

**PAY ITEM NOTES (CABLE BARRIER)**

- (TP-51) THE TENSION METER SHALL BE OF THE TYPE RECOMMENDED BY THE MANUFACTURER OF THE CABLE BARRIER SYSTEM PROVIDED, AND SHALL BE APPROVED BY THE ODOT TRAFFIC ENGINEERING DIVISION. IT SHALL ALSO BE NEW, CALIBRATED, FUNCTIONAL, AND CAPABLE OF READING THE TENSION ON THE CABLE BARRIER SYSTEM TO WITHIN THE MANUFACTURER'S RECOMMENDED TOLERANCES. THE DEVICE SHALL ALSO BE DEMONSTRATED BY THE INSTRUCTOR(S) ON HOW TO OPERATE THEM AND PROVIDE OTHER HELPFUL INFORMATION TO THE PARTICIPANTS. IT SHALL BE DELIVERED TO THE ODOT DIVISION 8 HEADQUARTERS IN TULSA, OK.
- (TP-57) PRICE BID FOR THIS ITEM CONSISTS OF INSTALLATION OF CABLE BARRIER SYSTEM AND ITS HARDWARE (CAPS, POST, TURN BUCKLE, ETC.). CONTRACTOR SHALL USE THE MATERIAL REMOVED FROM THE EXISTING CABLE BARRIER SYSTEM WITH THE EXCEPTION OF CONCRETE FOOTINGS. COST TO INCLUDE ANY ADDITIONAL HARDWARE NEEDED TO COMPLETE THE INSTALLATION. CONTRACTOR SHALL SWAGE NEW FITTINGS FOR THE INSTALLATION OF NEW SECTION IF DEEMED NECESSARY BY THE ENGINEER. PRICE BID FOR THIS ITEM ALSO INCLUDES COST OF NEW SWAGING FOR CABLE BARRIER SYSTEM.
- (TP-58) COST TO INCLUDE ANY ADDITIONAL HARDWARE NEEDED TO COMPLETE THE INSTALLATION. CONTRACTOR SHALL SWAGE NEW FITTINGS FOR THE INSTALLATION OF EXISTING SECTION IF NECESSARY BY THE ENGINEER. PRICE BID FOR THIS ITEM ALSO INCLUDES COST OF NEW SWAGING FOR CABLE BARRIER SYSTEM.
- (TP-59) TURNBUCKLES SHALL BE NO CLOSER THAN 1' TO A CABLE POST, IF IT INTERFERES WITH THE TENSIONING OPERATION OF THE SYSTEM. THE HEIGHTS FOR ALL ROWS OF CABLES SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS. THE BOTTOM CABLE MUST BE WITHIN THE TOLERANCE LIMITS RECOMMENDED BY THE MANUFACTURER.
- (TP-60) PRICE BID FOR THIS ITEM INCLUDES THE REMOVAL OR RELOCATION / RESET OF ANY EXISTING SIGNS OR DELINEATORS WITHIN THE MEDIAN WITH THE APPROVAL OF THE ENGINEER, AS WELL AS, RESHAPING THE DITCHES AS DIRECTED BY THE ENGINEER WITHIN THIS AREA PRIOR TO INSTALLATION OF THE CABLE BARRIER SYSTEM. RELOCATION OF ANY EXISTING SIGN OR DELINEATOR SHALL BE DETERMINED BY THE ENGINEER.
- (TP-62) INCLUDED IN THIS PAY ITEM WILL BE TWO (2) DAYS OF TRAINING FROM THE MANUFACTURER'S REPRESENTATIVE FOR MAINTAINING WIRE ROPE SAFETY FENCE SYSTEM. THE TRAINING SESSION(S) SHALL INCLUDE TRAINING TO PERTINENT ODOT AND LOCAL EMERGENCY PERSONNEL. PARTICIPANT SELECTION AND TRAINING LOCATION SHALL BE APPROVED BY THE ENGINEER.
- (TP-63) CABLE WILL BE MEASURED FROM BEGINNING OF WIRE ROPE CABLE TO END OF WIRE ROPE CABLE.
- (TP-64) ALL POSTS SHALL HAVE CAPS WHICH SHALL BE AFFIXED TO THE POST WITH A DURABLE LIQUID ADHESIVE, SUCH AS LIQUID NAILS. EVERY FIFTH POST SHALL BE DELINEATED IN EACH DIRECTION WITH RETROFLECTIVE SHEETING MEETING SPECIFICATION ASTM D-4956 TYPE VII, VIII, OR IX (MIN. 7 SQ. IN. YELLOW).
- (TP-65) IF THE SYSTEM POSTS FALL ON THE TOP OF A CROSS DRAIN BOX OR OTHER CONFLICTING UNDERGROUND STRUCTURE, SPECIAL POST DESIGN WILL BE REQUIRED. CABLE MANUFACTURER SHALL PROVIDE THE POST DESIGN TO THE ENGINEER FOR APPROVAL. ALL INSTALLATIONS MUST BE IN ACCORDANCE TO THE MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATION.
- (TP-66) INCLUDED IN THIS PAY ITEM IS ALL MISCELLANEOUS HARDWARE REQUIRED BY THE MANUFACTURER TO BE USED FOR INSTALLATION OF SOCKETED CABLE BARRIER SYSTEM. ALSO INCLUDED SHALL BE CABLE BARRIER POSTS, CAPS, PLASTIC HARDWARE, GROUND COVER, ETC.
- (TP-67) THE EXISTING CABLE BARRIER SYSTEM IS SAFENCE. CONTRACTOR SHALL CONTACT THE ENGINEER FOR EXISTING END ANCHOR AND FOOTINGS DESIGN AND CONSTRUCT THE CABLE BARRIER SYSTEM ACCORDING TO THE MANUFACTURER RECOMMENDED INSTALLATION. ALL INSTALLATION OF CABLE BARRIERS ON THIS SECTION SHALL BE SAFENCE.
- (TP-68) PRICE BID FOR THIS ITEM CONSISTS OF REMOVAL OF EXISTING CABLE BARRIER SYSTEM, ITS CONCRETE FOOTINGS, AND/OR ANCHOR UNITS. CONTRACTOR SHALL REMOVE, SPOOL, COLLECT, AND STORE ALL CABLE BARRIER HARDWARE. THE MATERIALS SHALL BE STORED AT A LOCATION DETERMINED BY THE ENGINEER TO BE USED ON THIS PROJECT. ALL CONCRETE FOOTINGS ARE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
- (TP-69) PRICE BID FOR THIS ITEM SHALL INCLUDE THE FILLING AND TAMPING OF HOLES LEFT AFTER THE REMOVAL OF POST FOOTINGS DURING CABLE BARRIER REMOVAL OPERATION. WORK SHALL BE PERFORMED IN A MANNER APPROVED BY THE ENGINEER.
- (TP-73) THIS IS AN ESTIMATED QUANTITY TO BE USED FOR POST FOOTINGS AND ANCHOR UNITS FOR THIS PROJECT. THIS ITEM SHALL ALSO INCLUDE REINFORCING STEEL BARS REQUIRED FOR POST FOOTINGS AND ANCHOR UNITS AS SHOWN BY THE MANUFACTURER'S DESIGN.
- (TP-74) THIS ITEM INCLUDES AN ESTIMATED QUANTITY OF CLASS AA CONCRETE BASED ON 12" DIAMETER AND 36" DEPTH MINIMUM FOOTING DESIGN. THIS ITEM INCLUDES A SOIL REPORT TO BE PROVIDED BY THE CONTRACTOR FROM THE EXISTING PROJECT NO. NHHP-272N(200)SS TO THE CABLE MANUFACTURER INDICATING ALL NECESSARY SOIL INFORMATION REQUIRED FOR THE MANUFACTURER TO DESIGN POST FOOTINGS AND ANCHOR UNITS FOR THIS PROJECT. THE FOUNDATION FOOTING DESIGN SHALL BE COMPLETED AND APPROVED BY THE ENGINEER, PRIOR TO EXCAVATION OF END ANCHOR AND POST FOOTINGS. ALL POSTS AND ANCHOR UNIT FOUNDATION DESIGNS RECOMMENDED BY THE MANUFACTURER FOR THIS PROJECT SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. THE POST FOOTINGS SHALL NOT BE LESS THAN 12" DIAMETER BY 36" DEEP. FOOTINGS SHALL NOT EXTEND ABOVE GROUND MORE THAN 1".

- (SP-1) INCLUDED IN THIS PAY ITEM IS THE COST OF EXCAVATION AND SCORING PAVED CONCRETE DITCH LINER
- (SP-2) THIS PAY ITEM IS FOR CONSTRUCTION OF A 4 FOOT WIDE BY 4 INCHES THICK PAVED DITCH LINER SURFACE FOR PROPOSED CABLE BARRIER OUTSIDE THE LIMITS OF CROSSOVER PAYMENT
- (SP-3) THIS QUANTITY IS ONLY FOR POST FOOTINGS INSTALLED OUTSIDE THE LIMITS OF CROSSOVER PAVEMENT

**CABLE BARRIER GENERAL CONSTRUCTION NOTES**

THE STATIONS AND LOCATIONS OF THE CABLE BARRIER SYSTEM AND END ANCHOR UNITS PLACEMENT, SHOWN ON THE PLAN AND DETAIL SHEETS, ARE APPROXIMATE. THE ENGINEER SHALL DETERMINE THE EXACT LOCATION OF THE CABLE BARRIER SYSTEM AND/OR END ANCHOR UNITS. THE CONTRACTOR SHALL VERIFY THESE LOCATIONS. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SURFACE DRAINAGE, SHALL VISUALLY INSPECT AND/OR MONITOR IT DURING RAINY OR WET WEATHER, AND TAKE NECESSARY STEPS TO ENSURE ALL AREAS IN THE MEDIAN ADEQUATELY DRAINS TO THE SATISFACTION OF THE ENGINEER.

REVISIONS		
REV. NO.	DESCRIPTION	DATE
1	NOTE & QUANTITIES	9/14/17

JP28884(04) CABLE BARRIER 0302				
PAY QUANTITIES				
ITEM	DESCRIPTION	UNIT	QTY	
509(A)	0319 CLASS AA CONCRETE (TP-73,74, SP-3)	CY	2.00	
509(D)	0325 CLASS C CONCRETE (SP-1,2)	CY	12.00	
619(B)	5190 REMOVAL OF CABLE BARRIER (TP-63,68,69)	LF	1,426.00	
628	5180 INSTALLATION OF CABLE BARRIER SYSTEM (TP-57,58,59,60,63,67)	LF	1,426.00	
628(B)	5125 HIGH-TENSION CABLE BARRIER (TL-4) (TP-59,60,62,63,64,65,66,67)	LF	1,426.00	
628(C)	5110 END ANCHORS (TP-62,66,67)	EA	4.00	
628(E)	5175 CABLE BARRIER TENSION METER (TP-51)	EA	1.00	

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DESIGN	DLA	11/16	TULSA COUNTY US-64 OVER 97TH W. AVE. OKLAHOMA DEPARTMENT OF TRANSPORTATION  <b>PAY QUANTITIES AND NOTES (CABLE)</b>  STATE JOB NO. 28884(04) SHEET NO. 5
DRAWN	SDK	11/16	
CHECKED	HRA	11/16	
APPROVED			
WALTER P MOORE			