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## Herbert E. MacCombie, Jr., P.E.

CONSULTING ENGINEERS & SURVEYORS, INC.  
1000 PALMERS MILL ROAD  
MEDIA, PA 19063

REPLY TO:  
P.O. BOX 118  
BROOMALL, PA 19008-0118

James W. MacCombie, P.E., P.L.S.  
Herbert E. MacCombie, III, Technician

June 14, 2011

Board of Supervisors  
East Fallowfield Township  
2264 Strasburg Road  
East Fallowfield, PA 19320

RECEIVED  
JUN 20 2011  
BY: Denise M. O'Connor

Attn: Jill Bukata, Township Manager

Re: Cardinal Drive Sewer Project  
Final Restoration

Dear Ms. Bukata:

Pursuant to the request of the Board of Supervisors our office has reviewed the condition of the bituminous paving restoration completed by the paving subcontractor to Anrich, Inc., the Pennsylvania American Water Company (PAWC) contractor for the Cardinal Drive Area Sewer Project. The final street restoration consists of full width 2½" of Bituminous Binder Base Course and 1 ½" of Bituminous Wearing Course on Robin Road, Cardinal Drive, Valmont Drive, 15<sup>th</sup> Avenue, 17<sup>th</sup> Avenue and West Chester Road in the areas where sewers were installed. In addition to the overall review specific attention was given to a list of 8 specific locations of concern provided to the Township by a resident of Robin Road. (See list attached) Paving was completed approximately one year ago. Pavement conditions were evaluated using guidelines from the Commonwealth of Pennsylvania, Department of Transportation, Bureau of Maintenance and Operations "Pavement Policy Manual, Publication 242," April 2010 edition and the "Automated Pavement Condition Survey Field Manual, Publication 336."

The reconstructed streets appear to be in good condition. There are no signs of fatigue cracking or transverse cracks in the pavement. There were five locations where residents had indicated miscellaneous cracks. These cracks were observed to be at the joint where the road surface meets the existing paved driveway. The contractor had provided sealer at those locations during construction and it appears there has been normal movement of the flexible pavement causing a gap in the joint. This is normal maintenance item and does not appear to be a failure in the final street restoration. The crack can be sealed using a liquid bituminous sealer. There were three locations where edge deterioration was noted. All of these locations appear to be the result of larger vehicles driving off the edge of the road and not a failure of the final street restoration. Routine maintenance including applying AC-20 Bituminous Crack Sealer will correct these very minor issues and assure the appropriate life cycle of the roadways.

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It was noted at several locations damage had occurred to the paved surface which appeared to be caused by the private contractors installing the laterals to individual homes. Attention should be given to the final inspection of the lateral installation to ensure the appropriate repairs are made by the private contractor in accordance with the required pavement restoration details.

In conjunction with the roadway surface review, a review of off street restoration issues were reviewed with representatives of PAWC and Anrich, Inc. All five areas require the placement of additional topsoil, seeding and soil supplements, and mulch in areas where sparse growth has occurred. The Contractor has agreed to address the locations where residents provided letters. Once complete, the Anrich, Inc would have the homeowner sign-off indicating the work was completed to their satisfaction. In addition a replacement tree was to installed at 1514 Robin Road to replace a sapling that was damaged during construction. It appears when this work is completed the contractor's restoration will be complete for the project.

Please feel free to contact our office if you have any questions or require additional information.

Very truly yours,



James W. MacCombie, P.E.

Copy: Tag Gathercole, Public Works Director  
David Lentowski, P.E., PAWC