

GENERAL CONSTRUCTION NOTES

REV. NO.	DESCRIPTION	REVISIONS	DATE

THE STRUCTURAL DESIGN OF ALL POLES, MAST ARMS, HIGH-MAST POLES, AND OTHER SUPPORTS FOR SIGNS, LUMINAIRES, AND SIGNALS AS WELL AS THEIR CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS. THE MANUFACTURER SHALL ENSURE THE FOLLOWING ARE APPLIED TO THE DESIGN:

THE MINIMUM DESIGN WIND SPEED AND DESIGN LIFE AS REQUIRED IN THE AASHTO SPECIFICATIONS:

THE CALCULATED STRESSES AND FORCES FROM THE DESIGN LOADINGS DO NOT EXCEED THOSE REQUIRED IN THE AASHTO SPECIFICATIONS:

A CATEGORY I FATIGUE IMPORTANCE FACTOR (IF) FOR ALL STRUCTURES; NO VIBRATORY MITIGATION SHALL BE ALLOWED. TRUCK-INDUCED GUSTS SHALL BE APPLIED TO ALL OVERHEAD TRAFFIC SIGNAL SUPPORTS.

ALL MEMBERS ARE AT LEAST THE MINIMUM THICKNESS AS REQUIRED IN THE AASHTO SPECIFICATIONS:

LUMINAIRE MAST ARMS SHALL BE DESIGNED TO SUPPORT AT LEAST A 50 LB. (22.7 KG) LUMINAIRE WITH AN EFFECTIVE PROJECTED AREA OF 2.5 FT<sup>2</sup> (0.23 M<sup>2</sup>);

THE ANCHOR BOLT DESIGN AND AMOUNT OF ANCHOR BOLTS TO BE USED SHALL BE AS REQUIRED IN THE AASHTO SPECIFICATIONS.

SIGNAL MAST ARMS AND POLES SHALL BE DESIGNED FOR SPECIFIC SIGNAL HEAD AND SIGN PLACEMENT.

UNLESS SITE SPECIFIC GEOTECHNICAL DATA IS AVAILABLE, FOUNDATIONS SHALL BE DESIGNED UTILIZING THESE PARAMETERS; SHEAR STRENGTH OF COHESIVE SOIL (C) OF 500 PSF, ANGLE OF INTERNAL FRICTION (F) OF 22 DEGREES, AND EFFECTIVE UNIT WEIGHT OF SOIL (G) OF 120 PCF.

MINIMUM HAND HOLE SIZE OF 3 INCH WIDTH BY 5 INCH HEIGHT.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING TRAFFIC ON CROSS STREETS. A MINIMUM OF ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. SEE O.D.O.T. STANDARDS AND DETAIL DRAWINGS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.

ALL REGULATORY SIGNS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) FOR TYPE III SHEETING.

ALL WARNING SIGNS SHALL HAVE FLUORESCENT YELLOW/GREEN SHEETING. THE FLUORESCENT YELLOW/GREEN SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956-(LATEST REVISION) REQUIREMENTS FOR TYPE VIII SHEETING.

THE MANUFACTURER SHALL FURNISH A TYPE 'A' CERTIFICATION IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS, LATEST EDITION, SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON THE MATERIAL SUBMITTED FOR APPROVAL.

ALL BROKEN CONCRETE INCLUDING OLD SIGN FOOTINGS WITH STUBS, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THE DISPOSAL OF THIS MATERIAL. ANY PIPE POST OR WIDE FLANGE POST ABOVE THE OLD SIGN FOOTINGS SHALL BE CUT AND HANDLED AS PROPERTY OF THE STATE AND SHALL BE NEATLY STACKED ON THE JOB SITE, AS DESIGNATED BY THE ENGINEER UNTIL SUCH TIME AS DIVISION PERSONNEL CAN REMOVE THE MATERIAL FROM THE JOB SITE.

ALL SIGNS SHALL BE REMOVED FROM THE POSTS IN A SALVAGEABLE MANNER FOR REUSE. CARE SHALL BE TAKEN DURING REMOVAL AND TRANSPORTING TO ALLEVIATE DAMAGE OF MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED DURING REMOVAL OF SIGNS, AND SIGN POSTS.

AFTER REMOVAL OF ANY SIGN FOOTINGS, THE HOLES SHALL BE FILLED WITH SOIL AND TAMPED AND SHAPED IN A MANNER APPROVED BY THE RESIDENT ENGINEER.

SYMBOLS AND LEGENDS ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED FOR EXISTING FIELD CONDITIONS, BUT NO MAJOR ALTERATIONS OR RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE TRAFFIC ENGINEER DIVISION AT (405) 521-2861.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC... PRIOR TO DIGGING NEAR THE UTILITIES, THE CONTRACTOR SHALL CALL FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION LISTED WITH THE FOLLOWING AGENCIES: THE "OKIE" NOTIFICATION CENTER 811 OR 1-800-522-6543 OR WWW.CALLOKIE.COM

THE ITEMS THAT ARE TO BE REMOVED AND/OR RESET SHALL BE HANDLED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING DURING THESE OPERATIONS.

THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF A PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.

THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL & THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. COST OF

TRAFFIC PAY QUANTITY NOTES

(TL-24) 4- ROADWAY LUMINAIRES SHALL BE 250 WATT HIGH PRESSURE SODIUM, WITH CLEAR LAMP OF 28,000 LUMENS, ILLUMINATION ENGINEERING SOCIETY DISTRIBUTION AS FOLLOWS: VERTICAL = M; LATERAL = TYPE III; CONTROL = S; O.D.O.T. FIXTURE STYLE = A1. SEE STD. HLD1-1-(LATEST REVISION).

(TL-35) SEE SERVICE POLE SCHEDULE; FOR ADDITIONAL INFORMATION CONCERNING THE SERVICE POLE, CONTACT THE FOLLOWING PRIOR TO INSTALLATION: WITH THE COMPANY OG&E RESIDENT ENGINEER- JEREMY HAGERMAN, TELEPHONE NO. 918-682-9471

(TL-43) ALL REMOVED SERVICE POLES, LIGHT POLES, MAST ARMS, LUMINAIRES, BREAKAWAY BASES AND PERTINENT EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF MUSKOGEE. THE CONTRACTOR SHALL NEATLY STACK THE REMOVED ITEMS IN AN AREA DESIGNATED BY THE ENGINEER WITHIN THE PROJECT LIMITS. THE ITEMS THAT ARE TO BE REMOVED SHALL BE HANDLED WITH CARE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING DURING THESE OPERATIONS.

(TR-6) THE CONTROLLERS TO BE FURNISHED ON THIS PROJECT SHALL BE 8 PHASE VEHICLE ACTUATED SOLID STATE DIGITAL TRAFFIC SIGNAL CONTROLLERS. A MINIMUM OF 16 LOAD SWITCH RECEPTACLES SHALL BE FURNISHED AND WIRED TO THE MOUNTING FRAMES. ALL WIRING FROM THE FIELD TERMINALS SHALL BE WIRED TO THE MOUNTING FRAME FOR AN 8 PHASE OPERATION. NO CABINET OR CONTROLLER WIRING SHALL BE REQUIRED EXCEPT FOR ADDITIONAL DETECTOR CONNECTING CABLES WHEN CONTROLLER IS EXPANDED FOR AN 8 PHASE OPERATION. THE CONTROLLER SHALL BE CAPABLE OF PERFORMING AS SHOWN ON THE PHASE AND SEQUENCE DIAGRAM.

PEDESTRIAN ISOLATION SHALL BE PROVIDED IN THE CONTROLLER CABINET. ALL N.E.M.A. FUNCTIONS SHALL TERMINATE IN THE CONTROLLER CABINET.

(TS-6) SHOP DRAWINGS FOR ATTACHING SIGNS TO LIGHT AND/OR SIGNAL POLES AND MAST ARMS SHALL BE SUBMITTED TO THE TRAFFIC ENGINEER FOR APPROVAL BEFORE FABRICATION. NO HOLES SHALL BE PERMITTED IN ANY LIGHT AND/OR SIGNAL POLE OR MAST ARM. THE PRICE BID SHALL INCLUDE ALL MATERIALS, LABOR, HARDWARE AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED.

SPECIAL PAY QUANTITY NOTES

(SP-1) THE CABINET SHALL BE P44 TS-1 TYPE OR AN APPROVED EQUAL. A MINIMUM OF 16 LOAD SWITCH RECEPTACLES SHALL BE FURNISHED AND WIRED TO THE MOUNTING FRAMES. ALL WIRING FROM THE FIELD TERMINALS SHALL BE CONNECTED TO THE MOUNTING FRAME FOR AN EIGHT (8) PHASE OPERATION. ALL CORRESPONDING RECEPTACLE WIRING IN THE CABINET AND FIELD WIRING SHALL BE INSTALLED FOR THE CONTROLLER AS REQUIRED.

(SP-2) INCLUDED IN THIS ITEM IS A TRAFFIC SIGNAL BATTERY BACK-UP SYSTEM IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS SECTION 825.02.

(SP-3) RED, YELLOW, AND GREEN LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL HEADS, MODULES, LENSES, AND ALL ASSOCIATED MATERIAL AND EQUIPMENT FURNISHED AND INSTALLED ON THIS PROJECT SHALL CONFORM TO I.T.E. VEHICLE TRAFFIC CONTROL SIGNAL HEAD (VTCSH) STANDARDS IN EFFECT AT THE TIME THAT THE ORDER IS PLACED. LED HEADS SHALL BE CAPABLE OF OPERATING WITHOUT A REFLECTOR.

(SP-4) CIRCULAR AND ARROW LED SIGNAL MODULES SHALL HAVE A UNIFORM APPEARANCE.

(SP-5) INCLUDED IN THIS PAY ITEM IS THE COST OF APPLYING 2" YELLOW RETROREFLECTIVE TAPE (TYPE VIII) ONTO BACKPLATES. (SEE STANDARD SA1-1-01 LATEST REVISION)

(SP-6) TRAFFIC SIGNAL HEAD FACES ARE TO COMPLETELY COVERED FROM THE TIME THEY ARE INSTALLED UNTIL PLACED IN FLASHING OR FULL OPERATION. COVERING THE LENSES ONLY IS NOT ACCEPTABLE.

(SP-7) A PART OF THIS PAY QUANTITY INCLUDES MAST ARM MOUNTED TRAFFIC SIGNAL SIGNS. SEE STANDARD TSSSI-1-(LATEST REVISION).

(SP-8) PRICE BID FOR THIS PAY ITEM TO INCLUDE DEFROST DEVICE FOR FROST, SNOW, ICE, OR LENS FOG REMOVAL.

(SP-9) POLYMER CONCRETE PULL BOXES MAY BE USED.

(SP-10) QUANTITY INCLUDES REPLACING THE EXISTING SIGNAL HEADS AT THE INTERSECTION OF US-62 & US-80. WITH LED SIGNALS HEADS.

(SP-11) PAY ITEM IS FOR REMOVING AND RESETTING FOUR LUMINAIRES AT OR NEAR THE INTERSECTION OF US-62 & WILLEY RD.

PAY QUANTITIES

0305 TRAFFIC SIGNAL				
ITEM		DESCRIPTION	UNIT	TOTAL
802(B)	8338	1 1/2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	2,000.00
802(B)	8342	2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	50.00
802(B)	8344	3" PVC SCH. 40 PLASTIC CONDUIT BORED	LF	315.00
802(B)	8346	3" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	165.00
803(A)	8065	PULL BOX (SIZE I)	(SP-9) EA	3.00
803(A)	8066	PULL BOX (SIZE II)	(SP-9) EA	1.00
803(A)	8067	PULL BOX (SIZE III)	(SP-9) EA	14.00
804(A)	2915	STRUCTURAL CONCRETE	CY	12.80
804(B)	2916	REINFORCING STEEL	LB	1,928.40
805(D)	8744	(PL) REMOVE & RESET LIGHT POLE	(SP-11) EA	4.00
806(A)	8349	32'MH POLE, 65' TS & 10' LMA (G.STL.)	EA	2.00
806(A)	8730	POLE & 35' TS MST.ARM(G.STL.)	EA	1.00
806(A)	8741	POLE & 65' TS MST. ARM (G.STL.)	EA	1.00
809(A)	8090	ROADWAY LUMINAIRE	(TL-24) EA	2.00
810(A)	3118	SERVICE POLE	(TL-35) EA	1.00
811	8040	1/C NO.6 ELECTRICAL CONDUCTOR	LF	600.00
811	8044	1/C NO.10 ELECTRICAL CONDUCTOR	LF	1,000.00
825	8550	TRAFFIC SIGNAL CONTROLLER ASSEMBLY	(SP-1,2)(TR-6) EA	1.00
828(A)	8142	VEHICLE LOOP DETECTOR	EA	15.00
828(B)	8136	LOOP DETECTOR WIRE	LF	6,620.00
831	8231	1WAY 3SEC. ADJ. SIG. HD. S-6	(SP-3,4,6,8,10) EA	16.00
831	8252	1WAY 3SEC. ADJ. SIG. HD. S-9	(SP-3,4,6,8,10) EA	5.00
831	8286	1WAY 5SEC. ADJ. SIG. HD. S-19	(SP-3,4,6,8) EA	3.00
833	3030	BACKPLATE	(SP-5) EA	24.00
834(A)	8207	5/C TRAFFIC SIGNAL ELECTRICAL CABLE	LF	870.00
834(A)	8208	7/C TRAFFIC SIGNAL ELECTRICAL CABLE	LF	185.00
834(A)	8213	21/C TRAFFIC SIGNAL ELECTRICAL CABLE	LF	940.00
834(B)	8220	2/C SHIELDED LOOP DETECTOR LEAD-IN CABLE	LF	2,440.00
850(C)	8118	MAST ARM MOUNTED SIGNS(ALUMINUM)	(SP-7)(TS-6) SF	76.00

PRIOR TO PHASE 9, THE TRAFFIC SIGNAL, SIGNAGE & STRIPING AT US-62 & GEORGETOWN RD. MUST BE COMPLETED.

PREPARED BY:  
OKLAHOMA DEPARTMENT OF TRANSPORTATION  
TRAFFIC ENGINEERING DIVISION

*Jami L. Short*  
DATE: 4/29/2016

OKLA. REG. NO. 22542

SUMMARY OF PAY QUANTITIES & NOTES (TRAFFIC SIGNAL)			
Drawn	RGN	2/16	
Design	RGN	2/16	
Checked	JLS	2/16	
Traffic Engineering JAMI SHORT			
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION		
DIVISION I	STATE JOB NO. 27956(04)	SHEET NO. 10	