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*DESIGN EXCEPTION:
SAG VERTICAL CURVE K
VERTICAL SSD

PROJECT REFERENCE	SHEET NO.
B-5682 – GRANVILLE 129	4

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21102 JAMES TIMOTHY JOHNSON
DocuSigned by: James Timothy Johnson
4/12/2018
MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 34364 ANTHONY J. CORRIGAN
DocuSigned by: Anthony J. Corrigan
4/23/2018
HDR ENGINEERING
LICENSE NO. F-0116

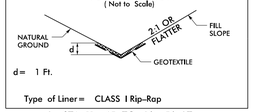
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Office of:
MOTT MACDONALD — PO Box 700, Fuquay-Varina, NC 27526, www.mottmac.com

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

HORIZONTAL SCALE
25' 0 25' 50'

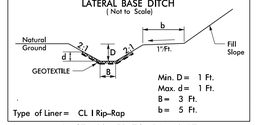
DETAIL A
TOE PROTECTION
(Not to Scale)



Type of Liner= CLASS I Rip-Rap

-L- STA. 11+45 TO 13+50 LT
-L- STA. 16+30 TO 16+75 LT

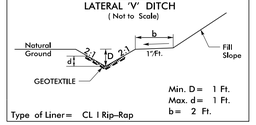
DETAIL B
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL I Rip-Rap

-L- STA. 13+50 TO 14+40 LT

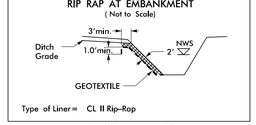
DETAIL C
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= CL I Rip-Rap

-L- STA. 14+67 TO 17+00 RT

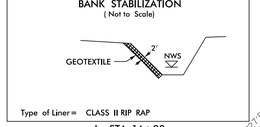
DETAIL D
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= CL II Rip-Rap

-L- STA. 14+40 LT
-L- STA. 14+63 RT

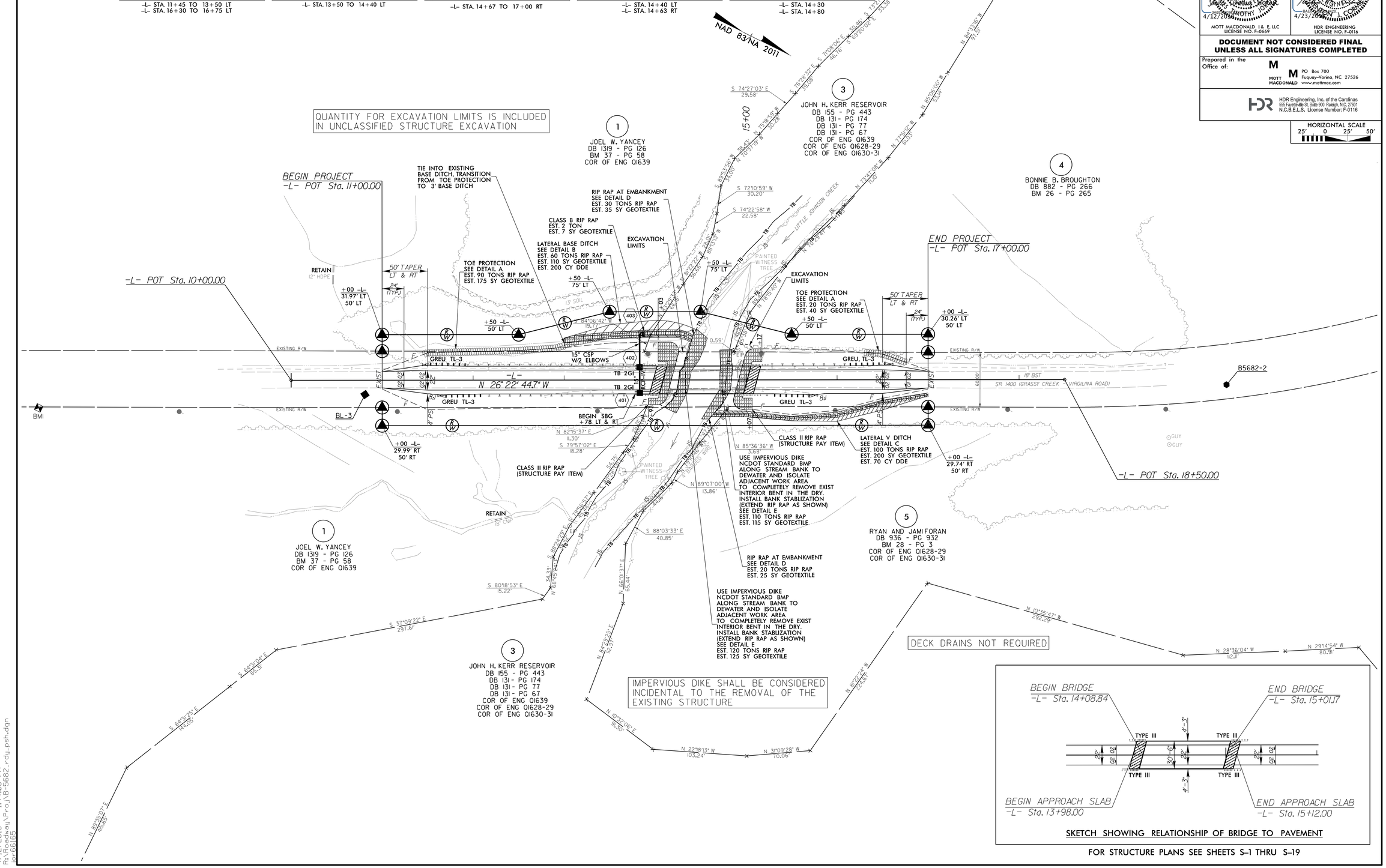
DETAIL E
BANK STABILIZATION
(Not to Scale)



Type of Liner= CLASS II RIP RAP

-L- STA. 14+30
-L- STA. 14+80

QUANTITY FOR EXCAVATION LIMITS IS INCLUDED IN UNCLASSIFIED STRUCTURE EXCAVATION



SKETCH SHOWING RELATIONSHIP OF BRIDGE TO PAVEMENT

FOR STRUCTURE PLANS SEE SHEETS S-1 THRU S-19

4/12/2018 1:44:08 PM
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