

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 1 of 11

REFERENCE

- 2019 Amendments to the Building and Fire Code for the City and County of Denver (2019 DBCA)
- 2018 International Residential Code (2018 IRC)
- 2018 International Building Code (2018 IBC)
- 2019 DBCA Section 133.2 Information Required
- 2019 DBCA Section 133.3 Additional Information When Requested

SCOPE

This policy establishes the minimum structural submittal requirements to provide complete drawings and specifications of sufficient clarity for the purpose of the permit application and review for one- and two-family dwellings and their accessory structures where the scope of work includes new construction, a change of use, structural alterations, structural repairs, or structural work previously completed without permits. 2019 DBCA Section 133.3 requires additional information to be provided where deemed necessary by the Building Official to determine compliance with the requirements of the building code.

POLICY CONTENTS

- I. COMPLIANCE PATHS 2
 - A. PRESCRIPTIVE COMPLIANCE PATH 2
 - B. ENGINEERED/PERFORMANCE COMPLIANCE PATH..... 2
- II. SUBMITTAL REQUIREMENTS APPLICABLE TO ALL STRUCTURAL SUBMITTALS..... 2
- III. SUBMITTAL REQUIREMENTS APPLICABLE TO PRESCRIPTIVE COMPLIANCE PATH.. 3
- IV. SUBMITTAL REQUIREMENTS APPLICABLE TO THE ENGINEERED/PERFORMANCE COMPLIANCE PATH I. 5
- V. ADDITIONAL SUBMITTAL REQUIREMENTS BASED ON SCOPE OF WORK..... 7
 - A. BASEMENT UNDERPINNING, SISTER WALL, SISTER CURB, BENCH FOOTING 7
 - B. SHORING AND EXCAVATION 9
 - C. RETAINING WALLS 9
 - D. SECOND STORY ADDITION / ATTIC CONVERSION 9
 - E. PROPRIETARY MATERIALS, DESIGNS, AND METHODS OF CONSTRUCTION .. 9
 - F. PROPRIETARY FOUNDATION REPAIR SUBMITTALS WITH DEEP FOUNDATION ELEMENTS (SUCH AS HELICAL PIERS OR PUSH PILES)..... 9
 - G. STRUCTURAL WORK OR CHANGE OF USE PREVIOUSLY COMPLETED WITHOUT PERMITS 10
 - H. RESIDENTIAL ELEVATORS..... 11

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 2 of 11

I. COMPLIANCE PATHS

The drawings, specifications, and other documents submitted with the application for residential construction permits for one- and two-family dwellings and their accessory structures including new construction, a change of use, structural alterations, structural repairs, or structural work previously completed without permits shall demonstrate compliance with the requirements of the 2019 DBCA by one or both of the following paths:

A. PRESCRIPTIVE COMPLIANCE PATH

Provide drawings, specifications, and other documents sufficient to confirm the proposed design meets the prescriptive structural requirements of the 2018 IRC as adopted and amended by the 2019 DBCA (See Section II, Section III, and Section V); and/or

B. ENGINEERED/PERFORMANCE COMPLIANCE PATH

Provide drawings, specifications, and other documents sufficient to confirm the proposed design, or portion thereof, meets an engineered/performance design in compliance with accepted engineering practice and the structural requirements of the 2018 IBC as adopted and amended by the 2019 DBCA (See Section II, Section IV, and Section V).

II. SUBMITTAL REQUIREMENTS APPLICABLE TO ALL STRUCTURAL SUBMITTALS

Regardless of the intended compliance path, applications for permits for new construction, a change of use, structural alterations, structural repairs, or structural work previously completed without permits for one- and two- family dwellings and their accessory structures must include the following information:

1. 2019 DBCA Section 133.1 requires construction documents for all buildings, structures, additions, alterations, or repairs prepared by a licensed design professional to bear the seal and signature of the licensed design professional responsible for each design phase. For digital submittal, refer to [Development Services Electronic Signatures Tutorial](#).
2. A narrative on the drawings describing the entire scope of work for the structural design.
3. Identify on the drawings the building codes and standards applicable to the intended structural design compliance path, including as applicable the 2018 International Residential Code (2018 IRC), the 2018 International Building Code (2018 IBC), and the 2019 Amendments to the Building and Fire Code for the City and County of Denver (2019 DBCA).
4. Drawings which graphically indicate, label, and dimension all existing construction to remain, all existing construction to be removed, and all proposed additions and alterations. All work indicated as existing construction to remain must be legally established. Work previously completed without permits to remain shall be included and documented as proposed alterations for permitting. Existing construction is considered legally established when records indicate it was constructed to meet the regulations in

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 3 of 11

force at the time it was built, such as copies of past building permits from [Denver Building Permit Records](#).

5. Drawings and documents sufficient to indicate the proposed design meets the minimum requirements of the building code for nonstructural aspects affected by the structural scope of work but not otherwise addressed by the structural design, including but not limited to the weather-resistance of the exterior building envelope, energy efficiency, light and ventilation, minimum room areas and heights, egress clearances, emergency escape and rescue openings, and the fire-resistance rated construction of the exterior walls and projections.
6. Where the proposed scope of work changes the loading on any existing structural element to remain, including the lateral loads, sufficient construction detail and calculations must be provided for the existing type, size, material, spacing, and location of existing construction to confirm the capacity of the existing structural elements is not exceeded by the proposed altered loads.

III. SUBMITTAL REQUIREMENTS APPLICABLE TO PRESCRIPTIVE COMPLIANCE PATH

Buildings and structures constructed as prescribed by the 2018 IRC are deemed to comply with the requirements that buildings and structures are constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads, and seismic loads prescribed by the 2018 IRC (2018 IRC Section R301.1). Alternatively, buildings and structures may be designed and constructed to the limitations and requirements of the 2018 American Wood Council Wood Frame Construction Manual for One- and Two-family dwellings (2018 AWC WFCM), the 2015 American Iron and Steel Institute Standard for Cold-Formed Steel Framing Prescriptive Method for One and Two-family Dwellings with Supplement 3 (2015 AISI S230), or the 2017 ICC Standard on the Design and Construction of Log Structures (2017 ICC 400); however engineered design completed as part of these standards must comply with Section IV below for design in conformance with the 2018 International Building Code (2018 IRC Section R301.1.1).

Drawings and specifications submitted for prescriptive structural designs must include sufficient information to describe, in detail, the method of compliance for each element in the scope of work with regard to the applicable prescriptive requirements of the 2018 IRC, including but not limited to indicating:

1. The ultimate design wind speed V_{ult} applicable to the project site climatic and geographic design criteria (2019 DBCA Section 1609).
2. The ground snow load applicable to the project site climatic and geographic design criteria (2019 DBCA Table R301.2(1)).
3. Calculations for the dead loads determined by the actual weights of materials and construction with consideration for the dead load of fixed service equipment (2018 IRC Section R301.4).
4. The minimum uniformly distributed live load for the floors and attics (2018 IRC Section R301.5).

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 4 of 11

5. The bearing capacity of the soil as determined by the geotechnical report signed and sealed by an engineer responsible for the preparation of the report. Where a geotechnical report has not been conducted, the soil bearing capacity must be accompanied by a narrative on the drawings identifying the classification of the soil at the building site based on observation and any necessary tests of the materials disclosed by borings or excavations made in appropriate locations, and any additional documentation to support the allowable presumptive soil load bearing pressure based on the class of foundation materials (2019 DBCA Section R401.4.1). Where a geotechnical investigation has been conducted, the geotechnical report must be referenced by and submitted with the structural design, including test pit results at the location of existing footings.
6. The type, size, material, location, and fastening of all structural elements to provide a complete load path for the transfer of loads from their point of origin through the load-resisting elements to the foundation (2018 IRC Section R301.1).
7. Sufficient information for the prescriptive braced wall design including (2019 DBCA Section R106.1.3, 2018 IRC Section R602.10):
 - a. Identify the intended method of prescriptive wall bracing to be used (2018 IRC Section R602.10.4);
 - b. Graphically indicate and dimension locations of braced wall lines (2018 IRC Section R602.10.1);
 - c. Indicate the minimum required length of bracing for each braced wall line (2018 IRC Section R602.10.3) including all applicable adjustment factors;
 - d. Labeled types, dimensioned locations, dimensioned lengths, hold-downs, and foundation requirements at the top and bottom of all proposed prescriptive braced wall panels (2018 IRC Section R602.10.2); and
 - e. If applicable, indicate corner conditions with hold-down devices or return panels which conform to the prescriptive end conditions for braced wall lines with continuous sheathing (2018 IRC Section R602.10.7)
8. Elevations, sections, and details sufficient to indicate all prescriptive structural requirements are met (2019 DBCA Section 133.3.3), including but not limited to:
 - a. Graphically indicate, label, and dimension:
 - i. Size and depth of footings, stem walls, and reinforcing, including the maximum unsupported wall height and maximum unbalanced backfill height;
 - ii. Foundation drainage system, where required;
 - iii. Location and dimension of all proposed cantilever spans, including backspans.
 - b. Label the type, size, material, grade (including identifying wood species), spacing, fastening, and connections of all:
 - i. Wall framing and sheathing;
 - ii. Floor framing, sheathing, and exterior deck framing; and

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 5 of 11

- iii. Roof framing and sheathing, including collar ties, rafter ties and ceiling joists.
- c. Provide details for interior and exterior opening header design, including but not limited to windows, doors, garage doors, and other openings.

IV. SUBMITTAL REQUIREMENTS APPLICABLE TO THE ENGINEERED/PERFORMANCE COMPLIANCE PATH

Buildings and structures not constructed as prescribed by the 2018 International Residential Code (2018 IRC) or accepted alternative prescriptive standards shall be designed in accordance with accepted engineering practice and in accordance with the provisions of the 2018 International Building Code (2018 IBC). Drawings and specifications submitted must include sufficient documentation and calculations substantiating the proposed structural design and element sizing for all elements supporting the proposed construction, including but not limited to:

1. A narrative on the drawings indicating the method of compliance with the requirements of the structural provisions of the building code for each element not intended to meet the prescriptive requirements of the 2018 IRC, including the applicable standards utilized.
2. Design load-bearing values of soils (2018 IBC Section 1603.1.6) and other foundation design criteria, including a geotechnical report sealed and signed by an engineer responsible for the preparation of the report per [Building Permit Policy No. IRC R401.4 Residential Soils Tests and Geotechnical Investigation Reports](#).
3. The uniformly distributed, concentrated and impact floor live load used in the design for floor areas (2018 IBC Section 1603.1.1).
4. Roof live load used in the design for roof areas (2018 IBC Section 1603.1.2).
5. Special loads applicable to the design including but not limited to the loads of machinery or equipment, and that are greater than specified floor and roof loads, including their descriptions and locations (2018 IBC Section 1603.1.8).
6. Dead load of rooftop-mounted photovoltaic panel systems, including rack support systems (2018 IBC Section 1603.1.8.1).
7. The ground snow load p_g and additional information including (2018 IBC Section 1603.1.3):
 - a. Flat-roof snow load p_f , taking into account roof snow drifting loads at parapets and other roof elements which create drifting.
 - b. Snow exposure factor C_e .
 - c. Snow load importance Factor I_s .
 - d. Thermal Factor C_t .
 - e. Slope factor(s) C_s .
 - f. Drift surcharge load(s) p_d when the sum of p_d and p_f exceeds 20 psf.
 - g. Width of snow drifts w .

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 6 of 11

8. Information related to wind design data including (2018 IBC Section 1603.1.4):
 - a. Basic design wind speed, V , miles per hour and allowable stress design wind speed, V_{asd} , as determined in accordance with 2019 DBCA Section 1609.3 and 2018 IBC Section 1608.3.1.
 - b. Risk category.
 - c. Wind exposure. Applicable wind direction if more than one wind exposure is utilized.
 - d. Applicable internal pressure coefficient.
 - e. Design wind pressures to be used for exterior component and cladding materials not specifically designed by the registered design professional responsible for the design of the structure, psf (kN/m²).
9. Seismic design category and site class (2018 IBC Section 1603.1.5)
10. Flood design data if located in flood hazard areas (2018 IBC Section 1603.1.7).
11. Design criteria indicating all lateral loads and allowable stresses in all structural materials. (2019 DBCA Section 133.2.8.A). Design criteria for allowable stresses in structural materials shall include materials such as:
 - a. Solid-sawn lumber
 - b. Engineered wood materials
 - c. Concrete
 - d. Reinforcing steel
 - e. Hot-rolled steel
12. Foundation, floor, and roof plans identifying the location of all concentrated loads (2019 DBCA Section 133.2.8.B) and showing the size, section, and relative locations of structural members with column centers and offsets dimensioned (2018 IRC Section 1603.1)
13. Elevations, sections and details showing all structural requirements (2019 DBCA Section 133.2.8.C) and showing the size, section, and relative locations of structural members with floor levels dimensioned (2018 IBC Section 1603.1).
14. Engineering design calculations sealed and signed by the licensed design professional responsible, including:
 - a. Referencing all load assumptions made from the 2018 IRC, 2018 IBC, and/or 2019 DBCA;
 - b. Calculations for any existing structural elements to remain where the proposed scope of work changes the loading on any existing construction; and
 - c. Calculations must include the full load combination applicable to the scope of work.

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 7 of 11

V. ADDITIONAL SUBMITTAL REQUIREMENTS BASED ON SCOPE OF WORK

Applications for residential construction permits which include one or more of the following elements in the scope of work require additional information with the initial submittal as listed below.

A. BASEMENT UNDERPINNING, SISTER WALL, SISTER CURB, BENCH FOOTING

Engineered reports, calculations, and designs shall be submitted which include at a minimum:

1. A narrative for the structural scope of work, which shall include the following.
 - a. Indicate the specific extent and depth, in feet, of the proposed excavation, including any proposed excavation outside the perimeter of the existing foundation.
 - b. Identify if the proposed work includes a new or expanded basement resulting from either excavating an existing crawlspace, lowering an existing basement area, or replacing the exterior foundation walls of an existing basement area
 - c. Identify if the scope of work includes any work previously completed without permits (such as permitting an existing space for the first time).
2. The following requirement noted on the drawings submitted: *“After excavation and before placement of new foundations Professional Engineer to conduct evaluation and verification of in-situ soils and material at the bottom of underpinning pits to ensure materials are adequate to achieve the design bearing capacity.”*
3. A fully dimensioned and labeled foundation plan for the existing foundation graphically indicating, locating, and labeling all existing construction to remain and all existing construction proposed to be removed.
4. A fully dimensioned and labeled proposed foundation plan including, but not limited to:
 - a. Location, width, and height of existing and proposed walls to be underpinned.
 - b. The width and height of proposed footings.
 - c. Dimensions for proposed openings.
 - d. Dimensions for the interior and exterior faces of proposed window wells.
 - e. Dimensions from the nearest lot lines to the face of the proposed foundation walls, face of the proposed footings, and face of any exterior cladding.
 - f. Provide details and notes for the proposed excavation sequencing below the existing foundation and/or structure. The sequencing plan shall include segment dimensions and minimum time requirements between excavation segments.
 - g. Keyed location of drawing references to building sections and/or wall sections.

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 8 of 11

5. Fully dimensioned and labeled wall sections including but not limited to:
 - a. Graphic indications, labels, and dimensions for the materials, sizes, and locations of proposed assemblies, including reinforcing.
 - b. Graphic indications, labels, and dimensions for all existing foundations and footings.
 - c. Dimensions for location and width of proposed underpinning systems.
 - d. Dimensions for proposed stem wall height.
 - e. Dimensions for proposed footing size.
 - f. Dimensions from the nearest lot lines to the face of the proposed foundation walls, face of the proposed footing, and face of any exterior cladding.
 - g. Dimensions from the existing grade to the bottom of the proposed foundation/excavation.
 - h. Graphic indications and labels for all reinforcing and materials.
6. Details graphically indicating, dimensioning, and specifying the proposed relationship between existing foundations and proposed foundations, and between adjoining underpinning footing segments and wall segments, and any proposed connections.
7. Calculations for design loads on walls, including any surcharge, taking into account the effects on the foundation and structure produced by lateral earth pressure exerted on the underpinning, existing walls, and the connections of both, and coordinated with the dimensions and reinforcing indicated in the drawings including at a minimum:
 - a. Identify and calculate all loads which impact the existing construction and proposed underpinning, including surcharge as applicable. Gravity loads shall include the proposed structure, additions to the proposed structure, and snow loads.
 - b. Soil bearing capacity.
 - c. Lateral pressure distribution due to active earth pressure diagram.
 - d. Lateral loads or 'driving wedge' shall be indicated in a pressure diagram. Identify the lateral shear pressure on the plans, considering active and passive pressure on the walls as well as water pressure and surcharges from adjacent structures and drives where applicable.
 - e. Identify loads for stability overturning, sliding safety factor, stem moment, shear stem, passive pressure, coefficient of friction active pressure, and footing heel and toe moments and shears.
 - f. Identify the factor of safety for gross stability.
8. Specifications on the drawings for general requirements for concrete strength, concrete reinforcing, and concrete mix and additives considering sulfate content of local soils.
9. For proposed excavation outside of the perimeter of the existing foundation walls, including proposed window wells, provide a fully dimensioned site plan and wall

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 9 of 11

section locating all existing and proposed construction with dimensions from the exterior face of the existing and proposed foundations and window wells to the nearest lot lines. Locate and dimension the extent of the proposed excavation with dimensions from the furthest extent of the proposed excavation to the nearest lot lines.

B. SHORING AND EXCAVATION

1. Provide shoring and excavation drawings, calculations and details where required by [Building Permit Policy No. ADMIN 130.2A Excavation, Benching and Shoring for IRC Structures](#).

C. RETAINING WALLS

1. Concrete or masonry foundation walls shall be designed in accordance with accepted engineering practice where the walls are subject to hydrostatic pressure from ground water -OR- where the walls support more than 48-inches of unbalanced backfill and do not have permanent lateral support at the top or bottom. Submittals for retaining walls designed in conformance with accepted engineering practice shall comply with Section IV above.

D. SECOND STORY ADDITION / ATTIC CONVERSION

1. Drawings indicating the complete load path for the proposed construction that meets the requirements for the transfer of loads from their point of origin through the load-resisting elements to the foundation.
2. Size, material, and location of all existing structural elements where loading has changed, including lateral loads.
3. Calculations demonstrating either:
 - a. Existing elements have sufficient capacity to support new and altered loads, including lateral loads; or
 - b. Structural repair design for existing elements to accommodate proposed new loads.

E. PROPRIETARY MATERIALS, DESIGNS, AND METHODS OF CONSTRUCTION

1. Complete reports from an independent testing agency, such as from the ICC Evaluation Service or other approved agency, which substantiates performance requirements of the current building code are met regarding structural and/or fire-resistance rated construction requirements, and listing any additional design and construction requirements, limitations, and conditions of use. Expired test reports or expired evaluation reports will not be accepted for permitting.

F. PROPRIETARY FOUNDATION REPAIR SUBMITTALS WITH DEEP FOUNDATION ELEMENTS (SUCH AS HELICAL PIERS OR PUSH PILES)

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 10 of 11

Engineered reports, calculations, and designs shall be submitted which include at a minimum:

1. The narrative for the structural scope of work must address the suitability of the foundation system selected for the specified project considering information on the groundwater table, corrosion-related parameters, soils properties, and any questionable soil characteristics.
2. Graphically indicate, label, and dimension on the site plan:
 - a. The lot lines, and
 - b. All existing structures to remain,
3. Graphically indicate, label, and dimension on the foundation plan:
 - a. The location of each proposed pile,
 - b. The capacity and torque of each proposed pile, and
 - c. The factor of safety for the specific application being proposed
4. For each pile assembly identify each component of the assembly by model number and description, and minimum embedment and torsional resistance termination criteria.
5. Wall sections and details indicating the type, materials, condition, size, depth, and reinforcement of the existing structures to be supported.
6. Design information and details for the proposed connection of the piles to the existing structures. The adequacy of the existing structures that are connected to the proposed system shall be verified by a registered design professional and must be designed considering the reactions of the connections acting on the existing structures. The adequacy of the existing structures is subject to approval by the code official.
7. Structural calculations (analysis and design) and drawings, prepared by a registered design professional and based on accepted engineering principles as described in 2018 IBC Section 1604.4 and in conformance with 2018 IBC Section 1810 Deep Foundations. The structural analysis must consider and calculate all applicable internal forces due to applied loads, structural eccentricity, and maximum spans between the proposed foundations. The calculations must indicate the site-specific combined load at each pile location and consider the existing construction.
8. Provide additional documents and drawings as necessary to demonstrate, in detail, conformance of the proposed design with the submittal requirements, limitations, and conditions of use of the evaluation reports submitted for the proprietary products selected.
9. Indicate on the drawings any requirements of the evaluation report for special inspections or continuous special inspections. Documentation of the special inspections must be presented to the building inspector in the field.

G. STRUCTURAL WORK OR CHANGE OF USE PREVIOUSLY COMPLETED WITHOUT PERMITS

CITY & COUNTY OF DENVER COMMUNITY PLANNING & DEVELOPMENT BUILDING PERMIT POLICY		
Subject: MINIMUM STRUCTURAL SUBMITTAL REQUIREMENTS FOR ONE- AND TWO-FAMILY DWELLING RESIDENTIAL CONSTRUCTION PERMIT APPLICATIONS		
Approved: Scott V. Prisco, AIA, Building Official		Drafted by: Abu-Jaber
Number: ADMIN 133B	Effective Date: March 2, 2020	Page: 11 of 11

Structural work previously completed without permits or a change of use previously completed without permits must be submitted for permitting by providing drawings, calculations, and details sufficient to indicate the work conforms to the current building code requirements, including:

1. A narrative indicating the complete extent of the scope of work completed without permits;
2. Complete as-built plans, wall sections, specifications, and details sufficient to describe in detail the entire scope of work completed; and
3. Drawings, calculations, and details for structural repairs for work previously completed without permits that does not conform to the minimum requirements of the current building code.

H. RESIDENTIAL ELEVATORS

Submit structural details coordinated with the specifications of the elevator model selected and permitted by the Denver Fire Department conveyance program, including but not limited to shaft dimensions for maximum clearances, overrun requirements, and structural requirements.

1. Provide foundations, columns, and details sufficient to confirm the method of load transfer from the proposed elevator to the foundation in conformance with the requirements of the building code, including details for the connection of the proposed elevator to the structure where loads are applied, such as connections of the elevator rail backing to the roof framing.
2. Provide calculations supporting the sizing of any new structural elements supporting the proposed elevator, coordinated with the loads and other structural requirements of the elevator manufacturer for the elevator selected.
3. Due to installation of an elevator, a Conveyance Installation Permit is required from the Denver Fire Department. Coordinate the submittal and review directly with the Denver Fire Department by contacting DFDconveyancePermits@denvergov.org, or 720-913-4184 to address any required building changes. Pay for and obtain a Conveyance Installation Permit to ensure residential construction permits can be issued. More information for the conveyance program submittal requirements can be found at: <https://www.denvergov.org/content/denvergov/en/fire-department-home/inspections/conveyance-program.html>

END OF DOCUMENT