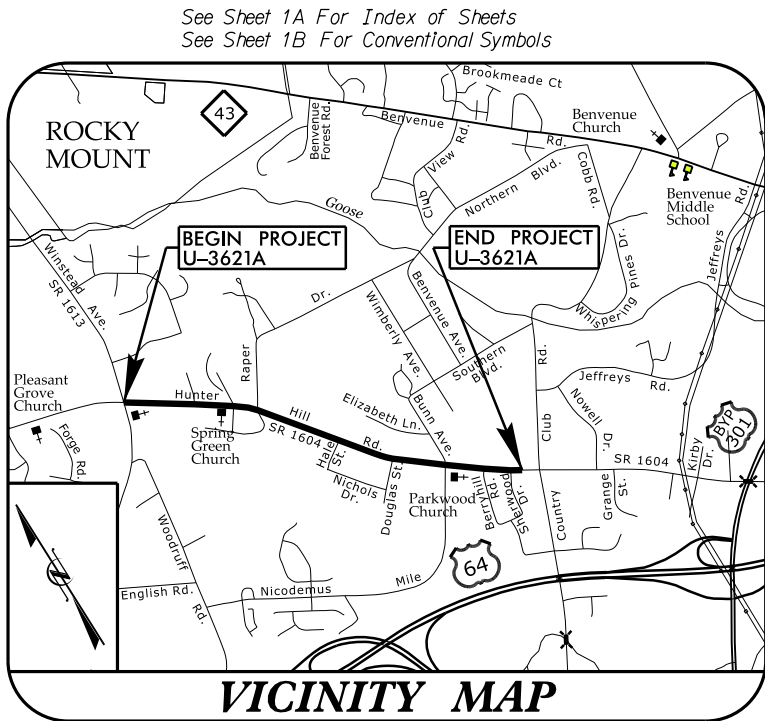


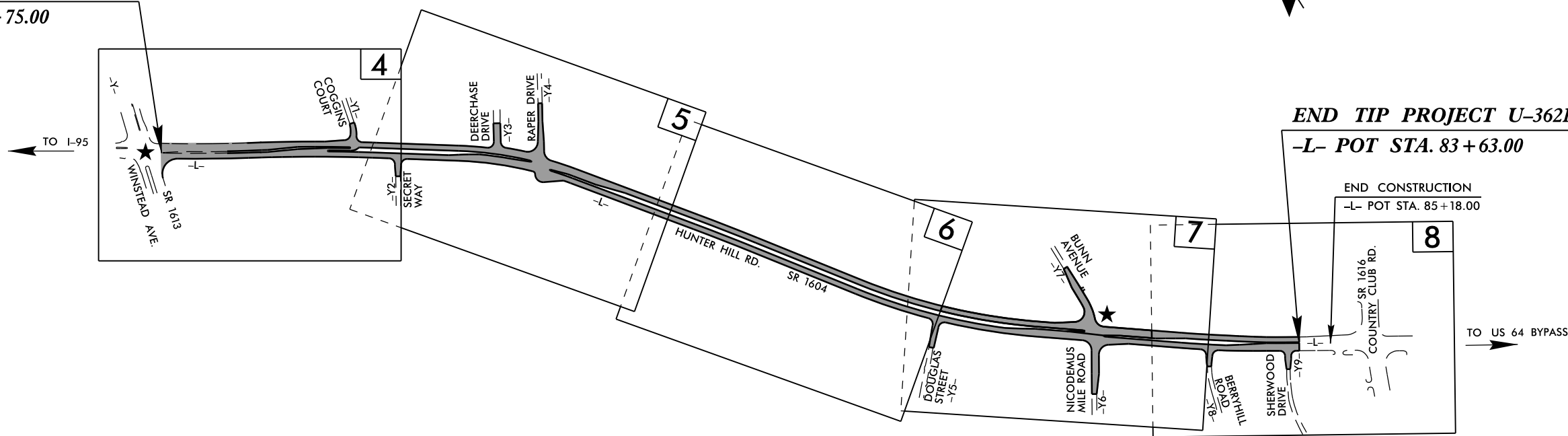
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\$\$\$\$\$USERNAME\$\$\$

CONTRACT:

TIP PROJECT: U-3621A



BEGIN TIP PROJECT U-3621A
-L- POC STA. 25 + 75.00



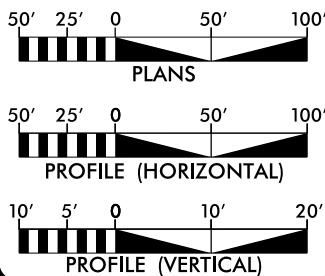
END TIP PROJECT U-3621A
-L- POT STA. 83 + 63.00

END CONSTRUCTION
-L- POT STA. 85 + 18.00

NOTES:

1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
2. THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF ROCKY MOUNT.

GRAPHIC SCALES



DESIGN DATA

ADT 2019 = 22750
ADT 2040 = 33400
K = 60 %
D = 9 %
T = 3 % *
V = 50 MPH
* TTST = 1% DUAL 2%
MINOR URBAN ARTERIAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-3621A = 1.096 Miles
TOTAL LENGTH TIP PROJECT U-3621A = 1.096 Miles

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JULY 23, 2015

LETTING DATE:
JULY 18, 2017

REKHA PATEL, PE
PROJECT ENGINEER

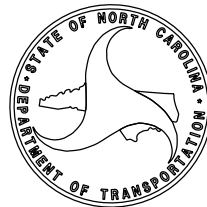
BRIAN P. ROBINSON
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

SIGNATURE: P.E.



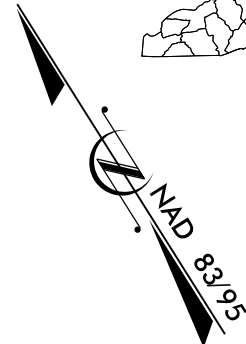
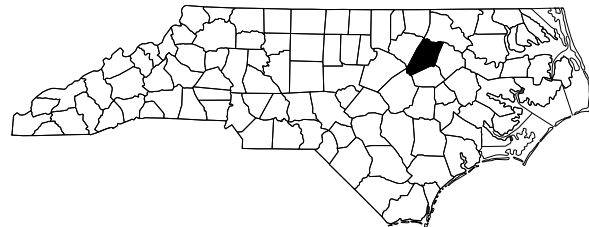
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NASH COUNTY

LOCATION: ROCKY MOUNT - SR 1604 (HUNTER HILL ROAD)
FROM SR 1613 (NORTH WINSTEAD AVE) TO
SR 1616 (COUNTRY CLUB ROAD)
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3621A	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34964.1.2	STP-1604 (8)	P.E.	
34964.3.2	STP-1604 (8)	R/W, UTILITY	

★ TRAFFIC SIGNALS



Note: Not to Scale

**S.U.E. = Subsurface Utility Engineering*

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
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	
Buffer Zone 1	
Buffer Zone 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 CA Marker	
Existing Control of Access	
Proposed Control of Access	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage / Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
<i>VEGETATION:</i>	
Single Tree	
Single Shrub	
Hedge	
Woods Line	

Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
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	
Designated U/G Power Line (S.U.E.*)	

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	
Designated U/G Telephone Cable (S.U.E.*)	
Recorded U/G Telephone Conduit	
Designated U/G Telephone Conduit (S.U.E.*)	
Recorded U/G Fiber Optics Cable	
Designated U/G Fiber Optics Cable (S.U.E.*)	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
Recorded U/G Water Line	
Designated U/G Water Line (S.U.E.*)	
Above Ground Water Line	

TV:

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

GAS:

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

SANITARY SEWER:

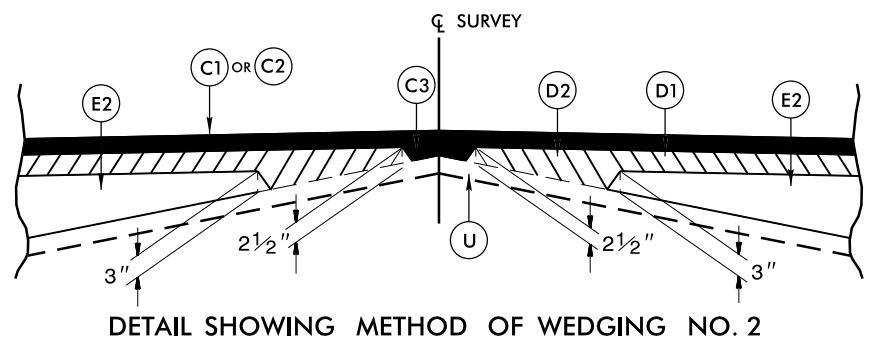
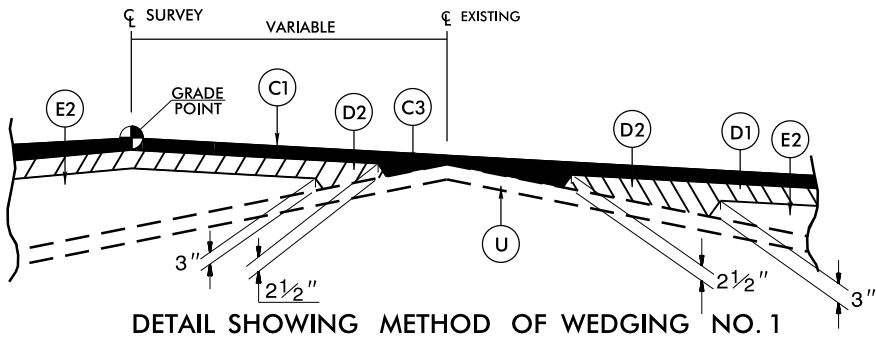
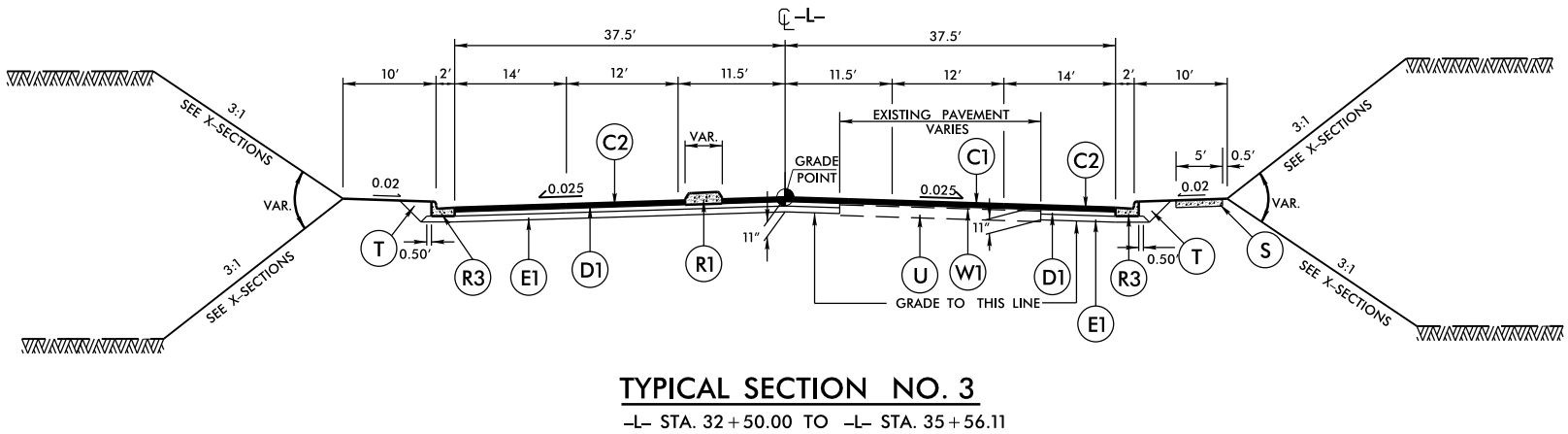
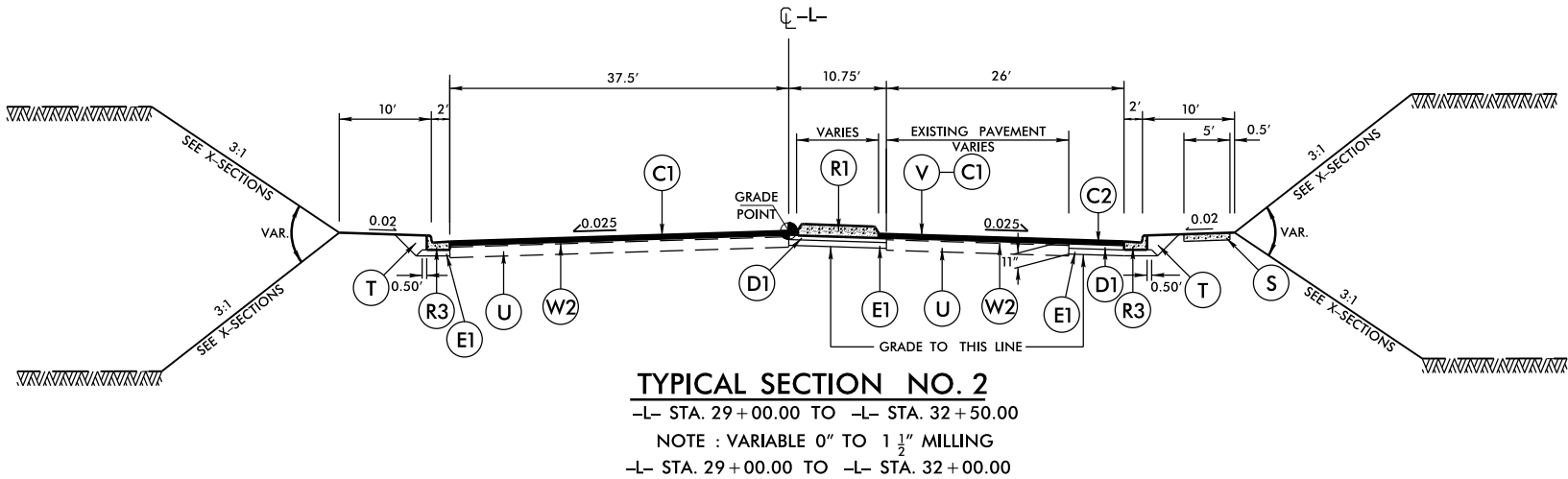
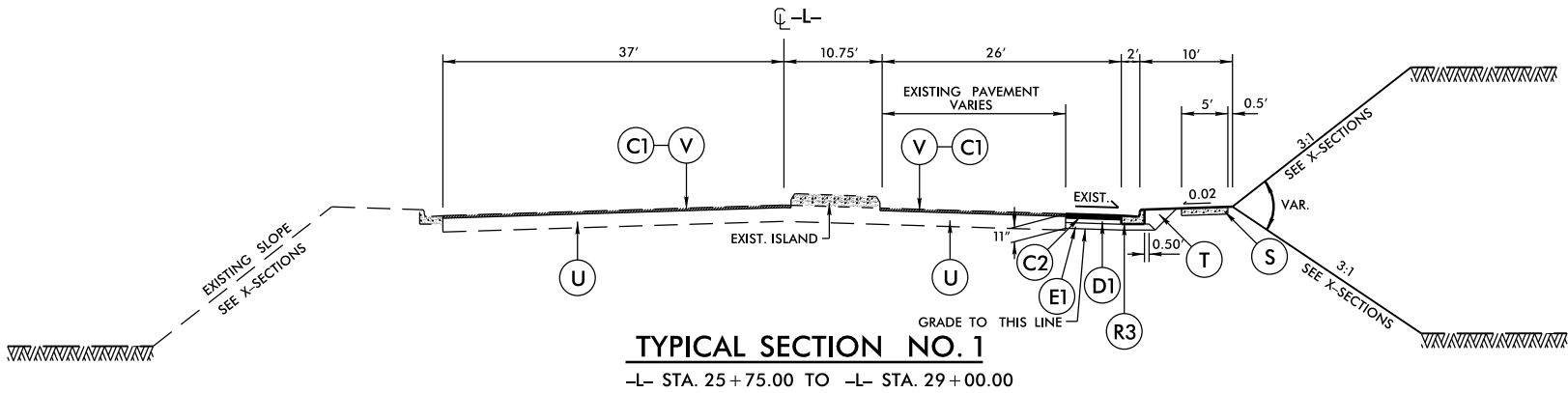
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
Recorded SS Forced Main Line	
Designated SS Forced Main Line (S.U.E.*)	

MISCELLANEOUS:

Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line	
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	

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
R1	5" MONOLITHIC CONCRETE ISLAND (KEYED IN).
R2	1'-6" CONCRETE CURB AND GUTTER.
R3	2'-6" CONCRETE CURB AND GUTTER.
R4	2' VALLEY GUTTER.
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING BITUMINOUS PAVEMENT, 1½" DEPTH.
W1	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE STANDARD WEDGING DETAIL NO. 1)
W2	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE STANDARD WEDGING DETAIL NO. 2)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE SHOWN.



PROJECT REFERENCE NO.
U-3621A

ROADWAY DESIGN
ENGINEER

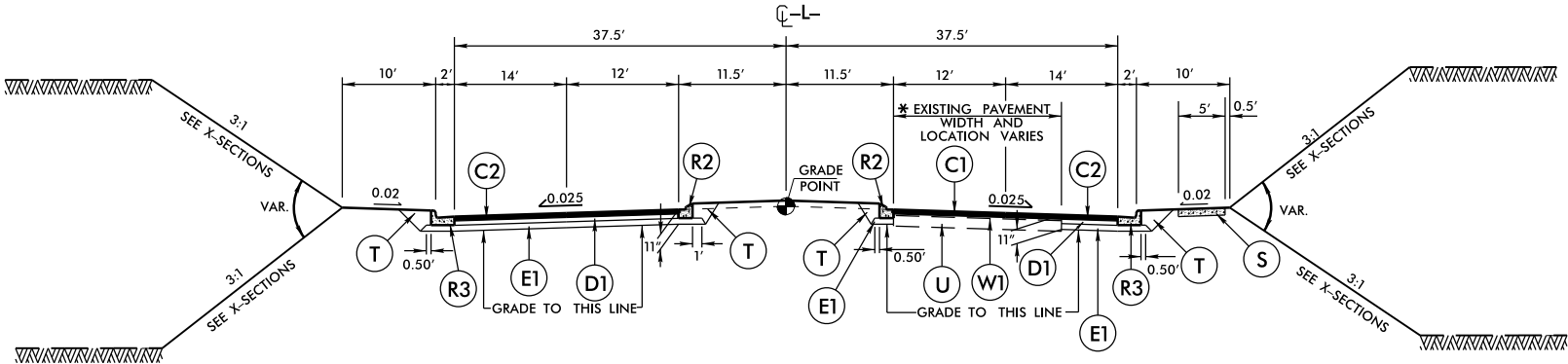
SHEET NO.
2A-1

PAVEMENT DESIGN
ENGINEER

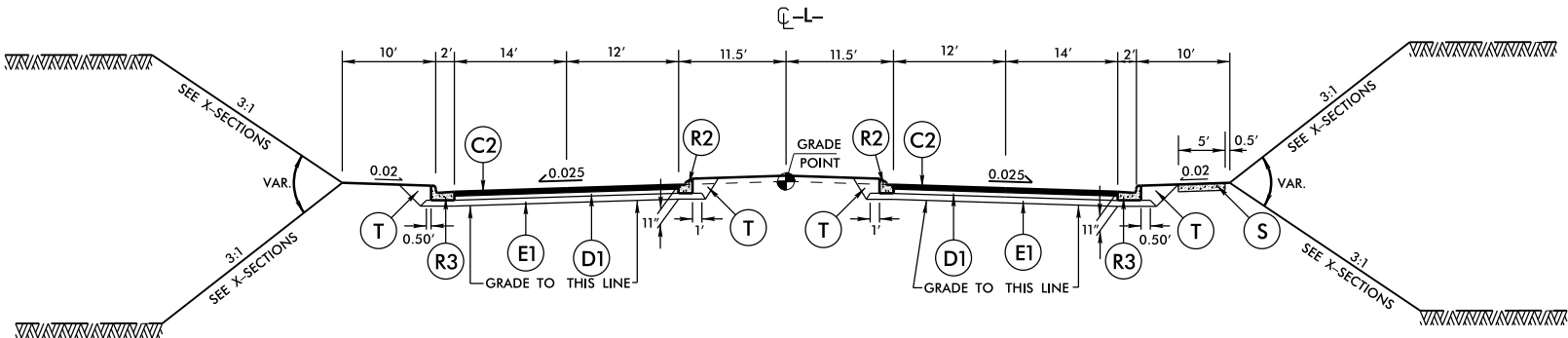
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ACSC, TYPE S9.5B.
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B.
D1	PROP. APPROX. 4" ACIC,TYPE I19.0B.
E1	PROP. APPROX. 4" ACBC, TYPE B25.0B.
R2	1'-6" CONCRETE CURB AND GUTTER.
R3	2'-6" CONCRETE CURB AND GUTTER.
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING.
W1	VARIABLE DEPTH ASPHALT PAVEMENT NO. 1.
W2	VARIABLE DEPTH ASPHALT PAVEMENT NO. 2.

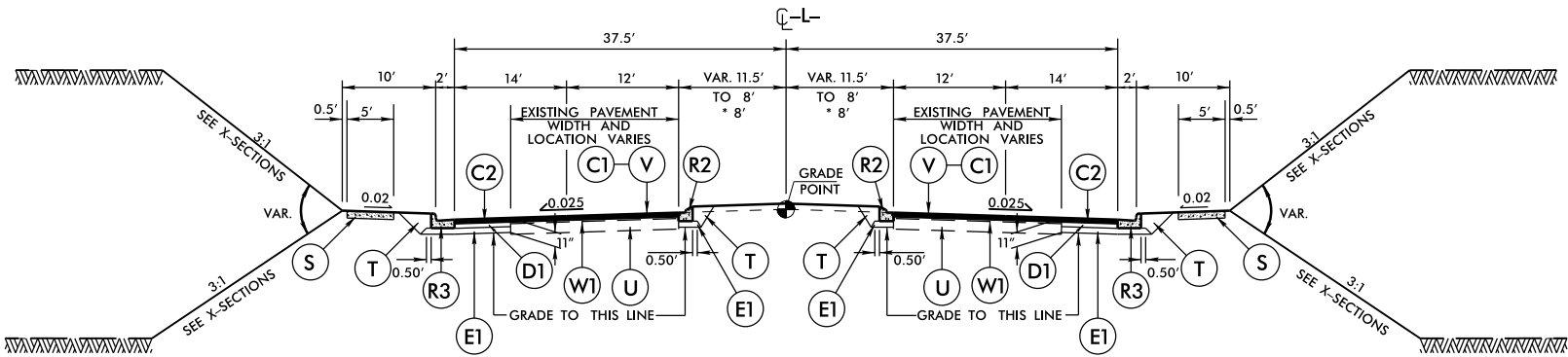
PROJECT REFERENCE NO.	SHEET NO.
U-3621A	2A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



TYPICAL SECTION NO. 4
-L- STA. 35+56.11 TO -L- STA. 62+00.00
* -L- STA. 67+00.00 TO -L- STA. 77+50.00 (REVERSE TYPICAL)



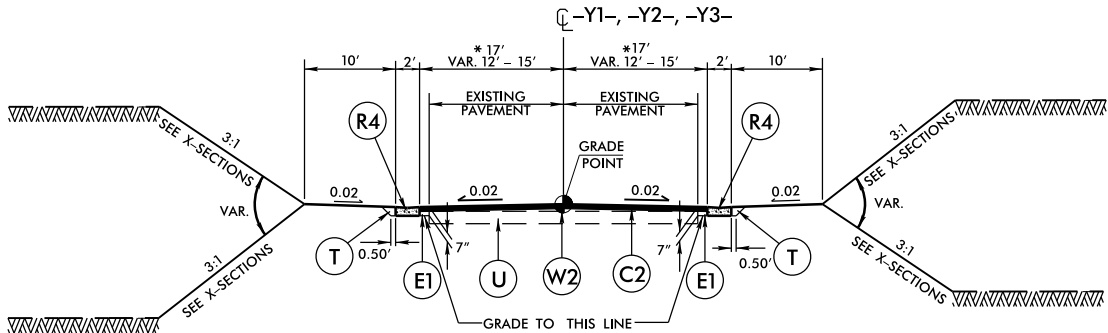
TYPICAL SECTION NO. 5
-L- STA. 62+00.00 TO -L- STA. 67+00.00
-L- STA. 77+50.00 TO -L- STA. 80+00.00



TYPICAL SECTION NO. 6
-L- STA. 80+00.00 TO -L- STA. 82+00.00
* -L- STA. 82+00.00 TO -L- STA. 83+63.00

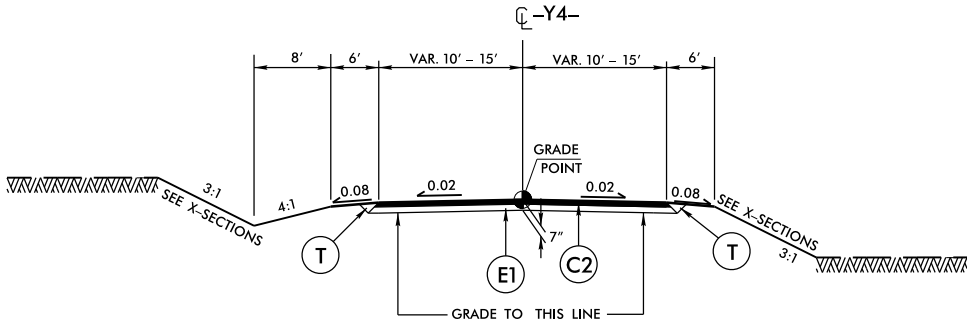
NOTE : VARIABLE 0" TO 1½" MILLING
-L- STA. 80+00.00 TO -L- STA. 83+63.00

FINAL PAVEMENT SCHEDULE	
C2	PROP. APPROX. 3" ACSC, TYPE S9.5B.
D1	PROP. APPROX. 4" ACIC,TYPE I19.0B.
E1	PROP. APPROX. 4" ACBC, TYPE B25.0B.
R3	2'-6" CONCRETE CURB AND GUTTER.
R4	2' VALLEY GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W2	VARIABLE DEPTH ASPHALT PAVEMENT NO. 2.



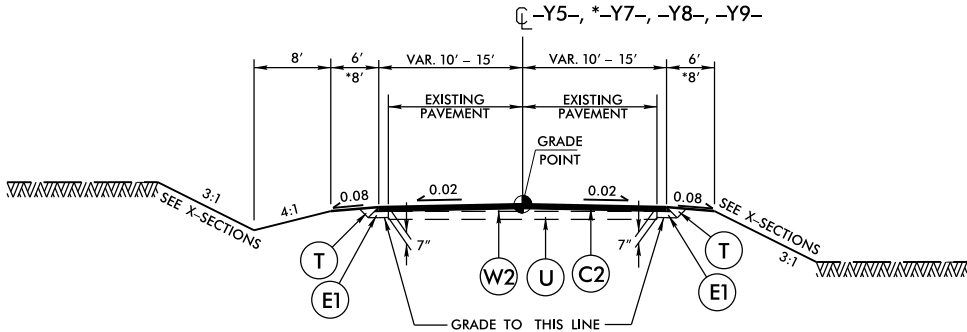
TYPICAL SECTION NO. 7

-Y1- STA. 11+25.00 TO -Y1- STA. 12+18.81
-Y2- STA. 10+37.54 TO -Y2- STA. 11+25.00
*-Y3- STA. 10+20.00 TO -Y3- STA. 11+35.42



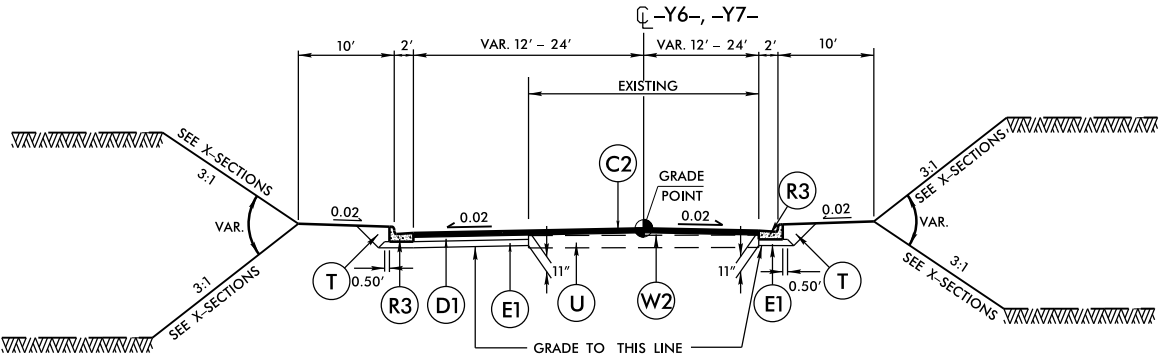
TYPICAL SECTION NO. 8

-Y4- STA. 12+30.00 TO -Y4- STA. 14+87.95



TYPICAL SECTION NO. 9

-Y5- STA. 10+37.55 TO -Y5- STA. 11+75.00
*-Y7- STA. 11+00.00 TO -Y7- STA. 13+16.50
-Y8- STA. 10+37.51 TO -Y8- STA. 11+20.00
-Y9- STA. 10+34.00 TO -Y9- STA. 11+25.00



TYPICAL SECTION NO. 10

-Y6- STA. 10+49.67 TO -Y6- STA. 13+00.00
-Y7- STA. 13+16.50 TO -Y7- STA. 14+10.53

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	2A-3
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

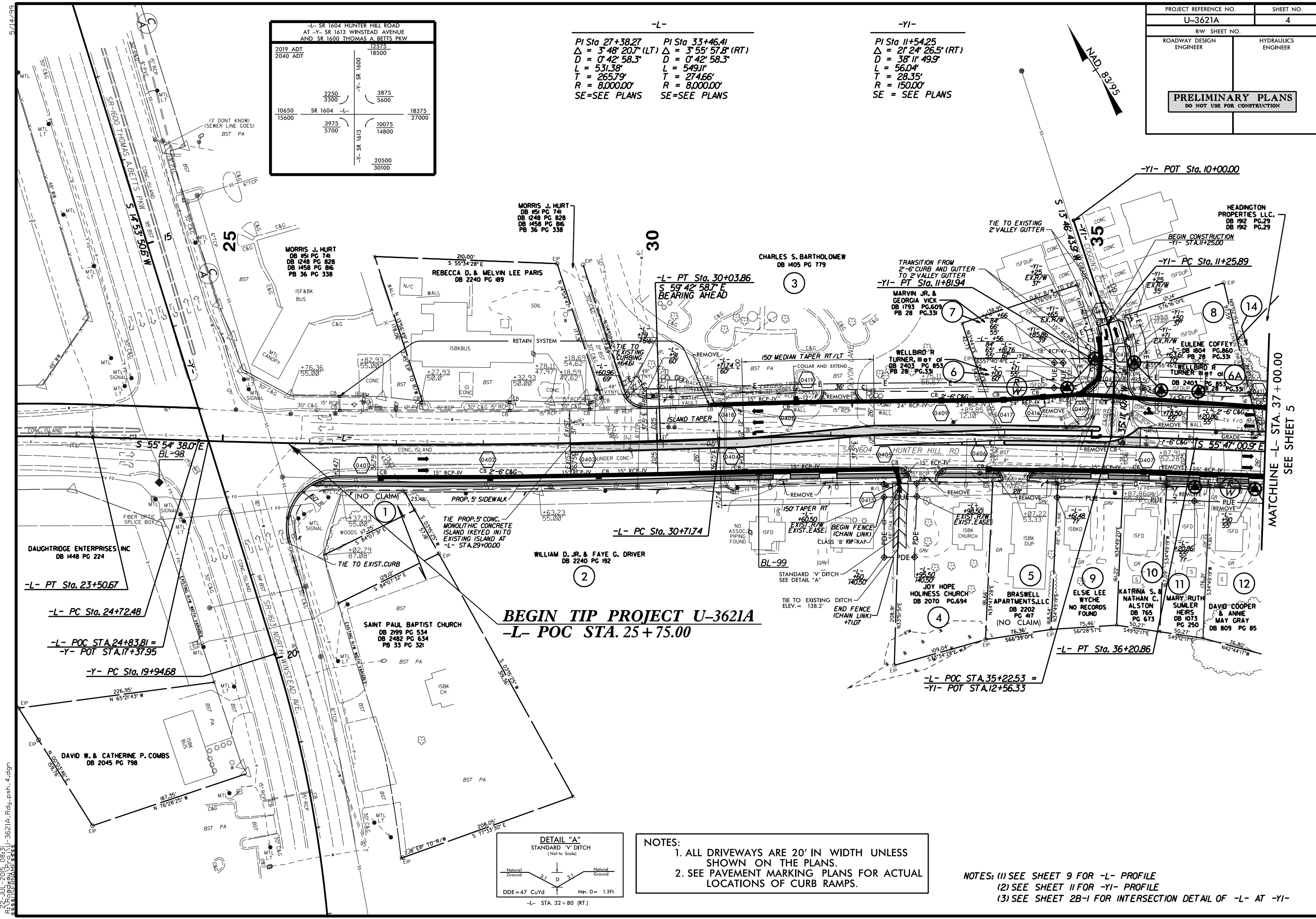
PI Sta 27+38.27
 $\Delta = 3^\circ 48' 20.7''$ (LT)
 $D = 0^\circ 42' 58.3''$
 $L = 531.38'$
 $T = 265.79'$
 $R = 8,000.00'$
SE=SEE PLANS

PI Sta 33+46.41
 $\Delta = 3^\circ 55' 57.8''$ (RT)
 $D = 0^\circ 42' 58.3''$
 $L = 549.11'$
 $T = 274.66'$
 $R = 8,000.00'$
SE=SEE PLANS

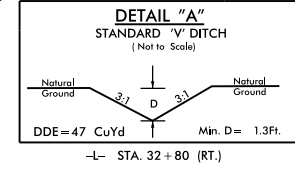
-YI-

PI Sta 11+54.25
 $\Delta = 2^\circ 24' 26.5''$ (RT)
 $D = 38^\circ 11' 49.9''$
 $L = 56.04'$
 $T = 28.35'$
 $R = 150.00'$
SE = SEE PLANS

-L- SR 1604 HUNTER HILL ROAD AT -Y- SR 1613 WINSTEAD AVENUE AND SR 1600 THOMAS A. BETTS PKW	
2019 ADT	12575
2040 ADT	18500
2250	3875
3300	5600
10650	18375
15600	27000
3975	10075
5700	14800
20500	30100



BEGIN TIP PROJECT U-3621A
-L- POC STA. 25+75.00



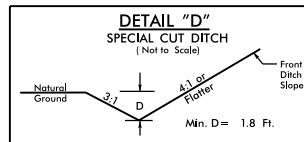
- NOTES:
1. ALL DRIVEWAYS ARE 20' IN WIDTH UNLESS SHOWN ON THE PLANS.
 2. SEE PAVEMENT MARKING PLANS FOR ACTUAL LOCATIONS OF CURB RAMPS.

- NOTES: (1) SEE SHEET 9 FOR -L- PROFILE
(2) SEE SHEET 11 FOR -YI- PROFILE
(3) SEE SHEET 2B-1 FOR INTERSECTION DETAIL OF -L- AT -YI-

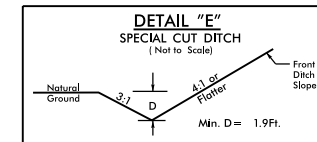
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PROJECT REFERENCE NO.	SHEET NO.
U-3621A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

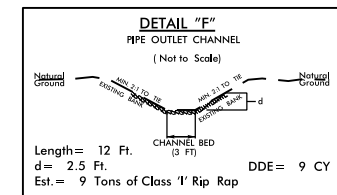
-L-
 PI Sta. 43+41.88
 $\Delta = 18' 29" 36.8" (RT.)$
 $D = 5' 10" 59.2"$
 $L = 580.99'$
 $T = 293.04'$
 $R = 1,800.00'$
 SE = SEE PLANS



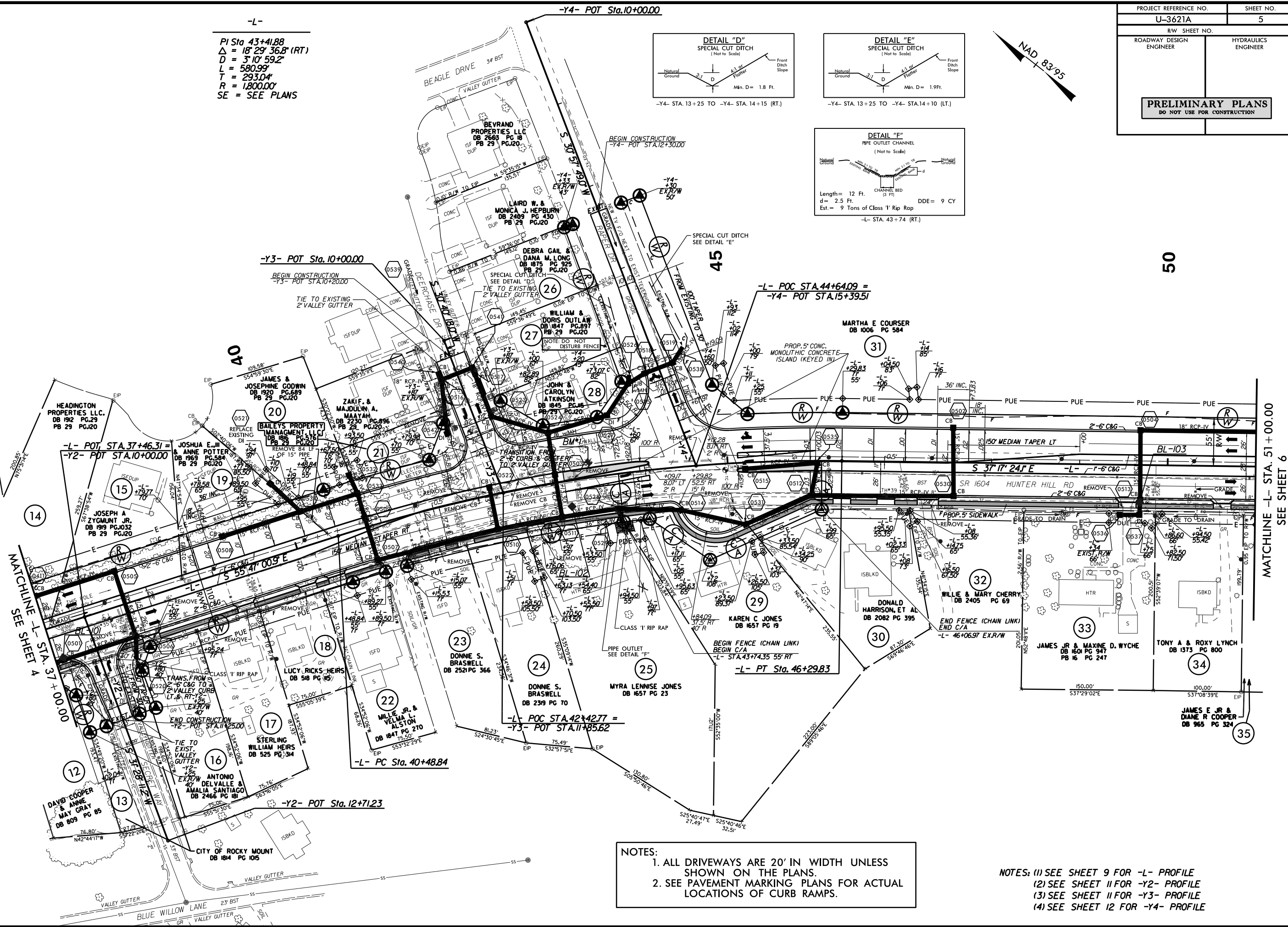
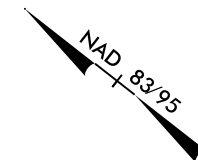
-Y4- STA. 13+25 TO -Y4- STA. 14+15 (RT.)



-Y4- STA. 13+25 TO -Y4- STA. 14+10 (LT.)



-L- STA. 43+74 (RT.)



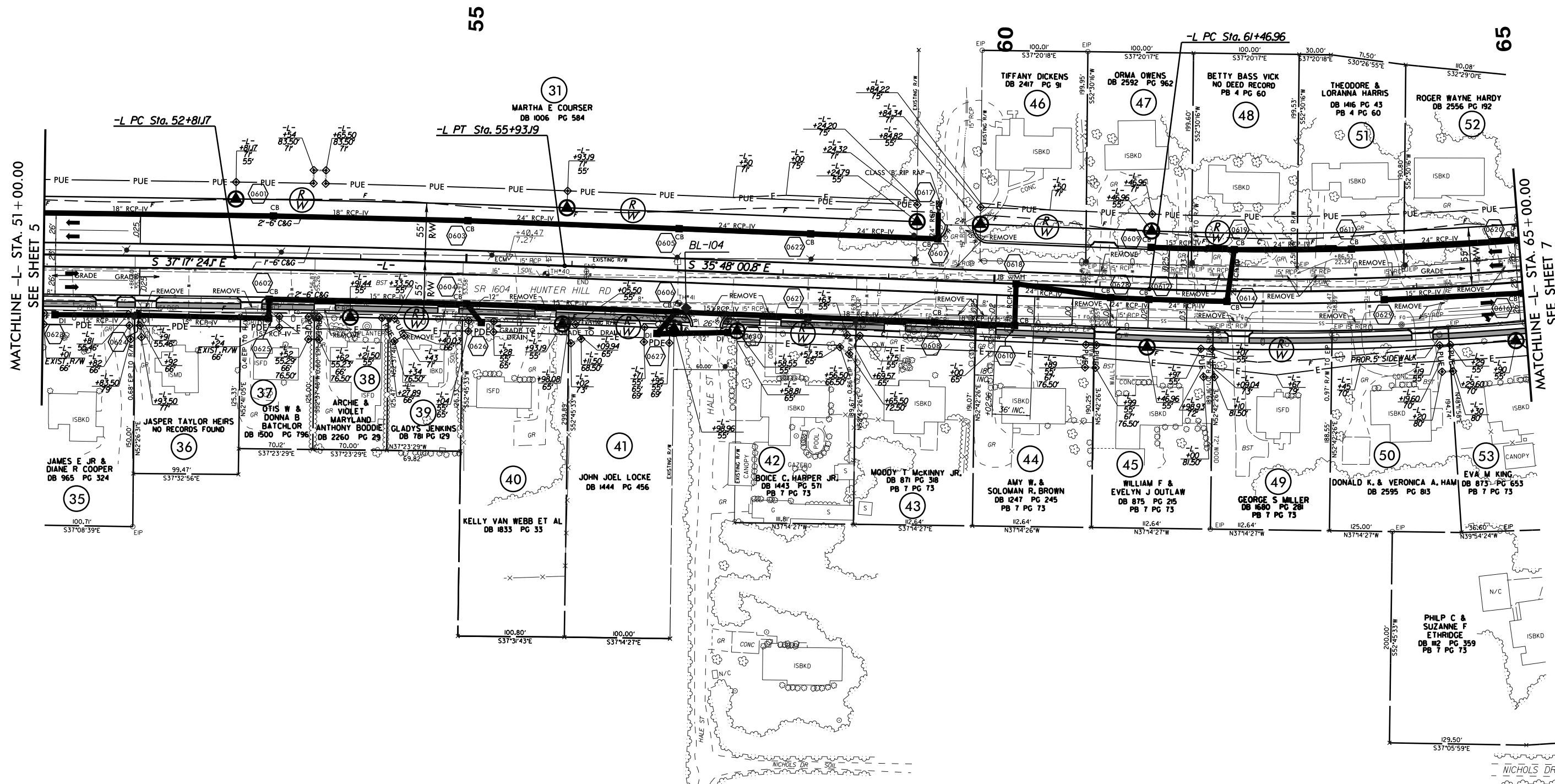
NOTES:

1. ALL DRIVEWAYS ARE 20' IN WIDTH UNLESS SHOWN ON THE PLANS.
2. SEE PAVEMENT MARKING PLANS FOR ACTUAL LOCATIONS OF CURB RAMPS.

- NOTES: (1) SEE SHEET 9 FOR -L- PROFILE
 (2) SEE SHEET 11 FOR -Y2- PROFILE
 (3) SEE SHEET 11 FOR -Y3- PROFILE
 (4) SEE SHEET 12 FOR -Y4- PROFILE

<i>PI Sta 54+37.19</i> $\Delta = 1^{\circ} 29' 23.3" (RT)$ $D = 0^{\circ} 28' 38.9"$ $L = 312.02'$ $T = 156.02'$ $R = 12,000.00'$ <i>SE = SEE PLANS</i>	<i>PI Sta 66+10.12</i> $\Delta = 1^{\circ} 33' 09.6" (LT)$ $D = 1^{\circ} 54' 35.5"$ $L = 919.06'$ $T = 463.16'$ $R = 3,000.00'$ <i>SE = SEE PLANS</i>
---	--

NAD 83/95



NOTES:

1. ALL DRIVEWAYS ARE 20' IN WIDTH UNLESS SHOWN ON THE PLANS.
2. SEE PAVEMENT MARKING PLANS FOR ACTUAL LOCATIONS OF CURB RAMPS.

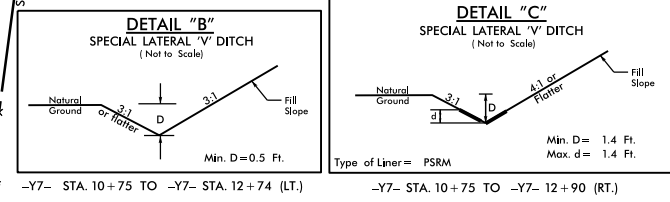
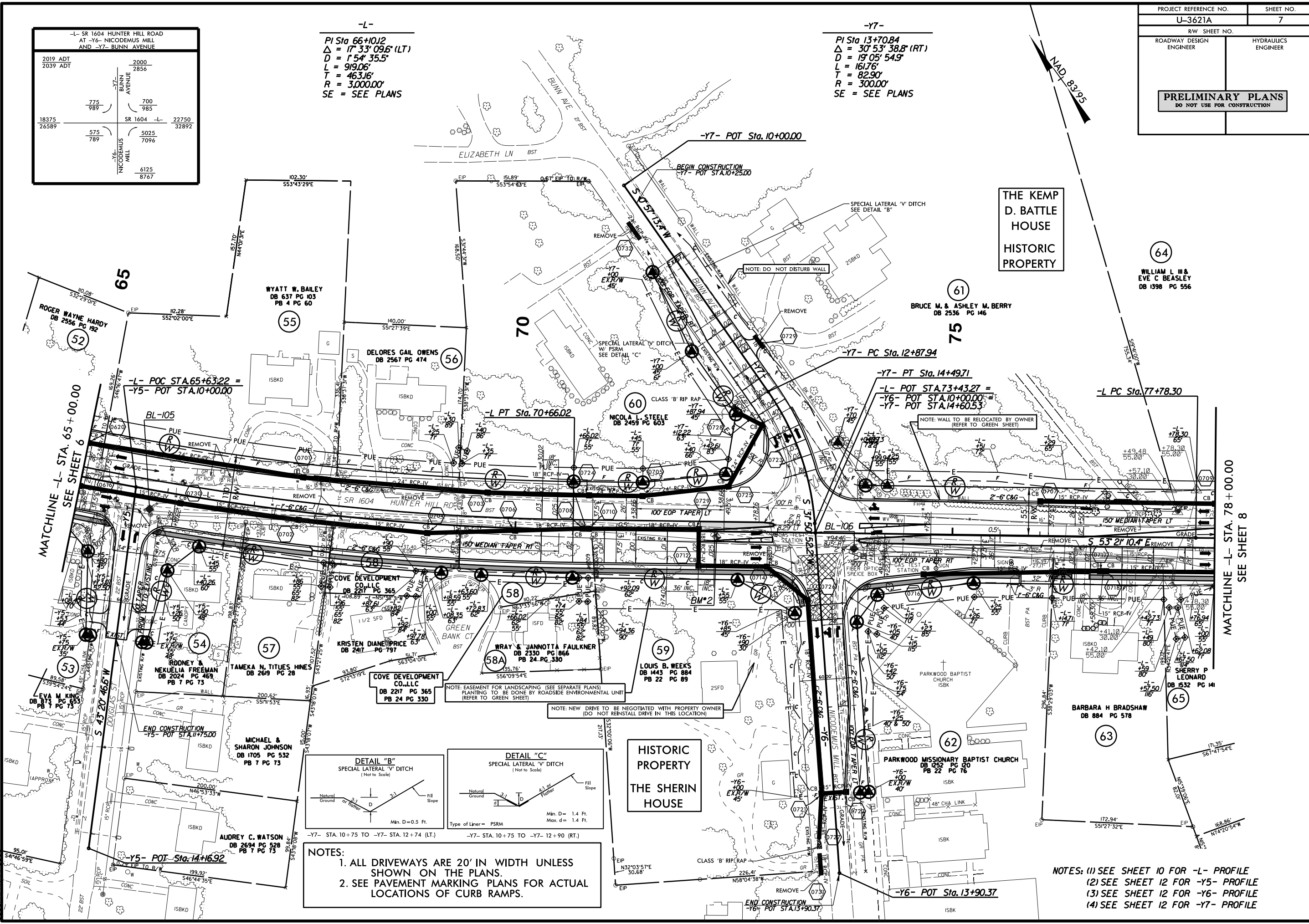
NOTE: SEE SHEET 10 FOR -L- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L- SR 1604 HUNTER HILL ROAD AT -Y6- NICODEMUS MILL AND -Y7- BUNN AVENUE	
2019 ADT 2039 ADT	2000 2856
18375 26589	22750 32892
775 989	700 985
575 789	5025 7096
	6125 8767

-L-
PI Sta 66+10.12
 $\Delta = 17^\circ 33' 09.6" (LT)$
 $D = 154' 35.5"$
 $L = 919.06'$
 $T = 463.16'$
 $R = 3,000.00'$
SE = SEE PLANS

-Y7-
PI Sta 13+70.84
 $\Delta = 30^\circ 53' 38.8" (RT)$
 $D = 1905' 54.9"$
 $L = 161.76'$
 $T = 82.90'$
 $R = 300.00'$
SE = SEE PLANS



- NOTES:
1. ALL DRIVEWAYS ARE 20' IN WIDTH UNLESS SHOWN ON THE PLANS.
 2. SEE PAVEMENT MARKING PLANS FOR ACTUAL LOCATIONS OF CURB RAMPS.

- NOTES: (1) SEE SHEET 10 FOR -L- PROFILE
(2) SEE SHEET 12 FOR -Y5- PROFILE
(3) SEE SHEET 12 FOR -Y6- PROFILE
(4) SEE SHEET 12 FOR -Y7- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
U-3621A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

PI Sta 80+37.32
 $\Delta = 4^{\circ}56'37.8"$ (LT)
 $D = 0^{\circ}57'17.7"$
 $L = 517.72'$
 $T = 259.02'$
 $R = 6,000.00'$
SE = SEE PLANS

-Y8-

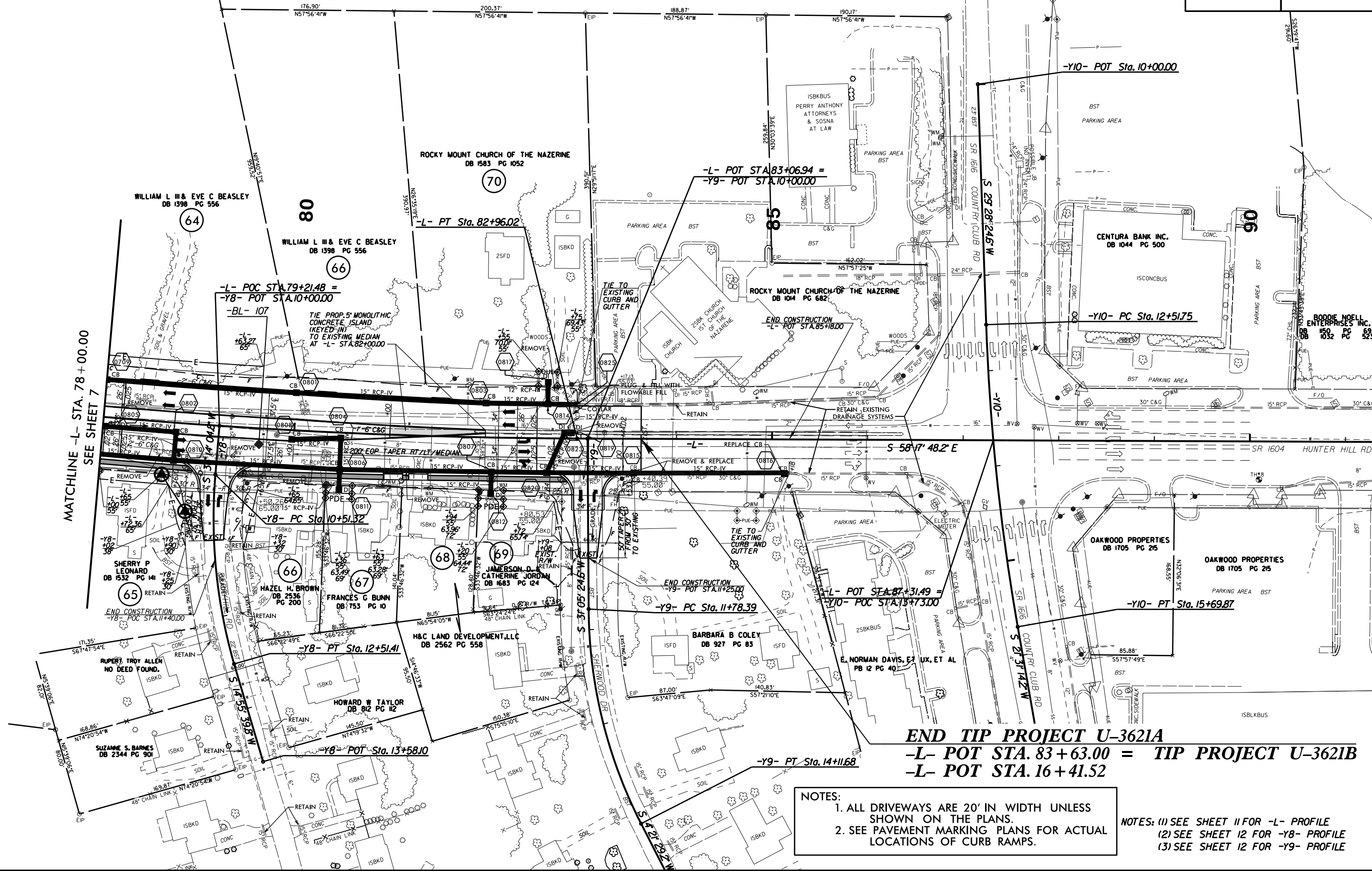
PI Sta 11+52.48
 $\Delta = 20^{\circ}50'39.7"$ (LT)
 $D = 10^{\circ}25'02.7"$
 $L = 200.09'$
 $T = 101.16'$
 $R = 550.00'$
SE = SEE PLANS

-Y9-

PI Sta 12+97.20
 $\Delta = 26^{\circ}43'55.4"$ (LT)
 $D = 11^{\circ}27'33.0"$
 $L = 233.28'$
 $T = 118.80'$
 $R = 500.00'$
SE = SEE PLANS

-Y10-

PI Sta 14+11.07
 $\Delta = 7^{\circ}57'10.4"$ (LT)
 $D = 2^{\circ}30'00.0"$
 $L = 318.12'$
 $T = 159.33'$
 $R = 2,291.83'$

**END TIP PROJECT U-3621A**

-L- POT STA. 83+63.00 = TIP PROJECT U-3621B
-L- POT STA. 16+41.52

NOTES:

1. ALL DRIVEWAYS ARE 20' IN WIDTH UNLESS SHOWN ON THE PLANS.
2. SEE PAVEMENT MARKING PLANS FOR ACTUAL LOCATIONS OF CURB RAMPS.

NOTES: (1) SEE SHEET 11 FOR -L- PROFILE
(2) SEE SHEET 12 FOR -Y8- PROFILE
(3) SEE SHEET 12 FOR -Y9- PROFILE

5/28/99

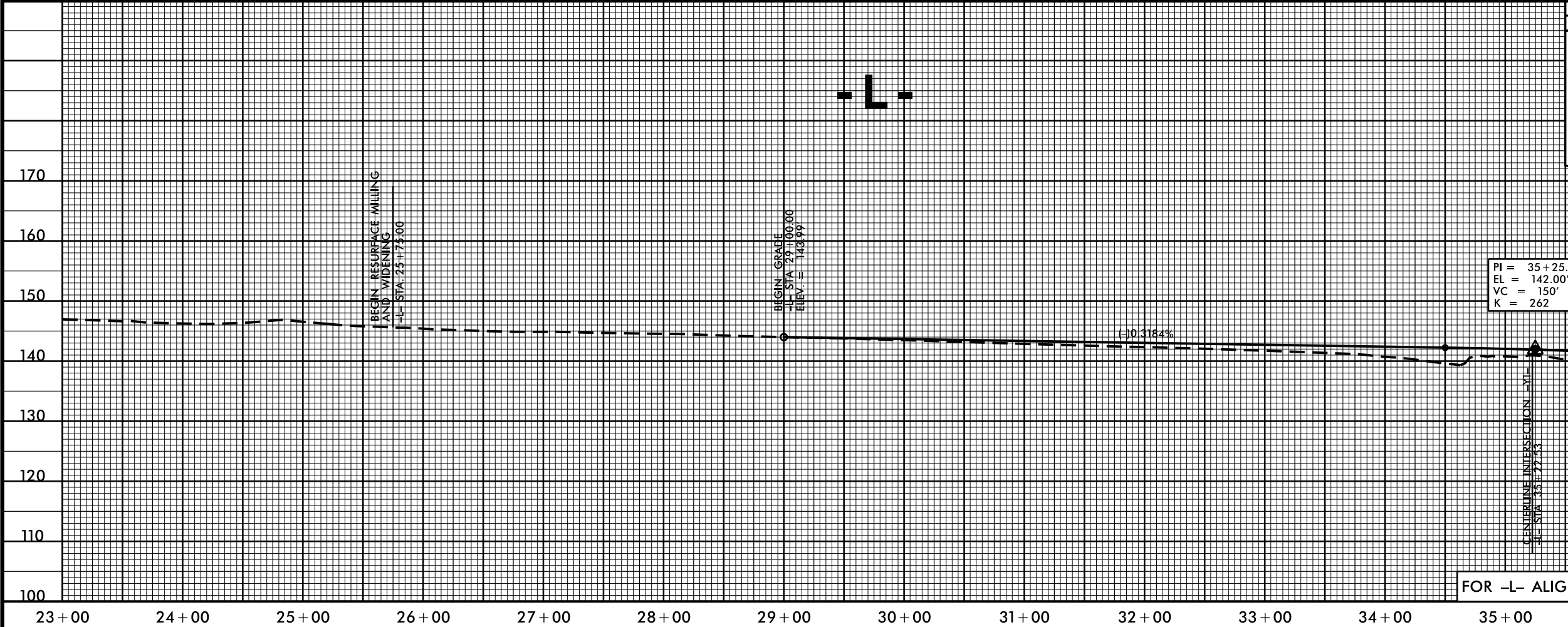
PROJECT REFERENCE NO.
U-3621A

ROADWAY DESIGN
ENGINEER

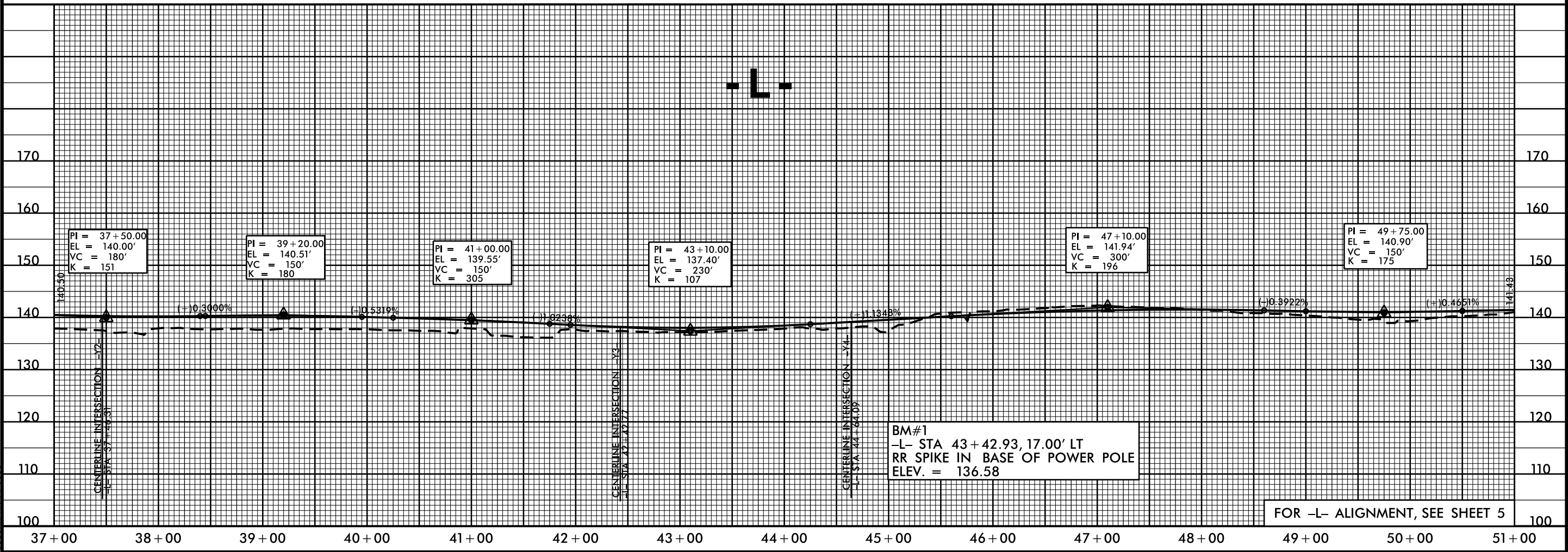
SHEET NO.
9

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



FOR -L- ALIGNMENT, SEE SHEET 4



FOR -L- ALIGNMENT, SEE SHEET 5

5/28/99

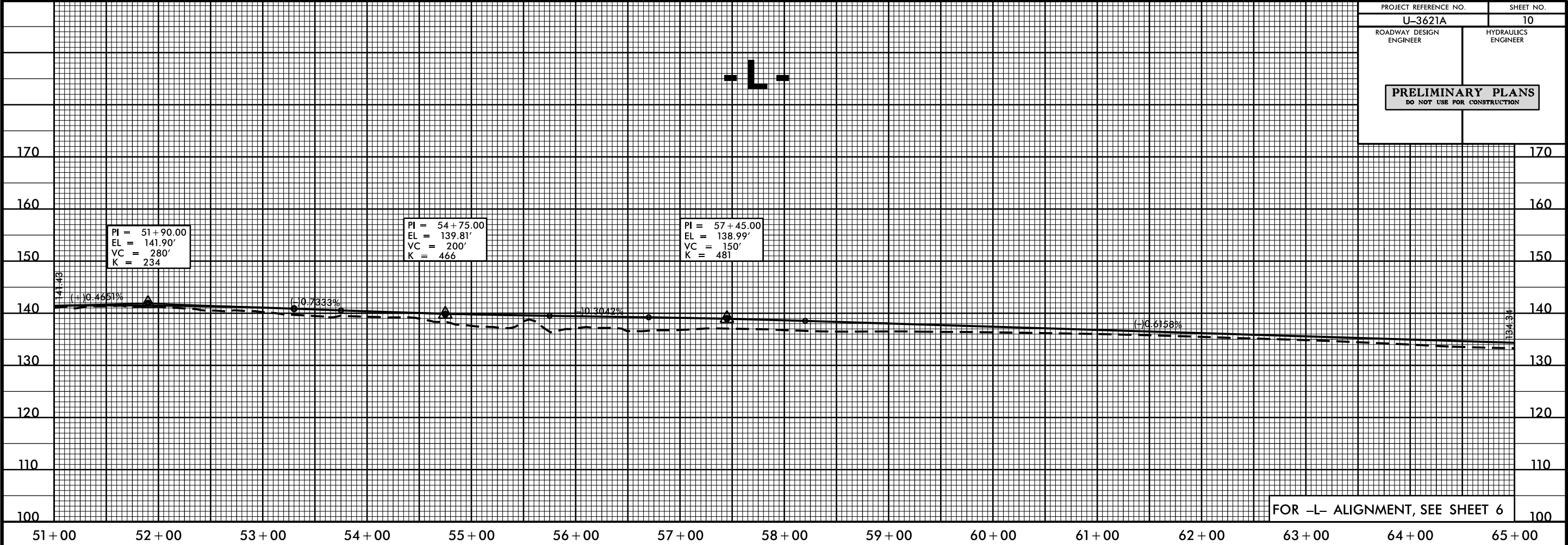
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ROADWAY DESIGN
ENGINEER

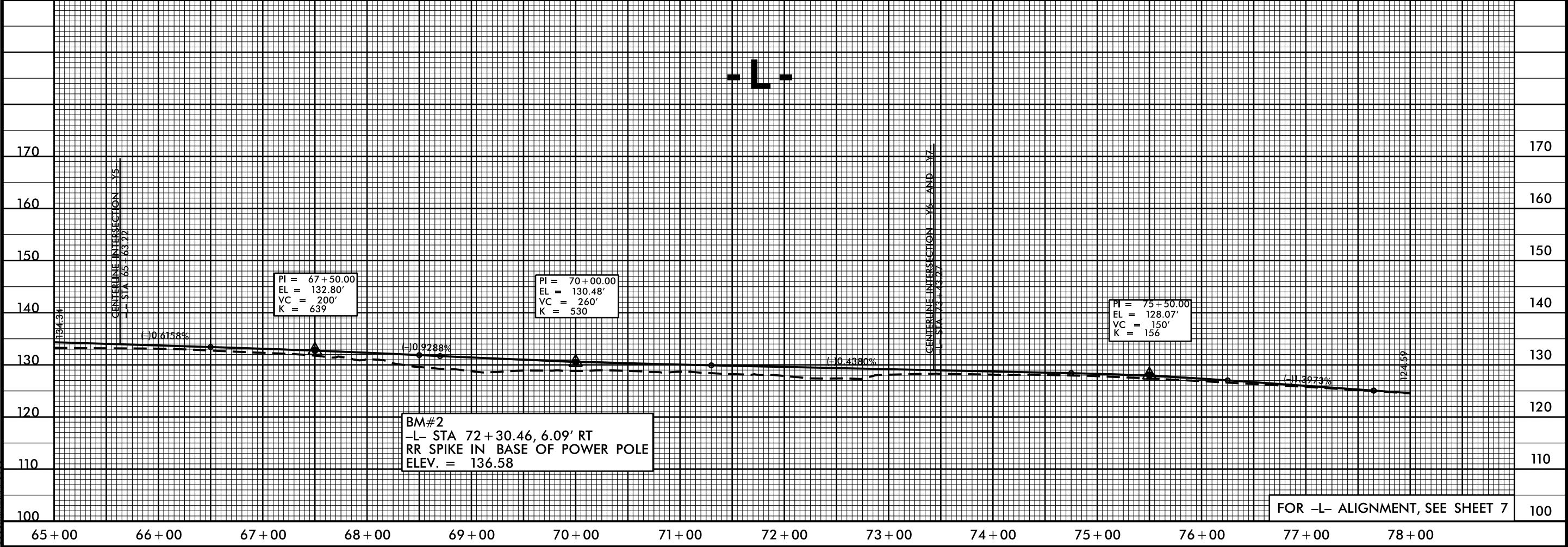
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10

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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\$\$\$\$\$ STRAWMAN \$\$\$



5/28/99

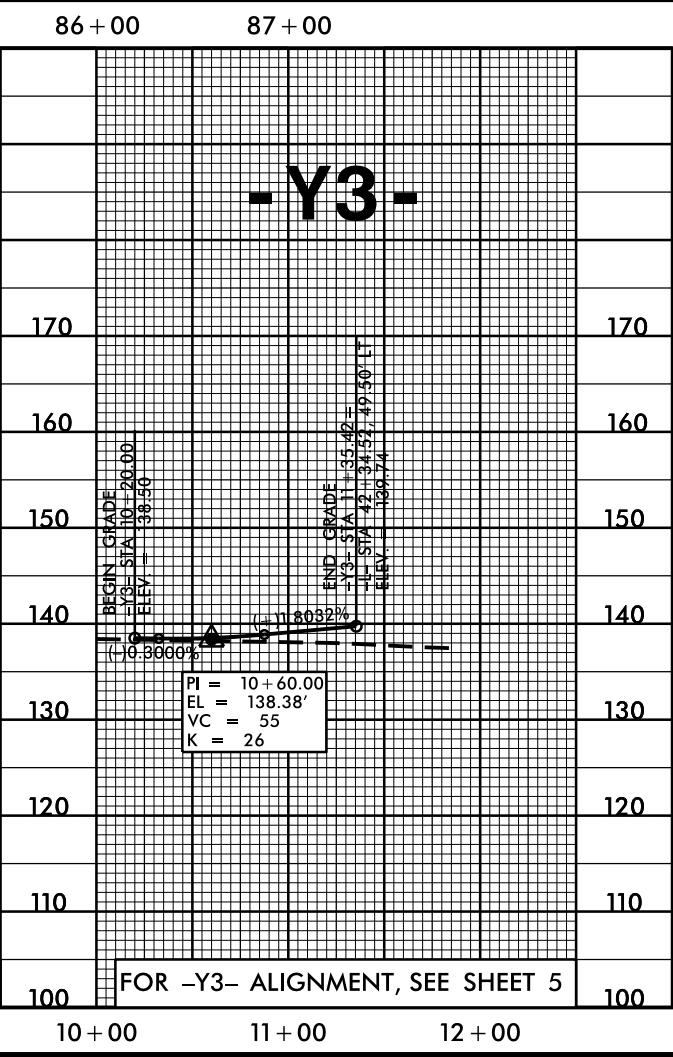
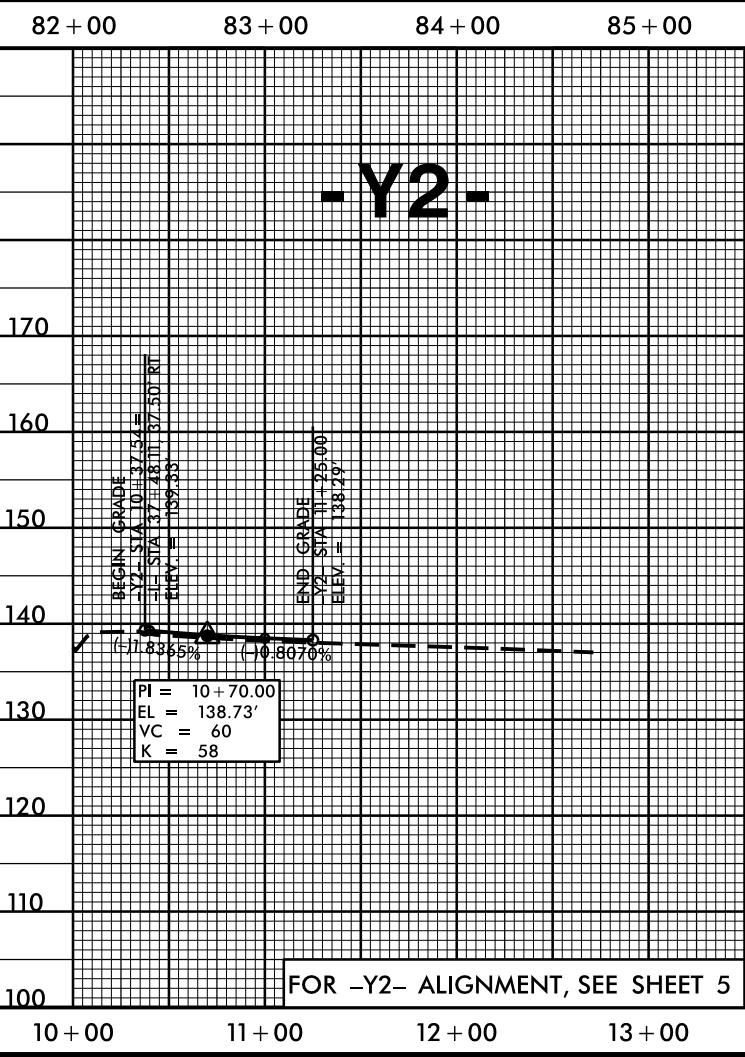
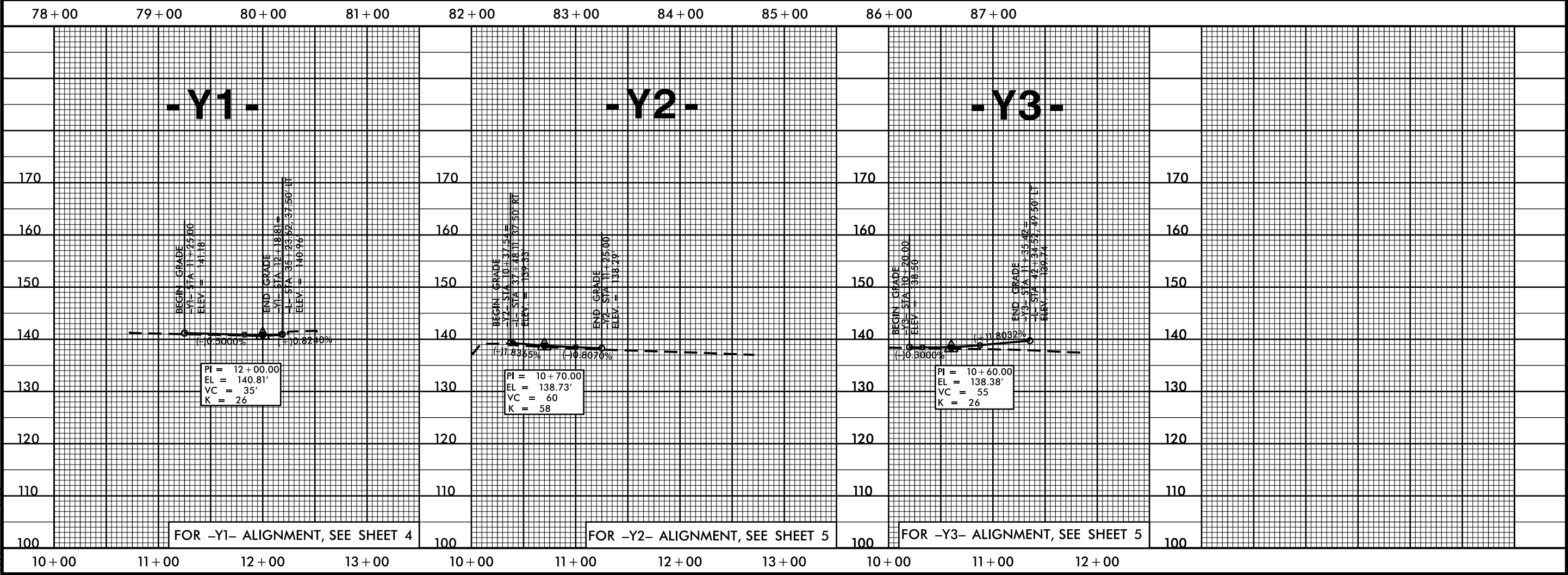
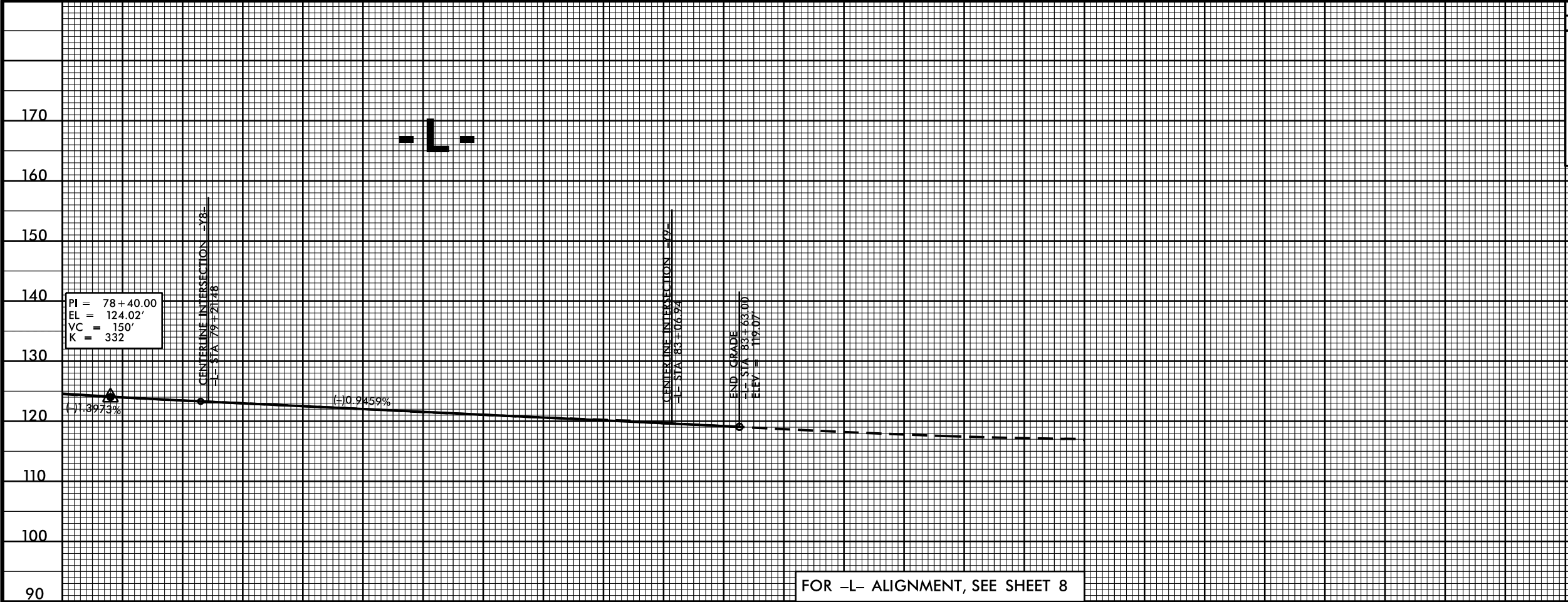
PROJECT REFERENCE NO.
U-3621A

ROADWAY DESIGN
ENGINEER

SHEET NO.
11

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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\$\$\$\$\$GRADE\$\$\$\$\$

PROJECT REFERENCE NO.		SHEET NO.
U-3621A		12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

