

THE NCDOT GEOTECHNICAL UNIT RECOMMENDS THE FOLLOWING NOTES ON PLANS FOR THE PROPOSED SHORING LOCATIONS:

SHORING LOCATION NO. 7

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y1- 14+85 +/-, 2.0 +/- FT LEFT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 262.0 +/- FT

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -Y1- 14+85 +/-, 2.0 +/- FT LEFT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT LEFT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1- 14+85 +/-, 2.0 +/- FT LEFT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

SHORING LOCATION NO. 8

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -Y1- 14+85 +/- 2.0 +/- FT RIGHT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 262.0 +/- FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -Y1- 14+85 +/-, 2.0 +/- FT RIGHT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT RIGHT MAY NOT PENETRATE BELOW ELEVATION 240 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS, OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -Y1- 14+85 +/-, 2.0 +/- FT RIGHT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -Y1- 14+85 +/-, 2.0 +/- FT RIGHT, TO STATION -Y1- 15+34 +/-, 2.0 +/- FT RIGHT CENTER. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 9

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -L- 24+00 +/-, 10.0 +/- FT RIGHT, TO STATION -L- 25+25 +/-, 10.0 +/- FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 268.0 +/- FT

DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION -L- 24+00 +/-, 10.0 +/- FT RIGHT, TO STATION -L- 25+25 +/-, 10.0 +/- FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 24+00 +/-, 10.0 +/- FT RIGHT, TO STATION -L- 25+25 +/-, 10.0 +/- FT RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

SHORING LOCATION NO. 10

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -FLYOVER- 18+55 +/-, 38.0 +/- FT LEFT, TO STATION -FLYOVER- 19+30 +/-, 38.0 +/- FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 245.0 +/- FT

DRIVEN PILING FOR TEMPORARY SHORING FR FROM STATION -FLYOVER- 18+55 +/-, 38.0 +/- FT LEFT, TO STATION -FLYOVER- 19+30 +/-, 38.0 +/- FT LEFT MAY NOT PENETRATE BELOW ELEVATION 245 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -FLYOVER- 18+55 +/-, 38.0 +/- FT LEFT, TO STATION -FLYOVER- 19+30 +/-, 38.0 +/- FT LEFT.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -FLYOVER- 18+55 +/-, 38.0 +/- FT LEFT, TO STATION -FLYOVER- 19+30 +/-, 38.0 +/- FT LEFT, FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

SHORING LOCATION NO. 11

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -FLYOVER- 21+45 +/-, 31.5 +/- FT LEFT, TO STATION -FLYOVER- 22+20 +/-, 28.0 +/- FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUNDWATER ELEVATION = 241.0 +/- FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -FLYOVER- 21+45 +/-, 31.5 +/- FT LEFT, TO STATION -FLYOVER- 22+20 +/-, 28.0 +/- FT LEFT MAY NOT PENETRATE BELOW ELEVATION 221 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -FLYOVER- 21+45 +/-, 31.5 +/- FT LEFT, TO STATION -FLYOVER- 22+20 +/-, 28.0 +/- FT LEFT.

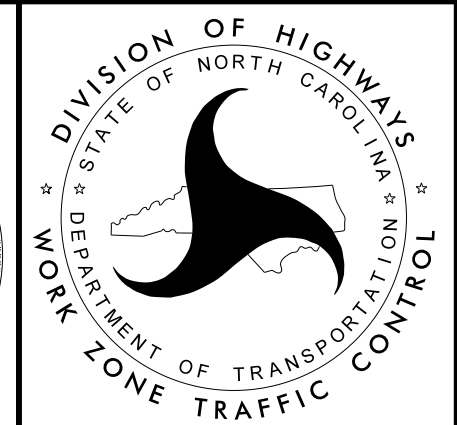
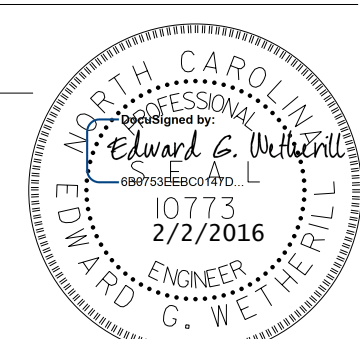
IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -FLYOVER- 21+45 +/-, 31.5 +/- FT LEFT, TO STATION -FLYOVER- 22+20 +/-, 28.0 +/- FT LEFT. FOR TEMPORARY SOIL NAIL WALL, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

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THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE NCDOT GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO NCDOT/WZTC ON DECEMBER 22, 2015 AND SEALED BY A PROFESSIONAL ENGINEER, THEIN T. ZAN, P.E., LICENSE NO. 030943.

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TEMPORARY SHORING NOTES