

THE STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION  
OFFICE OF TRANSPORTATION SOLUTIONS  
PLANS AND SPECIFICATIONS FOR

CONTRACT NUMBER - T201506106

NORTH MAINTENANCE

FEDERAL AID NUMBER - ESTP-2015(30)

PAGE 1 OF 31

CONTRACT TITLE- PAVEMENT & REHABILITATION - NORTH VI, 2015

PLANS PREPARED BY: George LeCates

DESIGN TECHNICIAN

DATE RECOMMENDED: 6/16/15

Christy Cates

GROUP ENGINEER, CONSTRUCTION - NORTH II

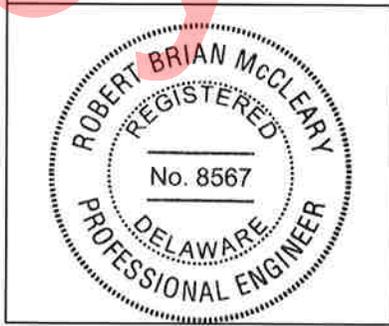
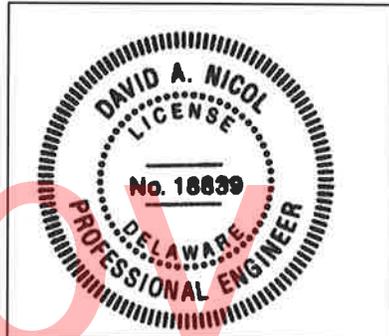
DATE RECOMMENDED: 6-16-15

David A. Nicol

ASSIST. DIRECTOR, ENGINEERING SUPPORT

DATE RECOMMENDED: 6/18/15

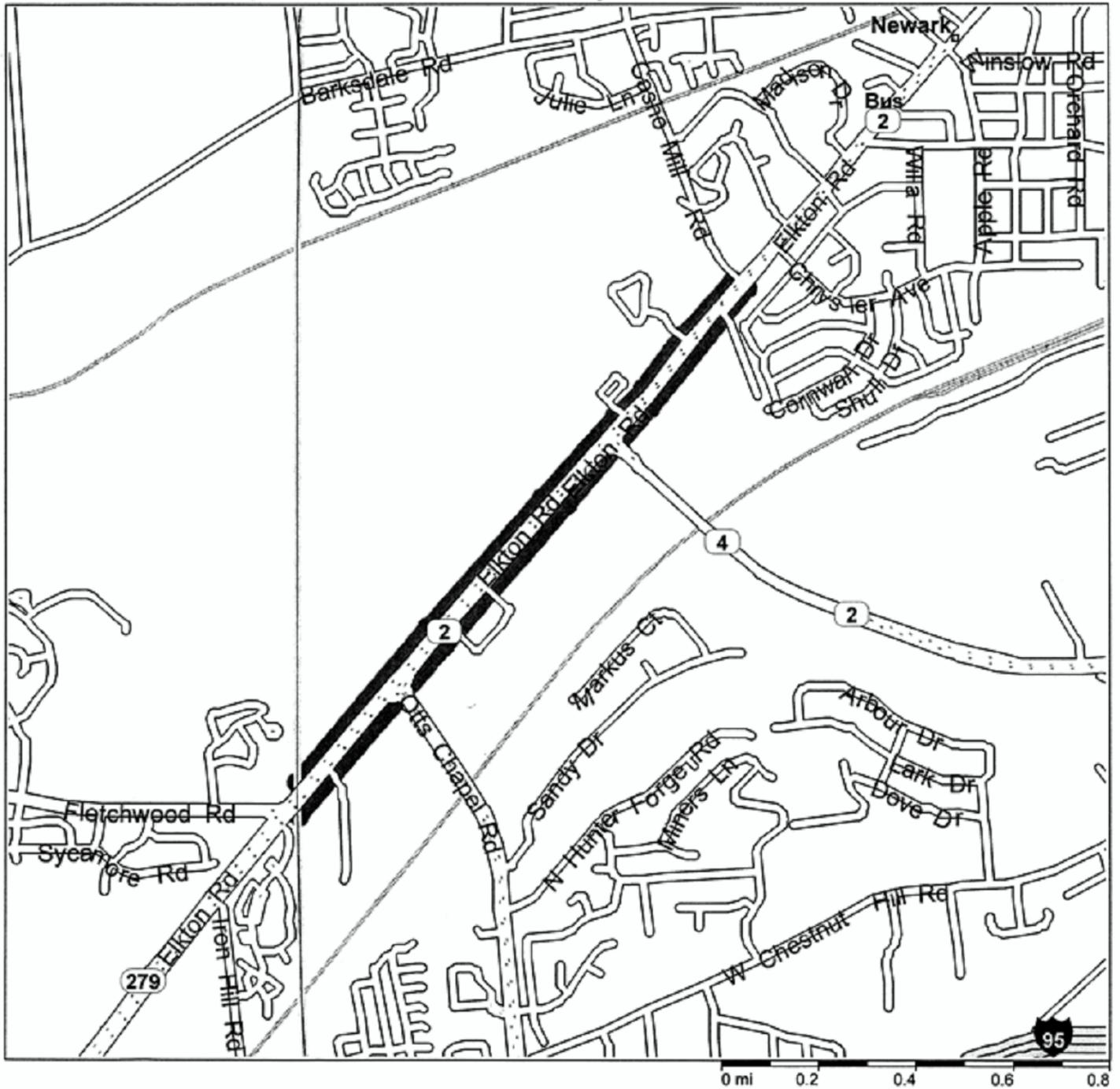
Robert Brian McCleary  
CHIEF ENGINEER



ELKTON ROAD FROM MARYLAND LINE TO CASHO MILL ROAD; CHRISTINA PARKWAY FROM ELKTON ROAD TO SOUTH COLLEGE AVENUE

LOCATION MAP

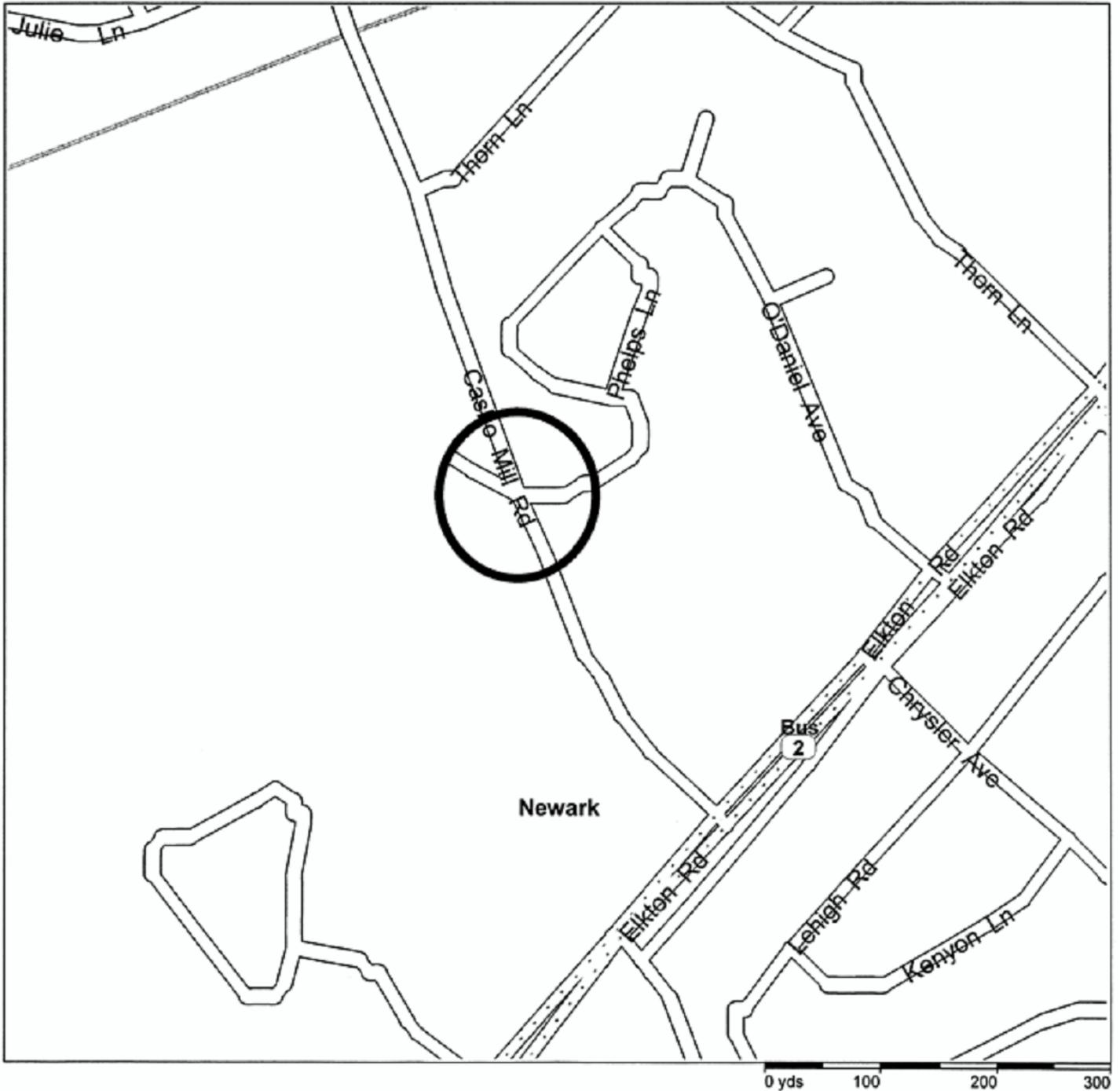
Location #1 - Elkton Road from Maryland Line to Casho Mill Road



ELKTON ROAD FROM MARYLAND LINE TO CASHO MILL ROAD; CHRISTINA PARKWAY  
FROM ELKTON ROAD TO SOUTH COLLEGE AVENUE

LOCATION MAP

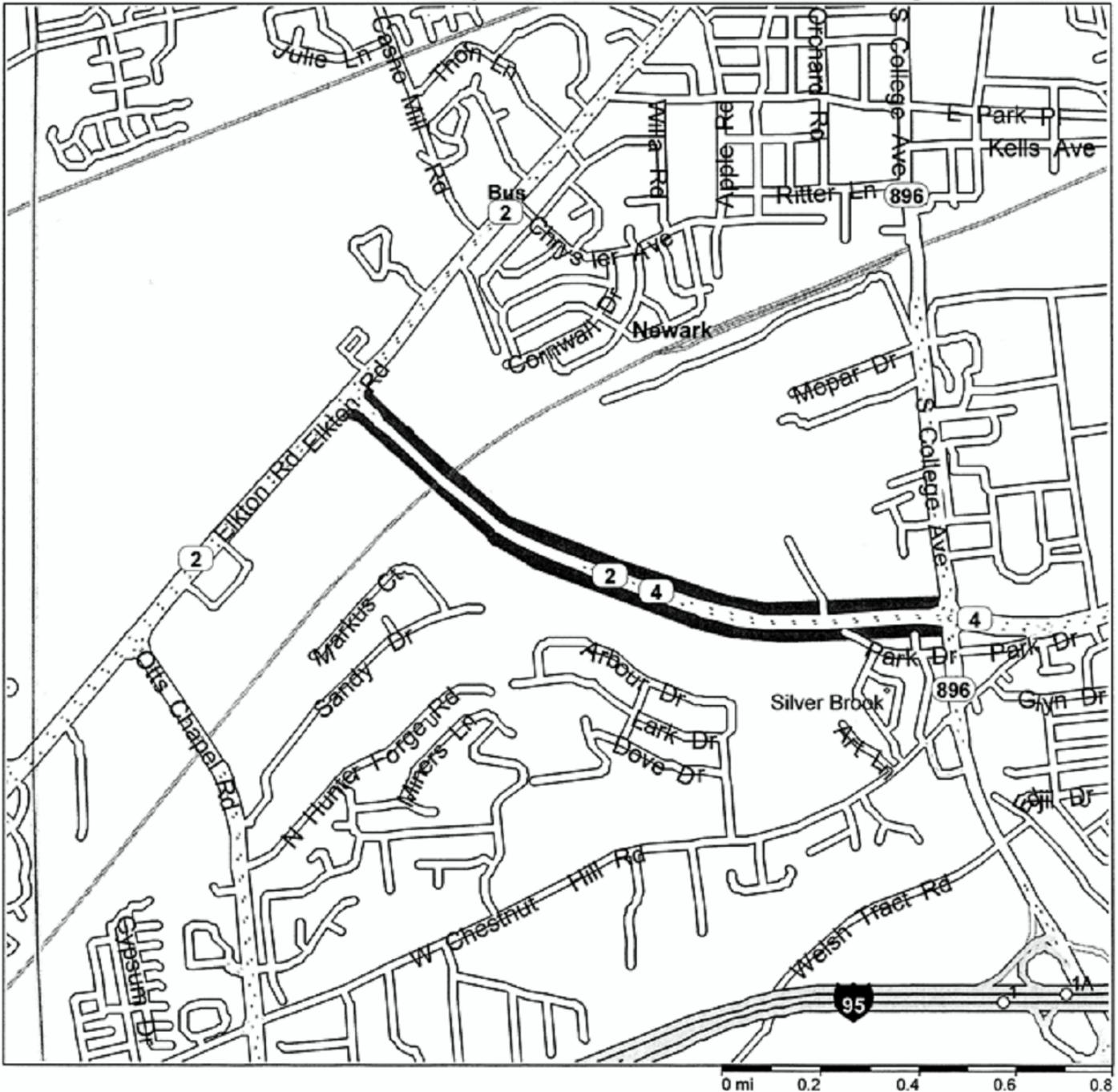
Location #2 - Casho Mill and Westfield Drive Drainage Improvement



ELKTON ROAD FROM MARYLAND LINE TO CASHO MILL ROAD; CHRISTINA PARKWAY FROM ELKTON ROAD TO SOUTH COLLEGE AVENUE

LOCATION MAP

Location #3 - Christina Parkway from Elkton Road to South College Avenue



GENERAL CONTRACT PLAN NOTES

REVISED 1/2015

GENERAL

1. CONSTRUCTION OF THIS CONTRACT SHALL CONFORM TO DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED AUGUST 2001 AS AMENDED BY THE SUPPLEMENTAL SPECIFICATIONS, THE SPECIAL PROVISIONS, THE MOST RECENT STANDARD CONSTRUCTION DETAILS, DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THESE PLANS.

2. THE PURPOSE OF THIS CONTRACT IS TO MAKE GENERAL IMPROVEMENTS TO ROADS AND/OR STREETS WITHIN THE DISTRICT HEREIN SPECIFIED. DEPENDING ON FUND AVAILABILITY, THE DEPARTMENT RESERVES THE RIGHT TO ADD OR DELETE LOCATIONS AND/OR QUANTITIES FOR THIS CONTRACT. SUCH LOCATION OR QUANTITY ADDITIONS OR DELETIONS SHALL NOT BE CAUSE FOR AN INCREASE OR DECREASE IN ANY CONTRACT UNIT BID PRICES. NO ITEM PRICES ARE TO BE RENEGOTIATED DUE TO EITHER AN INCREASE OR DECREASE IN QUANTITY USAGE RESULTING FROM SAID ADDITIONS OR DELETIONS.

3. THE CONTRACTOR SHALL PROVIDE ALL RESIDENTS AND BUSINESSES WHO LIVE ADJACENT TO THE WORK ZONE A MINIMUM 48 HR. PRIOR WRITTEN NOTICE FOR THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES, CONTRACTOR NAME & ADDRESS, AND DELDOT CONTACT NUMBERS. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOSURE OF A DRIVEWAY FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND/OR PROPERTY OWNER IN ADVANCE OF THE CLOSURE.

4. THE CONTRACTOR SHALL SUBMIT THE REQUIRED COPIES OF A DETAILED PROGRESS SCHEDULE (PSC) AS OUTLINED IN STANDARD SPECIFICATION 108.04 PRIOR TO OR AT THE PRECONSTRUCTION MEETING. DETAILS SHALL INCLUDE A DESCRIPTION OF EACH WORK ACTIVITY, THE PLANNED DAYS OF WORK, MULTIPLE CREWS OR SHIFTS, AND SCHEDULED WORKING HOURS. DURING THE

**GENERAL CONTRACT PLAN NOTES**

CONTRACT, THE CONTRACTOR SHALL SUBMIT TWO-WEEK (OR AS REQUIRED) "LOOK AHEAD" SCHEDULES TO THE AREA ENGINEER/ MANAGER NO LATER THAN NOON OF EACH THURSDAY. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

**MAINTENANCE OF TRAFFIC**

5. THE CONTRACTOR SHALL BE REQUIRED TO SHOW PROOF THAT HE HAS SUFFICIENT APPROVED STRIPING MATERIALS ON HAND TO ENSURE STRIPING IS COMPLETED PRIOR TO FULL OPENING ROADWAY TO TRAFFIC.

6. AT THE END OF EACH DAY'S OPERATION AND BEFORE TRAFFIC IS RETURNED TO UNRESTRICTED ROADWAY USE, TEMPORARY STRIPING SHALL BE UTILIZED AT LOCATIONS THAT REQUIRE PERMANENT STRIPING. TEMPORARY PAVEMENT STRIPING MUST MATCH PERMANENT PAVEMENT STRIPING IN ALL REGARDS. TEMPORARY PAVEMENT MARKINGS SHALL BE PAID AT THE APPLICABLE CONTRACT UNIT PRICE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE TEMPORARY MARKINGS IN GOOD CONDITION SUCH THAT THE PAVEMENT IS PROPERLY DELINEATED AT ALL TIMES. ANY REFRESHING OF THE TEMPORARY MARKINGS WILL BE AT THE CONTRACTOR'S EXPENSE.

7. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ALL ROAD USERS, INCLUDING VEHICULAR, PEDESTRIAN AND BICYCLE TRAFFIC, AND SHALL CONFORM TO THE REQUIREMENTS OF THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART 6, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT FOR BIDS.

8. THE CONTRACTOR SHALL MAINTAIN ACCESS TO AND ALONG PEDESTRIAN FACILITIES AT ALL TIMES DURING CONSTRUCTION. EARTH, STONE AND GRAVEL SURFACES ARE NOT ACCEPTABLE FOR PROVIDING PEDESTRIAN ACCESS. WHERE PEDESTRIAN ROUTES ARE CLOSED OR BLOCKED, ALTERNATE PEDESTRIAN ACCESS SHALL BE PROVIDED USING TA-28 AND/OR TA-29 OF THE 2011 DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR TO THE SATISFACTION OF THE ENGINEER. PEDESTRIAN DETOUR ROUTES OR ALTERNATE PEDESTRIAN FACILITIES SHALL CONSIST

**GENERAL CONTRACT PLAN NOTES**

OF ADA COMPLIANT FACILITIES TO THE LEVEL OF WHICH EXISTS ON THE PEDESTRIAN ROUTE. THE COST FOR ANY PROVISIONS SHALL BE INCIDENTAL TO ITEM 763XXX - MAINTENANCE OF TRAFFIC.

PEDESTRIAN MAINTENANCE OF TRAFFIC: THIS WORK SHALL CONSIST OF PROVIDING AND MAINTAINING AN ACCESSIBLE PEDESTRIAN ROUTE THROUGHOUT THE PROJECT'S LIMITS IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) TITLE II, PARAGRAPH 35.130.

THE CONTRACTOR SHALL BE REQUIRED TO REVIEW EACH CURB RAMP LOCATION AND SUBMIT THE APPROPRIATE MAINTENANCE OF TRAFFIC DETAIL AND DEVICES TO THE ENGINEER FOR EACH LOCATION AT LEAST 2 WEEKS BEFORE CONSTRUCTION FOR REVIEW, COMMENT, AND APPROVAL BY THE DISTRICT TRAFFIC SAFETY OFFICER

THE FOLLOWING CONSIDERATIONS SHALL BE TAKEN INTO ACCOUNT WHEN ADDRESSING ACCESSIBLE PEDESTRIAN MAINTENANCE OF TRAFFIC:

ALL PEDESTRIANS, INCLUDING PERSONS WITH DISABILITIES, SHALL BE PROVIDED WITH A REASONABLY SAFE, CONVENIENT AND ACCESSIBLE PATH THAT REPLICATES AS MUCH AS PRACTICABLE THE EXISTING PEDESTRIAN FACILITIES.

MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AT ALL TIMES.

PROVIDE PEDESTRIAN ACCESS THROUGH OR AROUND THE WORK ZONE. IF A DETOUR IS CHOSEN THE CONTRACTOR MUST SUBMIT THE DETOUR ROUTE TO THE ENGINEER FOR REVIEW AND APPROVAL. THE DETOUR ROUTE MUST MEET OR EXCEED THE CURRENT CONDITIONS.

WORK SHOULD BE PHASED SO THAT ALL AREAS OF AN INTERSECTION/SIDEWALK PATH ARE NOT UNDER CONSTRUCTION AT THE SAME TIME UNLESS A CLEAR PATH IS PROVIDED AND IDENTIFIED.

**GENERAL CONTRACT PLAN NOTES**

TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS AND FEATURES SHALL NOT INTRUDE INTO THE USABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY OR OTHER PEDESTRIAN FACILITY.

SIGNS AND OTHER DEVICES MOUNTED LOWER THAN 7 FT ABOVE THE TEMPORARY PEDESTRIAN PATHWAY SHALL NOT PROJECT MORE THAN 4 IN. INTO ACCESSIBLE PEDESTRIAN ROUTE.

A SMOOTH, CONTINUOUS HARD SURFACE SHALL BE PROVIDED THROUGHOUT THE ENTIRE LENGTH AND WIDTH OF THE PEDESTRIAN ROUTE THROUGHOUT CONSTRUCTION. THERE SHALL BE NO CURBS OR VERTICAL ELEVATION CHANGES GREATER THAN ¼ IN. IN GRADE OR TERRAIN THAT COULD CAUSE TRIPPING OR BE A BARRIER TO WHEELCHAIR USE.

9. AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR SHALL BE REQUIRED FOR ALL LOCATIONS SPECIFIED IN THE CONTRACT PLANS. A COPY OF THE CERTIFICATION CARD FOR THE ATSSA TRAFFIC CONTROL SUPERVISOR SHALL BE SUBMITTED AT THE PRECONSTRUCTION MEETING. THE PAPER CERTIFICATE IS NOT ACCEPTABLE.

**PAVEMENT MARKINGS**

10. AT THE PRECONSTRUCTION MEETING, THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS (INCLUDING BUT NOT LIMITED TO EXISTING STRIPING LENGTHS, LANE AND SHOULDER WIDTHS, TURN LANE LENGTHS, LOCATIONS OF STOP BARS, TURN ARROWS, CROSSWALKS AND RAILROAD CROSSINGS) THAT DEPICT THE EXISTING PAVEMENT MARKINGS FOR EACH PROJECT LOCATION. THESE DRAWINGS WILL BE REVIEWED BY THE DEPARTMENT'S TRAFFIC SECTION TO DETERMINE IF ANY CHANGES TO THE FINAL PAVEMENT MARKINGS ARE REQUIRED. FINAL PAVEMENT MARKINGS SHALL CONFORM TO ALL EXISTING PATTERNS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WHITE EDGE LINES SHALL WRAP AROUND THE RADIUS OF ALL SIDE STREETS AND MAJOR COMMERCIAL ENTRANCES TO A TANGENT POINT. YELLOW CENTERLINES SHALL BE CONTINUOUS AROUND MEDIAN ISLANDS. ALL DOUBLE YELLOW

**GENERAL CONTRACT PLAN NOTES**

CENTERLINES SHALL BE PLACED IN A 5-6-5 CONFIGURATION (2 EACH, 5" YELLOW STRIPES WITH A 6" GAP BETWEEN).

11. ANY ERRONEOUS MARKING WILL NOT BE PAID FOR AND SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTORS EXPENSE. ERRONEOUS MARKINGS OR SHADOWS THAT EXCEED ONE (1) INCH IN WIDTH SHALL BE REMOVED BY EITHER SAND OR WATER BLASTING AS DIRECTED BY THE ENGINEER. NO OTHER REMOVAL METHODS WILL BE ALLOWED. A FLAT BLACK PAINT OR DRIVEWAY SEALER SHALL BE APPLIED IN THE AREA OF THE REMOVED MARKING TO MASK THE REPAIR. ANY DAMAGE TO THE PAVEMENT CAUSED BY REMOVAL OF ERRONEOUS MARKINGS SHALL BE REPAIRED / REPLACED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTORS EXPENSE.

12. STOP LINES "BARS" SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 3B.16 OF THE 2011 DELAWARE MUTCD.

13. ALL CROSSWALKS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 3B.18 OF THE 2011 DELAWARE MUTCD.

**TRAFFIC SIGNAL NOTES**

14. TRAFFIC DETECTION LOOPS SHALL BE PLACED IN THE FINAL WEARING SURFACE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

15. TRAFFIC DETECTION LOOPS THAT ARE CURRENTLY 5'x7' SHALL BE REPLACED WITH LOOPS THAT ARE 6'x6' AT THE SAME LOCATION. STOP BAR DETECTION LOOPS SHALL BE THE SAME SIZE AS CURRENTLY EXISTING, AND SHOULD BE PLACED STARTING TWO FEET BEHIND THE STOP BAR, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF SEPARATE SIGNAL PLANS HAVE BEEN DEVELOPED, THE PLANS SUPERSEDE THIS NOTE.

**PROJECT**

GENERAL CONTRACT PLAN NOTES

16. UNLESS SPECIFIED, OVERLAY WIDTHS SHALL MATCH EXISTING WIDTHS.

17. THE COST OF CLIPPING BACK THE EDGES OF THE ROADWAY, SHOULDERS, AND THE FIRST 3' OF UNPAVED DRIVEWAY ENTRANCES, PICKING UP AND DISPOSING OF WASTE AND EXCESS MATERIAL, AND CLEANING THE EXISTING PAVEMENT PRIOR TO OVERLAY SHALL BE INCIDENTAL TO SECTION 401( ). PREPARING UNPAVED DRIVEWAY ENTRANCES BEYOND THE FIRST 3' SHALL BE PAID UNDER THE APPROPRIATE CONTRACT ITEMS: 202000 AND/OR 30200X.

18. BUTT JOINTS SHALL BE PLACED AT ALL INTERSECTING HOT MIX ROADS AND ANY OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. BUTT JOINTS AT DRAINAGE STRUCTURES NOT TO BE RESURFACED SHALL BE AS PER THE INCLUDED PLAN DETAIL OR LOCATION NOTES. BUTT JOINTS CUT PRIOR TO THE DAY OF THE PAVEMENT OVERLAY SHALL BE RAMPED WITH HOT MIX TRM. IN MILLING AREAS, THERE WILL BE NO SEPARATE PAYMENT FOR BUTT JOINTS. AFTER PAVEMENT MILLING, ALL TRANSVERSE VERTICAL DIFFERENCES, RAISED EDGES OF MANHOLES, CATCH BASINS, WATER VALVE BOXES, ETC...SHALL BE RAMPED WITH HOT-MIX TRM AT A 20:1 OR FLATTER SLOPE PRIOR TO OPENING THE ROADWAY TO TRAFFIC. PAVEMENT MILLINGS WILL NOT BE ALLOWED FOR USE AS RAMPING MATERIAL.

19. TAPER MILLING IS INTENDED FOR MILLING IN THE AREA OF FIXED STRUCTURES (I.E. CURBS GUARDRAIL, ETC.) THE MILLED DEPTH AT THE STRUCTURE SHALL BE THE DEPTH OF THE PROPOSED OVERLAY AND 0" AT A DISTANCE OF +/- 6½' FROM THE STRUCTURE. THE COMPUTED DEPTH FOR PAYMENT PURPOSES IS THE AVERAGE OF THE TWO DEPTHS.

20. ALL MILLED MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE STATED.

21. EXCAVATION UP TO 1' IN FRONT OF CURB WILL BE INCIDENTAL TO ITEM 701XXX. HOT MIX PLACED IN FRONT OF CURB WILL BE PAID UNDER ITEM 401XXX. USE OF CONCRETE AS FILL IN FRONT OF CURB WILL NO LONGER BE ACCEPTED UNLESS DIRECTED BY THE ENGINEER. AT EACH LOCATION, BACKFILLING SHALL BE PERFORMED IMMEDIATELY UPON REMOVAL OF FORMS FOR CURB OR

**GENERAL CONTRACT PLAN NOTES**

SIDEWALK, TOPSOIL, SEEDING, SEALING OF VALLEY GUTTERS, REMOVING OF FORMS, AND PARGING OF CATCH BASINS, SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS OF COMPLETION OF THE ITEM OF WORK. ITEM 732XXX, TOPSOIL, SHALL BE USED AS BACKFILL MATERIAL BEHIND CURB AND AROUND SIDEWALK OR/AS DIRECTED BY THE ENGINEER. TOPSOIL SHALL BE SCREENED/SIFTED SO AS NO MATERIAL GREATER THAN .5" IS PRESENT IN MATERIAL USED FOR BACKFILL. EXCAVATED MATERIAL, NOT NEEDED ON THE PROJECT, SHALL BE REMOVED FROM THE CONTRACT AT THE CONTRACTORS EXPENSE. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

22. ALL ADJUSTMENTS SHALL BE MADE NO MORE THAN SEVEN (7) CALENDAR DAYS PRIOR TO THE PLACEMENT OF THE FINAL COURSE OF HOT MIX UNLESS OTHERWISE APPROVED BY THE ENGINEER. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

23. ALL PAVING, INCLUDING TURN LANES, SHOULDERS AND INTERSECTIONS, IS TO BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FROM THE TIME THE AREA WAS MILLED. FAILURE TO COMPLY WILL RESULT IN A SUSPENSION OF ALL OTHER CONTRACT WORK WITH TIME CHARGES CONTINUING TO BE ASSESSED.

24. THE CONTRACTOR SHALL TAKE CARE IN REMOVING PAVEMENT AROUND UTILITIES, BUTT JOINTS, CURBS, ETC. SO THAT EXISTING PAVEMENT BEYOND THE SPECIFIED DEPTHS IS NOT DAMAGED. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS MAY RESULT IN PLACING LEVELING COURSES AT THE CONTRACTOR'S EXPENSE. THE REMOVAL AND CLEAN UP OF THE HOT MIX RESIDUE WEDGE REMAINING AFTER MILLING OPERATIONS SHALL BE INCIDENTAL TO THE MILLING ITEM. THE REMOVAL OF EXISTING RAISED PAVEMENT MARKERS (RPM'S) SHALL BE INCIDENTAL TO THE APPLICABLE MILLING AND/OR RECLAMATION ITEMS.

25. ALL PORTLAND CEMENT CONCRETE MUST BE RECEIVED FROM AN APPROVED PRODUCTION PLANT UNLESS OTHERWISE APPROVED BY THE ENGINEER. ONLY CALIBRATED VOLUMETRIC CONCRETE TRUCKS WILL BE PERMITTED TO PROVIDE ON-SITE MIXTURES. THIS PERTAINS TO BOTH WORK OCCURRING DURING NORMAL WORKING HOURS AND NIGHTTIME RESTRICTED WORK.

**GENERAL CONTRACT PLAN NOTES**

26. DRAINAGE INLETS, WHICH ARE 4' GREATER IN DEPTH AND ARE SLATED FOR REPAIR WILL HAVE STEPS INSTALLED IN ACCORDANCE WITH SECTION 708.07 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR ITEM 710001.

27. THE PORTLAND CEMENT CONCRETE USED WITHIN ITEM 710002 - ADJUST AND REPAIR EXISTING MAN HOLES AND ITEM 750000 - ADJUST WATER VALVE BOX SHALL CONFORM TO THE REQUIREMENTS OF CLASS A CONCRETE AS STATED WITHIN SECTION 503.02 OF THE DEPARTMENT'S STANDARD SPECIFICATIONS. ALSO, THE PERIMETER OF THE UTILITY ADJUSTMENT WILL BE SEALED AND WILL BE CONSIDERED INCIDENTAL TO THE APPLICABLE ADJUSTMENT ITEM.

28. WHEN JACKHAMMERING OR THE USE OF A BREAKER IS NECESSARY ON CONTRACTS THAT OCCUR DURING THE NIGHTTIME HOURS THE JACKHAMMERING AND BREAKING MUST CEASE AT 12:00AM REGARDLESS OF ANY NOISE WAIVER THAT MAY EXIST.

29. CURB RAMP AND/OR SIDEWALK CONSTRUCTION (NOT INCLUDING MEDIAN ISLANDS) SHALL BE COMPLETED DURING A SINGLE OPERATION. THE RAMP/SIDEWALK SHALL BE REMOVED AND PLACED BACK THE SAME NIGHT/DAY AND OPEN TO PEDESTRIAN TRAFFIC THE FOLLOWING DAY. THE USE OF A MONOLITHIC POUR SHALL BE PERMITTED WITH A BOND BREAKER TO BE PLACED AT THE BACK OF THE CURB AND EDGE OF SIDEWALK. IF THE CURB RAMP/SIDEWALK CANNOT BE COMPLETED IN A SINGLE OPERATION THE EXCAVATED AREA MUST BE BACKFILLED TO GRADE WITH COMPACTED MILLING MATERIAL ONLY. THIS MATERIAL WILL BE INCIDENTAL TO THE CURB RAMP ITEM. THE DRESSING UP OF THE AREA BEING PAID AS A CURB RAMP WITH TOPSOIL AND SEED WILL BE INCIDENTAL TO THE CURB RAMP ITEMS.

30. ANY MILLING MATERIAL REQUIRED TO MAKE AREAS ADA COMPLIANT IF NOT COMPLETED IN THE SAME SHIFT AT CURB, SIDEWALK, CURB RAMPS, ISLANDS, ETC. WILL BE INCIDENTAL TO THE PAY ITEM ASSOCIATED WITH THE WORK. MILLING MATERIAL IS THE ONLY APPROVED MATERIAL FOR THIS PRACTICE.

31. WHEN CONTRACT INCLUDES ITEMS 503001 AND 503002 PATCHES WILL BE PRESUMED TO BE STANDARD PATCH SIZES AND LOCATIONS WILL BE DETERMINED AT THE CONSTRUCTION PRE-WALK.

**GENERAL CONTRACT PLAN NOTES**

THE USE OF STEEL PLATES WILL BE PROHIBITED. ROADWAY MUST BE RETURNED TO UNRESTRICTED USE AT THE END OF EACH WORK DAY. ALL PCC PAVEMENT WILL BE PRESUMED TO BE 9".

32. ITEM 763621 CONSTRUCTION ENGINEERING, REHABILITATION WILL COMPENSATE THE CONTRACTOR FOR THE FOLLOWING SURVEY ACTIVITIES. ANY LAYOUT ASSOCIATED WITH ADA IMPROVEMENTS, PROVIDING GRADES FOR UTILITY ADJUSTMENTS IF NECESSARY, THE LAYOUT OF LANE LINES FOR PAVING, GRADES FOR THE INSTALLATION OF DRAINAGE STRUCTURES OR OTHER ITEMS OF WORK AS DETERMINED BY THE ENGINEER OR PROGRAM MANAGER. THIS ITEM WILL NOT COMPENSATE THE CONTRACTOR FOR THE LAYOUT OF STRIPING AS THIS IS THE RESPONSIBILITY OF THE STRIPING SUBCONTRACTOR. THE HOURLY PAYMENT WILL BE BASED UPON ACTUAL HOURS OF SURVEYING PERFORMED IN THE FIELD. IT WILL NOT INCLUDE TIME SPENT IN VEHICLE OR OFFICE. THE SURVEY CREW WILL BE RESPONSIBLE UPON ARRIVAL AND DEPARTURE ON THE JOBSITE TO CONTACT A MEMBER OF THE INSPECTION STAFF SO THAT HOURS CAN BE TRACKED FOR PAYMENT. THE CONSEQUENCE FOR NOT DOING THIS WILL BE NON-PAYMENT FOR THE SURVEYING SERVICES.

33. UPON RECEIPT OF THE MONTHLY PAY ESTIMATE ANY ISSUES OR DESCREPENCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER/PROGRAM MANAGER IF POSSIBLE BEFORE THE ISSUANCE OF THE NEXT PAY ESTIMATE. TO ALLOW FOR INVOICES FROM SUBCONTRACTORS ETC., A 60 DAY TIME PERIOD TO REPORT DESCREPENCIES WILL BE PERMITTED. ANY DESCREPENCIES BEYOND THE 60 DAY TIME PERIOD WILL NOT BE ENTERTAINED.

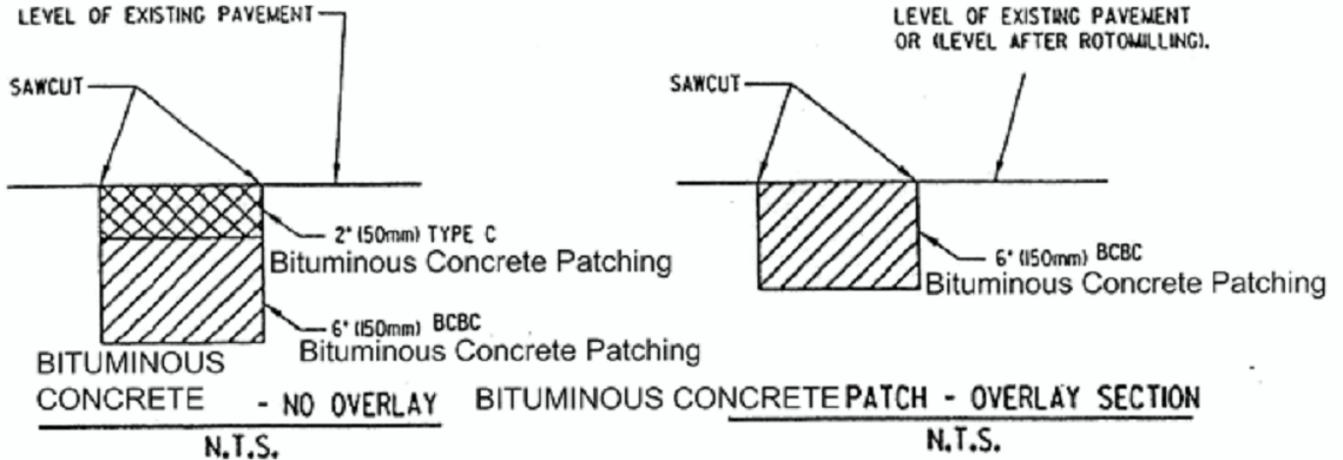
34. FOR ITEM 743007 TRAFFIC OFFICERS, REQUIRED INVOICES WILL BE REVIEWED FOR ACCURACY. ANY MAJOR INACCURACIES WILL BE ADJUSTED ACCORDINGLY. FOR EXAMPLE, IF INVOICE SHOWS CHARGED HOURS ON A CERTAIN DATE AND WE HAVE DOCUMENTATION THAT NO WORK OCCURED THAT DATE OR NO OFFICERS WERE PRESENT THE INVOICE WLL BE ADJUSTED ACCORDINGLY.

Copy

NORTH  
MAINTENANCE

ELKTON ROAD FROM MARYLAND LINE TO CASHO MILL ROAD;  
CHRISTINA PARKWAY FROM ELKTON ROAD TO SOUTH COLLEGE  
AVENUE

DETAILS SHEET



•UNDERCUT EXCAVATION PATCHING TO BE UTILIZED  
BELOW 8" (200mm) WHEN DIRECTED BY THE ENGINEER.

•UNDERCUT EXCAVATION PATCHING TO BE UTILIZED  
BELOW 6" (150mm) WHEN DIRECTED BY THE ENGINEER.

NOTE: PREFERRED EXCAVATION METHOD TO BE BY ROTOMILLING. SAWCUTTING EDGES SHALL BE AS DIRECTED BY ENGINEER AND DEPENDENT ON THE CONDITION LEFT BY THE ROTOMILLING OPERATION.  
BACKFILL FOR UNDERCUT EXCAVATION SHALL BE SUPERPAVE BCBC PATCH (SEPERATE LIFT).  
MINIMUM WIDTH OF PATCHING 6' (1.8M).  
THIS DETAIL SHALL BE USED FOR ALL HOT MIX PATCHES UNLESS OTHERWISE SHOWN ON THE PLANS.  
ALL HOT MIX TO BE PLACED USING A PAVER.

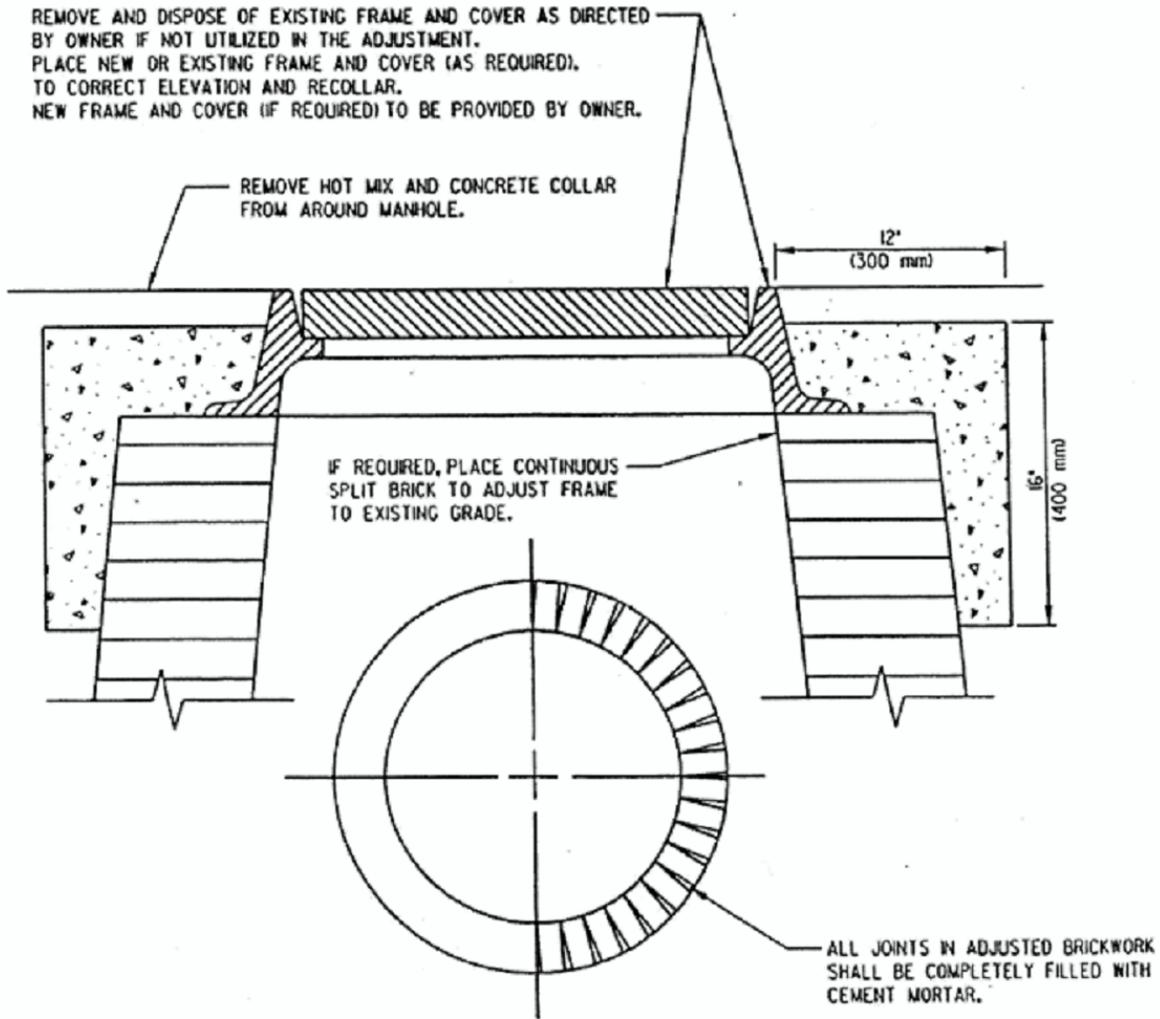
WHEN PCC PATCHING IS REQUIRED ON A COMPOSITE PAVEMENT(HOT-MIX OVER CONCRETE), THE CONTRACTOR MAY ELECT TO ELIMINATE ANY GRADE DIFFERENCE BETWEEN THE TOP OF THE CONCRETE PATCH AND THE TOP OF THE EXISTING HOT-MIX PAVEMENT BY EITHER PLACING HOT-MIX TRM MATERIAL(PAYMENT UNDER ITEM 402000) OR PLACING CONCRETE FLUSH WITH EXISTING HOT-MIX PAVEMENT(ADDITIONAL CONCRETE PAID AS ITEM 503503). IF CONCRETE IS PLACED FLUSH WITH EXISTING HOT-MIX, THE ROTOMILLING OF THE CONCRETE WILL BE PAID FOR AS ROTOMILLING HOT-MIX.

P.C.C. PATCHING NOTES

NORTH  
MAINTENANCE

ELKTON ROAD FROM MARYLAND LINE TO CASHO MILL ROAD;  
CHRISTINA PARKWAY FROM ELKTON ROAD TO SOUTH COLLEGE  
AVENUE

DETAILS SHEET

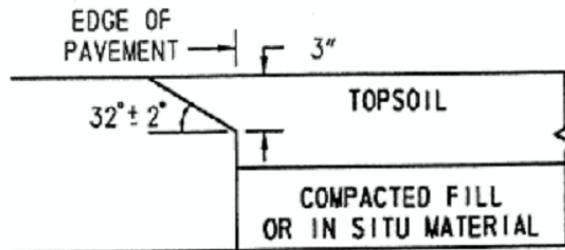


ADJUSTING AND REPAIRING MANHOLE  
N.T.S.

NOTE: MANHOLES IN CONCRETE ROADWAYS SHALL BE SAWCUT FULL DEPTH TO THE SPECIFIED DIMENSION PRIOR TO ANY ADJUSTMENT BEING MADE. THE SAWCUTTING SHALL BE INCIDENTAL TO ITEM 710002.

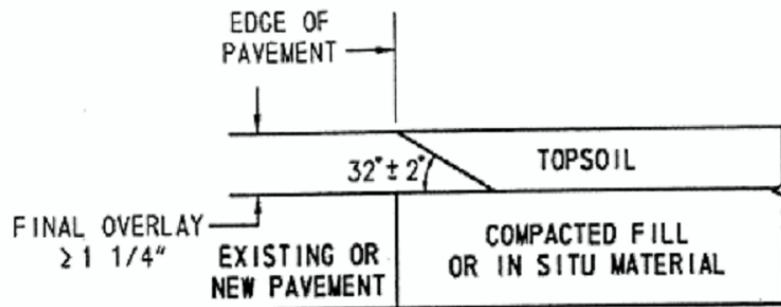
NORTH  
MAINTENANCE

ELKTON ROAD FROM MARYLAND LINE TO CASHO MILL ROAD;  
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AVENUE



**CONCRETE PAVEMENTS**

**N. T. S.**



**BITUMINOUS CONCRETE PAVEMENTS AND OVERLAYS**

**N. T. S.**

Prior to placing concrete or bituminous concrete pavement, prepare the shoulder material where the Safety Edge will be placed to provide a foundation that will support its placement.

The Safety Edge is installed during a bituminous concrete resurfacing project using a special, removable wedge shape compaction device attached to and extending below the screed strike-off plate of the paver. This device is used to construct a pre-compacted, long lasting, low angle wedge fillet on the outside edge of the paved mat. The device has a self-adjusting internal spring that allows it to follow the surface independent of other paver components. The device has an angled surface that compacts the asphalt as it enters the device while another fixed-angle surface forms the tapered edge. As the asphalt continues under the wedge-forming surface, the asphalt is smoothed to create a finished surface on the tapered edge. Two wedge shape compaction devices that are commercially available are TransTech's Shoulder Wedge Maker and Advant-Edge Paving Equipment's Advant-Edger. The use of a single plate strike off is not allowed. Compaction of the edge should not be done with the first pass of the roller in order to give the Safety Edge a chance to harden some.

For concrete pavement or overlay, modify the paver screed to create the shoulder wedge as per the Safety Edge cross section.

**DELAWARE DEPARTMENT OF TRANSPORTATION**

**CONTRACT T201506106**

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**NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015**

**LOCATION 1 11(ELKTON ROAD) FROM MARYLAND LINE TO BRIDGE APPROXIMATELY  
430' SOUTH OF CASHO MILL ROAD**

**LENGTH 2133.6000 m 7000.0000 L.F. AADT 30078**

**GENERAL IMPROVEMENTS  
SEE COMMENT SHEET**

**COMMENTS:**  
Please see attached sheets for comments

Unofficial

**MATERIAL ESTIMATE FOR LOCATION 1**

302005	GRADED AGGREGATE BASE COURSE, TYPE B	100.00	TON
401577	PAVER-LAID ULTRATHIN HOT MIX	30,500.00	S.Y.
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	200.00	TON
401755	RECYCLED ASPHALT PAVEMENT MILLINGS FOR ROADWAY EDGE	30.00	TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	1,440.00	TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	5,600.00	TON
402000	BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	30.00	TON
406001	BITUMINOUS CONCRETE PATCHING	15,600.00	SY-IN
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	200.00	L.F.
701022	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-8	50.00	L.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	50.00	S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	525.00	S.F.
705010	CURB RAMP, TYPE 5	300.00	S.F.
708060	REPLACE DRAINAGE INLET GRATE(S)	1.00	EACH
708061	REPLACE DRAINAGE INLET FRAME(S)	1.00	EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	2.00	EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	2.00	EACH
743003	ARROWPANELS, TYPE C	90.00	EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00	EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	440.00	EA-DY
743007	** TRAFFIC OFFICERS	720.00	HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	90.00	EA-DY
743056	FLAGGER, NEW CASTLE COUNTY, FEDERAL	3,520.00	HOUR

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**DELAWARE DEPARTMENT OF TRANSPORTATION**

**CONTRACT T201506106**

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**NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015**

**LOCATION 1 11(ELKTON ROAD) FROM MARYLAND LINE TO BRIDGE APPROXIMATELY  
430' SOUTH OF CASHO MILL ROAD**

**LENGTH 2133.6000 m 7000.0000 L.F. AADT 30078**

**GENERAL IMPROVEMENTS  
SEE COMMENT SHEET**

**COMMENTS:**  
Please see attached sheets for comments

**Unofficial**

**MATERIAL ESTIMATE FOR LOCATION 1**

743065	FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	360.00	HOUR
744544	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	1.00	EACH
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	2,235.00	L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	4,275.00	S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	111,680.00	L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	8,550.00	S.F.
748033	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 5"	815.00	L.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	55,840.00	L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	39.00	EACH
748559	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 5"	90.00	L.F.
748568	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 9"	80.00	L.F.
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	9.00	EACH
750000	ADJUST WATER VALVE BOXES	1.00	EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	900.00	S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	108,500.00	SY-IN
762001	SAW CUTTING, BITUMINOUS CONCRETE	500.00	L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	1,200.00	L.F.
763587	MAN-HOUR OF MISCELLANEOUS WORK	60.00	HOUR
763621	CONSTRUCTION ENGINEERING, REHABILITATION	20.00	HOUR
908001	TOPSOIL (TON)	30.00	TON
908014	PERMANENT GRASS SEEDING, DRY GROUND	225.00	S.Y.

\*\* DENOTES FIXED PRICE ITEM

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LOCATION 1 11(ELKTON ROAD) FROM MARYLAND LINE TO BRIDGE APPROXIMATELY  
430' SOUTH OF CASHO MILL ROAD

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**COMMENTS:**

ELKTON ROAD EB - REMOVAL OF DETERIORATED CONCRETE AND REPLACED USING ITEM 401823, REMOVAL OF CONCRETE TO BE PAID UNDER ITEM 758000, ASSUME CONCRETE TO BE 9", ADA IMPROVEMENTS, BITUMINOUS CONCRETE PATCHING SHOULDER, REMOVAL OF EXISTING 3/4" PAVER-LAID ULTRA THIN HOT-MIX AND PLACEMENT OF 1" PAVER-LAID ULTRA THIN HOT-MIX. REMOVAL OF EXISTING PAVER-LAID ULTRA THIN HOT-MIX TO BE PAID UNDER ITEM 760507 PROFILE MILLING HOT-MIX, MILLING AND PAVING TO OCCUR DURING THE SAME SHIFT.

ELKTON ROAD WB - BITUMINOUS CONCRETE PATCHING, ADA IMPROVEMENTS, 2" PROFILE MILL, 2" BITUMINOUS CONCRETE, SUPERPAVE TYPE C, PG 76-22

Restricted Work Hours: 7:30 PM to 5:30 AM

Recommended Traffic Control: #TA33, #TA3

Item 763587 Man-Hour of Miscellaneous Work

Scope of work includes:

Remove (chip out) failed partial depth concrete patches (spalls)  
Re-saw cut if necessary, clean spall area with compressed air  
Tack and backfill partial depth spall with bituminous Type C HM (76-22)

Hourly price based on the use of the following manpower/equipment to complete the spall repairs:

- 1 Foreman
- 7 Laborers
- 2 Truck Drivers
- 2 Pick-ups
- 2 Small Dump Trucks
- 2 Compressors w/chipping hammer and air-wand
- 1 Plate Tamp
- 1 Concrete Saw

Payment for hot-mix backfill will be made under item 401833. Payment for MOT set-ups will be incidental to item 763643. All work to be completed immediately prior to the placement of the Paver-Laid Ultra Thin Hot-Mix overlay.

ADA Improvement Locations:

Christina Parkway Route 4

Entrance and Driveway EB:

McIntire Drive  
Interchange Bus Park  
East Exit Business Interchange

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LOCATION 1 11(ELKTON ROAD) FROM MARYLAND LINE TO BRIDGE APPROXIMATELY  
430' SOUTH OF CASHO MILL ROAD

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Patriot

Entrance and Driveway WB:

#1024

#1036

DuPont Lab

Dupont

#1130

#1140

Unmarked location

Unmarked location

Utility Adjustments:

DelDOT Storm Sewer - 3

City of Newark Water Valve - 1

NCC Sanitary Manhole - 2

Unofficial

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

LOCATION 2 361(CASHO MILL ROAD) FROM INTERSECTION OF CASHO MILL ROAD AND WESTFIELD DRIVE TO

LENGTH 27.4320 m 90.0000 L.F. AADT 10303

GENERAL IMPROVEMENTS  
DRAINAGE IMPROVEMENT

COMMENTS:

Please see attached sheets for comments

Unofficial

MATERIAL ESTIMATE FOR LOCATION 2

202000	EXCAVATION AND EMBANKMENT	48.00	C.Y.
302007	GRADED AGGREGATE BASE COURSE, TYPE B	13.00	C.Y.
401816	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22	8.00	TON
401819	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22	9.00	TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	22.00	TON
612020	REINFORCED CONCRETE PIPE, 12", CLASS IV	30.00	L.F.
612049	REINFORCED CONCRETE PIPE, 12", CLASS V	37.00	L.F.
701021	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 2	79.00	L.F.
701023	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-6	22.00	L.F.
705001	P.C.C. SIDEWALK, 4"	50.00	S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	12.00	S.F.
705008	CURB RAMP, TYPE 1	95.00	S.F.
708051	DRAINAGE INLET, 34" X 24"	1.00	EACH
708112	MANHOLE, 48" X 48"	1.00	EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	1.00	EACH
743056	FLAGGER, NEW CASTLE COUNTY, FEDERAL	50.00	HOUR
743065	FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	5.00	HOUR
750000	ADJUST WATER VALVE BOXES	2.00	EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	20.00	S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	548.00	SY-IN
762001	SAW CUTTING, BITUMINOUS CONCRETE	250.00	L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	16.00	L.F.
763501	CONSTRUCTION ENGINEERING	1.00	L.S.

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**LOCATION 2** 361(CASHO MILL ROAD) FROM INTERSECTION OF CASHO MILL ROAD AND WESTFIELD DRIVE TO

LENGTH 27.4320 m 90.0000 L.F. AADT 10303

**GENERAL IMPROVEMENTS**  
DRAINAGE IMPROVEMENT

**COMMENTS:**  
Please see attached sheets for comments

Unofficial

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**MATERIAL ESTIMATE FOR LOCATION 2**

908004	TOPSOIL, 6" DEPTH	48.00	S.Y.
908014	PERMANENT GRASS SEEDING, DRY GROUND	48.00	S.Y.
908020	EROSION CONTROL BLANKET MULCH	48.00	S.Y.

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LOCATION 2 361(CASHO MILL ROAD) FROM INTERSECTION OF CASHO MILL ROAD AND WESTFIELD DRIVE TO

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**COMMENTS:**

Restricted Work Hours: 9:00 AM to 3:00 PM

Recommended Traffic Control: #TA3, #TA27

See plan sheets for additional information

Unofficial  
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DELAWARE DEPARTMENT OF TRANSPORTATION

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

LOCATION 3 366(CHRISTINA PARKWAY) FROM ELKTON ROAD (RD 11) TO SOUTH COLLEGE AVENUE (RD 387)

LENGTH 2164.0800 m 7100.0000 L.F. AADT 34122

GENERAL IMPROVEMENTS  
SEE COMMENT SHEET

COMMENTS:

Please see attached sheets for comments

Unofficial

MATERIAL ESTIMATE FOR LOCATION 3

202000	EXCAVATION AND EMBANKMENT	93.00	C.Y.
212001	UNDERCUT EXCAVATION, PATCHING	6.00	C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	75.00	TON
302007	GRADED AGGREGATE BASE COURSE, TYPE B	56.00	C.Y.
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	12.00	C.Y.
401577	PAVER-LAID ULTRATHIN HOT MIX	33,720.00	S.Y.
401755	RECYCLED ASPHALT PAVEMENT MILLINGS FOR ROADWAY EDGE	60.00	TON
401821	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, PATCHING	6.00	TON
401822	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING	9.00	TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	765.00	TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	1,300.00	TON
402000	BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	20.00	TON
406001	BITUMINOUS CONCRETE PATCHING	13,150.00	SY-IN
503001	PATCHING P.C.C. PAVEMENT, 6' TO 15', TYPE A	70.00	S.Y.
503006	DOWEL BARS	200.00	EACH
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	225.00	L.F.
701011	PORTLAND CEMENT CONCRETE CURB, TYPE 2	450.00	L.F.
701020	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 1-8	55.00	L.F.
701025	PORTLAND CEMENT CONCRETE CURB, TYPE 2 MODIFIED	90.00	L.F.
701027	PORTLAND CEMENT CONCRETE CURB, TYPE 1-2 MODIFIED	330.00	L.F.
705002	P.C.C. SIDEWALK, 6"	2,045.00	S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	210.00	S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	650.00	S.F.

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

LOCATION 3 366(CHRISTINA PARKWAY) FROM ELKTON ROAD (RD 11) TO SOUTH COLLEGE AVENUE (RD 387)

LENGTH 2164.0800 m 7100.0000 L.F. AADT 34122

GENERAL IMPROVEMENTS  
SEE COMMENT SHEET

COMMENTS:

Please see attached sheets for comments

Unofficial

MATERIAL ESTIMATE FOR LOCATION 3

708060	REPLACE DRAINAGE INLET GRATE(S)	3.00	EACH
708061	REPLACE DRAINAGE INLET FRAME(S)	3.00	EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	13.00	EACH
710004	ADJUST & REPAIR EXISTING DOUBLE DRAINAGE INLET(S)	3.00	EACH
736001	SODDING	23.00	S.Y.
743003	ARROWPANELS, TYPE C	49.00	EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	20.00	EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	180.00	EA-DY
743007	** TRAFFIC OFFICERS	375.00	HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	49.00	EA-DY
743056	FLAGGER, NEW CASTLE COUNTY, FEDERAL	1,410.00	HOUR
743065	FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	141.00	HOUR
744530	CONDUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	5.00	EACH
744542	FURNISH & INSTALL FRAME AND LID FOR JUNCTION WELL, TYPE 14	1.00	EACH
744544	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	1.00	EACH
745604	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	75.00	L.F.
745607	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (BORE)	130.00	L.F.
746850	POLE BASE, TYPE 4	5.00	EACH
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	3,000.00	L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	570.00	S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	57,940.00	L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	1,140.00	S.F.
748502	RAISED/RECESSED PAVEMENT MARKER	115.00	EACH
748530	REMOVAL OF PAVEMENT STRIPING	770.00	S.F.

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

LOCATION 3 366(CHRISTINA PARKWAY) FROM ELKTON ROAD (RD 11) TO SOUTH COLLEGE AVENUE (RD 387)

LENGTH 2164.0800 m 7100.0000 L.F. AADT 34122

GENERAL IMPROVEMENTS  
SEE COMMENT SHEET

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 3

748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	28,970.00	L.F.
748559	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 5"	200.00	L.F.
748568	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 9"	1,560.00	L.F.
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	7.00	EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	1,405.00	S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	57,070.00	SY-IN
761002	BUTT JOINTS, CONCRETE	90.00	S.Y.
762001	SAW CUTTING, BITUMINOUS CONCRETE	1,405.00	L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	2,760.00	L.F.
763587	MAN-HOUR OF MISCELLANEOUS WORK	20.00	HOUR
763621	CONSTRUCTION ENGINEERING, REHABILITATION	10.00	HOUR
908001	TOPSOIL (TON)	20.00	TON
908014	PERMANENT GRASS SEEDING, DRY GROUND	50.00	S.Y.

\*\* DENOTES FIXED PRICE ITEM

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LOCATION 3 366(CHRISTINA PARKWAY) FROM ELKTON ROAD (RD 11) TO SOUTH COLLEGE AVENUE (RD 387)

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**COMMENTS:**

REMOVAL OF DETERIORATED CONCRETE AND REPLACED USING ITEM 401823. REMOVAL OF CONCRETE TO BE PAID UNDER ITEM 758000, ASSUME CONCRETE TO BE 9", BITUMINOUS CONCRETE PATCHING SHOULDERS, REMOVAL OF EXISTING 3/4" PAVER-LAID ULTRA THIN HOT-MIX AND PLACEMENT OF 1" PAVER-LAID ULTRA THIN HOT-MIX, REMOVAL OF EXISTING PAVER-LAID HOT-MIX TO BE PAID UNDER ITEM 760507 PROFILE MILLING HOT-MIX, MILLING AND PAVING TO OCCUR DURING THE SAME SHIFT

Restricted Work Hours: 7:30 PM to 5:30 AM

Recommended Traffic Control: #TA33, #TA3, #TA10

Item 763587 Man-Hour of Miscellaneous Work

Scope of work includes:

Remove (chip out) failed partial depth concrete patches (spalls)  
Re-saw cut if necessary, clean spall area with compressed air  
Tack and backfill partial depth spall with bituminous Type C HM (76-22)

Hourly price based on the use of the following manpower/equipment to complete the spall repairs:

- 1 Foreman
- 7 Laborers
- 2 Truck Drivers
- 2 Pick-ups
- 2 Small Dump Trucks
- 2 Compressors w/chipping hammer and air-wand
- 1 Plate Tamp
- 1 Concrete Saw

Payment for hot-mix backfill will be made under item 401833. Payment for MOT set-ups will be incidental to item 763643. All work to be completed immediately prior to the placement of the Paver-Laid Ultra Thin Hot-Mix overlay.

ADA Improvement Locations: Route 4 & Elkton Road Intersection

Entrance and Driveway: None

Utility Adjustments: None

DELAWARE DEPARTMENT OF TRANSPORTATION

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

CONTRACT QUANTITIES SUMMARY SHEET

202000	EXCAVATION AND EMBANKMENT	141.00	C.Y.
212001	UNDERCUT EXCAVATION, PATCHING	6.00	C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	175.00	TON
302007	GRADED AGGREGATE BASE COURSE, TYPE B	69.00	C.Y.
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	12.00	C.Y.
401577	PAVER-LAID ULTRATHIN HOT MIX	64,220.00	S.Y.
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	200.00	TON
401755	RECYCLED ASPHALT PAVEMENT MILLINGS FOR ROADWAY EDGE	90.00	TON
401816	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22	8.00	TON
401819	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22	9.00	TON
401821	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, PATCHING	6.00	TON
401822	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING	9.00	TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	2,205.00	TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	6,922.00	TON
402000	BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	50.00	TON
406001	BITUMINOUS CONCRETE PATCHING	28,750.00	SY-IN
503001	PATCHING P.C.C. PAVEMENT, 6' TO 15', TYPE A	70.00	S.Y.
503006	DOWEL BARS	200.00	EACH
612020	REINFORCED CONCRETE PIPE, 12", CLASS IV	30.00	L.F.
612049	REINFORCED CONCRETE PIPE, 12", CLASS V	37.00	L.F.
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	425.00	L.F.
701011	PORTLAND CEMENT CONCRETE CURB, TYPE 2	450.00	L.F.
701020	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 1-8	55.00	L.F.
701021	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 2	79.00	L.F.
701022	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-8	50.00	L.F.

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

CONTRACT QUANTITIES SUMMARY SHEET

701023	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-6	22.00	L.F.
701025	PORTLAND CEMENT CONCRETE CURB, TYPE 2 MODIFIED	90.00	L.F.
701027	PORTLAND CEMENT CONCRETE CURB, TYPE 1-2 MODIFIED	330.00	L.F.
705001	P.C.C. SIDEWALK, 4"	50.00	S.F.
705002	P.C.C. SIDEWALK, 6"	2,045.00	S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	272.00	S.F.
705008	CURB RAMP, TYPE 1	95.00	S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	1,175.00	S.F.
705010	CURB RAMP, TYPE 5	300.00	S.F.
708051	DRAINAGE INLET, 34" X 24"	1.00	EACH
708060	REPLACE DRAINAGE INLET GRATE(S)	4.00	EACH
708061	REPLACE DRAINAGE INLET FRAME(S)	4.00	EACH
708112	MANHOLE, 48" X 48"	1.00	EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	16.00	EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	2.00	EACH
710004	ADJUST & REPAIR EXISTING DOUBLE DRAINAGE INLET(S)	3.00	EACH
736001	SODDING	23.00	S.Y.
743003	ARROWPANELS, TYPE C	139.00	EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	30.00	EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	620.00	EA-DY
743007	** TRAFFIC OFFICERS	1,095.00	HOURL
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	139.00	EA-DY
743056	FLAGGER, NEW CASTLE COUNTY, FEDERAL	4,980.00	HOURL
743065	FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	506.00	HOURL
744530	CONDUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	5.00	EACH
744542	FURNISH & INSTALL FRAME AND LID FOR JUNCTION WELL, TYPE 14	1.00	EACH
744544	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	2.00	EACH
745604	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	75.00	L.F.

**DELAWARE DEPARTMENT OF TRANSPORTATION**

**CONTRACT T201506106**

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**NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015**

**CONTRACT QUANTITIES SUMMARY SHEET**

745607	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (BORE)	130.00	L.F.
746850	POLE BASE, TYPE 4	5.00	EACH
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	5,235.00	L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	4,845.00	S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	169,620.00	L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	9,690.00	S.F.
748033	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 5"	815.00	L.F.
748502	RAISED/RECESSED PAVEMENT MARKER	115.00	EACH
748530	REMOVAL OF PAVEMENT STRIPING	770.00	S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	84,810.00	L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	39.00	EACH
748559	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 5"	290.00	L.F.
748568	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 9"	1,640.00	L.F.
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	16.00	EACH
750000	ADJUST WATER VALVE BOXES	3.00	EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	2,325.00	S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	166,118.00	SY-IN
761002	BUTT JOINTS, CONCRETE	90.00	S.Y.
762001	SAW CUTTING, BITUMINOUS CONCRETE	2,155.00	L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	3,976.00	L.F.
763000	INITIAL EXPENSE		LUMP SUM
763501	CONSTRUCTION ENGINEERING	1.00	L.S.
763587	MAN-HOUR OF MISCELLANEOUS WORK	80.00	HOUR
763621	CONSTRUCTION ENGINEERING, REHABILITATION	30.00	HOUR
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE		LUMP SUM
908001	TOPSOIL (TON)	50.00	TON
908004	TOPSOIL, 6" DEPTH	48.00	S.Y.

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DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201506106

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NORTH MAINTENANCE PAVEMENT & REHABILITATION, NORTH VI, 2015

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CONTRACT QUANTITIES SUMMARY SHEET

908014	PERMANENT GRASS SEEDING, DRY GROUND	323.00	S.Y.
908020	EROSION CONTROL BLANKET MULCH	48.00	S.Y.

\*\* DENOTES FIXED PRICE ITEM

Unofficial

Website

Copy

T201506106

Location #2 Plan Sheets (1 - 2)

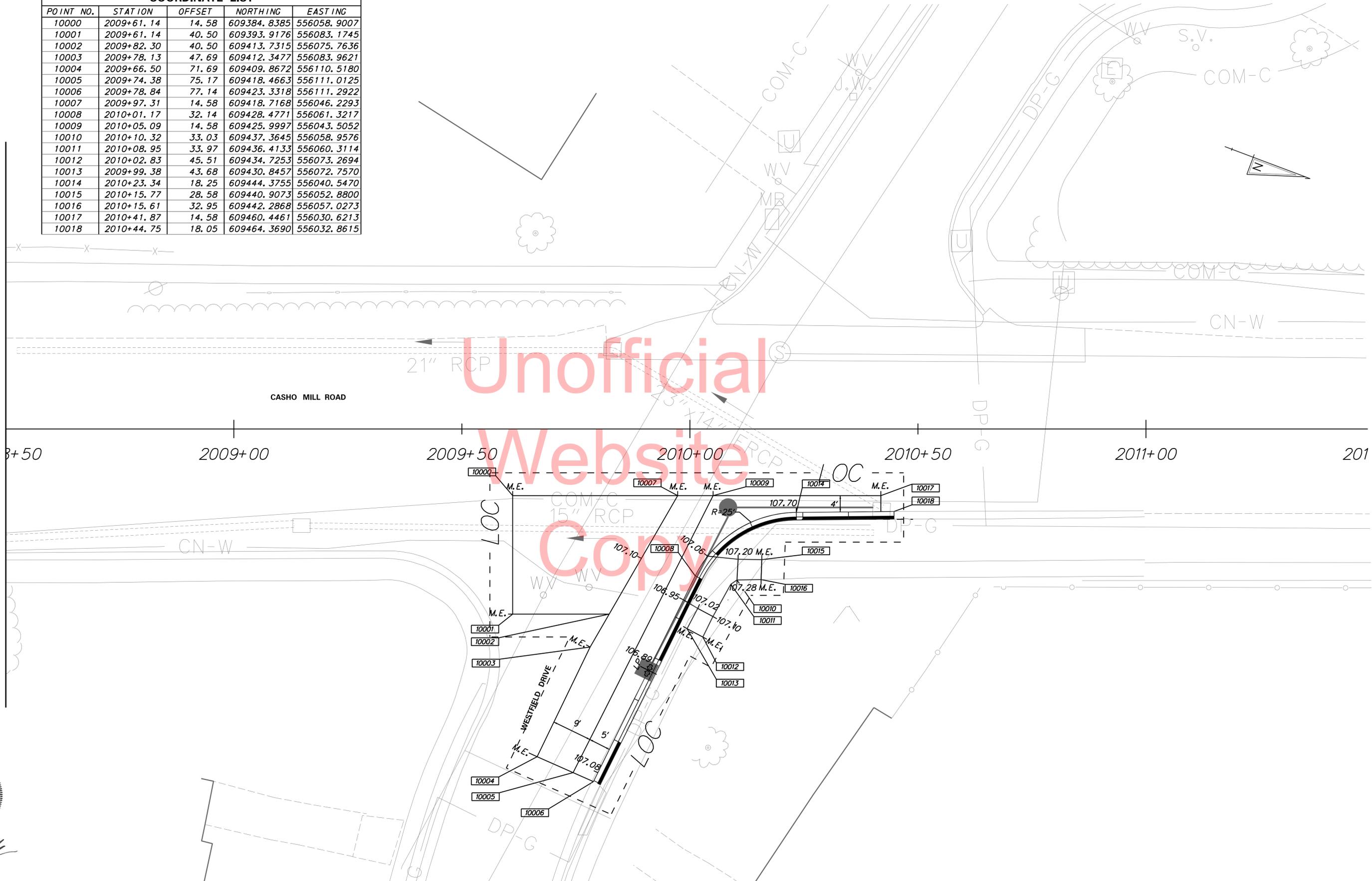
Intersection of Casho Mill Road and  
Westfield Drive Drainage  
Improvement





COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
10000	2009+61.14	14.58	609384.8385	556058.9007
10001	2009+61.14	40.50	609393.9176	556083.1745
10002	2009+82.30	40.50	609413.7315	556075.7636
10003	2009+78.13	47.69	609412.3477	556083.9621
10004	2009+66.50	71.69	609409.8672	556110.5180
10005	2009+74.38	75.17	609418.4663	556111.0125
10006	2009+78.84	77.14	609423.3318	556111.2922
10007	2009+97.31	14.58	609418.7168	556046.2293
10008	2010+01.17	32.14	609428.4771	556061.3217
10009	2010+05.09	14.58	609425.9997	556043.5052
10010	2010+10.32	33.03	609437.3645	556058.9576
10011	2010+08.95	33.97	609436.4133	556060.3114
10012	2010+02.83	45.51	609434.7253	556073.2694
10013	2009+99.38	43.68	609430.8457	556072.7570
10014	2010+23.34	18.25	609444.3755	556040.5470
10015	2010+15.77	28.58	609440.9073	556052.8800
10016	2010+15.61	32.95	609442.2868	556057.0273
10017	2010+41.87	14.58	609460.4461	556030.6213
10018	2010+44.75	18.05	609464.3690	556032.8615

MATCH LINE STATION 2008 + 50



Unofficial  
Website  
Copy

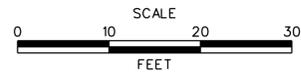


*Bradley P. Heger*

SUBMISSION STATUS: PS&E  
DATE PLOTTED: 4/24/2015  
JMT FILE LOCATION: G:\NDE\140659\_005\_Elkton\_Road\_...\_Addit\CADD\CP.DGN



ADDENDUMS / REVISIONS



**PAVEMENT & REHABILITATION,  
NORTH VI, 2015**

CONTRACT	BRIDGE NO.
T201506106	
COUNTY	DESIGNED BY: CCG
NEW CASTLE	CHECKED BY: BPH

**GRADES & GEOMETRICS**

SHEET NO.
2
TOTAL SHTS.
2