

0041DEL_P10a1

TIP PROJECT: P-5208G

CONTRACT: C203206

CONTRACT: C203206

STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

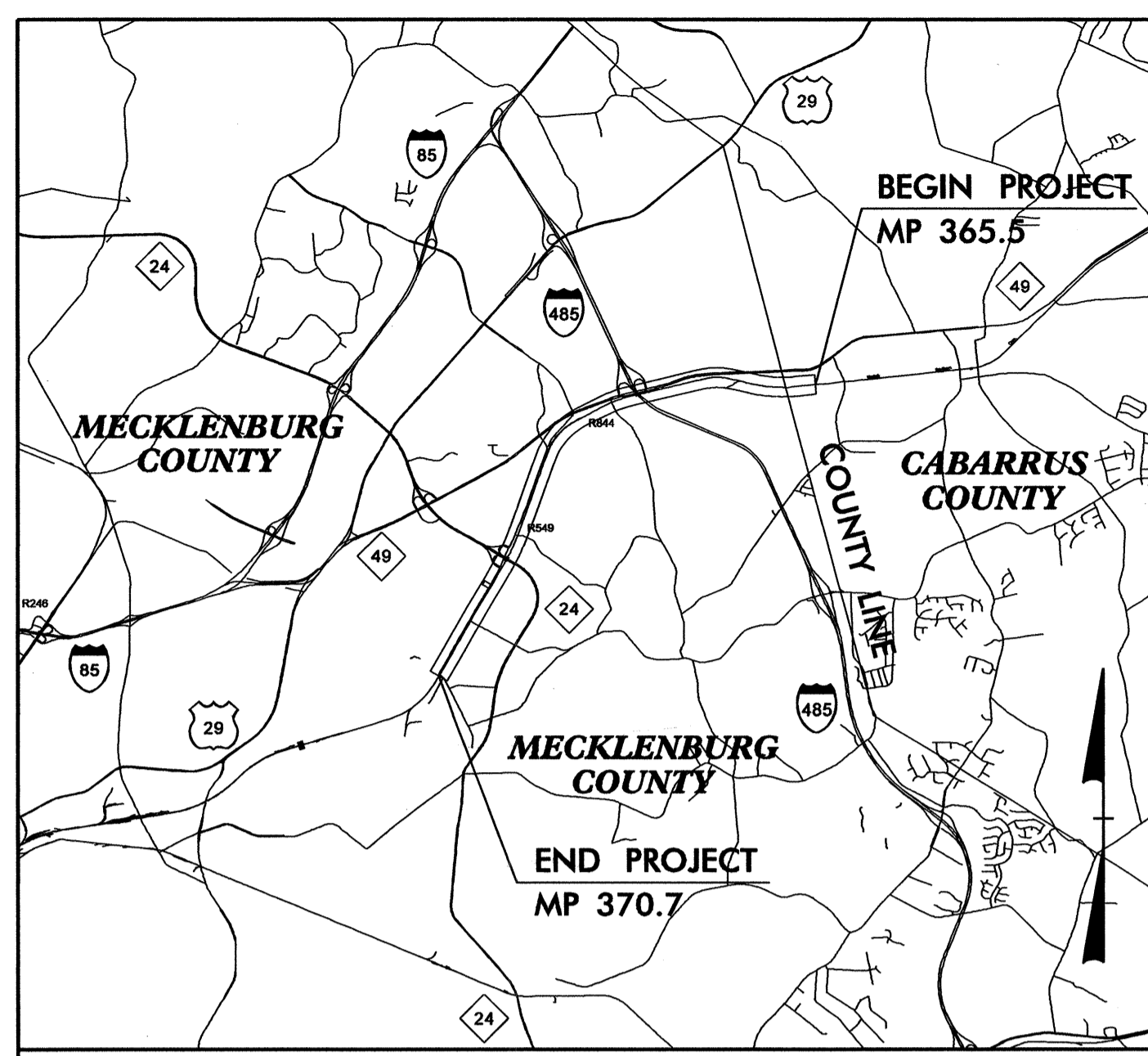


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208G	UC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50000.1.STRI1T1B		PE, UTIL PE	
50000.1.STRI2T3		PE, UTIL PE	
43219.2.STRO9P5208		RIGHT OF WAY	
50000.3.STRO1T4A	FRA-FR-HSR-0006-10-01-00	CONST, UTIL CONST	

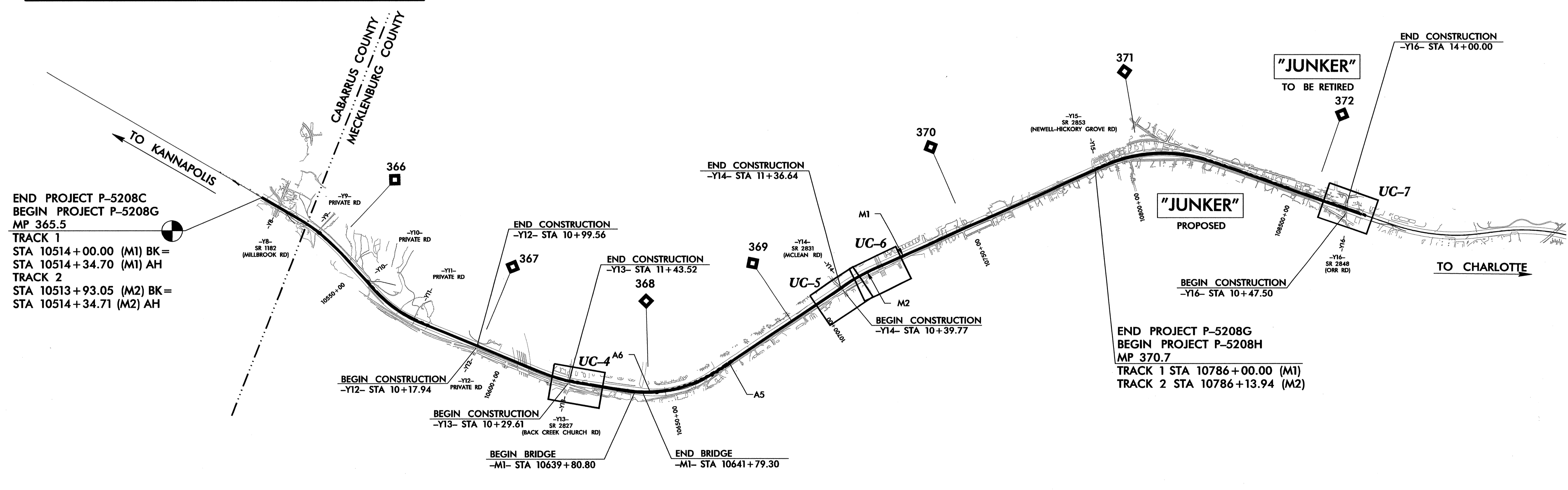
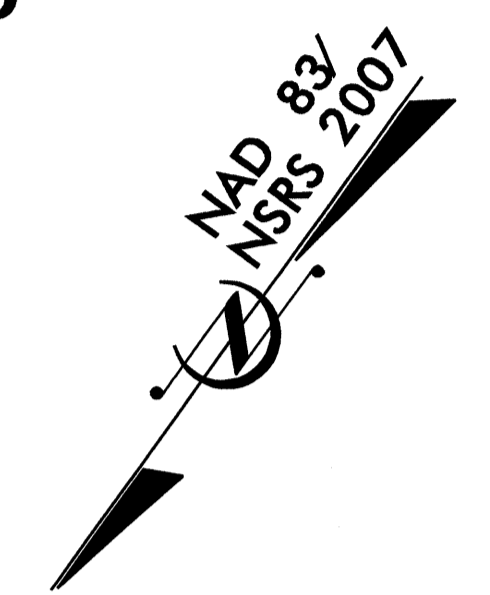
CABARRUS AND MECKLENBURG COUNTIES

LOCATION: NCRANS MAINLINE RAILROAD FROM MILLBROOK ROAD (SR 1182), MP 365.5 TO NORTH OF NEWELL-HICKORY GROVE ROAD (SR 2853), MP 370.7

TYPE OF WORK: UTILITY CONSTRUCTION

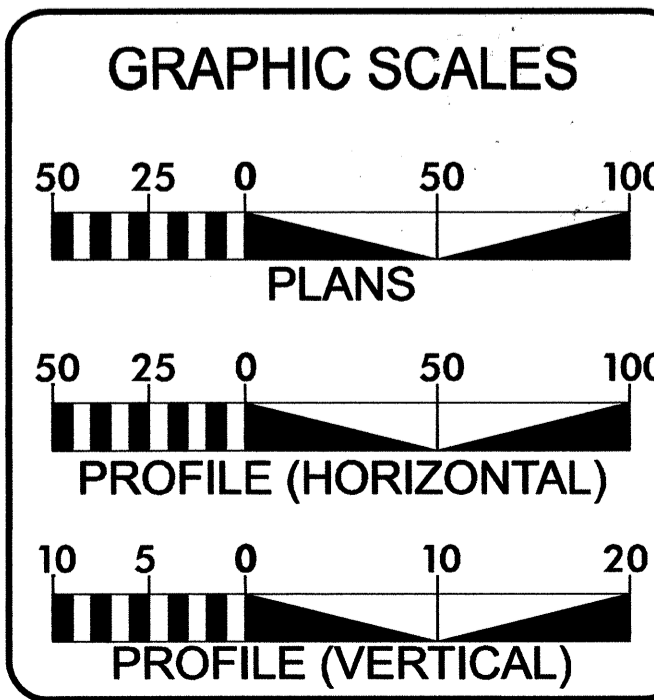


VICINITY MAP



END PROJECT P-5208C
BEGIN PROJECT P-5208G
MP 365.5
TRACK 1
STA 10514+00.00 (M1) BK=
STA 10514+34.70 (M1) AH
TRACK 2
STA 10513+93.05 (M2) BK=
STA 10514+34.71 (M2) AH

END PROJECT P-5208G
BEGIN PROJECT P-5208H
MP 370.7
TRACK 1 STA 10786+00.00 (M1)
TRACK 2 STA 10786+13.94 (M2)



SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	LEGEND OF SYMBOLS
UC-3	UTILITY CONSTRUCTION DETAILS
UC-4 THRU UC-7	UTILITY CONSTRUCTION PLANS AND PROFILE SHEETS

Prepared in the Office of:
AECOM
NC FIRM LICENSE No: F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 2012

LETTING DATE:
JULY 16, 2013

RILEY BIRMINGHAM, PE
RAIL PROJECT ENGINEER

LARRY W. MITCHELL, PE
UTILITIES PROJECT ENGINEER

CLAUDETTE ROQUE, PE
ROADWAY PROJECT ENGINEER

BRAD SMYTHE, PE
NCDOT PROJECT MANAGER

UTILITY OWNERS ON PROJECT

(1) WATER - TOWN OF HARRISBURG
CHARLOTTE-MECKLENBURG UTILITIES

(2) SEWER - CHARLOTTE-MECKLENBURG UTILITIES

UTILITIES ENGINEER

Professional Engineer Seal for Larry W. Mitchell, License No. 4132, State of North Carolina, expires 4/13/2013.

Signature: Larry W. Mitchell, P.E.

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	⊕
Property Monument	⊕
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Known Soil Contamination: Area or Site	☠
Potential Soil Contamination: Area or Site	?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	⊗
Foundation	▭
Area Outline	▭
Cemetery	⊕
Building	▭
School	▭
Church	▭
Dam	▭

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	▭
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	→
Disappearing Stream	→
Spring	○
Wetland	⊕
Proposed Lateral, Tail, Head Ditch	▭
False Sump	▭

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	⊕
Switch	⊕
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	○
Proposed Right of Way Line with Iron Pin and Cap Marker	○
Proposed Right of Way Line with Concrete or Granite RW Marker	⊕
Proposed Control of Access Line with Concrete C/A Marker	⊕
Existing Control of Access	⊕
Proposed Control of Access	⊕
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	⊕

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Curb Ramp	⊕
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	⊕

VEGETATION:

Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----

Orchard	⊕
Vineyard	⊕

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊕
Power Transformer	⊕
U/G Power Cable Hand Hole	⊕
H-Frame Pole	●
Recorded U/G Power Line	-P-
Designated U/G Power Line (S.U.E.*)	-P-

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	⊕
Recorded U/G Telephone Cable	-T-
Designated U/G Telephone Cable (S.U.E.*)	-T-
Recorded U/G Telephone Conduit	-TC-
Designated U/G Telephone Conduit (S.U.E.*)	-TC-
Recorded U/G Fiber Optics Cable	-T FO-
Designated U/G Fiber Optics Cable (S.U.E.*)	-T FO-

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊕
Water Hydrant	⊕
Recorded U/G Water Line	-W-
Designated U/G Water Line (S.U.E.*)	-W-
Above Ground Water Line	-A/G Water-

TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊕
U/G TV Cable Hand Hole	⊕
Recorded U/G TV Cable	-TV-
Designated U/G TV Cable (S.U.E.*)	-TV-
Recorded U/G Fiber Optic Cable	-TV FO-
Designated U/G Fiber Optic Cable (S.U.E.*)	-TV FO-

GAS:

Gas Valve	⊕
Gas Meter	⊕
Recorded U/G Gas Line	-G-
Designated U/G Gas Line (S.U.E.*)	-G-
Above Ground Gas Line	-A/G Gas-

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-SS-
Above Ground Sanitary Sewer	-A/G Sanitary Sewer-
Recorded SS Forced Main Line	-FSS-
Designated SS Forced Main Line (S.U.E.*)	-FSS-

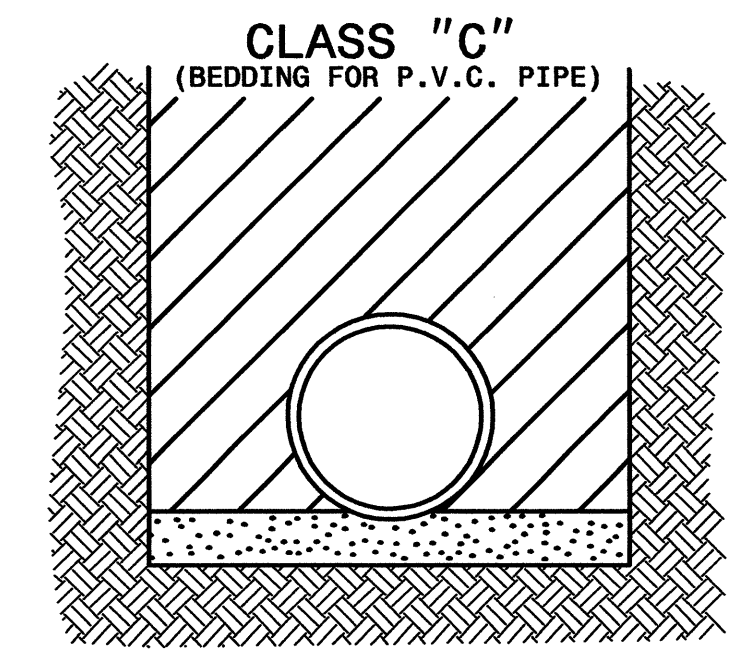
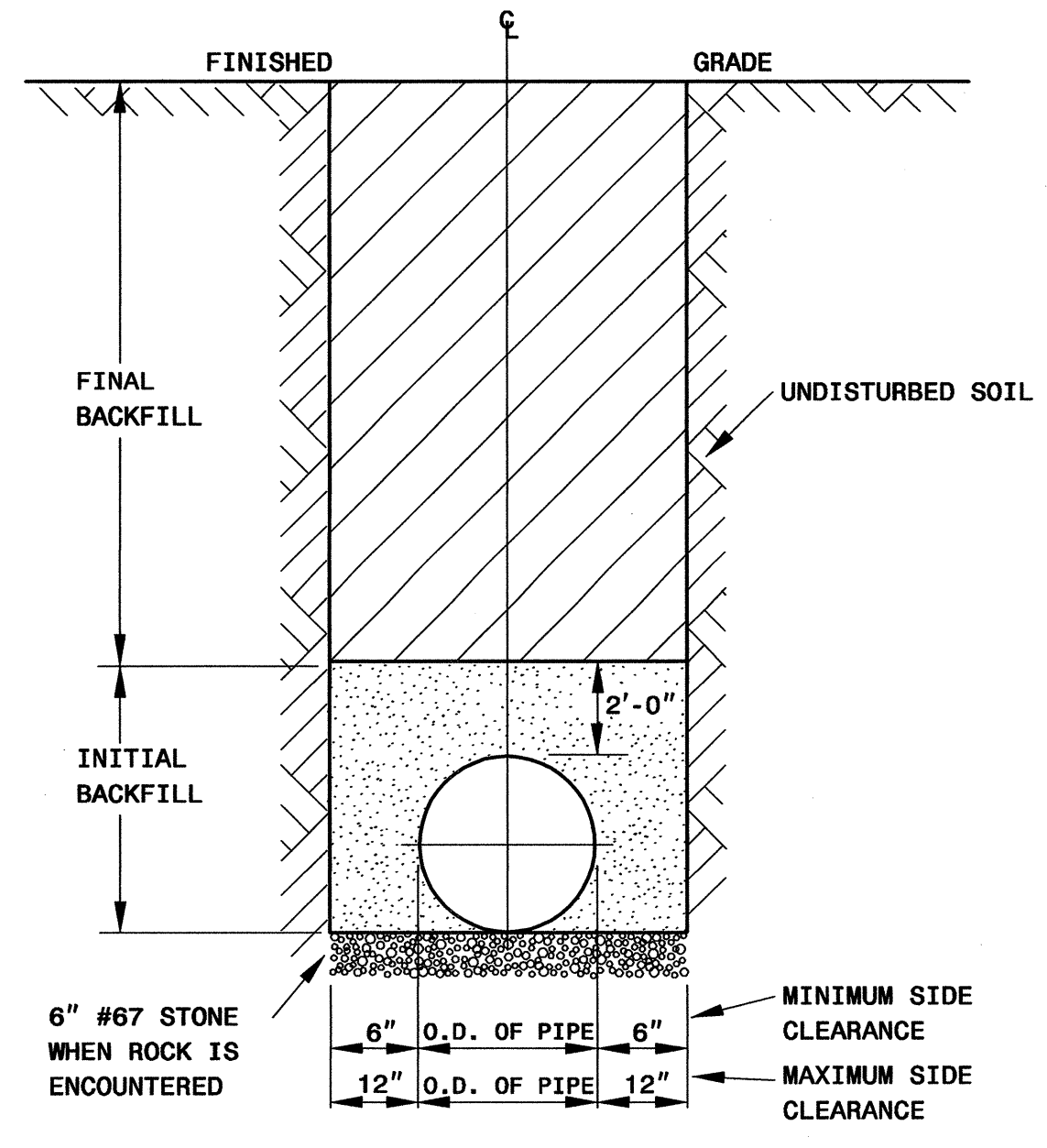
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊕
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-?UTL-
U/G Tank; Water, Gas, Oil	⊕
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	⊕
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	⊕
End of Information	⊕

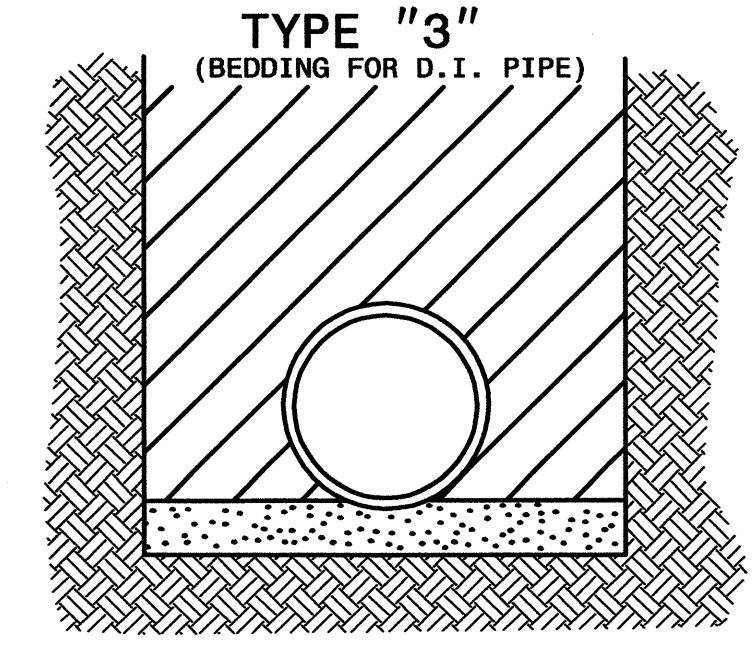
0041DEL_P10a1

USER: ad/mop
DATE: 4/18/2013
TIME: 10:31:08 AM
DRAW: P-5208G-UP-02.dgn

UTILITY CONSTRUCTION



PIPE BEDDED IN LOOSE MATERIAL, LIGHTLY TAMPED WITH A MINIMUM OF 6" UNDER PIPE. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL, IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.



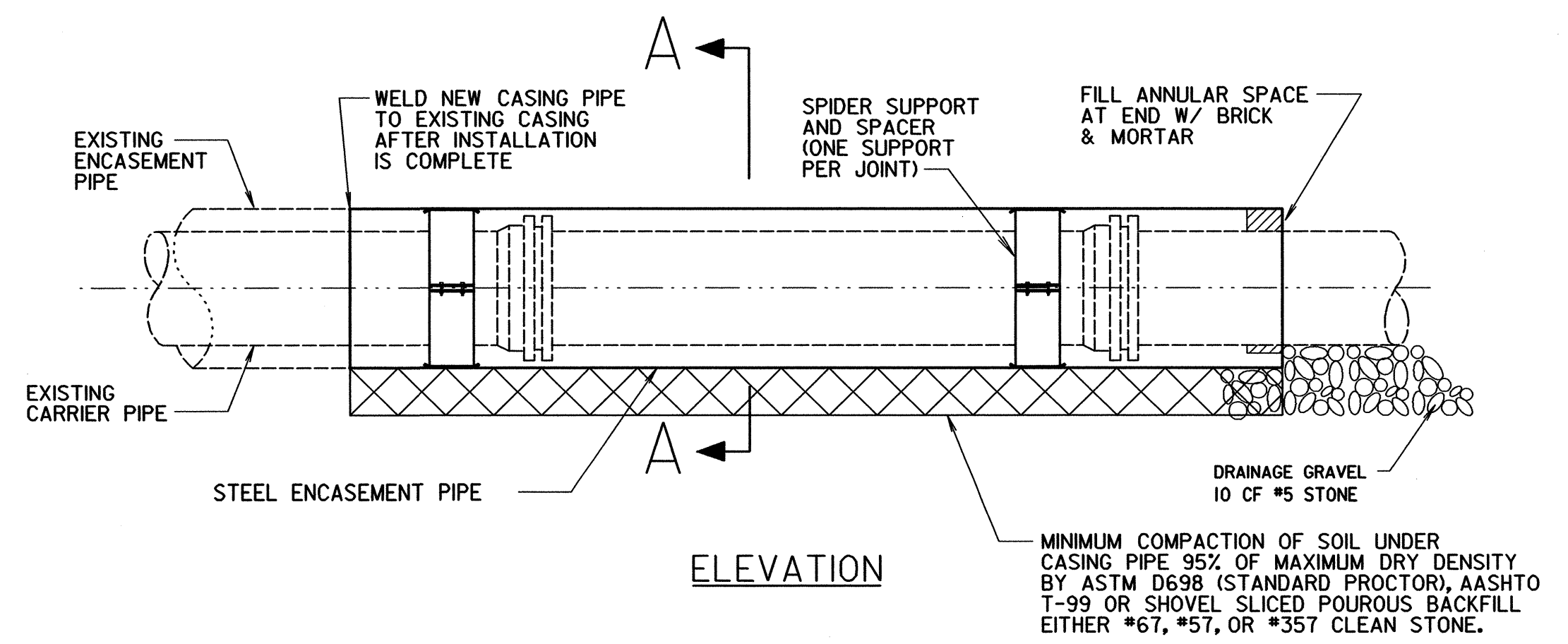
PIPE BEDDED IN 4" MINIMUM LOOSE SOIL. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

MAXIMUM TRENCH WIDTH AT TOP OF PIPE			
NOMINAL PIPE SIZE (inches)	TRENCH WIDTH (inches)	NOMINAL PIPE SIZE (inches)	TRENCH WIDTH (inches)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		

TRENCH & BACKFILL DETAIL

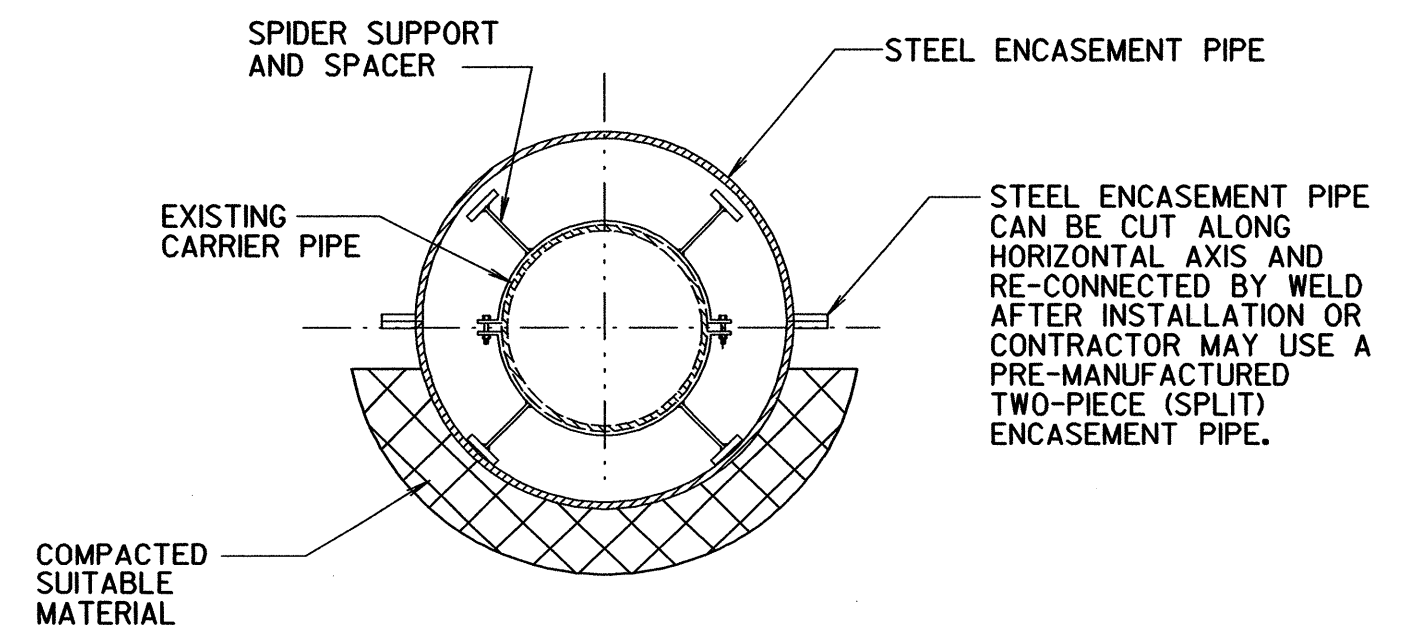
NOTES:

- TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
- NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
- ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
- BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
- ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
- IF IN EASEMENT 4" TOPSOIL, AND 12" CLEAN SELECT FILL IS REQUIRED.
- NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.



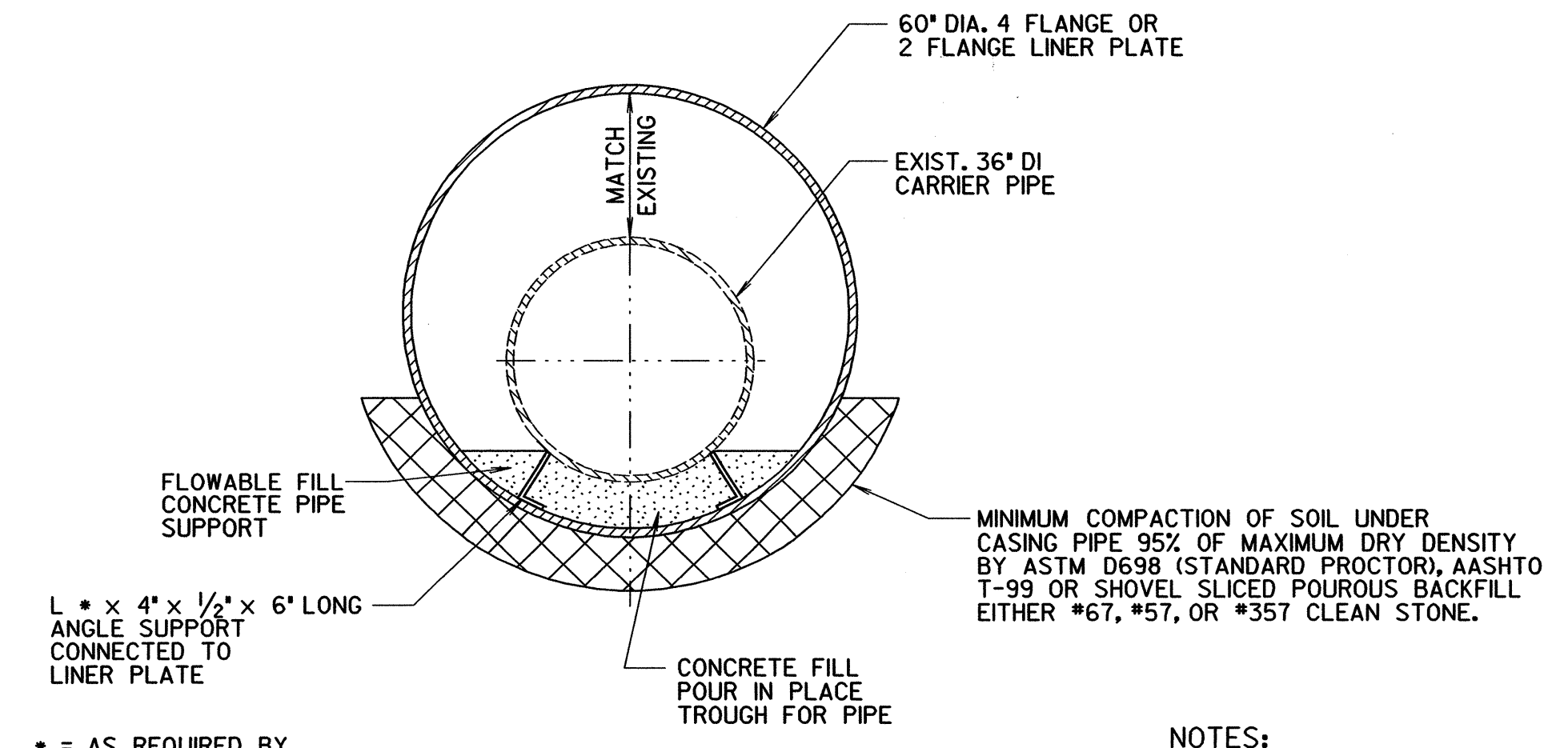
NOTES:

- CASING PIPE SHALL BE STEEL WITH MIN. YIELD STRENGTH OF 35,000 PSI.
- NO MORE THAN ONE JOINT OF EXISTING WATER MAIN SHALL BE EXPOSED AT ONE TIME.
- INSTALLATION OF CASING PIPE SHALL BE BY OPEN TRENCH.



STEEL ENCASEMENT PIPE FOR SPLIT INSTALLATION

NTS



NOTES:

- SEAL ENDS OF TUNNEL USING BRICK & MORTAR.
- NO MORE THAN ONE JOINT OF EXISTING WATER MAIN SHALL BE EXPOSED AT ONE TIME.

TUNNEL LINER EXTENSION DETAIL

NTS

TIP PROJECT: P-5208G

CONTRACT: C203206

\$\$\$SYTIME\$\$\$
\$\$\$DCN\$\$\$
\$\$\$USERNAME\$\$\$

STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

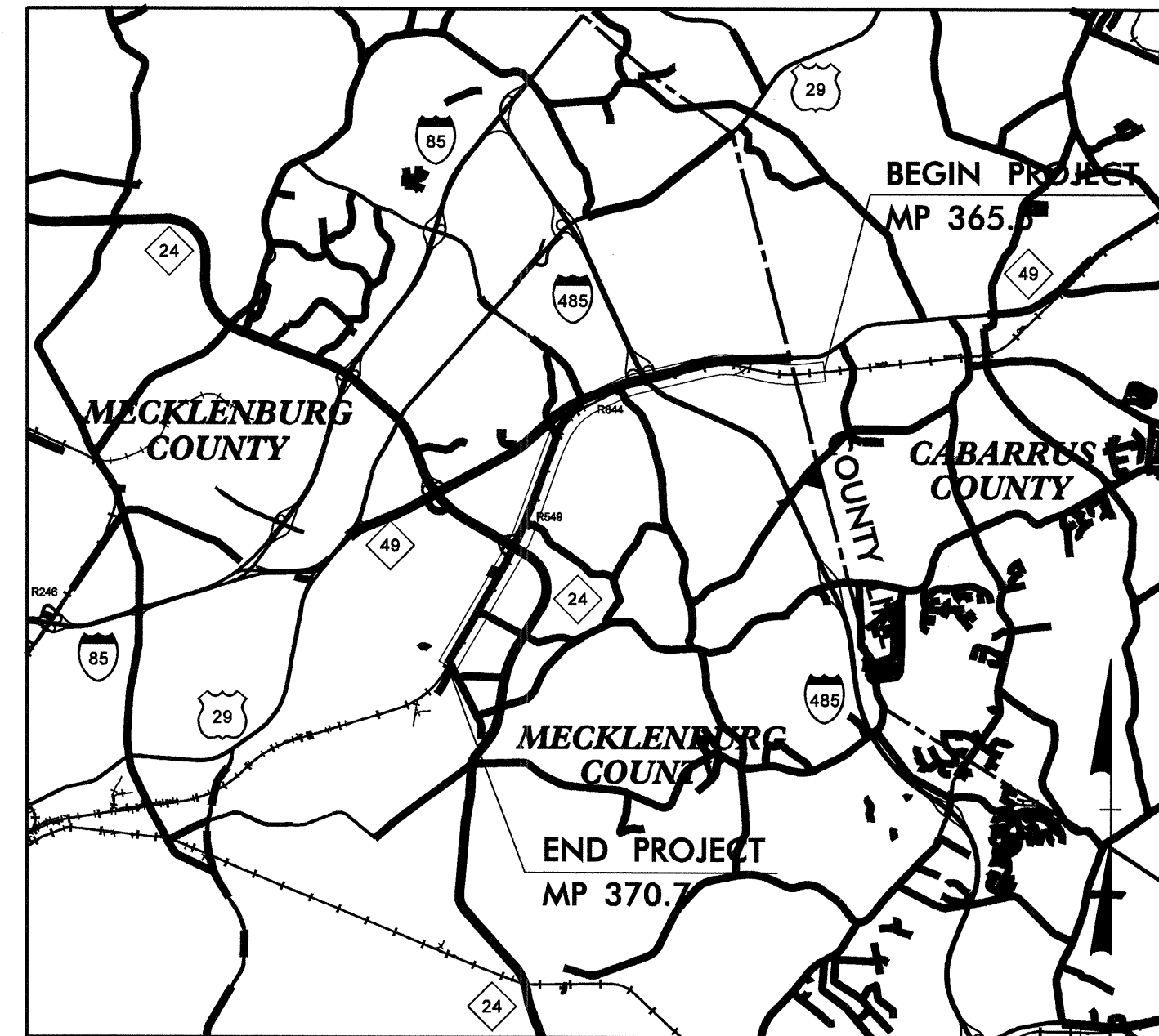


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5208G	UO-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50000.1.STR11T1B		PE, UTIL PE	
50000.1.STR12T3		PE, UTIL PE	
43219.2.STR09P5208		RIGHT OF WAY	
50000.3.STR01T4A	FRA-FR-HSR-0006-10-01-00	CONST, UTIL CONST	

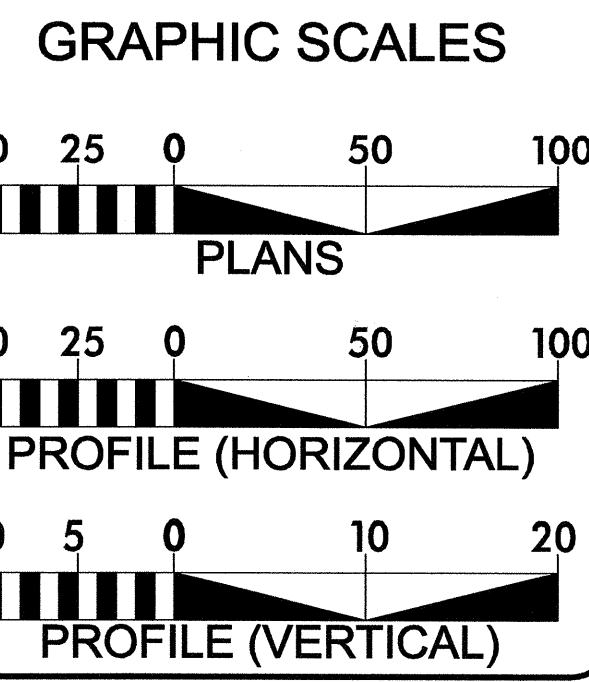
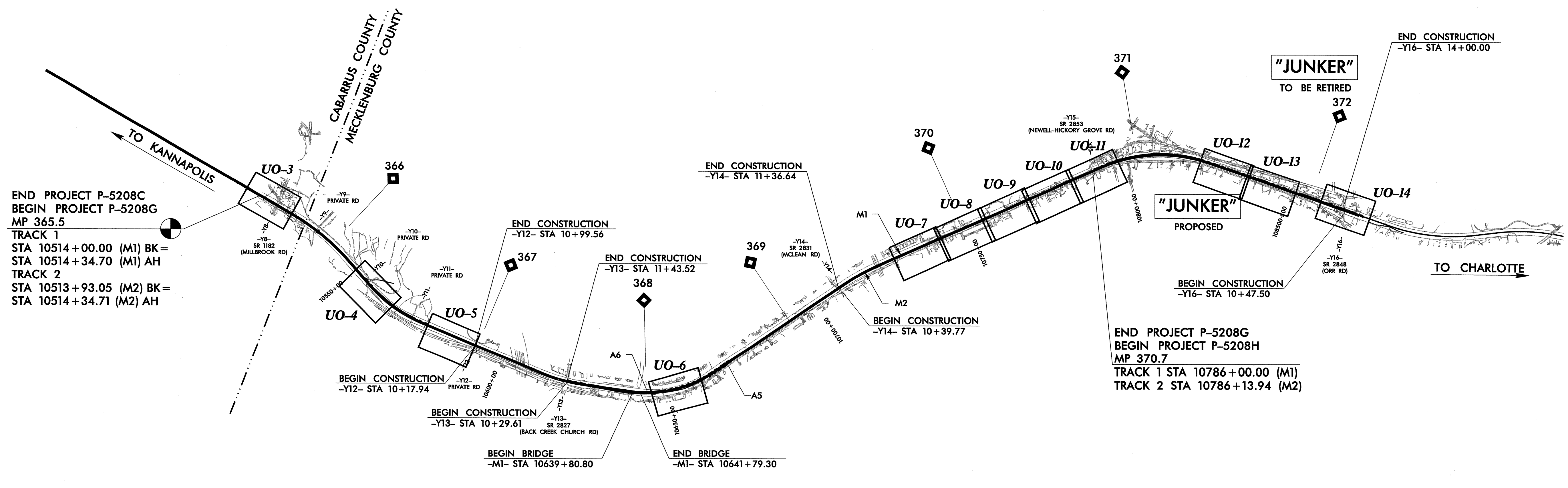
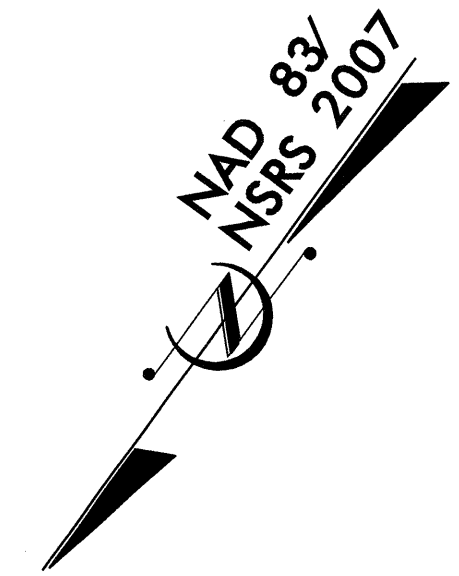
CABARRUS AND MECKLENBURG COUNTIES

LOCATION: NCRNRS MAINLINE RAILROAD FROM MILLBROOK ROAD (SR 1182), MP 365.5 TO NORTH OF NEWELL-HICKORY GROVE ROAD (SR 2853), MP 370.7

TYPE OF WORK: UTILITY RELOCATIONS



VICINITY MAP



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	LEGEND OF SYMBOLS
UO-3 THRU UO-14	UTILITIES BY OTHERS PLAN AND PROFILE SHEETS

Prepared In the Office of:

AECOM
NC FIRM LICENSE No: F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
SEPTEMBER 2012

LETTING DATE:
JULY 16, 2013

RILEY BIRMINGHAM, PE
RAIL PROJECT ENGINEER

LARRY W. MITCHELL, PE
UTILITIES PROJECT ENGINEER

CLAUDETTE ROQUE, PE
ROADWAY PROJECT ENGINEER

BRAD SMYTHE, PE
NCDOT PROJECT MANAGER

- UTILITY OWNERS ON PROJECT
- (1) POWER -DUKE ENERGY
 - (2) NATURAL GAS - PIEDMONT NATURAL GAS
 - (3) TELECOM - WINDSTREAM, AT&T
 - (4) TV CABLE - TIME WARNER CABLE

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
DESIGN AND CONSTRUCTION

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	✕
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Known Soil Contamination: Area or Site	☠
Potential Soil Contamination: Area or Site	?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	----- JS
Buffer Zone 1	----- BZ 1
Buffer Zone 2	----- BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	✕
Proposed Lateral, Tail, Head Ditch	← FLOW
False Sump	◇

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	MS ○ MILEPOST 35
Switch	SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	---R/W---
Proposed Right of Way Line with Iron Pin and Cap Marker	---R/W---▲
Proposed Right of Way Line with Concrete or Granite R/W Marker	---R/W---▲
Proposed Control of Access Line with Concrete C/A Marker	---C/A---
Existing Control of Access	---C/A---
Proposed Control of Access	---C/A---
Existing Easement Line	----- E
Proposed Temporary Construction Easement	----- E
Proposed Temporary Drainage Easement	----- TDE
Proposed Permanent Drainage Easement	----- PDE
Proposed Permanent Drainage / Utility Easement	----- DUE
Proposed Permanent Utility Easement	----- PUE
Proposed Temporary Utility Easement	----- TUE
Proposed Aerial Utility Easement	----- AUE
Proposed Permanent Easement with Iron Pin and Cap Marker	----- ◆

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	----- C
Proposed Slope Stakes Fill	----- F
Proposed Curb Ramp	----- (CR)
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----
VEGETATION:	
Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- CONC
Bridge Wing Wall, Head Wall and End Wall	---CONC WW---
MINOR:	
Head and End Wall	---CONC HW---
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○
Storm Sewer	----- S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊠
U/G Power Cable Hand Hole	□
H-Frame Pole	●
Recorded U/G Power Line	----- P
Designated U/G Power Line (S.U.E.*)	----- P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊠
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	□
Recorded U/G Telephone Cable	----- T
Designated U/G Telephone Cable (S.U.E.*)	----- T
Recorded U/G Telephone Conduit	----- TC
Designated U/G Telephone Conduit (S.U.E.*)	----- TC
Recorded U/G Fiber Optics Cable	----- T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	----- T FO

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	----- W
Designated U/G Water Line (S.U.E.*)	----- W
Above Ground Water Line	----- A/G Water

TV:

TV Satellite Dish	⊕
TV Pedestal	⊠
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	----- TV
Designated U/G TV Cable (S.U.E.*)	----- TV
Recorded U/G Fiber Optic Cable	----- TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	----- TV FO

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	----- G
Designated U/G Gas Line (S.U.E.*)	----- G
Above Ground Gas Line	----- A/G Gas

SANITARY SEWER:

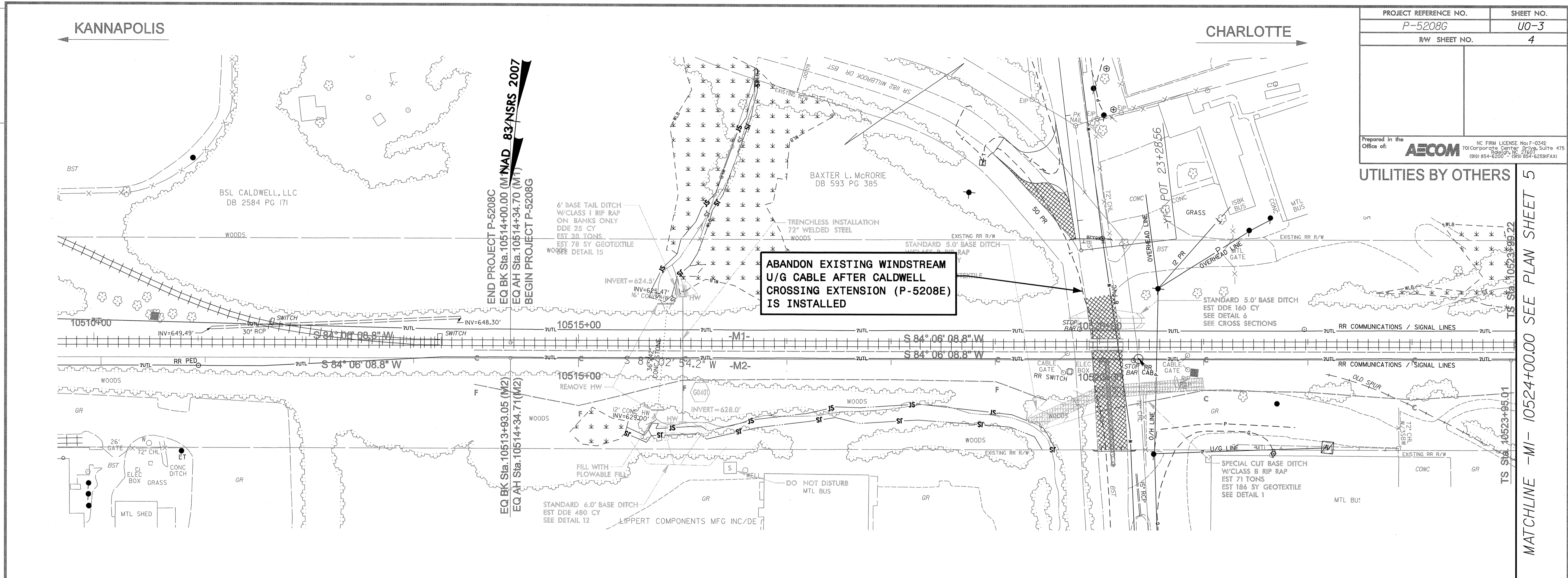
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	----- FSS
Designated SS Forced Main Line (S.U.E.*)	----- FSS

MISCELLANEOUS:

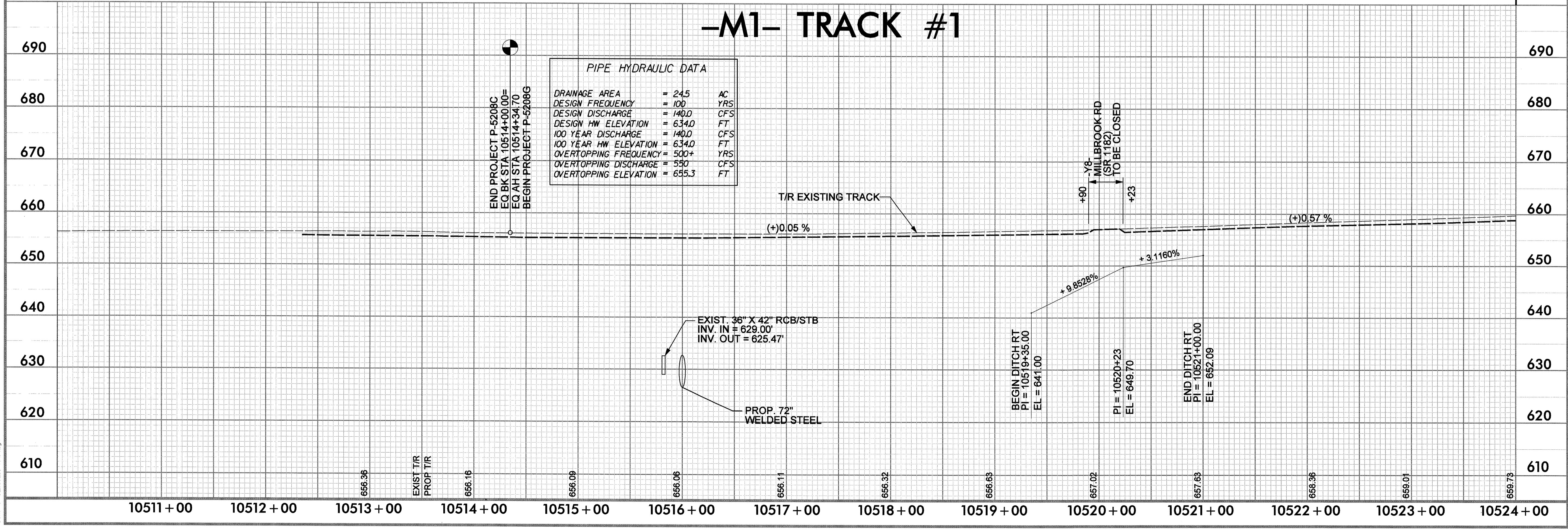
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line	----- ?U/L
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

0041DEL_P10a1

PROJECT REFERENCE NO. P-5208G	SHEET NO. UO-3
RW SHEET NO. 4	
Prepared in the Office of: AECOM <small>701 Corporate Center Drive, Suite 475 Raleigh, NC 27603 (919) 854-8200 • (919) 854-8259 (FAX)</small>	



-M1- TRACK #1



PIPE HYDRAULIC DATA	
DRAINAGE AREA	= 24.5 AC
DESIGN FREQUENCY	= 100 YRS
DESIGN DISCHARGE	= 140.0 CFS
DESIGN HW ELEVATION	= 634.0 FT
100 YEAR DISCHARGE	= 140.0 CFS
100 YEAR HW ELEVATION	= 634.0 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 550 CFS
OVERTOPPING ELEVATION	= 635.3 FT

END PROJECT P-5208C
EQ BK STA 10514+00.00
EQ AH STA 10514+34.70
BEGIN PROJECT P-5208G

BEGIN DITCH RT
PI = 10519+35.00
EL = 641.00

PI = 10520+23
EL = 649.70

END DITCH RT
PI = 10521+00.00
EL = 652.08

EXIST. 36" X 42" RCB/STB
INV. IN = 629.00'
INV. OUT = 625.47'

PROP. 72" WELDED STEEL

Y-8 MILLBROOK RD
(SR 1182)
TO BE CLOSED

USER: Swine6
DATE: 6/15/2013
TIME: 12:45:54 PM
Dwg: P-5208G_UO-004.dwg

MATCHLINE -M1- 10524+00.00 SEE PLAN SHEET 5

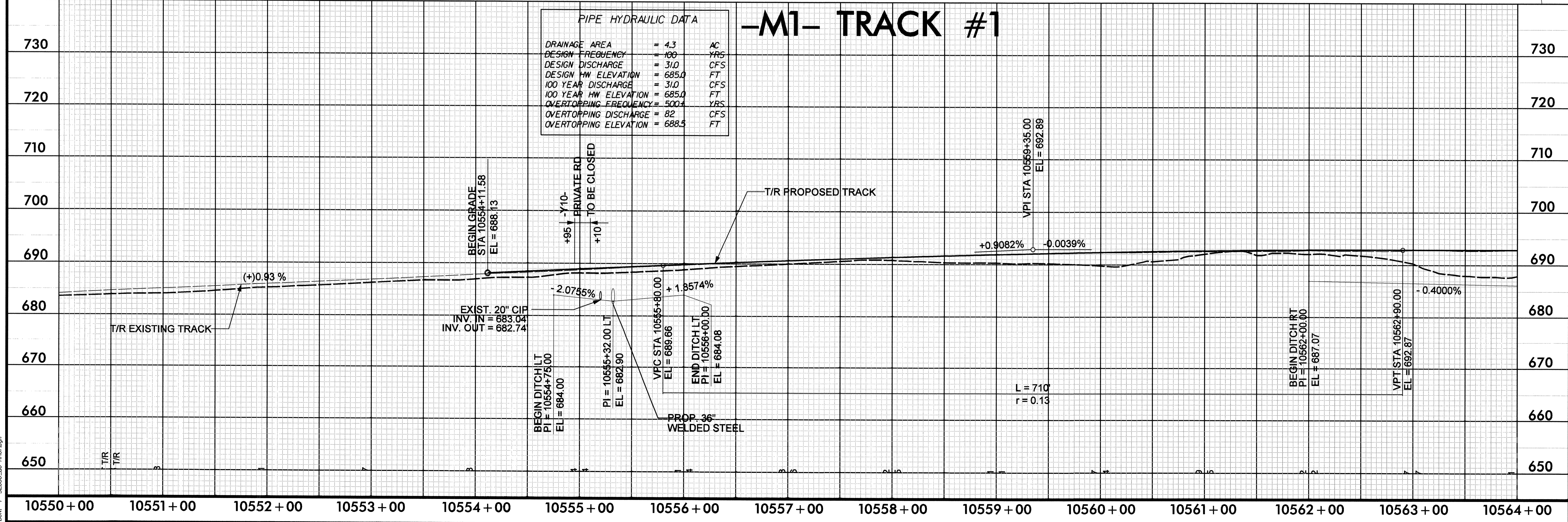
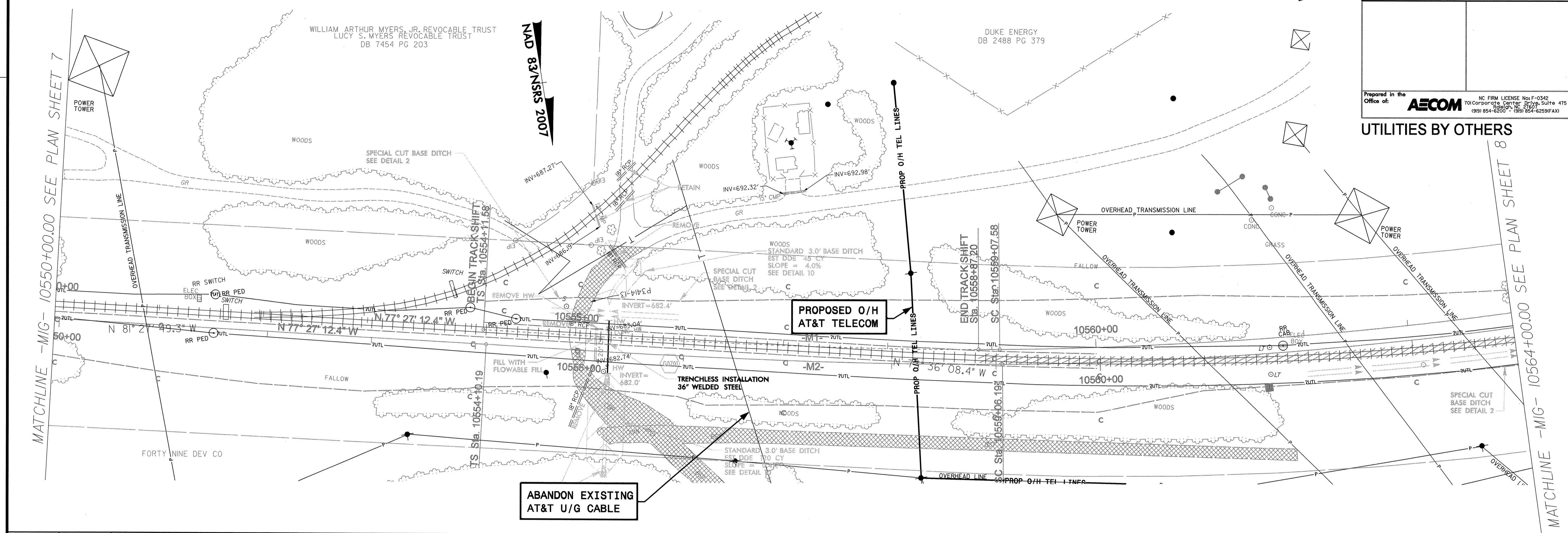
0041DEL_P10a1

KANNAPOLIS

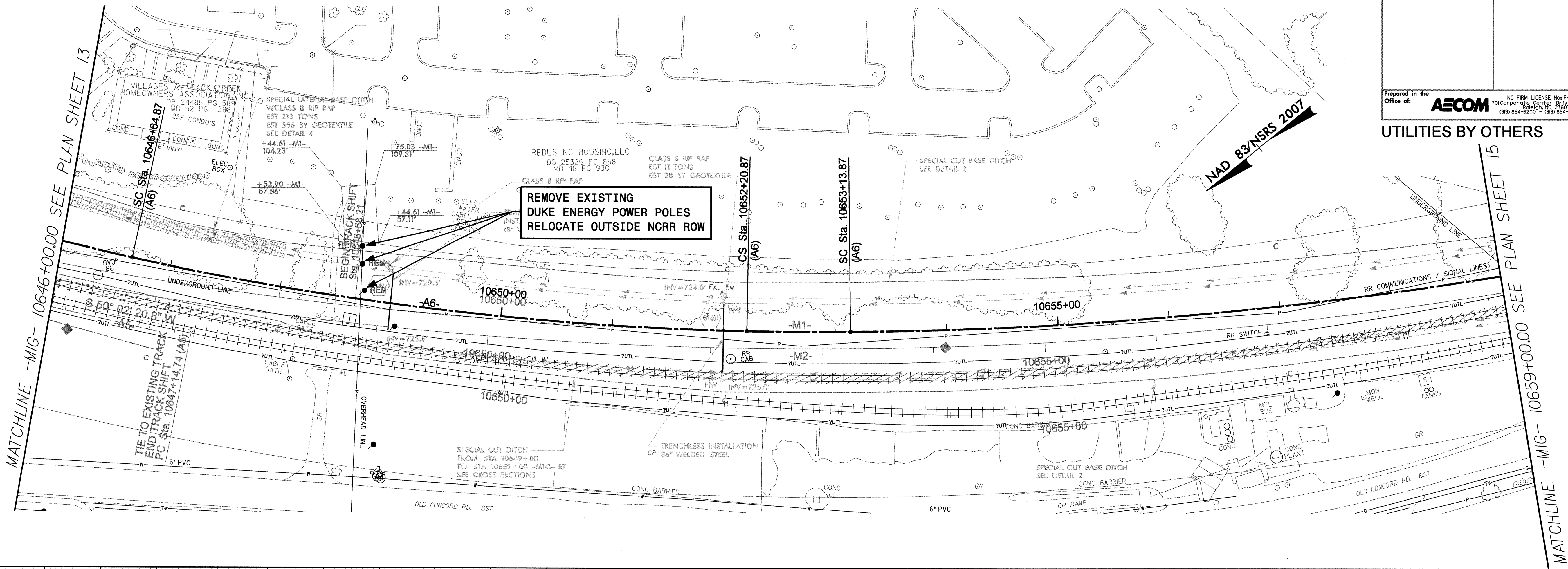
CHARLOTTE

PROJECT REFERENCE NO.	SHEET NO.
P-5208G	U0-4
RW SHEET NO.	7
Prepared in the Office of: AECOM <small>101 Corporate Center Drive, Suite 475 Raleigh, NC 27607 (919) 854-6200 / (919) 854-6299(FAX)</small>	

UTILITIES BY OTHERS

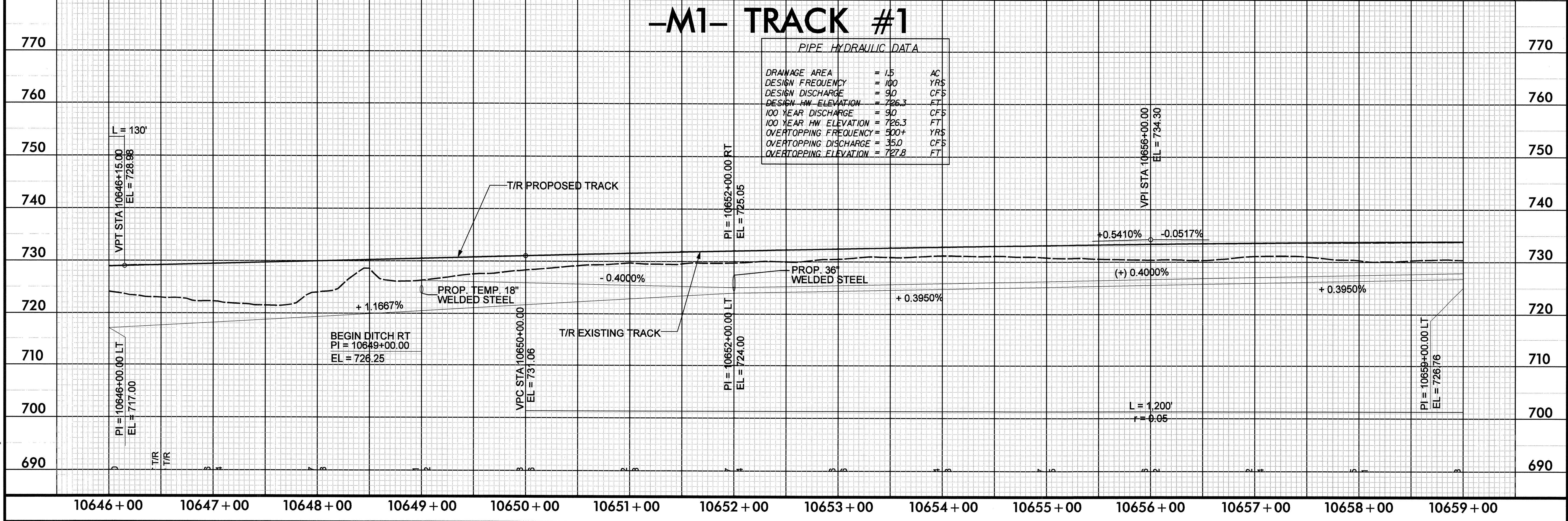


USER: Swinson
 DATE: 6/13/2013
 TIME: 12:43:33 PM
 DGN: P-5208G_10-PROF.dgn



-M1- TRACK #1

PIPE HYDRAULIC DATA	
DRAINAGE AREA	= 1.5 AC
DESIGN FREQUENCY	= 100 YRS
DESIGN DISCHARGE	= 90 CFS
DESIGN HW ELEVATION	= 726.3 FT
100 YEAR DISCHARGE	= 90 CFS
100 YEAR HW ELEVATION	= 726.3 FT
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING DISCHARGE	= 35.0 CFS
OVERTOPPING ELEVATION	= 727.8 FT



0041DEL_P10a1

KANNAPOLIS

CHARLOTTE

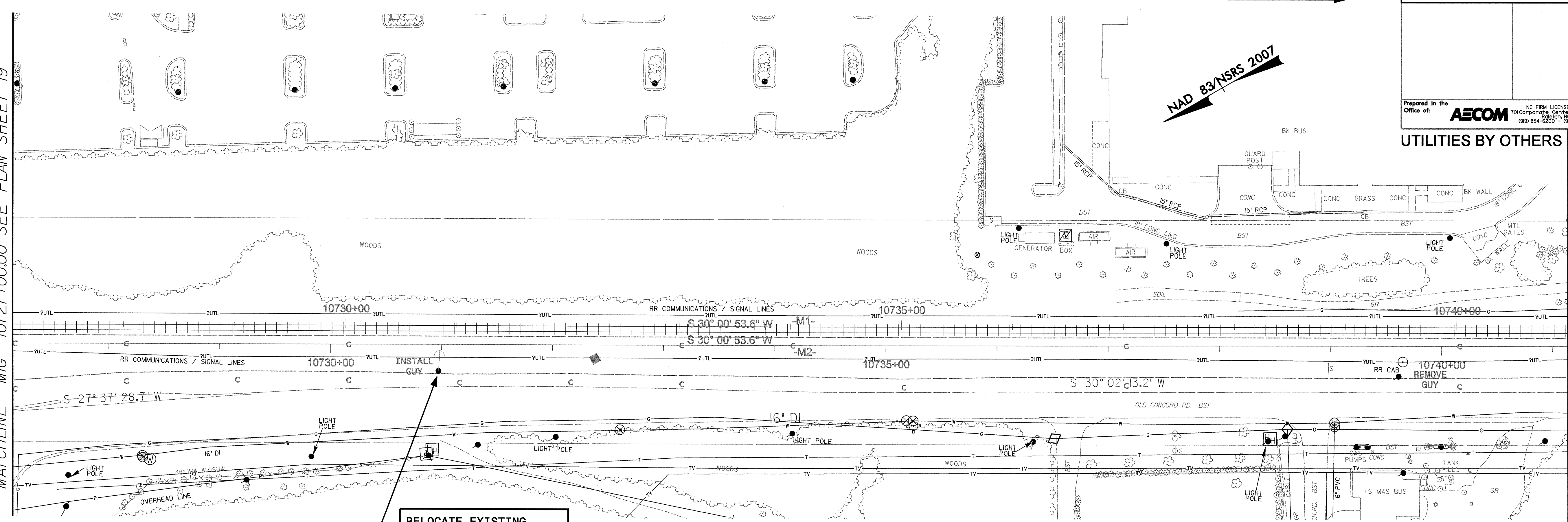
PROJECT REFERENCE NO.	SHEET NO.
P-5208G	U0-7
RW SHEET NO.	20

Prepared in the Office of: **AECOM**
 NC FIRM LICENSE No. F-0342
 700 Corporate Center, Suite 475
 Raleigh, NC 27603
 (919) 854-8200 • (919) 854-8259(FAX)

UTILITIES BY OTHERS

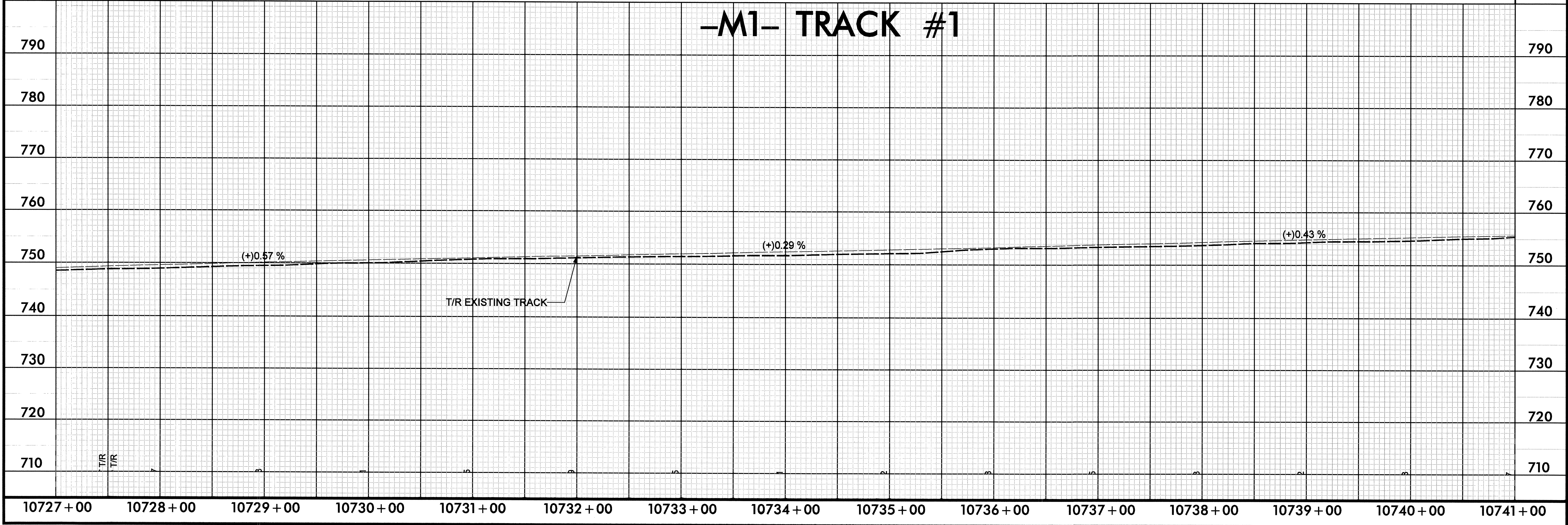
MATCHLINE -MIG- 10727+00.00 SEE PLAN SHEET 19

MATCHLINE -MIG- 10741+00.00 SEE PLAN SHEET 21



RELOCATE EXISTING DUKE ENERGY GUY ANCHOR

-M1- TRACK #1

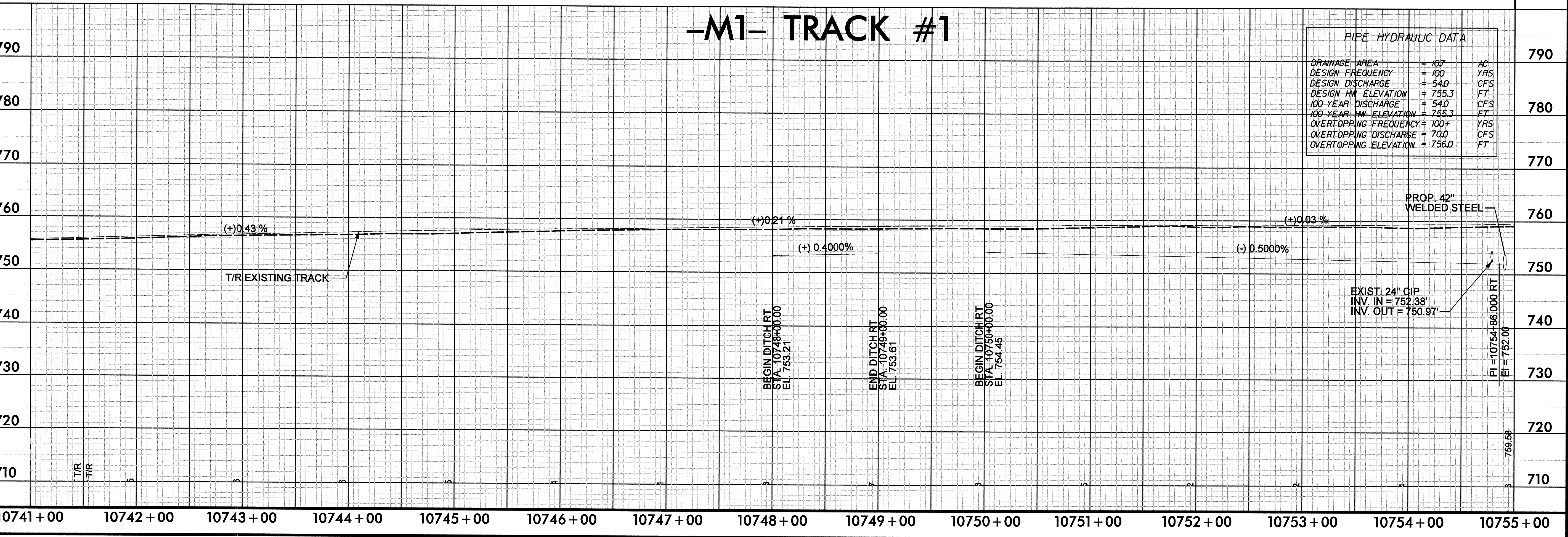
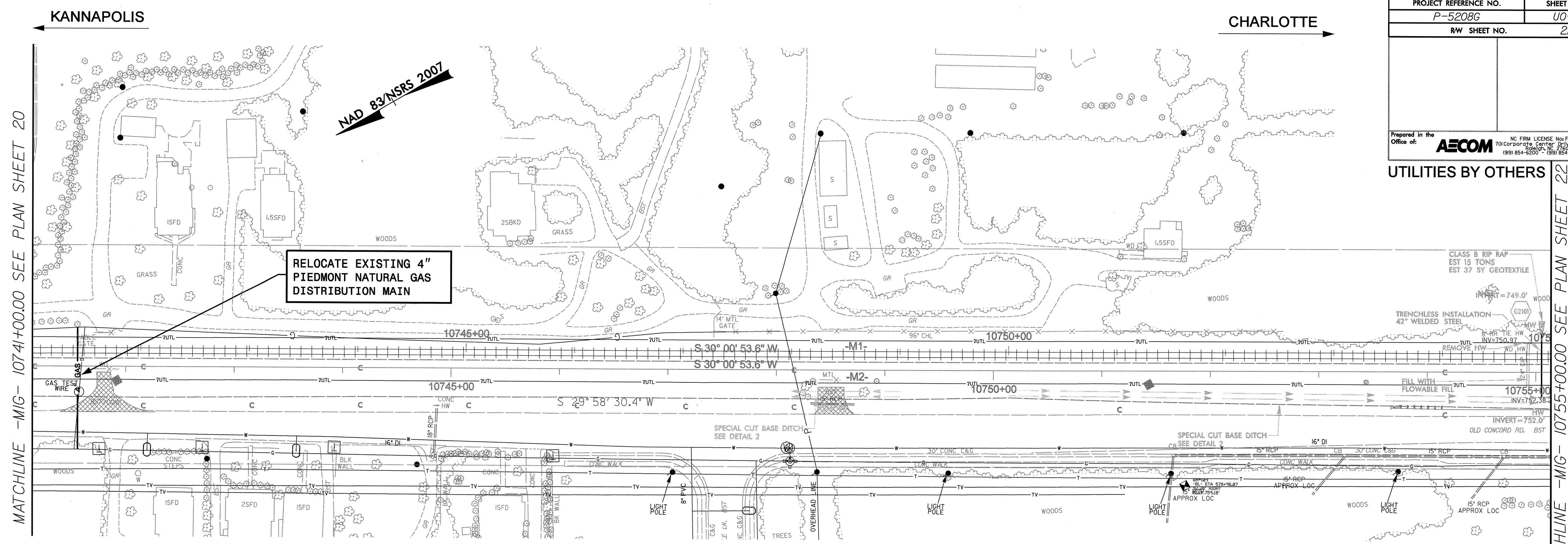


USER: Swinms6
 DATE: 10/24/07
 TIME: 04:57 PM
 DWG: P-5208G_U0-RR20.dwg

0041DEL_P10a1

PROJECT REFERENCE NO. P-5208G	SHEET NO. U0-8
R/W SHEET NO. 21	

Prepared in the Office of:
AECOM
NC FIRM LICENSE No. F-0342
70 Corporate Center Dr., Suite 415
Raleigh, NC 27607
(919) 854-6200 • (919) 854-6255(FAX)



USER: Swhong
DATE: 6/13/2013
TIME: 12:46:09 PM
JOB: P-5208G-01-01-01

MATCHLINE -MIG- 10741+00.00 SEE PLAN SHEET 20

MATCHLINE -MIG- 10755+00.00 SEE PLAN SHEET 22

UTILITIES BY OTHERS

0041DEL_P10a1

KANNAPOLIS

CHARLOTTE

NAD 83/NSRS 2007

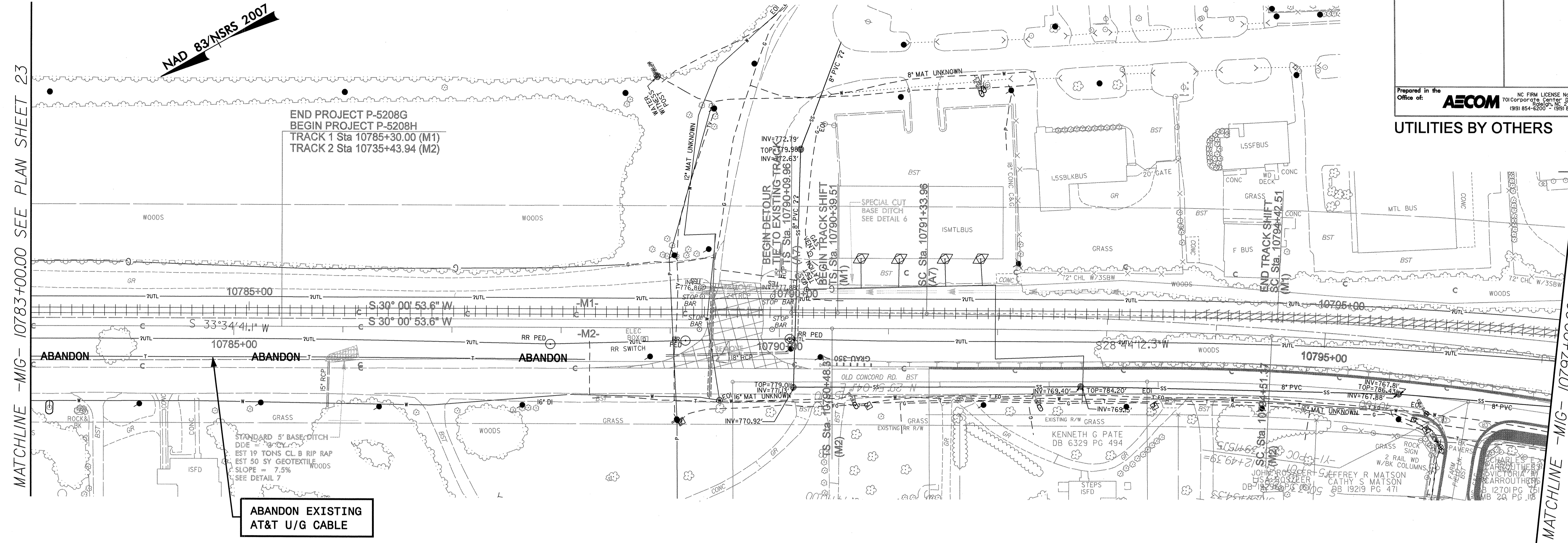
PROJECT REFERENCE NO.	SHEET NO.
P-5208G	U0-11
RW SHEET NO.	24

Prepared in the Office of **AECOM** NC FIRM LICENSE No. F-0342
 101 Corporate Center Dr., Suite 415
 Raleigh, NC 27603
 (919) 854-6200 • (919) 854-6299(FAX)

UTILITIES BY OTHERS

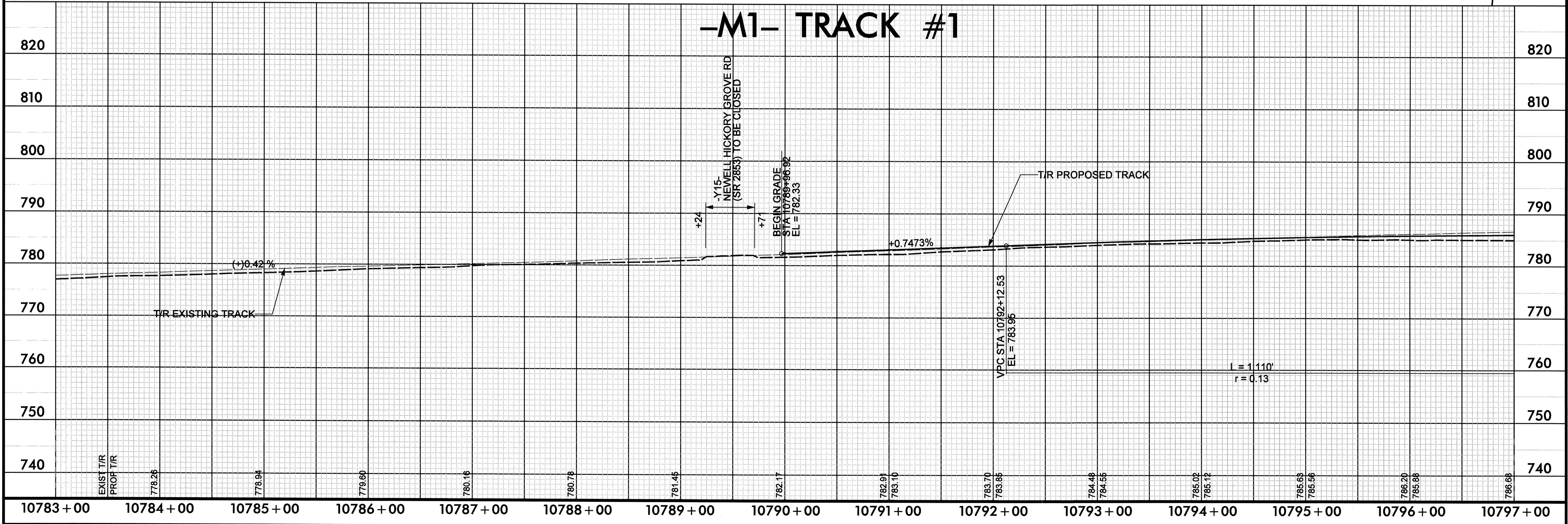
MATCHLINE -MIG- 10783+00.00 SEE PLAN SHEET 23

MATCHLINE -MIG- 10797+00.00 SEE PLAN SHEET 25



ABANDON EXISTING AT&T U/G CABLE

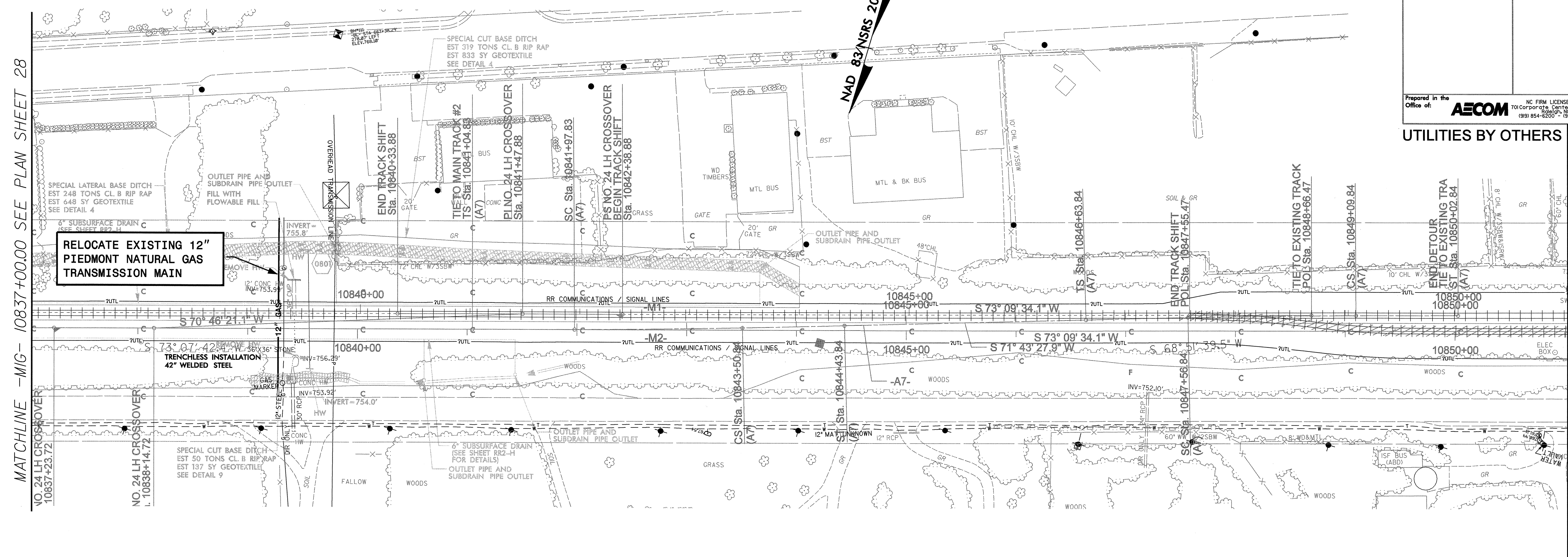
-M1- TRACK #1



USER: Swireong
 DATE: 6/13/2013
 TIME: 11:58 AM
 DSN: P-5208G.dwg
 PLOT: P-5208G.dwg-PR24.dgn

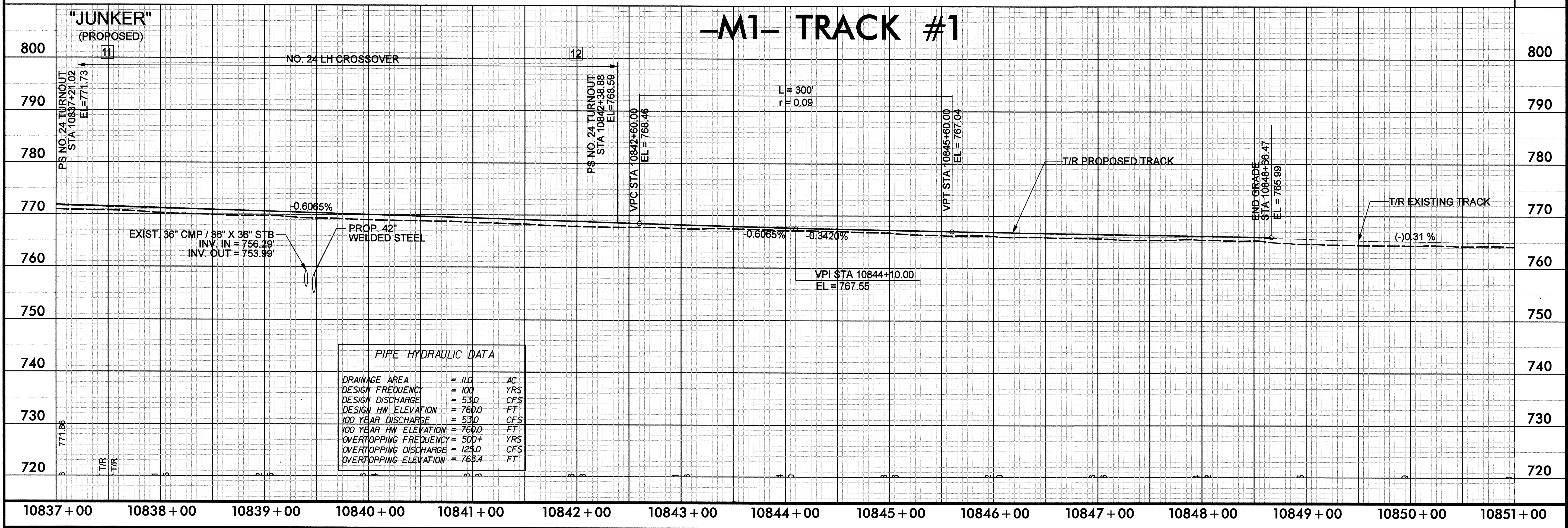
MATCHLINE -MIG- 10837+00.00 SEE PLAN SHEET 28

MATCHLINE -MIG- 10851+00.00 SEE PLAN SHEET 29



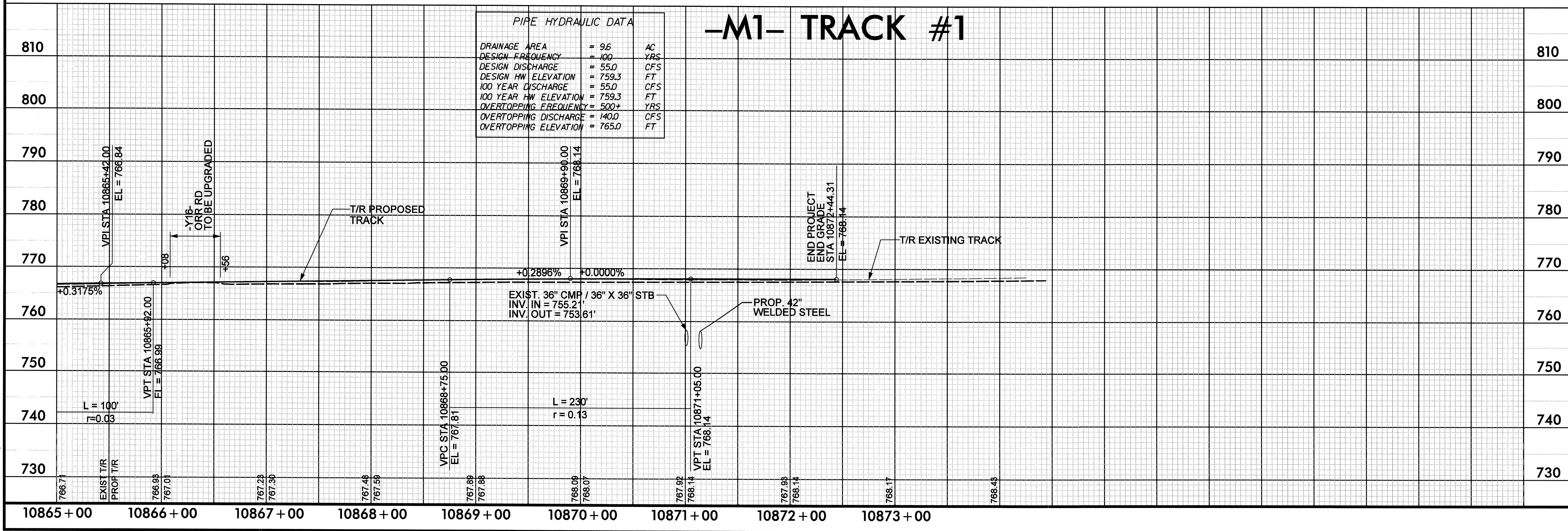
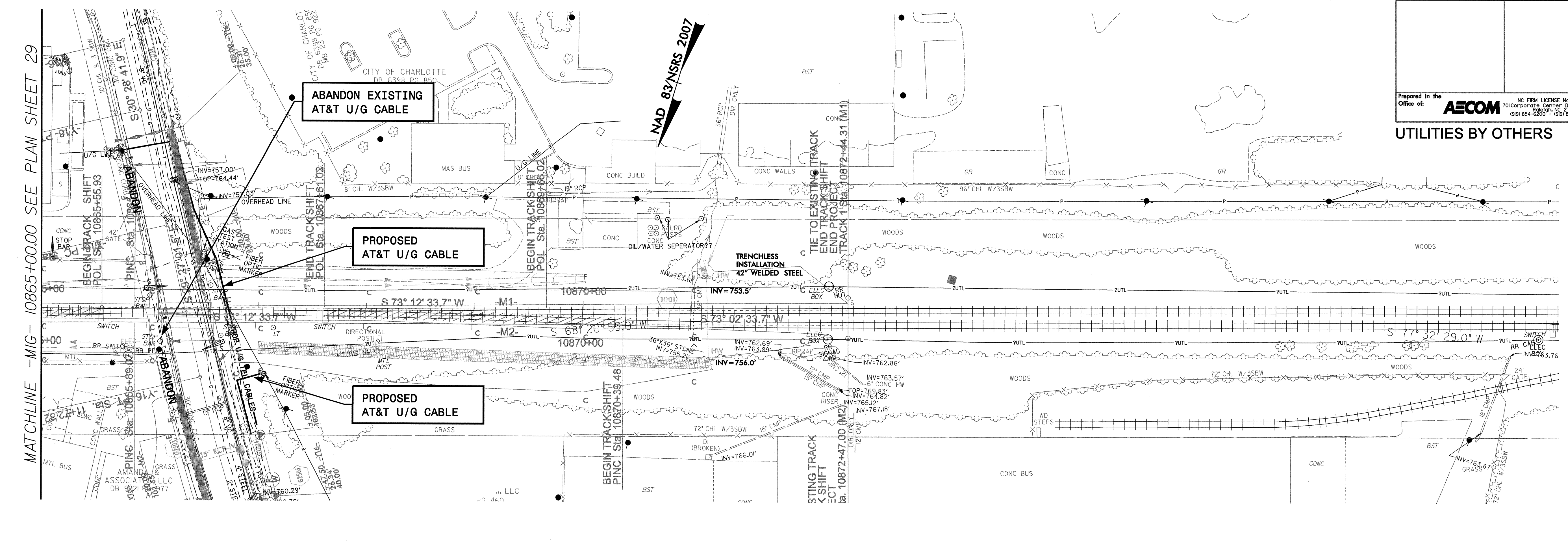
RELOCATE EXISTING 12" PIEDMONT NATURAL GAS TRANSMISSION MAIN

-M1- TRACK #1



0041DEL_P10a1

PROJECT REFERENCE NO. P-52086	SHEET NO. U0-14
RW SHEET NO. 30	
Prepared in the Office of AECOM	
<small>NC FIRM LICENSE No F-0342 101 Corporate Center Dr., Suite 475 Charlotte, NC 28203 (919) 854-6200 • (919) 854-6259(FAX)</small>	
UTILITIES BY OTHERS	



USER: Swinson
 DATE: 6/17/2015
 TIME: 12:55:17 PM
 Path: P:\2008\Del_P10a1.dgn