



ADDENDUM #2

ITB NUMBER: 2014038-PW-B

South Main Street Traffic Signal Upgrades ITB

DATE: March 11, 2014

TO: All Potential Proposers

City of Harrisonburg's South Main Street Traffic Signal Upgrades ITB (2014038-PW-B), is modified as follows:

1. *Question:* You have 6" and 8" bore conduit on the bid form but you don't have any on the plans. Where can this be found?
Answer: The original bid form separately itemized the actual bore size and the type of conduit intended to go into that bore. In the revised bid form, the pay items for the separate bores and conduits have been replaced by 2" and 3" bored conduit pay items. The conduit pay items have been revised to only include conduit that will be installed in trenched areas.
2. *Question:* Traffic signal poles take 12-16 weeks to get and that is from the date we get approved shop drawing back. So if we submit middle of May and get them back in 30 days that makes it mid June before they can be ordered and making that end of August or later receiving them, past deadline.
Answer: We would like to get this process started as soon as the contractor is comfortable, be it when we give the notice to award or when there is a signed agreement in hand. This should be around late March/early April.
3. *Question:* There isn't a pay item for Controller and Cabinet. Is the city to supply and install those items?
Answer: The city will supply the cabinet and controller with timings and the contractor will install them. A pay item for this task has been added to the revised bid form.
4. *Question:* You only have 2 test bores at the Mosby Rd intersection. Should that be 3?
Answer: Yes, there should be 3 test bores at Mosby Rd. A pay item for this task has been added to the revised bid form.
5. *Question:* You don't have any brackets for the SP-8.
Answer: A pay item has been added to the revised bid form for SMB-3 with 16" polycarbonate clamshell, yellow color.

6. *Question:* I am being told that the city wants the audible pedestrian push button system. Will there be an addendum on that?

Answer: Yes, Addendum 1 released on March 5th notes that an Accessible Pedestrian System is desired. The following specifications should be followed for this system:

Pedestrian push buttons shall be fully ADA compliant in size and location. Push buttons shall be included with an Accessible Pedestrian Signal, vandal resistant, with tone and LED verification. Push button make and model shall be Polara EN2-EZ Communicator Navigator. Push buttons shall be programmed to use audible tones. Test to ensure that volume automatically adjusts to ambient noise conditions. Verify all speech programming on the vendor-supplied APS order form with Shawn Adams at the Public Works Department prior to ordering the equipment.

7. *Question:* What is the typical lead time for ordering lighted LED street signs and Accessible Pedestrian Systems?

Answer: 4-6 weeks. Note that orders for both items should be sent to Shawn Adams for review prior to submitting them to the vendor.

8. *Question:* Will the contractor be responsible for milling and repaving in the vicinity of bore test holes? Also, what is the age of the existing asphalt?

Answer: Both intersections were repaved with the last 5 years, but there will be no milling and repaving involved with the test holes, only patching. Note that the city requires that all test holes be saw cut to a smooth edge on all sides and that test holes shall be filled with compacted 21B stone to 95% density to the bottom of the existing pavement surface, then covered with a minimum of 3" BM-25 and 2" SM-12.5D (or to a depth that matches the existing pavement, whichever is greater).

9. *Question:* Should item#14 on the bid form be 1 not 2 for the intersection of S Main St and Mosby Rd?

Answer: Yes, item 14 on the bid form for the Mosby Road signal (SIGNAL POLE MP-1 20' ONE ARM 40') should have a quantity of 1. This has been corrected in the revised bid form.

10. *Question:* The LED signs. How would we know the measurements of the signs? Will there be a specific size you want the sign to be or will there be a drawing provided for the signs measurements, letter size and color?

Answer: The LED lighted street signs shall be green and use Clearview 2 font with 8-inch white letters. The measurements of the sign will be determined by the length of the street name and the MUTCD standard spacing around the letters.

11. The following revisions apply to Addendum 1: Traffic Signal Project Specifications

- a. Section 2.2.6: The models listed for the Opticom equipment have been discontinued.

This section should read:

Global Traffic Technologies (GTT) Opticom Infrared Emergency Preemption System shall be used. This system shall include model 764 Phase Selector, model 768 Auxiliary Interface Panel, and model 721 Detectors with confirmation lights (one for each approach).

- b. Section 4.2: The LED lighted street signs shall be green and use Clearview 2 font with 8-inch white letters.
 - c. Section 5.2.1: Exact equivalent pull boxes are acceptable.
12. The following revisions apply to the South Main Street & Pleasant Hill Road plan sheet (Sheet 1, attached below):
- a. Signal head labels were changed to match intended phase numbers.
 - b. For the mast arm attached to signal pole 'A' for the eastbound approach of Pleasant Hill Road, the signal head for the left has been revised to show a 4-section head.
 - c. On the same pole, the signal head for the right lane has been revised to show a 3-section head.
 - d. On the eastbound approach of Pleasant Hill Road, there is a typo in the notation for the relocated stop bar. It should be denoted as "RELOCATE STOP BAR 15 FT. FROM EXISTING. TO BE PERFORMED BY CITY.
 - e. The signs labeled as "R-12 (TYP)" on the South Main Street northbound and southbound mast arms should be "R10-12 (TYP)" (Left turn yield on Green).
 - f. The street sign labeled as "R-37" on the eastbound Pleasant Hill Rd mast arm should be "R3-7".
 - g. Gas line (labeled as "CGV") was corrected to extend through the intersection instead of just being shown on the corners.
 - h. Changed electrical service standard from SE-3 Type B to SE-5 in the notes.
13. The following revisions apply to the South Main Street & Mosby Road plan sheet (Sheet 2, attached below):
- a. Signal head labels were changed to match intended phase numbers.
 - b. For the mast arm attached to signal pole 'C' for the eastbound approach of West Mosby Road, the signal head for the left lane has been revised to show a 4-section head.
 - c. On the same pole, the signal head for the right lane has been revised to show a 3-section head.
 - d. The signs labeled as "R-12 (TYP)" on the South Main Street northbound and southbound mast arms should be "R10-12 (TYP)" (Left turn yield on Green).
 - e. Gas line (labeled as "CGV") was corrected to extend through the intersection instead of just being shown on the corners.
 - f. Changed electrical service standard from SE-3 Type B to SE-5 in the notes.

Revised Bid Form begins on the following page. Pre-bid sign-in sheet and revised plan sheets are attached below the Bid Form.

All other requirements, terms and conditions of the ITB remain unchanged.

Addendum page must be signed and returned with your proposal to acknowledge receipt of this addendum.

Authorized Signature

By: Pat Hilliard, CPPB

Purchasing Agent

PAY ITEMS SUMMARY South Main Street Traffic Signal Upgrades

Submitted by:

Date

Traffic Signal at S Main Street & Pleasant Hill Road:

LINE #	ITEM #	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE (\$)	AMOUNT (\$)
1	100	MOBILIZATION	LS	1		
2	24330	TRAFFIC CONTROL	LS	1		
3	50902m	LED LIGHTED STREET NAME SIGNS	EA	4		
4	51184	TRAFFIC SIGNAL HEAD 12" GREEN BALL LED	EA	10		
5	51184	TRAFFIC SIGNAL HEAD 12" YELLOW BALL LED	EA	10		
6	51184	TRAFFIC SIGNAL HEAD 12" RED BALL LED	EA	10		
7	51184	TRAFFIC SIGNAL HEAD 12" GREEN ARROW LED	EA	4		
8	51184	TRAFFIC SIGNAL HEAD 12" YELLOW ARROW LED	EA	2		
9	51198	ACCESSIBLE PEDESTRIAN ACTUATION PA-2	EA	6		
10	51208	PEDESTAL POLE PF-2, 8'	EA	3		
11	51238	PF-8 CONCRETE FOUNDATION FOR SIGNAL POLE	CY	22		
12	51240	CONCRETE FOUNDATION PF-2	EA	3		
13	51245	CONCRETE CABINET FOUNDATION CF-1	EA	1		
14	51344	SIGNAL POLE MP-1 20' ONE ARM 56'	EA	1		
15	51425	NS SIGNAL POLE MP-1 20' TWO ARMS 50' & 56'	EA	1		
16	51614	8/1 CONDUCTOR CABLE	LF	200		
17	51700	14/2(S) CONDUCTOR CABLE	LF	600		
18	51601	14/3 CONDUCTOR CABLE	LF	1800		
19	51607	14/7 CONDUCTOR CABLE	LF	2800		
20	51614	18/5 CONDUCTOR CABLE	LF	600		
21	51614	EMERGENCY VEHICLE PREEMPTION DETECTOR CABLE	LF	600		
22	52002	NS TRAFFIC SIGNALIZATION VIDEO DETECTION SYSTEM, 4-WAY	EA	1		
23	52001	NS TRAFFIC SIGNALIZATION NO. 8 BONDED GROUND	LF	550		
24	51830	HANGER ASSEMBLY SM-3, ONE WAY (IN-LINE)	EA	8		
25	51830	HANGER ASSEMBLY SM-3, ONE WAY (CLUSTER)	EA	2		
26	51840	SIGN HANGER ASSEMBLY (SMD-2)	EA	11		

27	51951	SIGN PANEL - FURNISH AND INSTALL	SF	24		
28	519.63	REMOVE EXISTING SIGNAL EQUIPMENT	LS	1		
29	52002	UNITERRUPTIBLE POWER SUPPLY	EA	1		
30	52002	UNITERRUPTIBLE POWER SUPPLY BATTERY	EA	6		
31	52002	UNITERRUPTIBLE POWER SUPPLY CABINET	EA	1		
32	52002	EMERGENCY PREEMPTION 4-WAY	EA	1		
33	52403	PEDESTRAIN SIGNAL HEAD SP-8	EA	6		
34 REVISED	52405	ELECTRICAL SERVICE SE-5	EA	1		
35	55587	JUNCTION BOX JB-S2	EA	3		
36	55588	JUNCTION BOX JB-S3	EA	1		
37	56014	ELECTRICAL SERVICE GROUNDING ELECTRODE 10'	EA	11		
38	56024	1 1/4" METAL CONDUIT	LF	10		
39 REVISED	56021	1" CONDUIT (SCHEDULE 80 PVC)	LF	80		
40 REVISED	56053	2" CONDUIT (SCHEDULE 80 PVC)	LF	130		
41 REVISED	56054	3" CONDUIT (SCHEDULE 80 PVC)	LF	50		
42 REMOVED	85004	6" HDPE (DIRECTIONAL BORE)	LF	REMOVED		
43 REMOVED	85004	8" HDPE (DIRECTIONAL BORE)	LF	REMOVED		
44	56200	TRENCH EXAVATION ECI-1	LF	125		
45	56205	TEST BORE	EA	2		
ADDED	85012	INSTALL CITY PROVIDED TS/2 TYPE I CABINET AND CONTROLLER	EA	1		
ADDED	85012	SMB-3 PEDESTRIAN SIGNAL HEAD MOUNT	EA	6		
ADDED	85012	PEDESTRIAN SIGNAL HOUSING, 16" POLYCARBONATE CLAMSHELL STYLE, FEDERAL YELLOW	EA	6		
ADDED	85004	1" BORED CONDUIT	LF	80		
ADDED	56050	2" BORED CONDUIT	LF	610		
ADDED	56051	3" BORED CONDUIT	LF	315		
		TOTAL				

Traffic Signal at S Main Street & Mosby Road:

LINE #	ITEM #	DESCRIPTION	UNIT	EST. QUANTITY	UNIT PRICE (\$)	AMOUNT (\$)
1	100	MOBILIZATION	LS	1		
2	24330	TRAFFIC CONTROL	LS	1		
3	50902m	LED LIGHTED STREET NAME SIGNS	EA	4		
4	51184	TRAFFIC SIGNAL HEAD 12" GREEN BALL LED	EA	10		
5	51184	TRAFFIC SIGNAL HEAD 12" YELLOW BALL LED	EA	10		
6	51184	TRAFFIC SIGNAL HEAD 12" RED BALL LED	EA	10		
7	51184	TRAFFIC SIGNAL HEAD 12" GREEN ARROW LED	EA	4		
8	51184	TRAFFIC SIGNAL HEAD 12" YELLOW ARROW LED	EA	2		
9	51198	ACCESSIBLE PEDESTRIAN ACTUATION PA-2	EA	6		
10	51208	PEDESTAL POLE PF-2, 8'	EA	2		
11	51238	PF-8 CONCRETE FOUNDATION FOR SIGNAL POLE	CY	33		
12	51240	CONCRETE FOUNDATION PF-2	EA	2		
13	51245	CONCRETE CABINET FOUNDATION CF-1	EA	1		
14 REVISED	51327	SIGNAL POLE MP-1 20' ONE ARM 40'	EA	1		
15	51344	SIGNAL POLE MP-1 20' ONE ARM 56'	EA	1		
16	51425	NS SIGNAL POLE MP-1 20' TWO ARMS 46' & 50'	EA	1		
17	51614	8/1 CONDUCTOR CABLE	LF	200		
18	51700	14/2(S) CONDUCTOR CABLE	LF	900		
19	51601	14/3 CONDUCTOR CABLE	LF	2050		
20	51607	14/7 CONDUCTOR CABLE	LF	3300		
21	51614	18/5 CONDUCTOR CABLE	LF	900		
22	51614	EMERGENCY VEHICLE PREEMPTION DETECTOR CABLE	LF	900		
23	52002	NS TRAFFIC SIGNALIZATION VIDEO DETECTION SYSTEM, 4-WAY	EA	1		
24	52001	NS TRAFFIC SIGNALIZATION NO. 8 BONDED GROUND	LF	650		
25	51830	HANGER ASSEMBLY SM-3, ONE WAY (IN-LINE)	EA	8		
26	51830	HANGER ASSEMBLY SM-3, ONE WAY (CLUSTER)	EA	2		
27	51840	SIGN HANGER ASSEMBLY (SMD-2)	EA	10		
28	51951	SIGN PANEL - FURNISH AND INSTALL	SF	15		
29	519.63	REMOVE EXISTING SIGNAL EQUIPMENT	LS	1		

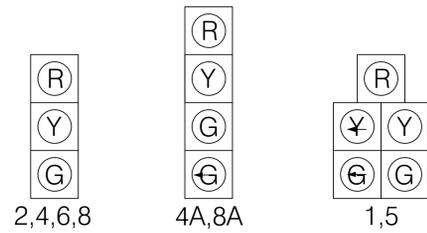
30	52002	UNITERRUPTIBLE POWER SUPPLY	EA	1		
31	52002	UNITERRUPTIBLE POWER SUPPLY BATTERY	EA	6		
32	52002	UNITERRUPTIBLE POWER SUPPLY CABINET	EA	1		
33	52002	EMERGENCY PREEMPTION 4-WAY	EA	1		
34	52403	PEDESTRAIN SIGNAL HEAD SP-8	EA	6		
35 REVISED	52405	ELECTRICAL SERVICE SE-5	EA	1		
36	55587	JUNCTION BOX JB-S2	EA	3		
37	55588	JUNCTION BOX JB-S3	EA	1		
38	56014	ELECTRICAL SERVICE GROUNDING ELECTRODE 10'	EA	11		
39	56024	1 1/4" METAL CONDUIT	LF	10		
40 REVISED	56021	1" CONDUIT (SCHEDULE 80 PVC)	LF	90		
41 REVISED	56053	2" CONDUIT (SCHEDULE 80 PVC)	LF	280		
42 REVISED	56054	3" CONDUIT (SCHEDULE 80 PVC)	LF	160		
43 REMOVED	85004	6" HDPE (DIRECTIONAL BORE)	LF	REMOVED		
44 REMOVED	85004	8" HDPE (DIRECTIONAL BORE)	LF	REMOVED		
45	56200	TRENCH EXAVATION ECI-1	LF	101		
46 REVISED	56205	TEST BORE	EA	3		
ADDED	85012	INSTALL CITY PROVIDED TS/2 TYPE I CABINET AND CONTROLLER	EA	1		
ADDED	85012	SMB-3 PEDESTRIAN SIGNAL HEAD MOUNT	EA	6		
ADDED	85012	PEDESTRIAN SIGNAL HOUSING, 16" POLYCARBONATE CLAMSHELL STYLE, FEDERAL YELLOW	EA	6		
ADDED	56050	2" BORED CONDUIT	LF	650		
ADDED	56051	3" BORED CONDUIT	LF	430		
		TOTAL				

PRE-BID MEETING ATTENDANCE
 SOUTH MAIN STREET TRAFFIC SIGNAL UPGRADES
 Monday, March 10, 2014 at 2:00 PM

NAME (Please Print)	COMPANY	PHONE/FAX	EMAIL
Mike Roberts	DESIGN ELECTRIC	1-540-569-3050 1-540-337-2122	mrobert@designelectricinc.com
Rick Yates	Design Electric Inc	540-569-3050 540-337-2122	rick@designelectricinc.com
Hug Ventura Kenneth Stanley Craig Casler	BBB Signal Company	703-393-8238 703-393-4780	hventura@bbsignal.com
	Richardson - Wayland Traffic Signal	(540) 815-3806 (540) 977-1904	kenway@rnttrafficignal.com cgusler@ruec.com

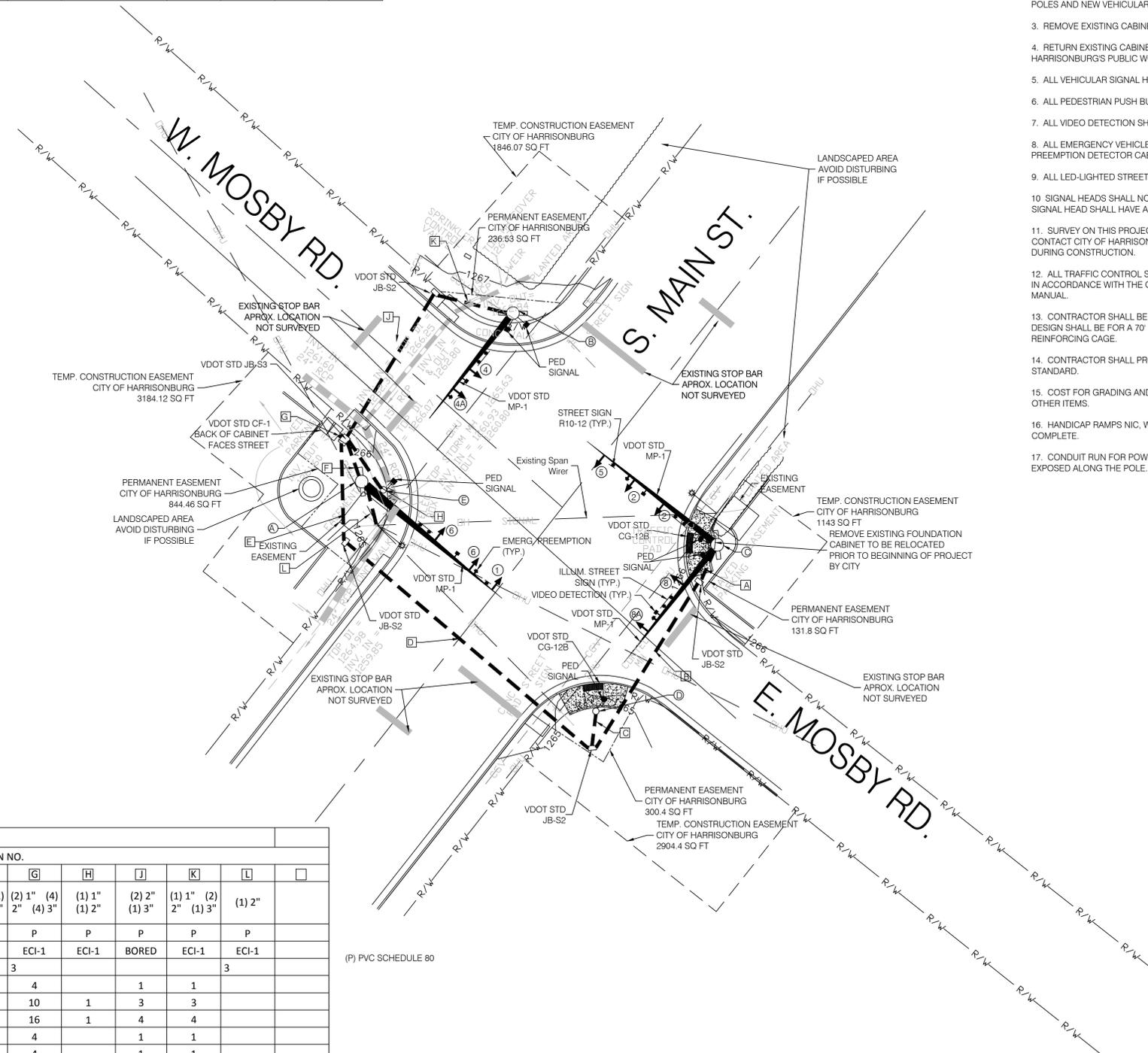
SIGNAL POLE LEGEND											
NO.	STANDARD				SIGNAL MOUNTING				TRAFFIC SIGN MOUNTING		
	TYPE	POLE HEIGHT	ARM LENGTH	FOUNDATI-ION	DISTANCE FROM POLE			EVP DIST. FROM POLE	DISTANCE FROM POLE		
(A)	MP-1	20	56	PF-8	30	44	53	48	25		
(B)	MP-1	20	40	PF-8	23	31		33	17		
(C)	MP-1	20	50/46	PF-8	21/17	33/40	45	36/40	24/14		
(D)	PF-2	8	N/A	PF-2							
(E)	PF-2	8	N/A	PF-2							

PROPOSED SIGNAL HEADS



GENERAL NOTES:

- INSTALL SE-5 UNDERGROUND ELECTRICAL SERVICE.
- REMOVE EXISTING POLE, SIGNAL HEADS, AND SIGNS FOLLOWING INSTALLATION OF THE POLES AND NEW VEHICULAR SIGNAL HEADS.
- REMOVE EXISTING CABINET AND FOUNDATION.
- RETURN EXISTING CABINET, SIGNAL HEADS, POLES, AND MAST ARMS TO CITY OF HARRISONBURG'S PUBLIC WORKS DEPARTMENT.
- ALL VEHICULAR SIGNAL HEADS SHALL BE POWERED BY *14/7C CABLE.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE POWERED BY *14/3C CABLE.
- ALL VIDEO DETECTION SHALL BE POWERED BY *18/5C SIAMESE CABLE.
- ALL EMERGENCY VEHICLE PREEMPTORS SHALL BE WIRED WITH EMERGENCY VEHICLE PREEMPTION DETECTOR CABLE AND *14/2C SHIELDED CABLE (FOR THE CONFIRMATION BEACON)
- ALL LED-LIGHTED STREET NAME SIGNS SHALL BE POWERED BY *14/3C CABLE.
- SIGNAL HEADS SHALL NOT BE WIRED IN SEQUENCE. EACH VEHICULAR OR PEDESTRIAN SIGNAL HEAD SHALL HAVE A SEPARATE CABLE.
- SURVEY ON THIS PROJECT WAS PERFORMED BY CITY SURVEYOR, CHARLIE WINGARD. CONTACT CITY OF HARRISONBURG PUBLIC WORKS DEPARTMENT, (540) 434-9928, FOR LAYOUT DURING CONSTRUCTION.
- ALL TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PF-8 FOUNDATION DESIGN. THIS DESIGN SHALL BE FOR A 70' MAST ARM. SUBMIT TO CITY FOR REVIEW PRIOR TO ORDERING REINFORCING CAGE.
- CONTRACTOR SHALL PROVIDE AND INSTALL ILLUMINATED STREET SIGNS PER CITY STANDARD.
- COST FOR GRADING AND ALL OTHER EARTHWORK SHALL BE INCLUDED IN UNIT PRICE FOR OTHER ITEMS.
- HANDICAP RAMPS NIC. WORK WILL BE PERFORMED BY CITY AFTER SIGNAL CONSTRUCTION IS COMPLETE.
- CONDUIT RUN FOR POWER SERVICE SHALL BE 1 1/4" METAL CONDUIT WHERE CONDUIT IS EXPOSED ALONG THE POLE.



CONDUIT SCHEDULE													
CONDUIT	RUN NO.												
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)	(L)	()	
SIZE	(1) 1" (2) 2" (1) 3"	(2) 2" (1) 3"	(1) 1" (1) 2"	(2) 2" (1) 3"	(2) 2" (1) 3"	(1) 1" (2) 2" (1) 3"	(2) 1" (4) 3"	(1) 1" (1) 2"	(2) 2" (1) 3"	(1) 1" (1) 2"	(1) 1" (2) 2" (1) 3"	(1) 2"	
TYPE	P	P	P	P	P	P	P	P	P	P	P	P	
INSTALLATION	ECI-1	BORED	ECI-1	BORED	ECI-1	ECI-1	ECI-1	ECI-1	BORED	ECI-1	ECI-1		
AWG 8	1C					3	3					3	
AWG 14	2C(S)	2	2		2	2	1	4		1	1		
	3C	4	4	1	5	5	1	10	1	3	3		
	7C	7	7	1	8	8	3	16	1	4	4		
AWG 18	5C	2	2		2	2	1	4		1	1		
EMERG. PREMP. CABLE	2	2		2	2	2	1	4		1	1		
AWG 6 Bonded Wire	1	1	1	1	1	1	1	1	1	1	1		

(P) PVC SCHEDULE 80

PLANS TO BE USED FOR BIDDING PURPOSES ONLY

REV	DATE	DESCRIPTION	BY	SCALE:
1	12/26/13	Electrical Service Conduit	DJD	1" = 20'
2	3/10/14	Revisions for Addendum 2	BWR	

SOUTH MAIN & MOSBY
SIGNAL UPGRADE

PUBLIC WORKS DEPARTMENT
CITY OF HARRISONBURG
320 EAST MOSBY ROAD
HARRISONBURG, VIRGINIA

SITE PLAN AND NOTES

SHEET
2