

TERMITE SPECIFICATIONS:

1. A PERMANENT SIGN WHICH IDENTIFIES THE TERMITE TREATMENT PROVIDER AND NEED FOR RE-INSPECTION AND TREATMENT CONTRACT RENEWAL SHALL BE PROVIDED. THE SIGN SHALL BE POSTED NEAR THE WATER HEATER OR ELECTRIC PANEL. (FBC 104.2.6)
2. CONDENSATE AND ROOF DOWNSPOUTS SHALL DISCHARGE AT LEAST 1'-0" AWAY FROM BUILDING SIDE WALKS. (FBC 1503.4.4)
3. IRRIGATION/SPRINKLER SYSTEMS INCLUDING ALL RISERS AND SPRAY HEADS SHALL NOT BE INSTALLED WITHIN 1'-0" OF THE BUILDING SIDE WALLS. (FBC 1514.4)
4. TO PROVIDE FOR INSPECTION FOR TERMITE INFESTATION, BETWEEN WALL COVERING AND FINAL EARTH GRADE SHALL NOT BE LESS THAN 6 INCHES.  
EXCEPTION: PAINT OR DECORATIVE CEMENTATIOUS FINISH LESS THAN 5/8" THICK ADHERED DIRECTLY TO THE FOUNDATION WALL. (FBC 1403.1.6)
5. INITIAL TREATMENT SHALL BE DONE AFTER ALL EXCAVATION AND BACKFILL IS COMPLETE. (FBC 1816.1.1)
6. SOIL DISTURBED AFTER THE INITIAL TREATMENT SHALL BE RETREATED INCLUDING SPACES BOXED AND FORMED. (FBC 1816.1.2)
7. BOXED AREAS IN CONCRETE FLOORS FOR SUBSEQUENT INSTALLATION OF TRPS, ETC., SHALL BE MADE WITH PERMANENT METAL OR PLASTIC FORMS. PERMANENT FORMS MUST BE OF A SIZE AND DEPTH THAT WILL ELIMINATE THE DISTURBANCE OF SOIL AFTER THE INITIAL TREATMENT. (FBC 1816.1.3)
8. MINIMUM 6 MIL VAPOR RETARDER MUST BE INSTALLED TO PROTECT AGAINST RAINFALL DILUTION. IF RAINFALL OCCURS BEFORE VAPOR RETARDER PLACEMENT, RETREATMENT IS REQUIRED. (FBC 1816.1.4)
9. CONCRETE OVERPOUR AND MORTAR ALONG THE FOUNDATION PERIMETER MUST BE REMOVED BEFORE EXTERIOR SOIL TREATMENT. (FBC 1816.1.5)
10. SOIL TREATMENT MUST BE APPLIED UNDER ALL EXTERIOR CONCRETE OR GRADE WITHIN 1'-0" OF THE STRUCTURE SIDEWALLS. (FBC 1816.1.6)
11. AN EXTERIOR VERTICAL CHEMICAL BARRIER MUST BE INSTALLED AFTER CONSTRUCTION IS COMPLETE INCLUDING LANDSCAPING AND IRRIGATION. ANY SOIL DISTURBED AFTER THE VERTICAL BARRIER IS APPLIED, SHALL BE RETREATED. (FBC 1816.1.6)
12. ALL BUILDINGS ARE REQUIRED TO HAVE PRE-CONSTRUCTION TREATMENT. (FBC 1816.1.7)
13. A CERTIFICATE OF COMPLIANCE MUST BE ISSUED TO THE BUILDING DEPARTMENT BY A LICENSED PEST CONTROL COMPANY BEFORE A CERTIFICATE OF OCCUPANCY WILL BE ISSUED. THE CERTIFICATE OF COMPLIANCE SHALL STATE: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. THE TREATMENT IS IN ACCORDANCE WITH THE RULES AND LAWS OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES." (FBC 1811.7)
14. AFTER ALL WORK IS COMPLETED, LOOSE WOOD AND FILL MUST BE REMOVED FROM BELOW AND WITHIN 1'-0" OF THE BUILDING. THIS INCLUDES ALL GRADE STACK, TUB TRAY BOXES, FORMS, SHORING OR OTHER CELLULOSE CONTAINING MATERIAL. (FBC 2303.1.3)
15. NO WOOD, VEGETATION, STUMPS, CARDBOARD, TRASH, ETC., SHALL BE BURIED WITHIN 15'-0" OF ANY BUILDING OR PROPOSED BUILDING. (FBC 2303.1.4)

A.B.	Anchor Bolt	F.B.C.	Florida Bldg. Code	Op'n.g.	Opening
Aov.	Above	Fin. Flr.	Finished Floor	Opt.	Optional
A/C	Air-Conditioner	F.G.	Fixed Glass	Pc.	Piece
Adj.	Adjustable	Flr.	Floor	Ped.	Pedestal
A.F.F.	Above Finished Floor	Fdn.	Foundation	P.L.	Parallam
A.H.U.	Air Handler Unit	Flr. Sys.	Floor System	PLF	Pounds per line foot
ALT.	Alternate	F.PI.	Fireplace	Plt. Sh.	Plate Height
B.C.	Base Cabinet	Fl.	Foot / Fast	Plt. Sh.	Plant Shelf
B.F.	Bifold Door	Flg.	Footing	PSF	Pounds per square foot
Bk.Sh.	Book Shelf	FX	Fixed	P.T.	Pressure Treated
Bm.	Beam	Galv.	Galvanized	Pwd.	Powder Rod
BOT.	Bottom	G.C.	General Contractor	Rad.	Radius
B.P.	Bypass door	G.F.I.	Ground Fault Interrupter	Ref.	Refrigerator
Brg.	Bearing	G.T.	Girder Truss	Req'd.	Required
Clr.	Circle	Hdr.	Header	Rm.	Room
Clg.	Ceiling	Hgt.	Height	Rnd.	Round
Col.	Column	HB	Hose Bibb	R/S.H	Rod and Shit
Comp.	A/C Compressor	Int.	Interior	SD	Smoke Detector
C.T.	Ceramic Tile	K/Wall	Kneewall	S.F.	Square Ft.
D.	Dryer	K.S.	Knee Space	Sh.	Shelves
Dec.	Decorative	Laun.	Laundry	SHT	Sheet
Ded.	Dedicated Outlet	Lav.	Lavatory	S.L.	Side Lights
Dbl.	Double	L.F.	Linear Ft.	S.P.F.	Source Pineir
Dia.	Diameter	L.T.	Laundry Tub	Sq.	Square
Disp.	Disposal	Mas.	Masonry	S.Y.P.	Southern Yew Pine
Dist.	Distance	Max	Maximum	Temp.	Tempered
D.S.	Drawer Stack	M.C.	Medicine Cabinet	Thickn.	Thicken
D.V.	Dryer Vent	MDP	Master Distribution Panel	T.O.B.	Top of Block
D.W.	Dishwasher	Mfg.	Manufacturer	T.O.M.	Top of Masonry
Ea.	Each	Micro.	Microwave	T.O.P.	Top of Plate
E.W.	Each Way	Min	Minimum	Trans.	Transom Window
Elec.	Electrical	M.L.	Microalim	Typ.	Typical
Elev.	Elevation	Mir.	Mirror	UCL	Under Cabin Lighting
Ext.	Exterior	Mono	Monolithic	U.N.O.	Unless Note Otherwise
Exp.	Expansion	N.T.S.	Not to Scale	VB	Vanity Base
				Vert.	Vertical
				V.L.	Versalim
				VTR	Vent through roof
				W	Washer
				W	With
				W/C	Water Closet
				W.A.	Wedge Anch
				Wd	Wood
				WP	Water Proof

STRUCTURAL NOTES:

FOUNDATIONS

SOIL TO BE COMPACTED TO AT LEAST 95% OF MAX. DRY DENSITY AS DETERMINED BY ASTM - 1557 (MODIFIED PROCTOR)

FOUNDATION INSPECTIONS

A FOUNDATION SURVEY SHALL BE PERFORMED AND A COPY OF THE SURVEY SHALL BE ON SITE FOR THE BUILDING INSPECTORS USE, OR ALL PROPERTY MARKERS SHALL BE EXPOSED AND A STRING STRECHED FROM MARKER TO MARKER TO VERIFY REQUIRED SETBACKS.

CAST IN PLACE CONCRETE

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI. A SLUMP OF 8" PLUS OR MINUS 1", AND HAVE 2 TO 5% AIR ENTRAINMENT, AND A MAXIMUM WATER/CEMENT RATIO OF 0.63
2. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 40.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. WWF SHALL BE LAPPED AT LEAST 6" AND CONTAIN AT LEAST ONE CROSS WIRE WITHIN THE 6".
4. HOOKS SHALL BE PROVIDED AT DISCONTINUOUS ENDS OF ALL TOP BARS OF BEAMS.
5. HORIZONTAL FOOTING BARS SHALL BE BENT 1'-0" AROUND CORNERS OR CORNER BARS WITH A 2'-0" LAP PROVIDED.
6. MINIMUM LAP SPLICES ON ALL REINFORCING BAR SPLICES SHALL BE 40 BAR DIAMETERS TYP.
7. CONCRETE COVER MIN. 3" WHEN EXPOSED TO EARTH OR 1 1/2" TO FORM

MASONRY WALL CONST.

1. HOLLOW LOAD BEARING UNITS SHALL BE NORMAL WEIGHT, GRADE N, TYPE 2, CONFORMING TO ASTM C90, WITH A MINIMUM NET COMPRESSIVE STRENGTH OF 1300 PSI (fm = 1350 PSI)
2. MORTAR SHALL BE TYPE "M" OR "S", CONFORMING TO ASTM C270.
3. COARSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI SLUMP 8" TO 11".
4. VERTICAL REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS WITH THE CELLS FILLED WITH COARSE GROUT.
5. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM AND AT A MAXIMUM SPACING OF 192 BAR DIAMETERS. REINFORCEMENT SHALL BE PLACED IN THE CENTER OF THE MASONRY CELL TYPICAL UNLESS OTHERWISE NOTED.
6. REINFORCING STEEL SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS
7. GROUT STOPS SHALL BE PROVIDED BELOW BOND BEAM, PLASTIC SCREEN, METAL LATH STRIP OR CAVITY CAPS MAY BE USED TO PREVENT THE FLOW GROUT INTO CELLS BELOW. THE USE OF FELT PAPER AS A STOP IS PROHIBITED.

WOOD CONSTRUCTION

1. WOOD CONSTRUCTION SHALL CONFORM TO THE NFPA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", LATEST EDITION.
2. ALL EXTERIOR WOOD STUD WALLS, BEARING WALLS, SHEAR WALLS AND MISC. STRUCTURAL WOOD FRAMING MEMBERS, (I.E. BLOCKING OR GABLE END BRACING) SHALL BE EITHER SOUTHERN PINE, OR S.P.F. NUMBER 2 GRADE SHALL BE USED REGARDLESS OF SPECIES.
3. ANY WOOD FRAME INTERIOR BEARING WALL STUDS THAT HAVE HOLES IN THE CENTER OF THE STUD UP TO 1" DIA. SHALL HAVE STUD PROTECTION SHIELDS FOR ALL HOLES OVER 1" IN DIA. FOR PLUMBING LINES, ETC. SHALL BE REPAIRED WITH SIMPSON HSS2 STUD SHOES TYP., U.N.O.

WOOD FRAMING INSPECTION

ALL PLUMBING, ELECTRICAL, AND MECHANICAL ROUGH-INS MUST BE COMPLETE, INSPECTED AND APPROVED BEFORE REQUESTING FRAMING INSPECTION.

PREFABRICATED WOOD TRUSSES

1. ALL PREFABRICATED WOOD TRUSSES SHALL BE SECURELY FASTENED TO THEIR SUPPORTING WALLS OR BEAMS WITH HURRICANE CLIPS OR ANCHORS.
2. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENERS" AS RECOMMENDED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
3. TRUSS MEMBERS AND CONNECTIONS SHALL BE PROPORTIONED WITH A MAXIMUM ALLOWABLE STRESS INCREASE FOR LOAD DURATION OF 25% TO WITHSTAND THE LIVE LOADS GIVEN IN THE NOTES AND TOTAL DEAD LOAD.
4. BRIDGING FOR PRE-ENGINEERED TRUSSES SHALL BE AS REQUIRED BY THE TRUSS MANUFACTURER UNLESS NOTED ON THE PLANS.
5. TRUSS ELEVATIONS AND SECTIONS ARE FOR GENERAL CONFIGURATION OF TRUSSES ONLY. WEB MEMBERS ARE NOT SHOWN, BUT SHALL BE DESIGNED BY THE TRUSS MANUFACTURER IN ACCORDANCE WITH THE FOLLOWING DESIGN LOADS:
6. DESIGN SPECIFICATIONS FOR LIGHT WEIGHT METAL PLATE CONNECTED WOOD TRUSSES PER THE TRUSS PLATE INSTITUTE TRI LATEST EDITION.
7. PRE-ENGINEERED WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE DESIGN LOADS AND GOVERNING CODES. SUBMITTALS SHALL INCLUDE TRUSS FRAMING PLANS AND DETAILS SHOWING MEMBER SIZES, BRACING, ANCHORAGE, CONNECTIONS, TRUSS LOCATIONS, AND AND PERMANENT BRACING AND/OR BRIDGING AS REQUIRED FOR ERECTION AND FOR THE PERMANENT STRUCTURE. EACH SUBMITTAL SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER. SUBMIT 3 COPIES FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
8. THE TRUSS MANUFACTURER SHALL DETERMINE ALL SPANS WORKING POINTS, BEARING POINTS, AND SIMILAR CONDITIONS. TRUSS SHOP DRAWINGS SHALL SHOW ALL TRUSSES, ALL BRACING MEMBERS, AND ALL TRUSS TO TRUSS HANGERS.

UPLIFT CONNECTORS

1. UPLIFT CONNECTORS SUCH AS HURRICANE CLIPS, TRUSS ANCHORS, AND ANCHOR BOLTS ARE ONLY REQUIRED ON MEMBERS IN WALLS THAT ARE EXPOSED TO UPLIFT FORCES. INTERIOR LOAD BEARING WALLS ARE NOT ALWAYS EXPOSED TO UPLIFT FORCES. THE MEMBERS OF THESE WALLS WOULD NOT NEED TO HAVE CONNECTORS APPLIED. PLEASE CONSULT THE TRUSS ENGINEERING FOR THE LOCATION OF THESE WALLS.

FIELD REPAIR NOTES

1. MISSED UNTEL STRAPS FOR MASONRY CONSTRUCTION MAY BE SUBSTITUTED W/ (1) "SIMPSON MTS-16 TWIST STRAP W/ (4) 1/4" X 2 1/4" DIA. TITENS TO THE BOND BEAM BLOCK AND (7) 10d TO THE TRUSS FOR UPLIFTS OF 1000 LBS. OR LESS. USE (2) FOR 2000 LBS. OR LESS.; OTHERS MAY BE SUBSTITUTED ON A CASE BY CASE BASIS.
2. MISSED 1" BOLTS FOR WOOD BEARING ON WALLS MAY BE SUBSTITUTED W/ 1/2" DIA. ANCHOR BOLTS SET IN 3/4" DIA. X 6" DEEP UNITEK "PROPOXY" 300 ADHESIVE BINDER FOLLOWING ALL MANUFACTURERS RECOMMENDATIONS (OR 1/2" X 6" SIMPSON TITEN HD ANCHORS.)
3. REGARDING MISSED REBAR IN VERTICAL FILLED CELLS: DRILL A 3/4" DIAMETER HOLE 6" DEEP AT THE LOCATION OF THE OMITTED REBAR, AND INSTALL A 32" LONG #5 BAR INTO THE EPOXY FILLED HOLE. USE A TWO PART EMBEDDMENT EPOXY (SIMPSON "EPOXY TIE SET", OR 1 HILTI "2 PART" EMBEDDMENT EPOXY), MIXED PER MANUFACTURER'S INSTRUCTIONS. ASSURE THAT ALL DUST AND DEBRIS FROM DRILLING ARE REMOVED FROM THE HOLE BY BRUSHING AND AND USING COMPRESSED AIR PRIOR TO APPLYING THE EPOXY. ALLOW THE EPOXY TO CURE TO MANUFACTURER'S SPECIFICATIONS, THEN FILL THE CELL IN THE NORMAL WAY DURING BOND BEAM POUR.
4. HURRICANE STRAPS MAY BE SUBSTITUTED WITH A STRAP OF GREATER HOLDOWN VALUE OR GREATER UPLIFT VALUE IN THE FIELD WITHOUT VERIFICATION, PROVIDED ALL MANUFACTURERS INSTALLATION INSTRUCTIONS ARE FOLLOWED.
5. FOR MORTAR JOINTS LESS THAN 1/4", PROVIDE (1) #5 VERT. IN CONC. FILLED CELL EACH SIDE OF THE JOINT (BAR DOES NOT HAVE TO BE CONT. TO FOOTING)





ANGELA TERRACE

S 1°36'0" E 172.5'

20' SETBACK

10' SETBACK

S 88°32'0" W 184.17'

S 88°31'0" W 33.00'

15' SETBACK

N 1°30' W 172.51'

existing conc. driveway

existing 3' conc. walkway

bore under conc. sidewalk  
and install 6" pvc underneath  
walkway

construct new swale to front ditch

existing well

57'-2"

CARPORT  
ADDITION

EXISTING GARAGE

EXISTING RESIDENCE

conc. patio

septic tank

10' SETBACK

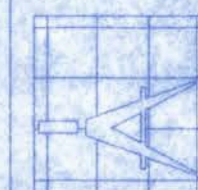
N 88°32'7" E 182.564'

N 88°31'0" E 33.00'

**SITE PLAN**  
SCALE: 1" = 10'-0"

**DESCRIPTION:**

LOT 5, BLOCK A PICCADILLY PARK SUBDIVISION AND PARCEL "A"  
TOWNSHIP 4 SOUTH, RANGE 16 EAST, SECTION 25 IN COLUMBIA  
COUNTY, FLORIDA.



**Freeman**  
Design Group INC.

128 SW NASSAU STREET  
LAKE CITY, FL 32025  
(386) 758-4209

CERTIFICATE OF AUTHORIZATION # 00009701

DATE  
04/28/09

DRAWN BY  
W.H.F.

APPROVED  
W.H.F.

REVISIONS

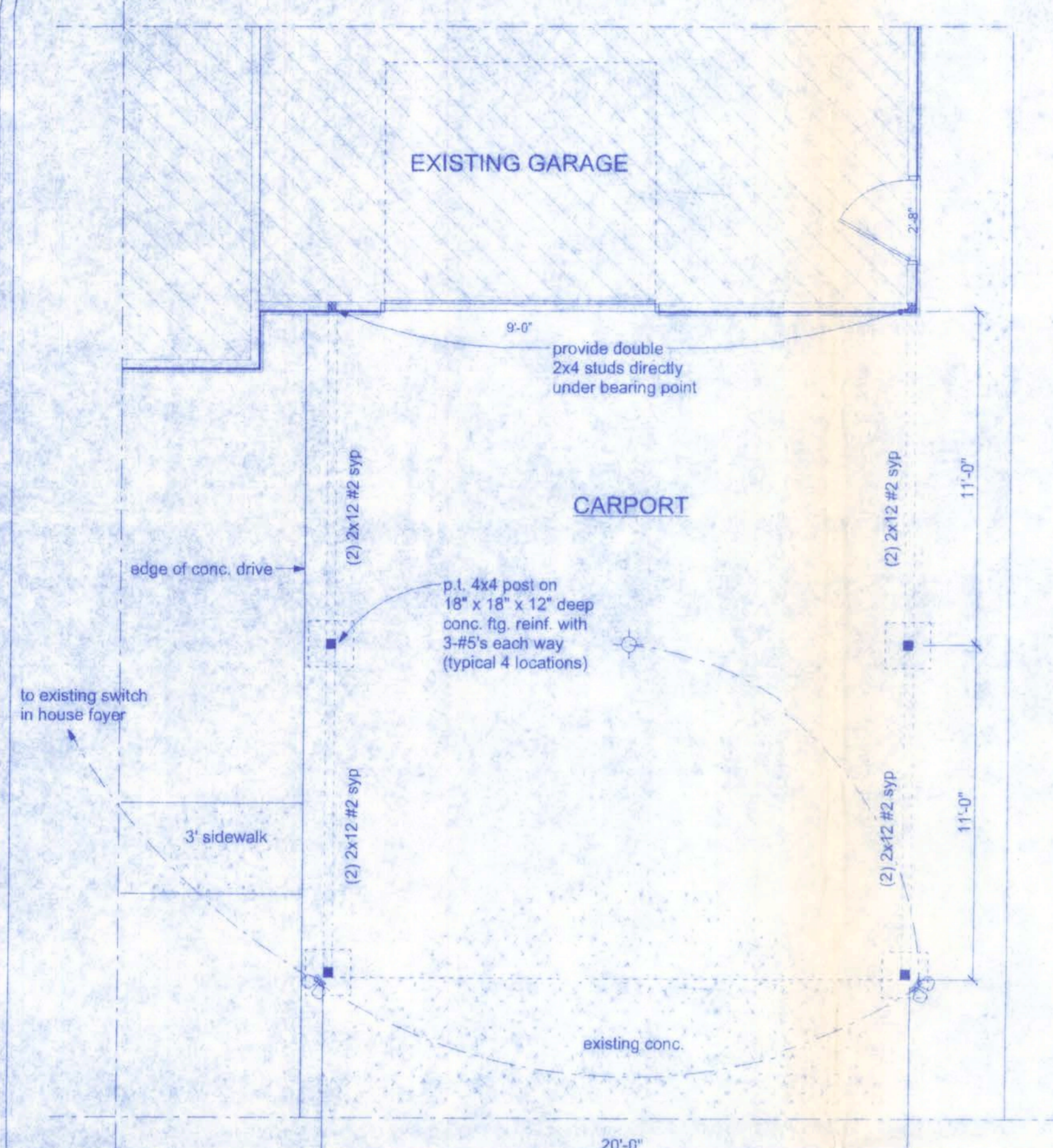
SHEET  
A2

OF  
1

PROJECT NO.  
09.R07

**MILLER CARPORT**

*Walter H. Freeman*  
5/4/09  
P.E. # 58501



**FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**AREA SUMMARY**  
CARPORT - 440 SF

ELECTRICAL	COUNT	SYMBOL
double spotlight with fluorescent bulb	2	Q
surface mount light with fluorescent bulb	1	Q

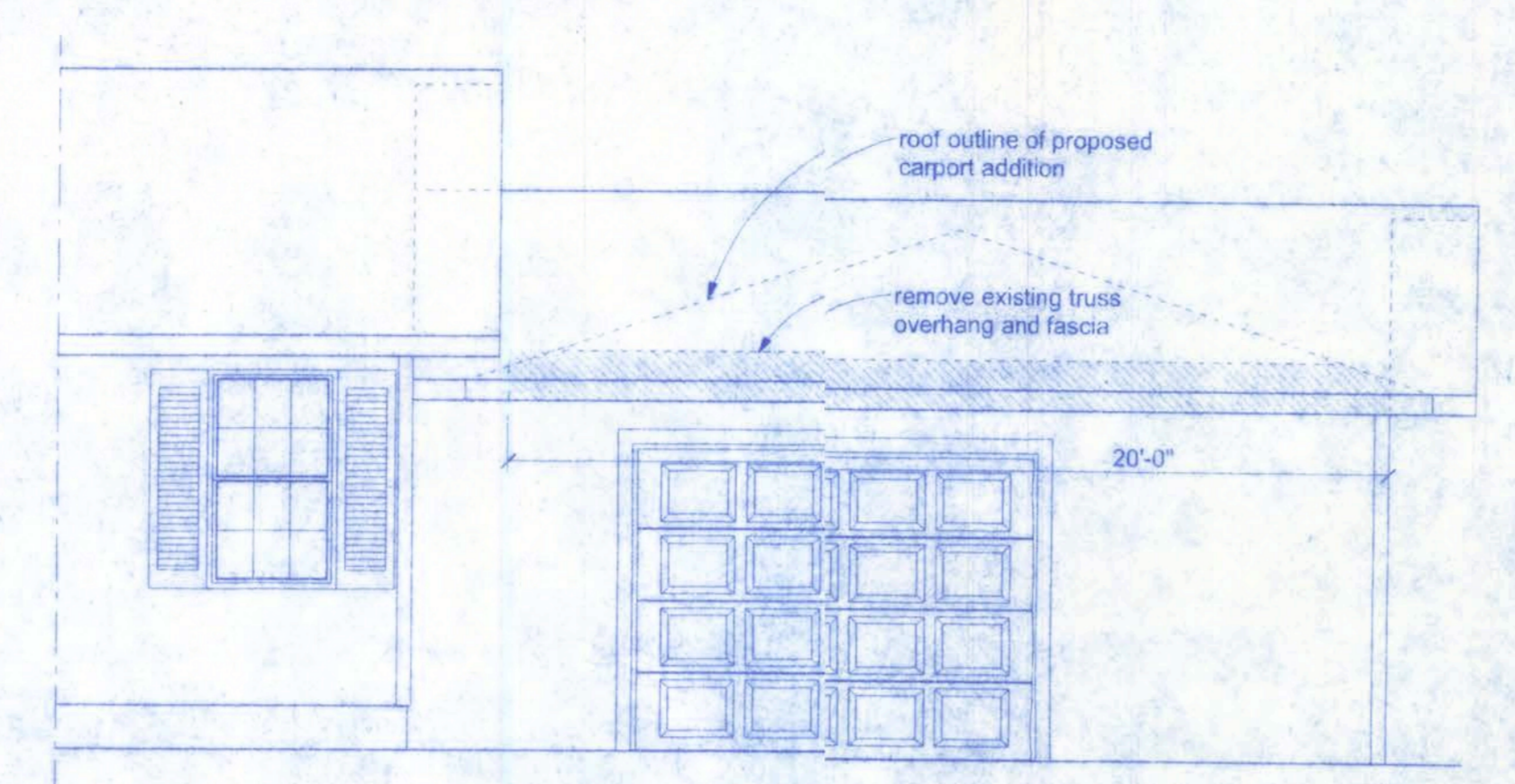
**ELECTRICAL PLAN NOTES**

INSTALLATION SHALL BE PER NAT'L. ELECTRIC CODE.

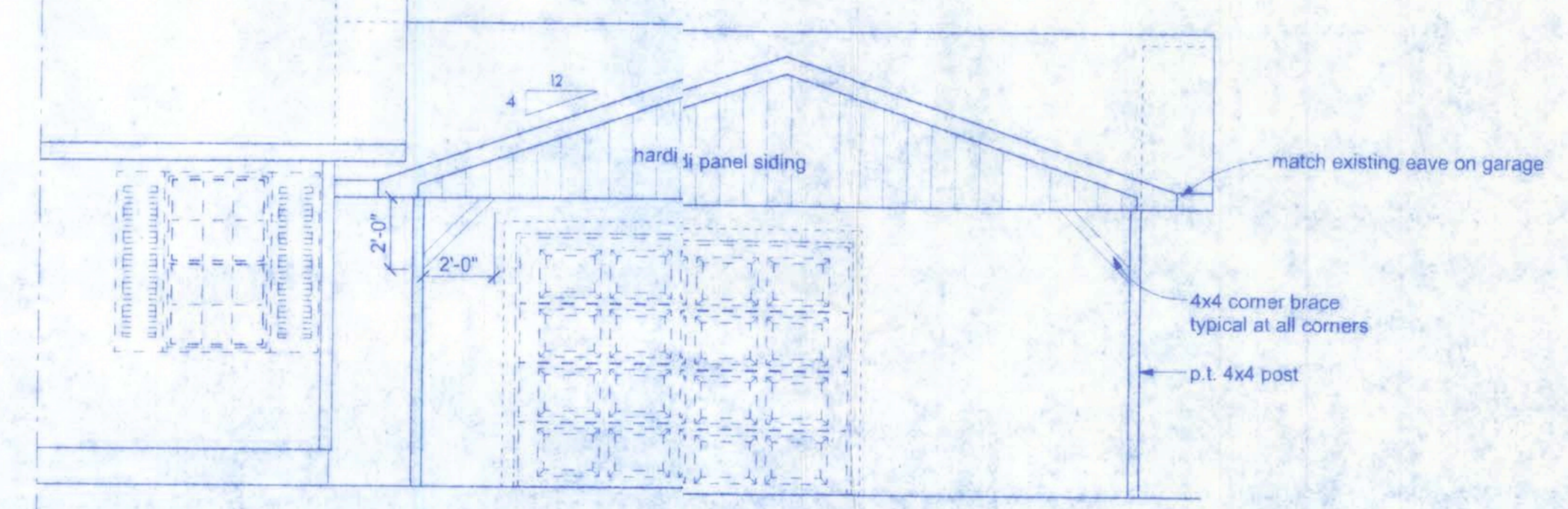
ELECTRICAL CONTR SHALL PREPARE "AS-BUILT" SHOWINGS INDICATING ALL ELECTRICAL WORK, INCLUDING ANY CHANGES TO THE ELEC. PLAN, ADDS TO THE ELEC. PAN. RISER DIAGRAM, AS-BUILT PANEL SCHEDULE W/ ALL CIR. IDENTIFIED W/ CKT Nr., DESCRIPTION & BRKR. SERVICENT. & ALL UNDERGROUND WIRE LOCATIONS/ROUTING/DEPTH. RISER DIA. SHALL INCLUDE WIRE SIZES/TYPE & EQUIPMENT TYPE W/ RATINGS & LOADS.

CONTRACTOR SHALL PROVIDE 1 COPY OF AS-BUILT DGS TO OWNER & 1 COPY TO THE PERMIT ISSUING AUTHORITY.

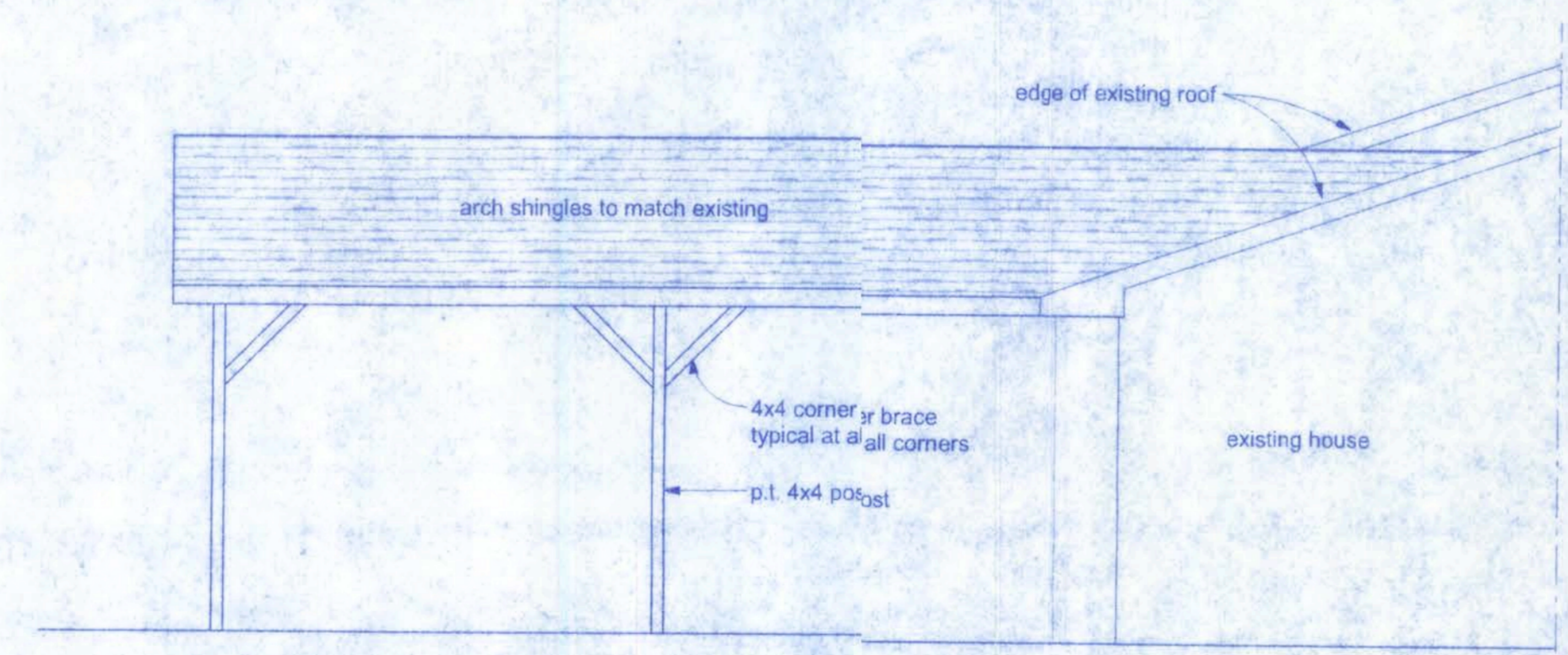
**NOTE:**  
use existing circuit from exterior landscape lighting (to be removed) to supply the new lighting in the carport addition.



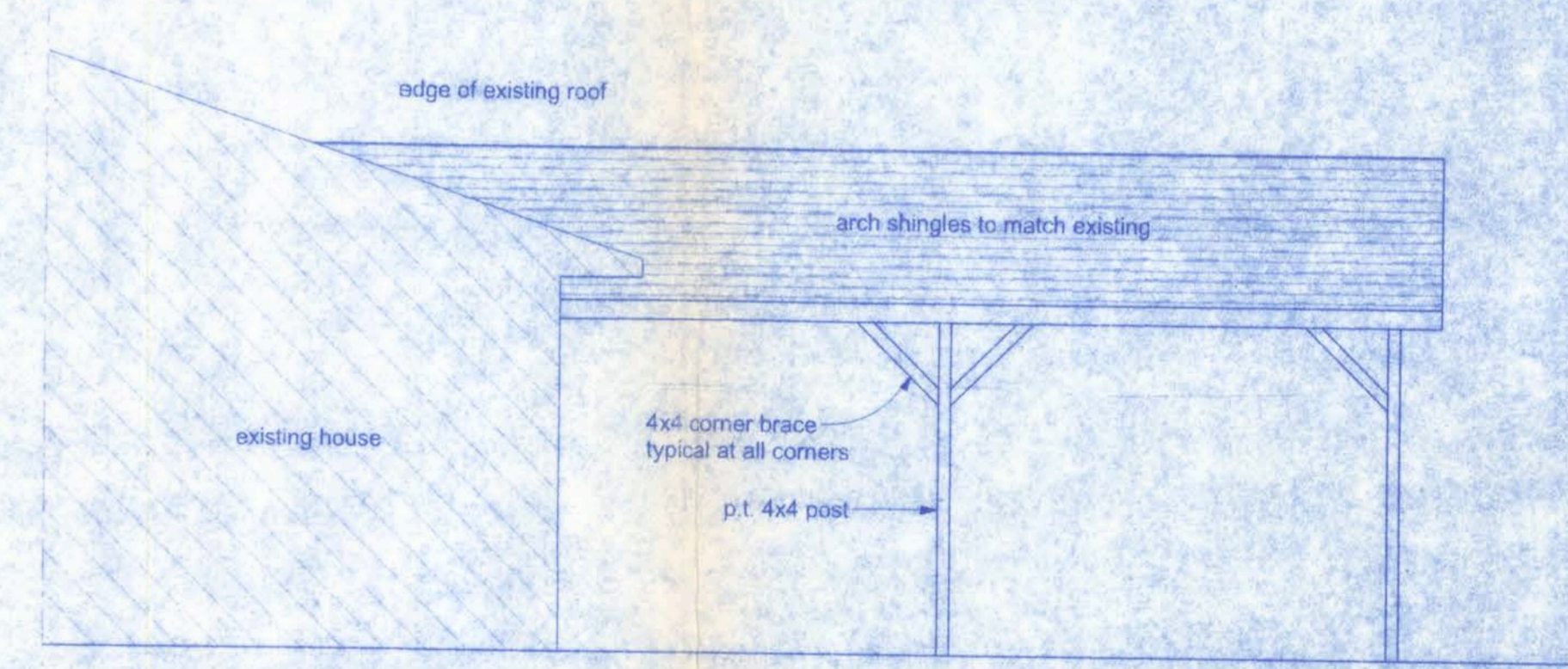
**DEMOLITION PLAN**  
SCALE: 1/4" = 1'-0"



**FRONT ELEVATION**  
SCALE: 1/4" = 1'-0"



**RIGHT ELEVATION**  
SCALE: 1/4" = 1'-0"



**LEFT ELEVATION**  
SCALE: 1/4" = 1'-0"

**NOTICE:**  
It is important that the Client and Contractor examine the drawings and documentation in detail. It shall be the final responsibility of the Contractor to review and double check the plans for accuracy and compliance with regulatory agencies. It is customary and ordinary not to include details well within the knowledge of licensed Contractor. If necessary, further clarification of these plans should be achieved before signing the construction contract and obtaining a building permit, otherwise the Contractor assumes responsibility for the construction in question. Methods of construction shall be determined by the Contractor.

*Walter H. Hagan*  
3/14/09  
P.E. # 95001

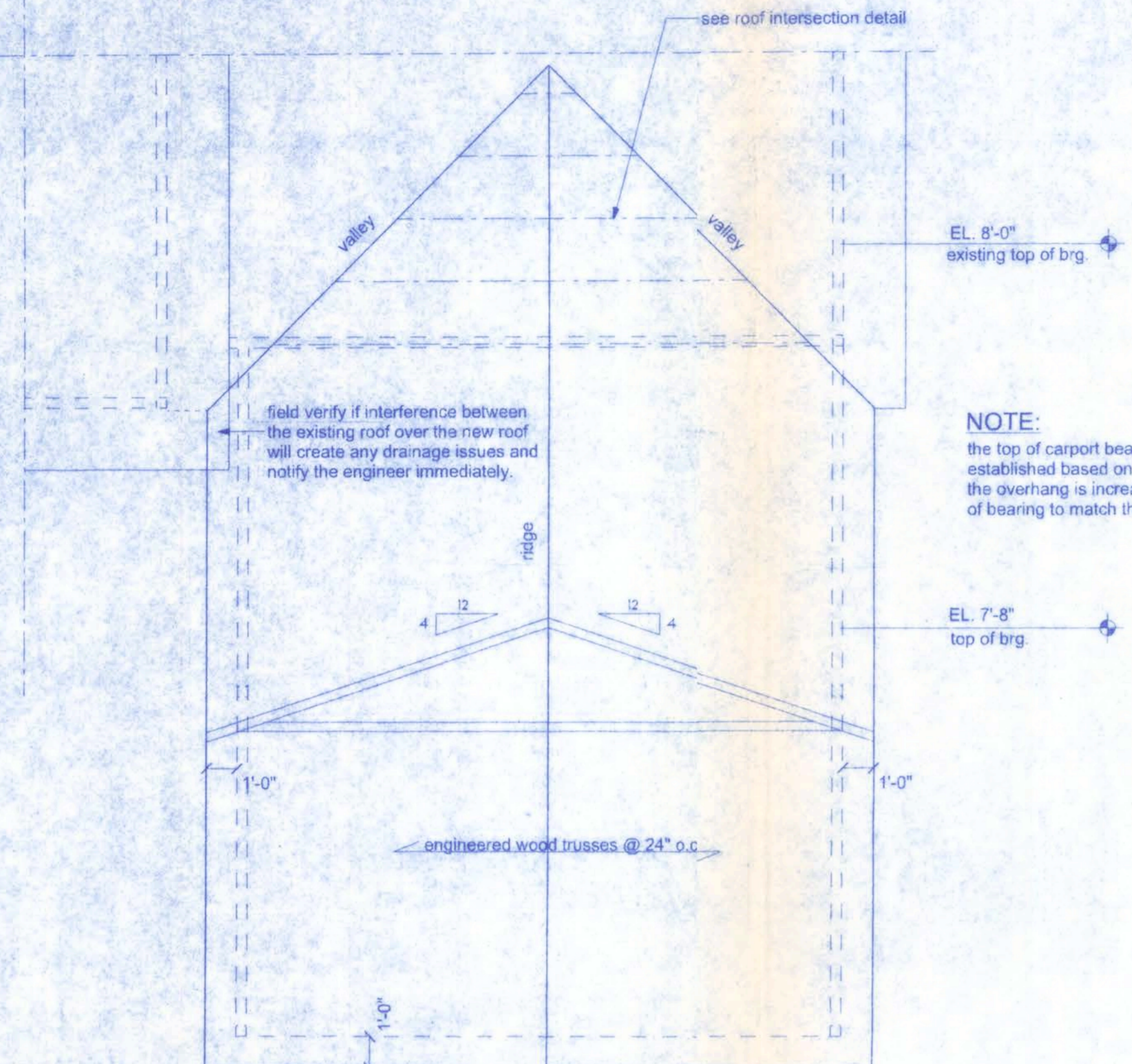
**MILLER CARPORT**

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CERTIFICATE OF AUTHORIZATION # 00008701

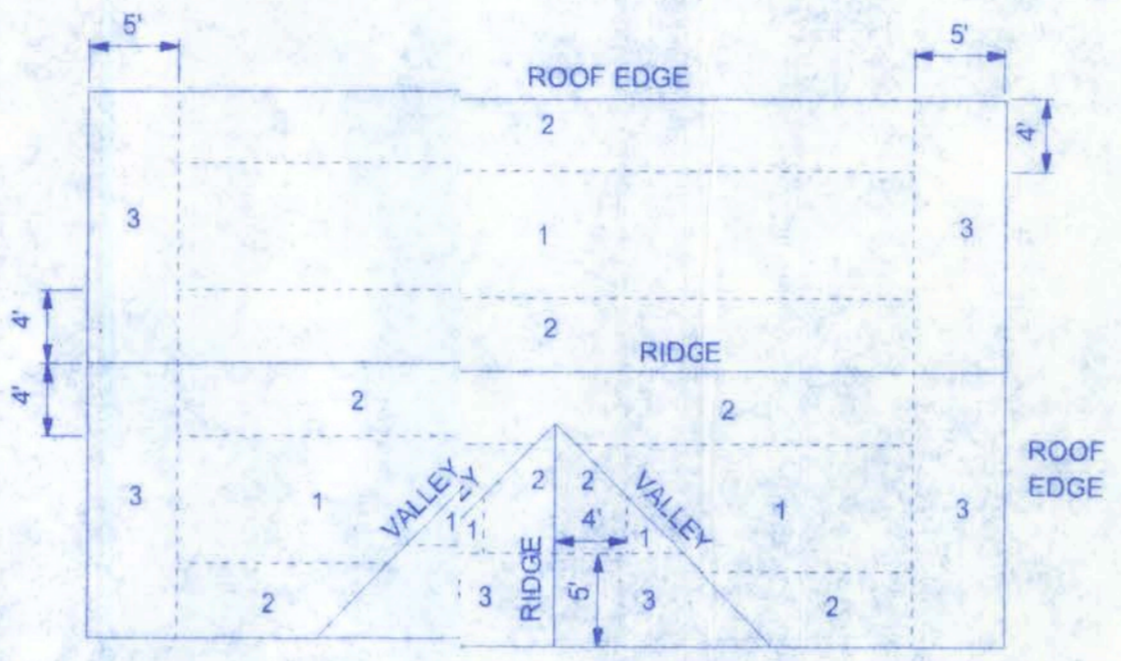


DATE 04/28/09	DRAWN BY W.H.F.
	APPROVED W.H.F.
REVISIONS	
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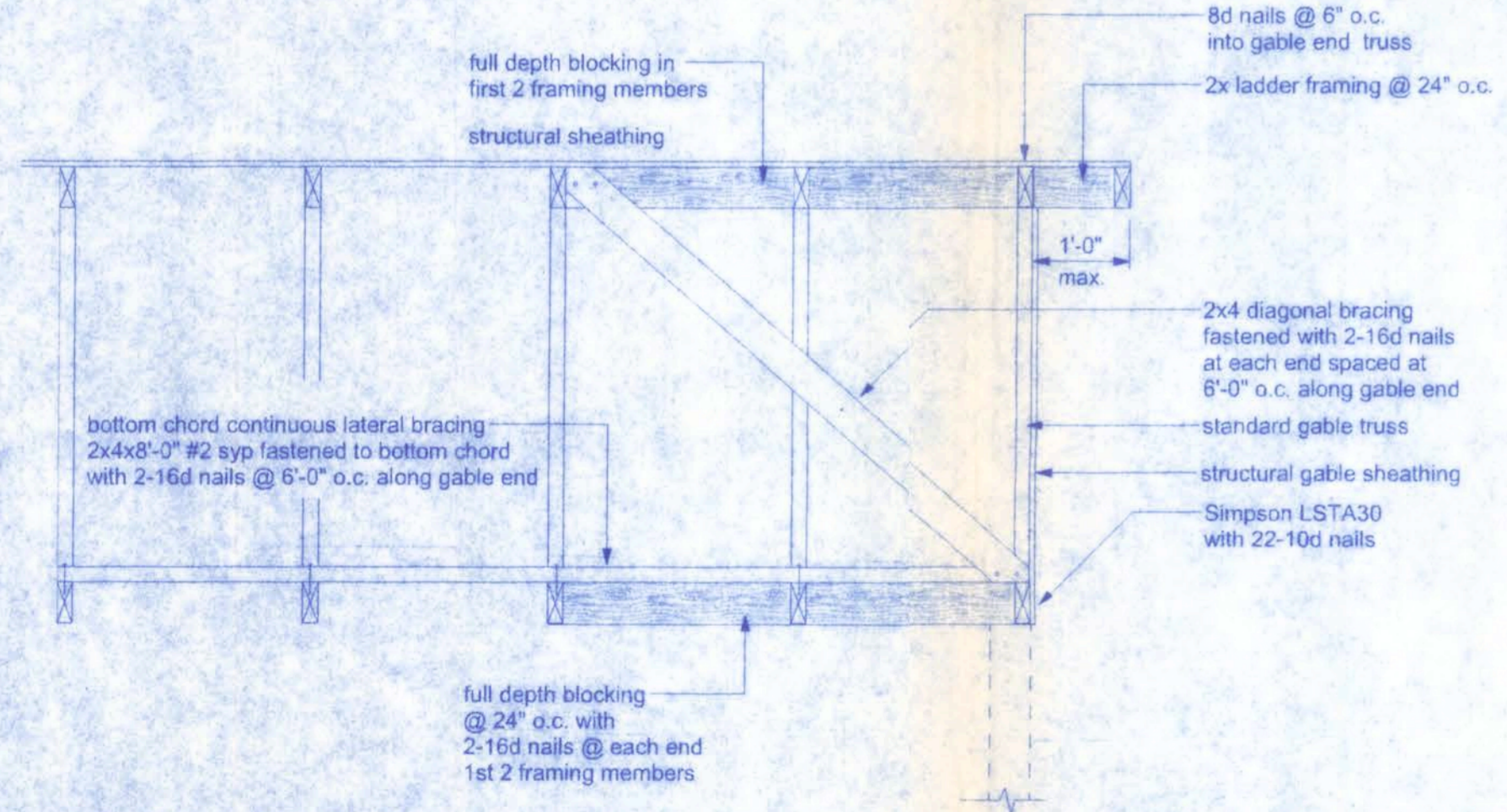


**ROOF PLAN**  
SCALE: 1/4" = 1'-0"

NAILING ZONE	SHEATHING TYPE	FASTENER	SPACING
1	1/2" O.S.B.	8d COMMON OR 8d HOT DIPPED GALVANIZED BOX NAILS	6 in. o.c. EDGE 12 in. o.c. FIELD
2			6 in. o.c. EDGE 6 in. o.c. FIELD
3			4 in. o.c. @ GABLE ENDWALL OR GABLE TRUSS 6 in. o.c. EDGE 6 in. o.c. FIELD

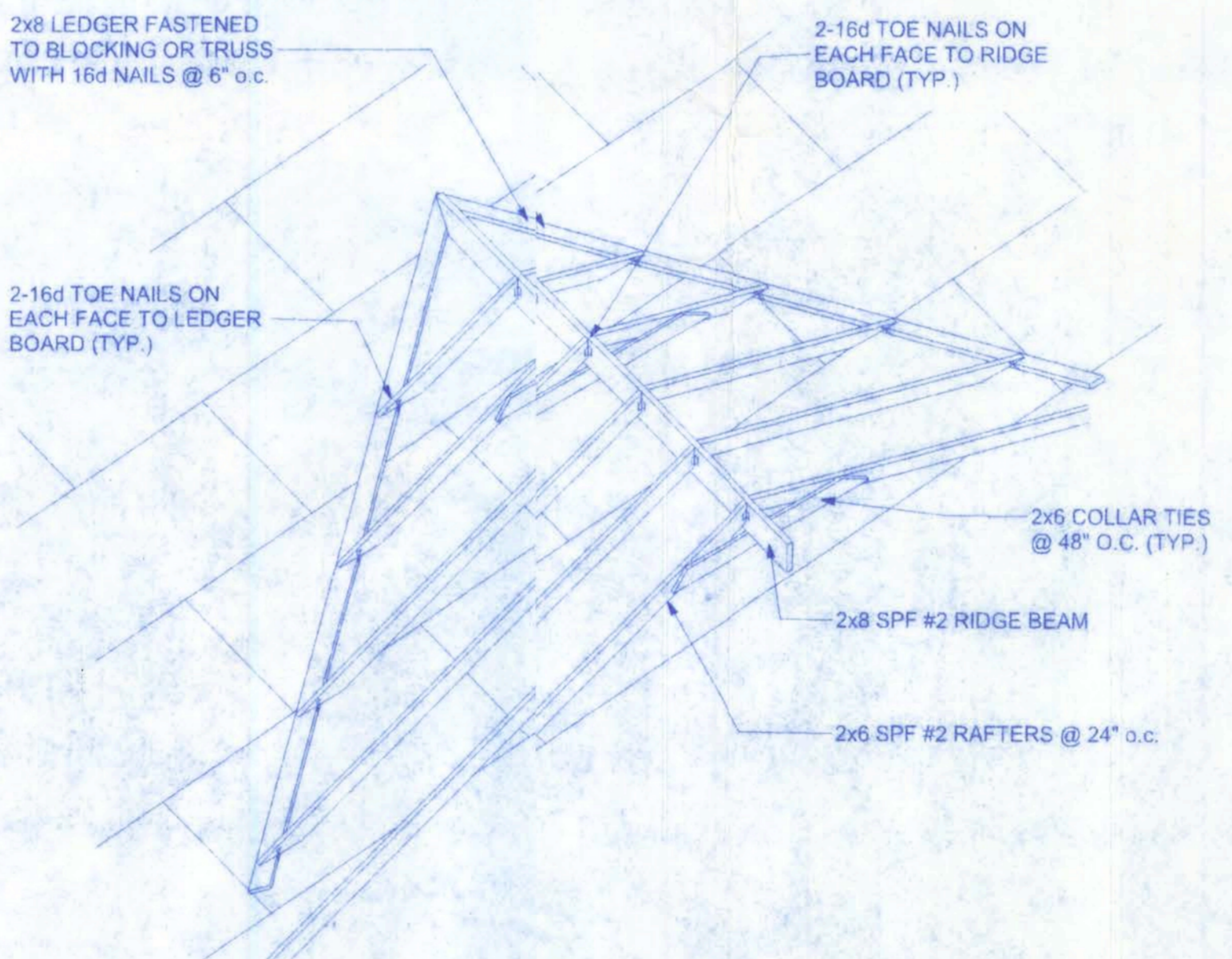


**ROOF SHEATHING NAILING ZONES (GABLE ROOF)**

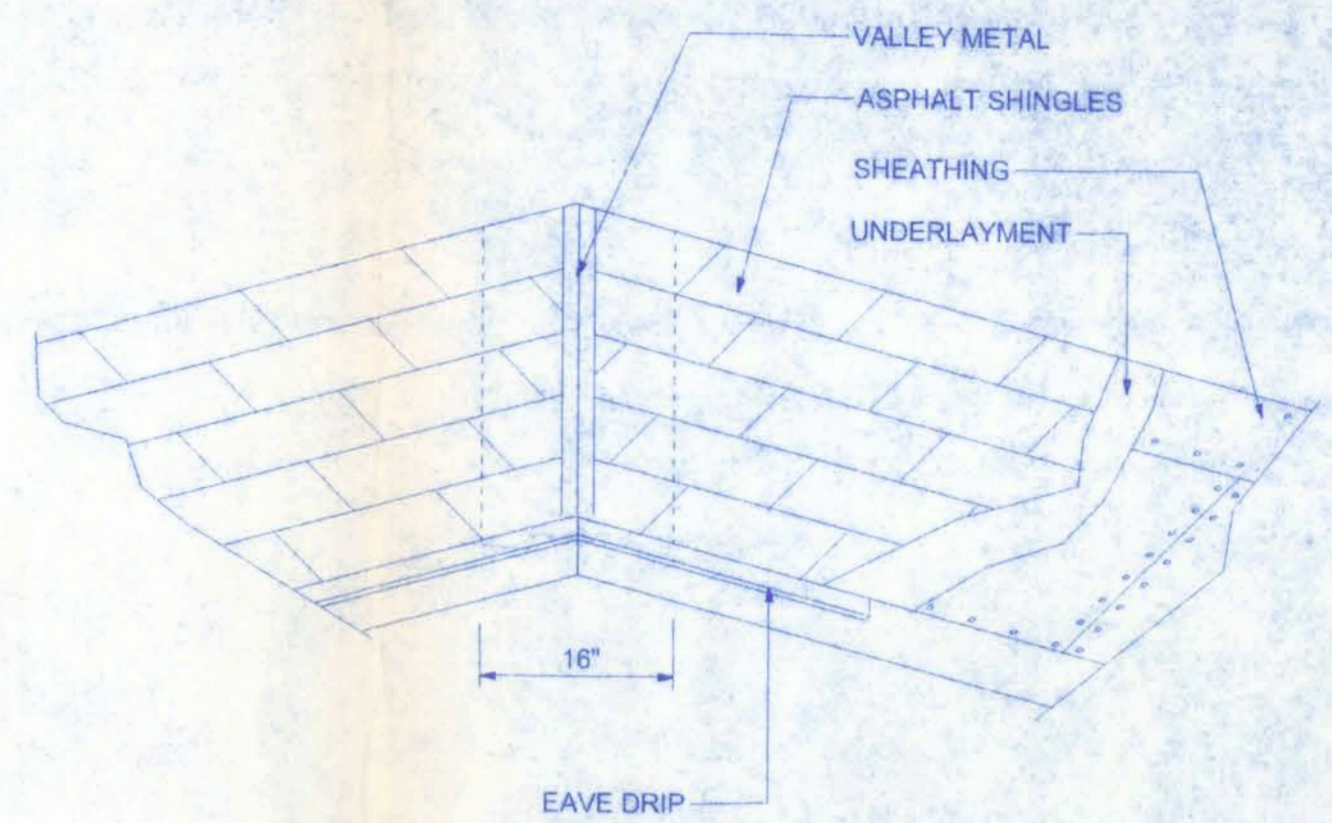


**END WALL BRACING FOR CEILING DIAPHRAGM**

NTS  
NOTE: ALL WOOD TO BE NUMBER 2 GRADE SOUTHERN YELLOW PINE



**ROOF INTERSECTION CONNECTION DETAIL**  
NTS



**DECK REQUIREMENTS:**  
ASPHALT SHINGLES SHALL BE FASTENED TO SOLIDLY SHEATHED DECKS.

**SLOPE:**  
ASPHALT SHINGLES SHALL BE USED ONLY ON ROOF SLOPES OF 2:12 OR GREATER. FOR ROOF SLOPES FROM 2:12 TO 4:12, DOUBLE UNDERLAYMENT IS REQUIRED.

**UNDERLAYMENT:**  
UNLESS OTHERWISE NOTED, UNDERLAYMENT SHALL CONFORM WITH ASTM D 226, TYPE 1, OR ASTM D 4869, TYPE 1.

**SELF-ADHERING POLYMER MODIFIED BITUMEN SHEET:**  
SELF ADHERING POLYMER MODIFIED BITUMEN SHALL COMPLY WITH ASTM D 1970.

**ASPHALT SHINGLES:**  
ASPHALT SHINGLES SHALL HAVE SELF SEAL STRIPS OR BE INTERLOCKING, AND COMPLY WITH ASTM D 225 OR ASTM D 3462.

**FASTENERS:**  
FASTENERS FOR ASPHALT SHINGLES SHALL BE GALVANIZED, STAINLESS STEEL, ALUMINUM OR COPPER ROOFING NAILS, MINIMUM 12 GAUGE SHANK WITH A MINIMUM 3/8 INCH DIAMETER HEAD, OF A LENGTH TO PENETRATE THROUGH THE ROOFING MATERIAL AND A MINIMUM 3/4" INTO THE ROOF SHEATHING. WHERE ROOF SHEATHING IS LESS THAN 3/4" THICK, THE NAILS SHALL PENETRATE THROUGH THE SHEATHING.

**ATTACHMENT:**  
ASPHALT SHINGLES SHALL BE SECURED TO THE ROOF WITH NOT LESS THAN FOUR FASTENERS PER STRIP SHINGLE OR TWO FASTENERS PER INDIVIDUAL SHINGLE. WHERE ROOFS LOCATED IN BASIC WIND SPEED OF 110 MPH OR GREATER, SPECIAL METHODS OF FASTENING ARE REQUIRED. UNLESS OTHERWISE NOTED, ATTACHMENT OF ASPHALT SHINGLES SHALL CONFORM WITH ASTM D 3161 OR M-DC PA 107-95.

**UNDERLAYMENT APPLICATION:**  
FOR ROOF SLOPES FROM 2:12 TO 4:12, UNDERLAYMENT SHALL BE A MINIMUM OF TWO LAYERS APPLIED AS FOLLOWS:  
1. STARTING AT THE EAVE, A 19 INCH STRIP OF UNDERLAYMENT SHALL BE APPLIED PARALLEL WITH THE EAVE AND FASTENED SUFFICIENTLY TO STAY IN PLACE.  
2. STARTING AT THE EAVE, 36 INCH WIDE STRIPS OF UNDERLAYMENT FELT SHALL BE APPLIED OVERLAPPING SUCCESSIVE SHEETS 19 INCHES AND FASTENED SUFFICIENTLY TO STAY IN PLACE.

FOR ROOF SLOPED 4:12 AND GREATER, UNDERLAYMENT SHALL BE A MINIMUM OF ONE LAYER OF UNDERLAYMENT FELT APPLIED AS FOLLOWS:  
STARTING AT THE EAVE, UNDERLAYMENT SHALL BE APPLIED SHINGLE FASHION PARALLEL TO THE EAVE, LAPPED 2 INCHES, AND FASTENED SUFFICIENTLY TO STAY IN PLACE.  
**BASE AND CAP FLASHINGS:**  
BASE AND CAP FLASHING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. BASE FLASHING SHALL BE OF EITHER CORROSION RESISTANT METAL OF MINIMUM NOMINAL THICKNESS 0.019 INCH OR MINERAL SURFACE ROLL ROOFING WEIGHING A MINIMUM OF 77 LBS PER 100 SQUARE FEET. CAP FLASHING SHALL BE CORROSION RESISTANT METAL OF MINIMUM NOMINAL THICKNESS OF 0.019 INCH.

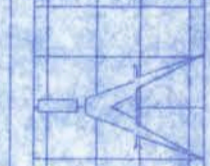
**VALLEYS:**  
VALLEY LININGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS BEFORE APPLYING ASPHALT SHINGLES. VALLEY LININGS OF THE FOLLOWING TYPES SHALL BE PERMITTED:  
1. FOR OPEN VALLEYS LINED WITH METAL, THE VALLEY LINING SHALL BE AT LEAST 16 INCHES WIDE AND OF ANY OF THE CORROSION RESISTANT METALS IN TABLE 1507.3.9.2.  
2. FOR OPEN VALLEYS, VALLEY LINING OF TWO PLIES OF MINERAL SURFACE ROLL ROOFING SHALL BE PERMITTED. THE BOTTOM LAYER SHALL BE 18 INCHES AND THE TOP LAYER A MINIMUM OF 36 INCHES WIDE.  
3. FOR CLOSED VALLEYS VALLEY LINING SHALL BE ONE OF THE FOLLOWING:  
1. BOTH TYPES 1 AND 2 ABOVE, COMBINED.  
2. ONE PLY OF SMOOTH ROLL ROOFING AT LEAST 36 INCHES WIDE AND COMPLYING WITH ASTM D 224.  
3. SPECIALTY UNDERLAYMENT AT LEAST 36 INCHES WIDE AND COMPLYING WITH ASTM D 1970.

MATERIAL	MINIMUM THICKNESS (in)	GAGE	WEIGHT (LB)
COPPER			1
ALUMINUM	0.024		
STAINLESS STEEL		28	
GALVANIZED STEEL	0.0179	26 (zinc coated G90)	
ZINC ALLOY LEAD PAINTED TERNE	0.027		2 1/2 20

W.D. Miller  
5/1/09  
P.E. # 9001

**MILLER CARPORT**

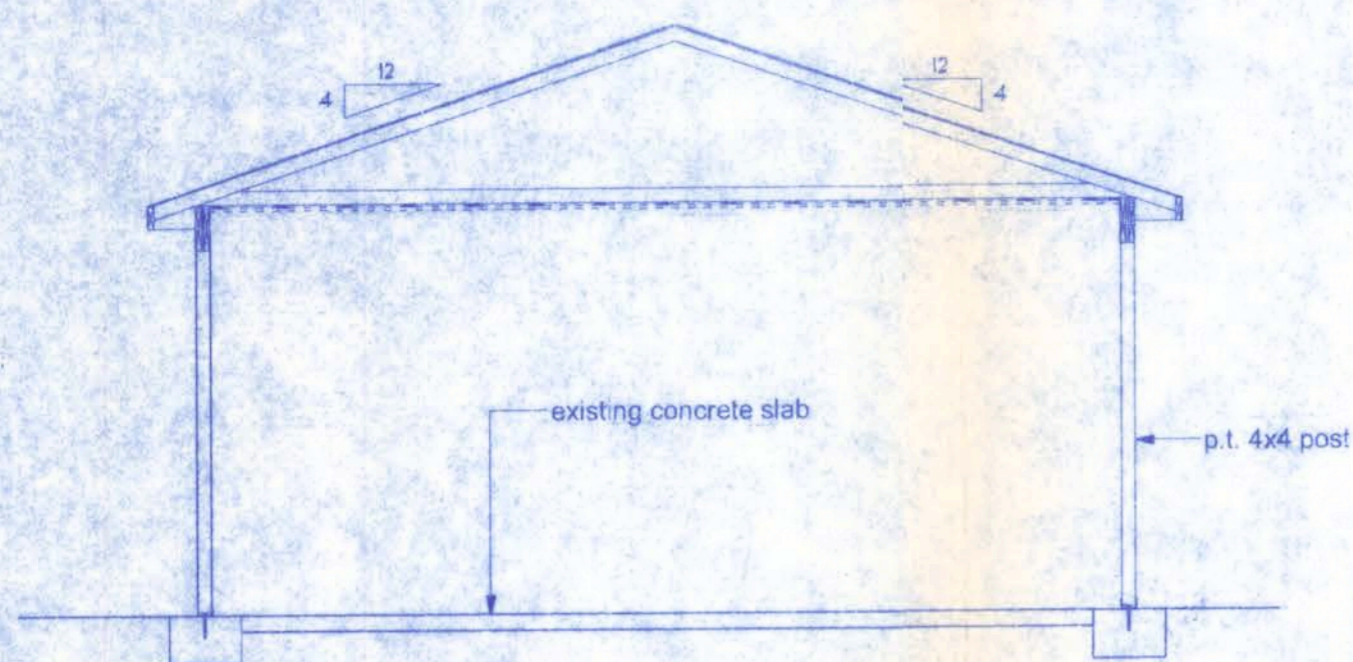
128 SW NASSAU STREET  
LAKE CITY, FL 32025  
(886) 758-4209



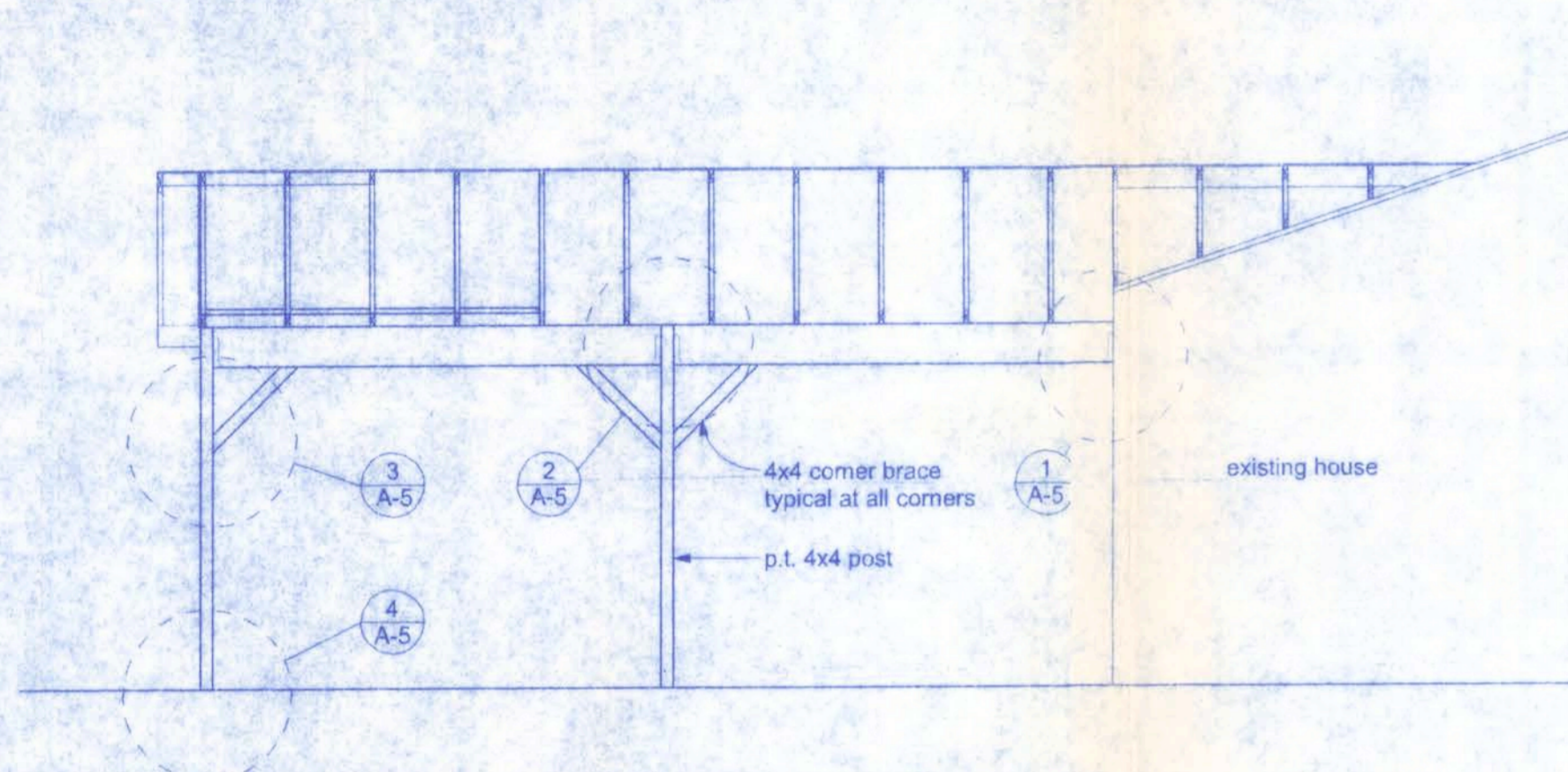
**Freeman**  
Design Group Inc.

DATE 04/28/09	DRAWN BY W.H.F.
	APPROVED W.H.F.
REVISIONS	
SHEET	A-4
OF	5
PROJECT NO. 01R017	

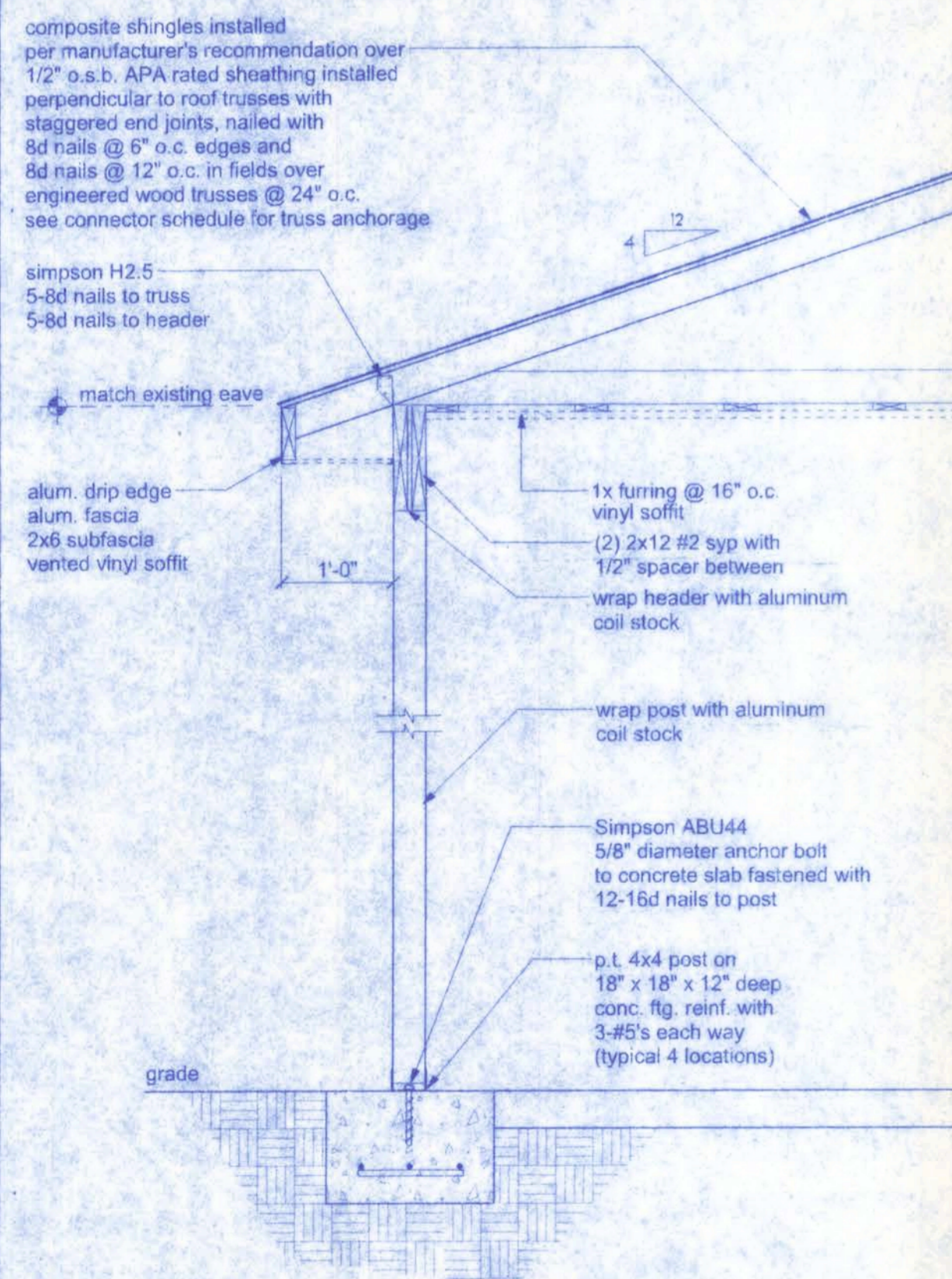
CERTIFICATE OF AUTHORIZATION # 00080701



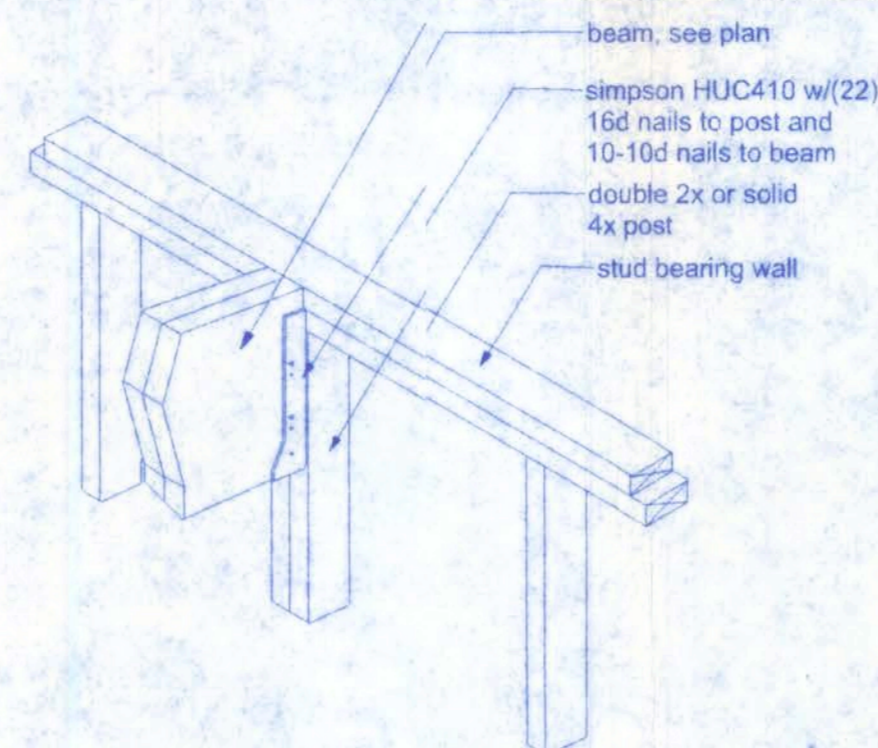
**TYPICAL SECTION**  
SCALE: 1/4" = 1'-0"



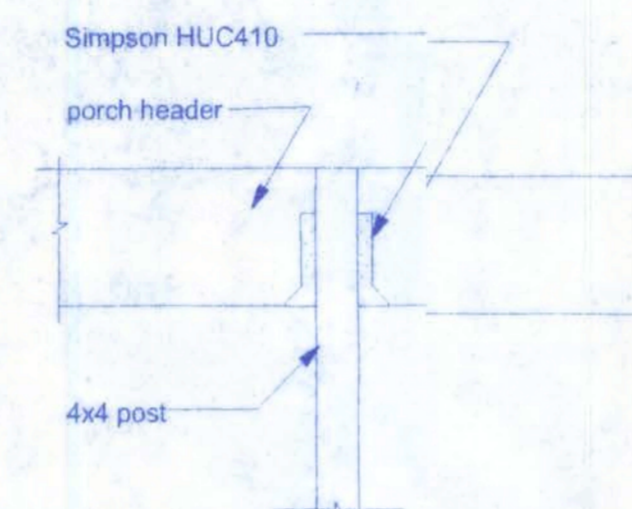
**RIGHT ELEVATION**  
SCALE: 1/4" = 1'-0"



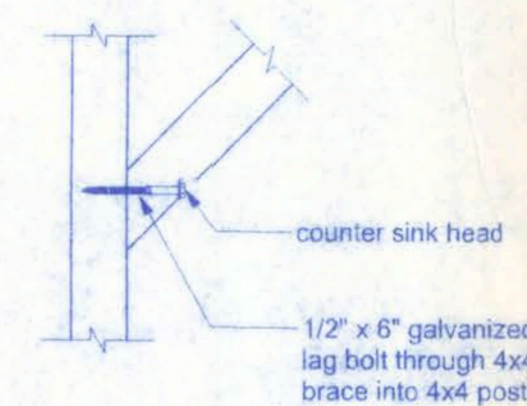
**TYPICAL SECTION**  
SCALE: 1/4" = 1'-0"



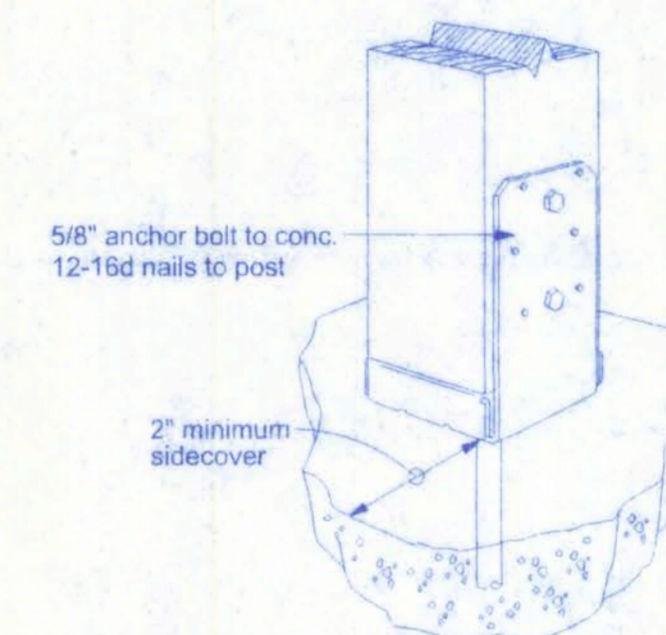
**1 BEAM/WALL CONNECTION**  
MAX. CAPACITY - 3640# DOWN, 1810# UPLIFT NOT TO SCALE



**2 INTERMEDIATE POST**  
NTS



**3 CORNER BRACE CONNECTION**  
NTS

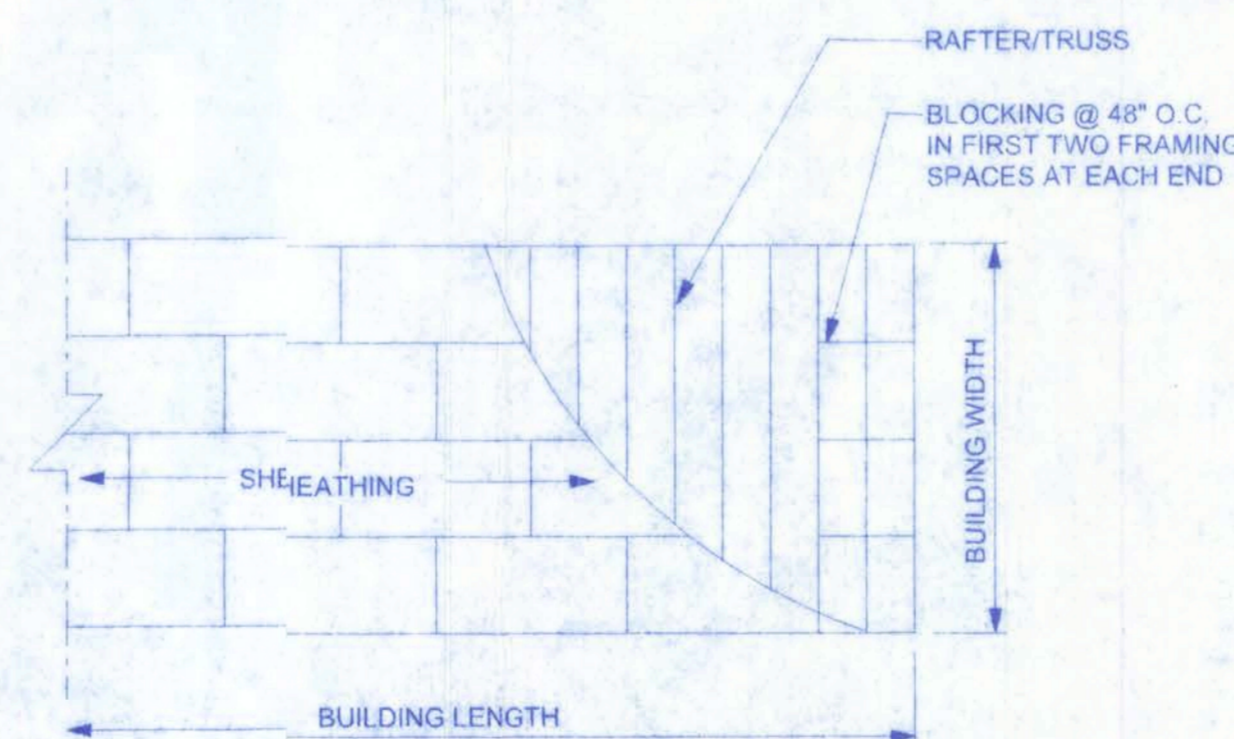


**4 Simpson ABU44**  
NTS

**STEEL COATING RECOMMENDATIONS IN PRESSURE TREATED WOOD:**

- Thicker galvanizing generally extends service life of a product. The treated wood industry recommends use of Stainless Steel and hot-dip galvanized connectors and fasteners with treated wood.
- Due to the uncertainties, which are out of the specifier's control, in regard to the chemicals used in pressure treated wood, Simpson recommends the use of stainless steel fasteners, anchors and connectors with treated wood when possible. At a minimum, customers should use ZMAX (G185 HDG per ASTM A653), Batch/Post Hot-Dip Galvanized (per ASTM A123 for connectors and ASTM A153 for fasteners), or mechanically galvanized fasteners (per ASTM B695, Class 55 or greater), product with the newer alternative treated woods.
- G60 galvanized products should not be used with treated woods.
- G90 galvanized connectors can be used with Sodium Borate (DOT - Disodium Octaborate Tetrahydrate) treated woods. Sodium Borate Treated woods are not suitable for applications where moisture exposure is likely. They are suitable for mudsill applications when transported, stored, and installed appropriately.
- When using stainless steel or hot-dip galvanized connectors, the connectors and fasteners should be made of the same material.

Simpson Strong-Tie Product Finishes	Untreated Wood	Chromated Copper Arsenate (CCA-C)	DOT Sodium Borate (SBX)	Alkaline Copper Quat ACO-C and ACO-D (Carbonate)	Copper Azole (CBA-A and CA-B)	SBX (DOT) with NASIO	Ammoniacal Copper Zinc Arsenate (ACZA)	Other Pressure Treated Woods
Standard (G90)	X	X	X					
ZMAX (G185)	X	X	X	X	X	X		
Post Hot-Dip Galvanized (HDG)	X	X	X	X	X	X	X	X
SST300 (Stainless Steel)	X	X	X	X	X	X	X	X



**ROOF SHEATHING LAYOUT AND ENDWALL ROOF BRACING**

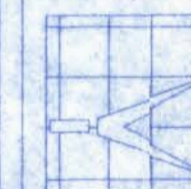
**ALLOWABLE DEFLECTION OF STRUCTURAL MEMBERS**

STRUCTURAL MEMBER	ALLOWABLE DEFLECTION
rafters having slopes greater than 2/12 with no finished ceiling attached to rafters	L/180
interior walls and partitions	H/180
floors and plastered ceilings	L/360
all other structural members	L/240
exterior walls with plaster or stucco finish	H/360
exterior walls - wind loads with brittle finishes	L/240
exterior walls - wind loads with flexible finishes	L/120

W. Miller, P.E.  
5/4/09  
P.E. # 99981

**MILLER CARPORT**

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**Freeman**  
Design Group Inc.

DATE: 04/28/09  
DRAWN BY: W.H.F.  
APPROVED: W.H.F.

REVISIONS

SHEET: A-5  
OF: 5

PROJECT NO.: 01 R017

CERTIFICATE OF AUTHORIZATION # 00002701