

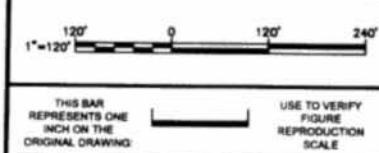
CITY: SYRACUSE DIV/GRP: ENV CAD DB: 8 DECEMBER 04, P.C. PM: LYRONA OFF: REF: G:\ENVCAD\SYRACUSE\ACT\B0023726\2010\DWG\2372601.dwg LAYOUT: 24-A. SAVED: 7/16/2010 3:52 PM. ACADVER: 17.08 (LMS TECH) PAGES: 17.08 (LMS TECH) PLOTSETUP: PLOTSTYLETABLE: PLOT01.ctb PLOTTED: 7/16/2010 3:52 PM BY: KOWALCZYK, STEVE

PRIMARY LEACHATE TRANSFER SYSTEM INFORMATION					
LEACHATE TRANSFER VAULTS	LOCATION	INITIAL BERM GRADE	CARRIER PIPE INV. ELEV.	BASE INV. ELEV.	
PV-1	100+53.00N 14+50.00E	330.84	308.78	324.28	
PV-2	84+12.50N 14+50.00E	328.00	308.35	324.80	
PV-3	100+00.00N 17+48.00E	330.82	308.45	324.05	
PV-4	84+12.50N 17+48.00E	330.73	307.25	325.75	
V-5	100+00.00N 20+75.00E	323.08	307.33	325.83	
V-6	84+12.50N 20+75.00E	330.80	307.40	326.40	
V-7	100+00.00N 24+50.00E	331.12	308.14	327.24	
▲▲ V-10	84+12.50N 18+48.00E	330.81	307.80	326.80	
▲▲▲ V-13	84+12.50N 20+75.00E	330.50	308.34	328.32	
▲▲▲ V-14	84+12.50N 20+75.00E	330.50	308.34	328.32	
SECONDARY LEACHATE TRANSFER SYSTEM INFORMATION					
LEACHATE TRANSFER VAULTS	LOCATION	INITIAL BERM GRADE	CARRIER PIPE INV. ELEV.	BASE INV. ELEV.	
SV-1	100+53.00N 14+50.00E	330.88	308.98	324.15	
SV-2	84+12.50N 14+50.00E	328.22	308.18	324.88	
SV-3	100+00.00N 17+48.00E	330.05	308.30	324.83	
SV-4	84+12.50N 17+48.00E	330.85	307.83	326.83	
▲					
JUNCTION MANHOLES					
	LOCATION	MANHOLE DIMENSION	FINISH GRADE	CARRIER PIPE INV. ELEV.	BASE INV. ELEV.
PM#1	100+48.00N 12+43.37E	4" DIA.	330.05	302.82	325.75
PM#2	84+12.50N 18+48.00E	4" DIA.	333.00	308.58	324.05

NOTES:

- THE TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRIPPI AND ASSOC., P.C.
- THE GRID SYSTEM INDICATED HAS BEEN ESTABLISHED IN THE FIELD. THE MONUMENTS ARE AS INDICATED ON THE DRAWING AND ACCORDING TO THE TABLE ON DRAWING NO. 2. THE GRID COORDINATES ARE CWM PLANT SITE GRID ONLY, NOT RELATED TO ANY LOCAL DATUM OR NEW YORK STATE PLANE COORDINATE SYSTEM. VERTICAL CONTROL IS ALSO CWM PLANT SITE DATUM.
- EAST RMU-1 GRID COORDINATES LABELED ON THESE PLANS ARE SIMPLIFIED PLANT GRID NUMBERS. SUBTRACTING 10,000 FROM THE EAST PLANT GRID COORDINATES WILL GIVE THE RMU-1 EAST GRID COORDINATES. NO CORRECTIONS ARE REQUIRED TO NORTH COORDINATES.
- GRADES INDICATED ARE TOP OF OPERATION LAYER.
- THIS DRAWING IS BASED ON A DRAWING ENTITLED "LEACHATE TRANSFER SYSTEM AND ELECTRICAL SITE PLAN", PREPARED BY EARTH TECH (FILE NO. A-55278 DATED FEBRUARY 1991).
- PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
 - NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLD, APPROVED BY MGR)
 - REVISED TO INCLUDE SECONDARY FORCEMAIN (DATED 7/93, DRAWN BY FLD, APPROVED BY MGR).
 - WOODY SUMP CELLS 5, 6 AND 7 (DATED 11/95, DRAWN BY FAS, APPROVED BY CPB).
 - ELIMINATE SUMP CELL 8 (DATED 11/98, DRAWN BY FAS, APPROVED BY CPB).
 - WOODY AND RELOCATE SUMP CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
 - WOODY AND RELOCATE SUMP CELLS 13 AND 14 (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
 - WOODY FORCEMAIN (DATED 10/97, DRAWN BY FAS, APPROVED BY CPB).
 - WOODY FORCEMAIN (DATED 6/00, DRAWN BY FAS, APPROVED BY CPB).
- ARCADIS SEAL AND SIGNATURE PERTAIN ONLY TO ARCADIS IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
- T-185 LEACHATE STORAGE TANK AND ASSOCIATED PIPE INFORMATION IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE T-185 LEACHATE STORAGE TANK AND ASSOCIATED PIPE INFORMATION WAS PREPARED AND PROVIDED BY ENSOL, INC. FOR CWM CHEMICAL SERVICES, LLC, AS SHOWN ON THE DESIGN DRAWINGS PREPARED BY ENSOL, INC. ENTITLED "PROPOSED TANK SYSTEM LOCATION PLAN", DATED JANUARY 2010 (LATEST REVISION 7/18/10). ARCADIS, AND ITS PROFESSIONAL ENGINEER, HAVE NOT REVIEWED OR EVALUATED, AND EACH TAKES NO RESPONSIBILITY FOR, ENSOL'S DESIGN OF THE LEACHATE STORAGE TANK AND ASSOCIATED PIPING.

DRAWING REVISED BY ARCADIS THROUGH ITS PROFESSIONAL ENGINEER 2/2/2010. WORK OF EARTHTECH (FORMERLY RUST ENVIRONMENT & INFRASTRUCTURE) AND ENSOL INC. NOT INDEPENDENTLY REVIEWED AND SHOWN FOR INFORMATIONAL PURPOSES ONLY.



																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

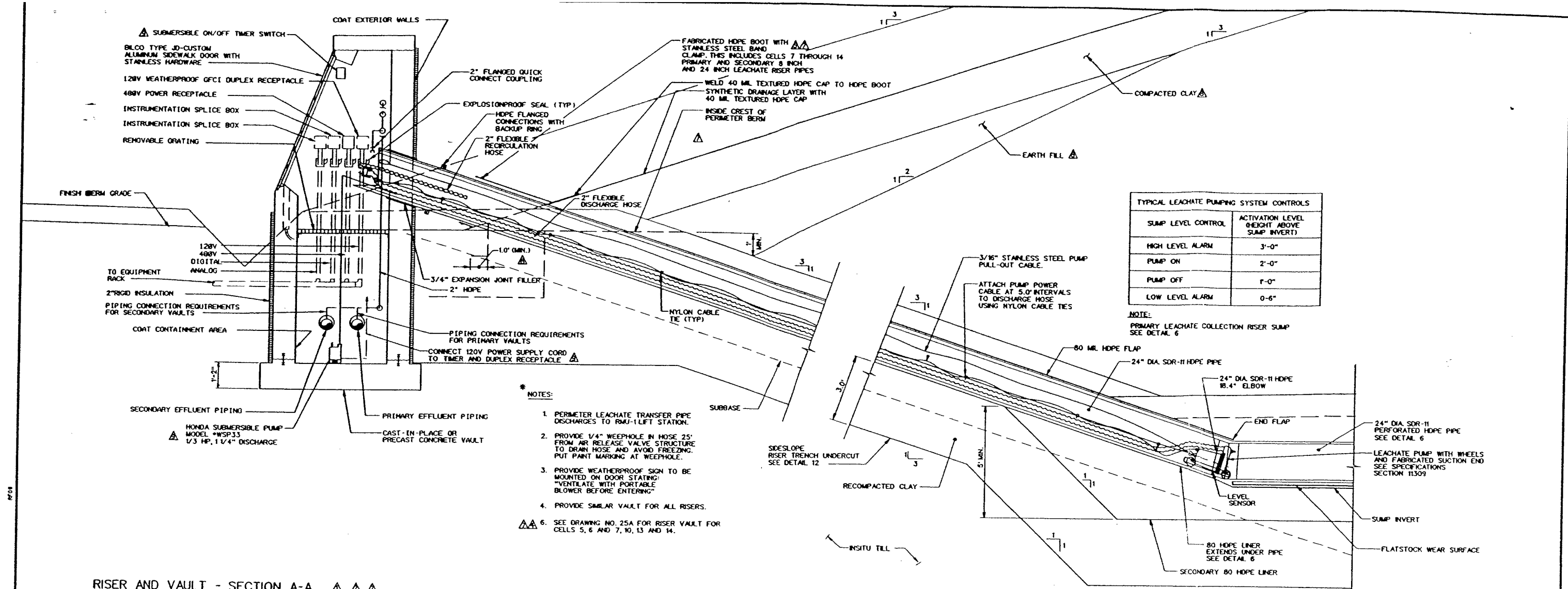
Professional Engineer's Name
JOSEPH MOLINA
Professional Engineer's No.
072644
State
NY
Date Signed
7-16-10
Project Mgr.
WAR
Designed by
ENSOL INC.
Drawn by
BKD
Checked by
BMS



ARCADIS
ARCADIS U.S., INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 1
LEACHATE TRANSFER SYSTEM AND ELECTRICAL SITE PLAN
GENERAL

ARCADIS Project No.
B0023726 2010.00001
Date
FEBRUARY 2010
ARCADIS
8723 TOWPATH ROAD
SYRACUSE, NEW YORK
315-445-8120



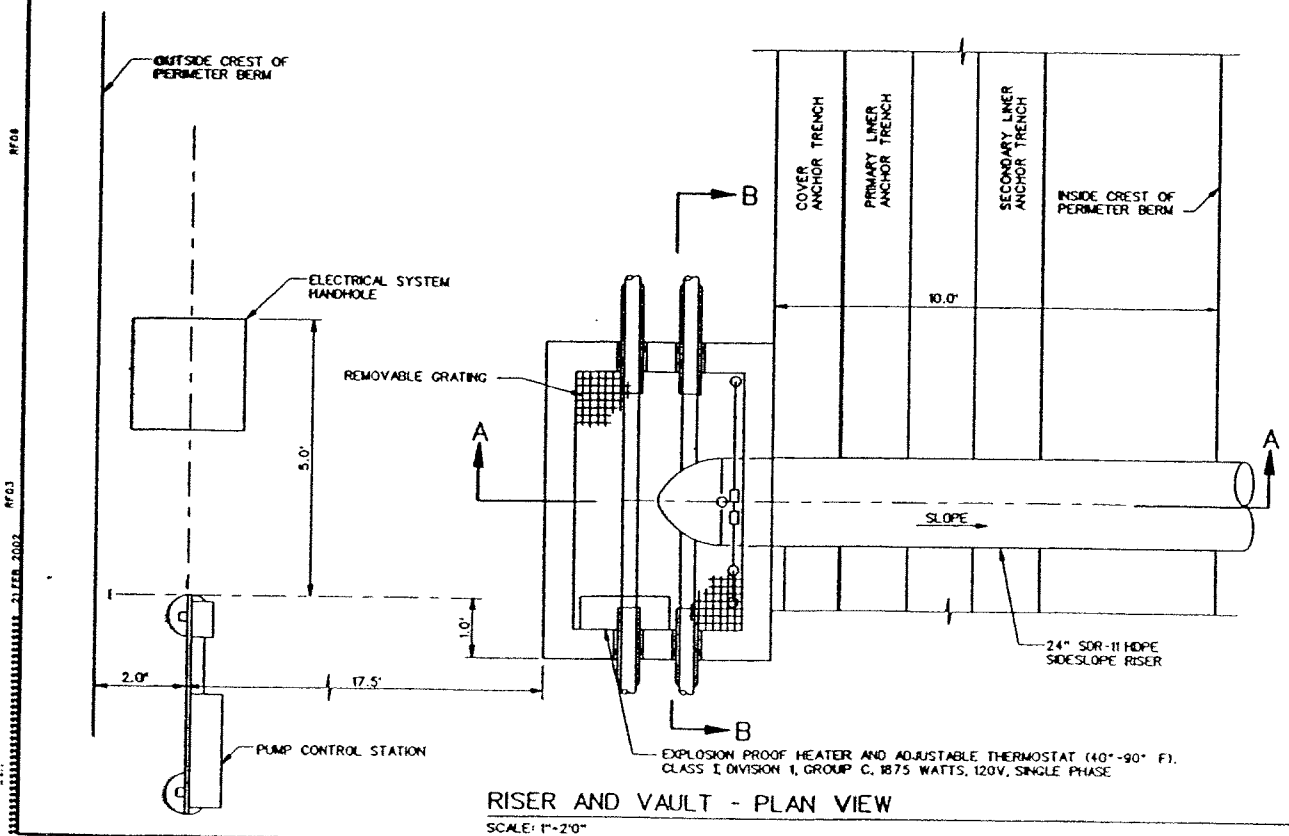
TYPICAL LEACHATE PUMPING SYSTEM CONTROLS

SUMP LEVEL CONTROL	ACTIVATION LEVEL (HEIGHT ABOVE SUMP INVERT)
HIGH LEVEL ALARM	3'-0"
PUMP ON	2'-0"
PUMP OFF	1'-0"
LOW LEVEL ALARM	0'-6"

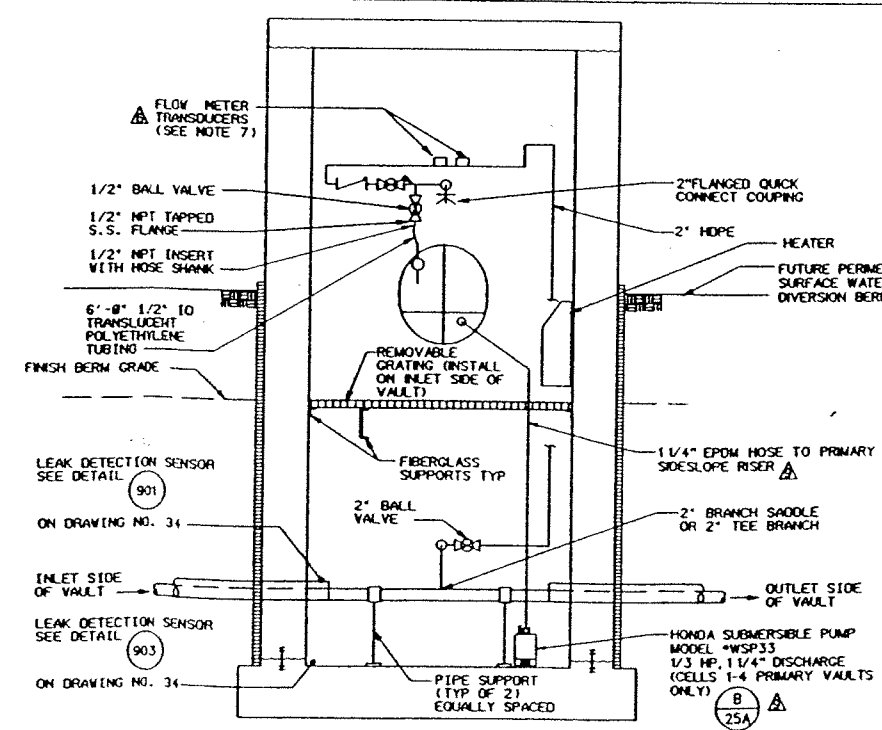
NOTE:
PRIMARY LEACHATE COLLECTION RISER SUMP
SEE DETAIL 6

- * NOTES:**
1. PERIMETER LEACHATE TRANSFER PIPE DISCHARGES TO RMU-1 LIFT STATION.
 2. PROVIDE 1/4" WEEPHOLE IN HOSE 25' FROM AIR RELEASE VALVE STRUCTURE TO DRAIN HOSE AND AVOID FREEZING. PUT PAINT MARKING AT WEEPHOLE.
 3. PROVIDE WEATHERPROOF SIGN TO BE MOUNTED ON DOOR STATING: "VENTILATE WITH PORTABLE BLOWER BEFORE ENTERING"
 4. PROVIDE SIMILAR VAULT FOR ALL RISERS.
 5. SEE DRAWING NO. 25A FOR RISER VAULT FOR CELLS 5, 6 AND 7, 10, 13 AND 14.

RISER AND VAULT - SECTION A-A
SCALE: 1"=2'0"



RISER AND VAULT - PLAN VIEW
SCALE: 1"=2'0"



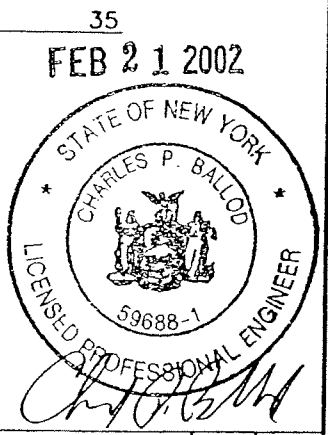
RISER VAULT - SECTION B-B
SCALE: 1"=2'0"

- NOTES:**
1. THIS CONFIGURATION IS TYPICAL OF ALL VAULTS.
 2. MODULAR MECHANICAL SEAL SYSTEM EQUAL TO LINK SEAL.
 3. PROVIDE 1/8" STAINLESS STEEL LEVEL CONTROL SENSOR PULLOUT CABLE.
 4. PROVIDE 2" HOSE OR SCH 40 STEEL PIPE FROM BALL VALVE TO QUICK COUPLING.
 5. LEAK SENSOR DETECTION: PROBE (TYP): WARRICK SERIES 27 ELECTRODE FITTING, MODEL 3E2C AND ELECTRODES (2), OR EQUAL. RELAY (TYP): WARRICK SERIES 27 INTRINSICALLY SAFE CONTROL RELAY MODEL 27A1EO, OR EQUAL.
 6. SEE DRAWING NO. 25A FOR RISER VAULT FOR CELLS 5, 6 AND 7, 10, 13 AND 14.
 7. PRIMARY FLOW METER ELEMENT IS OPTIONAL. IF FLOW METER ELEMENT IS ELIMINATED, PIPING MAY BE RUN IN A DIRECT LINE ELIMINATING THE PIPE TRAP.

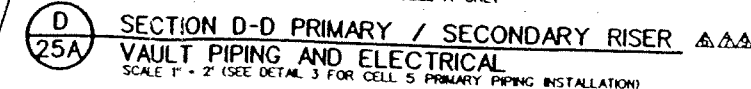
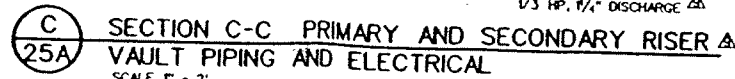
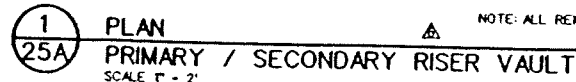
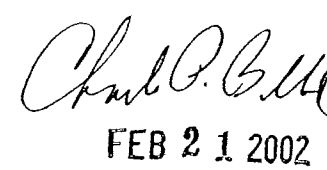
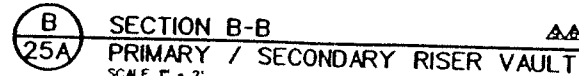
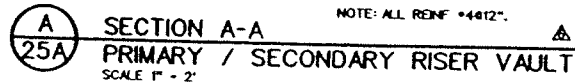
REV	DATE	DESCRIPTION	DR BY	APP BY
2-02		ADDED SUBMERSIBLE PUMP	FAS	CPB
7-97		MODIFIED FINAL CAP ON SECTION A-A	FAS	CPB
6-97		MODIFIED FINAL CAP ON SECTION A-A	FAS	CPB
4-97		ADDED NOTE 7	FAS	CPB
2-97		ADDED CELL 7 BOOT NOTE	FAS	CPB
11-96		ADDED NOTES	FAS	CPB
7-93		SECONDARY FORCE MAIN UPGRADE	MLJ	MGR
11-92		NOTICE OF DEFICIENCY RESPONSES	FLD	GRM
6-92		NOTICE OF DEFICIENCY RESPONSES	FLD	GRM

RUST ENVIRONMENTAL & INFRASTRUCTURE

SIGNATURE
DATE

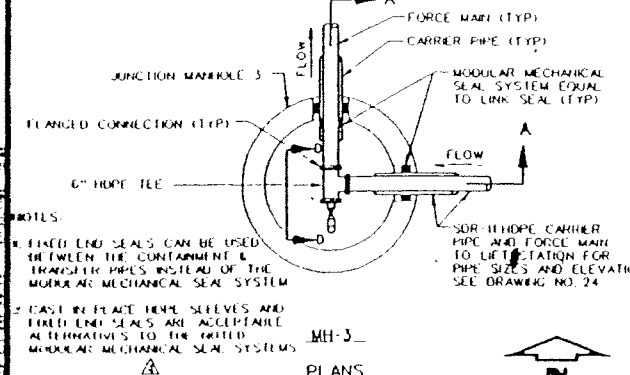
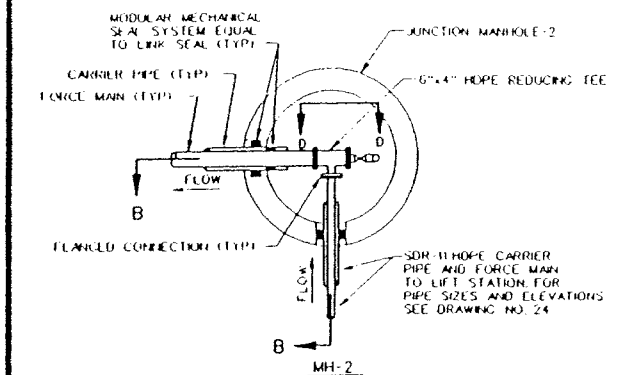
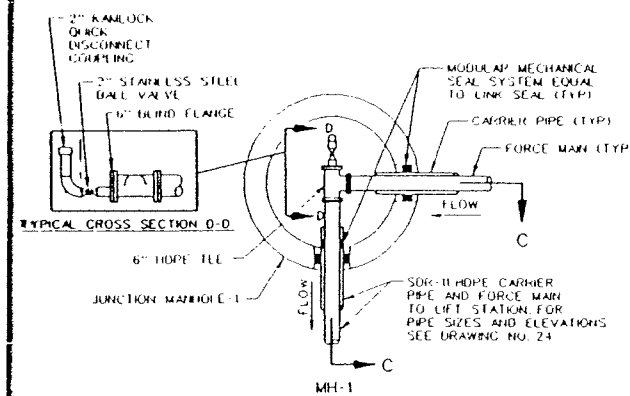
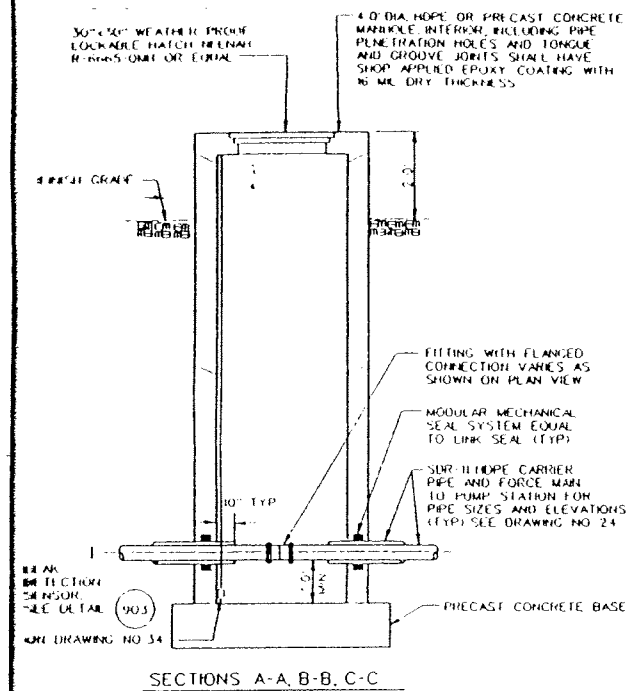


35
FEB 21 2002

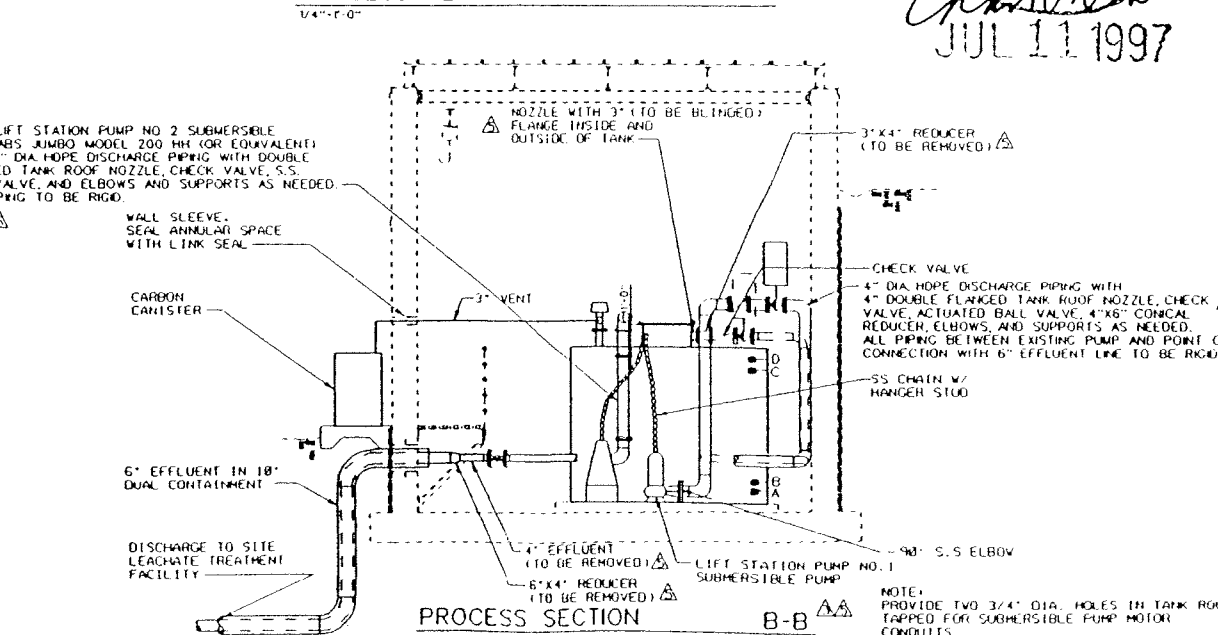
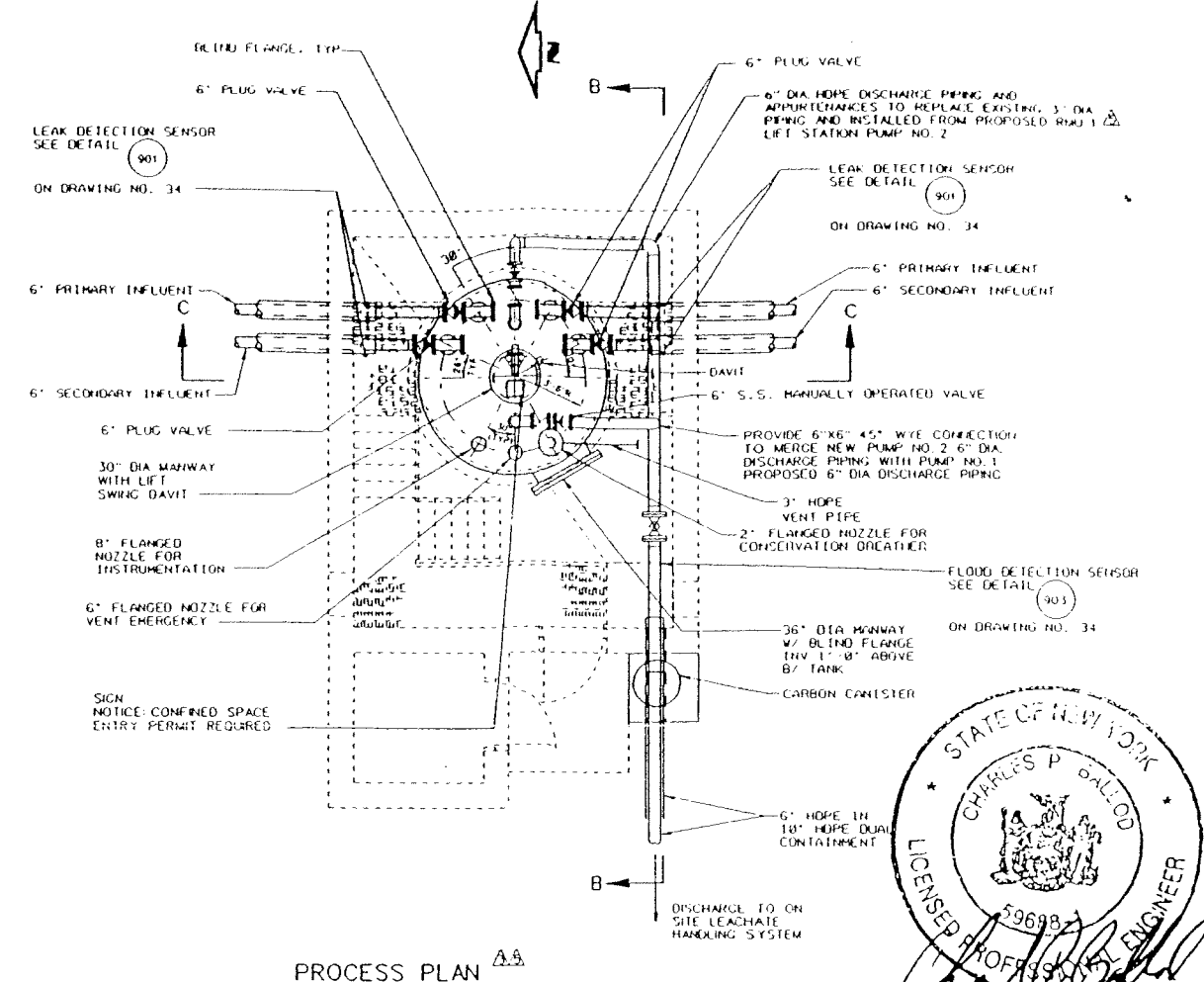
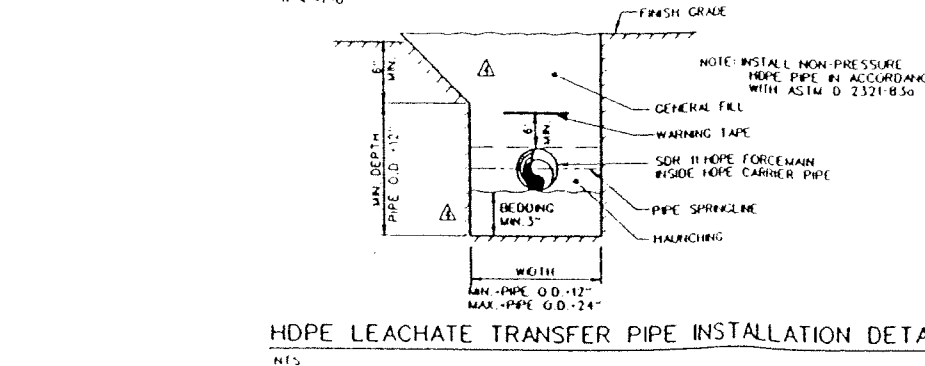
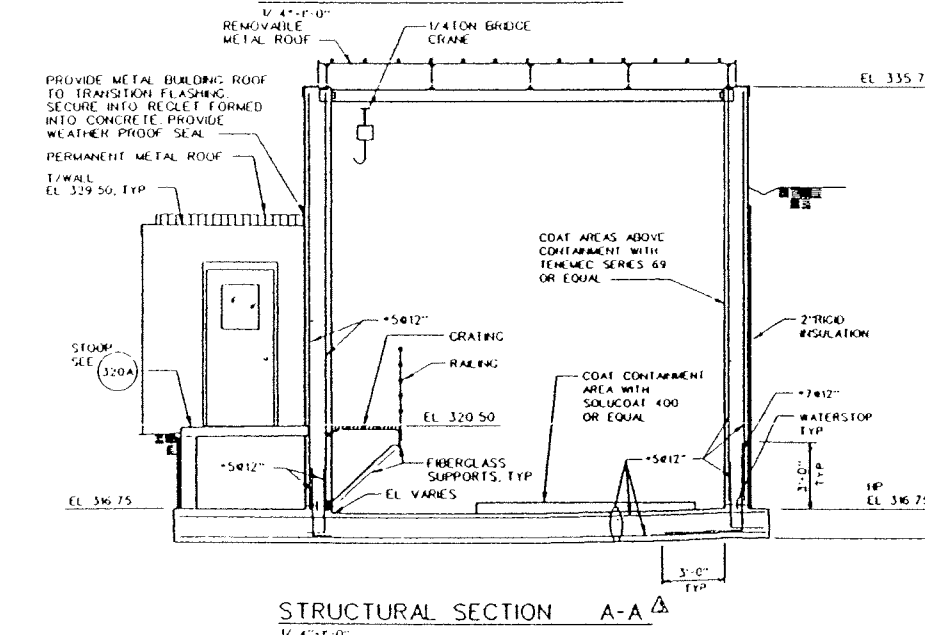
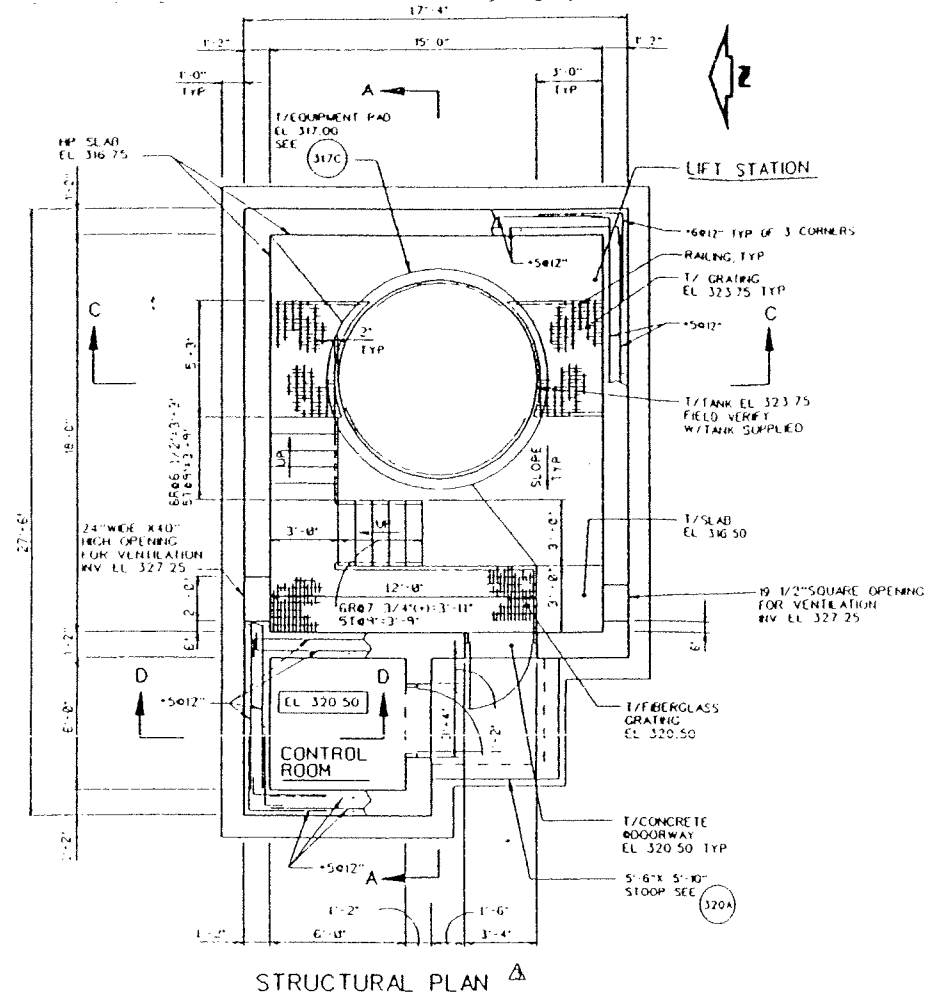


- Δ  2" PIPING INSTALLATION CELL 5

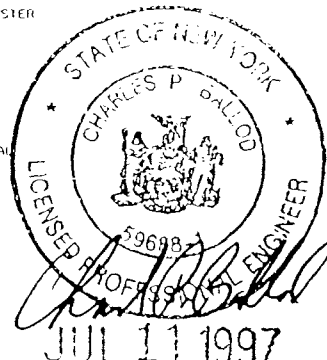
1	2-02	ADDED SUBVERSIBLE PUMP	FAS	CPB
2	10-97	WOOFY FOR CELLS 8 THROUGH 14	FAS	CPB
3	8-97	ADDED 3" PIPE FROM DET. BASIN/WOOFY DETAILS 8, 9, 3	FAS	CPB
4	6-97	DELETED SECONDARY CLEANOUT PIPE AND ADDED SEAL	FAS	CPB
5	4-97	ADDED CELL 9	FAS	CPB
6	11-96	ADDED COLLECTION PIPES CELL 7	FAS	CPB
7	10-96	ADD 3" PIPING OPTION	FAS	CPB
8	7-96	ADDED CELL 10	FAS	CPB
9	4-96	RELOCATED CONVECTION HEATER AND EP	FAS	CPB
		DISCONNECT SWITCH		
REV.	DATE	DESCRIPTION	DRN BY	APP B
DATE:	NOVEMBER 1995	PROJECT NO. 34282.100	SCALE:	AS SHOWN
DES BY:	FAS	PROJECT: RESIDUALS MANAGEMENT UNIT 1		
DRN BY:	FAS	SHEET TITLE:		
CHK BY:	CPB	LEACHATE EXTRACTION $\Delta\Delta\Delta$		
REV BY:	AWK	DETAILS CELLS 5, 6, 7, 10, 13 AND 14		
APP BY:	CPB			
		CWM Chemical Services, Inc. Model City Facility		DRAWING NO. 25A



JUNCTION MANHOLES
38



REV	DATE	DESCRIPTION	DR BY	CHK BY
7-97		ADDED ADDITIONAL PUMP	FAS	CPD
5-95		CLARIFIED PIPE DEPTHS: ADD NOTES TO DET 38	JWH	OUK
7-93		ADD SECONDARY FORCE MAIN AND CONTROL ROOM	MLJ	MGR
11-92		NOTICE OF DEFICIENCY RESPONSES	FLO	CRM
6-92		NOTICE OF DEFICIENCY RESPONSES	FLO	CRM
DES BY	RLP/JLS	PROJECT NO. 17365	DATE	FEBRUARY 1991
DRN BY	MLJ/FLO	PROJECT	RESIDUALS MANAGEMENT UNIT 1	
CHK BY	MGR	DRAWING TITLE	LIFT STATION AND JUNCTION MANHOLES	
ERY BY	FLO	FILE NO.	A-55274	
GRV BY	CRM	DRAWING NO.	26	
APP BY	CRM			



NOT FOR CONSTRUCTION

GENERAL STRUCTURAL NOTES (300)

DESIGN CRITERIA

- DESIGN AND CONSTRUCT IN CONFORMANCE WITH THE STATE OF NEW YORK CODES, RULES AND REGULATIONS, BUILDING CONSTRUCTION SUBCHAPTER B.
- SUPERIMPOSED DESIGN LOADS:
 - WIND LOAD: 15 PSF
 - SNOW LOAD: 25 PSF DRIFT

FOUNDATIONS

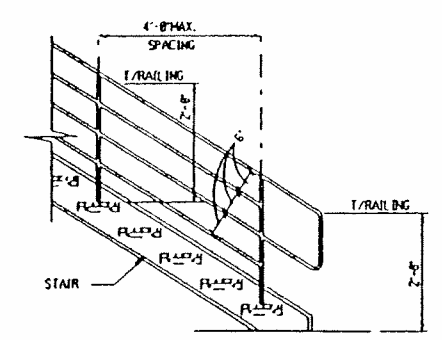
- PLACE FOOTINGS ON NATURAL UNDISTURBED EARTH OR STRUCTURAL FILL.
- TO MINIMIZE LATERAL FORCES AGAINST THE STRUCTURE DUE TO WEDGING ACTION OF THE SOIL, BEGIN COMPACTION OF EACH LAYER AT THE STRUCTURE WALL.

CONCRETE

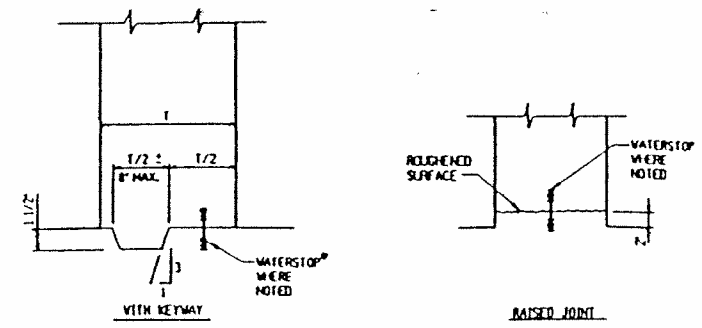
- REINFORCING STEEL: ASTM A615-GRADE 60.
- PROVIDE COVER FOR REINFORCEMENT AS FOLLOWS:
 - CAST AGAINST EARTH: 3 INCHES
 - ALL OTHER LOCATIONS: 2 INCHES
- PLACE DOWELS BEFORE PLACING CONCRETE.
- DO NOT WELD OR FIELD BEND BARS.
- CONCRETE:
 - ALL LOCATIONS: $F_c = 4000$ PSI
- PROVIDE WATERSTOP IN CONSTRUCTION JOINTS OF ALL EXTERIOR WALLS AND BASE SLABS.
- UNLESS OTHERWISE NOTED, CONSTRUCTION JOINTS SHOWN ARE OPTIONAL. CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS ARE SUBJECT TO APPROVAL BY THE ENGINEER.
- CONSTRUCTION JOINTS SHALL HAVE KEYS OR ROUGHENED SURFACES. WHERE ROUGHENED SURFACE IS USED, THE SURFACE SHALL HAVE AN AMPLITUDE OF 1/4" MIN.
- CHAMFER EXPOSED EDGES OF CONCRETE 3/4" MIN.

METALS

- STEEL:
 - STRUCTURAL STEEL: ASTM A36
 - BOLTED CONNECTIONS: ASTM A325
- ALUMINUM:
 - SHIMES AND PLATES: ALLOY 6061-T6 OR 6063-T6
- PROTECT ALUMINUM SURFACES IN CONTACT WITH OTHER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.



STAIR RAILING ELEVATION (227)

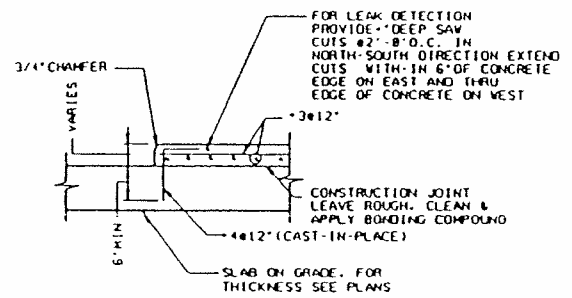


TYPICAL CONSTRUCTION JOINT DETAILS (301)

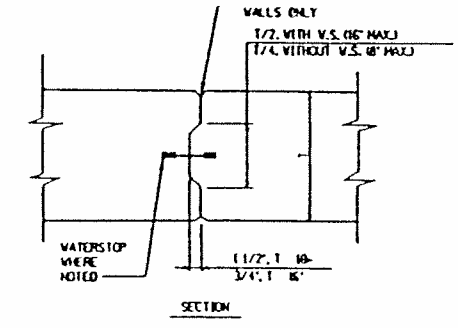
MINIMUM REINFORCEMENT BAR SPLICE AND ANCHORAGE LENGTH (INCHES)					
BAR SIZE	LAPPED SPLICE LENGTH		EMBEDMENT LENGTH		COMPRESSION LAP LENGTH
	TOP BARS	OTHERS	TOP BARS	OTHERS	
3	17	12	12	12	12
4	23	16	14	12	12
5	29	21	17	12	15
6	34	25	20	14	18
7	41	31	26	19	21
8	57	41	34	24	24
9	73	52	43	31	27
10	92	66	54	39	31
11	113	81	66	48	34

NOTES:

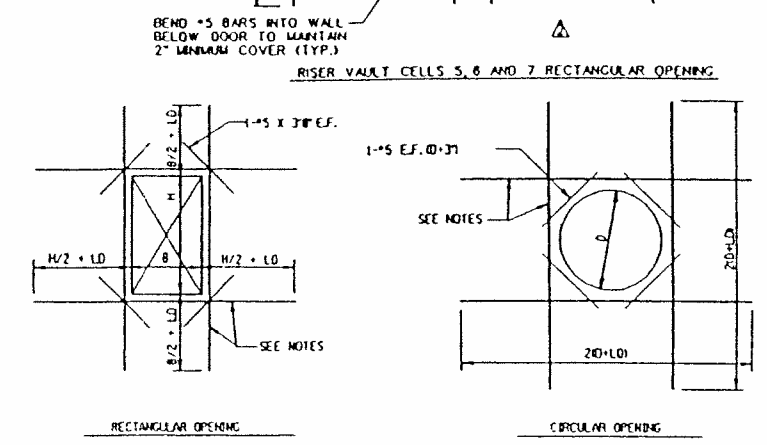
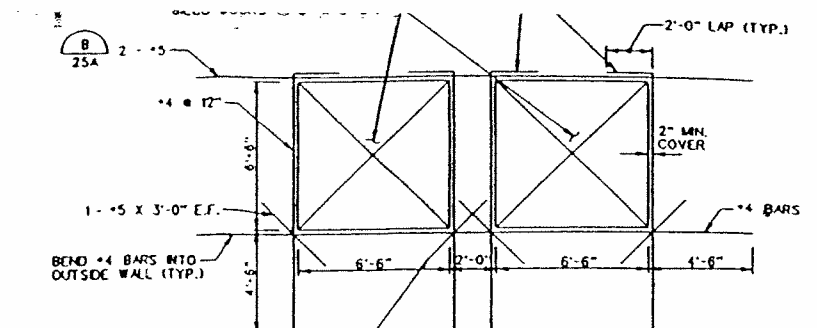
- TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
- FOR BARS SPACED LESS THAN 6" O.C., INCREASE LENGTH BY 25%.
- WHEN LAPPING TWO DIFFERENT SIZE BARS USE THE LAP LENGTH OF THE SMALLER BAR UNLESS NOTED OTHERWISE.
- EMBEDMENT LENGTH IS MINIMUM LENGTH OF EMBEDMENT FOR STRAIGHT DOWELS WHERE END HOOK IS NOT SHOWN UNLESS OTHERWISE NOTED.
- COMPRESSION LAP LENGTH FOR VERTICAL COLUMN BARS ONLY.
- HOOKS SHALL BE AS STANDARD UNLESS OTHERWISE NOTED.



TANK PAD DETAIL (317C)

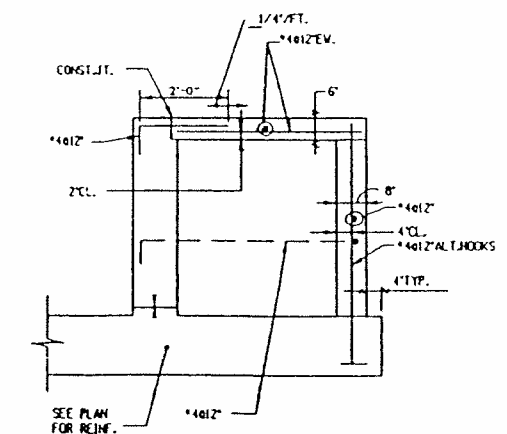


SLAB JOINT OR VERTICAL JOINT IN WALLS

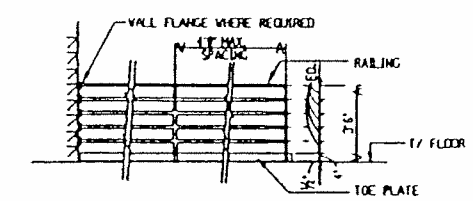


- NOTES:
- THESE DETAILS APPLY TO ALL OPENINGS IN CONCRETE WALLS AND SLABS WHEN LARGEST OPENING DIMENSION IS GREATER THAN TWO TIMES SECTION THICKNESS OR GREATER THAN REINFORCING SPACING IN THE SECTION, UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
 - THE AREA OF ADDITIONAL REINFORCING REQUIRED IN EACH FACE ON EACH SIDE OF AN OPENING SHALL EQUAL OR EXCEED ONE-HALF OF THE AREA OF THE INTERCEPTED BARS IN EACH FACE, IN EACH DIRECTION, RESPECTIVELY WITH A MINIMUM OF 1-#5 BAR EACH FACE.
 - PLACE THE ADDED BARS IN THE SAME LAYERS AS THE WALL OR SLAB REINFORCING.
 - DEVELOPMENT LENGTH SEE (302)

TYPICAL ADDITIONAL REINFORCEMENT AT OPENINGS IN WALLS AND SLABS (303)



DOOR STOOP AT LIFT STATION (320A)



GUARD RAIL ELEVATION (221)



JAN 23 1996
 Charles P. Ballod
 ENVIRONMENT & INFRASTRUCTURE
 DATE

REV	DATE	DESCRIPTION	DR BY	APP BY
11-95		MODIFY OPENING FOR CELLS 5, 6 AND 7	FAS	CPB
7-93		TANK PAD AND STAIR ADDITION	MLJ	MGR
DES BY	RLP	PROJECT NO. 17365	DATE	FEBRUARY 1991
DRN BY	MLJ	PROJECT		
CHK BY	RLP	RESIDUALS MANAGEMENT UNIT 1		
ERV BY	RLP	DRAWING TITLE		
GRV BY	MLJ	STRUCTURAL DETAILS		
APP BY	CRM			
FILE NO. A-55173		DRAWING NO. 27		

CWM CHEMICAL SERVICES, INC.
 MOORE CITY, NIAGARA COUNTY, NEW YORK

NOT FOR CONSTRUCTION REVIEW ONLY

1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

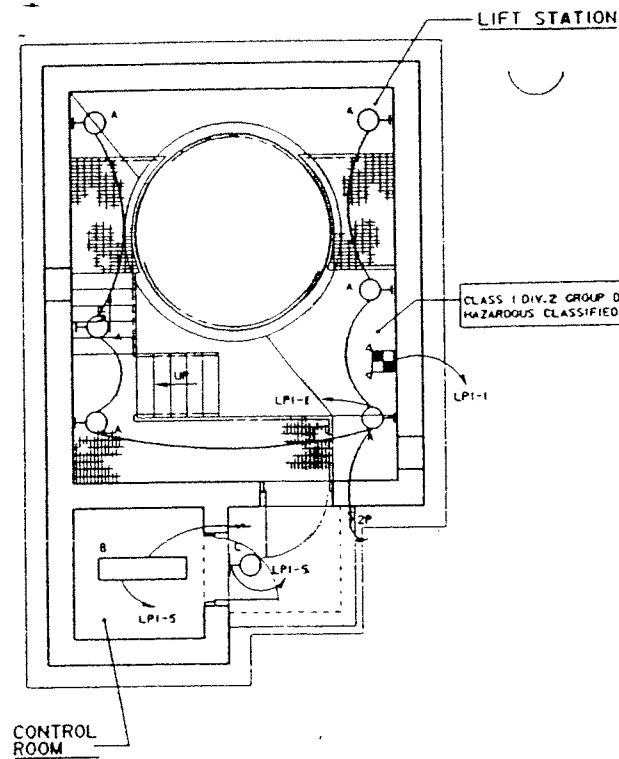
1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

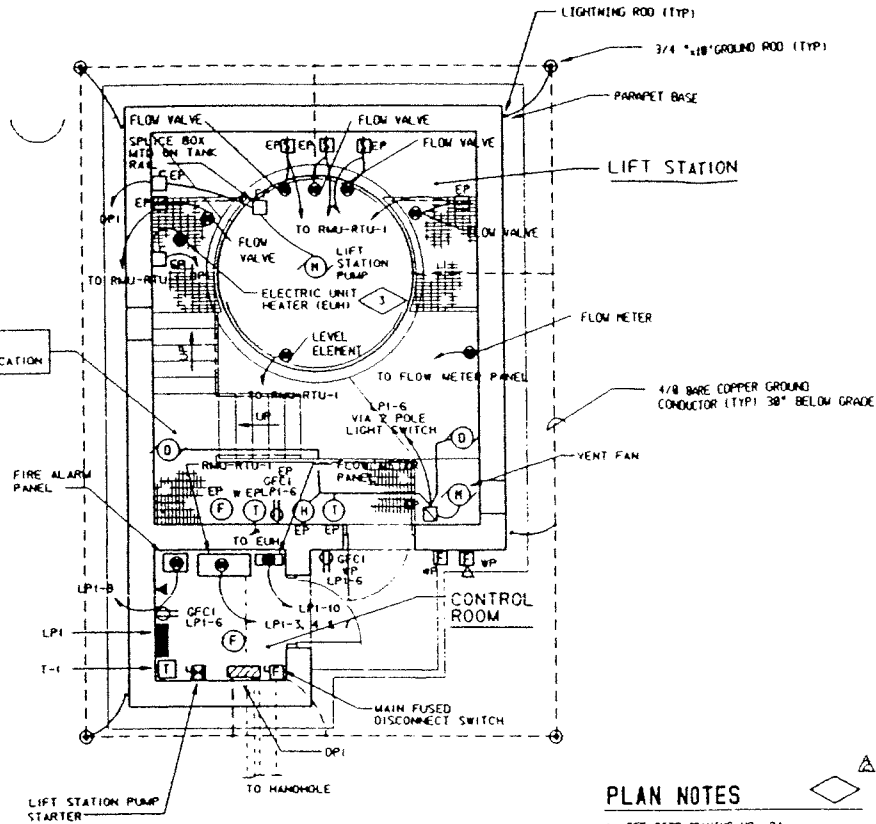
1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

NORTH



LIGHTING PLAN
1/4" = 1'-0"



POWER PLAN
1/4" = 1'-0"

PLAN NOTES

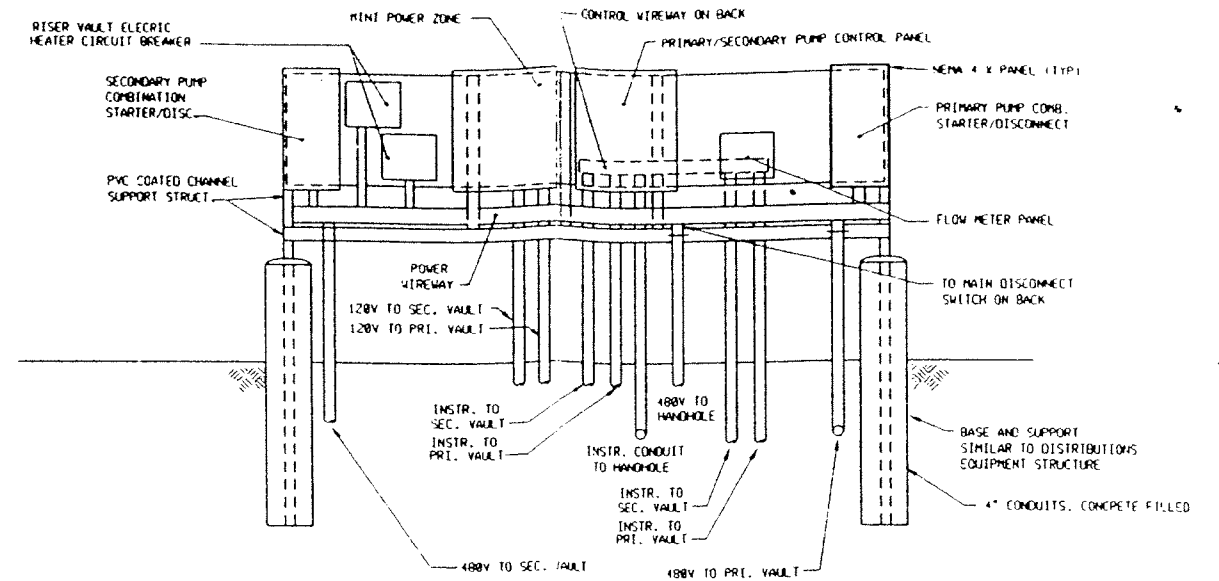
1. SEE SITE DRAWING NO. 24.
2. SEE RNU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER DIAG. NO. 23.
3. INDEED MODEL NO. 234-U11N-0050U OR EQUAL.
4. SEE SHEET NO. 33 FOR INSTRUMENTATION RISER DIAGRAM.

ABBREVIATIONS AND SYMBOLS

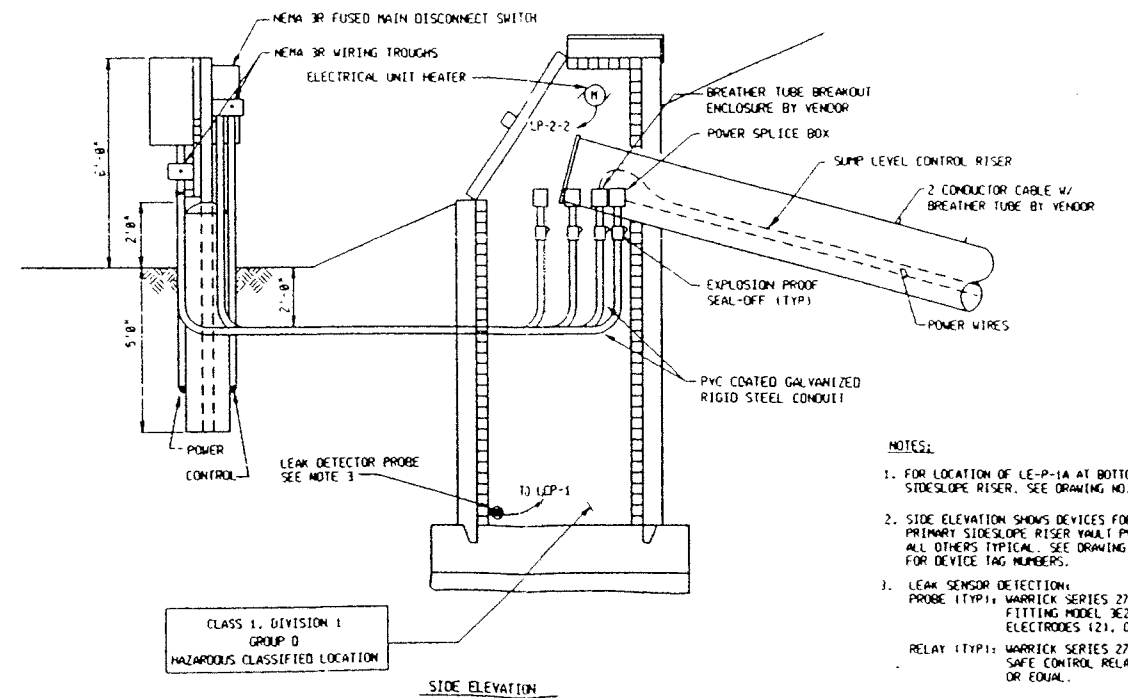
A	AMPERE
AC	ALTERNATING CURRENT
AF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
C	CONTACTOR/CONDUIT/COIL
CB	CIRCUIT BREAKER
CXT, CCT	CIRCUIT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
LCP	LOCAL CONTROL PANEL
LP	LIGHTING PANEL
M	METER
MTR, M	MOTOR
MTO	MOUNTED
NEC	NATIONAL ELECTRICAL CODE (ANSI/NFPA-70)
PC	PHOTOCELL
PVC	POLY VINYL CHLORIDE
V	VOLTS
WP	WEATHERPROOF

	FLUORESCENT FIXTURE - WALL MOUNTED (LETTER DENOTES TYPE)
	INCANDESCENT OR HID FIXTURE - WALL MOUNTED (LETTER DENOTES TYPE)
	SINGLE POLE SWITCH
	DUPLEX GROUNDED RECEPTACLE - 120V
	CONNECTION TO EQUIPMENT
	THREE PHASE COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH
	LIGHTING PANEL
	TRANSFORMER
	MOTOR
	HANDHOLE
	GROUND ROD
	HOME RUN CIRCUIT OR CONDUCTORS
	UNDERGROUND ELECTRICAL OUT.

	THERMAL DETECTOR
	HORN/STROKE
	NON-CODED MANUAL STATION

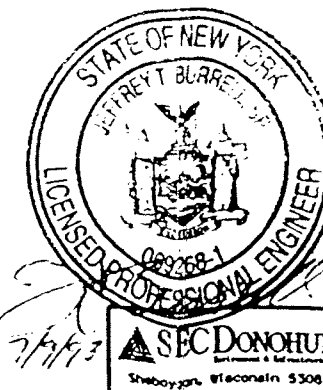


PRIMARY/SECONDARY RISER VAULT EQUIPMENT RACK FRONT ELEVATION (TYPICAL) DETAIL 2
NTS



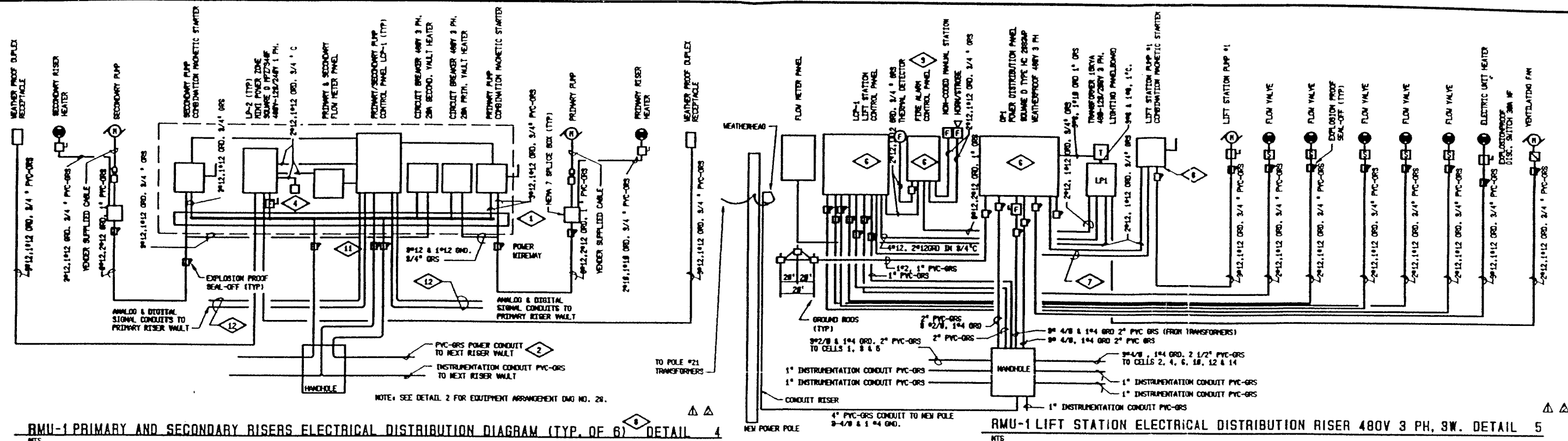
- NOTES:**
1. FOR LOCATION OF LE-P-1A AT BOTTOM OF SLOPE RISE, SEE DRAWING NO. 25.
 2. SIDE ELEVATION SHOWS DEVICES FOR PRIMARY SLOPE RISE VAULT PY-1A. ALL OTHERS TYPICAL. SEE DRAWING NO. 33 FOR DEVICE TAG NUMBERS.
 3. LEAK SENSOR DETECTION: PROBE (TYP): WARRICK SERIES 27, ELECTRODE FITTING MODEL 3E2C AND ELECTRODES (2), OR EQUAL. RELAY (TYP): WARRICK SERIES 27 INTRINSICALLY SAFE CONTROL RELAY MODEL 27A1E0, OR EQUAL.

PRIMARY/SECONDARY RISER VAULT EQUIPMENT RACK (TYP OF 14)
NTS



REV	DATE	DESCRIPTION	DR BY	APP BY
7-93		ADDITION OF CONTROL ROOM & EQUIP. ADDITIONS	SRS	MGR
6-92		NOTICE OF DEFICIENCY RESPONSES	FLD	GRW
DES BY	TH	PROJECT NO. 17365	DATE	FEBRUARY 1991
DRN BY	MJ	PROJECT	RESIDUALS MANAGEMENT UNIT 1	
CHK BY	TH	DRAWING TITLE		
ERV BY	TH	ELECTRICAL PLAN, SYMBOLS AND DETAILS		
GRV BY	MJ			
APP BY	GRW			
FILE NO.	A-55272			
DRAWING NO.	28			

CWM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

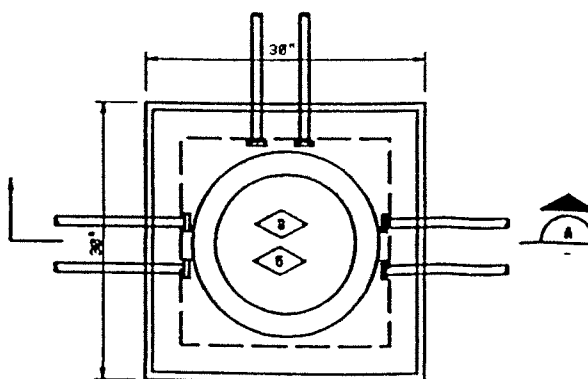


SURFACE MOUNTED		MINI POWER ZONE PANEL SCHEDULE LP2 (TYP)				MCA MAIN BREAKER BUS		MCA GROUND BUS	
SEE 120/240 V. 1 PHASE 3 WIRE									
CCT. NO.	TRIP/P	DESCRIPTION	PHASE		DESCRIPTION	TRIP/P	CCT. NO.		
			A	B					
1	20/1	PRIMARY PUMP CONTROL PANEL	20/1	-	FLOW METER PANEL	20/1	2		
3	20/1	RECEPTACLES	-	20/1	SPARE	20/1	4		
5	20/1	SPARE	-	-	SPARE	20/1	6		
7	20/1	SPARE	-	-	SPARE	20/1	8		
TOTALS			-	-	-				

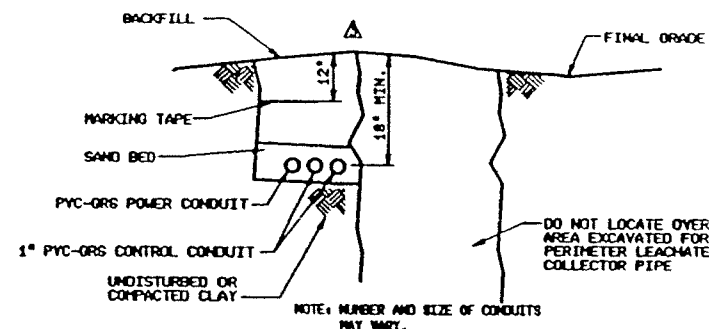
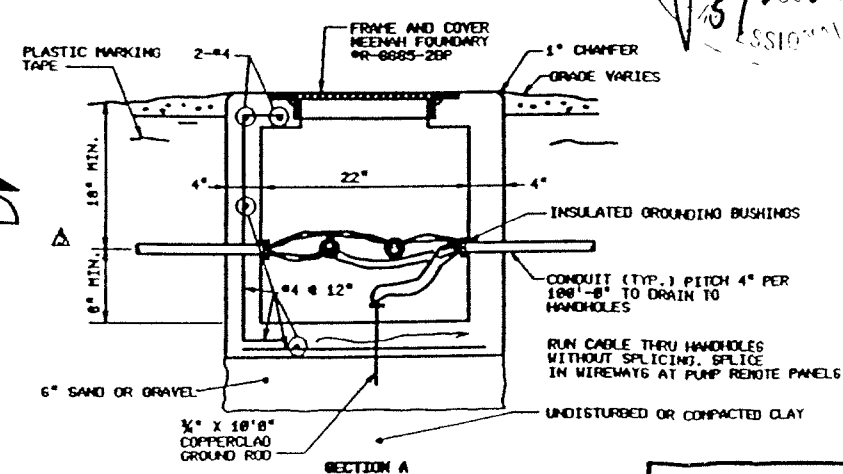
LOW VOLTAGE SECTION OF KINKI POWER ZONE, 400V 2 POLE 80A MAIN CB; 7.5 KVA TRANSFORMER

SURFACE MOUNTED		PANEL SCHEDULE Δ				225A MAIN LUGS		
400 V, 3 PHASE, 3 WIRE		DP1				225A BUS		
						200M GROUND BUS		
CKT. NO.	TRIP/P	DESCRIPTION	PANEL			DESCRIPTION	TRIP/P	CKT. NO.
			A	B	C			
1			-	-	-	PRIMARY/SECONDARY RISER VAULTS CELLS 1, 2 & 5		2
3	10A/3	PRIMARY/SECONDARY RISER VAULTS CELLS 2, 4, 6, 10, 12 & 14	-	-	-			4
5			-	-	-			6
7			100/250M			LIFT STATION PUMP NO. 1		8
9	20A/3	ELECTRIC UNIT HEATER		100/250M				10
11				100/250M				12
13			600M			SPACE		14
15	0A/3	LF-1 TRANSFORMER	-	600M	-			16
17			-	-	600M			18
19			-	-	-	SPACE		20
21	20A/3	SPACE	-	-	-			22
23			-	-	-			24
TOTALS			-	-	-			

SURFACE MOUNTED		PANEL SCHEDULE Δ				MAIN FUSE		
120/208 V 3 PHASE 4 WIRE		LPI				100A	BUS	
						100A	GROUND BUS	
CCT. NO.	TRIP/P	DESCRIPTION	PHASE			DESCRIPTION	TRIP/P	CCT. NO.
			A	B	C			
1	20A/1	LIGHTING LIFT STATION & ENGRS.	1500	-	-	SPACE	20A/1	1
2	20A/1	FLOW VALVES	-	825	463	FLOW VALVES	20A/1	2
3	20A/1	LIGHTING ELECTRIC ROOM & OUTSIDE	-	-	200	VENT FAN	20A/1	3
4	20A/1	RTU-RMU-1	250	-	825	SPACE	20A/1	4
5	20A/1	FIRE ALARM CONTROL PANEL	-	150	00	FLOW METER PANEL	20A/1	5
6	20A/1	SPACE	-	-	-	RECEPTACLES	20A/1	6
7	20A/1	SPACE	-	-	150	SPACE	-	7
8	-	SPACE	-	-	-	SPACE	-	8
9	-	SPACE	-	-	-	SPACE	-	9
10	-	SPACE	-	-	-	SPACE	-	10
TOTALS:			1500	1636	1568	-		



HANDHOLE DETAIL (TYPICAL)



SECTION 1
NTS

PLAN NOTES:

1. PRIMARY/SECONDARY RISER VAULT EQUIPMENT RACK. SEE DRAWING NO. 21.
2. POWER CONDUIT TO NEXT RISER VAULT. SEE RMU-1 LIFT STATION ELECTRICAL DISTRIBUTION RISER.
3. MAKE ALL GROUND CONNECTIONS TO GROUND ROD IN EACH HANDHOLE.
4. WEATHERPROOF DUPLEX RECEPTACLE.
5. CROSS INSTRUMENTATION CONTROL WIRES AT 90 DEGREE ANGLES TO POWER WIRES.
6. MOUNT EQUIPMENT TO UNDISTURBED CHANNELS ANCHORED TO RMU-1 LIFT STATION WALL.
7. SEE I&C RISER DRAWING NO. 32.
8. DEVICES SHOWN ARE FOR PRIMARY AND SECONDARY SLOPE RISER VAULTS PV-1 AND SV-1. ALL OTHERS TYPICAL.
9. PROVIDE 120V, 1 PH FIRE ALARM CONTROL PANEL CAPABLE OF RECEIVING SIGNALS FROM DEVICES SHOWN. PROVIDE DRY CONTACT FOR INTERFACE TO LIFT STATION CONTROL PANEL.
10. 6" WIDE YELLOW MARKING TAPE WITH BLACK LETTERS "CAUTION ELECTRIC LINE BURIED BELOW"
11. MAKE ALL 480V POWER TAPS IN POWER WIREWAY.
12. FOR RISER VAULT CONDUIT DETAIL. SEE DWG. NO. 25.

[illegible]

11/15/83
RFL
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL

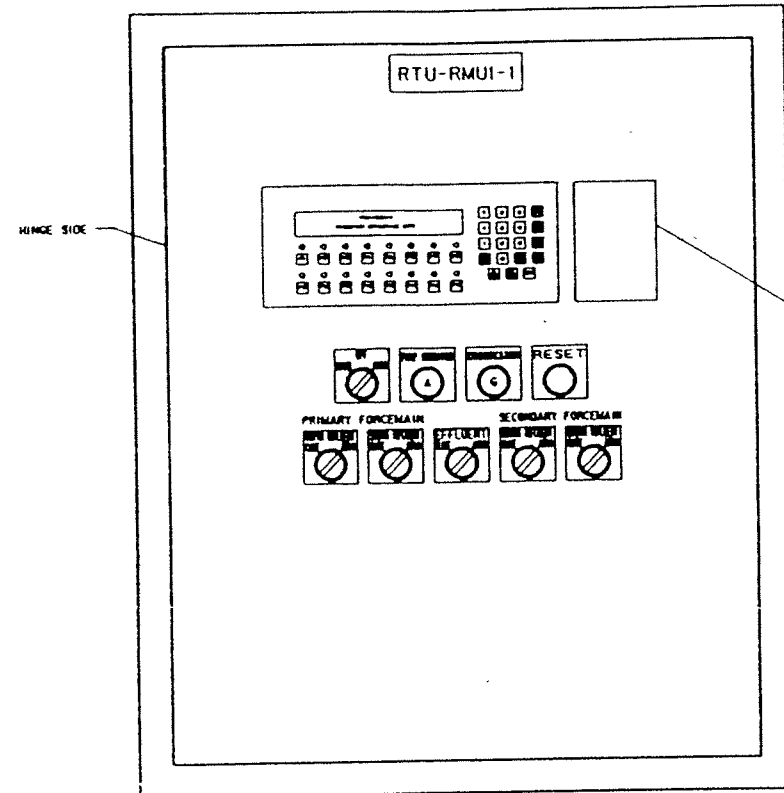
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL

11/15/83
RFL
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL

11/15/83
RFL
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL

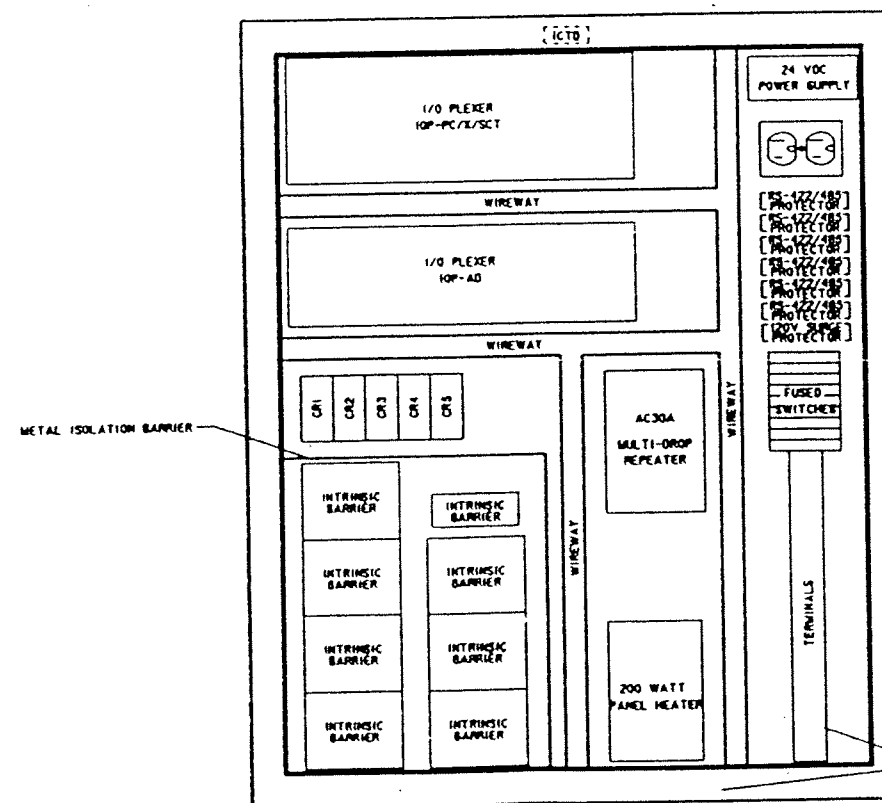
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL

11/15/83
RFL
11/15/83
RFL
11/15/83
RFL
11/15/83
RFL



FUNCTION KEY LEGEND
(INSCRIPTIONS FOR 18
FUNCTION KEYS SUPPLIED
BY SYSTEM PROGRAMMER.)

RTU-RMU1-1
RTU-RMU1-1 REMOTE TERMINAL UNIT
FRONT OF PANEL LAYOUT
NTS



RTU-RMU1-1
RTU-RMU1-1 REMOTE TERMINAL UNIT
INTERNAL PANEL LAYOUT
NTS

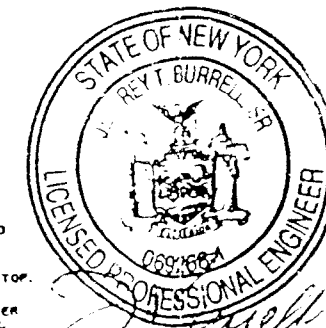
USE BOTTOM OF ENCLOSURE
FOR ADDITIONAL TERMINAL SPACE

LIST OF MATERIALS

ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER	QUANTITY
1	SINGLE DOOR HEMA 4X STAINLESS STEEL ENCLOSURE	HOFFMAN ENGINEERING COMPANY	A-38400108SLP	1
2	ENCLOSURE PANEL	HOFFMAN ENGINEERING COMPANY	A-38P30	1
3	200 WATT ELECTRIC ENCLOSURE HEATER	HOFFMAN ENGINEERING COMPANY	D-AH20001A	1
4	FAST OPERATING ENCLOSURE CLAMP ASSEMBLY	HOFFMAN ENGINEERING COMPANY	A-FC41288	7
5	120VAC SURGE PROTECTOR BASE	PHOENIX CONTACT	UAK 2/2-110 AC-BE	1
6	120VAC SURGE PROTECTOR PLUG	PHOENIX CONTACT	UAK 2/2-110 AC-ST	1
7	TERMINAL BLOCK	ALLEN-BRADLEY	1482-P1	80
8	FUSIBLE SWITCH	ALLEN-BRADLEY	1482-HE	8
9	FUSE - 1 AMP	LITTELFUSE	312001	2
10	FUSE - 2 AMP	LITTELFUSE	313002	4
11	FUSE - 5 AMP	LITTELFUSE	313003	3
12	POWER SUPPLY 24VDC @ 1.2 AMP	SOLA	SLB-24-012	1
13	120VAC 20 AMP DUPLEX OUTLET			1
14	DUPLEX OUTLET BOX AND COVER			1
15	MULTI-DROP REPEATER	OPTO22	AC30A	1
16	LOCAL CONTROLLER	OUTEC	1/0 PLEXER 10P-PC/X/5CT	1
17	ANALOG/DIGITAL I/O RACK	OUTEC	1/0 PLEXER 10P-AD	1
18	SINGLE CHANNEL AC OUTPUT MODULE	OUTEC	OACS	8
19	SINGLE CHANNEL AC INPUT MODULE	OUTEC	IACB	12
20	4 TO 20 MA CURRENT INPUT MODULE	OUTEC	11420	1
21	TEMPERATURE INPUT MODULE	OUTEC	ITP500	1
22	TEMPERATURE PROBE	OPTO-22	ICTD	1
23	RS-422/485 SURGE PROTECTOR BASE	PHOENIX CONTACT	UFBK 2-PE-24 DC-HE-BE	6
24	RS-422/485 SURGE PROTECTOR PLUG	PHOENIX CONTACT	UFBK 2-PE-24 DC-HE-ST	6
25	INTRINSIC SAFETY BARRIER	MTL INCORPORATED	MTL 702+	1
26	INTRINSIC SAFETY BARRIER	WARRICK	SERIES 17A100	7
27	8 PIN RELAY BASES	ALLEN-BRADLEY	800H-PRT18G	3
28	GENERAL PURPOSE DPDT 10 AMP RELAY BASE	ALLEN-BRADLEY	700H-W32A1	3
29	OPERATOR INTERFACE UNIT	UTICOR	PCI 105	1
30	PUSH TO TEST TRANSFORMER PILOT LIGHT W/ GREEN LENS	ALLEN-BRADLEY	800H-PRT18G	1
31	PUSH TO TEST TRANSFORMER PILOT LIGHT W/ AMBER LENS	ALLEN-BRADLEY	800-PRT18A	1
32	MOMENTARY PUSHBUTTON SWITCH	ALLEN-BRADLEY	800H-AR201	1
33	HAND-OFF-AUTO 3 POSITION MAINTAINED SELECTOR SWITCH	ALLEN-BRADLEY	800H-JR2B	1
34	CLOSE-AUTO 2 POSITION MAINTAINED SELECTOR SWITCH	ALLEN-BRADLEY	800H-MK2A	3
35	8 PIN MALE D SHELL CONNECTOR W/ HOOD	CINCH	DE-8P / SOH-BGL	2
36	8 PIN FEMALE D SHELL CONNECTOR W/ HOOD	CINCH	DE-8S / SOH-BGL	1
37	EXTERNAL COMMON ALARM LIGHT W/ RED LENS	FEDERAL	1310BT	1
38	LEACHATE LEVEL TRANSMITTER	DELTA	S81-GX-PVC-EX	1
39	LEAK DETECTOR ELECTRODE FITTING	WARRICK	SERIES 3E2C	7
40	LEAK DETECTOR ELECTRODE	WARRICK	SERIES 3RXC6	14
41				
42				
43				
44				
45				

NOTES

1. USE MANUFACTURERS AND MODEL NUMBERS AS LISTED, UNLESS APPROVED BY OWNER DUE TO TECHNOLOGY UPGRADES.
2. WIREWAY, MOUNTING HARDWARE, WIRE, AND WIRE MARKERS SHALL BE USED AS REQUIRED.
3. PROVIDE 30% SPARE TERMINALS FOR FUTURE USE.
4. PROVIDE 10% OF EACH TYPE FUSE, LIGHT BULB, SURGE PROTECTOR, INTRINSIC BARRIER, AND I/O MODULE USE ON PROJECT FOR USE AS SPARE COMPONENTS.
5. MOUNT ICTD PROBE CENTERED ON INSIDE OF TOP OF ENCLOSURE, STANDOFF 1/2 INCH FROM TOP.
6. PROVIDE ISOLATION BARRIER AROUND INTRINSIC SAFETY BARRIERS. MOUNT ISOLATION BARRIER TO ENCLOSURE PANEL AND EXTEND TO BOTTOM OF ENCLOSURE. PROVIDE TOP ACCESS COVER.
7. CONTROL PANEL MANUFACTURER SHALL CHECK ALL COMPONENT MOUNTING LOCATIONS FOR PROPER CLEARANCE BEFORE MOUNTING COMPONENTS OR CUTTING HOLES IN ENCLOSURE.



REV	DATE	DESCRIPTION	DR BY	APP BY
1	7-83	UPGRADED CONTROLLER TO COMPUTER BASE	DLW	WJR
2		PROJECT NO. 17365	DATE	FEBRUARY 1991
PROJECT				
RESIDUALS MANAGEMENT UNIT 1				
DRAWING TITLE				
LIFT STATION				
PANEL LAYOUT				



CHM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-58270
DRAWING NO. 30

NOT FOR CONSTRUCTION

REVISIONS
REV. 1
REV. 2
REV. 3

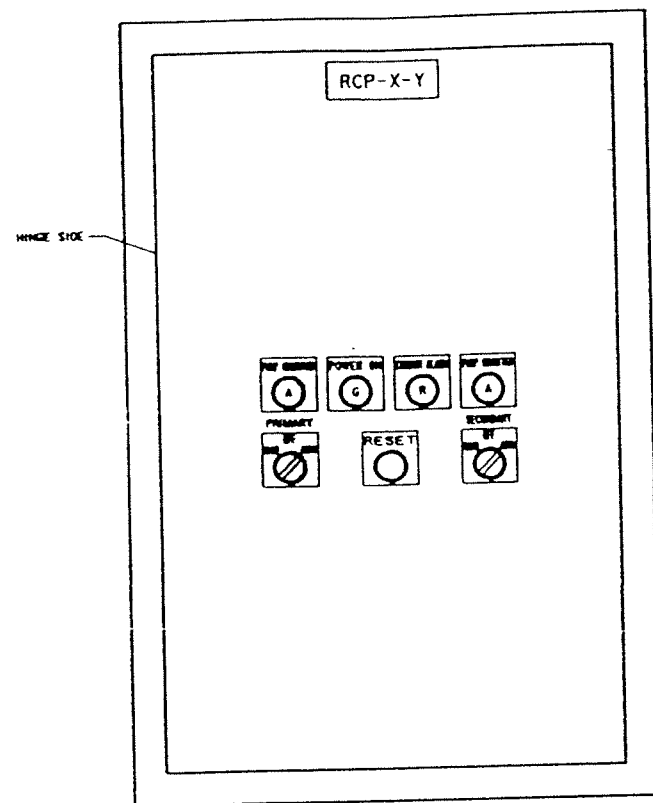
REVISIONS
REV. 4
REV. 5
REV. 6

REVISIONS
REV. 7
REV. 8
REV. 9

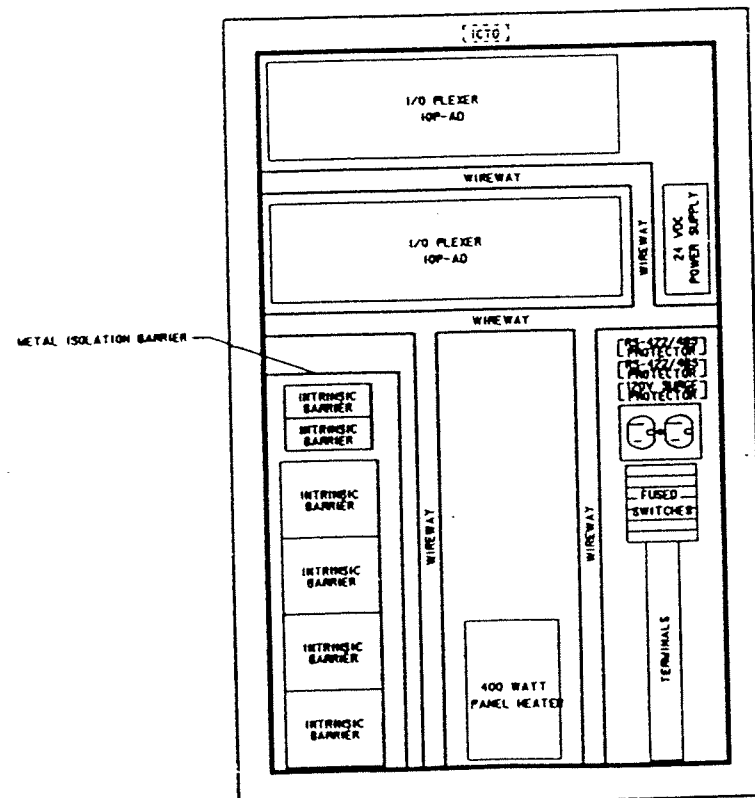
REVISIONS
REV. 10
REV. 11
REV. 12

REVISIONS
REV. 13
REV. 14
REV. 15

REVISIONS
REV. 16
REV. 17
REV. 18



RCP-X-Y
PRIMARY/SECONDARY REMOTE CONTROL PANEL
FRONT OF PANEL LAYOUT
NTS



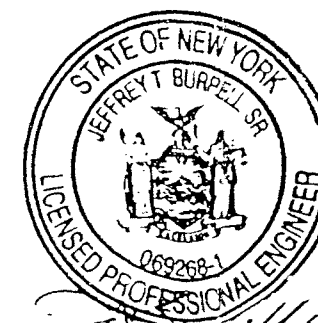
RCP-X-Y
PRIMARY/SECONDARY REMOTE CONTROL PANEL
INTERNAL PANEL LAYOUT
NTS

LIST OF MATERIALS

ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER	QUANTITY
1	SINGLE DOOR NEMA 4X STAINLESS STEEL ENCLOSURE	HOFFMAN ENGINEERING COMPANY	A-3402410SLP	1
2	STAINLESS STEEL DRIP SHIELD KIT	HOFFMAN ENGINEERING COMPANY	A-0K2485	1
3	ENCLOSURE PANEL	HOFFMAN ENGINEERING COMPANY	A-38P24	1
4	400 WATT ELECTRIC ENCLOSURE HEATER	HOFFMAN ENGINEERING COMPANY	D-AH40018	1
5	FAST OPERATING ENCLOSURE CLAMP ASSEMBLY	HOFFMAN ENGINEERING COMPANY	A-FC41253	7
6	120VAC SURGE PROTECTOR BASE	PHOENIX CONTACT	UAK 2/2-110 AC-BE	1
7	120VAC SURGE PROTECTOR PLUG	PHOENIX CONTACT	UAK 2/2-110 AC-ST	1
8	TERMINAL BLOCK	ALLEN-BRADLEY	1482-F1	21
9	FUSIBLE SWITCH	ALLEN-BRADLEY	1482-H8	7
10	FUSE - 2 AMP	LITTELFUSE	313002	4
11	FUSE - 5 AMP	LITTELFUSE	313005	3
12	POWER SUPPLY 24VDC @ 1.2 AMP	SOLA	SLB-24-012	1
13	120VAC 20 AMP DUPLEX OUTLET			1
14	DUPLEX OUTLET BOX AND COVER			1
15	ANALOG/DIGITAL I/O RACK	DUTEC	I/O PLEXER 10P-AD	2
16	SINGLE CHANNEL AC OUTPUT MODULE	DUTEC	OACB	5
17	SINGLE CHANNEL AC INPUT MODULE	DUTEC	IACB	11
18	4 TO 20 MA CURRENT INPUT MODULE	DUTEC	I1420	2
19	TEMPERATURE INPUT MODULE	DUTEC	ITP580	1
20	TEMPERATURE PROBE	OPTO-22	ICTD	1
21	RS-422/485 SURGE PROTECTOR BASE	PHOENIX CONTACT	UFBK 2-PE-24 DC-WF-BE	2
22	RS-422/485 SURGE PROTECTOR PLUG	PHOENIX CONTACT	UFBK 2-PE-24 DC-WF-ST	2
23	INTRINSIC SAFETY BARRIER	MTL INCORPORATED	MTL 702+	2
24	INTRINSIC SAFETY BARRIER	WARRICK	SERIES 17A1C0	4
25	PUSH TO TEST TRANSFORMER PILOT LIGHT W/ RED LENS	ALLEN-BRADLEY	800H-PR18R	1
26	PUSH TO TEST TRANSFORMER PILOT LIGHT W/ GREEN LENS	ALLEN-BRADLEY	800H-PR18G	1
27	PUSH TO TEST TRANSFORMER PILOT LIGHT W/ AMBER LENS	ALLEN-BRADLEY	800-PR18A	2
28	MOMENTARY PUSHBUTTON SWITCH	ALLEN-BRADLEY	800H-AR201	1
29	HAND-OFF-AUTO 3 POSITION MAINTAINED SELECTOR SWITCH	ALLEN-BRADLEY	800H-JR2B	2
30	8 PIN FEMALE D SHIELD CONNECTOR W/ HOOD	CINCH	DE-8S / SOH-BQL	1
31				
32	LEACHATE LEVEL TRANSMITTER	DELTA	581-GX-PVC-KX	2
33	LEAK DETECTOR ELECTRODE FITTING	WARRICK	SERIES 3E2C	4
34	LEAK DETECTOR ELECTRODE	WARRICK	SERIES 3MXCS	8
35				
36				
37				
38				
39				
40				

NOTES:

- USE MANUFACTURERS AND MODEL NUMBERS AS LISTED UNLESS APPROVED BY OWNER DUE TO TECHNOLOGY UPGRADES.
- WIREWAY, MOUNTING HARDWARE, WIRE, AND WIRE MARKERS SHALL BE USED AS REQUIRED.
- PROVIDE 30% SPARE TERMINALS FOR FUTURE USE.
- PROVIDE 10% OF EACH TYPE FUSE, LIGHT BULB, SURGE PROTECTOR, INTRINSIC BARRIER, AND I/O MODULE USE ON PROJECT FOR USE AS SPARE COMPONENTS.
- MOUNT ICTD PROBE CENTERED ON INSIDE OF TOP OF ENCLOSURE. STANDOFF 1/2 INCH FROM TOP.
- PROVIDE ISOLATION BARRIER AROUND INTRINSIC SAFETY BARRIERS. MOUNT ISOLATION BARRIER TO ENCLOSURE PANEL AND EXTEND TO BOTTOM OF ENCLOSURE. PROVIDE TOP ACCESS COVER.
- CONTROL PANEL MANUFACTURER SHALL CHECK ALL COMPONENT MOUNTING LOCATIONS FOR PROPER CLEARANCE BEFORE MOUNTING COMPONENTS OR CUTTING HOLES IN ENCLOSURE.
- THIS SCHEMATIC IS TYPICAL FOR REMOTE CONTROL PANELS.

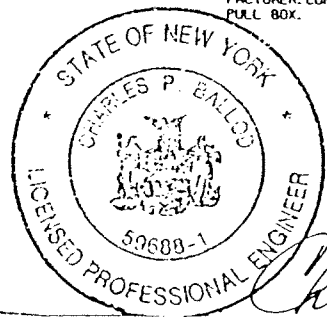
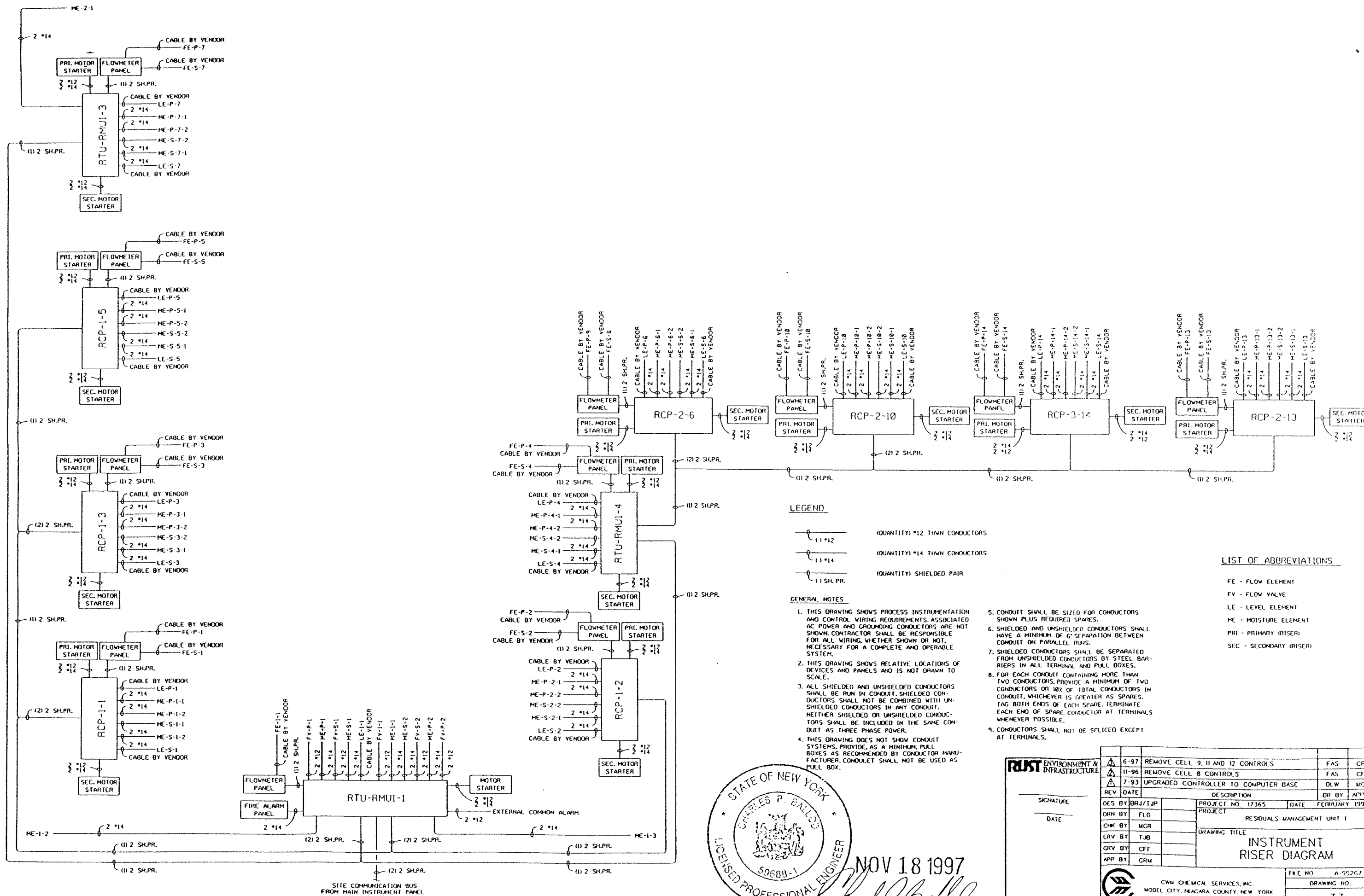


7/9/93

SEC DONOHUE
Shoreham, Vermont 05083

REV	DATE	DESCRIPTION	DATE	BY	APP. BY
1	7-93	UPGRADED CONTROLLER TO COMPUTER BASE		DLW	MOR
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

PROJECT NO. 17365
DATE FEBRUARY 1991
PROJECT RESIDUALS MANAGEMENT UNIT I
DRAWING TITLE
PRIMARY AND SECONDARY
PANEL LAYOUT
FILE NO. A-56288
DRAWING NO.
32



NOV 18 1997

Charles P. Ballou

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE
DATE

DES BY	BRJ/TJP	PROJECT NO.	17365	DATE	FEBRUARY 1991
DRN BY	FLO	PROJECT	RESIDUALS MANAGEMENT UNIT 1		
CHK BY	MGR	DRAWING TITLE	INSTRUMENT RISER DIAGRAM		
CRV BY	TJB				
GRV BY	OFF				
APP BY	GRM				

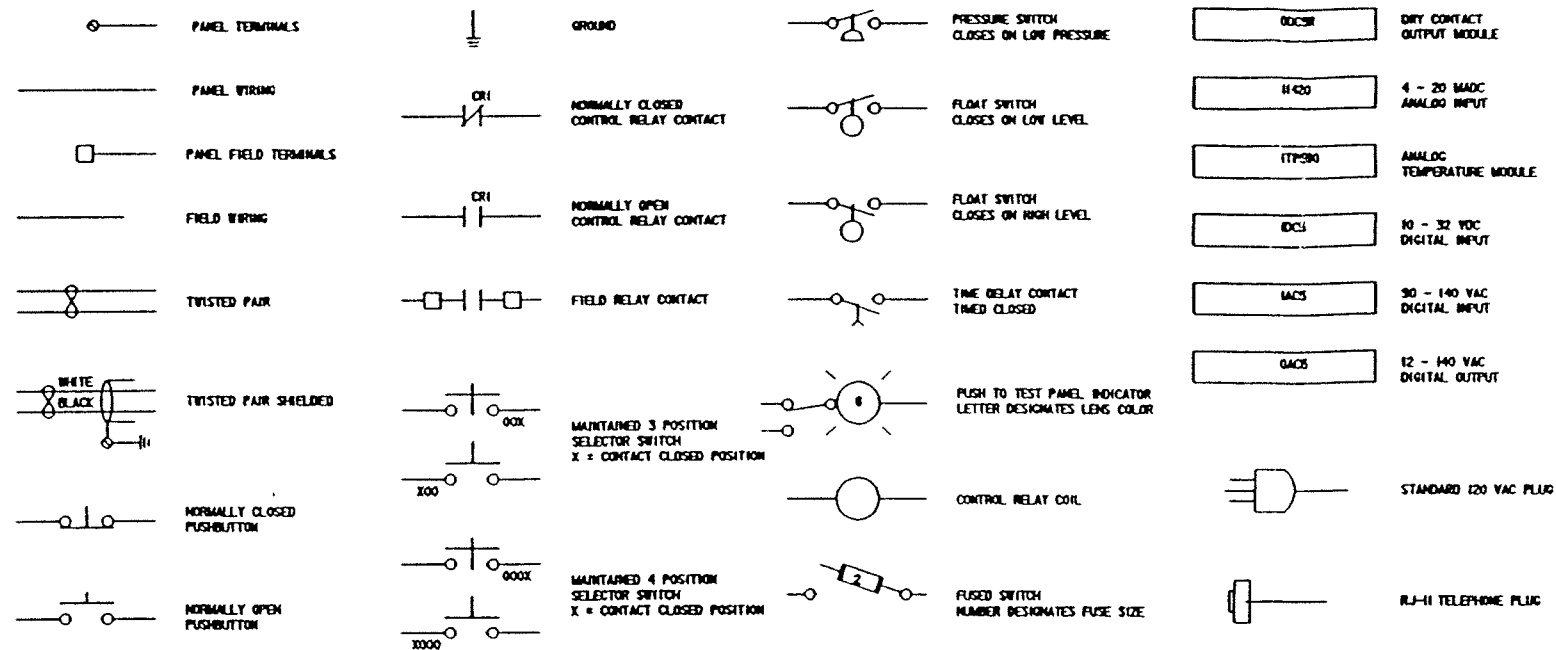


CWM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55267
DRAWING NO. 33

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

WIRING SCHEMATIC SYMBOLS



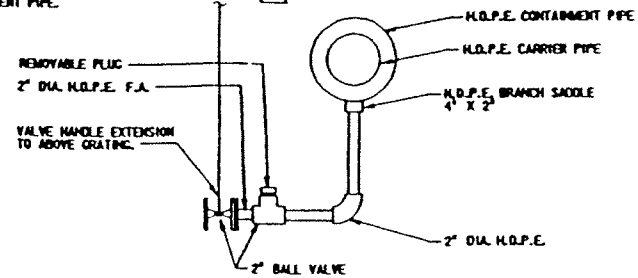
VALVE EXTENSION STEM TO 6" ABOVE GRATING. COORDINATE WITH VALVE MANUFACTURER. PROVIDE WALL SUPPORT BRACKETS AS REQUIRED.

NOTES

MOUNT PROBE FITTING 6" ABOVE GRATING IN RISER VALVETS AND 12" ABOVE GRATING IN LIFT STATION.

EXTEND ELECTRODES TO INVERT ELEVATION OF CONTAINMENT PIPE.

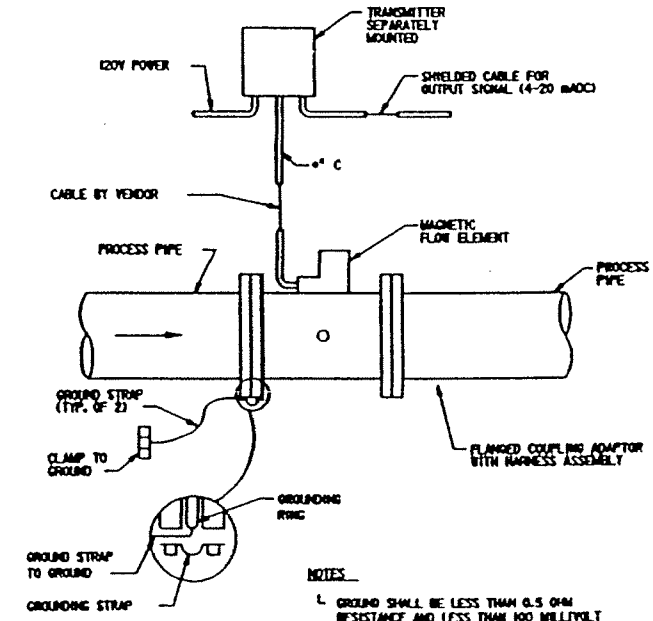
CENTERLINE OF VALVE 12" BELOW INVERT OF CONTAINMENT PIPE.



FORCEMAIN LEAK DETECTION DETAIL

NTS

901



NOTES

1. GROUND SHALL BE LESS THAN 0.5 OHM RESISTANCE AND LESS THAN 100 MILLISECOND WHEN TESTED WITH STANDARD METHODS.

FLOW ELEMENT ELECTROMAGNETIC ON CIP, DIP OR STEEL PROCESS LINE

NTS

812

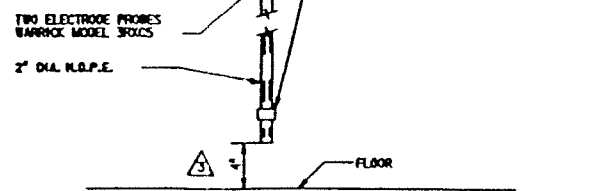
NOTES

1. PROVIDE COMPLETE SPECIFICATIONS, ITEMIZED LISTINGS, AND CATALOG CUTS FOR ALL DEVICES. PROVIDE DETAILED SHOP DRAWINGS OF LADDER DIAGRAMS AND PANEL LAYOUTS INCLUDING WIRE NUMBERS AND ELECTRICAL COMPONENT SIZINGS. PROVIDE INDIVIDUAL LOOP, TERMINAL TO TERMINAL DRAWINGS WITH PROPER IDENTIFICATION OF COMPONENTS AND LOCATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DURING FIRST 30 MONTHS AFTER SUBSTANTIAL COMPLETION OF SYSTEM, THREE (3) 8 HOUR SERVICE CALLS FOR PREVENTIVE MAINTENANCE AND TO MAKE NECESSARY ADJUSTMENTS AT NO CHARGE BASIS.
3. PROVIDE EQUIPMENT NECESSARY TO RUN COMPLETE AND OPERABLE SYSTEM WHETHER SPECIFICALLY IDENTIFIED OR NOT, MEETING ALL NEC, JIC, IEEE ELECTRICAL, AND INSTRUMENTATION CODES.
4. EQUIP PUMP CONTROL PANEL WITH THERMOSTATICALLY CONTROLLED SPACE HEATER. HEATERS SHALL OPERATE ON 120 VOLTS AC 60 HZ POWER. MANUFACTURE SHALL BE CHROMALOX, MODEL 6T-6EL. THERMOSTAT SHALL BE CHROMALOX, MODEL 6T-6EL.
5. EXTERNAL CONNECTIONS FROM CONTROL PANEL SHALL BE BY RAY OF NUMBERED TERMINAL BLOCKS. PROVIDE 20 SPARE TERMINAL CONNECTION POINTS IN ADDITION TO THOSE IDENTIFIED ON TERMINATION DRAWINGS AND REQUIRED TO COMPLETE THE WIRING OF THE PANEL.
6. CONDUCTORS SHALL NOT BE SPLICES EXCEPT AT TERMINALS. ALL CONDUCTORS EXCEPT FOR THE DATA IN-WAY SHALL BE TERMINATED USING SPINDE OR CLOSED LUG CONNECTORS. BARE WIRE ENDS ARE NOT ALLOWED.
7. PROVIDE #12 GAUGE, STRANDED, THIN WIRING ON PANEL AND #12 OR #14 FOR FIELD WIRING AS SHOWN ON RISER.

NOTES

MOUNT PROBE FITTING 6" ABOVE GRATING IN RISER VALVETS AND 24" ABOVE FLOOR IN LIFT STATION AND MANHOLES.

EXTEND ELECTRODES TO 4" ABOVE BOTTOM OF 2" H.O.P.E. PIPE.



FLOOD DETECTION DETAIL

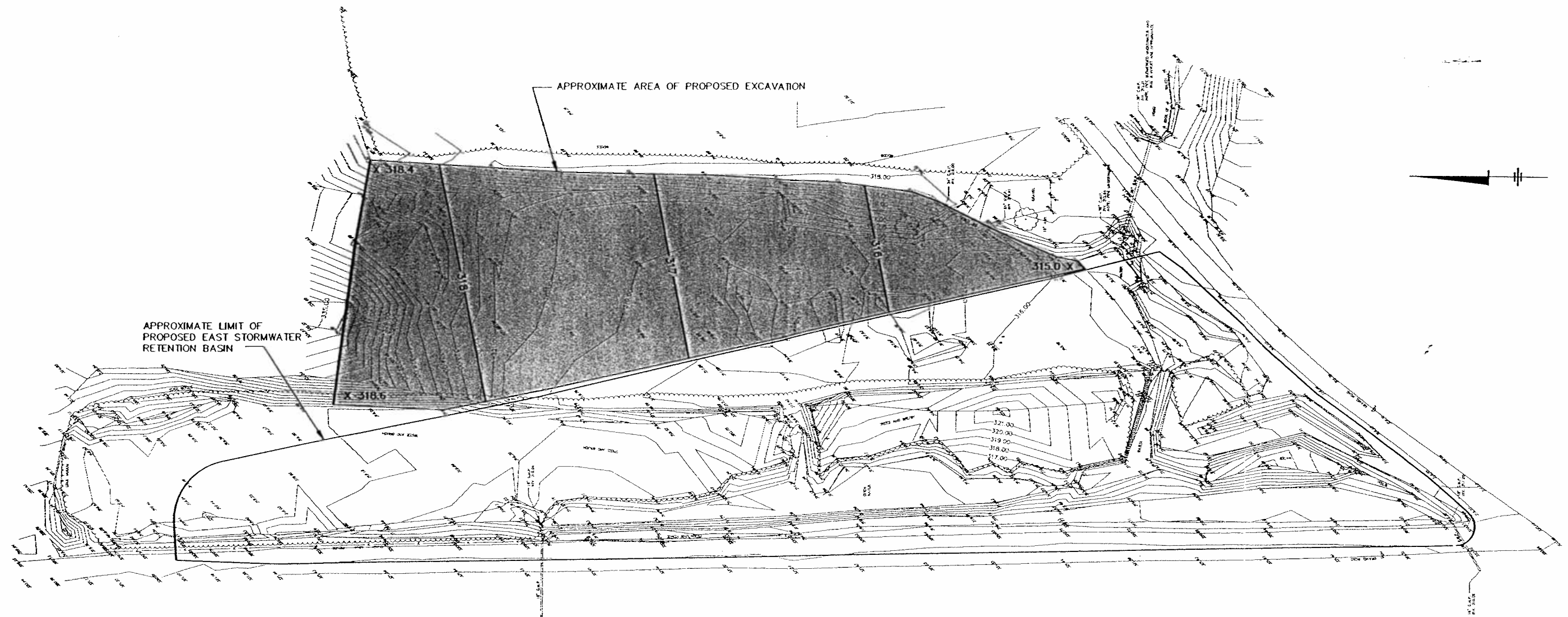
NTS

903



SEC DONOHUE
Shelbyville, Wisconsin 53083

DES BY	ORJ/TJP	PROJECT NO.	17365	DATE	FEBRUARY 1991
CHK BY	MGR	RESIDUALS MANAGEMENT UNIT 1			
APP BY	CRM	DRAWING TITLE			
INSTRUMENTATION SYMBOLS AND DETAILS					
FILE NO. A-65058					
DRAWING NO. 34					



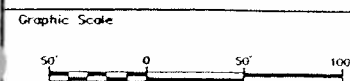
NOTES:

1. THIS MAP COMPILED FROM FIELD SURVEY BY McINTOSH & McINTOSH DATED MAY 2001 (PROJECT No. 6004-D1).
2. VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
3. CONTOUR INTERVAL EQUALS 1 FOOT.

LEGEND:

- 316 — PROPOSED ELEVATION CONTOUR
- 315.0 X PROPOSED SPOT ELEVATION

X: 05005X03.DWG
L: ON = OFF = REF
P: PAGESET/PLT-001
6/18/01 SYR-54-4NES
05005010/05005006.DWG



THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init.

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

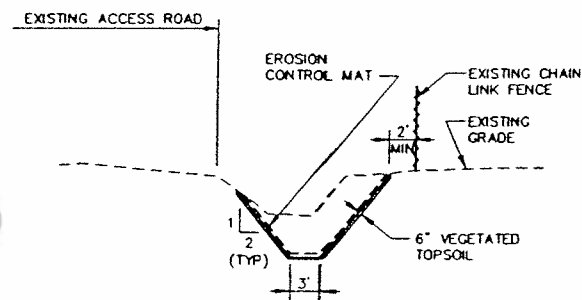
Project Mgr. _____
Designed by _____
Drawn by _____
Checked by _____
Prof. Eng. _____
PE License _____

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

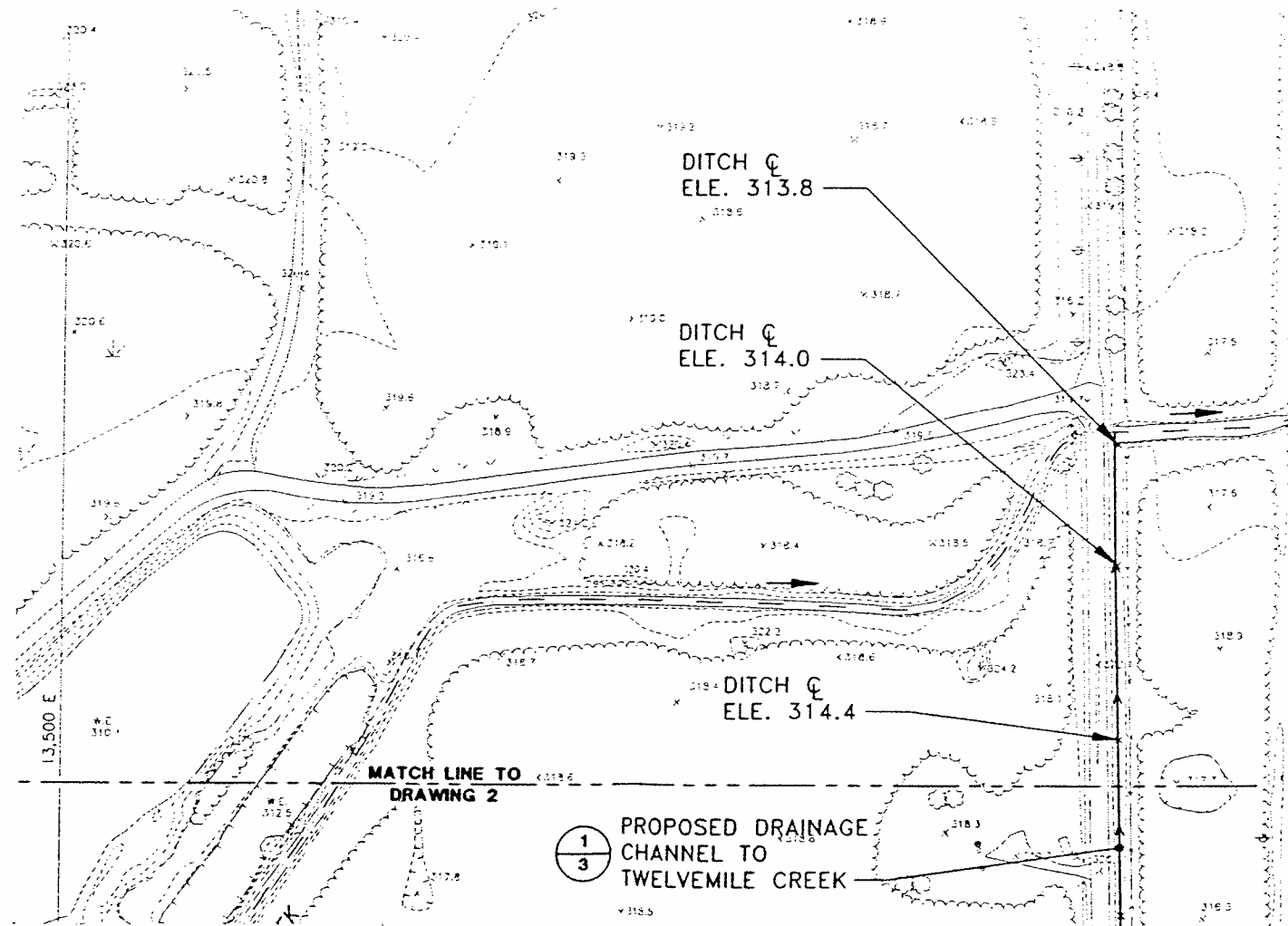
CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY

EAST STORMWATER RETENTION BASIN AREA SITE PLAN GENERAL

File Number
FILE NO.
Date
JUNE 2001
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120



TYPICAL SECTION - DRAINAGE DITCH 1
NOT TO SCALE



- LEGEND**
- VALVE
 - EDGE OF WATER
 - WATER SURFACE ELEVATION
 - EXISTING GROUND SURFACE SPOT ELEVATION
 - BRUSHLINE
 - CABLE MARKER
 - CATCH BASIN
 - DROP INLET
 - FENCE
 - FIRE HYDRANT
 - GUARD RAIL
 - LIGHT POLE
 - MISCELLANEOUS POLE
 - MONITORING WELL
 - MONUMENT
 - POST
 - SIGN
 - SWAMP
 - TRAFFIC LIGHT
 - PROPOSED GROUND SURFACE CONTOUR AND ELEVATION
 - PROPOSED GROUND SURFACE SPOT ELEVATION
 - PROPOSED GRADE BREAK
 - APPROXIMATE PROPERTY BOUNDARY LINE (SEE NOTE 2)
 - APPROXIMATE TOWN LINE (SEE NOTE 2)
 - SECTION/DETAIL REFERENCE NUMBER
 - DRAWING REFERENCE NUMBER
 - CENTERLINE CREEK
 - PROPOSED DITCH CENTERLINE
 - EXISTING GROUND SURFACE CONTOUR AND ELEVATION
 - STRUCTURE
 - RAILROAD TRACKS
 - TREE
 - TREELINE
 - UNIDENTIFIED OBJECT
 - UTILITY POLE

- NOTES:**
- THIS MAP COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 11-23-98. (AIR SURVEY CORP. PROJECT NO.7981121)
 - PROPERTY BOUNDARY AND TOWN LINE LOCATIONS ARE APPROXIMATE ONLY AND WERE SCALED FROM A SITE PLAN PREPARED BY WEHRAN-NEW YORK, INC. DATED (2/16/93).
 - VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
 - GRID BASED ON LOCAL COORDINATE SYSTEM.
 - CONTOUR INTERVAL 2 FT. (EXCEPT WHERE NOTED)

X: 0509301.DWG
L: DIMS, OFF-REF
P: STD-PCP/DL
1/19/00 SYR-54-KLN KLN SDL
DWG 3010/05093009.DWG



NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init
1	5/20/00	STORAGE AREA OUTLET/CULVERT LOCATION MOVED	
2	7/12/00	GENERAL	

Project Mgr. _____
Designed by _____
Drawn by _____
Checked by _____
Prof. Eng. _____
PE License _____

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

CWM CHEMICAL SERVICES, LLC • MODEL CITY FACILITY
**COMPENSATORY FLOOD STORAGE AREA
PLAN AND SECTION**
GENERAL

File Number
FILE NO
Date
JULY 2000
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Tawpath Road
Syracuse, NY 13214
315-446-9170



- 
PUMP SLED PROFILE
 NTS



SHEET
2