

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter C6) or Other Criteria	ECC or Other Citation
IIA	Envelope Inspections			
IIA1	Protection of exposed foundation insulation: Insulation shall be visually inspected to verify proper protection where applied to the exterior of basement or cellar walls, crawl-space walls and/or the perimeter of slab-on-grade floors.	As required during foundation work and prior to backfill	Approved construction documents	C303.2.1; ASHRAE 90.1 – 5.8.1.7
IIA2	Insulation placement and R-values: Installed insulation for each component of the conditioned space envelope and at junctions between components shall be visually inspected to ensure that the R-values are marked, that such R-values conform to the R-values identified in the construction documents and that the insulation is properly installed. Certifications for unmarked insulation shall be similarly visually inspected.	As required to verify continuous enclosure while walls, ceilings and floors are open	Approved construction documents	C303.1, C303.1.1, C303.1.2, C402.1, C402.2, C402.3; ASHRAE 90.1 – 5.5, 5.6, 5.8.1, 11 or Appendix G
IIA3	Fenestration U-factor and product ratings: U-factors, SHGC and Uf values of installed fenestration shall be visually inspected for conformance with the U-factors, SHGC and Uf values identified in the construction drawings by verifying the manufacturer's NFRC labels or, where not labeled, using the ratings in ECC Tables C303.1.3(1), (2) and (3).	As required during installation	Approved construction documents; NFRC 100, NFRC 200	C303.1, C303.1.3, C402.4; ASHRAE 90.1 – 5.5, 5.6, 5.8.2, 11 or Appendix G
IIA4	Fenestration air leakage: Windows and sliding or swinging door assemblies, except site-built windows and/or doors, shall be visually inspected to verify that installed assemblies are listed and labeled by the manufacturer to the referenced standard. For curtain wall, storefront glazing, commercial entrance doors and revolving doors, the testing reports shall be reviewed to verify that the installed assembly complies with the standard cited in the approved plans.	As required during installation; prior to final construction inspection	NFRC 400, AAMA/WDMA/CSA 1017.5.2/4440 ASTM E283; ANSI/DASMA 105	C402.5.2; ASHRAE 90.1 – 5.4.3.2, 5.8.2.2
IIA5	Fenestration areas: Dimensions of windows, doors and skylights shall be verified by visual inspection.	Prior to final construction inspection	Approved construction documents	C402.4; ASHRAE 90.1 – 5.5.4.2, 5.6, 11 or Appendix G
IIA6	Air-sealing and insulation visual inspection: Openings and penetrations in the building envelope, including site-built fenestration and doors, shall be visually inspected to verify that a continuous air barrier around the envelope forms on air-tight enclosure. The progress inspector shall visually inspect to verify that materials and/or assemblies have been tested and meet the requirements of the respective standards, or that the building is tested and meets the requirements of the respective standard, or must observe the testing of the building and/or assemblies and verify that the building and/or assemblies meet the requirements of the standard, in accordance with the standard(s) cited in the approved plans.	As required during construction	Approved construction documents; ASTM E2178, ASTM E2357, ASTM E1877, ASTM E779, ASTM E283.	C.402.5; ASHRAE 90.1 – 5.4.3.1, 5.4.3.5
IIA7	Air-sealing and insulation testing: Testing must be performed in accordance with section ECC C402.5.1.3 or ASHRAE 90.1-section 5.4.3.5, and shall be accepted if the building and/or its air-barrier assemblies meet the requirements detailed in such section. Testing must be performed by a third-party independent of the contractor and acceptable to the department	As required during construction, or prior to final construction inspection	Approved construction documents; ASTM E 779.	C402.5.1.3; ASHRAE 90.1 – 5.4.3.5
IIA9	Vestibules: Required entrance vestibules shall be visually inspected for proper operation.	Prior to final construction inspection	Approved construction documents	C402.5.7; ASHRAE 90.1 – 5.4.3.4
IIB	Mechanical and Service	Water Heating Inspections		
IIB1	Fireplaces: Provision of combustion air and light-tight fireproof doors shall be verified by visual inspection.	Prior to final construction inspection	Approved construction documents; ANSI Z21.60 (see also MC 904), ANSI Z21.50	C402.2.7, BC 2111; MC Chapters 7, 8, 9; FGC Chapter 6
IIB2	Shutoff dampers: Dampers for stair and elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be visually inspected to verify that such dampers, except where permitted to be gravity dampers, comply with approved construction drawings. Manufacturer's literature shall be reviewed to verify that the product has been tested and found to meet the standard.	As required during installation	Approved construction documents; AMCA 500D	C403.2.4.3; ASHRAE 90.1 – 6.4.3.4
IIB3	HVAC-R and service water heating equipment: Equipment sizing, efficiencies, pump ratings and other performance factors of all major equipment units, as determined by the applicant of record, and no less than 15% of minor equipment units, shall be verified by visual inspection and, where necessary, review of manufacturer's data. Pool heaters and covers shall be verified by visual inspection.	Prior to final plumbing and construction inspection	Approved construction documents; ASHRAE 183; ASHRAE HVAC Systems and Equipment Handbook	C403.2, C404.2, C404.5, C404.9; C406.2; ASHRAE 90.1 – 6.3, 6.4.1, 6.4.2, 6.4.5, 6.4.6, 6.8, 7.4, 7.8

	Inspection/Test	Periodic (minimum)	Reference Standard (See ECC Chapter C5) or Other Criteria	ECC or Other Citation
IIB5	HVAC-R insulation and sealing: Installed duct and piping insulation shall be visually inspected to verify proper insulation placement and values. Joints, longitudinal and transverse seams and connections in ductwork shall be visually inspected for proper sealing.	After installation and prior to closing shafts, ceilings and walls	Approved construction documents; SMACNA Duct Construction Standards, Metal and Flexible	C403.2.9, C403.2.10, C404.4, MC 603.9; ASHRAE 90.1 – 6.3, 6.4.4, 6.8.2, 6.8.3; 7.4.3
IIC	Electrical Power and Lighting Systems			
IIC1	Electrical energy consumption: The presence and operation of all required for meters monitoring total electric energy usage, tenant energy usage, or electrical energy usage in the building, in individual dwelling units, or in tenant space shall be verified by visual inspection.	Prior to final electrical and construction inspection	Approved construction documents	C405.6; ASHRAE 90.1 – 8.4.3, 8.4.5, 10.4.5
IIC2	Lighting in dwelling units: Lamps in permanently installed lighting fixtures shall be visually inspected to verify compliance with high-efficacy requirements.	Prior to final electrical and construction inspection	Approved construction documents	C405.1; ASHRAE 90.1 – 9.1.1
IIC3	Interior lighting power: Installed lighting shall be verified for compliance with the lighting power allowance by visual inspection of fixtures, lamps, ballasts and transformers.	Prior to final electrical and construction inspection	Approved construction documents	C405.4.2, C405.9.1, C405.3; ASHRAE 90.1 9.1, 9.2, 9.5, 9.6, 18CNY §101–07(c)(3)(v)(C)4
IIC4	Exterior lighting power: Installed lighting shall be verified for compliance with source efficacy and/or the lighting power allowance by visual inspection of fixtures, lamps, ballasts and relevant transformers.	Prior to final electrical and construction inspection	Approved construction documents	C405.6; ASHRAE 90.1 9.4.2; 18CNY §101–07(c)(3)(v)(C)4
IIC5	Lighting controls: Each type of required lighting controls, including: <ul style="list-style-type: none">• occupant sensors• manual interior lighting controls• light-reduction controls• automatic lighting shut-off• daylight zone controls• sleeping unit controls• exterior lighting controls shall be verified by visual inspection and tested for functionality and proper operation.	Prior to final electrical and construction inspection	Approved construction documents, including control system narratives	C402.4.2.1, C405.2.1; ASHRAE 90.1 – 9.4.1, 9.4.3
IIC6	Electric motors (including but not limited to fan motors): Where required by the construction documents for energy code compliance, motor listing or labels shall be visually inspected to verify that they comply with the respective energy requirements in the construction documents.	Prior to final construction inspection	Approved construction documents	C403.2.12, C405.6; ASHRAE 90.1 – 10.4
IID	Other			
IID1	Maintenance information: Maintenance manuals for mechanical, service hot water and electrical equipment and systems requiring preventive maintenance shall be reviewed for applicability to installed equipment and systems before such manuals are provided to the owner. Labels required for such equipment or systems shall be inspected for accuracy and completeness.	Prior to sign-off or issuance of Final Certificate of Occupancy	Approved construction documents, including electrical drawings where applicable; ASHRAE Guideline 4; Preparation of Operating and Maintenance Documentation for Building Systems	C303.3, C406.2.5.2; ASHRAE 90.1 – 4.2.2.3, 6.7.2.2, 6.7.2, 9.7.2.2

1. RCNY 5000-01 - NARRATIVE OF CONTROLS SYSTEMS
1. CONDENSER WATER SYSTEM - BMS CONTROLS SHALL CONTROL COOLING TOWERS, FANS, AND PUMP VFD'S TO MAINTAIN CONDENSER WATER SET POINTS OPERATION BETWEEN 87 TO 90 DEG. F. SUPPLY TEMPERATURES TO HEAT PUMP SYSTEMS WITHIN THE BUILDING. DURING HEATING SEASON, GAS FIRED HOT WATER BOILERS SHALL BE STAGED AND OPERATED TO PROVIDE HOT WATER INJECTION OF 150 DEG. F. WATER FOR THE HEAT PUMP LOOP. TO MAINTAIN BETWEEN 87 TO 92 CONDENSER WATER SUPPLY TEMPERATURE TO HEAT PUMPS.
2. HOT WATER BOILER SYSTEM - BMS CONTROLS SHALL STAGE GAS FIRED BOILERS AND MODULATE HW PUMP VFD'S TO PROVIDE HOT WATER SUPPLY AT 180 DEG. F TO HEAT PUMP SYSTEM INJECTION BY CONTROL VALVE MODULATION, AND TO SUPPLY HOT WATER TO HVAC HEATING COILS/ RADIATION FOR COMMON AREA SYSTEMS. BOILERS SHALL BE STAGED AND MODULATED BASED ON OUTDOOR AIR RESET SCHEDULE, AND DOMESTIC HOT WATER DEMAND LOADS.
3. HEAT PUMP AC UNITS SHALL BE INDIVIDUALLY CONTROLLED BY ROOM THERMOSTATS TO CONTROL EACH HEAT PUMP UNIT TO MAINTAIN OCCUPIED TEMPERATURES BETWEEN 68 DEG. F AND 75 DEG. F AND SHALL USE PROGRAMMABLE 7 DAY DIGITAL THERMOSTATS. CONTROL SYSTEM SHALL INCLUDE AUTOMATIC STRIKEBACK CONTROL DURING UNOCCUPIED HOURS.
4. HEAT RECOVERY SYSTEM - BMS CONTROLS SHALL CONTROL HEAT RECOVERY UNITS AND THE ASSOCIATED SUPPLY AND EXHAUST FANS AND VFD'S. OUTSIDE AIR FANS SHALL OPERATE CONTINUOUSLY SERVING EACH GUEST ROOM TO MEET CODE. TOILET EXHAUST FANS SHALL OPERATE CONTINUOUSLY SERVING EACH GUEST ROOM TO MEET CODE. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN THE FANS START.
5. AC UNITS SERVING CORRIDORS SHALL BE 100% OUTDOOR AIR WATER COOLED AC UNITS WITH SPACE TEMPERATURE SENSOR TO CONTROL TYPICAL CORRIDOR SPACE TEMPERATURE BETWEEN 68 DEG. F TO 75 DEG. F RANGE USING HEAT PUMP CONTROL OPERATION, HEAT PIPE DEHUMIDIFICATION COIL, HOT GAS REHEAT CONTROL, AND HW HEATING COIL. PACKAGED BY MANUFACTURER WITH CONTROLS. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN UNIT STARTS.
6. TOILET EXHAUST FANS SHALL OPERATE CONTINUOUSLY SERVING THE HOTEL COMMON AREA RESTROOMS TO MEET CODE. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN FAN STARTS.
7. KITCHEN EXHAUST FANS AND PRECIPITATORS WITH VFD'S SHALL BE CONTROLLED BY KITCHEN HOOD CONTROL SYSTEM.
8. AC UNITS SERVING KITCHENS SHALL BE 100% OUTDOOR AIR WATER COOLED AC UNITS WITH SPACE TEMPERATURE SENSOR TO CONTROL TYPICAL SPACE TEMPERATURE BETWEEN 68 DEG. F TO 75 DEG. F RANGE USING HEAT PUMP CONTROL OPERATION, HEAT PIPE DEHUMIDIFICATION COIL, HOT GAS REHEAT CONTROL, AND HW HEATING COIL. PACKAGED BY MANUFACTURER WITH CONTROLS. HEATING AND VENTILATING MAKEUP AIR UNIT WILL PROVIDE MAKEUP AIR AND SHALL BE INTERLOCKED WITH KITCHEN EXHAUST FAN OPERATION. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN UNITS START.
9. GENERAL EXHAUST FANS FOR BACK OF HOUSE SPACES SHALL OPERATE CONTINUOUSLY FOR VENTILATION FOR TRASH ROOM CLOSETS, MECHANICAL ROOMS, ELECTRICAL ROOMS, ETC.
10. HEATING AND VENTILATING UNITS WITH VFD'S SHALL BE CONTROLLED WITH SPACE TEMPERATURE SENSORS TO MAINTAIN TEMPERATURE FOR MECHANICAL ROOMS.
11. LOADING DOCK EXHAUST FAN WITH VFD SHALL BE CONTROLLED TO OPERATE AT MINIMAL VENTILATION RATE, AND MODULATE HIGHER UPON INCREASE OF MEASURE CO BY CO SENSORS IN LOADING DOCK.
12. STAIR PRESSURIZATION FANS WITH VFD'S SHALL BE CONTROLLED TO OPERATE IF CALLED BY FIRE ALARM SYSTEM. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN UNIT STARTS.
13. SMOKE CONTROL FANS WITH VFD'S SHALL BE CONTROLLED TO OPERATE IF CALLED BY FIRE ALARM SYSTEM. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN FAN STARTS.
14. POST FIRE SMOKE EXHAUST FANS WITH VFD'S SHALL BE CONTROLLED VIA FIRE COMMAND CENTER. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN FAN STARTS.
15. AC UNITS SERVING ELEVATOR MACHINE ROOMS SHALL BE INDIVIDUALLY CONTROLLED BY SPACE TEMPERATURE SENSORS TO CONTROL EACH AC UNIT TO MAINTAIN TEMPERATURE AT 80 DEG. F (ADJ.).
16. AC UNITS AND HEAT PUMPS SERVING HOTEL COMMON AREAS SHALL BE INDIVIDUALLY CONTROLLED BY SPACE TEMPERATURE SENSORS TO CONTROL EACH AC UNIT TO MAINTAIN TEMPERATURE.
17. OUTSIDE AIR AND GENERAL EXHAUST FANS WITH VFD'S SHALL BE CONTROLLED TO MAINTAIN CODE REQUIRED VENTILATION FOR HOTEL COMMON AREAS. AUTOMATIC MOTORIZED DUCT DAMPERS SHALL BE INSTALLED TO OPEN WHEN FANS START.
18. DRYER EXHAUST FANS WITH VFD'S SHALL BE CONTROLLED BY DUCT MOUNTED STATIC PRESSURE SENSORS FOR EACH FAN SYSTEM TO CONTROL FAN SPEED BASED ON EXHAUST STATIC PRESSURE TO MAINTAIN MINIMUM SET POINT OF 1.0 IN. W.G. PRESSURE WITHIN DUCTS AT FURTHEST POINT IN SYSTEM. NO DAMPERS ARE PERMITTED IN DRYER EXHAUST SYSTEMS.
19. EXHAUST FANS SERVING ELEVATOR HOISTWAYS SHALL BE CONTROLLED BY SMOKE DETECTION.

NOTES:
Professional Statement:
To the best of my knowledge, belief, and personal judgement, these plans and specifications are in compliance with the 2016 New York City Energy Conservation Code (by application of ASHRAE 90.1-2013) as amended by Appendix A.

Performance Method Rating Calculation:

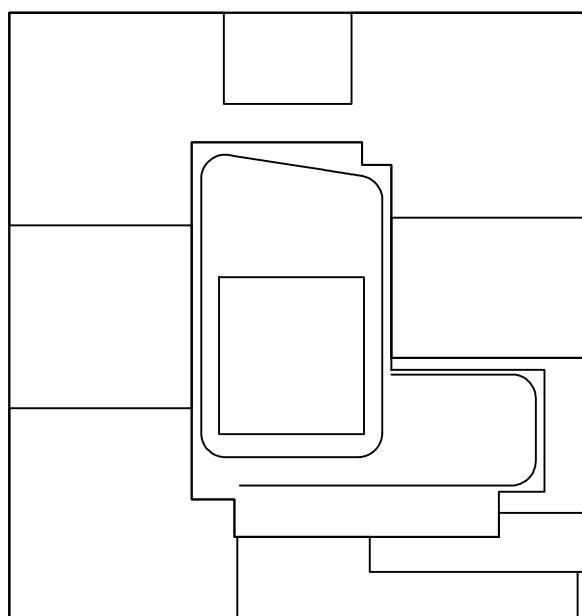
Proposed annual energy cost= \$1,478,942
Baseline annual energy cost = \$1,646,171
% Improvement = 10.1% or \$167,229 annual energy cost

The baseline is established according to 2016 NYCECC (by application of ASHRAE 90.1-2013) as amended by Appendix A. The proposed design is 10.1% better than the baseline. The proposed case includes high efficiency water source heat pumps, condensing boilers, heat recovery on apartment ventilation system, variable speed drives on fans and pumps, high efficacy lighting fixtures and a high performance envelope.

Commissioning Statement:

Per 6.7.2.4, the project is over 50,000 SF therefore commissioning is required. HVAC control systems shall be tested to ensure that control elements are calibrated, adjusted, and in proper working condition. Detailed instructions are included in the specification package under Section 230800 "Commissioning of HVAC Equipment" and 230593 "Testing, Adjusting, and Balancing of HVAC Equipment"

LIGHTING/ENERGY CODE DRAWING LIST	
SHEET NO.	Description
EN-001.00	ENERGY COMPLIANCE FORM AND NOTES
EN-002.00	ENERGY COMPLIANCE FORM AND NOTES
EN-003.00	ENERGY COMPLIANCE FORM AND NOTES
EN-004.00	ENERGY COMPLIANCE FORM AND NOTES
EN-005.00	ENERGY COMPLIANCE FORM AND NOTES
EN-006.00	ENERGY COMPLIANCE FORM AND NOTES
EN-007.00	ENERGY COMPLIANCE FORM AND NOTES
EN-008.00	WALL TYPE AND ELEVATION DIAGRAM
EN-009.00	WALL TYPE AND ELEVATION DIAGRAM
EN-010.00	EXTERIOR WALL TYPES DETAILS
EN-011.00	EXTERIOR WALL TYPES DETAILS
EN-012.00	WALL/GLAZING U-VALUE REFERENCE
EN-013.00	FOUNDATION WALL DETAILS
EN-014.00	ROOF DETAILS
EN-015.00	AIR BARRIER CONTINUITY PLAN
EN-200.00	ELECTRICAL CELLAR LIGHTING PLAN
EN-201.00	ELECTRICAL GROUND FLOOR LIGHTING PLAN
EN-202.00	ELECTRICAL LEVEL 2 LIGHTING PLAN
EN-203.00	ELECTRICAL LEVEL 3 LIGHTING PLAN
EN-204.00	ELECTRICAL LEVEL 4 LIGHTING PLAN
EN-205.00	ELECTRICAL LEVEL 5 LIGHTING PLAN
EN-206.00	ELECTRICAL LEVEL 6 LIGHTING PLAN
EN-207.00	ELECTRICAL LEVEL 7 LIGHTING PLAN
EN-208.00	ELECTRICAL LEVEL 8-15 LIGHTING PLAN
EN-209.00	ELECTRICAL LEVEL 20-35 LIGHTING PLAN
EN-210.00	ELECTRICAL LEVEL 36 LIGHTING PLAN
EN-211.00	ELECTRICAL LEVEL 37 LIGHTING PLAN
EN-212.00	ELECTRICAL LEVEL 38-49 LIGHTING PLAN
EN-213.00	ELECTRICAL LEVEL 50-60 LIGHTING PLAN
EN-214.00	ELECTRICAL LEVEL 61 LIGHTING PLAN
EN-215.00	ELECTRICAL LEVEL 62-66 LIGHTING PLAN
EN-216.00	ELECTRICAL LEVEL 67 LIGHTING PLAN
EN-217.00	ELECTRICAL ROOF LIGHTING PLAN



KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

12/08/2017	ISSUE FOR DOB
10/05/2017	ISSUE FOR DOB
09/15/2017	90% CD SET ADJ # 3
09/05/2017	85% CD SET
03/03/2017	50% CD SET
03/01/2017	ISSUED FOR DOB
03/01/2017	ISSUED FOR DOB
02/17/2017	ISSUED FOR DOB
01/27/2017	ISSUED FOR DOB
01/25/2017	ISSUED FOR DOB
11/17/2016	FAÇADE PHOTING SET
11/17/2016	ISSUED FOUNDATION BD SET
10/12/2016	ISSUED FOR DOB
02/02/2016	DOB FILING SET

Number: Date: Revision:

Project:

City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
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New York, NY 10121
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Whitehall
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New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:
ENERGY CODE
COMPLIANCE SHEET - 1

SEAL & SIGNATURE:

DATE: 12/08/2017

PROJECT #: 150318

SCALE: NONE

DWG NO. EN-001.00

1 OF 27

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1-2013 AS MODIFIED BY 2016 NYCECC APPENDIX C.A.

THIS PLAN APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

FILE NAME I:\50318\ENergy Modeling\Submission\EN\20170922 EN Response\EN\50318EN-002.dwg, SAVED ON 10/3/2017 11:11 AM, PLOTTED ON 10/3/2017 5:03 PM, PLOTTED BY CHU, JING

ASHRAE 90.1-2013 WITH 2016 NYC ENERGY CONSERVATION CODE AMENDMENTS NOTES:

STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NEW YORK CITY ENERGY CONSERVATION CODE BY APPLICATION OF ASHRAE 90.1-2013 WITH 2016 NEW YORK CITY ENERGY CONSERVATION CODE AMENDMENTS.

MANDATORY PROVISIONS:

ASHRAE 90.1-2013 WITH 2016 NYC AMENDMENTS NOTES:

STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NEW YORK CITY ENERGY CONSERVATION CODE BY APPLICATION OF ASHRAE 90.1-2013.

MANDATORY PROVISIONS:

- PER SECTION 6.4.3.3.5, IN HOTELS AND MOTELS WITH GREATER THAN 50 GUEST ROOMS, AUTOMATIC CONTROLS FOR THE HVAC EQUIPMENT SERVING EACH GUEST ROOM WILL BE CONFIGURED ACCORDING TO THE REQUIREMENTS IN THE FOLLOWING SUBSECTION. CONTROLS MUST COMPLY WITH EITHER SECTION 6.4.3.3.5.1 OR 6.4.3.3.5.2.
- PER SECTION 6.4.3.3.5.1, HVAC SETPOINT IN THE GUESTROOM WILL BE AUTOMATICALLY CONTROLLED IN ACCORDANCE WITH THE REQUIREMENT IN SECTION 6.4.3.3.5.1
- PER SECTION 6.4.3.3.5.2, CAPTIVE KEY CARD SYSTEMS WILL BE PERMITTED TO BE USED TO COMPLY WITH SECTION 6.4.3.3.5.
- PER SECTION 6.4.3.4.5, ENCLOSED PARKING GARAGE VENTILATION SYSTEM WILL AUTOMATICALLY DETECT CONTAMINANT LEVELS AND STAGE FANS OR MODULATE FAN AIRFLOW RATES TO 50% OR LESS OF DESIGN CAPACITY, PROVIDED ACCEPTABLE CONTAMINANT LEVELS ARE MAINTAINED. EXCEPTIONS ARE LISTED IN SECTION 6.4.3.4.5.
- PER SECTION 6.4.1.1, EQUIPMENT WILL MEET MINIMUM EFFICIENCY SHOWN IN TABLES 6.8.1-1 THROUGH 6.8.1-13.
- PER SECTION 6.4.1.2.1, WATER-COOLED CENTRIFUGAL CHILLING PACKAGES NOT DESIGNED FOR OPERATION AT AHRI STANDARD 550/590 TEST CONDITION OF 44F LEAVING CHILLED-FLUID TEMPERATURE AND 2.4 GPM/TON EVAPORATOR FLUID FLOW AND 85F ENTERING CONDENSER-FLUID TEMPERATURE WITH 3.0 GPM/TON CONDENSER-FLUID FLOW WILL HAVE MAXIMUM FULL-LOAD KW/TON (FL) AND PART-LOAD RATING REQUIREMENTS ADJUSTED USING THE EQUATIONS IN SECTION 6.4.1.2.1.
- PER SECTION 6.4.1.2.2, POSITIVE DISPLACEMENT (AIR- AND WATER- COOLED) CHILLING PACKAGES WITH AN EVAPORATOR LEAVING FLUID TEMPERATURE HIGHER THAN 32F AND WATER-COOLED POSITIVE DISPLACEMENT CHILLING PACKAGES WITH A CONDENSER LEAVING FLUID TEMPERATURE BELOW 115F WILL SHOW COMPLIANCE WITH TABLE 6.8.1-3 WHEN TESTED OR CERTIFIED WITH WATER AT STANDARD RATING CONDITIONS, PER THE REFERNCED TEST PROCEDURE.
- PER SECTION 6.4.1.3, EQUIPMENT NOT LISTED IN THE TABLES REFERENCED IN SECTION 6.4.1.1 AND 6.4.1.2 MAY BE USED.
- PER SECTION 6.4.1.4, EQUIPMENT EFFICIENCY INFORMATION SUPPLIED BY MANUFACTURERS WILL BE VERIFIED BY ONE OF THE SIX OPTIONS SHOWN IN SECTION 6.4.1.4.
- PER SECTION 6.4.1.5.1, MECHANICAL EQUIPMENT THAT IS NOT COVERED BY US NATIONAL APPLIANCE ENERGY CONSERVATION ACT (NAECA) OF 1987 WILL CARRY A PERMANENT LABEL INSTALLED BY THE MANUFACTURER STATING THAT THE EQUIPMENT COMPLIES WITH THE REQUIREMENT OF STANDARD 90.1.
- PER SECTION 6.4.1.5.2, NON-STANDARD-SIZE PACKAGED TERMINAL AIR CONDITIONERS AND HEAT PUMPS WITH EXISTING SLEEVES HAVING AN EXTERNAL WALL OPENING OF LESS THAN 16 IN. HIGH OR LESS THAN 42 IN. WIDE AND HAVING A CROSS-SECTIONAL AREA LESS THAN 67 IN.^2 WILL BE FACTORY LABELED IN ACCORDANCE WITH SECTION 6.4.1.5.2 REQUIREMENT.
- PER SECTION 6.4.2.1, HEATING AND COOLING SYSTEM DESIGN LOADS FOR THE PURPOSE OF SIZING SYSTEMS AND EQUIPMENT HAVE BEEN DETERMINED IN ACCORDANCE WITH ANSI/ASHRAE/ACCA STANDARD 183.
- PER SECTION 6.4.2.2, PUMP DIFFERENTIAL PRESSURE FOR THE PURPOSE OF SIZING PUMPS HAS BEEN DETERMINED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS AND HANDBOOKS ACCEPTABLE TO THE ADOPTING AUTHORITY. THE PRESSURE DROP THROUGH EACH DEVICE AND PIPE SEGMENT IN THE CRITICAL CIRCUIT AT DESIGN CONDITIONS WILL BE CALCULATED.
- PER SECTION 6.4.3.1.1, THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE WILL BE INDIVIDUALLY CONTROLLED BY THERMOSTATIC CONTROLS RESPONDING TO TEMPERATURE WITHIN THE ZONE. EXCEPTIONS ARE APPLIED IN ACCORDANCE WITH SECTION 6.4.3.1.1 FOR PERIMETER SYSTEMS OFFSETTING SKIN LOADS.
- PER SECTION 6.4.3.1.2, WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS WILL BE CAPABLE OF PROVIDING A TEMPERATURE RANGE OR DEAD BAND OF AT LEAST 5F WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCE TO A MINIMUM. EXCEPTIONS ARE APPLIED IN ACCORDANCE WITH SECTION 6.4.3.1.2.
- PER SECTION 6.4.3.2, WHERE HEATING AND COOLING TO A ZONE ARE CONTROLLED BY SEPARATE ZONE THERMOSTATIC CONTROLS LOCATED WITHIN THE ZONE, MEANS WILL BE PROVIDED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT MINUS ANY APPLICABLE PROPORTIONAL BAND.
- PER SECTION 6.4.3.3, HAVC SYSTEMS WILL HAVE OFF-HOUR CONTROLS REQUIRED BY SECTIONS 6.4.3.3.1 THROUGH 6.4.3.3.4. EXCEPTIONS ARE APPLIED IN ACCORDANCE WITH SECTION 6.4.3.3.
- PER SECTION 6.4.3.3.1, HVAC WILL BE EQUIPPED WITH AT LEAST ONE OF THE FOUR AUTOMATIC SHUTDOWN OPTIONS IN SECTION 6.4.3.3.1.
- PER SECTION 6.4.3.3.2, HEATING/COOLING SYSTEM WILL BE EQUIPPED WITH CONTROLS CONFIGURED TO AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES REQUIRED BY SECTION 6.4.3.3.2
- PER SECTION 6.4.3.3.3, INDIVIDUAL HEATING AND COOLING SYSTEMS WITH SETBACK CONTROLS AND DDC WILL HAVE OPTIMUM START CONTROLS. THE CONTROL ALGORITHM WILL MEET THE REQUIREMENT IN SECTION 6.4.3.3.3.
- PER SECTION 6.4.3.3.4, HVAC SERVING ZONES THAT ARE INTENDED TO OPERATE OR BE OCCUPIED NONSIMULTANEOUSLY WILL BE DIVIDED INTO ISOLATION AREAS. ZONES MAY BE GROUPED INTO A SINGLE ISOLATION AREA IN ACCORDANCE WITH SECTION 6.4.3.3.4. EACH ISOLATION AREA WILL BE EQUIPPED WITH ISOLATION DEVICES CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SUPPLY OF CONDITIONED AIR AND OUTDOOR AIR TO AND EXHAUST AIR FROM THE AREA. EACH ISOLATION AREA SHALL BE CONTROLLED INDEPENDENTLY BY A DEVICE MEETING THE REQUIREMENTS OF SECTION 6.4.3.3.1. FOR CENTRAL SYSTEMS AND PLANTS, CONTROLS AND DEVICES WILL BE PROVIDED TO ALLOW STABLE SYSTEM AND EQUIPMENT OPERATION FOR ANY LENGTH OF TIME WHILE SERVING ONLY THE SMALLEST ISOLATION AREA SERVED BY THE SYSTEM OR PLANT. EXCEPTIONS ARE LISTED IN SECTION 6.4.3.3.4.
- PER SECTION 6.4.3.4.1, STAIRS AND ELEVATOR SHAFT VENTS WILL BE EQUIPPED WITH MOTORIZED DAMPERS THAT ARE CAPABLE OF BEING AUTOMATICALLY CLOSED DURING NORMAL BUILDING OPERATION AND ARE INTERLOCKED TO OPEN AS REQUIRED BY FIRE AND SMOKE DETECTION SYSTEM.
- PER SECTION 6.4.3.4.2, ALL OUTDOOR AIR INTAKE AND EXHAUST SYSTEMS WILL BE EQUIPPED WITH MOTORIZED DAMPERS THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE NOT IN USE. VENTILATION OUTDOOR AIR AND EXHAUST/RELIEF DAMPERS WILL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF DURING PREOCCUPANCY BUILDING WARM-UP, COOLDOWN AND SETBACK, EXCEPT WHEN VENTILATION REDUCES ENERGY COSTS OR WHEN VENTILATION MUST BE SUPPLIED TO MEET CODE REQUIREMENTS. EXCEPTIONS ARE LISTED IN SECTION 6.4.3.4.2.
- PER SECTION 6.4.3.4.3, WHERE OUTDOOR AIR SUPPLY AND EXHAUST/RELIEF DAMPERS ARE REQUIRED BY SECTION 6.4.3.4.1, THEY WILL HAVE A MAXIMUM LEAKAGE RATE AS INDICATED IN TABLE 6.4.3.4.3 WHEN TESTED IN ACCORDANCE WITH AMCA STANDARD 500.
- PER SECTION 6.4.3.4.4, FANS WITH MOTORS GREATER THAN 0.75 HP WILL HAVE AUTOMATIC CONTROLS COMPLYING WITH SECTION 6.4.3.3.1 THAT ARE CAPABLE OF SHUTTING OFF FANS WHEN NOT REQUIRED.
EXCEPTION: HVAC SYSTEMS INTENDED TO OPERATE CONTINUOUSLY.
- PER SECTION 6.4.3.5, HEAT PUMPS EQUIPPED WITH INTERNAL ELECTRIC RESISTANCE HEATERS WILL HAVE CONTROLS THAT PREVENT SUPPLEMENTAL HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE DURING BOTH STEADY-STATE OPERATION AND SETBACK RECOVERY. SUPPLEMENTAL HEATER OPERATION IS PERMITTED DURING OUTDOOR COIL DEFROST CYCLES.
EXCEPTION: HEAT PUMPS WHOSE MINIMUM EFFICIENCY IS REGULATED BY NAECA AND WHOSE RATINGS MEET THE REQUIREMENTS SHOWN IN TABLE 6.8.1-2 AND INCLUDE ALL USAGE OF INTERNAL ELECTRIC RESISTANCE HEATING.
- PER SECTION 6.4.3.6, HUMIDITY CONTROL WILL PREVENT THE USE OF FOSSIL FUEL OR ELECTRICITY TO PRODUCE RH ABOVE 30% IN THE WARMEST ZONE SERVED BY THE HUMIDIFICATION SYSTEM AND TO REDUCE RH BELOW 60% IN THE COLDEST ZONE SERVED BY THE DEHUMIDIFICATION SYSTEM. WHERE A ZONE IS SERVED BY A SYSTEM OR SYSTEMS WITH BOTH HUMIDIFICATION AND DEHUMIDIFICATION CAPABILITY, MEANS WILL BE PROVIDED CAPABLE OF PREVENTING SIMULTANEOUS OPERATION OF HUMIDIFICATION AND DEHUMIDIFICATION EQUIPMENT.
- PER SECTION 6.4.3.7, FREEZE PROTECTION SYSTEMS INCLUDING SELF-REGULATING HEAT TRACING WILL INCLUDE AUTOMATIC CONTROLS CAPABLE OF SHUTTING OFF THE SYSTEMS WHEN OUTDOOR AIR TEMPERATURES ARE ABOVE 40F OR WHEN THE CONDITION OF THE PROTECTED FLUID WILL PREVENT FREEZING. SNOW- AND ICE- MELTING SYSTEMS WILL INCLUDE AUTOMATIC CONTROLS CAPABLE OF SHUTTING OFF THE SYSTEMS WHEN THE PAVEMENT TEMPERATURE IS ABOVE 50F AND NO PRECIPITATION IS FALLING, AND AN AUTOMATIC OR MANUAL CONTROL THAT WILL ALLOW SHUTOFF WHEN THE OUTDOOR TEMPERATURE IS ABOVE 40F SO THAT THE POTENTIAL FOR SNOW OR ICE ACCUMULATION IS NEGLIGIBLE.
- PER SECTION 6.4.3.8, DEMAND CONTROL VENTILATION (DCV) IS REQUIRED FOR SPACES LARGER THAN 500 SF AND WITH A DESIGN OCCUPANCY FOR VENTILATION OF ≥ 25 PEOPLE PER 1000 SF OF FLOOR AREA AND SERVED BY SYSTEMS WITH ONE OR MORE OF THREE FEATURES LISTED IN SECTION 6.4.3.8.
- PER SECTION 6.4.3.9, HEATING FOR VESTIBULES, IN ACCORDANCE WITH SECTION 5.4.3.4, AND AIR CURTAINS WILL INCLUDE AUTOMATIC CONTROLS CONFIGURED TO SHUT OFF THE HEATING SYSTEM WHEN OUTDOOR AIR TEMPERATURE ARE ABOVE 45F. VESTIBULE HEATING SYSTEMS WILL ALSO BE CONTROLLED BY A THERMOSTAT IN THE VESTIBULE WITH A SETPOINT LIMITED TO A MAXIMUM OF 60F.
- PER SECTION 6.4.3.10.1, DIRECT DIGITAL CONTROL (DDC) WILL BE PROVIDED IN THE APPLICATIONS AND QUALIFICATIONS LISTED IN TABLE 6.4.3.10.1
EXCEPTION: DDC IS NOT REQUIRED FOR SYSTEMS USING THE SIMPLIFIED APPROACH TO COMPLIANCE IN ACCORDANCE WITH SECTION 6.3
- PER SECTION 6.4.3.10.2, WHERE DDC IS REQUIRED BY SECTION 6.4.3.10.1, THE DDC SYSTEM WILL BE CAPABLE OF ALL OF THE FOUR FUNCTIONS DESCRIBED IN SECTION 6.4.3.10.2 (A) THROUGH 6.4.3.10.2 (D), AS REQUIRED, TO PROVIDE THE CONTROL LOGIC REQUIRED IN SECTION 6.5.
- PER SECTION 6.4.3.10.3, WHERE DDC IS REQUIRED BY SECTION 6.4.3.10.1 FOR NEW BUILDINGS, THE DDC SYSTEM WILL BE CAPABLE OF TRENDING AND GRAPHICALLY DISPLAYING INPUT AND OUTPUT POINTS.
- PER SECTION 6.4.4.1.1, INSULATION REQUIRED BY THIS SECTION WILL BE INSTALLED IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS. THESE REQUIREMENTS DO NOT APPLY TO HVAC EQUIPMENT. INSULATION WILL BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND, BUT NOT LIMITED TO TWO SITUATIONS DESCRIBED IN SECTION 6.4.1.1.
- PER SECTION 6.4.4.1.2, ALL SUPPLY AND RETURN DUCTS AND PLENUMS INSTALLED AS PART OF HVAC AIR DISTRIBUTION SYSTEM WILL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE 6.8.2-1 AND 6.8.2-2, EXCEPT FOR FOUR SITUATIONS DESCRIBED IN SECTION 6.4.4.1.2.
- PER SECTION 6.4.4.1.3, PIPING WILL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLES 6.8.3-1 AND 6.8.3-2, EXCEPT FOR FIVE SITUATIONS DESCRIBED IN SECTION 6.4.4.1.3.
- PER SECTION 6.4.4.1.4, ALL THERMALLY INEFFECTIVE PANEL SURFACES OF SENSIBLE HEATING PANELS, INCLUDING U-BENDS AND HEADERS, WILL BE INSULATED WITH A MINIMUM OF R-3.5. ADJACENT ENVELOPE INSULATION COUNTS TOWARD THIS REQUIREMENT
- PER SECTION 6.4.4.1.5, THE BOTTOM SURFACES OF FLOOR STRUCTURES INCORPORATING RADIANT HEATING WILL BE INSULATED WITH A MINIMUM OF R-3.5. ADJACENT ENVELOPE INSULATION COUNTS TOWARD THIS REQUIREMENT
- PER SECTION 6.4.4.2.1, DUCTWORK AND ALL PLENUMS WITH PRESSURE CLASS RATINGS WILL BE CONSTRUCTED TO SEAL CLASS A, AS REQUIRED TO MEET THE REQUIREMENTS OF SECTION 6.4.4.2.2 AND WITH STANDARD INDUSTRY PRACTICE. OPENINGS FOR ROTATING SHAFTS WILL BE SEALED WITH BUSHINGS OR OTHER DEVICES THAT SEAL OFF AIR LEAKAGE. PRESSURE-SENSITIVE TAPE WILL NOT BE USED AS THE PRIMARY SEALANT UNLESS IT HAS BEEN CERTIFIED TO COMPLY WITH UL-181A OR UL-181B BY AN INDEPENDENT TESTING LABORATORY AND THE TAPE IS USED IN ACCORDANCE WITH THAT CERTIFICATION. ALL CONNECTIONS WILL BE SEALED, INCLUDING BUT LIMITED TO SPIN-INS, TAPS, OTHER BRANCH CONNECTIONS, ACCESS DOORS, ACCESS PANELS, AND DUCT CONNECTIONS TO EQUIPMENT. SEALING THAT WOULD VOID PRODUCT LISTINGS IS NOT REQUIRED. SPIRAL LOCK SEAMS NEED NOT BE SEALED. ALL DUCT PRESSURE CLASS RATINGS WILL BE DESIGNATED IN THE DESIGN DOCUMENTS.
- PER SECTION 6.4.4.2.2, DUCTWORK THAT IS DESIGNED TO OPERATE AT STATIC PRESSURES IN EXCESS OF 3 IN. WC AND ALL DUCTWORK LOCATED OUTDOORS WILL BE LEAK-TESTED ACCORDING TO INDUSTRY-ACCEPTED TEST PROCEDURES. REPRESENTATIVE SECTIONS TOTALING NO LESS THAN 25% OF THE TOTAL INSTALLED DUCT AREA FOR THE DESIGNATED PRESSURE CLASS WILL BE TESTED. ALL SECTIONS WILL BE SELECTED BY THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. POSITIVE PRESSURE LEAKAGE TESTING IS ACCEPTABLE FOR NEGATIVE PRESSURE DUCTWORK. THE MAXIMUM PERMITTED DUCT LEAKAGE WILL BE MEET THE EQUIATION IN SECTION 6.4.4.2.2.

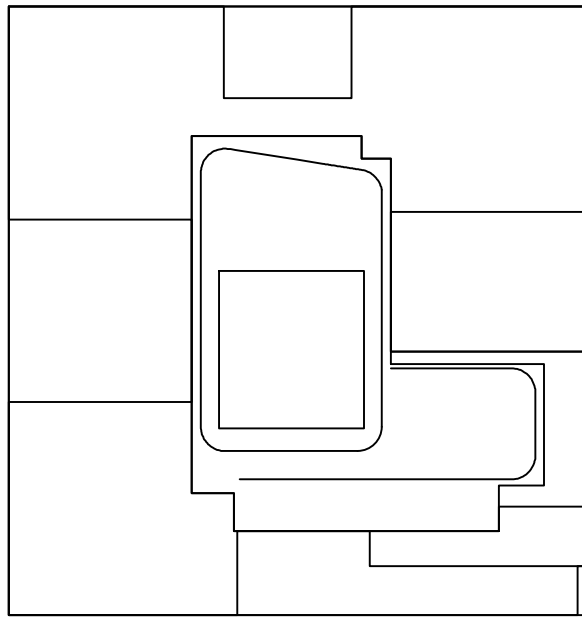
ASHRAE 90.1-2013 WITH 2016 NYC ENERGY CONSERVATION CODE AMENDMENTS NOTES:

STATEMENT OF COMPLIANCE:

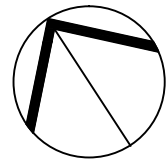
TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NEW YORK CITY ENERGY CONSERVATION CODE BY APPLICATION OF ASHRAE 90.1-2013 WITH 2016 NEW YORK CITY ENERGY CONSERVATION CODE AMENDMENTS.

MANDATORY PROVISIONS:

- PER SECTION 7.4.1, SERVICE WATER HEATING SYSTEM DESIGN LOADS FOR THE PURPOSE OF SIZING SYSTEMS AND EQUIPEMENT HAVE BEEN DETERMINED IN ACCORDANCE WITH MANUFACTURES' PUBLISHED SIZING GUIDELINES OR GENERALLY ACCEPTED ENGINEERING STANDARDS AND HANDBOOKS ACCPETABLE TO THE ADOPTING AUTHORITY.
- PER SECTION 7.4.2, WATER HEATING EQUIPMENT AND HOT WATER STORAGE TANKS WILL MEET THE CRITERIA LISTED IN TABLE 7.8.
- PER SECTION 7.4.3, THE FOLLOWING PIPING WILL BE INSULATED TO LEVELS SHOWN IN SECTION 6, TABLE 6.9.3-1
 - RECIRCULATING SYSTEM PIPING, INCLUDING THE SUPPLY AND RETURN PIPING OF A CIRCULATING TANK TYPE WATER HEATER
 - THE FIRST 8 FT OF OUTLET PIPING FOR A CONSTANT TEMPERATURE NONRECIRCULATING STORAGE SYSTEM
 - THE INLET PIPING BETWEEN THE STORAGE TANK AND A HEAT TRAP IN A NONRECIRCULATING STORAGE SYSTEM
 - PIPING THAT IS EXTERNALLY HEATED (SUCH AS HEAT TRACE OR IMPEDANCE HEATING)
- PER SECTION 7.4.4.1, TEMPERATURE CONTROLS SHALL BE PROVIDED THAT ALLOW FOR STORAGE TEMPERATURE ADJUSTMENT FROM 120F OR LOWER TO MAXIMUM TEMPERATURE COMPATIBLE WITH THE INTENDED USE, EXCEPT WHEN THE MANUFACTURES' INSTALLATION INSTRUCTIONS SPECIFY A HIGHER MINIMUM THERMOSTAT SETTING TO MINIMIZE CONDENSATION AND RESULTING CORROSION
- PER SECTION 7.4.4.2, SYSTEM DESIGNED TO MAINTAIN USAGE TEMPERATURES IN HOT-WATER PIPES SHALL BE EQUIPPED WITH AUTOMATIC TIME SWITCHES OR OTHER CONTROLS THAT CAN BE SET TO SWITCH OFF THE USAGE TEMPERATURE MAINTENANCE SYSTEM DURING EXTENDED PERIODS WHEN HOT WATER IS NOT REQUIRED.
- PER SECTION 7.4.4.3, TEMPERATURE CONTROLLING MEANS WILL BE PROVIDED TO LIMIT THE MAXIMUM TEMPERATURE OF WATER DELIVERED FROM LAVATORY FAUCETS IN PUBLIC FACILITY RESTROOMS TO 110F.
- PER SECTION 7.4.4.4, RECIRCULATING PUMPS SHALL BE EQUIPPED WITH CONTROLS LIMITING OPERATION TO A PERIOD FROM THE START OF THE HEATING CYCLE TO A MAXIMUM OF FIVE MINUTES AFTER THE END OF THE HEATING CYCLE, WHEN USED TO MAINTAIN STORAGE TANK WATER TEMPERATURE.
- PER SECTION 7.4.5.1, POOL HEATERS SHALL BE EQUIPPED WITH AN ON-OFF SWITCH TO ALLOW SHUTTING OFF THE HEATER WITHOUT ADJUSTING THE THERMOSTAT SETTING. POOL HEATERS FIRED BY NATURAL GAS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHTS.
- PER SECTION 7.4.5.2, HEATED POOLS SHALL BE EQUIPPED WITH A VAPOR RETARDANT POOL COVER ON OR AT THE WATER SURFACE. POOLS HEATED TO MORE THAN 90F SHALL HAVE A POOL COVER WITH A MINIMUM INSULATION VALUE OF R-12, EXCEPT FOR POOLS DERIVING OVER 60% OF THE ENERGY FOR HEATING FROM SITE-RECOVERED ENERGY OR SOLAR ENERGY SOURCE.
- PER SECTION 7.4.5.3, TIME SWITCHES SHALL BE INSTALLED ON SWIMMING POOL HEATERS AND PUMPS.
EXCEPTION:
 - WHERE PUBLIC HEALTH STANDARDS REQUIRE 24-HOUR PUMP OPERATION
 - WHERE PUMPS ARE REQUIRED TO OPERATE SOLAR AND WASTE HEAT RECOVERY POOL HEATING SYSTEMS



KEY PLAN



NOTES:

NOT FOR CONSTRUCTION

1/08/2017	ISSUED FOR DOB
08/10/2017	95% CD SET
06/02/2017	95% CD SET
03/24/2017	95% CD SUBMISSION SET
01/07/2017	SUBMITTAL SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FAÇADE PENDING SET
11/11/2016	95% CD SUBMISSION 90% SET
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

Number:	Date:	Revision:
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DOB STAMPS & SIGNATURES:

DWG TITLE:
ENERGY CODE COMPLIANCE SHEET - 2

SEAL & SIGNATURE:	DATE: 08/15/2017
PROJECT #:	19018
SCALE:	NONE
DWG NO:	EN-002.00

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1-2013 AS MODIFIED BY 2016 NYCECC APPENDIX CA.

THIS PLAN APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES*

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ASHRAE 90.1-1013 WITH 2016 NYC ENERGY CONSERVATION CODE AMENDMENTS NOTES:

STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NEW YORK CITY ENERGY CONSERVATION CODE BY APPLICATION OF ASHRAE 90.1-2013 WITH 2016 NEW YORK CITY ENERGY CONSERVATION CODE AMENDMENTS.

MANDATORY PROVISIONS:

8.4.2 AUTOMATIC RECEPTACLE CONTROL:
FOR EACH CONTINUOUSLY POWERED 125V PC DUPLEX PROVIDED, AT LEAST ONE 125V GENERAL CONVENIENCE (GC) DUPLEX WILL BE PROVIDED. GC DUPLEXES WILL BE LABELED AS AUTO CONTROLLED. TIME CLOCK RELAYS TO ALL GC DUPLEXES WILL TURN OFF RECEPTACLES AT PROGRAMMED TIMES AND WILL SATISFY THE FOLLOWING:
A. 50% OF ALL 125-VOLT 15- AND 20-AMP RECEPTACLES IN ALL PRIVATE OFFICES, CONFERENCE ROOMS, ROOMS USED PRIMARILY FOR PRINTING AND/OR COPYING FUNCTIONS, BREAK ROOMS, CLASSROOMS, AND INDIVIDUAL WORKSTATIONS
B. 25% OF BRANCH CIRCUIT FEEDERS INSTALLED FOR MODULAR FURNITURE NOT SHOWN ON THE CONSTRUCTION DOCUMENTS
[OFFICE/LOUNGE/KIDS/BREAK ROOMS: 50% OF THE GC DUPLEXES WILL BE CONTROLLED VIA TIME CLOCK RELAYS TO TURN RECEPTACLES OFF AT SPECIFIC PROGRAMMED TIMES.]
COMMERCIAL TENANT SPACE: IT IS THE TENANT RESPONSIBILITY, AS THEY ARE CIRCUITING THEIR LEASED SPACE, TO INSTALL AUTOMATIC RECEPTACLE CONTROLS FOR 50% OF RECEPTACLES AS PER SECTION 8.4.2. THE REQUIREMENT IS INCLUDED IN TENANT LEASE AGREEMENT.

8.4.3 ELECTRICAL ENERGY MONITORING
8.4.3.1 MONITORING
BMS METERING DEVICES WILL BE PROVIDED FOR THE BASE BUILDING TO MONITOR THE ELECTRICAL ENERGY USE FOR EACH OF THE FOLLOWING SEPARATELY: TOTAL ELECTRICAL ENERGY, HVAC SYSTEMS, INTERIOR LIGHTING, EXTERIOR LIGHTING, AND RECEPTACLE CIRCUITS.
[IN THIS PROJECT, METERING DEVICES ARE INTEGRATED WITH BMS SYSTEM TO MONITOR THE BASE BUILDING ENERGY END USES MENTIONED ABOVE. THE SYSTEM WILL MONITOR ENERGY USE FOR PUMPS, COOLING TOWERS, BOILERS, COMMON AREA AIR HANDLING UNITS, COMMON AREA LIGHTING, COMMON AREA EXTERIOR LIGHTING, AND COMMON RECEPTACLE CIRCUITS]

RESIDENTIAL DWELLING UNITS: DWELLING UNITS ARE EXEMPT FROM SECTION 8.4.3.1, PER SECTION 8.4.3-EXCEPTIONS, BUT ARE DIGITALLY SUB-METERED PER REQUIREMENT OF SECTION 8.4.5.

COMMERCIAL TENANT SPACE: TENANTS WILL BE PROVIDED DIGITAL DIRECT METER FOR TOTAL ELECTRICAL CONSUMPTION. IT IS THE TENANT RESPONSIBILITY TO INSTALL DEVICES TO MONITOR EACH ENERGY END-USE SEPARATELY IF TENANT SPACE IS GREATER THAN 10,000 SF. INDIVIDUAL RETAIL SPACES ARE BELOW 10,000 SF, BUT MARKET LINE PLAZA AND OFFICE SPACES CAN BE GREATER. THE REQUIREMENT IS INCLUDED IN TENANT LEASE AGREEMENT.

8.4.3.2 RECORDING AND REPORTING
THE ELECTRICAL ENERGY USAGE FOR ALL LOADS SPECIFIED IN SECTION 8.4.3.1 SHALL BE RECORDED A MINIMUM OF EVERY 15 MINUTES AND REPORTED AT LEAST HOURLY, DAILY, MONTHLY, AND ANNUALLY. THE DATA FOR EACH TENANT SPACE SHALL BE MADE AVAILABLE TO THAT TENANT. THE SYSTEM SHALL BE CAPABLE OF MAINTAINING ALL DATA COLLECTED FOR A MINIMUM OF 36 MONTHS.
BASE BUILDING:
[IN THIS PROJECT, ENERGY DATA ARE GATHERED BY METERING DEVICES, SENT TO BMS, AND RECORDED AND REPORTED IN THE DATABASE THAT IS INTEGRATED WITH BMS].
RESIDENTIAL DWELLING UNITS: DWELLING UNITS ARE EXEMPT FROM SECTION 8.4.3.2, PER SECTION 8.4.3-EXCEPTIONS, BUT THEY ARE DIGITALLY SUB-METERED PER REQUIREMENT OF SECTION 8.4.5.
COMMERCIAL TENANT SPACE: IT IS THE TENANT RESPONSIBILITY TO INSTALL DEVICES TO RECORD AND REPORT THE ENERGY END-USES MENTIONED IN SECTION 8.4.3.1, IF TENANT SPACE IS GREATER THAN 10,000 SF. THE REQUIREMENT IS INCLUDED IN TENANT LEASE AGREEMENT.

8.4.5 MEASUREMENT OF ELECTRICAL CONSUMPTION OF TENANT SPACES IN COVERED BUILDINGS
COMMERCIAL TENANT SPACE: PROVIDE DIGITAL DIRECT METERS WITH SERVICE FROM MASTER METER FOR ALL COMMERCIAL TENANTS.
RESIDENTIAL TENANT SPACE: PROVIDE DIGITAL SUB-METERS WITH SERVICE FROM MASTER METER FOR ALL RESIDENTIAL TENANTS.
[MASTER METERS ARE LOCATED IN THE ELECTRIC ROOM IN THE CELLAR. RESIDENTIAL SUBMETERS ARE LOCATED THE ELECTRIC CLOSET ON EVERY THREE FLOORS].

10.4.3 ELEVATORS
10.4.3.1 ELEVATOR LIGHTING: ELEVATOR CAB LIGHT FIXTURE IS SPECIFIED TO HAVE EFFICACY GREATER THAN 35 LM/W
LIGHTING IN ELEVATOR CABS WILL COMPLY WITH 10.4.3.1 BY MAINTAINING 5 fc AT EFFICACY OF 35 lm/W
10.4.3.2 ELEVATOR VENTILATION POWER LIMITATION: CAB VENTILATION FANS FOR ELEVATORS WITHOUT AIR CONDITIONING IS SPECIFIED TO NOT CONSUME OVER 0.33W/CFM AT MAXIMUM SPEED.
THE NOMINAL HORSEPOWER OF THE DESIGNED CAB VENTILATION FAN IS [282] W, AND THE NOMINAL DESIGNED CFM IS [1800] CFM. VENTILATION FAN POWER = [0.157] W/CFM < 0.33W/CFM
10.4.3.3 STANDY MODE: WHEN STOPPED AND UNOCCUPIED WITH DORRS CLOSED FOR OVER 15 MINUTES, CAB INTERIOR LIGHTING AND VENTILATION ARE SPECIFIED TO BE DE-ENERGIZED UNTIL REQUIRED FOR OPERATION.

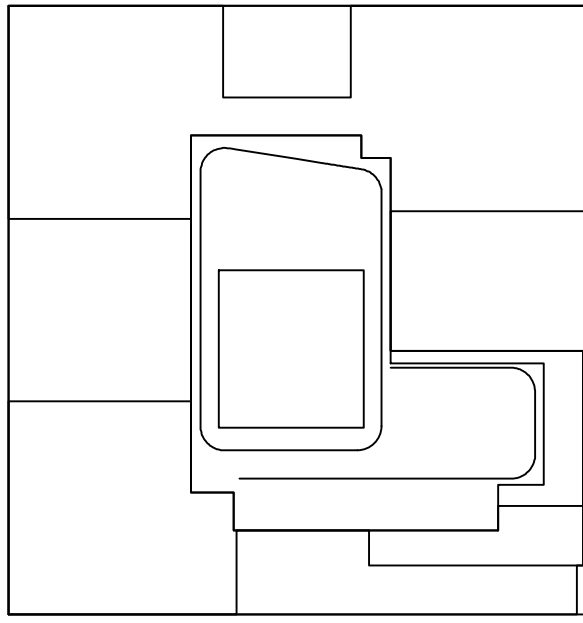
ASHRAE 90.1-1013 WITH 2016 NYC ENERGY CONSERVATION CODE AMENDMENTS NOTES:

STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2016 NEW YORK CITY ENERGY CONSERVATION CODE BY APPLICATION OF ASHRAE 90.1-2013 WITH 2016 NEW YORK CITY ENERGY CONSERVATION CODE AMENDMENTS.

MANDATORY PROVISIONS:

- PER SECTION 9.4.1.1, FOR EACH SPACE IN THE BUILDING, ALL OF THE LIGHTING CONTROL FUNCTIONS INDICATED IN TABLE 9.6.1, FOR THE APPROPRIATE SPACE TYPE IN COLUMN A, AND AS DESCRIBED IN SECTION 9.4.1.1, WILL BE IMPLEMENTED. FOR SPACE TYPES NOT LISTED, SELECT A REASONABLY TYPE. IF USING THE SPACE-BY-SPACE METHOD FOR LPD REQUIREMENTS, THE SPACE TYPE USED FOR DETERMINING CONTROL REQUIREMENTS WILL BE THE SAME SPACE TYPE USED TO DETERMINE THE LPD.
- PER SECTION 9.4.1.2, LIGHTING FOR PARKING GARAGES WILL COMPLY WITH THE FOLLOWING REQUIREMENTS:
 - PARKING GARAGE LIGHTING WILL HAVE AUTOMATIC LIGHTING SHUTOFF PER SECTION 9.4.1.1 (I)
 - LIGHTING POWER FOR EACH LUMINAIRE WILL BE AUTOMATICALLY REDUCED BY A MINIMUM OF 30% WHEN THERE IS NO ACTIVITY DETECTED WITHIN LIGHTING ZONE FOR 20 MINUTES, AND WHERE LIGHTING ZONES ARE NO LARGER THAN 3600 FT²
EXCEPTION: DAYLIGHT TRANSITION ZONES AND RAMPS WITHOUT PARKING
- LIGHTING FOR COVERED VEHICLE ENTRANCES AND EXITS FROM BUILDINGS AND PARKING STRUCTURES WILL BE SEPARATELY CONTROLLED BY A DEVICE THAT AUTOMATICALLY REDUCES THE LIGHTING BY AT LEAST 50% FROM SUNSET TO SUNRISE
- THE POWER TO LUMINAIRES WITHIN 20 FT OF ANY PERIMETER WALL PERIMETER WALL STRUCTURE THAT HAS A NET OPENING TO WALL RATIO OF AT LEAST 40% AND NO EXTERIOR OBSTRUCTIONS WITHIN 20 FT, WILL BE AUTOMATICALLY REDUCED IN RESPONSE TO DAYLIGHT
EXCEPTION: LIGHTING IN DAYLIGHT TRANSITIONS ZONES AND RAMPS WITHOUT PARKING
- PER SECTION 9.4.1.3,
 - LIGHTING LISTED IN SECTION 9.4.1.3 (I) WILL BE SEPARATELY CONTROLLED FROM THE GENERAL LIGHTING IN ALL SPACE.
 - GUESTROOMS
 - ALL LIGHTING AND ALL SWITCHED RECEPTACLES IN GUESTROOMS AND SUITES IN HOTELS, MOTELS, BOARDING HOUSES, OR SIMILAR BUILDINGS WILL BE AUTOMATICALLY CONTROLLED IN ACCORDANCE WITH SECTION 9.4.1.3 (2)
 - BATHROOMS WILL HAVE A SEPARATE CONTROL DEVICE INSTALLED TO AUTOMATICALLY TURN OFF THE BATHROOM LIGHTING WITHIN 30 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE BATHROOM.
EXCEPTION: NIGHT LIGHTING OF UP TO 5W PER BATHROOM IS EXEMPT.
- ALL SUPPLEMENTAL TASK LIGHTING, INCLUDING PERMANENTLY INSTALLED UNDERSHELF OR UNDERCABINET LIGHTING, WILL BE CONTROLLED IN ACCORDANCE WITH SECTION 9.4.1.3 (3).
- PER SECTION 9.4.1.4, LIGHTING FOR EXTERIOR APPLICATIONS NOT EXEMPTED IN SECTION 9.1 WILL MEET THREE REQUIREMENTS IN SECTION 9.4.1.4
 - ALL TIME SWITCHES WILL BE CAPABLE OF RETAINING PROGRAMMING AND THE TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST TEN HOURS.
- PER SECTION 9.4.2, THE TOTAL EXTERIOR LIGHTING POWER ALLOWANCE FOR ALL EXTERIOR BUILDING APPLICATIONS IS THE SUM OF THE BASE SITE ALLOWANCE PLUS THE INDIVIDUAL ALLOWANCES FOR AREAS THAT ARE DESIGNED TO BE ILLUMINATED AND ARE PERMITTED IN TABLE 9.4.2-2 FOR THE APPLICABLE LIGHTING ZONE. THE INSTALLED EXTERIOR LIGHTING POWER IDENTIFIED IN ACCORDANCE WITH SECTION 9.1.3 WILL NOT EXCEED THE EXTERIOR LIGHTING POWER ALLOWANCE DEVELOPED IN ACCORDANCE WITH THIS SECTION. TRADE-OFFS ARE ALLOWED ONLY AMONG EXTERIOR LIGHTING APPLICATIONS LISTED IN THE TABLE 9.4.2-2 "TRADABLE SURFACE" SECTION. THE LIGHTING ZONE FOR THE BUILDING EXTERIOR IS DETERMINED FROM TABLE 9.4.2-1 UNLESS OTHERWISE SPECIFIED BY THE LOCAL JURISDICTION.
EXCEPTION IS LISTED IN SECTION 9.4.2.
- PER SECTION 9.4.3 (NYC), INTERNALLY ILLUMINATED EXIT SIGNS WILL NOT EXCEED 5W PER FACE.
PER SECTION 9.4.4 (NYC), LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS WILL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTION. WHEN OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS, OR PHOTOSENSORS ARE INSTALLED, AT A MINIMUM, THE PROCEDURES DESCRIBED IN SECTION 9.4.4 WILL BE PERFORMED.
THE INDIVIDUAL(S) RESPONSIBLE FOR THE FUNCTIONAL TESTING WILL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT AND WILL PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA.



KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

2	10/02/2017 09/15/2017 08/02/2017 03/04/2017 01/27/2017 01/25/2017 11/17/2016 11/11/2016 10/12/2016 02/05/2016	ISSUED FOR DOB 90% CD SET 95% CD SET 95% CD SUBMITTAL SET SUPERSTRUCTURE SET DOE LEAD FOR DOB FACADE TYPING SET 100% CD FOUNDATION AND SET DOE LEAD FOR DOB DOE FILING SET
---	--	---

Number:	Date:	Revision:
---------	-------	-----------

Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
HILL | WEST
ARCHITECTS
11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
T: 212.213.8607

Consultant:
DESIMONE CONSULTING ENGINEERS
140 Broadway, 25th Floor
New York, NY, 10005
(212) 532-2211
Cosentini Associates
Two Pennsylvania Plaza, 3rd FL,
New York, NY, 10121
(212) 615-3600
Whitehall
11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

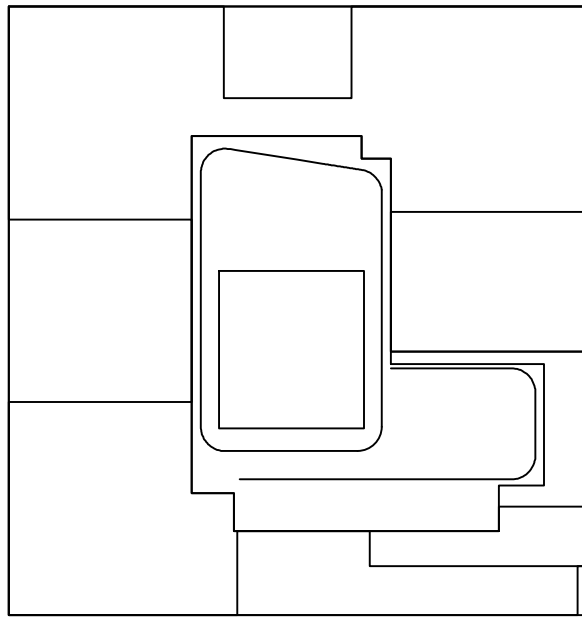
DWG TITLE:
ENERGY CODE COMPLIANCE SHEET - 3

SEAL & SIGNATURE:	DATE: 09/15/2017
PROJECT #:	150318
SCALE:	NONE
EN-003.00 DWG NO.	

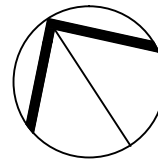
TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1 2013 AS MODIFIED BY 2016 NYCECC APPENDIX CA.

THIS PLAN APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES*

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.



KEY PLAN



NOTES:

NOT FOR CONSTRUCTION

12/08/2017 ISSUE FOR DOB
10/02/2017 ISSUE FOR DOB
09/15/2017 90% CD SET ADD #3
06/02/2017 85% CD SET
03/15/2017 50% CD SET
03/15/2017 ISSUED FOR DOB
03/01/2017 ISSUED FOR DOB
02/14/2017 ISSUED FOR DOB
01/27/2017 SUPERSTRUCTURE SET
01/25/2017 ISSUED FOR DOB
11/17/2016 FACADE PRELIM SET
11/11/2016 100% FOUNDATION DOB SET
10/12/2016 ISSUED FOR DOB
02/05/2016 DOB FILING SET

Number: Date: Revision:

Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
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11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:

ENERGY CODE
COMPLIANCE SHEET - 5

SEAL & SIGNATURE: DATE: 12/08/2017

PROJECT #: 150318

SCALE: NONE

EN-005.00
DWG NO.

Enter information for sections 1, 2 and 3 - incorporate in the drawing set.

Must be typewritten

1. Location Information			
House No(s) 23-15	Street Name 44 Drive		
Borough Queens	Block 427	Lot 6	BN 4005166
Work on Floor(s) Cellar, Ground, 2 through Top	Apt/Condo No(s) 748	CB No. 402	

2. Applicant Information			
Last Name First Name Douglas Nickolas			
Business Name Cosentini Associates	Business Telephone 212-615-3600		
Business Address 2 Penn Plaza 3rd Floor	Business Fax 212-615-3700		
City New York State New York	Zip 10121	Website Telephone	
Email nyco2@cosentini.com	License Number 98375		

3. Energy Modeling Information

Modeling Software & Version	eQuest 3.45
Weather File	TMY2 New York
Model Name File	72014
Construction ID#	879314
Proposed Overall Load Factor	184
Baseline Overall Load Factor	263
Proposed Net EUI (kBtu/sq ft)	83
Baseline Net EUI (kBtu/sq ft)	54.9

Falsification of any statement is a misdemeanor under the NYC Administrative Building Code and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for personally performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (please print)
DOUGLAS C. MASS
Signature



P.E. / R.A. Seal (apply seal, then sign and date over seal)

4. Energy Modeling Protocol (select)

Section 11 ECR

5. Purchased Energy Rates							
Fuel	Utility Rate Provider/Rate Structure (or Contract)	Virtual Utility Rate (\$/kWh)	Sanitized Design Total Change (\$)	Virtual Utility Rate (\$/kWh)	Proposed Design Total Change (\$)	Supporting Doc. Location	Model Output Report
Electric	ConEd - Elec	\$0.30	\$ 1,263,686.00	\$0.30	\$ 1,173,708.00	NA	LS-D
Gas	ConEd - Natural Gas	\$1.20	\$ 386,485.00	\$1.20	\$ 306,334.00	NA	LS-D
Steam		\$ -	-	-	-	NA	
Other		\$ -	-	-	-	2007 SAV9953	COMPLIST
TOTAL		\$ 1,648,171.00	\$ 1,649,942.00	\$ 1,648,171.00	\$ 1,580,042.00		

6A. Performance Cost Index - Appendix G ONLY

Baseline Building			Proposed Building
Building Performance Factor			0.67
Baseline Regulated Cost			\$ 309,575.14
Proposed Ump2009 Cost			\$ 309,575.14
Total Energy Cost			
Performance Cost Index			

INSTRUCTIONS: If the modeling parameters call for averaging 4 rotations, enter the data into each of the white columns. If the modeling protocol does not require averaging the 4 rotations, enter the data into only the column labeled "0°" (do not enter "0" into the columns labeled 90, 180, 270).

6B. Baseline Features											
Baseline Model										Model Output Report	
		0°	90°	180°	270°	Average of 4 rotations					
Annual usage (kBtu/ft²)											
Interior Lighting	Watt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Min. Equip.	1,556,245					1,556,245				0.00	0.00
Max. Equip.	1,680,201					1,680,201				0.00	0.00
Equip. Load	1,030,368	250,337				1,030,368	250,337			0.00	0.00
Equip. Cost	1,630,368					1,630,368				0.00	0.00
Heat Rejection	1,680					1,680				0.00	0.00
Pumps & Misc.	677,639					677,639				0.00	0.00
Net Fans	772,167					772,167				0.00	0.00
Other Net Water	70,966					70,966				0.00	0.00
Electric Lighting	38,110	-	-	-	-	38,110	-	-	-	0.00	0.00
Electric Misc.	-	-	-	-	-	-	-	-	-	0.00	0.00
TOTAL	6,308,476	320,451	-	-	-	6,308,476	320,451			0.00	0.00
Annual cost (\$)											
Electric	\$1,361,680.00					\$1,361,680.00				\$136	\$136
Gas	\$386,485.00					\$386,485.00				\$38	\$38
Steam	\$0.00					\$0.00				\$0	\$0
Other	\$0.00					\$0.00				\$0	\$0
TOTAL	1,648,171	-	-	-	-	1,648,171	-	-	-		

6C. Energy Modeling Usage Summary

Baseline Model				Proposed Model						
	Electric Usage (kWh)	Gas Usage (cubic feet)	Other Usage (kWh, other water, cooling, etc.)	Electric Usage (kWh)	Gas Usage (Therms)	Other Usage (kWh, other water, cooling, etc.)	Energy Savings (%)	Cost Savings (USD/yr)	Model Output Location (Report)	
Interior Lighting	1,756,217	-	1,678,038	-	-	-	0%	21%	SPS/SPS/SPS	
Min. Equip.	1,680,201	-	1,680,201	-	-	-	0%	0%	SPS/SPS/SPS	
Equip. Load	476,264	250,337	603,366	89,369	196,798	0	49%	11%	SPS/SPS/SPS	
Equip. Cost	1,630,368	-	1,630,368	-	-	-	0%	25%	SPS/SPS/SPS	
Heat Rejection	1,680	-	11,241	-	-	-	0%	0%	SPS/SPS/SPS	
Pumps & Misc.	677,639	-	241,674	-	-	-	0%	59%	SPS/SPS/SPS	
Net Fans	772,167	-	798,142	-	-	-	0%	3%	SPS/SPS/SPS	
Other Net Water	70,966	-	68,407	-	68,407	-	0%	15%	8%	SPS/SPS/SPS
Electric Lighting	38,110	-	31,071	-	-	-	0%	1%	0%	SPS/SPS/SPS
Electric Misc.	-	-	-	-	-	-	0%	0%	0%	SPS/SPS/SPS
TOTAL	6,308,476	320,451	5,883,237	226,195	226,195	0	100%	100%		
Does Not Align with Section 6.1 167,103.93										

6D. Energy Related Design Features

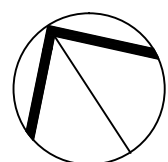
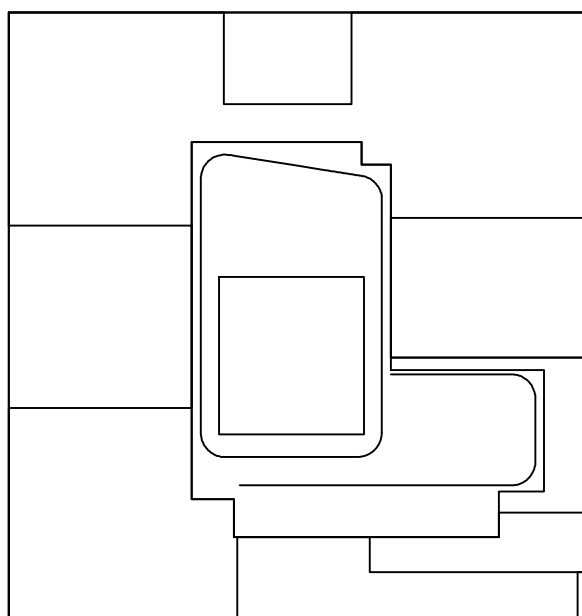
List energy related features that are included in the design and contribute to the energy savings in Section 5.
This project will be served by water loop heat pump system. The year-round heating and cooling system consists of a two pipe closed loop water circuit, through which non-refrigerated water is circulated continuously. The loop water temperature is maintained throughout the year by means of providing hot water from boilers and cooling towers for heat rejection. The primary and secondary condenser water pumps will be variable speed. ERU units will provide outside air for living units and corridors.

8a. Above-Grade Wall & Fenestration Areas									
		Baseline Case				Proposed Case			
		Multi-Family							
		Window + Wall Area (ft²)	Vertical Glazing Area (ft²)	Window + Wall Area (ft²)	Vertical Glazing Area (ft²)	Window + Wall Area (ft²)	Vertical Glazing Area (ft²)	Supporting Doc. Location	Model Output Report
Above-Grade Wall & Vertical Glazing Area by Orientation	North	102424	42715	42715	42715	102424	42715	EN1008-EN1010	LV-D
	East	103629	30103	2910	103629	30103	2910	EN1008-EN1010	LV-D
	South	102424	42715	4410	102424	42715	4410	EN1008-EN1010	LV-D
	West	103629	40193	4410	103629	40193	4410	EN1008-EN1010	LV-D
	Total	412109	164844	4010	412109	164844	4010	EN1008-EN1010	LV-D
Roof & Skylight Area	Roof + Skylight Area (ft²)	Skylight Area (ft²)		Roof + Skylight Area (ft²)		Skylight Area (ft²)		Supporting Doc. Location	Model Output Report
	Total	34260	340	0.0	34260	340	0.0	EN1008-EN1010	LV-D

8b. Vertical Fenestration												
Model Input Parameter		Category (Res/Non-Res)	Baseline Case				Proposed Case				Supporting Doc. Location	Model Output Report
	Item		Description (from ASHRAE)	U-factor	SHGC	U-Factor	Description (from design)	U-factor	SHGC	U-Factor		
Vertical	Residential	1	Metal framing (Steel)	U-0.42	0.40	0.90	Low-e	0.38	0.32	0.9	EN-008-EN010, EN012	LV-D
Vertical	Residential	2	Metal framing (Steel)	U-0.42	0.40	0.90	Low-e	0.4	0.32	0.9	EN-008-EN010, EN012	LV-D
Vertical	Non-Residential	3	Metal framing (Steel)	U-0.42	0.40	0.90	Low-e	0.4	0.32	0.9	EN-008-EN010, EN012	
Vertical		4					Weighted average U-value used in model: U-0.38; See Calculation on EN008-EN009					
Vertical		5										
Vertical		6										
Vertical		7										
Skylight	Residential	2	0% - 2.0%	U-0.50	0.40	0.90		0.4	0.32	0.9	EN-014	LV-D
Skylight		3										
Shading Devices			Auto shading projections, manual shading devices, or anti-shading have been modeled.				Use any permanent or auto-controlled shading devices; Overhangs and vertical columns as shown on architectural drawings					
			Cavity shading by glazing structure has been modeled identically to the proposed case.									

How were the Proposed case framed assembly fenestration U-factors determined? (Choose one)
☐ NFRC testing for site-assembled fenestration assemblies
☐ Table A6.2 (windows) and Table A6.1 (skylights)
☐ CLBNL Window 5 or Window 6 calculations
☐ Energy simulation includes separate frame and glazing
☐ Other (Describe):

		Baseline Case		Proposed Case		Assembly U-factor / U-factor / U-factor		% of above grade wall		Supporting Doc. Location		Model Output Report	
Model Input Parameter	Spec. Conditioning Category	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor	U-factor / U-factor / U-factor
Roof Construction	Residential	1	Insulation Entirely Above Deck	U-0.032	Average Roof Insulation	U-0.077	40%	EN008-EN010, EN012	44	LV-D, LV-I			
	Residential	2	Solar Reflectance	0.1 + 0.6		0.1 + 0.6							
Above-Grade Exterior Wall Construction	Residential	3	Steel Framed	U-0.064	Glass Sidelight	U-0.17	40%	EN008-EN012	LV-D, LV-I				
	Residential	4	Steel Framed	U-0.064	Metal Panel	U-0.103	3%	EN008-EN012	LV-D, LV-I				
	Residential	5	Steel Framed	U-0.064	CMU	U-0.166	5%	EN008-EN012	LV-D, LV-I				
Below-Grade Exterior Wall Construction	Non-Residential	6	Steel Framed	U-0.064	Base Granite	U-0.09	0%	EN008-EN012	LV-D, LV-I				
	Non-Residential	7	Below-Grade Wall	C-0.139	2" Rigid Insulation	C-0.087	90%	EN008-EN012	LV-D, LV-I				
	Non-Residential	8	Below-Grade Wall	C-0.139	2" Rigid Insulation	C-0.139	90%	EN008-EN012	LV-D, LV-I				
Foundation Floor Construction	Non-Residential	9	Foundation Floor	U-0.064	Foundation Floor	U-0.064	0%	EN008-EN012	LV-D, LV-I				
	Non-Residential	10	Foundation Floor	U-0.064	Foundation Floor	U-0.064	0%	EN008-EN012	LV-D, LV-I				
Opaque Doors	Non-Residential	11	Opaque Door	U-0.10	Opaque Door	U-0.10	0%	EN008-EN012	LV-D, LV-I				
	Non-Residential	12	Opaque Door	U-0.10	Opaque Door	U-0.10	0%	EN008-EN012	LV-D, LV-I				



NOTES:

NOT	FOR	CONSTRUCTION
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12/08/2017	ISSUE FOR DOB
10/06/2017	ISSUE FOR DOB
09/15/2017	90% CO SET, ADO # 3
06/02/2017	85% CO SET
03/24/2017	50% CO SET
03/10/2017	ISSUED FOR DOB
03/01/2017	ISSUED FOR DOB
02/14/2017	ISSUED FOR DOB
01/27/2017	SUPERSTRUCTURE SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE PRICING SET
11/11/2016	100% DISFOUNDATION
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

Number:	Date:	Revision:
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DOB STAMPS & SIGNATURES:

DWG TITLE:

ENERGY CODE
COMPLIANCE SHEET - 6

SEAL & SIGNATURE:  DATE: 12/08/2017



SCALE: NONE
 EN-006.00
 DWG NO.

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE ENERGY CONSERVATION CODE OF NEW YORK CITY 2014

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16 Title VIII, Article 145 § 7209.2 of the New York State Education Law.

Site Type (Table 10.1a Building uses Table 10.1b 3.5.2)	Total Area, Specialty Type	Basical Core					Proposed Core	
		As-Built Core (sq ft)	Envelope Core (sq ft)	Basical Core (sq ft)	Envelope Core (sq ft)	Supporting Structure	Model Output	
Manufacturing building	133,868	0	0	0	0	0	0.0	
Commercial - office	8,022	0	0	0	0	0	0.0	
Residential	2,048	0	0	0	0	0	0.0	
Public - school	1,775	0	0	0	0	0	0.0	
Public - library	1,775	0	0	0	0	0	0.0	
Government/Police Center - community area	12,000	0	0	0	0	0	0.0	
Storage area - all other	13,262	0	0	0	0	0	0.0	
Warehouse	4,818	0	0	0	0	0	0.0	
Public - school	2,825	0	0	0	0	0	0.0	
Public - school	1,850	0	0	0	0	0	0.0	
Office - Industrial and - (250 sq ft)	821	0	0	0	0	0	0.0	
Public - school	1,850	0	0	0	0	0	0.0	
Government/Police Center - all other	1,850	0	0	0	0	0	0.0	
Public - school	42,164	0	0	0	0	0	0.0	
LIGHTING POWER REQUIREMENTS FOR 2007 - EN 2691								
Type - for buildings are considered as an average calculation, see EN 2691								
Total	478,864	0.0	0.0	0.0	0.0	0.0	0.0	

[illegible]

6c Exterior Lighting Power				
	Baseline Design (Watts)	Proposed Design (Watts)	Supporting Doc. location	Model Output Report
Tradable Lighting Power	1746	2438.5	EN201_EN208	BEPU
Non-Tradable Lighting Power	5109	5346	EN201_EN208	BEPU
Base Site Allowance	1300			
Total Lighting Power	9455	7784.5		BEPU

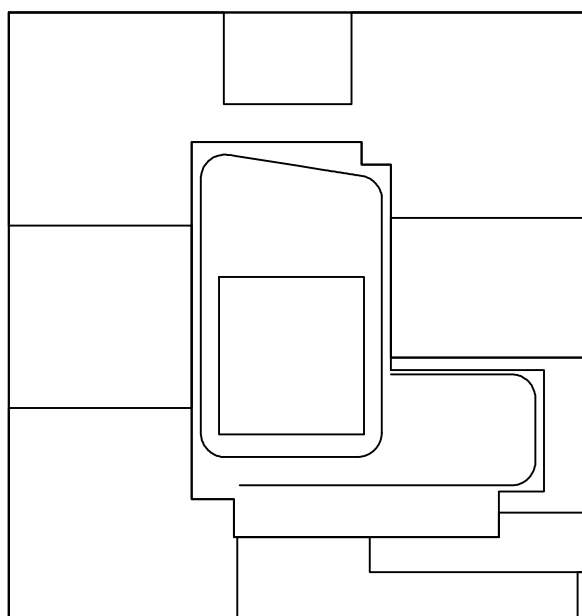
Process/Equipment						
Process/Equipment	Source Area (or Item)	Maximum Power Density (W/m²) (Gas/Down)	Modeling Frequency Schedule	Baseline Modelled Material(s) (Yes/No)	Supporting Doc. Location	Model Output
Multi-step Sealing line	69888	0.10	356x Yes	NA	NA	U/V
Control - all other	20021	0.20	870x Yes	NA	NA	U/V
Stavewell	68881	0.10	870x Yes	NA	NA	U/V
Control - all other	1719	0.10	870x Yes	NA	NA	U/V
Electro/Mechanical	61636	0.10	800x Yes	NA	NA	U/V
Assembly - all other	12584	0.50	4015x Yes	NA	NA	U/V
Assembly - all other	31562	0.20	870x Yes	NA	NA	U/V
Control - all other	4290	0.10	2000x Yes	NA	NA	U/V
Recycling - all other	2932	0.20	870x Yes	NA	NA	U/V
Control - all other	26334	1.15	4015x Yes	NA	NA	U/V
Control - all other	82	0.10	4015x Yes	NA	NA	U/V
Parking Area, Interior	36106	0.00	0x Yes	NA	NA	U/V
Control - all other	3602	1.00	4015x Yes	NA	NA	U/V
Drift	42144	0.10	870x Yes	NA	NA	U/V
TOTAL	975,854	421				

Lighting Zone						
4		CS and CS districts				
1300						
Base Site Area (acres)						
Area Type	Area Description	Length of Right of Way (ft)	Exposed Area (sq ft)	Effective Area	Total Area (sq ft)	
Unimproved Parking Areas	Total area of unimproved parking and lot areas (sq ft)				0.15	0.15P
	Length of walkways from lot to street Area of walkways greater than 10 ft wide Area less than 10 ft wide				1.00	0.05P
Building Footprints	Special function lighting zone				0.25	0.05P
	Area of building footprint (sq ft)	4100	2200	800	2.00	0.50P
	Special function lighting zone				0.25	0.05P
	Area of pedestrian walkways (sq ft)				0.25	0.05P
	Area of landscaping (sq ft)				0.25	0.05P
Building Footprints & Etc.	Total area of surface area (acres) (sq ft)	18	162	120		
	Total area width of other structures & vehicles	18	166.5	200	20.00	0.07P
	Area of canopies at entrance to building	280	68	114	0.08	0.05P
	Landscaping (sq ft)				0.10	0.05P
Sales centers	Area of canopies over sales functions (sq ft)				0.10	0.05P
	Area of sales functions (sq ft)				0.10	0.05P
Signage and signs	Total length of street frontage for vehicle signs (ft)				3.00	0.07P
	Area of Signage (sq ft)	1801.5			0.10	0.07P
Building Footprints	Area of Signage (sq ft)	2274			0.10	0.07P
	Area of Signage (sq ft)		3600	4766.5	0.10	0.07P
	Area of Signage (sq ft)				0.10	0.07P
	Area of Signage (sq ft)				0.10	0.07P
	Area of Signage (sq ft)				0.10	0.07P
Non-Residential Structures	Atolls	R-4				
	Specialized facility		Total of all			
	Specialized facility	Area of personnel entrance and pedestrian entrance to building			0.15	0.07P
	Specialized facility	Area of personnel entrance and pedestrian entrance to building			0.15	0.07P
	Specialized facility	Area of personnel entrance and pedestrian entrance to building			0.15	0.07P
Parking area (24-hour self-storage) -Covers all etc.	R-4					
	R-4					
Parking area (24-hour self-storage) -Covers all etc.	R-4				800	0.0000000000

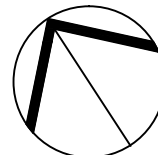
Semi-Red Water Systems						
Model Input Parameters	Baseline Design	2010	Proposed Design	2010	Separating Gas Location	Model Output
	Multi-Phase					
System Type & Use	Six-Column Water Heater					
Input Rating	13,000	100%	13,000	100%	7-400	Pass
Efficiency	80	80%	90	90%	7-400	Pass
Storage Volume	2400	Gal	2400	Gal	7-400	Pass
Temperature	140	°F	140	°F	7-400	Pass
Peak Flow Demand	30	GPM	30	GPM	7-400	Pass
Pressure 2010 Water	NA	PSI	NA	PSI	NA	Pass
Pressure 2010 Pump Flow	NA	PSI	NA	PSI	NA	Pass
Pressure 2010 Pump Control	NA		NA		NA	Pass

[illegible][illegible]

AS DATA/Systems							
System Description	HYMVC System - Group (BASELINE DESIGN)				HYMVC System - Group (PROPOSED DESIGN)		
	Description	Units	Description	Units	Equipment/Other Notes/Other		
					Equipment/Other Notes/Other	Equipment/Other Notes/Other	
Proposed by	SELECT FORM FROM FORMS (SELECT FROM ALL CELL REVIEW		Values		Values		
System (Equipment)	AC 10 0 0 0 0 AC 10 0 0 0 0 AC 10 0 0 0 0		AC 10 0 0 0 0 AC 10 0 0 0 0 AC 10 0 0 0 0				
AC 10 0 0 0 0	0						
Total Cooling Capacity	2500.000	kW/LN	2500	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	10	kW/LN	10.000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
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Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
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Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
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Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
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Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
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Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
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Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
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Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
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Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
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Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
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Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
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Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.000	kW/LN	1000	kW/LN	AC 10 0 0 0 0		SA 0
Values Values and Units	AC 10 0 0 0 0	SA 0	kW/LN	SA 0			SA 0
Total Cooling Capacity	1000.00						



KEY PLAN



NOTES:

[illegible]

Child Water						
Water Input Parameter	HVAE System / Simple BAS/EMS DESIGN			HVAE System / Simple PIPER/ISS DESIGN		
	Description	Units	Description	Units	Suggested Coefficient	Model Output Parameter
1 and 2 Size of Chilled and Heating coils of Chiller Water Loop, 1 Upper and 2 Lower	N/A		N/A		N/A	N/A
Chiller Outdoor Coils	N/A		N/A	MM	N/A	N/A
Chiller Primary / Return	N/A		N/A	MM/TON	N/A	N/A
Chiller Primary / Return	N/A		N/A	MA	N/A	N/A
Chiller Water (Chilled Water) Temp	N/A	°F	N/A	°F	N/A	N/A
Chiller Water	N/A	°F	N/A	°F	N/A	N/A
Chiller Supply/Return Water Pressures	N/A		N/A		N/A	N/A
Chiller Water Configuration	N/A		N/A		N/A	N/A
Number of Primary Chiller Pumps	N/A	#	N/A	#	N/A	N/A
Primary Chiller Pump Range	N/A		N/A		N/A	N/A
Primary Chiller Pump Flow	N/A	gpm	N/A	gpm	N/A	N/A
Primary Chiller Pump Control	N/A		N/A		N/A	N/A
Number of Secondary Chiller Pumps	N/A	#	N/A	#	N/A	N/A
Secondary Chiller Pump Flow	N/A	MM	N/A	bw	N/A	N/A
Secondary Chiller Pump Control	N/A	gpm	N/A		N/A	N/A
Secondary Chiller Pump Control	N/A		N/A		N/A	N/A
Water Side Isolator	N/A		N/A		N/A	N/A
Water Side Energy Recovery	N/A		N/A		N/A	N/A
Other Isolator	N/A		N/A		N/A	N/A
Other Isolator	N/A		N/A		N/A	N/A
Other Isolator	N/A		N/A		N/A	N/A

[illegible]

	Risk Mitigation or Status					
Model Input Parameter	HMC System / Gross (BAGLINE DESIGN)			HMC System / Gross (PROPOSED DESIGN)		
	Description	Units	Description	Units	Supporting Data	Model Output Parameter
Number and Type of Diffusers	2 equally spaced diffusers along the water column (see HMC system). 2 equally spaced vertical down flow diffusers for the new HMC system.					
TSS Basin Capacity	12.04	m ³ /day	23.94	m ³ /day	M-400	PV-4
Solar Efficiency	80%	%	90%	%	M-400	PV-4
Hot Water or Steam (HWS) Supply Temp	180° F	°F	188 °F	°F	M-400	PV-4
RRW AT	50 °F	°F	70 °F	°F	M-400	PV-4
Airflow Pump Performance	ARR at maximum inlet pressure and 125% of design flow rate ARR at minimum inlet pressure and 125% of design flow rate					
RRW Load Configuration	Variable Primary			Variable Primary		M-400
Number of Primary HMR Pumps	2	#	2	#	M-400	PV-4
Primary HMR Pump Power	16.445 kw	kW	16.445 kw	kW	M-400	PV-4
Primary HMR Pump Flow	1200 cfm	gpm	1200 cfm	gpm	M-400	PV-4
Primary HMR Pump Variable Speed	Variable Speed		Variable Speed		M-400	PV-4
Secondary HMR Pump Power	N/A	#	N/A	#	M-400	PV-4
Secondary HMR Pump Flow	N/A	gpm	N/A	gpm	M-400	PV-4
Secondary HMR Pump Control						
Other observed						
Other observed						
Other observed						

[illegible]

Combined: Heat & Power Systems						
Model Input Parameter	HMC System / Group (BASIC DESIGN)		HMC System / Group (PROPOSED DESIGN)		Supporting Data Source	Model Output Report
	Description	Units	Description	Units		
CHP-Type of generator	NA		NA		NA	NA
Quantity of CHP generators	NA		NA		NA	NA
Total capacity of CHP generators (MW) at design conditions	NA		NA		NA	NA
CHP Thermal efficiency (%) at design conditions	NA		NA	%	NA	NA
CHP Electrical efficiency (%) at design conditions	NA		NA	%	NA	NA
CHP Controls / Schedule	NA		NA		NA	NA
CHP Fuel Source	NA		NA		NA	NA
CHP: Whether the mass flow rate of fuel (e.g. gas) depends on time, i.e. non-steady distribution (Yes/No)	NA		NA		NA	NA
CHP: Whether the mass flow rate of fuel (e.g. gas) depends on temperature (e.g. fuel hot) (Yes/No)	NA		NA		NA	NA
CHP: Parameters (e.g. in) handling unit to and from the mass unit	NA		NA		NA	NA
CHP: Heat (described)	NA		NA		NA	NA
CHP: Power (described)	NA		NA		NA	NA
CHP: Mass (described)	NA		NA		NA	NA

NOT	FOR	CONSTRUCTION
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12/08/2017	ISSUE FOR DOB
10/06/2017	ISSUE FOR DOB
09/15/2017	90% CO SET (ADD # 3)
06/02/2017	85% CO SET
03/24/2017	50% CO SET
03/10/2017	ISSUED FOR DOB
03/01/2017	ISSUED FOR DOB
02/14/2017	ISSUED FOR DOB
01/27/2017	SUPERSTRUCTURE SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE PRICING SET
11/11/2016	100% DISCONTINUATION
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

2

Number:	Date:	Revision:
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City View Tower at
Court Square
23-15 44th Drive
Long Island City, NY 11101

Client: **Cityview Tower LLC**
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

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(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:

ENERGY CODE
COMPLIANCE SHEET - 7

SEAL & SIGNATURE

DATE: 12/06/2017

PROJECT #:

SCALE: NONE

EN 007 00

LN-007.00

7 OF 27

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16 Title VIII, Article 145 § 7209.2 of the New York State Education Law.

METALS

A. ALUMINUM: ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR TYPE OF USE AND FINISH INDICATED, COMPLYING WITH THE REQUIREMENTS OF STANDARDS INDICATED BELOW.

1. ACCEPTABLE ALLOY AND TEMPER COMBINATIONS FOR EXTRUSIONS SUBJECT TO FABRICATION FINISH AND STRUCTURAL REQUIREMENTS ARE: 6063-T5, 6063-T6, 6061-T6. USE 6063-T6 FOR EXTRUSIONS RECEIVING ANODIZED FINISH. OTHER ALLOYS OF THE 60XX SERIES AND OTHER TEMPER MAY BE SUBMITTED FOR APPROVAL. NOMINAL WALL THICKNESS OF 1/8 INCH OR GREATER IS ACCEPTABLE FOR PRIMARY ALUMINUM MEMBER EXTRUSIONS. WALL THICKNESS LESS THAN 1/8 INCH MAY BE ACCEPTABLE AND ARE SUBJECT TO APPROVAL. SILLS AND ORNAMENTAL SECTIONS EXTERIOR SHALL BE 1/8 INCH THICK MINIMUM. OVERALL FRAME DEPTHS SHALL BE KEPT TO A MINIMUM ALTHOUGH STRUCTURAL PERFORMANCE SHALL GOVERN.

2. ACCEPTABLE ALLOY AND TEMPER COMBINATIONS FOR SHEET AND PLATE SUBJECT TO FABRICATION FINISH AND STRUCTURAL REQUIREMENTS ARE: 3003-H14, 3003-H16, USE 3003-H14 FOR SHEET AND PLATE RECEIVING ANODIZED FINISH. OTHER ALLOYS OF THE 30XX, 50XX AND 60XX SERIES AND OTHER TEMPER MAY BE SUBMITTED FOR APPROVAL. PROVIDE 1/8 INCH MINIMUM NOMINAL THICKNESS OR 1/8 INCH THICK ALTERNATE FIRE RATED COMPOSITE PANELS. EXTRUDED MEMBERS AND PANELS SHALL PROVIDE A UNIFORM APPEARANCE. COMPOSITE PANELS AND REINFORCEMENT REQUIRED SHALL PROVIDE A UNIFORM AND FLAT OUTSIDE APPEARANCE. PANEL DEFLECTION UNDER LOAD SHALL BE RESTRICTED TO L/60.

3. SHEET AND PLATE: ASTM B 209.
4. EXTRUDED BARS, RODS, SHAPES, AND TUBES: ASTM B 221.
5. EXTRUDED STRUCTURAL PIPE AND TUBES: ASTM B 420.
6. STRUCTURAL PROFILES: ASTM A 1008.
7. WELDING RODS AND BARE ELECTRODES: AWS A5.10.
8. ALUMINUM EXTRUSIONS: SHAPES AS SHOWN AND AS REQUIRED FULFILLING PERFORMANCE REQUIREMENTS, BUT NOT LESS THAN 1/8 INCH THICK, UNLESS OTHERWISE SHOWN. SUITABLE ALLOY AND PROPER TEMPER FOR EXTRUDING AND FABRICATING WITH ADEQUATE STRUCTURAL CHARACTERISTICS, AND SUITABLE FOR FINISHING AS SPECIFIED.

9. ALUMINUM SHEETS AND PLATES, SIZES AND MINIMUM GAUGES AS SHOWN AND AS REQUIRED FULFILLING PERFORMANCE REQUIREMENTS. SUITABLE ALLOY AND PROPER TEMPER FOR FORMING AND FABRICATING WITH ADEQUATE STRUCTURAL CHARACTERISTICS AND SUITABLE FOR FINISHING AS SHOWN ON THE MATERIAL SCHEDULE IN THE DRAWINGS, AND AS FOLLOWS:

A. ALUMINUM, PPG DURANAR XL 3 COAT SYSTEM OR EQUAL, COLOR AND FINISH TO MATCH ARCHITECT'S SAMPLE.

10. ALUMINUM SPANDRELS: PROVIDE SIZES, THICKNESSES AND SHAPES AS SHOWN. FORMED OF SHEET ALUMINUM, MINIMUM 1/8 INCH THICKNESS. DEVIATIONS FROM FLAT FOR FACES OF FLAT PANELS SHALL NOT EXCEED +/- 1/16 INCH IN 1 FOOT AT ANY LOCATION AND 1/8 INCH TOTAL FOR THE ENTIRE FACE. TOLERANCE OF RADIUS OF CURVED PANEL SURFACE MEASURED WITH A RADIUS TEMPLATE OF FULL CROSS SECTION SHALL BE +/- 1/16 INCH.

B. STEEL REINFORCEMENT: MANUFACTURER'S STANDARD ZINC-RICH, CORROSION-RESISTANT PRIMER COMPLYING WITH SSPC-PS GUIDE NO. 12.00, APPLIED IMMEDIATELY AFTER SURFACE PREPARATION AND PRETREATMENT. SELECT SURFACE PREPARATION METHODS ACCORDING TO RECOMMENDATIONS IN SSPC-SP COM AND PREPARE SURFACES ACCORDING TO APPLICABLE SSPC STANDARDS.

1. STRUCTURAL SHAPES, PLATS, AND BARS: ASTM A 36.
2. COLD ROLLED SHEET AND STRIP: ASTM A 1008.
3. HOT ROLLED SHEET AND STRIP: ASTM A 1011.
4. STEEL BARS: ASTM A575.
5. TUBING SHALL CONFORM TO ASTM A500 OR A501.
6. NON-TUBULAR COLD FORMED CARBON STEEL WITH THICKNESS 3/16 INCH OR LESS SHALL CONFORM TO ASTM A 446.
7. ENGINEERED ANCHOR SYSTEM: PROVIDE STAINLESS STEEL OR AT MINIMUM ALDINE ALUMINUM COMPONENTS FOR USE IN EXTERIOR CONSTRUCTION. IN LOCATIONS SUBJECT TO MOISTURE, AND WHERE NOTED ON DRAWINGS, ZINC PLATED STEEL COMPONENTS ONLY WHERE ACCEPTED FOR DRY INTERIOR LOCATIONS.

C. STAINLESS STEEL

1. ALL STAINLESS STEEL EXPOSED TO WEATHER SHALL BE GRADE 316.
2. STAINLESS STEEL SHAPES, SHEET AND FASTENERS:
A. BARS AND STRIPS: UNS S31803, ASTM A314, ALTERNATE A: UNS S31603, ASTM A886.
B. SHEET (NON-STRUCTURAL): UNS S31600, ASTM A480, (ALL STAINLESS STEEL SHEET TO BE STRETCHER LEVEL AND STRESS-RELIEVED).
C. BOLTS AND SCREWS: ASTM F593, ALLOY GROUPS 1 AND 2, NON-MAGNETIC.
D. NUTS: ASTM F594, ALLOY GROUPS 1 AND 2, NON-MAGNETIC.
3. FITTINGS: COUNTERSUNK INTEGRAL FITTINGS SHALL BE PREDOMINANTLY MANUFACTURED FROM STAINLESS STEEL GRADE 316L. THE FINISH OF ALL FITTINGS WILL BE AS MACHINED, WITH EXPOSED FINISHES RECEIVING A GLASS BEAD-BLASTED FINISH. NO EXTERIOR PLATES, CAPS, DISKS, OR BUTTONS WILL BE PERMITTED.
4. THE MANUFACTURER/FABRICATOR SHALL DEMONSTRATE TO THE ARCHITECT'S SATISFACTION THAT THE STRESSES INDUCED IN THE GLASS BY THESE FITTINGS ARE COMPATIBLE WITH THE STRENGTH OF THE GLASS AND THE NEEDS OF THE PERFORMANCE SECTION OF THE SPECIFICATION.
5. FITTINGS SHALL PROVIDE A TOLERANCE CAPABILITY WHICH WILL COPE WITH THE FULL RANGE OF THE MOVEMENT SPECIFIED.
6. COUNTERSUNK BOLTS WILL BE MATTE FINISHED. SOCKET HEAT BOLT DIAMETER 3/4 INCH WITH HEXAGONAL RECESS, STAINLESS STEEL GRADE 316.

D. METAL PROTECTION: WHERE DISSIMILAR METALS CONTACT EACH OTHER OR CORROSIVE SUBSTRATES, PROTECT AGAINST GALVANIC ACTION AS RECOMMENDED IN WRITING BY METAL MANUFACTURER.

FIELD QUALITY CONTROL

A. CONTRACTOR'S QUALITY CONTROL RESPONSIBILITIES: CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL OF THE WORK.

B. CONTRACTOR'S TESTING AND INSPECTION PROGRAM: THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AN EFFECTIVE QUALITY CONTROL PROGRAM AND PERFORM SUFFICIENT INSPECTIONS, SURVEYS AND TESTS OF ITEMS OF WORK, INCLUDING THOSE OF OTHER TRADES, TO ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS AND THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION. FURNISH APPROPRIATE FACILITIES, ACCURATELY CALIBRATED INSTRUMENTS AND TESTING DEVICES REQUIRED TO PERFORM THE QUALITY CONTROL OPERATIONS AND WITH SUFFICIENT WORK FORCES TO COVER THE CONSTRUCTION OPERATIONS WITHIN THE ACTUAL CONSTRUCTION SEQUENCES. COORDINATE THIS WORK WITH THE QUALITY CONTROL REQUIREMENTS OF OTHER TECHNICAL SECTIONS OF THE SPECIFICATIONS AND WITH REQUIREMENTS OF THE OWNER AND GOVERNING AUTHORITIES HAVING JURISDICTION.

C. CONTRACTOR OFF-SITE TESTING

1. EXTERIOR WALL MOCK-UPS TESTING: THE CONTRACTOR SHALL PERFORM MOCK-UP CONSTRUCTION AND TESTING, FOR EACH SPECIFIC EXTERIOR WALL SYSTEM UTILIZED ON THE PROJECT.

D. CONTRACTOR'S SITE TESTING: THE CONTRACTOR SHALL PERFORM THE FOLLOWING SITE TESTING OF THE EXTERIOR WALL AT TIMES APPROPRIATE TO THE CONSTRUCTION SCHEDULE AND IN COMPLIANCE WITH DIRECTION OF THE OWNER'S EXTERIOR WALL CONSULTANT AND THE OWNER'S INDEPENDENT TESTING AGENCY:

1. IN-SITU EMBEDS AND ANCHOR TESTING: VERIFY THE ADEQUACY OF THE EMBEDS AND ANCHORAGE TO THE BASE BUILDING STRUCTURE BY MEANS OF PULL OUT, SHEAR, TENSION AND SEISMIC TESTING IN ACCORDANCE WITH ASTM E488, STANDARD TEST METHODS FOR STRENGTH OF ANCHORS IN CONCRETE AND MASONRY ELEMENTS, ON REPRESENTATIVE IN-SITU EMBEDS AND ANCHORS FOR THE EXTERIOR WALL SYSTEMS.

A. LOADING FOR THE TESTING SHALL BE FOR THE DESIGN LOAD AND 150% OF DESIGN LOAD TO MOST CLOSELY REPLICATE THE FORCES THE EXTERIOR WALL SYSTEM WILL EXERT ON THE ANCHORS AND EMBEDS (SHEAR, TENSION, STATIC, SEISMIC, ETC. AS REQUIRED) TO INDICATE COMPLIANCE WITH SPECIFIED PERFORMANCE CRITERIA. IN THE CASE OF PLATE EMBEDS, THE FORCES SHALL BE DELIVERED IN A MANNER SIMILAR TO THAT WHICH WILL OCCUR IN THE APPLICATION, AS DEMONSTRATED TO THE SATISFACTION OF THE OWNER'S EXTERIOR WALL CONSULTANT.

B. NUMBER OF TESTS SHALL BE AS DETERMINED BY THE OWNER'S EXTERIOR WALL CONSULTANT BASED ON THE COMPLEXITY OF THE EMBEDS AND ANCHOR DESIGNS, BUT SHALL NOT BE LESS THAN 3% OF THE TOTAL OF EACH ANCHOR TYPE BUT NO FEWER THAN FIVE (5) ANCHORS SHALL BE TESTED. FAILURE OF EMBEDS OR ANCHORS SHALL REQUIRE FURTHER TESTING TO ASCERTAIN THE EXTENT OF THE PROBLEM. AMOUNT OF ADDITIONAL TESTING SHALL BE AS DETERMINED BY THE OWNER'S EXTERIOR WALL CONSULTANT.

2. STRUCTURAL SILICONE SEALANT ADHESION TEST: TEST INSTALLED STRUCTURAL SILICONE SEALANT ACCORDING TO FIELD ADHESION TEST METHOD DESCRIBED IN AAMA CW 13, STRUCTURAL SEALANT GLAZING SYSTEMS (A DESIGN GUIDE), TEST A MINIMUM OF 2 AREAS ON EACH BUILDING FACE.

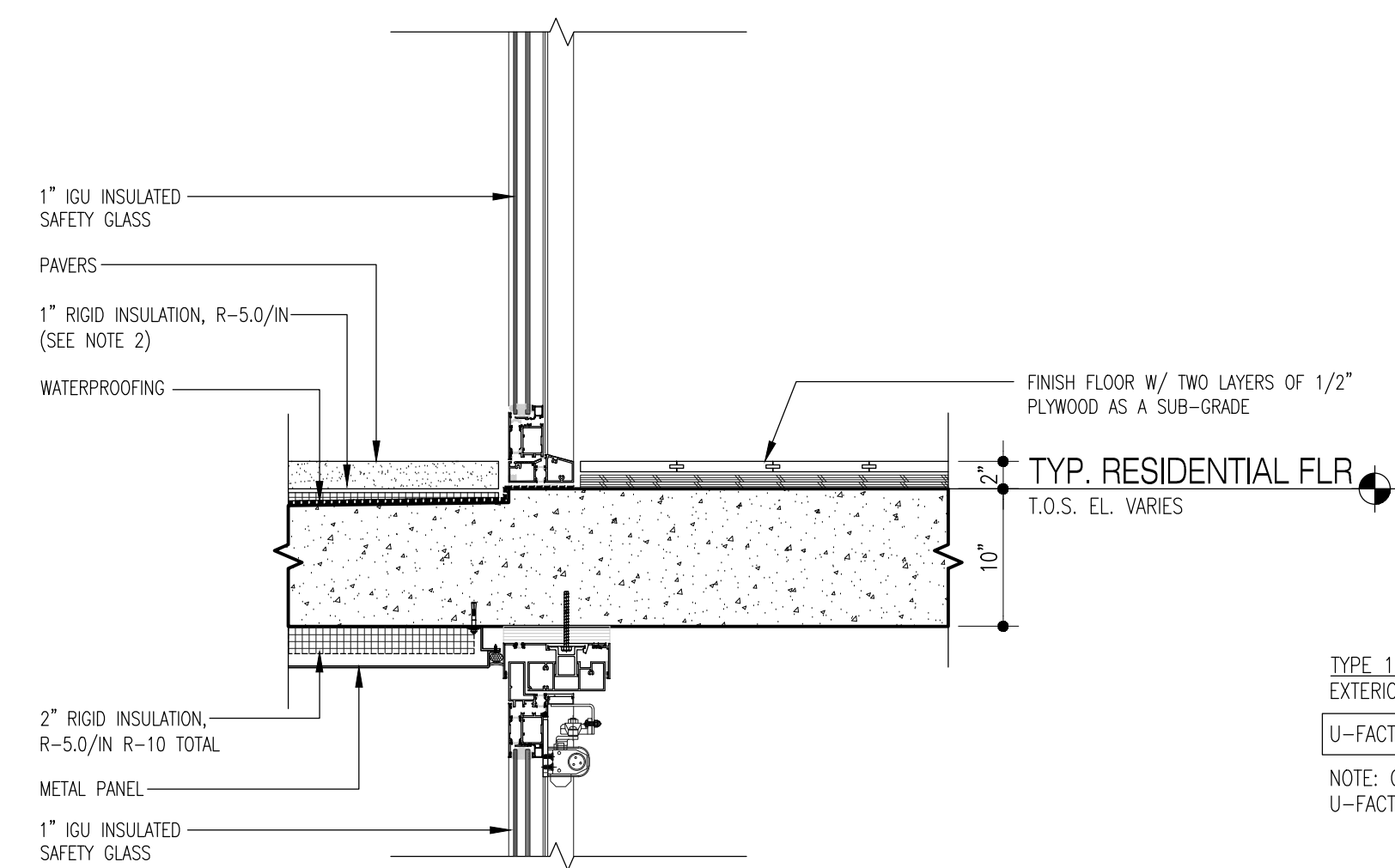
3. GUTTER SPLICE WATER TESTING: AT INTERVALS OF AT LEAST 30% OF ALL SPLICES, AND ONE (1) TEST PER INSTALLED FLOOR, THE CONTRACTOR SHALL DAM THE GUTTER OR OTHERWISE CONTINUOUSLY INTRODUCE WATER AT THE GUTTER SPLICE FOR A PERIOD OF FIVE (5) MINUTES. CONDUCT TESTS IN THE PRESENCE OF THE ARCHITECT, THE CONTRACTOR, THE OWNER'S EXTERIOR WALL CONSULTANT, THE OWNER'S TESTING AGENCY, THE EXTERIOR WALL FABRICATOR/RECTOR AND OTHER SUBCONTRACTORS INVOLVED IN THE WORK. CORRECT DEFICIENCIES OBSERVED AS A RESULT OF THIS TESTING.

4. FIELD WATER PENETRATION TESTING: AFTER COMPLETION OF THE EXTERIOR WALL INSTALLATION AND NOMINAL CURING OF SEALANT AND GLAZING COMPOUNDS, AND WHEN AND WHERE DIRECTED, TEST FOR WATER LEAKAGE. CONDUCT TESTS IN THE PRESENCE OF THE ARCHITECT, THE CONTRACTOR, THE OWNER'S EXTERIOR WALL CONSULTANT, THE OWNER'S TESTING AGENCY, THE EXTERIOR WALL FABRICATOR/RECTOR AND OTHER SUBCONTRACTORS INVOLVED IN THE WORK. CORRECT DEFICIENCIES OBSERVED AS A RESULT OF THIS TESTING.

5. WATER HOSE FIELD PENETRATION TEST: AFTER COMPLETION OF THE INSTALLATION AND NOMINAL CURING OF SEALANTS AND GLAZING COMPOUNDS, AND BEFORE INSTALLATION OF INTERIOR TRIM MEMBERS, FINISHES AND HEATING UNIT COVERS, TEST FOR WATER LEAKS BY PERFORMANCE OF AAMA 501.2, QUALITY ASSURANCE AND DIAGNOSTIC WATER LEAKAGE FIELD CHECK OF INSTALLED STOREFRONTS, CURTAIN WALLS AND SLOPED GLAZING SYSTEMS, WITH THE EXCEPTION OF THE DEFINITION OF UNCONTROLLED WATER, PROVIDE POWERED SCAFFOLD, HOSE, RADIOS, WATER SUPPLY AND MANPOWER TO PERFORM AT LEAST SEVEN (7) SUCCESSFUL TESTS, PLUS REPAIR TESTING OF UNSUCCESSFUL TESTS. TEST WALL AT 10%, 25%, 50%, AND 100% COMPLETION. EACH TEST SHALL BE APPROXIMATELY 300 SQ FT IN SIZE. PROVIDE WATER TESTING AT EACH CURTAIN WALL SPLICE JOINT WITHIN THE GUTTER PRIOR TO THE INSTALLATION OF PANEL ABOVE.

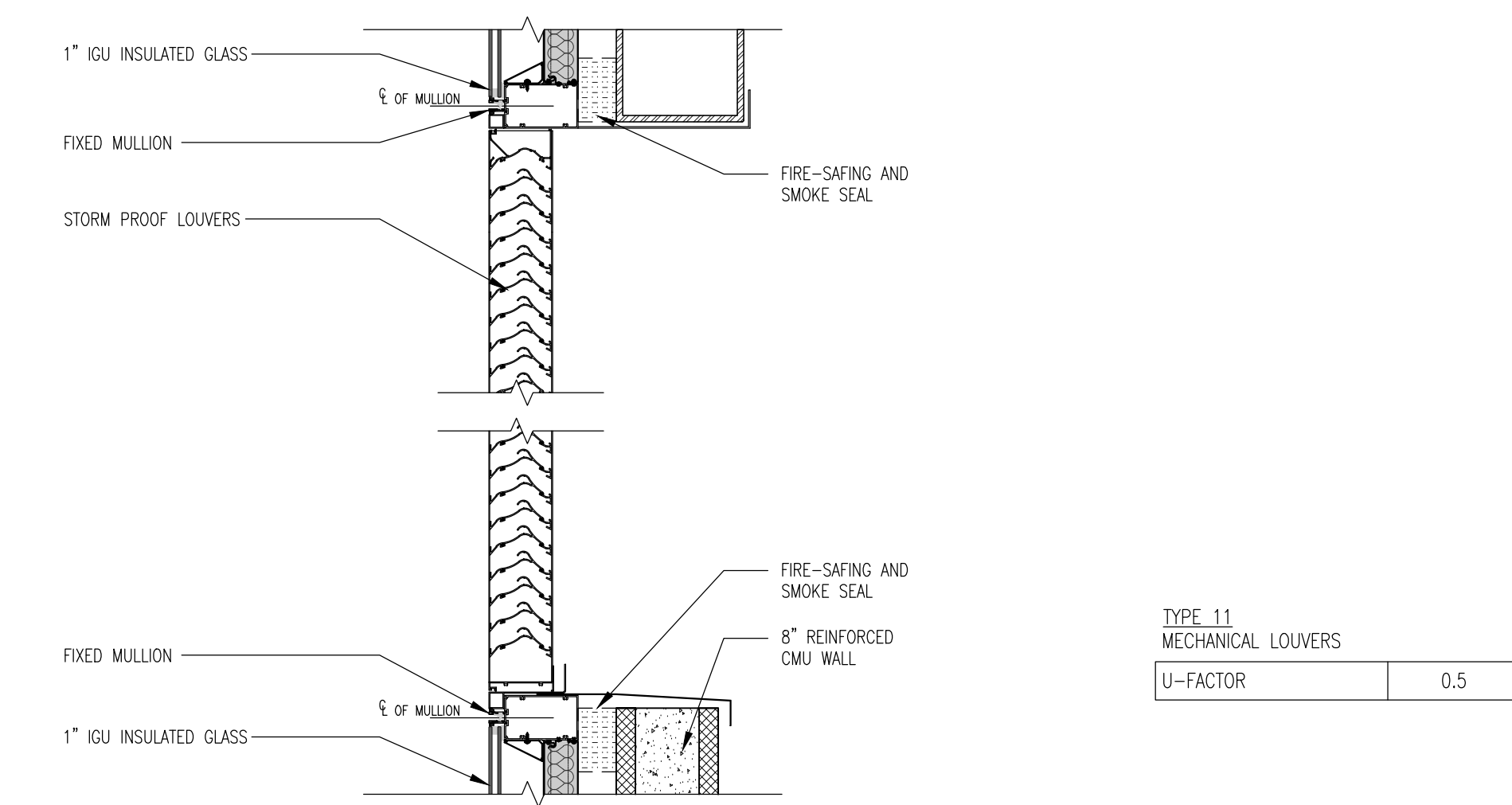
A. SCHEDULE WORK NECESSARY, AS OUT OF SEQUENCE SEALANT WORK, SO THAT THE WALL CAN BE TESTED AS SPECIFIED. THERE SHALL BE NO UNCONTROLLED WATER LEAKAGE AS DEFINED HEREIN, DEPENDING UPON THE PREVALENCE OR ABSENCE OF LEAKAGE IN THE INITIAL WATER PENETRATION TEST AND UPON MEASURES ADOPTED BY THE CONTRACTOR TO ELIMINATE SOURCE OF LEAKAGE. ARCHITECT AND OWNER'S EXTERIOR WALL CONSULTANT WILL DETERMINE NECESSITY FOR, AND SCOPE OF, ADDITIONAL TESTS AND TEST METHODS. IN NO CASE WILL THE TOTAL OF TESTED AREA AMOUNT TO LESS THAN 1% OR LESS THAN 3 PER ELEVATION NOR MORE THAN 10% EXCEPT IN CASES OF CHRONIC LEAKAGE OR AS AUTHORIZED BY THE OWNER. CONDUCT TESTS IN THE PRESENCE OF THE ARCHITECT. CORRECT DEFICIENCIES OBSERVED AS A RESULT OF THIS TEST.

6. POST-TEST PROCEDURES: REPAIR OR REPLACE COMPONENTS, INCLUDING JOINTS AND SEALANTS, WHICH LEAK OR ARE OBSERVED TO BE DEFECTIVE, AND RETEST AS DIRECTED. FURNISH A FULL WRITTEN REPORT OF THE TESTING PROCEDURES, RESULTS, AND REVISIONS OR CORRECTIVE PROCEDURES THAT SHALL BE FOLLOWED AS A RESULT OF THE TESTING.



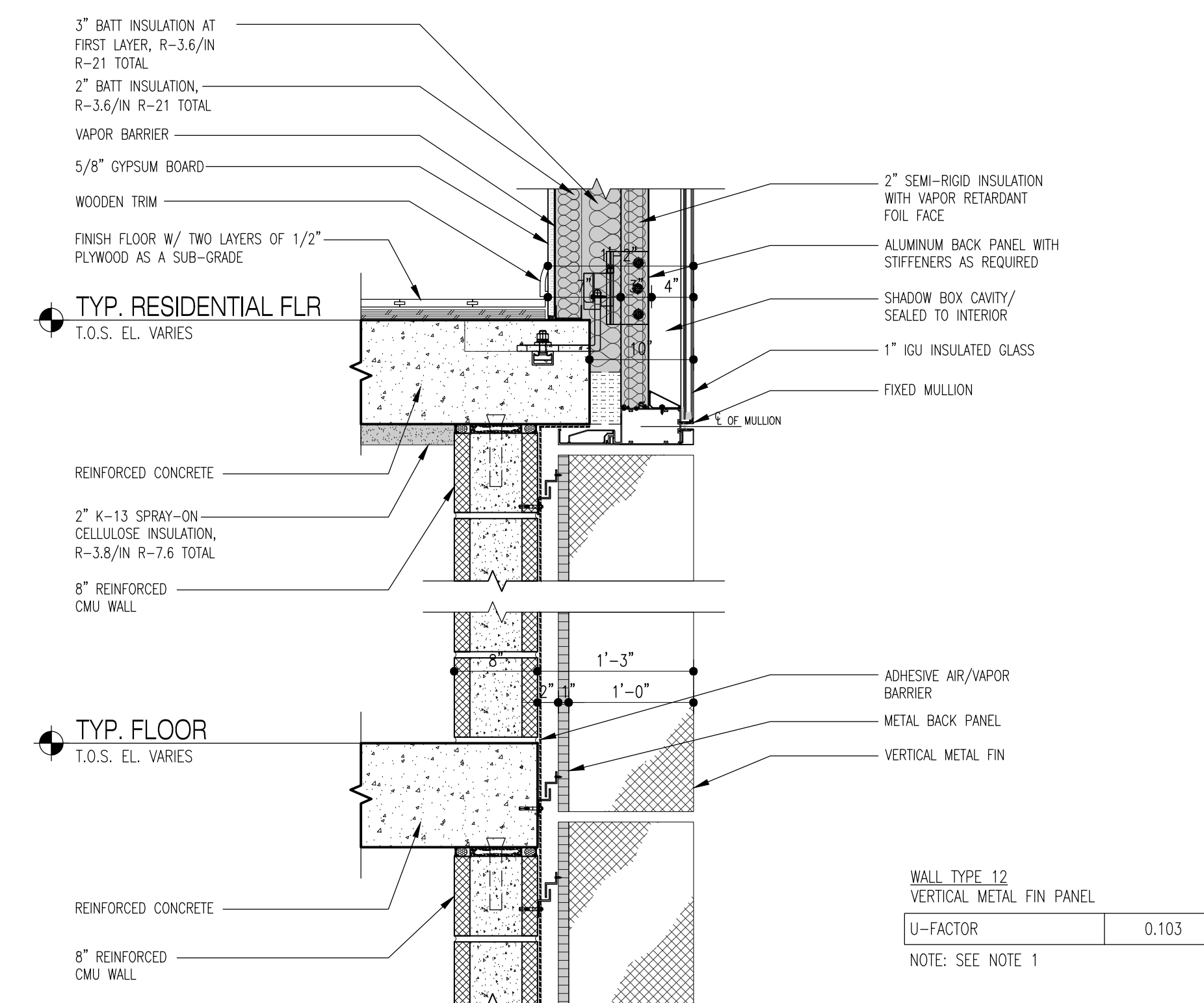
1 WALL TYPE 10 - EXTERIOR DOOR

Scale: 1"=1'-0"



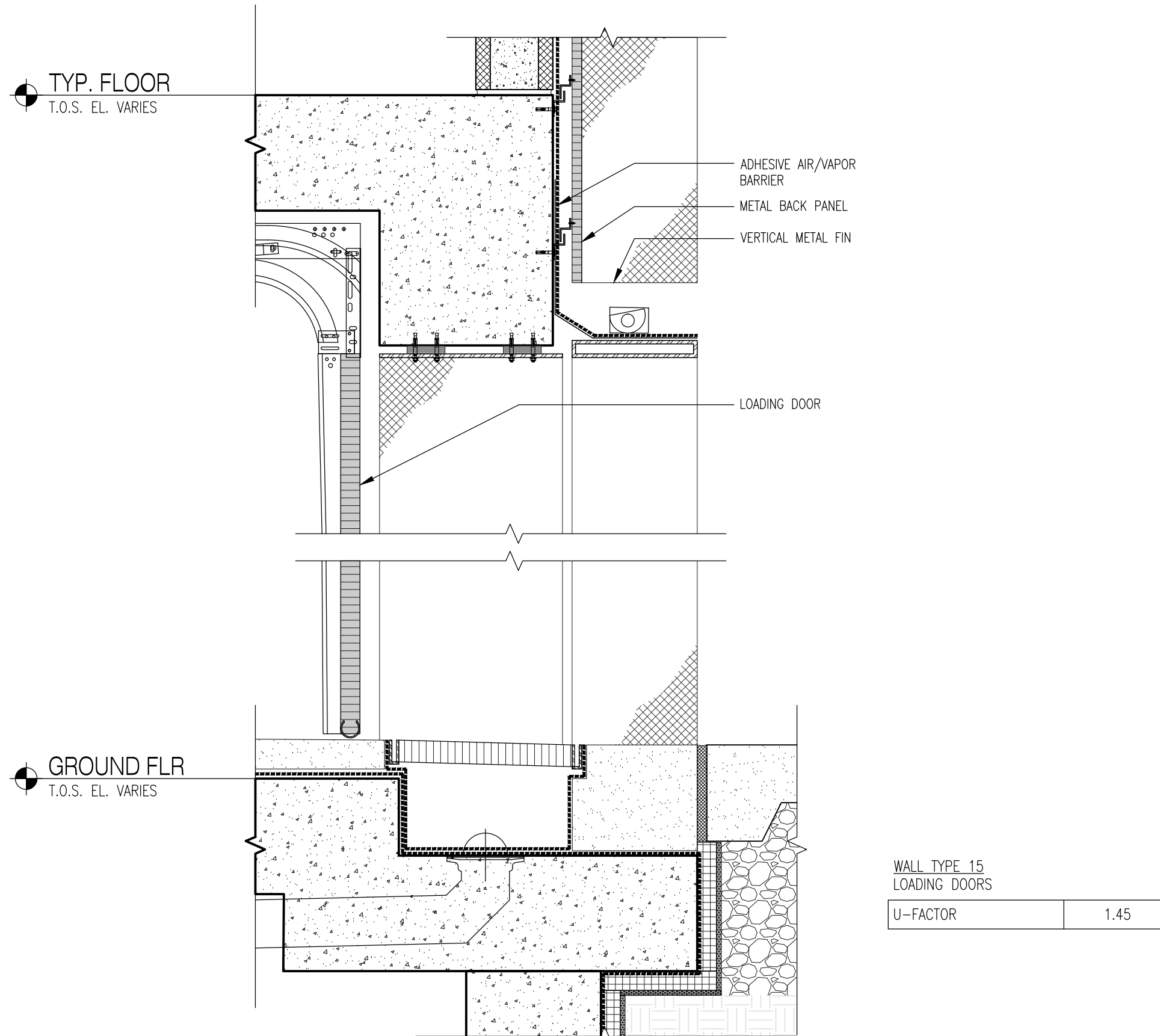
2 WALL TYPE 11 - MECHANICAL LOUVERS

Scale: 1"=1'-0"



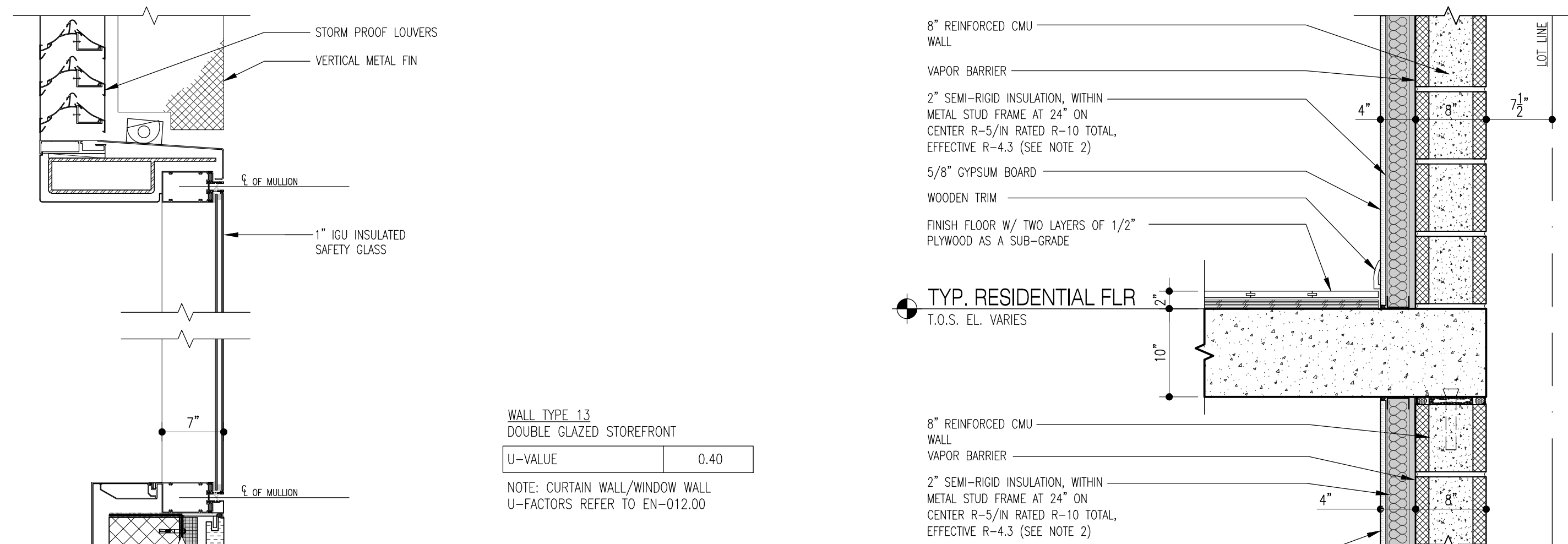
3 WALL TYPE 12 - VERTICAL METAL FIN PANEL

Scale: 1"=1'-0"



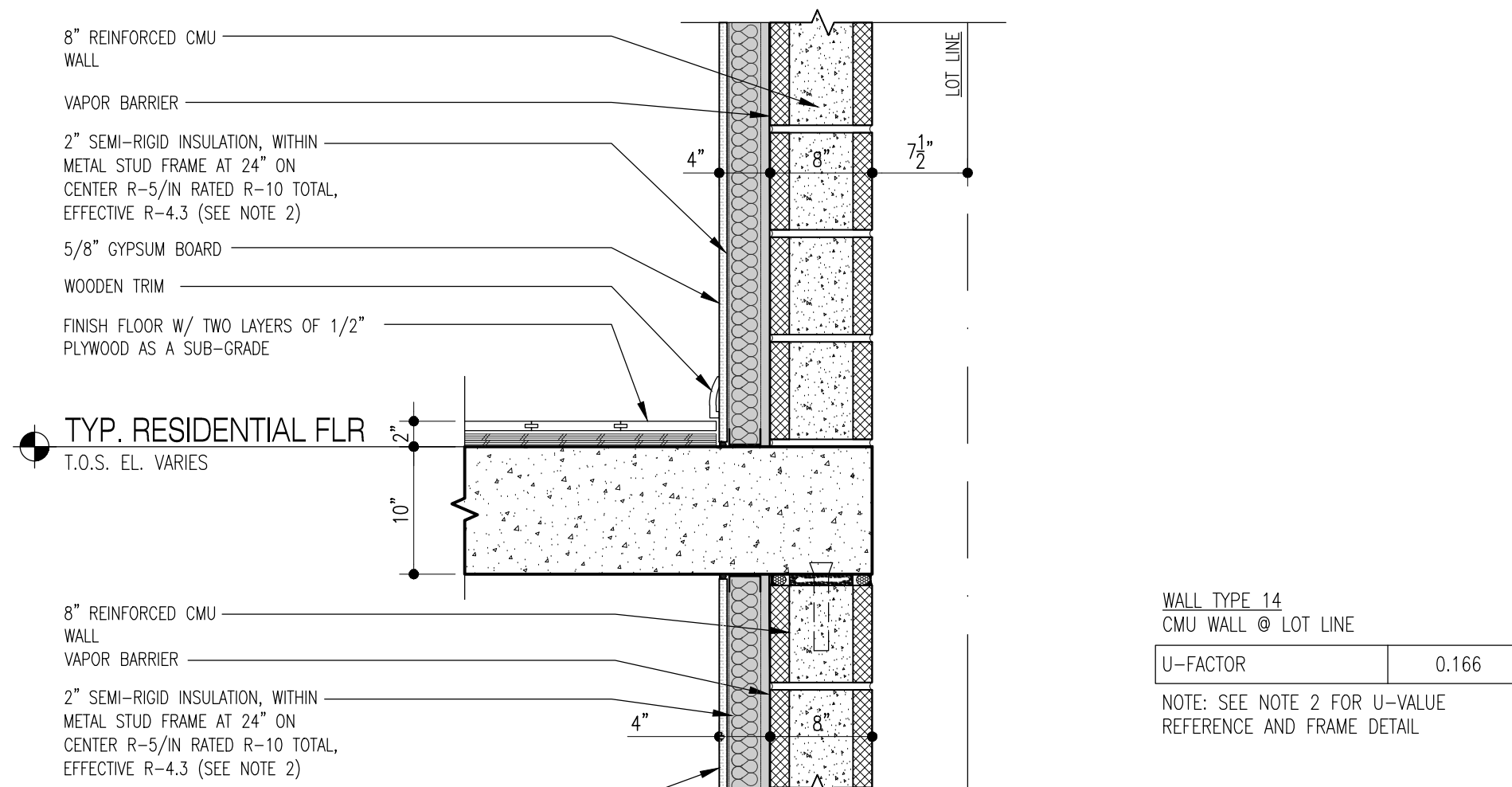
6 WALL TYPE 15 - LOADING DOORS

Scale: 1"=1'-0"



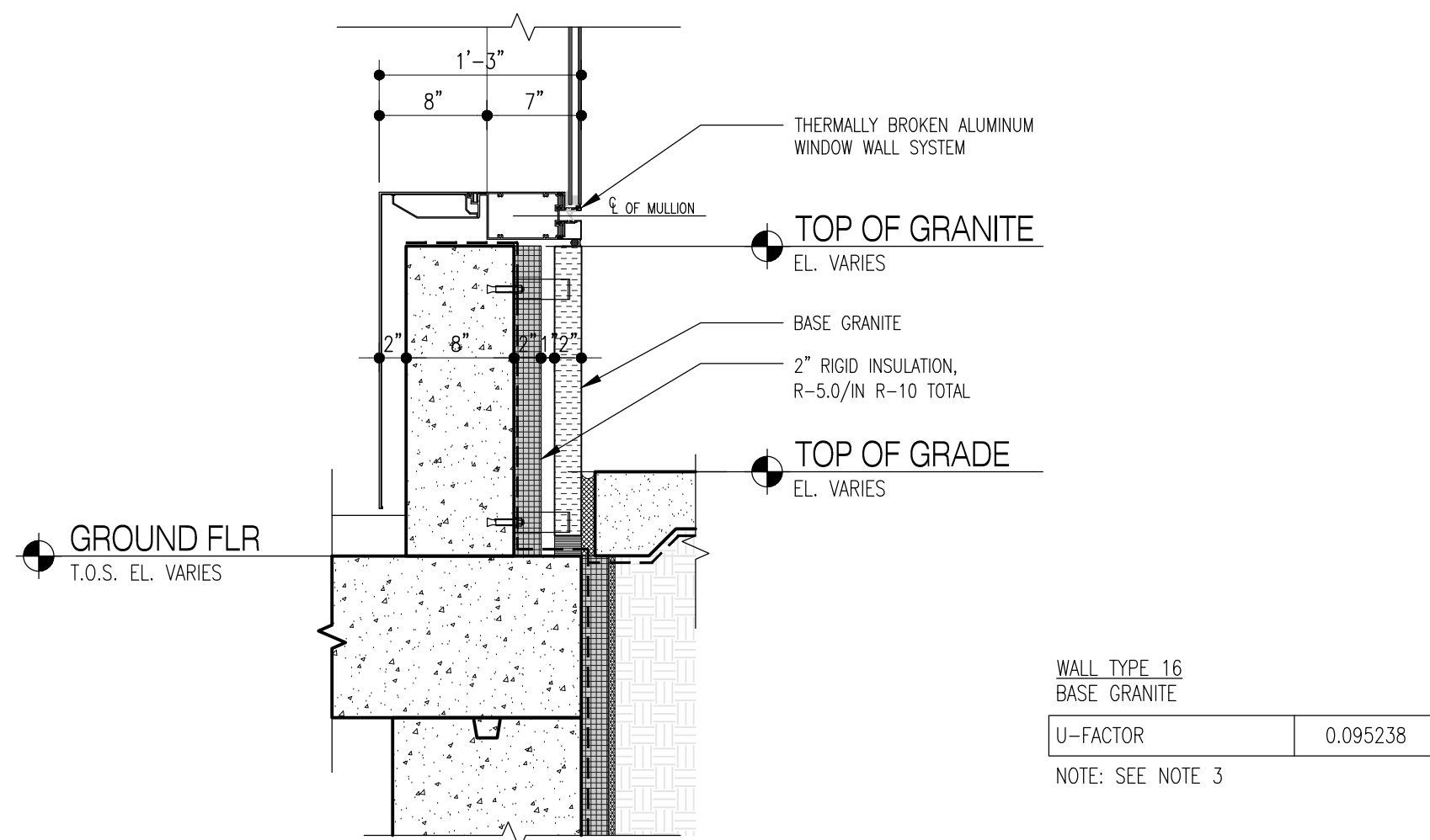
4 WALL TYPE 13 - DOUBLE GLAZED STOREFRONT

Scale: 1"=1'-0"



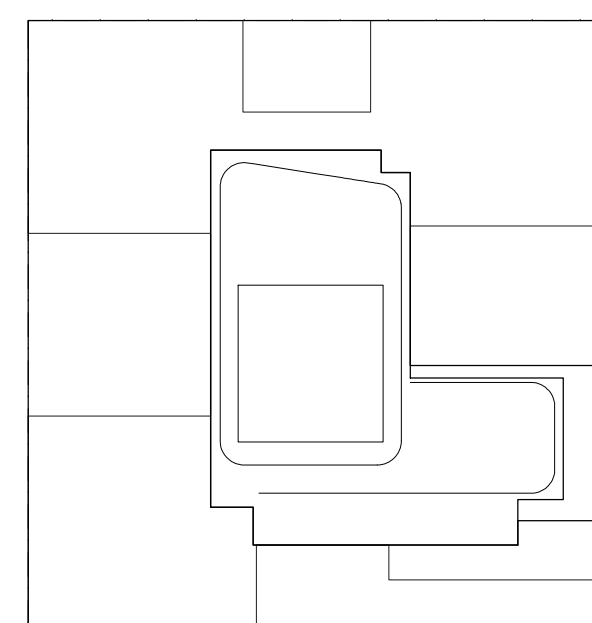
5 WALL TYPE 14 - CMU WALL @ LOT LINE

Scale: 1"=1'-0"



7 WALL TYPE 16 - BASE GRANITE

Scale: 1"=1'-0"



KEY PLAN

NOTES:

1. U-FACTOR REFERS TO ASHRAE-90.1 2013 APPENDIX A TABLE A3.1-1, CONTINUOUS INSULATION UNINTERRUPTED BY FRAMING WITH R-VALUE OF 8 AND ASSEMBLY U-FACTOR FOR 8 IN. MEDIUM WEIGHT 115 LB/FT³ CONCRETE BLOCK WALLS (SOLID GROUTED).

2. U-FACTOR IS CALCULATED BASED ON ASHRAE-90.1 2013 APPENDIX A TABLE A3.1-3, (8\"/>

3. EFFECTIVE R-VALUE REFERS TO ASHRAE-90.1 2013 APPENDIX A TABLE A3.1-4, CONTINUOUS INSULATION UNINTERRUPTED BY FRAMING (INCLUDES GYPSUM BOARD) WITH RATED R-VALUE OF 10

NOT FOR CONSTRUCTION

Number:	Date:	Revision:
1308/2017		ISSUE FOR DOB
1008/2017		ISSUE FOR DOB
08/15/2017		95% CD SET AND # 3
08/25/2017		ISSUE FOR DOB
06/02/2017		65% CD SET
03/04/2017		55% CD SET
03/10/2017		ISSUED FOR DOB
03/01/2017		ISSUED FOR DOB
02/14/2017		ISSUED FOR DOB
01/07/2017		SUPERSTRUCTURE SET
01/05/2017		ISSUED FOR DOB
11/17/2016		FAADE FRAMING SET
11/11/2016		100% DISPOSITION HDS SET
10/12/2016		ISSUED FOR DOB
02/05/2016		DOB FILING SET

Number: Date: Revision:

Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
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DOB STAMPS & SIGNATURES:

DWG TITLE:
ENERGY CODE WALL DETAILS

SEAL & SIGNATURE:
RED STEPHEN ARCHITECT
DATE: 12/08/2017
PROJECT #: 15412
SCALE: AS NOTED
EN-011.00
DWG NO.



PROJECT: CITY VIEW TOWER

CLIENT: YUANDA

SUBJECT: THERMAL CALCULATIONS: U-FACTOR & DEW POINT ANALYSIS

DATE: JUNE 2, 2017

PREVIOUS SUBMITTALS: N/A

8070 Park Lane • Suite 400 • Dallas, Texas 75231 USA • P (972) 437-4200 • F (972) 437-4562 • cdc-usa.com



RESULTS:

U-Factor Analysis:

The total fenestration product thermal transmittance (U-Factor) was calculated using NFRC approved simulation programs, WINDOW 7.4 and THERM 7.4, using NFRC 100 methods for the typical curtain wall system. The thermal transmittance of each framing element was area-weighted to determine the overall system performance. The results may be found below:

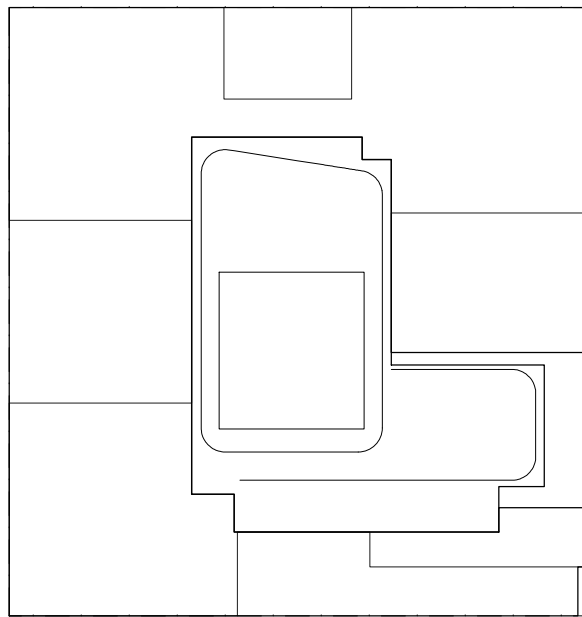
Spacer Used: 16mm Aluminum Spacer

Glass Makeup: 6mm Clear w/ Low-E on #2 surface
16mm Air Cavity (Argon Fill)
8mm Clear

Test Conditions: T_{in} = 69.8 °F
T_{out} = -0.4 °F
V_{wind} = 12.3 mph

Results: Curtain Wall System
Vision U-Factor: 0.38 Btu/hr-ft2-F
Spandrel U-Factor: 0.17 Btu/hr-ft2-F
Overall U-Factor: 0.31 Btu/hr-ft2-F

Window Wall System
Vision U-Factor: 0.40 Btu/hr-ft2-F
Spandrel U-Factor: 0.30 Btu/hr-ft2-F
Overall U-Factor: 0.39 Btu/hr-ft2-F



NOTES:

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12/08/2017	ISSUE FOR DOB
10/08/2017	ISSUE FOR DOB
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08/25/2017	ISSUE FOR DOB
08/02/2017	ISSUE FOR DOB
02/04/2017	ISSUE FOR DOB
03/10/2017	ISSUE FOR DOB
03/01/2017	ISSUE FOR DOB
02/14/2017	ISSUE FOR DOB
01/27/2017	ISSUE FOR DOB
01/25/2017	ISSUE FOR DOB
11/17/2016	ISSUE FOR DOB
11/01/2016	ISSUE FOR DOB
10/12/2016	ISSUE FOR DOB
02/05/2016	ISSUE FOR DOB

Number:	Date:	Revision:
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Project: City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client: Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
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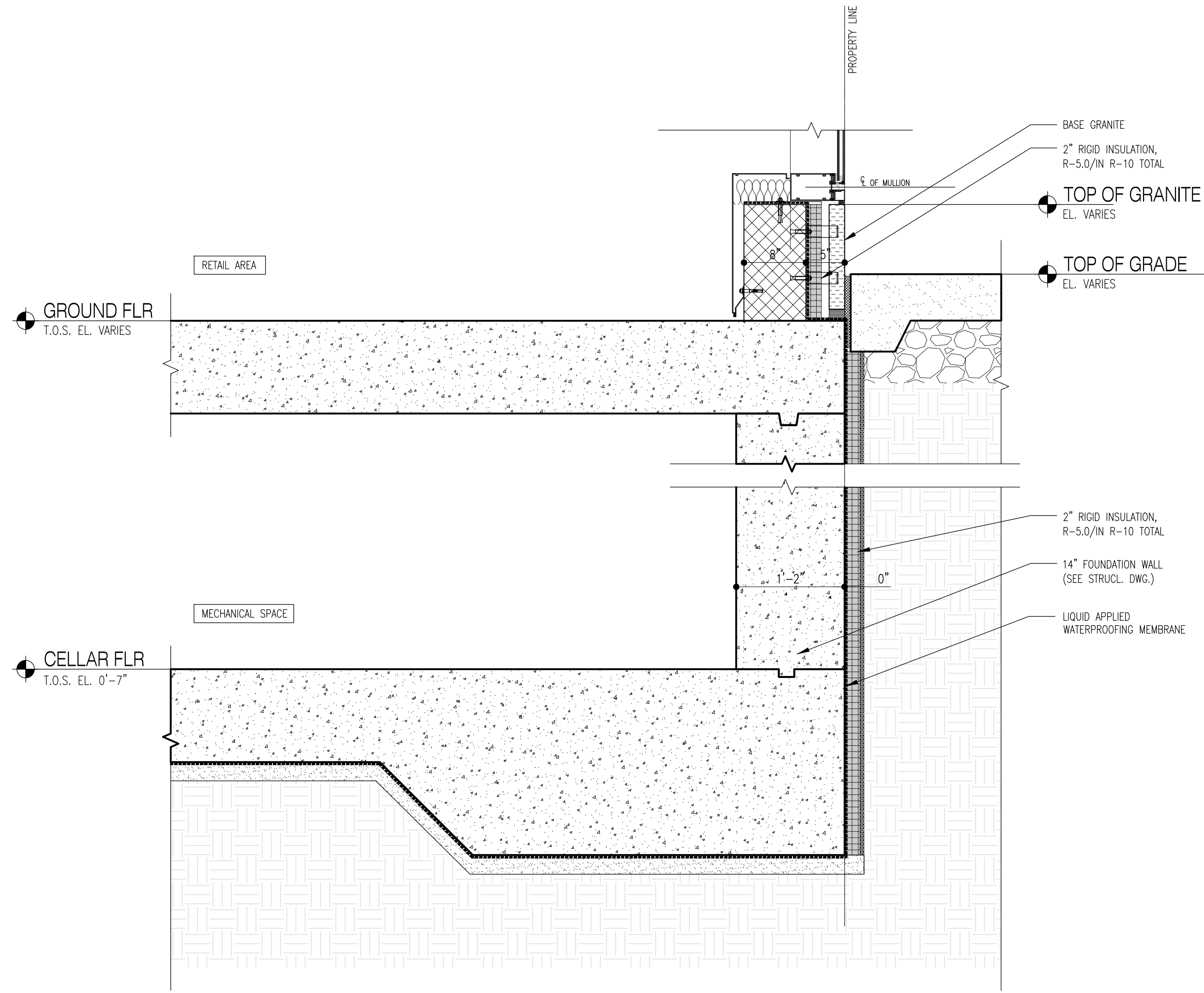
Architect: HILL | WEST ARCHITECTS
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Consultant: DESIMONE CONSULTING ENGINEERS
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DOB STAMPS & SIGNATURES:

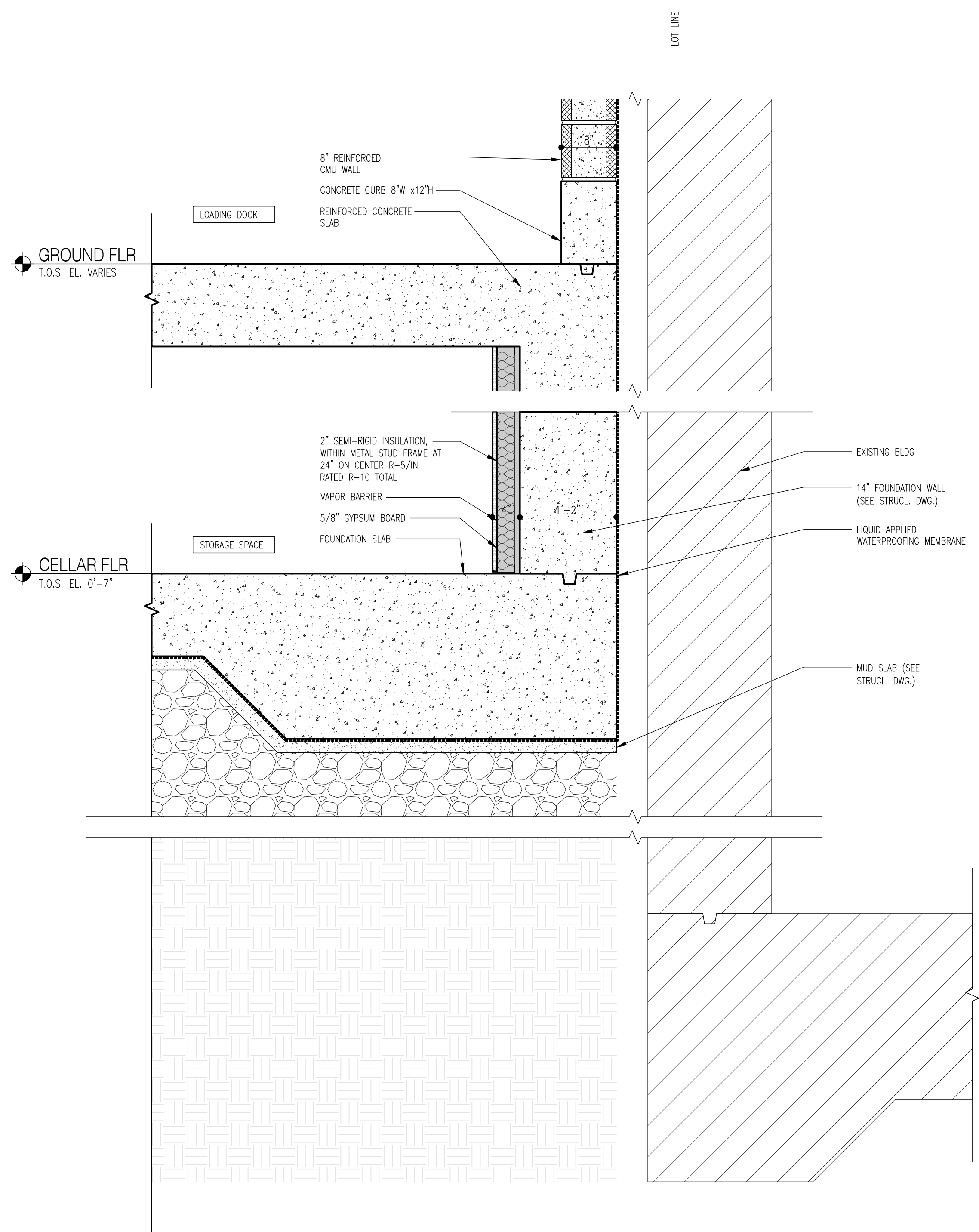
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SEAL & SIGNATURE: PROJECT # 15412 SCALE: AS NOTED DWG NO. EN-012.00



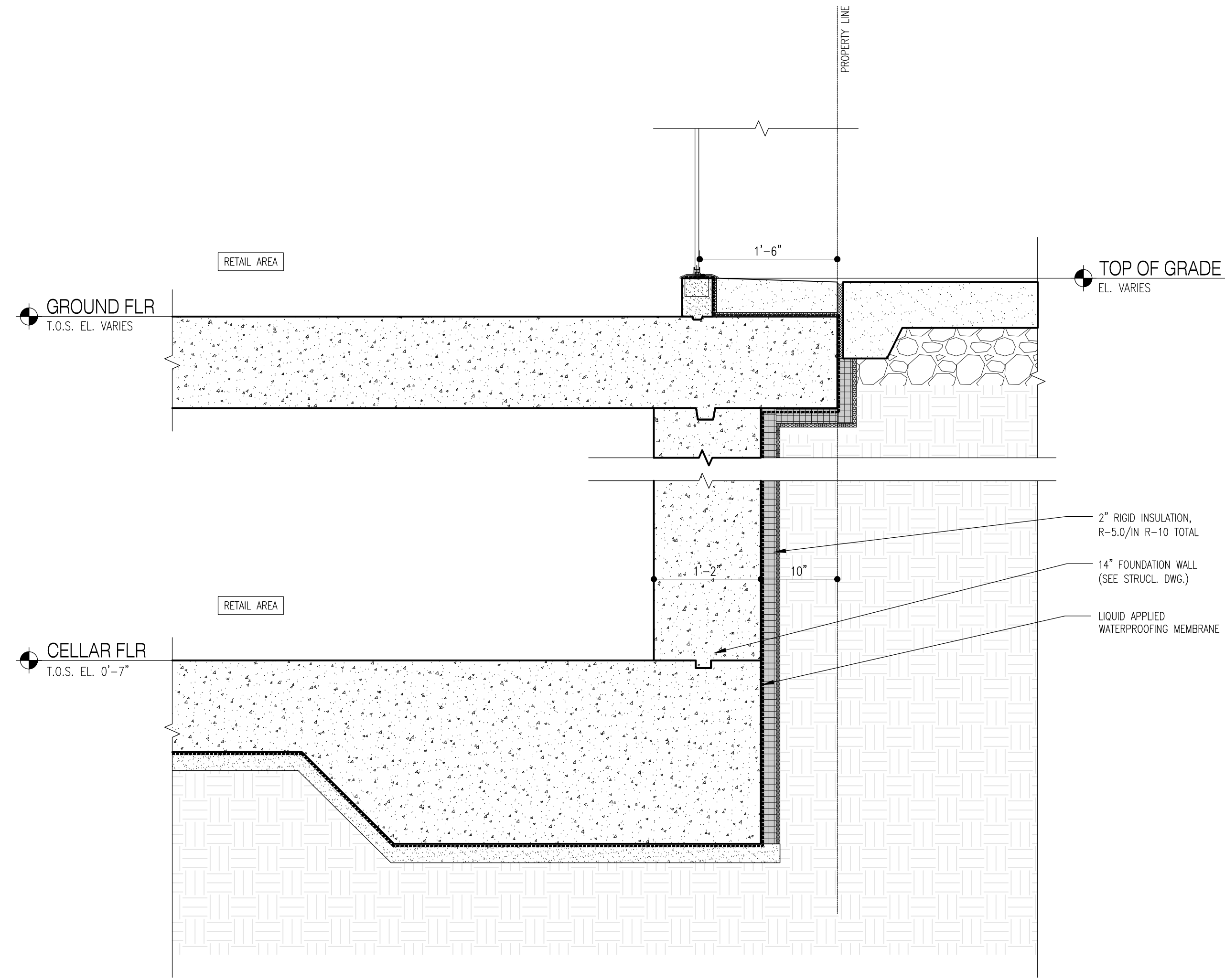
WALL TYPE 17
SOUTH FOUNDATION WALL
C-FACTOR 0.087
NOTE: SEE NOTE 1

1 WALL TYPE 17 -SOUTH FOUNDATION WALL
Scale: 1"=1'-0"



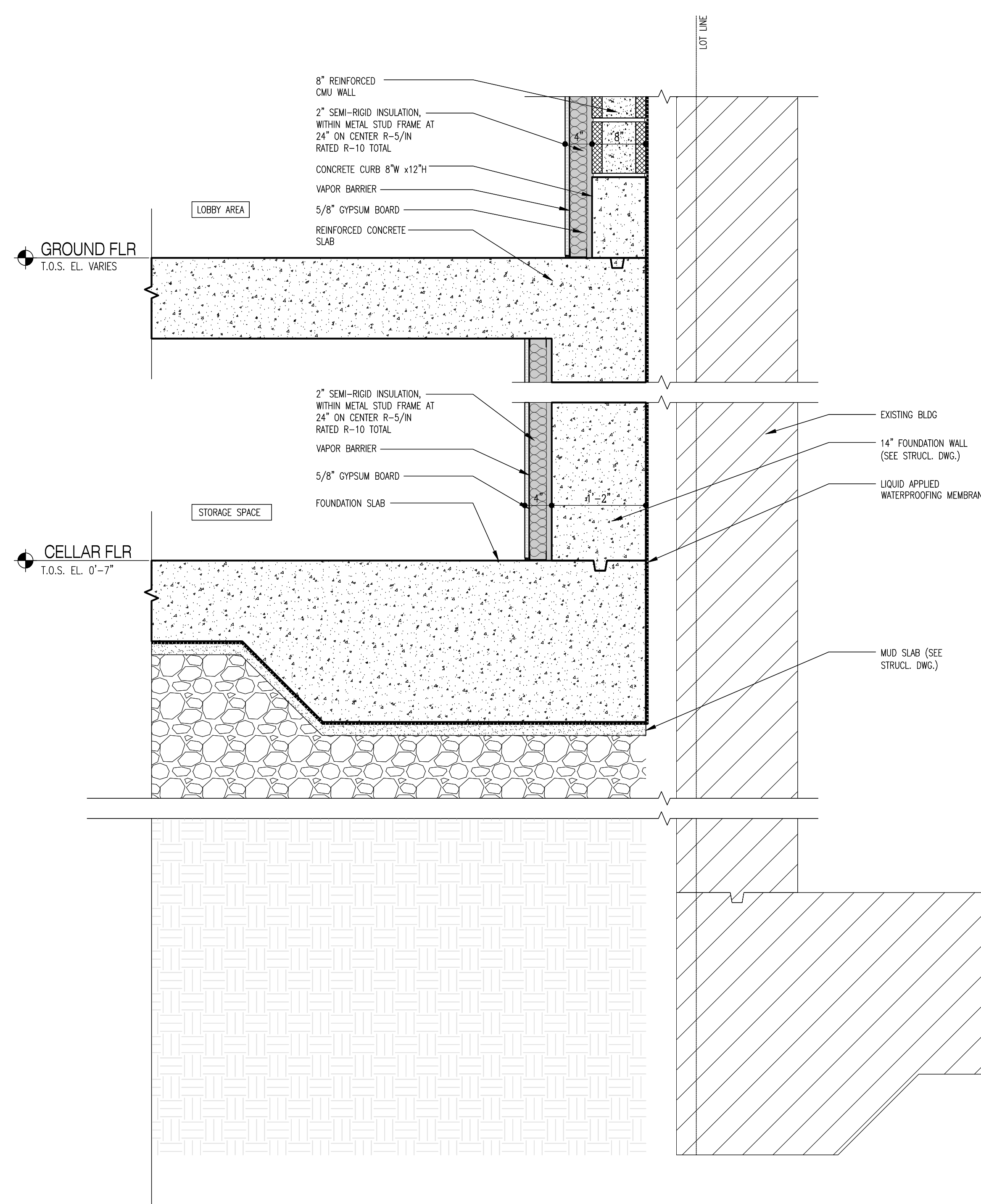
WALL TYPE 20
FOUNDATION WALL AT LOT LINE
C-FACTOR 0.174
NOTE: SEE NOTE 2

4 WALL TYPE 20 -FOUNDATION WALL AT LOT LINE
Scale: 1"=1'-0"



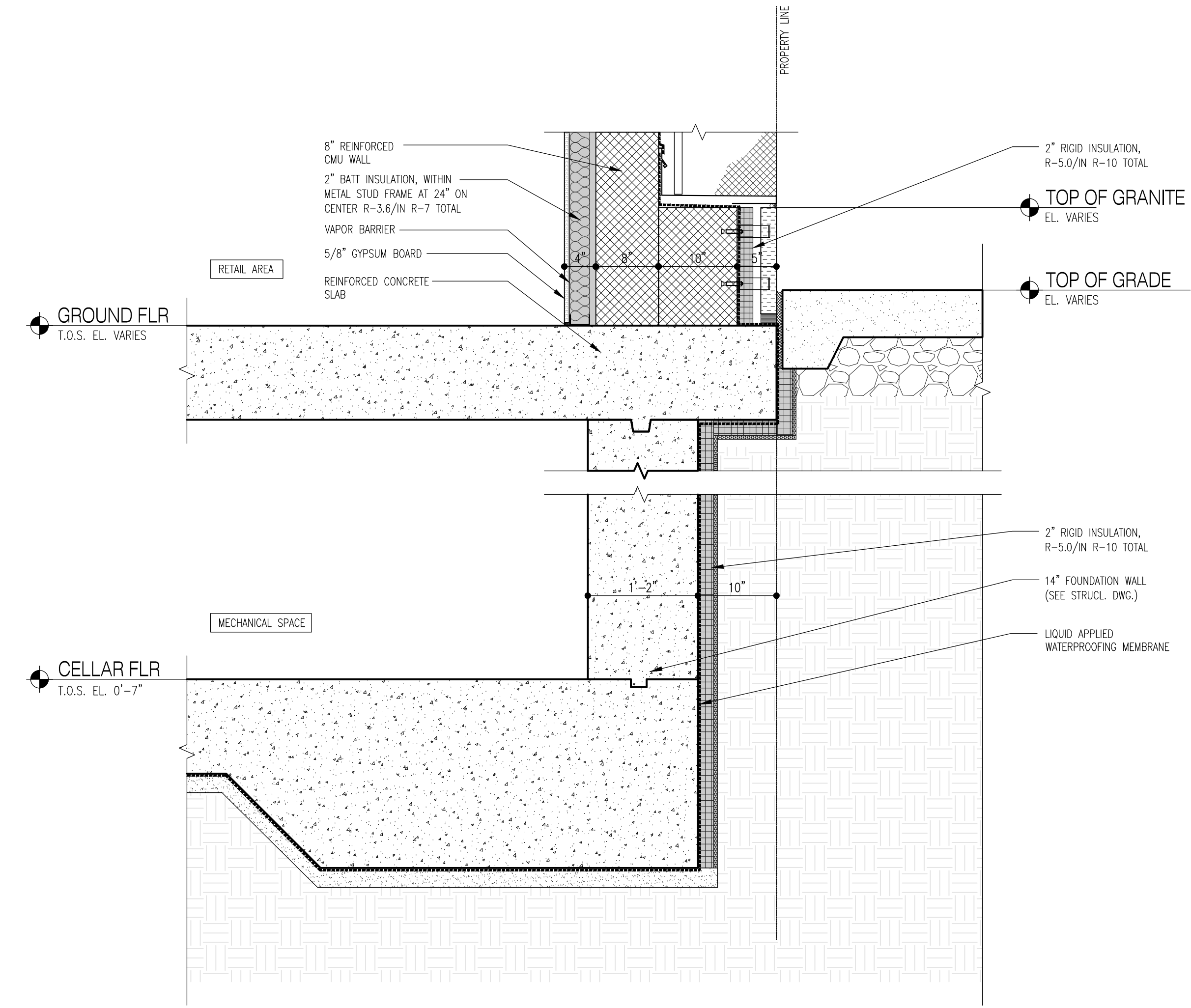
WALL TYPE 18
NORTH FOUNDATION WALL
C-FACTOR 0.087
NOTE: SEE NOTE 1

2 WALL TYPE 18 -NORTH FOUNDATION WALL
Scale: 1"=1'-0"



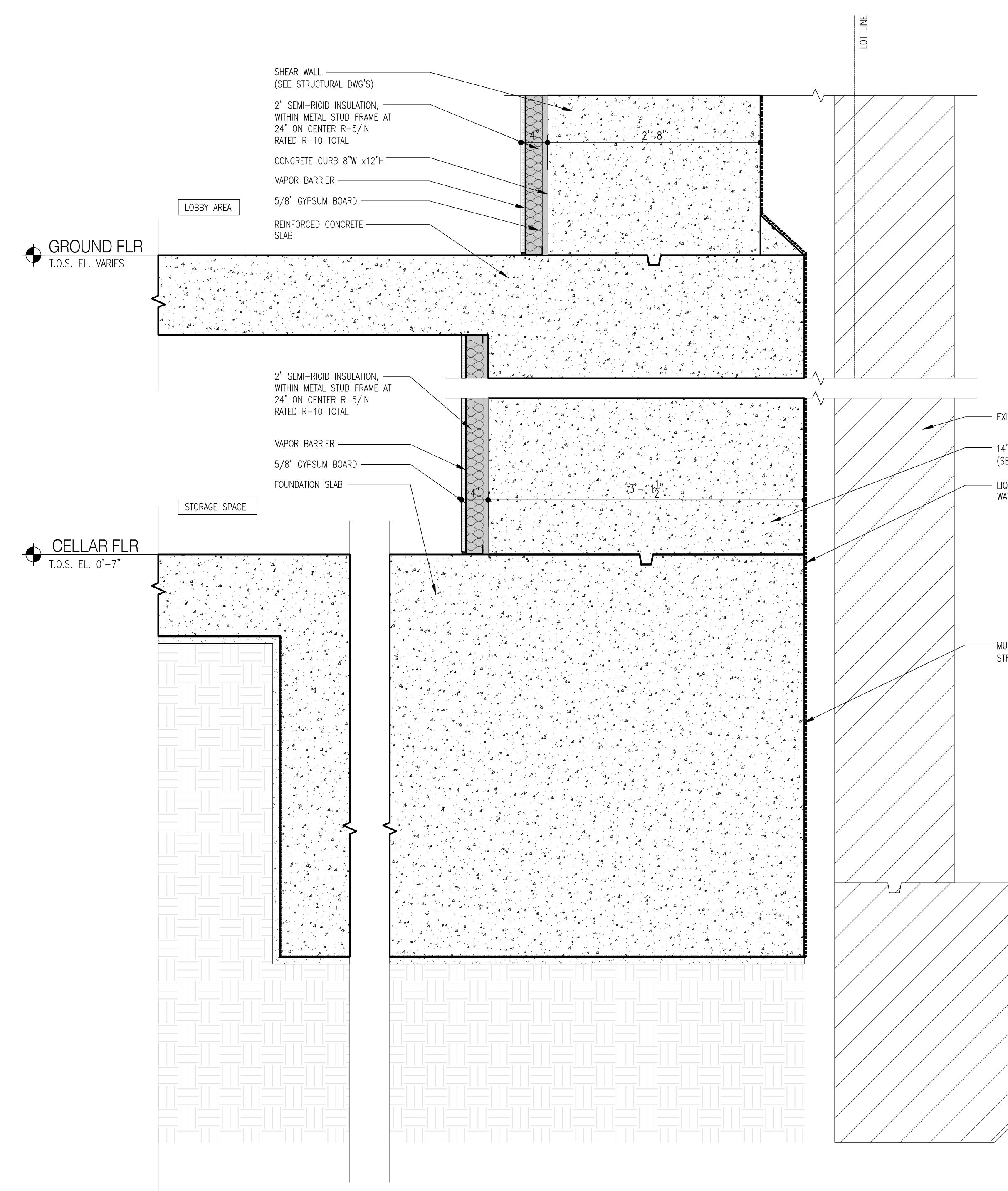
WALL TYPE 21
FOUNDATION WALL AT LOT LINE
C-FACTOR 0.174
NOTE: SEE NOTE 2

5 WALL TYPE 21 -FOUNDATION WALL AT LOT LINE
Scale: 1"=1'-0"



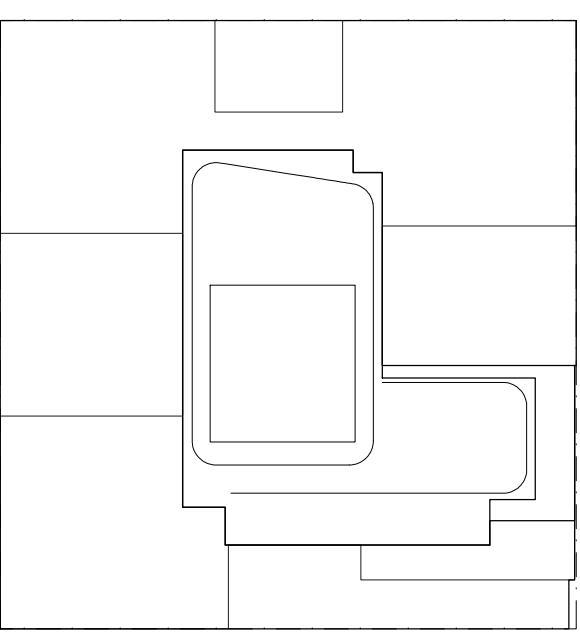
WALL TYPE 19
FOUNDATION WALL AT LOT LINE
C-FACTOR 0.087
NOTE: SEE NOTE 1

3 WALL TYPE 19 -NORTH FOUNDATION WALL
Scale: 1"=1'-0"



WALL TYPE 22
FOUNDATION WALL AT LOT LINE
C-FACTOR 0.174
NOTE: SEE NOTE 2

6 WALL TYPE 22 -FOUNDATION WALL AT LOT LINE
Scale: 1"=1'-0"



KEY PLAN

NOTES:

1. R-VALUE OF 14" FOUNDATION WALL WITH INSULATION REFERS TO ASHRAE 90.1-2013 APPENDIX A TABLE A9.4.3-1 CONCRETE AT R=0.0625/IN.
R-VALUE OF 5/8" GYPSUM BOARD REFER TO ASHRAE 90.1-2013 APPENDIX A TABLE A9.4.3-1 5/8" GYPSUM BOARD AT R=0.56.
C-FACTOR=1/(14"R-0.0625+R-0.56+R-10)= C-0.087
2. R-VALUE OF MINIMUM 14" FOUNDATION WALL WITH 2" SEMI-RIGID INSULATION WITHIN METAL STUD FRAME AT 24" ON CENTER REFERS TO ASHRAE 90.1-2013 APPENDIX A TABLE A9.4.3-1 5/8" GYPSUM BOARD AT R=0.56.
R-VALUE OF 2" SEMI-RIGID INSULATION R-10 WITHIN METAL STUD FRAME AT 24" ON CENTER REFERS TO ASHRAE 90.1-2013 APPENDIX A TABLE A9.4.3-1 5/8" GYPSUM BOARD AT R=0.56.
C-FACTOR=1/(14"R-0.0625+R-0.56+R-4.3)= C-0.174

NOT FOR CONSTRUCTION

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12/08/2017	ISSUE FOR DOB	
10/08/2017	ISSUE FOR DOB	
08/15/2017	ISSUE FOR DOB	
08/25/2017	ISSUE FOR DOB	
03/04/2017	ISSUE FOR DOB	
03/10/2017	ISSUE FOR DOB	
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01/07/2017	ISSUE FOR DOB	
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02/05/2016	ISSUE FOR DOB	

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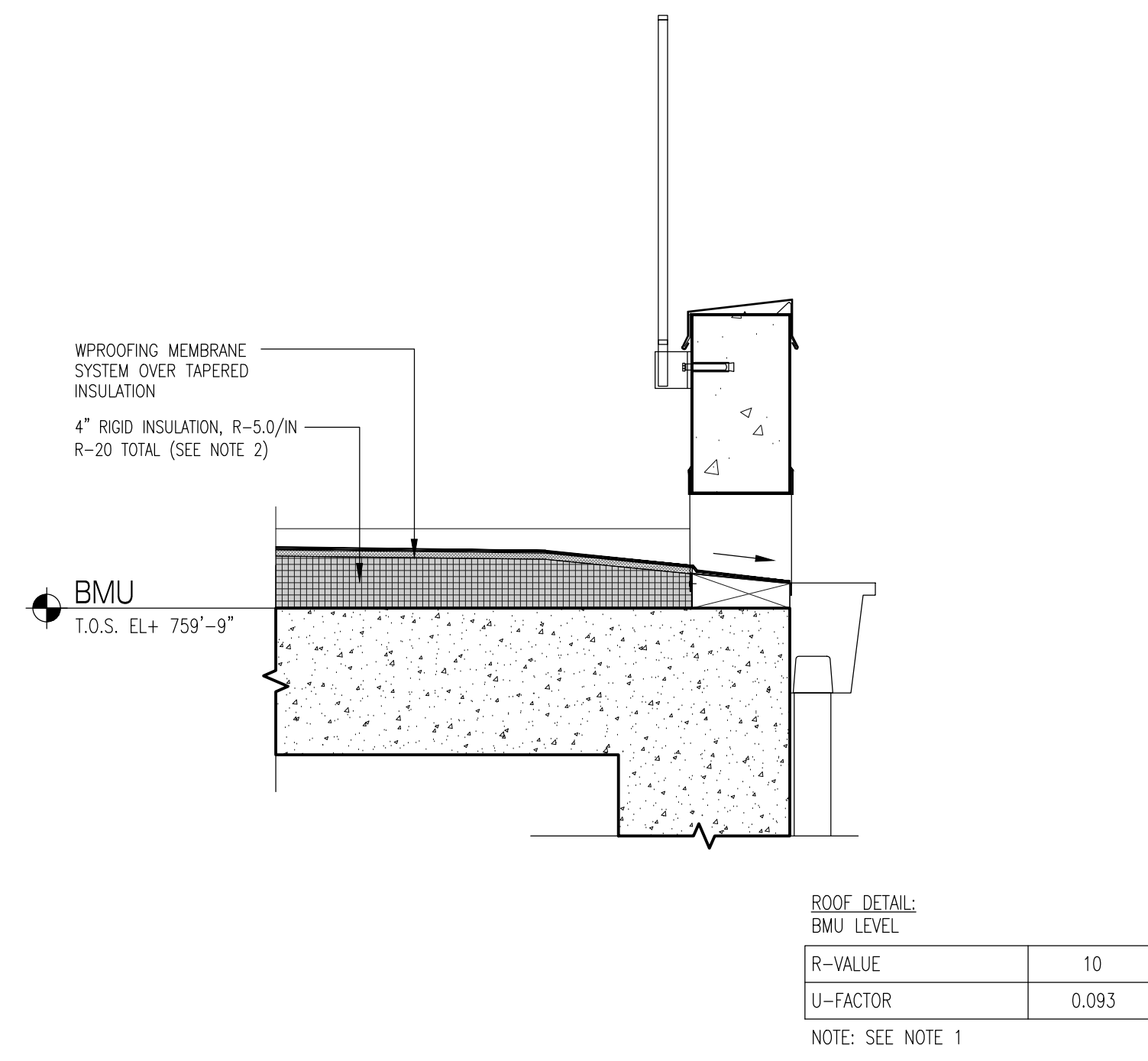
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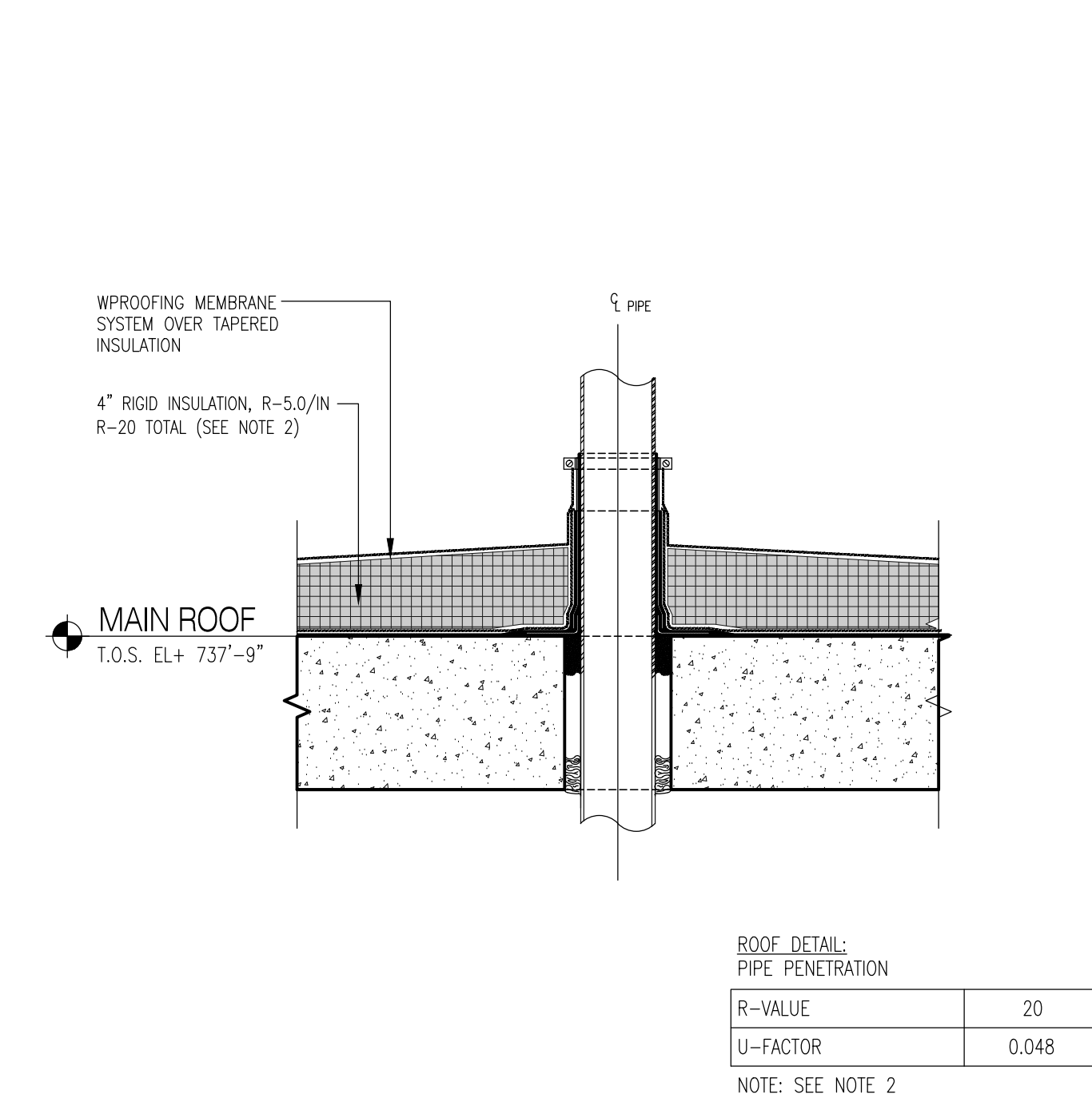
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DWG TITLE:
**ENERGY CODE
FOUNDATION WALL DETAILS**

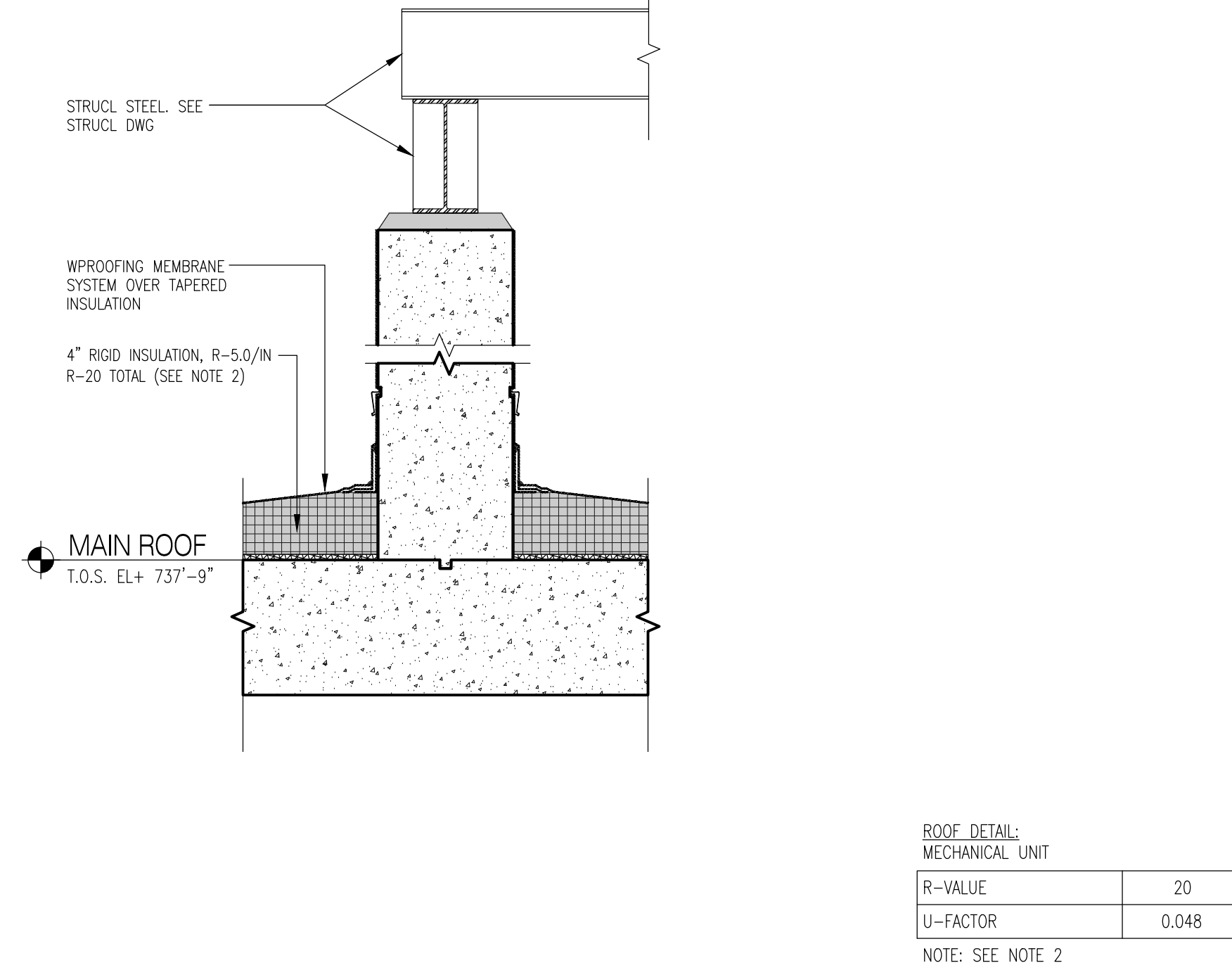
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RED STEPHEN ARCHITECT
PROJECT # 15812
SCALE: AS NOTED
EN-013.00
DWG NO.



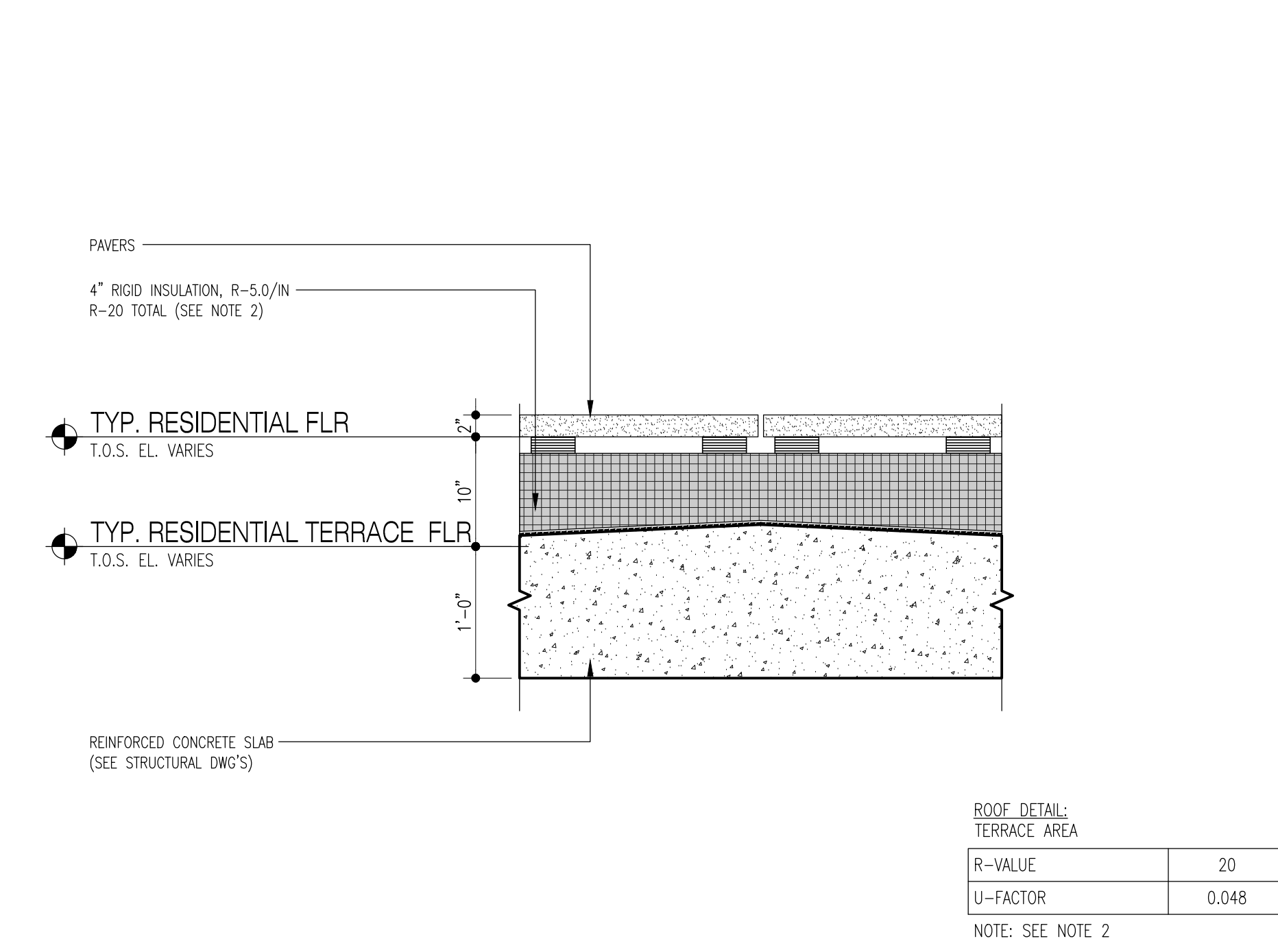
1 ROOF DETAIL @ BMU LEVEL
Scale: 1"=1'-0"



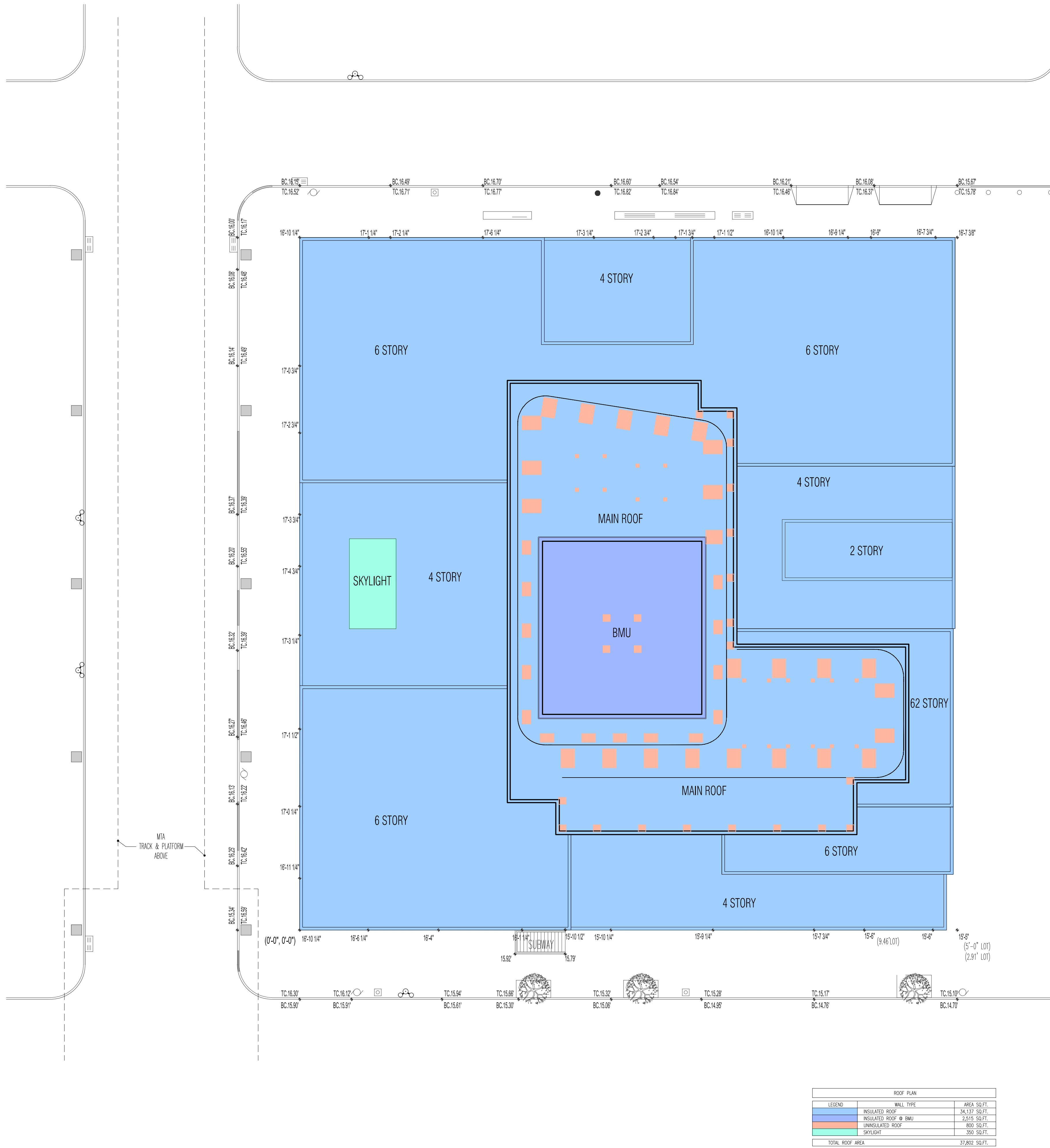
2 ROOF DETAIL @ PIPE PENETRATION
Scale: 1"=1'-0"



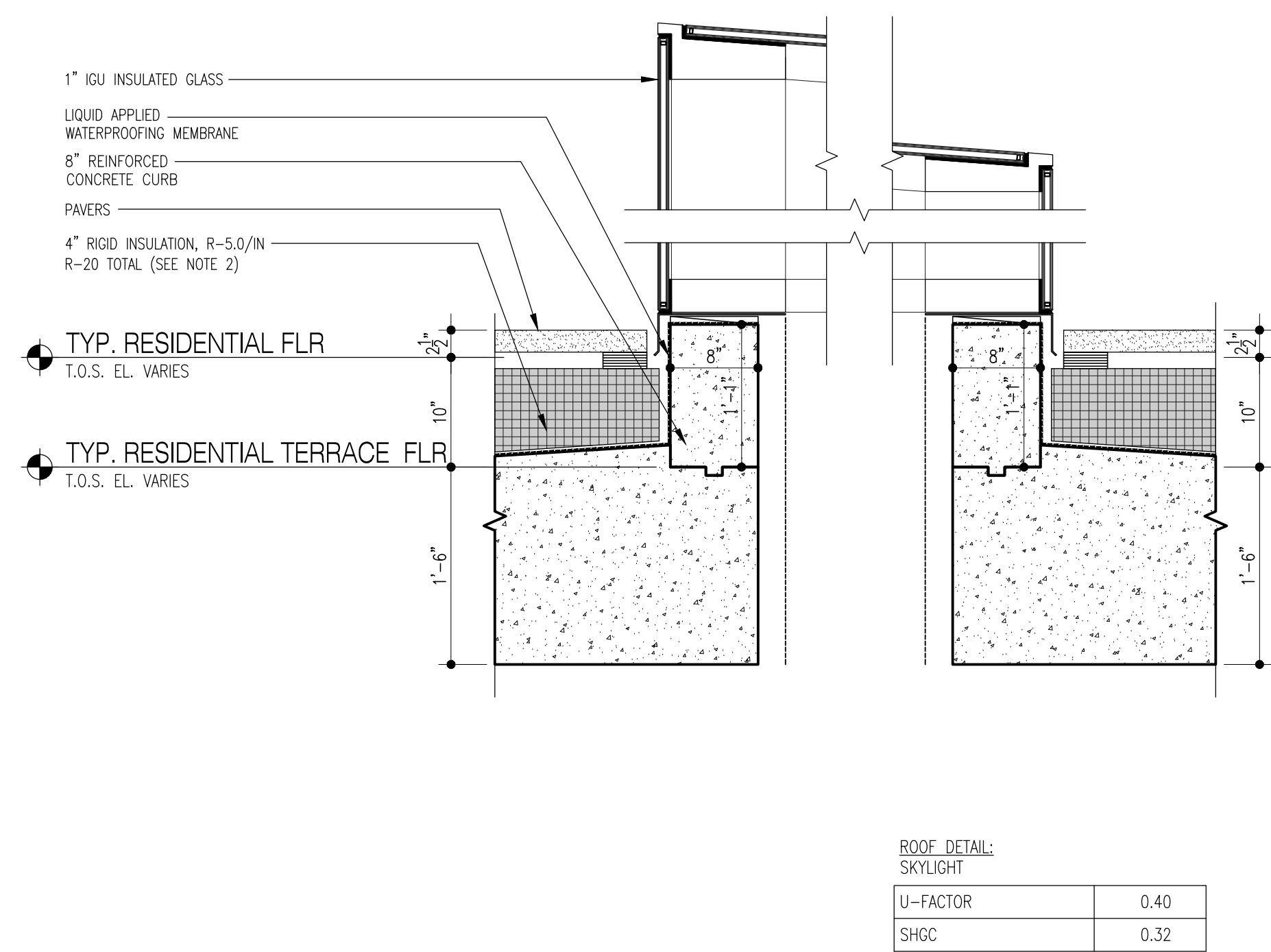
3 ROOF DETAIL @ MECH. UNIT
Scale: 1"=1'-0"



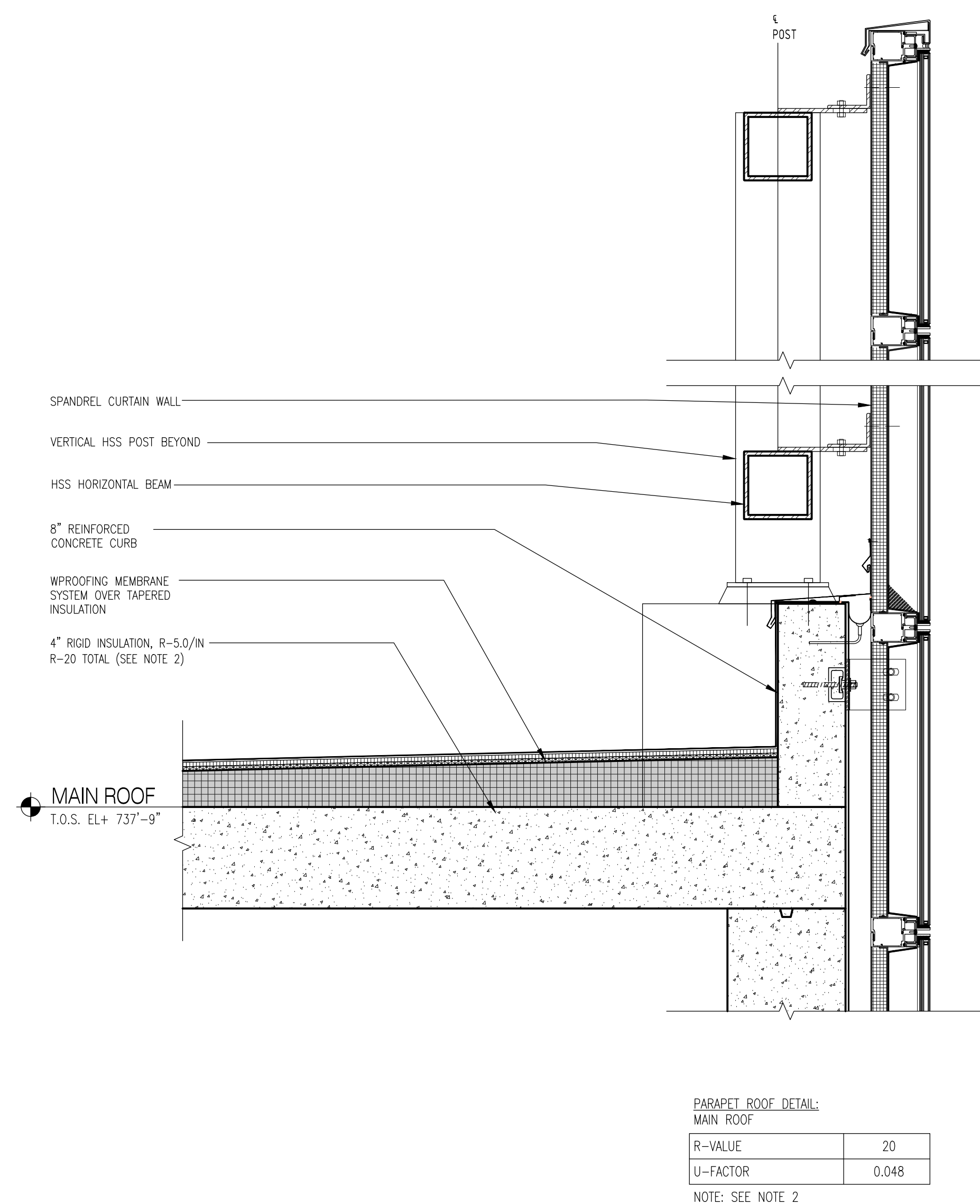
4 ROOF DETAIL @ TERRACE AREA
Scale: 1"=1'-0"



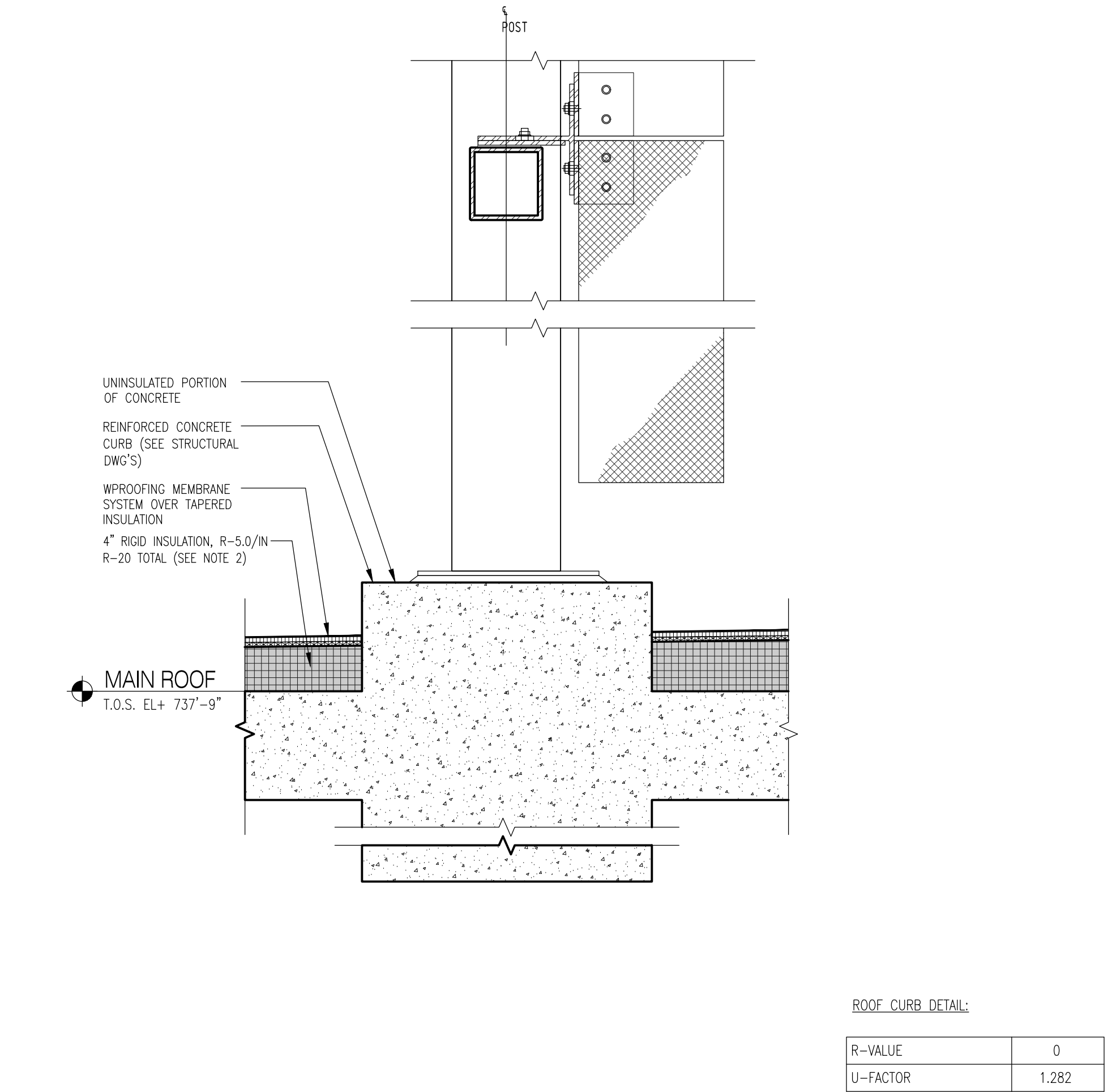
7 ROOF PLAN
Scale: 1/16"=1'-0"



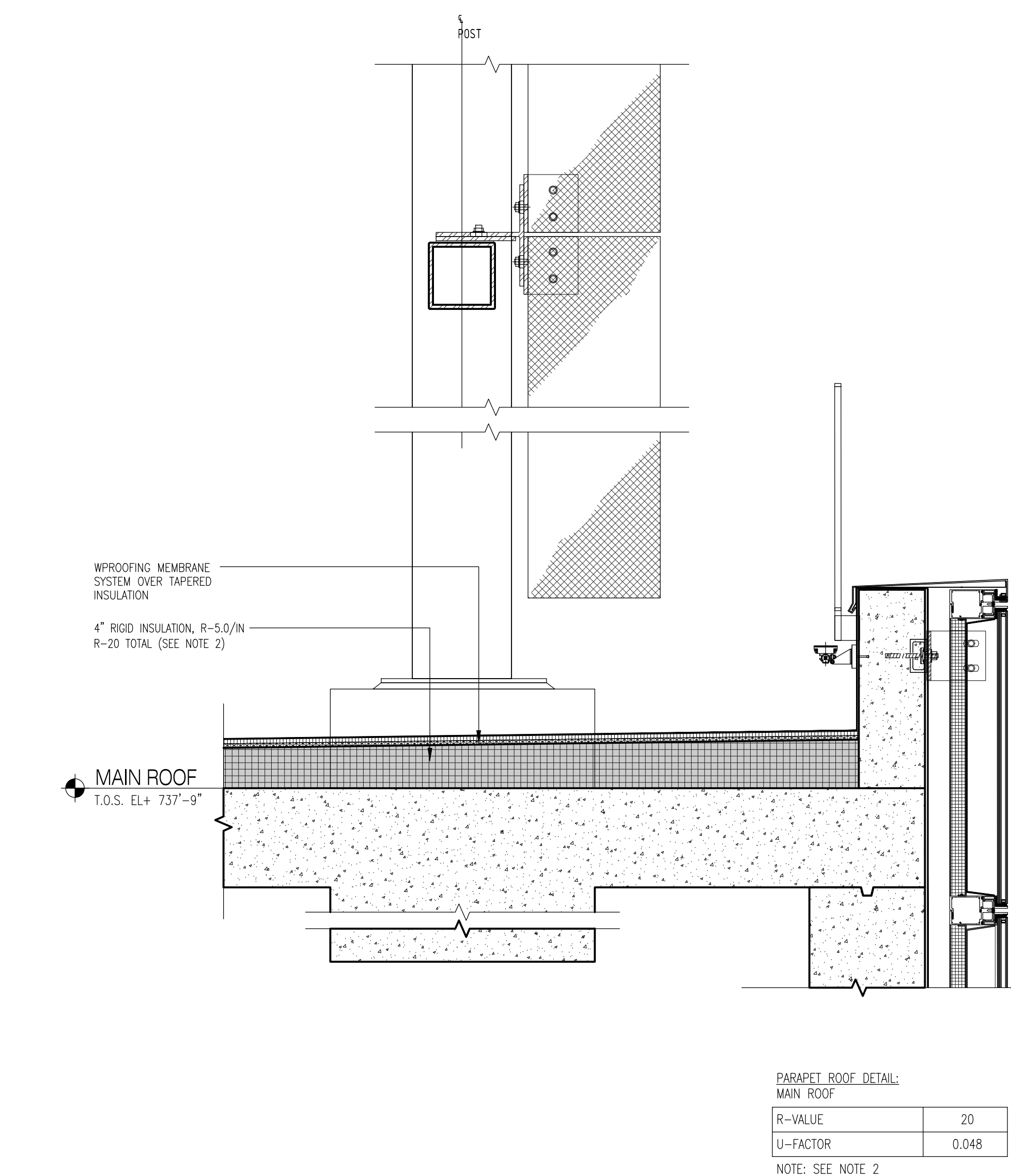
5 ROOF DETAIL @ SKYLIGHT
Scale: 1"=1'-0"



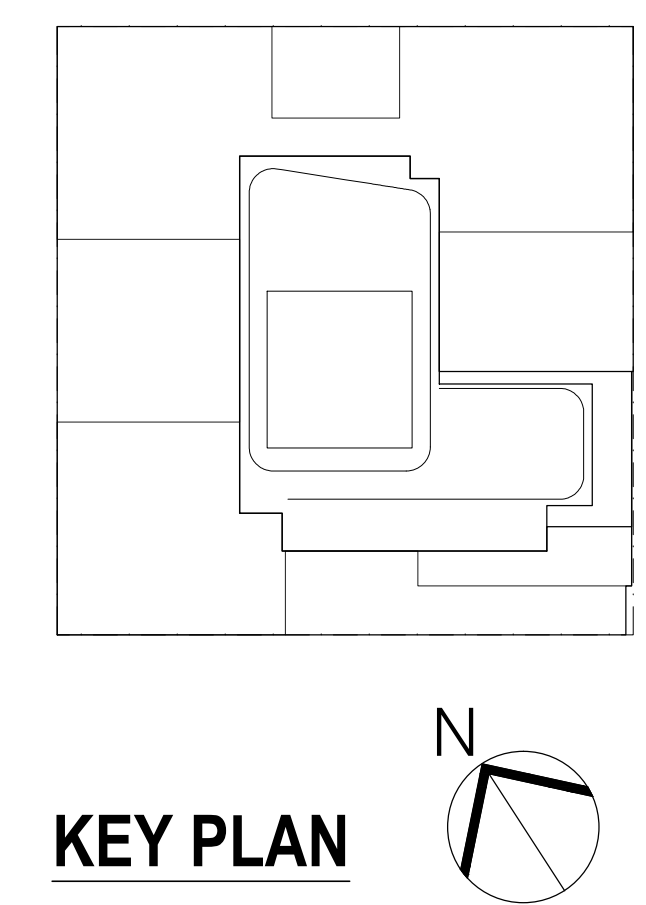
8 ROOF DETAIL @ MAIN ROOF
Scale: 1"=1'-0"



6 ROOF CURB DETAIL
Scale: 1"=1'-0"



9 ROOF DETAIL @ MAIN ROOF
Scale: 1"=1'-0"



KEY PLAN

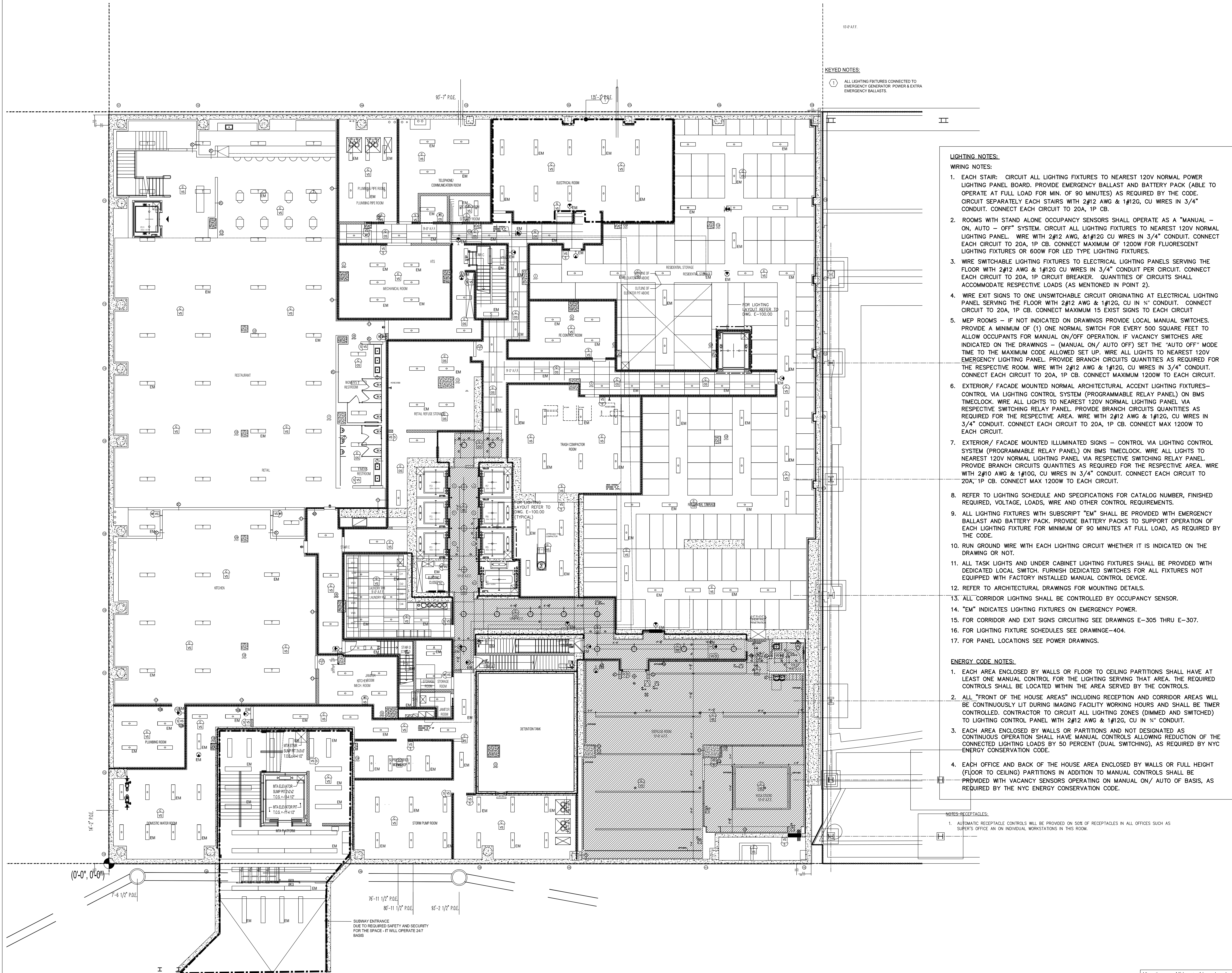
NOTES:

1. U-FACTOR REFERS TO ASHRAE 90.1-2013 APPENDIX A TABLE A2.2.3

2. WORST CASE R-20 IS USED IN ORDER TO BE CONSERVATIVE. U-FACTOR REFERS TO ASHRAE 90.1-2013 APPENDIX A TABLE A2.2.3

NOT FOR CONSTRUCTION	
12/08/2017	ISSUE FOR DOB
10/08/2017	ISSUE FOR DOB
08/15/2017	95% CD SET AND # 3
08/25/2017	ISSUE FOR DOB
08/02/2017	65% CD SET
03/04/2017	95% CD SET
03/10/2017	ISSUED FOR DOB
03/01/2017	ISSUED FOR DOB
02/14/2017	ISSUED FOR DOB
01/07/2017	SUPERSTRUCTURE SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FAÇADE PAVING SET
11/11/2016	100% INFORMATION HOS SET
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

Number:	Date:	Revision:
Project: City View Tower at Court Square 23-15 44th Drive Long Island City, NY 11101		
Client: Cityview Tower LLC 112-15 NORTHERN BLVD, CF-2 CORONA, NY 11368 (718) 321-8652		
Architect: HILL WEST ARCHITECTS 11 BROADWAY 17TH FLOOR NEW YORK, NY 10004 T. 212 213 8007		
Consultant: DESIMONE CONSULTING ENGINEERS 140 Broadway 25th Floor New York, NY, 10005 (212) 532-2211 Cosentini Associates Two Pennsylvania Plaza, 3rd FL, New York, NY 10121 (212) 615-3600 Whitehall 11 Broadway, 17th Floor New York, NY 10004 (212) 908-4940		
DOB STAMPS & SIGNATURES:		
DWG TITLE: ENERGY CODE AIR BARRIER SECTION & DETAILS		
SEAL & SIGNATURE: 	DATE: 12/08/2017	PROJECT #: 15412
SCALE: AS NOTED		DWG NO: EN-014.00



KEYED NOTES:

1. ALL LIGHTING FIXTURES CONNECTED TO EMERGENCY GENERATOR POWER & EXTRA EMERGENCY BALLASTS.

LIGHTING NOTES:

WIRING NOTES:

1. EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
2. ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL - ON, AUTO - OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
3. WIRE SWITCHABLE LIGHTING FIXTURES TO ELECTRICAL LIGHTING PANELS SERVING THE FLOOR WITH 2#12 AWG & 1#12G CU WIRES IN 3/4" CONDUIT PER CIRCUIT. CONNECT EACH CIRCUIT TO 20A, 1P CIRCUIT BREAKER. QUANTITIES OF CIRCUITS SHALL ACCOMMODATE RESPECTIVE LOADS (AS MENTIONED IN POINT 2).
4. WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT.
5. MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
6. EXTERIOR/ FACADE MOUNTED NORMAL ARCHITECTURAL ACCENT LIGHTING FIXTURES- CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
7. EXTERIOR/ FACADE MOUNTED ILLUMINATED SIGNS - CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#10 AWG & 1#10G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
8. REFER TO LIGHTING SCHEDULE AND SPECIFICATIONS FOR CATALOG NUMBER, FINISHED REQUIRED, VOLTAGE, LOADS, WIRE AND OTHER CONTROL REQUIREMENTS.
9. ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
10. RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
11. ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
12. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
13. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
14. "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
15. FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
16. FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
17. FOR PANEL LOCATIONS SEE POWER DRAWINGS.

ENERGY CODE NOTES:

1. EACH AREA ENCLOSED BY WALLS OR FLOOR TO CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS.
2. ALL "FRONT OF THE HOUSE AREAS" INCLUDING RECEPTION AND CORRIDOR AREAS WILL BE CONTINUOUSLY LIT DURING IMAGING FACILITY WORKING HOURS AND SHALL BE TIMER CONTROLLED. CONTRACTOR TO CIRCUIT ALL LIGHTING ZONES (DIMMED AND SWITCHED) TO LIGHTING CONTROL PANEL WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT.
3. EACH AREA ENCLOSED BY WALLS OR PARTITIONS AND NOT DESIGNATED AS CONTINUOUS OPERATION SHALL HAVE MANUAL CONTROLS ALLOWING REDUCTION OF THE CONNECTED LIGHTING LOADS BY 50 PERCENT (DUAL SWITCHING), AS REQUIRED BY NYC ENERGY CONSERVATION CODE.
4. EACH OFFICE AND BACK OF THE HOUSE AREA ENCLOSED BY WALLS OR FULL HEIGHT (FLOOR TO CEILING) PARTITIONS IN ADDITION TO MANUAL CONTROLS SHALL BE PROVIDED WITH VACANCY SENSORS OPERATING ON MANUAL ON/ AUTO OF BASIS, AS REQUIRED BY THE NYC ENERGY CONSERVATION CODE.

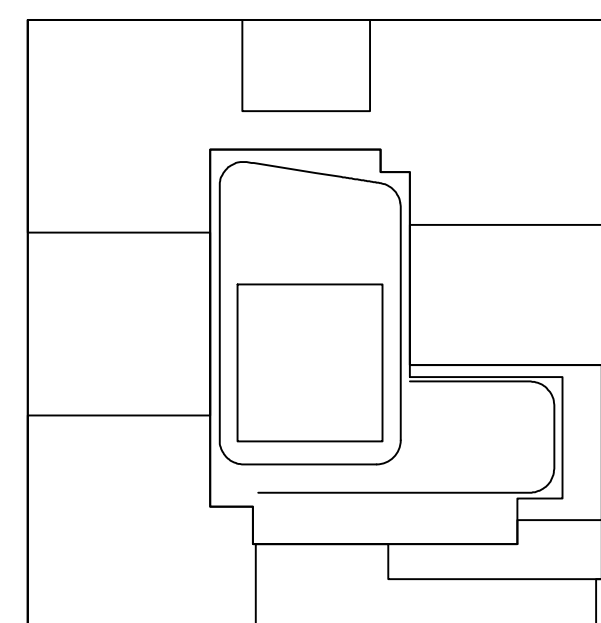
NOTES-RECEPTACLES:

1. AUTOMATIC RECEPTACLE CONTROLS WILL BE PROVIDED ON 50% OF RECEPTACLES IN ALL OFFICES SUCH AS SUPER'S OFFICE AN ON INDIVIDUAL WORKSTATIONS IN THIS ROOM.

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1 2013 AS MODIFIED BY 2016 NYECC APPENDIX CA.

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KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/02/2017	65.63 FOR DOB
08/02/2017	95% CB SET
06/02/2017	95% CB SET
03/24/2017	95% CB SUBMISSION SET
01/02/2017	SUPERSTRUCTURE SET
01/25/2017	65.63 FOR DOB
11/17/2016	FACADE PRKNG SET
11/11/2016	95% DOB SUBMISSION SET
10/12/2016	65.63 FOR DOB
03/02/2016	DOB PRNG SET

Number: Date: Revision:

Project:

City View Tower at
Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:

Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:

HILL | WEST
ARCHITECTS
11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
T. 212 213 8007

Consultant:

DESIMONE
CONSULTING ENGINEERS
140 Broadway 25th Floor
New York, NY, 10005
(212) 532-2211

Cosentini Associates
Two Pennsylvania Plaza, 3rd FL,
New York, NY 10121
(212) 615-3600

Whitehall
11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:

LIGHTING
CELLAR LIGHTING PLAN

SEAL & SIGNATURE:



DATE: 08/15/2017

PROJECT #:

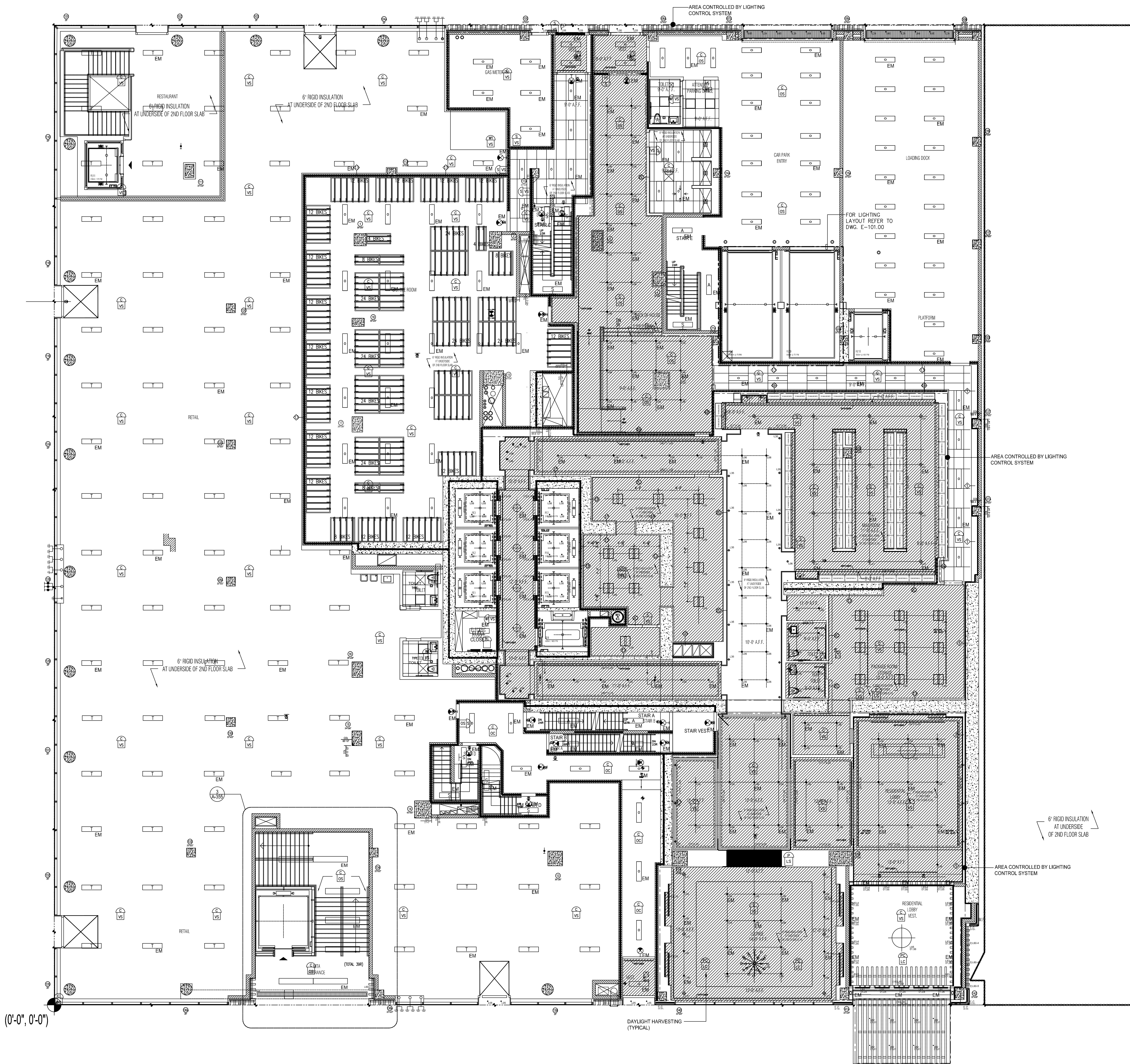
136018

SCALE:

1/8" = 1'-0"

DWG NO.

EN-200.00



(0'-0", 0'-0")

LIGHTING NOTES:

WIRING NOTES:

1. EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
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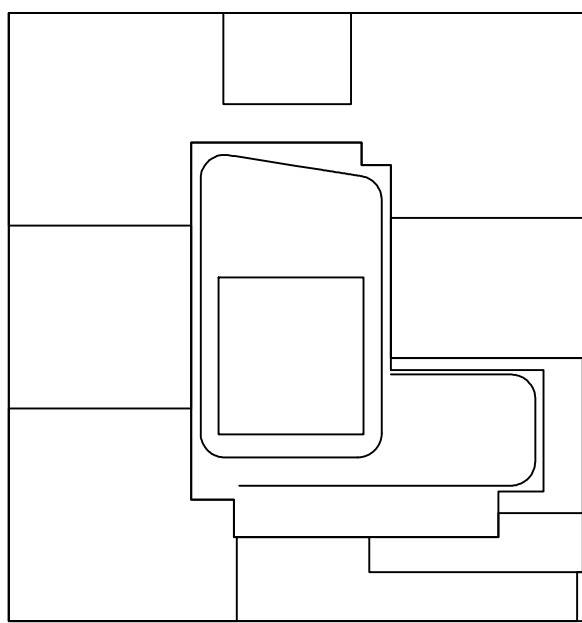
NOTES, REVISIONS:

1. AUTOMATIC RECEPTACLE CONTROLS WILL BE PROVIDED ON 50% OF RECEPTACLES IN ALL OFFICES SUCH AS SUPER'S OFFICE AN ON INDIVIDUAL WORKSTATIONS IN THIS ROOM.

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KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/02/2017	65.45 FOR DOB
08/02/2017	95% CTS SET
06/02/2017	95% CTS SET
03/24/2017	95% CTS SUBMISSION SET
01/02/2017	SUPERSTRUCTURE SET
01/25/2017	65.45 FOR DOB
11/17/2016	FACADE PAVING SET
11/11/2016	95% CTS FOUNDATION SET
10/12/2016	65.45 FOR DOB
03/02/2016	DOB RUMING SET

Number: Date: Revision:

Project:

City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:

Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
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(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:

LIGHTING
GROUND FLOOR LIGHTING PLAN

SEAL & SIGNATURE:



DATE: 08/15/2017

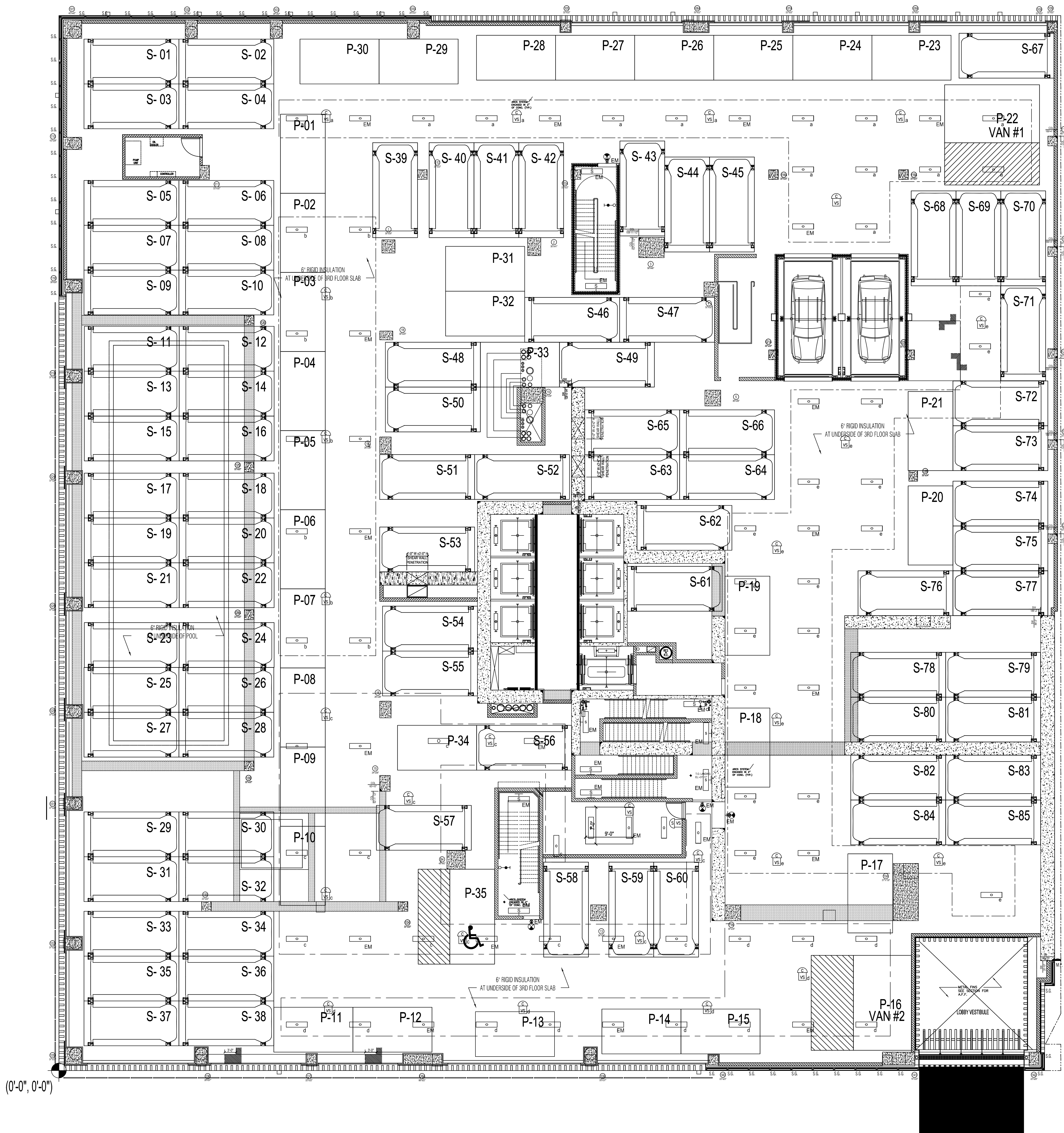
PROJECT #: 136018

SCALE: 1/8" = 1'-0"

DWG NO. **EN-201.00**

9 OF 27

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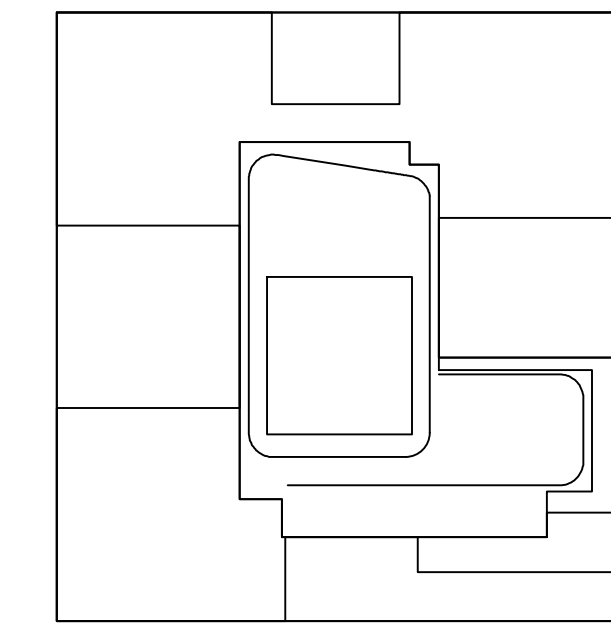
LIGHTING NOTES:

WIRING NOTES:

- EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
- ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL - ON, AUTO - OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
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- WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 1/2" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
- MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
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- FOR PANEL LOCATIONS SEE POWER DRAWINGS.

ENERGY CODE NOTES:

- EACH AREA ENCLOSED BY WALLS OR FLOOR TO CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS.
- ALL "FRONT OF THE HOUSE AREAS" INCLUDING RECEPTION AND CORRIDOR AREAS WILL BE CONTINUOUSLY LIT DURING IMAGING FACILITY WORKING HOURS AND SHALL BE TIMER CONTROLLED. CONTRACTOR TO CIRCUIT ALL LIGHTING ZONES (DIMMED AND SWITCHED) TO LIGHTING CONTROL PANEL WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT.
- EACH AREA ENCLOSED BY WALLS OR PARTITIONS AND NOT DESIGNATED AS CONTINUOUS OPERATION SHALL HAVE MANUAL CONTROLS ALLOWING REDUCTION OF THE CONNECTED LIGHTING LOADS BY 50 PERCENT (DUAL SWITCHING), AS REQUIRED BY NYC ENERGY CONSERVATION CODE.
- EACH OFFICE AND BACK OF THE HOUSE AREA ENCLOSED BY WALLS OR FULL HEIGHT (FLOOR TO CEILING) PARTITIONS IN ADDITION TO MANUAL CONTROLS SHALL BE PROVIDED WITH VACANCY SENSORS OPERATING ON MANUAL ON/ AUTO OF BASIS, AS REQUIRED BY THE NYC ENERGY CONSERVATION CODE.



KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/02/2017	ISSUED FOR DOB
08/02/2017	95% CD SET
06/02/2017	95% CD SET
03/24/2017	95% CD SUBMISSION SET
01/27/2017	SUPERINTENDENT SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE PRELIM SET
11/11/2016	100% COORDINATION 90 SET
10/12/2016	ISSUED FOR DOB
02/02/2016	DOB FILING SET

Number:	Date:	Revision:
---------	-------	-----------

Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
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ARCHITECTS
11 BROADWAY
17TH FLOOR
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T. 212 213 8007

Consultant:
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140 Broadway 25th Floor
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Two Pennsylvania Plaza, 3rd Fl.
New York, NY 10121
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New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
2ND FLOOR LIGHTING PLAN

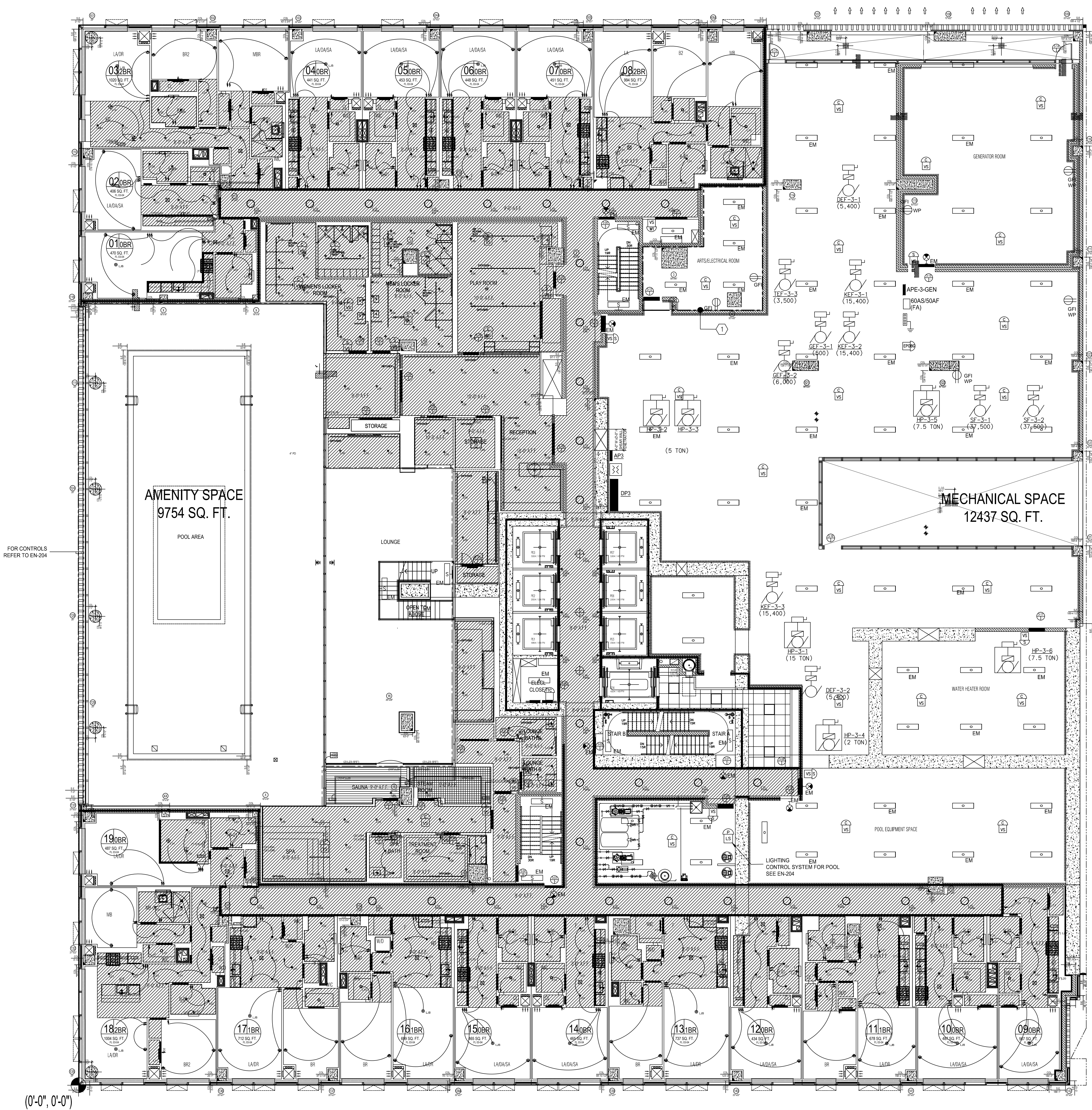
SEAL & SIGNATURE:

DATE: 08/15/2017
PROJECT #: 193018
SCALE: 1/8" = 1'-0"
EN-202.00
DWG NO.
10/07/27

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KEYED NOTES:

1. ALL LIGHTING FIXTURES CONNECTED TO EMERGENCY GENERATOR POWER & EXTRA EMERGENCY BALLASTS.

LIGHTING NOTES:

WIRING NOTES:

- EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
- ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL - ON, AUTO - OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
- WIRE SWITCHABLE LIGHTING FIXTURES TO ELECTRICAL LIGHTING PANELS SERVING THE FLOOR WITH 2#12 AWG & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CIRCUIT BREAKER. QUANTITIES OF CIRCUITS SHALL ACCOMMODATE RESPECTIVE LOADS (AS MENTIONED IN POINT 2).
- WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
- MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
- EXTERIOR/ FACADE MOUNTED NORMAL ARCHITECTURAL ACCENT LIGHTING FIXTURES- CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
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- REFER TO LIGHTING SCHEDULE AND SPECIFICATIONS FOR CATALOG NUMBER, FINISHED REQUIRED, VOLTAGE, LOADS, WIRE AND OTHER CONTROL REQUIREMENTS.
- ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
- RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
- ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
- REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
- ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
- "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
- FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
- FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
- FOR PANEL LOCATIONS SEE POWER DRAWINGS.

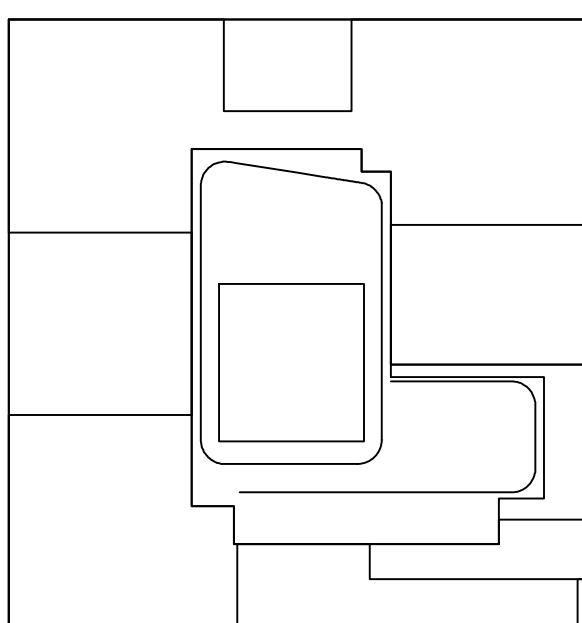
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KEY PLAN

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08/05/2017	95% CD SET
06/02/2017	85% CD SET
03/24/2017	50% CD SUBMISSION SET
01/07/2017	SUPERINTENDENT SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE PRELIM SET
11/11/2016	100% SUBORDINATION 100 SET
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02/02/2016	DOB FILING SET

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(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:

LIGHTING
3RD FLOOR LIGHTING PLAN

SEAL & SIGNATURE:



DATE: 08/15/2017

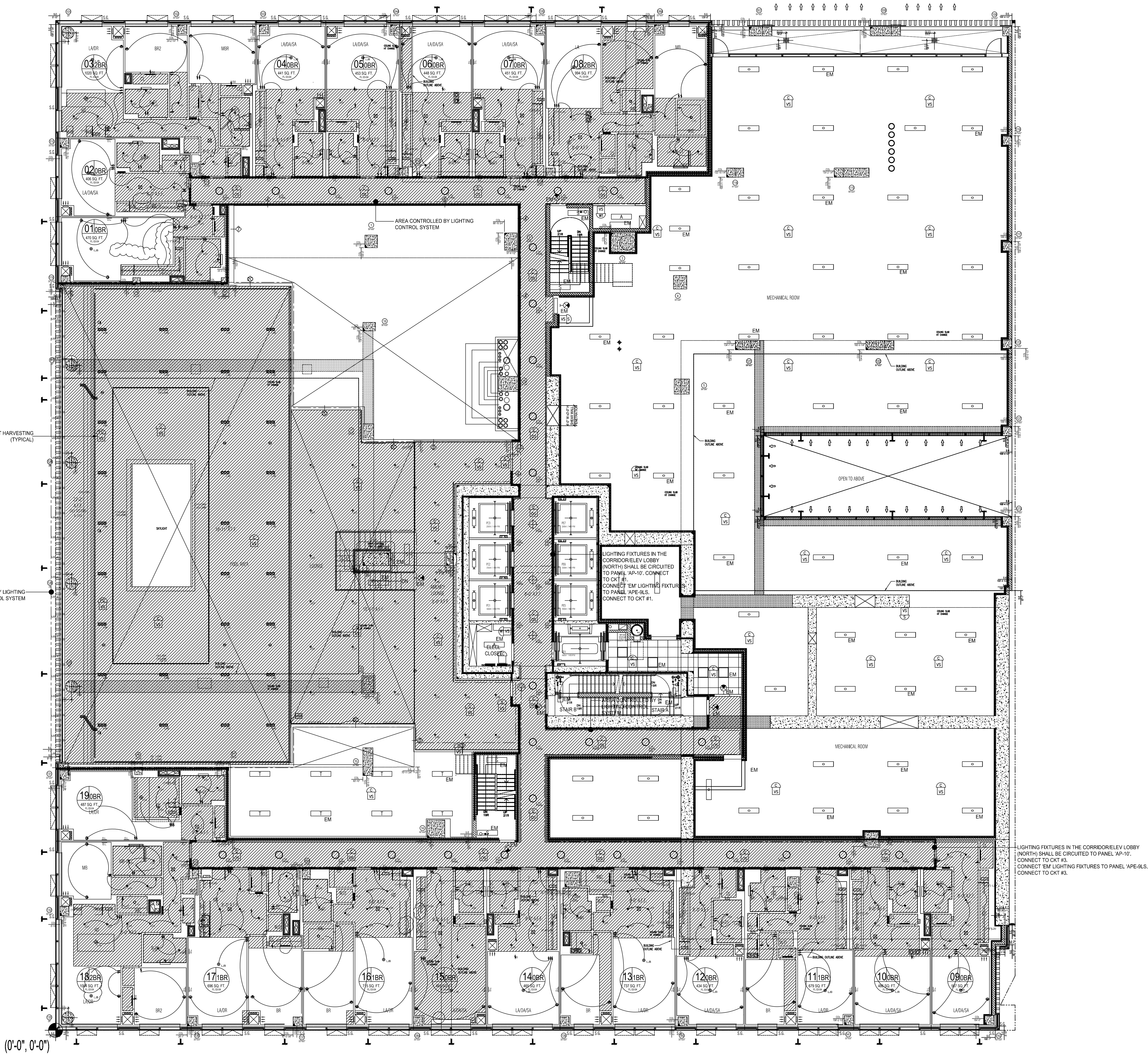
PROJECT #:

SCALE: 1/8" = 1'-0"

DWG NO.

EN-203.00

FILE NAME: I:\50318\Energy Modeling\Submission\EN12070922 EN Response\EN150318EN204 4TH FL.dwg SAVED ON 9/27/2017 3:30 PM PLOTTED ON 10/3/2017 5:15 PM PLOTTED BY CHU, JING



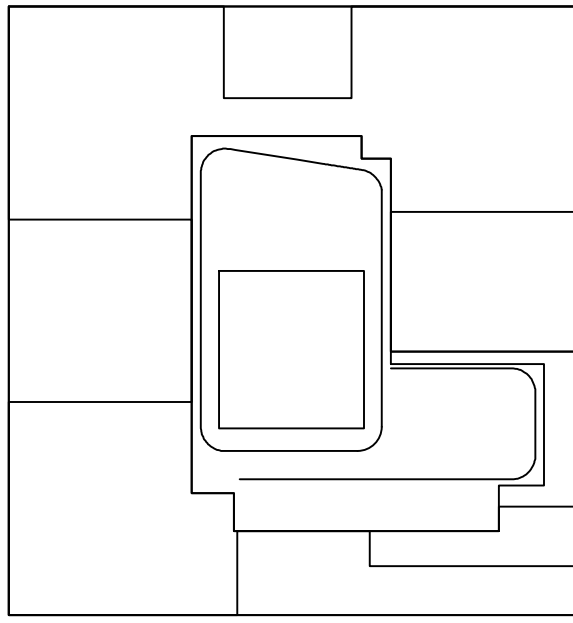
- LIGHTING NOTES:**
- WIRING NOTES:**
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KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/02/2017	65343 FOR DOB
08/02/2017	95% CO SET
06/02/2017	95% CO SET
03/24/2017	95% CO SUBMISSION SET
01/07/2017	SUPERSTRUCTURE SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	95% CO SUBMISSION SET
10/12/2016	65343 FOR DOB
02/02/2016	DOB FILING SET

Number: Date: Revision:

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DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
4TH FLOOR LIGHTING PLAN

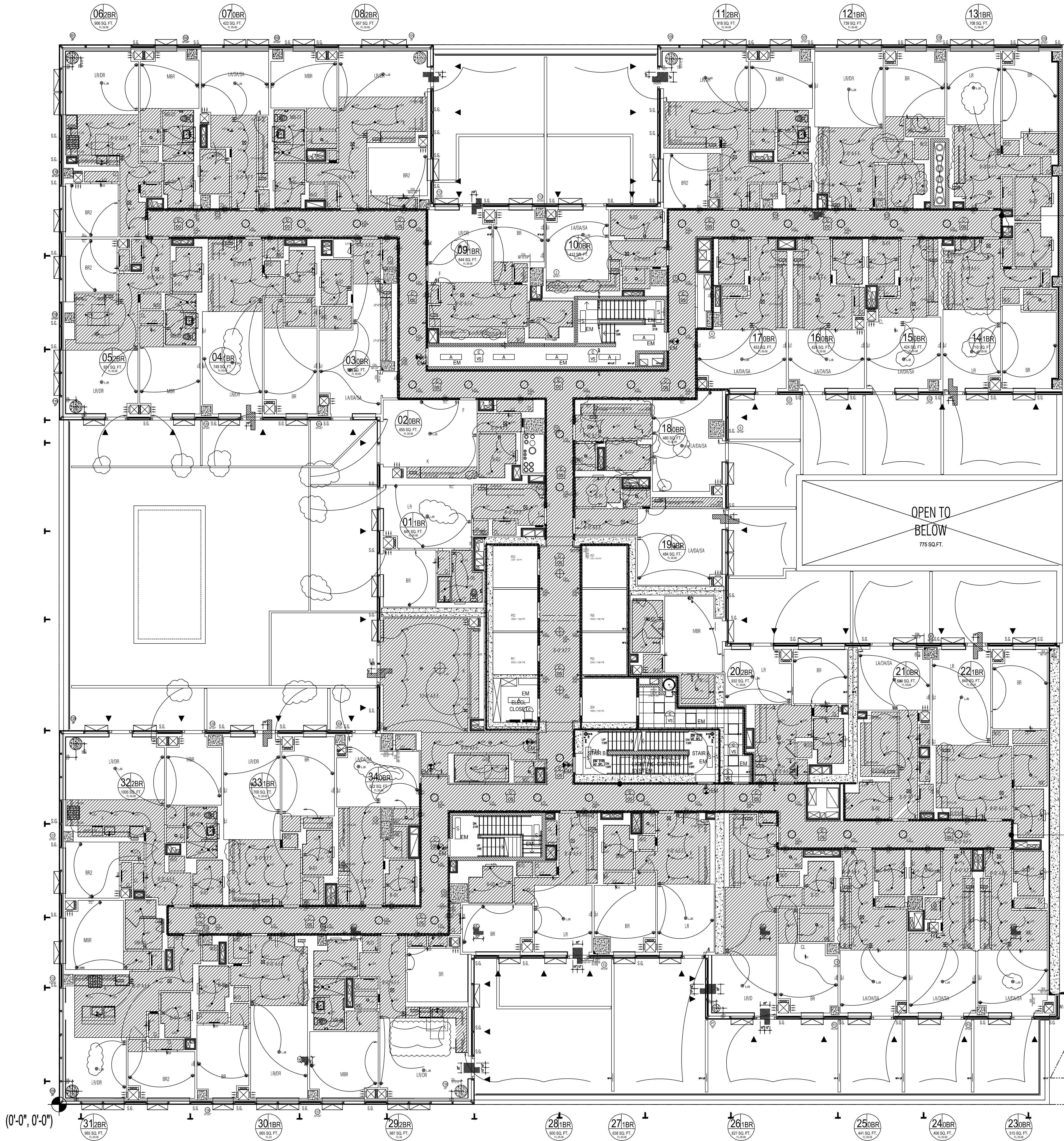
SEAL & SIGNATURE: DATE: 08/15/2017

PROJECT #: 193018

SCALE: 1/8" = 1'-0"

EN-204.00
DWG NO.

FILE NAME: I:\50318\ENrgy Modeling\Submission\EN150318EN205 (5TH FLOOR) SAVED ON 8/25/2017 11:00 AM PLOTTED ON 10/3/2017 5:16 PM PLOTTED BY CHU, JING



LIGHTING FIXTURES IN THE CORRIDOR/ELEV LOBBY
NORTH SHALL BE CIRCUITED TO PANEL AP-107.
CONNECT EM LIGHTING FIXTURES TO PANEL APE-8LS.
CONNECT TO CKT #5.

LIGHTING FIXTURES IN THE CORRIDOR/ELEV LOBBY
SHALL BE CIRCUITED TO PANEL AP-107. CONNECT TO
CKT #7.
CONNECT EM LIGHTING FIXTURES TO PANEL APE-8LS.
CONNECT TO CKT #7.

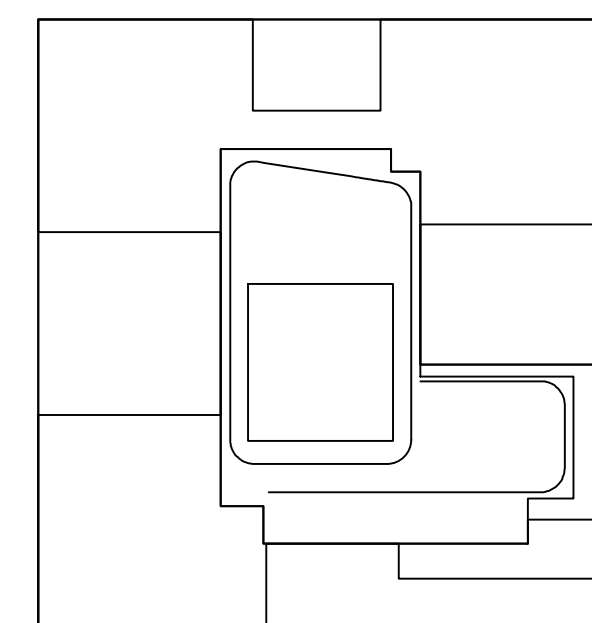
LIGHTING NOTES:

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2. ALL "FRONT OF THE HOUSE AREAS" INCLUDING RECEPTION AND CORRIDOR AREAS WILL BE CONTINUOUSLY LIT DURING IMAGING FACILITY WORKING HOURS AND SHALL BE TIMER CONTROLLED. CONTRACTOR TO CIRCUIT ALL LIGHTING ZONES (DIMMED AND SWITCHED) TO LIGHTING CONTROL PANEL WITH 2#12 AWG & 1#12G, CU IN 1/2" CONDUIT.
3. EACH AREA ENCLOSED BY WALLS OR PARTITIONS AND NOT DESIGNATED AS CONTINUOUS OPERATION SHALL HAVE MANUAL CONTROLS ALLOWING REDUCTION OF THE CONNECTED LIGHTING LOADS BY 50 PERCENT (DUAL SWITCHING), AS REQUIRED BY NYC ENERGY CONSERVATION CODE.
4. EACH OFFICE AND BACK OF THE HOUSE AREA ENCLOSED BY WALLS OR FULL HEIGHT (FLOOR TO CEILING) PARTITIONS IN ADDITION TO MANUAL CONTROLS SHALL BE PROVIDED WITH VACANCY SENSORS OPERATING ON MANUAL ON/ AUTO OF BASIS, AS REQUIRED BY THE NYC ENERGY CONSERVATION CODE.



KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65467 FOR DOB
08/25/2017	95% CD SET
08/02/2017	95% CD SET
03/24/2017	95% CD SUBMISSION SET
01/02/2017	SUBMITTAL SET
01/02/2017	65467 FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	100% CD FOUNDATION MD SET
10/12/2016	65467 FOR DOB
02/02/2016	DOB FILING SET

Number: Date: Revision:

Project:

City View Tower at
Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:

Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:

HILL | WEST
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11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
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Consultant:

DESIMONE
CONSULTING ENGINEERS
140 Broadway 25th Floor
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(212) 532-2211

Cosentini Associates
Two Pennsylvania Plaza, 3rd FL,
New York, NY 10121
(212) 615-3600

Whitehall
11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

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WITH APPLICABLE CODES*

SEAL & SIGNATURE:

DATE: 150318 08/15/2017

PROJECT #: 19318

SCALE: 1/8" = 1'-0"

EN-205.00
DWG NO.



NOTES:

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10/06/2017	ISSUED FOR DOB
09/15/2017	90% CD SET
06/02/2017	85% CD SET
03/24/2017	50% CD SUBMISSION SET
01/27/2017	SUPERSTRUCTURE SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FAÇADE FINISHING SET
11/11/2016	100% DO/FUNDATION BID SET
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

Number:	Date:	Revision:
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New York, NY 10121
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/whitehall
Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

STAMPS & SIGNATURES:

TITLE: LIGHTING
7TH FLOOR LIGHTING PLAN

& SIGNATURE:	
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DATE: 09/15/2017

PROJECT #: 150318

DATE	4/24	4/24
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SCALE: 1/8" = 1'-0"

EN 207 00

EN-207.00

	DWG NO.
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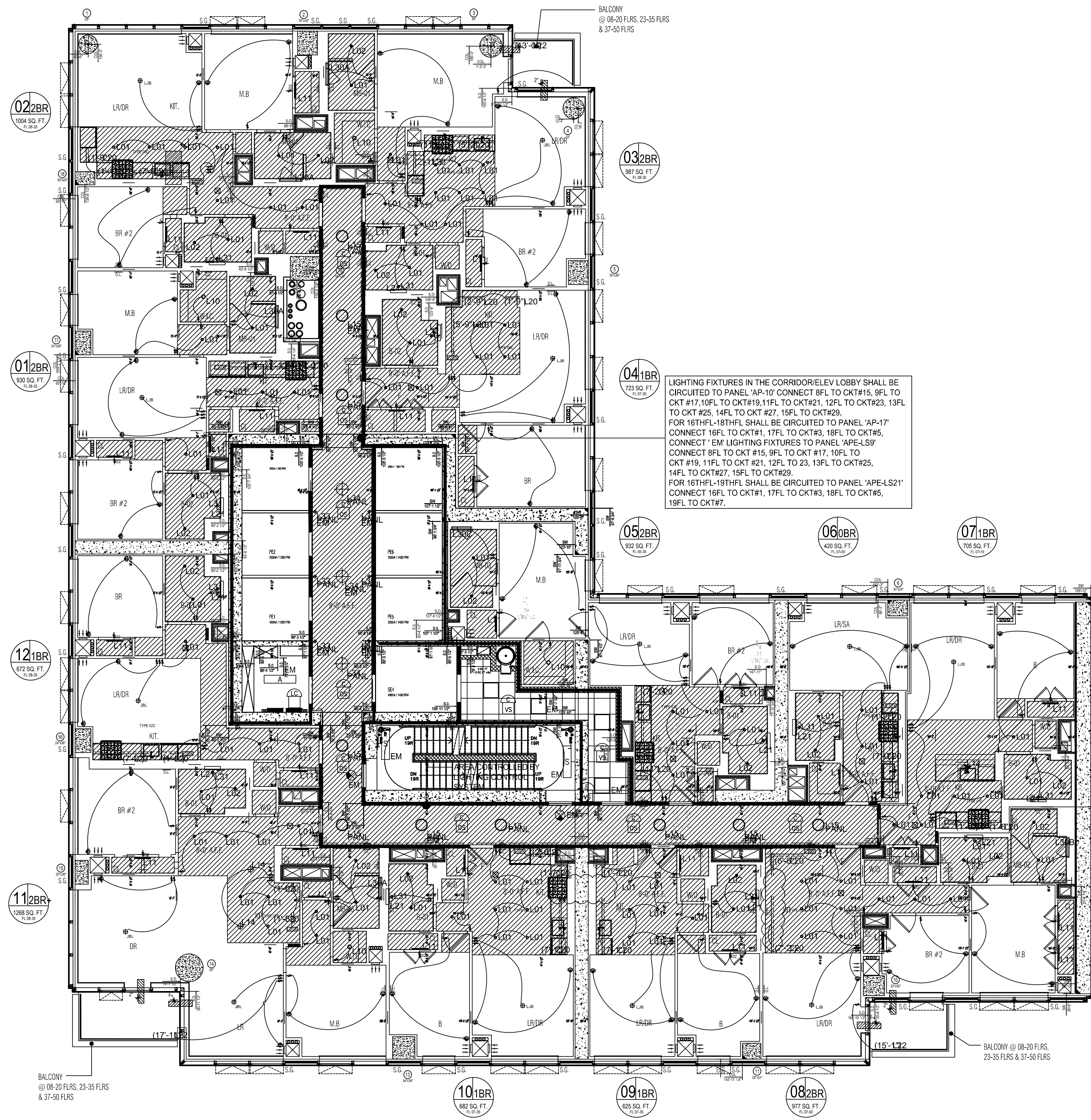
15 OF 27

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(0'-0", 0'-0")




- LIGHTING NOTES:**
- WIRING NOTES:**
- EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
 - ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL - ON, AUTO - OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
 - WIRE SWITCHABLE LIGHTING FIXTURES TO ELECTRICAL LIGHTING PANELS SERVING THE FLOOR WITH 2#12 AWG & 1#12G CU WIRES IN 3/4" CONDUIT PER CIRCUIT. CONNECT EACH CIRCUIT TO 20A, 1P CIRCUIT BREAKER. QUANTITIES OF CIRCUITS SHALL ACCOMMODATE RESPECTIVE LOADS (AS MENTIONED IN POINT 2).
 - WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
 - MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
 - EXTERIOR/ FACADE MOUNTED NORMAL ARCHITECTURAL ACCENT LIGHTING FIXTURES- CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
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 - REFER TO LIGHTING SCHEDULE AND SPECIFICATIONS FOR CATALOG NUMBER, FINISHED REQUIRED, VOLTAGE, LOADS, WIRE AND OTHER CONTROL REQUIREMENTS.
 - ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
 - RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
 - ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
 - REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
 - ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
 - "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
 - FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
 - FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
 - FOR PANEL LOCATIONS SEE POWER DRAWINGS.
- ENERGY CODE NOTES:**
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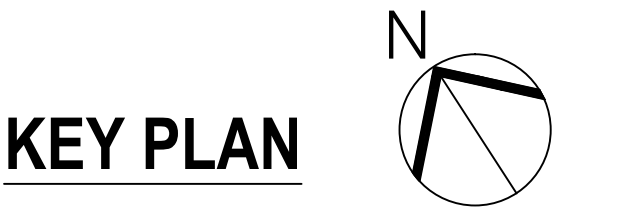
KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65.63 FOR DOB
08/05/2017	95% CD SET
08/02/2017	95% CD SET
03/24/2017	95% CD SUBMITTAL SET
01/02/2017	SUBMITTAL SET
01/25/2017	65.63 FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	95% CD FOUNDATION BD SET
10/12/2016	65.63 FOR DOB
02/02/2016	DOB FILING SET

Number:	Date:	Revision:
Project: City View Tower at Court Square 23-15 44th Drive Long Island City, NY 11101		
Client: Cityview Tower LLC 112-15 NORTHERN BLVD, CF-2 CORONA, NY 11368 (718) 321-8652		
Architect: HILL WEST ARCHITECTS 11 BROADWAY 17TH FLOOR NEW YORK, NY 10004 T. 212 213 8007		
Consultant: DESIMONE CONSULTING ENGINEERS 140 Broadway 25th Floor New York, NY 10005 (212) 532-2211 Cosentini Associates Two Pennsylvania Plaza, 3rd FL. New York, NY 10121 (212) 615-3600 Whitehall 11 Broadway, 17th Floor New York, NY 10004 (212) 908-4940		
DOB STAMPS & SIGNATURES:		
DWG TITLE: LIGHTING 8TH - 19TH FLOORS LIGHTING PLAN		
SEAL & SIGNATURE:	DATE: 08/15/2017	PROJECT #: 193018
	SCALE: 1/8" = 1'-0"	EN-208.00 DWG NO.
	15 OF 27	



NOTES:

10/06/2017	ISSUED FOR DOB
09/15/2017	90% CD SET
06/02/2017	85% CD SET
03/24/2017	50% CD SUBMISSION SET
01/27/2017	SUPERSTRUCTURE SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE FRACING SET
11/11/2016	100% CD FOUNDATION BID SET
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

Rev:	Date:	Revision:
------	-------	-----------

Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
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architect:

HILL | WEST
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/whitehall
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New York, NY 10004
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STAMPS & SIGNATURES:

TITLE:

LIGHTING

20TH - 35TH FLOORS LIGHTING PLAN

& SIGNATURE:	
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DATE: 09/15/2017

STATE OF NEW YORK JUL 15 2015 CLERK OF THE COURT	PROJECT #	150318
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SCALE: $1/8" = 1'-0"$

EN 220 0

FN-7700

DWG NO.

17 OF 27

WIRING NOTES:

1 EACH STA

1. EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
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10. RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
11. ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
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13. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
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15. FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
16. FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
17. FOR PANEL LOCATIONS SEE POWER DRAWINGS.

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DATE: 09/15/2017

STATE OF NEW YORK JUL 15 2015 CLERK OF THE COURT	PROJECT #	150318
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SCALE: $1/8" = 1'-0"$

EN 220 0

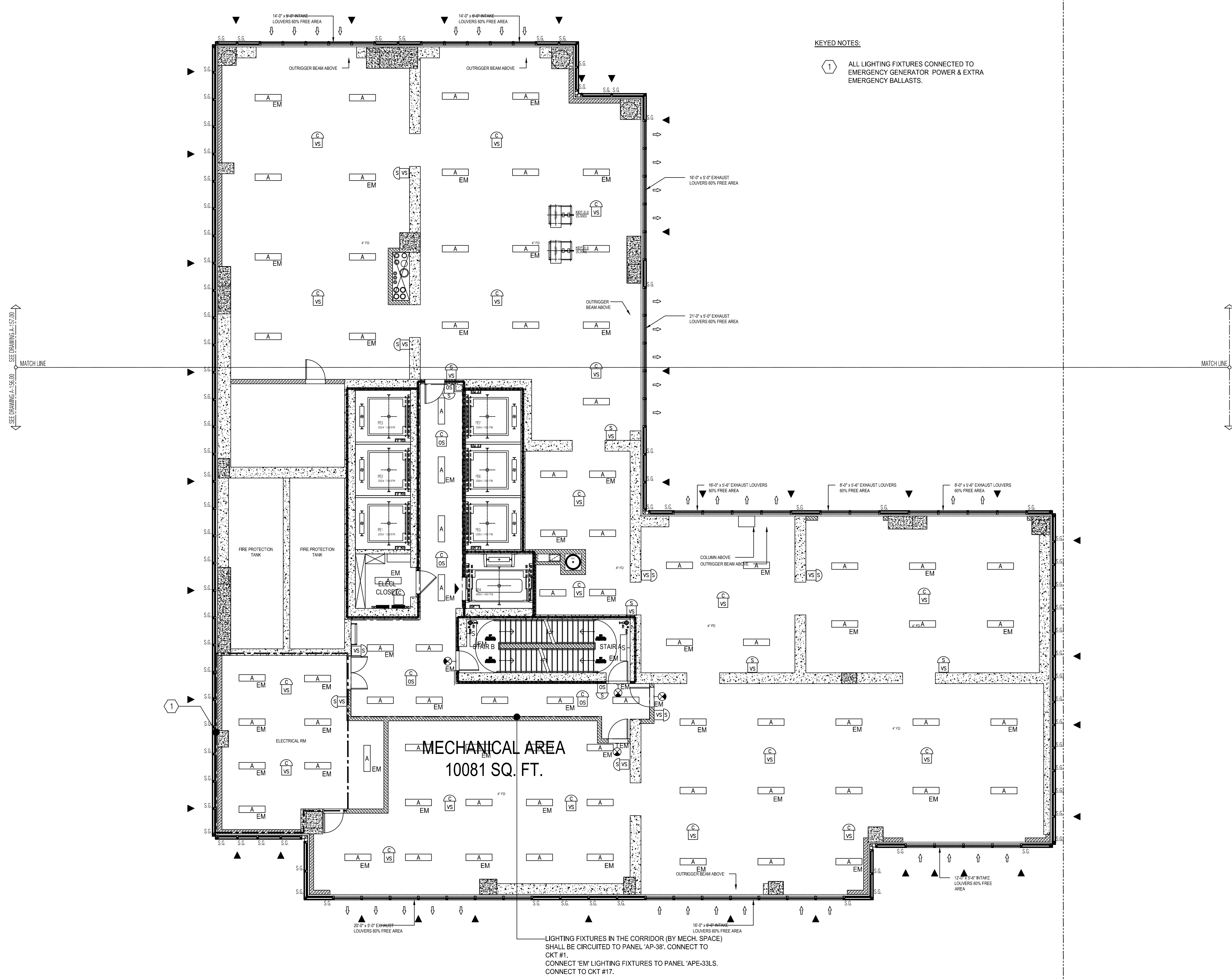
FN-7700

DWG NO.

17 OF 27

FILE NAME I:\50318\ENrgy Modeling\Submission\EN\20170922 EN Response\EN\50318\EN236 036TH F.L.dwg, SAVED DN 8/25/2017 5:25 PM PLOTTED BY CHU, JING

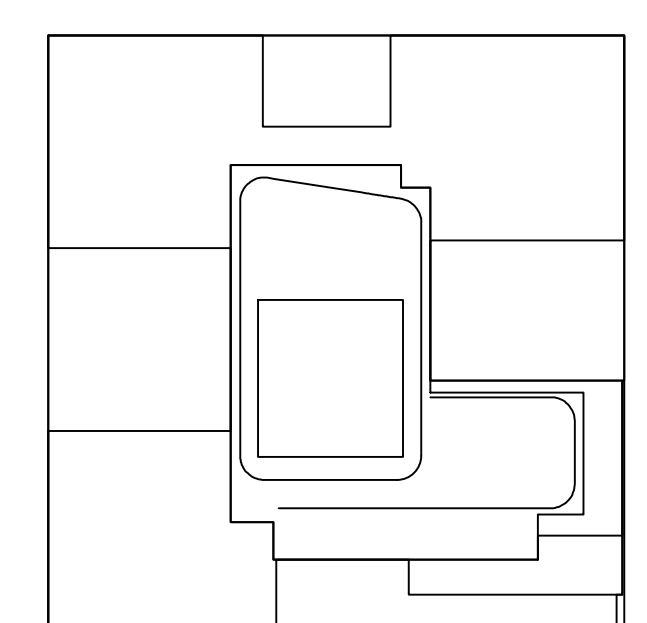
(0'-0", 0'-0")



- LIGHTING NOTES:**
- WIRING NOTES:**
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 - WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
 - MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
 - EXTERIOR/ FACADE MOUNTED NORMAL ARCHITECTURAL ACCENT LIGHTING FIXTURES- CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
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 - REFER TO LIGHTING SCHEDULE AND SPECIFICATIONS FOR CATALOG NUMBER, FINISHED REQUIRED, VOLTAGE, LOADS, WIRE AND OTHER CONTROL REQUIREMENTS.
 - ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
 - RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
 - ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
 - REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
 - ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
 - "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
 - FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
 - FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
 - FOR PANEL LOCATIONS SEE POWER DRAWINGS.
- ENERGY CODE NOTES:**
- EACH AREA ENCLOSED BY WALLS OR FLOOR TO CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS.
 - ALL "FRONT OF THE HOUSE AREAS" INCLUDING RECEPTION AND CORRIDOR AREAS WILL BE CONTINUOUSLY LIT DURING IMAGING FACILITY WORKING HOURS AND SHALL BE TIMER CONTROLLED. CONTRACTOR TO CIRCUIT ALL LIGHTING ZONES (DIMMED AND SWITCHED) TO LIGHTING CONTROL PANEL WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT.
 - EACH AREA ENCLOSED BY WALLS OR PARTITIONS AND NOT DESIGNATED AS CONTINUOUS OPERATION SHALL HAVE MANUAL CONTROLS ALLOWING REDUCTION OF THE CONNECTED LIGHTING LOADS BY 50 PERCENT (DUAL SWITCHING), AS REQUIRED BY NYC ENERGY CONSERVATION CODE.
 - EACH OFFICE AND BACK OF THE HOUSE AREA ENCLOSED BY WALLS OR FULL HEIGHT (FLOOR TO CEILING) PARTITIONS IN ADDITION TO MANUAL CONTROLS SHALL BE PROVIDED WITH VACANCY SENSORS OPERATING ON MANUAL ON/ AUTO OF BASIS, AS REQUIRED BY THE NYC ENERGY CONSERVATION CODE.

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NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65363 FOR DOB
08/05/2017	95% CD SET
08/02/2017	95% CD SET
03/24/2017	95% CD SUBMISSION SET
01/02/2017	SUBMITTAL SET
01/25/2017	65363 FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	100% CD FOUNDATION BD SET
10/12/2016	65363 FOR DOB
02/02/2016	DOB FILING SET

Number:	Date:	Revision:
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Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
HILL | WEST
ARCHITECTS
11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
T. 212 213 8007

Consultant:
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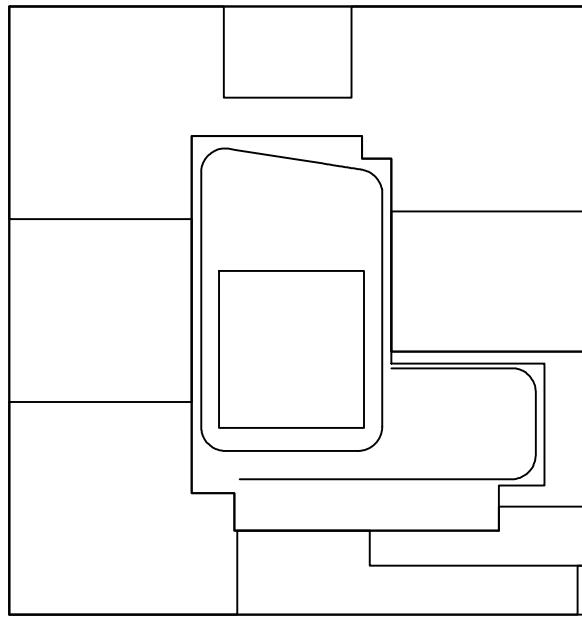
DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
36TH FLOOR LIGHTING PLAN
(MECHANICAL LEVEL)

SEAL & SIGNATURE:

DATE: 08/15/2017
PROJECT #: 139318
SCALE: 1/8" = 1'-0"
EN-236.00
DWG NO.

FILE NAME: I:\50318\Energy Modeling\Submission\EN\20170922_EN_Response\EN\50318\EN237_437TH_FLD.dwg, SAVED ON 8/25/2017 11:09 AM, PLOTTED ON 10/3/2017 5:29 PM, PLOTTED BY CHU, JING



KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65,657 FOR DOB
08/05/2017	95% CD SET
06/02/2017	95% CD SET
03/24/2017	50% CD SUBMISSION SET
01/02/2017	SUBMITTAL SET
01/25/2017	65,657 FOR DOB
11/17/2016	FAÇADE PRELIM SET
11/17/2016	100% CD FOUNDATION BD SET
10/12/2016	65,657 FOR DOB
02/06/2016	DOB FILING SET

Number: Date: Revision:

Project:
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DOB STAMPS & SIGNATURES:

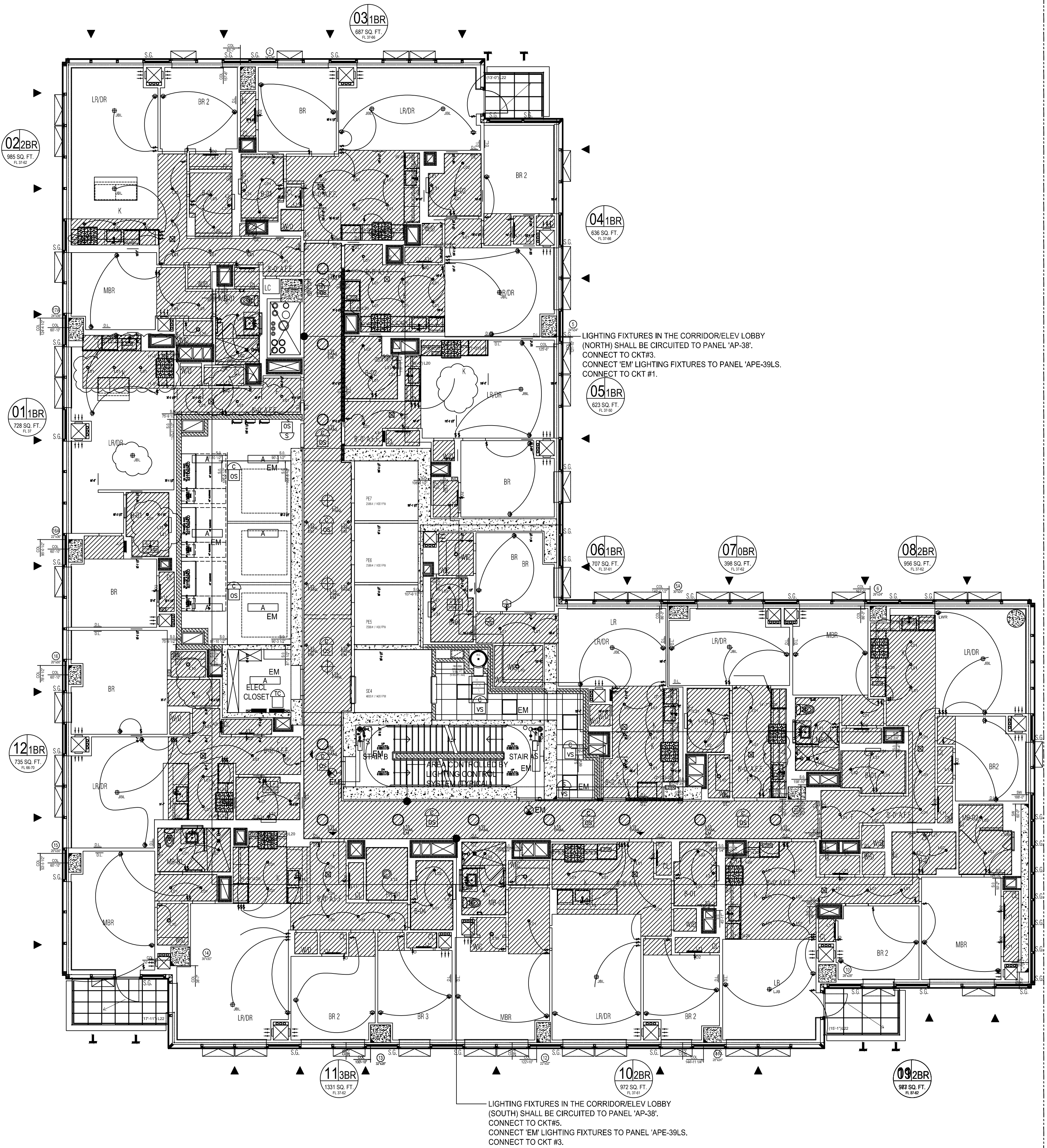
DWG TITLE:
LIGHTING
37TH FLOOR LIGHTING PLAN

SEAL & SIGNATURE: DATE: 08/15/2017
PROJECT #: 193018
SCALE: 1/8" = 1'-0"
EN-237.00
DWG NO. 19 OF 27

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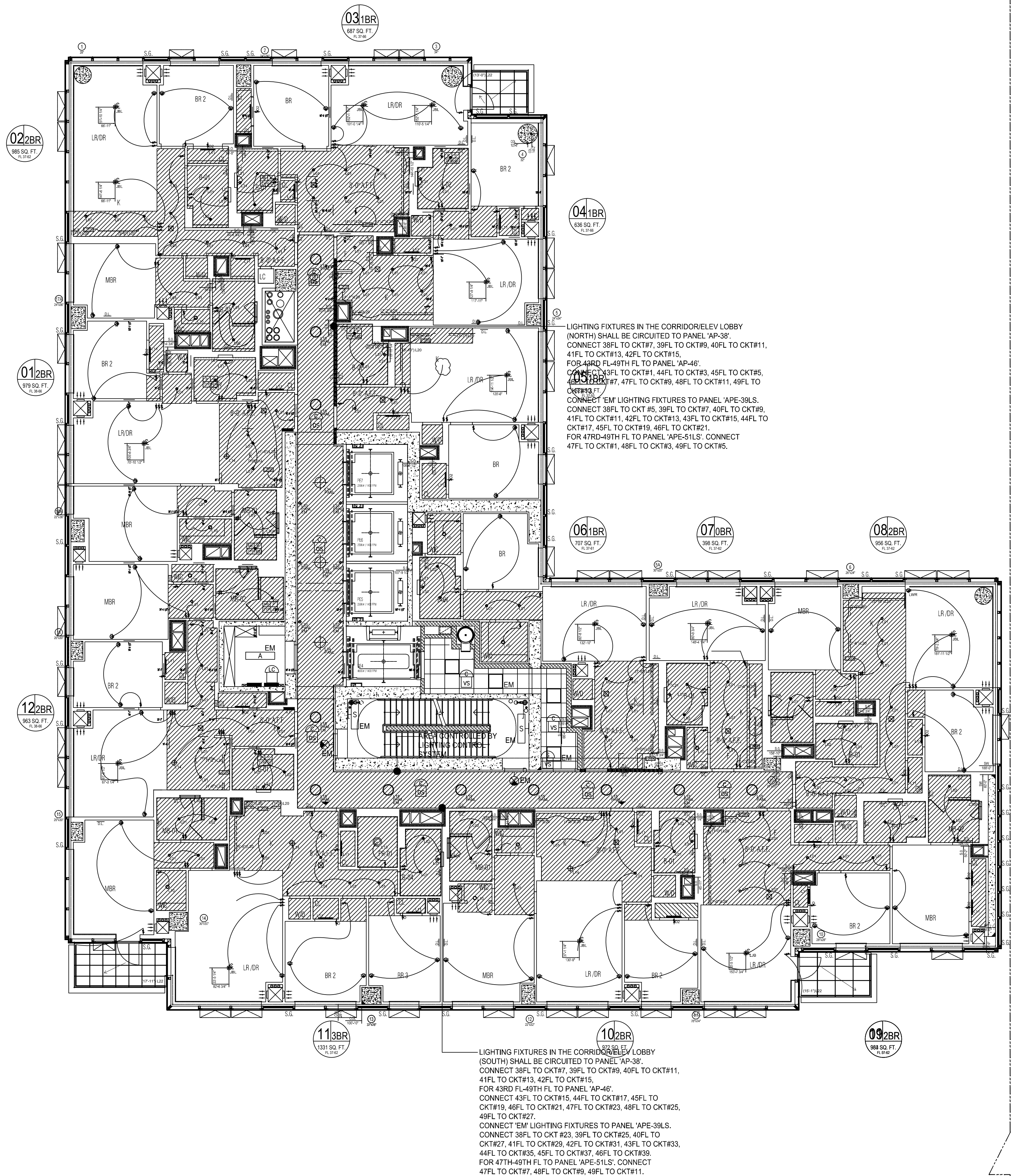


- LIGHTING NOTES:**
- WIRING NOTES:**
- EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
 - ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL – ON, AUTO – OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, &1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
 - WIRE SWITCHABLE LIGHTING FIXTURES TO ELECTRICAL LIGHTING PANELS SERVING THE FLOOR WITH 2#12 AWG & 1#12G CU WIRES IN 3/4" CONDUIT PER CIRCUIT. CONNECT EACH CIRCUIT TO 20A, 1P CIRCUIT BREAKER. QUANTITIES OF CIRCUITS SHALL ACCOMMODATE RESPECTIVE LOADS (AS MENTIONED IN POINT 2).
 - WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 1/2" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
 - MEP ROOMS – IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS – (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
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(0'-0", 0'-0")

FILE NAME: I:\50318\N\Energy Modeling\Submission\EN\20170922 EN Response\EN\50318\EN\238 -38TH-49TH FLOOR.dwg SAVED ON 8/25/2017 11:12 AM PLOTTED ON 10/3/2017 5:31 PM PLOTTED BY CHU, JING

(0'-0", 0'-0")



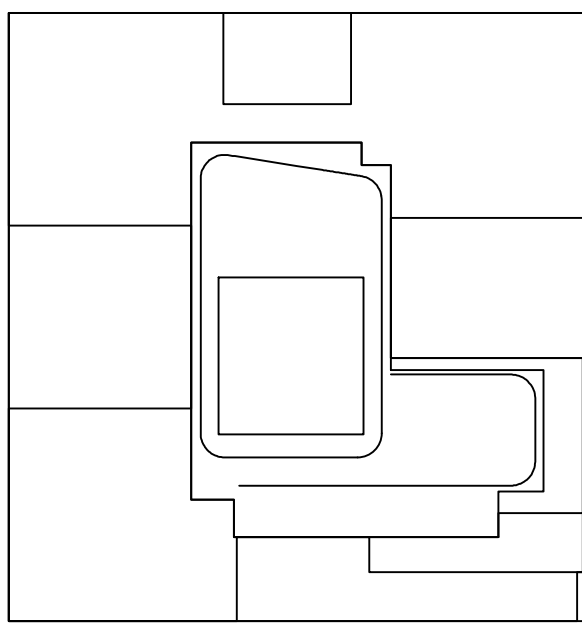
- LIGHTING NOTES:**
- WIRING NOTES:**
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 10. RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
 11. ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
 12. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
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 14. "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
 15. FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
 16. FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
 17. FOR PANEL LOCATIONS SEE POWER DRAWINGS.

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KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/02/2017	ISSUED FOR DOB
08/02/2017	95% CD SET
06/02/2017	95% CD SET
03/02/2017	95% CD SUBMISSION SET
01/02/2017	SUPERSTRUCTURE SET
01/02/2017	ISSUED FOR DOB
11/17/2016	FACADE PAVING SET
11/17/2016	95% CD SUBMISSION SET
10/12/2016	ISSUED FOR DOB
03/02/2016	DOB FILING SET

Number:	Date:	Revision:
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Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
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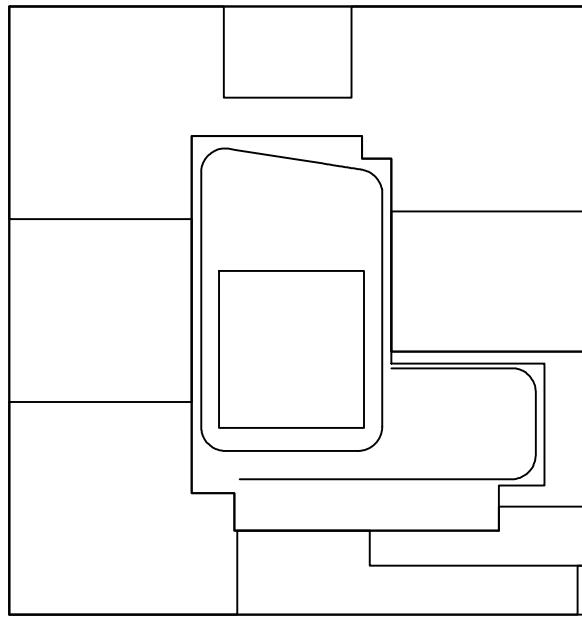
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DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
38TH - 49TH FLOORS LIGHTING PLAN

SEAL & SIGNATURE:

DATE: 08/15/2017
PROJECT #: 136018
SCALE: 1/8" = 1'-0"
EN-238.00
DWG NO.
20 OF 27



KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65.63 FOR DOB
08/05/2017	95% CO SET
08/02/2017	95% CO SET
03/24/2017	95% CO SUBMITTAL SET
01/02/2017	SUBMITTAL SET
01/25/2017	65.63 FOR DOB
11/17/2016	FACE PREP SET
11/17/2016	95% CO FOUNDATION SET
10/12/2016	65.63 FOR DOB
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DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
50TH - 60TH FLOORS LIGHTING PLAN

SEAL & SIGNATURE:

DATE: 08/15/2017
PROJECT #: 139318
SCALE: 1/8" = 1'-0"
EN-250.00
DWG NO.

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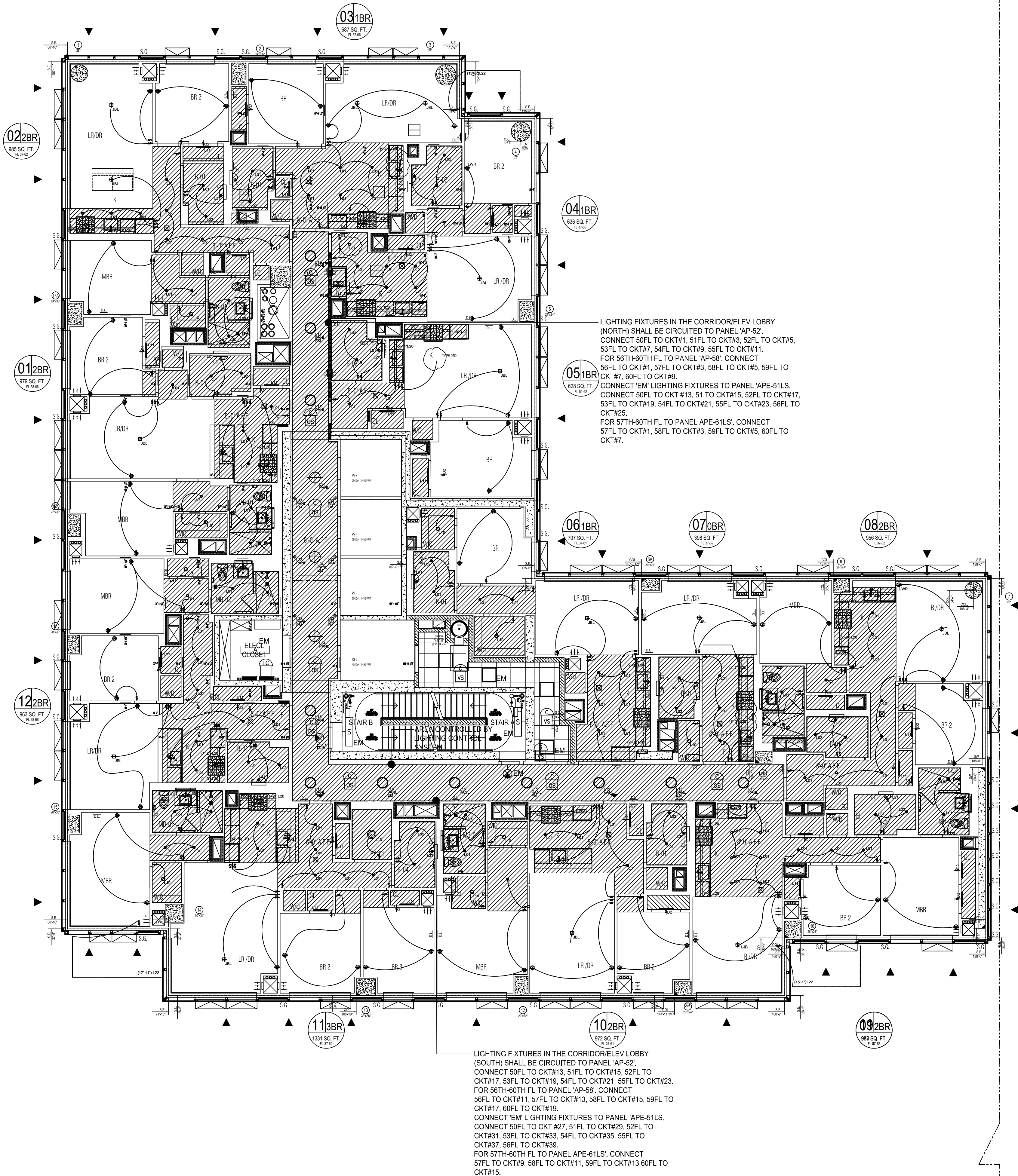
LIGHTING NOTES:

WIRING NOTES:

- EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
- ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL - ON, AUTO - OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
- WIRE SWITCHABLE LIGHTING FIXTURES TO ELECTRICAL LIGHTING PANELS SERVING THE FLOOR WITH 2#12 AWG & 1#12G CU WIRES IN 3/4" CONDUIT PER CIRCUIT. CONNECT EACH CIRCUIT TO 20A, 1P CIRCUIT BREAKER. QUANTITIES OF CIRCUITS SHALL ACCOMMODATE RESPECTIVE LOADS (AS MENTIONED IN POINT 2).
- WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
- MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
- EXTERIOR/ FACADE MOUNTED NORMAL ARCHITECTURAL ACCENT LIGHTING FIXTURES- CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
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- REFER TO LIGHTING SCHEDULE AND SPECIFICATIONS FOR CATALOG NUMBER, FINISHED REQUIRED, VOLTAGE, LOADS, WIRE AND OTHER CONTROL REQUIREMENTS.
- ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
- RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
- ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
- REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
- ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
- "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
- FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
- FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
- FOR PANEL LOCATIONS SEE POWER DRAWINGS.

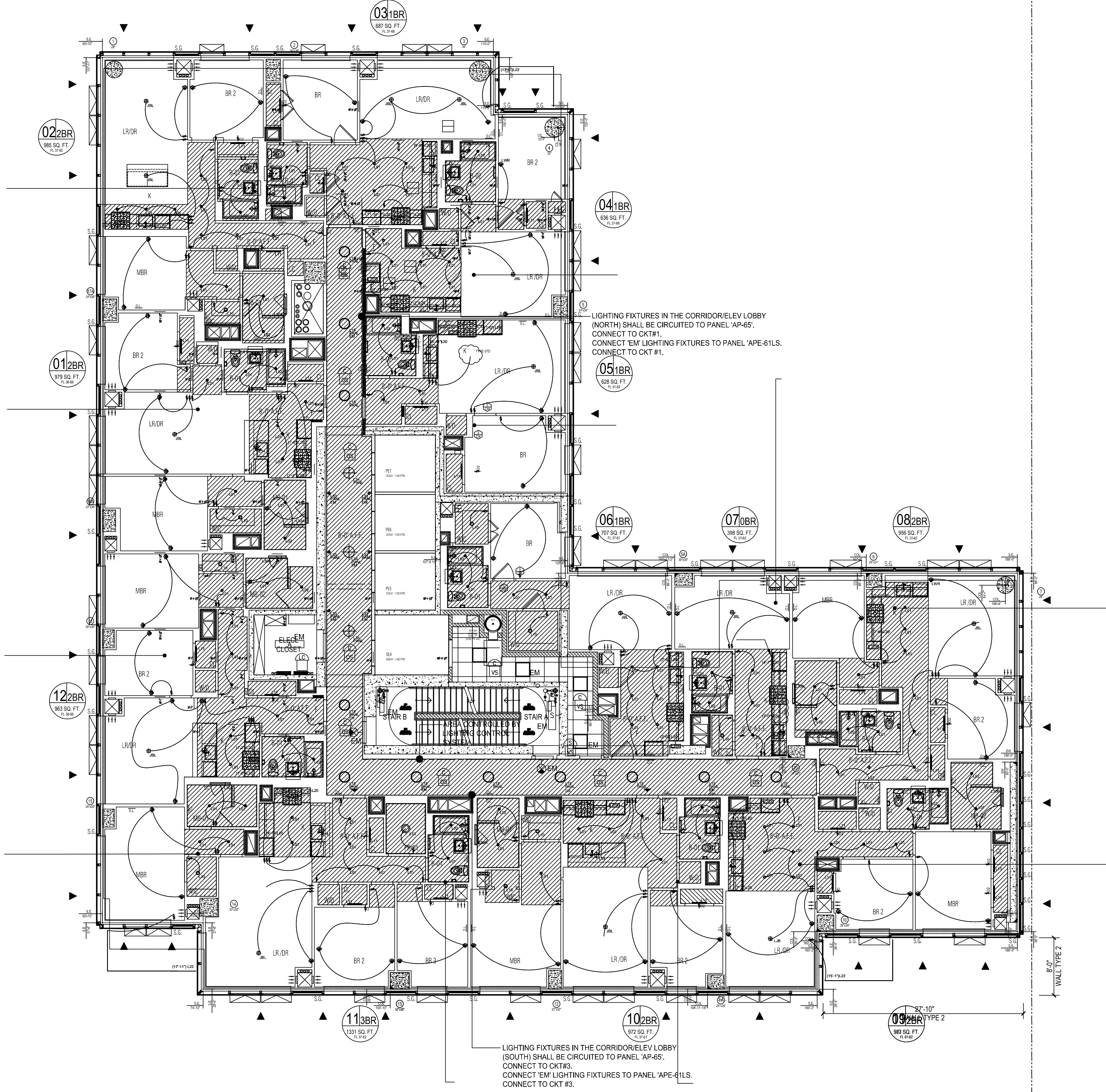
ENERGY CODE NOTES:

- EACH AREA ENCLOSED BY WALLS OR FLOOR TO CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS.
- ALL "FRONT OF THE HOUSE AREAS" INCLUDING RECEPTION AND CORRIDOR AREAS WILL BE CONTINUOUSLY LIT DURING IMAGING FACILITY WORKING HOURS AND SHALL BE TIMER CONTROLLED. CONTRACTOR TO CIRCUIT ALL LIGHTING ZONES (DIMMED AND SWITCHED) TO LIGHTING CONTROL PANEL WITH 2#12 AWG & 1#12G, CU IN 3/4" CONDUIT.
- EACH AREA ENCLOSED BY WALLS OR PARTITIONS AND NOT DESIGNATED AS CONTINUOUS OPERATION SHALL HAVE MANUAL CONTROLS ALLOWING REDUCTION OF THE CONNECTED LIGHTING LOADS BY 50 PERCENT (DUAL SWITCHING), AS REQUIRED BY NYC ENERGY CONSERVATION CODE.
- EACH OFFICE AND BACK OF THE HOUSE AREA ENCLOSED BY WALLS OR FULL HEIGHT (FLOOR TO CEILING) PARTITIONS IN ADDITION TO MANUAL CONTROLS SHALL BE PROVIDED WITH VACANCY SENSORS OPERATING ON MANUAL ON/ AUTO OF BASIS, AS REQUIRED BY THE NYC ENERGY CONSERVATION CODE.



(0'-0", 0'-0")

(0'-0", 0'-0")

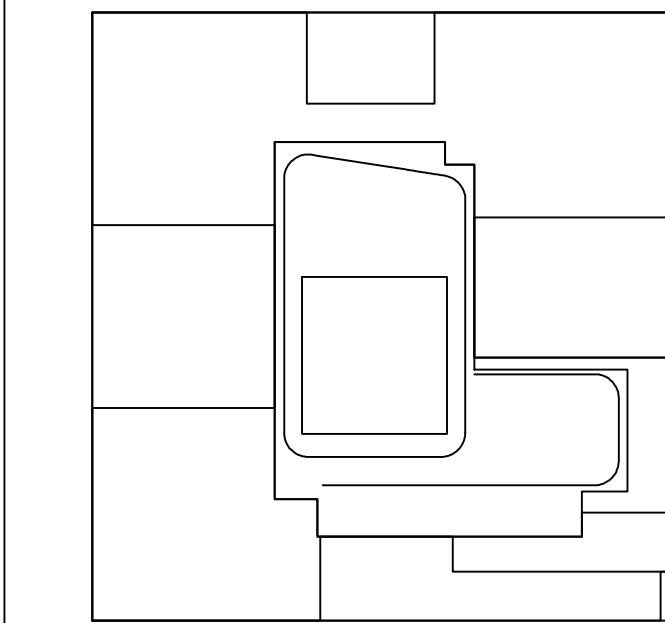


- LIGHTING NOTES:**
- WIRING NOTES:**
- EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
 - ROOMS WITH STAND ALONE OCCUPANCY SENSORS SHALL OPERATE AS A "MANUAL - ON, AUTO - OFF" SYSTEM. CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL LIGHTING PANEL. WIRE WITH 2#12 AWG, & 1#12G CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM OF 1200W FOR FLUORESCENT LIGHTING FIXTURES OR 600W FOR LED TYPE LIGHTING FIXTURES.
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 - RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
 - ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
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KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65.63 FOR DOB
08/05/2017	95% CO SET
08/02/2017	95% CO SET
03/24/2017	95% CO SUBMISSION SET
01/02/2017	SUBMITTAL SET
01/25/2017	65.63 FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	100% CO FOUNDATION BD SET
10/12/2016	65.63 FOR DOB
02/02/2016	DOB FILING SET

Number: Date: Revision:

Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
HILL | WEST
ARCHITECTS
11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
T. 212 213 8007

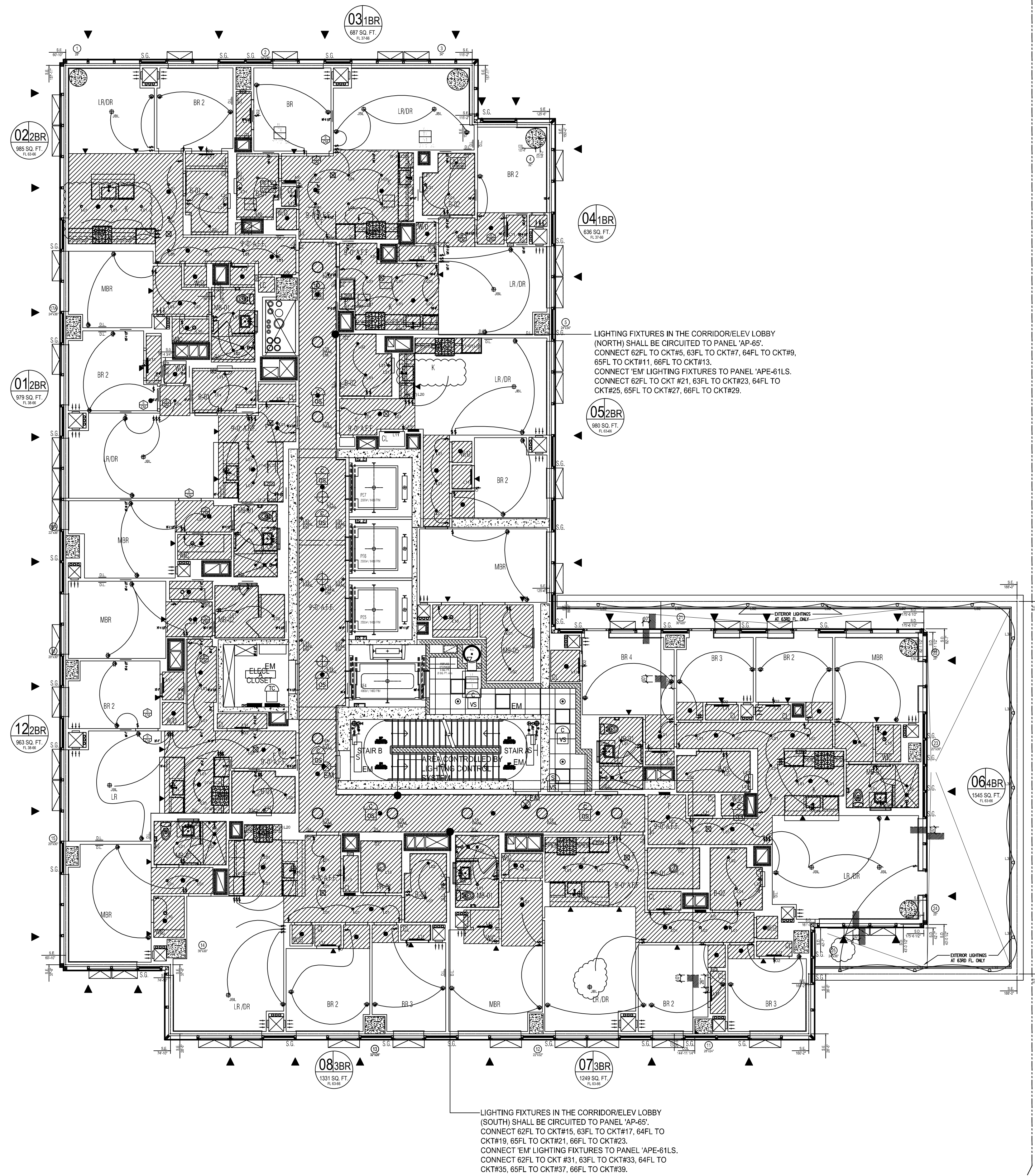
Consultant:
DESIMONE CONSULTING ENGINEERS
140 Broadway 25th Floor
New York, NY, 10005
(212) 532-2211
Cosentini Associates
Two Pennsylvania Plaza, 3rd FL,
New York, NY 10121
(212) 615-3600
Whitehall
11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
61ST FLOOR LIGHTING PLAN

SEAL & SIGNATURE: DATE: 08/15/2017
PROJECT #: 139318
SCALE: 1/8" = 1'-0"
EN-261.00
DWG NO. 22 OF 27

(0'-0", 0'-0")



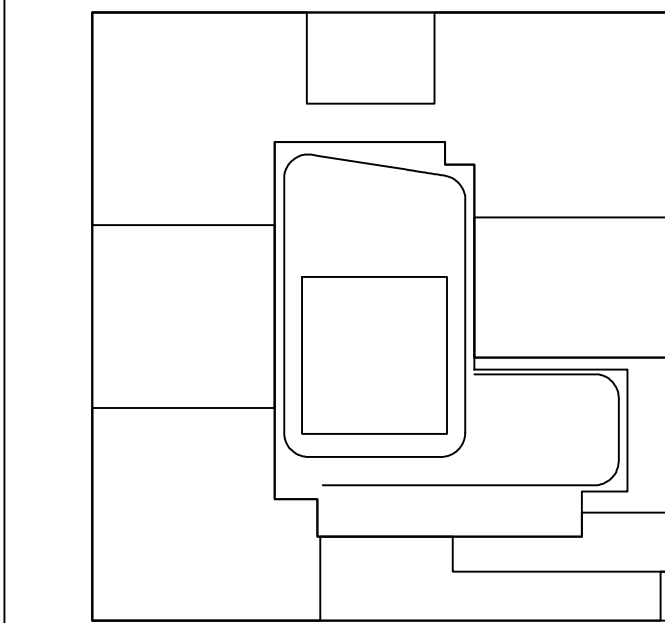
- LIGHTING NOTES:**
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 3. WIRE SWITCHABLE LIGHTING FIXTURES TO ELECTRICAL LIGHTING PANELS SERVING THE FLOOR WITH 2#12 AWG & 1#12G CU WIRES IN 3/4" CONDUIT PER CIRCUIT. CONNECT EACH CIRCUIT TO 20A, 1P CIRCUIT BREAKER. QUANTITIES OF CIRCUITS SHALL ACCOMMODATE RESPECTIVE LOADS (AS MENTIONED IN POINT 2).
 4. WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN 1/2" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIT SIGNS TO EACH CIRCUIT
 5. MEP ROOMS - IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS - (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
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 9. ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
 10. RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
 11. ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
 12. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
 13. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
 14. "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
 15. FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E-305 THRU E-307.
 16. FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING-404.
 17. FOR PANEL LOCATIONS SEE POWER DRAWINGS.

- ENERGY CODE NOTES:**
1. EACH AREA ENCLOSED BY WALLS OR FLOOR TO CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS.
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NOTES:

NOT FOR CONSTRUCTION

10/06/2017	62ND-66TH FLOOR
08/05/2017	95% CD SET
08/02/2017	95% CD SET
03/24/2017	50% CD SUBMISSION SET
01/02/2017	SUBMITTAL SET
01/25/2017	62ND-66TH FLOOR
11/17/2016	FACADE PRELIM SET
11/17/2016	100% CD FOUNDATION BD SET
10/12/2016	62ND-66TH FLOOR
02/02/2016	DOB FILING SET

Number:	Date:	Revision:
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Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
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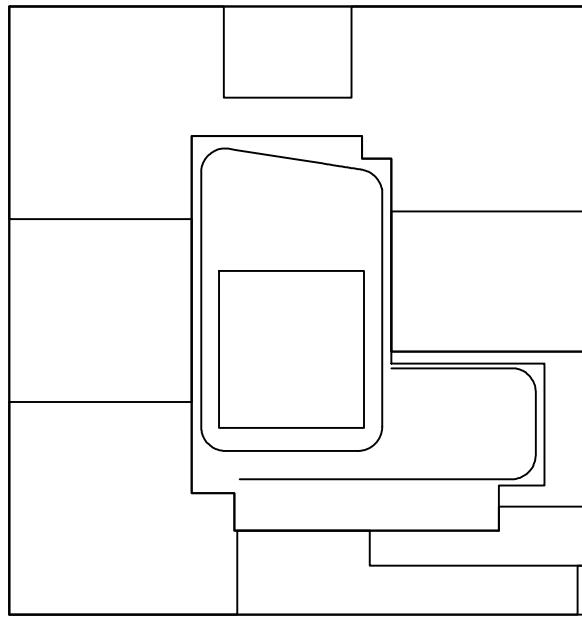
DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
62ND - 66TH FLOORS LIGHTING PLAN

SEAL & SIGNATURE:

DATE: 08/15/2017
PROJECT #: 139318
SCALE: 1/8" = 1'-0"
EN-262.00
DWG NO.
23 OF 27

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KEY PLAN

NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65267 FOR DOB
08/05/2017	95% CD SET
08/02/2017	95% CD SET
03/24/2017	50% CD SUBMISSION SET
01/02/2017	SUPPLEMENT SET
01/25/2017	65267 FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	100% CD FOUNDATION BD SET
10/12/2016	65267 FOR DOB
02/06/2016	DOB FILING SET

Number:	Date:	Revision:
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(212) 908-4940

DOB STAMPS & SIGNATURES:

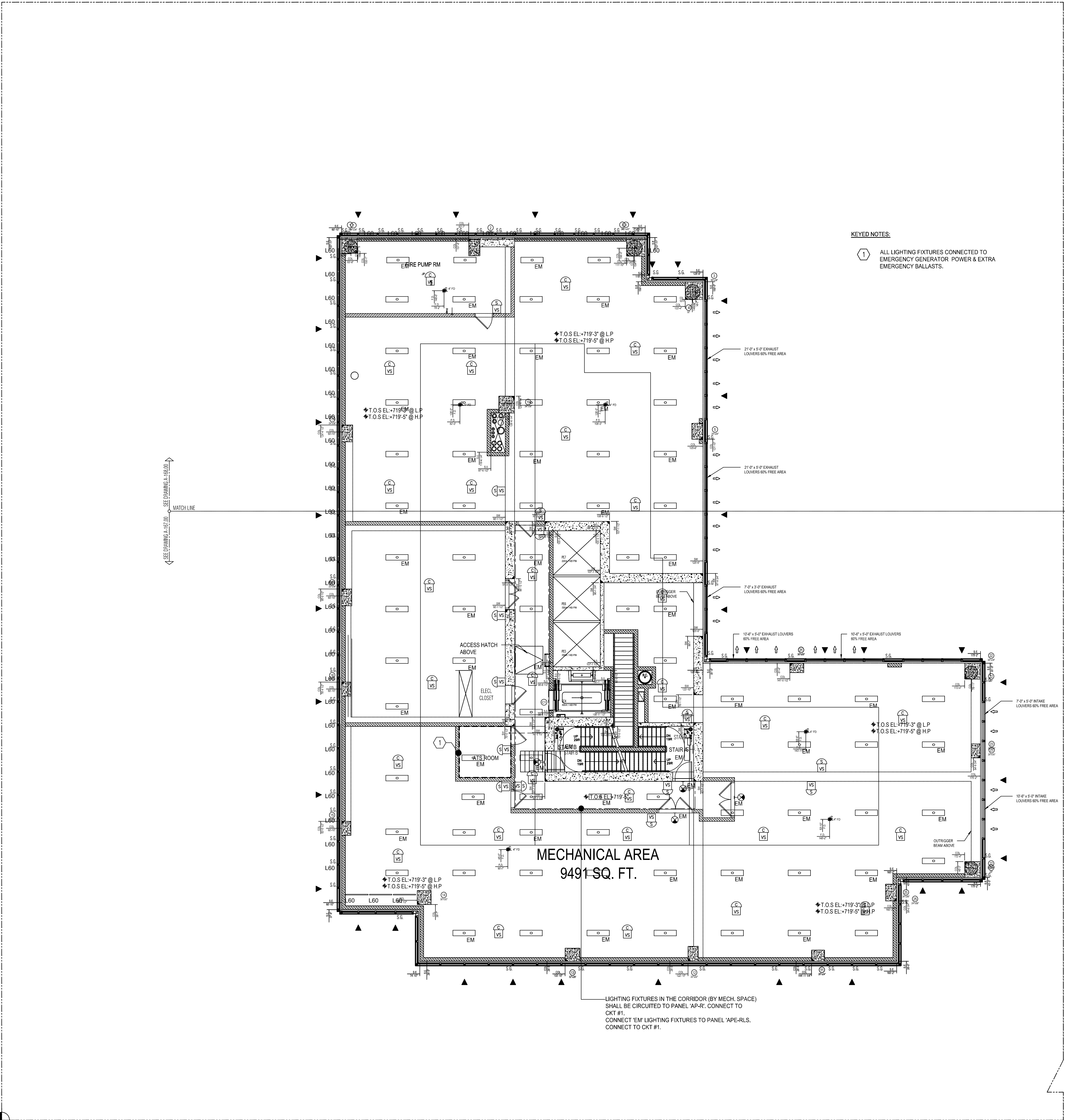
DWG TITLE:
LIGHTING
67TH FLOOR LIGHTING PLAN

SEAL & SIGNATURE:

DATE: 08/15/2017
PROJECT #: 193918
SCALE: 1/8" = 1'-0"
EN-267.00
DWG NO.

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KEYED NOTES:
① ALL LIGHTING FIXTURES CONNECTED TO EMERGENCY GENERATOR POWER & EXTRA EMERGENCY BALLASTS.

LIGHTING NOTES:

WIRING NOTES:

1. EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.
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4. WIRE EXIT SIGNS TO ONE UNSWITCHABLE CIRCUIT ORIGINATING AT ELECTRICAL LIGHTING PANEL SERVING THE FLOOR WITH 2#12 AWG & 1#12G, CU IN ¾" CONDUIT. CONNECT CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 15 EXIST SIGNS TO EACH CIRCUIT
5. MEP ROOMS – IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS – (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.
6. EXTERIOR/ FACADE MOUNTED NORMAL ARCHITECTURAL ACCENT LIGHTING FIXTURES – CONTROL VIA LIGHTING CONTROL SYSTEM (PROGRAMMABLE RELAY PANEL) ON BMS TIMECLOCK. WIRE ALL LIGHTS TO NEAREST 120V NORMAL LIGHTING PANEL VIA RESPECTIVE SWITCHING RELAY PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE AREA. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAX 1200W TO EACH CIRCUIT.
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8. REFER TO LIGHTING SCHEDULE AND SPECIFICATIONS FOR CATALOG NUMBER, FINISHED REQUIRED, VOLTAGE, LOADS, WIRE AND OTHER CONTROL REQUIREMENTS.
9. ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.
10. RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.
11. ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.
12. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS.
13. ALL CORRIDOR LIGHTING SHALL BE CONTROLLED BY OCCUPANCY SENSOR.
14. "EM" INDICATES LIGHTING FIXTURES ON EMERGENCY POWER.
15. FOR CORRIDOR AND EXIT SIGNS CIRCUITING SEE DRAWINGS E–305 THRU E–307.
16. FOR LIGHTING FIXTURE SCHEDULES SEE DRAWING–404.
17. FOR PANEL LOCATIONS SEE POWER DRAWINGS.

ENERGY CODE NOTES:

1. EACH AREA ENCLOSED BY WALLS OR FLOOR TO CEILING PARTITIONS SHALL HAVE AT LEAST ONE MANUAL CONTROL FOR THE LIGHTING SERVING THAT AREA. THE REQUIRED CONTROLS SHALL BE LOCATED WITHIN THE AREA SERVED BY THE CONTROLS.
2. ALL "FRONT OF THE HOUSE AREAS" INCLUDING RECEPTION AND CORRIDOR AREAS WILL BE CONTINUOUSLY LIT DURING IMAGING FACILITY WORKING HOURS AND SHALL BE TIMER CONTROLLED. CONTRACTOR TO CIRCUIT ALL LIGHTING ZONES (DIMMED AND SWITCHED) TO LIGHTING CONTROL PANEL WITH 2#12 AWG & 1#12G, CU IN ¾" CONDUIT.
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(0'-0", 0'-0")

LIGHTING NOTES:

WIRING NOTES:

1. EACH STAIR: CIRCUIT ALL LIGHTING FIXTURES TO NEAREST 120V NORMAL POWER LIGHTING PANEL BOARD. PROVIDE EMERGENCY BALLAST AND BATTERY PACK (ABLE TO OPERATE AT FULL LOAD FOR MIN. OF 90 MINUTES) AS REQUIRED BY THE CODE. CIRCUIT SEPARATELY EACH STAIRS WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB.

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5. MEP ROOMS – IF NOT INDICATED ON DRAWINGS PROVIDE LOCAL MANUAL SWITCHES. PROVIDE A MINIMUM OF (1) ONE NORMAL SWITCH FOR EVERY 500 SQUARE FEET TO ALLOW OCCUPANTS FOR MANUAL ON/OFF OPERATION. IF VACANCY SWITCHES ARE INDICATED ON THE DRAWINGS – (MANUAL ON/ AUTO OFF) SET THE "AUTO OFF" MODE TIME TO THE MAXIMUM CODE ALLOWED SET UP. WIRE ALL LIGHTS TO NEAREST 120V EMERGENCY LIGHTING PANEL. PROVIDE BRANCH CIRCUITS QUANTITIES AS REQUIRED FOR THE RESPECTIVE ROOM. WIRE WITH 2#12 AWG & 1#12G, CU WIRES IN 3/4" CONDUIT. CONNECT EACH CIRCUIT TO 20A, 1P CB. CONNECT MAXIMUM 1200W TO EACH CIRCUIT.

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9. ALL LIGHTING FIXTURES WITH SUBSCRIPT "EM" SHALL BE PROVIDED WITH EMERGENCY BALLAST AND BATTERY PACK. PROVIDE BATTERY PACKS TO SUPPORT OPERATION OF EACH LIGHTING FIXTURE FOR MINIMUM OF 90 MINUTES AT FULL LOAD, AS REQUIRED BY THE CODE.

10. RUN GROUND WIRE WITH EACH LIGHTING CIRCUIT WHETHER IT IS INDICATED ON THE DRAWING OR NOT.

11. ALL TASK LIGHTS AND UNDER CABINET LIGHTING FIXTURES SHALL BE PROVIDED WITH DEDICATED LOCAL SWITCH. FURNISH DEDICATED SWITCHES FOR ALL FIXTURES NOT EQUIPPED WITH FACTORY INSTALLED MANUAL CONTROL DEVICE.

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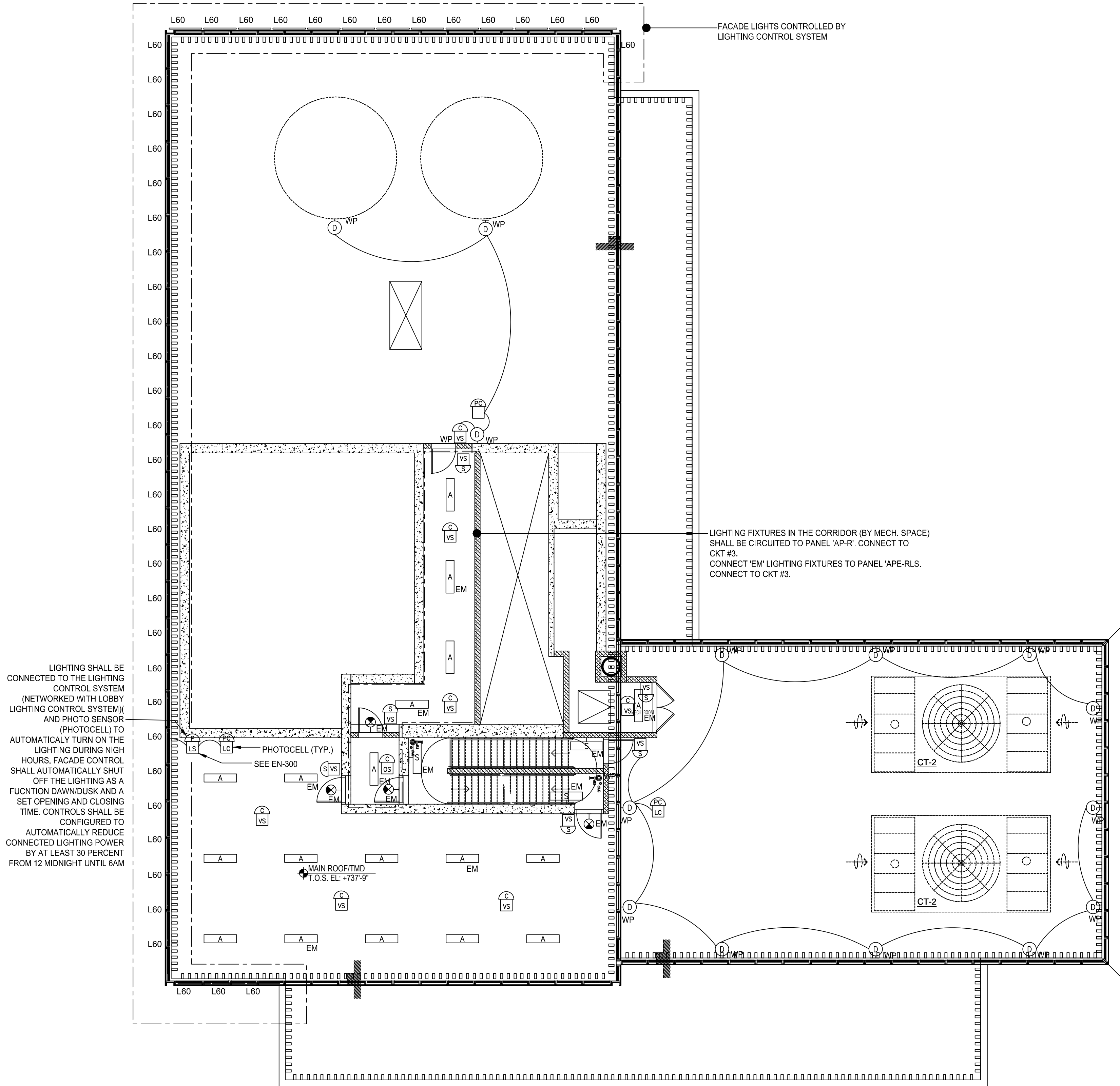
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TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1 2013 AS MODIFIED BY 2016 NYCECC APPENDIX CA.

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NOTES:

NOT FOR CONSTRUCTION

10/02/2017	ISSUED FOR DOB
08/15/2017	95% CD SET
06/02/2017	95% CD SET
03/24/2017	50% CD SUBMISSION SET
01/27/2017	SUPPLEMENTARY SET
01/25/2017	ISSUED FOR DOB
11/17/2016	FACADE PRELIM SET
11/11/2016	100% DEVELOPMENT 90 SET
10/12/2016	ISSUED FOR DOB
02/05/2016	DOB FILING SET

Number: Date: Revision:

Project:
City View Tower at Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:
Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:
HILL | WEST
ARCHITECTS
11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
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Consultant:
DESIMONE
CONSULTING ENGINEERS
140 Broadway 25th Floor
New York, NY, 10005
(212) 532-2211

Cosentini Associates
Two Pennsylvania Plaza, 3rd FL,
New York, NY 10121
(212) 615-3600

Whitehall
11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:
LIGHTING
ROOF LIGHTING PLAN

SEAL & SIGNATURE: DATE: 08/15/2017

PROJECT #: 19318

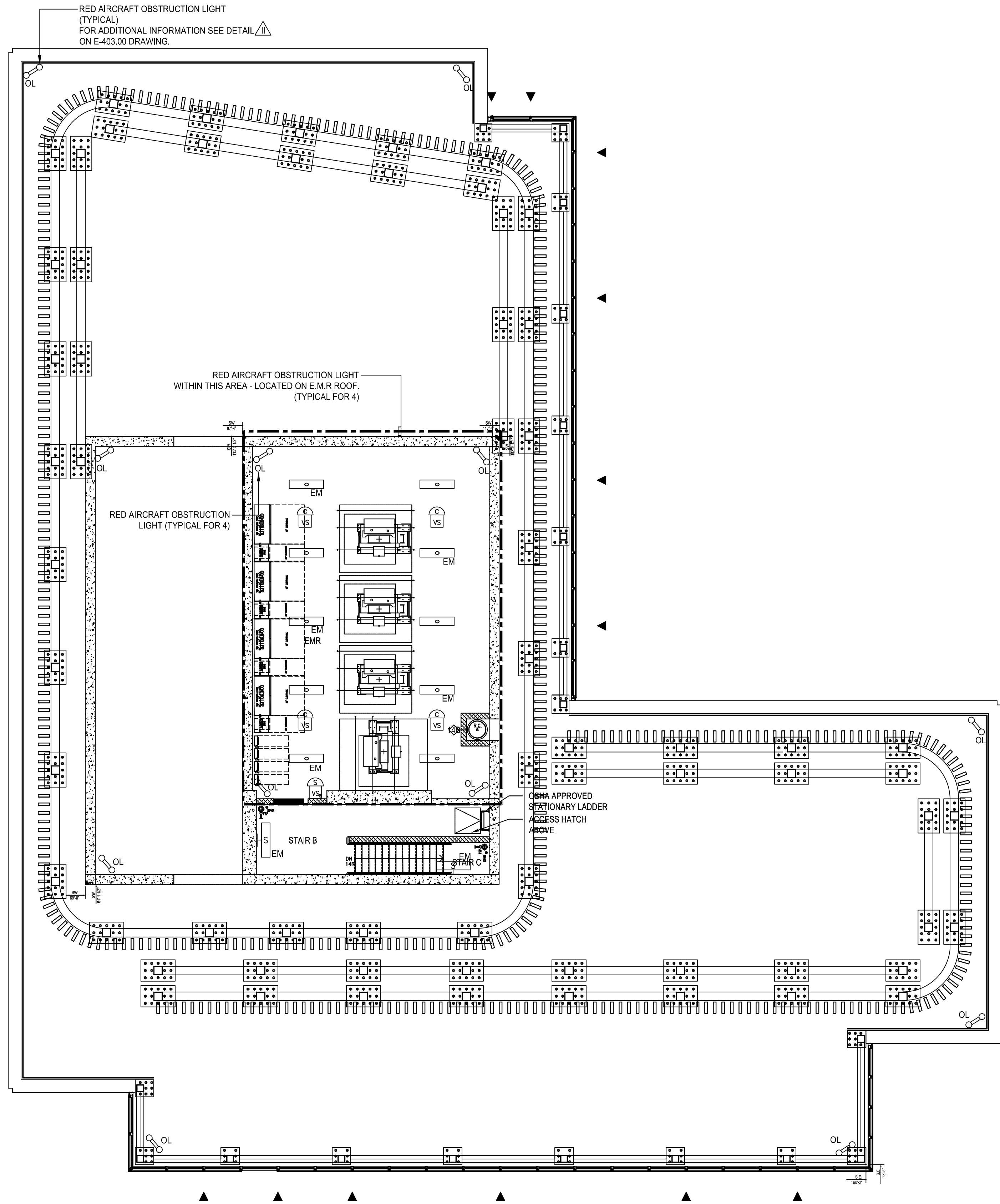
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EN-268.00
DWG NO.

25 OF 27

FILE NAME I:\50318\Energy Modeling\Submission\EN\20170922 EN Response\EN\50318\EN269 (EMR).dwg SAVED ON 8/25/2017 11:19 AM PLOTTED ON 10/3/2017 5:36 PM PLOTTED BY CHU, JING

(0'-0", 0'-0")



LIGHTING NOTES:

WIRING NOTES:

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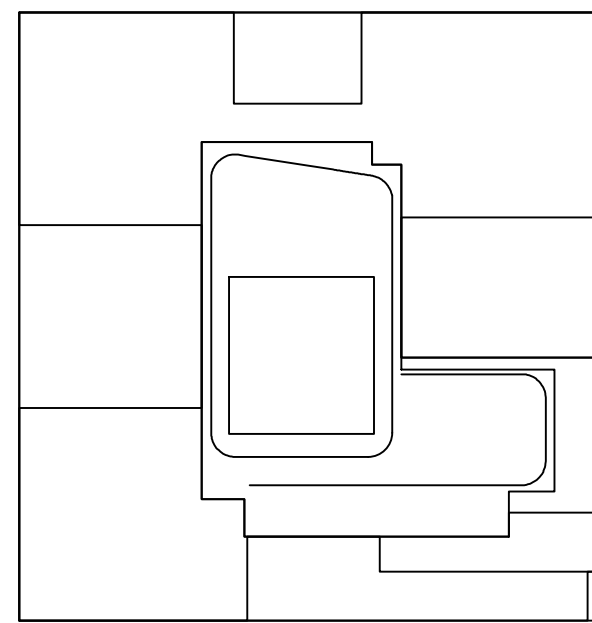
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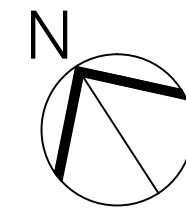
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KEY PLAN



NOTES:

NOT FOR CONSTRUCTION

10/06/2017	65.67 FOR DOB
08/15/2017	95% CD SET
08/02/2017	95% CD SET
03/24/2017	50% CD SUBMISSION SET
01/02/2017	SUBSTRUCTURE SET
01/25/2017	65.67 FOR DOB
11/17/2016	FACADE PRELIM SET
11/17/2016	100% CD FOUNDATION BD SET
10/12/2016	65.67 FOR DOB
02/03/2016	DOB FILING SET

Number: Date: Revision:

Project:

City View Tower at
Court Square
23-15 44th Drive
Long Island City, NY 11101

Client:

Cityview Tower LLC
112-15 NORTHERN BLVD, CF-2
CORONA, NY 11368
(718) 321-8652

Architect:

HILL | WEST
ARCHITECTS
11 BROADWAY
17TH FLOOR
NEW YORK, NY 10004
T. 212 213 8007

Consultant:

DESIMONE
CONSULTING ENGINEERS
140 Broadway 25th Floor
New York, NY, 10005
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Cosentini Associates

Two Pennsylvania Plaza, 3rd FL,
New York, NY 10121
(212) 615-3600

Whitehall

11 Broadway, 17th Floor
New York, NY 10004
(212) 908-4940

DOB STAMPS & SIGNATURES:

DWG TITLE:

LIGHTING
EMR LIGHTING PLAN

SEAL & SIGNATURE:



DATE: 08/15/2017

PROJECT #

139318

SCALE: 1/8" = 1'-0"

EN-269.00

DWG NO.

FILE NAME: I:\150318EN\Energy Modeling\Submission\EN150318EN\000.dwg, SAVED ON: 10/3/2017 5:37 PM, PLOTTED BY: CHU, JING

2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L01	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90 CRI, 800 lm	12w	ELV	120		Recessed
L02	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90 CRI, 800 lm	12w	ELV	120		Recessed
L05	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 3000K LED, 85 CRI, 1039 lm	15.5w	0-10V	120		Recessed
L06	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90 CRI, 1200 lm	15.1w	Phase (FWSRE-V)	120	Requires Flush Mount Adapter	Recessed
L07	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90 CRI, 2000 lm	27w	Phase (FWSRE-V)	120	Requires Flush Mount Adapter	Recessed
L08	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90CRI, 100 lm	2w	0-10V	120		Recessed
L09	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 3000K LED, 80+ CRI, 3275 lm	38w	0-10V	120		Recessed
L10	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90 CRI, 1000 lm	14.4w		120		Surface
L11	Pharos Lighting Light Emulator 1440W (17m) (OR EQUAL)	Integral 2700K LED, 85 CRI, 925 lm	14w	NON-DIM	120		Surface

85% CD
Release: Jun 2, 2017
Page 1 of 8

2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L25	FLEXCO-40-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 762 lm	8.9w/LF	MLV	24VDC	CHS-5-1208 (Channel) CWS-5-2010 (Channel)	Surface
L25X	961-2400R (OR EQUAL)	N/A	96w	MLV	120		Surface
L26	FLEXCO-40-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 762 lm	9w/LF	MLV	24VDC	CHS-5-1208 (Channel) CWS-5-2010 (Channel)	Surface
L26X	961-2400R (OR EQUAL)	N/A	96w	MLV	120		Surface
L28	Interlux FX OF-44-RV-100-24 (OR EQUAL)	Integral 3000K 85+ CRI LED	7.5w/LF	Phase (FWSRE-V)	24VDC		Recessed
L29A	Linear LED module with 120 degree beam angle. Nominal dims: 1.6" W x 1.4" H x 48" L 1) Fixture shall be furnished with mounting and electrical connection hardware accessories as required for proper installation.	Integral 2700K LED, 90 CRI, 44W/LF	15w	ELV	120-277		Surface
L29B	Linear LED module with 120 degree beam angle. Nominal dims: 1.6" W x 1.4" H x 12" L 1) Fixture shall be furnished with mounting and electrical connection hardware accessories as required for proper installation.	Integral 2700K LED, 90 CRI, 44W/LF	4w	ELV	120-277		Surface
L30A	FLEXCO-40-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 367 lm	55w	MLV	24VDC	CHS-5-1215 (Channel) CWS-1210-CP (Lens)	Surface

85% CD
Release: Jun 2, 2017
Page 3 of 8

2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L39	Douglas and Bco Line Mount Pendant Light	E27 LED Candle lamp, 330-350 lm (Included)	24w	ELV	120		Suspended
L40	Douglas and Bco Line Mount Pendant Light	E27 LED Candle lamp, 330-350 lm (Included)	4w	ELV	240		Surface
L41	Douglas and Bco Line Mount Pendant Light	E27 LED Candle lamp, 330-350 lm (Included)	4w	ELV	240		Suspended
L42	Decorative Pendant TBD		150w	INC	120V		
L43	Decorative Sconce TBD		100w	INC	120V		
L44	Decorative Pendant TBD		150w	INC	120V		
L45	Kelly Wagstaffer KW5550	Green Creative 40746 9416660M927 A19 LED 9W CRI90 series Dimming, 2700K, 92 CRI, 800 lm	27w	ELV	120		Suspended
L46	Restoration Hardware 6866130 LBB						Suspended

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2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L61	Wall Washer, Black Finish	Integral 3000K LED, 80+ CRI	30w	0-10V	120-277		Surface
L62	NS-LED-e55-MFL-RLP-12 (OR EQUAL)	Integral 3000K LED	8.5w	MLV	12VAC		Surface
L62X	Exterior accent light, 23 degree beam optic, black finish		150w	MLV	120		Surface
L63	STRO (see note) 5W/3W-3000K-10-1NF	Integral 3000K LED, 85 CRI, approx. 1200 lm	15w/LF	NON-DIM	380		Surface
L63X	GVA G20220						Surface
L64	STRO (see note) 5W/3W-3000K-10-1NF	Integral 3000K LED, 85 CRI, approx. 1200 lm	15w/LF	NON-DIM	380		Surface
L64X	GVA G20220						Surface
L65	Decorative Ceiling Mount Per FFBE		200w		120		
L66	NP-140000 In-grade LED fixture, nominal dims: 3-5/8" dia x 3" H. 30 degree beam	Integral 3000K LED, 275 lm	9w	MLV	120		Recessed

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2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L13	Kelly Wagstaffer KW 6012	9416660M927 A19 LED 9W CRI90 series Dimming, 2700K, 92 CRI, 800 lm	18w	ELV	120		Surface
L14	Decorative Pendant TBD		60w	INC	120V		
L15	ADORE 18" Round Surface Mount Downlight, Finish: brushed satin /en	Green Creative 40746 9416660M927 A19 LED 9W CRI90 series Dimming, 2700K, 92 CRI, 800 lm	18w	NON-DIM	120		Surface
L20	FLEXCO-40-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 367 lm	4.4w/LF	MLV	24VDC	CHS-5-1215 (Channel) CWS-1210-CP (Lens)	Surface
L20X	G2100-24-10W/XXX (OR EQUAL)	N/A	96w	ELV	120		Surface
L21	FLEXAC-65-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 354 lm	4.5w/LF	ELV	120	CHW-5-3535 (Channel)	Surface
L22	FLEXAC-65-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 354 lm	4.5w	ELV	120	CHW-5-3535 (Channel)	Surface
L23	Varied (see note) 10W/10-20-27-XX (OR EQUAL)	Integral 2700K LED, 90+ CRI, 421 lm	2.9w/LF	0-10V	24VDC	Channel 004, Linear Optic Lens	Surface
L24	39C1-C-C-500 (OR EQUAL)	Integral 3000K LED, 80+ CRI, 550 lm	7w/LF		120		Recessed

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2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L30B	FLEXCO-40-27-35-10X (Length) (OR EQUAL)	Integral 2700K LED, 90+ CRI, 367 lm	55w	MLV	24VDC	CHS-5-1215 (Channel) CWS-1210-CP (Lens)	Surface
L30X	961-2400R (OR EQUAL)	N/A	96w	MLV	120		Surface
L31	Kelly Wagstaffer KW 6012	Green Creative 47823 530110M927 candela rate LED lamp, 2700K, 90 CRI, 500 lm (or equal)	5.5w		120		Surface
L32	22-375 BLU (OR EQUAL)	Integral 3000K LED, 85 CRI	8.6w	0-10V	120-277		Surface
L33	Decorative Sconce TBD		100w	INC	120V		
L34	Alfred Mayer Potted Dome 3.5.3	One A19 LED Lamp, 2700K (Included)	9w	ELV	120		Surface
L35	Boyd Lighting Satin Brass	Integral 3000K LED, 90CRI, 600 lm	6w	NON-DIM	120		Surface
L37	Boyd Lighting Satin Brass	G9 Halogen Lamp, 3000K, 900 lm	60w		120		Suspended
L38	Longue Avenue Studio Satin Brass	Integral micro LED, 2700K, 85 CRI, 100 lm	44w		120		Suspended

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2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L47	Decorative Pendant TBD		150w		120		
L48	Decorative Pendant TBD		150w		120		
L51	Pharos Lighting CFL-64-50-27W-25-1 (Fluores in kit) CFL-35-30W W Reflector (OR EQUAL)	Integral 2700K LED, 80+ CRI, 400 lm	11w	ELV	120		Recessed
L52	L3NE1 / 1440W (17m) (OR EQUAL)	Integral 2700K LED, 90 CRI, 800 lm	12w	ELV	120		Recessed
L55	Lake Lamp Co Custom Rope Light	Linear LED, 2700K, 2.9w/LF	2.9w/LF	TBD	120V		Ceiling Suspended
L56	LF Luminaire MF120M-4-4-8020-10-1NF	(3) Integral 2700K Cree LED, 3350lm	123w	ELV	120		Recessed
L60	STRO (see note) 5W/3W-3000K-10-1NF	Integral RGBW color-changing LED, White @ 3000K, 453 lm	20w/LF	NON-DIM	380VDC		Surface
L60X	GVA G20220						Surface

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2 Court Square
Fixture Schedule

Note: Verify all components and quantities. Refer to product specifications for complete fixture data.

FixtureType	Fixture Specification	Lamp Specification	Fixture Wattage	Load Type	Fixture Voltage	Accessories	Mounting
L66X	NP-140000 In-grade LED fixture, nominal dims: 3-5/8" dia x 3" H. 30 degree beam	Integral 3000K LED, 275 lm	9w	MLV	120		Recessed

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BACK-OF-HOUSE LIGHTING FIXTURE LIST

FIXTURE TYPE DESIGNATION	FIXTURE DESCRIPTION	FIXTURE MANUFACTURERS & CATALOG NUMBERS	QUANTITY PER FIXTURE	DESIGNATION (LAMP MANUFACTURERS ABBREVIATION)	VOLTS	VOLT AMPS
A	4' SURFACE OR PENDANT MOUNTED FLUORESCENT INDUSTRIAL FIXTURE WITH WHITE BAKED ENAMEL REFLECTOR. REFLECTOR ALLOWS 10%-20% UPLIGHT.	DAYBRITE NF232-PP-1/2-EB-120; COLUMBIA KL-4-232-EB8-120-NY-20GA; METALUX DIM-232-120-EB81-20GA-REP; CROWNLINE 100-232-73.	2	F032/835 ECO.	120	70
D	VAPORTIGHT INCANDESCENT JAR LIGHT, WALL OR CEILING-MOUNTED, AS UL WET LOCATION LISTED.	WALL-MOUNT: CANLET GWF-151-G-GHC; RIG-A-LITE CVPH-151-12-HR-GC; HUBBELL VXX151VCG15.	1	100W A21.	120	150
E	EXPLOSION-PROOF INCANDESCENT JAR LIGHT, WALL OR CEILING-MOUNTED, AS INDICATED ON DRAWINGS, LISTED FOR CLASS 1, DIVISION 2, GROUPS A, B, C, D.	WALL-MOUNT: CANLET GWF-151-G-GHC; RIG-A-LITE CVPH-151-12-HR-GC; HUBBELL VXX151VCG15.	1	100W A21.	120	150
XA	CEILING-MOUNTED, SINGLE-FACE EXIT SIGN - DIE-CAST ALUMINUM HOUSING CANOPY-MOUNTED TO CEILING. SATIN ALUMINUM STENOL FACE WITH DIFFUSER BEHIND. ELECTRONICS FOR LED'S CONTAINED WITHIN HOUSING. 8" LETTERS PER NYC	ATLITE AUKA BRUSHED ALUM. MODIFY CATALOGUE NUMBER AS REQUIRED FOR ORCUITED VOLTAGE.	N/A	RED LED	120/277	0.9
D	4' SURFACE OR PENDANT MOUNTED FLUORESCENT INDUSTRIAL FIXTURE WITH WHITE BAKED ENAMEL REFLECTOR. REFLECTOR ALLOWS 10%-20% UPLIGHT.	DAYBRITE NF232-PP-1/2-EB-120; COLUMBIA KL-4-232-EB8-120-NY-20GA; METALUX DIM-232-120-EB81-20GA-REP; CROWNLINE 100-232-73.	2	F032/835 ECO.	120	70
S	WALL OR CEILING SURFACE MOUNTED FLUORESCENT FIXTURE 4' LONG WITH REBID CLEAR ACRYLIC DIFFUSER. B-LEVEL LUMINAIRE CONTROLLED BY AN INTEGRAL ULTRASONIC OCCUPANCY SENSOR SWITCHES LAMP TO 30% OUTPUT WHEN STAIR IS UNOCCUPIED AND 100% OUTPUT WHEN OCCUPANCY IS DETECTED. INTEGRAL EMERGENCY BATTERY PACK.	LAMAR LIGHTING VO-2-32-XX-08-U-PA-2C,F0,AS-8"X48"-F32B STAIRWELL CONTRACTOR TO ORDER. FEATURES: WITH UNOCCUPIED SENSOR SWITCH SET AT 30% OUTPUT.	2	F32TB	120	70
T	4' SURFACE OR PENDANT MOUNTED FLUORESCENT INDUSTRIAL FIXTURE WITH WHITE BAKED ENAMEL REFLECTOR. REFLECTOR ALLOWS 10%-20% UPLIGHT.	DAYBRITE NF232-PP-1/2-EB-120; COLUMBIA KL-4-232-EB8-120-NY-20GA; METALUX DIM-232-120-EB81-20GA-REP; CROWNLINE 100-232-73.	2	F032/835 ECO.	120	70




SYMBOL	DESCRIPTION	NOTES
	WALL BOX TYPE COMBINATION VACANCY SENSOR AND SWITCH. LINE OF SIGHT COVERAGE OF 300 SQUARE FEET MINIMUM. DEVICE SHALL HAVE SELECTABLE MANUAL-ON AND AUTO-ON MODES. DEVICE SHALL BE SELF-ADJUSTING, RATED FOR LINE-VOLTAGE SWITCHING OF 800VA DUAL.	SENSORS WILL SHUT OFF LIGHTING WHEN 20 MINUTES OF INACTIVITY IS RECORDED.
	CEILING MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR. SENSOR SHALL PROVIDE LINE OF SIGHT COVERAGE OF 1000 SQUARE FEET MINIMUM. SENSOR SHALL BE SELF-ADJUSTING. WHERE LIGHTING LOAD EXCEEDS THE SWITCHING CAPACITY OF THE SENSOR, PROVIDE POWER PACKS AS REQUIRED PER MANUFACTURERS RECOMMENDATIONS. EACH POWER PACK SHALL BE SUITABLE FOR SWITCHING LINE-VOLTAGE 20A LOAD.	WHERE MULTIPLE SENSORS ARE LOCATED IN A SPACE, CONNECT ALL SENSORS IN THE SPACE TO THE ASSOCIATED POWER PACKS. PROVIDE INTERCONNECTING CIRCUITRY PER MANUFACTURER'S REQUIREMENTS. MOUNT SENSOR A MINIMUM OF 4 FEET FROM AIR SUPPLY REGISTERS. WHERE LOCATED IN A CORRIDOR, PROVIDE SENSOR WITH APPROPRIATE COVERAGE PATTERN. SENSORS WILL SHUT OFF LIGHTING WHEN 20 MINUTES OF INACTIVITY IS RECORDED.
	CEILING MOUNT DUAL TECHNOLOGY VACANCY SENSOR. USED IN COMBINATION WITH WALL MOUNTED TOGGLE SWITCH. SENSOR DETECTS ROOM VACANCY AND TURNS OFF LIGHTS AFTER SET PERIOD OF TIME. SAME SPECIFICATIONS AS OCCUPANCY SENSOR.	SENSORS WILL SHUT OFF LIGHTING WHEN 20 MINUTES OF INACTIVITY IS RECORDED.
	CEILING MOUNT KENALL SMARTSENSE SENSOR. SENSOR SWITCHES LIGHTS TO 100% WHEN AREA IS OCCUPIED AND TO 30% WHEN AREA IS UNOCCUPIED. SENSOR SHALL PROVIDE LINE OF SIGHT COVERAGE OF 25 FOOT RADIUS. DEVICE TO BE CONNECTED TO KENALL SMARTSENSE LIGHTING CONTROL MODULE.	LIGHTING CONTROL MODULE LIMITED TO 6 SENSORS AND 32 LIGHTING FIXTURES PER MODULE. MODULES MAY BE CONNECTED TOGETHER TO SERVE MORE LIGHTING FIXTURES AND RECEIVE INPUT FROM MORE SENSORS. SENSORS WILL SHUT OFF LIGHTING WHEN 20 MINUTES OF INACTIVITY IS RECORDED.
	PHOTOCELL - DAYLIGHT CONTROL	

OCCUPANCY/VACANCY SENSOR DETAIL

GENERAL:
CONTRACTOR SHALL PROVIDE A COMPLETE MICROPROCESSOR BASED LIGHTING CONTROL SYSTEM AS DESCRIBED HEREIN INCLUDING START-UP, PROGRAMMING AND USER OPERATION MANUALS FOR EACH SCHEDULED LIGHTING CONTROL PANEL.

A. SYSTEM DESCRIPTION

THE LIGHTING CONTROL PANEL (LCP) SHALL PROVIDE THE ABILITY TO CONTROL LIGHTING THROUGH THE USE OF LOW VOLTAGE INPUTS AND LATCHING RELAYS. THE PANEL SHALL BE FIELD PROGRAMMABLE BY A USER FRIENDLY INTERNAL OR DEMONSTRABLE PROGRAMMING MODULE.

LEGEND		LIGHTING CONTROL PANEL (UPPER CASE LETTERS DENOTES PANEL DESIGNATION)			
	1A				
	1B, 1C, 1D, 1E	LOW VOLTAGE SWITCH CONTROL STATION WITH (1) SWITCH PER CONTROL ZONE (LOWER CASE LETTERS) DENOTE CONTROL ZONES AND QUANTITY THEREOF. NOTE THAT WITHIN ANY AREA REQUIRING MULTI-LEVEL LIGHTING CONTROL, (2) CONTROL ZONES ARE SPECIFIED PER AREA.			
LIGHTING CONTROL PANEL SCHEDULE					
LIGHTING CONTROL PANEL DESIGNATION	 1A	ASSOCIATED LIGHTING PANEL(S)			QUANTITY OF RELAYS
		DESIGNATION	VOLTAGE	DESIGNATION	
LOBBY			120V	TYP. CORRIDOR	24
ROOF					16
POOL					12
BACK OF THE HOUSE					16

NETWORKED LIGHTING CONTROL SYS

STATEMENT OF COMPLIANCE:

TO THE BEST OF MY KNOWLEDGE, AND PERSONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1-2013 AS MODIFIED BY 2016 NYECC APPENDIX CA.

NOTES (MANDATORY PROVISIONS):

- LIGHTING CONTROLS SHALL BE PROVIDED FOR EACH INTERIOR SPACE IN THE BUILDING AS INDICATED ON CONTRACT DRAWINGS. ALL OF THE LIGHTING CONTROL FUNCTIONS SHALL BE AS INDICATED IN BASIS OF DESIGN TABLE INDICATED ON CONTRACT DRAWINGS.
- THERE SHALL BE ONE OR MORE MANUAL LIGHTING CONTROLS IN THE SPACE THAT CONTROLS ALL OF LIGHTING IN THE SPACE AS REQUIRED BY THE CODE.
- THE CONTROL DEVICES SHALL BE READILY ACCESSIBLE AND LOCATED SO THE OCCUPANT CAN SEE THE CONTROLLED LIGHTING WHEN USING THE DEVICE. SWITCHES LOCATED IN REMOTE LOCATIONS FOR SAFETY OR SECURITY SHALL BE EQUIPPED WITH INDICATOR LIGHT AND SHALL BE CLEARLY LABELED TO IDENTIFY CONTROLLED LIGHTING.
- SEQUENCE OF OPERATION FOR MOST LIGHTING FIXTURES IN THE SPACE SHALL BE MANUAL ON/ AUTO OFF.
- MANUAL ON IS NOT REQUIRED WHERE MANUAL ON OPERATION OF THE GENERAL LIGHTING WOULD ENDANGER THE SAFETY OR SECURITY OF THE ROOM OR BUILDING OCCUPANTS.
- CORRIDORS: LIGHTING FIXTURES MARKED "EM" OR "EM/NL" FOR SAFETY AND SECURITY OF OCCUPANTS WILL BE ON 365/24/7. REMAINING LIGHTING FIXTURES BUT NOT NO MORE THAN 50% OF THE LIGHTING POWER FOR GENERAL CORRIDOR LIGHTING SHALL BE AUTOMATICALLY TURNED ON USING OCCUPANCY SENSORS UPON SENSING THE MOVEMENT. THE LIGHTING POWER IN THE CORRIDOR SHALL BE AUTOMATICALLY REDUCED AT LEAST 50% WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE.
- THE GENERAL LIGHTING IN THE SPACES SHALL BE CONTROLLED AS AS TO PROVIDE AT LEAST ON INTERMEDIATE STEP IN LIGHTING POWER OR CONTINUOUS DIMMING IN ADDITION TO FULL ON/ FULL OFF. STEP SHALL BE BETWEEN 30% AND 70% OF FULL LIGHTING POWER.
- IN ANY SPACE INDICATED ON CONTRACT DRAWINGS SUCH AS MAIN LOBBY WITH SIDELIGHTED AREAS (TYPICALLY PRIMARY SIDELIGHTED AREAS 150W OR GREATER, PRIMARY AND SECONDARY SIDELIGHTED AREAS 300W OR GREATER) THE GENERAL LIGHTING IN THESE SPACES SHALL BE CONTROLLED BY PHOTO CONTROLS WITH THE FOLLOWING CHARACTERISTICS:
 - THE CALIBRATION ADJUSTMENTS SHALL BE READILY ACCESSIBLE.
 - AT MINIMUM, GENERAL LIGHTING IN THE SECONDARY SIDELIGHTED AREA SHALL BE CONTROLLED INDEPENDENTLY OF THE GENERAL LIGHTING IN THE PRIMARY AREAS.
 - THE PHOTOCONTROLS SHALL REDUCE ELECTRIC LIGHTING IN RESPONSE TO AVAILABLE DAYLIGHT USING CONTINUOUS DIMMING OR WITH AT LEAST ONE CONTROL POINT BETWEEN 50% AND 70% OF DESIGN LIGHTING POWER AND SECOND CONTROL POINT BETWEEN 20% AND 40% OF DESIGN LIGHTING POWER OR TO THE LOWEST DIMMING CONTROL TECHNOLOGY ALLOWS, AND THIRD CONTROL POINT THAT TURNS ALL OF THE CONTROLLED LIGHTING OFF.
- BATHROOMS SHALL HAVE A SEPARATE CONTROL DEVICE INSTALLED TO AUTOMATICALLY TURN OFF THE BATHROOM LIGHTING WITHIN 30 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE BATHROOM. (NIGHT LIGHTING OF UP TO 5W PER BATHROOM IS EXEMPT FROM THIS REQUIREMENT).
- ALL SUPPLEMENTAL TASK LIGHTING, INCLUDING PERMANENTLY INSTALLED UNDERSHELF OR UNDERCABINET LIGHTING, SHALL BE CONTROLLED IN ACCORDANCE WITH CODE SECTION 9.4.1.3 (3).
- EXTERIOR LIGHTING CONTROL. LIGHTING FOR EXTERIOR APPLICATIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
 - ROOF LIGHTING SHALL BE CONTROLLED BY A DEVICE THAT AUTOMATICALLY TURNS OFF THE LIGHTING WHEN SUFFICIENT DAYLIGHT IS AVAILABLE.
 - ALL BUILDING FACADE AND LANDSCAPE LIGHTING SHALL BE AUTOMATICALLY SHUT OFF BETWEEN MIDNIGHT OR BUSINESS CLOSING, WHICHEVER IS LATER, AND 8 A.M. OR BUSINESS OPENING, WHICHEVER COMES FIRST, OR BETWEEN TIMES ESTABLISHED BY THE AUTHORITY HAVING JURISDICTION.
 - LIGHTING NOT SPECIFIED IN (B) AND LIGHTING FOR EXTERIOR SIGNAGE (IF ANY) SHALL BE CONTROLLED BY A DEVICE THAT AUTOMATICALLY REDUCES THE CONNECTED LIGHTING POWER BY AT LEAST 30% FOR AT LEAST ONE OF THE FOLLOWING CONDITIONS:
 - FROM 12 MIDNIGHT OR WITHIN ONE (1) HOUR OF THE END OF BUSINESS OPERATIONS, WHICHEVER IS LATER, UNTIL 6 A.M. OR BUSINESS OPENING, WHICHEVER IS EARLIER
 - DURING ANY PERIOD WHEN NO ACTIVITY HAS BEEN DETECTED FOR A TIME OF NO LONGER THAN 15 MINUTES
- ALL TIME SWITCHES WILL BE CAPABLE OF RETAINING PROGRAMMING AND THE TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST TEN HOURS.
- PER SECTION 9.4.3 (NYC), INTERNALLY ILLUMINATED EXIT SIGNS SHALL NOT EXCEED 5W PER FACE.
- LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTION.
- THE INDIVIDUAL(S) RESPONSIBLE FOR THE FUNCTIONAL TESTING SHALL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT AND WILL PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA.
- AUTOMATIC RECEPTACLES CONTROL IN BACK OF THE HOUSE AREAS: AT LEAST 50% OF ALL 125-VOLT 15 AND 20 AMP RATED RECEPTACLES IN ALL BACK OF THE HOUSE PRIVATE OFFICES, CONFERENCE ROOMS, ROOMS USED PRIMARILY FOR PRINTING AND/OR COPYING FUNCTIONS, BREAKROOMS, CLASSROOMS (IF ANY) AND INDIVIDUAL WORKSTATIONS. THESE RECEPTACLES SHALL BE CONTROLLED BY AN OCCUPANT SENSOR THAT SHALL RECEPTACLE OFF WITHIN 20 MINUTES OF ALL OCCUPANTS LEAVING THE SPACE.
- ALL CONTROLLED RECEPTACLES SHALL BE PERMANENTLY MARKED TO VISUALLY DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES.
- ALL CONTROLLED RECEPTACLES SHALL BE UNIFORMLY DISTRIBUTED THROUGH THE SPACE.
- ELECTRICAL MONITORING:

AS RESIDENTIAL COMMON AREAS EXCEED 10,000SF TOTAL, ADDITIONAL SUBMETERING WILL BE REQUIRED AT THE BASE BUILDING ELECTRIC METER FOR THE FOLLOWING ELECTRICAL USES:

 - TOTAL ELECTRICAL ENERGY
 - HVAC SYSTEMS
 - INTERIOR LIGHTING
 - EXTERIOR LIGHTING
 - RECEPTACLE CIRCUITS
- PER NOTE (27) ABOVE, SUBMETERS WILL REPORT BACK TO BUILDING MANAGEMENT SYSTEM (BMS) EVERY 15 MINUTES IN ACCORDANCE WITH SECTION 8.4.3.2.
- THE BUILDINGS WILL BE MASTER METERED. PROVISIONS WILL BE MADE TO DETERMINE THE ELECTRICAL ENERGY CONSUMED BY EACH UNIT BY SEPARATELY SUBMETERING OF INDIVIDUAL DWELLING UNITS.
- ELEVATOR SECTION SHALL COMPLY WITH SECTION 10.4.3

Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH ASHRAE 90.1-2013 AS MODIFIED BY 2016 NYECC APPENDIX CA

HEAT RECOVER UNIT (ERV WHEEL) SCHEDULE																																														MWSK EQUIPMENT AS STD									
UNIT NO.	AREA SERVED	LOCATION	TYPE	EVAPORATOR FAN					EXHAUST CFM	COMPRESSOR					COOLING COIL CAPACITY										HOT GAS REHEAT COIL					HEATING COIL CAPACITY					Volts/Ph/Hz	SUMMER WHEEL				WINTER WHEEL				MODEL NO.	MANUFACTURE	EER	REMARKS								
				AIR QTY (CFM)	TOTAL Q.A. CFM	EXT SP IN.WG	RPM	FAN QTY		FAN HP	QTY	MCA	MOP	LRA	RLA	TOTAL MBH	SENS MBH	EAT DB F	LAT WB F	LAT DB F	EWI DB F	LWT DB F	GPM	PD	EAT	LAT	TOTAL MBH	TOTAL MBH	EAT DB F	LAT DB F	EWI DB F	LWT DB F	GPM	PD		EAT DB F	RAT DB F	EAT WB F	RAT WB F																
AC-4-1	APARTMENT 0.A (3rd FL. - 6th FL.)	4th FL MER	VERTICAL	5,400	5,400	2	1725	1	5	5,400	2	35.2	45	100	12.6	198.8	150.1	80.1	66	54.9	53.9	85	97	38.4	13.2	54.9	75.6	122.8	391.1	10	76.5	180	160	39.3	7.4	460/3/60	89.9	75	25.8	72	VZWL15G4ATAA-X	MWSK EQUIPMENT	13.5												
AC-4-2	APARTMENT 0.A (3rd FL. - 6th FL.)	4th FL MER	VERTICAL	8,000	8,000	2	1725	2	5	8,000	4	57.7	60	75	9.5	222.4	462	79.9	65.9	54.7	52.9	85	97	62	11.5	54.7	74.1	170.9	590.1	10	77.7	180	160	60	7.3	460/3/60	90.1	75	25.2	72	VZW024G40TAA-X	MWSK EQUIPMENT	13.5												
AC-4-3	APARTMENT 0.A (7th FL. - 19th FL.)	4th FL MER	VERTICAL	10,200	10,200	2	1725	2	7.5	10,200	4	73.7	80	100	12.6	389.6	290.9	80.7	66.5	54.8	54	85	99.8	62	11.4	54.8	74.8	224.6	764	10	78.7	180	160	78	12.2	460/3/60	89.3	75	27.9	72	VZW030G40TAA-X	MWSK EQUIPMENT	13.5												
AC-4-4	APARTMENT 0.A (7th FL. - 19th FL.)	4th FL MER	VERTICAL	19,200	19,200	2	1725	2	15	19,200	4	134.3	150	150	23.1	742.6	544.8	80.9	66.6	55.2	54	85	97	144	7	55.2	75.3	423.7	1480.9	10	80.8	180	151	151	10.5	460/3/60	89.1	75	28	72	VZW060G40TAA-X	MWSK EQUIPMENT	13.5												
AC-36-1	APARTMENT 0.A (20th FL. - 35th FL.)	36th FL MER	VERTICAL	19,300	19,300	2	1725	2	7.5	19,300	4	134.3	150	150	23.1	742.6	544.8	80.9	66.6	55.2	55	85	97	144	7	55.2	75.3	423.7	1480.9	10	80.8	180	160	151	10.5	460/3/60	89.1	75	28.4	72	VZW060G40TAA-X	MWSK EQUIPMENT	13.5												
AC-36-2	APARTMENT 0.A (20th FL. - 35th FL.)	36th FL MER	VERTICAL	10,800	10,800	2	1725	2	7.5	10,800	4	73.7	80	100	12.6	389.6	290.9	80.7	66.5	54.8	54	85	97	78	17.2	54.8	74.8	224.6	764	10	78.7	180	160	78	12.2	460/3/60	89	75	28.6	72	VZW030G40TAA-X	MWSK EQUIPMENT	13.5												
AC-36-3	APARTMENT 0.A (37th FL. - 52nd FL.)	36th FL MER	VERTICAL	16,800	16,800	2	1725	2	10	16,800	4	102.8	110	125	17.9	619.4	467.9	80.4	66.2	55.1	54.1	85	97	118	14.5	55.1	75.4	375.8	1224.7	10	76.9	180	160	128	7.3	460/3/60	89.6	75	26.8	72	VZW050G40TAA-X	MWSK EQUIPMENT	13.5												
AC-36-4	APARTMENT 0.A (37th FL. - 52nd FL.)	36th FL MER	VERTICAL	10,800	10,800	2	1725	2	7.5	10,800	4	73.7	80	100	12.6	389.6	290.9	80.7	66.5	54.8	54	85	97	78	17.2	54.8	74.8	224.6	764	10	78.7	180	160	78	12.2	460/3/60	89	75	28.6	72	VZW030G40TAA-X	MWSK EQUIPMENT	13.5												
AC-67-1	APARTMENT 0.A (53rd FL. - 66th FL.)	67th FL MER	VERTICAL	13,500	13,500	2	1725	2	7.5	13,500	4	91.9	100	114	16.7	501.6	379.2	80.6	66.4	55.1	54.3	85	97.1	96	8.7	55.1	77.8	336.6	1021.6	10	79.4	180	160	98.2	7.8	460/3/60	89.4	75	27.4	72	VZW040G40TAA-X	MWSK EQUIPMENT	13.5												
AC-67-2	APARTMENT 0.A (53rd FL. - 66th FL.)	67th FL MER	VERTICAL	16,800	16,800	2	1725	2	10	16,800	4	102.8	110	125	17.9	619.4	467.9	80.4	66.2	55.1	54.1	85	97	118	14.5	55.1	75.4	375.8	1224.7	10	76.9	180	160	128	7.3	460/3/60	89.6	75	26.8	72	VZW050G40TAA-X	MWSK EQUIPMENT	13.5												
NOTES: 1. PROVIDE R-410a GREEN REFRIGERANT FOR ALL UNITS. 2. 100% OUTSIDE AIR UNIT 3. COATED COIL 4. MODULATING HOT GAS REHEAT. 5. FREEZE BLOCK HOT WATER COIL INCLUDING EXPANSION RELIEF HEADERS EQUIPPED WITH PRESSURE AND TEMPERATURE SENSING VALVES TO PREVENT FREEZE DAMAGE TO THE UNITS AND INSTALL IN FIELD). 6. EXTRA QUIET SOUND PACKAGE. 7. STAINLESS STEEL DRAIN PAN. 8. HOT GAS BYPASS.																																																							

VERTICAL HEAT PUMP UNIT SCHEDULE																				"ENVIROTEC" AS STD. (ISLANDAIRE AND HTS APPROVED EQUAL)							
UNIT TYPE	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	CONDENSER WATER				AIR TEMP (°F)		FAN DATA		TOTAL HEAT REJECTION (MBH)	HEATING MODE			COMPRESSOR				MIN. CIRCUIT AMP.	MAX FUSE/HACR	VOLTS/PH/HZ	MODEL NO.	DIMENSIONS	EER	COP	REMARKS	
			EWI	LWT (°F)	GPM	WPD (FT)	ENT.	LVG.	CFM	ESP		EWI (°F)	LWT (°F)	HTG (MBH)	QUANTITY	TYPE	RLA	FLA									
A	8.2	6.3	87	101	1.6	7	80	61.7	320	0.05	11.6	70	60	17.6	1	ROTARY	4.7	5.4	6	15	208/1/60	XXX	17"(W)x17"(D)x8"(H)	13	4.3		
B	11.1	8.4	87	101	1.8	7	80	64.6	390	0.05	11.9	70	60	24.7	1	ROTARY	5.6	6.6	7	15	208/1/60	XXX	20"(W)x20"(D)x8"(H)	13	4.3		
C	13.7	11.2	87	101	2	7	80	62.3	570	0.05	19	70	60	28.8	1	ROTARY	6.6	7.6	9	15	208/1/60	XXX	20"(W)x20"(D)x8"(H)	13.2	4.3		
D	17.1	13.4	87	101	2.4	7	80	62.3	655	0.05	23	70	60	28.8	1	ROTARY	6.6	7.6	12	15	208/1/60	XXX	20"(W)x20"(D)x8"(H)	13.2	4.3		
NOTES: 1. CAPACITIES INDICATED ARE NOMINAL. ALL UNITS TO BE PROVIDED WITH: THERMOSTAT, DISCONNECT SWITCH, EXTENDED RANGE VALVE FOR LOW WATER TEMP OPERATION, AND BE PROVIDED WITH EXTRA QUIET SOUND PACKAGE. UNIT TO BE PROVIDED WITH AUTOMATIC CONTROL/BALANCING VALVE TO CLOSE WATER WHEN UNIT IS OFF. 2. ALL UNITS AND COMPONENTS TO BE DESIGNED FOR MINIMUM OF 250 PSI FROM 1ST FLOOR TO 30TH FLOOR AND 200 PSI FROM 31ST FLOOR TO 49TH FLOOR. 3. UNITS SERVING MULTIPLE ROOMS TO BE PROVIDED WITH INTERNAL ACOUSTIC LINED 2" THICK BAFFLE TO BALANCE AIR TO DIFFERENT ROOMS.																											

HEAT PUMP UNIT SCHEDULE (AC)																														"FLORIDA" AS STD.					
UNIT TYPE	SERVICE	LOCATION	TONNAGE	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	CONDENSER WATER				AIR TEMP (°F)		MED-SP. FAN DATA	OA CFM	TOTAL HEAT REJECTION (MBH)	HEATING MODE			COMPRESSOR				MIN. CIRCUIT AMP.	MAX FUSE/ HACR	FLA	VOLTS/PH/HZ	HP	MODEL NO.	EER	COP	CONFIGURATION	REMARKS				
						EWI	LWT (°F)	GPM	WPD (FT)	ENT.	LVG.				CFM	ESP	EWI (°F)	LWT (°F)	HTG (MBH)	QUANTITY	TYPE											RLA	LRA		
AC-C-1	TELECOM ROOM	CELLAR	5	59	44.7	85	95	15	10.6	75	55	2,000	.5	0	72.5	70	60	73.7	1	SCROLL	7.8	52	13.8	20	11.8	460/3/60	1	LV060-4HZC	13	4.8	HORIZONTAL				
AC-C-2	ELECTRICAL ROOM	CELLAR	5	59	44.7	85	95	15	10.6	75	55	2,000	.5	0	72.5	70	60	73.7	1	SCROLL	7.8	52	13.8	20	11.8	460/3/60	1	LV060-4HZC	13	4.8	HORIZONTAL				
AC-C-3	LOBBY	CELLAR	30	301.4	219.2	85	95	75	18.1	83	57	8,000	1.5	3200	369.8	70	60	366.6	2	SCROLL	18.6	125	50.5	60	45.8	460/3/60	3	EC300-4VTC	13	4.3	VERTICAL				
AC-C-4	TENANT STORAGE	CELLAR	10	119.2	90.2	85	95	28	12.6	75	54	3,800	1.0	0	145.2	70	60	155.4	2	SCROLL	7.8	52	21.9	25	19.9	460/3/60	3	EC120-4HZC-SLSBUA	12.9	5.1	HORIZONTAL				
AC-C-5	COMPACTOR ROOM	CELLAR	2	22.7	17.4	85	95	6.0	12.8	85	55	800	.5	0	27.6	70	60	28.8	1	SCROLL	2.9	30	5.7	15	5.00	460/3/60	.5	LV024-4HZC	13	4.5	HORIZONTAL				
AC-C-6	EXERCISE ROOM	CELLAR	10	123.2	95.47	85	95	24	10	80	55	3800	1.0	1200	156.05	70	60	148.58	2	SCROLL	9.7	3.2	EA	26.4	35	20.3	460/3/60	3	EC120-4HZC-SLSBUA	13	4.3	HORIZONTAL			
AC-C-7	SUPER'S OFFICE	CELLAR	.75	35.8	28.0	85	95	9.0	11.9	75	55	1,200	.5	200	43.4	70	60	44.3	1	SCROLL	3.9	34	7	15	6.00	460/3/60	.5	LV036-4HZC	13	5.1	HORIZONTAL				
AC-C-8	LAUNDRY ROOM	CELLAR	2	22.7	17.4	85	95	6.0	12.8	85	55	800	.5	200	27.6	70	60	28.8	1	SCROLL	2.9	30	5.7	15	5.00	460/3/60	.5	LV024-4HZC	13	4.5	HORIZONTAL				
AC-C-9	MTA EMR	CELLAR	3	35.8	28.0	85	95	9.0	11.9	75	55	1,200	.5	0	43.4	70	60	44.3	1	SCROLL	3.9	34	7	15	6.00	460/3/60	.5	LV036-4HZC	13	5.1	HORIZONTAL				
AC-C-10	EMR	CELLAR	5	59	44.7	85	95	15	10.6	75	55	2,000	.5	0	72.5	70	60	73.7	1	SCROLL	7.8	52	13.8	20	11.8	460/3/60	1	LV060-4HZC	13	4.8	HORIZONTAL				
AC-C-11	(NOT USED)																																		
AC-C-12	ELECTRICAL CLOSET RM	CELLAR	2	22.7	17.4	85	95	6.0	12.8	85	55	800	.5	0	27.6	70	60	28.8	1	SCROLL	2.9	30	5.7	15	5.00	460/3/60	.5	LV024-4HZC	13	4.5	HORIZONTAL				
AC-C-13	STORAGE RM	CELLAR	2.5	28.8	22	85	95	7.5	13.7	75	63	900	.4	0	34.8	70	60	35.5	1	SCROLL	3.5	30	6.6	15	5.7	460/3/60	.5	LV030-4HZC	14.2	5.5	HORIZONTAL				
AC-2-1	MER	2ND FL.	3	35.8	28.0	85	95	9.0	11.9	75	55	1,200	.5	0	43.4	70	60	44.3	1	SCROLL	3.9	34	7	15	6.00	460/3/60	.5	LV036-4HZC	13	5.1	HORIZONTAL				
AC-3-1	LOUNGE	3RD FL.	15	157.5	120.9	85	95	42	11.9	80	57	4,510	1.0	1500	190.6	70	60	154	2	SCROLL	10.6	75	30	40	6.1	460/3/60	5	EC181-4VTC	13.8	4.8	VERTICAL				
AC-3-2	POOL EQUIP. ROOM	3RD FL.	3	35.8	28.0	85	95	9.0	11.9	75	55	1,200	.5	0	43.4	70	60	44.3	1	SCROLL	3.9	34	7	15	6.00	460/3/60	.5	LV036-4HZC	13	5.1	HORIZONTAL				
AC-3-3	ATS/ELECT. ROOM	3RD FLOOR	5	59	44.7	85	95	15	10.6	75	55	2,000	.5	0	72.5	70	60	73.7	1	SCROLL	7.8	52	13.8	20	11.8	460/3/60	1	LV060-4HZC	13	4.8	HORIZONTAL				
AC-3-4	KID'S ROOM	3RD FLOOR	5	59	44.7	85	95	15	10.6	75	55	2000	.5	200	72.5	70	60	73.7	1	SCROLL	7.8	52	13.8	20	11.8	460/3/60	.5	LV024-4HZC	13	4.8	HORIZONTAL				
AC-3-5	POOL	3RD FLOOR	10	119.2	90.2	85	95	28	12.6	75	54	3,800	1.0		145.2	70	60	155.4	2	SCROLL	7.8	52	21.9	25	19.9	460/3/60	3	EC120-4HZC-SLSBUA	13	4.3	HORIZONTAL				
AC-CS-3-1	CORRIDOR 3RD-6TH FL.	3RD FLOOR	15	157.5	120.9	85	95	42	11.9	80	57	4,510	1.0	4,510	190.6	70	60	154	2	SCROLL	10.6	75	30	40	6.1	460/3/60	5	EC181-4VTC	13.8	4.8	VERTICAL				
AC-CS-3-2	CORRIDOR 3RD-6TH FL.	3RD FLOOR	15	157.5	120.9	85	95	42	11.9	80	57	4,510	1.0	4,510	190.6	70	60	154	2	SCROLL	10.6	75	30	40	6.1	460/3/60	5	EC181-4VTC	13.8	4.8	VERTICAL				
AC-CS-4-1	CORRIDOR 7TH-19TH FL.	4TH FLOOR	20	301.4	219.2	85	95	75	18.1	83	57	8,000	1.0	8000	369.8	70	60	366.6	2	SCROLL	18.6	125	50.5	60	45.8	460/3/60	3	EC300-4VTC	13	4.3	VERTICAL				
AC-CS-4-2	CORRIDOR 7TH-19TH FL.	4TH FLOOR	20	301.4	219.2	85	95	75	18.1	83	57	8,000	1.0	8000	369.8	70	60	366.6	2	SCROLL	18.6	125	50.5	60	45.8	460/3/60	3	EC300-4VTC	13	4.3	VERTICAL				
AC-CS-36-5	CORRIDOR 20TH-35TH FL.	36TH FLOOR	20	301.4	219.2	85	95	75	18.1	83	57	8,000	1.0	8000	369.8	70	60	366.6	2	SCROLL	18.6	125	50.5	60	45.8	460/3/60	3	EC300-4VTC	13	4.3	VERTICAL				
AC-CS-36-6	CORRIDOR 37TH-51ST FL.	36TH FLOOR	20	301.4	219.2	85	95	75	18.1	83	57	8,000	1.0	8000	369.8	70	60	366.6	2	SCROLL	18.6	125	50.5	60	45.8	460/3/60	3	EC300-4VTC	13	4.3	VERTICAL				
AC-36-7	37TH FLOOR EMR	36TH FLOOR	10	119.2	90.2	85	95	28	12.6	75	54	3,800	1.0	0	145.2	70	60	155.4	2	SCROLL	7.8	52	21.9	25	19.9	460/3/60	3	EC120-4HZC-SLSBUA	13	4.3	HORIZONTAL				
AC-CS-67-1	CORRIDOR 52ND-66TH FL.	67TH FLOOR	15	157.5	120.9	85	95	42	11.9	80	57	4,510	1.0	4,510	190.6	70	60	154	2	SCROLL	10.6	75	30	40	6.1	460/3/60	5	EC181-4VTC	13.8	4.8	VERTICAL				
AC-CS-67-2	CORRIDOR 52ND-66TH FL.	67TH FLOOR	15	157.5	120.9	85	95	42	11.9	80	57	4,510	1.0	4,510	190.6	70	60	154	2	SCROLL	10.6	75	30	40	6.1	460/3/60	5	EC181-4VTC	13.8	4.8	VERTICAL				
AC-67-3	CORRIDOR 52ND-66TH FL.	67TH FLOOR	2	22.7	17.4	85	95	6.0	12.8	75	55	800	.5	200	27.6	70	60	28.8	1	SCROLL	2.9	30	5.7	15	5.00	460/3/60	.5	LV024-4HZC	13	4.5	HORIZONTAL				
NOTES:																																			
1. CAPACITIES INDICATED ARE NOMINAL. ALL UNITS TO BE PROVIDED WITH: THERMOSTAT, DISCONNECT SWITCH, EXTENDED RANGE VALVE FOR LOW WATER TEMP OPERATION, AND BE PROVIDED WITH EXTRA QUIET SOUND PACKING. UNIT TO BE PROVIDED WITH AUTOMATIC CONTROL/BALANCING VALVE TO CLOSE WATER WHEN UNIT IS OFF.																																			
2. ALL UNITS AND COMPONENTS TO BE DESIGNED FOR MINIMUM OF 300 PSI FROM 1ST FLOOR TO 30TH FLOOR AND 200 PSI FROM 31ST FLOOR TO 49TH FLOOR.																																			
3. UNITS SERVING MULTIPLE ROOMS TO BE PROVIDED WITH INTERNAL ACOUSTIC UNITS 2" THICK Baffle TO BALANCE AIR TO DIFFERENT ROOMS.																																			