0302DEL_P12

DCN

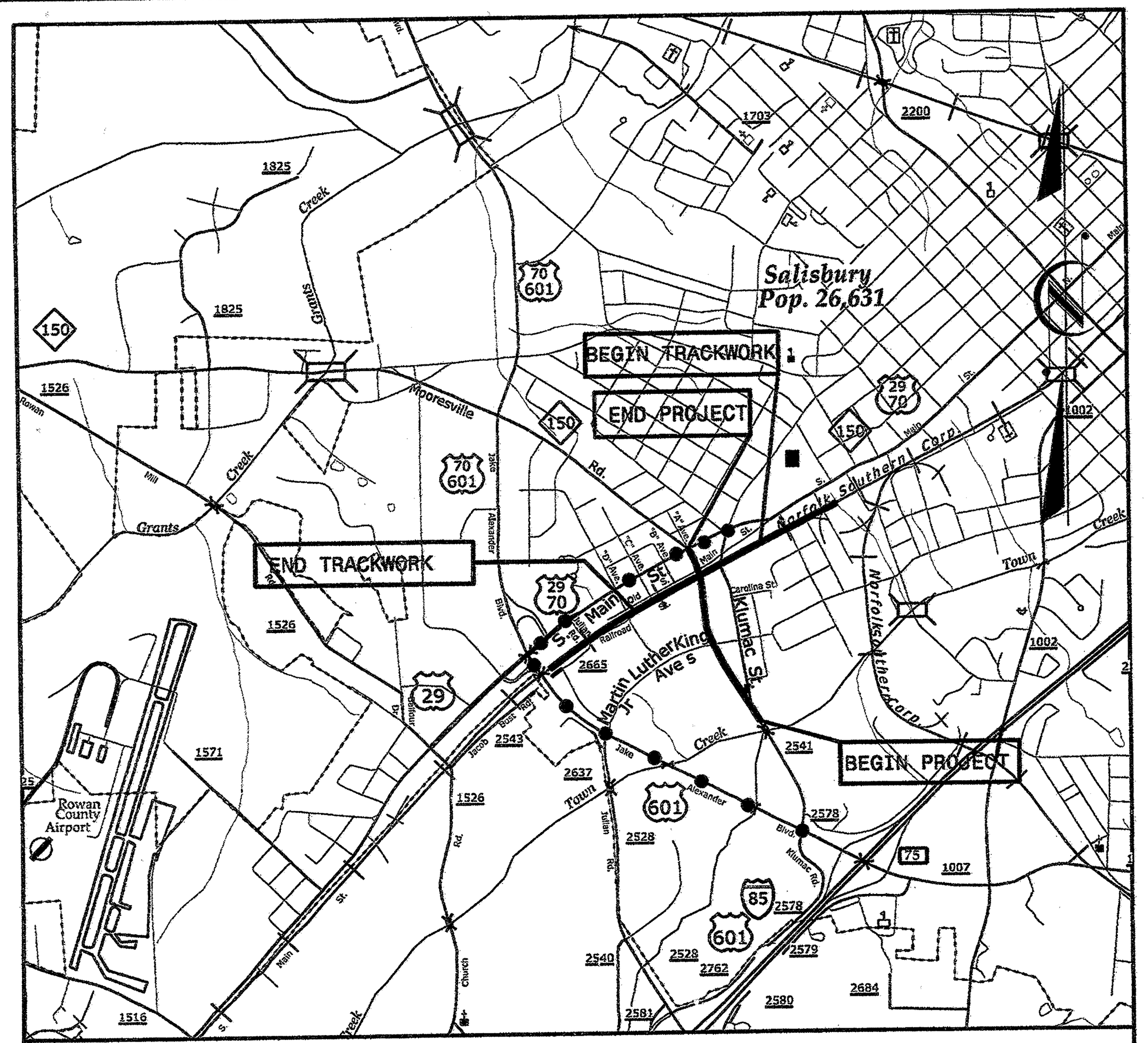
TIP PROJECT: U-3459

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3459	EC-1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
34951.1.1	STP-2541(4)	P.E.
34951.1.1	STP-2541(4)	R/W
53500.3.STR01T4	STP-2541(4)	R/W

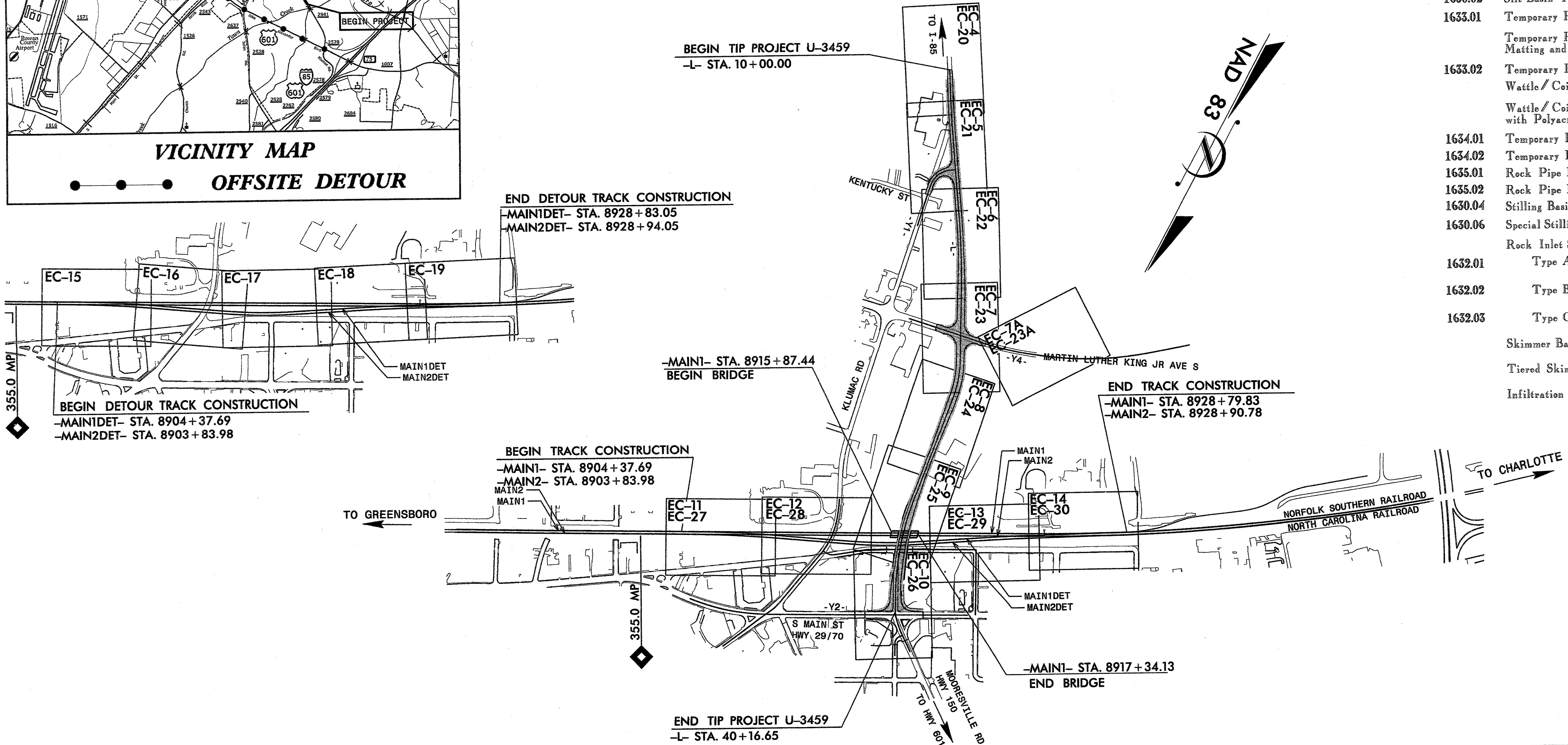
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROWAN COUNTY

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



VICINITY MAP

OFFSITE DETOUR



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TDD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle / Coir Fiber Wattle	
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE

10 0 20

PLANS

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

PLANS PREPARED BY:

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319-8850
CORP. LICENSE NO.: C-0275

2012 STANDARD SPECIFICATIONS

PLANS PREPARED FOR:

NCDOT RAIL DIVISION

SANDRA A. STEPNEY, PE
SENIOR PROJECT ENGINEER

JIMMY L. TERRY, PE
PROJECT ENGINEER
LEVEL III CERTIFICATION # 3145

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

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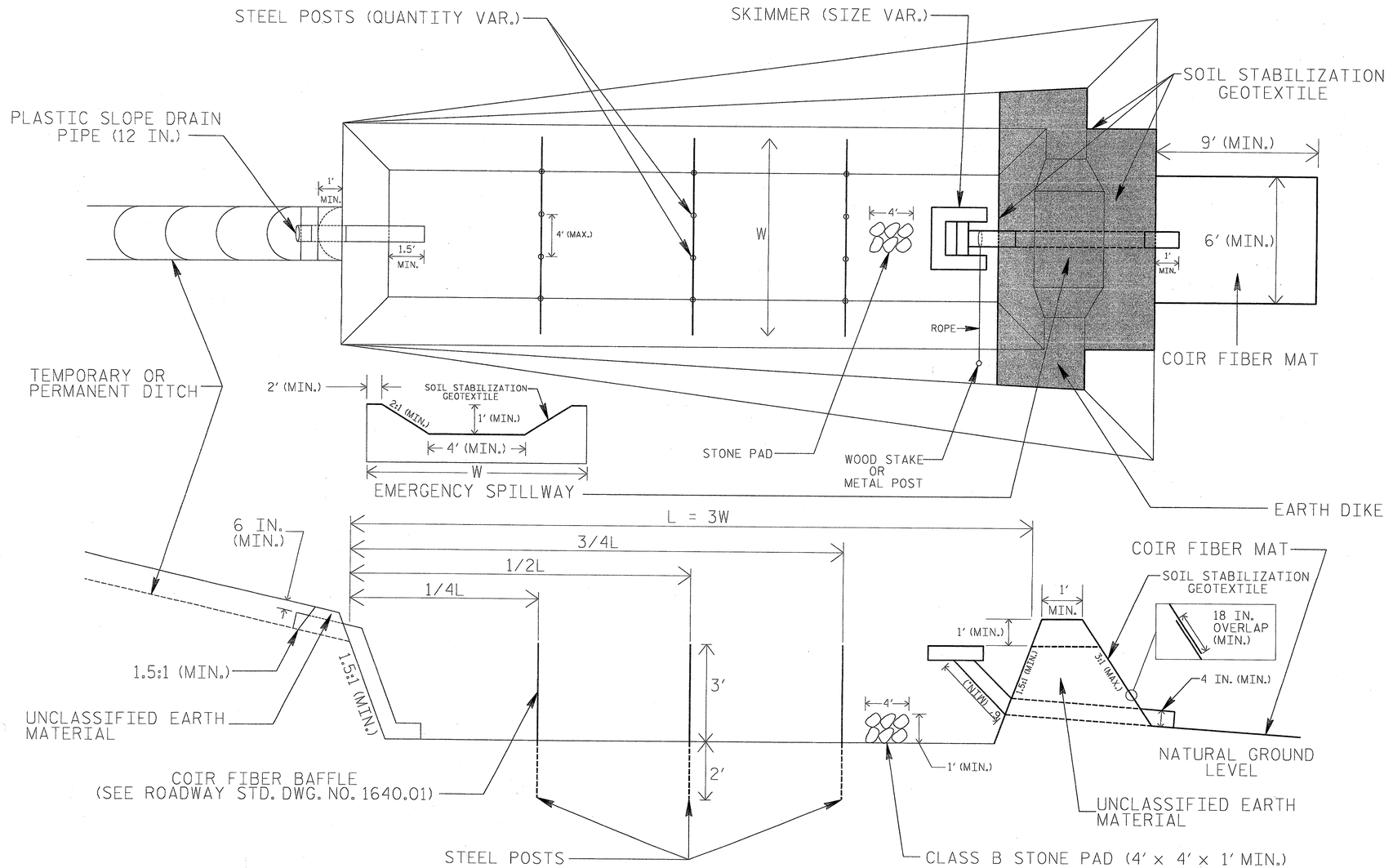
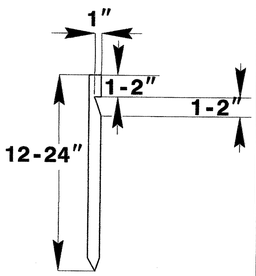
PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SKIMMER BASIN WITH BAFFLES DETAIL

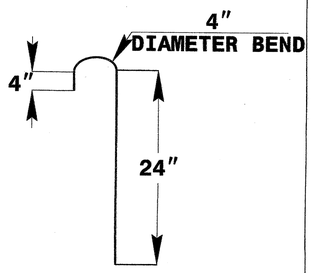


COIR FIBER MAT ANCHOR OPTIONS

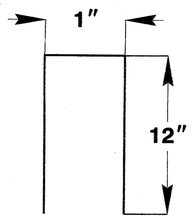
2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



1" (nominal) STAPLE



NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE EMERGENCY SPILLWAY LENGTH (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE AS DIRECTED.
6. SOIL STABILIZATION GEOTEXTILE FOR EMERGENCY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

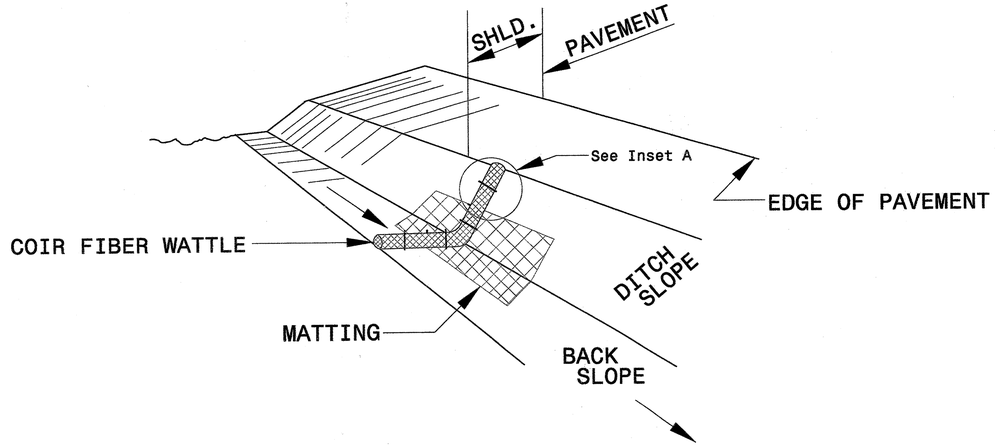
NOT TO SCALE

0302DEL_P12

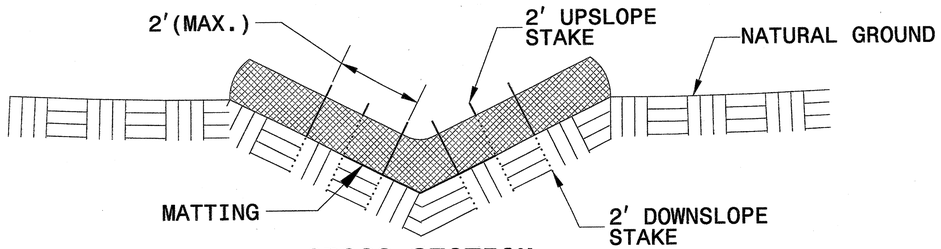
DGN

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

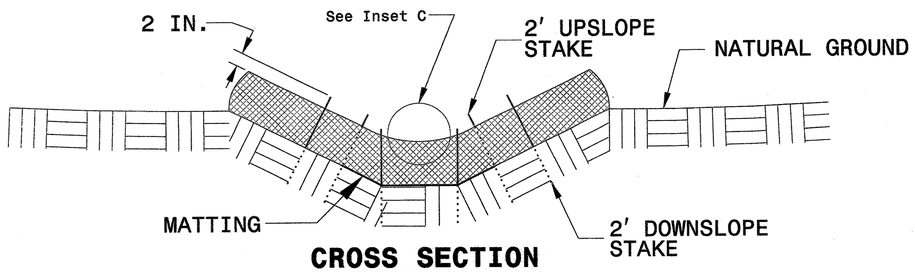
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

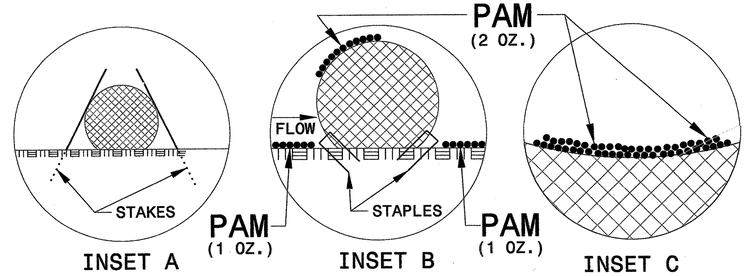
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

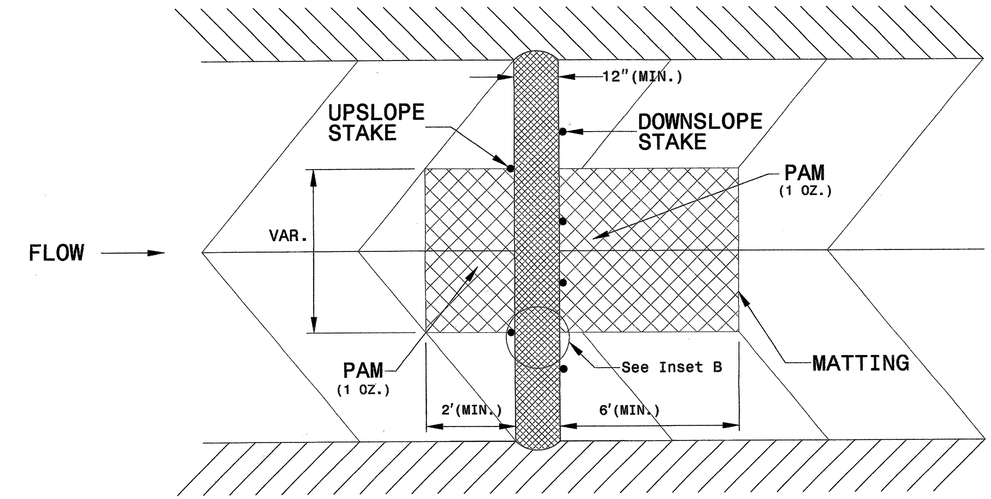
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

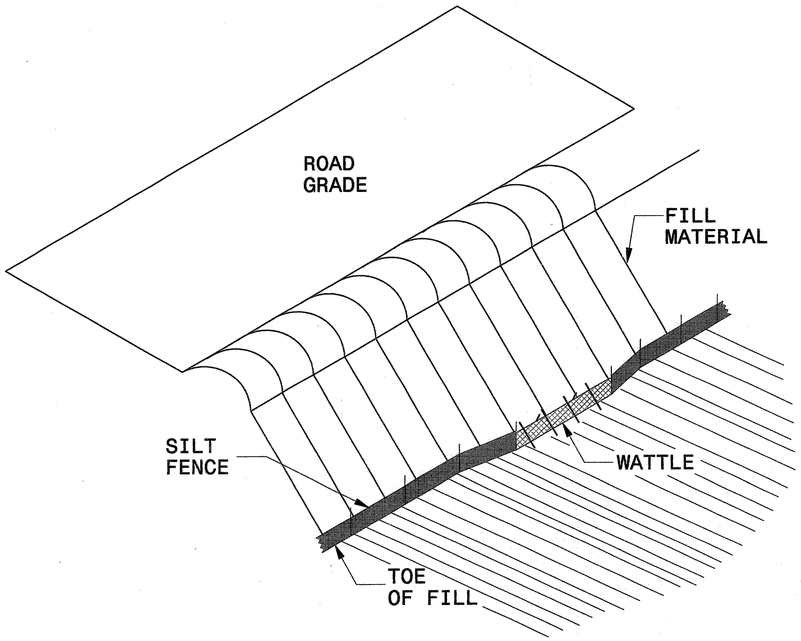




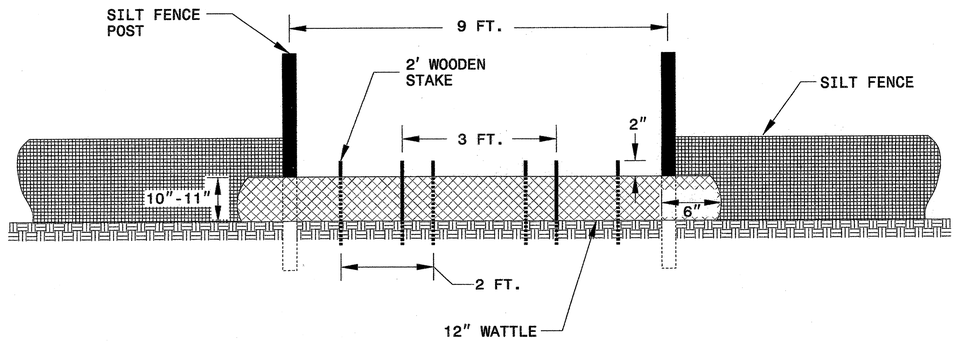
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

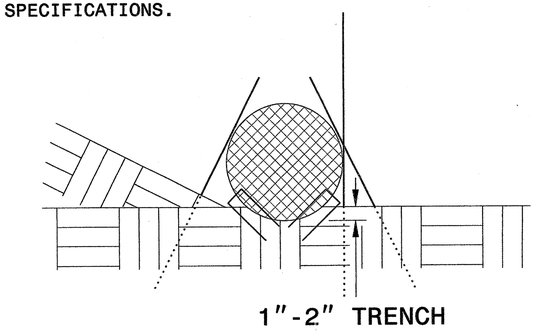
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

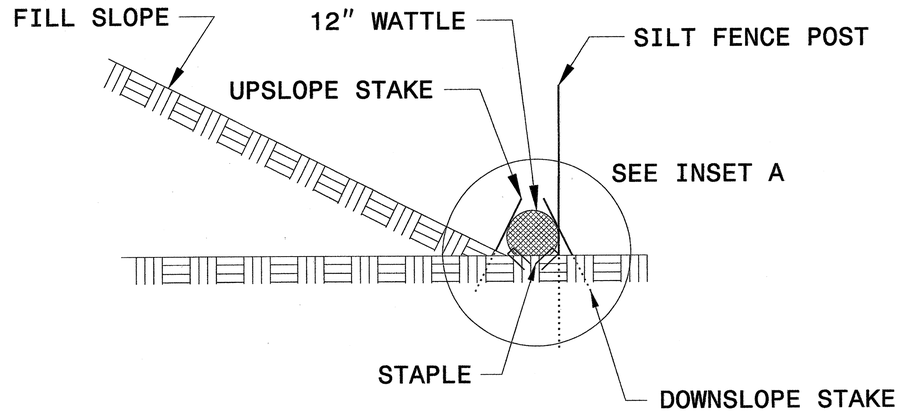
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



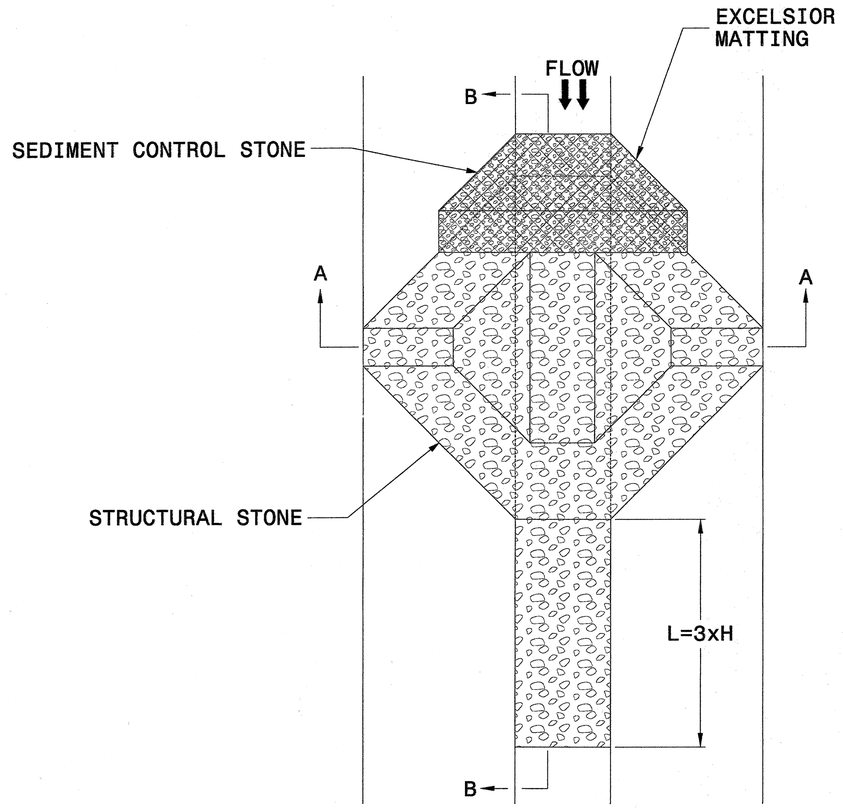


SIDE VIEW

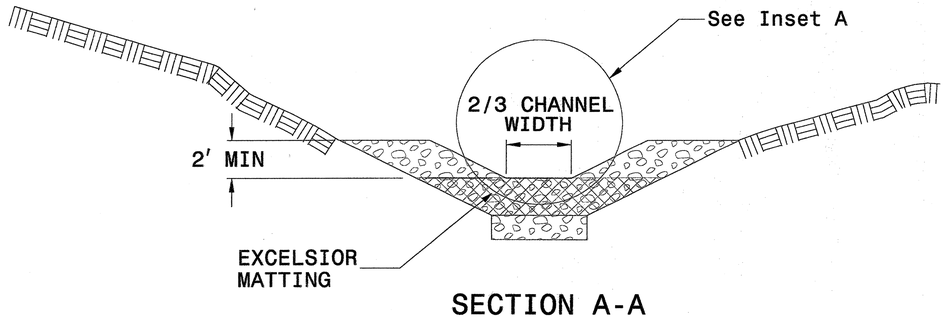
DGN 0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-2C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN



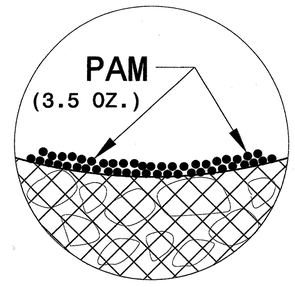
SECTION A-A

NOTES

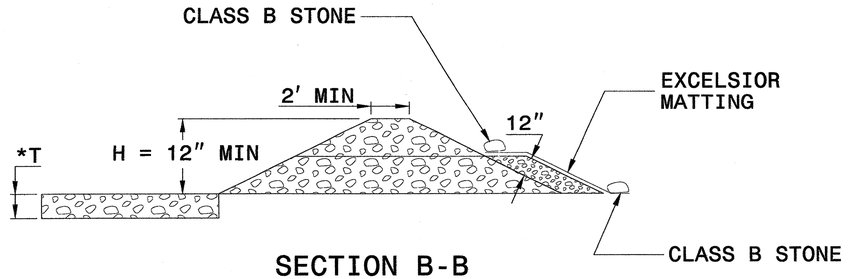
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

*T = 12" MIN., 18" MAX.

NOT TO SCALE

0302DEL_P12

DGN

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4 & 5	–L–	11+27	11+65	LT	55
4 & 5	–L–	11+65	13+04	LT	145
5	–Y1–	11+00	11+23	LT	15
5	–Y1–	11+23	12+00	LT	55
7	–Y4–	12+54	13+00	RT	55
7	–Y4–	13+00	13+50	RT	45
7	–Y4–	13+50	13+84	RT	35
7	–Y4–	14+71	15+25	LT	60
7	–Y4–	15+25	15+55	LT	30
8	–L–	27+71	28+00	RT	30
8	–L–	28+94	29+65	LT	75
8	–L–	29+65	30+50	LT	65
8 & 9	–L–	31+00	35+00	LT	285
8	–L–	29+50	29+82	RT	30
8	–L–	29+82	31+50	RT	175
9	–L–	32+00	34+40	RT	230
TK–4	–MAIN1DET–	8907+00	8912+00	RT	360
TK–7	–MAIN1DET–	8924+00	8932+80	RT	630
TK–11	–MAIN1–	8908+50	8912+50	RT	290
TK–12	–MAIN1–	8909+00	8913+50	LT	325
TK–13	–MAIN1–	8913+00	8915+00	RT	150
TK–13	–MAIN1–	8917+50	8932+80	RT	1,090
			SUBTOTAL		4,230
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					14,410
				TOTAL	18,640
				SAY	18,850

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	–L–	13+55	13+70	RT	10
5	–L–	13+55	14+04	RT	40
8	–L–	30+50	31+00	LT	40
8	–L–	31+50	32+00	RT	55
			SUBTOTAL		145
	ADDITIONAL PSRM	NEEDED PER HYDRAULICS UNIT			625
				TOTAL	770
				SAY	810

0302DEL_P12

DGN

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-3A
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

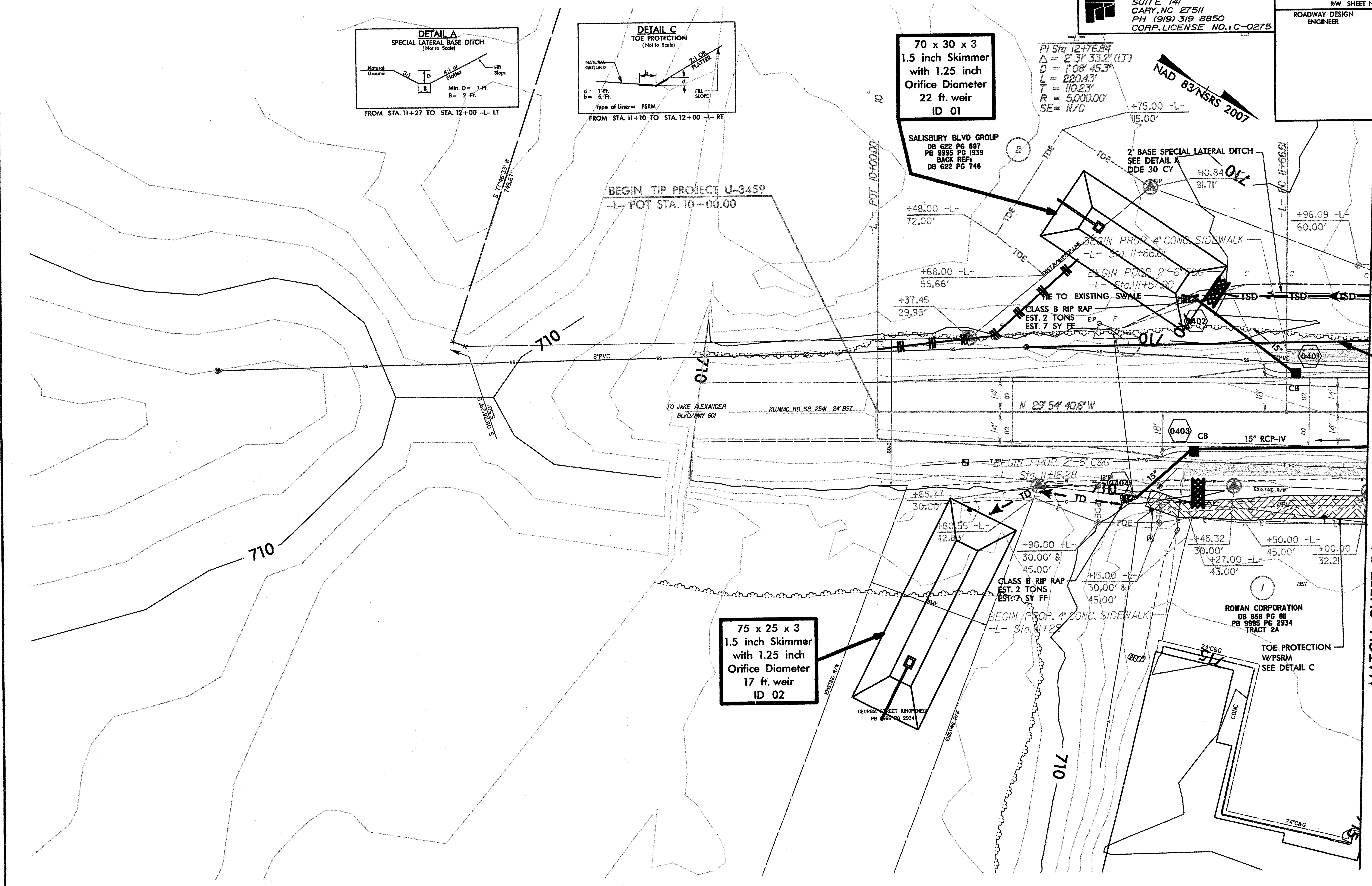
SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

0302DEL_P12

DGN

TGS ENGINEERS	PROJECT REFERENCE NO.	SHEET NO.
TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275	U-3459	EC-4/CONST. 4
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



MATCH SHEET EC-5 STA. -L- 12+00.00

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

DGN 0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

MATCH SHEET EC-4 STA. -L- 12+00.00

MATCH SHEET EC-6 STA -L- 17+00.00

NAD 83/NSRS 2007

-L-
PI Sta 12+76.84
Δ = 2° 31' 33.2" (LT)
D = 1° 08' 45.3"
L = 220.43'
T = 110.23'
R = 5,000.00'
SE = N/C

-Y1-
PI Sta 11+11.23
Δ = 66° 54' 57.9" (LT)
D = 45° 50' 11.8"
L = 145.99'
T = 82.60'
R = 125.00'

-L- POT 15+41.83 =
-Y1- POT 10+00.00

-Y1- PC 10+28.63

-Y1- PT 11+74.62

DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 3:1, D, B, 3:1 or Flatter, Front Slope
Min. D= 1 Ft.
B= 2 Ft.
FROM STA. 12+00 TO STA. 13+04 -L- LT

DETAIL B
SPECIAL LATERAL "V" DITCH
(Not to Scale)
Natural Ground, 2:1, D, 3:1 or Flatter, Fill Slope
Min. D= 1 Ft.
FROM STA. 13+32 TO STA. 14+04 -Y1- LT
FROM STA. 11+00 TO STA. 12+00 -Y1- LT

DETAIL J
STANDARD "V" DITCH
(Not to Scale)
Natural Ground, 2:1, D, 2:1, Natural Ground
Min. D= 1 Ft.
FROM STA. 13+55 TO STA. 13+70

DETAIL C
TOE PROTECTION
(Not to Scale)
NATURAL GROUND, b, d, 2:1 OR FLATTER, FILL SLOPE
d= 1 Ft.
b= 5 Ft.
Type of Liner= PSRM
FROM STA. 12+00 TO STA. 12+50 -L- RT

PROPOSED 8" GRAVITY SEWER LINE

2' BASE SPECIAL LATERAL DITCH SEE DETAIL A DDE 70 CY

CLASS B RIP RAP EST. 5 TONS EST. 14 SY FF

+00.00 -L- 70.00'
+87.04 -L- 40.00'
+87.04 -L- 30.00'
+45.00 -L- 30.00'
+74.07 -L- 30.00'
+00.00 -L- 55.00'
+21.17 -L- 30.00'
+15.37 -L- 40.00'
+74.62 -Y1- 40.00'
+30.29 -Y1- 40.00'
+38.20 36.60'
+57.00 -L- 47.00'
+00.00 32.21'
+83.65 -L- 45.00'
+32.60 58.08'
+58.07 65.93'

PROP. 4" CONC. SIDEWALK
PROP. 2'-6" C&G

SALISBURY BLVD GROUP
DB 622 PG 897
PB 9995 PG 1939
BACK REFS
DB 622 PG 746

ROWAN CORPORATION
DB 858 PG 81
PB 9995 PG 2934
TRACT 2A

MERRITT-INNES INC
DB 773 PG 285
PB 9995 PG 2934
TRACT 1

TOE PROTECTION W/PSRM SEE DETAIL C

HEAD V DITCH SEE DETAIL J DDE 10 CY

SPECIAL LATERAL V DITCH SEE DETAIL B

OBLITERATE EXIST. PAVEMENT

REMOVE 18" RCP

RETAIN 15" RCP

REMOVE 15" RCP

24" RCP-IV
15" RCP-IV
18" RCP-IV

CB 0501 0502 0503 0504 0505 0507 0508 0509 0510 0511 0512 0513 0514

2GI

WATER VAULT

BM*30
-BYI- STA. 11+61.02
51.21' RT
ELEV. 721.84'

END CONSTRUCTION
-Y1- POT STA. 12+25.00

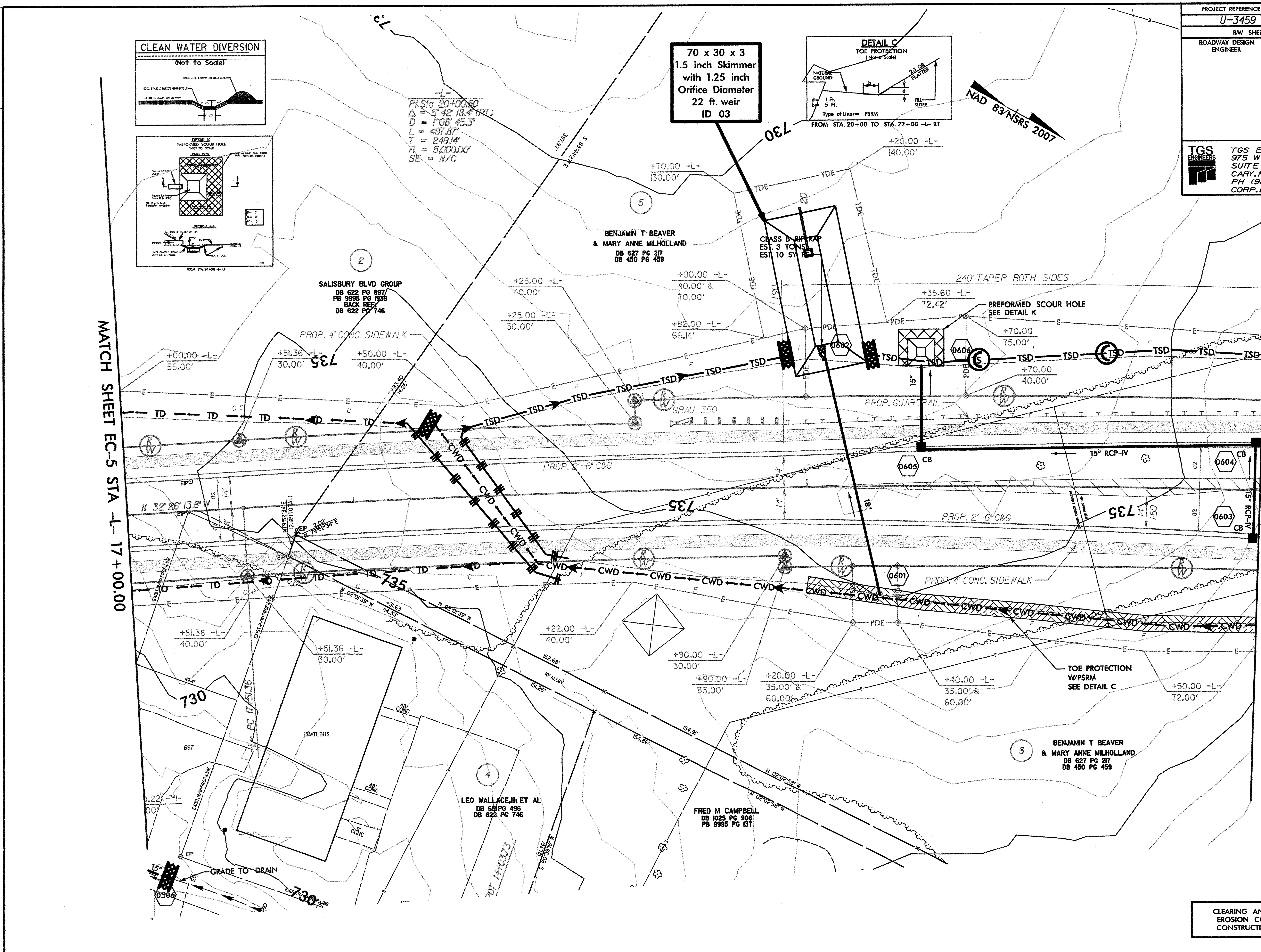
N 32° 26' 13.8" W
N 57° 33' 46.9" E
N 9° 21' 13.1" W
S 80° 04' 01" W

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-6/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

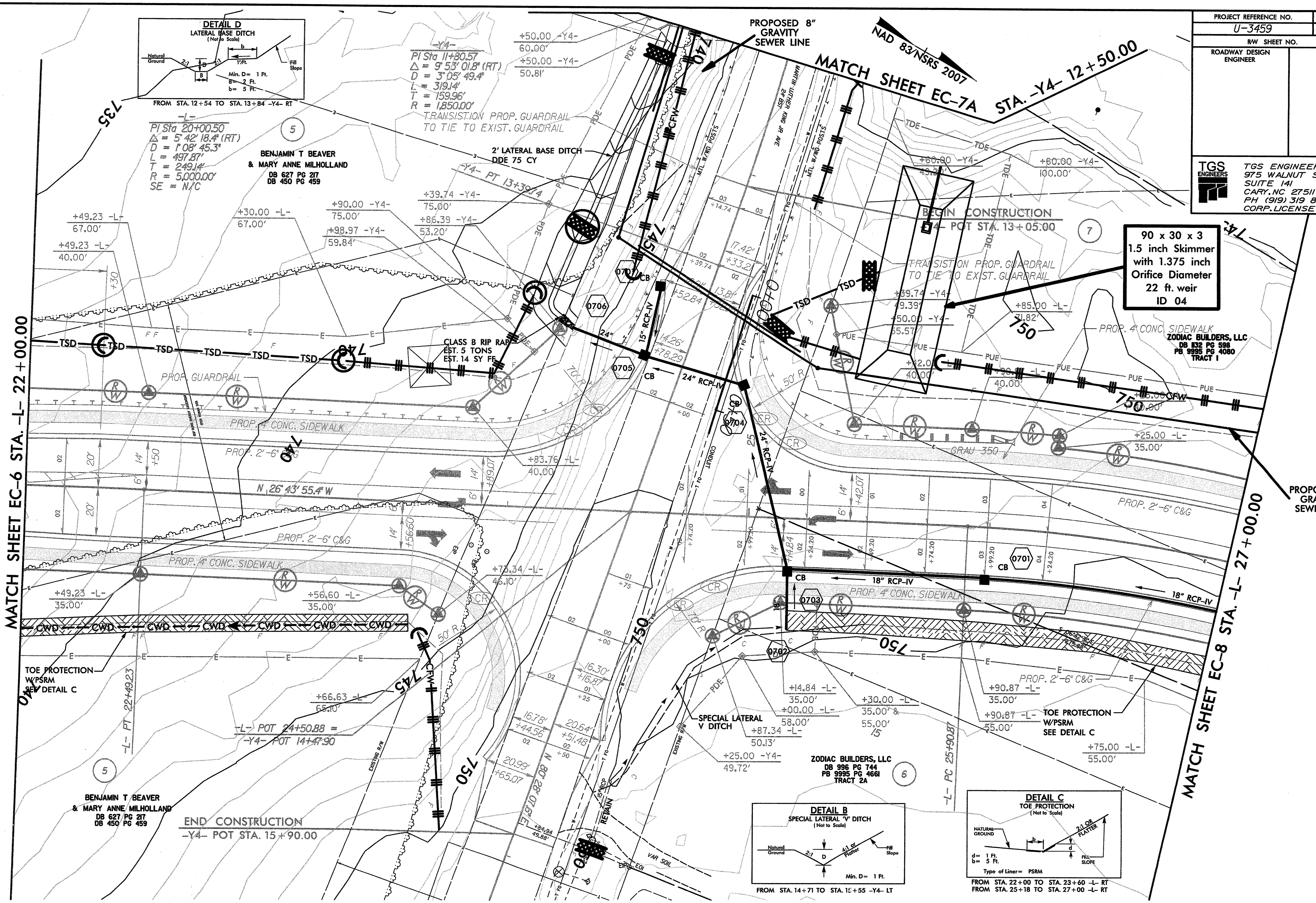


CLEAN WATER DIVERSION
(Not to Scale)
DETAIL K
PREFORMED SCOUR HOLE
NOT TO SCALE
70 x 30 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
22 ft. weir
ID 03
DETAIL C
TOE PROTECTION
(Not to Scale)
NATURAL GROUND
2:1 OR FLATTER
FILL SLOPE
d= 1 Ft.
b= 5 Ft.
Type of Liner= PSRM
FROM STA. 20+00 TO STA. 22+00 -L- RT
NAD 83/NSRS 2007
-L-
PI Sta 20+00.50
Δ = 5° 42' 18.4" (RT)
D = 1°08' 45.3"
L = 497.87'
T = 249.14'
R = 5,000.00'
SE = N/C
BENJAMIN T BEAVER
& MARY ANNE MILHOLLAND
DB 627 PG 217
DB 450 PG 459
SALISBURY BLVD GROUP
DB 622 PG 897
PB 9995 PG 1939
BACK REF.
DB 622 PG 746
CLASS B RIP RAP
EST. 3 TONS
EST. 10 SY FF
PREFORMED SCOUR HOLE
SEE DETAIL K
240' TAPER BOTH SIDES
PROP. 4" CONC. SIDEWALK
PROP. GUARDRAIL
PROP. 2'-6" C&G
15" RCP-IV
TOE PROTECTION
W/PSRM
SEE DETAIL C
MATCH SHEET EC-5 STA -L- 17+00.00
MATCH SHEET EC-7 STA. -L- 22+00.00
LEO WALLACE,III; ET AL
DB 65 PG 496
DB 622 PG 746
FRED M CAMPBELL
DB 1025 PG 906
PB 9995 PG 137
GRADE TO DRAIN
ISMTLBUS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

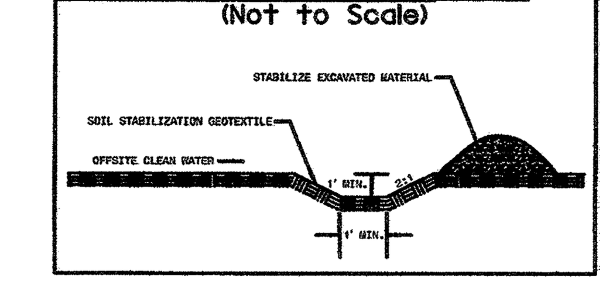
PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-7/CONST.7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

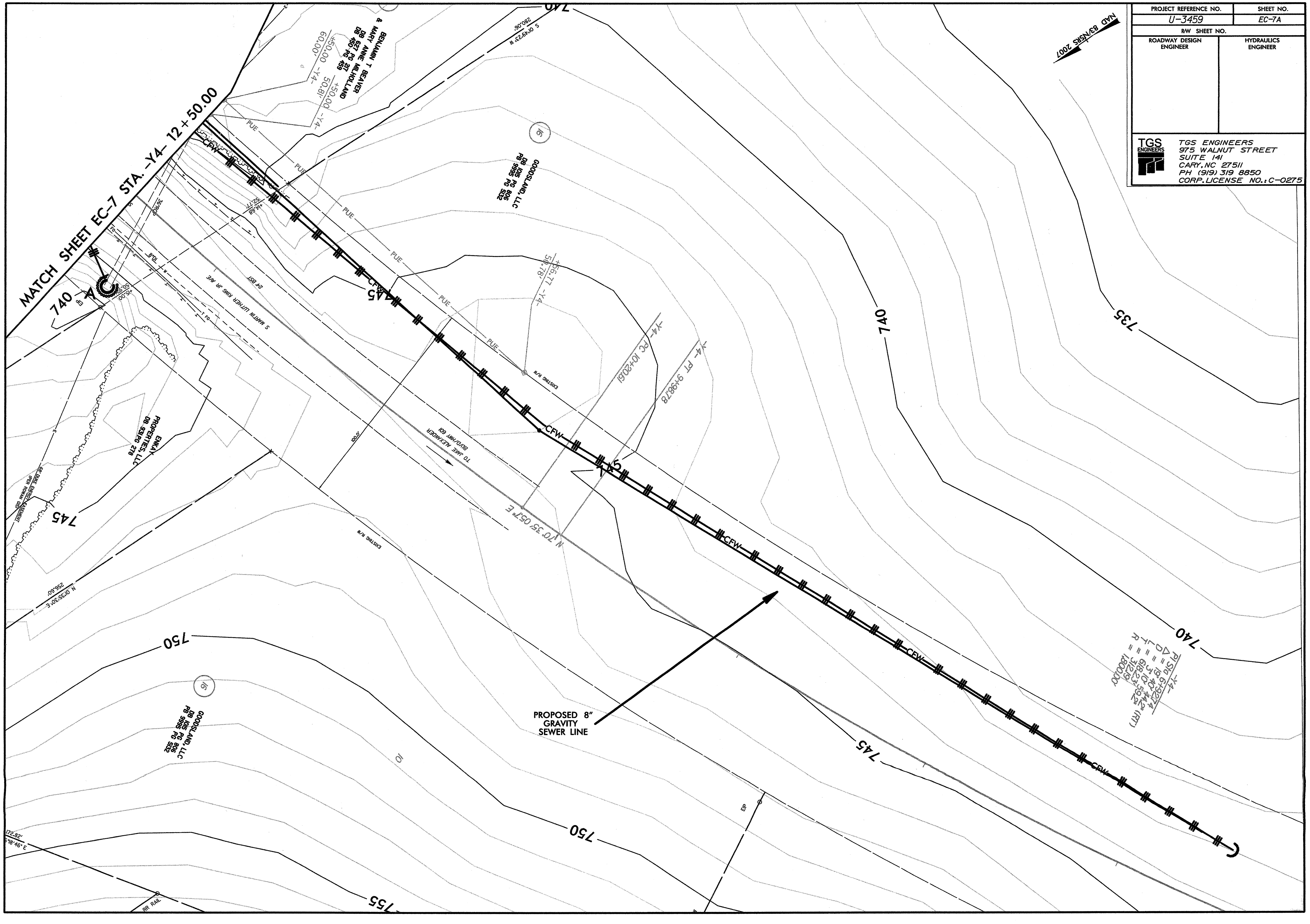


MATCH SHEET EC-7A STA. -Y4- 12+50.00
NAD 83/NSRS 2007
MATCH SHEET EC-6 STA. -L- 22+00.00
MATCH SHEET EC-8 STA. -L- 27+00.00
PROPOSED 8" GRAVITY SEWER LINE
DETAIL D
LATERAL BASE DITCH
(Not to Scale)
FROM STA. 12+54 TO STA. 13+84 -Y4- RT
BENJAMIN T BEAVER & MARY ANNE MILHOLLAND
DB 627 PG 217
DB 450 PG 459
2' LATERAL BASE DITCH
DDE 75 CY
CLASS B RIP RAP
EST. 5 TONS
EST. 14 SY FF
BEGIN CONSTRUCTION
-Y4- POT STA. 13+05.00
90 x 30 x 3
1.5 inch Skimmer
with 1.375 inch
Orifice Diameter
22 ft. weir
ID 04
TRANSISTION PROP. GUARDRAIL TO TIE TO EXIST. GUARDRAIL
PROP. 4' CONC. SIDEWALK
PROP. 2'-6" C&G
PROP. GUARDRAIL
ZODIAC BUILDERS, LLC
DB 832 PG 598
PB 9995 PG 4080
TRACT 1
N 26°43' 55.4" W
TOE PROTECTION W/PSRM SEE DETAIL C
SPECIAL LATERAL V DITCH
ZODIAC BUILDERS, LLC
DB 996 PG 744
PB 9995 PG 4661
TRACT 2A
END CONSTRUCTION
-Y4- POT STA. 15+90.00
-L- POT 24+50.88 = -Y4- POT 14+47.90
DETAIL B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
FROM STA. 14+71 TO STA. 15+55 -Y4- LT
DETAIL C
TOE PROTECTION
(Not to Scale)
Type of Liner= PSRM
FROM STA. 22+00 TO STA. 23+60 -L- RT
FROM STA. 25+18 TO STA. 27+00 -L- RT

CLEAN WATER DIVERSION
(Not to Scale)



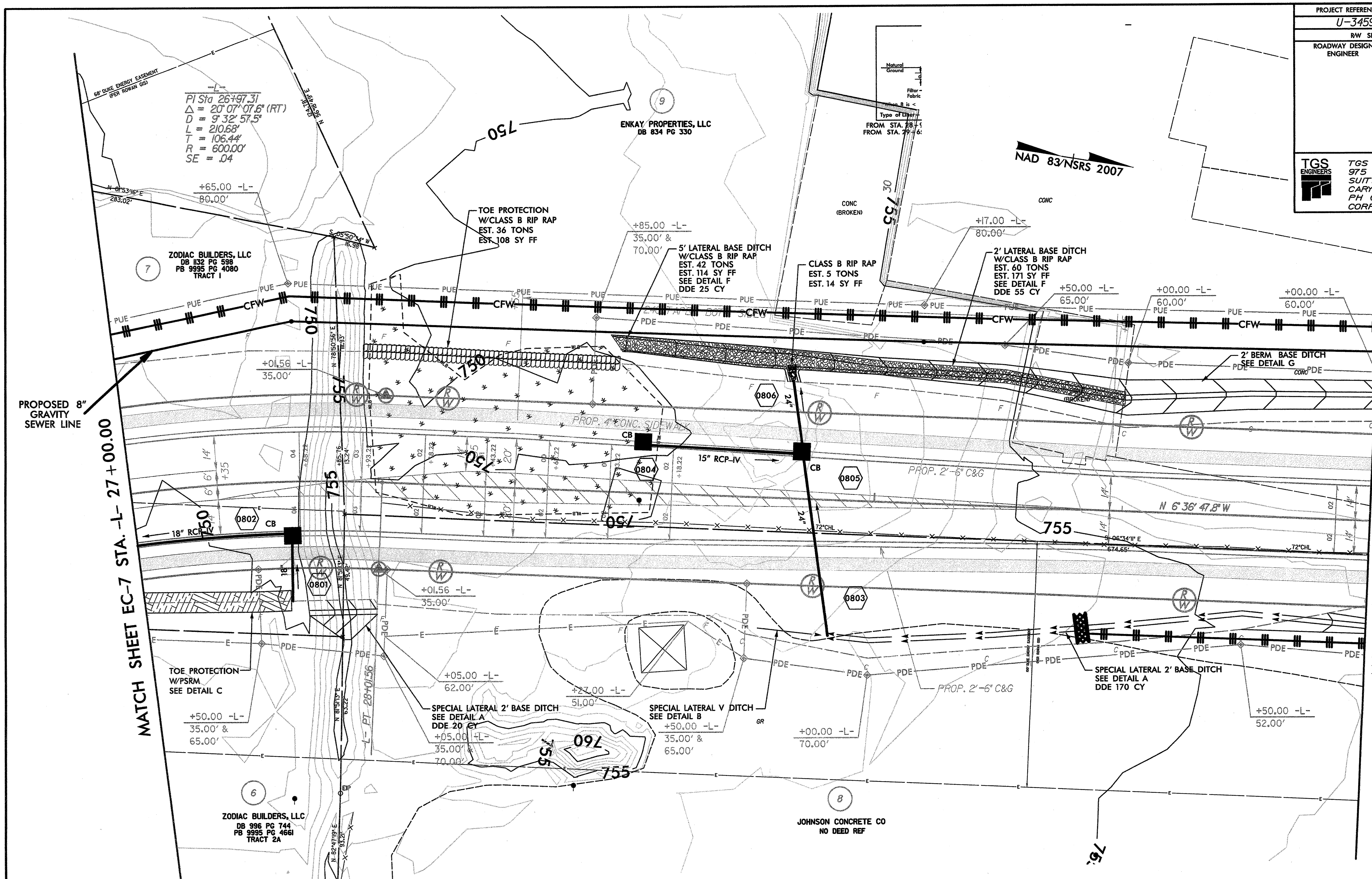
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 7


PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-7A
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
MATCH SHEET EC-7 STA. -Y4- 12+50.00
PROPOSED 8" GRAVITY SEWER LINE
BENJAMIN T BEAVER & MARY ANNE MILHOLLAND
GOODSLAND, LLC
EMKAY PROPERTIES, LLC
S MARTIN LUTHER KING JR AVE
N 70°35'05.7" E
EXISTING R/W
PUE
CFW
735
740
745
750
755

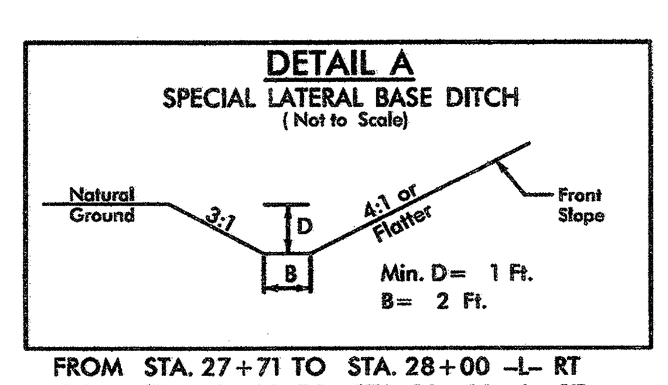
0302DEL_P12

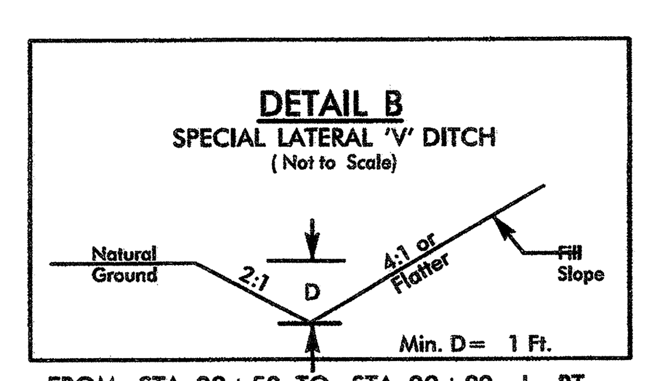
PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-8/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

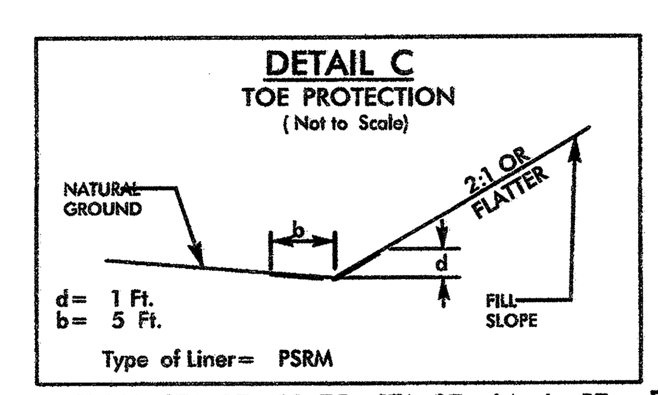
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

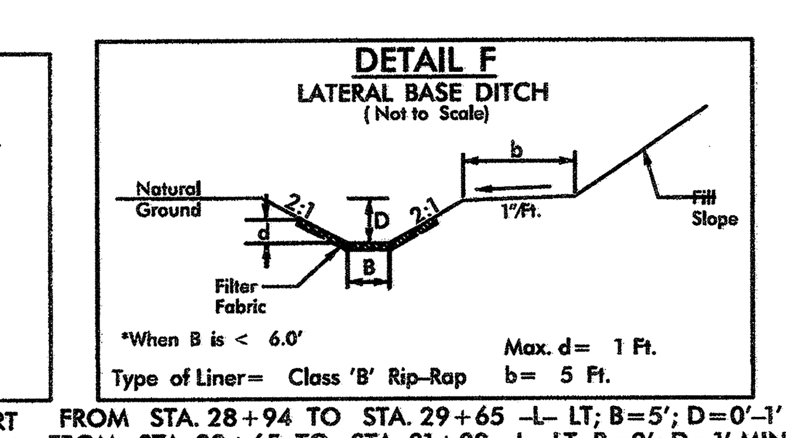


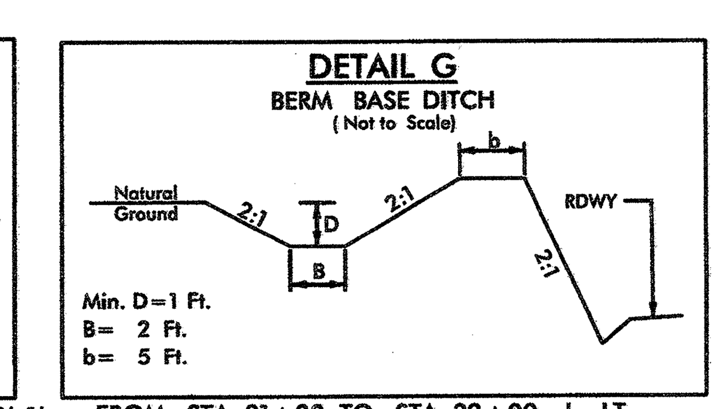
MATCH SHEET EC-7 STA. -L- 27+00.00
MATCH SHEET EC-9 STA. -L- 32+00.00
NAD 83/NSRS 2007
68' DUKE ENERGY EASEMENT (PER ROWAN GIS)
-L-
PI Sta 26+97.31
Δ = 20° 07' 07.6" (RT)
D = 9° 32' 57.5"
L = 210.68'
T = 106.44'
R = 600.00'
SE = .04
ENKAY PROPERTIES, LLC
DB 834 PG 330
ZODIAC BUILDERS, LLC
DB 1132 PG 598
PB 9995 PG 4080
TRACT 1
ZODIAC BUILDERS, LLC
DB 996 PG 744
PB 9995 PG 4661
TRACT 2A
JOHNSON CONCRETE CO
NO DEED REF
TOE PROTECTION
W/CLASS B RIP RAP
EST. 36 TONS
EST. 108 SY FF
5' LATERAL BASE DITCH
W/CLASS B RIP RAP
EST. 42 TONS
EST. 114 SY FF
SEE DETAIL F
DDE 25 CY
CLASS B RIP RAP
EST. 5 TONS
EST. 14 SY FF
2' LATERAL BASE DITCH
W/CLASS B RIP RAP
EST. 60 TONS
EST. 171 SY FF
SEE DETAIL F
DDE 55 CY
2' BERM BASE DITCH
SEE DETAIL G
PROPOSED 8" GRAVITY SEWER LINE
PROP. 4" CONC. SIDEWALK
PROP. 2'-6" C&G
15" RCP-IV
18" RCP
N 6° 36' 47.8" W
TOE PROTECTION
W/PSRM
SEE DETAIL C
SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL A
DDE 20 CY
SPECIAL LATERAL V DITCH
SEE DETAIL B
SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL A
DDE 170 CY
-L- PT 28+01.56
CONC
CONC (BROKEN)





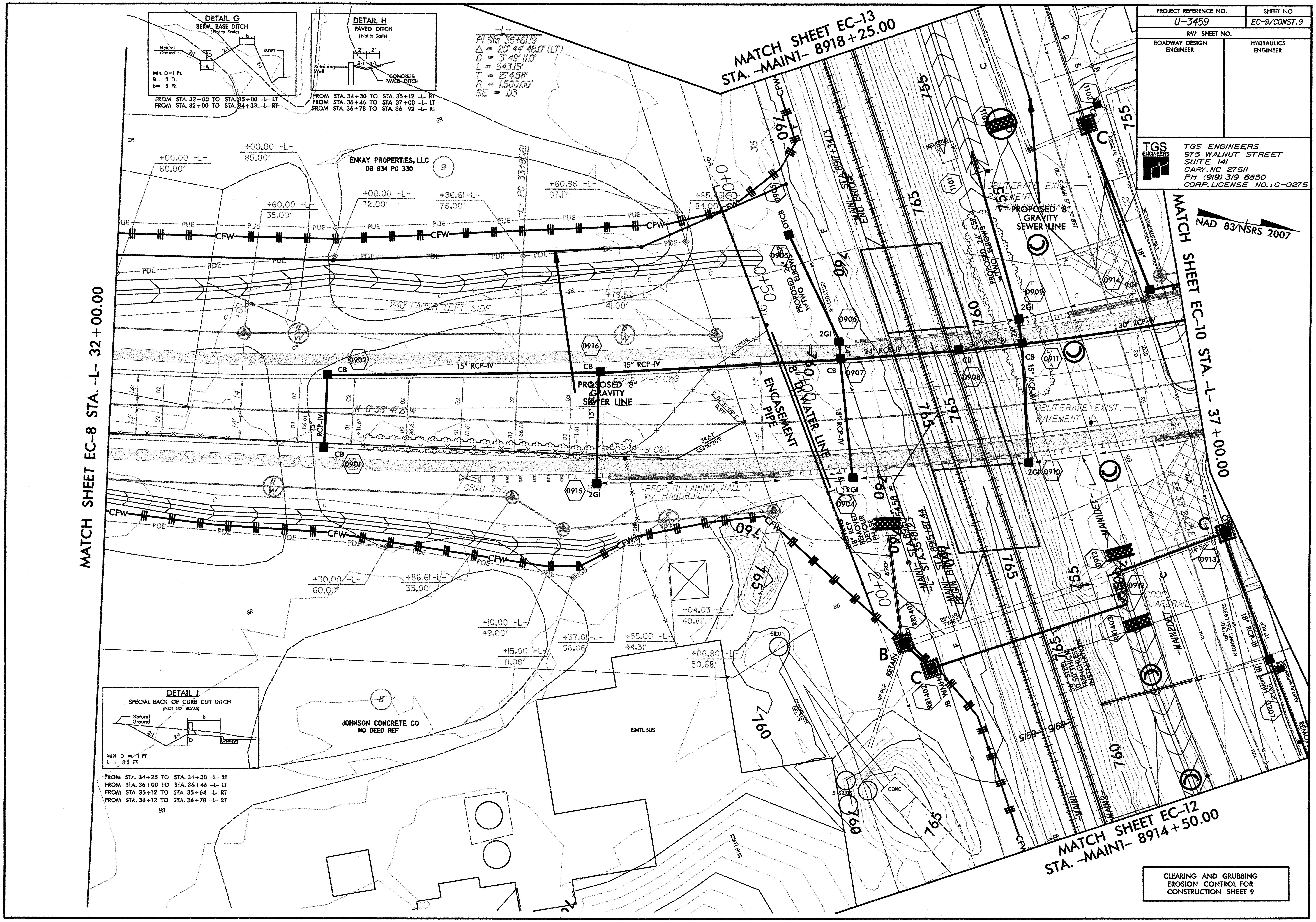






CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

0302DEL_P12



PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-9/CONST.9
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
MATCH SHEET EC-13 STA. -MAIN1- 8918+25.00
MATCH SHEET EC-10 STA. -L- 37+00.00
MATCH SHEET EC-12 STA. -MAIN1- 8914+50.00
MATCH SHEET EC-8 STA. -L- 32+00.00
DETAIL G
BERM BASE DITCH
(Not to Scale)
Natural Ground
Min. D=1 Ft.
B= 2 Ft.
b= 5 Ft.
FROM STA. 32+00 TO STA. 35+00 -L- LT
FROM STA. 32+00 TO STA. 34+33 -L- RT
DETAIL H
PAVED DITCH
(Not to Scale)
Retaining Wall
CONCRETE PAVED DITCH
FROM STA. 34+30 TO STA. 35+12 -L- RT
FROM STA. 36+46 TO STA. 37+00 -L- LT
FROM STA. 36+78 TO STA. 36+92 -L- RT
-L-
PI Sta 36+61.19
Δ = 20° 44' 48.0" (LT)
D = 3° 49' 11.0"
L = 543.15'
T = 274.58'
R = 1,500.00'
SE = .03
ENKAY PROPERTIES, LLC
DB 834 PG 330
240' TAPER LEFT SIDE
PROPOSED 8" GRAVITY SEWER LINE
15" RCP-IV
24" RCP-IV
30" RCP-IV
N 6° 36' 47.8 W
ENCASEMENT PIPE
8" DI WATER LINE
PROP. RETAINING WALL #1 W/ HANDRAIL
GRAU 350
OBLITERATE EXIST. PAVEMENT
PROP. GUARDRAIL
JOHNSON CONCRETE CO
NO DEED REF
DETAIL J
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)
Natural Ground
MIN D = 1 FT
b = 8.3 FT
FROM STA. 34+25 TO STA. 34+30 -L- RT
FROM STA. 36+00 TO STA. 36+46 -L- LT
FROM STA. 35+12 TO STA. 35+64 -L- RT
FROM STA. 36+12 TO STA. 36+78 -L- RT
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 9

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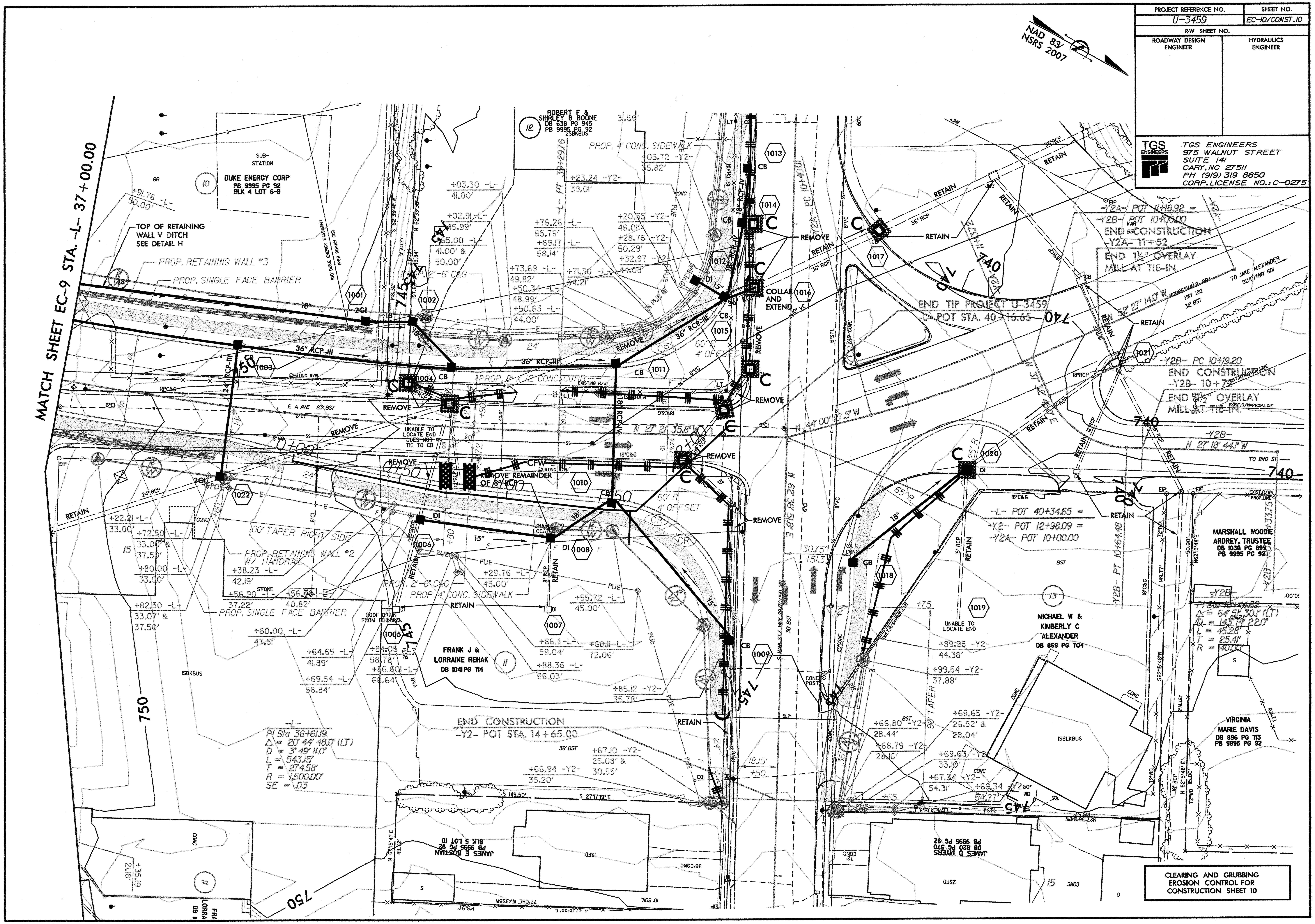
PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-10/CONST.10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER — HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275



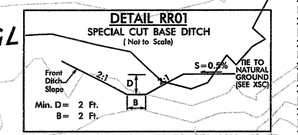
0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-11/CONST.TK11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

-MAIN1- STA. 8904+37.69
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)

DETAIL RR01
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM -MAIN1- STA. 8908+50 TO STA. 8912+50 RT
(SEE XSC AND SHEET RR-22 FOR ELEVATIONS)

-MAIN1- STA. 8908+57.00
BEGIN TRACK CONSTRUCTION
END TRACK TO BE SHIFTED
(CUT AND THROW)

PROPOSED CLASS B RIP RAP
AT CUT/FILL TRANSITION
-MAIN1- STA. 8908+80 +/- LT
EST. CL. B = 10 TONS
EST. FILTER FABRIC = 30 SY

TIE TO DITCH CONSTRUCTED
DURING THE DETOUR PHASE
-MAIN1- STA. 8908+00 +/-

PROPOSED 2' BASE DITCH
(SEE DETAIL TK01 THIS SHEET)

STANDARD 2' BASE DITCH -MAIN1DET- STA. 8907+00 +/- TO 8912+00 +/- RT (SEE TYPICAL SECTIONSHEET TK-2)

MATCH SHEET EC-12 -MAIN1- STA. 8909+00.00

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET TK-11

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-12/CONST.TK12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

MATCH SHEET EC-11 –MAIN1– STA. 8909+00.00

MATCH SHEET EC-9 STA. –MAIN1– 8914+50.00

–MAIN2– STA. 8910+56.00
BEGIN TRACK CONSTRUCTION
END TRACK TO BE SHIFTED
(CUT AND THROW)

DETAIL RR02
SPECIAL CUT BASE DITCH
(Not to Scale)

DETAIL RR01
SPECIAL CUT BASE DITCH
(Not to Scale)

FROM –MAIN1– STA. 8913+00 TO STA. 8915+00 RT
(SEE XSC AND SHEET RR-22 AND RR-23 FOR ELEVATIONS)

FROM –MAIN1– STA. 8908+50 TO STA. 8912+50 RT
(SEE XSC AND SHEET RR-23 FOR ELEVATIONS)

*SEE PLAN SHEETS 9, 11, AND 12 FOR DETAILED DRAINAGE LAYOUT CONNECTIONS WITH ROADWAY SYSTEM

EXISTING AT-GRADE CROSSING TO BE REMOVED

STANDARD 2' BASE DITCH
–MAIN1– STA. 8909+00 +/–
TO 8913+50 +/– LT
(SEE TYPICAL SECTION SHEET RR-2)

PROPOSED 2' BASE DITCH
(SEE DETAIL RR01 THIS SHEET)

PROPOSED 2' BASE DITCH
(SEE DETAIL RR02 THIS SHEET)

PROPOSED 2' BASE DITCH
(SEE DETAIL RR02 ON SHEET

REMOVE TEMP. RCP

REMOVE 8' +/–

RETAIN

DETAIL RR04
FALSE SUMP
(Not to Scale)

–MAIN1– STA. 8915+60 +/– RT
–MAIN1– STA. 8917+55 +/– RT

ARTHUR COMPANY, INC
DB 743 PG 166
PB 9995 PG 381

HOLMES IRON & METAL, INC
DB 780 PG 544

JOHNSON CONCRETE CO
NO DEED REF

CAROLINA PROMATS
REAL ESTATE, LLC
DB 910 PG 575

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET TK-12

NAD 83/NSRS 2007

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-13/CONST.TK14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

NAD 83/NSRS 2007

MATCH SHEET EC-9
STA. -MAIN1- 8918+25.00

MATCH SHEET EC-14 -MAIN1- STA. 8923+75.00

DETAIL RR01
SPECIAL CUT BASE DITCH
(Not to Scale)

DETAIL RR03
SPECIAL CUT BASE DITCH
(Not to Scale)

FROM -MAIN1- STA. 8917+50 TO STA. 8923+08.87
(SEE XSC AND SHEET RR-23 FOR ELEVATIONS)

FROM -MAIN1- STA. 8923+08.87 TO STA. 8925+80.87
(SEE XSC AND SHEET RR-23 AND RR-24 FOR ELEVATIONS)

-MAIN2- STA. 8920+90.00
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)

-MAIN1- STA. 8923+42.00
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)

-MAIN1-TS 8922+49.49

-MAIN2-TS 8922+50.77

PROPOSED 2' BASE DITCH
(SEE DETAIL RR01 ON THIS SHEET)

PROPOSED 2' BASE DITCH
(SEE DETAIL RR03 ON THIS SHEET)

PROPOSED 8" GRAVITY SEWER LINE

-Y3B POT 10+00.00 =
-Y3C- POT 10+00.00

REMOVE TEMP. 2GI

FILL 8" PIPE

REMOVE NSSG 2GI W

TO CHARLOTTE

TO GREENSBORO

-MAIN1-

-MAIN2-

CFW

CONC RAMP

36' MTL RAIL

EXISTING RAILROAD R/W

UNABLE TO LOCATE END

10' BST

ENKAY PROPERTIES, LLC
DB 834 PG 330

THERMOID, INC
DB 636 PG 357
PARCELS 1-3

ROMULUS E & ETTA P HOFFMAN
DB 1016 PG 672
PB 9995 PG 92

HEATHER THOMAS
DB 1026 PG 985
PB 9995 PG 92

JEFFREY J BAME
DB 889 PG 60
PB 9995 PG 92

DEBRA H. ELLISON
DB 952 PG 817
PB 9995 PG 92

LD PROP.
DB 961 PG
PB 9995

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET TK-14

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-14/CONST.TK15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

NAD 83/NSRS 2007

MATCH SHEET EC-13 -MAIN1- STA. 8923+75.00

-MAIN1- SC 8925+28.49

-MAIN2- SC 8925+229.77

UNABLE TO LOCATE END

-MAIN1- STA. 8928+79.83
END TRACK TO BE SHIFTED
(CUT AND THROW)

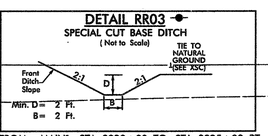
-MAIN2- STA. 8928+90.78
END TRACK TO BE SHIFTED
(CUT AND THROW)

TIE TO DITCH CONSTRUCTED DURING THE DETOUR PHASE
-MAIN1- STA. 8925+00+/-

8' OF EXISTING PIPE REMOVED DURING DETOUR PHASE

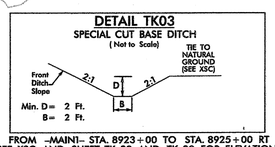
PROPOSED 2' BASE DITCH (SEE DETAIL RR03 ON THIS SHEET)

DETAIL RR03
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM -MAIN1- STA. 8923+00 TO STA. 8925+00 RT
(SEE XSC AND SHEET RR-23 AND RR-24 FOR ELEVATIONS)

DETAIL TK03
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM -MAIN1- STA. 8923+00 TO STA. 8925+00 RT
(SEE XSC AND SHEET TK-22 AND TK-23 FOR ELEVATIONS)

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET TK-15

THERMOID, INC
DB 636 PG 357
PARCELS 1-3

ISBKBUS

TO GREENSBORO

TO CHARLOTTE

EXISTING RAILROAD R/W

EXISTING SWITCH

OLD S MAIN ST 30' BST

E D AVE 24' BST TO MAIN ST

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-15/CONST.RR5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

NAD 83/NSRS 2007

-MAINIDET- TS 8904+37.69
BEGIN TRACK TO BE SHIFTED (CUT AND THROW)

TO GREENSBORO

TO CHARLOTTE

MAINIDET Curve *D101

MAIN2DET Curve *D201

-MAIN2DET-SC 8906+31.98

-MAINIDET-SC 8906+85.69

TIE TO EXISTING SWALE -MAINIDET- STA. 8907+00 +/-

-MAINIDET-CS 8907+75.31

-MAIN2DET-CS 8908+00.79

-MAIN2DET- STA. 8908+25+00
BEGIN TRACK CONSTRUCTION
END TRACK TO BE SHIFTED (CUT AND THROW)

STANDARD 2' BASE DITCH -MAINIDET- STA 8907+00 +/- TO 8912+00 +/- RT SEE TYPICAL SECTION SHEET TK-2)

MATCH SHEET EC-16 -MAINIDET- STA. 8909+00.00

ROMAN COUNTY & CITY OF SALISBURY
DB 867 PG 443

GALDEN MONUMENTS, INC
DB 634 PG 673

HOLMES IRON & METAL, INC
DB 780 PG 544

ARTHUR COMPANY, INC
DB 743 PG 166
PB 9995 PG 381

EXISTING RAILROAD R/W

EXIST.R/W=PROP.LINE

72"CHL W/3SBW

CONC DOCK

ISBKBUS

ISBLK/MTLS

CONC

RETAIN

DETOUR

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-16/CONST.RR6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

MATCH SHEET EC-15 –MAIN1DET– STA. 8909+00.00

MATCH SHEET EC-17 –MAIN1DET– STA. 8914+00.00

*SEE PLAN SHEETS 9, 11, AND 12 FOR DETAILED DRAINAGE LAYOUT CONNECTIONS WITH ROADWAY SYSTEM

–MAIN1DET– STA. 8909+90.00
BEGIN TRACK CONSTRUCTION
END TRACK TO BE SHIFTED
(CUT AND THROW)

EXISTING AT-GRADE CROSSING
TO BE REMOVED

TO GREENSBORO

TO CHARLOTTE

MAIN1DET Curve #D101

MAIN2DET Curve #D201

S 66°54'47.0" W

72"CHL W/3SBW

–MAIN2DET–ST 8910+48.79

–MAIN1DET–ST 8910+23.31

STANDARD 2' BASE DITCH
–MAIN1DET– STA. 8907+00 +/–
TO 8912+29 +/– RT
(SEE TYPICAL SECTION SHEET RR–2)

–MAIN1DET–TS 8912+63.67

–MAIN2DET–TS 8912+63.63

BEG. TEMP. SHORING
–MAIN2DET–
STA. 8913+60.29 –RT

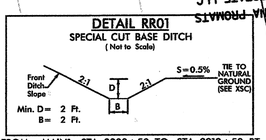
HOLMES IRON & METAL, INC
DB 780 PG 544

JOHNSON CONCRETE CO
NAD 83/NSRS 2007
OLD DEED REF

ARTHUR COMPANY, INC
DB 743 PG 166
PB 9995 PG 381

CAROLINA PROMATS
REAL ESTATE, LLC
DB 910 PG 575

DETAIL RR01
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM –MAIN1– STA. 8908+50 TO STA. 8912+50 RT
(SEE XSC AND SHEET RR-22 FOR ELEVATIONS)

DETOUR

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-17/CONST.RR7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

DETAIL RR04
FALSE SLUMP
(Not to Scale)

S=Ditch Slope ℄ Proposed Ditch

-MAIN1- STA. 8915+60 +/- RT
-MAIN1- STA. 8917+35 +/- RT

MATCH SHEET EC-16 -MAIN1DET- STA. 8914+00.00

MATCH SHEET EC-18 -MAIN1DET- STA. 8919+00.00

ENKAY PROPERTIES, LLC
DB 834 PG 330

PROPOSED 8" GRAVITY SEWER LINE

ENCASEMENT PIPE
8" DI WATER LINE

*SEE PLAN SHEETS 9, 11, AND 12 FOR DETAILED DRAINAGE LAYOUT CONNECTIONS WITH ROADWAY SYSTEM

THE CONTRACTOR SHALL KEEP ANY WATER FROM PONDING EITHER ON THE TRACK BANK OR UNDER THE PROPOSED STRUCTURE DURING THE CONSTRUCTION PHASE. PUMPS AND EROSION CONTROL DEVICES WILL BE REQUIRED.

PIPE HAS BEEN BURIED BY NEW GRADING

BEG. TEMP. SHORING -MAIN1DET- STA. 8915+70, 14'LT

END TEMP. SHORING -MAIN1DET- STA. 8917+42, 14'LT

TO GREENSBORO

TO CHARLOTTE

-MAIN2DET- SC 8915+11.67

-MAIN1DET- SC 8915+11.67

COLLAR AND EXTEND 24" SMOOTH WALL STEEL (0.50" THICK)

-MAIN1DET- CS 8915+85.99

-MAIN2DET- CS 8915+85.95

MAIN1DET Curve *D102

MAIN2DET Curve *D202

REMOVE EXIST. 24" RCP

RR0701 TEMPORARY 18" BCCSP - 12 GAGE (0.079" THICK)

RR0702

RR0703

RR0704 REMOVE

TEMP. 18" PIPE

PROPOSED 8" GRAVITY SEWER LINE

END TEMP. SHORING -MAIN2DET- STA. 8914+70, 34.5'RT

BEG. TEMP. SHORING -MAIN2DET STA. 8917+00, 33.7'RT

-MAIN1DET- ST 8918+33.99

-MAIN2DET- ST 8918+33.95

DUKE ENERGY CORP PB 9995 PG 92 BLK 4 LOT 6-8

DUKE ENERGY CORP PB 9995 PG 92 BLK 4 LOT 6-9

LD PROP., LLC DB 9618 PG 944 PB 9995 PG 92

JEFFREY J BANE DB 919 PG 60 PB 9995 PG 92

NAD 83/NSRS 2007

DETOUR

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-18/CONST.RR8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

MATCH SHEET EC-17 –MAIN1DET– STA. 8919+00.00

MATCH SHEET EC-19 –MAIN1DET– STA. 8924+00.00

NAD 83/NSRS 2007

–MAIN1DET– STA. 8921+00.00
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)

–MAIN1DET– STA. 8922+36.58
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)

–MAIN2DET– STA. 8922+58.94
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)

TO GREENSBORO

TO CHARLOTTE

S 58° 51' 19.9" W

MAINIDET Curve *D103

MAIN2DET Curve *D203

–MAINIDET–CS 8922+94.69

END TEMP. SHORING
–MAIN2DET–
STA. 8921+00, 24.7' RT

–MAINIDET–TS 8920+70.00

–MAIN2DET–TS 8920+62.75

–MAINIDET–SC 8921+94.03

–MAIN2DET–SC 8921+86.75

–MAIN2DET– CS 8922+68.95

–MAIN2DET–ST 8923+92.95

TEMPORARY 1' DEEP, 2' BASE DITCH
~~TRANSITION TO EXISTING DITCH~~
–MAINIDET– STA. 8922+50 +/–
TO STA. 8924+00 +/–
(SEE XSC FOR ELEVATIONS)

PROPOSED 8" GRAVITY SEWER LINE

ENKAY PROPERTIES, LLC
DB 834 PG 330

THERMOID, INC
DB 636 PG 357
PARCELS 1-3

ISMTLBUS

ISBLKBUS

ISBKD

DEBRA H. ELLISON
DB 952 PG 817
PB 9995 PG 92

ROMULUS E. & ETTA P HOFFMAN
DB 1016 PG 672
PB 9995 PG 92

EXISTING RAILROAD R/W

CONC RAMP

CONC

36" MTL RAIL

72" MTL

UNABLE TO LOCATE END

RETAIN

10' BST

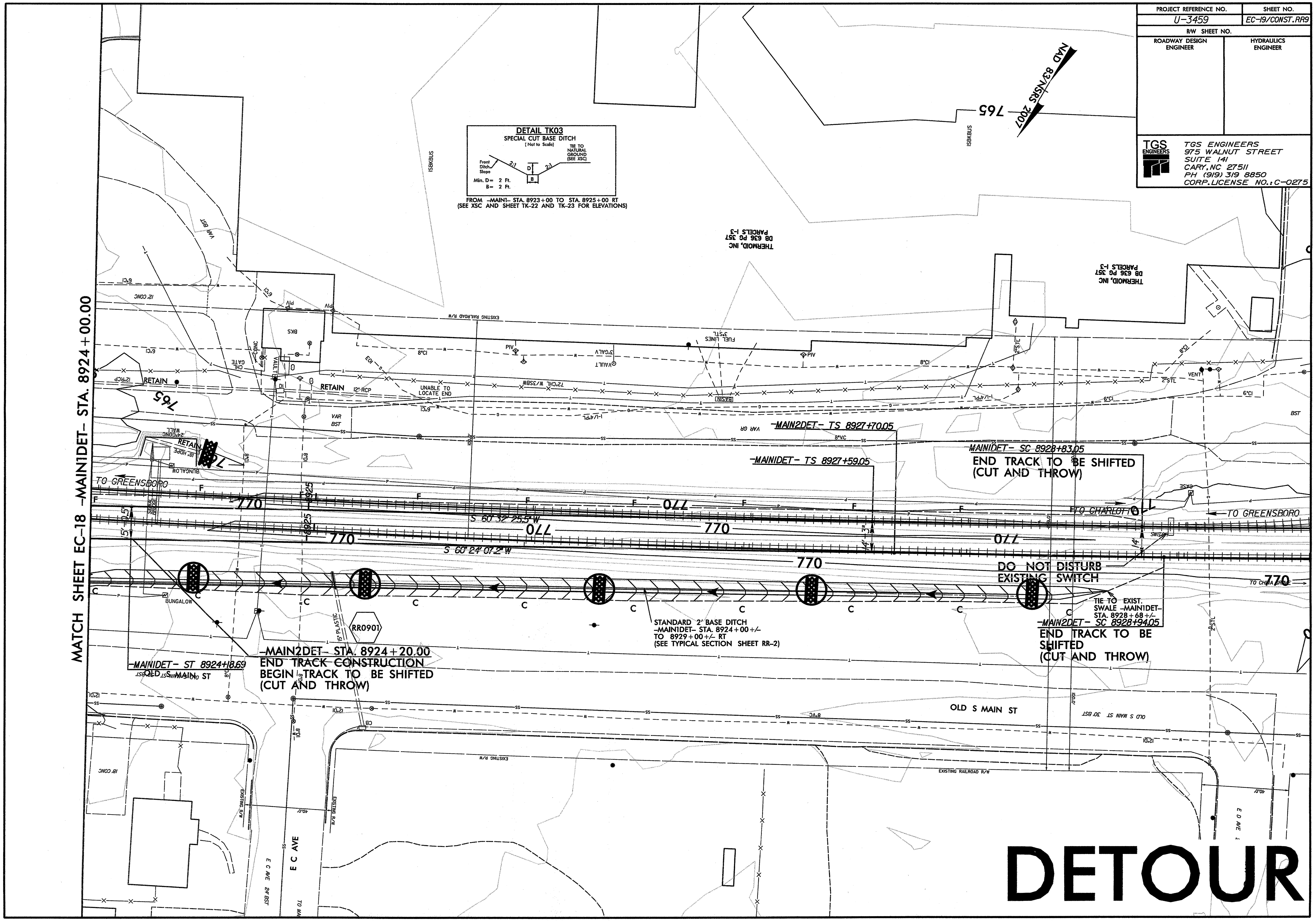
OLD S MAIN ST 30' BST

MAIN ST

TEMP. RGI w/ NSSG RR080

DETOUR

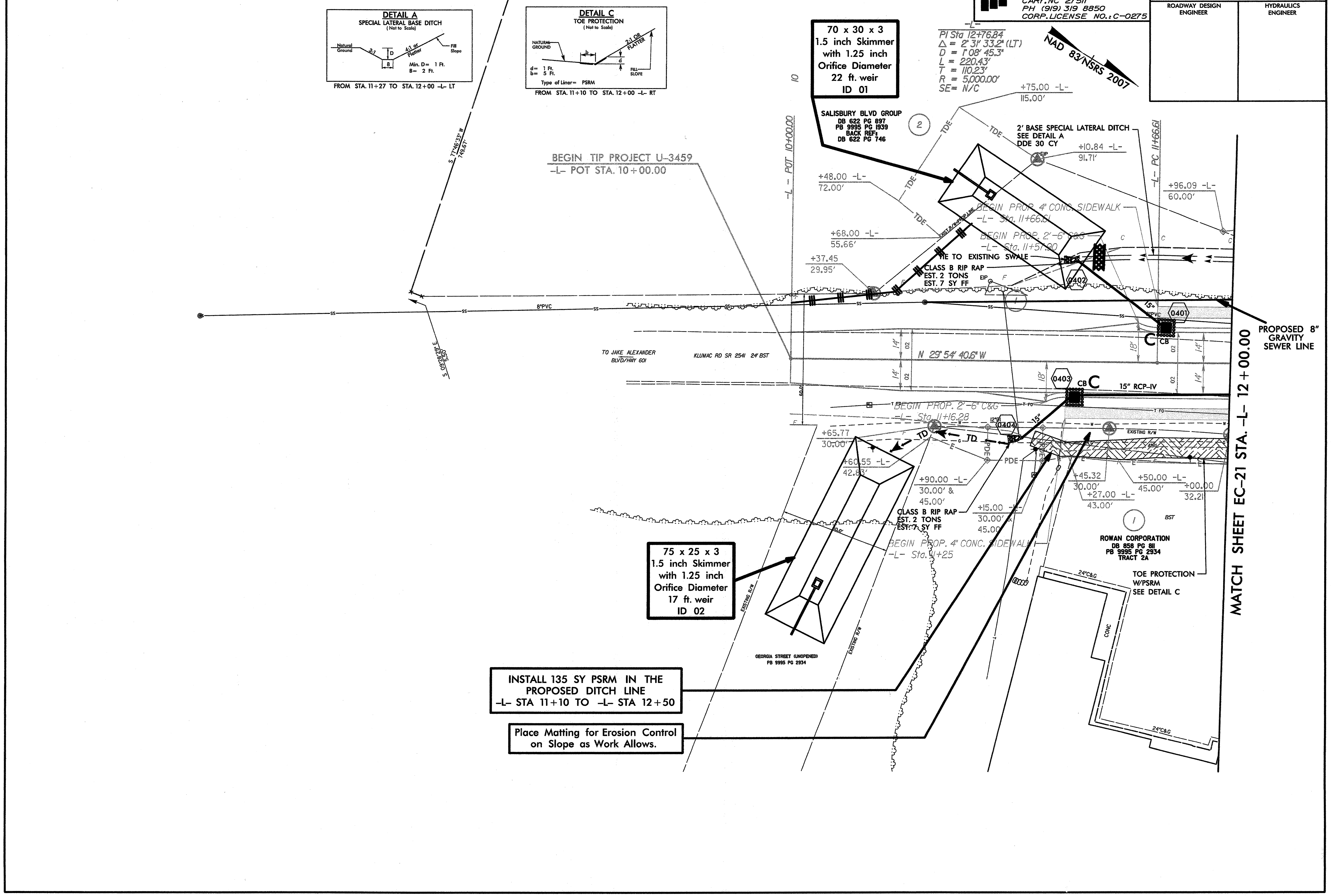
0302DEL_P12


PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-19/CONST.RR9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
DETAIL TK03
SPECIAL CUT BASE DITCH
(Not to Scale)
TIE TO NATURAL GROUND (SEE XSC)
Front Ditch Slope
Min. D= 2 Ft.
B= 2 Ft.
FROM -MAIN1- STA. 8923+00 TO STA. 8925+00 RT
(SEE XSC AND SHEET TK-22 AND TK-23 FOR ELEVATIONS)
THERMOID, INC
DB 636 PG 357
PARCELS I-3
MATCH SHEET EC-18 -MAIN1DET- STA. 8924+00.00
-MAIN2DET- TS 8927+70.05
-MAIN1DET- TS 8927+59.05
-MAIN1DET- SC 8928+83.05
END TRACK TO BE SHIFTED
(CUT AND THROW)
TO GREENSBORO
TO CHARLOTTE
S 60°32'25.5"W
S 60°24'07.2"W
770
765
DO NOT DISTURB
EXISTING SWITCH
TIE TO EXIST. SWALE -MAIN1DET- STA. 8928+68+/-
-MAIN2DET- SC 8928+94.05
END TRACK TO BE SHIFTED
(CUT AND THROW)
STANDARD 2' BASE DITCH
-MAIN1DET- STA. 8924+00+/-
TO 8929+00+/- RT
(SEE TYPICAL SECTION SHEET RR-2)
RR0901
-MAIN2DET- STA. 8924+20.00
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)
-MAIN1DET- ST 8924+18.69
OLD S MAIN ST
E C AVE
EXISTING RAILROAD R/W
RETAIN
UNABLE TO LOCATE END
FUEL LINES
BUNGALOW
DETOUR

0302DEL_P12

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-20/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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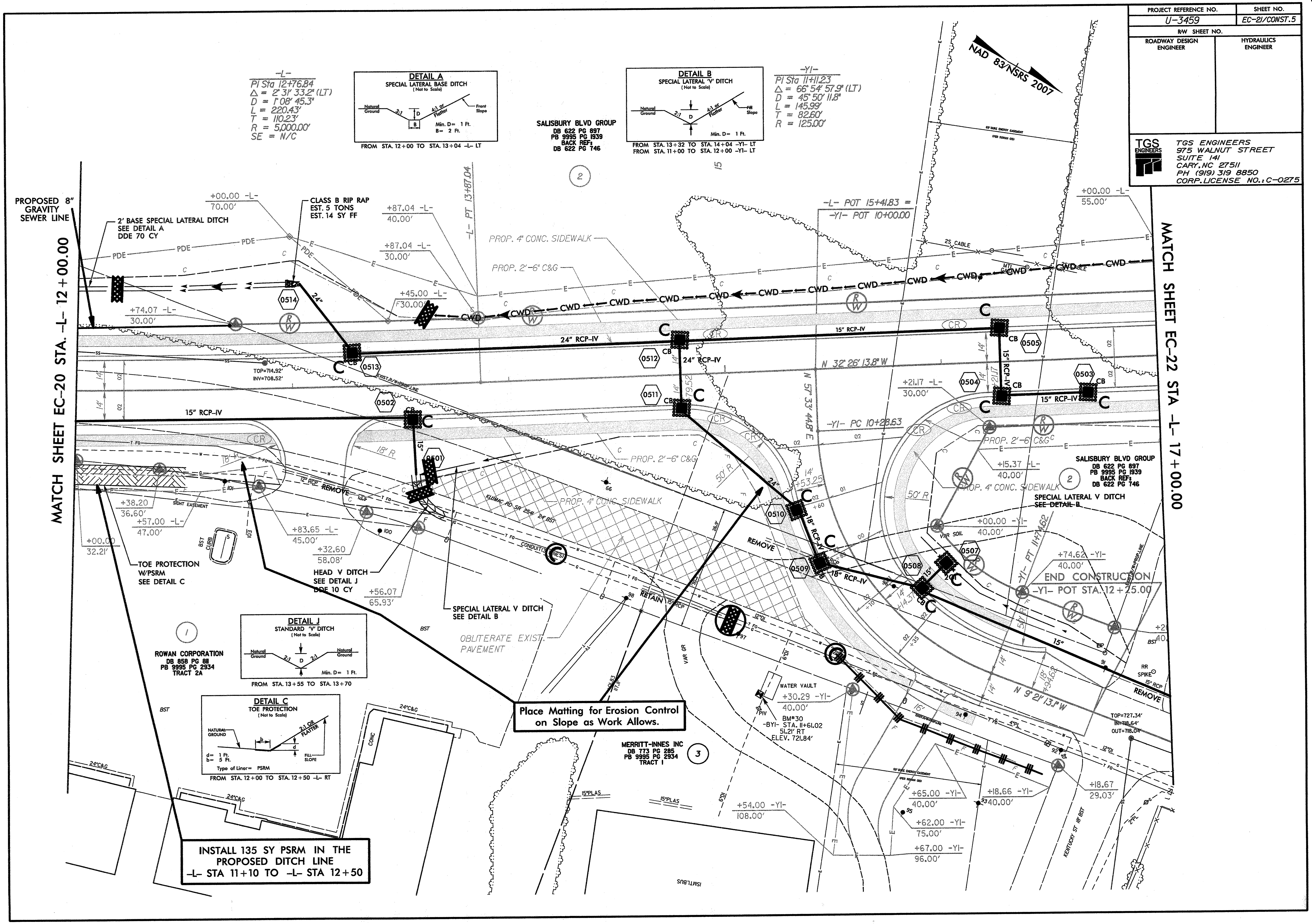
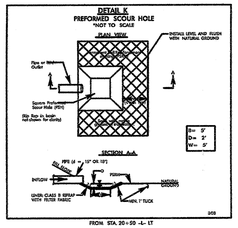

PROJECT REFERENCE NO. U-3459
SHEET NO. EC-21/CONST.5
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
-L- PI Sta 12+76.84 Δ = 2° 31' 33.2" (LT) D = 1° 08' 45.3" L = 220.43' T = 110.23' R = 5,000.00' SE = N/C
DETAIL A SPECIAL LATERAL BASE DITCH (Not to Scale)
Natural Ground
3:1
4:1 or Flatter
Front Slope
Min. D= 1 Ft. B= 2 Ft.
FROM STA. 12+00 TO STA. 13+04 -L- LT
SALISBURY BLVD GROUP DB 622 PG 897 PB 9995 PG 1939 BACK REF: DB 622 PG 746
DETAIL B SPECIAL LATERAL 'V' DITCH (Not to Scale)
Natural Ground
2:1
4:1 or Flatter
Fill Slope
Min. D= 1 Ft.
FROM STA. 13+32 TO STA. 14+04 -Y1- LT
FROM STA. 11+00 TO STA. 12+00 -Y1- LT
-Y1- PI Sta 11+11.23 Δ = 66° 54' 57.9" (LT) D = 45° 50' 11.8" L = 145.99' T = 82.60' R = 125.00'
PROPOSED 8" GRAVITY SEWER LINE
2' BASE SPECIAL LATERAL DITCH SEE DETAIL A DDE 70 CY
CLASS B RIP RAP EST. 5 TONS EST. 14 SY FF
-L- PT 13+87.04
PROP. 4" CONC. SIDEWALK
PROP. 2'-6" C&G
-L- POT 15+41.83 = -Y1- POT 10+00.00
MATCH SHEET EC-20 STA. -L- 12+00.00
MATCH SHEET EC-22 STA -L- 17+00.00
24" RCP-IV
15" RCP-IV
18" RCP-IV
N 32° 26' 13.8" W
N 5° 33' 44.8" E
N 9° 21' 13.1" W
-Y1- PC 10+28.63
TOP=714.92' INV=708.52'
TOP=727.34' IN=718.64' OUT=718.04'
0501 0502 0503 0504 0505 0507 0508 0509 0510 0511 0512 0513 0514
REMOVE
RETAIN
PROP. 2'-6" C&G
PROP. 4" CONC. SIDEWALK
SALISBURY BLVD GROUP DB 622 PG 897 PB 9995 PG 1939 BACK REF: DB 622 PG 746
SPECIAL LATERAL V DITCH SEE DETAIL B
END CONSTRUCTION -Y1- POT STA. 12+25.00
-Y1- PT 11+74.62
TOE PROTECTION W/PSRM SEE DETAIL C
HEAD V DITCH SEE DETAIL J DDE 10 CY
SPECIAL LATERAL V DITCH SEE DETAIL B
OBLITERATE EXIST. PAVEMENT
DETAIL J STANDARD 'V' DITCH (Not to Scale)
Natural Ground
2:1
Min. D= 1 Ft.
FROM STA. 13+55 TO STA. 13+70
ROWAN CORPORATION DB 858 PG 811 PB 9995 PG 2934 TRACT 2A
DETAIL C TOE PROTECTION (Not to Scale)
NATURAL GROUND
2:1 OR FLATTER
FILL SLOPE
d= 1 Ft. b= 5 Ft.
Type of Liner= PSRM
FROM STA. 12+00 TO STA. 12+50 -L- RT
Place Matting for Erosion Control on Slope as Work Allows.
MERRITT-INNES INC DB 773 PG 285 PB 9995 PG 2934 TRACT 1
WATER VAULT
BM#30 -BY1- STA. 11+61.02 51.21' RT ELEV. 721.84'
INSTALL 135 SY PSRM IN THE PROPOSED DITCH LINE -L- STA 11+10 TO -L- STA 12+50

0302DEL_P12

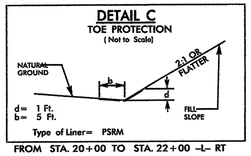
PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-22/CONST.6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

DETAIL K
PREFORMED SCOUR HOLE
*NOT TO SCALE



DETAIL C
TOE PROTECTION
(Not to Scale)



FROM STA. 20+00 TO STA. 22+00 -L- RT

NAD 83/NSRS 2007

70 x 30 x 3
1.5 inch Skimmer
with 1.25 inch
Orifice Diameter
22 ft. weir
ID 03

-L-
PI Sta 20+00.50
△ = 5° 42' 18.4" (RT)
D = 1° 08' 45.3"
L = 497.87'
T = 249.14'
R = 5,000.00'
SE = N/C

Place Matting for Erosion Control on Slope as Work Allows.

MATCH SHEET EC-21 STA -L- 17+00.00

MATCH SHEET EC-23 STA. -L- 22+00.00

(2) SALISBURY BLVD GROUP
DB 622 PG 697
PB 9995 PG 1939
BACK REF:
DB 622 PG 746

(5) BENJAMIN T BEAVER & MARY ANNE MILHOLLAND
DB 627 PG 217
DB 450 PG 459

(4) LEO WALLACE,III; ET AL
DB 651 PG 496
DB 622 PG 746

FRED M CAMPBELL
DB 1025 PG 906
PB 9995 PG 137

CLASS B RIP RAP
EST. 3 TONS
EST. 10 SY

PREFORMED SCOUR HOLE
SEE DETAIL K

240' TAPER BOTH SIDES

PROP. 4" CONC. SIDEWALK

PROP. GUARDRAIL

PROP. 2'-6" C&G

GRAU 350

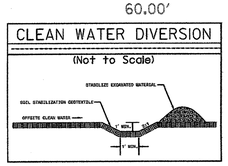
15" RCP-IV

18"

TOE PROTECTION
W/PSRM
SEE DETAIL C

INSTALL 280 SY PSRM IN THE PROPOSED DITCH LINE
-L- STA 20+00 TO -L- STA 23+61

CLEAN WATER DIVERSION
(Not to Scale)



(5) BENJAMIN T BEAVER & MARY ANNE MILHOLLAND
DB 627 PG 217
DB 450 PG 459

ISMTLBUS

-L- PC 17+51.36

-Y1- POT 14+03.73

EXIST.R/W=PROP.LINE

EXIST.R/W=PROP.LINE

10' ALLEY

KLUMAC RD

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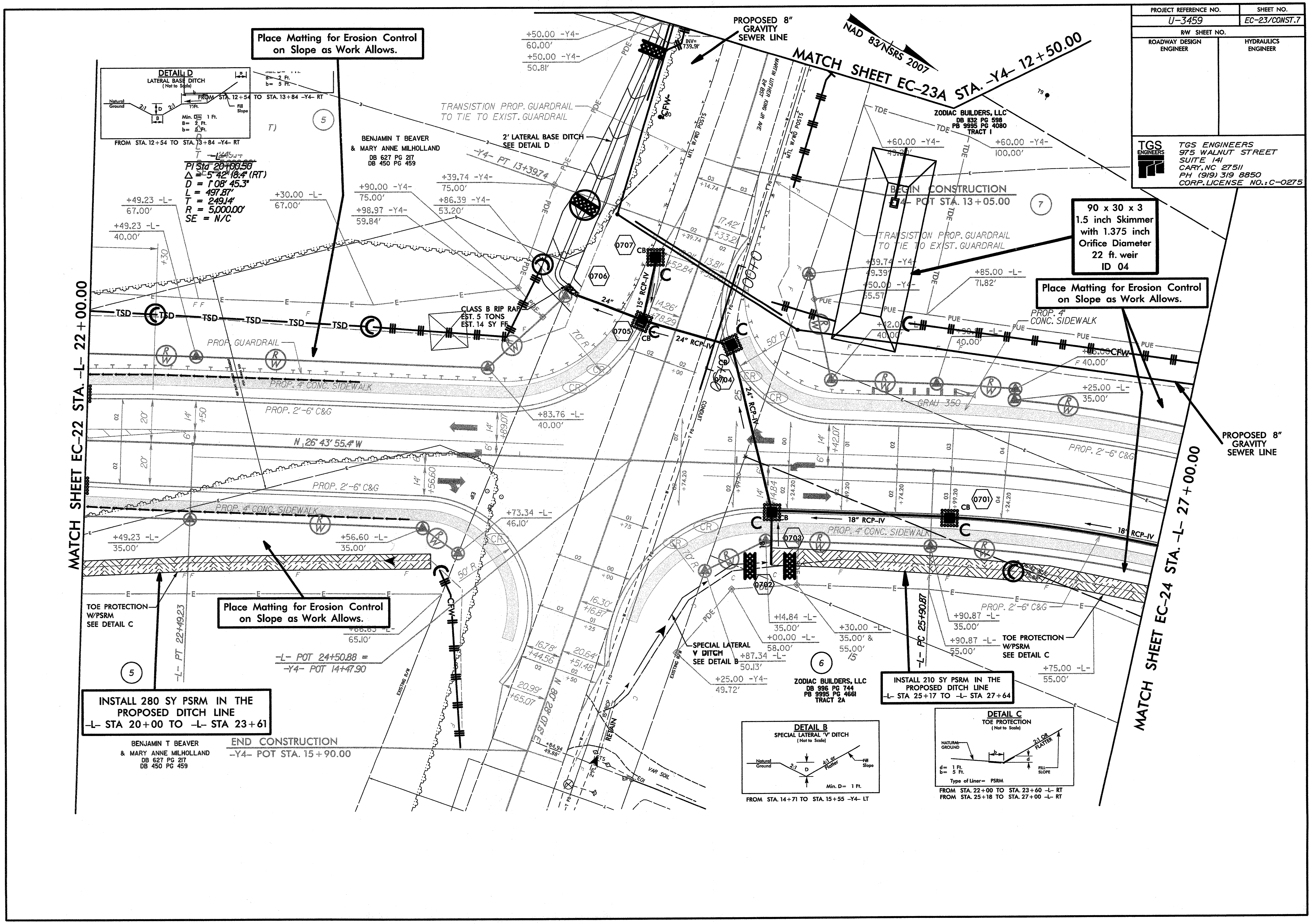
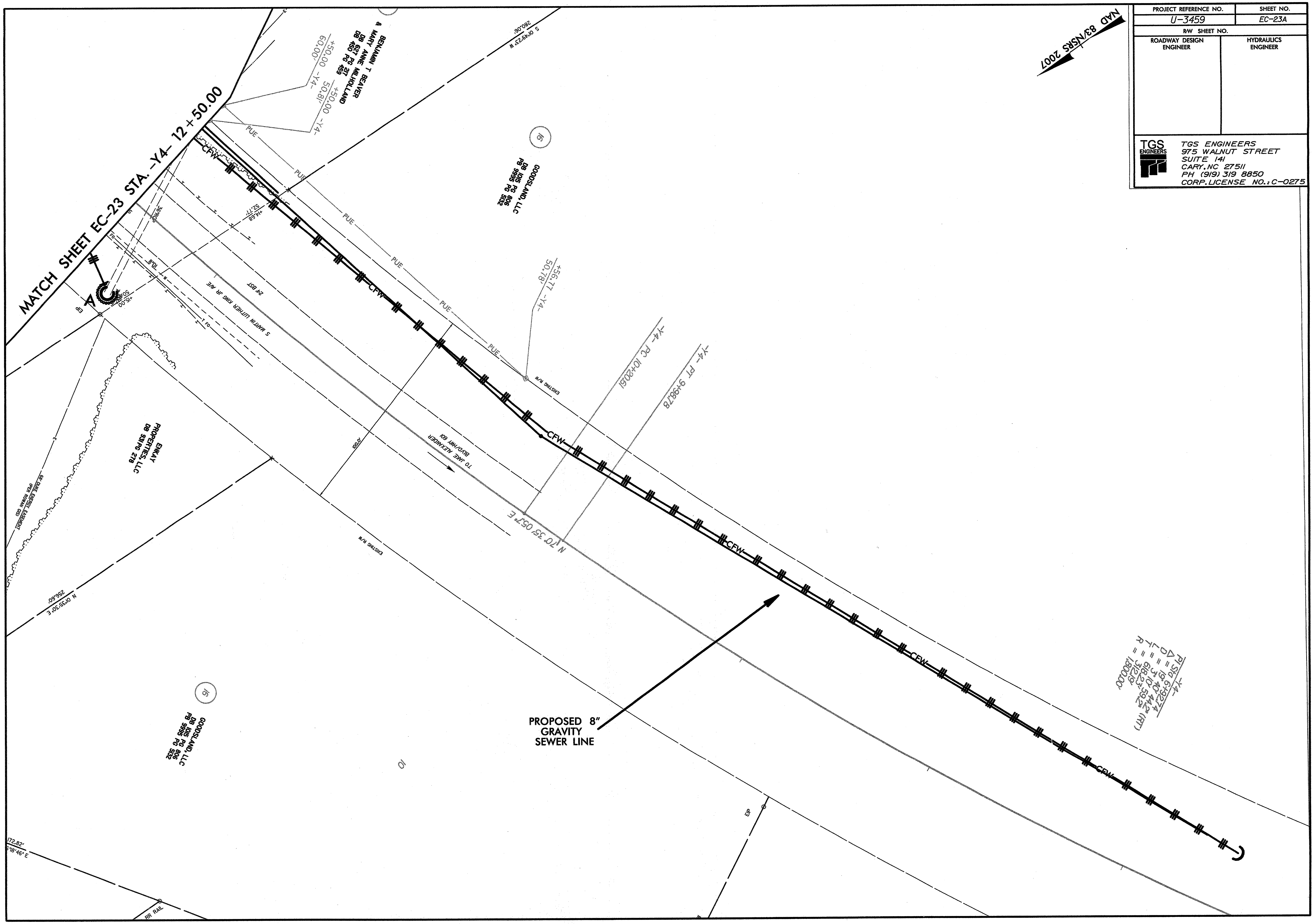


PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-23/CONST.7
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
MATCH SHEET EC-23A STA. -Y4- 12+50.00
MATCH SHEET EC-22 STA. -L- 22+00.00
MATCH SHEET EC-24 STA. -L- 27+00.00
PROPOSED 8" GRAVITY SEWER LINE
Place Matting for Erosion Control on Slope as Work Allows.
90 x 30 x 3 1.5 inch Skimmer with 1.375 inch Orifice Diameter 22 ft. weir ID 04
BEGIN CONSTRUCTION -Y4- POT STA. 13+05.00
END CONSTRUCTION -Y4- POT STA. 15+90.00
INSTALL 280 SY PSRM IN THE PROPOSED DITCH LINE -L- STA 20+00 TO -L- STA 23+61
INSTALL 210 SY PSRM IN THE PROPOSED DITCH LINE -L- STA 25+17 TO -L- STA 27+64
TOE PROTECTION W/PSRM SEE DETAIL C
SPECIAL LATERAL V DITCH SEE DETAIL B
2' LATERAL BASE DITCH SEE DETAIL D
CLASS B RIP RAP EST. 5 TONS EST. 14 SY FF
TRANSISTION PROP. GUARDRAIL TO TIE TO EXIST. GUARDRAIL
BENJAMIN T BEAVER & MARY ANNE MILHOLLAND DB 627 PG 217 DB 450 PG 459
ZODIAC BUILDERS, LLC DB 1132 PG 598 PB 9995 PG 4080 TRACT 1
ZODIAC BUILDERS, LLC DB 996 PG 744 PB 9995 PG 4661 TRACT 2A
PI Sta 20+00.50
Δ = 5°42' 18.4" (RT)
D = 1°08' 45.3"
L = 497.87'
T = 249.14'
R = 5,000.00'
SE = N/C
N 26°43' 55.4" W
-Y4- PT 13+39.74
-L- POT 24+50.88 = -Y4- POT 14+47.90
-L- PT 22+49.23
-L- PC 25+90.87
MARTIN LUTHER KING JR AVE
PROP. 4' CONC. SIDEWALK
PROP. 2'-6" C&G
PROP. GUARDRAIL
24" RCP-IV
15" RCP-IV
18" RCP-IV
0701
0702
0703
0704
0705
0706
0707
DETAIL D
LATERAL BASE DITCH (Not to Scale)
FROM STA. 12+54 TO STA. 13+84 -Y4- RT
DETAIL B
SPECIAL LATERAL 'V' DITCH (Not to Scale)
Min. D= 1 Ft.
FROM STA. 14+71 TO STA. 15+55 -Y4- LT
DETAIL C
TOE PROTECTION (Not to Scale)
d= 1 Ft.
b= 5 Ft.
Type of Liner= PSRM
FROM STA. 22+00 TO STA. 23+60 -L- RT
FROM STA. 25+18 TO STA. 27+00 -L- RT

0302DEL_P12

PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-23A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275



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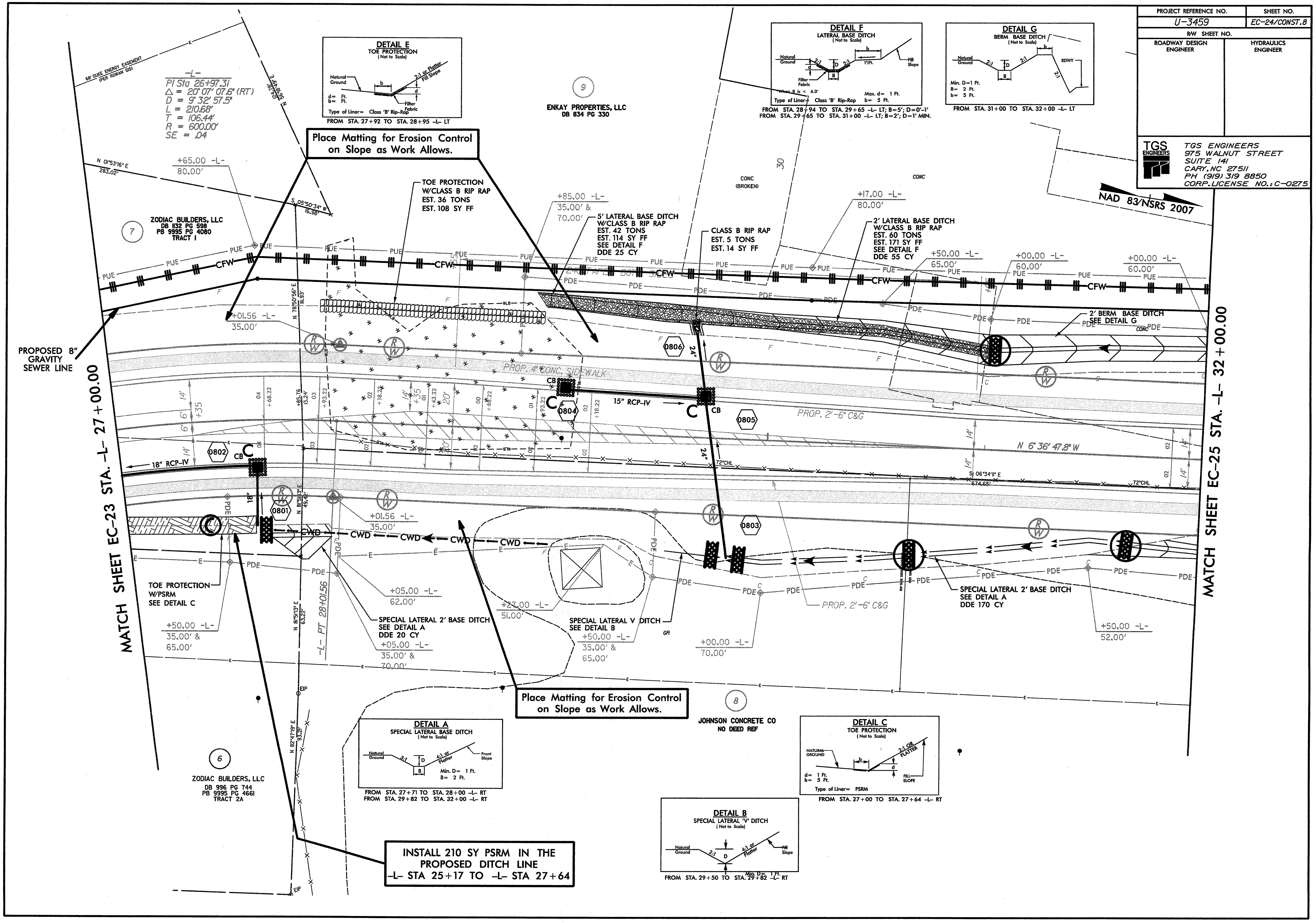
PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-24/CONST.8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
-L-
PI Sta 26+97.31
Δ = 20° 07' 07.6" (RT)
D = 9° 32' 57.5"
L = 210.68'
T = 106.44'
R = 600.00'
SE = .04
DETAIL E
TOE PROTECTION
(Not to Scale)
Type of Liner= Class 'B' Rip-Rap
FROM STA. 27+92 TO STA. 28+95 -L- LT
DETAIL F
LATERAL BASE DITCH
(Not to Scale)
Type of Liner= Class 'B' Rip-Rap
FROM STA. 28+94 TO STA. 29+65 -L- LT; B=5'; D=0'-1'
FROM STA. 29+65 TO STA. 31+00 -L- LT; B=2'; D=1' MIN.
DETAIL G
BERM BASE DITCH
(Not to Scale)
Min. D=1 Ft.
B= 2 Ft.
b= 5 Ft.
FROM STA. 31+00 TO STA. 32+00 -L- LT
ENKAY PROPERTIES, LLC
DB 834 PG 330
Place Matting for Erosion Control on Slope as Work Allows.
TOE PROTECTION W/CLASS B RIP RAP
EST. 36 TONS
EST. 108 SY FF
ZODIAC BUILDERS, LLC
DB 1132 PG 598
PB 9995 PG 4080
TRACT I
5' LATERAL BASE DITCH W/CLASS B RIP RAP
EST. 42 TONS
EST. 114 SY FF
SEE DETAIL F
DDE 25 CY
CLASS B RIP RAP
EST. 5 TONS
EST. 14 SY FF
2' LATERAL BASE DITCH W/CLASS B RIP RAP
EST. 60 TONS
EST. 171 SY FF
SEE DETAIL F
DDE 55 CY
2' BERM BASE DITCH
SEE DETAIL G
PROPOSED 8" GRAVITY SEWER LINE
PROP. 4" CONC. SIDEWALK
15" RCP-IV
18" RCP-IV
PROP. 2'-6" C&G
N 6° 36' 47.8" W
MATCH SHEET EC-23 STA. -L- 27+00.00
MATCH SHEET EC-25 STA. -L- 32+00.00
TOE PROTECTION W/PSRM
SEE DETAIL C
SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL A
DDE 20 CY
SPECIAL LATERAL V DITCH
SEE DETAIL B
SPECIAL LATERAL 2' BASE DITCH
SEE DETAIL A
DDE 170 CY
-L- PT 28+01.56
Place Matting for Erosion Control on Slope as Work Allows.
JOHNSON CONCRETE CO
NO DEED REF
ZODIAC BUILDERS, LLC
DB 996 PG 744
PB 9995 PG 4661
TRACT 2A
DETAIL A
SPECIAL LATERAL BASE DITCH
(Not to Scale)
Min. D= 1 Ft.
B= 2 Ft.
FROM STA. 27+71 TO STA. 28+00 -L- RT
FROM STA. 29+82 TO STA. 32+00 -L- RT
DETAIL C
TOE PROTECTION
(Not to Scale)
Type of Liner= PSRM
FROM STA. 27+00 TO STA. 27+64 -L- RT
DETAIL B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
FROM STA. 29+50 TO STA. 29+82 -L- RT
INSTALL 210 SY PSRM IN THE PROPOSED DITCH LINE
-L- STA 25+17 TO -L- STA 27+64

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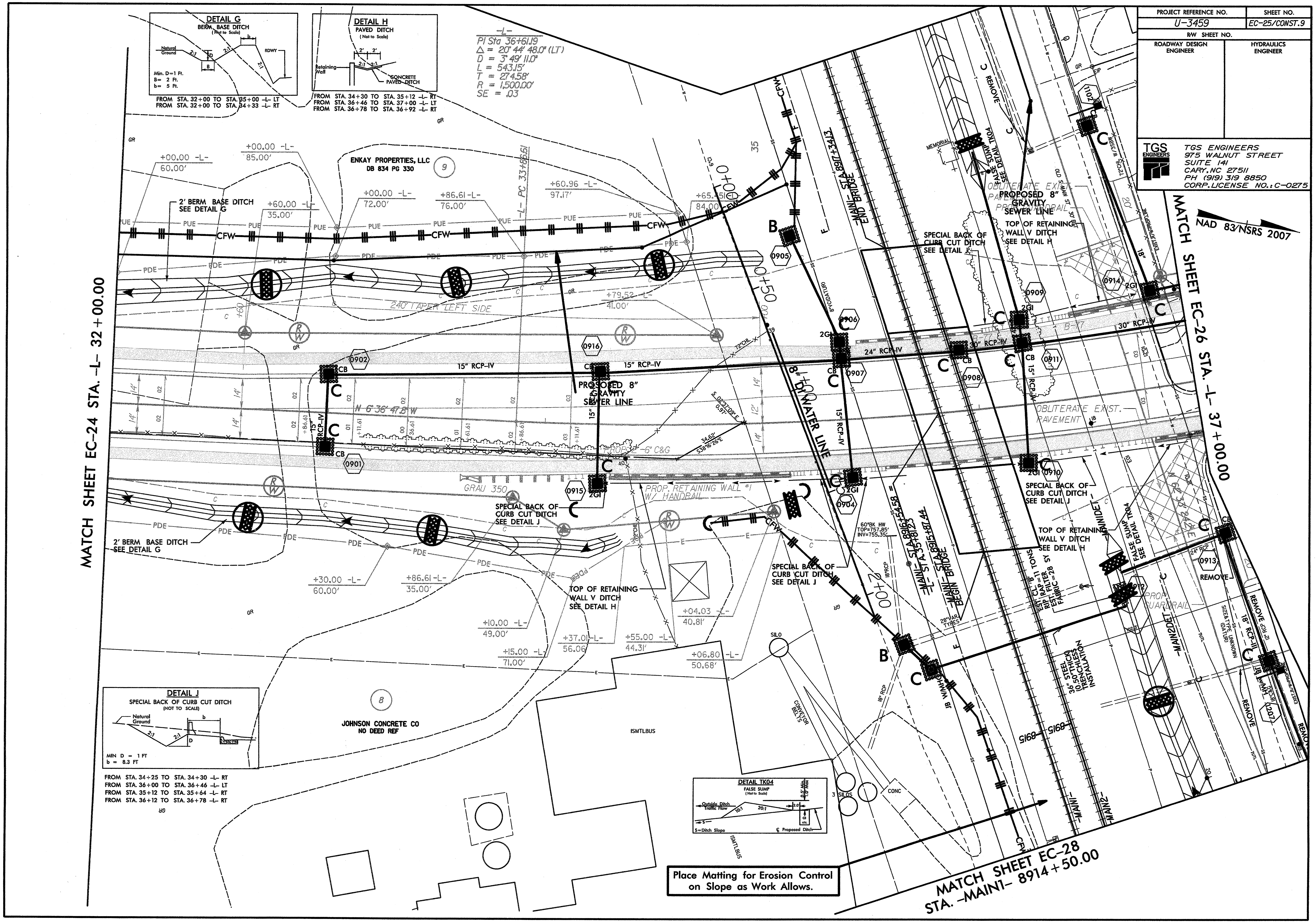

PROJECT REFERENCE NO. U-3459
SHEET NO. EC-25/CONST.9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS 975 WALNUT STREET SUITE 141 CARY, NC 27511 PH (919) 319 8850 CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
MATCH SHEET EC-24 STA. -L- 32+00.00
MATCH SHEET EC-26 STA. -L- 37+00.00
MATCH SHEET EC-28 STA. -MAIN1- 8914+50.00
DETAIL G
BERM BASE DITCH
(Not to Scale)
Min. D=1 Ft.
B= 2 Ft.
b= 5 Ft.
FROM STA. 32+00 TO STA. 35+00 -L- LT
FROM STA. 32+00 TO STA. 34+33 -L- RT
DETAIL H
PAVED DITCH
(Not to Scale)
Retaining Wall
CONCRETE PAVED DITCH
FROM STA. 34+30 TO STA. 35+12 -L- RT
FROM STA. 36+46 TO STA. 37+00 -L- LT
FROM STA. 36+78 TO STA. 36+92 -L- RT
-L-
PI Sta 36+61.19
Δ = 20° 44' 48.0" (LT)
D = 3° 49' 11.0"
L = 543.15'
T = 274.58'
R = 1,500.00'
SE = .03
ENKAY PROPERTIES, LLC
DB 834 PG 330
2' BERM BASE DITCH SEE DETAIL G
240' TAPER LEFT SIDE
PROPOSED 8" GRAVITY SEWER LINE
8" DI WATER LINE
15" RCP-IV
24" RCP-IV
30" RCP-IV
N 6° 36' 47.8" W
PROP. RETAINING WALL #1 W/ HANDRAIL
SPECIAL BACK OF CURB CUT DITCH SEE DETAIL J
TOP OF RETAINING WALL V DITCH SEE DETAIL H
OBLITERATE EXIST. PAVEMENT
-MAIN1- STA 8917+34.13 END BRIDGE
-MAIN1- STA 8915+81.44 BEGIN BRIDGE
PROP. GUARDRAIL
FALSE SUMP SEE DETAIL TK04
36" STEEL 0.50" THICK TRENCHLESS INSTALLATION
JOHNSON CONCRETE CO
NO DEED REF
DETAIL J
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)
MIN D = 1 FT
b = 8.3 FT
FROM STA. 34+25 TO STA. 34+30 -L- RT
FROM STA. 36+00 TO STA. 36+46 -L- LT
FROM STA. 35+12 TO STA. 35+64 -L- RT
FROM STA. 36+12 TO STA. 36+78 -L- RT
DETAIL TK04
FALSE SUMP
(Not to Scale)
Place Matting for Erosion Control on Slope as Work Allows.

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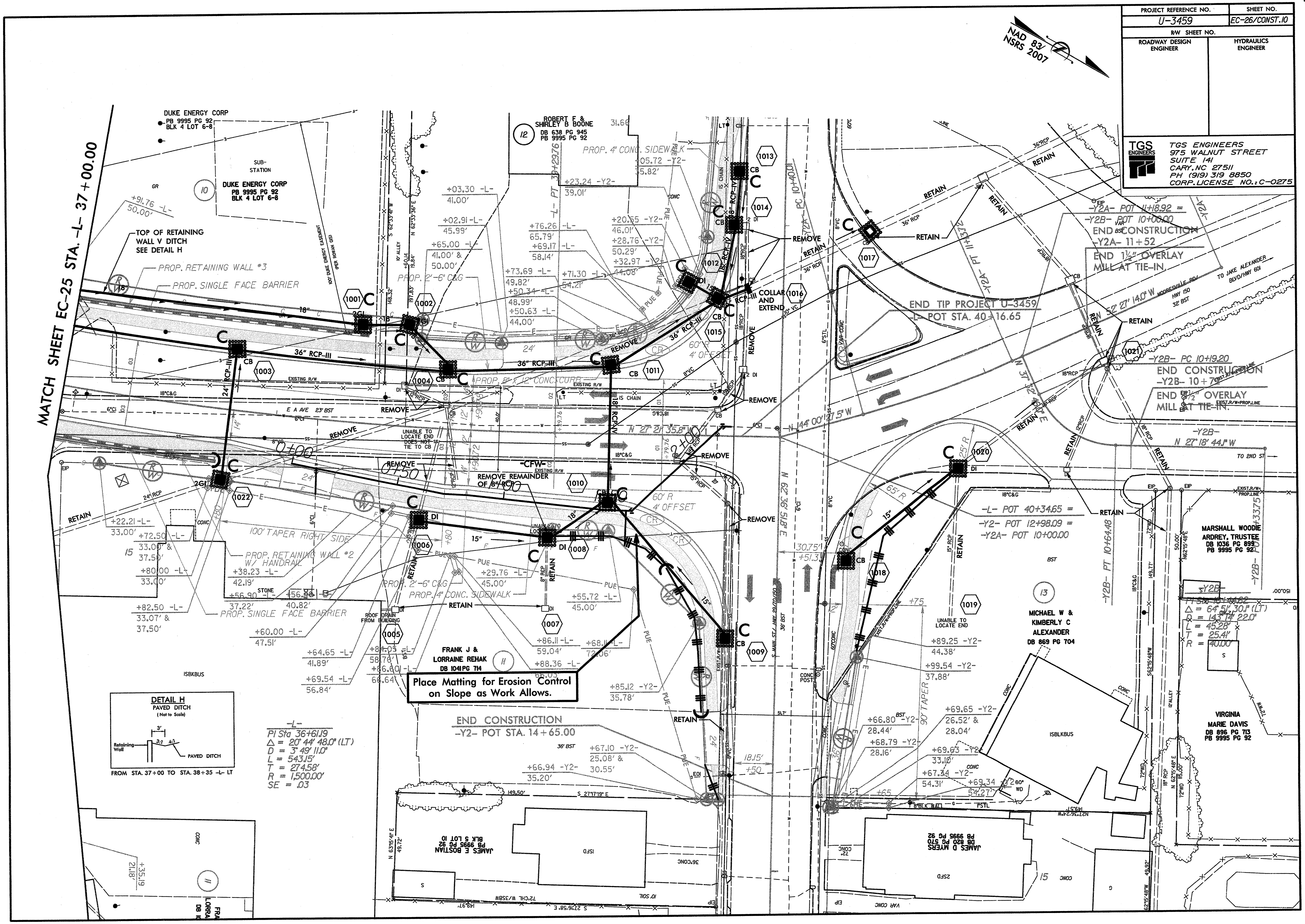
PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-26/CONST.10
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
NAD 83/ NSRS 2007
MATCH SHEET EC-25 STA. -L- 37+00.00
DUKE ENERGY CORP
PB 9995 PG 92
BLK 4 LOT 6-8
SUB-STATION
ROBERT F & SHIRLEY B BOONE
DB 638 PG 945
PB 9995 PG 92
TOP OF RETAINING WALL V DITCH SEE DETAIL H
PROP. RETAINING WALL #3
PROP. SINGLE FACE BARRIER
PROP. 4" CONC. SIDEWALK
PROP. 2'-6" C&G
36" RCP-III
24" RCP-III
END TIP PROJECT U-3459
-L- POT STA. 40+16.65
-Y2A- POT 11+18.92 =
-Y2B- POT 10+00.00
END CONSTRUCTION
-Y2A- 11+52
END 1½" OVERLAY
MILL AT TIE-IN
-Y2B- PC 10+19.20
END CONSTRUCTION
-Y2B- 10+76
END 1½" OVERLAY
MILL AT TIE-IN
TO JAKE ALEXANDER BLVD/HWY 601
N 52° 27' 14.0" W
MOORESVILLE RD/ HWY 150
N 44° 00' 21.5" W
N 27° 21' 35.8" W
N 27° 18' 44.1" W
-L- POT 40+34.65 =
-Y2- POT 12+98.09 =
-Y2A- POT 10+00.00
REMOVE
RETAIN
COLLAR AND EXTEND
UNABLE TO LOCATE END DOES NOT TIE TO CB
REMOVE REMAINDER OF 8" RCP
-CFW-
100' TAPER RIGHT SIDE
PROP. RETAINING WALL #2 W/ HANDRAIL
PROP. SINGLE FACE BARRIER
ROOF DRAIN FROM BUILDING
Place Matting for Erosion Control on Slope as Work Allows.
FRANK J & LORRAINE REHAK
DB 1041 PG 714
END CONSTRUCTION
-Y2- POT STA. 14+65.00
S. MAIN ST./HWY 29/70/150/601
MARSHALL WOODIE ARDREY, TRUSTEE
DB 1036 PG 899
PB 9995 PG 92
MICHAEL W & KIMBERLY C ALEXANDER
DB 869 PG 704
VIRGINIA MARIE DAVIS
DB 896 PG 713
PB 9995 PG 92
JAMES E BOSTIAN
PB 9995 PG 92
BLK 5 LOT 10
JAMES D MYERS
DB 820 PG 570
PB 9995 PG 92
DETAIL H
PAVED DITCH
(Not to Scale)
Retaining Wall
PAVED DITCH
FROM STA. 37+00 TO STA. 38+35 -L- LT
-L-
PI Sta 36+61.19
Δ = 20° 44' 48.0" (LT)
D = 3° 49' 11.0"
L = 543.15'
T = 274.58'
R = 1,500.00'
SE = .03
-Y2B-
PI Sta 10+44.62
Δ = 64° 51' 30.1" (LT)
D = 143° 14' 22.0"
L = 45.28'
T = 25.41'
R = 40.00'

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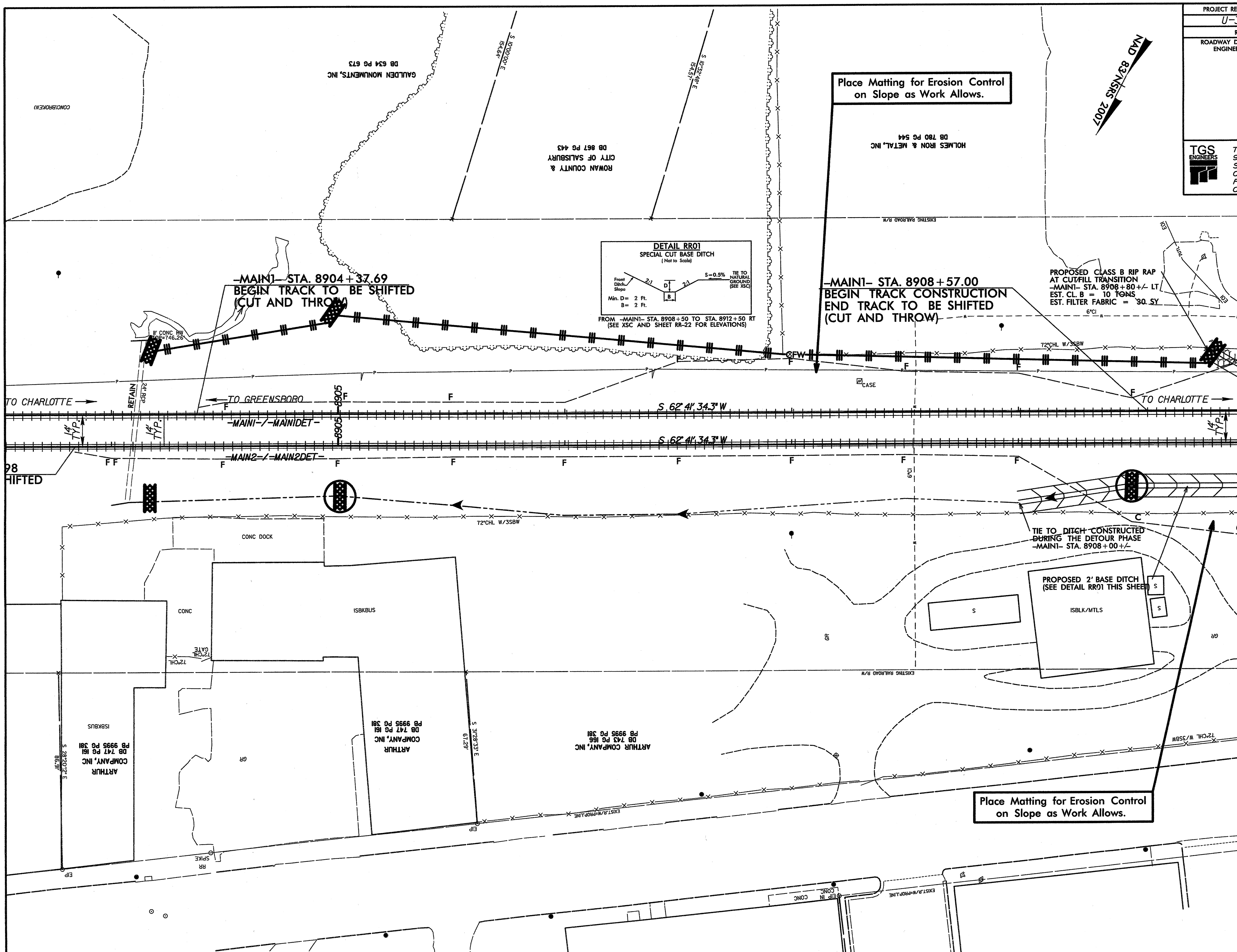
PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-27/CONST.RR12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275



MATCH SHEET EC-28 -MAIN1- STA. 8909+00.00

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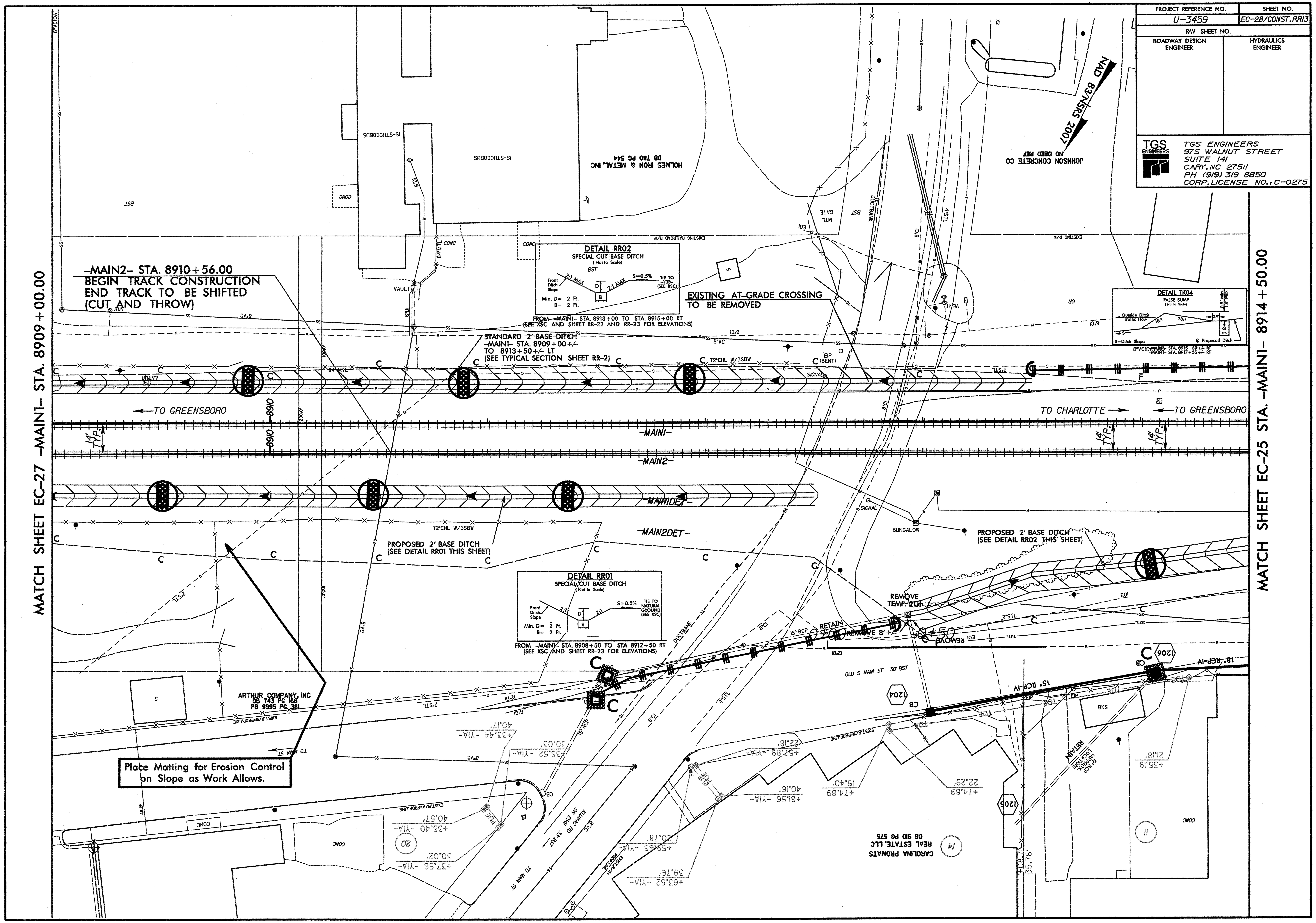
PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-28/CONST.RR13
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
MATCH SHEET EC-27 -MAIN1- STA. 8909+00.00
MATCH SHEET EC-25 STA. -MAIN1- 8914+50.00
NAD 83/NSRS 2007
-MAIN2- STA. 8910+56.00
BEGIN TRACK CONSTRUCTION
END TRACK TO BE SHIFTED
(CUT AND THROW)
HOLMES IRON & METAL, INC
DB 780 PG 544
JOHNSON CONCRETE CO
NO DEED REF
IS-STUCCOBUS
EXISTING RAILROAD R/W
EXISTING R/W
DETAIL RR02
SPECIAL CUT BASE DITCH
(Not to Scale)
Front Ditch Slope
2:1 MAX
S=0.5%
TIE TO -Y3B- (SEE XSC)
Min. D= 2 Ft.
B= 2 Ft.
FROM -MAIN1- STA. 8913+00 TO STA. 8915+00 RT
(SEE XSC AND SHEET RR-22 AND RR-23 FOR ELEVATIONS)
EXISTING AT-GRADE CROSSING
TO BE REMOVED
STANDARD 2' BASE DITCH
-MAIN1- STA. 8909+00+/-
TO 8913+50+/- LT
(SEE TYPICAL SECTION SHEET RR-2)
DETAIL TK04
FALSE SUMP
(Not to Scale)
Outside Ditch Traffic Flow
10:1
20:1
S=Ditch Slope
℄ Proposed Ditch
-MAIN1- STA. 8915+60+/- RT
-MAIN1- STA. 8917+55+/- RT
72"CHL W/3SBW
TO GREENSBORO
TO CHARLOTTE
14' TYP.
-MAIN1-
-MAIN2-
-MAIN1DET-
-MAIN2DET-
PROPOSED 2' BASE DITCH
(SEE DETAIL RR01 THIS SHEET)
DETAIL RR01
SPECIAL CUT BASE DITCH
(Not to Scale)
2:1
S=0.5%
TIE TO NATURAL GROUND (SEE XSC)
Min. D= 2 Ft.
B= 2 Ft.
FROM -MAIN1- STA. 8908+50 TO STA. 8912+50 RT
(SEE XSC AND SHEET RR-23 FOR ELEVATIONS)
PROPOSED 2' BASE DITCH
(SEE DETAIL RR02 THIS SHEET)
BUNGALOW
SIGNAL
REMOVE TEMP. 2GI
RETAIN
REMOVE 8'+/-
OLD S MAIN ST 30' BST
15" RCP-IV
18" RCP-IV
1204
1205
1206
CB
BKS
ARTHUR COMPANY, INC
DB 743 PG 166
PB 9995 PG 381
EXIST.R/W=PROP.LINE
Place Matting for Erosion Control
on Slope as Work Allows.
TO MAIN ST
SR 2541 KLUMAC RD 33' BST
CAROLINA PROMATS REAL ESTATE, LLC
DB 910 PG 575
12" RCP (APPROX. LOCATION)
+33.44 -Y1A- 40.17'
+35.52 -Y1A- 30.03'
+35.40 -Y1A- 40.57'
+37.56 -Y1A- 30.02'
+57.89 -Y1A- 22.18'
+61.56 -Y1A- 40.16'
+59.65 -Y1A- 20.78'
+63.52 -Y1A- 39.76'
+74.89 19.40'
+74.89 22.29'
+35.19 21.18'
+08.71 35.76'

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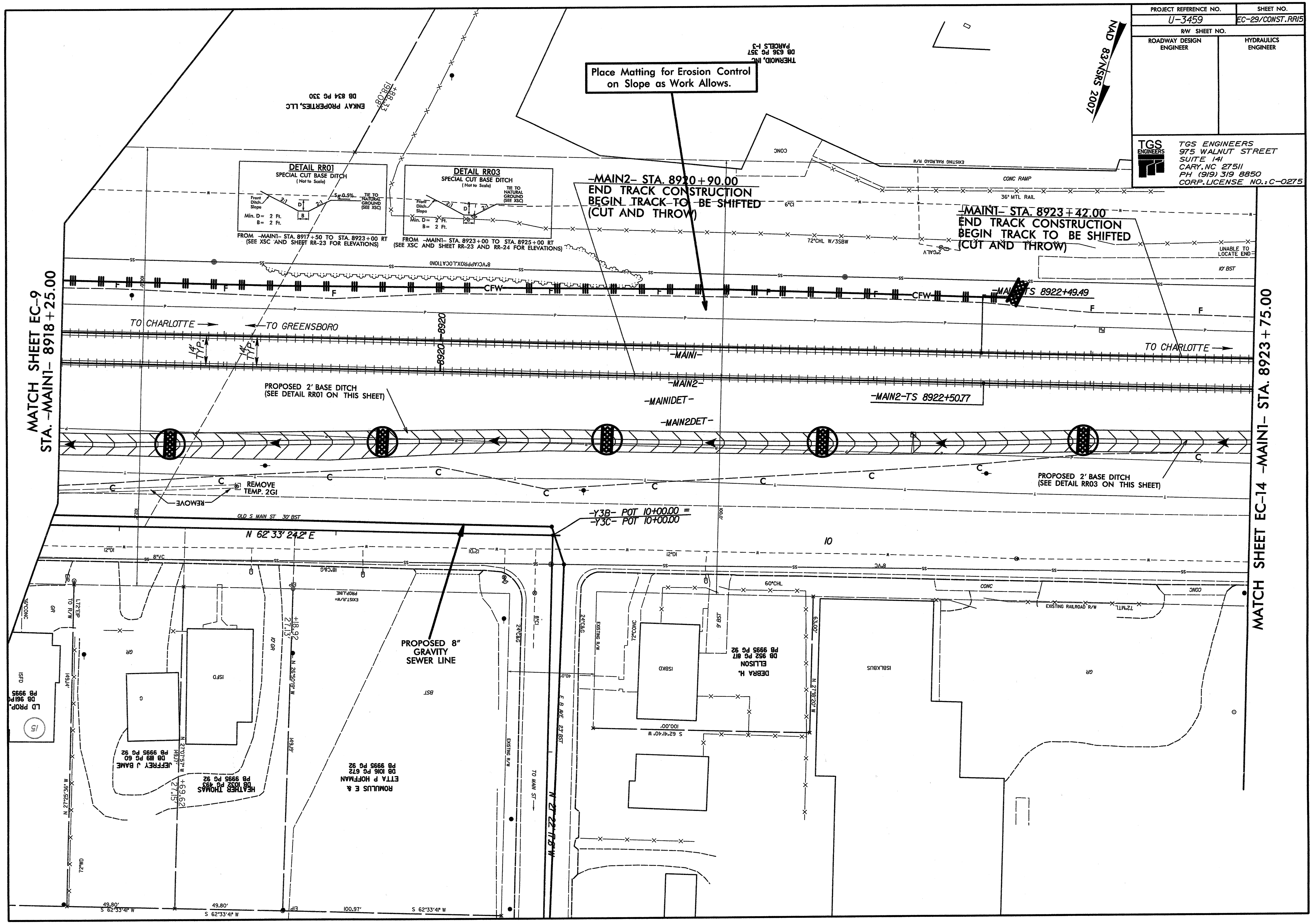
PROJECT REFERENCE NO.
U-3459
SHEET NO.
EC-29/CONST.RR15
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275
NAD 83/NSRS 2007
Place Matting for Erosion Control on Slope as Work Allows.
DETAIL RR01
SPECIAL CUT BASE DITCH
(Not to Scale)
FROM -MAIN1- STA. 8917+50 TO STA. 8923+00 RT
(SEE XSC AND SHEET RR-23 FOR ELEVATIONS)
DETAIL RR03
SPECIAL CUT BASE DITCH
(Not to Scale)
FROM -MAIN1- STA. 8923+00 TO STA. 8925+00 RT
(SEE XSC AND SHEET RR-23 AND RR-24 FOR ELEVATIONS)
-MAIN2- STA. 8920+90.00
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)
-MAIN1- STA. 8923+42.00
END TRACK CONSTRUCTION
BEGIN TRACK TO BE SHIFTED
(CUT AND THROW)
ENKAY PROPERTIES, LLC
DB 834 PG 330
THERMOID, INC
DB 636 PG 357
PARCELS I-3
MATCH SHEET EC-9
STA. -MAIN1- 8918+25.00
MATCH SHEET EC-14 -MAIN1- STA. 8923+75.00
TO CHARLOTTE
TO GREENSBORO
TO CHARLOTTE
-MAIN1-
-MAIN2-
-MAINIDET-
-MAIN2DET-
-MAIN1-TS 8922+49.49
-MAIN2-TS 8922+50.77
PROPOSED 2' BASE DITCH
(SEE DETAIL RR01 ON THIS SHEET)
PROPOSED 2' BASE DITCH
(SEE DETAIL RR03 ON THIS SHEET)
REMOVE
TEMP. 2GI
REMOVE
OLD S MAIN ST 30' BST
N 62°33'24.2" E
-Y3B- POT 10+00.00 =
-Y3C- POT 10+00.00
PROPOSED 8"
GRAVITY
SEWER LINE
UNABLE TO LOCATE END
EXISTING RAILROAD R/W
CONC RAMP
36" MTL RAIL
72"CHL W/3SBW
DEBRA H.
ELLISON
DB 952 PG 817
PB 9995 PG 92
ROMULUS E &
ETTA P HOFFMAN
DB 1016 PG 672
PB 9995 PG 92
HEATHER THOMAS
DB 1032 PG 453
PB 9995 PG 92
JEFFREY J BAME
DB 1119 PG 60
PB 9995 PG 92
LD PROP.
DB 961 PG
PB 9995
E B AVE 23' BST
TO MAIN ST
S 62°41'40" W
S 62°33'41" W

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PROJECT REFERENCE NO.	SHEET NO.
U-3459	EC-30/CONST.RR16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
975 WALNUT STREET
SUITE 141
CARY, NC 27511
PH (919) 319 8850
CORP. LICENSE NO.: C-0275

NAD 83/NSRS 2007

MATCH SHEET EC-13 –MAIN1– STA. 8923+75.00

Place Matting for Erosion Control on Slope as Work Allows.

–MAIN1– SC 8925+28.49

–MAIN2– SC 8925+229.77

–MAIN1– STA. 8928+79.83
END TRACK TO BE SHIFTED
(CUT AND THROW)

–MAIN2– STA. 8928+90.78
END TRACK TO BE SHIFTED
(CUT AND THROW)

–MAIN1–/–MAINIDET– DO NOT DISTURB EXISTING SWITCH

TO GREENSBORO

TO CHARLOTTE

TO GREENSBORO

–MAIN1–

–MAINIDET–

–MAIN2–

–MAIN2DET–

MAIN1 Curve #101

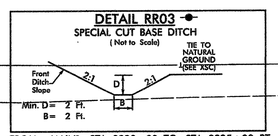
MAIN2 Curve #201

TIE TO DITCH CONSTRUCTED DURING THE DETOUR PHASE –MAIN1– STA. 8925+00+/–

8' OF EXISTING PIPE REMOVED DURING DETOUR PHASE

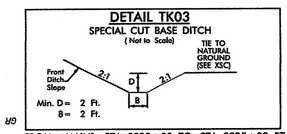
PROPOSED 2' BASE DITCH (SEE DETAIL RR03 ON THIS SHEET)

DETAIL RR03
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM –MAIN1– STA. 8923+00 TO STA. 8925+00 RT
(SEE XSC AND SHEET RR-23 AND RR-24 FOR ELEVATIONS)

DETAIL TK03
SPECIAL CUT BASE DITCH
(Not to Scale)



FROM –MAIN1– STA. 8923+00 TO STA. 8925+00 RT
(SEE XSC AND SHEET TK-22 AND TK-23 FOR ELEVATIONS)

THERMOID, INC
DB 636 PG 357
PARCELS 1-3

EXISTING RAILROAD R/W

OLD S MAIN ST 30' BST

E C AVE 24' BST

TO MAIN ST

ISBKBUS