44th Ave Manatee County
County Project No. 6086960

ROADWAY QUANTITIES

PAY ITEM NUMBER	DESCRIPTION	UNIT	TOTAL
0101 1	MOBILIZATION	LS	1
0102 1	MAINTENANCE OF TRAFFIC	LS	1
0102 14	TRAFFIC CONTROL OFFICER	HR	1
0102 60	WORK ZONE SIGN	ED	335
0102 74 1	CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	ED	744
0102 74 2	CHANNELIZING DEVICE, TYPE III, 6'	ED	203
0102 76	ARROW BOARD / ADVANCE WARNING ARROW PANEL	ED	400
0102 78	REFLECTIVE PAVEMENT MARKER, TEMPORARY	EA	961
0102 99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	1800
0102 107 1	TEMPORARY TRAFFIC DETECTION AND MAINTENANCE OF INTERSECTION	ED	200
0104 10 3	SEDIMENT BARRIERS	LF	25889
0104 11	FLOATING TURBIDITY BARRIER	LF	444
0104 12	STAKED TURBIDITY BARRIER	LF	76
0104 18	INLET PROTECTION SYSTEM	EA	120
0107 1	LITTER REMOVAL AND DISPOSAL	LS/AC	17.8
0107 2	MOWING	AC	9.34
0110 1 1	CLEARING & GRUBBING	AC	38
0110 4 10	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	3983
110 5	PLUGGING WATER WELLS, ARTESIAN	EA	1
110 6	PLUGGING WATER WELLS, NON-ARTESIAN	EA	1
120-1	REGULAR EXCAVATION	CY	81636
120-4	SUBSOIL EXCAVATION	CY	1571
0120 6	EMBANKMENT	CY	68998
0160 4	TYPE B STABILIZATION	SY	88633
285 701	OPTIONAL BASE, BASE GROUP 01	SY	2506
0285 709	OPTIONAL BASE, BASE GROUP 09	SY	70797
0327 70 05	MILLING EXISTING ASPHALT PAVEMENT (1.5" AVG DEPTH)	SY	3871
0334 1 13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	TN	10641
0337-7-83	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C ,FC-12.5, PG76-22	TN	9501
339-1	MISC. ASPHALT PAVEMENT	TN	13.25
400-0-11	CONCRETE CLASS NS, GRAVITY WALL	CY	318
0515-1-2	PIPE-HANDRAIL, ALUMINUM	LF	1068
0520-1-10	CONCRETE CURB, TYPE F	LF	16912
0520-1-11	CONCRETE CURB AND GUTTER - TYPE AB	LF	7681
520-5-11	CONCRETE TRAFFIC SEPARATOR TYPE 1, 4' WIDE	LF	1386
520-5-16	CONCRETE TRAFFIC SEPARATOR TYPE 1, 8.5' WIDE	LF	1401
521-1	MEDIAN CONCRETE BARRIER	LF	507
0521 72 5	SHOULDER CONCRETE BARRIER WALL	LF	595
0522 1	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	14158
0522 2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	2599
527 2	DETECTABLE WARNINGS	SF	495
536-1-0	GUARDRAIL-ROADWAY GENERAL TL-2	LF	366.8
536-85-24	GUARDRAIL END ANCHORAGE ASSEMBLY/END TREATMENT- PARALLEL	EA	1
536-85-26	GUARDRAIL END ANCHORAGE ASSEMBLY/END TREATMENT- TYPE CRT	EA	1
570-1-1	HYDROSEED/MULCH	SY	26152
570-1-2	PERFORMANCE TURF, SOD	SY	19069
0710 11 101	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6"	GM	3.34
710-11-124	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR DIAGONAL OR CHEVRON, 18"	LF	97.8
710-11-125	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR STOP LINE OR CROSSWALK, 24"	LF	128.1
0710 11 131	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 10-30 OR 3-9 SKIP, 6" WIDE	GM	0.05
710-11-160	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	2
0710 11 201	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6"	GM	2.56
710-11-224	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW SOLID FOR DIAGONAL OR CHEVRON, 18"	LF	680.2
0999 25	INITIAL CONTINGENCY AMOUNT, DO NOT BID	LS/LS	1

44th Ave Manatee County
County Project No. 6086960

DRAINAGE QUANTITIES

PAY ITEM NUMBER	DESCRIPTION	UNIT	TOTAL
0400-1-2	CONCRETE CLASS I, ENDWALLS	CY	8
0400-2-2	STRAIGHT CONCRETE ENDWALL	CY	12.5
0425-1-351	INLETS, CURB, TYPE P-5, <10'	EA	20
0425-1-352	INLETS, CURB, TYPE P-5, >10'	EA	2
0425-1-361	INLETS, CURB, TYPE P-6, <10'	EA	17
0425-1-451	INLETS, CURB, TYPE J-5, <10'	EA	11
0425-1-452	INLETS, CURB, TYPE J-5, >10'	EA	7
0425-1-461	INLETS, CURB, TYPE J-6, <10'	EA	9
0425-1-462	INLETS, CURB, TYPE J-6, >10'	EA	4
0425-1-531	INLETS, DITCH BOTTOM, TYPE C MODIFIED- BACK OF SIDEWALK, <10'	EA	20
0425-1-541	INLETS, DT BOT, TYPE D, <10'	EA	4
0425-1-551	INLETS, DT BOT, TYPE E, <10'	EA	3
0425-1-581	INLETS, DT BOT, TYPE H, <10'	EA	2
0425-1-891	INLETS, BARRIER WALL, <10'	EA	5
0425-1-910	INLETS, CLOSED FLUME	EA	4
0425-2-41	MANHOLES, P-7, <10'	EA	6
0425-2-71	MANHOLES, J-7, <10'	EA	9
0425-2-72	MANHOLES, J-7, >10'	EA	5
0430-175-112	PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 12"S/CD	LF	53
0430-175-118	PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 18"S/CD	LF	4228
0430-175-124	PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 24"S/CD	LF	2223
0430-175-130	PIPE CULVERT, OPT MATERIAL, ROUND, 30"S/CD	LF	716
0430-175-136	PIPE CULVERT, OPT MATERIAL, ROUND, 36"S/CD	LF	1329
0430-175-142	PIPE CULVERT, OPT MATERIAL, ROUND, 42"S/CD	LF	695
0430-175-148	PIPE CULVERT, OPT MATERIAL, ROUND, 48"S/CD	LF	1234
0430-175-154	PIPE CULVERT, OPT MATERIAL, ROUND, 54"S/CD	LF	3056
0430-175-160	PIPE CULVERT, OPT MATERIAL, ROUND, 60"S/CD	LF	1516
0430-175-218	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 18"S/CD	LF	226
0430-175-224	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 24"S/CD	LF	277
0430-175-230	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 30"S/CD	LF	79
0430-175-242	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 42"S/CD	LF	198
0430-175-254	PIPE CULVERT, OPT MATERIAL, OTHER SHAPE - ELIP/ARCH, 54"S/CD	LF	36
0430-982-125	MITERED END SECTION, OPTIONAL ROUND, 18" CD	EA	3
0430-982-129	MITERED END SECTION, OPTIONAL ROUND, 24" CD	EA	4
0430-982-138	MITERED END SECTION, OPTIONAL ROUND, 36" CD	EA	1
0430-982-142	MITERED END SECTION, OPTIONAL ROUND, 54" CD	EA	2
0430-982-143	MITERED END SECTION, OPTIONAL ROUND, 60" CD	EA	1
0430-982-625	MITERED END SECTION, OPTIONAL ELLIP/ARCH, 18" CD	EA	2
0430-982-629	MITERED END SECTION, OPTIONAL ELLIP/ARCH, 24" CD	EA	1

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY
DRAWN BY
CHECKED BY

ROBERT EDWARD HIDECK, P.E.
P.E. NO. 67495
HARDESTY & HANOVER, LLC
5110 EISENHOWER BOULEVARD, SUITE 310
TAMPA, FL 33634
(813) 749-0823
CERTIFICATE OF AUTHORIZATION: 29741

DATE: 02/2019
PROJECT NO.: 6086960

Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: ROBERT EDWARD HIDECK, P.E.
FL. LICENSE NO.: 67495

SUMMARY OF PAY ITEMS

SHEET NO.:

Mitch Johnson 12/20/2019 7:16:11 AM J:\PROJECTS - CADD\Manatee County\60869600000\roadway\SUMQRD01.dwg

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			T-7		T-8		T-9		T-10		T-11		T-12		T-13		T-14		T-15		T-16						
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
630-2-11	CONDUIT (F&I) (OPEN TRENCH)	LF	115		500		20		540		600		145		645		230				270		3065				
630-2-12	CONDUIT (F&I) (DIRECTIONAL BORE)	LF	90		610		105		154		100		675		70								1804				
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION (F&I)	PI	1		1																		2				
633-1-121	FIBER OPTIC CABLE (F&I) (UNDERGROUND) (2-12)	LF											70										70				
633-1-123	FIBER OPTIC CABLE (F&I) (UNDERGROUND) (49-96)	LF					205		794		750		910		815		730		700		740		5644				
633-2-31	FIBER OPTIC CONN (INSTALL) (SPLICE)	EA					4						16										20				
633-3-11	FIBER OPTIC CONN HDWR (F&I) (SPLICE ENCLOSURE)	EA											1										1				
633-3-12	FIBER OPTIC CONN HDWR (F&I) (SPLICE TRAY)	EA											2										2				
633-3-13	FIBER OPTIC CONN HDWR (F&I) (PRE-TERM CONN AS)	EA											12										12				
633-3-16	FIBER OPTIC CONN HDWR (F&I) (PATCH PNL, FIELD TERM)	EA											1										1				
633-3-17	FIBER OPTIC CONN HDWR (F&I)(CONNECTOR PANEL)	EA											1										1				
633-3-51	FIBER OPTIC CONN HDWR (ADJUST/MOD) (SPLICE ENCLOSURE)	EA					1																1				
633-3-52	FIBER OPTIC CONN HDWR (ADJUST/MOD) (SPLICE TRAY)	EA					1																1				
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE (F&I)	LF					63						70										133				
635-2-11	PULL & SPLICE BOX (F&I) (17X30)	EA	4		30		1						3										38				
635-2-12	PULL & SPLICE BOX (F&I) (24X36)	EA							2		1		2		2		1				1		9				
635-2-13	PULL & SPLICE BOX (F&I) (30X60)	EA											1										1				
639-1-122	ELECTRICAL PWR SVC (F&I)(UNDERGND)(METER PURCH BY CONTR)	AS			1								1										2				
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF			465								146										611				
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA			1		1						1										3				
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA			2								1										3				
641-2-13	PRESTRESSED CONCRETE POLE, F&I, TYPE P-III	EA					1						1										2				
646-1-11	ALUMINUM SIGNALS POLE (F&I) (PEDESTAL)	EA	4		8																		12				
649-31-203	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,W/0 LUM-60'	EA			1																		1				
649-31-204	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,W/0 LUM-70.5'	EA			1																		1				
649-31-205	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,W/0 LUM-78'	EA			1																		1				
649-31-207	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,WITH LUM-46'	EA			1																		1				
650-1-14	TRAFFIC SIGNAL, (F&I) (3 SECT) (1 WAY) (ALUMINUM)	AS	3		6																		9				
650-1-16	TRAFFIC SIGNAL, (F&I) (4 SECT) (1 WAY) (ALUMINUM)	AS	1		4																		5				
650-1-19	TRAFFIC SIGNAL, (F&I) (5 SECT CLUSTER) (1 WAY) (ALUMINUM)	AS	1		4																		5				
650-1-60	TRAFFIC SIGNAL, (REMOVE)	AS	3																				3				
650-1-70	TRAFFIC SIGNAL, (RELOCATE)	AS	2																				2				
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	EA	4		8																		12				
660-3-11	VDS- MICROWAVE, FURNISH & INSTALL, CABINET EQUIPMENT	EA	1		1								1										3				
660-3-12	VDS- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA	3 1		2								1										6 1				
660-4-11	VEH DETECTION SYS-VIDEO (F&I) (CAB EQUIP)	EA			1																		1				
660-4-12	VEH DETECTION SYS-VIDEO (F&I)(ABOVE GRND EQUIP)	EA			4																		4				
660-4-52	VEH DETECTION SYS-VIDEO (ADJ/MOD)(ABOVE GRND EQUIP)	EA	1																				1				
660-6-121	VEH DETECTION SYS-AVI, BLUETOOTH (F&I) (CAB EQUIP)	EA	1		1																		2				
660-6-122	VEH DETECTION SYS-AVI, BLUETOOTH (F&I)(ABOVE GRND EQUIP)	EA	1		1																		2				
665-1-11	PEDESTRIAN DETECTOR (F&I) (STANDARD)	EA	4		8																		12				
670-5-112	TRAFFIC CONT AS (F&I) (NEMA) (TWO PRE-EMPTION)	AS			1																		1				
670-5-400	TRAFFIC CONT AS, (MODIFY)	EA	1																				1				
676-2-122	ITS CABINET, F&I, POLE MOUNT, 336S W/SS	EA					1						1										2				
682-1-113	CCTV CAMERA (F&I) (DOME,PTZ, PRESSURIZED) (IP, HD)	EA					1						1										2				
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA											1										1				
684-2-1	DEVICE SERVER, FURNISH & INSTALL	EA											1										1				
685-1-12	UPS (F&I) ONLINE/DOUBLE CONVERSION	EA					1						1										2				
685-1-13	UPS (F&I) LINE INTERACTIVE WITH CABINET	EA			1																		1				
700-3-201	SIGN PANEL, F&I OVERHEAD MT, UP TO 12 SF	EA			2																		2				
700-5-22	INTERNALLY ILLUM SIGN (F&I OVERHEAD MT) (12-18 ft2)	EA			4																		4				
700-5-50	INTERNALLY ILLUM SIGN (RELOCATE)	EA	1																				1				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

No.	REVISIONS	DATE	BY
1	REVISION 1		

SCALE: AS NOTED
DESIGNED BY: P. NEVAH
DRAWN BY: D. POWELL
CHECKED BY: P. O'SHEA

PATRICK B. NEVAH, P.E.
P.E. No 72369
AECOM TECHNICAL SERVICES, INC.
7650 WEST COURTNEY CAMPBELL CAUSEWAY
TAMPA, FL 33607-1462
(813) 286-1711
CERTIFICATE OF AUTHORIZATION: 8115

DATE: 02/16/2018
PROJECT NO.: 6086960

Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: PATRICK B. NEVAH, P.E.
FL. LICENSE NO.: P.E. No 72369

TABULATION OF QUANTITIES (1)

SHEET NO.: T-3

$TIME$ $DATE$ $FILE$

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																				TOTAL THIS SHEET		GRAND TOTAL		REF. SHEET
			T-17		T-18		T-19		T-20		T-21		T-22		T-23												
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
630-2-11	CONDUIT (F&I) (OPEN TRENCH)	LF	610		700		700		555		700		590		410								4265		7330		
630-2-12	CONDUIT (F&I) (DIRECTIONAL BORE)	LF	120						142		117		100										479		2283		
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION (F&I)	LF																							2		
633-1-121	FIBER OPTIC CABLE (F&I) (UNDERGROUND) (2-12)	LF	70								70												140		210		
633-1-123	FIBER OPTIC CABLE (F&I) (UNDERGROUND) (49-96)	LF	835		700		700		847		800		790		610								5282		10926		
633-2-31	FIBER OPTIC CONN (INSTALL) (SPLICE)	EA	16								16				4								36		56		
633-3-11	FIBER OPTIC CONN HDWR (F&I) (SPLICE ENCLOSURE)	EA	1								1				1								3		4		
633-3-12	FIBER OPTIC CONN HDWR (F&I) (SPLICE TRAY)	EA	2								2				1								5		7		
633-3-13	FIBER OPTIC CONN HDWR (F&I) (PRE-TERM CONN AS)	EA	12								12												24		36		
633-3-16	FIBER OPTIC CONN HDWR (F&I) (PATCH PNL, FIELD TERM)	EA	1								1												2		3		
633-3-17	FIBER OPTIC CONN HDWR (F&I)(CONNECTOR PANEL)	EA	1								1												2		3		
633-3-51	FIBER OPTIC CONN HDWR (ADJUST/MOD) (SPLICE ENCLOSURE)	EA																							1		
633-3-52	FIBER OPTIC CONN HDWR (ADJUST/MOD) (SPLICE TRAY)	EA																							1		
633-8-1	MULTI-CONDUCTOR COMMUNICATION CABLE (F&I)	LF	211								70												281		414		
635-2-11	PULL & SPLICE BOX (F&I) (17X30)	EA	6								3												9		47		
635-2-12	PULL & SPLICE BOX (F&I) (24X36)	EA	1						1				2										4		13		
635-2-13	PULL & SPLICE BOX (F&I) (30X60)	EA	1						1		1				1								4		5		
639-1-122	ELECTRICAL PWR SVC (F&I)(UNDERGND)(METER PURCH BY CONTR)	AS									1												1		3		
639-2-1	ELECTRICAL SERVICE WIRE (F&I)	LF	216								153												369		980		
639-3-11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	1								1												2		5		
641-2-12	PRESTRESSED CONCRETE POLE, F&I, TYPE P-II SERVICE POLE	EA									1												1		4		
641-2-13	PRESTRESSED CONCRETE POLE, F&I, TYPE P-III	EA	1								1												2		4		
646-1-11	ALUMINUM SIGNALS POLE (F&I) (PEDESTAL)	EA																							12		
649-31-203	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,W/0 LUM-60'	EA																							1		
649-31-204	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,W/0 LUM-70.5'	EA																							1		
649-31-205	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,W/0 LUM-78'	EA																							1		
649-31-207	STEEL MAST ARM(F&I)WIND SPEED-130,SINGLE ARM,WITH LUM-46'	EA																							1		
650-1-14	TRAFFIC SIGNAL, (F&I) (3 SECT) (1 WAY) (ALUMINUM)	EA																							9		
650-1-16	TRAFFIC SIGNAL, (F&I) (4 SECT) (1 WAY) (ALUMINUM)	EA																							5		
650-1-19	TRAFFIC SIGNAL, (F&I) (5 SECT CLUSTER) (1 WAY) (ALUMINUM)	EA																							5		
650-1-60	TRAFFIC SIGNAL, (REMOVE)	EA																							3		
650-1-70	TRAFFIC SIGNAL, (RELOCATE)	EA																							2		
653-1-11	PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY	EA																							12		
660-3-11	VDS- MICROWAVE, FURNISH & INSTALL, CABINET EQUIPMENT	EA									1												1		4		
660-3-12	VDS- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT	EA									1												1		7		
660-4-11	VEH DETECTION SYS-VIDEO (F&I) (CAB EQUIP)	EA																							1		
660-4-12	VEH DETECTION SYS-VIDEO (F&I)(ABOVE GRND EQUIP)	EA																							4		
660-4-52	VEH DETECTION SYS-VIDEO (ADJ/MOD)(ABOVE GRND EQUIP)	EA																							1		
660-6-121	VEH DETECTION SYS-AVI, BLUETOOTH (F&I) (CAB EQUIP)	EA																							2		
660-6-122	VEH DETECTION SYS-AVI, BLUETOOTH (F&I)(ABOVE GRND EQUIP)	EA																							2		
665-1-11	PEDESTRIAN DETECTOR (F&I) (STANDARD)	EA																							12		
670-5-112	TRAFFIC CONT AS (F&I) (NEMA) (TWO PRE-EMPTION)	AS																							1		
670-5-400	TRAFFIC CONT AS, (MODIFY)	EA																							1		
676-2-122	ITS CABINET, F&I, POLE MOUNT, 336S W/SS	EA	1								1												2		4		
682-1-113	CCTV CAMERA (F&I) (DOME,PTZ, PRESSURIZED) (IP, HD)	EA	1								1												2		4		
684-1-1	MANAGED FIELD ETHERNET SWITCH, FURNISH & INSTALL	EA	1								1												2		3		
684-2-1	DEVICE SERVER, FURNISH & INSTALL	EA									1												1		2		
685-1-12	UPS (F&I) ONLINE/DOUBLE CONVERSION	EA	1								1												2		4		
685-1-13	UPS (F&I) LINE INTERACTIVE WITH CABINET	EA																							1		
700-3-201	SIGN PANEL, F&I OVERHEAD MT, UP TO 12 SF	EA																							2		
700-5-22	INTERNALLY ILLUM SIGN (F&I OVERHEAD MT) (12-18 ft2)	EA																							4		
700-5-50	INTERNALLY ILLUM SIGN (RELOCATE)	EA																							1		

No.	REVISIONS	DATE	BY
1	REVISION 1		

SCALE: AS NOTED
DESIGNED BY: P. NEVAH
DRAWN BY: D. POWELL
CHECKED BY: P. O'SHEA

PATRICK B. NEVAH, P.E.
P.E. No 72369
AECOM TECHNICAL SERVICES, INC.
7650 WEST COURTNEY CAMPBELL CAUSEWAY
TAMPA, FL 33607-1462
(813) 286-1711
CERTIFICATE OF AUTHORIZATION: 8115

DATE: 02/16/2018
PROJECT NO.: 6086960

Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: PATRICK B. NEVAH, P.E.
FL. LICENSE NO.: P.E. No 72369

TABULATION OF QUANTITIES (2)

SHEET NO.: T-4

$TIME$ $DATE$ $FILE$

PAY ITEM NOTES

1. 630-2-11:
USE A MINIMUM 2" DIAMETER SCHEDULE 40 PVC CONDUIT FOR ALL SIGNAL, PEDESTRIAN, AND DETECTION FUNCTIONS. CONDUIT FOR POWER SERVICE WIRE INTO THE CONTROLLER ASSEMBLY SHALL BE 2-2" SCHEDULE 40 PVC. USE 2" CONDUIT FOR COMMUNICATIONS. POLYESTER MEASURING PULL WIRE SHALL BE INSTALLED IN ALL SPARE CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE. PAYMENT FOR CONDUIT PLACED UNDERGROUND WILL BE BASED ON THE HORIZONTAL LENGTH OF THE TRENCH MEASURED IN A STRAIGHT LINE BETWEEN THE CENTERS OF PULL BOXES, CABINETS, POLES, ETC., IN A LINEAR FEET REGARDLESS OF THE LENGTH OR NUMBER OF CONDUITS IN THE SAME TRENCH. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE RUNS OF CONDUIT WITHIN A TRENCH. MULTIPLE RUNS ARE LABELED ON THE PLANS.

   ALL FIBER OPTIC CABLE CONDUIT INSTALLED BY TRENCHING METHOD SHALL HAVE WARNING TAPE INSTALLED IN THE TRENCHLINE ONE FOOT BELOW FINISH GRADE DIRECTLY OVER ANY INSTALLED CABLE AND CONDUIT RUN. THE WARNING TAPE SHALL COMPLY WITH SECTION 630-2 OF THE FDOT STANDARD SPECIFICATIONS. COLOR SHALL BE ORANGE AS REQUIRED BY AMERICAN PUBLIC WORKS ASSOCIATION (APWA) UNIFORM COLOR CODE, AND HAVE "CAUTION: FIBER OPTIC CABLE BURIED BELOW" PERMANENTLY PRINTED ON THE TAPE'S SURFACE.

   THIS PAY ITEM INCLUDES A LOCATE WIRE SYSTEM FOR ALL FIBER OPTIC CONDUIT. THE LOCATE WIRE SYSTEM INCLUDES LOCATE WIRE, ROUTE MARKERS, WIRE GROUNDING UNITS (WGU), GROUND RODS, AND ALL MISCELLANEOUS ITEMS NEEDED FOR A COMPLETE AND ACCEPTED LOCATE SYSTEM.

   USED STANDARD INDEX 21210 FOR CONDUIT TRANSITION TO BRIDGE TRAFFIC RAILING.

2. 630-2-12:
USE MINIMUM 2" DIAMETER HDPE SDR 11 CONDUIT FOR ALL SIGNAL, PEDESTRIAN, AND DETECTION FUNCTIONS. USE 2-2" CONDUIT FOR COMMUNICATIONS. POLYESTER MEASURING PULL WIRE SHALL BE INSTALLED IN ALL CONDUITS. AT LEAST 2 FEET OF PULL WIRE SHALL BE ACCESSIBLE. PAYMENT FOR CONDUIT PLACED UNDERGROUND WILL BE BASED ON THE HORIZONTAL LENGTH OF THE BORE MEASURE IN A STRAIGHT LINE BETWEEN THE CENTERS OF PULL BOXES, CABINETS, POLES, ETC., IN A LINEAR FEET REGARDLESS OF THE LENGTH OR NUMBER OF CONDUITS INSTALLED. NO ADDITIONAL PAYMENT WILL BE MADE FOR MULTIPLE CONDUITS IN THE SAME BORE. MULTIPLE RUNS ARE LABELED ON THE PLANS.

   USE ABOVE GROUND ROUTE MARKERS FOR FIBER OPTIC CONDUIT RUNS.

   THIS PAY ITEM INCLUDES A LOCATE WIRE SYSTEM. THE LOCATE WIRE SYSTEM INCLUDES LOCATE WIRE, WIRE GROUNDING UNITS (WGU), GROUND RODS, AND ALL MISCELLANEOUS ITEMS NEEDED FOR A COMPLETE AND ACCEPTED LOCATE SYSTEM.

3. 632-7-1:
VERIFY THE COLOR CODE OF SIGNAL CABLE WITH MANATEE COUNTY PRIOR TO WIRING THE INTERSECTION. USE A MINIMUM OF IMSA CERTIFIED AWG #14, 7 CONDUCTOR STRANDED SIGNAL CABLE FOR SIGNAL HEADS. SIGNAL CABLE SHALL BE INSTALLED AS A CONTINUOUS RUN FROM THE SIGNAL CABINET TO THE VEHICLE SIGNAL HEAD. THE PEDESTRIAN HEAD SHALL USE AWG #14 SHIELDED, 5 CONDUCTOR WIRE FROM THE SIGNAL CABINET TO EACH PEDESTRIAN SIGNAL HEAD AND AWG #14 SHIELDED, 1 PAIR WITH GROUND WIRE FROM THE SIGNAL CABINET TO THE PEDESTRIAN BUTTON.

4. 633-1-121:
THE PROPOSED FIBER OPTIC DROP CABLE SHALL BE 12 COUNT SINGLE MODE.
633-1-123:
THE PROPOSED FIBER OPTIC BACKBONE SHALL BE 96 COUNT SINGLE MODE.

5. 633-3-16:
ALL FIELD TERMINATED PATCH PANELS SHALL COME WITH SC CONNECTORS.

6. 633-8-1:
THE CCTV MULTI-CONDUCTOR COMMUNICATION CABLE SHALL BE TYPE OSP FLOODED CORE CAT6 ETHERNET CABLE FOR VIDEO AND UPS DATA FROM THE CCTV CABINET TO THE MANAGED ETHERNET SWITCH IN THE TRAFFIC CABINET. THE CONTRACTOR SHALL TERMINATE THE CABLE UTILIZING PUNCH DOWN BLOCKS. IN-LINE SURGE SUPPRESSION SHALL BE INSTALLED ON THE ETHERNET CABLE IN BOTH CABINETS. THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY FOR ALL MATERIALS AND CABINET EQUIPMENT LAYOUT PRIOR TO ORDERING. THE MDVS MULTI-CONDUCTOR COMMUNICATION CABLE SHALL BE THE ORION WIRE COMBO-2206-2002-PVCGY OR AN APPROVED EQUIVALENT CABLE CAPABLE OF RS-485 TWISTED PAIR COMMUNICATIONS.

7. 635-2-11, 635-2-12 AND 635-2-13:
ALL PULL BOXES AND LIDS SHALL BE OF TRAFFIC BEARING POLYMER TYPE (QUAZITE OR EQUIVALENT) CONCRETE CONSTRUCTION.

   PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7 FEET FROM EDGE OF PAVEMENT. THE TOP OF THE LID SHALL HAVE THE FOLLOWING IDENTIFICATION PERMANENTLY CAST INTO THE TOP SURFACE IN STAMPED RAISED LETTERS, ACCORDING TO THE APPLICATION FOR WHICH IT IS TO BE USED: "MANATEE COUNTY TRAFFIC SIGNAL" FOR SIGNALIZED INTERSECTION APPLICATIONS; "MANATEE COUNTY FIBER OPTIC SYSTEM" FOR COMMUNICATIONS; "ELECTRICAL" FOR OTHER ELECTRICAL APPLICATIONS.

   STANDARD PULL BOX DIMENSIONS SHALL BE 17"X30". FIBER OPTIC PULL BOX DIMENSIONS SHALL BE 24"X36"X36". FIBER OPTIC SPLICE BOX DIMENSIONS SHALL BE A MINIMUM OF 30"X60"X36".

8. 639-1-122:
THIS PAY ITEM INCLUDES THE COST OF ALL SPECIAL IMPACT CONNECTION FEES CHARGED BY LOCAL POWER COMPANIES FOR ELECTRICAL SERVICE CONNECTION. IT SHALL ALSO INCLUDE INSTALLATION OF THE PHOTOELECTRIC CONTROL ASSEMBLY. THE CONTRACTOR SHALL FURNISH & INSTALL A LEVER-TYPE METER SOCKET.

9. 639-2-1:
PAYMENT SHALL BE BASED ON THE COMPLETE LENGTH OF WIRE RUN (ALL CONDUCTORS INCLUDED). USE A BONDING WIRE FROM THE UTILITY COMPANY SERVICE POINT TO CONTROLLER CABINET. MATERIAL SHALL MEET REQUIREMENTS OF LATEST FDOT SPECIFICATIONS SECTION 639.

10. 646-1-11:
USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTALS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").

11. 649-31-203, 649-31-204, 649-31-205, 649-31-207:
ALL SIGNALS SHALL HAVE MAST ARM SUPPORTS; ALL MAST ARM POLES ARE TO BE GALVANIZED NON-PAINTED. MAST ARMS SHALL BE CONSTRUCTED OF ONE CONTINUOUS SECTION UP TO 50 FEET IN LENGTH OR OF A TWO SECTION CONSTRUCTION FROM 50 FEET TO 100 FEET IN LENGTH. USE THREE 2" AND ONE 3/4" CONDUITS STUBBED OUT THROUGH THE MAST ARM POLE FOUNDATION AND TEMPORARILY SEAL.

12. 650-1-14, 650-1-16, 650-1-19:
SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO MAST ARMS. USE SIGNAL HEAD SUPPORTING TUBE THAT IS CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FEET. DO NOT USE PLASTIC GARBAGE BAGS AS A COVERING FOR CONCEALING SIGNAL HEADS. PAY ITEMS INCLUDE THE COST OF TUNNEL VISORS AND BACK PLATES. BACKPLATES SHALL BE LOUVERED ALUMINUM WITH A 2 INCH YELLOW REFLECTORIZED (TYPE III REFLECTIVITY) OUTER EDGE BORDER.

1 13. 660-3-11, 660-3-12:
SHALL INCLUDE WAVETRONIX SMART SENSOR ADVANCE VEHICLE DETECTION FOR EB, WB AND NB APPROACHES ON 44TH AVENUE EAST AT 45TH STREET AND EB AND WB APPROACHES ON 44TH AVENUE EAST AT 57TH STREET/CARUSO ROAD. SHALL INCLUDE WAVETRONIX HD SENSORS FOR LOCATIONS COLLOCATED WITH A CCTV.

14. 660-4-11, 660-4-12:
THESE PAY ITEMS SHALL INCLUDE ALL CABINET AND OVERHEAD EQUIPMENT INCLUDING, BUT NOT LIMITED TO CAMERAS, CABLING, MOUNTING HARDWARE, VIDEO PROCESSORS, SUPPLEMENTAL INTERFACE HARDWARE, CABINET CABLING AND OTHER COMPONENTS FOR A COMPLETE AND ACCEPTABLE VIDEO DETECTION SYSTEM. THE CONTRACTOR SHALL COORDINATE WITH MANATEE COUNTY FOR AN ACCEPTABLE VIDEO DETECTION SYSTEM TO INSTALL PRIOR TO SHOP DRAWING SUBMITTAL. INSTALL THE ITERIS VANTAGE RZ4 ADVANCED WIDE DYNAMIC RANGE COLOR CAMERA MOUNTED ON PELCO MAST ARM CAMERA BRACKET. INSTALL ALL COMPONENTS OF THE DETECTION SYSTEM IN STRICT ACCORDANCE WITH THE INSTALLATION MANUALS. THE CONTRACTOR SHALL ONLY USE MANUFACTURER APPROVED CABLING, CONNECTORS, AND COMPONENTS FOR THE VIDEO DETECTION SYSTEM. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER'S TECHNICAL REPRESENTATIVES PRIOR TO INSTALLATION.

   USE A 72" LONG GUSSET TUBE FOR VIDEO DETECTION CAMERA ATTACHMENT BRACKET. THE CAMERAS SHALL BE ITERIS VANTAGE RZ4 ADVANCED WIDE DYNAMIC RANGE COLOR CAMERA OR EQUIVALENT. IN ADDITION TO THE CAMERAS AND OTHER RELATED EQUIPMENT, THE VIDEO DETECTION SYSTEM MUST INCLUDE THE FOLLOWING: ITERIS VANTAGE EDGE 2 PROCESSOR, ITERIS EDGE CONNECT MODULE, AND ITERIS VANTAGE EDGE 2 TS2 I/O MODULE.

   THE SYSTEM INSTALLER SHALL LEAVE A MINIMUM OF 30 INCHES OF SPARE CABLE AT EACH CAMERA BRACKET. THE SLACK SHALL BE NEATLY FORMED INTO A LOOP AND SECURED TO THE CAMERA. A MINIMUM OF 10 FEET OF VIDEO CABLE SLACK SHALL BE NEATLY STORED AT EACH PULL BOX LOCATION WITHIN A CONDUIT RUN. A MINIMUM OF 30 FEET OF SLACK SHALL BE AVAILABLE FOR EACH NEW VIDEO DETECTION CABLE RUN.

15. 639-2-1: THIS ITEM IS FOR ANY ADJUSTMENT OR MODIFICATION REQUIRED TO THE EXISTING VEHICLE DETECTION CAMERA 3 ON SIGNAL PLAN (1) TO PROVIDE DETECTION OF VEHICLES IN THE PROPOSED ADDITIONAL WESTBOUND 44TH AVENUE TRAFFIC LANES AT THE 45TH STREET INTERSECTION.

16. 660-6-121 & 660-6-122: SHALL BE BLUETOAD SPECTRA, POWER-OVER-ETHERNET BLUETOOTH TRAVEL-TIME MEASURING DEVICE EQUIPMENT.

17. 670-5-112:
USE NEMA TS2 TYPE I CONTROLLER IN A SIZE 6 CABINET COMPATIBLE WITH THE EXISTING SIGNAL SYSTEM. ALL CONTROLLER CABINETS SHALL HAVE FRONT AND BACK ACCESS DOORS. THE CONTROLLER ASSEMBLY SHALL BE EQUIPPED WITH ALL COMPONENTS NECESSARY TO RECONNECT ALL SYSTEM COMPONENTS INCLUDING THE EXISTING CCTV CABINET AT 45TH STREET. ALL CONTROLLER EQUIPMENT SHALL BE COMPATIBLE WITH MANATEE COUNTY'S EXISTING SYSTEM (NAZTEC'S ATMS.NOW). THE CONTROLLER SUPPLIED WITH THE CABINET SHALL BE A TRAFFICWARE 980 ATC. THE TRAFFICWARE CONTROLLER SHALL COME EQUIPPED WITH 4 SERIAL PORTS AND ONE ETHERNET PORT. THE CONTROLLER SHALL COME EQUIPPED WITH ALL NECESSARY SYSTEM COMPONENTS FOR INTEGRATION INTO THE EXISTING ETHERNET-BASED FIBER OPTIC NETWORK. CONTACT MANATEE COUNTY PRIOR TO ORDERING CONTROLLER ASSEMBLY TO CONFIRM EQUIPMENT COMPATIBILITY.

   THIS PAY ITEM SHALL INCLUDE THE COST OF AN EMERGENCY GENERATOR CABINET AND THE COST TO CONSTRUCT THE EMERGENCY GENERATOR CABINET (EGC) FOUNDATIONS. THE EGC FOUNDATIONS SHALL HAVE DIMENSIONS OF 48"X36" FOR CABINET MOUNTING WITH A FDOT STANDARD TECHNICIAN PAD OR STEPS. IT SHALL BE LOCATED ADJACENT TO THE PROPOSED SIDEWALK WITH (2) - 2 INCH CONDUITS AND (1) - 1/2 INCH CONDUIT INSTALLED DIRECTLY TO THE CONTROLLER BASE. THE EXISTING EGC AT 45TH STREET SHALL BE RELOCATED TO THE PROPOSED EGC BASE.

   ALL COSTS OF LABOR, CONCRETE AND OTHER MATERIALS FOR THE EGC BASE, TECHNICIAN PAD, STEPS AS REQUIRED, AND INSTALLATION OF THE GENERATOR CABINETS ARE INCLUDED IN THIS ITEM. TOP OF CONTROLLER AND EGC BASES SHALL BE THE SAME ELEVATION AS CROWN OF ROADWAY OR GREATER. THE MAXIMUM DISTANCE FROM THE TECHNICIAN PAD OR STEP TO THE FOUNDATION TOP IS 24 INCHES. THE CABINET DOORS SHALL OPEN TOWARD OR PARALLEL TO THE RIGHT-OF-WAY LINE AND AWAY FROM TRAFFIC.

   THE CONTROLLER ASSEMBLY FOUNDATIONS SHALL HAVE A MINIMUM OF (4) - 2" CONDUIT SPARES. TWO OF THE SPARES SHALL BE TERMINATED IN THE NEAREST FIBER OPTIC PULL BOX AND FITTED WITH A WEATHERPROOF CAP. THE OTHER TWO SPARES SHALL BE TERMINATED IN THE SIGNAL CABLE AND LOW VOLTAGE PULL BOXES.

18. ITEM 670-5-400:
THIS ITEM IS FOR ANY MODIFICATION REQUIRED TO THE EXISTING TRAFFIC SIGNAL CONTROLLER AT THE 44TH AVENUE/45TH STREET INTERSECTION TO ADD VEHICLE MOVEMENT 7 AND PEDESTRIAN MOVEMENTS P2 AND P4 TO THE CONTROLLER OPERATIONS.

19. 682-1-113:
THE CONTRACTOR SHALL PROVIDE AN IP CCTV CAMERA COMPATIBLE WITH THE MANATEE COUNTY ATMS SYSTEM. THE CCTV CAMERA SHALL BE BOSCH VG5-AUTODOME ITS1080P-30x4.

20. 684-1-1:
THE CONTRACTOR SHALL PROVIDE A MANAGED ETHERNET SWITCH COMPATIBLE WITH THE MANATEE COUNTY ATMS SYSTEM. THE ETHERNET SWITCH SHALL BE RUGGEDCOM RSG920P, MODEL# 6GK60920PS23-0BA0-Z-A05+B05+C02+D02. THIS ITEM SHALL INCLUDE A RUGGEDCOM MODEL RPS 1300 EXTERNAL POWER SUPPLY.

21. 685-1-12:
UNINTERRUPTIBLE POWER SUPPLY (UPS) FOR ITS CABINET SHALL MEET REQUIREMENTS OF LATEST FDOT SPECIFICATIONS SECTION 685.

22. 685-1-13:
INCLUDE AN UNINTERRUPTED POWER SUPPLY UNIT (UPS) WITH AN 4 HOUR RUN TIME AT 400 WATTS. THE UPS SHALL HAVE A NOMINAL OPERATING RANGE OF 850W TO 110W WITH A STANDARD RS232 ETHERNET PORT. THE UPS SHALL BE EQUIPPED WITH ETHERNET CONNECTION AND SNMP (PROTOCOL). THE UPS SHALL BE SIZED TO ACCOMMODATE THE MAXIMUM CONNECTED LOAD. ATTACH UPS UNIT TO THE OUTSIDE OF THE CONTROLLER CABINET. INSTALL UPS UNIT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE TRAFFIC SIGNAL UPS SHALL BE ALPHA MODEL FXM 1100.

23. 700-5-22:
ALL OVERHEAD ILLUMINATED SIGNS SHALL BE FDOT APPROVED EDGE-LIT LED TYPE AND SHALL INCLUDE APPROPRIATE COMPATIBLE ADJUSTABLE HANGERS, BRACKETS, CLAMPS, AND MISCELLANEOUS HARDWARE FOR A COMPLETE AND ACCEPTABLE INSTALLATION. THE ILLUMINATED SIGNS SHALL BE RIGID-MOUNTED, SINGLE-PANEL AND MOUNTED ON MAST ARMS. USE ONE SIGN PER APPROACH, MOUNTED ON THE MAST ARM NEAR THE UPRIGHT. ELECTRICAL INFORMATION FOR THE ILLUMINATED SIGNS TO BE PROVIDED AS PART OF THE AS-BUILT PLANS.

No.	REVISIONS	DATE	BY
1	REVISION 1	12/13/19	PBN

SCALE: AS NOTED
DESIGNED BY: P. NEVAH
DRAWN BY: D. POWELL
CHECKED BY: P. O'SHEA

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CERTIFICATE OF AUTHORIZATION: 8115

DATE: 2/16/2018
PROJECT NO.: 6086960

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PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

DESIGN ENGINEER: PATRICK B. NEVAH, P.E.
FL. LICENSE NO.: P.E. No. 72369

PAY ITEM NOTES

SHEET NO.: T-6

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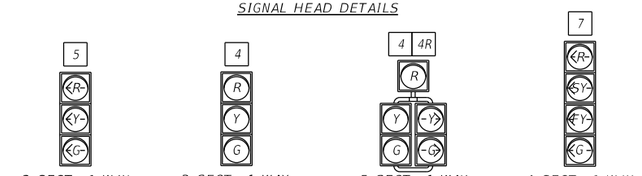
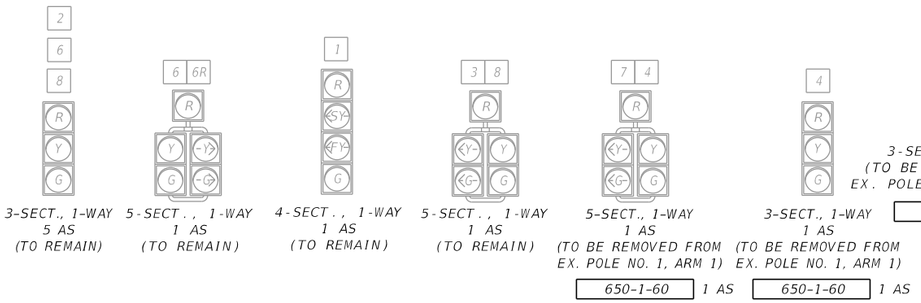
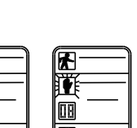
SIGNAL HEAD DETAILS



NOTE: ALL BACK PLATES SHALL HAVE A YELLOW REFLECTIVE BORDER.





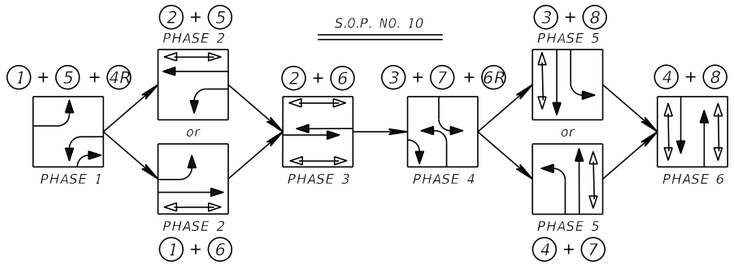
SIGN FTP-68B-06 TO BE INCLUDED UNDER PAY ITEM 665-1-11

EXISTING MAST ARM MOUNTED SIGNS TO REMAIN

NOTE:
ALL EXISTING TRAFFIC CONTROL EQUIPMENT TO REMAIN UNLESS OTHERWISE INDICATED

CONTROLLER OPERATIONS:

1. THE MAJOR STREET IS 44TH AVENUE (MOVEMENTS 2 & 6).
2. THE MINOR STREET IS 45TH STREET EAST (MOVEMENTS 4 & 8).
3. SIGNAL OPERATING PLAN NO. 10 SHALL BE USED WITH: ACTUATED PEDESTRIAN TIMING FOR MOVEMENT 2 (P2), 4 (P4), 6 (P6) & 8 (P8).



EACH PHASE/MOVEMENT SHALL BE WIRED FROM THE SIGNAL DISPLAY TO THE CONTROLLER AS A SEPARATE PHASE/MOVEMENT. THIS INCLUDES LEFT TURN MOVEMENTS. EACH LEFT TURN MOVEMENT SHALL HAVE CONDUCTORS AVAILABLE FOR PROTECTED AND PROTECTIVE/PERMISSIVE OPERATION.

CONTROLLER TIMING PLAN								
TIMING INTERVAL								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN (INITIAL)	-	-	-	-	7	-	-	-
EXTENSION	-	-	-	-	3.0	-	-	-
MAXIMUM GREEN 1	-	-	-	-	20	-	-	-
MAXIMUM GREEN 2	-	-	-	-	-	-	-	-
YELLOW CLEARANCE	-	-	-	-	4.8	-	-	-
ALL RED	-	-	-	-	2.2	-	-	-
PEDESTRIAN WALK	-	7	-	7	-	-	-	-
PED CLEARANCE	-	15	-	27	-	-	-	-
RECALL	-	MIN	-	-	-	-	-	-

EXISTING TIMINGS TO REMAIN.
PROPOSED TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE PROJECT ENGINEER.
POSTED SPEED LIMIT FOR 44TH AVENUE IS 45 MPH.
POSTED SPEED LIMIT FOR 45TH STREET IS 40 MPH.

MICROWAVE VEHICLE DETECTION ASSIGNMENT		
HD MVDS DETECTION	DETECTION ZONE	DELAY TIME (SECS.)
HD MVDS 1	DZ-6	--
HD MVDS 2	DZ-2	--
HD MVDS 3	DZ-4	--

HD MVDS - WAVETRONIX SMART SENSOR ADVANCE

VIDEO VEHICLE DETECTION ASSIGNMENT		
VIDEO DETECTION	DETECTION ZONE	RIGHT TURN DELAY TIME (SECS.)
VD 3	DZ-5	--

EXISTING VIDEO VEHICLE ASSIGNMENTS TO REMAIN. DETECTION ZONE 5 TO BE ADDED TO VD 3 ASSIGNMENT.

No.	REVISIONS	DATE	BY

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SIGNALIZATION PLAN (1)

SHEET NO.: T-7

$TIME$ $DATE$ $FILE$

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