

ENVIRONMENTAL MITIGATION NOTES: Δ

AMERICAN BURYING BEETLE NOTE:

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

BAT BRIDGE SEASONAL RESTRICTION NOTE:

THE GRAY BAT, INDIANA BAT, OZARK BIG-EARED BAT AND THE NORTHERN LONG-EARED BAT ARE LISTED BAT SPECIES THAT OCCUR WITHIN THE PROJECT'S ACTION AREA. IN ORDER TO AVOID AND MINIMIZE ADVERSE IMPACTS TO LISTED BAT SPECIES, BRIDGE DEMOLITION SHALL BE RESTRICTED TO BETWEEN NOVEMBER 16, AND MARCH 31, OUTSIDE OF THE ACTIVE SEASON. IF BRIDGE DEMOLITION DURING THE ACTIVE SEASON (BETWEEN APRIL 1, AND NOVEMBER 15) CANNOT BE AVOIDED, THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-521-2515 TO SCHEDULE A BAT BRIDGE INSPECTION, PRIOR TO ANY BRIDGE WORK. INSPECTION SURVEYS CAN ONLY BE CONDUCTED BETWEEN MAY 15, AND AUGUST 15. IF THE SURVEY FINDS LISTED BAT SPECIES WITHIN THE PROJECT'S ACTION AREA, BRIDGE DEMOLITION SHALL ONLY BE PERMITTED BETWEEN NOVEMBER 16, AND MARCH 31 (WHEN BATS ARE HIBERNATING IN CAVES).

BAT TREE REMOVAL SEASONAL RESTRICTION NOTE:

THE GRAY BAT, INDIANA BAT, OZARK BIG-EARED BAT AND NORTHERN LONG-EARED BAT ARE LISTED BAT SPECIES THAT OCCUR WITHIN THE PROJECT'S ACTION AREA. IN ORDER TO AVOID ADVERSE IMPACTS TO THE SPECIES, ALL TREE REMOVAL SHALL BE RESTRICTED TO BETWEEN NOVEMBER 16, AND MARCH 31 (OUTSIDE THE BATS' ACTIVE SEASON). IF TREE REMOVAL DURING THE ACTIVE SEASON (BETWEEN APRIL 1, AND NOVEMBER 15) CANNOT BE AVOIDED, THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-521-2515 TO SCHEDULE A BAT ACOUSTIC SURVEY, PRIOR TO ANY TREE REMOVAL. ACOUSTIC SURVEYS CAN ONLY BE CONDUCTED BETWEEN MAY 15 AND AUGUST 15. IF THE SURVEY FINDS LISTED BAT SPECIES WITHIN THE PROJECT'S ACTION AREA, TREE REMOVAL SHALL ONLY BE PERMITTED BETWEEN NOVEMBER 16, AND MARCH 31 (WHEN BATS ARE HIBERNATING IN CAVES).

BAT TREE REMOVAL LIMITS NOTE:

THE GRAY BAT, INDIANA BAT, OZARK BIG-EARED BAT AND NORTHERN LONG-EARED BAT ARE LISTED SPECIES THAT OCCUR WITHIN THE PROJECT'S ACTION AREA. IN ORDER TO AVOID AND MINIMIZE ADVERSE IMPACTS TO THESE SPECIES, THE REMOVAL OF TREES AND SHRUBS SHALL BE RESTRICTED TO AREAS WITHIN THE ACTUAL LIMITS OF CONSTRUCTION (TOE OF SLOPE/TOP OF CUT). THE RESIDENT ENGINEER SHALL INSTALL BRIGHT-COLORED FLAGGING/FENCING TO INDICATE WHICH TREES ARE NOT TO BE REMOVED AND ENSURE LIMITS OF TREE REMOVAL ARE VISIBLY AND CLEARLY DEFINED FOR THE CONTRACTOR. THE RESIDENT ENGINEER SHALL ALSO PROVIDE BEFORE AND AFTER PHOTO-DOCUMENTATION TO THE ODOT BIOLOGIST OF EXTENT OF TREE CLEARING WITHIN THE PROJECT AREA.

BAT WATER QUALITY NOTE:

THE GRAY BAT, INDIANA BAT, OZARK BIG-EARED BAT AND NORTHERN LONG-EARED BAT ARE LISTED SPECIES THAT OCCUR WITHIN THE PROJECT'S ACTION AREA. IN ORDER TO AVOID AND MINIMIZE ADVERSE IMPACTS TO LISTED BAT SPECIES, APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE IMPACTS FROM STORM WATER DISCHARGES, AS ESTABLISHED BY THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY, SHALL BE CONSCIENTIOUSLY IMPLEMENTED THROUGHOUT THE PROPOSED CONSTRUCTION PERIODS. THE EFFECTIVENESS OF EROSION CONTROLS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. HAZARDOUS MATERIALS, CHEMICALS, FUELS, LUBRICATING OILS, AND OTHER SUCH SUBSTANCES SHALL BE STORED AT LEAST 100 FEET FROM THE OHWMS. REFUELING OF CONSTRUCTION EQUIPMENT SHALL ALSO BE CONDUCTED AT LEAST 100 FEET FROM THE OHWMS. SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED AROUND STAGING AREAS TO PROHIBIT DISCHARGE OF MATERIALS FROM THESE SITES. CONSTRUCTION WASTE MATERIALS AND DEBRIS SHALL BE STOCKPILED AT LEAST 25 FEET OUTSIDE OF THE OHWMS, AND THESE MATERIALS SHALL BE REMOVED AND DISPOSED OF PROPERLY FOLLOWING COMPLETION OF THE PROJECT.

BAT LIGHTING NOTE:

THE GRAY BAT, INDIANA BAT, OZARK BIG-EARED BAT AND NORTHERN LONG-EARED BAT ARE LISTED SPECIES THAT OCCUR WITHIN THE PROJECT'S ACTION AREA. IN ORDER TO AVOID AND MINIMIZE ADVERSE IMPACTS TO LISTED BAT SPECIES, IF ANY PERMANENT LIGHTING IS INSTALLED OR REPLACED, DOWNWARD-FACING FULL CUT-OFF LENS LIGHTS SHALL BE INSTALLED AND DIRECTED AWAY FROM WOODED AREAS AND STREAMS.

KARST NOTE:

ALTHOUGH A SURVEY HAS BEEN COMPLETED TO IDENTIFY KARST FEATURES, SUCH AS CAVES, SINKHOLES, LOSING STREAMS AND SPRINGS, PRIOR TO THE PROJECT, THERE IS A POTENTIAL TO UNCOVER KARST FEATURES DURING CONSTRUCTION. KARST FEATURES ARE POTENTIAL HABITAT FOR FEDERALLY THREATENED AND ENDANGERED SPECIES, INCLUDING BATS. UNDISCOVERED KARST FEATURES MAY OCCUR ON OR NEAR PROJECT SITES, EVEN IN PREVIOUSLY DEVELOPED AREAS. IF KARST FEATURES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL ESTABLISH A BUFFER AREA OF 300 FEET AROUND THE NEWLY DISCOVERED FEATURE, AND THE RESIDENT ENGINEER SHALL CONTACT THE ODOT BIOLOGIST AT 405-521-2515. THE ODOT BIOLOGIST SHALL CONTACT THE US FISH AND WILDLIFE SERVICES (USFWS) TO FURTHER EVALUATE THE KARST FEATURE. NO FILL MATERIAL SHALL BE PLACED INTO THE KARST FEATURE OPENING, AND ALL PARKING, MAINTENANCE, STAGING, FUELING, STORM WATER MANAGEMENT ACTIVITIES, GROUND-DISTURBING, TREE-CLEARING, OR ANY OTHER CONSTRUCTION ACTIVITY SHALL BE ALLOWED WITHIN THE 300-FOOT BUFFER, UNTIL EVALUATION BY USFWS IS COMPLETE. IF KARST FEATURES ARE DETERMINED TO BE HABITAT FOR FEDERALLY-LISTED OR SENSITIVE SPECIES, A FORMAL CONSULTATION WITH USFWS SHALL BE REQUIRED BEFORE THE CONSTRUCTION CAN RESUME. THIS CONSULTATION MAY TAKE UP TO 180 DAYS AFTER THE INITIAL EVALUATION OF THE KARST FEATURES AND THE CONTRACTOR SHALL NOT BE COMPENSATED FOR ANY DELAYS DURING THAT TIME. IN SOME CASES, MODIFICATION TO THE PROJECT MAY BE NECESSARY THAT WOULD RESULT IN A CHANGE ORDER.

MIGRATORY BIRD NOTE:

MIGRATORY BIRDS ARE PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. MANY BIRDS COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR MOST MIGRATORY BIRD SPECIES EXTENDS FROM MARCH 1 TO AUGUST 31. MIGRATORY BIRD NESTING USE OF THE NS-475 BALLARD CREEK BRIDGE (NBI: 10065) WAS OBSERVED. PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION OF THE EXISTING BRIDGE SHALL BE CONDUCTED BETWEEN SEPTEMBER 1, AND FEBRUARY 28, WHEN MIGRATORY BIRD NESTS ARE NOT OCCUPIED. IF PAINTING, REPAIR, RETROFIT, REHABILITATION OR DEMOLITION CANNOT BE COMPLETED BETWEEN SEPTEMBER 1 AND FEBRUARY 28, THE BRIDGE SHALL BE PROTECTED FROM NEW NEST ESTABLISHMENT PRIOR TO MARCH 1, BY MEANS THAT DO NOT RESULT IN BIRD DEATH OR INJURY. OPTIONS INCLUDE THE EXCLUSION OF ADULT BIRDS FROM SUITABLE NEST SITES ON OR WITHIN A STRUCTURE BY THE PLACEMENT OF WEATHER-RESISTANT POLYPROPYLENE NETTING WITH 0.25-INCH OR SMALLER OPENINGS, PRIOR TO MARCH 1. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

CULTURAL RESOURCES PLAN NOTE:

LOCATIONS OUTSIDE THE PROJECT AREA IN THE FOLLOWING AREA MUST NOT BE UTILIZED FOR BORROW, EQUIPMENT STAGING, HAUL ROADS, SPOIL DUMPS OR ANY OFF-SITE PROJECT-RELATED ACTIVITY.

T18N R26E:

SECTION 16: SW1/4 SW1/4 SW1/4
SECTION 20: S1/2 SE1/4
SECTION 29: NE1/4 SW1/4 NE1/4
SE1/4 SE1/4 SW1/4
SECTION 32: SE1/4 NW1/4 NE1/4
NE1/4 SW1/4 NE1/4

- (1) ESTIMATED AT 110 LBS./CU. FT.
- (2) ESTIMATED AT 105 LBS./CU. FT.
- (3) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF A 5-10' CONCRETE SLAB SPAN BRIDGE. COST OF REMOVAL SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "REMOVAL OF EXISTING BRIDGE STRUCTURE." REMOVAL AND DISPOSAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IN ACCORDANCE WITH SECTION 619.04 (b)2 OF THE SPECIFICATIONS AND IN A MANNER APPROVED BY THE ENGINEER.
- (4) PRICE BID TO INCLUDE THE COST OF 4 TYPE 1 CODE 3 DELINEATORS (AMBER COLOR).

- (5) CONSTRUCTION TRAFFIC CONTROL SHALL INCLUDE ALL BARRICADES AND SIGNS REQUIRED ON EACH END OF THE CONSTRUCTION AREA AND OTHER AREAS DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNS, BARRICADES, LIGHTS, ETC., ACCORDING TO THE STANDARDS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND AS SHOWN ON THE STANDARD DRAWINGS. COST OF ALL NECESSARY CONSTRUCTION SIGNING WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "CONSTRUCTION TRAFFIC CONTROL."
- (6) IN ADDITION TO THE RESPONSIBILITIES SHOWN IN THE SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND/OR REESTABLISHING THE SURVEY CONTROL POINTS SHOWN ON THE PLANS, STAKING THE CENTERLINE OF CONSTRUCTION AND REESTABLISHING RIGHT-OF-WAY STAKES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING BENCH MARKS SHOWN ON THE PLANS AND FOR ESTABLISHING NEW BENCH MARKS AS NEEDED TO CONSTRUCT THE PROJECT.
- (7) INCLUDES COST TO BREAK UP EXISTING ASPHALT PAVEMENT TO A SIZE OF NOT MORE THAN THREE INCHES TO BE INCORPORATED INTO ROADWAY EMBANKMENT.
- (8) INCLUDES COST OF SALVAGING AND PLACING TOPSOIL APPROXIMATELY 28 FEET WIDE TAPERING TO 100 FEET WIDE BY 5 INCHES DEEP FROM STA. 20+00 TO STA. 35+40 AND 18-46-0 FERTILIZER (ESTIMATED AT 150 LBS PER ACRE). SEE TOPSOIL NOTE, SHEET NO. 0002.
- (9) PRICE BID TO INCLUDE COST OF TEMPORARY SEDIMENT REMOVAL.
- (10) INCLUDES 105 TONS FOR RURAL DRIVES AND 461 TONS FOR SHOOFLY (INCLUDES TEMPORARY DRIVE).
- (11) INCLUDES 61 TONS FOR FOR GUARD RAIL WIDENING AND 57 TONS FOR DRIVES.
- Δ (12) PRICE BID TO INCLUDE EXCAVATION FOR PLACEMENT IN ACCORDANCE WITH SPECIAL DETAIL, SHEET NO. 0002. (ESTIMATED AT 0.67 C.Y./TON)
- (13) INCLUDES 2,600 L.F. YELLOW FOR DOUBLE CENTER STRIPE AND 2,600 L.F. WHITE FOR EDGE STRIPES.
- (14) ESTIMATED AT 140 LBS/C.F.
- (15) THE CONTRACTOR MUST PROVIDE TESTING RESULTS FROM A CERTIFIED LAB THAT THE BORROW SITE IS FREE FROM DISPERSIVE CLAYS AS REQUIRED IN SECTION 202.02(A) IN THE 2009 SPEC. BOOK BEFORE ANY MATERIAL CAN BE PLACED ON THE PROJECT.
- (16) ESTABLISHMENT AND RE-ESTABLISHMENT OF HORIZONTAL AND VERTICAL CONTROL, INCLUDING THE SETTING AND RE-SETTING OF BENCHMARKS AND THE STAKING AND RE-STAKING OF RIGHT-OF-WAY, WILL BE INCLUDED IN THE PRICE BID FOR STAKING.
- (17) QUANTITY BASED ON 4.25 ACRES AT TWO APPLICATIONS.
- (18) TO BE USED IF ROCK ENCOUNTERED IN CUT SECTIONS IS NOT RIPPABLE ACCORDING TO SECTION 202.03 OF THE SPECIFICATIONS, OR AT THE DISCRETION OF THE ENGINEER. CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT AND VERIFY SITE CONDITIONS BEFORE BIDDING.
- (19) INCLUDES 500 C.Y. TO ACCOUNT FOR REPAIR OF OVER EXCAVATION WHICH MAY OCCURE IF ROCK IS ENCOUNTERED.

PAY QUANTITY NOTES

- (R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY ONLY. SEE SECTION 109.01B OF THE STANDARD SPECIFICATIONS.
- (R-7) FOR 230(A) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 LBS. PER 1,000 SQUARE YARDS.
- (R-8) FOR 230(A) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 80 GALLONS PER SQUARE YARD.
- (R-11) THE QUANTITY ESTIMATED FOR TEMPORARY EROSION AND SEDIMENT CONTROL IS 4.25 ACRES.
- Δ (R-30) PRICE BID TO INCLUDE COST OF 570 GALLONS OF TACK COAT MEETING THE REQUIREMENTS OF SECTION 407 OF THE STANDARD SPECIFICATIONS.
- Δ (R-31) PRICE BID TO INCLUDE COST OF 1,210 GALLONS OF PRIME COAT MEETING THE REQUIREMENTS OF SECTION 408 OF THE STANDARD SPECIFICATIONS AND ESTIMATED AS 0.35 GAL. PER SQ. YD. ON TOP OF COMPLETED SUBGRADE AND 0.25 GAL PER SQ. YD. ON TOP OF AGGREGATE BASE. THE ACTUAL CUTBACK PRIME COAT REQUIRED FOR PLACEMENT OPERATIONS WILL BE DETERMINED BY THE CONTRACTOR AND SHALL CONSIDER THE RESIDUE FROM DISTILLATION PERCENTAGE SHOWN IN SECTION 708.03 OF THE STANDARD SPECIFICATIONS.
- (R-32) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.
- (R-41) QUANTITY INCLUDES AN ESTIMATED 10 C.Y. TO BE USED AS DIRECTED BY THE ENGINEER.
- (R-48) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES AND OTHER STRUCTURES WITHIN THE RIGHT-OF-WAY.
- (R-49) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- B1 THE APPROACH SLABS CONTAIN AN ESTIMATED TOTAL OF 41.5 C.Y. OF CLASS AA CONCRETE AND 8,900 LB. OF REINFORCING STEEL. INCLUDE ALL COSTS FOR CONSTRUCTING THE APPROACH SLABS, INCLUDING CONCRETE, REINFORCING STEEL, BACKER ROD, RAPID CURE JOINT SEALANT, POLYETHYLENE, POLYSTYRENE, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "APPROACH SLAB".
- B2 PAY ITEM "(PL) PILOT HOLES" CONSISTS OF DRILLING 16 PILOT HOLES, 19 FT. DEEP, FOR ABUTMENT BRIDGE SEATS. SEE STAKING DIAGRAM FOR DETAILS OF PILOT HOLES. ALL COST INCLUDING LABOR, EQUIPMENT, CLASS C CONCRETE, GRANULAR BACKFILL, CASING AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "(PL) PILOT HOLES."
- B3 INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE PERFORATED PIPE AND PIPE UNDERDRAIN COVER MATERIAL (BOTH FILTER SAND AND COARSE), INCLUDING ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK, IN THE CONTRACT UNIT PRICE OF "6" PERFORATED PIPE UNDERDRAIN ROUND". INSTALLATION SHALL BE AS SHOWN IN THE PLANS AND ON STD. PUD-3.
- B4 EXTENT, LOCATION AND DEPTH OF NON-PERFORATED PIPE UNDERDRAIN MAY BE ADJUSTED BY THE ENGINEER DURING CONSTRUCTION. INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE NON-PERFORATED PIPE, AND STANDARD BEDDING MATERIAL, INCLUDING ALL TRENCH EXCAVATION, MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN THE CONTRACT UNIT PRICE OF "6" NON-PERF. PIPE UNDERDRAIN RND." INSTALLATION SHALL BE AS SHOWN IN THE PLANS AND ON STD. PUD-3.

	REVISIONS	DATE
Δ	ENVIRONMENTAL NOTES REVISED	10/11/17
Δ	SHEET NUMBER UPDATED	10/11/17
Δ	TACK COAT QUANTITY UPDATED	10/11/17
Δ	PRIME COAT QUANTITY UPDATED	10/11/17

GENERAL NOTES

SPECIFICATIONS: COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AS APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION JANUARY 4, 2010, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

AIR VENTS: 2" PVC PIPE SHALL BE PLACED VERTICALLY THROUGH THE DECK BETWEEN THE BEAMS AS SHOWN IN THE DETAIL SHOWN ON SHEET NO. B001, GENERAL PLAN AND ELEVATION.

ALL TREES, BRUSH AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

CREEK AND RIVER BANKS SHALL BE KEPT IN THEIR NATURAL STATE AS MUCH AS POSSIBLE. THE CONTRACTOR SHALL NOT UNDULY STRIP EXISTING PROTECTIVE VEGETATION IN THE VICINITY OF THE STREAM BANKS AND SHALL SO CONDUCT HIS OPERATIONS AS NOT TO DAMAGE THE BANKS WITH HIS EQUIPMENT. NO BANK UPSTREAM OR DOWNSTREAM SHALL BE EXCAVATED EXCEPT AS APPROVED FOR AND AS SHOWN ON THE PLANS. NO WORK ROADS SHALL BE CONSTRUCTED UPSTREAM WHERE IT IS NECESSARY TO CUT THE STREAM OR RIVER BANKS EXCEPT BY THE APPROVAL OF THE ENGINEER. BANK CUTS FOR WORK ROADS SHALL BE LOCATED DOWNSTREAM AND REPLACED BY THE CONTRACTOR TO THEIR ORIGINAL SHAPE AND DENSITY. UNNECESSARY STRIPPING OF VEGETATION GROWTH ALONG BANKS IN THE CONSTRUCTION AREA IS NOT PERMITTED.

THE FOLLOWING ITEMS WILL BE THE RESPONSIBILITY OF THE COUNTY AND NOT A PART OF THIS CONTRACT: (1) ACQUISITION AND STAKING OF RIGHT-OF-WAY; (2) UTILITY RELOCATION; (3) REMOVAL AND RESETTING OF MAIL BOXES; (4) DETOUR SIGNING, IF REQUIRED; (5) TEMPORARY AND PERMANENT FENCING, (6) REMOVAL AND RESETTING OF CATTLE GUARDS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNING.

ROADWAY SHALL REMAIN OPEN TO THROUGH TRAFFIC DURING THE CONSTRUCTION PERIOD. CONTRACTOR SHALL PROVIDE ACCESS TO ADJACENT LAND OWNERS AND TENANTS.

(CAUTION) THE LOCATION AND DEPTH OF ALL UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES 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 UTILITIES. IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE1" 1-800-522-6543 OR 811.

THE USE OF OFFROAD OR OVERWEIGHT HAUL TRUCKS SHALL NOT BE ALLOWED DURING CONSTRUCTION OF THIS PROJECT.

THE CONTRACTOR SHALL NOTIFY THE ADAIR COUNTY BOARD OF COMMISSIONERS, CED 2 OFFICE, AND ODOT DIVISION 1, IN WRITING, FOURTEEN CALENDAR DAYS PRIOR TO BEGINNING CONSTRUCTION.

PILE DRIVING AND CAPACITY -

THE FACTORED REACTION FOR EACH HP 10x42 PILE AT THE ABUTMENT IS 73.7 TONS ON BRIDGE "A".

THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES.

$$\text{AXIAL LOAD RESISTANCE} = \phi [(0.875 \sqrt{E} \log_{10}(10N)) - 50]$$

WHERE:

ϕ = RESISTANCE FACTOR OF 0.4
 E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.
 N = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:

- THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY AND SINGLE ACTING HAMMERS ONLY).
- THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED.
- THE PENETRATION IS QUICK AND UNIFORM.
- THERE IS NO APPRECIABLE REBOUND OF THE HAMMER AND A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD, AS DETERMINED BY THE ENGINEER. IF WATER JETS ARE USED IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.