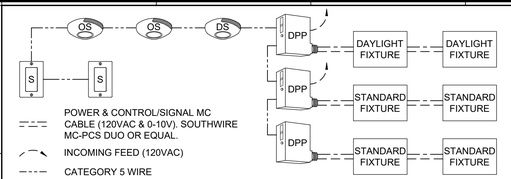
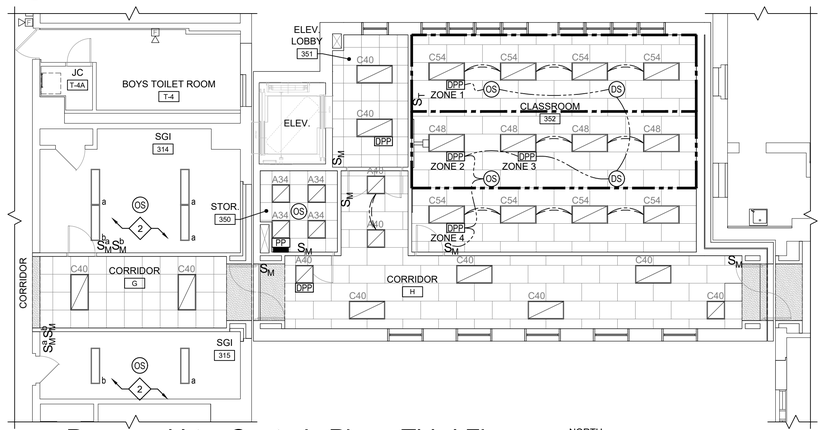


GENERAL NOTES:
1. REFER TO PLAN FOR ACTUAL ARRANGEMENT OF FIXTURES/ SWITCHES/SENSORS.
2. REFER TO MANUFACTURER'S DETAILS FOR EXACT WIRING REQUIREMENTS.

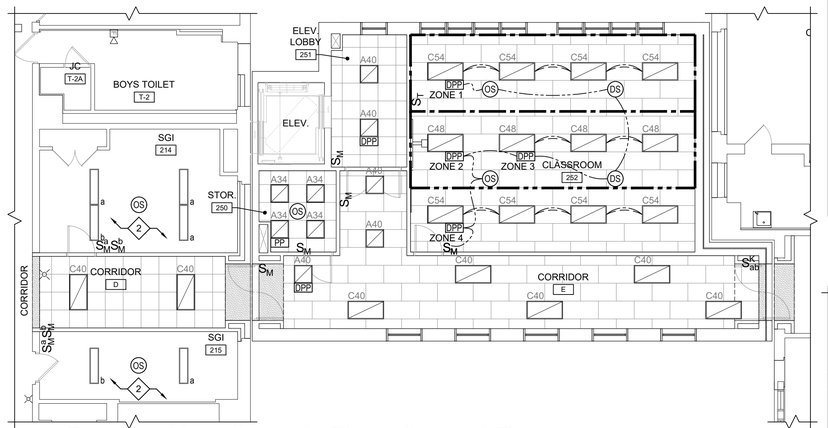
Schematic Lighting Controls Wiring

5 / E5.02 — N.T.S. — SIMILAR THROUGHOUT BUILDING



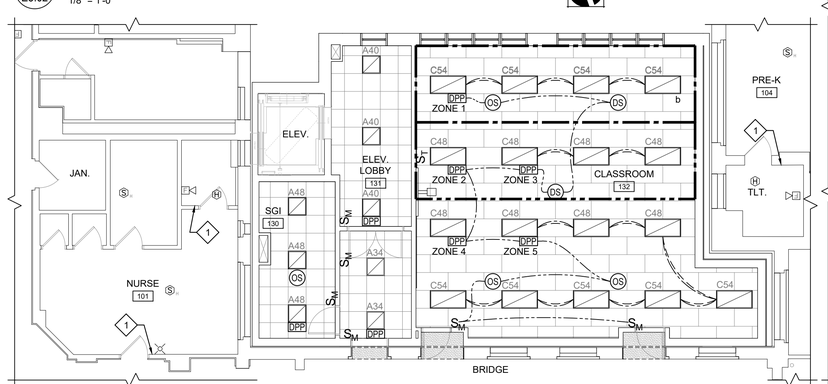
Proposed Ltg. Controls Plan - Third Floor

4 / E5.02 — 1/8" = 1'-0" — NORTH



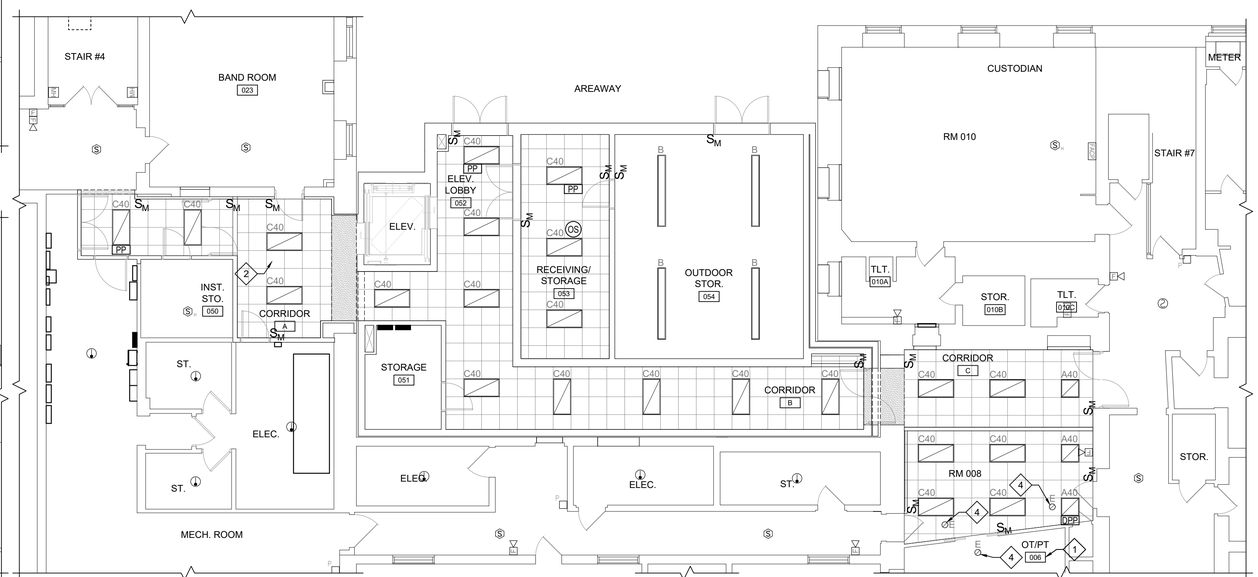
Proposed Ltg. Controls Plan - Second Floor

3 / E5.02 — 1/8" = 1'-0" — NORTH



Proposed Ltg. Controls Plan - First Floor

2 / E5.02 — 1/8" = 1'-0" — NORTH



Proposed Ltg. Controls Plan - Lower Level

1 / E5.02 — 1/8" = 1'-0" — NORTH

Lighting Controls Narrative Schedule

TYPICAL FOR ALL SPACES

LIGHTS
- ALL LIGHTS ARE CAPABLE OF BEING DIMMED
- EACH ZONE MODULE OR nLIGHT ENABLED FIXTURE CAN BE EITHER CONTROLLED INDEPENDENTLY, AS AN ENTIRE SPACE, OR IN ANY COMBINATION AS PROGRAMMED ON THE APP IN THE FIELD.
- MAXIMUM LIGHT OUTPUT CAN BE ASSIGNED IN THE FIELD.

DAYLIGHTING CONTROL (WHEN INDICATED ON THE PLAN)
- SMOOTH CONTINUOUS AUTOMATIC DIMMING OF LIGHTING CONTROL ZONES WITHIN THE DAYLIGHTING ZONE TO MAINTAIN THE LIGHT LEVEL DEFINED IN THE CONTROLS SCHEDULE.
- PRIMARY AND SECONDARY DAYLIGHTING ZONES SHALL BE CONTROLLED INDEPENDENTLY BY THEIR RESPECTIVE PHOTOCELL.

GENERAL INFORMATION
- WHERE "100%" IS INDICATED IN THE NARRATIVES, IT REFERS TO 100% OF MAXIMUM PRESET VALUE SET IN THE FIELD.

CONTROLS NARRATIVE 1 - STANDARD CLASSROOM

OCCUPANCY CONTROL
- LIGHTS MUST BE TURNED ON MANUALLY.
- LIGHTS AUTOMATICALLY TURN OFF WHEN ROOM IS VACANT FOR 20 MINUTES.

ZONES
ZONE 1 - ROW AT WINDOW
ZONE 2 - FIXTURE OVER WHITEBOARD
ZONE 3 - MIDDLE ROW, MINUS FIXTURE OVER WHITEBOARD
ZONE 4 - CORRIDOR ROW

MANUAL CONTROL
"MASTER SWITCH" SHALL HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL ZONES ON TO 100% OF MAXIMUM PRESET VALUE.
2. "OFF" - ALL ZONES OFF
3. "▲" - ALL FIXTURES BRIGHTEN.
4. "▼" - ALL FIXTURES DIM.

"TEACHER CONTROL" SWITCH SHALL HAVE THE FOLLOWING PRESETS (NOTE - THESE SETTINGS ARE FOR REFERENCE ONLY AND SHALL BE CONFIRMED DURING THE SHOP DRAWING PHASE):
1. "ALL ON" - ALL ZONES/FIXTURES ON TO 100% OF MAXIMUM PRESET VALUE.
2. "ALL OFF" - ALL ZONES/FIXTURES OFF
3. "AV" - ZONES 1, 3 & 4 ON TO 70% OF MAXIMUM PRESET VALUE, ZONE 3 OFF (DAYLIGHTING DISABLED)
4. "50% DIM" - ALL ZONES/FIXTURES DIMMED TO 50% OF MAXIMUM PRESET VALUES.

CONTROLS NARRATIVE 1A - STANDARD CLASSROOM (4 ROWS)

OCCUPANCY CONTROL
- LIGHTS MUST BE TURNED ON MANUALLY.
- LIGHTS AUTOMATICALLY TURN OFF WHEN ROOM IS VACANT FOR 20 MINUTES.

ZONES
ZONE 1 - ROW AT WINDOW
ZONE 2 - FIXTURE OVER WHITEBOARD - WINDOW SIDE
ZONE 3 - MIDDLE ROW - WINDOW SIDE, MINUS FIXTURE OVER WHITEBOARD
ZONE 4 - FIXTURE OVER WHITEBOARD - CORRIDOR SIDE
ZONE 5 - MIDDLE ROW - CORRIDOR SIDE, MINUS FIXTURE OVER WHITEBOARD & CORRIDOR ROW

MANUAL CONTROL
"MASTER SWITCH" SHALL HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL ZONES ON TO 100% OF MAXIMUM PRESET VALUE.
2. "OFF" - ALL ZONES OFF
3. "▲" - ALL FIXTURES BRIGHTEN.
4. "▼" - ALL FIXTURES DIM.

CONTROLS NARRATIVE 2 - CORRIDOR

MANUAL ON/MANUAL OFF ONLY

OCCUPANCY CONTROL
- NO OCCUPANCY CONTROL

MANUAL CONTROL
"MASTER SWITCH(ES)" SHALL BE A KEY SWITCH, nLIGHT MODEL "nPOD KEY COLOR" AND HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL FIXTURES ON TO 100% OF MAXIMUM PRESET VALUE.
2. "OFF" - ALL FIXTURES OFF

CONTROLS NARRATIVE 3 - SMALL, NON-DIMMING SPACES

MANUAL ON/AUTOMATIC OFF ONLY

OCCUPANCY CONTROL
- LIGHTS MUST BE TURNED ON MANUALLY.
- LIGHTS AUTOMATICALLY TURN OFF WHEN ROOM IS VACANT FOR 20 MINUTES.

MANUAL CONTROL
"MASTER SWITCH" SHALL HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL FIXTURES ON TO 100% OF MAXIMUM PRESET VALUE.
2. "OFF" - ALL FIXTURES OFF

CONTROLS NARRATIVE 4 - SMALL, DIMMING SPACES

MANUAL ON/AUTOMATIC OFF ONLY

OCCUPANCY CONTROL
- LIGHTS MUST BE TURNED ON MANUALLY.
- LIGHTS AUTOMATICALLY TURN OFF WHEN ROOM IS VACANT FOR 20 MINUTES.

MANUAL CONTROL
"MASTER SWITCH" SHALL HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL FIXTURES ON TO 100% OF MAXIMUM PRESET VALUE.
2. "OFF" - ALL FIXTURES OFF
3. "▲" - ALL FIXTURES BRIGHTEN.
4. "▼" - ALL FIXTURES DIM.

CONTROLS NARRATIVE 5 - RENOVATED SGI'S

MANUAL ON/AUTOMATIC OFF ONLY

OCCUPANCY CONTROL
- OCCUPANCY SENSORS IN THIS AREA SHALL BE 120VAC SENSORS AND CONTROL "a" FIXTURES ONLY.
- LIGHTS MUST BE TURNED ON MANUALLY.
- LIGHTS CONTROLLED BY THE SENSOR AUTOMATICALLY TURN OFF WHEN ROOM IS VACANT FOR 20 MINUTES.

MANUAL CONTROL
"MASTER SWITCHES" IN THESE SPACES SHALL BE 120VAC SWITCHES.
"MASTER SWITCH a" SHALL BE A MOMENTARY CONTACT SWITCH AND HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL "a" FIXTURES ON.
2. "OFF" - ALL "a" FIXTURES OFF

"MASTER SWITCH b" SHALL BE A KEY SWITCH AND HAVE THE FOLLOWING PRESETS:
1. "ON" - ALL "b" FIXTURES ON.
2. "OFF" - ALL "b" FIXTURES OFF

Lighting Controls Symbol Legend

GENERAL SWITCH REQUIREMENTS:
ALL SWITCHES SHALL BE nLIGHT nPODM FAMILY UNLESS NOTED OTHERWISE. REFER TO CONTROL NARRATIVES FOR BUTTON QUANTITY AND PROGRAMMING.

S_M "MASTER" WALL SWITCH - REFER TO CONTROLS NARRATIVE FOR BUTTON/CONTROLS REQUIREMENTS.

S_T "TEACHER CONTROL STATION" WALL SWITCH - REFER TO CONTROLS NARRATIVE FOR BUTTON/CONTROLS REQUIREMENTS.

PRIMARY DAYLIGHTING ZONE. PHOTOCELL SHALL CONTROL FIXTURES PARTIALLY OR FULLY IN THIS AREA. WHERE A PORTION OF A LINEAR FIXTURE FALLS IN THIS AREA, CONTRACTOR SHALL PROVIDE FOR DUAL CIRCUITING OPTION WITHIN THE FIXTURE TO ALLOW FOR THE PORTION WITHIN THE DAYLIGHTING ZONE TO BE CONTROLLED INDEPENDENTLY.

SECONDARY DAYLIGHTING ZONE. PHOTOCELL SHALL CONTROL FIXTURES PARTIALLY OR FULLY IN THIS AREA. WHERE A PORTION OF A LINEAR FIXTURE FALLS IN THIS AREA, CONTRACTOR SHALL PROVIDE FOR DUAL CIRCUITING OPTION WITHIN THE FIXTURE TO ALLOW FOR THE PORTION WITHIN THE DAYLIGHTING ZONE TO BE CONTROLLED INDEPENDENTLY.

OS DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR. SMALL MOTION, STANDARD RANGE, 360° LENS. nLIGHT MODEL "nCM PDT 9 RJ45" OR EQUAL

DS DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR WITH PHOTOCELL ENABLED. SMALL MOTION, STANDARD RANGE, 360° LENS. nLIGHT MODEL "nCM PDT 9 RJ45 ADCX" OR EQUAL

DPP DIMMING POWER/RELAY PACK. nLIGHT MODEL "nPP16D EFP" OR EQUAL. CONNECT VIOLET & GRAY, 0-10V CONTROL CDTRS (600V INSULATED CONDUCTORS) TO FIXTURES TO BE CONTROLLED TO THIS PACK. "ZONE #" INDICATES ZONE NUMBER FOR PROGRAMMING PURPOSES.

PP NON-DIMMING POWER/RELAY PACK. nLIGHT MODEL "nPP16 EFP" OR EQUAL.

CONTRACTOR'S OPTION:
IN LIEU OF PROVIDING A POWER PACK IN SMALL ROOMS, THE FIXTURES CAN BE PROVIDED WITH THE INTEGRAL nLIGHT MODULE.

REFER TO DRAWING A0.01 FOR AREAS OF WORK AND DEFINED AREAS OF EXISTING AND NEW CONSTRUCTION AREAS.

Key Notes

SYMBOL INDICATES KEY NOTE

1. PROVIDE AND INSTALL A KEY SWITCH TO CONTROL THE FIXTURE CLOSEST TO THE DOOR OF THIS ROOM. RECIRCUIT THE FIXTURE AS REQUIRED.
2. RECIRUIT LIGHTS TO THE NEW SWITCHES IN THIS SPACE AS PER THE PLANS AND CONTROLS NARRATIVE. CONTRACTOR RESPONSIBLE TO REMOVE THE FIXTURES WHERE THE NEW CORRIDOR CUTS THROUGH. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR ADDITIONAL INFORMATION.

Lighting Controls System General Notes

THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL WIRING (POWER, CAT 5, 0-10V DIMMING), POWER PACKS, MODULES, ETC., WHETHER INDICATED OR NOT, FOR A COMPLETE AND OPERATION SYSTEM TO MEET THE INTENT OF THE CONTROLS MATRIX. THE CONTROLS, WIRING, AND MODULES INDICATED ON THE DRAWING ARE TO SHOW THE DESIGN INTENT AND ARE NOT MEANT TO BE "ALL INCLUSIVE".

Design Notes
1. System is based on Acuity Brands nLight Controls.
2. One relay is needed per fixture group to be controlled and can reside within sensors, wall switches, or relay packs. Power Pack placement on drawings is for schematic purposes only to indicate the design intent; final quantity shall be determined by the contractor and/or the manufacturer's design rep. during the shop drawing stage. Confirm all quantities to verify the number of relays needed to switch all desired loads.
3. Sensors and wall switches are indicated to show design intent. The contractor shall allow to provide and install an additional 5 (five) occupancy sensors to accomodate building changes, final partition height/placement, furniture placement, equipment height/placement and shelving height/placement.
4. All devices have RJ-45 Female ports. Making CAT-5(e) cables with T568B Male terminations is required. It is imperative that all CAT-5 cables be tested with a LAN Cable Tester to verify proper terminations.

PRE-INSTALLATION LIGHTING NOTES:
1. The electrical contractor shall coordinate a pre-installation conference, prior to construction activities, to review the exact lighting control requirements.
   a. Pre-installation conference shall be attended by:
      - Owner's authorized representative
      - Contractor
      - Engineer
      - Lighting controls factory representative
2. All nLight devices come with a self adhesive identification label. The contractor shall supply a drawing with the nLight identification labels place at their applicable device/fixture. The drawing shall be updated to reflect the as-built conditions. Failure to do this will require the contractor to manually determine the address of every device.

Controls Sequence of Operation

SPACE/ROOM	CONTROLS NARRATIVE No. (REFER TO CONTROLS NARRATIVE SCHED.)	OCCUPANCY: VACANCY MODE (MANUAL ON)	OCCUPANCY MODE (AUTO ON)	SENSOR TIME OUT PERIOD (FULL OFF) IN MINUTES	WALL: ON/OFF ONLY	ON/OFF & DIMMER SWITCH	KEY SWITCH	PHOTOCELL: INDOOR - DIMMING	AVE. LIGHT LEVEL MAINTAINED (FC @ 30" A.F.F.)	EXTERIOR PHOTOCELL - ON/OFF
AREAWAY										X
A CORRIDOR	2					X	X			
B CORRIDOR	2					X	X			
C CORRIDOR	2					X	X			
008 ROOM	4	X		20		X				
050 INST. STO.	3	X		20	X					
051 STORAGE	3	X		20	X					
052 ELEV. LOBBY	2					X	X			
053 RECEIVING STORAGE	2	X		20	X					
054 OUTDOOR STOR.	2	X		20	X					
130 SGI	4	X		20		X				
131 ELEV. LOBBY	2					X	X			
132 CLASSROOM	1A	X		20		X		X	50	
D CORRIDOR	EXISTING SWITCHING/CONTROLS									
E CORRIDOR	2						X	X		
214 SGI	5	X		20	X		X			
215 SGI	5	X		20	X		X			
250 STOR.	3	X		20	X					
251 ELEV. LOBBY	2					X	X			
252 CLASSROOM	1	X		20		X		X	50	
G CORRIDOR	EXISTING SWITCHING/CONTROLS									
H CORRIDOR	2						X	X		
314 SGI	5	X		20	X		X			
315 SGI	5	X		20	X		X			
350 STOR.	3	X		20	X					
351 ELEV. LOBBY	2					X	X			
352 CLASSROOM	1	X		20		X		X	50	

Date	1/10/20
Checked	BH
Drawn	MH

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Revisions:

#	
1	ISSUE TO BID 11/23/20

NYSED PROJECT # 66-07-01-03-0-004-030

PROPOSED LIGHTING CONTROLS PLANS
2019 BOND REFERENDUM
MAMARONECK AVENUE ELEMENTARY SCHOOL
MAMARONECK UNION FREE SCHOOL DISTRICT
850 MAMARONECK AVENUE, MAMARONECK, NY 10543

Job No. 4.1092.72.2

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