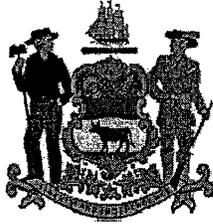


THE STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION
OFFICE OF TRANSPORTATION SOLUTIONS

PLANS AND SPECIFICATIONS FOR

CONTRACT NUMBER- T201406101

CANAL MAINTENANCE

FEDERAL AID NUMBER – ESTP-2014(06)

PAGE 1 OF 30

CONTRACT TITLE- PAVEMENT & REHABILITATION – NORTH 1, 2014

PLANS PREPARED BY: Amey L. Cates
DESIGN TECHNICIAN

UNOFFICIAL
WEBSITE
COPY

DATE RECOMMENDED: 11-15-13

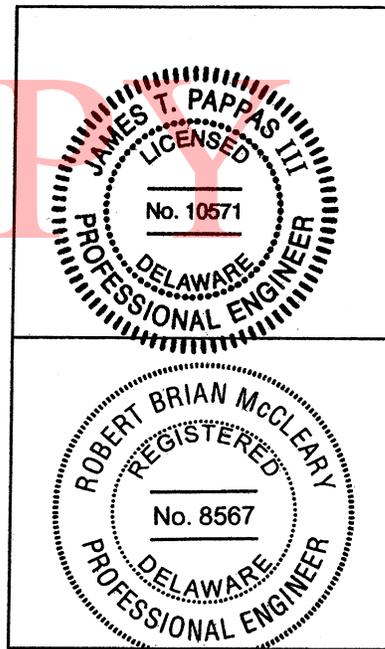
DATE RECOMMENDED: _____

[Signature]
GROUP ENGINEER, CONSTRUCTION – NORTH II

N/A
ASSIST. DIRECTOR, CONSTRUCTION - NORTH

DATE RECOMMENDED: 11.15.13

James T. Pappas III
ASSIST. DIRECTOR, DESIGN



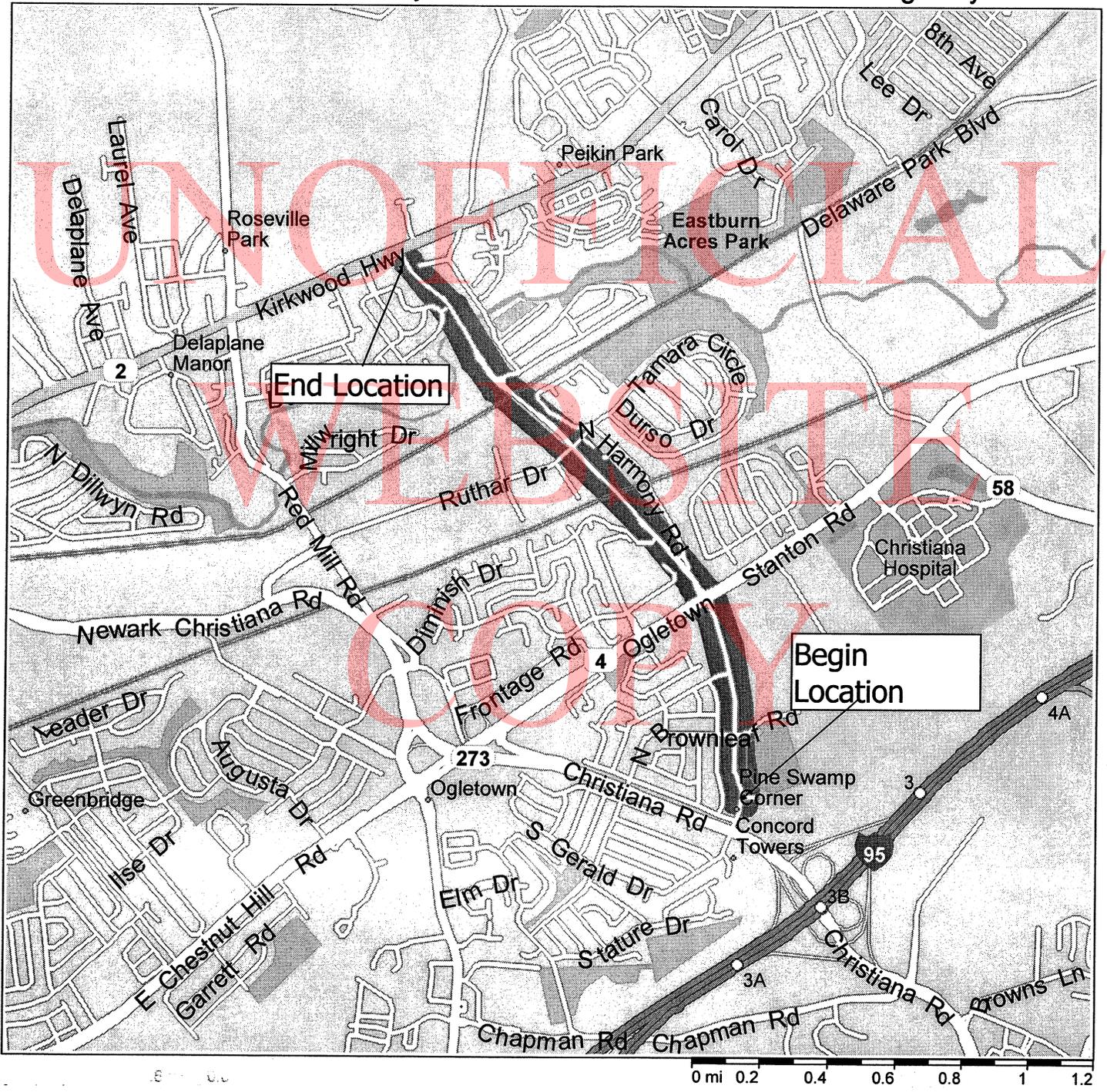
DATE RECOMMENDED: 11/18/13

Robert B. McCleary
CHIEF ENGINEER

RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD355); HARMONY RD (RD355) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAY (RD11); PORTER RD - SALEM CHURCH RD (RD48) FROM ROUTE 72

LOCATION MAP

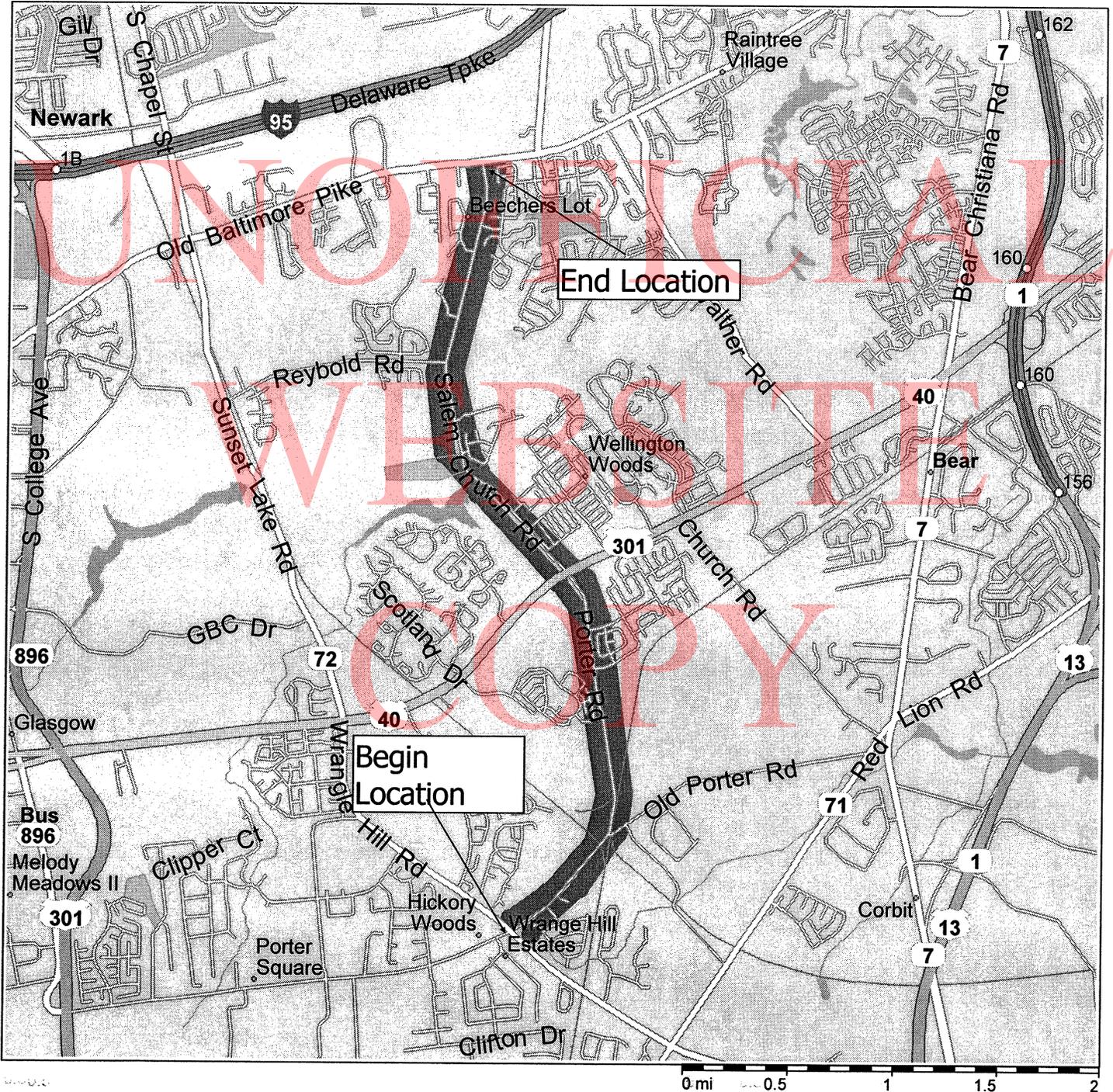
Location #1 - Harmony Road from Route 273 to Kirkwood Highway



RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD355); HARMONY RD (RD355) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAY (RD11); PORTER RD - SALEM CHURCH RD (RD48) FROM ROUTE 72

LOCATION MAP

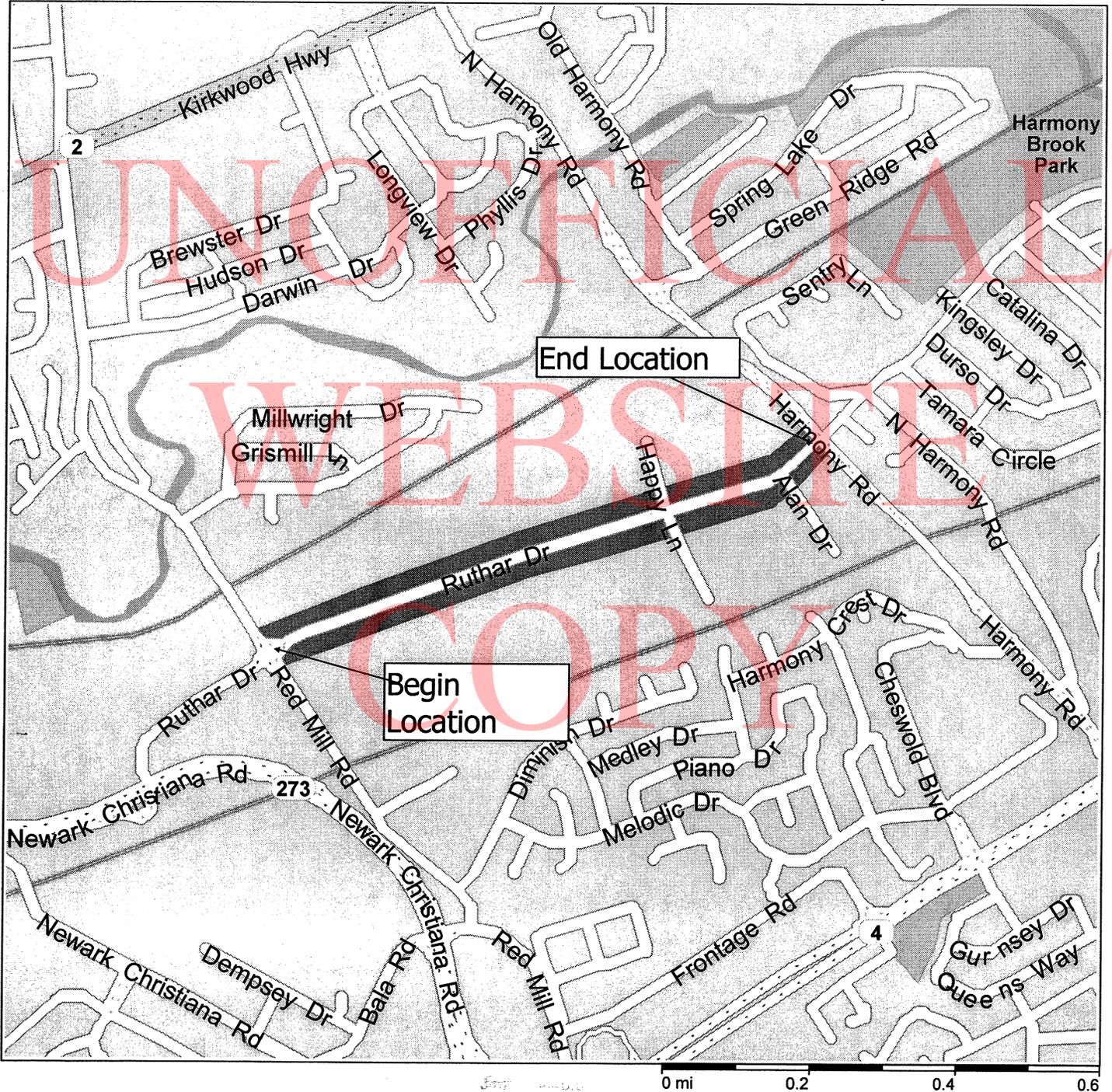
Location #2 - Porter Road - Salem Church Road from Route 72 to Old Baltimore Pike



RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD355); HARMONY RD (RD355) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAY (RD11); PORTER RD - SALEM CHURCH RD (RD48) FROM ROUTE 72

LOCATION MAP

Location #3 - Ruthar Drive from Red Mill Road to Harmony Road



GENERAL CONTRACT PLAN NOTES

REVISED 9/2013

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 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.

GENERAL CONTRACT PLAN NOTES

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 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

GENERAL CONTRACT PLAN NOTES

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.
- 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.

GENERAL CONTRACT PLAN NOTES

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

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.

GENERAL CONTRACT PLAN NOTES

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

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.

PAVEMENT & REHABILITATION, NORTH I, 2014

GENERAL CONTRACT PLAN NOTES

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 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

PAVEMENT & REHABILITATION, NORTH I, 2014

GENERAL CONTRACT PLAN NOTES

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.

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 701002 - 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.

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.

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.

DELAWARE DEPARTMENT OF TRANSPORTATION

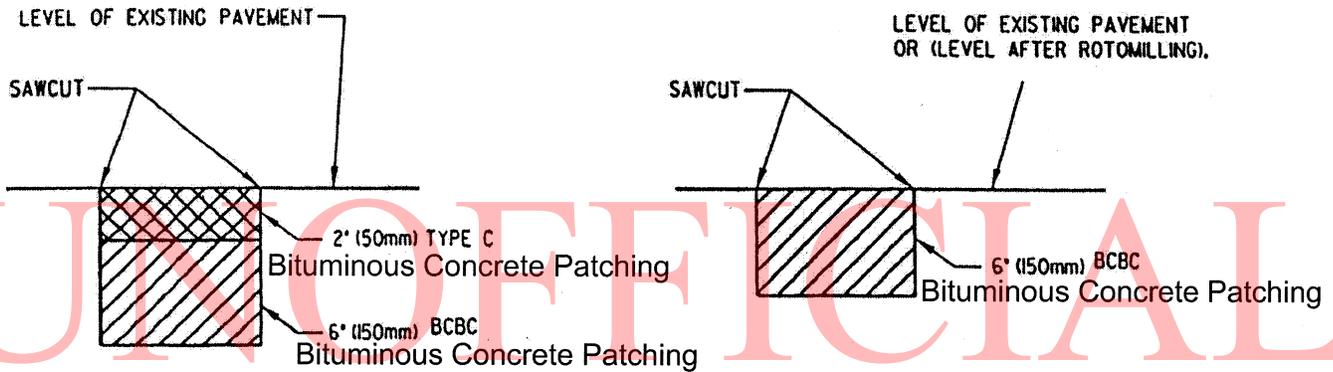
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CANAL

RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD

DETAILS SHEET



BITUMINOUS CONCRETE - NO OVERLAY

BITUMINOUS CONCRETE PATCH - OVERLAY SECTION

N.T.S.

N.T.S.

•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

DELAWARE DEPARTMENT OF TRANSPORTATION

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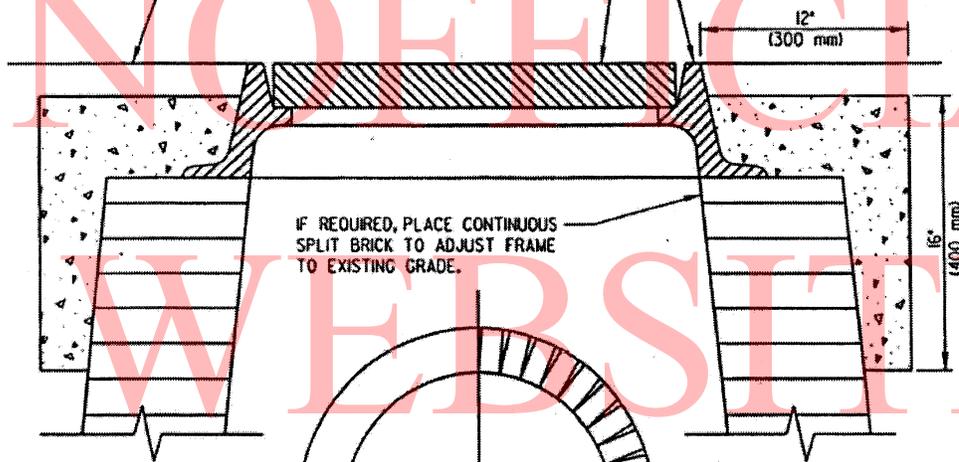
CANAL

RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD

DETAILS SHEET

REMOVE AND DISPOSE OF EXISTING FRAME AND COVER AS DIRECTED BY OWNER IF NOT UTILIZED IN THE ADJUSTMENT. PLACE NEW OR EXISTING FRAME AND COVER (AS REQUIRED), TO CORRECT ELEVATION AND RECOLLAR. NEW FRAME AND COVER (IF REQUIRED) TO BE PROVIDED BY OWNER.

REMOVE HOT MIX AND CONCRETE COLLAR FROM AROUND MANHOLE.



IF REQUIRED, PLACE CONTINUOUS SPLIT BRICK TO ADJUST FRAME TO EXISTING GRADE.

ALL JOINTS IN ADJUSTED BRICKWORK SHALL BE COMPLETELY FILLED WITH CEMENT MORTAR.

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.

DELAWARE DEPARTMENT OF TRANSPORTATION

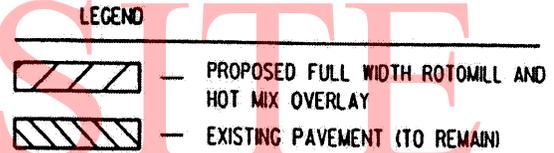
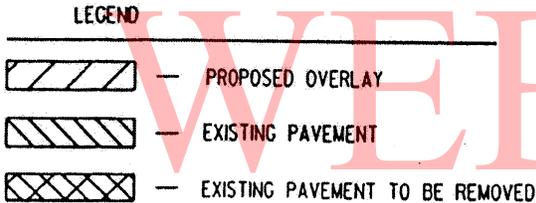
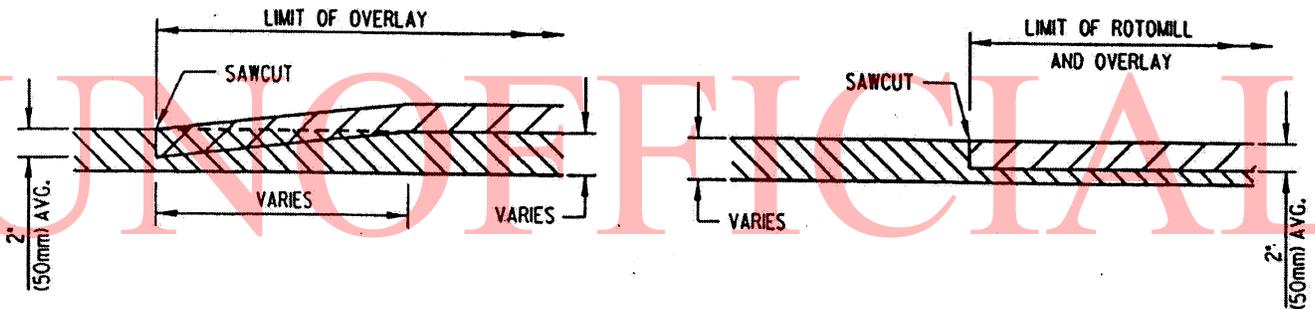
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CANAL

RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD

DETAILS SHEET



BUTT JOINT FOR OVERLAY SECTION
PAYMENT UNDER ITEM 761001.

BITUMINOUS CONCRETE JOINT FOR FULL WIDTH ROTOMILL SECTION
PAYMENT INCIDENTAL TO ITEM 760XXX, ROTOMILLING.

HOT MIX JOINT DETAIL

•NOTE: THE FOLLOWING LENGTHS ARE BASED ON THE POSTED SPEED OF THE ROADWAY:
LESS THAN 50 MPH = 20 FT (6m) PER 1" (25mm) OF OVERLAY DEPTH.
EQUAL TO OR GREATER THAN 50 MPH = 30 FT (9.1m) PER 1" (25mm) OF OVERLAY DEPTH.
AT STOP SIGNS = 15 FT (4.6m) PER 1" (25mm) OF OVERLAY DEPTH.

DELAWARE DEPARTMENT OF TRANSPORTATION

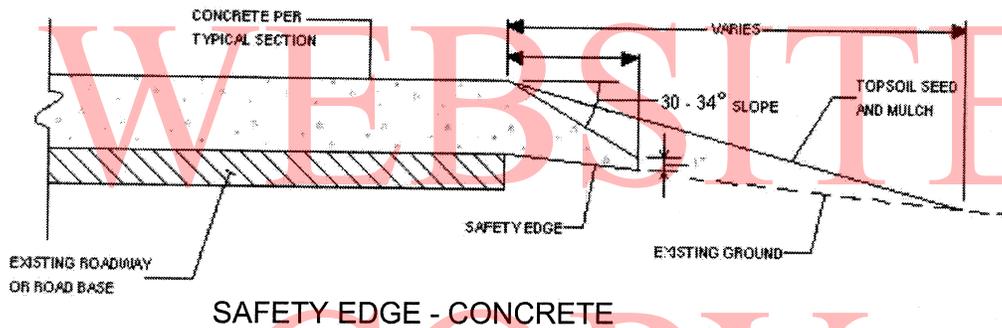
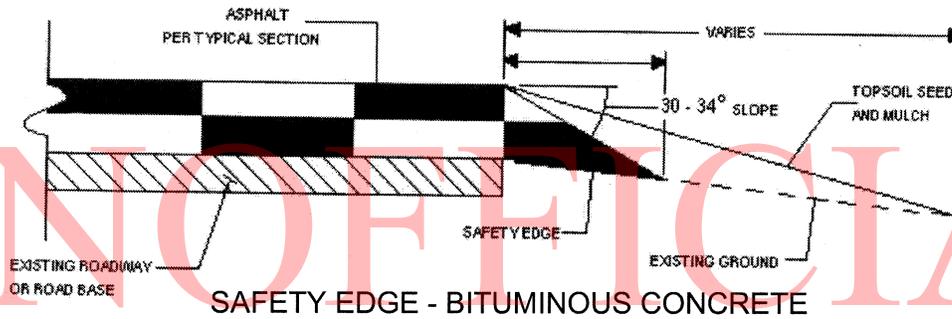
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CANAL

RUTHAR RD (RD65) FROM RED MILL RD (RD352) TO HARMONY (RD

DETAILS SHEET



GENERAL NOTES

1. THE SAFETY EDGE WILL BE CONSTRUCTED AS PART OF THE ROADWAY PAVEMENT. A SHOULDER WEDGE DEVICE WILL BE ADDED TO THE SCREED OF THE PAVING MACHINE.
2. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITION AND TURNOUTS.
3. SITE PREPARATION AND ADDITIONAL EARTHWORK REQUIRED TO CONSTRUCT THE SAFETY EDGE WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T201406101

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

**LOCATION 1 355(HARMONY ROAD) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO
HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAY (RD11)**

LENGTH 3255.2640 m 10680.0000 L.F. AADT 13896

GENERAL IMPROVEMENTS

ADA UPGRADES, 2" PROFILE MILL, BITUMINOUS CONCRETE PATCHING, 2" BITUMINOUS CONCRETE, TYPE C 76-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 1

302005	GRADED AGGREGATE BASE COURSE, TYPE B	90.00 TON
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	190.00 TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	100.00 TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	6,300.00 TON
402000	HOT-MIX BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	100.00 TON
406001	BITUMINOUS CONCRETE PATCHING	1,820.00 SY-IN
701020	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 1-8	500.00 L.F.
701021	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 2	250.00 L.F.
705001	P.C.C. SIDEWALK, 4"	450.00 S.F.
705002	P.C.C. SIDEWALK, 6"	1,650.00 S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	140.00 S.F.
705008	CURB RAMP, TYPE 1	225.00 S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	1,575.00 S.F.
705530	TRIANGULAR CHANNELIZING ISLANDS	1,510.00 S.F.
708060	REPLACE DRAINAGE INLET GRATE(S)	2.00 EACH
708061	REPLACE DRAINAGE INLET FRAME(S)	2.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	9.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	5.00 EACH
732004	TOPSOIL (TON)	35.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	75.00 S.Y.
743003	ARROWPANELS, TYPE C	20.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743007	** TRAFFIC OFFICERS	320.00 HOUR
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	1,680.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	168.00 HOUR
744530	CONDUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	19.00 EACH
744531	CONDUIT JUNCTION WELL, TYPE 14, PRECAST CONCRETE/ POLYMER LID-FRAME	3.00 EACH

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

LOCATION 1 **355(HARMONY ROAD) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO
HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAY (RD11)**

LENGTH 3255.264 m 10680 L.F. AADT 13896

GENERAL IMPROVEMENTS

ADA UPGRADES, 2" PROFILE MILL, BITUMINOUS CONCRETE PATCHING, 2" BITUMINOUS CONCRETE, TYPE C 76-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 1

744544	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	3.00 EACH
745602	FURNISH & INSTALL UP TO 4" SCHEDULE 80 HDPE CONDUIT (BORE)	780.00 L.F.
745603	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT)	100.00 L.F.
745604	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	1,700.00 L.F.
745606	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (TRENCH)	535.00 L.F.
745607	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (BORE)	10.00 L.F.
745609	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	60.00 L.F.
746614	POLE BASE EXTENSION	64.00 C.F.
746847	POLE BASE, TYPE 3	10.00 EACH
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	3,020.00 L.F.
747516	CABINET BASE, TYPE P	1.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLASTIC	1,300.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	86,440.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	2,600.00 S.F.
748027	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12"	450.00 L.F.
748502	RAISED/RECESSED PAVEMENT MARKER	180.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	43,220.00 L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	12.00 EACH
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	75.00 EACH
749688	INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH	10.00 EACH
749690	INSTALLATION OR REMOVAL OF TRAFFIC SIGNS ON MULTIPLE SIGN POSTS	160.00 S.F.
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	560.00 S.Y.
760507	PROFILE MILLING, HOT-MIX	114,500.00 SY-IN
762001	SAW CUTTING, HOT MIX	1,200.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	600.00 L.F.

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

LOCATION 1 **355(HARMONY ROAD) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO
HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAT (RD11)**

LENGTH 3255.264 m 10680 L.F. AADT 13896

GENERAL IMPROVEMENTS

ADA UPGRADES, 2" PROFILE MILL, BITUMINOUS CONCRETE PATCHING, 2" BITUMINOUS
CONCRETE, TYPE C 76-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 1

763621 CONSTRUCTION ENGINEERING, REHABILITATION

7.00 HOUR

** DENOTES FIXED PRICE ITEM

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LOCATION 1 355(HARMONY ROAD) FROM HOT-MIX JOINT PAST ROUTE 273 (RD18) TO HOT-MIX JOINT BEFORE KIRKWOOD HIGHWAY (RD11)

COMMENTS:

Recommended Traffic Control: TA #10
TA #3

Restricted Work Hours: 8:00 AM to 4:00 PM

Curb Ramp Locations:

N. Gerald Dr. - 2
Brownleaf Rd. - 4 - signalized
Rosewood Dr. - 2
Tutor Time - 2
Omega Shops - 2
Brookhaven Dr. - 2

Entrance and Driveway Locations:

Greentree Rd. 35'
N. Gerald Dr. 30'
E. Brownleaf Rd. 10'
W. Brownleaf Rd. 10'
Rosewood Dr. 20'
Omega Shops 45'
Old Harmony Rd. 60'

Manhole Adjustments:

1 - DelDOT
4 - NCCDSS
1 - Delmarva Gas by others

General Notes:

School on side street at this location
Major pass through to Route 4 (Location of Christiana Hospital) and Kirkwood Highway

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

LOCATION 2 **48(PORTER ROAD - SALEM CHURCH RD) FROM ROUTE 72 (RD356) TO OLD BALTIMORE PIKE (RD26)**

LENGTH 6630.924 m 21755 L.F. AADT 5825

GENERAL IMPROVEMENTS

BIT.UMINOUS CONC. PATCHING, ADA UPGRADES, IN CURBED AREA AT ROUTE 40 INTERSECTION - 1 1/2" PROFILE MILL AND 1 1/2' BIT. CONC., TYPE C 64-22, REMAINING AREAS - TAPER MILL @ CURB AND GUARDRAILS ,1 1/2" BIT. CONC., TYPE C 64-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 2

302005	GRADED AGGREGATE BASE COURSE, TYPE B	130.00 TON
401696	ENTRANCE, DRIVEWAY AND INTERSECTINGSTREET PAVING SURCHARGE	620.00 TON
401755	RECYCLED ASPHALT PAVEMENT MILLINGS FOR ROADWAY EDGE	400.00 TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	910.00 TON
401827	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE)	9,840.00 TON
402000	HOT-MIX BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	75.00 TON
406001	BITUMINOUS CONCRETE PATCHING	16,500.00 SY-IN
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	100.00 L.F.
705001	P.C.C. SIDEWALK, 4"	800.00 S.F.
705002	P.C.C. SIDEWALK, 6"	2,530.00 S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	180.00 S.F.
705008	CURB RAMP, TYPE 1	150.00 S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	2,450.00 S.F.
705530	TRIANGULAR CHANNELIZING ISLANDS	450.00 S.F.
708060	REPLACE DRAINAGE INLET GRATE(S)	2.00 EACH
708061	REPLACE DRAINAGE INLET FRAME(S)	2.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	2.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	27.00 EACH
716502	CONVERTING EXISTING CATCH BASIN TO DRAINAGE INLET	1.00 EACH
732004	TOPSOIL (TON)	160.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	2,100.00 S.Y.
743003	ARROWPANELS, TYPE C	80.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743007	** TRAFFIC OFFICERS	1,480.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	80.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	4,800.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	480.00 HOUR

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

LOCATION 2 **48(PORTER ROAD - SALEM CHURCH RD) FROM ROUTE 72 (RD356) TO OLD BALTIMORE PIKE (RD26)**

LENGTH 6630.924 m 21755 L.F. AADT 5825

GENERAL IMPROVEMENTS

BIT.UMINOUS CONC. PATCHING, ADA UPGRADES, IN CURBED AREA AT ROUTE 40 INTERSECTION - 1 1/2" PROFILE MILL AND 1 1/2' BIT. CONC., TYPE C 64-22, REMAINING AREAS - TAPER MILL @ CURB AND GUARDRAILS ,1 1/2" BIT. CONC., TYPE C 64-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 2

744530	CONCUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	13.00 EACH
744544	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	9.00 EACH
745602	FURNISH & INSTALL UP TO 4" SCHEDULE 80 HDPE CONDUIT (BORE)	280.00 L.F.
745604	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	500.00 L.F.
746850	POLE BASE, TYPE 4	8.00 EACH
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	3,350.00 L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	3,250.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	93,500.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	3,250.00 S.F.
748502	RAISED/RECESSED PAVEMENT MARKER	350.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	93,500.00 L.F.
748549	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 10"	100.00 L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	30.00 EACH
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	100.00 EACH
749688	INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH	10.00 EACH
749690	INSTALLATION OR REMOVAL OF TRAFFIC SIGNS ON MULTIPLE SIGN POSTS	160.00 S.F.
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	400.00 S.Y.
760502	PAVEMENT MILLING, TAPER CUT	6,100.00 SY-IN
760507	PROFILE MILLING, HOT-MIX	5,700.00 SY-IN
761001	BUTT JOINTS, HOT MIX	17,500.00 S.Y.
762001	SAW CUTTING, HOT MIX	100.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	280.00 L.F.
763621	CONSTRUCTION ENGINEERING, REHABILITATION	10.00 HOUR

** DENOTES FIXED PRICE ITEM

LOCATION 2 48(PORTER ROAD - SALEM CHURCH RD) FROM ROUTE 72 (RD356) TO OLD BALTIMORE PIKE (RD26)

COMMENTS:

Recommended Traffic Control: TA #10
TA #3
TA #46

Restricted Work Hours: 8:00 AM to 4:00 PM

Curb Ramp Locations:

- Caldonia Way - 2 - signalized
- E. Scotland Dr. - 1
- Carson Dr. - 2
- S. Huckleberry Ave. - 1
- Joan Dr. - 2 - signalized
- Wawa entrance - 1
- Cornell Dr. - 1
- Bradley Dr. - 3
- Deasy Dr. - 2
- Rite Aid entrance - 2
- Old Porter Rd. - 2

Entrance and Driveway Locations:

South Bound

- Salem United Methodist Church 15'
- #475 15'
- #477 4'
- #479 2 @ 4'
- Danvers Way 50'
- #537 2 @ 4'
- #543 4'
- #555 4'
- #559 2 @ 4'
- #565 4'
- #571 4'
- #577 4'
- #583 2 @ 4'
- Christiana Woods Court 40'
- Reybold Rd. 30'
- Entrance to power lines 15'
- #705 4'
- #739 15'
- #761 4'
- Driveway north of Becks Pond 20'
- Becks Pond entrance 30'
- #817 2 @ 4'
- #821 4'
- #829 4'
- #833 4'
- #837 4'
- Kiddie International Academy 4'
- #847 10'
- #859 4'
- #861 4'
- #863 4'
- #873 4'



LOCATION 2 48(PORTER ROAD - SALEM CHURCH RD) FROM ROUTE 72 (RD356) TO OLD BALTIMORE PIKE (RD26)

#881 4'
 7-11 10'
 #917 2 @ 4'
 #937 4'
 Caladonia Way 50'
 #1077 4'
 Bike Path 4'
 E. Scotland Dr. 70'
 #1501 665'
 #1565 4'
 #1597 4'

North Bound

#1730 4'
 Christiana Fire House #6 15'
 Danstone Dr. 40'
 D & S Lane 30'
 Across from House #1597 4'
 Railroad Yard 4'
 #1520 4'
 Old Porter Rd. 55'
 #1386 10'
 Entrance to Guardian Construction 2 @ 25'
 Carson Dr. 30'
 S. Huckleberry Ave. 70'
 Joan Dr. 80'
 Rite Aid 15'
 Wawa 35'
 #888 4'
 Cornell Dr. 20'
 Bradley Dr. 50'
 #790 2 @ 4'
 #768 4'
 Spruce Dr. 30'
 #720 4'
 #716 4'
 #714 4'
 Deasy Dr. 30'
 Entrance north of Deasy Dr. 30'
 Miller reserve 30'
 Christiana Fire House #3 10'
 #584 4'
 #582 2 @ 4'
 #578 4'
 #574 4'
 #554 4'
 #552 4'
 #546 2 @ 4'
 #540 4'
 #536 4'
 Joseph Dr. 50'
 #470 4'
 #468 4'
 #464 4'
 #454 4'
 #448 4'

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**LOCATION 2 48(PORTER ROAD - SALEM CHURCH RD) FROM ROUTE 72 (RD356) TO OLD
BALTIMORE PIKE (RD26)**

Manhole Adjustments:

3 - DeLDOT Storm
24 - NCCDSS
3 - Water valves by others
1 - Delmarva Gas by others

General Notes:

Item #760507 for profile milling @ intersection of Route 40
Elementary school and church at this location
2 Christiana Fire houses at this location

No milling/paving to occur at recently upgraded railroad crossing.

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DELAWARE DEPARTMENT OF TRANSPORTATION

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

LOCATION 3 **65(RUTHAR DRIVE) FROM RED MILL RD (RD352) TO HARMONY RD (RD355)**

LENGTH 1371.6 m 4500 L.F. AADT 6491

GENERAL IMPROVEMENTS

ADA UPGRADES, 2" PROFILE MILL, BITUMINOUS CONCRETE PATCHING, 2" BITUMINOUS CONCRETE, TYPE C 76-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 3

202000	EXCAVATION AND EMBANKMENT	20.00 C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	30.00 TON
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	50.00 TON
401755	RECYCLED ASPHALT PAVEMENT MILLINGS FOR ROADWAY EDGE	20.00 TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	300.00 TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	2,040.00 TON
402000	HOT-MIX BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	20.00 TON
406001	BITUMINOUS CONCRETE PATCHING	5,500.00 SY-IN
701021	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 2	40.00 L.F.
701022	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-8	280.00 L.F.
705001	P.C.C. SIDEWALK, 4"	100.00 S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	60.00 S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	500.00 S.F.
705530	TRIANGULAR CHANNELIZING ISLANDS	220.00 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	1.00 EACH
732004	TOPSOIL (TON)	20.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	40.00 S.Y.
743003	ARROWPANELS, TYPE C	10.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	10.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	450.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	45.00 HOUR
744530	CONDUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	6.00 EACH
744531	CONDUIT JUNCTION WELL, TYPE 14, PRECAST CONCRETE/ POLYMER LID-FRAME	1.00 EACH
745602	FURNISH & INSTALL UP TO 4" SCHEDULE 80 HDPE CONDUIT (BORE)	320.00 L.F.

DELAWARE DEPARTMENT OF TRANSPORTATION

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CANAL

PAVEMENT & REHABILITATION, NORTH I, 2014

LOCATION 3 65(RUTHAR DRIVE) FROM RED MILL RD (RD352) TO HARMONY RD (RD355)

LENGTH 1371.6 m 4500 L.F. AADT 6491

GENERAL IMPROVEMENTS

ADA UPGRADES, 2" PROFILE MILL, BITUMINOUS CONCRETE PATCHING, 2" BITUMINOUS CONCRETE, TYPE C 76-22

COMMENTS:

Please see attached sheets for comments

MATERIAL ESTIMATE FOR LOCATION 3

745604	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	620.00 L.F.
745606	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (TRENCH)	140.00 L.F.
745609	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	30.00 L.F.
746847	POLE BASE, TYPE 3	4.00 EACH
746850	POLE BASE, TYPE 4	2.00 EACH
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	820.00 L.F.
747516	CABINET BASE, TYPE P	1.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	150.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	11,300.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	300.00 S.F.
748502	RAISED/RECESSED PAVEMENT MARKER	80.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	5,650.00 L.F.
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	10.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	75.00 S.Y.
760507	PROFILE MILLING, HOT-MIX	37,100.00 SY-IN
762001	SAW CUTTING, HOT MIX	750.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	60.00 L.F.
763621	CONSTRUCTION ENGINEERING, REHABILITATION	2.00 HOUR

** DENOTES FIXED PRICE ITEM

LOCATION 3 65(RUTHAR DRIVE) FROM RED MILL RD (RD352) TO HARMONY RD (RD355)

COMMENTS:

Recommended Traffic Control: TA #10

Restricted work hours: 8:00 AM to 4:00 PM

Curb Ramp Locations:

Location ends @ joint before Red Mill Rd.

Entrance and Driveway Locations:

D. S. Warehousing 25'
EXR Space 15'
Happy Lane east bound 25'
Delaware Sportsplex 14'
O'Conner Belting 10'
UPS Employee west 15'
UPS east 10'
B.F. Rich 15'
Rath Inc. 15'
Growth Inc. 15'
Advant Edge 20'
Fire Protection Ind. 15'
Forum 2000 10'
Forum 3000 10'
National Decorative Distributors 10'
Kayfield Auto Paint 25'

Manhole Adjustments:

1 - NCCDSS

General Notes:

Industrial area - warehouses, UPS and this type of business on this location
Heavy, slow moving truck traffic
Sink hole east bound lane @ D & S warehousing

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CANAL PAVEMENT & REHABILITATION, NORTH I, 2014

CONTRACT QUANTITIES SUMMARY SHEET

202000	EXCAVATION AND EMBANKMENT	20.00 C.Y.
302005	GRADED AGGREGATE BASE COURSE, TYPE B	250.00 TON
401696	ENTRANCE, DRIVEWAY AND INTERSECTING STREET PAVING SURCHARGE	860.00 TON
401755	RECYCLED ASPHALT PAVEMENT MILLINGS FOR ROADWAY EDGE	420.00 TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	1,310.00 TON
401827	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (NON-CARBONATE STONE)	9,840.00 TON
401833	BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)	8,340.00 TON
402000	HOT-MIX BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	195.00 TON
406001	BITUMINOUS CONCRETE PATCHING	23,820.00 SY-IN
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	100.00 L.F.
701020	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 1-8	500.00 L.F.
701021	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 2	290.00 L.F.
701022	INTEGRAL PORTLAND CEMENT CONCRETE CURB & GUTTER, TYPE 3-8	280.00 L.F.
705001	P.C.C. SIDEWALK, 4"	1,350.00 S.F.
705002	P.C.C. SIDEWALK, 6"	4,180.00 S.F.
705007	SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	380.00 S.F.
705008	CURB RAMP, TYPE 1	375.00 S.F.
705009	CURB RAMP, TYPE 2, 3, AND/OR 4	4,525.00 S.F.
705530	TRIANGULAR CHANNELIZING ISLANDS	2,180.00 S.F.
708060	REPLACE DRAINAGE INLET GRATE(S)	5.00 EACH
708061	REPLACE DRAINAGE INLET FRAME(S)	5.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	13.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	33.00 EACH
716502	CONVERTING EXISTING CATCH BASIN TO DRAINAGE INLET	1.00 EACH
732004	TOPSOIL (TON)	215.00 TON
734013	PERMANENT GRASS SEEDING, DRY GROUND	2,215.00 S.Y.
743003	ARROWPANELS, TYPE C	110.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	30.00 EA-DY

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743007	** TRAFFIC OFFICERS	1,800.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	80.00 EA-DY
743056	** FLAGGER, NEW CASTLE COUNTY, FEDERAL	6,930.00 HOUR
743065	** FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	693.00 HOUR
744530	CONCUIT JUNCTION WELL, TYPE 11, PRECAST CONCRETE/ POLYMER LID-FRAME	38.00 EACH
744531	CONDUIT JUNCTION WELL, TYPE 14, PRECAST CONCRETE/ POLYMER LID-FRAME	4.00 EACH
744544	ADJUST OR REPAIR EXISTING CONDUIT JUNCTION WELL	12.00 EACH
745602	FURNISH & INSTALL UP TO 4" SCHEDULE 80 HDPE CONDUIT (BORE)	1,380.00 L.F.
745603	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (OPEN CUT)	100.00 L.F.
745604	FURNISH & INSTALL UP TO 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	2,820.00 L.F.
745606	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (TRENCH)	675.00 L.F.
745607	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (BORE)	10.00 L.F.
745609	FURNISH & INSTALL UP TO 4" GALVANIZED STEEL CONDUIT (ON STRUCTURE)	90.00 L.F.
746614	POLE BASE EXTENSION	64.00 C.F.
746847	POLE BASE, TYPE 3	14.00 EACH
746850	POLE BASE, TYPE 4	15.00 EACH
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	7,190.00 L.F.
747516	CABINET BASE, TYPE P	2.00 EACH
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	4,700.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	191,240.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	6,150.00 S.F.
748027	PERMANENT PAVEMENT STRIPING, ALKYD-THERMOPLASTIC, 12"	450.00 L.F.
748502	RAISED/RECESSED PAVEMENT MARKER	610.00 EACH
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	142,370.00 L.F.
748549	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 10"	100.00 L.F.
748553	PREFORMED RETROREFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS, BIKE SYMBOL	42.00 EACH
749687	INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	185.00 EACH
749688	INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH	20.00 EACH

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CONTRACT QUANTITIES SUMMARY SHEET

749690	INSTALLATION OR REMOVAL OF TRAFFIC SIGNS ON MULTIPLE SIGN POSTS	320.00 S.F.
758000	REMOVAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	1,035.00 S.Y.
760502	PAVEMENT MILLING, TAPER CUT	6,100.00 SY-IN
760507	PROFILE MILLING, HOT-MIX	157,300.00 SY-IN
761001	BUTT JOINTS, HOT MIX	17,500.00 S.Y.
762001	SAW CUTTING, HOT MIX	2,050.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	940.00 L.F.
763000	INITIAL EXPENSE	LUMP SUM
763621	CONSTRUCTION ENGINEERING, REHABILITATION	19.00 HOUR
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM

** DENOTES FIXED PRICE ITEM

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