

 BUILDINGS

 OILWELL

 COLWELL

 DRAINAGE STRUCTURES - IN PLACE

 DRAINAGE STRUCTURES - NEW

 PRES.R.W.

 RIGHT-OF-WAY LINES - EXISTING

 R.W.

 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.

\\App-mdl01-345\ics4pdf\3460\71459\_1\0001-31699(04)-TITLE.dgn

TRAFFIC DESIGN

ROADWAY DESIGN

NEER : A. ENGINEER VISOR : A. TECHNICIAN

JJECT ENGIN

BRIDGE DESIGN DUAD SUPERVISOR: D. HARJO DUAD MEMBERS: V. TRAN, GBAPTISTE,

SOL

Ц

Z

Ŕ

ENGINEER TECHNICIA

> EER : ISOR

| OKLAHOMA DEPARTMENT OF TRANSPORTATION |       |               |                |              |                 |
|---------------------------------------|-------|---------------|----------------|--------------|-----------------|
| FED. ROAD<br>DIST. NO.                | STATE | JOB PIECE NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
| 6                                     | OKLA. |               |                |              |                 |
| DESCRIPTIO                            | N     | REVISIONS     |                |              | DATE            |
|                                       |       |               |                |              |                 |

# INDEX OF SHEETS

# SHEET NUMBER SHEET DESCRIPTION

| 0001 | TITLE SHEET  |
|------|--|
| 4B01 | GENERAL NOTES AND SUMMARY OF PAY QUANTITIES (BRIDGE)               |
| ΔΤ01 | SUMMARY OF PAY QUANTITIES AND NOTES (TRAFFIC CONTROL)              |
| B001 | GENERAL PLAN AND ELEVATION (BRIDGE "A")                            |
| 3002 | REPAIR BRIDGE ITEM (TYPE A) (EXPANSION JOINT REPLACEMENT AT PIERS) |
|      | (SHEET 1 OF 2)   |
| 3003 | REPAIR BRIDGE ITEM (TYPE A) (EXPANSION JOINT REPLACEMENT AT PIERS) |
|      | (SHEET 2 OF 2)   |
| 3004 | PIER NO. 1 REPAIR  |
| 3005 | PIER NO. 2 REPAIR  |
| 3006 | PIER NO. 3 REPAIR  |
| 3007 | PIER NOS. 1, 2, & 3 FIBER WRAP DETAILS                             |
| 3008 | BEAM END REPAIR LOCATIONS  |
| 3009 | BEAM END REPAIR DETAILS  |
| T001 | TRAFFIC CONTROL DETAIL   |
|      |  |

# STANDARDS TO BE INCLUDED

| BRIDGE    | TRAFFIC    |
|-----------|------------|
| J-DTL-01E | TCS1-1-01  |
|           | TCS2-1-00  |
|           | TCS3-1-01  |
|           | TCS4-1-01  |
|           | TCS5-1-00  |
|           | TCS6-1-02  |
|           | TCS7-1-02  |
|           | TCS9-1-01  |
|           | TCS11-1-01 |
|           | TCS14-1-00 |
|           | TCS20-1-00 |

TCS21-1-02

| OKLAHOMA DEPARTMEN<br>BRIDGE DES<br>DOOT<br>ASGHAR MOL<br>OKLA, RE<br>DATE6/15/201 | RED BY:<br>IT OF TRANSPORTATION<br>IGN DIVISION<br>LA-ESMAIL, P.E.<br>G. NO. 17544<br>6 |
|--|---|
| OKLAHOMA<br>DEPARTMENT OF TRANSPORTATION   | DEPARTMENT OF TRANSPORTATION<br>FEDERAL HIGHWAY ADMINISTRATION                          |
| DATE APPROVED  | DATE APPROVED   |
| CHIEF ENGINEER   | DIVISION ADMINISTRATOR  |
| COUNTY ROGER MILLS HIGH  | NO. <u>317-2058(015)58</u><br>NAYUS-283 SHEET NO. <u>0001</u>                           |

# GENERAL NOTES

# SPECIFICATIONS:

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

# VERIFICATION OF EXISTING CONDITIONS.

BIDDERS SHALL FULLY INFORM THEMSELVES OF THE NATURE OF THE WORK AND CONDITIONS UNDER WHICH IT WILL BE PERFORMED. THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICE AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO ANY EXISTING BRIDGE STRUCTURE OR ROADWAY. ANY DAMAGE TO THE BRIDGE STRUCTURE OR ROADWAY DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. TO THE SATISFACTION OF THE ENGINEER.

CONSTRUCTION PLANS FOR THE EXISTING STRUCTURES, MAY BE OBTAINED FROM THE REPRODUCTIONS BRANCH OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION.

REPRODUCTION BRANCH OKLAHOMA DEPARTMENT OF TRANSPORTATION 200 NE 21ST STREET OKLAHOMA CITY, OKLAHOMA 73105

ASK FOR PROJ. NO. SAP-65(67) FOR BRIDGE 'A'.

# REMOVED MATERIALS:

ALL MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF BY HIM IN A MANNER APPROVED BY THE ENGINEER

# DAMAGE TO EXISTING STRUCTURE DURING REPAIR:

ANY DAMAGE DONE TO EXISTING STRUCTURE AS A RESULT OF THE REPAIR OF BRIDGE ITEMS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

# CLEANING OF DEBRIS:

THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE DECK SURFACE AND TOPS OF BRIDGE SEATS AND PIERS. ALL COSTS TO CLEAN THE DEBRIS SHALL BE INCLUDED IN OTHER ITEMS OF WORK

# ENVIRONMENTAL MITIGATION NOTES

CLIFF SWALLOWS AND BARN SWALLOWS ARE SMALL COLONIAL NESTING BIRDS PROTECTED BY THE FEDERAL MIGRATORY BIRD TREATY ACT. THESE SPECIES COMMONLY USE BRIDGES AND CULVERTS FOR NESTING. THE NESTING SEASON FOR THE SWALLOWS RUNS FROM APRIL 1 TO AUGUST 31. ANY ACTIVITIES WHICH WOULD DESTROY ACTIVE NESTS OF HARM EGGS OF BIRDS WOULD VIOLATE THE MIGRATORY BIRD TREATY ACT SWALLOW SURVEY HAS NOT BEEN CONDUCTED FOR ANY OF THE STRUCTURES WITHIN THE PROJECT EXTENT RESPONSE OF SWALLOWS TO THE PLANNED WORK HAS NOT BEEN ASSESSED. THE RESIDENT ENGINEER WILL EVALUATE THE CONTRACTOR'S PROPOSED WORK METHODS AND CONCLUDE WHETHER THE PROPOSED WORK WOULD POSE DISRUPTION TO ANY NESTING BIRDS BEFORE WORK NEAR THE STRUCTURE IS AUTHORIZED. IF THE PROPOSED WORK WILL HARM ANY NESTING BIRDS, THE BRIDGE MAY BE NETTED PRIOR TO APRIL 1 OR THE WORK DELAYED UNTIL THE NESTING SEASON IS COMPLETE. METHODS OTHER THAN NETTING MUST BE PRE-APPROVED BY THE ODOT BIOLOGIST.

# PAY ITEM NOTES

## 1) FALSEWORK JACKING:

PAY ITEM "(PL) FALSEWORK JACKING" CONSISTS OF SUPPORTING THE BRIDGE DURING THE REPAIR OF PEDESTAL ON BEAMLINE 5 AT PIER NO. 1 IN ACCORDANCE WITH SECTION 502 OF SPECIFICATIONS. SUBMIT A WORK PLAN SIGNED AND SEALED BY AN OKLAHOMA REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER FOR APPROVAL PRIOR TO JACKING OPERATIONS. ALL COSTS ASSOCIATED WITH JACKING OPERATIONS, INCLUDING ENGINEER SERVICES WILL BE INCLUDED IN LUMP SUM PRICE OF PAY ITEM "(PL) FALSEWORK JACKING". ANY DAMAGE TO THE STRUCTURE AS A RESULT OF JACKING OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER.

# 2) CLASS B BRIDGE DECK REPAIR:

THIS ITEM CONSISTS OF BRIDGE DECK AREAS THAT ARE UNSOUND AND TO BE REMOVED TO A DEPTH DESIGNATED BY THE ENGINEER. ALL COSTS OF THE REPAIR INCLUDING MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "CLASS B BRIDGE DECK REPAIR"

# 3) PREPARATION OF CRACKS, ABOVE WATER AND EPOXY RESIN, ABOVE WATER:

THESE ITEMS ARE FOR INJECTING AND SEALING CRACKS IN THE SUBSTRUCTURE (MAINLY 5 LF AT PIER 1 AND 30 LF AT ABUTMENT 2) AS DIRECTED BY THE ENGINEER. THESE QUANTITIES ARE APPROXIMATE AND PAYMENT WILL BE ACTUAL AREAS REPAIRED, AS APPROVED BY THE ENGINEER. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL COSTS INCLUDING LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "PREPARATION OF CRACKS, ABOVE WATER" AND THE PRICE BID PER GALLON OF "EPOXY RESIN, ABOVE WATER".

# 4) PNEUMATICALLY PLACED MORTAR:

ITEM "PNEUMATICALLY PLACED MORTAR" SHALL CONSIST OF CONCRETE SURFACE REPAIRS OF THE SUBSTRUCTURE AND BEAM ENDS AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. THE ACTUAL EXTENT OF THE REPAIRS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. THE REPAIRS SHALL BE IN ACCORDANCE WITH SECTION 521 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND IN A MANNER APPROVED BY THE ENGINEER. THE REMOVAL OF LOOSE CONCRETE SHALL BE DONE USING HAND TOOLS. POWER TOOLS WILL NOT BE ALLOWED UNLESS HAND TOOLS PROVE INCAPABLE OF EXCAVATING ALL DETERIORATED CONCRETE TO SOUND CONCRETE AS APPROVED BY THE ENGINEER. SHOULD POWER TOOLS BE NECESSARY, POWER TOOLS SHALL BE OF SUCH SIZE THAT THEIR USE DOES NOT CAUSE DAMAGE TO THE SOUND CONCRETE. ANY DAMAGE DONE TO THE EXISTING REINFORCING STEEL DURING THE REMOVAL PROCESS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE ENGINEER. ANY DETERIORATED REINFORCING STEEL WITH A SECTION LOSS GREATER THAN 50%, AS DETERMINED BY THE ENGINEER, SHALL BE REPORTED TO THE BRIDGE ENGINEER FOR REMEDIAL ACTION. PRIOR TO MORTAR APPLICATION, BLAST CLEAN THE CONCRETE SURFACE AND REINFORCING STEEL FREE OF DEBRIS AND CORROSION. APPLY PNEUMATICALLY PLACED MORTAR TO REPLACE DETERIORATED CONCRETE BUILD UP MORTAR TO MATCH THE ORIGINAL LINES OF THE CURBS AND PIERS. THE CONTRACTOR MAY PROPOSE AND USE AS AN ALTERNATE ONE OF THE FOLLOWING REPAIR METHODS

# (1) CAST-IN-PLACE CONCRETE (2) FORMED AND PUMPED CONCRETE AND MORTAR

THE CONTRACTOR SHALL SUBMIT A PROPOSED WORK PLAN OF THE REPAIR METHOD TO BE USED TO THE ENGINEER FOR HIS APPROVAL. THE WORK PLAN SHOULD INCLUDE SURFACE PREPARATION METHODS, PATCHING MATERIAL BONDING AGENTS, MATERIAL PLACING METHODS, AND FINISHING METHODS. THE CONTRACTOR SHALL TEST REPAIR AN AREA TO VERIFY THE EFFECTIVENESS OF THE PROPOSED REPAIR METHOD PRIOR TO COMMENCEMENT OF THE WORK. FAULTY REPAIRS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. ALL COSTS INCLUDING LABOR MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "PNEUMATICALLY PLACED MORTAR" (APPROXIMATELY 5 SQUARE YARDS IS SET ASIDE FOR ABUTMENT NO. 2 WHILE THE REST IS FOR PIERS AND BEAM END REPAIRS)

# 5) DECK AREA SEALED (FLOODCOATS):

THIS ITEM CONSISTS OF SEALING ENTIRE BRIDGE DECK WITH FLOODCOAT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

# 6) CARBON FIBER-REINFORCED POLYMER

THIS ITEM IS FOR APPLYING ONE LAYER OF CARBON FIBER-REINFORCED POLYMER AT LOCATIONS AND EXTENT SHOWN IN THE PLANS AND AS APPROVED BY THE ENGINEER, IN ACCORDANCE WITH SPECIAL PROVISIONS 524-3. THE QUANTITY SHOWN IS APPROXIMATE. THE EXTENT WILL BE FIELD DETERMINED WITH THE APPROVAL OF THE ENGINEER

# 7) CORROSION INHIBITOR (SURFACE APPLIED)

THIS ITEM IS FOR APPLYING CORROSION INHIBITOR (SURFACE APPLIED) AT LOCATIONS AND EXTENT SHOWN IN THE PLANS (AS DIRECTED BY THE ENGINEER) IN ACCORDANCE WITH SPECIAL PROVISIONS 535-1. THE QUANTITY SHOWN IS APPROXIMATE.

# 31699(04)

| 0200             | BRIDG | E 'A' - NBI 19633                          |          |      |         |
|------------------|-------|--|----------|------|---------|
| ITEM DESCRIPTION |       | UNIT                                       | QUANTITY |      |         |
| 502              | 6116  | (PL) FALSEWORK JACKING                     | (1)      | LSUM | 1.0     |
| 513(B)           | 6019  | CLASS B BRIDGE DECK REPAIR                 | (2)      | SY   | 30.00   |
| 520(A)           | 6058  | PREPARATION OF CRACKS, ABOVE WATER         | (3)      | LF   | 35.00   |
| 520(C)           | 6060  | EPOXY RESIN, ABOVE WATER                   | (3)      | GAL  | 1.00    |
| 521(A)           | 6210  | PNEUMATICALLY PLACED MORTAR                | (4)      | SY   | 50.40   |
| 523(C)           | 6570  | DECK AREA SEALED (FLOODCOATS)              | (5)      | SY   | 1912.00 |
| 524(A)           | 6610  | (SP) CARBON FIBER-REINFORCED POLYMER       | (6)      | SF   | 1016.00 |
| 535              | 6130  | (SP) CORROSION INHIBITOR (SURFACE APPLIED) | (7)      | SY   | 159.30  |
| 540              | 4515  | (PL) REPAIR BRIDGE ITEM (TYPE A)           | (8)      | EACH | 3.0     |
| 540              | 4525  | (PL) REPAIR BRIDGE ITEM (TYPE B)           | (9)      | EACH | 1.0     |

| ITEM    |      |  |  |  |
|---------|------|--|--|--|
| 0640    | CONS |  |  |  |
| 0100010 |      |  |  |  |
| 31699(0 | 14)  |  |  |  |

1399

# 8) REPAIR BRIDGE ITEM (TYPE A)

641

THIS ITEM CONSISTS OF:

CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL COSTS OF THE REPAIR INCLUDING REMOVAL, DISPOSAL, MATERIAL, LABOR, WELDING, PAINT, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN AND NOTED SHALL BE INCLUDED IN THE PRICE BID PER EACH OF "REPAIR BRIDGE ITEM (TYPE A)"

# 9) REPAIR BRIDGE ITEM (TYPE B)

THE PLANS.

CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL COSTS OF THE REPAIR INCLUDING REMOVAL, DISPOSAL, MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN AND NOTED SHALL BE INCLUDED IN THE PRICE BID PER EACH OF "REPAIR BRIDGE ITEM (TYPE B)"

# REVISIONS

# PAY QUANTITIES

| PAY QUANTITIES |      |          |
|----------------|------|----------|
| RUCTION        |      |          |
| DESCRIPTION    | UNIT | QUANTITY |
| NOBILIZATION   | LSUM | 1.00     |

PAY ITEM "REPAIR BRIDGE ITEM (TYPE A)" IS FOR REPLACEMENT OF THE EXISTING EXPANSION JOINTS AT THE PIERS 1, 2 AND 3 AS SHOWN IN THE PLANS.

A) REMOVING THE EXISTING EXPANSION JOINT ALONG WITH A PORTION OF DECK SLAB ADJACENT

B) INSTALLING NEW EXPANSION DEVICE (SEJ) ALONG WITH PLACEMENT OF REINFORCEMENT AND CONCRETE.

PAY ITEM "REPAIR BRIDGE ITEM (TYPE B)" IS FOR REPAIR OF PEDESTAL ON BEAMLINE 5 AT PIER NO. 1 AS SHOWN IN

| (                 | ROGER MILLS COUNTY                 | Design   |              |        |  |
|-------------------|------------------------------------|----------|--------------|--------|--|
|                   |                                    | Detail   | DAH          | 5/16   |  |
| GENERAL NOTES AND |                                    |          |              |        |  |
| SUMMARY OF        | SUMMARY OF PAY QUANTITIES (BRIDGE) |          | Squad: HARJO |        |  |
|                   |                                    | Engr.: M | OLLA-E       | ESMAIL |  |
| STATE OF          | DEPARTMENT OF TRANSP               | OR       | ΓΑΤ          | ION    |  |
| OKLAHOMA          | JOB PIECE NO. 31699(04)            |          | SHEET NO.    | AB01   |  |
|                   |                                    |          |              |        |  |

# TRAFFIC OPERATIONS GENERAL CONSTRUCTION NOTES

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.

EXISTING ROADWAY SHALL REMAIN OPEN DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BARRICADES, LIGHTS, SIGNING, AND DEVICES WITHIN THE LIMITS OF CONSTRUCTION. ALL CONSTRUCTION SIGNING WILL BE DONE ACCORDING TO STANDARDS SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION", AND AS SHOWN ON TCS STANDARD DRAWINGS.

THE CONTRACTOR SHALL BE CLOSE BY TO THE PROJECT TO MONITOR THE CONSTRUCTION TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK, AND SHALL IMMEDIATELY BE ON SITE TO RECTIFY ANY TRAFFIC CONTROL DEVICE THAT FAILS DURING CONSTRUCTION OR IS NOTIFIED BY THE ENGINEER. WORK SHALL BE DONE BY THE CONTRACTOR IN A MANNER APPROVED BY AND TO THE SATISFACTION OF THE ENGINEER.

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.

# SPECIAL TRAFFIC PAY QUANTITY NOTES

- (SP-1) TYPE "C" WARNING LIGHTS ARE NOT REQUIRED.
- (SP-2) PRICE BID FOR THIS PAY ITEM INCLUDES THE INITIAL PLACEMENT AND SUBSEQUENT REPLACEMENT DURING THE CONSTRUCTION TO MAINTAIN ADEQUATE DELINEATORS.
- (SP-3) PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE LOCATED WHERE DEEMED NECESSARY BY THE ENGINEER.
- (SP-4) PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED 14 DAYS PRIOR TO THE PROJECT START DATE.

# TRAFFIC CONSTRUCTION PAY QUANTITY NOTES

- (TC-1) THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH LIGHTS, SIGNS, BARRICADES, AND PROVIDE FLAGGERS NECESSARY FOR THE CONTROL, SAFETY, AND MAINTENANCE OF TRAFFIC WHEN INSTALLING, RELOCATING OR DELIVERING PORTABLE LONGITUDIAL BARRIER.
- (TC-2) QUANTITY INCLUDES SUFFICIENT LENGTH OF PORTABLE LONGITUDIAL TO PROVIDE FOR THE LONGEST SECTION SHOWN ON THE PLANS. THIS SAME BARRIER WILL BE USED ON OTHER DETOUR PHASES.
- (TC-19) THIS ITEM INCLUDES AN ESTIMATED 500 L.F. (4" WIDE) WHITE AND 500 L.F. (4" WIDE) YELLOW STRIPE. THE CONTRACTOR SHALL PROVIDE AND INSTALL AN 0.D.O.T. APPROVED REMOVABLE PAVEMENT MARKING TAPE. COST FOR REMOVAL OF THIS TAPE SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NON-REMOVABLE MARKING TAPE (FOIL BACK) SHALL NOT BE CONSIDERED AN APPROVED EQUAL FOR THIS ITEM.
- (TC-21) INCLUDED IN THE COST OF THIS ITEM SHALL BE INSTALLATION, MAINTENANCE AND REMOVAL. THIS ITEM SHALL BE BID ACCORDINGLY.
- (TC-26) CONSTRUCTION TRAFFIC CONTROL WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND APPLICABLE 0.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 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-30) INCLUDED IN THIS ITEM ARE ALL S.C.S. (SPECIAL CONSTRUCTION SIGNING)SIGNS WHICH ARE BETWEEN 16.00 S.F. AND 32.99 S.F. ALSO INCLUDED IN THIS ITEM SHALL BE THE COST OF INSTALLANTION, MAINTENANCE, AND REMOVAL OF THESE SIGNS.
- (TC-33) ALL CONSTRUCTION WORK ZONE SIGNS SHALL HAVE FLUORESCENT SHEETING. THE FLUORESCENT SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956 (LATEST REVISION).

THE MANUFACTURER SHALL FURNISH A TYPE "D" CERTIFICATION IN ACCORDANCE WITH O.D.O.T. STANDARD SPECIFICATIONS (CURRENT EDITION SUBSECTION 106.04. THE CERTIFICATION SHALL INCLUDE TEST RESULTS ON MATERIAL SUBMITTED FOR APPROVAL.

- (TC-52) ANY USED TRUCK MOUNTED ATTENUATOR OR CHANGEABLE MESSAGE SIGN 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 THSES TRUCKS SHALL ALSO BE EQUIPPED WITH AN ARROW DISPLAY (TYPE B).
- (TC-80) INCLUDED IN THIS ITEM SHALL BE ONE (1) ADDITIONAL UNIT TO BE USED AS A STAND BY OR REPLACEMENT. THIS STAND BY UNIT SHALL BE IMMEDIATELY ACCESSIBLE TO REPLACE A DAMAGED, STOLEN OR MALFUNCTIONING UNIT. THE AMOUNT OF TIME BETWEEN THE REMOVAL OF THE DAMAGED UNIT AND THE INSTALLATION OF THE STAND BY UNIT SHALL BE NO MORE THAN TWENTY FOUR (24) HOURS.
- (TC-84) 60 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 QUANIITY ONLY, BASED ON THE CURRENT ODDI 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 AN APPROVED LIST, GO TO THE QUALIFIED PRODUCT LIST WEBSITE AT http://www.okladot.state.ok.us/traffic/qpl/index.php .

# TRAFFIC SIGNING PAY QUANTITIES NOTES

(TS-24) QUANTITY SHOWN INCLUDES 1,000 L.F. TRAFFIC STRIPE (MULTI-POLYMER)(WHITE) AND 1,000 L.F. TRAFFIC STRIPE(MULTI-POLYMER)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4\*) WIDE TRAFFIC STRIPE. Revised Incomplete JP # 06/20/20

|      |       | PAY QUANTITIES  |      |          |
|------|-------|---|------|----------|
| )    | TRAFF | IC CONTROL  |      |          |
| I TI | ΞM    | DESCRIPTION   | UNIT | QUANTITY |
| 2)   | 8851  | REMOVABLE MARKING TAPE (4" WIDE) (TC-19, 21, 70)              | LF   | 1000.00  |
|      | 8478  | (SP) PORTABLE TRAFFIC SIGNAL SYSTEM (TC-80)                   | SD   | 60.00    |
| B)   | 8705  | (SP)CONST. ZONE IMPACT ATTEN. (TC-52, 70, 80)                 | SD   | 120.00   |
| B)   | 8484  | DELIVER PORTABLE LONGITUDINAL BARRIER (TC-1, 2)               | LF   | 700.00   |
| C)   | 8486  | RELOCATION OF PORTABLE LONGITUDINAL BARRIER (TC-1)            | LF   | 700.00   |
| B)   | 8818  | CONSTRUCTION SIGNS 0 TO 6.25 SF<br>(TC-26, 33, 84)            | SD   | 360.00   |
| B)   | 8821  | CONSTRUCTION SIGNS 6.26 SF TO 15.99 SF<br>(TC-26, 33, 84)     | SD   | 660.00   |
| B)   | 8824  | CONSTRUCTION SIGNS 16.0 SF TO 32.99 SF<br>(TC-26, 30, 33, 84) | SD   | 780.00   |
| C)   | 8848  | WING BARRICADES (TC-26, 84)                                   | SD   | 240.00   |
| E)   | 8860  | WARNING LIGHTS (TYPE A)<br>(TC-26, 84)                        | SD   | 960.00   |
| F)   | 8878  | DRUMS<br>(SP-1) (TC-26, 84)                                   | SD   | 1980.00  |
| G)   | 8890  | CHANNELIZER CONES (TC-26, 84)                                 | SD   | 2880.00  |
| A)   | 8306  | PORTABLE CHANGEABLE MESSAGE SIGN<br>(SP-3, 4) (TC-52, 85)     | SD   | 148.00   |
|      |       |   |      |          |

| TRAFF  | PAY QUAN<br>ICSIGNING & STRIPING        | TITIES  |      |          |
|--------|---|---------|------|----------|
| TEM    | DESCRIPTION                             |         | UNIT | QUANTITY |
| ) 8530 | TRAFFIC STRIPE (MULTI-POLYMER)(4" WIDE) | (TS-24) | LF   | 2000.00  |





Begin Bridge

101'-3"

Span No. 1



100'-0"

Span No. 2

Bridge Length = 402'-6"

100'-0"

Span No. 3

|                      | REVIS                 | 0005         | DATE   |
|----------------------|-----------------------|--------------|--------|
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       | ~            |        |
|                      |                       |              |        |
|                      |                       |              |        |
| н <sup>і</sup>       |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
| End Bridg            | <u>e</u>              |              |        |
|                      |                       |              |        |
| 4                    |                       |              |        |
|                      |                       |              |        |
| FIX.ID               |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
| <u>U</u> <u>I</u> II |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
|                      |                       |              |        |
| BRIDGE "A"           | ROGER MILLS           | Design MI C  | 01/16  |
| U.S283 OVER WASH     | ITA RIVER             | Detail WDY   | 02/16  |
|                      |                       | Check DAH    | 03/16  |
|                      |                       | Squad: HARJO |        |
| OTATE OF             |                       |              |        |
| OKLAHOMA             | JOBPIECENO. 31699(04) |              | ) B001 |

101'-3"

Span No.

| AMOHA | JOB PIECE NO. | 31699(04) |  |
|-------|---------------|-----------|--|

SHEET NO. BOO1





ELEVATION OF **EXPANSION JOINT** 

# NOTES:

- Clean, straighten and reuse existing Longitudinal Deck Slab and Parapet Reinforcing.
- This repair will be performed in two phases. The New 'A' Transverse Bars will be tied using Mechanical Splices at the Phasing Joint. The cost of Mechanical Splices will be included in Other Items of Work.







# ANCHOR ASSEMBLY

(EMBEDDED PLATE TO BE ATTACHED TO TOP OF PIER DIAPHRAGMS)



L BAR





Note



B #5 x 4'-2"



|   | BAR LIST   |         |        |          |             |
|---|--|---------|--------|----------|-------------|
|   | GRA  | DE 60 E | POXY C | OATED    | REINFORCING |
|   |  | PE      | REXPAN | VSION JO | DINT        |
|   | MARK   | SIZE    | NO.    | FORM     | LENGTH      |
|   | А  | #5      | 26     | STR.     | 45'-5"      |
|   | В  | #5      | 12     | BNT.     | 4'-2"       |
|   | PR1  | #5      | 12     | BNT.     | 2'-6"       |
|   | PR2  | #5      | 12     | BNT.     | 3'-3"       |
|   | PR3  | #5      | 12     | STR.     | 2'-6"       |
| 1 | "A" bars will be provided in two pieces,<br>Mechanically Spliced at the phasing Joint. |         |        |          |             |



PICTORIAL VIEW OF SEALED JOINT AT PARAPET



# REVISIONS

# REPAIR BRIDGE ITEM (TYPE A) AT PIERS

This work consists of removing the existing expansion device along with a portion of the deck slab and parapet replacing with new sealed expansion device and new concrete as shown in the plans. All costs of removal of the existing and placement of the new expansion device including labor, concrete, reinforcing steel, Anchor Assembly, welding, paint, saw cut and other incidentals shall be included in price bid per each of "Repair Bridge Item (Type A)".

Use Class AA Concrete. Use Grade 60 Reinforcing Steel (Epoxy Coated).

The Sealed Expansion device shall have the following specifications:

The Sealed Expansion Joint shall have a total movement range of 4". The Steel Receptor provided shall either be

the Watson, Bowman and Acme Type Q Steel Extrusion or the D.S. Brown Type SSOK Steel Extrusion. See Standard EJ-DTL for details of steel receptors.

# PAINT

Two shop coats, one an inorganic zinc rich (IZ) primer, the other an inorganic zinc rich (IZ) intermediate coat, will be applied to the entire surface of the Steel Receptor, Support Plates, L Support Bars, and W1 and W2 Anchor Bars. All painting shall be done in accordance with Section 730 of the Standard Specifications.

# MATERIALS

MA LERIALS Steel Receptors shall be in accordance with AASHTO M270 (ASTM A709), Grade 36, 50 or 50W (Charpy V-Notch testing not required). Support Plates, L Support Bars, and W1 and W2 Anchor Bars shall conform to AASHTO M225 (ASTM A496). All bar dimensions shall be included in the shop drawing. drawings. Welding of Steel Receptors, Support Plate,

L Support Bars, and W1 and W2 Anchor Bars shall be in accordance with Subsection 724.03 of the Standard Specifications. Preformed Neoprene gland lubricant adhesive shall be in accordance with the manufacturer's published literature.

FABRICATION OF JOINT At locations where joint is shown to be mitered at any angle for turn-up at traffic rail or for skew, the material shall be shop spliced with heat vulcanizing or other method of equal effectiveness as recommended by the listed joint manufacturer or approved equal and approved by the Engineer.

| BRIDGE "A"      | ROGER MILLS COUNTY      | Design   | MLC       | 01/16  |
|-----------------|-------------------------|----------|-----------|--------|
| U.S283 OVER WAS |                         | Detail   | WDY       | 02/16  |
| REPAIR I        | BRIDGE ITEM (TYPE A)    | Check    | MLC       | 04/16  |
| (EXPANSIO       | N JOINT REPLACEMENT)    | Saund H  | AR.IO     |        |
| AT PIE          | ERS) (SHEET 2 OF 2)     | Engr.: M | OLLA-I    | ESMAII |
| STATE OF        | DEPARTMENT OF TRANSP    | OR       | ΤΑΤ       | ION    |
| IOKLAHOMA       | JOB PIECE NO. 31699(04) |          | SHEET NO. | B003   |







PIER NO. 2

Details of Pneumatically Placed Mortar and Corrosion Inhibitor

REVISIONS



NOTES:

- The location and extent of repair must be approved by the Engineer.
- Apply Corrosion Inhibitor after Patching with Pneumatically Placed Mortar.

|   | PIER NO. 2 QUANTITIES                      |      |       |
|---|--|------|-------|
|   | DESCRIPTION                                | UNIT | QTY.  |
|   | Pneumatically Placed Mortar                | SY   | 6.90  |
|   | (SP) Corrosion Inhibitor (Surface Applied) | SY   | 17.10 |
| 1 | (SP) Carbon Fiber-Reinforced Polymer       | SF   | 36.00 |

(1) See sheet B007 for Fiber Wrap Locations.

LEGEND

Pneumatically Placed Mortar, PPM

Corrosion Inhibitor (Surface Applied), CI

| BRIDGE "A"       |                  | ROGER N  | AILLS COUNTY | Design                | MLC            | 03/16  |
|------------------|------------------|----------|--------------|-----------------------|----------------|--------|
| U.S283 OVER WASH | HIA RIVER        |          |              | Detail                | WDY            | 03/16  |
|                  |                  |          |              | Check                 | MLC            | 04/16  |
| PIC              | :R NU. 2 F       | EPAIR    |              | Squad: H.<br>Engr.: M | ARJO<br>OLLA-I | ESMAIL |
| STATE OF         | DEPART           | MENT C   | OF TRANSF    | 'OR                   | ΓΑΤ            | ION    |
| OKLAHOMA         | JOB PIECE NO. 31 | 1699(04) |              |                       | SHEET NO.      | B005   |



REVISIONS



# CI = 1.60 S.Y.

PPM = 2.90 S.Y. CI = 2.90 S.Y. (Underside of the Pier Cap overhang)

NOTES:

1

- The location and extent of repair must be approved by the Engineer.
- Apply Corrosion Inhibitor after Patching with Pneumatically Placed Mortar.

| PIER NO. 3 QUANTITIES                      |      |       |
|--|------|-------|
| DESCRIPTION                                | UNIT | QTY.  |
| Pneumatically Placed Mortar                | SY   | 5.80  |
| (SP) Corrosion Inhibitor (Surface Applied) | SY   | 12.20 |
| (SP) Carbon Fiber-Reinforced Polymer       | SF   | 72.00 |

(1) See sheet B007 for Fiber Wrap Locations.

# LEGEND

Pneumatically Placed Mortar, PPM

Corrosion Inhibitor (Surface Applied), Cl

| -                |                        |                 |          |           |        |
|------------------|------------------------|-----------------|----------|-----------|--------|
| BRIDGE "A"       | ROG                    | ER MILLS COUNTY | Design   | MLC       | 03/16  |
| U.S283 OVER WASH | III A RIVER            |                 | Detail   | WDY       | 03/16  |
|                  |                        | D               | Check    | MLC       | 04/16  |
| PIC              | R NO. 3 REPAI          | R               | Squad: H | IARJO     |        |
|                  |                        |                 | Engr.: N | 10LLA-    | ESMAIL |
| STATE OF         | DEPARTMEN              | T OF TRANSF     | POR      | TAT       | ION    |
| IOKLAHOMA        | JOBPIECE NO. 31699(04) |                 |          | SHEET NO. | B006   |



|           |                                       |                   | REV. NO. DESCRIPTION | EVISIUNS<br>DATE     |
|-----------|---------------------------------------|-------------------|----------------------|----------------------|
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
| EI        | har wran avtanta (in ana la           | (101)             |                      |                      |
| <u>F1</u> | indicated by heavy line               | iyer)             |                      |                      |
|           | 1                                     |                   | 1                    |                      |
|           |                                       | - \               |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      | 1                    |
|           |                                       | 1                 |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           | Ľ                                     | 1                 | \ <u>L</u>           | :                    |
|           |                                       |                   | Fiber wrap shall a   | overlap as shown     |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           | SECTION A-A                           |                   | SECTION B-F          | 3                    |
|           |                                       |                   |                      |                      |
|           | <ol> <li>Omit CFRP at Pede</li> </ol> | estal             |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      |                      |
|           |                                       |                   |                      | ITV Davim Latt a com |
|           | U.S283 OVER WASH                      | IITA RIVER        | RUGER MILLS COUN     | NIT Design MLC 03/16 |
|           |                                       |                   |                      | Uetal WDY 03/16      |
|           | PIE                                   | R NOS. 1,         | 2,&3                 | Check MLC 04/16      |
|           | FIBEI                                 | R WRAP D          | ETAILS               | Squad: HARJO         |
|           |                                       |                   |                      |                      |
|           | SIAILOF                               |                   |                      | NSPORIATION          |
|           | UNLAHUMA                              | JOB PIECE NO. 316 | 99(04)               | SHEET NO. BOO7       |







|    |             | REVISIONS |
|----|-------------|-----------|
| NO | DESCRIPTION |           |



Minimum Fiber Wrap Extents Indicated by Heavy Line





# For repair locations, see sheet B008

- ① Omit Fiber Wrap at Embedded Steel Plate.
- (2) Remove any loose or deteriorated concrete on the Beam Ends. Apply Pneumatically Placed Mortar and Corrosion Inhibitor to spalled areas before applying Fiber Wrap. Use one layer of Fiber Wrap at the Beam Ends with the Fiber Wrap oriented vertically. Fiber Wrap shall extend at least 1' past the extents of Pneumatically Placed Mortar.

INTERIOR BEAM

# BEAM END (16 TOTAL)

Pneumatically Placed Mortar (PPM) = 7.00 S.Y. Corrosion Inhibitor (CI) = 40.00 S.Y. Carbon Fiber-Reinforced Polymer (CFRP) = 278.00 S.F.

|      |              | KE/ | /ISIO | N |
|------|--------------|-----|-------|---|
| 0.00 | DECODIDITION |     |       |   |



| L | EGEN | D |
|---|------|---|
| _ |      | - |

Corrosion Inhibitor (Surface Applied), Cl

| ſ | BRIDGE "A"       |               | ROGER MILLS COUNT  | <b>/</b> Design | MLC       | 02/16  |
|---|------------------|---------------|--|-----------------|-----------|--------|
|   | U.S283 OVER WASH | HI A RIVEF    | < compared with the second sec | Detail          | WDY       | 02/16  |
|   |                  |               |  | Check           | MLC       | 04/16  |
|   |                  | ND KEP        | AIR DETAILS  | Squad: H        | ARJO      |        |
|   |                  |               |  | Engr.: N        | IOLLA-    | ESMAIL |
|   | STATE OF         | DEPAF         | RTMENT OF TRANS  | POR             | ΤΑΤ       | ION    |
|   | OKLAHOMA         | JOB PIECE NO. | 31699(04)  |                 | SHEET NO. | B009   |



NOTE 1

| FLARE RATES FOR CONCRETE MEDIAN BARRIER<br>IN TEMPORARY TRAFFIC CONTROL ZONES |                       |  |
|---|-----------------------|--|
| SPEED .   | FLARE RATE (MINIMUM)  |  |
| 40 M.P.H.   | 9 TO 1                |  |
| 45 M.P.H.   | 10 TO 1               |  |
| 50 M.P.H.   | 11 TO 1               |  |
| 55 M.P.H.   | 12 TO 1               |  |
| 60 M.P.H.   | 13 TO 1               |  |
| 65 M.P.H.   | 14 TO 1               |  |
| 70 M.P.H.   | 15 TO 1               |  |
| 75 M.P.H. 16 TO 1   |                       |  |
| * POSTED SPEED LIMIT  | PRIOR TO CONSTRUCTION |  |

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

NOTE 3 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 4 IF CLEAR ZONE CAN BE MET BY FLARING MEDIAN BARRIER, THE CONST. ZONE IMPACT ATTENUATORS MAY BE OMITTED. SEE FLAIR RATE TABLE.

SIGNALS SHALL BE INSTALLED AND OPERATED IN ACCORDANCE WITH PART IV OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, TEMPORARY TRAFFIC CONTROL SIGNALS SHALL MEET THE PHYSICAL DISPLAY AND OPERATIONAL REQUIREMENTS OF CONVENTIONAL TRAFFIC SIGNALS.

THE INSTALLATION AND TIMING OF SIGNALS SHALL BE APPROVED BY THE DIVISION TRAFFIC ENGINEER PRIOR TO SIGNALS BEING PLACED IN OPERATION.

ALL CONFLICTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKER REFLECTORS BETWEEN THE ACTIVITY AREA AND THE STOP LINE SHALL BE REMOVED. AFTER COMPLETION OF THE WORK, THE STOP LINES AND OTHER TEMPORARY INAPPLICABLE PAVEMENT MARKINGS SHALL BE REMOVED.







NOT TO SCALE



PORTABLE TRAFFIC SIGNAL CONST. ZONE IMPACT ATTENUATOR

PORTABLE LONGITUDINAL MEDIAN BARRIER

