MATERIAL REQUIRED

ITEM	UNIT	DESCRIPTION	QTY.
625	EACH	LIGHT POLE FOUNDATION, 24"X6' DEEP	4
625	EACH	ALUMINUM TRANSFORMER BASE, ATA	4
625	EACH	CONNECTOR KIT, TYPE III	4
625	EACH	CONNECTOR KIT, TYPE VIII	8
625	LIN.FT.	CONDUIT, 713.04, 1"	1800
625	LIN.FT.	CONDUIT, 713.04, 2"	145
625	LIN.FT.	CONDUIT, 713.04, 3"	46
625	LIN.FT.	CONDUIT, 725.07, 1-1/2"	953
625	LIN.FT.	CONDUIT JACKED OR DRILLED UNDER PVMT, 2"	360
625	EACH	PULL BOX, 713.08, 18"	23
625	EACH	GROUND ROD, APP	10
630	EACH	SIGN, FLAT SHEET	39
630	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE, APP	4
631	EACH	PHOTOELECTRIC CONTROL	2
631	EACH	SIGN FLASHER ASSEMBLY	4
632	EACH	VEH. SIGNAL HEAD, (LED), 3-SECT., 12" LENS, 1-WAY, POLYCARB., APP	10
632	EACH	BACKPLATE, 3-SECTION	10
632	EACH	LOOP DETECTOR UNIT, DELAY AND EXT. TYPE	10
632	LIN.FT.	MESS. WIRE, 7-STRAND, 3/8" DIA. W/ ACC.	378
632	LIN.FT.	MESS. WIRE, 7-STRAND, 1/4" DIA. W/ ACC.	378
632	EACH	BREAKAWAY TETHER POLE CONNECTION	4

ITEM	UNIT	DESCRIPTION	QTY.
632	LIN.FT.	LOOP DETECTOR LEAD-IN CABLE, 2/C, NO. 14 AWG	6060
632	LIN.FT.	POWER CABLE, 2/C, NO. 6 AWG	36
632	LIN.FT.	POWER CABLE, 3/C, NO. 6 AWG	30
632	EACH	POWER SERVICE	30
632	LIN.FT.	SIGNAL CABLE, 3/C, NO. 14 AWG	2351
632	LIN.FT.	SIGNAL CABLE, 5/C, NO. 14 AWG	927
632	EACH	CABLE SUPPORT ASSEMBLY	2
632	CU.YD.	CONCRETE FOR ANCHOR BASE FOUNDATION, APP	11.52
632	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 10,	4
632	EACH	STEEL STRAIN POLE, 7.5" DIA, 10.5" BOLT CIRCLE,	11 GA, 5
632	LIN.FT.	LOOP DETECTOR WIRE, TYPE E	2523
632	EACH	METER BASE, 200 AMP WITH BYPASS	1
633	EACH	CONTROLLER ACTUATED, 8-PHASE, SOLID-STATE	1
	EACH	DIGITAL MICROPROCESSOR, APP	
633	CU.YD.	CONCRETE FOR CABINET FOUNDATION	3.39
633	SQ.FT.	CONTROLLER WORK PAD	22.4
633	EACH	FLASHER CONTROLLER	1
633	EACH	1000W UPS W/ ENCLOSURE	1

Ⓐ EXISTING 1" CONDUIT: 1-2/C #6 AWG POWER CABLE
EXISTING 3" CONDUIT W/ 4-5/C AND 2-3/C SIGNAL CABLES AND 2-2/C LOOP LEAD-IN CABLES

Ⓑ EXISTING 1" CONDUIT: 1-2/C #6 AWG POWER CABLE
EXISTING 3" CONDUIT W/ 4-5/C AND 2-3/C SIGNAL CABLES AND 2-2/C LOOP LEAD-IN CABLES

Ⓒ EXIST 5' LENGTH OF 2" CONDUIT W/ 1-2/C POWER CABLE FROM DISCONNECT TO BACKUP AND 1-2/C POWER FROM BACKUP TO CONTROLLER

PB-10
STA 14+54*
INSTALL 1" CONDUIT: 1-2/C #14 AWG
EXISTING PB-9
STA 13+44±
EXISTING 2" CONDUIT: 5-2/C #14 AWG CABLES AND 1-3/C
EXISTING PB-8
STA 10+90±
EXIST. 1" CONDUIT: 1-2/C #14 AWG
ATTACH HT = 30.6'
POLE BASE DIA = 13"
STRAIN POLE P-1
DES. NO. 10, 32'
W/ FLASHER CONTROLLER AND 3'X4' CONC. WORKPAD
PB-5A - EXIST 18"
STA 131+79±
POWER SOURCE, O.E. POLE NO. 4918A2-5, STA 131+57*, LT
EXISTING 8-PHASE CONTROLLER ON CONCRETE FND. W/ 3'X4' WORKPAD
EXIST UPS - GROUND MOUNTED ON TYPE 2 FND W/ 30"X50" WORK PAD
SR 4
R/W
EXISTING 2" CONDUIT JACKED OR DRILLED UNDER PAVEMENT W/ 3-2/C AND 1-3/C
EXISTING PB-7
STA 10+95, 25' RT
ATTACH HT = 30.6'
POLE BASE DIA = 13"
STRAIN POLE P-3
DES. NO. 10, 32'
EXIST 1-1/2"CONDUIT: 1-3/C #14 AWG
EXIST 2" CONDUIT: 3-2/C AND 1-3/C
EXISTING PB-12
STA 134+09±
EXISTING PB-13
STA 135+17*
EXISTING PB-14
STA 136+58±
EXISTING PB-15
STA 138+83±
EXISTING 1" CONDUIT: 2-2/C #14 AWG
EXISTING 1" CONDUIT: 2-3/C
EXIST. PB-20
STA 140+62
65' LT
EXISTING PB-11
STA 132+90±
EXISTING 2" CONDUIT: 1-2/C #14 AWG JACKED OR DRILLED UNDER PVMT.
EXISTING PB-19
STA 132+90±, 10' RT
EXIST. 2" CONDUIT: 1-3/C
EXIST. PB-21
STA 140+62,
13' LT
EXISTING 1" CONDUIT: 1-3/C
EXIST W-47-48 SIGN FLASHER ASSEMBLY ON 15' STEEL POLE, ATA BASE, AND LIGHT POLE FND. INSTALL PHOTOELECTRIC CONTROL ON TOP OF POLE IN MEDIAN. STA 140+52±
W-47-48
STA 140+52±,
MED. & RT
EXISTING PB-4
STA 129+05±
1-1/2" CONDUIT: 1-3/C #14 AWG
EXISTING 2" CONDUIT: W/ EXIST 3-2/C LOOP CABLES AND EXIST. 1-3/C
EXISTING PB-5
STA 131+47*
EXISTING 1" CONDUIT WITH 2-2/C #14 AWG CABLE
EXISTING 3" CONDUIT WITH 1-2/C #14 AWG CABLE
EXISTING PB-6
STA 131+47*, 8'LT
STA 132+17.88 ℄USR 20 = STA 10+00 ℄SR 4
W-47-48
STA 123+69±,
MED. & RT
EXIST W-47-48 SIGN FLASHER ASSEMBLY ON 15' STEEL POLE, ATA BASE, AND LIGHT POLE FND. INSTALL PHOTOELECTRIC CONTROL ON TOP OF POLE IN MEDIAN. STA 123+69±
EXISTING 1" CONDUIT: 2-3/C #14 AWG
EXISTING 1" CONDUIT: 1-2/C #14 AWG AND 1-3/C
EXIST. 2" CONDUIT: 2-2/C #14 AWG AND 1-3/C
EXIST. PB-22
STA 123+59,
15' RT
EXISTING PB-1
STA 125+23±
EXISTING PB-2
STA 127+57±
℄ USR 20
EXISTING PB-3
STA 129+05±
STA 132+19.03 ℄ USR 20 = STA 10+00 ℄ SR 4
EXIST. 2" CONDUIT: 1-3/C
EXIST. PB-22
STA 123+59,
67' RT
EXIST 1-1/2" CONDUIT: 1-3/C #14 AWG
EXISTING 1" CONDUIT: 1-3/C
EXIST. 2" CONDUIT: 2-2/C #14 AWG AND 1-3/C
USR 20
ONY
L-1
L-2
L-3
L-4
L-5
L-6
L-7
L-8
L-9
L-10
L-11
L-12
L-13
L-14
L-15
L-16
STRAIN POLE P-2
DES. NO. 10, 32'
ATTACH HT = 31.2'
POLE BASE DIA = 13"
STRAIN POLE P-4
DES. NO. 10, 32'
ATTACH HT = 28.3'
POLE BASE DIA = 13"
EXISTING 2" CONDUIT: W/ 2-2/C #14 AWG
EXISTING PB-18
STA 9+26±
EXISTING 1-2/C #14 AWG LOOP LEAD-IN CABLE IN EXISTING 1" CONDUIT
ASPHALT DRIVE
PB-17, EXISTING
STA 7+18±
EXISTING 1-2/C #14 AWG LOOP LEAD-IN CABLE AND 1" CONDUIT.
EXISTING PB-16
STA 6+40±
SR 4
0 30 60
SCALE

NOTE: TRANSFORMER BASES ARE ATA TB1-20 DESIGN WITH 10.5" TO 13.5" TOP BOLT CIRCLE AND 13" TO 15" BOTTOM BOLT CIRCLE.

LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE
L-1	6X8	3	PULSE		1	2
L-2	6X8	3	PULSE		1	2
L-3	6X20	2	PULSE		2	2
L-4	6X20	2	PULSE		2	2
L-5	6X20	2	PULSE		3	6
L-6	6X20	2	PULSE		3	6
L-7	6X8	3	PULSE		4	6
L-8	6X8	3	PULSE		4	6
L-9	6.4X10.8	4	PULSE	3*	5	8
L-10	6.4X10.8	4	PULSE	3*	5	8
L-11	6X30	3+3	PRESENCE	8*	6	8
L-12	6X8X30	2	PRESENCE	8*	7	4
L-13	5X5	3	PULSE	3*	8	4
L-14	5X5	3	PULSE	3*	8	4
L-15	6X30	3	PRESENCE		9	5
L-16	6X30	3	PRESENCE		10	1

* INHIBIT DELAY DURING ASSOC. PHASE GREEN INTERVAL

LEFT TURN SIGNAL
R10-10
Ⓐ

EXIST SPANWIRE SIGNS

5" BACKPLATE W/ YELLOW REFLECTIVE TAPE BORDER PER CMS 732.22, TYPICAL ALL SIGNAL HEADS

COMPACT FLOURESCENT (CFL) DOWNLIGHTS

EXIST SIGN FLASHER BEACON (EXIST 12" LENS W/ LED LAMPS)

TYPICAL SIGNAL HEADS
BLACK POLYCARBONATE W/ 12" LED LAMPS

50"
12" 12" 12"
FRONT (WORKPAD SIDE)
36"
25"
ANCHOR BOLTS

EXISTING CONTROLLER FOUNDATION DETAIL

PHASING IDENTIFICATION

PHASE 1	PHASE 2	FUTURE USE / PHASE 3	FUTURE USE / PHASE 4
PHASE 5	PHASE 6	FUTURE USE / PHASE 7	FUTURE USE / PHASE 8

PHASE 1 & 6
PHASE 1 & 5
PHASE 2 & 6
PHASE 4 & 8
PHASE 2 & 5

℄ OF LOOP
7'-10"
6'
1'-10"
3'-6"
90°
10'-10"
CENTER OF LANE
1'-3" STATION
6'-5"
℄ SR 58

ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL

Flasher Operation
Yellow To US 20
Red To SR 4
Signal No. HUR-20-0250S
Section No. 00.98
Route Type 20
Installation Date 6-23-37
File No. 0018
OSIS No. 471

DATE	REVISIONS	INSTALLED
2/7/95	PLAN REDRAWN PER WORK ON PROJ 284(93)	9/8/94
4-24-96	SWITCHED PH 2&3, ADDED NO-SKIP FOR SR-4	4-11-96
2-19-97	NEW STRAIN POLES, HEADS, AND CONTROLLER	5-29-97
10-31-97	INSTALLED PROT. LT. TURN PHASES ON USR 20 & REMOVED NO-SKIP FOR SR 4	10-28-97
2-22-02	RELOCATED LOOPS L-15 AND L-16	3-8-02
1-6-04	REMOVED NOTE FOR STROBE LIGHTS	
1-29-04	PROJ 62(03)-REBUILD SIGN FLASHERS, NEW SIGNAL HEADS, 8-PH. CONTROLLER	6-2-04
3-4-05	INSTALLED BATTERY BACKUP - PROJ. 62-03	5-24-05
9-17-10	PROJ 58(10)-INSTALLED BREAKAWAY TETHER POLE CONNECTIONS	4-21-10
10-17-11	PROJ 332(10)-INSTALLED NEWS SIGNAL HEADS W/ BACKPLATES	12-13-11
10-17-11	PROJ 603(11) -UPGRADE LOOPS ON SOUTH APPROACH	6-8-12

OHIO DEPARTMENT OF TRANSPORTATION

ELECTRICAL INSTALLATION LOCATED AT

U.S.R. 20 AND S.R. 4

PLAN REDRAWN

DISTRICT 3 COUNTY HURON

APPROVED _____ DATE _____ DRAWING NO. _____

ENGINEER OF TRAFFIC

DESIGNED	DRAWN	REVISED	CHECKED	REVIEWED	SHEET
RJR 2/97	RJR 2/97	RJR 1/04			1 OF

DESIGN FILE: I:\FIELDINV\ELECTRICAL\SIGNAL\DGN\H20&4.dgn
WORKSTATION: RRONEY DATE: 6/14/2012