

Duct Design Input

Model opt m-bath **Mfg.** CMH-MFG 929 **Date** 4/30/2019 **Source** 29M150

| | | | | |
|----------------|----------------|-------------------|-----------------|------------------------------|
| Design Type | Flow Direction | Plenum Connection | Plenum Location | Plenum Width X Plenum Length |
| Double-section | Down Flow | Direct to a Trunk | Floor B | 13 X 13 (Sqr. in) |

Note: all the unspecified dimensions are in inches.

| Crossover | Supply | To | Material | H / D | Width | Length (ft) | Offset Dir. | Offset |
|-----------|---------|---------|----------|-------|-------|-------------|-------------|--------|
| 1 | Floor B | Floor A | Flex | 12 | N/A | 19 | Center | 0 |

| Floor A | Vertical | Material | Trunk H | Trunk W | | | | | |
|---------|-------------|--------------|-----------|----------|--------|-------------|-----------|------------|------------|
| | First Floor | Aluminum | 5 | 14 | | | | | |
| | Direction | Distance(ft) | Boot Type | Boot H/D | Boot W | Boot L (ft) | Reg. Type | Register H | Register W |
| | Left 1 | 1.75 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 1 | 1.25 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 2 | 7 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 3 | 7.5 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 4 | 16 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 5 | 9.75 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |

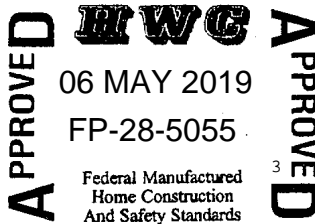
| Floor B | Vertical | Material | Trunk H | Trunk W | | | | | |
|---------|-------------|--------------|-----------|----------|--------|-------------|-----------|------------|------------|
| | First Floor | Aluminum | 5 | 14 | | | | | |
| | Direction | Distance(ft) | Boot Type | Boot H/D | Boot W | Boot L (ft) | Reg. Type | Register H | Register W |
| | Left 1 | 2 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 1 | 10 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 2 | 12 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 3 | 9.5 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 4 | 10.5 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |

Duct Design Performance

The refrigerated air cooling supply duct system including registers must be capable of handling at least 300 cfm per 10,000 Btuh with a static pressure no greater than 0.3 inches of water when measured at room temperature-HUD Manufactured Home Construction and Safety Standards, Part 3280.715 (a) (3) (ii)

Performance Calculated at a Static Pressure of 0.3 in. wc.

| | | | |
|----------------------|------|------------------------|-------|
| Air Flow Rate (SCFM) | 1864 | Duct Capacity (Btu/Hr) | 62100 |
|----------------------|------|------------------------|-------|



Duct Design Input

Model _____ **Mfg.** CMH-MFG 929 **Date** 12/6/2018 **Source** 29M150

| | | | | |
|----------------|----------------|-------------------|-----------------|------------------------------|
| Design Type | Flow Direction | Plenum Connection | Plenum Location | Plenum Width X Plenum Length |
| Double-section | Down Flow | Direct to a Trunk | Floor B | 13 X 13 (Sqr. in) |

Note: all the unspecified dimensions are in inches.

| Crossover | Supply | To | Material | H / D | Width | Length (ft) | Offset Dir. | Offset |
|-----------|---------|---------|----------|-------|-------|-------------|-------------|--------|
| 1 | Floor B | Floor A | Flex | 12 | N/A | 19 | Center | 0 |

| Floor A | Vertical | Material | Trunk H | Trunk W | | | | | |
|---------|-------------|--------------|-----------|----------|--------|-------------|-----------|------------|------------|
| | First Floor | Aluminum | 5 | 14 | | | | | |
| | Direction | Distance(ft) | Boot Type | Boot H/D | Boot W | Boot L (ft) | Reg. Type | Register H | Register W |
| | Left 1 | 1.75 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 1 | 1.25 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 2 | 7 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 3 | 7.5 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 4 | 16 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 5 | 8 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |

| Floor B | Vertical | Material | Trunk H | Trunk W | | | | | |
|---------|-------------|--------------|-----------|----------|--------|-------------|-----------|------------|------------|
| | First Floor | Aluminum | 5 | 14 | | | | | |
| | Direction | Distance(ft) | Boot Type | Boot H/D | Boot W | Boot L (ft) | Reg. Type | Register H | Register W |
| | Left 1 | 2 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 1 | 10 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 2 | 12 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 3 | 9.5 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |
| | Right 4 | 10.5 | Reg. Boot | 4 | 10 | 0.5 | Boot Reg. | 4 | 10 |

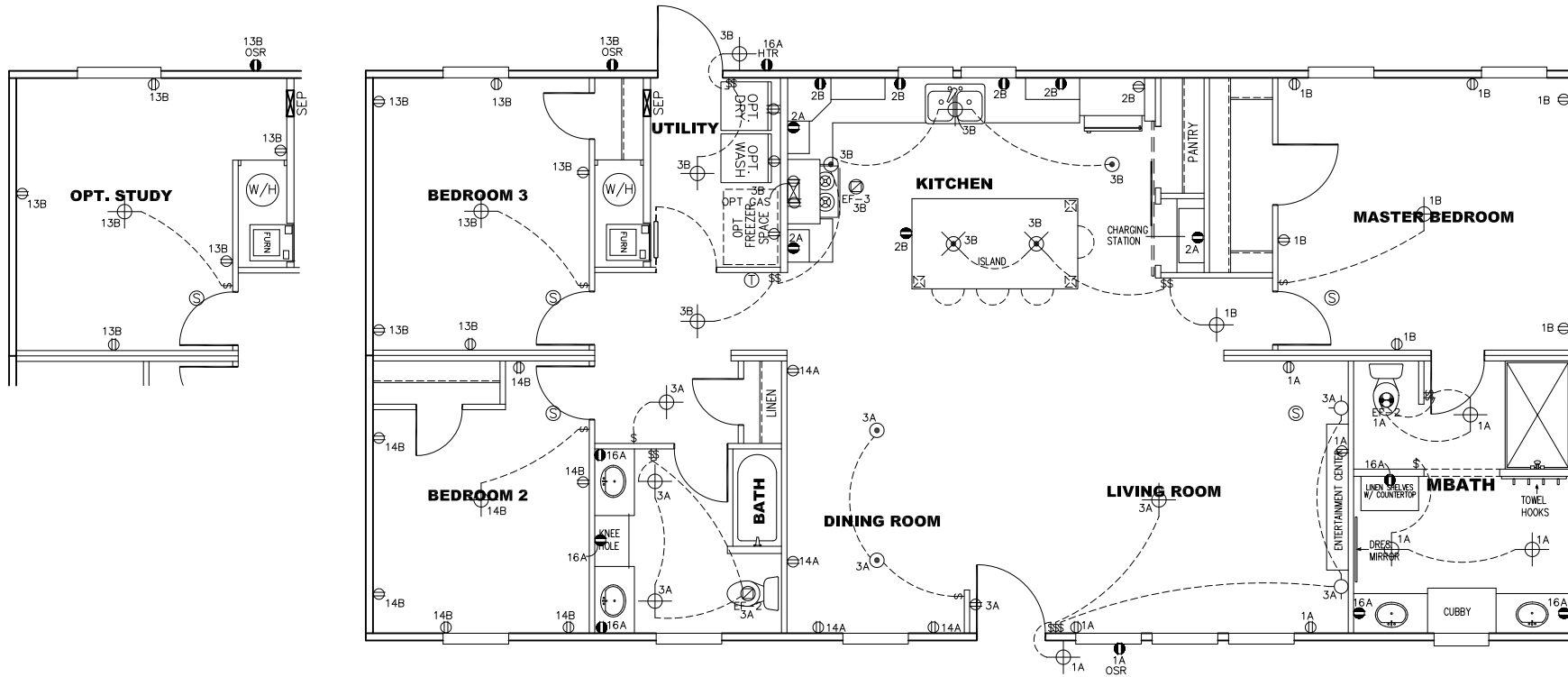
Duct Design Performance

The refrigerated air cooling supply duct system including registers must be capable of handling at least 300 cfm per 10,000 Btuh with a static pressure no greater than 0.3 inches of water when measured at room temperature-HUD Manufactured Home Construction and Safety Standards, Part 3280.715 (a) (3) (ii)

Performance Calculated at a Static Pressure of 0.3 in. wc.

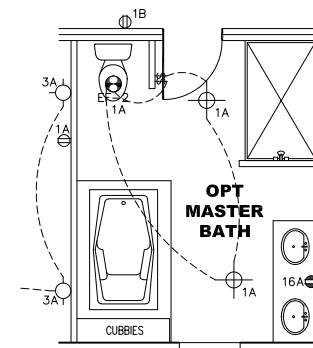
| | | | |
|----------------------|------|------------------------|-------|
| Air Flow Rate (SCFM) | 1864 | Duct Capacity (Btu/Hr) | 62100 |
|----------------------|------|------------------------|-------|





NOTES:

1. ALL CIRCUITS SHOWN ARE FOR REFERENCE AND MAY BE CHANGED BASED ON OPTIONAL COMPONENTS INSTALLED IN THE HOME.
2. REFER TO EL SECTION OF THE DAPIA FOR SYMBOL CHART.
3. EITHER LIGHT OR RECEPTACLE MUST CONNECT TO SWITCH.
4. EF-1= 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE III
THERMAL ZONES I & II MAY USE FAN OR WINDOW W/1.5 SQ. FT. OPENABLE GLASS.
5. EF-2= 50 CFM EXHAUST FAN REQUIRED THERMAL ZONE I, II, AND III.
6. EF-3= 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
7. EF-4= WHOLE HOUSE VENTILATION PER REQUIREMENTS IN S-HV-10 & 10A OR M-HV-11 & 11A OF DAPIA.
8. REFER TO EL SECTION OF THE DAPIA OR THE MFG. INSTALLATION INSTRUCTIONS FOR PROPER WIRE SIZE AND BREAKER SIZE FOR SPECIFIC APPLIANCE AND MODEL BEING INSTALLED.
9. ALL SMOKE ALARMS TO BE LOCATED ON THE CEILING.
10. DIMENSIONS SHOWN ON PRINT ARE APPROXIMATE AND TO BE USED ONLY AS A GUIDELINE.

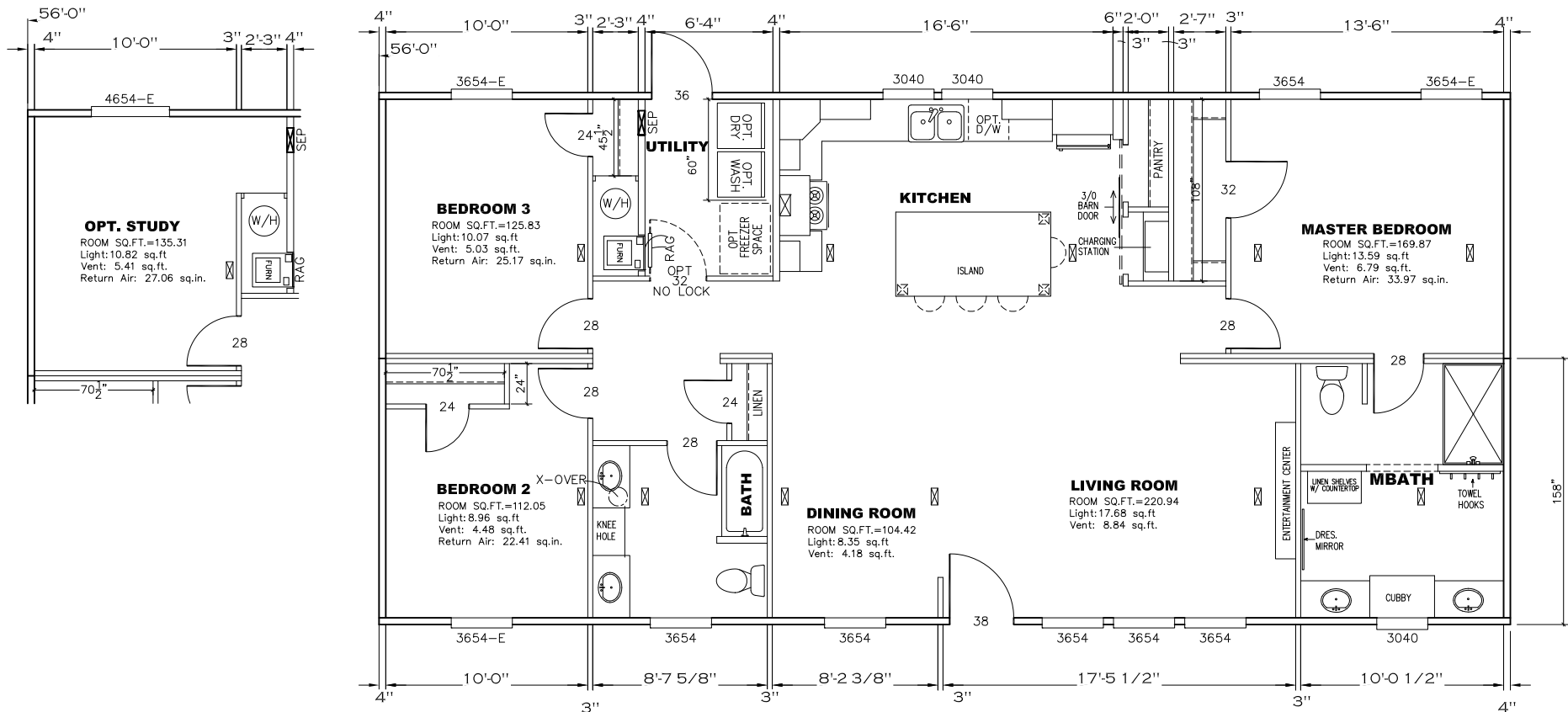


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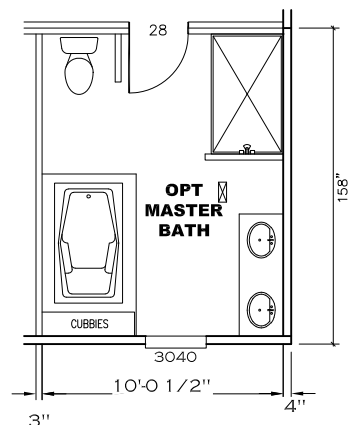
| CIRCUIT | CIRCUIT # | WIRE | BREAKER | CIRCUIT | CIRCUIT # | WIRE | BREAKER | CIRCUIT | CIRCUIT # | WIRE | BREAKER |
|-------------|-------------------|-------------|---------|--------------|---------------|-------------|---------|--------------------|-----------|-------------|---------|
| LIGHT/RECEP | 1A,B,3A,B,13B,14B | 14-2 | 15-SP | WATER HEATER | 4A,6B | SEE NOTE #8 | | BATHROOM | 16A | 12-2 | 20-SP |
| KITCHEN | 2A,2B,14A | 12-2 | 20-SP | RANGE | 5B,7A | SEE NOTE #8 | | OPT G/DISP | 9B | SEE NOTE #8 | |
| WASHER | 12A | 12-2 | 20-SP | FURNACE | 6A,8A,B,10A,B | SEE NOTE #8 | | OPT SPA/ WP/JAC | 11A,B | SEE NOTE #8 | |
| DRYER | 5A,7B | SEE NOTE #8 | | OPT D/WASH | 9A | SEE NOTE #8 | | FREEZER | 13A | SEE NOTE #8 | |
| | | | | SMOKE ALARM | 4B | SEE NOTE #8 | | | | | |

1,475 SQ.FT. (STD PLAN "CONDITIONED")
 N/A SQ.FT. (W/OPT. PORCH/RECESS "CONDITIONED")

| | | |
|--|--|-----------------------------|
| CMH MANUFACTURING Product Designer: Alex Whaley | Model #: NOW28563U Date: 4.17.18 Scale: NTS | Drawing #: 29M150 |
| | 28' x 56' Ultra II | |
| ELECTRICAL PLAN-06 | | |
| REVISION ECR- 1/7/19 BH | | |



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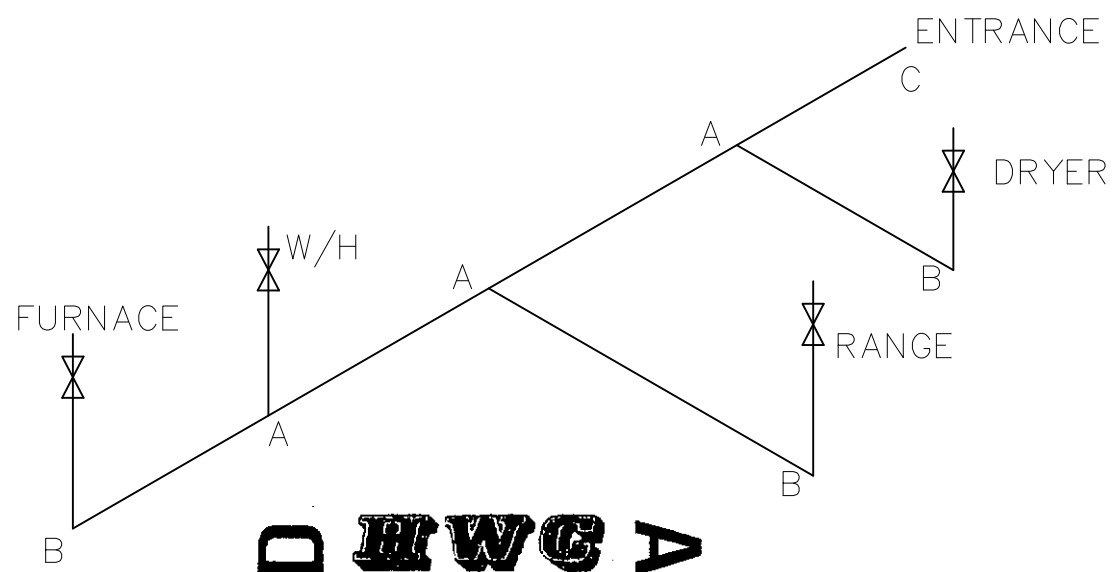
NOTE: ALL BEDROOMS ARE WITHIN 35' FROM AN EXIT DOOR

1,475 SQ.FT. (STD PLAN "CONDITIONED")
 N/A SQ.FT. (W/OPT. PORCH/RECESS "CONDITIONED")

| | | |
|--------------------------------------|---------------------------|--|
| CMH MANUFACTURING | Model #: NOW28563U | Drawing #: |
| Product Designer: Alex Whaley | Date: 4.17.18 | Scale: NTS |
| 28' x 56' Ultra II | | 29M150 |
| FLOOR PLAN | | 7 REVISION ECR-745735 1/15/19 EH |

| LEGEND | | APPLIANCE BTU'S RATINGS MAX. INPUT | |
|--------|----------|------------------------------------|--------------|
| SYM | FITTINGS | | |
| A | TEE | FURNACE | 70,000 BTU'S |
| B | 90 ELL | W/H | 37,000 BTU'S |
| X | VALVE | RANGE | 54,000 BTU'S |
| C | CAP | DRYER | 22,000 BTU'S |

MDL=25'



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| GAS LINE SIZE CHART | |
|---------------------|--------|
| | = 1" |
| | = 3/4" |

- NOTES:
- 1) ALL PIPE IS 3/4" I.D.CAST (EXCEPT WHERE NOTED OTHERWISE)
 - 2) MDL=MAX. DETERMINED LENGTH OF PIPE
 - 3) FITTING MAY BE ADDED OR SUBTRACTED TO TRAVERSE VARIATIONS IN AXLE QUANTITY, PLACEMENT, AND FRAME TYPE.
 - 4) INLET LOCATION MAY VARY TO STAY WITHIN MAX. DETERMINED LENGTH

FP-28-5055

| | |
|--|--------------------------------------|
| 1,475 SQ.FT. (STD PLAN "CONDITIONED") | |
| N/A SQ.FT. (W/OPT. PORCH/RECESS "CONDITIONED") | |
| CMH MANUFACTURING | Model #: NOW28563U Drawing #: |
| Date: 4.17.18 | Scale: NTS 29M150 |
| Product Designer: Alex Whaley | |
| 28' x 56' Ultra II | |
| GAS LINE DETAIL | |
| REVISION ECR- 4/30/18 EH | |

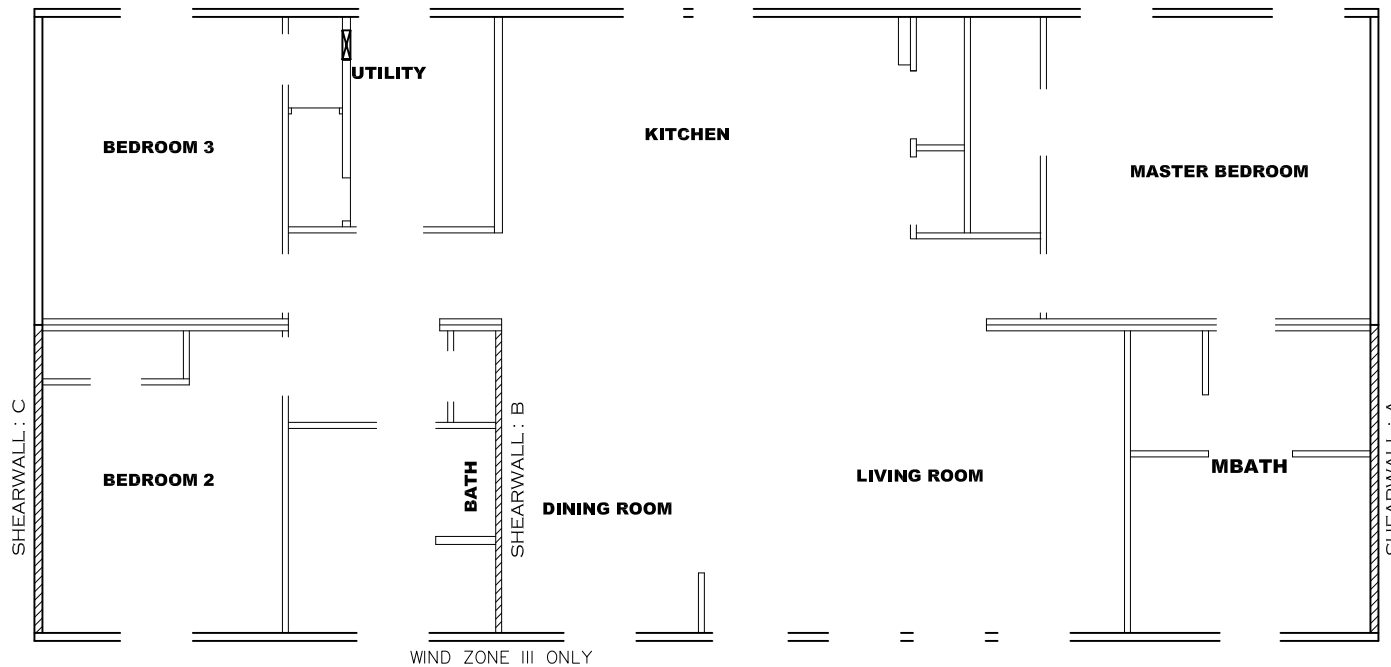
Model # 29M150-8ft Minimum Joist Spacing 16 "
 Box Width = 158 " Double wide No Offset Box
 Box Length = 56 ft. 95.5" 12" MIN. IBEAM No Clerestory
 No Skylights No Origami Dormer
 No Porches No Sunken Floor
 Joist Size = #2 sp 2x6 Lags 9Mx3" No Parapet Roof

Version R13.14

| Wind Zone 1 Standard Roof | | (3/8" sheathing only with 15 gax 1.5" at 5"/10" oc. (197 plf) Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block. | | | | | 96 inch sidewall |
|---------------------------|--------------|--|-----|-------------|------|-------|------------------|
| Shearwall | Dist./ Hitch | Length | PLF | # of Joists | Lags | Notes | |
| A | 0' | 128" | 162 | 2 | 2/1 | | |
| C | 56' | 128" | 162 | 2 | 2/1 | | |

| Wind Zone 2 Standard Roof | | (3/8" sheathing only with 15 gax 1.5" at 5"/10" oc. (197 plf) Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block. | | | | | 96 inch sidewall |
|---------------------------|--------------|--|-----|-------------|------|-------|------------------|
| Shearwall | Dist./ Hitch | Length | PLF | # of Joists | Lags | Notes | |
| A | 0' | Full | 425 | 2 | 3/3 | | |
| C | 56' | Full | 425 | 2 | 3/3 | | |

| Wind Zone 3 Standard Roof | | (3/8" sheathing only with 15 gax 1.5" at 5"/10" oc. (197 plf) Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/ 12" glue block. | | | | | 96 inch sidewall |
|---------------------------|--------------|--|-----|-------------|------|-------|------------------|
| Shearwall | Dist./ Hitch | Length | PLF | # of Joists | Lags | Notes | |
| A | 0' | Full | 425 | 2 | 3/3 | | |
| B | 36.66' | Full | 425 | 2 | 2/2 | 0.66 | |
| C | 56' | 136" | 162 | 2 | 2/1 | | |



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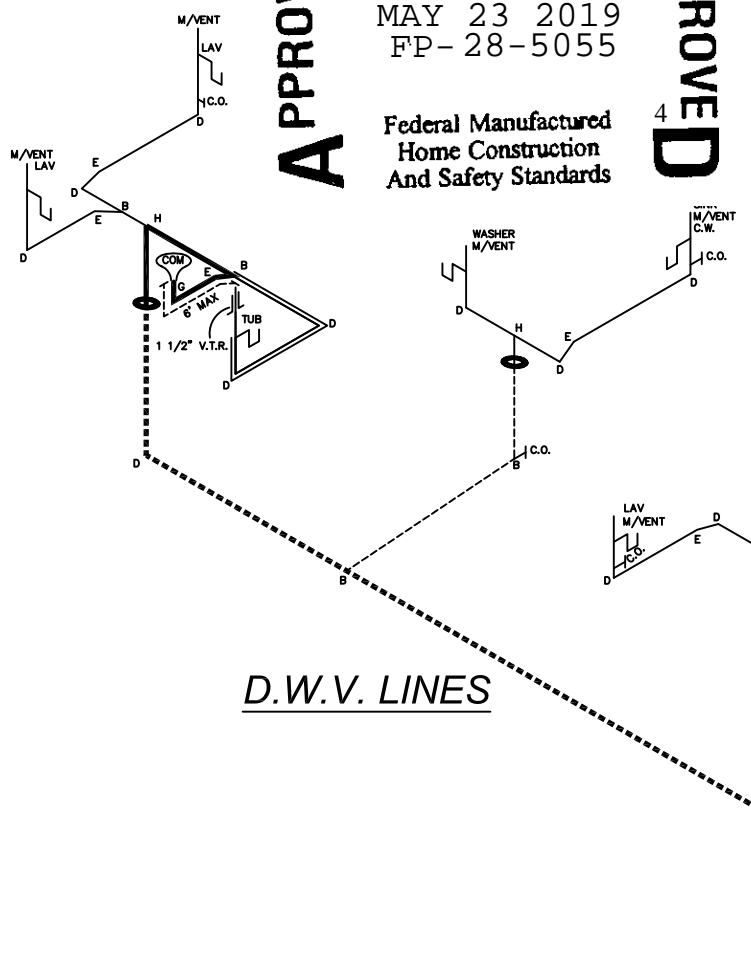
FP-28-5055

1,475 SQ.FT. (STD PLAN "CONDITIONED")
 N/A SQ.FT. (W/OPT. PORCH/RECESS "CONDITIONED")

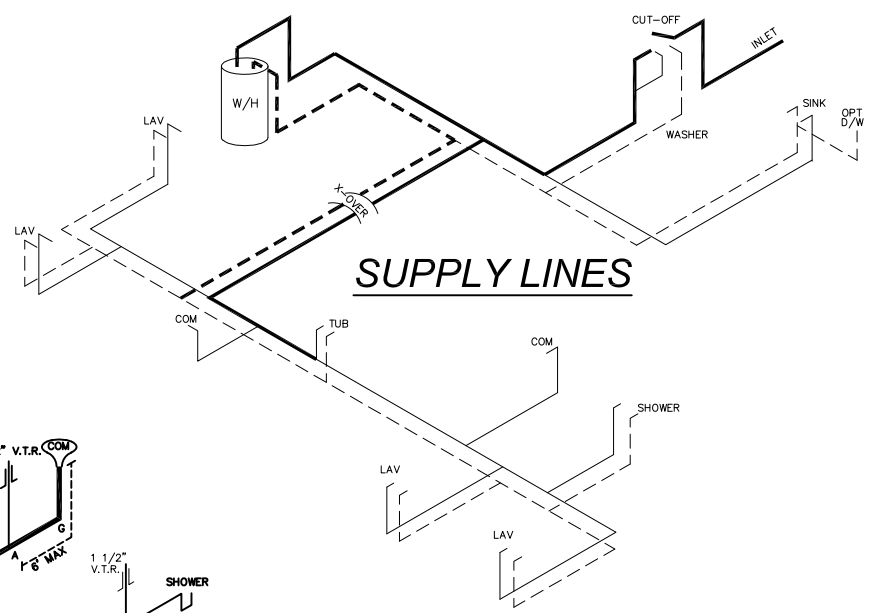
| | | |
|-------------------------------|---------------------------|--|
| CMH MANUFACTURING | Model #: NOW28563U | Drawing #: |
| | Date: 4.17.18 | Scale: NTS |
| Product Designer: Alex Whaley | | 29M150 |
| 28' x 56' Ultra II | | |
| SHEARWALL PAGE | | 1 REVISION ECR-632119 5/23/18 EH |

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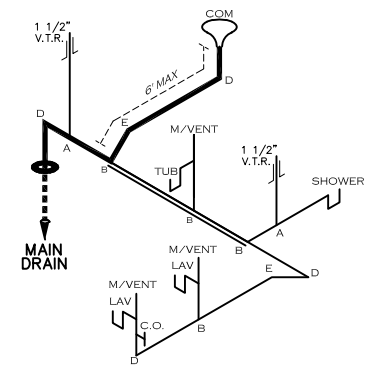
NOTE:
DASHED LINES INDICATES HOT WATER
SOLID LINES INDICATES COLD WATER
—— = 3/4"
—— = 1/2"



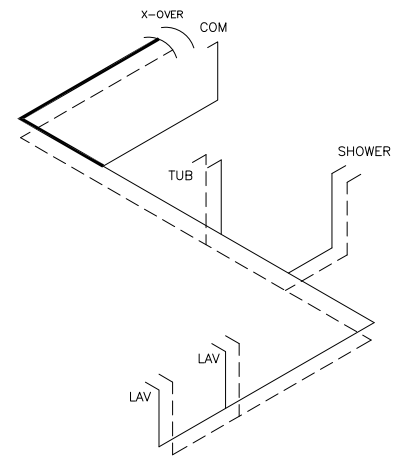
D.W.V. LINES



SUPPLY LINES



D.W.V. LINES
OPT. MASTER BATH



SUPPLY LINES
OPT. MASTER BATH

| LEGEND | |
|--------|------------------------|
| A | SHORT TURN T-Y |
| B | LONG TURN T-Y |
| C | 1/4 BEND |
| D | LONG SWEEP 1/4 BEND |
| E | 45 ELL |
| F | DBL. SANITARY TEE |
| G | 4x3 CLOSET ELL |
| H | DOUBLE ELL |
| I | 22 1/2\" ELL |
| J | 45\" Y |
| K | LONG TURN STREET ELBOW |
| L | 45 FTG ELL |

| DWV LINE SIZE CHART | |
|---------------------|----------|
| | = 3" |
| | = 2" |
| | = 1 1/2" |

1,475 SQ.FT. (STD PLAN "CONDITIONED")
N/A SQ.FT. (W/OPT. PORCH/RECESS "CONDITIONED")

| | | |
|--------------------------------|---------------------------|-------------------------------------|
| CMH MANUFACTURING | Model #: NOW28563U | Drawing #: 29M150 |
| | Date: 4.17.18 | Scale: NTS |
| Product Designer: Alex Whaley | 28' x 56' Ultra II | |
| D.W.V. and Supply Lines | | 2 REVISION ECR- 5/9/18 BH |