



City of Scottsdale

Quality Submittal Guidelines For

Single Family Standard Plans



Single Family Standard Plans

Plan Review Submittal Checklist



1. Building / Fire Review (Note: separate fire sprinkler plan must be submitted for review.)

- A) One (1) complete set of Architectural Plans.
- B) When trusses are used, provide two (2) complete sets of engineered truss designs sealed by an Arizona licensed engineer and keyed to the roof framing plan. Plans shall be signed and sealed by the licensed "architect or engineer of record" who sealed the plans for the structural design of the overall building. The Deferred Submittal option may be used.
- C) One (1) RESCheck or equal. See www.energycodes.gov/rescheck/
- D) One (1) copy of Structural Calculations.
- E) One (1) Subdivision Soils Report.
- F) One (1) 24" x 36" copy of the approved Grading and Drainage Improvement Plan set.
- G) One (1) Water meter calculation sheet.
- H) One (1) Deferred Submittal Form
- I) One (1) copy of Manual S and J HVAC equipment design calculations

2. Planning Review

- A) One (1) exterior Architectural Elevation sheet(s) showing dimension from finish floor to maximum height of roof noting "All A/C and mechanical equipment shall be screened a minimum of one foot above the highest point of the equipment".
- B) One (1) floor plan.
- C) One (1) foundation plan.
- D) One (1) 24" x 36" subdivision plat map and setback exhibit (setback exhibit should be at the same scale as the improvement plan set and include natural and proposed topography in zoning overlays where building height is measured from natural grade).
- E) One (1) 24" x 36" copy of the approved Grading and Drainage Improvement Plan set.
- F) One (1) 8 ½" x 11" Lot fit analysis letter or matrix addressing the horizontal compliance for each lot, and including vertical compliance information for subdivisions with pre-engineered finished floor elevations.
- G) One (1) 8 ½" x 11" transparency sheet with the building footprint, scaled to match the improvement plans, showing all options that expand the building footprint.
 - In zoning overlays where building height is measured from natural grade, this sheet should also identify the roof ridges and parapet configurations.

Basements are not allowed as an option to a Standard Plan.

Planning and Development Services

7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • www.ScottsdaleAZ.gov

Single Family Standard Plans Subdivision Transfer Plan Review Submittal Checklist



1. Building / Fire Review (Note: separate fire sprinkler plan must be submitted for review.)

- A) One (1) copy of previously approved Architectural Plans set.
- B) One (1) Subdivision Soils Report.
- C) One (1) 24" x 36" copy of the approved Grading and Drainage Improvement Plan set.
- D) One (1) Water meter calculation sheet.
- E) One (1) Deferred Submittal Form

2. Planning Review

- A) One (1) exterior Architectural Elevation sheet(s) showing dimension from finish floor to maximum height of roof noting "All A/C and mechanical equipment shall be screened a minimum of one foot above the highest point of the equipment".
- B) One (1) floor plan.
- C) One (1) foundation plan.
- D) One (1) 24" x 36" subdivision plat map and setback exhibit (setback exhibit should be at the same scale as the improvement plan set and include natural and proposed topography in zoning overlays where building height is measured from natural grade).
- E) One (1) 24" x 36" copy of the approved Grading and Drainage Improvement Plan set.
- F) One (1) 8 ½" x 11" Lot fit analysis letter or matrix addressing the horizontal compliance for each lot, and including vertical compliance information for subdivisions with pre-engineered finished floor elevations.
- G) One (1) 8 ½" x 11" transparency sheet with the building footprint, scaled to match the improvement plans, showing all options that expand the building footprint.
 - In zoning overlays where building height is measured from natural grade, this sheet should also identify the roof ridges and parapet configurations.

Basements are not allowed as an option to a Standard Plan.

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INTERPRETATIONS & APPLICATIONS
OF BUILDING CODES & REGULATIONS 14-1

CODE SECTION: 2012 IBC 107.2.6 AMENDED

05/27/2014

SUBJECT: STANDARD PLANS

Plan Review Submittal Requirements

1. The following plans are required for the submittal of each standard plan:
 - a. For building review submit one complete construction document set, including civil engineering drawings and subdivision soils report.
 - b. For planning review submit one subdivision plat with a setback exhibit, copy of approved grading and drainage improvement plans, exterior elevation sheets showing maximum height of structure above finish floor, location of A/C and mechanical equipment; one floor plan, one foundation plan, lot fit analysis.
2. All standard plans must have their intended lot locations identified by submitting a listing of all possible lot locations with each standard plan.
3. The cover sheet for the plans must have key plans drawn to scale indicating each possible combination of footprint options with corresponding building ridge lines. This requirement will provide a mechanism for documenting and insuring that standard plans will conform to varying lot configurations.
4. Each set of plans must include a set of engineered truss designs from an approved manufacturer, or engineered truss designs may be submitted as a deferred Submittal.
5. Water meter calculation sheets must be included, which are then to be provided to the designer of the fire sprinkler system.
6. If plans are to be constructed "opposite hand", correctly drawn plan sheets (floor plan, foundation plan, framing plan) relating to the actual construction configuration shall be included in the set.

When a standard plan is submitted for use at an additional subdivision:

- a) For building review submit one full plan set, soils report, and civil engineering plans.
- b) For planning review; one subdivision plat with a setback exhibit, copy of approved grading and drainage improvement plans, exterior elevation sheets showing maximum height of structure above finish floor, location of A/C and mechanical equipment; one floor plan, one foundation plan, lot fit analysis

A full plan review fee shall be charged for the first subdivision. For each additional subdivision a minimum fee as prescribed in the City code shall be charged.

Zero lot line subdivisions:

Standard plans are not permitted and a full plan review submittal will be required, unless the following information is on file:

1. A grading and drainage plan showing the location of all possible plans on each lot.
2. Indicate roof drainage and coordination with adjacent structures.
3. Use and Benefit Easements exhibit

Options to Floor Plans and Elevations

Standard plans may include optional footprint features in addition to the base floor plan footprint. Patio covers that are not enclosed are not considered footprint options. An option involving extensive modifications, or changes to the base plan foundation will be required to be submitted as a separate plan, with a full plan check fee.

Basements or modifications that would change the elevation of the lowest finished floor are not allowed as an option unless lowest floor and pad elevation for basements and finished floor and pad elevation for first floors are identified on improvement plans for all lots. The submitted soils report must also reflect the basement condition.

If there is a question on the extent of options, the Building Official, or building plan reviewers can make the determination before plans are submitted for review. The cover sheet of the set of plans shall designate all possible combinations of footprint options, along with corresponding square footage

Exterior design elevations that do not substantially change the roof framing, shall be limited to three (3) per standard plan. A fee as prescribed in the city code will be charged for each elevation in addition to the base plan.

Revisions to Standard Plans

All requests for changes to approved standard plans are to be submitted as additional or revised sheets of the original set of plans. All revisions are to be clearly identified by the use of clouded symbols, deltas or other appropriate means. The review fee for revised plans is as prescribed in the city code.

Revisions and options to previously approved standard plans will be processed with a suffix to the original plan check number (e.g. 555-00-4). Subsequent revisions and options must reflect the changes called out in all earlier revisions to the base plan, but have only the changes currently requested highlighted with clouds or others means of designation.

Revisions which involve extensive modifications, or which in the Building Official's judgment are not adequately defined, will be required to be submitted as a new plan with a full plan check fee.

Minor, one time only, non-structural, interior revisions, specific to one building permit, may be submitted as "over the counter" reviews. The review fee to be as required for expedited plans as prescribed in the city code.

If there is a question on the extent of revisions, the Building Plan Reviewers can make the determination before plans are submitted for review.

Permit submittal requirements:

1. Subdivisions with pre-engineered finished floor elevations

The following information must be included on the approved City formatted plot plan for approval and permit issuance:

- A. Address, lot number and tax parcel number (book, map & parcel number).
- B. Lot size and house configuration with written and graphic scale.
- C. Zoning classification.
- D. Easements labeled and dimensioned.
- E. Building setbacks from all property lines.
- F. Location of mechanical equipment and how it will be screened (if required).
- G. Location, height and type of fence.
- H. Egress (3 ft. minimum width) from yard to public way for bedroom emergency exit.
- I. Finish floor and pad elevation, benchmark and datum per the approved subdivision-grading plan.
- J. Complete FEMA block information

2. Subdivisions without established finished floor elevations

The following information must be submitted for approval and permit issuance:

- A. 3 copies of a 24" x 36" Grading & Drainage site plan listing the model number or name of the approved standard plan, a/c and non- a/c square footages, along with the approved options being applied. In addition to the plan information listed in Section 1 above, the site plan must also reflect the lineal footages of all site walls, retaining walls, and retaining walls with fences on top, and wall heights. One copy of the City stamped approved foundation, floor plan, and exterior elevation sheets for the standard plan must be included for reference. Staff may determine that a drainage report is required in some cases.
 - a) Where on-lot Natural Area Open Space (NAOS) is required/provided, the lot area and NAOS area calculations must also appear on the site plan.
 - b) Building height above finished floor must be noted on the site plan, or a separate Roof over Topography plan. The average adjacent curb elevation must be shown on the plan to verify that the building is within allowable height.
 - i. HD, FO, and ESLO: If the zoning district specifies that the building height is measured from natural grade, then the roof configuration must be shown overlaid on the pre-disturbed topography with roof elevations called out using NAVD88.
- B. 3 copies of a 24" x 36" Native Plant Salvage plan, including inventoried plant locations and associated inventory/salvage information.
- C. 1 additional 24" x 36" Grading & Drainage site plan with copies of the approved the foundation plan and details for Building review.

Revisions to approved plot plans

Revisions to approved plot plans are to be submitted through the Development Services counter for re-approval by project review staff. Revisions shall be based off of the originally approved plan with adequate identification for the scope of the revision. Supporting documentation must accompany the submittal.

City of Scottsdale
Planning and Development Operational Policy

Use of Standard Plans in Large-Lot Subdivisions in the ESL Overlay

- Section 6.1071.A.6 of the Environmentally Sensitive Lands ordinance includes the following language: “No grading permits shall be issued on lots with Single-family Residential R1-190, Single Family Residential R1-130, Single-family Residential R1-70, Single-family Residential R1-43 or Single-family Residential R1-35 zoning unless they are submitted in conjunction with building plans for on-site structures, except for drainage facilities, driveways or utilities required with the approved subdivision plans to serve the subdivision or adjacent properties.”
- The intent of this provision is to not allow for any mass grading of larger lots within the Environmentally Sensitive Lands overlay district. General community interest in establishing these regulations included: minimizing the potential of pollution from dust and erosion, minimizing the visual blight of large expanses of bare lots and encouraging appropriate sensitivity to the local environmental conditions of the site and adjacent properties.
- Note: Each standard plan must be able to be constructed on at least 3 lots within the subdivision they are assigned to, otherwise they will be processed as a custom house plan.
- Subdivision final plans should include:
 - Street designs including all associated grading (if grading occurs outside of the rights-of-way, Temporary Construction Easements (TCEs) may be required);
 - Water facilities designs;
 - Sewer facilities designs;
 - Drainage facilities that serve the entire subdivision including all associated grading and access (if grading occurs outside of the drainage easements, Temporary Construction Easements (TCEs) may be required);
 - All common amenities for the subdivision;
 - Any gated entries and associated facilities and landscaping;
 - The allocated requirement for Natural Area Open Space (NAOS) for each lot;
 - Standard designs and treatments for retaining walls and exposed cuts and fills (to be approved through the Development Review process);
 - A report by a registered soils geologist regarding the ability of exposed rock and/or caliche to remain stable if left exposed; and
 - The Native Plant submittal associated with the plans identified above.
- The developer of the subdivision may submit the following advisory plans as reference material in the review of the on-lot improvements. (Note: These are for review purposes and are not subject to approval or permitting. These plans will be kept with the Preliminary Plat for reference by plan reviewers.):
 - A comprehensive grading concept plan that demonstrates how the grading on adjacent lots would relate to each other; and
 - A lot-fit analysis for setback conditions that determines which models may be located on which lots. (Note: On lot building height determinations can only occur in conjunction with the on-lot grading and drainage plans as identified below.)
- The plans for on-lot improvements should include:
 - The designated standard plan for the lot, including
 - The Plan Check number of the approved Standard Plan,

- The number of options being applied to the house on the lot and the total square footage for the house, and
 - A copy of the approved foundation, floor, and roof plans along with the building height plan;
 - The site plan for the building model as proposed for the lot;
 - The grading and drainage plans associated with the proposed home plans;
 - The design of any retaining walls or exposed cuts or fills associated with creating a building site on the lot;
 - All site walls and fences;
 - The Lowest Finish Floor rationale, calculations and designation;
 - Any Temporary Construction Easements (TCEs) if any construction necessary to complete the lot occurs on an adjacent lot (unless adjacent lots are submitted in concurrently) that does not have an on-lot grading permit; and
 - The Native Plant submittal associated with the plans identified above.
 - No more than 8 lots (excluding lots used for model homes and subdivision construction staging) will be accepted for review and permitting for a given subdivision within a 90 day period.
- Model homes require special site plan and landscaping approvals (in order to comply with Section 49-247 (Water Conservation ordinance)). These plans shall include:
 - The site plan and landscaping plan for the models as well as plans for when the homes are converted to resident occupation; and
 - Site plans for the parking area (if any) that are also submitted with the site plan for a home to be built on the applicable lot(s) (Note: the permits for this home shall be kept in abeyance until the first model home is sold to an occupant.).
- Stockpile, subdivision construction staging and plant nursery areas to be used during construction of the subdivision will require specific approvals. The plans for these shall include:
 - Site plans for the home to be built upon this lot(s) (Note: The permits for the on-site home shall be kept in abeyance until the last lot in the subdivision is sold or 24 months, whichever occurs first); and
 - A legal description of the proposed construction envelope for this area (to be fenced during the term of construction and use as a stockpile or plant nursery);
- Fees considerations include:
 - All development fees will be collected whenever the initial construction action on a lot is permitted for that lot. These are one-time fees and will not lapse or be subject to change.
 - Building permit fees –
 - If a model change-out is submitted within 6 months of being permitted on a lot, there will be a refund of 80% of the original building permit fee. Change-outs of standards plans on a lot will require re-submittal and review of new Grading and Drainage and site plans. The new permit will require payment of the full permit fees.
 - After 6 months from the original issuance of a permit no refunds are available.
 - One extension of the on-site building permit is allowed by written request. Any subsequent requests must be accompanied by fees under the current fee schedule. After one year if no inspections and progress has been made on the permitted construction the permits can be extended by written request and subject to city staff approval. If applicable codes have since the original

issuance of the permit the plans will need to be re-submitted for review under the most current codes.

- If on-lot construction has not been started within 6 months of the approval of the plans the applicant will need to re-submit a resealed Grading and Drainage plan for review and approval.

Date: 11/26/2013

notice

PLAN SUBMITTAL REQUIREMENTS FOR PROJECTS INCORPORATING RETAINING WALLS

All private project development plans

in the "building review" sets of plans :

include retaining wall details and calculations, and a copy of the civil grading site plan with any retaining walls or other structures called out. Retaining walls must have the top of wall and top of footing elevations noted.

in the "civil review" sets of plans :

the civil grading site plan must have any retaining walls or other structures called out. Retaining walls must have the top of wall and top of footing elevations noted. Any change in site grading that affects the height or configuration of retaining walls will be transmitted to the person reviewing the building plans.

City infrastructure, subdivisions and development projects without buildings

include details and calculations of retaining walls and other structures in the "civil review sets of plans.

Fees (onsite private development) :

Bridges	one-half building square foot fee
except	for minimum

Retaining Walls : same as fence fee - lineal feet

Deferred Submittal Form



This does NOT permit the violation of any section of the International Building Code, or any federal, state or local regulations.

Project Name: _____ Plan Check No.: _____

Address: _____ Building Permit No.: _____

Deferred Submittal Work to be covered by this Form: Struc. Arch. MPE Other

Deferral of any submittal items shall have the prior approval of the building official. The *registered design professional in responsible charge shall list the deferred submittals on the construction documents* for review by the building official. Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the building official *when requested* with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the deferred submittal documents have been approved. (Section 107.3.4.1 of the International Building Code)

OWNER'S ACKNOWLEDGEMENT

To be completed and signed by **Owner** before a building permit is issued.

I hereby acknowledge that the person listed below is designated as the registered design professional in charge who shall be responsible for reviewing and coordinating deferred submittal items for compatibility with the design of the building. The deferred submittal items shall not be installed until approved by *the professional in responsible charge* and accepted by the Building Official, *when requested*.

Owner/Agent Signature: _____
(Agent: include title, relationship to project, and furnish letter signed by owner authorizing you as agent)

Date: _____

(Registered professional in responsible charge)

Date: _____

Identify work to be deferred submittal (use additional pages if needed).

CERTIFICATE OF COMPLIANCE FOR DEFERRED SUBMITTALS

To be signed by **registered professional responsible** upon completion of the work.

I certify that I have reviewed the deferred submittal work for structural component or subsystem for conformance to the intent of the structural contract documents.

I further certify that I have reviewed the shop fabrication and layout drawings as submitted by the contractor; and found the supplier-designed drawings of components or subsystems as being in conformance with the structural contract documents.

Seal, Signature & Date

Planning and Development Services

7447 E Indian School Road, Suite 125, Scottsdale, AZ 85251 • www.ScottsdaleAZ.gov



Water Meter Sizing Calculations

Single-Family Residential

Plan Check Number: _____

Date: _____

To determine the water meter fee, the water development fee and the sewer connection fee, we must know the size of the water meter required for the residence. To determine the correct size, please provide the following essential information.

This does NOT permit the violation of any section of any federal, state or local regulations.

1. Total number of fixture units (FU's) of all water using outlets is:

Type of Fixture	FU's		Existing Fixture Count		New Fixture Count		Total FU's
Bidet	2	X		+		=	
Bathtub (with/without shower head)	1.4	X		+		=	
Clothes washer	1.4	X		+		=	
Dish washer	1.4	X		+		=	
Full-bath group with bathtub (with or w/o shower head) or shower stall	3.6	X		+		=	
Half-bath group (water closet & lavatory)	2.6	X		+		=	
Hose bibb (sillcock)	2.5	X		+		=	
Kitchen group (dishwasher & sink with/without grinder)	2.5	X		+		=	
Kitchen sink	1.4	X		+		=	
Laundry group (clothes washer & laundry tub)	2.5	X		+		=	
Laundry tub	1.4	X		+		=	
Lavatory	0.7	X		+		=	
Shower stall	1.4	X		+		=	
Water closet (tank type)	2.2	X		+		=	
*Other		X		+		=	
					Total	=	

**Water supply outlets for items not listed above shall be computed at their maximum demand, or according to the size of the supply pipe as indicated in the currently adopted International Plumbing Code; whichever is greater.*

- 2) Total length of the piping from the water meter to the farthest water-using outlet/fixture is: _____ lineal feet.
- 3) Local water service pressure is _____ pounds per square inch (psi).
- 4) Total square footage under roof: _____**

****When the TOTAL square footage within exterior enclosing walls under roof exceeds 12,000 sq ft, the minimum required meter size shall be not less than 1-1/2", and the minimum supply from the meter to the building shall be not less than 2" ID pipe.**

It is the owner/builders responsibility to conduct a water pressure test at your site or as near as possible to your site. Your building permit cannot be issued until you have obtained this info. An approved type pressure regulator is required to be installed

Owner/Agent: _____

Phone: _____

Fax: _____

E-mail: _____

Signature: _____

To be completed by the Plans Examiner

Size of Meter _____

Size of Building Supply _____

Date: _____

When approved by the City of Scottsdale, the Applicant shall deliver a copy of this form, or the City approved plans, to the Fire Sprinkler Designer to use in the calculation of the fire sprinkler system. Verification of the Meter size must accompany Fire Sprinkler plans submitted for review .

PLANNING AND DEVELOPMENT SERVICES

STANDARD PLOT PLAN



Address: _____ Gross Lot Size: _____
 Lot & Subdivision: _____ NAOS Area: _____
 Book-Map-Parcel: _____ Net Lot Size: _____
 Standard Plan #: _____ AZ R.O.C. #: _____
 Plan Check #: _____ Elevation: _____ Scottsdale Tax #: _____

Square footage of original plan – A/C Area: _____ Non A/C Area: _____ Number of Options Included: _____
 Square footage of options included in this request – A/C Area: _____ Non-A/C Area: _____
 Total square footage including options for this request – A/C Area: _____ Non-A/C Area: _____
 Note: Square footage cannot exceed 10% of original floor plan.
 Photovoltaic System: Yes No # of KW: _____ Fence: _____ total linear feet Retaining: _____ linear feet

PER APPROVED GRADING PLAN; PLAN CHECK # _____

Lowest floor elevation: _____ /Additional floor elevations: _____

Special Flood Hazard Areas

Mech pad elevation(s): _____

Lowest garage elevation: _____

Wet flood proofing elevation: _____ **Special inspection req'd.**

Benchmark elevation: _____ Datum: _____

APPROVAL FOR:

- Setbacks Other
- Lowest floor
- Fences (*does not include retaining walls*).

Approved by: _____

Date: _____

North Arrow _____

Current Flood Insurance Rate Map (FIRM) Information

(In AO zone, give some depth and velocity)

Community No.	Community Map No.	Panel No.	Suffix	Date of FIRM	FIRM Zone	Base Flood Elevation

(For Areas Under Study Or Preliminary F.I.R.M.)

(In AO zone, give depth and velocity. No habitable floors are permitted below lowest floor elevation.)

Source of Map	Date of Map	Flood Zone	Base Flood Elevation

Statement of responsibility: The preparer of this standard plot plan certifies the information shown to be the most current and accurately reflects compliance with City approved plans and records.

Company: _____ Name: _____ Phone #: _____

Please draw your standard plot plan below or attach an additional page if necessary.



2021 INTERNATIONAL RESIDENTIAL CODE Building Code Plan Review Checklist

CONSTRUCTION DOCUMENTS MINIMUM DESIGN GUIDELINES

IRC TABLE R301.2

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed (mph)	Topographic effects	Special wind region	Windborne debris zone		Weathering	Frost line depth	Termite			
0	105	No	No	No	B	Negligible	Final Grade	Moderate	No	0	71.2° F

MANUAL J DESIGN CRITERIA

ELEVATION	ALTITUDE CORRECTION FACTOR	COINCIDENT WET BULB	INDOOR WINTER DESIGN DRY-BULB TEMPERATURE	OUTDOOR WINTER DESIGN DRY-BULB TEMPERATURE	HEATING TEMPERATURE DIFFERENCE
1,473 feet	0.97	70°F	Maximum of 72°F	37°F	20.6°F
LATITUDE	DAILY RANGE	INDOOR SUMMER DESIGN RELATIVE-HUMIDITY	INDOOR SUMMER DESIGN DRY-BULB TEMPERATURE	OUTDOOR SUMMER DESIGN DRY-BULB TEMPERATURE	COOLING TEMPERATURE DIFFERENCE
33.62 N	High (H)	45%	Minimum of 75°F	105°F	20.1°F

BUILDING CODE DESIGN DATA

All construction within Scottsdale shall comply with the following codes and amendments per their adopting ordinances:

- 2021 International Building Code (ord. # 4550, resolution #12498)
- 2021 International Residential Code (ord. # 4575, resolution #12499)
- 2021 International Fire Code (ord. # 4562, resolution #12583)

APPLICANT: Plan submittal shall include the following plans:

- Site Plan
- Floors
- Foundation and Roof Plans
- Elevations and Building Sections (minimum two building sections)
- Building Details

- Plumbing Plan (water supply line sizes, gas supply line sizes, water-heating equipment, hot water recirculation pump controls, fixture flow and flush rates)
- Mechanical Plan (equipment type/size, supply/return, outside air ventilation, exhaust fan systems)
- Electrical Plan (lighting, power, load calculation, single line diagram)
- Plans must include a plan index, be readable and to "scale".
- Place all required notes on the drawings.
- Specification books on Single Family Plan checks are not acceptable
- Provide a True North Arrow and an Orientation North Arrow on site plans and floor plans.

A. Standard Plans

1. Provide a soils report and a compaction test for the subdivision.
2. Per the soils report provide over-excavation and / or re-compaction for foundations and slabs on grade.
3. Note a provision for a continuous three-foot-wide path of travel from all bedroom egress windows to a public way.
4. Show minimum allowable dimensions from stem wall to property lines on foundation plan.
5. Remove all parcel/lot specific information from plan set. (i.e. site plan).
6. The cover sheet must have key plans drawn to scale indicating each possible combination of footprint options with corresponding building ridge lines to ensure conformance with varying lot configurations.

B. Add/ Alt/ Remodels

1. Provide scope of work. (IBC 107.2 amended)
2. Provide separate existing and demolition plans. (IBC 107.2 amended)
3. Clearly identify throughout, existing vs. new vs. remodeled area. (IBC 107.2 amended)
4. Complete and return fire sprinkler worksheet. (IFC 903)
5. Address smoke and CO detectors throughout house with additions/alterations/remodels. (R314-315)

C. Site Plan

1. Provide a complete site plan, grading and drainage where required. Show flow direction arrows, contour grades, and top of curb grades (107.5.1 amended)
2. Provide a complete project address. (R319.1)
3. Show location of structure(s) with setback dimensions on site plan. (IBC 107.2.5 & R302.1).
4. Show location of all site fences and retaining walls on site plan. Provide lineal footage of fences and retaining walls including wall grades. (IBC 107.2.5)
5. Reference on site plan, structural details for each site retaining wall and fence. (TF, T/RW, TW, TR) (IBC 107.2.6)

6. Provide structural calculations for retaining walls. City of Scottsdale, Administrative Policy 13-3.
7. Show sewer tap and water meter locations at street with sizes indicated. (P3008.1)
8. Include lowest floor elevation of livable space. Show and identify next upstream manhole rim location and elevation, address backwater valve. (P3008.1).
9. If septic system, provide copy of septic system permit application from Maricopa County. (P2602.1)
10. When enclosing pool, provide minimum 3-foot wide, minimum 60-inch high, out-swinging, self-closing gate. (AG105.2 amended)

D. GREEN BUILDING

1. Provide a separate plan sheet listing the baseline 13 "green" building measures and the rating options selected from rating checklist. Include the points permitted for each selection and a total summary (mandatory measures for baseline level and 20 points for advanced level).
2. Incorporate the "green" building requirements with-in the plan design, including notes and details, (i.e. - readily accessible return air filter grille; kitchen pull-out bins for collection of trash and recycles; etc.).
3. Provide REScheck, REM/Rate or HERS report for each house.
4. Place the following note in large text on the Floor, Foundation, Roof Framing plan sheets:

NOTE: Separate "Green Building" Compliance Certificate required prior to Final Inspection.

E. Floor plans

a) Doors and Windows

1. Provide a 1-3/8" solid wood / solid or honeycomb-core steel / 20-minute fire-rated self-closing doors between residence and garage. (R302.5.1)
2. Provide permanent landing at exterior doors. (R311.3)
3. Doors shall not open directly between a sleeping room and a garage. (R302.5.1)

4. Shower doors shall have safety glazing; hinged shower doors shall open outward. (R308.4.5 & P2708.1)
5. Provide and identify all required safety glazing. (R308)
6. Indicate emergency escape and rescue openings in basements and bedrooms. (R310.1)
7. Show direction of door swing. (R311.3)
8. Show size of each window and type of operation. (R303.1 & 310.2)
9. Site built windows shall comply with section 2404 of the IBC. (R308.5)
10. Glazing maximum U-factor 0.40, Solar Heat Gain Coefficient (SHGC) maximum 0.25 (Table N1102.1.3)
11. Skylight - maximum U-factor 0.65, SHGC maximum 0.30. Provide manufacture and ICC-ES number. (Table N1102.1.3)

b) Light and Ventilation

1. Provide required natural light and ventilation for habitable rooms- Light: 8%, ventilation: 4%. (R303.1)
2. Provide attic ventilation per (R806.1 amended) unless insulation is applied on the under-side of roof sheathing. or (R806.5)
3. Enclosed attic or rafter space is not required to be ventilated where there is 24 inches or less between the bottom of roof sheathing and the ceiling. (R806.1 amended exception).

c) Stairways, handrails, guardrails

1. Show handrail, notes, and dimensions. (R311.7.8)
2. Show guardrails where required. (R312.1)
3. Provide a floor or landing at the top and bottom of each stairway. (R311.7.6)
4. Provide code complying stairways. Address tread and riser dimensions per type of stairway. (R311.7)
5. Provide stairway illumination per (R303.7 & R303.8)
6. Stairway maximum 12'-3" vertical rise between floor/landing (R311.7.3)

d) Fireplaces and Gas Appliances

1. Provide manufacturer, model number and ICC report or equal for each fireplace. (R1002, R1004 & R1005)
2. Provide a permanently installed approved decorative appliance/gas log set. (R1004.4)
3. Fireplace dampers: Where a listed decorative appliance is installed, the fireplace damper opening shall comply with listed decorative appliance manufacture's installation instructions. (G2453.1)
4. Decorative shrouds shall not be installed at the termination of chimneys of factory-built fireplaces except where listed and labeled for such use. (R1004.3)
5. Provide outside combustion air for interior fireplaces. (R1006.2).

e) General Floor Plan

1. Show ceiling heights for all rooms, spaces and hallways. (R305)
2. Show thermal envelope (exterior insulated walls) that encloses interior conditioned space. (N1101.5.1)
3. Show minimum clearances from centerline of water closets to finished wall, cabinets, and other plumbing fixtures. (R307.1)
4. Gypsum Board applied to a ceiling shall be 1/2" when framing members are 16" o.c. or 5/8" when framing members are 24" o.c. or use labeled 1/2" sag-resistant gypsum ceiling board. (Table R702.3.5)

f) Manufacturers' Installation Instructions

1. Manufacture's installation instructions, as required by this code, shall be available on the job site at the time of inspection (R106.1.2)
2. RANGES AND COOKTOPS: Show note on plans. Provide a listed and approved range and/or cooktop unit installed in accordance with the listing and with the manufacturer's installation instructions. VERIFY AND MAINTAIN REQUIRED HORIZONTAL AND VERTICAL CLEARANCES ABOVE THE FINISHED COUNTERTOP SURFACE BEFORE ORDERING OR INSTALLING CABINETS.

F. Braced/Shear wall Plan

1. Provide a complete braced/shear wall plan and reference a braced /shear wall schedule at each braced/shear wall location. (R602.10)
2. Braced/Shear wall schedule to include anchor bolts, holdowns, studs and spacing, sheathing and nailing. (R602)
3. Address "alternate braced wall panels" per (R602.10.6)
4. Coordinate post locations with holdowns on foundation plan. (R602.11)
5. Show and identify each required holddown on foundation plan.
6. Provide Wood-Stud wall Engineering Analysis for bearing walls Over 10 Feet High (T. R602.3 (5))

G. Elevation Plan

1. Provide minimum of four elevation drawings of building: typical front, back, left and right.
2. Show building heights and dimensions.
3. Show and label all exterior surface building materials. (R703)
4. Show manufacturer, model number and ICC/NER Report Number for stucco, roof materials, stone veneer. (R703.7)
5. Provide weather flashing/proofing and exterior wall penetrations/openings. (R703.1& 703.2)

H. Sections

1. Provide minimum two building cross sections.
2. Cut cross-sections on foundation, floor and roof framing plans.
3. Show thermal envelope (insulated walls, floors, ceilings, roofs) with continuous air barrier around interior conditioned space. (N1101.5.1)
4. Foam plastics shall be separated from the interior of a building including attics and crawl spaces by an approved thermal barrier. (R316.4)
5. Show required fire blocking on each section. (R602.8)
6. Show height dimensions on each cross-section.
7. Label all rooms, spaces, and hallways on each section.
8. Provide and reference/key structural details for critical connections for cross-sections.

I. Wall Construction

1. Provide a cross section detail and wall legend for each type of wall.
2. Callout exterior materials, including, stucco system, lath, building paper, foam, and sheathing where required. (R703)
3. Specify on plans, interior wall materials. (R702)
4. Specify on plans, interior wall construction, coverings, and backings for tile and in wet locations. (R702.1)
5. Provide weepscreed and dimensions from soil and paved surfaces. (R703.7.2.1)
6. Provide nailing schedule. (R602.3)

J. Foundation Plan

1. For single-family custom submittal, provide a soils report or a soils waiver signed by owner.
2. Provide a complete fully dimensioned and detailed foundation plan.
3. Address foundation drainage per (R405.1)
4. Address foundation damp proofing (R406.1)
5. Show isolated footing dimensions and reinforcing. (R403.1 amended)
6. Show note: Exterior and interior footings shall bear minimum 18 inches below undisturbed soil or engineers certified compacted fill. (R403.1 amended)
7. Show required reinforcing steel for all footings and stem. (R 403.1.3.5)
8. Reference a complete set of structural details, footing, stem, turndown, pad footing, post at stem, etc.
9. Clearly show, dimension and detail interior bearing footings and shearwall footings.
10. Clearly show each required post location on foundation plan, coordinate with shearwall and roof framing plans.
11. Clearly show and label each required holdown on foundation plan. (R403.1.6)
12. Show and detail building retaining walls and basement and foundation walls, including drainage. (R 405.1)
13. Provide any/all slab elevations.

K. Floor and Roof Framing Plans

1. Provide a complete fully detailed floor and/or roof-framing plan. (R107.2 amended)
2. Clearly identify all framing members, including posts/columns, headers, beams, joists, and trusses. (R107.2 amended).
3. Clearly show each required post and size, coordinate with foundation plan.
4. Show and identify posts from above framing.
5. Show floor-to-floor tie, mechanical connectors.
6. Clearly show and identify all truss/joist hangers.
7. Clearly show and identify beam to post mechanical connectors.
8. Clearly show and key detail reference(s) for each beam to post, beam-to-beam, and girder to beam connections.
9. Detail typical truss/joist to wall, beam, and girder connections.
10. If pre-qualifying conditions are met, **deferred submittals** for truss design drawing may be allowed per (R802.10.1.1 amended)
11. Show lateral full height blocking at braced/shear wall line for joists, rafters and trusses.
12. Framing details shall reflect types of framing members, trusses flat and sloped, I-joists, dimension lumber rafters, etc.
13. Show stair mechanical attachment at top and bottom.
14. Framing members to accommodate masonry fireplace clearances to combustibles. (Table R1001.11)
15. Provide detail showing how lateral forces are transferred from roof diaphragm into shear wall.
16. Identify all trusses used as drag struts and show loads on framing plan.
17. Framing members to accommodate mechanical equipment requirements if installed in attic.

K. Structural Calculations

1. Provide the following structural engineering calculations:
 - a. Gravity loads analysis.
 - b. Lateral loads analysis.
 - c. Retaining wall calculations per policy #15-3.
 - d. Provide special inspections per (IBC Ch. 17).

M. Building Thermal Envelope

1. Energy compliance shall be demonstrated by prescriptive, UA trade-off (REScheck) or performance (REM/Rate, ERI, HERS) compliance path.

2. Mechanical closets requiring outside combustion air for gas furnace or water heater shall be thermally isolated from the building unless the equipment is direct-vent.
3. Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. (N1102.4.5).
4. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5.0 air changes per hour for detached dwelling units. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascal's). Testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the building official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. (N1102.4.1.2).

N. Mechanical Plan

1. Show mechanical equipment and water heaters on 18-inch platform if placed in garage or room with direct access to garage. (M1307.3).
2. Provide combustion air and show hi and low vent opening sizes for gas fuel appliances located in *confined* spaces. (G2407).
3. Provide and reference approved detail for gas piping to gas island cooktop. (G2415.14).
4. Provide kitchen exhaust fan vented direct to outside. (M1505.2 amended, Table M1505.4.4).
5. Show mechanical system design criteria, types, sizes, efficiencies and controls (N1101.5).
6. Provide HVAC equipment sizing calculations. Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved calculation methodologies (N1103.7).
7. Provide minimum 15 SEER (Seasonal Energy Efficiency Ratio) for air conditioning equipment.
8. Provide minimum 78% AFUE (Annual Fuel Utilization Efficiency) for weatherized gas heating equipment, non-weatherized equipment minimum 80% AFUE.
9. Each separate heating and cooling system shall be provided with at least one programmable thermostat (N1103.1).
10. Show how the building is provided with outside air ventilation in accordance with Section M1505. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating. (N1103.6).

11. Provide mechanical exhaust ventilation for bathrooms, water closet rooms, laundry room, and kitchen, ducted direct to outside. Bathrooms, water closet compartments and other similar rooms shall be provided with a mechanical ventilation system, with a minimum ventilation rate of 50 cfm (23.6 L/s) for intermittent ventilation, or 20 cfm (9.4 L/s) for continuous ventilation Except where functioning as a component of a whole house ventilation system, exhaust fans in bathrooms with a shower or tub shall be provided with a delay timer or humidity/condensation control sensor. Exhaust fans shall be switched separately from lighting systems. (Amended R303.3 1 and M1505.)
12. Duct systems serving heating, cooling and ventilation equipment shall be installed in accordance with the provisions of this section and ACCA Manual D or other approved methods. (M1601.1)
13. Show supply and return air ducts and registers.
14. Supply and return ducts in attics shall be insulated to a minimum **R-8** where 3 inches in diameter or greater. Ducts in other portions of the building shall be insulated to minimum R-6 where 3 inches in diameter or greater. (N1103.3.1)
15. Ducts, air handlers, and filter boxes shall be sealed in accordance with Sections N1103.3.4 and M1601.4.1. Ducts shall be pressure tested to determine air leakage by one of the following methods (N1103.3.5):
 - a) Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
 - b) Post construction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

A written report of results shall be signed by the party conducting the test and provided to the code official.
16. Building framing cavities shall not be used as ducts or plenums (N1103.3.7).
17. Dwelling units shall be provided with mechanical ventilation airflow rates in accordance with Section M1505 (N1103.6).
18. Mechanical ventilation systems shall be tested and verified to provide the minimum ventilation flow rates required by Section N1103.6. A written report of results shall be signed by the party conducting the test and provided to the code official (N1103.6.3).

O. Electrical Plan and Lighting

1. Provide a complete Electrical Plan

2. Provide fully noted plan showing, all required receptacles, light fixtures, switches, exhaust fans, smoke detectors, service panels and sub-panels. (E3703 & E3901)
3. Provide notes and symbols legend.
4. Show and label all required **GFCI** and **WP/GFCI** receptacles. (E3902)
5. Show and label all required **AFCI** circuits. (E3902.16)
6. In areas specified in Section E3901.1, 125-volt, 15- and 20-ampere receptacles shall be listed tamper-resistant receptacles. (E4002.14)
7. Show that all permanently installed lighting fixtures contain only high-efficacy lamps (N1104.1)
8. Show that permanently installed interior lighting fixtures are controlled with either a dimmer, an occupant sensor control or other control such as an automatic timer shut-off switch. Exceptions include bathrooms and hallways. (N1104.2)
9. Show that exterior lighting over 30 watts include automatic shut-off. (N1104.3)
10. Show and label all **WP/DP** lighting fixtures as **SUITABLE FOR WET OR DAMP LOCATIONS** accordingly. (E4001.7)
11. Show and label all **smoke alarms**. Smoke alarms shall be installed in the following locations:
 - 1) In each sleeping room.
 - 2) Outside each separate sleeping area in the immediate vicinity of the bedrooms.
 - 3) On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
 - 4) Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.
 - 5) In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches or more, smoke alarms shall be installed in the hallway and in the adjacent room. (R314.3 amended).
 - 6) smoke alarms devices shall be interconnected unless listed wireless alarms are installed (R314.4) and shall receive their primary power from the building wiring (R314.6).
Show and label all **carbon monoxide alarms**, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. (R315),

carbon alarms devices shall be interconnected unless unless listed wireless alarms are installed (R315.5) and shall receive their primary power from the building wiring (R315.6).

12. Provide a UFER ground encased in concrete footing. (E3608.1.2)
13. The main electrical service panel shall have a reserved space to allow installation of a dual pole circuit breaker for "future solar electric" installation and shall be labeled as such (U103.7).
14. For Electrical Services greater than 400 amps, **PROVIDE ELECTRICAL LOAD CALCULATIONS.**
15. Provide an **ELECTRICAL SINGLE LINE DIAGRAM** for Services 200 amps and larger.

P. Plumbing Plan

1. Provide a single line gas-piping diagram; include all gas burning appliances and BTUs of each appliance, show pipe *lengths* and *sizes* from gas meter to each branch line and to each appliance. (G2413)
2. Show type of gas piping. (G2414)
3. Do not place gas piping under slab. (G2415.14)
4. Provide approved detail for gas piping to kitchen island gas cook top. (G2415.14)
5. Show all drainage/sewer piping materials. (Tables P3002.1, P3002.2)
6. Show high efficiency plumbing fixtures that meet the following maximum flow and flush rates: Lavatory faucets: 1.5 gal/minute; Shower heads: 2.0 gal/minute; Kitchen faucet: 1.8 gal/minute; water closets: 1.28 gal/flush. (Table P2903.2. amended).
7. Provide roof drains and over-flow/scuppers. (R903.4).
8. Show mechanical and service water heating system types, sizes, efficiencies, and controls (N1101.5).
9. Storage-tank type water heaters shall be installed with a drain pan and drain line. (P2801.6)
10. WH-pan drain-line shall terminate per (P2801.6.2)
11. Show minimum R-3 insulation for hot water pipes. (N1103.5.2).
12. A hot water circulation system shall be provided when the length of hot water piping or tubing from the source of hot water to the furthest fixture exceeds: 21 feet for a 3/4-inch line, 32 feet for a 5/8 inch line, 43 feet for a 1/2 inch line and 50 feet for a 3/8 inch line or less (N1103.5.1.1.1 amended).
 - a) Where the water piping or tubing length contains more than one size of pipe, the largest size shall be used for determining the maximum allowable length of pipe before a circulating hot water system is required. For the purposes of this section, the source of hot water shall be a water heater, boiler, circulation loop piping, distribution manifold, or heat-traced piping.
 - b) The hot water circulation system shall use a dedicated return line or the cold-water supply line

as the return at the most remote fixture. Gravity and thermo-syphon circulation systems shall be prohibited. Controls shall start the pump upon receiving a signal from the action of a user of a fixture or appliance or sensing the flow of hot or tempered water to a fixture, fitting or appliance. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

Q. Fire Sprinklers

1. Provide fire sprinklers per (IFC 903.).

R. Additional Energy Requirements

1. For low-slope roofs (less than 2 in 12 slope), provide a light-colored roof surface with a minimum solar reflectance index (SRI) of 64. (New N1102.6)

2. Reserve electrical service panel space for full-size 2-pole circuit breaker labeled "Future EV Charging" with electrical raceway installed from panel to a junction box in the garage labeled "Future EV Charging". (New N1104.4)
3. Identify a solar-ready zone not less than 10% of the total roof area over conditioned space but not less than 300 square feet exclusive of access and set back areas as required by the International Fire Code. The zone shall be free from obstructions, including but not limited to vents, chimneys, and roof-mounted equipment. Provide electrical pathway for conduit run from electrical service panel with reserved space for 2-pole circuit breaker. (Appendix AT103 amended)
4. A permanent energy certificate shall be completed by the builder or other approved party and posted in accordance with N1101.14 and AT103.10.

PLACE THE FOLLOWING NOTES ON DRAWINGS

If these notes are reproduced on the plans as a block, it will facilitate the review of the project. The notes are available and can be downloaded from: [City of Scottsdale - Building Review Detail Drawings \(scottsdaleaz.gov\)](http://scottsdaleaz.gov) Notes 1-13 reflect 2021 code updates.

2021 International Building Code	(ord. # 4550, resolution #12498)
2021 International Residential Code	(ord. # 4575, resolution #12499)
2021 International Fire Code	(ord. # 4562, resolution #12583)

1. Doors and windows that provide access to the swimming pool/spa, shall be separated by an approved barrier.
2. ***Plumbing fixtures** shall comply with the following conservation requirements: Lavatory faucets: 1.5 gal/minute; Shower heads: 2.0 gal/minute; **Kitchen faucet: 1.8 gal/minute**; water closets: 1.28 gal/flush. (Table P2903.2. amended).
3. ***A demand-controlled hot water circulation system** shall be provided in accordance with amended Section N1103.5.1.1 amended.
4. ***Cool/light reflective coated roofs.** Roof solar reflectance and thermal emittance for roof slopes less than 2:12. Three-year-aged solar reflectance index (SRI) of 64, Three-year-aged solar reflectance of 0.55 and a three-year aged thermal emittance of 0.75 over conditioned and non-conditioned spaces. N1102.6 amended.
5. ***The building thermal envelope shall comply with climate zone 2. Energy compliance shall be demonstrated by UA trade-off (REScheck) OR performance (REM/Rate, ERI, HERS) compliance path OR by the following prescriptive values (Table N1102.1.3): Prescriptive minimum R-values: (*Ceiling=R-49) / (Walls=R-13).**
6. **Prescriptive maximum Window Fenestration values: (U-Factor=0.40) / (SHGC=0.25).**
7. ***Exterior lighting** over 30 watts shall include an automatic shut-off. (N1104.3).
8. ***All permanently installed lighting fixtures shall contain only high-efficacy lamps.** (N1104.1).
9. ***All permanently installed interior lighting fixtures shall be controlled with either a dimmer, an occupant sensor control or other control such as an automatic timer shut-off switch. Exceptions include bathrooms and hallways.** (N1104.2).
10. ***E3606.5 Surge protection.** All electrical services supplying one- and two-family dwelling units shall be provided with a surge protective device (SPD) installed in accordance with Sections E3606.5.1 through E3606.5.3.
11. ***Electric Vehicle Charging Capacity.** Reserve electrical service panel space for a full size 2-pole circuit breaker labeled "Future EV Charging". A raceway shall be installed from the electrical service panel to a location within the garage, where it shall terminate in a junction box or outlet and be labeled "Future EV Charging".
12. ***Solar-Ready Zones – RB103.** Minimum 10% of roof area but not less than 300 sq. ft. free and clear of obstructions including mechanical equipment and vents. Provide electrical pathway for conduit run from solar-ready zone to electrical service panel with reserved space for 2-pole circuit breaker. Capped roof penetration sleeve shall be provided on roofs with a low-slope of 1 in 12 or less.
13. ***The following three notes are applicable to New Construction only** (BPI certified professionals are approved for testing air leakage in existing buildings, otherwise RESNET professionals are approved for new and existing):
 - a. ***The building shall be provided with a whole-house mechanical ventilation system that meets the requirements of Section M1505. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.** (N1103.6).
 - b. ***The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding five air changes per hour for detached dwelling units and seven air changes per hour for attached dwelling units. Testing shall be conducted in accordance with ASTM E 779 or ASTM E 1827 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by an approved third party (RESNET certified). A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.** (N1102.4.1.2).

- c. *Ducts, air handlers, and filter boxes shall be sealed in accordance with N1103.3.4. Joints and seams shall comply with Section M1601.4.1. Ducts shall be pressure tested to determine leakage by one of the following methods (N1103.3.5):
1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
 2. Post-construction test: Total leakage shall be measured with a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

A written report of the results shall be signed by the party conducting the test and provided to the code official prior to the Final Building Inspection.

14. All products listed by an Evaluation Service Report (ESR) shall be installed per the report and the manufacturer's written instructions. Product substitutions shall also be listed by an ESR.
15. Provide Fire Sprinkler System per Scottsdale Fire Code (IRC R313 amended).
16. Separate permits required: pools, spas, fences, site walls, retaining walls, and gas storage tanks.
17. Foundation & Footing depth shall be a minimum of 18 inches **below grade** (or per property soil report), provide a minimum of 3-inch clearance between Rebar and soil. (R403.1 amended).
18. Doors between the garage and residence shall be self-closing minimum 1 3/8" thick solid core or 20-minute fire rated. (R302.5.1).
19. Wood sill plates shall be pressure treated or decay resistant. Exterior sill plates shall bear a minimum of 6 inches above finish grade. (R317.1).
20. Gypsum board applied to a ceiling shall be 1/2" when framing members are 16" o.c. or 5/8" when framing members are 24" o.c. or use labeled **1/2" sag-resistant gypsum ceiling board**. (Table R702.3.5 (d)).
21. Showers and tub-shower combinations shall be provided with individual control valves of the pressure balance or thermostatic mixing valve type. (P2708.4).
22. Shower area walls shall be finished with a smooth, hard non-absorbent surface, such as ceramic tile, to a height of not less than 72 inches above the drain inlet. Cement, fiber-cement or glass mat gypsum backers installed in accordance with manufacturers' recommendations shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas. (R702.4.2).
23. Storage-tank type water heaters shall be installed with a drain pan and drain line. (P2801.6).
24. Provide roof/attic ventilation unless insulation is applied directly to underside of the roof-sheathing, or the depth is 24 inches or less between the ceiling and bottom of roof sheathing. (R806.1 Amended).
25. Provide Minimum R-3 insulation on hot water pipes. (N1103.5.2).
26. Supply and return ducts located outside conditioned space shall be insulated to a minimum **R-8**. Ducts and air handlers located completely within the continuous air barrier and within the building thermal envelope are exempt from insulation. (N1103.3.1 and N1103.3.2).
27. Exhaust air from kitchens, bathrooms and toilet rooms shall be exhausted directly to the outdoors, not recirculated, or discharged indoors. (M1505.4.4 amended).
28. Exhaust fans in bathrooms with a shower or tub shall be provided with a delay timer or humidity/condensation control sensor. Exhaust fans shall be switched separately from lighting systems. (R303.3).
29. Provide a wall mounted GFCI protected receptacle outlet within 36" of a bathroom or powder room lavatory. (E3901.6).
30. Receptacles serving kitchen countertops installed in bathrooms, garages, unfinished accessory buildings, outdoors and located within 6 feet of sinks shall have **GFCI** protection for personnel. (E3902).
31. All branch circuits that supply 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by a combination type arc-fault circuit interrupter (**AFCI**) installed to provide protection of the branch circuit. (E3902.12).
32. General purpose 15- and 20-ampere receptacles shall be listed **tamper-resistant**. (E4002.14).

33. Provide interconnected and hardwired **Smoke Alarms** in new and existing areas of home. (R314).
34. Approved **Carbon Monoxide Alarms**, hardwired and interconnected, shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. (R315).
35. Recessed luminaires installed in the building thermal envelope shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. (N1102.4.5).
36. Provide illumination with wall switches for stairways when there are 6 or more risers. (R303.7).
37. Receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6 feet, measured horizontally, from an outlet in that space, including any wall space 2 feet or more in width. (E3901.2).
38. Provide a minimum of two 20-amp small appliance branch circuits for the kitchen/dining/breakfast. (E3703.2).
39. Provide outside combustion air to all indoor fireplaces per manufactures specifications. (R1006.1).
40. At least one thermostat shall be provided for each separate heating and cooling system. (N1103.1).