

THE STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION
MAINTENANCE AND OPERATIONS
CONSTRUCTION PLANS AND SPECIFICATIONS FOR

BITUMINOUS PATCHING, OPEN END, SOUTH, FY21-FY22

CONTRACT NUMBER - T202006602

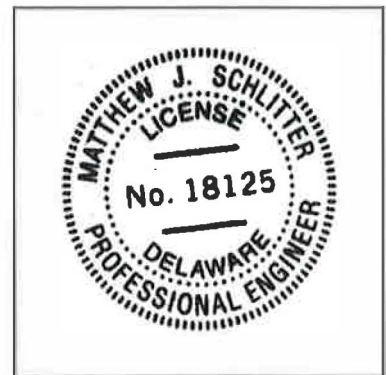
PRIMAVERA ID - 20-12002

FEDERAL AID NUMBER - NONE

COUNTY: SUSSEX

PLANS PREPARED BY: R.M. HYLBERT
DESIGNER

Matthew J. Schlitter 7.2.20
DELDOT - CE IV/PROJECT MANAGER DATE
MAINTENANCE AND OPERATIONS - (SOD)



THIS SEAL APPLIES TO ALL SHEETS
BEARING THE "SOD" SECTION
DESIGNATION

APPROVED FOR ADVERTISEMENT

David Bass 7-8-2020
DIRECTOR OF MAINTENANCE AND OPERATIONS DATE

SOUTH DISTRICT

BITUMINOUS PATCHING, OPEN END, SOUTH, FY21-FY22

CONTRACT DESCRIPTION

The purpose of this contract is to make general improvements to various bituminous roads throughout Sussex County using bituminous pavement patching methods. These bituminous patching methods shall include, but not be limited to: saw cutting, milling, paving, crack and joint sealing, replacing pavement markings, adjusting & repairing drainage inlets, manholes, water valves, and other utilities, repairing pavement area around patches and any other work required to complete each work order.

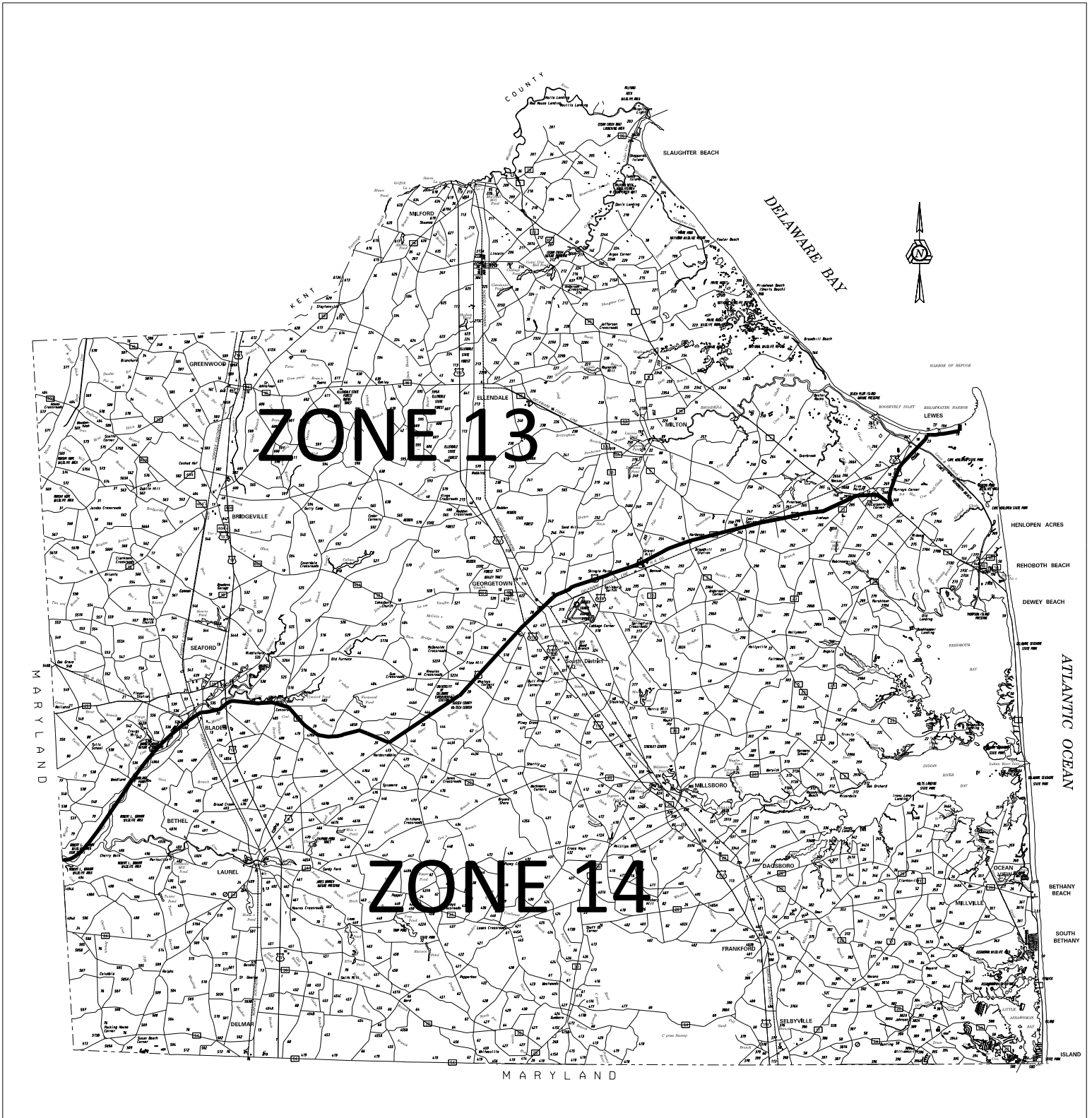
The specific work sites are not listed herein, but will be assigned as available by the South District Maintenance Support office as locations are funded.

1. The DelDOT project manager is responsible for ensuring any required documents and analysis as part of the adopted work zone safety and mobility procedures and guidelines has been completed prior to any work starting on this contract.
2. It is anticipated that all work will occur within DelDOT's right of way. Should the need occur to trespass onto railroad property, including the highway-rail crossing; it will be the responsibility of the DelDOT project manager to contact the railroad chief engineer and obtain written authorization prior to such work.

The contractor, however, shall be responsible for obtaining the required clearances and insurances for each railway company involved if the railroad property and/or facilities are located within or near the proposed limits of work and/or if the proposed work encroaches upon the railroad's right of way; in accordance with DelDOT Maintenance of Railroad Traffic item 801501. The contractor must contact DelDOT's railroad section manager at 302-760-2183 prior to the start of any work to coordinate the execution of the appropriate agreements and authorizations required from any railway company involved, including coordination of railroad flagging, if necessary.

3. It is anticipated that all work will occur within DelDOT's existing right of way or easement areas. Should the need occur to trespass onto private property; it will be the responsibility of the DelDOT project manager to secure such trespass needs prior to the start of work.
4. No environmental permits are required for this work provided no jurisdictional wetlands or waters are impacted. If there is any question as to whether or not a water or wetland is jurisdictional, the contractor shall contact the DelDOT environmental section at 302-760-2280 prior to the start of work.
5. No utility relocation is anticipated. Should any conflicts be encountered during construction requiring adjustment and/or relocation of the agencies' existing facilities, the necessary relocation work shall be accomplished by the respective agencies' forces, as directed by the District Engineer. Any adjustments and/or relocations of municipally owned facilities shall be done by the state's contractor in accordance with the respective agencies' standard specifications as directed by the District Engineer. Payment shall be made using contract unit pricing or where no pricing is available; it shall be negotiated prior to the commencement of work.
6. The DelDOT project manager shall be responsible for coordinating with the traffic section relating to any impacts to traffic section facilities (including but not limited to traffic loops, junction wells etc.) in advance of the start of the activity.
7. Prior to initiating any work on this contract, the contractor shall be responsible for preparing and submitting for approval of the safety section a maintenance of traffic plan. Sufficient time shall be provided for the review and approval of the plan. The maintenance of traffic plan shall include proposed time restrictions on the closure of travel lanes subject to the approval of the safety section.

ZONE MAP



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GENERAL CONTRACT NOTES

1. Construction of this contract shall conform to Delaware Department of Transportation Standard Specifications dated August 2016 as amended by the Supplemental Specifications, the Special Provisions, the most recent Standard Construction Details, the Delaware Manual of Uniform Traffic Control Devices and these plans.
2. The department reserves the right to add or delete quantities to this contract. Such 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 Department reserves the right to prioritize, substitute, add, or delete locations at any time during the contract.
4. The contract shall expire 730 calendar days from the date the Notice to Proceed is issued. The Department reserves the right to request to extend the contract for 1 additional calendar year at the original unit bid prices. The one-year extension must be approved by both parties in writing prior to the expiration of the existing contract. The performance bond shall be submitted with the contract execution and shall be subject to any such agreed upon renewal for extension periods. Initial expense shall only be paid once and shall not be paid a second time upon an extension of the contract. Any additional expenses related to the extension of the contract must be documented and shall be agreed to prior to contract extension.
5. Work will be scheduled via work orders from the district. Work locations will vary in size. The work orders will indicate the work to be performed at each location and the time given for the completion of the work.
6. Issuance of each work order constitutes the Notice to Proceed (NTP) with the work described on the work order. The contractor must begin work within 10 calendar days of the Work order / NTP being issued. Failure to comply with the work order NTP or the work order completion date will result in liquidated damages being assessed based on each work order and section 108.08 of the standard specifications. Liquidated damages will be assessed based on the value of the work order or the total contract award amount, whichever is less.
7. Each work order shall be considered a separate unit of work. The engineer will make payment monthly for the completed work as outlined in section 109.07. Upon the substantial completion of the work order, the engineer will stop time at those locations and perform an initial inspection for the work order locations in accordance with subsection 105.16. If the work is satisfactorily completed, the engineer will release the contractor from maintenance responsibility for those locations. The engineer may also choose to perform the initial inspections at 6-month intervals. The engineer reserves the right to require the contractor to add work or make repairs to completed locations at the department's expense until such a location has been accepted by the department. The contractor must repair all defects in the work caused by poor workmanship or materials at their own expense until the department performs a primary inspection and accepts the contract. A primary inspection will be completed on an annual basis for work orders completed in a calendar year. Upon satisfactory completion of the primary punch list, the department will accept the location and release the contractor from responsibility for the work at that location. If a work order is sufficiently large and complex as determined by the engineer, a primary inspection may be held upon the completion of that work order.
8. Upon issuance of each work order the contractor shall submit the required copies of a detailed progress schedule (PSC) as outlined in standard specification 108.04 within 5 calendar days of the issuance of work order. 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. Details shall include a description of each work activity, the planned days of work, multiple crews or shifts, and scheduled working hours. Failure to comply will result in a suspension of all contract work with time charges continuing to be assessed. The PSC must also be updated and submitted to the department as changes or delays occur in the contract.

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GENERAL CONTRACT NOTES (cont.)

9. The locations of the work to be performed are included in designated mobilization zones. The mobilization zone limits are shown on the mobilization zone map in the contract documents. The boundaries of the zones are formed by roads, county lines, bodies of water, etc.
10. One mobilization fee shall be paid for each move into a mobilization zone, which shall cover all locations within that mobilization zone and all work orders issued within that zone. A separate mobilization fee will not be paid for each individual location. No mobilization fee will be paid if a new work order is issued while work on a previous work order is ongoing in that zone. A separate mobilization fee will only be paid if the contractor is directed by the department to move from the mobilization zone in which the contractor is presently working or inclement weather causes a substantial delay in the work. A substantial delay due to inclement weather shall be defined as fourteen or more calendar days. Payment of any mobilization fees shall be agreed upon between the contractor and the department, in writing, prior to work commencing.
11. The contractor shall commence work indicated on the work order no later than the seventh (10th) calendar day after issuance unless required materials are not available. Non-availability of materials shall be verified by at least three (3) different sources. Verification shall be formal and supplied by the contractor in writing. If there is a verified non-availability of materials, time charges shall commence on the first (1st) working day following the delivery date of said materials.
12. All work added shall be performed at contract unit prices. In the case where contract unit prices are not available the prices are to be negotiated prior to the commencement of work.
13. Any and all construction engineering, including survey and/or layout for traffic islands, striping, curb ramps, piping and drainage, etc., shall be incidental to the contract.

PROJECT NOTES

14. Unless specified, overlay widths shall match existing widths.
15. All subdivisions shall use a type 'C' bituminous mix that shall meet the requirements for a 9.5mm (3/8") nominal maximum aggregate size for Superpave.
16. The minimum and maximum single lift thicknesses of materials shall be as follows:
 - A. -Type 'C' Bituminous Concrete: 1.25" - 2.00"
 - B. -Type 'B' Bituminous Concrete: 2.25" - 4.00"
 - C. -BCBC: 3.00" - 6.00"
 - D. -GABC: 2.00" - 8.00"
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.

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PROJECT NOTES (cont.)

18. Butt joints shall be placed at all intersecting bituminous roads and any other locations as directed by the engineer. Butt joints at drainage structures not to be resurfaced shall be as per the standard detail or location notes. Butt joints cut prior to the day of the pavement overlay shall be ramped with bituminous TRM. TRM shall be incidental to the butt joint item. In areas to be milled, there will be no separate payment for butt joints. Joint sealing shall be required at all butt joint locations. The cost for this work shall be incidental to the butt joint item. Material shall meet specification for 1042.
19. After pavement milling, all transverse vertical differences, raised edges of manholes, catch basins, water valve boxes, etc. shall be ramped with bituminous TRM at a 20:1 or flatter slope prior to opening the roadway to traffic. Pavement millings will not be allowed for this purpose. All TRM shall be incidental to the milling item or other corresponding item.
20. All milled material shall remain the property of the contractor unless otherwise stated.
21. All paving, including turn lanes, shoulders and intersections, is to be completed within seven (7) calendar days of each day's milling operation. Failure to comply will result in a suspension of all other contract work with time charges continuing to be assessed.
22. Item 908001, Topsoil, shall be used to fill shoulder areas adjacent to new bituminous mix asphalt overlays and/or patching unless otherwise instructed by the engineer.
23. The contractor shall take care in removing pavement around utilities, butt joints, curbs, etc. so as not to disturb the existing pavement beyond the specified depth. Any damage caused by the contractor's operation may result in placing leveling courses at the contractor's expense. The removal and cleanup 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 items and/or reclamation items.
24. The cost of fine grading, compacting, and preparing existing shoulders for paving shall be incidental to section 401.
25. All adjustments shall be made no more than seven (7) calendar days prior to the placement of the final course of bituminous 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.
26. 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.
27. Drainage inlets, which are 4' or greater in depth and are slated for repair will have steps installed in accordance with section 602 of the standard specifications. Payment shall be incidental to the unit price bid for item 602130.
28. Drainage inlet grates adjacent to pavement being overlaid, which are not the 45-degree type shall be replaced. At locations where no patching is designated, this type of grate shall be replaced only when the catch basin is to be adjusted and/or repaired. The actual locations, the need for any grate modifications or for new frames shall be determined by the engineer. The cost for the work shall be negotiated prior to the replacement of any drainage inlet grates.
29. The Portland cement concrete used within item 602132 - Adjust and Repair Existing Manhole and item 710002 - Adjust Water Valve Box shall conform to the requirements of class 'A' concrete as stated within section 503.02 of the Standard Specifications.

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PROJECT NOTES (cont.)

30. Excavation for PCC curbs, sidewalk or valley gutter shall be incidental to the bid price for each respective item. Excavated material, not needed on the project, shall be removed from the project at the contractor's expense. Item 908001, 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" should be present in material used for back fill. When replacement of curb and gutter has been completed and the forms removed at each location of this contract, backfilling shall be done immediately. Complete restoration, topsoil, seeding, and removal of all materials for curb & gutter or sidewalk; sealing of valley gutters, flow channels and parging of catch basins, shall be completed within seven (7) calendar days. Failure to comply will result in a suspension of all other contract work with time charges continuing to be assessed.
31. All manhole adjustments placed in concrete shall require tack on all vertical surfaces and joint sealing application per 1042.01.2. These items are incidental to the manhole adjustment per items 401.03-M and item 762.03.D in the 2016 Standard Specifications.
32. All concrete to bituminous interfaces shall require tack on all vertical surfaces. All longitudinal interfaces shall be sealed with a uniform 4" band of PG 64-22. These items are incidental to the interface item per items 401.03-M and item 762.03.D in the 2016 Standard Specifications.
33. All vertical contact surfaces shall be tacked before placing any new mixture against the joint. These items are incidental to item 401 per section 401.03-M and 762.03.D in the 2016 Standard Specifications. No separate payment will be made for the sealing of these joints.
34. Item 504001, Crack and Joint Sealing less than $\frac{3}{4}$ " Wide, shall be paid on locations where the remedy is crack sealing. This item will not be paid separately for newly installed pavement joints or interfaces as the sealing of those joints are incidental to the work generating the joints.
35. The contractor shall give a two (2) weeks' notice to the property owner when any fixture, shrub or other object must be removed from the right of way or easement area. If the owner has not attempted to salvage this property, the contractor shall remove it without obligation. Compensation shall be incidental to the contract.
36. A Safety Edge shall be used on all patches that extend to the edge of the riding surface of the shoulder.

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MAINTENANCE OF TRAFFIC AND PAVEMENT MARKINGS

37. All work shall be performed in a manner that will reasonably provide the least practical obstruction to all road users, including vehicular, pedestrian and bicycle traffic and shall conform to the requirements of the latest Delaware Manual on Uniform Traffic Control Devices (MUTCD) Part 6, herein referred to as the Traffic Control Manual (including revisions in effect at the time of advertisement for bids).
38. At the preconstruction meeting, the contractor shall submit to the South District Safety Officer the necessary NCHRP 350 & MASH certifications for all traffic control devices expected to be used on the contract. In addition, prior to the start of any work order, the contractor must submit a traffic control plan including any additional certifications not previously submitted. Written approval must be received before the start of work at each location.
39. The contractor shall submit to the South District Safety Officer their proposed lane closure time frames for approval. This shall be submitted a minimum of 2 weeks prior to the start of work.
40. An American Traffic Safety Services Association (ATSSA) certified traffic control supervisor shall be required for each location on this project. 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. The ATSSA officer shall be incidental to the work being performed and shall not be paid separately.
41. Maintenance of traffic, unless otherwise noted in the approved plans, shall conform to the appropriate traffic control typical application found in the latest version of the DE MUTCD.
42. When required by the DE MUTCD, permanent advance warning signs shall be installed with the legend "END ROAD WORK" located 500 feet downstream from the work area. On intersecting roadways within the project limits, a "ROAD WORK AHEAD" sign shall be placed at a distance not less than 500 feet in advance of the work area and an "END ROAD WORK" sign shall be located 500 feet downstream of the work area. The use of skid mounted sign supports is not allowed unless the contractor can demonstrate that a utility conflict exists, which shall be verified by the engineer; or concrete medians prevent the installation of the permanent signs in the appropriate location. All temporary and permanent signs shall be paid as item 810001.
43. The use of millings and GABC in the travel way, temporary travel way, high volume entrances and access ramps for the purpose of providing temporary roadway service, pothole repair, tapered edge for utilities, butt joints, and longitudinal drop-offs (milling and paving operations) is prohibited. Bituminous TRM, as approved by the Engineer, shall be used for this purpose. TRM shall be incidental to the work it protects and shall not be paid separately.
44. The use of millings or GABC shall be used at the following locations where access to a business, residence, or edge drop off needs to be maintained unless otherwise noted in the plans or directed by the Engineer to use bituminous TRM. All millings and GABC shall be rolled and compacted to prevent material from unraveling.
 - a. Driveways
 - b. Entrances
 - c. Low volume access ramps (identified in the contract documents)
 - d. Edge drop offs adjacent to live roadway (lane, shoulder, or turn lane) and the proposed road construction
 - e. Edge of roadway drop off
45. Grading and maintaining base course that is being used for roadway wedge/ fillet between travel lanes and pavement box, edge of travel way, driveway or entrance access shall be incidental to the contract. The base course shall be placed at no greater than the slope specified in table 6G-1 and shall be compacted. Vertical differences shall be corrected in accordance with the table 6G-1 of the DE MUTCD.

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MAINTENANCE OF TRAFFIC AND PAVEMENT MARKINGS (cont.)

46. No separate payment shall be made for the use of traffic cones. Traffic cones and/or work associated with their use such as setup, removal, cleaning, etc. shall be incidental to the work for which they protect.
47. All persons working within the state right-of-way shall wear a minimum of an ANSI Class II safety vest meeting the ANSI 107-2004 requirements.
48. The contractor is responsible for ensuring that the Traffic Management Center (1-302-659-4600) is notified each and every day when work is being performed in State Right of Way. The contractor must identify the type of work, any lane(s) or shoulder(s) closed, the length of time for work when the lane restriction is in place and when the lane restriction is picked up, contact person/number and state inspector.
49. The contractor shall be responsible for notifying the local 911 center, local schools, and the DeIDOT public information center of all roads and lanes to be closed a minimum of seven calendar days before the closure. If temporarily blocking access to a fire hydrant, notification must be given to Sussex County, the local firefighting authorities, and the 911 center.
50. The contractor shall be responsible for daily coordination efforts with his/her work with other contractors in the immediate area.
51. The contractor shall provide all residents and businesses 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 DeIDOT contact numbers. Failure to give proper notice will result in a suspension of work requiring notice until proper notice is provided.
52. Access to all businesses and residences within the project limits shall be maintained throughout the duration of the contract. Any temporary closure of an entrance for tie in purposes shall be coordinated with the engineer and / or property owner in advance of the closure.
53. Prior to additional lifts, all drop offs shall be secured before next lift per DE MUTCD 6G.1, even when a safety edge is present.
54. The contractor is responsible for the maintenance of existing pavement and shoulders within the project limits for the duration of the contract or as directed by the Engineer or his designee.
55. All roadways and entrances not open to traffic shall be closed using Type III Barricades and shall be placed per the Traffic Control Manual, Section 6F.63 & 6F.68.
56. A safety edge shall be used on all overlays and patches where patch extends to unimproved shoulder.
57. 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 or TA-29 of the DE MUTCD or to the satisfaction of the Engineer and shall be ADA compliant. The cost for any provisions on open end contracts shall be negotiated prior to the commencement of work.

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 1960 (ADA) Title II, Paragraph 35.130.

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MAINTENANCE OF TRAFFIC AND PAVEMENT MARKINGS (cont.)

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 practical 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 protrude 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" into the 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 $\frac{1}{4}$ " in grade or terrain that could cause tripping or be a barrier to wheelchair use.

58. All storage of equipment and material shall comply with section 6G.21 of the DE MUTCD.
59. All flaggers shall comply with Chapter 6E of the DE MUTCD.
60. All roadway excavation in or adjacent to travel ways shall be properly backfilled at the end of each day prior to traffic returning to unrestricted travel per Section 6G.20 and Table 6G-1 of the DE MUTCD. This includes all utilities and/or obstacles within or adjacent to the travel ways as outlined in the DE MUTCD.
61. Prior to the start of work, the contractor shall be required to show proof that he has sufficient approved striping materials on hand to ensure striping is completed prior to fully opening roadway to traffic.
62. 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.
63. The contractor shall submit detailed drawings (including but not limited to 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 at the preconstruction meeting. These drawings will be reviewed by the department's traffic section to determine if any changes to the final pavement markings are required.
64. Final pavement markings shall conform to all existing patterns unless otherwise directed by the Engineer. The final pavement markings shall be placed within five (5) calendar days after the completion of the paving. Failure to comply will result in suspension of all other contract work with time charges continuing to be assessed.

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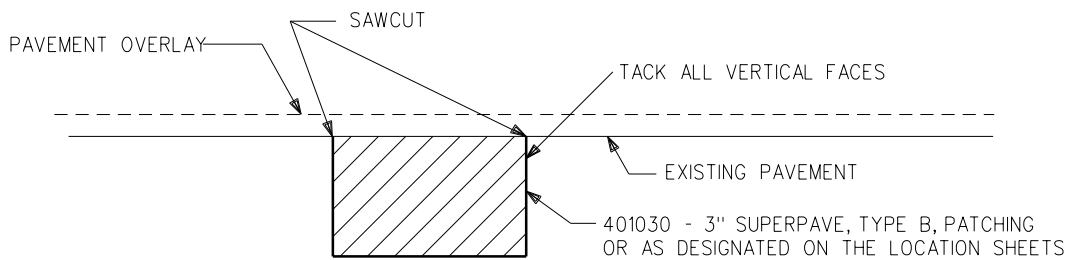
MAINTENANCE OF TRAFFIC AND PAVEMENT MARKINGS (cont.)

65. 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, including the replacement of peeling temporary tape.
66. Any erroneous marking will not be paid for and shall be corrected immediately at the contractor's expense. Erroneous markings or shadows that exceed one (1) inch in width shall be removed by either sand or water blasting. No other removal methods will be allowed. An asphalt sealer shall be applied in the area of the removed marking to mask the repair. Any damage to the pavement caused by the removal of erroneous markings shall be repaired/replaced to the satisfaction of the Engineer at the contractor's expense.
67. All markings that are no longer in use and conflict with the pavement markings in use by the traveling public are to be removed and must be completely obliterated by a method approved by the Engineer. Painting over the conflicting striping will not be accepted as a method of removal.
68. 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 with a 6" gap between).
69. The contractor, with the Engineer, shall inventory all signs on all roads subject to improvements. Necessary signs shall be maintained in operation during construction and any other signs shall be properly stored by the contractor, who shall be responsible for any loss or damage. Immediately prior to final inspection, the contractor and Engineer shall again inventory the traffic signs and account for any lost or damaged signs.
70. Traffic detection loops shall be placed in the final wearing surface unless otherwise directed by the Engineer.
71. 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.
72. Stop lines "bars" shall be installed in accordance with section 3B.16 of the latest DE MUTCD.
73. All crosswalks shall be installed in accordance with Section 3B.18 of the latest DE MUTCD.
74. International crosswalk symbols will be placed at all existing crosswalk locations or other locations as directed by the engineer. Payment will be under the applicable striping items.

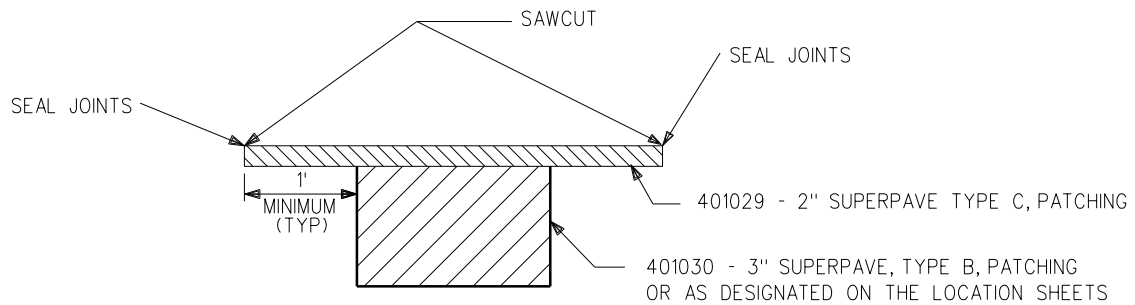
PATCHING DETAIL

NOTE: ALL EDGES TO BE SAWCUT. CUTTING BY USE OF AIR HAMMERS MAY BE SUBSTITUTED FOR SAWCUTTING IF THE AREA IS TO BE OVERLAID UNDER THE SAME CONTRACT. THIS DETAIL SHALL BE USED FOR ALL PATCHING UNLESS OTHERWISE NOTED ON THE PLANS.

NOTE: PATCH SIZES SHALL BE AS DIRECTED BY THE ENGINEER.



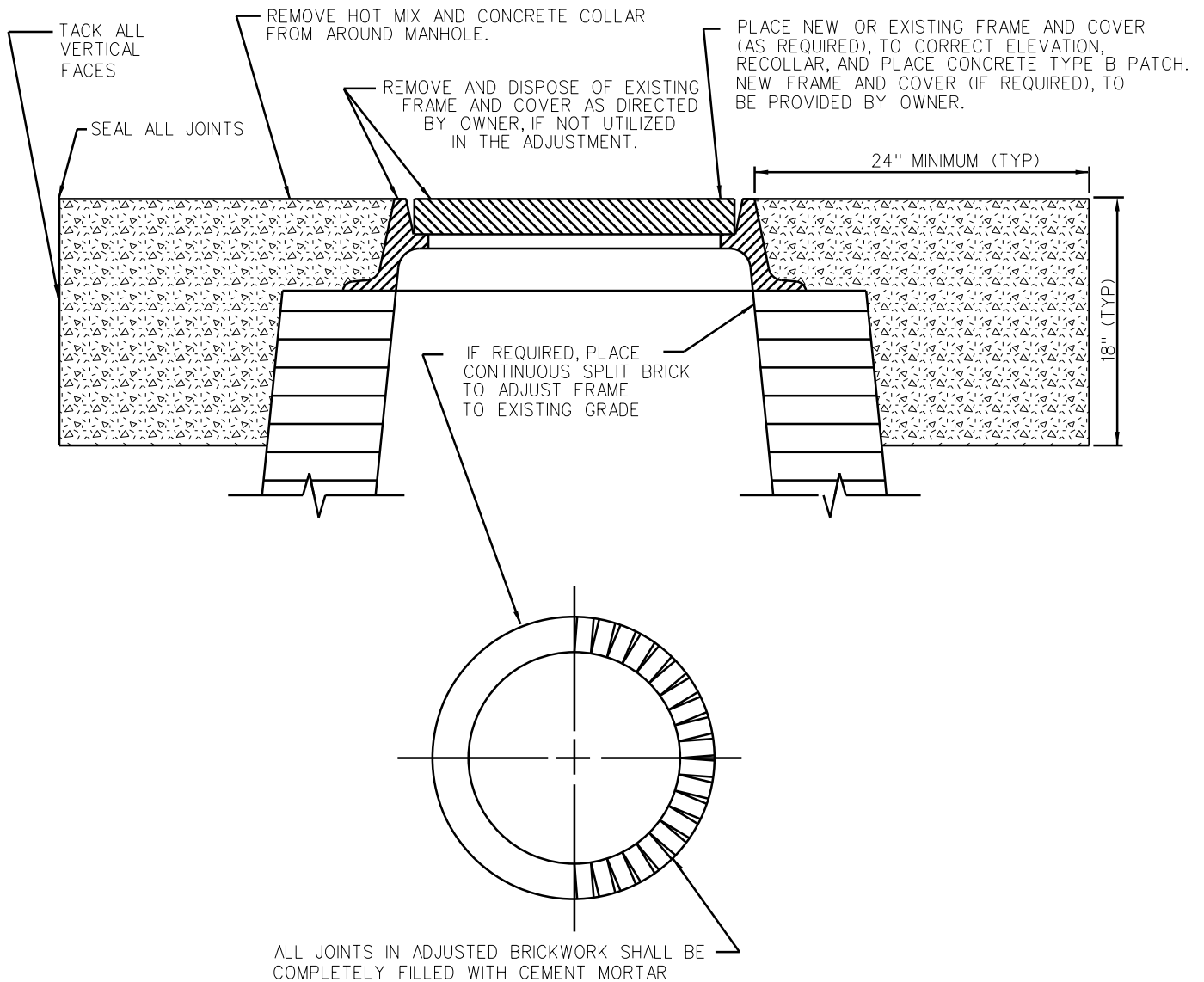
BITUMINOUS PATCH WITH OVERLAY



BITUMINOUS PATCH DETAIL WITHOUT OVERLAY

NOTE: NORMAL DEPTH OF PATCHING IS 3" OR 6" OR MAY BE AS DIRECTED BY THE ENGINEER.

MANHOLE ADJUSTMENT DETAIL



ADJUSTING MANHOLE

NOTE: MANHOLES IN CONCRETE ROADWAYS SHALL BE SAWCUT FULL DEPTH TO THE SPECIFIED DIMENSIONS PRIOR TO ANY ADJUSTMENT BEING MADE. THE SAWCUTTING SHALL BE INCIDENTAL TO ITEM 602132.

DELAWARE DEPARTMENT OF TRANSPORTATION

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SOUTH MAINTENANCE

BITUMINOUS PATCHING, OPEN END, SOUTH, FY21-FY22

LOCATION 1 VARIOUS LOCATIONS – OPEN END
LENGTH
GENERAL IMPROVEMENTS

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 1

202004	UNDERCUT EXCAVATION, PATCHING	50.00	C.Y.
301002	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	400.00	C.Y.
401029	SUPERPAVE TYPE C, PG 64-22, PATCHING	7,500.00	TON
401030	SUPERPAVE TYPE B, PG 64-22, PATCHING	2,500.00	TON
401036	SUPERPAVE TYPE C, PG 64-22, WEDGE	500.00	TON
401532	PAVING SURCHARGE, ZONE 13	5,250.00	TON
401533	PAVING SURCHARGE, ZONE 14	5,250.00	TON
402000	BITUMINOUS CONCRETE PATCHING	120,000.00	SY-IN
504001	CRACK AND JOINT SEALING LESS THAN 3/4 INCH WIDE	5,000.00	L.F.
602130	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	20.00	EACH
602132	ADJUSTING AND REPAIRING EXISTING MANHOLE	20.00	EACH
710002	ADJUST WATER VALVE BOXES	20.00	EACH
760006	RUMBLE STRIPS, BITUMINOUS PAVEMENT	10,000.00	L.F.
760008	RUMBLE STRIPS, CENTER LINE, BITUMINOUS PAVEMENT	10,000.00	L.F.
762000	SAW CUTTING, BITUMINOUS CONCRETE	10,000.00	L.F.
762004	BUTT JOINTS	1,000.00	S.Y.
763556	ROAD LOCATION MOBILIZATION, ZONE 13	10.00	EACH
763557	ROAD LOCATION MOBILIZATION, ZONE 14	10.00	EACH
802003	ARROW PANELS TYPE C	100.00	EA-DY
803001	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	100.00	EA-DY
805001	PLASTIC DRUMS	4,650.00	EA-DY
806001	TRAFFIC OFFICERS	100.00	HOURLY
808002	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	300.00	EA-DY
810001	TEMPORARY WARNING SIGNS AND PLAQUES	5,000.00	EA-DY

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SOUTH MAINTENANCE

BITUMINOUS PATCHING, OPEN END, SOUTH, FY21-FY22

LOCATION 1 VARIOUS LOCATIONS – OPEN END
LENGTH
GENERAL IMPROVEMENTS

COMMENTS:

MATERIAL ESTIMATE FOR LOCATION 1

811003	FLAGGER, SUSSEX COUNTY, STATE	5,000.00	HOUR
811015	FLAGGER, SUSSEX COUNTY, STATE, OVERTIME	500.00	HOUR
817002	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	1,500.00	S.F.
817003	TEMPORARY MARKINGS, PAINT, 4"	30,000.00	L.F.
817004	TEMPORARY MARKINGS, PAINT, SYMBOL/LEGEND	10,000.00	S.F.
817013	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	30,000.00	L.F.
817027	RAISED/RECESSED PAVEMENT MARKER	200.00	EACH
846001	FURNISH AND INSTALL LOOP WIRE 1-CONDUCTOR #14 AWG ENCASED IN 1/4" FLEXIBLE TUBING IN A LOOP SAWCUT	800.00	L.F.
908001	TOPSOIL	200.00	TON
908014	PERMANENT GRASS SEEDING, DRY GROUND	1,000.00	S.Y.

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CONTRACT QUANTITIES SUMMARY SHEET

202004	UNDERCUT EXCAVATION, PATCHING	50.00	C.Y.
301002	GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING	400.00	C.Y.
401029	SUPERPAVE TYPE C, PG 64-22, PATCHING	7,500.00	TON
401030	SUPERPAVE TYPE B, PG 64-22, PATCHING	2,500.00	TON
401036	SUPERPAVE TYPE C, PG 64-22, WEDGE	500.00	TON
401532	PAVING SURCHARGE, ZONE 13	5,250.00	TON
401533	PAVING SURCHARGE, ZONE 14	5,250.00	TON
402000	BITUMINOUS CONCRETE PATCHING	120,000.00	SY-IN
504001	CRACK AND JOINT SEALING LESS THAN 3/4 INCH WIDE	5,000.00	L.F.
602130	ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET	20.00	EACH
602132	ADJUSTING AND REPAIRING EXISTING MANHOLE	20.00	EACH
710002	ADJUST WATER VALVE BOXES	20.00	EACH
760006	RUMBLE STRIPS, BITUMINOUS PAVEMENT	10,000.00	L.F.
760008	RUMBLE STRIPS, CENTER LINE, BITUMINOUS PAVEMENT	10,000.00	L.F.
762000	SAW CUTTING, BITUMINOUS CONCRETE	10,000.00	L.F.
762004	BUTT JOINTS	1,000.00	S.Y.
763000	INITIAL EXPENSE/DE-MOBILIZATION	LUMP	SUM
763556	ROAD LOCATION MOBILIZATION, ZONE 13	10.00	EACH
763557	ROAD LOCATION MOBILIZATION, ZONE 14	10.00	EACH
802003	ARROW PANELS TYPE C	100.00	EA-DY
803001	FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	100.00	EA-DY
805001	PLASTIC DRUMS	4,650.00	EA-DY
806001	TRAFFIC OFFICERS	100.00	HOUR
808002	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	300.00	EA-DY
810001	TEMPORARY WARNING SIGNS AND PLAQUES	5,000.00	EA-DY
811003	FLAGGER, SUSSEX COUNTY, STATE	5,000.00	HOUR
811015	FLAGGER, SUSSEX COUNTY, STATE, OVERTIME	500.00	HOUR
817002	PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	1,500.00	S.F.

DELAWARE DEPARTMENT OF TRANSPORTATION

CONTRACT T202006602

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SOUTH MAINTENANCE

BITUMINOUS PATCHING, OPEN END, SOUTH, FY21-FY22

CONTRACT QUANTITIES SUMMARY SHEET

817003	TEMPORARY MARKINGS, PAINT, 4"	30,000.00	L.F.
817004	TEMPORARY MARKINGS, PAINT, SYMBOL/LEGEND	10,000.00	S.F.
817013	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	30,000.00	L.F.
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