

Install Orifice Plates & TRV's at

Olinville Avenue Buildings

Bronx, New York

Contractor agrees to perform heating-system work at 2880, 2300, and 2440 Olinville Avenue in Bronx, New York for the sums shown below, to be paid by Pinnacle Bronx, LLC ("Owner"). (Note: these prices will hold for thirty days from the date of the Contractor's signature). Prices given are inclusive of any applicable sales tax.

The work is specified in the attached pages of this Contract. The Work does not include asbestos abatement. Any changes to the Work resulting in extra costs will require a change order, to be signed by both the Owner and the Contractor. No substitution of specified equipment or materials shall be allowed without the prior written approval of the Construction Manager. Contractor shall have general-liability and workman's compensation insurance. The Owner and Jonathan Flothow shall each be named as additionally insured parties. All labor and materials will be warranted for a period of one year commencing with receipt of all signoffs. All equipment shall be installed in strict conformance with the manufacturers' recommendations, requirements, and instructions. The work shall conform to all applicable laws, codes, and standards. Contractor is responsible for confirming all site conditions, and for immediately reporting all problems, discrepancies, errors, or omissions relating to the site or this specification to the Construction Manager.

All required materials shall be supplied and installed by Contractor.

A COPY OF THE ATTACHED SPECIFICATION SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES THAT WORK IS BEING PERFORMED!

COST FOR PLATES & MACON COMPONENTS AT 442 CONVECTORS:	\$ _____
COST FOR VENTS, PLATES & MACON COMPONENTS AT 14 CONVECTORS:	\$ _____
COST FOR PLATES & DANFOSS COMPONENTS AT 491 CONVECTORS:	\$ _____
COST FOR VENTS, PLATES & DANFOSS COMPONENTS AT 29 CONVECTORS:	\$ _____

Offered By:

Accepted By:

_____ Date _____

("Contractor")

_____ Date _____

Pinnacle Bronx, LLC
("Owner")

General

Description of Work

- Each heater will be fitted with an orifice-plate, which is about the size and shape of a bottle cap. It fits inside the hand-valve union.
- The hand valves will be retrofitted with inserts that convert them to thermostatic operation.
- Some top floor heaters will have their supplies re-piped, to install vents.
- In 2300, components will be by Danfoss. In 2280 and 2440, components will be by Macon.



Fill Out Work Checklists

- For each heater, fill out the appropriate line of the attached Checklists.
- Note any problems, including backpitched piping or elements.

Scan And E-mail Checklists

Twice weekly, scan all checklists that have newly completed work, and email them to the Project Manager.

All Mechanics to be Checked by Project Manager

- Project Manager shall be present on the first day of work, to observe installation work performed by all mechanics who will be on the job.
- Minimum one-week's notice shall be given before any substitution of mechanics. For that reason, have extra mechanics on hand the first day.

Pipe Dope

Pipe thread sealant shall be gray dope or tape. No other dopes.

Cabinetry

- If the heater is enclosed in cabinetry, locate the dial as instructed by the Project Manager. If there are no instructions, lay the dial on the floor under the heater, and immediately notify the Project Manager.
- Owner shall remove any custom-made covers and/or enclosures that impede the work.

Ground Floor Excluded

Work at ground floor heaters is excluded.

Install Orifice Plates

Installing Orifice Plates

- Measure the convector cabinet.
- Use the relevant chart to determine proper orifice-size.
- Drill the orifice into the approximate center of the plate.
- If a heater is found that is NOT in the chart, notify the Project Manager, and temporarily install a blank plate.
- Install the plate by slipping it into the TRV union, between the tail-piece and valve-body.
- If not carefully installed, the plates can get bent in half, rendering them useless.

Sizing Orifices

- Measure the depth and width of the convector cabinet.
- Also check the height. Cabinets should be 24" high.
- Use the charts below to select orifice-size.



24" High Heaters

4" Deep

Width	Orifice
20"	1/16"
24"	1/16"
28"	1/16"
32"	5/64"
40"	5/64"
44"	3/32"
48"	3/32"
56"	3/32"
64"	3/32"
68"	7/64"
72"	7/64"
76"	7/64"

6" Deep

Width	Orifice
20"	1/16"
24"	5/64"
28"	5/64"
32"	3/32"
40"	3/32"
44"	7/64"
48"	7/64"
56"	7/64"
64"	1/8"
68"	3/32"
72"	1/8"
76"	1/8"

8" Deep

Width	Orifice
32"	3/32"
40"	7/64"
44"	1/8"
48"	1/8"
56"	9/64"
64"	9/64"
68"	5/32"
72"	5/32"
76"	5/32"

Install Thermostatic Valve Inserts: General

Installing Valve Inserts

- Remove the hand-valve bonnet and internals.
- Clean the valve seat using a seat cleaner, a flat brush, or canned air.
- Inspect the seat for damage. If it is damaged, replace the valve (on a T&M basis).
- If the valve seat is sound, install the appropriate insert.



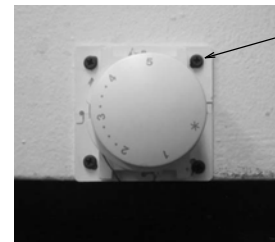
Check Pitch

- Check each heater element for proper pitch.
- Note backpitched elements in the checklists.



Mount Operator Dial

- Make sure the top faces up. (Danfoss dials have a raised ridge.)
- Mount the dial with four screws. Use sheet-metal screw or “zip” screws.
- Before driving the second screw, level the dial.



Four
Screws

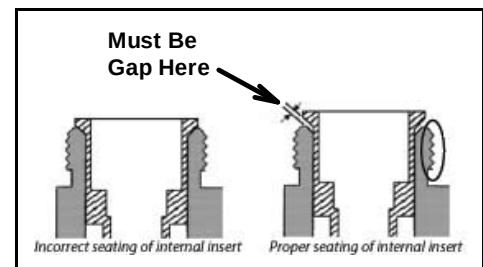
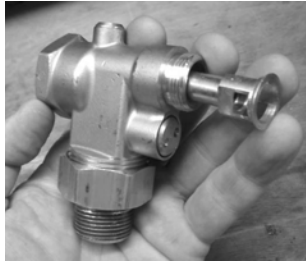
Fill Out Work Checklists

- For each heater, fill out the appropriate line of the attached Checklists.
- Note any problems, including backpitched piping or elements.

2280 & 2440 Olinville: Danfoss Components

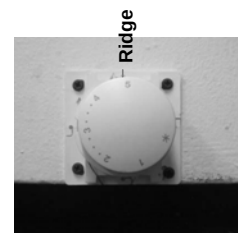
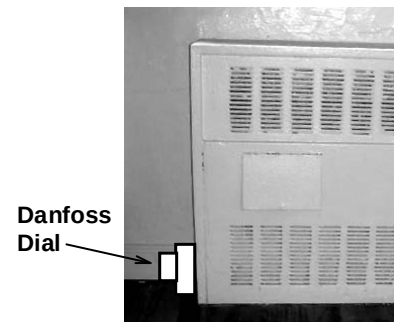
Installing Danfoss Valve Inserts

- If the valve seat is sound, install Danfoss insert #013G8074.
- Twist it to ensure that the lower gasket seats.
- With the insert well seated, there should still be a slight gap between the insert's upper lip and the valve-body shoulder (see diagram at right). If there is no gap, replace the valve-body (on a T&M basis).
- Apply sealant to the male bonnet threads, then install the bonnet.



Installing Danfoss Remote Operators

- Operator shall be Danfoss #013G8562 (with remote sensor/dial).
- Use a hole-saw to cut a hole in the end of the convector cabinet. Locate it so that the dial will be all the way at the bottom.
- Mount the dial at the bottom side as shown.
- Make sure the raised ridge faces up (see lower photo).
- to the front of the enclosure, right next to the access door, and right on top of the lower vents (see diagram at right).
- Set the dial to 4.
- Leave the Danfoss explanatory hanger on the dial.



2300 Olinville: Macon Components

Installing Macon Valve Inserts

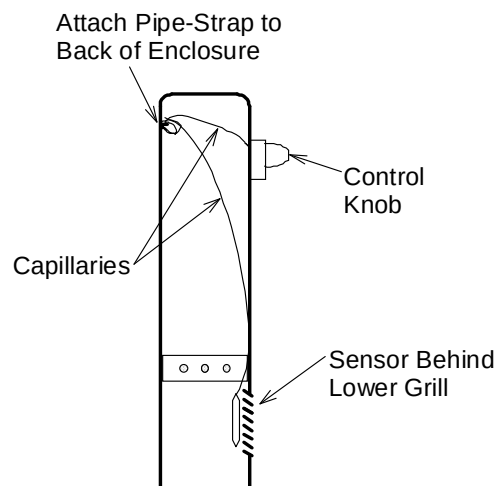
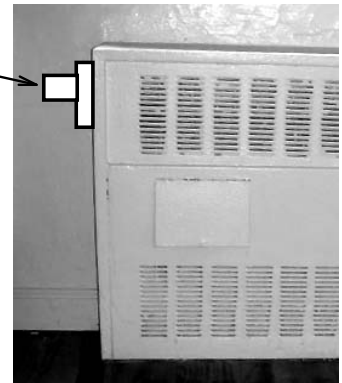
- If the valve seat is sound, install a Macon RSDNB insert as follows.
- Remove the handle, bonnet and innards, and cap the threads with the Macon cap.
- Remove the Dunham internal needle valve ("orifice") and its covering plug, and install the Macon insert into that tapping.



Installing Macon Remote-Mount Operators

- Operator shall be Macon remote-mount #ENTLZ B56000.
- Use a hole-saw to cut a hole in the end of the convactor cabinet. Locate it so that the dial will be all the way at the top.
- Make a "hook" out of pipe-strap, and use a self-tapping sheet-metal screw to attach it to the back of the cabinet. Locate it high, about 6" from the supply end.
- Remove the sensor from behind the dial. Remove its plastic housing, and uncoil the capillary. Loop capillary around the pipe-strap, so that the sensor hangs immediately behind the lower grille. See photos below.
- Turn the operator's union-nut hand-tight, then wrench it a quarter-turn.
- Set the dial to 7.

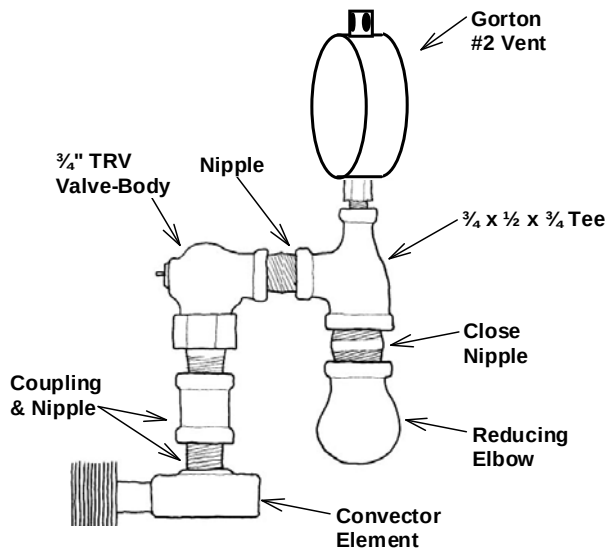
Macon Dial



Install Vents at Top Floor Heaters

At the locations given below, install riser vents inside convector cabinets as follows.

- Remove the existing hand-valve.
- Remove the reducing-elbow from the 1" stub-out. Re-install or replace it, and face it up. (Final turn will have to be made after vent is in place.)
- Install fittings and nipples as shown in the diagram below, including $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{3}{4}$ Tee.
- Include a $\frac{3}{4}$ " TRV valve-body, piped as shown. (In 2300 use Macon N10657, in 2280 & 2440 use Danfoss 013G8019.)
- Install a remote operator, in the same manner as in the rest of the convectors.



2280 Olinville Vents

- 1101 End Bedroom
Living Room (two)
- 1103 Living Room
End Bedroom
- 1104 Living Room
Middle Bedroom
- 1106 Living Room (two)
- 1107 Living Room
- 1108 Living Room
Middle Bedroom
- 1109 Living Room
End Bedroom
- 1110 Living Room

2300 Olinville Vents

2440 Olinville Vents

**Vent Locations
To Be
Confirmed**

Materials Takeoff

This information is given to assist the Contractor in bidding, and is not to be considered a comprehensive list of contractually required materials. Pipe, tubing, fittings, ball-valves, wire, conduit, paint, and general supplies are not included.

Count	Item	Make	Model	
976	Orifice Plate	Tunstall	¾"	_____
442	Insert for ¾" SWRF-B	Macon	RSDNB	_____
14	¾" Valve-Body	Macon	N10657	_____
456	Remote Operator	Macon	ENTLZ B56000	_____
491	Insert for ¾" SWRF-B	Danfoss	013G8074	_____
29	¾" Valve-Body	Danfoss	013G8019	_____
520	Remote Operator	Danfoss	013G8562	_____
43	Main Line Vent	Gorton	#2	_____

Supplier Information

Macon Parts:

ALB Supply, Brooklyn, (718) 253-5343

Tunstall Orifice Plates:

Tunstall Inc, Springfield, (800) 423-5578

2280 Olinville Avenue Checklist

Install Vents on 11th Floor

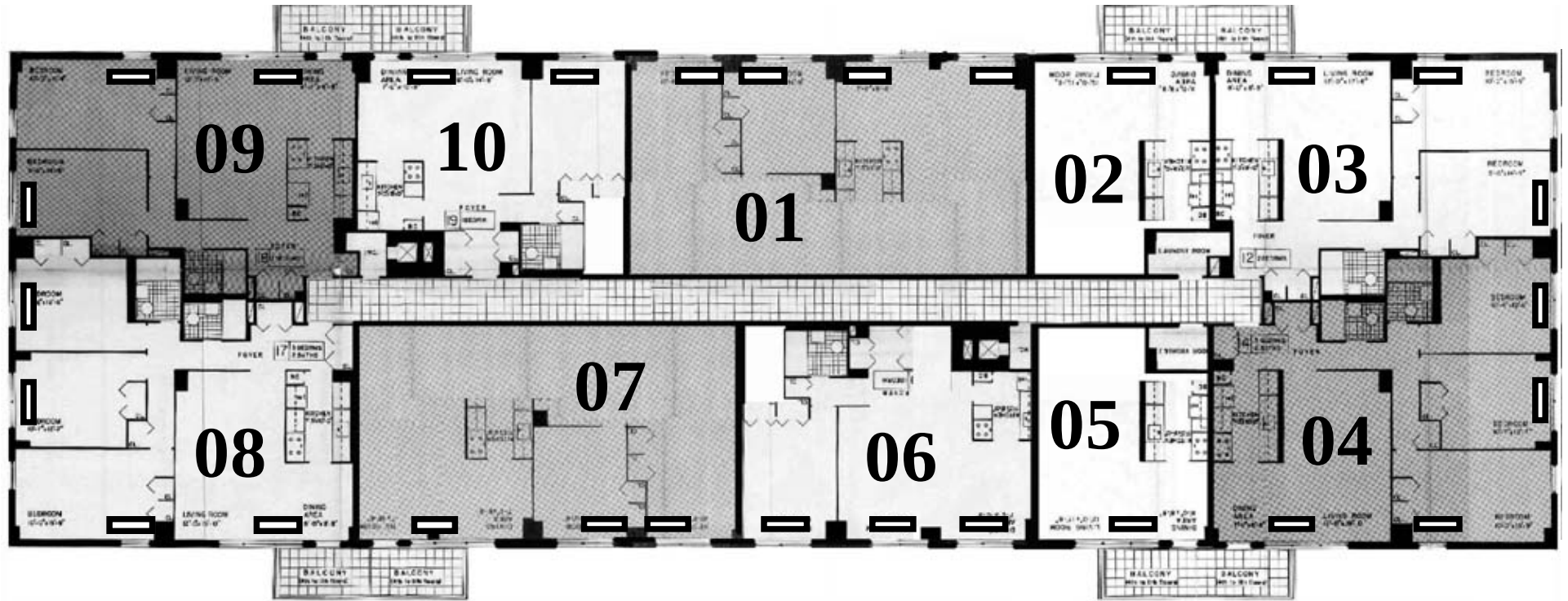
Floor:

		Convector Dimensions			Orifice Size	Seat Okay?	Pitch Okay?	Vent Installed?	Date	Installer Initials	Comments/Problems/Extras
		Depth	Width	Height							
01	Living Room: Left										
	Living Room: Right										
	Middle Bedroom										
	End Bedroom										
02	Main Room										
03	Living Room										
	Middle Bedroom										
	Corner Bedroom										
04	Living Room										
	Bedroom #1										
	Bedroom #2 (Middle)										
	Bedroom #3 (Corner)										
05	Main Room										
06	Living Room: Left										
	Living Room: Right										
	Bedroom										
07	Living Room										
	Middle Bedroom										
	End Bedroom										
08	Living Room										
	Bedroom #1										
	Bedroom #2 (Middle)										
	Bedroom #3 (Corner)										
09	Living Room										
	Middle Bedroom										
	Corner Bedroom										
10	Living Room										
	Bedroom										

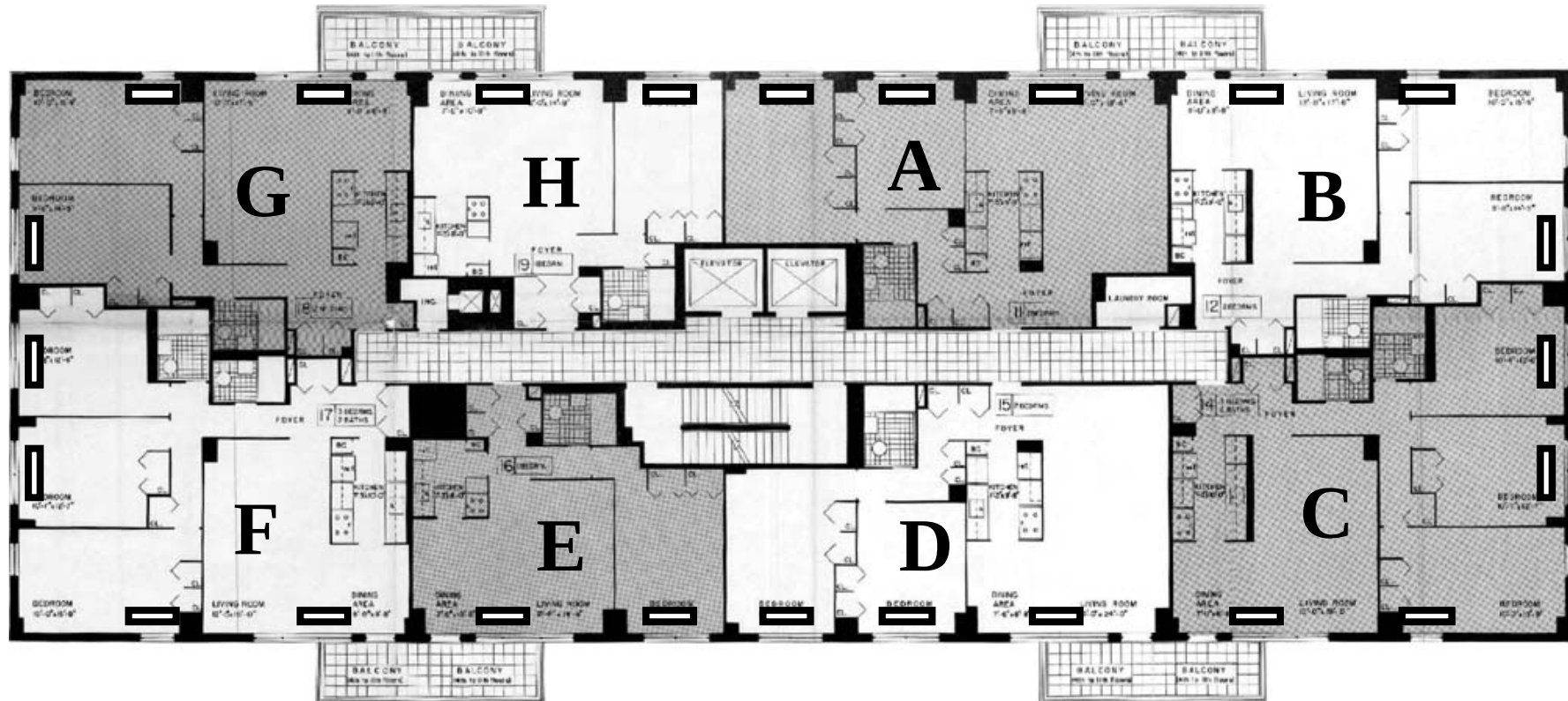
This is a detailed floor plan of a 10-unit apartment building. The units are arranged in two rows of five, separated by a central horizontal corridor. The units are labeled as follows:

- Top Row (from left to right):**
 - Unit 09:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 10:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 01:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 02:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 03:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
- Bottom Row (from left to right):**
 - Unit 08:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 07:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 06:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 05:** Includes a bedroom, living room, dining area, kitchen, and bathroom.
 - Unit 04:** Includes a bedroom, living room, dining area, kitchen, and bathroom.

The plan also shows common areas, including a central corridor, stairs, and several balconies located at the top and bottom edges of the building. Each unit has its own set of rooms and a private bathroom.



2300 Olinville Typical Floor Plan



2440 Olinville Avenue Checklist

Install Vents on 11th Floor

Floor:

		Convector Dimensions			Orifice	Seat	Pitch	Vent	Date	Installer	Comments/Problems/Extras
		Depth	Width	Height	Size	Okay?	Okay?	Installed?		Initials	
11	Living Room										
	Middle Bedroom										
	End Bedroom										
12	Living Room										
	Middle Bedroom										
	Corber Bedroom										
14	Living Room										
	Bedroom #1										
	Bedroom #2 (Middle)										
	Bedroom #3 (Corner)										
15	Living Room										
	Middle Bedroom										
	End Bedroom										
16	Living Room										
	Bedroom										
17	Living Room										
	Bedroom #1										
	Bedroom #2 (Middle)										
	Bedroom #3 (Corner)										
18	Living Room										
	Middle Bedroom										
	End Bedroom										
19	Living Room										
	Bedroom										

2440 Olinville Typical Floor Plan

