

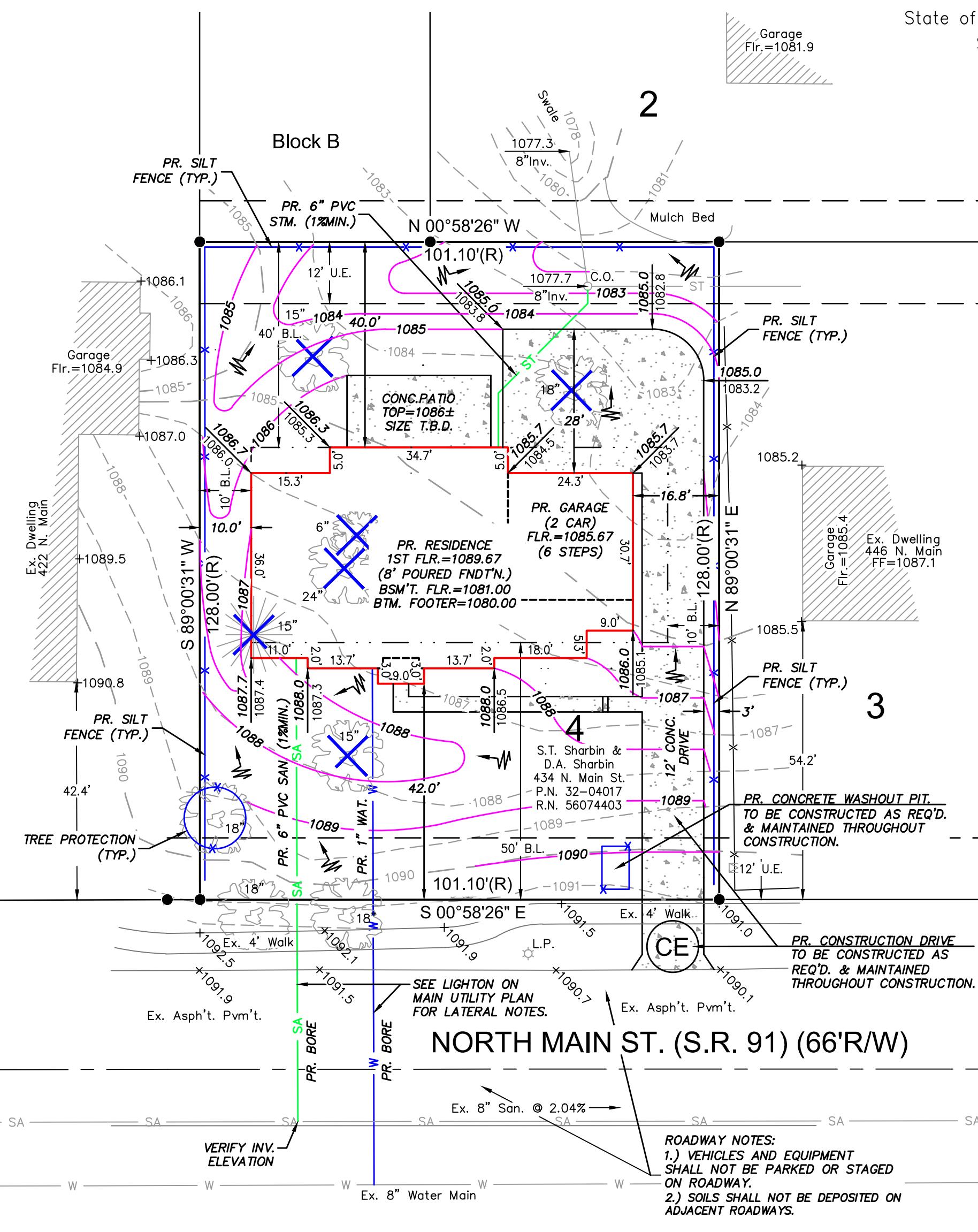
## REVISIONS:

1.) Address Hudson Engineering Comments – 7/24/18

**TOPOGRAPHIC SURVEY  
& SITE PLAN  
for  
The Giannetti Residence  
by  
Kapela Design & Construction**

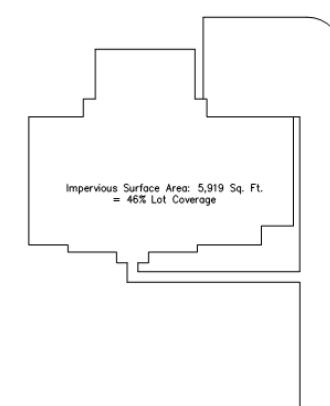
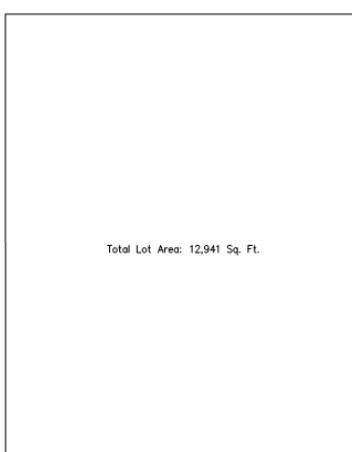
Situated in the City of Hudson, County of Summit and State of Ohio: And known as being Lot 4 in the Lighton On Main Street Subdivision, as recorded in R.N. 55419478.

Situated in the City of Hudson, County of Summit and State of Ohio: And known as being Lot 4 in the Lighton On Main Street Subdivision as recorded in R N 55419478



## CONSTRUCTION NOTES:

1. The contractor must verify all foundation dimensions and propose grades shown on this plan. Any errors resulting from failure to check or to notify the surveyor of any changes shall not be the responsibility of Apex Land Surveying.
2. All grades shall comply w/ corresponding government office.
3. All swales must maintain a minimum slope of 1%.
4. Maintain positive yard drainage away from house.
5. Contractor to notify utilities protection services/ OUPS prior to construction.
6. Contractor shall verify location and depths of existing laterals & verify if proper connections can be made to house. Contact corresponding government office if discrepancies occur.
7. All sewer connections must maintain a minimum slope of 1%.
8. A foundation sump pump is not required.
9. Silt fence must surround any excavation areas so that no silt escapes site.
10. There was no search for easements of record, right-of-ways, restrictive covenants, encumbrances, ownership title evidence, or any other facts that a title search may disclose.



Know what's below.  
**Call** before you dig.

SURVEYED BY:		TITLE: TOPO & SITE PLAN		DATE: JUNE 2018	
 <b>APEX LAND SURVEYING</b>		CLIENT: P. GIANNETTI		PROJ.: 2018043	
KELLY D. DUNFORD, P.S. 8182 2858 FULMER DR., SILVER LAKE, OH (330) 928-7750 ps8182@sbcglobal.net www.apexlandsurveying.com		SCALE: 1" = 20'		FILE: 2018043.dwg	
		DRAWN BY: KDD		CHECKED BY: KDD	
		CREW: KDD			
		SHEET SIZE: 17" X 22"		SHEET: 1 OF 1	





CONTACT:  
J. KAPELA DESIGNS, Inc.  
44 Clinton St. Hudson, OH 44236  
330.650.1949  
www.jkapela.com

**GIANNETTI RESIDENCE**  
4341 N. MAIN STREET (S/L 4 LIGHTON)  
HUDSON, OH 44236

EXTERIOR ELEVATIONS

DATE  
2018-05-23 RZ9A SUBMITTAL  
2018-06-05 ARB SUBMITTAL

**8-16-18**

COPYRIGHT © 2018  
ALL DESIGNS AND DRAWINGS APPEARING HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
ARE OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THESE DESIGNS AND DRAWINGS ARE PROVIDED  
TO THE CLIENT OR BUILDER. THE DESIGNS  
AND DRAWINGS ARE NOT TO BE COPIED,  
DISCLOSED, COPIED, OR SOLD TO  
ANYONE ELSE. THE DESIGNS AND DRAWINGS  
ARE THE PROPERTY OF J. KAPELA DESIGNS, INC.  
NOT TO BE USED BY ANYONE ELSE  
WITHOUT THE WRITTEN CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806

**A201**

## ELEVATION NOTES

Reference sections 1061.3 and chapter 44 of the Residential Code of Ohio

### GENERAL:

-GRADE SHALL HAVE A MINIMUM OF 6" FALL AWAY FROM THE STRUCTURE  
WITHIN THE FIRST 10' PER RCO SECTION 401.3.

-ALL CHIMNEYS SHALL EXTEND PAST ANY ROOF THAT IS WITHIN 10'-0"  
OF THE CHIMNEY BY A MINIMUM OF 2'-0".

-IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO  
CHOOSE ALL SIDING COLORS, TRIM SIZES AND ANY FALSE VENTS.

### SHINGLES:

ROOF SHINGLES SHALL BE APPLIED OVER A MINIMUM OF ONE PLY  
OF #15 FELT. FELT SHALL BE LAID PARALLEL TO THE EAVES, WITH  
A 2" TOP LAP AND 4" END LAP. MINIMUM ROOF SLOPE NO LESS THAN  
1 1/4" / FT. ICE GUARD AND WATERSHIELD AT ALL EAVES AND VALLEYS.  
ICE GUARD SHALL BE INSTALLED A MINIMUM OF 24" MEASURED FROM  
THE INSIDE OF THE EXTERIOR WALL PER RCO SECTION 905.2.7.2.

### ATTICS:

ALL ENCLOSED ATTICS AND RAFTER SPACES SHALL HAVE CROSS  
VENTILATION WITH THE NET FREE VENTILATING AREA NOT LESS  
THAN 1/300 OF THE AREA TO BE VENTILATED. ALL OPENINGS SHALL  
BE PROTECTED AGAINST THE ENTRANCE OF SNOW AND RAIN.

REFER TO ROOF PLAN SHEET FOR VENTING CALCULATIONS.

### TRUSSES:

ALL TRUSSES ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER  
WITH DETAILED DRAWINGS DESCRIBING TRUSS LAYOUTS AND LOAD  
CALCULATIONS USED TO DESIGN THE TRUSSES. IT IS THE BUILDER  
AND/OR OWNERS RESPONSIBILITY TO SUPPLY ANY/OR ALL OF THIS  
INFORMATION IF REQUESTED BY THE BUILDING DEPARTMENT TO ISSUE  
BUILDING PERMITS. IT IS ALSO THE RESPONSIBILITY OF THE TRUSS  
MANUFACTURER TO VERIFY, AND IF NECESSARY, ADJUST THE SIZE OF  
OR ADD ANY BEAM OR HEADER THAT IS DIRECTLY EFFECTED OR  
REQUIRED TO CARRY THE ROOF LOADS. IN THIS EVENT, THE TRUSS  
MANUFACTURER SHALL CONTACT J. KAPELA DESIGNS, INC. IN ORDER  
TO UPDATE THE DRAWINGS.

### WINDOWS:

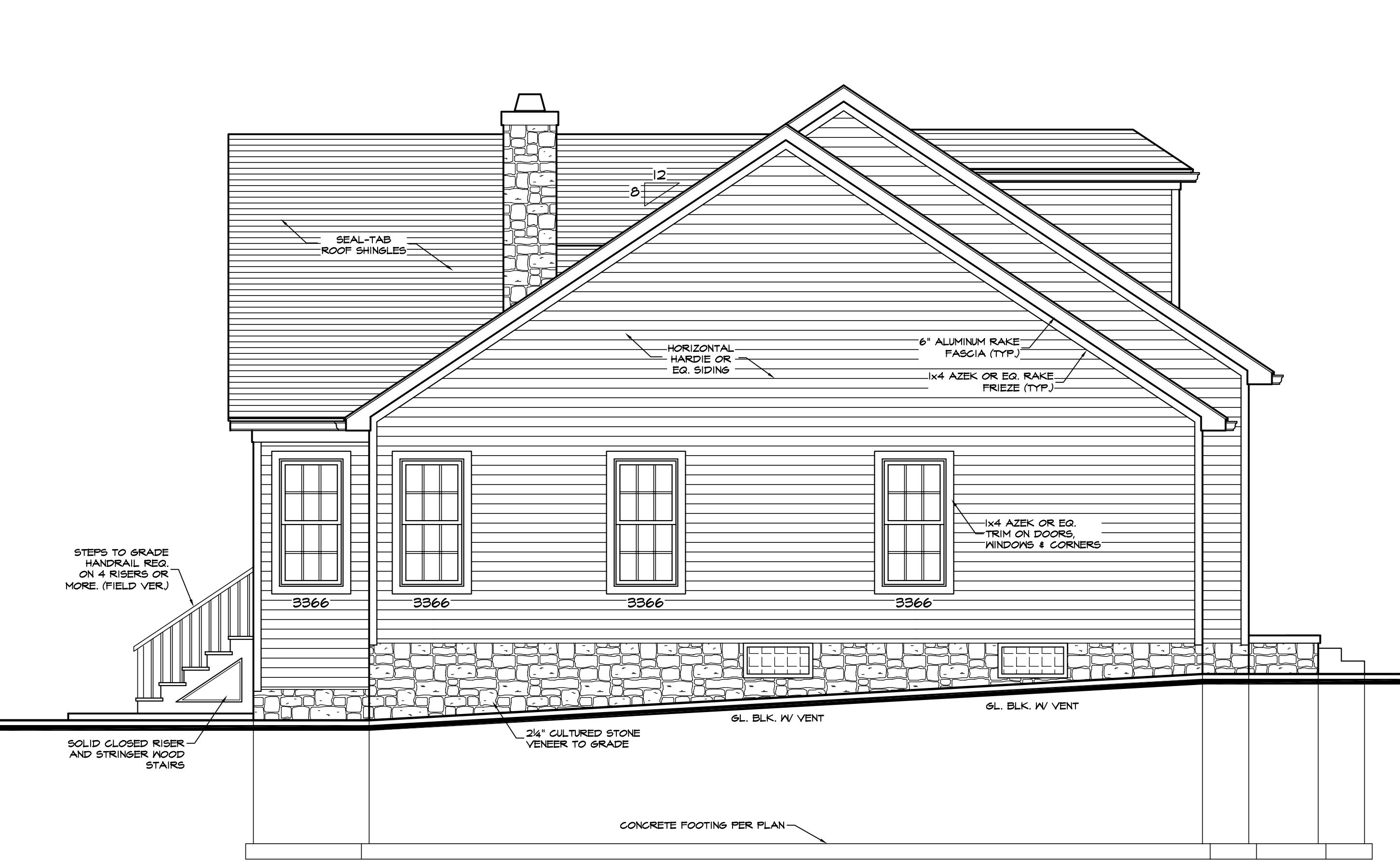
ALL WINDOWS AND SIZES ARE DRAWN NOMINAL INCHES.

WINDOWS WITHIN 36" HORIZONTALLY & 60" VERTICALLY OF A  
TUB OR SHOWER MUST BE TEMPERED.

WINDOWS WITH SILLS LOWER THAN 18" MUST BE TEMPERED.

EGRESS REQUIREMENTS:  
MAXIMUM SILL HEIGHT ABOVE FLOOR.....44"  
MINIMUM NET CLEAR OPENING HEIGHT.....24"  
MINIMUM NET CLEAR OPENING WIDTH.....20"  
MINIMUM NET CLEAR OPENING SQUARE FEET.....5.7  
MINIMUM NET CLEAR OPENING SQ. FT. GRADE LEVEL.....5.0  
REMOVAL OF SASH MAY NOT BE USED TO OBTAIN CLEAR OPG.

SEE SHEET C101 FOR GEN. CODE  
REQUIREMENTS, DISCLAIMERS AND  
GENERAL CONSTRUCTION NOTES



**LEFT SIDE ELEVATION**

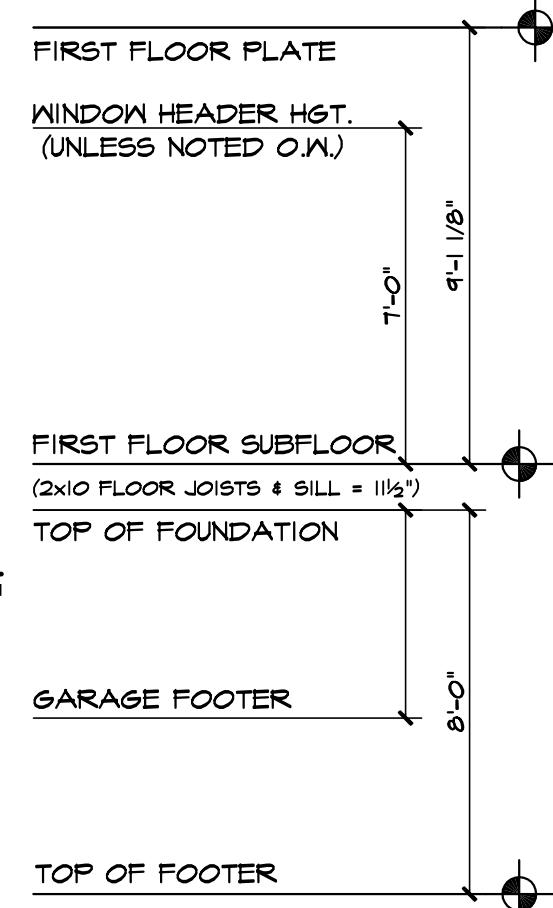
S: 1/4" = 1'-0"

### EXTERIOR SELECTIONS:

ROOF: Owens Duration - Onyx Black  
SIDING: Hardie or Eq. 4" LAP - Slate Gray  
CULTURED STONE: Dutch Quality - Elkwood, Tuscan Ridge  
FRONT DOOR: Color to be determined  
GARAGE DOOR: Color to be determined  
WINDOWS: Grids between the glass - White  
DOOR, WINDOW & CORNER TRIM: Azek or Eq. - White  
FRIEZE & RAKE FRIEZE TRIM: Azek or Eq. - White  
FASCIA & RAKE FASCIA: Aluminum wrap - White



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



ALL DESIGNS AND DRAWINGS APPEARING HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
ARE OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THESE DESIGNS AND DRAWINGS ARE PROVIDED  
TO THE CLIENT OR BUILDER. THE DESIGNS  
AND DRAWINGS ARE NOT TO BE COPIED,  
DISCLOSED, COPIED, OR SOLD TO  
ANYONE ELSE. THE DESIGNS AND DRAWINGS  
ARE THE PROPERTY OF J. KAPELA DESIGNS, INC.  
NOT TO BE USED BY ANYONE ELSE  
WITHOUT THE WRITTEN CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806



CONTACT:  
J. KAPELA DESIGNS, Inc.  
44 Clinton St. Hudson, OH 44236  
330.650.1949  
www.jkapela.com

DATE  
2018-05-23 RZ9A SUBMITTAL  
2018-06-05 ARB SUBMITTAL

**8-16-18**

COPYRIGHT © 2018  
ALL DESIGNS AND DRAWINGS APPEARING HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
ARE OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THESE DESIGNS AND DRAWINGS ARE PROVIDED  
TO THE CLIENT OR BUILDER. THE DESIGNS  
AND DRAWINGS ARE NOT TO BE COPIED,  
DISCLOSED, CONCEIVED OR SOLD TO  
ANYONE ELSE. THE DESIGNS AND DRAWINGS  
ARE THE PROPERTY OF J. KAPELA DESIGNS, INC.  
CONTRACTOR OR PERSON WITHOUT THE WRITTEN  
CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806

**A202**

## ELEVATION NOTES

Reference sections 1061.3 and chapter 44 of the Residential Code of Ohio

### GENERAL:

-GRADE SHALL HAVE A MINIMUM OF 6" FALL AWAY FROM THE STRUCTURE  
WITHIN THE FIRST 10' PER RCO SECTION 401.3.

-ALL CHIMNEYS SHALL EXTEND PAST ANY ROOF THAT IS WITHIN 10'-0"  
OF THE CHIMNEY BY A MINIMUM OF 2'-0".

-IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO  
CHOOSE ALL SIDING COLORS, TRIM SIZES AND ANY FALSE VENTS.

### SHINGLES:

ROOF SHINGLES SHALL BE APPLIED OVER A MINIMUM OF ONE PLY  
OF #15 FELT. FELT SHALL BE LAID PARALLEL TO THE EAVES, WITH  
A 2" TOP LAP AND 4" END LAP. MINIMUM ROOF SLOPE NO LESS THAN  
1/4" / FT. ICE GUARD AND WATERSHIELD AT ALL EAVES AND VALLEYS.  
ICE GUARD SHALL BE INSTALLED A MINIMUM OF 24" MEASURED FROM  
THE INSIDE OF THE EXTERIOR WALL PER RCO SECTION 905.2.7.2.

### ATTICS:

ALL ENCLOSED ATTICS AND RAFTER SPACES SHALL HAVE CROSS  
VENTILATION WITH THE NET FREE VENTILATING AREA NO LESS  
THAN 1/300 OF THE AREA TO BE VENTILATED. ALL OPENINGS SHALL  
BE PROTECTED AGAINST THE ENTRANCE OF SNOW AND RAIN.

REFER TO ROOF PLAN SHEET FOR VENTING CALCULATIONS.

### TRUSSES:

ALL TRUSSES ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER  
WITH DETAILED DRAWINGS DESCRIBING TRUSS LAYOUTS AND LOAD  
CALCULATIONS USED TO DESIGN THE TRUSSES. IT IS THE BUILDER  
AND/OR OWNERS RESPONSIBILITY TO SUPPLY ANY/OR ALL OF THIS  
INFORMATION IF REQUESTED BY THE BUILDING DEPARTMENT TO ISSUE  
BUILDING PERMITS. IT IS ALSO THE RESPONSIBILITY OF THE TRUSS  
MANUFACTURER TO VERIFY, AND IF NECESSARY, ADJUST THE SIZE OF  
OR ADD ANY BEAM OR HEADER THAT IS DIRECTLY EFFECTED OR  
REQUIRED TO CARRY THE ROOF LOADS. IN THIS EVENT, THE TRUSS  
MANUFACTURER SHALL CONTACT J. KAPELA DESIGNS, INC. IN ORDER  
TO UPDATE THE DRAWINGS.

### WINDOWS:

ALL WINDOWS AND SIZES ARE DRAWN NOMINAL INCHES.

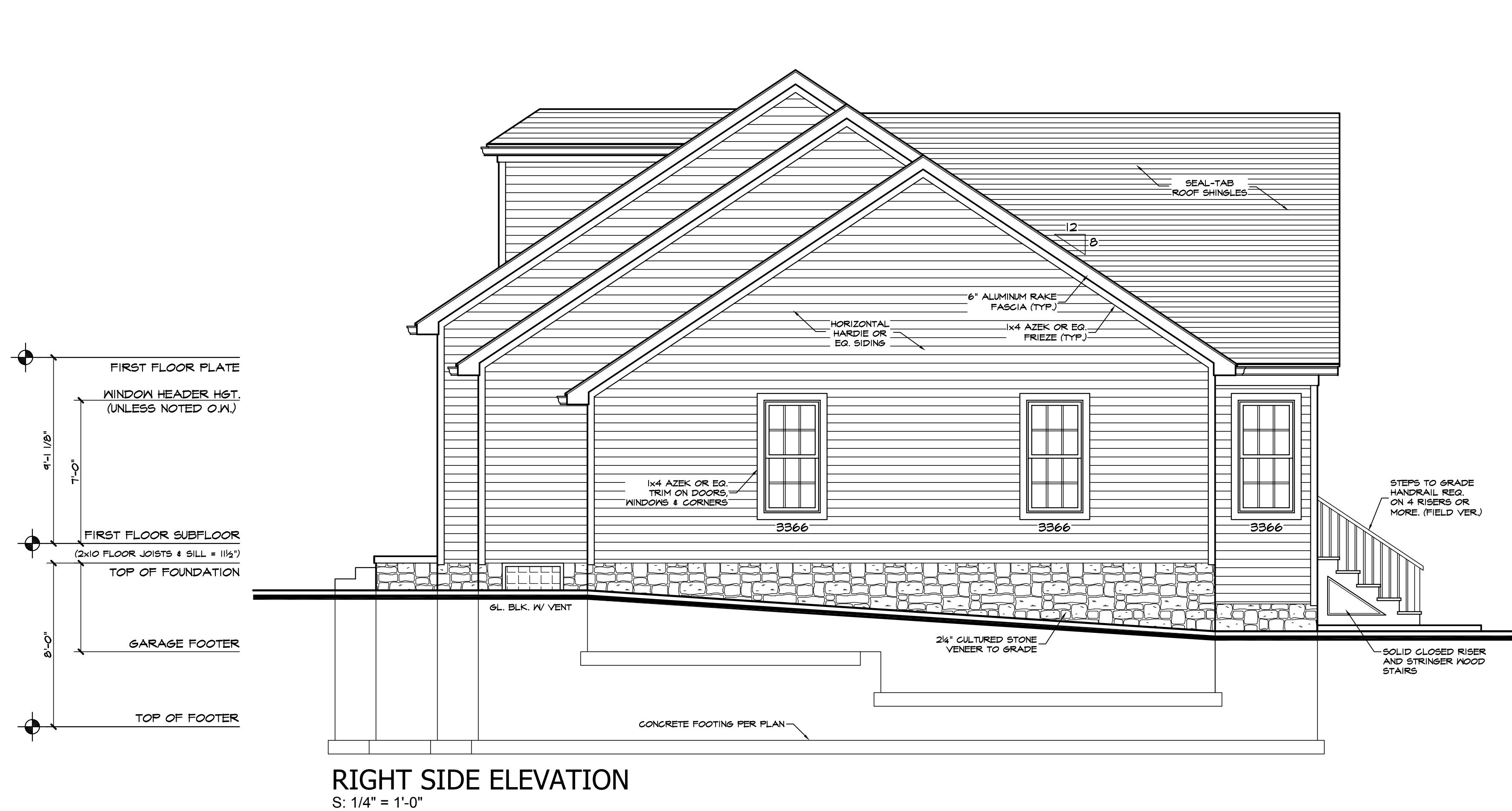
WINDOWS WITHIN 36" HORIZONTALLY & 60" VERTICALLY OF A  
TUB OR SHOWER MUST BE TEMPERED.

WINDOWS WITH SILLS LOWER THAN 18" MUST BE TEMPERED.

#### EGRESS REQUIREMENTS:

MAXIMUM SILL HEIGHT ABOVE FLOOR.....44"  
MINIMUM NET CLEAR OPENING HEIGHT.....24"  
MINIMUM NET CLEAR OPENING WIDTH.....20"  
MINIMUM NET CLEAR OPENING SQUARE FEET.....5.7  
MINIMUM NET CLEAR OPENING SQ. FT. GRADE LEVEL.....5.0  
REMOVAL OF SASH MAY NOT BE USED TO OBTAIN CLEAR OPG.

SEE SHEET C101 FOR GEN. CODE  
REQUIREMENTS, DISCLAIMERS AND  
GENERAL CONSTRUCTION NOTES





## FOUNDATION NOTES

Reference sections 1061.3 and chapter 44 of the Residential Code of Ohio

### GENERAL:

- 2x8 PRESSURE TREATED SILL PLATE WITH SILL SEALER
- 1/2" x 18" ANCHOR BOLTS @ 6'-0" o.c. AND 12" MAXIMUM FROM CORNERS AND WITH A MIN. OF 2 BOLTS PER PLATE PER RCO SECTION 403.1.6.
- EXTERIOR FOUNDATION INSULATION AS REQUIRED.
- R-19 BATT INSULATION BETWEEN FLOOR JOIST CAVITIES AT RIM.

### FOOTINGS:

- ALL FOOTINGS SHALL EXTEND BELOW THE MINIMUM FROST LINE DEPTH OF 42" PER RCO SECTION 402.2.

-(2) #4 REBAR CONTINUOUS THRU WALL FOOTERS.

-ALL 8" BLOCK OR POURED CONCRETE WALLS SHALL HAVE A MINIMUM 8"x16" CONTINUOUS POURED CONCRETE FOOTING.

-ALL 12" BLOCK OR POURED CONCRETE WALLS SHALL HAVE A MINIMUM 8"x20" CONTINUOUS POURED CONCRETE FOOTING.

-ALL CONCRETE LINTELS AT FOOTING LEVEL CHANGES SHALL HAVE A MINIMUM OF 8" BEARING AT EACH END.

CENTER ALL FOOTINGS ON COLUMN CENTER LINES. REINFORCE EACH WAY AS FOLLOWS:

24"x24"	.....(2) #4
30"x30"	.....(3) #4
36"x36"	.....(3) #4
42"x42"	.....(4) #4
48"x48"	.....(5) #4
60"x60"	.....(5) #5
72"x72"	.....(6) #5

### CRAWL SPACE VENTILATION:

CRAWL SPACE EXTERIOR VENTILATION OPENINGS MAY BE OMITTED WHEN CONTINUOUSLY OPERATED MECHANICAL VENTILATION IS PROVIDED AT A RATE OF 1.0 cfm FOR EACH 50 SQUARE FEET OF CRAWL SPACE FLOOR AREA.

### POINT LOADS:

IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO VERIFY THAT ALL POINT LOADS TRANSFER TO THE FOUNDATION OR SPECIFIED BEARING LOCATIONS.

SEE SHEET C101 FOR GEN. CODE REQUIREMENTS, DISCLAIMERS AND GENERAL CONSTRUCTION NOTES

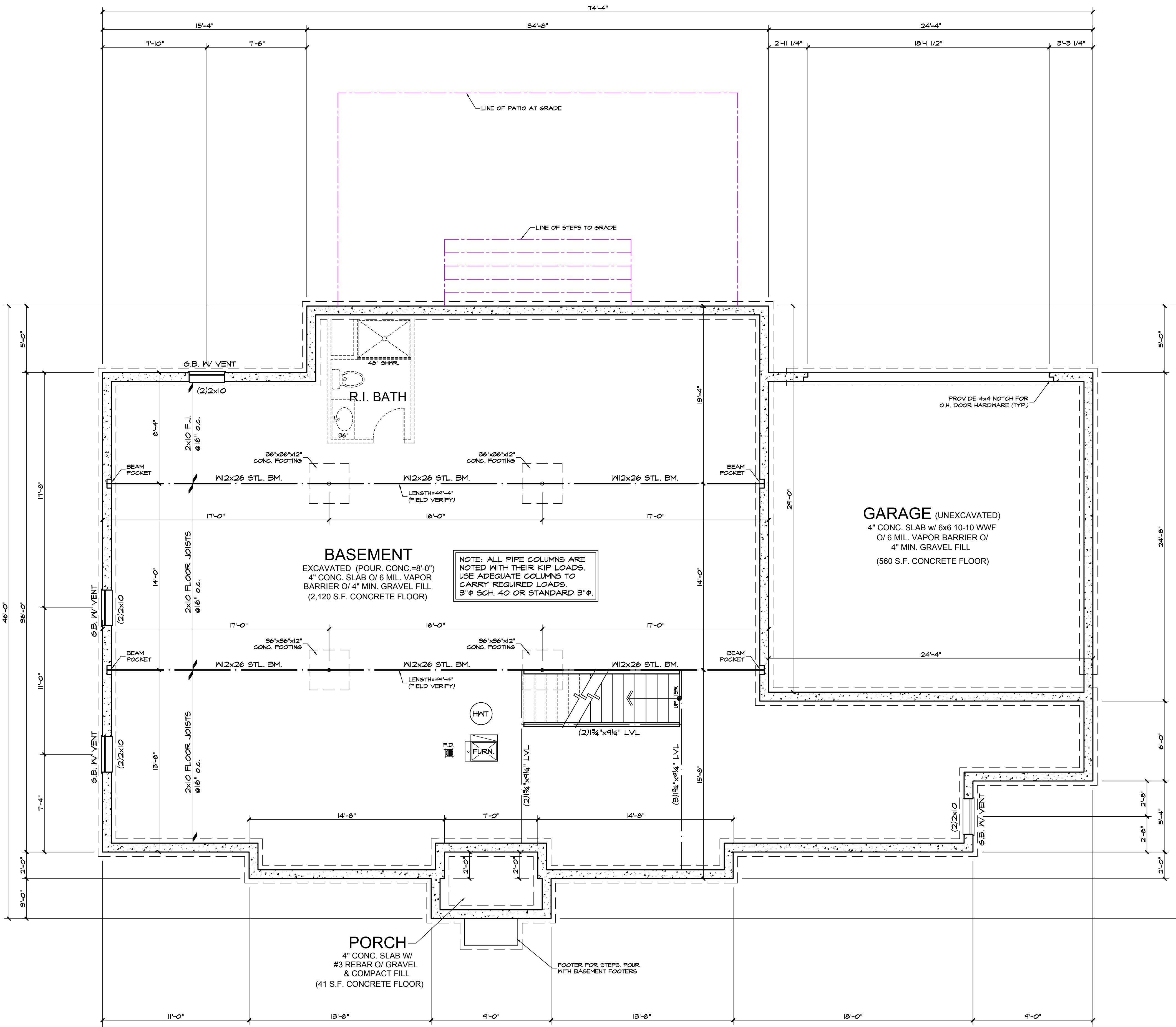
### STEEL BEAM CHART

SIZE	DEPTH	WIDTH
W12x26	12 1/4"	6 1/2"

NOTE: DIMENSIONS ARE DERIVED FROM AISC STEEL MANUAL. VERIFY WITH STEEL DISTRIBUTOR.

### REINFORCING DETAIL

CONCRETE WALL REINFORCEMENT=
8' WALL = (1) #6 @ 48" o.c.
9' WALL = (1) #6 @ 32" o.c.
24" MAX. FROM CORNERS
EXTERIOR FACE
INTERIOR 32'-48"
DESIGN CRITERIA:
-BARS ARE 6" FROM EXTER. FACE
-36" MINIMUM GRAVEL FILL
-MAX. LATERAL SOIL PRESSURE OF 55 psf
-1500 psf SOIL BEARING PRESSURE
-MIN. 3,000 psi CONCRETE STRENGTH
-REINFORCING YIELD STRENGTH OF 60,000 psi
NOTE: THIS DETAIL IS ASSUMING BEST CASE SOIL CONDITIONS. FOR MEDIUM OR WORST CASE REFER TO RCO TABLE 404.1(2)



FOUNDATION PLAN  
S: 1/4" = 1'-0"

GIANNETTI RESIDENCE  
4341 N. MAIN STREET (SL 4 LIGHTON)  
HUDSON, OH 44236

FOUNDATION PLAN

DATE  
2018-05-23 BZBA SUBMITTAL  
2018-06-05 ARB SUBMITTAL

7-2-18

COPYRIGHT 2018  
ALL DESIGN DRAWINGS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF J. KAPELA DESIGNS, INC. AND OWNED SOLELY BY J. KAPELA DESIGNS, INC. NO PART OF THESE DRAWINGS MAY BE REPRODUCED, COPIED, DISCLOSED, CONCEIVED OR SOLD TO ANYONE ELSE, OR USED IN ANY OTHER WAY, WITHOUT THE WRITTEN CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806

A101

## FIRST FLOOR NOTES

Reference sections 1061.3 and chapter 44 of the Residential Code of Ohio

### GENERAL:

- ALL WALLS ARE DIMENSIONED STUD-TO-STUD.
- ALL INTERIOR WALLS ARE 3 1/2", EXTERIOR WALLS ARE 4" UNLESS OTHERWISE NOTED.
- ALL ANGLED WALLS ARE 45° UNLESS OTHERWISE NOTED.
- SEE PLANS FOR HEADERS IN ALL OPENINGS FOR EXTERIOR AND LOAD BEARING WALLS.
- ALL FLOOR JOISTS SHALL BE CROWNED BEFORE PLACEMENT.
- ALL POSTS (■) SHALL BE A MINIMUM OF (3)2x4's OR (2)2x6's UNLESS NOTED OTHERWISE & DEPENDENT ON WALL THICKNESS
- POINT LOADS ARE REPRESENTED BY (●)

### SMOKE & CARBON DETECTORS:

ALL SMOKE & CARBON DETECTORS SHALL BE HARDWIRED & INTERCONNECTED WITH A BATTERY BACK-UP. THEY SHALL BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL STORY OF THE BUILDING PER RCO SECTIONS 314.3 AND 315.1.

### FIREPLACES:

ALL CHIMNEYS AND FIREPLACES SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF 2013 RCO AND INSTALLED PER THE ORDINANCES SET FORTH BY THE LOCAL GOVERNING BUILDING AND ZONING DEPARTMENTS. IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO VERIFY THE ROUGH-OPENING DIMENSIONS FOR ALL PRE-FAB FIREPLACES WITH THE ACTUAL UNIT TO BE INSTALLED, PRIOR TO FRAMING.

### WINDOWS:

ALL WINDOWS AND SIZES ARE DRAWN NOMINAL INCHES.

WINDOWS WITHIN 60" OF STANDING OR WALKING SURFACE OF A TUB, SHOWER, HOT TUB OR WHIRLPOOL MUST BE TEMPERED.

WINDOWS WITH SILLS LOWER THAN 18" MUST BE TEMPERED.

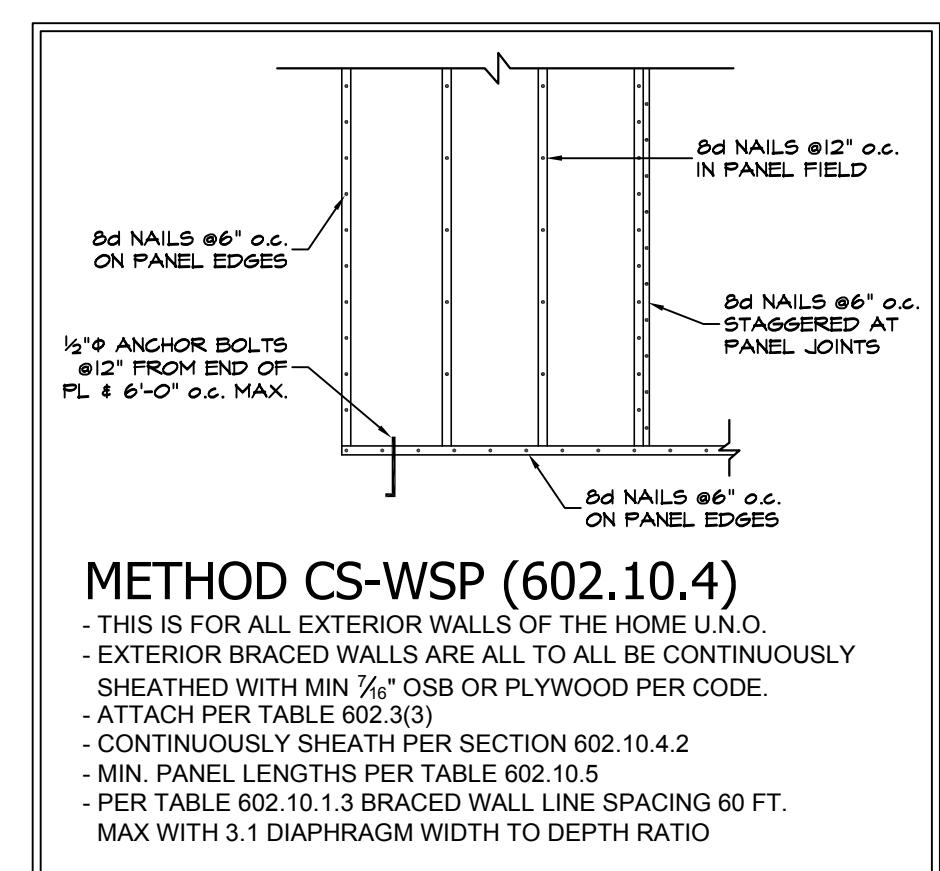
### EGRESS REQUIREMENTS:

MAXIMUM SILL HEIGHT ABOVE FLOOR.....44"  
MINIMUM NET CLEAR OPENING HEIGHT.....24"  
MINIMUM NET CLEAR OPENING WIDTH.....20"  
MINIMUM NET CLEAR OPENING SQUARE FEET.....5.7  
MINIMUM NET CLEAR OPENING SQ. FT. GRADE LEVEL.....5.0  
REMOVAL OF SASH MAY NOT BE USED TO OBTAIN CLEAR OPNG.

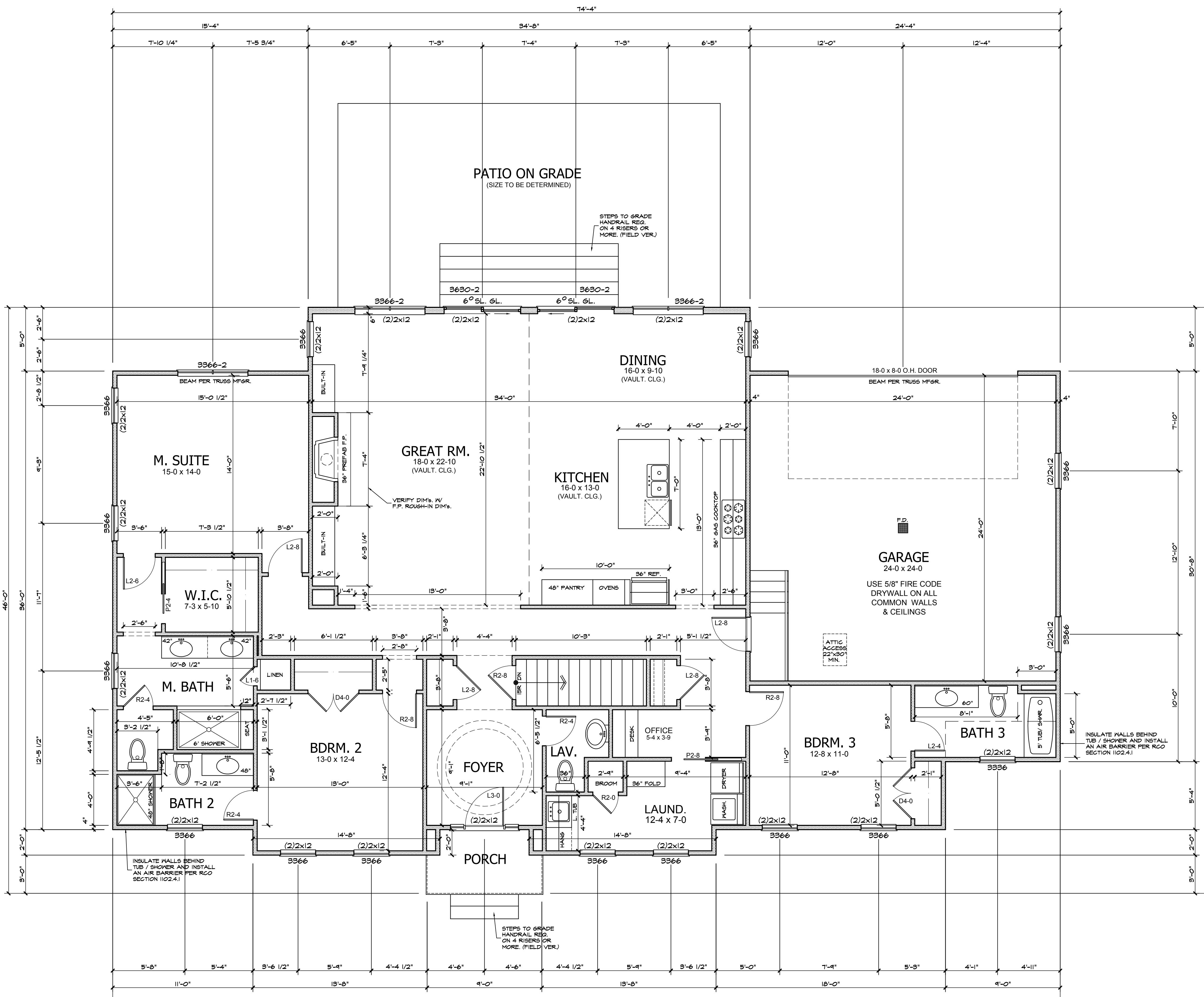
### STAIR REQUIREMENTS:

MIN. STAIR WIDTH EXCLUDING WALL HANDRAIL.....3'-0"  
MINIMUM TREAD DEPTH.....9"  
MAXIMUM RISER HEIGHT.....8 1/4"  
MAXIMUM VARIANCE IN RISER HEIGHT.....3/8"  
MINIMUM NOSING PROJECTION.....1"  
MINIMUM HEADROOM HEIGHT AT STAIR ANGLE.....6'-8"  
MINIMUM / MAXIMUM HANDRAIL HEIGHT.....34" / 38"  
MAXIMUM BALUSTER SPACING (CLEAR OPENING).....<4"  
MINIMUM GUARDRAIL HEIGHT AT STAIRS.....34"  
MINIMUM GUARDRAIL HEIGHT AT DECKS & BALCONIES.....36"  
MAXIMUM HAND GRIP WIDTH.....2 1/4"  
MINIMUM DISTANCE BETWEEN WALL AND HANDRAIL.....1 1/2"

SEE SHEET C101 FOR GEN. CODE REQUIREMENTS, DISCLAIMERS AND GENERAL CONSTRUCTION NOTES



BRACED WALL PANELS (NOT TO SCALE)



CONTACT:  
 J. KAPELA DESIGNS, Inc.  
 44 Clinton St. Hudson, OH 44236  
 330.650.1949  
 www.jkapela.com

GIANNETTI RESIDENCE  
 434 N. MAIN STREET (S/L 4 LIGHTON)  
 HUDSON, OH 44236

FIRST FLOOR PLAN

DATE  
 2018-05-23 B2B SUBMITTAL  
 2018-06-05 ARB SUBMITTAL

8-16-18

COPYRIGHT 2012  
 ALL DESIGNS AND NOTES APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF J. KAPELA DESIGNS, INC. AND ARE OWNED SOLELY BY J. KAPELA DESIGNS, INC. NO PART OF THIS DESIGN MAY BE COPIED, DISCLOSED, CONSIDERED OR SOLD TO ANYONE ELSE, IN WHOLE OR IN PART, WITHOUT THE WRITTEN CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806

A102



CONTACT:  
J. KAPELA DESIGNS, Inc.  
44 Clinton St. Hudson, OH 44236  
330.650.1949  
www.jkapela.com

**FINAL PLAN**  
07/02/2018 12:52:58 PM

## GIANNETTI RESIDENCE

4341 N. MAIN STREET (S/L 4 LIGHTON)  
HUDSON, OH 44236

## ROOF PLAN

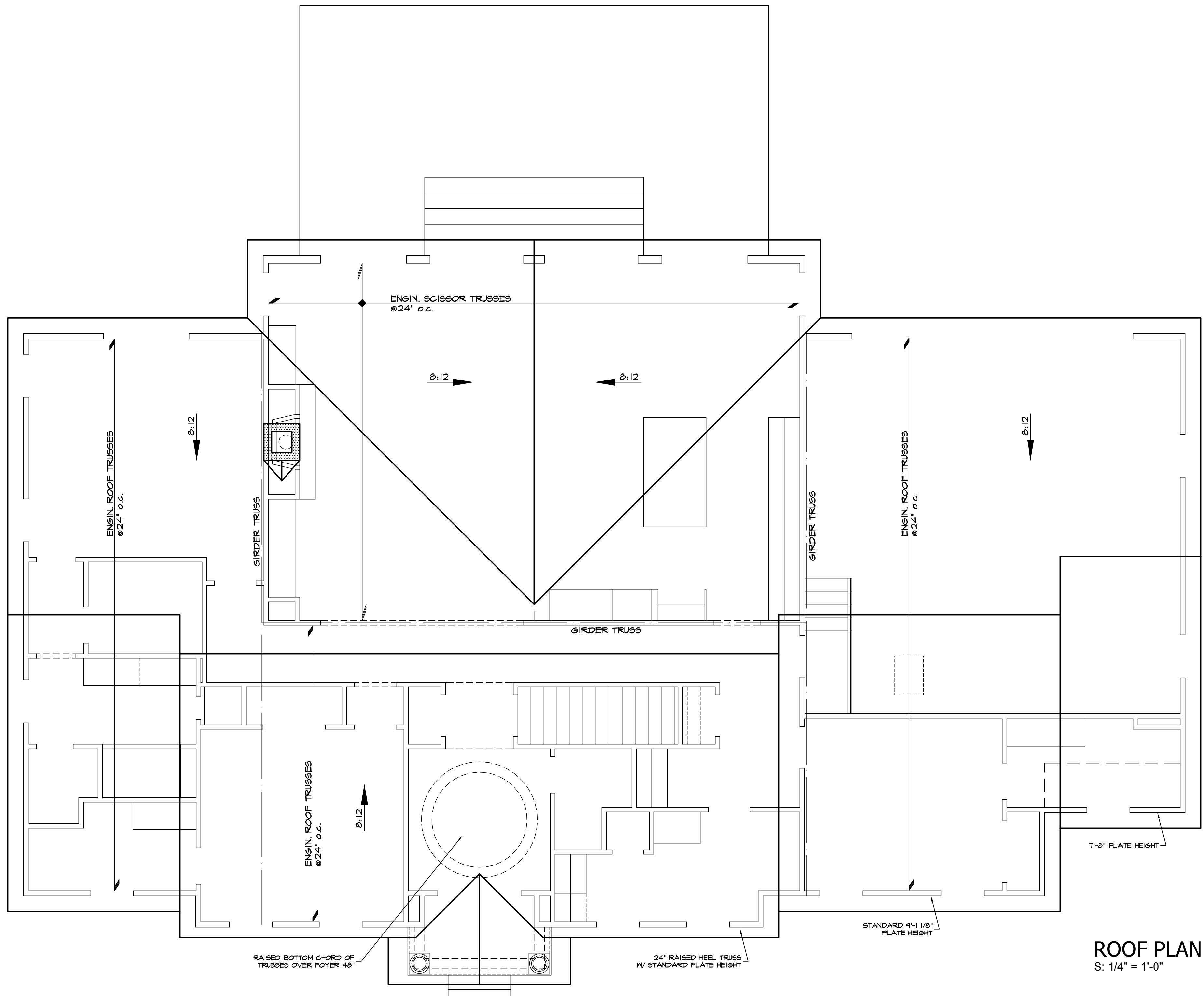
DATE  
2018-05-23 BZ9A SUBMITTAL  
2018-06-05 ARB SUBMITTAL

7-2-18

COPYRIGHT 2018  
ALL DESIGNS AND DRAWINGS APPEARING HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THESE DESIGNS AND DRAWINGS ARE PROVIDED  
TO THE CLIENT OR BUILDER. THE DESIGNS  
AND DRAWINGS ARE NOT TO BE REPRODUCED,  
COPIED, DISCLOSED, CONCEIVED OR SOLD TO  
ANYONE ELSE. THE DESIGNS AND DRAWINGS ARE  
THE PROPERTY OF J. KAPELA DESIGNS, INC.  
CONTRACTOR OR PERSON WITHOUT THE WRITTEN  
CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806

A103



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

## ROOF NOTES

Reference sections 1061.3 and chapter 44 of the Residential Code of Ohio

### SHINGLES:

ROOF SHINGLES SHALL BE APPLIED OVER A MINIMUM OF ONE PLY OF #15 FELT. FELT SHALL BE LAID PARALLEL TO THE EAVES, WITH A 2" TOP LAP AND 4" END LAP. MINIMUM ROOF SLOPE NO LESS THAN 1/4" / FT. ICE GUARD AND WATERSHIELD AT ALL EAVES AND VALLEYS. ICE GUARD SHALL BE INSTALLED A MINIMUM OF 24" MEASURED FROM THE INSIDE OF THE EXTERIOR WALL PER RCO SECTION 905.2.7.2.

### ATTICS:

ALL ENCLOSED ATTICS AND RAFTER SPACES SHALL HAVE CROSS VENTILATION WITH THE NET FREE VENTILATING AREA NOT LESS THAN 1/300 OF THE AREA TO BE VENTILATED. ALL OPENINGS SHALL BE PROTECTED AGAINST THE ENTRANCE OF SNOW AND RAIN.

### SHEATHING:

EXTERIOR WALLS & ROOF SHALL BE CONTINUOUSLY SHEATHED WITH MIN.  $\frac{1}{2}$ " OSB OR PLYWOOD PER SECTION R602.10. NAILED W/ 8d NAILS AT 6" o.c. AT ALL PANEL EDGES AND 12" o.c. AT INTERMEDIATE SUPPORTS

### TRUSSES:

ALL TRUSSES ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER WITH DETAILED DRAWINGS DESCRIBING TRUSS LAYOUTS AND LOAD CALCULATIONS USED TO DESIGN THE TRUSSES. IT IS THE BUILDER AND/OR OWNERS RESPONSIBILITY TO SUPPLY ANY/OR ALL OF THIS INFORMATION IF REQUESTED BY THE BUILDING DEPARTMENT TO ISSUE BUILDING PERMITS. IT IS ALSO THE RESPONSIBILITY OF THE TRUSS MANUFACTURER TO VERIFY, AND IF NECESSARY, ADJUST THE SIZE OF OR ADD ANY BEAM OR HEADER THAT IS DIRECTLY EFFECTED OR REQUIRED TO CARRY THE ROOF LOADS. IN THIS EVENT, THE TRUSS MANUFACTURER SHALL CONTACT J. KAPELA DESIGNS, INC. IN ORDER TO UPDATE THE DRAWINGS.

### OVER-LAY RAFTERS:

USE 2x4's @24" o.c. FOR SPANS UP TO.....6'-0"  
USE 2x6's @24" o.c. FOR SPANS UP TO.....9'-0"  
USE 2x8's @24" o.c. FOR SPANS UP TO.....12'-0"  
USE 2x10's @24" o.c. FOR SPANS UP TO.....15'-0"

### LIVE LOADS:

IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO VERIFY THAT ALL POINT LOADS TRANSFER TO THE FOUNDATION OR SPECIFIED BEARING LOCATIONS.

THIS STRUCTURE IS DESIGNED TO RESIST THE FOLLOWING LOADS:  
ROOF/SNOW.....25psf ATTIC.....20psf  
FIRST FLOOR.....40psf SECOND FLOOR.....40psf  
BALCONIES.....60psf BASIC WIND SPEED.....90mph

### POINT LOADS:

IT IS THE RESPONSIBILITY OF THE BUILDER AND/OR OWNER TO VERIFY THAT ALL POINT LOADS TRANSFER TO THE FOUNDATION OR SPECIFIED BEARING LOCATIONS.

SEE SHEET C101 FOR GEN. CODE REQUIREMENTS, DISCLAIMERS AND GENERAL CONSTRUCTION NOTES





CONTACT:  
J. KAPELA DESIGNS, Inc.  
44 Clinton St. Hudson, OH 44236  
330.650.1949  
www.jkapela.com

FINAL PLAN  
07/02/2018 12:52:58 PM

GIANNETTI RESIDENCE  
4341 N. MAIN STREET (S/L 4 LIGHTON)  
HUDSON, OH 44236

MECHANICAL SCHEMATICS

DATE  
2018-05-23 BZ9A SUBMITTAL  
2018-06-05 ARB SUBMITTAL

7-2-18

COPYRIGHT 2013  
ALL DESIGN AND DRAWINGS APPEAR HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THESE DRAWINGS ARE TO BE KEPT CONFIDENTIAL  
BY THE CLIENT OR BUILDER. THE DESIGNS  
MAY NOT BE COPIED, DISCLOSED, CONCEIVED OR SOLD TO  
ANYONE ELSE. THE DESIGNS ARE THE PROPERTY OF  
J. KAPELA DESIGNS, INC. AND ARE THE EXCLUSIVE  
CONTRACTOR OR PERSON WITHOUT THE WRITTEN  
CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806

M101

## MECHANICAL NOTES

### RECEPTACLE LOCATIONS:

PER NEC SECTION 210.52 AND 210.52(A)(1) - REQUIRES ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6'-0" FROM A RECEPTACLE OUTLET.

### GFCI LOCATIONS:

PER NEC SECTION 210.8 - ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN BATHROOMS, GARAGES, ACCESSORY BUILDINGS, EXTERIOR WALLS, CRAWL SPACES, UNFINISHED BASEMENTS, KITCHENS ABOVE COUNTER TOP HEIGHT, BOAT HOUSES, AND ANY ROOM WITH A SINK WHERE THE OUTLET IS WITHIN SIX FEET OF THE SINK SHALL BE GROUND-FAULT CIRCUIT INTERRUPTER TYPE.

### AFCI LOCATIONS:

PER NEC SECTION 210.12 - ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN ANY ROOM, CLOSET, HALLWAY, CEILING, ETC. OF THE HOUSE SHALL BE ARC-FAULT CIRCUIT INTERRUPTER TYPE EXCEPT WHERE GFCI LOCATIONS SUPERCEDE LISTED IN THE NOTE ABOVE PER NEC SECTION 210.8.

### SMOKE & CARBON DETECTORS:

ALL SMOKE & CARBON DETECTORS SHALL BE HARDWIRED & INTERCONNECTED WITH A BATTERY BACK-UP. THEY SHALL BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL STORY OF THE BUILDING PER RCO SECTIONS 314.3 AND 315.1.

### BATH FANS / VENTS

ALL BATHROOM EXHAUST FANS SHALL VENT TO THE EXTERIOR AND HAVE A TERMINATION CAP INSTALLED PER RCO SECTION 303.3 EXCEPTION AND 303.5.

### DISCLAIMER:

ALL HVAC, PLUMBING & ELECTRICAL SCHEMATICS ARE SUGGESTED. BUILDER AND/OR OWNER IS RESPONSIBLE FOR FINAL LAYOUTS THAT COMPLY WITH ALL LOCAL AND STATE BUILDING CODES. BUILDER AND/OR OWNER FULLY UNDERSTAND THAT J. KAPELA DESIGNS, INC. IS NOT A MECHANICAL ENGINEER AND ASSUMES NO RESPONSIBILITY FOR MECHANICAL SYSTEM INSTALLATIONS AND/OR ANY ISSUES RELATED TO THEIR INSTALLATION.

SEE SHEET C101 FOR GEN. CODE REQUIREMENTS, DISCLAIMERS AND GENERAL CONSTRUCTION NOTES

### ELECTRIC SYMBOLS

	SINGLE POLE SWITCH
	3 WAY SWITCH
	4 WAY SWITCH
	ANY SWITCH WITH DIMMER
	110V DUPLEX RECEPTICAL
	SWITCH PLUG
	SPECIAL OUTLET
	TELEPHONE OUTLET
	CABLE OUTLET
	GFI GROUND FAULT CIRCUIT INTERRUPTER
	WEATHERPROOF
	JUNCTION BOX
	CEILING LIGHT
	WALL LIGHT
	CEILING OUTLET (RECESSED FIXTURE)
	CEILING OUTLET (RECESSED EYEBALL FIXTURE)
	EXHAUST FAN
	SERVICE PANEL (MAY BE RECESSED OR SURFACE MOUNTED)
	CEILING FAN
	FLUORESCENT PANEL

(A) TRANE FURNACE - 95% EFFICIENCY (SIZE PER MECH. CONTRACTOR)

(B) TRANE CONDENSER - 13 SEER (SIZE PER MECH. CONTRACTOR)

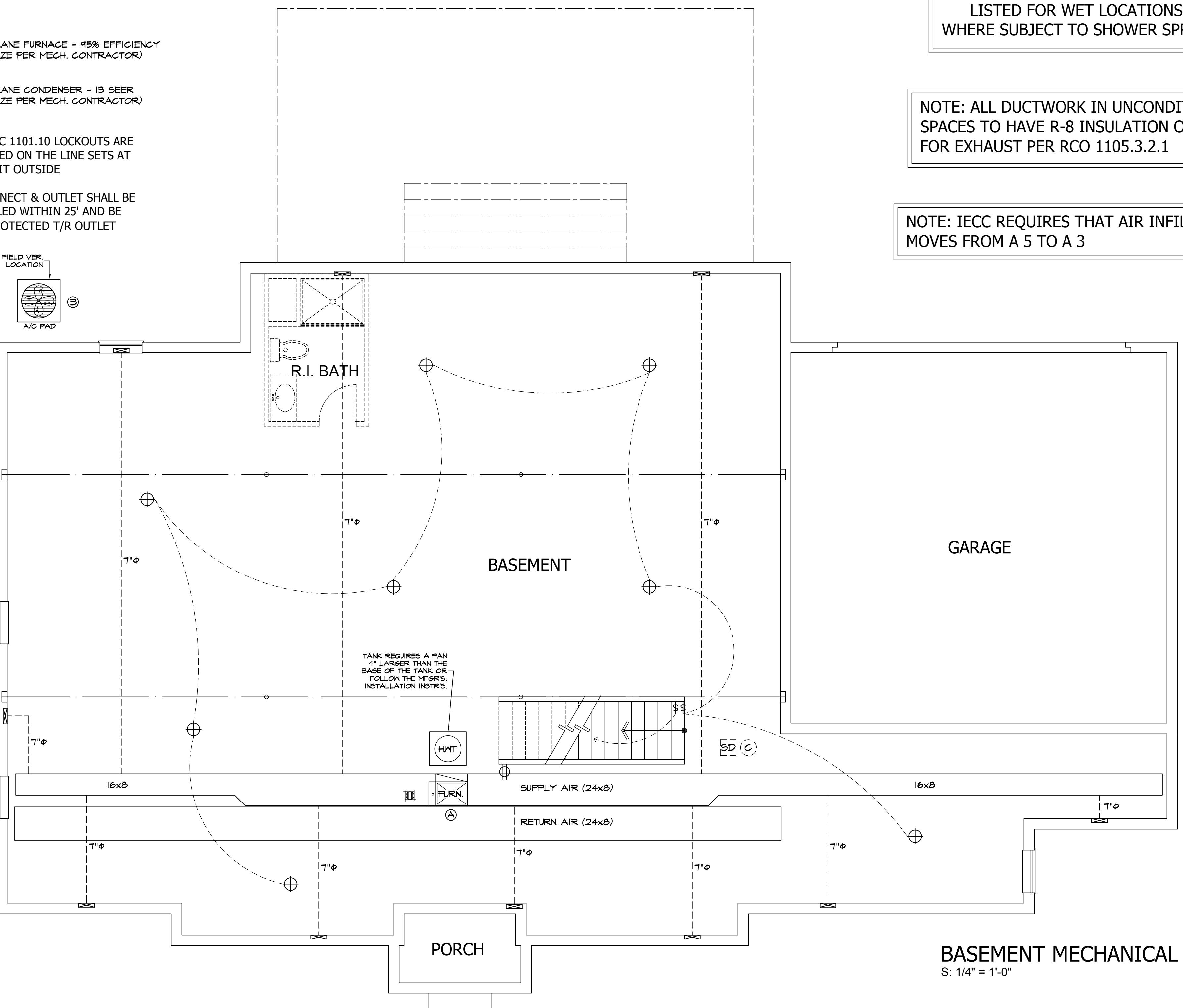
PER OMC 1101.10 LOCKOUTS ARE REQUIRED ON THE LINE SETS AT THE UNIT OUTSIDE

DISCONNECT & OUTLET SHALL BE INSTALLED WITHIN 25' AND BE GFCI PROTECTED T/R OUTLET

NOTE: PER NEC SECTION 410(D)  
ALL BATHROOM LIGHTING FIXTURES SHALL BE LISTED FOR DAMP LOCATIONS, OR LISTED FOR WET LOCATIONS WHERE SUBJECT TO SHOWER SPRAY.

NOTE: ALL DUCTWORK IN UNCONDITIONED SPACES TO HAVE R-8 INSULATION OR R-6 FOR EXHAUST PER RCO 1105.3.2.1

NOTE: IECC REQUIRES THAT AIR INFILTRATION MOVES FROM A 5 TO A 3



DATE  
2018-05-23 BZ9A SUBMITTAL  
2018-06-05 ARB SUBMITTAL

7-2-18

COPYRIGHT 2013  
ALL DESIGN AND DRAWINGS APPEAR HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THESE DRAWINGS ARE TO BE KEPT CONFIDENTIAL  
BY THE CLIENT OR BUILDER. THE DESIGNS  
MAY NOT BE COPIED, DISCLOSED, CONCEIVED OR SOLD TO  
ANYONE ELSE. THE DESIGNS ARE THE PROPERTY OF  
J. KAPELA DESIGNS, INC. AND ARE THE EXCLUSIVE  
CONTRACTOR OR PERSON WITHOUT THE WRITTEN  
CONSENT OF J. KAPELA DESIGNS, INC.

JOB # 1806



CONTACT:  
J. KAPELA DESIGNS, Inc.  
44 Clinton St. Hudson, OH 44236  
330.650.1949  
www.jkapela.com

FINAL PLAN  
07/02/2018 12:52:58 PM

GIANNETTI RESIDENCE  
4341 N. MAIN STREET (S/L 4 LIGHTON)  
HUDSON, OH 44236

MECHANICAL SCHEMATICS

## MECHANICAL NOTES

### RECEPTACLE LOCATIONS:

PER NEC SECTION 210.52 AND 210.52(A)(1) - REQUIRES ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6'-0" FROM A RECEPTACLE OUTLET.

### GFCI LOCATIONS:

PER NEC SECTION 210.8 - ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN BATHROOMS, GARAGES, ACCESSORY BUILDINGS, EXTERIOR WALLS, CRAWL SPACES, UNFINISHED BASEMENTS, KITCHENS ABOVE COUNTER TOP HEIGHT, BOAT HOUSES, AND ANY ROOM WITH A SINK WHERE THE OUTLET IS WITHIN SIX FEET OF THE SINK SHALL BE GROUND-FAULT CIRCUIT INTERRUPTER TYPE.

### AFCI LOCATIONS:

PER NEC SECTION 210.12 - ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN ANY ROOM, CLOSET, HALLWAY, CEILING, ETC. OF THE HOUSE SHALL BE ARC-FAULT CIRCUIT INTERRUPTER TYPE EXCEPT WHERE GFCI LOCATIONS SUPERCEDE LISTED IN THE NOTE ABOVE PER NEC SECTION 210.8.

### SMOKE & CARBON DETECTORS:

ALL SMOKE & CARBON DETECTORS SHALL BE HARDWIRED & INTERCONNECTED WITH A BATTERY BACK-UP. THEY SHALL BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL STORY OF THE BUILDING PER RCO SECTIONS 314.3 AND 315.1.

### BATH FANS / VENTS

ALL BATHROOM EXHAUST FANS SHALL VENT TO THE EXTERIOR AND HAVE A TERMINATION CAP INSTALLED PER RCO SECTION 303.3 EXCEPTION AND 303.5.

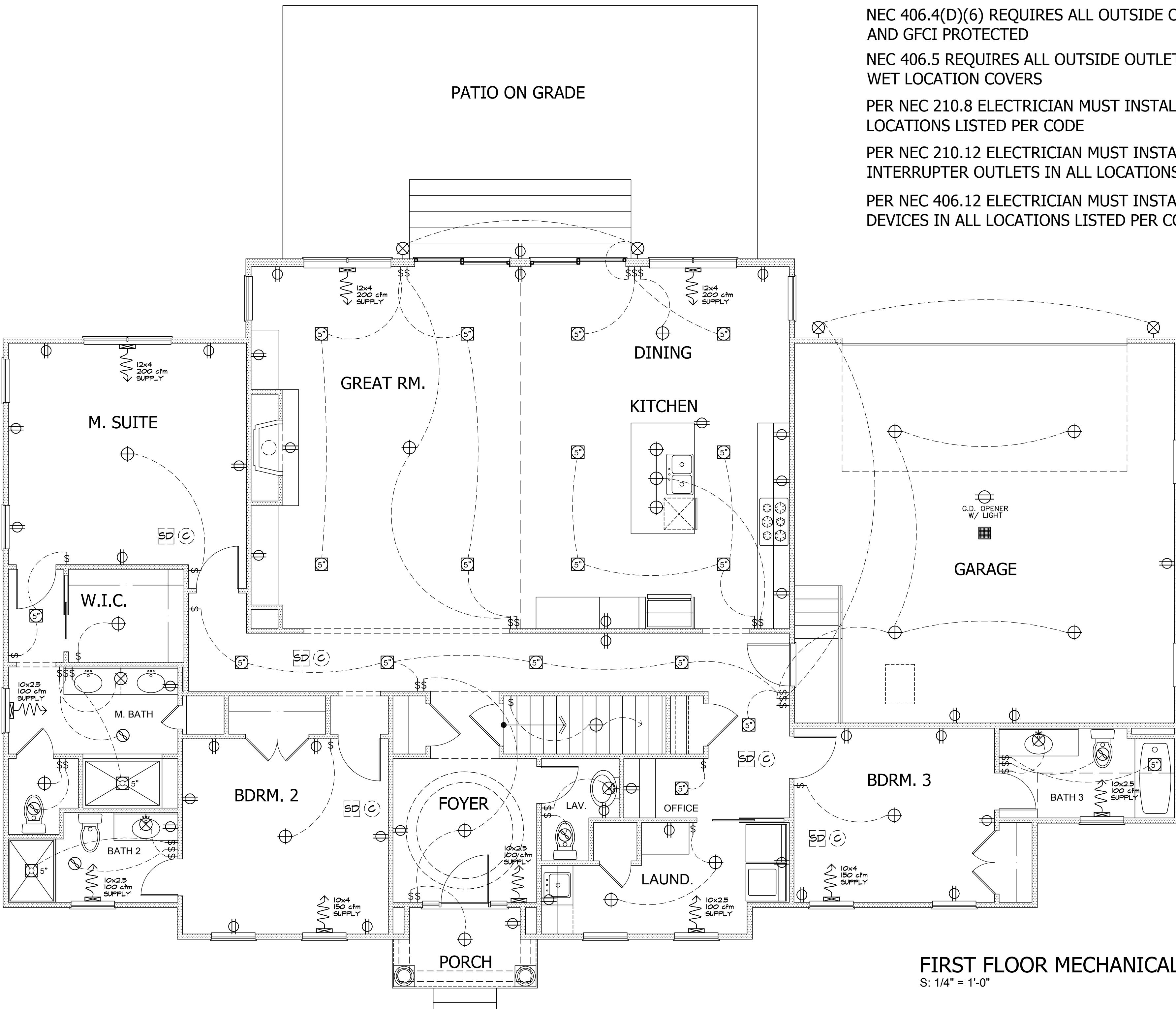
### DISCLAIMER:

ALL HVAC, PLUMBING & ELECTRICAL SCHEMATICS ARE SUGGESTED. BUILDER AND/OR OWNER IS RESPONSIBLE FOR FINAL LAYOUTS THAT COMPLY WITH ALL LOCAL AND STATE BUILDING CODES. BUILDER AND/OR OWNER FULLY UNDERSTAND THAT J. KAPELA DESIGNS, INC. IS NOT A MECHANICAL ENGINEER AND ASSUMES NO RESPONSIBILITY FOR MECHANICAL SYSTEM INSTALLATIONS AND/OR ANY ISSUES RELATED TO THEIR INSTALLATION.

SEE SHEET C101 FOR GEN. CODE REQUIREMENTS, DISCLAIMERS AND GENERAL CONSTRUCTION NOTES

### ELECTRIC SYMBOLS

\$	SINGLE POLE SWITCH
\$1	3 WAY SWITCH
\$14	4 WAY SWITCH
\$15	ANY SWITCH WITH DIMMER
110V DUPLEX RECEPTICAL	
□	SWITCH PLUG
Ⓐ	SPECIAL OUTLET
△	TELEPHONE OUTLET
□	CABLE OUTLET
GFI	GROUND FAULT CIRCUIT INTERRUPTER
WP	WEATHERPROOF
○	JUNCTION BOX
○	CEILING LIGHT
○	WALL LIGHT
□	CEILING OUTLET (RECESSED FIXTURE)
□	CEILING OUTLET (RECESSED EYEBALL FIXTURE)
○	EXHAUST FAN
○	SERVICE PANEL (MAY BE RECESSED OR SURFACE MOUNTED)
○	CEILING FAN
□	FLUORESCENT PANEL



NOTE: PER NEC SECTION 410(D)  
ALL BATHROOM LIGHTING  
FIXTURES SHALL BE LISTED  
FOR DAMP LOCATIONS, OR  
LISTED FOR WET LOCATIONS  
WHERE SUBJECT TO SHOWER SPRAY.

NOTE: ALL NEW 15 AMP AND  
20 AMP OUTLET RECEPTACLES  
SHALL BE TAMPER RESISTANT  
PER NEC SECTION 406.12

NOTE: OHIO LICENSED ELECTRICIAN  
IS REQUIRED TO INSTALL ALL ELECTRICAL  
ITEMS AS FOLLOWS PER THE NEC:

NEC 210.52(G)(1) REQUIRES A GFCI OUTLET FOR EACH CAR SPACE  
NEC 210.52(H) REQUIRES HALLWAY OUTLETS INSTALLED PER CODE

NEC 406.4(D)(6) REQUIRES ALL OUTSIDE OUTLETS TO BE TYPE WR  
AND GFCI PROTECTED

NEC 406.5 REQUIRES ALL OUTSIDE OUTLETS TO HAVE HOODED  
WET LOCATION COVERS

PER NEC 210.8 ELECTRICIAN MUST INSTALL GFCI OUTLETS IN ALL  
LOCATIONS LISTED PER CODE

PER NEC 210.12 ELECTRICIAN MUST INSTALL ARC-FAULT-CIRCUIT-  
INTERRUPTER OUTLETS IN ALL LOCATIONS LISTED PER CODE

PER NEC 406.12 ELECTRICIAN MUST INSTALL TAMPER-RESISTANT  
DEVICES IN ALL LOCATIONS LISTED PER CODE

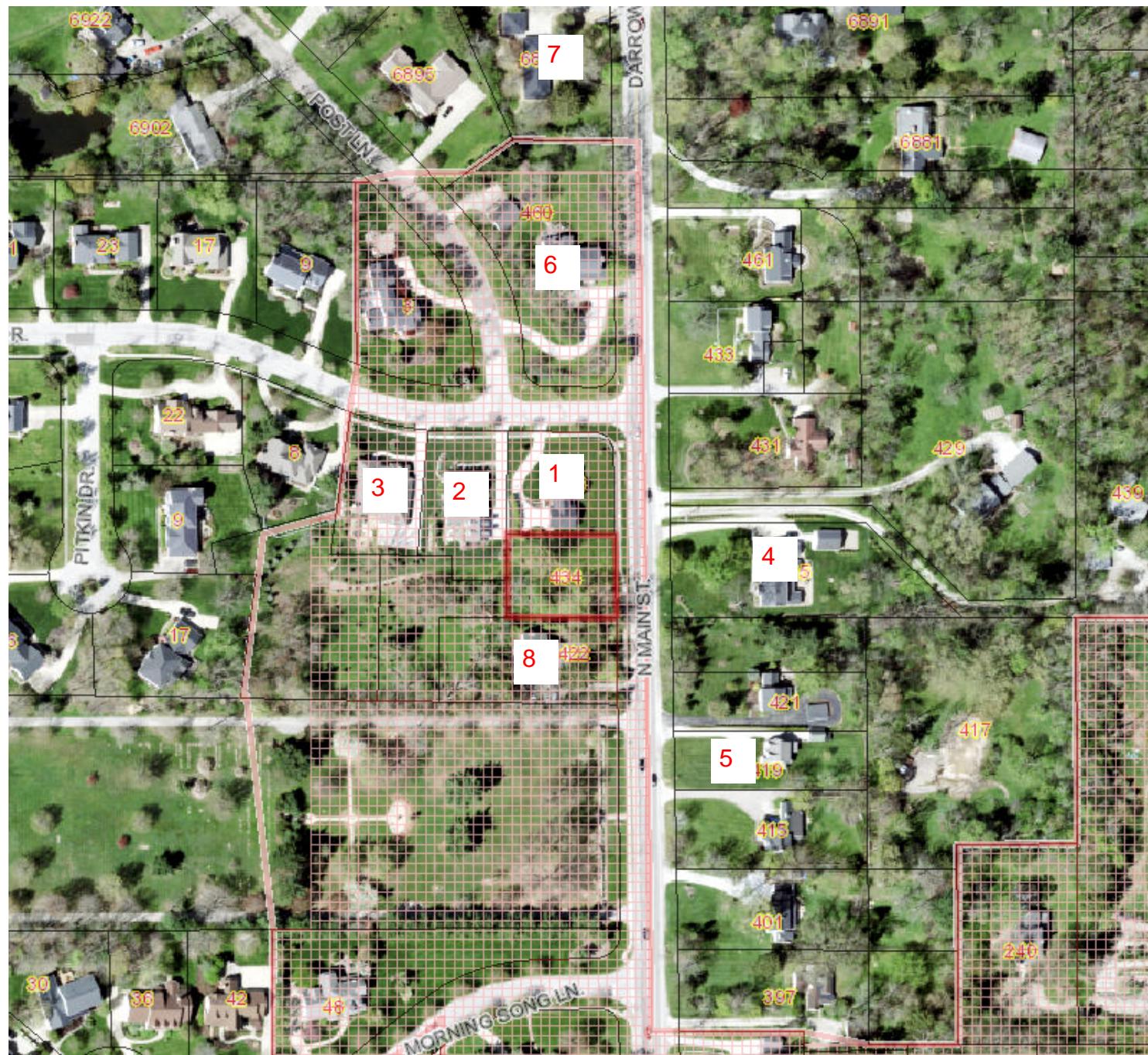
DATE  
2018-05-23 BZ9A SUBMITTAL  
2018-06-05 ARB SUBMITTAL

7-2-18

COPYRIGHT 2018  
ALL DESIGNS AND DRAWINGS APPEARING HEREIN  
CONSTITUTE THE ORIGINAL AND UNPUBLISHED  
WORKS OF J. KAPELA DESIGNS, INC. AND  
ARE OWNED SOLELY BY J. KAPELA DESIGNS, INC.  
THEY ARE PROVIDED TO THE CLIENT OR BUILDER  
FOR THE EXCLUSIVE USE IN THE CONSTRUCTION  
OF THE PROJECT. THEY ARE NOT TO BE COPIED,  
DISCLOSED, CONCEIVED OR SOLD TO  
ANYONE ELSE. THEY ARE THE PROPERTY OF  
J. KAPELA DESIGNS, INC.

JOB # 1806

M102



# TILT-WASH DOUBLE-HUNG WINDOWS



## SECTION REFERENCE

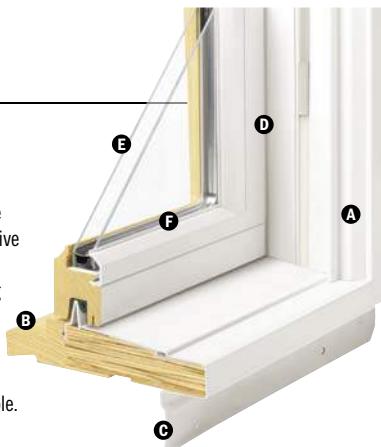
Tables of Sizes .....	223-224
Specifications .....	224-225
Grille Patterns .....	225
Window Details .....	226
Joining Details .....	226
Combination Designs .....	255
Product Performance .....	269
Warranty .....	290-291

# TIlt-Wash Double-Hung Windows

## FEATURES

### Frame

**A** Exterior outer frame members are treated with water-repellent preservative and covered with a rigid vinyl cover, minimizing maintenance and providing an attractive appearance.



**B** Interior surfaces are unfinished pine. Low-maintenance prefinished White interiors are available.

**C** Full-perimeter installation flange makes installation easy and fast with little or no adjustment. It's fixed, seamless and integrated with the exterior frame.

**D** Flexible weatherstripping around all four sides is factory-installed and provides a tight seal between the sash and frame.

### Glass

**E** Choose Low-E, Low-E HeatLock®, Low-E SmartSun™, Low-E SmartSun HeatLock or dual-pane glass. Tempered glass and other glass options are available. Contact your Andersen supplier. A removable translucent film helps shield the glass from damage during delivery and construction and simplifies finishing at the jobsite.

### Sash

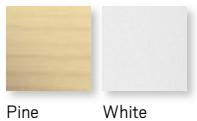


A convenient tilt-wash design makes it easy to clean the window from the inside. An in-sash balancer minimizes the view of the jamb liner, maximizing the amount of wood in the frame. Window can be secured through the side jambs to stud walls without hitting balancer.

## EXTERIOR



## INTERIOR



Naturally occurring variations in grain, color and texture of wood make each window one-of-a-kind. All wood interiors are unfinished unless prefinished White is specified. Oil rubbed bronze is a "living" finish that will change with time and use.

## DOUBLE-HUNG HARDWARE OPTIONS

### LOCK & KEEPER



Antique Brass | Black | Bright Brass  
Gold Dust | Oil Rubbed Bronze  
Satin Nickel | **Stone** | White

### CLASSIC SERIES™ LIFT\*\*



Stone | **White**

*Bold name denotes finish shown.*

\* Visit [andersenwindows.com/warranty](http://andersenwindows.com/warranty) for details.

\*\* Hardware sold separately.

Dimensions in parentheses are in millimeters.

Printing limitations prevent exact duplication of colors and finishes. See your Andersen supplier for actual color and finish samples.

## ACCESSORIES Sold Separately

### Frame

#### Extension Jambs

Standard jamb depth is 3 1/4" (83). Extension jambs are available in unfinished pine or prefinished White. Some sizes may be veneered.

Factory-applied and non-applied extension jambs are available in 1/8" (1.5) increments between 4 1/16" (114) and 7 1/8" (181). Extension jambs can be factory-applied to either three sides (stool and apron) or four sides (picture frame casing).

### Drywall Return

The 200 Series double-hung window is available with a narrow 3" (76) jamb depth with a flat interior surface for easy drywall return. Available in pine or prefinished White.

### Two-Tone Option

200 Series tilt-wash double-hung windows are available with a two-tone color configuration, featuring a prefinished White interior and a Sandtone exterior. Some exterior components are visible from the interior. Corresponding picture and transom units, as well as grilles, are available to match.

### Window Opening Control Device



A new recessed window opening control device is available factory-applied. It limits the sash travel to 4" (102) when the window is first opened. Available in Stone and White.

### Security Sensors

#### Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 30 for details.

### Insect Screens

#### Insect Screen Frames



Choose full insect screen or half insect screen. Half insect screen (shown above) allows ventilation without affecting the view from the upper sash. Frames are available in colors to match product exteriors.

#### TruScene® Insect Screen

Exclusive Andersen® TruScene® insect screens provide over 50% more clarity than our conventional insect screens for a beautiful unobstructed view. They allow more fresh air and sunlight in, while doing a better job of keeping out small insects.

#### Conventional Insect Screen

Conventional insect screens have a long-lasting\* fiberglass screen mesh with a charcoal finish.

### Exterior Trim

This product is available with Andersen® Exterior Trim. See pages 215-220 for details.

#### CAUTION:

- Painting and staining may cause damage to rigid vinyl.
- Do not paint 200 Series windows with White exteriors.
- Andersen does not warrant the adhesion or performance of homeowner-applied paint over vinyl or other factory-coated surfaces.
- 200 Series windows in Sandtone color may be painted any color lighter than Sandtone color using quality oil-base or latex paint.
- For vinyl painting instructions and preparation, contact your Andersen supplier.
- Do not paint weatherstripping.
- Creosote-based stains should not come in contact with Andersen products.
- Abrasive cleaners or solutions containing corrosive solvents should not be used on Andersen products.

For more information about **glass**, **grilles** and **TruScene® insect screen** see pages 10-16.

For more information about **combination designs**, **product performance**, **installation accessories** and **warranty** see pages 255-291 or visit

**Table of Tilt-Wash Transom and Double-Hung Window Sizes**

Scale  $1\frac{1}{8}$ " (3) = 1'-0" (305) – 1:96

Window Dimension	1'-7 1/2"	1'-11 1/2"	2'-3 1/2"	2'-7 1/2"	2'-11 1/2"	3'-3 1/2"
<b>Minimum Rough Opening</b>	1'-8" (495)	1'-11 1/2" (597)	2'-3 1/2" (699)	2'-7 1/2" (800)	2'-11 1/2" (902)	3'-3 1/2" (1003)
Unobstructed Glass (lower sash only)	13 1/2" (343)	17 1/2" (445)	21 1/2" (546)	25 1/2" (648)	29 1/2" (749)	33 1/2" (851)
See Half Circle chart	244CT18	244CT20	244CT24	244CT28	244CT30	244CT34
	244FX1810	244FX2010	244FX2410	244FX2810	244FX3010	244FX3410
	244FX1816	244FX2016	244FX2416	244FX2816	244FX3016	244FX3416
	244FX1820	244FX2020	244FX2420	244FX2820	244FX3020	244FX3420
	244DH1830	244DH2030	244DH2430	244DH2830	244DH3030	244DH3430
	244DH1836	244DH2036	244DH2436	244DH2836	244DH3036	244DH3436
	244DH1840	244DH2040	244DH2440	244DH2840	244DH3040	244DH3440
	244DH1846	244DH2046	244DH2446	244DH2846	244DH3046	244DH3446
	244DH1849	244DH2049	244DH2449	244DH2849	244DH3049 <sup>0</sup>	244DH3449 <sup>0</sup>
	244DH1850	244DH2050	244DH2450	244DH2850	244DH3050 <sup>0</sup>	244DH3450 <sup>0</sup>
	244DH1856	244DH2056	244DH2456	244DH2856 <sup>0</sup>	244DH3056 <sup>0</sup>	244DH3456 <sup>0</sup>
	244DH1860	244DH2060	244DH2460	244DH2860 <sup>0</sup>	244DH3060 <sup>0</sup>	244DH3460 <sup>0</sup>

**Table of Tilt-Wash Half Circle Window Sizes**

Scale  $1\frac{1}{8}$ " (3) = 1'-0" (305) – 1:96

Window Dimension	1'-7 1/2"	1'-11 1/2"
<b>Minimum Rough Opening</b>	1'-8" (495)	1'-11 1/2" (597)
Unobstructed Glass	13 1/2" (343)	17 1/2" (445)
	1'-0 5/8" (321)	1'-1 1/8" (333)
	6 5/8" (168)	8 5/8" (219)
	244CT18	244CT20
	2'-3 1/2" (699)	2'-7 1/2" (800)
	2'-4" (711)	2'-8" (813)
	21 1/2" (546)	25 1/2" (648)
	1'-4 5/8" (422)	1'-6 5/8" (473)
	1'-5 1/8" (435)	1'-7 1/8" (486)
	10 5/8" (270)	11 5/8" (321)
	244CT24	244CT28
	2'-11 1/2" (902)	3'-3 1/2" (1003)
	3'-0" (914)	3'-4" (1016)
	29 1/2" (749)	33 1/2" (851)
	1'-8 5/8" (524)	1'-10 5/8" (575)
	1'-9 1/8" (537)	1'-11 1/8" (587)
	1'-2 5/8" (422)	1'-4 5/8" (422)
	244CT30	244CT34

Grille patterns shown

on page 225.

• "Window Dimension" always refers to outside frame to frame dimension.

• **Minimum Rough Opening** dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. See pages 288-289 for more details.

• Dimensions in parentheses are in millimeters.

<sup>0</sup>Meet or exceed clear opening area of 5.7 sq. ft. or 0.53 m<sup>2</sup>, clear opening width of 20" (508) and clear opening height of 24" (610). See table on page 225.

# TIlt-Wash Double-Hung Windows

## Table of Tilt-Wash Picture Window Sizes

Scale  $\frac{1}{8}$ " (3) = 1'-0" (305) - 1:96

Window Dimension	2'-11 1/2"	3'-11 1/2"	4'-5 1/2"	4'-8 1/2"	4'-11 1/2"	5'-5 1/2"	5'-11 1/2"
Minimum Rough Opening	2'-11 1/2" (902)	3'-11 1/2" (1207)	4'-5 1/2" (1359)	4'-8 1/2" (1435)	4'-11 1/2" (1511)	5'-5 1/2" (1663)	5'-11 1/2" (1816)
Unobstructed Glass	29 1/2" (749)	41 1/2" (1054)	47 1/2" (1207)	50 1/2" (1283)	53 1/2" (1359)	59 1/2" (1511)	65 1/2" (1664)
2'-11 1/2"	244FX3030	244FX4030	244FX4630	244FX4930	244FX5030	244FX5630	244FX6030
3'-11 1/2"	244FX3040	244FX4040	244FX4640	244FX4940	244FX5040	244FX5640	244FX6040
4'-5 1/2"	244FX3046	244FX4046	244FX4646	244FX4946	244FX5046	244FX5646	244FX6046
4'-8 1/2"	244FX3049	244FX4049	244FX4649	244FX4949	244FX5049	244FX5649	244FX6049
4'-11 1/2"	244FX3050	244FX4050	244FX4650	244FX4950	244FX5050	244FX5650	244FX6050
5'-5 1/2"	244FX3056	244FX4056	244FX4656	244FX4956	244FX5056		
5'-11 1/2"	244FX3060	244FX4060	244FX4660	244FX4960	244FX5060		

Grille patterns shown  
on page 225.

- "Window Dimension" always refers to outside frame to frame dimension.
- "Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panelling, brackets, fasteners or other items. See pages 288-289 for more details.
- Dimensions in parentheses are in millimeters.

## Tilt-Wash Picture Window Area Specifications

Window Number	Glass Area Sq. Ft./( $m^2$ )	Overall Window Area Sq. Ft./( $m^2$ )	Window Number	Glass Area Sq. Ft./( $m^2$ )	Overall Window Area Sq. Ft./( $m^2$ )	Window Number	Glass Area Sq. Ft./( $m^2$ )	Overall Window Area Sq. Ft./( $m^2$ )
244FX3030	6.04 (0.56)	8.75 (0.81)	244FX4640	13.89 (1.27)	17.65 (1.64)	244FX5046	17.65 (1.64)	22.11 (2.05)
244FX3040	8.50 (0.79)	11.71 (1.09)	244FX4646	15.67 (1.46)	19.88 (1.85)	244FX5049	18.76 (1.74)	23.35 (2.17)
244FX3046	9.73 (0.90)	13.19 (1.23)	244FX4649	16.66 (1.55)	21.00 (1.95)	244FX5050	19.88 (1.85)	24.59 (2.28)
244FX3049	10.35 (0.96)	13.93 (1.29)	244FX4650	17.65 (1.64)	22.11 (2.05)	244FX5056	22.11 (2.05)	27.06 (2.51)
244FX3050	10.96 (1.02)	14.67 (1.36)	244FX4656	19.63 (1.82)	24.34 (2.26)	244FX5060	24.34 (2.26)	29.54 (2.75)
244FX3056	12.19 (1.13)	16.15 (1.50)	244FX4660	21.61 (2.01)	26.56 (2.47)	244FX5630	12.19 (1.13)	16.15 (1.50)
244FX3060	13.42 (1.25)	17.63 (1.64)	244FX4930	10.35 (0.96)	13.93 (1.29)	244FX5640	17.15 (1.59)	21.61 (2.01)
244FX4030	8.50 (0.79)	11.71 (1.09)	244FX4940	14.55 (1.35)	18.64 (1.73)	244FX5646	19.63 (1.82)	24.34 (2.26)
244FX4040	11.96 (1.11)	15.67 (1.46)	244FX4946	16.66 (1.55)	21.00 (1.95)	244FX5649	20.87 (1.94)	25.70 (2.39)
244FX4046	13.69 (1.27)	17.65 (1.64)	244FX4949	17.71 (1.65)	22.17 (2.06)	244FX5650	22.11 (2.05)	27.06 (2.51)
244FX4049	14.55 (1.35)	18.64 (1.73)	244FX4950	18.76 (1.74)	23.35 (2.17)	244FX6030	13.42 (1.25)	17.63 (1.64)
244FX4050	15.42 (1.43)	19.63 (1.82)	244FX4956	20.87 (1.94)	25.70 (2.39)	244FX6040	18.88 (1.75)	23.59 (2.19)
244FX4056	17.15 (1.59)	21.61 (2.01)	244FX4960	22.97 (2.13)	28.05 (2.61)	244FX6046	21.61 (2.01)	26.56 (2.47)
244FX4060	18.88 (1.75)	23.59 (2.19)	244FX5030	10.96 (1.02)	14.67 (1.36)	244FX6049	22.97 (2.13)	28.05 (2.61)
244FX4630	9.73 (0.90)	13.19 (1.23)	244FX5040	15.42 (1.43)	19.63 (1.82)	244FX6050	24.34 (2.26)	29.54 (2.75)

• Dimensions in parentheses are in square meters.

1



2



3



4



5



6



7



