



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

September 10, 2019

N.C. Department of Environmental Quality
Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699

ATTN: Ms. Amy Chapman
Transportation Permitting Branch Supervisor

Dear Madam:

Subject: **Response to NCDWR On Hold Letter dated August 13, 2019** for the extension and relocation of NC 84 from NC 16 to SR 1008 (Waxhaw-Indian Trail Road) in Union County. Federal Aid Project No. STP-1316(10), WBS 39019.1.1, Division 10, TIP No. U-3467.

Reference: 404/401 Individual Permit Application dated February 21, 2019
NCDWR On Hold Letter dated August 13, 2019

On August 13, 2019, NCDWR sent a letter placing the permit application for the above-referenced project on hold, requesting avoidance and minimization of an open cut utility relocation impact to West Fork Twelvemile Creek (Permit Site U1).

NCDOT's Utilities Unit has identified the following avoidance and minimization measures that led to the design shown in the permit application:

- The original location of these relocated utilities was slightly further south (see attached). They were pulled in tighter to the north as much as possible to avoid impacts to the tributary (Stream SB) coming into West Fork Twelvemile in that location.
- Pushing the utility relocation further away from the roadway and bridge was analyzed, but it would still have to cross West Fork Twelvemile Creek at some point, and it would have a much larger permanent utility easement (PUE) on Parcel 67 which is slated for development.

- The proposed waterline is a 24” diameter pipe. If this was directionally drilled, a 30” diameter high-density polyethylene (HDPE) pipe would be required. The bore pits necessary for this size directional drill would impact nearby stream SB and possibly West Fork Twelvemile Creek or the proposed bridge structure.
- Directional drill of the waterline would necessitate increasing the horizontal separation of the water and sewer lines creating more PUE.
- The water and sewer lines are designed at the minimum allowable horizontal separation allowed by NCDEQ in order to minimize disturbance at the stream crossing.
- Ensuring minimum slope requirements on a gravity sewer line using directional drilling is difficult and unpredictable.

We believe, based on the above information, that the open cut utility relocation across West Fork Twelvemile Creek (Permit Site U1) has been avoided and minimized to the maximum extent practicable and the project can be removed from On Hold status and the processing of our application can proceed.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Erin Cheely at ekcheely@ncdot.gov or (919) 707-6108.

Sincerely,



for

Philip S. Harris III, P.E., C.P.M.
Environmental Analysis Unit Head

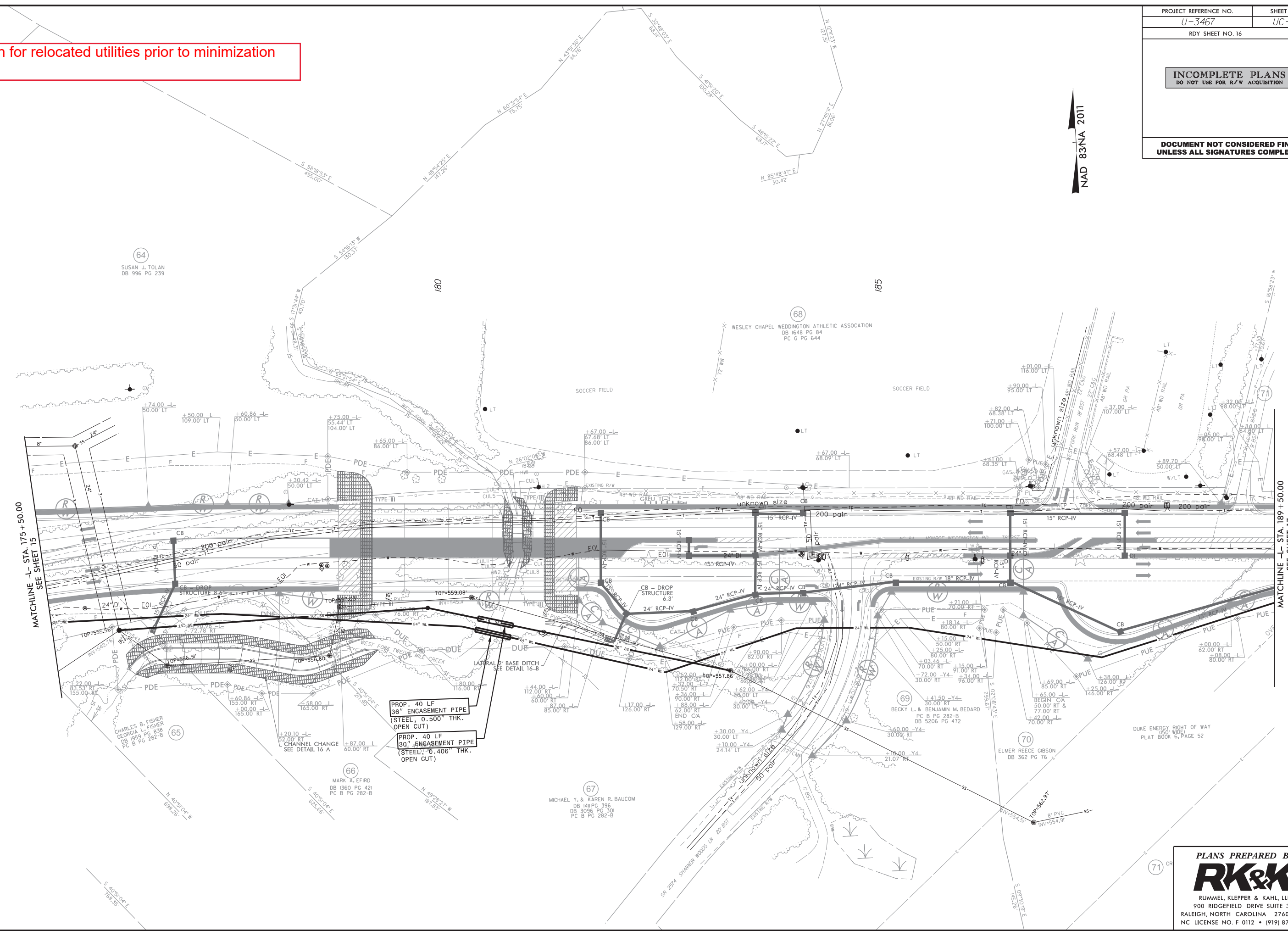
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NCDOT Permit Application Standard Distribution List

Original location for relocated utilities prior to minimization and permitting.

NAD 83/NA 2011

REVISIONS



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8/17/2018
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