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PERMIT/CONSTRUCTION SET
 DATE: FEB. 28, 2018

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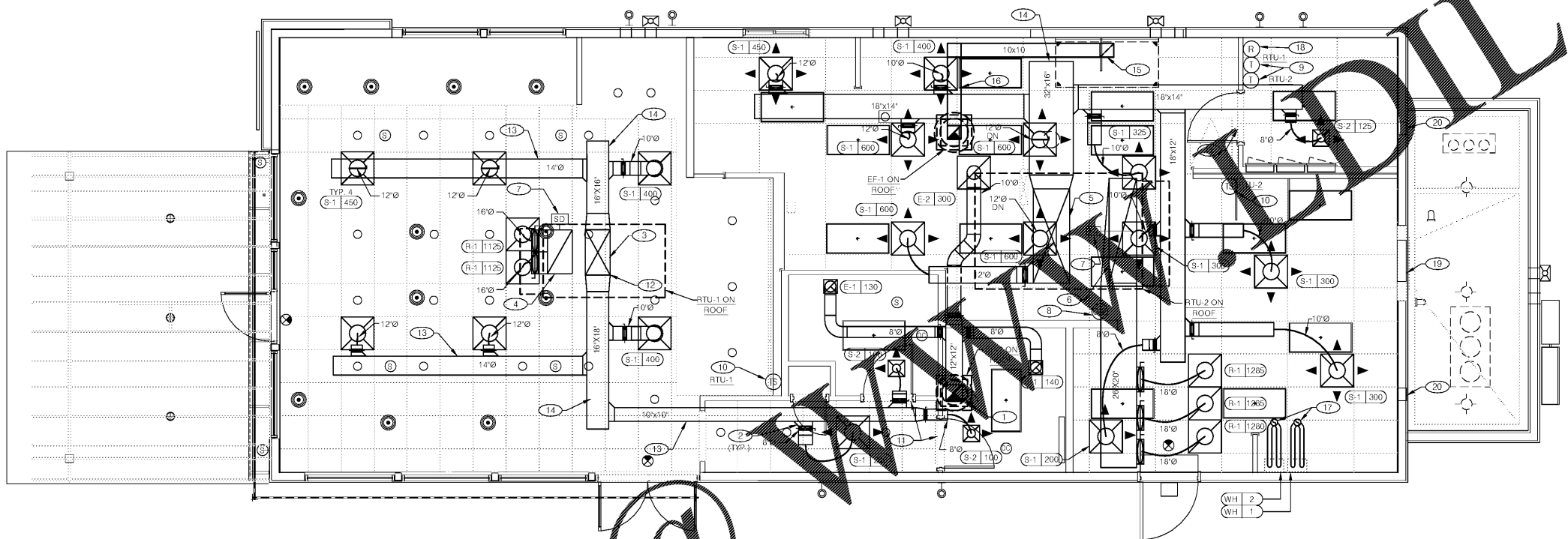
CONTRACT DATE: XX-XX-XX
 BUILDING TYPE: EXPLORER LITE 40
 PLAN VERSION: DECEMBER 2017
 SITE NUMBER: XXX-XXX
 STORE NUMBER: XXXXX

TACO BELL
 101 MONTGOMERY CROSSING
 BISCOE, NC 27209



DUCT AND DIFFUSER PLAN
M2.0

PLOT DATE:



DUCT AND DIFFUSER PLAN 1/4"=1'-0" **A**

1. Summary
 Ventilation Sizing Method Sum of Space OA Airflow
 Design Ventilation Airflow Rate 603 CFM

2. Space Ventilation Analysis

| Zone Name / Space Name | Mult | Floor Area (ft ²) | Maximum Occupants | Required Outdoor Air (CFM/person) | Required Outdoor Air (CFM/ft ²) | Uncorrected Outdoor Air (CFM) |
|---|------|-------------------------------|-------------------|-----------------------------------|---|-------------------------------|
| Zone 1 | | | | | | |
| Dining | 1 | 718.0 | 40.0 | 7.50 | 0.18 | 429.2 |
| Drive Thru | 1 | 210.0 | 1.0 | 7.50 | 0.18 | 21.9 |
| Kitchen | 1 | 250.0 | 4.0 | 7.50 | 0.12 | 88.6 |
| Men | 1 | 60.0 | 0.0 | 0.00 | 0.00 | 0.0 |
| Office | 1 | 74.0 | 1.0 | 5.00 | 0.08 | 9.4 |
| Service | 1 | 81.0 | 1.0 | 7.50 | 0.18 | 22.1 |
| Women | 1 | 182.0 | 2.0 | 5.00 | 0.12 | 31.8 |
| Washroom | 1 | 65.0 | 0.0 | 0.00 | 0.00 | 0.0 |
| Totals (incl. Space Multipliers) | | | | | | 603.1 |

TOTAL O.A. REQUIRED = 603 CFM
 Δ EZ FACTOR = 754 CFM
 TOTAL O.A. PROVIDED = 1700 CFM
 (SEE AIR BALANCE SCHEDULE ON SHEET M1.0)

OUTDOOR AIR CALCULATION **F**

- GENERAL NOTES** **E**
- DINING ROOM LIGHT FIXTURE LOCATIONS ARE CRITICAL. COORDINATE DUCTWORK LOCATIONS SO AS NOT TO CONFLICT WITH LIGHT FIXTURE LOCATIONS.
 - THERMOSTATS SHALL BE PROGRAMMABLE THERMOSTAT WITH SUBBASE. REMOTE TEMPERATURE SENSOR, AND REMOTE HUMIDITY SENSOR (PROVIDED WITH TRANE PACKAGE).
 - HUMIDITY SENSOR APPLICATION IS VARIABLE PER SITE SPECIFIC CONDITIONS. REFER TO HVAC UNIT SCHEDULE, 1/M1.0, FOR APPLICATION CONDITIONS.
 - FURNISHED HVAC AS-BUILT DRAWINGS TO BE SUBMITTED BY CONTRACTOR WITHIN 90 DAYS OF SYSTEM ACCEPTANCE.
 - CONTRACTOR SHALL PROVIDE OPERATIONS AND MAINTENANCE MANUALS FOR HVAC SYSTEMS WITH IN 90 DAYS OF SYSTEM ACCEPTANCE.
 - COORDINATE DUCTWORK LOCATIONS WITH LIGHTING AND STRUCTURAL.

GENERAL NOTES **E**

- 12x12 EXHAUST AIR DUCT UP THROUGH ROOF TO EF-2.
- SEE DETAIL 8 ON DRAWING M4.0 FOR SUPPLY AIR TAKE-OFF TO CEILING DIFFUSERS. RETURN OR EXHAUST AIR TAKE-OFFS SHALL BE SIMILAR.
- SUPPLY AIR DUCT UP. CONNECT TO SUPPLY AIR PLENUM AT ROOFTOP UNIT RTU-1. VERIFY SIZE OF PLENUM WITH EQUIPMENT PROVIDED IN FIELD.
- 32x18 RETURN AIR DUCT UP. CONNECT TO RETURN AIR PLENUM AT ROOFTOP UNIT RTU-1.
- EXTEND SUPPLY AIR PLENUM FULL SIZE FROM ROOFTOP UNIT RTU-2 AND PREP FOR CONNECTION OF NEW DUCTWORK.
- EXTEND RETURN AIR PLENUM FULL SIZE FROM ROOFTOP UNIT RTU-2 AND PREP FOR CONNECTION OF NEW DUCTWORK.
- FURNISH AND INSTALL SMOKE DETECTOR IN THE RETURN AIR DUCT, IN ACCORDANCE WITH LOCAL CODES. DUCT SMOKE DETECTOR WIRED BY ELECTRICAL CONTRACTOR, SEE SHEET E3.2.
- INSTALL STAND ALONE CO2 SENSOR AT 64" WITH AUDIO AND VISUAL DETECTOR WITH OVERRIDE MOUNTED IN MANAGERS OFFICE. COORDINATE EXACT LOCATION WITH CONSTRUCTION MANAGER PRIOR TO PLACEMENT.
- LOCATE THERMOSTAT CONTROLS ON WALL IN OFFICE AT 48" A.F.F. COORD LOCATION WITH LIGHT SWITCHES.
- MOUNT THERMOSTAT REMOTE SENSOR AT 60" ABOVE FINISHED FLOOR.
- UNDERCUT RESTROOM DOORS AND OFFICE DOOR MIN. 3/4" FOR MAKE-UP AIR.
- PROVIDE SPLITTER DAMPER AND 90 DEGREE ELBOW WITH TURNING VANES.

KEY NOTES **B**

- RUN DUCT THROUGH OPEN WEBBING OF ROOF JOISTS (WHERE POSSIBLE). COORDINATE WITH TRUSS DESIGN PRIOR TO DUCTWORK FABRICATION.
- RUN DUCTWORK BETWEEN TRUSSES AS HIGH AS POSSIBLE UNDER ROOF JOISTS.
- 10"x10" EXHAUST AIR DUCT DOWN AND TRANSITION TO FIELD CUT EXHAUST CONNECTION AT HOOD.
- EXHAUST DUCT SHALL RUN BETWEEN ROOF JOISTS TO CONNECT TO ROOF EXHAUST FAN EF-1. SEE HOOD DETAILS ON DRAWING M3.0. SEE DETAIL 15 ON SHEET M4.0 FOR FIRE PROTECTION OF DUCTWORK. SEE DETAIL 16 ON SHEET M4.0 FOR EXHAUST DUCT TRANSITION.
- 2" PVC EXHAUST AND INTAKE FLUES FROM WATER HEATER, PIPE THROUGH ROOF AND TERMINATE WITH CONCENTRIC VENT KIT AS RECOMMENDED BY MANUFACTURER. MAINTAIN 10'-0" MINIMUM TO ANY AIR INTAKE.
- NEW SMOKE DETECTOR RESET SWITCH WITH KEY. MFR. IS "SYSTEM SENSOR" MODEL # RT5151 KEY MOUNT NEXT TO THERMOSTATS @ 48" A.F.F. - INSTALL PER MFR. SPECIFICATIONS.
- ACCESS OPENING TO SPACE ABOVE WALK-IN. SEE SHEET A7.1.
- AIR TRANSFER GRILLS. SEE SECTION 'B' ON SHEET A5.2.

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