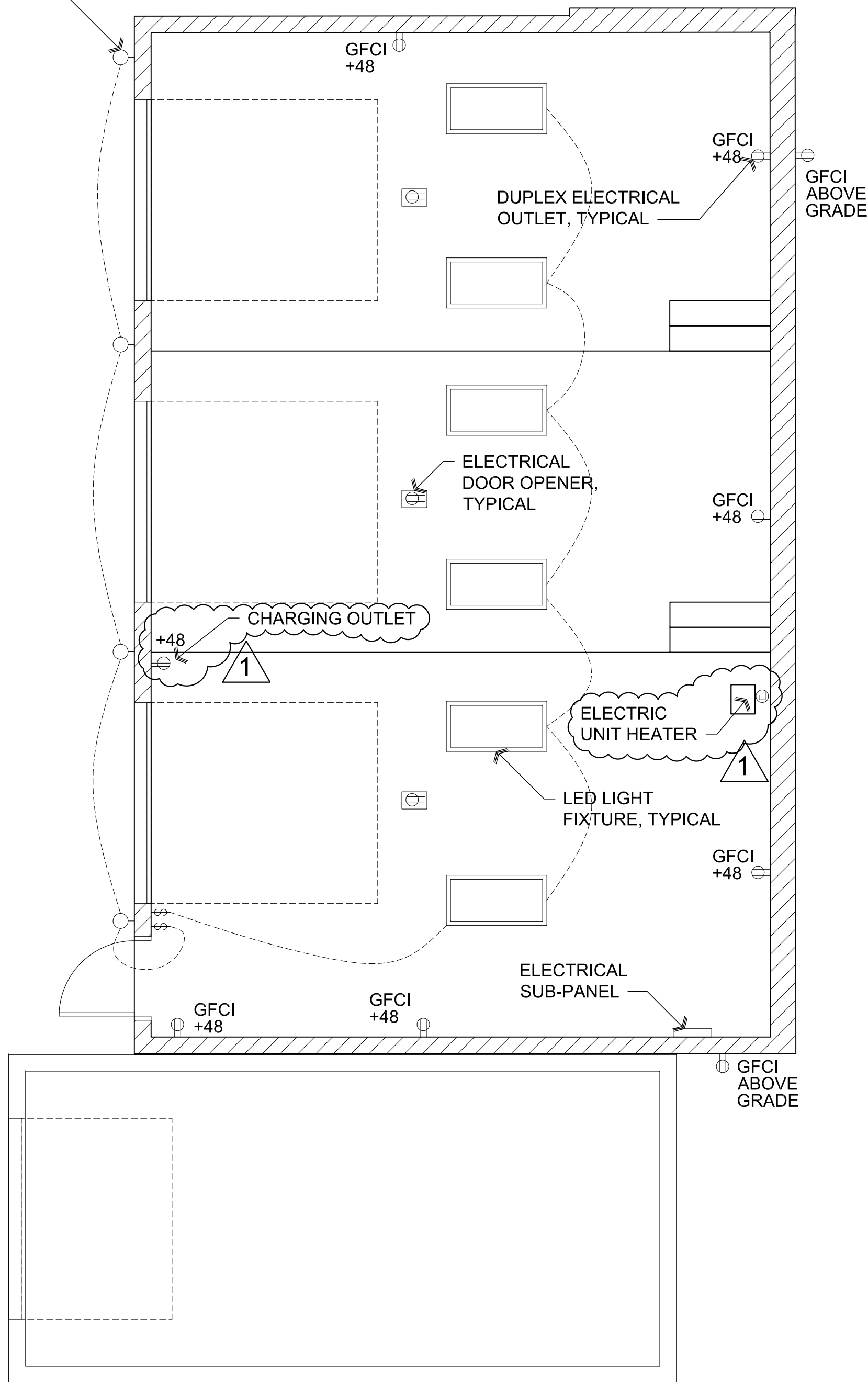
APN: 109-01-114A

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| DRAWN BY L.O. |
| CHECKED BY W.A.K. |
| DATE April 5th, 2023 |
| JOB NO. 790 |
| SHEET |

A1.0

Jun 26, 2023 9:11am

LIGHT FIXTURE
BY OWNER TO
BE BRIGHT SKY
ORDINANCE
COMPLIANT



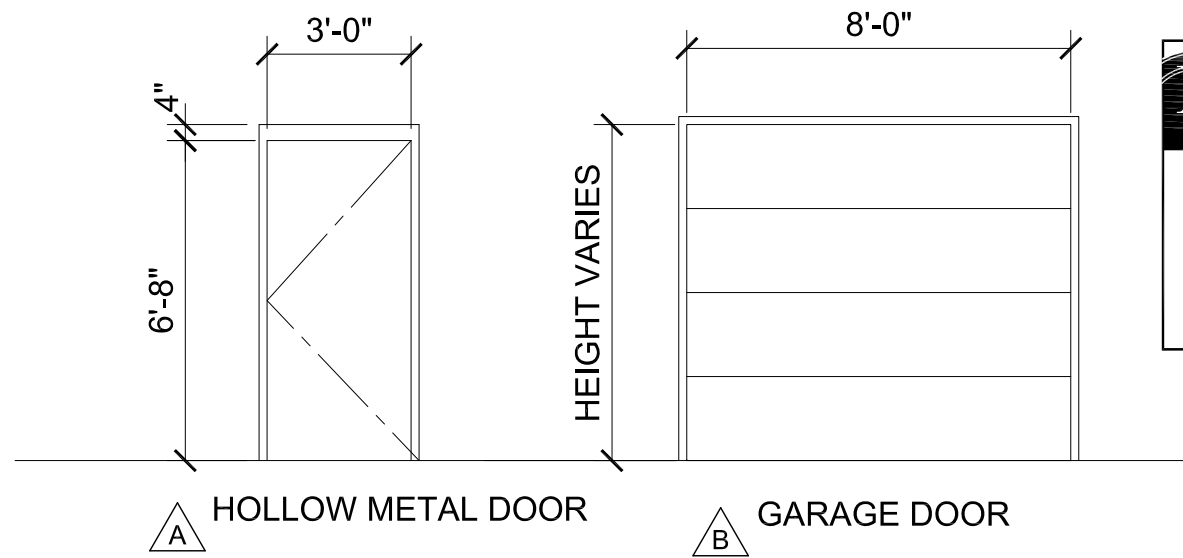
A1 Electrical / Reflected Ceiling Plan

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



Door Schedule

| NO. | RM. NAME | SIZE | TYPE | DOOR MATERIAL | DOOR FINISH | FRAME MATERIAL | FRAME FINISH | HARDWARE TYPE |
|------|----------|--------------|------|---------------|-------------|----------------|--------------|---------------|
| 100A | GARAGE | 3'-0"x6'-8" | A | HM | PAINT | HM | PAINT | A |
| 100B | GARAGE | 8'-0"x7'-0" | B | - | - | - | - | - |
| 100C | GARAGE | 8'-0"x8'-6" | B | - | - | - | - | - |
| 100D | GARAGE | 8'-0"x10'-0" | B | - | - | - | - | - |



Door Hardware Schedule

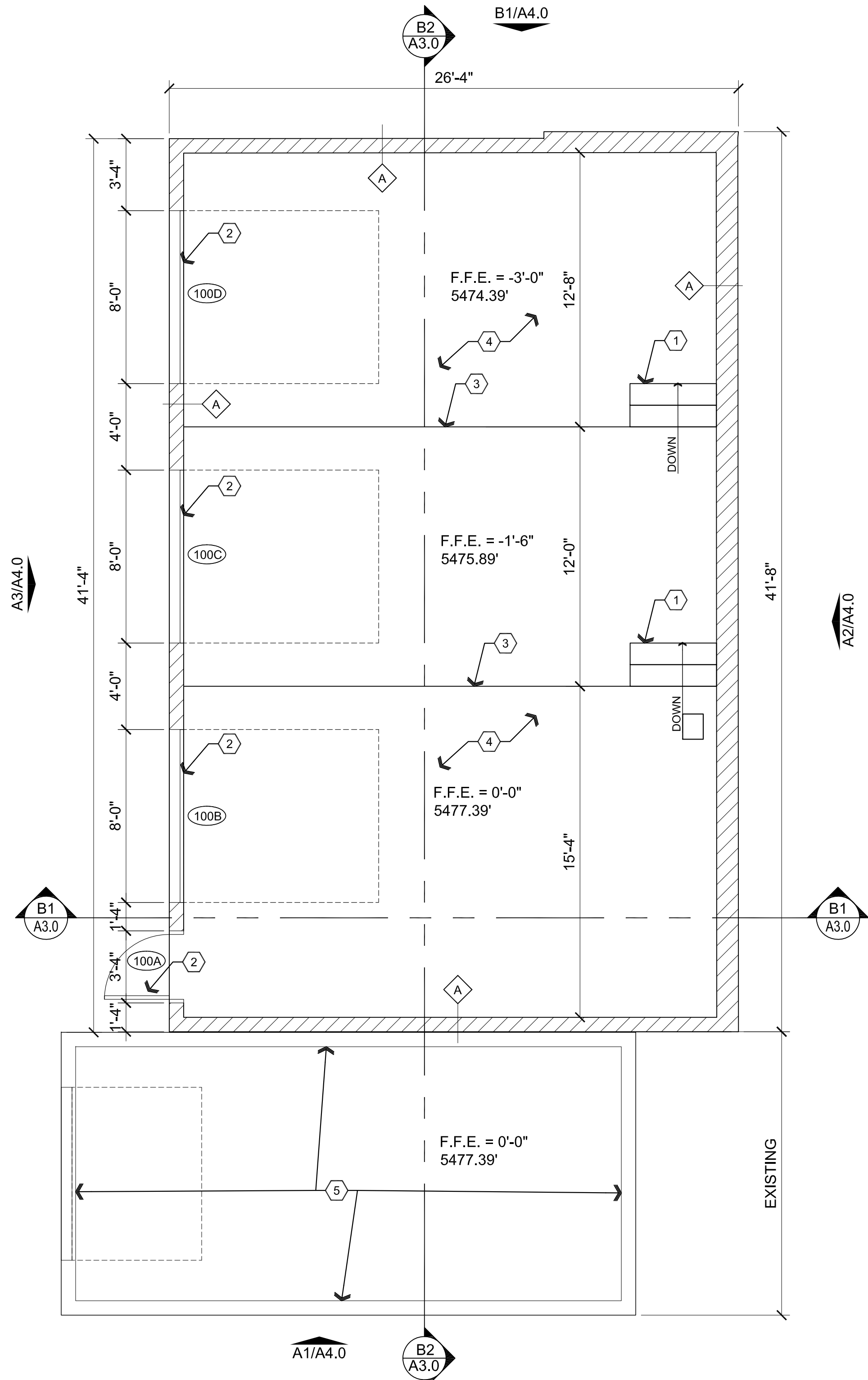
HARDWARE SET A:
LEVER ENTRY LOCK, WEATHER STRIP,
THRESHOLD, DEADBOLT.

Descriptive Keynotes

1. CONCRETE STAIRS, REFER TO STRUCTURAL PLANS.
2. DOOR, REFER TO DOOR SCHEDULE.
3. STEP IN FLOOR, REFER TO BUILDING SECTIONS AND STRUCTURAL PLANS.
4. CONCRETE FLOOR, REFER TO STRUCTURAL PLANS.
5. EXISTING GARAGE / STORAGE BUILDING.

Wall Types Legend

A EXTERIOR CMU WALL /
RETAINING WALL
REFER TO STRUCTURAL PLANS



B1 Reference / Dimension / Wall Types Floor Plan

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



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|-----------|----|
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F 928-443-5815 Prescott, AZ 86304
email: wakaarchitect@gmail.com
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: Reference / Dimension / Wall Types Floor Plan

PROJECT: Vakula Garage
226 S. Pleasant St.
Prescott, AZ 86303

APN: 109-01-114A

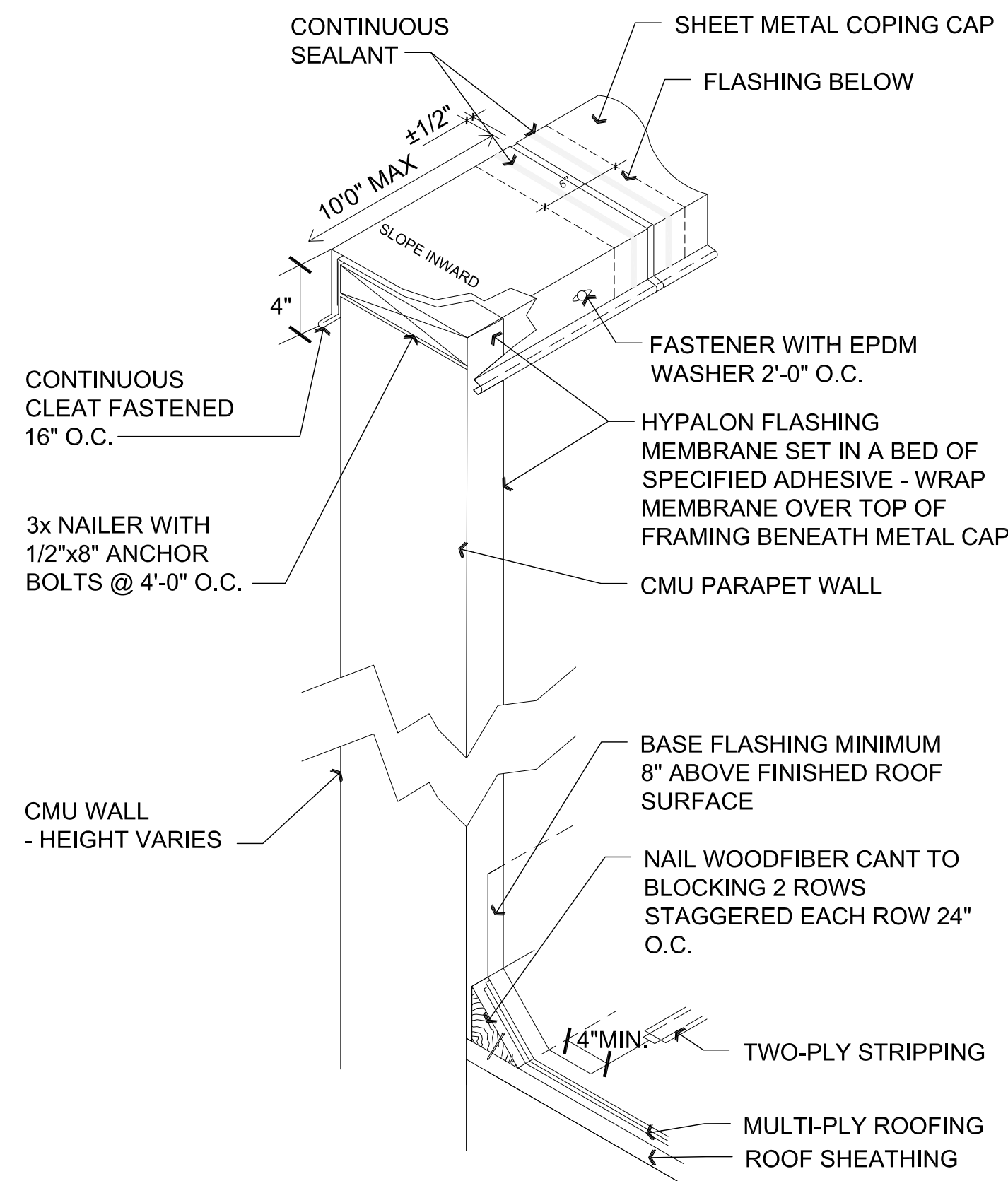
DRAWN BY
L.O.
CHECKED BY
W.A.K.
DATE
April 5th, 2023
JOB NO.
790
SHEET

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May 12, 2023 - 1:15pm

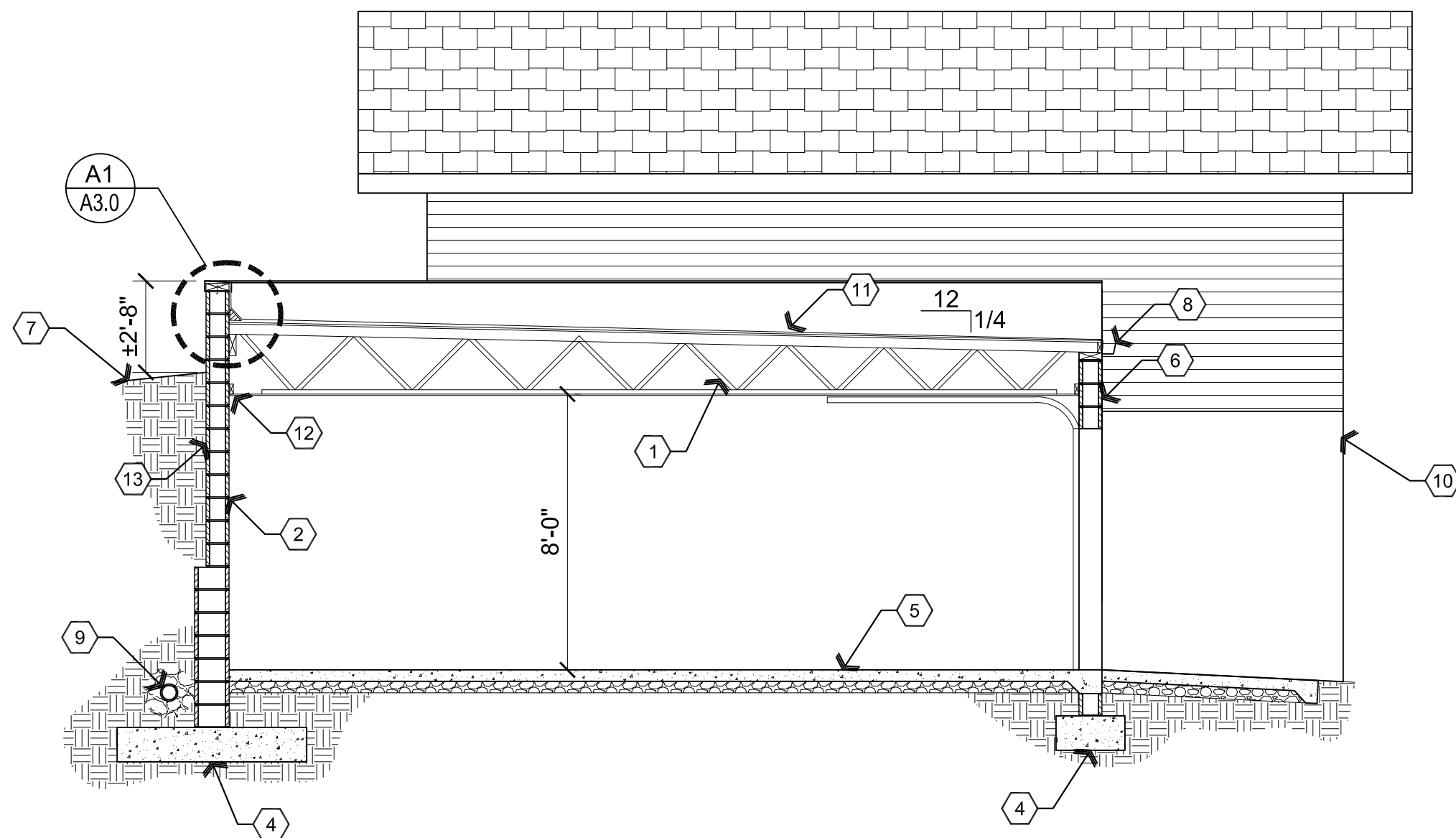
A1 Parapet Cap / Wall Flashing

SCALE: N.T.S.



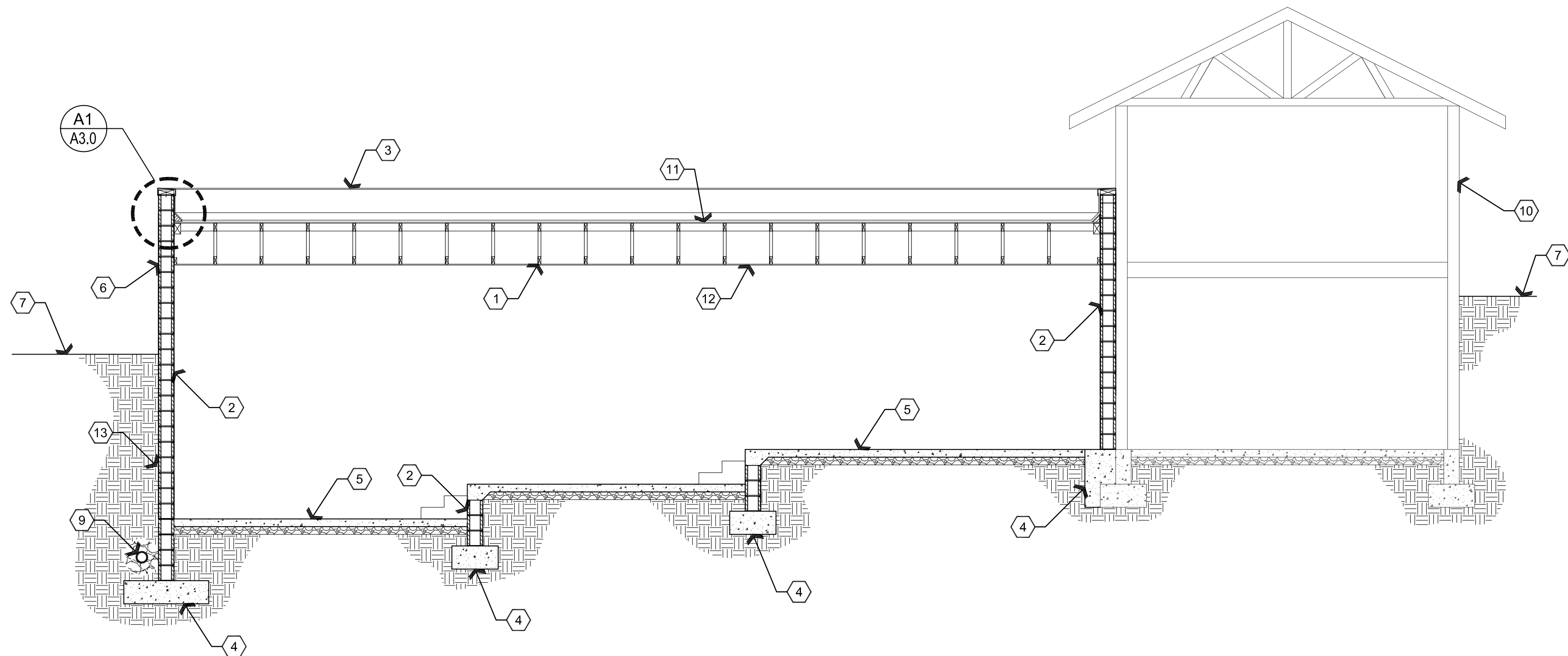
B1 Building Section

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



B2 Building Section

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



Descriptive Keynotes

1. PROVIDE PRE-MANUFACTURED WOOD TRUSS, REFER TO STRUCTURAL PLANS.
2. PROVIDE CMU WALL, REFER TO STRUCTURAL PLANS AND REFERENCE FLOOR PLAN.
3. PROVIDE SHEET METAL PARAPET CAP.
4. CONCRETE FOOTING, REFER TO STRUCTURAL PLANS.
5. PROVIDE CONCRETE SLAB, REFER TO STRUCTURAL PLANS.
6. PROVIDE WESTERN ONE COAT STUCCO SYSTEM - UES# 382, WITH SYNTHETIC INTEGRAL COLOR SMOOTH FINISH OVER BROWN COAT.
7. APPROXIMATE FINISH GRADE.
8. PROVIDE SHEET METAL RAIN GUTTER.
9. PROVIDE FRENCH DRAIN, REFER TO STRUCTURAL PLANS.
10. EXISTING GARAGE / STORAGE BUILDING.
11. MULTI-PLY BUILT UP ROOFING.
12. 1/2" GYPSUM DRYWALL CEILING.
13. PROVIDE WATER PROOFING WITH PROTECTION BOARD.

W. Alan Kenson & Associates, P.C.

P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: wakaarchitect@gmail.com
www.kenson-associates.com

ARCHITECTURE & PLANNING

DRAWING: Building Sections and Detail

PROJECT:

Vakula Garage
226 S. Pleasant St.
Prescott, AZ 86303

APN:

109-01-114A

DRAWN BY
L.O.

CHECKED BY
W.A.K.

DATE
April 5th, 2023

JOB NO.
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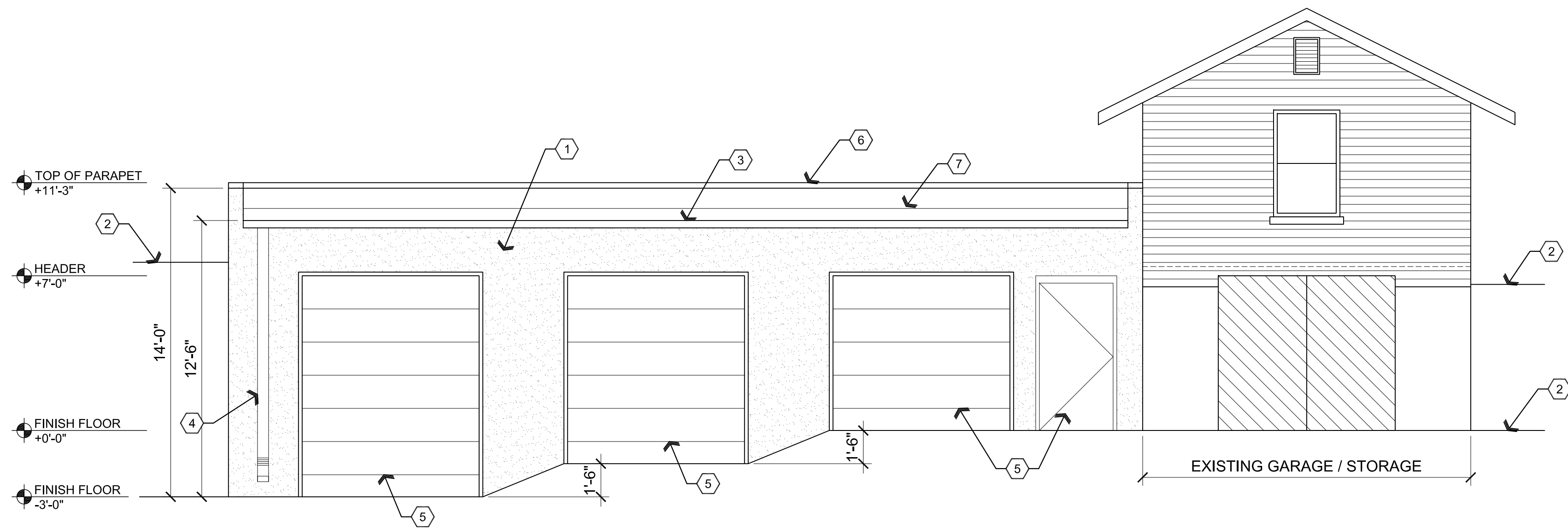
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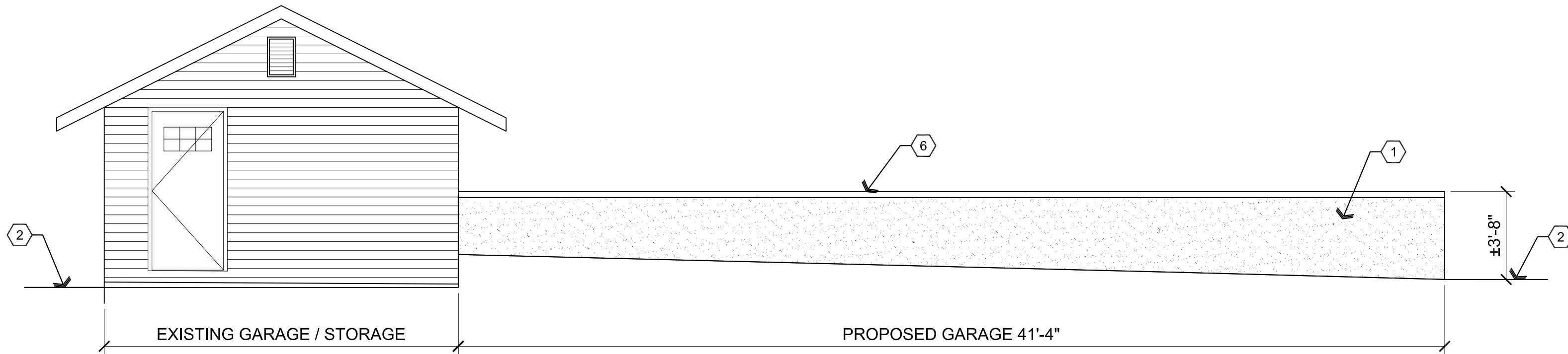
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May 12, 2023 - 1:15pm



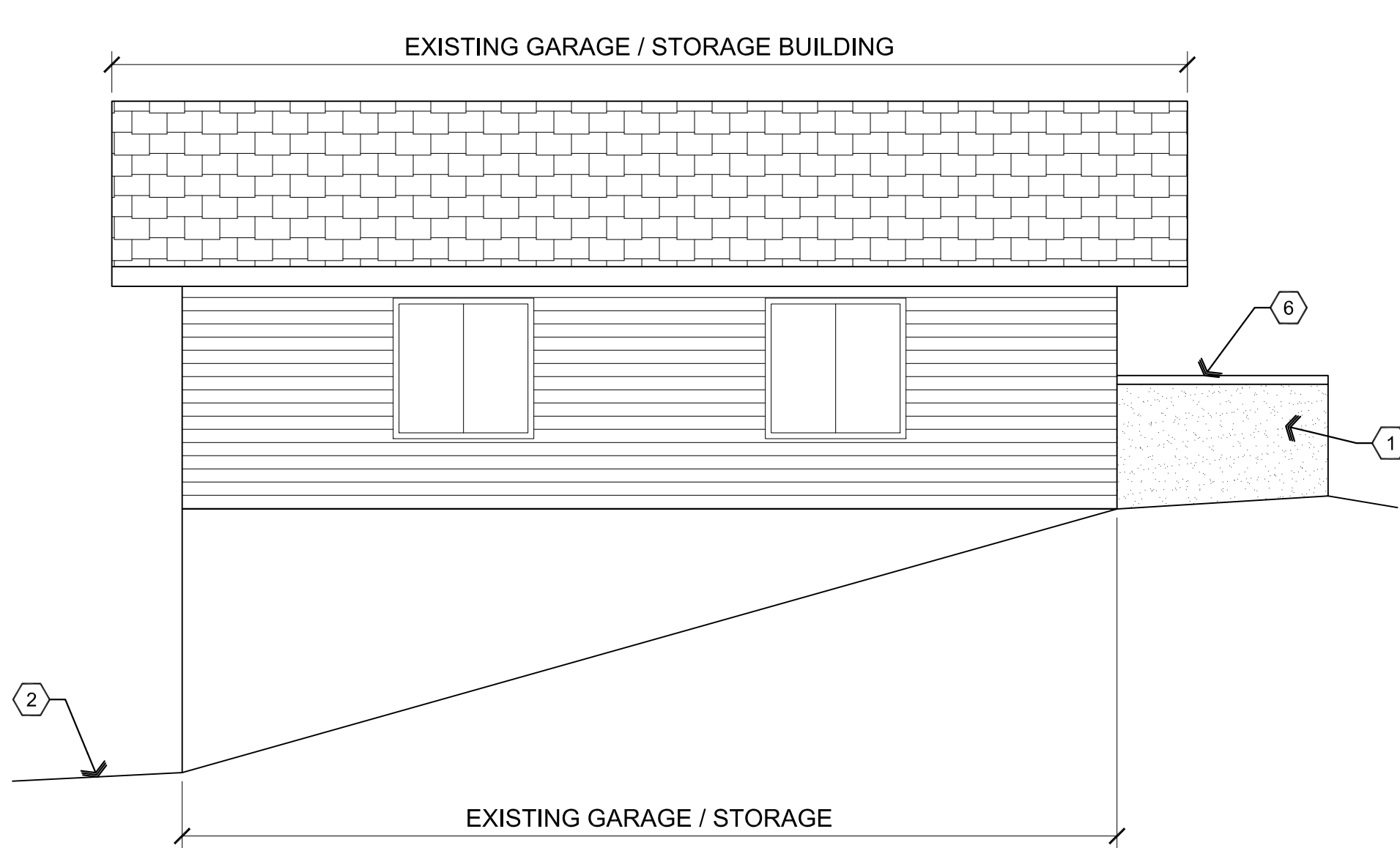
A3 West Elevation

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



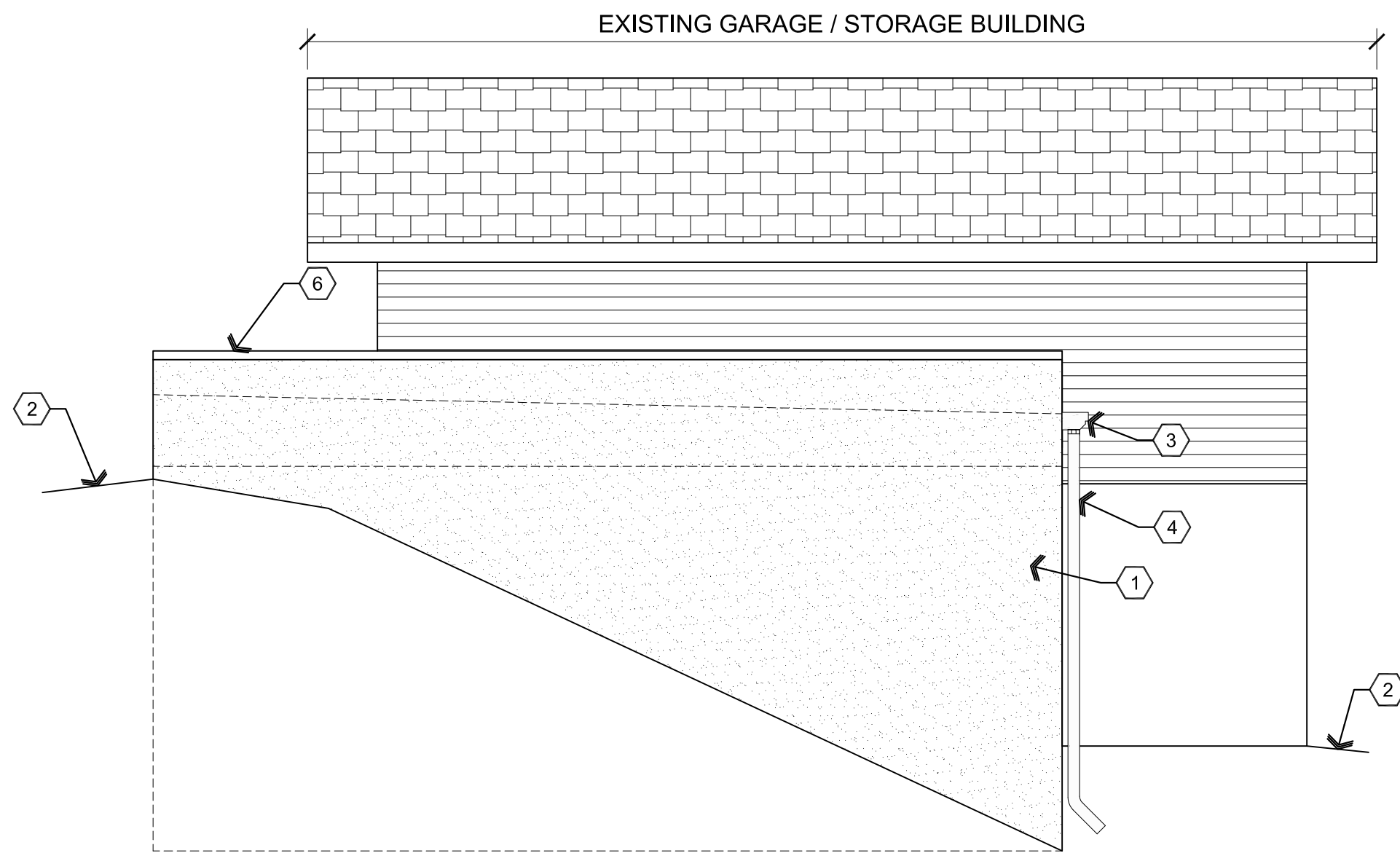
A2 East Elevation

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



A1 South Elevation

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



B1 North Elevation

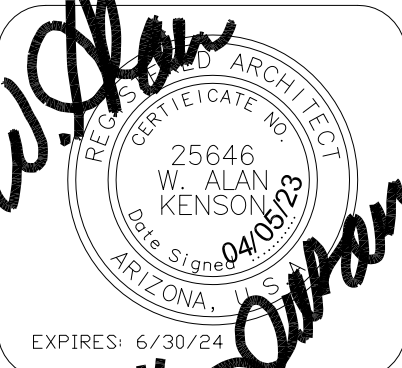
Scale: 1/4"=1'-0"

Descriptive Keynotes

1. PROVIDE WESTERN ONE COAT STUCCO SYSTEM - UES# 382, WITH SYNTHETIC INTEGRAL COLOR SMOOTH FINISH OVER BROWN COAT.
2. APPROXIMATE FINISH GRADE.
3. PROVIDE SHEET METAL RAIN GUTTER.
4. PROVIDE SHEET METAL DOWNSPOUT.
5. PROVIDE DOOR, REFER TO REFERENCE FLOOR PLAN AND DOOR SCHEDULE.
6. PROVIDE SHEET METAL PARAPET CAP.
7. MULTI-PLY BUILT UP ROOFING.

| REVISIONS | BY |
|-----------|----|
| | |
| | |

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P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: wakaarchitect@gmail.com
www.kenson-associates.com

ARCHITECTURE & PLANNING

DRAWING: Exterior Elevations

PROJECT: Vakula Garage
226 S. Pleasant St.
Prescott, AZ 86303

APN: 109-01-114A

DRAWN BY L.O.
CHECKED BY W.A.K.
DATE April 5th, 2023
JOB. NO. 790
SHEET

A4.0

GENERAL REQUIREMENTS:

- 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.
- 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.
- 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.
- 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.
- 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:

- BUILDING CODE: 2018 EDITION OF THE IBC WITH CITY/COUNTY AMENDMENTS.
RISK CATEGORY = II
- VERTICAL LOADS:

| LOCATION | LIVE / SNOW LOAD | DEAD LOAD |
|----------|------------------|-----------|
| ROOF | 30 PSF | 15 PSF |

- 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 = 0.516, Sm1 = 0.244 |
| SPECTRAL RESPONSE COEFFICIENTS | Sds = 0.344, Sd1 = 0.163 |
| HORIZONTAL SHEAR TRANSFER ELEMENTS: | |
| PLYWOOD – FLEXIBLE DIAPHRAM(S) | R = 6.5 |
| VERTICAL SHEAR TRANSFER ELEMENTS: | |
| INTERMEDIATE MASONRY SHEARWALL(S) | R = 3.5 |

- WIND DESIGN PARAMETERS (STRENGTH):

| | |
|---------------------------------|-------------------------|
| ULTIMATE WIND SPEED | 115 MPH (3 SECOND GUST) |
| WIND EXPOSURE | C |
| INTERNAL PRESSURE COEFFICIENT | +/-0.18 |
| COMPONENT AND CLADDING PRESSURE | 29.6 PSF |
| NET UPLIFT ON ROOF | 28.7 PSF |

FOUNDATION NOTES:

- THE SOIL DESIGN PARAMETERS LISTED BELOW HAVE BEEN APPROVED BY THE CITY/COUNTY DEVELOPMENT SERVICES DEPARTMENT, CONTINGENT THAT THE SOIL ON THE SITE PREDOMINATELY CONSISTS OF THE FOLLOWING PROPERTIES:

| |
|---|
| PLASTICITY INDEX (PI) = 15 OR LESS |
| EXPANSION INDEX (EI) = 20 OR LESS |
- THESE PLASTICITY/EXPANSION INDICES MUST BE DETERMINED IN A RECOGNIZED SOIL ANALYSIS LABORATORY. THEIR RESULTS SHOULD BE PROVIDED IN A GRADATION REPORT AT TIME OF PERMIT APPLICATION ALONG WITH THESE CALCULATIONS.

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 |
| LATERAL BACKFILL PRESSURE (RESTRAINED) | 50 PSF/FT |
| SITE CLASS | D |
- 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 NOTES (CONT):

| FOUNDATION BEARING DEPTH |
|--------------------------|
| 18" BELOW FINISHED GRADE |

- ALL FOUNDATIONS SHALL BEAR ON UNDISTURBED NATURAL SOIL OR 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.
- 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.
- BACKFILL AGAINST RESTRAINED WALLS SHALL NOT BE PLACED UNTIL EITHER THE WALLS ARE BRACED OR AFTER THE WALLS ARE SUPPORTED BY THE COMPLETION OF INTERIOR FLOOR SYSTEMS AND CONCRETE OR GROUT STRENGTH HAS REACHED THE 28 DAY STRENGTH LISTED BELOW.

CONCRETE:

- MINIMUM 28 DAY CONCRETE STRENGTH SHALL BE AS FOLLOWS:

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

- 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.

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

| 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.

- 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" | ± ¾" |
| SLABS ON GRADE | 1½" | ± ¼" |
| EXPOSED TO EARTH OR WEATHER – #5 AND SMALLER | 1½" | ± ¾" |
| EXPOSED TO EARTH OR WEATHER – #6 AND LARGER | 2" | ± ¾" |

- 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.
- NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY.
- 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.
- 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.
- 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.
- 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.
- COLD/HOT WEATHER CONCRETE CONSTRUCTION: PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH IN COMPLIANCE WITH ACI 305 AND 306.

GENERAL STRUCTURAL NOTES
(APPLY UNLESS NOTED OTHERWISE ON PLANS/DETAILS)

MASONRY (CONCRETE BLOCK):

MINIMUM 28 DAY MASONRY STRENGTH SHALL BE 1500 PSI.

- VERTICAL REINFORCING: #5 AT 8 INCHES ON CENTER FULL HEIGHT OF WALL, CENTERED IN GROUDED 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.
- 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.
- HORIZONTAL REINFORCING: (MINIMUM UNLESS NOTED OTHERWISE ON PLANS/DETAILS) (2) #4 BARS IN CENTER OF 16 INCH DEEP MINIMUM CONTINUOUS GROUDED BOND BEAM AT ELEVATED FLOOR AND ROOF LINES. FOR 8 INCH THICK WALLS, ONE #4 BAR IN CENTER OF 8 INCH DEEP CONTINUOUS GROUDED 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.

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

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

- 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 (4) 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.
- 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.
- 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.
- 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.
- BLOCK CONSTRUCTION: ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNLESS OTHERWISE NOTED) WITH ALL VERTICAL CELLS IN ALIGNMENT.
- 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:

- ASTM A615 GRADE 60 (FY = 60 KSI) DEFORMED BARS FOR ALL BARS #5 AND LARGER. ASTM A615 GRADE 40 (FY = 40 KSI) DEFORMED BARS FOR ALL BARS #4 AND SMALLER. GRADE 60 DEFORMED BARS SHALL BE USED FOR CONCRETE WALLS, BEAMS, ELEVATED SLABS AND COLUMN REINFORCING.
- WELDING OF REINFORCING BARS SHALL BE MADE ONLY TO ASTM A706 GRADE 60 BARS AND ONLY USING E30 SERIES RODS. WELDING OF REINFORCING BARS SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.
- 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:

- 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: |
|--|-----------------------------|
| 2X 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 |

- PLYWOOD: ALL PLYWOOD SHALL BE C-D OR C-C SHEATHING CONFORMING TO STANDARD PS 1-09. 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: |
|-----------|--------------------|--------------------|------------------|-------------------|
| ROOF | ½" | 32/16 | 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 DOC PS 2-10 EXPOSURE 1, AND SHALL HAVE A SPAN RATING EQUIVALENT TO OR BETTER THAN THE PLYWOOD IT REPLACES. ATTACHMENT AND THICKNESS (WITHIN ½") SHALL BE THE SAME AS THE PLYWOOD IT REPLACES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

- 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.
- 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.

PREFABRICATED WOOD TRUSSES SHALL BE HANDLED, STORED, ERECTED, AND BRACED DURING ERECTION IN ACCORDANCE WITH TRUSS PLATE INSTITUTE (TPI) AND WOOD TRUSS COUNCIL OF AMERICA (WTCA) BUILDING COMPONENT SAFETY INFORMATION (BCSI) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES, 2013 EDITION. PERMANENT BRACING, IF REQUIRED, TO BE IN ACCORDANCE WITH TRUSS MANUFACTURER DRAWINGS/CALCULATIONS.

SHOP DRAWINGS SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING POINTS. ALL CONNECTORS SHALL HAVE CURRENT ICC 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:

- 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 |
| REINFORCING STEEL FOR ALL CONCRETE/ MASONRY THAT REQUIRES INSPECTION | YES | PRIOR TO PLACEMENT OF CONCRETE OR GROUT |
| EPOXY ANCHORS | YES | DURING INSTALLATION OF ANCHORS |
| MASONRY (CMU) | YES | DURING PLACEMENT OF GROUT |

SPECIAL INSPECTIONS NOT LISTED ABOVE ARE NOT REQUIRED BY FSE HOWEVER, ADDITIONAL SPECIAL INSPECTIONS MAY BE REQUIRED BY THE BUILDING OFFICIAL.

- DESIGNATION OF SPECIAL INSPECTOR: A SPECIAL INSPECTION CERTIFICATE CORRESPONDING TO THE REQUIREMENTS IN THE TABLE ABOVE HAS BEEN PROVIDED WITH THESE DRAWINGS BY FSE FOR PERMITTING PURPOSES.
 - ACCORDING TO THE SI CERTIFICATE, THE SPECIAL INSPECTOR SHALL BE, OR WORK UNDER THE DIRECT SUPERVISION OF THE STRUCTURAL ENGINEER OF RECORD – FROST STRUCTURAL ENGINEERING(S) (928)776-4757. FSE IS NOT RESPONSIBLE FOR SPECIAL INSPECTIONS IF WE ARE NOT CONTACTED OR CONTRACTED TO DO SO.
 - TO SCHEDULE ANY SPECIAL INSPECTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE SPECIAL INSPECTOR AT LEAST ONE DAY IN ADVANCE.
 - AN ALTERNATE SPECIAL INSPECTOR MAY BE USED BY OBTAINING A NEW SI CERTIFICATE, AND MAKE THE NECESSARY NOTIFICATIONS TO ALL PARTIES INVOLVED. THE ALTERNATE SPECIAL INSPECTOR SHALL BE AN ARIZONA LICENSED CIVIL OR STRUCTURAL ENGINEER OR AN ICC CERTIFIED SPECIAL INSPECTOR.
 - FOR GEOTECHNICAL ITEMS LISTED ABOVE, THE SPECIAL INSPECTOR SHALL BE, OR WORK UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER OR THE BUILDING OFFICIAL.
- QUALITY ASSURANCE PROGRAM:
 - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
 - 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.
 - 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.

| ABBREVIATIONS | | | |
|--------------------|--------------------------|------------------|------------------------|
| A.B.C. ——— | AGGREGATE BASE COURSE | GLR (GLULAM) ——— | GLUED-LAMINATED BEAM |
| A/C ——— | AIR CONDITIONER | I.F.W. ——— | INSIDE FACE OF WALL |
| A.F.F. ——— | ABOVE FINISHED FLOOR | HORIZ ——— | HORIZONTAL |
| ALT. ——— | ALTERNATE | K(KIP) ——— | 1000 POUNDS |
| A.B. ——— | ANCHOR BOLT | L ——— | LIVE LOAD |
| Ø ——— | AT (MEASUREMENT) | LSB (#) ——— | POUNDS |
| BM ——— | BEAM | LLH ——— | LONG LEG HORIZONTAL |
| B.F.F. ——— | BELOW FINISHED FLOOR | LV ——— | LONG LEG VERTICAL |
| B.O.B. ——— | BOTTOM OF BEAM | MFR('S) ——— | MANUFACTURER('S) |
| B.O.D. ——— | BOTTOM OF DECK | MCJ ——— | MASONRY CONTROL JOINT |
| B.O.F. ——— | BOTTOM OF FOOTING | MECH'L ——— | MECHANICAL |
| BRG ——— | BEARING | N/A ——— | NOT APPLICABLE |
| C.I.P. ——— | CAST IN PLACE | N.T.S. ——— | NOT TO SCALE |
| C.L. ——— | CENTERLINE | O.C. ——— | ON CENTER |
| CLB ——— | CENTERLINE OF BEAM | O.F.W. ——— | OUTSIDE FACE OF WALL |
| CLF ——— | CENTERLINE OF COLUMN | ORP ——— | ORRISITE |
| CLF ——— | CENTERLINE OF FOOTING | P.C. ——— | PRECAST CONCRETE |
| CLW ——— | CLEAR | P.F. ——— | POUNDS PER LINEAR FOOT |
| CLR ——— | CONCRETE | PREFAB ——— | PREFABRICATED |
| CONC ——— | CONCRETE CONTROL JOINT | PSF ——— | POUNDS PER SQUARE FOOT |
| CONC S.J. ——— | CONCRETE SAWCUT JOINT | PSI ——— | POUNDS PER SQUARE INCH |
| CMU ——— | CONCRETE MASONRY UNIT | REIN ——— | REINFORCING |
| CONN ——— | CONNECTION | RLF ——— | POUNDS PER LINEAR FOOT |
| CONT ——— | CONTINUOUS | SLV ——— | SHORT LEG VERTICAL |
| Ø OR DIA. ——— | DEAD LOAD | SM ——— | SIMILAR |
| DWG(S) ——— | DRAWING(S) | SO ——— | SQUARE |
| E.O.S. ——— | EDGE OF SLAB | STD ——— | STANDARD |
| EQ ——— | EQUAL | T.L. ——— | TOTAL LOAD |
| EQUIP ——— | EQUIPMENT | T.O.B. ——— | TOP OF BEAM |
| EXP. JT (E.J.) ——— | EXPANSION JOINT | T.O.D. ——— | TOP OF DECK |
| E.W. ——— | EACH WAY | T.O.F. ——— | TOP OF FOOTING |
| F.F. ——— | FACE OF MEMBER | T.O.L. ——— | TOP OF LEDGER |
| F.O.M. ——— | FACE OF MEMBER | T.O.P. ——— | TOP OF PLATE |
| F.O.S. ——— | FACE OF STEEL | T.O.S. ——— | TOP OF STEEL |
| F.O.W. ——— | FACE OF WALL | T.O.W. ——— | TOP OF WALL |
| GA ——— | GAGE | TRP ——— | TYPICAL |
| GALV ——— | GALVANIZED | UN.O. ——— | UNLESS NOTED OTHERWISE |
| GSN ——— | GENERAL STRUCTURAL NOTES | VERT ——— | VERTICAL |
| | | W.F. ——— | WELDED WIRE FABRIC |
| | | W/ ——— | WITH |
| | | W/O ——— | WITHOUT |

| REVISIONS | BY |
|-----------|----|
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| | |
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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

GENERAL STRUCTURAL NOTES

DRAWING:

PROJECT:

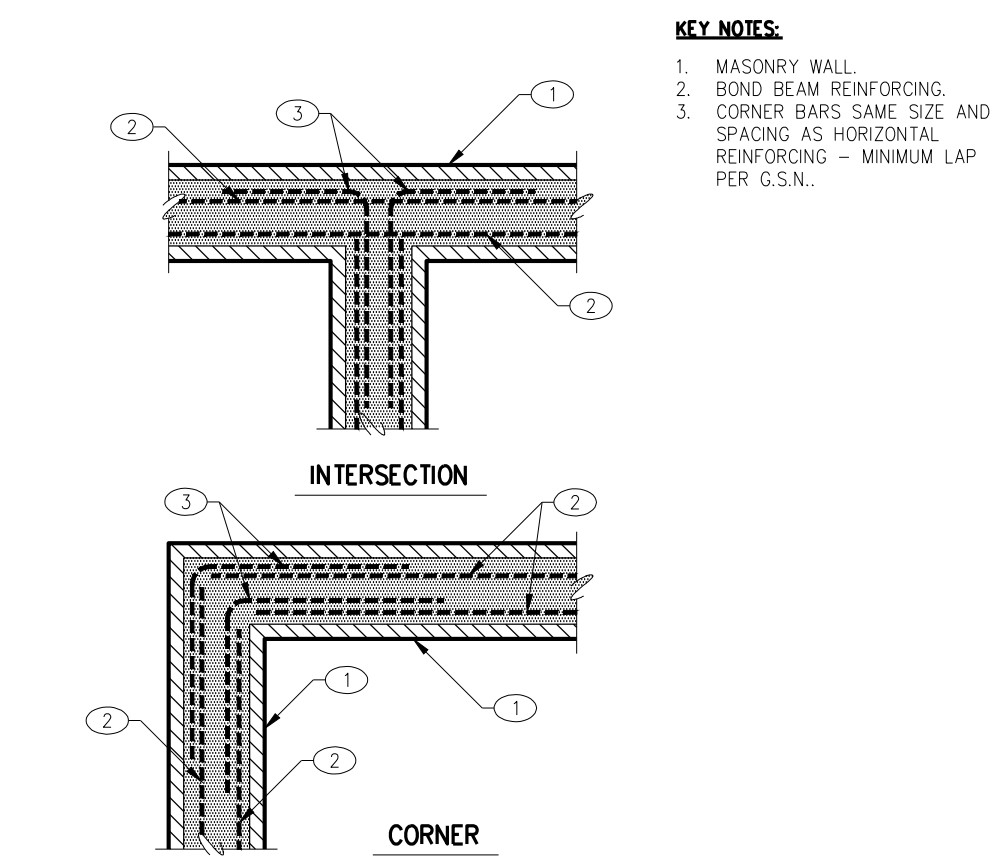
APN:

Vakula Garage
226 S. PLEASANT ST.
PRESCOTT, AZ 86303

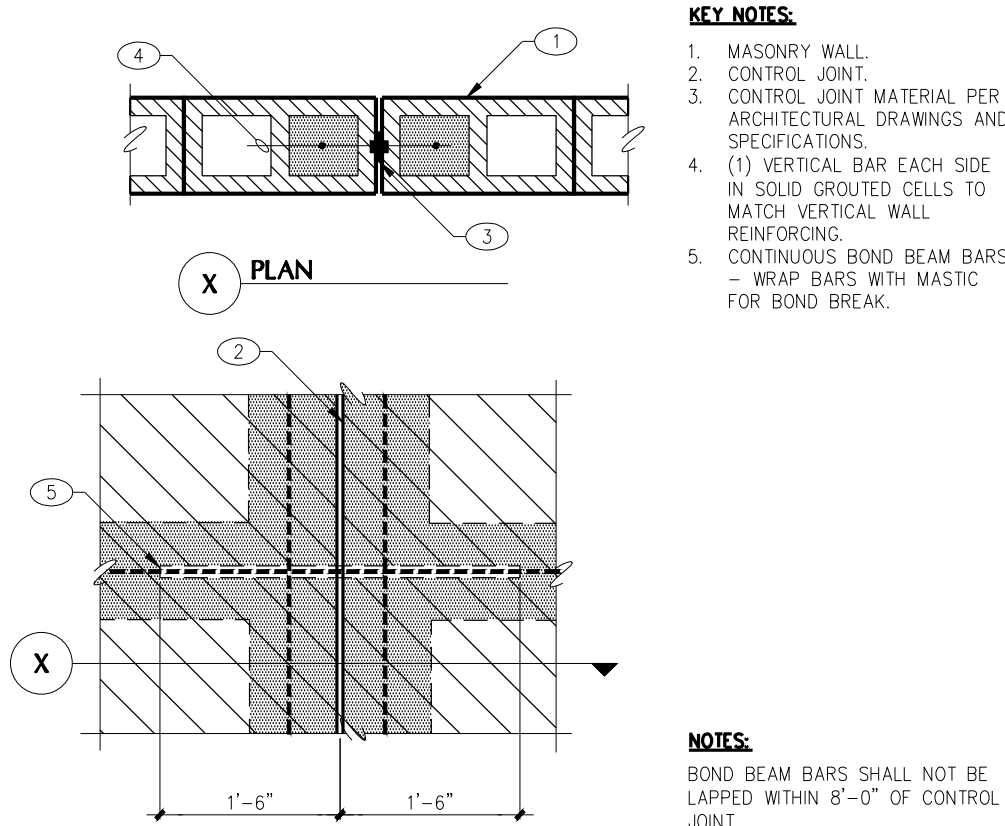
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| DRAWN BY MJS |
| CHECKED BY ANDY K. |
| PLOT DATE 4/4/23 |
| JOB NO. 2023-033 |
| SHEET |

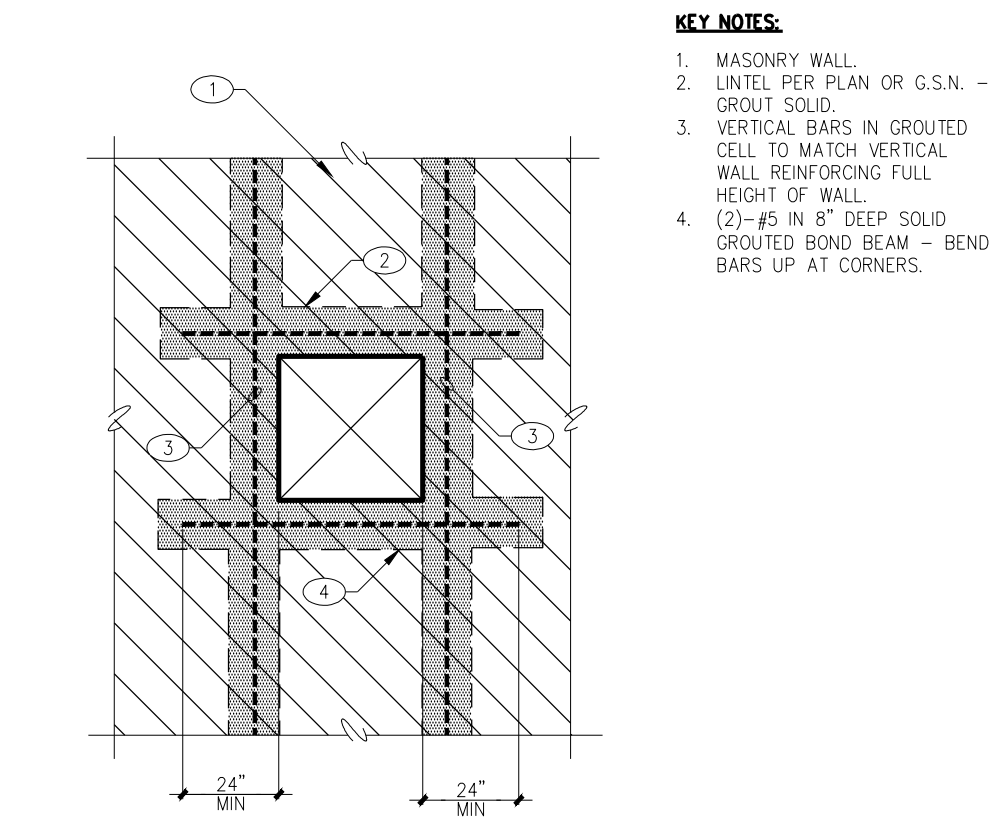
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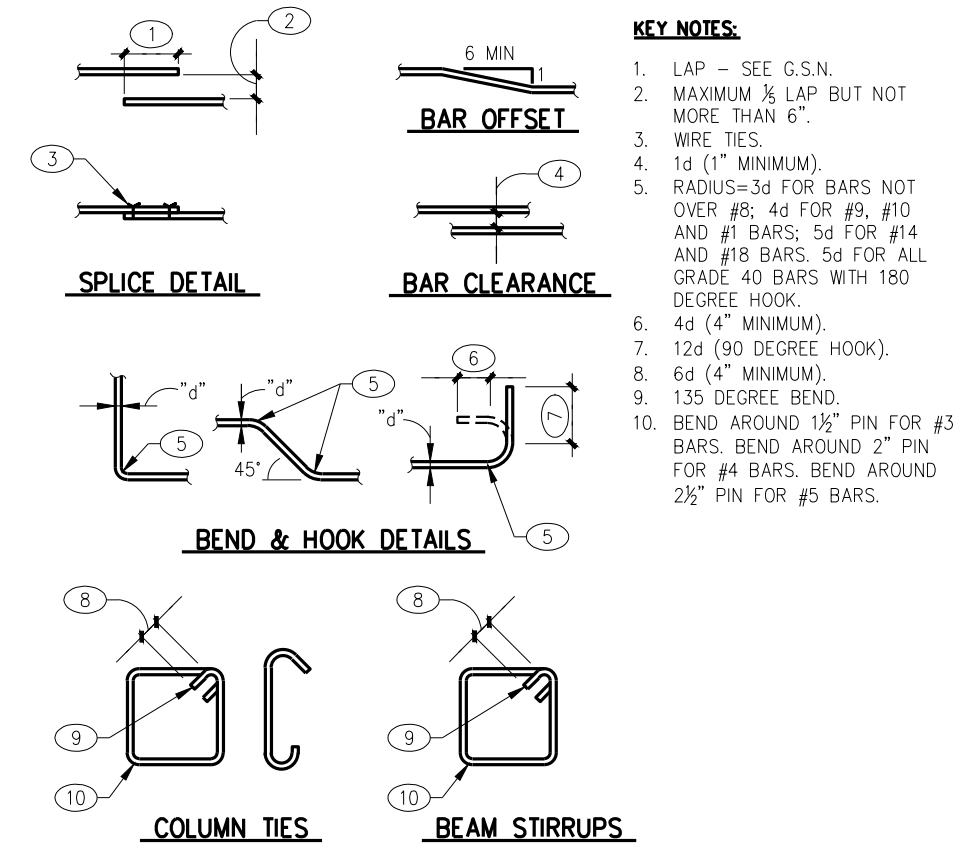
T4 **PLAN - CORNER REINFORCING IN MASONRY WALLS**
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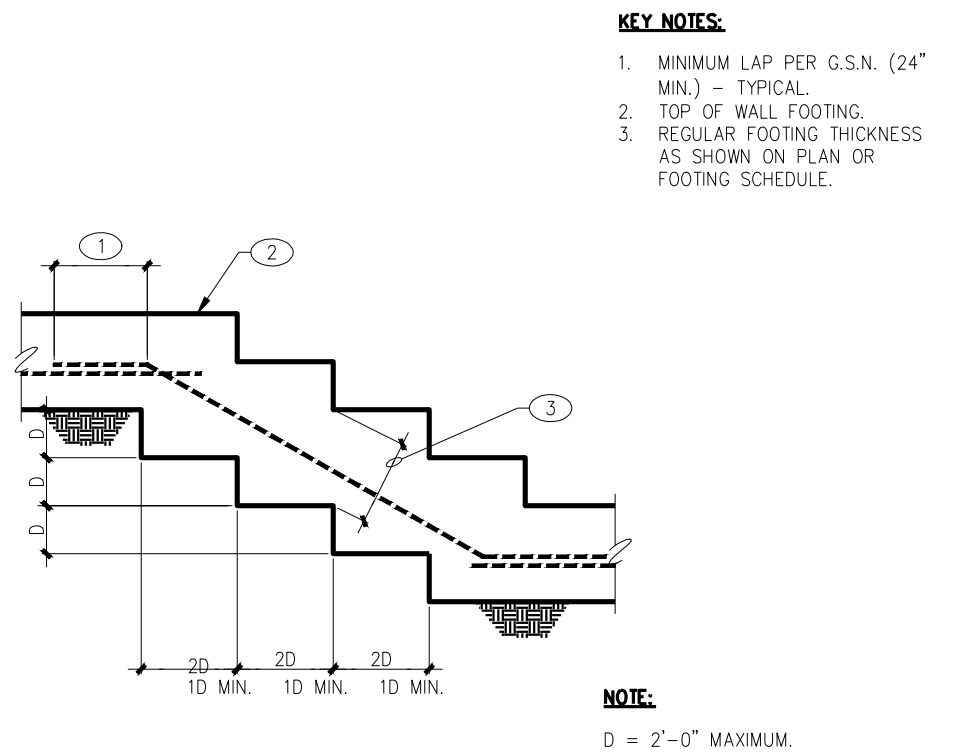
T5 **CONTROL JOINT IN MASONRY WALL**
02-M0301 NO SCALE



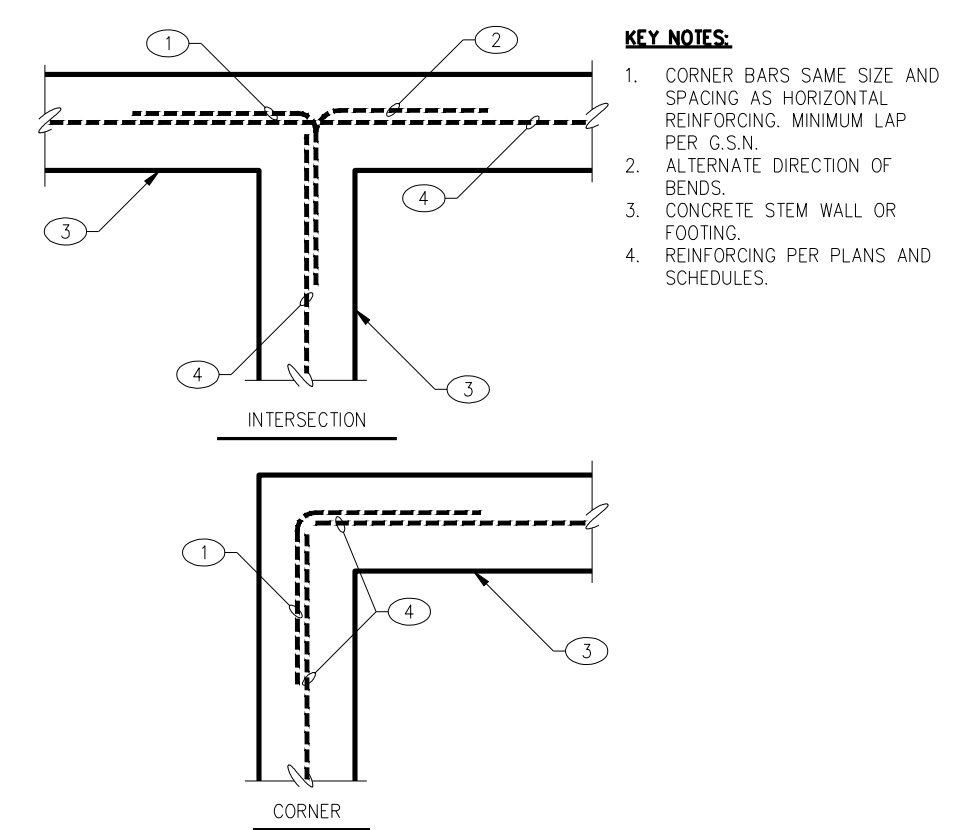
T6 **ELEVATION - TYPICAL OPENING IN MASONRY WALL**
02-M0401 NO SCALE



T1 **TYPICAL REINFORCING DETAILS**
02-C01 NO SCALE



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



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

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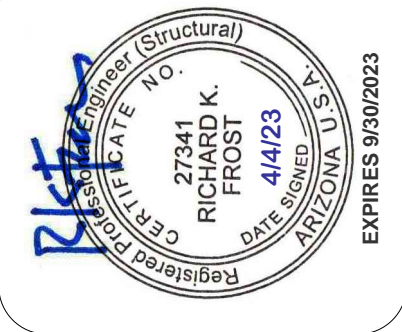
JOB NO.: 2023-033 PROJECT MANAGER: ANDY K. CAD OPERATOR: MJS

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

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W. Alan Kenson & Associates, P.C.

P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com

P.O. Box 11593
Prescott, AZ 86304

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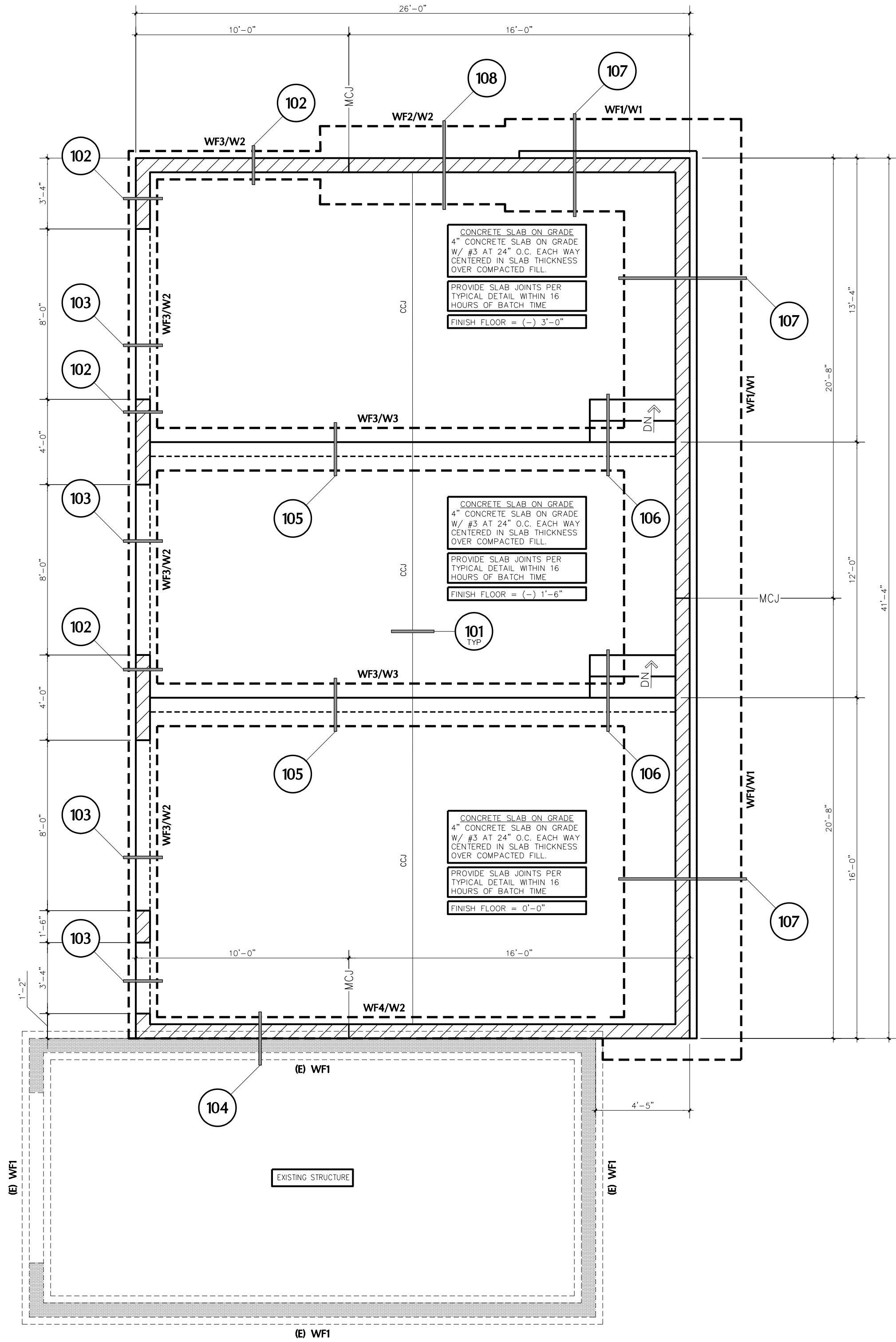
DRAWING: TYPICAL DETAILS T-SERIES

PROJECT: Vakula Garage
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PRESCOTT, AZ 86303

APN: 109-01-114A

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| PLOT DATE 4/4/23 |
| JOB NO. 2023-033 |
| SHEET |

S1.1



| 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. | |
| AS SEEN ON PLANS | INDICATES- |
| | 8" MASONRY (CMU) WALL. MINIMUM REINFORCING UNLESS NOTED OTHERWISE. VERTICAL: #5 AT 8" O.C. HORIZONTAL: #4 AT 48" O.C. MAXIMUM. |
| | EXISTING 8" CONCRETE WALL. |
| FOUNDATION PLAN NOTES | |
| 1. VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS. 2. FOR LOCATION OF DETAILS SEE SHEET INDEX ON SHEET S1. 3. ALL SCHEDULED MARK DESIGNATIONS MAY NOT NECESSARILY BE FOUND ON THIS PLAN. SCHEDULES ARE TYPICAL TO THIS PROJECT. 4. 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. 5. WF1, WF2, ETC. - AS SHOWN ON PLAN INDICATES A CONTINUOUS WALL FOOTING. SEE WALL FOOTING SCHEDULE FOR ADDITIONAL INFORMATION. 6. W1, W2, ETC. - AS SHOWN ON PLAN INDICATES WALL REINFORCING. SEE WALL REINFORCING SCHEDULE FOR ADDITIONAL INFORMATION. 7. CCJ - AS SHOWN ON PLAN INDICATES LOCATION OF EITHER A KEED OR A SAW CUT CONTROL JOINT IN THE SLAB ON GRADE AT CONTRACTOR'S OPTION. SEE GENERAL STRUCTURAL NOTES AND DETAIL 101. 8. VERIFY EXACT SIZE AND LOCATION OF DEPRESSED AND/OR RAISED SLABS WITH ARCHITECTURAL DRAWINGS. 9. FOR SIDEWALK AND LANDING LOCATIONS, SEE ARCHITECTURAL DRAWINGS. 10. MCJ - AS SHOWN ON PLAN INDICATES A MASONRY CONTROL JOINT IN A MASONRY WALL. SEE GENERAL STRUCTURAL NOTES AND TYPICAL DETAIL. | |

| CONCRETE WALL FOOTING (WF) SCHEDULE | | | | |
|--|------------|-----------|---|--------------|
| FOR CONSTRUCTION ABOVE FOOTING, SEE DETAILS. | | | | |
| | | | | |
| STRIP FOOTING | | | | |
| MARK | DIMENSIONS | | FOOTING REINFORCING | FOOTING TYPE |
| | WIDTH | THICKNESS | | |
| WF1 | | | SEE DETAIL 107 | |
| WF2 | | | SEE DETAIL 108 | |
| WF3 | 24" | 12" | (3) #4 CONTINUOUS | |
| WF4 | 16" | | SEE DETAIL 104 (2) #4 CONT. TOP AND BOTTOM | |

| WALL REINFORCING (W) SCHEDULE | | | |
|-------------------------------|------------|-------------------------|---------|
| MARK | THICKNESS | REINFORCING | REMARKS |
| W1 | | SEE DETAIL 107 | --- |
| W2 | 8" MASONRY | #5 AT 8" O.C. CENTERED | --- |
| W3 | 8" MASONRY | #5 AT 48" O.C. CENTERED | --- |

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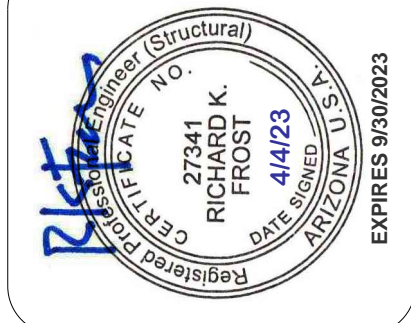
JOB NO.: 2023-033 PROJECT MANAGER: ANDY K. CAD OPERATOR: MJS

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File name: S2.dwg

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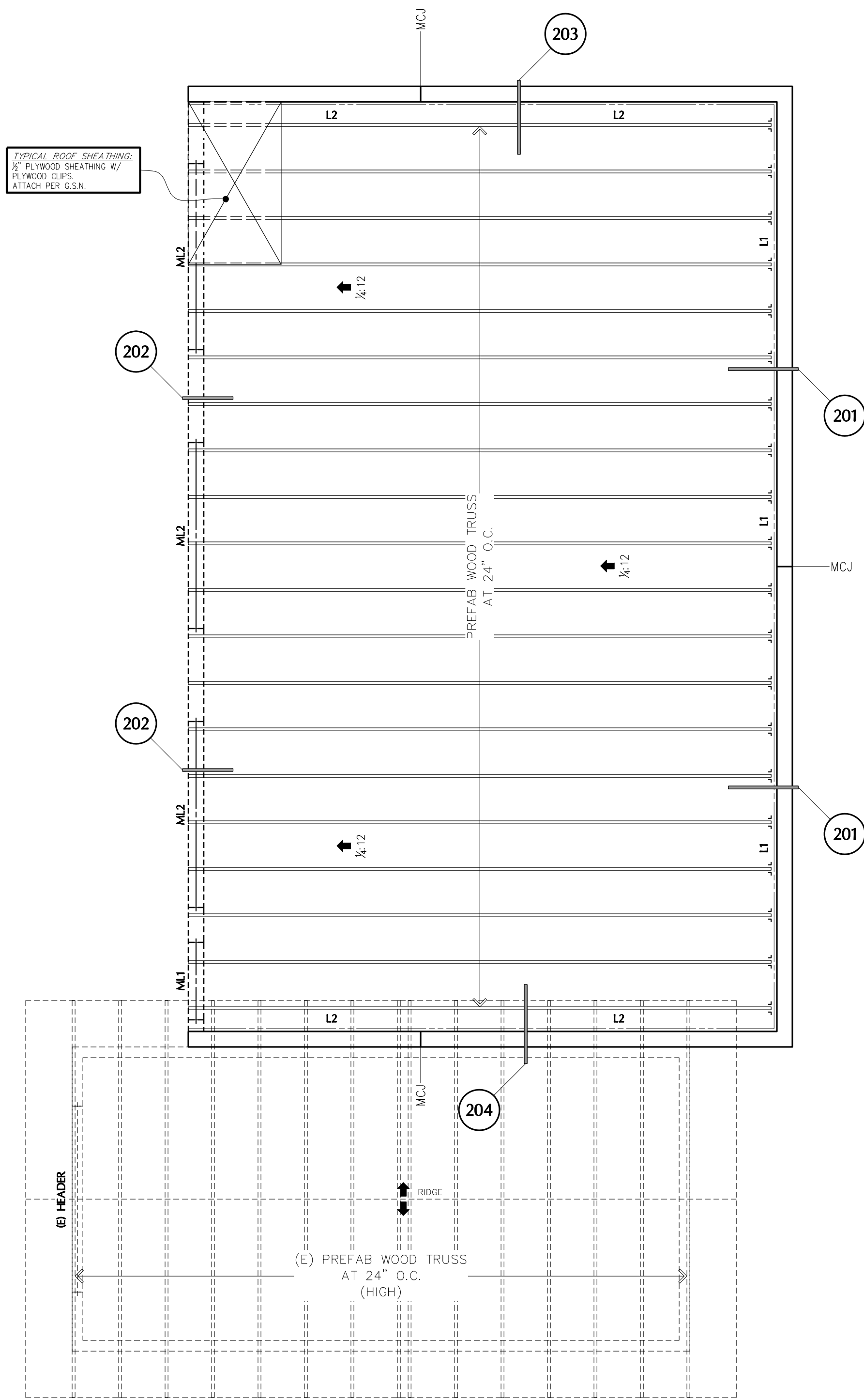
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P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com

ARCHITECTURE & PLANNING

DRAWING: FOUNDATION PLAN
PROJECT: Vakula Garage
226 S. PLEASANT ST.
PRESCOTT, AZ 86303
APN: 109-01-114A

| |
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| DRAWN BY MJS |
| CHECKED BY ANDY K. |
| PLOT DATE 4/4/23 |
| JOB NO. 2023-033 |
| SHEET |

S2



ROOF FRAMING PLAN

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

| WALL SCHEDULE | |
|-------------------------|--|
| NOTE | SEE PLAN SCHEDULES, DETAILS AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION. |
| AS SEEN ON PLANS | INDICATES- |
| | STRUCTURAL WALL BELOW (BEARING WALL, SHEARWALL, OR EXTERIOR WALL). |
| | NON-STRUCTURAL WALL BELOW. |
| | PARAPET WALL. |
| ROOF FRAMING PLAN NOTES | |
| 1. | VERIFY ALL DIMENSIONS WITH ALL ARCHITECTURAL DRAWINGS. |
| 2. | FOR LOCATION OF DETAILS SEE SHEET INDEX ON SHEET S1. |
| 3. | ALL SCHEDULED MARK DESIGNATIONS MAY NOT NECESSARILY BE FOUND ON THIS PLAN. SCHEDULES ARE TYPICAL TO THIS PROJECT. |
| 4. | ML1, ML2, ETC. - AS SHOWN ON PLAN INDICATES A MASONRY LINTEL. SEE MASONRY LINTEL SCHEDULE FOR ADDITIONAL INFORMATION. |
| 5. | FOR MISCELLANEOUS LINTELS NOT SHOWN, SEE G.S.N. MASONRY CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR SIZES AND LOCATIONS. |
| 6. | L1, L2, ETC. - AS SHOWN ON PLAN INDICATES A LEDGER. SEE LEDGER SCHEDULE FOR ADDITIONAL INFORMATION. |
| 7. | MCJ - AS SHOWN ON PLAN INDICATES A MASONRY CONTROL JOINT IN A MASONRY WALL. SEE G.S.N. AND TYPICAL DETAIL. JOINTS MAY BE SHOWN, BUT NOT NOTED ON THIS PLAN. SEE FOUNDATION PLAN FOR NOTED LOCATIONS. |
| 8. | FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITION. |

| MASONRY LINTEL (ML) SCHEDULE | | |
|--|--------|-------------------|
| | | |
| NOTE: 1. VERTICAL REINFORCING TO MATCH AND LAP WALL REINFORCING PER G.S.N. 2. EXTEND GROUT, OPEN END MASONRY UNITS AND REINFORCING 2'-0" PAST EACH JAMB. USE CORNER BARS WHERE 2'-0" CANNOT BE ACHIEVED. | | |
| MARK | HEIGHT | REINFORCING |
| ML1 | 24" | (1) #5 HORIZONTAL |
| ML2 | 24" | (2) #5 HORIZONTAL |

| LEDGER (L) SCHEDULE | | |
|---------------------|------|--|
| MARK | SIZE | CONNECTION |
| L1 | 3X10 | (2) 3/4"Ø BOLTS AT 32" O.C. (OR (1) 3/4"Ø BOLT AT 16" O.C. STAGGERED) |
| L2 | 3X6 | (1) 3/4"Ø BOLT AT 48" O.C. |

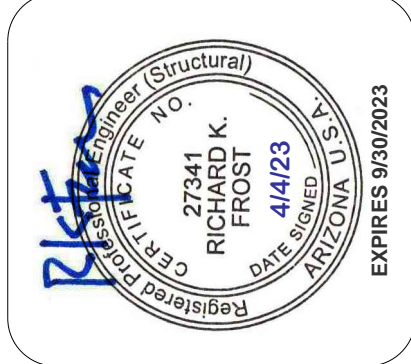
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JOB NO.: 2023-033 PROJECT MANAGER: ANDY K. CAD OPERATOR: MJS

FROST STRUCTURAL ENGINEERING
1678 Oaklawn Drive, Suite C phone: 928.776.4757
Prescott, Arizona 86305 info@frost-structural.com
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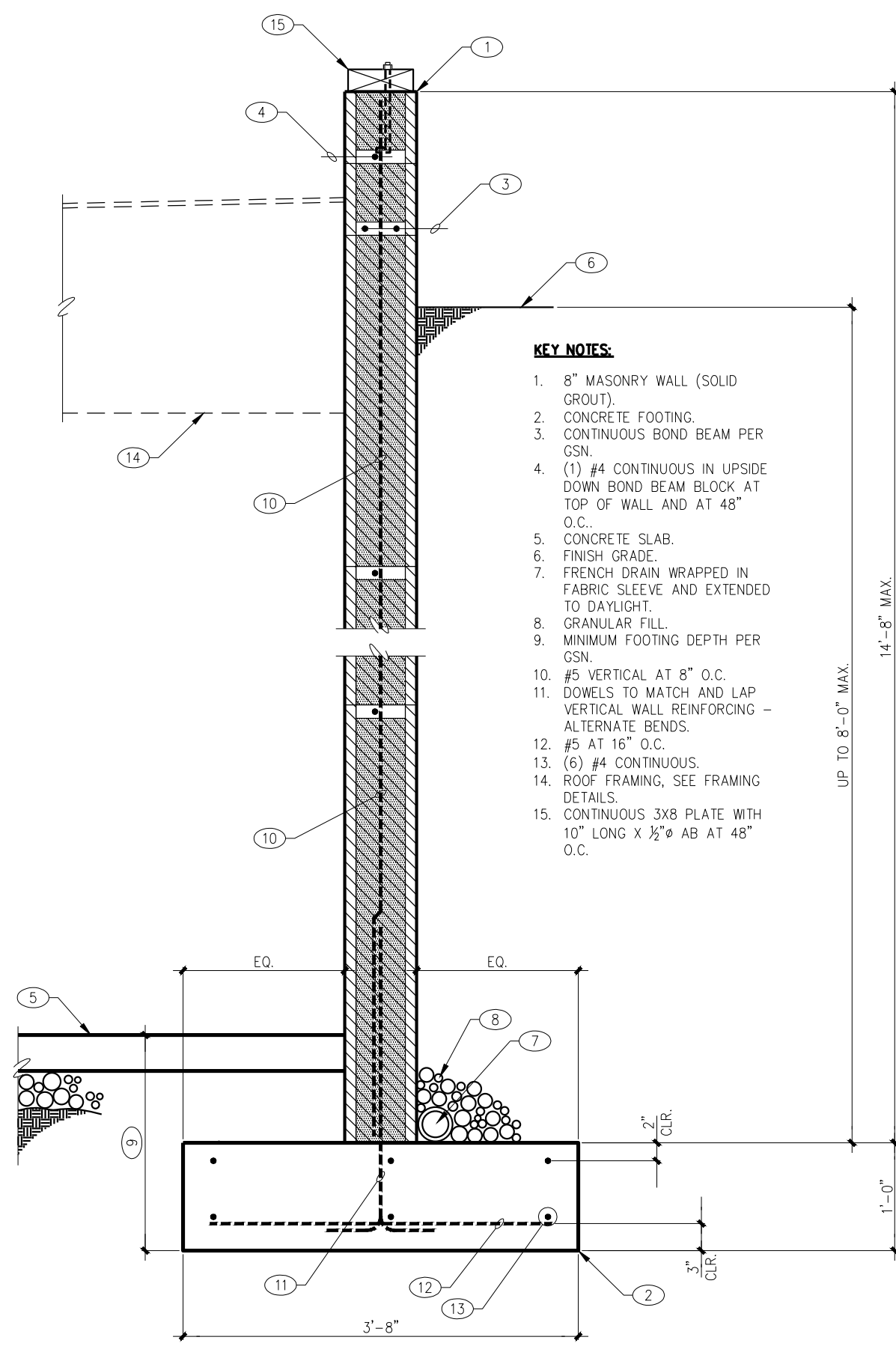
W. Alan Kenson & Associates, P.C.
P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: ROOF FRAMING PLAN
PROJECT: Vakula Garage
226 S. PLEASANT ST.
PRESCOTT, AZ 86303
APN: 109-01-114A

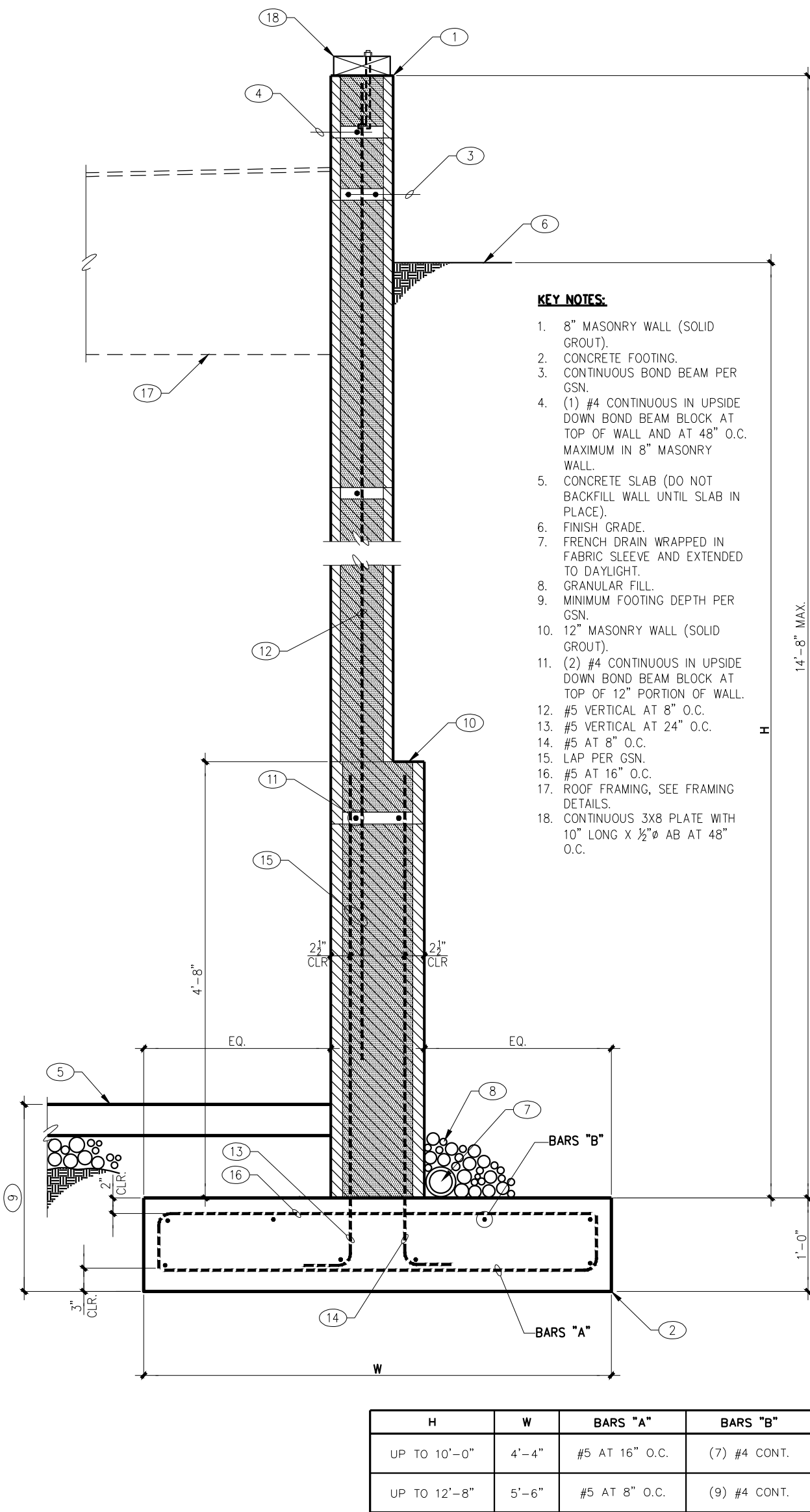
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| JOB NO. 2023-033 |
| SHEET |

S3

File name: S3.dwg

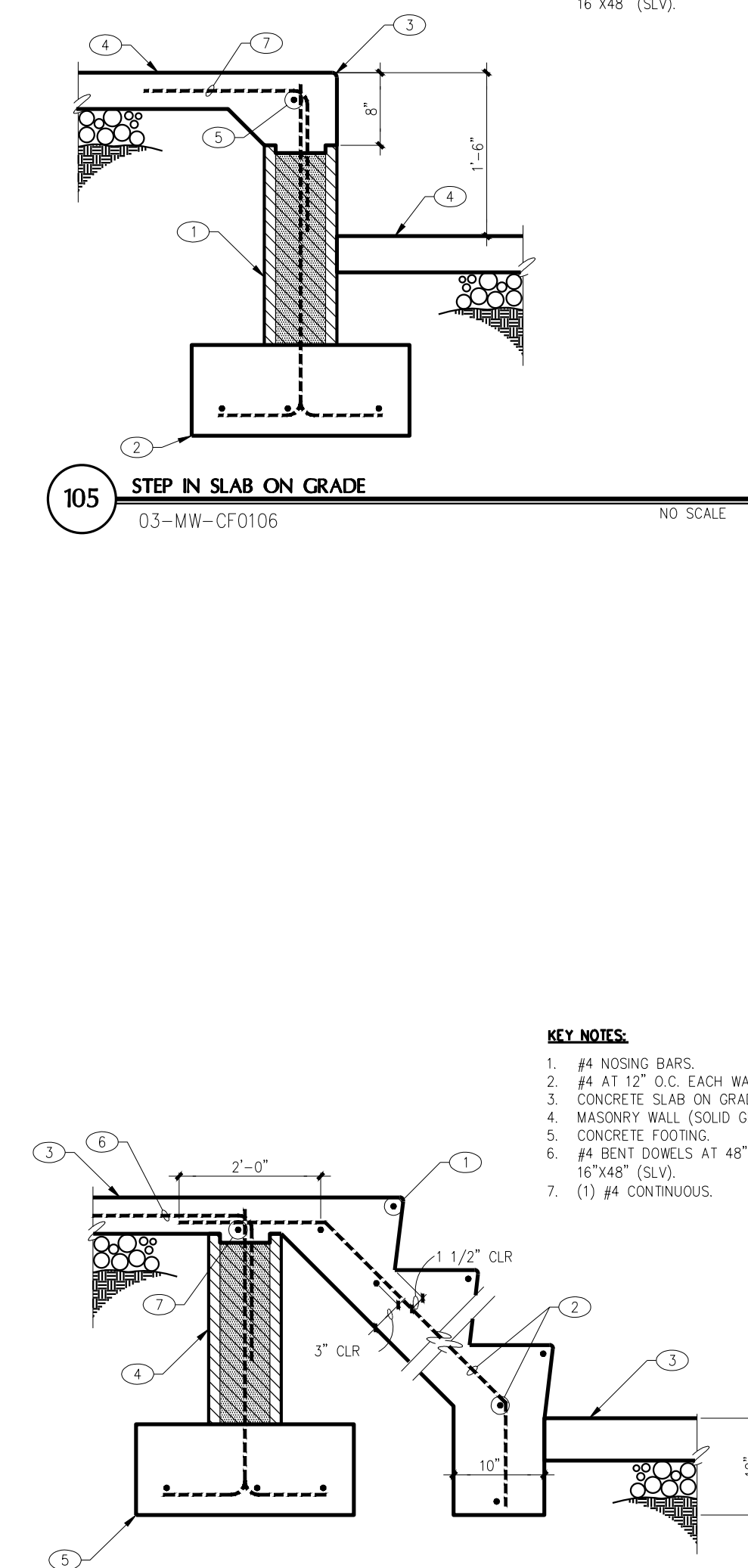


108 MASONRY WALL AT CONCRETE FOOTING NO SCALE

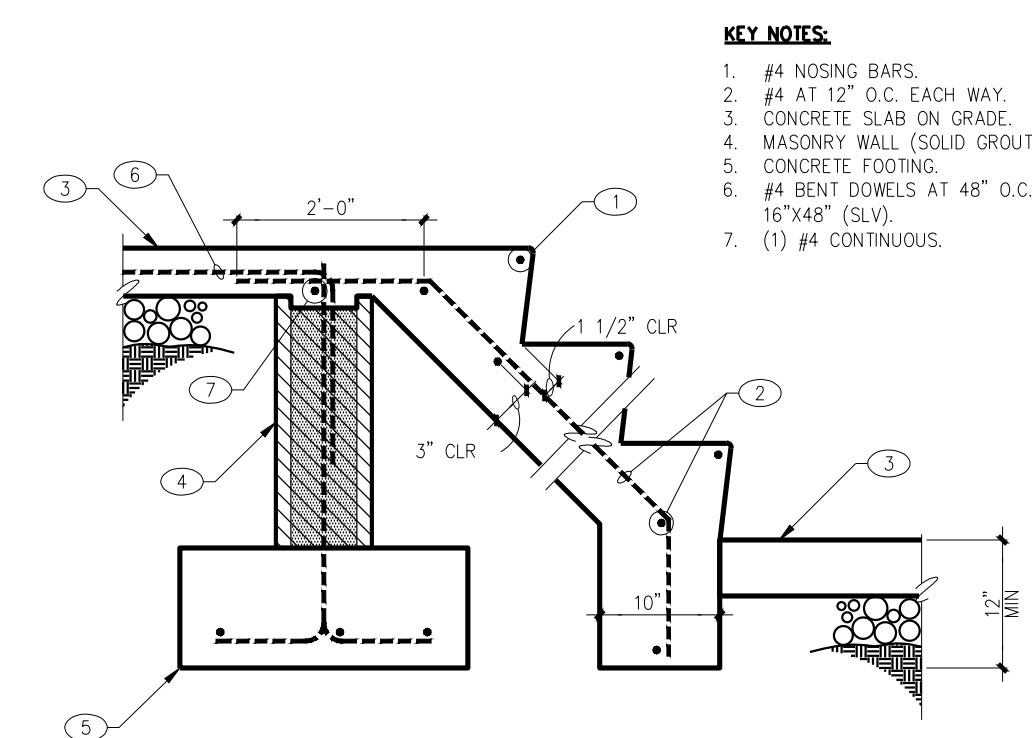


107 MASONRY WALL AT CONCRETE FOOTING NO SCALE

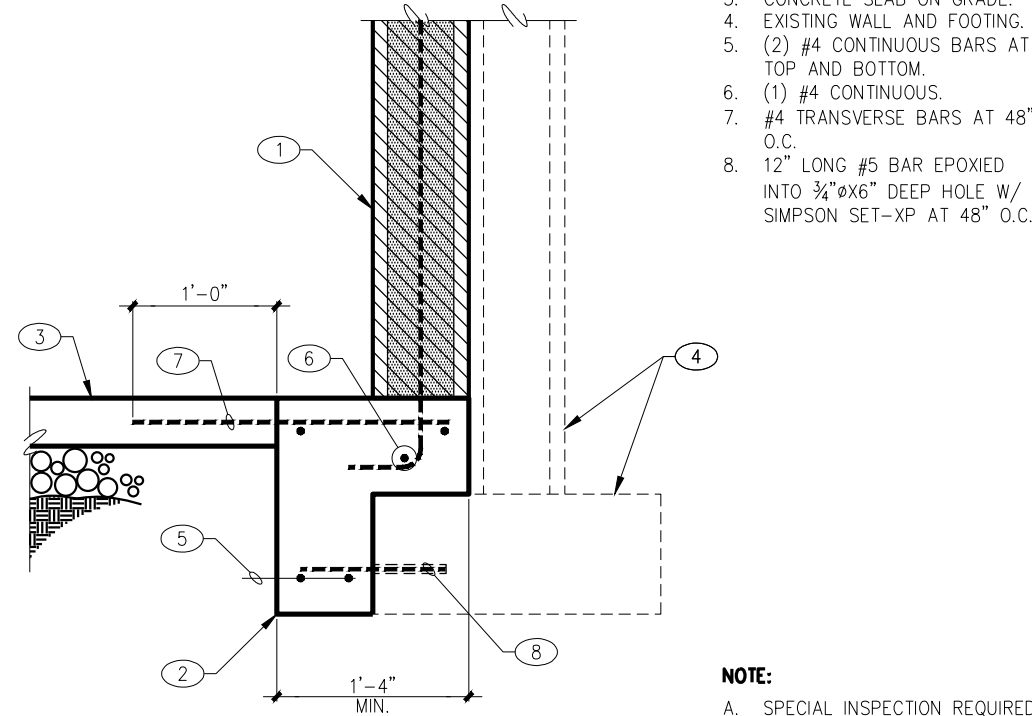
| H | W | BARS "A" | BARS "B" |
|--------------|-------|----------------|--------------|
| UP TO 10'-0" | 4'-4" | #5 AT 16" O.C. | (7) #4 CONT. |
| UP TO 12'-8" | 5'-6" | #5 AT 8" O.C. | (9) #4 CONT. |



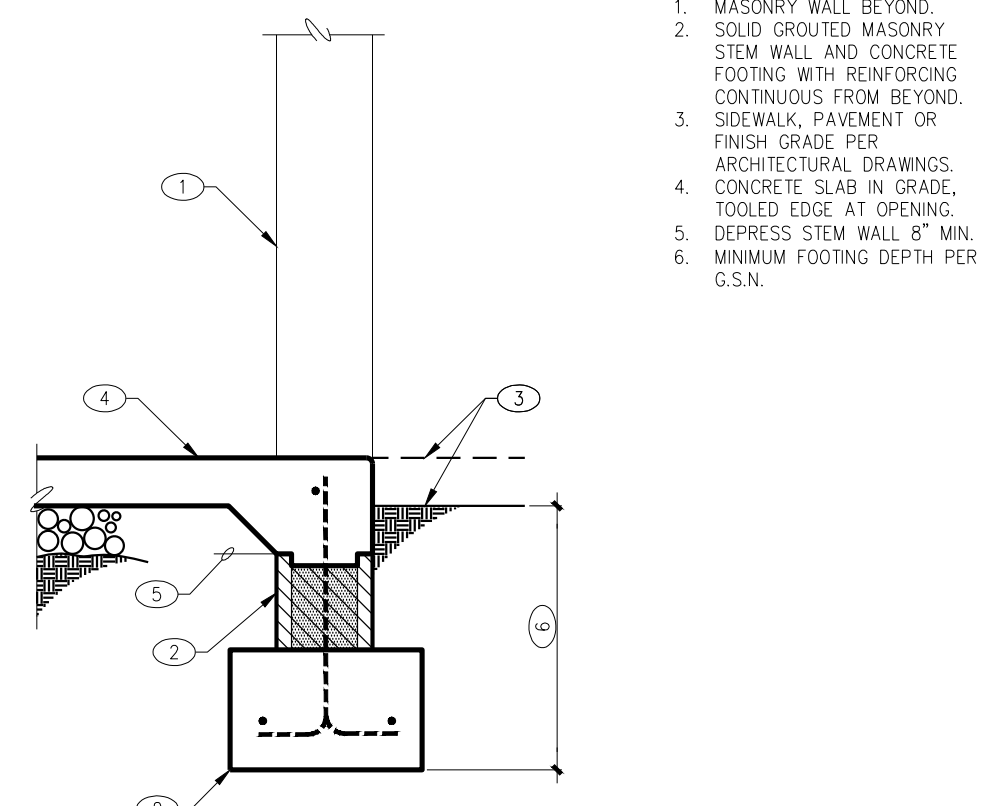
105 STEP IN SLAB ON GRADE NO SCALE



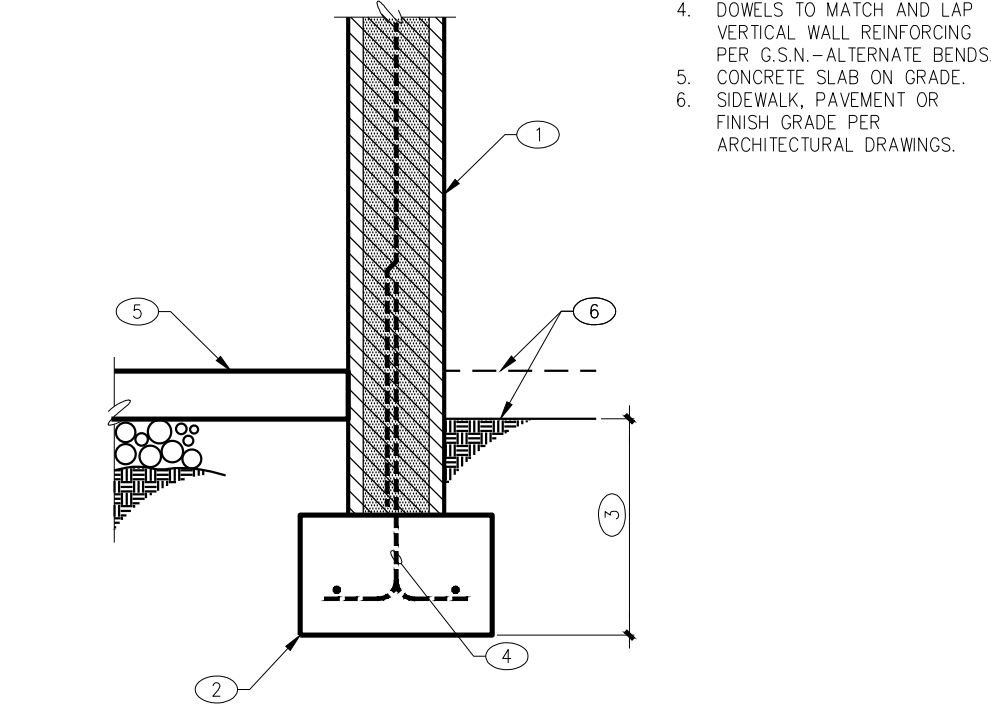
106 TYPICAL CONCRETE STAIRS ON GRADE NO SCALE



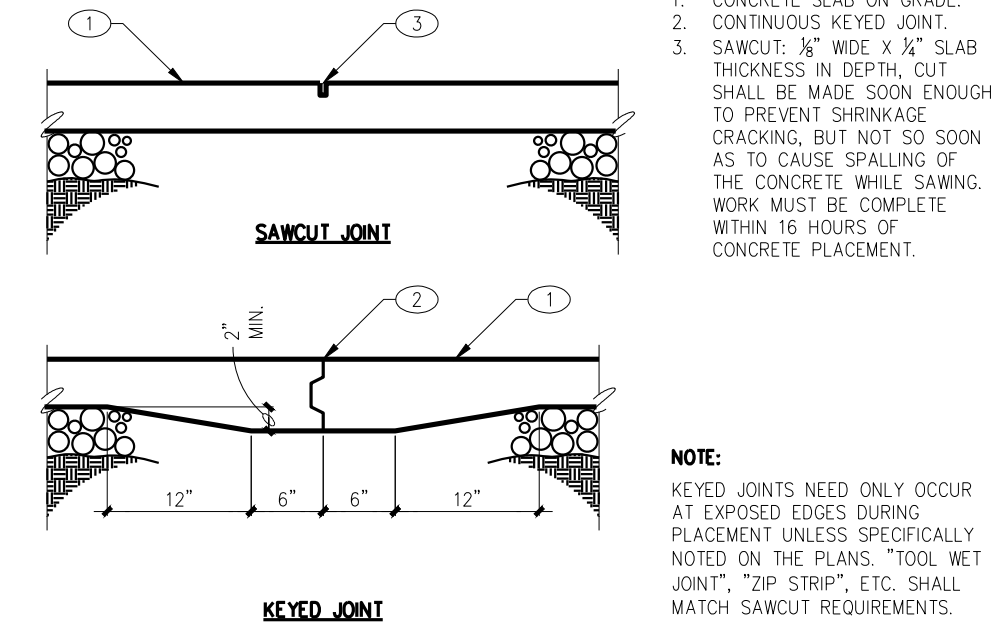
104 MASONRY WALL AT CONCRETE FOOTING NO SCALE



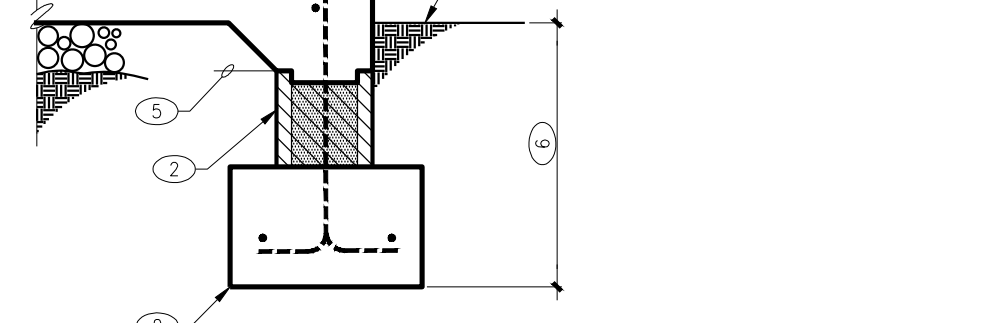
103 DOOR OPENING AT CONCRETE FOOTING NO SCALE



102 MASONRY WALL AT CONCRETE FOOTING NO SCALE



101 CONTROL JOINTS IN CONCRETE SLAB ON GRADE NO SCALE



105 STEP IN SLAB ON GRADE NO SCALE

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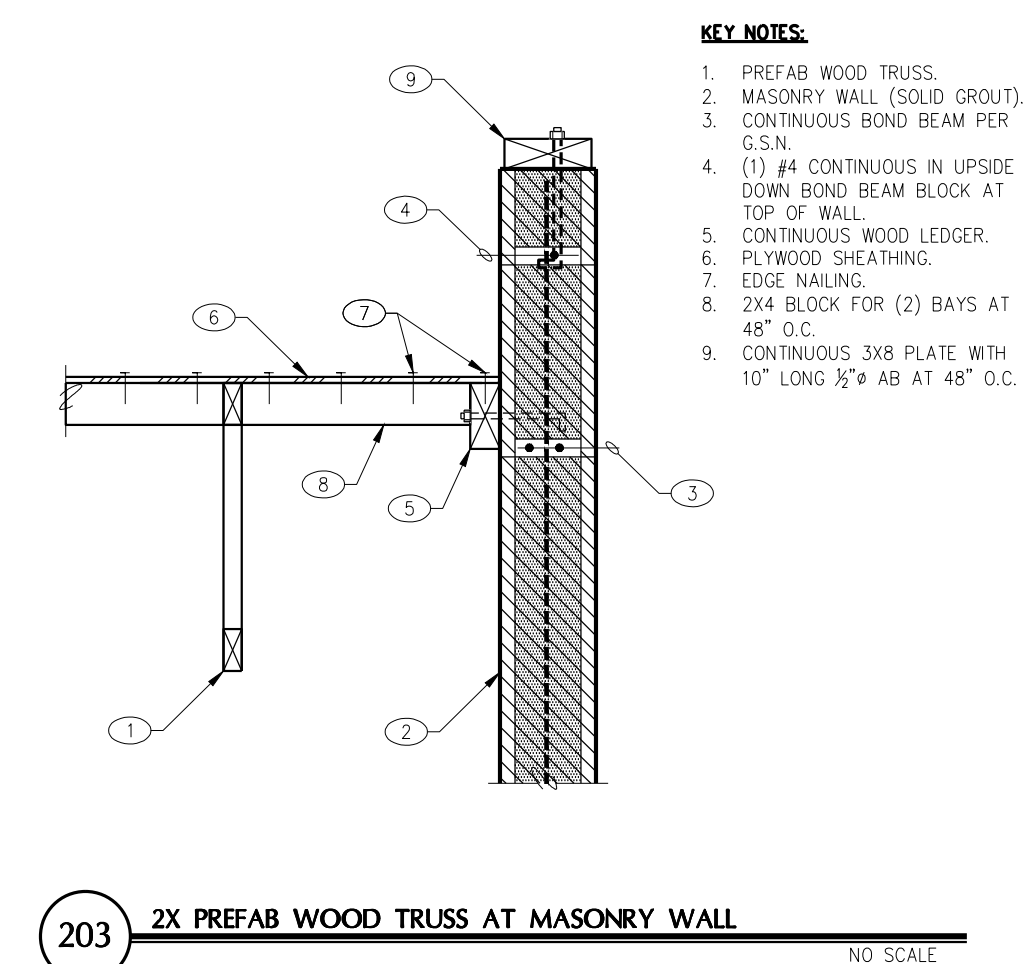
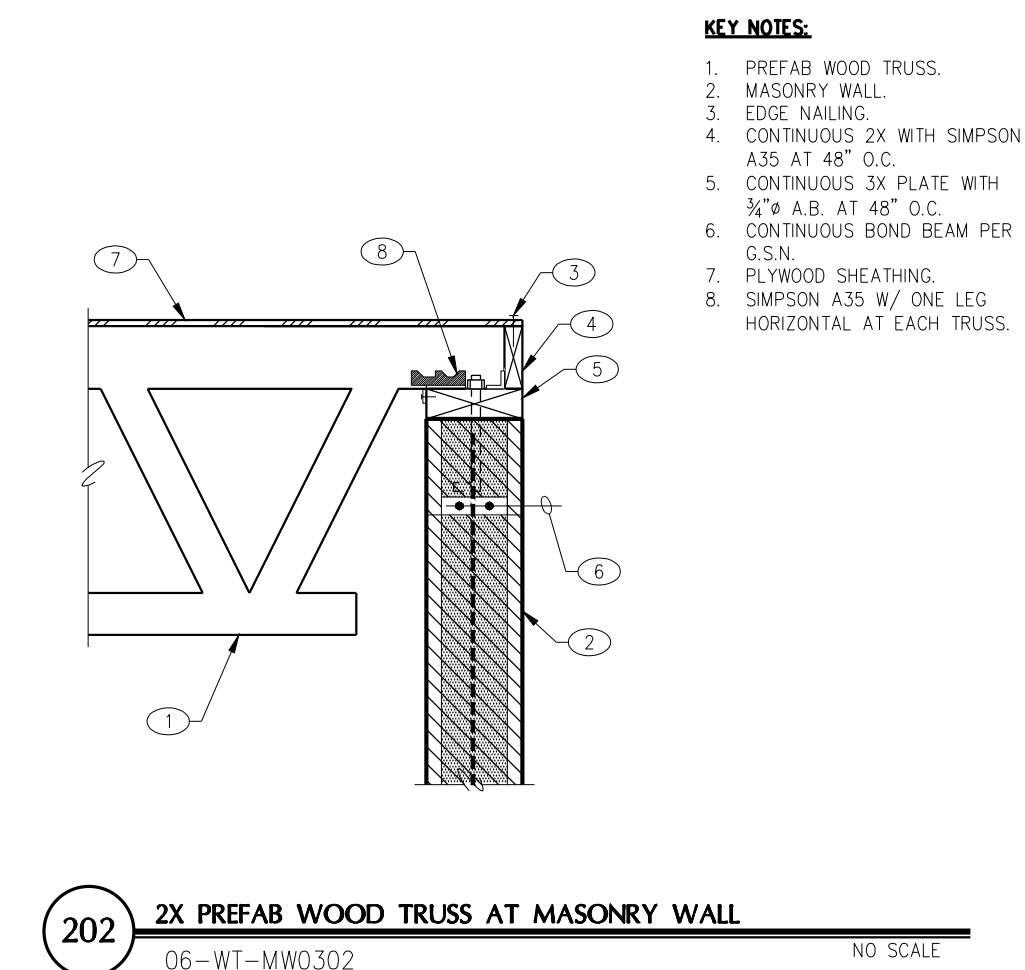
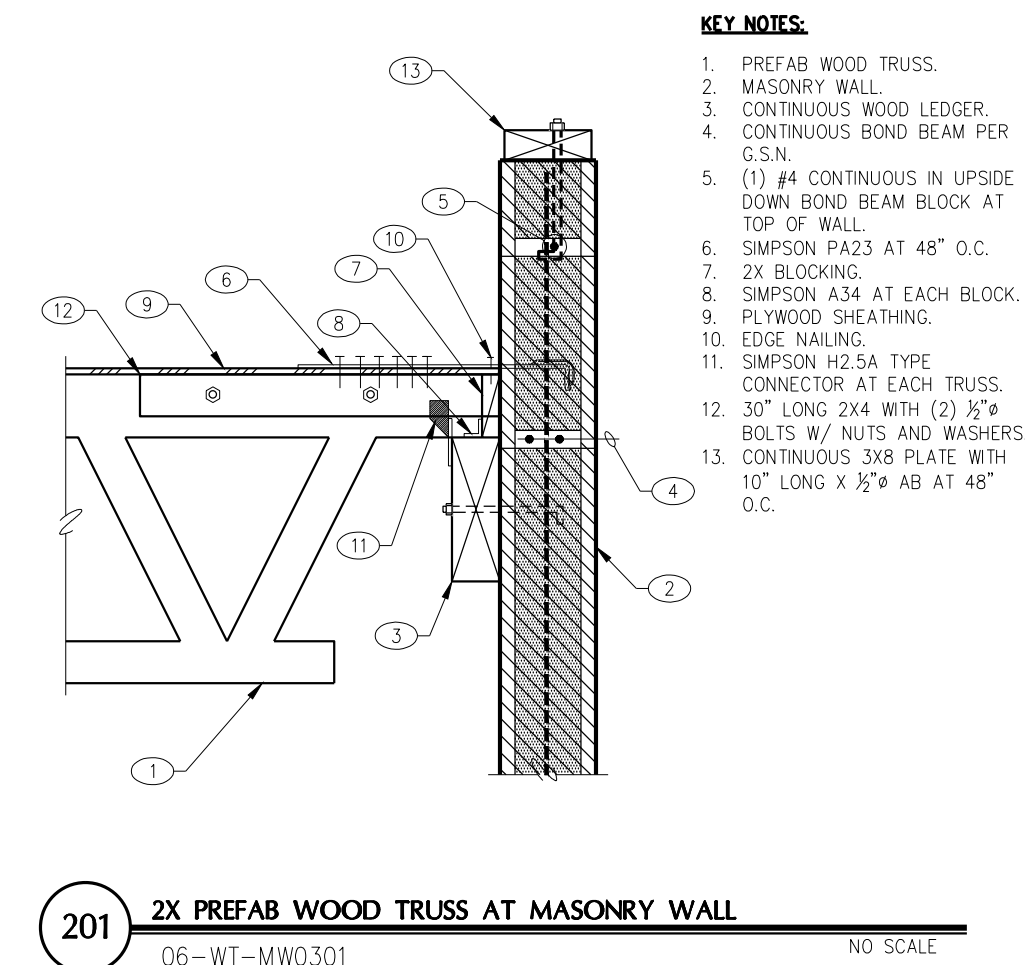


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P 928-443-5812 P.O. Box 11593
F 928-443-5815 Prescott, AZ 86304
email: waka@cableone.net
www.kenson-associates.com
ARCHITECTURE & PLANNING

DRAWING: FOUNDATION DETAILS 100-SERIES
PROJECT: Vakula Garage
226 S. PLEASANT ST.
PRESCOTT, AZ 86303
APN: 109-01-114A

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| PLOT DATE 4/4/23 |
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| SHEET |

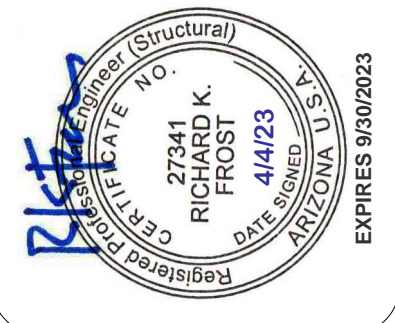




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P 928-443-5812
F 928-443-5815
email: waka@cableone.net
www.kenson-associates.com

ARCHITECTURE & PLANNING



DRAWING: FRAMING DETAILS 200-SERIES

PROJECT: Vakula Garage
226 S. PLEASANT ST.
PRESCOTT, AZ 86303

APN: 109-01-114A

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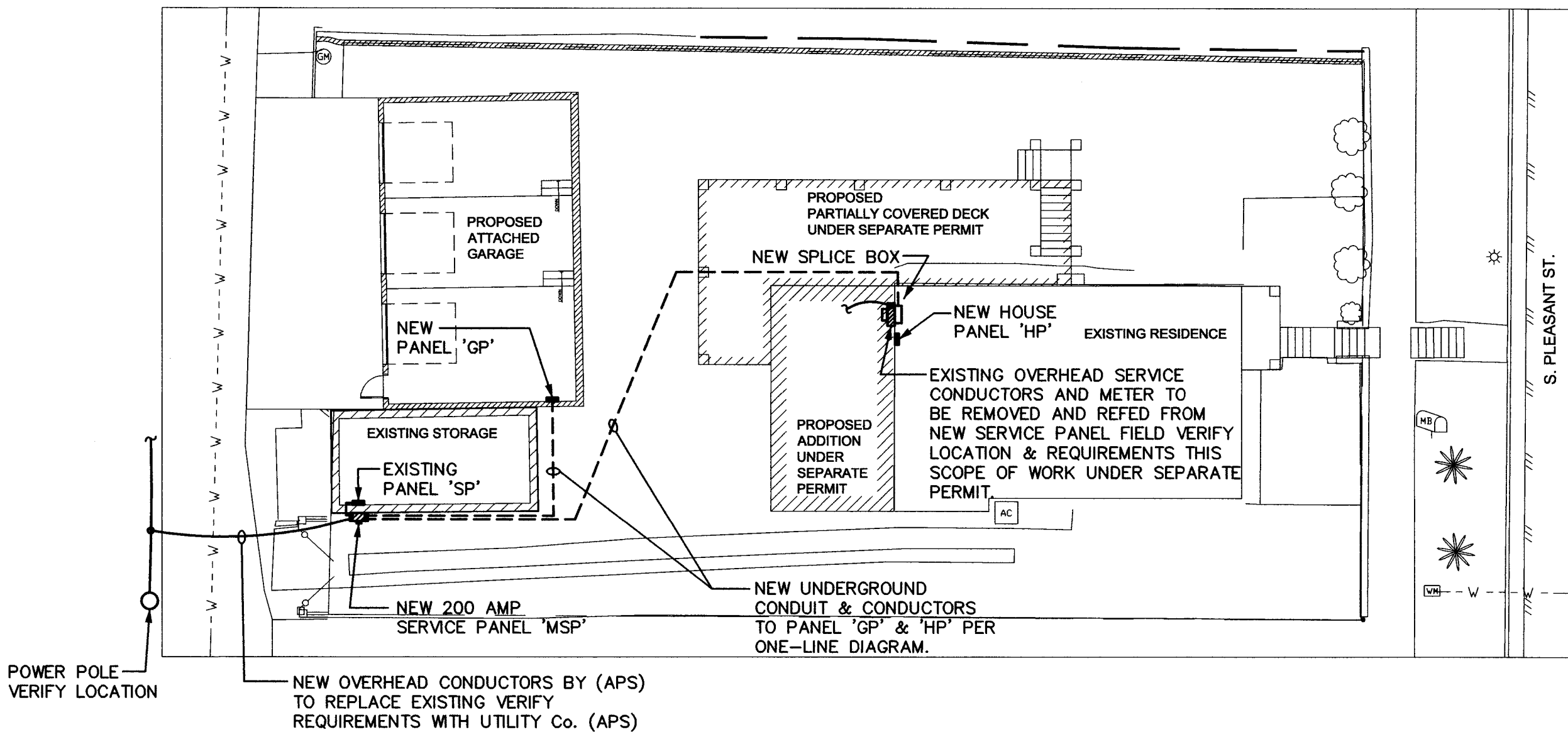
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ANDY K.

PLOT DATE
4/4/23

JOB NO.
2023-033

SHEET

\$5



ELECTRICAL SITE PLAN

SCALE 1" = 20'-0"

| PANELBOARD SP | | | | SCHEDULE | | | |
|---------------------------|------|---------|----|----------------------------------|----------|------|---------------------|
| MAINS: 50A MLO | | | | LOCATION: SEE PLAN | | | |
| VOLTAGE: 120/240V, 1Ø, 3W | | | | MOUNTING: SURFACE | | | |
| TYPE: EXISTING SIEMENS | | | | MIN. A.I.C.: 22/10K SERIES RATED | | | |
| CIRCUIT DESCRIPTION | BKR. | CR. NO. | ØA | ØC | CIR. NO. | BKR. | CIRCUIT DESCRIPTION |
| LIGHTS | 15 | 1 | | | 2 | | |
| RECEPTACLES | 20 | 3 | | | 4 | | |
| | 1 | 5 | | | 6 | | |
| | | 7 | | | 8 | | |
| | | 9 | | | 10 | | |
| | | 11 | | | 12 | | |
| | | 13 | | | 14 | | |
| | | 15 | | | 16 | | |
| | | 17 | | | 18 | | |
| | | 19 | | | 20 | | |
| | | 21 | | | 22 | | |
| | | 23 | | | 24 | | |
| TOTAL LOAD PER PHASE: | | | | HP | | | |

| PANELBOARD GP | | | | SCHEDULE | | | |
|---------------------------|------|---------|----|----------------------------------|----------|------|-------------------------------|
| MAINS: 70A MLO | | | | LOCATION: SEE PLAN | | | |
| VOLTAGE: 120/240V, 1Ø, 3W | | | | MOUNTING: SURFACE | | | |
| TYPE: GE, SQ D OR EQUAL | | | | MIN. A.I.C.: 22/10K SERIES RATED | | | |
| CIRCUIT DESCRIPTION | BKR. | CR. NO. | ØA | ØC | CIR. NO. | BKR. | CIRCUIT DESCRIPTION |
| LIGHTS - INTERIOR | 20 | 1 | | | 2 | | RECEPTACLE (GFCI) |
| LIGHTS - EXTERIOR SPARE | | 3 | | | 4 | | RECEPTACLE (GFCI) |
| SPARE | | 5 | | | 6 | | GARAGE DOOR OPENERS |
| SPARE | | 7 | | | 8 | | RECEPTACLES - EXTERIOR (GFCI) |
| CAR CHARGER | 50 | 9 | | | 10 | | SPACE HEATERS |
| | | 11 | | | 12 | | SPACE HEATERS |
| SPACE | | 13 | | | 14 | | SPACE |
| | | 15 | | | 16 | | |
| | | 17 | | | 18 | | |
| | | 19 | | | 20 | | |
| | | 21 | | | 22 | | |
| | | 23 | | | 24 | | |
| TOTAL LOAD PER PHASE: | | | | HP | | | |

ONE LINE GENERAL NOTES:

- SYSTEM SHOWN IS A TWO TIER SERIES RATED SYSTEM 22/10K. MANUFACTURER SHALL PROVIDE A UL LISTED SYSTEM TO MATCH THIS RATING.
- MOTOR SHORT CIRCUIT CONTRIBUTION IS LESS THAN 1% OF SYSTEM SHORT CIRCUIT AMPS.
- NO DESIGN CHANGES MAY BE MADE TO THE SYSTEM WITHOUT THE PRIOR APPROVAL OF THE DESIGN ELECTRICAL ENGINEER AND THE ELECTRICAL INSPECTOR

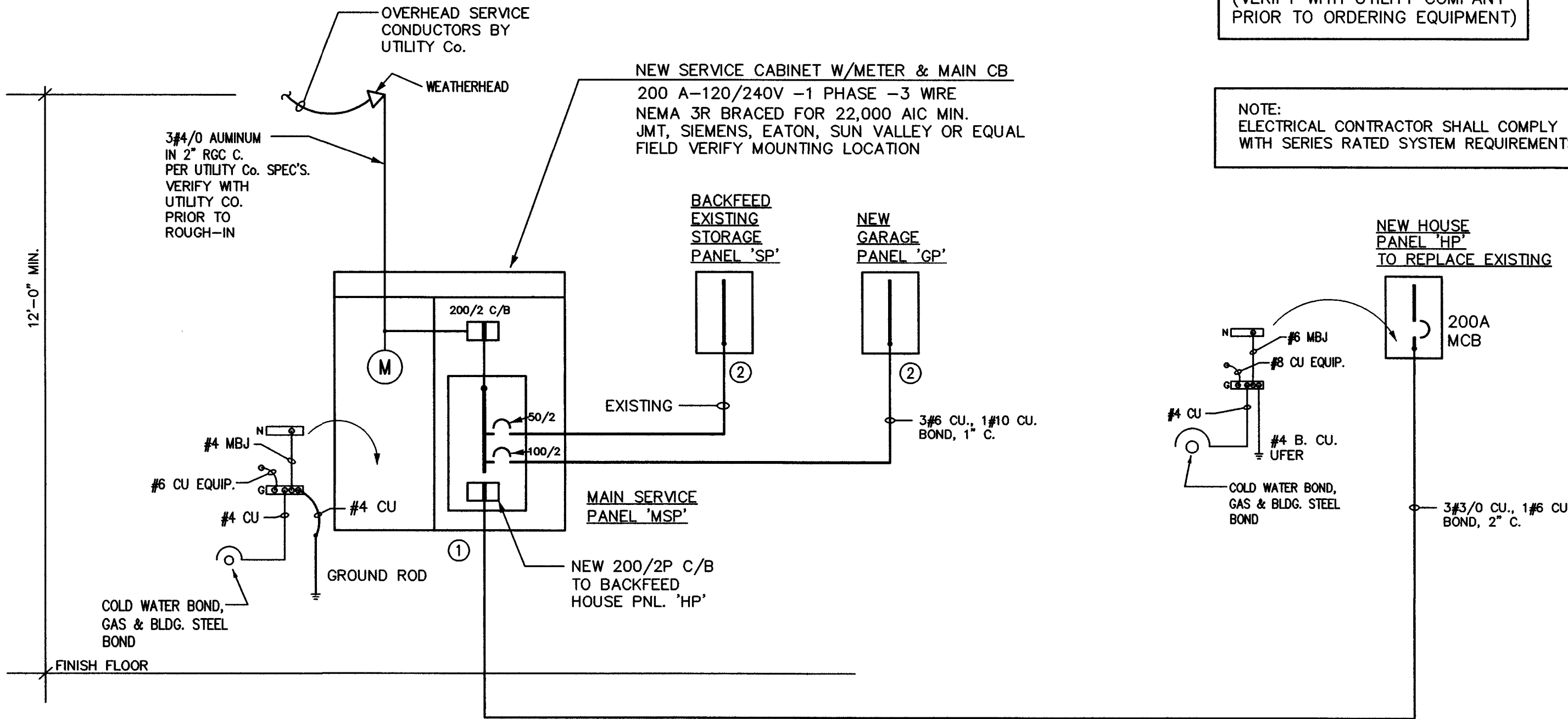
ONE LINE KEYNOTES:

- PROVIDE A PERMANENT LABEL READING "THIS CIRCUIT BREAKER IS PART OF A SERIES RATED SYSTEM WITH DOWNSTREAM PANELS 22/10K. 22,000 AMPS AVAILABLE. IDENTIFIED REPLACEMENT COMPONENT REQUIRED"
- PROVIDE A PERMANENT LABEL READING "CAUTION-SERIES RATED SYSTEM 22/10. IDENTIFIED REPLACEMENT COMPONENTS REQUIRED"

ELECTRICAL DESIGN & CADD SERVICES INC.
1600 LAMB LANE
PRESCOTT, AZ. 86305
PH: (928) 776-4900
CELL: (928) 420-1200
E-MAIL: archie@elecdesign.net

MAXIMUM AVAILABLE FAULT CURRENT = 14,318 AMPS SYMM (VERIFY WITH UTILITY COMPANY PRIOR TO ORDERING EQUIPMENT)

NOTE: ELECTRICAL CONTRACTOR SHALL COMPLY WITH SERIES RATED SYSTEM REQUIREMENTS.



EXISTING ELEC. ONE-LINE DIAGRAM - 'SES'

NOTE: ALL CONDUCTOR SIZES ARE BASED ON 'XHHW', 'THHN'/'THWN' COPPER.

N.T.S.

PANELBOARD SYMBOLS

- * CONTINUOUS DUTY/LARGEST MOTOR @ 125%
- ▲ AFI TYPE CIRCUIT BREAKER
- HACR TYPE CIRCUIT BREAKER
- △ GFCI TYPE CIRCUIT BREAKER

| PANELBOARD HP | | | | SCHEDULE | | | |
|------------------------------|------|---------|----|--|----------|------|----------------------------|
| MAINS: 200A MLO | | | | LOCATION: SEE PLAN (GARAGE VERIFY W/ARCHITECT) | | | |
| VOLTAGE: 120/240-1Ø-3W | | | | MOUNTING: SURFACE | | | |
| TYPE: SQ D OR EQUAL | | | | MIN. A.I.C.: 22/10K SERIES RATED | | | |
| CIRCUIT DESCRIPTION | BKR. | CR. NO. | ØA | ØC | CIR. NO. | BKR. | CIRCUIT DESCRIPTION |
| GEN. LIGHTING/REC'S. (AFCI) | 20 | 1 | | | 2 | 1 | MASTER BATHROOM RECEPT'S. |
| | | 3 | | | 4 | | |
| | | 5 | | | 6 | | KIT. APPLIANCE RECEPT'S. |
| | | 7 | | | 8 | | |
| | | 9 | | | 10 | | |
| | | 11 | | | 12 | | |
| DISHWASHER | | 13 | | | 14 | | REFRIGERATOR/FREEZER |
| COMPACTOR | | 15 | | | 16 | | SPARE |
| MICROWAVE | | 17 | | | 18 | | WATER HEATER (IF REQUIRED) |
| EXHAUST HOOD | | 19 | | | 20 | 2 | |
| DISPOSAL | | 21 | | | 22 | 50 | RANGE |
| COFFEE SYSTEM (IF REQUIRED) | | 23 | | | 24 | 2 | |
| WARMING DRAWER (IF REQUIRED) | | 25 | | | 26 | 1 | RESTROOM RECEPT. (GFCI) |
| SPARE | | 27 | | | 28 | | RESTROOM RECEPT. (GFCI) |
| SPARE | | 29 | | | 30 | | SPARE |
| LAUNDRY WASHER | 30 | 31 | | | 32 | | FURNACE F-1 |
| LAUNDRY DRYER | | 33 | | | 34 | | FURNACE F-2 |
| | | 35 | | | 36 | | A/C CONDENSING UNIT AC-2 |
| A/C CONDENSING UNIT AC-1 | 50 | 37 | | | 38 | 2 | SPACE |
| | | 39 | | | 40 | | SPACE |
| SPACE | | 41 | | | 42 | | SPACE |
| TOTAL LOAD PER PHASE: | | | | HP | | | |

ELEC. FAULT CURRENT CALCULATIONS

| PANEL 'HP' | PANEL 'GP' |
|---|---|
| $f = \frac{2 \times 60' \times 14,318 \text{ A}}{10740 \times 240V} = .666$ | $f = \frac{2 \times 20' \times 8,590 \text{ A}}{2430 \times 240V} = .589$ |
| $M = \frac{1}{1 + .666} = .148$ | $M = \frac{1}{1 + .589} = .629$ |
| $I_{sc} = 14,318 \text{ A} \times .600 = 8,590 \text{ AMPS}$ | $I_{sc} = 8,590 \text{ A} \times .629 = 5,403 \text{ AMPS}$ |

TOTAL SERVICE PANEL 'MSP' ELEC. LOAD CALC'S:

| | |
|--|-------------|
| 200 AMP SERVICE ENTRANCE SECTION: | |
| GENERAL LIGHTING & RECEPT'S. (3,000 SQ. FT. @ 5VA/SQ. FT.) | = 15,000 VA |
| SMALL APPLIANCE LOAD: 3 CKTS. @ 1500 VA | = 4,500 VA |
| DISHWASHER: 1 @ 1200 VA | = 1,200 VA |
| COMPACTOR: 1 @ 830 VA | = 830 VA |
| DISPOSAL: (1) @ 1590 VA | = 1,590 VA |
| MICROWAVES: (1) @ 1500 VA | = 1,500 VA |
| RANGE COOKTOP | = 12,000 VA |
| REFRIGERATOR/FREEZER | = 1,500 VA |
| WATER HEATER (ELECTRIC FIELD VERIFY) | = 4,500 VA |
| U.C. REFRIGERATORS 1 @ 750 VA (IF REQUIRED) | = 750 VA |
| LAUNDRY (WASHER) LOAD: 1 @ 1500 VA | = 1,500 VA |
| LAUNDRY (DRYER) LOAD: 1 @ 5000 VA | = 5,000 VA |
| EXTERIOR RECEPT'S. | = 1,400 VA |
| EXTERIOR LIGHTING: | = 1,400 VA |
| STORAGE PANEL 'SP' | = 4,000 VA |
| GARAGE PANEL 'GP' | = 10,000 VA |

SUB-TOTAL = 66,670 VA

FIRST 10 KVA AT 100% = 10,000 VA
REMAINDER AT 40% (56,670VA X 0.4) = 22,668 VA

HEATING & COOLING LOAD: TOTAL = 32,668 VA

| | |
|--|------------|
| FURNACES INDOOR UNIT FC-1 (1 @ 9.0A x 120V) @ 100% | = 1,080 VA |
| FURNACES INDOOR UNIT FC-2 (1 @ 7.5A x 230V) @ 100% | = 1,725 VA |
| A/C COND'G. UNIT HP-1 (1 @ 20.3A x 230V) @ 100% | = 4,669 VA |
| A/C COND'G. UNIT HP-2 (1 @ 28.2A x 230V) @ 100% | = 6,486 VA |

GRAND TOTAL = 46,628 VA

÷ 240 V

TOTAL PANEL LOAD = 194.2 AMPS

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| | |



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

DRAWING: Electrical One-Line Diagram, Panel Schedules and Calc's.
PROJECT: Vakula Garage
226 S. Pleasant St.
Prescott, AZ 86303
APN: 109-01-114A

DRAWN BY
CHECKED BY
DATE
June 15th, 2023
JOB NO.
790
SHEET

E1.1