

# Responses to Review Comments

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**Issue Date:** 09.07.2017

**Reviewed by:** HR Green, Inc., 08.28.2017  
Prairie Center Multi-Family Development– Permit Number 17-xxxxx  
1988 McTuhrsan Ct. (Bldg F-2), 1995 McThursan Ct. (Bldg E), St. Charles, Illinois

**Re: Prairie Centre, Buildings F2 (North) & E (South), St. Charles, Illinois**  
NHA No.2017.03.00

## **Building Code Plan Review Comments & Responses:**

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- 1 Note: A separate permit shall be applied for, reviewed and approved for the following as applicable:
  - a. All signage-Temporary and permanent (Outside of structure)
  - b. Fences
  - c. Flag Pole
  - d. Job trailers

**Response:** *Noted, these will be applied for and obtained by the owner and contractor.*

- 2 Please furnish attic draft stopping plan. In combustible construction, draft stopping shall be installed to subdivide attic spaces and concealed roof spaces. In this installation, the attic space shall be subdivided into areas not exceeding 3000 sq.ft., or above every 2 dwelling units, whichever is smaller. Alternatively, the attic/concealed spaces may be fully sprinklered (IBC 718.4.2).

**Response:** *As noted on G001, draftstopping is not provided because the NFPA 13 sprinkler system requires that the attic is fully sprinklered, also noted in the fire protection specification on P403.*

- 3 Please specify listed Assembly Numbers to be used by contractors for all fire resistance rated floor, wall, and ceiling penetrations (IBC 714, 715, 717).

**Response:** *The owner/contractor will provide a separate submittal package to the City with all fire rated penetrations as noted above.*

- 4 Please schedule doors for Unit Storage Rooms in Parking Garage.

**Response:** *Door tags have been added to the unit storage rooms (wire mesh partition systems with operable panels/doors and hardware) and typical door has been added to the door schedule. See attached revised drawings A003, A101 and A106.*

- 5 Please furnish roof ventilation calculations and details indicating means of compliance to be implemented (IBC 1203.2).

**Response:** Notes have been added, see attached revised drawings A105, A110 and A511. Calculations have been attached at the end of this document.

- 6 Please provide large scale detail of Sprinkler Room with exterior access including all piping and equipment to be located therein (IBC 901.8, IFC 901.4.6, NFPA 13 7.3.1, 8.1.2).

**Response:** Sprinkler plans along with a large scale detail of the fire protection riser will be provided by the design build FP contractor as a separate submittal. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, will be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction.

#### Accessibility Review Comments & Responses:

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- 1 No review comments at this time.

#### Fire Review Comments & Responses:

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- 1 Fire Plan reviews will be performed by the St. Charles Fire Prevention Bureau.

#### Fuel Gas Comments & Responses:

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- 1 See Building Item #3.

#### Mechanical Review Comments & Responses:

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- 1 Please verify mechanical ventilation (exhaust) for Parking Garage. The garage area calculation should only exclude Stair S-01 (provided w/positive pressure), the Elevator (provided w/positive pressure), Elevator Machine Room (equipped w/exhaust fan), and the Trash Enclosure (equipped w/ exhaust fan). The balance of space (including Storage Units) will be subject to CO and NO2 accumulation (IMC 404.2, 404.3, 403.3.1).

**Response:** Calculations verified. Calculated area only excludes the elevator machine room, trash room and stairwell.

2 See Building Item #3.

3 Please indicate minimum 4 feet clearance between Magic-Pak vent and edge of patio door (IMC 804.3.4).

**Response:** Drawings have been updated to reflect minimum 4' clearance between Magic-Pak vent and edge of operable patio door. See attached revised drawings A111, A112, A113, A201, A203 and A204. Added note to 'Mechanical Notes' on each floor plan sheet.

4 Please add note: Contractor shall use contrasting color primer for PVC vent and combustion air piping (IMC 503.4.1).

**Response:** Added note to 'Mechanical Notes' on each floor plan sheet.

5 Please verify developed length of clothes dryer exhaust does not exceed 35' or manufacturer's maximum allowable developed length (IMC 508.4).

**Response:** Dryer vents that exceed 35' developed length are provided with dryer booster fans.

6 Please schedule Kitchen exhaust hood. Verify Kitchen exhaust hood capacity does not exceed 400 cfm or furnish details for required make-up air (IMC 505.2).

**Response:** Kitchen hoods are called out per the associated key note on the plans. Hood capacity does not exceed 400 CFM.

7 Please add note: Natural gas piping shall be pressure tested to 1 ½ times proposed maximum working pressure, but in no case less than 3 psig (IFGC 406.4.1).

**Response:** Added note to sheet M101 and M106.

#### Electrical Review Comments & Responses:

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1 See Building Item #3.

2 Please amend grounding detail note: Terminate with *non-reversible* mechanical connectors

**Response:** Revised note on sheet E350.

3 Please confirm conductor terminals are temperature rated to 90°C to match conductors (NEC 110.3).

**Response:** Conductors are sized based on a rating of 75C and shall have matching terminals.

- 4 Please add note: Service conductors are to be Copper ONLY per St. Charles amendment (NEC 110.5).  
**Response:** Note added to sheet E307.
- 5 Please add note: Grounding conductors are to be copper ONLY per St. Charles amendment (NEC 250.62).  
**Response:** Note added to sheet E350.
- 6 Please add note: Contractor shall provide a complete grounding electrode system to include concrete encased electrode (Ufer), rod electrode, and metal underground water pipe (NEC 250.50).  
**Response:** Note added to sheet E350.
- 7 Please revise note: All 120 volt, single-phase, 15 and 20 ampere branch circuits supplying outlets (*not just receptacles*) installed in dwelling unit kitchens, family rooms dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, or similar rooms or areas, shall be protected by a listed arc-fault circuit interrupter, combination type, installed to protect the branch circuit (NEC 210.12(B)).  
**Response:** Revised note on sheets E302 and E304.
- 8 Please add contractor note: Receptacle outlets shall be rated in accordance with rating of the branch circuit (NEC 210.21).  
**Response:** Added note on sheets E302 and E304.
- 9 Please add electrical note: The 2 or more 20A dedicated small appliance receptacle branch circuits specified in NEC 210.52 (B) (1) shall have no other outlets (non-receptacle outlets).  
**Response:** Added note on sheets E302 and E304.

#### Plumbing Review Comments & Responses:

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- 1 See Building Item #3.
- 2 Please furnish continuation call-outs for riser diagrams.  
**Response:** Continuation call-outs added to all waste and vent diagrams. See sheets P301 through P308.
- 3 Please revise DFU values for (South Building) P8, P11, P15, P24, P29, P30, P35, P37, P38, P43, P51, P59, P73, P74, P76, and (North Building) P8, P10, P11, P14, P15, P24, P29, P30, P38, P43, P51, P52, P61, P74, and P76 to reflect fixture count as shown on diagrams and plans.

**Response:** DFU calculations added to requested risers. All risers DFU counts are accurate and double-checked for accuracy. The risers are consistent with the plans. Some of the risers are more complex than usual to account for structural elements. See sheets P301 through P308.

- 4 Please clarify. There are 2 water supply risers tagged W-2 on Sheet P309.

**Response:** Second W-2 tag should have been labeled W-3. See sheets P301 through P308.

- 5 Please callout proposed domestic water service size.

**Response:** Domestic water service shall be 4" with a 4" meter, 4" isolation valves and 4" RPZ/strainer. See sheets P101 and P107.

#### Energy Review Comments & Responses:

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- 1 Please submit REScheck or similar report for energy compliance. By definition, only buildings NOT included in the definition "RESIDENTIAL BUILDING" are commercial (IECC C202).

**Response:** See attached REScheck report for each building.

- 2 Please revise duct insulation notes. Minimum R6 required within conditioned spaces and R8 required in un-conditioned spaces (IECC R403.3.1).

**Response:** Duct insulation notes have been revised.

#### Structural Review Comments & Responses:

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- 1 Sheet G001: It appears that the curbs and basement vestibules are in conflict with each other. (Section 107.2.1)

**Response:** G001 has been updated to accurately reflect the relationship between the curbs and the basement vestibules, see attached revised drawing.

- 2 Sheet S001: General Structural Notes, Precast Concrete Units, third note, and Wood, fourteenth note; these submittals should be done by a Licensed Structural Engineer, not a Professional Engineer. (Section 107.2.1)

**Response:** The notes have been corrected.

- 3 Sheet S100.A to S109: Verify that the keynotes are correct. There are numerous instances where it appears that the callout has the incorrect number. (Section 107.2.1)

**Response:** *Keynotes on all plan sheets have been reviewed and revised as required.*

- 4 Sheet S200: Details M1 and M3a/M3b; It is unclear where these retaining walls are located. Civil sheets were not included as part of this plan set. (Section 107.2.1).

**Response:** *The details are not required and have been removed from the drawing.*

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**Issued by:**

Amy Schmieding  
Nagle Hartray Architecture

### **Roof Ventilation Requirement Calculations Per IBC 1203.2**

These calculations fall into the exception permitting the net free cross-ventilation area to be reduced to 1/300.

#### **South Building E Attic Area (including eave and soffit)**

=20,081.9 sq.ft

#### **Required Attic Ventilation Area**

=20,081.9 sq.ft / 300

=67 sq.ft x 144

=9,648 sq.in

#### **Provide >40% ventilation by**

=9,648 sq.in x .4 ridge vent

=3,859.2 sq.in

#### **Provide <50% ventilation by**

=9,648 sq.in x .5 ridge vent

=4,824 sq.in

#### **Actual Ridge Ventilation**

=249 x 18 sq.in

=4,482 sq.in

#### **Provide Soffit Vent**

=4,824 sq.in

#### **Actual Eave Vent**

=779-9 x 9 sq.in

=7,017 sq.in

### **Roof Ventilation Requirement Calculations Per IBC 1203.2**

These calculations fall into the exception permitting the net free cross-ventilation area to be reduced to 1/300.

#### **North Building F2 Attic Area (including eave and soffit)**

=21,066.2 sq.ft

#### **Required Attic Ventilation Area**

=21,066.2 sq.ft / 300

=70.2 sq.ft x 144

=10,112 sq.in

#### **Provide >40% ventilation by**

=10,112 sq.in x .4 ridge vent

=4,044.8 sq.in

#### **Provide <50% ventilation by**

=10,112 sq.in x .5 ridge vent

=5,056 sq.in

#### **Actual Ridge Vent**

=262.3 x 18 sq.in

=4,721 sq.in

#### **Provide Soffit Vent**

=5,056 sq.in

#### **Actual Soffit Vent**

=814 x 9 sq.in

=7,326 sq.in