

7/25/2016

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PAECN650-TUL\CV\255231000_0001_LJS169BR-dg\20_DESIGN\40_CAD_Hickory\DRNNS\BRIDGE_A\24750(04)_S.Gen.Notes.Dwg

JP NO. 24750(04)		NBI NO. 30985	
BRIDGE "A" PAY ITEMS			
0200 BRIDGE "A"			
CONSTRUCT NEW CONVENTIONAL 100'-100'-75" TYPE IV P.C. BEAM SPANS WITH F-SHAPED PARAPET WITH 44'-0" CLEAR ROADWAY, SKEW 30° RF AT C.L. STA. 712+37.21 CRL US 169			
ITEM NO.	CODE NO.	DESCRIPTION	NOTES UNIT TOTAL
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	(1) CY 255
501(G)	6309	CLSM BACKFILL	(1) CY 351.3
503(A)	1313	PRESTRESSED CONCRETE BEAMS (TYPE IV)	(1) LF 1370.0
504(A)	1304	APPROACH SLAB	(1,5,6) SY 443.2
504(B)	1305	SAW-CUT GROOVING	(1) SY 1791.1
504(C)	6250	SEALED EXPANSION JOINT	(1) LF 53.67
504(E)	6190	42" F-SHAPED PARAPET	(1) LF 732.8
506(A)	1322	STRUCTURAL STEEL	(1) LB 1670
507(A)	6170	STAINLESS STEEL FIXED BEARING ASSEMBLY	EA 20
507(B)	6174	STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA 10
509	6152	SPECIAL CONCRETE FINISH	(1,7) SY 104
509(A)	1326	CLASS AA CONCRETE	(1,2) CY 375.5
509(B)	1328	CLASS A CONCRETE	(1) CY 313.4
511(A)	1332	REINFORCING STEEL	(1) LB 2330
511(B)	6010	EPOXY COATED REINFORCING STEEL	(1) LB 158070
513(C)	6020	CLASS C BRIDGE DECK REPAIR	(9) SY 100
514(A)	6010	PILES, FURNISHED (HP10X42)	LF 132
514(A)	6011	PILES, FURNISHED (HP12X53)	LF 678
514(B)	6292	PILES, DRIVEN (HP10X42)	(10) LF 132
514(B)	6294	PILES, DRIVEN (HP12X53)	(10) LF 678
514(G)	6310	METAL PILE SHOES	EA 28
514(L)	6220	PILE SPLICE, H-PILE (NON-BIDDABLE)	EA 1
515(A)	6013	WATER REPELLENT (VISUALLY INSPECTED)	(1) SY 1608
516(A)	6096	DRILLED SHAFTS 60" DIAMETER	(3,10) LF 155
516(C)	6200	CROSSHOLE SONIC LOGGING	(8) EA 1
523(A)	6550	SEALER CRACK PREPARATION	(1) LF 54
523(B)	6560	SEALER RESIN	(1) GAL 0.4
601(B)	1353	TYPE I-A PLAIN RIPRAP	TON 1760
601(C)	1355	TYPE I-A FILTER BLANKET	TON 300
601(I)	6312	FILTER FABRIC (RIPRAP)	SY 1236
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND	(1) LF 115
613(I)	6207	6" NON-PERF. PIPE UNDERDRAIN RND.	LF 40
619(B)	2500	REMOVAL OF BRIDGE ITEMS	LSUM 1

BRIDGE PAY ITEM NOTES

- (1) PAY PLAN QUANTITY PER SECTION 109.01(B) OF THE STANDARD SPECIFICATIONS.
- (2) PLAN QUANTITY FOR CLASS AA CONCRETE INCLUDES 22.8 C.Y. FOR HAUNCHES OVER GIRDERS. THIS QUANTITY IS CALCULATED ASSUMING AN AVERAGE HAUNCH OF 3 5/16" FOR THE FULL LENGTH OF THE GIRDERS AT SPAN 1 AND SPAN 2, AND A 3" HAUNCH AT SPAN 3. SEE TYPICAL SECTION FOR HAUNCH DIMENSIONS AT BEARINGS, THE FINAL HAUNCH HEIGHTS WILL BE SET AFTER ERECTION OF GIRDERS AND DIAPHRAGMS TO PROVIDE FOR DEAD LOAD DEFLECTION AND GRADE ADJUSTMENT.
- (3) CROSSHOLE SONIC LOGGING ACCESS TUBES SHALL BE PLACED IN ALL DRILLED SHAFTS. INCLUDE ALL COSTS FOR CROSSHOLE SONIC LOGGING ACCESS TUBES IN THE PRICE BID FOR L.F. OF "DRILLED SHAFTS 60" DIAMETER".
- (4) PRICE BID SHALL INCLUDE THE WORK DESCRIBED IN SECTION 642.04(B) OF THE 2009 ODOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- (5) THERE IS AN ESTIMATED 160.1 C.Y. OF CLASS AA CONCRETE FOR BOTH APPROACH SLABS.
- (6) THERE IS AN ESTIMATED 29,830 LBS. OF EPOXY COATED REINFORCING STEEL FOR BOTH APPROACH SLABS.
- (7) ITEM "SPECIAL CONCRETE FINISH" IS A LIQUID APPLIED URETHANE COATING (CIM 1000) TO BE APPLIED TO THE PIER CAP AS DETAILED IN THE PLANS.
- (8) A MINIMUM OF 1 DRILLED SHAFTS PER BRIDGE SHALL BE TESTED AND LOGGED WITH CROSSHOLE SONIC LOGGING. ADDITIONAL TESTING MAY BE REQUIRED, AT THE DISCRETION OF THE ENGINEER.
- (9) TO BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
- (10) HARD ROCK WAS ENCOUNTERED DURING GEOTECHNICAL INVESTIGATION. SEE STAKING DIAGRAM.

0600 STAKING		STAKING PAY ITEMS	
ITEM NO.	CODE NO.	DESCRIPTION	NOTES UNIT TOTAL
642(B)	0096	CONSTRUCTION STAKING LEVEL 11	(4) LSUM 1

0640 CONSTRUCTION		CONSTRUCTION PAY ITEMS	
ITEM NO.	CODE NO.	DESCRIPTION	NOTES UNIT TOTAL
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM 1
640(A)	1426	FIELD OFFICE	EA 1
641	1552	MOBILIZATION	LSUM 1

BRIDGE GENERAL NOTES

SPECIFICATIONS:
COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

EXISTING PLANS:
PLANS OF THE EXISTING BRIDGES MAY BE OBTAINED FROM THE ODOT REPRODUCTION DEPARTMENT, 200 N.E. 21ST ST., OKLAHOMA CITY, OK. 73105.

PILE DRIVING EQUIPMENT:
USE A PILE DRIVING HAMMER OF THE SIZE AND TYPE CAPABLE OF CONSISTENTLY DELIVERING THE EFFECTIVE DYNAMIC ENERGY SUFFICIENT TO DRIVE THE PILES TO THE REQUIRED TIP ELEVATION AND TO ACHIEVE THE AXIAL LOAD RESISTANCES WITHOUT EXCEEDING THE LIMITATIONS SET ON THE ALLOWABLE DRIVING STRESSES IN ACCORDANCE WITH SECTION 514.03(A)2.

ABUTMENT PILING CAPACITY:
THE MAXIMUM FACTORED LOAD FOR EACH HP12X53 PILE AT ABUTMENT 1 IS 75.62 TONS AND ABUTMENT 2 IS 78.06 TONS.
THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN FOUNDATION PILES.
AXIAL LOAD RESISTANCE = $\phi [(0.875 \sqrt{E} \text{ LOG}_{10}(10N)) - 50]$
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:
 1) THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY & SINGLE ACTING HAMMERS ONLY).
 2) THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED.
 3) THE PENETRATION IS QUICK AND UNIFORM.
 4) THERE IS NO APPRECIABLE REBOUND OF THE HAMMER.
 5) 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 SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

STAY-IN-PLACE FORMS:
THE CONTRACTOR MAY NOT USE STAY-IN-PLACE STEEL DECK FORMS.

PERFORATED PIPE UNDERDRAIN ROUND:
ITEM "6" PERFORATED PIPE UNDERDRAIN - ROUND" INCLUDES ALL COSTS OF PERFORATED PIPE AND OF UNDERDRAIN COVER MATERIAL, BOTH COARSE AND FINE, FOR EACH ABUTMENT. THE INSTALLATION OF THE PERFORATED PIPE AND PIPE UNDERDRAIN COVER MATERIAL SHALL BE AS SHOWN ON THE PLANS AND ON STANDARD PUD-3.
ALL COSTS OF THE PERFORATED PIPE UNDERDRAIN INSTALLATION INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "6" PERFORATED PIPE UNDERDRAIN ROUND".

NON-PERFORATED PIPE UNDERDRAIN ROUND:
ITEM "6" NON-PERF. PIPE UNDERDRAIN - RND." INCLUDES ALL COSTS OF NON-PERFORATED PIPE, TRENCH EXCAVATION AND STANDARD BEDDING MATERIAL FOR EACH ABUTMENT. THE INSTALLATION OF THE NON-PERFORATED PIPE SHALL BE AS SHOWN ON THE PLANS AND ON STANDARD PUD-3.
ALL COSTS OF THE NON-PERFORATED PIPE UNDERDRAIN INSTALLATION INCLUDING BACKFILLING, LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF "6" NON-PERF. PIPE UNDERDRAIN RND.".

STAINLESS STEEL FIXED BEARING ASSEMBLY:
PROVIDE AND INSTALL FIXED BEARING ASSEMBLIES OF THE SIZE AND SHAPE DETAILED IN THE PLANS AT THE ABUTMENTS AND PIER NO. 2. THERE IS AN ESTIMATED TOTAL WEIGHT OF 3,810 LBS. OF STRUCTURAL STEEL FOR 20 FIXED BEARINGS. INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE ANCHOR PLATES AND ANCHOR BOLTS, INCLUDING ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS IN THE PRICE BID PER EACH OF "STAINLESS STEEL FIXED BEARING ASSEMBLY".

MANDATORY TIE:
THE COST OF THE FOLLOWING PAY ITEMS FOR JP 24750(04), NOWATA COUNTY SHALL INCLUDE THOSE PAY ITEMS FOR JP 27092(04), NOWATA COUNTY:
 1. 642(B) CONSTRUCTION STAKING LEVEL 11
 2. 640(A) FIELD OFFICE
 3. 641 MOBILIZATION

DOT DIVISION	STATE	J.P.P. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	OKLA	24750(04)		9	127

DESCRIPTION	REVISIONS	DATE
▲ UPDATED MANDATORY TIE		07/25/16

BRIDGE GENERAL NOTES CONT'D.

STAINLESS STEEL EXPANSION BEARING ASSEMBLY:
PROVIDE AND INSTALL EXPANSION BEARING ASSEMBLIES OF THE SIZE AND SHAPE DETAILED IN THE PLANS. THERE IS AN ESTIMATED TOTAL WEIGHT OF 1,930 LBS. OF STRUCTURAL STEEL FOR 10 EXPANSION BEARINGS.
INCLUDE ALL COSTS ASSOCIATED WITH PROVIDING AND INSTALLING THE ANCHOR PLATES, CONTACT ANGLES, ANCHOR BOLTS, NUTS AND WASHERS, INCLUDING ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS IN THE PRICE BID PER EACH OF "STAINLESS STEEL EXPANSION BEARING ASSEMBLY".

WATER REPELLENT:
A PENETRATING WATER REPELLENT SURFACE TREATMENT SHALL BE APPLIED TO THE CONCRETE SURFACES OF THE BRIDGE AS SHOWN ON THE PLANS. PIER CAP SHALL BE TREATED ON ALL VERTICAL FACES EXCEPT WHERE SPECIAL CONCRETE FINISH IS APPLIED.

APPROACH SLAB:
CLASS AA CONCRETE SHALL BE USED IN THE APPROACH SLABS. THE QUANTITY GIVEN IS BASED ON THE ACTUAL SQUARE YARDS OF THE APPROACH SLABS. THE CONTRACT UNIT PRICE FOR APPROACH SLAB SHALL BE FULL COMPENSATION FOR CONCRETE, REINFORCING STEEL (INCLUDING FS2 BARS IN PARAPET), BACKER RODS, RAPID CURE JOINT SEALANT, POLYSTYRENE, LABOR, EQUIPMENT, AND INCIDENTALS NEEDED TO COMPLETE THE WORK AS SPECIFIED IN THE PLANS.

CONCRETE INTERMEDIATE DIAPHRAGMS:
ONCE THE CONCRETE HAS BEEN PLACED FOR THE INTERMEDIATE DIAPHRAGMS, WAIT A MINIMUM OF 24 HOURS BEFORE REMOVING THE SIDE FORMS. DO NOT REMOVE THE BOTTOM FORM FOR A MINIMUM OF THREE (3) DAYS, OR AS DIRECTED OTHERWISE BY THE ENGINEER. THIS TIME CAN BE SHORTENED IF THE CONCRETE HAS ATTAINED 80% OF THE SPECIFIED COMPRESSIVE STRENGTH.

CLSM BACKFILL:
THE CLSM BACKFILL MUST BE PLACED IN TWO LIFTS OF EQUAL HEIGHTS AT BOTH ABUTMENT 1 AND ABUTMENT 2. SEE STANDARD SPECIFICATIONS REGARDING CURING CLSM.

REMOVAL OF EXISTING BRIDGE STRUCTURES:
ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF A 80'-100'-80" PL GIRDER SPAN BRIDGE WITH A 30' CLEAR ROADWAY, CURBS, AND CONCRETE AND METAL TRAFFIC RAIL, 30° SKEW AT C.L. US 169, STA. 712+72.00, INCLUDING THE ORIGINAL ABUTMENTS AND PIERS. THE CONTRACTOR SHALL FULLY INFORM HIMSELF OF THE NATURE OF THIS REMOVAL TO ALLOW FOR AN ACCURATE ESTIMATE.
REMOVAL OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH SECTION 619 OF THE STANDARD SPECIFICATION AND IN A MANNER APPROVED BY THE ENGINEER.
THE EXISTING STRUCTURAL STEEL IS PAINTED WITH LEAD-BASED PAINT. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS AND FOLLOW ALL NECESSARY REGULATIONS IN HANDLING AND TRANSPORTING ANY STRUCTURAL STEEL CONTAINING LEAD-BASED PAINT.
CONTRACTOR SHALL NOT ALLOW CONCRETE OR STEEL RUBBLE TO FALL INTO, OR REMAIN IN THE CREEK. EXISTING PIERS AND THEIR SPREAD FOOTINGS SHALL BE REMOVED IN THEIR ENTIRETY.
THE BRIDGE BEAMS SHALL BECOME THE PROPERTY OF NOWATA COUNTY. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE BEAMS AND WILL STORE THE BEAMS ON THE PROJECT FOR THE COUNTY TO PICK UP. ONCE THE BEAMS ARE STORED THE CONTRACTOR SHALL GIVE WRITTEN NOTIFICATION TO THE COUNTY TO REMOVE THE BEAMS FROM THE PROJECT. THE COUNTY WILL BE RESPONSIBLE FOR LOADING AND TRANSPORTING THE BEAMS. THE COUNTY WILL HAVE THIRTY (30) DAYS FROM THE TIME WRITTEN NOTIFICATION IS GIVEN TO REMOVE THE BEAMS. AFTER 30 DAYS, ANY BEAMS NOT REMOVED FROM THE PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR. THE BEARINGS SHALL REMAIN THE PROPERTY OF ODOT AND WILL BE STOCKPILED WITHIN THE R/W AS DIRECTED BY THE ENGINEER. AFTER 30 DAYS ANY BEARINGS NOT REMOVED FROM THE PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR. ITEMS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO ODOT OR THE COUNTY. ALL OTHER MATERIALS OTHER THAN THE BEAMS AND BEARINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.
ALL COSTS ASSOCIATED WITH THE REMOVAL, TRANSIT, AND DISPOSAL OF THE EXISTING BRIDGE STRUCTURE AS DESCRIBED ABOVE AND AS DIRECTED BY THE ENGINEER, INCLUDING LABOR, EQUIPMENT, AND INCIDENTALS, SHALL BE INCLUDED IN THE PRICE BID PER LUMP SUM OF "REMOVAL OF BRIDGE ITEMS".

Design	AEJ	6/16	US 169 OVER HICKORY CREEK BRIDGE A BRIDGE PAY ITEMS AND GENERAL NOTES Job Piece No. 24750(04) Sheet No. 9
Drawn	RAH	6/16	
Checked	AEJ	6/16	
Approved	SAK	6/16	
Squad	BENHAM		