

	COOLING TOWER SCHEDULE																			
EQUIPMENT	MANUFACTURER (OR ACCEPT.	MODEL	LOCATION	SERVES	EWT	LWT	AMBIENT WB	FLOW RATE	SUMP CAPACITY	DRY WEIGHT	OPERATING WEIGHT		FAN MOTORS						NOTES	
TAG	EQUAL)	MODEL	LUCATION	SERVES	(°F)	(°F)	(°F)	(GPM)	(GAL)	(LBS)	(LBS)	SHELL MATERIAL	QTY.	NOM. H.P.	VOLT.	PHASE	HZ.	RPM	FLA	NOTES
CT-1	DELTA	TM-203312	ROOF	EXISTING CHILLER	95	85	75	1,650	960	13,000	24,400	POLYETHYLENE (HDPE)	4	3.0	480	3	60	900	4.8	1-7
<ol> <li>PROVIDE</li> <li>PROVIDE</li> </ol>	PROVIDE W/ PREMIUM EFFICIENT VFD RATED MOTORS PROVIDE W/ ALUMINUM LADDER AND OSHA SAFETY CAGE PROVIDE W/ ALUMINUM LADDER AND OSHA SAFETY CAGE PROVIDE W/ UPPER SAFETY HANDRAIL SYSTEM & SAFETY GATE PROVIDE W/ PVC MESH SCREEN OUTLET STRAINER PROVIDE W/ PVC MESH SCREEN OUTLET STRAINER																			

		MOTOR				NOTES
H.P.	VOLT.	PHASE	HZ.	RPM	FLA	NOTES
	480	3	60	1760	52	-
	480	3	60	1760	52	-
	480	3	60	1760	52	-
	480	3	60	1760	52	-

General Syn	nbols:	Μ	lechani
	DIRECTION OF PIPE PITCH (DOWN) DIRECTION OF FLOW	1.	ALL MATE THE BASIS STANDARI
—×— →	ANCHOR REDUCER OR INCREASER	2.	THESE DF CONTRAC HAVING S
 	ECCENTRIC REDUCER TOP CONNECTION, 45° OR 90°	3.	CONDITIO
	BOTTOM CONNECTION, 45° OR 90° SIDE CONNECTION	4.	ALL WOR
Ţ	CAPPED OUTLET RISE OR DROP IN PIPE	5.	ALL CUTT TRADE SH
	UNION PIPE UP PIPE DOWN	6.	a minimui Approva Submittin Are verii
	THERMOMETER PRESSURE GAGE	7.	THIS CON OBTAIN A WITH WOF
	VENTURI FLOW METER	8.	ALL WORI WITH THE 2020 ENEF
 	REFRIGERANT SIGHT GLASS TEST PLUG (PRESSURE/TEMPERATURE)	9.	ALL DUCT SPECIFIED SMACNA D
	AUTOMATIC AIR VENT	10.	PROVIDE I PURPOSE THE OPPO
	MANUAL AIR VENT		DAMPERS GEAR OPE
C	QUICK-COUPLE HOSE CONNECTOR	11.	FURNISH FIRE-RATE DUCTWOF AND MAIN
	AND EXISTING WORK	10	

## Valve Symbols:

			DIFFUSERS.
	GATE VALVE - THREADED/FLANGED		RETURN AN STEEL PLEN
	GLOBE VALVE - THREADED/FLANGED		
	GATE VALVE WITH 3/4" HOSE ADAPTER	14.	ALL SUPPLY SHALL BE IN
	CHECK VALVE		BUILDING EI BE FIBERGL
	WYE STRAINER (WITH BALL VALVE & HOSE CONNECTION)		TO BE USED
	WYE STRAINER WITH VALVED DRAIN AND QUICK-COUPLE HOSE CONNECTOR	15.	INSTALL ALL STRUCTURA CONFLICTS
	FLEXIBLE CONNECTION		
<b>₹</b> -	ANGLE GLOBE VALVE	16.	THE ENTIRE
/×	BUTTERFLY VALVE	17.	THE CONTR
<u> </u>	BALL VALVE		INSTALLED BY THE OWN
	MODULATING CONTROL VALVE	18.	THE CONTR
——Й———	MODULATING CONTROL BUTTERFLY VALVE		ORDER TO I IF THE CON THE PROJE
	TWO POSITION CONTROL VALVE		PROJECT.
	THREE-WAY MODULATING CONTROL VALVE	19.	CONTRACTO ENGINEER A
ф	THREE-WAY TWO POSITION CONTROL VALVE		STSTEWS A
$\nabla \dot{+}$		Н	ydronic
	PRESSURE REGULATING VALVE	_	2
	PRESSURE SAFETY VALVE	1.	ALL HYDRO MOLDED SE 1-1/2" THICK
IDJ	AUTOMATIC BALANCING CONTROL VALVE		DIAMETER.
	WATER BALANCE DEVICE	2.	ALL PIPING BUILDING W MISCELLANE
	CIRCUIT SETTER VALVE	3.	HYDRONIC F
	GATE VALVE WITH GLOBE-VALVED BYPASS	3.	1. PIPING ACCORI
	PLUG VALVE		ASME B SOLDEF
K	CONTROL VALVE (CV) - FLOAT-OPERATED	3.	2. PIPING
&	PRESSURE REDUCING VALVE (PRV)	5.	MADE IN JOINTS JOINTS

# VENTS.

- OBTAINED.
- SYSTEM.

## nical Notes:

### ERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. SIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE RDS

DRAWINGS ARE DIAGRAMMATIC. AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ONS FOUND DURING THE COURSE OF THE CONTRACT.

NTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.

RK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR HE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.

ITING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS SHALL BE COMPLETED BY THIS CONTRACTOR.

UM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR AL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY TING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS RIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.

INTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION ORK UNDER THIS CONTRACT.

RK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE IE 2020 BUILDING CODE OF NEW YORK STATE, 2020 MECHANICAL CODE OF NEW YORK STATE & ERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.

TWORK IS TO BE CONSTRUCTED OF GALVANIZED SHEET STEEL (EXCEPT WHERE OTHERWISE ED) WITH GAUGES, BRACING AND CONSTRUCTION IN ACCORDANCE WITH THE LATEST A DUCT MANUAL STANDARDS AND ALL OTHER AUTHORITIES HAVING JURISDICTION.

MANUAL DAMPERS AT EACH SPLIT OR TAP CONNECTION TO TRUNK DUCTS FOR BALANCING ES WHETHER OR NOT SPECIFICALLY SHOWN ON DRAWINGS. EACH DAMPER SHALL BE OF POSED BLADE DAMPER TYPE INSTALLED WITH AN OPERATOR AND LOCKING DEVICE. ALL RS LOCATED ABOVE HARD OR INACCESSIBLE CEILINGS SHALL BE INSTALLED WITH REMOTE PERATORS.

I & INSTALL FUSIBLE LINK FIRE DAMPERS AT ALL LOCATIONS WHERE DUCT PENETRATES TED FLOOR OR CEILING ASSEMBLY WHETHER OR NOT SPECIFICALLY SHOWN. INSTALL DRK CASING ACCESS DOORS AND FRAMES AHEAD OF EACH FIRE DAMPER FOR INSPECTION INTENANCE. DOORS SHALL BE A MINIMUM OF 20 GA. DOUBLE PANEL INSULATED TYPE.

12. INSTALL TURNING VANES ON ALL RECTANGULAR TURNS. TURNING VANES SHALL BE DOUBLE THICKNESS TYPE CONSTRUCTED IN ACCORDANCE WITH SMACNA MANUAL.

13. ROUND SHEET STEEL ELBOWS ARE TO BE INSTALLED AT THE DUCT CONNECTION TO ALL SUPPLY AIR DIFFUSERS. SHEET STEEL PLENUM BOXES ARE TO BE INSTALLED AT THE DUCT CONNECTION TO ALL JRN AND EXHAUST AIR GRILLES. THE CONTRACTOR IS TO PAINT THE INSIDE OF THE SHEET EL PLENUM BOXES FLAT BLACK.

SUPPLY AND RETURN DUCTWORK LOCATED IN UNCONDITIONED SPACES OR ABOVE CEILINGS LL BE INSULATED WITH A MINIMUM OF R-6 INSULATION. ALL DUCTWORK LOCATED OUTSIDE THE DING ENVELOPE SHALL BE INSULATED WITH A MINIMUM OF R-12 INSULATION. INSULATION SHALL IBERGLASS DUCT WRAP WITH VAPOR SEAL SECURELY TAPED AROUND DUCT. IF DUCT LINING IS E USED, ALL DUCT SIZES SHOWN SHALL BE CONSIDERED TO BE INSIDE CLEAR DIMENSIONS.

ALL ALL DUCTWORK AS HIGH AS POSSIBLE PROVIDING RISERS, DROPS AND OFFSETS TO CLEAR JCTURAL MEMBERS, LIGHT FIXTURES, OTHER PIPING, AND OTHER OBSTRUCTIONS. WHERE FLICTS ARISE, IT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO PROCEEDING.

ENTIRE AIR DISTRIBUTION SYSTEM IS TO BE BALANCED TO WITHIN 10% OF THE SPECIFIED LOW REQUIREMENTS.

CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, PIPING, FIXTURES, AND SYSTEMS ALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE HE OWNER AND ENGINEER.

CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS

TRACTOR IS RESPONSIBLE TO CREATE AND SUBMIT RED-LINE "AS-BUILT" PLANS TO THE INEER AT THE END OF THE PROJECT. AS-BUILT PLANS SHALL ACCURATELY REPRESENT THE TEMS AS THEY WERE INSTALLED.

### conic Piping Notes:

HYDRONIC HOT WATER PIPING AND FITTINGS ARE TO BE INSULATED WITH RIGID ONE-PIECE DED SECTIONAL FIBERGLASS PIPE COVERING WITH UNIVERSAL JACKET. INSULATION SHALL BE ' THICK FOR PIPING UP THRU 1-1/2" DIAMETER, AND 2" THICK FOR PIPING GREATER THAN 1-1/2" IETER. ALL JOINTS ARE TO BE COMPLETELY SEALED A MINIMUM OF 6" BEYOND JOINT ENDS.

PIPING SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO DING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND ELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.

RONIC PIPING SYSTEM MATERIALS ARE TO BE AS FOLLOWS:

PIPING UP THRU 3" DIAMETER IS TO BE TYPE L HARD DRAWN SEAMLESS COPPER TUBING MADE IN ACCORDANCE WITH ASTM B 88 WITH WROUGHT COPPER FITTINGS MADE IN ACCORDANCE WITH ASME B 16.22. JOINTS SHALL BE MADE BY APPLYING A FLUX CONFORMING WITH ASTM B 813, AND SOLDERED WITH A 95-5 LEAD-FREE SOLDER CONFORMING TO ASTM B 32.

PIPING GREATER THAN 3" DIAMETER IS TO BE SCHEDULE 40 GRADE B SEAMLESS CARBON STEEL MADE IN ACCORDANCE WITH ASTM A 53 WITH FITTINGS MADE IN ACCORDANCE WITH ASTM B 16.9. JOINTS SHALL BE WELDED, OR MAY BE MADE USING GROOVED AND SHOULDERED MECHANICAL JOINTS CONFORMING TO THE REQUIREMENTS OF ASTM F 1476.

3.3. FURNISH & INSTALL DIELECTRIC UNIONS WHERE JOINING STEEL TO COPPER PIPING.

4. ALL PIPING SHALL BE PITCHED SUCH THAT AIR IN THE SYSTEM CAN BE VENTED THROUGH MANUAL AIR

5. TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS TO TWICE THE SYSTEM WORKING PRESSURE. TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER AND LOCAL INSPECTOR. TEST SHALL BE REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS

6. SUPPORT HORIZONTAL PIPING UTILIZING A SPACING PER PIPING MANUFACTURER'S REQUIREMENTS.

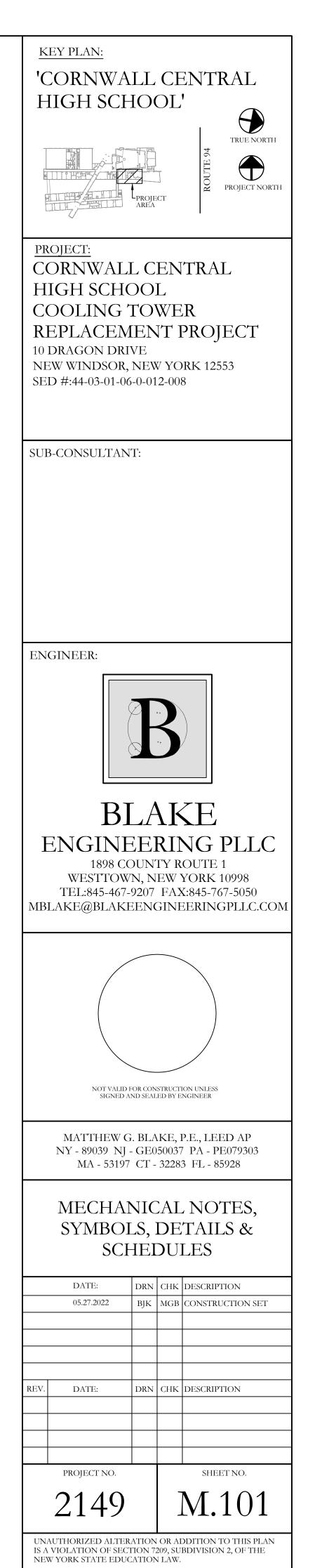
7. INSTALL VALVES ON THE ENTIRE DISTRIBUTION SYSTEM, SO LOCATED AS TO GIVE COMPLETE CONTROL TO ALL FIXTURES AND EQUIPMENT.

8. INSTALL DRAIN VALVES AT BASE OF ALL RISERS AND AT LOW POINTS OF PIPING SYSTEM. INSTALL MANUAL AIR VENT VALVE FACILITIES AT THE TOP OF ALL RISERS AND AT HIGH POINTS OF THE PIPING

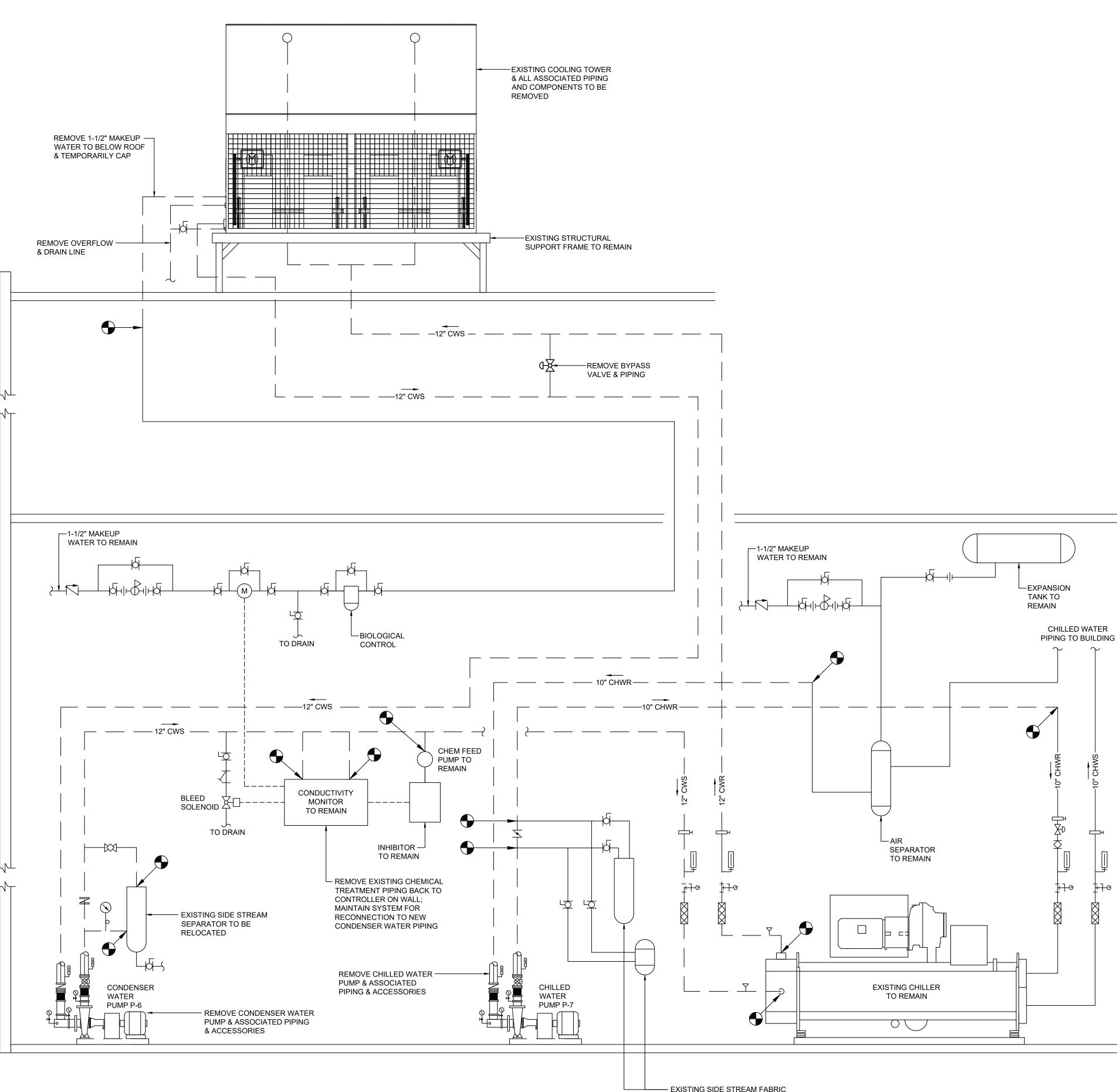
9. PROVIDE PROPER PROVISION FOR EXPANSION/CONTRACTION OF PIPING TO PREVENT STRAIN ON THE SYSTEM AND/OR THE BUILDING STRUCTURE.

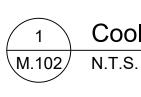
10. INSTALL ALL HYDRONIC PIPING AS HIGH AS POSSIBLE PROVIDING RISERS, DROPS AND OFFSETS TO CLEAR STRUCTURAL MEMBERS, LIGHT FIXTURES, OTHER PIPING, AND OTHER OBSTRUCTIONS. WHERE CONFLICTS ARISE, IT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO PROCEEDING.

11. THE ENTIRE HYDRONIC SYSTEM IS TO BE BALANCED TO WITHIN 10% OF THE SPECIFIED WATER FLOWRATE REQUIREMENTS. A CERTIFIED BALANCING REPORT AND VERIFICATION IS TO BE SUBMITTED TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.

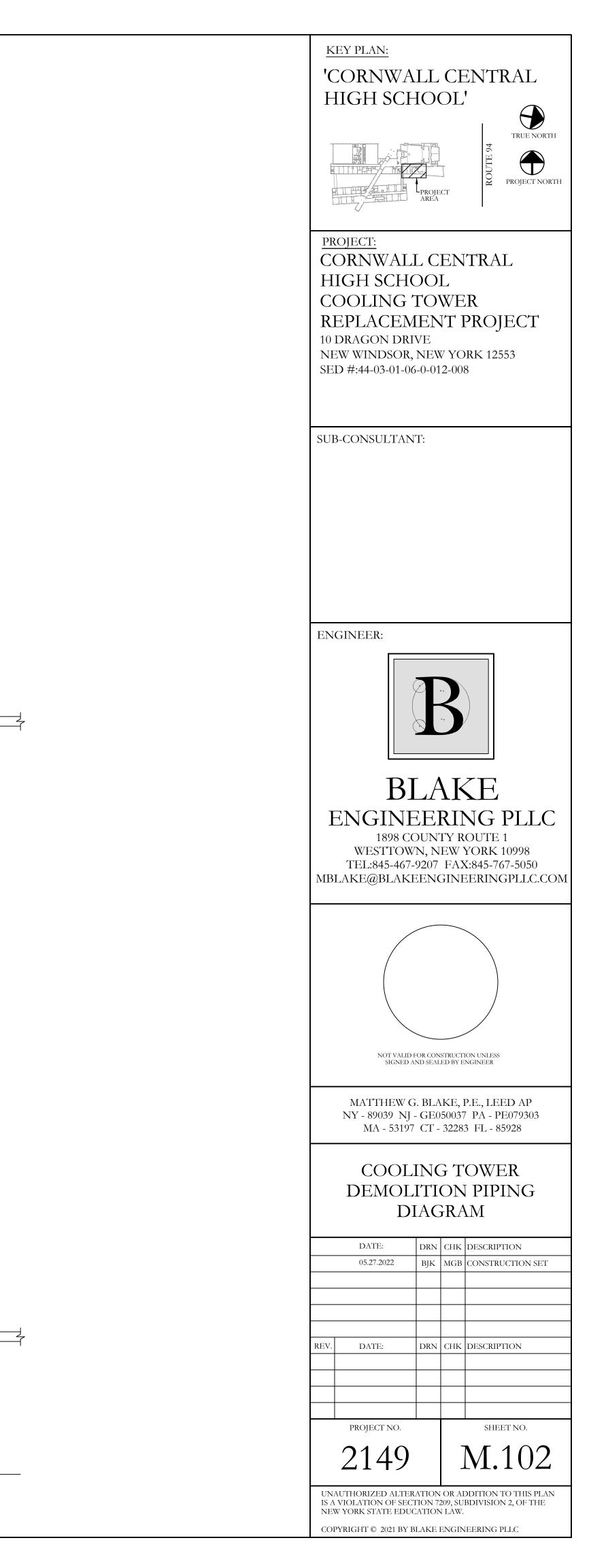


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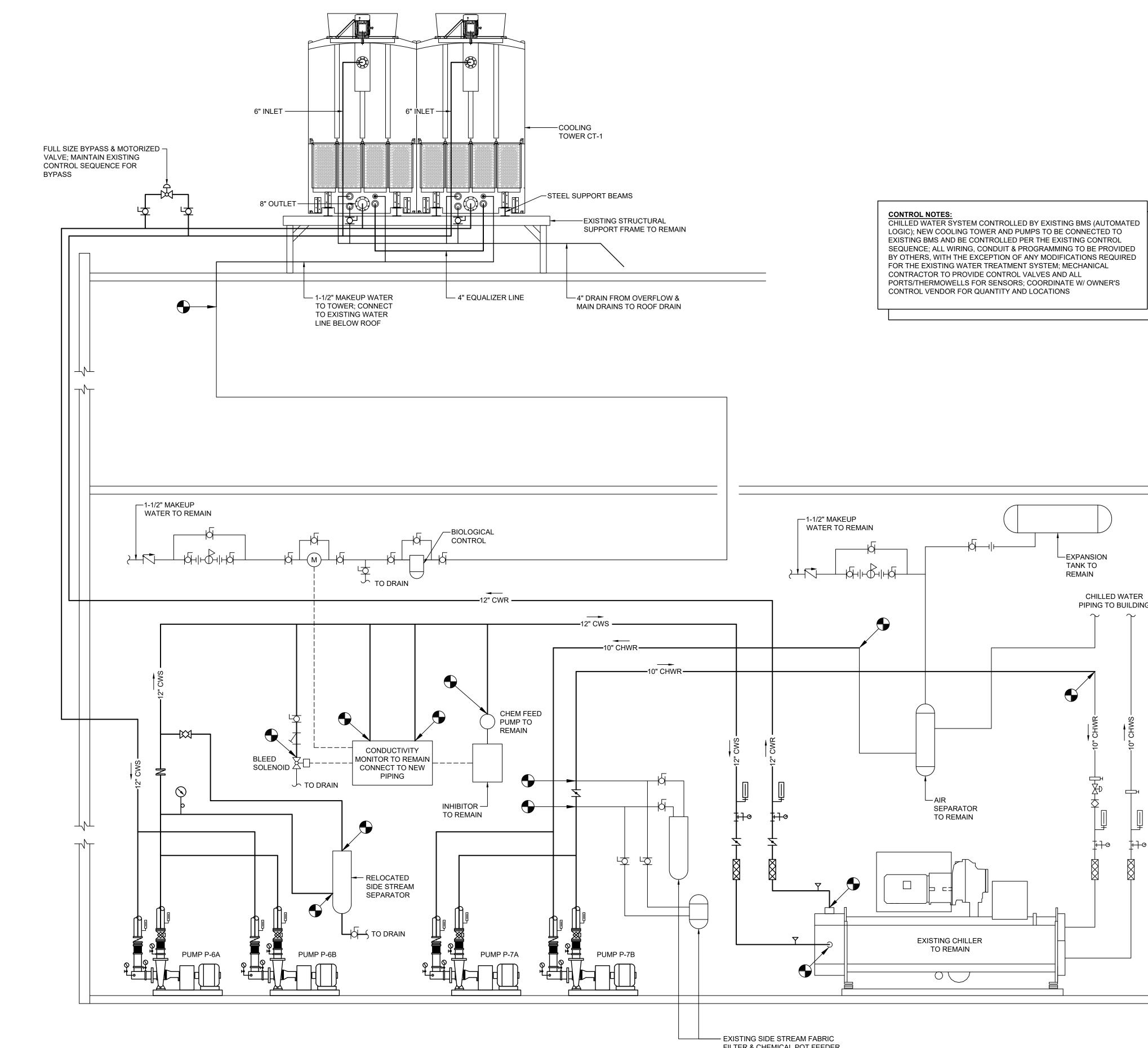
- EXISTING SIDE STREAM FABRIC FILTER & CHEMICAL POT FEEDER TO REMAIN; DISCONNECT PIPING & TEMPORARILY CAP UNTIL RECONNECTED TO NEW PIPING

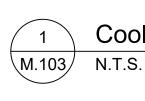


CHILLED WATER

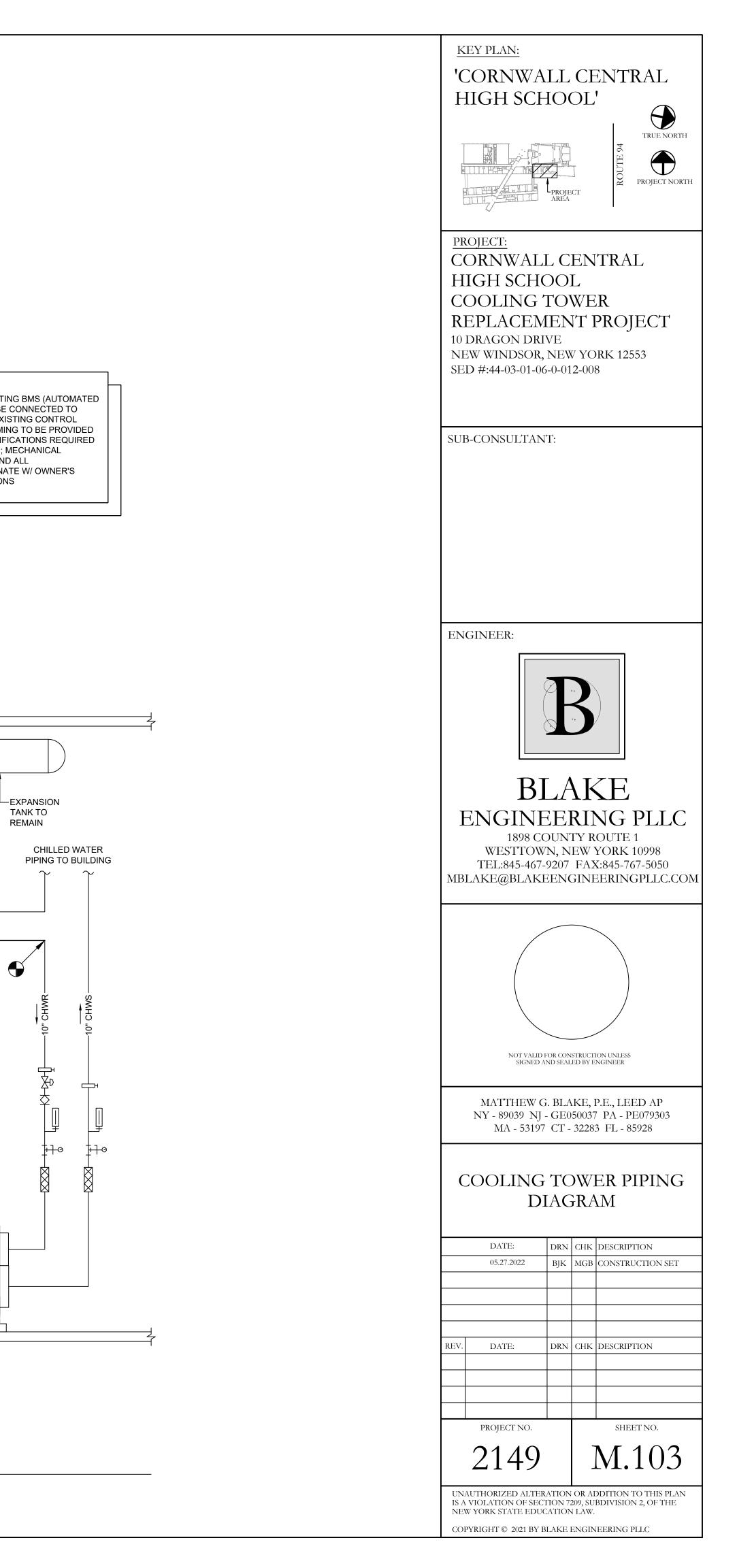
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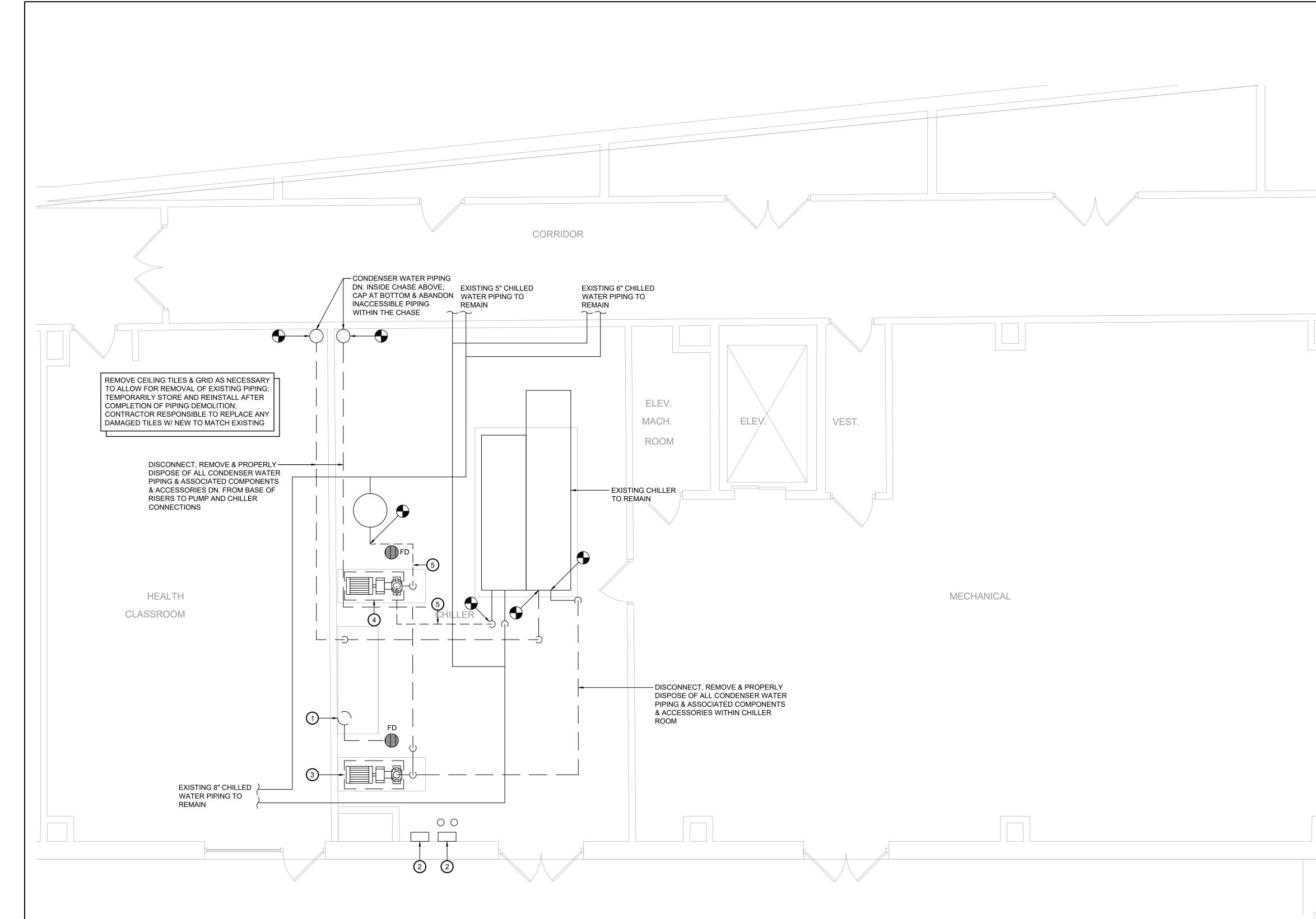
F-10

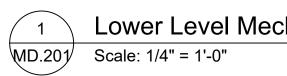




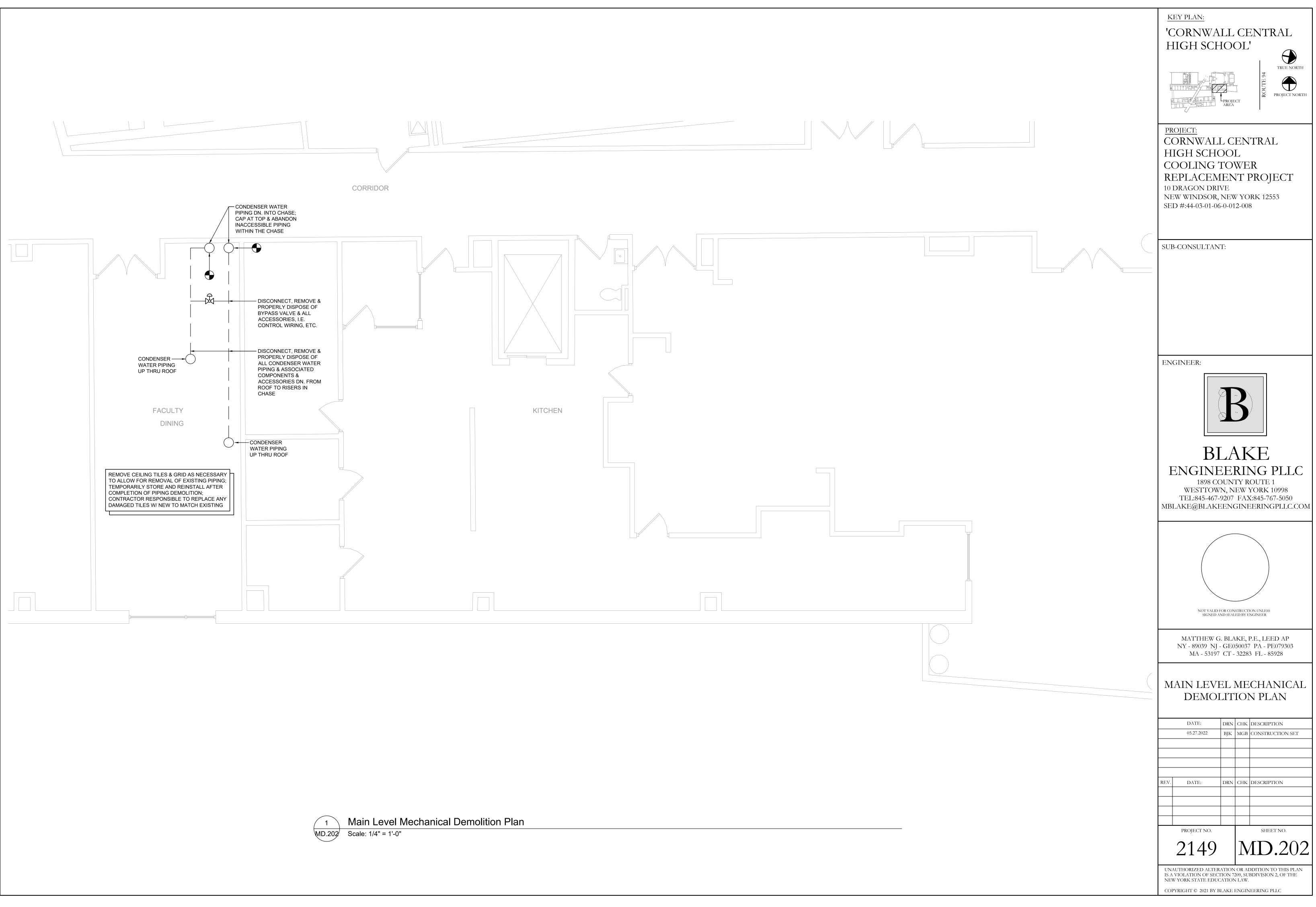
- EXISTING SIDE STREAM FABRIC FILTER & CHEMICAL POT FEEDER TO REMAIN; DISCONNECT PIPING & TEMPORARILY CAP UNTIL RECONNECTED TO NEW PIPING



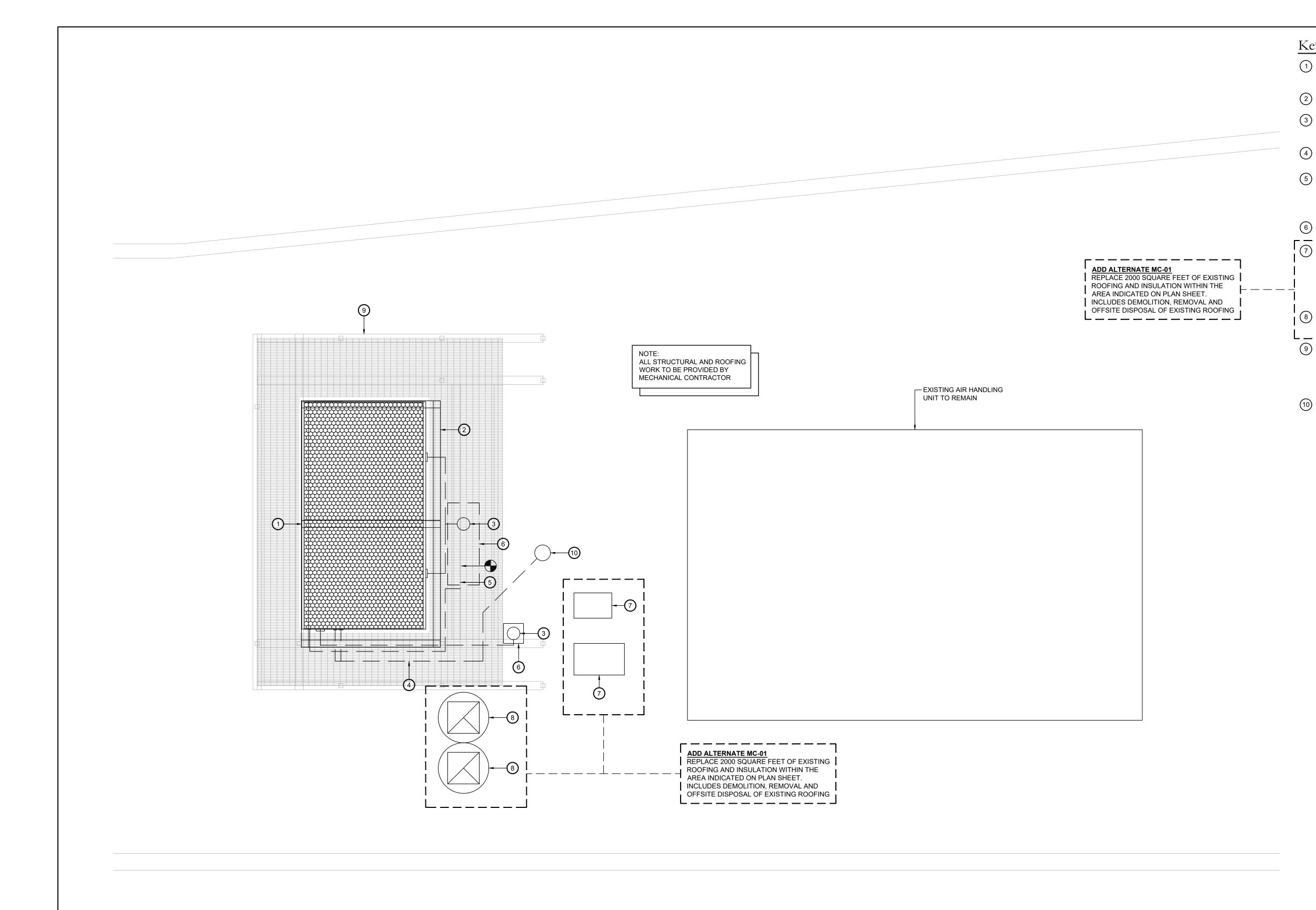


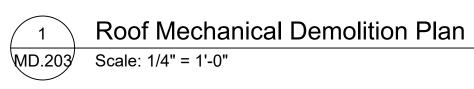


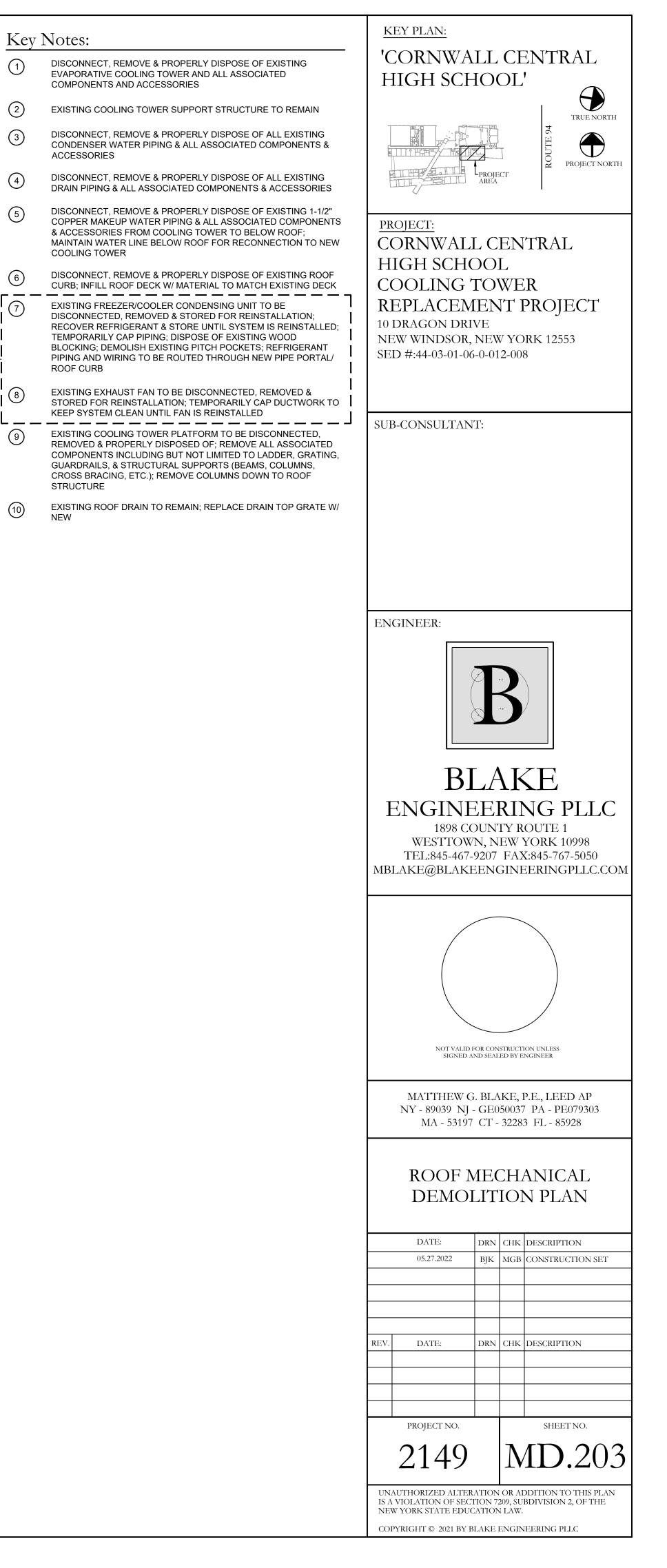
Key Notes: KEY PLAN: 'CORNWALL CENTRAL DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING SEPARATOR FILTRATION SYSTEM AND ALL ASSOCIATED PIPING, (1)HIGH SCHOOL' VALVES AND CONTROLS  $\bigcirc$ 2 EXISTING WATER TREATMENT SYSTEM TO REMAIN; REMOVE ALL PIPING (SAMPLING, CHEMICAL INJECTION, ETC.) FROM TRUE NORTH CONNECTIONS AT CONDENSER WATER PIPING BACK TO THE CONTROLLERS AT THE WALL  $\bigcirc$ DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING 3 PROJECT NORTH CONDENSER WATER PUMP AND ALL ASSOCIATED ACCESSORIES, **L**PROJECT VALVES, ETC. DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING 4 CHILLED WATER PUMP AND ALL ASSOCIATED ACCESSORIES, VALVES, ETC. PROJECT: CORNWALL CENTRAL 5 DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING CHILLED WATER PIPING AND ALL ASSOCIATED ACCESSORIES, HIGH SCHOOL VALVES, ETC. FROM THE PUMP TO THE LOCATIONS SHOWN COOLING TOWER REPLACEMENT PROJECT 10 DRAGON DRIVE NEW WINDSOR, NEW YORK 12553 SED #:44-03-01-06-0-012-008 SUB-CONSULTANT: ENGINEER: BLAKE ENGINEERING PLLC 1898 COUNTY ROUTE 1 WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050 MBLAKE@BLAKEENGINEERINGPLLC.COM NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY ENGINEER MATTHEW G. BLAKE, P.E., LEED AP NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 LOWER LEVEL MECHANICAL DEMOLITION PLAN DATE: DRN CHK DESCRIPTION \_\_\_\_ 05.27.2022 BJK MGB CONSTRUCTION SET DATE: DRN CHK DESCRIPTION PROJECT NO. SHEET NO. MD.201 2149 UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. COPYRIGHT © 2021 BY BLAKE ENGINEERING PLLC

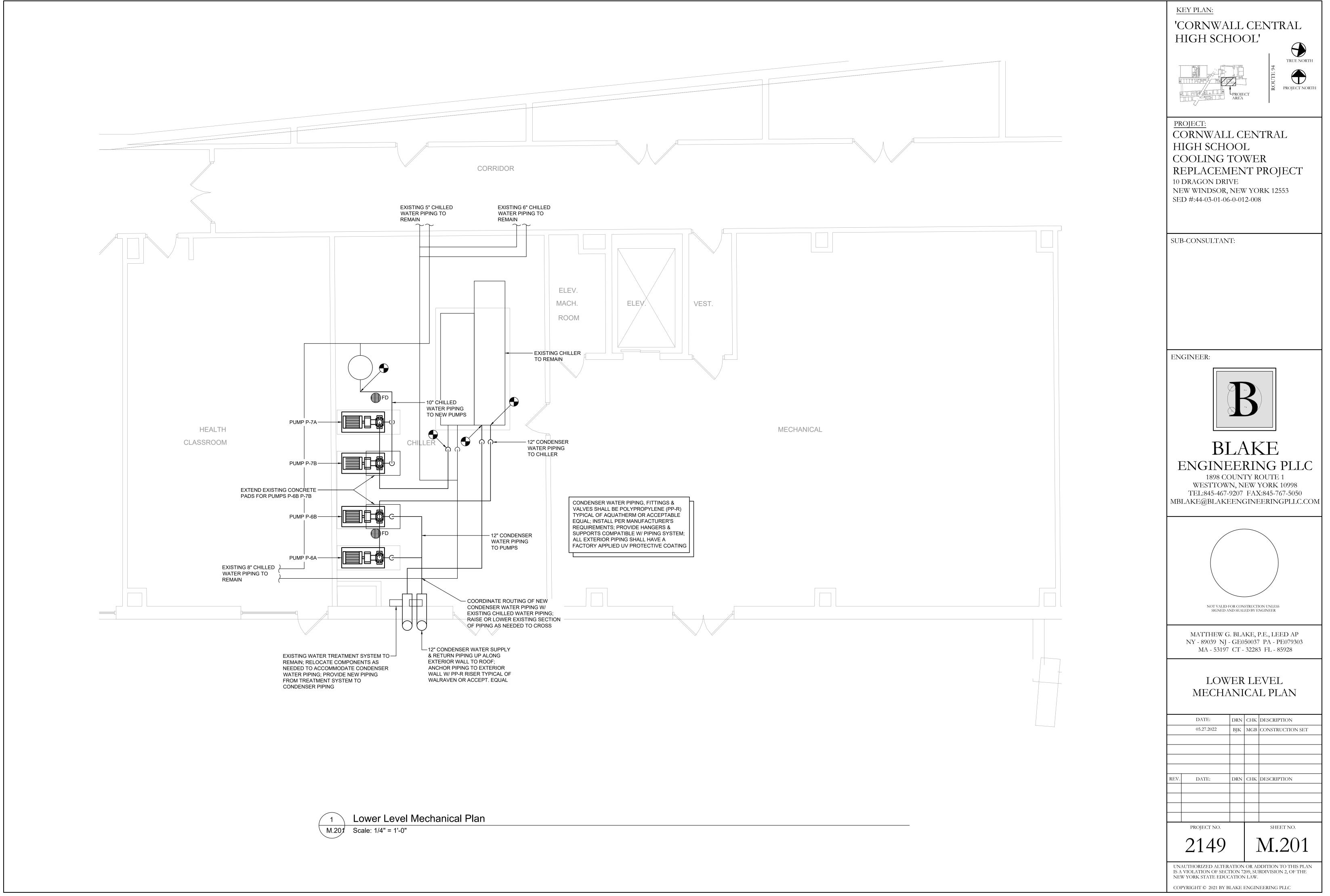


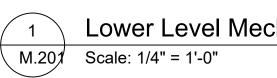


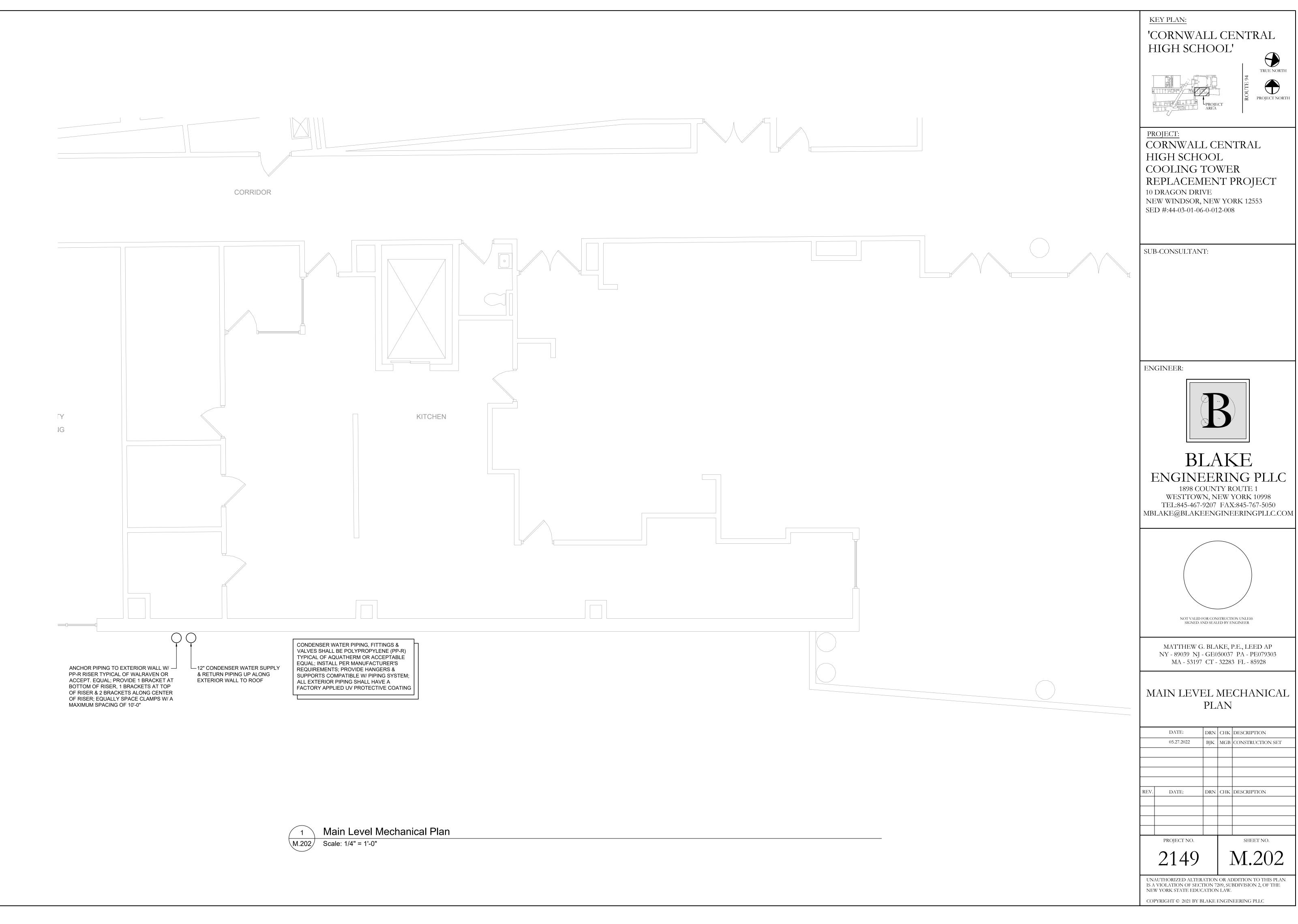




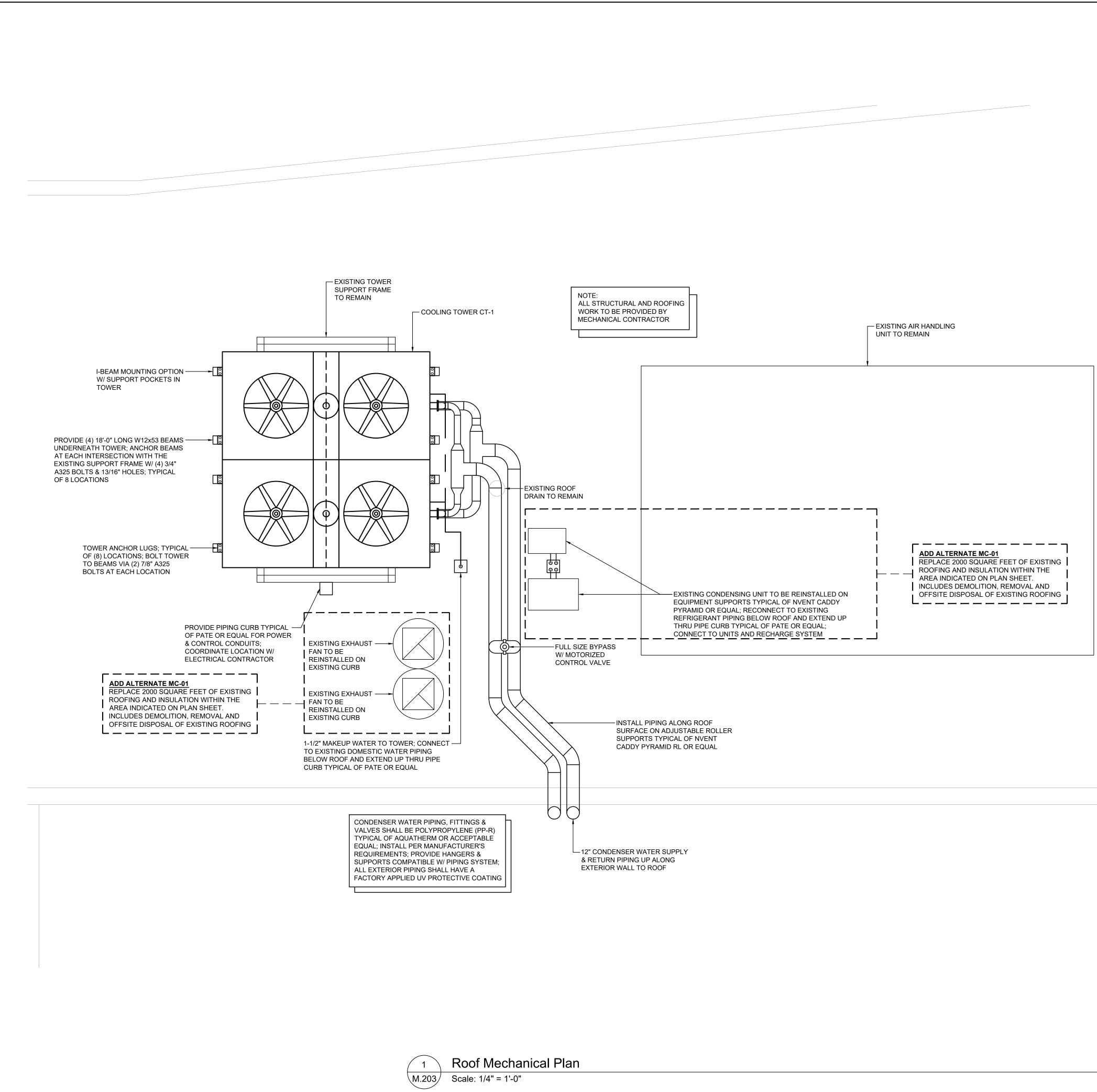


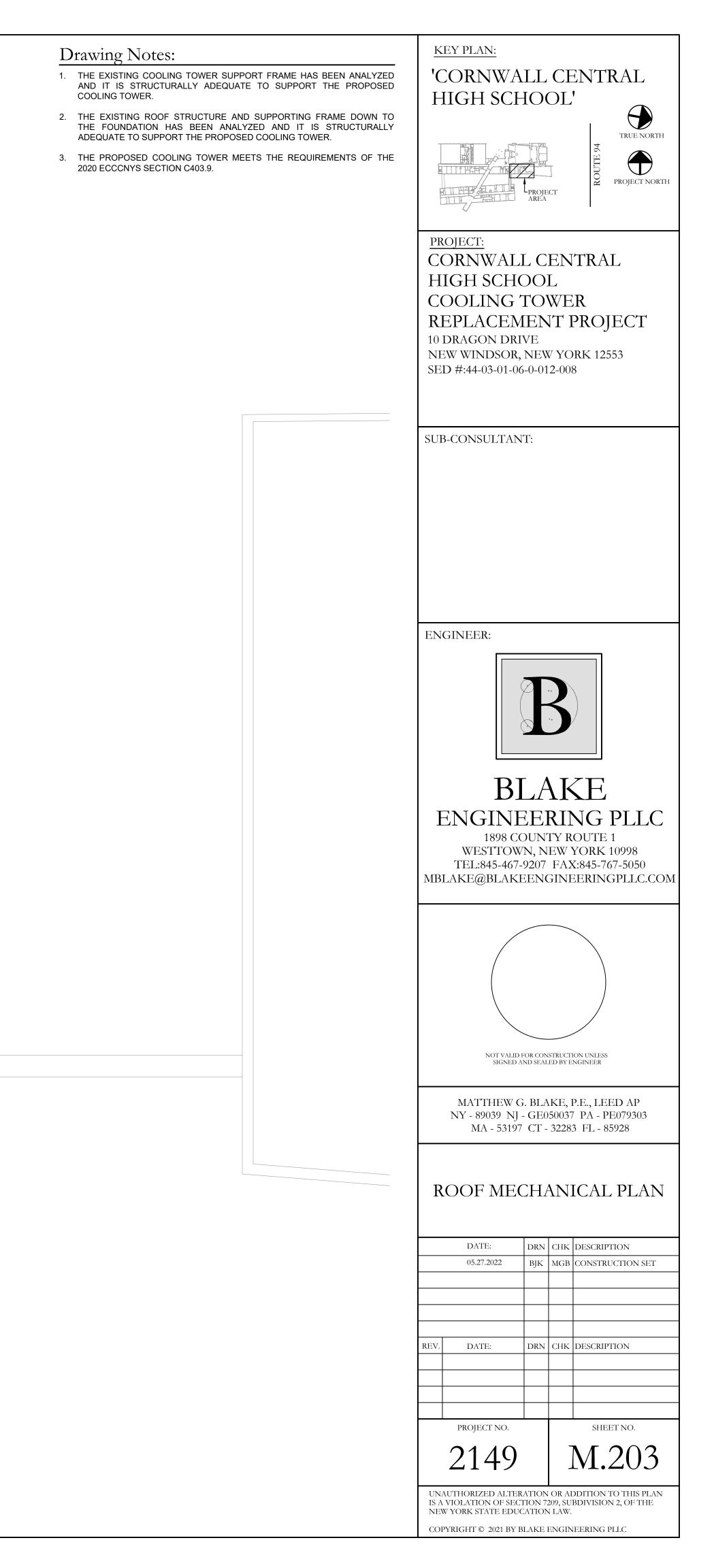


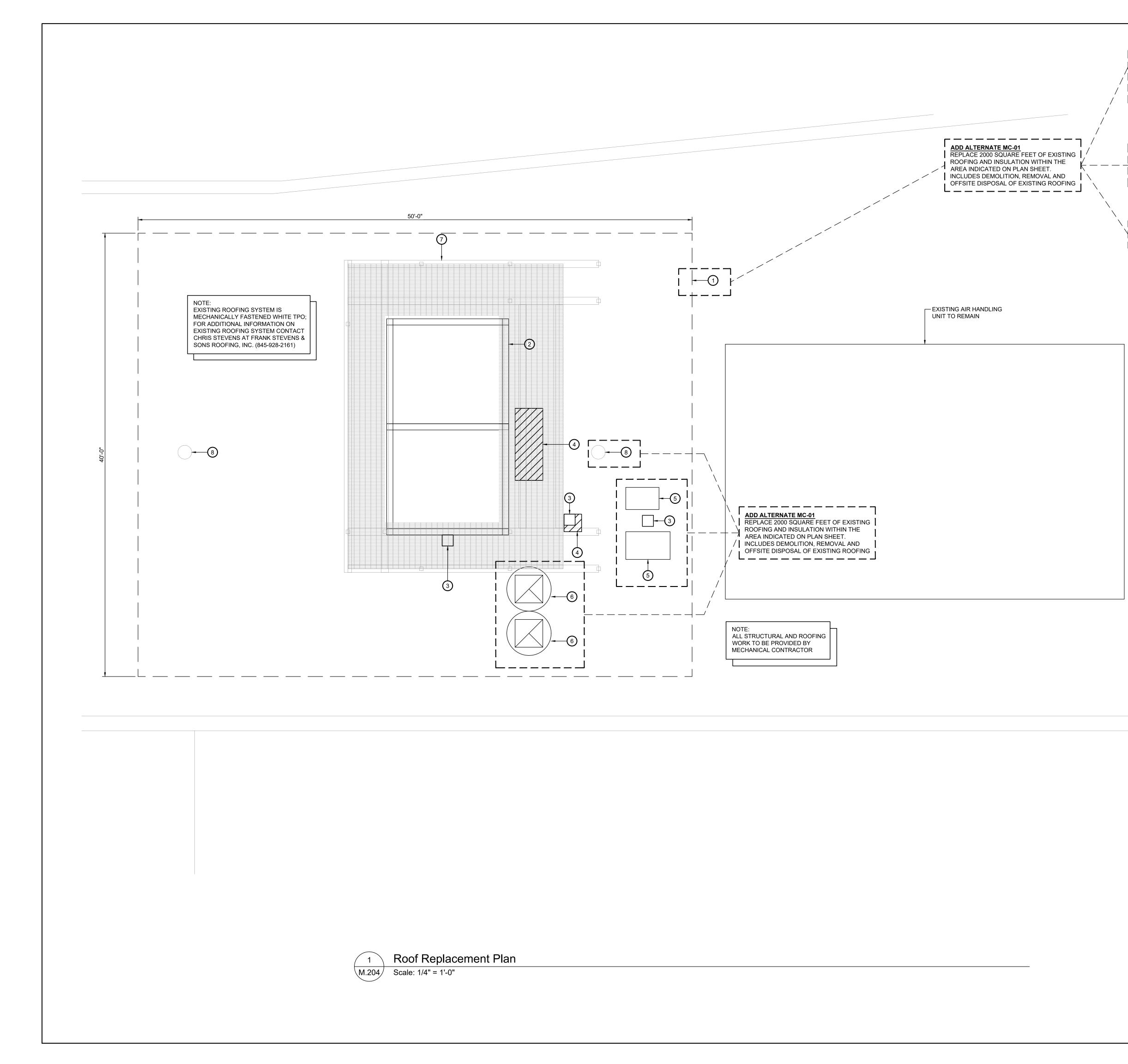












Kev	Notes:	KEY PLAN:
	REPLACE EXISTING ROOF AND ALL INSULATION WITHIN AREA INDICATED; MATCH EXISTING ROOFING SYSTEM AND INSULATION TYPE AND THICKNESS; MATCH EXISTING INSULATION TAPER TO MAINTAIN EXISTING DRAINAGE PATTERN	'CORNWALL CENTRAL HIGH SCHOOL'
2)	EXISTING COOLING TOWER SUPPORT STRUCTURE TO REMAIN, PROVIDE FLASHING AT STRUCTURAL SUPPORTS THRU ROOF	TRUE NORTH
3	PIPING/CONDUIT CURB; FLASH INTO ROOF SYSTEM	HOU PROJECT NORTH
4)	DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING ROOF CURB; INFILL ROOF DECK W/ MATERIAL TO MATCH EXISTING DECK	Le Roject AREA
$\mathbf{b}$	EXISTING CONDENSING UNIT TO BE TEMPORARILY REMOVED AND REINSTALLED ON ROOF SUPPORT MTD. ON TOP OF ROOF SURFACE	PROJECT:
)	EXISTING EXHAUST FAN TO BE TEMPORARILY REMOVED AND REINSTALLED; FLASH NEW ROOFING SYSTEM INTO EXISTING CURB	CORNWALL CENTRAL
$\mathbf{O}$	EXISTING COOLING TOWER MAINTENANCE PLATFORM TO BE DISCONNECTED, REMOVED; PATCH OVER WHERE STRUCTURAL SUPPORTS WERE REMOVED FROM ROOF	HIGH SCHOOL COOLING TOWER
	EXISTING ROOF DRAIN TO REMAIN; CONNECT NEW ROOFING	REPLACEMENT PROJECT 10 DRAGON DRIVE
	SYSTEM INTO EXISTING DRAIN AND REPLACE DRAIN TOP GRATE W/	NEW WINDSOR, NEW YORK 12553 SED #:44-03-01-06-0-012-008
		SUB-CONSULTANT:
		SUD-CONSULIANT:
		ENGINEER:
		BLAKE
		ENGINEERING PLLC
		1898 COUNTY ROUTE 1
		WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050 MBLAKE@BLAKEENGINEERINGPLLC.COM
		NOT VALID FOR CONSTRUCTION UNLESS
		SIGNED AND SEALED BY ENGINEER
		MATTHEW G. BLAKE, P.E., LEED AP NY - 89039 NJ - GE050037 PA - PE079303
		MA - 53197 CT - 32283 FL - 85928
		ROOF REPLACEMENT PLAN
		DATE: DRN CHK DESCRIPTION
		05.27.2022 BJK MGB CONSTRUCTION SET
		REV. DATE: DRN CHK DESCRIPTION
		$\begin{array}{c c} PROJECT NO. \\ \hline \\ $
		ргојест NO. SHEET NO. SHEET NO. M.204

120/208V 3Ø 4W+G; 65kAIC RATING				BUS	RATING	250A				MLO
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
			1	• / •			2			
PUMP P-6A	(3) #4 CU & (1) #8 GND.	70	3		• / •		4	70	(3) #4 CU & (1) #8 GND.	PUMP P-6B
			5			• /	6			
			7	. /.			8			
PUMP P-7A	(3) #4 CU & (1) #8 GND.	70	9		• / •		10	70	(3) #4 CU & (1) #8 GND.	PUMP P-7B
			11			• /	12			
SPACE	-	-	13	• / •			14	-	-	SPACE
SPACE	-	-	15		•		16	-	-	SPACE
SPACE	-	-	17			•	18	-	-	SPACE
SPACE	-	-	19	• / •			20	-	-	SPACE
SPACE	-	-	21		•		22	-	-	SPACE
SPACE	-	-	23			•	24	-	-	SPACE
SPACE	-	-	19	• / •			20	-	-	SPACE
SPACE	-	-	21		•		22	-	-	SPACE
SPACE	-	-	23			•	24	-	-	SPACE
SQUARE 'D' NF PANELBOA	ARD W/ BOLT ON BREAKERS			-	-	-	-	kVA T	OTAL	

∖E.101/

New Panelboard BMLNH-3 Scale: None

277/480V 3Ø 4W+G			BUS	RATING	: 400A				MLO	
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
			1				2			
SPARE	-	125	3		•		4	125	EXISTING	EXISTING AHU 1A & 1B
			5			•	6			
			7	- /-			8			
SPARE	-	100	9		•		10	20	EXISTING	EXISTING EF-28
			11			•	12			
			13	•			14			
EXISTING AHU-5	EXISTING	40	15		•		16	20	EXISTING	EXISTING EF-27
			17			•	18			
			19	•			20	-	-	BLANK
COOLING TOWER	(3) #10 CU & (1) #10 GND.	30	21		•		22	-	-	BLANK
			23			•	24	-	-	BLANK
BLANK	-	-	25	•			26	-	-	BLANK
BLANK	-	-	27		•		28	-	-	BLANK
BLANK	-	-	29			•	30	-	-	BLANK
BLANK	-	-	31	•			32	-	-	BLANK
BLANK	-	-	33		•		34	-	-	BLANK
BLANK	-	-	35			•	36	-	-	BLANK
BLANK	-	-	37	•			38	-	-	BLANK
BLANK	-	-	39	ſ	•	1	40	-	-	BLANK
BLANK	-	-	41			•	42	-	-	BLANK
SQUARE D NF PANEL				-	-	-	-	kVA T	OTAL	
$\overline{2}$ Exis	ting Panelboard B	TT	NI				( F • F (	CIRCU RATIN PANEL CONTI	DE NEW CIRCUIT BREAKERS ITS; BREAKERS SHALL MATC G . SCHEDULE SHOWN BASED ( RACTOR SHALL VERIFY IN FIE JT AS NEEDED BASED ON AV	H EXISTING TYPE AND ON EXISTING DIRECTORY, ELD & ADJUST CIRCUIT

DISCONNECT, REMOVE & DISPOSE -

OF EXISTING CIRCUITS TO EXISTING

COOLING TOWER: MAINTAIN

EXISTING BREAKERS AS SPARES

 $2 \setminus Existing Panelboard BFLNHZ$ 

E.101/ Scale: None

## ELECTRICAL LEGEND:

Ø	MOTOR	
Ţ	EARTH GROUND	
0	JUNCTION BOX	
РВ	PULL BOX	
	FUSE WITH RATING	
$\bigcirc$	MOLDED CASE CIRCUIT BREAKER	
42	DISCONNECT SWITCH, FUSED	
<b>-</b>	DISCONNECT SWITCH, UNFUSED	
4	STARTER, COMBINATION WITH DISCON	NECT SWITCH
	STARTER OR MOTOR CONTROLLER	
M	METER	
⊜	20A 120V DUPLEX CEILING MOUNTED RI	ECEPTACLE
÷	20A 120V DUPLEX WALL MOUNTED REC OTHERWISE NOTED	EPTACLE; 18" A.F.F. UNLESS
-	20A 120V DUPLEX WALL MOUNTED REC FAULT CIRCUIT INTERRUPTER	EPTACLE WITH GROUND
-	20A 120V QUADRAPLEX RECEPTACLE	
Ф	WALL MOUNTED SPECIAL PURPOSE RE	CEPTACLE
€USB	20A 120V WALL MOUNTED USB CHARGE HUBBELL USB20X OR ACCEPTABLE EQU	
₽F	FLOOR BOX WITH STAINLESS COVER TY #OB-1-SP OR ACCEPTABLE EQUAL; PUS RATED WATER PROOF (WHEN IN CLOSE E60120 GFCI RECEPTACLE (UNLESS OTI	H BUTTON OPEN; FULLY IP66 D POSITION); W/ 20A 125V
$\Delta_{M}$	WALL PHONE OUTLET MTD. 48" A.F.F.; 3, ABOVE CEILING W/ PULL CORD	/4" EMT CDT. IN WALL TO
$\diamond$	WALL BOX FOR TELEVISION CONNECTION TO ABOVE CEILING W/ PULL CORD	DN; 1-1/4" EMT CDT. IN WALL
¥	TELEPHONE/DATA COMMUNICATION BC WALL TO ABOVE CEILING W/ PULL CORI	
ŧ	BRANCH CIRCUIT HOMERUN; LINES INE NEUTRAL, AND SWITCH LEG CONDUCTO GROUNDING CONDUCTOR SHALL BE PF HOMERUN; NOT SHOWN	ORS; ONE SEPARATE
<b>\$</b> 2	3 = THREE-WAY D = DIMMER P = WITH PILOT LIGHT T = TIMER OPERATED	2 = DOUBLE POLE 4 = FOUR-WAY K = KEY OPERATED PB= PUSH BUTTON WP= WEATHER PROOF OC= OCCUPANCY SENSOR
OS	DUAL TECHNOLOGY OCCUPANCY SENS	SOR
DS	DAYLIGHT SENSOR	
$\boxtimes \!$	HORN/STROBE DEVICE, ONE ASSEMBLY OTHERWISE NOTED; 15 CANDELA UNLE	
$\bowtie$	STROBE DEVICE; MTD. 80" A.F.F. UNLES CANDELA UNLESS OTHERWISE NOTED	S OTHERWISE NOTED; 15
\$	MANUAL PULL STATION; MTD. 48" A.F.F.	
	WATER FLOW SWITCH	
	VALVE TAMPER SWITCH	
Øx	DETECTOR; LETTER INDICATES AS FOL BLANK = SMOKE DETECTOR P = PHOTOELECTRIC SMOKE M = MULTIPLE STATION SMOKE ALARM D = PHOTOELECTRIC DUCT SMOKE DET FSD = DUCT SMOKE DETECTOR FOR FIL	ECTOR
⊕ <sub>R</sub>	RATE OF RISE HEAT DETECTOR, 135°F	
СО	CARBON MONOXIDE DETECTOR; MTD. 6	60" A.F.F.
FACP	ADDRESSABLE FIRE ALARM CONTROL	PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL	
RTS	REMOTE TEST SWITCH & LED FOR DUC	T SMOKE DETECTORS
R	FIRE ALARM RELAY	

## ELECTRICAL NOTES:

- 1. ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.
- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.
- 4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
- 6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.
- 7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
- 8. EQUIPMENT AND MATERIALS FOR WHICH UNDERWRITERS LABORATORIES INC. (UL) PROVIDES PRODUCT LISTING SERVICE SHALL BE LISTED AND BEAR THE LISTING MARK.
- 9. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2015 NATIONAL ELECTRIC CODE, 2020 BUILDING CODE OF NEW YORK STATE, 2020 FIRE CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- 10. ALL NEW LIGHTING FIXTURES SHALL BE INSTALLED FULLY LAMPED AND OPERABLE. THE CONTRACTOR SHALL TURN OVER TO THE OWNER SPARE LAMPS OF EVERY TYPE ON THE PROJECT IN AN AMOUNT NOT LESS THAN 20% OF THE TOTAL NUMBER OF EACH TYPE (MINIMUM 1 PER TYPE).
- 11. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL UTILITY COMPANY AND/OR THE TELEPHONE COMPANY. ALL WORK INVOLVING THE UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
- 12. ALL CONDUCTORS SHALL BE COPPER, SHALL NOT BE LESS THAN #12 AWG, AND SHALL NOT EXCEED 70 FEET FROM PANEL BOARD TO FURTHEST CONNECTION UNLESS OTHERWISE NOTED ON PLANS.
- 13. WIRING SHALL CONSIST OF METALLIC ARMORED CABLES (TYPE AC) INSTALLED WHERE CONCEALED IN FRAMED WALLS, CEILINGS, OR PERMITTED BY THE NEC. OTHER AREAS SHALL CONSIST OF INSULATED CONDUCTORS INSTALLED IN RIGID STEEL CONDUIT (RGS), ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR FLEXIBLE METALLIC ARMORED CABLE (GREENFIELD).
- 14. LIGHTING LOADS SHALL NOT BE COMBINED ON THE SAME CIRCUIT AS ANY OTHER ELECTRICAL LOADS.
- 15. CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH & INSTALL ALL SMALL DETAILS AND INCIDENTAL WORK NOT SHOWN OR SPECIFIED, BUT WHICH CAN BE REASONABLY INFERRED AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM OF HIGH QUALITY MEETING ALL APPLICABLE CODES AND REGULATIONS.
- 16. FOR EACH NEW OR MODIFIED ELECTRICAL PANEL, THE CONTRACTOR SHALL PROVIDE A TYPE WRITTEN DIRECTORY CARD TO REFLECT ALL CIRCUITING. ADDITIONALLY, THE CONTRACTOR SHALL LABEL (WITH A PERMANENT MARKER OR LABEL) EACH RECEPTACLE ON THE INSIDE OF EACH FACE PLATE WITH PANEL AND CIRCUIT NUMBER DESIGNATION.
- 17. MINIMUM REQUIREMENT FOR EQUIPMENT GROUNDING SHALL BE GOVERNED BY THE NEC. ALL GROUNDS, BONDING, ETC. SHALL MEET THESE REQUIREMENTS. THE CONTRACTOR SHALL FURNISH AND INSTALL ANY AND ALL ITEMS NECESSARY TO MEET THESE REQUIREMENTS AT NO EXTRA COST, EVEN IF SUCH ITEMS ARE NOT DETAILED ON THE DRAWINGS.
- 18. ALL CONDUIT AND CABLE SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 19. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, WIRING, DEVICES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 20. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.

	WIRE COLOR CODING TABLE													
PHASE	WIRES	VOLTAGE	L1	L2	L3	NEUTRAL	GROUND							
1	2 (1)	120	BLACK	-	-	WHITE	-							
1	2 (1)	208	BLACK	RED	-	-	-							
1	3	120	BLACK	-	-	WHITE	GREEN (2)							
1	3	208	BLACK	RED	-	-	GREEN (2)							
3	4	208	BLACK	RED	BLUE	-	GREEN (2)							
3	5	208	BLACK	RED	BLUE	WHITE	GREEN (2)							
1	3	277	BROWN	-	-	GRAY	GREEN (2)							
1	3	277	BROWN	ORANGE	-	-	GREEN (2)							
3	4	480	BROWN	ORANGE	YELLOW	-	GREEN (2)							
3	5	480	BROWN	ORANGE	YELLOW	GRAY	GREEN (2)							
NOTES:														

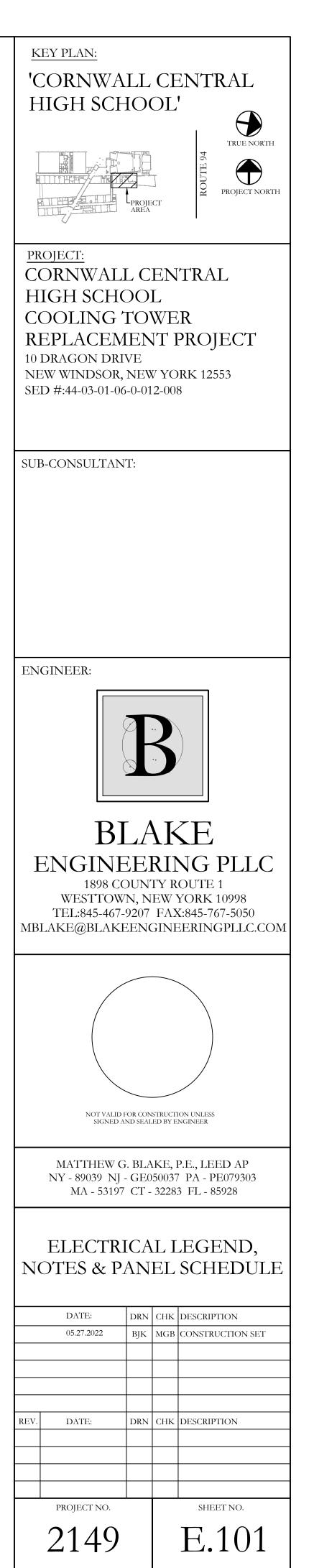
FOR DOUBLE INSULATED EQUIPMENT ONLY.

GREEN/YELLOW MAY BE USED: - GREEN/YELLOW SHALL BE GREEN WITH ONE OR MORE YELLOW STRIPES

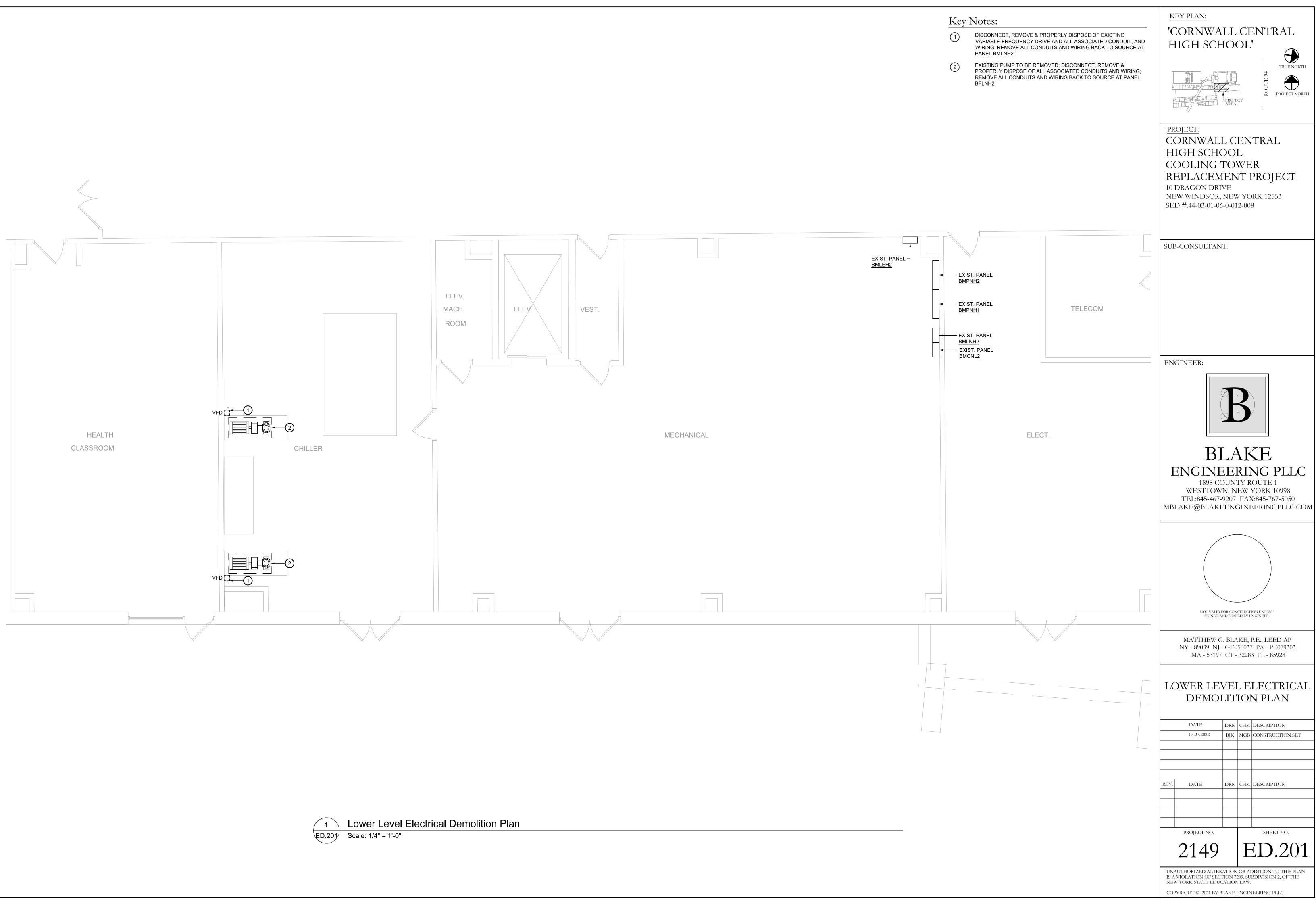
- GREEN = 50 TO 70%, YELLOW = 50 TO 30%. - GREEN/YELLOW IS THE ONLY COLOR INTERNATIONALLY ACCEPTED FOR

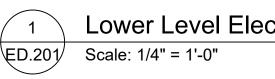
USE AS AN EQUIPMENT GROUNDING CONDUCTOR. - GREEN OR GREEN/YELLOW MUST ONLY BE USED FOR GROUNDING

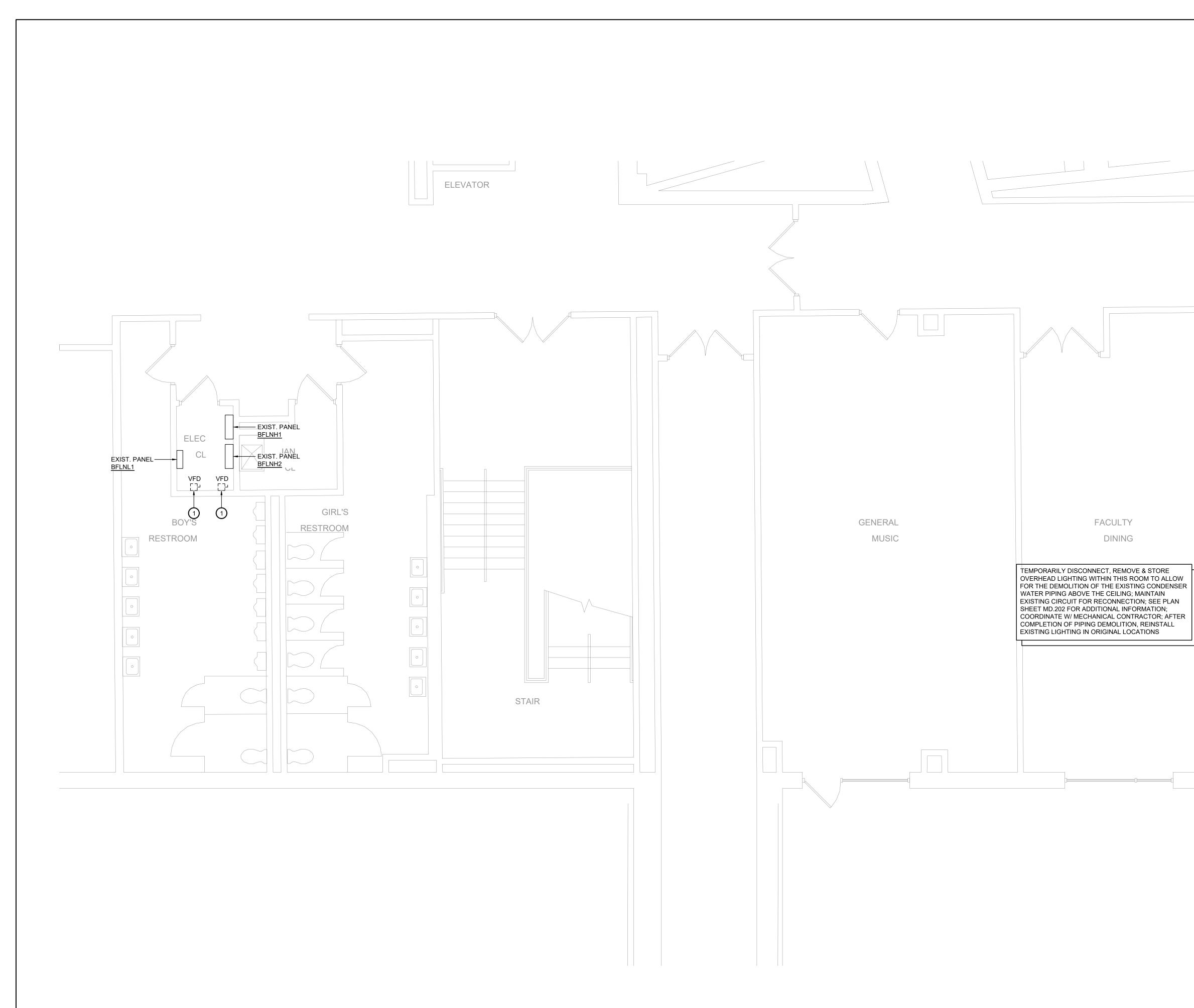
CONDUCTORS.



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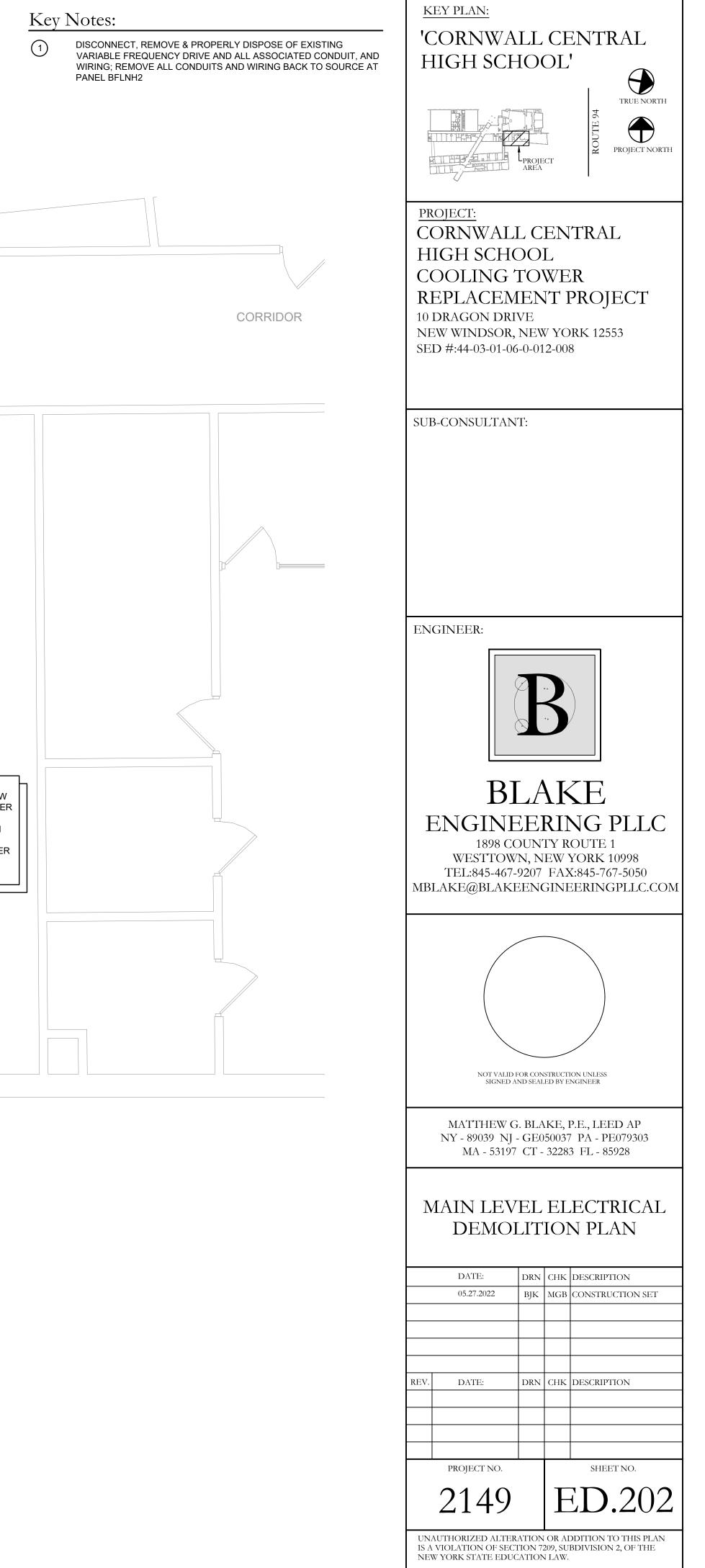






ED.202 Scale: 1/4" = 1'-0"

# Main Level Electrical Demolition Plan



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