

# NOTIFICATION OF ADDENDUM

## ADDENDUM NO. 1

**DATED 3/29/2007**

|                |                         |
|----------------|-------------------------|
| <b>Control</b> | <b>2465-01-015</b>      |
| <b>Project</b> | <b>STP 2007(463)HES</b> |
| <b>Highway</b> | <b>FM 2280</b>          |
| <b>County</b>  | <b>JOHNSON</b>          |

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: STP 2007(463)HES

CONTROL: 2465-01-015

COUNTY: JOHNSON

LETTING: 04/11/2007

REFERENCE NO: 0329

**PROPOSAL ADDENDUMS**

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\_\_\_ PROPOSAL COVER

X BID INSERTS (SH. NO.: 2-8 THRU 8-8) )

X GENERAL NOTES (SH. NO.: G AND H) )

\_\_\_ SPEC LIST (SH. NO.: )

\_\_\_ SPECIAL PROVISIONS: )

ADDED:

DELETED:

\_\_\_ SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

X OTHER: SEE CHANGES BELOW.

DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

BID INSERTS:

SHEET 2-8: DELETED ITEMS 341-2106 AND 341-2138 AND ADDED ITEM 341-2050..  
SHEETS 3-8 THRU 8-8 REVISED DUE TO SHIFTING.

GENERAL NOTES SHEETS G & H: REVISED ITEM 341.

PLAN SHEETS 7C, 8, 8A & 9: REVISED DUE TO ABOVE CHANGES.

| ALT | ITEM-CODE  |              |             | UNIT BID PRICE ONLY.<br>WRITTEN IN WORDS                                 | UNIT | APPROX<br>QUANTITIES | DEPT<br>USE<br>ONLY |
|-----|------------|--------------|-------------|--|------|----------------------|---------------------|
|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |  |      |                      |                     |
|     | 100        | 2002         | 001         | PREPARING ROW<br><br>DOLLARS<br>and<br>CENTS                             | STA  | 15.420               | 1                   |
|     | 110        | 2001         |             | EXCAVATION (ROADWAY)<br><br>DOLLARS<br>and<br>CENTS                      | CY   | 542.000              | 2                   |
|     | 132        | 2008         |             | EMBANKMENT (FINAL)(DENS CONT)(TY D)<br><br>DOLLARS<br>and<br>CENTS       | CY   | 94.000               | 3                   |
|     | 161        | 2002         |             | COMPOST MANUF TOPSOIL (BOS) (4")<br><br>DOLLARS<br>and<br>CENTS          | SY   | 1,449.000            | 4                   |
|     | 164        | 2009         |             | BROADCAST SEED (TEMP) (WARM)<br><br>DOLLARS<br>and<br>CENTS              | SY   | 725.000              | 5                   |
|     | 164        | 2011         |             | BROADCAST SEED (TEMP) (COOL)<br><br>DOLLARS<br>and<br>CENTS              | SY   | 725.000              | 6                   |
|     | 164        | 2015         |             | STRAW/HAY MLCH<br>SEED(PERM)(RURAL)(CLAY)<br><br>DOLLARS<br>and<br>CENTS | SY   | 1,449.000            | 7                   |
|     | 168        | 2001         |             | VEGETATIVE WATERING<br><br>DOLLARS<br>and<br>CENTS                       | MG   | 68.690               | 8                   |
|     | 276        | 2096         |             | CM TRT(PT MX)(CL N)(TY A)(GR 4)(FN POS)<br><br>DOLLARS<br>and<br>CENTS   | CY   | 283.000              | 9                   |
|     | 310        | 2019         |             | PRIME COAT (MC-30 OR SS-1)<br><br>DOLLARS<br>and<br>CENTS                | GAL  | 245.000              | 10                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |   |      |                      |                     |
|     | 316        | 2158         |             | AGGR(TY-PL GR-4 SAC-A)<br><br>DOLLARS<br>and<br>CENTS             | CY   | 71.000               | 11                  |
|     | 316        | 2359         |             | ASPH (AC-20XP)<br><br>DOLLARS<br>and<br>CENTS                     | GAL  | 3,122.000            | 12                  |
|     | 341        | 2050         |             | D-GR HMA(QCQA) TY-C PG70-22<br><br>DOLLARS<br>and<br>CENTS        | TON  | 141.000              | 13                  |
|     | 416        | 2031         | 001         | DRILL SHAFT (TRF SIG POLE) (30 IN)<br><br>DOLLARS<br>and<br>CENTS | LF   | 10.000               | 14                  |
|     | 416        | 2032         | 001         | DRILL SHAFT (TRF SIG POLE) (36 IN)<br><br>DOLLARS<br>and<br>CENTS | LF   | 24.000               | 15                  |
|     | 432        | 2002         |             | RIPRAP (CONC)(5 IN)<br><br>DOLLARS<br>and<br>CENTS                | CY   | 14.050               | 16                  |
|     | 432        | 2041         |             | RIPRAP (STONE COMMON)(DRY)(18 IN)<br><br>DOLLARS<br>and<br>CENTS  | CY   | 41.000               | 17                  |
|     | 464        | 2003         |             | RC PIPE (CL III)(18 IN)<br><br>DOLLARS<br>and<br>CENTS            | LF   | 362.100              | 18                  |
|     | 464        | 2015         |             | RC PIPE (CL III)(72 IN)<br><br>DOLLARS<br>and<br>CENTS            | LF   | 9.220                | 19                  |
|     | 465        | 2077         | 001         | INLET (COMPL)(DROP)(TY 1)<br><br>DOLLARS<br>and<br>CENTS          | EA   | 1.000                | 20                  |
|     | 466        | 2075         |             | HEADWALL (CH-FW-0)(DIA= 72 IN)<br><br>DOLLARS<br>and<br>CENTS     | EA   | 1.000                | 21                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |  |      |                      |                     |
|     | 467        | 2286         |             | SET (TY II)(18 IN)(RCP)(6:1)(P)<br><br>DOLLARS<br>and<br>CENTS             | EA   | 2.000                | 22                  |
|     | 496        | 2004         |             | REMOV STR (SET)<br><br>DOLLARS<br>and<br>CENTS                             | EA   | 4.000                | 23                  |
|     | 496        | 2006         |             | REMOV STR (HEADWALL)<br><br>DOLLARS<br>and<br>CENTS                        | EA   | 1.000                | 24                  |
|     | 496        | 2016         |             | REMOV STR (PIPE)<br><br>DOLLARS<br>and<br>CENTS                            | EA   | 2.000                | 25                  |
|     | 500        | 2001         | 002         | MOBILIZATION<br><br>DOLLARS<br>and<br>CENTS                                | LS   | 1.000                | 26                  |
|     | 502        | 2001         | 022         | BARRICADES, SIGNS AND TRAFFIC HAN-<br>DLING<br><br>DOLLARS<br>and<br>CENTS | MO   | 6.000                | 27                  |
|     | 506        | 2002         |             | ROCK FILTER DAMS (INSTALL) (TY 2)<br><br>DOLLARS<br>and<br>CENTS           | LF   | 50.000               | 28                  |
|     | 506        | 2009         |             | ROCK FILTER DAMS (REMOVE)<br><br>DOLLARS<br>and<br>CENTS                   | LF   | 50.000               | 29                  |
|     | 506        | 2022         |             | EARTHWORK (ERSN & SEDM CONT, IN VEH)<br><br>DOLLARS<br>and<br>CENTS        | CY   | 20.000               | 30                  |
|     | 506        | 2034         |             | TEMPORARY SEDIMENT CONTROL FENCE<br><br>DOLLARS<br>and<br>CENTS            | LF   | 208.000              | 31                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |  |      |                      |                     |
|     | 530        | 2017         |             | TURNOUTS (ACP)<br><br>DOLLARS<br>and<br>CENTS                              | SY   | 35.560               | 32                  |
|     | 540        | 2001         |             | MTL W-BEAM GD FEN (TIM POST)<br><br>DOLLARS<br>and<br>CENTS                | LF   | 245.000              | 33                  |
|     | 542        | 2001         |             | REMOVING METAL BEAM GUARD FENCE<br><br>DOLLARS<br>and<br>CENTS             | LF   | 245.000              | 34                  |
|     | 544        | 2001         |             | GUARDRAIL END TREATMENT (INSTALL)<br><br>DOLLARS<br>and<br>CENTS           | EA   | 2.000                | 35                  |
|     | 544        | 2003         |             | GUARDRAIL END TREATMENT (REMOVE)<br><br>DOLLARS<br>and<br>CENTS            | EA   | 2.000                | 36                  |
|     | 560        | 2006         | 001         | MAILBOX INSTALL-S (RR-POST) TY 4 FND-<br>TB<br><br>DOLLARS<br>and<br>CENTS | EA   | 2.000                | 37                  |
|     | 618        | 2018         |             | CONDT (PVC) (SCHD 40) ( 2")<br><br>DOLLARS<br>and<br>CENTS                 | LF   | 40.000               | 38                  |
|     | 618        | 2022         |             | CONDT (PVC) (SCHD 40) (3")<br><br>DOLLARS<br>and<br>CENTS                  | LF   | 30.000               | 39                  |
|     | 618        | 2024         |             | CONDT (PVC) (SCHD 40) (4")<br><br>DOLLARS<br>and<br>CENTS                  | LF   | 110.000              | 40                  |
|     | 618        | 2025         |             | CONDT (PVC) (SCHD 40) (4") (BORE)<br><br>DOLLARS<br>and<br>CENTS           | LF   | 60.000               | 41                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |  |      |                      |                     |
|     | 620        | 2009         | 001         | ELEC CONDR (NO. 6) BARE<br><br>DOLLARS<br>and<br>CENTS                 | LF   | 240.000              | 42                  |
|     | 620        | 2010         | 001         | ELEC CONDR (NO. 6) INSULATED<br><br>DOLLARS<br>and<br>CENTS            | LF   | 120.000              | 43                  |
|     | 621        | 2002         |             | TRAY CABLE (3 CONDR) (12 AWG)<br><br>DOLLARS<br>and<br>CENTS           | LF   | 240.000              | 44                  |
|     | 624        | 2014         |             | GROUND BOX TY D (162922) W/APRON<br><br>DOLLARS<br>and<br>CENTS        | EA   | 3.000                | 45                  |
|     | 624        | 2016         |             | GROUND BOX TY E (122317) W/APRON<br><br>DOLLARS<br>and<br>CENTS        | EA   | 1.000                | 46                  |
|     | 628        | 2172         |             | ELC SRV TY D 120/240 060 (NS)SS(E)SP(0)<br><br>DOLLARS<br>and<br>CENTS | EA   | 1.000                | 47                  |
|     | 644        | 2001         |             | INS SM RD SN SUP&AM TY 10BWG(1) SA(P)<br><br>DOLLARS<br>and<br>CENTS   | EA   | 6.000                | 48                  |
|     | 644        | 2004         |             | INS SM RD SN SUP&AM TY 10BWG(1) SA(T)<br><br>DOLLARS<br>and<br>CENTS   | EA   | 2.000                | 49                  |
|     | 644        | 2025         |             | INS SM RD SN SUP&AM TY S80(1) SA(T)<br><br>DOLLARS<br>and<br>CENTS     | EA   | 1.000                | 50                  |
|     | 644        | 2060         |             | REMOVE SM RD SN SUP & AM<br><br>DOLLARS<br>and<br>CENTS                | EA   | 4.000                | 51                  |
|     | 662        | 2115         |             | WK ZN PAV MRK SHT TERM (TAB) TY Y-2<br><br>DOLLARS<br>and<br>CENTS     | EA   | 154.000              | 52                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |   |      |                      |                     |
|     | 666        | 2012         |             | REFL PAV MRK TY I (W) 4" (SLD)(100MIL)<br>DOLLARS<br>and<br>CENTS | LF   | 3,049.000            | 53                  |
|     | 666        | 2036         |             | REFL PAV MRK TY I (W) 8" (SLD)(100MIL)<br>DOLLARS<br>and<br>CENTS | LF   | 375.000              | 54                  |
|     | 666        | 2111         |             | REFL PAV MRK TY I (Y) 4" (SLD)(100MIL)<br>DOLLARS<br>and<br>CENTS | LF   | 4,395.000            | 55                  |
|     | 666        | 2132         |             | REFL PAV MRK TY I (Y) 24"(SLD)(100MIL)<br>DOLLARS<br>and<br>CENTS | LF   | 333.000              | 56                  |
|     | 668        | 2105         |             | PREFAB PAV MRK TY C (W) (24") (SLD)<br>DOLLARS<br>and<br>CENTS    | LF   | 74.000               | 57                  |
|     | 668        | 2106         |             | PREFAB PAV MRK TY C (W) (ARROW)<br>DOLLARS<br>and<br>CENTS        | EA   | 4.000                | 58                  |
|     | 668        | 2116         |             | PREFAB PAV MRK TY C (W) (WORD)<br>DOLLARS<br>and<br>CENTS         | EA   | 4.000                | 59                  |
|     | 672        | 2012         |             | REFL PAV MRKR TY I-C<br>DOLLARS<br>and<br>CENTS                   | EA   | 74.000               | 60                  |
|     | 672        | 2015         |             | REFL PAV MRKR TY II-A-A<br>DOLLARS<br>and<br>CENTS                | EA   | 198.000              | 61                  |
|     | 680        | 2002         |             | INSTALL HWY TRF SIG (ISOLATED)<br>DOLLARS<br>and<br>CENTS         | EA   | 1.000                | 62                  |
|     | 682        | 2005         |             | LOUVER (12 IN) ( 7 DEG)<br>DOLLARS<br>and<br>CENTS                | EA   | 1.000                | 63                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |   |      |                      |                     |
|     | 682        | 2022         |             | VEH SIG SEC (12 IN) LED (GRN ARW)<br>DOLLARS<br>and<br>CENTS      | EA   | 2.000                | 64                  |
|     | 682        | 2023         |             | VEH SIG SEC (12 IN) LED (GRN)<br>DOLLARS<br>and<br>CENTS          | EA   | 6.000                | 65                  |
|     | 682        | 2024         |             | VEH SIG SEC (12 IN) LED (YEL ARW)<br>DOLLARS<br>and<br>CENTS      | EA   | 1.000                | 66                  |
|     | 682        | 2025         |             | VEH SIG SEC (12 IN) LED (YEL)<br>DOLLARS<br>and<br>CENTS          | EA   | 6.000                | 67                  |
|     | 682        | 2027         |             | VEH SIG SEC (12 IN) LED (RED)<br>DOLLARS<br>and<br>CENTS          | EA   | 7.000                | 68                  |
|     | 684        | 2042         |             | TRF SIG CBL (TY A) (14 AWG) (16 CONDR)<br>DOLLARS<br>and<br>CENTS | LF   | 300.000              | 69                  |
|     | 686        | 2025         |             | INS TRF SIG PL AM(S) 1 ARM (24') LUM<br>DOLLARS<br>and<br>CENTS   | EA   | 1.000                | 70                  |
|     | 686        | 2037         |             | INS TRF SIG PL AM(S) 1 ARM (36') LUM<br>DOLLARS<br>and<br>CENTS   | EA   | 1.000                | 71                  |
|     | 686        | 2045         |             | INS TRF SIG PL AM(S) 1 ARM (44') LUM<br>DOLLARS<br>and<br>CENTS   | EA   | 1.000                | 72                  |
|     | 5442       | 2001         |             | GEOGRID BASE REINFORCEMENT (TY II)<br>DOLLARS<br>and<br>CENTS     | SY   | 1,225.000            | 73                  |
|     | 6006       | 2001         |             | SPREAD SPECTRUM RADIO<br>DOLLARS<br>and<br>CENTS                  | EA   | 1.000                | 74                  |

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|     | ITEM<br>NO | DESC<br>CODE | S.P.<br>NO. |   |      |                      |                     |
|     | 6006       | 2002         |             | COAXIAL CABLE<br><br>DOLLARS<br>and CENTS                       | LF   | 30.000               | 75                  |
|     | 6006       | 2004         |             | ANTENNA (OMNI-DIRECTIONAL)<br><br>DOLLARS<br>and CENTS          | EA   | 1.000                | 76                  |
|     | 6266       | 2005         |             | VIVDS COMMUNICATION CABLE (COAXIAL)<br><br>DOLLARS<br>and CENTS | LF   | 300.000              | 77                  |

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**Control:** 2465-01-015, etc.

**Highway:** FM 2280

**GENERAL NOTES:**

**Specification Data**

**Basis of Estimate**

| <b>Item</b> | <b>Description</b>                     | <b>Rate</b>      | <b>Unit</b> |
|-------------|--|------------------|-------------|
| 168         | Vegetative Watering                    | 101660 gal/acre  | MG          |
| **210       | Roll (Med Pnerm Tire)(TyB) Surf Treat  | 1 hr/2000SY/Crse | Hr          |
| 276         | Cement (New Base)(Plant-Mixed)(Str N)  | 75 lb/CY         | Ton         |
| 310         | Asph Mat'l (MC-30 Or SS-1)(Cem Trt Bs) | 0.2 gal/SY*      | Gal         |
| 341         | Hot Mix (All Types)                    | 115 lb/SY/in     | Ton         |

\*Based On 50/50 Mixture Of Emulsified Asphalt And Water.

\*\*Non pay, for contractor's information only

**Compaction Requirements for Base Courses:  
(Percent Of Density As Determined By Compaction Ratio Test TEX-113-E)**

| <b>ITEM</b> | <b>MATERIAL</b> | <b>COURSE</b> | <b>MIN DENSITY</b> |
|-------------|-----------------|---------------|--------------------|
| 276         | Cement Treat.   | All           | 92 %               |

Surface Treatment Data:

Seal Coat

Asph Type AC-20XP  
Rate 0.40 gal/SY

Aggr Type PB or Lightweight  
Grade 4  
Rate 1 CY/110 SY

Note: The rates of application of asphalt and aggregate are for estimating purposes only and may be varied as directed by the Engineer.

**Special Notes:**

Existing storm sewers and utilities are shown from the best available information. Verify the location of all underground facilities prior to starting work.

For dimensions of R.O.W. not shown on the plans, see the link at [http://www.dot.state.tx.us/services/right\\_of\\_way/row\\_state.htm](http://www.dot.state.tx.us/services/right_of_way/row_state.htm) or the R.O.W. map on file at the TxDOT District Office.

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Provide all-weather surface for temporary ingress and egress to adjacent property, as directed. Materials, labor, equipment and incidentals necessary to provide temporary ingress and egress will not be paid for directly, but will be subsidiary to the various bid items.

In those instances where necessary, the governing slopes indicated herein may be varied from the limits shown, to the extent approved.

All driveway openings will be determined by the Engineer and shall conform with Texas Department of Transportation "Regulations for Access Driveways to State Highways" adopted September 1953, and revised June 2004.

Locations and lengths of all private entrances are approximate only. The actual locations, lengths, lines, and grades are to be established in the field.

Remove the grass from the crown of shoulders or pavement edges by blading or other approved methods. Payment for this work will not be made directly but shall be considered subsidiary to the various items of the contract.

Locations shown for drainage structures refer to the control points of structures as follows:

- 1) Manholes, Inlets, and Junction Boxes -- Locations are at the centroid of the structure; when two structure types are specified, location is at the centroid of the top structure. Bottom structure may be positioned as required to align with top structure, storm drain pipes and other adjacent structures.
- 2) Headwalls -- Locations are to the outside face of the headwall at the centerline of the pipe or box structure. For pipe headwalls with Type "P" or "C" safety end treatment, locations are on the centerline of the pipe structure at the limit of payment for pipe.

Reinforced concrete pipe collars are not paid for directly, but are subsidiary to Item 464, Reinforced Concrete Pipe.

Provide temporary drain openings at all low points or other drainage structures, as required, at the Contractor's expense.

Remove any obstructions to existing drainage due to the contractor's operations, as required, at the Contractor's expense.

Apply all erosion control measures as shown on the plans or as directed, immediately following construction of channels to their required line, grade and section.

### **Item 5. Control of the Work**

Prior to contract letting, bidders may obtain a free computer diskette or a computerized transfer of files (from the Engineer's office) that contains the earthwork information. If copies of the

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actual cross-sections are requested, in addition to, or instead of, the diskette, they will be available at the Engineers office for borrowing by copying companies for the purpose of making copies for the bidder, at the bidder's expense.

**Item 7. Legal Relations and Responsibilities**

Do not initiate activities in a project specific location (PSL) associated with a U.S. Army Corps of Engineers (USACE) permit area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. "Associated" as defined here means materials are delivered to or from the PSL. The permit area includes all waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. The contractor shall be responsible for any and all consultations with the USACE regarding activities, including project specific locations (PSLs) that have not been previously evaluated by the USACE. Provide the Department with a copy of all consultation(s) or approval(s) from the USACE prior to initiating activities.

The Contractor may proceed with activities in PSLs that do not affect a USACE permit area if a self determination has been made that the PSL is non-jurisdictional or proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. The contractor is solely responsible for documenting any determination(s) that their activities do not affect a USACE permit area. Maintain copies of their determination(s) for review by the Department or any regulatory agency.

Document and coordinate with the USACE, if required, prior to any excavation hauled from or embankment hauled into a USACE permit area by either (1) or (2) below.

**(1) Restricted Use of Materials for Previously Evaluated Permit Areas.**

Document both the project specific location (PSL) and its authorization. Maintain copies for review by the Department or any regulatory agency when an area within the project limits has been evaluated by the USACE as part of the permit process for this project:

- a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in Item 110 is used for permanent or temporary fill (Item 132, Embankment) within a USACE permit area;
- b. Suitable embankment (Item 132) from within the USACE permit area is used as fill within a USACE evaluated area; and,
- c. Unsuitable excavation or excess excavation ["Waste"] (Item 110) that is disposed of at a location approved by the Engineer within a USACE evaluated area.

**(2) Contractor Materials from Areas Other than Previously Evaluated Areas.**

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Provide the Department with a copy of all USACE coordination or approval(s) prior to initiating any activities for an area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:

- a. Item 132, Embankment, used for temporary or permanent fill within a USACE permit area; and,
- b. Unsuitable excavation or excess excavation ["Waste"] (Item 110, Excavation) that is disposed of outside a USACE evaluated area.

The total area disturbed for this project is 1.94 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer and to the local government that operates a separate storm sewer system.

### **Item 8. Prosecution and Progress**

Working days will be computed and charged in accordance with Article 8.3.A.4, Standard Workweek.

### **Item 100. Preparing Right of Way**

Measurement for this item shall be along the centerline of the project with the limits of measurements as shown on the plans.

### **Item 110. Excavation**

Review proposed waste sites to determine if any site is located in a "Base Floodplain" or "Floodway" as defined by the Federal Emergency Management Agency (FEMA).

If waste material from this project is placed in a base floodplain as defined by FEMA, a permit will have to be obtained from the local community responsible for enforcing National Flood Insurance Program (NFIP) regulations. The Contractor is responsible for ensuring that the owner of the property receiving the waste has obtained the necessary permit.

### **Items 110 and 132. Excavation and Embankment**

Sulfate-laden subgrade material that is to be treated with either lime or cement, including material up to one foot outside the proposed treatment limits, is susceptible to sulfate heave.

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Moderate sulfate levels are those defined from 3,001 PPM to 7,000 PPM. Treat these soils with lime at the full 150 lb/CY rate or cement at the full 75 lb/CY rate. Do not split the rates to ensure complete reaction and mitigation of sulfate heaves. Allow the mixture to mellow for 7 days to provide for complete reaction.

High sulfate levels are not allowed within the treatment and surrounding areas as defined above.

Test soils for soluble sulfates in accordance with Test Method TEX-145 and TEX-146-E.

Treat moderate sulfate or excavate high sulfate areas identified above and other subgrade areas that may be identified during construction as having moderate to high sulfate concentrations to a depth of one foot below and laterally to one foot outside the proposed treatment limits.

Treatment of the moderate level material shall be paid for under Item 260 or Item 275. Removal of the high level material shall be measured and paid for in accordance with Item 110 and replacement with suitable material shall be measured and paid for in accordance with Item 132.

Any excavated sulfate-laden material will be acceptable for use in fill areas. Do not place within previously specified section boundaries of subgrade to be treated with either lime or cement.

Off-Site Borrow Sources. In addition to meeting pertinent specification requirements, test off-site borrow sources for sulfate content. Test soils for soluble sulfates in accordance with Test Method TEX-145 and TEX-146-E and provide documentation that supports compliance with previously stated requirements. The Engineer will perform additional testing for sulfates of this material upon delivery to the project. Only material that is placed within one foot vertically or laterally of subgrade treatment will require testing for sulfates. Remove and replace failing material (sulfate concentrations >7,000 PPM by dry weight).

### **Item 132. Embankment**

At all locations where guardrail is shown to flare, widen the embankment as necessary to accommodate the guardrail.

### **Item 161. Compost**

Place approximately 4" of compost manufactured topsoil (CMT) on all cut and fill slopes (except drainage channels where flexible channel liners are indicated), at other locations shown in the plans, and as directed.

Where "blended on-site" CMT is specified, produce the compost manufactured topsoil by incorporating 1" of compost with 3" of furnished topsoil as shown in the plans.

### **Item 164. Seeding for Erosion Control**

Apply seeding required between December 1 and January 31 using seed types and mixtures as shown in Item 164.2.A, Table 3. If, in the opinion of the Engineer, this does not provide an

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effective vegetative cover, apply "straw or hay mulch" as specified in Item 164.3.E as soon as possible. After February 1 apply warm season seeding in order to establish a permanent protective vegetative cover.

**Item 168. Vegetative Watering**

Apply vegetative watering for a period of three months following application of seed or installation of sod, according to the following "Required Weekly Watering Requirements":

| Month    | Required Weekly Rainfall Equivalent* |  | Month     | Required Weekly Water Equivalent* |
|----------|--------------------------------------|--|-----------|-----------------------------------|
| January  | 1.0"                                 |  | July      | 3.4"                              |
| February | 1.2"                                 |  | August    | 3.2"                              |
| March    | 1.8"                                 |  | September | 2.4"                              |
| April    | 2.1"                                 |  | October   | 1.9"                              |
| May      | 2.5"                                 |  | November  | 1.3"                              |
| June     | 2.9"                                 |  | December  | 1.0"                              |

\* Equal to (Average Monthly Pan Evaporation Rate + 1")/4

1" Water per acre = 20,066 Gal/Acre

Immediately following sodding or seeding, water two times per week for a period of four weeks, regardless of calendar month.

For the remainder of the watering period, water one time per week during the months of September through June or twice per week during the months of July and August. Where two watering cycles per week are required, divide the weekly totals shown above by two, and distribute the resulting amount at each application.

Furnish and install an approved rain gauge at the project site, as directed. Furnishing and installation of the rain gauge will not be paid for directly, but will be considered subsidiary to Item 168.

When actual rainfall at the project site during any week or cycle exceeds the required equivalent amount, the Engineer may suspend vegetative watering for one cycle.

**Item 247. Flexible Base**

(TY A, GR 4) Furnish crushed stone, gravel, or crushed gravel aggregate conforming to the following requirements:

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Gradation:

| <u>Retained on<br/>Sieve Size</u>               | <u>Percent (%)<br/>by Weight</u> |
|---|----------------------------------|
| 1-3/4 in.                                       | 0 – 5                            |
| 7/8 in.   | 5 – 35                           |
| No. 4   | 40 – 75                          |
| No. 40  | 65 – 85                          |
| Plasticity Index (PI)                           | 12 max., 4 min.                  |
| Liquid Limit                                    | 45 max.                          |
| Wet Ball Mill                                   | 50 max.                          |
| Wet Ball Mill, %<br>Increase Passing the No. 40 | 20 max.                          |

**Item 276. Cement Treatment (Plant-Mixed)**

Treat base material with a maximum 4% cement by weight. The 7-day compressive strength of treated material shall be 250 psi.

**Item 301. Asphalt Antistripping Agent**

Furnish a liquid antistripping agent unless directed.

**Item 310. Prime Coat**

Provide an MC-30 or SS-1 for this Item. Apply SS-1 as specified in Item 314.

**Item 316. Surface Treatments**

Asphalt storage tanks may be used.

Furnish aggregate meeting a Surface Aggregate Classification rating of “A” for this project:

Provide a transverse variance rate of 10%. Provide an equal amount of asphaltic material between the wheelpaths as outside the wheelpaths.

Provide a minimum of 3 pneumatic rollers as specified under Article 316.3.C.

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**Item 341. Dense-Graded Hot Mix Asphalt (QC/QA)**

Use of RAP is not allowed on this project.

Target laboratory molded density is 96%.

Provide a PG70-22 asphalt.

Furnish a CSS-1P for the tack coat on this project.

From Table 7:

The tensile strength is waived for this project.

Use the boil test, test method TEX-530-C, and provide only mixes that produce zero percent (0%) stripping for design verification and during production.

The requirements shown in Table 8 are waived for this project.

**Item 432. Riprap**

Provide weepholes as directed.

Provide Class B Concrete for riprap.

The quantities for riprap at the location indicated may be varied to the extent necessary to ensure proper functioning for the purpose intended.

All concrete riprap shall be 5" (.42') in thickness, unless otherwise shown in the plans, and shall be reinforced.

An 8 inch (.67') by 18 inch (1.5') toewall will be required at the exposed edge of all concrete riprap unless otherwise directed.

Locations and lengths of riprap flumes shown on the plans are approximate. Actual lengths and locations are to be determined in the field.

**Item 464. Reinforced Concrete Pipe**

All bends and connections in pipe shall be prefabricated.

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**Item 466. Headwalls and Wingwalls**

Do not use precast headwalls/wingwalls.

**Item 467. Safety End Treatment**

Precast Safety End Treatments are permitted

**Item 502. Barricades, Signs, and Traffic Handling**

Permanent signs may be installed when construction in an area is complete and they will not be in conflict with the traffic control plan for the remainder of the job.

Existing signs are to remain as long as they do not interfere with construction and they do not conflict with the traffic control plan.

Any sign not detailed in the plans but called for in the layout shall be as shown in the current "Standard Highway Sign Designs for Texas".

When traffic is obstructed, arrange warning devices in accordance with arrangements indicated in the latest edition of the "Texas Manual on Uniform Traffic Control Devices".

Cover or remove any work zone signs when work or condition referenced is not occurring.

**Item 504. Field Office and Laboratory**

Furnish the following structures for this project:

| <u>Type</u>      | <u>No.</u> |
|------------------|------------|
| Field Lab(Ty. D) | 1          |

**Item 506. Temporary Erosion, Sedimentation, and Environmental Controls**

Remove accumulated sediment and/or replace SW3P controls when the capacity has been reduced by 50% or when the depth of sediment at the control structure exceeds one foot.

**Item 540. Metal Beam Guard Fence**

The locations and lengths of guard fence shown on the plans are approximate. Actual lengths and locations are to be determined in the field.

The tops of timber posts shall be domed. Beveled tops will not be permitted for timber or steel posts.

When holes for timber posts are drilled below bottom of post elevation, backfill the excessive depth with an acceptable sand. The furnishing and installation of the sand backfill will not be paid for directly but shall be considered subsidiary to this Item.

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When guardrail posts are placed in a finished surface, backfill the top 4 inches with an asphaltic material, domed to carry water away from the posts or as shown on the plans. The furnishing and installation of the asphaltic material backfill will not be paid for directly but shall be considered subsidiary to this Item.

**Item 542. Removing Metal Beam Guard Fence**

Remove existing metal beam guard fence only when authorized.

**Item 585. Ride Quality for Pavement Surfaces**

Use Surface Test Type A to evaluate ride quality of travel lanes in accordance with Item 585, "Ride Quality for Pavement Surfaces"

**Traffic SIGNAL Installation**

The following standard detail sheets have been modified:

SMA-80(1)-99(FW) SMA-80(2)-96(FW), TS-FD-99(FW), ED(6)-03(FTW)  
AND VDZ-05(FTW) ARE FORT WORTH STANDARDS

Submit all shop drawings, working drawings or other documents which require review by the Engineer, 60 days in advance of scheduled pre-construction conference in order to allow a minimum of 30 calendar days for Engineer review and response prior to the conference. Please contact Mr. Billy Manning at 817-370-6745 with Fort Worth District Traffic-Electrical Maintenance/Construction so that he and a representative from the Signal Shop may attend the pre-construction meeting. Provide submittal literature for all furnished traffic signal equipment prior to installation.

The Contractor is responsible for picking up material provided by the State from State stockyards.

**TRAFFIC ENGINEERING**

For final project inspection, the Area Office and Chief Inspector should contact Mr. Billy Manning. He should be contacted at 817-370-6745 with Fort Worth District Traffic Engineering approximately 48 hours in advance of needed inspection. At the time of the final inspection, Mr. Billy Manning will create a punch list of discrepancies that must be corrected before signal is turned on for full operation. When the signal is ready for turn on, he will be the contact between the Chief Inspector and the Fort Worth District Signal Shop. If at any time, there are discrepancies that cannot be resolved, he shall work with the contractor and the Area Office until the discrepancies can be resolved. If Mr. Billy Manning is contacted for final inspection, his requirements for corrective actions to the signal installation shall be the only required corrections.

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### **VIDEO IMAGING VEHICLE DETECTION ZONES**

The signal technicians from the Fort Worth District Signal Shop are responsible for verification of video imaging vehicle detection zones set by the Contractor. Contact the Inspector and Mr. Billy Manning at 817-370-6745 to coordinate a suitable meeting time with the Fort Worth District Signal Shop for wiring connections and to verify proper camera locations in accordance with sheet VDZ-05(FTW). At this time, the Fort Worth Signal Shop performs their one-week inspection. Any discrepancies they find shall be corrected or repaired. Upon the satisfactory completion of repairs or corrections, the signals shall operate in a flashing mode for two or three days prior to the beginning of the test period for full signal operation.

### **SIGNAL TURN ON**

Notify Mr. Billy Manning at 817-370-6745 with Fort Worth District Traffic-Electrical Maintenance/Construction approximately 48 hours in advance of the signal turn on. Signal technicians from the Fort Worth District Signal Shop will be present when the signals are placed in operation. Unless otherwise directed, place the signal in full operation between 9:00 A.M. - 12:00 (NOON) on Tuesday, or Wednesday only.

### **TEST PERIOD FOR SIGNALS**

The signals shall operate continuously for a minimum of 30 calendar days in a satisfactory manner. Equipment failures during these 30 days will cause the test period to start over.

### **PHASES OF SIGNAL OPERATION**

Wire the signal installation to operate in accordance with phase diagrams in these plans. Timing and phasing will be changed and maintained by the Fort Worth District Signal Shop during all phases of construction. A copy of all revisions to the original timing and phasing plans will be delivered to the Fort Worth Traffic Engineering group and one copy is to stay in the controller cabinet at the completion of the project.

### **Item 420. Concrete Structures**

Notify the Inspector 48 hours prior to forming and placing concrete in any unit of all the Signal Pole and Controller Foundations. This is to verify that the Class C concrete design, concrete plant, materials, reinforcing steel placement, and grounding rods are correct for the signal poles and cabinet being supplied, and to permit the inspection of forms (bolt templates and patterns). Do not place concrete without a Inspector present. Failure to inform the Inspector and provide adequate time to arrive on the job site may result in removing and replacing the foundation.

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**Item 449. Anchor Bolts**

Use pipe joint compound that is an electrically conducting protective thread lubricant compound to be used on the foundation anchor bolts for Traffic Signal Poles (Crouse-Hinds TL-2, 0Z/Gedney STL, Thomas & Betts Kopr-Shield, or equal).

**Item 618. Conduit**

It may be necessary to saw cut existing concrete at some locations for placement of conduit. Saw cut the existing concrete, remove it from the steel reinforcement (bars or fabric) and bend the steel to accommodate the conduit. After the conduit has been placed in its final position, bend the steel back to its original position and backfill the trench with CL "A" concrete. Removal and replacement of concrete will not be paid for directly, but will be considered subsidiary to this Item.

Use materials from pre-qualified producers are acceptable as shown on the Construction Division (CST) of the Texas Department of Transportation (TxDOT) materials producers list. Use the following website to view this list: [http://www.dot.state.tx.us/business/producer\\_list.htm](http://www.dot.state.tx.us/business/producer_list.htm)

**Item 620. Electrical Conductors**

Clearly and permanently, mark each illumination conductor installed in a signal strain pole as "illumination" where it can be clearly seen from the signal pole hand hole.

All wiring not covered by the plans and specifications shall be in accordance with the National Electric Code (NEC) and TxDOT Standard Sheets.

When the specifications for electrical items require UL listed products, it will be construed to mean UL listed or CSA listed.

Bond together any grounding conductors that share the same conduit, junction box, ground box, or structure, at every accessible point in accordance with the National Electrical Code (NEC) and TxDOT Standard Sheets.

Provide breakaway electrical connectors for breakaway poles. Use Bussman HEBW, Littlefuse LEB, Ferraz-Shawmut FEB, or equal on ungrounded conductors. For grounded conductors, use Bussman HET, Littlefuse LET, Ferraz-Shawmut FEBN, or equal. These breakaway connectors have a white colored marking and a permanently installed solid neutral. See the latest RID (2) standard for additional details.

Do not use non-certified persons to perform electrical work. See **Item 7.15 "Electrical Requirements"** for additional details.

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**Item 621. Tray Cable**

All proposed tray cable and number of conductors required shall be as shown on the plans. No splices shall be allowed. Direct questions concerning vendor manufacturers of this tray cable to the District Director of Traffic Operations or to Traffic Operations – Division.

**Item 628. Electrical Services**

Time-charge suspension due to the availability of power shall not be considered unless all arrangements for power have been submitted within fifteen (15) days after the project work has begun.

Notify the Engineer, in writing, a minimum of 30 days in advance of his/her need for electrical service.

Provide switch duty circuit breakers UL listed to UL489.

**Item 680. Installation of Highway Traffic Signals**

This project shall consist of the installation of all of the materials necessary for complete signal systems as follows:

1. Furnish and install all permanent signs mounted on traffic signal wires, traffic signal poles, or traffic signal mast arms. The cost of the signs, hardware, and erecting the signs shall be subsidiary to Item 680, "Installation of Highway Traffic Signals."
2. The locations shown on the plans for signal pole foundations, controller foundations, conduit, and other items may be adjusted to meet field conditions, subject to prior approval. Adjustments in project construction may be necessary to meet the field conditions.
3. Provide submittal literature for all traffic signal equipment 30 days prior to installation.
4. Provide a qualified technician on the project site to place the traffic signals in full operation.
5. During the thirty-day test period, provide qualified personnel to respond to and diagnose all trouble calls. Repair any malfunctions to signal equipment supplied for the project. Provide a local telephone number, not subject to frequent changes and available to receive calls on a 24-hour basis. Respond to reported calls within a reasonable travel time, (i.e. from a Dallas address), but not more than 2 hours maximum. Make appropriate repairs within 24 hours. Place a logbook in each controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. The error log in the conflict monitor shall not be cleared during the thirty-day test period without approval.
6. Seal all conduits at the bell ends of all conduits where conductors and/or cables are present and required for the intended operation of the traffic signals at the turn on of the traffic signal.

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- 7. Where work requires the removal of power from the controller and cabinet assembly, erect temporary stop sign panels. Remove the stop sign panels after the traffic signals are in operation.
- 8. All detector cards on this project shall have a LCD display of all operational and diagnostic information.
- 9. Deliver the cabinet, controller, accessories, and three complete sets of signal construction plans to the TxDOT Fort Worth District Signal Shop, 2501 SW Loop 820 at McCart Street, Fort Worth. Notify the Signal Shop at 817-370-6682 two working days prior to delivery of the cabinet.
- 10. VIVDS installation: Use at least astro-brac type mounting bracket to the desired location at least 30' feet above the road on the luminaire arm or the signal pole. Pin if required. Mount setback cameras in such a manner to maintain a 10' clearance zone from overhead electrical lines. Aim the bracket down toward the direction of traffic to be detected. Attach the camera assembly to the camera-mounting bracket. Connect the camera cables to the camera enclosure, leaving drip loop near the camera. When mounting presence cameras on mast arms contact the Fort Worth Signal Shop for further mounting instructions.
- 11. The State will provide the following material for this traffic signal intersection:

| <b>P.O. Number</b> | <b>Description</b>       | <b>Quantity</b> |
|--------------------|--------------------------|-----------------|
| G442003000183000   | VIVD's (4 Camera set up) | 1               |
|                    |                          |                 |
|                    |                          |                 |

All work and installation of material associated with the individual intersection within the project shall be considered subsidiary to this item.

- 12. Timing and phasing will be changed and maintained by the Fort Worth District Signal Shop during all phases of construction. Timing and phasing plan will be printed and signed sealed and dated by the Traffic Engineer prior to uploading the controller for all phases of construction.
- 13. Perform the following at no additional compensation:
  - a. Protect all areas of the right-of-way, which are not included in the actual limits of the proposed construction areas from destruction. Care shall be exercised to prevent damage to trees, vegetation, and other natural surroundings as well as any property damage to property owner's poles, fences, shrubs, mailboxes, etc. Restore any area disturbed as a result of construction operations to a condition as good as, or better than, that present prior to this contract. Be responsible for sweeping, the removal of all litter, construction debris and surplus material on the right of way within the project limits so as to keep the site of the work in a neat and presentable condition at all times.

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- b. Provide access to all driveways during all phases of construction. Attention is called to the fact that all locations used for storing construction equipment, and materials of any type within the right of way shall be approved by the Engineer. Use of the right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance, as determined by the Engineer, will not exist.
  - c. Protect all underground and overhead utilities and repair any damages.
  - d. No extra compensation will be allowed for fulfilling the requirements stated above.
14. TxDOT Signal Shop will not assume responsibility for the maintenance of the traffic signals until the project is completed and accepted.

**Item 682. Vehicle and Pedestrian Signal Heads**

Unless otherwise shown in the plans, use LED signal lamps and mount vertically.

Traffic signal heads for this project shall be yellow aluminum with black aluminum back plates. Cover all traffic and pedestrian signal faces with burlap or other approved material so that they cannot be seen from the time of installation until placed in operation.

The internal arrangements of each louver shall consist of five vanes with a 7-degree cut-off right of center. All louvers shall have a flat black finish on the inside surfaces. Each louver shall be of suitable weight and size to fit inside the full circle visor furnished for the intended signal section.

For all proposed mast arm pole assemblies, provide mounting bracket assembly Option "C" as shown on the State Standard Sheets "Single Mast Arm Assemblies."

Span mounted traffic signal faces shall be mounted as shown on State Standard Sheets "Strain Pole Assemblies." All traffic signal sections for span mounted traffic signals shall be made of polycarbonate resin and shall be from the same manufacturer.

**Item 684. Traffic Signal Cables**

Include extra cable length in each run to provide adequate slack, as determined by the Engineer, at each ground box, foundation and signal head. Identify each cable as shown on the plans (cable 1, etc.) with pre-numbered identification tags of plastic, tape or marking labels at each signal head, ground box, terminal block, pole base and controller.

All cables shall be continuous without splices from terminal point to terminal point or as directed or approved. All proposed signal cable and number of conductors required shall be as shown on the plans.

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## **VIDEO IMAGING VEHICLE DETECTION SYSTEM**

Under this project, provide the 8-foot luminaire arms on the existing traffic signal strain poles at the locations indicated in the plans. Then install the video imaging vehicle detection system (VIVDS) cameras onto the ends of the luminaire arms with the attachment mechanisms provided with the camera system. Place the traffic signal cable and the VIVDS communication cable (coaxial) in continuous and separate runs from each VIVDS camera to the controller. The multi-conductor cable shall be a low density, high molecular weight polyethylene, 0.008-inch aluminum shielded coaxial with a filled core (for moisture resistance), single-jacketed, telephone cable with 3-#16 AWG standard twisted pairings of copper conductors. The cables shall exist all in a single sheath, such as that supplied by MULTICOM INC. Part Number: 8281163CR191JKT Camera Cable, or approved equivalent. For more information concerning the VIVDS camera cable, contact by phone at 1-800-423-2594 or on the internet at: [WWW.MULTICOMINC.COM](http://WWW.MULTICOMINC.COM) using the above stated part number for reference.

For each cable terminating at the controller cabinet, an extra 10-foot length will be provided for final installation into the controller by State Forces. All costs associated with the installation of the cameras onto the luminaire arms will be considered subsidiary to this item.

A single camera, placed at the proper mounting height with the proper lens, must be able to monitor up to and including five (5) traffic lanes simultaneously. Detection accuracy must include the presence of any vehicle in the defined detection zone regardless of the lane, which the vehicle is occupying. Occlusion produced by vehicles in the same or adjacent lanes must not be considered a failure of the VIVDS processor unit, but a limitation of the camera placement. A minimum of 95% detection accuracy must be enforced for the entire design field of view on a lane by lane and on a time period basis. Furnish up to 24 continuous hours of recorded video of all installed intersection cameras within the 30-day test period for verification of proper camera placement, field of view, focus, detection zone placement, processor setup, and operation. The video from each camera must show vehicle detections for all zones. Live video with the detection overlaid is required for field verification of the system.

Equipment failure, either camera or VIVDS processor unit, must result in constant vehicle detection on affected detection zones.

When recorded video is required by the plans, it will be paid for by each camera recorded.