

1 STORM WATER RISER DIAGRAM
Scale: NONE



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

PROJECT NAME:
HARPER ST. YARD

32-11 HARPER STREET,
QUEENS, NY 11368
CAPITAL PROJECT NUMBER
HWQF027C

Architect:
nARCHITECTS, PLLC
68 JAY #317
BROOKLYN, NY 11201
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Structural Engineer:
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Environmental & Fuel Consultant:
URS
77 GOODELL STREET
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T: 716.856.5636 F: 716.856.2545

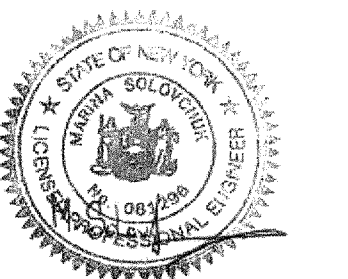
Code Consultant:
J CALLAHAN CONSULTING INC.
299 BROADWAY SUITE 1420
NEW YORK, NY 10007
T: 212.766.2115 F: 212.766.2787

Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bld Set

Sheet title:
**STORM WATER
RISER DIAGRAM**

Scale: AS INDICATED

Seal and Signature:

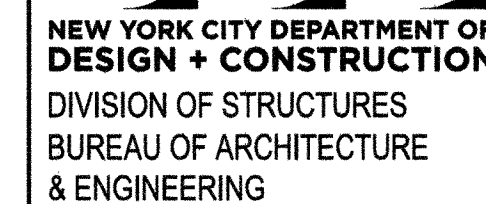


Date: 09.28.12
Project No.: 0902
Dwg By: NB
Chk By: MS

Dwg No:

NEW YORK CITY BUILDING DEPARTMENT NOTE
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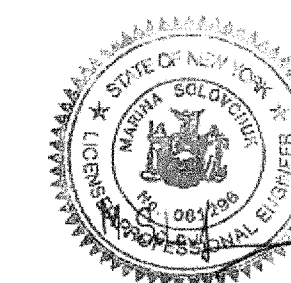
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ROOF PLUMBING
PART PLAN "C"

Scale: AS INDICATED

Seal and Signature:



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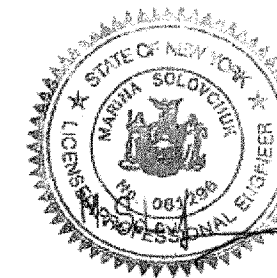
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**ROOF PLUMBING
PART PLAN "B"**

Scale: AS INDICATED

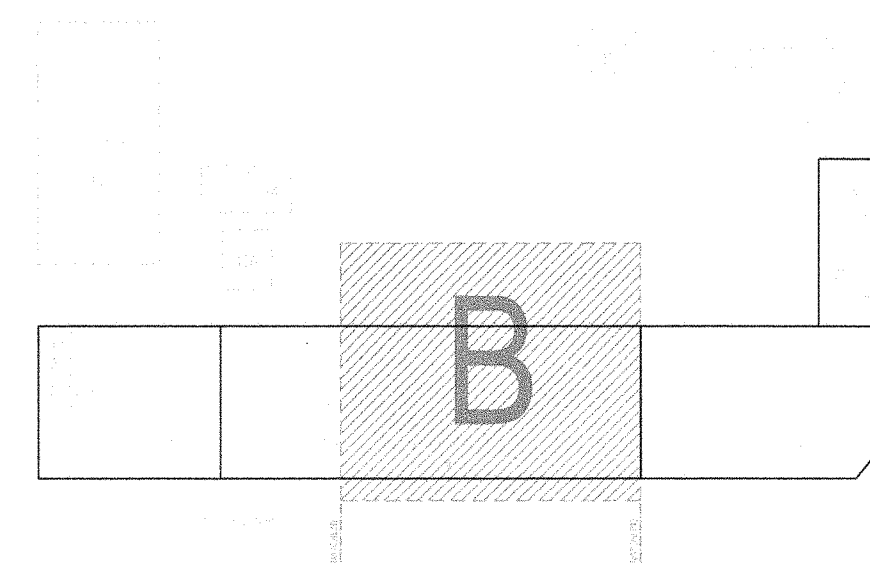
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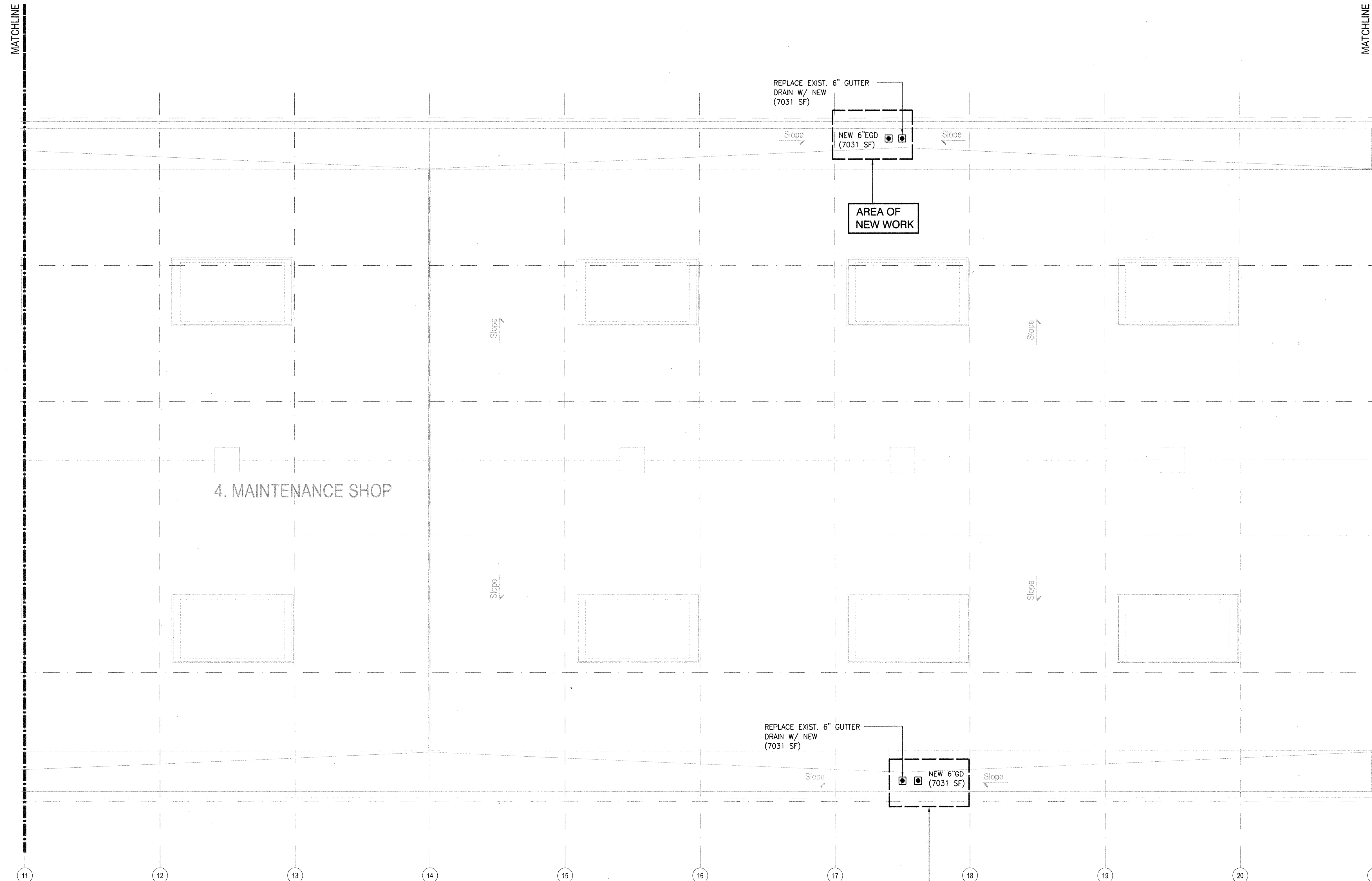
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Dwg No:

P-122.00



1 KEY PLAN AREA "B"
N.T.S



1 ROOF PART PLAN "B"
1/8" = 1'-0"



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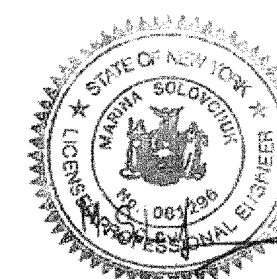
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Sheet title:

**ROOF PLUMBING
PART PLAN "A"**

Scale: AS INDICATED

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Date: 09.28.12

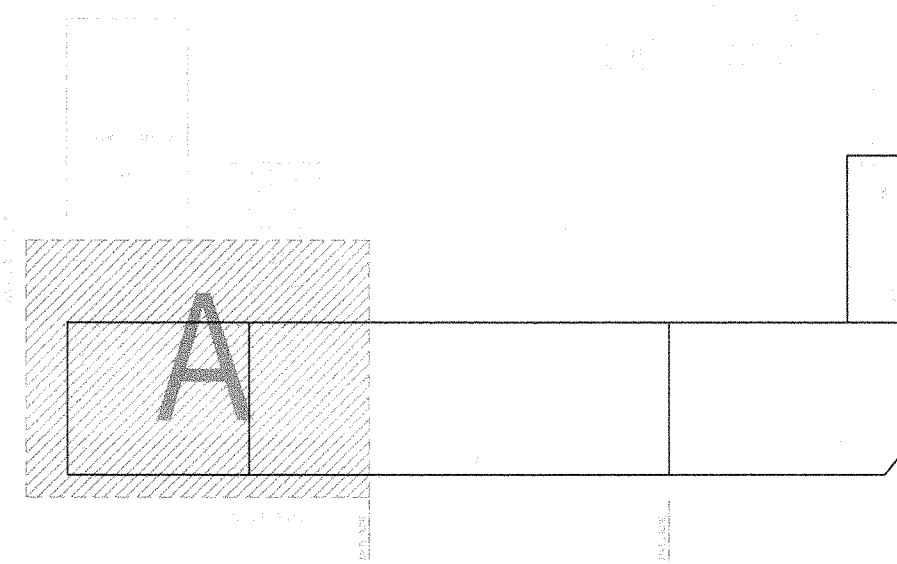
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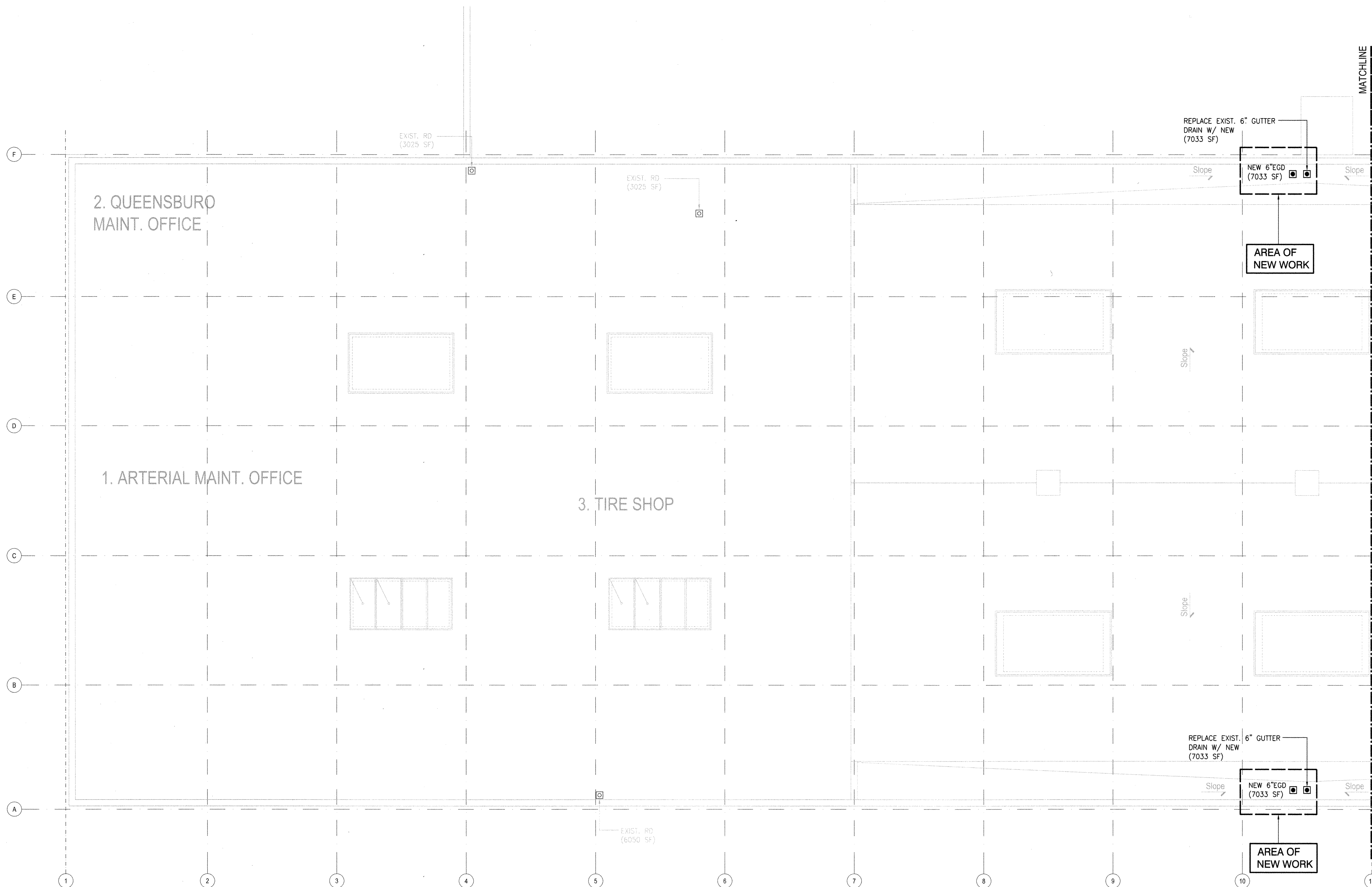
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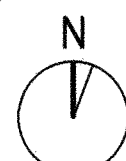
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1 KEY PLAN AREA "A"
N.T.S



1 ROOF PART PLAN "A"
1/8" = 1'-0"



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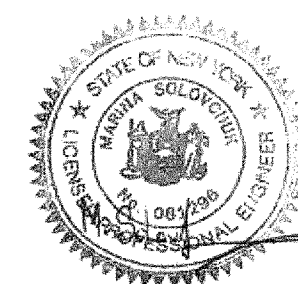
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Sheet title:
**FIRST FLOOR
PLUMBING PART
PLAN "D"**

Scale: AS INDICATED

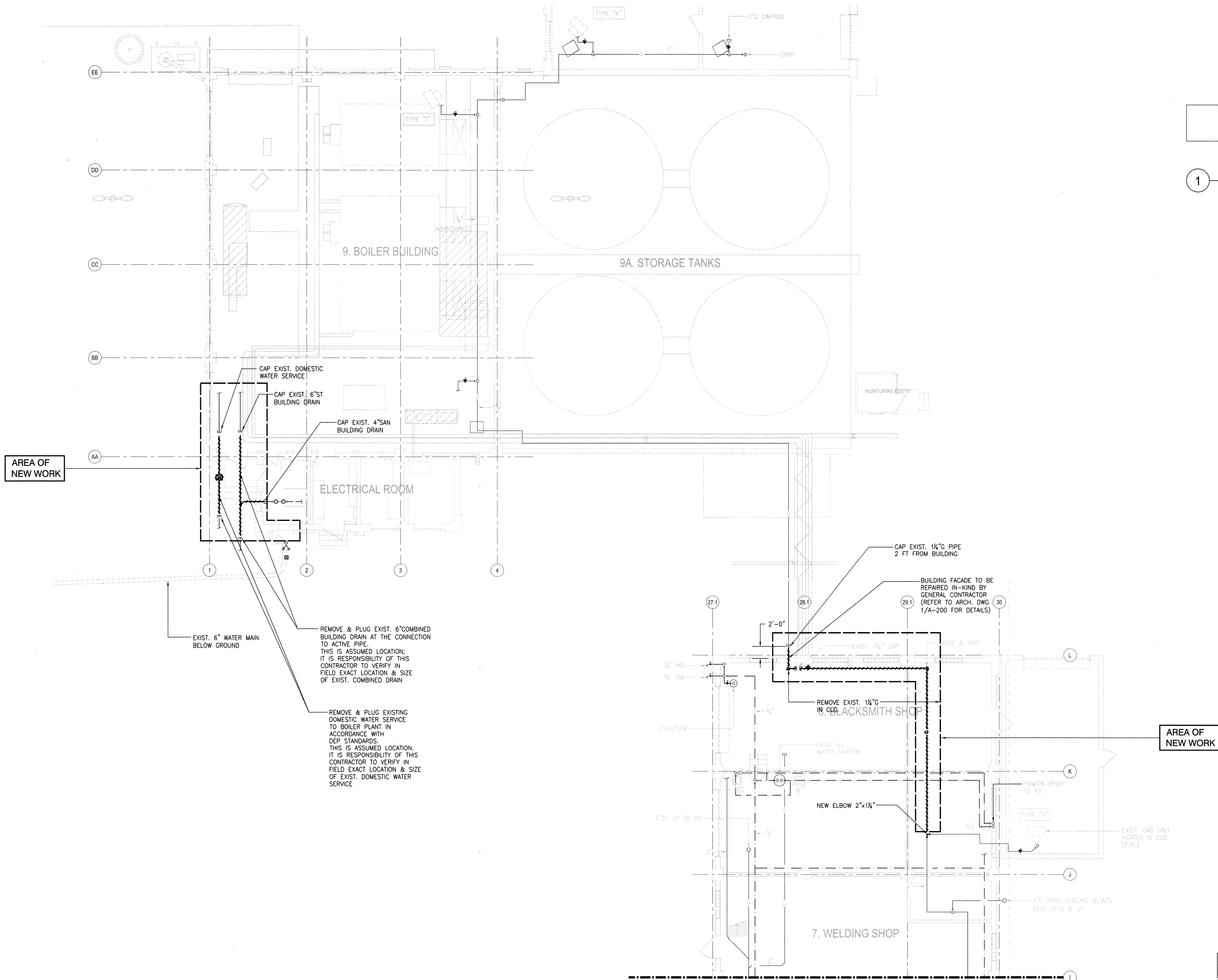
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Chk By: MS

Dwg No:

P-104.00



1 FIRST FLOOR PARTIAL PLAN "D"
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NOTE:
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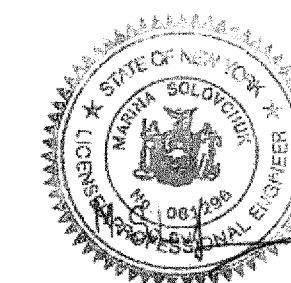
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**FIRST FLOOR
PLUMBING PART
PLAN "C"**

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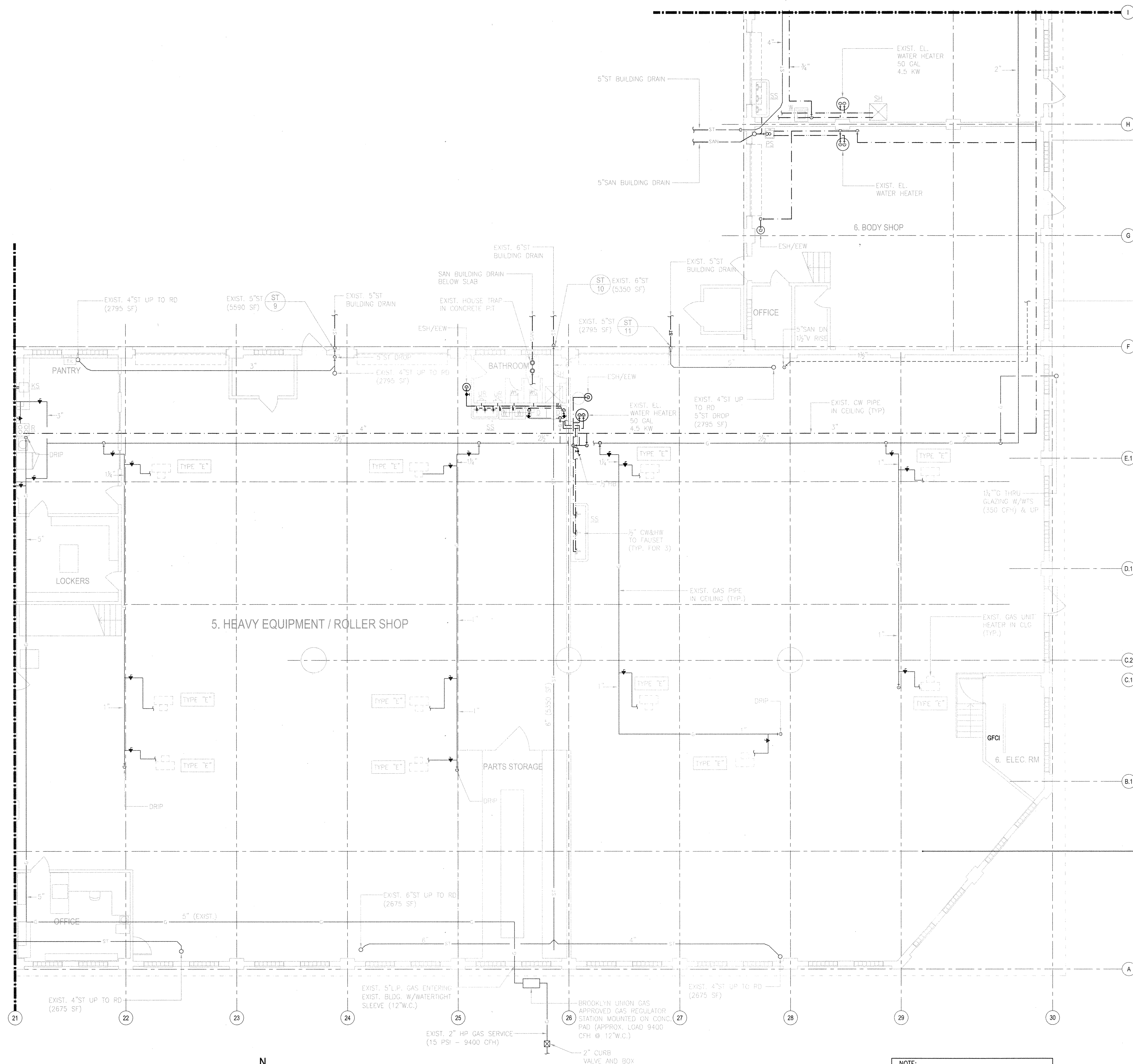
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1 KEY PLAN AREA "C"
N.T.S.

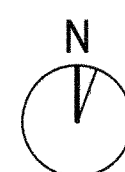
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1 FIRST FLOOR PARTIAL PLAN "C"
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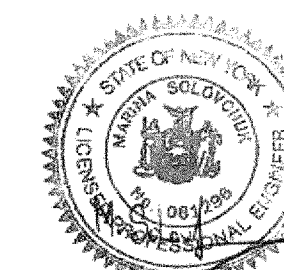
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PLUMBING PART
PLAN "B"**

Scale: AS INDICATED

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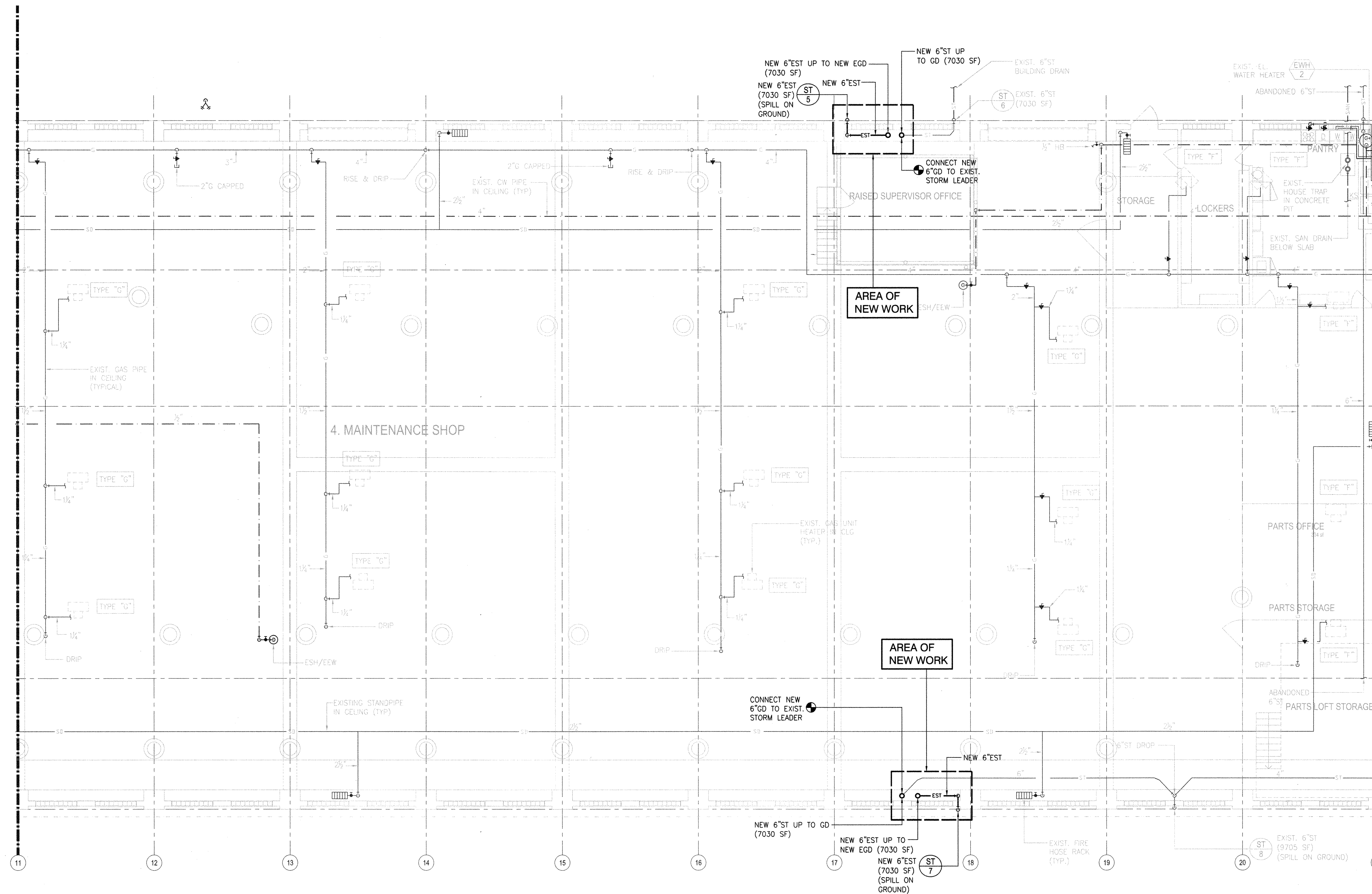


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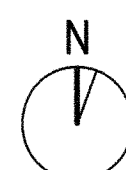
Dwg No:

P-102.00

1 KEY PLAN AREA "B"
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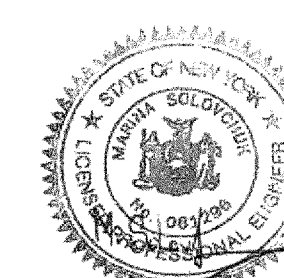
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**FIRST FLOOR
PLUMBING PART
PLAN "A"**

Scale: AS INDICATED

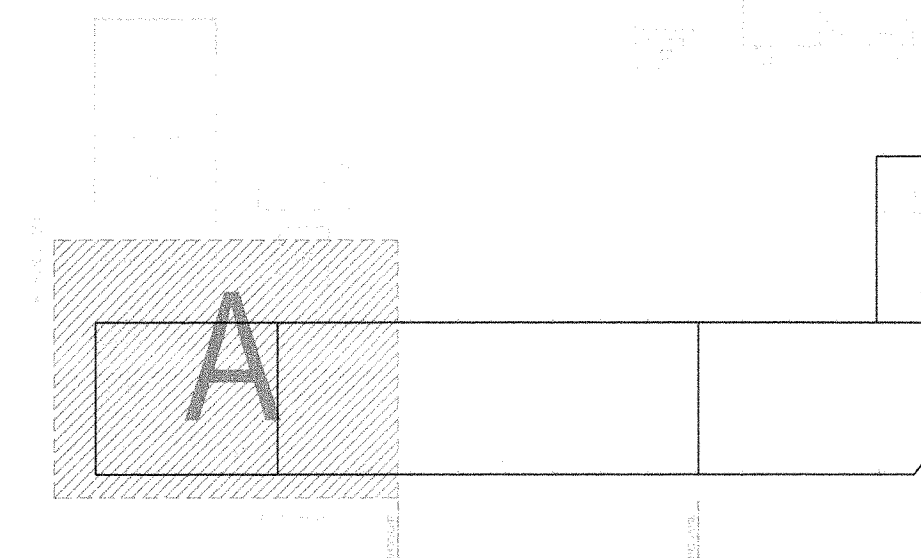
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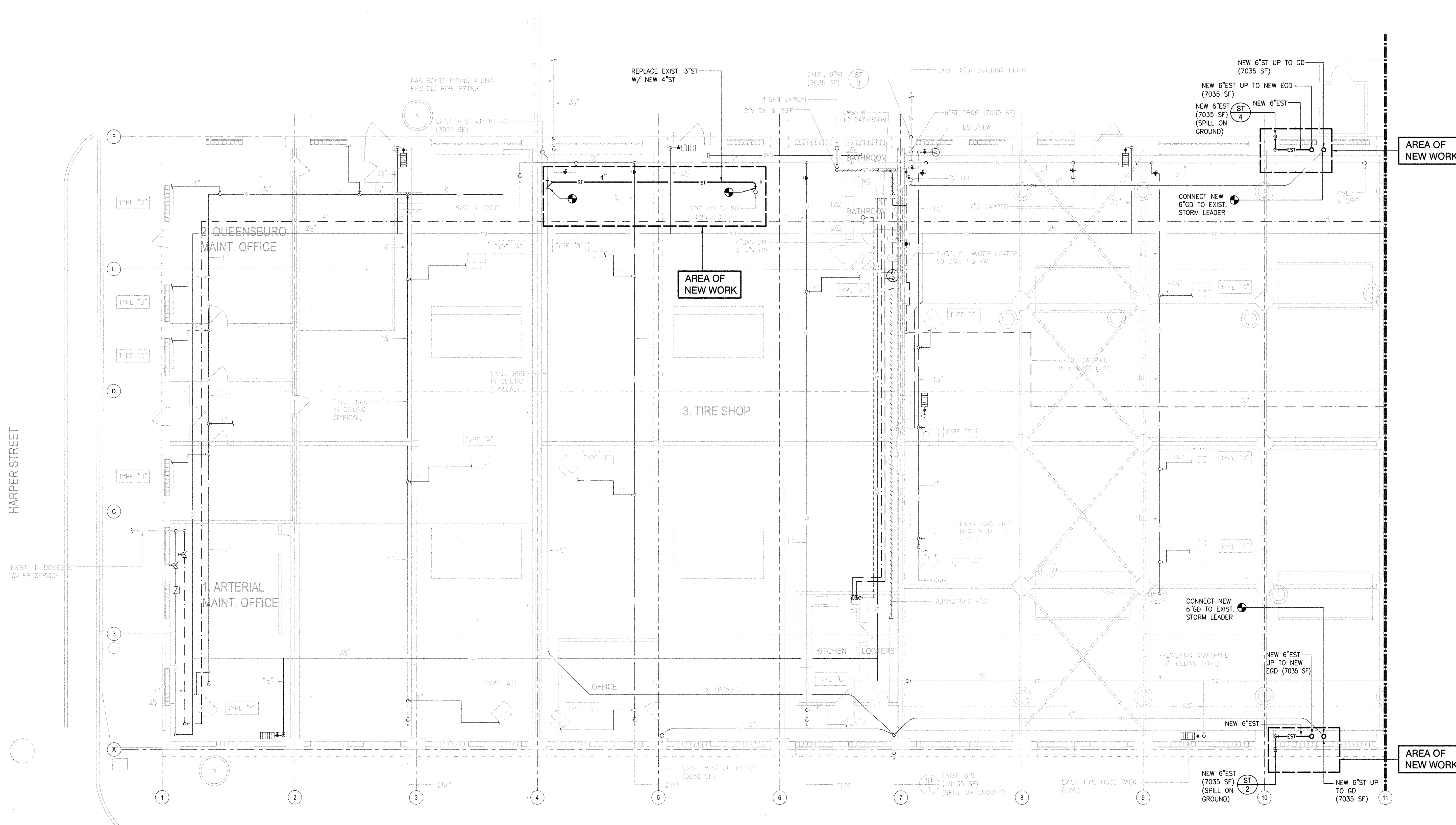
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


1 KEY PLAN AREA "A"
N.T.S.



1 FIRST FLOOR PARTIAL PLAN "A"
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SYMBOLS		ABBREVIATIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
--- SAN ---	SANITARY PIPING BELOW GRADE	AD	AREA DRAIN
— SAN —	SANITARY PIPING ABOVE GRADE	AI	AIR INTAKE
— SED —	SEWAGE EJECTOR DISCHARGE	ARCH	ARCHITECTURAL
— SPD —	SUMP PUMP DISCHARGE	BFP	BACKFLOW PREVENTER
-----	VENT PIPING	BLDG	BUILDING
— EST —	EMERGENCY STORM WATER PIPING	CFRD	CONTROLLED FLOW ROOF DRAIN
— ST —	STORM WATER PIPING	CLG	CEILING
— SD —	FIRE STANDPIPE	CODP	CLEANOUT DECK PLATE
— IW —	INDIRECT WASTE	COWP	CLEANOUT WALL PLATE
-----	COLD WATER PIPING	CW	DOMESTIC COLD WATER PIPING
-----	HOT WATER PIPING	DIA	DIAMETER
-----	HOT WATER RETURN PIPING	DIM	DIMENSION
— G —	GAS PIPING	DN	DOWN
	SHUT-OFF VALVE	DR	DRAIN
	CHECK VALVE	DWG	DRAWING
	PRESSURE REDUCING VALVE	EGD	EMERGENCY GUTTER DRAIN
	BALANCING VALVE	EWC	ELECTRIC WATER COOLER
	COCK VALVE	EWB	ELECTRIC WATER HEATER
	SOLENOID VALVE	EST	EMERGENCY (SECONDARY) STORM WATER PIPING
	GAS PRESSURE REGULATOR	FAI	FRESH AIR INLET
	VALVE IN VERTICAL	FD	FLOOR DRAIN
	ANGLE VALVE	FE	FLUE EXHAUST
	PIPE DROP OR DOWN	F.F.	FINISH FLOOR
	PIPE CONNECTION, TOP	FL	FLOOR
	PIPE CONNECTION, BOTTOM	G	GAS PIPING
	PIPE RISE OR UP	HB	HOSE BIBB
	"P" TRAP	HW	DOMESTIC HOT WATER PIPING
	CLEANOUT	HWR	DOMESTIC HOT WATER RETURN PIPING
	CLEANOUT DECK PLATE	INV.EL.	INVERT ELEVATION
	HOUSE TRAP	MAX	MAXIMUM
	CAPPED OUTLET	MECH	MECHANICAL
	VENT THROUGH ROOF	MH	MANHOLE
	FLOOR DRAIN, ROOF DRAIN, AREA DRAIN, OVERFLOW ROOF DRAIN, TRENCH DRAIN	MIN	MINIMUM
	HOSE BIBB	NC	NORMALLY CLOSED
	WALL HYDRANT	NO	NORMALLY OPEN
	VACUUM BREAKER ASSEMBLY	NTS	NOT TO SCALE
	FLOOR, AREA DRAIN (RISER)	RD	ROOF DRAIN
	WATER HAMMER ARRESTOR	ORD	OVERFLOW ROOF DRAIN
	FRESH AIR INLET (FAI)	PD	PLANTER DRAIN
	METER	RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
	STRAINER	S	SANITARY WASTE
	WATER FILTER	ST	STORM WATER PIPING
	PUMP	TD	TRENCH DRAIN
	EXPANSION JOINT	TYP	TYPICAL
	WATERFLOW SWITCH	V	SANITARY VENT PIPING
	FIRE HOSE RACK	VIF	VERIFY IN FIELD
	CONNECTION FROM NEW TO EXISTING	W/	WITH
	PIPE BREAK	WC	WATER CLOSET
		WH	WALL HYDRANT
		WHA	WATER HAMMER ARRESTOR

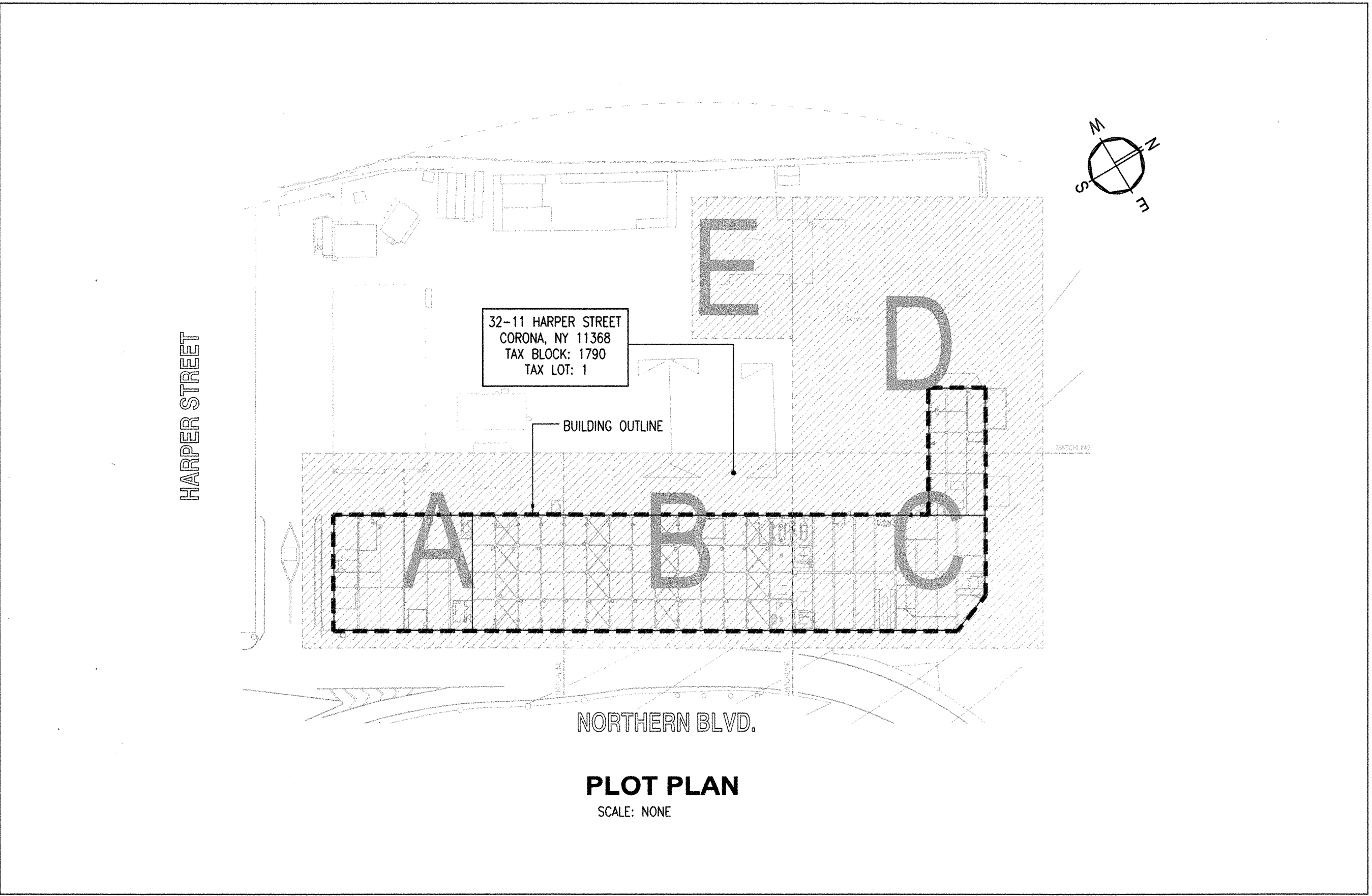
GENERAL NOTES

1. VERIFY THE LOCATIONS AND SIZES OF EXISTING PIPING IN THE FIELD AND IF ANY DISCREPANCIES OCCUR WITH CONTRACT DRAWINGS, NOTIFY PLUMBING ENGINEER PRIOR TO COMMENCEMENT OF WORK.
2. DO NOT INTERRUPT ANY SERVICES OF THE EXISTING BUILDING NOR INTERFERE WITH ANY SERVICES IN ANY WAY WITHOUT WRITTEN PERMISSION FROM THE BUILDING MANAGER. INTERRUPTIONS SHALL BE AS BRIEF AS POSSIBLE AND ONLY AT DESIGNATED TIMES.
3. UNDER NO CIRCUMSTANCES WILL THE PLUMBING CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP EXCEPT AREAS AS DESIGNATED FOR SUCH USE BY THE CONTRACTING OFFICER.
4. REMOVE RUBBISH FROM PREMISES AND SITE AT THE END OF EACH WORK DAY AND AS DIRECTED.
5. STORE MATERIALS IN DESIGNATED SPACES.
6. COORDINATE NEW WORK WITH OTHER TRADES AND EXISTING FIELD CONDITIONS. THE PLUMBING CONTRACTOR SHALL PAY ALL FEES, GIVE NOTICE, FILE NECESSARY
7. DRAWINGS AND OBTAIN PERMITS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT. HE SHALL COMPLY WITH LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS AND WITH THE NYC BUILDING CODE.
8. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF NEW WORK.
9. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE.
10. NEW WORK AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND MADE READY FOR USE.
11. BEFORE SUBMITTING A PROPOSAL, BIDDERS SHALL VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND TO EXECUTION OF WORK. THE PROVISION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE THE EXISTING CONDITIONS ENCOUNTERED WOULD HAVE BEEN FORESEEN AND AN EXAMINATION BEEN MADE PRIOR TO PROPOSAL.
12. PLUMBING CONTRACTOR SHALL COORDINATE ALL TIE-INS, PLUS REMOVALS WITH GENERAL CONTRACTOR AND OWNER'S SCHEDULE.
13. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. 1 REMOVE EXISTING WORK DISPOSAL OF EXISTING WORK TO BE IN A CLEAN AND ACCEPTABLE CONDITION AS DETERMINED BY THE PLUMBING ENGINEER.
14. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, PLUMBING WORK, AND EQUIPMENT.
15. DIMENSIONS SHOWN ON DRAWINGS ARE BASED ON PRELIMINARY DATA. THE PLUMBING CONTRACTOR TO COORDINATE ALL DIMENSIONS, ELEVATIONS AND CONNECTION REQUIREMENTS FOR FINAL CONDITIONS.
16. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL LOCATION OF ALL EQUIPMENT.
17. PLUMBING WORK SHALL BE IN STRICT CONFORMITY WITH THE NYC PLUMBING CODE AND AUTHORITIES HAVING JURISDICTION AND THIS PROJECT'S SPECIFICATIONS.
18. REPAIR WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE, AND INSTALL. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT ANY WORK INVOLVING EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL FROM THE PLUMBING ENGINEER.
19. PLUMBING MATERIAL AND INSTALLATION SHALL BE PROVIDED IN ACCORDANCE WITH THE BUILDING STANDARDS.
20. DRAINAGE AND VENT PIPING SHALL BE TESTED BY PERFORMING WATER TEST: NO LEAKS FOR TWO HOURS UNDER 25 FEET WATER PRESSURE. COLD AND HOT WATER PIPES SHALL BE TESTED FOR 3 HOURS AT PRESSURE 150 PSI.

N.Y.C. BUILDING DEPARTMENT NOTES

THE PLUMBING SYSTEMS (SANITARY, VENT AND WATER DISTRIBUTION) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE PLUMBING CODE OF THE CITY OF NEW YORK, 2008.

1. THE PLUMBING SYSTEM SHALL BE IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS OF SECTION PC 303
2. THE MATERIALS USED IN THE PLUMBING SYSTEM WILL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC 303
3. EQUIPMENT HOOK-UP AND THE JOINING OF PIPING WILL BE IN FULL COMPLIANCE WITH SECTION PC 605, PS 705, PC 706
4. THE INSTALLATION OF FIXTURES WILL BE IN FULL ACCORDANCE WITH SECTION PC 405
5. TRAPS FOR FIXTURES AND DRAIN LINES WILL BE PROVIDED AND CLEANOUTS INSTALLED IN FULL ACCORDANCE WITH SECTION PC 1002
6. VERTICAL AND HORIZONTAL PIPING WILL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND IN FULL COMPLIANCE WITH SECTION PC 308
7. THE WATER SUPPLY SYSTEM OF THE SUBJECT BUILDING SHALL BE INSTALLED AND MAINTAINED IN FULL COMPLIANCE WITH SECTION P 107.0.
8. THE SANITARY DRAINAGE SYSTEM OF THE SUBJECT BUILDING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC 401
9. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM OF THE SUBJECT BUILDING WILL BE INSTALLED IN FULL COMPLIANCE WITH SECTION PC 901.0.
10. RATIOOFING SHALL BE DONE IN ACCORDANCE WITH SECTION PC 304
11. TEMPORARY TOILET FACILITIES SHALL BE PROVIDED FOR WORKMEN AS PER SECTION PC 311
12. CHANGES IN DIRECTION IN DRAINAGE PIPING SHALL BE MADE WITH APPROPRIATE USE OF 45 DEGREE WYES, LONG SWEEPS, SHORT SWEEPS, SIXTH, EIGHTH OR SIXTEENTH BENDS OR BY A COMBINATION OF THESE OR EQUIVALENT FITTINGS.
13. SANITARY TEES AND QUARTER BENDS MAY BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
14. SHORT SWEEPS WILL BE PERMITTED IN DRAINAGE PIPING 3 INCH DIAMETER OR LARGER FOR ANY OFFSETS EITHER HORIZONTAL OR VERTICAL



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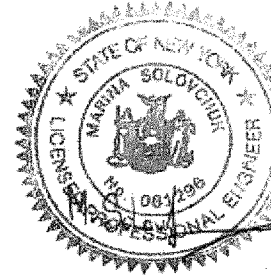
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02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:

PLUNBING LEGEND, NOTES & PLOT PLAN

Scale: AS INDICATED

Seal and Signature



Date: 09.28.12

Project No.: 0902

Dwg By: NE

Chk By: MS

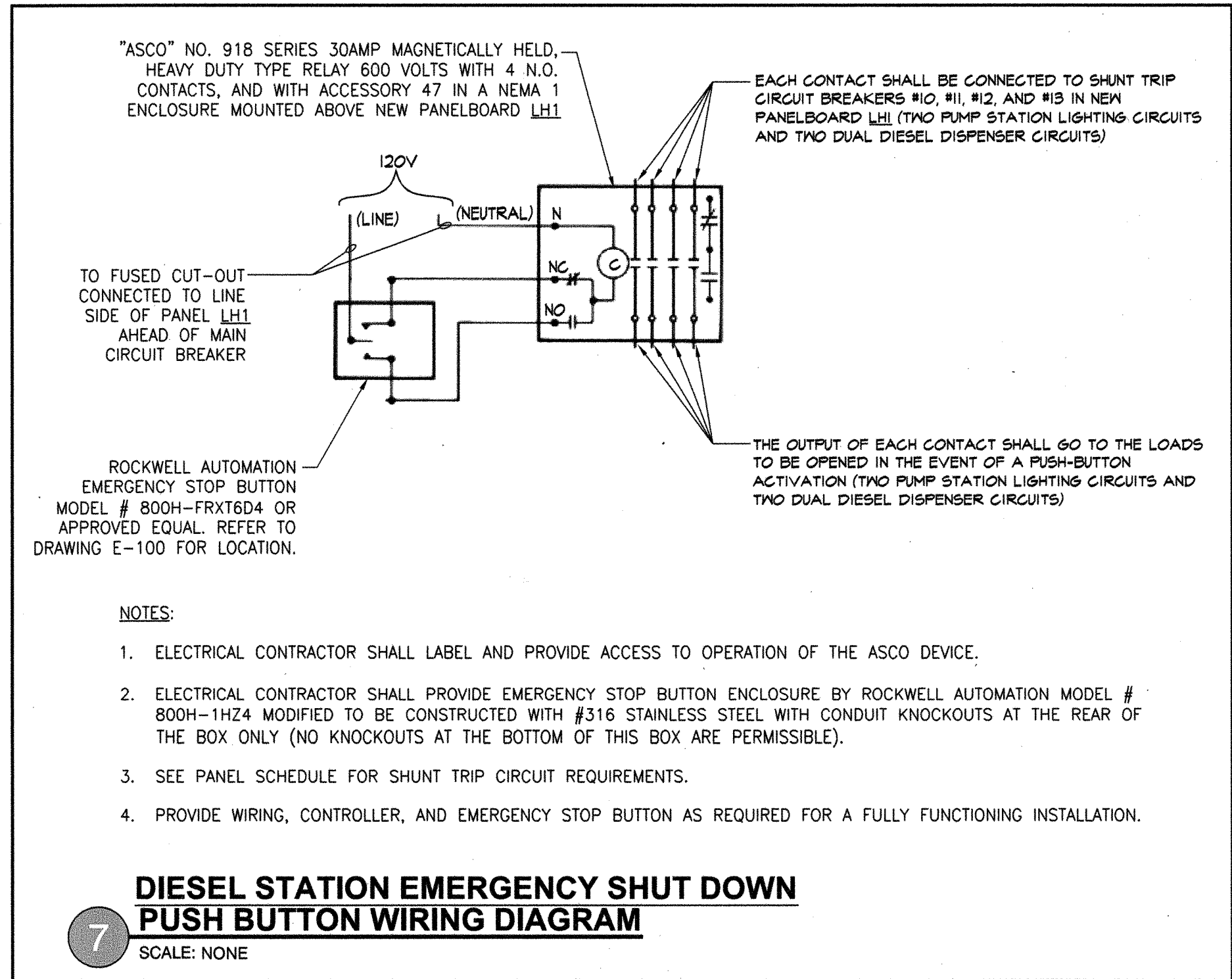
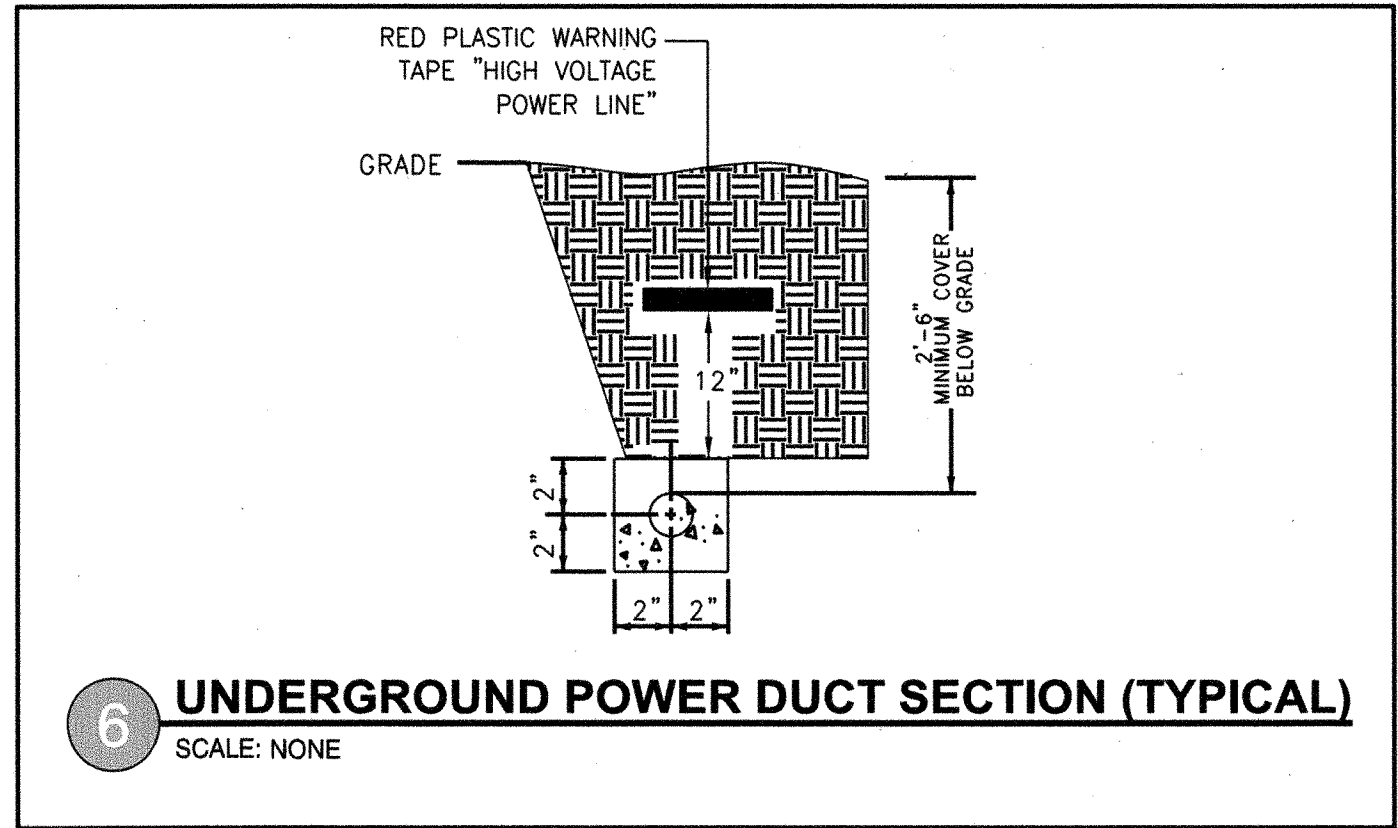
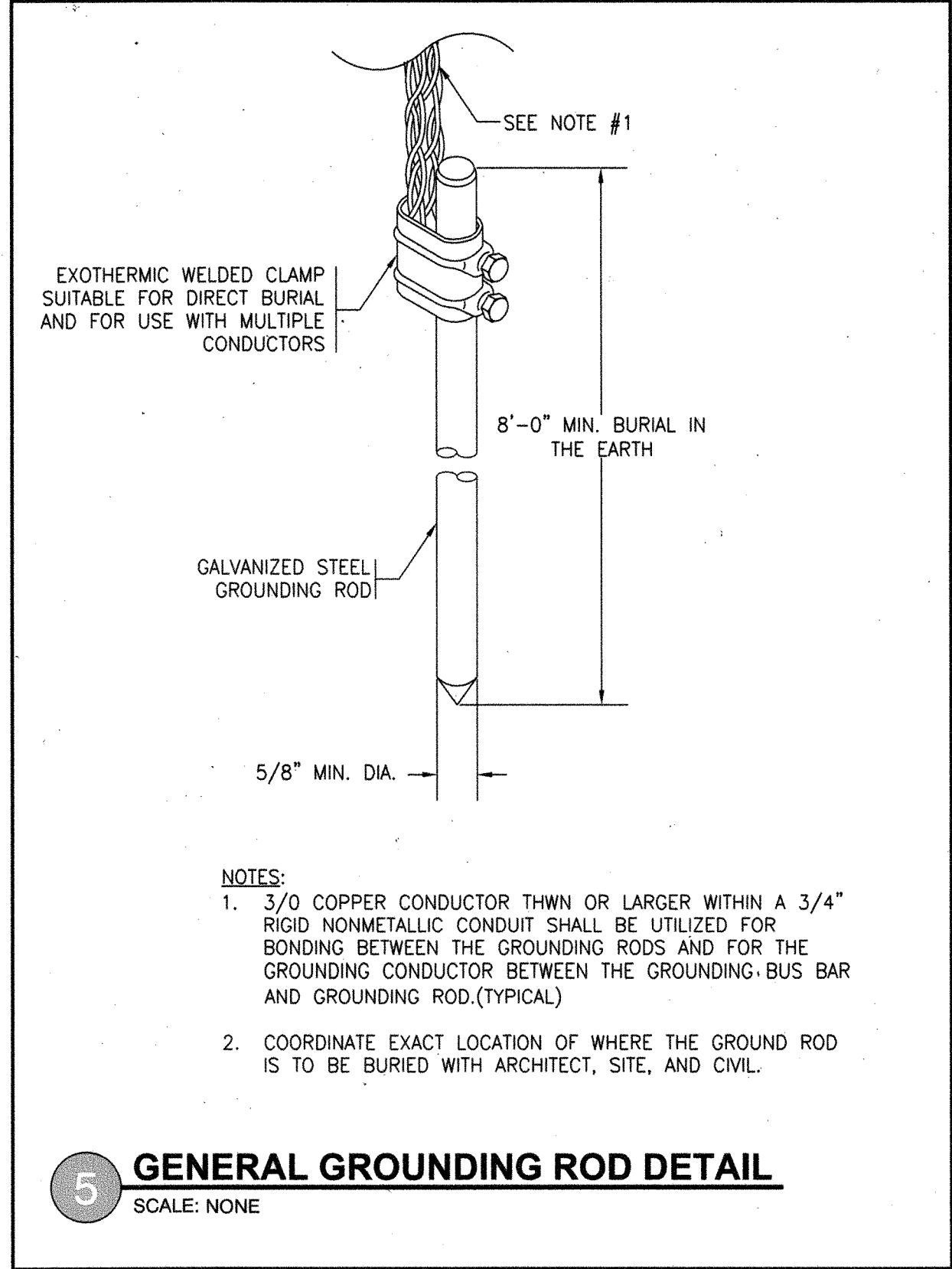
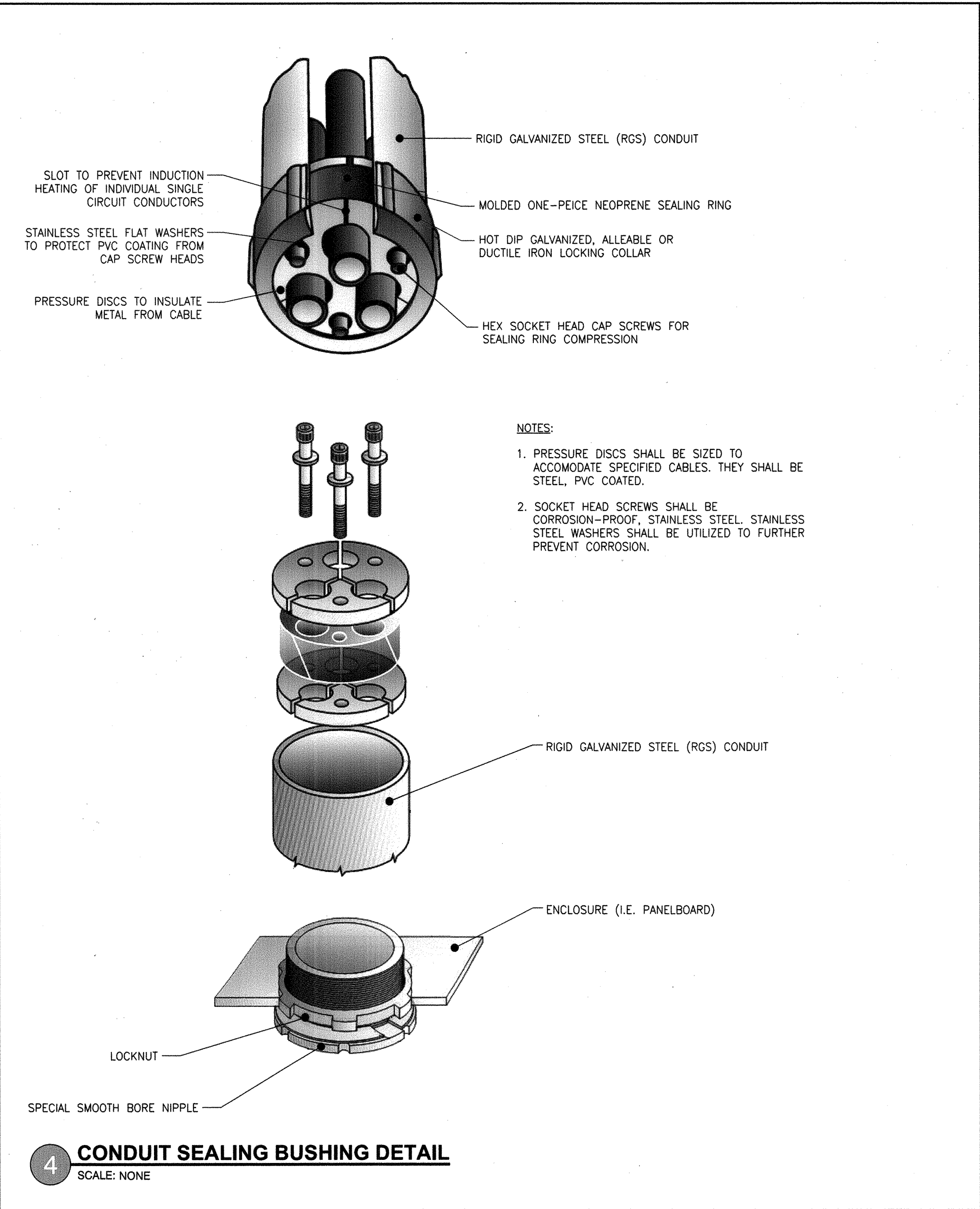
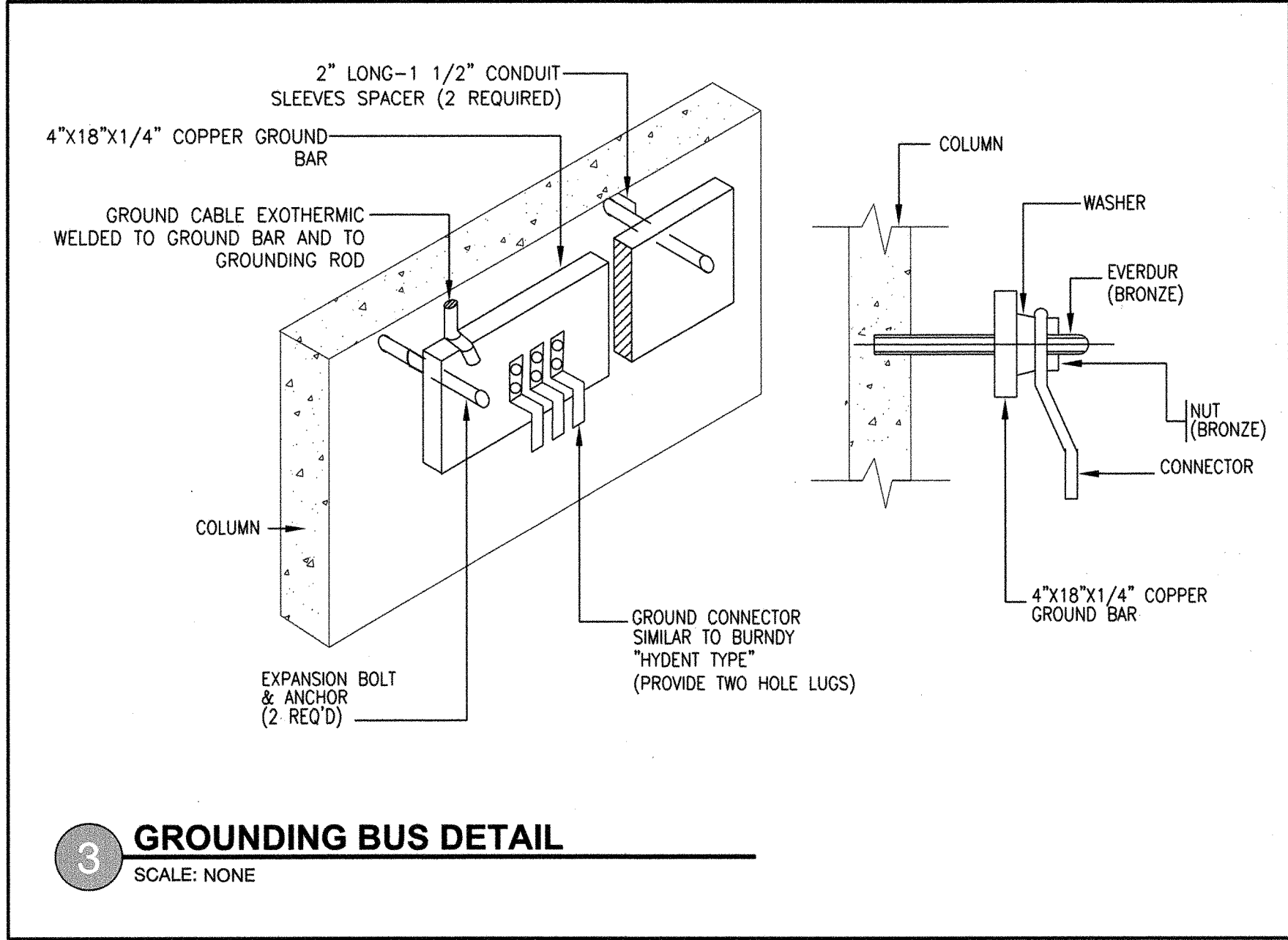
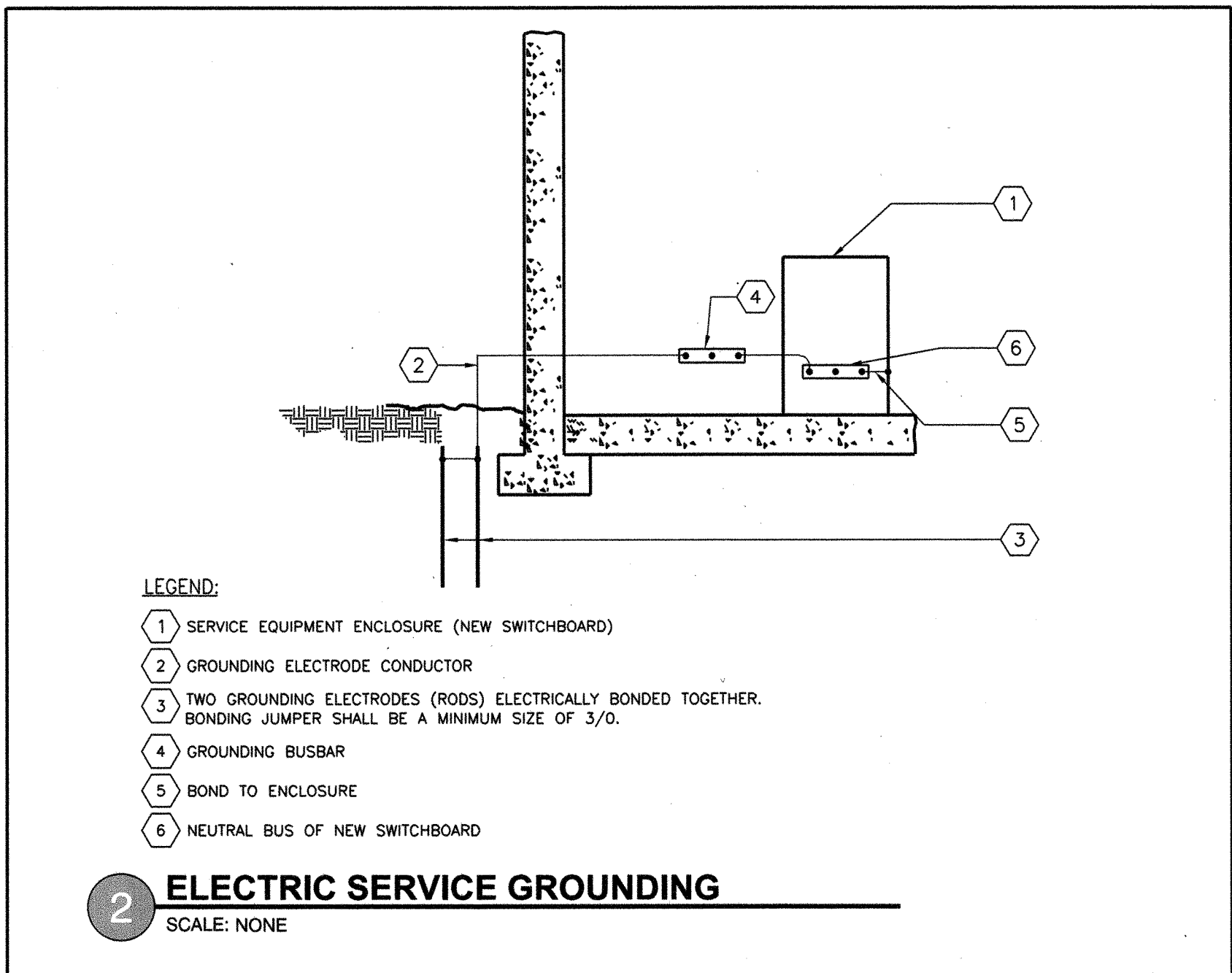
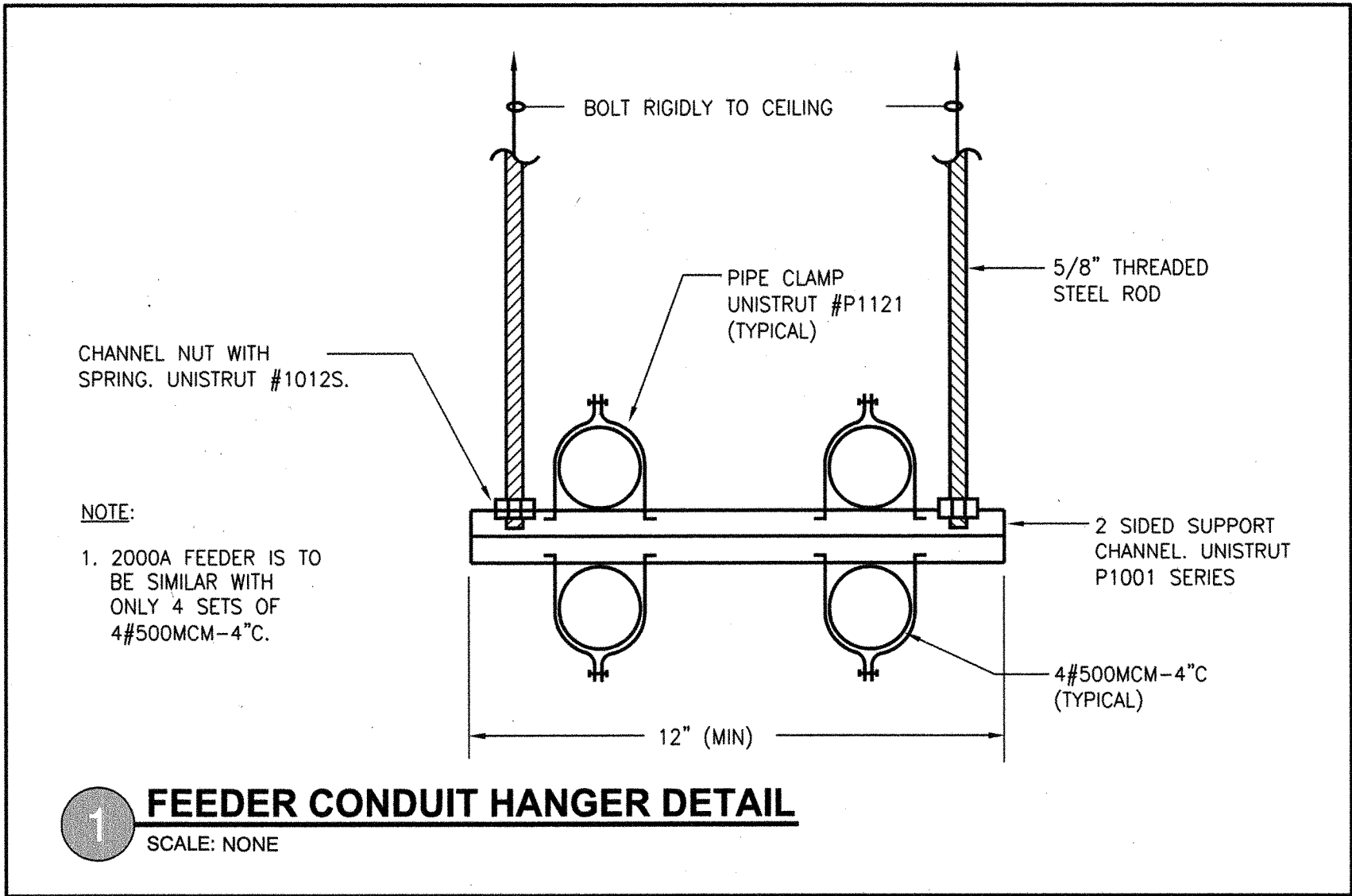
Dwg No

NEW YORK CITY BUILDING DEPARTMENT NOTE
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P-001.00

EQUIPMENT LEGEND									
SYMBOL	DESCRIPTION	ELECTRICAL POWER REQUIREMENTS						CONDUIT AND WIRE SIZE	NOTES
		EQUIPMENT & APPLIANCE RATING					OUTLET # OF PHASES		
KW	KVA	HP	AMPS	VOLTS					
	THRU--THE-WALL AC UNIT			19.5	208		1	2#10+1#10G-3/4"	
	ELECTRIC BASEBOARD HEATER			10.4	120		1	2#12+1#12G-3/4"	
	ELECTRIC BASEBOARD HEATER	1.1		10.4	120		1	2#12+1#12G-3/4"	
	AUTOMATED FUEL MANAGEMENT SYSTEM CONTROLLER	2.2		20	120		1	2#12+1#12G-3/4"	
	DUAL DIESEL DISPENSER	2.2		20	120		1	2#12+1#12G-3/4"	
	EMERGENCY STOP BUTTON			20	120		1	2#12+1#12G-3/4"	
	OVERFILL ALARM	2.2		20	120		1	2#12+1#12G-3/4"	
	CARD READER	2.2		20	120		1	2#12+1#12G-3/4"	

- EQUIPMENT LEGEND NOTES**
- 1 NO ELECTRICAL WORK IS REQUIRED BEYOND RECEPTACLE OUTLET.
- 2 INSTALL CONTROL DEVICES FURNISHED SEPARATE FROM ELECTRIC WORK AND PROVIDE CONTROL WIRING BETWEEN SAME AS REQUIRED FOR FULLY OPERATIONAL SYSTEM. FINAL LOCATIONS OF CONTROL DEVICES SHALL BE COORDINATED WITH THE ARCHITECT.
- 3 PROVIDE CONTROL AND/OR POWER WIRING/CONDUITS BETWEEN ALL SYSTEM COMPONENTS AS REQUIRED.
- 4 EXTEND INDICATED POWER CIRCUIT AND CONNECT SAME TO LINE TERMINALS OF THE EQUIPMENT-- THE FINAL PORTION (NOT TO EXCEED 48" IN LENGTH) SHALL BE WITH FLEXIBLE METALLIC CONDUIT
- 5 PROVIDE DISCONNECT MEANS WITH CONNECTIONS AS REQUIRED TO INTERPOSE SAME BETWEEN TERMINATION OF BUILDING WIRING AND LINE TERMINALS OF UNIT--TYPE OF DISCONNECT MEANS AND MOUNTING LOCATION TO BE IN ACCORDANCE WITH INSTRUCTIONS ISSUED BY THE MANUFACTURER OF THE UNIT
- 6 FINAL CIRCUITRY REQUIREMENTS FOR THIS ITEM SHALL BE AS PER THE MANUFACTURER.



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EQUIPMENT SCHEDULE AND DETAIL SHEET

Scale: AS INDICATED

Seal and Signature:

Date: 09.28.12
Project No.: 0902
Dwg By: RE/CD
Chk By: IM

Dwg No:

E-403.00

PANEL:				LA1 (EXIST)				VOLTAGE:				120 /208VOLTS				3 PHASE 4 WIRE											
BUS RATING:				100 AMPS				LOCATION:				GROUND LEVEL															
X				M.L.O. 100 AMPS				X				100% RATED NEUTRAL BUS															
X				SURFACE MOUNT				X				-															
CKT/BKR								KVA/PHASE								CKT/BKR											
#				POLE				TRIP				LOAD DESCRIPTION				A				B				C			
1				2				20				EXIT. LOAD				1.9											
3				1				20				EXIST. LOAD								1.9							
5				1				15				EXIST. LOAD												1.4			
7				-				-				BLANK				-				-				-			
9				-				-				BLANK				-				-				-			
11				-				-				BLANK				-				-				-			
CONNECTED KVA												1.9				1.9				1.4							
CONNECTED AMPS												16				16				12							
</																											

PANEL:				LA4 (EXIST)				VOLTAGE:				120 /208VOLTS				3 PHASE 3 WIRE					
BUS RATING:				100 AMPS				LOCATION:				GROUND LEVEL									
X				M.L.O. 100 AMPS				X				-									
X				SURFACE MOUNT				X				-									
CKT/BKR								KVA/PHASE								CKT/BKR					
#	POLE	TRIP	LOAD DESCRIPTION				A	B	C	A	B	C	LOAD DESCRIPTION				TRIP	POLE	#		
1	1	20	EXIST. LIGHTING LOAD				1.9			1.9			EXIST. LIGHTING LOAD				20	1	2		
3	1	20	EXIST. LIGHTING LOAD					1.9			1.9			EXIST. LIGHTING LOAD				20	1	4	
5	1	20	EXIST. LIGHTING LOAD						1.9			1.9			EXIST. LIGHTING LOAD				20	1	6
7	1	20	EXIST. LIGHTING LOAD				1.9				1.9			EXIST. LIGHTING LOAD				20	1	8	
9	1	20	EXIST. LIGHTING LOAD					1.9				1.9			EXIST. LIGHTING LOAD				20	1	10
11	1	20	EXIST. LIGHTING LOAD						1.9			1.9			EXIST. LIGHTING LOAD				20	1	12
CONNECTED KVA								3.8	3.8	3.8	3.8	3.8	3.8	CONNECTED KVA							
CONNECTED AMPS								31.7	31.7	31.7	31.7	31.7	31.7	CONNECTED AMPS							
								PHASE A		7.6	KVA	63.3	AMPS								
								PHASE B		7.6	KVA	63.3	AMPS								
								PHASE C		7.6	KVA	63.3	AMPS								
								CONNECTED TOTAL		22.8	KVA	63.3	AMPS								
								TOTAL DEMAND 80% LOAD		18.24	KVA	50.63	AMPS								

PANEL:				LA5 (EXIST)				VOLTAGE:				120/208VOLTS				3 PHASE 4 WIRE			
BUS RATING:				225 AMPS				LOCATION:				GROUND LEVEL							
X				M.C.B.				225 AMPS				X				-			
X				SURFACE MOUNT				X				-							
CKT/BKR						KVA/PHASE						KVA/PHASE				CKT/BKR			
#	POLE	TRIP	LOAD DESCRIPTION		A	B	C	A	B	C	LOAD DESCRIPTION		TRIP	POLE	#				
1					1.9			3							2				
3	3	20	EXIST. LOAD			1.9			3		EXIST. LOAD		50	3	4				
5							1.9								6				
7	1	20	EXIST. LOAD		1.9			1.4			EXIST. LOAD		15	3	8				
9						1.9			1.4						10				
11	1	20	EXIST. LOAD				1.9			1.4	EXIST. LOAD		15	3	12				
13	1	20	EXIST. LOAD		1.9			1.4			EXIST. LOAD		15	2	14				
15	1	20	EXIST. LOAD (DUAL CIRCUITS)		1.9	1.9			1.4		EXIST. LOAD		15	1	16				
17	1	20	EXIST. LOAD (DUAL CIRCUITS)				1.9			1.4	EXIST. LOAD		15	1	18				
19	1	20	EXIST. LOAD (DUAL CIRCUITS)		1.9			1.4			EXIST. LOAD		15	1	20				
21	1	20	EXIST. LOAD (DUAL CIRCUITS)			1.9			1.4		EXIST. LOAD		15	1	22				
23	1	20	EXIST. LOAD (DUAL CIRCUITS)		1.9		1.9			1.4	EXIST. LOAD		15	3	24				
25	1	20	EXIST. LOAD (DUAL CIRCUITS)			1.9		1.4			EXIST. LOAD		15	3	26				
27							1.9		1.4						28				
29	1	20	EXIST. LOAD				1.9			1.4	EXIST. LOAD (DUAL CIRCUITS)		15	1	30				
31	1	20	EXIST. LOAD		1.9			1.4			EXIST. LOAD (DUAL CIRCUITS)		15	1	32				
33						3			1.4		EXIST. LOAD		15	1	34				
35	3	60	EXIST. PANEL "LA3"				3			1.4	EXIST. LOAD (DUAL CIRCUITS)		15	1	36				
37								6.1							38				
39	2	60	EXIST. LOAD			5			6.1		EXIST. PANEL "LA4"		100	3	40				
41							5			6.1					42				
CONNECTED KVA					12.5	17.5	17.5	16.1			16.1	16.1	CONNECTED KVA						
CONNECTED AMPS					130	172	172	108			108	108	CONNECTED AMPS						
					PHASE A		28.6	KVA	238	AMPS									
					PHASE B		33.6	KVA	280	AMPS									
					PHASE C		33.6	KVA	280	AMPS									
					CONNECTED TOTAL		95.8	KVA	266	AMPS									
					TOTAL DEMAND 80% LOAD		76.64	KVA	213	AMPS									

PANEL: LA2 (EXIST)				VOLTAGE: 120 /208VOLTS				3 PHASE 4 WIRE					
BUS RATING: 100 AMPS				LOCATION: GROUND LEVEL									
X M.L.O. 100 AMPS				X 100% RATED NEUTRAL BUS									
X SURFACE MOUNT				X -									
Ckt/BKR				KVA/PHASE				Ckt/BKR					
#	POLE	TRIP	LOAD DESCRIPTION	A	B	C	A	B	C	LOAD DESCRIPTION	TRIP	POLE	#
1	1	15	EXIST. LIGHTS	1.4			2.9			EXIST. HOT WATER HEATER	30		2
1	1	15	EXIST. LIGHTS		1.4			1.9		EXIST. HOT WATER HEATER	20	1	4
5	1	15	EXIST. LIGHTS			1.4			1.9	EXIST. RECEPTACLES	20	1	6
7	1	15	EXIST. LIGHTS	1.4			1.4			EXIST. LIGHTS	15	1	8
CONNECTED KVA				2.8			1.4	1.4	CONNECTED KVA				
CONNECTED AMPS				13.4			14.2	1.7	0.0			CONNECTED AMPS	
				7.1 KVA			59.2 AMPS						
				3.3 KVA			27.5 AMPS						
				3.3 KVA			27.5 AMPS						
				13.7 KVA			58 AMPS						
				TOTAL DEMAND LOAD			10.4 KVA			28.7 AMPS			





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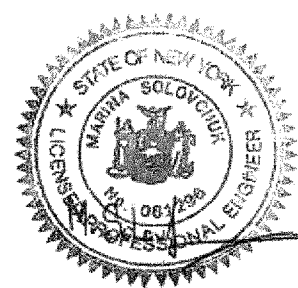
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Sheet title:
**ELECTRICAL
ONE-LINE DIAGRAM**

Scale: NONE

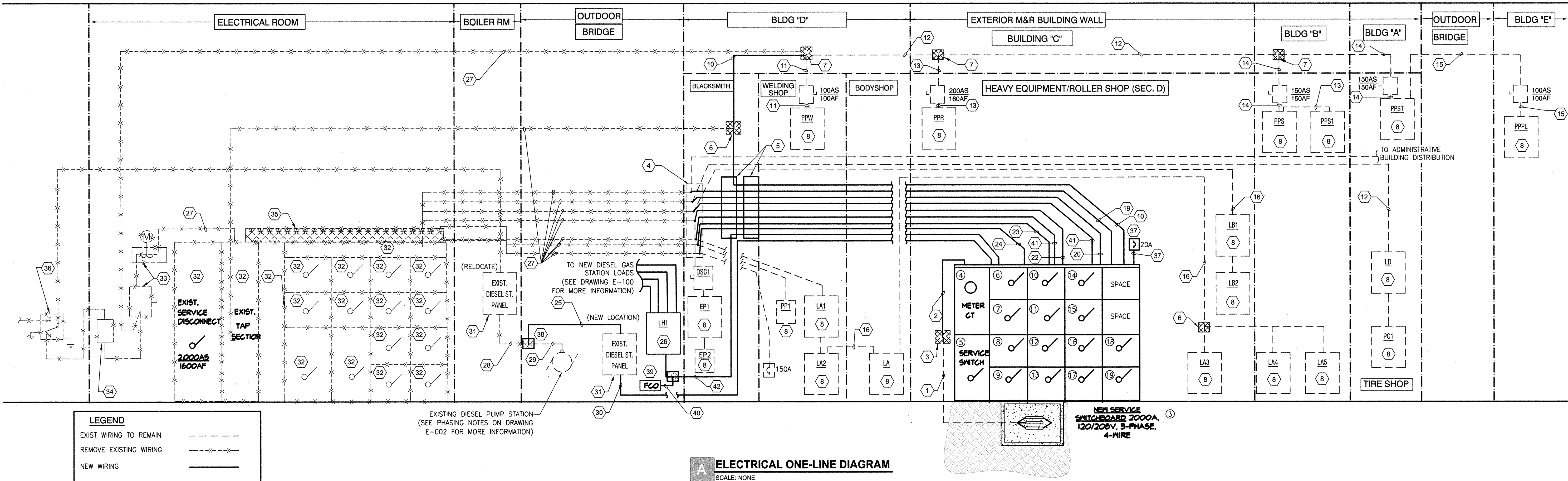
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Dwg No:

E-300.00



LEGEND

EXIST WIRING TO REMAIN
REMOVE EXISTING WIRING
NEW WIRING

ONE-LINE DIAGRAM LEGEND:

- 1 EXISTING 4 SETS OF 4#500MCM-4"CONDUIT TO REMAIN. SPLICE IN EXISTING WALL MOUNTED JUNCTION BOX TO ENERGIZE NEW 2000A SERVICE RATED SWITCHBOARD.
- 2 NEW 4 SETS OF 4#500MCM-4"CONDUIT TO NEW 2000A SERVICE RATED SWITCHBOARD. SPLICE EXISTING 4 SETS OF 4#500MCM IN EXISTING WALL MOUNTED JUNCTION BOX.
- 3 EXISTING 12"x24" WALL MOUNTED JUNCTION BOX. UTILIZE TO SPLICE NEW FEEDERS. TYPICAL FOR 2.
- 4 EXISTING CEILING MOUNTED PULL/JUNCTION BOX IN THE BLACKSMITH SHOP WITH EXISTING BRANCH CIRCUITRY FROM THE EXISTING SWITCHBOARD. SEE PHASING NOTES ON DRAWING E-002 AND DRAWING E-104 FOR MORE INFORMATION.
- 5 NEW CEILING MOUNTED PULL BOX. SIZE AS REQUIRED.
- 6 EXISTING CEILING MOUNTED JUNCTION BOX TO REMAIN.
- 7 EXISTING EXTERIOR WALL MOUNTED JUNCTION BOX TO REMAIN.
- 8 EXISTING PANEL TO REMAIN. SEE PANEL SCHEDULE ON DRAWING E-400.00 + E-401.00.
- 9 NOT USED
- 10 NEW 4#500MCM - 3 1/2" RIGID GALVANIZED STEEL CONDUIT TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN NEW JUNCTION BOX.
- 11 EXISTING 4#2 - 1 1/2" TO REMAIN
- 12 EXISTING 4#500MCM - 3 1/2" TO REMAIN
- 13 EXISTING 4#4 - 1 1/2" TO REMAIN
- 14 EXISTING 4#2/0 - 2 1/2" TO REMAIN
- 15 EXISTING 4#1 - 1 1/4" TO REMAIN
- 16 EXISTING 4#3/0 - 3" TO REMAIN
- 17 NOT USED
- 18 NOT USED
- 19 NEW 4#500MCM - 3 1/2" TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN JUNCTION BOX.
- 20 NEW 4#500MCM - 3 1/2" TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN JUNCTION BOX.
- 21 NOT USED
- 22 NEW 4#1 + 1#BG - 1 1/2" TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN JUNCTION BOX.
- 23 NEW 4#1 + 1#BG - 1 1/2" TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN JUNCTION BOX.
- 24 NEW 4#2/0 + 1#4G - 2" TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN JUNCTION BOX.
- 25 PROVIDE NEW WIRING AND CONDUIT TO EXTEND EXISTING EMERGENCY DIESEL PUMP CIRCUITS FROM EXISTING PANEL TO NEW SWITCHGEAR. COORDINATE WITH DDC AND DOT FOR CIRCUIT RELATION. MATCH NEW WIRING AND CIRCUIT BREAKERS TO EXISTING.
- 26 NEW 100A BUS, 100A MCB, 120/208V, 3P, 4W, 42-POLE PANELBOARD. SEE DRAWING E-402 FOR PANELBOARD SCHEDULE.
- 27 DISCONNECT AND REMOVE EXISTING CONDUITS AND ASSOCIATED WIRING FOR EXISTING SWITCHBOARD BRANCH CIRCUITS. SEE FLOOR PLAN FOR APPROXIMATE DISSECTION POINT. SEE DRAWING F-007 FOR PHASING NOTIFS.

ONE-LINE DIAGRAM LEGEND (CONTINUED):

- 28 ABANDON EXISTING CONDUITS AND ASSOCIATED WIRING FEEDING THE EXISTING DIESEL PUMP STATION FROM THE EXISTING DIESEL STATION PANELBOARD LOCATION. SEE PHASING NOTES ON DRAWING E-002 AND DRAWING E-104 FOR MORE INFORMATION.
- 29 EXISTING CONDUIT AND WIRING TO REMAIN FEEDING THE EXISTING DIESEL PUMP STATION. SEE DRAWING E-104 FOR MORE INFORMATION.
- 29 NEW WIRING AND CONDUIT TO EXTEND TO EXISTING DIESEL PUMP STATION. SEE THE PHASING NOTES ON DRAWING E-002 AND DRAWING E-104 FOR MORE INFORMATION.
- 30 NEW 4#1/0 + 1#6G - 1 1/4" TO RELOCATED DIESEL PUMP STATION PANELBOARD
- 31 DISCONNECT AND REMOVE EXISTING DIESEL STATION PANELBOARD. RELOCATE THIS EXISTING PANELBOARD AS INDICATED ON DRAWING E-104. THE NEW BRANCH CIRCUITRY TO EXISTING DIESEL STATION SHALL MATCH EXISTING. COORDINATE WITH DDC AND DOT PRIOR TO SHUT-DOWN AND REMOVAL. SEE THE PHASING NOTES ON DRAWING E-002 AND DRAWING E-104 FOR MORE INFORMATION.
- 32 REMOVE EXISTING 2000AS/1600AF, 120/208V, 3-PHASE, 4-WIRE SWITCHBOARD AND ALL ASSOCIATED ACCESSORIES. COORDINATE WITH DDC, DOT AND CON EDISON PRIOR TO SHUT DOWN AND REMOVAL. DISPOSAL OF SWITCHBOARD, SERVICE DISCONNECT SWITCH AND ALL ASSOCIATED ACCESSORIES SHALL BE AS DIRECTED BY DDC, DOT, AND CON EDISON. SEE THE PHASING NOTES ON DRAWING E-002 AND DRAWING E-104 FOR MORE INFORMATION.
- 33 DISCONNECT AND REMOVE EXISTING 400A RATED DISCONNECT SWITCH, ELECTRICAL SERVICE METER, AND ASSOCIATED ACCESSORIES FEEDING EXISTING PANELBOARDS "PPST", "PPR", "PPR", AND "PPM". COORDINATE WITH DDC AND DOT PRIOR TO SHUT-DOWN AND REMOVAL OF UNIT. DISPOSAL OF SERVICE DISCONNECT SWITCH AND ALL ASSOCIATED ACCESSORIES SHALL BE AS DIRECTED BY DDC AND DOT. COORDINATE THE ELECTRICAL METER REMOVAL WITH CON EDISON. SEE PHASING NOTES ON DRAWING E-002 FOR MORE INFORMATION.
- 34 SEE PHASING NOTES ON DRAWING E-002 FOR MORE INFORMATION. DISCONNECT AND REMOVE EXISTING 100A RATED DISCONNECT SWITCH AND ACCESSORIES. COORDINATE WITH DDC AND DOT PRIOR TO SHUT-DOWN AND REMOVAL OF UNIT. DISPOSAL OF SERVICE DISCONNECT SWITCH AND ALL ASSOCIATED ACCESSORIES SHALL BE AS DIRECTED BY DDC AND DOT.
- 35 REMOVE EXISTING OVERHEAD WIRE TROUGH AND ALL ASSOCIATED WIRING AND ACCESSORIES. COORDINATE WITH DDC, DOT AND CON EDISON PRIOR TO SHUT DOWN AND REMOVAL. DISPOSAL OF SWITCHBOARD, SERVICE DISCONNECT SWITCH AND ALL ASSOCIATED ACCESSORIES SHALL BE AS DIRECTED BY DDC AND DOT. SEE THE PHASING NOTES ON DRAWING E-002 AND DRAWING E-104 FOR MORE INFORMATION.
- 36 DISCONNECT AND REMOVE EXISTING MANUAL TRANSFER SWITCH. COORDINATE WITH DDC AND DOT PRIOR TO SHUT-DOWN AND REMOVAL.
- 37 20A, 1-POLE NEMA 1 ENCLOSURE, SURFACE MOUNTED CIRCUIT BREAKER WITH 2#12+1#120-3/4" RMC TAPPED (NO MORE THAN 10-FEET) TO THE BUS OF THE NEW SWITCHBOARD FOR THE NEW LIGHTING FIXTURE "A" AND THE NEW RECEPTACLE INSTALLED IN THE ELECTRICAL ROOM SHOWN ON DRAWING E-103.
- 38 NEW UNDERGROUND JUNCTION BOX SUITABLE FOR OUTDOOR USE WITH ACCESSIBLE HANDHOLE AS NECESSARY UTILIZED TO RE-FEED THE EXISTING DIESEL PUMP STATION FROM THE RELOCATED DIESEL PUMP STATION PANELBOARD.
- 39 NEW 1-PHASE, 240VAC FUSE CUTOFF BOX WITH TWO (2) 30A FUSES TO FEED THE NEW EMERGENCY STOP BUTTON. REFER TO DRAWING E-100 FOR LOCATIONS OF BOTH THE FUSE CUTOFF BOX AND THE EMERGENCY STOP BUTTON. SEE DETAIL #7 ON DRAWING E-403 FOR MORE INFORMATION.
- 40 NEW 2#8 + 1#BG - 3/4" RGS CONDUIT TO NEW FUSE CUTOFF BOX FEEDING THE NEW EMERGENCY STOP BUTTON.
- 41 NEW (4)250KCMIL + 1#4G - 2 1/2" TO NEW CEILING MOUNTED JUNCTION BOX FOR CONNECTION TO EXISTING FEEDER. SPLICE IN JUNCTION BOX.
- 42 NEW 4#1/0 + 1#BG - 1 1/2"

ELECTRICAL ONE-LINE DIAGRAM

SCALE: NONE

ONE-LINE DIAGRAM NOTES:

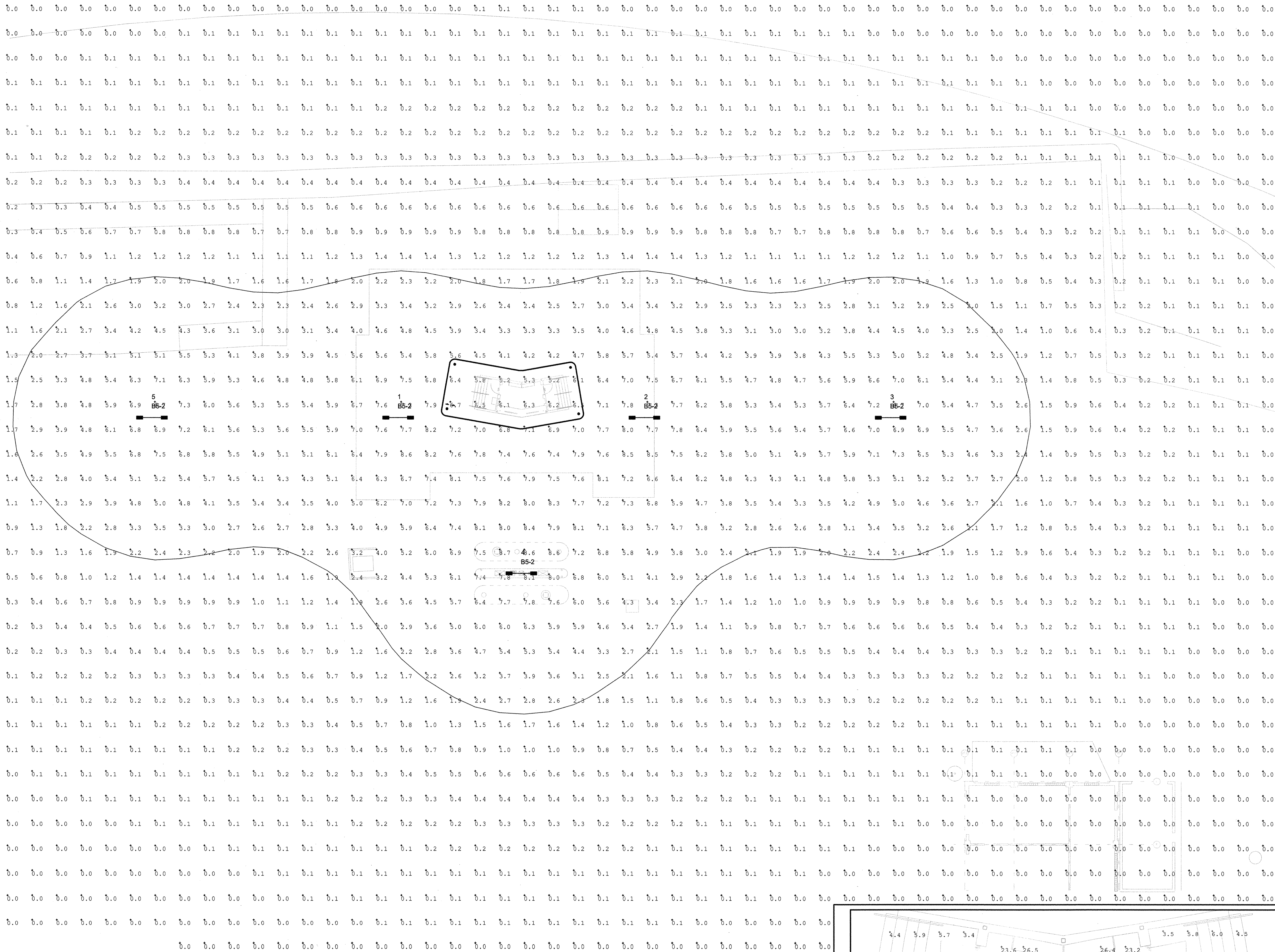
1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH STRUCTURAL ENGINEER AND CONFIRM THE INSTALLATION OF CONDUITS AND PULL BOXES, AND EQUIPMENT WEIGHT.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE KINDORF SUPPORT FOR CONDUIT INSTALLATION.
3. PROVIDE PULL BOX AND CABLE SUPPORTS AT EVERY (3) 90° BEND AND EVERY 50 FT. AS PER ELECTRICAL CODES FOR ALL CONDUIT RUNS.
4. PROVIDE ROUTING SHOP DRAWING TO OWNER, ENGINEER AND BUILDING MANAGEMENT FOR REVIEW AND APPROVAL PRIOR TO START OF INSTALLATION.
5. ALL CONDUITS RUN EXPOSED ON THE ROOF SHALL BE RIGID GALVANIZED STEEL CONDUIT.
6. PROVIDE NEW REFERENCE GROUND BUS (RGS), BOND ADJACENT TO SWITCHBOARD.
7. ELECTRICAL CONTRACTOR SHALL REFURBISH ALL EXISTING PANELS AS REQUIRED. RETIGHTENS ALL BUS CONNECTIONS AND MOUNTING HARDWARE. PROVIDE MISCELLANEOUS NECESSITIES SUCH AS PANEL COVER, GROUND BAR, AND ETC. TO PLACE EXISTING PANELBOARDS IN FIRST CLASS OPERATING CONDITION.
8. SEE DRAWING E-002 FOR PHASING NOTES.
9. NEW BRANCH CIRCUIT CONDUCTOR SIZES FEEDING THE EXISTING BRANCH CIRCUITS FROM THE NEW SWITCHBOARD SHALL THE MATCH THE EXISTING BRANCH CIRCUITRY FROM THE EXISTING SWITCHBOARD. FIELD VERIFY THESE EXISTING SIZES AND NOTIFY THE ENGINEER IF THEY DIFFER FROM THE NEW SIZES INDICATED ON THIS DRAWING.

NEW SERVICE RATED SWITCHBOARD NOTES:

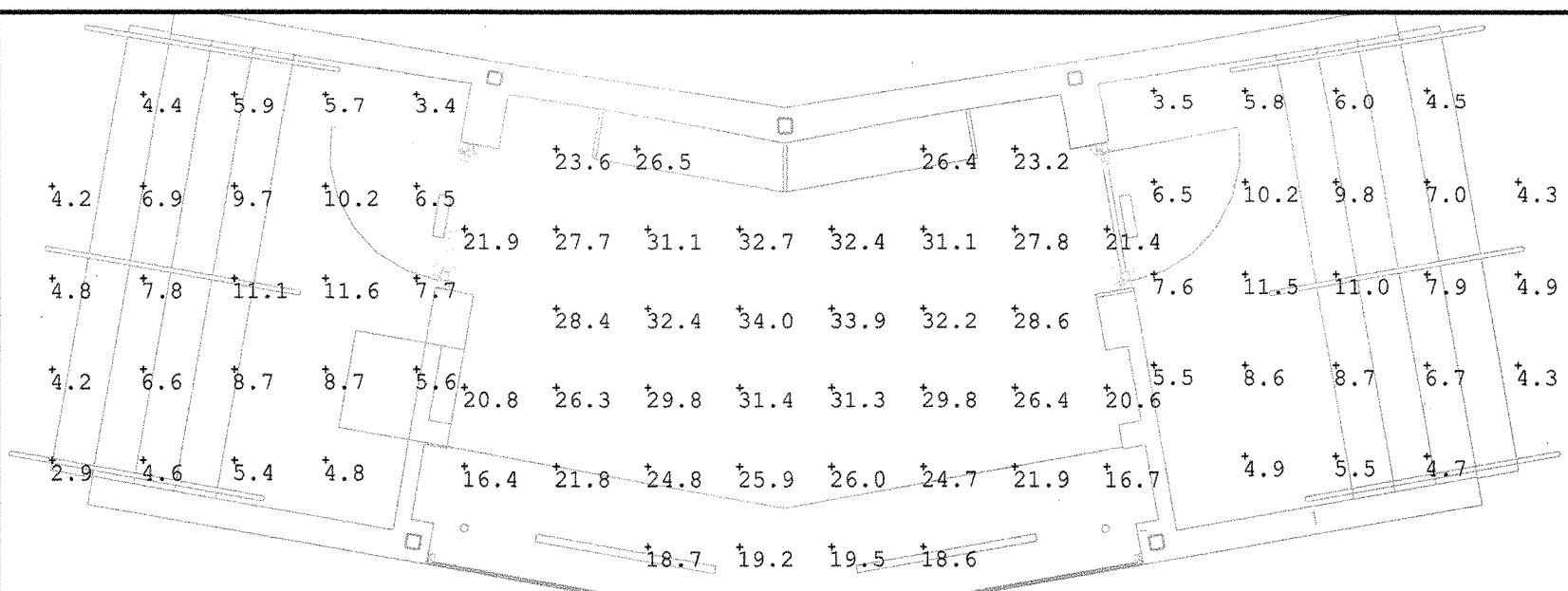
- 1 ELECTRICAL CONTRACTOR SHALL COORDINATE IN WRITING WITH DDC AND DOT REPRESENTATIVES THREE (3) WEEKS IN ADVANCE FOR BUILDING SHUT-DOWN AND ALL WORK ASSOCIATED WITHIN THE SCOPE OF WORK START OF THE CONSTRUCTION.
- 2 NOT USED
- 3 PROVIDE NEW 120/208V 3-PHASE, 4-WIRE, 2000A SERVICE SWITCHBOARD. THE SERVICE SWITCHBOARD SHALL INCLUDE A 2000A MAIN DISCONNECT SWITCH WITH THREE (3) TIME-DELAY FUSES, A CON EDISON CURRENT TRANSFORMER AND METER SECTION, AND A TAP SECTION. THE CONTRACTOR SHALL ENGAGE THE SWITCHBOARD MANUFACTURER TO PROVIDE ALL NECESSARY ASSISTANCE.
- 4 SERVICE SWITCH BOARD CURRENT TRANSFORMER/METERING COMPARTMENT. COORDINATE METERING WITH CONNECTION AND TERMINATION WITH CON-ED.
- 5 2000A, 240VAC RATED, HIGH PRESSURE SERVICE RATED DISCONNECT SWITCH WITH (3) 1600A TIME DELAY FUSES IN THE NEW SWITCHBOARD. CONTRACTOR SHALL ENGAGE SWITCHBOARD MANUFACTURE TO PROVIDE ALL NECESSARY ASSISTANCE.
- 6 200AS/150AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO 150A SELF-ENCLOSED MOLDED CASE BREAKER IN WELDING SHOP
- 7 400AS/400AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO ADMINISTRATIVE BUILDING (EXISTING PANELS "P1", "P2", AND "P3")
- 8 400AS/400AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO TIRESHOP PANELS LD, PC + OFFICES
- 9 100AS/100AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO TO RELOCATED DIESEL PUMP STATION PANELBOARD
- 10 400AS/250AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO EXISTING PANELS LA1, LA2 + LA
- 11 400AS/250AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO EXISTING ROLLER SHOP PANEL LB1
- 12 100AS/100AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO NEW PANEL LH1
- 13 400AS/250AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO PANELBOARDS "PPST", "PPS", "PPR", AND "PPW".
- 14 100AS/100AF, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO EXISTING DISCONNECT SWITCH "DSC1" FEEDING EXISTING PANELBOARD "EP1".
- 15 200A, 240VAC, 3-PHASE, 4-WIRE SPARE DISCONNECT SWITCH
- 16 200A, 240VAC, 3-PHASE, 4-WIRE SPARE DISCONNECT SWITCH
- 17 100A, 240VAC, 3-PHASE, 4-WIRE DISCONNECT SWITCH TO EXISTING PANELBOARD PP1.
- 18 400A, 240VAC, 3-PHASE, 4-WIRE SPARE DISCONNECT SWITCH
- 19 400A, 240VAC, 3-PHASE, 4-WIRE SPARE DISCONNECT SWITCH

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1 SITE PLAN FOOT CANDLE CALCULATIONS
SCALE: 1/16" = 1' - 0"



2 MONITORING BOOTH FOOT CANDLE CALCULATIONS
SCALE: 1/4" = 1' - 0"

NEW YORK CITY DEPARTMENT OF
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Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**FOOT CANDLE
CALCULATIONS SHEET**

Scale: AS INDICATED

Seal and Signature:

Date: 09.28.12
Project No.: 0902
Dwg By: CD
Chk By: IM
Dwg No:

E-105.00

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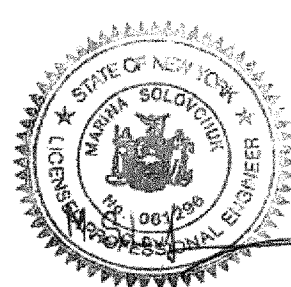
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10.12.12	Bld Set

Sheet title:
**FIRST FLOOR
ELECTRICAL PART
PLAN "D"**

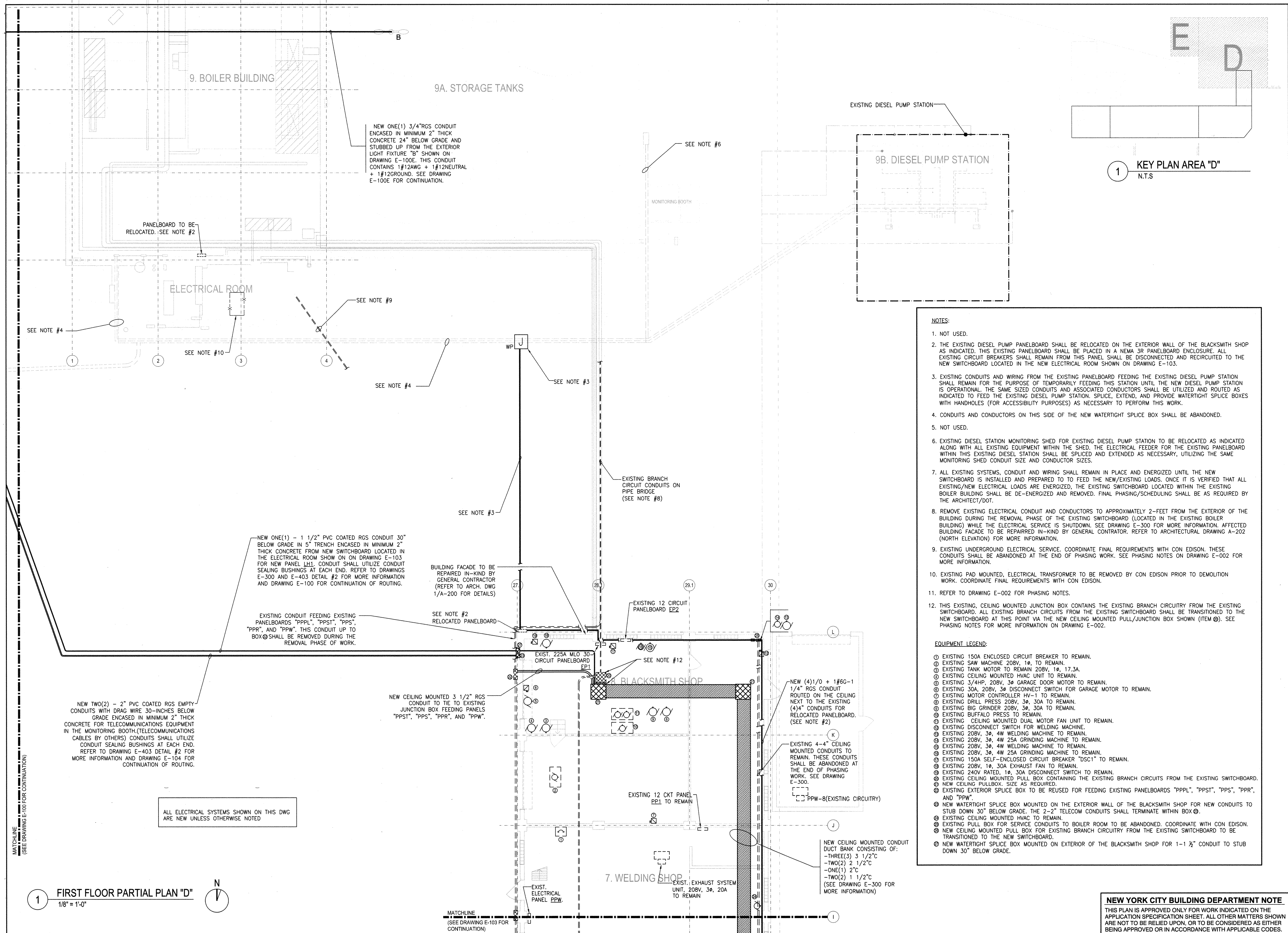
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Seal and Signature:



Date: 09.28.12
Project No.: 0902
Dwg By:
Chk By:

Dwg No:
E-104.00





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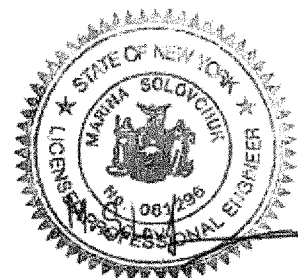
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06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**FIRST FLOOR
ELECTRICAL PART
PLAN "C"**

Scale: AS INDICATED

Seal and Signature:



Date: 09.28.12
Project No.: 0902
Dwg By:
Chk By:

Dwg No:
E-103.00

1 KEY PLAN AREA "C"
N.T.S.

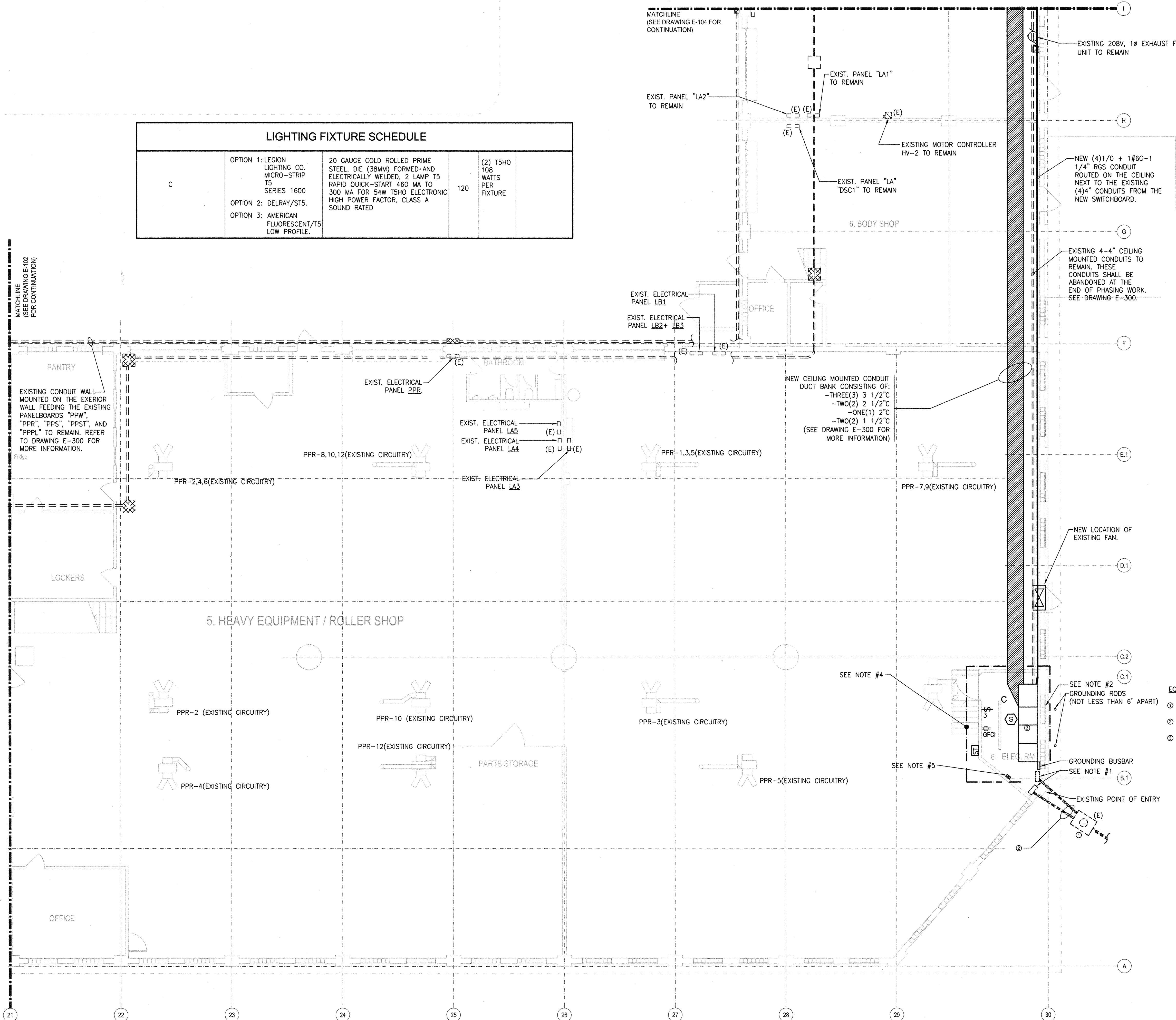
NOTES:

1. REUSE EXISTING TWO (2) SERVICE PULLBOXES TO SPLICE AND REDIRECT CON EDISON FEEDERS.
2. EXISTING FAN TO BE RELOCATED. PROVIDE NEW JUNCTION BOX, SPLICE AND EXTEND AS NECESSARY TO FEED AT NEW LOCATION WITH SAME SIZE AND TYPE OF WIRING AND CONDUIT. UTILIZE SHORTEST CONDUIT/WIRING RUN POSSIBLE.
3. SEE DRAWING E-300 FOR SWITCH CAPACITIES WITHIN THE NEW SWITCHBOARD. THE NEW SWITCHBOARD DIMENSIONS ARE APPROXIMATELY 114"x153"x36"D. ALLOW FOR AT LEAST 1/2" BETWEEN THE BACK OF THE NEW SWITCHBOARD AND THE WALL. ALLOW FOR AT LEAST 3'-6" CLEARANCE IN FRONT OF THE NEW SWITCHBOARD.
4. THE GROUNDING RODS SHALL BE EMBEDDED BELOW PERMANENT MOISTURE LEVEL. THEY SHALL BE FREE FROM NONCONDUCTIVE COATINGS SUCH AS PAINT OR ENAMEL. THE GROUNDING RODS SHALL NOT BE MORE THAN 6'-FEET APART AND SHALL BE EFFECTIVELY BONDED. THE BONDING CONDUCTOR BETWEEN THE RODS SHALL BE OF THE COPPER TYPE.
5. INSTALL A NEW SURFACE MOUNTED ENCLOSED 20 AMP, 1-POLE CIRCUIT BREAKER TAPPED OFF OF THE NEW SWITCHBOARD TO FEED THE NEW RECEPTACLE AND LIGHTING FIXTURE "A" IN THIS AREA. THE TAP SHALL NOT EXCEED 10'-FEET.
6. REFER TO DRAWING E-300 FOR NEW WORK INTENT. FINAL REQUIREMENTS FOR CONDUIT ROUTING, NECESSARY SPLICING, ETC SHALL BE VERIFIED AFTER PERFORMING NECESSARY CIRCUIT TRACING
7. REFER TO DRAWING E-002 FOR PHASING NOTES.

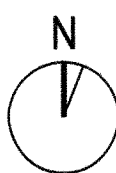
EQUIPMENT LEGEND:

- EXISTING MANHOLE SUPPLYING 4 SETS OF 4#500MCM FEEDERS TO THE M&R BUILDING TO REMAIN.
- EXIST. 4 SETS OF 4" CONDUITS UNDERGROUND STUBBING UP INTO THE THE M&R BUILDING TO REMAIN.
- NEW 120/208V, 3Ø, 4W, 2000A SWITCHBOARD.

LIGHTING FIXTURE SCHEDULE				
C	OPTION 1: LEGION LIGHTING CO. MICRO-STRIP T5 SERIES 1600 OPTION 2: DELRAY/STS. OPTION 3: AMERICAN FLUORESCENT/T5 LOW PROFILE.	20 GAUGE COLD ROLLED PRIME STEEL, DIE (38MM) FORMED AND ELECTRICALLY WELDED, 2 LAMP T5 RAPID QUICK-START 460 MA TO 300 MA FOR 54W T5HO ELECTRONIC HIGH POWER FACTOR, CLASS A SOUND RATED	120	(2) T5HO 108 WATTS PER FIXTURE



1 FIRST FLOOR PARTIAL PLAN "C"
1/8" = 1'-0"



ALL ELECTRICAL SYSTEMS SHOWN ON THIS DWG
ARE NEW UNLESS OTHERWISE NOTED

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02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bld Set

Sheet title:
**FIRST FLOOR
ELECTRICAL PART
PLAN "B"**

Scale: AS INDICATED

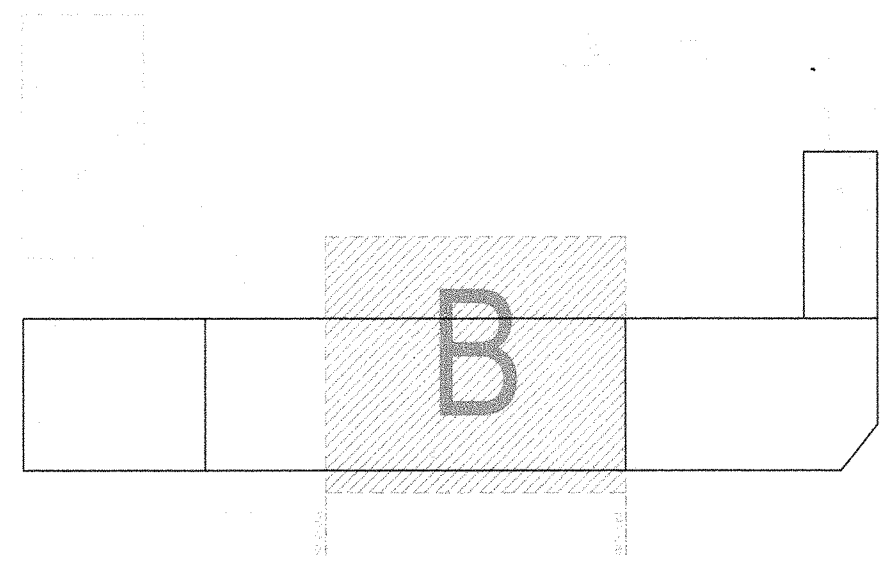
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Date: 09.28.12
Project No.: 0902
Dwg By: RE/CD
Chk By: IM

Dwg No:

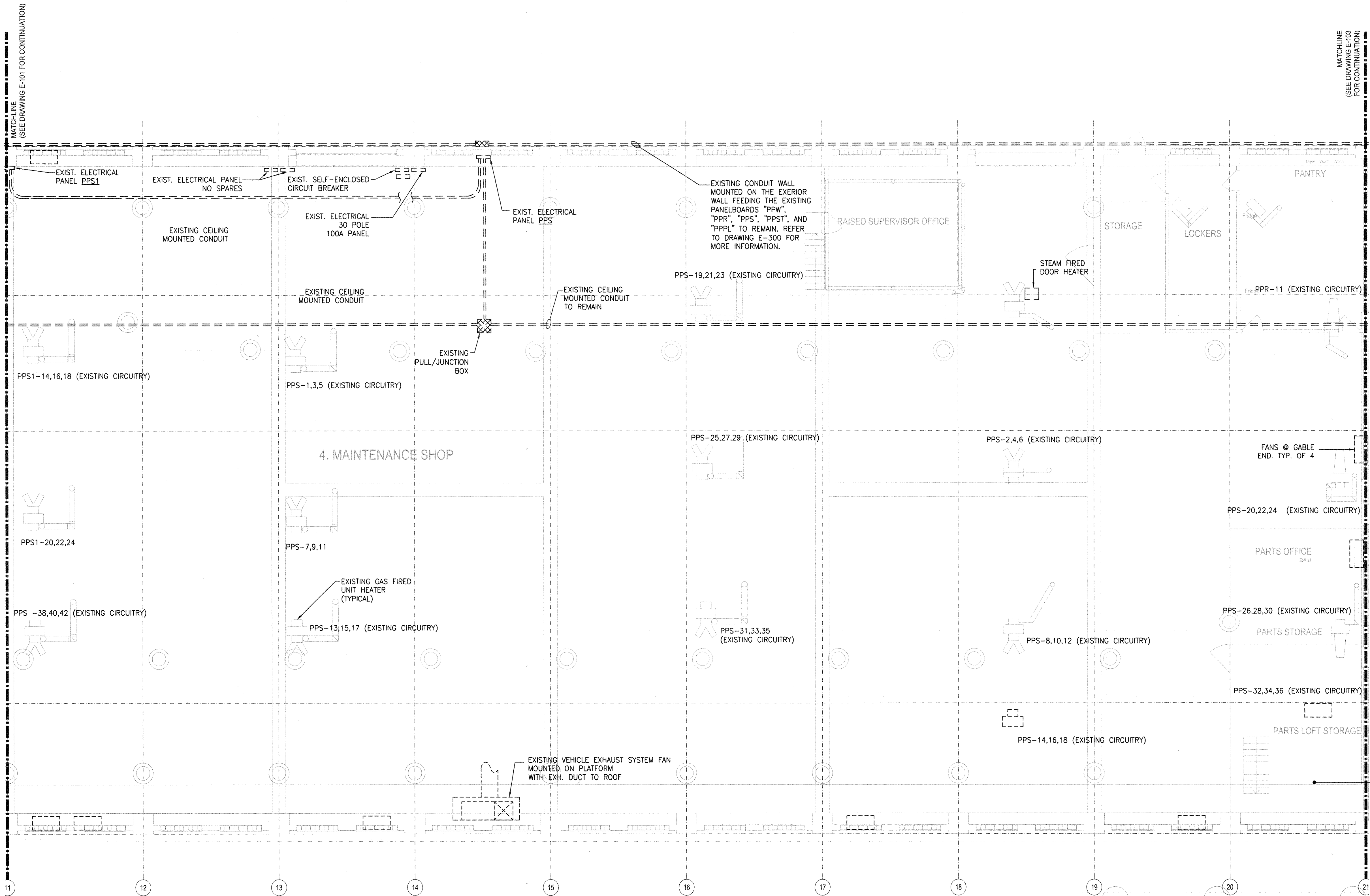
E-102.00



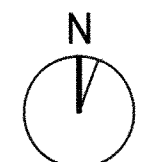
1 KEY PLAN AREA "B"
N.T.S

NOTES:

1. REFER TO DRAWING E-002 FOR PHASING NOTES.



1 FIRST FLOOR PARTIAL PLAN "B"
1/8" = 1'-0"



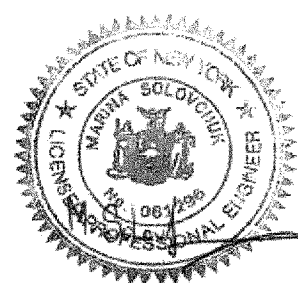
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06.06.12	100% CD - Revised
10.12.12	Bld Set

Sheet title:
**FIRST FLOOR
ELECTRICAL PART
PLAN "A"**

Scale: AS INDICATED

Seal and Signature:



Date: 09.28.12

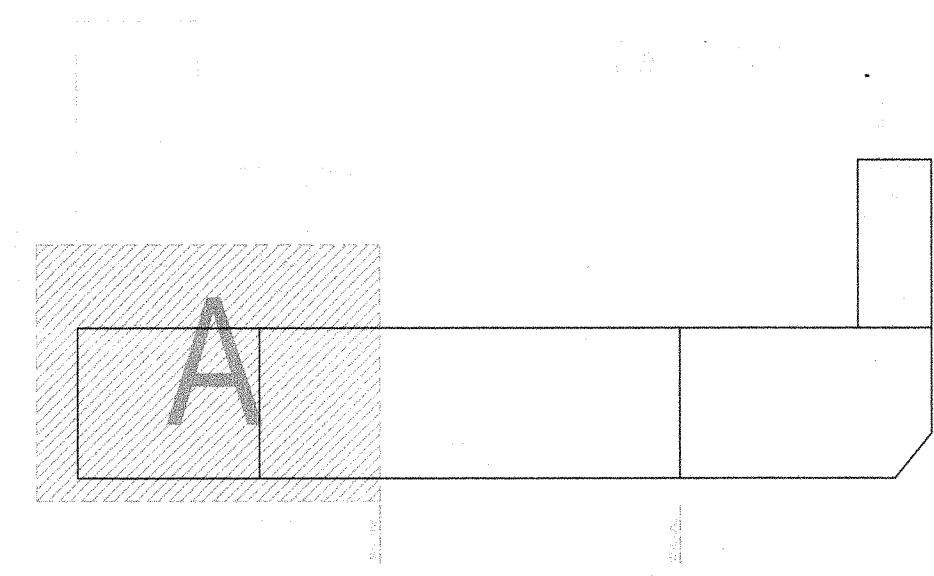
Project No.: 0902

Dwg By: RE/CD

Chk By: IM

Dwg No:

E-101.00

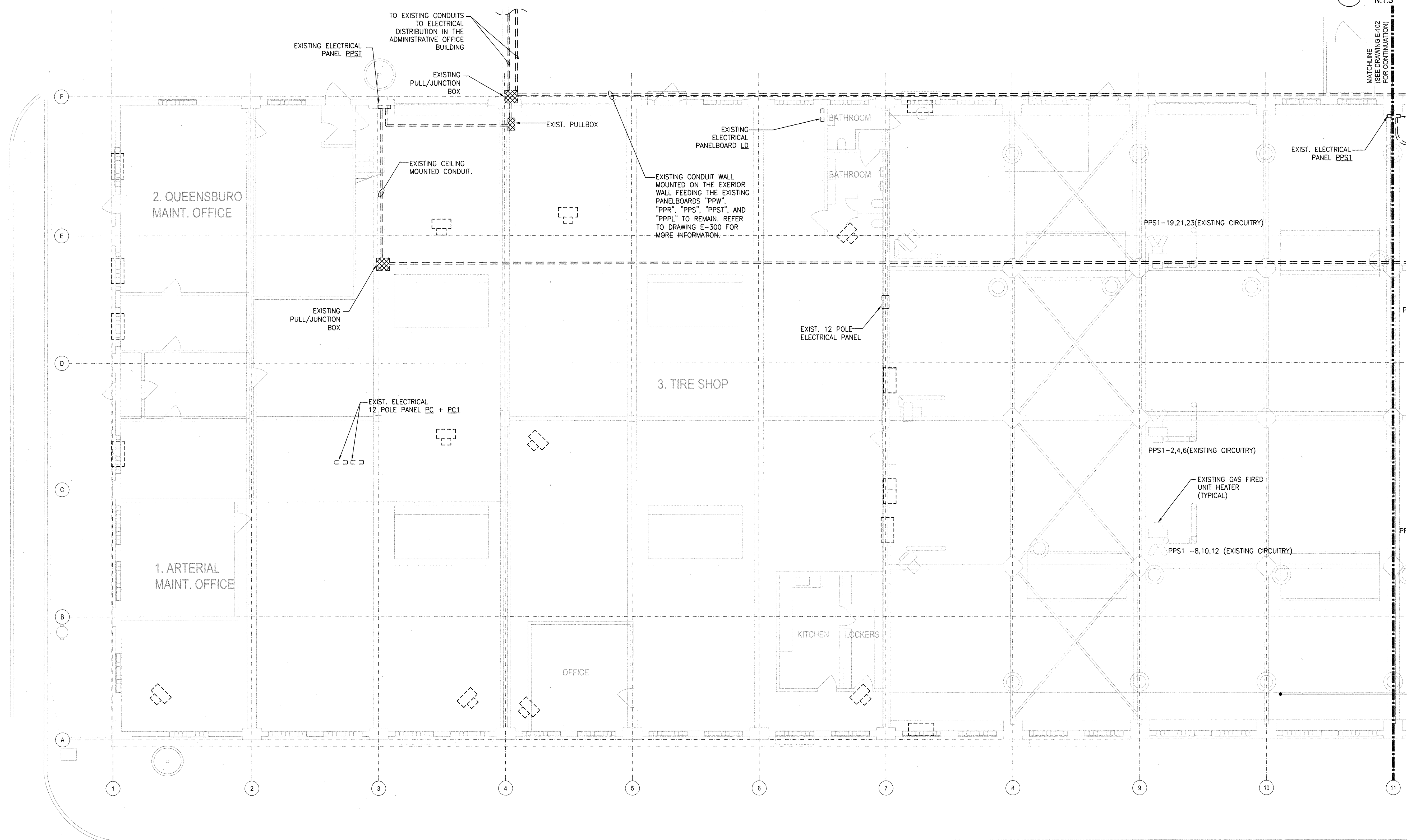


1 KEY PLAN AREA "A"
N.T.S.

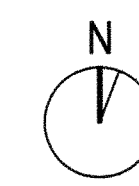
NOTES:

1. REFER TO DRAWING E-002 FOR PHASING NOTES.

MATCHLINE
(SEE DRAWING E-102
FOR CONTINUATION)



1 FIRST FLOOR PARTIAL PLAN "A"
1/8" = 1'-0"



ALL ELECTRICAL SYSTEMS SHOWN ON THIS DWG
ARE NEW UNLESS OTHERWISE NOTED

PART PLAN SHOWN
FOR INFORMATION ONLY.
THERE IS NO NEW WORK
ON THIS DRAWING.

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8 MONITORING BOOTH

E



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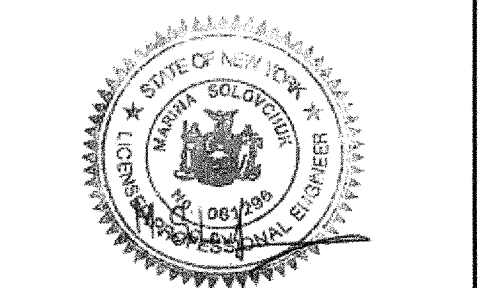
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Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bld Set

Sheet title:
**FIRST FLOOR
ELECTRICAL PART
PLAN "E"**

Scale: AS INDICATED

Seal and Signature:



Date: 09.28.12
Project No.: 0902
Dwg By: RE/CD
Chk By: IM

Dwg No:

E-100.00

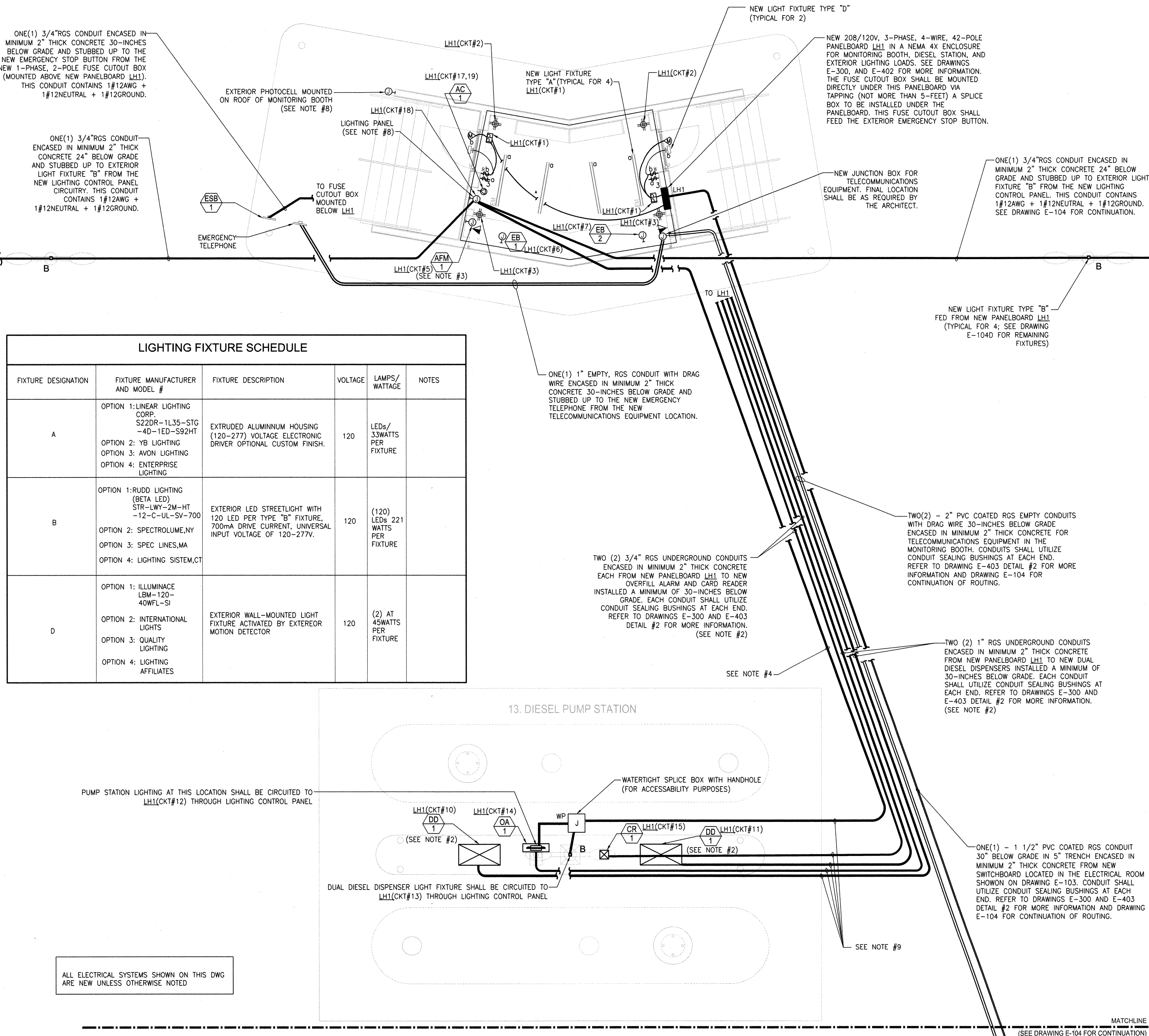
1 KEY PLAN AREA "E"
N.T.S.

NOTES:

- ALL ELECTRICAL SYSTEMS SHOWN ON THIS DRAWING ARE NEW UNLESS OTHERWISE NOTED.
- CIRCUITS FEEDING EACH DUAL DIESEL DISPENSER, AND EACH LIGHTING FIXTURE BY THE DIESEL STATION SHALL BE CONNECTED TO SHUNT-TRIP TYPE CIRCUIT BREAKERS. REFER TO THE LH1 PANELBOARD SCHEDULE ON DRAWING E-402 FOR MORE INFORMATION.
- THIS ITEM SHALL BE FED FROM ONE (1) 3/4" RGS CONDUIT CONTAINING 1#12AWG + 1#12NEUTRAL + 1#12GROUND PROTECTED BY ONE (1) 20A, 1-POLE CIRCUIT BREAKER WITHIN THE NEW PANELBOARD LH1.
- ONE(1) 1" RGS CONDUIT ENCASED IN A MINIMUM 2" THICK CONCRETE, 30" BELOW GRADE FOR THE EXTERIOR LIGHT FIXTURE "B". THE NEW CARD READER, AND THE TWO OVERFILL ALARM STATIONS LOCATED IN THE NEW DIESEL PUMP STATION. THIS CONDUIT CONTAINS 4#10AWG + 4#10NEUTRAL + 4#10GROUND. EACH CIRCUIT SHALL BE FED FROM A 20A, 1-POLE, CIRCUIT BREAKER.
- FINAL CONTROL WIRING REQUIREMENTS (WIRE SIZES, CONDUIT SIZES/ROUTING, ETC.) SHALL BE AS REQUIRED BY THE RELEVANT CONSULTANT DRAWINGS/SPECIFICATIONS.
- SEE DRAWING E-300 FOR RISER DIAGRAM EQUIPMENT LEGEND.
- SEE DRAWING E-403 FOR EQUIPMENT LEGEND.
- JUNCTION BOX FOR LIGHTING CONTROL PANEL BY WATTSTOPPER MODEL #LPB8-B-115 OR APPROVED EQUAL. FINAL LOCATION SHALL BE AS REQUIRED BY THE ARCHITECT. EXTERIOR PHOTOCELL (LOW VOLTAGE) MODEL # EM-24A2 SHALL CONTROL THE EXTERIOR LIGHTING FIXTURE "B" THROUGH THIS LIGHTING PANEL. FINAL INSTALLATION REQUIREMENTS SHALL BE AS PER THE MANUFACTURER. FINAL LOCATION SHALL BE AS REQUIRED BY THE ARCHITECT.
- PROVIDE LINK-SEAL PENETRATION FOR EACH CONDUIT THRU WALL OR SLAB IN DIESEL PUMP STATION.
- REFER TO DRAWING E-002 FOR PHASING NOTES.
- THE RECEPTACLE SERVING THE UNIT "AC-1" SHALL BE NEMA 6-30R.

MATCHLINE
(SEE DRAWING E-104 FOR CONTINUATION)

MATCHLINE
(SEE DRAWING E-104 FOR CONTINUATION)



LIGHTING FIXTURE SCHEDULE					
FIXTURE DESIGNATION	FIXTURE MANUFACTURER AND MODEL #	FIXTURE DESCRIPTION	VOLTAGE	LAMPS/WATTAGE	NOTES
A	OPTION 1: LINEAR LIGHTING CORP. S22DR-1L35-STG-40-1ED-S9ZHT OPTION 2: YB LIGHTING OPTION 3: AVON LIGHTING OPTION 4: ENTERPRISE LIGHTING	EXTRUDED ALUMINUM HOUSING (120-277) VOLTAGE ELECTRONIC DRIVER OPTIONAL CUSTOM FINISH.	120	LEDs/ 33WATTS PER FIXTURE	
B	OPTION 1: RUDD LIGHTING (BETA LED) STR-LWY-2M-HT-12-C-UL-SV-700 OPTION 2: SPECTROLUM, NY OPTION 3: SPEC LINES, MA OPTION 4: LIGHTING SISTEM, CT	EXTERIOR LED STREETLIGHT WITH 120 LED PER TYPE "B" FIXTURE, 700mA DRIVE CURRENT, UNIVERSAL INPUT VOLTAGE OF 120-277V.	120	(120) LEDs 221 WATTS PER FIXTURE	
D	OPTION 1: ILLUMINACE LBM-120-40WFL-SI OPTION 2: INTERNATIONAL LIGHTS OPTION 3: QUALITY LIGHTING OPTION 4: LIGHTING AFFILIATES	EXTERIOR WALL-MOUNTED LIGHT FIXTURE ACTIVATED BY EXTEREOR MOTION DETECTOR	120	(2) AT 45WATTS PER FIXTURE	

ALL ELECTRICAL SYSTEMS SHOWN ON THIS DWG ARE NEW UNLESS OTHERWISE NOTED

1 FIRST FLOOR PARTIAL PLAN "E"
1/4" = 1'-0"

NEW YORK CITY BUILDING DEPARTMENT NOTE
THIS PLAN IS 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.

GENERAL NOTES

A. EXISTING PREMISES

- 1. THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE EXISTING CONDITIONS AND COMPARE SAME WITH DRAWINGS AND SPECIFICATIONS AND SATISFY HIMSELF OF ALL CONDITIONS PRIOR TO SUBMISSION OF A BID PROPOSAL. CONTRACTOR SHALL BE ACQUAINTED WITH THE EXISTING ELECTRICAL INSTALLATIONS.
- 2. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING TO ENSURE MINIMUM INTERFERENCES WITH THE OPERATION OF THE FACILITY. POWER SHUTDOWNS OR INTERFERENCE WITH ACTIVE AREAS SHALL NOT BE PERMITTED WITHOUT PERMISSION OF THE FACILITY. THE FACILITY REQUIRES NOTIFICATION IN WRITING PRIOR TO APPROVAL OF ANY SHUTDOWNS. CONTRACTOR TO INCLUDE ANY OVERTIME AS REQUIRED. MAKE TEMPORARY CONNECTIONS IF NECESSARY TO ENSURE CONTINUOUS OPERATION.

B. MISCELLANEOUS ELECTRICAL SYSTEMS

- 1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
- 2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE CONDUCTORS SHOWN.
- 3. WHERE WIRE SIZES ARE INDICATED ON PLANS FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
- 4. ALL JUNCTION BOXES AND PULL BOXES SHALL BE OF CODE GAUGE AND OF THE REQUIRED SIZE TO ACCOMMODATE NUMBER OF CONDUCTORS SHOWN.
- 5. CONTRACTOR SHALL VERIFY THE EXACT LOCATION, QUANTITIES, AND POWER REQUIREMENTS OF ALL MECHANICAL, PLUMBING AND ALL OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
- 6. ALL PANELBOARDS SHALL HAVE DOOR IN DOOR COVER AND BE KEYED ALIKE UNLESS OTHERWISE NOTED.
- 7. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
- 8. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND SPACE CONDITIONS AT ALL TIMES.
- 9. LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOORS, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGES. VERIFY FINAL LOCATIONS WITH THE ARCHITECT PRIOR TO ANY WORK.
- 10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR CLOCKS, SWITCHES, FIRE ALARM DEVICES, RECEPTACLES, ETC. WITH BLACKBOARDS, TACK BOARDS, CABINETS ETC. TO AVOID CONFLICT. FINAL LOCATIONS AND MOUNTING HEIGHT TO BE COORDINATED WITH THE ARCHITECT.
- 11. WHERE ELECTRIC MOTORS, HEATERS, ETC. ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT.
- 12. EXPOSED RACEWAYS (WHEN REQUIRED OR ALLOWED FOR INSTALLATION BY THE ARCHITECT AND OWNER) SHALL BE RUN PARALLEL WITH/OR AT RIGHT ANGLES TO WALLS.
- 13. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
- 14. FURNISH FISH WIRE IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
- 15. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, UNLESS OTHERWISE INDICATED.
- 16. PROVIDE PULL BOXES AND CABLE SUPPORT BOXES AS REQUIRED BY CODES. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT.
- 17. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
- 18. SEE MECHANICAL AND PLUMBING DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR CONTROL PANELS, SWITCHES, VALVES, MOTORIZED DAMPERS, RELAYS, ETC. CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS WITH MECHANICAL TRADE PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
- 19. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT SHALL BE WEATHERPROOF TYPE.
- 20. LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK TO BACK.
- 21. REFER TO ARCHITECTURAL DRAWINGS FOR CONTRACT LIMIT LINES.
- 22. IF THERE IS A DISCREPANCY BETWEEN THE DRAWINGS PLANS, NOTES AND SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
- 23. FINAL LOCATION AND MOUNTING HEIGHTS OF ALL ELECTRICAL DEVICES AND LIGHTING FIXTURES SHALL BE COORDINATED WITH THE ARCHITECT.
- 24. ALL GLASS WALLS WHERE EXPOSED CONDUITS ARE IN PLAIN VIEW ARE REQUIRED TO BE HIDDEN CONTRACTOR TO COORDINATE WITCH ARCHITECT AS DIRECTED IN THE FIELD.

C. POWER DISTRIBUTION SYSTEM:

- 1. UNLESS OTHERWISE NOTED, ALL ELECTRICAL OUTLETS AND EQUIPMENT LOCATED WITHIN AREAS DESIGNATED ON ELECTRICAL PLANS SHALL BE CIRCUITED TO ELECTRICAL PANELS LOCATED IN THE SAME AREA. THE ELECTRICAL CONNECTIONS SHALL BE AS FOLLOWS:
 - A. APL PANEL:
 - 120V AND 208V APPLIANCE LOADS.
 - MOTORS NOT OVER 1/2 HP.
 - 120V LIGHTING FIXTURES
- 2. A. MOTOR CONTROL EQUIPMENT (MOTOR STARTERS, VFD'S, ETC.) FOR ALL HVAC AND PLUMBING SYSTEMS SHALL BE FURNISHED BY MECHANICAL TRADE AND INSTALLED AS PART OF ELECTRICAL WORK AS REQUIRED. INCLUDE THIS WORK FOR EACH HVAC AND PLUMBING SYSTEM MOTOR THAT IS NOT A PART OF PACKAGE SYSTEM. PROVIDE DISCONNECT SWITCH SIZED AS REQUIRED FOR EACH MECHANICAL EQUIPMENT MOTOR UNLESS COMBINATION MOTOR TARTER OR VFD IS PROVIDED AT MOTOR LOCATION.

- B. REFER TO HVAC AND PLUMBING DRAWINGS FOR MORE INFORMATION REGARDING MOTOR CONTROL EQUIPMENT AND ALL MECHANICAL EQUIPMENT FINAL LOCATIONS. TYPES (MOTOR STARTERS OR VFD'S), SIZES AND QUANTITIES.

3. CIRCUITRY GROUND RULES:

- A. PROVIDE CIRCUITRY FOR ALL "NON-STANDARD" WIRING DEVICES (OTHER THAN 20A, 120V OUTLETS) ON THE BASIS OF ONE RECEPTACLE PER CIRCUIT (OVERCURRENT DEVICE IN PANEL SIZED TO MATCH AMPERE RATING OF "NON-STANDARD" WIRING DEVICE WIRED TO THE NEAREST APL PANEL AS REQUIRED.
- B. PROVIDE ONE (1) DEDICATED CIRCUIT FOR EACH HVAC AND PLUMBING ITEM (SUPPLY AND EXHAUST FANS, PUMPS RATED FOR 120V OR 208V SYSTEM OPERATION, ELECTRICAL HEATERS, ETC.) REFER TO HVAC AND PLUMBING DRAWINGS FOR FINAL LOCATIONS, SIZES AND QUANTITIES OF THESE ITEMS.
 - UNLESS OTHERWISE NOTED, THE CIRCUITS PROVISIONS SHALL BE AS FOLLOWS:
 - 1. ELECTRICAL LOADS RATED FOR 120V, 1 PH SYSTEM OPERATION:
 - 2#12&1#12G CONDUCTORS IN 3/4" CONDUIT.
 - 1P-20A OVERCURRENT PROTECTION DEVICE IN THE NEAREST APL PANEL
 - 2. ELECTRICAL LOADS RATED FOR 208V, 1 PH SYSTEM OPERATION:
 - 2#12&1#12G CONDUCTORS IN 3/4" CONDUIT.
 - 2P-20A OVERCURRENT PROTECTION DEVICE IN NEAREST APL PANEL
 - 3. ELECTRICAL LOADS RATED FOR 208V, 3 PH SYSTEM OPERATION:
 - 3#12&1#12G CONDUCTORS IN 3/4" CONDUIT.
 - 3P-20A OVERCURRENT DEVICE IN THE NEAREST APL PANEL.
 - 4. ALL OTHER LOADS:
 - AS SHOWN ON PANEL SCHEDULES AND/OR AS REQUIRED.
- C. UNLESS OTHERWISE NOTED, LIGHTING & APPLIANCE BRANCH CIRCUITRY SHALL BE PROVIDED WITH #12 AWG CONDUCTORS (QUANTITIES AS REQUIRED FOR THE CONNECTED LOAD). ALL POWER WIRING SHALL BE INSTALLED IN CONDUITS SIZED AS REQUIRED. DO NOT USE CONDUITS SMALLER THAN 3/4". IF MORE THEN THREE (3) AND UP TO SIX (6) CIRCUITS ARE INSTALLED IN ONE (1) COMMON CONDUIT, CONDUCTORS MINIMUM SIZE SHALL BE #10AWG.
- 4. PROVIDE CABLE SUPPORT BOXES AND PULL BOXES AS REQUIRED.
- 5. PROVIDE ALL CONVENIENCE AND SPECIAL DEDICATED OUTLETS, HARDWIRED CONNECTIONS WITH ALL ASSOCIATED CIRCUITRY AND OVERCURRENT DEVICES AS REQUIRED FOR EACH DEVICE OR EQUIPMENT THAT REQUIRES ELECTRICAL POWER --- REFER TO ARCHITECTURAL, MECHANICAL, LOW VOLTAGE SYSTEM, ETC. CONTRACT DOCUMENTS FOR EXACT LOCATIONS, QUANTITIES AND POWER REQUIREMENTS FOR SUCH ITEMS.
- 6. PROVIDE GFI TYPE CIRCUIT BREAKER FOR EACH BRANCH CIRCUIT FEEDING FLOOR MOUNTED RECEPTACLE OUTLETS.
- 7. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS, QUANTITIES, AND MOUNTING HEIGHTS OF ALL ELECTRICAL DEVICES, EXCEPT IN ELECTRICAL ROOMS AND ELECTRIC CLOSETS.
- 8. LOCATING, ROUTING AND WIRING METHODS OF POWER CIRCUITRY:
 - A. ALL CIRCUITRY SHALL BE RUN CONCEALED EXCEPT AS FOLLOWS:
 - 1. HORIZONTALLY AT THE CEILING OF PERMANENTLY UNFINISHED SPACES WHICH ARE NOT ASSIGNED TO MECHANICAL OR ELECTRICAL EQUIPMENT.
 - 2. HORIZONTALLY AND VERTICALLY IN MECHANICAL EQUIPMENT SPACES.
 - 3. HORIZONTALLY AND VERTICALLY IN ELECTRIC EQUIPMENT ROOMS.
 - 4. WHERE SPECIFICALLY ALLOWED BY THE ARCHITECT AND OWNER.

- 9. IN GENERAL, EACH ELECTRICAL PANEL SERVING LOADS WITH ISOLATED GROUND TO BE PROVIDED WITH EQUIPMENT GROUND AND ISOLATED GROUND BUSES.
- 10. FINAL LOCATIONS OF NEW ELECTRICAL PANELS NOT BEING INSTALLED IN ELECTRICAL SPACES SHALL BE COORDINATED WITH THE ARCHITECT.
- 11. FINAL LOCATIONS OF NEW ELECTRICAL PANELS NOT BEING INSTALLED IN ELECTRICAL SPACES SHALL BE COORDINATED WITH THE ARCHITECT. FINAL LOCATIONS OF ELECTRICAL AND FIRE ALARM PANELS INSTALLED IN THE DATA/COMMUNICATION ROOM SHALL BE COORDINATED WITH THE IT CONSULTANT.
- 12. ALL FREESTANDING ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH 4 IN. HIGH CONCRETE PAD.
- 13. BRANCH CIRCUITRY COMMON NEUTRAL MAY BE USED FOR LIGHTING CIRCUITS ONLY.
- 14. PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ROOM LAYOUTS INDICATING ACTUAL DIMENSIONS OF THE APPROVED EQUIPMENT TO ENSURE COMPLIANCE WITH CODE REQUIRED CLEARANCES.
- 15. PROVIDE ISOLATED GROUND RECEPTACLES TOGETHER WITH ASSOCIATED BRANCH CIRCUITS CONTAINING AN ISOLATED GROUND CONDUCTORS WHEN THEY ARE REQUIRED BY LOW VOLTAGE SYSTEMS CONTACT DOCUMENTS (SECURITY TELECOMMUNICATION, A/V, ETC. SYSTEMS).

D. LIGHTING SYSTEM:

- 1. PROVIDE LIGHTING FIXTURES, EXIT SIGNS, LIGHT SWITCHES AND OTHER DEVICES AND EQUIPMENT FOR LIGHTING AND LIGHTING CONTROL SYSTEMS AS REQUIRED. FINAL LOCATIONS, TYPES AND QUANTITIES OF ALL LIGHTING SYSTEM FIXTURES, EQUIPMENT AND CONTROL DEVICES AND EQUIPMENT SHALL BE AS REQUIRED BY THE LIGHTING CONSULTANT, EQUIPMENT VENDOR AND ARCHITECT.
- 2. ALL DIMMED FLUORESCENT FIXTURES SHALL BE PROVIDED WITH COMPATIBLE DIMMING BALLASTS.
- 3. ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH ENERGY EFFICIENT LAMPS AND ELECTRONIC BALLASTS.
- 4. WHERE MORE THAN ONE SWITCH OCCURS IN THE SAME LOCATION, THEY SHALL BE INSTALLED IN A GANG-TYPE BOX UNDER ONE COVER PLATE.
- 5. PROVIDE GROUND WIRE WITH ALL FLEXIBLE CONDUIT CONNECTION TO EACH LIGHTING FIXTURE.
- 6. PROVIDE GROUND WIRE WITH ALL FLEXIBLE CONDUIT CONNECTION TO EACH LIGHTING FIXTURE.
- 7. LIGHTING CIRCUITRY GROUND RULES:
 - A. BRANCH CIRCUITING SHALL BE IN ACCORDANCE WITH CONTROL SCHEMES AS SHOWN ON PLANS.
 - B. RELAY CONTROLLED AND DIMMER SYSTEM BRANCH CIRCUITS SHALL RUN VIA LIGHTING CONTROL EQUIPMENT AS REQUIRED.
 - C. EACH ZONE SHALL BE PROVIDED WITH OVERRIDE SWITCH
 - E. IN GENERAL, 120V LIGHTING CONNECTED LOAD CIRCUIT SHALL NOT EXCEED 1600 WATTS.
 - F. MINIMUM SIZE OF BRANCH CIRCUIT CONDUIT SHALL BE 3/4".
 - G. MINIMUM SIZE OF BRANCH CIRCUIT WIRE SHALL BE 12 AWG.
 - H. PROVIDE 20% SPARE LIGHTING RELAYS/DIMMER MODULES.
 - I. COORDINATE LOCATIONS, MOUNTING AND TYPES OF CONTROL DEVICES (SWITCHES, SENSORS, ETC.) WITH ARCHITECT/LIGHTING CONSULTING.
 - J. FINAL DIMMING AND LIGHTING CONTROL REQUIREMENTS SHALL BE COORDINATED WITH LIGHTING CONSULTANT ARCHITECT AND EQUIPMENT VENDOR AS SPECIFIED.
 - K. EACH LIGHTING CIRCUIT SHALL BE PROVIDED WITH 20A OVERCURRENT PROTECTION DEVICE LOCATED IN PANEL OR LIGHTING SYSTEM EQUIPMENT.
 - L. ALL CONDUITS FOR FIXTURES SEMI-RECESSED IN CONCRETE WILL BE RUN IN THE CONCRETE.
- 8. SEE SPECIFICATIONS FOR LIGHTING FIXTURE DESCRIPTIONS AND LAMPING.
- 9. SEE ARCHITECTURAL REFLECTED CEILING PLANS AND DETAILS TO CONFIRM EXACT LOCATION OF ALL FIXTURES AND MOUNTING ARRANGEMENTS.
- 10. ALL EXTERIOR TYPE FIXTURES SHALL BE CONTROLLED BY LIGHTING CONTROL PANEL PROVIDED WITH PHOTOCELL/TIMELOCK. PROVIDE PHOTOCELL DEVICES TO CONTROL ALL EXTERIOR LIGHTING AS REQUIRED.
- 11. FINAL LOCATIONS, TYPES, QUANTITIES AND CONTROL ARRANGEMENTS OF ALL EMERGENCY LIGHTING FIXTURES SHALL BE COORDINATED WITH THE LIGHTING CONSULTANT AND ARCHITECT.

- 12. ALL SWITCHED EMERGENCY LIGHTING CIRCUITS SHALL BE PROVIDED WITH SHUNT RELAYS.
- 13. REFER TO THE LIGHTING SPECIFICATIONS FOR FINAL LIGHTING CONTROL ARRANGEMENTS IN SELECTED AREAS. PROVIDE ALL WORK AS REQUIRED FOR FULLY OPERATIONAL DIMMING AND OTHER LIGHTING CONTROL SYSTEMS.

E. GROUNDING SYSTEM:

- 1. PROVIDE COMPLETE POWER SYSTEM GROUNDING AND COMMUNICATION SYSTEM GROUNDING IN COMPLIANCE WITH GROUNDING SPECIFICATIONS AND NEC (NFPA 70). THE SYSTEM SHALL CONSIST OF GROUNDING ELECTRODE NETWORK, GROUNDING ELECTRODE CONDUCTORS, EQUIPMENT GROUNDING AND BONDING CONDUCTORS AND CONNECTIONS.
- 2. UTILIZE A SEPARATE INSULATED CONDUCTOR AS THE EQUIPMENT GROUNDING CONDUCTOR FOR ALL POWER SYSTEM CIRCUITS AS REQUIRED.
- 3. THE GROUNDING SYSTEM SHALL CONSIST OF CONDUCTORS, CONNECTORS AND ALL OTHER NECESSARY EQUIPMENT REQUIRED TO PROVIDE A COMPLETE GROUND SYSTEM FOR ELECTRICAL WORK. THE GROUND SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF THE ELECTRICAL CODE.
- 4. THE COMPLETE GROUNDING SYSTEM SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT LOW IMPEDANCE RETURN PATH TO THE GROUNDING SOURCE.
- 5. THE GROUNDING CONDUCTOR SHALL BE SIZED AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE ELECTRICAL CODE AND THE AUTHORITY HAVING JURISDICTION.
- 6. ALL GROUNDING CONNECTIONS WITHIN BUILDING SHALL BE ACCESSIBLE FOR PERIODIC FUTURE INSPECTIONS AND SHALL ALSO BE MADE USING SOLDERLESS CONNECTORS AS HEREIN SPECIFIED.
- 7. LENGTH OF GROUNDING CONDUCTORS OR JUMPERS SHALL BE KEPT AT A MINIMUM.
- 8. BOLTED CONNECTIONS SHALL BE OF THE MULTIPLE BOLT-TYPE. BOLTS, WASHERS AND STOP NUTS SHALL BE OF THE HIGH COPPER ALLOY EVERDUR, DURUM, DURONIZE OR SILICON BRONZE. FERROUS HARDWARE WILL NOT BE ACCEPTABLE.
- 9. EQUIPMENT GROUND
 - A. EQUIPMENT GROUNDING SHALL CONSIST OF CONNECTING ALL NON-CURRENT CARRYING METAL PARTS OF THE WIRING SYSTEM TO A GROUND SOURCE.
 - B. GROUND SOURCE SHALL BE THE TERMINAL OF THE GROUNDED CONDUCTOR IN THE SERVICE EQUIPMENT.
 - C. CONDUIT GROUNDING BUSHINGS SHALL BE PROVIDED ON ALL INCOMING AND OUTGOING CONDUITS TO THE SERVICE EQUIPMENT.
 - D. NON-CURRENT CARRYING METAL PARTS SHALL INCLUDE SUCH ITEMS AS METAL CONDUITS, RACEWAYS, OUTLET BOXES, CABINETS AND SIMILAR COMPONENT PARTS OF ALL ELECTRICAL AND NON-ELECTRICAL EQUIPMENT AND APPARATUS.
- 10. GROUND TESTS
 - A. THE CONTRACTOR SHALL PERFORM SUCH GROUND TESTS AS ARE REQUIRED IN ORDER TO ENSURE COMPLIANCE OF THE GROUNDING SYSTEM WITH THE REQUIREMENTS OF THE ELECTRICAL CODE.
- 11. SERVICE GROUND SHALL CONSIST OF CONNECTING THE NEUTRAL CONDUCTOR TO THE SERVICE EQUIPMENT TO A GROUND SOURCE.
- 12. GROUND SOURCE SHALL BE THE STREET SIDE OF THE INCOMING MAIN COLD WATER VALVE.

F. ELECTRICAL DEMOLITION

- 1. CONTRACTOR SHALL EXAMINE EXISTING CONDITIONS AND SHALL PERFORM ALL REQUIRED DEMOLITION AND RELOCATION WORK AS WELL AS PROVISION OF ALL NEW ELECTRICAL EQUIPMENT, WIRING, ETC. AS REQUIRED FOR FULLY FUNCTIONAL SYSTEM.
- 2. ALL CIRCUITS AFFECTED BY THE DEMOLITION WORK SHALL BE DE-ENERGIZED AT THEIR SOURCE PRIOR TO BEGINNING ANY DEMOLITION WORK IN THE BUILDING OR ON THE SITE.
- 3. THE REMOVAL OF LIGHTING FIXTURES, WIRING DEVICES AND OUTLETS SHALL INCLUDE THE REMOVAL OF ALL ASSOCIATED BRANCH CIRCUIT WIRING, RACEWAYS, BOXES AND SUPPORTS.
- 4. WHERE PORTIONS OF EXISTING BRANCH CIRCUITS ARE REMOVED, WIRING TO REMAINING DEVICES ON THE CIRCUIT SHALL BE RECONNECTED OR MODIFIED IN AN APPROVED MANNER AS REQUIRED TO MAINTAIN CONTINUITY OF THE AFFECTED BRANCH CIRCUIT AND OPERATION OF THE REMAINING DEVICES.
- 5. THE REMOVAL OF ALL LOW VOLTAGE SYSTEMS (TELECOMMUNICATION, SECURITY, ETC.) SHALL BE IN ACCORDANCE WITH REQUIREMENTS OUTLINED IN RESPECTIVE CONTRACT DOCUMENTS AND COORDINATED WITH THE APPROPRIATE BUILDING OPERATING PERSONNEL.
- 6. ANY FIRE ALARM SYSTEM WIRING CUT OR REROUTED DURING DEMOLITION WORK SHALL BE RECONNECTED TO MAINTAIN SYSTEM OPERATION. ANY SYSTEM SHUTDOWNS MUST BE COORDINATED WITH THE OWNER. FIRE WATCHES TO BE PROVIDED AS REQUIRED AT NO ADDITIONAL COST.
- 7. UNLESS OTHERWISE NOTED OR DIRECTED IN THE FIELD, DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES, RECEPTACLES, OUTLETS AND OTHER ELECTRICAL DEVICES AND EQUIPMENT IN EXISTING BUILDING ALONG WITH ALL ASSOCIATED WIRING AND CONDUIT IN EXISTING SPACES TO BE RENOVATED OR AFFECTED BY THE NEW CONSTRUCTION. CONDUITS IN FLOOR SLAB SHALL BE CUT FLUSH, WIRING SHALL BE REMOVED AND FLOOR PATCHED.
- 8. THE CONTRACTOR SHALL INCLUDE ALL COSTS FOR REMOVALS IN THE CONTRACT. THESE COSTS SHALL INCLUDE WORK DESCRIBED IN THE CONTRACT DOCUMENTS WITH ALLOWANCES FOR NORMAL UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED.
- 9. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS AND SCHEMES IN FULL COORDINATION WITH THE NEW ARCHITECT'S DEMOLITION PLANS. ALL ELECTRICAL INSTALLATIONS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED, DISCONNECTED AND REMOVED AT THE SOURCE OF POWER SUPPLY.
- 10. ALL ELECTRICAL WORK IN ADJOINING AREAS WHICH IS REQUIRED TO FUNCTION BUT IS AFFECTED BY DEMOLITION AND/OR PHASING WORK SHALL BE RECONNECTED AND RESTORED TO ITS PRESENT FUNCTION AS PART OF NEW ELECTRICAL SYSTEM OF THE BUILDING.
- 11. ALL PRESENT MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, REMAIN THE PROPERTY OF THE OWNER AND/OR SHALL BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED.
- 12. PORTIONS OF FEEDER LINES THAT HAVE TO BE REMOVED AND ABANDONED AS A RESULT OF DEMOLITION WORK AND/OR PHASING WORK BUT ARE REQUIRED TO CONTINUE TO FUNCTION, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED FOR CONTINUATION OF THEIR PRESENT FUNCTION. NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS (CONDUCTOR CAPACITY, CONDUIT SIZES, ETC.).
- 13. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION REGARDING ALL AREAS AFFECTED BY NEW CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR CONTRACT LIMIT LINES.
- 14. DUE TO CONSTRUCTION PHASING, THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY INSTALLATIONS AND MODIFICATIONS TO EXISTING AND/OR NEW ELECTRICAL SYSTEMS AS REQUIRED TO MAINTAIN CONTINUITY OF ALL EXISTING OR NEW ELECTRICAL SYSTEMS AND EQUIPMENT TO AREAS NOT BEING AFFECTED BY CONSTRUCTION PHASE AND AS FOLLOWS:
 - A. THE TEMPORARY ELECTRICAL SYSTEMS SHALL BE COMPLETELY INSTALLED AND OPERATING AT THE EARLIEST POSSIBLE DATE.
 - 1. MAINTENANCE SHALL INCLUDE ALL LABOR AND MATERIAL AND PERFORMING ALL REQUIRED WORK TO A SATISFACTORY CONDITION ALL CONDUITS, CONDUCTORS, BOXES, FITTINGS, SWITCHES, PANELBOARDS, OVERCURRENT DEVICES, LAMPS, ETC. OF THE ENTIRE TEMPORARY ELECTRICAL SYSTEMS.
 - 2. MAINTENANCE SHALL INCLUDE MOVING AND REROUTING OF TEMPORARY LIGHT AND POWER WIRING AND EQUIPMENT NECESSARY TO PERMIT ALL TRADES TO SATISFACTORILY PERFORM THE WORK. SUCH MOVING OR REROUTING OF WIRING OR EQUIPMENT SHALL BE PERFORMED AS REQUIRED.

- B. EXCEPT AS DIRECTED BY THE ARCHITECT AND AS SPECIFIED ABOVE, ALL TEMPORARY ELECTRICAL WIRING AND EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR (INCLUDING FEEDERS, SAFETY SWITCHES, PANELBOARD, CONDUITS, BOXES, CONDUCTORS DROP LIGHTS, ETC.) SHALL BE DISCONNECTED AND REMOVED FROM THE PREMISES WHEN DIRECTED.
- C. INSTALLATION OF TEMPORARY ELECTRICAL WORK SHALL BE IN COMPLIANCE WITH ELECTRICAL CODE AND REQUIREMENTS OF THE CONTRACT DOCUMENTS.

G. SERVICE ENTRANCE

- 1. COMPLY WITH ALL OF THE CONTRACT DOCUMENTS, INCLUDING DRAWINGS, SCHEDULES, GENERAL AND SUPPLEMENTARY CONDITIONS, GENERAL REQUIREMENTS.
- 2. THE WORK SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES TO FURNISH AND INSTALL NEW SERVICE EQUIPMENT AS DESCRIBED HEREIN AND SHOWN ON THE DRAWINGS.
- 3. THIS CONTRACTOR SHALL MAKE APPLICATION FOR THE REQUIRED PERMITS AND APPROVALS FOR THE NEW ELECTRICAL SERVICE AND BEAR ALL COSTS IN RELATION TO THE INSTALLATION OF THE PERMANENT ELECTRIC SERVICE FOR THE BUILDING. THE ELECTRICAL CONTRACTOR SHALL:
 - A. FURNISH AND INSTALL MAIN SERVICE EQUIPMENT AS REQUIRED.
- 4. THE WORK OF THE ELECTRICAL CONTRACTOR SHALL GENERALLY BE AS FOLLOWS:
 - A. PROVIDE ALL SERVICE CABLES, CONDUITS, AND ELECTRICAL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE ELECTRICAL CODE AND ALL AUTHORITIES HAVING JURISDICTION.
 - B. INSTALL ALL SERVICE AND METERING EQUIPMENT, METERING CURRENT METRANSFORMERS AND ASSOCIATED TER WIRING.
- 5. COMPLETE THE INSTALLATION, MOUNTING, AND PREPERATION WORK OF THE NEW 2000A ELECTRICAL SERVICE DISTRIBUTION SWITCHBOARD IN THE NEW ELECTRICAL ROOM OF THE EXISTING "HEAVY EQUIPMENT/ROLLER SHOP" AREA (SEE DRAWING E-103 FOR LOCATION) PRIOR TO ANY ELECTRICAL SERVICE SHUTDOWN. IN ADDITION, THE INSTALLATION OF ALL NEW CONDUITS, WIRING, AND ACCESSORIES FROM THE NEW SWITCHBOARD (FOR THE PURPOSE OF TRANSFERRING EXISTING BRANCH CIRCUITS FROM THE EXISTING SWITCHBOARD TO THE NEW SWITCHBOARD) SHALL BE COMPLETED PRIOR TO ANY ELECTRICAL SERVICE SHUTDOWN, WITHOUT MAKING FINAL TERMINATIONS. AN ADDITIONAL 5'-FEET OF SLACK SHALL BE ACCOUNTED FOR WHEN INSTALLING NEW CONDUCTORS PRIOR TO ANY NEW TERMINATIONS. IN ADDITION, A NEW CEILING MOUNTED PULL/JUNCTION BOX SHALL BE INSTALLED NEXT TO THE EXISTING MAIN PULL/JUNCTION BOX, SIZED FOR ALL NEW CONDUITS FROM THE NEW SWITCHBOARD. SEE DRAWING E-104 FOR MORE INFORMATION.
- 6. THE ELECTRICAL SERVICE SHUT-DOWN SHALL COMMENCE ONLY AFTER THE COMPLETION OF ALL PREPERATION WORK DESCRIBED IN PHASING NOTES #1 THROUGH #3 ABOVE, INCLUDING TURNING OFF OF EACH EXISTING BRANCH CIRCUIT BEING FED FROM THE EXISTING SWITCHBOARD. COORDINATE AND PERFORM THE ELECTRICAL SERVICE SHUTDOWN WITH CON EDISON, DOT, AND DOT. NO ADDITIONAL SERVICE SHUTDOWNS WILL BE NECESSARY. THE TRANSITION FROM NORMAL UTILITY POWER TO BACK-UP POWER (GENERATOR) FOR THE EXISTING SWITCHBOARD WILL REQUIRE ONE(1) CON-EDISON SERVICE SHUTDOWN FOR ONE(1) WEEKEND. THIS WORK SHALL BE PERFORMED AS OVER-TIME.
- 7. TRANSFER THE EXISTING SERVICE SWITCHBOARD AND EXISTING TAP FEEDING THE EXISTING PANELBOARDS "PPW", "PPR", "PPS", "PPST", AND "PPPL" TO THE TEMPORARY, ON-SITE, 500KW GENERATOR WITH ALL BRANCH CIRCUITS COMING OUT OF THE EXISTING SWITCHBOARD IN THE "OFF" POSITION. THIS WORK SHALL BE PERFORMED BY CONNECTING THE TEMPORARY GENERATOR OUTPUT TO THE LINE SIDE OF THE MAIN SEVICE DISCONNECT SWITCH LOCATED IN THE BOILER ROOM.
- 8. RELOCATE THE EXISTING PANELBOARD FEEDING THE EXISTING DIESEL PUMP STATION AS INDICATED ON DRAWING E-104.
- 9. UTILIZE THE SAME SIZED CONDUITS AND ASSOCIATED CONDUCTORS FOR THE EXISTING PANELBOARD FEEDING THE EXISTING DIESEL PUMP STATION, ROUTE THESE NEW CONDUITS AND CONDUCTORS AND RE-UTILIZE THE EXISTING CONDUITS AND CONDUCTORS, AS INDICATED ON DRAWING E-104, TO FEED THE EXISTING DIESEL PUMP STATION. SPLICE, EXTEND, AND PROVIDE WATERTIGHT SPLICE BOXES WITH HANDHOLES (FOR ACCESSIBILITY PURPOSES) AS NECESSARY TO PERFORM THIS WORK.
- 10. COORDINATE WITH CON EDISON, DOT, AND DDC FOR THE COMPLETE REMOVAL OF THE EXISTING ELECTRICAL SERVICE TRANSFORMER.
- 11. RE-ENERGIZE EXISTING SWITCHBOARD MAIN.
- 12. RE-ENERGIZE BRANCH CIRCUITS FROM THE EXISTING SWITCHBOARD ONE-BY-ONE UNTIL THEY ARE ALL ON. VERIFY THAT ALL EXISTING LOADS ARE OPERATIONAL AS THEY ARE FED FROM THE TEMPORARY GENERATOR.
- 13. RE-ROUTE THE NORMAL SERVICE FROM THE CON-ED MANHOLE IN SECTION D OF "HEAVY EQUIPMENT/ROLLER SHOP" AT THE PULLBOXES TO THE NEW SWITCHBOARD AND TERMINATE THE CONNECTIONS AS NECESSARY WITHIN THE PULLBOX/SERVICE ENTRANCE SECTION OF THE NEW SWITCHBOARD.
- 14. ENERGIZE THE NEW SWITCHBOARD MAIN DISCONNECT SWITCH, MAKING SURE THAT EVERY BRANCH DISCONNECT SWITCH IS IN THE "OFF" POSITION.
- 15. TRANSFER THE EXISTING LOADS FROM EXISTING SWITCHBOARD TO THE NEW SWITCHBOARD BY MAKING THE FINAL CONDUCTOR TERMINATIONS FOR THE LOAD TO BE TRANSFERRED, AND TURNING ON THE ASSOCIATED BRANCH CIRCUIT FROM THE NEW SWITCHBOARD. THIS COORDINATION SHALL BE DIRECTED BY DOT AND DDC. THIS PROCESS SHALL BE PERFORMED FOR ALL EXISTING LOADS.
- 16. TURN ON ASSOCIATED BRANCH CIRCUITS FROM THE NEW SWITCHBOARD TO FEED ALL NEW LOADS (I.E. MONITORING BOOTH PANELBOARD LH1 FEEDING THE MONITORING BOOTH LOADS AND NEW DIESEL STATION). THIS COORDINATION SHALL BE DIRECTED BY DOT AND DDC. THIS PROCESS SHALL BE PERFORMED FOR ALL NEW LOADS.
- 17. DEMOLISH OR ABANDON ALL EXISTING CONDUITS AND EQUIPMENT NO LONGER IN USE AT THE COMPLETION OF THIS PHASING WORK AS SHOWN ON DRAWINGS E-103, E-104, AND E-300.



NEW YORK CITY DEPARTMENT OF
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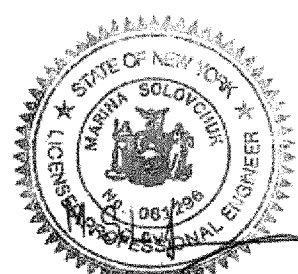
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Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

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**ELECTRICAL
GENERAL NOTES**

Scale: NONE

Seal and Signature:

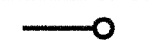



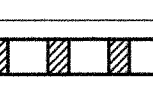






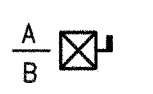

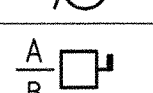

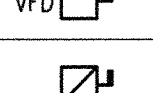
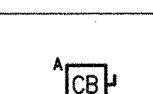
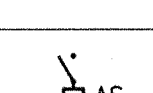

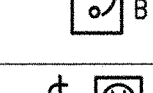



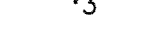






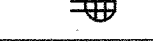



Date: 09.28.12
Project No.: 0902
Dwg By: RE/CD
Chk By: IM

Dwg No:

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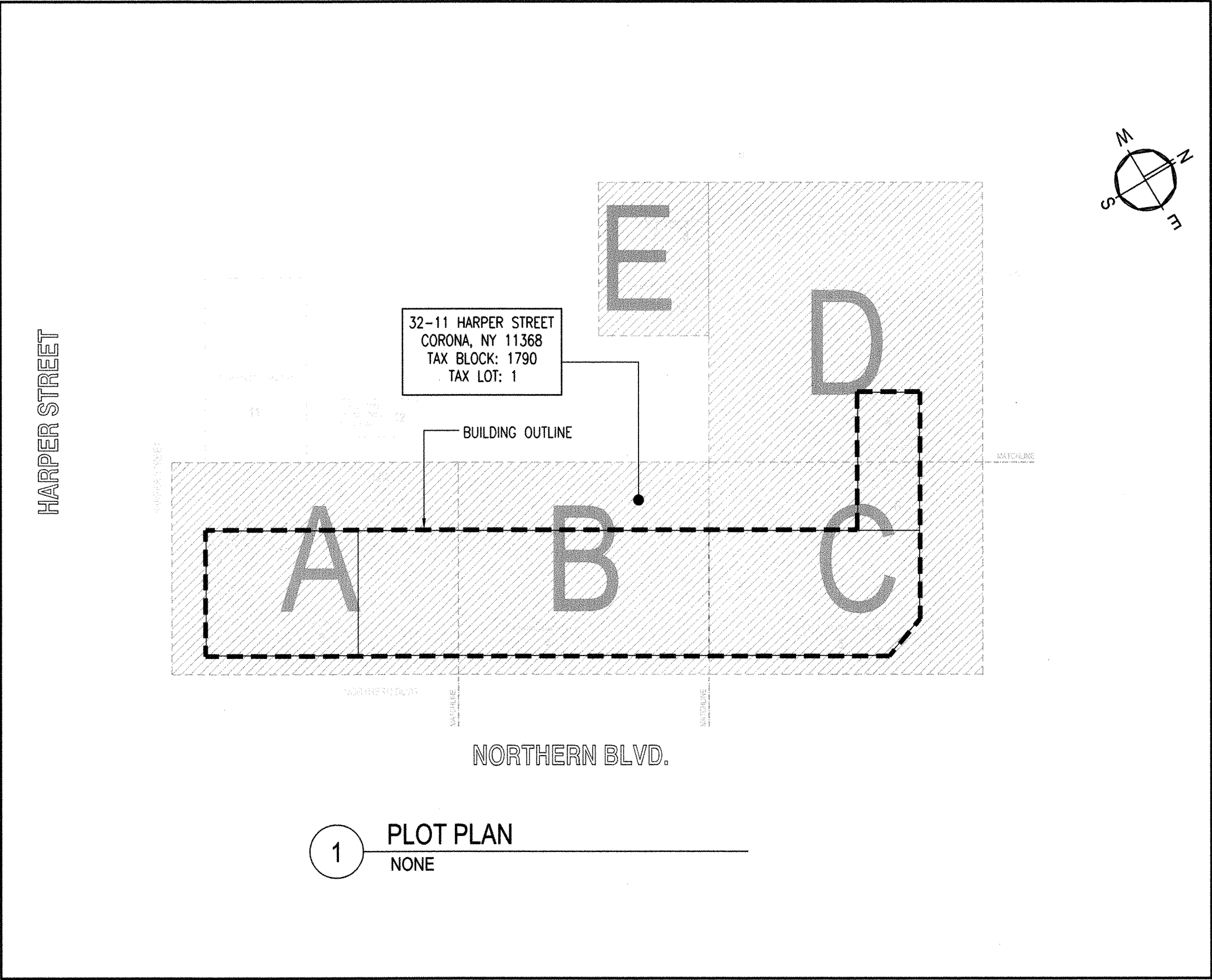
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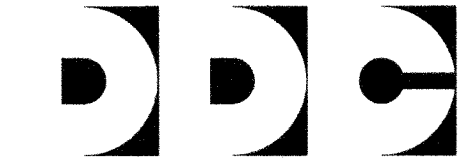
CABLES & CONDUIT SYSTEMS	
SYMBOL	DESCRIPTION
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT STUB WITH WIRE PULL AND CAP
	PULLBOX OR JUNCTION BOX LARGE CUSTOM FABRICATED TYPES
	CONCRETE, ENCASED UNDER GROUND/UNDER SLAB CONDUIT DUCT BANK
	CONDUIT BANK
	CONDUIT BANK UP
	CONDUIT BANK DOWN
MISCELLANEOUS	
	LINE TYPE REPRESENTING NEW ELECTRICAL SYSTEM EQUIPMENT, DEVICE, FEEDER ETC.
	U.O.N., LINE TYPE REPRESENTING EXISTING ELECTRICAL SYSTEM EQUIPMENT, DEVICE, FEEDER ETC. TO REMAIN.
	LINE TYPE REPRESENTING EXISTING ELECTRICAL SYSTEM EQUIPMENT, DEVICE, FEEDER ETC. TO BE REMOVED.
POWER	
SYMBOL	DESCRIPTION
	COMBINATION MOTOR STARTER NUMERAL DENOTES NEMA SIZE: 'A' DENOTES SWITCH/CIRCUIT BREAKER RATING 'B' DENOTES FUSE SIZE/TRIP RATING
	MOTOR IN MECHANICAL SYSTEM EQUIPMENT
	FUSED DISCONNECT SWITCH: - 'A' DENOTES SWITCH SIZE - 'B' DENOTES FUSE SIZE IF INDICATED
	VARIABLE FREQUENCY DRIVE
	UNFUSED DISCONNECT SWITCH. RATING SAME AS UPSTREAM BRANCH CIRCUIT PROTECTIVE DEVICE.
	CIRCUIT BREAKER IN NEMA 1 ENCLOSURE: - 'A' DENOTES FRAME - 'B' DENOTES TRIP SETTING.
	SWITCH AND FUSE UNIT AS - DENOTES SWITCH SIZE AF - DENOTES FUSE SIZE
	CIRCUIT BREAKER IN NEMA 1 ENCLOSURE: - 'A' DENOTES FRAME - 'B' DENOTES TRIP SETTING
	METERING AND CURRENT/POTENTIAL TRANSFORMER AS REQUIRED
PANELBOARD AND CABINETS	
SYMBOL	DESCRIPTION
	EXISTING 120/208V PANELBOARD
	NEW 120/208V PANELBOARD
LIGHTING CONTROLS	
SYMBOL	DESCRIPTION
	120VAC 20A TOGGLE SWITCH *3 INDICATES 3-WAY SWITCH TYPE. SWITCH SHALL BE BY: OPTION#1 LEVITON DECORA STYLE. OPTION#2 LUTRON DIVA. OPTION#3 SIEMENS DELTA. OR APPROVED EQUAL.
	ASTRONOMICAL DIGITAL TIME SWITCH BY INTERMATIC MODEL # E1600 OR BY WATTSTOPPER, LUTRON, OR GENERAL ELECTRICAL,OR APPROVED EQUAL.
	POWER PACKS BY WATTSTOPPER MODEL #B347D-P OR BY : OPTION#1 CONSERVE ELECTRICAL SUPPLY CORP. OPTION#2 I.G.FEDERAL ELECTRIC SUPPLY. OPTION#3 LIBERTY ELECTRICAL SUPPLIES. OR APPROVED EQUAL.
	LOW VOLTAGE MOTION SENSOR BY WATTSTOPPER MODEL #EW-105-24 OR BY: OPTION#1 CONSERVE ELECTRICAL SUPPLY CORP. OPTION#2 I.G.FEDERAL ELECTRIC SUPPLY. OPTION#3 LIBERTY ELECTRICAL SUPPLIES. OR APPROVED EQUAL.
	STROBE LIGHT BY KIDDE MODEL #SL1771 OR BY FIRST ALERT, GENTEX, GENERAL ELECTRIC,OR APPROVED EQUAL. THIS ITEM SHALL BE CONNECTED IN PARALLEL WITH THE KIDDE SMOKE DETECTOR INSTALLED IN THE NEW ELECTRICAL ROOM INDICATED ON DRAWING E-100.
	NEW SMOKE DETECTOR BY KIDDE MODEL #PI2010 OR BY FIRST ALERT, GENTEX, GENERAL ELECTRIC,OR APPROVED EQUAL.
WIRING DEVICES	
	WALL MOUNTED DUPLEX RECEPTACLE, 20A,125V, 2P, 3W (GROUNDED) NEMA CONFIG. 5-20R
	WALL MOUNTED DOUBLE DUPLEX RECEPTACLE IN 2 GANG BOX, 20A,125V,2P, 3W (GROUNDED) NEMA CONFIG. 5-20R
	FLOOR MOUNTED DUPLEX RECEPTACLE, 20A,125V, 2P, 3W (GROUNDED) NEMA CONFIG. 5-20R
	WALL MOUNTED DUPLEX RECEPTACLE, 30A,250V, 2P, 3W (GROUNDED) NEMA CONFIG. 6-30R

ABBREVIATIONS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
A, AMP	AMPERE	MIC	MICROPHONE
AIC	AMPS INTERRUPTING CAPACITY	MIN	MINIMUM
AC	ALTERNATING CURRENT	MS	MAIN SWITCHBOARD
AFF	ABOVE FINISHED FLOOR	MTD	MOUNTED
AP	APPLIANCE PANEL	MISC	MISCELLANEOUS
ATS	AUTOMATIC TRANSFER SWITCH	MMV	MEDIUM VOLTAGE
BLDG	BUILDING	NEC	NATIONAL ELECTRICAL CODE
BMS	BUILDING MANAGEMENT SYSTEM	N	NEUTRAL
BFG	BELOW FINISHED GRADE	N/A	NOT APPLICABLE
C, CDT	CONDUIT	NEMA	NATIONAL ELECT. MANUFACTURERS ASSOCIATION
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NL	ON NIGHT LIGHTING CIRCUIT
CLS	CLOSET	NTS	NOT TO SCALE
CS	CABLE SUPPORT	OC	ON CENTER
DC	DIRECT CURRENT	OCD	OVERCURRENT DEVICE
EC	EMPTY CONDUIT	OL	OVERLOAD
EM	ON EMERGENCY CIRCUIT	P	POLES
EMT	ELECTRICAL METALLIC TUBING	PB	PULL BOX
EL	ELEVATION	PF	POWER FACTOR
ELEC	ELECTRIC	PFC	POWER FACTOR CORRECTION
ELEV	ELEVATOR	PH, Ø	PHASE
EP	EXPLOSION PROOF	PNL	PANEL
EQPM	EQUIPMENT	PVC	POLYVINYL CHLORIDE
EXIST	EXISTING	PWR	POWER
FDR	FEEDER	RC	REMOTE CONTROL
FIN	FINISH	REC	RECEPTACLE
FIXT	FIXTURE	REQ	REQUIRED
FLUOR	FLUORESCENT	RM	ROOM
FA	FIRE ALARM	RMS	ROOT MEAN SQUARE
FLA	FULL LOAD AMPS	SPECS	SPECIFICATIONS
FSD	FIRE SMOKE DAMPER	SPDT	SINGLE POLE DOUBLE THROW
FT	FEET	SPKLR	SPRINKLER
GA	GAUGE	SPKR	SPEAKER
GALV	GALVANIZED	SO	SQUARE
G, GRD	GROUND	STD	STANDARD
GFI	GROUND FAULT INTERRUPTER	SPST	SINGLE POLE SINGLE THROW
HGT	HEIGHT	SURF	SURFACE
HID	HIGH INTENSITY DISCHARGE	SYM	SYMMETRICAL
HOA	HAND-OFF-AUTOMATIC	SW	SWITCH
HP	HORSE POWER	SWBD	SWITCHBOARD
HTG	HEATING	SWGR	SWITCHGEAR
HVAC	HEATING VENTILATING AND AIR CONDITIONING	TC	TERMINAL CABINET
IG	ISOLATED GROUND	TEL	TELEPHONE
IN	INCHES	TELCO	TELEPHONE CO.
J, JB	JUNCTION BOX	TYP	TYPICAL
KWH	KILOWATT HOURS	TV	TELEVISION
KVA	KILO VOLT- AMPERE	UG	UNDERGROUND
KW	KILO WATT	UON	UNLESS OTHERWISE NOTED
LC	LOCK & COVER	UPS	UNINTERRUPTIBLE POWER SUPPLY
LP	LIGHTING PANEL	US	UNIT SUBSTATION
LTG	LIGHTING	UNF	UNFUSED
LV	LOW VOLTAGE	V	VOLT
LVR	LOW VOLTAGE RELAY	VA	VOLT-AMPERES
MA	MILLIAMPS	VENT	VENTILATING
MCC	MOTOR CONTROL CENTER	VT	VAPORTIGHT
MCM	THOUSAND CIRCULAR CENTER	W	WATT
MCP	MOTOR CONTROL PANEL	WP	WEATHERPROOF
MECH	MECHANICAL	WT	WIRING TROUGH
MER	MECHANICAL EQUIPMENT ROOM	XFMR	TRANSFORMER
MFCR	MANUFACTURER	XP	EXPLOSION PROOF

ENERGY COMPLIANCE STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE & 1 RCNY 5000-01.





**NEW YORK CITY DEPARTMENT OF
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DIVISION OF STRUCTURES
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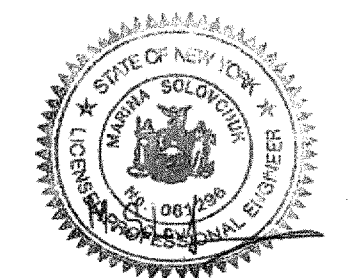
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Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**ELECTRICAL SYMBOLS
AND ABBREVIATIONS**

Scale: NONE

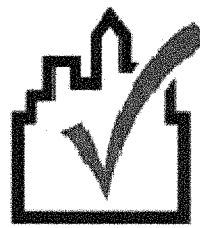
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Date:	09.28.12
Project No.:	0902
Dwg By:	RE/CD
Chk By:	IM
Dwg No:	

E-001.00

NEW YORK CITY BUILDING DEPARTMENT NOTE
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COMcheck Software Version 3.9.0
Mechanical Compliance Certificate

2010 New York Energy Conservation Construction Code

Section 1: Project Information

Project Type: **New Construction**
Project Title : Harper Street Yard

Construction Site: 32-11 Harper Street
Queens, NY 11368
Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Location (for weather data): New York, New York
Climate Zone: 4a

Section 3: Mechanical Systems List

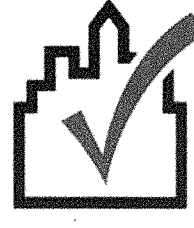
Quantity	System Type & Description
1	Heating (Single Zone): Heating: 2 each - Radiant Heater (Electric Baseboard), Electric, Capacity = 4 kWh/ft
1	Cooling (Single Zone): Cooling: 1 each - Packaged Terminal Unit (Thru-the-Wall AC Unit), Capacity = 13 kWh/ft, Efficiency = 10.70 EER, Air-Cooled Condenser

Section 4: Requirements Checklist

- Requirements Specific To: Heating :
None
- Requirements Specific To: Cooling :
☒ 1. Equipment minimum efficiency: Packaged Terminal DX Unit: 9.73 EER
- Generic Requirements: Must be met by all systems to which the requirement is applicable:
- ☒ 1. Plant equipment and system capacity no greater than needed to meet loads
Exceptions(s):
☐ Standby equipment automatically off when primary system is operating
☐ Multiple units controlled to sequence operation as a function of load
- ☒ 2. Minimum one temperature control device per system
- ☐ 3. Minimum one humidify control device per installed humidification/dehumidification system
- ☒ 4. Load calculations per ASHRAE/ACCA Standard 183
- ☒ 5. Automatic Controls: Setback to 65°F (heat) and 68°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup
Exceptions(s):
☐ Continuously operating zones
☐ 2 kW demand or less, submit calculations
- ☐ 6. Outside-air source for ventilation; system capable of reducing OSA to required minimum
- ☐ 7. Hot water pipe insulation: 1.5 in. for pipes <= 1.5 in. and 2 in. for pipes > 1.5 in.
Chilled water/refrigerant/brine pipe insulation: 1.5 in. for pipes <= 1.5 in. and 1.5 in. for pipes > 1.5 in.
Steam pipe insulation: 1.5 in. for pipes <= 1.5 in. and 3 in. for pipes > 1.5 in.
Exceptions(s):
☐ Piping within HVAC equipment
- ☐ Exception: Runouts < 4 ft in length.
- ☒ 8. Operation and maintenance manuals provided to building owner
- ☐ 9. Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft² in spaces >500 ft²) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 3000 cfm.
Exception: Systems with heat recovery.
☐ Exception: Multiple-zone systems without DDC of individual zones communicating with a central control panel.
☐ Exception: Systems with a design outdoor airflow less than 1200 cfm.
☐ Exception: Spaces where the supply airflow rate minus any makeup or outgoing transfer air requirement is less than 1200 cfm.
- ☐ 10. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings
☐ Exception: Gravity dampers acceptable in buildings <3 stories
☐ Exception: Gravity dampers acceptable in systems with outside or exhaust air flow rates less than 300 cfm where dampers are interlocked with fan
- ☒ 11. Automatic controls for freeze protection systems present
- ☐ 12. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted
☐ Exception: Hazardous exhaust systems, commercial kitchen and clothes dryer exhaust systems that the International Mechanical Code prohibits the use of energy recovery systems.
☐ Exception: Systems serving spaces that are heated and not cooled to less than 60°F.
☐ Exception: Where more than 80 percent of the outdoor heating energy is provided from site-recovered or site solar energy.
☐ Exception: Heating systems in climates with less than 3600 HDD.
☐ Exception: Cooling systems in climates with a 1 percent cooling design wet-bulb temperature less than 64°F.
☐ Exception: Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
☐ Exception: Laboratory fume hood exhaust systems that have either a variable air volume system capable of reducing exhaust and makeup air volume to 50 percent or less of design values or, a separate make up air supply meeting the following makeup air requirements: a) at least 75 percent of exhaust flow rate, b) heated to no more than 2°F below room setpoint temperature, c) cooled to no lower than 3°F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling.

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.8.1 and to comply with the mandatory requirements in the Requirements Checklist.



COMcheck Software Version 3.9.0
Interior Lighting Compliance Certificate

2010 New York Energy Conservation Construction Code

Section 1: Project Information

Project Type: **New Construction**
Project Title : Harper Street Yard

Construction Site: 32-11 Harper Street
Queens, NY 11368
Owner/Agent: Designer/Contractor:

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B x C)
Transportation	153	1	153
		Total Allowed Watts =	153

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamp/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Transportation (153 sq.ft.)				
LED Other / Electronic	1	4	33	132
		Total Proposed Watts =	132	

Section 4: Requirements Checklist

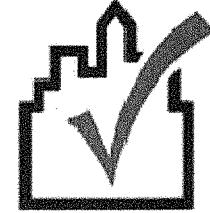
- Lighting Wattage:
☒ 1. Total proposed watts must be less than or equal to total allowed watts.
- Allowed Watts: 153
Proposed Watts: 132
Complies: YES
- Controls, Switching, and Wiring:
- ☐ 2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
- ☐ 3. Daylight zones have individual lighting controls independent from that of the general area lighting.
Exceptions:
☐ Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
☐ Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.
- ☒ 4. Independent controls for each space (switch/occupancy sensor).
Exceptions:
☐ Areas designated as security or emergency areas that must be continuously illuminated.
☐ Lighting in stairways or corridors that are elements of the means of egress.
- ☐ 5. Master switch at entry to hotel/motel guest room.
- ☐ 6. Individual dwelling units separately metered.
- ☐ 7. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
- ☒ 8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.
Exceptions:
☐ Only one luminaire in space.
☒ An occupant-sensing device controls the area.
☐ The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
☐ Areas that use less than 0.6 Watts/sq.ft.
- ☐ 9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.
Exceptions:
☐ Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.
- ☒ 10. Photocell/astrometrical time switch on exterior lights.
Exceptions:
☐ Lighting intended for 24 hour use.
- ☐ 11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).
Exceptions:
☐ Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Interior Lighting PASSES: Design 14% better than code

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.9.0 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date



COMcheck Software Version 3.9.0
Exterior Lighting Compliance Certificate

2010 New York Energy Conservation Construction Code

Section 1: Project Information

Project Type: **New Construction**
Project Title : Harper Street Yard
Exterior Lighting Zone: 2 (Light Industrial area with limited nighttime use)

Construction Site: 32-11 Harper Street
Queens, NY 11368
Owner/Agent: Designer/Contractor:

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Parking area	10100 ft ²	0.05	Yes	606	1159
		Total Tradable Watts* =	606		1159
		Total Allowed Watts =	606		606
		Total Allowed Supplemental Watts** =	600		

* Wattage tradeoffs are only allowed between tradable areas/surfaces.
** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamp/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Parking area (10100 ft ²): Tradable Wattage				
Exterior LED Fixture: B: LED Streetlight - Type V Medium / Other / Electronic	1	5	221	1105
Exterior Wall Mounted Fixture: D: Other	1	2	27	54
		Total Tradable Proposed Watts =	1159	

Section 4: Requirements Checklist

- Lighting Wattage:
☒ 1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.
Compliance: Passes using supplemental allowance watts.
- Controls, Switching, and Wiring:
- ☒ 2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.
- ☐ 3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.
- ☒ 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
- ☒ 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.
- Exterior Lighting Efficacy:
- ☒ 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 80 lumens/watt.

- Exceptions:
- ☐ Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
- ☐ Lighting that is specifically designated as required by a health or life safety statute, ordinance, or regulation.
- ☐ Emergency lighting that is automatically off during normal building operation.
- ☐ Lighting that is controlled by motion sensor.

Exterior Lighting PASSES: Design 4% better than code

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.9.0 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

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CAPITAL PROJECT NUMBER
HWQF027C

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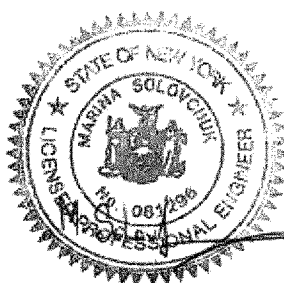
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Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**ENERGY CODE
COMPLIANCE
(SHEET 2 OF 2)**
Scale: NONE

Seal and Signature:



Date: 09.28.12
Project No.: 0902
Dwg By: DG
Chk By: IM


Dwg No:

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EN-002.00

ENERGY CODE COMPLIANCE PROGRESS INSPECTIONS

TR8 IDENTIFIER	INSPECTION TEST AND REQUIREMENTS		MINIMUM PERIODIC INSPECTION FREQUENCY	REFERENCE STANDARD (SEE NYSECC CHAPTER 6) OR OTHER CRITERIA	ECC OR OTHER CITATION
IIA	INSPECTION TEST AND REQUIREMENTS				
IIA1	PROTECTION OF FOUNDATION	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	303.2.1; 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	303.1, 303.1.1, 303.1.2, 502.1, 502.2; ASHRAE 90.1 – 5.5, 5.6 OR 11; 5.8.1
IIA3	FENESTRATION THERMAL VALUES AND PRODUCT RATINGS FOR AIR LEAKAGE	U-FACTORS AND SHGC VALUES OF INSTALLED FENESTRATION SHALL BE VISUALLY INSPECTED FOR CONFORMANCE WITH THE U-FACTORS AND SHGC VALUES IDENTIFIED IN THE CONSTRUCTION DRAWINGS BY VERIFYING THE MANUFACTURER'S NFRC LABELS OR, WHERE NOT LABELED, USING THE RATINGS IN ECC TABLES 303.1.3(1), (2) AND (3).WHERE ASHRAE 90.1 IS USED, VISIBLE LIGHT TRANSMITTANCE VALUES SHALL ALSO BE VERIFIED.	AS REQUIRED DURING INSTALLATION.AT A MINIMUM, PERFORM WHEN 20% OF DOORS/WINDOWS/CURTAIN WALLS ARE INSTALLED	APPROVED CONSTRUCTION DOCUMENTS; NFRC 100, NFRC 200	303.1, 303.1.3, 502.3; ASHRAE 90.1 – 5.5, 5.6 OR 11; 5.8.2
IIA4	FENESTRATION AND DOOR ASSEMBLY PRODUCT RATING FOR AIR LEAKAGE	WINDOWS AND SLIDING OR SWINGING DOOR ASSEMBLIES SHALL BE VISUALLY INSPECTED TO VERIFY THAT INSTALLED ASSEMBLIES ARE LABELED BY THE MANUFACTURER TO THE REFERENCED STANDARD.FOR CURTAIN WALL AND STOREFRONT GLAZING, 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.AT A MINIMUM, PERFORM WHEN 20% OF DOORS/WINDOWS/CURTAIN WALLS ARE INSTALLED	NFRC 400, AAMA/WDMA/CSA 101/11S.2/A440;ASTM E283; ANSI/DASMA 105	502.4; ASHRAE 90.1 – 5.4.3.2
IIA5	FENESTRATION AREAS	DIMENSIONS OF WINDOWS, DOORS AND SKYLIGHTS SHALL BE VERIFIED BY VISUAL INSPECTION.	PRIOR TO FINAL INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	502.3; ASHRAE 90.1 – 5.5.4, 5.6 OR 11
IIA6	SEALING AND INSULATION	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 AN 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 STANDARD, IN ACCORDANCE WITH THE STANDARD(S) CITED IN THE APPROVED PLANS.	AS REQUIRED DURING CONSTRUCTION	APPROVED CONSTRUCTION DOCUMENTS; ASTM E2178, ASTM E2357, ASTM E1677, ASTM E779, ASTM E283	502.4.3, 502.4.7; ASHRAE 90.1 – 5.4.3.1
IIA7	PROJECTION FACTORS	WHERE THE ENERGY ANALYSIS UTILIZED A PROJECTION FACTOR >0, THE PROJECTION DIMENSIONS OF OVERHANGS, EAVES OR PERMANENTLY ATTACHED SHADING DEVICES SHALL BE VERIFIED FOR CONFORMANCE WITH APPROVED PLANS BY VISUAL INSPECTION.	PRIOR TO FINAL CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS, INCLUDING ENERGY ANALYSIS	502.3; ASHRAE 90.1 – 5.5.4, 5.6 OR 11
IIA8	MOISTURE CONTROL, VAPOR RETARDER	MOISTURE CONTROL, VAPOR RETARDER: FRAMED WALLS, FLOORS AND CEILINGS THAT ARE NOT VENTILATED TO ALLOW MOISTURE TO ESCAPE, SHALL BE VISUALLY INSPECTED FOR INSTALLATION OF A VAPOR RETARDER FOR MOISTURE CONTROL.	AS REQUIRED DURING CONSTRUCTIONS OF ENVELOP AND PRIOR TO COVERING VAPOR BARRIER	APPROVED CONSTRUCTION DOCUMENTS; ASTM E96 PROCEDURE A	802.1.2
IIA9	BUILDING ENTRANCE VESTIBULES	REQUIRED ENTRANCE VESTIBULES SHALL BE VISUALLY INSPECTED FOR PROPER OPERATION.	PRIOR TO FINAL CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	502.4.6; ASHRAE 90.1 – 5.4.3.4
IIB	MECHANICAL AND SERVICE WATER HEATING INSPECTIONS				
IIB3	HVAC, SERVICE WATER HEATING	EQUIPMENT SIZING, EFFICIENCIES 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.	PRIOR TO FINAL PLUMBING AND CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	503.2, 504.2, 504.7;
IIC	ELECTRICAL POWER AND LIGHTING INSPECTIONS				
IIC3	INTERIOR LIGHTING POWER	INSTALLED LIGHTING SHALL BE VERIFIED FOR COMPLIANCE WITH THE LIGHTING POWER ALLOWANCE BY VISUAL INSPECTION OF FIXTURES, LAMPS, BALLASTS AND RELEVANT TRANSFORMERS.	PRIOR TO FINAL ELECTRICAL AND CONSTRUCTION INSPECTION	APPROVED CONSTRUCTION DOCUMENTS	505.5; 1RCNY §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	505.6; 1RCNY §101-07(C)(3)(V)(C)4
IIC5	LIGHTING CONTROLS	EACH TYPE OF REQUIRED LIGHTING CONTROLS, INCLUDING: 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	505.2, 505.2.2.2;
OTHER INSPECTIONS AND MAINTENANCE					
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	303.3; 8.7.2



NEW YORK CITY DEPARTMENT OF
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PROJECT NAME:
HARPER ST. YARD

32-11 HARPER STREET,
QUEENS, NY 11368
CAPITAL PROJECT NUMBER
HWQF027C

Architect:
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Date:

Issue:

05.19.1075% SD

06.02.1080% SD

11.17.10100% Schematic Design

02.09.11100% Design Dev.

04.06.1175% CD

03.07.12100% CD

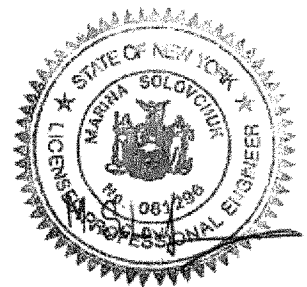
06.06.12100% CD - Revised

10.12.12**Bid Set**

Sheet title:
ENERGY CODE COMPLIANCE (SHEET 1 OF 2)

Scale: AS INDICATED

Seal and Signature:



Date:09.28.12

Project No.:0902

Dwg By:DG

Chk By:IM

Dwg No:

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EN-001.00

SYMBOL	DESCRIPTION
	STEAM TRAP
	GATE VALVE OS&Y
	VEHICLE EXHAUST TO BE REPLACED WITH NEW HOSE, NOZZLE AND RECOIL HOSE REEL
	GATE VALVE LEVER
	GATE VALVE

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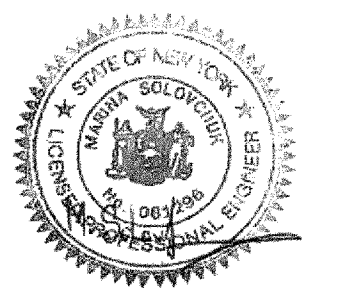
Code Consultant:
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NEW YORK, NY 10007
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04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**FIRST FLOOR
MECHANICAL PART
PLAN "C & D"**

Scale: AS INDICATED

Seal and Signature:

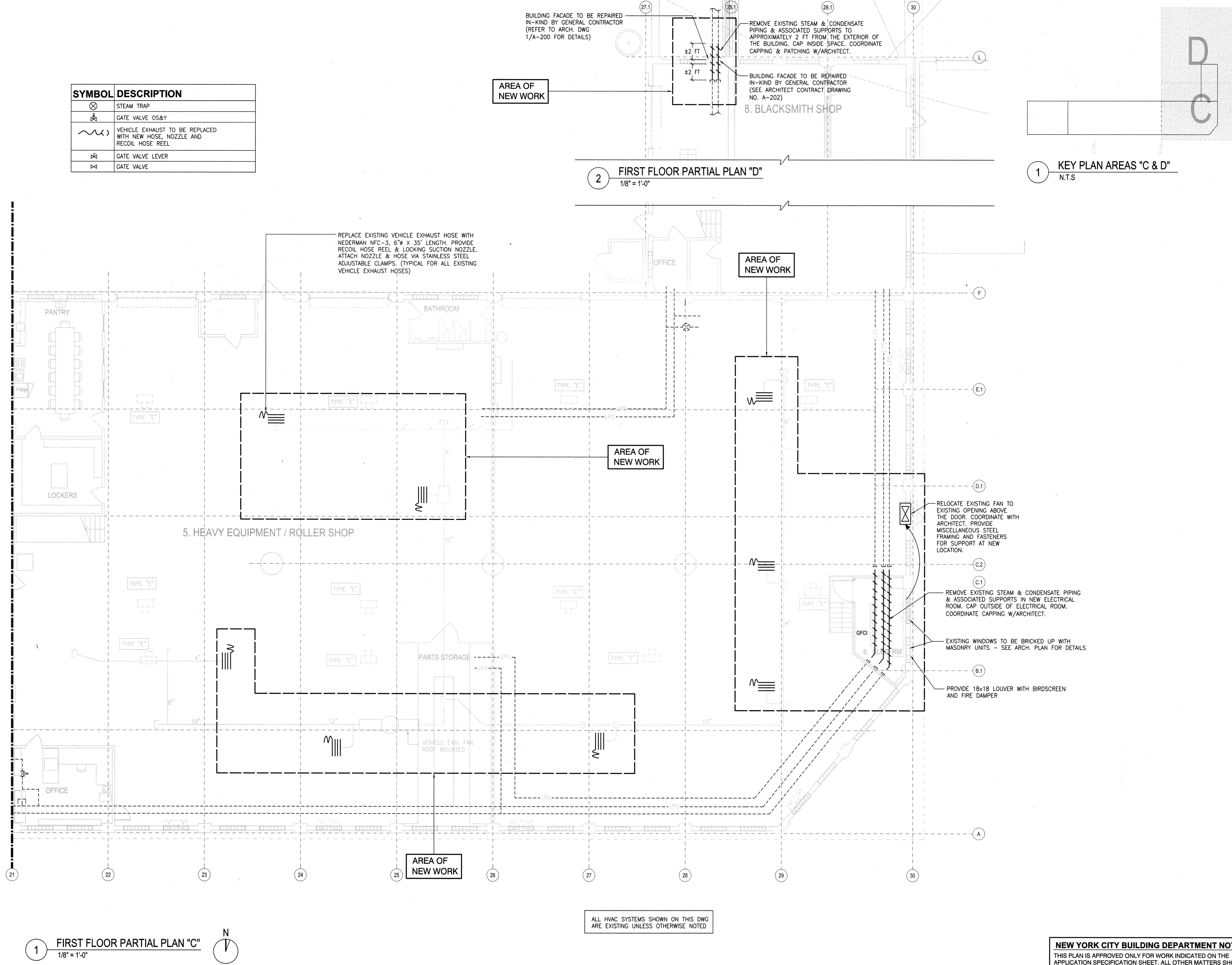


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Chk By: IM

Dwg No:

M-103.00

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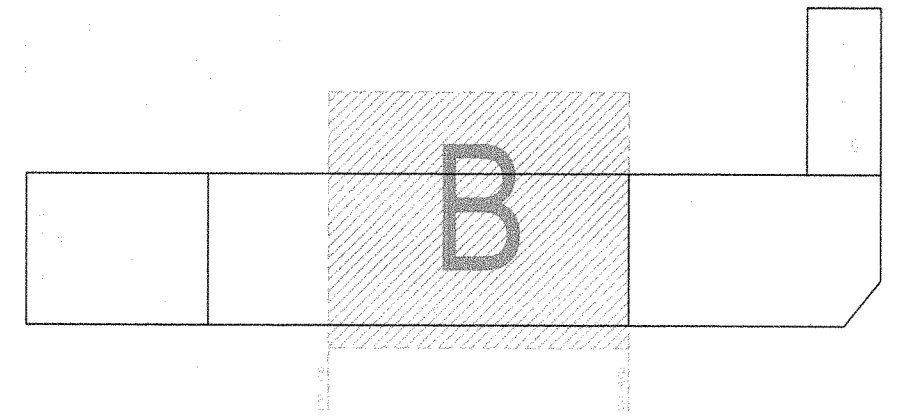
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1/8" = 1'-0"

2 FIRST FLOOR PARTIAL PLAN "D"
1/8" = 1'-0"

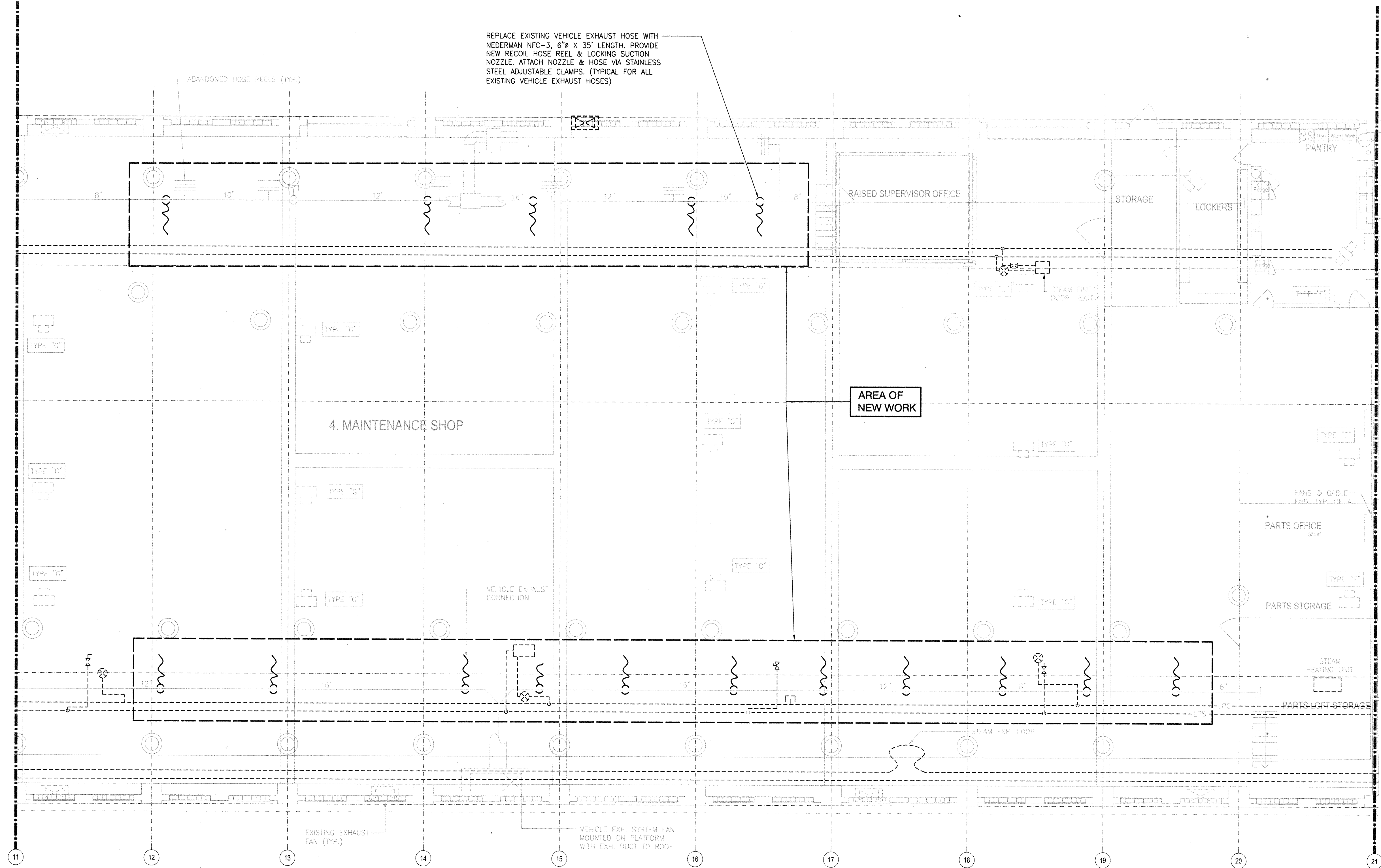
1 KEY PLAN AREAS "C & D"
N.T.S

ALL HVAC SYSTEMS SHOWN ON THIS DWG ARE EXISTING UNLESS OTHERWISE NOTED

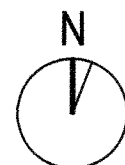
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	GATE VALVE OS&Y
	VEHICLE EXHAUST TO BE REPLACED WITH NEW HOSE, NOZZLE AND RECOIL HOSE REEL
	GATE VALVE LEVER
	GATE VALVE



1 KEY PLAN AREA "B"
N.T.S.



1 FIRST FLOOR PARTIAL PLAN "B"
1/8" = 1'-0"



ALL HVAC SYSTEMS SHOWN ON THIS DWG
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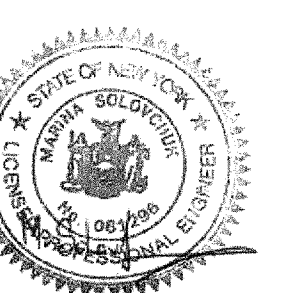
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05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**FIRST FLOOR
MECHANICAL PART
PLAN "B"**

Scale: AS INDICATED

Seal and Signature:

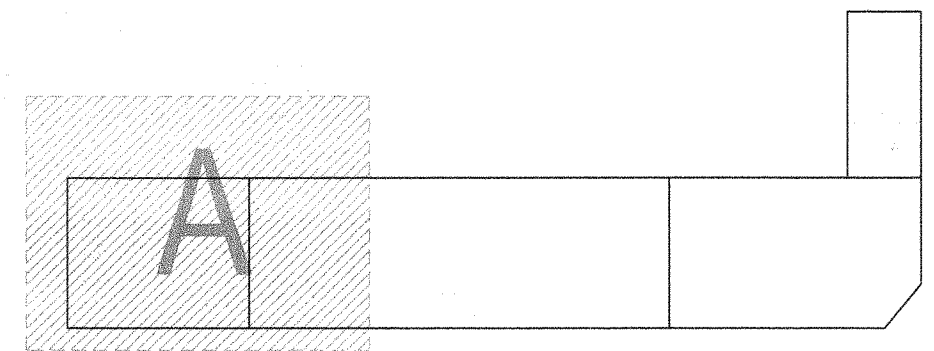


Date: 09.28.12
Project No.: 0902
Dwg By: DG
Chk By: IM

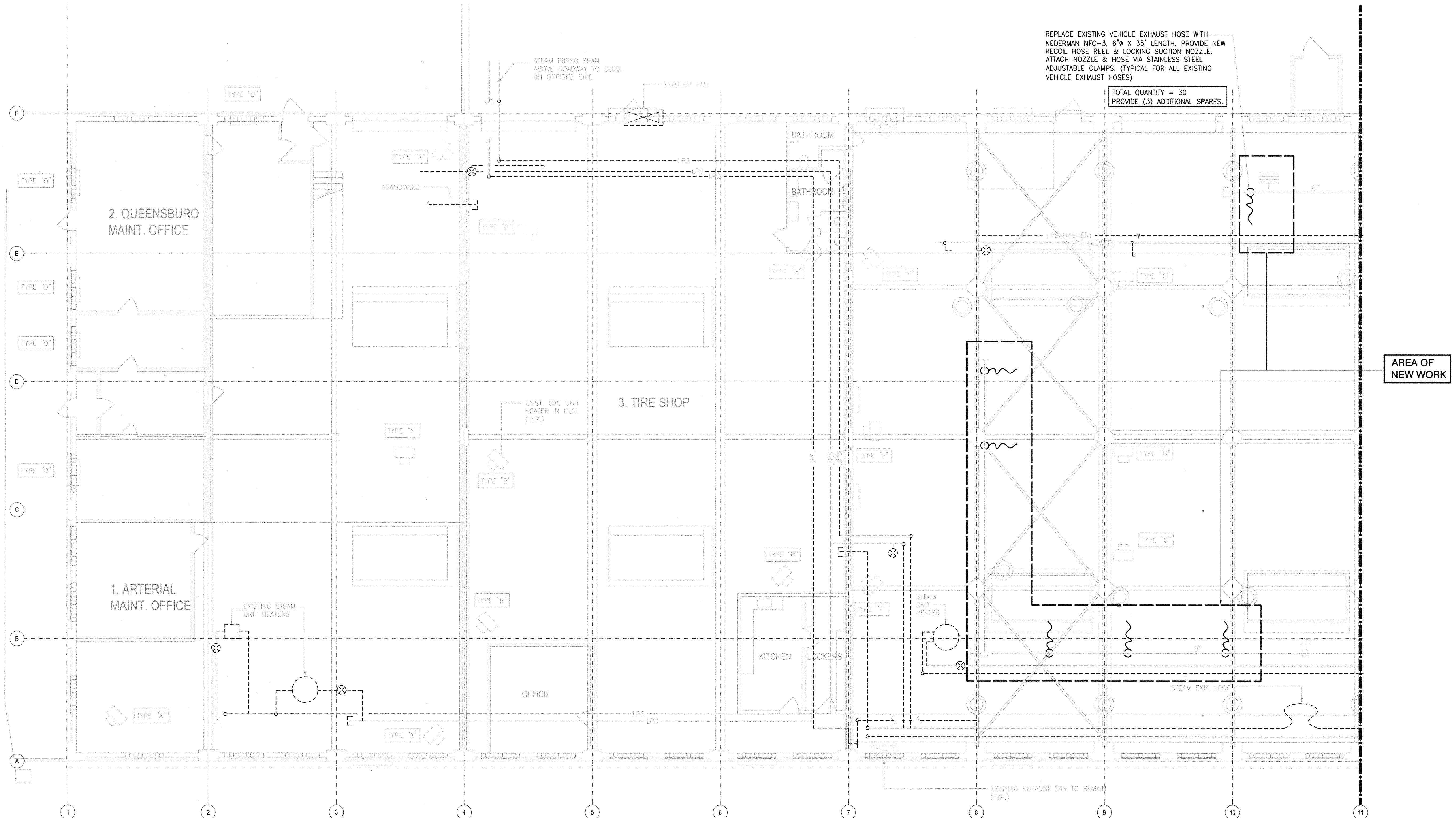
Dwg No:

M-102.00

SYMBOL	DESCRIPTION
	STEAM TRAP
	GATE VALVE OS&Y
	VEHICLE EXHAUST TO BE REPLACED WITH NEW HOSE, NOZZLE AND RECOIL HOSE REEL
	GATE VALVE LEVER
	GATE VALVE



1 KEY PLAN AREA "A"
N.T.S.



1 FIRST FLOOR PARTIAL PLAN "A"
1/8" = 1'-0"



ALL HVAC SYSTEMS SHOWN ON THIS DWG ARE EXISTING UNLESS OTHERWISE NOTED

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CAPITAL PROJECT NUMBER
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nARCHITECTS, PLLC
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Environmental & Fuel Consultant:
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BUFFALO, NY 14203
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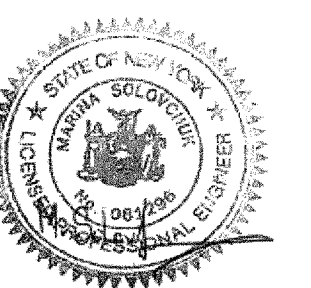
Code Consultant:
J CALLAHAN CONSULTING INC.
299 BROADWAY SUITE 1420
NEW YORK, NY 10007
T: 212.766.2115 F: 212.766.2787

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PLAN "A"**

Scale: AS INDICATED

Seal and Signature:



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Project No.: 0902

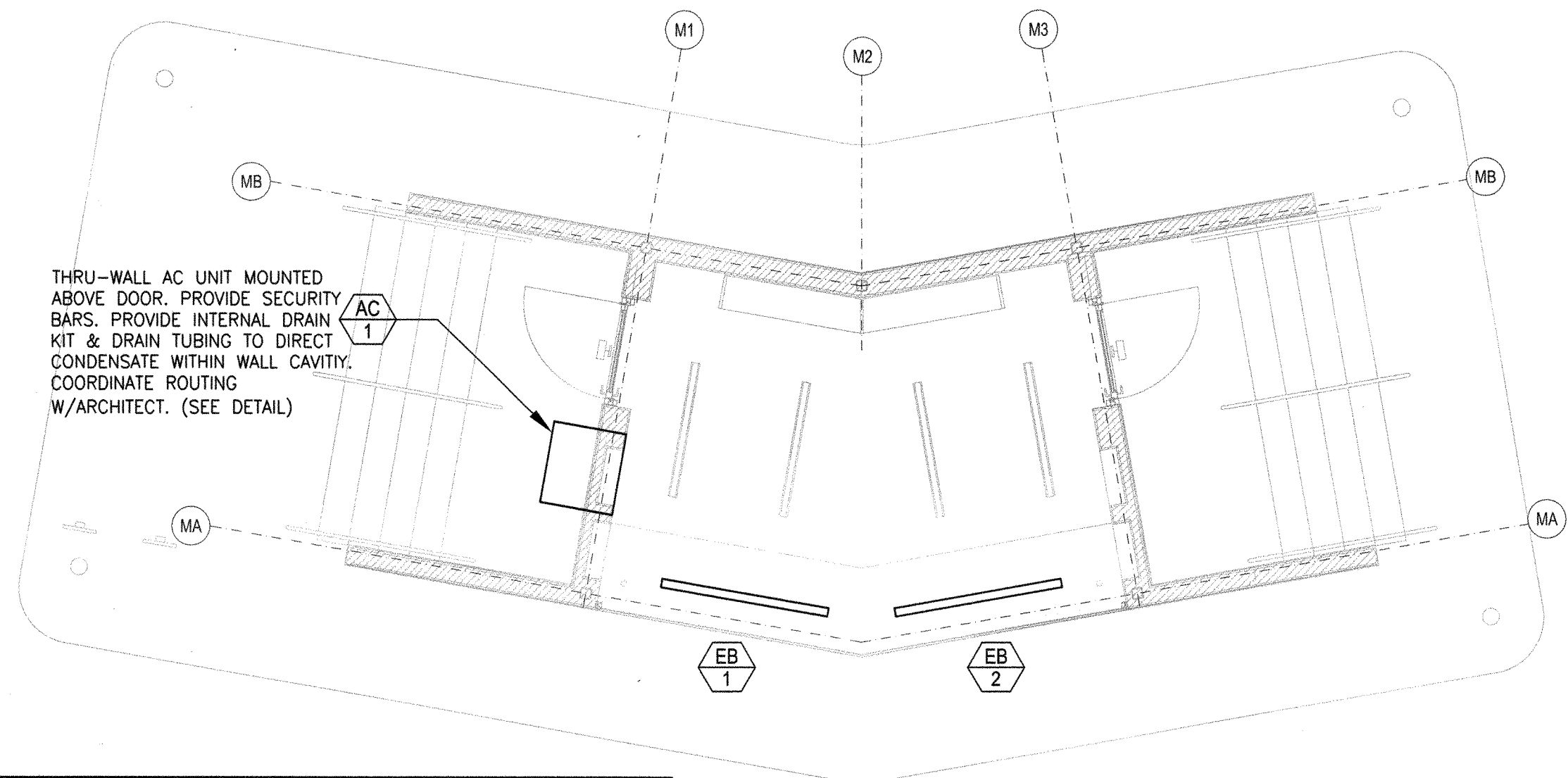
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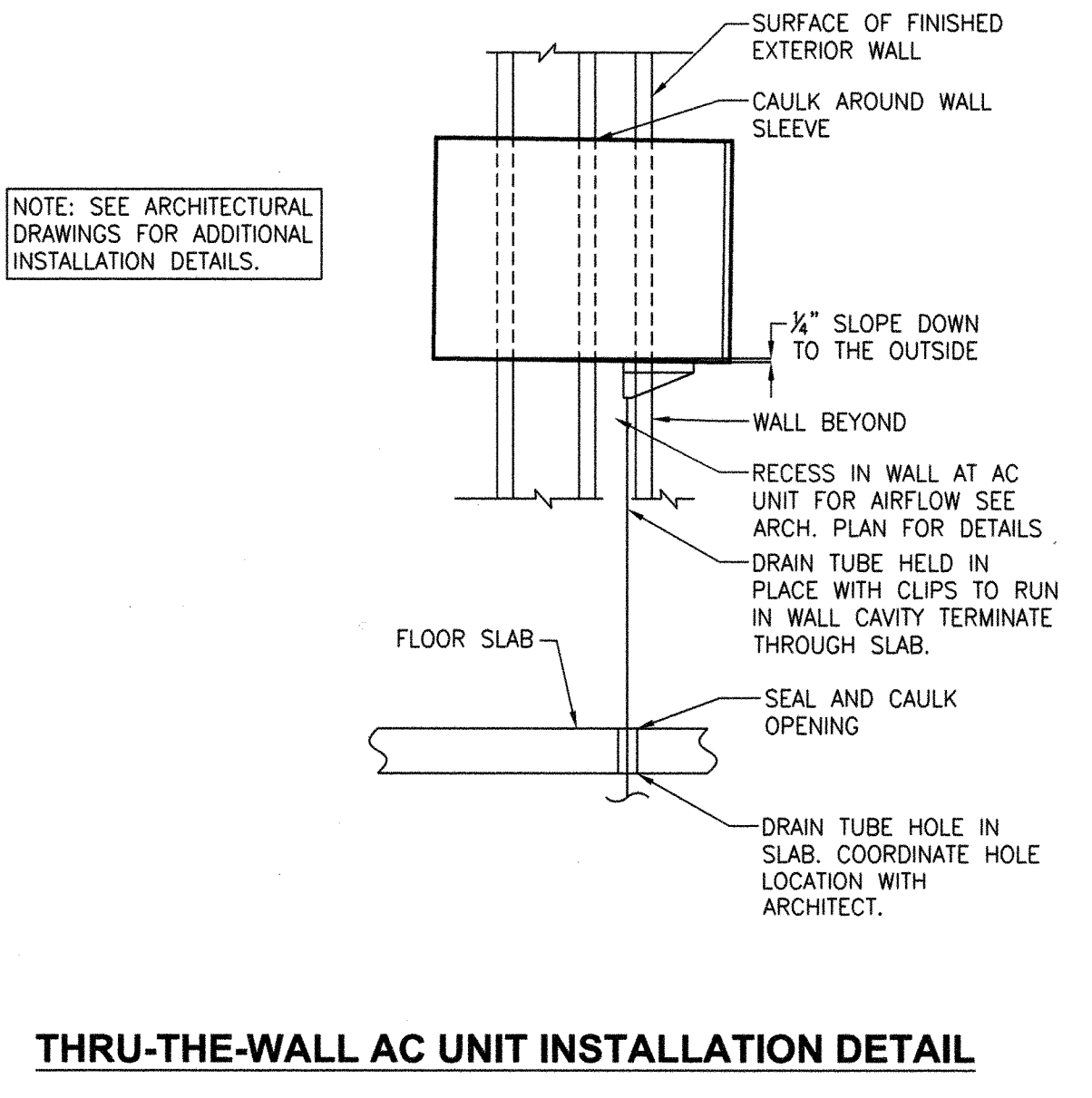
Dwg No:

M-101.00

8 MONITORING BOOTH

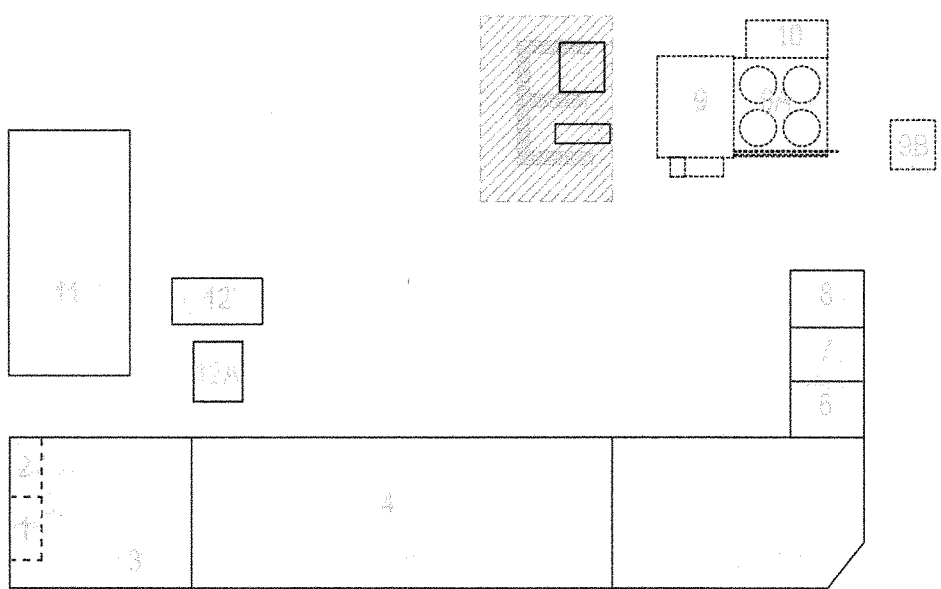
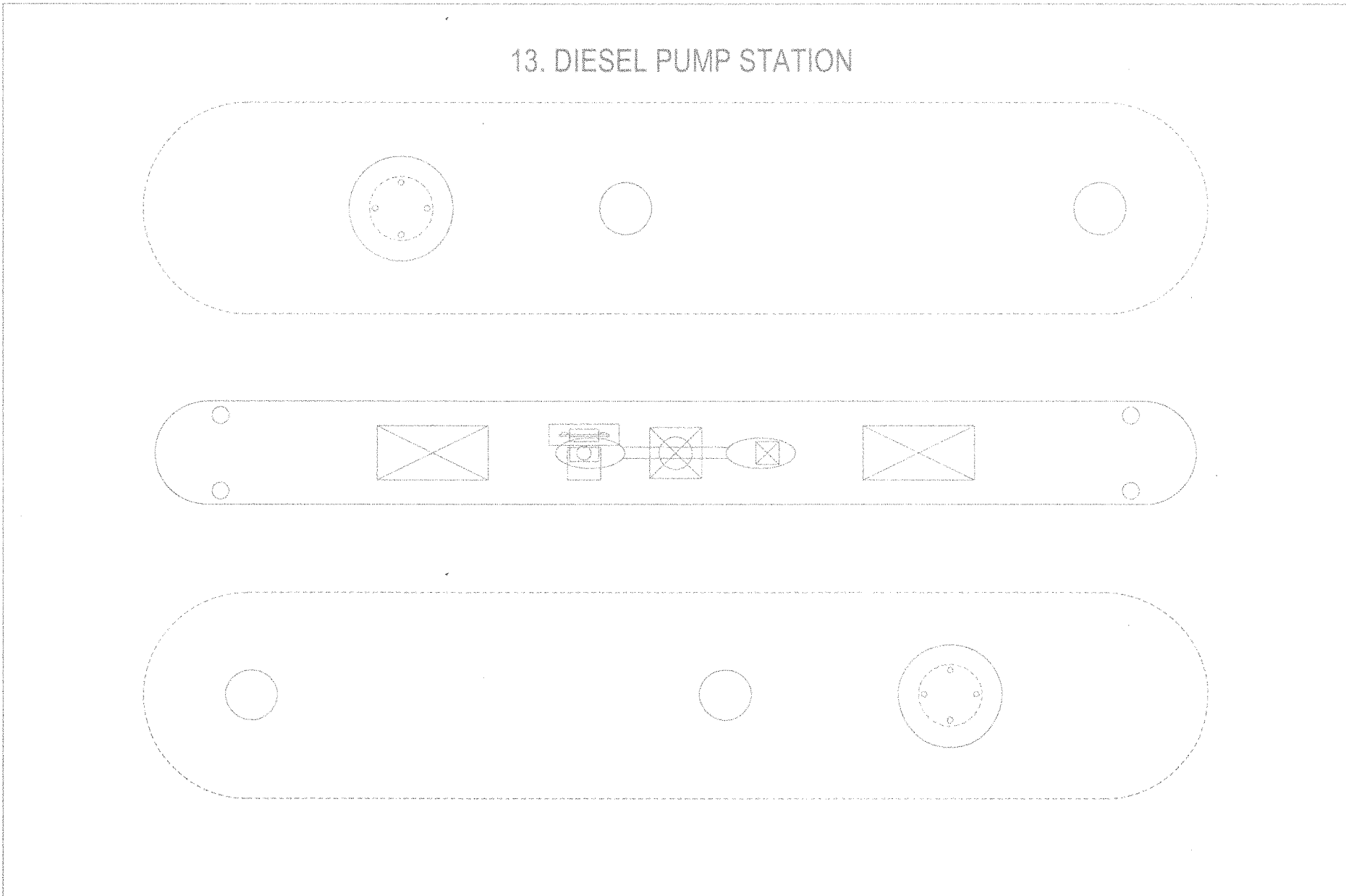


MONITORING BOOTH PART PLAN




THRU-THE-WALL AC UNIT INSTALLATION DETAIL

13. DIESEL PUMP STATION



1 KEY PLAN AREA "E"
N.T.S



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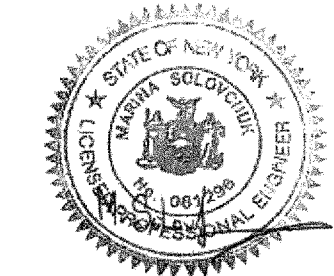
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M-100.00

MISCELLANEOUS SYMBOLS

SYMBOL	DESCRIPTION
	EQUIPMENT DESIGNATION EQUIPMENT TYPE EQUIPMENT TAG NUMBER
	CONNECT NEW WORK TO EXISTING
	DISCONNECT & CAP EXISTING WORK
	SECTION SECTION # DRAWING LOCATION
	REVISION NUMBER
	THERMOSTAT AND WIRING
	TEMPERATURE SENSOR
	SMOKE DETECTOR

HVAC ABBREVIATIONS

ABBREVIATIONS	DESCRIPTION
A	AMPERES
AC	AIR CONDITIONING
CFM	CUBIC FEET PER MINUTE
DHW	DOMESTIC HOT WATER
DWG	DRAWING
FT	FEET
GPM	GALLONS PER MINUTE
H	HEIGHT
IN	INCH OR INCHES
KW	KILOWATT
L	LENGTH
LBS	POUNDS
NTS	NOT TO SCALE
SS	STAINLESS STEEL
TEMP	TEMPERATURE
TYP	TYPICAL
V	VOLTS
W	WIDTH

GENERAL NOTES

- CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS.
- ALL MOTOR STARTERS LOCATED OUTDOORS OR EXPOSED TO WET OR DAMP CONDITIONS SHALL BE NEMA TYPE 3R.
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIAL INSPECTION AS PART OF THIS CONTRACT. MECHANICAL CONTRACTOR SHALL PROVIDE THE NAME OF A LICENSED PROFESSIONAL ENGINEER TO ARCHITECT WHEN AWARDED THE CONTRACT.

BUILDING DEPARTMENT NOTES - HVAC

NYC BUILDING DEPT. NOTES

GENERAL NOTES

- ALL WORK AND COMPONENTS SHOWN ON THESE PLANS COMPLY WITH THE NEW YORK BUILDING LAWS (LL 33/2008) AS AMENDED TO THIS DATE.

SPECIAL INSPECTIONS - MECHANICAL

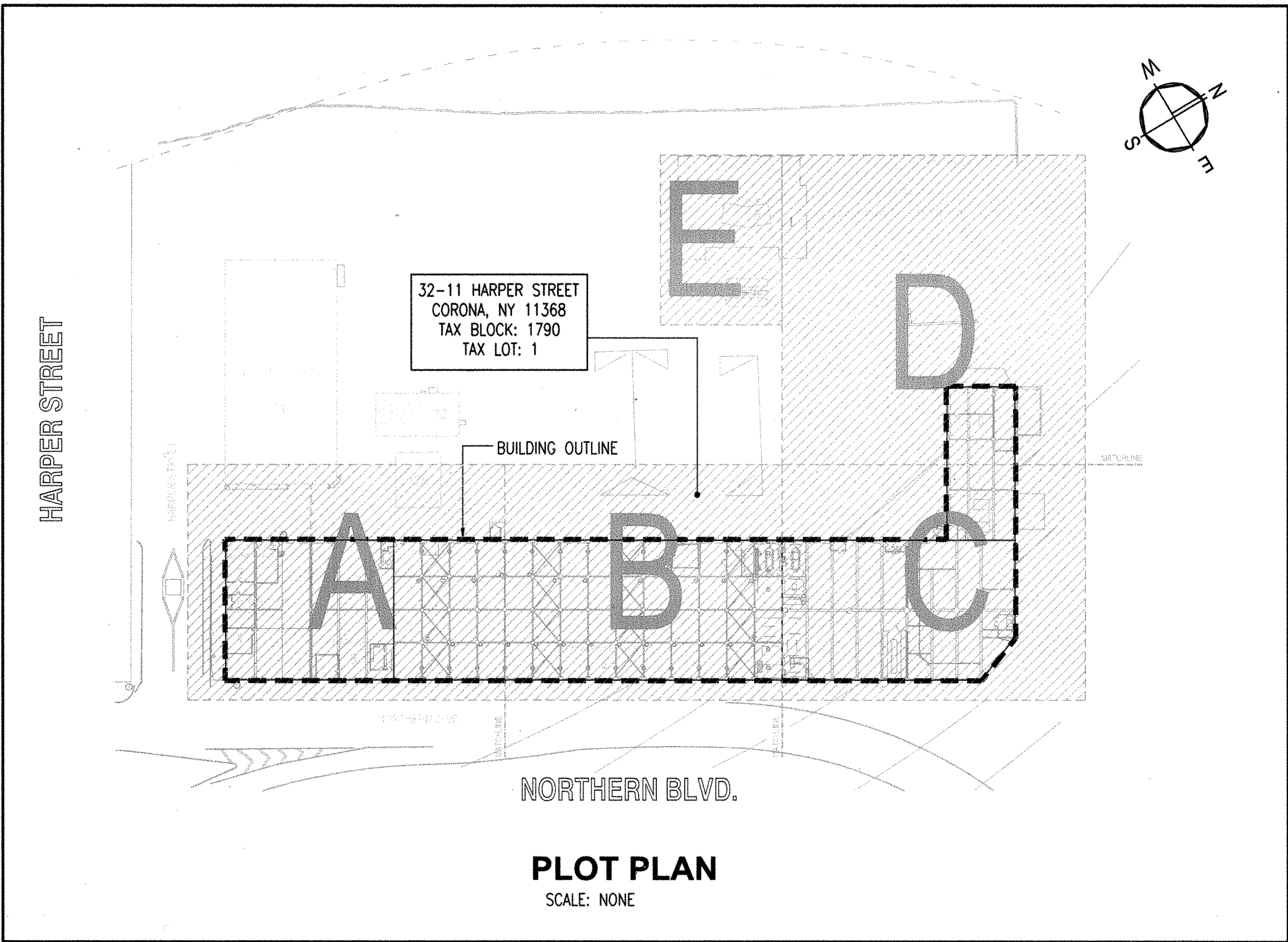
THE FOLLOWING SPECIAL INSPECTIONS ARE REQUIRED AS DESCRIBED IN THE NEW YORK CITY BUILDING CODE:

SPECIAL INSPECTIONS:

MECHANICAL SYSTEMS BC 1704.15
HEATING SYSTEMS BC 1704.23

ENERGY COMPLIANCE STATEMENT

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.



THRU - THE - WALL AC UNIT SCHEDULE

TAG	MANUFACTURER	MODEL	LOCATION	CFM	TOTAL COOLING (BTUH)	TOTAL HEATING (WATTS)	ELECTRICAL DATA		EER	SEER
							V / Ph / Hz	AMPS		
AC-1	FRIEDRICH	EM18M34	MONITORING BOOTH	310	13000	3500	208/1/60	19.5	10.7	12.0

- NOTE:
- PROVIDE WALL SLEEVE, REMOTE CONTROL & LOW VOLTAGE (24V) REMOTE WALL THERMOSTAT.
 - UNIT SHALL BE PROVIDED WITH PREMIUM CARBON FILTER, MERV 6 RATING AND ADSORBING ODORS AND VOC IN CONJUNCTION WITH STANDARD FILTER. PROVIDE ADDITIONAL PACK (3 FILTER) OF SPARE CARBON FILTERS.
 - PROVIDE INSECT BARRIER.
 - PROVIDE ALUMINUM OUTSIDE GRILLE.
 - COORDINATE POWER PLUS (NEMA# 6-30P) WITH ELECTRICAL CONTRACTOR.
 - REFRIGERANT SHALL BE R-410A.
 - PROVIDE INTERNAL DRAIN KIT. PROVIDE BLACK HEAVY DUTY TUBING FOR DIRECT CONDENSATE DRAINAGE DOWN.

ELECTRIC BASEBOARD HEATER SCHEDULE

TAG	MANUFACTURER & MODEL NO.	LOCATION	HTG CAP WATTS	LENGTH FT	ELECTRICAL DATA	
					AMPS	V / Ph /Hz
EB-1.2	QMARK QMKC2515W	MONITORING BOOTH	1250	5	10.4	120/1/60

- NOTE:
- PROVIDE THERMOSTAT.

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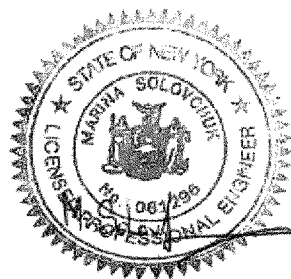
J CALLAHAN CONSULTING INC.
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**MECHANICAL SYMBOLS
ABBREVIATIONS,
SCHEDULES &
GENERAL NOTES**
Scale: AS INDICATED

Seal and Signature:



Date: 09.28.12

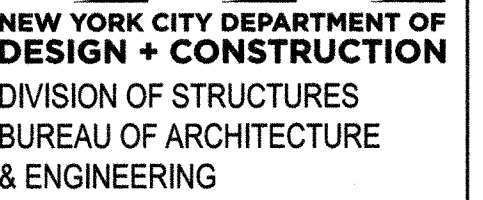
Project No.: 0902

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Chk By: IM

Dwg No:

M-001.00



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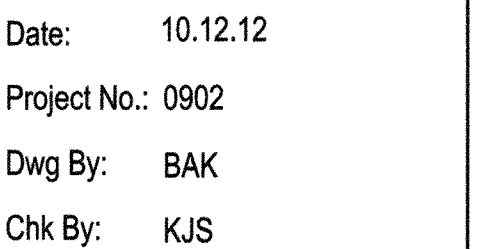
J CALLAHAN CONSULTING INC.
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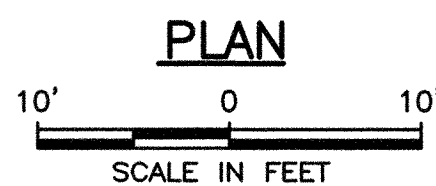
PROPOSED
RESTORATION PLAN

Scale: AS SHOWN

Seal and Signature: _____



Dwg No:
X-118.00

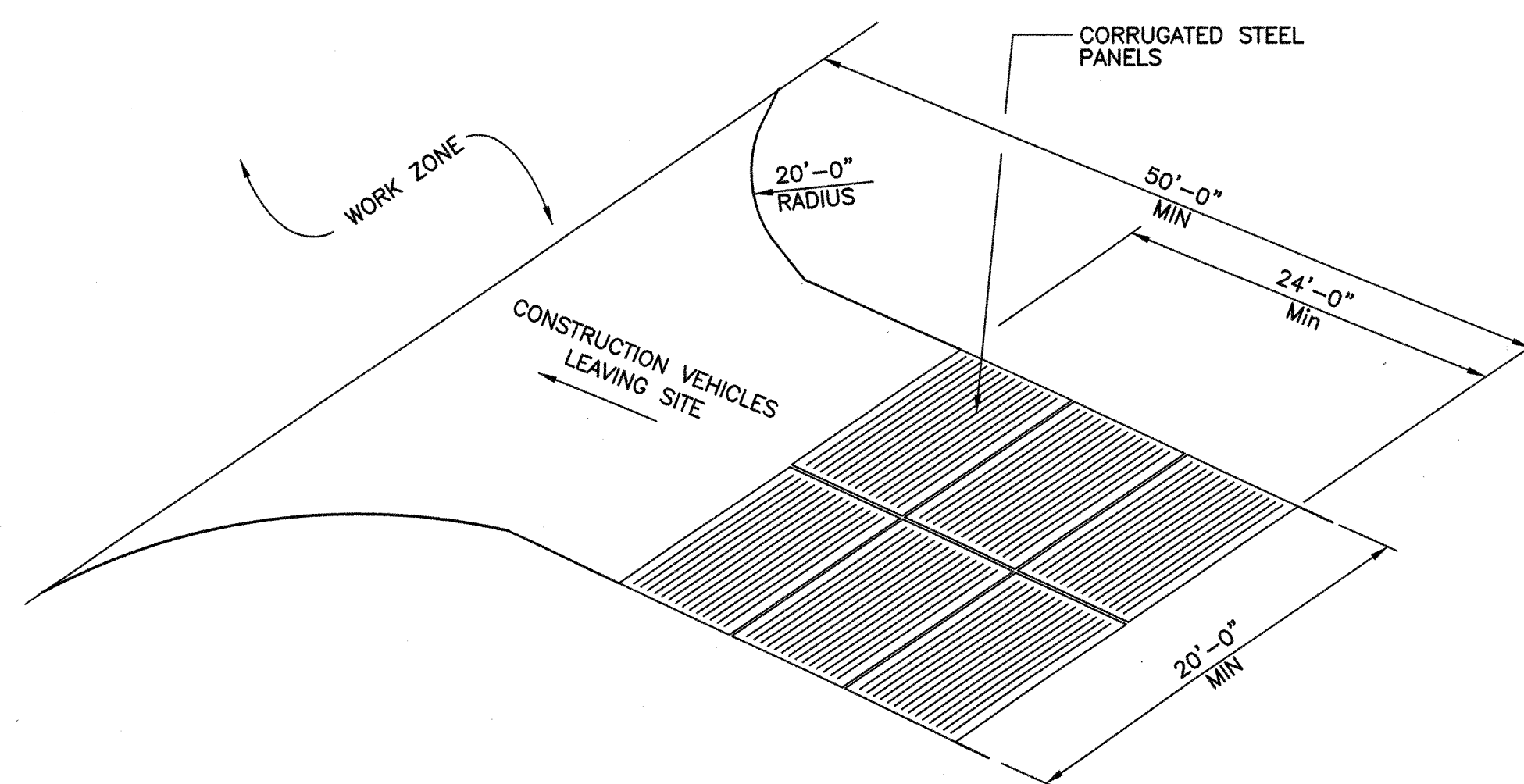


- NOTES:**
1. THE CONTRACTOR SHALL INSTALL EXPANSION JOINT AND ASPHALT PAVEMENT SECTION BETWEEN NEW DIESEL FUELING STATION TOP SLAB AND SURROUNDING EXISTING PAVEMENT. THE CONTRACTOR SHALL ALSO INSTALL ASPHALT PAVEMENT SECTION WHERE THE EXISTING DIESEL FUELING STATION IS LOCATED AFTER THE TANKS AND DISPENSER ISLAND HAVE BEEN REMOVED AND THE EXCAVATION BACKFILLED.
 2. THE CONTRACTOR SHALL PLACE SUB-BASE AND ASPHALT PAVEMENT SECTION TO ELEVATION THAT WILL ACHIEVE THE FOLLOWING RESTORATION PROJECT OBJECTIVES:
 - A. TIE INTO SURROUNDING EXISTING PAVEMENT.
 - B. PROMOTE POSITIVE STORMWATER FLOW AND AVOID PONDING AND MAINTAIN EXISTING DRAINAGE PATTERNS ON-SITE.
 3. THE CONTRACTOR SHALL SUBMIT A PAVEMENT RESTORATION PLAN TO THE CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO RESTORATION.
 4. THE CONTRACTOR SHALL REMOVE ALL EROSION AND SEDIMENT CONTROL MEASURES AS WELL AS ALL EQUIPMENT, MATERIALS, AND DEBRIS DURING SITE RESTORATION.
 5. ALL SOIL AND DEBRIS EXCAVATED DURING DEMOLITION WORK INCLUDING TRENCHING ACTIVITIES SHALL BE CONSIDERED "CONTAMINATED HISTORIC FILL" AND SHALL BE DISPOSED OF AT A LICENSED/PERMITTED DISPOSAL FACILITY.
 6. THE CONTRACTOR SHALL REPAIR/REPLACE ANY DOT FACILITY DAMAGED DURING THE COURSE OF CONSTRUCTION TO A CONDITION EQUAL TO OR BETTER AT NO COST TO THE OWNER.
 7. RESTORATION AREAS ASSOCIATED WITH THE MONITORING BUILDING AND TRENCHING REQUIRED FOR ELECTRICAL AND LIGHT STANDARD INSTALLATION ARE SHOWN ON DRAWING A-103.



NOTES:

1. MAXIMUM STOCKPILE HEIGHT IS 35 FEET.
 2. STOCKPILE SLOPES MUST BE NO STEEPER THAN 2H:1V.
 3. STOCKPILE LOCATIONS SHOWN ON THE PLANS ARE ILLUSTRATIVE AND MAY VARY IN LOCATION AS CONSTRUCTION PROCEEDS.
 4. STOCKPILE IS TO BE STABILIZED IN ACCORDANCE WITH DETAIL THIS SHEET T22
- X-117.00 X-117.00

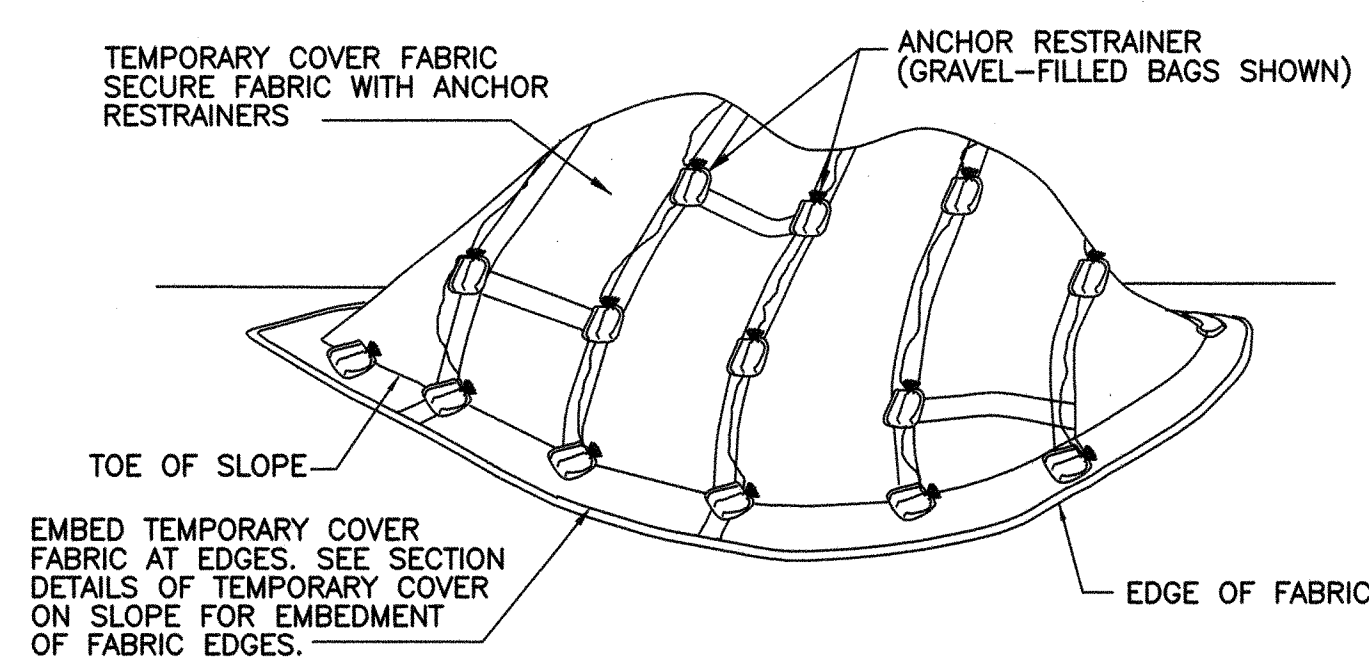


PERSPECTIVE

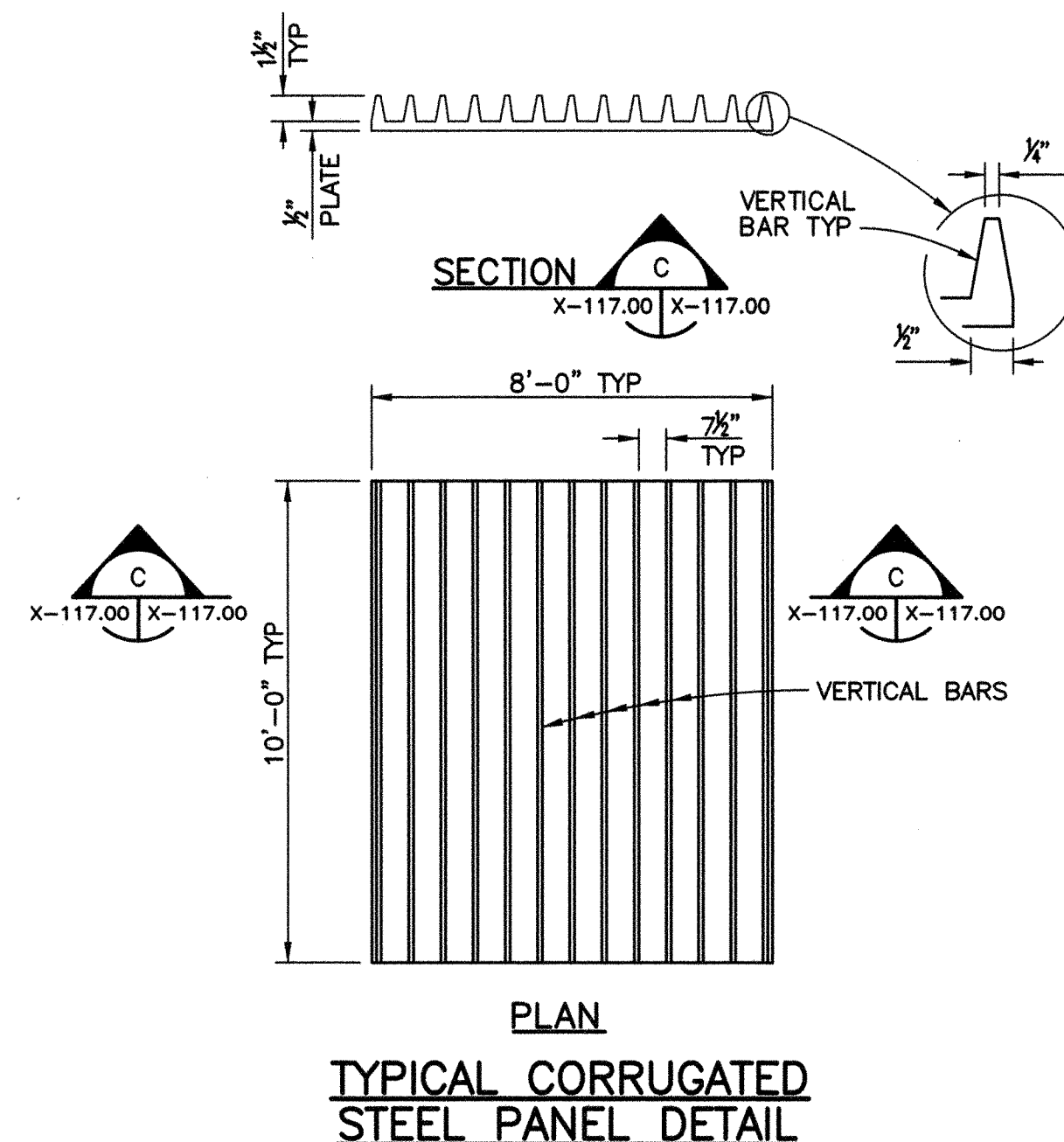
ACCESS DRIVE TRACK CONTROL T20

NOT TO SCALE

X-115.00 | X-117.00



TEMPORARY COVER ON STOCKPILE T22
X-117.00 | X-117.00



NOTES:

1. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.
2. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL BASED ON FIELD LOCATION AND CONDITIONS.
3. SECURE THE ENDS OF THE APRON FOR THE PREFABRICATED DRAINAGE STRUCTURE INLET PROTECTION WITH STAPLES AS DETAILED IN THE PLAN VIEW OR AS RECOMMENDED BY THE MANUFACTURER'S LITERATURE.
4. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) DAYS, AFTER EACH RAINFALL OF 1/2" OR MORE WITHIN A 24 HOUR PERIOD, OR DAILY DURING PROLONGED RAINFALL. MEASURES SHALL BE CLEANED AND REPAIRED AS REQUIRED.
5. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
6. MAINTENANCE SHALL INCLUDE REPAIR AND RE-BUILDING INLET PROTECTION AS NEEDED TO ENSURE THAT IT FUNCTIONS AS ORIGINALLY INTENDED.
7. INLET PROTECTION - SHALL BE INSTALLED AT DRAINAGE LOW POINTS AS SHOWN ON THE PLANS AND AS DETERMINED BY THE ENGINEER.



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**EROSION AND
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CONTROL DETAILS**

Scale: AS SHOWN

Seal and Signature: _____



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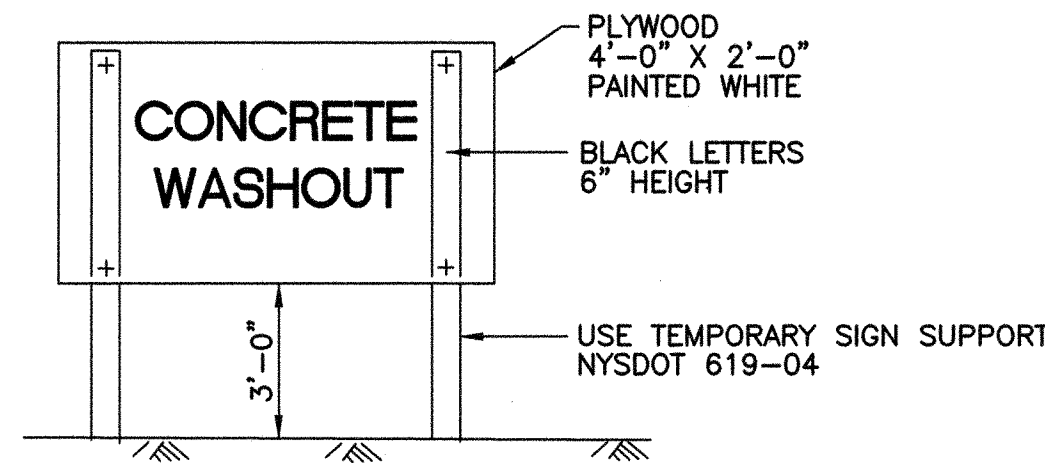
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Chk By: KJS

Dwg No:

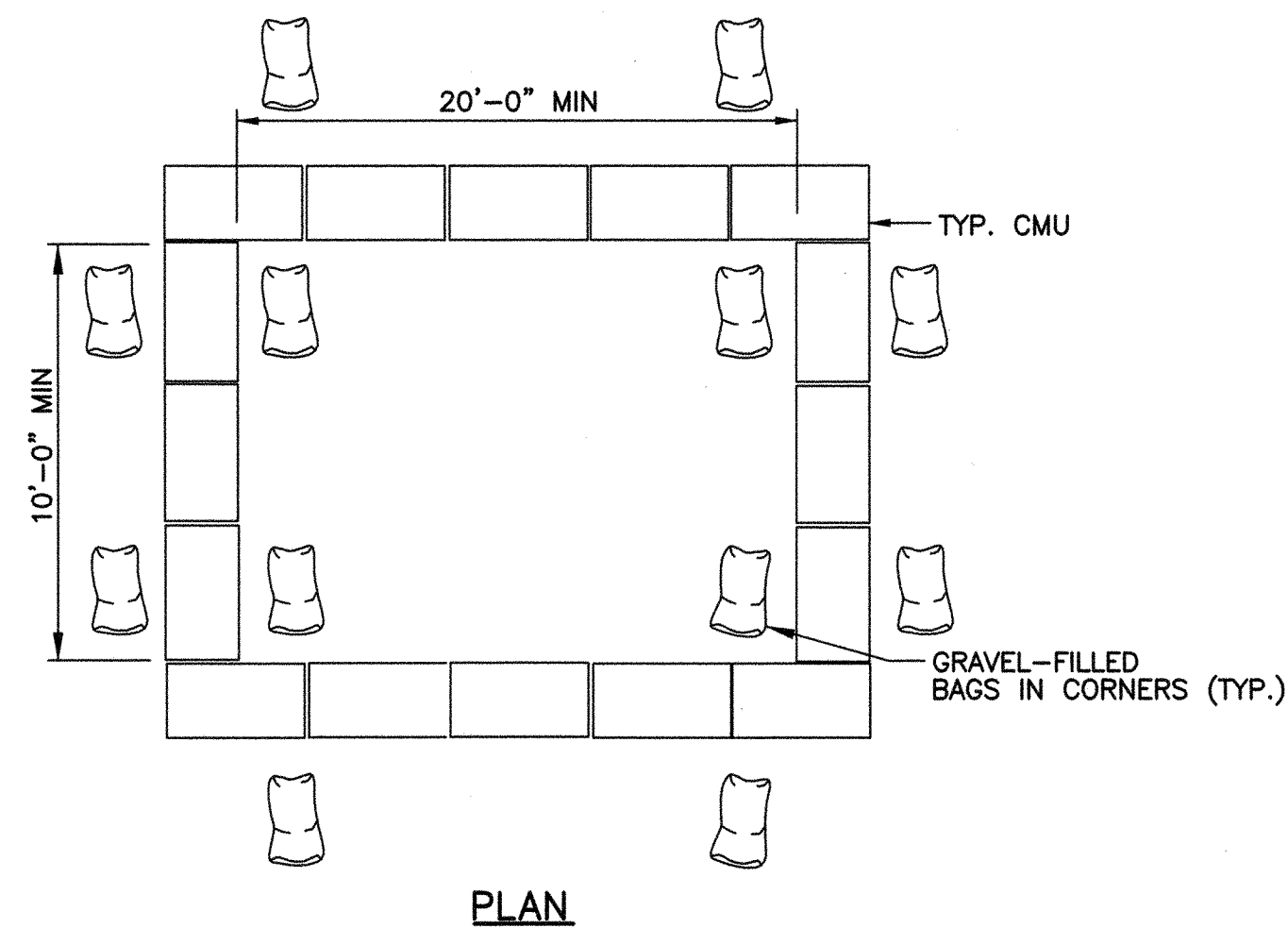
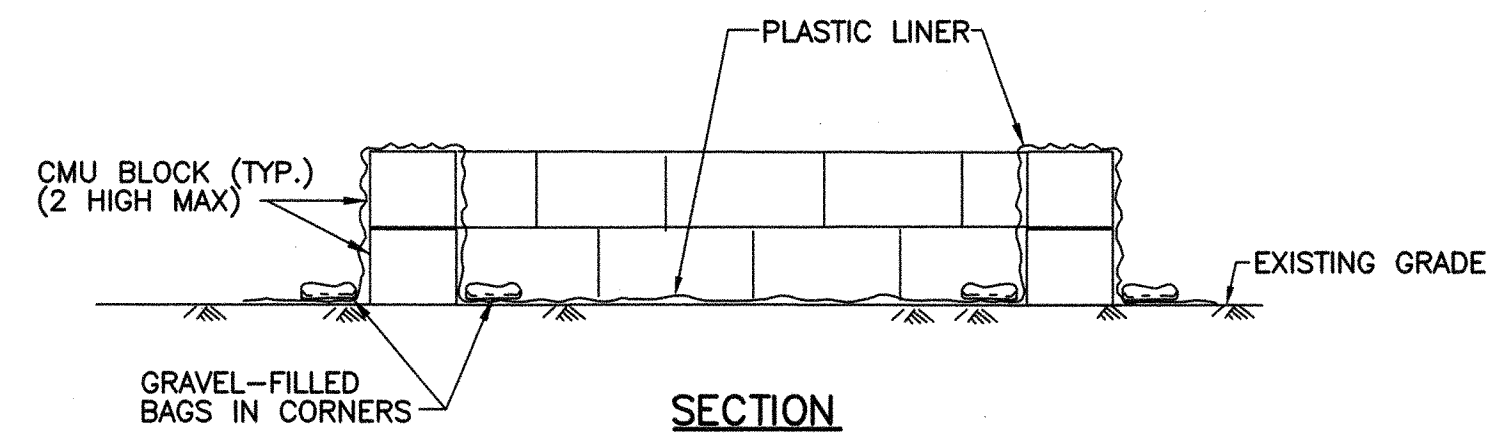
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NOTES:

1. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED NEAR THE TEMPORARY CONCRETE WASHOUT FACILITY.

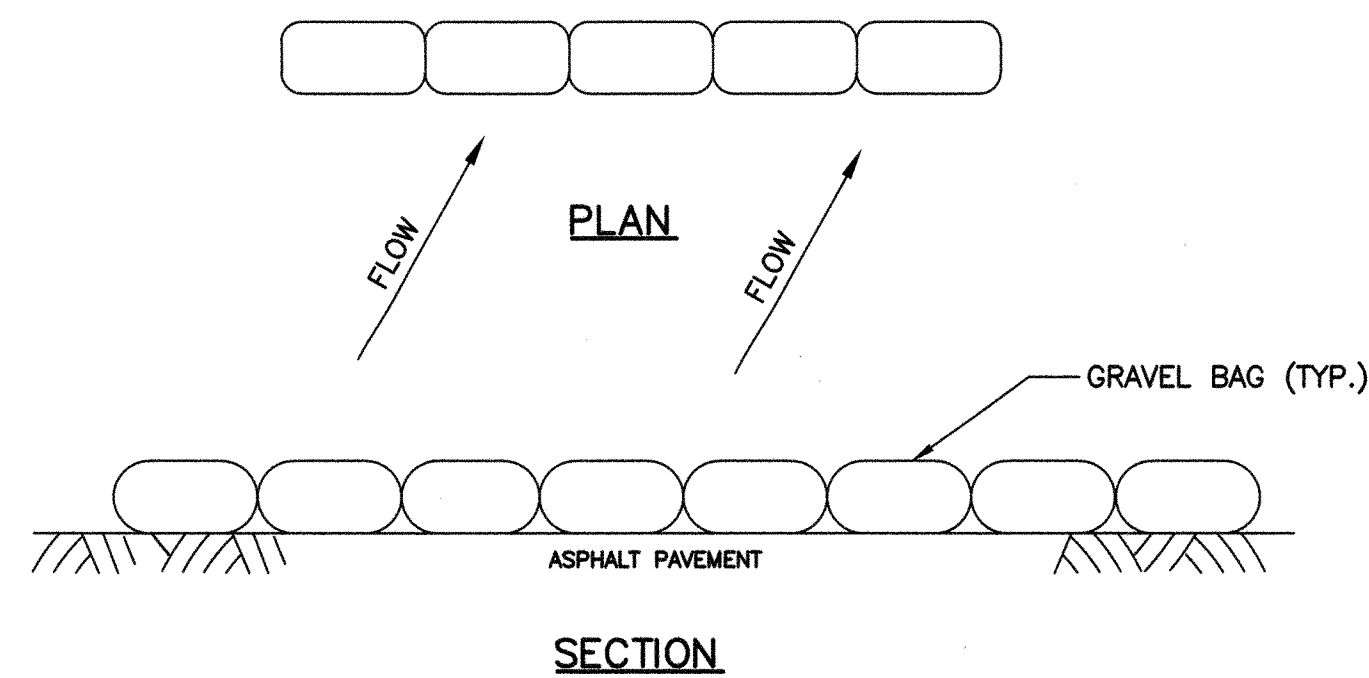
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SIGN DETAIL**



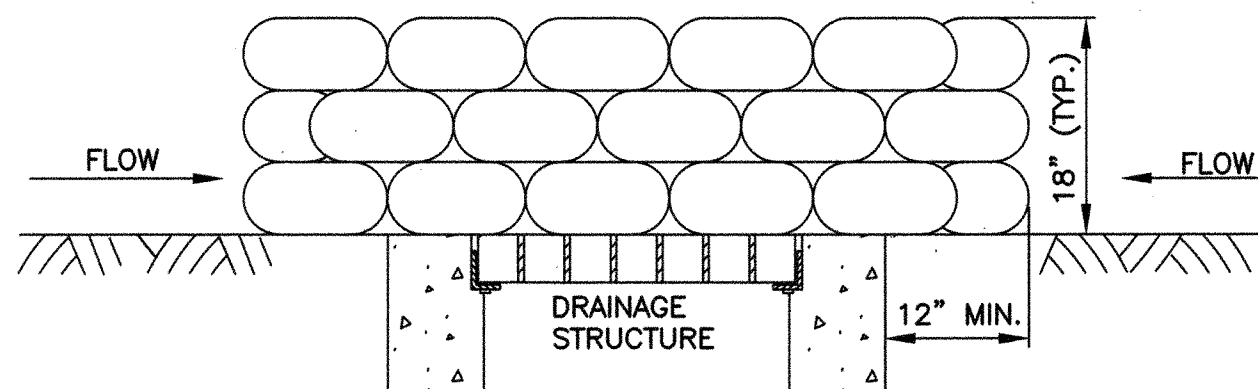
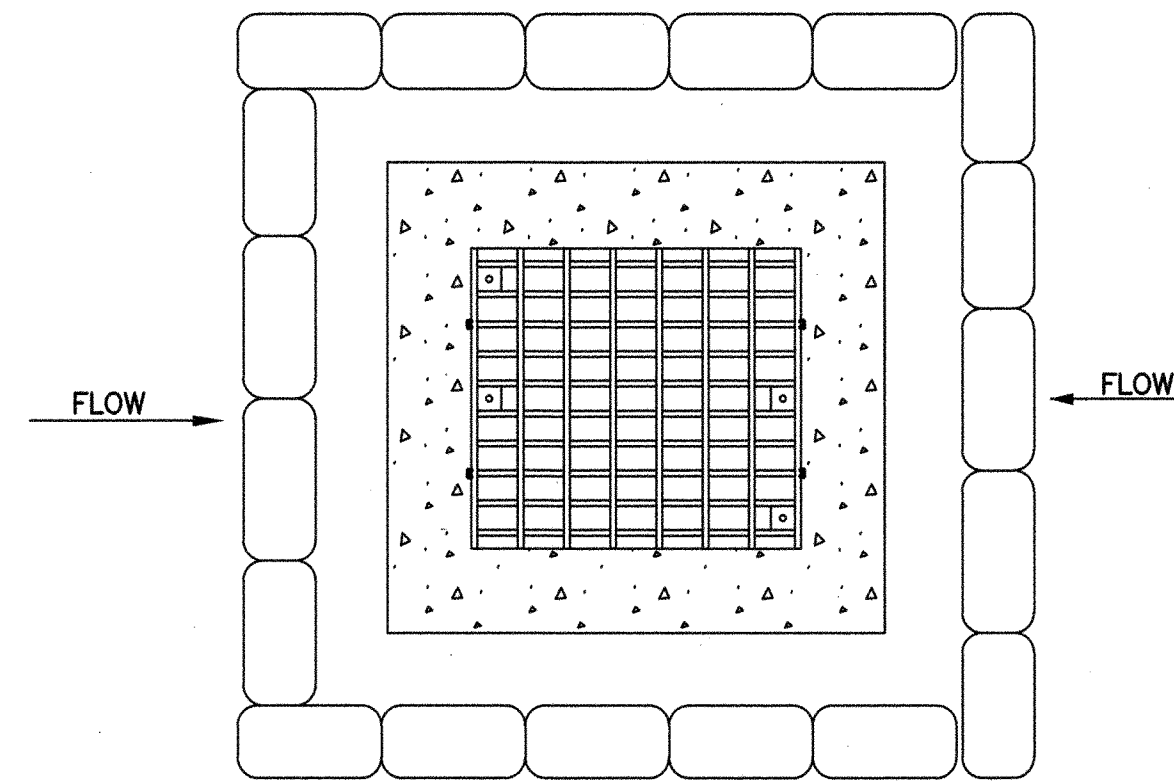
NOTE:

1. PLASTIC LINER SHALL BE ANCHORED WITH GRAVEL-FILLED BAGS IN A CONFIGURATION SIMILAR AS DEPICTED. THE GRAVEL BAGS SHALL BE WEIGHTED TO PREVENT MOVEMENT.

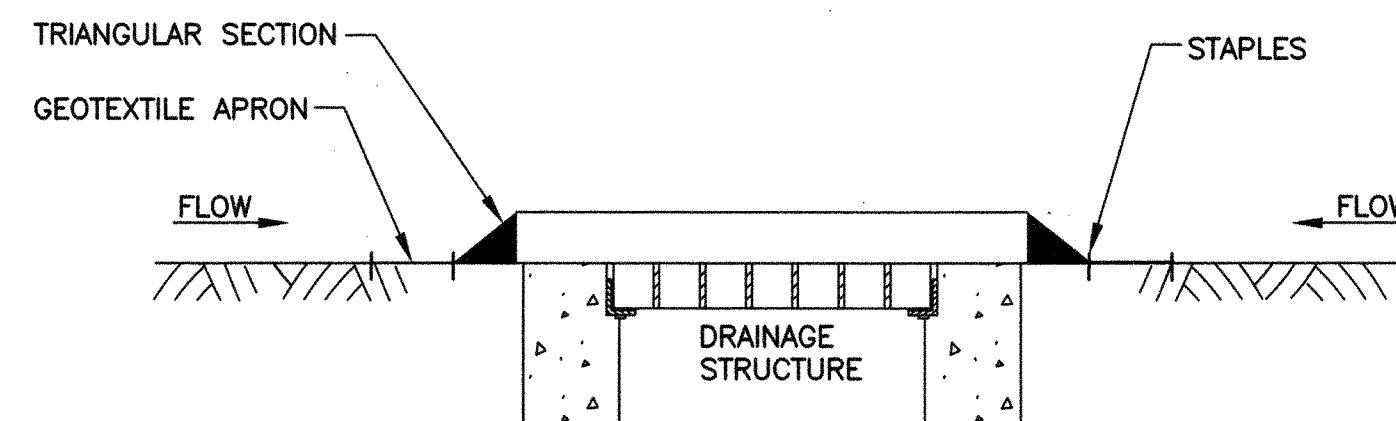
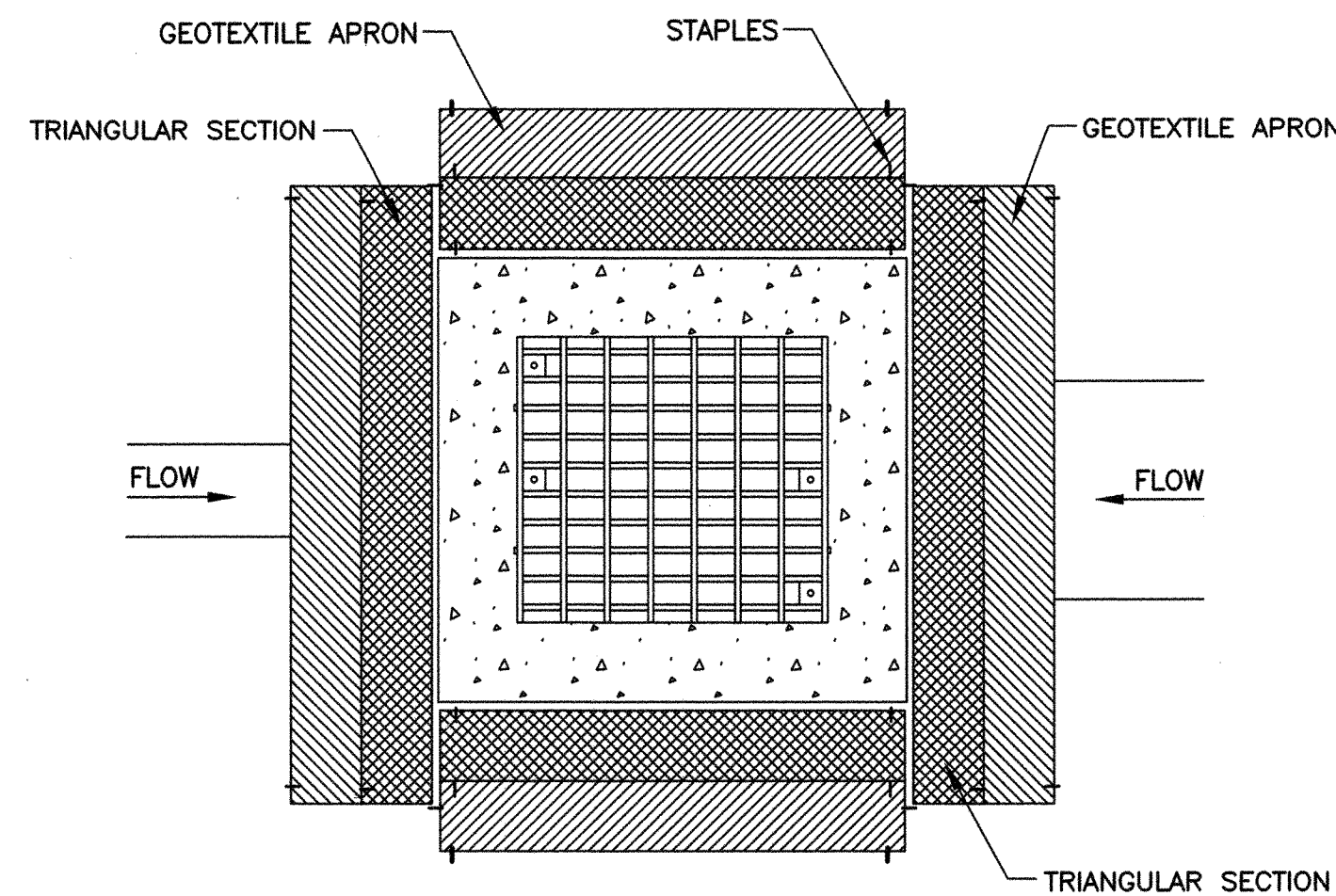
TEMPORARY CONCRETE WASHOUT FACILITY T16
NOT TO SCALE X-115.00 X-116.00



**PERIMETER PROTECTION - TEMPORARY
(GRAVEL BAG)** T17
NOT TO SCALE X-115.00 X-116.00



**DRAINAGE STRUCTURE INLET
PROTECTION - TEMPORARY
(GRAVEL BAG)** T18
NOT TO SCALE X-115.00 X-116.00



**DRAINAGE STRUCTURE INLET
PROTECTION - TEMPORARY
(PREFABRICATED)** T19
NOT TO SCALE X-115.00 X-116.00

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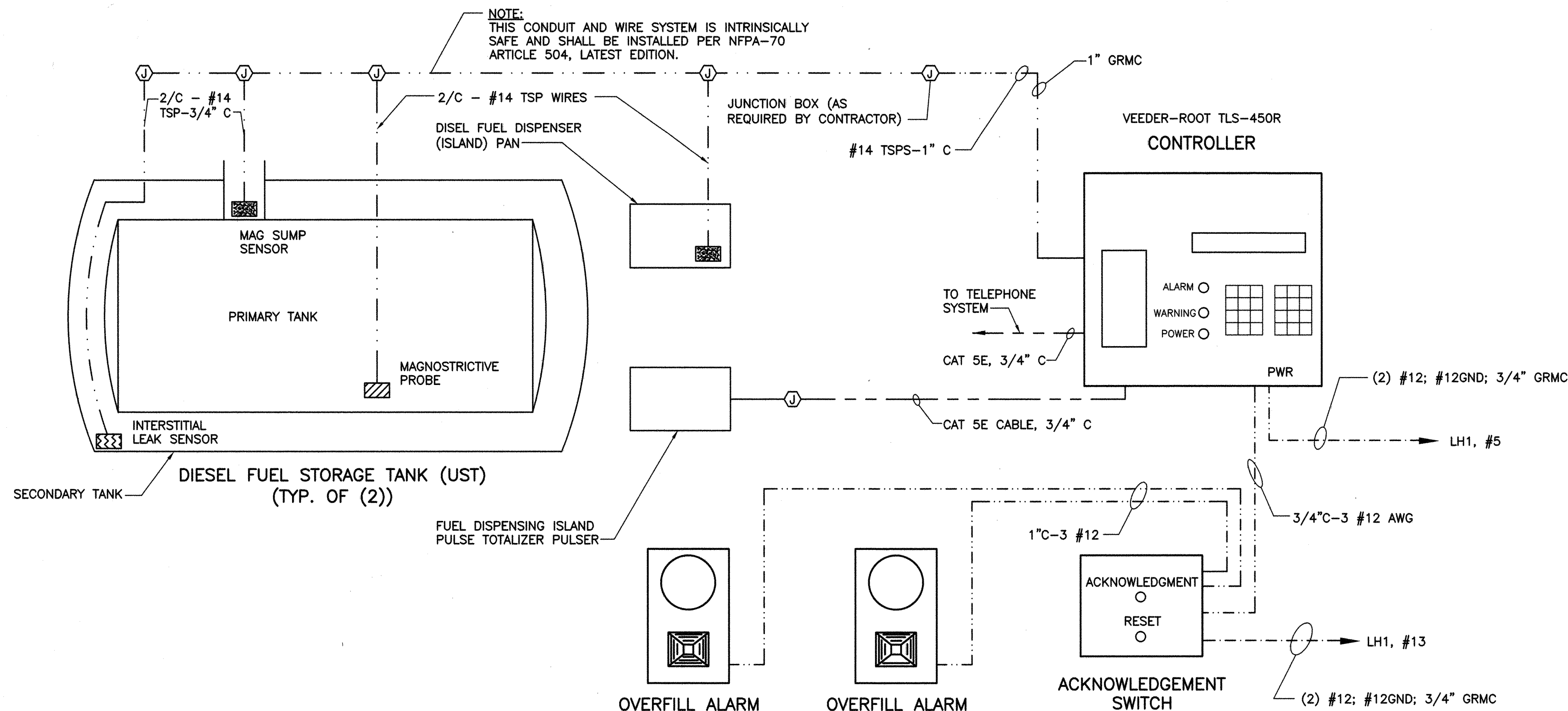
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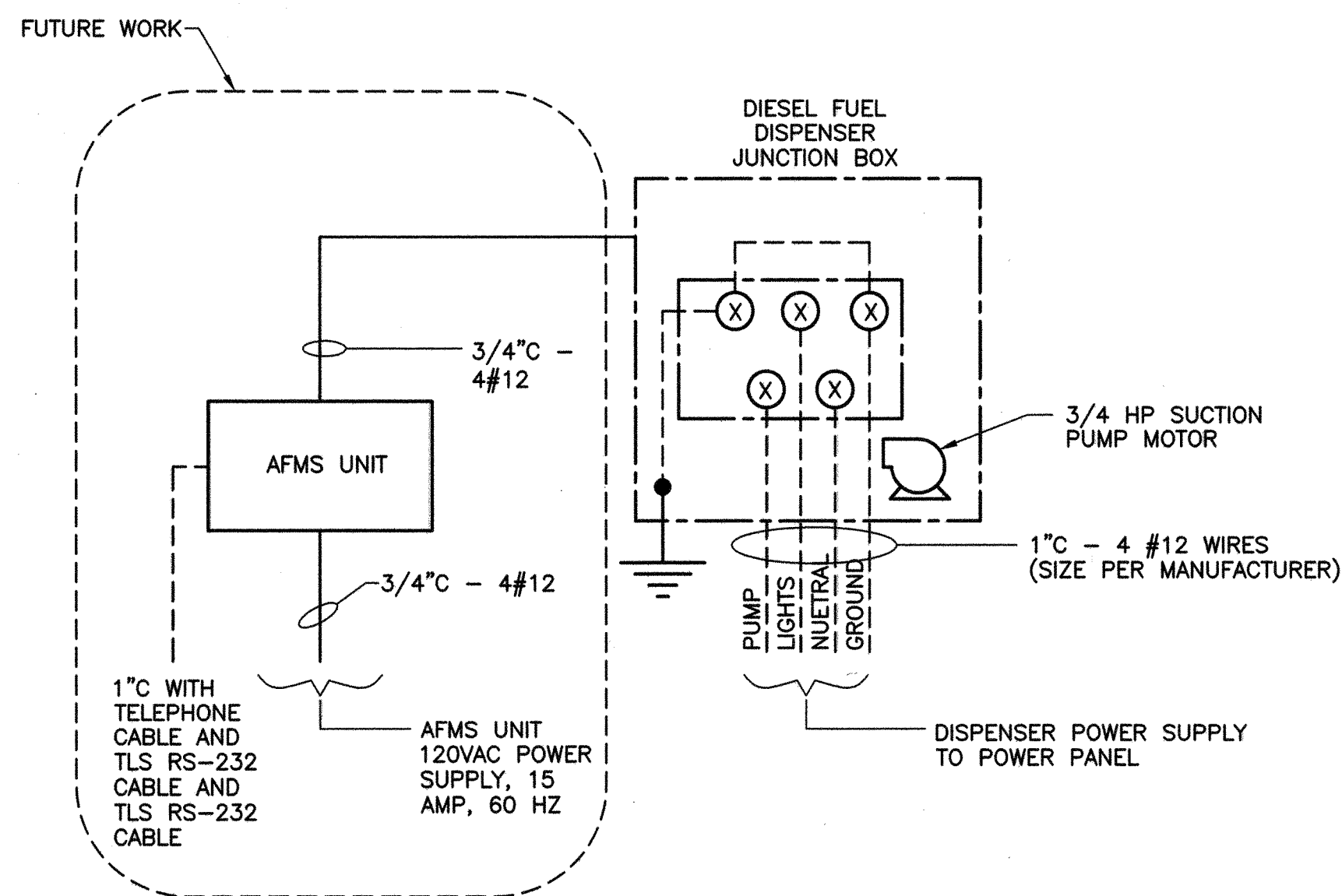
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Dwg No:
X-116.00



TYPICAL CONTROL SCHEMATIC

NOT TO SCALE

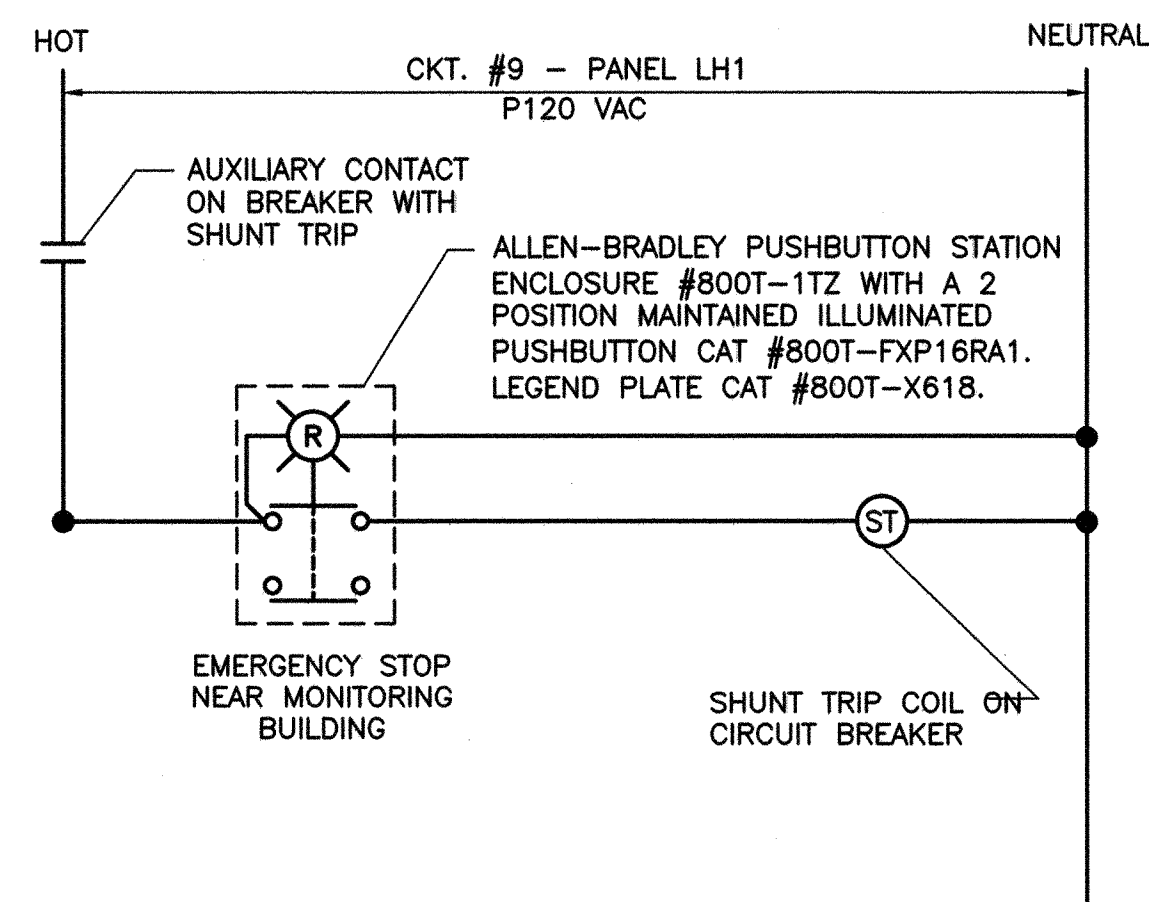


NOTES:

1. CONDUIT SHALL BE RIGID GALVANIZED STEEL IN ACCORDANCE WITH N.Y.C. ELECTRICAL CODE & NFPA NO. 70 & 30.
2. INSTALLATION SHOWN TYPICAL FOR SINGLE SUCTION PUMP.
3. INSTALLATION OF EMERGENCY PUMP SHUTOFF IS NOT SHOWN. EMERGENCY SHUTOFF SHALL BE INSTALLED AT THE LOCATIONS AS SHOWN ON THE CONTRACT DRAWINGS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND THE N.Y.C. ELECTRICAL CODE.

FUEL DISPENSER TYPICAL WIRING DIAGRAM

NOT TO SCALE



FUELING STATION EMERGENCY SHUTOFF

NOT TO SCALE

CONTROL SYSTEM GENERAL NOTES:

1. THE INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, NEW YORK CITY ELECTRICAL CODE, AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES, LAWS AND REGULATIONS.
2. THE TANK INVENTORY/LEAK DETECTION DEVICES SHALL BE MANUFACTURED AS INTRINSICALLY SAFE. THE CONDUITS AND WIRE TROUGHS FOR THE SYSTEM SHALL CONTAIN NO OTHER WIRING.
3. POWER WIRING SHALL BE INSTALLED IN SEPARATE CONDUIT FROM PROBE AND SENSOR WIRING.
4. THE CONTRACTOR SHALL REFER TO THE MANUFACTURER'S DATA SUPPLIED WITH THE EQUIPMENT FOR INSTALLATION INSTRUCTIONS AND PROCEDURES. FAILURE TO COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS CAN RESULT IN PERSONAL INJURY, PROPERTY LOSS AND EQUIPMENT DAMAGE. DAMAGED EQUIPMENT AND DEVICES SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
5. LEAK DETECTION AND TANK INVENTORY/OVERFILL PREVENTION CONTROL CONSOLE SHALL BE VEEDER-ROOT TLS-450R AS INDICATED IN DRAWINGS AND IN CONTRACT SPECIFICATIONS.
6. THE FUEL SYSTEM CONTRACTOR SHALL USE THE ELECTRICAL PANEL LH1 AND COORDINATE FUEL SYSTEM ELECTRICAL INSTALLATION WITH ELECTRICAL CONTRACTOR TO MAKE CERTAIN SUFFICIENT CIRCUITS ARE PROVIDED IN ELECTRICAL PANEL LH1.
7. ALL ELECTRICAL WORK ASSOCIATED WITH THE FUEL DISPENSING SYSTEM AND FUEL TANK SHALL COMPLY WITH THE NEC ARTICLE 514.
8. ALL CONDUCTOR SIZES LISTED ARE AWG. CABLES SHALL BE AS RECOMMENDED BY THE MANUFACTURERS AND CORROSION RESISTANT.

ABBREVIATIONS

TSP TWISTED SHIELDED PAIR
2/C TWO CONDUCTOR
AFMS AUTOMATED FUEL MANAGEMENT SYSTEM
DP DISTRIBUTION PANEL
GRMC GALVANIZED RIGID METAL CONDUIT



NEW YORK CITY DEPARTMENT OF
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PROJECT NAME:
HARPER ST. YARD

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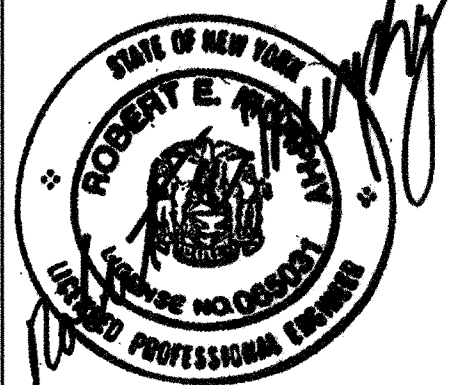
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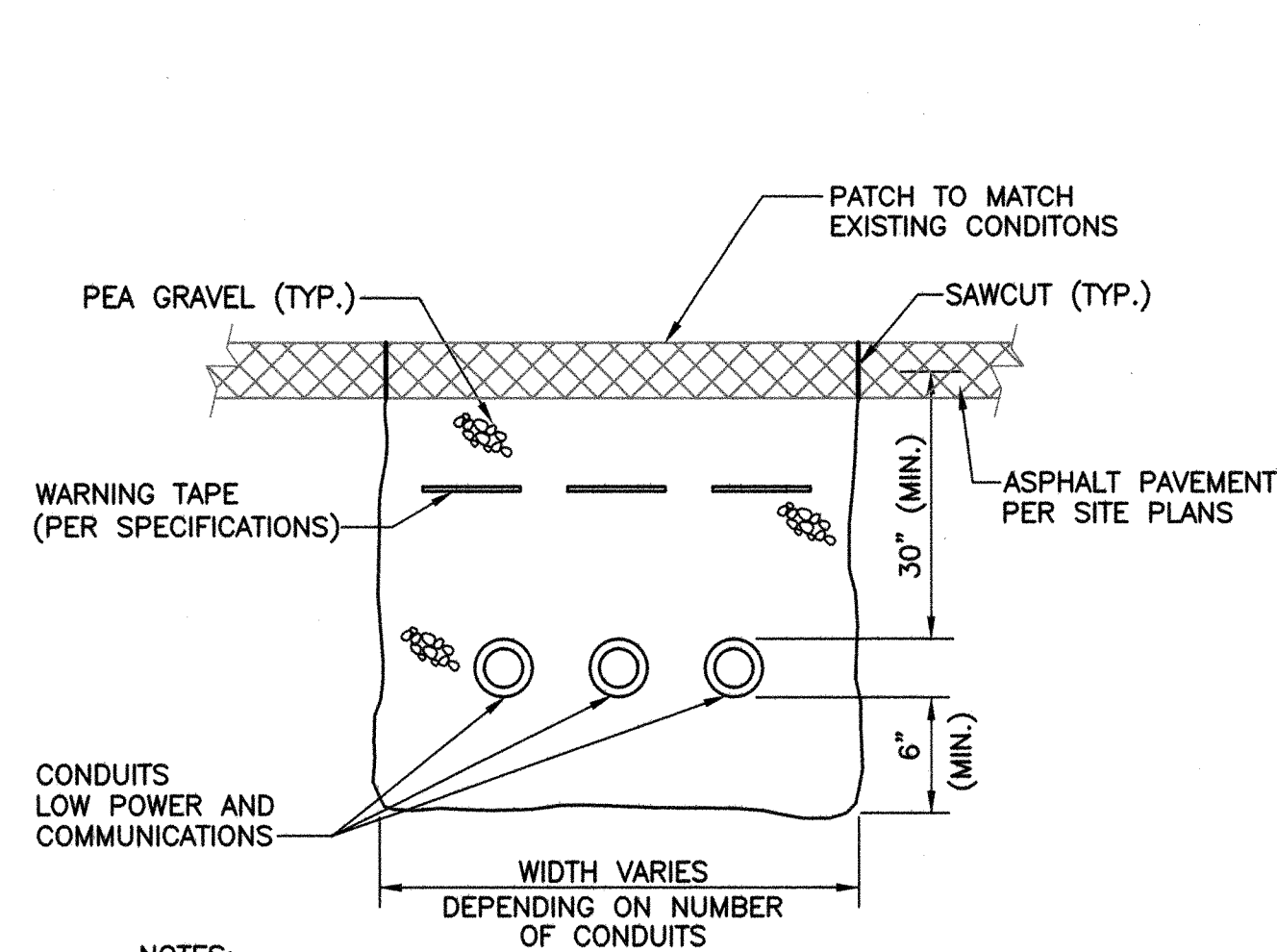
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**MISCELLANEOUS
DETAILS
(3 OF 3)**
Scale: AS SHOWN

Seal and Signature:



Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

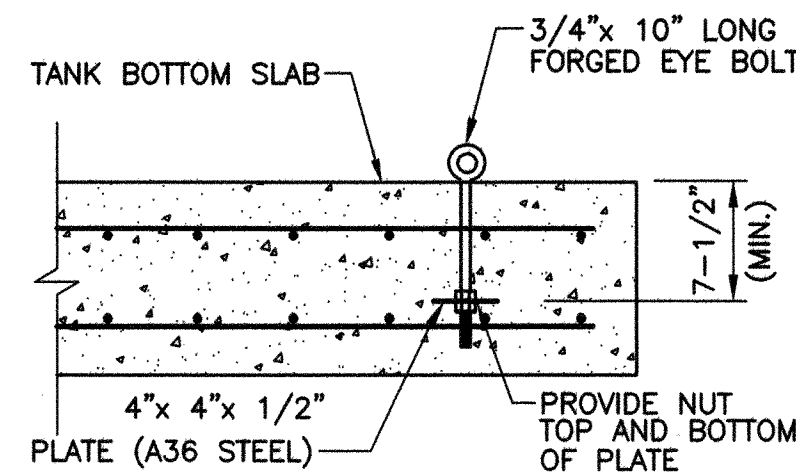
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X-114.00



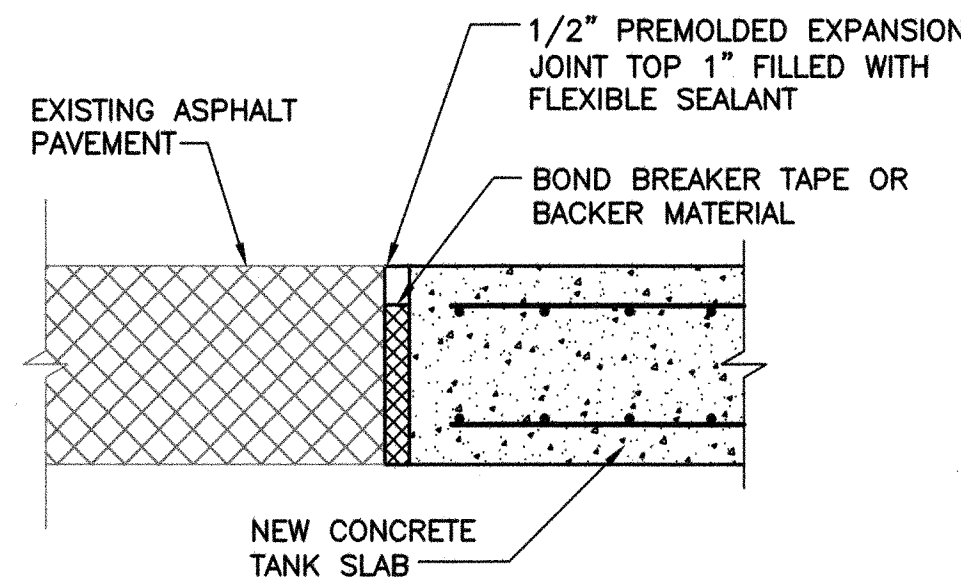
NOTES:

1. DETAIL INTENDED TO CONVEY CONCEPTUAL DESIGN OF POWER AND COMMUNICATION CONDUIT INSTALLATION. CONTRACTOR SHALL COORDINATE WITH MEP CONTRACT DESIGN DOCUMENTS FOR ACTUAL INSTALLATION DETAILS INCLUDING ENCASEMENTS.
2. CONTRACTOR SHALL CONSIDER ALL EXCAVATED MATERIAL TO BE "HISTORIC CONTAMINATED FILL" AND DISPOSE OF PROPERLY.

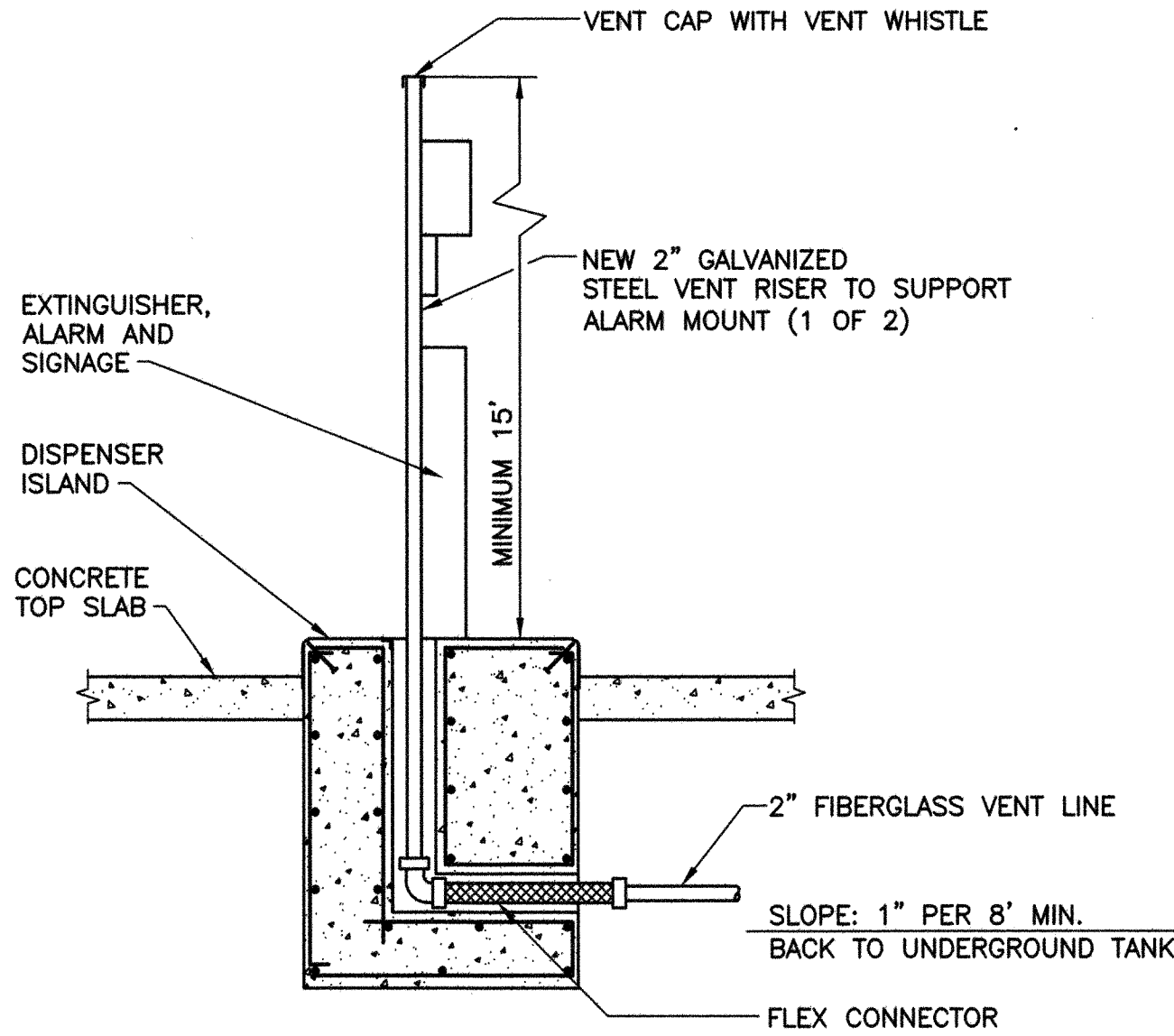
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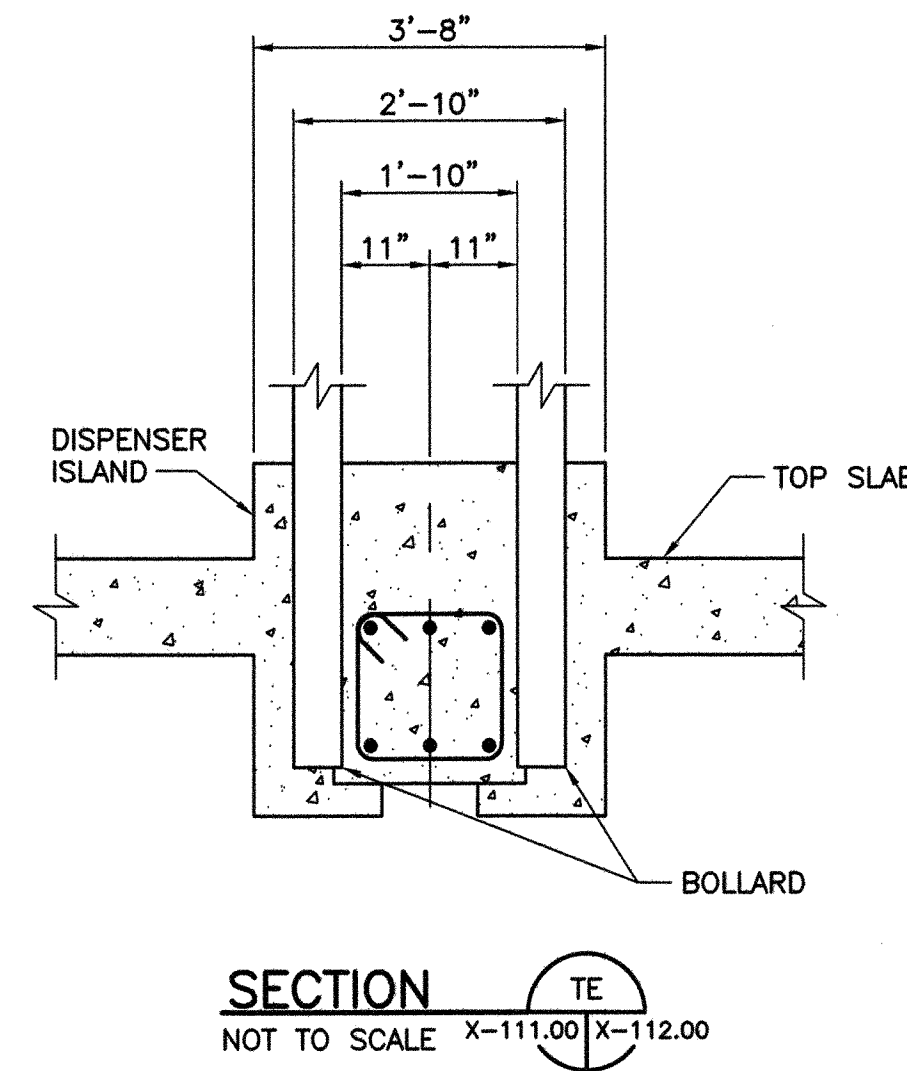
TANK STRAP ANCHOR DETAIL T8
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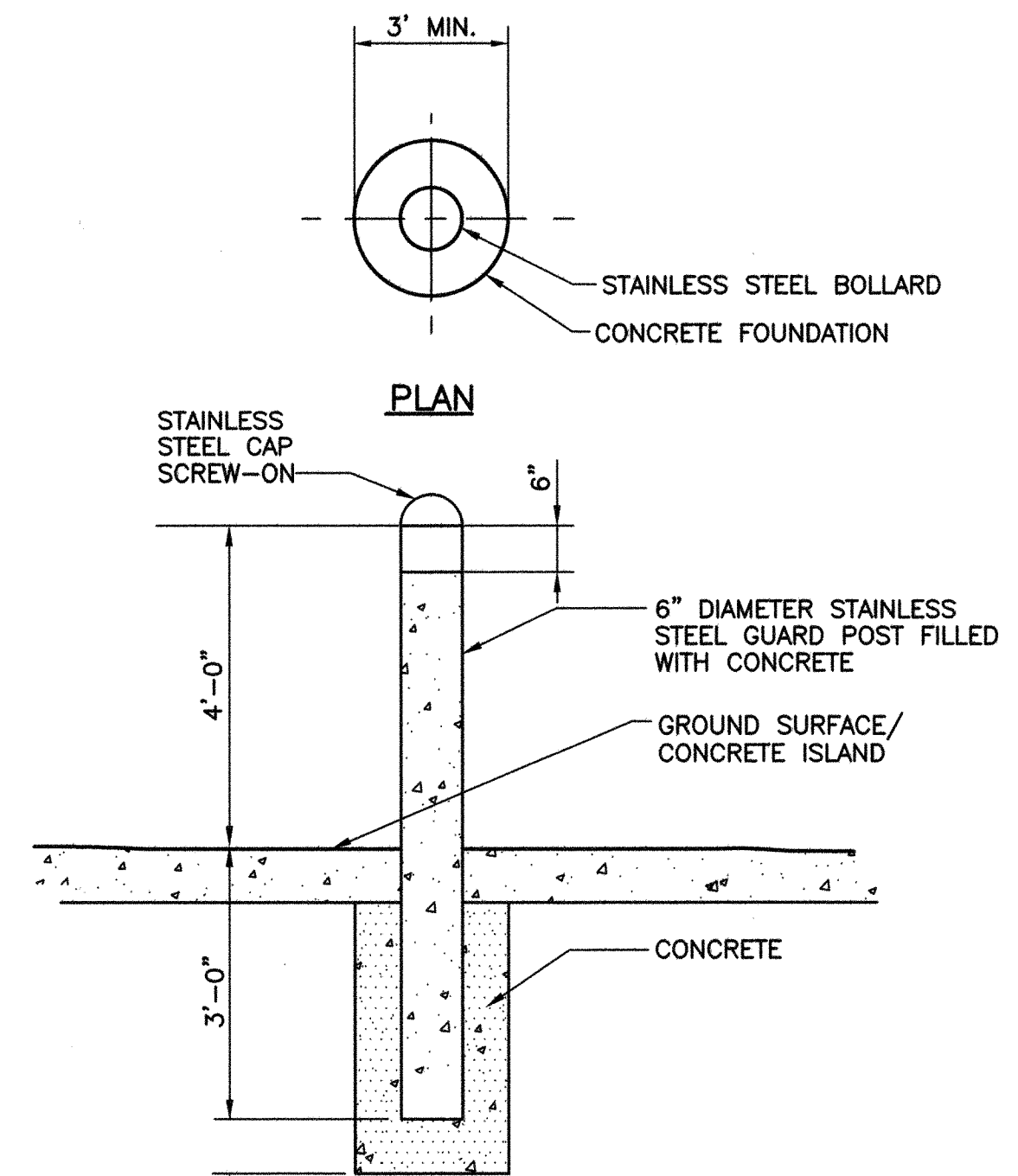
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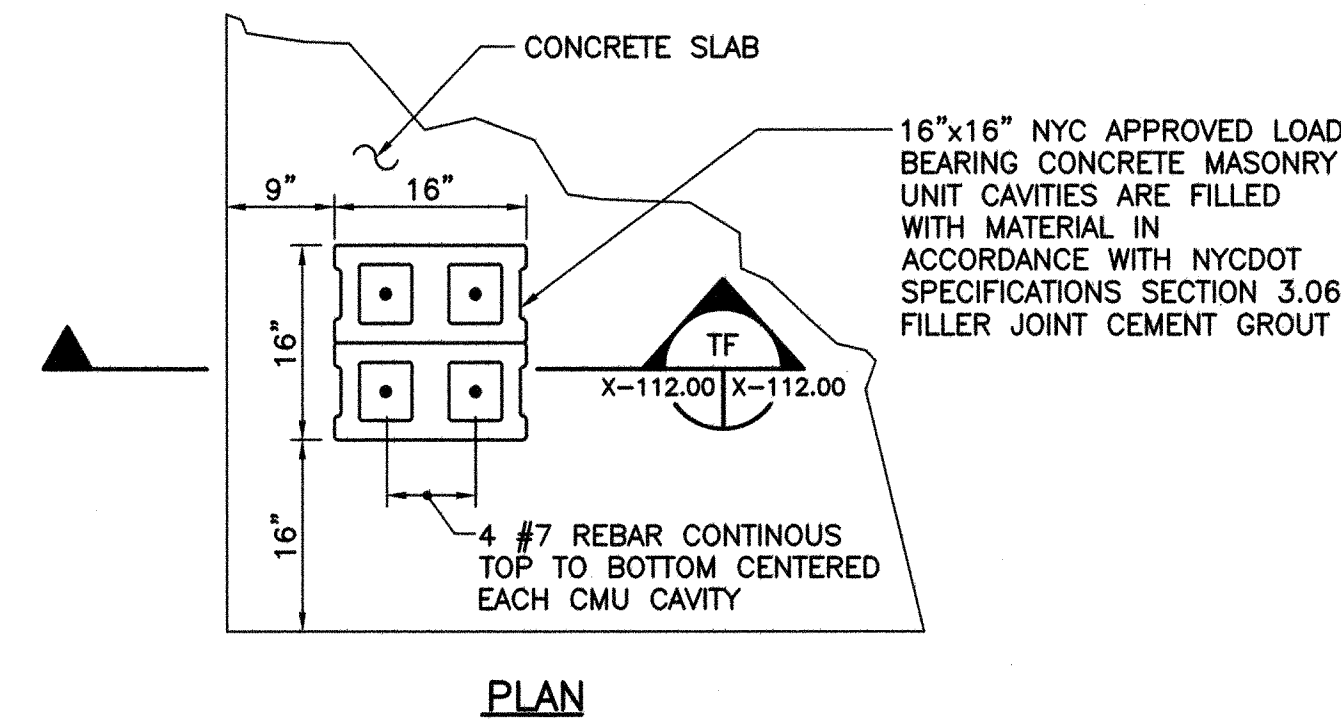
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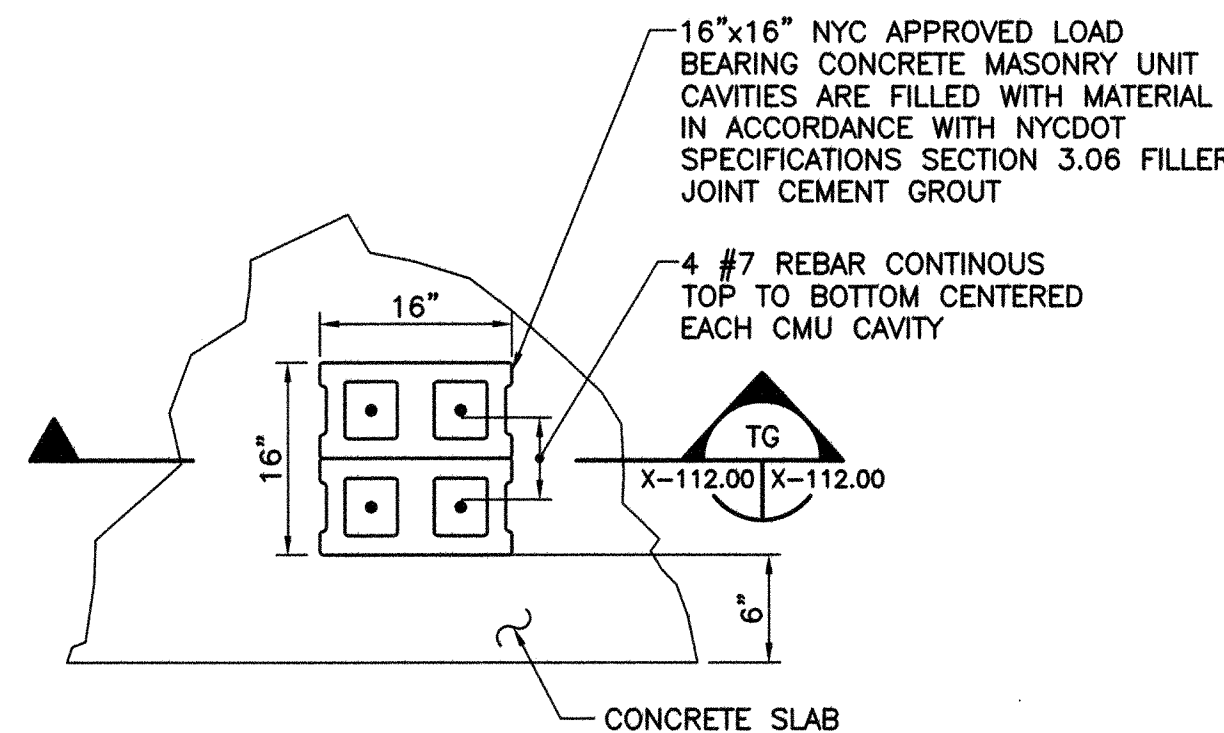
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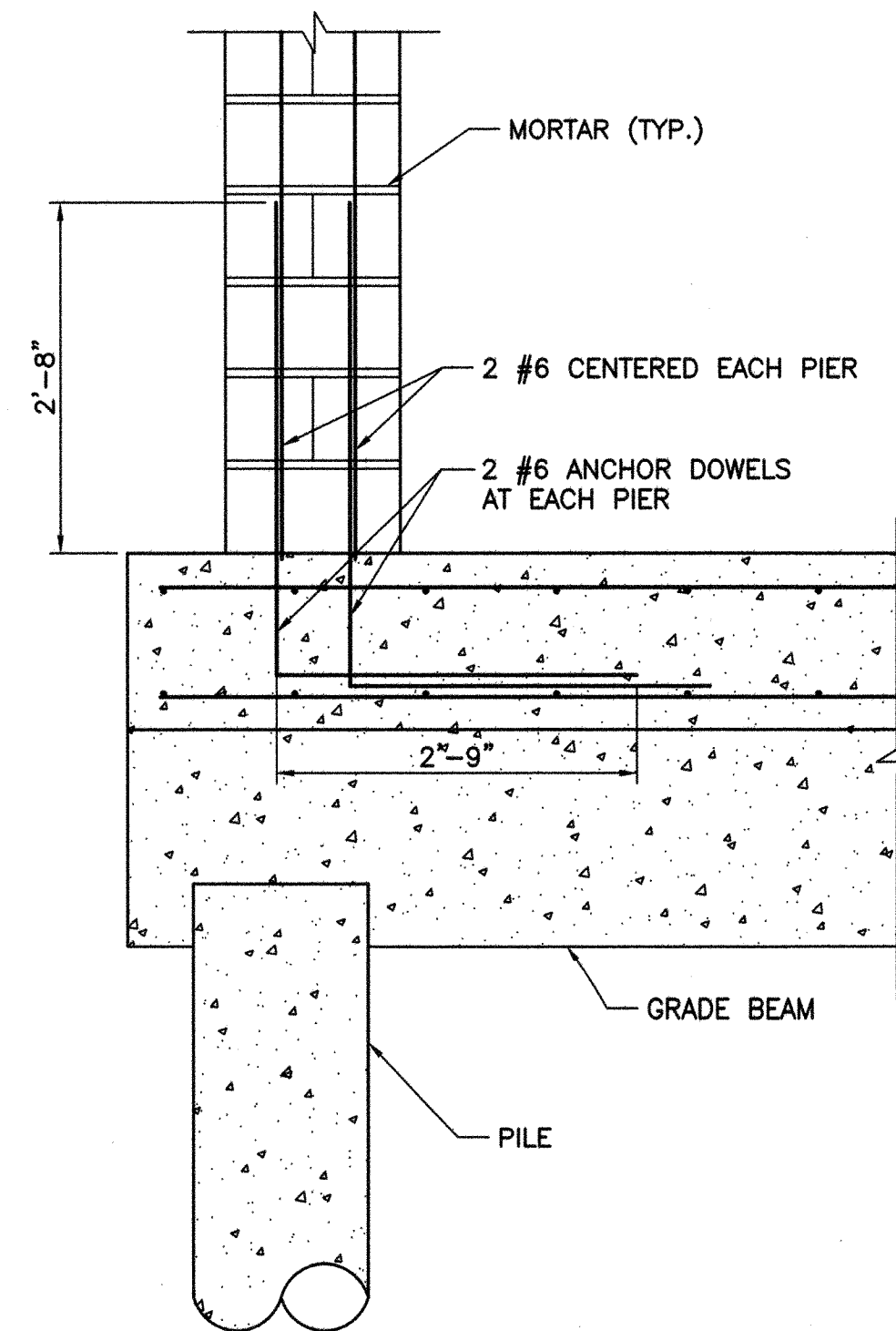
STAINLESS STEEL PIPE BOLLARD DETAIL T24
X-108.00 | X-112.00
NOT TO SCALE



PLAN

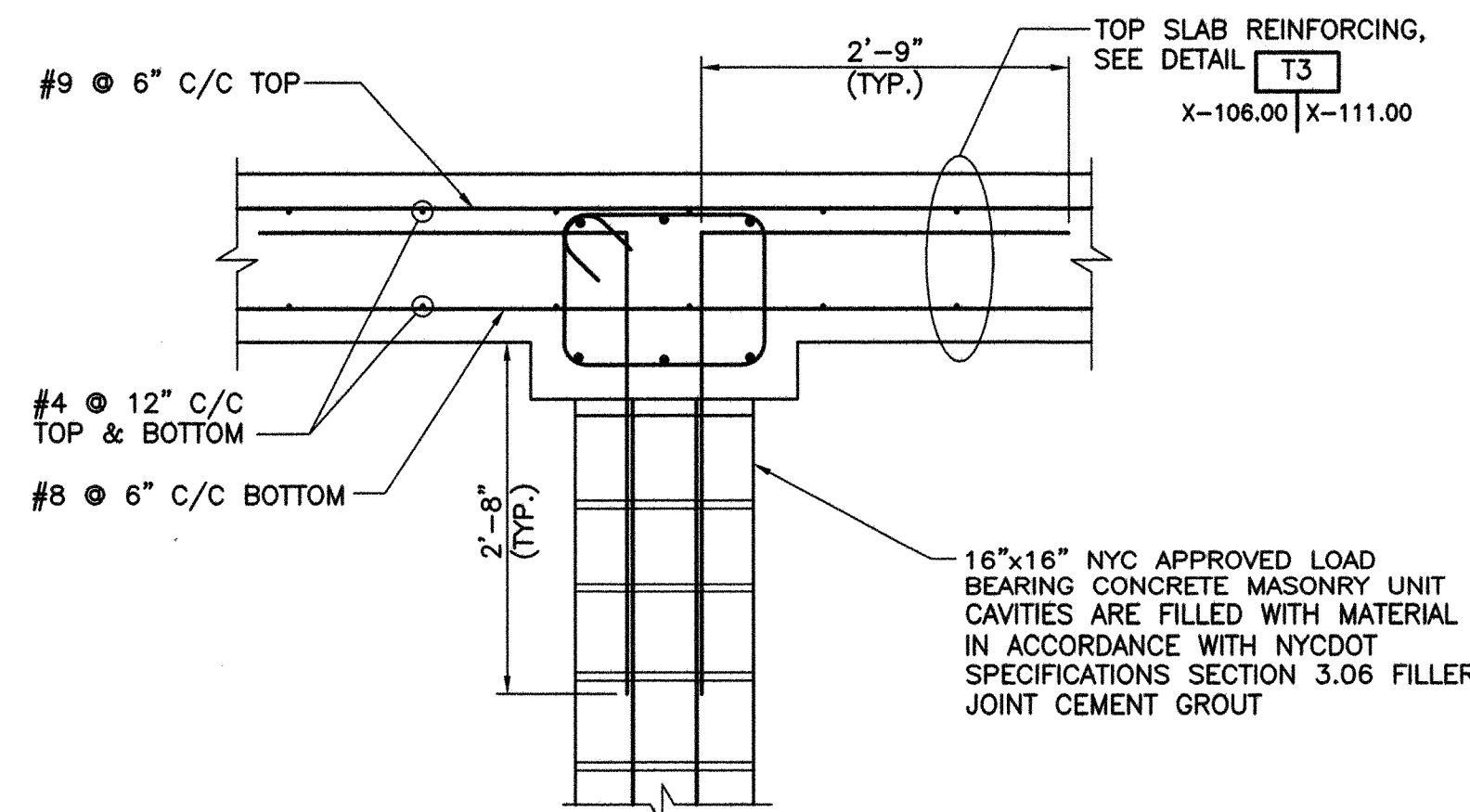


PLAN



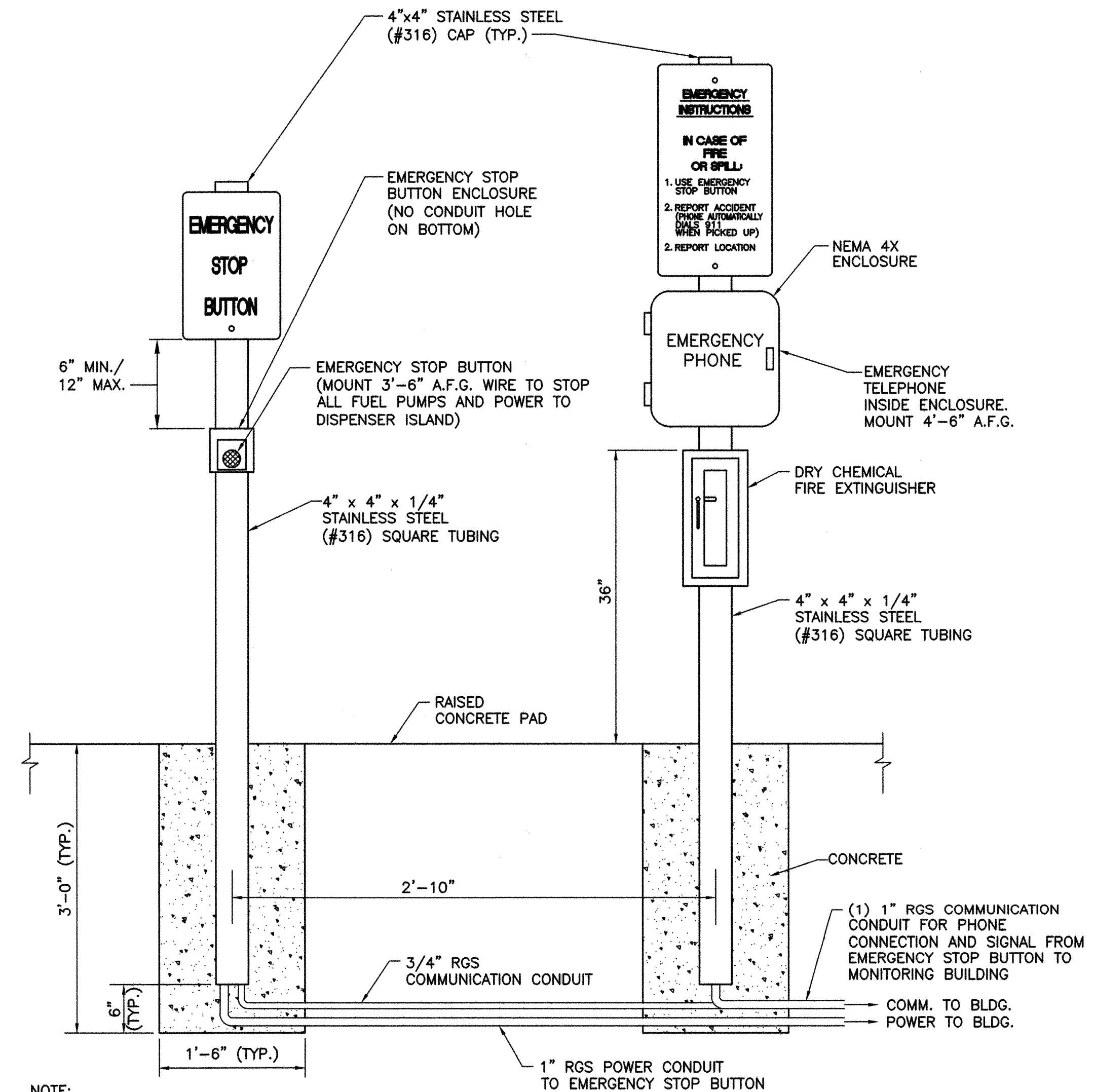
SECTION
X-112.00 | X-112.00
NOT TO SCALE

EXTERIOR BOTTOM SLAB/PIER DETAIL T9
X-109.00 | X-112.00
NOT TO SCALE



SECTION
X-112.00 | X-112.00
NOT TO SCALE

TOP SLAB CENTER GIRDER/PIER DETAIL T11
X-110.00 | X-112.00
NOT TO SCALE



NOTE:
THE CONTRACTOR SHALL SECURELY ANCHOR ALL MOUNTED APPURTENANCES USING STAINLESS STEEL FASTENERS.

EMERGENCY STOP SWITCH/PHONE/SIGNAGE DETAIL T12
X-107.00 | X-112.00
NOT TO SCALE

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Sheet title:
MISCELLANEOUS DETAILS (1 OF 3)
Scale: AS SHOWN

Seal and Signature:

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Chk By: KJS

Dwg No:
X-112.00



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Sheet title:

**FUEL DISPENSING
ISLAND PLAN AND
CROSS SECTION**

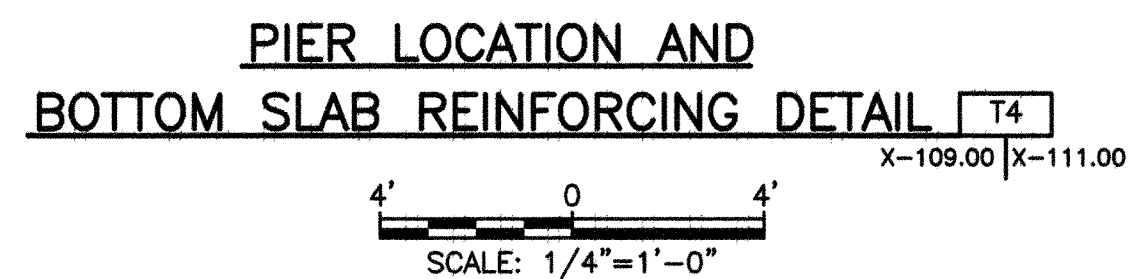
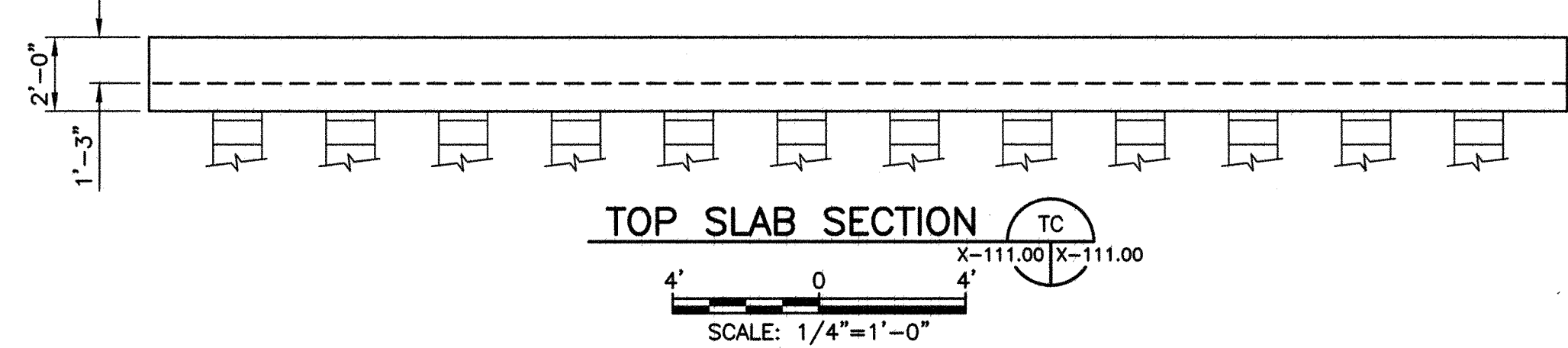
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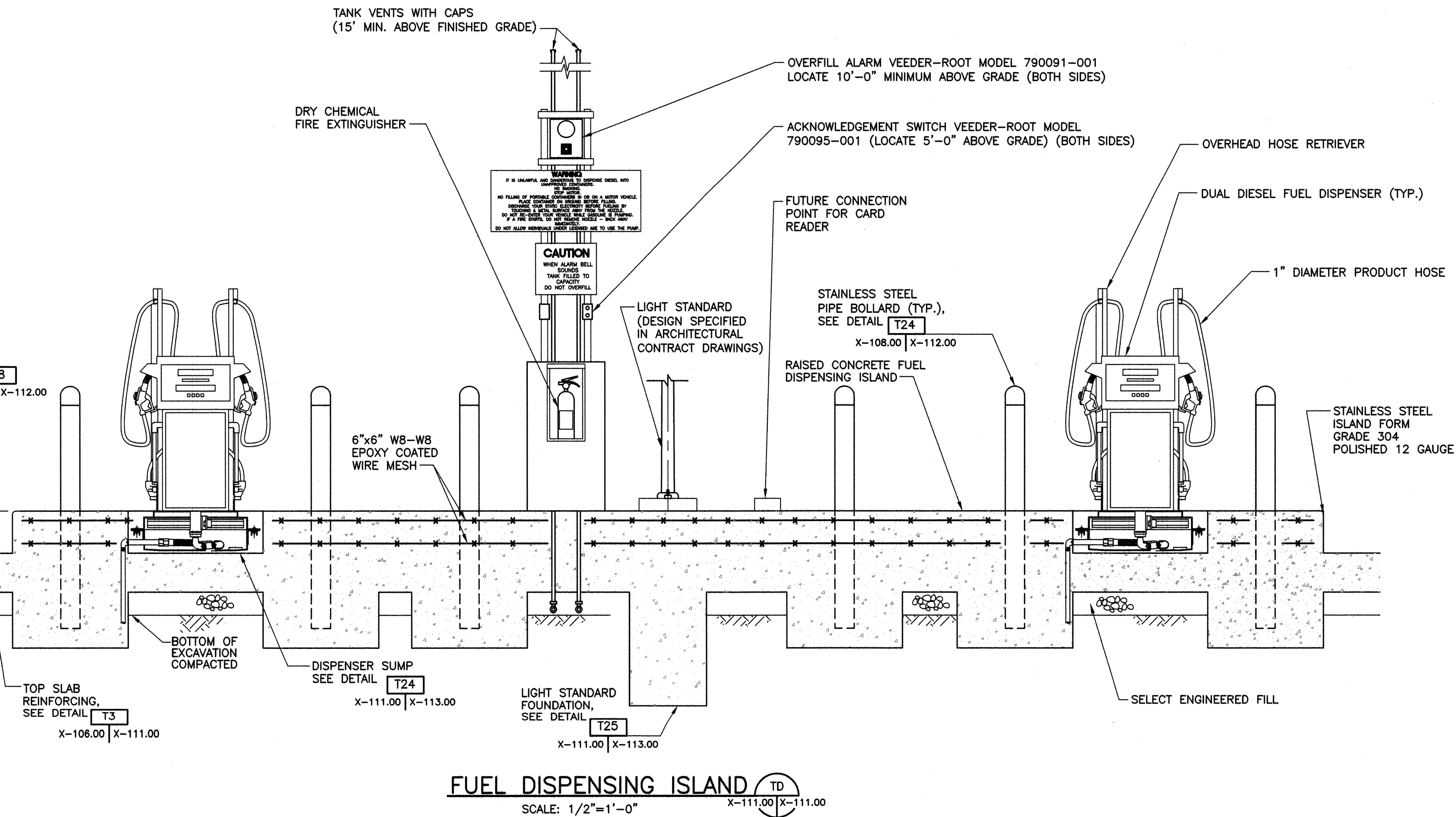


Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

Dwg No:
X-111.00



- NOTES:
1. LOCATION OF TANK ANCHOR STRAPS SHOWN PER MANUFACTURERS RECOMMENDATION.
 2. END PILES SHALL BE 13 INCHES FROM EDGE OF BOTTOM SLAB.



- NOTES:
1. THE TOP SLAB AND FUEL DISPENSING ISLAND ARE TO BE CAST MONOLITHICALLY.



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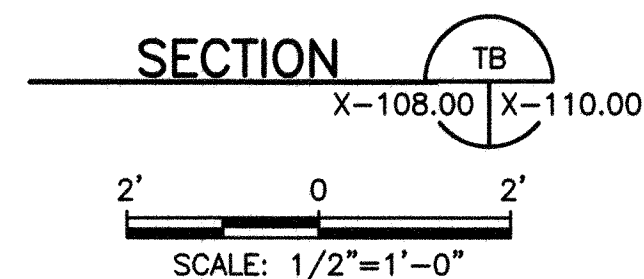
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Sheet title:

NEW UNDERGROUND
STORAGE TANK SYSTEM
CROSS SECTIONS

A circular professional engineer seal for the State of New York. The outer ring contains the text "STATE OF NEW YORK" at the top and "PROFESSIONAL ENGINEER" at the bottom. Inside the ring, the name "ROBERT E. MURPHY" is written in a larger font, and "LICENSE NO. 086002" is written in a smaller font below it. In the center of the seal is a small emblem featuring a building and the word "ENGINEER". The seal is stamped over a document with handwritten notes and signatures.

Dwg No:
X-110.00



CONTAINMENT SUMP DETAIL T2
NOT TO SCALE X-109.00 | X-110.00



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**NEW UNDERGROUND
STORAGE TANK SYSTEM
CROSS SECTIONS**

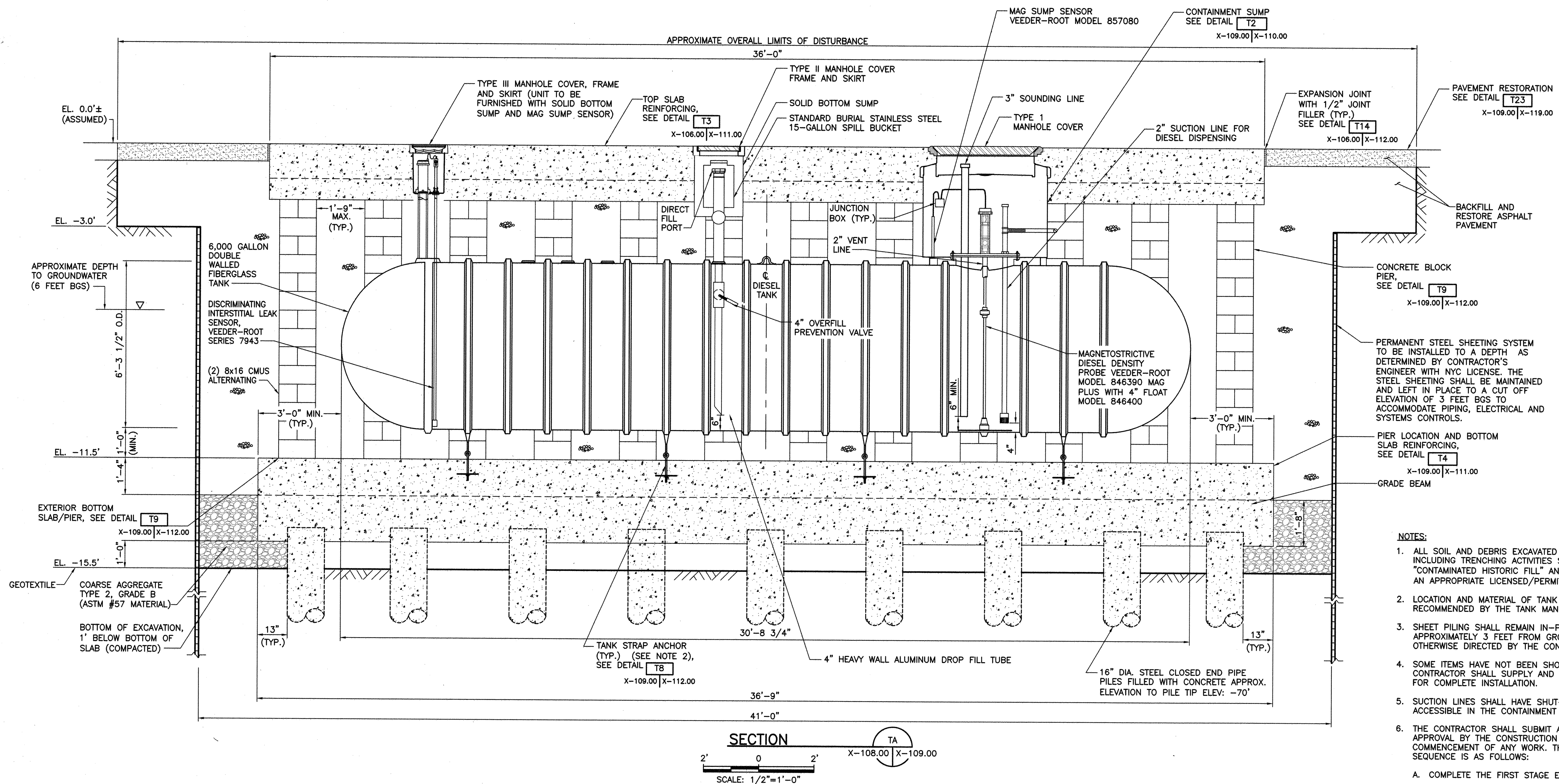
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Seal and Signature:



Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

Dwg No:
X-109.00



NOTES:

- ALL SOIL AND DEBRIS EXCAVATED DURING DEMOLITION WORK INCLUDING TRENCHING ACTIVITIES SHALL BE CONSIDERED "CONTAMINATED HISTORIC FILL" AND SHALL BE DISPOSED OF AT AN APPROPRIATE LICENSED/PERMITTED DISPOSAL FACILITY.
- LOCATION AND MATERIAL OF TANK STRAP ANCHOR SHALL BE AS RECOMMENDED BY THE TANK MANUFACTURER.
- SHEET PILING SHALL REMAIN IN-PLACE AND CUT DOWN APPROXIMATELY 3 FEET FROM GROUND SURFACE OR AS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
- SOME ITEMS HAVE NOT BEEN SHOWN FOR CLARITY. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL ITEMS REQUIRED FOR COMPLETE INSTALLATION.
- SUCTION LINES SHALL HAVE SHUT-OFF GATE VALVES EASILY ACCESSIBLE IN THE CONTAINMENT SUMP, AS PER SPECIFICATIONS.
- THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF ANY WORK. THE SUGGESTED CONSTRUCTION SEQUENCE IS AS FOLLOWS:
 - COMPLETE THE FIRST STAGE EXCAVATION;
 - INSTALL THE EXCAVATION PROTECTION STRUCTURE AND CONTINUE EXCAVATING AND BRACING AS WARRANTED;
 - DEWATER AND EXPOSE THE EXCAVATION BOTTOM.
 - PLACE THE COARSE AGGREGATE BEDDING AND CONTINUE DEWATERING;
 - CONSTRUCT THE BOTTOM REINFORCED CONCRETE SLAB;
 - CONSTRUCT THE CONCRETE BLOCK PIERS;
 - PLACE THE PEA GRAVEL BACKFILL, INSTALL THE USTS AND STRAP ANCHORS, AND ALL OTHER TANK APPURTENANCES AS PER TANK MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN IN SECTION DETAILS ON THIS DRAWING AND ELSEWHERE IN DRAWINGS;
 - CONTINUE BACKFILLING TO THE BOTTOM OF FIRST STAGE EXCAVATION, CUT-OFF VERTICAL COMPONENTS OF THE EXCAVATION PROTECTION STRUCTURE;
 - COMPLETE PEA GRAVEL BACKFILLING;
 - CONSTRUCT THE TOP REINFORCED CONCRETE SLAB WITH MANHOLES AND OTHER MECHANICAL AND ELECTRICAL ELEMENTS AND COMPONENTS; AND,
 - COMPLETE BACKFILLING WITH SELECT FILL AS NECESSARY AND RESTORE THE ASPHALT PAVEMENT TO ITS ORIGINAL CONDITION OR BETTER AS DIRECTED BY THE CONSTRUCTION MANAGER.
- A "WELDING PROCEDURE SPECIFICATION" (WPS) APPROVED BY THE ENGINEER IS REQUIRED.
- ALL WELDING SHALL BE PERFORMED BY A NEW YORK CITY LICENSED WELDER IN CONFORMANCE WITH REQUIREMENTS FOR WELDING SPECIFIED IN THE N.Y.S. STEEL CONSTRUCTION MANUAL.
- ENTRY FITTINGS INTO ALL SUMPS SHALL BE PELLATHANE FILLED AS MANUFACTURED BY BLUE LINE OR APPROVED EQUAL.
- SOLID BOTTOM SUMP FOR DIRECT FILL PORT SHALL BE EQUIPPED WITH A MAG SUMP SENSOR.
- ALL UNDERGROUND DIESEL PIPING SHALL BE DOUBLE WALLED FIBERGLASS MANUFACTURED BY AMERON MODEL LCX OR APPROVED EQUAL.



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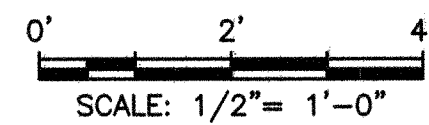
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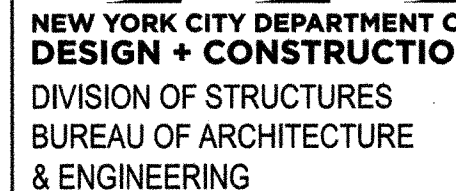
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X-108.00



NOTES:

1. THIS DRAWING ILLUSTRATES INSTALLATION OF LOW-VOLTAGE SIGNAL CONDUCTORS AND RGS CONDUIT AS REQUIRED FOR TANK EQUIPMENT AND AS SHOWN ON THE TANK CONTRACT DRAWINGS. ELECTRICAL DESIGN FOR LINE VOLTAGE (110 VOLTS) REQUIRED TO PROVIDE POWER TO TANK EQUIPMENT, LIGHTING, MONITORING BUILDING, ETC. IS FOUND IN THE MEP CONTRACT DRAWINGS AND SPECIFICATIONS.
2. COORDINATE WITH ELECTRICAL CONTRACTOR FOR EMERGENCY STOP BUTTON TO DISCONNECT ALL POWER, SIGNAL, AND CONTROL CIRCUITS ASSOCIATED WITH THE DISPENSER ISLAND EXCEPT THOSE LABELED AS INTRINSICALLY SAFE.
3. ALL NEW PAVEMENT, INCLUDING THE TOP SLAB, SHALL BE SLOPED A MINIMUM OF 0.5% TO PROVIDE POSITIVE DRAINAGE.
4. THE LIMITS OF THE TANK EXCAVATION SHALL BE SUFFICIENT TO PERFORM WORK AND INSTALL EQUIPMENT AND CONCRETE AS SHOWN ON THESE DRAWINGS.
5. THE LOCATION OF THE VENT PIPING, SUCTION PIPING, AND SIGNAL CONDUCTOR IS APPROXIMATE. THE LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE CONSTRUCTION MANAGER.
6. THE FACILITY CANNOT LOSE FUELING SERVICES DURING THE COURSE OF ALL WORK.





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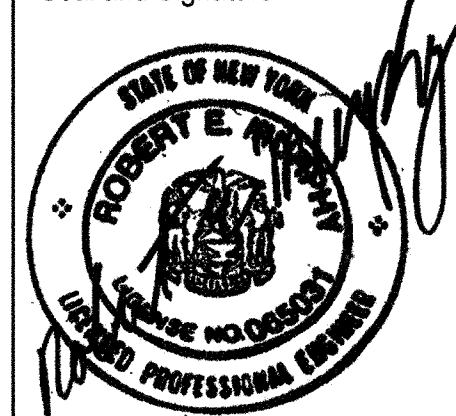
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**PROPOSED DIESEL
FUELING SYSTEM AND
MONITORING BUILDING**
Scale: AS SHOWN

Seal and Signature: _____



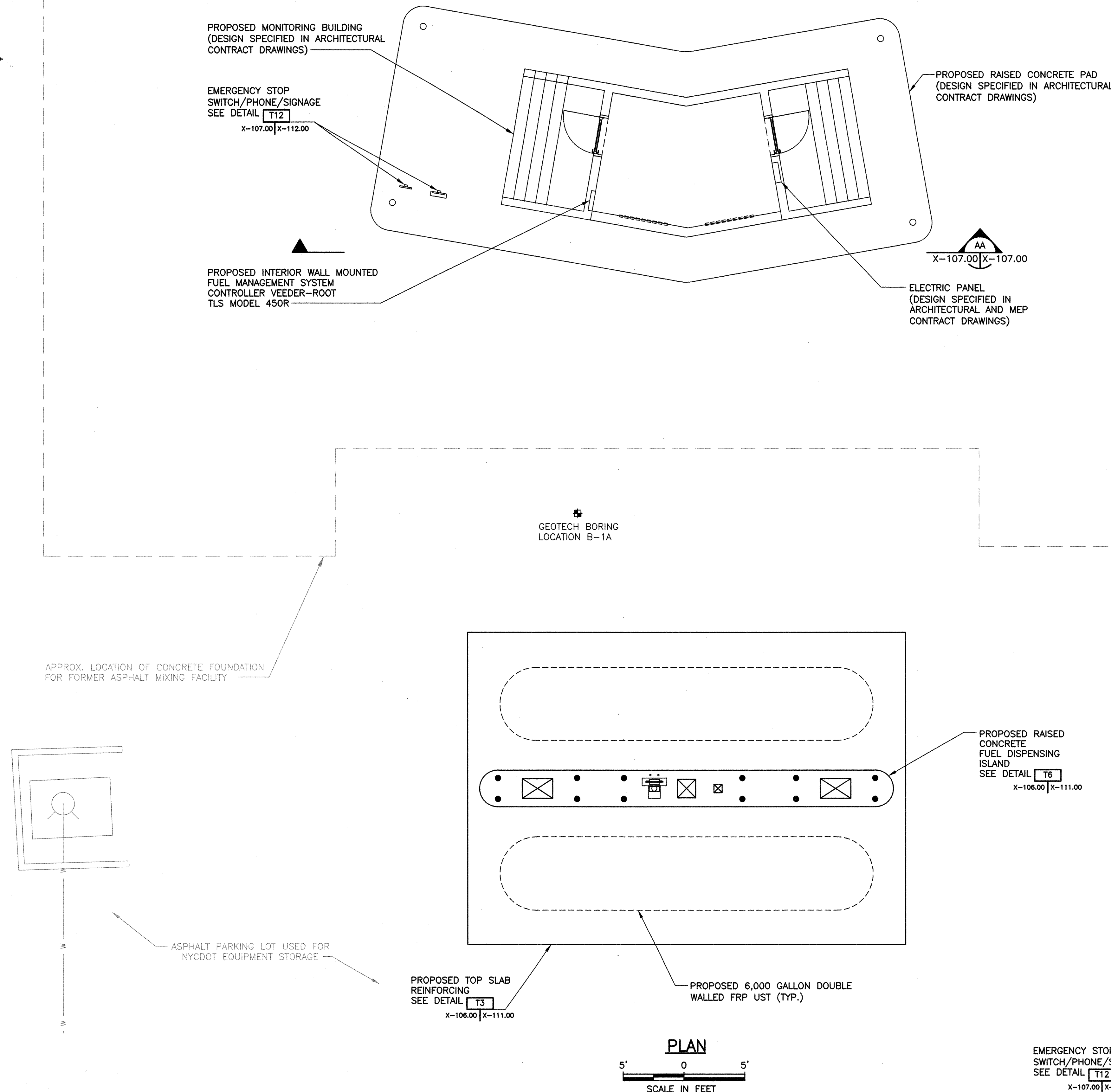
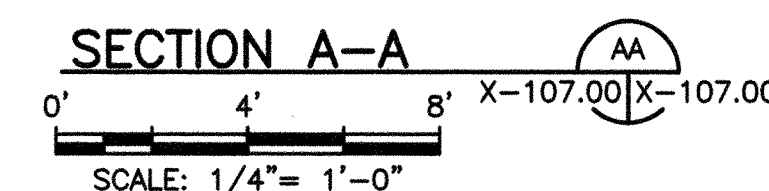
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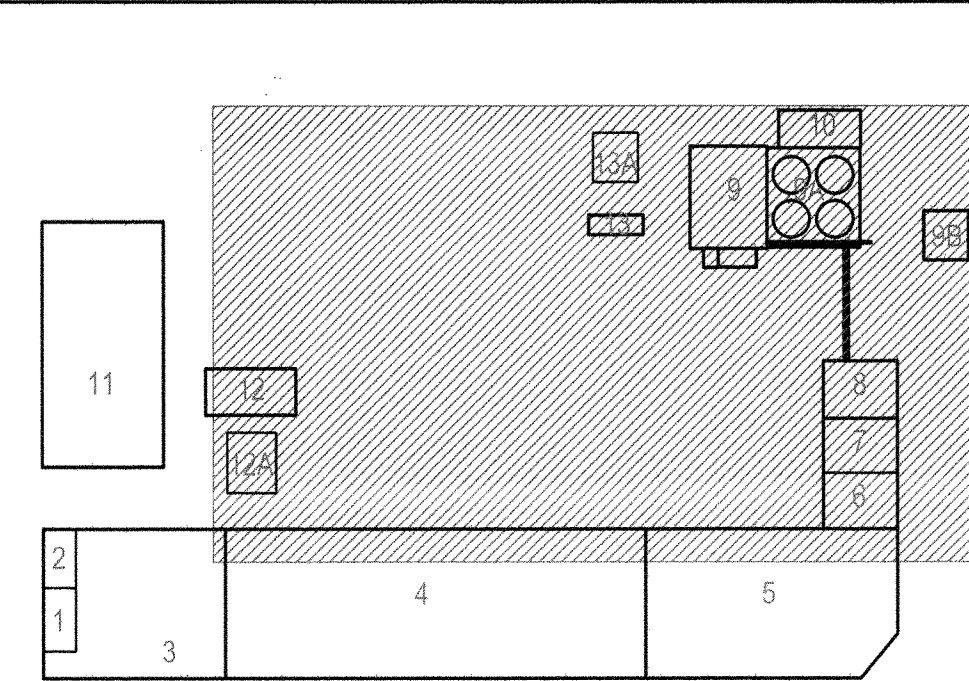
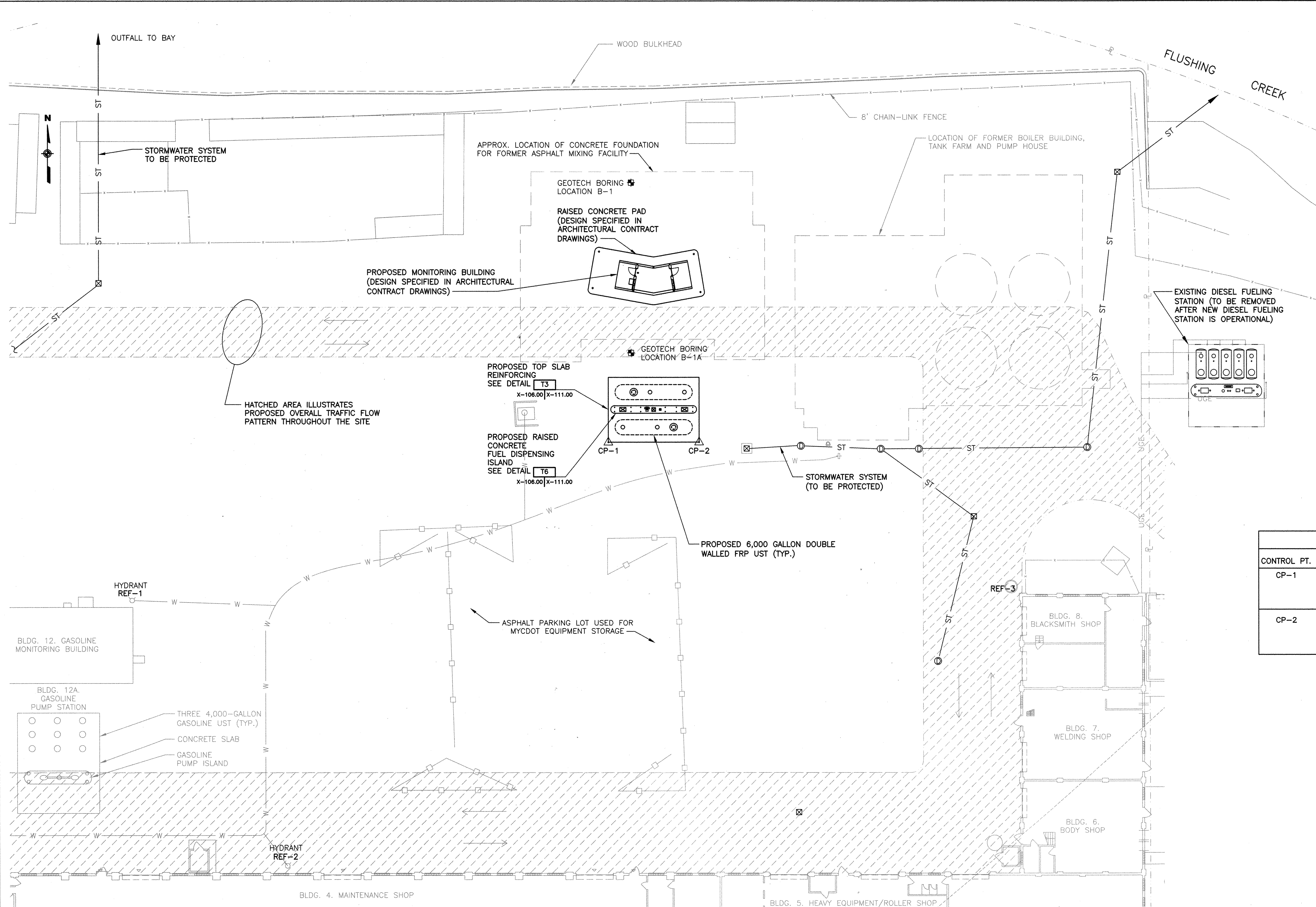


NOTES:

1. THIS DRAWING WAS GENERATED FROM INFORMATION PRESENTED ON A DRAWING PREPARED BY STV INCORPORATED ENTITLED "TOPOGRAPHIC AND UTILITY SURVEY", DRAWING C-102 DATED JUNE 30, 2003, EXISTING CONDITION PLANS PREPARED BY ARCHITECTS DATED MARCH 2010 AND A TOPOGRAPHICAL SURVEY PREPARED BY CITY OF NEW YORK DDC, BUREAU OF SITE ENGINEERING (TOPOGRAPHICAL SECTION) DATED NOVEMBER 8, 2010.
2. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO MAKE A COMPLETE INSTALLATION.
3. THE CONTRACTOR SHALL REFER TO DRAWINGS X-108.00, X-109.00, X-110.00 AND X-111.00 FOR NEW TANK CROSS SECTIONS AND DETAILS.
4. DESIGN OF THE MONITORING BUILDING, ASSOCIATED CONCRETE PAD, ELECTRICAL SYSTEM ETC. AND DISPENSER ISLAND LIGHT STANDARD IS FOUND IN THE ARCHITECTURAL, STRUCTURAL AND MEP CONTRACT DRAWINGS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THE FOLLOWING EQUIPMENT AT THE MONITORING BUILDING:
 - FIRE EXTINGUISHER
 - EXTERIOR POST MOUNTED EMERGENCY STOP SWITCH/PHONE/SIGNAGE
 - INTERIOR WALL MOUNTED FUEL MANAGEMENT CONTROLLER
 - INTERIOR POWER LOCK OUT SWITCH



I:\117618\04 Drawings\06-Final Design\05-MECHANICAL\X-106-06.dwg, 10/12/12 -2- E.L.B.

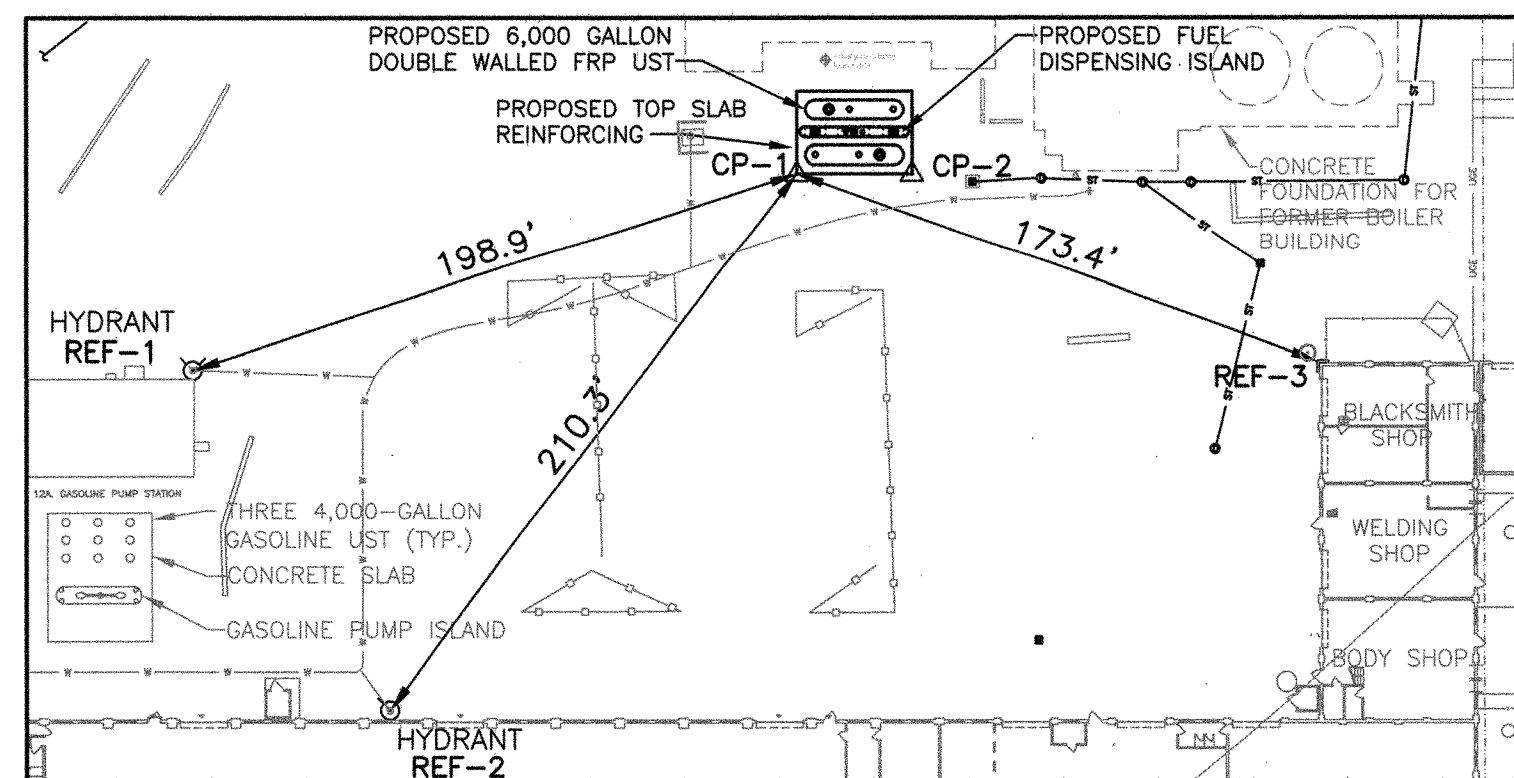


1 KEY PLAN AREA

NOTES:

1. THIS DRAWING WAS GENERATED FROM INFORMATION PRESENTED ON A DRAWING PREPARED BY STV INCORPORATED ENTITLED "TOPOGRAPHIC AND UTILITY SURVEY", DRAWING C-102 DATED JUNE 30, 2003, EXISTING CONDITION PLANS PREPARED BY ARCHITECTS DATED MARCH 2010 AND A TOPOGRAPHICAL SURVEY PREPARED BY CITY OF NEW YORK DDC, BUREAU OF SITE ENGINEERING (TOPOGRAPHICAL SECTION) DATED NOVEMBER 8, 2010.
2. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO MAKE A COMPLETE INSTALLATION.
3. THE CONTRACTOR SHALL REFER TO DRAWINGS X-108.00, X-109.00, X-110.00 AND X-111.00 FOR NEW TANK CROSS SECTIONS AND DETAILS.
4. THE CONTRACTOR SHALL USE HORIZONTAL CONTROL TABLE TO ESTABLISH LOCATION OF PROPOSED DIESEL FUELING STATION TOP SLAB.

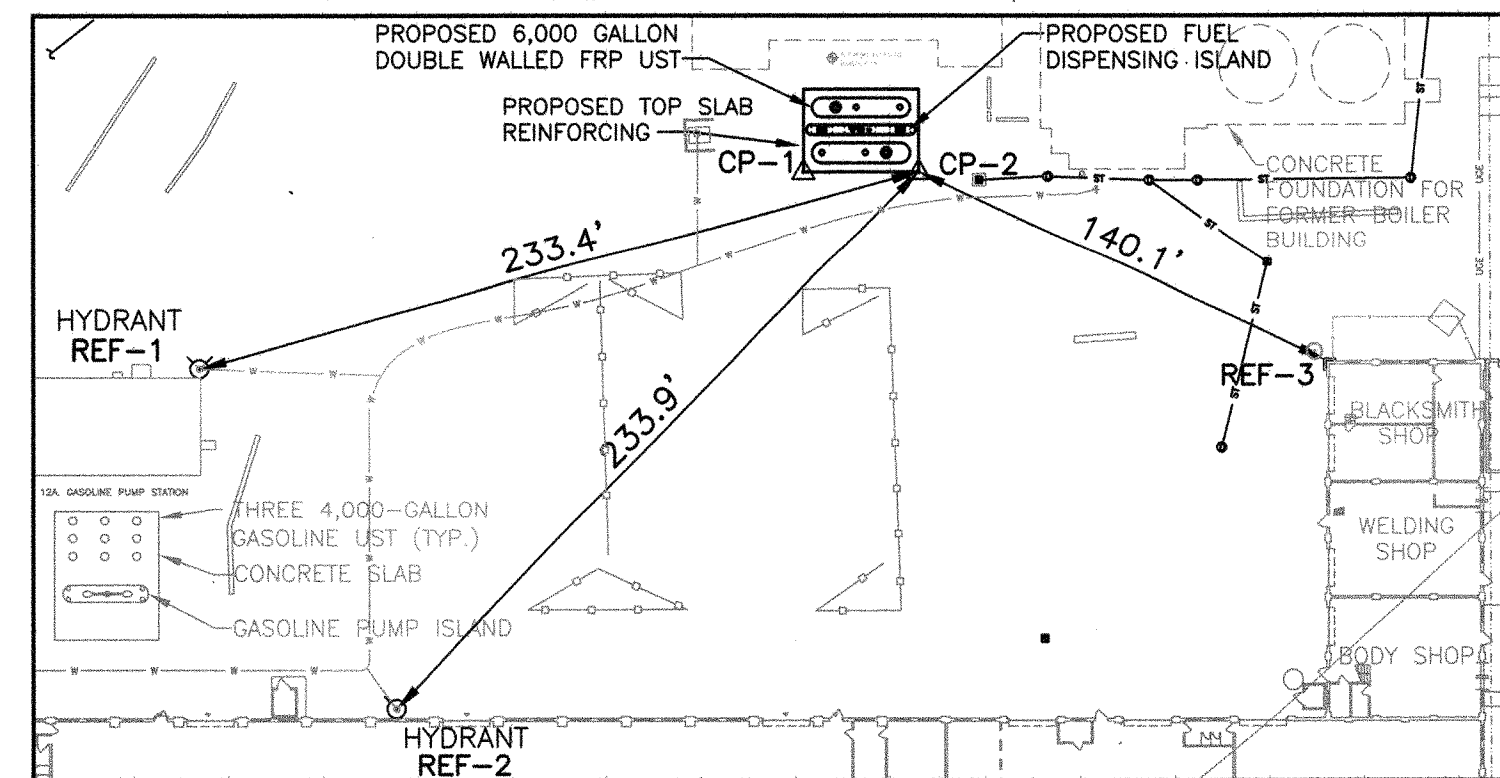
HORIZONTAL CONTROL TABLE			
CONTROL PT.	REFERENCE PT.	DESCRIPTION	DISTANCE
CP-1	REF-1	HYDRANT TOP NUT	198.9'
	REF-2	HYDRANT TOP NUT	210.3'
	REF-3	BUILDING CORNER	173.4'
CP-2	REF-1	HYDRANT TOP NUT	233.4'
	REF-2	HYDRANT TOP NUT	233.9'
	REF-3	BUILDING CORNER	140.1'




CP-1 TIE POINT
SCALE IN FEET

PROPOSED DIESEL FUELING SYSTEM PLAN

20' 0 20'
SCALE IN FEET



CP-2 TIE POINT
SCALE IN FEET



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

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CAPITAL PROJECT NUMBER
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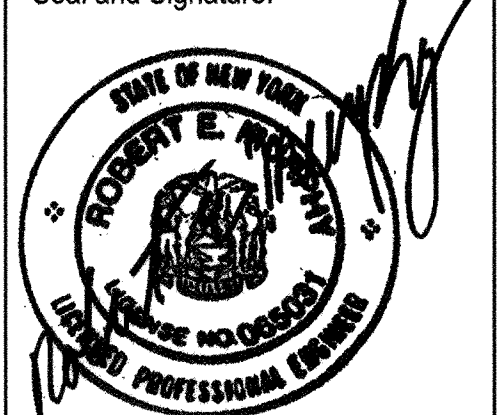
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Date: Issue:

05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**PROPOSED DIESEL
FUELING SYSTEM AND
MONITORING BUILDING**
Scale: AS SHOWN

Seal and Signature:


Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

Dwg No:
X-106.00



32-11 HARPER STREET,
QUEENS, NY 11368
CAPITAL PROJECT NUMBER
HWQF027C

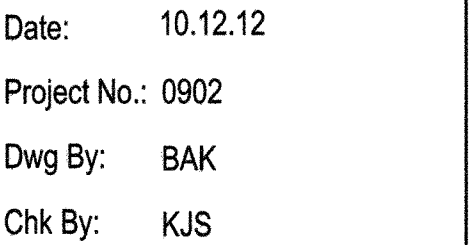
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10.12.12	Bid Set

Scale: 1"=10'

Seal and Signature: _____

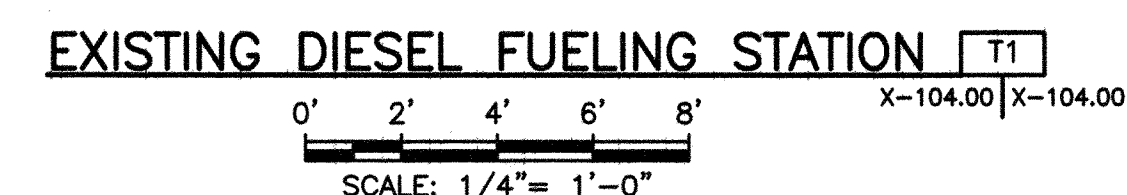
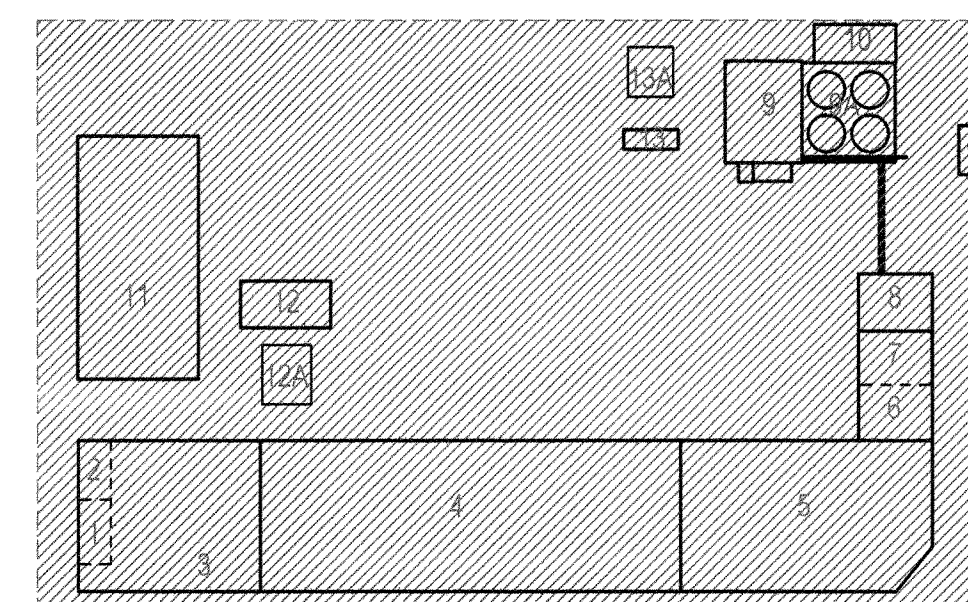


Dwg No:

X-105.00

10' 0 10'

SCALE IN FEET



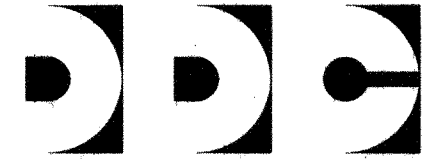
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REMEDATION AND TANK REMOVAL EXCAVATION NOTES: (CONT.)

10. ALLOWABLE HORIZONTAL DEFLECTIONS OF THE EXCAVATION PROTECTION SYSTEM WALL AT TOP OF GRADE LEVEL IS LIMITED TO 0.75 INCHES. THE CONTRACTOR SHALL PROVIDE SURVEY POINTS AND MONITOR SETTLEMENT ON PARKING LOT DURING EXCAVATION AND DURING THE PERIOD WHEN THE EXCAVATION REMAINS OPEN AND PROTECTED UNTIL THE EXCAVATION IS BACKFILLED. THE CONTRACTOR SHALL OBTAIN MONITORING SURVEY RECORDS TWICE DAILY DURING THE EXCAVATION AND ONCE UPON COMPLETION OF WORK AND PROMPTLY SUBMIT TO THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL TAKE IMMEDIATE PRECAUTIONARY MEASURES TO PREVENT LATERAL MOVEMENT OF THE EXCAVATION PROTECTION SYSTEM IN EXCESS OF THRESHOLD LIMITS, WHICH SHALL NOT EXCEED 2/3 OF THE ALLOWABLE DEFLECTIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER WHEN PRECAUTIONARY MEASURES ARE REQUIRED.
11. THE CONTRACTOR SHALL CUTOFF AND REMOVE ALL MEMBERS OF THE EXCAVATION PROTECTION SYSTEM TO A MINIMUM DEPTH OF 3 FEET BELOW GROUND SURFACE.
12. THE CONTRACTOR MAY ENCOUNTER CONCRETE, COBBLES, BOULDERS, AND BURIED CONSTRUCTION DEBRIS. THE CONTRACTOR SHALL REMOVE ALL UNDERGROUND OBSTRUCTIONS THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THE EXCAVATION PROTECTION SYSTEM BY A METHOD THAT WILL NOT DAMAGE STRUCTURES, UTILITIES, OR ON-SITE APPURTENANCES. THE CONTRACTOR SHALL UTILIZE DRILLING OR OTHER INSTALLATION TECHNIQUE TO MITIGATE OBSTRUCTIONS ENCOUNTERED WITHOUT CAUSING SOIL DISTURBANCE OUTSIDE THE EXCAVATION LIMITS AND/OR ADVERSELY IMPACTING THE BUILDING OR BRICK WALL.
13. THE ESTIMATED EXCAVATION LIMITS FOR THE TANK REMOVAL AND NEW TANK INSTALLATION ARE DEPICTED IN THE CONTRACT DRAWINGS. THE EXCAVATIONS SHALL NOT EXTEND BEYOND THE LIMITS SHOWN UNLESS DIRECTED OTHERWISE BY THE CONSTRUCTION MANAGER. THE EXCAVATION LIMITS ARE BASED ON THE EXPOSED SURFACES OF THE EXCAVATION PROTECTION SYSTEM.
14. PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR SHALL FILE DRAWINGS WITH THE NEW YORK CITY DEPARTMENT OF BUILDINGS PRIOR TO THE COMMENCEMENT OF ANY SITE WORK.
15. DURING REMOVAL OF THE EXISTING DIESEL UST SYSTEM THE CONTRACTOR SHALL USE A PHOTOIONIZATION DETECTOR (PID) TO SCREEN SOILS – THE CONTRACTOR SHALL COLLECT SOIL SAMPLES FROM ANY AREA THAT APPEARS TO BE VISUALLY CONTAMINATED OR WHERE ELEVATED PID READINGS ARE ENCOUNTERED. AT A MINIMUM, THE CONTRACTOR SHALL COLLECT ONE COMPOSITE SOIL SAMPLE FROM EACH SIDEWALL AT AN APPROXIMATE DEPTH OF 5' BELOW GROUND SURFACE. THE CONTRACTOR SHALL COLLECT GRAB SAMPLES EVERY TWO FEET TO PRODUCE THE COMPOSITE SOIL SAMPLE FOR EACH SIDEWALL OF THE EXCAVATION. THE CONTRACTOR SHALL COLLECT TWO SOIL SAMPLES FROM THE BOTTOM OF THE EXCAVATION. THE CONTRACTOR SHALL ONLY COLLECT SOIL SAMPLES FROM THE VAPOSE ZONE. THE CONTRACTOR SHALL HAVE ALL SOIL SAMPLES ANALYZED FOR NYSDEC TADM #4046 PETROLEUM RELATED CONTAMINANTS USING USEPA METHOD 8260B WITH SAMPLING RESULTS FORWARDED TO THE CONSTRUCTION MANAGER AND ENGINEER WITHIN 48 HOURS OF SAMPLING.
16. THE CONTRACTOR SHALL PROTECT ALL OPEN EXCAVATIONS WHEN WORK IS NOT IN PROGRESS IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS, CODES, AND REQUIREMENTS AND AS DIRECTED BY THE CONSTRUCTION MANAGER. THE EXCAVATION SHALL BE SUFFICIENTLY COVERED WITH STEEL PLATE OR ALTERNATIVE MEANS APPROVED BY THE CONSTRUCTION MANAGER AND SECURED TO PREVENT VEHICULAR AND PEDESTRIAN TRAFFIC FROM ENTERING THE EXCAVATED AREA.
17. THE CONTRACTOR SHALL NOT STOCKPILE EXCAVATED SOIL AND/OR MATERIALS. ALL EXCAVATED SOIL SHALL BE REPLACED WITH APPROVED BACKFILL ONCE SOIL SAMPLE RESULTS ARE EVALUATED BY THE CONSTRUCTION MANAGER. BACKFILL MATERIALS SHALL NOT BE PLACED WITHOUT WRITTEN APPROVAL FROM THE CONSTRUCTION MANAGER.
18. DURING EXCAVATION ACTIVITIES, THE CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES, UTILITIES, CATCH BASINS AND STORM SEWER PIPING, MONITORING WELLS, AND ANY EXISTING ON-SITE APPURTENANCES. CATCH BASINS SHALL BE CLEANED OF DEBRIS AND RETURNED TO WORKING ORDER UPON COMPLETION OF WORK EACH DAY. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO THE COMMENCEMENT OF WORK AT NO ADDITIONAL COST TO THE CITY.
19. THE CONTRACTOR SHALL PERFORM THE EXCAVATION IN A TIMELY MANNER AND MINIMIZE DISRUPTION TO OPERATIONAL ACTIVITIES AT THE SITE. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL ACTIVITIES, INCLUDING DISPOSAL/TREATMENT OF PETROLEUM CONTAMINATED SOILS/GROUNDWATER IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS, REGULATIONS, AND REQUIREMENTS.
20. THE CONTRACTOR SHALL DEWATER THE EXCAVATION AS NECESSARY AND STORE/DISPOSE/TREAT THE EXTRACTED WATER IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
21. THE CONTRACTOR SHALL HAND EXCAVATE AND HAND BACKFILL IN AREAS AROUND ANY UTILITIES ENCOUNTERED DURING THE EXCAVATION.
22. THE EXISTING UTILITIES AND ASSOCIATED APPURTENANCES SHALL BE PROTECTED AND MAINTAINED DURING CONSTRUCTION. THE CONSTRUCTION MANAGER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY WORK ON OR IN THE VICINITY OF THE UTILITIES AND ASSOCIATED APPURTENANCES. FOR ANY WORK DONE IN THE VICINITY OF THE UTILITIES AND ASSOCIATED APPURTENANCES, HAND EXCAVATION SHALL BE USED TO DETERMINE THEIR EXACT LOCATION. PEDESTRIAN TRAFFIC SHALL ALSO BE PROTECTED AROUND THE EXCAVATION SITE DURING CONSTRUCTION.
23. GROUND ALL CONSTRUCTION EQUIPMENT TO AVOID ACCIDENTAL ELECTROCUTION.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE, CRACKING, SUBSIDENCE, AND GROUND SETTLEMENT CAUSED BY THE USE OF THE EXCAVATION PROTECTION SYSTEM AND/OR EXCAVATION ACTIVITIES.

FUEL SYSTEMS NOTES:

1. INSTALLATION OF TANKS SHALL BE IN ACCORDANCE WITH NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) BULK STORAGE LAWS (6 NYCRR PARTS 612, 613 AND 614), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) UNDERGROUND STORAGE TANK REGULATIONS (40 CFR PART 280), AND OIL POLLUTION PREVENTION REGULATIONS (40 CFR PART 112), NATIONAL FIRE PROTECTION AGENCY (NFPA) CODES (NFPA 30 AND 30A), AND ALL APPLICABLE LOCAL REGULATIONS, BUILDING CODES, AND FIRE CODES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND TURNING OVER TO THE CONSTRUCTION MANAGER ALL NECESSARY APPROVALS AND PERMITS FROM THE NEW YORK CITY FIRE DEPARTMENT, NYSDEC AND ANY LOCAL BUILDING DEPARTMENT, FIRE OFFICIAL, OR OTHER GOVERNING ENTITIES WITH APPLICABLE REQUIREMENTS FOR THE INSTALLATION AND OPERATION OF THE UNDERGROUND STORAGE TANK SYSTEM.
3. EXCAVATION FOR THE UNDERGROUND STORAGE TANK SHALL BE MADE WITH DUE CARE TO AVOID UNDERMINING FOUNDATIONS OF EXISTING STRUCTURES.
4. ALL FILL PORTS SHALL BE CLEARLY LABELED AS TO THE PRODUCT BEING STORED.
5. THE TANK SHALL BE EQUIPPED WITH A VENT PIPE. THE VENT PIPE SHALL TERMINATE NO LESS THAN 15 FEET ABOVE THE ADJACENT GROUND LEVEL AND NO LESS THAN 10 FEET FROM THE NEAREST BUILDING OPENING. THE VENT SHALL HAVE APPROVED VENT FITTINGS WITH DOUBLE MESH NO FINER THAN #4 MESH BRASS SCREEN (DOUBLE GOOSENECK), AND SHALL BE WELL-BRACED IN POSITION. VENT PIPES SHALL HAVE NFPA AND CARB APPROVED VENT CAP FITTINGS. A VENT PIPE SHALL NOT BE OBSTRUCTED BY DEVICES THAT WILL REDUCE ITS CAPACITY AND THUS CAUSE EXCESSIVE BACK PRESSURE, EXCEPT AS APPROVED BY THE FIRE COMMISSIONER OF THE CITY OF NEW YORK. VENT PIPE SHALL BE AT LEAST TWO INCHES NOMINAL INSIDE DIAMETER
6. LEAK DETECTION AND INVENTORY CONTROL SYSTEMS FOR THE UNDERGROUND STORAGE TANK AND ASSOCIATED SECONDARY CONTAINMENT SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ALL FEDERAL, STATE, AND LOCAL CODES.
7. THE TANK SHALL BE EQUIPPED WITH AN AUDIBLE AND VISUAL ALARM FOR OVERFILL PREVENTION AND AN ACKNOWLEDGMENT SWITCH. AUDIBLE AND VISUAL ALARMS SHALL BE POSITIONED SO THEY ARE READILY VISIBLE FROM THE FILL BOX AREA. FINAL LOCATION OF THE ALARMS SHALL BE AS APPROVED BY THE CONSTRUCTION MANAGER.
8. ALL WORK IS SUBJECT TO RULES AND REGULATIONS OF ALL FEDERAL, STATE, AND LOCAL AGENCIES HAVING JURISDICTION AT THE PROPOSED FACILITY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY AND OBTAIN ALL NECESSARY APPROVALS AND PERMITS FROM THESE AGENCIES. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS AND CONDITIONS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSTRUCTION MANAGER FOR RESOLUTION BEFORE STARTING WORK.
9. WHERE A STORAGE SYSTEM FOR FLAMMABLE LIQUIDS AND A STORAGE SYSTEM FOR FUEL OIL ARE TO BE USED ON THE SAME PREMISES, THE TERMINAL OF THE FUEL OIL FILL PIPE SHALL BE PROVIDED WITH A LEFT HANDED THREAD AND THE FILL PIPE FITTING SHALL BE OF A DIFFERENT SIZE THAN THAT REQUIRED FOR THE FILL PIPE TO TANKS CONTAINING FLAMMABLE LIQUIDS.
10. THE DIESEL FUEL STORAGE SYSTEM SHALL BE APPROVED BY THE FDNY BUREAU OF FIRE PREVENTION PRIOR TO CONSTRUCTION.
11. THE TANK SHALL BE INSTALLED SO THAT THE TOP OR HIGHEST POINT OF THE TANK IS NOT LESS THAN TWO (2) FEET BELOW THE LEVEL OF THE LOWEST CELLAR FLOOR OF ANY BUILDING WITH IN A RADIUS OF TEN (10) FEET FROM THE TANK.
12. BACKFILL MATERIAL SHALL BE PLACED ALONG THE BOTTOM, UNDER THE SIDES AND END CAPS, OR HEADS OF THE TANK, BY SHOVELING AND TAMPING. BACKFILLING SHALL THEN BE COMPLETED IN 12-INCH LIFTS PLACED UNIFORMLY AROUND THE TANK.
13. REQUIREMENTS FOR 'XERXES' OR APPROVED EQUAL FIBERGLASS DOUBLE WALLED TANKS FOR UNDERGROUND DIESEL FUEL OIL STORAGE INCLUDE:
- A. REGULATORY APPROVAL OR INDEPENDENT TESTING LABORATORY LISTING, TOGETHER WITH OTHER INFORMATION REQUIRED BY CODE AND REGULATIONS, MUST BE ON A PERMANENTLY AFFIXED LABEL AT THE TOP OF THE TANK. THE LABEL MUST ALSO INCLUDE THE MAXIMUM INTERNAL AND EXTERNAL PRESSURE THE TANK IS DESIGNED FOR, AND MUST INDICATE THAT IT IS BUILT TO RESIST ALCOHOL MIXTURES OF GASOLINE.
- B. A PERMANENT FILL PORT LABEL SHALL BE INSTALLED AT ALL UNDERGROUND TANK FILL PORTS INDICATING THE TANK NUMBER, DATE OF INSTALLATION, TANK CAPACITY AND DIMENSIONS, NAME OF THE MANUFACTURER, THE STANDARD OF DESIGN, AND THE MAXIMUM DESIGN PRESSURE OF THE TANK.
- C. ALL FILL PORTS MUST BE PERMANENTLY MARKED TO IDENTIFY THE PRODUCT INSIDE THE TANK, THESE MARKINGS MUST BE CONSISTENT WITH THE COLOR AND SYMBOL CODE OF THE AMERICAN PETROLEUM INSTITUTE.
- D. ALL FIBERGLASS TANKS INSTALLED IN NEW YORK CITY SHALL BE ALCOHOL MIXTURE RESISTANT TANKS TO CONFORM TO APPLICABLE FEDERAL AND NEW YORK STATE REGULATIONS. THE TANKS SHALL BE COMPATIBLE WITH THE PRODUCT STORED.
- E. THE INNER TANK MUST BE BUILT TO WITHSTAND, WITHOUT DAMAGE, A PRESSURE OF 1.5 TIMES THE MAXIMUM INTERNAL PRESSURE AND TESTED HYDROSTATICALLY AT THIS PRESSURE FOR ONE HALF HOUR WITHOUT LEAKS OR DAMAGE TO THE TANK. IN ANY CASE, THE TEST PRESSURE MAY NOT BE LESS THAN 30 PSI (5 PSI FOR FUEL OIL) HYDROSTATIC ON THE INNER OR PRIMARY TANK OR PER CURRENT REGULATION REQUIREMENTS.
- F. ALL PIPING SHALL BE SUBJECT TO A HYDROSTATIC PRESSURE TEST SIMULTANEOUSLY TESTING BOTH THE TANK AND THE PIPING IN ACCORDANCE WITH SPECIFICATIONS FOR THE TANK TEST OUTLINED ABOVE. HOWEVER, DISCHARGE PIPING SHALL BE TESTED IN ACCORDANCE WITH PARAGRAPH 27-794(A), (NYCAC) I.E.; 100 PSI OR 1.5 TIMES THE MAXIMUM WORKING PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD 30 MINUTES OR PER CURRENT REGULATION REQUIREMENTS.
- G. A NEW YORK CITY APPROVED TANK LEAK DETECTION AND INVENTORY CONTROL SYSTEM SHALL BE INSTALLED. THE SYSTEM MUST CONTINUALLY CHECK THE ANNULAR SPACE AND PIPING MANWAY FOR LEAKS. THE LEAK DETECTION SYSTEM SHALL COMPLY WITH ALL REGULATIONS AND REQUIREMENTS APPLICABLE TO THESE SYSTEMS.
- H. ALL INNER TANKS SHALL HAVE BOTTOM REINFORCING PLATES OF SUFFICIENT SIZE BELOW OPENINGS IN THE TOP OF THE TANK TO PROTECT THE BOTTOM OF THE TANK FROM PUNCTURE AND EROSION. THESE SHALL BE MADE OF STEEL PLATES LAMINATED WITH FIBERGLASS RESIN.
- I. INSTALLATION IS TO BE DONE ONLY BY NEW YORK CITY LICENSED INSTALLERS FOR ALL UNDERGROUND SYSTEMS, AND BE CERTIFIED BY THE TANK MANUFACTURER AS BEING SPECIFICALLY TRAINED IN FIBERGLASS TANK INSTALLATION. LISTS OF CERTIFIED INSTALLERS SHALL BE PROVIDED BY THE TANK MANUFACTURER TO THE NEW YORK CITY FIRE DEPARTMENT. NOTIFICATION SHALL BE PROVIDED TO THE NEW YORK CITY FIRE DEPARTMENT IMMEDIATELY UPON DECERTIFICATION OF ANY INSTALLER. THE NEW YORK CITY FIRE DEPARTMENT WILL ALSO CERTIFY FIBERGLASS TANK INSTALLERS AFTER EXAMINATION IN INSTALLATION PROCEDURES, REQUIREMENTS OF REGULATIONS, ETC.
- J. THE CONTRACTOR'S WORKERS INVOLVED IN THE INSTALLATION OF FIBERGLASS TANKS SHALL BE CERTIFIED BY THE TANK MANUFACTURER.
- K. ALL TANKS SHALL BE ON A FIRM MINIMUM 12 INCH THICK APPROVED CONCRETE SLAB WITH A MINIMUM OF 12 INCHES OF PEA GRAVEL ON TOP OF THE SLAB. IN ADDITION, THE TANK SHALL BE SURROUNDED BY PEA GRAVEL. THE SIZE OF THE PEA GRAVEL SHALL NOT DIFFER FROM THE MANUFACTURER'S SPECIFICATIONS. PEA GRAVEL SHALL ALSO BE USED FROM THE TOP OF THE TANK TO THE BOTTOM OF THE APPROVED CONCRETE COVER SLAB. PEA GRAVEL MUST BE FREE FROM STONES THAT WILL NOT PASS A 1" MESH.
- L. INSTALLATION OF ALL TANKS SHALL BE IN ACCORDANCE WITH AN APPROVED PROCEDURE, DESIGNED TO AVOID DAMAGE TO THE TANK DURING UNLOADING, HANDLING, PLACEMENT, BURIAL, AND SURROUNDING AND COVERING TANKS WITH APPROVED MATERIALS.
- M. AFTER CAREFUL PLACEMENT OF THE TANK ON THE PEA GRAVEL, THE TANK SHALL BE PROPERLY ANCHORED TO THE BASE AS SPECIFIED BY THE TANK MANUFACTURER.
- N. ALL TANKS SHALL HAVE APPROVED AND PRE-TESTED LIFTING LUGS, AND SHALL BE PLACED IN EXCAVATION BY USING APPROVED LUGS.
- O. TANKS SHALL BE COVERED WITH A REINFORCED CONCRETE SLAB NOT LESS THAN EIGHT INCHES THICK WHICH SHALL EXTEND NOT LESS THAN TWELVE INCHES BEYOND THE HORIZONTAL OUTLINES OF THE TANK.
- P. TANKS SHALL MEET THE ADDITIONAL CONSTRUCTION STANDARDS FOR CYLINDRICAL TANKS AS SPECIFIED IN NYCMC 1305.14.2.
14. REQUIREMENTS FOR THE USE OF THE 'TITFLEX' FLEXIBLE CONNECTORS FOR UNDERGROUND PETROLEUM STORAGE TANK INSTALLATIONS SHALL BE AS FOLLOWS:
- A. FLEXIBLE CONNECTORS SHALL BE FIRESAFE MODEL 111504D-24-L, 111504D-32-L, 111504E-24-L, 111504E-32-L, 111504A-24-L, 111504A-32-L, 111504C-24-L, 111504C-32-L, OR APPROVED EQUAL.
- B. THE FLEXIBLE CONNECTORS SHALL BE LISTED BY UNDERWRITERS LABORATORY, OR FACTORY MUTUAL.
- C. FLEXIBLE CONNECTORS SHALL BE 100% CONTAINED IN A NON-PERMEABLE, NONMETALLIC CONTAINMENT, DESIGNED TO CONTAIN ANY LEAKAGE, AND CHANNEL SUCH LEAKAGE TO A LOCATION EQUIPPED WITH AN APPROVED, CONTINUOUSLY MONITORED, AUTOMATIC LEAK DETECTION DEVICE.
- D. WHEN USED AT TANK SUMPS, FLEXIBLE CONNECTORS SHALL BE LOCATED INSIDE OF SUMPS, AND SHALL BE FIRESAFE MODELS.
- E. THE LENGTH OF THE FLEXIBLE CONNECTORS SHALL BE ADEQUATE TO RELIEVE STRESSES DUE TO MOVEMENT, SETTLEMENT, AND SHIFTING OF THE TANK AND PIPING, OR DUE TO VIBRATION, TRAFFIC ETC., AND SHALL BE INSTALLED SO AS NOT TO HAVE LESS THAN THE MINIMUM BENDING RADIUS OF THE CONNECTORS AS RECOMMENDED BY THE MANUFACTURER. IT SHALL NOT TRANSMIT EXCESS STRESS TO THE THREADS OF THE ASSOCIATED FIBERGLASS PIPING. WHEN THE CONNECTOR IS BENT, IT SHALL NOT BE DISTORTED OUT OF SHAPE, AND ITS DIAMETER SHALL NOT BE CONSTRICTED OR OBSTRUCTED.
15. NEW YORK CITY FIRE DEPARTMENT REQUIREMENTS FOR 'AMERON' FIBERGLASS PIPING FOR UNDERGROUND PETROLEUM INSTALLATIONS (DUALOY 3000 L SERIES) SHALL BE AS FOLLOWS:
- A. FIBERGLASS PIPING, FITTINGS, AND ADHESIVES SHALL CURRENTLY BE LISTED WITH, UNDERWRITERS LABORATORY, OR FACTORY MUTUAL. THE CONTRACTOR SHALL SUBMIT CERTIFICATION DOCUMENTS SHOWING THAT ALL FIBERGLASS PIPING, FITTINGS, AND ADHESIVES ARE ACCEPTED FOR USE WITH GASOLINE, METHANOL, AND ALCOHOL MIXTURES OF GASOLINE, AND ARE COMPATIBLE WITH THE PRODUCTS STORED IN THE TANKS AND COMPLY WITH U.L. 871 AND 567, OR EQUIVALENT STANDARDS, AND ARE ACCEPTABLE TO THE NEW YORK CITY FIRE DEPARTMENT.
- B. THE OUTER PIPING SHALL BE A NON-PERMEABLE SLEEVE DESIGNED TO RETAIN ANY LEAKAGE, AND TO CHANNEL SUCH LEAKAGE AS APPROPRIATE TO A LOCATION EQUIPPED WITH A CONTINUOUSLY MONITORED, FIRE DEPARTMENT APPROVED, AUTOMATIC LEAK DETECTION SYSTEM. THE SLEEVE SHALL PROVIDE 100% CONTAINMENT OF THE PIPING, INCLUDING THE FLEXIBLE CONNECTORS. IF THE ENTIRE ANNULAR SPACE OF THE DOUBLE-WALL PIPING CANNOT BE CHANNELLED TO A SINGLE LOCATION, THE CONTRACTOR SHALL INSTALL ADDITIONAL MONITORING LOCATIONS EQUIPPED WITH LEAK DETECTION SO THAT THE ENTIRE LENGTH OF DOUBLE-WALL PIPING IS MONITORED CONTINUOUSLY BY AN AUTOMATIC LEAK DETECTION SYSTEM. THE INSTALLATION OF THE LEAK DETECTION SYSTEM FOR THE ANNULAR SPACE SHALL BE SUPERVISED BY A LICENSED INSTALLER CERTIFIED BY THE SYSTEM'S MANUFACTURER, OR INSTALLED UNDER THE MANUFACTURER'S DIRECTION. THE INSTALLATION SHALL BE IN FULL COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL TEST THE SYSTEMS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE PRIOR TO, AND AFTER, THE POURING OF ANY CONCRETE COVER. THE CONTRACTOR SHALL SUBMIT DETAILED INSTALLATION PROCEDURES FOR REVIEW BY THE ENGINEER.
- C. INSTALLATION OF DOUBLE-WALL PIPING SHALL BE SUPERVISED BY A STATE OF NEW YORK LICENSED INSTALLER FOR UNDERGROUND SYSTEMS, WHO SHALL ALSO BE CERTIFIED BY THE TANK AND PIPE MANUFACTURERS AND WHO IS ACCEPTED BY THE NEW YORK CITY FIRE DEPARTMENT AS BEING SPECIFICALLY TRAINED IN FIBERGLASS PIPING INSTALLATIONS. THE MANUFACTURERS SHALL SUBMIT LISTS OF CERTIFIED INSTALLERS TO THE BUREAU OF FIRE PREVENTION AS THEY ARE CERTIFIED. THE PIPING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH A CODE OF PRACTICE DEVELOPED BY A NATIONALLY RECOGNIZED ASSOCIATION, OR INDEPENDENT TESTING LABORATORY, AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. DETAILS SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR REVIEW.
- D. UNDERGROUND FIBERGLASS PIPING SHALL BE PROVIDED WITH A PROTECTOR PLATE OF ADEQUATE STRENGTH AND SIZE, POSITIONED NO MORE THAN 6 INCHES ABOVE THE PIPING, TO PREVENT DAMAGE TO THE PIPING DURING FUTURE EXCAVATIONS. IN ADDITION, A WARNING TAPE BURIED 6 INCHES BELOW GRADE SHALL BE POSITIONED OVER THE FIBERGLASS PIPING, WARNING THAT FIBERGLASS GASOLINE, DIESEL, FUEL OIL, OR MOTOR VEHICLE FUEL PIPING IS LOCATED BELOW.
- E. ALL INNER PIPING SHALL BE TESTED HYDROSTATICALLY FOR 30 MINUTES AT A PRESSURE OF 30 PSI, EXCEPT DISCHARGE PIPING LINES WHICH SHALL BE TESTED AT 100 PSI OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER, FOR A PERIOD OF 30 MINUTES. THE ANNULAR SPACE OF THE DOUBLE WALL PIPES SHALL BE HYDROSTATICALLY PRESSURE TESTED AT 5 PSI, FOR A PERIOD OF 30 MINUTES. BOTH TESTS SHALL BE PERFORMED BY THE INSTALLER, IN THE PRESENCE OF, AND WITNESSED BY, A REPRESENTATIVE OF THE NEW YORK CITY FIRE DEPARTMENT AND THE CONSTRUCTION MANAGER, AND SHALL NOT SHOW ANY LEAKAGE. TESTS ARE TO BE PERFORMED AFTER FINAL INSTALLATION OF LEAK DETECTION SYSTEM, AS WELL AS, PRIOR TO AND AFTER, POURING OF CONCRETE FLOORS OR PER CURRENT REGULATION REQUIREMENTS.
16. TEST PROCEDURES SHALL BE AS FOLLOWS:
- ALL REQUIRED TESTS SHALL BE DONE ON SITE AFTER TANK INSTALLATION AND PLACEMENT IN THE EXCAVATION. THERE SHALL BE TWO PRELIMINARY TESTS BEFORE BACKFILLING, AND A FINAL TEST AFTER BACKFILLING WITH PEA GRAVEL. ALL TESTS SHALL BE WITNESSED BY THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL AND AS FOLLOWS OR PER CURRENT REGULATION REQUIREMENTS:
- A. FIRST APPOINTMENT FOR INSPECTION:
- AN INSPECTION WITNESSING THE POURING OF THE 12 INCH (MIN.) CONCRETE BOTTOM SLAB SHALL BE MADE.
- B. SECOND APPOINTMENT FOR INSPECTION:
- THE CONTRACTOR SHALL HAVE COMPLETED HIS OWN PRELIMINARY 5 PSI AIR TEST ON INNER AND OUTER TANKS BEFORE ANCHORING. THIS TEST DOES NOT HAVE TO BE WITNESSED BY THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL.
 - THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL SHALL WITNESS A PRELIMINARY 5 PSI AIR TEST ON INNER AND OUTER TANK AFTER ANCHORING ON TOP OF THE 12 INCH APPROVED PEA GRAVEL BED AND APPROVED CONCRETE BOTTOM SLAB.
 - THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL SHALL WITNESS THE PLACEMENT OF PEA GRAVEL IN BACKFILLING UP TO THE TOP OF THE TANK.
- C. THIRD APPOINTMENT FOR INSPECTION:
- WITH APPROVED PEA GRAVEL IN PLACE UP TO THE TOP OF THE TANK, THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL SHALL WITNESS A HYDROSTATIC TEST ON THE INNER TANK AND PIPING AT 30 PSI (5 PSI FOR FUEL OIL).
 - APPROVED PIPING SHALL BE TESTED AT THE SAME PRESSURE AS THE INNER TANK EXCEPT DISCHARGE PIPING SHALL BE TESTED AT 100 PSI OR 1.5 TIMES WORKING PRESSURE, WHICHEVER IS GREATER.
 - AFTER SATISFACTORY APPROVED TEST OF THE INNER TANK AND PIPING, THE PRESSURE SHALL BE RELIEVED AND WATER REMOVED FROM THE INNER TANK TO A SUFFICIENT LEVEL SO THAT DURING THE 10 PSI TEST OF THE ANNULAR SPACE, NO WATER IS FORCED FROM THE INNER TANK INTO THE ANNULAR SPACE.
 - THE FINAL TEST OF THE ANNULAR SPACE SHALL BE A 5 PSI AIR TEST FOR ONE HALF HOUR WITH NO LEAKS.
 - THE DETAILS OF THE APPROVED INSTALLATION AND TEST PROCEDURES SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED PROCEDURES, WHICH SHALL BE CONSISTENT WITH FIRE DEPARTMENT REQUIREMENTS.
 - THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL SHALL INSPECT THE PLACEMENT OF PEA GRAVEL FROM THE TOP OF THE TANK TO THE UNDERSIDE OF THE TANK TOP SLAB, AND SHALL WITNESS THE POURING OF THE TANK TOP SLAB, AND MAKE FINAL INSPECTION OF PERMIT.
- D. THE ABOVE TESTS SHALL BE MODIFIED AS DIRECTED BY THE CONSTRUCTION MANAGER AND ON-SITE PERSONNEL. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING ALL TESTS AS REQUIRED BY THE NEW YORK CITY FIRE DEPARTMENT FOR MOTOR FUEL UNDERGROUND STORAGE TANKS, PRIOR TO THE FACILITY TAKING POSSESSION OF THE TANKS.
- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND TESTING EQUIPMENT REQUIRED TO PERFORM THE TESTS WHICH THE CONTRACTOR IS RESPONSIBLE FOR, AT NO ADDITIONAL COST TO THE NEW YORK CITY DEPARTMENT OF DESIGN AND CONSTRUCTION.
17. PURSUANT TO SECTION 9004 OF THE RESOURCE CONSERVATION AND RECOVERY ACT AS AMENDED, NEW YORK STATE HAS SUBMITTED AN UNDERGROUND STORAGE TANK RELEASE DETECTION, PREVENTION, AND CORRECTION PROGRAM WHICH HAS BEEN ACCEPTED BY THE FEDERAL E.P.A. ADMINISTRATION AS BEING IN COMPLIANCE WITH E.P.A. REQUIREMENTS. NEW YORK STATE'S PETROLEUM BULK STORAGE CODE IS CONTAINED IN SECTION 17-1001.ET SEQ. OF THE ENVIRONMENTAL CONSERVATION LAW. THIS LAW PROVIDES FOR THE REGISTRATION OF ALL PETROLEUM FACILITIES, PROMULGATES RULES FOR THE HANDLING AND STORAGE OF PETROLEUM, AND ESTABLISHES STANDARDS FOR NEW AND SUBSTANTIALLY MODIFIED PETROLEUM STORAGE FACILITIES. THE CODES ARE CONTAINED IN 6NYCRR, PARTS 612, 613, AND 614 OF THE OFFICIAL COMPLIANCE CODES, RULES, AND REGULATIONS OF THE STATE OF NEW YORK. THIS CODE PREEMPTS LOCAL LAW TO THE CONTRARY PURSUANT TO 6NYCRR, SECTION 612.5(A).



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

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Issue:

05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:

**FUEL SYSTEM
NOTES**

Scale: NONE

Seal and Signature:



Date: 10.12.12

Project No.: 0902

Dwg By: BAK

Chk By: KJS

Dwg No:

X-103.00

K:\11176180\04 Drawings\06-final Design\05-Mechanical\X-102-00.dwg, 10/12/12-1 BAK

MECHANICAL NOTES:

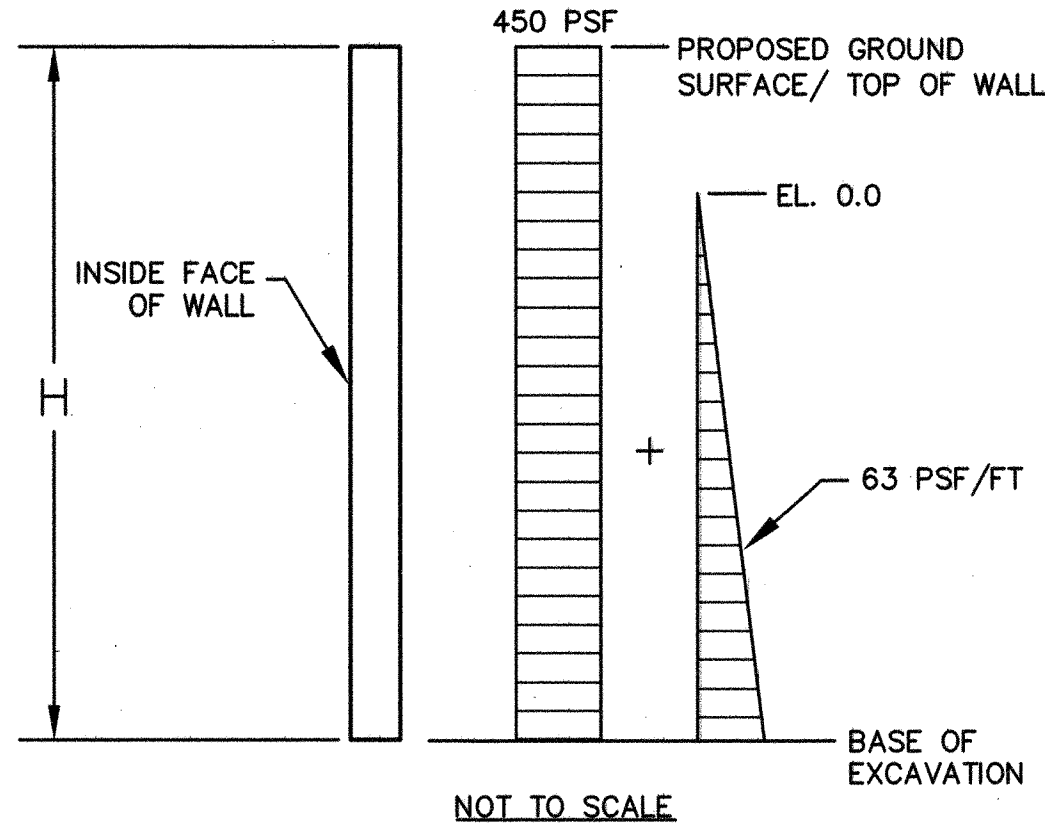
1. THE CONTRACT DRAWINGS INDICATE GENERAL ARRANGEMENT ONLY AND ARE SUBJECT TO CHANGE TO MEET FIELD CONDITIONS, AS APPROVED BY THE CONSTRUCTION MANAGER.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL SUBMIT COMPLETE WORKING DRAWINGS TO THE CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO COMMENCING WORK.
3. ALL PIPING, CONDUITS AND OTHER EQUIPMENT SHALL BE SUPPORTED TO SUIT FIELD CONDITIONS, AS APPROVED BY THE CONSTRUCTION MANAGER. DETAILS OF ALL SUPPORTS SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR APPROVAL.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CUTTING, CHIPPING, CHASING, PATCH WORK, AND REPAIR.
5. ALL EQUIPMENT AND APPURTENANCES SHALL BE INSTALLED SO AS TO AVOID INTERFERENCE WITH OTHER PIPING, ELECTRICAL FIXTURES, EQUIPMENT, AND APPURTENANCES.
6. ALL EQUIPMENT AND APPURTENANCES SHALL BE INSTALLED AND ADJUSTED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
7. FINAL PIPING ARRANGEMENT AND INSTALLATION SHALL PERMIT ACCESS TO ALL VALVES AND EQUIPMENT TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
8. THE CONTRACTOR SHALL INSTALL FITTINGS IN THE PIPE RUNS TO PERMIT MAINTENANCE OF ALL EQUIPMENT AND VALVES, AS DIRECTED BY THE CONSTRUCTION MANAGER.
9. THE CONTRACTOR SHALL PROVIDE APPROVED EXPANSION DEVICES WHERE REQUIRED, AS APPROVED BY THE CONSTRUCTION MANAGER.
10. THE CONTRACTOR SHALL PROVIDE APPROVED SLEEVES AND WATERPROOF HUBS FOR ALL PIPES PASSING THROUGH WALLS, FLOORS, AND ROOFS.
11. FIRE STOPPING SHALL BE REQUIRED AT ALL PENETRATIONS OF FIRE RATED PARTITIONS AND SLABS RELATED TO THE WORK IN THIS CONTRACT.
12. THE CONTRACTOR SHALL PROVIDE EQUIPMENT AND PIPING WITH IDENTIFICATION NAMEPLATES AS PER SPECIFICATIONS OR AS DIRECTED BY THE CONSTRUCTION MANAGER. EACH RELAY, CIRCUIT BREAKER, SWITCH, AND CONTROL INSTALLED UNDER THIS CONTRACT SHALL HAVE AN APPROVED IDENTIFICATION LABEL AND/OR NAMEPLATE.
13. CERTAIN PIPING AND/OR APPURTENANCES HAVE NOT BEEN SHOWN ON SOME OR ALL DRAWINGS FOR REASONS OF CLARITY. THE CONTRACTOR SHALL REFER TO ALL DESIGN DOCUMENTS AND MANUFACTURER RECOMMENDATIONS WHEN COMPLETING THE INSTALLATION.
14. ALL NOTES AND LEGENDS ON ANY ONE DRAWING APPLY TO ALL DRAWINGS WHERE APPLICABLE.
15. TYPICAL PIPE TERMINOLOGY – 2" x 3" PIPE MEANS DOUBLE WALLED PIPE WITH A 2-INCH FIBERGLASS PRIMARY CARRIER PIPE SURROUNDED BY A 3-INCH FIBERGLASS OUTER CONTAINMENT PIPE.
16. ALL UNDERGROUND FILL, SUCTION, VENT, AND RETURN PIPING SHALL BE SLOPED BACK TO THE TANKS AT A MINIMUM OF 1 INCH PER 8 FOOT OF PIPE. ALL ABOVEGROUND FILL, SUCTION, VENT, AND RETURN PIPING SHALL BE SLOPED BACK TO THE TANKS AT A MINIMUM OF 1/2 INCH PER 10 FEET OF PIPE. PIPING SHALL BE SLOPED BACK TO THE CONTAINMENT SUMPS TO PERMIT LEAK DETECTION IN CONTAINMENT SUMPS. ALL PIPING SHALL BE INSTALLED WITHOUT ANY SAGS OR LOW POINTS IN PIPING RUNS. A DOWNWARD SLOPE SHALL BE MAINTAINED THROUGH ALL FLEX CONNECTORS.
17. THERE SHALL BE 12 INCHES OF PEA GRAVEL BETWEEN THE TANK AND THE TANK BOTTOM SLAB. THERE SHALL BE A MINIMUM OF 18 INCHES OF PEA GRAVEL BETWEEN THE TANK AND ANY TANK SHEETING OR TANK TOP SLAB. THERE SHALL BE A MINIMUM OF 24 INCHES OF PEA GRAVEL FROM THE EDGE OF ONE TANK TO THE EDGE OF ANOTHER TANK.
18. THE TRANSITION FROM FIBERGLASS TO STEEL PIPE SHALL BE SUITABLY SUPPORTED TO INSURE THAT LOADS ARE NOT TRANSMITTED TO THE FIBERGLASS PIPE. THE CONTRACTOR SHALL SUBMIT DETAILS TO THE CONSTRUCTION MANAGER FOR APPROVAL.
19. VALVES AND ALL OTHER APPURTENANCES INSTALLED IN PIPING, SHALL BE SUPPORTED SO AS NOT TO IMPOSE STRESSES ON FIBERGLASS PIPE.
20. MANHOLE COVERS AND FRAMES SHALL BE PERMANENTLY IMPREGNATED OR FACTORY PAINTED WITH COLORS AND SYMBOLS IN ACCORDANCE WITH THE COLOR AND SYMBOL CODE OF THE AMERICAN PETROLEUM INSTITUTE. IF NOT AVAILABLE FROM THE MANHOLE MANUFACTURER, AND APPROVED BY THE CONSTRUCTION MANAGER, THE CONTRACTOR SHALL PAINT MANHOLE COVERS AND FRAMES IN ACCORDANCE WITH THE COLOR AND SYMBOL CODE OF THE AMERICAN PETROLEUM INSTITUTE.
21. FUEL FILLS SHALL BE IDENTIFIED IN ACCORDANCE WITH THE COLOR AND SYMBOL CODE OF THE AMERICAN PETROLEUM INSTITUTE.
22. UNUSED TANK OPENINGS SHALL BE PERMANENTLY SEALED AT THE TANK AS PER TANK MANUFACTURER AND/OR STATE AND LOCAL APPLICABLE CODES AND REGULATIONS.
23. TANKS SHALL BE PLACED ON A 12-INCH THICK BASE SLAB APPROVED BY THE NEW YORK CITY DEPARTMENT OF BUILDINGS AND SECURED AGAINST FLOTATION.

ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF LOW-VOLTAGE SIGNAL CONDUCTORS AS REQUIRED FOR TANK EQUIPMENT AND AS SHOWN ON THE TANK CONTRACT DRAWINGS. ELECTRICAL DESIGN FOR LINE VOLTAGE (110 VOLTS) REQUIRED TO PROVIDE POWER TO TANK EQUIPMENT, LIGHTING, MONITORING BUILDING, ETC. IS FOUND IN THE MEP CONTRACT DRAWINGS AND SPECIFICATIONS.
2. ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE BUT NOT LESS THAN 3/4 INCH WHERE EXPOSED AND 1 INCH WHERE CONCEALED.
3. THE CONTRACTOR SHALL GROUND ALL EQUIPMENT TO STRUCTURAL STEEL OR GRADE WITH 1-1/2" x 1/8" CONTINUOUS COPPER GROUND BUS IN ACCORDANCE WITH APPLICABLE CODES AND AS DIRECTED BY THE CONSTRUCTION MANAGER.
4. ALL CONDUIT CONNECTIONS SHALL BE WATERTIGHT. ALL CONDUIT ENTERING ENCLOSURES SHALL BE PROVIDED WITH WATERTIGHT HUBS.
5. A RUN OF CONDUIT BETWEEN INLET AND OUTLET, FITTING AND FITTING, OR OUTLET AND FITTING SHALL NOT CONTAIN MORE THAN TWO (2) 90-DEGREE BENDS.
6. THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION MANAGER DETAILED DRAWINGS OF ALL EQUIPMENT PRIOR TO INSTALLATION.
7. WHEREVER THE INSTALLATION OF ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS IS IMPRACTICAL DUE TO LOCAL INTERFERENCE OR OTHER REASONS, THE CONTRACTOR SHALL INSTALL THE EQUIPMENT AT NEW LOCATIONS, AS APPROVED BY THE CONSTRUCTION MANAGER.
8. DRAWINGS INDICATE GENERAL ARRANGEMENT ONLY AND ARE SUBJECT TO CHANGE TO MEET FIELD CONDITIONS, AS APPROVED BY THE CONSTRUCTION MANAGER.
9. ALL EQUIPMENT SHALL BE ARRANGED TO PERMIT EASY ACCESS FOR OPERATIONS AND MAINTENANCE. ALL EQUIPMENT LAYOUT DRAWINGS SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR APPROVAL.
10. ALL EQUIPMENT SHALL BE FURNISHED AND INSTALLED AS SPECIFIED IN THE CONTRACT DRAWINGS. IN CASE OF ANY CONFLICT WITH THE SPECIFICATIONS, THE EQUIPMENT SPECIFIED IN THE CONTRACT DRAWINGS SHALL BE FINAL.
11. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE NEC AND THE NEW YORK CITY ELECTRICAL CODE (TITLE 27, CHAPTER 3). ANY REFERENCE TO THE NEC SHALL ALSO INCLUDE REFERENCE TO THE NEW YORK CITY ELECTRICAL CODE.

TANK INSTALLATION EXCAVATION NOTES:

1. THE FOLLOWING INFORMATION IS TO BE USED AS A GUIDE ONLY. IN THE EVENT OF A CONFLICT BETWEEN THIS INFORMATION AND OSHA OR OTHER LOCAL REGULATIONS, THE MOST RESTRICTIVE REGULATIONS AND REQUIREMENTS SHALL GOVERN ALL EXCAVATION WORK.
2. ALL EXCAVATIONS SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS IN DIVISION 31. ALSO AND SHALL COMPLY WITH ALL REQUIREMENTS OF OSHA SUBSECTION 'P' – EXCAVATIONS, TRENCHING, SHORING – SECTIONS 1926.650 THROUGH 1926.653. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF CHAPTER 52 TO TITLE 1 OF THE OFFICIAL COMPILATION OF THE RULES OF THE CITY OF NEW YORK REGARDING WORK PURSUANT TO AN EARTHWORK PERMIT.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN EXCAVATIONS ARE ADJACENT TO PROPERTY LINES, ROADS, SIDEWALKS, ETC. PARTICULARLY WHERE BUILDINGS ON ABUTTING PROPERTY ARE NEAR THE PROPERTY LINE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE EXCAVATION SUPPORT SYSTEM. THE SYSTEM SHALL CONSIST OF A FULLY ENCLOSED AND INTERNALLY BRACED SHEET PILE SYSTEM (SYSTEMS UTILIZING CANTILEVERED SHEET PILING WILL NOT BE ACCEPTABLE). SHEET PILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATION 316216.
5. CONTRACTOR SHALL PROVIDE SHORING DESIGN CALCULATIONS AND DRAWINGS FULLY DEFINING AND SUPPORTING THE CONFIGURATION OF THE SYSTEM. THE DRAWINGS AND CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK.
6. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING DESIGN LOADING CONDITIONS ON WHICH THE DESIGN OF THE EXCAVATION SUPPORT SYSTEM IS BASED, IN CONJUNCTION WITH THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. SOILS INFORMATION PROVIDED AS PART OF THESE CONTRACT DOCUMENTS ARE FOR INFORMATIONAL PURPOSES ONLY, AND CONTRACTOR SHALL APPROPRIATELY VERIFY CONDITIONS IN SUPPORT OF ITS DESIGN. HOWEVER, CONTRACTOR'S DESIGN SHALL BE, AT A MINIMUM, BASED ON THE EARTH PRESSURE DIAGRAM AND ACCOMPANYING ASSUMPTIONS GIVEN IN THE FIGURE BELOW:



NOTE: THIS PRESSURE DIAGRAM CONSIDERS LATERAL EARTH AND GROUNDWATER PRESSURES ACTING ABOVE THE BASE OF THE EXCAVATION ONLY. THE LOADS PRESENTED ARE UNFACTORED. SURCHARGES FROM CONSTRUCTION EQUIPMENT, ETC. ARE NOT INCLUDED AND MUST ADDED SEPARATELY BY THE DESIGNER. A MINIMUM UNIFORM LATERAL SURCHARGE LOAD OF 100 PSF, ACTING ON THE ENTIRE DEPTH OF THE WALL SHOULD BE APPLIED, IF NO OTHER SURCHARGES ARE TO BE PRESENT. CONTRACTOR SHALL ALSO APPROPRIATELY CONSIDER EARTH AND GROUNDWATER PRESSURES ACTING BELOW THE BASE OF THE EXCAVATION.

7. ADDITIONALLY, CONTRACTOR'S EXCAVATION SUPPORT SYSTEM SHALL BE DESIGNED AND CONSTRUCTED TO SATISFY THE FOLLOWING REQUIREMENTS. CONTRACTOR'S DESIGN AND CALCULATIONS SHALL SPECIFICALLY ADDRESS THESE ISSUES.
 - A. SHEET PILING SHALL BE EXTENDED A SUFFICIENT DISTANCE BELOW THE BOTTOM OF THE EXCAVATION TO PRECLUDE HEAVING OR INSTABILITY OF THE BASE AND TO PREVENT EXCESSIVE UNDERSEEPAGE FROM ENTERING THE EXCAVATION THROUGH ITS BASE, IN CONJUNCTION WITH CONTRACTOR'S DEWATERING SYSTEM.
 - B. DESIGN OF STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN STEEL INSTITUTE'S MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN.
 - C. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, OTHER SITE FEATURES, AND ANY NEW CONSTRUCTION DURING EXCAVATION ACTIVITIES. CONTRACTOR'S EXCAVATION SUPPORT SYSTEM SHALL BE SUFFICIENTLY RIGID TO LIMIT LATERAL DEFLECTION OF THE SYSTEM AT THE EXISTING GRADE ELEVATION TO LESS THAN 0.75-INCHES. CONTRACTOR SHALL MONITOR LATERAL DEFLECTION OF THE SYSTEM USING SURVEY TECHNIQUES, ON A DAILY BASIS.
 - D. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND FINAL CLEARANCE OF ANY REQUIRED NEEDLING, UNDERPINNING, EXCAVATION SHEETING, SHORING, OR BRACING OF EXISTING STRUCTURES THAT MAY BE REQUIRED IN ADDITION TO THE EXCAVATION SUPPORT SYSTEM.
8. THE CONTRACTOR SHALL CUTOFF AND REMOVE ALL MEMBERS OF THE EXCAVATION SUPPORT SYSTEM TO A MINIMUM DEPTH OF 3 FEET BELOW GROUND SURFACE. SHEET PILING BELOW THIS DEPTH SHALL REMAIN PERMANENTLY IN PLACE. INTERNAL BRACING MEMBERS SHALL BE INCREMENTALLY REMOVED AS THE STRUCTURE IS BACKFILLED. ALL WASTE STEEL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
9. SOFT AND POTENTIALLY ORGANIC CLAYEY SOILS ARE ANTICIPATED AT THE BASE OF THE PROPOSED EXCAVATION. THESE SOILS MAY DEFORM UNDER THE WEIGHT OF CONSTRUCTION EQUIPMENT AND MAY REQUIRE SPECIAL TREATMENT TO PROVIDE AN ADEQUATE WORKING SURFACE FOR SETTING FORMWORK, POURING CONCRETE, COMPACTION OF BACKFILLS, ETC. CONTRACTOR'S PROPOSED EXCAVATION SYSTEM DESIGN AND CONSTRUCTION PLAN SHALL APPROPRIATELY CONSIDER THE CONDITIONS AT THE BASE OF THE EXCAVATION. THE CONTRACTOR SHALL ADJUST THE THICKNESS OF THE COARSE AGGREGATE MATERIAL PLACED AT THE BOTTOM OF THE EXCAVATION TO SUIT THE NEEDS OF EQUIPMENT TO PROVIDE AN ADEQUATE WORKING SURFACE, AT NO COST TO THE OWNER.
10. THE PRESENCE OF GROUNDWATER REQUIRES SPECIAL TREATMENT, AND THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING, CONSTRUCTING, AND MAINTAINING AN APPROPRIATE DEWATERING SYSTEM. REFER TO THE SPECIFICATION SECTION 312319 FOR DEWATERING REQUIREMENTS, AND MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION OF TANKS BELOW THE EXISTING GROUNDWATER LEVEL.
11. DEWATERING SYSTEM SHALL BE CONFIGURED SO AS TO KEEP THE EXCAVATION IN A DRY CONDITION THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTROL THE RATE AND EFFECT OF THE DEWATERING AS TO AVOID OBJECTIONABLE SETTLEMENT AND SUBSIDENCE. SHEET PILE JOINTS MAY NEED TO BE CHOKED OR SEALED, DEPENDING ON SEEPAGE CONDITIONS ENCOUNTERED.
12. PRIOR TO STARTING THE EXCAVATION, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE ALL EXISTING UTILITIES AND APPURTENANCES TO REMAIN IN PLACE. ANY BURIED UTILITIES ENCOUNTERED WHICH ARE NOT IDENTIFIED BEFORE THE START OF EXCAVATION SHALL BE REPORTED TO THE CONSTRUCTION MANAGER.

13. ALL EXCAVATED SOIL SHALL BE REPLACED WITH APPROVED BACKFILL PER SPECIFICATIONS. BACKFILL MATERIALS SHALL NOT BE PLACED WITHOUT WRITTEN APPROVAL FROM THE CONSTRUCTION MANAGER.
14. BACKFILL AND FILL SHALL BE PLACED IN LIFTS OF 8" MAXIMUM LOOSE DEPTH. EACH LIFT SHALL BE COMPACTED WITH A POWER VIBRATING COMPACTOR OR SIMILAR EQUIPMENT TO ASSURE MAXIMUM COMPACTION OF THE MATERIAL. WHERE COMPACTION WILL BE PERFORMED WITHIN 5 FT OF EXISTING STRUCTURES OR UTILITIES, ONLY LIGHTWEIGHT COMPACTION EQUIPMENT SHALL BE UTILIZED AND LOOSE DEPTH OF EACH LIFT SHALL BE LESS THAN 4-INCHES.
15. COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH ASTM D698 FOR COHESIVE MATERIAL. COHESIONLESS FILL FOR DRAINAGE SHALL BE COMPACTED IN ACCORDANCE WITH ASTM D-4253 AND D-4254.
16. SETTLEMENT OR WASHING OUT THAT OCCURS IN GRADED OR BACKFILLED AREAS PRIOR TO ACCEPTANCE OF THE WORK SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES.
17. THE CONTRACTOR SHALL OVER EXCAVATE AS DIRECTED BY THE CONSTRUCTION MANAGER.
18. THE CONTRACTOR SHALL ALSO COMPLY WITH THE REMEDIATION AND TANK REMOVAL EXCAVATION NOTES AS DIRECTED BY THE CONSTRUCTION MANAGER.

PILE FOUNDATIONS NOTES:

1. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE GEOTECHNICAL INFORMATION THAT HAS BEEN INCLUDED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER AS SOON AS POSSIBLE OF ANY UNUSUAL SOIL CONDITIONS OR SOIL CONDITIONS IN VARIANCE WITH TEST BORINGS.
2. STEEL PIPE PILES SHALL HAVE CLOSED ENDS, AND SHALL BE FINISHED BY FILLING WITH CONCRETE TO THE FINAL TOP CUT-OFF ELEVATION.
3. PILE LENGTHS INDICATED IN THE PLANS ARE FOR BIDDING PURPOSES. THE ACTUAL PILE LENGTH SHALL BE DETERMINED BASED ON THE PILE ULTIMATE CAPACITY BEING ACHIEVED AND VERIFIED ON THE BASIS OF DYNAMIC PILE TESTING AS REQUIRED HEREIN AND IN THE SPECIFICATIONS. HOWEVER, ALL PILES SHALL EXTEND AT LEAST TO THE MINIMUM PILE TIP ELEVATION SHOWN ON THE PLANS, REGARDLESS OF THE RESULTS OF DYNAMIC TESTING.
4. STEEL PIPE PILES ARE DESIGNED BASED ON A WORKING LOAD OF 75 TONS IN COMPRESSION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING PILE LOAD CAPACITIES BY MEANS OF FIELD PILE LOAD TESTS AS REQUIRED IN THE SPECIFICATIONS AND AT THE TEST PILE LOCATIONS INDICATED IN THE PLANS. TEST PILES SHALL BE DRIVEN TO SUFFICIENT DEPTH SUCH THAT THE TEST LOAD SHALL IS AT LEAST 2.25 TIMES THE WORKING LOAD OF THE PILE, OR 170 TONS. DRIVING CRITERIA SHALL BE ESTABLISHED BASED ON THIS TEST LOAD, AND ALL PILES SHALL BE DRIVEN TO THE DEPTH REQUIRED TO SATISFY THIS DRIVING CRITERIA, OR TO THE HIGHEST PILE TIP ELEVATION INDICATED ON THE PLANS, WHICHEVER IS LOWER.
5. NEAR-SURFACE OBSTRUCTIONS ARE NOT ANTICIPATED AT THE SITE, BUT PREAUGERING OR RELOCATION OF PILES MAY BE NECESSARY IF OBSTRUCTIONS ARE ENCOUNTERED. PREAUGERING DEPTH SHALL BE LIMITED TO 10 FT AND THE PREAUGER DIAMETER SHALL BE LESS THAN THE DIAMETER OF THE PILE. IF RELOCATION OF ONE OR MORE PILES BECOMES NECESSARY, THE ENGINEER SHALL DICTATE THE NEW LOCATIONS.
6. UPON COMPLETION OF THE WORK, A CERTIFIED PILE REPORT SHALL BE SUBMITTED BY THE CONTRACTOR PROVIDING ALL PILE DRIVING RECORDS AND CERTIFYING THAT ALL PILES WERE INSTALLED TO THE CONFIGURATIONS, ELEVATIONS, AND CAPACITIES REQUIRED BY THE PLANS AND SPECIFICATIONS.

REMEDIATION AND TANK REMOVAL EXCAVATION NOTES:

1. THE CONTRACT DRAWINGS HAVE BEEN PREPARED TO INDICATE TO BIDDERS THE GENERAL TYPE OF CONSTRUCTION OR ALTERATION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURES IN THE FIELD PRIOR TO BID. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS BASED ON THE ACTUAL FIELD CONDITIONS.
3. THE CONTRACTOR SHALL REPLACE ALL FUNCTIONING MONITORING WELLS DESTROYED DURING THE CONSTRUCTION WORK AS DIRECTED BY THE CONSTRUCTION MANAGER OR AS INDICATED WITHIN THE CONTRACT DRAWINGS.
4. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF OSHA SUBSECTION 'P' – EXCAVATIONS, TRENCHING, SHORING – SECTIONS 1926.650 THROUGH 1926.653 AND ALL OTHER APPLICABLE REQUIREMENTS STIPULATED IN THE BUILDING CODE OF THE CITY OF NEW YORK AND RULES OF THE CITY OF NEW YORK. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF CHAPTER 52 TO TITLE 1 OF THE OFFICIAL COMPILATION OF THE RULES OF THE CITY OF NEW YORK REGARDING WORK PURSUANT TO AN EARTHWORK PERMIT.
5. FOR FURTHER REQUIREMENTS ON EXCAVATION LIMITS, BACKFILLING MATERIALS, AND CONSTRUCTION SEQUENCE, THE CONTRACTOR SHALL REFER TO CONTRACT SPECIFICATION DIVISION 31 AND THE CONTRACT DRAWINGS.
6. THE CONTRACTOR SHALL INSTALL THE EXCAVATION PROTECTION SYSTEM TO ASSURE MAINTENANCE OF STABLE VERTICAL SIDE SLOPES DURING THE EXCAVATION AND BOTTOM STABILITY AGAINST BOLING AND DISTURBANCE DURING DEWATERING.
7. THE CONTRACTOR SHALL INFORM HIMSELF AS TO THE FOLLOWING: THE NATURE OF THE SUBSURFACE CONDITIONS; THE DEPTH TO ANY PERCHED OR PERMANENT GROUNDWATER; THE LEVEL, QUALITY, AND QUANTITY OF MATERIALS TO BE ENCOUNTERED DURING THE PERFORMANCE OF WORK; THE TYPE OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY AND DURING THE PERFORMANCE OF THE WORK; AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK.
8. BORING LOGS DEVELOPED DURING ENVIRONMENTAL AND GEOTECHNICAL INVESTIGATIONS COMPLETED AT THE SITE IF AVAILABLE ARE INCLUDED IN THE APPENDIX OF THE CONTRACT SPECIFICATIONS. THE INFORMATION CONTAINED WITHIN THESE BORING LOGS IS BELIEVED TO BE REPRESENTATIVE OF THE CONDITIONS LIKELY TO BE ENCOUNTERED AT THE PROJECT SITE. NO GUARANTEE IS EXPRESSED OR IMPLIED OF THE ACCURACY, RELIABILITY, OR COMPLETENESS OF SUCH DATA.
9. SOIL PARAMETER MINIMUM VALUES TO DESIGN THE EXCAVATION PROTECTION SYSTEM ARE AS FOLLOWS: SATURATED UNIT WEIGHT OF SOIL – 130 PCF; ANGLE OF INTERNAL SOIL FRICTION – 30 DEGREES; AND, CONSTRUCTION EQUIPMENT SURCHARGE LOAD – 300 PSF.



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

PROJECT NAME:
HARPER ST. YARD

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CAPITAL PROJECT NUMBER
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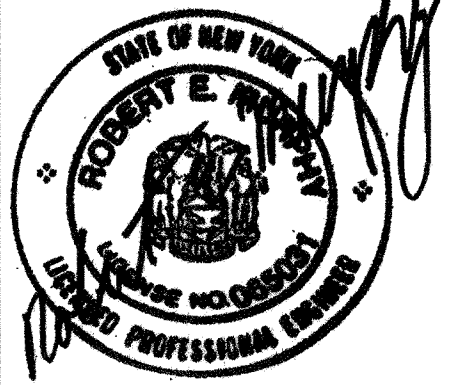
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Date:	Issue:
05.19.10	75% SD
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11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**TANK REMOVAL
AND INSTALLATION
NOTES**

Scale: NONE

Seal and Signature:



Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

Dwg No:
X-102.00

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FIRE PREVENTION NOTES:

1. NO OPEN FLAME OR SPARK PRODUCING DEVICE SHALL BE PERMITTED, EXCEPT AS PERMITTED BY 27-4079 OF THE NEW YORK CITY ADMINISTRATIVE CODE. THE APPLICABLE PROVISIONS OF CHAPTER 27 OF THE NEW YORK CITY ADMINISTRATIVE CODE WILL BE COMPLIED WITH IN ALL RESPECTS. INSTALLATION OF UNDERGROUND STORAGE TANKS SHALL BE MADE BY AN INSTALLER TRAINED BY THE MANUFACTURER AND HAVING ALL NECESSARY LICENSES IN NEW YORK STATE AND CITY OF NEW YORK.
2. CONTRACTOR SHALL PROVIDE SIGNAGE IN ACCORDANCE WITH THE "RULES OF THE CITY OF NEW YORK" TITLE 3, SECTION 21-09(a) AND NYC FIRE CODE SECTION 2206.12.
3. THE CONTRACTOR SHALL SUPPLY AND INSTALL A 20-POUND ABC RATED FIRE EXTINGUISHER. THE FIRE EXTINGUISHER SHALL BE AS SPECIFIED IN CONTRACT SPECIFICATION SECTION 104416 OR APPROVED EQUAL.
4. ALL DISPENSING OR EXTRACTION OF FUEL FROM STORAGE TANKS, PRIOR TO DEMOLITION, SHALL BE UNDER THE DIRECT SUPERVISION OF CERTIFIED ATTENDANT.
5. THE CONTRACTOR SHALL STORE ALL COMBUSTIBLES AND COMBUSTIBLE WASTE PER NYC FIRE CODE SECTION FC 304. AT MINIMUM ALL OUTDOOR STORAGE SHALL BE LOCATED GREATER THAN 10 FEET OF A PROPERTY LINE OR WITHIN 50 FEET OF A BUILDING OF GROUP A, GROUP E OR GROUP R-2.
6. THE CONTRACTOR SHALL PROVIDE ALL PORTABLE FIRE EXTINGUISHERS FOR ANY CONSTRUCTION OR COMBUSTIBLE STORAGE REQUIREMENTS PER NYC FIRE CODE.

STRUCTURAL NOTES:

GENERAL CONDITIONS

1. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
2. IF MATERIALS, QUANTITIES, STRENGTHS OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR GREATER QUANTITY, STRENGTH OR SIZE INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED.
3. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL CONFORM TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
4. GOVERNING CODE: NEW YORK CITY BUILDING CODE, 2008 EDITION
5. DESIGN LIVE LOADS:
- SURFACE SLAB - 250 PSF W/ H-20 TRUCK LOADING
6. EARTHQUAKE DESIGN DATA (PER APPLICABLE SECTIONS OF CHAPTER 16-STRUCTURAL DESIGN; 2008 NEW YORK CITY BUILDING CODE)
- SEISMIC USE GROUP = II
SEISMIC IMPORTANCE FACTOR = 1.0
MAPPED SPECTRAL RESPONSE COEFFICIENTS SDS = 0.511; SDI =0 .161
SEISMIC RESPONSE COEFFICIENT, Cs = 0.192
SITE CLASS E
7. ANY CHANGES TO THE STRUCTURAL SYSTEMS SHALL BE REDESIGNED BY A PROFESSIONAL ENGINEER AT NO COST TO THE OWNER OR THE A/E AND SUBMITTED TO THE A/E FOR REVIEW. SUBMITTAL SHALL BE ACKNOWLEDGED IN WRITING BEFORE BEGINNING CONSTRUCTION. IF CHANGES ARE MADE WITHOUT WRITTEN APPROVAL SUCH CHANGES SHALL BE THE LEGAL AND FINANCIAL RESPONSIBILITY OF THE PARTY MAKING THE CHANGE TO REPLACE OR REPAIR THE CONDITION AS DIRECTED BY THE A/E.
8. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOADS. SHORING AND RE-SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
9. CONTRACTOR IS RESPONSIBLE TO UNCOVER AND VISUALLY FIELD VERIFY THE EXISTING CONSTRUCTION PRIOR TO THE START OF ANY WORK AFFECTING THE EXISTING STRUCTURE. CONTRACTOR IS TO REPORT ANY CHANGES OR DISCREPANCIES FROM THOSE SHOWN TO THE A/E.

FOUNDATIONS

1. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SURVEY AND GEOTECHNICAL INVESTIGATION REPORTS (SEE NOTE 2) BEFORE BEGINNING CONSTRUCTION.
2. FOUNDATION DESIGN CRITERIA IS BASED UPON THE GEOTECHNICAL REPORT TITLED "HARPER STREET YARD TANK REPLACEMENT PRELIMINARY FOUNDATION RECOMMENDATIONS" DATED JAN. 14, 2010 AND THE RESULTS OF SOIL LABORATORY TESTING FROM LOUIS BERGER AND ASSOCIATES, P.C. DATED JUNE 18, 2010.
3. NOTIFY THE A/E AS SOON AS POSSIBLE OF ANY UNUSUAL SOIL CONDITIONS OR SOIL CONDITIONS IN VARIANCE WITH TEST BORINGS.
4. BACKFILL AND FILL MATERIALS SHALL CONSIST OF SOIL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER, AND BE FREE OF DEBRIS, WATER, FROZEN MATERIALS, ORGANIC AND OTHER DELETERIOUS MATTER.
- A. POROUS FILL SHALL BE A NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF CRUSHED LIMESTONE OR GRAVEL, (6" THICK, COMPACTED, UNLESS NOTED OTHERWISE ON DRAWINGS) AND THE GRADATION SHALL CONFORM WITH ASTM C33, SIZE #57.
- B. PEA GRAVEL SHALL MEET SPECIFICATIONS OF ASTM C33 AND THE GRADATION SHALL CONFORM WITH AASHTO M43, SIZE #8.

EXCAVATION AND COMPACTION:

- A. BACKFILL AND FILL SHALL BE PLACED IN LIFTS OF 8" MAXIMUM LOOSE DEPTH. EACH LIFT SHALL BE COMPACTED WITH A POWER VIBRATING COMPACTOR OR SIMILAR EQUIPMENT TO ASSURE MAXIMUM COMPACTION OF THE MATERIAL.
- B. COMPACTION SHALL BE NOT LESS THAN 98% OF MAXIMUM DENSITY ACCORDING TO ASTM D698 FOR COHESIVE MATERIAL. CUSHION LESS FILL FOR DRAINAGE SHALL BE COMPACTED TO 96% OF MAXIMUM DENSITY ACCORDING TO ASTM D-4253 AND D-4254.
- C. SETTLEMENT OR WASHING OUT THAT OCCURS IN GRADED OR BACKFILLED AREAS PRIOR TO ACCEPTANCE OF THE WORK SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES.
- D. ALL EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE.
6. UPON COMPLETION OF THE WORK, A CERTIFIED PILE REPORT SHALL BE SUBMITTED BY THE CONTRACTOR RECORDING ACTUAL ELEVATION AT BOTTOM AND TOP, ELEVATION OF ROCK (IF ANY), FINAL CENTERLINE LOCATION AT TOP, VARIATION OF PILE FROM PLUMB, RESULT OF TEST PERFORMED, ANY UNUSUAL CONDITIONS, DATE AND TIME OF STARTING PILING, COMPLETION OF PILING, TESTING, AND PLACEMENT OF PILE CONCRETE, AND VOLUME OF CONCRETE PLACED.

CAST-IN-PLACE CONCRETE

1. CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE CODES AND STANDARDS. ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" IS HEREBY MADE A PART OF THESE DRAWINGS. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301, EXCEPT AS EXPLICITLY MODIFIED HEREIN.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
3. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:
- A. 4000 PSI WITH A MAXIMUM WATER/CEMENT RATIO = 0.45 AND WITH AN ENTRAINED AIR ADMIXTURE CONFORMING WITH ASTM C260 FOR ALL CONCRETE PERMANENTLY EXPOSED TO THE WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE 6% ± 1%.
4. REINFORCING BARS TO BE ASTM A615, GRADE 60 KSI YIELD STRENGTH. WELDABLE BARS SHALL BE ASTM A706 GR. 60.
5. TACK WELDING OF THE REINFORCING SHALL NOT BE PERMITTED.
6. FIBERMESH PRODUCT TO BE ASTM A185, DELIVERED IN FLAT SHEETS.
7. CALCIUM CHLORIDE SHALL NOT BE PERMITTED NOR SHALL ANY ADMIXTURE CONTAINING CALCIUM CHLORIDE BE PERMITTED.
8. ALL CONCRETE SHALL CONTAIN A WATER REDUCING ADMIXTURE CONFORMING TO ASTM C494, TYPE A, F OR G.
9. ALUMINUM PIPE SHALL NOT BE USED WITH CONCRETE PUMPS.
10. CONCRETE SHALL BE DISCHARGED AT THE SITE WITHIN 1.5 HOURS AFTER WATER HAS BEEN ADDED TO THE CEMENT AND AGGREGATES. ADDITION OF WATER TO THE MIX AT THE PROJECT SITE WILL NOT BE ALLOWED. ALL WATER MUST BE ADDED AT THE BATCH PLANT.
11. REINFORCING BARS REQUIRED FOR PROPER SUPPORT OF PRINCIPAL REINFORCING SHALL BE DETAILED AND SUPPLIED BY THE CONTRACTOR WHETHER OR NOT THEY ARE INDICATED ON THE DRAWINGS. THE MINIMUM BAR SIZE SHALL BE #4 AND MAXIMUM SPACING SHALL BE 36" ON CENTER. WELDED WIRE FABRIC SHALL NOT BE USED FOR THE SUPPORT OF PRINCIPAL REINFORCING. CONCRETE CUBES OR SAND PLATED CHAIRS SHALL BE USED FOR THE SUPPORT OF REINFORCING ON GRADE.
12. WHERE CONSTRUCTION JOINTS ARE REQUIRED BUT ARE NOT INDICATED ON THE DRAWINGS, THEY SHALL BE LOCATED AT MID SPAN OF BEAMS, SLABS, AND WALLS, AND SHALL BE SUBJECT TO REVIEW BY THE A/E OR OWNER. UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS, PROVIDE A CONTINUOUS SHEAR KEY IN SLABS AND WALLS, AND A MINIMUM OF TWO CONTINUOUS HORIZONTAL KEYS IN BEAMS AND EACH JOIST. THE MINIMUM KEY SIZE SHALL BE 1.5" DEEP BY 1/3 THE DEPTH OR WIDTH OF THE MEMBER. AT CONCRETE SLABS ON STEEL DECK, SUPPORTED BY STEEL BEAMS, CONSTRUCTION JOINTS SHALL BE PLACED AT MID SPAN OF DECK AND MID-WAY BETWEEN BEAMS.
13. WHERE REINFORCING IS SHOWN THROUGH CONSTRUCTION JOINTS, MECHANICAL BAR SPLICE DEVICES MAY BE USED.
14. FORM CONTRACTION JOINTS WITH POWER SAWS EQUIPPED WITH SHATTERPROOF ABRASIVE OR DIAMOND-RIMMED BLADES. CUT 1/8-INCH (3-MM) WIDE JOINTS INTO CONCRETE WHEN CUTTING ACTION WILL NOT TEAR, ABRADE, OR OTHERWISE DAMAGE SURFACE AND BEFORE CONCRETE DEVELOPS RANDOM CONTRACTION CRACKS.
15. ALL LIQUID MEMBRANE CURING COMPOUND MEETING THE REQUIREMENTS OF ASTM C-309 SHALL BE USED ON ALL FORMED SURFACES DESIGNATED TO RECEIVE A "SMOOTH RUBBED FINISH" OR "GROUT CLEANED FINISH".
16. OPENINGS:
- A. OPENINGS SHOWN ARE FOR BIDDING PURPOSES ONLY. RECONCILE THEIR EXACT SIZES AND LOCATIONS WITH HVAC, PLUMBING, AND OTHER REQUIREMENTS BEFORE PROCEEDING WITH WORK.
- B. AT ALL SLAB OPENINGS, THE EQUIVALENT OF REINFORCEMENT INTERRUPTED SHALL BE ADDED ON ALL SIDES OF THE OPENING. ALL OPENINGS SHALL BE LOCATED WITHIN THE MIDDLE HALF OF THE SPAN IN EACH DIRECTION UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER.
- C. OPENINGS SHALL NOT BE PROVIDED IN FRAMED SLABS, BEAMS, JOISTS, COLUMNS, AND WALLS UNLESS SHOWN ON STRUCTURAL DRAWINGS. IF ANY OPENING NOT SHOWN ON THE PLANS IS REQUIRED, SECURE APPROVAL OF THE A/E BEFORE PROCEEDING.
- D. PROVIDE ½ NUMBER OF BARS INTERRUPTED PLUS ONE TYPICAL EACH FACE OF OPENING. PROVIDE TWO #5 BARS AROUND ALL SLAB AND WALL OPENINGS, EXTENDING 2' BEYOND OPENING IN EVERY DIRECTION UNLESS NOTED. OPENINGS NOT EXCEEDING 16" X 16" MAY BE SLEEVED AS REQUIRED BY WORKING THE REINFORCING STEEL AROUND THEM.
17. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.
18. REINFORCING BAR LAP SPLICES AND ANCHORAGE LENGTH SHALL CONFORM WITH TABLE #1, "MINIMUM LAP SPLICE AND ANCHORAGE DIMENSION TABLE".

4000PSI NORMAL WEIGHT CONC, Fy = 60KSI, NON-COATED REBAR

BAR SIZE	TOP BARS DEVELOPMENT	LAP	BAR SIZE	OTHER BARS DEVELOPMENT	LAP
#3	19"	24"	#3	15"	19"
#4	25"	32"	#4	19"	25"
#5	31"	40"	#5	24"	31"
#6	37"	48"	#6	29"	37"
#7	54"	70"	#7	42"	54"
#8	62"	80"	#8	48"	62"
#9	70"	91"	#9	54"	70"
#10	79"	102"	#10	61"	79"
#11	87"	113"	#11	67"	87"

19. TOP LAYER OF REINFORCING STEEL IN BEAMS, SLABS, JOISTS AND FOOTINGS SHALL BE CONSIDERED TOP BARS REGARDLESS OF THICKNESS OF CONCRETE BELOW THE BARS.
20. MECHANICAL BAR SPLICE DEVICES THAT PROVIDE A FULL TENSION SPLICE WITH A CAPACITY OF 125 PERCENT OF THE BAR YIELD STRENGTH MAY BE USED. ALL SPLICES SHALL BE VISUALLY INSPECTED BY A QUALIFIED INSPECTOR TO VERIFY THAT THE SPLICE HAS BEEN MADE PROPERLY.
21. PROVIDE A MINIMUM OF 3-#5 TOP REINFORCING BARS IN BEAMS WHERE NO OTHER TOP BARS ARE AVAILABLE FOR SUPPORTING STIRRUPS. ALL SPANDREL AND EDGE BEAMS SHALL HAVE A MINIMUM OF 3-#5 TOP REINFORCING BARS AND CLOSED STIRRUPS CONTINUOUS ACROSS THE SPAN.
22. BOND BREAKER MATERIAL SHALL BE 30 POUND FELT PAPER.
23. DETERMINE SIZE AND LOCATION OF MECHANICAL EQUIPMENT, AND MAKE PROVISIONS FOR BOLTS, SLEEVES, PADS, ETC., IN ACCORDANCE WITH THE MANUFACTURER'S CERTIFIED DRAWINGS. THIS WORK SHALL BE COORDINATED WITH THE TRADES INVOLVED.

MASONRY WORK

1. MASONRY WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE REFERENCES AND STANDARDS LISTED BELOW, EXCEPT AS MODIFIED HEREIN, IN ADDITION TO ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS AND STANDARD PRACTICES.
- A. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
- B. AMERICAN CONCRETE INSTITUTE, ACI-ASCE COMMITTEE 530. (ACI)
2. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS WITH A DRY NET WEIGHT OF NOT MORE THAN 115 PCF.
3. HOLLOW AND SOLID CONCRETE MASONRY UNITS SHALL CONFORM WITH ASTM C90, TYPE I WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI, EACH UNIT, NET CROSS-SECTIONAL AREA.
4. MORTAR FOR LOAD-BEARING WALLS, EXTERIOR WALLS, SHEAR WALLS, AND VERTICALLY REINFORCED MASONRY WALLS SHALL BE ASTM C270 TYPE S, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI IN 28 DAYS.
5. GROUT TO FILL CORES SHALL CONFORM WITH ASTM C476, WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS, AND SECTION 3.06 - FILLER, JOINT, AIR ENTRAINED CEMENT-GROUT OF THE NYCDOT STANDARD HIGHWAY SPECIFICATIONS.
6. MAXIMUM HEIGHT OF GROUT POUR SHALL BE 4'-0" UNLESS CLEANOUT OPENINGS ARE PROVIDED AT THE BOTTOM OF ALL CELLS TO BE FILLED.
7. ALL UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HEAD, BED (FACE SHELLS), WEBS, AND COLLAR JOINTS, UNLESS OTHERWISE NOTED.
8. DO NOT USE CALCIUM CHLORIDE OR ANY ADDITIVE THAT CONTAINS CALCIUM CHLORIDE IN THE MORTAR OR GROUT.
9. CONVENTIONAL REINFORCING BARS, HORIZONTAL AND VERTICAL, SHALL BE A615 GRADE 60. WELDABLE BARS SHALL BE ASTM A706 GR. 60.
10. PROTECT MASONRY FROM FREEZING WHEN THE TEMPERATURE IS 40 DEG FAHRENHEIT OR LESS.
11. DO NOT USE FROZEN MATERIALS OR MATERIALS MIXED OR COATED WITH ICE OR FROST.
12. DO NOT BUILD ON FROZEN WORK. REMOVE AND REPLACE MASONRY WORK DAMAGED BY FROST OR FREEZING.
13. TEMPORARILY BRACE ALL MASONRY TO PROVIDE STABILITY DURING CONSTRUCTION UNTIL THE DESIGNED STRUCTURE IS COMPLETE AND CAN STABILIZE THE WALLS.
14. NO PREMIXED MASONRY CEMENT MORTARS SHALL BE PERMITTED.
15. TESTING:
- A. THE OWNER SHALL ENGAGE AN INDEPENDENT TESTING AND INSPECTION AGENCY TO PERFORM TESTS AND SUBMIT TEST AND INSPECTION REPORTS.
- B. THE TESTING AGENCY SHALL CONDUCT AND INTERPRET THE TESTS AND STATE IN EACH REPORT WHETHER THE SPECIMENS COMPLY WITH THE REQUIREMENTS STATED HEREIN OR ON THE DRAWINGS OR BOTH, AND SPECIFICALLY STATE ANY DEVIATIONS.
- C. CORRECT DEFICIENCIES IN WORK WHICH INSPECTIONS AND LABORATORY TEST REPORTS HAVE INDICATED NOT TO BE IN COMPLIANCE WITH REQUIREMENTS. PERFORM ADDITIONAL TESTS, AT CONTRACTOR'S EXPENSE, AS MAY BE NECESSARY TO RECONFIRM ANY NON-COMPLIANCE OF THE ORIGINAL WORK, AND AS MAY BE NECESSARY TO SHOW COMPLIANCE OF CORRECTED WORK.
- D. INSPECTION AND TESTING REQUIREMENTS
- 1) PERFORM LABORATORY TESTING IN ACCORDANCE WITH ASTM C109
- 2) PERFORM LABORATORY TESTS USING THE ACTUAL MATERIALS AND PROPORTIONS TO BE USED IN CONSTRUCTION.
- 3) PERFORM LABORATORY TESTS AT LEAST 56 DAYS PRIOR TO START OF CONSTRUCTION.
- 4) PERFORM FIELD TESTING OF MORTAR AND GROUT IN ACCORDANCE WITH ACI 530.1, SECTION 4, GROUT. FIELD TESTS SHALL BE PERFORMED ON AT LEAST THREE SPECIMENS TAKEN EACH DAY OF EACH TYPE OF MORTAR AND GROUT USED AND WHENEVER THERE IS A CHANGE IN MIX PROPORTIONS, MATERIALS OR METHOD OF MIXING.
- 5) KEEP A COMPLETE JOB RECORD OF DAILY TEMPERATURE AND WEATHER CONDITIONS.
- 6) CHECK THE STORAGE AND STACKING OF MASONRY MATERIALS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 7) RANDOM SELECTION OF MASONRY UNITS FROM STOCKPILE FOR TESTS OF COMPLIANCE WITH ASTM SPECIFICATION.
- 8) INSPECTION INCLUDES REJECTING ANY BROKEN, CRACKED OR DIRTY UNITS.
- 9) CHECK REINFORCING STEEL SIZE, POSITIONING, LAP AND EMBEDMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 10) CHECK LAYING, MORTARING, AND GROUTING OF MASONRY UNITS AND ELEMENTS FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 11) CHECK THAT HOT AND COLD WEATHER REQUIREMENTS OF THE CONTRACT DOCUMENTS ARE BEING ADHERED TO.



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10.12.12	Bid Set

Sheet title:

NOTES

Scale: NONE




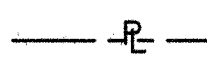










Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS




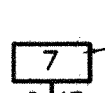
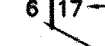

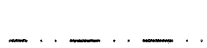

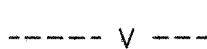








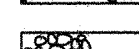
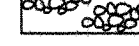

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X-101.00

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LEGEND -- EXISTING

	ELECTRIC MANHOLE
	UNDERGROUND PIPING
	HYDRANT
	PROPERTY LINE
	SPOT ELEVATION (AMSL)
	STORM MANHOLE
	STORM CATCH BASIN
	WATER LINE
	WATER VALVE
	UNDERGROUND ELECTRICAL CONDUIT
	GROUNDWATER MONITORING WELL
	GEOTECHNICAL SOIL BORING

LEGEND -- PROPOSED

	SECTION
	SHEET ON WHICH SECTION IS LOCATED
	SHEET ON WHICH SECTION IS FIRST CUT
	DETAIL
	SHEET ON WHICH DETAIL IS LOCATED
	SHEET ON WHICH DETAIL IS FIRST CUT
	UNDERGROUND SIGNAL CONDUCTOR (LOW VOLTAGE)
	DIESEL VENT
	DIESEL SUPPLY
	DISPENSER PUMP
	FUTURE CARD READER
	IMPACT PROTECTION (BOLLARDS)
	REINFORCED CAST-IN-PLACE PORTLAND CEMENT CONCRETE
	PEA GRAVEL
	INLET PROTECTION
	PERIMETER PROTECTION
	DESIGNATED AREAS OF MATERIAL STOCKPILE
	TEMPORARY CONCRETE WASHOUT FACILITY
	TEMPORARY SEDIMENT/DEWATERING CONTROL
	EXISTING DIRECTION OF SURFACE DRAINAGE

ABBREVIATIONS

AMSL	ABOVE MEAN SEA LEVEL
AST	ABOVEGROUND STORAGE TANK
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
BGS	BELOW GROUND SURFACE
C/C	CENTER TO CENTER
CMU	CONCRETE MASONRY UNIT
DIA.	DIAMETER
EL., ELEV.	ELEVATION
EW	EACH WAY
FRP	FIBER REINFORCED PLASTIC
INV.	INVERT
MAX.	MAXIMUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MH	MANHOLE
MIN.	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION AGENCY
PSI	POUNDS PER SQUARE INCH
RIM	RIM ELEVATION
TYP.	TYPICAL
UST	UNDERGROUND STORAGE TANK

GENERAL NOTES:

1. UNDERGROUND STORAGE TANK, PIPING AND APPURTENANCE REMOVAL AND INSTALLATION SHALL BE COORDINATED WITH OTHER NYCDOT CONTRACTORS AND PERSONNEL WORKING ON-SITE.
2. THE CONTRACTOR SHALL COMPLY WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) PETROLEUM BULK STORAGE LAWS (6 NYCRR PARTS 612, 613 AND 614), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) UNDERGROUND STORAGE TANK REGULATIONS (40 CFR PART 280), AND OIL POLLUTION PREVENTION REGULATIONS (40 CFR PART 112), NATIONAL FIRE PROTECTION AGENCY (NFPA) CODES (NFPA 30 AND NFPA 30A), THE NEW YORK STATE BUILDING CODES, FIRE PREVENTION CODE, AND ALL APPLICABLE LOCAL REGULATIONS, BUILDING CODES, AND FIRE CODES THAT APPLY TO AUTOMOTIVE SERVICE STATIONS AND PRIVATE FILLING STATIONS.
3. THE DISTANCE FROM ANY PART OF THE NEW TANK TO THE NEAREST WALL OF ANY BASEMENT, PIT, SEPTIC TANK, CELLAR, OR ANY PROPERTY LINE, SHALL BE GREATER THAN THREE FEET.
4. NEW UNDERGROUND TANKS SHALL BE DOUBLE WALL FIBERGLASS. THE TANKS SHALL BE UL LISTED FOR THE STORAGE OF METHANOL, DIESEL AND GASOLINE PRODUCTS. THE TANKS SHALL BE AS MANUFACTURED BY XERXES OF MINNEAPOLIS, MINNESOTA, OR AN APPROVED EQUAL, AND SHALL BE ACCEPTABLE TO THE FIRE COMMISSIONER OF THE CITY OF NEW YORK.
5. ALL FEATURES OF THE EXISTING SITE, OR ADJACENT SITES, WHICH ARE DAMAGED, DISTURBED, OR REMOVED DURING THE COURSE OF THIS WORK, SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO COMMENCEMENT OF THIS WORK, AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL RELOCATE, AS NECESSARY TO PERFORM WORK, ALL UTILITIES PRIOR TO THE COMMENCEMENT OF WORK.
7. THESE DRAWINGS DEPICT EXISTING SITE CONDITIONS PER RECORD PLANS AND THE OWNERS GENERAL KNOWLEDGE OF THE PROJECT AREA AT THE TIME OF THIS CONTRACT DEVELOPMENT. THE CONTRACTOR SHALL IDENTIFY ANY DISCREPANCIES IN THE PLAN DOCUMENTS OR WITH ACTUAL FIELD CONDITIONS AND SUBMIT THEM IN WRITING TO THE CONSTRUCTION MANAGER.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF SUBSURFACE UTILITIES/STRUCTURES. CONTRACTOR SHALL PERFORM DUE DILIGENCE IN INVESTIGATING AND IDENTIFYING THOSE UTILITIES/STRUCTURES THAT MAY BE IMPACTED BY THE DEMOLITION WORK.
9. THE CONTRACTOR SHALL PROVIDE A STAGING PLAN DETAILING THE SEQUENCE OF CONSTRUCTION FOR APPROVAL BY THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL PROTECT THE EXISTING DIESEL FUELING STATION UNTIL THE NEW DIESEL FUELING STATION IS COMPLETELY OPERATIONAL. IN ADDITION, THE CONTRACTOR SHALL CONDUCT CONSTRUCTION WORK SUCH THAT IT DOES NOT INTERFERE WITH ROUTINE REFUELING ACTIVITIES BY NYCDOT STAFF AT THE EXISTING DIESEL FUELING STATION.
10. THE EQUIPMENT SHALL BE CONSTRUCTED, INSTALLED, MAINTAINED, AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE, TITLE 27, AND THE RULES OF THE COMMISSIONER.
11. EQUIPMENT SHALL MEET THE FLOOD PLAIN REQUIREMENTS IDENTIFIED IN NFPA SECTION 23.14.
12. ALL SOIL AND DEBRIS EXCAVATED DURING DEMOLITION WORK INCLUDING TRENCHING ACTIVITIES SHALL BE CONSIDERED "CONTAMINATED HISTORIC FILL" AND SHALL BE DISPOSED OF AT AN APPROPRIATE LICENSED/PERMITTED DISPOSAL FACILITY.



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DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

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32-11 HARPER STREET,
QUEENS, NY 11368
CAPITAL PROJECT NUMBER
HWQF027C

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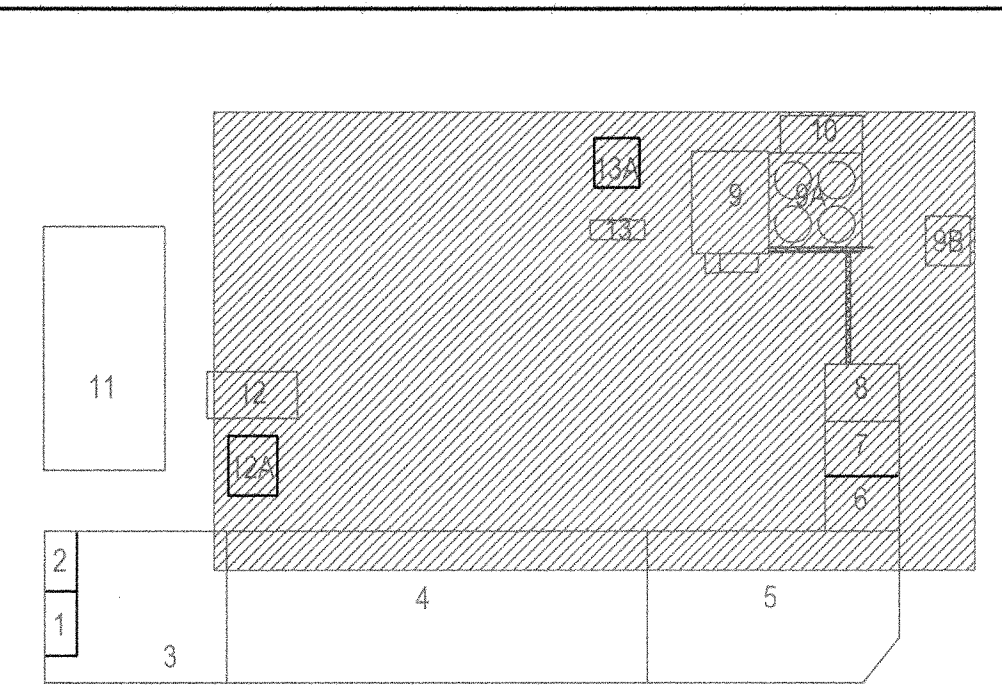
Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set




Sheet title:
**LEGEND,
ABBREVIATIONS
AND GENERAL
NOTES**
Scale: NONE

Seal and Signature:

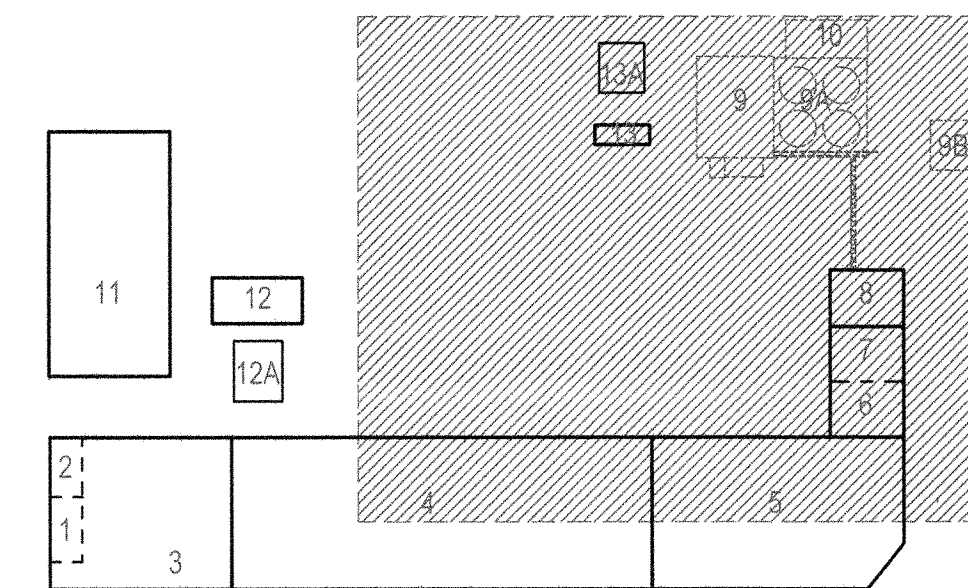

Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

Dwg No:
X-100.00



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10.12.12	Bid Set
Sheet title: PROPOSED RESTORATION PLAN Scale: AS SHOWN	
Seal and Signature:  	
Date:	10.12.12
Project No.:	0902
Dwg By:	BAK
Chk By:	KJS
Dwg No:	DM-309.00

- PAVEMENT RESTORATION NOTES:**
1. ALL UNDERMINED BASE SHALL BE REMOVED PRIOR TO BACKFILLING.
 2. ALL TRENCHES SHALL BE BACKFILLED WITH "GOOD" TO "EXCELLENT" FILL AS PER NYCDOT STANDARD HIGHWAY SPECIFICATIONS.
 3. SAW CUTTING BACK CONCRETE BASE, SQUARING AND ALIGNING OF CUT LIMITS TO BE PERFORMED ONLY AFTER COMPLETION OF THE COMPACTION OF THE BACKFILL TO THE BOTTOM OF THE BASE.
 4. BACKFILL MATERIAL SHALL BE DEPOSITED IN HORIZONTAL LAYERS NOT EXCEEDING 12" THICKNESS PRIOR TO COMPACTION. A MINIMUM STANDARD MAXIMUM DENSITY WILL BE REQUIRED AS PER THE SPECIFICATIONS. WHEN PLACING BACKFILL AROUND PIPES, LAYERS SHALL BE DEPOSITED TO PROGRESSIVELY. COMPACTION SHALL BE ACHIEVED BY THE USE OF RAMMERS, PLATE OR SMALL DRUM VIBRATORS OR PNEUMATIC BUTTON HEAD COMPACTION EQUIPMENT. HAND TAMPING IS NOT PERMITTED EXCEPT IN THE IMMEDIATE AREA OF UNDERGROUND FACILITIES.
 5. ALL RESTORATION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF NYC DEPARTMENT OF TRANSPORTATION.
 6. WHEN THE EXISTING PAVEMENT IS ASPHALT ON CONCRETE BASE, THEN RESTORATION SHALL BE AS SHOWN ON THIS RESTORATION DETAIL. CONCRETE SHALL BE REMOVED TO A WIDTH OF W+1 FOOT BY FULL DEPTH SAW CUTTING. ASPHALT SHALL BE REMOVED TO A WIDTH OF NOT LESS THAN W+3 FOOT, BY SAW CUT AND GRINDING OR PEELING SO AS NOT TO DAMAGE THE CONCRETE BASE.
 7. WHEN THE EXISTING PAVEMENT IS ASPHALT MACADAM WITHOUT CONCRETE BASE, THE CONTRACTOR SHALL SAW CUT A WIDTH OF NOT LESS THAN W+1 FOOT OF THE EXISTING PAVEMENT AND RESTORE THIS TO CONFORM TO THE EXISTING PAVEMENT AND SUB-BASE MATERIAL BUT MUST PLACE NOT LESS THAN 6" OF ASPHALT MACADAM ON 6" OF CRUSHED STONE AGGREGATE SIZED TO 1" TO 3". THE RESTORATION SHALL CONFORM TO THE TYPICAL TYPE RESTORATION ABOVE.



N.T.S

1. THIS DRAWING WAS GENERATED FROM INFORMATION PRESENTED ON A DRAWING PREPARED BY STV INCORPORATED ENTITLED "TOPOGRAPHIC AND UTILITY SURVEY", DRAWING C-102 DATED JUNE 30, 2003, EXISTING CONDITION PLANS PREPARED BY ARCHITECTS DATED MARCH 2010 AND A TOPOGRAPHICAL SURVEY PREPARED BY CITY OF NEW YORK DDC, BUREAU OF SITE ENGINEERING (TOPOGRAPHICAL SECTION) DATED NOVEMBER 8, 2010.

1. INSTALL ACCESS DRIVE TRACK CONTROL MEASURES AT THE LOCATIONS IDENTIFIED BY THE CONTRACTOR TO MINIMIZE TRACK OFF.
2. INSTALL THE PERIMETER CONTROLS AND INLET PROTECTION AS DESCRIBED HEREIN AND AT THE LOCATIONS ON THE CONTRACT DRAWINGS.
3. ESTABLISH DESIGNATED AREAS TO STOCKPILE MATERIALS, AS MATERIALS ARRIVE ON SITE PREPARE THE STOCKPILES WITH PERIMETER CONTROLS OR SURFACE COVERAGE AS NEEDED. PLACE CONSTRUCTION AND DEMOLITION WASTE STORAGE CONTAINERS IN THE AREAS APPROVED. THE CONTRACTOR SHALL MAINTAIN THE MINIMUM REQUIRED SEPARATION OF THESE CONTAINMENT AREAS AND PROJECT SITE ADJACENT WATERCOURSES.
4. COMPLETE DEMOLITION AND ANY ANCILLARY PROJECT WORK SPECIFIED IN THE CONTRACT DOCUMENTS.
5. COMPLETE SITE IMPROVEMENTS AND PAVEMENT RESTORATIONS TO GRADES AND ELEVATIONS AS SHOWN ON THE CONTRACT DRAWINGS. WHEN SITE HAS BEEN STABILIZED, REMOVE ALL TEMPORARY WATER QUALITY CONTROLS.
6. MAINTENANCE - THE CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR MAINTENANCE AND REPAIRS TO ALL TEMPORARY CONTROLS DURING THE CONSTRUCTION OF THE PROJECT. THE CONTROLS IDENTIFIED SHALL BE IN-PLACE AT THE END OF EVERY WORKING DAY AND MAINTAINED IN THE FOLLOWING MANNER.

A. ALL STORMWATER BMP'S SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING ANY RUN-OFF PRODUCING STORM EVENT. ANY DEFICIENCIES OR DAMAGE TO THE CONTROL DEVICES SHALL BE REPAIRED IMMEDIATELY TO SATISFY THE ORIGINAL DESIGN AND FUNCTION.

B. SEDIMENT ACCUMULATIONS AT THE PERIMETER CONTROLS SHALL BE REMOVED WHEN THE DEPTH OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE DEVICE. REPAIRS SHALL BE MADE AS NECESSARY TO THE PERIMETER PROTECTION TO MAINTAIN IT AS A CONTINUOUS BARRIER.

C. THE ACCESS DRIVE TRACK CONTROL MEASURES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROADWAYS OR RIGHTS-OF-WAY. ANY MATERIALS SPILLED, DROPPED, OR WASHED ONTO PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY.

D. ALL DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGH DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED OR BROUGHT TO FINISHED GRADES.

7. INSPECTIONS - THE CONTRACTOR SHALL HAVE A QUALIFIED WATER QUALITY INSPECTOR CONDUCT AND ASSESSMENT OF THE SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND CERTIFY IN AN INSPECTION REPORT THAT THE APPROPRIATE WATER QUALITY CONTROLS DESCRIBED IN THE PERMIT HAVE BEEN FULLY INSTALLED, BEEN ADEQUATELY INSTALLED OR IMPLEMENTED TO ENSURE OVERALL PREPAREDNESS OF THE SITE. FOLLOWING THE COMMENCEMENT OF CONSTRUCTION, SITE INSPECTIONS SHALL BE CONDUCTED BY THE QUALIFIED REPRESENTATIVE AT LEAST EVERY SEVEN (7) CALENDAR DAYS, OR AS REQUIRED BY LOCAL PRACTICES.

8. THE WATER QUALITY INSPECTOR SHALL COMPLETE ANY REQUIRED DOCUMENTATION FOR EACH INSPECTION AND MAINTAIN A COPY OF THE RECORDS AT THE PROJECT SITE FOR THE DURATION OF THE CONTRACT.

Dwg No:
DM-306.00

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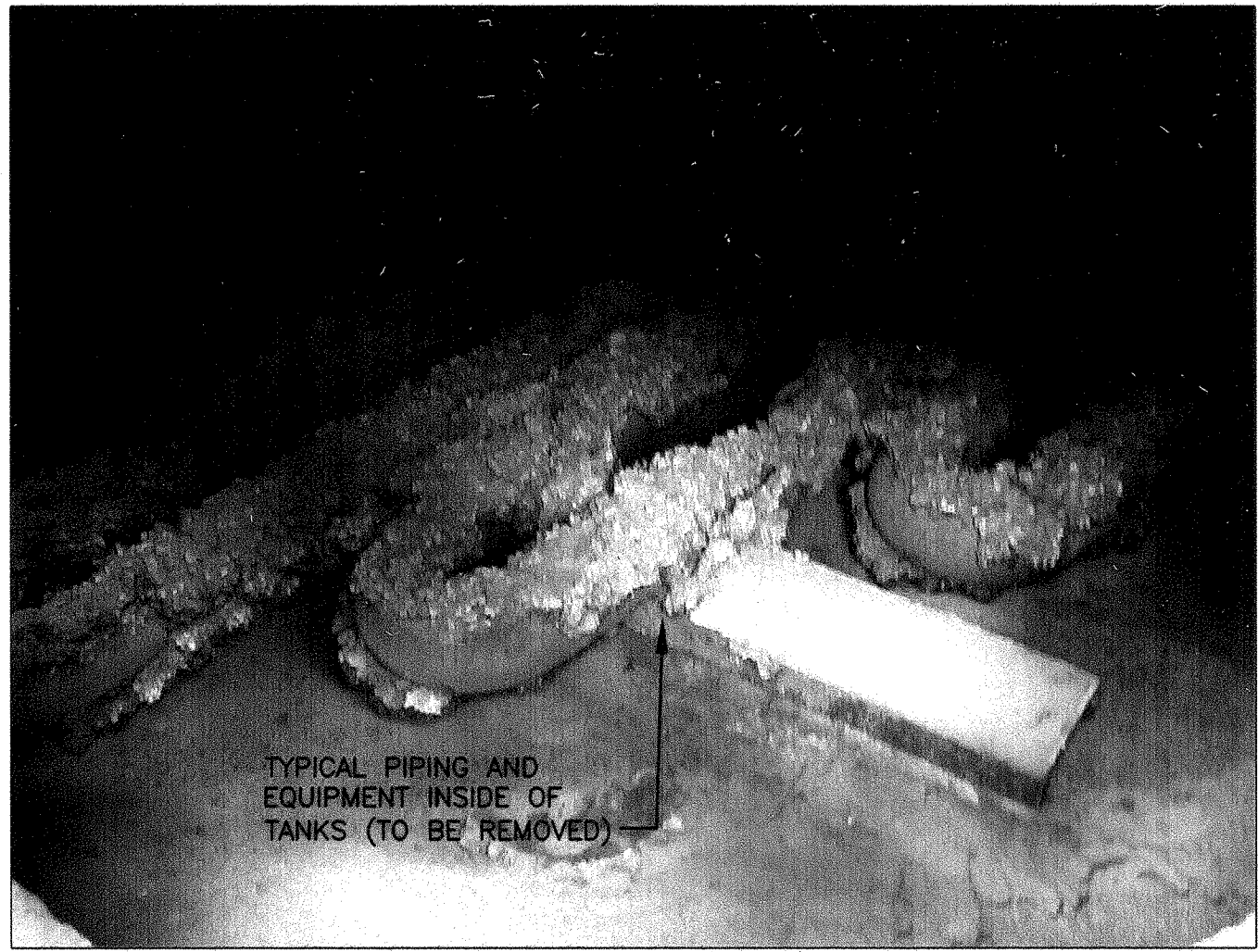


PHOTO 10



PHOTO 11

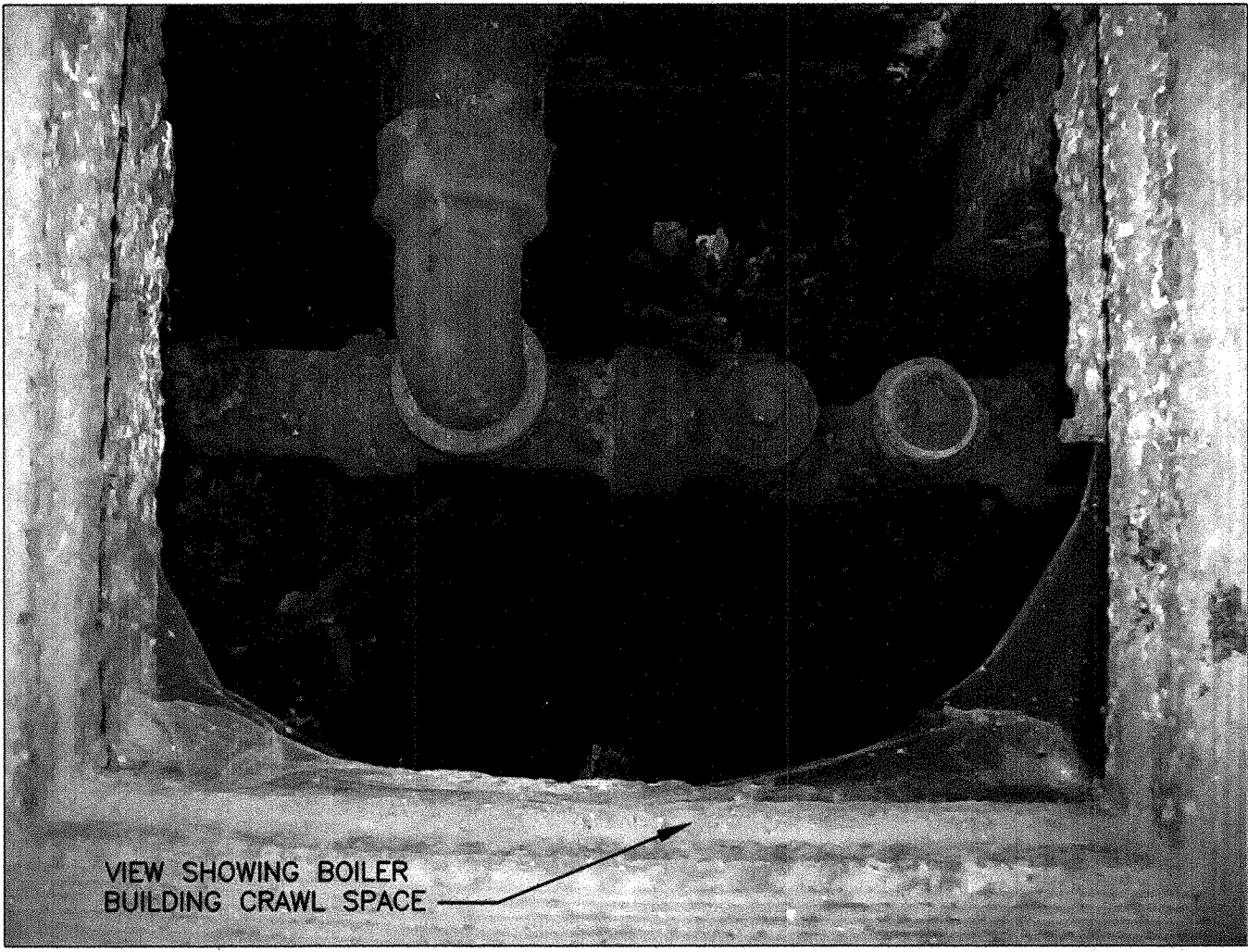


PHOTO 12



PHOTO 13

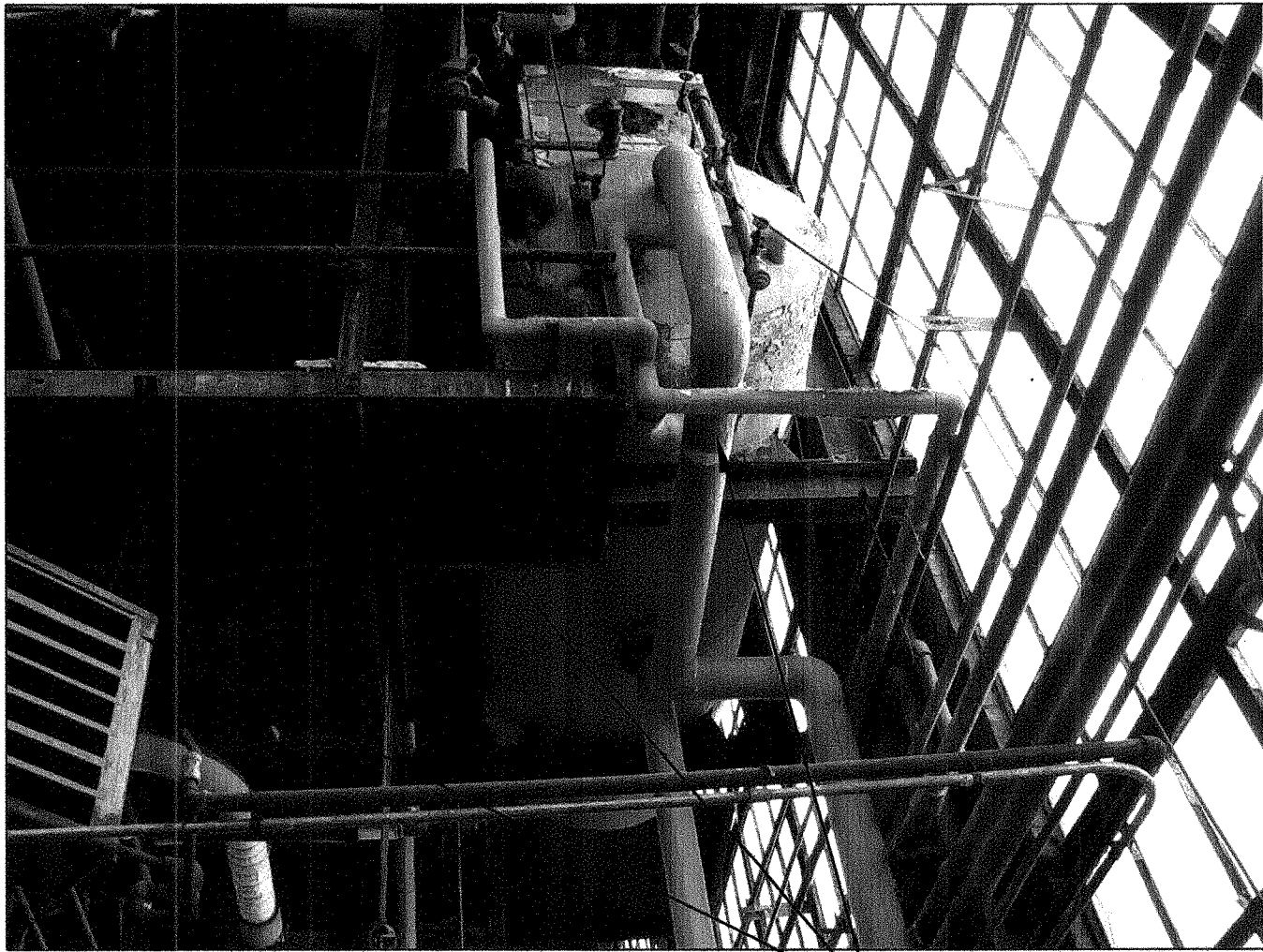


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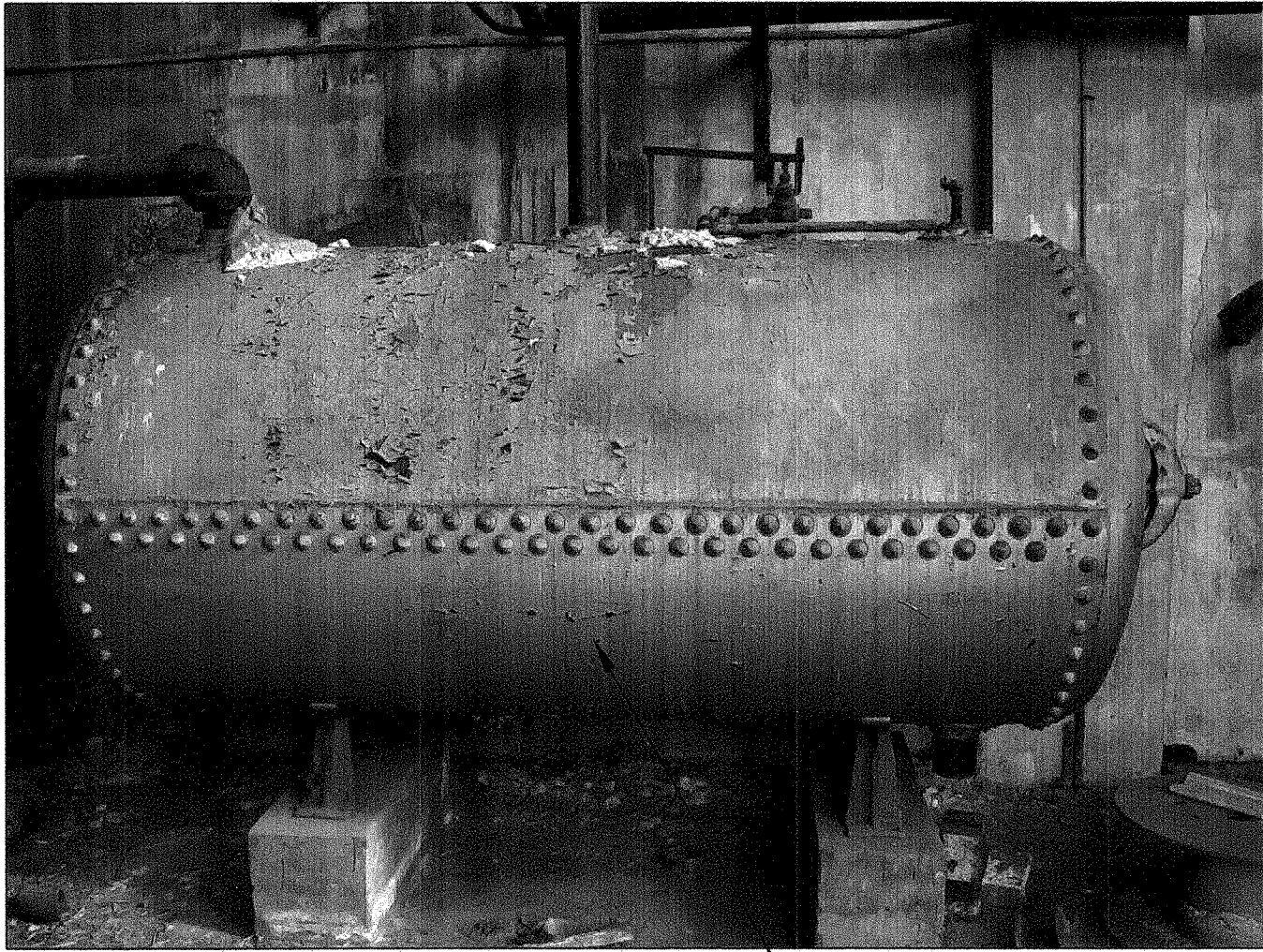


PHOTO 15



PHOTO 16

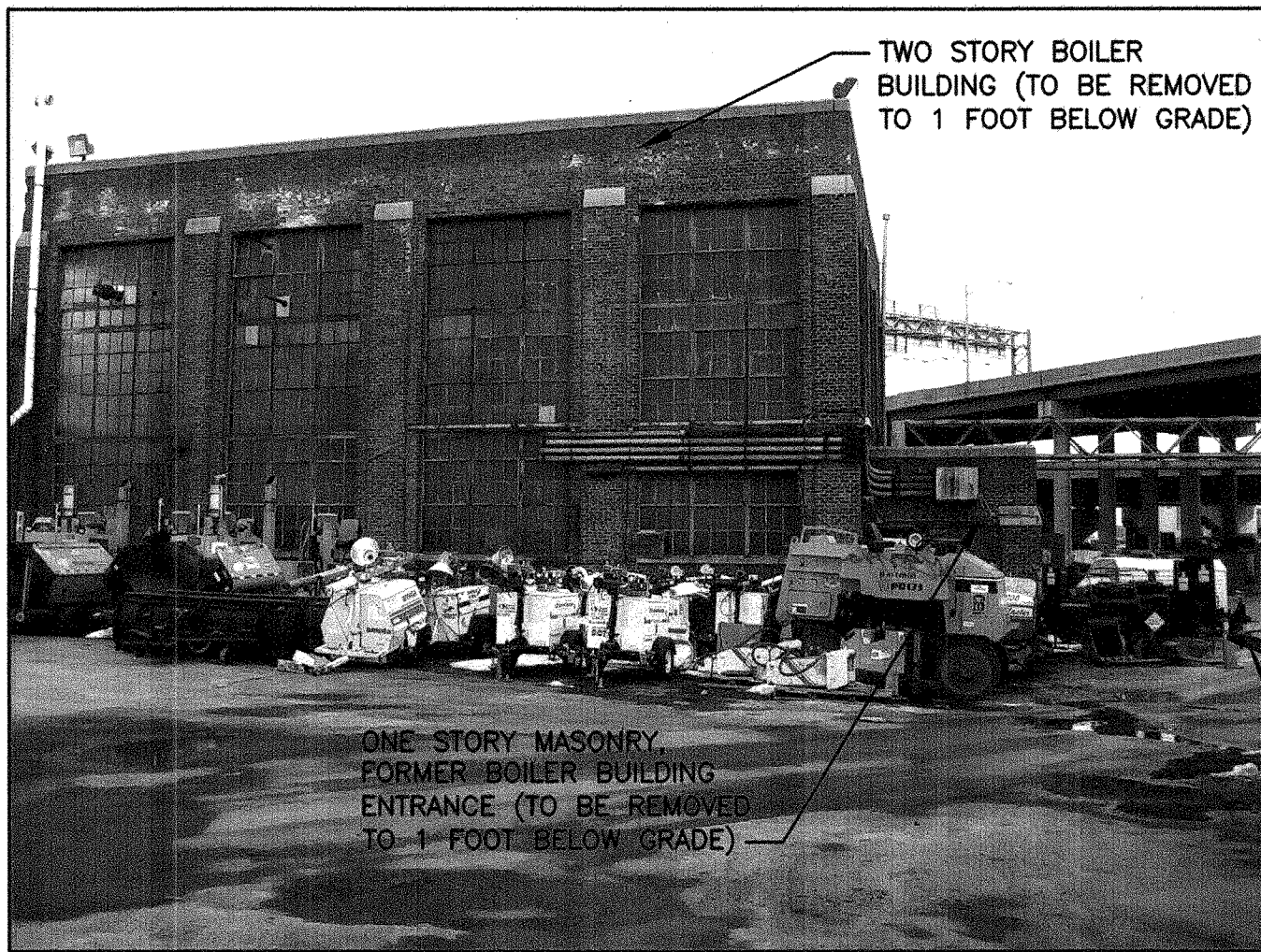



PHOTO 17

- NOTES:
1. REFER TO SHEET DM-302.00 FOR PHOTO DIRECTION AND LOCATION.
 2. THE PURPOSE OF THESE PHOTOS IS TO PROVIDE A BETTER UNDERSTANDING TO THE CONTRACTOR OF THE SCOPE OF THE DEMOLITION WORK.



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Sheet title:
SITE PHOTOS

Scale: NONE

Seal and Signature:


Date:	10.12.12
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Dwg By:	BAK
Chk By:	KJS

Dwg No:
DM-305.00

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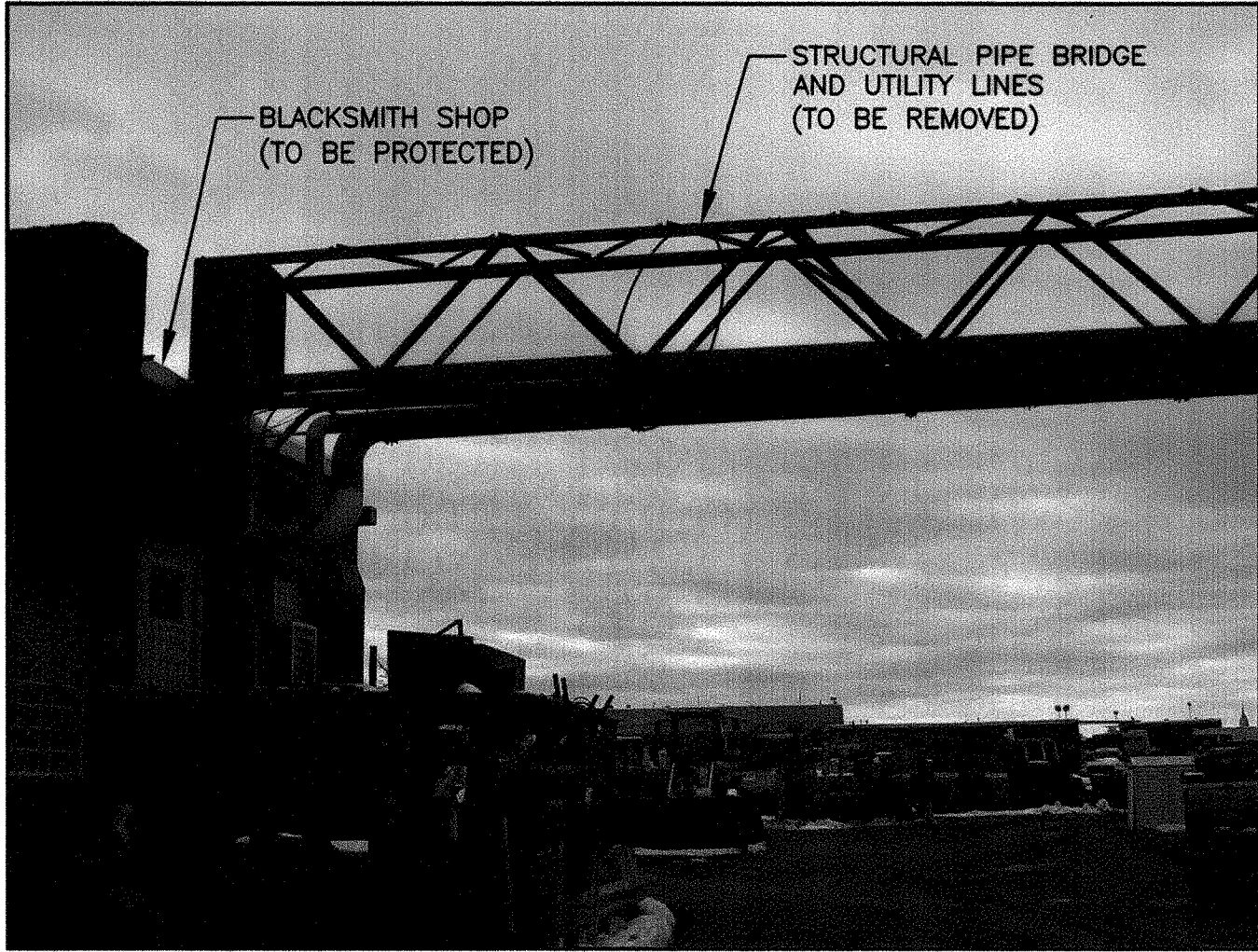


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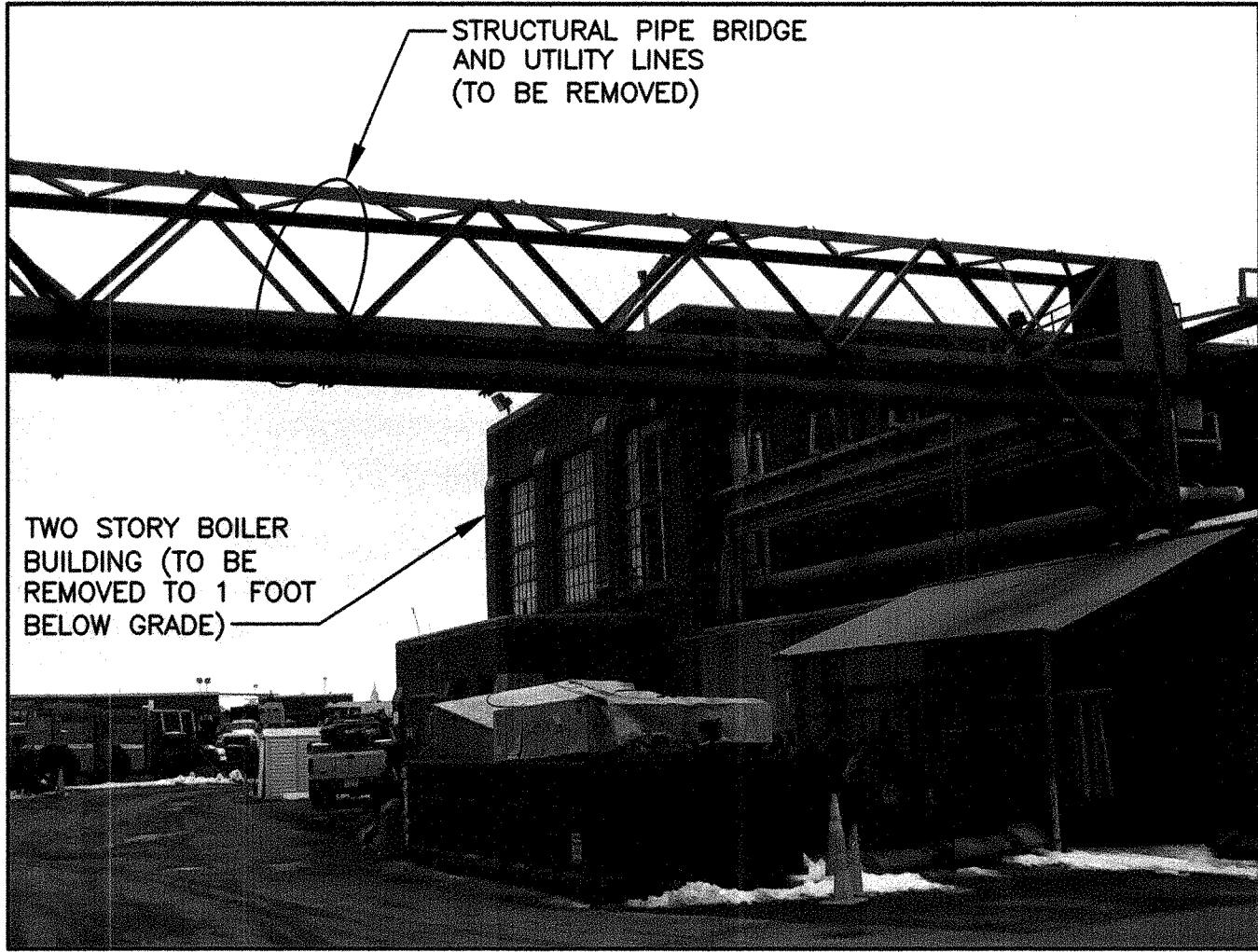


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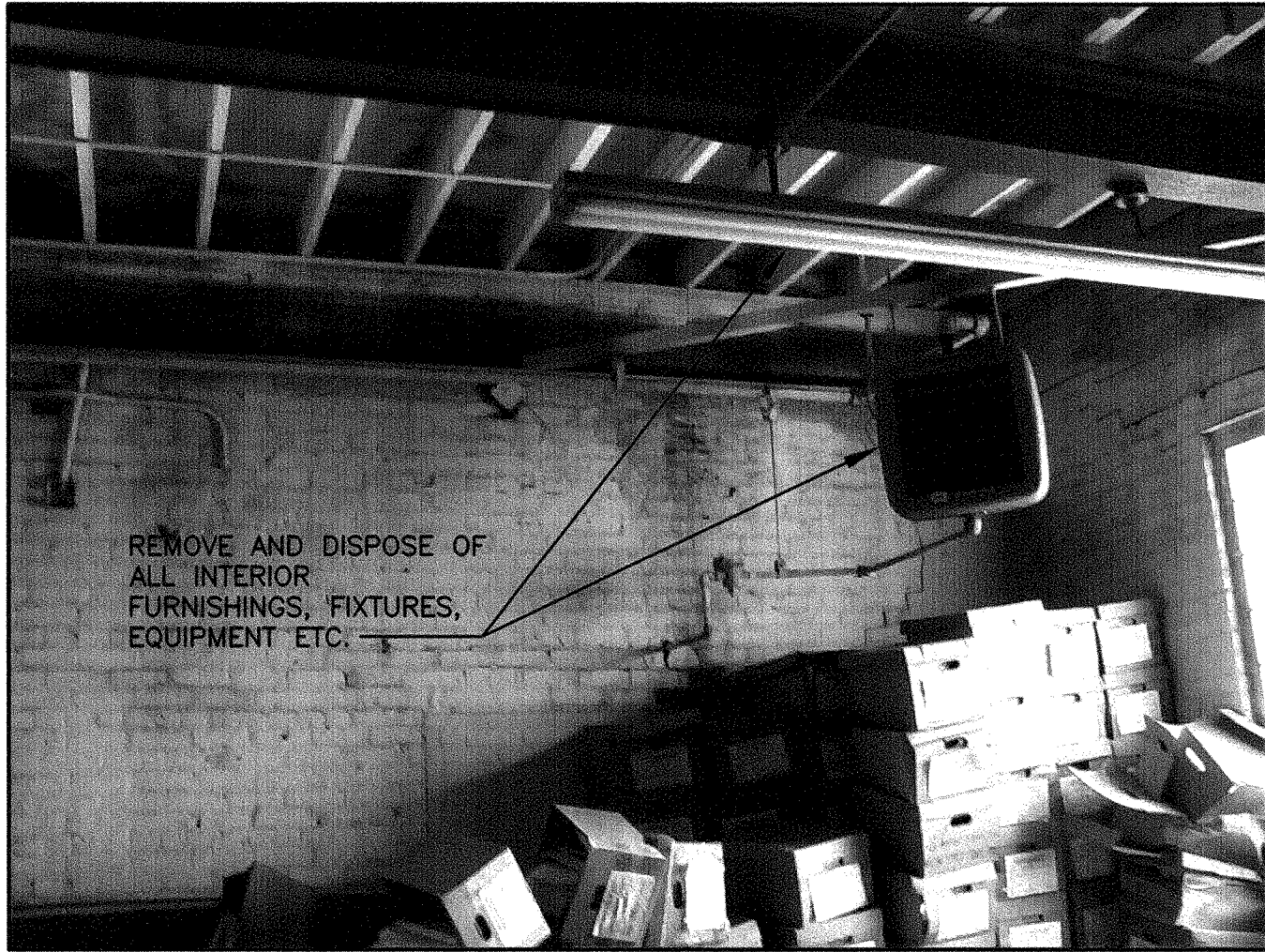


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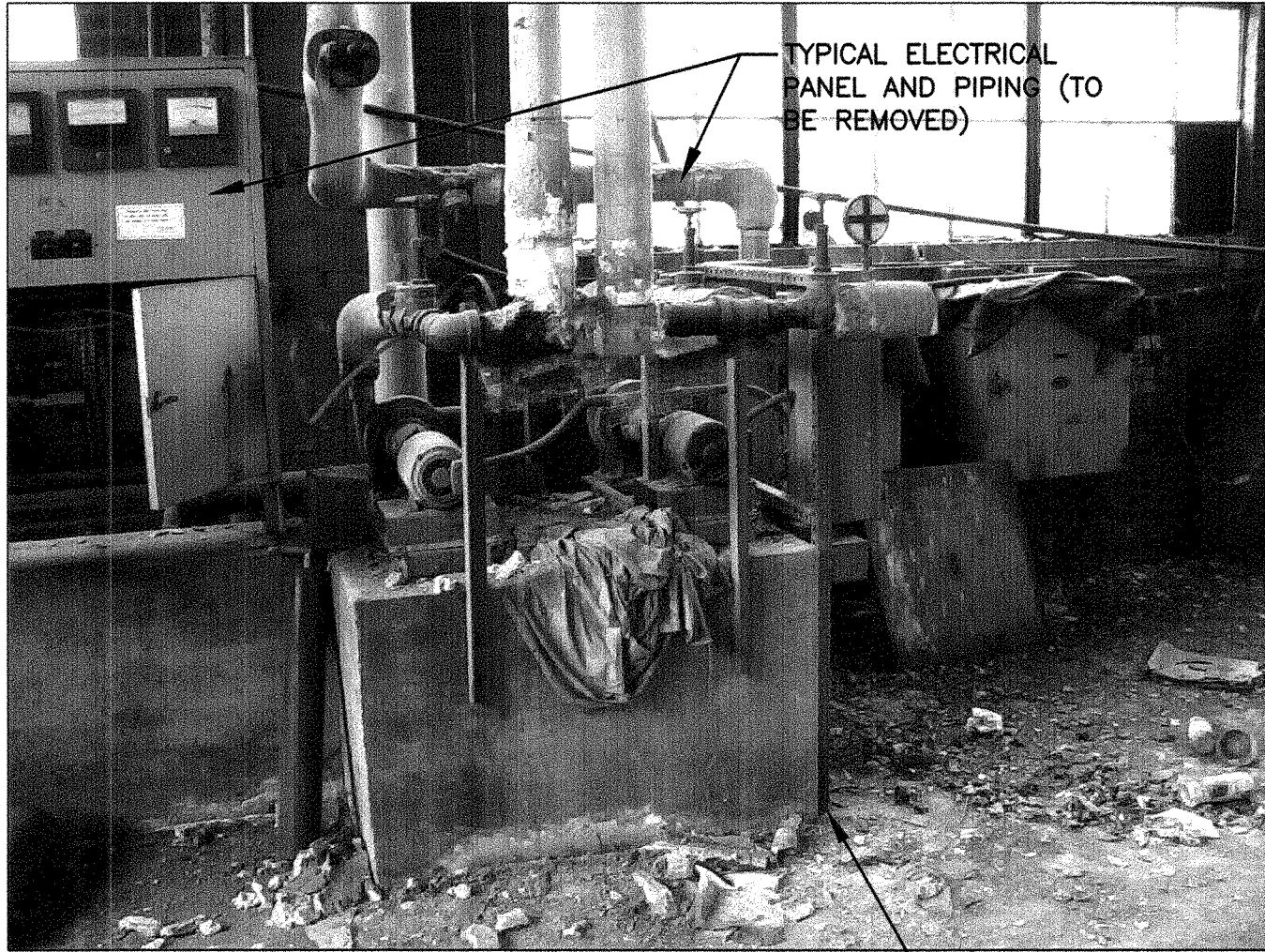


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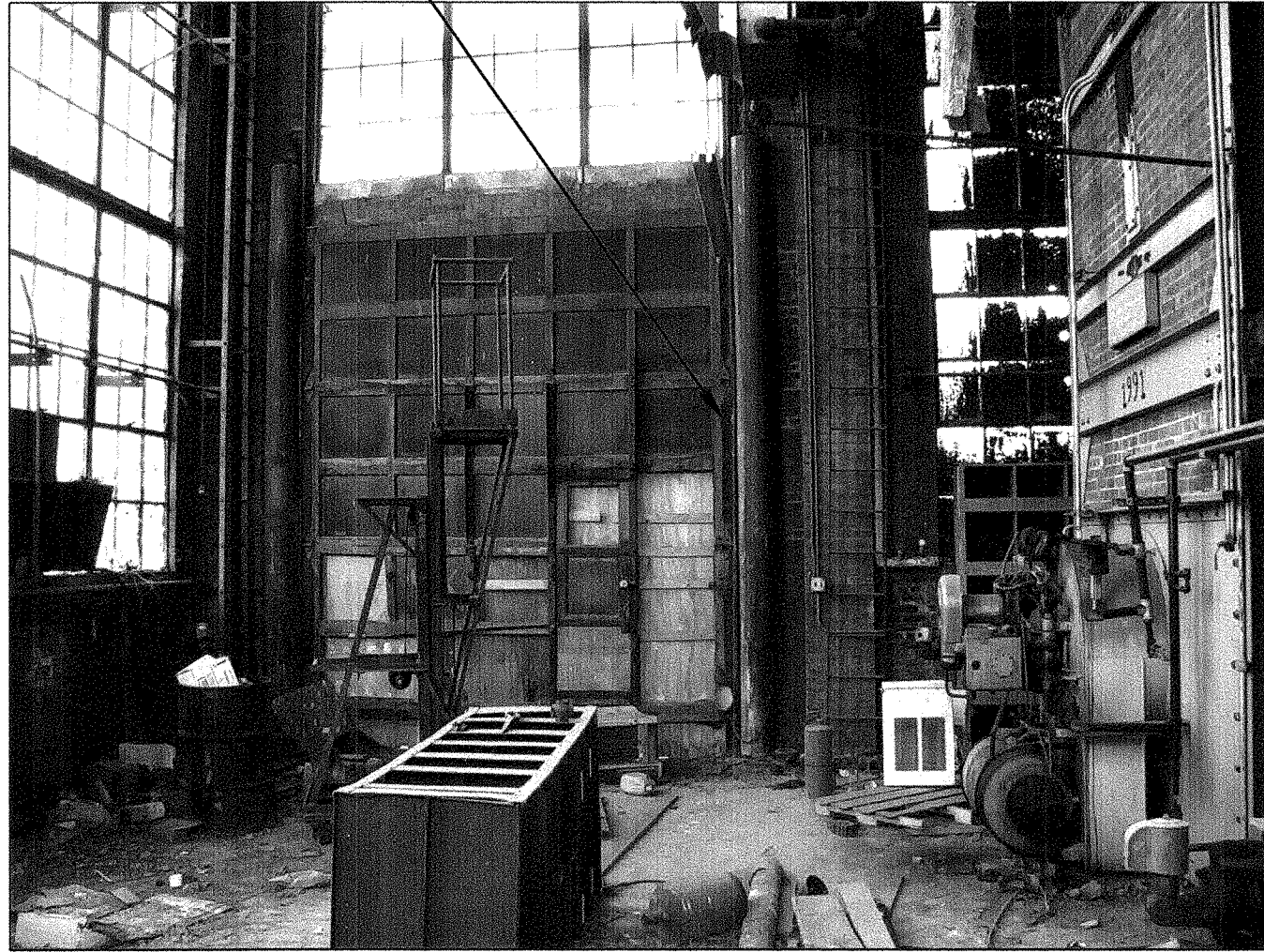


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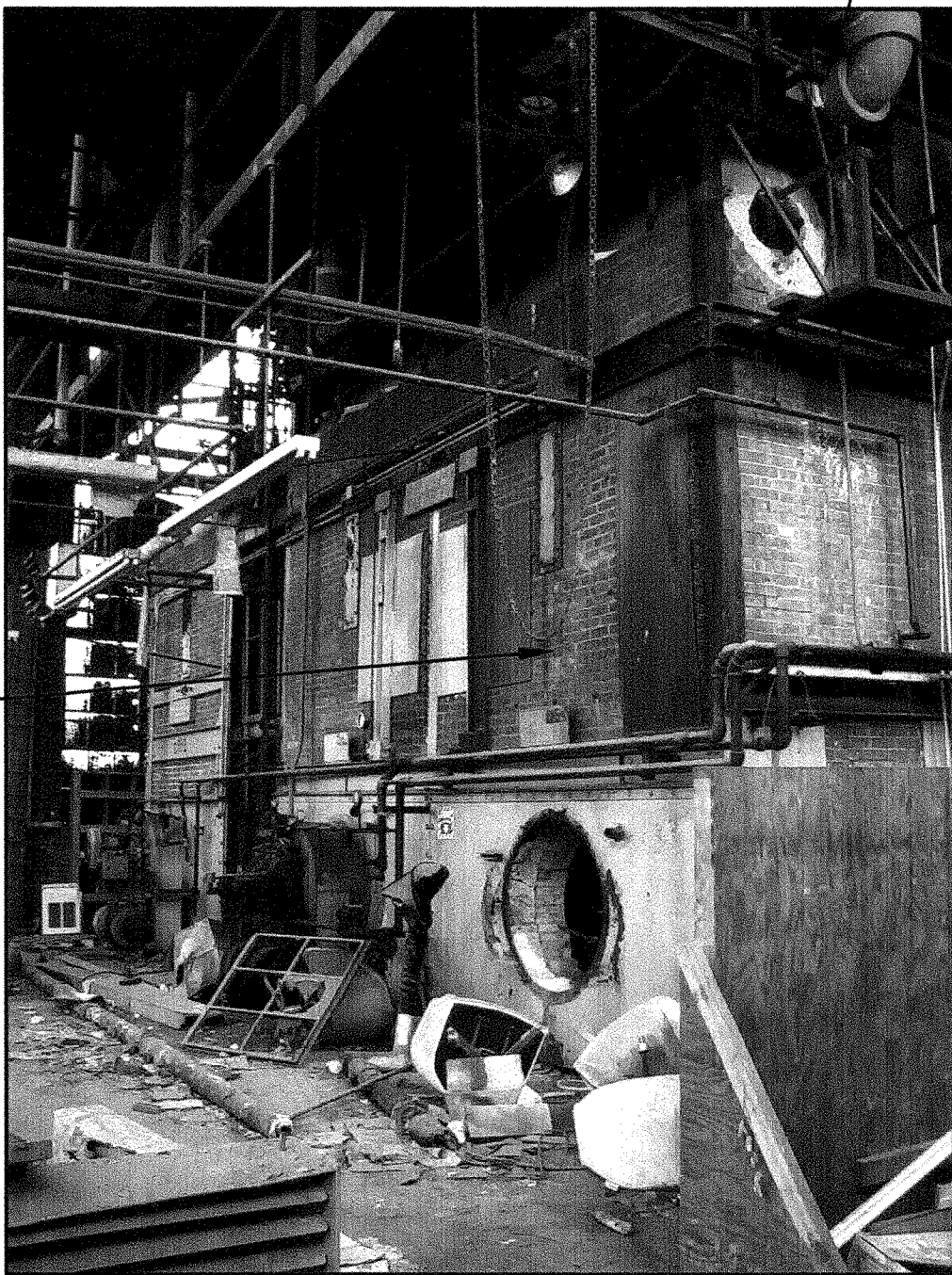


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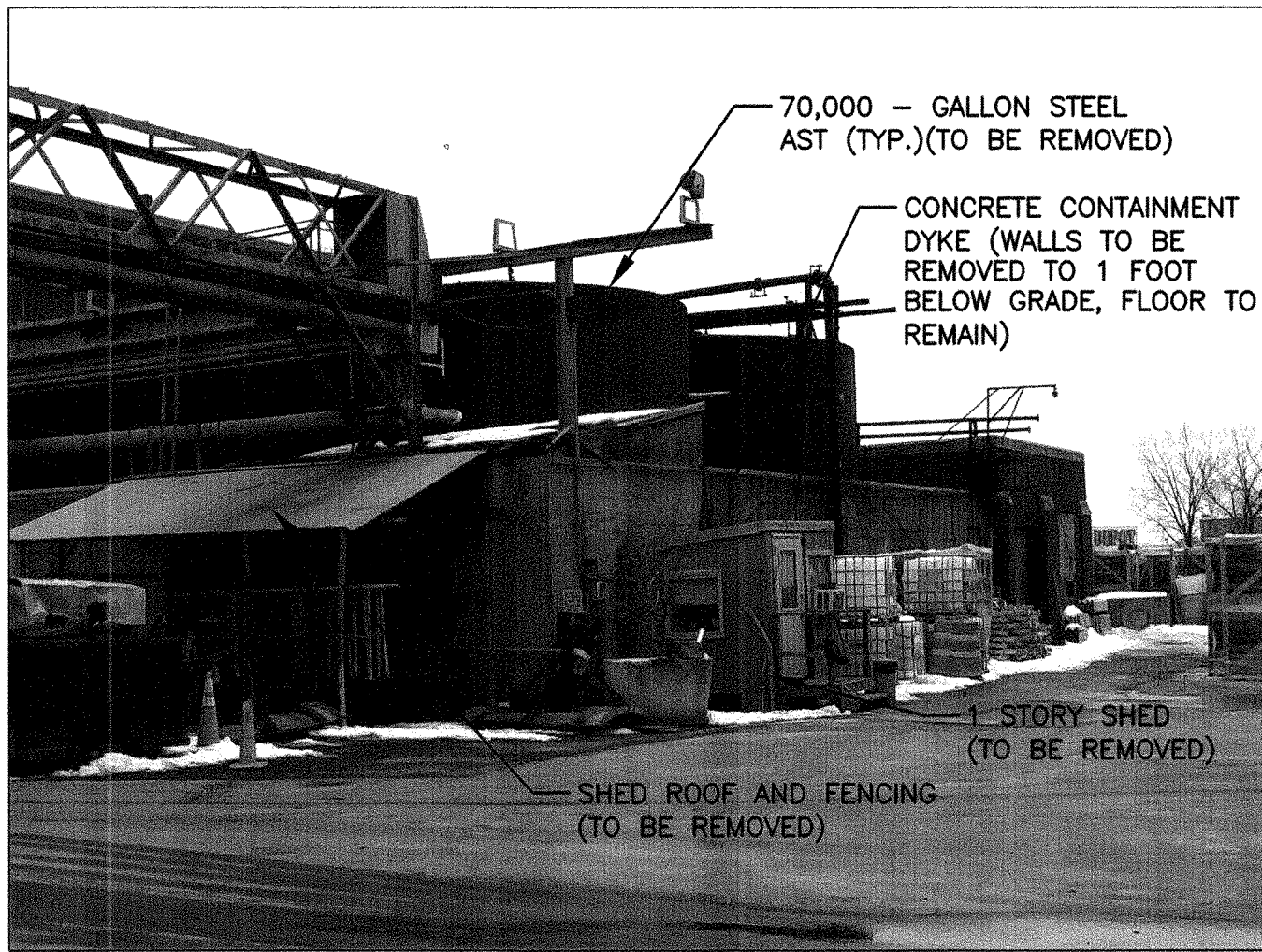


PHOTO 8



PHOTO 9

TYPICAL MASONRY BOILER
AND ALL ASSOCIATED
EQUIPMENT (TO BE
REMOVED)

TYPICAL SUSPENDED
EQUIPMENT AND PIPING
(TO BE REMOVED)

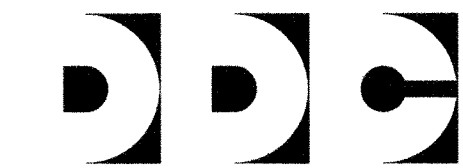
TYPICAL FLOOR MOUNTED
EQUIPMENT AND
CONCRETE PAD (TO BE
REMOVED)

70,000 - GALLON STEEL
AST (TYP.) (TO BE REMOVED)
CONCRETE CONTAINMENT
DYKE (WALLS TO BE
REMOVED TO 1 FOOT
BELOW GRADE, FLOOR TO
REMAIN)

1 STORY SHED
(TO BE REMOVED)
SHED ROOF AND FENCING
(TO BE REMOVED)

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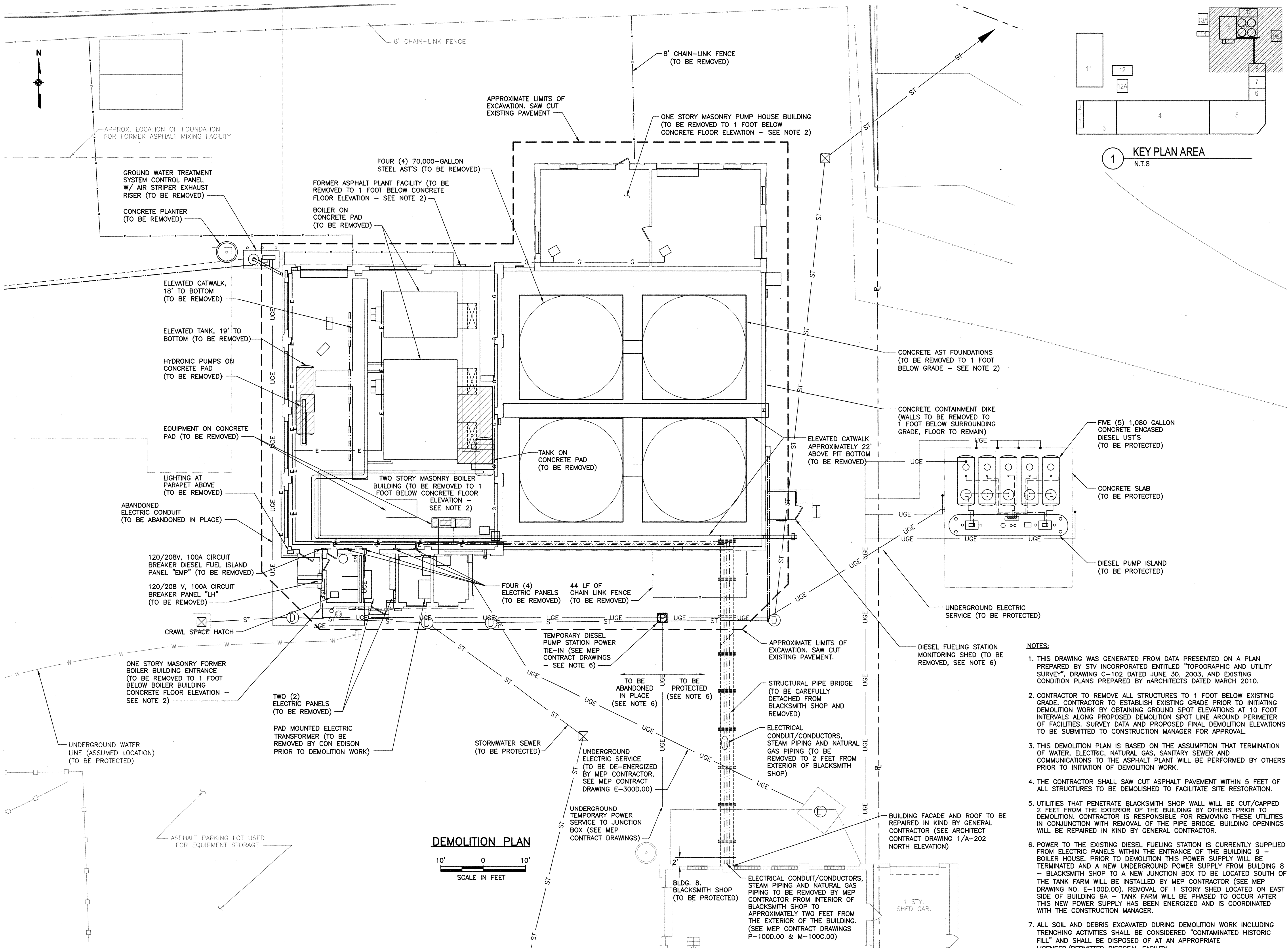
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Chk By: KJS

Dwg No:
DM-304.00



NOTES:

- THIS DRAWING WAS GENERATED FROM DATA PRESENTED ON A PLAN PREPARED BY STV INCORPORATED ENTITLED "TOPOGRAPHIC AND UTILITY SURVEY", DRAWING C-102 DATED JUNE 30, 2003, AND EXISTING CONDITION PLANS PREPARED BY nARCHITECTS DATED MARCH 2010.
- CONTRACTOR TO REMOVE ALL STRUCTURES TO 1 FOOT BELOW EXISTING GRADE. CONTRACTOR TO ESTABLISH EXISTING GRADE PRIOR TO INITIATING DEMOLITION WORK BY OBTAINING GROUND SPOT ELEVATIONS AT 10 FOOT INTERVALS ALONG PROPOSED DEMOLITION SPOT LINE AROUND PERIMETER OF FACILITIES. SURVEY DATA AND PROPOSED FINAL DEMOLITION ELEVATIONS TO BE SUBMITTED TO CONSTRUCTION MANAGER FOR APPROVAL.
- THIS DEMOLITION PLAN IS BASED ON THE ASSUMPTION THAT TERMINATION OF WATER, ELECTRIC, NATURAL GAS, SANITARY SEWER AND COMMUNICATIONS TO THE ASPHALT PLANT WILL BE PERFORMED BY OTHERS PRIOR TO INITIATION OF DEMOLITION WORK.
- THE CONTRACTOR SHALL SAW CUT ASPHALT PAVEMENT WITHIN 5 FEET OF ALL STRUCTURES TO BE DEMOLISHED TO FACILITATE SITE RESTORATION.
- UTILITIES THAT PENETRATE BLACKSMITH SHOP WALL WILL BE CUT/CAPPED 2 FEET FROM THE EXTERIOR OF THE BUILDING BY OTHERS PRIOR TO DEMOLITION. CONTRACTOR IS RESPONSIBLE FOR REMOVING THESE UTILITIES IN CONJUNCTION WITH REMOVAL OF THE PIPE BRIDGE. BUILDING OPENINGS WILL BE REPAIRED IN KIND BY GENERAL CONTRACTOR.
- POWER TO THE EXISTING DIESEL FUELING STATION IS CURRENTLY SUPPLIED FROM ELECTRIC PANELS WITHIN THE ENTRANCE OF THE BUILDING 9 - BOILER HOUSE. PRIOR TO DEMOLITION THIS POWER SUPPLY WILL BE TERMINATED AND A NEW UNDERGROUND POWER SUPPLY FROM BUILDING 8 - BLACKSMITH SHOP TO A NEW JUNCTION BOX TO BE LOCATED SOUTH OF THE TANK FARM WILL BE INSTALLED BY MEP CONTRACTOR (SEE MEP DRAWING NO. E-100D.00). REMOVAL OF 1 STORY SHED LOCATED ON EAST SIDE OF BUILDING 9A - TANK FARM WILL BE PHASED TO OCCUR AFTER THIS NEW POWER SUPPLY HAS BEEN ENERGIZED AND IS COORDINATED WITH THE CONSTRUCTION MANAGER.
- ALL SOIL AND DEBRIS EXCAVATED DURING DEMOLITION WORK INCLUDING TRENCHING ACTIVITIES SHALL BE CONSIDERED "CONTAMINATED HISTORIC FILL" AND SHALL BE DISPOSED OF AT AN APPROPRIATE LICENSED/PERMITTED DISPOSAL FACILITY.

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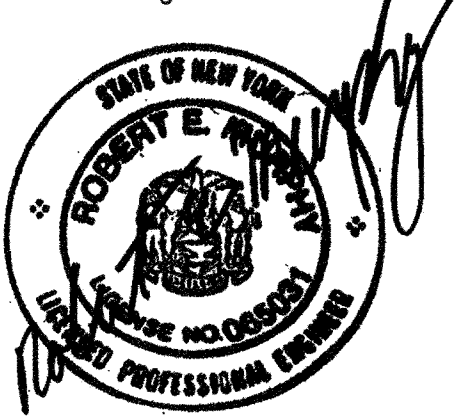
Code Consultant:
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Date:	Issue:
05.19.10	75% SD
06.02.10	80% SD
11.17.10	100% Schematic Design
02.09.11	100% Design Dev.
04.06.11	75% CD
03.07.12	100% CD
06.06.12	100% CD - Revised
10.12.12	Bid Set

Sheet title:
**DETAILED SITE
DEMOLITION
PLAN**

Scale: AS SHOWN

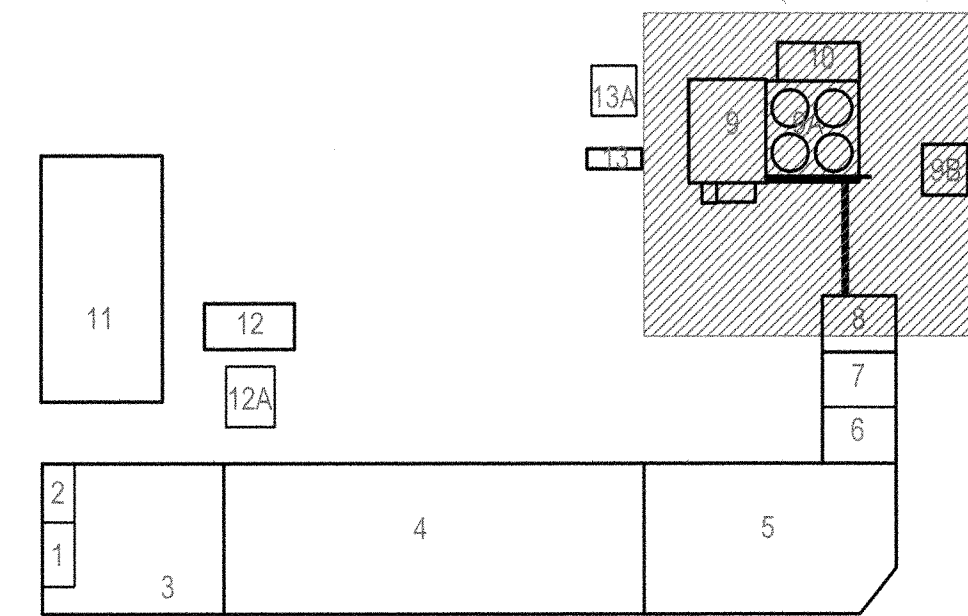
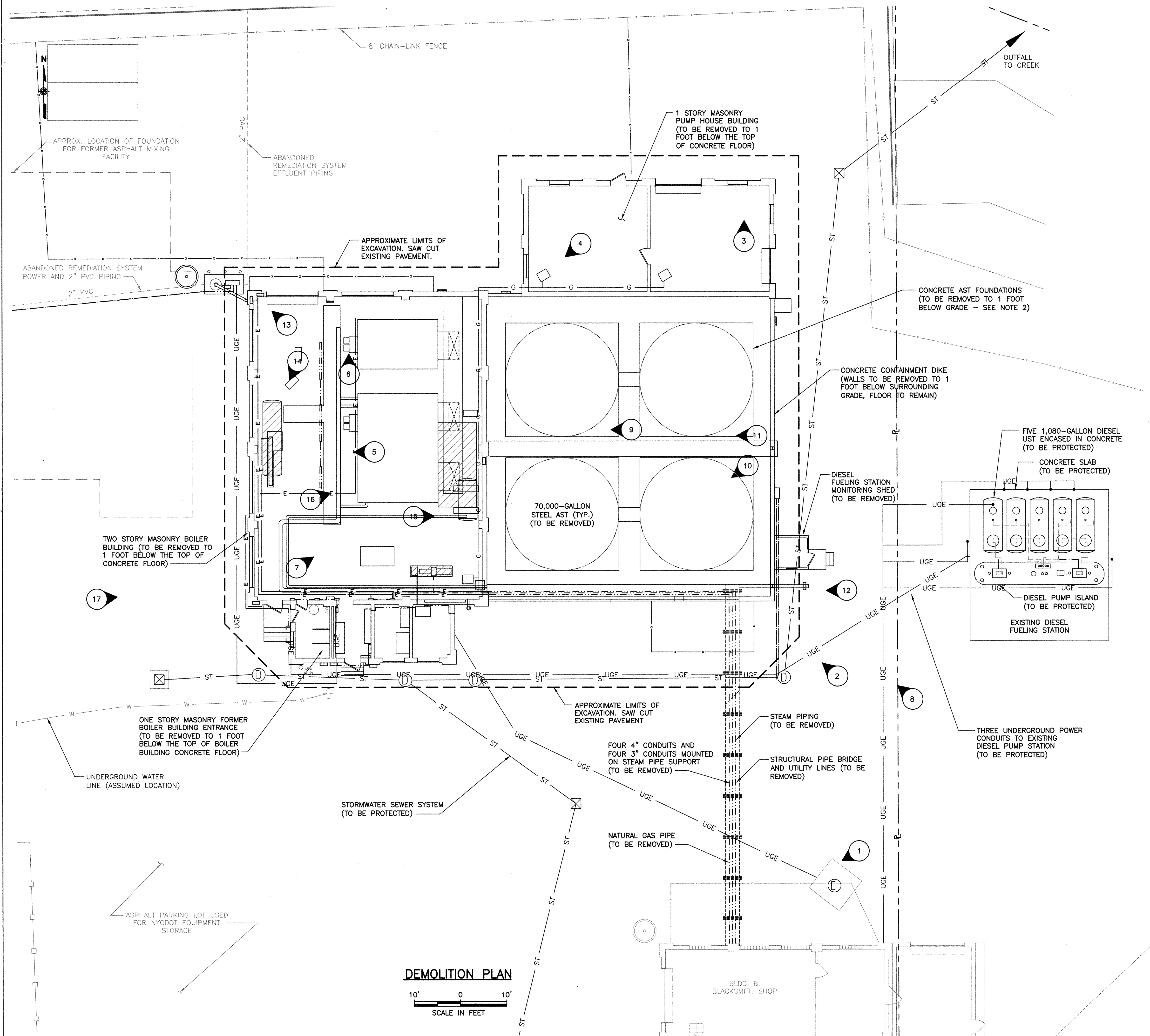
Seal and Signature:



Date: 10.12.12
Project No.: 0902
Dwg By: BAK
Chk By: KJS

Dwg No:
DM-303.00

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1 KEY PLAN AREA
N.T.S

NOTES:

- THIS DRAWING SHALL BE USED FOR REFERENCE ONLY AND WAS GENERATED FROM DATA PRESENTED ON A PLAN PREPARED BY STV INCORPORATED ENTITLED "TOPOGRAPHIC AND UTILITY SURVEY", DRAWING C-102 DATED JUNE 30, 2003, EXISTING CONDITION PLANS PREPARED BY nARCHITECTS DATED MARCH 2010 AND A TOPOGRAPHICAL SURVEY PREPARED BY CITY OF NEW YORK DDC, BUREAU OF SITE ENGINEERING (TOPOGRAPHICAL SECTION) DATED NOVEMBER 8, 2010.
- THE CONTRACTOR SHALL DEMOLISH AND REMOVE FROM THE SITE ALL FACILITIES WITHIN PROPOSED ASPHALT PAVEMENT SAW CUT AS WELL AS STRUCTURAL PIPE BRIDGE/UTILITIES.
- CONTRACTOR TO REMOVE ALL STRUCTURES TO 1 FOOT BELOW EXISTING GRADE. CONTRACTOR TO ESTABLISH EXISTING GRADE PRIOR TO INITIATING DEMOLITION WORK BY OBTAINING GROUND SPOT ELEVATIONS AT 10 FOOT INTERVALS ALONG PROPOSED DEMOLITION SPOT LINE AROUND PERIMETER OF FACILITIES. SURVEY DATA AND PROPOSED FINAL DEMOLITION ELEVATIONS TO BE SUBMITTED TO CONSTRUCTION MANAGER FOR APPROVAL.
- POWER TO THE EXISTING DIESEL FUELING STATION IS CURRENTLY SUPPLIED FROM ELECTRIC PANELS WITHIN THE ENTRANCE OF BUILDING 9 - BOILER HOUSE. PRIOR TO DEMOLITION THIS POWER SUPPLY WILL BE TERMINATED AND A NEW UNDERGROUND POWER SUPPLY FROM BUILDING 8 - BLACKSMITH SHOP TO A NEW JUNCTION BOX TO BE LOCATED NEAR THE SOUTHEAST CORNER OF BUILDING 9A - TANK FARM WILL BE INSTALLED BY OTHERS (SEE MEP DRAWING NO. E-100D.00). REMOVAL OF 1 STORY SHED LOCATED ON EAST SIDE OF BUILDING 9A - TANK FARM WILL BE PHASED TO OCCUR AFTER THIS NEW POWER SUPPLY HAS BEEN ENERGIZED AND IS COORDINATED WITH THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL PROTECT THE EXISTING DIESEL FUELING STATION (EXCEPT FOR 1 STORY SHED) THROUGHOUT THE DEMOLITION AND RESTORATION WORK. IN ADDITION, THE CONTRACTOR SHALL NOT INTERFERE WITH ROUTING OF THE GENERAL NYCDOT SITE TRAFFIC PATTERNS AND REFUELING OPERATIONS AT THE EXISTING DIESEL FUELING STATION.
- TERMINATION OF WATER, ELECTRIC, NATURAL GAS, SANITARY SEWER AND COMMUNICATIONS TO BUILDING 9 - BOILER HOUSE, BUILDING 9A - TANK FARM AND BUILDING 10 - PUMP HOUSE WILL BE PERFORMED BY OTHERS PRIOR TO INITIATION OF DEMOLITION WORK.
- THE PURPOSE OF THIS GENERAL SITE DEMOLITION PLAN IS TO PROVIDE AN OVERVIEW OF THE DEMOLITION SCOPE OF WORK. REFER TO THE DETAILED DEMOLITION PLAN PRESENTED ON DRAWING D-303.00 FOR SPECIFIC INFORMATION.
- THE CONTRACTOR SHALL ASSUME THAT ASBESTOS AND HAZARDOUS MATERIALS ABATEMENT WILL BE COMPLETED PRIOR TO DEMOLITION WORK.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
- ALL SOIL AND DEBRIS EXCAVATED DURING DEMOLITION WORK INCLUDING TRENCHING ACTIVITIES SHALL BE CONSIDERED "CONTAMINATED HISTORIC FILL" AND SHALL BE DISPOSED OF AT AN APPROPRIATE LICENSED/PERMITTED DISPOSAL FACILITY.



NEW YORK CITY DEPARTMENT OF
DESIGN + CONSTRUCTION
DIVISION OF STRUCTURES
BUREAU OF ARCHITECTURE
& ENGINEERING

PROJECT NAME:
HARPER ST. YARD

32-11 HARPER STREET,
QUEENS, NY 11368
CAPITAL PROJECT NUMBER
HWQF027C

Architect:
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**GENERAL SITE
DEMOLITION
PLAN**
Scale: AS SHOWN

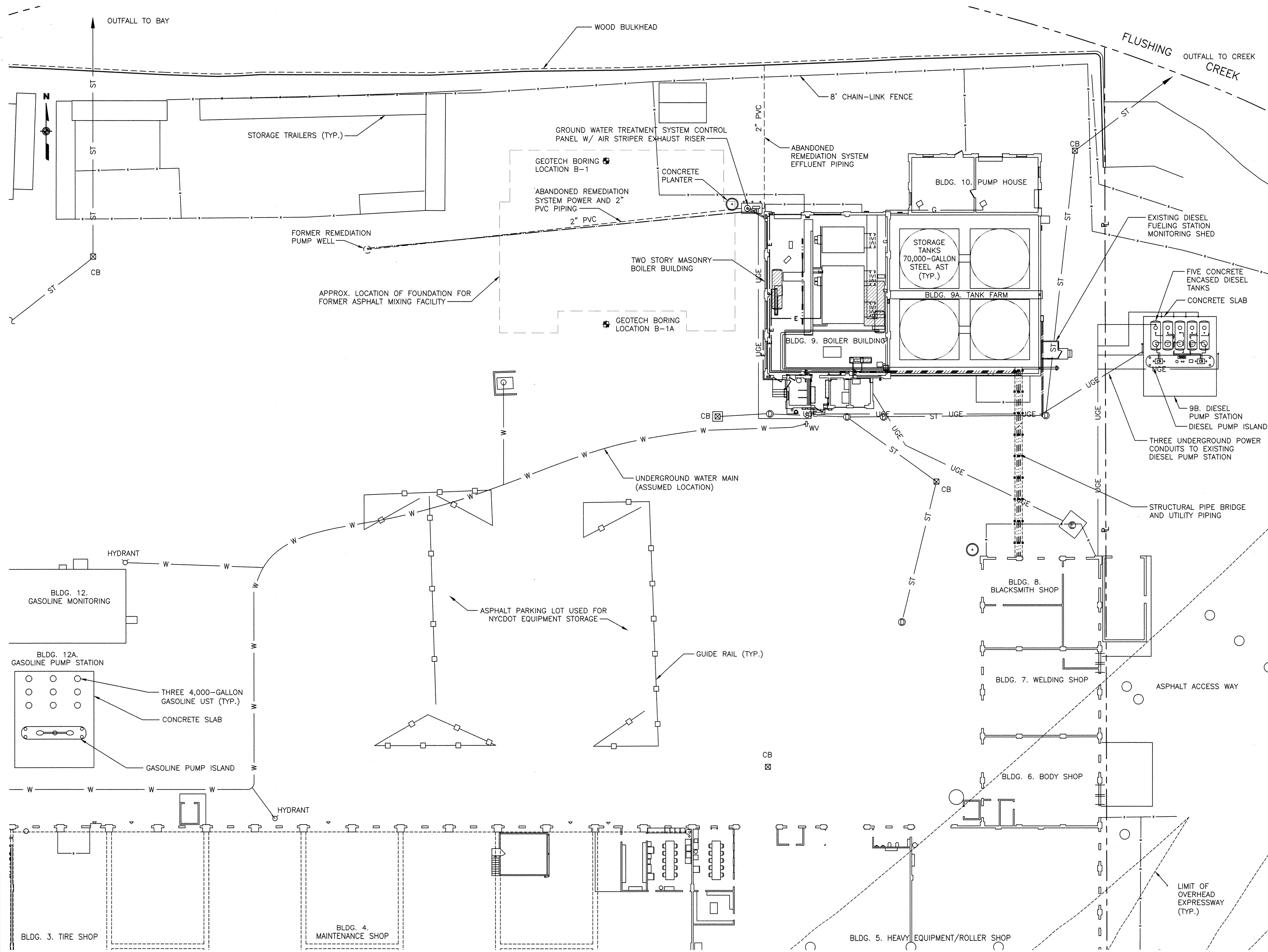
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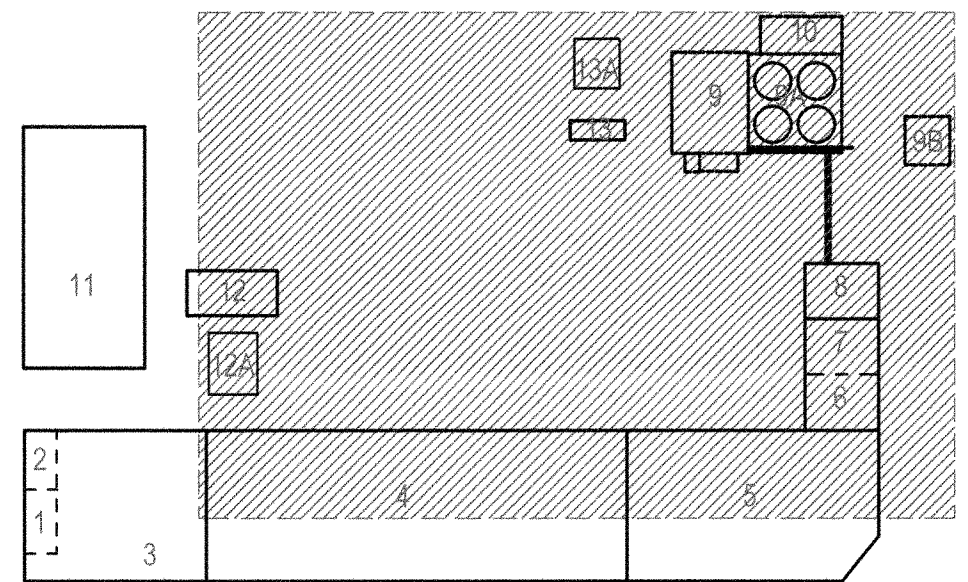
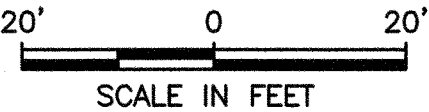
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Chk By: KJS

Dwg No:
DM-302.00

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EXISTING CONDITIONS PLAN



1 KEY PLAN AREA
N.T.S

- NOTES:**
1. THIS DRAWING WAS GENERATED FROM INFORMATION PRESENTED ON A DRAWING PREPARED BY STV INCORPORATED ENTITLED "TOPOGRAPHIC AND UTILITY SURVEY", DRAWING C-102 DATED JUNE 30, 2003, EXISTING CONDITION PLANS PREPARED BY nARCHITECTS DATED MARCH 2010 AND A TOPOGRAPHICAL SURVEY PREPARED BY CITY OF NEW YORK DDC, BUREAU OF SITE ENGINEERING (TOPOGRAPHICAL SECTION) DATED NOVEMBER 8, 2010.
 2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
 3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF SUBSURFACE UTILITIES/STRUCTURES. CONTRACTOR SHALL PERFORM DUE DILIGENCE IN INVESTIGATING AND IDENTIFYING THOSE UTILITIES/STRUCTURES THAT MAY BE IMPACTED BY THE DEMOLITION WORK.
 4. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING FEATURES, UTILITIES, AND ANY EXISTING ON-SITE APPURTENANCES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO THE COMMENCEMENT OF WORK AT NO ADDITIONAL COST TO THE CITY OF NEW YORK.
 5. THE CONTRACTOR SHALL MINIMIZE DISRUPTIONS TO THE FACILITY'S OPERATIONS.



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CONDITIONS
PLAN**
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Seal and Signature:

















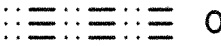

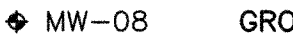


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Chk By: KJS

Dwg No:
DM-301.00

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LEGEND – EXISTING

	HYDRANT
	FENCE
	ELECTRIC MANHOLE
	PHOTO NUMBER AND DIRECTION TAKEN (SEE SHEET D-4 FOR PHOTOS)
	PROPERTY LINE
	UNDERGROUND PIPING
	SPOT ELEVATION (AMSL)
	STORM CATCH BASIN
	STORM MANHOLE
	OVERHEAD ELECTRICAL CONDUIT
	UNDERGROUND ELECTRICAL CONDUIT
	UNDERGROUND WATER MAIN
	STORM SEWER
	OVERHEAD NATURAL GAS PIPING
	ABANDONED STEAM PIPING
	OVERHEAD UTILITY CORRIDOR
	WATER VALVE
	GROUNDWATER MONITORING WELL
	GEOTECHNICAL SOIL BORING

ABBREVIATIONS


AST	ABOVEGROUND STORAGE TANK
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
BGS	BELOW GROUND SURFACE
CB	CATCH BASIN
C/C	CENTER TO CENTER
DIA.	DIAMETER
DND	DO NOT DISTURB
EL., ELEV.	ELEVATION
EXIST.	EXISTING
FRP	FIBER REINFORCED PLASTIC
HYD.	HYDRANT
MH	MANHOLE
NFPA	NATIONAL FIRE PROTECTION AGENCY
NYCDOT	NEW YORK CITY DEPARTMENT OF TRANSPORTATION
PSI	POUNDS PER SQUARE INCH
TBR	TO BE REMOVED
TBRR	TO BE REMOVED AND RELOCATED
TBRL	TO BE REMOVED AND REPLACED
TEMP.	TEMPORARY
TYP.	TYPICAL
UST	UNDERGROUND STORAGE TANK

GENERAL NOTES:

1. THE LEGEND AND ABBREVIATIONS SHOWN ON THIS SHEET APPLY ONLY TO THE DEMOLITION DRAWINGS ILLUSTRATED ON SHEETS DM-300.00 THROUGH DM-309.00.
2. ALL DEMOLITION WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS AND PERSONNEL WORKING ON-SITE.
3. DEMOLITION WORK WILL NOT BE INITIATED UNTIL ALL ASBESTOS AND HAZARDOUS MATERIALS ARE REMEDIATED.
4. BOILER BUILDING STRUCTURES TO BE DEMOLISHED ARE TO BE REMOVED TO 1 FOOT BELOW BOILER BUILDING CONCRETE FLOOR ELEVATION.
5. PUMP HOUSE BUILDING STRUCTURES TO BE DEMOLISHED ARE TO BE REMOVED TO 1 FOOT BELOW PUMP HOUSE CONCRETE FLOOR ELEVATION.
6. CONCRETE CONTAINMENT DIKE, ASTS, TANK FOUNDATIONS AND ALL OTHER EQUIPMENT/FOUNDATIONS AT THE TANK FARM TO BE REMOVED TO 1 FOOT BELOW SURROUNDING GRADE.
7. ALL UTILITIES WILL BE TERMINATED/MADE SAFE BY OTHERS OUTSIDE OF THE BUILDING FOOTPRINT TO ACCOMMODATE BELOW GRADE WORK.
8. WORK IS TO BE PERFORMED DURING NORMAL DAYLIGHT OPERATING HOURS OF BETWEEN 7 AM TO 5:30 PM.
9. DECOMMISSIONING OF THE EXISTING DIESEL FUELING STATION INCLUDING TANK REMOVAL IS NOT PART OF THE DEMOLITION SCOPE OF WORK. THE DEMOLITION CONTRACTOR SHALL PROTECT THE EXISTING DIESEL FUELING STATION THROUGHOUT THE DEMOLITION AND RESTORATION WORK. IN ADDITION, THE DEMOLITION CONTRACTOR SHALL NOT INTERFERE WITH ROUTINE DOT VEHICLE REFUELING OPERATIONS AT THE EXISTING DIESEL FUELING STATION.
10. THE DEMOLITION CONTRACTOR MAY SALVAGE ANY MATERIALS DESIGNATED FOR DEMOLITION AND OFF-SITE DISPOSAL. CONTRACTOR IS NOT PERMITTED TO REPROCESS CONSTRUCTION AND DEMOLITION DEBRIS ONSITE FOR RESALE OR REUSE.
11. ALL SOIL AND DEBRIS EXCAVATED DURING DEMOLITION WORK INCLUDING TRENCHING ACTIVITIES SHALL BE CONSIDERED "CONTAMINATED HISTORIC FILL" AND SHALL BE DISPOSED OF AT AN APPROPRIATE LICENSED/PERMITTED DISPOSAL FACILITY.

DEMOLITION NOTES:

1. BLACKSMITH SHOP IS TO BE PROTECTED.
2. UTILITIES THAT PENETRATE BLACKSMITH SHOP WALL WILL BE CUT/CAPPED 2 FEET FROM THE EXTERIOR OF THE BUILDING BY MEP CONTRACTOR PRIOR TO DEMOLITION. CONTRACTOR IS RESPONSIBLE FOR REMOVING THESE UTILITIES IN CONJUNCTION WITH REMOVAL OF THE PIPE BRIDGE. BUILDING OPENINGS AND ROOF WILL BE REPAIRED IN KIND BY GENERAL CONTRACTOR.
3. SURROUNDING ASPHALT PARKING LOT AND DRIVEWAYS ARE TO BE PROTECTED DURING DEMOLITION.



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Sheet title:
**LEGEND,
ABBREVIATIONS
AND NOTES**
Scale: NONE

Seal and Signature:



Date:	10.12.12
Project No.:	0902
Dwg By:	BAK
Chk By:	KJS

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SECTIONS

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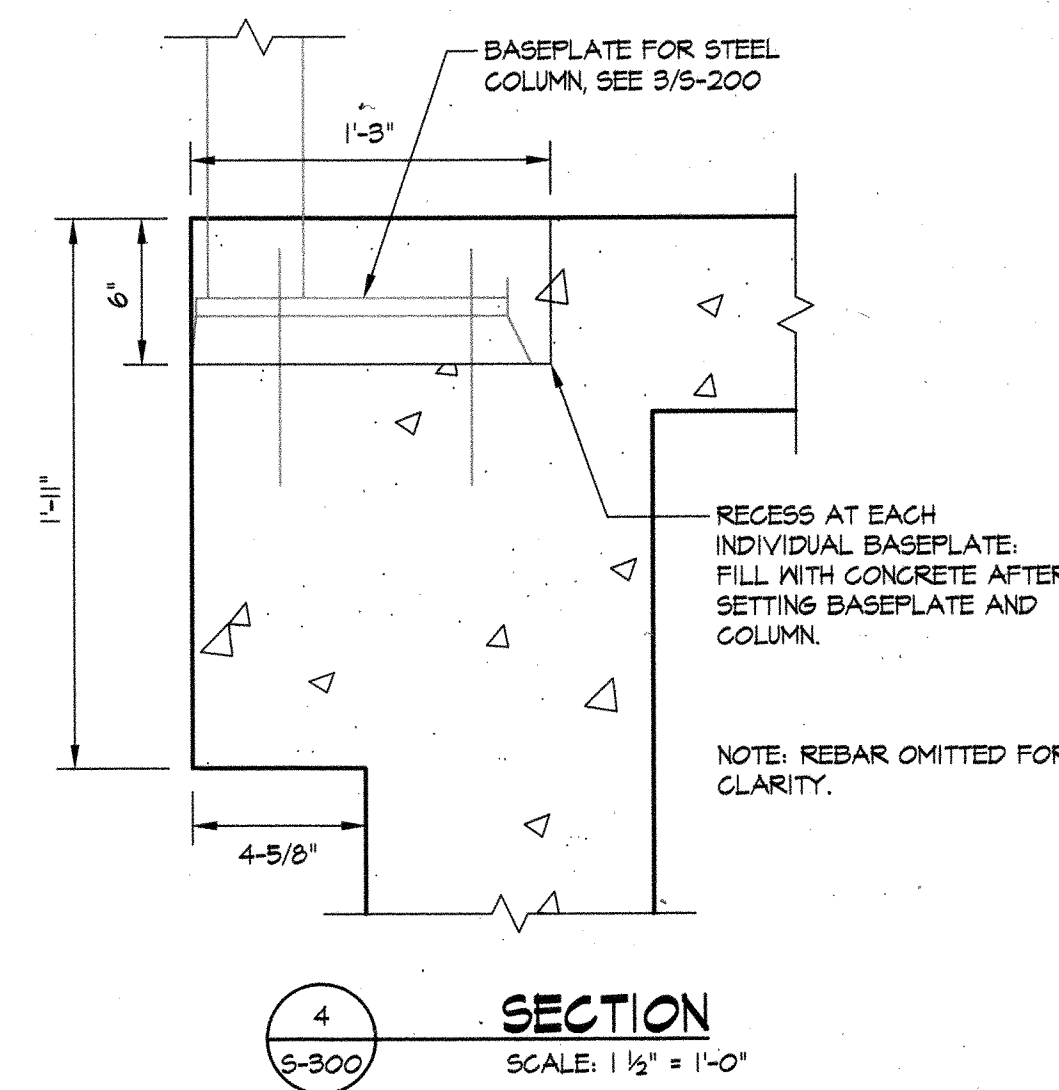
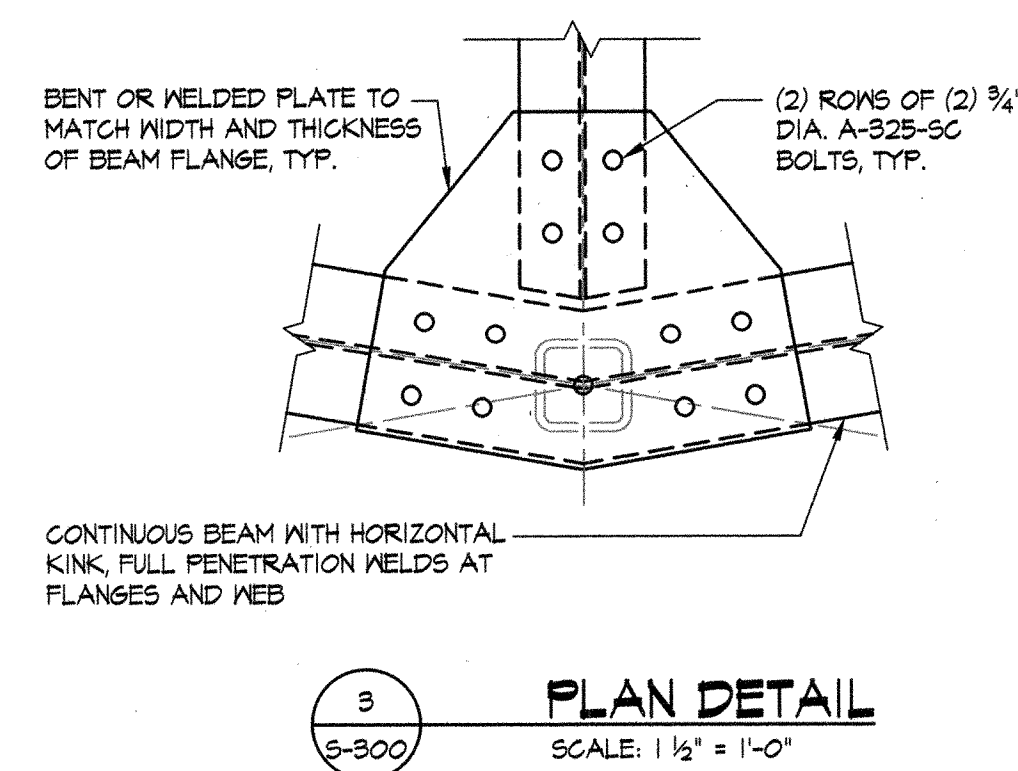
Seal and Signature:



Date: 03.07.12
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Dwg By: MS/EMS
Chk By: EMS/NO

Dwg No:

S-300.00



NO UNDERPINNING
REQUIRED.