

OKLAHOMA DEPARTMENT OF TRANSPORTATION					
FED. ROAD DIST. NO.	STATE	JOB PIECE NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	OKLA.	33253(04)	2017	1	6
DESCRIPTION		REVISIONS	DATE		

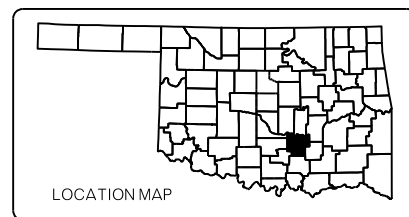
STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED  
**STATE HIGHWAY**  
FEDERAL AID PROJECT NO. HSIP-262C(044)TR  
CITY OF ROFF SCHOOL ZONE  
STATE HIGHWAY 1  
**PONTOTOC COUNTY**

CONTROL SECTION NO. 01-62-06  
STATE JOB NO. 33253(04)

INDEX OF SHEETS

SHEET NUMBER	SHEET DESCRIPTION
0001	TITLE SHEET
AT01	SUMMARY OF PAY QUANTITIES AND NOTES
AT02	TRI-HEAD SOLAR BEACON DETAILS
T001	TRAFFIC CONTROL DETAIL
T002	TRAFFIC CONTROL DETAIL (FLAGGER)
T003	SIGNING & STRIPING



OKLAHOMA DEPARTMENT OF TRANSPORTATION  
 ENGINEER MANAGER: TAREK MAAROUF    CHECKED BY: TAREK MAAROUF    PROJECT ENGINEER: K. DEDERING  
 ENGINEER INTERN: G. FADEL    SQUAD SUPERVISOR: B. ABRAHAM    SQUAD MEMBERS: J. FOX, A. POLACH, I. SHIELDS, C. DIVIS



START LOCATION  
N 10TH ST



STANDARDS TO BE INCLUDED

TRAFFIC

SBS1-1-00	TCS1-1-01
SBS2-1-00	TCS2-1-00
GMS1-1-00	TCS3-1-01
SSP1-1-02	TCS5-1-00
SSA1-1-00	TCS6-1-02
CCD1-1-00	TCS7-1-02
RWSF1-1-01	TCS9-1-01
PM1-1-02	TCS14-1-00
SA1-1-02	TCS15-1-01
SZSD1-1-00	TCS20-1-00

END LOCATION  
CONTROL SUB-SECTION  
0.39

**CITY OF ROFF**

PROJECT LENGTH ----- 0.320 MI.

CONVENTIONAL SYMBOLS

	PROPOSED ROAD
	RAILROADS
	RANGE & TOWNSHIP
	SECTION LINES
	QUARTER SECTION LINES
	FENCES
	GROUND LINE
	EXISTING ROADS
	BASE LINE
	GRADE LINES
	TELEPHONE & TELEGRAPH
	POWER LINES
	BUILDINGS
	OILWELL
	DRAINAGE STRUCTURES - IN PLACE
	DRAINAGE STRUCTURES - NEW
	RIGHT-OF-WAY LINES - EXISTING
	RIGHT-OF-WAY LINES - NEW
	CONTROLLED ACCESS
	RIGHT-OF-WAY FENCE

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4, 2010.

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
TRAFFIC ENGINEERING DIVISION

TAREK A. MAAROUF, P.E.  
OKLA. REG. NO. 25181  
DATE 07-12-17

REGISTERED PROFESSIONAL ENGINEER

TAREK AHMAD MAAROUF  
25181

OKLAHOMA

OKLAHOMA DEPARTMENT OF TRANSPORTATION

DATE APPROVED \_\_\_\_\_

BY \_\_\_\_\_

CHIEF ENGINEER

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

DATE APPROVED \_\_\_\_\_

BY \_\_\_\_\_

DIVISION ADMINISTRATOR

SWO \_\_\_\_\_ N/A \_\_\_\_\_

PROJECT NO. \_\_\_\_\_ HSIP-262C(044)TR

COUNTY \_\_\_\_\_ PONTOTOC \_\_\_\_\_

HIGHWAY \_\_\_\_\_ SH-1 \_\_\_\_\_

SHEET NO. \_\_\_\_\_ 0001

REVISIONS		
REV. NO.	DESCRIPTION	DATE
△	ADDED ENVIRONMENTAL NOTES	9/5/17

**TRAFFIC GENERAL CONSTRUCTION NOTES**

THE CONTRACTOR SHALL PROVIDE A PERSON TO BE ON 24 HOUR CALL AS NEEDED AS DETERMINED BY THE ENGINEER. THIS PERSON SHALL HOLD A CURRENT CERTIFICATION FROM THE AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA) OR THE OKLAHOMA TRAFFIC ENGINEERING ASSOCIATION (OTEA) AS A TRAFFIC CONTROL TECHNICIAN OR TRAFFIC CONTROL SUPERVISOR.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL MEET ODOT'S "QUALITY STANDARDS FOR TEMPORARY TRAFFIC CONTROL DEVICES." CHANNELIZING DEVICES SHALL HAVE A MINIMUM HEIGHT OF 36 INCHES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE TEMPORARY TRAFFIC CONTROL DEVICES, AND SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DEVICE DURING CONSTRUCTION.

**TRAFFIC PAY QUANTITY NOTES**

- (TC-13) A PART, OR ALL, OF THIS ITEM IS INTENDED FOR REPLACEMENT OF REMOVED EXISTING CONFLICTING STRIPING.
- (TC-14) SEE STANDARD DRAWING PM1-1, PM2-1, PM3-1, PM4-1, PM5-1, PM6-1, PM7-1, PM8-1 (LATEST REVISION). A PART, OR ALL, OF THE QUANTITY SHOWN IS TO BE USED AS FINAL PAVEMENT MARKING.
- (TC-22) AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT REVISED MARKING REMOVAL SHALL INCLUDE THE COST OF REMOVING STRIPE, ARROWS, WORDS AND SYMBOLS, AS SHOWN IN THE PLANS. THESE ITEMS MAY CONSIST OF PLASTIC, PAINT OR NON-REMOVABLE MARKING TAPE.
- (TC-25) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS REQUIRED FOR COMPLETION OF THE PROJECT. ALL SIGNS AND BARRICADES, WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.
- (TC-52) ANY USED CHANGEABLE MESSAGE SIGN AND TRUCK MOUNTED ATTENUATOR TO BE PLACED ON THIS PROJECT SHALL BE SUBJECT TO INSPECTION AND APPROVAL, BY THE OKLAHOMA DEPARTMENT OF TRANSPORTATION, TO ASSURE THAT THEY ARE IN GOOD WORKING CONDITION, PRIOR TO PLACEMENT ON THE PROJECT.
- (TC-70) THIS ITEM IS AN ESTIMATED QUANTITY TO BE USED AS DEEMED NECESSARY BY THE ENGINEER.
- (TC-75) TEMPORARY PAVEMENT MARKINGS SHALL BE IN PLACE THE SAME DAY THAT EXISTING PAVEMENT MARKINGS ARE REMOVED FROM ANY ROADWAY OPEN TO TRAFFIC. ALSO, ALL TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO THE INSTALLATION OF FINAL STRIPING.
- (TC-76) ANY TRUCK MOUNTED ATTENUATOR USED ON THIS PROJECT SHALL HAVE PASSED ALL MANDATORY AND OPTIONAL TESTS LISTED IN NCHRP 350, TL-3 CRITERIA. THIS ITEM IS TO BE USED WHERE SHOWN IN THE STANDARD DRAWINGS OR AT THE DISCRETION OF THE ENGINEER ON SHADOW VEHICLES PROTECTING THE WORK AREAS AND TEMPORARY ROADSIDE HAZARDS.
- (TC-77) TRUCK MOUNTED ATTENUATORS ARE TO BE INSTALLED ON NON-STATE OWNED TRUCKS HAVING A MINIMUM GROSS WEIGHT RATING OF 15,000 POUNDS. EACH OF THESE TRUCKS SHALL ALSO BE EQUIPPED WITH AN ARROW DISPLAY (TYPE B).
- (TC-84) 15 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.
- (TC-85) THESE SIGNS MUST BE ON THE OKLAHOMA DEPARTMENT OF TRANSPORTATION LIST OF APPROVED CHANGEABLE MESSAGE SIGNS. FOR A LIST OF THE APPROVED SIGNS GO TO THE OKLAHOMA DEPARTMENT OF TRANSPORTATION WEBSITE AT: <http://www.okladot.state.ok.us/traffic/apl/index.php>

**TRAFFIC SIGNING PAY QUANTITY NOTES**

- (TS-23) QUANTITY SHOWN INCLUDES 60 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY-FOUR INCH (24") WIDE TRAFFIC STRIPE.
- (TS-33) INCLUDED IN THIS PAY ITEM IS ALL HARDWARE ASSOCIATED WITH PROPERLY ANCHORING AND MOUNTING THE HIGHWAY SIGN IN ACCORDANCE WITH O.D.O.T. PLANS AND STANDARD DRAWINGS SSA1-1 AND SSP1-1-(LATEST REVISION).
- (TS-34) INCLUDED IN THIS PAY ITEM IS THE REMOVAL OF ANY EXISTING SIGNS TO BE REPLACED BY NEW ASSEMBLIES AND THE REMOVAL OF ANY EXISTING SIGNS THAT WILL BE IN CONFLICT WITH THE NEW ROADWAY OR NEW SIGNAGE.
- (TS-41) "REMOVAL OF EXISTING SIGNS" SHALL INCLUDE THE REMOVAL OF A COMPLETE SIGN ASSEMBLY WHICH MAY INCLUDE MULTIPLE SIGNS, POSTS, FOOTINGS, AND ANY FOOTINGS ADJACENT TO THE SIGN ASSEMBLY. WHEN APPROVED BY THE ENGINEER, FOOTINGS MAY BE OBLITERATED TO A POINT BELOW GROUND LEVEL IN LIEU OF BEING COMPLETELY REMOVED. SEE GENERAL CONSTRUCTION NOTES FOR DISPOSAL OF OLD CONCRETE FOOTING MATERIAL.

**ENVIRONMENTAL MITIGATION NOTES**

**AMERICAN BURYING BEETLE NOTE:**

THE AMERICAN BURYING BEETLE IS A LARGE CARRION BURYING BEETLE THAT OCCURS NEAR THE PROJECT AREA. NO ARTIFICIAL LIGHTING SHALL BE USED DURING CONSTRUCTION. CARCASSES AND ALL FOOD TRASH SHALL BE REMOVED FROM THE PERMANENT AND TEMPORARY RIGHT-OF-WAY THROUGHOUT PROJECT ACTIVITIES. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE PLACED ON TOP OF ALL AREAS OF GROUND DISTURBANCE, PRIOR TO RE-VEGETATION.

**SPECIAL NOTES**

- (SP-1) PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED WHERE DEEMED NECESSARY BY THE ENGINEER.
- (SP-2) PORTABLE CHANGEABLE MESSAGE SIGN(S) SHALL BE PLACED 14 DAYS PRIOR TO CONSTRUCTION.
- (SP-3) INCLUDED IN THIS PAY ITEM IS THE REMOVAL OF EXISTING SIGNS BY THE CONTRACTOR. THESE REMOVED ITEMS SHALL BECOME PROPERTY OF DIVISION 3 AND DELIVERED TO A STORAGE LOCATION DESIGNATED BY THE DIVISION.
- (SP-4) PRICE BID FOR THIS ITEM SHALL INCLUDE ALL COST FOR THE SQUARE PEDESTAL CAST ALUMINUM BASE AND COLLAR AND ALL HARDWARE ASSOCIATED WITH PROPERLY INSTALLING THIS SIGN IN ACCORDANCE WITH STANDARD RWSF1-1-(LATEST REVISION).
- (SP-5) INCLUDED WITH THIS PAY ITEM SHALL BE THE STRUCTURAL CONCRETE AND REINFORCING STEEL FOR THE ASSEMBLY FOOTING AS WELL AS THE 4" GALVANIZED STEEL PIPE.
- (SP-6) THE CONTRACTOR SHALL SET THE ON-OFF TIME AS FOLLOWS UNLESS SPECIFIED BY THE SCHOOL SUPERINTENDENT  

ON	OFF
TIME: 7:30 AM	8:30 AM
2:30 PM	3:30 PM
- (SP-7) PRICE BID FOR THIS ITEM SHALL INCLUDE ALL COST FOR THE SOLID STATE FLASHER CONTROLLERS (TYPE II) AND ALL HARDWARE ASSOCIATED WITH PROPERLY INSTALLING THE CONTROLLERS IN ACCORDANCE WITH STANDARD RWSF1-1-(LATEST REVISION).
- (SP-8) THIS PROJECT SHALL INCLUDE SIX (6) YELLOW 1 WAY 1 SECTION ADJUSTABLE LED SIGNAL HEADS, TYPE S-22. THE LED TRAFFIC MODULES, LENSES AND ALL ASSOCIATED MATERIAL AND EQUIPMENT 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-9) TRI-HEAD BEACON SOLAR-POWERED

**DESCRIPTION**  
 THE MANUFACTURER SHALL PROVIDE A TRI-HEAD (2 FRONT AND 1 CONFIRMATION) SOLAR-POWERED LED BEACON ASSEMBLY. THIS BEACON'S HIGH-INTENSITY LEDS ARE VISIBLE IN ALL WEATHER AND AMBIENT LIGHT CONDITIONS.

**FUNCTIONAL REQUIREMENTS**  
 PER FHWA GUIDELINES, WHEN FLASHED, THE LED BEACONS SHALL FLASH SIMULTANEOUSLY AT A RATE OF MORE THAN 50 AND LESS THAN 60 TIMES PER MINUTE. WHEN INSTALLED, THE SOLAR PANEL COLLECTOR MUST FACE SOUTH FOR OPTIMAL PERFORMANCE OF THE UNIT.

**MATERIALS**  
 THE MANUFACTURER SHALL PROVIDE A COMPLETE SOLAR-POWERED LED BEACON ASSEMBLY, CONSISTING OF BUT NOT LIMITED TO: 3 AMBER LED INDICATIONS, HOUSING, LENS, SOLAR PANEL, BATTERY, ALUMINUM CABINET, POLE, POLE BASE WITH J-BOLTS, AND ELECTRICAL COMPONENTS INCLUDING CONTROLLER.

THE LED BEACON ASSEMBLY SHALL INCLUDE THE FOLLOWING ITEMS:

- LED BEACONS**
- THE BEACONS SHALL MEET THE COLOR AND UNIFORMITY OF ITE VTCSH LED CIRCULAR SIGNAL SUPPLEMENT FOR THE TEMPERATURE 77°F (25°C) = AMBER
  - THE LED BEACON'S COLOR UNIFORMITY SHALL EXCEED THE ITE STANDARD.
  - THE LED BEACON SHALL HAVE A 12" (300MM) ABRASION-RESISTANT CONVEX LENS.
  - BEACON HEADS WILL BE POLYCARBONATE BLACK
  - THE MODULE LENS SHALL HAVE A CLEAR OR TINTED UV ACRYLIC

- SOLAR PANEL**
- THE SOLAR PANEL SHALL PROVIDE UP TO 55 WATTS PEAK TOTAL OUTPUT.
  - THE SOLAR PANEL SHALL BE MOUNTED TO AN ALUMINUM PLATE AND BRACKET AT AN ANGLE OF 45° - 60° TO PROVIDE MAXIMUM OUTPUT.
  - ALL FASTENERS USED SHALL BE ANTI-VANDAL.
  - THE SYSTEM AVERAGE STATE OF CHARGE SHALL BE 90% AND LOSS OF LOAD SHALL BE ZERO THROUGHOUT THE YEAR
  - THE PHOTOVOLTAIC MODULE SHALL PROVIDE 12 VDC AND BE CAPABLE OF RECHARGING THE SYSTEM TO FULL CAPACITY AFTER 6 HOURS IN 3 HOURS OF OPTIMUM SUN CONDITIONS.
  - SOLAR MODULES SHALL BE INDUSTRIAL GRADE.
  - MODULE CONSTRUCTION WILL UTILIZE LOW IRON TEMPERED GLASS SURFACE WITH AN INDUSTRIAL GRADE ALUMINUM FRAME.
  - A UV RESISTANT JUNCTION BOX, WIRE TERMINATION SHALL BE PROVIDED.

- CONTROL CIRCUIT**
- THE CONTROL CIRCUIT SHALL HAVE THE CAPABILITY OF FLASHING LED BEACON.
  - THE FLASHING OUTPUT SHALL HAVE 51-59 PERIODS OF FLASHING PER MINUTE. THE OUTPUT SHALL REACH THE OUTPUT CURRENT AS PROGRAMMED FOR THE DURATION OF THE PULSE.
  - THE CONTROL CIRCUIT SHALL BE INSTALLED IN A NEMA RATED 3R ENCLOSURE.
  - CONTROL CIRCUIT SHALL BE CAPABLE OF STORING INPUT COUNT DATA STORED IN PRESET INTERVALS USING A WINDOWS BASED PC SOFTWARE PROGRAM AND STANDARD RS232 PROGRAMMING CABLE.
  - THE CONTROLLER SHALL HAVE AN ONBOARD, SOLID STATE, CHARGE CONTROL CIRCUIT TO INSURE PROPER CHARGING ON THE SYSTEM BATTERY BANK
  - AN LED/LCD SHALL BE PROVIDED TO INDICATE SOLAR PANEL CHARGING

- BATTERY**
- BATTERY UNIT SHALL BE A 12VDC SEALED AGM BATTERY.
  - BATTERY SHALL HAVE 48 AMP HOUR CAPACITY
  - THE BATTERY SHALL BE SPILL PROOF

**WARRANTY**  
 THE SYSTEM SHALL BE SUPPORTED BY A THREE YEAR LIMITED WARRANTY (INCLUDING BATTERIES).

**PAY QUANTITY SCHEDULE**

**0300 TRAFFIC CONTROL**

PAY ITEM	CODE NO.	DESCRIPTION	UNIT	QUANTITY
857(F)	8006	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE) (TC-22,70,75)	LF	56.00
876(A)	8482	(PL) TRUCK MOUNTED ATTENUATOR (TC-52,76,77,84)	SD	30.00
880(I)	8902	FLAGGER (TC-70)	SD	5.00
880(J)	8905	CONSTRUCTION TRAFFIC CONTROL (TC-25)	LSUM	1.00
882(A)	8306	PORT. CHANGEABLE MESSAGE SIGN (SP-1,2)(TC-52,84,85)	SD	58.00

**PAY QUANTITY SCHEDULE**

**0301 TRAFFIC SIGNING & STRIPING**

PAY ITEM	CODE NO.	DESCRIPTION	UNIT	QUANTITY
805(A)	8724	(PL) REMOVAL OF EXISTING SIGNS (SP-3)(TS-41)	EA	2.00
805(D)	8756	(PL) REMOVE & RESET EXISTING SIGNS	EA	3.00
836	8425	REGULATORY OR WARNING SIGN ASSEMBLY (SP-4,5,9)	EA	2.00
850(A)	8110	SHEET ALUMINUM SIGNS (TS-33,34)	SF	26.00
851(C)	8324	2" SQUARE TUBE POST (TS-33,34)	LF	32.00
855(A)	8825	TRAFFIC STRIPE (PLASTIC) 24" WIDE (TC-13,14)(TS-23)	LF	60.00

**PAY QUANTITY SCHEDULE**

**0305 SIGNALS**

PAY ITEM	CODE NO.	DESCRIPTION	UNIT	QUANTITY
827	8623	SOLID STATE FLASHER CONTROLLER (TYPE II) (SP-6,7)	EA	2.00
831	8301	1 WAY 1 SEC. ADJ. SIG. HD. S-22 (SP-8)	EA	6.00

**PAY QUANTITY SCHEDULE**

**0640 CONSTRUCTION**

PAY ITEM	CODE NO.	DESCRIPTION	UNIT	QUANTITY
641	1552	MOBILIZATION	LSUM	1.00

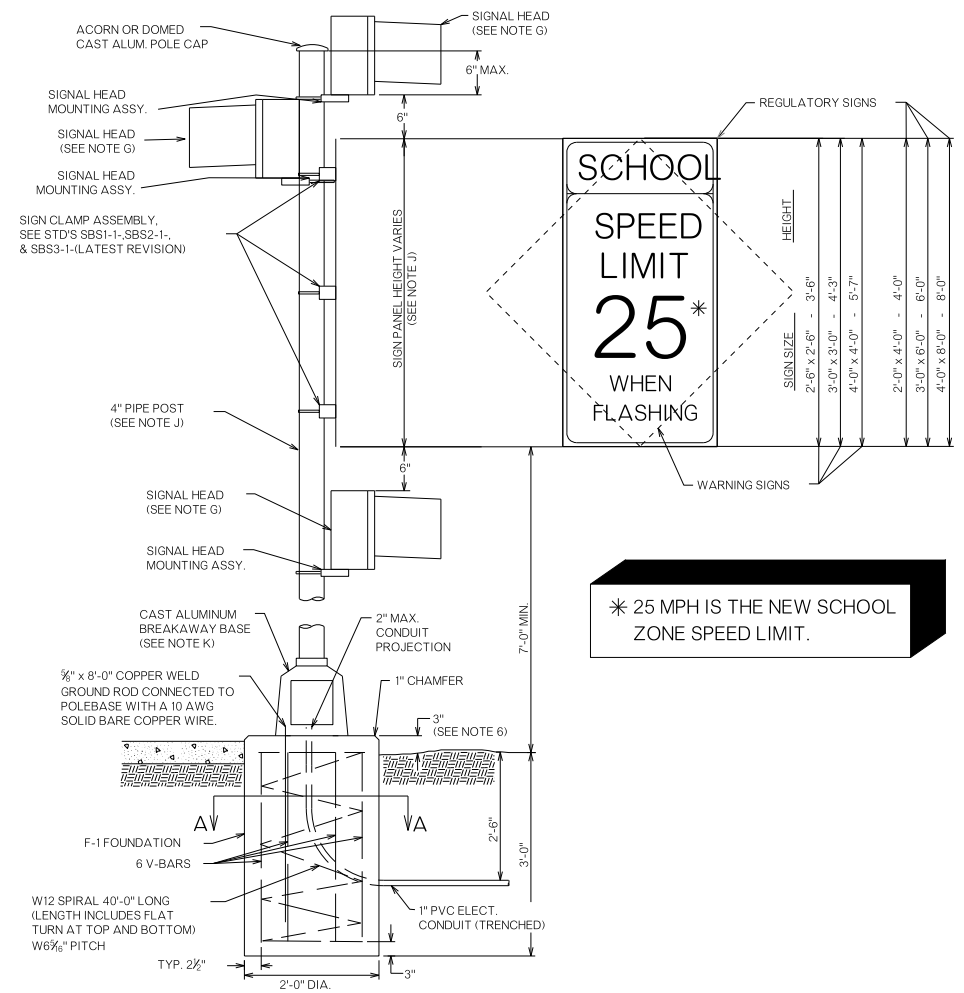
**SUMMARY OF SIGN QUANTITIES FOR URBAN AREA FOR REGULATORY SIGNS**

ITEM NO.	APPROXIMATE LOCATION	SIGN DESCRIPTION	SQUARE TUBE POST 2"		REMOVAL OF EXIST. SIGNS 805(A)	REMOVE & RESET EXIST. SIGNS 805(D)	REMARKS
			A	S.F.			
1	LT	R2-1(25) S5-2	16.50	5.00		1.00	RESET S5-2 ON NEW POST WITH R2-1(25)
2	RT	S4-3P, R2-1, & S4-1P			1.00		REMOVE
3	RT	S5-1 Flasher		8.00			NEW
4	LT	S1-1 & W16-7P					RELOCATED SIGNS FROM #5
5	LT	S1-1 & W16-7P				1.00	REMOVE & RESET TO SIGN LOCATION #4
6	RT	S5-2 & R2-1(35)				1.00	REMOVE & RESET TO SIGN LOCATION #9
7	RT	R2-1(35)	15.50	5.00			NEW
8	LT	S4-3P, R2-1, & S4-1P			1.00		REMOVE
9	RT	S5-2 & R2-1(35)					RELOCATED SIGNS FROM #6
10	LT	S5-1 Flasher		8.00			NEW
TOTAL			32.00	26.00	2.00	3.00	

DIVISION 3 SH-01		PONTOTOC COUNTY		DETAIL:	CLD	06/17
<b>SUMMARY OF PAY QUANTITIES AND NOTES</b>				CHECK:	GF	06/17
				ENGINEER:	KCD	06/17
				GROUP:	ABRAHAM	
				EM:	MAAROUF	
<b>STATE OF OKLAHOMA</b>		<b>DEPARTMENT OF TRANSPORTATION</b>				
JOB/PIECE NO. 33253(04)		SHEET NO. AT01				

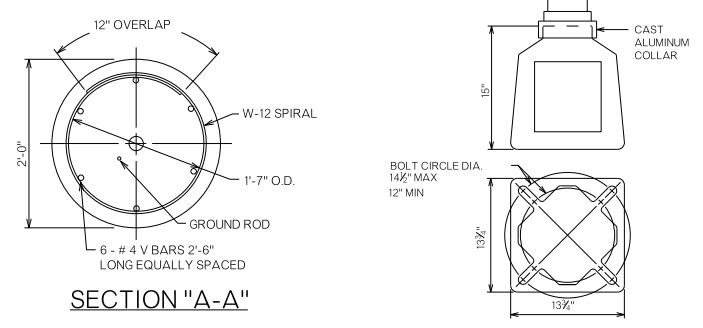
REVISIONS		
REV. NO.	DESCRIPTION	DATE

# TRI-HEAD SOLAR BEACON DETAILS

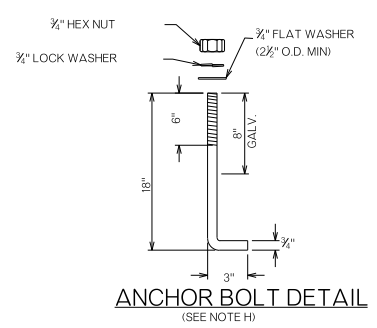


\* 25 MPH IS THE NEW SCHOOL ZONE SPEED LIMIT.

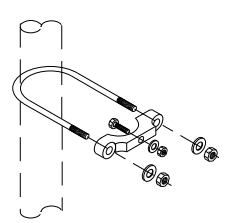
**TYPICAL FLASHING REGULATORY / WARNING SIGN**  
STRUCTURAL CONCRETE = 0.35 CY  
REINFORCING STEEL = 27 LBS



**SECTION "A-A"**



**ANCHOR BOLT DETAIL**  
(SEE NOTE H)

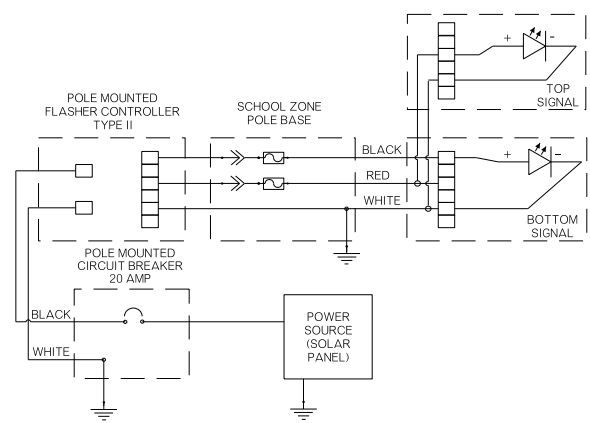


**SIGN CLAMP**



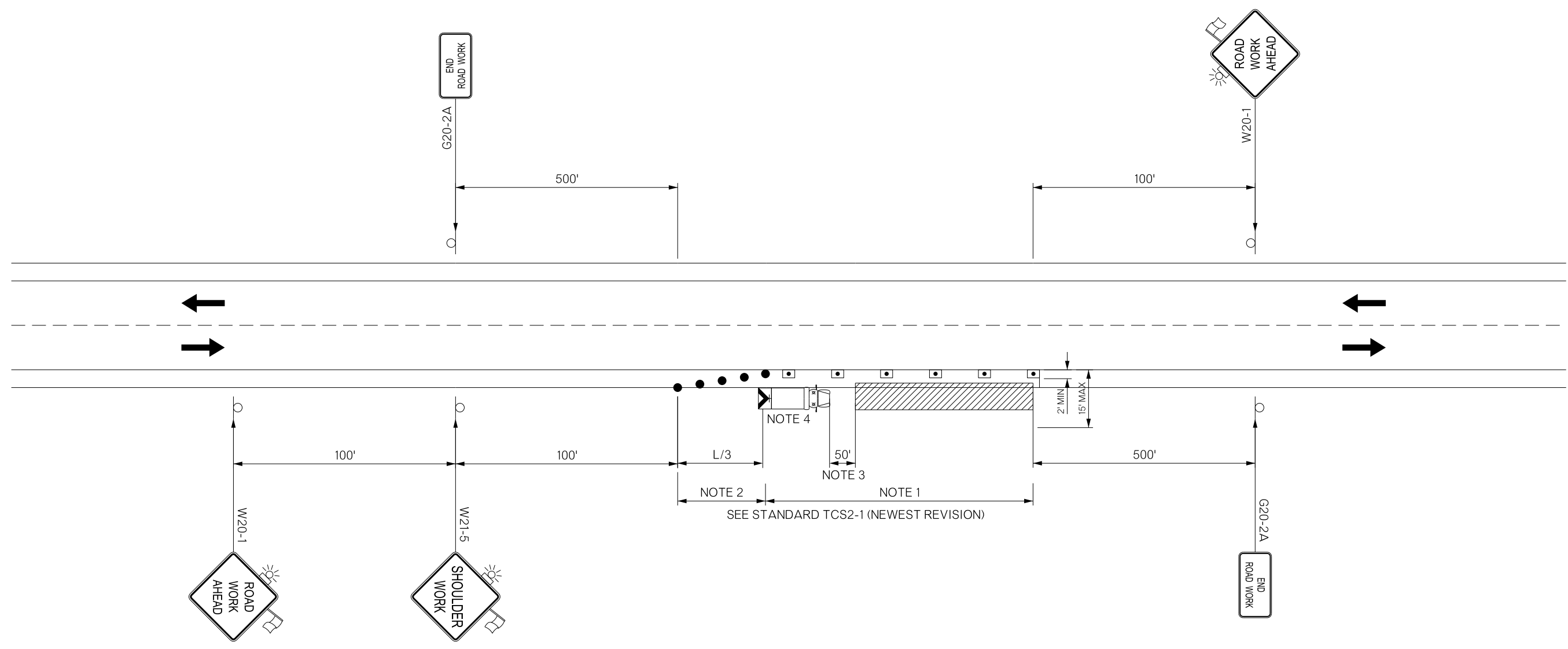
## MATERIAL SPECIFICATIONS

- A. ELECTRICAL CONDUIT AND FITTINGS SHALL BE IN ACCORDANCE WITH SECTION 802 OF THE 2009 STANDARD SPECIFICATIONS AND MAY BE EITHER RIGID GALV. STEEL OR SCH. 40 PVC PLASTIC.
- B. ELECTRICAL CONDUCTORS FROM THE POWER SERVICE INSULATOR TO THE CONTROLLER AND TO THE FLASHING SIGNAL HEADS SHALL BE A NO. 10 AWG, TYPE THHN. ELECTRICAL WIRING FROM THE FOOTING TO THE SIGNAL HEADS SHALL BE INSTALLED WITHIN THE SUPPORTING SIGN POLE.
- C. ALL CONDUITS OR STRAPS SHALL BE GALVANIZED MALLEABLE IRON.
- D. THE FLASHER CONTROLLER SHALL BE A TYPE I FLASHER FOR 24 HOUR OPERATION OR A TYPE II FLASHER FOR TIMED OPERATION, IN A CAST ALUMINUM, NEMA 3R RAIN-TIGHT, LOCKABLE ENCLOSURE. CONTROLLER SHALL CONFORM TO SECTION 827 OF THE 2009 STANDARD SPECIFICATIONS.
- E. THE ENCLOSURE FOR THE CIRCUIT BREAKER SHALL BE A N.E.M.A. 3R RAIN-TIGHT ENCLOSURE, AND SHALL BE LOCKED IN ACCORDANCE WITH THE POWER COMPANY REQUIREMENTS. CIRCUIT BREAKERS SHALL BE I-POLE, 120 VOLT, RATED AT 20 AMP.
- F. SIGNAL HEADS USED SHALL BE ONE-WAY, ONE SECTION ( WITH YELLOW LENS AND TUNNEL VISOR (V-1), CONFORMING TO SECTION 831 OF THE 2009 STANDARD SPECIFICATIONS. SIGNAL HEAD SIZE SHALL BE EITHER A S-8 (8") OR S-22 (12") AS SPECIFIED ON THE PLANS.
- G. ANCHOR BOLTS SHALL BE ASTM A-572 OR A-36, MODIFIED TO 50,000 PSI YIELD STRENGTH WITH A HEAVY DUTY FLAT WASHER, HEAVY DUTY LOCK WASHER AND HEAVY DUTY HEX NUT, ALL GALVANIZED AS PER ASTM A-153.
- H. THE FUSE HOLDER LOCATED IN THE POLE BASE SHALL BE WATERPROOF, IN-LINE, BREAK-A-WAY TYPE INCLUDING A 10 AMP KTK FUSE.
- I. THE PIPE POST SHALL BE 4" @ 10.79 SCH. 40 GALV. STEEL. PIPE LENGTH WILL VARY DUE TO SIGN SIZES AND FIELD CONDITIONS. THE CONTRACTOR SHALL VERIFY AND ADJUST THE PIPE POST LENGTH AS REQUIRED. MINIMUM LENGTH OF 12', UNLESS OTHERWISE SPECIFIED IN THE SIGNING SCHEDULE. SPUN ALUMINUM SCH.40 OR 80 PIPE, AS REQUIRED, MAY BE USED AS AN ALTERNATE POST MATERIAL.
- J. ALL COST OF THE FHWA APPROVED SQUARE CAST ALUMINUM BASE WITH A PLASTIC DOOR, GROUNDING LUG AND A CAST ALUMINUM BASE COLLAR SHALL BE INCLUDED IN THE PRICE BID FOR REGULATORY OR WARNING SIGN ASSEMBLY.
- K. COST OF CONCRETE AND STEEL IN THE FOOTING SHALL BE INCLUDED IN THE PRICE BID OF REGULATORY OR WARNING SIGN ASSEMBLY PAY ITEM. FOR CONCRETE AND STEEL QUANTITIES SEE STANDARD FGS2-1 (LATEST REVISION).



DIVISION 3 SH-01	PONTOTOC COUNTY	DETAIL:	CLD	06/17
TRI-HEAD SOLAR BEACON DETAILS		CHECK:	GF	06/17
		ENGINEER:	KCD	06/17
		GROUP:	ABRAHAM EM: MAAROUF	
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	JOB/PIECE NO. 33253(04)	SHEET NO. AT02	

REVISIONS		
REV. NO.	DESCRIPTION	DATE



**NOTE 1**  
 MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE EQUAL TO TWICE THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 50 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 75 FEET FOR CHANNELIZER CONES. SPACING SHALL NOT EXCEED 100 FEET FOR TYPE II BARRICADES, VERTICAL PANELS, OR DRUMS.

**NOTE 2**  
 A MINIMUM OF FIVE (5) CHANNELIZING DEVICES SHALL BE PLACED THRU THIS AREA.

**NOTE 3**  
 A LONGITUDINAL BUFFER AREA, TO ALLOW WORKERS TIME TO EVACUATE THE WORK AREA, SHOULD BE PROVIDED. FOR GUIDELINES ON SETTING THE LENGTH OF THIS BUFFER, SEE STANDARD DRAWING TCS2-1-(LATEST REVISION). ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND THE JUDGEMENT OF THE ENGINEER.

**NOTE 4**  
 THE SHADOW VEHICLE SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE WHENEVER WORKERS ARE IN THE WORK AREA. THIS VEHICLE SHALL BE REMOVED FROM THE ROADWAY WHENEVER WORKERS ARE NOT IN THE WORK AREA. THIS VEHICLE SHALL BE EQUIPPED WITH AN ACTUATED FLASHING OR REVOLVING YELLOW LIGHT.

THE "ROAD WORK AHEAD" SIGN MAY BE REPLACED WITH OTHER APPROPRIATE SIGNS SUCH AS "SHOULDER WORK" IF CONDITIONS DICTATE.

IF THE WORKSPACE IS LOCATED IN THE MEDIAN OF A DIVIDED ROADWAY AN ADVANCE WARNING SIGN SHOULD ALSO BE PLACED ON THE LEFT SIDE OF THE ROADWAY.

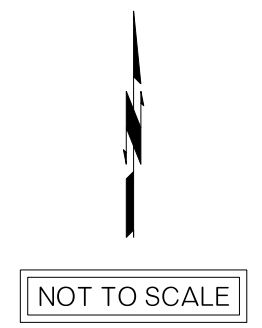
"ROAD WORK NEXT XX MILES" SIGN SHALL BE REQUIRED IF WORK AREA IS 2 MILES OR MORE.

FOR WORK REQUIRING (60 MINUTES OR LESS), OR MOBILE OPERATION, ALL SIGNS AND CHANNELIZING DEVICES MAY BE ELIMINATED IF A VEHICLE WITH AN ACTIVATED FLASHING OR REVOLVING YELLOW LIGHT IS USED.

ALL VEHICLES, EQUIPMENT, WORKERS (EXCEPT FLAGGERS) AND THEIR ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF THE ROADWAY.

IN INSTANCES WHERE SIGHT DISTANCE MAY BE RESTRICTED DUE TO A CREST VERTICAL CURVE, HORIZONTAL CURVE OR OTHER FACTORS, THE CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.

SEE STANDARD TCS2-1 (NEWEST REVISION)



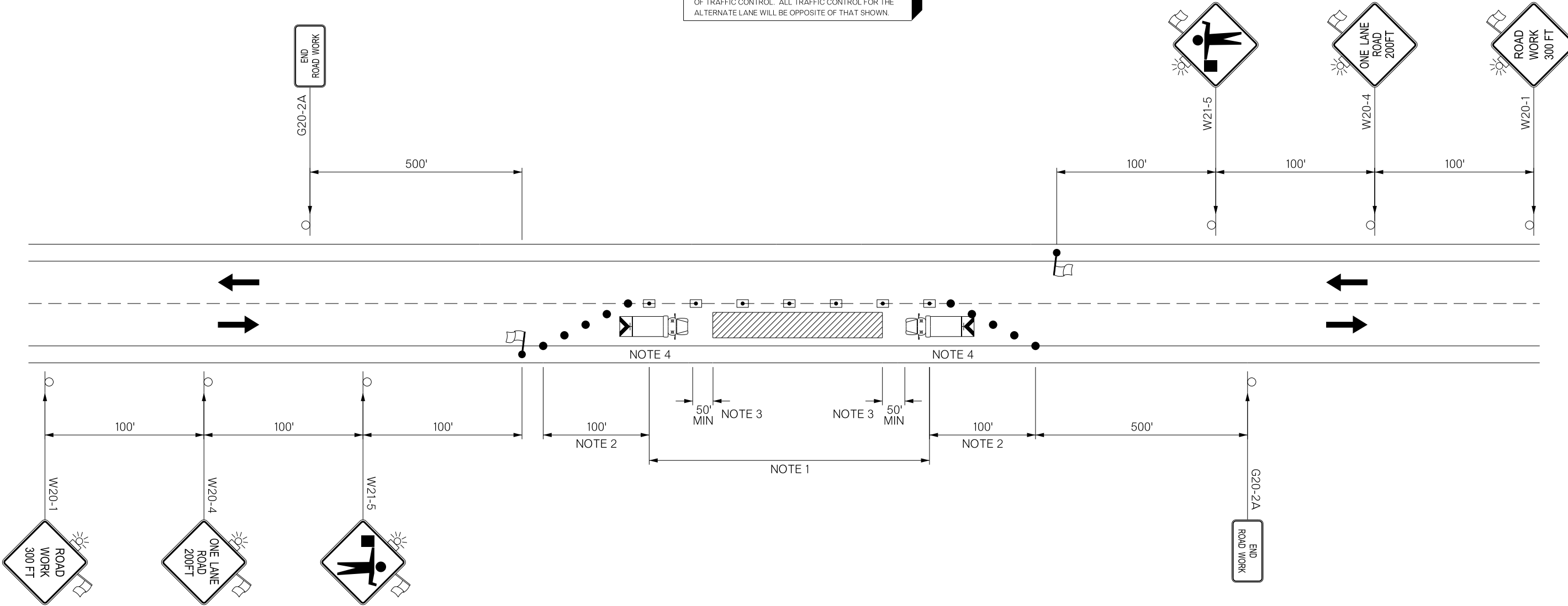
KEY	
	CHANNELIZING CONE
	DRUM
	SIGN
	TRAFFIC FLOW ARROW
	WORK AREA
	SHADOW VEHICLE
	TRUCK MOUNTED ATTENUATOR

DIVISION 3 SH-01	PONTOTOC COUNTY	DETAIL: CLD 06/17
TRAFFIC CONTROL DETAIL		CHECK: GF 06/17
		ENGINEER: KCD 06/17
		GROUP: ABRAHAM EM: MAAROUF
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	JOB/PIECE NO. 33253(04) SHEET NO. T001



REVISIONS		
REV. NO.	DESCRIPTION	DATE

THERE IS NO SUGGESTED SEQUENCE OF CONSTRUCTION IN THIS DRAWING. THE DETAILS SHOWN ARE FOR ONE LANE OF TRAFFIC CONTROL. ALL TRAFFIC CONTROL FOR THE ALTERNATE LANE WILL BE OPPOSITE OF THAT SHOWN.



**NOTE 1**  
 MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES (FEET) SHALL BE TWICE THE POSTED SPEED LIMIT (M.P.H.) WITH THE FOLLOWING EXCEPTIONS. SPACING SHALL NOT EXCEED 50 FEET FOR CONES OR TUBE CHANNELIZERS. SPACING SHALL NOT EXCEED 75 FEET FOR CHANNELIZER CONES. SPACING SHALL NOT EXCEED 100 FEET FOR TYPE II BARRICADES, VERTICAL PANELS OR DRUMS.

**NOTE 2**  
 A MINIMUM OF FIVE (5) CHANNELIZING DEVICES SHALL BE PLACED THROUGH THIS AREA.

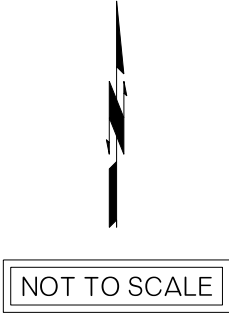
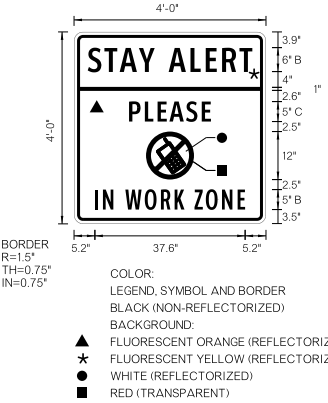
**NOTE 3**  
 A LONGITUDINAL BUFFER AREA, TO ALLOW WORKERS TIME TO EVACUATE THE WORK AREA, SHOULD BE PROVIDED. FOR GUIDELINES ON SETTING THE LENGTH OF THIS BUFFER, SEE STANDARD DRAWING TCS2-1-(LATEST REVISION). ACTUAL LENGTH SHALL BE DETERMINED BY FIELD CONDITIONS AND THE JUDGEMENT OF THE ENGINEER.

**NOTE 4**  
 THE SHADOW VEHICLE SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE WHENEVER WORKERS ARE IN THE WORK AREA. THIS VEHICLE SHALL BE REMOVED FROM THE ROADWAY WHENEVER WORKERS ARE NOT IN THE WORK AREA. THIS VEHICLE SHALL BE EQUIPPED WITH AN ACTUATED FLASHING OR REVOLVING YELLOW LIGHT.

WHEN NO WORK IS BEING PERFORMED AND TWO LANE TRAFFIC IS OPERATING, FLAGGERS WILL NOT BE REQUIRED. WHENEVER FLAGGERS ARE NOT PRESENT, THE "FLAGGER" SIGNS SHALL BE REMOVED OR COVERED.

FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.

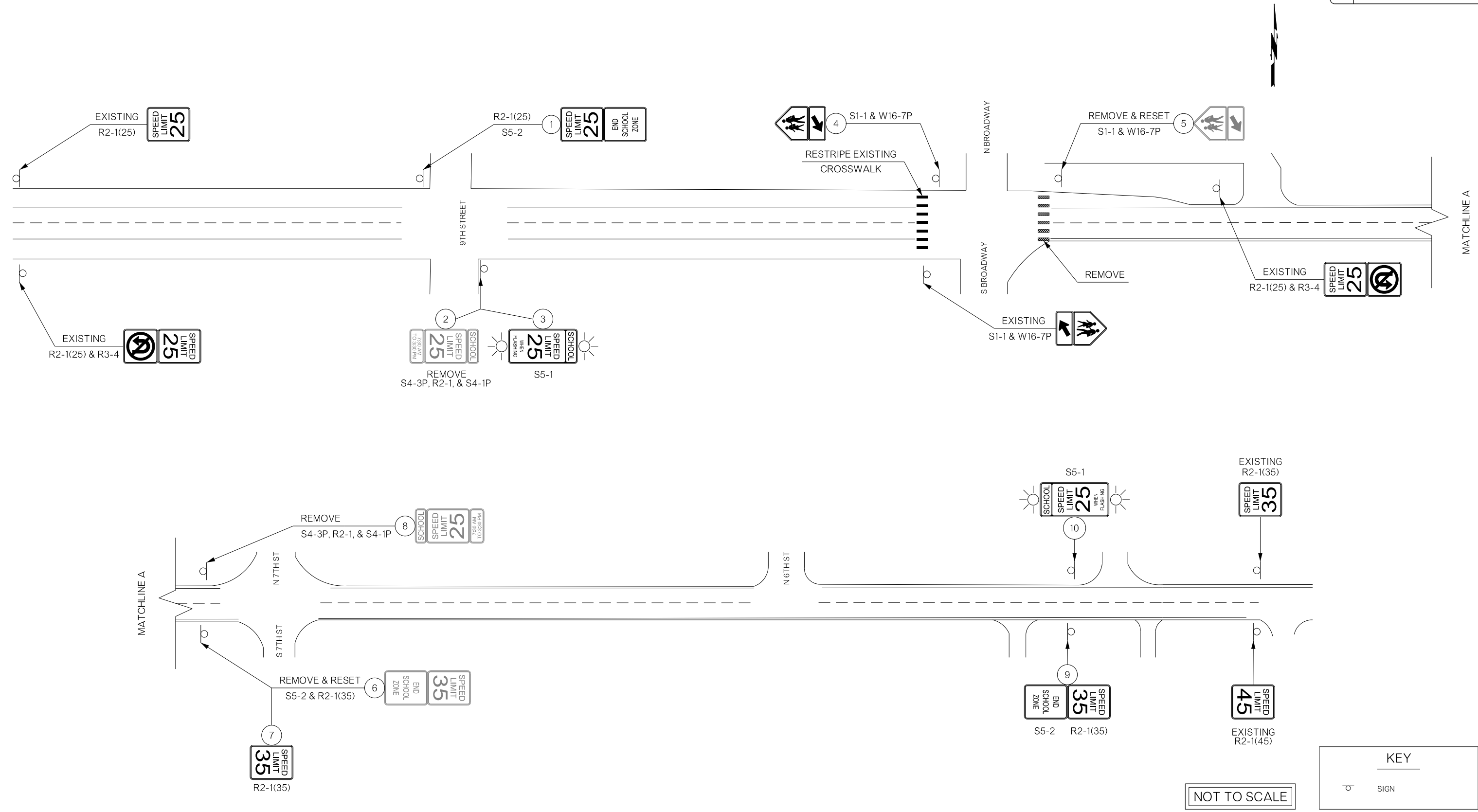
THE FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT CONTACT AT ALL TIMES AND SHALL BE POSITIONED TO PROTECT THE WORKERS.



KEY	
	SIGN
	DRUM
	CHANNELIZING CONE
	WORK AREA
	FLAGGER
	SHADOW VEHICLE
	TRUCK MOUNTED ATTENUATOR

DIVISION 3 SH-01	PONTOTOC COUNTY	DETAIL: CLD 06/17
TRAFFIC CONTROL DETAIL (FLAGGER)		CHECK: GF 06/17
		ENGINEER: KCD 06/17
GROUP: ABRAHAM EM: MAAROUF		
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	
JOBPIECE NO. 33253(04)		SHEET NO. T002

REVISIONS		
REV. NO.	DESCRIPTION	DATE



NOT TO SCALE

KEY	
	SIGN

DIVISION 3 SH-01	PONTOTOC COUNTY	DETAIL: CLD 06/17
SIGNING AND STRIPING		CHECK: GF 06/17
		ENGINEER: KCD 06/17
GROUP: ABRAHAM		EM: MAAROUF
STATE OF OKLAHOMA	DEPARTMENT OF TRANSPORTATION	JOB/PIECE NO. 33253(04) SHEET NO. T003