

MCC/MOTOR STARTER MOUNTED NORMALLY ACCESSIBLE TO JUNILL
ACCESSIBLE
OPERATOR
——— DISCRETE INSTRUMENTS MICROPROCESSOR BASED SHARED INSTRUMENT COMPUTER NONE NONE FUNCTION INACCESSIBLE OR BEHIND-THE-PANEL DEVICES OR FUNCTIONS MAY BE DEPICTED BY USING THE SAME SYMBOLS BUT WITH DASHED HORIZONTAL BARS, I.E.

TAG NUMBER FUNCTION ABBREVIATIONS

AI T	AL TERNATE
C	CLOSE(D)
ČM	COMPUTER-MANUAL
DIFF	DIFFERENCE OR DIFFERENTIAL
DO	DISSOLVED OXYGEN
F	FAIL
F(X)	CHARACTERIZED
FOR FSR	FORWARD-STOP-REVERSE (MAINTAINED CONTACT) FORWARD-STOP-REVERSE (MOMENTARY CONTACT)
HOA	HAND-OFF-AUTOMATIC (MAINTAINED CONTACT)
II	CURRENT-TO-CURRENT
ΪΡ	CURRENT-TO-PNFUMATIC
ΪL	LEAD-LAG (MAINTAINED CONTACT)
LOR	LOCAL-OFF-REMOTE (MAINTAINED CONTACT)
LOS	LOCKOUT STOP (LOCKABLE IN "STOP" POSITION.
. 5	MOMENTARY CONTACT)
LR MA	LOCAL-REMOTE (MAINTAINED CONTACT)
MOA	MANUAL-AUTOMATIC (MAINTAINED CONTACT) MANUAL-OFF-AUTOMATIC (MAINTAINED CONTACT)
0	OPEN
ŎΑ	OFF-AUTOMATIC
OAC	OPEN-AUTOMATIC-CLOSE (MAINTAINED CONTACT)
OC	OPEN-CLOSE(D) (MAINTAINED CONTACT)
OSC	OPEN-STOP-CLOSE (MOMENTARY CONTACT
00	SPRING RETURN TO CENTER POSITION)
00 00A	ON-OFF (MAINTAINED CONTACT) ON-OFF-AUTOMATIC (MAINTAINED CONTACT)
OOR	ON-OFF-REMOTE (MAINTAINED CONTACT)
R	RUN
Š	STOP
SP	SPEED POT
SQRT	SQUARE ROOT
SS	START-STOP (MOMENTARY CONTACT)
SSA	START-STOP-AUTOMATIC (MOMENTARY CONTACT)
SSL	START-STOP-LOCK (LOCKABLE IN "STOP" POSITION, MOMENTARY CONTACT)
SUM	SUMMATION
VID	VIDDATION

SUM VIB VIBRATION

INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTER (S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
Α	ANALYSIS (+)		ALARM		
В	BURNER COMBUSTION		USERS CHOICE (+)	CLOSE, STOP, DECREASE	USERS CHOICE (+)
С	USERS CHOICE (+)			CONTROL	CLOSED
D	USERS CHOICE (+)	DIFFERENTIAL		OPEN, START, INCREASE	
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE, FIRE				
G	USERS CHOICE (+)		GLASS		FAIL
Н	HAND (MANUAL)				HIGH (OPEN)
I	CURRENT		INDICATE		INTERMEDIATE
J	POWER	SCAN			
K	TIME OR SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW (CLOSED)
М	MOTOR, MOISTURE	MOMENTARY			MIDDLE
N	USERS CHOICE (+)		USERS CHOICE (+)	USERS CHOICE (+)	ON
0	USERS CHOICE (+)		ORIFICE		OPENED
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION (+)	MULTIFUNCTION (+)	MULTIFUNCTION (+)
٧	VIBRATION			VALVE	
W	WEIGHT OR FORCE		WELL		
Χ	UNCLASSIFIED (+)	X AXIS	UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Υ	EVENT, STATE, OR PRESSURE	Y AXIS		RELAY OR COMPUTE (+)	
Z	POSITION, DIMENSION	Z AXIS		DRIVE. ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(†) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL.

SPECIAL CASES: ELAPSED TIME METER

X FILLED SYSTEM (CAPILLARY TUBING ETC.) _____UNDEFINED SIGNAL **EQUIPMENT AND SELF ACTUATED**

VALVE IDENTIFICATION EQUIPMENT ABBREVIATIONS

MECHANICAL EQUIPMENT TANK

D: INSTRUMENTATION TAG, EQUIPMENT OR SELF CONTAINED VALVE ABBREVIATION

W: UNIT PROCESS NUMBER X: LOOP NUMBER

Y: UNIT NUMBER ** COMPONENT DESIGNATOR

PROCESS FLOW

— RAS — →

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SIGNALS

TAG NUMBER

D-WXYZ

-FLOW STREAM IDENTIFIERS

NEW MAJOR PROCESS FLOW

STREAM (CLOSED CONDUIT)

NEW INTERMEDIATE PROCESS

STREAM (CLOSED CONDUIT)

STREAM (CLOSED CONDUIT)

STREAM (CLOSED CONDUIT)

STREAM (OPEN CONDUIT)

- NEW OR RELOCATED ITEM

— NEW OR RELOCATED STRUCTURE

— A — — MODULATED (4 TO 20 mADC ECT.) — L

INSTRUMENT SUPPLY OR CONNECTION TO EQUIPMENT

- ALP NEW MINOR PROCESS FLOW

___PI___ EXISTING MAJOR PROCESS FLOW

---ALP--- EXISTING MINOR PROCESS FLOW

— PI → NEW MAJOR PROCESS FLOW

EXISTING MAJOR PROCESS FLOW STREAM (OPEN CONDUIT)

STRUCTURES AND EQUIPMENT

---- EXISTING STRUCTURE

— — — DISCRETE (ON/OFF ETC.)

--- o --- SOFTWARE OR DATALINK

---- EXISTING ITEM

FLOW STREAM (CLOSED CONDUIT)

EXISTING INTERMEDIATE PROCESS

FLOW STREAM (CLOSED CONDUIT)

AIR RELEASE VALVE AIR AND VACUUM RELEASE VALVE LEVEL CONTROL VALVE PRESSURE CONTROL VALVE

SELF CONTAINED VALVE ABBREVIATIONS

PRESSURE SAFETY (RELIEF) VALVE TEMPERATURE CONTROL VALVE

POWER OPERATED VALVE IDENTIFICATION

SAME AS INSTRUMENT IDENTIFICATION.

INTERFACE SYMBOLS

INTER-UNIT PROCESS

A = INTERFACE NO.

INTRA-UNIT PROCESS
Q = INTERFACE LETTER

TO INTERFACE

(N)—-

NOT IN CONTRACT

W = SOURCE UNIT PROCESS NO.

NNN = SOURCE SHEET NO. MMM = DESTINATION SHEET NO.

INTER - UNIT PROCESS
W = SOURCE UNIT PROCESS NO.

MMM = DESTINATION SHEET NO.

Q = INTERFACE LETTER

A = INTERFACE NO.

NNN = SOURCE SHEET NO.

INTRA-UNIT PROCESS

PROCESS

NNN W-A

SIGNAL

W-A MMM

SIGNAL LINE CONTINUATION N = 1, 2, 3 ETC.

SIGNAL LINE CONTINUATION

 $\overline{\text{MMM}}$ >

-(8)

PARALLELING LINES.

CONNECTING LINES

NON-CONNECTING LINES

—— PACKAGE SYSTEM

ELECTROMAGNETIC OR

ELECTROMAGNETIC OR SONIC (UNGUIDED)

----- PNEUMATIC

──└── HYDRAULIC

—⊙——⊙— MECHANICAL LINK

— — E — — ETHERNET LINK

(PARENTHETICAL NUMBER INDICATES THE NUMBER OF

SIGNALS REPRESENTED)

ELECTRICAL PANEL/ CONTROL STATION IDENTIFICATION

TAG NUMBER: (LCP-P) ◆

PANEL DESIGNATION PANEL NUMBER

COMPONENT DESIGNATOR

COMPONENT DESIGNATORS

- CRITICAL ALARM
- PROVIDE IN ACCORDANCE WITH SECTION 16900
- EXISTING COMPONENT TO BE RELOCATED IN ACCORDANCE WITH SECTION 16900
- ♦♦♦ OWNER FURNISHED COMPONENT TO BE INSTALLED IN ACCORDANCE WITH SECTION 16900
 - * OWNER FURNISHED COMPONENT TO BE INSTALLED IN ACCORDANCE WITH DIVISION 11 AND DIVISION 15
 - PROVIDE AS PART OF A MANUFACTURER'S OR VENDOR'S PACKAGED SYSTEM IN ACCORDANCE WITH DIVISION 11, DIVISION 13 AND DIVISION 15
- EXISTING COMPONENT TO BE RELOCATED IN ACCORDANCE WITH DIVISION 11 AND DIVISION 15

PROVIDE COMPONENT WITHOUT A DESIGNATOR IN ACCORDANCE WITH DIVISION 11, DIVISION 13 AND DIVISION 15

GENERAL NOTES:

- THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.
- 2. CROSS-HATCHED PORTIONS OF P&ID'S

INDICATE FUTURE OR CONCURRENT WORK WHICH IS NOT A PART OF THIS CONTRACT.

3. THERE IS NO INTENT TO SHOW ALL EXISTING FACILITIES ON THE P&ID'S.

<u>GI-2</u>

DESIGNED DKC REVISED McDonough Associates Inc. CHECKED KMY REVISED Engineers/Architects DRAWN CJM REVISED SCALE 03/22/2012 DATE CHECKED KMY REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION I & C SYMBOL LIST, ABBREVIATIONS, & GENERAL NOTES F.A.P. RTE. **PUMP STATION 47**

SHEET NO. GI-2 OF 2 SHEETS

COUNTY SECTION DUPAGE 181 125 2011-035-1 CONTRACT NO. 60P41 ILLINOIS FED. AID PROJECT