



*Office of Public Works*

Matthew Walsh, P.E., Director

MEMO

TO: Jeremy DeCarli

FROM: Matthew Walsh, Director of Public Works

DATE: 7-16-19

SUBJECT: Culvert Replacement at Abbey Road

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On Abbey Rd approximately 2,500' west of the intersection with Champion Hill there is a brook crossing consisting of three 36" corrugated metal pipes with a stone end wall and head wall. On July 8<sup>th</sup> 2019 a very large sink hole was observed in Abbey Road over the CMP culverts. Further inspection of the sink revealed the bottoms of the metal culverts had completely disintegrated allowing the stream to erode away pipe existing pipe bedding materials which are entirely sand. All three CMP culverts require replacement.

Phase 1 project will consist of installing erosion controls consistent with the 2004 CT erosion control guidelines. Erosion controls will be monitored and adjusted / upgraded as the project moves forward.

Phase 2 will include excavation of all over burden material and the excavation and removal of the CMP culverts. The Culverts will be replaced with new 36" HDPE culverts with flared ends. Additionally the each culvert run will be extended 5' on both sides of Abbey Road to eliminate the need for head and end walls. The culverts will be backfilled with drainage stone and wrapped in geotextile filter fabric to eliminate the migration of fines into the stone voids. Once the pipes have been backfilled to subgrade the the road pavement section will be installed.

Phase 3 will consist of stabilizing the fill slopes with modified riprap, installing guard rail, general cleanup and restoration of disturbed areas. All

erosion controls will be removed after all disturbed areas have been stabilized.

In summary the project will disturb approximately 600 S.F. of wetlands area. To facilitate the removal of the head and end walls approximately 68 C.Y. of fill material will be placed in the area of the extended culverts.