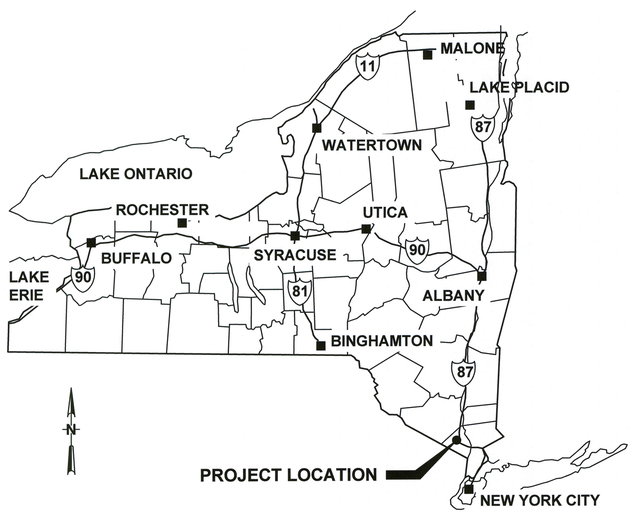
TOWN OF NORTH CASTLE, NEW YORK
WATER DISTRICT No. 1
NORTH BROADWAY ULTRAVIOLET DISINFECTION

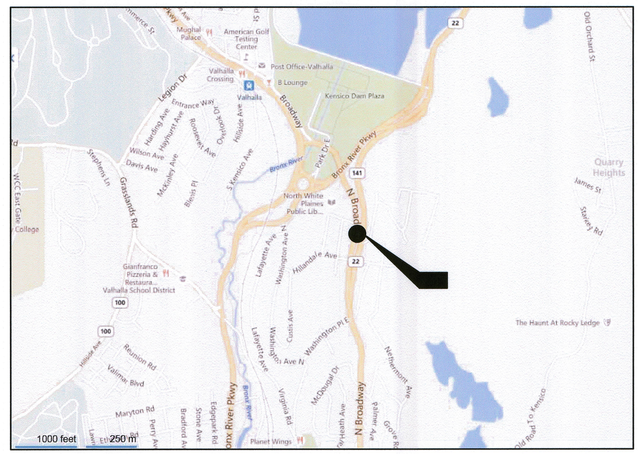
86-16786

CONTRACT No. 1 - GENERAL



LOCATION PLAN

2015



AREA MAP

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

NOTES:

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.

IT IS VIOLATION OF NEW YORK STATE EDUCATION LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DRAWING IN ANYWAY. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS.HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF SUCH ALTERATION AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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Drafting Check M. Young	Design Check	Project	NORTH BROADWAY ULTRAVIOLET DISINFECTION
Approved (Project Director)		Title	COVER
Date 10/30/15	Contract No. 1		
Scale NONE	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	Original Size Arch D	Drawing No: 86-16786-G001 Rev: 0

Plot Date: 28 October 2015 - 3:24 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Gen\86-16786-G001_Cover.dwg

ABBREVIATIONS

AB	ANCHOR BOLT
ACOUS	ACOUSTICAL (SOUND DEADENING)
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
ALLW	ALLOWANCE
ALT	ALTERNATE
ALUM	ALUMINUM
APC	AIR POLLUTION CONTROL
ARCH	ARCHITECT OR ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
ASSY	ASSEMBLY
B/	BOTTOM OF
B/F	BOTTOM OF FOOTING
BD	BOARD
BTW	BETWEEN
BF	BLIND FLANGE
BIT	BITUMINOUS
BL	BUILDING LINE
BLDG	BUILDING
BM	BENCH MARK / BEAM
BMK	BENCH MARK
BOT OR B	BOTTOM
BP	BASE PLATE
BRG	BEARING
BRK	BRICK
BRZ	BRONZE
BU	BUILT UP
BV	BUTTERFLY VALVE
℄	CENTERLINE
CABN	CABINET
CATG	CATALOG
CB	CATCH BASIN
CC	CENTER TO CENTER
CEM	CEMENT
CEMS	CONTINUOUS EMISSIONS
CER	CERAMIC
CF OR CU FT	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CIP	CAST IRON PIPE
CIRC	CIRCLE/CIRCULAR
CIRCUMF	CIRCUMFERENCE
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CL JT	CONTROL JOINT
CLR	CLEAR/COLOR
CL2	CHLORINE
CLF	CHAIN LINK FENCE
CLG	CEILING
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CMUG	GLAZED CONRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COMB	COMBINATION
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
CP	CONCRETE PLANK
CPLG	COUPLING
CPVC	CHLORINATED POLYVINYL CHLORIDE
CRF	CHEMICAL RESISTANT FINISH
CRS	COURSE
CS	CARBON STEEL
CS JT	CONSTRUCTION JOINT
CT	CERAMIC TILE
CTR	CONTRACT
CTRD	CENTERERED
CU IN	CUBIC INCH
CU	COPPER
CV	CHECK VALVE
CW	CIRCULAR WASHER
CY OR CU YD	CUBIC YARD
D	DISCHARGE
DEFL	DEFLECTION
DET	DETAIL
DF	DRINKING FOUNTAIN
DH	DECK HYDRANT
DIA, OR Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIST	DISTRIBUTION, DISTANCE
DJ	DOUBLE JOIST
DL	DEAD LOAD
DN	DOWN
DO	DISSOLVED OXYGEN
DOZ	DOZEN
DR	DOOR / DRAIN
DWG	DRAWING
DWL	DOWEL
DWV	DRAIN / WASTE / VENT
E	EAST
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EFF	EFFLUENT
EFW	EFFLUENT WATER
EJ	EXPANSION JOINT
EL	ELEVATION
ELB	ELBOW
ELEC	ELECTRIC
EMH	ELECTRIC MANHOLE
ENAM	ENAMEL
ENG	ENGINE
ENGR	ENGINEER
ENT	ENTRANCE
EQ	EQUAL
F&C	FRAME AND COVER
F&G	FRAME AND GRATING
FAB	FABRICATE
FC	FOOT CANDLE / FLUSHING CONNECTION
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FF	FAR FACE / FINISHED FLOOR
FG	FIBERGLASS / FINISHED GRADE
FH	FIRE HYDRANT
FIN RAD	FIN RADIATOR
FIN	FINISH
FITG	FITTING
FIX	FIXTURE
FL	FLANGE
FLG	FLOORING
FLR	FLOOR
FLUOR	FLUORESCENT
FM	FORCE MAIN / FLOW METER
FND	FOUNDATION
FOC	FACE OF COLUMN
FPRF	FIREPROOF
FPS	FEET PER SECOND
FRP	FIBERGLASS REINFORCED PLASTIC
FS	FOOTING STEP
FST	FINAL SETTLING TANK
FT	FEET
FTG	FOOTING
FURR	FURRING / FURRED
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GI	GALVANIZED IRON
GL	GLASS
GM	GAS METER
GPM	GALLONS PER MINUTE
GR	GRADE / GUARDRAIL
GRAN	GRANITE
GRTG	GRATING
GS	GALVANIZED STEEL
GV	GATE VALVE
GYP	GYPSUM
H&V	HEATING AND VENTILATING
HB	HOSE BIBB
HD	HEAVY DUTY
HDBD	HARDBOARD
HDPE	HIGH DENSITY POLYETHYLENE
HDWR	HARDWARE
H EXCH	HEAT EXCHANGER
HH	HANDHOLE
HM	HOLLOW METAL
HMA	HOT MIX ASPHALT
HOR OR H	HORIZONTAL
HP	HORSEPOWER
HPT	HIGH POINT
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTR	HEATER
HWL	HIGH WATER LEVEL
HYD	HYDRATING
I / O	INPUT / OUTPUT
I	IRON /INLET
ID	INSIDE DIAMETER
IF	INSIDE FACE
INCIN	INCINERATOR
INCL	INCLUDE
INF	INFLUENT
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
IPS	INTERNAL PIPE SIZE
ISO	ISOLATION
JAN CLO	JANITOR'S CLOSET
JCT	JUNCTION
JST	JOIST
JT	JOINT
K	1000 POUNDS (1 KIP)
KG	KNIFE GATE
L PT	LOW POINT
L	ANGLE
LF	LINEAR FEET
LAM	LAMINATE/LAMINATED
LAV	LAVATORY
LE	LEFT END
LG / LFG	LANDFILL GAS
LG	LENGTH / LONG
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LIGHT POLE
LT WT	LIGHTWEIGHT
LT	LIGHT
LV	LOUVER
LWL	LOW WATER LEVEL
M	MOTOR
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MO	MASONRY OPENING
MS	MONITORING SYSTEM
MTG	MOUNTING
MTL	METAL
MULT	MULTIPLE
MX	MIXER
N	NORTH
NAHS03	SODIUM BISULFITE
NAT	NATURAL
NF	NEAR FACE
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NPT	NATIONAL PIPE THREAD
NPW	NON POTABLE WATER
NS	NO SMOKING
NTS	NOT TO SCALE
OC	ON CENTERS / ODOR CONTROL
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPER	OPERABLE
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
ORP	OXIDATION REDUCTION POTENTIAL
℄	PLATE / PROPERTY LINE
P&ID	PROCESS INSTRUMENTATION DIAGRAM
PAR	PARALLEL
PAT	PATTERN
PAVT	PAVEMENT
PC	PIECE
PCF	POUNDS PER CUBIC FOOT
PERF	PERFORATED
PERP	PERPENDICULAR
PIL	PILASTER
PLAM	PLASTIC LAMINATE
PLAS	PLASTER/ PLASTIC
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POLY OR PE	POLYETHYLENE
POR	PORCELAIN
PR	PAIR
PREFAB	PREFABRICATED
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE RELIEF/REDUCING VALVE
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PST	PRIMARY SETTLING TANKS
PT	POINT / PRESSURE TREATED
PTN	PARTITION
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
QT	QUARRY TILE
QTY	QUANTITY
R	RISER / REACTION / RADIUS
RAD	RADIUS / RADIATOR
RAS	RETURN ACTIVATED SLUDGE
RBR	RUBBER
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN / ROAD
RE	RIGHT END
REC	RECESS / RECORD
RECIR	RECIRCULATION
REDR	REDUCER
REF	REFERENCE / REFRIGERATOR
REG	REGISTER
REINF	REINFORCING
REM	REMOVE
REP	REPAIR
REQD	REQUIRED
REV	REVISE
RF	ROOF
RFG	ROOFING
RL	ROOF LEADER
RM	ROOM
RO	ROUGH OPENING
ROB	RUN OF BANK
ROW	RIGHT OF WAY
RS	RETURN SLUDGE
S	SOUTH / SUCTION
SADL	SADDLE
SAN	SANITARY
SCH	SCHEDULE
SCP	STRUCTURAL CLAY PIPE
SEC	SEVERE ENVIRONMENTAL CONDITION
SECT	SECTION
SEL	SELECTION
SEW	SEWER
SF	SQUARE FOOT OR SILT FENCE
SG	SLIDE GATE
SHT	SHEET
SIM	SIMILAR
STA	STATION
STL JST	STEEL JOIST
SLG	SLUICE GATE
SOI	SPRAYED ON INSULATION
SP	STOP PLATE / SOUTHERN PINE
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
ST	STREET
STD	STANDARD
STIRR	STIRRUPS
STL	STEEL
STOR	STORAGE
STRU	STRUCTURAL / STRUCTURE
SUR	SURFACE
SUSP	SUSPENDED / SUSPENSION
SWD	SIDE WATER DEPTH
SYM	SYMMETRICAL
T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
T	TILE, TREAD OR TOP
T/D	TOP OF DECK
T/F	TOP OF FOOTING
T/G	TOP OF GROUT /GRATING
T/M	TOP OF MASONRY
T/P	TOP OF PIPE
T/S	TOP OF SLAB / STEEL
T/W	TOP OF WALL
TC	TRAFFIC CONTROL
TCB	TEMPORARY CONCRETE BARRIER
TCMH	TRAFFIC CONTROL MANHOLE
TDH	TOTAL DYNAMIC HEAD
TEL	TELEPHONE
TEMP	TEMPERATURE / TEMPORARY / TEMPERED
TERT	TERTIARY
THK	THICK
TK	TANK
TOB	TOP OF BANK
TOL	TOLERANCE
TRANS	TRANSFORMER
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UP	UTILITY POLE
UR	URINAL
UV	ULTRAVIOLET
V	VINYL / VERTICAL / VENT
VAT	VINYL ASBESTOS TILE
VT	VITRIFIED TILE
VTR	VENT THRU ROOF
W	WATER / WEST
W/	WITH
W/O	WITHOUT
WAS	WASTE ACTIVATED SLUDGE
WC	WATER CLOSET
WD	WOOD / WIDTH
WG	WEIR GATE
WH	WALL HYDRANT
WI	WROUGHT IRON
WL	WATER LEVEL
WO	WINDOW OPENING
WP	WHITE PINE
WP	WORKING POINT
WS	WATER SURFACE
WS	WATERSTOP
WST	WELDED STEEL PIPE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YH	YARD HYDRANT

SYMBOLS

GATE VALVE

CHECK VALVE

BALL VALVE

BUTTERFLY VALVE

FLOW DIRECTION

FLANGED ADAPTER

FLANGED JOINT

MECHANICAL JOINT / RESTRAINED PUSH ON JOINT/PUSH ON JOINT

PIPE HANGER TYPE 'A' PIPE SUPPORT (SHOWN IN PLAN ONLY)

PIPE STANCHION SADDLE W/U-BOLT TYPE 'B' PIPE SUPPORT

STRAP W/S.S. BOLTS AND INSERTS TYPE 'D' PIPE SUPPORT

CONCRETE PIPE SUPPORT TYPE 'G' PIPE SUPPORT

WELDED STEEL BRACKET W/U-BOLT TYPE 'H' PIPE SUPPORT

STEEL TUBE OR COLUMN SUPPORT W/ U-BOLT TYPE 'T' OR TYPE 'H' PIPE SUPPORT

WALL SLEEVE

PIPE COUPLING

ECCENTRIC BLIND FLANGE W/FLUSHING CONNECTION OR PIPE DRAIN

1 PIPE SIZE & MAT. ELEVATION

VENT PIPING

x SANITARY PIPING BELOW SLAB

BALL VALVE

GATE VALVE

PRESSURE REDUCING VALVE

WATER HAMMER ARRESTER W/PDI SYMBOL

PRESSURE GAUGE

CLEANOUT

CLEANOUT

FLOOR DRAIN

ROOF DRAIN

"Y" STRAINER

HOSE BIBB

HOSE RACK

BUILDING TRAP, VENT & CO

PIPE DOWN

PIPE UP

SYMBOLS

LUMBER (FINISHED GRADE)

LUMBER (STRUCTURAL GRADE)

CONCRETE BLOCK (PLAN)

CONCRETE BLOCK (ELEVATION)

BRICK (PLAN)

EARTH

COMPACTED GRAVEL BACKFILL

INSULATION (LOOSE OR BLANKET)

INSULATION (RIGID)

CONCRETE

GROUT

SITE SURVEY LEGEND

PROPERTY LINE/LEASE PARCEL LINE

RIGHT-OF-WAY LINE

EASEMENT LINE

BUILDING LINE

FENCE LINE

EDGE OF WATER, STREAM OR DITCH

EDGE OF WOODS OR BRUSH

SANITARY SEWER LINE W/MANHOLE & CLEAN OUT

STORM SEWER LINE W/MANHOLE & INLET

WATER LINE W/HYDRANT, VALVE & VAULT

UNDERGROUND ELECTRIC LINE W/PULLBOX, METER & MANHOLE

NATURAL GAS LINE W/METER & VALVE

OVERHEAD ELECTRIC, TELEPHONE & CABLE LINE

UNDERGROUND TELEPHONE LINE

UNDERGROUND FIBER OPTIC LINE

SIGNAL ARM/HEAD, SIGNAL POLE, PEDESTRIAN POLE & TRAFFIC PULL BOX

TRAFFIC CONTROL LINE

UTILITY POLE, GUY, LIGHT POLE & TOP MOUNT LIGHT

SIGNS

SOIL BORING

600 EXISTING CONTOUR

SITE SURVEY NOTES:

1. COORDINATES AND NORTH ORIENTATION SHOWN HEREON ARE REFERENCED TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, EAST ZONE, TRANSVERSE MERCATOR PROJECTION, NAD 83 (2011) EPOCH 2010.00 USING GPS PROCEDURES AND THE NEW YORK STATE DOT CORS NETWORK.
2. ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 USING GPS PROCEDURES.
3. UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM FIELD LOCATIONS, VISIBLE AT THE TIME OF SURVEY. THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOULD BE STAKED BY THE RESPECTIVE UTILITY COMPANY PRIOR TO ANY CONSTRUCTION.

REFERENCES:

1. HIGHWAY MAP NO. 27 AND EASEMENTS "A" AND "B" AS SHOWN ON A MAP OF HIGHWAY NO. 20 PREPARED FOR THE COUNTY OF WESTCHESTER, DATED 1923.

Equipment List

Equipment Description	Manufacturer and Model Numbers	Specification Reference	Notes
UV Disinfection System	Trojan Technologies, Model UVSwift SC; ETS, Model SX-225	Section 11390	Design UVT: 87% at 480 gpm
UV Control Panel (CPP)	By UV System Manufacturer	Section 11390	
UVT Analyzer	RealTech, Model UV254 M3000	Section 11390	Provide By UV System Manufacturer
Chlorine Analyzer	Hach Model CL17	Section 17601	Chlorine residual analyzers must be compatible with the requirements of EPA Method 334.0 or ChloroSense (Palintest).
Magnetic Flow Meter	Foxboro, Krohne, Rosemount, ABB	Section 17400	
Butterfly Valves	Pratt, DeZurik	Section 15100	
Motorized Valve Actuators	Rotork, Model IQT Pro; Limitorque	Section 15100	
Generator	Onan - Model 150 GFPA; Caterpillar	Section 16620	

Note: The above equipment list is provided in accordance with Westchester County Health Department requirements. Refer to the Specifications for additional requirements.

GENERAL NOTES:

1. LOCATION OF NEW INSTRUMENTATION IS APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL INSTRUMENTATION LOCATION.
2. EXISTING PIPING AND FACILITIES SHOWN LIGHT. NEW PIPING AND FACILITIES SHOWN DARK. SOME ITEMS TO BE DEMOLISHED ARE SPECIFICALLY LABELED ON THESE DRAWINGS. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION REGARDING DEMOLITION.
3. CONTRACTOR IS TO VERIFY AND COORDINATE ALL EXISTING STRUCTURE AND PIPING ELEVATIONS, LOCATIONS, SIZE AND TYPE OF MATERIAL WITH NEW PIPING PRIOR TO CONSTRUCTION. IF DISCREPANCIES ARISE BETWEEN THESE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IN WRITING.
4. CONTRACTOR IS TO PROVIDE ADAPTERS FOR TRANSITIONS BETWEEN DIFFERENT PIPE MATERIALS.
5. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION UNLESS NOTED OTHERWISE.
6. CONTRACTOR TO SUPPLY ALL BENDS REQUIRED TO MAINTAIN SMOOTH FLOW LINES, CHANGES IN ELEVATION AND TO MEET ALL TRANSITIONS. USE 45° BENDS UNLESS APPROVED BY THE ENGINEER.
7. CONTRACTOR TO PROVIDE POSITIVE SITE DRAINAGE DURING CONSTRUCTION OPERATIONS. ALL FINAL LINES AND GRADES SHALL BE CONSTRUCTED TO MAINTAIN POSITIVE SITE DRAINAGE TO EXISTING DRAINAGE STRUCTURES.
8. ALL PAVEMENT SHALL BE SAW CUT PRIOR TO RESTORATION.
9. INFORMATION REGARDING EXISTING CONDITIONS AND FACILITIES ARE DERIVED FROM PREVIOUS CONTRACT DRAWINGS OBTAINED FROM THE TOWN OF NORTH CASTLE TITLED: WATER SUPPLY CONNECTION AS BUILT NORTH BROADWAY TO OVERLOOK TANK - OVERLOOK ROAD TOWN OF NORTH CASTLE, NEW YORK, WESTCHESTER COUNTY, DATED: FEBRUARY 1, 2012 PREPARED BY KEANE COPPELMAN ENGINEERS, P.C.. THERE MAY BE OTHER EXISTING CONDITIONS AND FACILITIES, THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN.
10. SURVEY PERFORMED AND PREPARED AT THE SITE OF 990 NORTH BROADWAY, NORTH CASTLE, NEW YORK BY FISHER ASSOCIATES, 135 CALKINS ROAD, ROCHESTER, NEW YORK DATED: APRIL 2015.
11. LEGEND REPRESENTS STANDARD LINE TYPES AND HATCHING UNLESS INDICATED ON SPECIFIC DRAWINGS.
12. CONTRACTOR TO COORDINATE STAGING AREAS WITH OWNER.
13. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SCOPE OF WORK IN THE FIELD, REVIEW THESE CONTRACT DRAWINGS, ALL PREVIOUS FACILITY CONSTRUCTION DRAWINGS & DOCUMENTS AND THE DEMOLITION SPECIFICATIONS, THE EXISTING FACILITY PLANS, AND DEMOLISH ALL ITEMS NECESSARY TO ACCOMMODATE THE PROPOSED WORK. ALSO THE CONTRACTOR SHALL REPAIR ALL SURFACES AND PLUG ABANDONED PENETRATIONS UPON REMOVAL OF THE DEMOLISHED ITEMS PER THE SPECIFICATION.
14. ALL BUILDING INTERIOR AND UNDERGROUND PIPE AND FITTINGS, VALVES AND HYDRANTS CONNECTED TO AND FORMING PART OF A POTABLE WATER SUPPLY SYSTEM SHALL BE DISINFECTED IN FULL ACCORDANCE WITH BOTH THE REQUIREMENTS OF AWWA STANDARD C651 AND THE STATE OR COUNTY DEPARTMENT OF HEALTH HAVING JURISDICTION OVER THE PROJECT.
15. DISINFECTION PROCEDURES SHALL BE FOLLOWED FOR THE NEW WATER MAIN ALONG WITH AN "APPROVAL OF COMPLETED WORKS" IS ISSUED BY THE WESTCHESTER COUNTY HEALTH DEPARTMENT PRIOR TO PLACING THE WATER MAIN INTO SERVICE. THE CONTRACTOR SHALL DISINFECT THE WATER MAIN IN ACCORDANCE WITH THE LATEST AWWA STANDARD C651. ALL PRESSURE AND BACTERIOLOGICAL TESTING WILL BE SUBMITTED TO WCDOH FOR APPROVAL PRIOR TO ANY WATERMAINS BEING PLACED INTO SERVICE. A SUMMARY DESCRIPTION PROVIDED BELOW:

STANDARDS:AWWA C651, DISINFECTION PROCEDURES (METHOD NO. 2, REFER TO SECTIONS 02674 AND 02675 FOR ADDITIONAL REQUIREMENTS):

a. COMPLETE ALL PRESSURE AND LEAKAGE TESTING PRIOR TO START OF DISINFECTION PROCESS.
b. FLUSH ALL PIPE AND APPURTENANCES OF DIRT AND CONTAMINANT MATERIALS.
c. USE CONTINUOUS FEED METHOD.
d. USE OF SOLID HYPOCHLORITE METHOD IS NOT ALLOWED (TABLET METHOD).
e. CHLORINE INJECTION POINT SHALL BE WITHIN 10-FEET OF THE EXISTING HYDRANT.
f. AVAILABLE CHLORINE IN SOLUTION SHALL BE NOT LESS THAN 50 MG/L AND NOT GREATER THAN 100 MG/L AND SHALL BE HELD IN THE SYSTEM FOR NOT LESS THAN 24-HOURS.
g. DURING CHLORINE INJECTION FLUSH EACH HYDRANT UNTIL THE REQUIRED RESIDUAL IS MET.
h. AFTER 24-HOURS THE AVAILABLE CHLORINE SHALL BE NO LESS THAN 25 MG/L.
i. REPEAT PROCEDURE AS NECESSARY TO ACHIEVE REQUIRED CHLORINE RESIDUAL AT THE COMPLETION OF THE DISINFECTION PROCEDURE.
j. THOROUGHLY FLUSH THE SYSTEM, UNTIL THE CHLORINE RESIDUAL IS BETWEEN 0.5 AND 1.2 MG/L.
k. COLLECT INITIAL SAMPLES FOR LABORATORY TESTING FOR TOTAL COLIFORM.
l. A SECOND TOTAL COLIFORM TESTING SHALL BE PERFORMED NO LESS THAN 24-HOURS FOLLOWING THE INITIAL TESTING.
m. DISPOSE OF SPENT CHLORINE SOLUTION OFF-SITE OR BY NEUTRALIZING THE REMAINING CHLORINE AS APPROVED BY THE OWNER AND APPROPRIATE REGULATORY AGENCIES.
n. IF EITHER TOTAL COLIFORM TESTING FAILS TO MEET HEALTH DEPARTMENT REQUIREMENTS THE DISINFECTION AND TESTING SHALL BE REDONE AT THE CONTRACTORS EXPENSE.
o. ANALYSIS SHALL BE PERFORMED BY A STATE CERTIFIED LABORATORY.
p. PRIOR TO ESTABLISHING SERVICE CONNECTIONS TO EACH HOME OR BUSINESS THE SERVICE SHALL BE THOROUGHLY FLUSHED.

16. STARTUP AND TESTING SHALL BE COORDINATED WITH THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH AND NEW YORK STATE HEALTH DEPARTMENT AND REPRESENTATIVES FROM BOTH ENTITIES SHALL BE PERMITTED TO WITNESS STARTUP AND TESTING.
17. BURIED PVC WATER PIPING SHALL BE ANSI/AWWA C900 POLY (VINYL CHLORIDE) (PVC) PIPE MATERIAL CONFORMING TO ASTM D1784, MINIMUM CLASS 150 PSI (DR 18), INSIDE NOMINAL DIAMETER OF 6 INCHES, PUSH-ON JOINT CONFORMING TO ASTM D3139 WITH ELASTOMERIC GASKETS CONFORMING TO ASTM F477. FITTINGS FOR USE ON PVC PRESSURE PIPE OF 4-INCH NOMINAL INSIDE DIAMETER OR GREATER SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS AS DESCRIBED IN ANSI 21.10/AWWA C110. INTERIOR OF DUCTILE IRON FITTINGS SHALL HAVE DOUBLE-THICKNESS CEMENT MORTAR LINING AND ASPHALTIC SEAL COAT WHICH SHALL CONFORM TO ANSI A21.4/AWWA C104. EXTERIOR OF DUCTILE IRON FITTINGS SHALL HAVE ASPHALTIC COATING APPROXIMATELY 1 MIL THICK AND CONFORM TO REQUIREMENTS OF ANSI 21.51/AWWA C151. BOLTS AND HARDWARE SHALL BE FLUOROPOLYMER COATED, HIGH STRENGTH, LOW ALLOY STEEL BOLTS AND HARDWARE IN ACCORDANCE WITH AWWA C-111.
18. BURIED PVC SEWER AND DRAIN PIPING SHALL BE UNPLASTICIZED PVC GRAVITY SEWER PIPE AND FITTINGS WITH INTEGRAL WALL BELL-AND-SPIGOT JOINTS MEETING ASTM D3034 SPECIFICATION FOR TYPE PSM PVC SEWER PIPE AND FITTINGS, STANDARD DIMENSION RATIO (SDR) 35, OR ASTM F789. RUBBER GASKET SHALL CONFORM TO ASTM F477. FITTINGS SHALL BE MADE OF PVC HAVING A CELL CLASSIFICATION OF 12454B OR 12454C OR AS DEFINED IN ASTM D1784. FABRICATED FITTINGS WITH SOLVENT-CEMENTED COMPONENTS SHALL BE MADE IN ACCORDANCE WITH ASTM D2855 AND TAKING COGNIZANCE OF ASTM F402. PVC FITTINGS SHALL BE SDR 35, ASTM D3034.
19. COUPLINGS FOR CONNECTIONS TO EXISTING PIPING SHALL BE IN ACCORDANCE WITH AWWA C219 AND SHALL BE RATED FOR A WORKING PRESSURE OF 150 PSI. COUPLINGS SHALL BE PROVIDED WITH FLUOROPOLYMER COATED, HIGH STRENGTH, LOW ALLOY STEEL BOLTS AND NUTS IN ACCORDANCE WITH AWWA C-111. THE COUPLINGS SHALL RECEIVE TWO COATS OF COAL TAR EPOXY PAINT ON ALL EXTERIOR SURFACES PRIOR TO INSTALLATION. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

DRAWING LIST

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

NOTES:

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.

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STATE OF NEW YORK REGISTERED 070882 LICENSED PROFESSIONAL ENGINEER

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Drawn	M YOUNG	Designer	M YOUNG
Drafting Check	M. Young	Design Check	
Approved (Project Director)			
Date	10/30/15	Contract No.	1
Scale	NONE	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client: TOWN OF NORTH CASTLE, NEW YORK

Project: NORTH BROADWAY ULTRAVIOLET DISINFECTION

Title: LEGEND, ABBREVIATIONS, SYMBOLS, GENERAL NOTES AND LIST OF DRAWINGS

Original Size: Arch D | Drawing No: 86-16786-G002 | Rev: 0

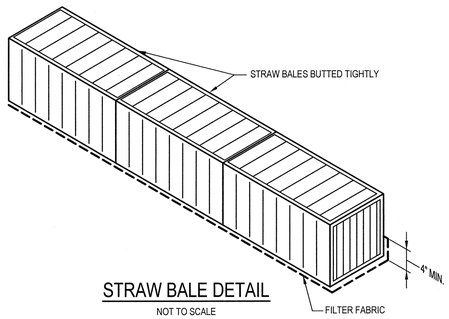
Plot Date: 28 October 2015 - 3:23 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Gen\86-16786-G002_LegAbbrevDwgList.dwg

EROSION & SEDIMENTATION CONTROL MEASURES

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR DAILY AND IMMEDIATELY AFTER PERIODS OF RAINFALL, REPAIR AND/OR MAINTENANCE OF SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE MADE AS SOON AS NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF ALL CONTROL MEASURES ON THIS SITE.
2. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM. RESTABILIZATION WILL BE SCHEDULED IMMEDIATELY AFTER ANY DISTURBANCE.
3. SILT FENCES SHALL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
4. CATCH BASINS SHALL BE PROTECTED WITH INLET PROTECTION BARRIERS OF SILT FENCES THROUGHOUT THE CONSTRUCTION SEQUENCE AND UNTIL ALL DISTURBED AREAS ARE STABILIZED.
5. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ALL CONSTRUCTION ACTIVITIES.
6. ANCHOR ALL TOPSOIL STOCK PILES WITH STRAW MULCH AND RING WITH SILT FENCE, OR STRAW BALE BARRIER.
7. DURING CONSTRUCTION, ALL EXPOSED SLOPES THAT WILL NOT RECEIVE PERMANENT SURFACE TREATMENT IMMEDIATELY, AND ALL PILES OF SOIL SHALL BE TEMPORARILY SEEDED WITH A MIXTURE OF PERENNIAL RYEGRASS, ANNUAL RYEGRASS AND WINTER GRASS, SHOULD CONSTRUCTION ACTIVITIES BE HALTED, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS BY APPROVED METHODS SUCH AS MULCHING AND HYDROSEEDING.
8. SEDIMENT REMOVAL FROM CONTROL STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SEDIMENT SHALL BE DISPOSED OF IN A MANNER WHICH DOES NOT RESULT IN ADDITIONAL EROSION AND WHICH IS CONSISTENT WITH THE CONTRACT DOCUMENTS AND REGULATORY REQUIREMENTS.
9. THE EROSION AND SEDIMENTATION CONTROL MEASURES DESCRIBED HEREIN ARE INTENDED AS A GENERAL GUIDE FOR THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ANY AND ALL WORK NECESSARY TO PREVENT EROSION OF SOIL FROM THE CONSTRUCTION SITE. TO PREVENT EROSION, THE CONTRACTOR SHALL PROVIDE SILT FENCES OR OTHER CONTROL MEASURES AS THE NEED ARISES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
10. PAVED ROADWAYS SHALL BE KEPT CLEAN AT ALL TIMES.
11. A TEMPORARY CRUSHED STONE PAD OR ROADWAY SHALL BE CONSTRUCTED AT ALL NON-PAVED PARKING AREAS, HEAVY USE AREAS, OR ROADWAYS WHERE THERE IS NO EXISTING PAVEMENT, OR WHERE PAVEMENT HAS BEEN REMOVED.

GENERAL EROSION AND SEDIMENTATION NOTES

1. ALL REQUIRED EROSION CONTROL MEASURES SHALL BE ESTABLISHED WITHIN A DRAINAGE AREA PRIOR TO EXCAVATION WITHIN THE AREA.
2. THE LISTED EROSION CONTROL MEASURES ARE REQUIRED. ADDITIONAL EROSION CONTROL MEASURES MAY BE NEEDED AT THE TIME OF CONSTRUCTION BASED ON CONSTRUCTION PRACTICES AND SITE CONDITIONS.
3. SPECIFIC EROSION CONTROL PRACTICES FOR INDIVIDUAL AREAS ARE SHOWN ON THE INDIVIDUAL DRAWINGS. GENERAL PRACTICES AND DETAILS ARE LISTED ON THIS SHEET.
4. THE GENERAL SEQUENCE OF CONSTRUCTION WILL BE AS FOLLOWS:
   - A. IDENTIFY THE LIMITS OF THE DRAINAGE AREA.
   - B. ESTABLISH EROSION CONTROL MEASURES WITHIN THE DRAINAGE AREA.
   - C. EXCAVATE MATERIAL FROM THE EXCAVATION AND STOCKPILE ACCEPTABLE MATERIAL ADJACENT TO THE EXCAVATION.
   - D. REMOVE UNACCEPTABLE MATERIAL FROM THE SITE.
   - E. HAUL IN ACCEPTABLE BACKFILL AND STOCKPILE MATERIAL ADJACENT TO THE EXCAVATION.
   - F. INSTALL NEW FACILITIES, IE: BEDDING, PIPE, SIDEWALK.
   - G. BACKFILL WITH ACCEPTABLE MATERIAL.
   - H. ESTABLISH SURFACE TREATMENTS.
   - I. MAINTAIN EROSION CONTROLS UNTIL ALL SURFACE AREAS ARE STABILIZED.
   - J. REMOVE EROSION CONTROL MEASURES.
5. DRAINAGE WILL BE SLOPED AWAY FROM THE EXCAVATION AREA.
6. EXCAVATIONS WILL BE KEPT DRY USING SUMP PUMP SYSTEMS. THE SUMP WILL BE LOCATED AT THE LOW POINT OF THE TRENCH, AND WILL CONSIST OF A SUCTION HOSE DRAWING FROM A POCKET OF WASHED GRAVEL WRAPPED IN NON-WOVEN GEOTEXTILE. THE SUMP WILL DISCHARGE TO STABILIZED CATCH BASINS. STABILIZED CATCH BASINS WILL BE CLEANED PRIOR TO HAVING STORMWATER DISCHARGED TO THEM AND THEIR GRATES WILL BE WRAPPED WITH WOVEN GEOTEXTILE (SILT FENCE MATERIAL) TO PREVENT THE ENTRANCE OF FINES. STABILIZED CATCH BASINS WILL ALSO BE CLEANED WHEN THE SILT REACHES THE MIDPOINT OF THE SUMP AND AT THE COMPLETION OF THE PROJECT.
7. IF A STABILIZED CATCH BASIN IS NOT AVAILABLE WITHIN A DRAINAGE AREA THE TRENCH SUMP WILL DISCHARGE TO A SILT BAG AND FLOW OVERLAND TO NATURAL DRAINAGE COURSES. THE VOLUME OF WATER DISCHARGED WILL BE MONITORED TO PREVENT EROSION OR DAMAGE WITHIN THE NATURAL DRAINAGE COURSES.
8. MATERIAL TAKEN FROM ROADWAYS, CATCH BASINS, AND SILT BAGS WILL BE DISPOSED OF IN A MANNER THAT MEETS ALL LOCAL, STATE AND FEDERAL LAWS.



STRAW BALE DETAIL

NOT TO SCALE

EROSION CONTROL NARRATIVE

PRIOR TO COMMENCING WORK, CONTRACTOR SHALL INSTALL SEDIMENT AND EROSION CONTROL MEASURES.

WHEN THE SITE IS CLEARED, BUT BEFORE GRUBBING, EROSION CONTROLS SHALL BE PLACED AT POINTS NOTED ON THE PLANS. THESE INCLUDE POSITIONING CONTROLS AS NEEDED AT DOWNGRADIENT EDGES OF GRADED AREAS AND AT THE BASE OF PROPOSED FILL SLOPES AND WALLS.

STABILIZED CONSTRUCTION AND WASHDOWN PAD SHALL BE INSTALLED AS SHOWN ON DRAWINGS. IF NECESSARY, ROUGH GRADES SHALL BE ESTABLISHED AND SHAPED. SITE AREAS SHALL BE ESTABLISHED FOR USE AS CONSTRUCTION MATERIAL STORAGE AND PARKING.

CUTS AND FILLS WILL BE MADE TO DESIGN GRADES. EXCESS FILL WILL BE HAULED AND PLACED IN FILL AREAS OR DISPOSED OF AT AN APPROVED OFF-SITE LOCATION.

EROSION CONTROLS SHALL BE PERIODICALLY CHECKED AND MAINTAINED AT THE DOWNHILL EDGE OF DISTURBED AREAS AND SHALL BE PLACED AT THE BASE OF SLOPES. STRAW BALES OR SILT FENCES SHALL BE MAINTAINED AT THE POINTS OF RUNOFF PIPE AND DITCH OUTLETS.

WHEN CONSTRUCTION WORK IS COMPLETED AND STABLE SURFACES (VEGETATED OR PAVED) HAVE BEEN ACHIEVED, THE EROSION CONTROLS SHALL BE REMOVED.

DUST CONTROL MEASURES

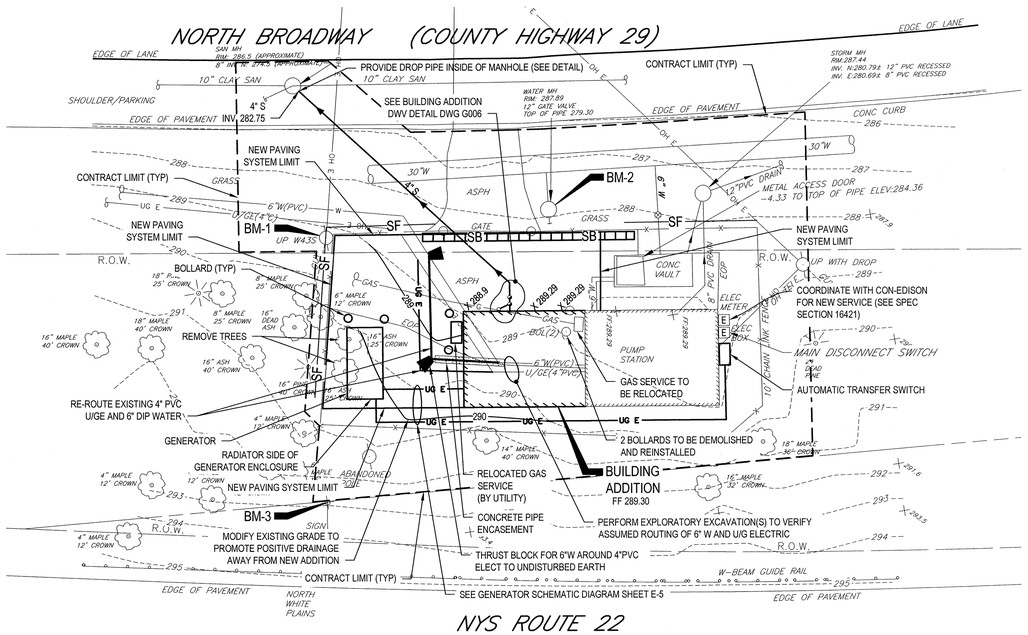
DUST CONTROL MEASURES WILL BE IMPLEMENTED ACROSS AREAS OF SITE DISTURBANCE.

TEMPORARY STABILIZATION (SEEDING, MULCHING) WILL BE EMPLOYED IF CONSTRUCTION AREAS ARE TO BE LEFT OPEN FOR PERIODS OF TIME. THESE NOTED GENERAL OPERATIONS WILL HELP REDUCE THE POTENTIAL LEVEL OF DUST GENERATED FROM THE SITE.

DUST CONTROL MEASURES WILL BE EMPLOYED DURING DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS ARE STABILIZED.

SPECIFIC DUST CONTROL MEASURES FOLLOW IN ORDER OF HIERARCHY.

- SPRINKLING: WATER WILL BE SPRAYED ON THE SURFACE OF DISTURBED AREAS UNTIL THE SURFACE IS WET. THIS PRACTICE IS ESPECIALLY EFFECTIVE ON TRAFFICKED AREAS.
- VEGETATION: TEMPORARY SEEDING WILL BE EMPLOYED IN SITE DISTURBED AREAS NOT SUBJECT TO TRAFFIC.
- MULCH: MULCH MATERIAL INCLUDING WOOD CHIPS AND GRAVEL WILL BE USED ON AREAS WHERE A FAST EFFECTIVE MEANS TO CONTROL DUST IS NEEDED.
- BARRIERS: TEMPORARY "FENCING" WILL BE USED TO CONTROL AIR CURRENTS. EFFECT OF A BARRIER MAY BE AS LARGE AS 15 TIMES THE BARRIER HEIGHT EXISTING OPEN FIELD VEGETATION (3' +/-HT) CAN PROVIDE AN EFFECTIVE CONTROL FOR DUST FROM LOCAL WORK AREAS.



NYS ROUTE 22

BENCHMARK LIST

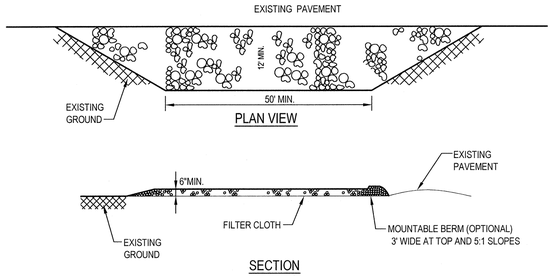
BENCHMARK	ELEVATION	DESCRIPTION
BM-1	291.12	EXISTING NAIL IN NORTH FACE OF UTILITY POLE
BM-2	287.93	NORTH RIM OF MANHOLE
BM-3	293.58	TOP OF NORTH WEST SIGN ANCHOR BOLT

SITE PLAN

SCALE: 1" = 10'

SITE LEGEND

SB	STRAW BALE (TO BE UTILZED OFF HOURS)
SF	SILT FENCE
X 289.0	NEW SPOT ELEVATION
290	NEW CONTOUR



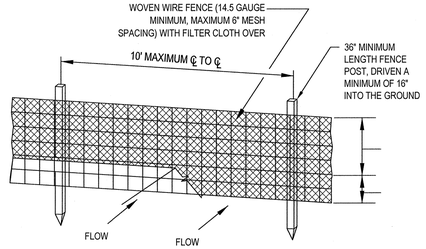
STABILIZED CONSTRUCTION AND WASHDOWN PAD

NOT TO SCALE

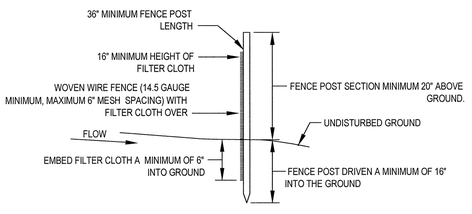
CONSTRUCTION SPECIFICATION

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH ALSO DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

REPRODUCED FROM NEW YORK STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL



PERSPECTIVE DETAIL



CROSS SECTION

SILT FENCE NOTES

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. POST: SHALL BE STEEL EITHER "T" OR "U" TYPE OR 2" HARDWOOD STAKE.
6. FENCE: SHALL BE WOVEN WIRE, 14.5 GAUGE WITH 6" MAXIMUM MESH OPENING.
7. FILTER CLOTH: SHALL BE FILTER X, 7. MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
8. PREFABRICATED UNIT: SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

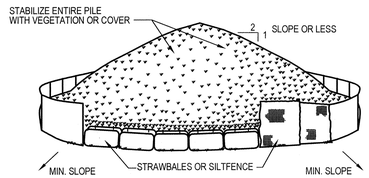
DESIGN CRITERIA

SLOPE STEEPNESS	SLOPE LENGTH	FENCE LENGTH
FLATTER THAN 50:1	UNLIMITED	UNLIMITED
50:1 TO 10:1	125 FEET	1,000 FEET
10:1 TO 5:1	100 FEET	750 FEET
5:1 TO 3:1	60 FEET	500 FEET
3:1 TO 2:1	40 FEET	250 FEET
2:1 AND STEEPER	20 FEET	125 FEET

REPRODUCED FROM NEW YORK STATE GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL

SILT FENCE DETAIL

NOT TO SCALE

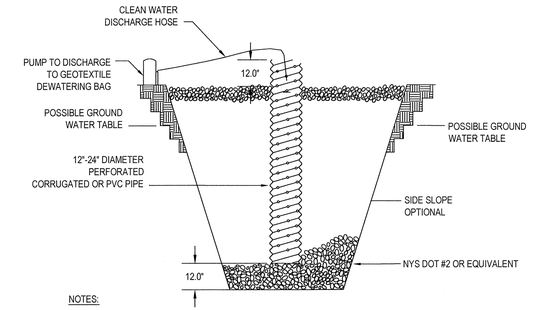


INSTALLATION NOTES

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING

NOT TO SCALE



NOTES:

1. PIT DIMENSIONS ARE OPTIONAL.
2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORATING A 12-24" DIAMETER CORRUGATED OR PVC PIPE.
3. A BASE OF 2" AGGREGATE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD BE BACKFILLED WITH 2" AGGREGATE.
4. THE STANDPIPE SHOULD EXTEND 12-18" ABOVE THE LIP OF THE PIT.
5. THE STANDPIPE SHOULD BE WRAPPED WITH FILTER CLOTH BEFORE INSTALLATION. IF DESIRED, 1/4"-1/2" HARDWARE CLOTH MAY BE PLACED AROUND THE STANDPIPE, PRIOR TO ATTACHING THE FILTER CLOTH.
6. DEWATERING BAG SHALL BE 10 OZ. NON-WOVEN CAPACITY: 6 CUBIC YARDS, BAG SIZE 15 FT. X 10 FT. , WATER FLOW RATE PER ASTM 4491, 95 GAL/MIN/SF

SUMP PIT

NOT TO SCALE

0 5 10 15 20'

SCALE 1"=10' AT ORIGINAL SIZE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

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STATE OF NEW YORK KEITH CASTRO 070862 LICENSED PROFESSIONAL ENGINEER

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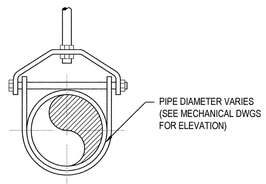
Drawn	M YOUNG	Designer	M YOUNG
Drafting Check	M.Pa	Design Check	
Approved (Project Director)			
Date	10/30/15	Contract No.	1
Scale	AS SHOWN		

'This Drawing shall not be used for Construction unless Signed and Sealed For Construction

Client: TOWN OF NORTH CASTLE, NEW YORK
Project: NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title: SITE PLAN - EROSION & SEDIMENTATION CONTROL NOTES AND DETAILS

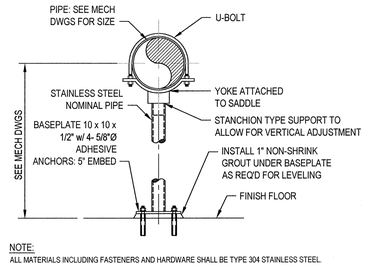
Original Size: Arch D
Drawing No: 86-16786-G003
Rev: 0

Plot Date: 28 October 2015 - 3:25 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Gen\86-16786-G003_SitePlan.dwg



TYPE "A" PIPE SUPPORT (REFER TO SECTION 15150)

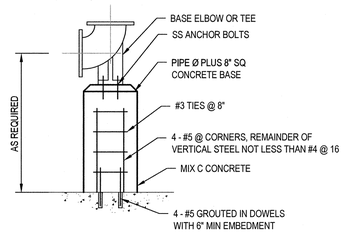
NOT TO SCALE



NOTE:
ALL MATERIALS INCLUDING FASTENERS AND HARDWARE SHALL BE TYPE 304 STAINLESS STEEL.

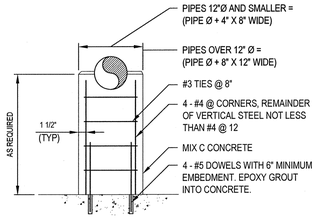
TYPE "B" PIPE SUPPORT

NOT TO SCALE



TYPE "F" PIPE SUPPORT

NOT TO SCALE



TYPE "G" PIPE SUPPORT

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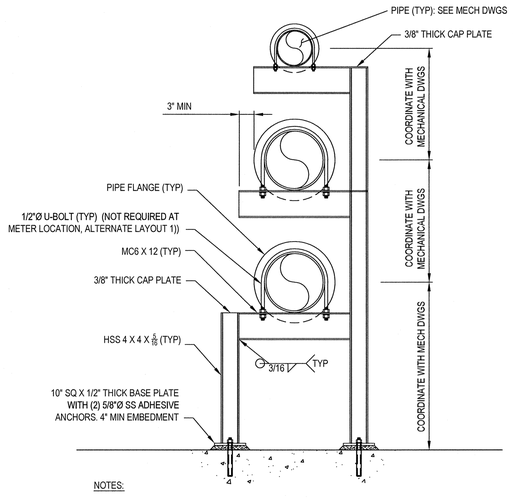
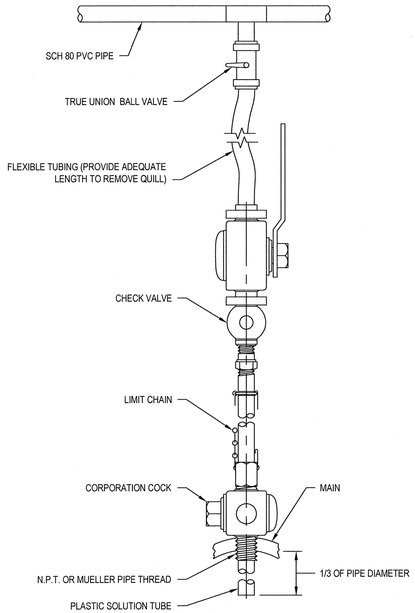


NOTES:

1. PIPE SUPPORT ASSEMBLY SHALL BE SHOP WELDED THEN HOT DIP GALVANIZED.
2. ALL BOLTS AND U-BOLTS SHALL BE STAINLESS STEEL.
3. SEE MECHANICAL PLAN AND SECTIONS FOR SUPPORT LOCATIONS.

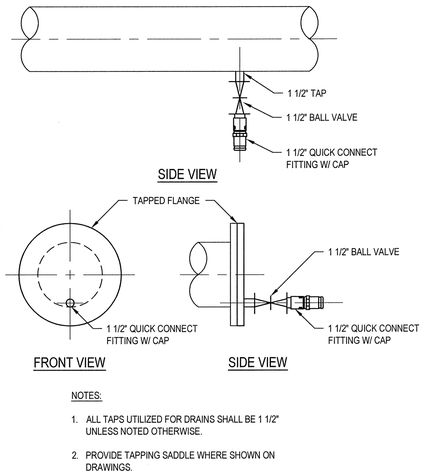
TYPE 'H' PIPE SUPPORT

NOT TO SCALE



TYPICAL CHEMICAL FEED CONNECTION DETAIL

NOT TO SCALE

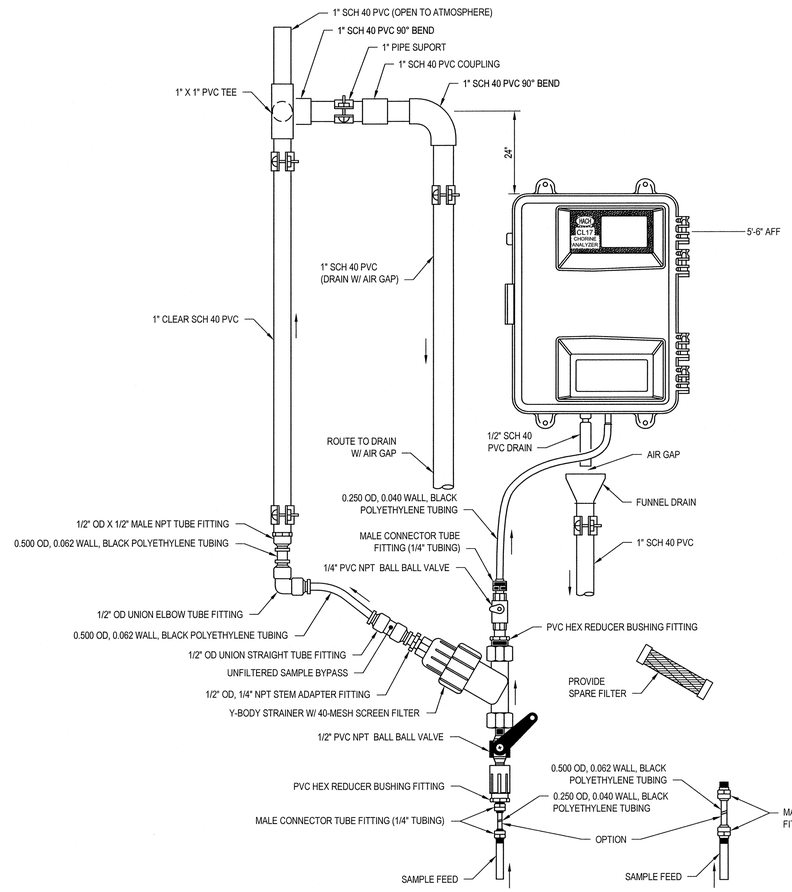


NOTES:

1. ALL TAPS UTILIZED FOR DRAINS SHALL BE 1 1/2" UNLESS NOTED OTHERWISE.
2. PROVIDE TAPPING SADDLE WHERE SHOWN ON DRAWINGS.

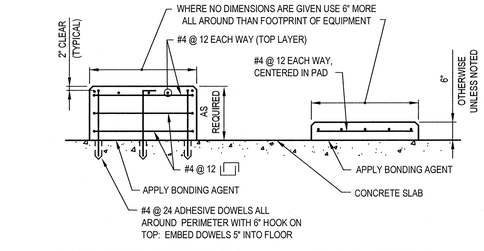
PIPE DRAIN DETAIL

NOT TO SCALE



CHLORINE ANALYZER DETAIL

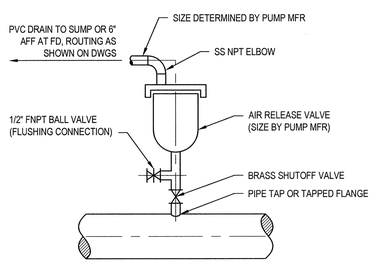
NOT TO SCALE



TYPICAL EQUIPMENT/PUMP PAD HOUSEKEEPING PAD

REINFORCEMENT FOR CONCRETE PADS

NOT TO SCALE



AIR RELEASE VALVE DETAIL

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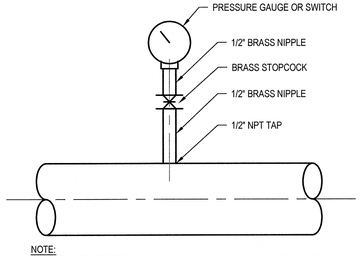
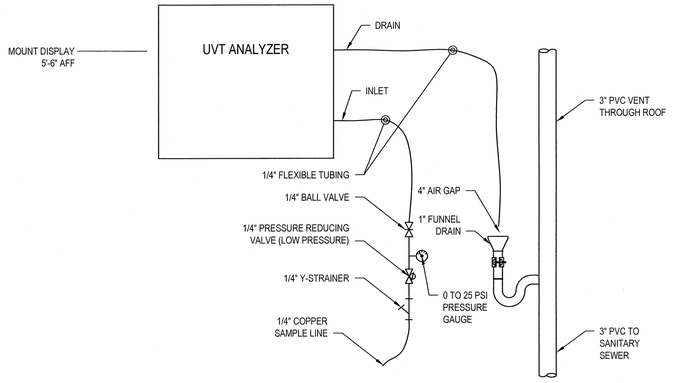


NOTE:
ALL TAPS UTILIZED FOR GAUGES SHALL BE 1/2" UNLESS NOTED OTHERWISE.

PRESSURE DEVICE MOUNTING DETAIL

NOT TO SCALE



UVT ANALYZER SCHEMATIC

NOT TO SCALE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

NOTES:

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STATE OF NEW YORK · KEVIN CASTRO · 070883 · LICENSED PROFESSIONAL ENGINEER

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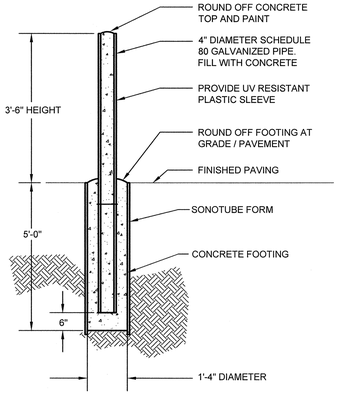
Drawn	M YOUNG	Designer	M YOUNG
Drafting Check	M. Young	Design Check	
Approved (Project Director)			
Date	10/30/15	Contract No.	1
Scale	NONE	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client TOWN OF NORTH CASTLE, NEW YORK
Project NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title MISCELLANEOUS DETAILS

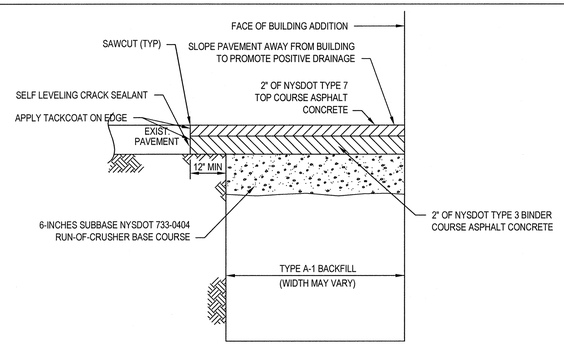
Original Size Arch D
Drawing No: 86-16786-G004
Rev: 0

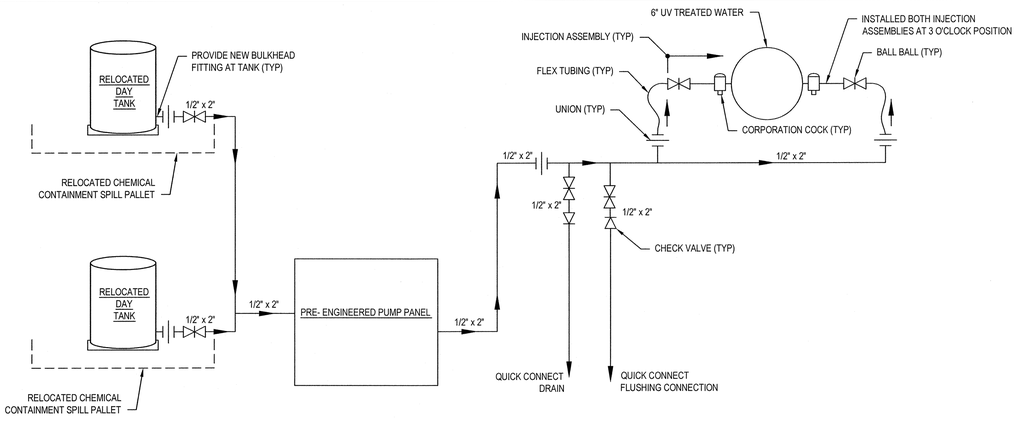
Plot Date: 28 October 2015 - 3:26 PM Plotted by: Jay DeLapp
Cad File No: G:\86\16786\CADD\Drawings\Gen\86-16786_Misc Details.dwg



TYPICAL BOLLARD DETAIL

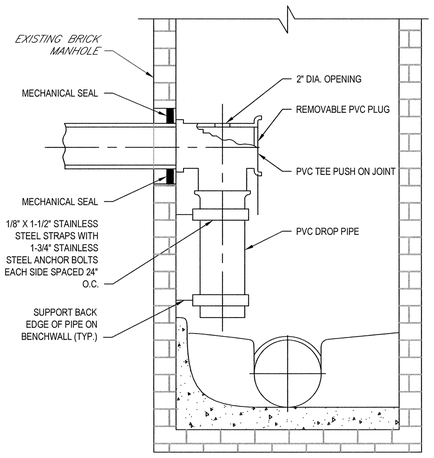
NOT TO SCALE





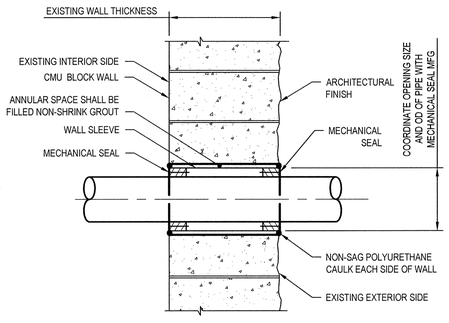
CHLORINE FEED SCHEMATIC

NOT TO SCALE



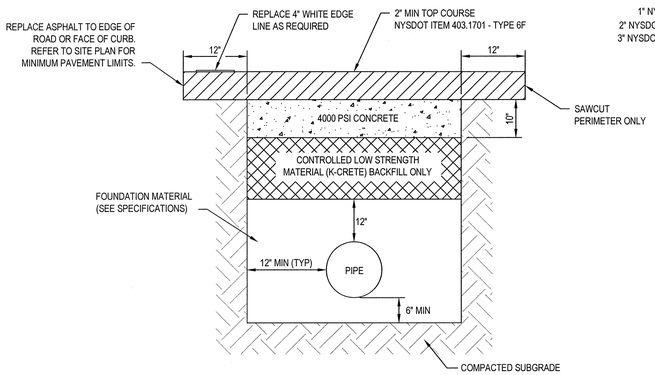
DROP MANHOLE DETAIL

NOT TO SCALE



TYPICAL WALL SLEEVE DETAIL EXISTING STRUCTURE

NOT TO SCALE

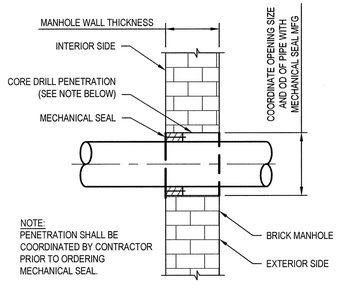


NOTES:

1. TEMPORARY PAVEMENT REPLACEMENT WILL BE ALLOWED ONLY WHEN ASPHALT PLANTS ARE NOT IN OPERATION OR AS DIRECTED. TEMPORARY PAVEMENT SHALL BE 4" OF BINDER COURSE NYSDOT 402.256902 IN LIEU OF TOP COURSE AS SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND UPKEEP OF SAID PATCH UNTIL PERMANENT PATCH IS INSTALLED.
2. UPON THE AVAILABILITY OF ASPHALT, THE CONTRACTOR SHALL EXCAVATE THE "K-CRETE" BACKFILL TO THE ORDER DEPTH AND REPLACEMENT WITH 4000 PSI CONCRETE AND THE REQUIRED 2" THICK ASPHALT TO THE LIMITS AND SPECIFICATIONS SHOWN.
3. STEEL PLATES OF ADEQUATE SIZE SHALL BE PLACED OVER ALL TRENCHES UNTIL THE 4000 PSI CONCRETE PLUG IS DEEMED PASSABLE.
4. STEEL PLATES SHALL BE PINNED AS REQUIRED TO PREVENT MOVEMENT. DURING WINTER ALL STEEL PLATES SHALL BE RECESSED.
5. USE THIS DETAIL FOR WORK IN COUNTY HIGHWAY 29.

PERMANENT PAVEMENT REPLACEMENT - COUNTY ROAD

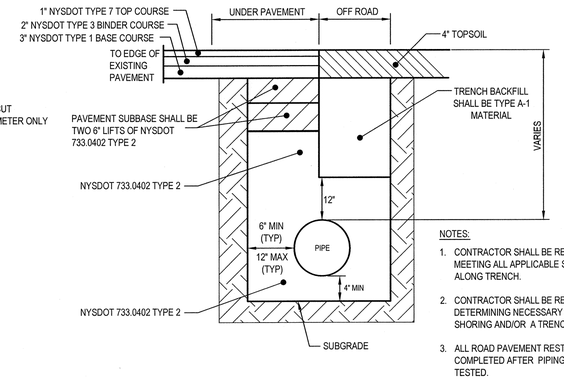
NOT TO SCALE



NOTE:
PENETRATION SHALL BE COORDINATED BY CONTRACTOR PRIOR TO ORDERING MECHANICAL SEAL.

TYPICAL PENETRATION DETAIL BRICK STRUCTURE

NOT TO SCALE

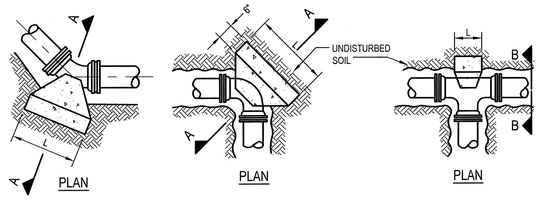


NOTES:

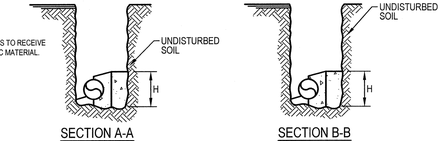
1. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL APPLICABLE SAFETY CONDITIONS ALONG TRENCH.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING NECESSARY SIDE SLOPES, AND IF SHORING AND/OR A TRENCH SHIELD IS REQUIRED.
3. ALL ROAD PAVEMENT RESTORATION SHALL BE COMPLETED AFTER PIPING IS INSTALLED AND TESTED.

NORMAL SOIL CONDITIONS TRENCH & PAVEMENT RESTORATION DETAIL

NOT TO SCALE



NOTE:
ALL EXPOSED PORTIONS OF ANCHOR STRAPS TO RECEIVE A MINIMUM OF 2 FIELD COATS OF BITUMASTIC MATERIAL.



HORIZONTAL ANCHOR DIMENSIONS FOR AVERAGE SOIL CONDITIONS

UP TO 150 P.S.I. WORKING PRESSURE										
PIPE SIZE	PLUG, CAP, TEE OR TAP SLEEVE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	H	L	H	L	H	L	H	L	H	L
6"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	1'-4"	0'-9"	1'-0"	0'-6"	1'-0"

THRUSTBLOCK DETAIL

NOT TO SCALE

LOW SPEED URBAN HIGHWAY (30-40 mph)

TAST-C1UL

Notes:

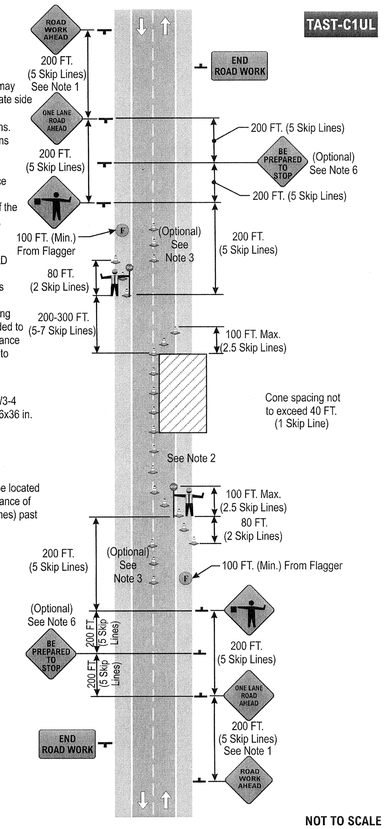
1. In urban conditions, advance warning sign spacings may be reduced to a 100 FT. (Min.) in order to accommodate side streets and driveways.
2. Barrier vehicles are not required for flagging operations. A buffer space may be provided where traffic conditions allow.
3. Centerline cones are optional and may be eliminated where space constraints exist. If cones are used, place them 100 FT. (Min.) From flagger.
4. State Law signs (NYR9-11 or NYR9-12) are optional if the anticipated work duration is less than 4 hours. If used, State Law sign to be placed 1000 FT. in advance of initial warning sign.
5. Flagger Symbol Sign (W20-7a) and "ONE LANE ROAD AHEAD" Sign (W20-4) shall be removed, covered or turned away from road users when flagging operations are not occurring.
6. Should the traffic queue up prior to the advance warning signs the "BE PREPARED TO STOP" sign can be added to the sign series at the location shown or the entire advance warning sign series shall be moved to a location prior to the queued traffic.

W20-7a 36x36 in.
W3-4 36x36 in.
W20-4 36x36 in.
G20-2 36x18 in.
This sign shall be located a Maximum distance of 500' (12 Skip Lines) past the work area.
W20-1 36x36 in.
Flag Tree
Work Area

NYSDOT WORK ZONE TRAFFIC CONTROL

SHORT-TERM STATIONARY
OPERATION INVOLVING
DAYTIME
LANE CLOSURE WITH FLAGGERS
ON
LOW SPEED URBAN (30-40 mph)
TWO-LANE CONVENTIONAL HIGHWAY

FEBRUARY 2009 **TAST-C1UL**



NOT TO SCALE

TRAFFIC CONTROL DETAIL

NOT TO SCALE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

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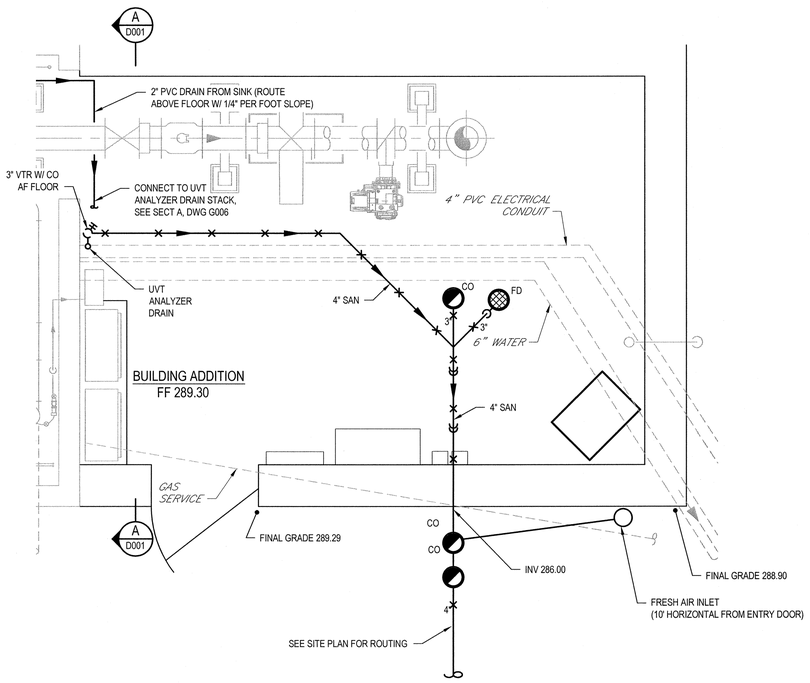
Drawn M YOUNG	Designer M YOUNG	Client	TOWN OF NORTH CASTLE, NEW YORK
Drafting Check M. Young	Design Check	Project	NORTH BROADWAY ULTRAVIOLET DISINFECTION
Approved (Project Director)		Title	MISCELLANEOUS DETAILS
Date 10/30/15	Contract No. 1		
Scale NONE	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	Original Size Arch D	Drawing No: 86-16786-G005 Rev: 0

Plot Date: 28 October 2015 - 3:27 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Gen\86-16786_Misc Details.dwg



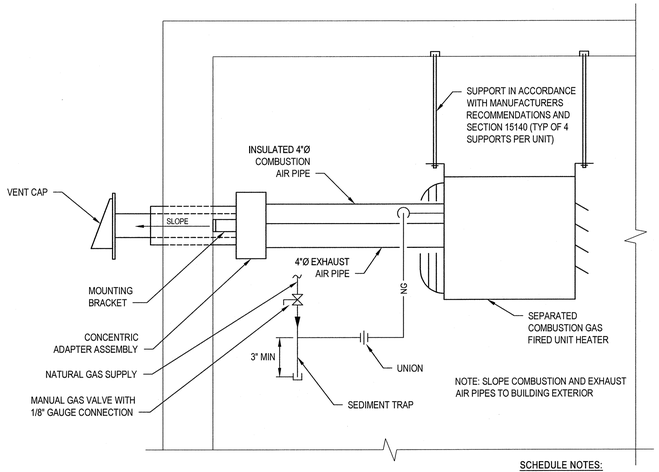
BUILDING ADDITION DWV PLAN
SCALE 1/2" = 1'-0"

FAN SCHEDULE

UNIT ID	EQUIPMENT TYPE	FAN				INLET	ELECTRICAL			CONTROLS	DESIGN BASIS	NOTES
		DRIVE	CFM	EXT SP (" WG)	RPM	dBA	HP	RPM	VOLTS/ PHASE	CONTROLLED BY	MANUFACTURER, MODEL	
F-1	CENTRIFUGAL SIDEWALL EXHAUST FAN	DIRECT	300	0.25	1,648	50	1/6	1,725	120/1	ON/OFF SWITCH	GREENHECK, CW-070-VG	1

GAS UNIT HEATER SCHEDULE

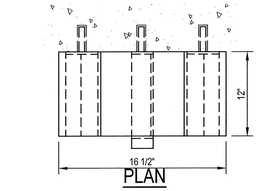
UNIT ID	ROOM SERVED	EQUIPMENT TYPE	HEATING DATA			MOTOR DATA			DESIGN BASIS	NOTES
			MBH OUTPUT	CFM	HEAT THROW (FT)	HP	RPM	VOLTS/ PHASE	MANUFACTURER, MODEL	
UH-1	BUILDING ADDITION	SEPARATED COMBUSTION GAS FIRED	24.6	450	26	0.08	1,550	120/1	REZNOR, UDAS-30	2



SEPARATED COMBUSTION GAS FIRED UNIT HEATER
NOT TO SCALE

SCHEDULE NOTES:

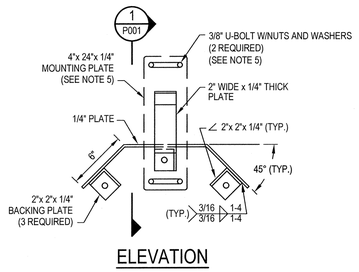
1. PROVIDE WITH ELECTRICALLY COMMUTATED MOTOR AND MOTOR MOUNTED SPEED DIAL.
2. PROVIDE WITH MANUFACTURERS OUTSIDE AIR AND EXHAUST VENT TERMINATION KITS.



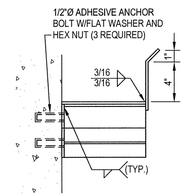
PLAN

NOTES:

1. ANGLES AND PLATES SHALL BE 6061-T6 ALUMINUM.
2. MILL FINISH.
3. ALL HARDWARE SHALL BE STAINLESS STEEL.
4. PAINT ALUMINUM IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
5. FOR COLUMN OR HANDRAIL MOUNTING, OMIT BACKING PLATES. PROVIDE MOUNTING PLATE AND U-BOLTS AS SHOWN.

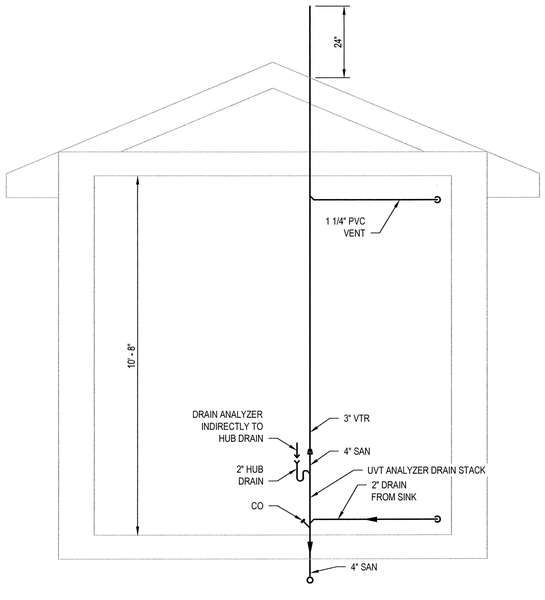


ELEVATION



1 P001 SECTION
NOT TO SCALE

HOSE RACK DETAIL
NOT TO SCALE



A D001 SECTION
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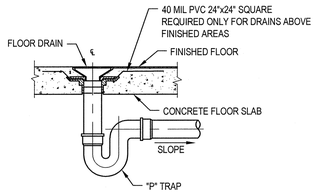
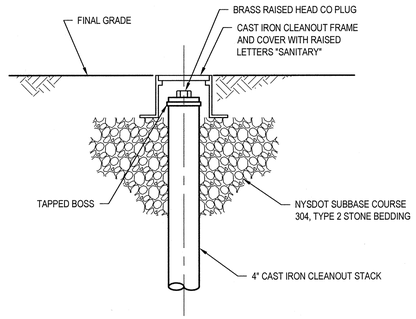
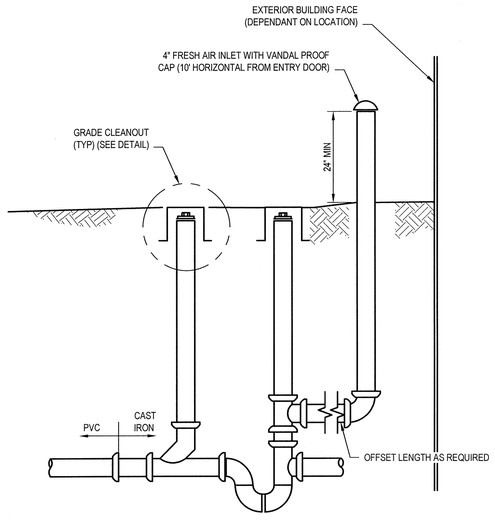


FLOOR DRAIN
NOT TO SCALE



GRADE CLEANOUT DETAIL
NOT TO SCALE



FRESH AIR INLET (FAI) AND CLEANOUT (CO) ASSEMBLY DETAIL
NOT TO SCALE

NOTES:

1. VENT AND CLEANOUT ASSEMBLY DETAIL APPLIES TO SANITARY BUILDING DRAIN.
2. ALL PIPE AND FITTINGS FOR FRESH AIR INLET, CLEANOUT ASSEMBLY AND SEWER SHALL BE SERVICE DUTY CAST IRON PIPE.

DWV ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
CO	CLEANOUT
CODP	CLEANOUT DECK PLATE
COWP	CLEANOUT WALL PLATE
C	COLD WATER
D	DRAIN
DN	DOWN
DWV	DRAIN/WASTE/VENT
FD	FLOOR DRAIN
GV	GATE VALVE
HB	HOSE BIBB
NP	NON-POTABLE WATER
SAN	SANITARY
V	VENT
VTR	VENT THRU ROOF
W	WASTE
W/	WITH

DWV SYMBOLS

- VENT PIPING
- SANITARY PIPING BELOW SLAB
- CLEANOUT
- FLOOR DRAIN
- HOSE BIBB
- HOSE RACK
- BUILDING TRAP, VENT & CO
- PIPE DOWN
- PIPE UP

GENERAL NOTES:

1. COORDINATE ALL PLUMBING WORK WITH OTHER TRADES.
2. ISOLATION VALVES SHALL BE INSTALLED AT ALL BRANCH LINES, FIXTURES, AND EQUIPMENT.
3. ALL PIPING SHALL BE ADEQUATELY SUPPORTED PER SPECIFICATIONS.
4. SUPPLY ALL FITTINGS REQUIRED TO MAINTAIN SMOOTH FLOW LINES, CHANGE IN ELEVATIONS AND TO MEET ALL TRANSITIONS FOR A COMPLETE SYSTEM.
5. SEE DRAWING G002 FOR GENERAL LIST OF ADDITIONAL ABBREVIATIONS.
6. ALL PIPE, FITTINGS, VALVES AND HYDRANTS CONNECTED TO AND FORMING PART OF A POTABLE WATER SUPPLY SYSTEM SHALL BE DISINFECTED IN FULL ACCORDANCE WITH BOTH THE REQUIREMENTS OF AWWA STANDARD C651 AND THE STATE OR COUNTY DEPARTMENT OF HEALTH HAVING JURISDICTION OVER THE PROJECT.

No	Revision	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION	MRY	NJH	KC	10/15

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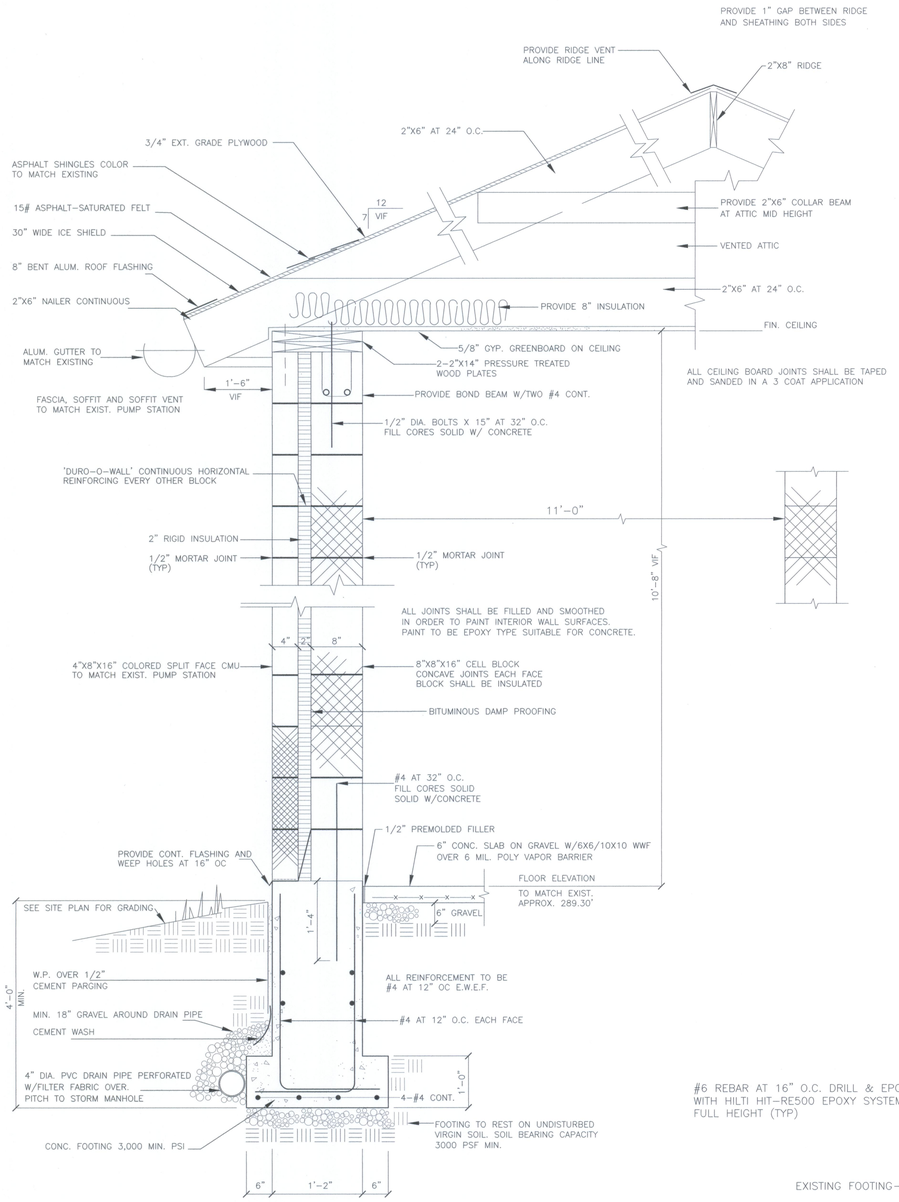
Drawn	M YOUNG	Designer	M YOUNG
Drafting Check	M. Young	Design Check	
Approved (Project Director)			
Date	10/30/15	Contract No.	1
Scale	NONE		

This Drawing shall not be used for Construction unless Signed and Sealed For Construction

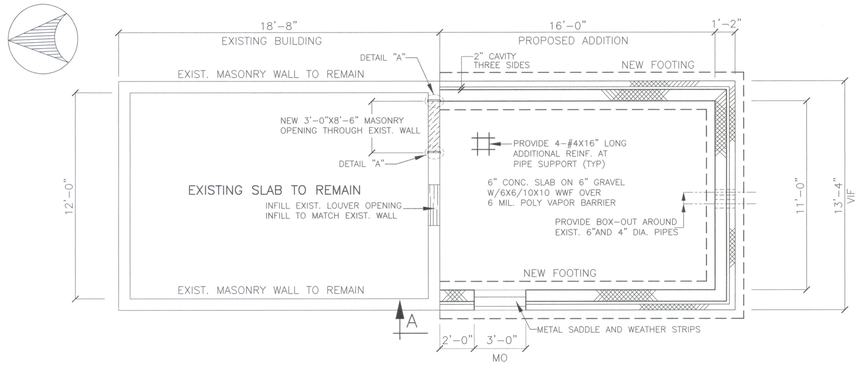
Client TOWN OF NORTH CASTLE, NEW YORK
Project NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title MISCELLANEOUS DETAILS AND BUILDING ADDITION DWV PLAN

Original Size Arch D
Drawing No: 86-16786-G006
Rev: 0

Plot Date: 28 October 2015 - 3:27 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Gen\86-16786_Misc Details.dwg



TYPICAL WALL SECTION
NTS



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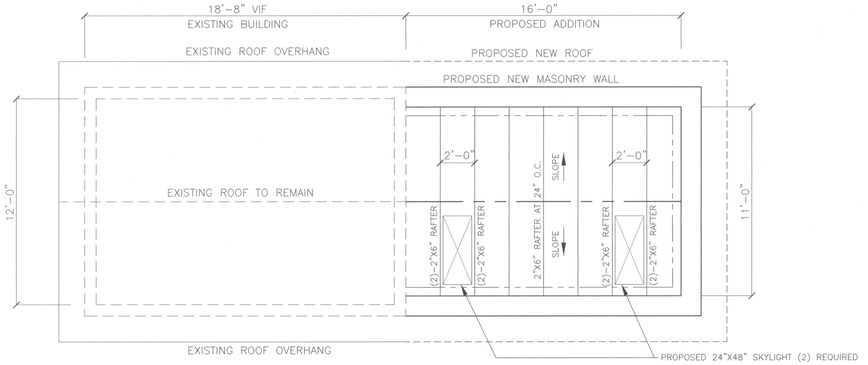
0 5 10



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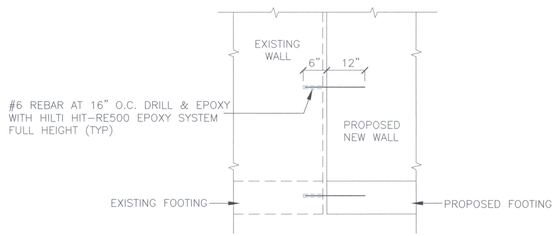
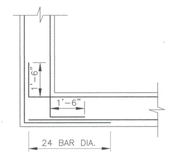
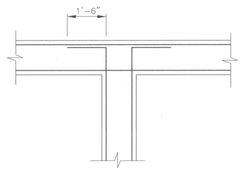
0 5 10



SECTION 'A'
NTS



TYPICAL CORNER WALL DETAIL
NTS



TYPICAL INTERSECTION WALL DETAIL
NTS

GENERAL NOTES:

* ALL WORK TO COMPLY WITH LATEST NYUCC, NATIONAL ELECTRICAL CODE, IBC AND ALL LOCAL ORDINANCES.
* CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS SHOWN ON DRAWINGS BEFORE COMMENCING WORK AND SHALL TAKE ALL NECESSARY PRECAUTIONS AGAINST ANY DAMAGE TO EXIST. STRUCTURES AND PROPERTY AND TAKE INTO ACCOUNT ALL POSSIBLE DIFFICULTIES OF STORAGE DELIVERY AND HANDLING OF MATERIALS.
* MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

CONCRETE NOTES:

- CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE ACI STANDARD "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-LATEST EDITION)
- NORMAL WEIGHT CONCRETE COMPRESSIVE STRENGTH F'c AT THE END OF 28 DAYS SHALL NOT BE LESS THAN 4,000 PSI.
- ALL REINFORCING BARS #3 OR LARGER SHALL BE DEFORMED BARS INTERMEDIATE GRADE NEW BILLET STEEL AS PER ASTM A-615, 60,000 PSI YEILD. STEEL TO BE EPOXY COATED SHALL BE COATED WITH SCOTCHKOTE BRAND FUSION BOND EPOXY COATING 213 OR 214 AS MANUFATURED 3M.
- UON, PROTECTIVE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
  A- BOTTOM REINFORCEMENT FOR FOUNDATION, SLABS AND SLABS AND BEAMS ON GRADE - 3 INCHES.
  B- PIERS, FOUNDATION, BEAM AND WALL FACES IN CONTACT WITH GROUNED OR EXPOSED TO WEATHER - 2 INCHES.
- REINFORCING BAR DETAIL SHALL CONFORM TO THE "MANUAL FOR STANDARD PRACTICE" LATEST EDITION, BY THE CONCRETE REINFORCING STEEL INSTITUTE. DETAIL DRAWINGS HAVE TO BE APPROVED BY THE ENGINEER BEFORE FABRICATION. WELDING OF REINFORCEMENT (INCLUDING TACK WELDS) SHALL NOT BE PERMITTED UNLESS INDICATED ON THE DESIGN DRAWINGS.
- ALL KEYS AT CONSTRUCTION JOINTS SHALL BE 2"X4" UNO.
- ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4" UNLESS NOTED.
- SUBMIT SHOP DRAWINGS FOR APPROVAL

FRAMING NOTES:

- ALL LUMBER TO BE DOUGLAS FIR-LARCH OR EQUAL F=1500 MIN. BENDING STRESS, Ft=1200 PSI, E=1,900.000
- ALL MICRO-LAM BEAMS BASED ON 2.0E SP OR APPROVED EQUAL.
- ALL WOOD GIRDERS SHALL BE SECURELY SPIKED AND SUPPORTED ON SOLID BEARING. MINIMUM 4" BEARING
- PROVIDE DOUBLE FRAMING UNDER ALL PARTITIONS RUNNING PARALLEL TO JOIST.
- DESIGN LOADS:

FLOOR:	200 P.S.F. LIVE LOAD	ROOF: 30 P.S.F. LIVE LOAD
	50 P.S.F. DEAD LOAD	15 P.S.F. DEAD LOAD

- ALL STRUCTURAL WOODWORK SHALL COMPLY WITH NATIONAL LUMBER MANUFACTURER ASSOCIATION AND WESTERN WOOD PRODUCTS ASSOCIATION STANDARDS & PRACTICES.
- WHERE JOISTS AND BEAMS FRAME FLUSH, PROVIDE TECE OR EQUAL STEEL HANGERS AND CONNECTORS FOR SUPPORT.

MASONRY NOTES:

- ALL CONCRETE MASONRY WORK SHALL CONFORM TO THE ACI STANDARD BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES (ACI 531) AND THE SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY WALLS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA). REFER TO THE ACI SPECIFICATIONS FOR CONCRETE MASONRY CONETRUCTION ACI 531.1FOR SPECIFIC MATERIAL AND WORKMANSHIP REQUIREMENTS. ALL MASONRY WALLS, UNLESS OTHERWISE NOTED ON THE DRAWINGS, SHALL BE CONSTRUCTED OF HOLLOW LOAD BEARING BLOCK CONFORMING TO ASTM C-90 WITH THE ADDITIONAL REQUIREMENT THAT THE MINIMUM COMPRESSIVE STRENGTH OF THE MASONRY WALL F'm SHALL BE 2000 PSI

LINTEL NOTE:

- LINTELS IN WALLS FOR ARCHITECTURAL, MECHANICAL AND MISCELLANEOUS OPENINGS TO BE SIZED AS FOLLOWS, UNLESS SHOWN OTHERWISE ON STRUCTURAL DRAWINGS. PROVIDE 6" MINIMUM BEARING AT EACH END.

EACH 4 INCH WALL THICKNESS.

UP TO 3'-11".....L4"X3"X5/16"
4'-0" TO 5'-11".....L5"X3"X5/16"
6'-0" TO 7'-11".....L6"X3"X5/16"

NOTE:

NOT ALL BUILDING PENETRATIONS ARE SHOWN. CONTRACTOR SHALL COORDINATE PENETRATIONS WITH THE GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

DETAIL "A'
NTS

manganaro ENGINEERS

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		GH	JSK	SRN	10/2015

NOTES:

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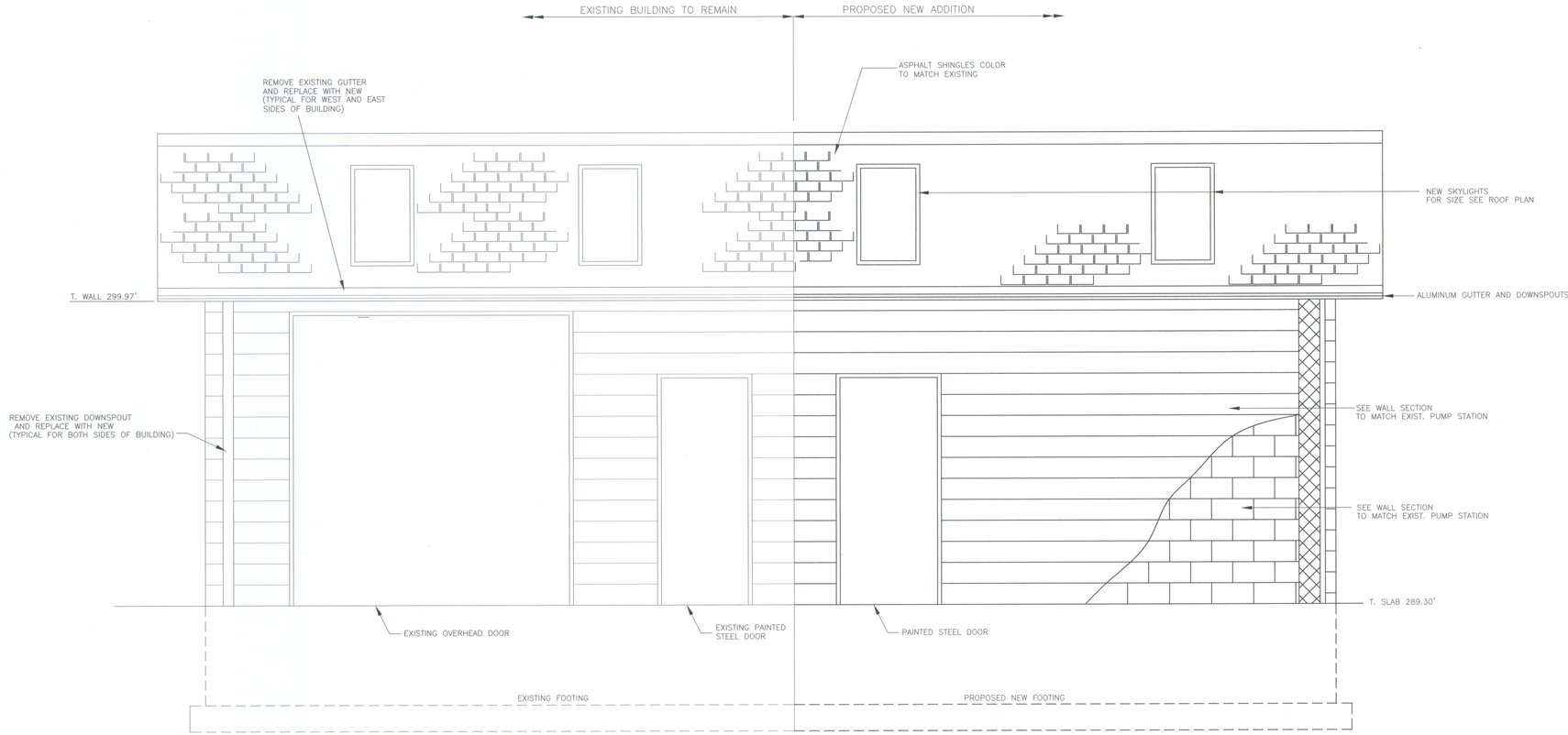
STATE OF NEW YORK * SHAILESH RAMESH NAIK * LICENSED PROFESSIONAL ENGINEER
SIGNATURE
DATE 10/29, 2015

GHD
GHD Consulting Services, Inc.

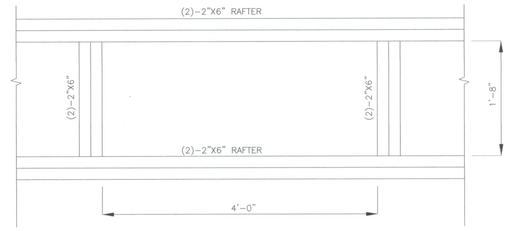
Drawn: GH	Designer: GH
Drafting: ST Check	Design: JSK Check
Approved Project Director: SRN Date: 10/2015	Contract No. 1
Scale: AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction

Client: TOWN OF NORTH CASTLE, NEW YORK
Project: NORTH BROADWAY PUMP STATION ULTRAVIOLET DISINFECTION MODIFICATION TO EXISTING PUMP STATION BUILDING
Title:
Original Size: Arch D
Drawing No: A001
Rev: 0



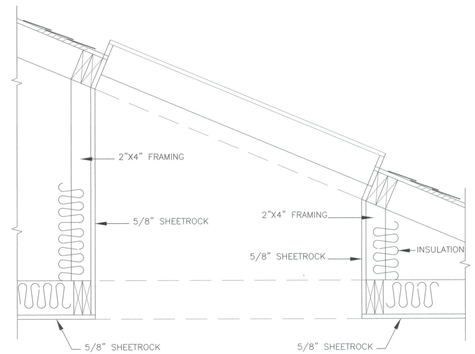
EXIST./PROPOSED WEST ELEVATION

SCALE: 1/2"=1'-0"



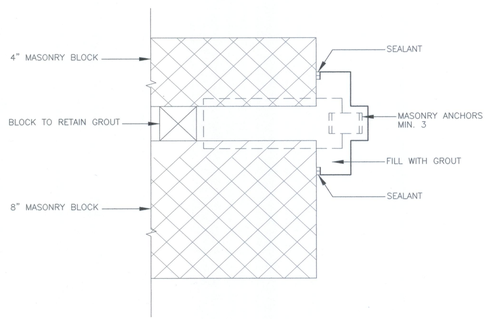
PLAN
SKYLIGHT DETAIL

NTS



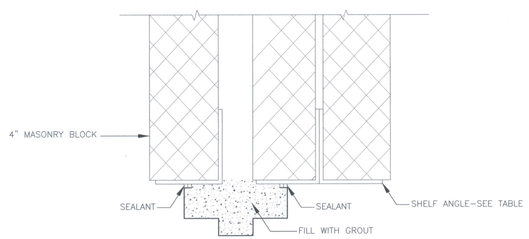
TYPICAL SECTION DETAIL

NTS



TYPICAL JAMB DETAIL

NTS



TYPICAL HEAD DETAIL

NTS

NOTE:

TO TIE NEW ROOF INTO EXISTING ROOF, REMOVE THE EXISTING FASCIA BOARD AND OTHER OBSTRUCTIONS BACK TO THE FIRST TRUSS OF EXISTING ROOF. CUT BACK EXISTING ROOF BOARD TO THE FIRST TRUSS OF EXISTING ROOF AND ABUTT THE NEW BOARD.

manganaro ENGINEERS

No	Revision	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION	GH	JSK	SRN	10/2015

Note: * indicates signatures on original issue of drawing or last revision of drawing

NOTES:

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STATE OF NEW YORK * SHAILESH RAMESH NAIK * 072797 LICENSED PROFESSIONAL ENGINEER 2015

GHD Consulting Services, Inc.

Drawn: GH	Designer: GH
Drafting: ST Check	Design: JSK Check
Approved Project Director: SRN	
Date: 10/2015	Contract No. 1
Scale: AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction

Client: TOWN OF NORTH CASTLE, NEW YORK

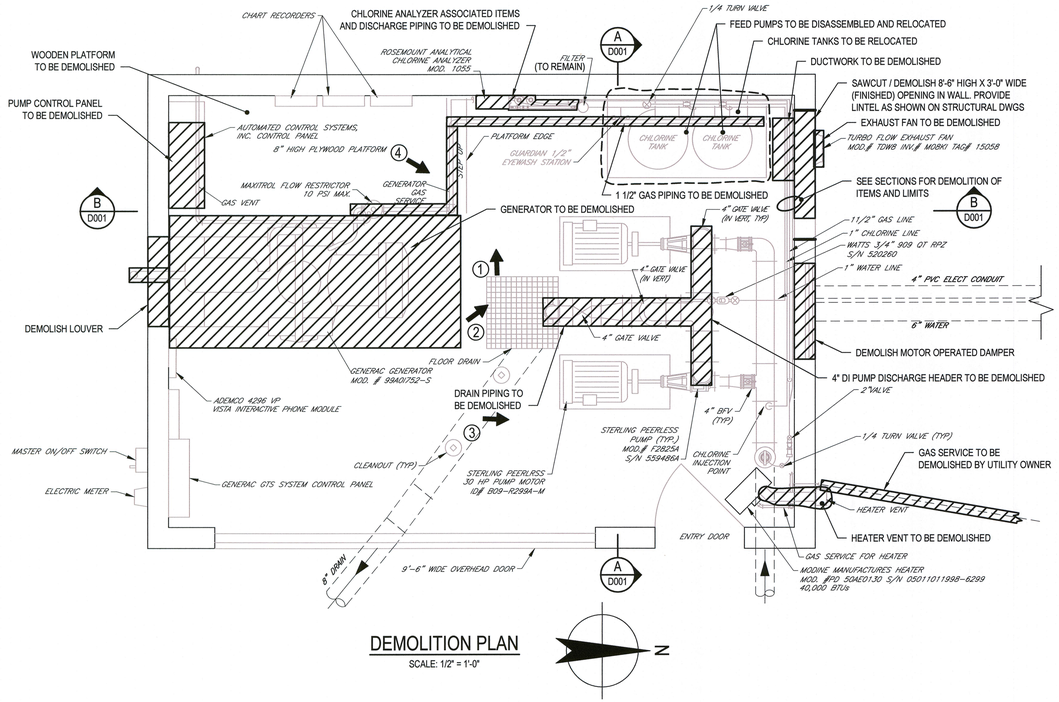
Project: NORTH BROADWAY PUMP STATION ULTRAVIOLET DISINFECTION

Title: BUILDING ELEVATION AND DETAILS

Original Size: Arch D

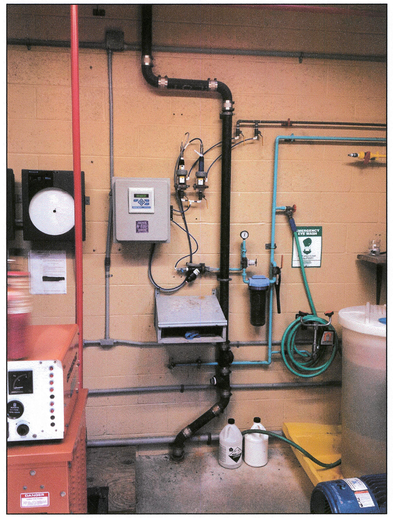
Drawing No: A002

Rev: 0



DEMOLITION PLAN

SCALE: 1/2" = 1'-0"



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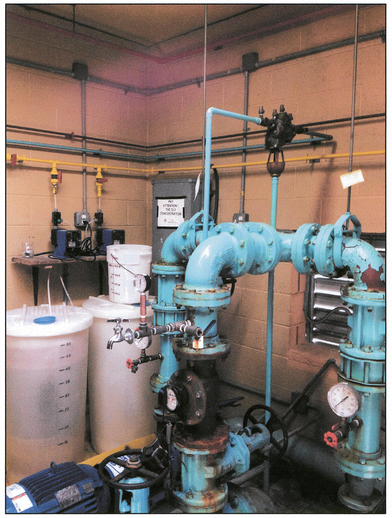

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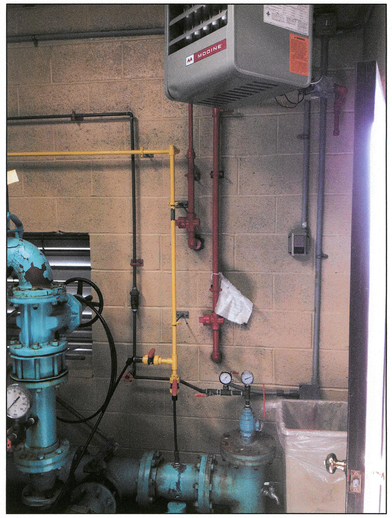

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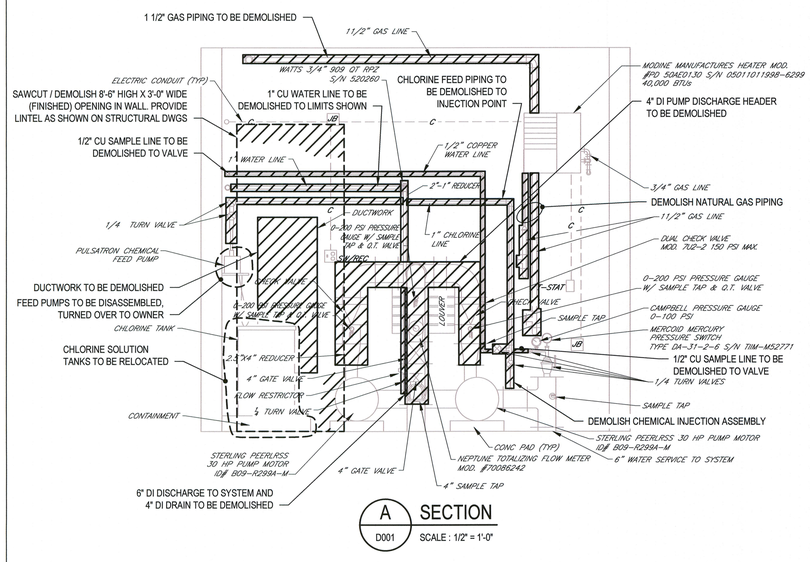
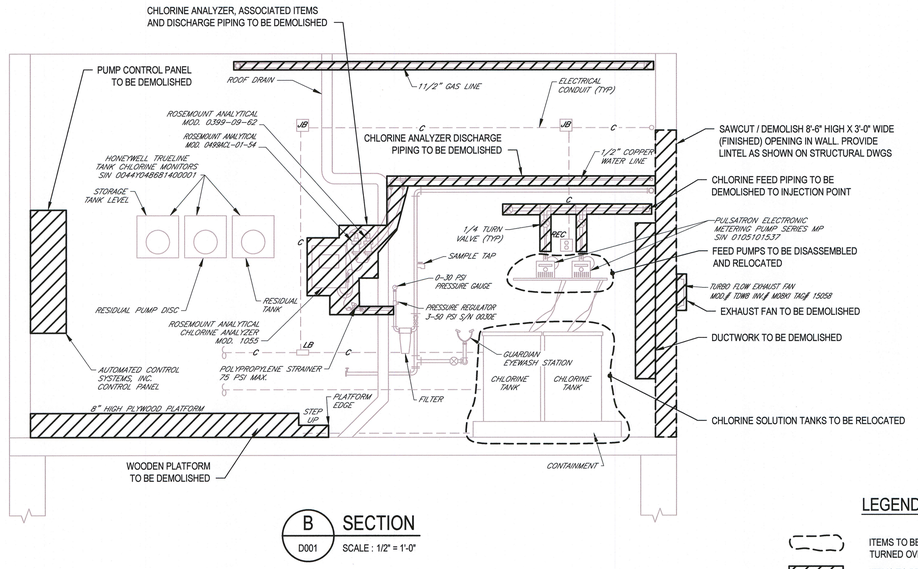


A SECTION

A D001 SCALE : 1/2" = 1'-0"



B SECTION

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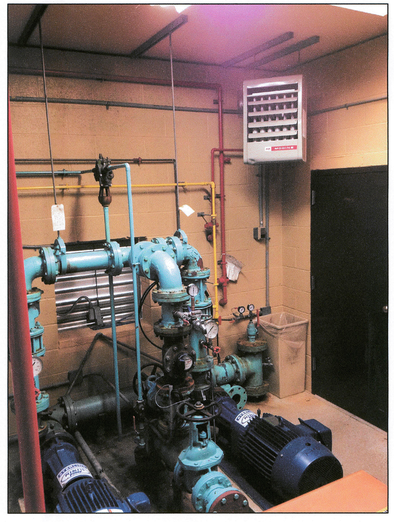

PHOTO 4

LEGEND

- ITEMS TO BE RELOCATED / DISASSEMBLED TURNED OVER TO OWNER
- ITEMS TO BE DEMOLISHED
- ③ PHOTO LOCATION / DIRECTION

0 1'-0" 2'-0" 3'-0" 4'-0"

SCALE 1/2"=1'-0" AT ORIGINAL SIZE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

NOTES:

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STATE OF NEW YORK KEVIN CASTRO 070853 LICENSED PROFESSIONAL ENGINEER

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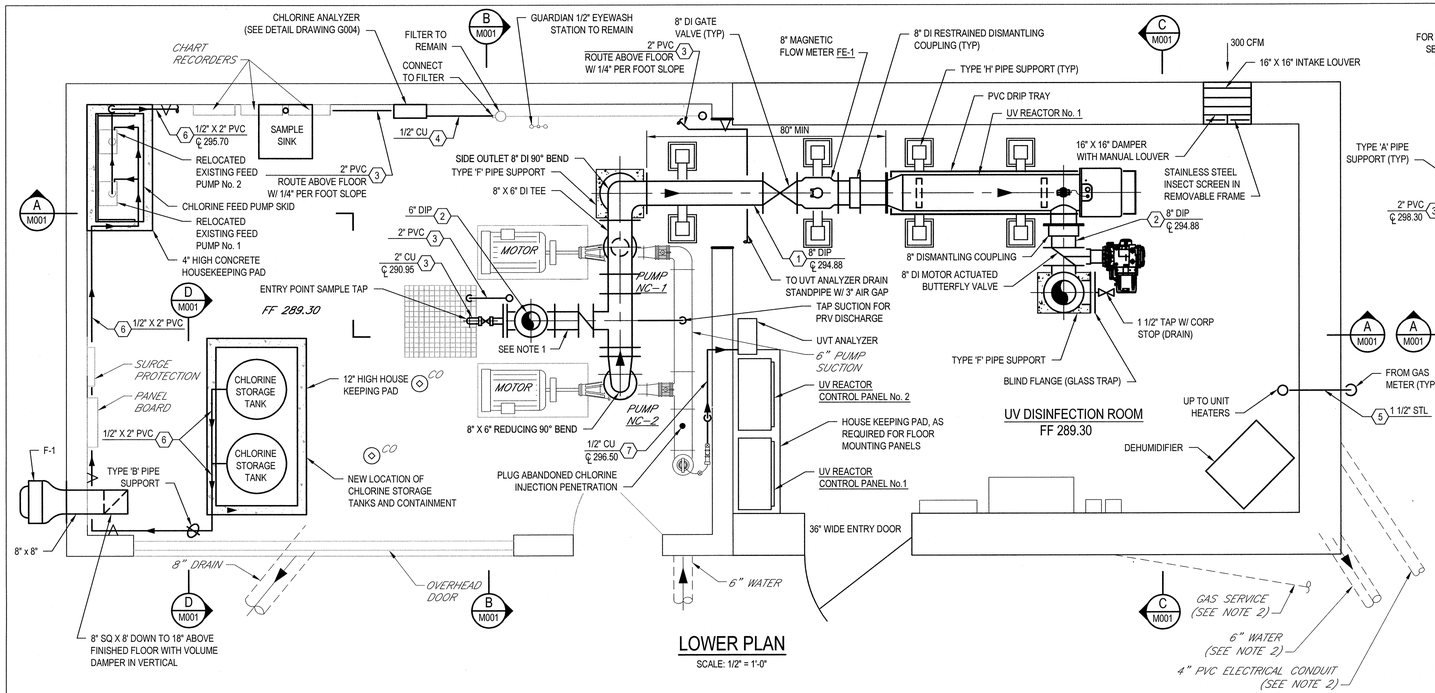
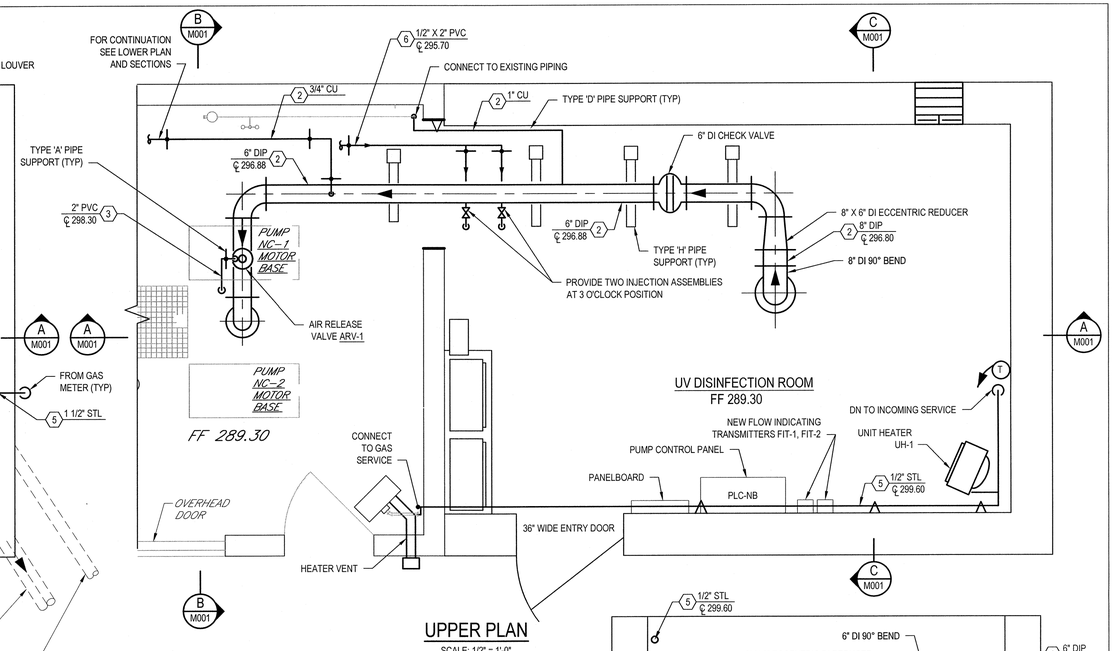
Drawn MRY	Designer MRY	Client	TOWN OF NORTH CASTLE, NEW YORK
Drafting Check M. Young	Design Check	Project	NORTH BROADWAY ULTRAVIOLET DISINFECTION
Approved (Project Director)		Title	DEMOLITION AND EXISTING CONDITIONS PLANS, SECTIONS AND PHOTOS
Date 10/30/15	Contract No. 1		
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	Original Size Arch D	Drawing No: 86-16786-D001 Rev: 0

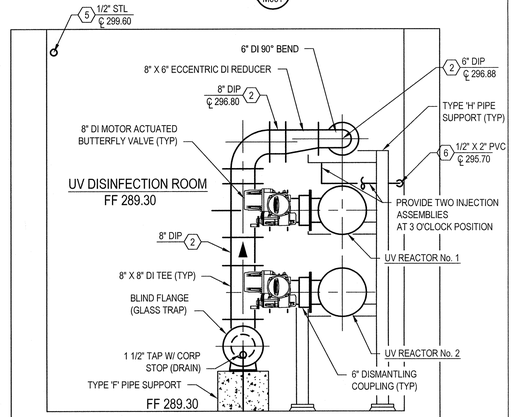
Plot Date: 29 October 2015 - 12:33 PM Plotted by: Nicholas Hyde Cad File No: G:\86\16786\CADD\Drawings\Demo\86-16786-D001.dwg



LOWER PLAN
SCALE: 1/2" = 1'-0"



UPPER PLAN
SCALE: 1/2" = 1'-0"



C SECTION
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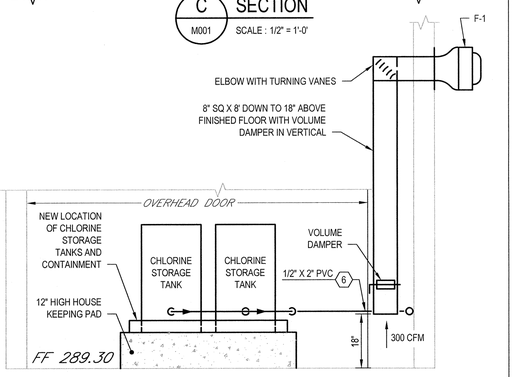

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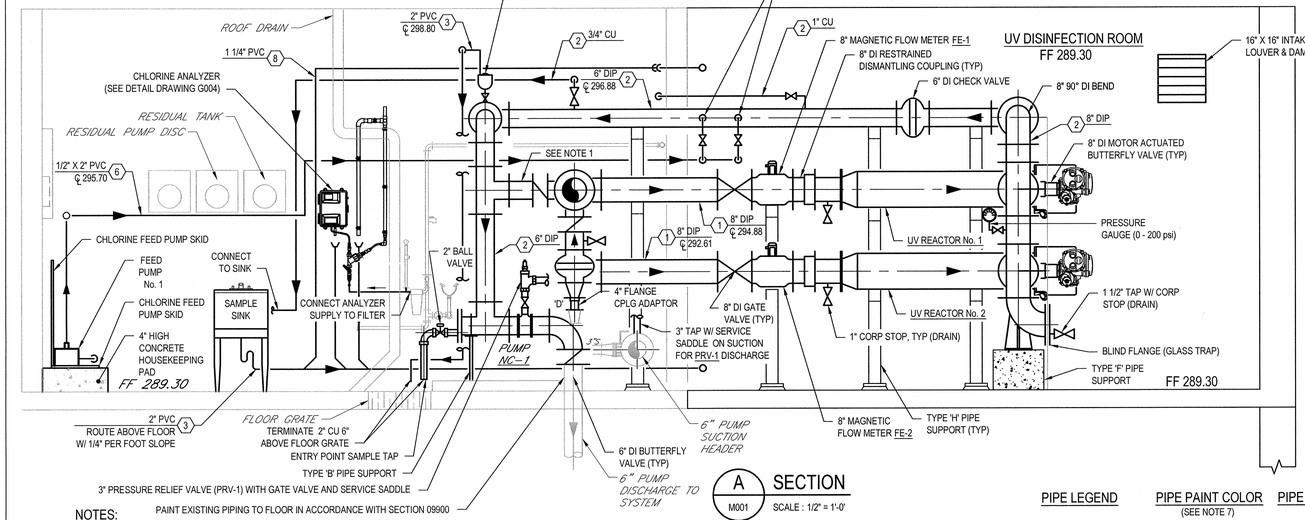

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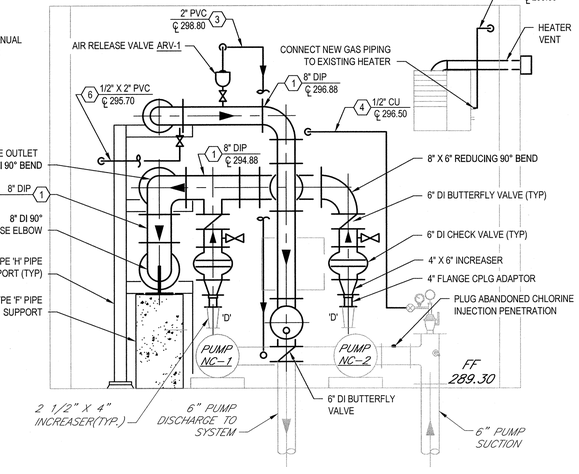

B SECTION
M001 SCALE : 1/2" = 1'-0"

NOTES:

1. UPON FINAL ACCEPTANCE OF THE ENTIRE UV SYSTEM, REMOVE 6 INCH SPOOL PIECE AND 6 INCH BUTTERFLY VALVE. PROVIDE BLIND FLANGES ON THE 6 INCH X 6 INCH TEE AND 8 INCH X 6 INCH TEE.
2. EXISTING GAS SERVICE, 6" WATER AND 4" PVC ELECTRICAL CONDUIT TO BE RELOCATED. SEE G003 FOR NEW LOCATIONS.
3. PIPING LOCATED UPSTREAM OF THE UV REACTORS SHALL HAVE NO EXPANSIONS OR CONTRACTIONS (REDUCERS) WITHIN 80 INCHES (10 PIPE DIAMETERS) OF THE UV REACTOR INLET FLANGE.
4. PIPING CONFIGURATION LOCATED UPSTREAM AND DOWNSTREAM OF THE REACTOR IS IN ACCORDANCE WITH RECOMMENDED STANDARDS FOR WATER WORKS, POLICY STATEMENT OF ULTRAVIOLET LIGHT DISINFECTION FOR TREATMENT OF PUBLIC WATER SUPPLIES.
5. MAINTAIN PROPER CLEARANCE PER UV REACTOR'S MANUFACTURER'S REQUIREMENTS FOR MAINTENANCE, REMOVAL AND OPERATION OF UV REACTORS. AS SUCH, CONTRACTOR SHALL OBTAIN WRITTEN CONFIRMATION THAT THE VERTICAL CLEARANCE AS SHOWN IS ACCEPTABLE PRIOR TO ORDERING AND ASSEMBLY AND SHALL BE SUBMITTED TO ENGINEER.
6. UV REACTOR SHALL BE UV SWIFT SC BY TROJAN TECHNOLOGIES. PROVIDE VALIDATED CAPACITY OF 480 GPM AT 87 PERCENT UVT. SEE SPECIFICATION SECTION 11390 FOR ADDITIONAL DETAIL.
7. REFER TO SPECIFICATION SECTION 09900 FOR PAINTING REQUIREMENTS. PIPE LABELS SHALL BE PROVIDED FOR ALL PIPING PIPING IN ACCORDANCE WITH SPECIFICATION SECTION 09900.
8. ALL SAMPLE TAPS SHALL BE PROVIDED WITH TAPPING SADDLE AND SHALL BE SMOOTH-NOSED AT INTERIOR PIPE WALL
9. PROVIDE PVC DRIP TRAY BETWEEN UV REACTOR No. 1 AND UV REACTOR No. 2.
10. DUCTWORK SHALL BE GALVANIZED STEEL, MANUFACTURED AND INSTALLED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

PAINT EXISTING PIPING TO FLOOR IN ACCORDANCE WITH SECTION 09900

	PIPE LEGEND	PIPE PAINT COLOR (SEE NOTE 7)	PIPE LABEL COLOR
1	RAW WATER	OLIVE GREEN	GREEN W/ WHITE LETTERS
2	UV TREATED WATER	DARK BLUE	BLUE W/ WHITE LETTERS
3	DRAIN	NONE	NONE
4	ANALYZER SUPPLY	NONE	BLUE W/ WHITE LETTERS
5	NATURAL GAS	RED	**CONFORM TO FUEL GAS CODE
6	SODIUM HYPOCHLORITE	NONE	YELLOW W/ BLACK LETTERS
7	UVT ANALYZER SUPPLY	NONE	GREEN W/ WHITE LETTERS
8	VENT	NONE	NONE

No	Revision	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION	MRY	NJH	KC	10/15

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STATE OF NEW YORK · KEVIN CASTRO · 070882 · LICENSED PROFESSIONAL ENGINEER

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Drawn	MRY
Designer	MRY
Drafting Check	M. Young
Design Check	
Approved (Project Director)	
Date	10/30/15
Contract No.	1
Scale	AS SHOWN

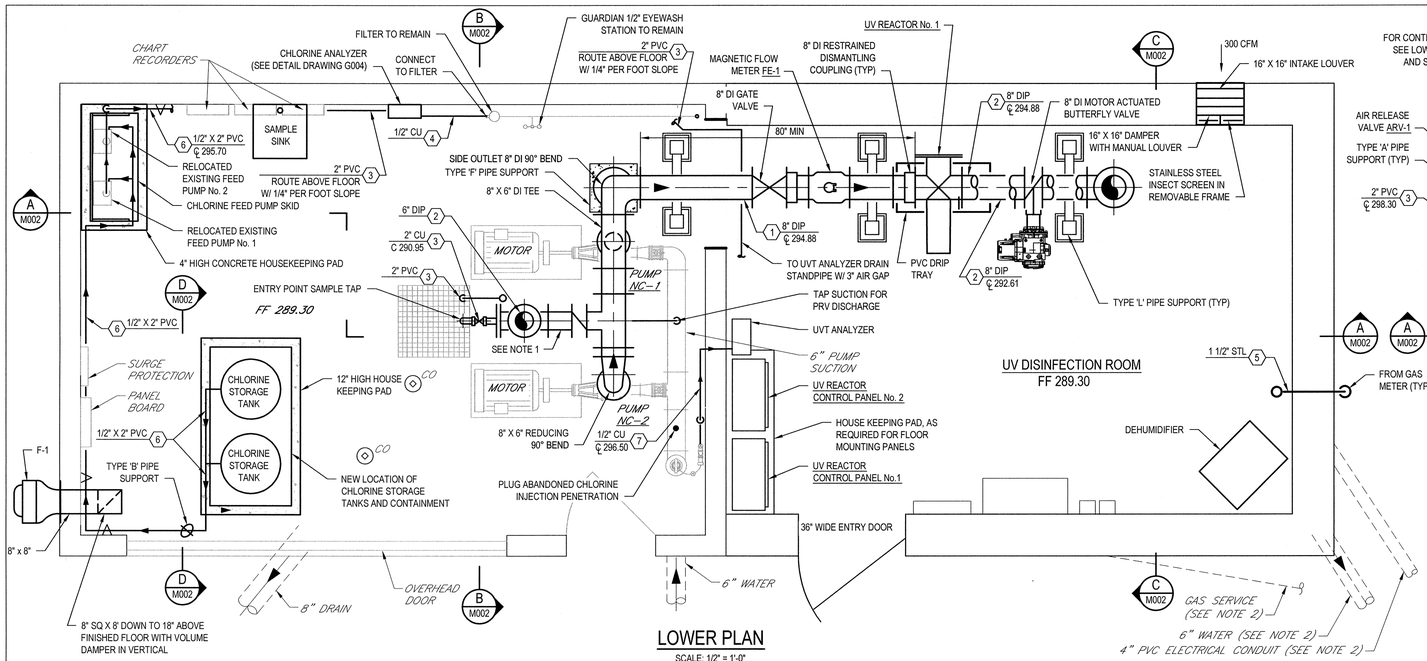
This Drawing shall not be used for Construction unless Signed and Sealed For Construction

Client: TOWN OF NORTH CASTLE, NEW YORK
Project: NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title: MECHANICAL PLANS AND SECTIONS ALTERNATE LAYOUT 1

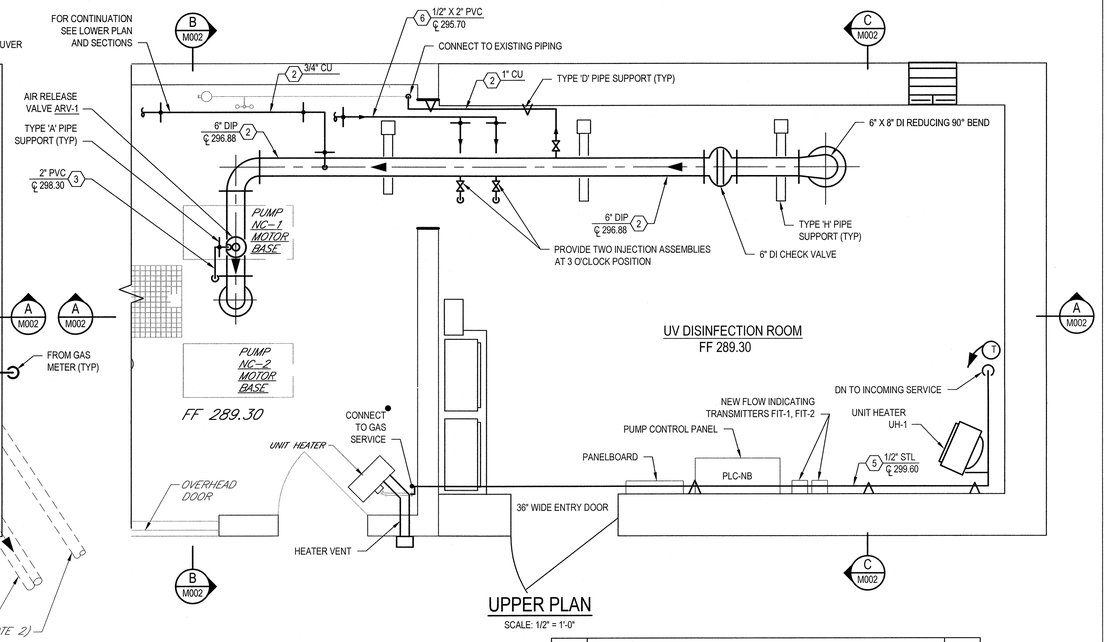
Original Size: Arch D
Drawing No: 86-16786-M001
Rev: 0

SCALE 1/2"=1'-0" AT ORIGINAL SIZE

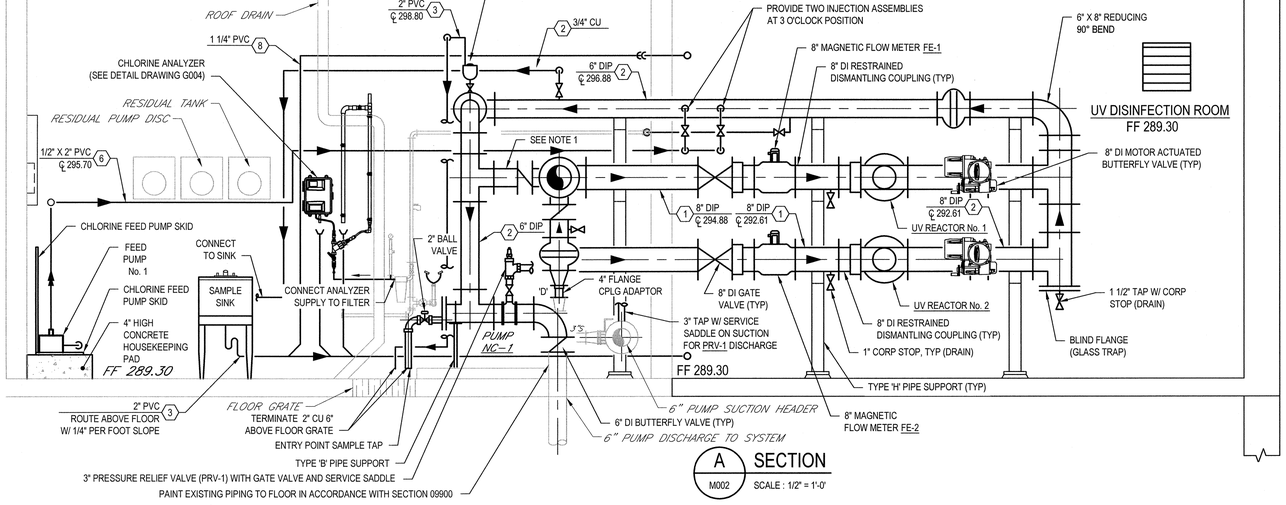
Plot Date: 28 October 2015 - 3:34 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Mech\86-16786-M001.dwg



LOWER PLAN
SCALE: 1/2" = 1'-0"



UPPER PLAN
SCALE: 1/2" = 1'-0"



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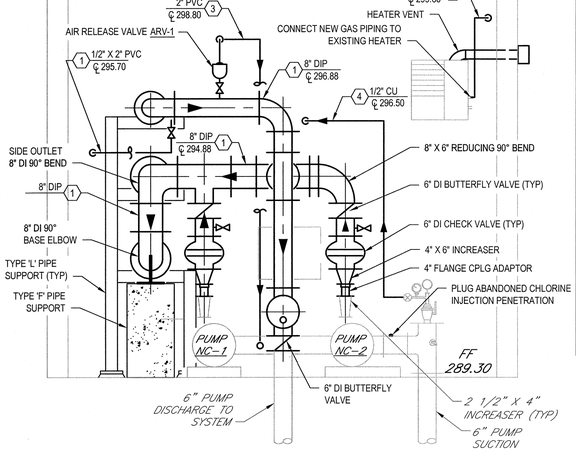

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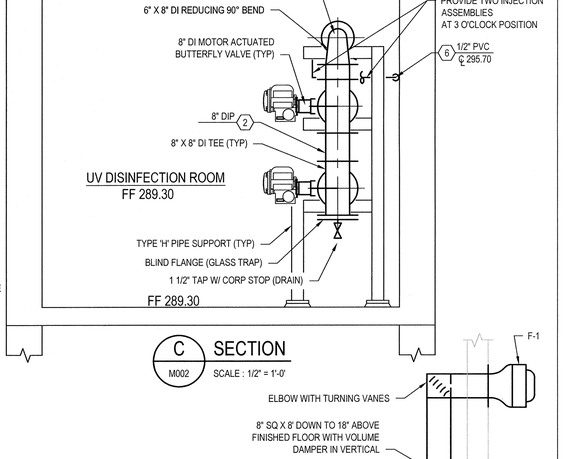
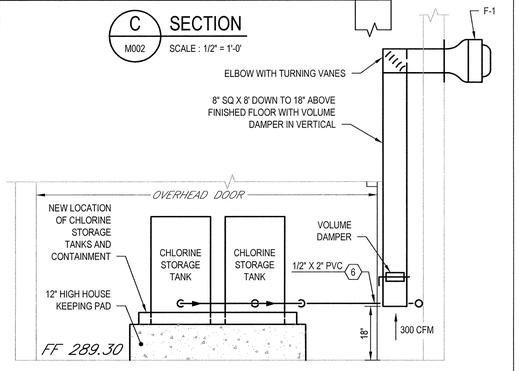


C SECTION
M002 SCALE : 1/2" = 1'-0"



D SECTION
M001 SCALE : 1/2" = 1'-0"

SCALE 1/2"=1'-0" AT ORIGINAL SIZE

NOTES:

1. UPON FINAL ACCEPTANCE OF THE ENTIRE UV SYSTEM, REMOVE 6 INCH SPOOL PIECE AND 6 INCH BUTTERFLY VALVE. PROVIDE BLIND FLANGES ON THE 6 INCH X 6 INCH TEE AND 8 INCH X 6 INCH TEE.
2. EXISTING GAS SERVICE, 6" WATER AND 4" PVC ELECTRICAL CONDUIT TO BE RELOCATED. SEE G003 FOR NEW LOCATIONS.
3. PIPING LOCATED UPSTREAM OF THE UV REACTORS SHALL HAVE NO EXPANSIONS OR CONTRACTIONS (REDUCERS) WITHIN 80 INCHES (10 PIPE DIAMETERS) OF THE UV REACTOR INLET FLANGE.
4. PIPING CONFIGURATION LOCATED UPSTREAM AND DOWNSTREAM OF THE REACTOR IS IN ACCORDANCE WITH RECOMMENDED STANDARDS FOR WATER WORKS, POLICY STATEMENT OF ULTRAVIOLET LIGHT DISINFECTION FOR TREATMENT OF PUBLIC WATER SUPPLIES.
5. MAINTAIN PROPER CLEARANCE PER UV REACTOR'S MANUFACTURER'S REQUIREMENTS FOR MAINTENANCE, REMOVAL AND OPERATION OF UV REACTORS. AS SUCH, CONTRACTOR SHALL OBTAIN WRITTEN CONFIRMATION THAT THE VERTICAL CLEARANCE AS SHOWN IS ACCEPTABLE PRIOR TO ORDERING AND ASSEMBLY AND SHALL BE SUBMITTED TO ENGINEER.
6. UV REACTOR SHALL BE MODEL SX225 BY ENGINEERED TREATMENT SYSTEMS (ETS). PROVIDE VALIDATED CAPACITY OF 480 GPM AT 87 PERCENT UVT. SEE SPECIFICATION SECTION 11390 FOR ADDITIONAL DETAIL.
7. REFER TO SPECIFICATION SECTION 09900 FOR PAINTING REQUIREMENTS. PIPE LABELS SHALL BE PROVIDED FOR ALL PIPING PIPING IN ACCORDANCE WITH SPECIFICATION SECTION 09900.
8. ALL SAMPLE TAPS SHALL BE PROVIDED WITH TAPPING SADDLE AND SHALL BE SMOOTH-NOSED AT INTERIOR PIPE WALL
9. PROVIDE PVC DRIP TRAY BETWEEN UV REACTOR No. 1 AND UV REACTOR No. 2.
10. DUCTWORK SHALL BE GALVANIZED STEEL, MANUFACTURED AND INSTALLED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

PIPE LEGEND		PIPE PAINT COLOR (SEE NOTE 7)	PIPE LABEL COLOR
1	RAW WATER	OLIVE GREEN	GREEN W/ WHITE LETTERS
2	UV TREATED WATER	DARK BLUE	BLUE W/ WHITE LETTERS
3	DRAIN	NONE	NONE
4	ANALYZER SUPPLY	NONE	BLUE W/ WHITE LETTERS
5	NATURAL GAS	RED	**CONFORM TO FUEL GAS CODE
6	SODIUM HYPOCHLORITE	NONE	YELLOW W/ BLACK LETTERS
7	UVT ANALYZER SUPPLY	NONE	GREEN W/ WHITE LETTERS
8	VENT	NONE	NONE

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		MRY	NJH	KC	10/15

NOTES:

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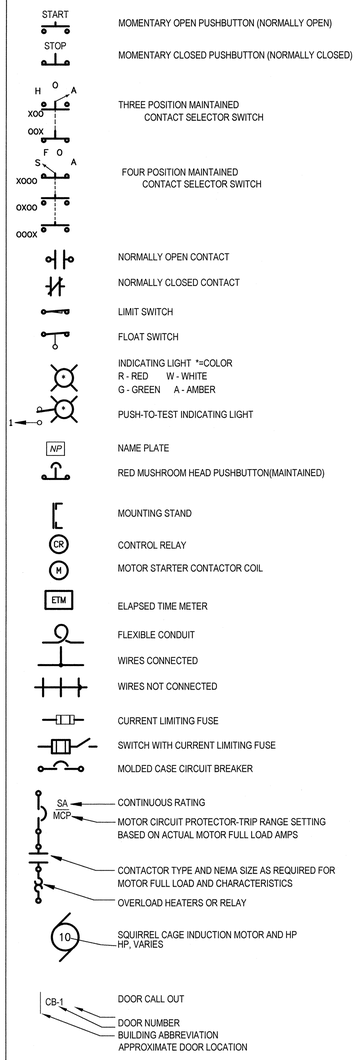
Drawn MRY	Designer MRY	Client	TOWN OF NORTH CASTLE, NEW YORK
Drafting Check M.Young	Design Check	Project	NORTH BROADWAY ULTRAVIOLET DISINFECTION
Approved (Project Director)		Title	MECHANICAL PLANS AND SECTIONS ALTERNATE LAYOUT 2
Date 10/30/15	Contract No. 1		
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	Original Size Arch D	Drawing No: 86-16786-M002 Rev: 0

Plot Date: 28 October 2015 - 3:35 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Mech\86-16786-M002.dwg

ABBREVIATIONS

A or AMP	AMPERE, AMPS
AC	ALTERNATING CURRENT
AF	AMPERE FRAME SIZE
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CURRENT
AIT	ANALYZING INDICATING TRANSMITTER
AT	AMPERE TRIP RATING
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C or COND	CONDUIT
CA	CABLE
CB	CIRCUIT BREAKER
CEMS	CONTINUOUS EMISSIONS MONITORING SYSTEM
CIRC	CIRCUIT
CMU	CONCRETE MASONRY UNIT
COMP	COMPARTMENT
CP	CONTROL PANEL
CS	CONTROL STATION
CPT	CONTROL POWER TRANSFORMER
CON	CONCRETE
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EA	EACH
ESTOP	EMERGENCY STOP
ETM	ELAPSED TIME METER
EW	EACH WAY
F & I	FURNISHED & INSTALLED
FIT	FLOW INDICATING TRANSMITTER
FE	FLOW ELEMENT
FLEX	FLEXIBLE
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
FVTS	FULL VOLTAGE TWO SPEED
GEN	GENERATOR
GENSET	EMERGENCY POWER GENERATOR
GRD	GROUND
H	HORIZONTAL
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSE POWER
IL	INDICATING LIGHT
I/0	INPUT/OUTPUT
ISR	INTRINSICALLY SAFE RELAY
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LE	LEVEL ELEMENT
LIT	LEVEL INDICATING TRANSMITTER
mA	MILLIAMPS
MAG	MAGNETIC
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MIN	MINIMUM
Mx	MOTOR CONTACTOR AUXILIARY CONTACT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NO	NORMALLY OPEN
NP	NAMEPLATE
OC	ON CENTER
OL	OVERLOAD RELAY
Ø	PHASE OR DIAMETER
P	POLE
PB	PUSHBUTTON
PBX	PULL BOX
PF	PULLING FITTING
PLC	PROGRAMMABLE LOGIC CONTROLLER
PVC	POLYVINYL CHLORIDE
RAS	RETURN ACTIVATED SLUDGE
RGS	RIGID GALVANIZED STEEL (CONDUIT)
ROC	RUN OF CRUSH
SA	SURGE ARRESTOR
SEC	SECOND
SCADA	SYSTEM CONTROL AND DATA ACQUISITION
SHLD	SHIELDED
S/L	STOP/LOCKOUT SWITCH
SEL or SEL SW	SELECTOR SWITCH
SS	STAINLESS STEEL
S/S	STOP/START PUSH BUTTON
STR	STRANDED
SV	SOLENOID VALVE
SW	SWITCH
TERM	TERMINAL
TRANS	TRANSFORMER
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS OR VERTICAL
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W/	WITH
WAS	WASTE ACTIVATED SLUDGE
WP	WEATHER PROOF, WATER PROOF
XP	EXPLOSION PROOF
YI	FAILURE INDICATION
YA	RUN INDICATION

SYMBOLS



MOMENTARY OPEN PUSHBUTTON (NORMALLY OPEN)

MOMENTARY CLOSED PUSHBUTTON (NORMALLY CLOSED)

THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH

FOUR POSITION MAINTAINED CONTACT SELECTOR SWITCH

NORMALLY OPEN CONTACT

NORMALLY CLOSED CONTACT

LIMIT SWITCH

FLOAT SWITCH

INDICATING LIGHT *=COLOR
R - RED W - WHITE
G - GREEN A - AMBER

PUSH-TO-TEST INDICATING LIGHT

NAME PLATE

RED MUSHROOM HEAD PUSHBUTTON(MAINTAINED)

MOUNTING STAND

CONTROL RELAY

MOTOR STARTER CONTACTOR COIL

ELAPSED TIME METER

FLEXIBLE CONDUIT

WIRES CONNECTED

WIRES NOT CONNECTED

CURRENT LIMITING FUSE

SWITCH WITH CURRENT LIMITING FUSE

MOLDED CASE CIRCUIT BREAKER

CONTINUOUS RATING

MOTOR CIRCUIT PROTECTOR-TRIP RANGE SETTING BASED ON ACTUAL MOTOR FULL LOAD AMPS

CONTACTOR TYPE AND NEMA SIZE AS REQUIRED FOR MOTOR FULL LOAD AND CHARACTERISTICS

OVERLOAD HEATERS OR RELAY

SQUIRREL CAGE INDUCTION MOTOR AND HP
HP, VARIES

DOOR CALL OUT

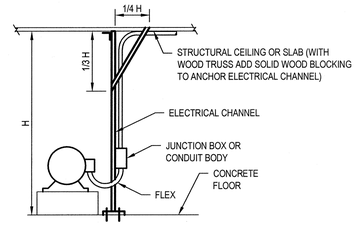
DOOR NUMBER
BUILDING ABBREVIATION
APPROXIMATE DOOR LOCATION

THE ABBREVIATIONS AND SYMBOLS LISTED HEREIN ARE STANDARDS OF THIS OFFICE AND APPLY TO A VARIETY OF PROJECTS. ONLY A PORTION OF THEM WILL NECESSARILY APPLY TO ANY GIVEN PROJECT.

SEE THE LISTINGS IN OTHER SECTIONS OF THIS DOCUMENT FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.

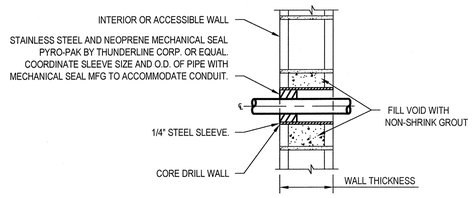
GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, THESE CONTRACT DOCUMENTS AND ALL LOCAL AUTHORITIES HAVING JURISDICTION.
2. FURNISH AND INSTALL ALL MATERIAL, LABOR, EQUIPMENT AND SUPPLIES, TOGETHER WITH ALL RELATED AND REQUIRED APPURTENANCES TO PROVIDE A COMPLETE AND OPERATING SYSTEM. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE AMOUNT OF MATERIALS REQUIRED.
3. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND APPROVALS REQUIRED.
4. PROVIDE FULLY LABELED AS-BUILT DRAWINGS IN ACCORDANCE WITH SECTIONS 16055 AND 01700. DRAWINGS SHALL SHOW CONDUIT RUNS AND DESTINATION. WIRE TERMINAL NO'S. AND GENERAL ROUTING. DIMENSION BURIED CONDUIT OFF BUILDINGS.
5. AFTER REMOVAL OF EXISTING ELECTRICAL FACILITIES SHOWN OR SPECIFIED TO BE DEMOLISHED, THE CONTRACTOR SHALL REPAIR OR SEAL ALL HOLES IN THE STRUCTURE AND PROVIDE ALL BLANKS AND COVERS TO CLOSE UP ALL HOLES IN REMAINING ELECTRICAL WORK. RE-LABEL ALL DIRECTORIES.
6. PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT IN ACCORDANCE WITH SECTION 01300 FOR ENGINEER'S REVIEW.
7. NOT ALL CONDUIT IS SHOWN ON THE PLANS. REFER TO SCHEMATIC DIAGRAMS FOR CONDUIT AND CONDUCTOR SIZES AND QUANTITIES. EXACT LOCATION OF CONDUIT INSTALLATION SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD, UNLESS SPECIFICALLY DIMENSIONED ON THE PLANS. CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH SPECIFICATION 16055. CONDUIT SHALL BE INSTALLED SO AS TO NOT CAUSE TRIPPING HAZARDS. RUN CONDUIT AROUND WORK AREAS, OR INSTALL OVERHEAD - MIN. 7'-0" CLEARANCE. ALL CONDUIT TO BE RIGIDLY INSTALLED.
8. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
9. EXACT EQUIPMENT LOCATIONS SHALL BE DETERMINED IN THE FIELD UNLESS SPECIFICALLY DIMENSIONED ON THE PLANS.
10. ALL INTERIOR ELECTRICAL CONDUIT SHALL BE PARALLEL TO BUILDING WALLS AND BEAMS UNLESS OTHERWISE SHOWN. SUPPORT ALL CONDUIT PER NEC.
11. TWISTED SHIELDED PAIR (TSP) AND TWISTED SHIELDED TRIAD (TST) CONDUCTORS CARRYING 4-20mA INSTRUMENTATION SIGNALS SHALL BE INSTALLED IN RIGID STEEL CONDUIT OR PVC COATED RIGID STEEL CONDUIT ONLY. POWER DISTRIBUTION AND CONTROL CONDUCTORS SHALL NOT BE INSTALLED IN CONDUIT CARRYING INSTRUMENTATION CONDUCTORS. EXCEPTION - 24 VOLT CONTROL CAN BE INSTALLED WITH 4-20mA CABLE.
12. MOUNT ALL CONDUIT, BOXES AND ENCLOSURES OFF WALLS BY 1/4".
13. ALL PENETRATIONS THROUGH EXISTING CONCRETE STRUCTURES SHALL BE CORE DRILLED AND SIZED TO ACCEPT MECHANICAL LINK SEALS. CONDUIT THROUGH MASONRY WALLS SHALL HAVE HOLES CORE DRILLED AND THE SPACE PATCHED WITH NON-SHRINK GROUT. HOLES THROUGH METAL SECTIONS OF BUILDINGS SHALL BE NEATLY CUT.
14. EXPANSION FITTINGS SHALL BE FURNISHED AND INSTALLED WHERE CONDUIT PASSES ACROSS STRUCTURAL EXPANSION JOINTS, OR STRAIGHT CONDUIT RUNS ARE OVER 50 FEET IN LENGTH.
15. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORTS, ANGLES, BRACKETS, ETC., REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL SYSTEM.
16. EACH CONDUIT OR GROUP OF CONDUITS SHALL BE LABELED AS TO DESTINATION.
17. NO TERMINATION SHALL BE MADE IN WIREWAYS OR PULLBOXES., PROVIDE TERMINAL STRIPS IN ALL JUNCTION BOXES 100 CUBIC INCHES OR LARGER. OVERSIZE BOXES AS REQUIRED.
18. EXISTING PIPING AND FACILITIES SHOWN LIGHT. NEW PIPING AND FACILITIES SHOWN DARK. ITEMS TO BE DEMOLISHED ARE SPECIFICALLY LABELED ON THESE DRAWINGS.
19. CONTRACTOR IS TO VERIFY AND COORDINATE ALL EXISTING STRUCTURE AND PIPING ELEVATIONS, LOCATIONS, SIZE AND TYPE OF MATERIAL WITH NEW PIPING PRIOR TO CONSTRUCTION. IF DISCREPANCIES ARISE BETWEEN THESE CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IN WRITING.
20. IN GENERAL ALL NEW WORK OR WORK TO BE MODIFIED IS SHOWN VIA A HEAVY LINE..
21. CONTRACTOR RESPONSIBLE TO REPAIR/PATCH ALL PENETRATIONS AND/OR OPENINGS AS A RESULT FROM THEIR WORK.



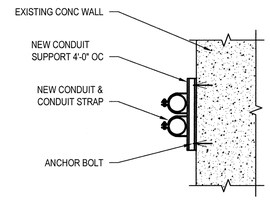
501 OVERHEAD ELECTRICAL FEED DETAIL

SCALE: NTS



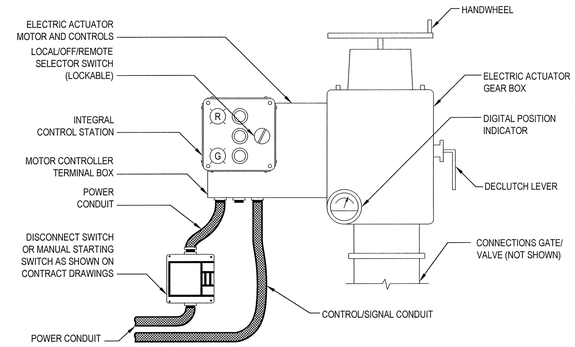
205 TYPICAL CONDUIT THRU BLOCK WALL

SCALE: NTS



502 VERTICAL WALL MOUNT CONDUIT SUPPORT DETAIL

SCALE: NTS



NOTES:

1. ELECTRIC ACTUATOR DETAIL IS TYPICAL FOR INSTALLATION ON BUTTERFLY, PINCH, PLUG, GATE VALVES, WIER, SLUICE AND SLIDE GATES, ETC. ACTUATOR ORIENTATION SHALL BE COORDINATED FOR EACH SPECIFIC VALVE INSTALLATION.
2. DETAIL IS SHOWN WITH AN INTEGRAL CONTROL STATION. PROVIDE REMOTE CONTROL STATIONS WHERE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS. REMOTE CONTROL STATIONS SHALL BE PROVIDED WITH CONDUIT AND CONTROL CONDUCTORS BACK TO THE MOTOR TERMINAL BOX. CONTROL CONDUCTOR QUANTITIES AND CONNECTIONS SHALL BE COORDINATED WITH THE GATE/ VALVE MANUFACTURER.
3. ELECTRIC ACTUATORS SHALL BE PROVIDED WITH DISCONNECT SWITCHES LOCATED ADJACENT TO EACH ACTUATOR REGARDLESS IF SHOWN ON THE PLANS. POWER AND CONTROL CONDUITS SHALL BE PROVIDED AS SHOWN ON THE DETAIL AND MAY NOT BE SCHEDULED OR SHOWN ON THE PLANS FOR CLARITY.
4. ALL CONNECTIONS SHALL BE MADE TO THE BOTTOM OF THE OPERATOR. PROVIDE ADDITIONAL PULLBOXES OR JUNCTION BOXES W/ DRAIN FITTINGS. BOX TO BE INSTALLED BELOW OPERATOR..

905 TYPICAL ELECTRIC ACTUATOR DETAIL

SCALE: NTS

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
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Drafting Check TWD		Design Check TWD	
Approved (Project Director)		Date 10/30/15	Contract No. 1
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction		

Client TOWN OF NORTH CASTLE, NEW YORK

Project NORTH BROADWAY ULTRAVIOLET DISINFECTION

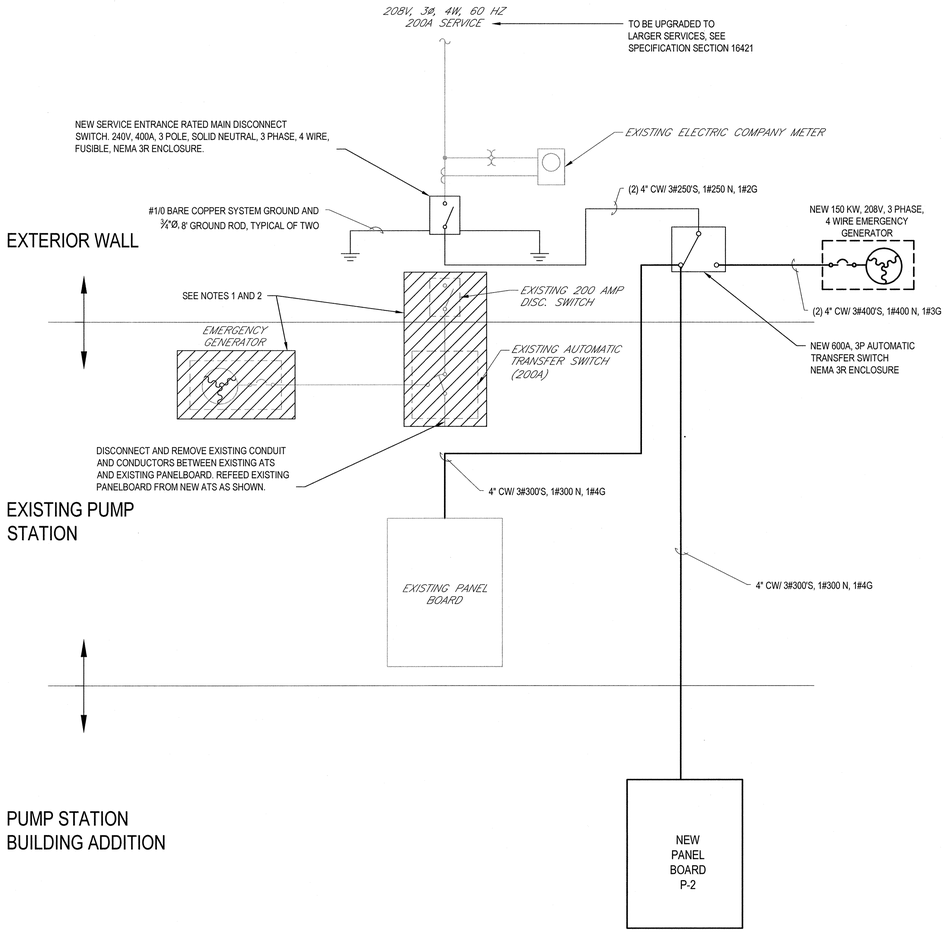
Title ABBREVIATIONS, SYMBOLS, NOTES AND DETAILS

Original Size Arch D

Drawing No: 86-16786-E001

Rev: 0

Plot Date: 28 October 2015 - 3:41 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Elec\86-16786-E001.dwg



ONE LINE DIAGRAM

NOT TO SCALE

NEW PANELBOARD P-2 SCHEDULE

LOCATION: PUMP STATION BUILDING ADDITION
MAIN BUS RATINGS: 208/120 VOLTS, 3 PHASE, 4 WIRE, 225 A
MINIMUM SHORTCIRCUIT INTERRUPTION RATING: 22,000 AIC
MAIN BREAKER TRIP: 225 A, 3P
ESTIMATED CONNECTED LOAD:

FED FROM: NEW AUTOMATIC TRANSFER SWITCH
INCOMING FEED: 3#300's, 1#300 N, 1#4 G
ENCLOSURE: NEMA 1

DESCRIPTION	LOAD	CB TRIP/POLE	CIR.	A B C	CIR.	CB TRIP/POLE	LOAD	DESCRIPTION
MOTOR ACTUATED VALVE MCV-1	.58 HP	10A/1P	1		2	30A	6	UV REACTOR 1
MOTOR ACTUATED VALVE MCV-2	.58 HP	10A/1P	3		4			
FLOWMETER FE-1 / FIT-1		10A/1P	5		6	3P	KW	
FLOWMETER FE-2 / FIT-2		10A/1P	7		8	30A	6	UV REACTOR UV-2
UV TRANSMITTANCE ANALYZER UVT-1		10A/1P	9		10			
CHLORINE RESIDUAL ANALYZER ALT-1		20A/1P	11		12	3P	KW	
RECEPTACLE FOR CL2 FEED PUMP 1 CFP-1		20A/1P	13		14	10A/1P		GAS FIRED UNIT HEATER
RECEPTACLE FOR CL2 FEED PUMP 2 CFP-2		20A/1P	15		16			
LIGHTS		20A/1P	17		18	30A	5	GENERATOR HEATER ENGINE BLOCK
GENERATOR BATTERY CHARGER		20A/1P	19		20			
GENERATOR RECEPTACLE		20A/1P	21		22	3P	KW	
GENERATOR CONTROL PANEL		20A/1P	23		24			
RECEPTACLES		20A/1P	25		26			
			27		28			
			29		30			

NOTES:

1. EXISTING EMERGENCY GENERATOR, AUTOMATIC TRANSFER SWITCH AND MAIN DISCONNECT SWITCH TO BE DISCONNECTED, REMOVED, AND GIVEN TO THE OWNER FOR RE-USE IN ANOTHER APPLICATION.

2. PROVIDE NEW MAIN SERVICE RATED DISCONNECT SWITCH, AUTOMATIC TRANSFER SWITCH AND EMERGENCY GENERATOR AS SHOWN AND AS SPECIFIED.

3. FIELD VERIFY MAIN LUG SIZES ON EXISTING PANELBOARD REPLACE AS REQUIRED TO ACCOMMODATE NEW INCOMING CONDUCTORS AS SHOWN ON ONE-LINE.

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION		IDG	NJH	KC	10/15

NOTES:

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Drawn IDG		Designer IDG	
Drafting Check TWD		Design Check TWD	
Approved (Project Director)		Date 10/30/15	Contract No. 1
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction		

Client: TOWN OF NORTH CASTLE, NEW YORK
Project: NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title: ONE LINE DIAGRAM AND SCHEDULES

Original Size: Arch D
Drawing No: 86-16786-E002
Rev: 0

Plot Date: 28 October 2015 - 3:46 PM Plotted by: Jay DeLapp
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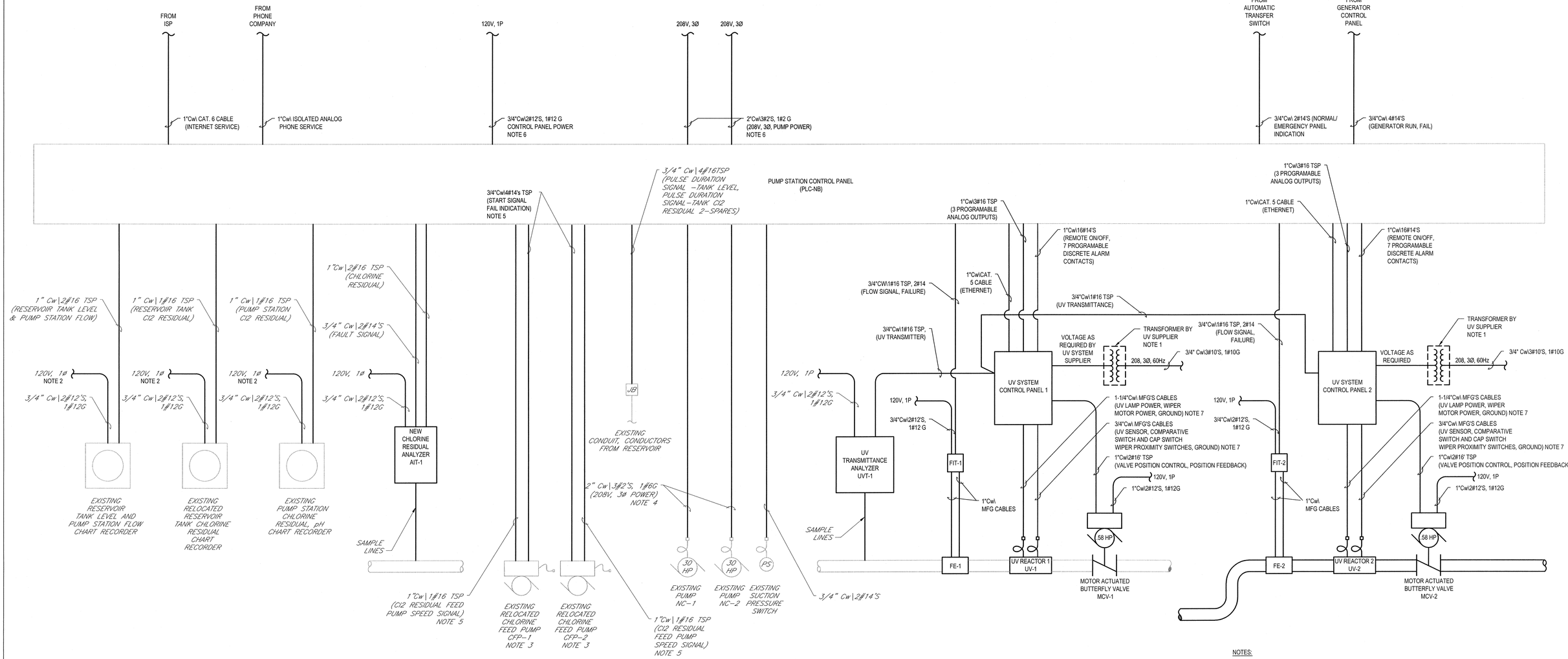

SCHEMATIC DIAGRAM

NOT TO SCALE

NOTES:

1. TRANSFORMER PROVIDED BY UV SYSTEM SUPPLIER IF REQUIRED. IF TRANSFORMER IS REQUIRED, UV SUPPLIER TO PROVIDE CONDUIT AND WIRE BETWEEN TRANSFORMER AND UV SYSTEM CONTROL PANEL. IF NO TRANSFORMER IS REQUIRED, BRING POWER FEED CONDUIT AND CONDUCTORS DIRECTLY TO UV SYSTEM CONTROL PANEL. TRANSFORMERS TO BE INSTALLED ABOVE UV SYSTEM CONTROL PANELS. (TRANSFORMER NOT SHOWN ON PLANS).
2. DISCONNECT AND REMOVE EXISTING POWER CONDUCTORS FOR EXISTING CHART RECORDERS.
3. PROVIDE DEDICATED RECEPTACLES FOR CHLORINE FEED PUMPS. SEE PLAN ON SHEET E-004.
4. RE-FEED POWER TO EXISTING PUMPS FROM NEW PUMP STATION CONTROL PANEL.
5. REMOVE EXISTING CONDUIT AND CONDUCTORS BETWEEN EXISTING CONTROL PANEL AND CHLORINE FEED PUMPS. PROVIDE NEW CONDUIT AND CONDUCTORS AS SHOWN.
6. REMOVE EXISTING CONDUIT AND CONDUCTORS BETWEEN EXISTING PANELBOARD AND EXISTING CONTROL PANEL. PROVIDE NEW CONDUIT AND CONDUCTORS BETWEEN EXISTING PANELBOARD AND NEW CONTROL PANEL AS SHOWN.
7. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE REQUIRED QUANTITY AND SIZE OF CONDUITS AND CONDUCTORS FROM THE UV CONTROL PANELS TO THE REACTORS WITH THE UV EQUIPMENT MANUFACTURER.
8. SCHEMATIC REFLECTS MINIMUM REQUIREMENT FOR LAYOUT 1 AND LAYOUT 2UV MANUFACTURERS. ANY ADDITIONAL CONDUIT AND CONDUCTORS REQUIRED BY THE SELECTED MANUFACTURER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

No	Revision	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION	IDG	NJH	KC	10/15

NOTES:

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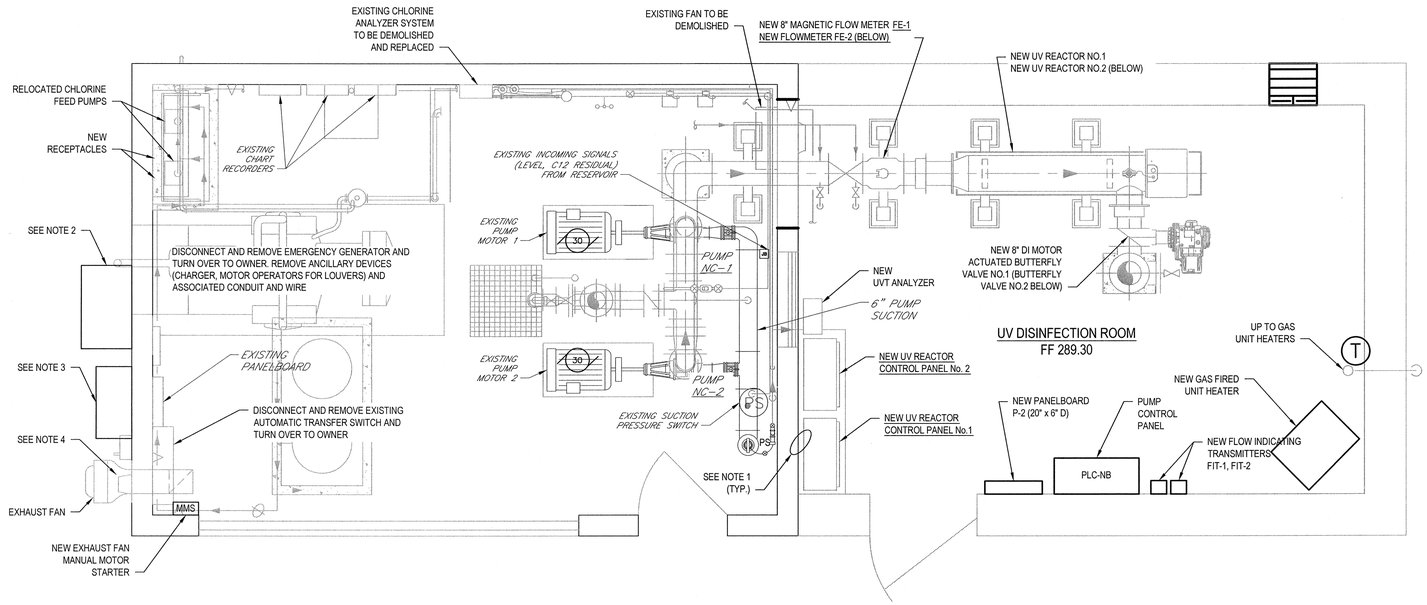
Drawn IDG	Designer IDG
Drafting Check TWD	Design Check TWD
Approved (Project Director)	
Date 10/30/15	Contract No. 1
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction

Client **TOWN OF NORTH CASTLE, NEW YORK**
Project **NORTH BROADWAY**
Title **ULTRAVIOLET DISINFECTION SCHEMATIC DIAGRAM**

Original Size **Arch D** Drawing No: **86-16786-E003** Rev: **0**

Plot Date: 28 October 2015 - 4:15 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Elec\86-16786-E003.dwg



ELECTRICAL PLAN

SCALE: 1/2" = 1'-0"

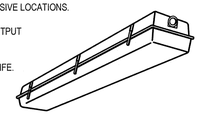
NOTES:

1. PROVIDE EXPANSION FITTINGS WHERE ALL CONDUIT CROSS FROM EXISTING PUMP STATION TO BUILDING ADDITION.
2. NEW AUTOMATIC TRANSFER SWITCH. SEE SITE PLAN FOR GENERATOR LOCATIONS.
3. DISCONNECT AND REMOVE EXISTING MAIN DISCONNECT SWITCH AND TURN OVER TO OWNER. PROVIDE NEW MAIN DISCONNECT SWITCH. SEE ONE LINE DIAGRAM AND SPECIFICATIONS.
4. EXISTING UTILITY SERVICE METER. COORDINATE WITH UTILITY RE: METERING REQUIREMENTS FOR UPGRADED SERVICE. SEE SPECIFICATION SECTION 16421.

NOTE:

PLAN IS BASED ON UV REACTOR ALTERNATE LAYOUT 1. CONTRACTOR IS RESPONSIBLE FOR CHANGES TO EQUIPMENT LAYOUT LOCATIONS AS REQUIRED BY THE APPROVAL UV EQUIPMENT MANUFACTURER.

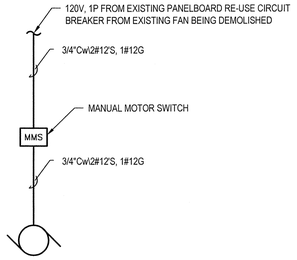
1. NONMETALLIC LED LUMINAIRE, NOMINALLY 4-FEET LONG.
2. CEILING MOUNTED.
3. FIBERGLASS HOUSING WITH NEOPRENE GASKET.
4. ACRYLIC PRISMATIC LENS WITH SIX STAINLESS STEEL LATCHES.
5. SUITABLE FOR WET OR CORROSIVE LOCATIONS.
8. LED MINIMUM 4,1000 LUMEN OUTPUT MINIMUM 65CRI
9. RATED FOR 60,000 HOURS OF LIFE.
10. 120 VOLT OPERATION.



MANUFACTURERS:
LITHONIA: VAP LED SERIES
DAY-BRIGHT: V2 SERIES
OR APPROVED EQUAL

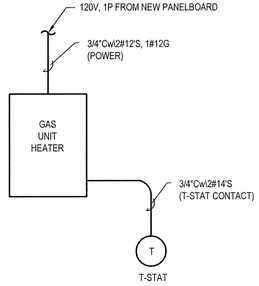
LUMINAIRE 'BL' SPECIFICATION

NOT TO SCALE



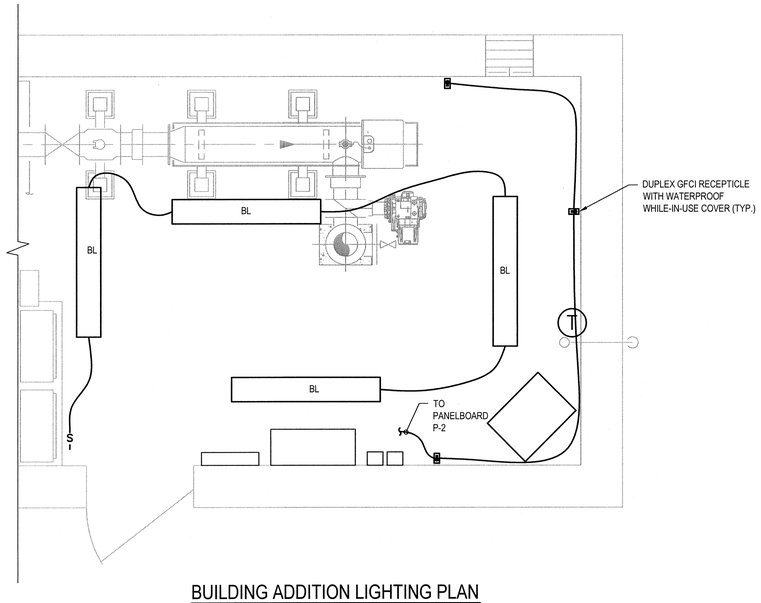
FAN SCHEMATIC DIAGRAM

NOT TO SCALE



GAS FIRED UNIT HEATER SCHEMATIC DIAGRAM

NOT TO SCALE



BUILDING ADDITION LIGHTING PLAN

0 1'-0" 2'-0" 3'-0" 4'-0"
SCALE 1/2"=1'-0" AT ORIGINAL SIZE

No	Revision	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION	MRY	NJH	KC	10/15

Note: * indicates signatures on original issue of drawing or last revision of drawing

NOTES:

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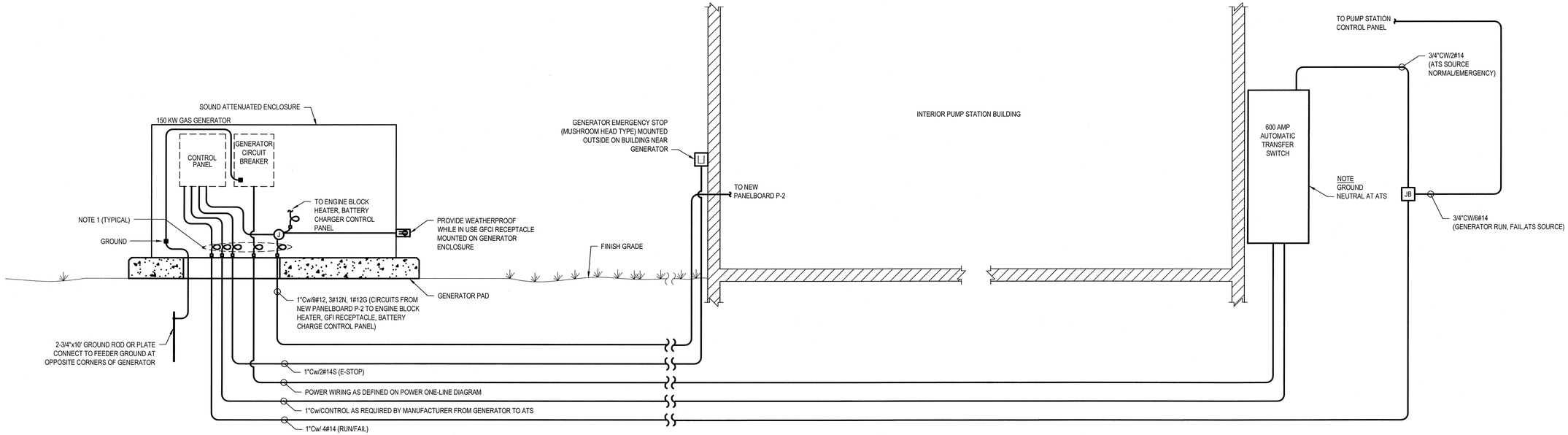
Drawn GJH		Designer TWD	
Drafting Check TWD		Design Check TWD	
Approved (Project Director)			
Date 10/30/15	Contract No. 1		
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction		

Client: TOWN OF NORTH CASTLE, NEW YORK
Project: NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title: ELECTRICAL PLANS

Original Size: Arch D
Drawing No: 86-16786-E004
Rev: 0

Plot Date: 28 October 2015 - 4:16 PM Plotted by: Jay DeLapp Cad File No: G:\86\16786\CADD\Drawings\Elec\86-16786-E004.dwg

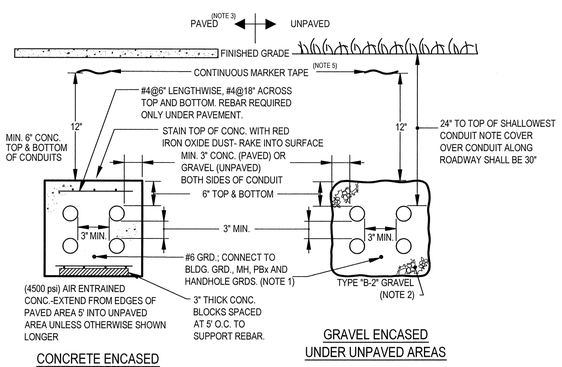


NOTES:

1. PROVIDE FLEXIBLE CONDUIT/CONDUCTORS WITH SUFFICIENT SLACK TO ALLOW UP TO 2-INCHES OF SLAB HEAVING/SETTLEMENT DURING FREEZE/THAW PERIODS.
2. WIRING IS DIAGRAMMATIC AND FOR PRICING PURPOSES. CONFIRM ALL WIRING WITH GENERATOR MANUFACTURER PRIOR TO INSTALL.

GENERATOR SCHEMATIC

NOT TO SCALE

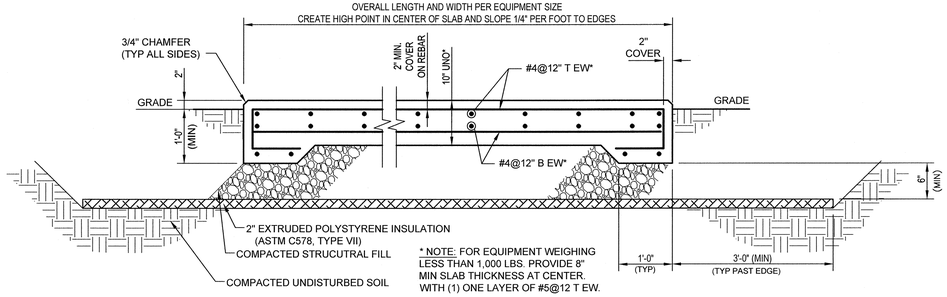


104 DUCTBANK DETAIL

SCALE: NTS

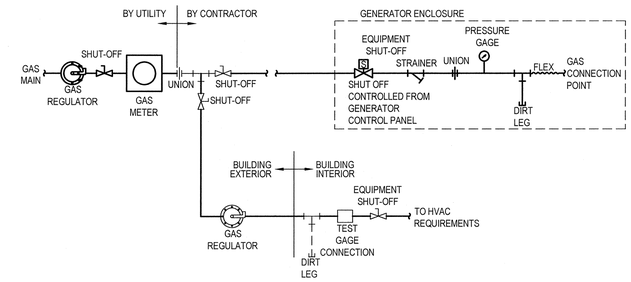
DUCTBANK NOTES:

1. IF EXISTING OR NEW GROUNDS ARE NOT AVAILABLE AT DUCTBANK ENDS, PROVIDE ONE 3/4"x10' GROUND ROD, OFFSET TO SIDE OF DUCTBANK, FOR TERMINATION OF DUCTBANK GROUNDING CONDUCTORS.
2. CONTRACTOR SHALL BE PERMITTED TO USE OTHER SUITABLE GRAVEL WITH 2" MAXIMUM SIZE EXCEPT CRUSHED AGGREGATE SHALL NOT BE PERMITTED.
3. INCLUDES ALL AREAS NORMALLY SUBJECT TO VEHICULAR TRAFFIC, AND OTHER AREAS AS SHOWN ON THE PLANS.
4. DUCTBANKS SHALL BE CONCRETE ENCASED OVER ALL PIPE CROSSINGS TO 5' FROM CENTERLINE IN BOTH DIRECTIONS, AND EXTENDING 5' BEYOND PAVED AREAS.
5. ON DUCTBANKS WIDER THAN 30-INCHES, PROVIDE TWO ROWS OF WARNING TAPE, PLACED NEAR THE OUTER EDGES OF THE DUCTBANK.



TYPICAL FROST-PROTECTED EQUIPMENT PAD DETAIL

NOT TO SCALE



- ALL GAS PIPING SHALL BE MINIMUM 1 1/2" DIAMETER, UNLESS OTHERWISE NOTED, UNTIL FINAL CONNECTION TO LOADS. PROVIDE REDUCERS AS REQUIRED. SELECT PIPE ROUTING TO MINIMIZE BENDS AND ELBOWS.
- INSTALL PLASTIC / METAL ADAPTER AT METER. ALL ABOVE GRADE PIPING SHALL BE WROUGHT STEEL. PIPING INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH LOCAL GAS UTILITY AND NFPA 54.
- NOTE: GAS SERVICE ENTRANCE PIPING IS NOT SHOWN ON THE PLAN DRAWINGS. CONTRACTOR SHALL COORDINATE WITH GAS UTILITY TO PROVIDE RELOCATED GAS SERVICE. FURNISH AND INSTALL GAS PIPING IN ACCORDANCE WITH UTILITY REQUIREMENTS AND ALL APPLICABLE CODES. GAS SERVICE REQUIREMENT IS APPROXIMATELY 2,050 CFH AT 7 TO 11 INCHES OF WATER COLUMN FOR THE GENERATOR AND 100 CFH AT 5 TO 14 INCHES OF WATER COLUMN FOR HVAC. PROVIDE ADDITIONAL REGULATORS, VALVES AND GAUGES AS REQUIRED BY GENERATOR MANUFACTURER AND HVAC REQUIREMENTS.

TYPICAL GAS PIPING SERVICE ENTRANCE

NOT TO SCALE

No	Revision	Drawn	Job Manager	Project Director	Date
0	FOR CONSTRUCTION	IWS	NJH	KC	10/15

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Drawn IWS		Designer TWD	
Drafting Check TWD		Design Check TWD	
Approved (Project Director)			
Date 10/30/15	Contract No. 1		
Scale AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction		

Client TOWN OF NORTH CASTLE, NEW YORK
Project NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title ELECTRICAL PLANS

Original Size Arch D
Drawing No: 86-16786-E005
Rev: 0

Plot Date: 28 October 2015 - 3:43 PM Plotted by: Jay DeLapp
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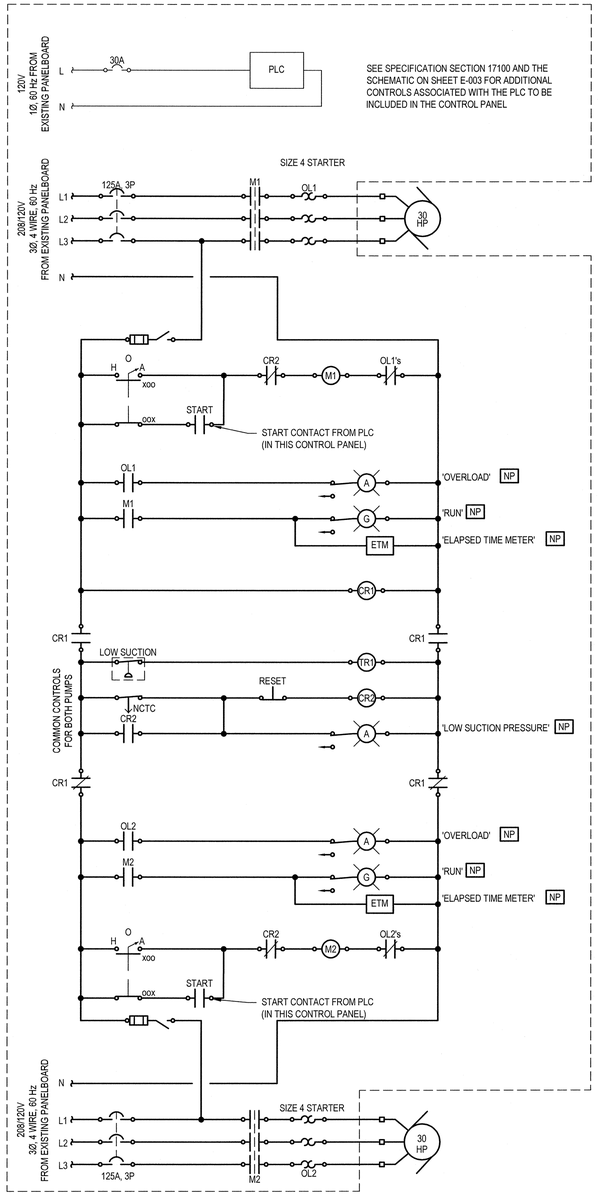
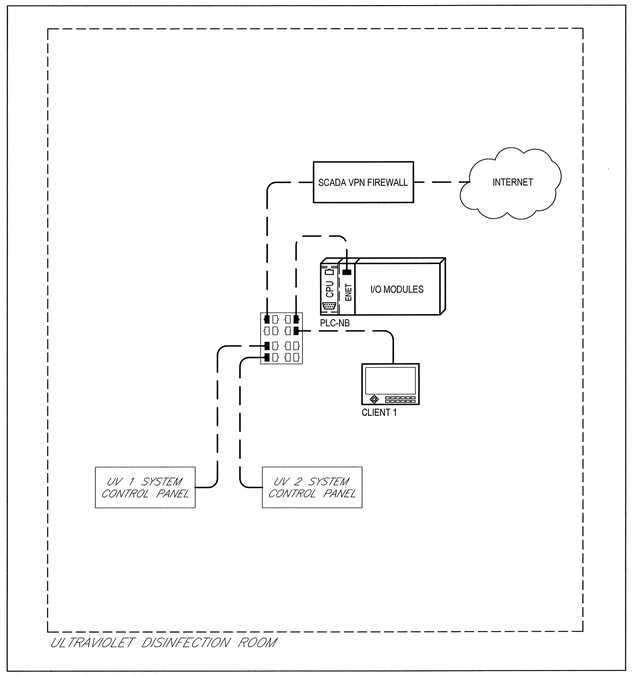
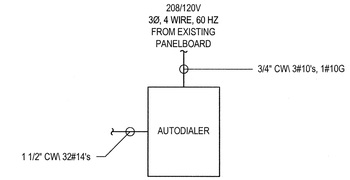


PUMPSTATION CONTROL PANEL DUPLEX PUMP ELEMENTARY

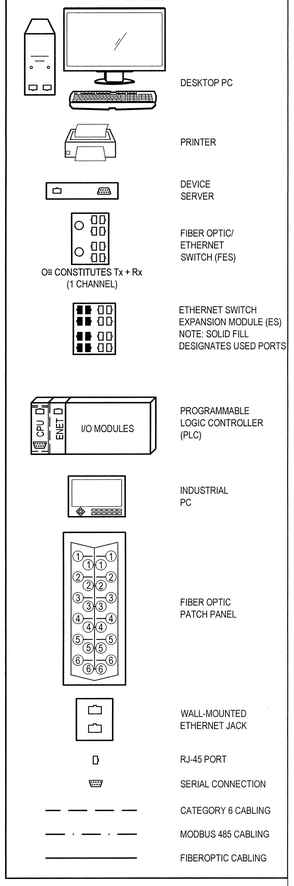




AUTODIALER WIRING

CHANNEL	SIGNAL FROM	DESCRIPTION
1.	PLC-NB	NO CONTACT FOR ALARM FROM PLC
2	PLC-NB	NO CONTACT FOR ALARM FROM PLC
3	PLC-NB	NO CONTACT FOR ALARM FROM PLC
4	PLC-NB	NO CONTACT FOR ALARM FROM PLC
5	PLC-NB	NO CONTACT FOR ALARM FROM PLC
6	PLC-NB	NO CONTACT FOR ALARM FROM PLC
7	PLC-NB	NO CONTACT FOR ALARM FROM PLC
8	PLC-NB	NO CONTACT FOR ALARM FROM PLC
9	PLC-NB	NO CONTACT FOR ALARM FROM PLC
10	PLC-NB	NO CONTACT FOR ALARM FROM PLC
11	PLC-NB	NO CONTACT FOR ALARM FROM PLC
12	UV SYSTEM	UV ALARMS
13	UV SYSTEM	UV ALARMS
14	UV SYSTEM	UV ALARMS
15	UV SYSTEM	UV ALARMS
16	PLC-NB	NO CONTACT FOR PLC FAILURE

LEGEND



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No	Revision Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date	

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Drafting Check		Design Check	
Approved (Project Director)			
Date	10/30/15	Contract No.	1
Scale	AS SHOWN	This Drawing shall not be used for Construction unless Signed and Sealed For Construction	

Client TOWN OF NORTH CASTLE, NEW YORK
Project NORTH BROADWAY ULTRAVIOLET DISINFECTION
Title SCADA ARCHITECTURE DIAGRAM

Original Size Arch D
Drawing No: 86-16786-I001
Rev: A

Plot Date: 29 October 2015 - 12:38 PM Plotted by: Nicholas Hyde Cad File No: G:\86\16786\CADD\Drawings\Instrumentation\86-16786-I001.dwg