

CITY OF MACEDONIA

BASIC DECK AND PORCH REQUIREMENTS

All decks and porches must meet all state and local codes.



Please provide the following information at the time of permit application:

1. Residential Building Application (attached)
2. A letter from your Homeowners Association if you live in a subdivision with an HOA.
3. A drawing of your lot showing distances from all lot lines and structures to your proposed deck or porch.
***All structures must be ten feet from the side property line and five feet from the rear line. If you live on a corner lot, then the sideyard setback for the street side of your property is forty feet instead of ten feet.
4. A detailed drawing showing all dimensions, construction material, footers, railings, steps, lumber dimensions, support beams, etc. as required (Residential Code of Ohio). Please note: railings are required for all decks or porches 30 inches or higher from the ground. Railings must be a minimum of 36 inches high and have ornamental closures which do not allow passage of a sphere four inches or more in diameter.
5. Detailed drawings of electrical work if applicable (National Electric Code).

Drawings may be completed by the homeowner or a design professional. Please provide us with two copies of your drawings. We will keep one set on file and the other will be returned to you for your records. Please allow thirty days for your plans to be reviewed. Once approval is given, we will notify you of the permit cost. Please remember that contractors working without a registration or work starting without a permit will result in fines, so check with us to make sure that your contractor is registered.

INSPECTIONS ARE REQUIRED BASED ON THE TYPE AND SIZE OF YOUR PROJECT.

The most common are listed in order as follows:

- Post hole – Inspection shall be performed before concrete is placed. All postholes must be a minimum of 36 inches deep and of the diameter noted on the approved plans.
- Rough frame – When deck frame is complete but before decking is installed. Framing inspection may be included with final inspection if the structure can be viewed from below, but any corrections may require removal of decking.
- Rough electrical (if applicable)
- Final electrical (if applicable)
- Final building – When deck is complete with all railings and steps installed. Please note that stair treads must have a minimum $\frac{3}{4}$ " nosing. Maximum open space of a riser cannot exceed 4". Stairs must have a graspable handrail complying with RCO 311.7.7.3.

We strive to make this a pleasant experience for our residents. The more detailed the data provided is, the faster it can be approved.

Please feel free to call us with any questions that you may have at (330) 468-8360.

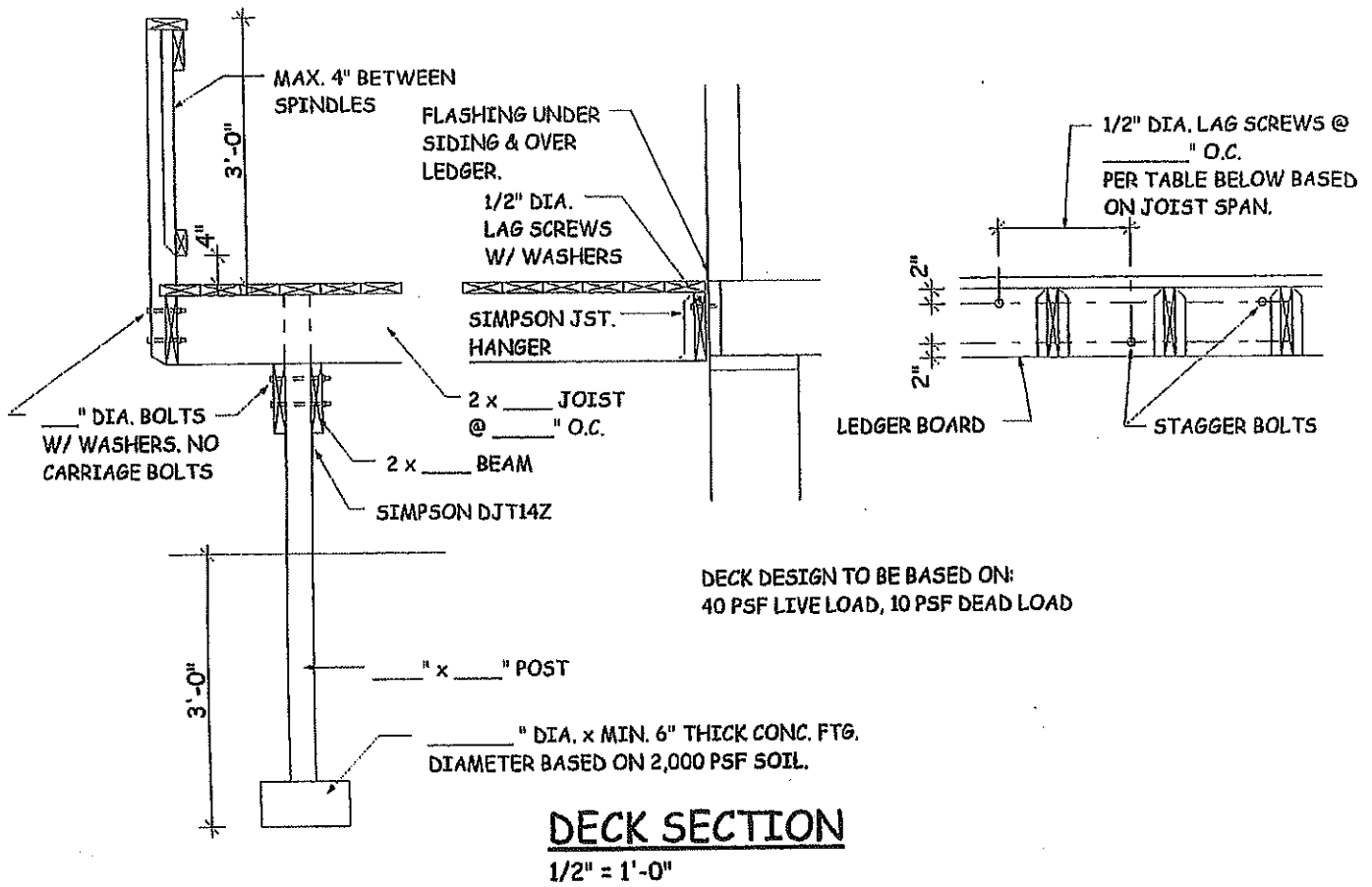
Macedonia Building Department

9691 Valley View Road

Macedonia, OH 44056

HOURS: Monday – Friday 7:30am – 4:00pm (excluding government holidays)

All Codified Ordinances can be found at www.macedonia.oh.us under 'Quick Links'



DECK SECTION
1/2" = 1'-0"

Ledger-to-Rim Joist Connection

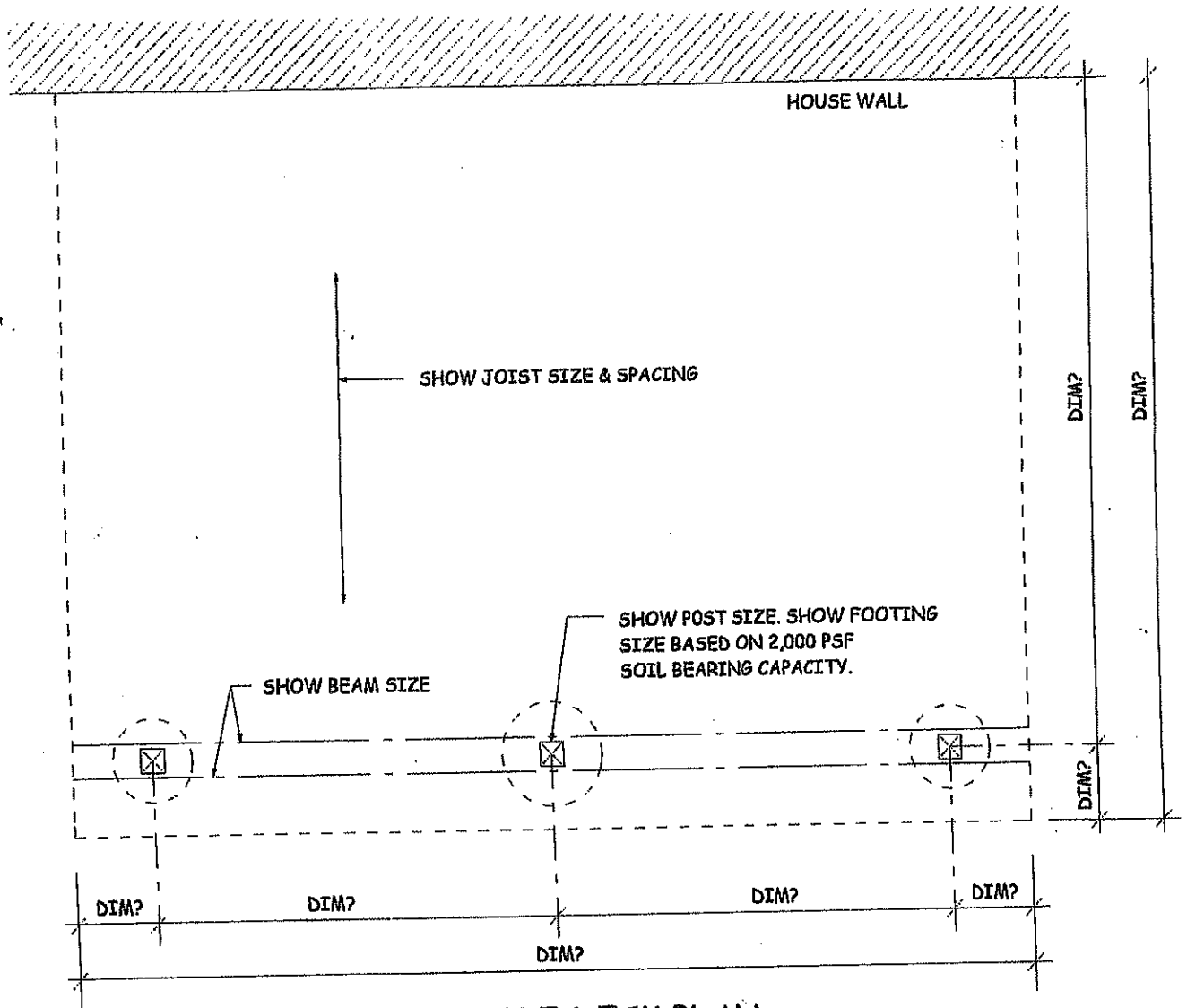
- **International Residential Code® -2007 Supplement**
R502.2.2.1 Deck Ledger Connection to Band Joist
 For decks supporting a total design load of 50 psf (40 psf live, 10 psf dead load), the connection between a deck ledger of PPT Southern Pine, incised PPT Hem Fir, or approved decay-resistant species, and a 2-inch nominal band joist bearing on a sill plate or a wall plate shall be constructed with 1/2" lag screws or bolts with washers per Table R502.2.2.1. Lag screws, bolts and washers shall be hot-dipped galvanized or stainless steel.

TABLE R502.2.2 Fastener Spacing for a Southern Pine or Hem Fir Deck Ledger and a 2-Inch Nominal Solid Sawed Spruce Pine-Fir Band Joist Deck Live Load = 40 psf Deck Dead Load = 10 psf							
Joist Span (ft)	8' and less	8'-1" to 8'	8'-1" to 10'	10'-1" to 12'	12'-1" to 14'	14'-1" to 16'	16'-1" to 18'
Connection Details	On-Center Spacing of Fasteners 4,5						
1/2" diameter lag screw with 15/32" maximum sheathing	30	23	18	15	13	11	10
1/2" diameter bolt with 15/32" maximum sheathing	36	36	30	20	24	21	15
1/2" diameter bolt with 15/32" maximum sheathing and 1/2" stacked washers 2,6	36	36	24	24	21	18	15

Lag Screws – Wood-to-Wood Ledger Application

AF&PA National Design Specification for Wood Construction (NDS) – '97/'01/'05

- Pre-bored holes are required;
 - 100% for the shank diameter in the shank portion of the screw (NDS '97 – 9.1.2.1a, NDS '01, '05 – 11.1.3.2a)
 - 40%-75% for the threaded portion (NDS '97 – 9.1.2.1b, NDS '01, '05 – 11.1.3.2b)
- No reduction in capacity is anticipated if soap or other lubricant is used. (NDS '97 – 9.1.2.4, NDS '01, '05 – 11.1.3.5)



SAMPLE DECK PLAN

N.T.S.

Footing pad sizes for decks must comply with Table R403.4 from the Residential Code of Ohio. If plans are not marked, they will be returned to you to show the correct footing sizes.

R404.1

Residential Code

Ch 4-12

**TABLE R403.4
MINIMUM FOOTING SIZE FOR DECK FOOTINGS
WITHOUT ROOF LOADS
EXTERIOR DECK AND PORCH FOOTING SIZE IN INCHES^{a,b}**

Diameter	Square	Maximum Tributary Area Allowed Per Post (square feet)
8	8 x 8	14
10	9 x 9	22
12	11 x 11	31.6
14	13 x 13	42.8
16	15 x 15	56
18	16 x 16	70.8
20	18 x 18	87.2

a. Based upon 2000 lbs. per square foot soil bearing capacity.

b. Based upon 40 lbs. per square foot live load and a 10 lbs. per square foot dead load.

CHAPTER 5 FLOORS

SECTION 501 GENERAL

501.1 Application. The provisions of this chapter shall control the design and construction of the floors for all buildings including the floors of attic spaces used to house mechanical or plumbing fixtures and equipment.

501.2 Requirements. Floor construction shall be capable of accommodating all loads according to Section 301 and of transmitting the resulting loads to the supporting structural elements.

SECTION 502 WOOD FLOOR FRAMING

502.1 Identification. Load-bearing dimension lumber for joists, beams and girders shall be identified by a grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with DOC PS 20. In lieu of a grade mark, a certificate of inspection issued by an approved lumber grading or inspection agency meeting the requirements of this section shall be accepted.

502.1.1 Preservative-treated lumber. Preservative treated dimension lumber shall also be identified as required by Section 319.1.

502.1.2 Blocking and subflooring. Blocking shall be a minimum of utility grade lumber. Subflooring may be a minimum of utility grade lumber or No. 4 common grade boards.

502.1.3 End-jointed lumber. Approved end-jointed lumber identified by a grade mark conforming to Section 502.1 may be used interchangeably with solid-sawn members of the same species and grade.

502.1.4 Prefabricated wood I-joists. Structural capacities and design provisions for prefabricated wood I-joists shall be established and monitored in accordance with ASTM D 5055.

502.1.5 Structural glued laminated timbers. Glued laminated timbers shall be manufactured and identified as required in ANSI/AITC A190.1 and ASTM D 3737.

502.1.6 Structural log members. Stress grading of structural log members of nonrectangular shape, as typically used in log buildings, shall be in accordance with ASTM D 3957. Such structural log members shall be identified by the grade mark of an approved lumber grading or inspection agency. In lieu of a grade mark on the material, a certificate of inspection as to species and grade issued by an approved lumber-grading or inspection agency meeting the requirements of this section shall be permitted to be accepted.

502.1.7 Exterior wood/plastic composite deck boards. Wood/plastic composites used in exterior deck boards shall comply with the provisions of Section 317.4.

502.2 Design and construction. Floors shall be designed and constructed in accordance with the provisions of this chapter,

Figure 502.2 and Sections 317 and 318 or in accordance with AF&PA/NDS.

502.2.1 Framing at braced wall lines. A load path for lateral forces shall be provided between floor framing and braced wall panels located above or below a floor, as specified in Section 602.10.6.

502.2.2 Decks. Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawal. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. For decks with cantilevered framing members, connections to exterior walls or other framing members, shall be designed and constructed to resist uplift resulting from the full live load specified in Table 301.5 acting on the cantilevered portion of the deck.

502.2.2.1 Deck ledger connection to band joist. For decks supporting a total design load of 50 pounds per square foot (2394 Pa) [40 pounds per square foot (1915 Pa) live load plus 10 pounds per square foot (479 Pa) dead load], the connection between a deck ledger of pressure-preservative-treated Southern Pine, incised pressure-preservative-treated Hem-Fir or approved decay-resistant species, and a 2-inch (51 mm) nominal lumber band joist bearing on a sill plate or wall plate shall be constructed with 1/2-inch (12.7 mm) lag screws or bolts with washers in accordance with Table 502.2.2.1. Lag screws, bolts and washers shall be hot-dipped galvanized or stainless steel.

502.2.2.1.1 Placement of lag screws or bolts in deck ledgers. The lag screws or bolts shall be placed 2 inches (51 mm) in from the bottom or top of the deck ledgers and between 2 and 5 inches (51 and 127 mm) in from the ends. The lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger.

502.2.2.2 Alternate deck ledger connections. Deck ledger connections not conforming to Table 502.2.2.1 shall be designed in accordance with accepted engineering practice. Girders supporting deck joists shall not be supported on deck ledgers or band joists. Deck ledgers shall not be supported on stone or masonry veneer.

502.2.2.3 Deck lateral load connection. The lateral load connection required by Section 502.2.2 shall be permitted to be in accordance with Figure 502.2.2.3. Hold-down tension devices shall be installed in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 pounds (6672 N).

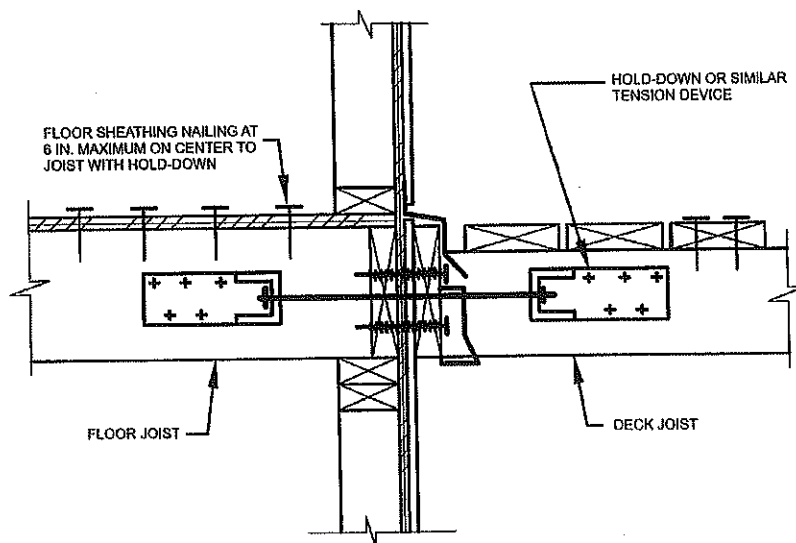
502.2.2.4 Exterior wood/plastic composite deck boards. Wood/plastic composite deck boards shall be installed in accordance with the manufacturer's instructions.

TABLE 502.2.2.1
FASTENER SPACING FOR A SOUTHERN PINE OR HEM-FIR DECK LEDGER
AND A 2-INCH NOMINAL SOLID-SAWN SPRUCE-PINE-FIR BAND JOIST^{a, b}
 (Deck live load = 40 psf, deck dead load = 10 psf)

JOIST SPAN	6' and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
Connection details	On-center spacing of fasteners ^{a, b}						
1/2 inch diameter lag screw with 1 5/32 inch maximum sheathing ^a	30	23	18	15	13	11	10
1/2 inch diameter bolt with 1 5/32 inch maximum sheathing	36	36	34	29	24	21	19
1/2 inch diameter bolt with 1 5/32 inch maximum sheathing and 1/2 inch stacked washers ^{b, h}	36	36	29	24	21	18	16

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm. 1 pound per square foot = 0.0479 kPa.

- a. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- b. The maximum gap between the face of the ledger board and face of the wall sheathing shall be 1/2".
- c. Ledgers shall be flashed to prevent water from contacting the house band joist.
- d. Lag screws and bolts shall be staggered in accordance with Section 502.2.2.1.1.
- e. Deck ledger shall be minimum 2 x 8 pressure-preservative-treated No.2 grade lumber, or other approved materials as established by standard engineering practice.
- f. When solid-sawn pressure-preservative-treated deck ledgers are attached to a minimum 1 inch thick engineered wood product (structural composite lumber, laminated veneer lumber or wood structural panel band joist), the ledger attachment shall be designed in accordance with accepted engineering practice.
- g. A minimum 1 x 9 1/2 Douglas Fir laminated veneer lumber rimboard shall be permitted in lieu of the 2-inch nominal band joist.
- h. Wood structural panel sheathing, gypsum board sheathing or foam sheathing not exceeding 1 inch in thickness shall be permitted. The maximum distance between the face of the ledger board and the face of the band joist shall be 1 inch.



For SI: 1 inch = 25.4 mm.

FIGURE 502.2.2.3
DECK ATTACHMENT FOR LATERAL LOADS

502.3 Allowable joist spans. Spans for floor joists shall be in accordance with Tables 502.3.1(1) and 502.3.1(2). For other grades and species and for other loading conditions, refer to the AF&PA Span Tables for Joists and Rafters.

502.3.1 Sleeping areas and attic joists. Table 502.3.1(1) shall be used to determine the maximum allowable span of floor joists that support sleeping areas and attics that are

accessed by means of a fixed stairway in accordance with Section 311.7 provided that the design live load does not exceed 30 pounds per square foot (1.44 kPa) and the design dead load does not exceed 20 pounds per square foot (0.96 kPa). The allowable span of ceiling joists that support attics used for limited storage or no storage shall be determined in accordance with Section 802.4.

CITY OF MACEDONIA, OHIO
APPLICATION FOR RESIDENTIAL BUILDING AND/OR ZONING CERTIFICATE



DATE: _____ SUBLOT: _____ SUBDIVISION: _____

JOB ADDRESS: _____ ESTIMATED VALUE: \$ _____

OWNER/OCCUPANT: _____ PHONE NO.: _____ JOB TYPE: _____

NOTE: ALL CONTRACTORS AND/OR SUBCONTRACTORS MUST BE REGISTERED WITH THE CITY

GENERAL CONTRACTOR: _____

ELECTRICAL: _____ CARPENTER/FRAME: _____ DRIVEWAY: _____

PLUMBING: _____ CONCRETE: _____ FIREPLACE: _____

MECHANICAL: _____ DRYWALL: _____ MASON: _____

ROOFER: _____ SIDING: _____ TILE/CARPET: _____

EXCAVATOR: _____ PAINTER: _____ OTHER: _____

INSULATOR: _____ CARPENTER/FINISH: _____ OTHER: _____

The structure described in this application to erect and or alter a structure or premises as described herein or shown in accompanying plans and specs is to be erected as shown on the accompanying plot plan. The information which follows and the accompanying plans and specs with the representation therein contained are made a part of this application.

It is understood and agreed by this application that any error, misstatement, or misrepresentation of material fact, or expression of material fact, either with or without intention on the part of this applicant, such as might or would operate to cause a refusal of this application or any material alteration or change in the accompanying plans, specifications or structure made after filing this application and/or subsequent to the issuance of a Building Permit or Zoning Certificate in accordance with this application, without the approval of the Building Officials, shall constitute sufficient ground for the revocation of such permit.

The acceptance of this application constitutes an agreement to abide by all conditions herein contained and to comply with all the Ordinances of Macedonia and Laws of the State of Ohio relating to the structure herein described and/or the work to be done hereunder.

I hereby declare, under the penalties provided for in the Building Code and Zoning Ordinance of Macedonia for violation thereof, that the statement made in connection with this project in this application for a Permit or Certificate are to the best of my knowledge and belief, true.

APPLICANT: _____ DATE: _____

ZONING INFORMATION OFFICE USE ONLY

CALCULATIONS:

BASEMENT: _____

GARAGE: _____

1ST. FL.: _____

2ND. FL.: _____

OTHER: _____

DECK:

TOTAL SQ. FT.: _____

LIVING SP.: _____

BASE FEE: _____

\$ _____

BLDG.: _____

ZONING: _____

ESCROW: _____

ENGINEER: _____

ARCHITECT: _____

DECK: _____

ELECTRIC: _____

MECHANICAL: _____

PLUMBING: _____

TOTAL: _____

ZONING: DATE: _____ APPROVED: _____ DATE: _____ DISAPPROVED: _____

COMMENTS: _____

CITY ARCH: DATE: _____ APPROVED: _____ DATE: _____ DISAPPROVED: _____

COMMENTS: _____

PLANS EXAM: DATE: _____ APPROVED: _____ DATE: _____ DISAPPROVED: _____

COMMENTS: _____