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Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	25-623 Towne South
Location:	Elizabeth City, North Carolina
Climate Zone:	3a
Project Type:	New Construction
Project No:	97856
All Electric:	false
Is Renewable:	false
Has Battery:	false
Has Charger:	false
Has Heat Pump	true

Construction Site: **Owner/Agent:** **Designer/Contractor:**

Notes:

Energy Credits

Description	Credit
Dedicated Outdoor Air System	1.0

Credits: 1.0 Required 1.0 Proposed

Building Area

Description	Floor Area
1-Religious Building (Religious Building) : Nonresidential	10800

Envelope Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	25-623 Towne South
Location:	Elizabeth City, North Carolina
Climate Zone:	3a
Project Type:	New Construction
Vertical Glazing / Wall Area:	0.104

Construction Site: **Owner/Agent:** **Designer/Contractor:**

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Roof:Main Roof, Metal Building, Screw Down, Single Insulation Layer without Thermal Blocks, 3-Year-Aged Solar Reflectance Index = 0.00, Thermal Emittance = 0.75 (e), [Bldg. Use 1 - Religious Building]	10870	19.00	10.00	0.060	0.059
Roof:Canister Roof, Insulation Entirely Above Deck, 3-Year-Aged Solar Reflectance Index = 0.00, Thermal Emittance = 0.75 (e), [Bldg. Use 1 - Religious Building]	801	---	25.00	0.039	0.039
Floor:Main Floor, Unheated Slab-On-Grade, Vertical 3 ft., [Bldg. Use 1 - Religious Building] (c)	457	---	0.00	0.730	0.730
Floor: Platform Floor, Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Religious Building] (c)	112	---	0.00	0.730	0.730
NORTH					
Ext Wall: North WC Wall, Metal Frame, 16" o.c., [Bldg. Use 1 - Religious Building]	2409	13.00	7.50	0.064	0.064
Window:Green Room Window, Metal Frame, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.33, VT 0.60,] [Bldg. Use 1 - Religious Building]	67	---	---	1.200	0.460
Door:North Platform Door, Insulated Metal, Swinging, [Bldg. Use 1 - Religious Building]	42	---	---	0.000	0.610
Ext Wall: North Connector Wall, Metal Frame, 16" o.c., [Bldg. Use 1 - Religious Building]	300	13.00	7.50	0.064	0.064
Window:Vestibule - Right, Metal Frame with Thermal Break, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.33, VT 0.60, [Bldg. Use 1 - Religious Building]	24	---	---	1.100	0.460
Window: Vestibule - Left, Metal Frame with Thermal Break, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.33, VT 0.60, [Bldg. Use 1 - Religious Building]	24	---	---	1.100	0.460
Door:Vestibule Door - Right, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.33, VT 0.60, [Bldg. Use 1 - Religious Building]	48	---	---	1.200	0.770
Door:Vestibule Door - Left, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.33, VT 0.60, [Bldg. Use 1 - Religious Building]	48	---	---	1.200	0.770
EAST					
Ext Wall: East WC Wall, Metal Frame, 16" o.c., [Bldg. Use 1 - Religious Building]	2259	13.00	7.50	0.064	0.064
Door:WC Egress, Insulated Metal, Swinging, [Bldg. Use 1 - Religious Building]	21	---	---	0.000	0.610

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
SOUTH					
Ext Wall: South WC Wall, Metal Frame, 16" o.c., [Bldg. Use 1 - Religious Building]	2350	13.00	7.50	0.064	0.064
Window: South Curtain Wall, Metal Frame with Thermal Break, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	550	---	---	1.100	0.460
Door:Lobby Entry Door - Right, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	48	---	---	1.200	0.770
Door: Lobby Entry Door - Left, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	48	---	---	1.200	0.770
Ext Wall: South Connector Wall, Metal Frame, 16" o.c., [Bldg. Use 1 - Religious Building]	277	13.00	7.50	0.064	0.064
Window:Connector - Right, Metal Frame with Thermal Break, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	0	---	---	1.100	0.460
Window:Connector - Left, Metal Frame with Thermal Break, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	24	---	---	1.100	0.460
Door:Connector Door - Right, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	48	---	---	1.200	0.770
Door:Connector Door - Left, Pert. Type: Energy code default, Single Pane, Clear , SHGC 0.25, VT 0.60, [Bldg. Use 1 - Religious Building]	48	---	---	1.200	0.770
WEST					
Ext Wall: West WC Wall, Metal Frame, 16" o.c., [Bldg. Use 1 - Religious Building]	1818	13.00	7.50	0.064	0.064
Door: SLL Egress door, Insulated Metal, Swinging, [Bldg. Use 1 - Religious Building]	42	---	---	0.000	0.610
Door:Corridor Egress Door, Insulated Metal, Swinging, [Bldg. Use 1 - Religious Building]	21	---	---	0.000	0.610

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) This component has a mandatory U-factor/R-value requirement.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
(e) High-albedo roof requirement options: 1) 3-year aged solar reflectance >= 0.55 thermal emittance >= 0.75, 2) 3-year aged solar reflectance index >= 64.0, 3) Initial year aged solar reflectance >= 0.70 thermal emittance >= 0.75, 4) Initial year aged solar reflectance index >= 82.0.

Envelope TBD: Invalid Area(s)

MECHANICAL

1. FOR DESIGN OF MECHANICAL SYSTEMS SEE MECHANICAL, PLUMBING AND ELECTRIC DRAWINGS. THE PURPOSE OF THESE ENGINEERING GUIDELINES SHALL BE TO DIRECT ANY COST ALTERNATES FOR THE MECHANICAL PLUMBING AND ELECTRIC CONTRACTOR IN PREPARING PROJECT SPECIFIC ENGINEERED ALTERNATES SUBMITTALS AND SPECIFICATIONS. THE WORK REPRESENTED IN THESE DRAWINGS SHALL PROVIDE THE END USER WITH A SYSTEM THAT SATISFIES THEIR GENERAL AND SPECIFIC REQUIREMENTS AS RELATED TO COMFORT CONDITIONS, PROGRAM NEEDS, LIFE SAFETY, AND OVERALL ENVIRONMENT. ENGINEERED ALTERNATES SHALL BE REVIEWED AND APPROVED BY OWNER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LOCATIONS OF ALL MECHANICAL CONTROLS W/OTHER TRADES AND ARCHITECT PRIOR TO ROUGH-IN, TYPICAL.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN COMPLIANCE W/ ALL STATE & LOCAL CODES & OBTAIN ALL NECESSARY MEP PERMITS. CONTRACTOR SHALL VERIFY LOCATION OF EACH PENETRATION W/ BUILDING STRUCTURE AND/OR BUILDING ENVELOPE FOR PIPING & CONDUIT ETC. CONTRACTOR SHALL NOTIFY OWNER AND ARCHITECT OF ANY OBSTRUCTIONS PRIOR TO RELOCATION OF CORE DRILLS.
4. ALL WORK SHALL COMPLY WITH, BUT NOT BE LIMITED TO APPLICABLE STATE MECHANICAL AND PLUMBING CODES AND AMENDMENTS, APPLICABLE STATE ENERGY COMPLIANCE CODES, APPLICABLE STATE VENTILATION CODES, APPLICABLE STATE BUILDING CODES, ALL LOCAL CODES AND AMENDMENTS, SMACNA, ASHRAE AND THE AMERICANS WITH DISABILITIES ACT.
5. THE IMPLIED AND STATED INTENT OF THESE GUIDELINES IS TO ESTABLISH MINIMUM ACCEPTABLE QUALITY STANDARDS, METHODS OF DESIGN/CONSTRUCTION, EQUIPMENT AND WORKMANSHIP, AND TO PROVIDE OPERABLE SYSTEMS IN EVERY REGARD.
6. IT SHALL BE UNDERSTOOD THAT THE DRAWINGS ARE DIAGRAMMATIC. THE PRIMARY INTENT OF THE DRAWINGS SHALL BE TO INDICATE SYSTEM COMPONENTS, ARRANGEMENTS, AND QUANTITIES OF SPECIFIC MATERIALS IN ORDER TO PROVIDE THE END USER A TURN-KEY FACILITY.
7. THE DRAWINGS SHALL ALSO PROVIDE INFORMATION AS TO GENERAL CONSTRUCTION REQUIREMENTS SUCH AS, BUT NOT LIMITED TO, CEILING HEIGHTS/CONSTRUCTION, POWER AND SIGNAL REQUIREMENTS / LOCATIONS, EQUIPMENT POWER REQUIREMENTS, AND OTHER APPLICABLE CONSTRUCTION METHODS.
8. ALL MECHANICAL GRILLES & DIFFUSERS ARE TO BE PREFINISHED, TO MATCH OR ACCEPT PAINT OF ADJACENT CEILING COLOR.
9. ALL EXPOSED MECHANICAL CONTROLS & COVERS ARE TO MATCH ADJACENT WALL COLOR OR WHITE TYPICAL, UNLESS APPROVED BY ARCHITECT.
10. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT/OWNER FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK, TYPICAL.
    A. PROVIDE EXHAUST AS REQUIRED AT ALL RESTROOMS AND KITCHENETTE OR PREP AREAS.
11. SEE PROJECT ENGINEERING SPECIFICATIONS AND SUBMITTAL AND SHOP DRAWING REQUIREMENTS.
    A. AS-BUILT SHOP DRAWINGS SHALL BE FURNISHED UPON PROJECT COMPLETION. THE SHOP DRAWINGS SHALL BE FURNISHED VIA AN ELECTRONIC MEDIUM READILY DOWNLOADABLE FOR PLOTTING.
    B. SUBMITTED PRODUCT DATA SHALL INCLUDE: PERTINENT PRODUCTS, MODELS, AND APPLICABLE DATA, PERFORMANCE CHARACTERISTICS AND CAPACITIES, DIMENSIONS AND CLEARANCES REQUIRED, AND ASSOCIATED WIRING AND/OR PIPING DIAGRAMS.
12. SPECIFIC METHODS/CRITERIA (HVAC)
    A. ALL NEW HVAC SYSTEM(S) SHALL BE CAPABLE OF MAINTAINING A UNIFORM TEMPERATURE NO GREATER THAT 75 DEGREES F. DRY BULB AND 30% TO 50% RELATIVE HUMIDITY DURING SUMMER CONDITIONS IN ZONES PROVIDED WITH MECHANICAL COOLING AND 72 DEGREES F. DRY BULB DURING WINTER CONDITIONS IN ALL FULLY HEATED ZONES. DESIGN SHALL BE BASED UPON THE 112 DEGREES F DRY BULB AND 74 DEGREES F. WET BULB SUMMER CONDITIONS AND 23 DEGREES F. WINTER DESIGN CONDITIONS, U.N.O.
    B. NEW HVAC SYSTEMS(S) SHALL PROVIDE THE PROPER OUTSIDE AIR VENTILATION IN ACCORDANCE WITH THE APPLICABLE INDOOR AIR QUALITY STANDARDS AND/OR LOCAL CODES, WHICHEVER IS MORE STRINGENT.
    C. MECHANICAL EQUIPMENT TO SERVE THESE ZONES SHALL BE AS FOLLOWS:
13. MECHANICAL CRITERIA:
    A. PROVIDE FOR RELIEF AIR OPENINGS AND DAMPERS AS REQ'D.
    B. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE SHEET METAL (WITH EXCEPTION OF FLEX DUCT RUN-OUTS). SUPPLY TRUNKS EXPOSED IN CEILING CAVITIES SHALL BE SPIRAL ROUND CONSTRUCTION. SUPPLY DUCTS SHALL BE INSULATED IN ACCORDANCE WITH APPLICABLE ENERGY CODES. RETURN AIR SOUND BOOTS SHALL BE PROVIDED WITH DUCT LINER AS SPECIFIED. DUCT LINER SHALL HAVE A NON-EROSIVE AND ANTI-MICROBIAL COATING. FABRICATE, SUPPORT, AND SEAL ALL DUCTWORK IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE.
    C. FLEXIBLE DUCTWORK MAY BE UTILIZED ONLY FOR INDIVIDUAL RUN-OUTS TO SUPPLY AIR DIFFUSERS. MAXIMUM ACCEPTABLE LENGTH SHALL BE 6'-0".
    D. ALL INDIVIDUAL SUPPLY AIR-RUNOUTS TO DIFFUSERS SHALL BE FURNISHED WITH VOLUME DAMPERS. DIFFUSERS SHALL BE MOUNTED ON REGISTER BOXES LINED WITH DUCT LINER.
    E. AIR DISTRIBUTION DEVICES IN CEILINGS SHALL BE SQUARE, MODULAR CORE TYPES. EXPOSED DEVICES SHALL BE SIDEWALL STYLE IN MULTIPURPOSE ROOMS. IN OTHER AREAS, SELECT DEVICES TO PROVIDE SATISFACTORY DIFFUSION AND VENTILATION MIXING. NOISE CRITERIA (NC) FACTORS SHALL NOT EXCEED 25 FOR ALL APPLICATIONS.
    F. ALL PIPES AND DUCTS PASSING THROUGH FLOOR SLABS ABOVE THE LOWEST FLOOR SLAB, THROUGH CONCRETE OR MASONRY WALLS, FIRE PARTITIONS AND SMOKE OR FIRE PLENUM BARRIER PARTITIONS SHALL HAVE THE TOTAL ANNULAR SPACE BETWEEN ALL PIPES OR DUCTS AND THE SLEEVES PACKED WITH UL LISTED AND APPROVED FIRE STOPPING SEALANT.
    G. ALL MAJOR ITEMS OF EQUIPMENT SUCH AS WATER HEATERS, FANS, HVAC RELATED EQUIPMENT, ETC. SHALL BE PERMANENTLY MARKED IN AN APPROVED MANNER THAT IDENTIFIES THE PIECE OF EQUIPMENT.

TESTING AND BALANCING

    A. THIS PROJECT REQUIRES THAT THE MECHANICAL CONTRACTOR PROVIDE AIR-TESTING AND BALANCING. ANY SYSTEMS IMPROPERLY BALANCED OR FOUND TO NOT BE IN AGREEMENT WITH THE REPORT WILL REQUIRE RE-BALANCING AND A NEW REPORT SUBMITTAL. IN ADDITION, THE PRICING FOR THE AIR BALANCING SCOPE OF WORK SHALL INCLUDE A COMFORT BALANCE WITHIN 90 DAYS OF END USER OCCUPANCY.

PROVIDE FINAL COPIES OF THE AIR BALANCE REPORT FOR INCLUSION IN OPERATING AND MAINTENANCE MANUALS. PROVIDE REPORTS IN SOFT COVER COMPLETE WITH INDEX PAGE AND INDEXING TABS. INCLUDE SET OF REDUCED DRAWINGS WITH AIR OUTLETS AND EQUIPMENT IDENTIFIED TO CORRESPOND WITH DATA SHEETS. THE REPORT SHALL BE SUBMITTED TO THE GENERAL CONTRACTOR WITH COPIES TO THE ENGINEER OF RECORD, THE OWNER, PROJECT MANAGER, AND ARCHITECT.

ELECTRICAL

1. ELECTRICAL SYSTEMS ARE TO BE AS DESIGNED IN THE ELECTRICAL DRAWINGS AND COORDINATED WITH THE PRODUCTION RELATED AUDIO VIDEO AND LIGHTING DESIGN. THE PURPOSE OF THESE ENGINEERING GUIDELINES SHALL BE TO ASSIST THE CONTRACTOR IN PREPARING PROJECT SPECIFIC ENGINEERED DESIGN ALTERNATES, SUBMITTALS AND SPECIFICATIONS. THE WORK REPRESENTED IN THESE DRAWINGS SHALL PROVIDE THE END USER WITH A SYSTEM THAT SATISFIES THEIR GENERAL AND SPECIFIC REQUIREMENTS AS RELATED TO COMFORT CONDITIONS, PROGRAM NEEDS, LIFE SAFETY, AND OVERALL ENVIRONMENT. ENGINEERED DRAWINGS SHALL BE REVIEWED AND APPROVED BY OWNER.
2. ALL WORK SHALL COMPLY WITH, BUT NOT BE LIMITED TO APPLICABLE STATE ELECTRICAL CODES AND AMENDMENTS, APPLICABLE STATE ENERGY COMPLIANCE CODES, APPLICABLE STATE BUILDING CODES, ALL LOCAL CODES AND AMENDMENTS, AMERICANS WITH DISABILITIES ACT.
3. THE IMPLIED AND STATED INTENT OF THESE GUIDELINES IS TO ESTABLISH MINIMUM ACCEPTABLE QUALITY STANDARDS, METHODS OF DESIGN/CONSTRUCTION, EQUIPMENT AND WORKMANSHIP, AND TO PROVIDE OPERABLE SYSTEMS IN EVERY REGARD.
4. ELECTRICAL CONTRACTOR TO CONFIRM THAT THEY HAVE ALL THE CONDUIT FOR LOW VOLTAGE AVL REQUIREMENTS AND POWER AS SHOWN IN THE AV AND TL DRAWINGS.
5. ELECTRICAL CONTRACTOR TO BE INTERVIEWED BY THE OWNER TO CONFIRM ALL ELECTRICAL CONTRACTOR PROVIDED CONDUIT FOR LOW VOLTAGE, ALL AVL POWER REQUIREMENTS AND ALL PROPER INFRASTRUCTURE FOR AVL DESIGN AS SHOWN ON THE AV AND TL DRAWINGS SHALL OCCUR PRIOR TO SIGNING A CONTRACT WITH THE G.C. SIGNING OF THE CONTRACT BY THE G.C. AND ELECTRICAL CONTRACTOR WILL PROVIDE CONSENT THAT THE AVL DESIGN AND REQUIREMENTS WILL BE MET.
6. IT SHALL BE UNDERSTOOD THAT THE DRAWINGS ARE DIAGRAMMATIC. THE PRIMARY INTENT OF THE DRAWINGS SHALL BE TO INDICATE SYSTEM COMPONENTS, ARRANGEMENTS, AND QUANTITIES OF SPECIFIC MATERIALS IN ORDER TO PROVIDE THE END USER A TURN-KEY FACILITY.
7. THE DRAWINGS SHALL ALSO PROVIDE INFORMATION AS TO GENERAL CONSTRUCTION REQUIREMENTS SUCH AS, BUT NOT LIMITED TO, CEILING HEIGHTS/CONSTRUCTION, POWER AND SIGNAL REQUIREMENTS / LOCATIONS, EQUIPMENT POWER REQUIREMENTS, AND OTHER APPLICABLE CONSTRUCTION METHODS.
8. PROJECT ENGINEERING SPECIFICATIONS CLEARLY INDICATE SUBMITTAL AND SHOP DRAWING REQUIREMENTS. AS-BUILT SHOP DRAWINGS SHALL BE FURNISHED UPON PROJECT COMPLETION. THE SHOP DRAWINGS SHALL BE FURNISHED VIA AN ELECTRONIC MEDIUM READILY DOWNLOADABLE FOR PLOTTING.
9. SUBMITTED PRODUCT DATA SHALL INDICATE PERTINENT PRODUCTS, MODELS, AND APPLICABLE DATA, PERFORMANCE CHARACTERISTICS AND CAPACITIES, DIMENSIONS AND CLEARANCES REQUIRED.
10. CRITERIA:
    A. PROVIDE ELECTRICAL OUTLETS AND CIRCUITS AS REQUIRED BY CODE AND AS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL DRAWINGS. ALL CONDUIT AND OUTLETS TO BE RECESSED WITHIN WALLS AT NEW WALLS. ALL JUNCTION BOXES TO HAVE BLANK COVER PLATES.
    B. PROVIDE LIGHTING FIXTURES AS SHOWN ON THE ARCHITECTURAL AND ELECTRICAL DRAWINGS. PROVIDE LIGHTING CONTROLS AS REQUIRED BY APPLICABLE CODES, AND AS INDICATED ON THE DRAWINGS.
    C. PROVIDE AND INSTALL AUDIO VISUAL POWER AND LOW VOLTAGE CONTROL CONDUIT. COORDINATE WITH OWNER FOR SPECIFICATION OF WIRING AND EQUIPMENT LOCATION AND CONDUIT RUNS AS REQUIRED. CONDUIT RUNS AND PATHWAYS FOR ALL AVL APPLICATIONS TO BE THE MOST EFFICIENT. CONDUIT RUNS TO BE UNDER SLAB AND COORDINATED WITH OWNER AND AVL CONTRACTOR
    D. AUDIO-VISUAL EQUIPMENT TO BE PROVIDED AND INSTALLED BY OWNER'S A/V CONTRACTOR. CONTRACTOR TO COORDINATE WITH OWNER'S AUDIO-VISUAL CONTRACTOR FOR EXACT LOCATIONS OF WIRING AND INTERFACE WITH AUDIO-VISUAL EQUIPMENT.
    E. PROVIDE AND INSTALL LOW VOLTAGE AND DATA WIRING AT LOCATIONS AS DIRECTED BY OWNER AND SHOWN IN THE DRAWINGS. ROUGH-IN WIRING AT FIBER OPTIC SWITCH LOCATION WITH PULL STRING TO DEMARK POINTS AND PROVIDE FINISH CONNECTIONS AT WALL JACKS. PROVIDE CONDUIT WITHIN WALL CAVITIES AND AS REQUIRED BY LOCAL CODE.
11. EXPOSED CONDUIT, JUNCTION BOXES, SUPPORT OR PENDANT SUPPORTS, TO BE PAINTED TO MATCH ADJACENT WALL
12. AVLA COORDINATION AND ELECTRICAL CONTRACTOR SELECTION.

GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR TO INITIAL THE FOLLOWING:

____ INTERVIEW OF ELECTRICAL CONTRACTOR BY OWNER AND AVL CONTRACTOR

____ SIGN OFF THAT ELECTICAL CONTRACTOR HAS RECEIVED, READ AND UNDERSTOOD THE AL, TL AND AV DRAWINGS AS PROVIDED IN THE BID SET

____ ELECTRICAL CONTRACTOR UNDERSTANDS SCOPE OF WORK FOR LOW VOLTAGE CONDUIT AND LOW VOLTAGE LIGHT CONTROLS AS LISTED IN THE AL, TL AND AV DRAWING SETS

____ ELECTRICAL CONTRACTOR UNDERSTANDS SCOPE OF WORK POWER FOR AVLA EQUIPMENT

____ ELECTRICAL CONTRACTOR UNDERSTANDS SCOPE OF WORK FOR LOW VOLTAGE CONDUIT AND INSTALL FOR FIBER OPTIC DATA AND SWITCH

13. FINISHES:
    A. ALL UNSPECIFIED RECEPTACLES, SWITCHES, SENSORS, AND ANY OTHER ELECTRICAL FIXTURES TO BE WHITE FINISH. DO NOT PROVIDE ALMOND, CREAM, 'OFF-WHITE', OR ANY OTHER NON-WHITE COLOR UNLESS OTHERWISE NOTED IN ARCHITECTURAL DRAWINGS OR ARCHITECTURAL SPECIFICATIONS.
    B. ANY WALL OR SURFACE PAINTED BLACK, OR IRON ORE TO RECEIVE BLACK RECEPTACLES AND BLACK WALL SWITCHES, TYP.
14. APPROVED MANUFACTURERS
    A. SUBCONTRACTOR MAY PROVIDE ALTERNATE ELECTRICAL COMPONENTS FOR ARCHITECTS APPROVAL IN SUBMITTALS.
    B. APPROVED MANF.: LEVITON, LUTRON, LEGRAND, PHILIPS
15. FOR TYPICAL MOUNTING HEIGHTS REFER TO SHEET A-610.

PLUMBING SYSTEMS

1. PIPING MATERIALS SHALL BE AS SPECIFIED IN THE PLUMBING AND MECHANICAL SPECIFICATIONS.
2. INSULATE PIPE IN ACCORDANCE WITH ENERGY CODES. USE PREFORMED GLASS FIBER WITH ALL SERVICE JACKET.
    A. SPECIFICATION OF PLUMBING FIXTURES SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS. TYPICALLY ARCHITECT WILL SPECIFY FIXTURES SUCH AS WATER CLOSETS, URINALS, LAVATORIES, SINKS, DRINKING FOUNTAINS, AND ASSOCIATED TRIM. ENGINEERING DRAWINGS SHALL CLEARLY INDICATE THAT CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED VALVES, CARRIERS, ESCUTCHEON PLATES, TRAP PRIMERS, CLEANOUTS, FLOOR DRAINS, ROOF DRAINS, ETC. AS REQUIRED FOR A COMPLETE TURNKEY, CODE COMPLYING INSTALLATION.
    B. ALL PIPING INSULATED AND UNFINISHED SHALL BE CLEARLY IDENTIFIED BY MEANS OF PRESSURE-SENSITIVE PIPE MARKERS. IDENTIFY THE SERVICE AND DIRECTION OF FLOW.
    C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LOCATIONS OF ALL MECHANICAL CONTROLS W/OTHER TRADES AND ARCHITECT PRIOR TO ROUGH-IN, TYPICAL.
3. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT/OWNER FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK, TYPICAL.
    A. PROVIDE EXHAUST AS REQUIRED AT ALL RESTROOMS AND KITCHENETTE OR PREP AREAS.
    B. PROVIDE UNDER-COUNTER MOUNT PORCELAIN LAVATORIES WITH ADA COMPLIANT S.S. FAUCETS, TYP.
    C. ALL WASTE LINES TO BE CONNECTED TO EXISTING SANITARY SEWER LINE ON SITE;

BUILDING ENCLOSURE

EXTERIOR WALL - GENERAL

- THE BUILDING ENVELOPE CONTAINS A CONTINUOUS AIR BARRIER THAT IS SEALED IN AN APPROVED MANNER AND EITHER CONSTRUCTED OR TESTED IN AN APPROVED MANNER. AIR BARRIER PENETRATIONS ARE SEALED IN AN APPROVED MANNER.
- ALL SOURCES OF AIR LEAKAGE IN THE BUILDING THERMAL ENVELOPE ARE SEALED, CAULKED, GASKETED, WEATHER STRIPPED OR WRAPPED WITH MOISTURE VAPOR-PERMEABLE WRAPPING MATERIAL TO MINIMIZE AIR LEAKAGE.
- FACTORY-BUILT FENESTRATION AND DOORS ARE LABELED AS MEETING AIR LEAKAGE REQUIREMENTS

1. THE EXTERIOR WALL SHALL BE A COMPLETE SYSTEM INCLUDING ALL CONNECTIONS, ANCHORS, MISCELLANEOUS FRAMING, KICKERS AND STIFFENERS, FASTENERS, FLASHING, INSULATION AND SEALANTS.
2. CONNECTION, ANCHORS, MISCELLANEOUS FRAMING, KICKERS AND STIFFENERS SHOWN ARE SUGGESTIVE ONLY AND ARE TO BE ENGINEERED AND DETAILED BY THE CONTRACTOR.
3. CONNECTION DETAILS ARE TO BE COORDINATED WITH STRUCTURAL FRAMING AND OTHER ADJACENT BUILDING COMPONENTS INCLUDING BLIND POCKETS, AND CEILING AND WALL FINISHES.
4. THE EXTERIOR WALL MAY BE ATTACHED TO EITHER THE COLUMNS, SPANDREL BEAMS, OR SLABS, SUBJECT TO THE FOLLOWING CRITERIA:
    A. THE STEEL SPANDREL BEAMS HAVE NOT BEEN DESIGNED TO RESIST TWISTING LOADS OR WEAK AXIS BENDING LOADS AS A RESULT OF THE CONNECTION OF EXTERIOR WALL COMPONENTS. THE EXTERIOR WALL CONTRACTOR SHALL PROVIDE SUPPLEMENTAL STRUCTURAL STEEL FRAMING, DIAGONAL MEMBERS, ETC. FOR LATERAL SUPPORT OF SPANDREL BEAMS WHEN APPLYING EXTERIOR WALL LOADS THAT ARE NOT IN THE PLANE OF THE SPANDREL BEAM WEB. BRACING MEMBERS SHALL NOT PUT UPWARD LOADS ON THE COMPOSITE METAL DECK FLOOR UNLESS SUFFICIENT ADDITIONAL SLAB REINFORCEMENT IS PROVIDED. BRACING MEMBERS MAY "KICK" TO THE TOP FLANGE OF ADJACENT BEAMS.
    B. WHERE THE GRAVITY ATTACHMENT IS TO THE SLAB, THE EXTERIOR WALL CONTRACTOR SHALL PROVIDE INSERTS WITH INTEGRAL REBARS, ADDITIONAL SLAB REINFORCEMENT, OR SUPPLEMENTAL STRUCTURAL STEEL FRAMING AS REQUIRED TO CARRY THE LOADS FROM THE POINT OF ATTACHMENT TO THE SPANDREL BEAM WITHOUT TORQUING THE BEAM.
    C. CONNECTIONS TO THE COLUMNS SHALL BE DETAILED TO MINIMIZE TWISTING OF THE COLUMNS.
5. PROVIDE POSITIVE MECHANICAL FASTENERS FOR ALL ATTACHMENTS. PROVIDE FASTENERS SELECTED TO PREVENT GALVANIC ACTION WITH THE COMPONENTS FASTENED. ALL FASTENERS ARE TO BE CONCEALED, EXCEPT AS SPECIFICALLY NOTED OR SHOWN.
6. PROVIDE THERMAL EXPANSION/ CONTRACTION AND BUILDING MOVEMENT JOINTS TO SATISFY THE EXTERIOR WALL PERFORMANCE REQUIREMENTS OF THE PROJECT

DESIGN CRITERIA

1. ALL DISSIMILAR METALS SHALL BE SEPARATED WITH A HEAVY COATING OF EPOXY PAINT OR OTHER SUITABLE PERMANENT SEPARATION MATERIAL AS REQUIRED TO PREVENT GALVANIC ACTION.
2. ALL MATERIALS, WHICH MAY CAUSE STAINING, DISCOLORING, DEGRADATION OR OTHER DETRIMENTAL EFFECTS WHEN IN CONTACT, SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER.
3. THE COLOR, CHARACTER AND FINISH OF THE EXTERIOR WALL MATERIALS SHALL MATCH THE ARCHITECT'S SAMPLES.
4. THE EXTERIOR WALL SYSTEM SHALL HAVE TWO CONTINUOUS AND SEPARATE LINES OF PROTECTION AGAINST AIR INFILTRATION AND WATER LEAKAGE. PROVIDE A WEEP SYSTEM TO DRAIN THE CAVITY CREATED BY THE TWO SEPARATE LINES OF PROTECTION AT EACH COMPONENT PART OF THE EXTERIOR WALL.
5. PROVIDE WEEPS AT EACH LINE OF FLASHING (INCLUDING AT THE BASE OF THE WALL) AS REQUIRED TO INSURE POSITIVE DRAINAGE OF THE EXTERIOR WALL.
6. PROVIDE A CONTINUOUS THERMAL BREAK IN THE EXTERIOR WINDOW WALL SYSTEM WHERE APPLICABLE, AND AS MAY IS REQUIRED TO MEET CONDENSATION CONTROL INDICATED IN THE PERFORMANCE REQUIREMENTS.
7. PROVIDE A POSITIVE DRAIN HOLE SYSTEM FOR CONDENSATION INSIDE OF ALUMINUM WINDOW WALL MULLIONS AND PANELS WHERE APPLICABLE. ALL WEEP HOLES SHALL HAVE WEEP BAFFLES TO MINIMIZE WATER INFILTRATION THROUGH THE WEEP HOLE.
   EIFS SHALL COMPLY WITH IBC 1408 (EIFS)

BUILDING INSULATION

1. INSULATION AND VAPOR BARRIER MATERIALS SHALL RECEIVE THE LOCAL CODE AUTHORITY APPROVAL FOR USE.
2. INSULATION AND VAPOR BARRIER MATERIALS SHALL COMPLY WITH LOCAL CODE REQUIRED FLAME SPREAD AND SMOKE DEVELOPMENT RATINGS.
3. INSULATION AND VAPOR BARRIER MATERIALS SHALL NOT, UNDER ANY CONDITIONS, EMIT TOXIC GASES.
4. PROVIDE BUILDING INSULATION AND VAPOR BARRIER MATERIALS WHERE SHOWN ON THE DRAWINGS AND/OR NOTED BELOW IN ORDER TO MEET THE "U" VALUE PERFORMANCE REQUIREMENTS OF THE PROJECT DESIGN CRITERIA.
    A. AT PERIMETER FOUNDATION WALLS ADJACENT TO OCCUPIED SPACE. EXTEND INSULATION TO FLOOR LINE OF OCCUPIED SPACE OR AT A MINIMUM, 3'-6" BELOW GRADE.
    B. UNDER SLAB-ON-GRADE CONSTRUCTION 4'-0" IN FROM THE PERIMETER WALL.
    C. AT EXTERIOR WALL CONNECTIONS, ANCHORS, SUPPORTS AND JOINTS SO AS TO MAINTAIN THE FULL INTEGRITY OF THE EXTERIOR WALL THERMAL, CONDENSATION DESIGN AND FIRE RESISTANCE REQUIREMENTS.
    D. PROVIDE VAPOR BARRIER TAPE AT THE SEAMS, JOINTS, PENETRATIONS AND TERMINATION OF THE VAPOR BARRIER SO AS TO MAINTAIN FULL INTEGRITY OF THE VAPOR BARRIER.
    E. BATTEN TYPE INSULATION SHALL BE OVERSIZED TO CREATE A TIGHT JOINT BETWEEN PANELS. ALL JOINTS AND EXPOSED EDGES TO BE FOIL TAPED.

FLASHING

1. PROVIDE A CONTINUOUS FLASHING SYSTEM AT THE HEAD AND SILL OF ALL WALL OPENINGS. UPTURN FLASHING AT EACH END. PROVIDE A CONTINUOUS FLASHING SYSTEM AT THE BASE OF WALLS WITH A WEEP SYSTEM TO THE EXTERIOR.
2. ALL PENETRATIONS OF FLASHING, INCLUDING PENETRATIONS BY EXTERIOR WALL ATTACHMENT CONNECTIONS SHALL BE SEALED.
3. PROVIDE FOR THERMAL EXPANSION OF SHEET METAL FLASHING. LOCATE EXPANSION JOINTS AND SEAMS AT MAXIMUM 10 FT. INTERVALS, AND 2 FT. EAC