GENESEE COUNTY ROAD COMMISSION

AN EQUAL OPPORTUNITY EMPLOYER

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BOARD MEETINGS - TUESDAYS @ 10 A.M.

JAMES A. POMEROY, Chairman
ROBERT C. JOHNSON, Vice-Chairman
DAVID L. MILLER, Commissioner
K. MICHAEL HARVEY, Commissioner
CLOYCE L. DICKERSON, Commissioner

GCRC Board Meeting – 07/16/2013

Consent – B3

FROM: John H. Daly
Manager-Director

Fred F. Peivandi
County Highway Engineer

Bonnie P. Wood
Traffic Engineering Manager

TO: The Board of County Road Commissioners of the County of Genesee

RE: **Adoption of a Cold Weather Road Repair Procedure and Policy**

DATE OF MEETING: July 16, 2013

DATE PREPARED: July 8, 2013

SYNOPSIS: Staff has developed a preferred pavement repair for cold weather breaks that utilizes flowable fill. This construction technique eliminates backfill density concerns during the winter months when soils are frozen. By establishing this repair detail as policy, we hope to eliminate inadequate repair patches and additional road closures and detours.

RECOMMENDATION: The Board of County Road Commissioners adopt the Cold Weather Road Repair detail as policy for utility breaks under pavement.

BPW:bpw
Attachment

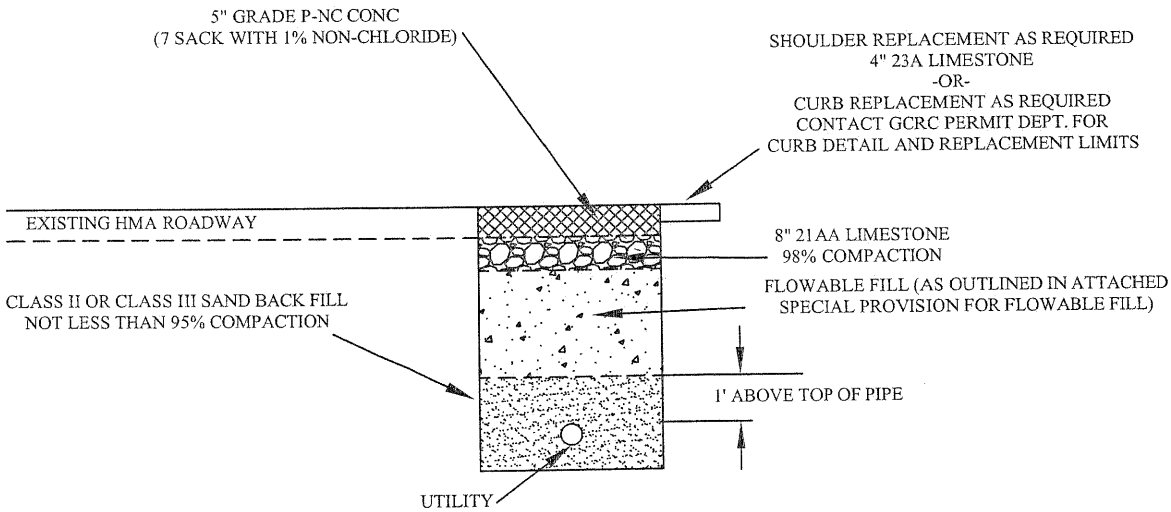
COLD WEATHER ROAD REPAIR

COLD PATCH OR SIMILAR PRODUCT SHALL NOT BE UTILIZED AS A TEMPORARY REPAIR. IF COLD PATCH OR SIMILAR PRODUCT IS PLACED, GCRC WILL REPAIR ROADWAY AS OUTLINED AT THE FACILITY OWNERS EXPENSE.

- NOTICE MUST BE PROVIDED TO GCRC PERMIT OFFICE PRIOR TO THE START OF ANY REPAIR TO FACILITIES THAT REQUIRE THE OPEN CUT OF ANY ROAD. IF REPAIRS OCCUR DURING WEEKEND OR ON A HOLIDAYS GCRC PERMIT OFFICE MUST BE NOTIFIED BY LEAVING A MESSAGE AT EXTENSION 250.
- A PERMIT WILL BE REQUIRED OUTLINING THE PERMANENT REPAIRS. FACILITY OWNER MUST APPLY FOR THE PERMIT WITHIN 48 HRS. THE PERMANENT REPAIR SHALL BE IN PLACE NO LATER THAN JUNE 1ST.
- TEMPORARY REPAIR OF THE ROADWAY SHALL BE CONSTRUCTED AS PART OF THE EMERGENCY REPAIR AND SCHEDULED AS SUCH. PROPER BACK FILL AND PLACEMENT OF TEMPORARY CONCRETE WILL BE CONSTRUCTED IMMEDIATELY FOLLOWING THE REPAIR OF THE FACILITIES AND WILL BE DONE WITH SIMILAR URGENCY AS THE UTILITY REPAIR ITS SELF.

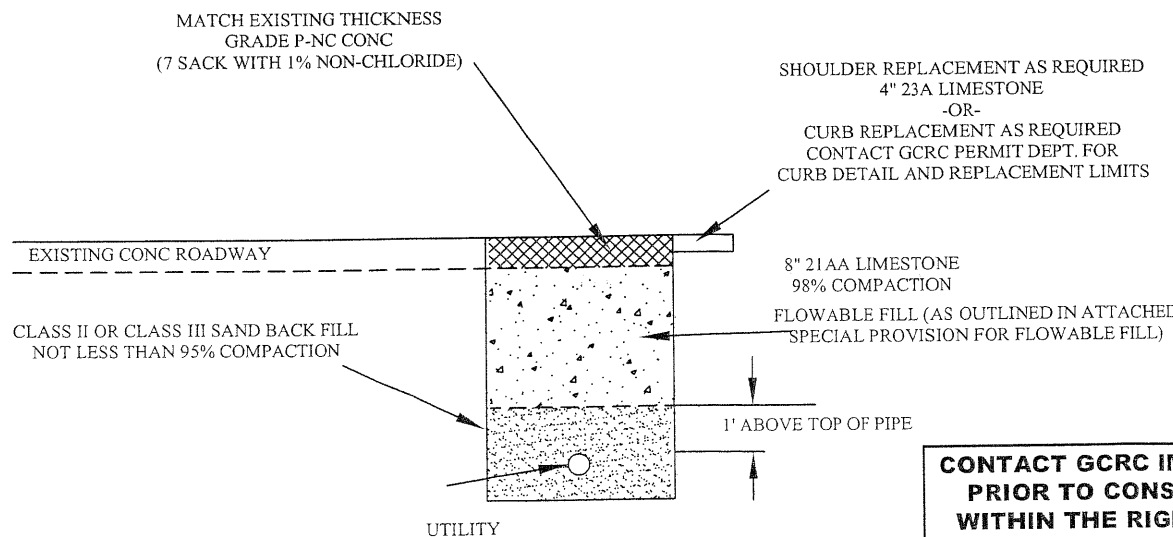
TEMP. PAVEMENT PATCH FOR HMA ROAD

(TO BE REPLACED WITH PERMANENT HMA REPAIR NO LATER THAN JUNE 1ST)



PAVEMENT PATCH FOR CONCRETE ROAD

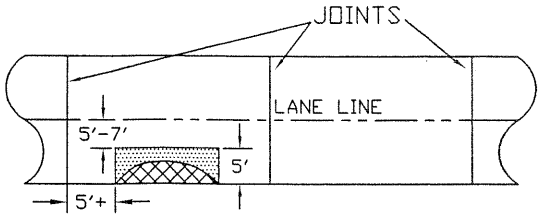
(TO BE CONSTRUCTED AS PERMANENT REPAIR)



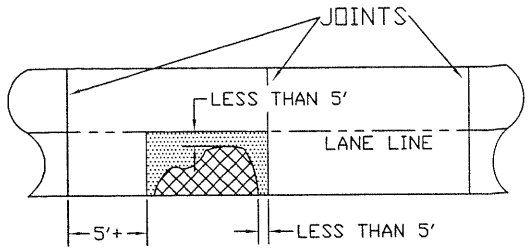
CONTACT GCRC IMMEDIATELY PRIOR TO CONSTRUCTION WITHIN THE RIGHTS of WAY @ (810)767-4920 EXT. 250

SEE ATTACHED DETAIL SHEET FOR REPAIR LIMITS OR CONTACT GCRC PERMIT DEPT. FOR REPAIR LIMITS

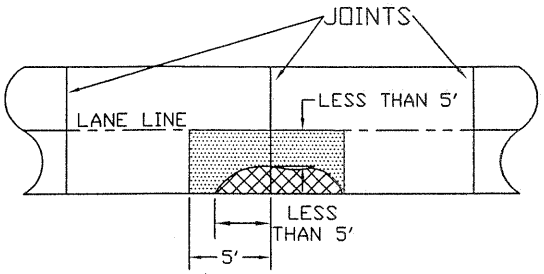
REPAIR OF CONCRETE PAVEMENT



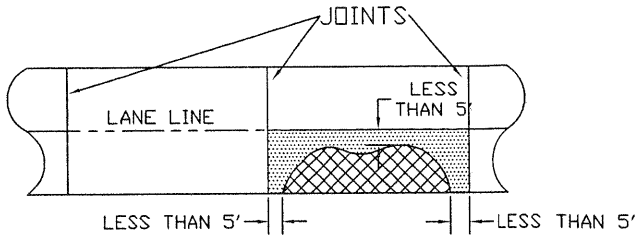
PAVEMENT BREAK & SAW CUT MORE THAN 5' FROM EXISTING JOINTS



PAVEMENT BREAK LESS THAN 5' FROM EXISTING JOINTS



PAVEMENT BREAK CROSSING JOINT



REMOVING ENTIRE SLAB

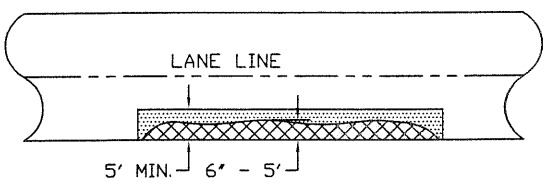
CONCRETE MUST BE GRADE P-NC 7 SK WITH 1% NON-CHORIDE, WITH ALL DOWEL BARS & LANE TIES REPLACED. LANE TIES TO BE EPOXY COATED, MIN. 40" O.C.

AREA TO REMOVE AND REPLACE

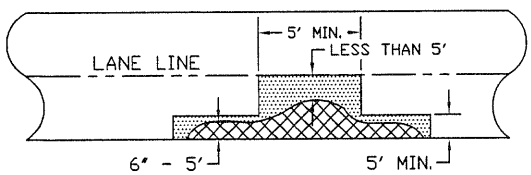
SAW CUT FULL DEPTH OF EXISTING PAVEMENT

PAVEMENT BREAK

REPAIR OF ASPHALT PAVEMENT



ASPHALT BROKEN LESS THAN 5'

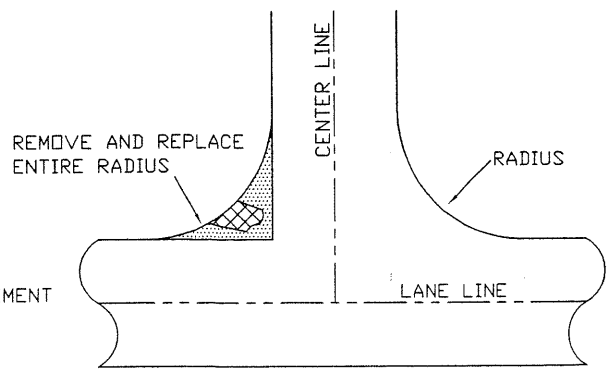


ASPHALT BROKEN LESS THAN 5'

AREA TO REMOVE AND REPLACE

SAW CUT FULL DEPTH OF EXISTING PAVEMENT

PAVEMENT BREAK



CUTTING OR BREAKING RADIUS AT INTERSECTION

GENESEE COUNTY ROAD COMMISSION

SPECIAL PROVISION
FOR
FLOWABLE FILL

a. Description. This work includes developing a mix design, furnishing, and placing flowable fill as indicated on the plans or as directed by the Engineer. All requirements for flowable fill and related work will be according to the current Michigan Department of Transportation Standard Specifications for Construction except as modified by this special provision. This specification is not intended to address flowable fill used for abandoning pipes and miscellaneous structures or other non-structural applications.

b. Materials. Supply flowable fill consisting of a mixture of Portland cement, granular material or fine aggregate, fly ash and water. The optional addition of ground granulated blast furnace slag, air entraining admixture and performance enhancing admixture is allowed.

Use Type I Portland cement conforming to section 901 of the current MDOT Standard Specifications for Construction and Class F or C fly ash as specified by ASTM C 618 except that there is no limit on loss on ignition.

Use granular material Class II conforming to section 902 of the current MDOT Standard Specifications for Construction except that 100 percent must pass the 1/2 inch sieve. Use 2NS material for fine aggregate.

If a performance enhancing admixture is used it must be included in the mix design, and must be used according to the manufacturer's recommendation.

c. Mix Design, Strength Requirements. Submit mix design. The mix design must include source and type or class of materials and batch proportions.

The compressive strength of the flowable fill must be a minimum of 50 psi at 3 days, and 75 to 150 psi at 28 days. If an air entraining admixture or performance enhancing admixture is used, the air content of the flowable fill must not exceed 35 percent by volume.

d. Construction. Provide for 24 hours from start to start of each flowable fill placement. Produce and deliver the flowable fill at a minimum temperature of 50 degrees F.

Use batching equipment equipped to measure the quantities of each component material. Provide sufficient mixing to ensure uniform consistency of the mixture. Do not add water to the flowable fill mixture after batching. Maintain water content to achieve specified compressive strengths and a uniform, self-leveling mixture.

Secure all pipes and conduits within the backfill area to counteract the buoyant effect of flowable fill. Tightly seal pipes, manholes and other areas not intended to be filled. Place the material evenly around manholes and in utility trenches to avoid dislocating pipes and conduits.