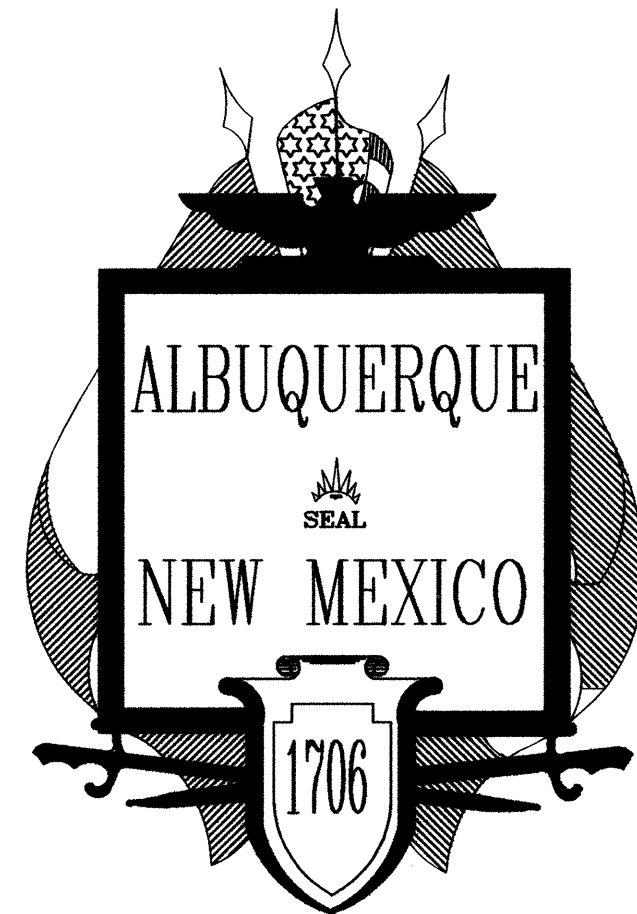


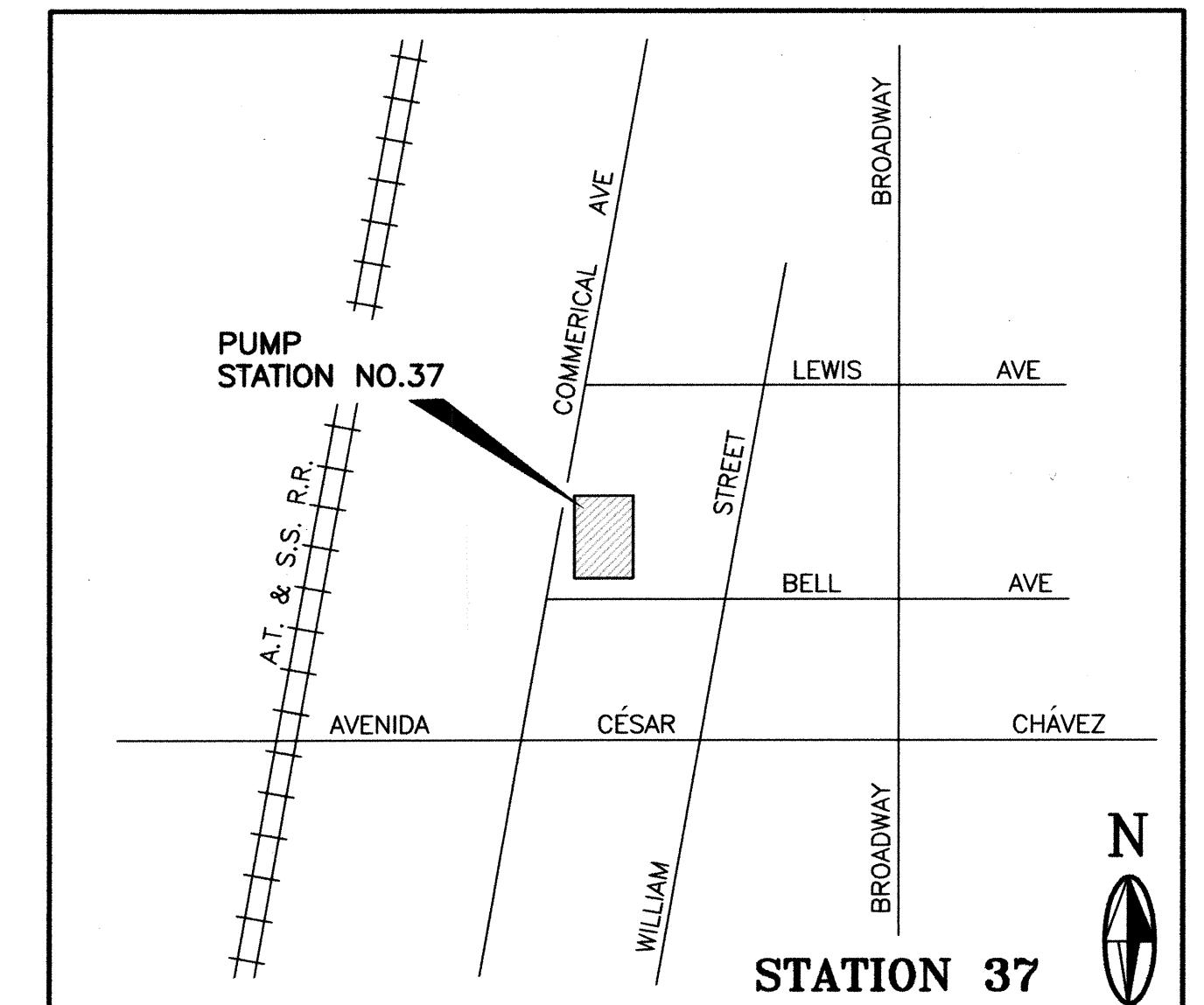


CITY OF Albuquerque

CITY OF ALBUQUERQUE, NEW MEXICO
PUBLIC WORKS DEPARTMENT

STORM WATER PUMP STATION NO. 37 BELL REHABILITATION

JULY 2002



ZONE ATLAS: MAP L-14

LOCATION MAP
N.T.S.

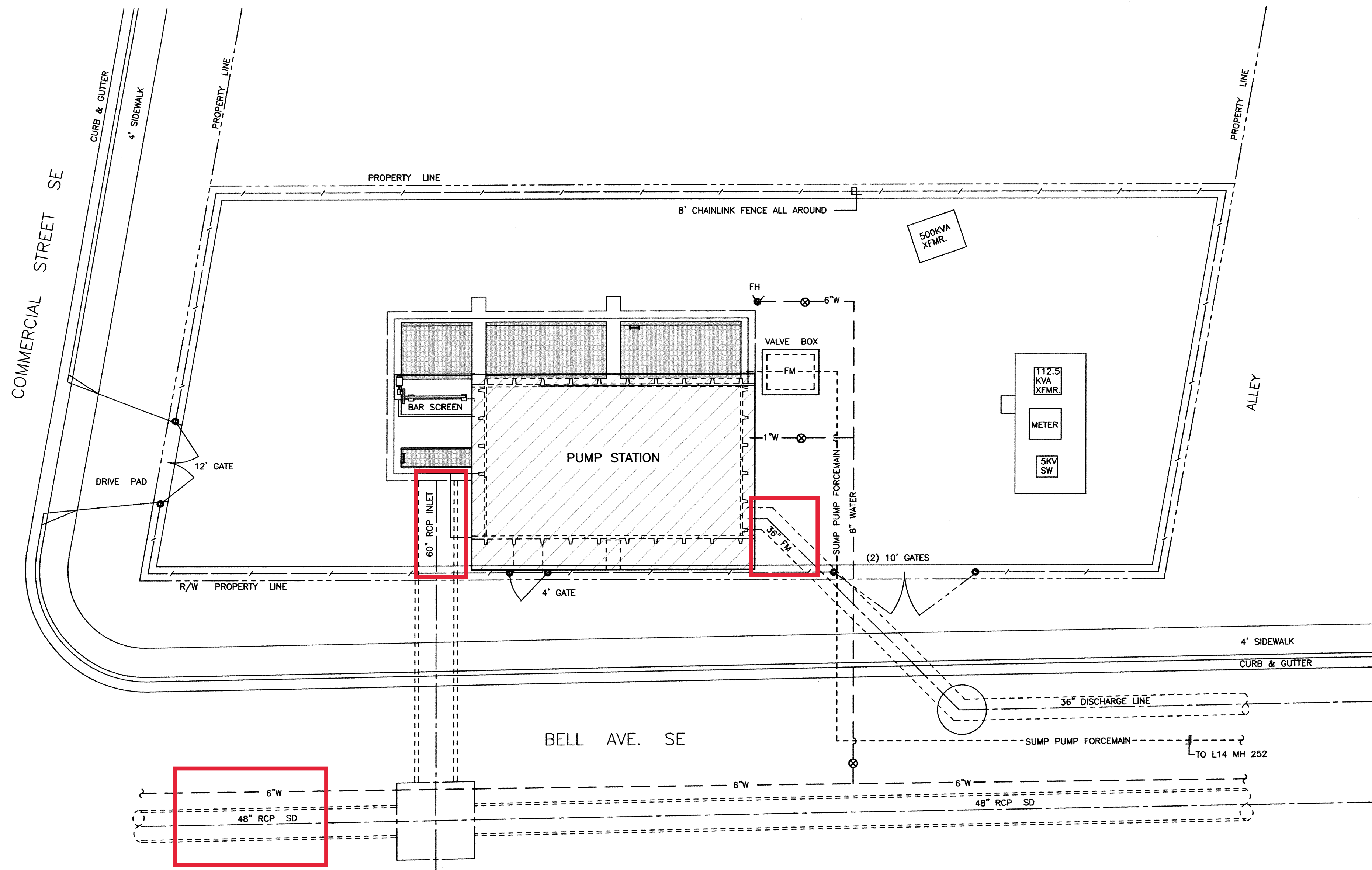
INDEX TO DRAWINGS

SEQ.	SHEET	TITLE	SEQ.	SHEET	TITLE	SEQ.	SHEET	TITLE
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2	C-02	EXISTING BELL PUMP STATION NO. 37 - LOCATION MAP & SITE PLAN	6	E-02	ELECTRICAL ONE-LINE DIAGRAM	20	I-02	BELL STATION #37 ELECTRICAL P & ID DIAGRAM, SHEET 1
3	C-03	BELL PUMP STATION NO. 37 - PUMP AND PIPING MODIFICATIONS PLANS, SECTION AND DETAILS	7	E-03	BELL STATION #37 ELECTRICAL SITE PLANS	21	I-03	BELL STATION #37 ELECTRICAL P & ID DIAGRAM, SHEET 2
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			16	E-12	BELL STATION #37 ELECTRICAL DETAILS			
			17	E-13	BELL STATION #37 LIFT PUMP #1 CONNECTION DIAGRAMS AND ALARM			
			18	E-14	BELL STATION #37 LIFT PUMP #2 AND #3 CONNECTION DIAGRAMS			

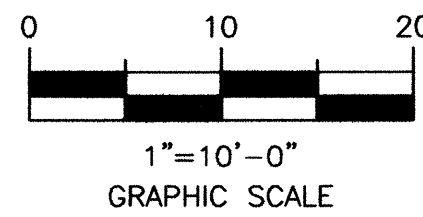
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REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE	
		DRC Chairman		<i>[Signature]</i>		7-19-02	
		Transportation		N/A		7/16/02	
		Water/Wastewater		<i>[Signature]</i>		7/16/02	
		Hydrology		<i>[Signature]</i>		7/16/02	
		Parks					
Constr. Coord.		<i>[Signature]</i>		7-19-02		7/19/02	
City Project No.				4682.91		Sheet 1 Of 25 (C-01)	



EXISTING STATION NO.37 SITE PLAN
SCALE: 1"=10'-0"



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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP
TITLE: STORM WATER PUMP STATION #37 REHABILITATION
EXISTING BELL PUMP STATION #37
LOCATION MAP AND SITE PLAN

DESIGN REVIEW COMMITTEE
APPROVED
JUL 19 2002
DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL
APPROVED
JUL 19 2002
CITY ENGINEER

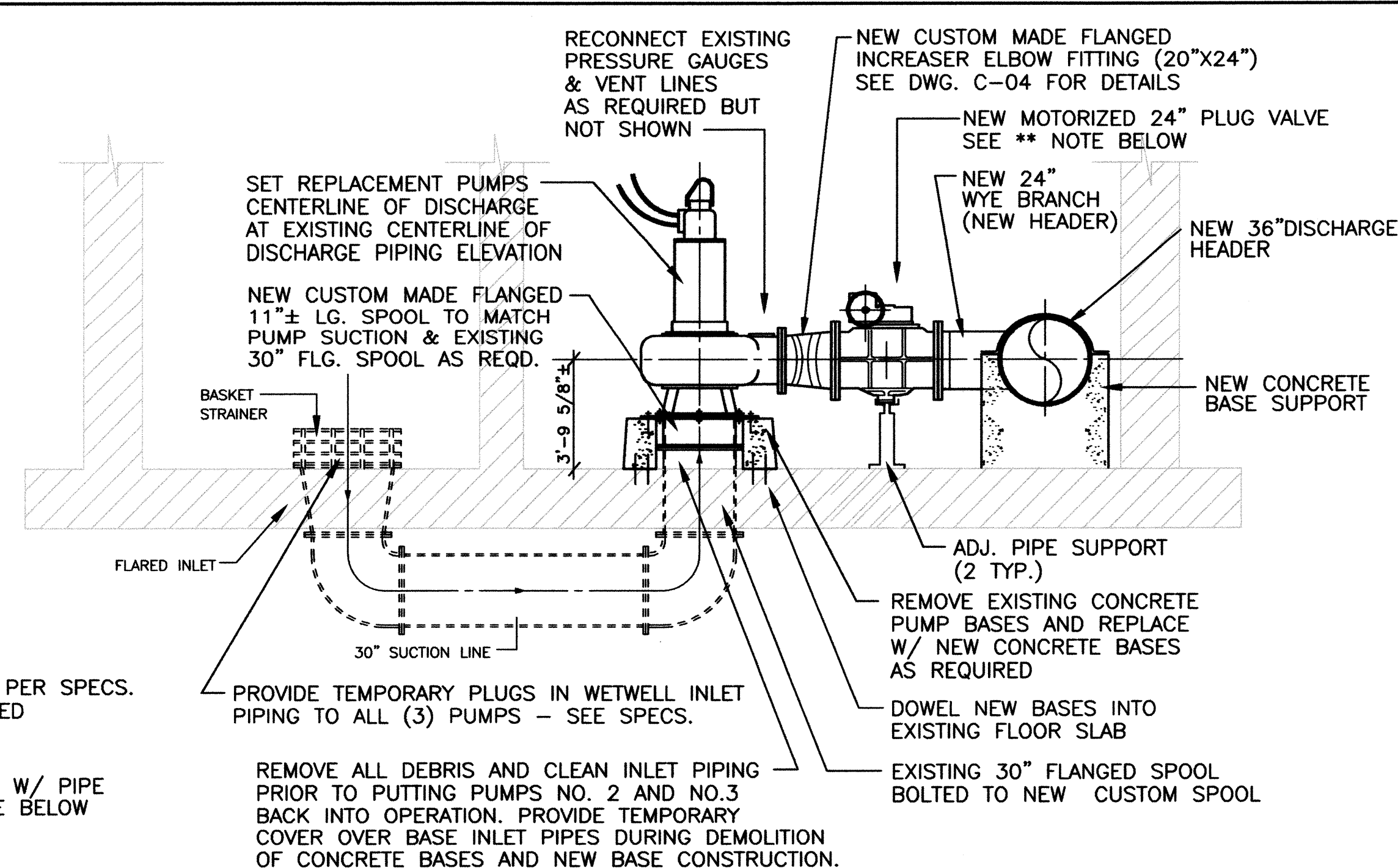
Last Design Update

City Project No. 4682.91

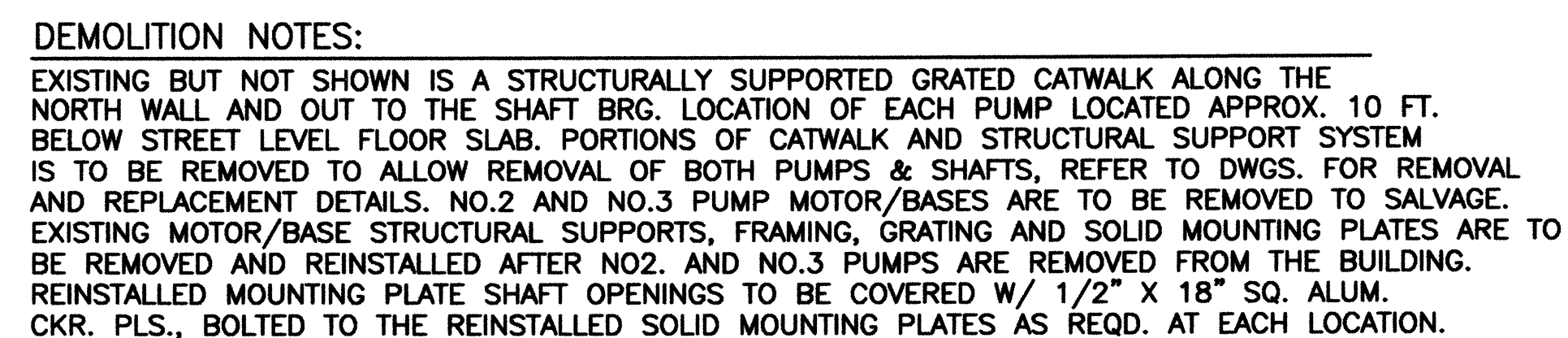
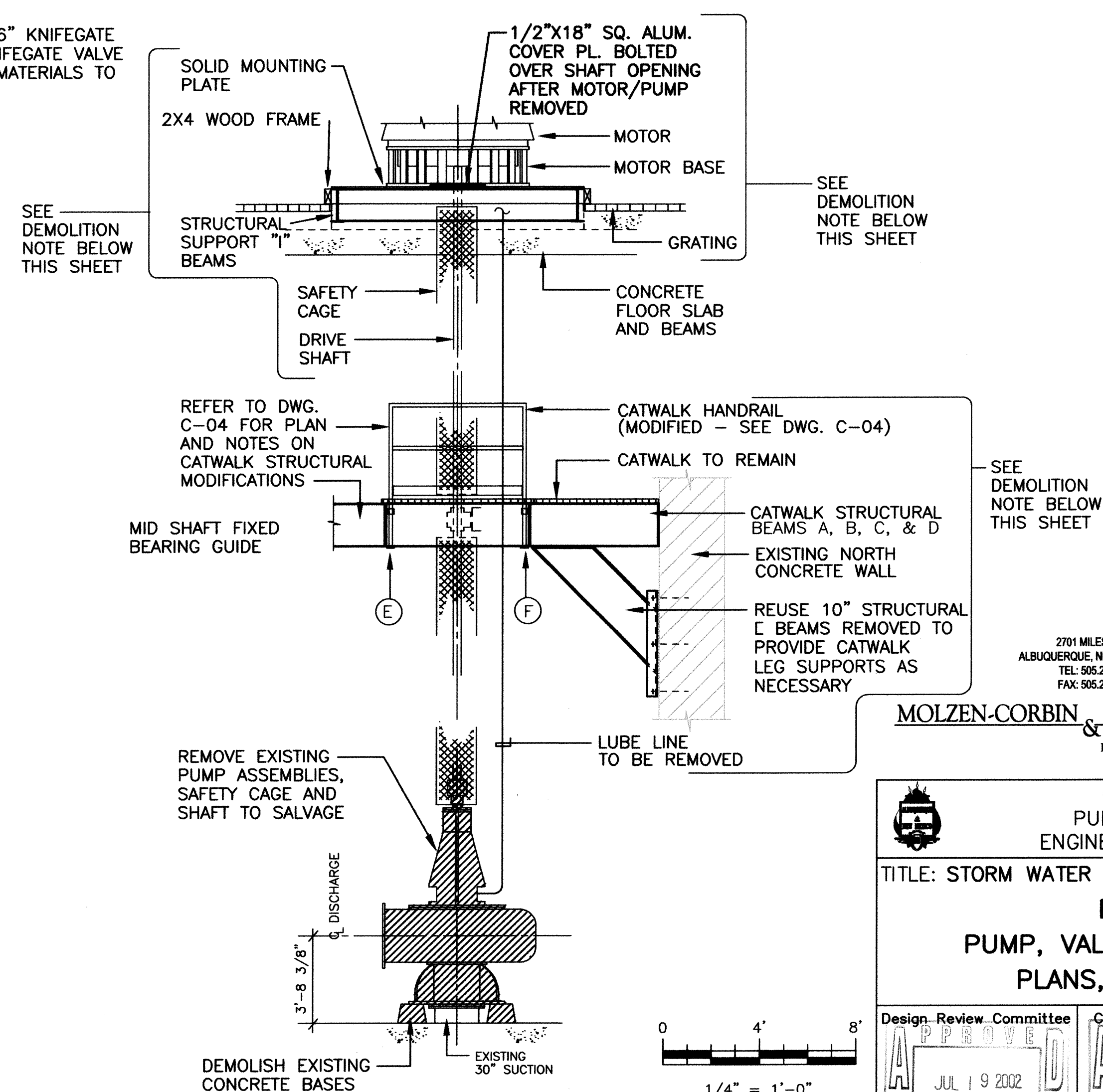
Zone Map No. L-14

Sheet C-02 2 of 25

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
	NO.	BY	DATE	NO.	BY	DATE	NO.
REVISIONS		REVISIONS		REVISIONS		REVISIONS	
NO. DATE		NO. DATE		NO. DATE		NO. DATE	
BY		BY		BY		BY	
DESIGNED BY BB/RM		DESIGNED BY BB/RM		DESIGNED BY BB/RM		DESIGNED BY BB/RM	
DATE NOV. 1998		DATE NOV. 1998		DATE NOV. 1998		DATE NOV. 1998	
DRAWN BY C.J. SPINELLO		DRAWN BY C.J. SPINELLO		DRAWN BY C.J. SPINELLO		DRAWN BY C.J. SPINELLO	
DATE NOV. 1998		DATE NOV. 1998		DATE NOV. 1998		DATE NOV. 1998	
CHECKED BY RM		CHECKED BY RM		CHECKED BY RM		CHECKED BY RM	
DATE NOV. 1998		DATE NOV. 1998		DATE NOV. 1998		DATE NOV. 1998	



MODIFIED PUMP ILLUSTRATIVE SECTION (1)
N.T.S. (SIMILAR FOR BOTH PUMPS)

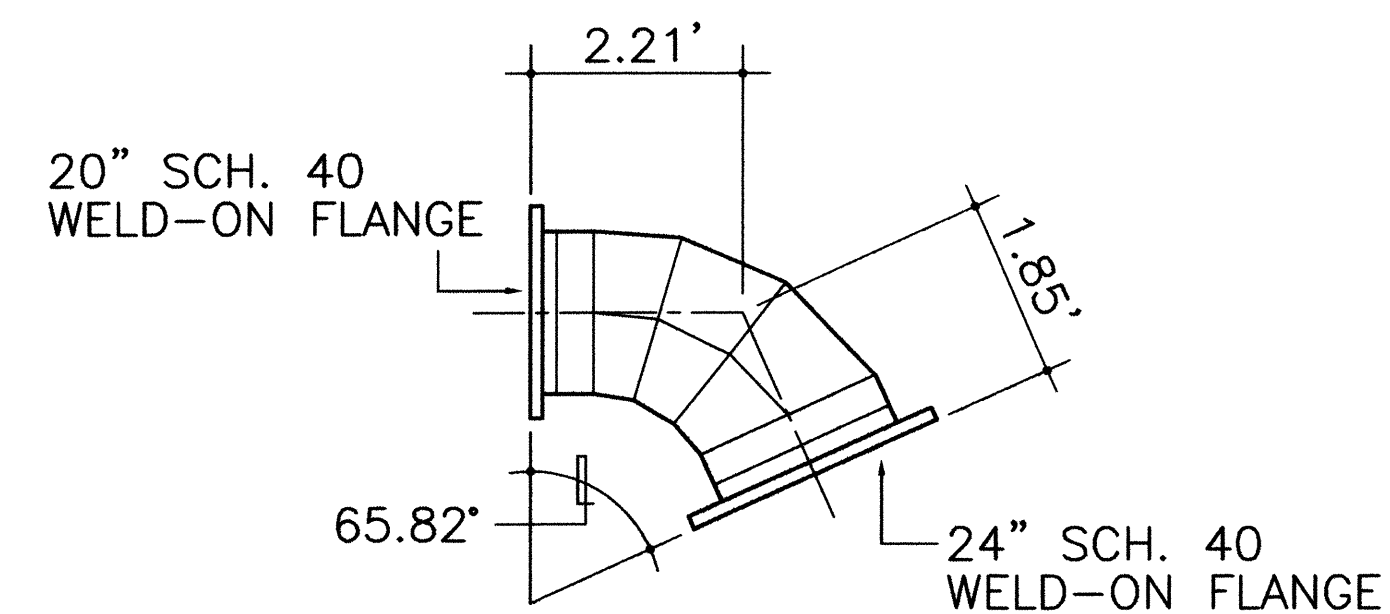
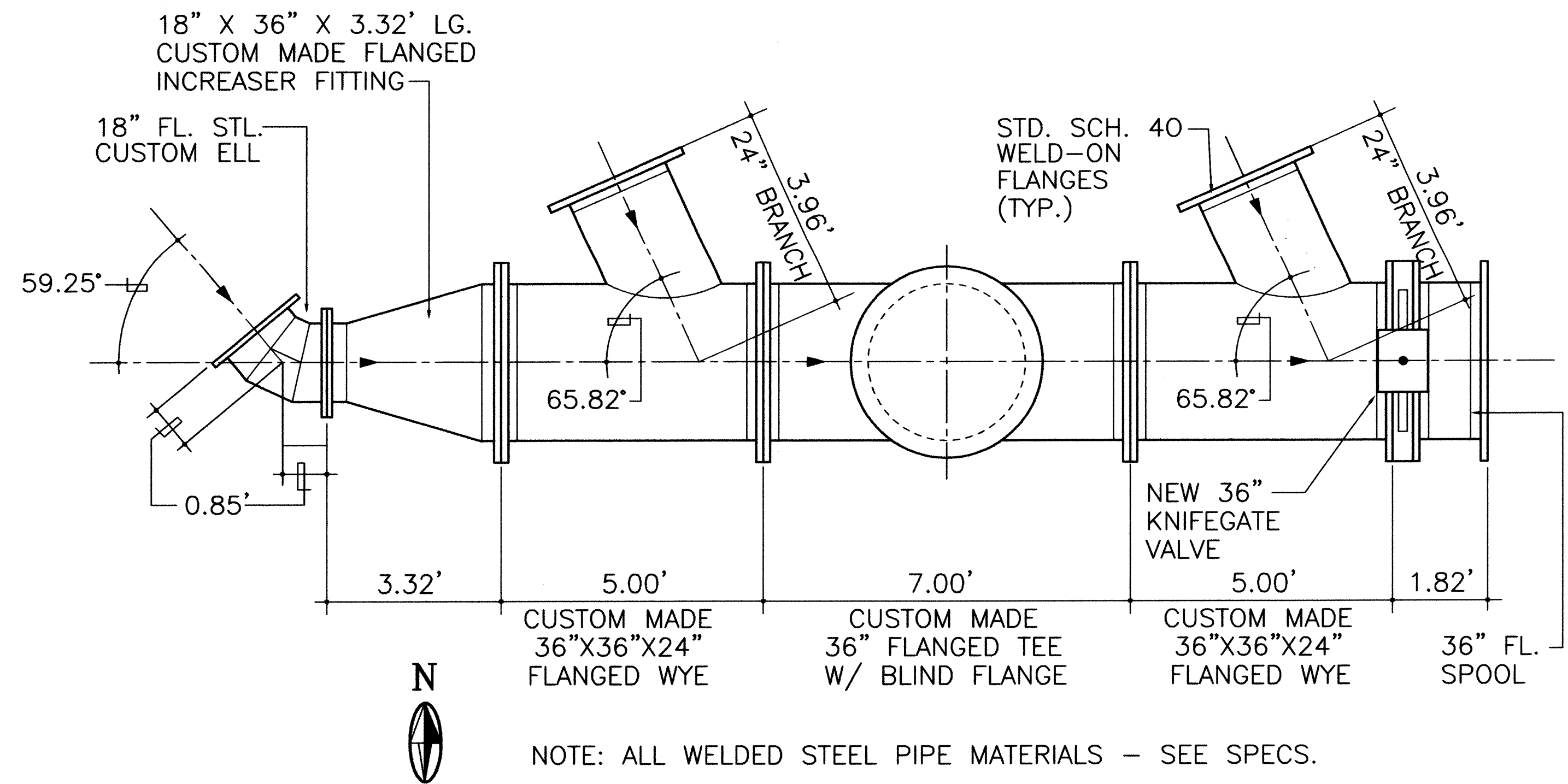
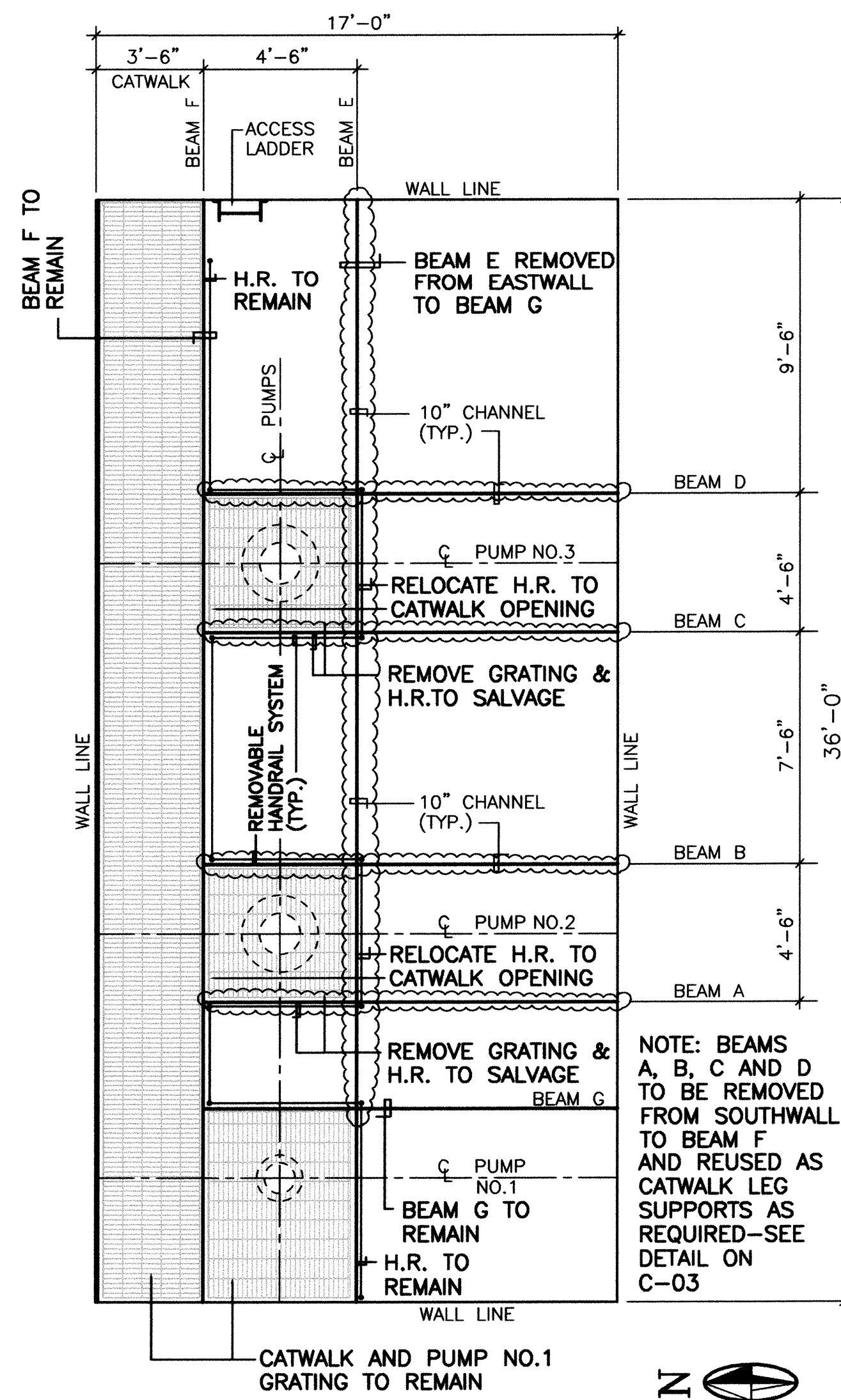


EXISTING POWER CABLES TO PUMP MOTORS NO.2 & NO.3 MUST BE DISCONNECTED FROM POWER AND REMOVED PRIOR TO PUMP REMOVAL.

SCALE: 1/4" = 1'-0"

SCALE: NOT TO SCALE

REHABILITATION MODIFICATIONS DETAILS 37									
CONTRACTOR INSPECTED BY ACCEPTANCE BY VERIFICATION BY DRAWINGS CORRECTED BY DATE DATE DATE DATE DATE DATE									
ENGINEER'S SEAL SURVEY INFORMATION BENCH MARKS AS BUILT INFORMATION									
NO. BY DATE									
NO. DATE REMARKS BY									
DESIGNED BY DRAWN BY BB/RM/CS C.J. SPINELLO DATE DATE FEB. 2000 FEB. 2000									
REVISIONS DESIGN									
Mo./Day/Yr. Mo./Day/Yr.									
Sheet 3 Of 25									
C-03 37									



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MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL STATION #37 DISCHARGE HEADER DETAIL AND MODIFIED PUMP ROOM CATWALK PLAN	
Design Review Committee APPROVED JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVED JUL 19 2002 CITY ENGINEER
City Project No. 4682.91	Zone Map No. L-14
Designed By: RM/CS Drawn By: C.J. SPINELLO Checked By: RM	REVISIONS DATE: FEB. 2000 DATE: FEB. 2000 DATE: FEB. 2000
Mo./Day/Yr.	Mo./Day/Yr.
Sheet 4 of 25 C-04	

POWER	SCHEMATICS	ONE-LINE DIAGRAMS	ONE-LINE DIAGRAMS	ABBREVIATIONS CONT.
LPA-5 EP DUPLEX RECEPTACLE EP - EXPLOSIONPROOF GFI - GRD FAULT INTERRUPTER WP - WEATHERPROOF PP1-2 SPECIAL RECEPTACLE ① JUNCTION BOX ON CEILING ② JUNCTION BOX ON WALL ⏏ FUSED COMBINATION STARTER # EQUIPMENT SEE ABBREVIATIONS M SINGLE PHASE MOTOR M THREE PHASE MOTOR ⊖ THERMOSTAT • PUSHBUTTON ESS - EMERGENCY STOP BUTTON S/S - START/STOP UH UNIT HEATER EC EVAPORATIVE COOLER ⊕ GROUND ROD G GROUND CONDUCTOR EXOTHERMIC WELD VS SOLENOID VALVE 30A DISCONNECT SWITCH GH GAS HEATER XXXX CONDUIT IDENTIFIER XXXX - NUMBER	FUSE TERMINAL BLOCK MOUNTED FUSE SELECTOR SWITCH A B C INDICATES SWITCH POSITION X INDICATES CLOSED CONTACT O INDICATES OPEN CONTACT CENTRIFUGAL SWITCH NORMALLY OPEN PUSHBUTTON NORMALLY CLOSED PUSHBUTTON TIME DELAY RELAY CONTACT OPEN AFTER DROP OUT # = OPERATING COIL TIME DELAY RELAY CONTACT CLOSE AFTER DROP OUT # = OPERATING COIL TIME DELAY RELAY CONTACT CLOSE AFTER ENERGIZING # = OPERATING COIL NORMAL OPEN LEVEL SWITCH NORMAL CLOSED LEVEL SWITCH OPEN PRESSURE SWITCH NORMALLY OPEN LIMIT SWITCH NORMALLY CLOSED LIMIT SWITCH TORQUE SWITCH NORMALLY OPEN CONTACT R INDICATES COIL REFERENCE NORMALLY CLOSED CONTACT R INDICATES COIL REFERENCE OPEN TEMPERATURE SWITCH RELAY COIL R-RELAY DESIGNATION PILOT LIGHT R INDICATES COLOR R-RED G-GREEN A-AMBER W-WHITE MOTOR SHIELD CIRCUIT BREAKER SWITCH OVERLOAD'S	2.6 IMP. 240V 5KVA 120V TRANSFORMER 240V - PRIMARY VOLTAGE 5KVA - KVA RATING 120V - SECONDARY VOLTAGE 2.6 IMP - TRANSFORMER IMPEDANCE 30 GROUNDED WYE 30 UNGROUNDED DELTA CURRENT TRANSFORMER 300:5 - INDICATES CT RATIO (2) - INDICATES QUANTITY FUSED POTENTIAL TRANSFORMER 480V - PRIMARY VOLTAGE 120V - SECONDARY VOLTAGE (2) INDICATES QUANTITY SWITCHBOARD METER, # INDICATES A - AMMETER ET - ELAPSED TIME KW - KILOWATT KWH - KILOWATT-HOUR KWH - HOUR-DEMAND V - VOLTMETER GROUND THERMAL OVERLOAD SURGE ARRESTER DOUBLE THROW DISCONNECT 100 A- AMPERAGE RATING SINGLE THROW DISCONNECT 60A - AMPERAGE RATING 3P - NUMBER OF POLES DRAWOUT FUSE & RATING CIRCUIT BREAKER 100A - TRIP RATING 225A - FRAME RATING (FOR ADJUSTABLE TRIP BREAKERS) 3P - NUMBER OF POLES M - MAGNETIC TRIP LOW VOLTAGE AIR CIRCUIT BREAKER E - INDICATES ELECTRICAL SHUNT TRIP M - INDICATES MECHANICAL SHUNT TRIP 1200AF - FRAME RATING 800AT - TRIP RATING SINGLE PHASE MOTOR THREE PHASE MOTOR KIRK KEY INTERLOCK FUSED SWITCH COMBINATION STARTER 60A - INDICATES SWITCH RATING 45A - INDICATES FUSE SIZE # - NEMA STARTER SIZE LTR = TYPE FV2S - FULL VOLTAGE 2 SPEED FVR - FULL VOLTAGE REVERSING FVNR - FULL VOLTAGE NON-REVERSING RVAT - REDUCED VOLTAGE AUTOTRANSFORMER PW - PART WINDING MV - MEDIUM VOLTAGE AFD - ADJUSTABLE FREQUENCY DRIVE	MOTOR CIRCUIT PROTECTOR COMBINATION STARTER 100A IT - INSTANTANEOUS TRIP RATING 60CA - CONTINUOUS AMP # - NEMA STARTER SIZE ## - TYPE DISTRIBUTION PANELBOARD POWER FACTOR CORRECTION CAPACITOR LIGHTNING ARRESTOR TRANSIENT SUPPRESSOR CIRCUITING PHASE CONDUCTOR NEUTRAL CONDUCTOR SWITCHED CONDUCTOR GROUNDING CONDUCTOR HOMERUN INDICATION CONTROL CONDUCTOR 4 - INDICATES # OF COND. SHIELDED PAIR 4 - INDICATES # OF PAIRS MANUFACTURER SUPPLIED CONDUIT TURNS DOWN CONDUIT TURNS UP SURFACE MOUNTED CONDUIT BURIED OR EMBEDDED CONDUIT GROUND WIRE ABBREVIATIONS A AMPERES AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE BSCP BAR SCREEN CONTROL PANEL CJB CONTROL JUNCTION BOX CTL. PNL. CONTROL PANEL CT CURRENT TRANSFORMER DP# DISTRIBUTION PANEL & IDENTIFYING LETTER DV DISCHARGE VALVE DVCP DISCHARGE VALVE CONTROL PANEL ECU EVAPORATIVE COOLER UNIT EMT ELECTRICAL METALLIC TUBING FE FLOW ELEMENT FT FLOW TRANSMITTER FTI FLOW TRANSMITTER/INDICATOR FVNR FULL VOLTAGE NON-REVERSING GUH GAS UNIT HEATER GFI GRD FAULT INTERRUPTING RECEPTACLE GRD, G GROUND HID HIGH INTENSITY DISCHARGE HVAC HEATING, VENTILATION, AIR CONDITIONING IC INSTRUMENT CABINET J JUNCTION JB JUNCTION BOX KV KILO VOLT KVA KILO VOLT-AMPERE KW KILOWATT KWH KILOWATT-HOUR KVAR KILO VOLT AMPERE REACTIVE	LINE LE LEVEL ELEMENT LFMC LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT LI LEVEL INDICATOR LSH LEVEL SWITCH HIGH LTI LEVEL TRANSMITTER/INDICATOR LT LEVEL TRANSMITTER M MAGNETIC TRIP MCU MOTOR CONTROL UNIT MCC MOTOR CONTROL CENTER MOV MOTOR OPERATED VALVE N NEUTRAL NC NORMALLY CLOSED NEMA NATIONAL ELECTRICAL MANUFACTURER'S ASSOC NIC NOT IN CONTRACT NIU NOT IN USE NO NORMALLY OPEN N.T.S. NOT TO SCALE OFE OWNER FURNISHED EQUIPMENT OL'S OVERLOADS (THERMAL OVERLOAD CONTACTS) P#CR PUMP NUMBER CONTROL RELAY PBV PUMP BYPASS CONTROL VALVE PCB POLYCHLORINATED BIPHENYL PCP PUMP CONTROL PANEL PEC PHOTO-ELECTRIC CELL PF POWER FACTOR PFCC POWER FACTOR CORRECTION CAPACITOR PH PHASE PNM PUBLIC SERVICE COMPANY OF NEW MEXICO PSH PRESSURE SWITCH HIGH (HIGH DISC. PRESS. SWITCH) PSL PRESSURE SWITCH LOW PT POTENTIAL TRANSFORMER PTT PRESSURE TRANSDUCER TRANSMITTER PVC POLYVINYL CHLORIDE RMC RIGID METAL CONDUIT, GALVANIZED RTB REMOTE TERMINAL BLOCK RTU-TB REMOTE TERMINAL UNIT TERMINAL BLOCK RTD RESISTANCE TEMPERATURE DEVICE SP SPARE SPCP SUMP PUMP CONTROL PANEL SW SWITCH SYM SYMMETRICAL TB TERMINAL BLOCK TE TEMPERATURE ELEMENT (MOTOR RTD) TEL TELEMETRY TSH TEMP. SWITCH HIGH (HIGH AMBIENT TEMP. SWITCH) TSP TWISTED SHIELDED PAIR TSL TEMP. SWITCH LOW (LOW AMBIENT TEMP. SWITCH) TWSH TWISTED SHIELDED CONDUCTORS TYP TYPICAL UH UNIT HEATER V VOLT VAC VOLTS ALTERNATING CURRENT VDC VOLTS DIRECT CURRENT VIBJB VIBRATION SENSOR JUNCTION BOX VLV VALVE LOCATED ITEM VS SOLENOID VALVE W WIRE WH WATER HEATER WP WEATHERPROOF WT WATERTIGHT XFMR TRANSFORMER XMTR TRANSMITTER Y WYE ZSC POSITION SWITCH CLOSED ZSO POSITION SWITCH OPEN Δ DELTA Φ PHASE PXXX POWER CONDUCTORS CXXX CONTROL CONDUCTORS LXXX LIGHTING & RECEPTACLE CONDUCTORS
TERMINALS	LIGHTING			
○ MCU, MCC, DP'S □ PLC/CONTROL PANEL ▣ ELECT. VALVE ACTUATOR ⊙ FIELD JB ∅ TEL ▼ MOTOR RESISTER TERMINAL ⊙ PACKAGE CONTROL ▼ PACKAGE CONTROL #2	FLUORESCENT CEILING FIXTURE TYP. { 1 FIXTURE TYPE PER SPECIFICATION SCHEDULE WALL FIXTURE # DESIGNATES TYPE, LETTER DESIGNATES SWITCH PHOTOELECTRIC CELL SWITCH, # INDICATES: 3 - THREE WAY 4 - FOUR WAY a - SWITCH DESIGNATION K - KEY OPERATED WP - WEATHERPROOF DP - DOUBLE POLE			
				AS BUILT INFORMATION BENCH MARKS SURVEY INFORMATION FIELD NOTES ENGINEER'S SEAL REVISIONS DESIGN NO. DATE REMARKS DESIGNED BY WNH DATE 10-00 DRAWN BY RA DATE 10-00 CHECKED BY SES DATE 7-02
				2701 MILES RD SE ALBUQUERQUE, NM 87106 TEL: 505.242-6700 FAX: 505.242-0873 MOLZEN-CORBIN & Associates ENGINEERS/ARCHITECTS/PLANNERS CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP TITLE: STORM WATER PUMP STATION #37 REHABILITATION ELECTRICAL LEGEND Design: Review Committee City Engineer Approval APPROVED JUL 19 2002 DESIGN REVIEW COMMITTEE APPROVED JUL 19 2002 CITY ENGINEER City Project No. 4682.91 Zone Map No. L-14 Sheet 5 of 25 E-01

NOTE: SOME SYMBOLS SHOWN
BUT NOT USED.

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PANEL ELP									
DESCRIPTION	BRKR	CKT	LOAD PER PHASE		CKT	BRKR	DESCRIPTION		
			A	B					
ELECTRIC VALVE ACTUATOR #1	30	1			2	30	ELECTRIC VALVE ACTUATOR #2		
	30	3			4	30			
	30	5			6	30			
ELECTRIC VALVE ACTUATOR #3	30	7			8	20	PLC		
	30	9			10				
	30	11			12				
		13			14				
		15			16				
		17			18				
		19			20				
		21			22				
		23			24				

208Y/120 VOLT
100 AMP BUS,
100 AMP MCB, NEMA 1

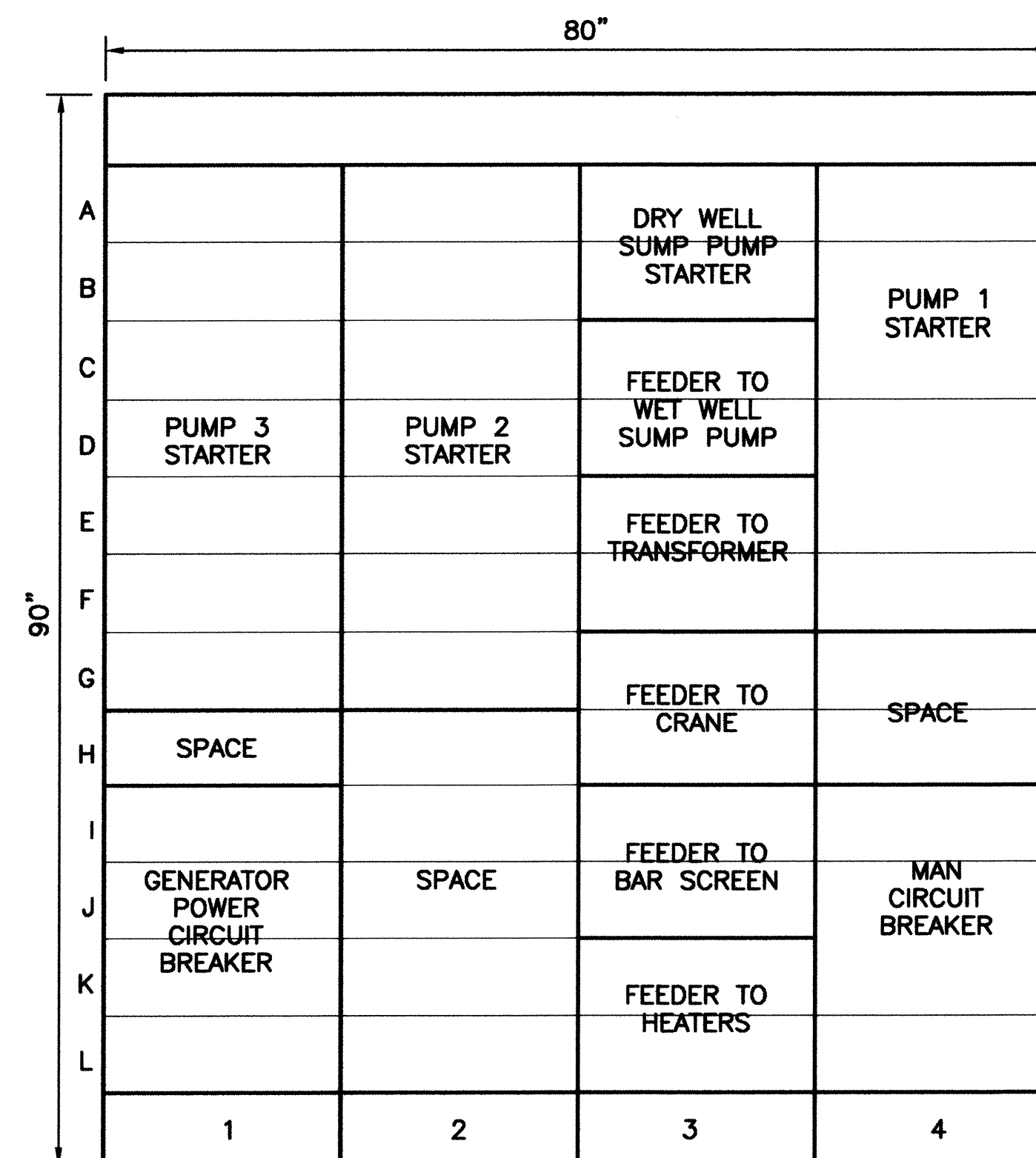
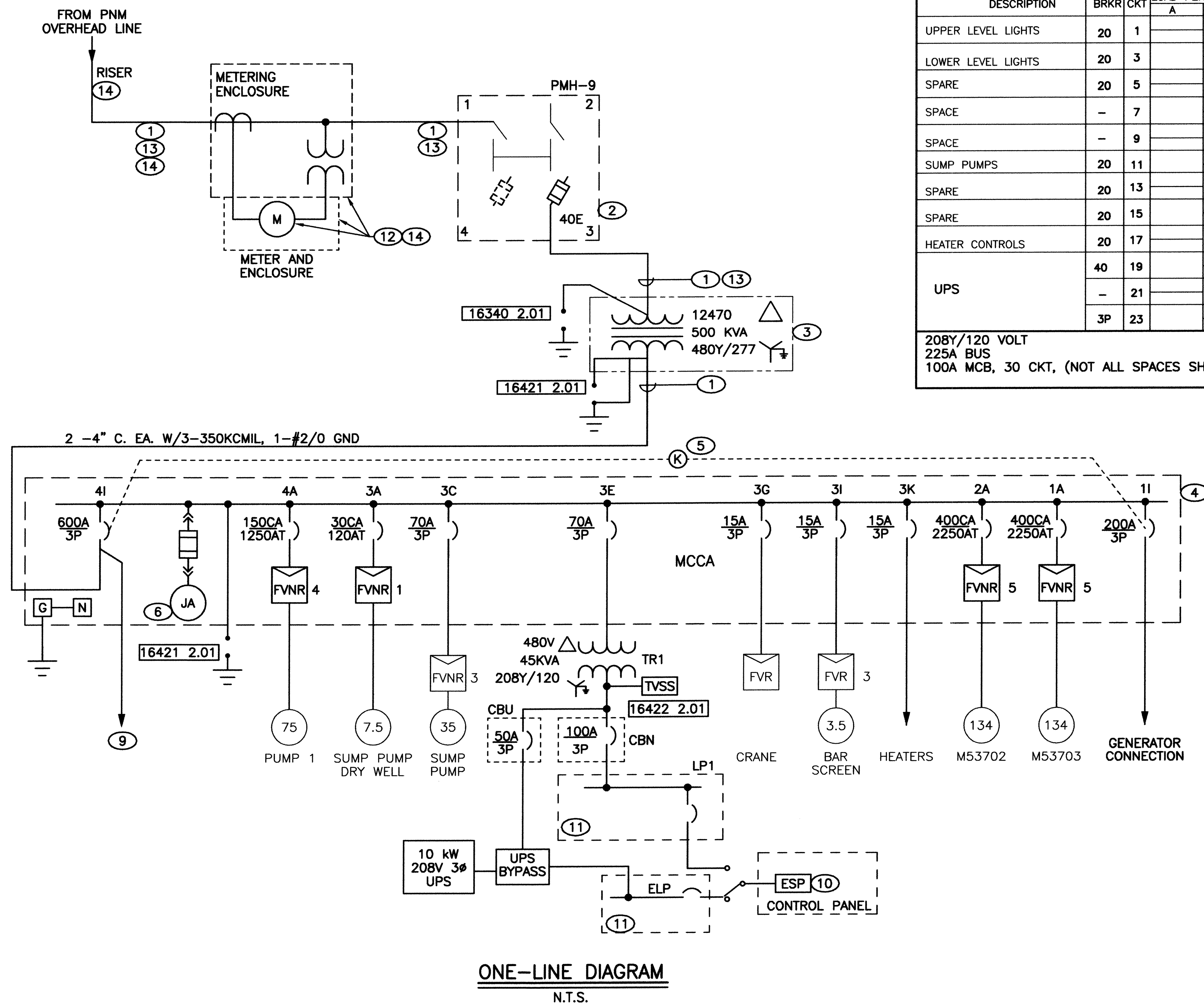
PANEL LP									
DESCRIPTION	BRKR	CKT	LOAD PER PHASE		CKT	BRKR	DESCRIPTION		
			A	B					
UPPER LEVEL LIGHTS	20	1			2	20	EXTERIOR LIGHTS		
LOWER LEVEL LIGHTS	20	3			4	20			
SPARE	20	5			6	20	RECEPTS		
SPARE	20	7			8	20	HEAT TRACE BACKFLOW		
SPARE	20	9			10	20			
SUMP PUMPS	20	11			12	20			
SPARE	20	13			14	20	SPARE		
SPARE	20	15			16	20			
HEATER CONTROLS	20	17			18	20	HEATER CONTROLS		
SPARE	30	19			20	-	SPACE		
		2P 21			22	-	SPACE		
SPACE	-	23			24	-	SPACE		

PANEL LP1									
DESCRIPTION	BRKR	CKT	LOAD PER PHASE		CKT	BRKR	DESCRIPTION		
			A	B					
UPPER LEVEL LIGHTS	20	1			2	20	EXTERIOR LIGHTS		
LOWER LEVEL LIGHTS	20	3			4	20	PLC		
SPARE	20	5			6	20	RECEPTS		
SPACE	-	7			8	20	HEAT TRACE BACKFLOW		
SPACE	-	9			10	-	SPACE		
SUMP PUMPS	20	11			12	-	SPACE		
SPARE	20	13			14	20	SPARE		
SPARE	20	15			16	-	SPACE		
HEATER CONTROLS	20	17			18	20	HEATER CONTROLS		
UPS	40	19			20	-	SPACE		
	-	21			22	-	SPACE		
	3P	23			24	-	SPACE		

208Y/120 VOLT
225A BUS
100A MCB, 30 CKT, (NOT ALL SPACES SHOWN)

KEYED NOTES

- 1 INSTALL INDICATED CONDUITS AND CONDUCTORS.
- 2 INSTALL OFE FUSIBLE PRIMARY SWITCH. PROVIDE AND INSTALL S & C SML4Z FUSE HOLDERS AND REFILLS IN PRIMARY SWITCH. STORE ONE SET OF SPARE FUSES REFILLS IN DOOR AND DELIVER ADDITIONAL SET TO OWNER.
- 3 500 KVA TRANSFORMER.
- 4 INSTALL NEW MOTOR CONTROL CENTER.
- 5 KEY LOCK SYSTEM TO PERMIT ONLY ONE CIRCUIT BREAKER TO BE CLOSED. KIRK BRAND, NO SUBSTITUTES.
- 6 INSTALL DRAWOUT FUSES OR DISCONNECT AND FUSES. INSTALL THREE PHASE VOLTAGE MONITOR AND CONNECT OUTPUT TO PLC. SSAC PLMU SERIES OR ENGINEER APPROVED SUBSTITUTE.
- 7 SCHEDULE OF EXISTING PANEL. RECONNECT LOADS TO REPLACEMENT PANELBOARD LP-1.
- 8 CIRCUITS MAY BE REARRANGED IF PHYSICALLY NECESSARY. PROVIDE CORRECTED DIRECTORY.
- 9 TEMPORARY CONNECTION OF NEW MCC TO OLD MCC. SEE E-04.
- 10 ELECTRONIC SAG PROTECTOR.
- 11 OTHER LOADS ARE SHOWN ON SCHEDULE.
- 12 PRIMARY METERING ENCLOSURE METER BASE AND ENCLOSURE AS REQUIRED BY PNM. COMPLY WITH PNM DS-19-79.0 AND DRAWINGS REFERENCED THEREON. DELIVER TO PNM FOR METERING EQUIPMENT INSTALLATION. RETRIEVE AND INSTALL.
- 13 4" C. WITH 3 #2 15 KV, #8 GND.
- 14 FOR ALL ASPECTS OF SERVICE, COMPLY WITH PNM DS-7-15.1 AND DRAWINGS REFERENCED THEREON.



NEW MCC ELEVATION

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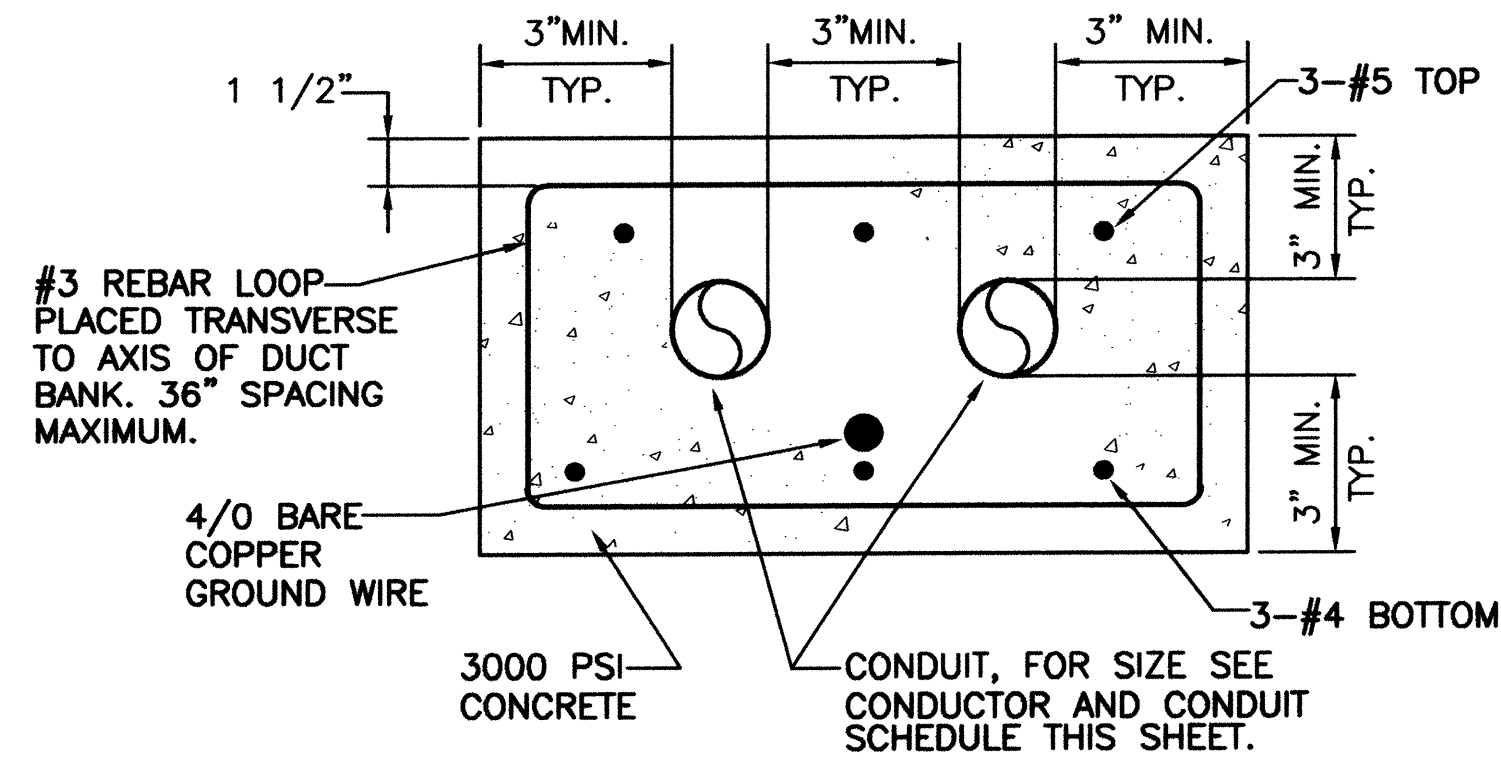
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: STORM WATER PUMP STATION #37 REHABILITATION	
ELECTRICAL ONE-LINE DIAGRAM	
Design Review Committee APPROVED JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVED JUL 19 2002 CITY ENGINEER
City Project No. 4682.91	Zone Map No. L-14
Sheet E-02	6 of 25

Mo./Day/Yr. Mo./Day/Yr.

DESIGNED BY WNH/HCH DATE 10-00
DRAWN BY RA DATE 7-02
CHECKED BY SES DATE 7-02

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION					
NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE				
CONTRACTOR		INSPECTOR'S		DATE		DATE					
STAMPED BY		DATE		DATE		DATE					
CORRECTED BY		DATE		DATE		DATE					
RECORDED BY		DATE		DATE		DATE					
NO.		NO.		NO.		NO.					

16 July 2002

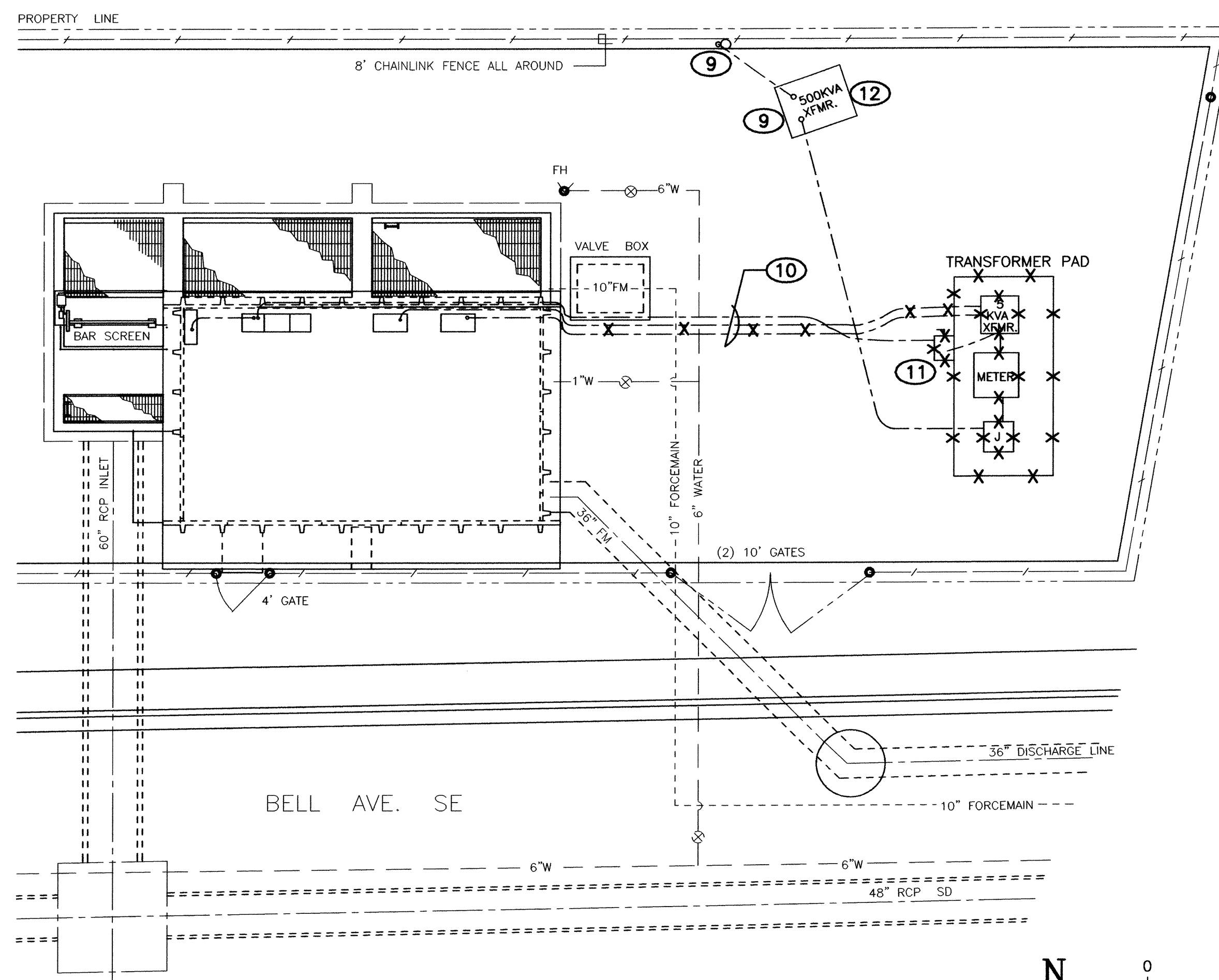


DUCT BANK DETAIL
SCALE: N.T.S.

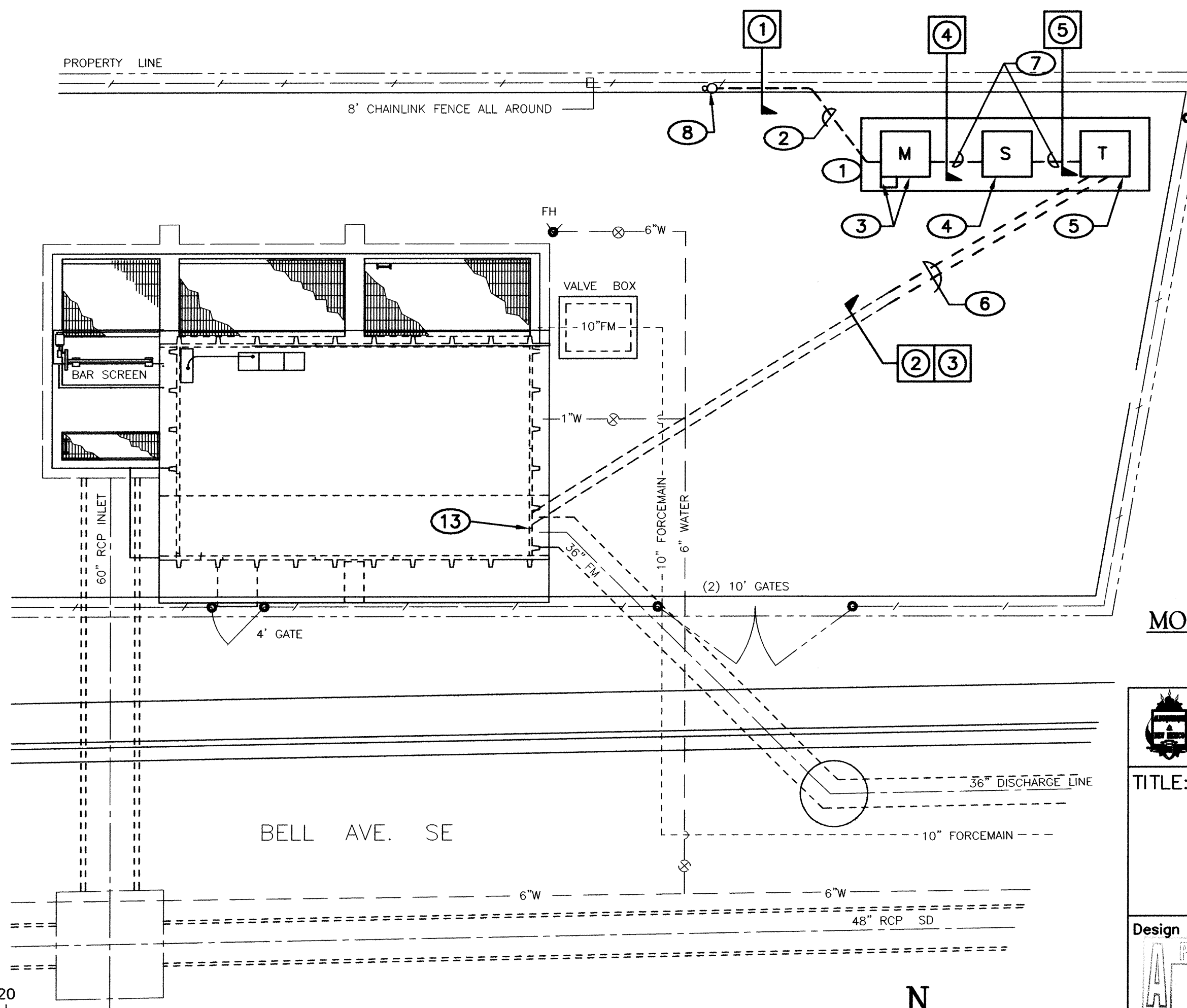
CONDUCTOR AND CONDUIT SCHEDULE						
DB TAG	CONDUIT NUMBER	CONDUIT SIZE	CONDUIT TYPE	CABLE TYPE	CABLE ORIGIN	CABLE DESTINATION
①	P53701	4"	PVC	3-#2 15KV	RISER	METERING
②	P53702	3"	PVC	4-350 THWN	TRANSFORMER	MCC
③	P53703	3"	PVC	4-350 THWN	TRANSFORMER	MCC
④	P53704	4"	PVC	3-#2 15KV	METERING	15KV SWITCH
⑤	P53705	4"	PVC	4-#2 15KV	15KV SWITCH	TRANSFORMER

KEYED NOTES

- CONSTRUCT CONCRETE PAD FOR METERING, SWITCHGEAR, AND TRANSFORMER. DO NOT SCALE PAD ON THIS PLAN. SEE DETAIL ON E-12.
- 4" RED-DYED CONCRETE ENCASED SCHEDULE 40 PVC TO EXISTING POLE. INSTALL ELBOW AND RISER IN ACCORDANCE WITH PNM DRAWING DS-7-15.1.
- PRIMARY METERING ENCLOSURE METER BASE AND ENCLOSURE AS REQUIRED BY PNM. COMPLY WITH PNM DS-19-79.0 AND DRAWINGS REFERENCED THEREON. DELIVER TO PNM FOR METERING EQUIPMENT INSTALLATION. RETRIEVE AND INSTALL.
- INSTALL OWNER FURNISHED S&C PMH-9 PRIMARY SWITCH.
- 500 KVA PADMOUNTED TRANSFORMER.
- DUCTBANK BETWEEN SECONDARY COMPARTMENT OF NEW TRANSFORMER AND BUILDING. INSTALL CONDUCTORS BETWEEN TRANSFORMER AND NEW MCC. 36 INCH MINIMUM COVER.
- CONDUIT AND CONDUCTORS BETWEEN METERING ENCLOSURE AND PRIMARY SWITCH AND BETWEEN PRIMARY SWITCH AND TRANSFORMER.
- ARRANGE WITH PNM TO PROVIDE SERVICE TO NEW TRANSFORMER.
- ARRANGE WITH PNM TO DISCONNECT EXISTING SERVICE AND PNM OWNED TRANSFORMER.
- REMOVE CONDUCTOR TO EXISTING MCC AND TO THE EXISTING 5 KV MOTOR STARTERS. REMOVE CONDUIT AS NEEDED TO AVOID INTERFERENCE WITH NEW DUCTBANK 2/3.
- REMOVE EXISTING JUNCTION BOX, METERING ENCLOSURE, PADMOUNTED TRANSFORMER, AND DISCONNECT SWITCH. ARRANGE WITH PNM FOR REMOVAL AND RETURN OF PNM OWNED METERING DEVICES. RETURN MATERIAL REMOVED TO CITY. REMOVE EXISTING CONCRETE PADS. RESTORE TO MATCH EXISTING GRADE. REMOVE CONDUITS TO MINIMUM 2 FEET BELOW FINISHED GRADE. CAP. ABANDON BALANCE IN PLACE.
- REMOVE EXISTING CONCRETE PAD. REMOVE CONDUITS TO MINIMUM 2 FEET BELOW FINISHED GRADE. CAP. ABANDON BALANCE IN PLACE. RESTORE TO MATCH EXISTING GRADE.
- CORE DRILL BELOW GRADE. RUN CONDUITS TO MCC ON LOWER LEVEL. SEAL PENETRATION THROUGH EAST WALL WITH NON-SHRINK GROUT.



EXISTING STATION NO.37 ELECTRICAL SITE DEMOLITION PLAN
SCALE: 1"=10'-0"



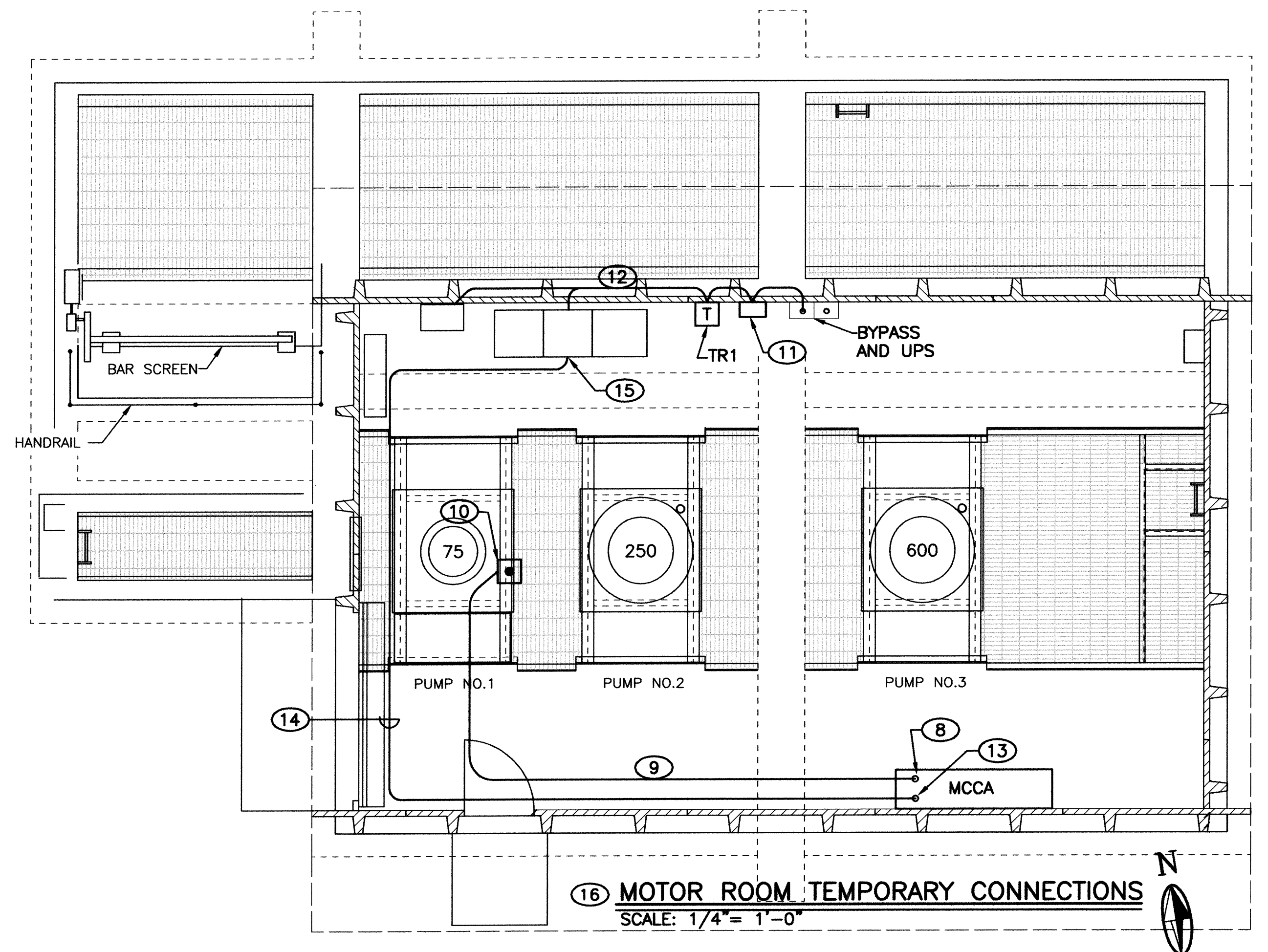
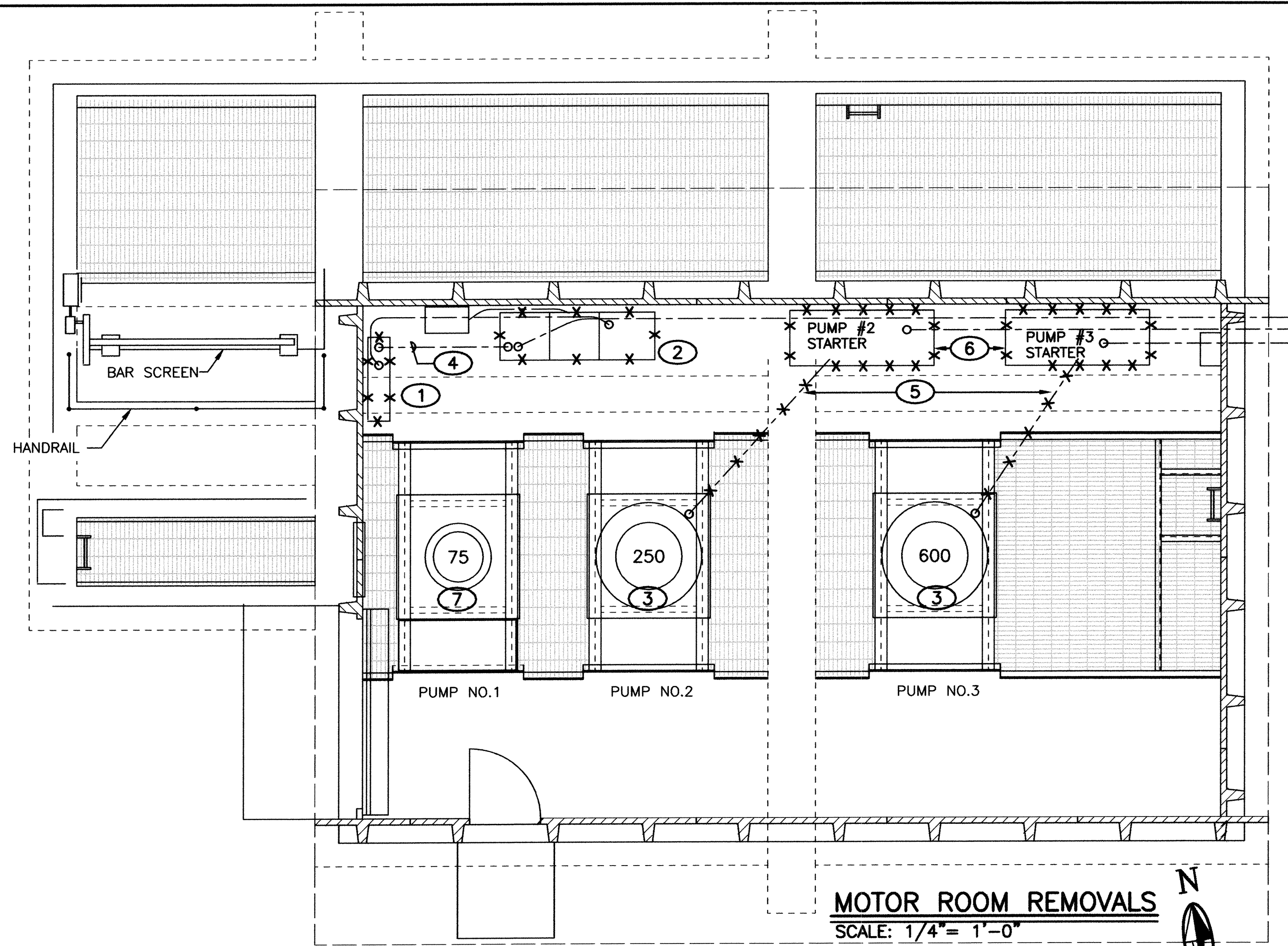
REVISED STATION NO.37 ELECTRICAL SITE PLAN
SCALE: 1"=10'-0"

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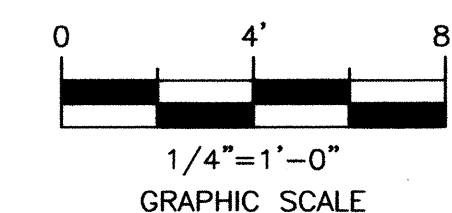
		CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: STORM WATER PUMP STATION #37 REHABILITATION			
BELL STATION #37			
ELECTRICAL SITE PLAN			
Design Review Committee 	City Engineer Approval 	Mo./Day/Yr. 	Mo./Day/Yr.
City Project No. 4682.91	Zone Map No. L-14	Sheet E-03	7 of 25

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	NO.	DATE	NO.	DATE	NO.	DATE
INSPECTOR'S	DATE	NO.	DATE	NO.	DATE	NO.	DATE
FIELD	DATE	NO.	DATE	NO.	DATE	NO.	DATE
REVISIONS	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CORRECTED BY	DATE	NO.	DATE	NO.	DATE	NO.	DATE
MICRO-FILM INFORMATION				DESIGNED BY: VNH/HCH DRAWN BY: RA CHECKED BY: SES DATE: 10-00 DATE: 7-02 DATE: 7-02			



KEYED NOTES

- ① REMOVE EXISTING MOTOR CONTROL CENTER. DISPOSE OF AS DIRECTED BY OWNER.
- ② REMOVE STARTER/CONTROLLER. DISPOSE OF AS DIRECTED BY OWNER.
- ③ DISASSEMBLE AS NECESSARY AND REMOVE PUMP MOTORS #2 AND #3. DISPOSE OF AS DIRECTED BY OWNER.
- ④ REMOVE CONDUCTORS BETWEEN MOTOR CONTROL CENTER AND STARTER/CONTROLLER.
- ⑤ DISCONNECT AND REMOVE CONDUCTORS BETWEEN STARTERS AND PUMP #2 AND #3 MOTORS.
- ⑥ REMOVE 4160V STARTER FOR PUMP #2 AND #3. DISPOSE OF THESE STARTERS AND A THIRD SIMILAR STARTER LOCATED OUTSIDE EAST OF THE BUILDING.
- ⑦ AT POINT SHOWN IN SEQUENCE OF CONSTRUCTION, REMOVE EDDY CURRENT CLUTCH ASSEMBLY AND DISPOSE OF AS DIRECTED BY OWNER. REINSTALL MOTOR TO PROVIDE DIRECT DRIVE TO PUMP SHAFT. FURNISH COUPLERS/ADAPTERS AS NECESSARY.
- ⑧ CORE DRILL FLOOR FOR 3/4" RMC. TEMPORARILY USE FOR NOTE 9 CABLE.
- ⑨ 14 - 2 PLUS GROUND SJO CORD. ROUTE THROUGH LOWER LEVEL TO PROTECT FROM DAMAGE.
- ⑩ HEAVY-DUTY OIL-TIGHT OFF/RUN SWITCH FOR PUMP 1. MOUNT IN NEMA 1 ENCLOSURE NEAR PUMP, NORTH OF VALVE.
- ⑪ POWER UPS FROM TR1 WITH 4 #8 PLUS GROUND. MOUNT CBU IN NEMA 1 ENCLOSURE APPROXIMATELY 48 INCHES AFF. THIS REMAINS AS PART OF THE PERMANENT INSTALLATION.
- ⑫ 14 - 2 PLUS GROUND SJO CORD. ROUTE HIGH ON WALL. CONNECT TO POWER TELEMETRY UNIT. PROTECT AT UPS END WITH TEMPORARY IN-LINE 5A FUSE.
- ⑬ RUN CIRCUIT TO TOP OF MCC. CONNECT TO GENERATOR CB.
- ⑭ 3 #1, #6 GROUND, RNMC OR EMT.
- ⑮ FIELD VERIFY LOCATION OF PUMP 1 STARTER CB. REMOVE CONDUCTORS FROM LOAD SIDE OF CB. CONNECT TEMPORARY FEEDER.
- ⑯ REMOVE TEMPORARY ITEMS WHEN NO LONGER REQUIRED.



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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL STATION #37 MOTOR ROOM ELECTRICAL REMOVALS AND TEMPORARY CONNECTIONS	
Design Review Committee APPROVED JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVED JUL 19 2002 CITY ENGINEER
City Project No. 4682.91	Zone Map No. L-14
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DRAWN BY RA	DATE 5-01
REVISIONS DESIGN	DATE 7-02
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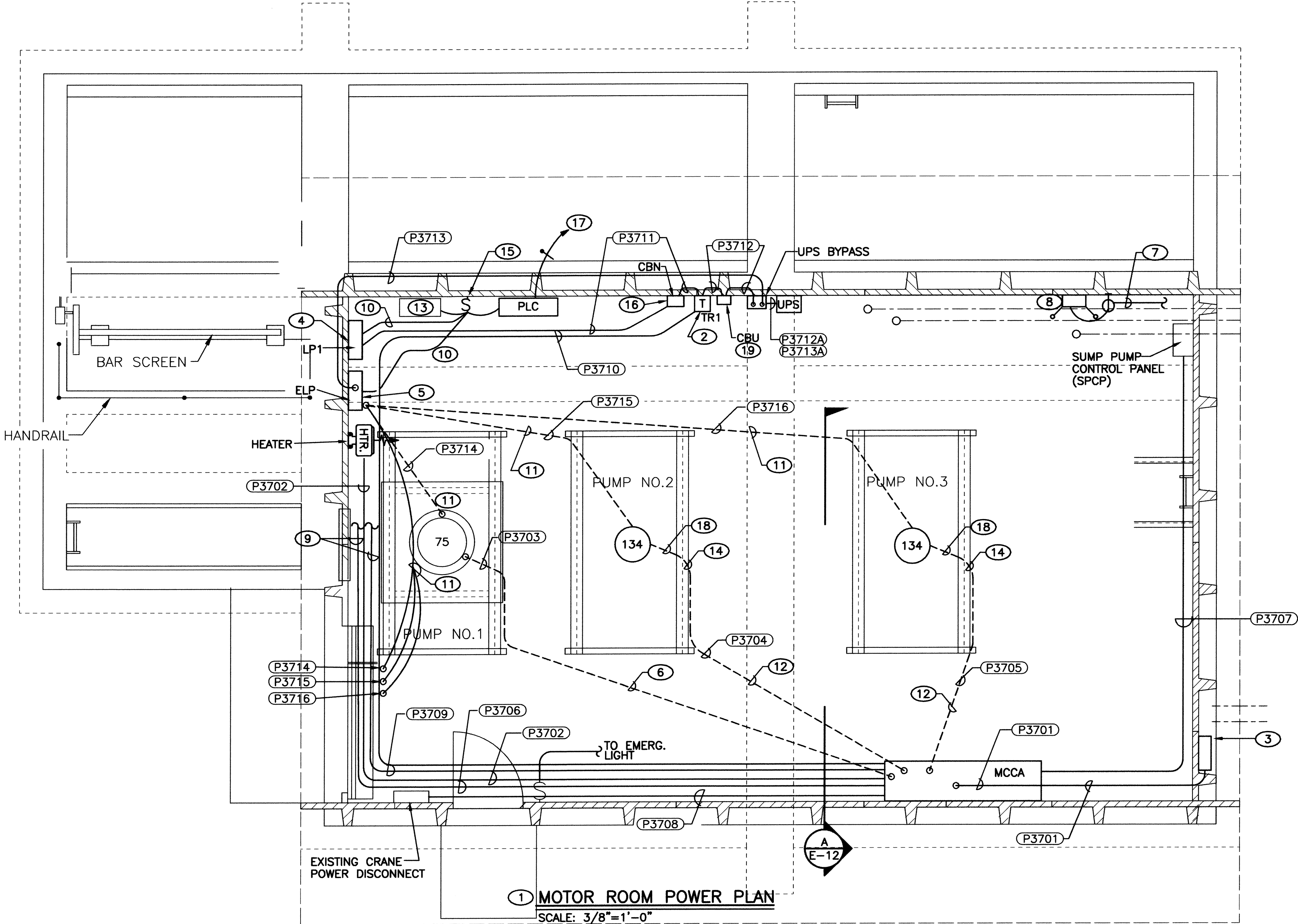
CONDUCTOR AND CONDUIT SCHEDULE						
DESIG-NATION	NUMBER OF RUNS	CONDUIT SIZE	FROM	TO	WIRE	REMARKS
P3701	1	2"	MCC	GENERATOR	3-4/0, 1-#2 GROUND	
P3702	1	3/4"	MCC	HEATER	3-#12, 1-#12 GROUND	
P3703	1	1-1/2"	MCC	M53701	3-#1, 1-#6 GROUND	
P3704	2	3"	MCC	M53702	CABLE BY MOTOR MFG.	
P3705	2	3"	MCC	M53703	CABLE BY MOTOR MFG.	
P3706	1	3/4"	MCC	DW SUMP	3-#12, 1-#12 GROUND	
P3707	1	3/4"	MCC	SPCP	3-#8, 1-#10 GROUND	
P3708	1	3/4"	MCC	CRANE	3-#12, 1-#12 GROUND	
P3709	1	3/4"	MCC	BSCP	3-#12, 1-#12 GROUND	
P3710	1	1"	MCC	TR1	3-#4, 1-#8 GROUND	
P3711	1	1"	TR1	LP1	4-#2, #8 GROUND	VIA CBN ON WALL
P3712	1	1"	TR1	UPS BYPASS	4-#8, 1-#8 GROUND	VIA CBU ON WALL
P3712A	1	1"	UPS BYPASS	UPS	4-#8, 1-#8 GROUND	
P3713	1	1"	UPS BYPASS	ELP	4-#8, 1-#8 GROUND	
P3713A	1	1"	UPS	UPS BYPASS	4-#8, 1-#8 GROUND	
P3714	1	3/4"	ELP	FV53701	3-#10, 1-#10 GROUND	
P3715	1	3/4"	ELP	FV53702	3-#10, 1-#10 GROUND	
P3716	1	3/4"	ELP	FV53703	3-#10, 1-#10 GROUND	

KEYED NOTES CONTINUED

- (15) 20 A DPDT 250 V TOGGLE SWITCH. INSTALL NP: SOURCE SELECTOR SWITCH FOR PLC AND TELEMETRY. INSTALL NP BY UPPER SWITCH POSITION: ELP. INSTALL NP BY LOWER SWITCH POSITION: LP1.
- (16) CIRCUIT BREAKER CBN IN NEMA 1 ENCLOSURE. NP: CBN, DISCONNECT FOR LP1.
- (17) RUN 3/4" CONDUIT UP FROM PLC, THEN ALONG WALL EASTWARD. CORE DRILL WALL, INSTALL CONDUIT, SEAL PENETRATION WITH SILICONE SEAL. RUN DOWN WALL THEN UNDERGROUND TO GROUNDING RING AT TRANSFORMER. INSTALL INSULATED #6 GROUND FROM RING TO ISOLATED GROUND BAR AT PLC ENCLOSURE.
- (18) PUMP CABLE SUSPENDED FROM CABLE GRIP.
- (19) CIRCUIT BREAKER CBU IN NEMA 1 ENCLOSURE. NP: CBU, DISCONNECT FOR UPS.

KEYED NOTES

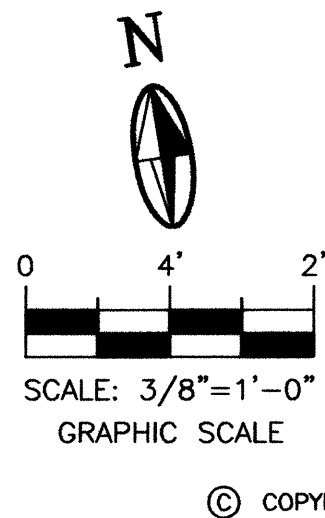
- (1) FOR GRATING SEE DRAWING E-04.
- (2) TR1 (NP: TR1. FED FROM MCCA. FEEDS UPS VIA CBU AND BYPASS. FEEDS LP1 VIA CBN.)
- (3) 16X16X6 INCH NEMA 3R HINGED COVER ENCLOSURE. MOUNT WITH BOTTOM AT 36" AFG. INSTALL 3 POLE POWER DISTRIBUTION BLOCK FOR PHASE CONDUCTORS, SQUARE D LBA360101, AND FOR GROUND, SQUARE D LBA162101, OR ENGINEER APPROVED EQUIVALENT. INSTALL TWO INCH CLOSE NIPPLE WITH DOUBLE LOCK NUTS AND CAP THROUGH BOTTOM OF BOX. NP: CONNECTION BOX FOR PORTABLE GENERATOR.
- (4) NEW PANELBOARD LP1 (NP: LP1. 208 V 3 PHASE. FED FROM TR1 VIA CBN.) LOCATE TO FACILITATE RECONNECTING LOADS OF EXISTING PANELBOARD LP THAT BECOME DISCONNECTED WHEN MCC1 IS REMOVED. RECONNECT LOADS. DO NOT SPLICE EXISTING CONDUCTORS. REMOVE AND REINSTALL CONDUCTORS WHICH ARE TOO SHORT OR ARE DAMAGED. OPTION TO REMOVAL AND REINSTALLATION OF SHORT CONDUCTORS: INSTALL TERMINAL BOX BELOW LP1. INSTALL TERMINAL BOARDS. LAND EXISTING CONDUCTORS. RUN NEW CONDUCTORS TO LP1. MATCH WIRE COLORS. MARK TBS. MARK WIRES.
- (5) ELP (NP: ELP. 208 V 3 PHASE. FED FROM UPS VIA UPS BYPASS.)
- (6) CORE DRILL FLOOR AT LOCATION OF STARTER FOR PUMP 1. INSTALL CONDUIT AND SEAL WITH SILICONE SEAL. ROUTE NEW CONDUIT FROM MCCA TO PUMP 1 ON CEILING OF PUMP ROOM THEN UP THROUGH GRATING.
- (7) 2 #12 H&N, 1#12 GROUND FROM LINE SIDE OF SWITCH BY SOUTH DOOR, 3/4" RMC.
- (8) INSTALL EMERGENCY LIGHT SIX INCHES BELOW CEILING. INSTALL 15 A SIMPLEX RECEPTACLE. INSTALL CORD AND CAP TO CONNECT LIGHT TO RECEPTACLE.
- (9) LOCATE CONDUITS FROM MCC1 TO BAR SCREEN AND TO DRY WELL SUMP PUMP. MARK. REMOVE EXISTING CONDUCTORS. EXTEND CONDUITS OVERHEAD FROM LOCATION OF MCC1 TO MCCA. INSTALL AND CONNECT NEW CONDUCTORS TO MATCH EXISTING.
- (10) 2 #12 AND #12 GROUND FROM LP1 AND FROM ELP TO SWITCH.
- (11) RUN CONDUITS UP FROM ELP, THEN HIGH ON WALL SOUTHWARD, THEN DOWN. PENETRATE FLOOR CLOSE TO WEST WALL. SEAL PENETRATIONS WITH SILICONE SEAL. RUN CONDUIT DOWN TO LOWER FLOOR. RUN TO RESPECTIVE VALVE ACTUATOR PARALLEL TO CONTROL CONDUITS. SEE E-06 NOTE 5.
- (12) RUN ON CEILING OF PUMP ROOM.
- (13) EXISTING TELEMETRY UNIT. FIELD VERIFY LOCATION. FEED FROM SOURCE SELECTOR SWITCH WITH 3 #12.
- (14) LOCATE CABLE GRIPS DIRECTLY ADJACENT TO EDGE OF OPENING FOR ACCESSIBILITY FROM UPPER FLOOR.



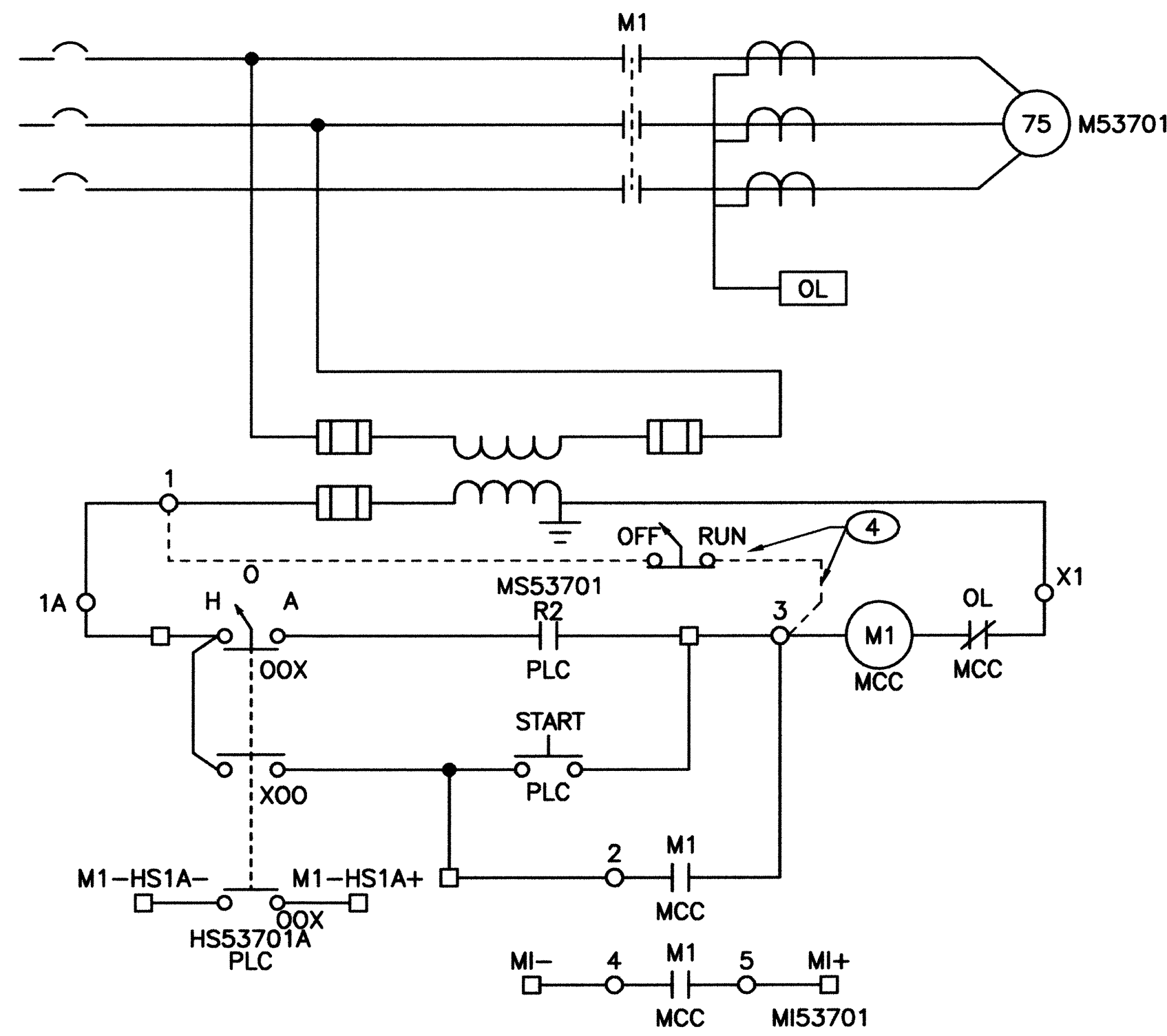
1 MOTOR ROOM POWER PLAN
SCALE: 3/8"=1'-0"

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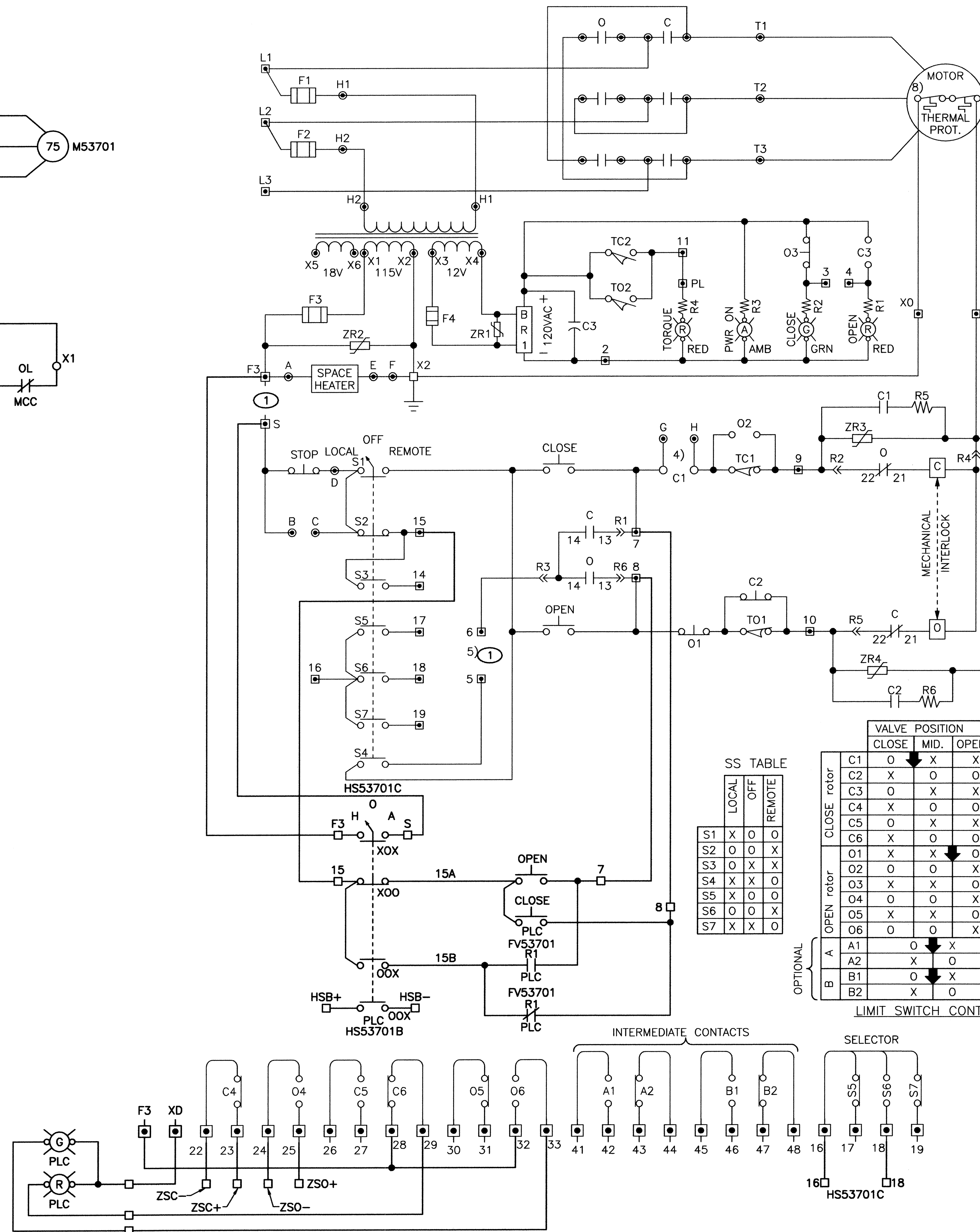
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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL STATION #37 MOTOR ROOM POWER PLAN		Mo./Day/Yr. Mo./Day/Yr.	
Design Review Committee APPROVE JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVE JUL 19 2002 CITY ENGINEER	Last Design Update	Mo./Day/Yr. Mo./Day/Yr.
City Project No. 4682.91		Zone Map No. L-14	Sheet 9 of 25 E-05



SCHEMATIC DIAGRAM FOR LIFT PUMP #1
N.T.S.



VALVE CONTROL DIAGRAM ② ③
N.T.S.

KEYED NOTES

- 1 REMOVE JUMPER.
- 2 VALVE CONTROL SHOWN IN CLOSED POSITION WITH SELECTOR SWITCH IN LOCAL.
- 3 LIGHT PEN WEIGHT INDICATES COMPONENTS INTEGRAL TO VALVE OPERATOR.
- 4 TEMPORARY SWITCH AND CONNECTIONS.

SS TABLE

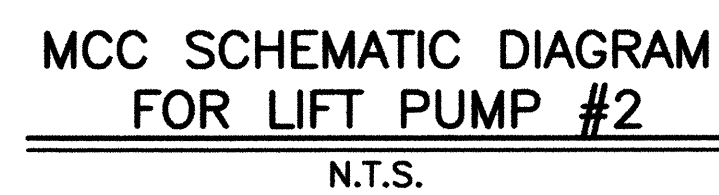
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S2	O	O	X
S3	O	X	X
S4	X	X	O
S5	X	O	O
S6	O	O	X
S7	X	X	O

		VALVE POSITION			CONTACT FUNCTION
		CLOSE	MID.	OPEN	
CLOSE rotor	C1	O	X	X	CLOSE COIL
	C2	X	O	O	BYPASS TO1
	C3	O	X	X	OPEN LAMP
	C4	X	O	O	SPARE
	C5	O	X	X	SPARE
	C6	X	O	O	SPARE
OPEN rotor	O1	X	X	O	OPEN COIL
	O2	O	O	X	BYPASS TC1
	O3	X	X	O	CLOSE LAMP
	O4	O	O	X	SPARE
	O5	X	X	O	SPARE
	O6	O	O	X	SPARE
OPTIONAL	A	O	X		SPARE
	A2	X	O		SPARE
LIMIT SWITCH CONTACTS	B1	O	X		SPARE
	B2	X	O		SPARE

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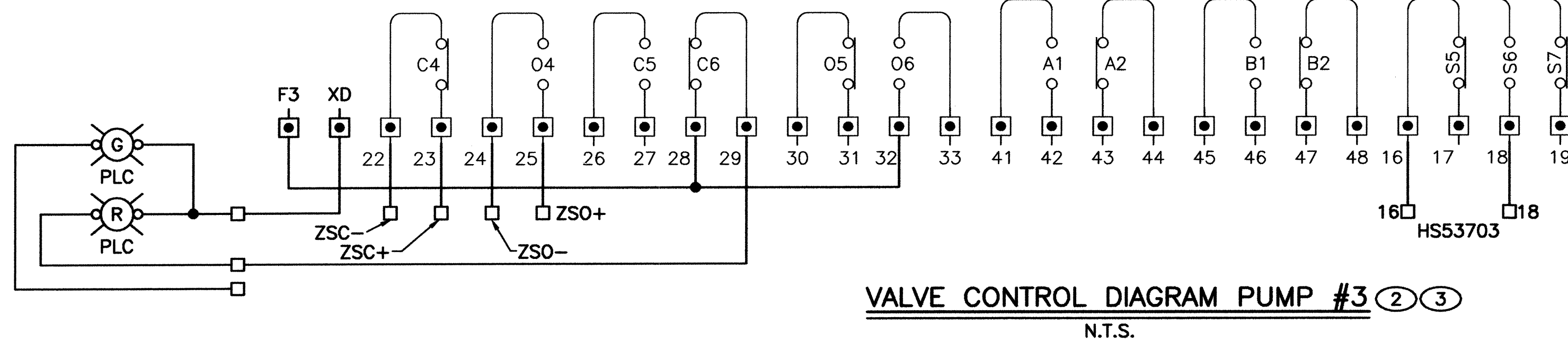
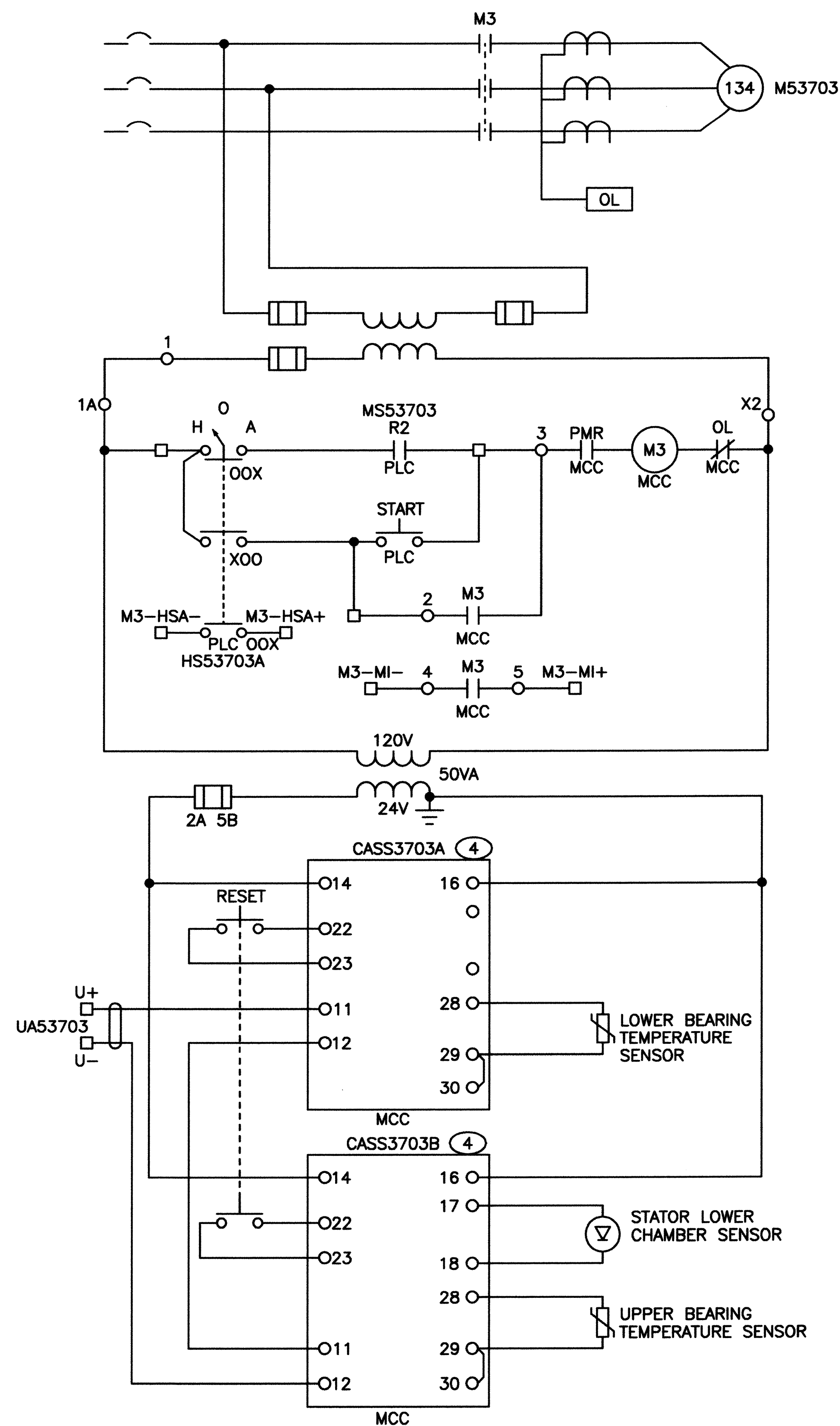
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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL PUMP STATION #37 LIFT PUMP #1 SCHEMATICS	
Design Review Committee JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval JUL 19 2002 CITY ENGINEER
Zone Map No. 4682.91	Sheet E-07



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	CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
TITLE: STORM WATER PUMP STATION #37 REHABILITATION				
BELL STATION #37 LIFT PUMP #2 SCHEMATICS				
Design Review Committee 	City Engineer Approval 	Last Design Update 	Mo./Day/Yr. 	Mo./Day/Yr. 
City Project No. 4682-91		Zone Map No. L-14	Sheet E-08	12 of 25



KEYED NOTES

- 1 REMOVE JUMPER.
- 2 VALVE CONTROL SHOWN IN CLOSED POSITION WITH SELECTOR SWITCH IN LOCAL.
- 3 LIGHT PEN WEIGHT INDICATES COMPONENTS INTEGRAL TO VALVE OPERATOR.
- 4 INSTALL OFE CAS MONITORING UNITS IN MCC COMPARTMENT.

SS TABLE

	LOCAL	OFF	REMOTE
S1	X	O	O
S2	O	O	X
S3	O	X	X
S4	X	X	O
S5	X	O	O
S6	O	O	X
S7	X	X	O

LIMIT SWITCH CONTACTS

	VALVE POSITION			CONTACT FUNCTION
	CLOSE	MID.	OPEN	
C1	O	X	X	CLOSE COIL
C2	X	O	O	BYPASS TO1
C3	O	X	X	OPEN LAMP
C4	X	O	O	SPARE
C5	O	X	X	SPARE
C6	X	O	O	SPARE
O1	X	X	O	OPEN COIL
O2	O	O	X	BYPASS TC1
O3	X	X	O	CLOSE LAMP
O4	O	O	X	SPARE
O5	X	X	O	SPARE
O6	O	O	X	SPARE
A1	O	X	X	SPARE
A2	X	X	O	SPARE
B1	O	X	X	SPARE
B2	X	O	O	SPARE

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MOLZEN-CORBIN & Associates
ENGINEERS/ARCHITECTS/PLANNERS

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: STORM WATER PUMP STATION #37 REHABILITATION
BELL STATION #37
LIFT PUMP #3
SCHEMATICS

Design Review Committee: JUL 19 2002
City Engineer Approval: JUL 19 2002
City Engineer: [Signature]

City Project No. 4682.91
Zone Map No. L-14
Sheet E-09 13 of 25

DESIGNED BY: WNH/HCH
DRAWN BY: RA
CHECKED BY: SES

REVISIONS
NO. DATE BY

REMARKS

AS BUILT INFORMATION

CONTRACTOR: [Blank]
INSPECTOR'S SIGNATURE: [Blank]
DATE: [Blank]
VERIFICATION BY: [Blank]
DATE: [Blank]
CORRECTED BY: [Blank]
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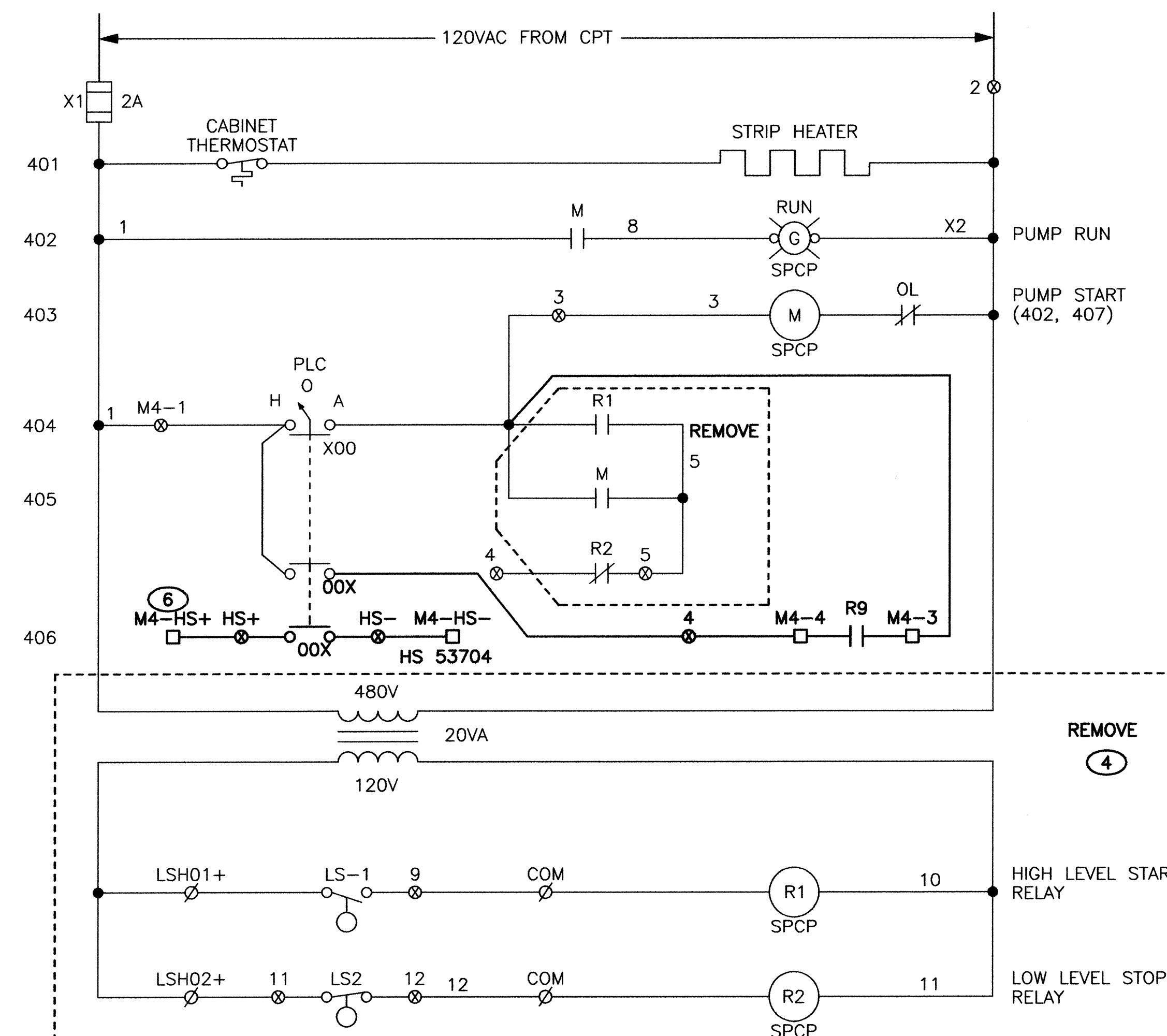
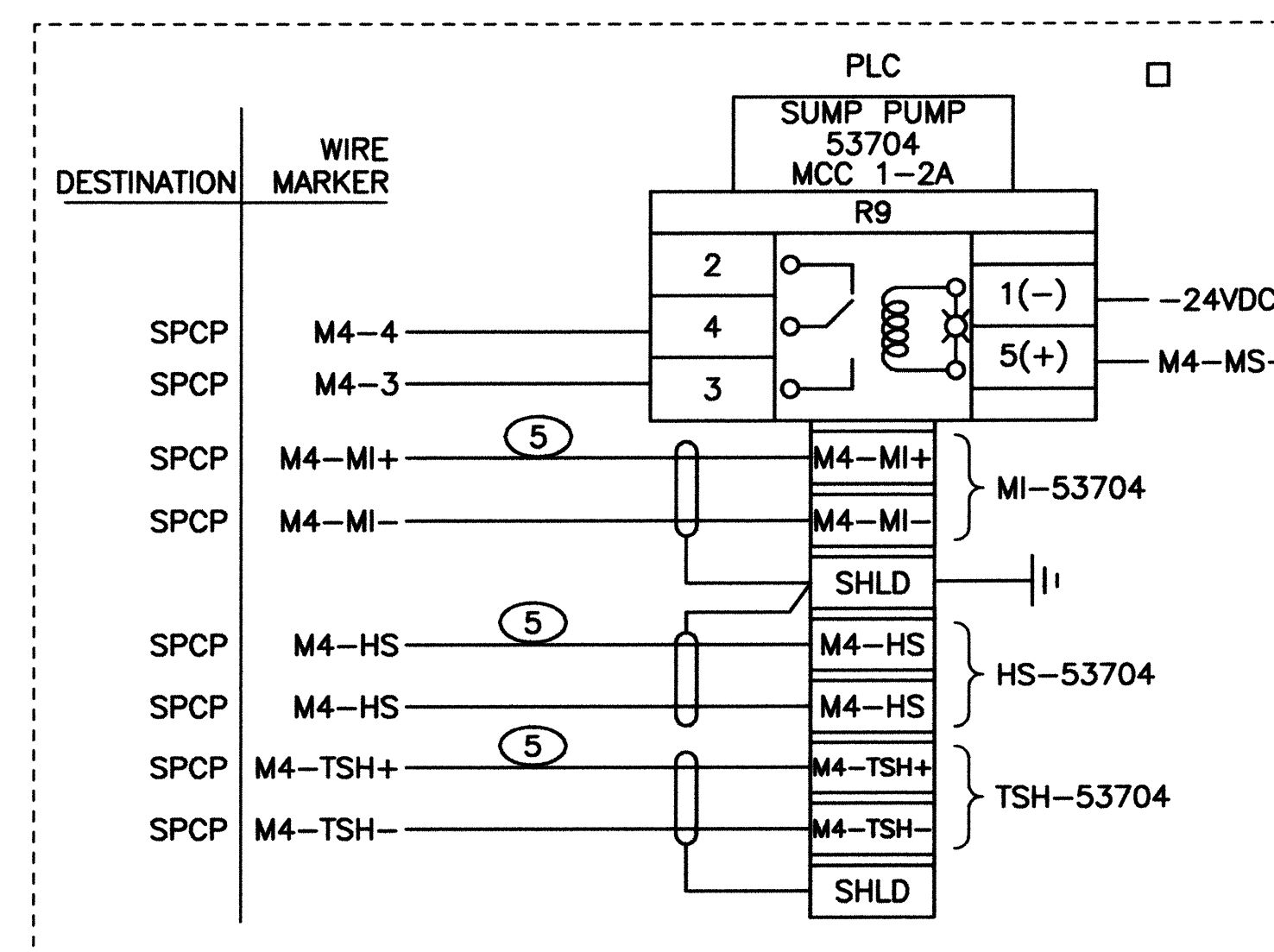
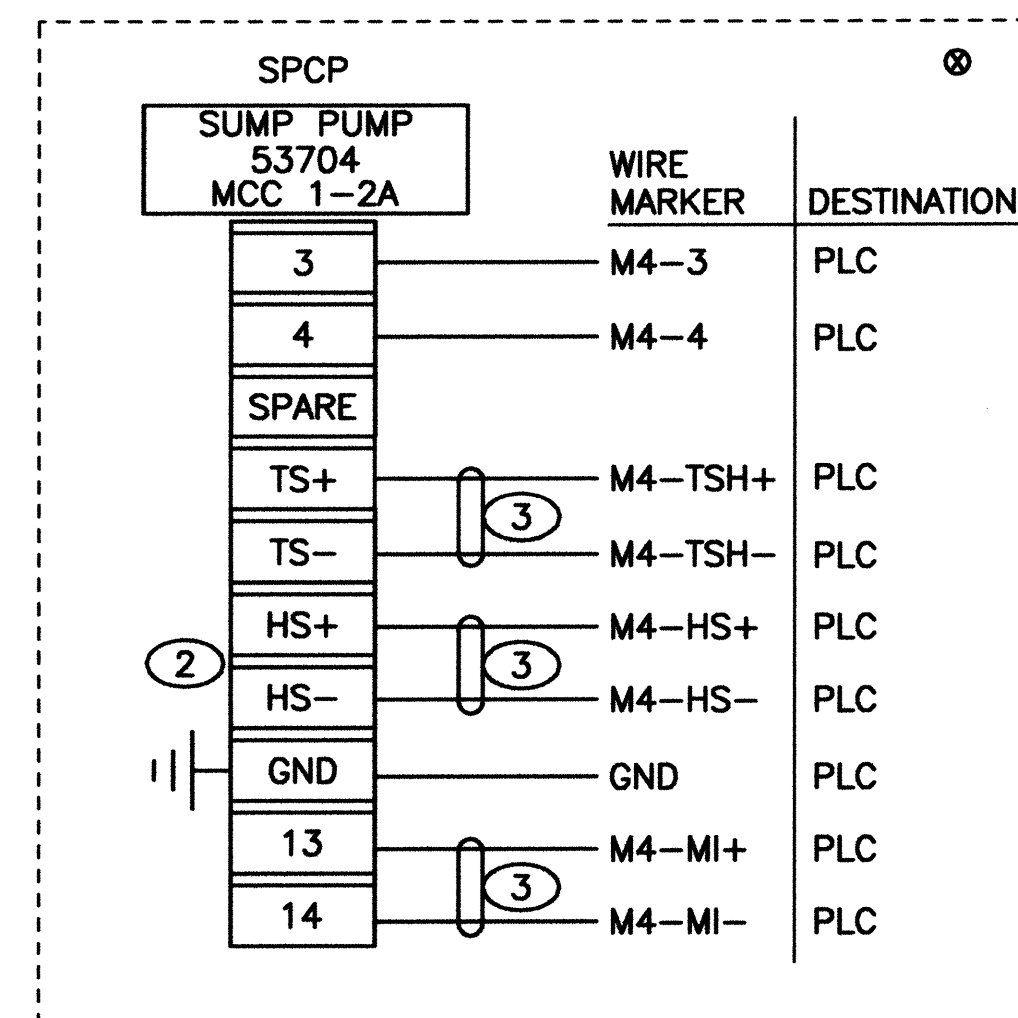
SURVEY INFORMATION

FIELD NOTES

NO. BY DATE

ENGINEER'S SEAL

STEVEN E. SOREANON
NEW MEXICO
6570
REGISTERED PROFESSIONAL ENGINEER
16 JUL 2002



KEYED NOTES

- ① MODIFY SUMP PUMP CONTROL CIRCUITRY AS SHOWN TO PROVIDE PLC CONTROL AND MONITORING OF EQUIPMENT OPERATIONS.
- ② REUSE EXISTING TERMINAL BOARD POINTS. RE-LABEL AS INDICATED.
- ③ CUT SHIELD 1/2" SHORTER THAN PAIRED CABLE. INSULATE SHIELD WITH HEAT SHRINK TUBING.
- ④ REMOVE SUMP PUMP CONTROL FLOATS. STORE AS DIRECTED BY OWNER REPRESENTATIVE. IF SERVICEABLE, REUSE CONDUIT INSTALLED FROM SUMP PUMP CONTROL PANEL TO WET WELL. IF EXISTING CONDUIT IS DAMAGED OR OTHERWISE NOT SERVICEABLE, REPLACE.
- ⑤ SINGLE PAIR TWSH FROM PLC TO SUMP PUMP CONTROL PANEL.
- ⑥ PROVIDE AND INSTALL CONTACT BLOCK FOR EXISTING HOA SWITCH.

[illegible]

JE MENT GROUP	
REHABILITATION	
37	
TIC	
Mo./Day/Yr.	Mo./Day/Yr.
Sheet F-10	14 of 25

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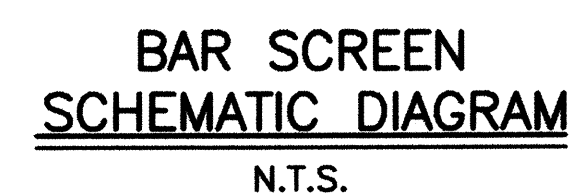


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 CITY OF ALBUQUERQUE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING DEVELOPMENT GROUP

TITLE: STORM WATER PUMP STATION #37 REHABILITATION
 BELL STATION #37
 SUMP PUMP
 CONTROL SCHEMATIC

Design Review Committee 		City Engineer Approval 		Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
DESIGN REVIEW COMMITTEE		CITY ENGINEER				
City Project No. 4682 91		Zone Map No. 1-14		Sheet F-10	14 of 25	



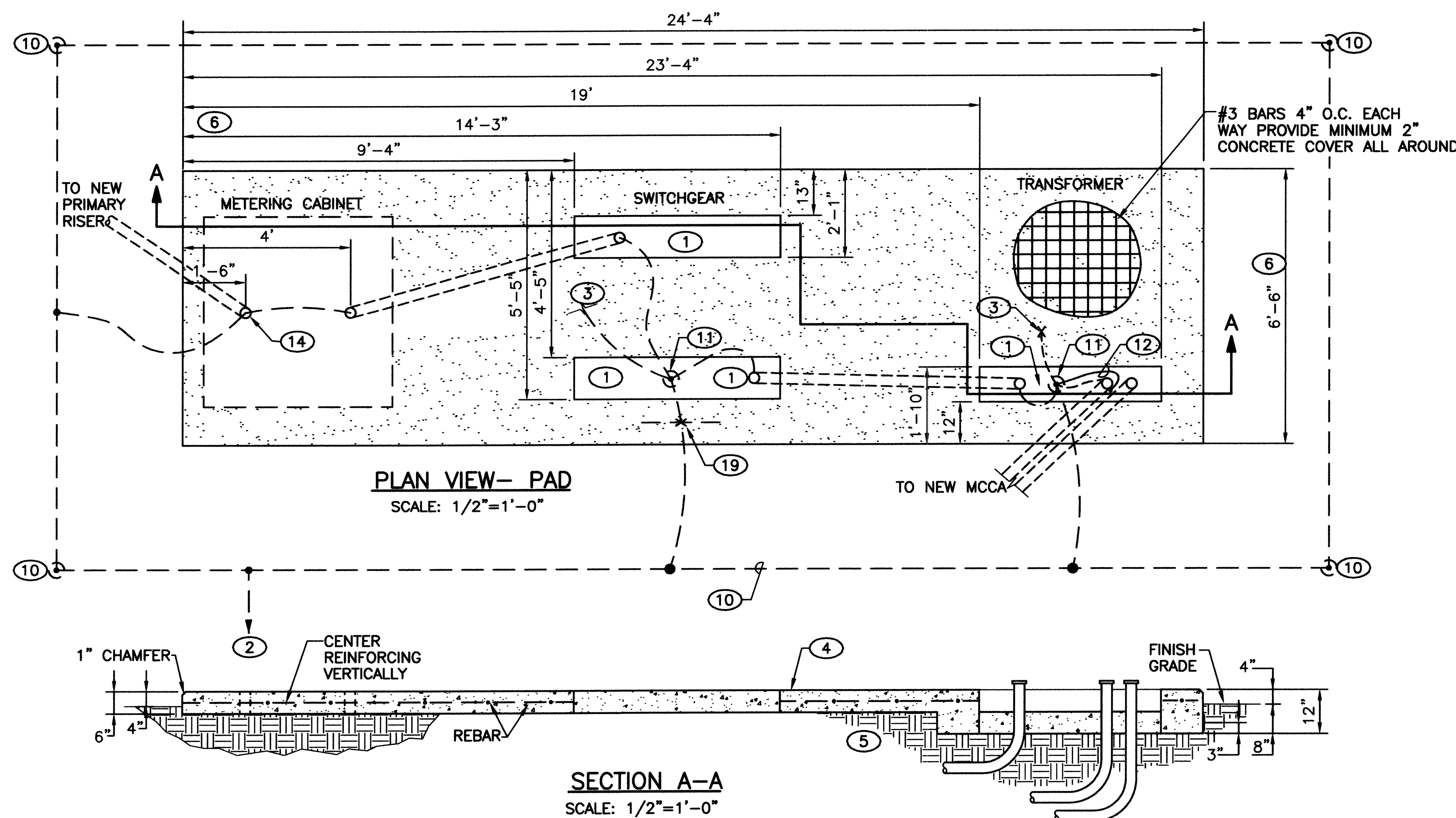
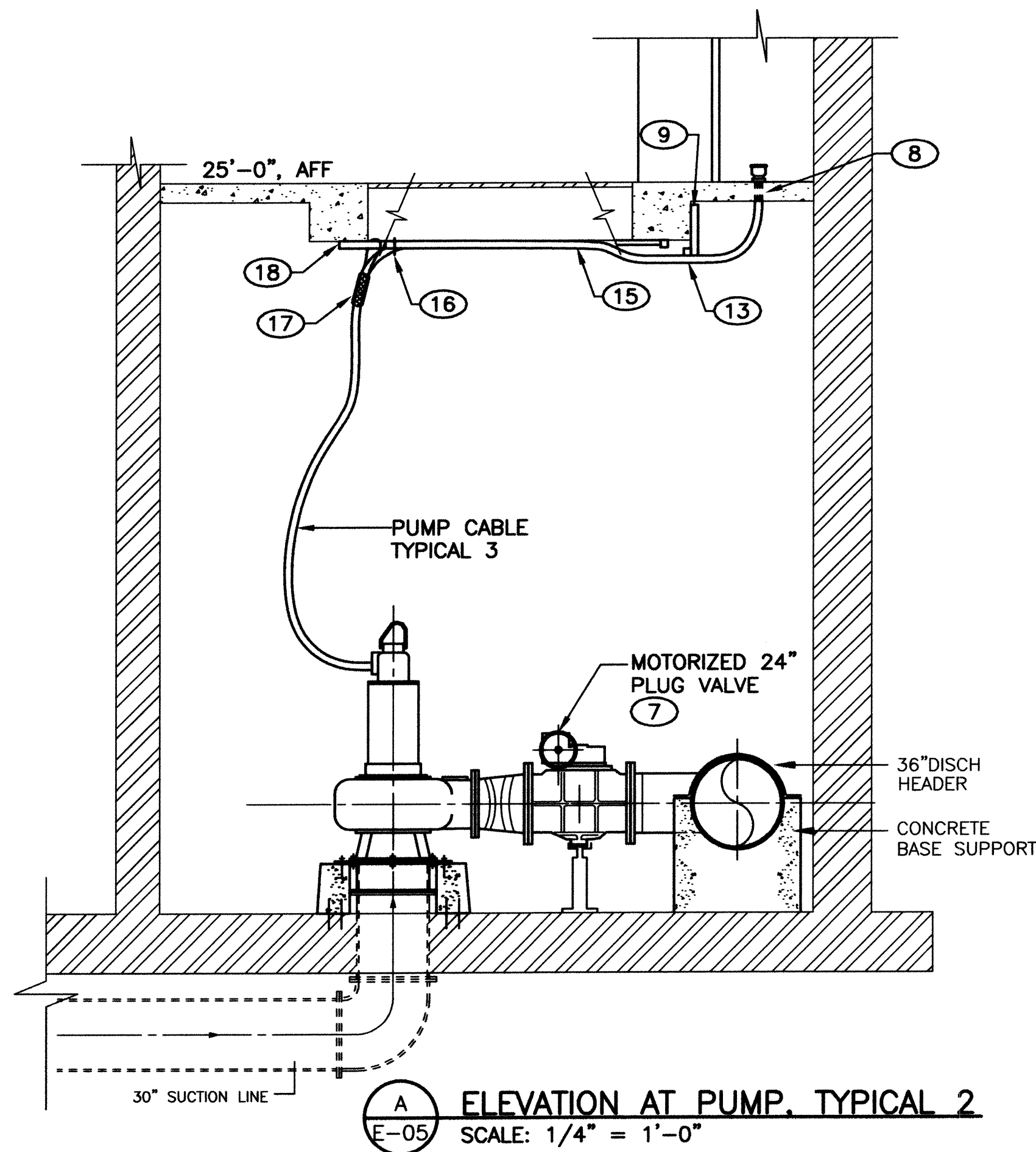
PARTIAL INTERCONNECTION DIAGRAM

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	CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP																										
TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL STATION #37 BARSCREEN DIAGRAMS																											
Design Review Committee APPROVED JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVED JUL 19 2002 CITY ENGINEER	Last Design Update <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Mo./Day/Yr.</th> <th style="width: 50%;">Mo./Day/Yr.</th> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	Mo./Day/Yr.	Mo./Day/Yr.											<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Mo./Day/Yr.</th> <th style="width: 50%;">Mo./Day/Yr.</th> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	Mo./Day/Yr.	Mo./Day/Yr.										
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City Project No. 4682.91	Zone Map No. L-14	Sheet E-11	15 of 25																								



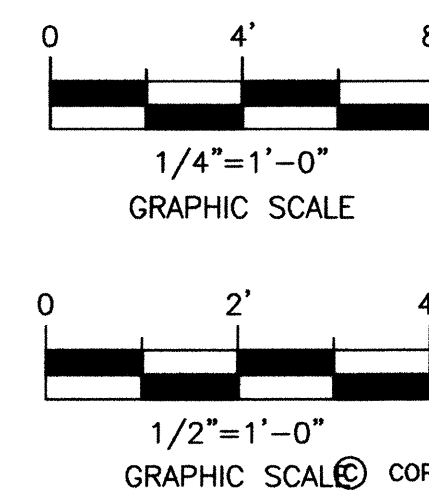
KEYED NOTES

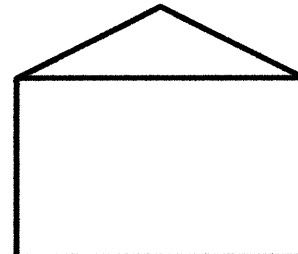
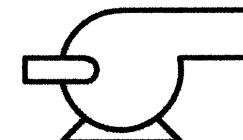
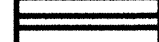
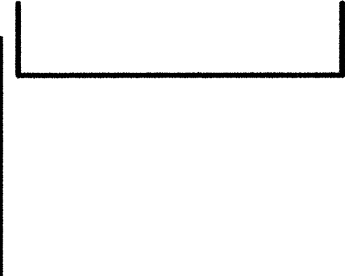
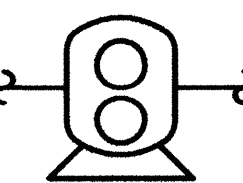
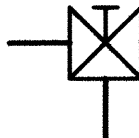
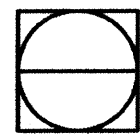
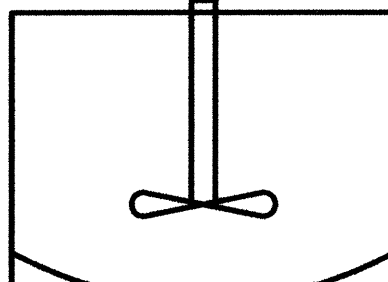
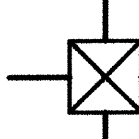
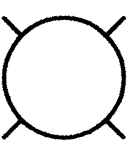
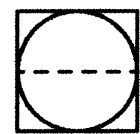
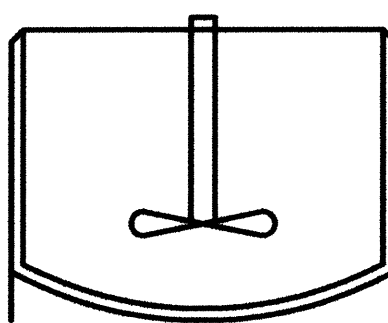
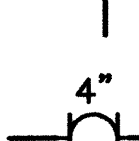
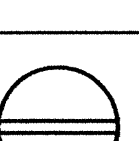
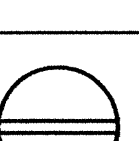
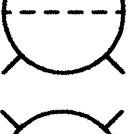
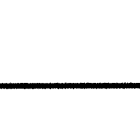
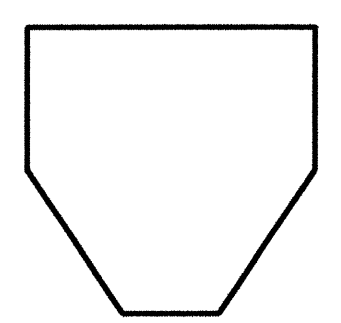
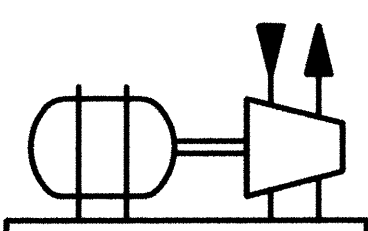
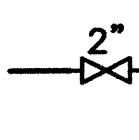
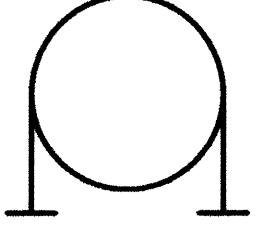
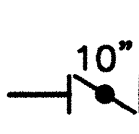
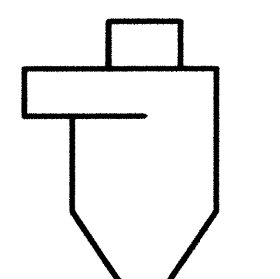
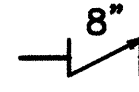
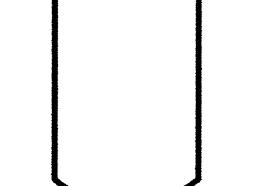
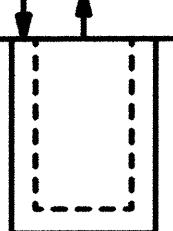
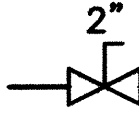
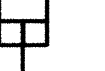
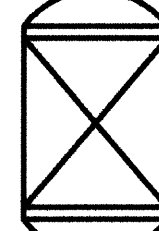
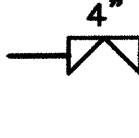
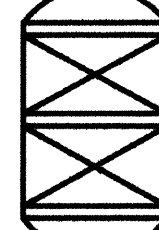
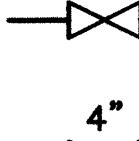
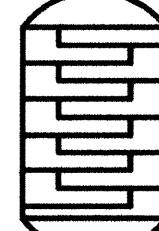
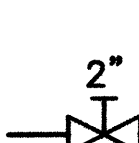
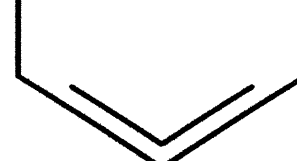
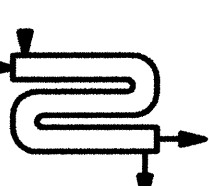
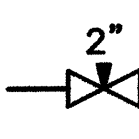
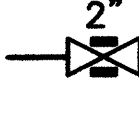
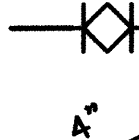
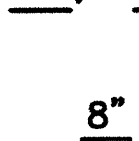
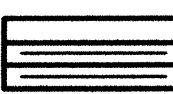
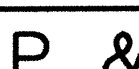
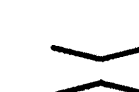
- ① NO CONCRETE IN TROUGH AREA.
- ② TO PLC.
- ③ CONNECT TO EQUIPMENT GROUND BAR WITH #4/0, TYPICAL.
- ④ 3000 PSI CONCRETE. LEVEL WITHIN +/- 1/4 INCH IN FIVE FEET. TROWEL FINISH TO PROVIDE A TRUE PLANE WITHIN 1/16 INCH IN FIVE FEET AS DETERMINED BY A FIVE FOOT STRAIGHTEDGE.
- ⑤ COMPACT EXISTING SOIL AND ENGINEERED FILL TO MINIMUM 95% MODIFIED PROCTOR.
- ⑥ DIMENSIONS SHOWN ARE TYPICAL. ADJUST DIMENSIONS TO ACCOMMODATE EQUIPMENT FURNISHED. MAINTAIN MINIMUM THREE FEET CLEARANCE ON EACH SIDE OF SWITCHGEAR. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND TRANSFORMER. MAINTAIN CLEARANCE AROUND PRIMARY METERING ENCLOSURE AS REQUIRED BY PNM STANDARDS.
- ⑦ ILLUSTRATIVE. SEE DRAWING C-03 FOR ACTUAL ORIENTATION.
- ⑧ CORE DRILL FLOOR AT STARTER FOR PUMP 2 AND FOR PUMP 3, TOTAL OF SIX PENETRATIONS. INSTALL CONDUITS. INSTALL BUSHINGS AND BONDS AS SPECIFIED. SEAL AROUND CONDUITS WITH SILICONE SEAL. SEE E-05 FOR PUMP 1 CONDUIT.
- ⑨ THREE VERTICAL STRUT, EACH ANCHORED WITH 1/2" DIAMETER DRILLED IN EPOXY-SET ANCHOR. ONE HORIZONTAL STRUT BOLTED TO VERTICAL STRUTS.
- ⑩ CONSTRUCT GROUND GRID OF #4/0 BARE COPPER AND 5/8 INCH BY 12 FOOT GROUND RODS 3 FEET OUTSIDE THE PERIMETER OF THE PAD. BURY #4/0 AT THREE FEET BELOW GRADE. RISE UP AT RODS TO CONNECT INSIDE GROUND WELL. PROVIDE GROUND WELLS AND MARKINGS AS SPECIFIED.
- ⑪ 5/8 INCH BY 12 FOOT GROUND RODS FOR SWITCHGEAR AND TRANSFORMER. CONNECT TO GROUND GRID WITH #4/0.
- ⑫ CONNECT DUCT BANK GROUND TO GROUND ROD.
- ⑬ EXTEND STRUT DOWN TO ACCOMMODATE BENDING RADIUS OF CONDUIT.
- ⑭ BOND TO METAL CONDUITS, TYPICAL.
- ⑮ OFFSET VERTICALLY UP SO CONDUITS ARE SUPPORTED RIGHT AT BOTTOM OF BEAM. OFFSET HORIZONTALLY TOWARD CENTERLINE OF PUMP FOR EASY ACCESS TO CABLES FOR FUTURE MAINTENANCE. CONTROL HORIZONTAL OFFSET SO CONDUITS DO NOT INTERFERE WITH REMOVAL/REPLACEMENT OF PUMP.
- ⑯ INSULATED THROAT BUSHING, TYPICAL.
- ⑰ CABLE GRIP ON EACH CABLE. KELLEMS STANDARD DUTY, SINGLE OFFSET EYE, SINGLE WEAVE, TIN-COATED BRONZE, SPLIT MESH, ROD CLOSING.
- ⑱ TWO STRUT IN NORTH-SOUTH DIRECTION. THREE STRUT IN EAST-WEST DIRECTION. CANTILEVER EW STRUT FOR SUPPORT OF CONDUIT TOWARD PUMP CENTERLINE.
- ⑲ BRAZE GROUNDING CONDUCTOR TO REINFORCING ROD.

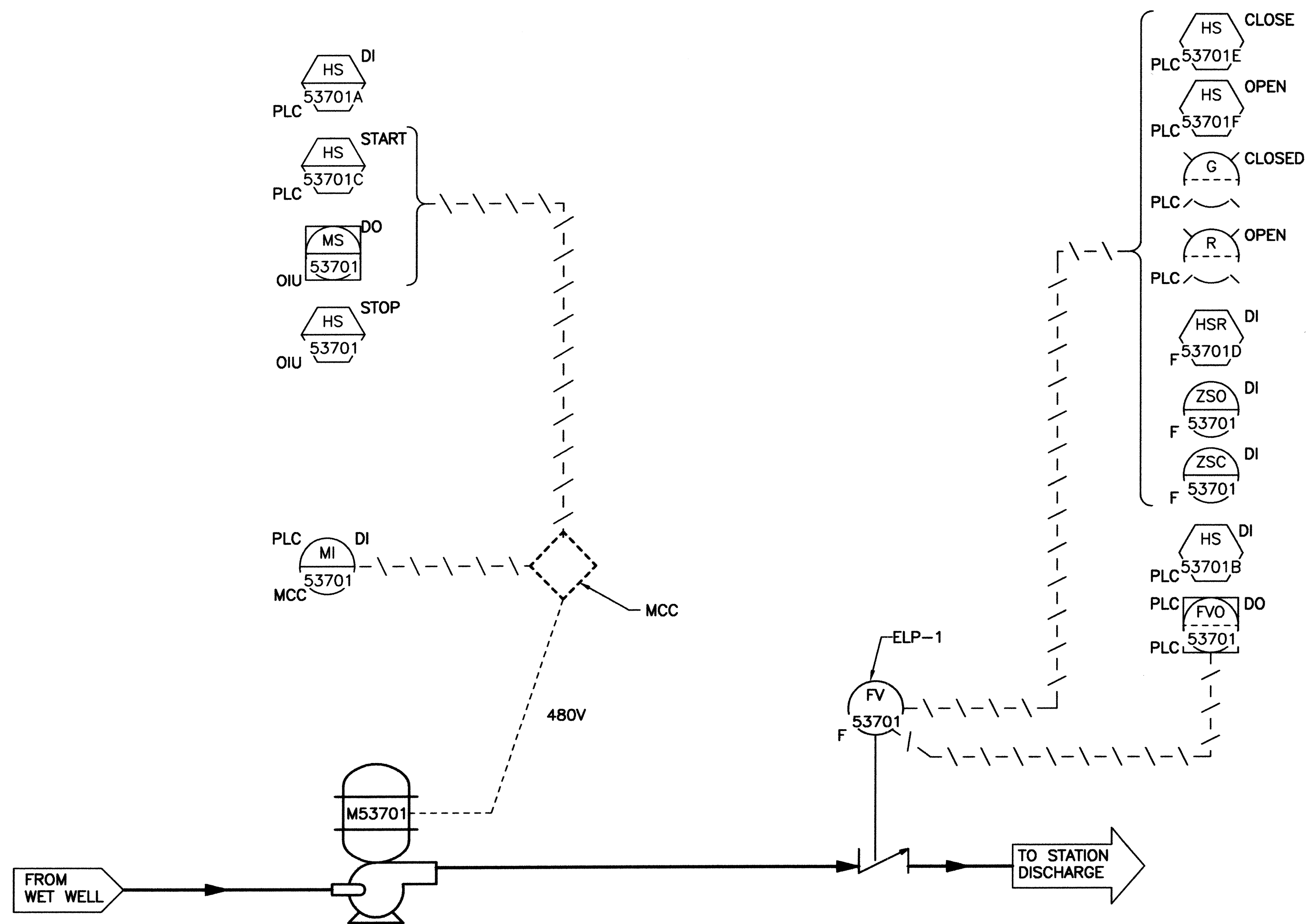
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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP		TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL STATION #37 ELECTRICAL DETAILS	
Design Review Committee JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval JUL 19 2002 CITY ENGINEER	Mo./Day/Yr. Mo./Day/Yr.	Mo./Day/Yr. Mo./Day/Yr.
City Project No. 4682.91	Zone Map No. L-14	Sheet E-12	16 of 25



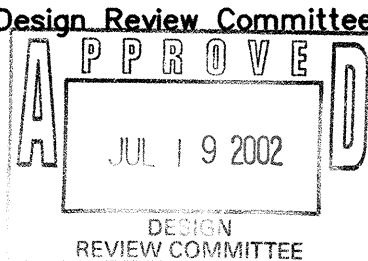
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	CON E ROOF TANK		CENTRIFUGAL PUMP		NORMALLY OPEN ANGLE VALVE SOLID - NORMALLY CLOSED		FLOW STRAIGHTENING VANE		FIELD MOUNTED		FIELD DEVICE	OPERATOR INTERFACE UNIT		COMPUTER FUNCTION
	FLOATING ROOF TANK		ROTARY PUMP		3 - WAY VALVE SOLID - CLOSED PORT		BLIND FLANGE		PLC CABINET MOUNTED/ ACCESSIBLE TO OPERATOR			CONTROLS	INDICATOR LIGHT	
	STIRRED TANK		MOTOR		4 - WAY VALVE		AVERAGING PITOT TUBE		INACCESSIBLE TO OPERATOR/ INDICATION ONLY					
	HEATED AND STIRRED TANK		TURBINE		NORMALLY OPEN BALL VALVE SOLID - NORMALLY CLOSED 4" - VALVE SIZE		HANDWHEEL		REMOTE PANEL CONTROLLER MOUNTED					
	BIN		COMPRESSOR		NORMALLY OPEN BLEED VALVE SOLID - NORMALLY CLOSED 2" - VALVE SIZE		DIAPHRAGM ACTUATOR, SPRING OPPOSED	FUNCTIONAL IDENTIFICATION						
	PRESSURIZED SPHERICAL VESSEL		EJECTOR		NORMALLY OPEN BUTTERFLY VALVE SOLID - NORMALLY CLOSED 10" - VALVE SIZE		DIAPHRAGM ACTUATOR, PRESSURE BALANCED	FIRST-LETTER						
	HORIZONTAL DRUM VESSEL		CYCLONE		CHECK VALVE 8" - VALVE SIZE		MOTORIZED ACTUATOR	MEASURED OR INITIATING VARIABLE						
	VERTICAL DRUM VESSEL		LIQUID FILTER		NORMALLY OPEN COCK VALVE SOLID - NORMALLY CLOSED 2" - VALVE SIZE		CYLINDER ACTUATOR	MODIFIER						
	TOWER		DRUM FILTER		NORMALLY OPEN DIAPHRAGM VALVE SOLID - NORMALLY CLOSED 4" - VALVE SIZE		ELECTROHYDRAULIC ACTUATOR	READOUT OR PASSIVE FUNCTION						
	PACKED TOWER		STATIC MIXER		NORMALLY OPEN GLOBE VALVE SOLID - NORMALLY CLOSED 4" - VALVE SIZE		SOLENOID ACTUATOR	OUTPUT FUNCTION						
	TRAYED TOWER		EXCHANGER		NORMALLY OPEN HAND VALVE SOLID - NORMALLY CLOSED 2" - VALVE SIZE		PRESSURE RELIEF	MODIFIER						
	THICKENER TANK		DOUBLE PIPE EXCHANGER		NORMALLY OPEN NEEDLE VALVE SOLID - NORMALLY CLOSED 2" - VALVE SIZE		PRESSURE REDUCING REGULATOR	A ANALYSIS						
			AIR EXCHANGER		NORMALLY OPEN PINCH VALVE SOLID - NORMALLY CLOSED 2" - VALVE SIZE		BACKPRESSURE REGULATOR	B BURNER, COMBUSTION						
			VESSEL INSULATION		NORMALLY OPEN PLUG VALVE SOLID - NORMALLY CLOSED 6" - VALVE SIZE		RELIEF ARROW	C USER'S CHOICE						
			FLOW NOZZLE		NORMALLY OPEN STRAHMAN VALVE SOLID - NORMALLY CLOSED 4" - VALVE SIZE		PRESSURE AND VACUUM RELIEF ARROW	D USER'S CHOICE						
			MANHOLE		ISOLATION VALVE		MAGNETIC CLUTCH	E VOLTAGE						
			THERMOWELL		ORIFICE PLATE		OUTPUT FROM COMPUTER CONTROL SYSTEM	F FLOW RATE						
			REDUCER		ROTAMETER		INPUT TO COMPUTER CONTROL SYSTEM	G USER'S CHOICE						
					FE - FUNCTIONAL IDENTIFICATION 70102 - LOOP NUMBER			H HAND						
					VENTURI TUBE			I CURRENT (ELEC)						
					FLUME			J POWER						
					WEIR			K TIME, TIME SCHEDULE						
					TURBINE FLOW METER			L LEVEL						
								M MOTOR						
								N INDICATOR						
								O USER'S CHOICE						
								P PRESSURE, VACUUM						
								Q QUANTITY						
								R RADIATION						
								S SPEED, FREQUENCY						
								T TEMPERATURE						
								U MULTIVARIABLE						
								V VIBRATION, MECHANICAL ANALYSIS						
								W WEIGHT, FORCE						
								X UNCLASSIFIED						
								Y EVENT, STATE OR PRESENCE						
								Z POSITION, DIMENSION						



PUMP #1 PID DIAGRAM
N.T.S.

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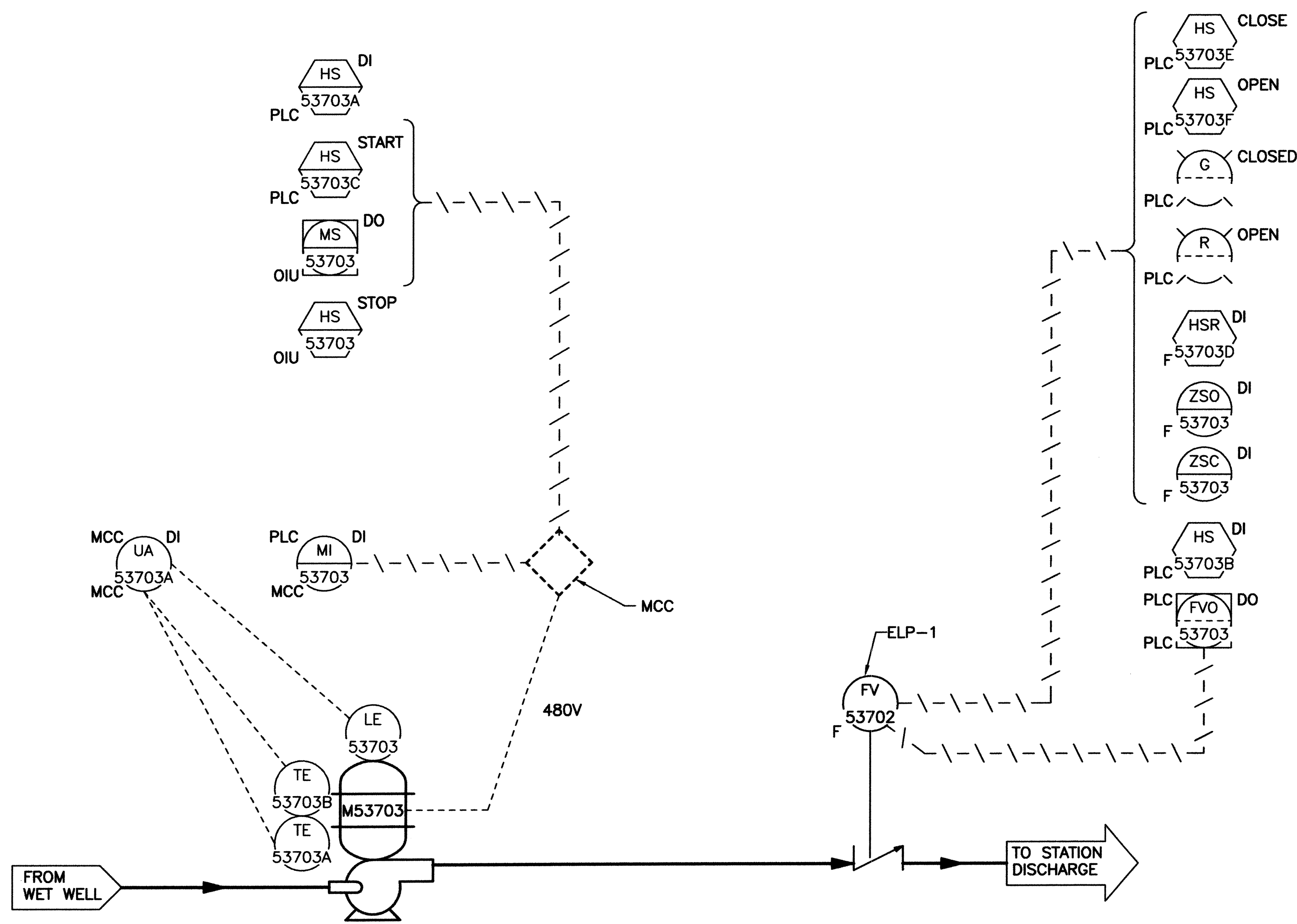
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TITLE: STORM WATER PUMP STATION #37 REHABILITATION			
BELL STATION #37			
ELECTRICAL P & ID			
DIAGRAM, SHEET 1			
Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
			
City Project No.	Zone Map No.	Sheet	20 of 25
4682.91	L-14	1-02	



1

	CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP																							
TITLE: STORM WATER PUMP STATION #37 REHABILITATION BELL STATION #37 ELECTRICAL P & ID DIAGRAM, SHEET 2																								
Design Review Committee JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval JUL 19 2002 CITY ENGINEER	Last Design Update	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Mo./Day/Yr.</th> <th style="width: 50%;">Mo./Day/Yr.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Mo./Day/Yr.	Mo./Day/Yr.									<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Mo./Day/Yr.</th> <th style="width: 50%;">Mo./Day/Yr.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Mo./Day/Yr.	Mo./Day/Yr.								
Mo./Day/Yr.	Mo./Day/Yr.																							
Mo./Day/Yr.	Mo./Day/Yr.																							
City Project No. 4682.91		Zone Map No. L-14	Sheet 1-03 of 25																					

[illegible]



PUMP #3 PID DIAGRAM
N.T.S.

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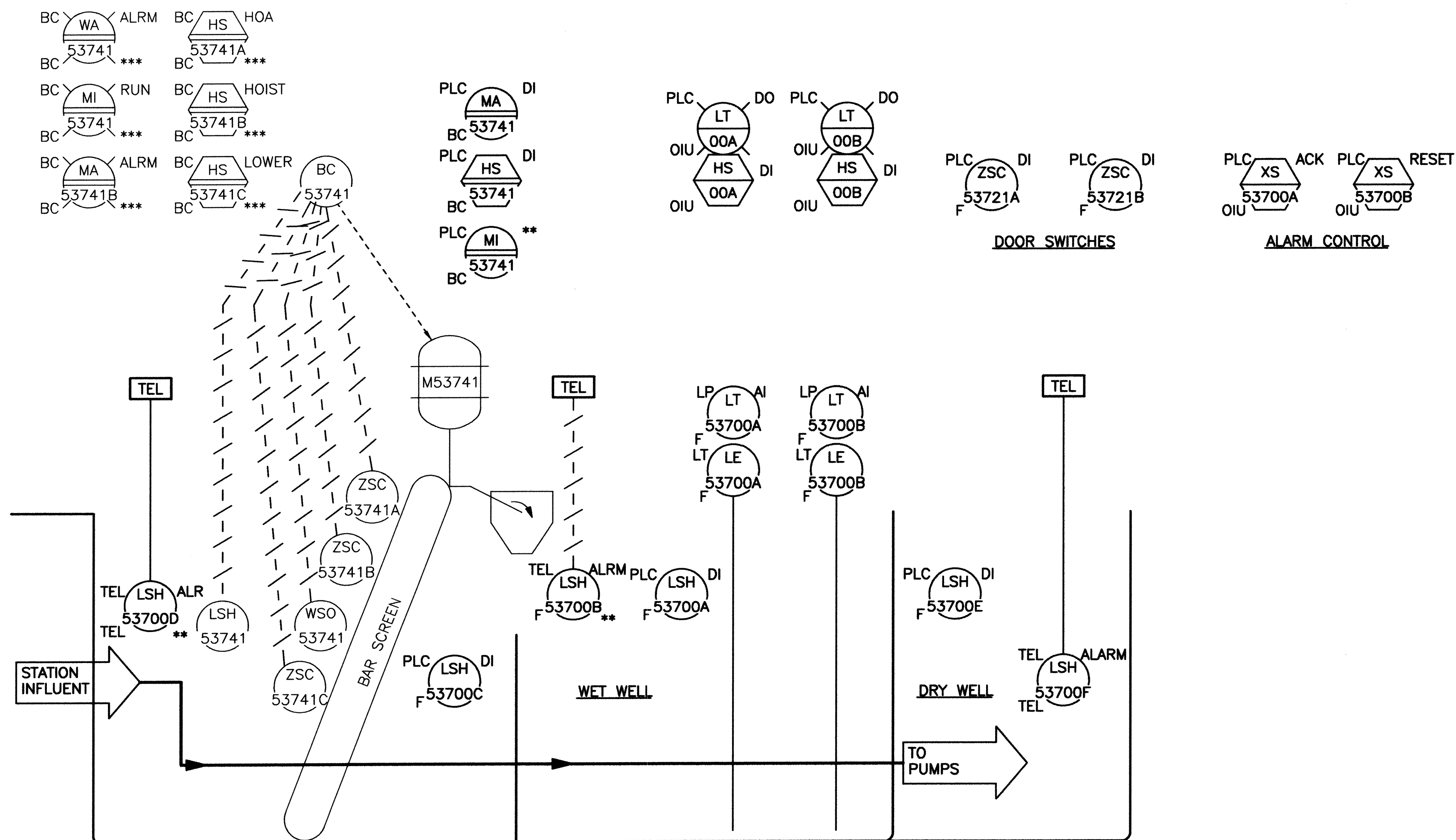
MOLZEN-CORBIN & Associates
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BELL STATION #37			
ELECTRICAL P & ID			
DIAGRAM, SHEET 3			
Design Review Committee APPROVE JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVE JUL 19 2002 CITY ENGINEER	Last Design Update	Mo./Day/Yr.
City Project No. 4682.91	Zone Map No. L-14	Sheet 1-04	22 Of 25

ENGINEER'S SEAL		REVISIONS	
		NO.	DATE
		BY	DATE
		REMARKS	
		DESIGNED BY	DATE
		DRAWN BY	DATE
		CHECKED BY	DATE

BENCH MARKS		AS BUILT INFORMATION	
		CONTRACTOR	DATE
		INSPECTED BY	DATE
		TESTED BY	DATE
		VERIFIED BY	DATE
		CORRECTED BY	DATE
		RECORDED BY	DATE

MICRO-FILM INFORMATION	
NO.	DATE



BARSscreen PID DIAGRAM
N.T.S.

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		CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: STORM WATER PUMP STATION #37 REHABILITATION			
BELL STATION #37 ELECTRICAL P & ID DIAGRAM, SHEET 4			
Design Review Committee APPROVE JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVE JUL 19 2002 CITY ENGINEER	Mo./Day/Yr.	Mo./Day/Yr.
City Project No. 4682.91	Zone Map No. L-14	Sheet 1-05	23 of 25

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	DATE	BY	DATE	NO.	DATE	CONTRACTOR	DATE
						INSPECTOR'S	DATE
REMARKS		FIELD NOTES		BENCH MARKS		AS BUILT INFORMATION	
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DRAWN BY		BY		NO.		DATE	
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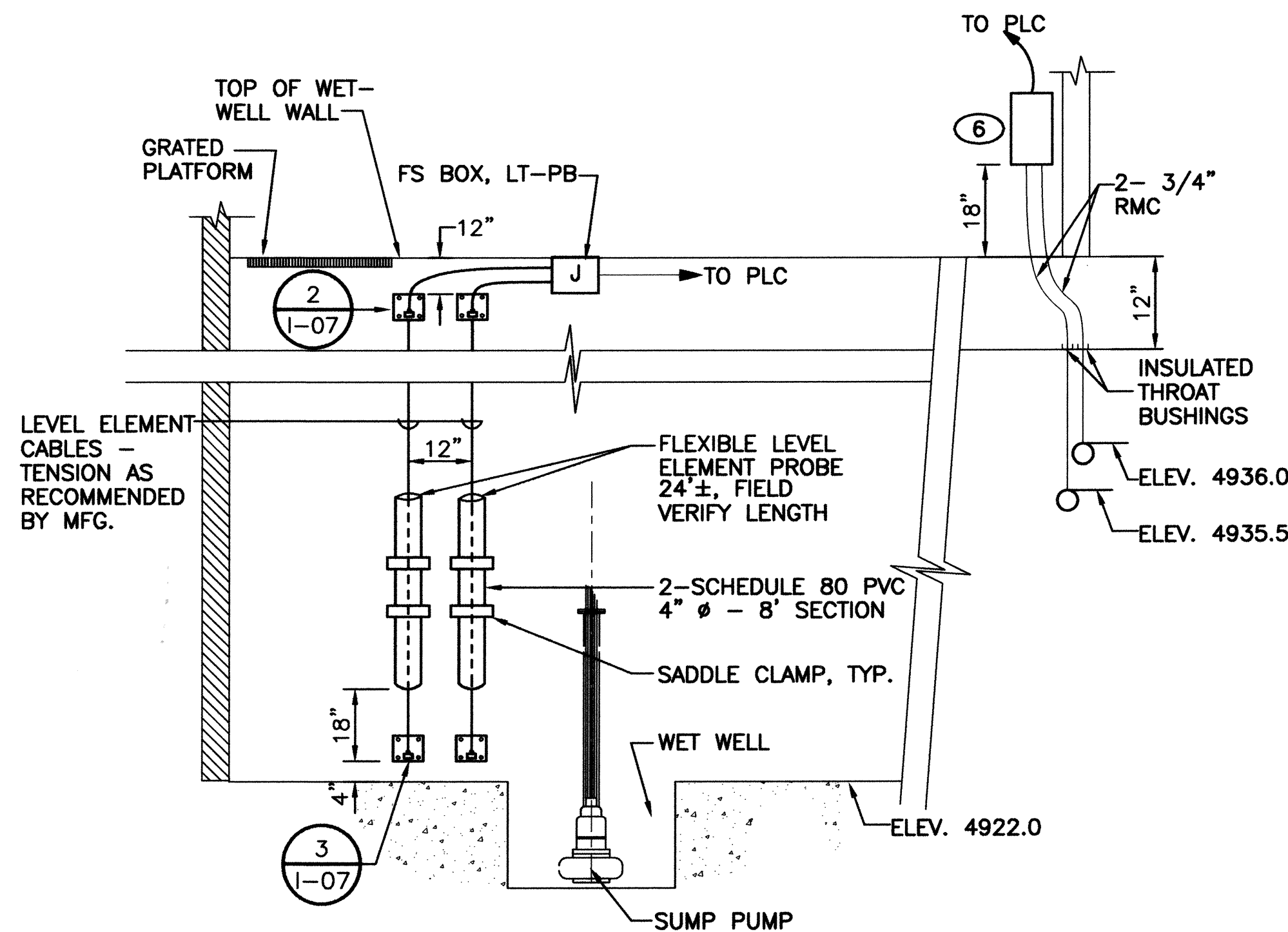
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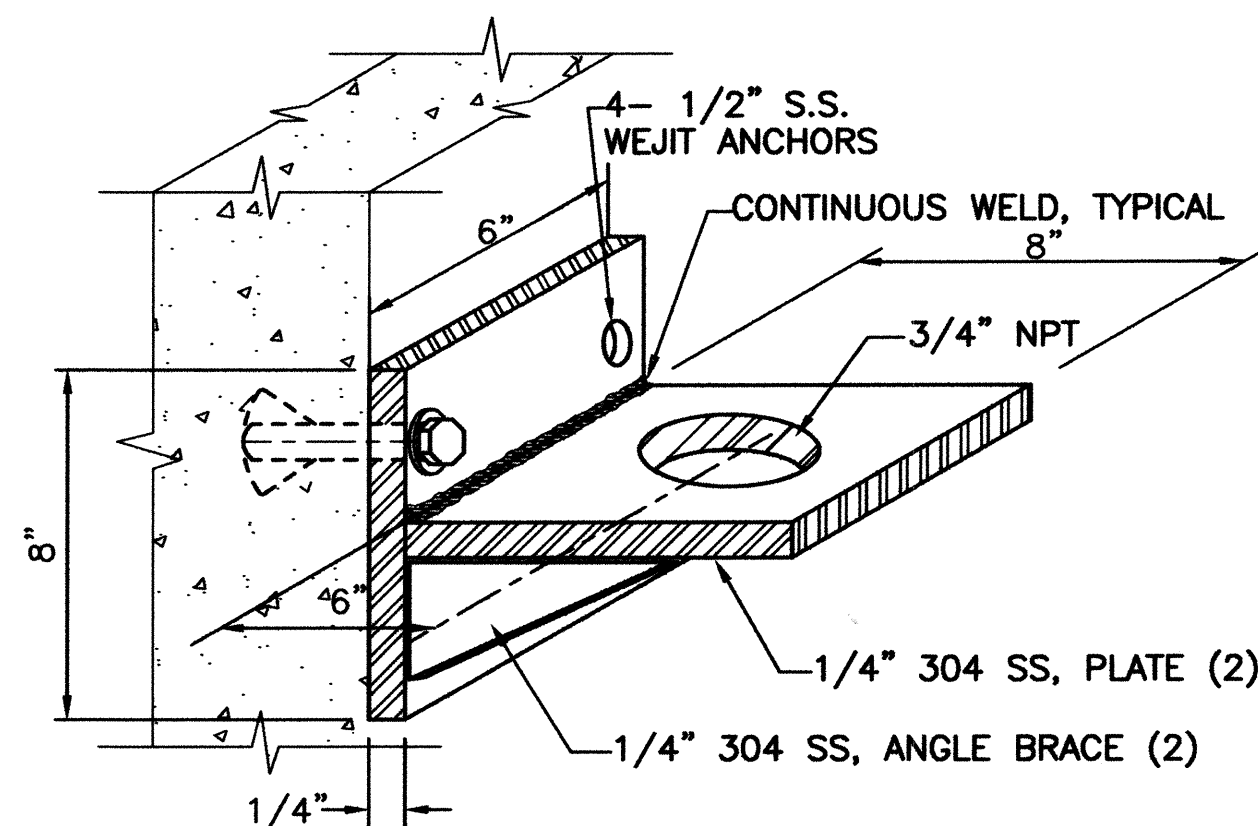


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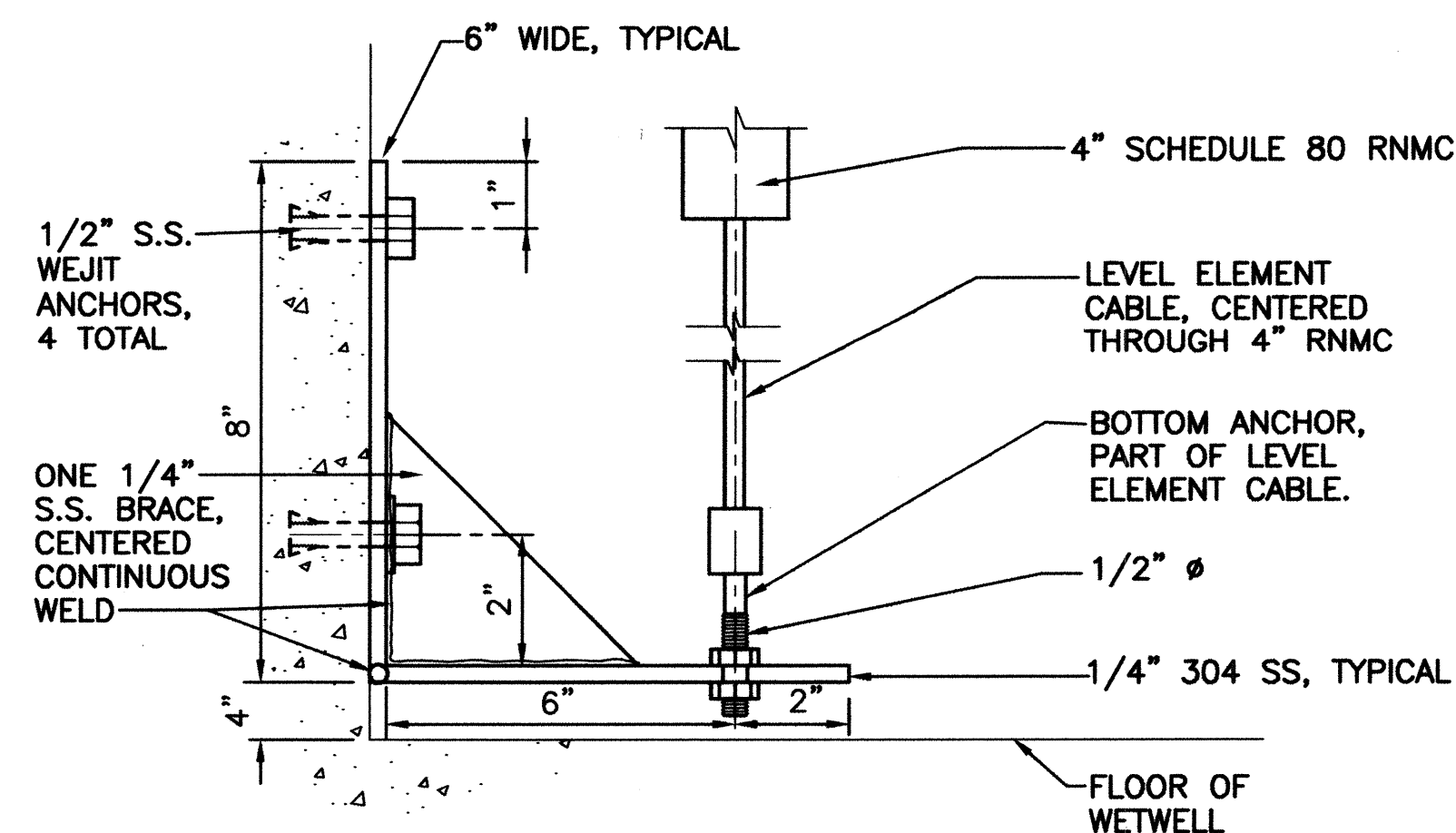
	CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
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BELL STATION #37 LOOP DIAGRAMS, SHEET 1				
Design Review Committee APPROVED JUL 19 2002 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVED JUL 19 2002 CITY ENGINEER	Last Design Update	Mo./Day/Yr. 	Mo./Day/Yr.
City Project No. 4682.91	Zone Map No. L-14	Sheet 1-06	24 of 25	



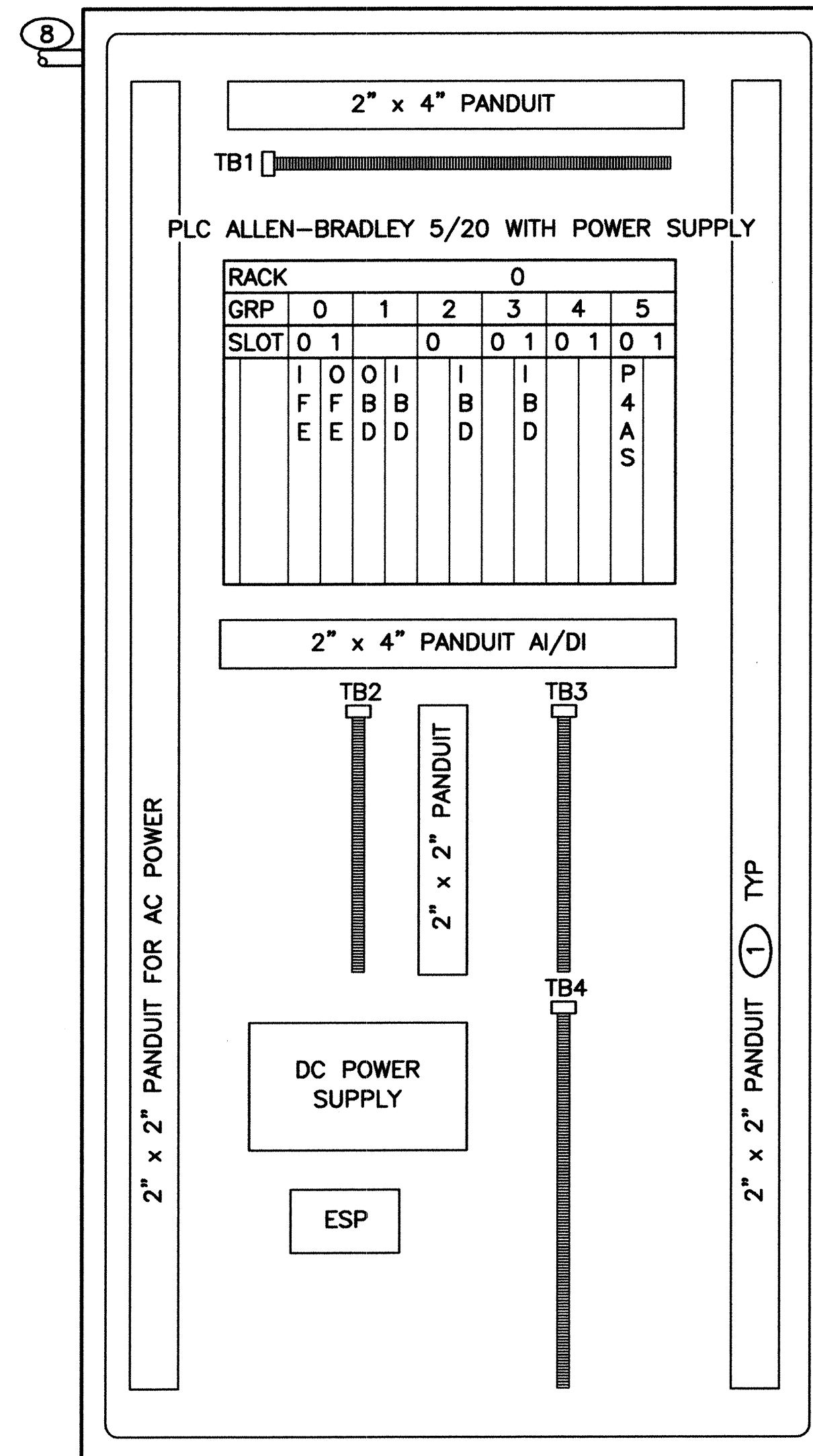
1 LEVEL ELEMENT AND FLOAT INSTALLATION
E-06 SCALE: N.T.S.



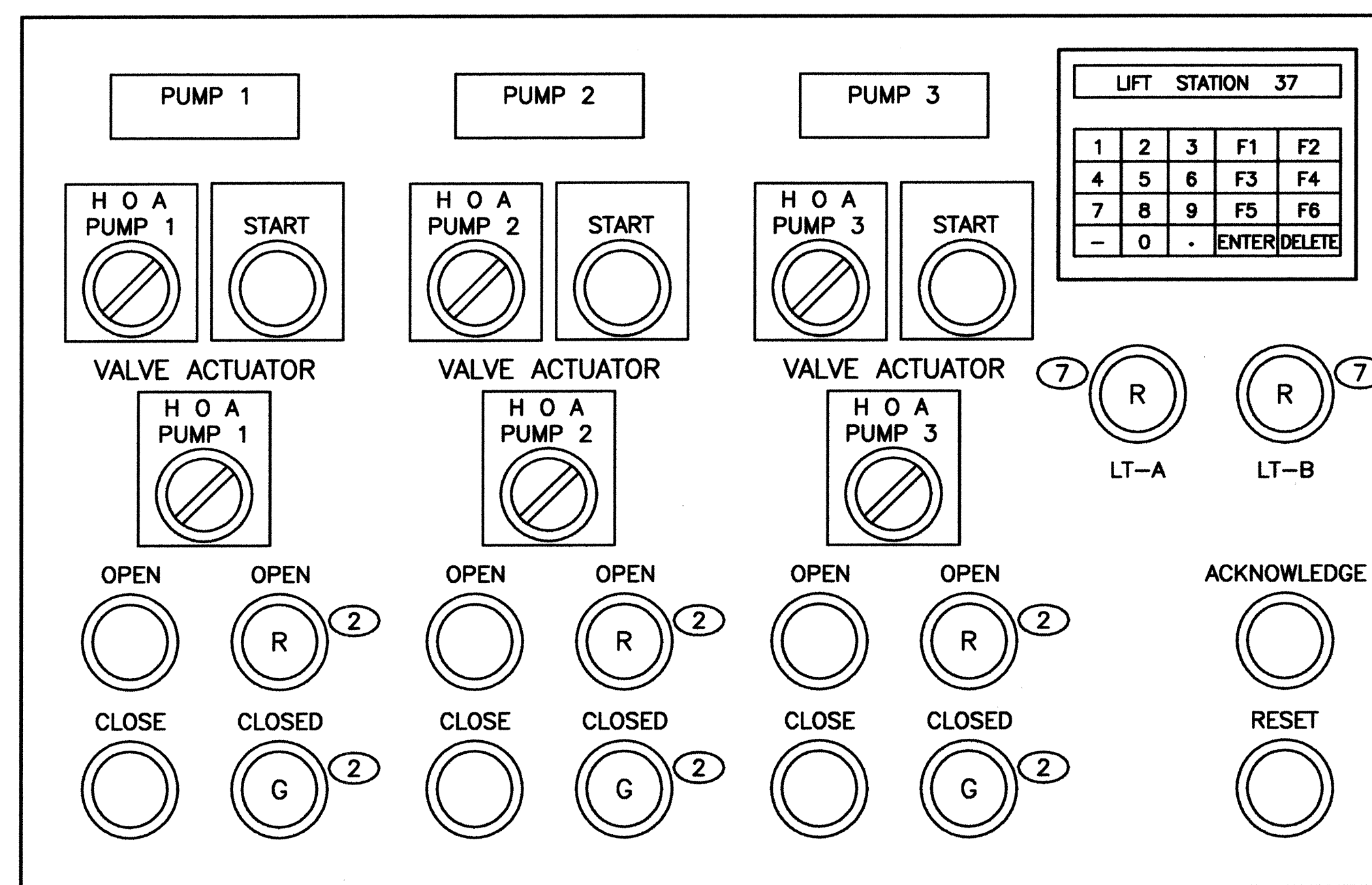
2 TRANSMITTER UPPER BRACKET 4
I-07 SCALE: N.T.S.



3 CABLE ANCHOR
I-07 SCALE: N.T.S.



PLC LAYOUT
N.T.S.



PLC DOOR
N.T.S.

TERMINAL BLOCK ID

- TB1. M53701, M53702, M53703, M53704, M53741 DISCRETE DEVICES SEE SHEETS: E10, E11, E13, E14
- TB2. LT53700A, LT53700B, ANALOG DEVICES SEE SHEET I-06
- TB3. DC DOOR DEVICES, THIS SHEET
- TB4. AC DOOR DEVICES, THIS SHEET

KEYED NOTES

- NOT ALL PANDUIT SHOWN. PROVIDE SUFFICIENT PANDUIT TO SEPARATE AC AND DC SYSTEMS.
- LED TYPE INDICATOR.
- PROVIDE STEEL ENCLOSURE, NEMA 12, SINGLE HINGED DOOR.
- 1/4" WELD ALL AROUND AS REQUIRED, HOT DIP GALVANIZE AFTER FABRICATION, OR ALL SS.
- OBTAIN UL LISTING FOR CONTROL PANEL.
- 12 BY 16 NEMA 4 ENCLOSURE WITH SEVEN BUCHANAN B112 TBS. LEAVE FOUR FEET OF EACH FLOAT CABLE COILED IN ENCLOSURE.
- MOMENTARY CONTACT ILLUMINATED PUSH BUTTON 24VDC RED LED. ALLEN-BRADLEY 800T-QBH24R OR ENGINEER APPROVED SUBSTITUTION.
- 1" CONDUIT TO EXISTING TELEMETRY UNIT. CONNECTIONS FROM PLC COMMUNICATIONS MODULE TO TELEMETRY BY CITY.

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	NO.	BY	DATE	NO.	DATE	BY
INSPECTOR'S NAME	DATE						
INSPECTOR'S DATE	DATE						
VERIFICATION BY	DATE						
CORRECTED BY	DATE						
MICRO-FILM INFORMATION							
RECORDED BY	DATE						
NO.							

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: STORM WATER PUMP STATION #37 REHABILITATION
BELL STATION #37
INSTALLATION
DETAILS

Design Review Committee
JUL 19 2002
DESIGN REVIEW COMMITTEE

City Engineer Approval
JUL 19 2002
CITY ENGINEER

Mo./Day/Yr. Mo./Day/Yr.

DESIGNED BY: WNH DATE: 10-00
DRAWN BY: RA DATE: 10-00
CHECKED BY: SES DATE: 7-02

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I-07