



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
PO BOX 778
DOVER, DELAWARE 19903

JACK MARKELL
GOVERNOR

SHAILEN BHATT
SECRETARY

VIA OVERNIGHT DELIVERY

(302) 760-2030
FAX (302) 739-2254

May 17, 2012

Contract No. DOT1217-TRAFFMAINT
EMERGENCY HIGHWAY ITS AND TRAFFIC MAINTENANCE
Statewide

Ladies and Gentlemen:

Enclosed is Addendum No. 2 for the referenced contract consisting of the following:

NOTE: The date for the receipt of bids has been moved to Thursday, May 31, 2012.

1. One (1) page, Bid Proposal Cover, revised, to be substituted for the same page in the Proposal.
2. Nine (9) pages, Questions and Answers, new, to be added to the Proposal.
3. Forty (40) pages, Pre-Bid Meeting Transcript, new, to be added to the Proposal.
4. Three (3) pages, Pre-Bid Meeting Attendees, new, to be added to the Proposal.
5. One (1) page, Table of Contents, page v, revised, to be substituted for the same page in the Proposal.
6. Five (5) pages, Special Provisions, 746907 - Furnish & Install 1-conductor #2 AWG Stranded Copper, 746908 - Furnish & Install 1-Conductor #4 AWG Stranded Copper, 746909 - Furnish & Install 1-Conductor #6 AWG Stranded Copper, 746910 - Furnish & Install 1-Conductor #8 AWG Stranded Copper, 746911 - Furnish & Install 1-Conductor #10 AWG Stranded Copper, 746912 - Furnish & Install 1-Conductor #14 AWG Stranded Copper, 746914 - Furnish & Install #6 Bare Stranded Copper Ground, 746918 - Furnish & Install #2/0 AWG Stranded Copper, 746919 - Furnish & Install #4/0 AWG Stranded Copper, pages 81 through 85, revised, to be substituted for the same pages in the Proposal. (Title of Special Provision was modified and a minor change was made on page 81 under Cable-, 3.)
7. Two (2) pages, Bid Proposal Forms, pages 8 and 9, revised, to be substituted for the same pages in the Proposal. (Item Descriptions were modified to match Special Provision title.)
8. One (1) sheet, Construction Plans, sheet 51, revised, to be substituted for the same sheet

in the Plan Set.

9. Two (2) sheets, Construction Plans, sheets 25A and 25B, new, to be added to the Plan Set.
10. For proposal holders with the electronic bid option only, Amendment Disk No. 1.

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott S. Gottfried". The signature is fluid and cursive, with a large initial "S" and "G".

Scott S. Gottfried
Competitively Bid Contracts Coordinator
:ssg
Enclosures

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT DOT1217-TRAFFMAINT

EMERGENCY HIGHWAY ITS AND TRAFFIC MAINTENANCE

STATEWIDE COUNTY

ADVERTISEMENT DATE: April 16, 2012

PROSPECTIVE BIDDERS ARE ADVISED THAT THERE WILL BE A MANDATORY PRE-BID MEETING FOR THIS CONTRACT ON APRIL 26, 2012 at 10:30 A.M. IN THE BIDDER'S ROOM, TRANSPORTATION ADMINISTRATION CENTER, 800 BAY ROAD, DOVER, DELAWARE 19901.

Completion Date 365 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2001

Bids will be received in the Bidder's Room, Transportation Administration Center, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time THURSDAY, May 31, 2012



Delaware Department
of Transportation

**CONTRACT DOT1217-TRAFFMAINT
EMERGENCY HIGHWAY ITS AND TRAFFIC MAINTENANCE
STATEWIDE**

QUESTIONS AND ANSWERS

May 17, 2012

	Question	Answer
8	Please verify under which item # we are to be compensated for installation of pole or base mounted signal cabinet.	The installation of a signal cabinet is typically performed by DelDOT personnel; therefore, the corresponding items have been intentionally omitted from both contracts. If the installation of a signal cabinet is required per DelDOT's discretion or based on the approved traffic plans that supplement each work order, then negotiated prices will be established for Item 747504 – Installation or Removal of Pole or Post Mounted Cabinet (EA) and Item 747505 – Installation or Removal of Base or Pad Mounted Cabinet. Negotiated prices will be the preferred method of establishing payment for new items added to the contracts. Force Account payment, per Standard Specification 109.04, may be utilized if negotiated prices prove to be unsuccessful.
7	Item #732004 Topsoil (ton) and Item #736001 Sodding..... There are no details or explanation as to what these items will include/encompass that we can locate in our bid documents. Please advise.	See Sections 732 and 736, respectively, of the Standard Specifications.
6	In the specification for furnish and install wire (items 746906 746922) page 108 of DOT1209,; third paragraph; "Additional cables shall be left and arranged in neat and orderly manner as noted: 1. When pulled through junction wells, 6 feet of copper cable, supported on cable rack assemblies"; please clarify or offer detail on what type of cables this refers to and what type and size of cable racks should be utilized in what size junction well.	Cable racks are not required if the cable slack can be neatly arranged and laced with cable ties.

CONTRACT DOT1217-TRAFFMAINT

5	<p>In the specification for furnish and install wire (items 746906 746922) page 108 of DOT1209, the second paragraph states “underground cable runs shall be started at one terminal point and shall be continuous without splices to the final terminal point except for “home run cable” to “loop detector wire”. Opticom cable shall not be spliced in any application. Further down to the last category “splicing”, we are given details on how to splice certain cables. This specification does not clearly explain what types of cable can be spliced; and when. Highway lighting circuits and the feeders to and from service cabinets often take long and complicated routes to service lights. This specification leaves contractors vulnerable to an interpretation that could differ greatly between inspectors and engineers. Also, please note that this exact specification is often utilized in project bids outside the Traffic Section, where interpretation is almost never that of what was truly intended by the writers of this specification. This particular spec needs to be rewritten; not only to clarify what type of wire is desired (question pending form pre bid meeting of 4-26-12), but to clarify that the electrical lighting and fused service feeders will almost always have to be spliced.</p>	<p>With the exception of loop detector cables, DeIDOT does not intend to permit underground splicing under either contract. Roadway lighting cables and pedestrian signal/pushbutton cables are typically spliced in above-ground transformer bases and electrical service cables should not be spliced between the above-ground service pedestals and the corresponding cabinets/disconnects. If splicing cables in an underground location (e.g., inside a junction well) is required per DeIDOT’s discretion or based on the approved traffic plans that supplement each work order, then negotiated prices will be established for Item 746779 – Splicing of Electrical Cable, Underground (EA). Negotiated prices will be the preferred method of establishing payment for new items added to the contracts. Force Account payment, per Standard Specification 109.04, may be utilized if negotiated prices prove to be unsuccessful.</p>
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CONTRACT DOT1217-TRAFFMAINT

4	<p>In both sets of specifications Project Notes section 2D Crew Composition states “Crews for aerial work must have a Journeyman Electrician as the foreman. Effective July 1, 2012, the Board of Electrical Examiners revised definition of a Journeyman Electrician is “"Journeyman electrician" shall mean a person who is qualified and skilled to perform electrical work and who has met the requirements of § 1408 of this title to be licensed as a journeyman electrician.” The new requirements to be considered a “Journeyman” (by the Board of Electrical examiners definition) will be “5) For licensure as a journeyman electrician shall: a. Be at least 20 years of age. b. Have successfully completed an apprenticeship program approved by the Board. c. Have over 8,000 hours of full-time experience performing electrical work under the supervision of a licensed master electrician, master electrician special, limited electrician, or limited electrician special. d. Any person who meets the requirement of paragraph (a)(5)c. of this section as of June 30, 2012, may have the requirements of paragraph (a)(5)b. of this section and the examination requirement of paragraph (a)(6) of this section waived by the Board. Journeypersons, effective July 1, 2012, must apply and be approved and licensed by the Board of Electrical Examiners. Please verify the use of “Journeyman”/Journeyman” and whether its new definition by our State’s new standards is applicable and what was intended in this portion of the specification, as the “and/or” exception for the crew foreman that is not aerial does not apply to the aerial foreman requirement.</p>	<p>The Contractor Requirements for both contracts are consistent with DeIDOT’s current contract, 29-500-85.01, and DeIDOT intends to comply with the DE Code, including all adopted amendments and regulations currently in effect by state law. As a result of the enactment of House Bill 180, anyone providing electrical services in Delaware must hold a Delaware professional license as an electrician starting June 30, 2012. After that date, it will be illegal for unlicensed persons to provide electrical services.</p>
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CONTRACT DOT1217-TRAFFMAINT

3	<p>In both sets of specifications in Project Notes section 2A says the contractor will provide a Mater Electrician Special. The definition of such Chapter 14 of Title 24 is "Master electrician special" shall mean a person, licensed by the Board, to plan, estimate, layout, perform or supervise the installation, erection or repair of any electrical conductor, molding, duct, raceway, conduit, machinery, apparatus, device or fixture for any 1 of the following purposes: elevators, swimming pools, electric signs, air conditioning, heating, refrigeration and oil burners, and overhead and underground primary distribution systems." This definition is included in the revised rules and regulations of the Board of Electrical Examiners that will take effect July, 1, 2012. Please verify that "master electrician special" is the desired license for the contracts.</p>	<p>The Contractor Requirements for both contracts are consistent with DeIDOT's current contract, 29-500-85.01, and DeIDOT intends to comply with the DE Code, including all adopted amendments and regulations currently in effect by state law.</p>
2	<p>The hdw specs call for a cast nipple on the dwg's but the diagram shows tri-stud. Reference typical hardware drawing on page 42.</p>	<p>Response forthcoming.</p>

CONTRACT DOT1217-TRAFFMAINT

1	<p>Are there signal breakouts or configurations available. Item# 0910 – is this to include housing, led & hdw; 0930 – is this led module only ; 1040- is this led & housing only; 1050- is this led module only</p>	<p>No; signal head breakouts will not be provided. The price differential for arrow and circular shaped LED signal modules of different colors is generally considered nominal for the comprehensive furnish and install items for signal head sections (i.e., Items 746929, 746930, 746932, and 746933), which also include furnishing the traffic signal housing and associated hardware and the specified installation type (i.e., rigid or span mounting). For Contract 1209, the relatively small anticipated quantities for Items 746931 and 746934 should not significantly alter the total bid. For Contract 1217, the need for a weighted average to establish the unit cost for each furnish only item (i.e., Items 746943 – 746946) is at the bidders’ discretion.</p> <ul style="list-style-type: none"> • Line No. 0910 – Item 746929 – Yes; this item includes the LED vehicular signal indication module, signal housing, and associated hardware for one, single signal section • Line No. 0930 – Item 746931 – Yes; this item is limited to only the LED vehicular signal indication module • Line No. 1040 – Item 746943 – Yes; this “furnish only” item includes the LED vehicular signal indication module, signal housing, and associated hardware for one, single signal section • Line No. 1050 – Item 746944 – Yes; this “furnish only” item is limited to only the LED vehicular signal indication module
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PRE-BID QUESTIONS AND ANSWERS

April 26, 2012

8	<p>“On the junction wells, install bonding on existing junction wells, is there -- you come up with a method of how it's supposed to be done? Cast-iron, it's almost impossible to drill. Does anybody know that procedure, how it's done?”</p>	<p>One of DeIDOT’s current traffic contractors has completed this work for several roadway lighting projects in accordance with DeIDOT Standard Construction Detail No. T-2 (2011) – Junction Well, Grounding & Bonding for Steel Frames & Lids.</p>
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CONTRACT DOT1217-TRAFFMAINT

7	<p>“Same item, 747513, "Lighting Control and Distribution Enclosure," it's not stated what amperage you want that to be. The main breaker. 100? 200?”</p>	<p>See addendum with revised item description and special provision. DeIDOT generally installs intersection lighting under this contract, not interchange lighting; therefore, enclosures with 100 amperage main breakers are anticipated. If enclosures with 200 amperage main breakers are required per DeIDOT’s discretion, then payment will be based on a negotiated price for an alternate enclosure. Negotiated prices will be the preferred method of establishing payment for new items added to the contracts. Force Account payment, per Standard Specification 109.04, may be utilized if negotiated prices prove to be unsuccessful.</p>
6	<p>“Item 746925, "Furnish & Install Embedded Metered Service Pedestal," is this one approved by Delmarva Power? My main reason, your detail shows that switch, that bypass switch. I know Delmarva Power was an area that won't allow that.”</p>	<p>DeIDOT anticipates having approval from Delmarva for the new electrical service detail prior to these contracts being executed. If Delmarva does not approve this detail, then a revised detail will be provided and revised prices will be negotiated. Force Account payment, per Standard Specification 109.04, may be utilized if negotiated prices prove to be unsuccessful.</p>
5	<p>“While you're clarifying that, 746914, furnish and install No. 6 stranded solid ground. Stranded solid ground. I don't know what you want. And is it bare? It doesn't say that word, but I'm not too sure whether you want USE, bare.”</p>	<p>See addendum with corrected item description and special provision</p>
4	<p>“About your wire item, specifically the No. 2, No. 4, your item reads THWN. Your specification says XLPUSERHW. Which one do we want?”</p>	<p>See addendum with corrected item descriptions and special provisions</p>

CONTRACT DOT1217-TRAFFMAINT

<p align="center">3</p>	<p>“Your on-structure conduit items, furnish, install, on structure, is that going to cover the sides of bridges? Not overpasses, bridges</p>	<p>Under both contracts, DeIDOT primarily intends to use Items 745605 and 745609 for banding conduit to existing wood or steel poles or sign structures. If the installation of bridge-mounted conduit is required per DeIDOT’s discretion or based on the approved traffic plans that supplement each work order, then negotiated prices will be established for Item 745549 – Installation of Bridge-Mounted Conduit from Work Area above Bridge Deck (LF) and 745550 – Installation of Bridge-Mounted Conduit from Work Area below Bridge Deck (LF). Negotiated prices will be the preferred method of establishing payment for new items added to the contracts. Force Account payment, per Standard Specification 109.04, may be utilized if negotiated prices prove to be unsuccessful.</p>
<p align="center">2</p>	<p>“On the LEDs, looking at it real quick, you just had -- one might have been like 200 LEDs, but green is substantially higher than, say, yellow. Do you want to break that out or just figure everything on the higher end? Basically, if you're going to bid on an intersection with LEDs on it, I think you have the item is supplied LED 200, or whatever that amount was. Well, what color do we want?”</p>	<p>The price differential for arrow and circular shaped LED signal modules of different colors is generally considered nominal for the comprehensive furnish and install items for signal head sections (i.e., Items 746929, 746930, 746932, and 746933), which also include furnishing the traffic signal housing and associated hardware and the specified installation type (i.e., rigid or span mounting). For Contract 1209, the relatively small anticipated quantities for Items 746931 and 746934 should not significantly alter the total bid. For Contract 1217, the need for a weighted average to establish the unit cost for each furnish only item (i.e., Items 746943 – 746946) is at the bidders’ discretion.</p>

CONTRACT DOT1217-TRAFFMAINT

1	<p>“On the contract you only have pole base type 3, 4, and 6. In the instance where you need to use an alternate, there's really no pay item for that. How does that work?”</p>	<p>The installation of pole base, types 3, 4, and 6 are generally anticipated under both contracts based on the approved traffic plans that supplement each work order. Type 3 pole bases are commonly specified for traffic signal and CCTV camera foundations. Type 4 and type 6 pole bases are commonly specified for pedestal pole and roadway lighting foundations, respectively. If additional reinforced concrete or modified dimensions are required for a specific pole foundation per DelDOT’s discretion (e.g., unanticipated field conditions), then payment will be in accordance with the respective unit cost for Item 746614 – Pole Base Extension (CF) or based on a negotiated price for an alternate pole base type. Negotiated prices will be the preferred method of establishing payment for new items added to the contracts. Force Account payment, per Standard Specification 109.04, may be utilized if negotiated prices prove to be unsuccessful.</p>
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STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

IN RE:

CONTRACT DOT1209-TRAFFICSIG & ITS
and
CONTRACT DOT1217-TRAFFMAINT

DelDOT Administration Center
Bidders Conference Room
800 Bay Road
Dover, Delaware

Thursday, April 26, 2012
10:40 a.m.

BEFORE:

SCOTT S. GOTTFRIED
DelDOT

MARK LUSZCZ
DelDOT

MATT BUCKLEY
WR&A, LLP

MANDATORY PREBID MEETING

WILCOX & FETZER
1330 King Street - Wilmington, Delaware 19801
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www.wilfet.com



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ORIGINAL
Addendum No. 2
May 17, 2012

Pre-Bid Meeting

1 MR. GOTTFRIED: Good morning,
2 everybody. Welcome, and thank you for coming.
3 This is a mandatory prebid meeting for the
4 following contracts: The first contract is
5 DOT1209-TRAFFICSIG&ITS. This is traffic signals
6 and ITS statewide. The other contract that's
7 being handled in this prebid meeting is contract
8 No. DOT1217-TRAFFMAINT. This is emergency
9 highway ITS and traffic maintenance statewide.
10 Please note that both these contracts are
11 365-calendar-day contracts.

12 Today's meeting will start with me
13 talking about the administrative handling of
14 these contracts, then I will turn the program
15 over to the traffic section and consultants to
16 discuss the specifics of the work.

17 As we go along, if you have a
18 question, please ask. As you can see, we have a
19 court stenographer here making a transcript of
20 this meeting. If you plan to ask a question, I
21 would ask that you raise your hand, please state
22 your name and the company you represent, and only
23 one person speak at a time.

24 Procedures before bidding: All



1 questions must come to me. This is process is
2 very simple. That process used to be very
3 simple. I want to make sure that my boss didn't
4 put it in this contract. I don't think he did,
5 but... I am correct. That process is very
6 simple. You may fax your questions to me at
7 302-739-2254 or you may email them to me. My
8 email address is Scott, which is s-c-o-t-t,
9 .gottfried@state.us -- excuse me, restart that.
10 @state.de.us. This will allow you to secure
11 questions in your own words. I will in turn
12 direct those questions to the appropriate
13 section. Do not call the traffic section or the
14 consultant. If there's a true need to speak with
15 them, I will make those arrangements. It's the
16 most efficient way for this to be handled.

17 If the question results in
18 information that all bidders need to be aware of,
19 the information will be distributed via addendum.
20 After this meeting there will be at least one
21 addendum issued to each of those attending the
22 prebid meeting. The addendum will consist of the
23 minutes of this meeting, whatever plan or spec
24 changes come as a result of this meeting, and a



Pre-Bid Meeting

1 list of attendees. Please make sure you sign the
2 list certifying attendance. Since this is a
3 mandatory prebid meeting, if your firm is not
4 signed in, you cannot bid.

5 I strongly encourage you to look
6 over the plans and specifications as soon as you
7 can. We're planning to take bids on May 15th,
8 2012, for both contracts. I want to make this
9 clear. Any technical questions or concerns
10 regarding these contracts must come in seven days
11 prior to the bid opening. Do not make a mistake
12 on this. I'm going to hold these two contracts
13 to that. If you have a question or concerns, if
14 it comes in after the seven days of this
15 contract, I will not respond to your questions.

16 Are all the contractors in here
17 aware of that? I don't want to come back and
18 hear that I didn't hear you say that. Seven
19 calendar days prior to the bid opening. At 4:30
20 on May 8th I will not accept any more questions.
21 Okay?

22 Joint ventures: If any firms are
23 planning to bid as a joint venture, both firms
24 need to be registered. If you are not currently



1 registered, please stop by my office here or
2 right here at this window and pick up a
3 registration package. If you are planning to bid
4 as a joint venture, you must contact me via email
5 or phone call. The certification and bid bond
6 forms that are in the back of your proposals are
7 no good. You will need new bid forms and
8 certifications.

9 Bonding requirement: This, as all
10 other contracts, has a 10 percent bid,
11 100 percent performance bonding requirement.
12 Please note that we cannot accept any bonds with
13 riders or restriction. The only rider or
14 restriction that I still will accept is the
15 terrorist rider that came because of 9/11.

16 Please note the bond forms that are
17 in the back of these proposals. If you are not
18 doing a joint venture and you're planning to bid
19 as a single company, you must use that bond form.
20 I will not accept any AIA bonds or any other form
21 of bonds. If your bonding company has a problem
22 with using our form, please have your bond
23 company contact me. I will work this out.
24 Please note, this is not a DelDOT requirement.



1 This is state law. If you do not use my bond
2 form, you are automatically DQ'd. And along with
3 your bid bond -- I'm not sure where everybody's
4 bidding from, but this is Delaware -- we require
5 a 10 percent bid bond, not 5 percent. I require
6 a 10 percent bid bond.

7 The standard specifications dated
8 August 2001 are what governs these contracts.
9 Please note that is available at my office for a
10 cost of \$42. If you are a cheapskate like
11 myself, you can go online and get this from our
12 website, which is www.deldot.gov. Go on to
13 "Publications" and look up "Standard
14 Specifications August 2001."

15 Now, in saying that, at the time of
16 advertisement of these two projects, we have
17 supplementals to the standard specification. As
18 you will notice inside of your proposal books,
19 there is a page that talks about the supplemental
20 specifications. That page is page 37. Please
21 note, it is the contractor's responsibility,
22 since the time of advertisement, any supplemental
23 specification that was in effect at the time of
24 advertisement will apply to this contract. I



1 will not send out any little fliers or emails
2 telling you, hey, this is changed. You must go
3 in and look at the supplementals yourself online.
4 And make sure you are aware of those and see if
5 they affect this contract. That is in your
6 proposal book. There is a link on the website.
7 If you go to our website and open this up on
8 Delawarebids.com, I believe it is, or Delaware
9 Bids and open this up and look at the electronic
10 version that's on the website, you will see
11 there's a link there. Go to that link.

12 Again, it is the responsibility of
13 the contractor to make sure that they are aware
14 of any supplemental specifications that have come
15 out to the standard specs before the
16 advertisement date of this project. All that did
17 come out are incorporated in this project.

18 Are there any questions on what I
19 have gone over so far?

20 (No response.)

21 MR. GOTTFRIED: Let's get to the fun
22 stuff, then.

23 Bid proposal quantity forms: This
24 project is using the Expedite program 5.9A which



1 you can download at my website, which, again, is
2 www.deldot.gov. When you order your proposal,
3 you can ask for the Expedite bid file which
4 carries these two projects, whichever one you're
5 choosing to bid or both of them, and load that
6 into the program and you can bid this
7 electronically. When I say "electronically,"
8 that means it allows you to put your numbers onto
9 your computer and print off a hard copy that you
10 will still have to submit to me in by hand on
11 May 15th. Electronic does not mean that you can
12 bid this over the Web. Is everybody clear on
13 that? You will still have to bring me a hard
14 copy of your bid. What the electronic bidding
15 does allow is that you don't make any bidding
16 mistakes because that program will tell you if
17 you put a zero dollar amount in, it will also
18 automatically add up everything for you correctly
19 so that you don't have to extend out the numbers.
20 It does this for you.

21 I would suggest, because there are so
22 many items on these two projects, that you please
23 use the Expedite 5.9A bidding system. If you
24 choose not to do that and you're going to fill



1 out the bid forms that are in the back of my
2 proposal, this next part is for you.

3 First of all, there are one, two,
4 three, five columns. The fourth column on the
5 bid form is for your unit price. Please make
6 sure that's what you put in there. My
7 regulations state that, if I have any concerns or
8 issues with your bids, I fall back to unit price.
9 If you make the mistake and put your extended
10 amount in the unit price, I will not disqualify
11 your bid. What I will do is fall back to your
12 unit price and I will extend out and redo your
13 mathematics for you. And if you put your
14 extended amount there, which people in the past
15 have done, you will have a trillion-dollar bid,
16 and I guarantee you, you will not win the award.

17 The fifth column is for your extended
18 amount. Please note, you are not allowed to bid
19 a zero dollar amount for anything. If you have
20 an issue with items we have on this project and
21 something should be included in another item or
22 you think two items should be rolled up together,
23 you must contact my office and let me know. Do
24 not put on your bid form is included in item 60.



1 Item 70 is included in item 60. That's an
2 automatic disqualification. I cannot accept
3 that. You must bid every item on this proposal.
4 Okay? I want to make that very clear. That is
5 one of the 11 things that will automatically get
6 you disqualified from this bid, no questions
7 asked.

8 Please note, if you choose not to use
9 the 5.9 Expedite, you must typewrite your bid.
10 Must be typewritten figures, no exception. If
11 you handwrite your bids, they will automatically
12 be disqualified. The only way I will accept a
13 handwritten bid is there must have been a
14 typewritten number in there previously. I know
15 people are getting the numbers at the last
16 minute. I have seen people sitting out in my
17 parking lot 10 minutes before bid opening. You
18 may strike a single black line through the
19 typewritten number, write the corrected amount,
20 and you must initial it. Is everybody clear on
21 that?

22 Are there any questions on the
23 quantity pages? Please note, you save yourself a
24 lot of time if you use the 5.9A. If anybody has



1 a problem loading it in their computer or they
2 have any issues, please contact my office. We
3 will walk you through it. If it is your first
4 time using the Expedite 5.9A, when you first go
5 in and you're setting up your account on there,
6 I'll let you know this now, it asks for an agency
7 ID number. If this is your first time using it,
8 that is your federal tax EIN number. You're to
9 put that in there with no dashes. That is your
10 nine-digit number with no dashes.

11 The next form I'd like to go over is
12 your certification form. The certification form
13 must be turned in. This is a two-page form. A
14 lot of people just look at the front and don't
15 realize there's a back to this. Please note, on
16 your certification form the undersigned bidder at
17 the top is the name of your company, not the name
18 of the person filling out the form.

19 On the second page, halfway down the
20 page, it states: "Failure to acknowledge all
21 addenda will result in this bid being declared
22 nonresponsive." When you receive an addendum,
23 the number of addendums, you must fill it out on
24 this form to let me know that you have received



1 it and you did acknowledge that addendum. If you
2 do not do that, and I can guarantee there's going
3 to be one addendum on this -- I have to send out
4 the transcript -- if you do not acknowledge that
5 addendum, I have no choice but to disqualify your
6 bid.

7 Please note, at the bottom it says,
8 "Name of the Bidder" and "Authorized Signature."
9 That is the person allowed to obligate your
10 company into a contractual agreement. And the
11 form must be notarized. This may sound very
12 stupid, but I can show you bids where I have a
13 notary public seal down there and no signature.
14 Automatic disqualification.

15 This form also includes your
16 noncollusion statement. If I don't have a
17 signature here, it's toast.

18 If you have a corporate seal, your
19 corporate seal must be put on here and it must be
20 attested to. If for some reason your corporate
21 seal is locked in the secretary's drawer and
22 she's at Disney, you may draw your corporate seal
23 on this form. But make it very clear, the person
24 that attests to the corporate seal cannot be the



1 same person that enters the contract into a
2 contractual agreement. The signatures must be
3 different. In other words, the person that signs
4 saying we're obligating our company cannot be the
5 person that attests to the corporate seal.

6 Are there any questions on the
7 certification form?

8 (No response.)

9 MR. GOTTFRIED: Last form is your bid
10 bond. As I said before, you may Xerox this, you
11 may fax this, you may do anything you want to it.
12 But you may not retype it. It must be this
13 original form. There is an electronic version on
14 my website in case your bonding company wants to
15 go there and grab it down. But you must use this
16 form. I am going to impress on you, do not
17 retype this form. If you do, if you make one
18 mistake, you forget one period, you capitalize
19 one letter that shouldn't be capitalized, if you
20 retype it, because people have done this, you
21 will automatically be disqualified and I will not
22 consider it my form. I may be sounding like an
23 ogre right now, but believe me, I have had many a
24 companies lose contracts and take us to court and



1 lose in court because they aren't following these
2 simple rules.

3 Please note, on here it asks you to
4 give a dollar amount to how much your bid bond is
5 covering. If your bonding company will allow
6 you, I would suggest that you put only 10 percent
7 in that box so it doesn't matter what the total
8 cost of your contract is or if you make a mistake
9 and you're adding on your quantity forms. But if
10 you must put an exact dollar amount to not to
11 exceed from your bonding company, please round it
12 up several thousand dollars because you do not
13 want what happens to other people is they put an
14 exact figure in there and guess what, they
15 misadded by 25 cents. We will say 50 cents. And
16 their bond goes up by 50 cents -- their bid goes
17 up by 50 cents. That means the bond needs to be
18 a nickel more. Because they put an exact figure
19 in there, their bond does not cover their
20 contract and I automatically disqualify them.

21 Are there any questions over the
22 information I have gone over? Any at all? This
23 is the administrative handling part only.

24 (No response.)



1 MR. GOTTFRIED: If you have any
2 concerns on how to turn your bid in or what you
3 need to do to fill out your bid -- before I say
4 that, if this is your first time bidding with us
5 or you haven't bid with us in a while, I suggest
6 you go to the standard specifications. I
7 strongly suggest you look at 102.06. That is
8 preparation of proposal. It will tell you
9 exactly how to bid with the Department. We will
10 give you all my rules and regulations on how to
11 turn your bid in. If you can't get through that,
12 please call me.

13 Section 102.07 is irregular
14 proposals. There's 11 items there. If you make
15 one of those 11 mistakes, you're automatically
16 disqualified, no questions asked. The wording in
17 there says, "shall be disqualified or considered
18 nonresponsive." I'd much rather get viable bids
19 than get people that make mistakes. You should
20 just call me and we can work it out. I will
21 answer questions up until 2 o'clock on the 15th.
22 If you have a question, please call me or email
23 me.

24 Are there any questions about the



1 administrative handling of these two contracts?

2 Any at all?

3 (No response.)

4 MR. GOTTFRIED: Okay. If there's no
5 questions, then I'm going to turn the meeting
6 over to Mark Luszc and he's going to go through
7 the technical specs and other issues he wanted to
8 bring up to you in this meeting.

9 MR. LUSZCZ: Thanks, Scott. These
10 two contracts are replacing our existing on-call
11 signal, ITS, and lighting contract which was bid
12 under Contract No. 29-500-85. The new contracts
13 which are currently out to bid have several
14 significant differences from our current
15 contracts which is why we are holding this prebid
16 meeting.

17 Under 29-500-85 we selected and
18 executed agreements with two contractors. The
19 work included in these contracts included new
20 installations, upgrades to existing facilities,
21 planned maintenance work, and emergency
22 maintenance work. Our new contracts will split
23 the construction and maintenance work efforts
24 into separate contracts.



1 I'm going to use the shorthand name
2 for our new contracts just using the number so I
3 don't have to spell out that whole list of
4 letters like Scott did to officially do it.

5 Contract 1209 will be the traffic
6 construction contract and will encompass planned
7 construction projects, including new
8 installations and modifications to traffic
9 signals, roadway lighting, and ITS systems. Work
10 may also include curb ramps, sidewalks, and
11 median modifications. Each task will be
12 accompanied by design plans, estimated
13 quantities, and a defined time frame for
14 completion.

15 Contract 1217 will be the traffic
16 maintenance contract and will encompass both
17 planned and emergency maintenance projects.
18 Planned work will include projects such as head
19 wire replacements and signal head replacements.
20 Emergency work may include repair and replacement
21 of struck signal heads, cabinets, and/or signal
22 or pedestrian poles. The maintenance contract
23 may also be used for general maintenance of
24 traffic support as well.



1 DelDOT may elect to award either/or
2 both contracts to multiple contractors based on
3 the lowest responsive responsible bids received.
4 The contract terms are for one year with the
5 option to extend each for an additional four
6 years.

7 With that, I'm going to turn it over
8 to Matt Buckley to go into some more of the
9 details.

10 MR. BUCKLEY: Good morning. I'm
11 going to highlight some of the key components of
12 the specifications component of each contract,
13 both 1209 and 1217.

14 For work assignments for
15 Contract 1209, each work assignment will have a
16 number of working days assigned to it. Failure
17 to complete the task within the allotted time
18 will result in the assessment of liquidated
19 damages based on the value of the particular
20 task. I suggest you, for 1209, see page 5 for
21 the examples and the assigned liquidated damages
22 for each task.

23 For Contract 1217 the contractor is
24 required to begin all work assignments no later



1 than seven calendar days after issuance of the
2 work order. Failure to begin the assignment
3 within those seven calendar days will result in
4 the Department personnel performing the work,
5 with the itemized cost deducted from the payments
6 due to the contractor. For 1217 that is on
7 pages 5 and 6.

8 Procedures for invoicing work
9 completed are listed on pages 7 and 8 of both
10 contracts. Note that a DelDOT Form CN-91 must be
11 submitted to the Department's DBE office
12 reflecting payment to all suppliers and
13 subcontractors. This form must be submitted
14 following receipt of each pay estimate before the
15 next estimate can be paid by DelDOT. The form
16 will be provided by the Department.

17 Both contracts require a one-year
18 warranty on materials, installation, and
19 workmanship. Specific items, for example, LED
20 modules may carry a longer warranty if so
21 specified. Both contracts have that information
22 on page 9 under "Basis of Payment."

23 We would also like to advise you that
24 the Department at their discretion may call for



1 electrical testing. That is on page 10. The
2 plan details included in both projects will
3 govern the work to be performed. In the event of
4 a conflict between the special provisions or
5 standard construction details, the plan details
6 will supersede.

7 There are several new items or
8 changes to previous special provisions that were
9 in the previous Contract 29-500-85 that we would
10 also like to highlight.

11 There are no DBE goals or trainee
12 requirements to be met on either contract. In
13 general, most pay items will include furnish and
14 installing all materials. Separate furnished
15 items are included primarily in 1217 for LED
16 units, pedestrian push-button assemblies, and
17 solar-powered radar speed signs. In the bid
18 documents there's a typo that includes the word
19 "speed trap" or "trap." That is not correct.
20 There is an error in the description and the spec
21 is actually correct for the name of that pay
22 item. Again, that is for solar-powered radar
23 speed signs, and that is a furnish-only item.

24 Separate install-only items are



1 included in both contracts for materials that
2 will be supplied by the Department. For example,
3 poles, luminaires, and overhead signs. All other
4 items include both furnishing and installing
5 various materials specified unless specifically
6 noted otherwise.

7 Under the previous contract an
8 example was the installation only of a
9 Department-supplied push-button assembly. Under
10 this new contract, the pay item includes
11 furnishing and installing the push-button
12 assembly. As well as under 1217 there is a
13 furnish-only item for push-button assemblies.

14 Conduit junction wells have changed
15 significantly. There are new composite-type
16 junction wells that differ from previous
17 metal-only wells. They now include specific
18 grounding requirements that are identified in the
19 detail section of the specifications. The new
20 junction wells will require grounding as part of
21 the unit bid price. There is also a separate bid
22 item to include grounding existing junction
23 wells.

24 Conduit items have changed



1 significantly. In order to lessen the number of
2 overall contract pay items, the sizes of the
3 various conduit items are now listed as an up-to
4 primarily or typically four inches, up to four
5 inches. That way we do not have specific pay
6 items for supplying and installing two-inch,
7 three-inch. It's now up to four inches. This
8 means that all conduit sizes equal to or smaller
9 than the identified size will be measured and
10 paid for under a singular item. The material
11 types of the contracts do have different pay
12 items, such as HDPE, PVC, galvanized, etcetera.

13 The removal of traffic control
14 devices has also changed significantly. There
15 are three new pay items to the DelDOT traffic
16 contracts. These items include preparing each
17 location for final inspection, notifying those
18 required that a location is ready to be put in
19 service, notifying DelDOT, and picking up any
20 DelDOT-furnished materials, disposal of materials
21 not returned to DelDOT, and salvaging and
22 returning the items listed below to either the
23 Dover sign shop or Bear operations facility as
24 specified.



1 I quote, "Traffic signal poles and
2 pedestrian signal poles, pedestal poles, lighting
3 poles, salvage cable, controllers and cabinet
4 enclosures, junction well frames and lids, signal
5 heads, pedestrian signal heads, Opticom detector
6 units and signs that were mounted on mast arms,
7 poles or structures."

8 The work is essentially broken down
9 into three different classifications depending on
10 the amount of material that needs to be removed
11 from a site. Type 1 is relatively minor and
12 small items. We have a type 2. It's
13 intermediates. And type 3 is essentially a
14 complete removal of the existing equipment and
15 replacing that. A particular type will be
16 identified for each project.

17 Performance and payment bond: In
18 order to put all bidders on an equal footing,
19 item 763384 has been designated as a fixed-price
20 item. Each bidder will have an identical amount
21 included in their overall bid in order that no
22 advantage or disadvantage can be realized based
23 on the bonding item.

24 Following award, the successful



1 bidder must document and provide to DelDOT proof
2 of payment to the applicable surety company.
3 Ten percent will be added to that figure to
4 account for overhead, profit, etcetera. The
5 contract will then be adjusted by change order,
6 either plus or minus, so that the payment for the
7 item will match the actual payment to the surety,
8 plus 10 percent. The fixed prices are \$70,000
9 lump sum for Contract 1209 and \$10,000 lump sum
10 for Contract 1217.

11 At this time we will take technical
12 questions that you may have.

13 MR. GOTTFRIED: Before you take any
14 technical questions, I have something to say.

15 You mentioned the DBE goal. There is
16 no goal on this contract, you're absolutely
17 correct, but if everybody looked at the
18 certification page, you will see there is a place
19 for you to put a DBE goal in there. Now, these
20 two contracts have the ability to use federal
21 funds, so we have to put a federal certification
22 in there. DBE goal is zero. If you put any
23 number in that area for the DBE goal, you will be
24 held to that. I want to make that perfectly



1 clear. You do not have to put any number on
2 there and you can put zero. And you can use a
3 DBE, not a problem. But if you turn in that
4 certification and it has a percentage in there
5 that you put on there, I will hold you to that
6 for the life of the contract and you will be
7 contractually obligated to meet that DBE goal.

8 Does everybody understand that? Make
9 sure it's clear, the goal is zero. You only have
10 to meet the goal. If anybody puts more than that
11 in there, you will be held to that standard once
12 I receive the certification paper. I don't want
13 anybody to make a mistake on that.

14 Once you turn that certification in
15 signed, you can't go back and change it to zero.
16 I'm not trying to tell you not to use DBEs. I'm
17 just telling you, if you do fill it out and you
18 are planning to use them, you either put zero or
19 how much you're planning to use. You will still
20 get credit for using a DBE. That's your choice.
21 But if you fill out a number on your
22 certification, you must meet that. And we can't
23 take any excuses after the fact on why you can't
24 use that amount.



1 I want to make that clear because I
2 had another company make that mistake and they
3 wanted to take it back and they couldn't. Is
4 everybody clear?

5 I'm sorry about that. I wanted to
6 make sure that was clear.

7 Any technical questions?

8 MR. CLOWNEY: Dennis from Byers
9 Electric. I notice that you had mentioned you're
10 going away from the supply-of items to furnish
11 and install up to four inch. But there's a big
12 difference between four inch and two and a half
13 inch as far as conduits is concerned. I was just
14 wondering, is that really the way you wanted to
15 go? At this point we would have to generally bid
16 everything at four inch, which is quite a bit
17 more than it would be for two and a half or two
18 inch, especially steel right now.

19 MR. BUCKLEY: Yes. And we feel that
20 the quantities for the engineer's estimate
21 reflect the anticipated amounts used for each
22 type. So if you compare -- you mentioned steel
23 versus PVC. If you look at the quantities that
24 corresponds to each, you might see that that's



1 what we intend to use. From a, I guess, design
2 standard, we have new internal documents that
3 actually recommend the majority of the larger
4 sizes. So four inch is -- in other words, four
5 inch is becoming much more common, as well as
6 three inch.

7 MR. MOORE: Tom Moore from Byers
8 Electric. The new item for traffic control
9 device equipment turn on and pick up, I noticed
10 that I read that you're going to have -- part of
11 that item is going to be removing junction wells.
12 Is that going to be like designated on each print
13 or is that going to be a guessing game on what
14 the amount is going to be removed and how much --

15 MS. PETERS: Mel Peters from Traffic.
16 It's going to be determined in the design phase
17 what category it falls into, whether it's 1, 2,
18 or 3.

19 MR. MOORE: You have several
20 different types of intersections where it could
21 be one junction well, you have to take out
22 16 junction wells no matter how big the
23 intersection.

24 MS. PETERS: Design will know that.



1 They will know the number of removals on a
2 traffic project.

3 MR. BUCKLEY: That's correct. I
4 guess the selection of type 1, 2 or 3 will be at
5 the discretion of the systems design section and
6 then each plan that corresponds to the work order
7 will identify the number of wells that will need
8 to be removed or the number of pole bases and
9 it's -- if we anticipate or based on the design
10 plan if there's a significant number of devices
11 to be removed and the location and the complexity
12 of the removals, then we will take that into
13 account and potentially select a type 2 removal
14 as opposed to a type 1.

15 MR. MOORE: On the same line, if you
16 go out to an intersection and change out one
17 pole, anything that's going to be -- have removal
18 is going to be identified as one of those
19 categories?

20 MR. BUCKLEY: That's correct.

21 MS. KRISS: Kathleen, Kriss
22 Contracting. 743007, "Traffic Officers," you
23 have a fixed rate in here of \$75 per hour. What
24 if that doesn't cover the cost --



1 MR. GOTTFRIED: Read the special
2 provisions. The spec that's in the standard spec
3 tells you it's exact cost plus 10 percent. \$75
4 is just a placeholder so everybody bids the same
5 thing. If you pull up the standard spec, it
6 reads whatever your cost plus a 10 percent markup
7 on that from the actual invoice from the police
8 station or whoever you use, because no two police
9 stations in the state of Delaware charge the same
10 amount. To make everybody on the same page, we
11 put a fixed price. That's what you actually get
12 paid plus 10 percent.

13 MR. MOORE: Tom Moore from Byers
14 again. On the contract you only have pole base
15 type 3, 4, and 6. In the instance where you need
16 to use an alternate, there's really no pay item
17 for that. How does that work?

18 MR. BUCKLEY: We will likely answer
19 that question through the addendum.

20 MR. CLOWNEY: Dennis of Byers again.
21 On the LEDs, looking at it real quick, you just
22 had -- one might have been like 200 LEDs, but
23 green is substantially higher than, say, yellow.
24 Do you want to break that out or just figure



1 everything on the higher end?

2 MR. BUCKLEY: That's left up to the
3 discretion of each bidder.

4 MR. CLOWNEY: Because arrows, yellow
5 arrow --

6 MR. GOTTFRIED: No, it's not. You
7 can't break it out.

8 MR. BUCKLEY: I'm sorry.

9 MR. GOTTFRIED: He's asking to break
10 it out and you said it's at the discretion of the
11 bidders. He can't bid something we don't put in
12 there. Go ahead.

13 MR. CLOWNEY: Basically, if you're
14 going to bid on an intersection with LEDs on it,
15 I think you have the item is supplied LED 200, or
16 whatever that amount was. Well, what color do we
17 want?

18 MR. BUCKLEY: I apologize. I
19 misspoke. The assumption for the number of each
20 color and the cost associated with, that's why we
21 left it as a comprehensive pay item. It's still
22 going to be one single item that will take into
23 account arrows, red, yellow, and green.

24 MR. CLOWNEY: It doesn't say that.



1 It just says -- they're all different costs.
2 Green may be more than red and they're cheaper.
3 I guess you're saying just take an average.

4 MR. BUCKLEY: We understand that
5 there is a difference in cost. However, the pay
6 item is to account for one single LED
7 irregardless of whether it's an arrow or circular
8 indication.

9 MR. CLOWNEY: Basically we have to
10 use the higher price just to cover ourselves.

11 MR. LUSZCZ: We may clarify this one
12 with the addendum as well.

13 MR. CLOWNEY: Is there a
14 possibility -- the State, we have changed out a
15 number of LEDs. Is there a possibility -- I
16 didn't notice it -- if you could give out a
17 couple vendors that we could possibly use?
18 Whether it's Dialight or if it's GE. You know
19 what you have been using. So we don't have to
20 send this to nine different people and hope to
21 say, yeah, I meet that spec, find out they don't
22 meet their spec, and later on you're going to
23 tell us, that's your problem, guys.

24 MR. GOTTFRIED: I cannot advocate for



1 any one vendor. It will be looking like the
2 State shows partiality. I can tell you this
3 much -- hold on before you go any further. I can
4 show you -- you can request from my office -- the
5 last bid tab for the LEDs and you can see all the
6 vendors that bid and who the apparent low bidder
7 was. But I will not advocate for any one company
8 or say, you should call this company or that.
9 But there was an LED contractor that was bid
10 what, one year ago, two years ago? You may ask
11 for that bid tab. I believe it's on the
12 Internet. And you can look at who the apparent
13 low bidder was and that's who we're using and all
14 the bidders that came in there.

15 I will not give you a specific name
16 that you need to call. Your LED vendors are to
17 meet our specs. That's the best I can do as far
18 as state law.

19 MR. CLOWNEY: Sometimes in
20 construction like it would say approved vendors
21 would be Holophane and Hadco.

22 MR. GOTTFRIED: That had special
23 rulings and agreements upon the State and with
24 the feds. We don't have that for LEDs. The same



1 thing goes for epoxy paint. I have specific
2 vendors because we want certain things. Certain
3 items get approved. Like LEDs is not one. The
4 best you can do is, like I said, grab the bid
5 tab -- and if you wait around today, I will get
6 you a copy of that. If anybody else wants it, I
7 will let you see it, but I will not advocate for
8 just one vendor or even two.

9 MS. KRISS: Kathleen, Kriss
10 Contracting. Your on-structure conduit items,
11 furnish, install, on structure, is that going to
12 cover the sides of bridges? Not overpasses,
13 bridges.

14 MR. BUCKLEY: We will have to follow
15 up with that for the addendum.

16 MR. CLOWNEY: Dennis of Byers again.
17 I guess for the wire is furnish and install. I
18 guess we would figure worst-case scenario whether
19 it's an empty conduit or a conduit that already
20 has wire in it, on a span or in a pole? Just
21 figure worst-case scenario like the conduit?

22 MR. BUCKLEY: It's furnish and
23 install irregardless of the installation type.
24 And the common installation types are overhead on



1 a span through conduit, whether it's existing
2 with numerous cables or empty existing conduit.
3 But the way that the spec is written is for
4 furnish and install irregardless of installation.

5 MS. KRISS: Kathleen, Kriss
6 Contracting. About your wire item, specifically
7 the No. 2, No. 4, your item reads THWN. Your
8 specification says XLPUSERHW. Which one do we
9 want?

10 MR. BUCKLEY: We will clarify that
11 through the addendum.

12 MS. KRISS: Me again. While you're
13 clarifying that, 746914, furnish and install
14 No. 6 stranded solid ground. Stranded solid
15 ground. I don't know what you want. And is it
16 bare? It doesn't say that word, but I'm not too
17 sure whether you want USE, bare.

18 MS. PETERS: That's a typo, and we
19 will give you clarification.

20 I have one statement I'd like to say.
21 The contract requires that any of the items,
22 supply items, that you supply serial numbers.
23 For example, LED modules. What's forthcoming
24 that has not been a Department decision yet is we



1 have an inventory system that we read -- today we
2 do. We track serial numbers to account for
3 manufacturer warranty. We need a method put in
4 place to be able to track the warranty of items
5 that are supplied by the contractor.

6 So we're working that issue out, and
7 what's forthcoming is the method in which we
8 would like to see those items come from each
9 contractor in some kind of format, whether it be
10 Excel or scanned document or something of that
11 nature.

12 I just want to put that out there
13 that it is forthcoming. It is a Department
14 decision that hasn't been finalized yet.

15 MR. MOORE: Tom Moore from Byers
16 Electric. Item 746925, "Furnish & Install
17 Embedded Metered Service Pedestal," is this one
18 approved by Delmarva Power?

19 MR. RUCKER: Mickey Rucker, Century
20 Engineering with DelDOT Traffic.

21 They have been installed in numerous
22 locations in Maryland on the lower Eastern Shore
23 where Delmarva Power supplies power.

24 MR. MOORE: That still doesn't answer



Pre-Bid Meeting

1 the question. Delmarva Power Delaware's section?

2 MR. GOTTFRIED: We will respond to it
3 back via the addendum.

4 MR. MOORE: My main reason, your
5 detail shows that switch, that bypass switch. I
6 know Delmarva Power was an area that won't allow
7 that.

8 Can I follow up? Same item, 747553,
9 "Lighting Control and Distribution Enclosure,"
10 it's not stated what amperage you want that to
11 be. The main breaker. 100? 200?

12 MR. BUCKLEY: We will clarify that as
13 well.

14 MS. KRISS: Kathleen, Kriss
15 Contracting. I don't know whether this is an
16 admin. question, technical question or in
17 between. Is there a set minimum percentage of
18 work? Since you're awarding to multiple
19 contractors, is there a set minimum percentage of
20 work that a contractor would be given work orders
21 for?

22 MR. LUSZCZ: No.

23 MR. GOTTFRIED: Not at this time.

24 MR. MOORE: Tom Moore from Byers



1 Electric again. On the junction wells, install
2 bonding on existing junction wells, is there --
3 you come up with a method of how it's supposed to
4 be done? Cast-iron, it's almost impossible to
5 drill.

6 MR. BUCKLEY: I believe we have been
7 successful in doing it to date retrofitting that
8 at several locations.

9 MR. MOORE: You have?

10 MR. BUCKLEY: Yes.

11 MR. MOORE: Does anybody know that
12 procedure, how it's done? We're a contractor.
13 We have not done it.

14 MR. BUCKLEY: We will take a look at
15 the special provision and follow up in the
16 addendum to see if additional clarification is
17 needed.

18 MR. GOTTFRIED: Any other questions?

19 (No response.)

20 MR. GOTTFRIED: The issue that was
21 just brought up I will bring it up to the
22 contractor here. There's a big job and small job
23 here. Both of these jobs are bidding on the same
24 day. Just in case you can't encompass doing both



1 jobs but you would like to bid both jobs just in
2 case you don't get the big one or the larger of
3 the two, I will allow you on that day, once I
4 have opened up the larger of the two, if you
5 would like to withdraw your bid on the second job
6 if you are the apparent low bidder on the first,
7 I will allow that. Okay? So that you can bid
8 both jobs and be safely assured that you will
9 still be able to do one or the other.

10 Does everybody understand what I'm
11 saying? Does anybody have a problem with that?
12 Any other questions?

13 MR. CLEMENTS: Tom Clements with
14 Century Engineering. Just to clarify or further
15 go into that issue, if you are successful getting
16 both jobs, you're going to be expected to do the
17 work on both jobs and that means start the
18 assignments, finish the assignments. If you
19 don't get finished, you're going to be charged
20 damages. But just be aware, you will need to
21 have enough horsepower to do both jobs if you
22 elect to bid both.

23 MR. GOTTFRIED: Any other questions
24 or concerns?



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(No response.)

MR. GOTTFRIED: If not, I'd like to thank everybody for showing up today. I look forward to seeing your bids. Thank you very much.

(Meeting concluded at 11:30 a.m.)

- - - - -



C E R T I F I C A T E

STATE OF DELAWARE)

)

NEW CASTLE COUNTY)

I, Kimberly A. Hurley, Registered Merit Reporter and Notary Public, do hereby certify that the foregoing record, pages 1 to 40 inclusive, is a true and accurate transcript of my stenographic notes taken on Thursday, April 26, 2012, in the above-captioned matter.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of May, 2012, at Wilmington.



Kimberly A. Hurley



Project No. DOT1209-TRAFFICSIG&ITS and DOT1217-TRAFFMAINT
Traffic Signals & ITS and Emergency Highway Its and Traffic Maintenance Statewide
Mandatory Pre-Bid Meeting- April 26, 10:30 AM

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Jim Bunting	DEL DOT	14 Sign Shop LN DOVER DE 19901	Jim.Bunting@state.de.us	760-4814

746932 - FURNISH & INSTALL 12" LED SIGNAL HEAD SECTION, RIGID MOUNT	<u>75</u>
746933 - FURNISH & INSTALL 12" LED SIGNAL HEAD SECTION, SPAN MOUNT	<u>75</u>
746934 - FURNISH & INSTALL 12" LED TRAFFIC SIGNAL HEAD INDICATION MODULE	<u>75</u>
746906 - FURNISH & INSTALL 4-CONDUCTOR #18 AWG SHIELDED OPTICOM CABLE	<u>81</u>
746907 - FURNISH & INSTALL 1-CONDUCTOR #2 AWG STRANDED COPPER	<u>81</u>
746908 - FURNISH & INSTALL 1-CONDUCTOR #4 AWG STRANDED COPPER	<u>81</u>
746909 - FURNISH & INSTALL 1-CONDUCTOR #6 AWG STRANDED COPPER	<u>81</u>
746910 - FURNISH & INSTALL 1-CONDUCTOR #8 AWG STRANDED COPPER	<u>81</u>
746911 - FURNISH & INSTALL 1-CONDUCTOR #10 AWG STRANDED COPPER	<u>81</u>
746912 - FURNISH & INSTALL 1-CONDUCTOR #14 AWG STRANDED COPPER	<u>81</u>
746913 - FURNISH & INSTALL 2-CONDUCTOR #14 AWG ALUMINUM SHIELDED COPPER	<u>81</u>
746914 - FURNISH & INSTALL #6 BARE STRANDED COPPER GROUND	<u>81</u>
746915 - FURNISH & INSTALL #8/2 WIRE UF W/GROUND	<u>81</u>
746916 - FURNISH & INSTALL #8/3 WIRE UF W/GROUND	<u>81</u>
746918 - FURNISH & INSTALL #2/0 AWG STRANDED COPPER	<u>81</u>
746919 - FURNISH & INSTALL #4/0 AWG STRANDED COPPER	<u>81</u>
746920 - FURNISH & INSTALL 14/4 TRAFFIC CONTROL CABLE	<u>81</u>
746921 - FURNISH & INSTALL 14/9 TRAFFIC CONTROL CABLE	<u>81</u>
746922 - FURNISH & INSTALL 14/16 TRAFFIC CONTROL CABLE	<u>81</u>
746923 - FURNISH & INSTALL A 1" FLEXIBLE NON-METALLIC LIQUIDTIGHT CONDUIT DETECTOR SLEEVE WITH LOOP WIRE	<u>86</u>
746924 - FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	<u>86</u>
746925 - FURNISH & INSTALL EMBEDDED METERED SERVICE PEDESTAL (100 AMP)	<u>89</u>
746926 - FURNISH & INSTALL ELECTRICAL UTILITY SERVICE EQUIPMENT 120/240	<u>91</u>
746935 - FURNISH & INSTALL 16" LED COUNTDOWN PEDESTRIAN SIGNAL	<u>93</u>
746936 - FURNISH & INSTALL 16" LED PEDESTRIAN SIGNAL HEAD INDICATION MODULE	<u>93</u>
746937 - FURNISH & INSTALL PEDESTRIAN PUSHBUTTON WITH SIGN	<u>93</u>
746938 - INSTALL OVERHEAD SIGN	<u>98</u>
746939 - TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL AND MAINTENANCE, TYPE I	<u>99</u>
746940 - TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL AND MAINTENANCE, TYPE II	<u>99</u>
746941 - TRAFFIC CONTROL DEVICE EQUIPMENT TURN ON, PICK UP, REMOVAL AND MAINTENANCE, TYPE III	<u>99</u>
746943 - FURNISH 8" LED SIGNAL HEAD SECTION	<u>102</u>
746944 - FURNISH 8" LED TRAFFIC SIGNAL HEAD INDICATION MODULE	<u>102</u>
746945 - FURNISH 12" LED SIGNAL HEAD SECTION	<u>102</u>
746946 - FURNISH 12" LED TRAFFIC SIGNAL HEAD INDICATION MODULE	<u>102</u>
746947 - FURNISH 16" LED COUNTDOWN PEDESTRIAN SIGNAL	<u>106</u>
746948 - FURNISH 16" LED PEDESTRIAN SIGNAL HEAD INDICATION MODULE	<u>106</u>
746949 - FURNISH PEDESTRIAN PUSHBUTTON ASSEMBLY	<u>106</u>
746950 - FURNISH SOLAR-POWERED RADAR SPEED SIGN	<u>110</u>
747515 - CABINET BASE TYPE M	<u>111</u>
747516 - CABINET BASE TYPE P	<u>111</u>
763684 - PERFORMANCE AND PAYMENT BOND, OPEN END TRAFFIC MAINTENANCE CONTRACT	<u>112</u>
BID PROPOSAL FORMS	<u>113</u>

746906 - FURNISH & INSTALL 4-CONDUCTOR #18 AWG SHIELDED OPTICOM CABLE
746907 - FURNISH & INSTALL 1-CONDUCTOR #2 AWG STRANDED COPPER
746908 - FURNISH & INSTALL 1-CONDUCTOR #4 AWG STRANDED COPPER
746909 - FURNISH & INSTALL 1-CONDUCTOR #6 AWG STRANDED COPPER
746910 - FURNISH & INSTALL 1-CONDUCTOR #8 AWG STRANDED COPPER
746911 - FURNISH & INSTALL 1-CONDUCTOR #10 AWG STRANDED COPPER
746912 - FURNISH & INSTALL 1-CONDUCTOR #14 AWG STRANDED COPPER
746913 - FURNISH & INSTALL 2-CONDUCTOR #14 AWG ALUMINUM SHIELDED COPPER
746914 - FURNISH & INSTALL #6 BARE STRANDED COPPER GROUND
746915 - FURNISH & INSTALL #8/2 WIRE UF W/GROUND
746916 - FURNISH & INSTALL #8/3 WIRE UF W/GROUND
746918 - FURNISH & INSTALL #2/0 AWG STRANDED COPPER
746919 - FURNISH & INSTALL #4/0 AWG STRANDED COPPER
746920 - FURNISH & INSTALL 14/4 TRAFFIC CONTROL CABLE
746921 - FURNISH & INSTALL 14/9 TRAFFIC CONTROL CABLE
746922 - FURNISH & INSTALL 14/16 TRAFFIC CONTROL CABLE

Description:

The pay items listed above include furnishing, installing, and splicing if approved, the various types and sizes of cable in conduit, or overhead and lashed to a span wire. All conduit installation will be paid for under their respective items.

Materials:

Cable - All electrical cables shall be manufactured in conformance with the National Electrical Code, 600-Volt, UL approved.

1. Stranded or solid, single conductor copper cables shall be XLP Insulated; USE or RHW rated
2. Type UF cable shall include ground and the number and size of conductors as shown on the plans. Use cable conforming to ANSI/UL 493.
3. 14/4, 14/9, 14/16 ~~#14~~ AWG Solid copper conductor Traffic Signal cable shall conform to IMSA Specification Number 19-1. Provide wire size and number of conductors as shown on the plans or as directed by the Engineer. Additional material requirements for Traffic Signal Cables are as follow:
 - a. If requested, the Contractor shall provide independent test results to verify specification compliance. Costs of testing are incidental to the Cable item being supplied.
 - b. All cables shall be supplied on reels with each reel containing one continuous length of cable.
 - c. Color code to be used as established by IMSA Specifications. In addition to IMSA, DelDOT requires that individual tracers contrast with the base color to allow easy identification between each base color and the same base color plus tracer.
To test for sufficient color contrast, remove the sheath for a length of 6 inches. All filler material and tapes shall be removed for the same length. All conductors of the same base color will be placed side by side and all other conductors will be hidden. The conductors will be held against a white or ivory surface and viewed from a distance of 6 feet. The base color, tracer, and tracer color must be identified within a period of three seconds after being placed in position. The same test for contrast will also be made for base colors. If either the base color or tracer color test fails, the material will be rejected.
 - d. The tracer line width shall not exceed 3/20 inch when measured perpendicular to the edge of the line. Also, the total width of tracer lines on a conductor may not be equal to or greater than one-half the total circumference of the conductor.

4. Aluminum Shielded Cable shall be shielded two conductor controlled capacitance cable enclosed in an aluminized polyester shield within a polyethylene jacket, rated to 600 volts. The two conductors are AWG # 14 stranded copper. Cable shall meet IMSA 50-2. Referred to as "Home-run Cable".
5. Opticom Cable – must meet the manufacturer's recommended specifications

Splicing Materials –

1. Insulating (rubber) tape shall be of the self-bonding type and shall be 3M Company, Inc. (Cat. No. 130C, 2228); Plymouth Rubber (Cat. No. 2212); Permacel (Cat. No. 253, P280), or an approved equal.
2. Jacket (plastic) Tape shall be of the waterproof type and shall be 3M Company, Inc. (Cat. No. 33); Plymouth Rubber (Cat. No. 3117); Permacel (Cat. No. P29), or an approved equal.
3. For overhead traffic control cable splices:
Wire Nuts – Ideal 74B or 76B, 3M Highland H-33, or approved equal

Cable Installation

Installation in Conduit:

This work consists of installing various types, sizes, and number of communications or electrical cable(s) in existing conduits, which may or may not contain an existing communications or electrical cable(s) or wire(s). Conduits may be located underground, within mast arms, on wood poles, or on metal poles.

The number of cables to be pulled through each conduit will be as shown on the plans or as directed by the Engineer.

Construction Methods:

All cable must be transported by and unreeled from a cable trailer(s). The laying of reels on the ground and subsequent removal of wire or cable from this position is prohibited. Avoid damaging cable insulation when removing cable from drums or reels, or during installation of the cable.

Hand pulling methods are required for conduit sizes of 1-1/2" or less and are **preferred** for all other sizes. Dynamometer is recommended for use when pulling other than by hand.

Prior to installation, **written approval by the Engineer is required** for the use of any power-assisted methods of pulling communications or electrical cable(s) or wire(s) into conduit. A short piece of material that will part if the strain exceeds the amount specified below shall be used between the pulling grip and the pulling medium, unless industry standards require less:

150 lbs. for all pulls up through 12 pair communications cable; and
300 lbs. for all larger cables

Any and all cable(s) pulled into any conduit without the use of an acceptable pulling grip, Kellems or equal, and without the use of a strain release element or by using methods which may have or did result in pulling forces in excess of strain release material, or using methods which may have or did result in pulling forces in excess of those set forth herein or prescribed by industry standards are **unacceptable**.

Any and all unacceptable cable(s) shall be removed and replaced with new cable(s) using correct methods at no cost to the Department.

The installation of cable(s) in existing conduits shall be accomplished by pulling the cable(s) through the conduits. If required, pulling lubricant of the type recommended by the cable manufacturer will be used. The cable(s) shall be prepared for pulling by reeling them from their respective reels as they enter the conduit or by taking sufficient length from the reel(s) to comprise the set to be pulled. Care shall be taken to avoid damaging insulation and to eliminate any twists or kinks and to marry the cables in a straight lay. Care shall also be taken to prevent entry of moisture into the cable at all times during installation. Cable ends will be

sealed using rubber tape and painted with a sealing type of waterproof compound until final splices are made.

The cable(s) shall be hand fed into the conduit. When, in the opinion of the Engineer, additional radius is required to prevent damage to the cable(s) a sleeve shall be used. There shall be no additional payment made for sleeves or their use.

Underground cable runs shall be started at one terminal point and shall be continuous without splices to the final terminal point except for "Home Run Cable" to "Loop Detector Wire". Opticom cable shall not be spliced in any application.

Additional cable(s) shall be left and arranged in a neat and orderly manner as noted:

1. When pulled through junction wells, 6 feet of copper cable, supported on cable rack assemblies
2. At the control box and other splice locations, 6 feet of cable, neatly arranged and laced with cable ties

When cable already exists in a conduit, the Contractor shall ensure that the placement of a fish does not damage or entangle the existing wire or cable(s). The lead end of a fish shall contain a blunt terminal. Bending and/or taping the end of the fish shall not be satisfactory nor shall any termination which contains rough edges or any sort of hook that might engage an existing wire or cable when the fish is extracted.

Where two or more wires occupy the same conduit, they shall be drawn in together and kept parallel to each other by means of a pulling head. Phase legs shall be arranged circumferentially and in sequence around the neutral wires.

All conduit ends shall be duct sealed after cable installations.

Installation on Span Wire Overhead:

This work consists of installing electrical cable on an existing span wire.

Construction Methods:

All electrical cable must be transported by and unreeled from a cable trailer(s). The laying of reels on the ground and subsequent removal of wire or cable from this position is prohibited. Avoid damaging cable insulation when removing cable from drums or reels, or during installation of the cable.

The electrical cable will not be spliced at the top of the pole but will continue on to be taped onto the span wire. The electrical cable shall be oriented so water will not run along its length and run into the steel pole. The electrical cable shall be installed on the underside of the span wire with no crossover or wraps around the span wire. The electrical cable shall be pulled tight without any kinks and the jacket (plastic) tape wrapped tight around the span wire and electrical cable at least six wraps every twelve to fourteen inches.

At each signal head location, there will be a loop of signal cable 36 inches long.

Splicing:

Traffic Control Cable and Single Conductor Stranded Wire :

General – Traffic signal cable splicing shall only be made above ground in pole hand-holes, transformer bases or on span wire at the signal head. Underground traffic control cable splices (except between loop detector wire and "home-run" cable) or splices in between conduit runs are prohibited. After cables have been installed and pending permanent splicing, the end of each section of cable in the control box and at all splice locations shall be carefully sealed, using rubber tape, and painted with a sealing type of waterproof compound. The circuit number of all cables and wires shall be identified by color coded tape attached to each of the cables and wires in the control box and at all splice locations. The color coded tape shall be secured to the cable or wire with nylon cable ties. Any splices found to be faulty within 90 days of installation shall be remade at the Contractor's expense. Insulation from each conductor to be spliced shall be removed to expose ½ inch of copper. Use of any tool or method which might nick the conductor is prohibited. Each

conductor not being spliced shall be inspected and trimmed so that the conductor does not extend beyond the insulation. After each conductor to be spliced is connected, all conductors both used and not used shall be returned to their original configuration before the insulation was removed and then sealed as specified.

Individual cables shall not extend beyond the splice of the last signal head for each signal phase.

Shielded Opticom cable shall not be spliced.

Shielded Aluminum Cable ("Home-Run cable") may be spliced only with the loop detector wire in a junction well. No splicing of the "home-run cable" outside of this junction well is permitted.

Overhead - Conductors to be electrically connected shall be placed side by side with the exposed copper aligned. The copper shall then be twisted clockwise with pliers until a good mechanical connection shall be effected. A proper size wire nut shall be installed and hand tightened. If necessary to cover all the copper, minor trimming may be done. The copper splice shall be 5/16 inch long when trimmed. Care shall be taken to ensure that no insulation is caught up in the copper area of the splice. It is essential that the splice be kept dry. Therefore, care must be taken during taping and by placement of the completed splice to prevent water from entering the splice between or around the cables.

1. **Termination of cable (Butt Splice)** - The sheath of each cable shall be removed as necessary. When all conductors to be joined have been completed, the splice shall be prepared for taping. The cables shall be placed in a butt position and all wires and wire nuts shall be positioned to ensure that no shorts exist and that the splice area is reduced to as small a diameter as possible. Taping shall begin with rubber tape two inches over the intact sheath. Taping shall proceed toward the other cable overlapping half of the tape width until a point two inches on the other cable sheath has been reached. Taping shall then be repeated in the other direction starting one tape width wider than the previous wrap. Where necessary to cover all areas of the splice, overlapping shall be increased. Every area of the splice shall have rubber tape at least four layers (two fully overlapped passes) deep. The rubber tape shall be covered with plastic tape applied in the same fashion.
2. **Taps or Tee Splices** - The sheath of the through cable shall be removed for a distance of 8 inches centered on the point of splice. The sheath of the branch cable(s) shall be removed for a distance of 4 inches. The through cable conductors which are to be joined to the conductors of the branch cable(s) are to be separated out from the others and cut. No other conductors shall be cut for any purpose. Depending upon the need, the branch cable(s) may be placed beside one of the through cables and the splicing proceed or the through cable may be doubled back so that the parts of the through cable and the branch cable(s) are placed side by side. When all conductors to be joined have been completed, the splice shall be prepared for taping. The cables shall be placed in approximately their final position and an inspection for shorts shall be made. After all wire nuts and wires are properly positioned, taping shall begin on the through cable 2 inches from the end for the sheath. It shall proceed with 1/2 inch width overlap across the splice area and onto the other through sheath for a distance of 2 inches. The taping shall start at the end point and return back across the splice to the branch cable(s). It shall proceed along the branch cable(s) and onto the sheath for a distance of one inch. A return along the branch back to the main cable shall be made and the remaining part of the splice shall be taped continuing as before. Every area of the splice shall have rubber tape at least four layers (two fully overlapped passes) deep. The cables shall be placed in their final position and taped with two fully overlapped passes of plastic tape. Plastic tape need not cover the interior areas covered by the rubber tape. The splice shall be placed so that the branch cable(s) enters the splice from below to prevent water from flowing along the branch cable(s) into the splice area.
3. **Termination End of Cable** - Dead ended cables shall have 3" of sheath removed. Each individual cable shall be rubber taped then bundled and re-taped with vinyl tape and coated with waterproofing compound.

Method of Measurement:

The quantity of cable will be measured as the actual number of linear feet of cable furnished and pulled

through conduits (underground, in mast arms, or on poles) or installed on a span wire in accordance with these specifications, complete in place, and accepted.

All required cable slack left at termination points or in junction wells shall be measured as part of this item.

Basis of Payment:

The quantity of cable furnished and pulled through all conduit (underground, in mast arms, or on poles) or furnished and installed on a span wire will be paid for at the Contract unit price per linear foot of the applicable pay item. Splice installations and all costs related to the splice shall be incidental to the linear foot payment of the cable being spliced. Price and payment will constitute full compensation for all labor, equipment, tools, materials, material testing, splicing, taping, and incidentals required to complete the work as specified above.

5/7/12

746923 – FURNISH & INSTALL A 1” FLEXIBLE NON-METALLIC LIQUIDTIGHT CONDUIT DETECTOR SLEEVE WITH LOOP WIRE

746924 – FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN ¼” FLEXIBLE TUBING IN A LOOP SAWCUT

Description:

Sawcut and seal existing pavement, furnish and install loop detector wire, aluminum shielded “home-run” cable, and 1” Flexible Non-Metallic Liquidtight Detector sleeve as shown on the plans.

Materials:

1. **1” liquidtight flexible non-metallic conduit** - meets National Electric Code 2002, Article 350.
2. **1-conductor #14 AWG Cable in ¼” Flexible Tubing** - shall consist of cable preinstalled in a polyethylene (PE) plastic duct meeting IMSA 51-5. Cable shall be rated for 600 volts. The cable shall have a temperature tolerance range of at least - 65 to + 176 degrees Fahrenheit. The conductor is AWG #14 stranded copper. Outside diameter of the cable is 0.25 inches. Referred to as “loop wire”
3. **2-conductor #14 AWG Aluminum Shielded Cable** – see specifications for furnish and install cable. Referred to as “home-run cable”.
4. **Flexible embedding sealer** - a cold poured, resilient type epoxy joint sealer, Bondo P 606 or Duracote D115 for concrete or asphalt pavement or E Poxy Industry 36 1 for concrete or E Poxy Industry 11 1 for asphalt pavement, or approved equal. A sealer accelerant or retarder may be added per the manufacturers specifications.
5. **Backer Rod** - 5/8" closed cell foam
6. **Tape** – Vinyl electrical tape shall have a PVC base with rubber based pressure sensitive adhesive. The tape shall be a minimum 7 mils thick and be UL listed and marked per UL Standard 510 as flame retardant and cold resistant. It shall be compatible with synthetic cable insulations, jackets and splicing compounds and rated for wire and cable splices up to 600-volts.
7. For splices in Junction Well (see plan detail):
 - a. Dual Wall Heat Shrink Tubing – Heat-shrink tubing shall be medium or heavy wall thickness, irradiated polyolefin tubing containing an adhesive mastic inner wall. Minimum wall thickness prior to contraction shall be 40 mils. When heated, the inner wall shall melt and fill all crevices and interstices of the object being covered while the outer wall shrinks to form a waterproof insulation. Each end of the heat-shrink tube or the open end of the end cap of heat-shrink tubing shall, after contraction, overlap the conductor insulation at least one and one-half inches. Heat-shrink tubing shall conform to the requirements in UL Standard 468D and ANSI C119.1, for extruded insulated tubing at 600 V.
 - b. Soldering iron with Rosin Core solder
 - c. Splicing Kit- In-line barrel type design, resin encapsulating compound kit with UL486 rating. Suitable for use in wet or direct buried locations. Resin encapsulating compounds shall be acceptable for use at 16 degrees C.

Construction Methods:

Loop Wire Installation:

The pavement saw cut shall be 5/8” wide and up to 4½” deep. It shall be “wet-cut” in the directions and sizes specified on the Plans, Standard Details or as directed by the Engineer. Contractor shall remove sharp edges in the saw cut and round the corners.

CONTRACT ID: DOT1217-TRAFFMAINT PROJECT(S): DOT1217-TRAFFMAINT

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0680	746832 SUPPLY AND INSTALLATION OF WEATHERHEAD, 3", ON STEEL POLE	4.000 EACH				
0690	746850 POLE BASE, TYPE 4	40.000 EACH				
0700	746892 FURNISH & INSTALL SIGNAL HEAD BACKPLATE	5.000 EACH				
0710	746906 FURNISH & INSTALL 4-CONDUCTOR #18 AWG SHIELDED OPTICOM CABLE	1000.000 LF				
0720	746907 FURNISH & INSTALL 1-CONDUCTOR #2 AWG STRANDED COPPER	100.000 LF				
0730	746908 FURNISH & INSTALL 1-CONDUCTOR #4 AWG STRANDED COPPER	100.000 LF				
0740	746909 FURNISH & INSTALL 1-CONDUCTOR #6 AWG STRANDED COPPER	100.000 LF				
0750	746910 FURNISH & INSTALL 1-CONDUCTOR #8 AWG STRANDED COPPER	100.000 LF				
0760	746911 FURNISH & INSTALL 1-CONDUCTOR #10 AWG STRANDED COPPER	100.000 LF				
0770	746912 FURNISH & INSTALL 1-CONDUCTOR #14 AWG STRANDED COPPER	100.000 LF				

CONTRACT ID: DOT1217-TRAFFMAINT PROJECT(S): DOT1217-TRAFFMAINT

All figures must be typewritten.

CONTRACTOR : _____

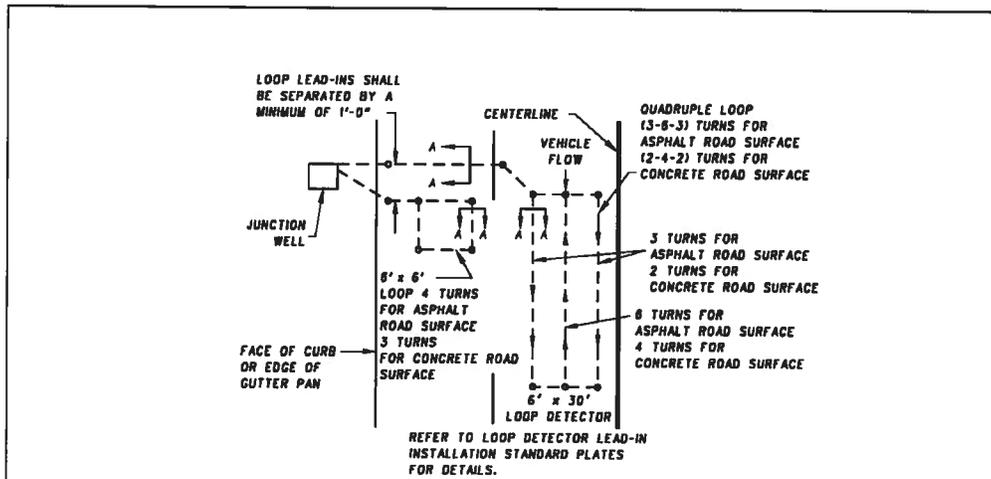
LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0780	746913 FURNISH & INSTALL 2-CONDUCTOR #14 AWG ALUMINUM SHIELDED CABLE	5000.000 LF				
0790	746914 FURNISH & INSTALL #6 BARE STRANDED COPPER GROUND	500.000 LF				
0800	746915 FURNISH & INSTALL #8/2 WIRE UF W/GROUND	250.000 LF				
0810	746916 FURNISH & INSTALL #8/3 WIRE UF W/GROUND	50.000 LF				
0820	746918 FURNISH & INSTALL #2/0 AWG STRANDED COPPER	500.000 LF				
0830	746919 FURNISH & INSTALL #4/0 AWG STRANDED COPPER	200.000 LF				
0840	746920 FURNISH & INSTALL 14/4 TRAFFIC CONTROL CABLE	250.000 LF				
0850	746921 FURNISH & INSTALL 14/9 TRAFFIC CONTROL CABLE	2500.000 LF				
0860	746922 FURNISH & INSTALL 14/16 TRAFFIC CONTROL CABLE	2500.000 LF				

22. ITEM NUMBERS BY CATEGORY

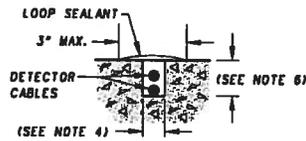
To assist locating a particular item, the item numbers included in this contract have been divided into categories, as shown in the following table.

 Removed the letters THWN from the item Description

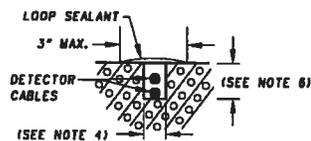
ITEM	DESCRIPTION	UOM	QTY
	CABINETS AND CABINET BASES		
747515	Cabinet Base Type M	EA	4
747516	Cabinet Base Type P	EA	10
	CABLE AND SPLICES		
746906	Furnish & Install 4- conductor #18 AGW Shielded Opticom Cable	LF	1,000
746907	Furnish & Install 1- conductor #2 AWG THWN Stranded Copper 	LF	100
746908	Furnish & Install 1- conductor #4 AWG THWN Stranded Copper 	LF	100
746909	Furnish & Install 1- conductor #6 AWG THWN Stranded Copper 	LF	100
746910	Furnish & Install 1- conductor #8 THWN AWG Stranded Copper 	LF	100
746911	Furnish & Install 1- conductor #10 AWG THWN Stranded Copper 	LF	100
746912	Furnish & Install 1- conductor #14 AWG THWN Stranded Copper 	LF	100
746913	Furnish & Install 2-Conductor #14 AWG Aluminum Shielded Cable	LF	5,000
746914	Furnish & Install #6 Bare Stranded Copper ground	LF	500
746915	Furnish & Install #8/2 wire UF W/ground	LF	250
746916	Furnish & Install #8/3 wire UF W/ground	LF	50
746918	Furnish & Install #2/0 AWG THWN Stranded Copper 	LF	500
746919	Furnish & Install #4/0 AWG THWN Stranded Copper 	LF	200
746920	Furnish & Install 14/4 Traffic Control Cable	LF	250
746921	Furnish & Install 14/9 Traffic Control Cable	LF	2,500
746922	Furnish & Install 14/16 Traffic Control Cable	LF	2,500
746923	Furnish & Install a 1" Flexible Non-Metallic Liquidtight Conduit Detector Sleeve with Loop Wire	LF	800
746924	Furnish & Install Loop Wire 1-conductor # 14 AWG encased in 1/4" Flexible Tubing in a Loop Sawcut	LF	8,000
	CONDUIT		
745601	Furnish & Install up to 3" Flexible Metallic-Liquidtight Conduit	LF	50
745602	Furnish & Install up to 4" Schedule 80 HDPE Conduit (Bore)	LF	1,000
745603	Furnish & Install up to 4" Schedule 80 PVC Conduit (Open Cut)	LF	100
745604	Furnish & Install up to 4" Schedule 80 PVC Conduit (Trench)	LF	2,000
745605	Furnish & Install up to 4" Schedule 80 PVC Conduit (On Structure)	LF	100
745606	Furnish & Install up to 4" Galvanized Steel Conduit (Trench)	LF	100
745607	Furnish & Install up to 4" Galvanized Steel Conduit (Bore)	LF	100
745608	Furnish & Install up to 4" Galvanized Steel Conduit (Open Cut)	LF	100
745609	Furnish & Install up to 4" Galvanized Steel Conduit (On Structure)	LF	100
745610	Furnish & Install up to 4" Nonmetallic Pole Riser Shield	LF	100



LOOP DETECTOR SAWCUT TYPICAL



**SECTION A-A
 CONCRETE SURFACE**

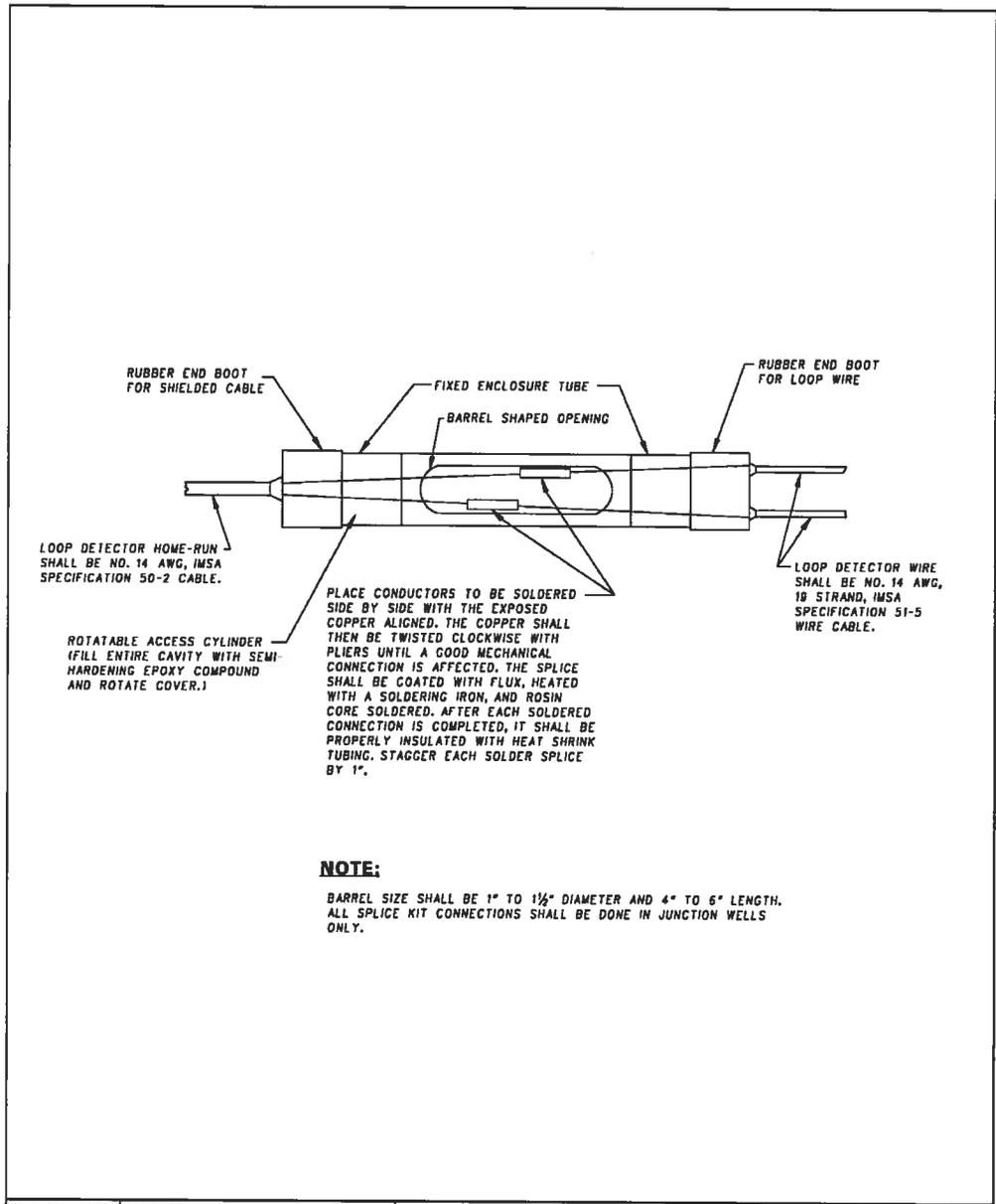


**SECTION A-A
 ASPHALT SURFACE**

NOTES:

1. WHEN A PROPOSED LOOP DETECTOR SAWCUT CROSSES A LATERAL ROADWAY JOINT OR VALVE COVER (i.e. MANHOLE, JUNCTION WELL, ETC.), LOOP DETECTOR INSTALLATION SHALL BE MODIFIED INTO TWO SEPARATE LOOP DETECTORS WHICH SHALL NOT TRAVERSE JOINTS OR VALVE COVERS.
2. THE LOOPS SHALL BE PLACED IN THE CENTER OF THE LANE UNLESS OTHERWISE NOTED ON PLANS.
3. PRESENCE LOOP DETECTORS ARE TO BE PLACED 12" BEHIND THE EXISTING OR PROPOSED STOP LINE.
4. LOOP DETECTOR AND LEAD-IN SAWCUTS SHALL BE 5/8".
5. 1 1/2" DRILL HOLES SHALL BE USED AT ALL CHANGES IN SAWCUT DIRECTIONS.
6. 2" DEPTH FOR CONCRETE ROAD SURFACE OR 4 1/2" DEPTH FOR ASPHALT ROAD SURFACE.

SPECIFICATION 746924	CATEGORY CODE ITEMS DETECTION	DELAWARE DEPARTMENT OF TRANSPORTATION TRAFFIC CONSTRUCTION DETAILS LOOP DETECTOR INSTALLATION
APPROVED	CHEF TRAFFIC ENGINEER	
		DETAIL NO. DE 746.004-03



SPECIFICATION 746924	CATEGORY CODE ITEMS DETECTION	DELAWARE DEPARTMENT OF TRANSPORTATION TRAFFIC CONSTRUCTION DETAILS SPLICE KIT FOR LOOP DETECTOR WIRE AND LOOP DETECTOR HOME-RUN
APPROVED	_____ CHIEF TRAFFIC ENGINEER	
DETAIL NO.		DE 746.004-04

