

0041DEL_P10A1

TIP PROJECT: P-5208A

STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

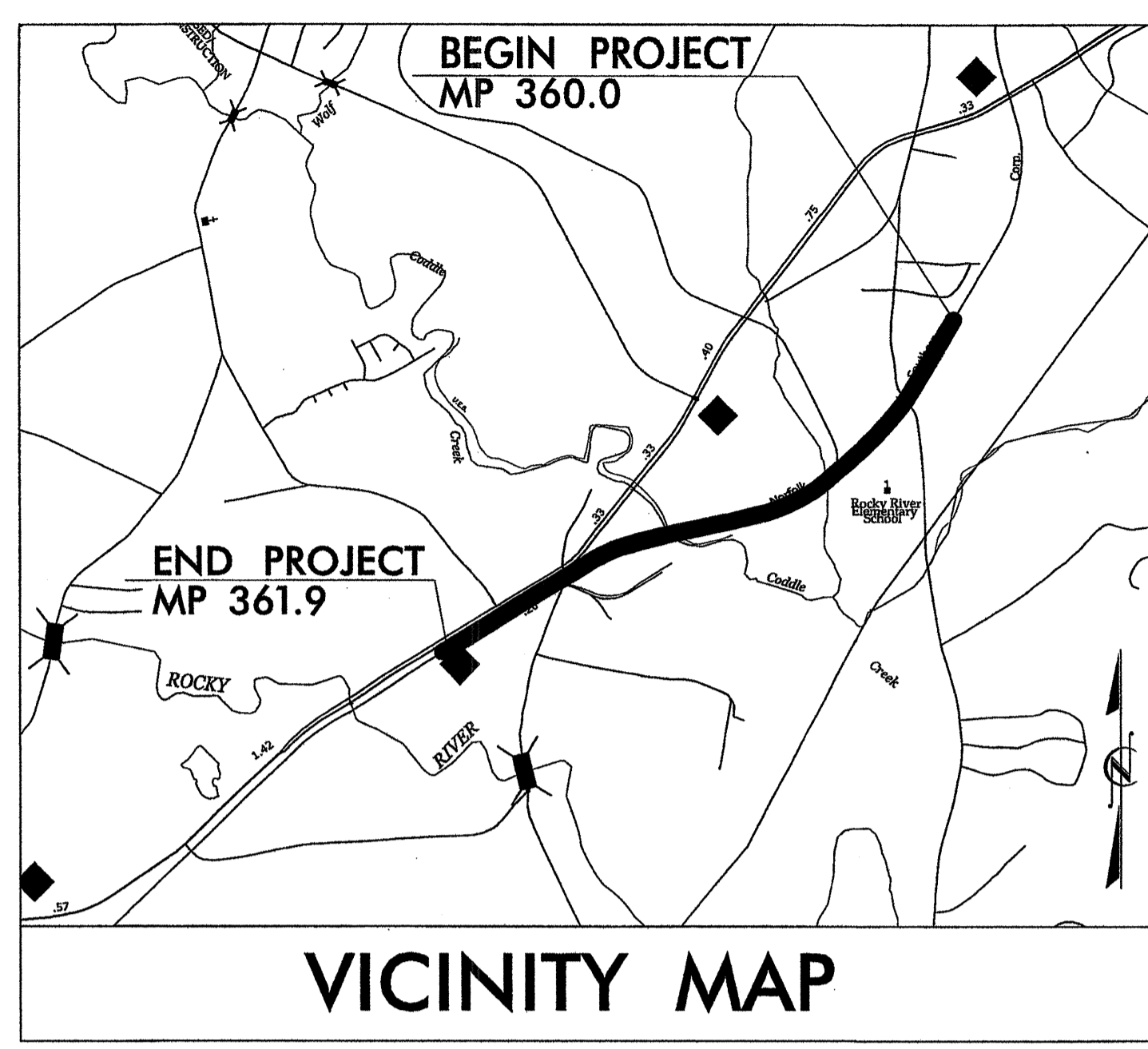


T.I.P. NO.	SHEET NO.
P-5208A	UC-1

UTILITIES CONSTRUCTION PLANS CABARRUS COUNTY

LOCATION: NCRR /NS MAINLINE RAILROAD ROADBED FROM CP "HAYDOCK" (MP 360.0) TO SOUTH OF PHARR MILL RD (SR 1158, MP 361.9)

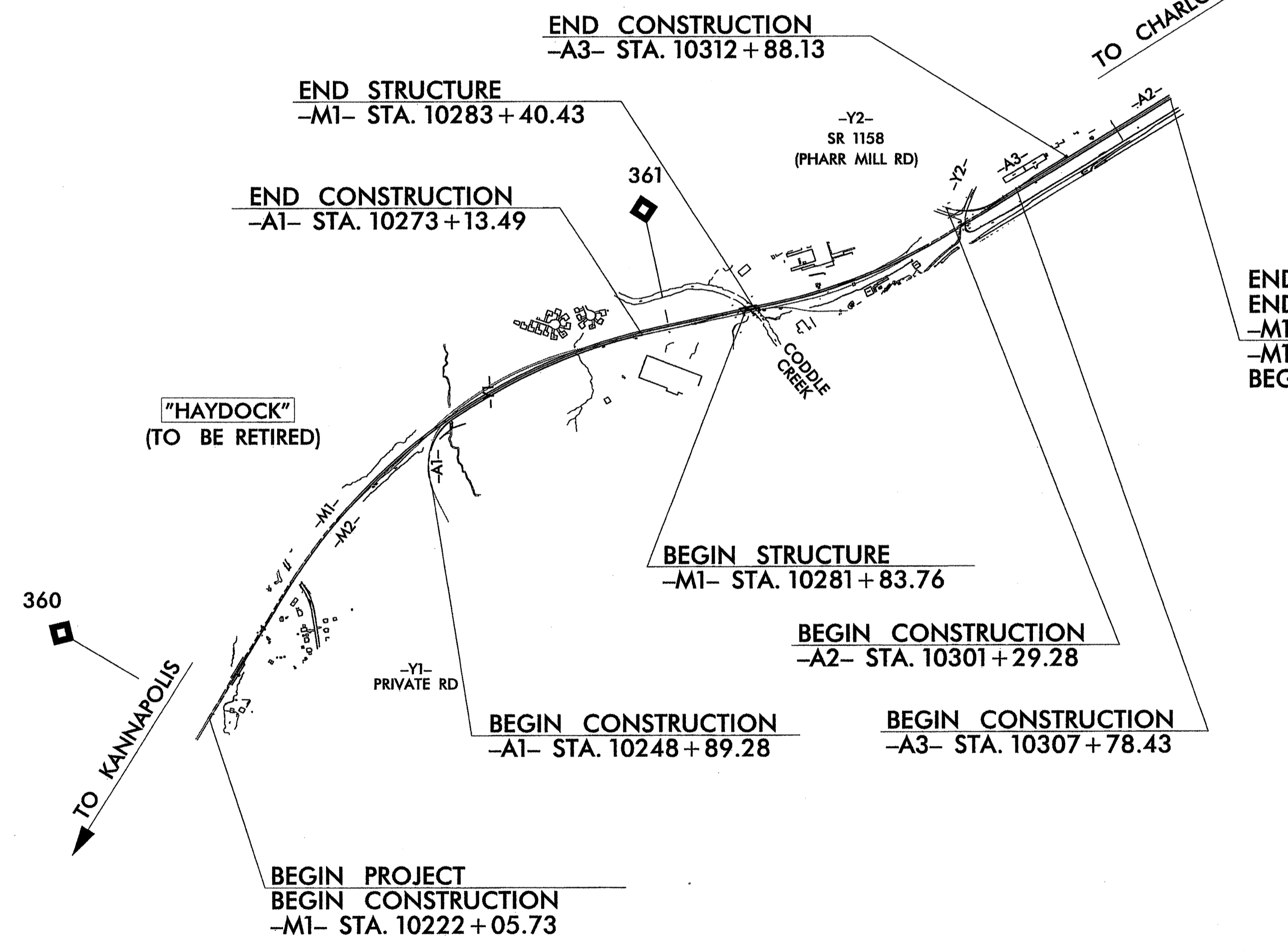
TYPE OF WORK: UTILITIES



VICINITY MAP

INDEX OF SHEETS

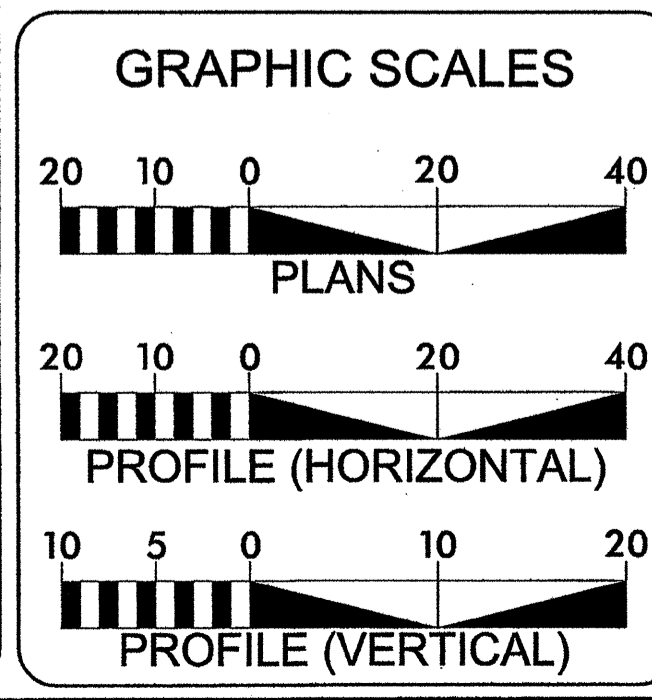
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	SYMBOLY SHEET
UC-3	UTILITY DETAILS
UC-4	SEWER UTILITY PLAN & PROFILE SHEET
UC-5	WATER UTILITY PLAN & PROFILE SHEET



END PROJECT
END CONSTRUCTION
-M1- STA. 10323 + 00.00 =
-M1- STA. 10323 + 05.28
BEGIN PROJECT P-5208C

CONTRACT:

DATE: JUNE 11, 2013



WATER AND SEWER OWNERS ON PROJECT

(1) SANITARY SEWER - WSACC
Tom Bach
PHONE (704) 786-1783

(2) WATER - CITY OF CONCORD
Sue Hyde
PHONE (704) 920-5401

UTILITIES ENGINEER

Eric M. Tweed, P.E.

PLANS PREPARED BY:

CH ENGINEERING

3220 GLEN ROYAL RD. RALEIGH, NC 27617
TELE 919.788.0224 FAX 919.788.0232
NC LICENSE #P-0189

UTILITIES PROJECT ENGINEER
Eric Tweed, P.E.

PREPARED FOR THE OFFICE OF:
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1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER

\$\$\$\$SYTIME\$\$\$\$
P-5208 UTILS SH Both.dgn

DCN 0041DEL_P10A1

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CH ENGINEERING
 3220 GLEN ROYAL RD. RALEIGH, NC 27617
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PROJECT REFERENCE NO. P-5208A	SHEET NO. UC-2
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UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	—————
11¼ Degree Bend	——+——
22½ Degree Bend	——+X——
45 Degree Bend	——+X——
90 Degree Bend	——+——
Plug	—— ——
Tee	——+——
Cross	——+——
Reducer	——▶——
Gate Valve	——GV——
Butterfly Valve	——BV——
Tapping Valve	——TV——
Line Stop	——LS——
Line Stop with Bypass	——LS/BP——
Blow Off	——BO——
Fire Hydrant	——FH——
Relocate Fire Hydrant	——RFH——
Remove Fire Hydrant	——REM FH——
Water Meter	——WM——
Relocate Water Meter	——RWM——
Remove Water Meter	——REM WM——
Water Pump Station	——PS(W)——
RPZ Backflow Preventer	——RPZ——
DCV Backflow Preventer	——DBFP——
Relocate RPZ Backflow Preventer	——RRPZ——
Relocate DCV Backflow Preventer	——RDBFP——

PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	—————
Force Main Sewer Line (Sized as Shown)	—————
Manhole (Sized per Note)	——●——
Sewer Pump Station	——PS(SS)——

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	——○——
Telephone Pole	——○——
Joint Use Pole	——○——
Telephone Pedestal	——TEL PED——
Utility Line by Others (Type as Shown)	—————
Trenchless Installation	—————
Encasement by Open Cut	—————
Encasement	—————

Thrust Block	—— ——
Air Release Valve	——AR——
Utility Vault	——UV——
Concrete Pier	——CP——
Steel Pier	——SP——
Plan Note	——NOTE——
Pay Item Note	——PAY ITEM——

EXISTING UTILITIES SYMBOLS

Power Pole	——●——
Telephone Pole	——●——
Joint Use Pole	——●——
Utility Pole	——●——
Utility Pole with Base	——□——
H-Frame Pole	——●——
Power Transmission Line Tower	——X——
Water Manhole	——⊙——
Power Manhole	——⊙——
Telephone Manhole	——⊙——
Sanitary Sewer Manhole	——⊙——
Hand Hole for Cable	——X——
Power Transformer	——X——
Telephone Pedestal	——□——
CATV Pedestal	——□——
Gas Valve	——◇——
Gas Meter	——◇——
Located Miscellaneous Utility Object	——○——
Abandoned According to Utility Records	——AATUR——
End of Information	——E.O.I.——

*Underground Power Line	————
*Underground Telephone Cable	————
*Underground Telephone Conduit	————
*Underground Fiber Optics Telephone Cable	————
*Underground TV Cable	————
*Underground Fiber Optics TV Cable	————
*Underground Gas Pipeline	————
Aboveground Gas Pipeline	——A/G Gas——
*Underground Water Line	————
Aboveground Water Line	——A/G Water——
*Underground Gravity Sanitary Sewer Line	————
Aboveground Gravity Sanitary Sewer Line	——A/G Sanitary Sewer——
*Underground SS Forced Main Line	————
Underground Unknown Utility Line	————
SUE Test Hole	——●——
Water Meter	——○——
Water Valve	——⊙——
Fire Hydrant	——◇——
Sanitary Sewer Cleanout	——⊙——

*For Existing Utilities
 Utility Line Drawn from Record (Type as Shown) ————
 Designated Utility Line (Type as Shown) - - - - -

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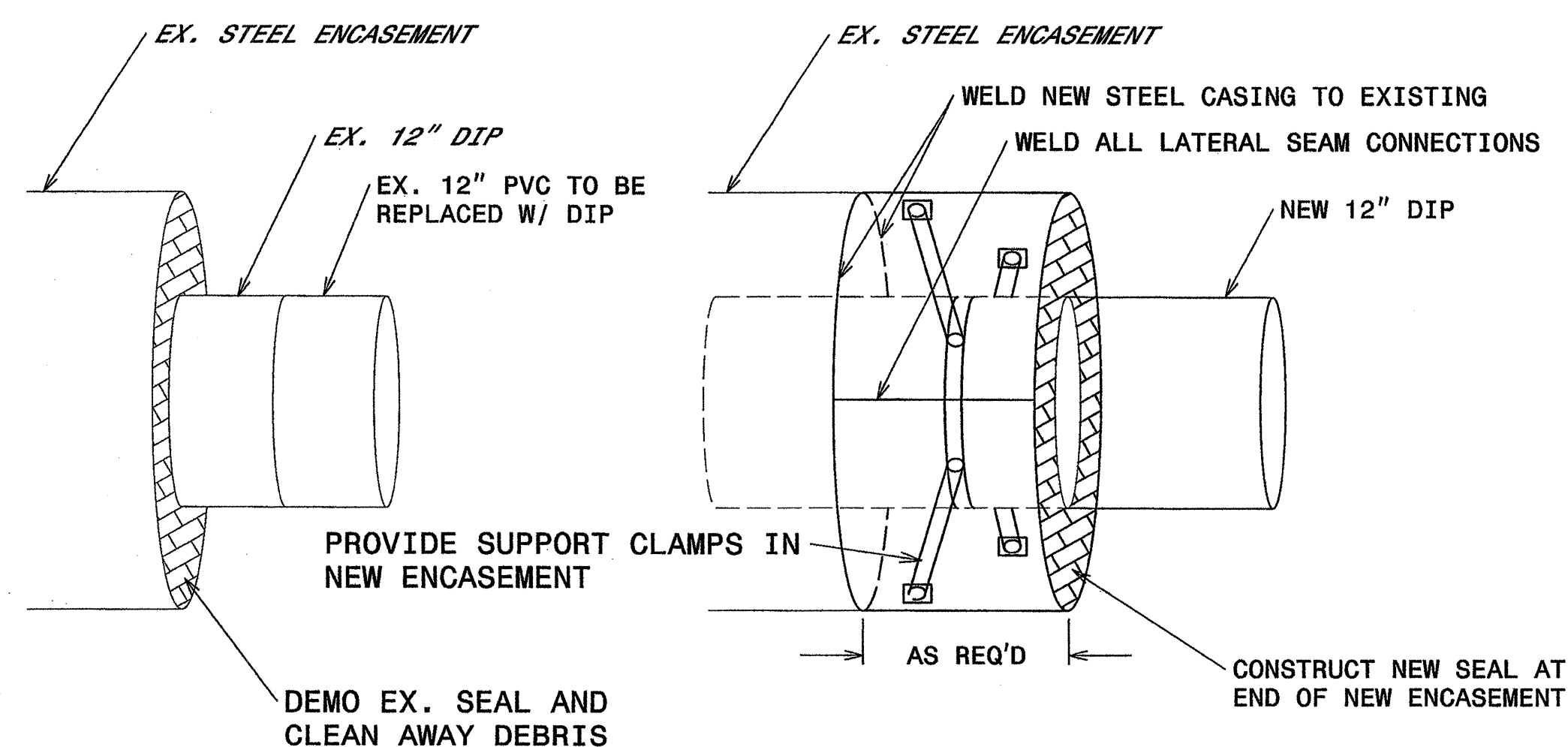
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 NC LICENSE #P-0189

PROJECT REFERENCE NO. P-5208	SHEET NO. UC-3
BRIDGE NO.	

UTILITY ENGINEER
 NORTH CAROLINA PROFESSIONAL SEAL
 028912
 6-11-13

STEEL ENCASEMENT SHALL MEET THICKNESS REQUIREMENTS OF RAILROAD:
 24" STEEL - 0.375"

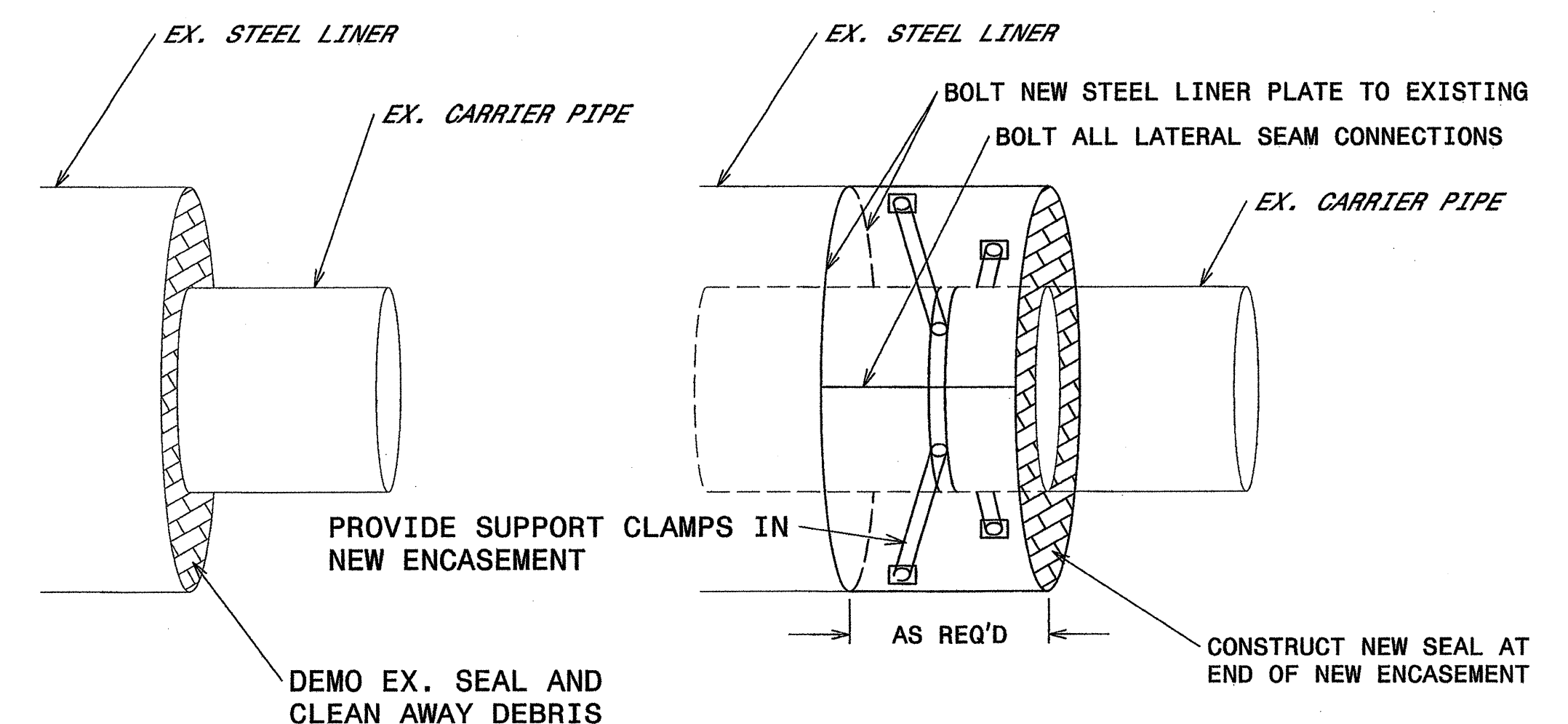


**ENCASEMENT PIPE EXTENSION DETAIL
 WATER LINE AT MP 360+1248**
 NTS

STEEL TUNNEL LINER SHALL MEET THICKNESS REQUIREMENTS OF RAILROAD:
 EXISTING IS 54" STEEL - 0.781" OR 12 GA CORRUGATED ACCORDING TO RECORDS

PROVIDE BITUMINOUS COATED GALVANIZED STEEL IN 4-FLANGE CONSTRUCTION. WIDTH OF PLATE SHALL BE 500 MM MIN.

IF CASING IS FOUND TO BE STEEL PIPE AND NOT LINER PLATE, ALL SEAMS SHALL BE WELDED.



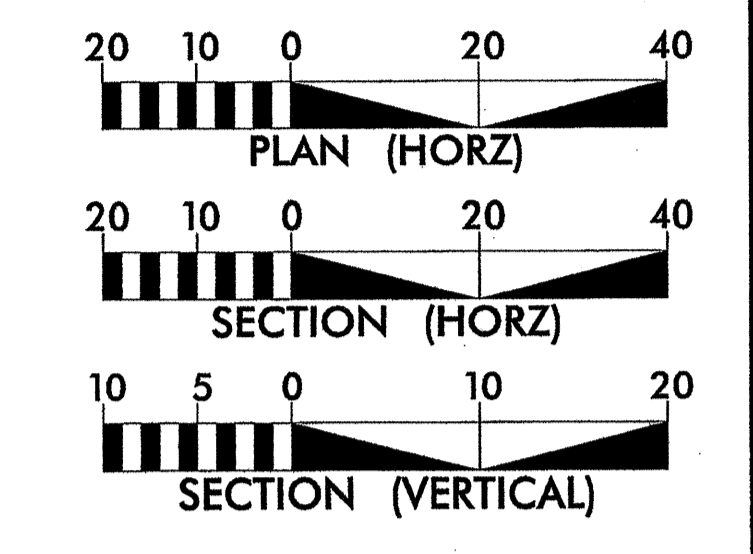
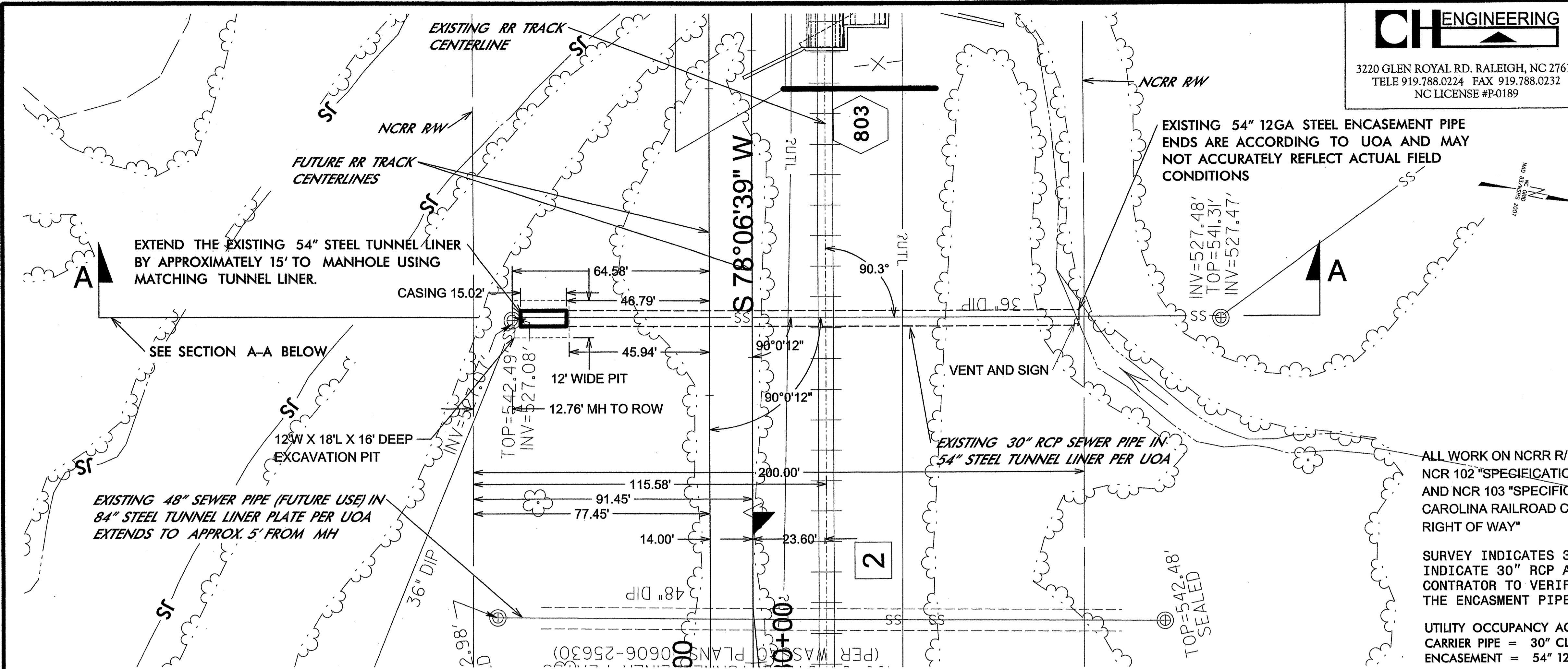
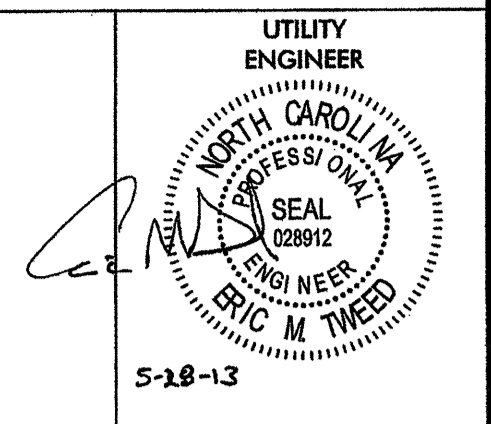
**ENCASEMENT PIPE EXTENSION DETAIL
 SEWER LINE AT MP 361+0565**
 NTS

CORRUGATIONS NOT SHOWN

0041DEL_P10A1

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 NC LICENSE #P-0189

PROJECT REFERENCE NO. P-5208A	SHEET NO. UC-4
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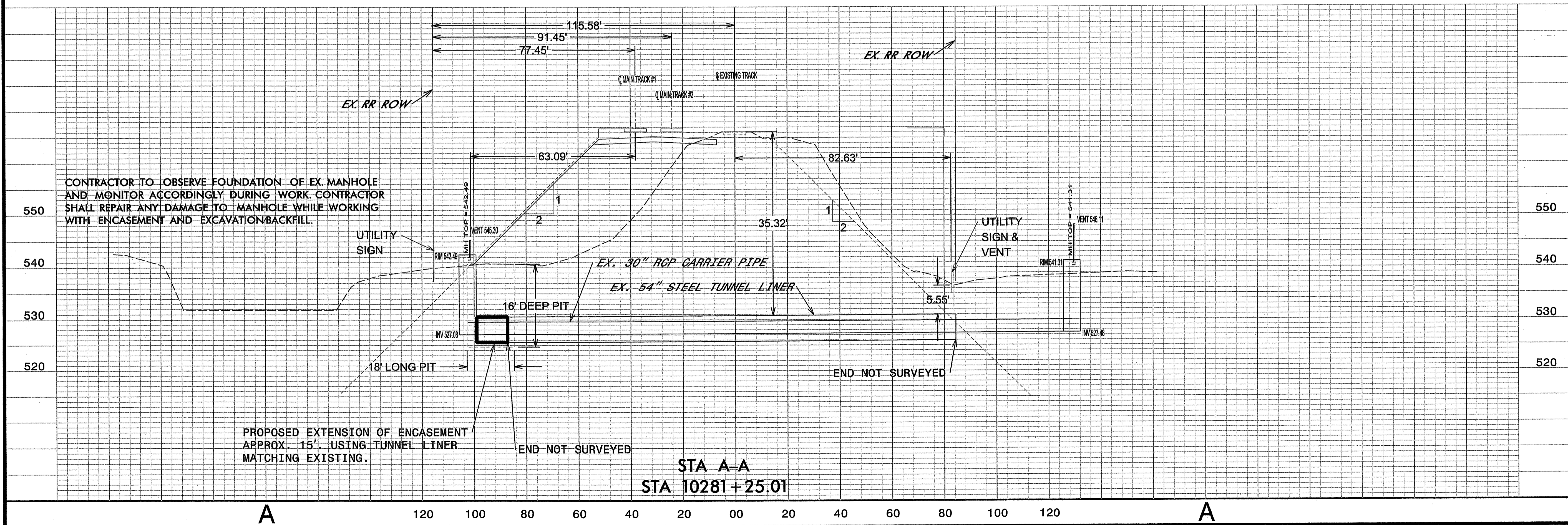


MILEPOST REFERENCE:
 PIPELINE CROSSING IS 361+ 0565
 MILEPOST 361

ALL WORK ON NCRR R/W TO BE IN ACCORDANCE WITH NCR 102 "SPECIFICATIONS FOR PIPELINE OCCUPANCY" AND NCR 103 "SPECIFIC REQUIREMENTS OF NORTH CAROLINA RAILROAD COMPANY FOR WORK ON ITS RIGHT OF WAY"

SURVEY INDICATES 36" DIP BUT RECORDS INDICATE 30" RCP AS THE SEWER MAIN. CONTRACTOR TO VERIFY SIZE OF UTILITY & THE ENCASMENT PIPE.

UTILITY OCCUPANCY AGREEMENT A-8021 (4-14-86)
 CARRIER PIPE = 30" CLASS 3 RCP, COMPRESSION JOINTS
 ENCASMENT = 54" 12 GAUGE STEEL, 0.014 BOLTED JOINTS



CONTRACTOR TO OBSERVE FOUNDATION OF EX. MANHOLE AND MONITOR ACCORDINGLY DURING WORK. CONTRACTOR SHALL REPAIR ANY DAMAGE TO MANHOLE WHILE WORKING WITH ENCASMENT AND EXCAVATION BACKFILL.

PROPOSED EXTENSION OF ENCASMENT APPROX. 15' USING TUNNEL LINER MATCHING EXISTING.

STA A-A
 STA 10281+25.01

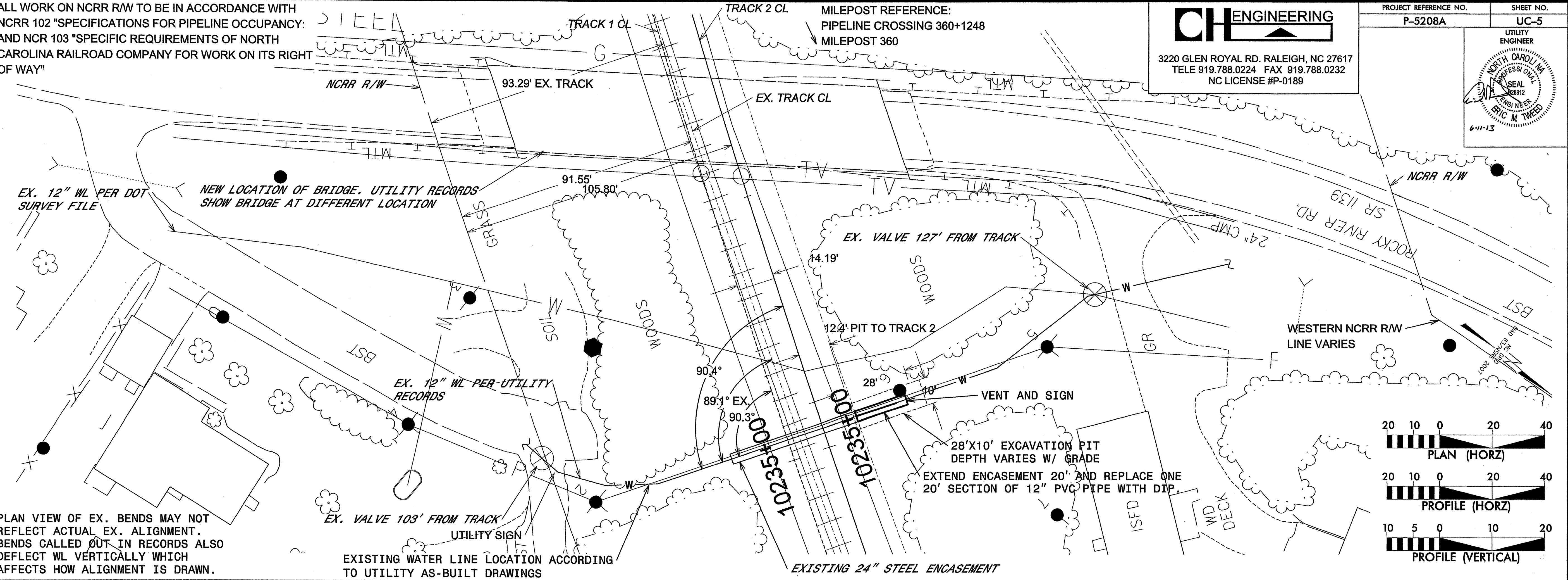
ALL WORK ON NCRR R/W TO BE IN ACCORDANCE WITH NCRR 102 "SPECIFICATIONS FOR PIPELINE OCCUPANCY" AND NCR 103 "SPECIFIC REQUIREMENTS OF NORTH CAROLINA RAILROAD COMPANY FOR WORK ON ITS RIGHT OF WAY"

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TRACK 1 CL TRACK 2 CL MILEPOST REFERENCE:
PIPELINE CROSSING 360+1248
MILEPOST 360

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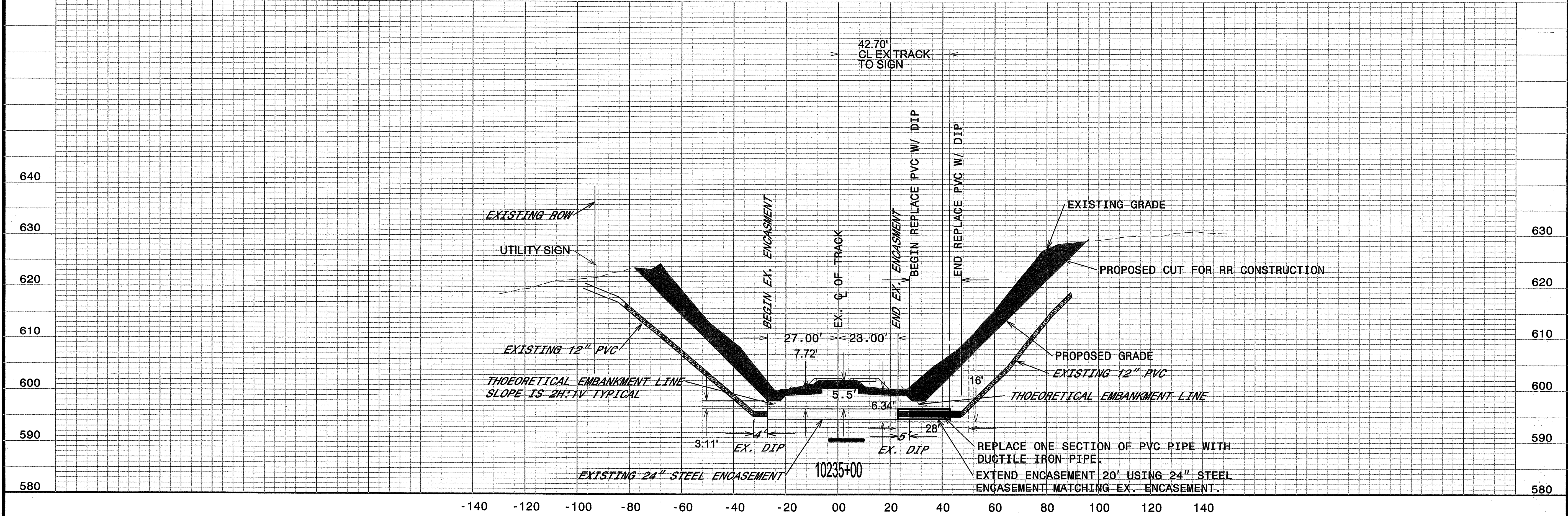
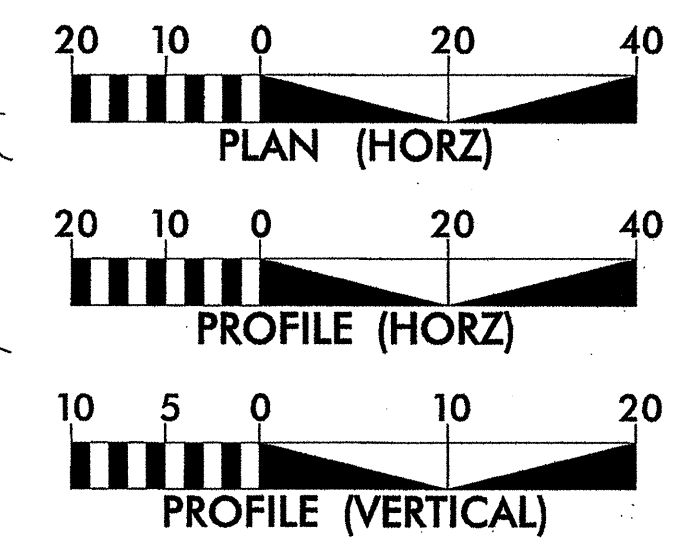
PROJECT REFERENCE NO. P-5208A SHEET NO. UC-5
UTILITY ENGINEER
ERIC M. TWEED
6-11-13



PLAN VIEW OF EX. BENDS MAY NOT REFLECT ACTUAL EX. ALIGNMENT. BENDS CALLED OUT IN RECORDS ALSO DEFLECT WL VERTICALLY WHICH AFFECTS HOW ALIGNMENT IS DRAWN.

EXISTING WATER LINE LOCATION ACCORDING TO UTILITY AS-BUILT DRAWINGS

EXISTING 24" STEEL ENCASEMENT



REPLACE ONE SECTION OF PVC PIPE WITH DUCTILE IRON PIPE.
EXTEND ENCASEMENT 20' USING 24" STEEL ENCASEMENT MATCHING EX. ENCASEMENT.

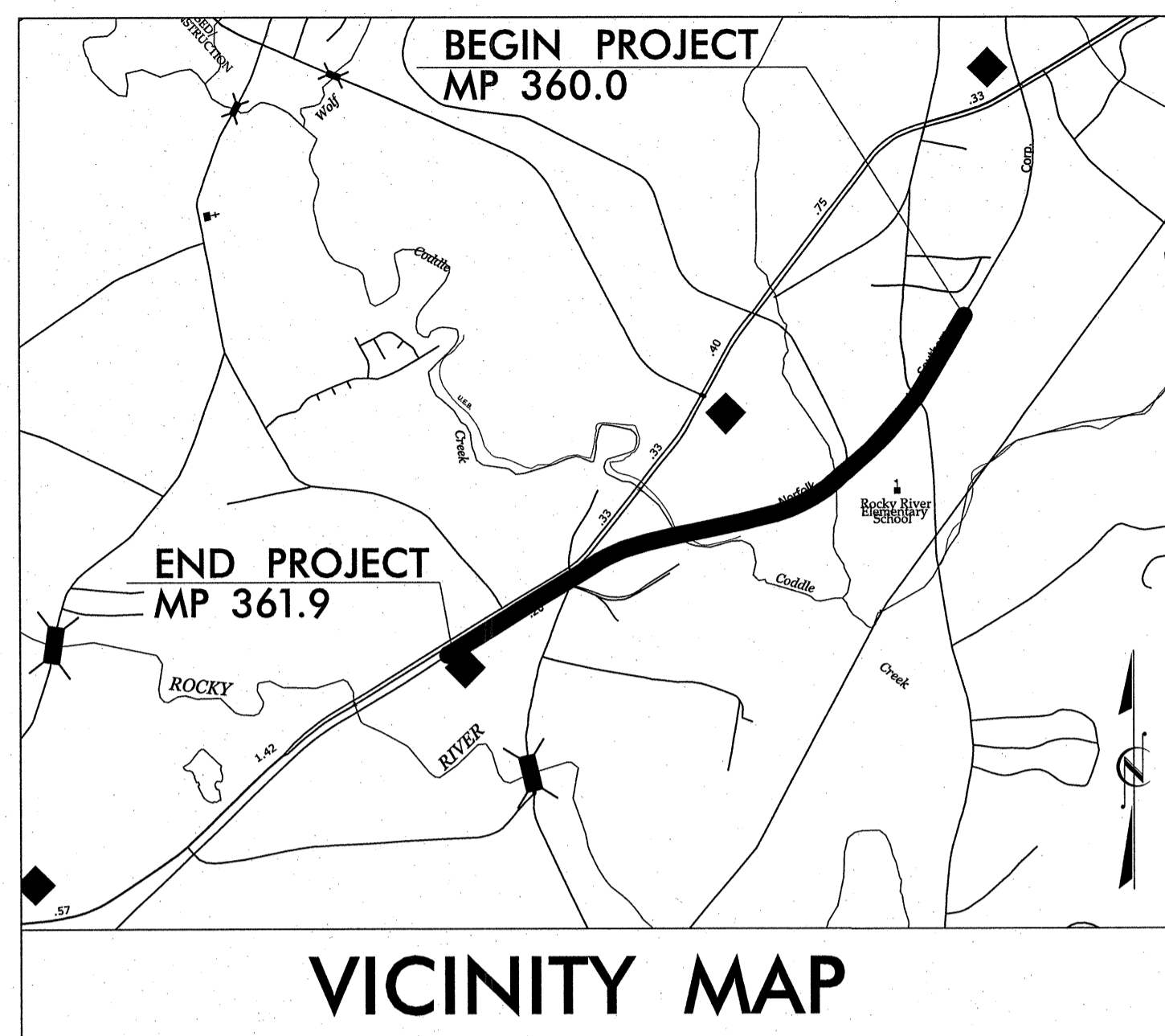


T.I.P. NO.	SHEET NO.
P-5208A	UO-1

UTILITIES BY OTHER PLANS CABARRUS COUNTY

LOCATION: *NCRR /NS MAINLINE RAILROAD ROADBED FROM CP "HAYDOCK" (MP 360.0) TO SOUTH OF PHARR MILL RD (SR 1158, MP 361.9)*

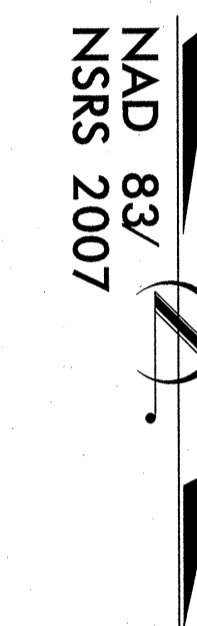
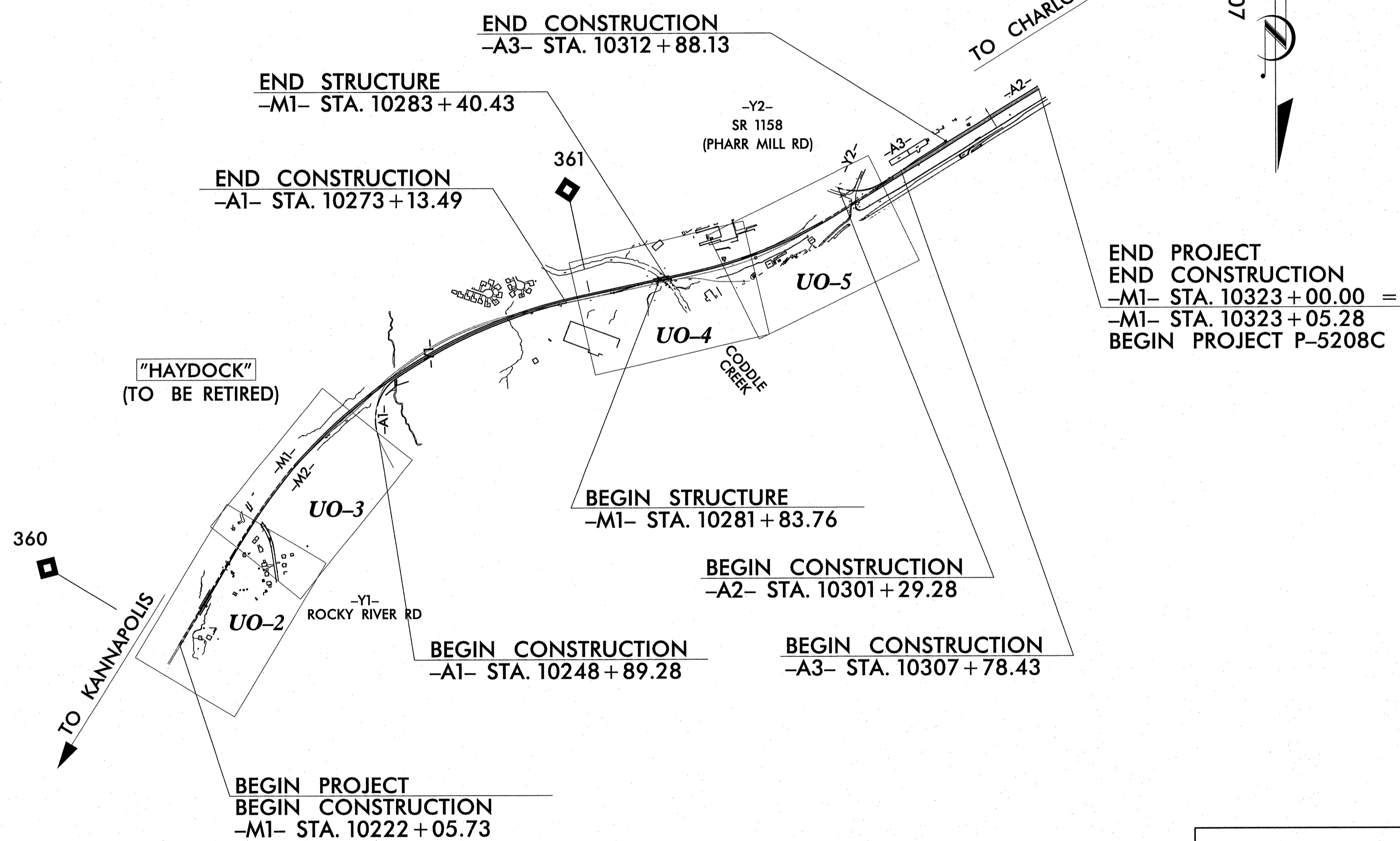
TYPE OF WORK: *UTILITIES*



VICINITY MAP

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLAN SHEET
UO-3	UTILITIES BY OTHERS PLAN SHEET
UO-4	UTILITIES BY OTHERS PLAN SHEET
UO-5	UTILITIES BY OTHERS PLAN SHEET

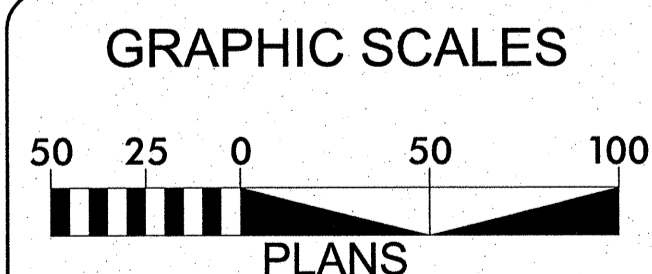


END PROJECT
END CONSTRUCTION
-M1- STA. 10323 + 00.00 =
-M1- STA. 10323 + 05.28
BEGIN PROJECT P-5208C

0041DEL_P10A1

TIP PROJECT: P-5208A

CONTRACT:



NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT BRANCH
CAPITAL YARD
1556 MAIL SERVICE CENTER
RALEIGH, NC 27699-1556

- UTILITY OWNERS ON PROJECT
- (1) POWER - DUKE ENERGY: Jim Carlson (704) 395-4393
 - (2) TELEPHONE - WINDSTREAM LEXCOM: Jim Foley (704) 722-2822
 - (3) CABLE - TIME WARNER CABLE: Matt Wintermute (704) 395-4393
 - (4) GAS - PSNC: Michael Coleman (704) 810-3209
 - (5) WATER- CITY OF CONCORD: Sue Hyde (704) 920-5401

PLANS PREPARED BY:

3220 GLEN ROYAL RD. RALEIGH, NC 27617
TELE 919.788.0224 FAX 919.788.0232
NC LICENSE #P-0189

UTILITIES PROJECT ENGINEERS
Mary Jo Lee, P.E.

DATE: April 12, 2013

PREPARED FOR THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION

1555 MAIL SERVICE CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER

\$\$\$\$SYTIME\$\$\$\$
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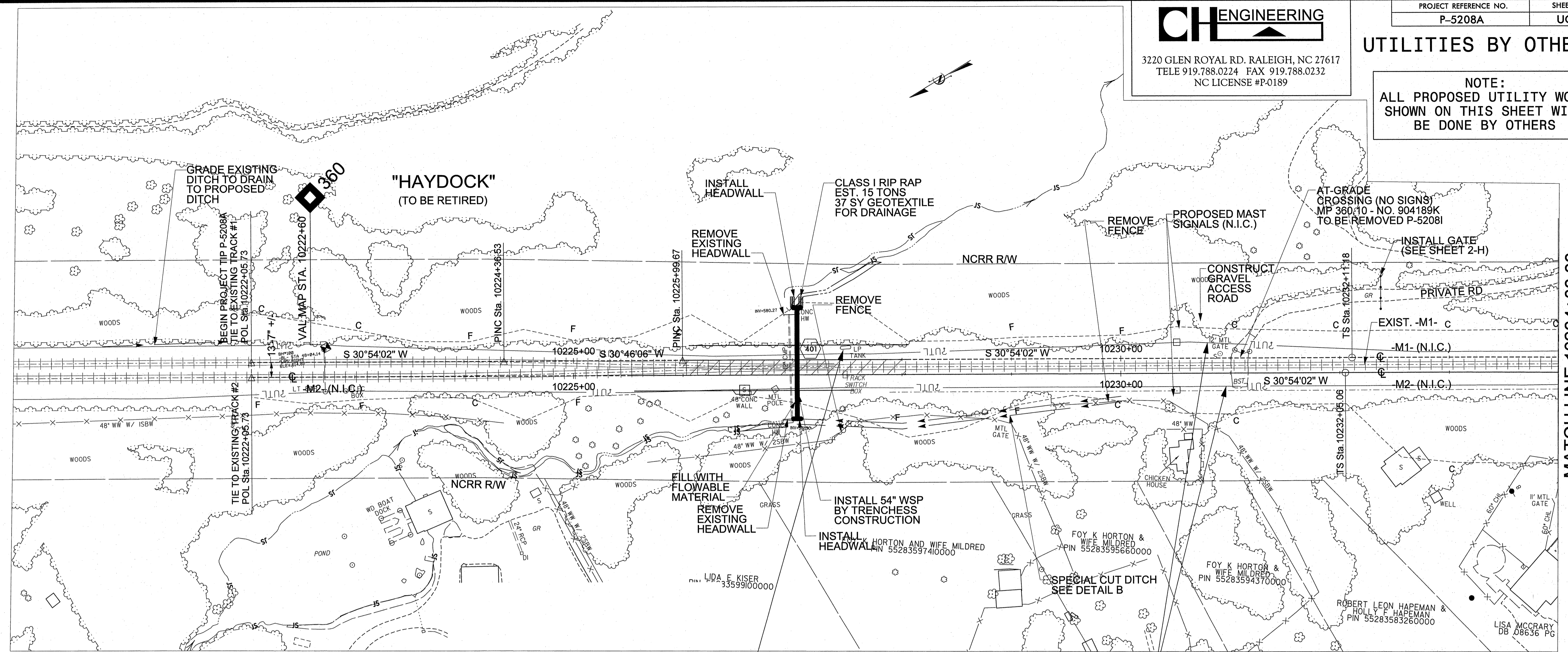
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CH ENGINEERING
 3220 GLEN ROYAL RD. RALEIGH, NC 27617
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 NC LICENSE #P-0189

PROJECT REFERENCE NO. P-5208A	SHEET NO. UO-2
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UTILITIES BY OTHERS

NOTE:
 ALL PROPOSED UTILITY WORK
 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS



LP TANK ASSUMED TO POWER
 SWITCH HEATER N.S. MAINTAINED
 WITH REMOVAL OF TURNOUT THIS
 TANK IS NO LONGER NEEDED

UTILITY ASSUMED TO BE
 RR OWNED AND MAINTAINED

MATCH LINE 10234+00.00
 SEE DWG. NO. 5

CONTACT INFORMATION FOR UTILITIES

POWER: DUKE ENERGY; JIM CARLSON 704-395-4393 JAMES.CARLSON@DUKE-ENERGY.COM
 PHONE: WINDSTREAM LEXCOM TELEPHONE CO; JIM FOLEY 704-722-2822 JAMES.FOLEY@WINDSTREAM.COM
 CABLE: TIME WARNER CABLE; MATT WINTERMUTE 704-378-2698 MATTHEW.WINTERMUTE@TWCABLE.COM
 GAS: PSNC; MICHAEL COLEMAN 704-810-3209 MCOLEMAN2@SCANA.COM
 WATER: CITY OF CONCORD; SUE HYDE 704-920-5401 HYDES@CONCORDNC.GOV
 SANITARY SEWER: WSACC; TOM BACH 704-786-1783 TBACH@WSACC.ORG

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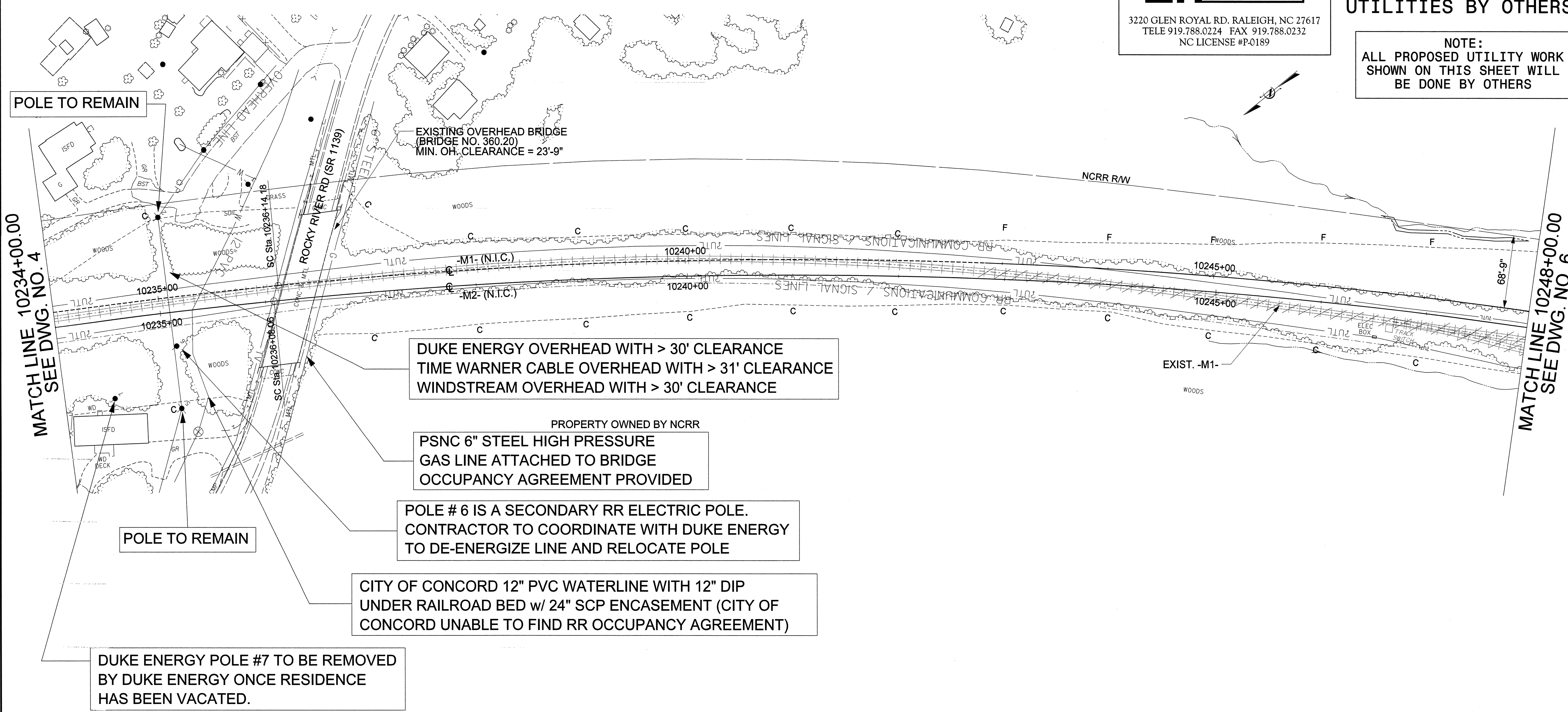


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PROJECT REFERENCE NO. SHEET NO.
P-5208A UO-3

UTILITIES BY OTHERS

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



MATCH LINE 10234+00.00
SEE DWG. NO. 4

MATCH LINE 10248+00.00
SEE DWG. NO. 6

DUKE ENERGY POLE #7 TO BE REMOVED
BY DUKE ENERGY ONCE RESIDENCE
HAS BEEN VACATED.

POLE TO REMAIN

DUKE ENERGY OVERHEAD WITH > 30' CLEARANCE
TIME WARNER CABLE OVERHEAD WITH > 31' CLEARANCE
WINDSTREAM OVERHEAD WITH > 30' CLEARANCE

PROPERTY OWNED BY NCRR
PSNC 6" STEEL HIGH PRESSURE
GAS LINE ATTACHED TO BRIDGE
OCCUPANCY AGREEMENT PROVIDED

POLE # 6 IS A SECONDARY RR ELECTRIC POLE.
CONTRACTOR TO COORDINATE WITH DUKE ENERGY
TO DE-ENERGIZE LINE AND RELOCATE POLE

CITY OF CONCORD 12" PVC WATERLINE WITH 12" DIP
UNDER RAILROAD BED w/ 24" SCP ENCASEMENT (CITY OF
CONCORD UNABLE TO FIND RR OCCUPANCY AGREEMENT)

CONTACT INFORMATION FOR UTILITIES

POWER: DUKE ENERGY; JIM CARLSON 704-395-4393 JAMES.CARLSON@DUKE-ENERGY.COM
 PHONE: WINDSTREAM LEXCOM TELEPHONE CO; JIM FOLEY 704-722-2822 JAMES.FOLEY@WINDSTREAM.COM
 CABLE: TIME WARNER CABLE: MATT WINTERMUTE 704-378-2698 MATTHEW.WINTERMUTE@TWCABLE.COM
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 SANITARY SEWER: WSACC; TOM BACH 704-786-1783 TBACH@WSACC.ORG

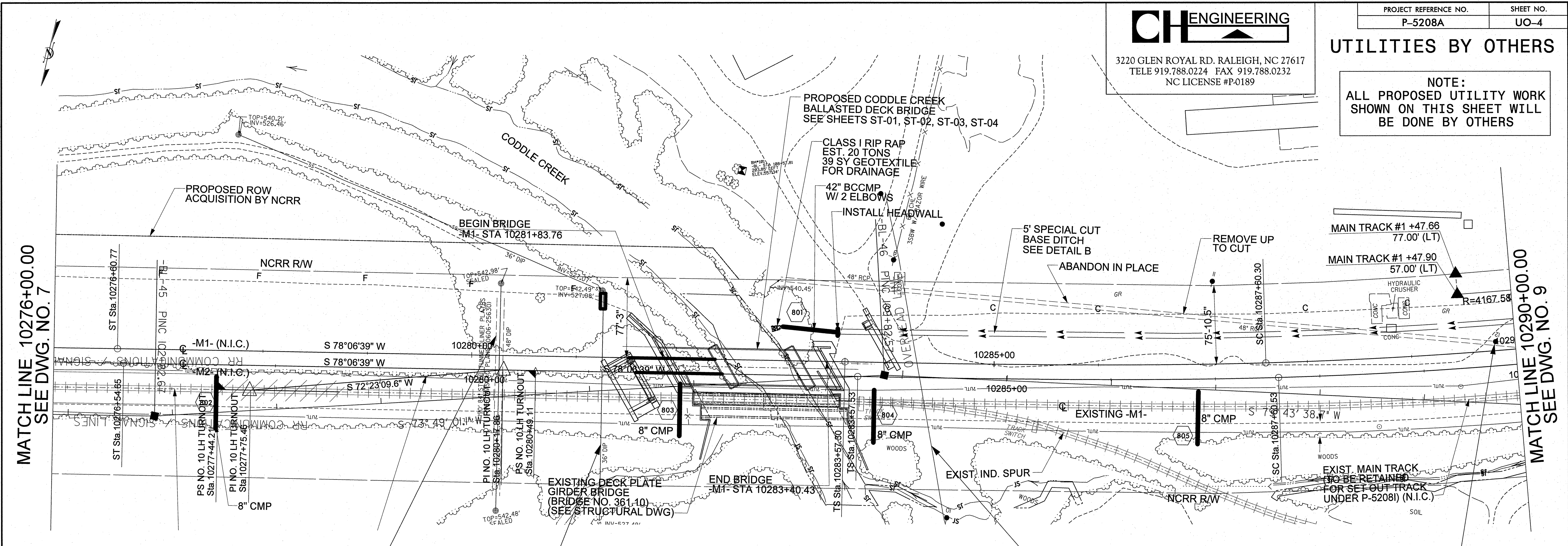
5/29/2013 10:52:08AM UBO_LUO_3.dgn
T.H.E.P.L.E.R.

CH ENGINEERING
 3220 GLEN ROYAL RD. RALEIGH, NC 27617
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PROJECT REFERENCE NO. P-5208A	SHEET NO. UO-4
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UTILITIES BY OTHERS

NOTE:
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 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS



48" DIP IN 84" ENCASEMENT PIPE (DRY)
 OWNED BY WSACC (OCCUPANCY
 AGREEMENT PROVIDED BY WSACC)

36" DIP SS IN 54" STEEL ENCASEMENT PIPE
 OWNED BY WSACC (PREVIOUSLY OWNED BY
 CITY OF CONCORD) OCCUPANCY AGREEMENT
 PROVIDED BY CITY OF CONCORD

DUKE ENERGY POLE # 12
 TO BE REMOVED

DUKE ENERGY CONFIRMS CLEARANCE
 OF OVERHEAD LINES TO BE GREATER
 THAN 30 FEET

CONTACT INFORMATION FOR UTILITIES

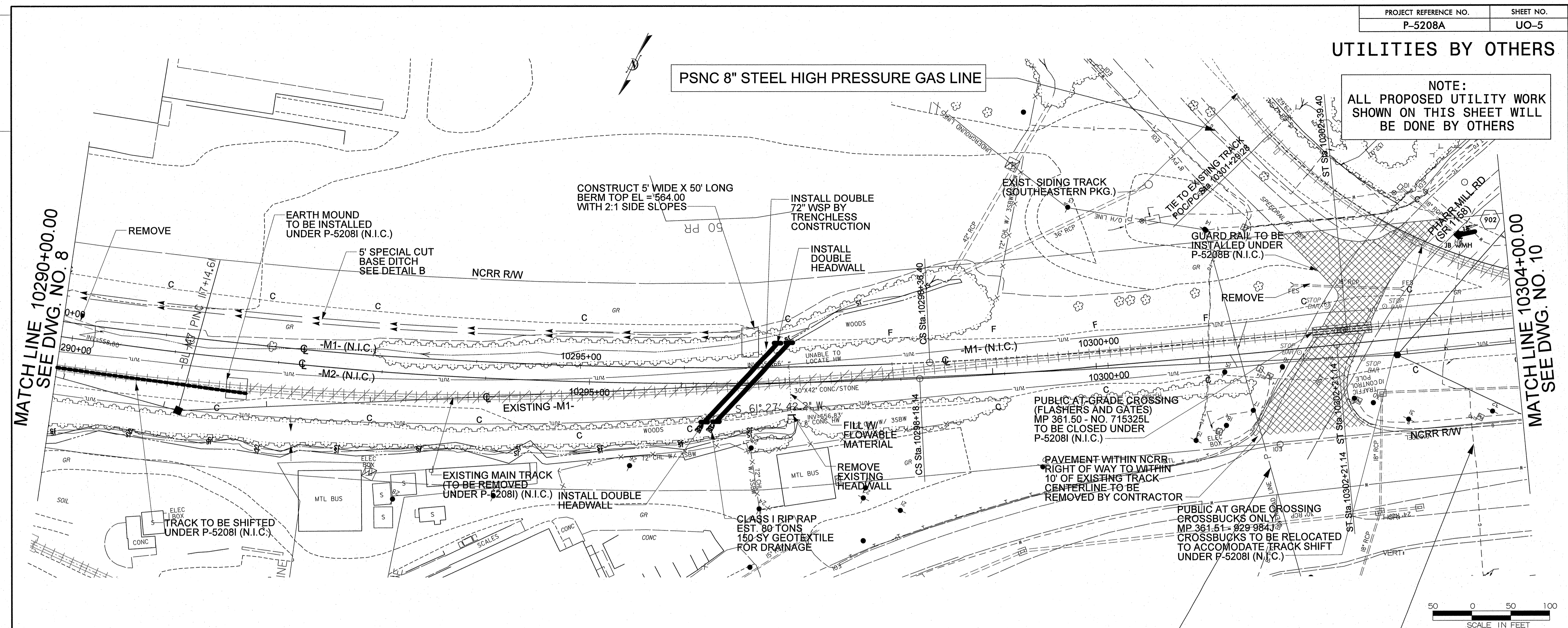
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 WATER: CITY OF CONCORD; SUE HYDE 704-920-5401 HYDES@CONCORDNC.GOV
 SANITARY SEWER: WSACC; TOM BACH 704-786-1783 TBACH@WSACC.ORG

MATCH LINE 10276+00.00
 SEE DWG. NO. 7

MATCH LINE 10290+00.00
 SEE DWG. NO. 9

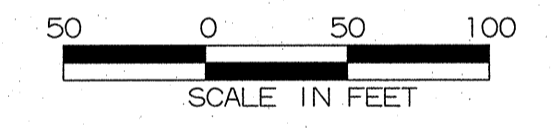
UTILITIES BY OTHERS

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MATCH LINE 10290+00.00
SEE DWG. NO. 8

MATCH LINE 10304+00.00
SEE DWG. NO. 10



CONTACT INFORMATION FOR UTILITIES

POWER: DUKE ENERGY; JIM CARLSON 704-395-4393 JAMES.CARLSON@DUKE-ENERGY.COM
 PHONE: WINDSTREAM LEXCOM TELEPHONE CO; JIM FOLEY 704-722-2822 JAMES.FOLEY@WINDSTREAM.COM
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CH ENGINEERING

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4/17/2013 P-5208A_LUBO_UO_5.dgn TL HEPLER