THE STATE OF DELAWARE

DEPARTMENT OF TRANSPORTATION

OFFICE OF TRANSPORTATION SOLUTIONS

CONSTRUCTION PLANS AND SPECIFICATIONS FOR

HIGH PERFORMANCE THIN OVERLAY, KENT, 2014

CONTRACT NUMBER - T201406201.01 **PRIMAVERA ID – 14-06201**

FEDERAL AID NUMBER - ESTP-2013(36) **CENTRAL DISTRICT MAINTENANCE**

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PLANS PREPARED BY: _____

DESIGN TECHNICIAN

DATE RECOMMENDED: 1/26/2015

_____

GROUP ENGINEER, CONSTRUCTION

DATE RECOMMENDED: 1.26.15

_____

ASSIST. DIRECTOR, DESIGN

DATE RECOMMENDED: 01/26/2015

_____

CHIEF ENGINEER

JAMES T. PAPPAS III LICENSED No. 10571 DELAWARE PROFESSIONAL ENGINEER

ROBERT BRIAN McCLEARY REGISTERED No. 8567 DELAWARE PROFESSIONAL ENGINEER

LOCATION MAP

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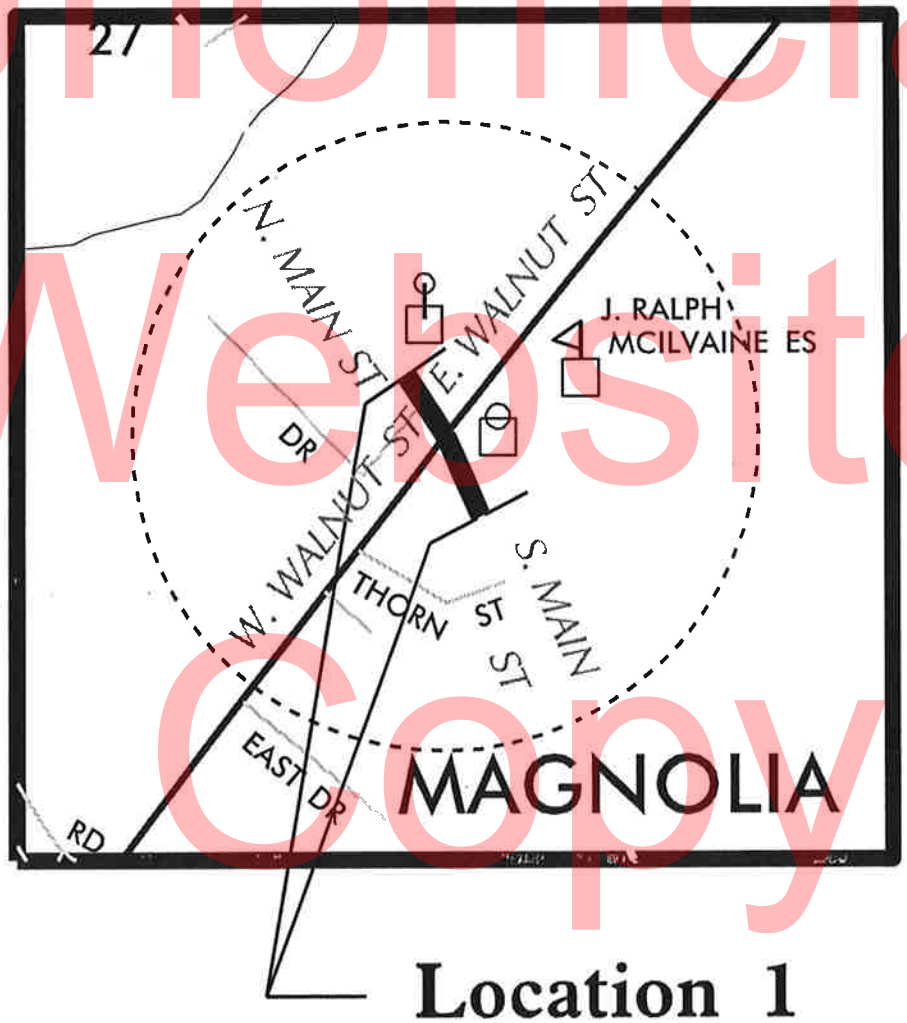

Location 1

Main Street and Walnut Street intersection (Magnolia)

LOCATION MAP

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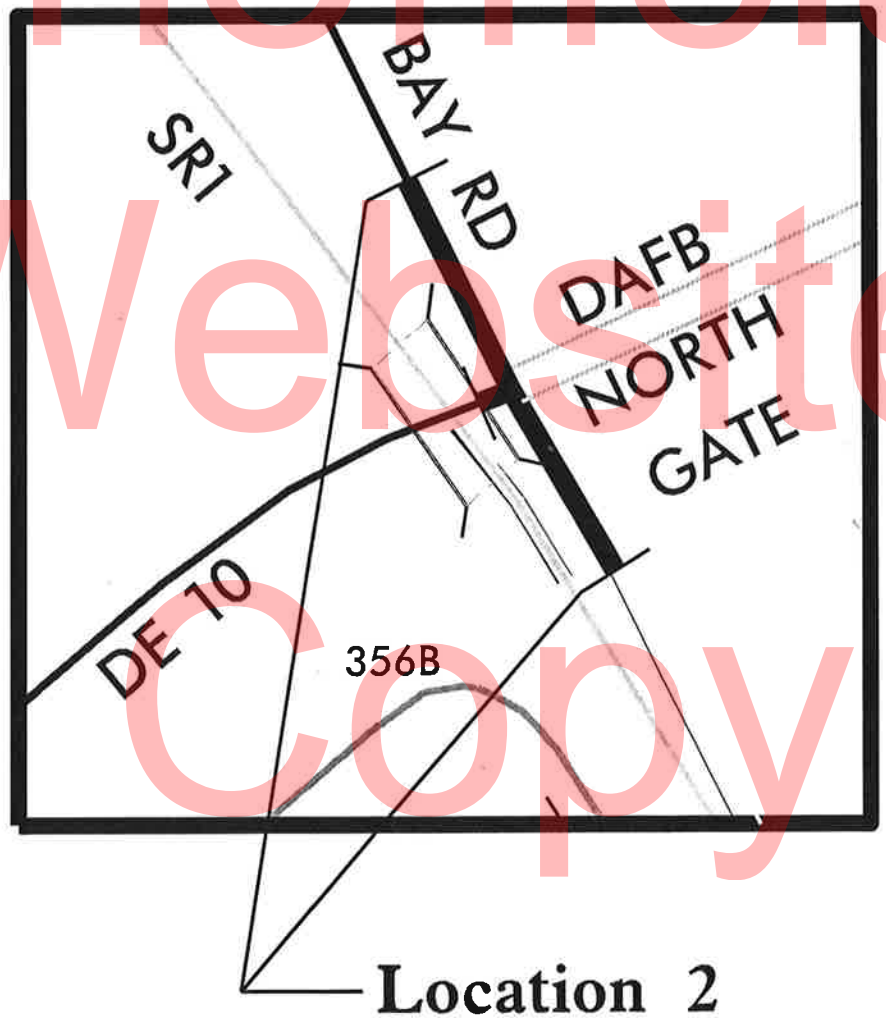

Bay Rd and DE 10 intersection.
(including SR 1 exit ramp, approx. 350lf)

GENERAL CONTRACT PLAN NOTES

REVISED 6/14

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 CONTRACT 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, SHALL BE INSTALLED IN ACCORDANCE WITH THE TEMPORARY STRIPING POLICY. 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

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GENERAL CONTRACT PLAN NOTES

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 **763643** - 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.
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 7FT 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

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GENERAL CONTRACT PLAN NOTES

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.

THE DEPARTMENT WILL PROVIDE STRIPING LAYOUT AT LOCATIONS WHERE NO PAVEMENT MARKINGS PREVIOUSLY EXISTED. IF DEPARTMENT FORCES PROVIDE STRIPING LAYOUT ON LOCATIONS WHERE MARKINGS PREVIOUSLY EXISTED, THEN THE CONTRACTOR SHALL REIMBURSE THE DEPARTMENT FOR THE LAYOUT COSTS.

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).

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

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GENERAL CONTRACT PLAN NOTES

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.

21. EXCAVATION FOR P.C.C. CURBS, SIDEWALK OR VALLEY GUTTER SHALL BE INCIDENTAL TO THE BID PRICE FOR THESE RESPECTIVE ITEMS. EXCAVATED MATERIAL, NOT NEEDED ON THE PROJECT, SHALL BE REMOVED FROM THE CONTRACT AT THE CONTRACTORS EXPENSE. ITEM 732XXX, TOPSOIL, SHALL BE USED AS BACKFILL MATERIAL FOR CURB AND SIDEWALK AS DIRECTED BY THE ENGINEER. TOPSOIL SHALL BE SCREENED/SIFTED SO AS NO MATERIAL GREATER THAN .5" IS PRESENT IN MATERIAL USED FOR BACKFILL. AT EACH LOCATION, BACKFILLING SHALL BE PERFORMED IMMEDIATELY UPON REMOVAL OF FORMS FOR CURB OR SIDEWALK WORK. COMPLETE RESTORATION, TOPSOIL, SEEDING, AND REMOVAL OF ALL MATERIALS FOR CURB & GUTTER OR SIDEWALK; SEALING OF VALLEY GUTTERS AND PARGING OF CATCH BASINS, SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS OF COMPLETION OF THE ITEM OF WORK. ANY PAVEMENT EDGE DROP OFFS LEFT DURING NON-WORKING HOURS MUST BE CORRECTED IN ACCORDANCE WITH TABLE 6G-1 OF THE DE-MUTCD. 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.

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GENERAL CONTRACT PLAN NOTES

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, CURBING, 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.

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.

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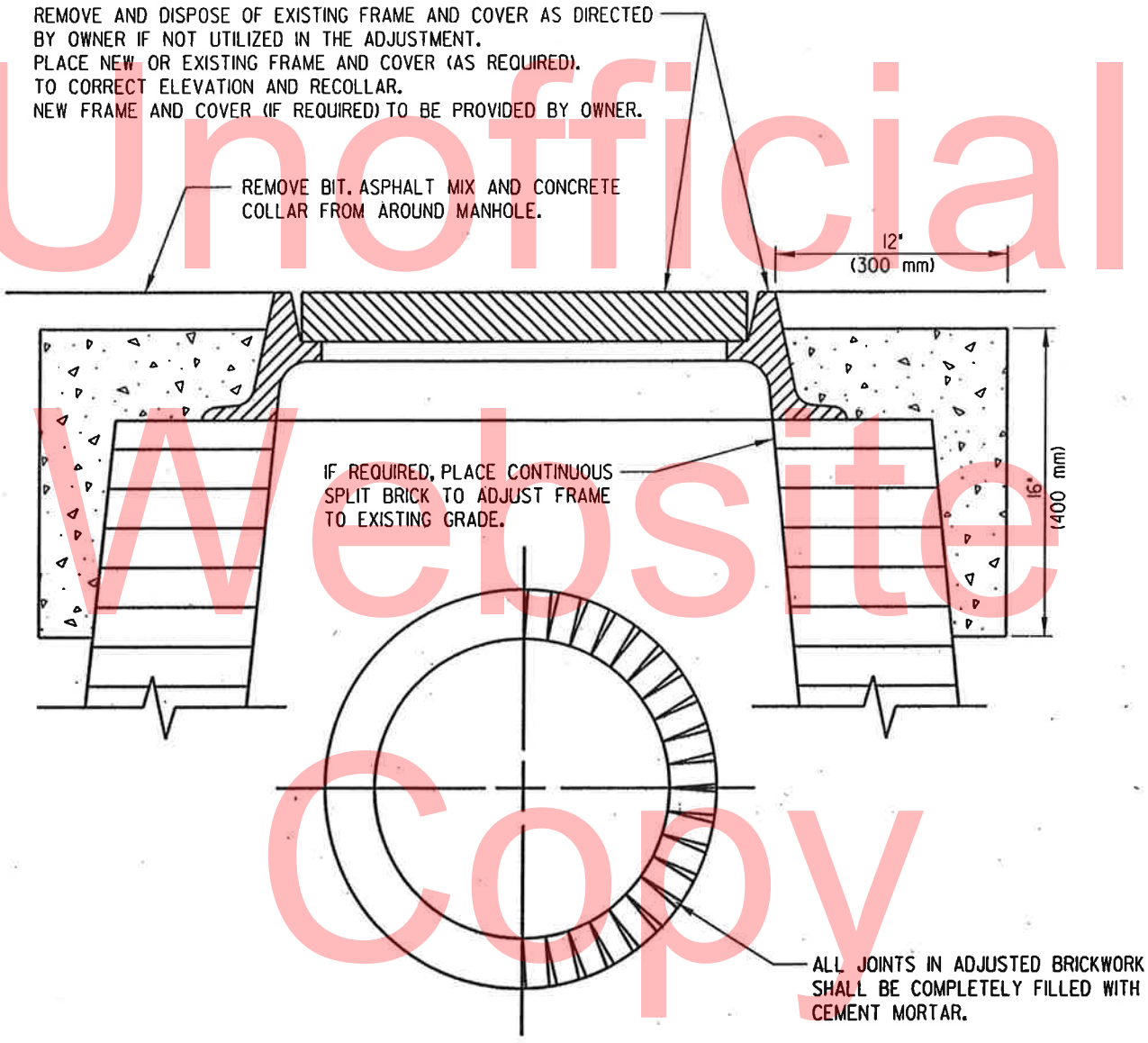
DETAILS SHEET



ADJUSTING AND REPAIRING MANHOLE

N.T.S.

NOTES:

1. 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.
2. ANY ADJUSTMENTS AND/OR RELOCATIONS OF MUNICIPALLY OWNED SEWER OR WATER FACILITIES SHALL BE DONE IN ACCORDANCE TO THE RESPECTIVE AGENCIES STANDARD SPECIFICATIONS AS DIRECTED BY THE ENGINEER.

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DETAILS SHEET

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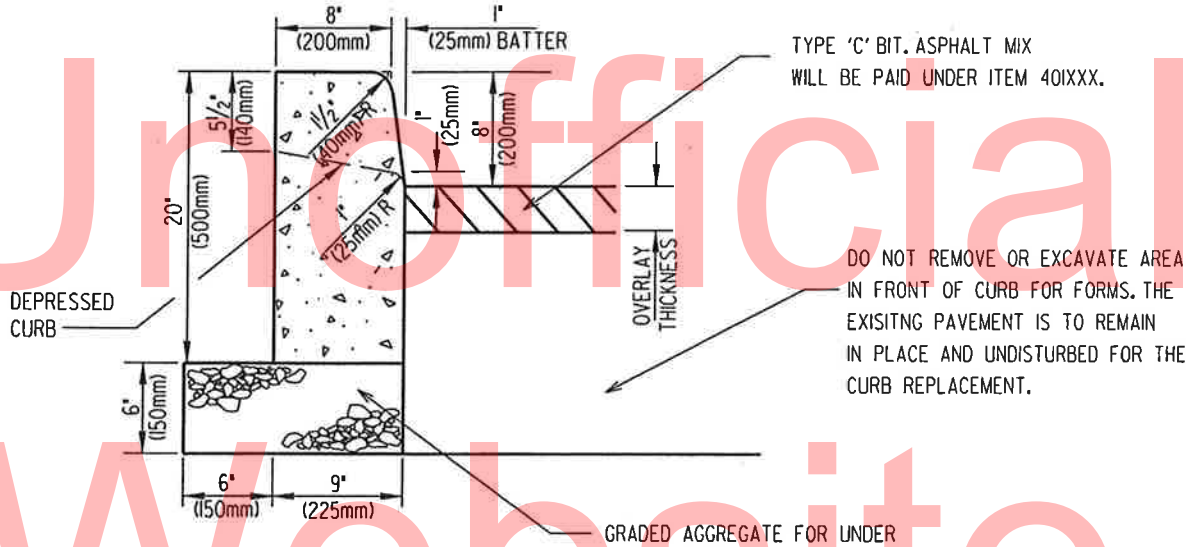
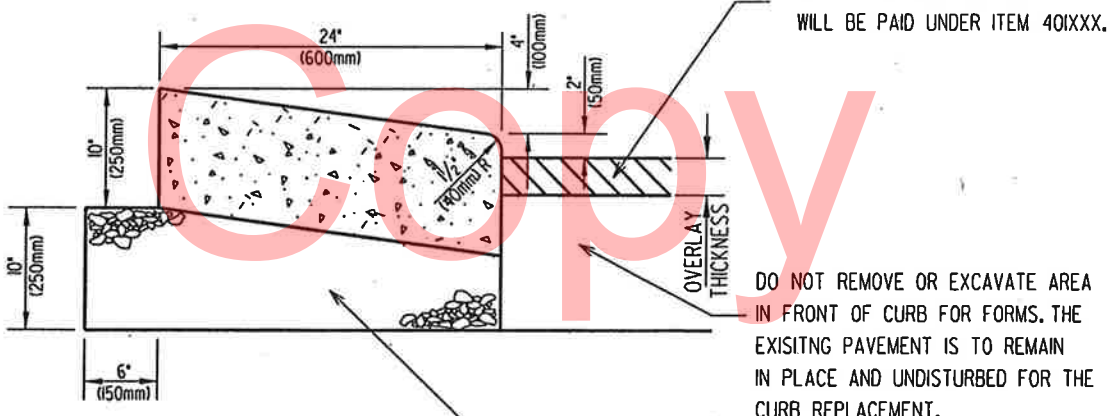


P.C.C. CURB TYPE I-8

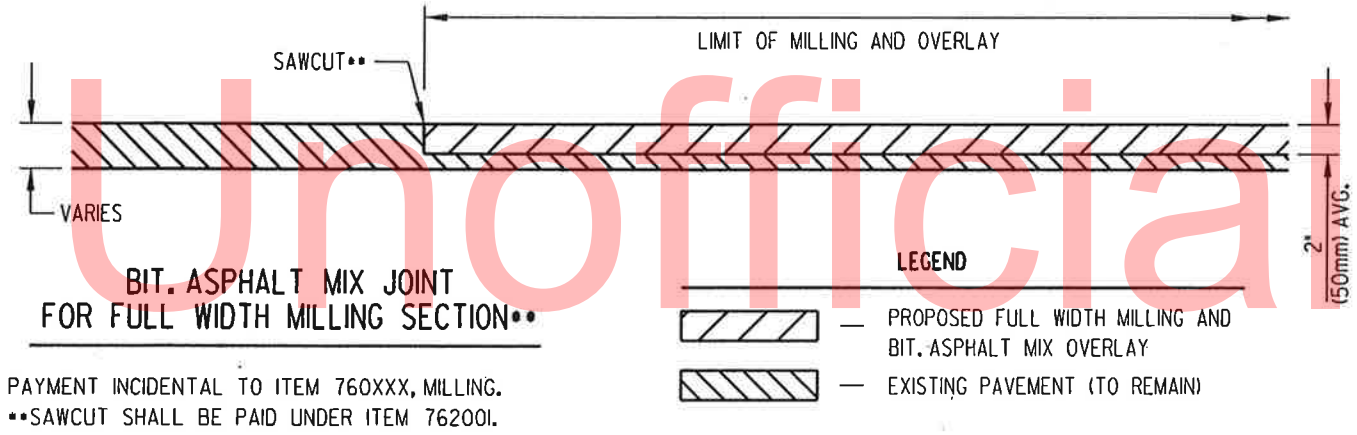
N.T.S.



P.C.C. PARKWAY CURB TYPE 2

N.T.S.

DETAILS SHEET



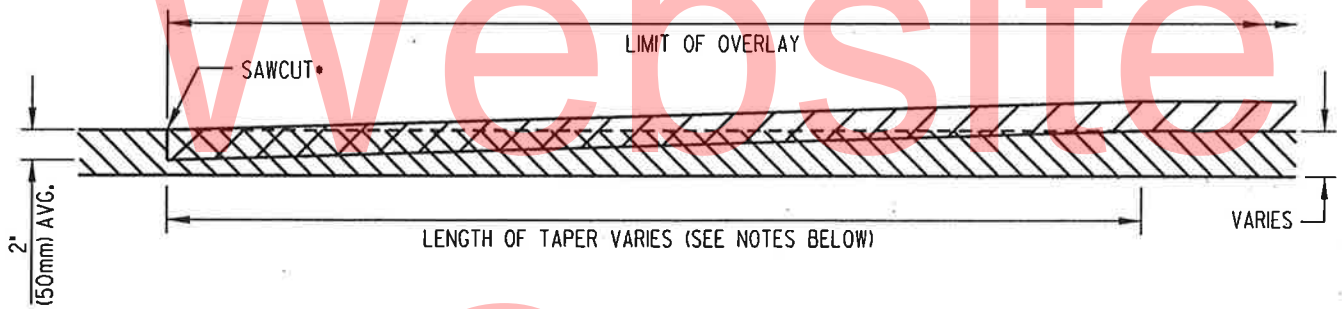
BIT. ASPHALT MIX JOINT FOR FULL WIDTH MILLING SECTION**

PAYMENT INCIDENTAL TO ITEM 760XXX, MILLING.
**SAWCUT SHALL BE PAID UNDER ITEM 762001.

LEGEND

— PROPOSED FULL WIDTH MILLING AND BIT. ASPHALT MIX OVERLAY

— EXISTING PAVEMENT (TO REMAIN)



HOT MIX JOINT FOR OVERLAY SECTION*

PAYMENT UNDER ITEM 761001.
*SAWCUT IS INCIDENTAL TO ITEM 761001.

LEGEND

— PROPOSED OVERLAY

— EXISTING PAVEMENT

— EXISTING PAVEMENT TO BE REMOVED

NOTES:

THE FOLLOWING LENGTHS ARE BASED ON THE POSTED SPEED OF THE ROADWAY:

1. EQUAL TO OR GREATER THAN 55 MPH = 40 FT (9.1m) PER 1" (25mm) OF OVERLAY DEPTH.
2. LESS THAN 55 MPH = 30 FT (6m) PER 1" (25mm) OF OVERLAY DEPTH.
3. AT STOP SIGNS = 15 FT (4.6m) PER 1" (25mm) OF OVERLAY DEPTH.

BITUMINOUS ASPHALT MIX JOINT DETAILS

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DETAILS SHEET

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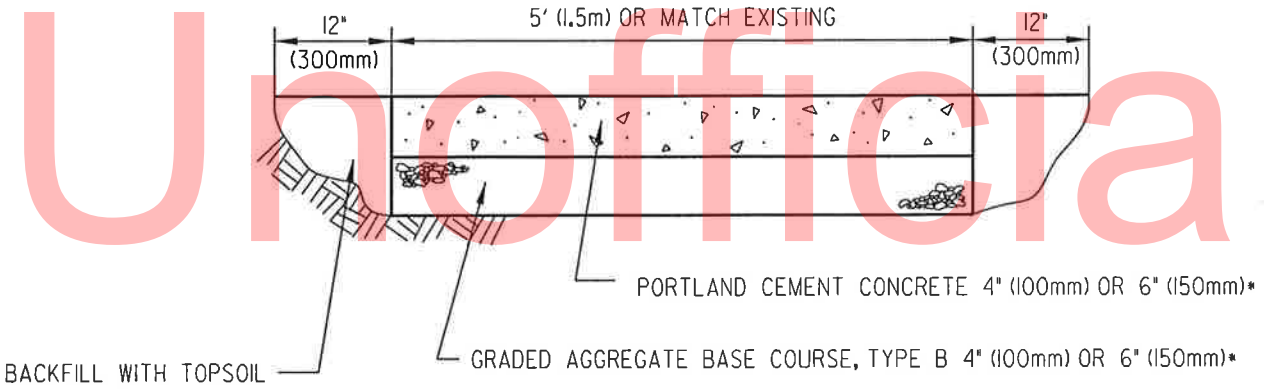
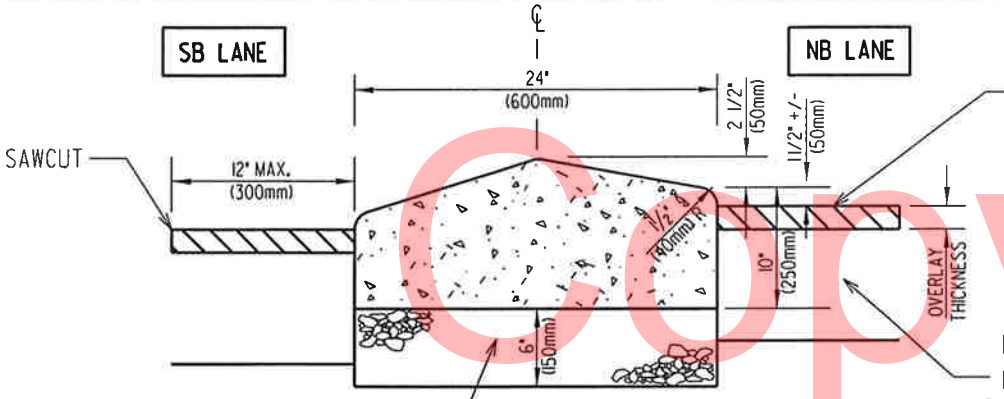


P.C.C. SIDEWALK
N.T.S.

• **NOTE:** 6" (150mm) CONCRETE OVER 6" (150mm) GRADED AGGREGATE TO BE USED FOR DRIVEWAY PLACEMENT



BIT. ASPHALT MIX WILL BE PAID UNDER ITEM 401759.

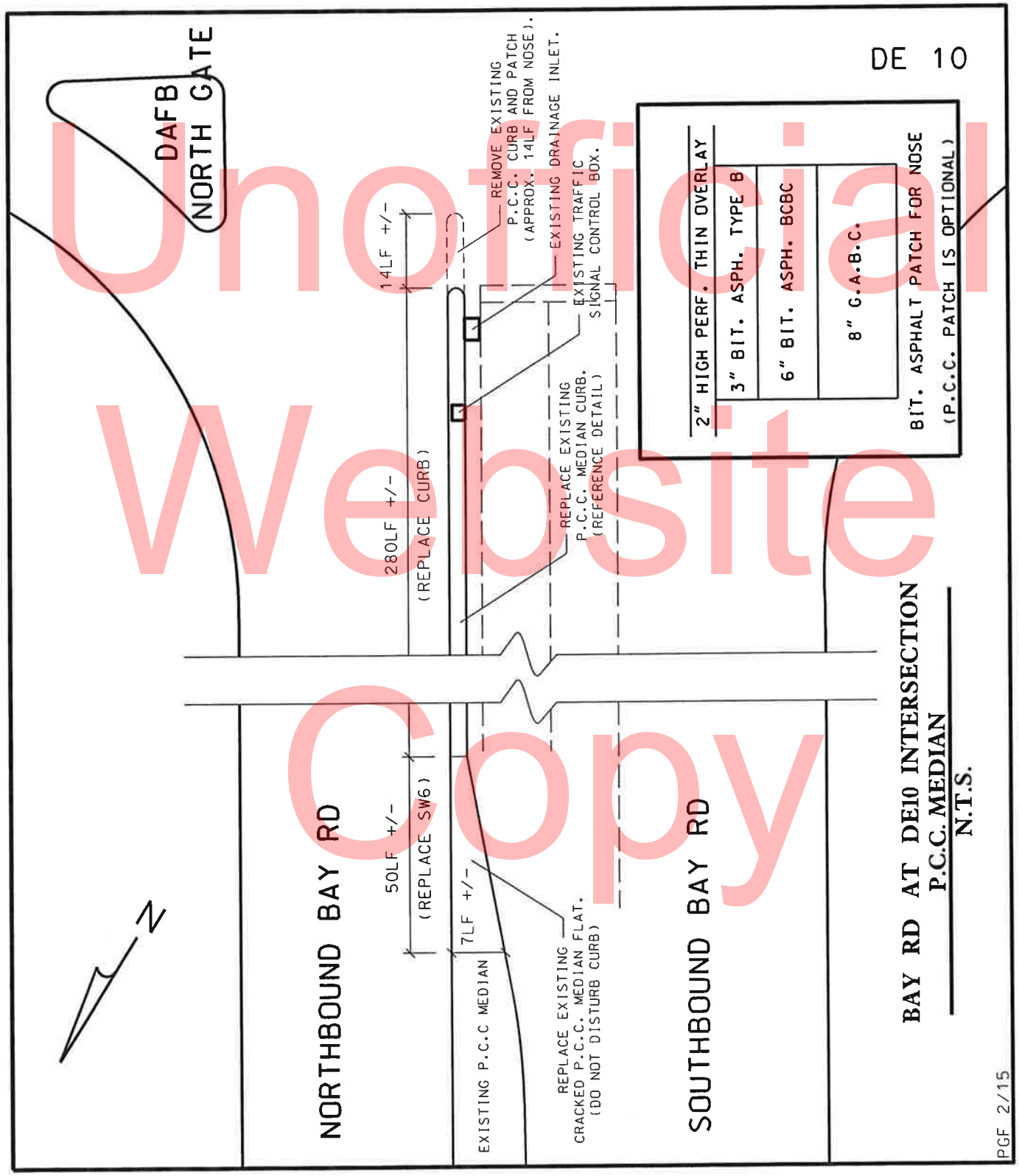
DO NOT REMOVE OR EXCAVATE IN FRONT OF CURB FOR FORMS. THE EXISTING PAVEMENT BELOW ASPHALT IS TO REMAIN IN PLACE AND UNDISTURBED FOR THE CURB REPLACEMENT.

REGRADE AND COMPACT BASE IF MATERIAL IS SUITABLE, ANY ADDITIONAL GRADED AGGREGATE NEEDED WILL BE PAID UNDER ITEM 302007.

P.C.C. CURB TYPE 2 (MODIFIED)
N.T.S.

• **NOTE:** THERE IS A GRADE DIFFERENCE OF APPROX. 1 1/2" TO 2" +/- BETWEEN THE NORTHBOUND AND SOUTHBOUND PAVEMENT.

DETAILS SHEET



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LOCATION 1 **MAIN ST (K27) - (MAGNOLIA) AND WALNUT ST (K31) INTERSECTION**

LENGTH

GENERAL IMPROVEMENTS

HIGH PERFORMANCE THIN OVERLAY

COMMENTS:

Please see attached sheets for comments

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MATERIAL ESTIMATE FOR LOCATION 1

212001	UNDERCUT EXCAVATION, PATCHING	6.00 C.Y.
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	6.00 C.Y.
401759	HIGH PERFORMANCE THIN OVERLAY	130.00 TON
401816	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22	220.00 TON
503001	PATCHING P.C.C. PAVEMENT, 6' TO 15', TYPE A	40.00 S.Y.
503006	DOWEL BARS	64.00 EACH
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	100.00 L.F.
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	5.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	2.00 EACH
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	56.00 EA-DY
743007	** TRAFFIC OFFICERS	80.00 HOUR
743051	** FLAGGER, KENT COUNTY, STATE	300.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	45.00 HOUR
746924	FURNISH & INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	400.00 L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	550.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	600.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	550.00 S.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	600.00 L.F.
750000	ADJUST WATER VALVE BOXES	3.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	50.00 S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	8,400.00 SY-IN
762001	SAW CUTTING, BITUMINOUS CONCRETE	100.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	150.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 1 MAIN ST (K27) - (MAGNOLIA) AND WALNUT ST (K31) INTERSECTION

COMMENTS:

1. RECOMMENDED M.O.T. CASE TA-10 (TRAVEL LANES).

2. DAYTIME WORKING HOURS 9:00AM - 3:00PM

3. ON THE MAIN CONTSTRUCTION ROAD AND ALL INTERSECTING ROADS, "ROAD WORK AHEAD AND END ROAD WORK" SIGNS FACING THE TRAFFIC SHALL BE PLACED AT 1500', 1000', AND 500' APPROACHING THE WORK ZONE. IN THOSE CASES, WHERE IT IS DIFFICULT TO MEET THE ABOVE CRITERIA BECAUSE OF DISTANCE LIMITATIONS, THE SIGN SHALL BE PLACED AS DIRECTED BY THE FIELD ENGINEER.

4. PRIOR TO STARTING ANY WORK CONTACT THE MAGNOLIA FIRE COMPANY TO COORDINATE DAILY ACTIVITIES. MAGNOLIA VOL. FIRE CO. CAN BE CONTACTED AT 302-335-3260

5. PRIOR TO STARTING ANY WORK CONTACT CEASER RODNEY SCHOOL DISTRICT TO INFORM THE DISTRICT OF WORK BEING DONE IN THE AREA OF MCLLVAINE EARLY CHILDHOOD CENTER. CEASER RODNEY SCHOOL DISTRICT CAN BE CONTACTED AT 302-698-4800

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LOCATION 2 **BAY RD (K7) - (DOVER) AND DE 10 (K356) INTERSECTION (INCLUDING SR 1 NB EXIT RAMP, APPROX. 350LF)**

LENGTH

GENERAL IMPROVEMENTS

HIGH PERFORMANCE THIN OVERLAY

COMMENTS:

Please see attached sheets for comments

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MATERIAL ESTIMATE FOR LOCATION 2

212001	UNDERCUT EXCAVATION, PATCHING	1.70 C.Y.
302007	GRADED AGGREGATE BASE COURSE, TYPE B	14.00 C.Y.
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	10.70 C.Y.
401759	HIGH PERFORMANCE THIN OVERLAY	670.00 TON
401816	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22	1,100.00 TON
401822	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING	0.60 TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	1.00 TON
406002	BITUMINOUS CONCRETE PATCHING, CONCRETE	361.00 SY-IN
503001	PATCHING P.C.C. PAVEMENT, 6' TO 15', TYPE A	60.00 S.Y.
503006	DOWEL BARS	96.00 EACH
701011	PORTLAND CEMENT CONCRETE CURB, TYPE 2	280.00 L.F.
705002	P.C.C. SIDEWALK, 6"	210.00 S.F.
708060	REPLACE DRAINAGE INLET GRATE(S)	1.00 EACH
708062	FURNISH DRAINAGE INLET FRAME(S)	1.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	1.00 EACH
743003	ARROWPANELS, TYPE C	80.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	42.00 EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	60.00 EA-DY
743007	** TRAFFIC OFFICERS	300.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	40.00 EA-DY
743051	** FLAGGER, KENT COUNTY, STATE	600.00 HOUR
743063	** FLAGGER, KENT COUNTY, STATE, OVERTIME	90.00 HOUR
744505	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	1,000.00 L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	1,210.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	3,390.00 L.F.
748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	220.00 S.F.

LOCATION 2 **BAY RD (K7) - (DOVER) AND DE 10 (K356) INTERSECTION (INCLUDING SR 1 NB EXIT RAMP, APPROX. 350LF)**

LENGTH

GENERAL IMPROVEMENTS

HIGH PERFORMANCE THIN OVERLAY

COMMENTS:

Please see attached sheets for comments

Unofficial Website Copy

MATERIAL ESTIMATE FOR LOCATION 2

748535	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 4"	2,560.00 L.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	3,690.00 L.F.
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	144.00 S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	45,560.00 SY-IN
762001	SAW CUTTING, BITUMINOUS CONCRETE	600.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	220.00 L.F.

** DENOTES FIXED PRICE ITEM

LOCATION 2 **BAY RD (K7) - (DOVER) AND DE 10 (K356) INTERSECTION (INCLUDING SR 1 NB EXIT RAMP, APPROX. 350LF)**

COMMENTS:

1. RECOMMENDED M.O.T. CASE TA-33 (TRAVEL LANES)
   CASE TA-3A (SHOULDERS)
   CASE TA-42 (WORK ON OFF RAMP FROM SR1

2. NIGHTTIME WORKING HOURS 7:00PM - 5:30AM

3. ON THE MAIN CONTSTRUCTION ROAD AND ALL INTERSECTING ROADS, "ROAD WORK AHEAD AND END ROAD WORK" SIGNS FACING THE TRAFFIC SHALL BE PLACED AT 1500', 1000', AND 500' APPROACHING THE WORK ZONE. IN THOSE CASES, WHERE IT IS DIFFICULT TO MEET THE ABOVE CRITERIA BECAUSE OF DISTANCE LIMITATIONS, THE SIGN SHALL BE PLACED AS DIRECTED BY THE FIELD ENGINEER.

4. PRIOR TO BEGINNING THIS LOCATION CONTACT SGT REAVIS OF DAFB TO ADVISE DAFB OF SCHEDULE OF WORK AND LENGTH OF TIME TO COMPLETE THIS LOCATION. SGT REAVIS CAN BE CONTACTED AT 302-677-6086.

5. REPLACE P.C.C. MEDIAN CURB(MODIFIED PCC CURB TYPE 2) AND CONCRETE(FLAT) AS SHOWN PER DETAIL SHEETS. PAYMENT FOR CURB AND CONCRETE SHALL BE PAID AS ITEMS 701011 AND 705002 RESPECTIVELY.

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CONTRACT QUANTITIES SUMMARY SHEET

212001	UNDERCUT EXCAVATION, PATCHING	7.70 C.Y.
302007	GRADED AGGREGATE BASE COURSE, TYPE B	14.00 C.Y.
302008	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	16.70 C.Y.
401759	HIGH PERFORMANCE THIN OVERLAY	800.00 TON
401816	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22	1,320.00 TON
401822	BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING	0.60 TON
401823	BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING	1.00 TON
406002	BITUMINOUS CONCRETE PATCHING, CONCRETE	361.00 SY-IN
503001	PATCHING P.C.C. PAVEMENT, 6' TO 15', TYPE A	100.00 S.Y.
503006	DOWEL BARS	160.00 EACH
701010	PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	100.00 L.F.
701011	PORTLAND CEMENT CONCRETE CURB, TYPE 2	280.00 L.F.
705002	P.C.C. SIDEWALK, 6"	210.00 S.F.
708060	REPLACE DRAINAGE INLET GRATE(S)	1.00 EACH
708062	FURNISH DRAINAGE INLET FRAME(S)	1.00 EACH
710001	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	6.00 EACH
710002	ADJUSTING AND REPAIRING EXISTING MANHOLE	2.00 EACH
743003	ARROWPANELS, TYPE C	80.00 EA-DY
743004	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	98.00 EA-DY
743005	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	60.00 EA-DY
743007	** TRAFFIC OFFICERS	380.00 HOUR
743010	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	40.00 EA-DY
743051	FLAGGER, KENT COUNTY, STATE	900.00 HOUR
743063	FLAGGER, KENT COUNTY, STATE, OVERTIME	135.00 HOUR
744505	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	1,400.00 L.F.
748015	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND ALKYD-THERMOPLAST IC	1,760.00 S.F.
748019	TEMPORARY MARKINGS, PAINT, 4"	3,990.00 L.F.

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CONTRACT QUANTITIES SUMMARY SHEET

748026	TEMPORARY MARKINGS, PAINT SYMBOL/LEGEND	770.00 S.F.
748535	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 4"	2,560.00 L.F.
748548	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	4,290.00 L.F.
750000	ADJUST WATER VALVE BOXES	3.00 EACH
758000	REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	194.00 S.Y.
760507	PROFILE MILLING, BITUMINOUS CONCRETE	53,960.00 SY-IN
762001	SAW CUTTING, BITUMINOUS CONCRETE	700.00 L.F.
762002	SAW CUTTING, CONCRETE, FULL DEPTH	370.00 L.F.
763000	INITIAL EXPENSE	LUMP SUM
763643	MAINTENANCE OF TRAFFIC, ALL INCLUSIVE	LUMP SUM

** DENOTES FIXED PRICE ITEM

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