

CONTRACT: C201303 TIP PROJECT: B-3637

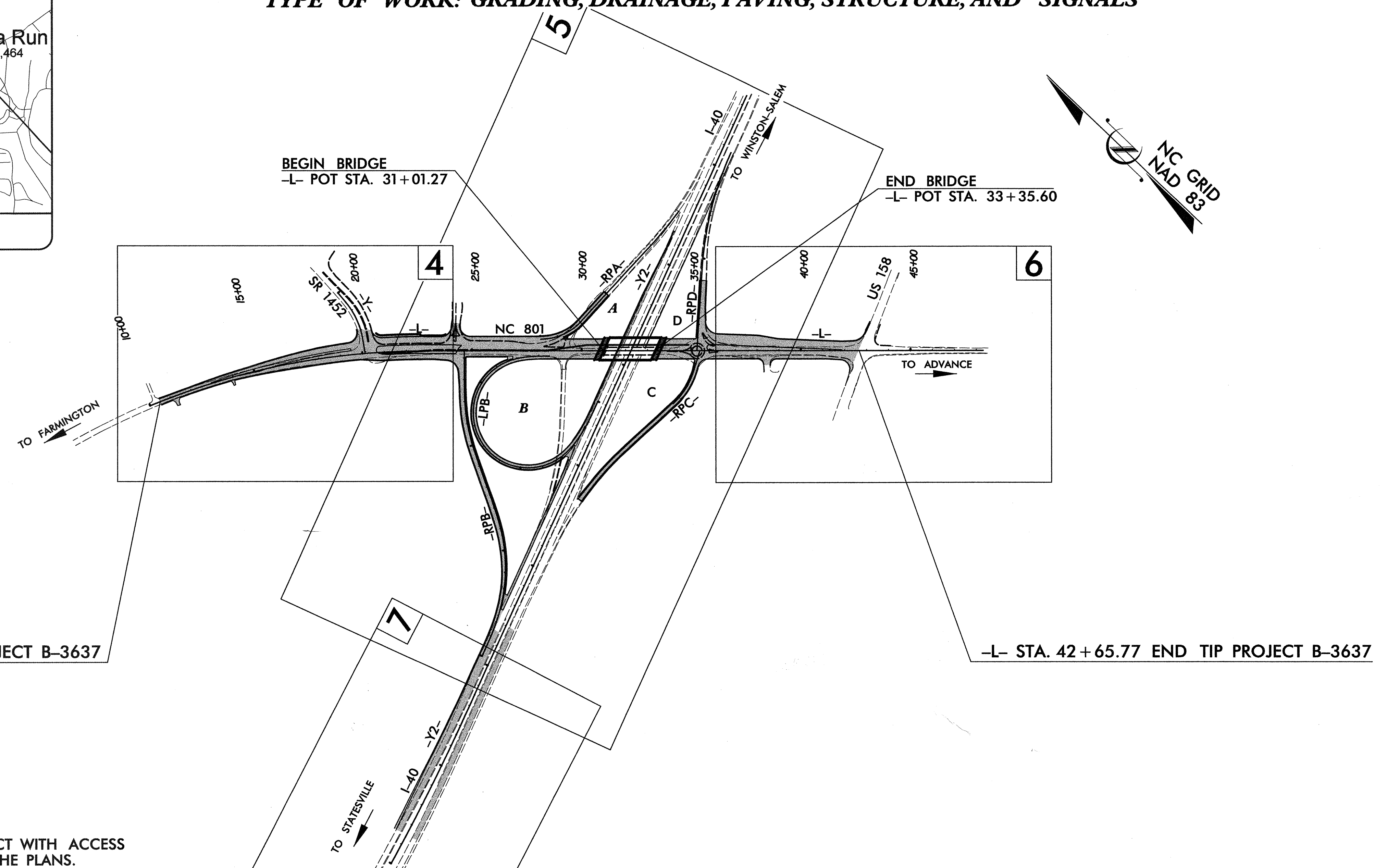
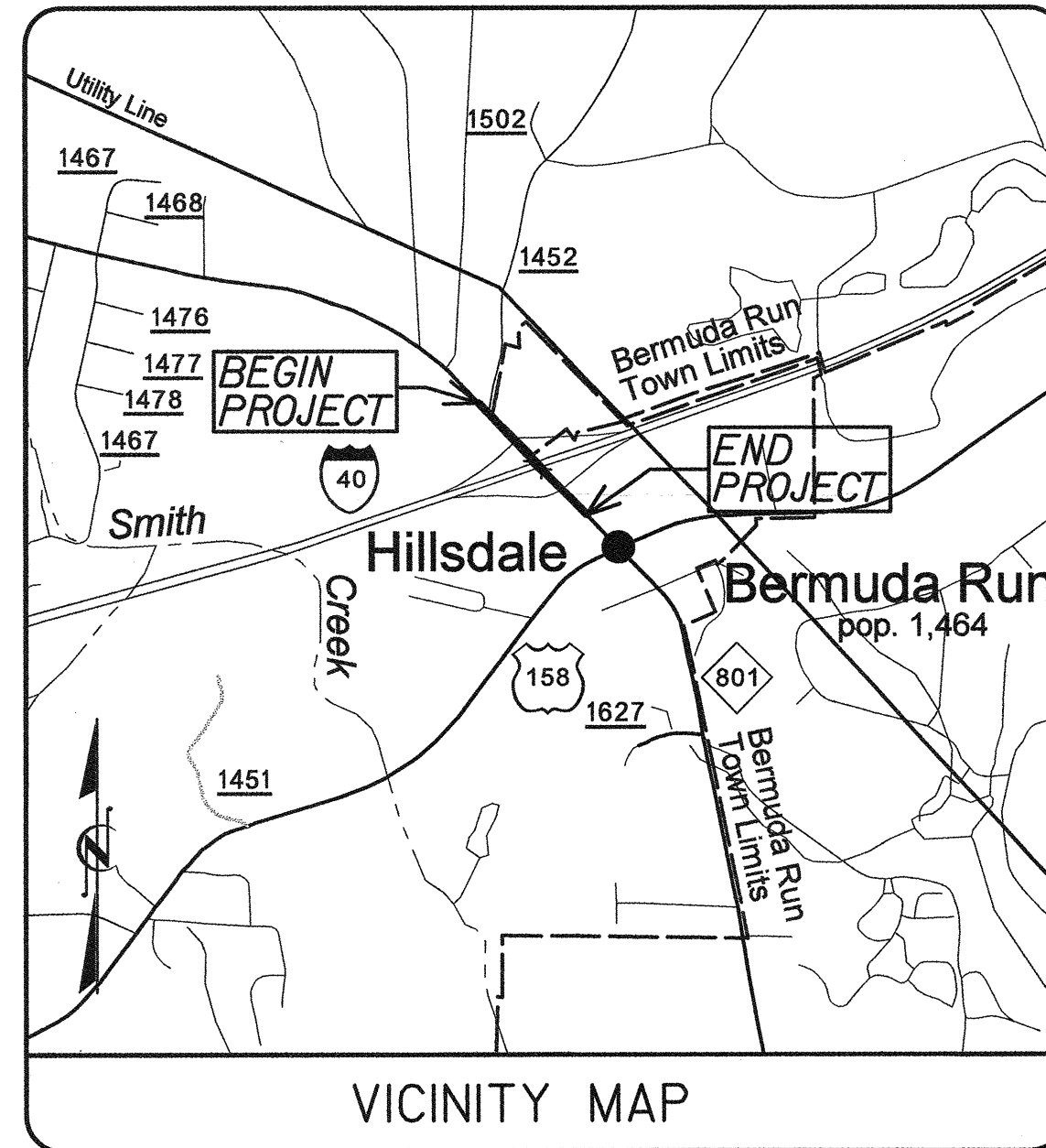
See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIE COUNTY

LOCATION: BRIDGE NO. 37 OVER I-40 ON NC 801
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURE, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3637	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33185.1.1	BRSTP-801(2)	PE	
33185.2.2	BRSTP-801(2)	RW, UTILITIES	
33185.3.GV1	BRIMF-801(9)	CONST.	



THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

<p>GRAPHIC SCALES</p> <p>50 25 0 50 100 PLANS</p> <p>50 25 0 50 100 PROFILE (HORIZONTAL)</p> <p>10 5 0 10 20 PROFILE (VERTICAL)</p>	<p>DESIGN DATA</p> <p>ADT 2007 = 21,208 ADT 2027 = 30,592</p> <p>DHV = 11 % D = 65 % T = 5 % * V = 40 MPH</p> <p>* (TTST 1% + DUAL 4%)</p>	<p>PROJECT LENGTH</p> <p>LENGTH ROADWAY TIP PROJECT B-3637 = 0.565 MI LENGTH STRUCTURE TIP PROJECT B-3637 = 0.044 MI TOTAL LENGTH TIP PROJECT B-3637 = 0.609 MI</p>	<p>PLANS PREPARED BY: TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850</p> <p>2006 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: MARCH 15, 2005</p> <p>LETTING DATE: SEPTEMBER 18, 2007</p> <p>NCDOT CONTACT:</p>	<p>PLANS PREPARED FOR: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr. Raleigh, NC 27610</p> <p>CHARLES L. FLOWE, P.E. PROJECT ENGINEER</p> <p>W. CRAIG PARKER, P.E. PROJECT DESIGN ENGINEER</p> <p>DOUG TAYLOR, PE PROJECT ENGINEER - ROADWAY DESIGN</p>	<p>HYDRAULICS ENGINEER</p> <p><i>William F. Stephens Jr.</i> SIGNATURE: 7-9-2007</p> <p>ROADWAY DESIGN ENGINEER</p> <p><i>W. Craig Parker</i> SIGNATURE: 7-16-2007</p>	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA</p> <p><i>cut m. miller</i> STATE HIGHWAY DESIGN ENGINEER</p>
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

*S.U.E = SUBSURFACE UTILITY ENGINEER

ROADS & RELATED ITEMS

Edge of Pavement	-----
Curb	-----
Prop. Slope Stakes Cut	-----C-----
Prop. Slope Stakes Fill	-----F-----
Prop. Woven Wire Fence	○-----○
Prop. Chain Link Fence	□-----□
Prop. Barbed Wire Fence	◇-----◇
Prop. Wheelchair Ramp	WCR
Curb Cut for Future Wheelchair Ramp	CCFR
Exist. Guardrail	-----
Prop. Guardrail	-----
Equality Symbol	⊕
Pavement Removal	XXXXXX

RIGHT OF WAY

Baseline Control Point	◆
Existing Right of Way Marker	△
Exist. Right of Way Line w/Marker	-----△-----
Prop. Right of Way Line with Proposed	-----▲-----
RW Marker (Iron Pin & Cap)	▲
Prop. Right of Way Line with Proposed (Concrete or Granite) RW Marker	▲
Exist. Control of Access Line	○C/A
Prop. Control of Access Line	○C/A
Exist. Easement Line	-----E-----
Prop. Temp. Construction Easement Line	-----E-----
Prop. Temp. Drainage Easement Line	-----TDE-----
Prop. Perm. Drainage Easement Line	-----PDE-----

HYDROLOGY

Stream or Body of Water	-----
River Basin Buffer	-----RBB-----
Flow Arrow	→
Disappearing Stream	-----
Spring	-----
Swamp Marsh	-----
Shoreline	-----
Falls, Rapids	-----
Prop Lateral, Tail, Head Ditches	-----FLOW-----

STRUCTURES

MAJOR	
Bridge, Tunnel, or Box Culvert	-----CONC-----
Bridge Wing Wall, Head Wall and End Wall	-----CONC WW-----

MINOR	
Head & End Wall	-----CONC HW-----
Pipe Culvert	-----
Footbridge	-----
Drainage Boxes	-----CB-----
Paved Ditch Gutter	-----

UTILITIES

Exist. Pole	•
Exist. Power Pole	•
Prop. Power Pole	○
Exist. Telephone Pole	•
Prop. Telephone Pole	○
Exist. Joint Use Pole	•
Prop. Joint Use Pole	○
Telephone Pedestal	⊞
UG Telephone Cable Hand Hold	⊞
Cable TV Pedestal	⊞
UG TV Cable Hand Hold	⊞
UG Power Cable Hand Hold	⊞
Hydrant	⊞
Satellite Dish	⊞
Exist. Water Valve	⊞
Sewer Clean Out	⊞
Power Manhole	⊞
Telephone Booth	⊞
Cellular Telephone Tower	⊞
Water Manhole	⊞
Light Pole	⊞
H-Frame Pole	⊞
Power Line Tower	⊞
Pole with Base	⊞
Gas Valve	⊞
Gas Meter	⊞
Telephone Manhole	⊞
Power Transformer	⊞
Sanitary Sewer Manhole	⊞
Storm Sewer Manhole	⊞
Tank; Water, Gas, Oil	⊞
Water Tank With Legs	⊞
Traffic Signal Junction Box	⊞
Fiber Optic Splice Box	⊞
Television or Radio Tower	⊞
Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement	-----TS-----

Recorded Water Line	-----W-----
Designated Water Line (S.U.E.*)	-----W-----
Sanitary Sewer	-----SS-----
Recorded Sanitary Sewer Force Main	-----FSS-----
Designated Sanitary Sewer Force Main(S.U.E.*)	-----FSS-----
Recorded Gas Line	-----G-----
Designated Gas Line (S.U.E.*)	-----G-----
Storm Sewer	-----S-----
Recorded Power Line	-----P-----
Designated Power Line (S.U.E.*)	-----P-----
Recorded Telephone Cable	-----T-----
Designated Telephone Cable (S.U.E.*)	-----T-----
Recorded U/G Telephone Conduit	-----TC-----
Designated U/G Telephone Conduit (S.U.E.*)	-----TC-----
Unknown Utility (S.U.E.*)	-----PUTL-----
Recorded Television Cable	-----TV-----
Designated Television Cable (S.U.E.*)	-----TV-----
Recorded Fiber Optics Cable	-----FO-----
Designated Fiber Optics Cable (S.U.E.*)	-----FO-----
Exist. Water Meter	⊞
U/G Test Hole (S.U.E.*)	⊞
Abandoned According to U/G Record	ATTUR
End of Information	E.O.I.

BOUNDARIES & PROPERTIES

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Exist. Iron Pin	⊞
Property Corner	⊞
Property Monument	⊞
Property Number	⊞
Parcel Number	⊞
Fence Line	-----
Existing Wetland Boundaries	-----WW & ISBW-----
High Quality Wetland Boundary	-----WLB-----
Medium Quality Wetland Boundaries	-----MQ WLB-----
Low Quality Wetland Boundaries	-----LQ WLB-----
Proposed Wetland Boundaries	-----WLB-----
Existing Endangered Animal Boundaries	-----EAB-----
Existing Endangered Plant Boundaries	-----EPB-----

BUILDINGS & OTHER CULTURE

Buildings	-----
Foundations	-----
Area Outline	-----
Gate	-----
Gas Pump Vent or U/G Tank Cap	-----
Church	-----
School	-----
Park	-----
Cemetery	-----
Dam	-----
Sign	-----
Well	-----
Small Mine	-----
Swimming Pool	-----

TOPOGRAPHY

Loose Surface	-----
Hard Surface	-----
Change in Road Surface	-----
Curb	-----
Right of Way Symbol	R/W
Guard Post	○ GP
Paved Walk	-----
Bridge	-----
Box Culvert or Tunnel	-----
Ferry	-----
Culvert	-----
Footbridge	-----
Trail, Footpath	-----
Light House	-----

VEGETATION

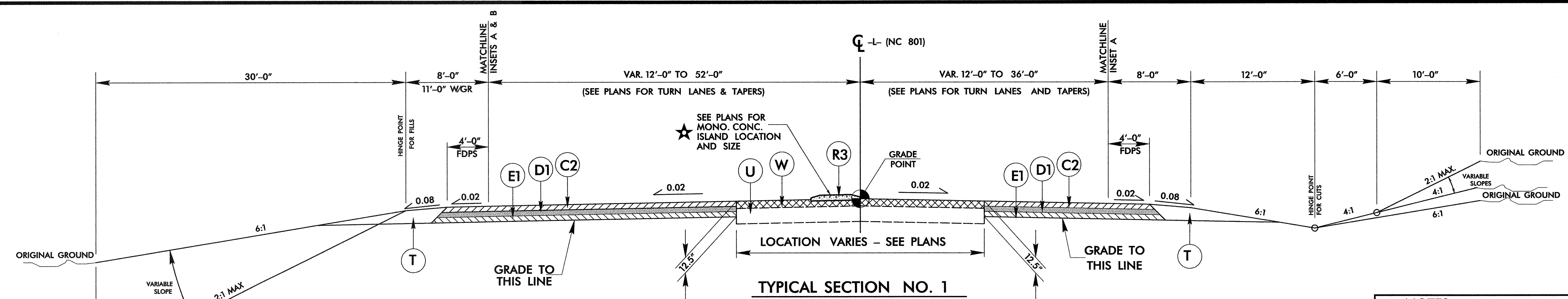
Single Tree	-----
Single Shrub	-----
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	-----VINEYARD-----

RAILROADS

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----

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USE TYPICAL SECTION NO. 1 AS FOLLOWS:

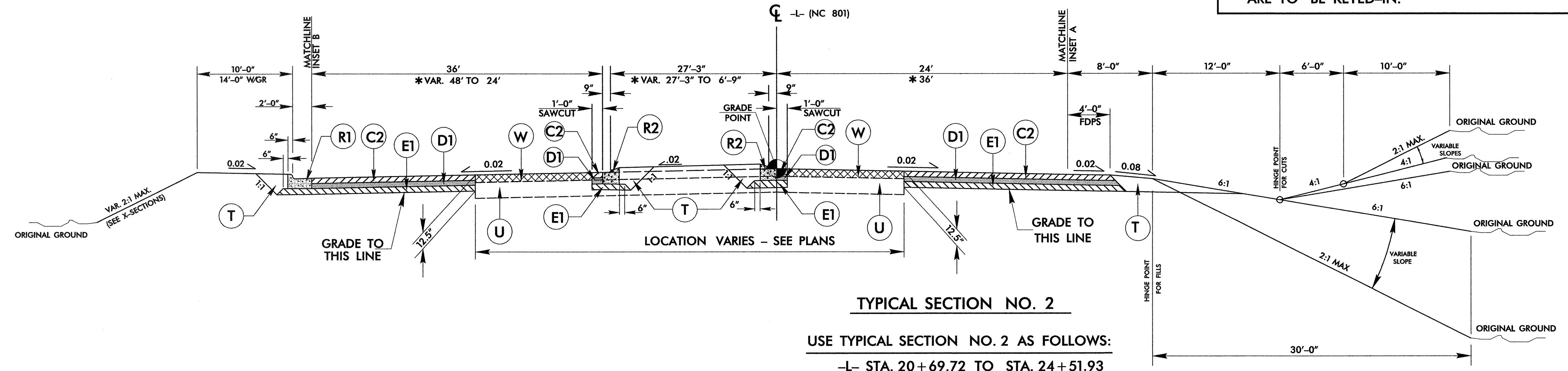
- L- STA. 10+50.00 TO 20+69.72
- L- STA. 24+51.93 TO 31+01.27 (BEGIN BRIDGE)
- L- STA. 33+35.60 (END BRIDGE) TO 35+71.26
- L- STA. 41+31.54 TO 42+65.77

NOTES:

PLACE FULL DEPTH PAVEMENT (NO WIDENING OR WEDGING) AS FOLLOWS:

- L- STA. 25+00.00 TO 31+01.27 (BEGIN BRIDGE)
- L- STA. 33+35.60 (END BRIDGE) TO 38+50.00

★ ALL MONOLITHIC CONCRETE ISLANDS ARE TO BE KEYED-IN.

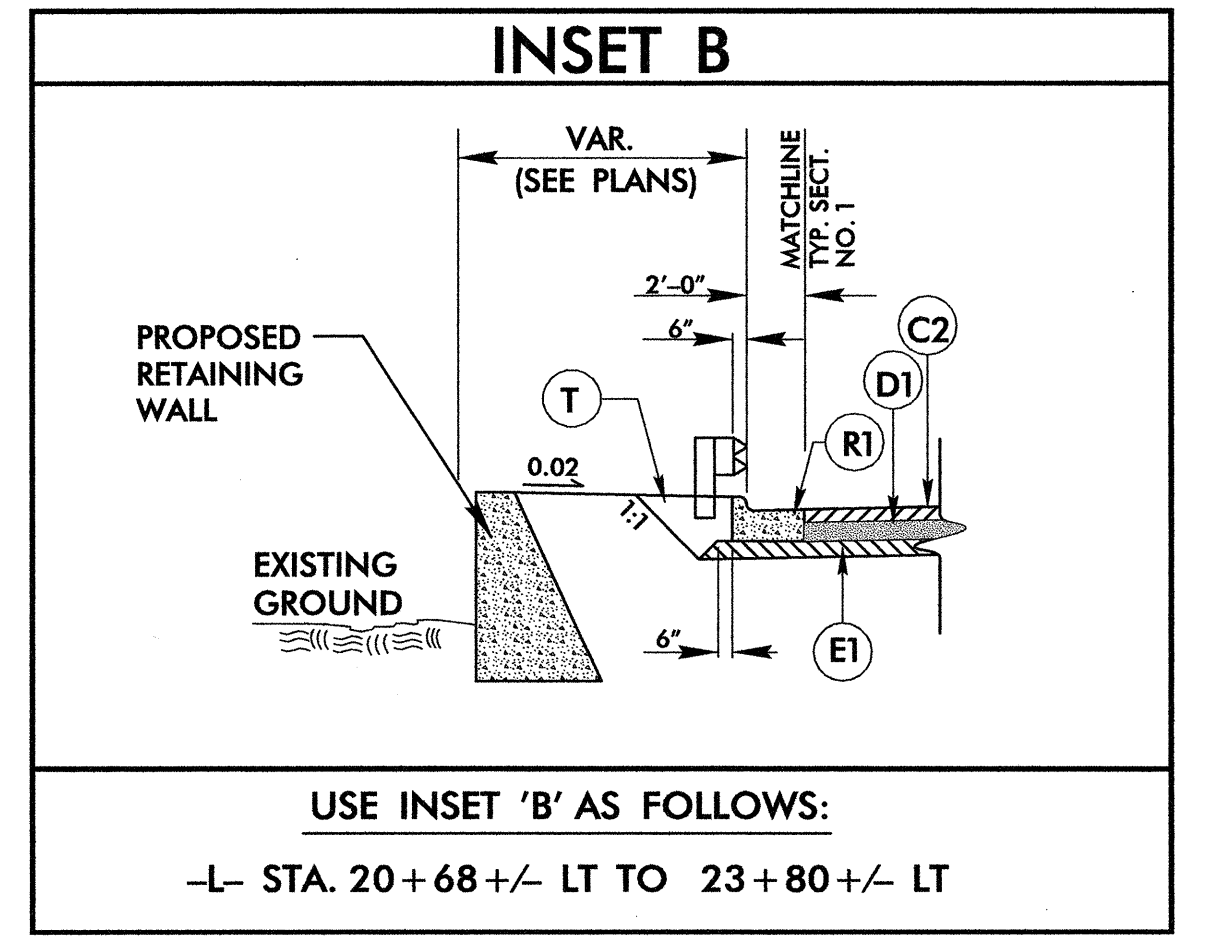
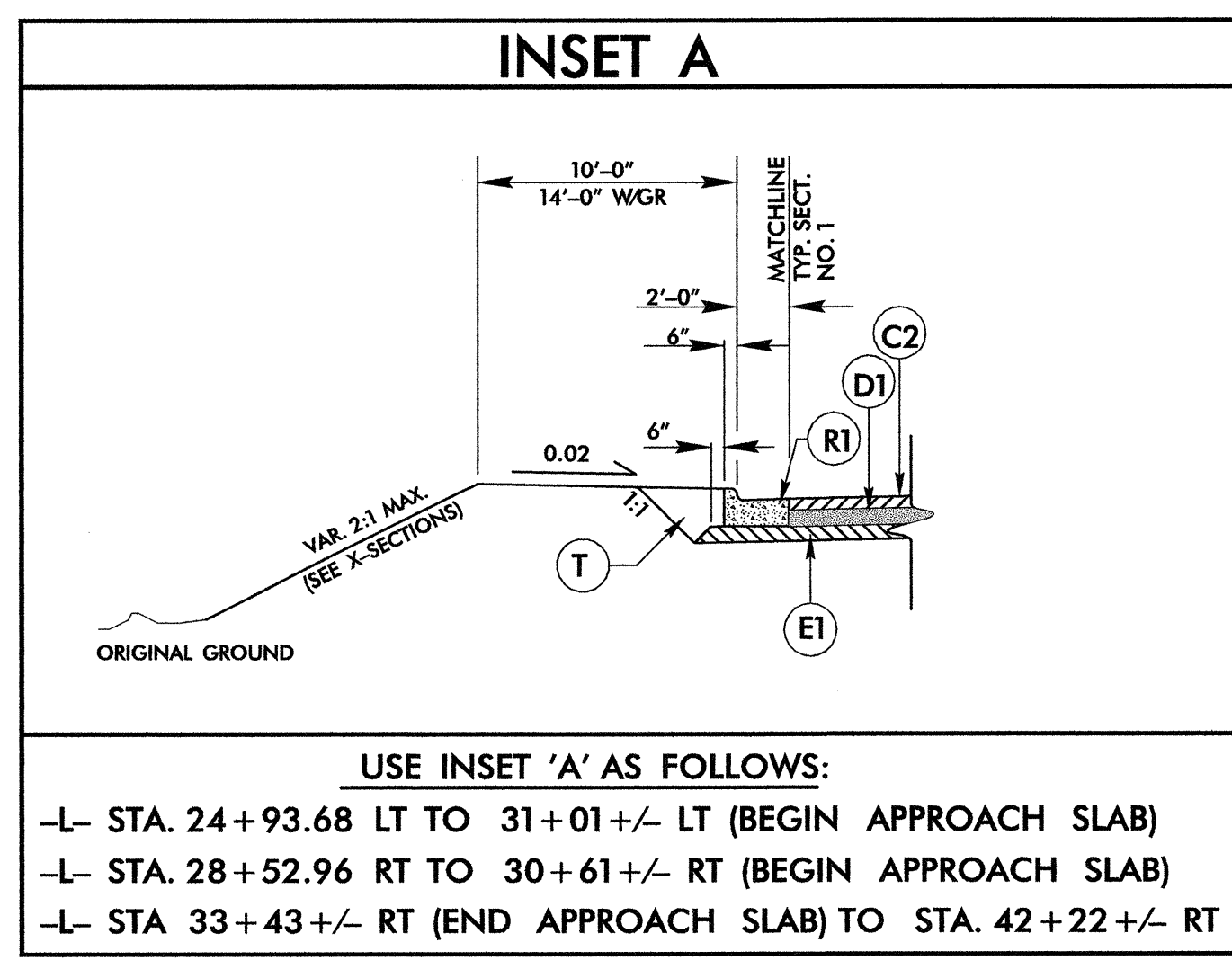


USE TYPICAL SECTION NO. 2 AS FOLLOWS:

- L- STA. 20+69.72 TO STA. 24+51.93
- * -L- STA. 35+71.26 TO STA. 41+31.54

PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	E2	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 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	E3	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS	E4	PROP. VAR. DEPTH ASPHALT 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 4" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
C4	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 LESS THAN 1 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.	E5	PROP. APPROX. 9" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C5	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	2'-6" CONCRETE CURB AND GUTTER.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R2	1'-6" CONCRETE CURB AND GUTTER.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	R3	5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
D3	PROP. VAR. DEPTH ASPHALT 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 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL
D4	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
E1	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.	W	VAR. DEPTH ASPHALT PAVEMENT (SEE STD. WEDGING DETAILS, SHEET 2-A)

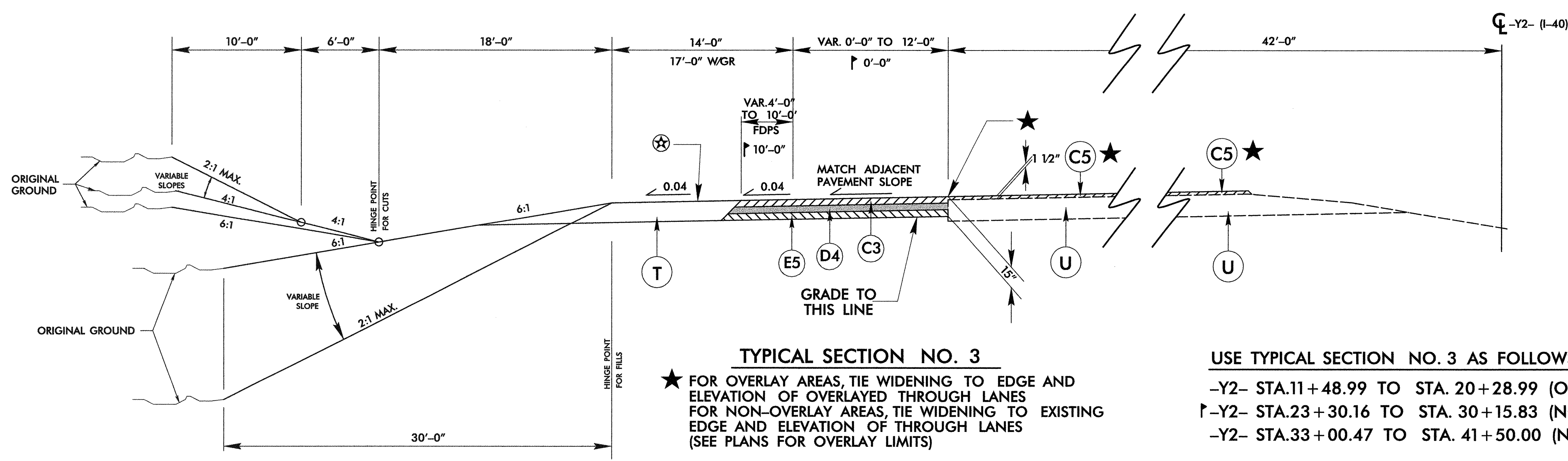
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



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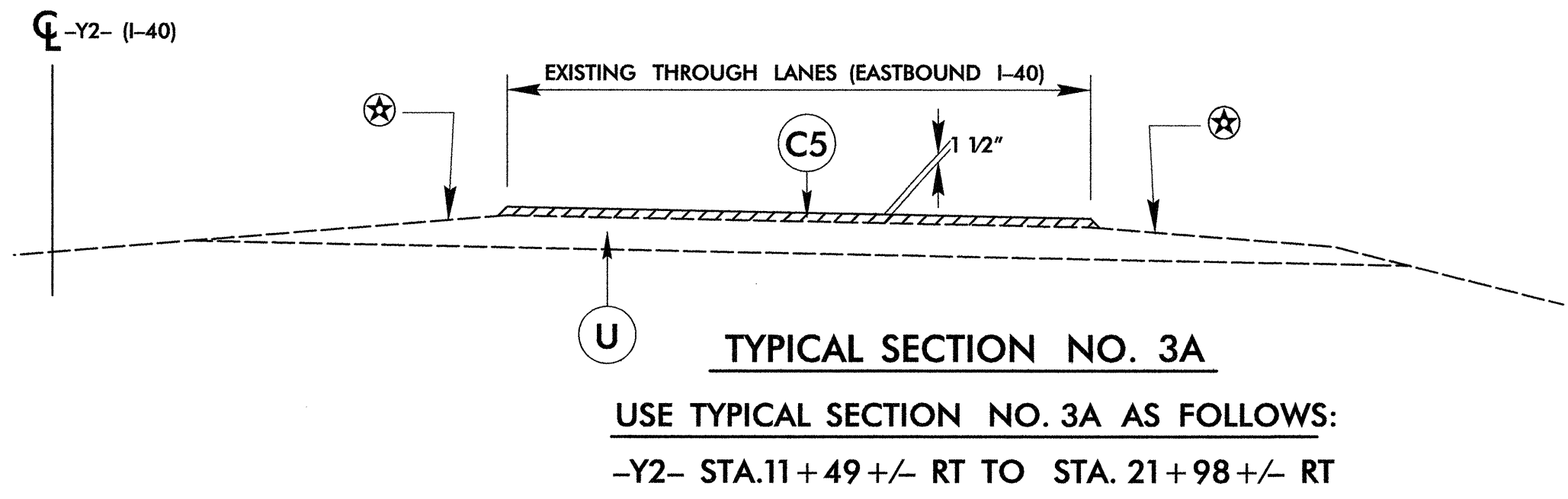
PROJECT REFERENCE NO. B-3637	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER CRAIG PARKER 1-5-2007	PAVEMENT DESIGN ENGINEER CLARK S. MORRISON 7-20-07
TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



TYPICAL SECTION NO. 3
 ★ FOR OVERLAY AREAS, TIE WIDENING TO EDGE AND ELEVATION OF OVERLAYED THROUGH LANES FOR NON-OVERLAY AREAS, TIE WIDENING TO EXISTING EDGE AND ELEVATION OF THROUGH LANES (SEE PLANS FOR OVERLAY LIMITS)

USE TYPICAL SECTION NO. 3 AS FOLLOWS:
 -Y2- STA.11+48.99 TO STA. 20+28.99 (OVERLAY THROUGH LANES)
 -Y2- STA.23+30.16 TO STA. 30+15.83 (NO OVERLAY)
 -Y2- STA.33+00.47 TO STA. 41+50.00 (NO OVERLAY)

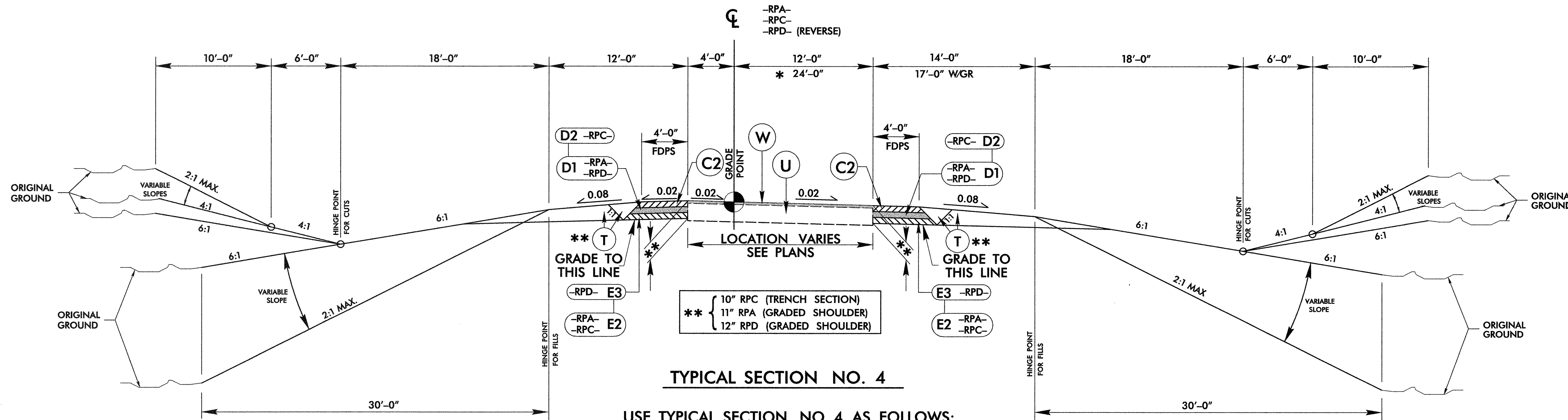
★ NOTE:
 INSTALL MILLED RUMBLE STRIPS FROM -Y2- STA. 11+48.99 TO 41+50.00 IN ACCORDANCE WITH RDY. STD. 665.01



TYPICAL SECTION NO. 3A
 USE TYPICAL SECTION NO. 3A AS FOLLOWS:
 -Y2- STA.11+49 +/- RT TO STA. 21+98 +/- RT

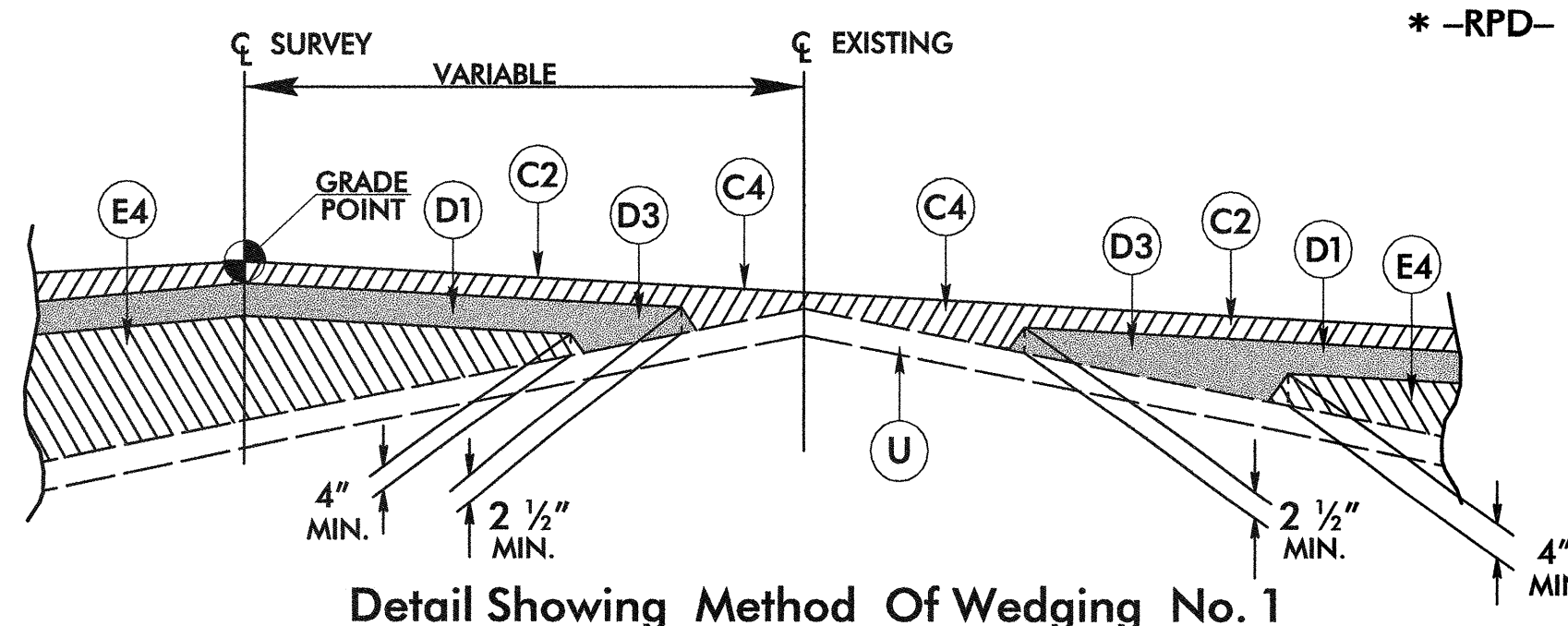
PAVEMENT SCHEDULE	
C2	3", TYPE S9.5B.
C3	3", TYPE S9.5C.
C4	VAR., TYPE S9.5B.
C5	1 1/2", TYPE S9.5D.
D1	4", TYPE I19.0B.
D2	3", TYPE I19.0B.
D3	VAR. DEPTH, TYPE I19.0B.
D4	3", TYPE I19.0C.
E2	4", TYPE B25.0B.
E3	5", TYPE B25.0B.
E4	VAR. DEPTH, TYPE B25.0B.
E5	9", TYPE B25.0C.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING

NOTES: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE. SEE SHEET 2 FOR DETAILED PAVEMENT SCHEDULE.

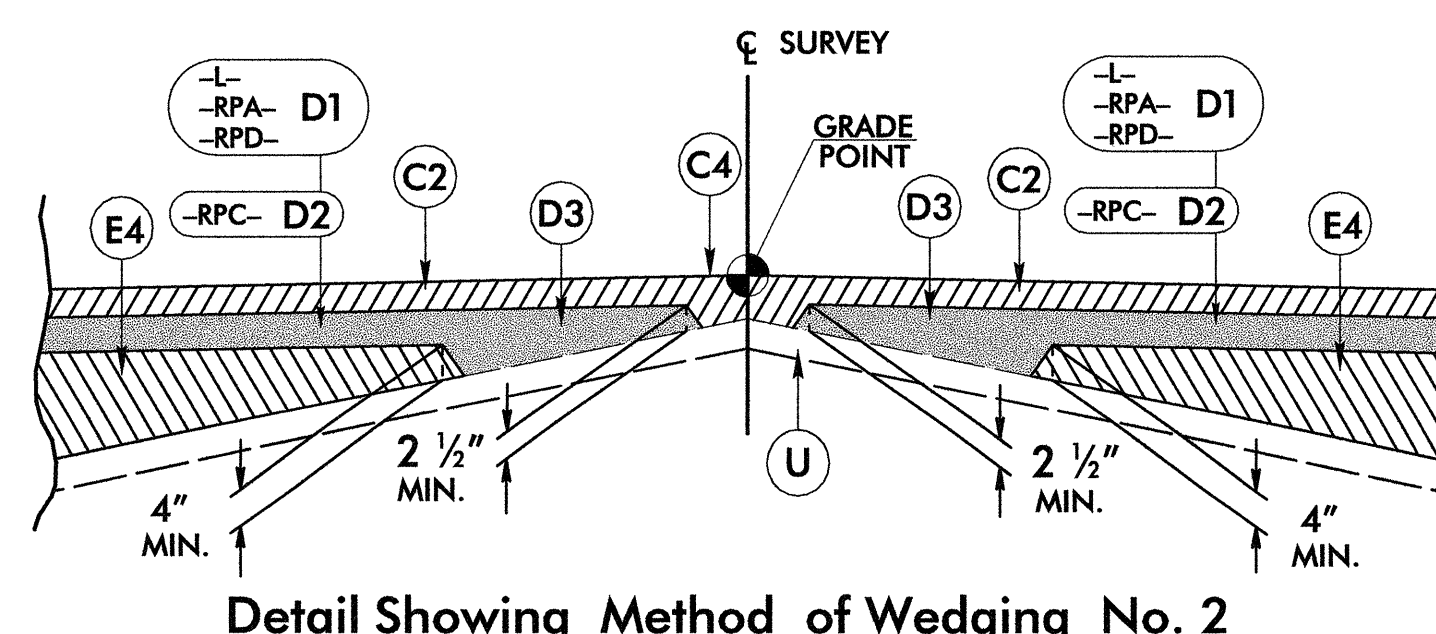


TYPICAL SECTION NO. 4
 USE TYPICAL SECTION NO. 4 AS FOLLOWS:
 -RPA- STA. 15+00.00 TO STA. 18+02.55
 -RPC- STA. 10+50.00 TO STA. 12+02.99
 *-RPD- STA. 16+00.00 TO STA. 17+80.89

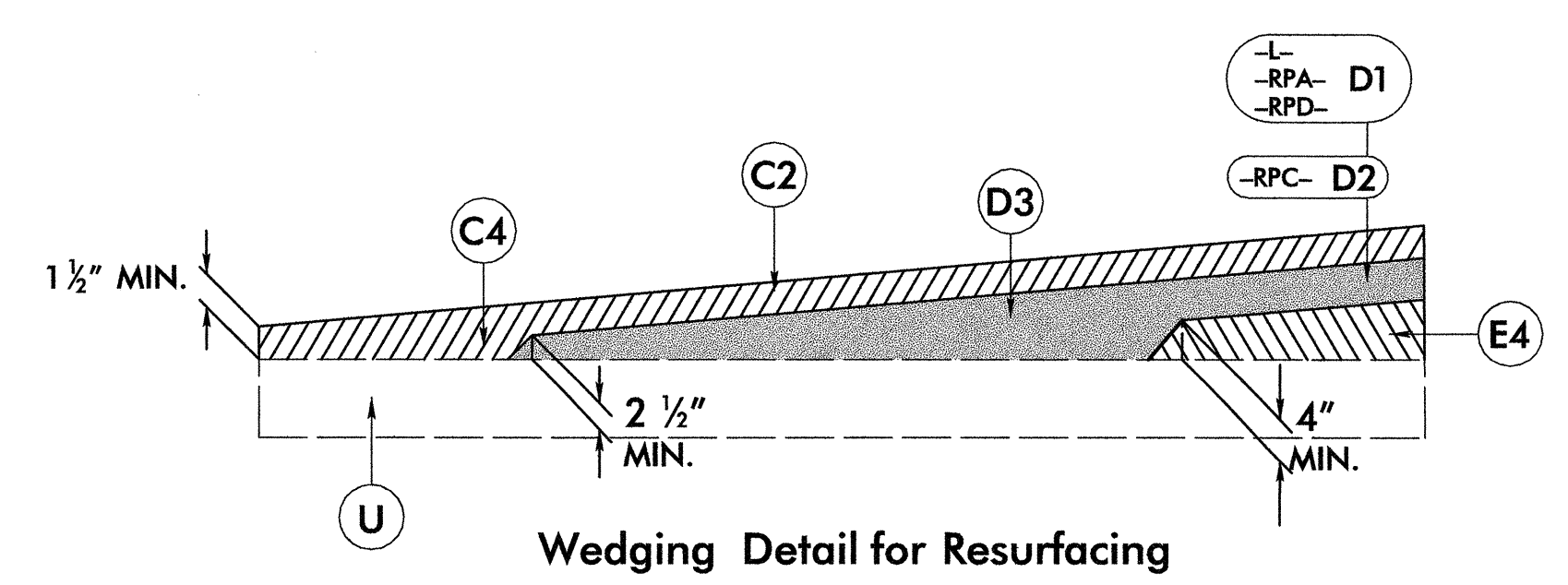
NOTE:
 PLACE FULL DEPTH PAVEMENT (NO WIDENING OR WEDGING) AS FOLLOWS:
 -RPA- STA. 17+00.00 TO 18+02.55
 -RPD- STA. 17+50.00 TO 17+80.89



Detail Showing Method Of Wedging No. 1



Detail Showing Method of Wedging No. 2

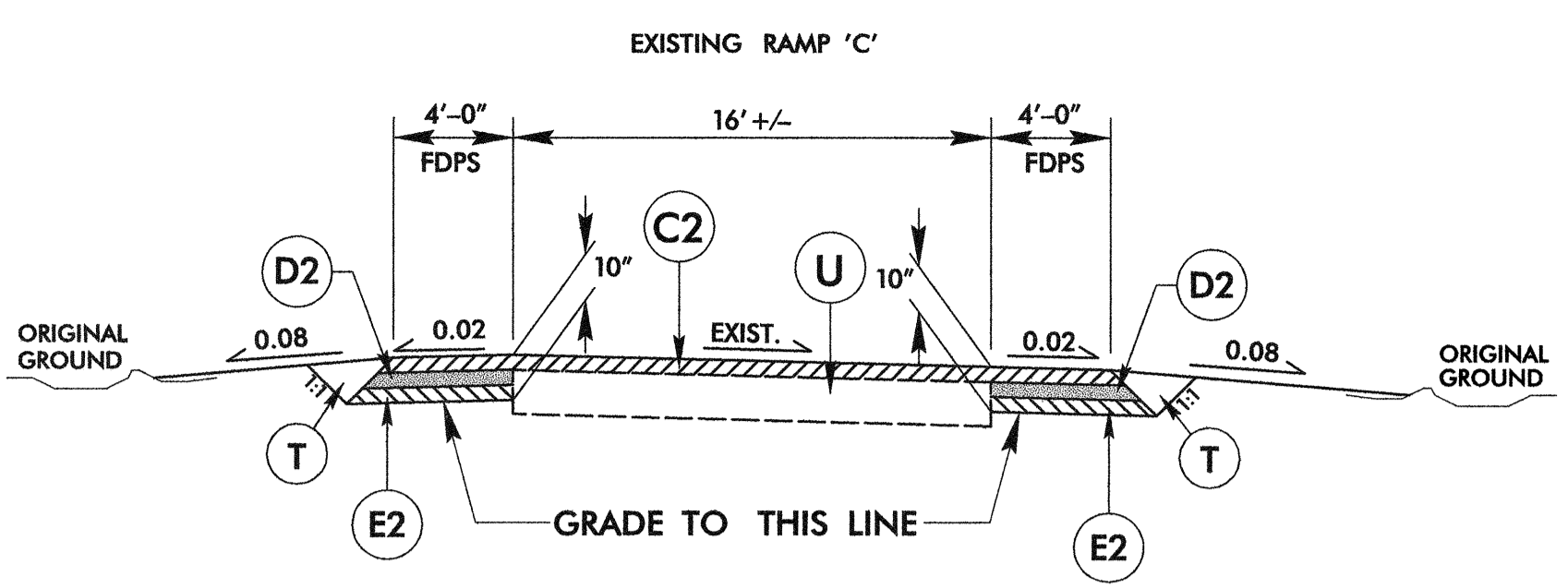


Wedging Detail for Resurfacing

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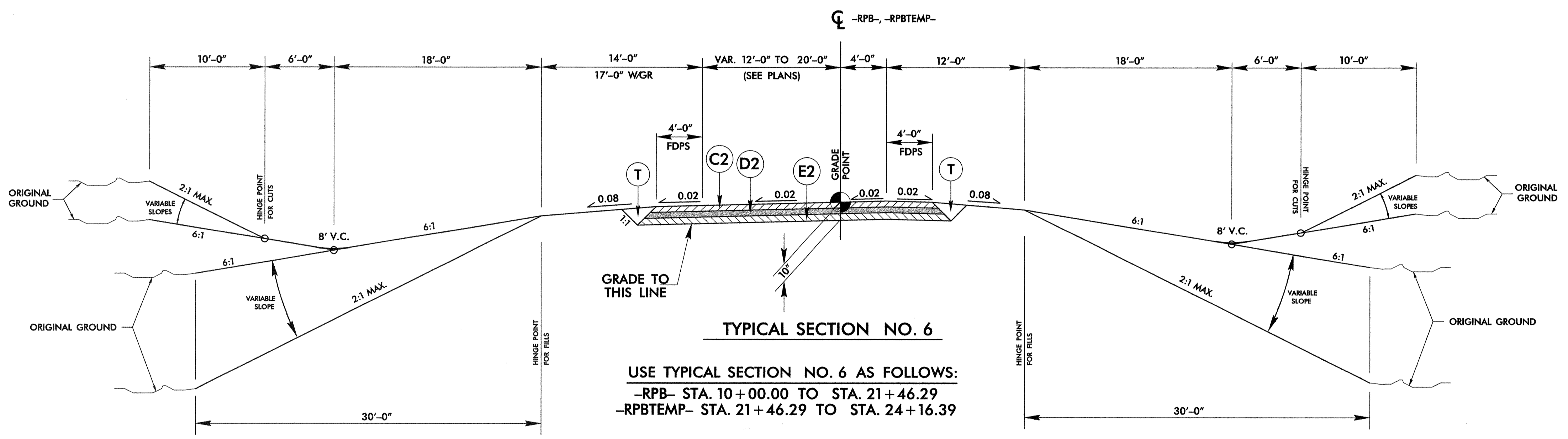
6/27/99

PROJECT REFERENCE NO. B-3637	SHEET NO. 2-B
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



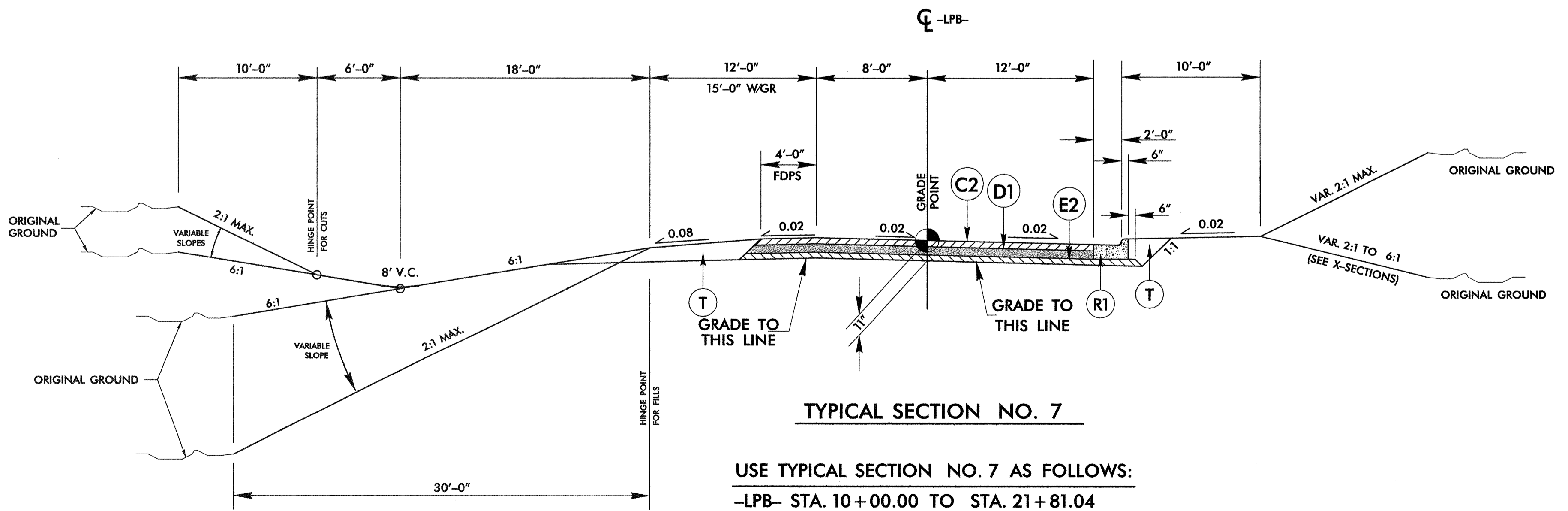
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5 AS FOLLOWS:
 WIDEN AND OVERLAY EXISTING RAMP 'C'
 FROM -Y2- STA. 28+60+/- RT TO -RPC- STA. 10+50.00



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6 AS FOLLOWS:
 -RPB- STA. 10+00.00 TO STA. 21+46.29
 -RPBTEMP- STA. 21+46.29 TO STA. 24+16.39



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7 AS FOLLOWS:
 -LPB- STA. 10+00.00 TO STA. 21+81.04

PAVEMENT SCHEDULE

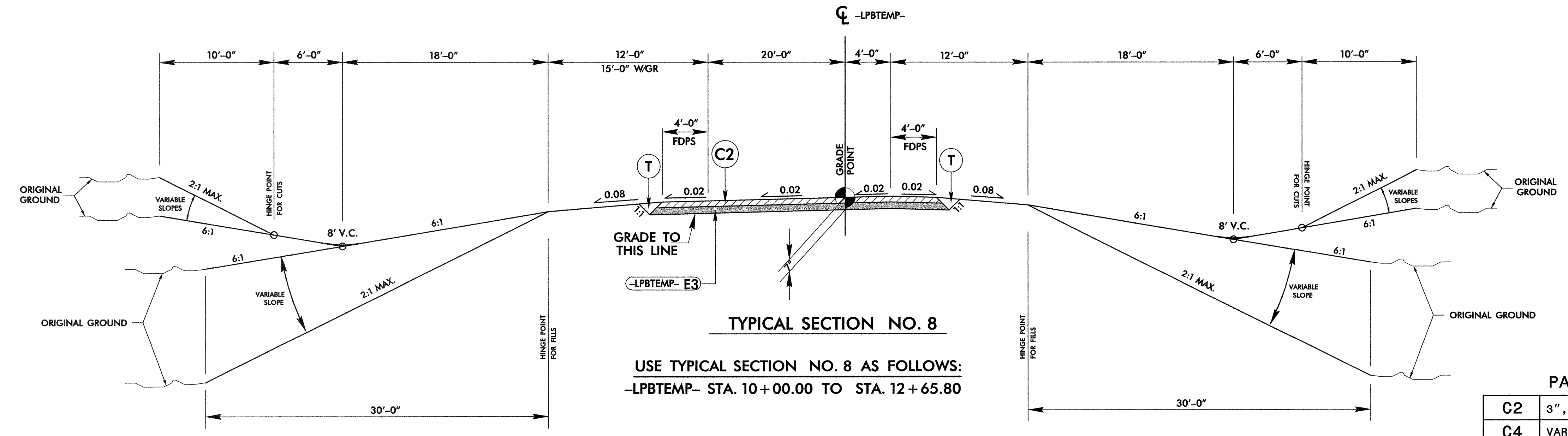
C2	3", TYPE S9.5B.
D1	4", TYPE I19.0B.
D2	3", TYPE I19.0B.
E2	4", TYPE B25.0B.
R1	2'-6" CONC. CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
 SEE SHEET 2 FOR DETAILED PAVEMENT SCHEDULE.

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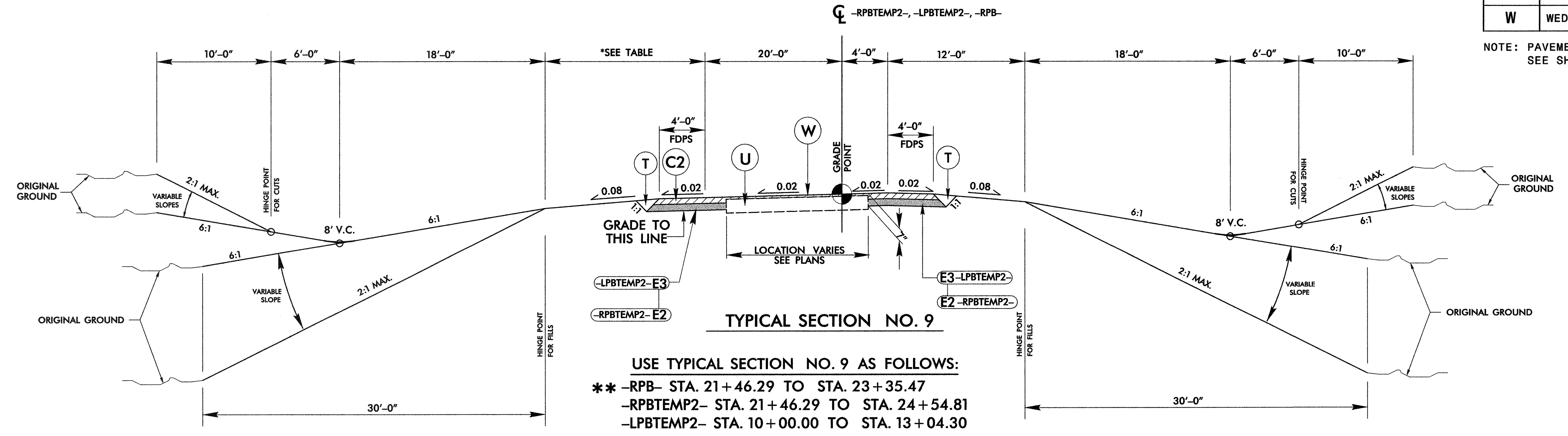
PROJECT REFERENCE NO. B-3637	SHEET NO. 2-C
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
7/19/2007	
TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



PAVEMENT SCHEDULE

C2	3", TYPE S9.5B.
C4	VAR., TYPE S9.5B.
E2	4", TYPE B25.0B.
E3	5", TYPE B25.0B.
E4	VAR. DEPTH, TYPE B25.0B.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING

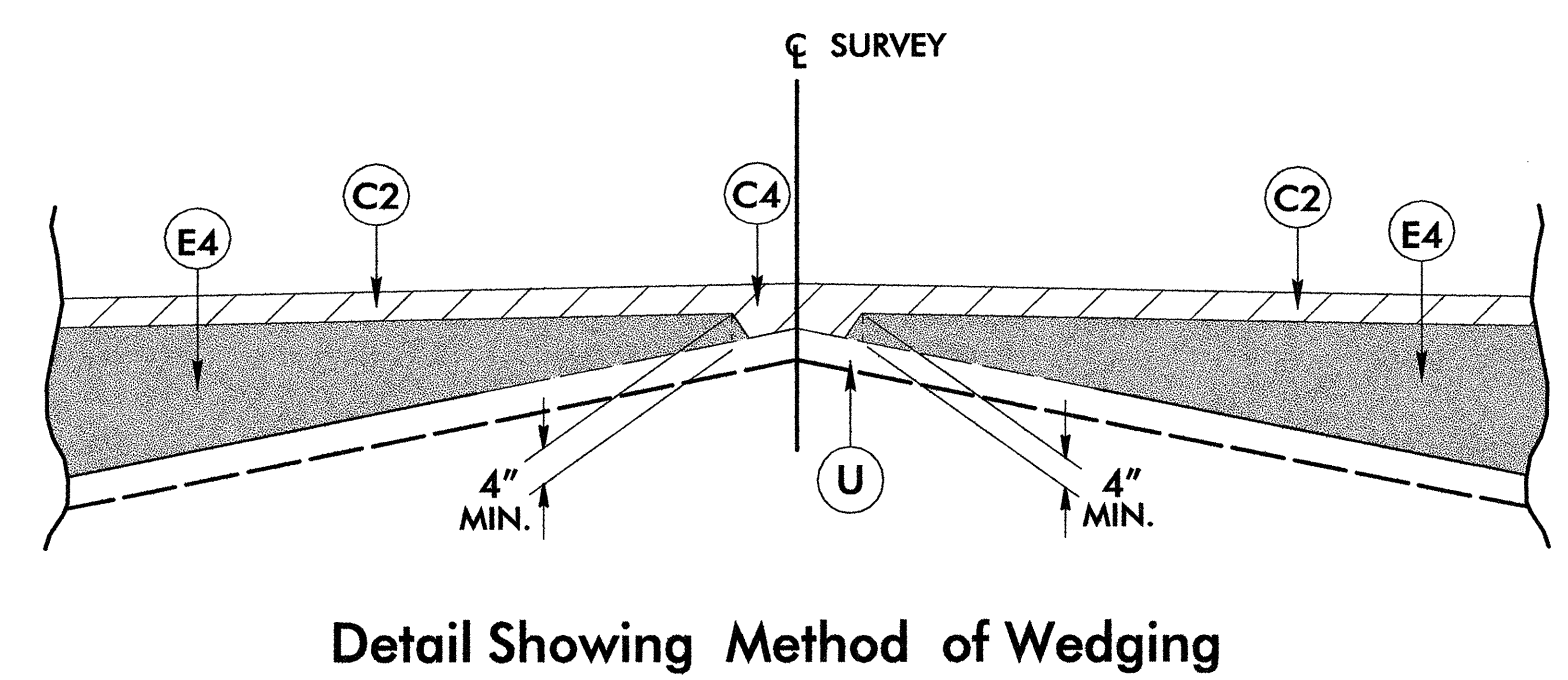
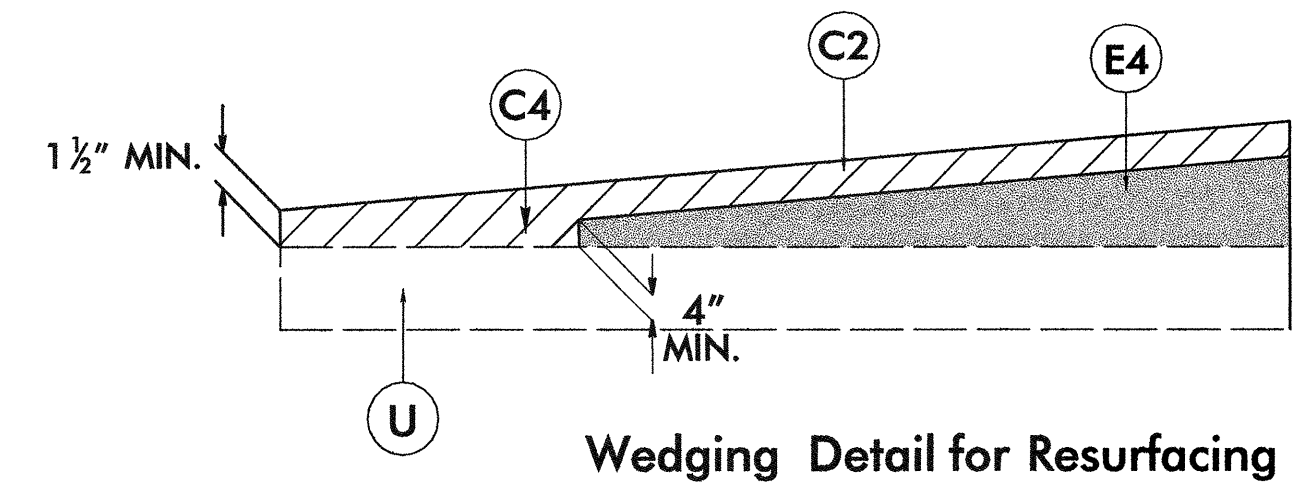
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE. SEE SHEET 2 FOR DETAILED PAVEMENT SCHEDULE.



***SHOULDER WIDTHS**

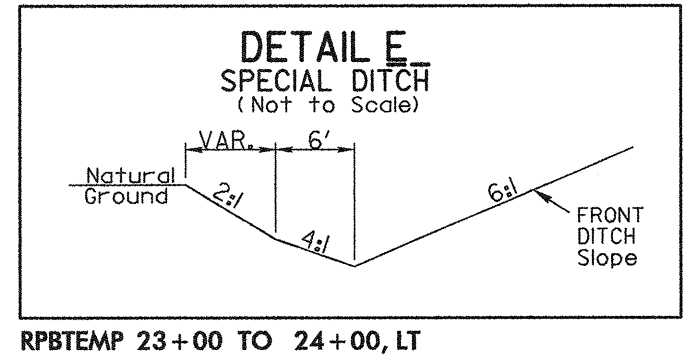
-RPB-	14' (17' W/GR)
-LPBTEMP-	12' (15' W/GR)
-RPBTEMP2-	14' (17' W/GR)
-LPBTEMP2-	12' (15' W/GR)

** NOTE: -RPB- WILL BE MINIMUM WEDGING ONLY



SYSTEMS DESIGN CONSULTANTS

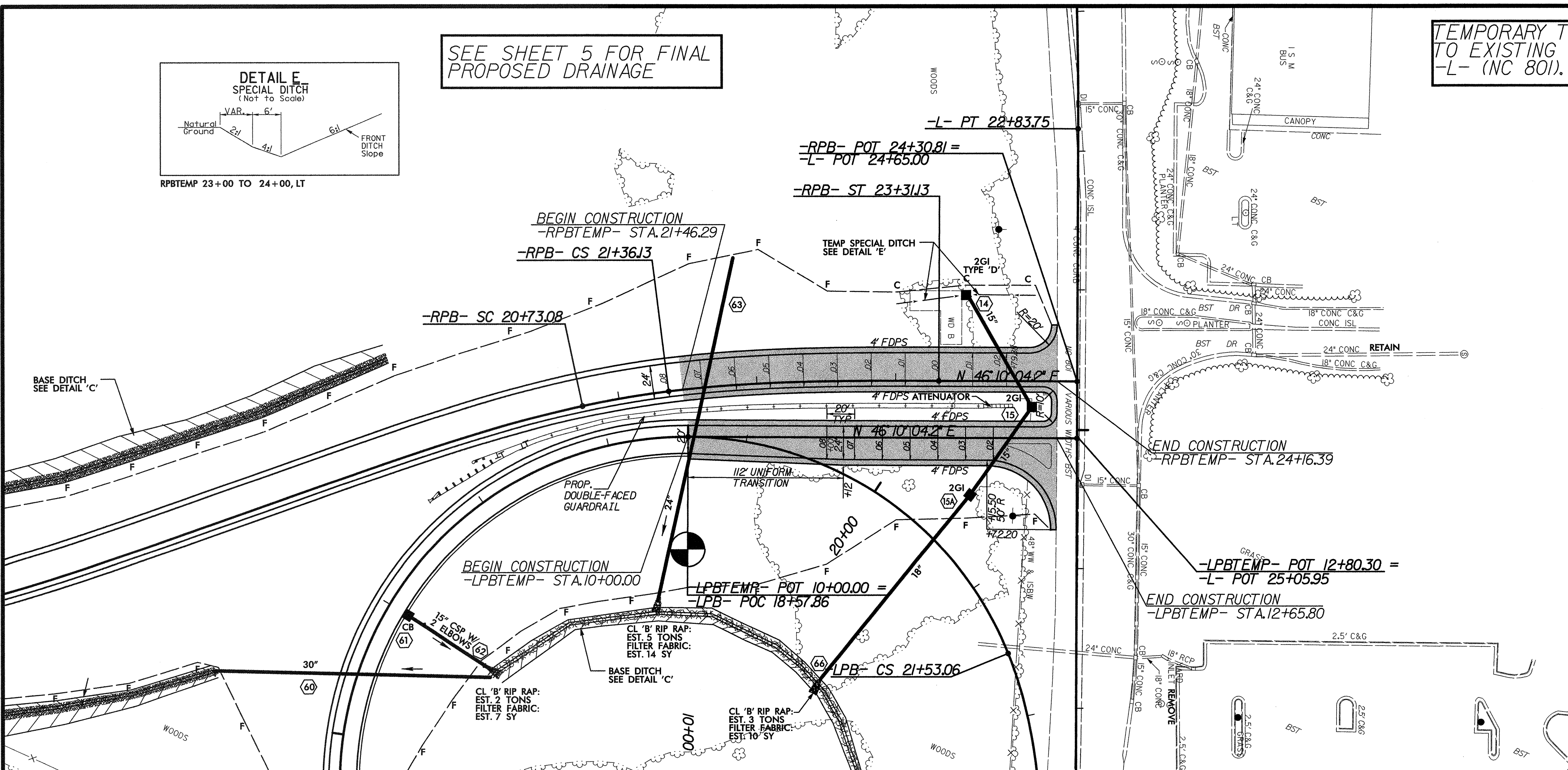
8/17/99



SEE SHEET 5 FOR FINAL PROPOSED DRAINAGE

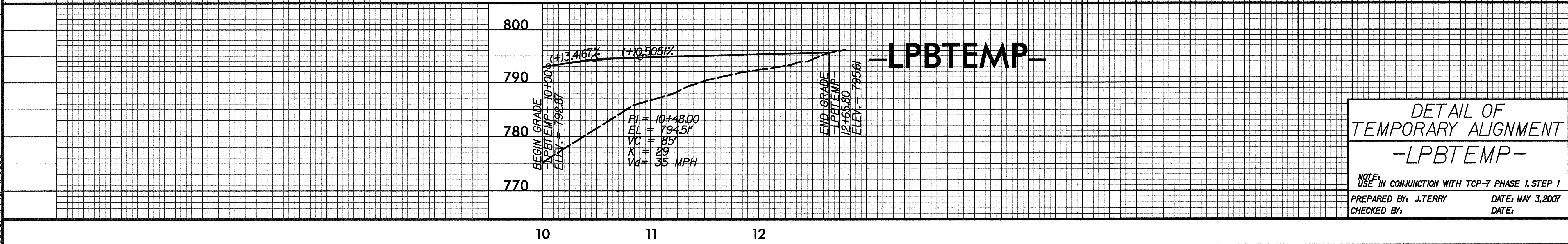
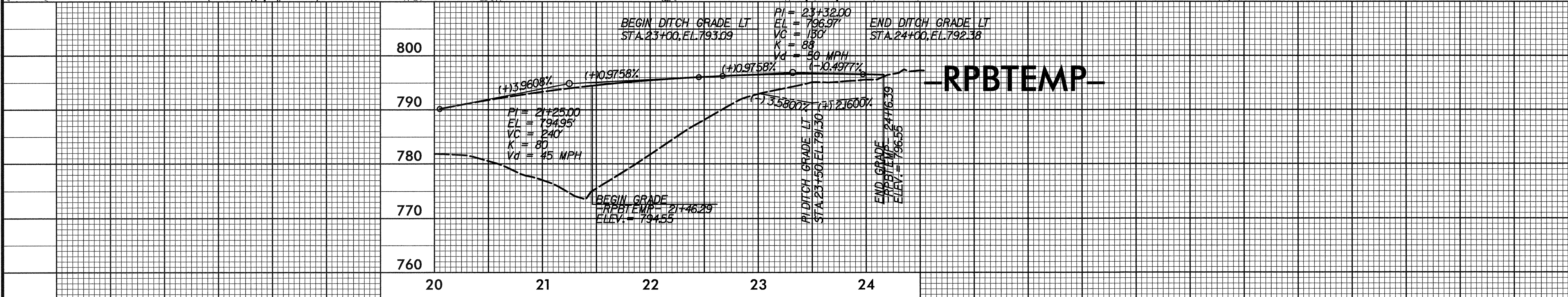
TEMPORARY TIE OF RPB AND LPB TO EXISTING PAVEMENT EDGE OF -L- (NC 801). SEE TCP-7

PROJECT REFERENCE NO. B-3637	SHEET NO. 2-D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER W. CRAIG PARKER 25474 7/23/07	HYDRAULICS ENGINEER I. STEPHENS 20754 7/23/07
TGS ENGINEERS SUITE 141 975 WALNUT STREET CARY, NC 27511 PH (919) 319-8850	



SEE SHEETS X-44 TO X-45 FOR -LPBTEMP- AND -RPBTEMP- CROSS SECTIONS.

REVISIONS



DETAIL OF
TEMPORARY ALIGNMENT
-LPBTEMP-

NOTE:
USE IN CONJUNCTION WITH TCP-7 PHASE I, STEP 1

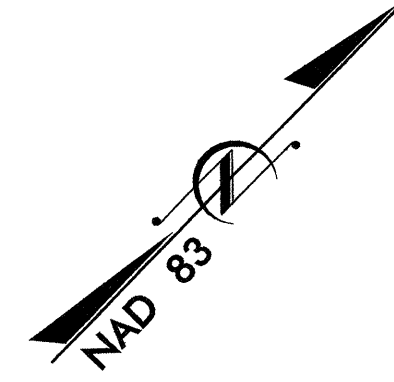
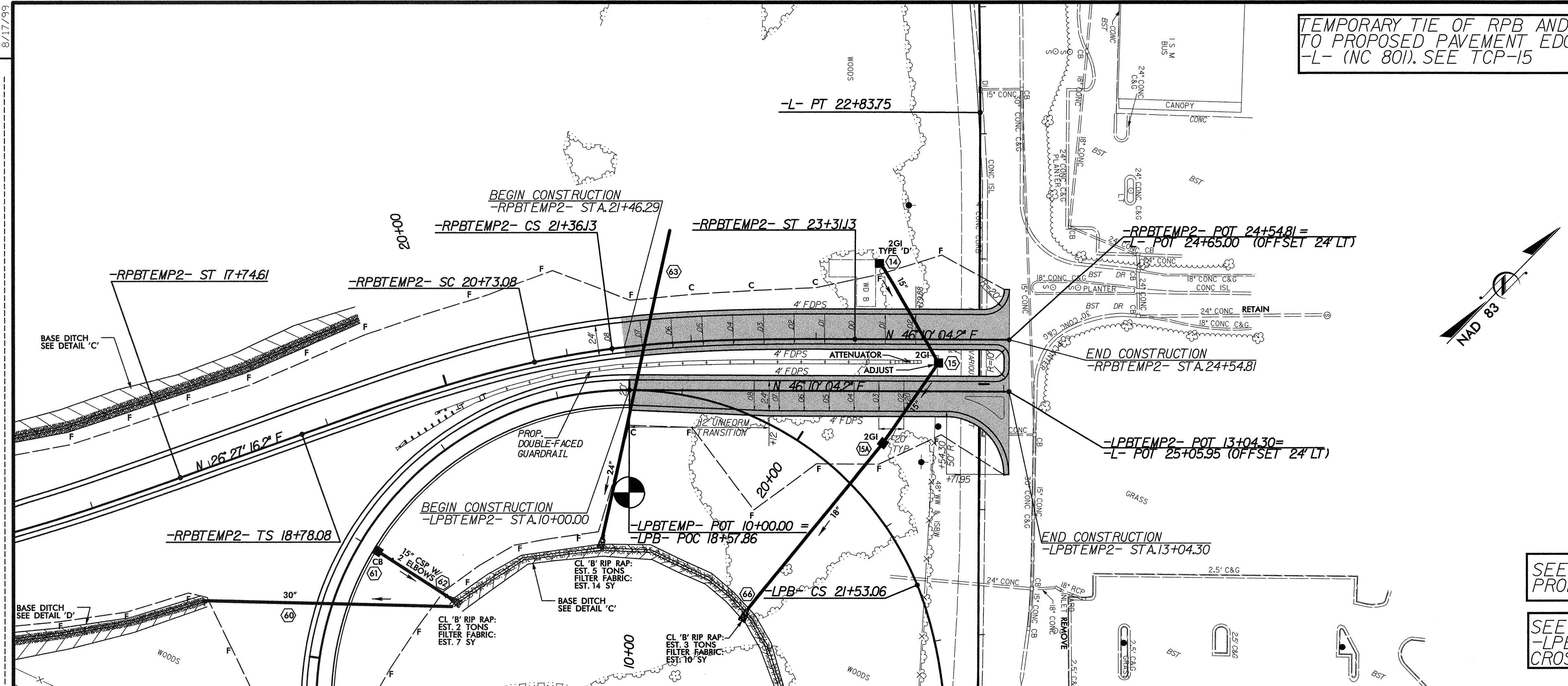
PREPARED BY: J.TERRY DATE: MAY 3, 2007

CHECKED BY: DATE:

SYSTEMS ENGINEERING

3-3637.dwg LPBTEMP_Detail2-D.dwg 7/23/2007 11:25:11 AM

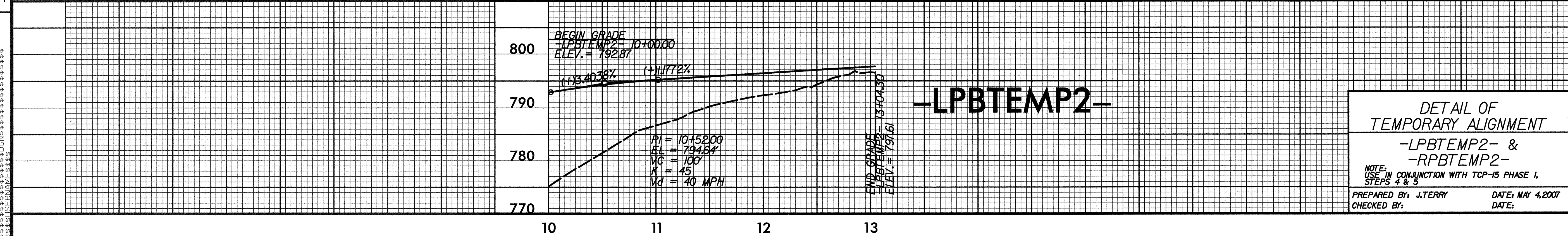
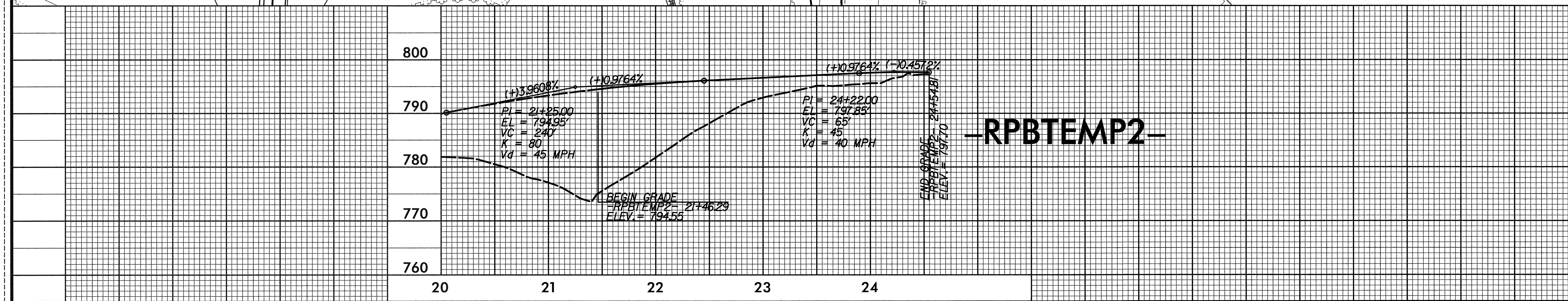
TEMPORARY TIE OF RPB AND LPB TO PROPOSED PAVEMENT EDGE OF -L- (NC 801). SEE TCP-15



SEE SHEET 5 FOR FINAL PROPOSED DRAINAGE

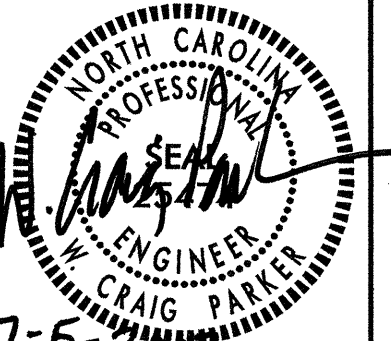
SEE SHEETS X-46 TO X-47 FOR -LPBTEMP2- AND -RPBTEMP2- CROSS SECTIONS.

REVISIONS



DETAIL OF TEMPORARY ALIGNMENT
-LPBTEMP2- & -RPBTEMP2-
NOTE: USE IN CONJUNCTION WITH TCP-15 PHASE I, STEPS 4 & 5
PREPARED BY: J.TERRY DATE: MAY 4, 2007
CHECKED BY: DATE:

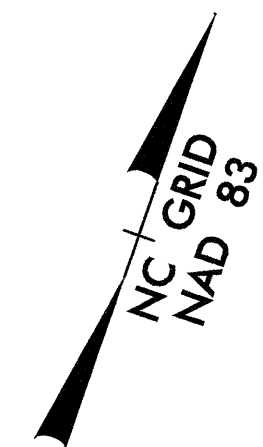
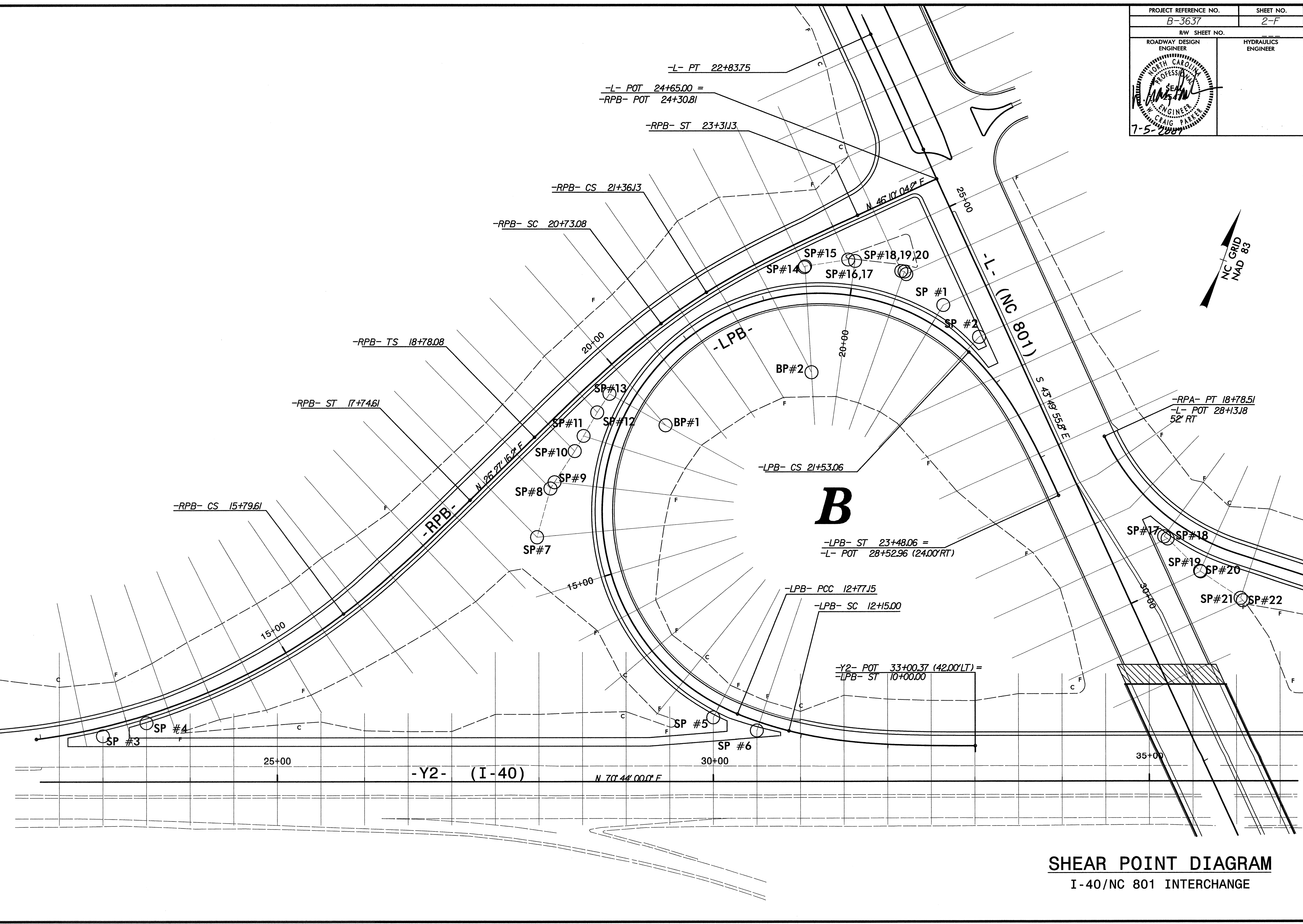
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PROJECT REFERENCE NO. B-3637	SHEET NO. 2-F
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	

8/17/99

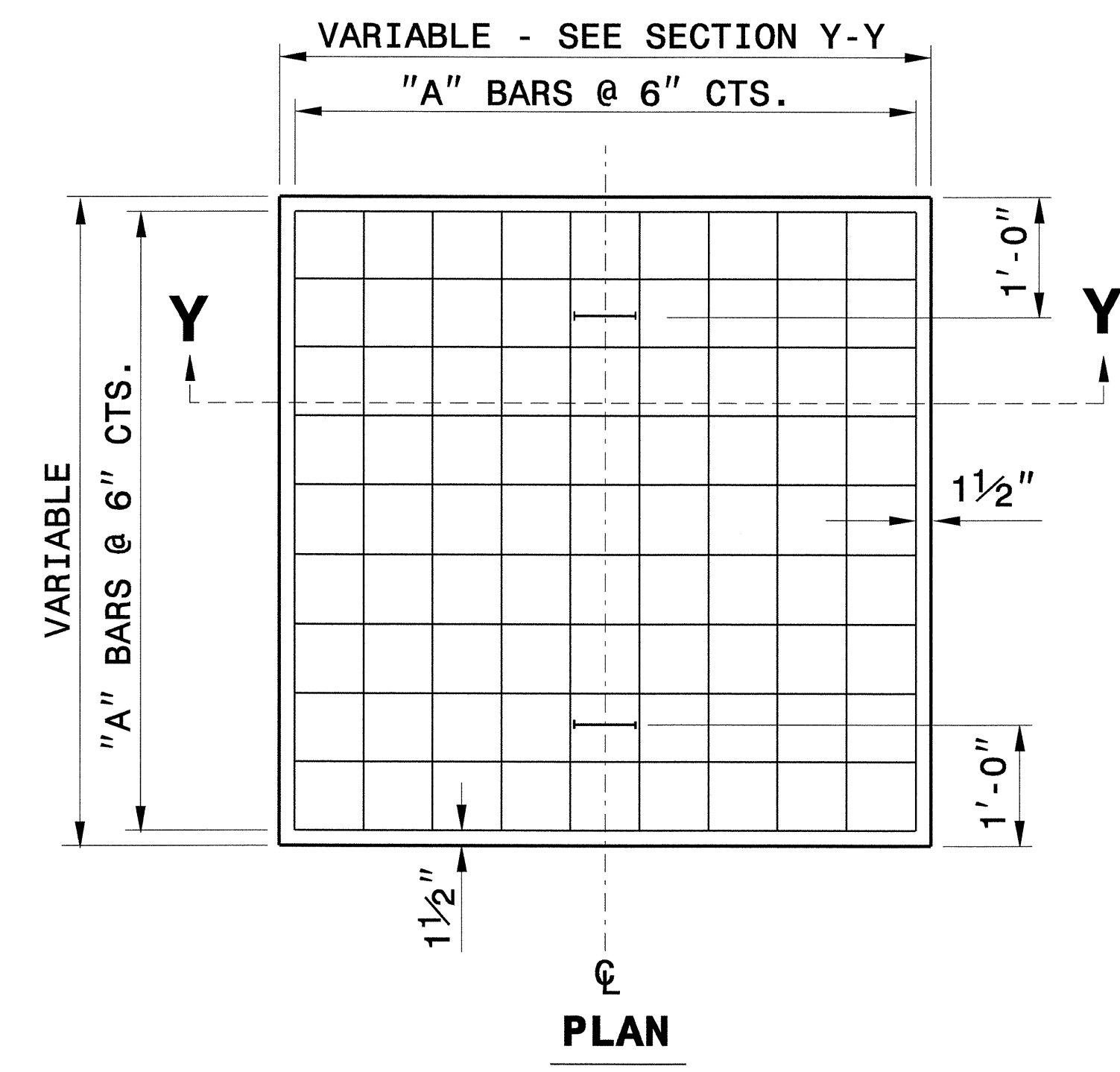
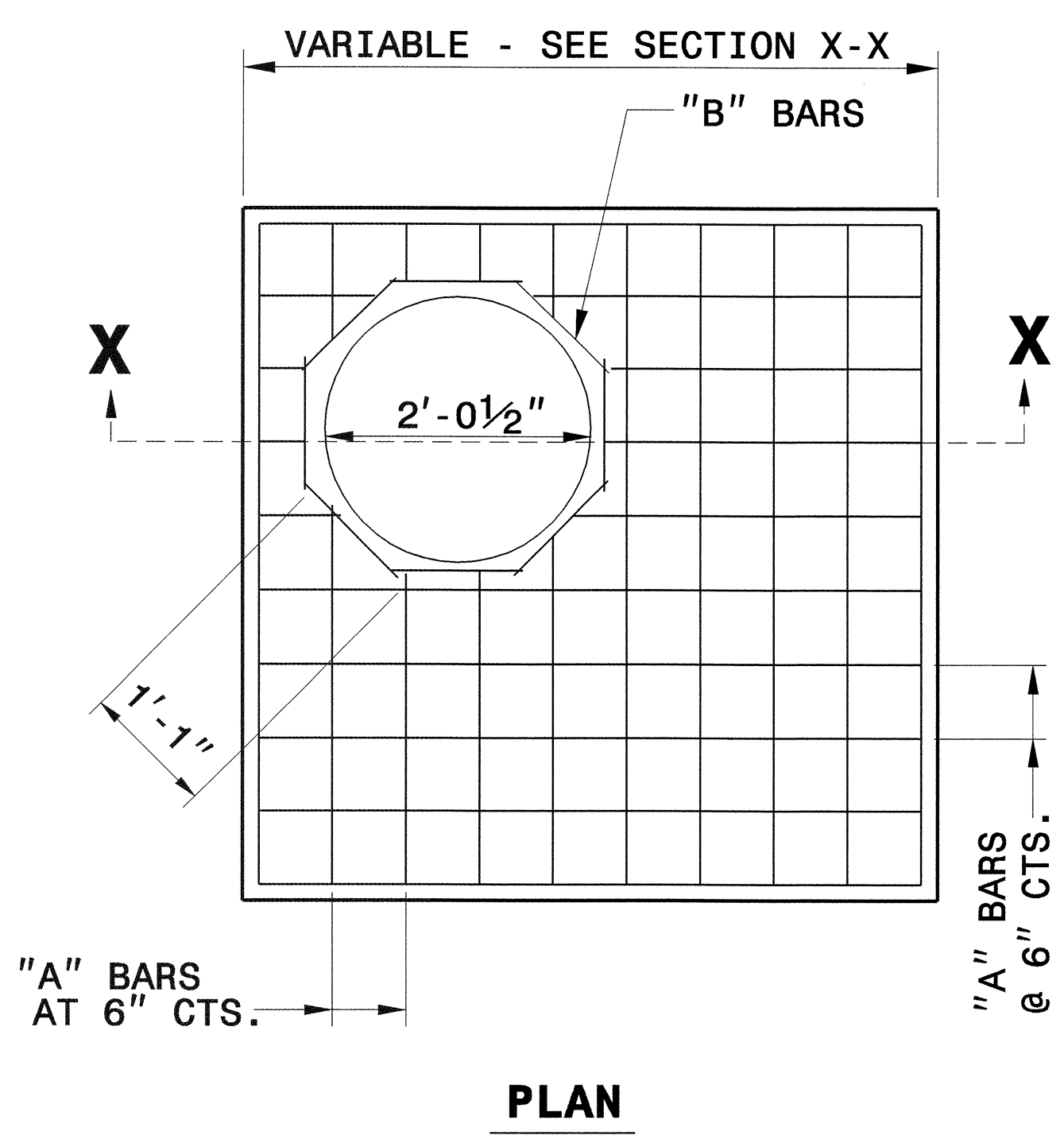
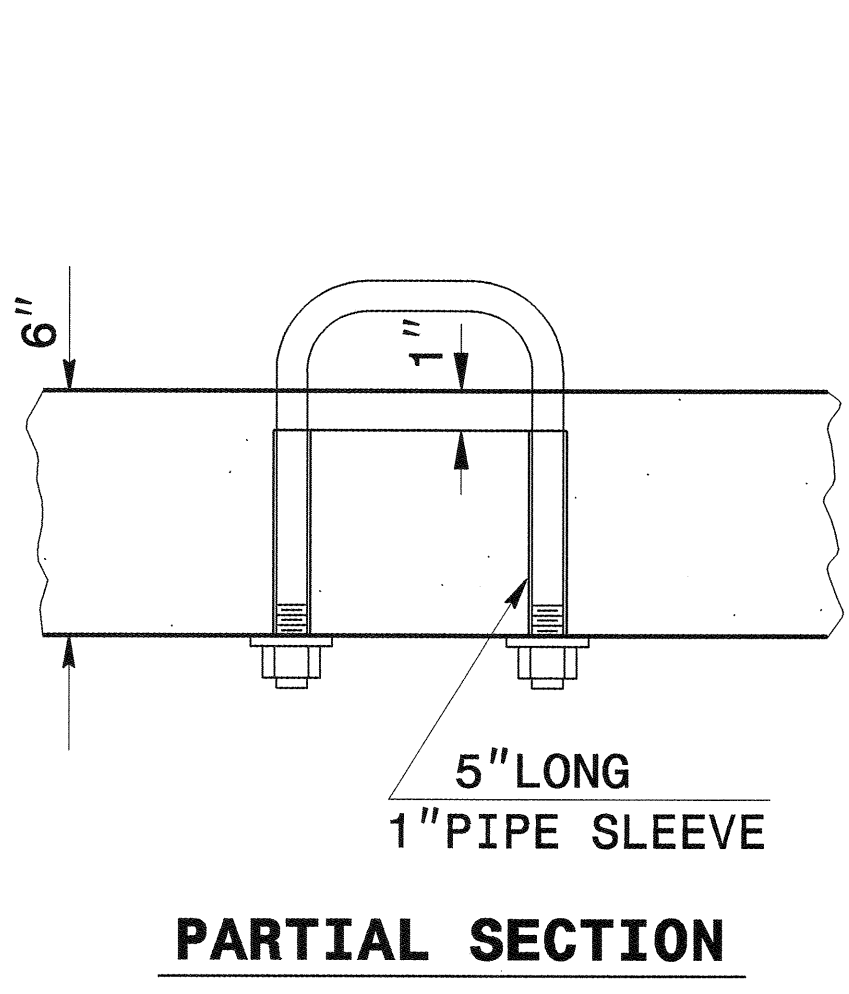
REVISIONS

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SHEAR POINT DIAGRAM
I-40/NC 801 INTERCHANGE

B3637_101_Shear_Pt.dgn 6/26/2007 8:47:21 AM

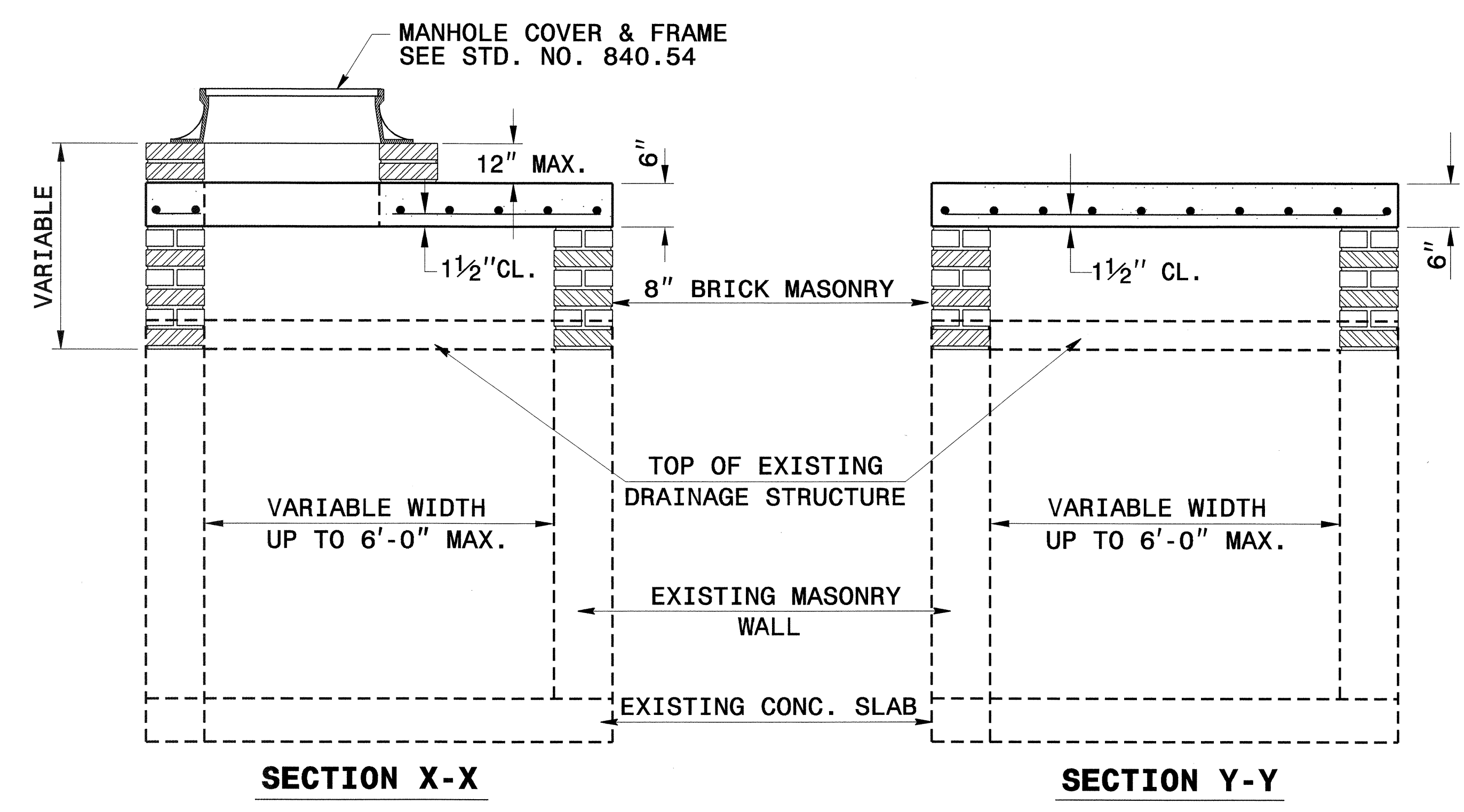
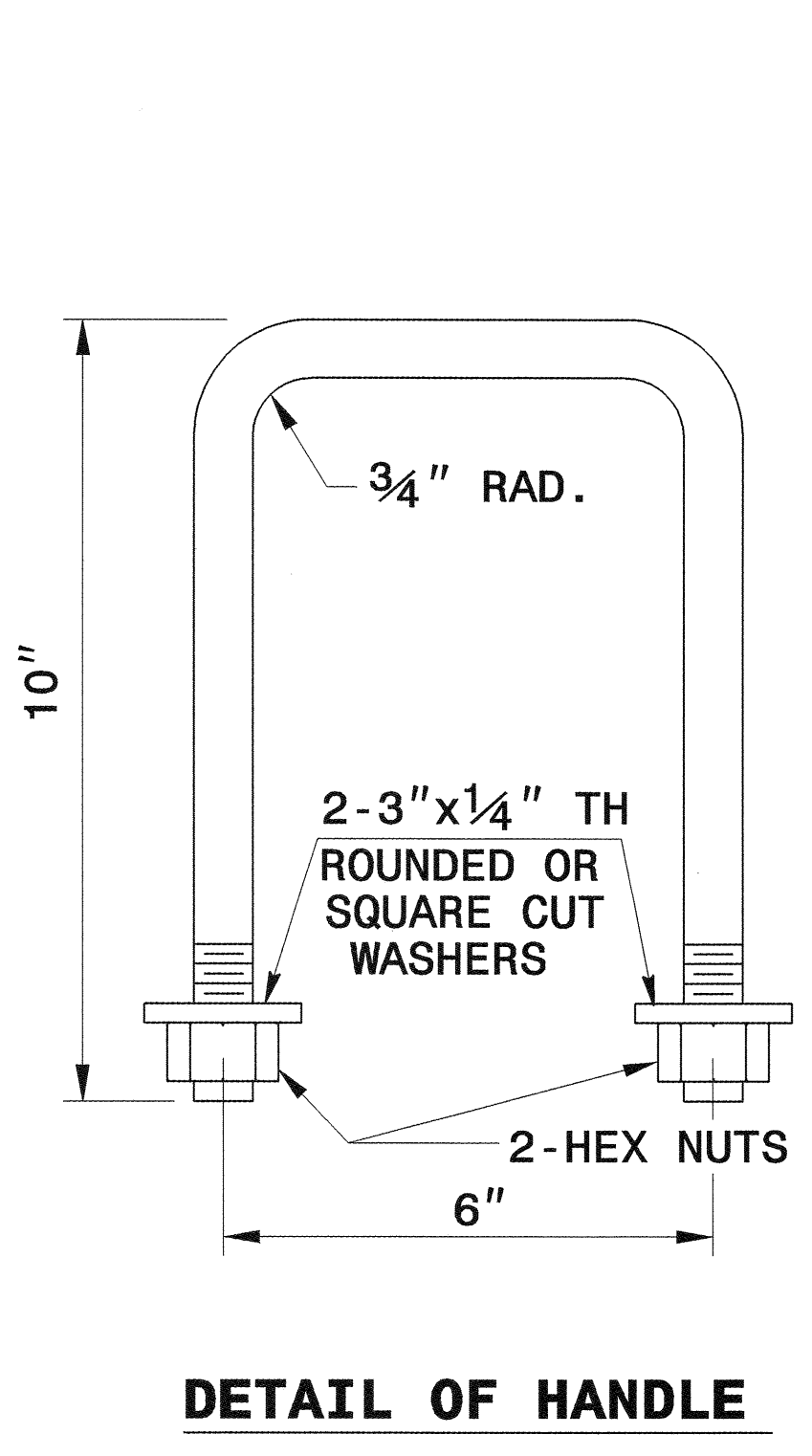


GENERAL NOTES:

CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

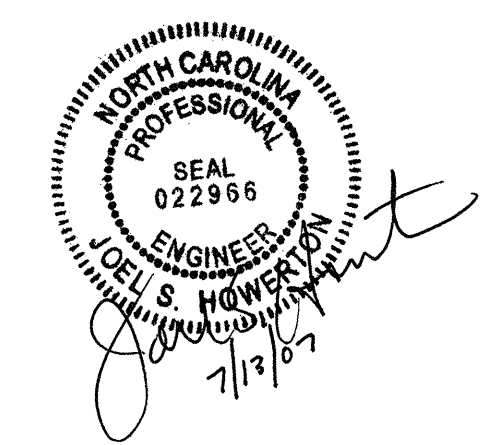
DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.



BILL OF MATERIALS				
REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
TOTAL				65.91 *
MASONRY				CU YDS
TOP SLAB CONCRETE CLASS "B"				.4326 *
BRICK MASONRY PER FT HT (MIN)				.4111

*** NOTE:**
 QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.

5/14/99
 05-MAY-2006 09:41
 s:\concrete\projects\special\details\nbritt\english\hydro\box_conversion.dgn
 nbritt AT P5228331



**PROJECT SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN**
 Office 919-250-4128 FAX 919-250-4119

**DETAIL TO CONVERT EXISTING
 DROP INLET OR CATCH BASIN
 TO JUNCTION BOX
 (MANHOLE OPTIONAL)**

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: nbritt DATE: 11/23/05
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/nbritt/english/hydro/boxconversion

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

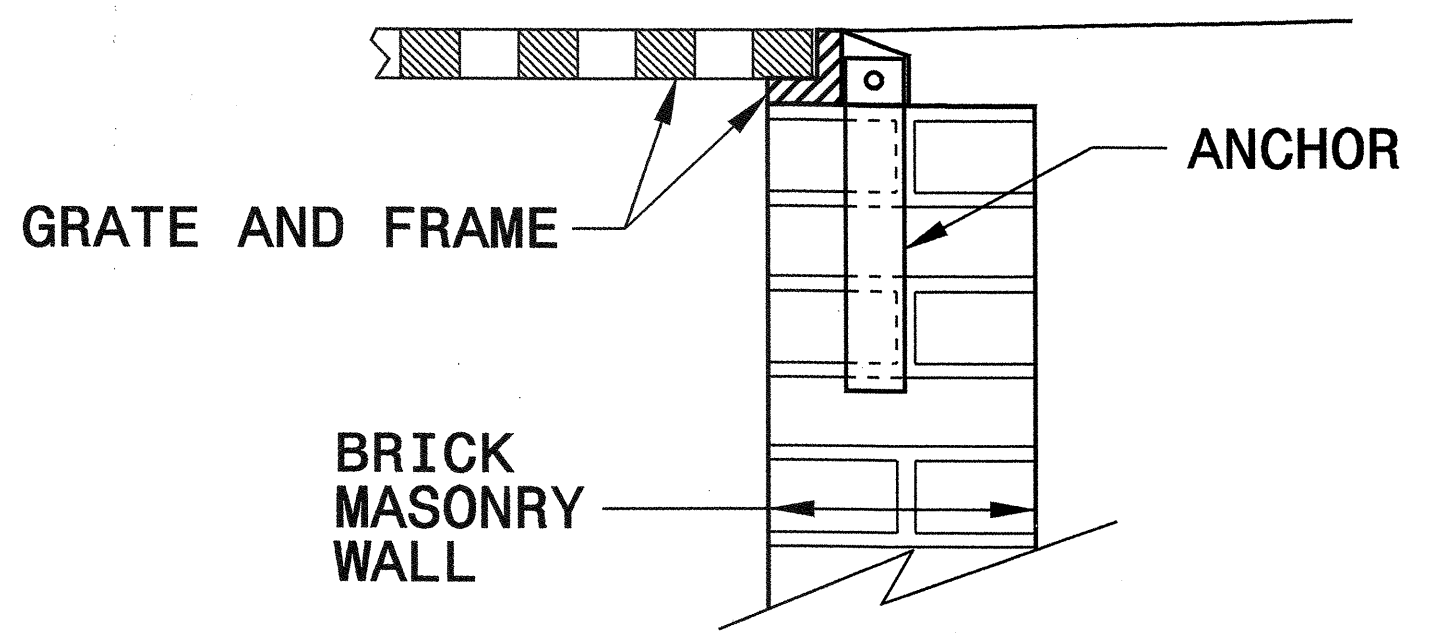
ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

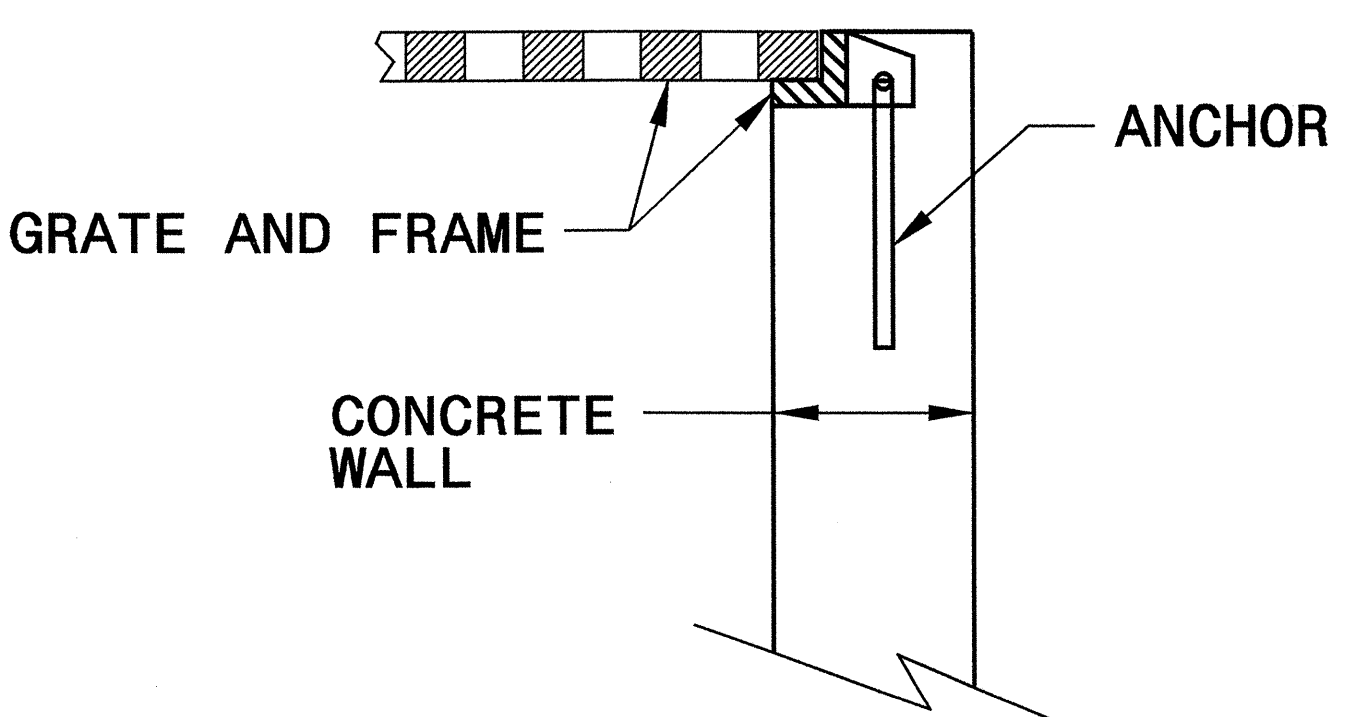
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

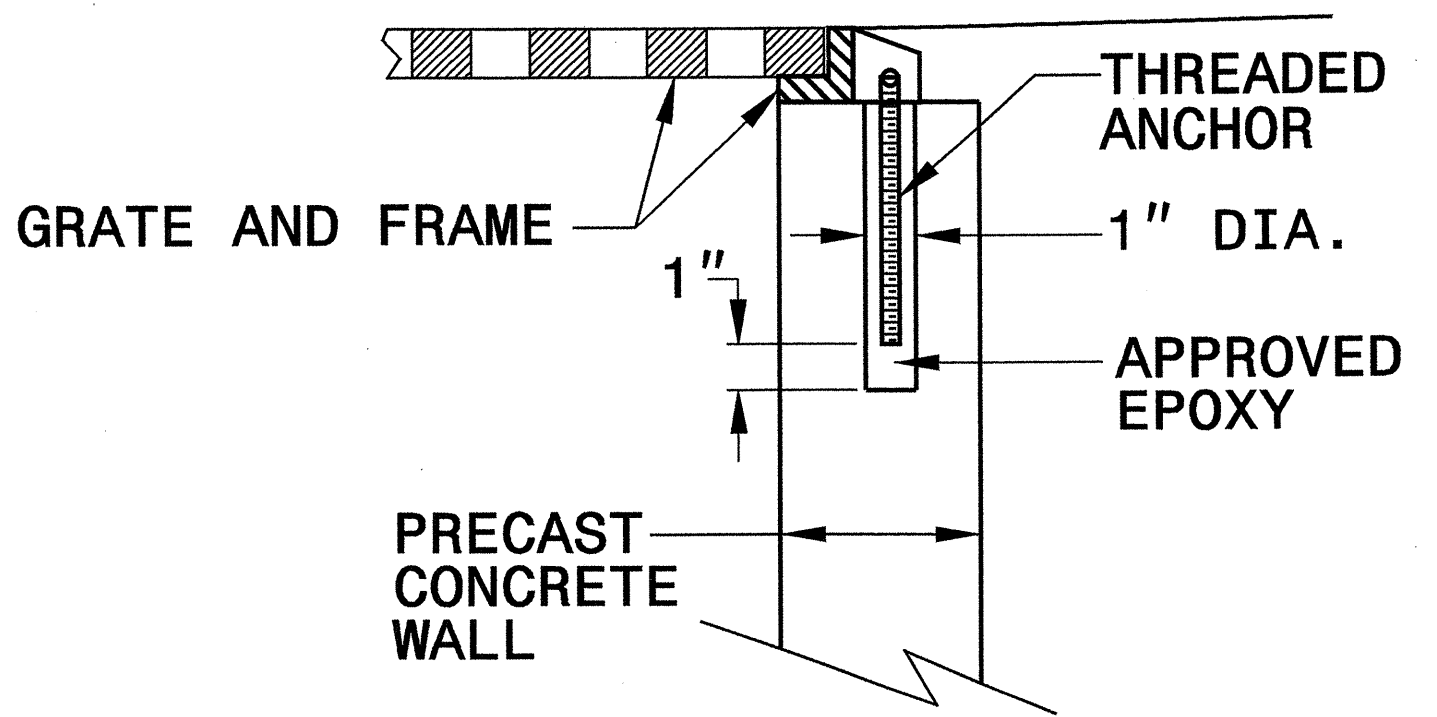
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



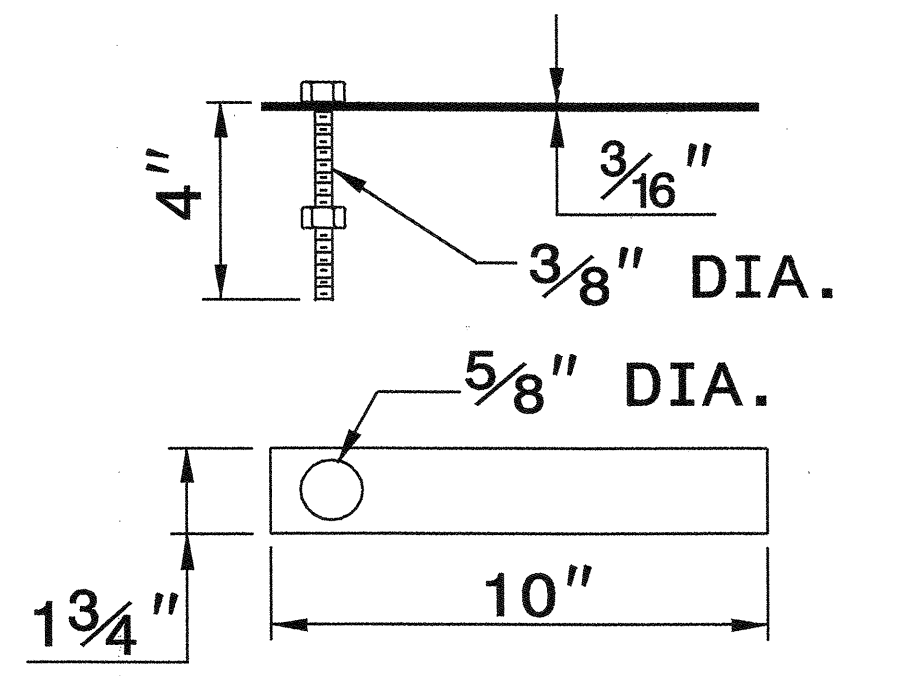
CONCRETE CONSTRUCTION



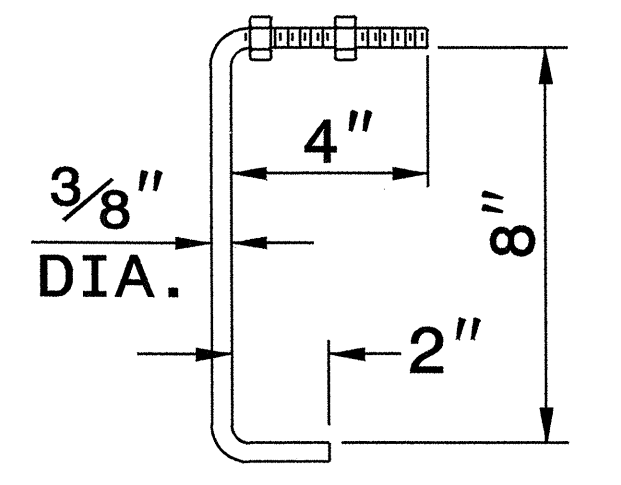
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

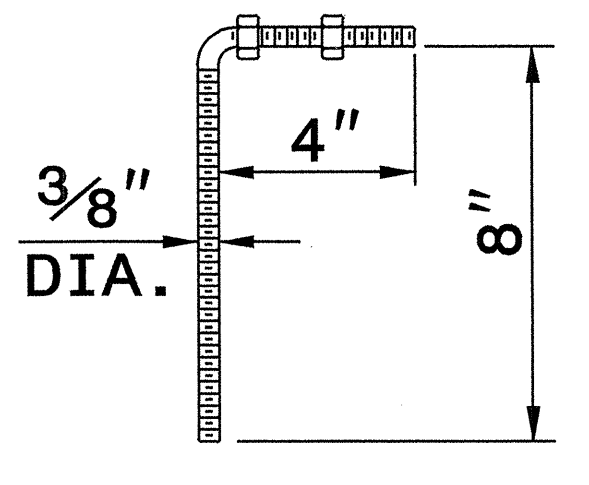
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



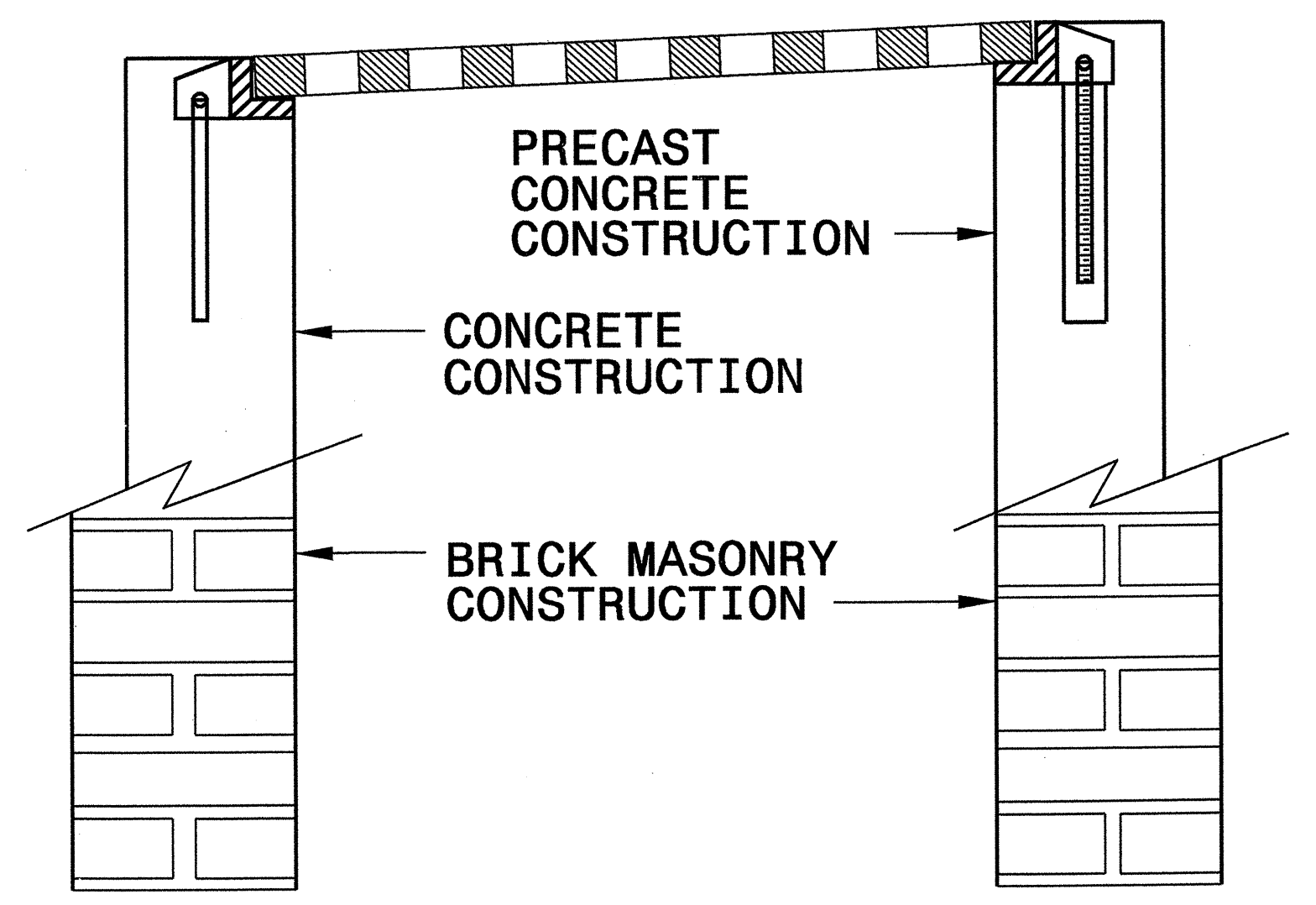
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

01-MAR-2007 09:04 C:\projects\special_details\ward\stds\06\stds to special_details\84025_anchorage_for_frames\0840d25.dgn Jhowerton AT P5212260



PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: DATE:
FILE SPEC.:

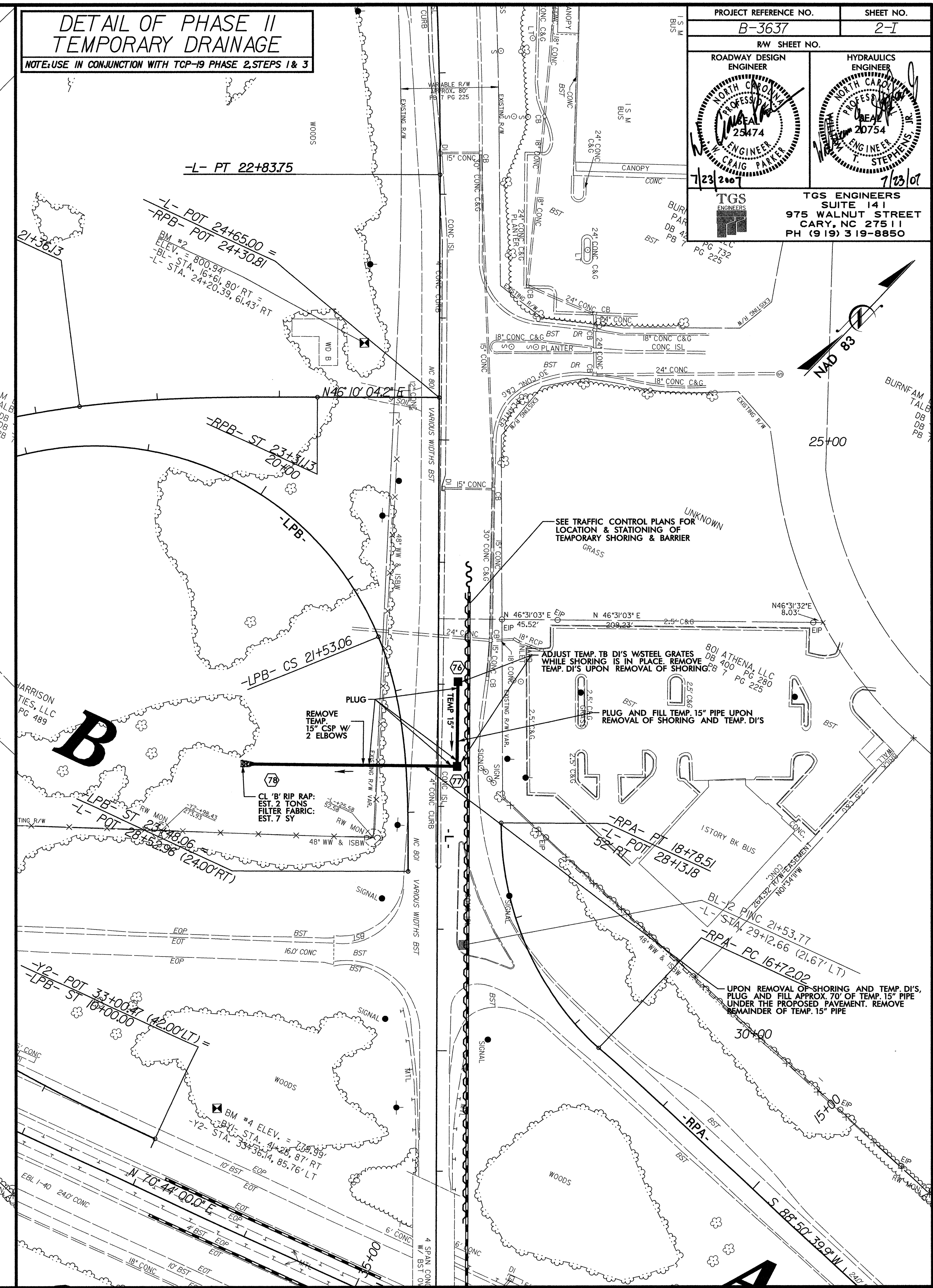
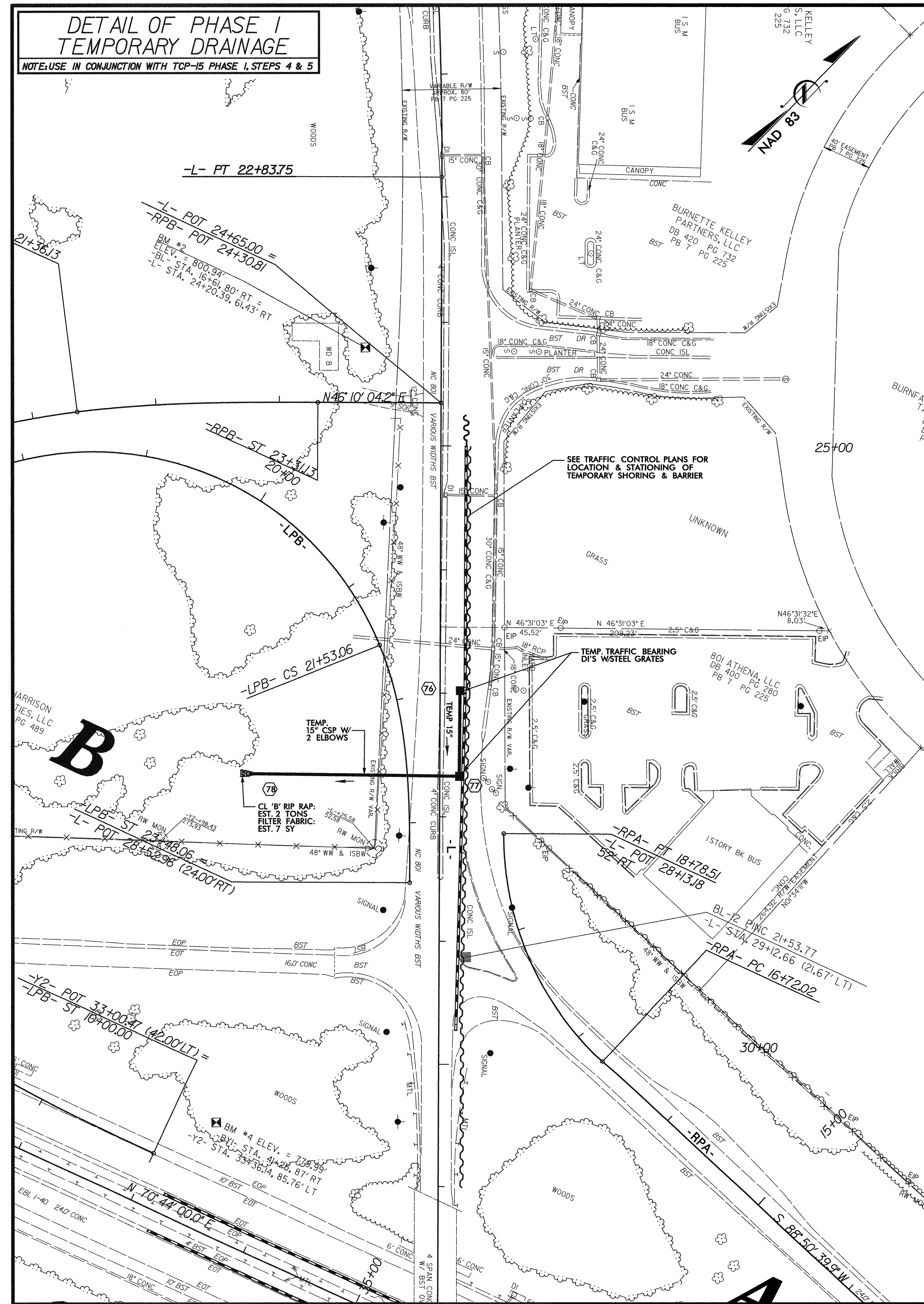
DETAIL OF PHASE I TEMPORARY DRAINAGE

NOTE: USE IN CONJUNCTION WITH TCP-15 PHASE I, STEPS 4 & 5

DETAIL OF PHASE II TEMPORARY DRAINAGE

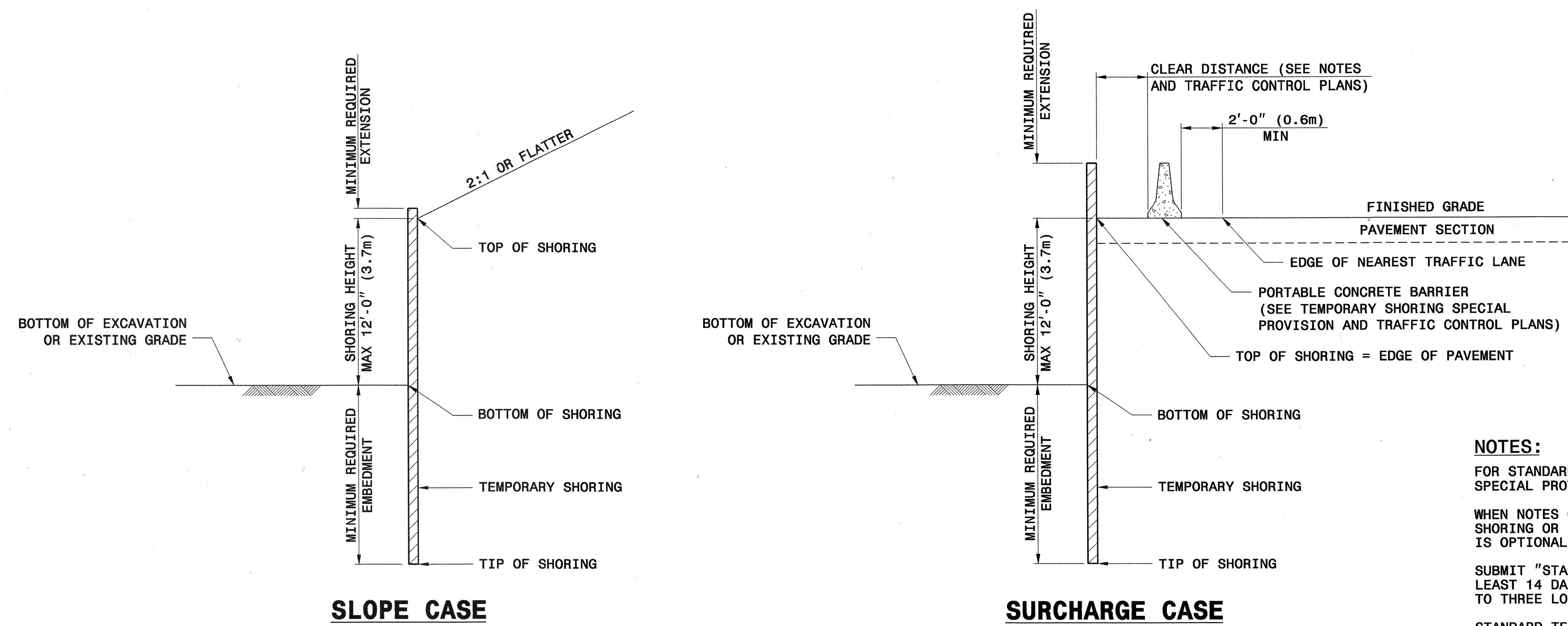
NOTE: USE IN CONJUNCTION WITH TCP-19 PHASE 2, STEPS 1 & 3

PROJECT REFERENCE NO. B-3637	SHEET NO. 2-I
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 23474 W. CRAIG BARTER 7/23/2007	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 20754 T. STEPHENS 7/23/07
TGS ENGINEERS SUITE 141 975 WALNUT STREET CARY, NC 27511 PH (919) 319-8850	



GEOTECHNICAL ENGINEER ENGINEER

Scott A. Shidden 3/29/07



NOTES:
 FOR STANDARD TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.
 WHEN NOTES ON PLANS DO NOT PROHIBIT STANDARD TEMPORARY SHORING OR STANDARD SHORING, STANDARD TEMPORARY SHORING IS OPTIONAL.

SUBMIT "STANDARD TEMPORARY SHORING SELECTION FORM" AT LEAST 14 DAYS BEFORE BEGINNING SHORING CONSTRUCTION. UP TO THREE LOCATIONS MAY BE INCLUDED ON EACH SELECTION FORM.

- STANDARD TEMPORARY SHORING IS BASED ON THE FOLLOWING CONDITIONS:
- 1) MAXIMUM SHORING HEIGHT IS 12'-0" (3.7m).
 - 2) TRAFFIC SURCHARGE IS 240 PSF (11.5 KPA) MAXIMUM OR BACKSLOPE IS 2:1 (H:V) OR FLATTER.
 - 3) BOTTOM OF EXCAVATION OR EXISTING GRADE IN FRONT OF SHORING IS 6:1 (H:V) SLOPE OR FLATTER.
 - 4) H PILE SPACING IS 6'-0" (1.8m).
 - 5) H PILE EMBEDMENT DEPTHS ARE FOR DRIVEN PILES.
 - 6) TIMBER LAGGING IS A MINIMUM OF 3" (75mm) THICK.

STANDARD TEMPORARY SHORING IS BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
 TOTAL UNIT WEIGHT = 120 PCF (18.8 KN/M³)
 FRICTION ANGLE = 30 DEGREES
 COHESION = 0 PSF (0 KPA)
 GROUNDWATER IS ASSUMED TO BE BELOW BOTTOM OF SHORING.

DO NOT USE STANDARD TEMPORARY SHORING WHEN THE ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR GROUNDWATER IS ABOVE THE BOTTOM OF SHORING.

DO NOT USE STANDARD TEMPORARY SHORING WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS PRESENT WITHIN THE EMBEDMENT DEPTH.

VERIFY GROUNDWATER ELEVATION BEFORE BEGINNING SHORING CONSTRUCTION.

IF THE CLEAR DISTANCE AVAILABLE IS LESS THAN THE MINIMUM REQUIRED IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS, SET THE BARRIER AGAINST THE TRAFFIC SIDE OF THE SHORING AND USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT".

AT THE CONTRACTOR'S OPTION, H PILE EMBEDMENT DEPTHS FOR PILES SET IN DRILLED HOLES MAY BE REDUCED BY 25%. FOR PILE EXCAVATION, SEE TEMPORARY SHORING SPECIAL PROVISION.

CONTROL DRAINAGE DURING CONSTRUCTION IN THE VICINITY OF THE SHORING. COLLECT AND DIRECT RUNOFF AWAY FROM SHORING.

CONTACT THE ENGINEER IF MINIMUM REQUIRED EMBEDMENT IS NOT ACHIEVED.

GROUNDWATER CONDITION	SHORING HEIGHT FT (m)	SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT					SURCHARGE CASE WITH TRAFFIC IMPACT				
		SHEET PILES		H PILES WITH TIMBER LAGGING			SHEET PILES		H PILES WITH TIMBER LAGGING		
		MINIMUM REQUIRED EMBEDMENT FT (m)	MINIMUM REQUIRED SECTION MODULUS IN ³ /FT (cm ³ /m)	MINIMUM REQUIRED EMBEDMENT FT (m)			MINIMUM REQUIRED EMBEDMENT FT (m)	MINIMUM REQUIRED SECTION MODULUS IN ³ /FT (cm ³ /m)	MINIMUM REQUIRED EMBEDMENT FT (m)		
				HP 10x42 (HP 250x62)	HP 12x53 (HP 310x79)	HP 14x73 (HP 360x108)			HP 10x42 (HP 250x62)	HP 12x53 (HP 310x79)	HP 14x73 (HP 360x108)
GROUNDWATER ELEVATION BELOW TIP OF SHORING	< 6 (1.8)	7.5 (2.3)	3.0 (161)	8.0 (2.4)	8.0 (2.4)	8.0 (2.4)	11.0 (3.4)	10.0 (538)	9.5 (2.9)	9.5 (2.9)	9.5 (2.9)
	7 (2.1)	8.5 (2.6)	4.5 (242)	9.5 (2.9)	9.5 (2.9)	9.5 (2.9)	12.0 (3.7)	12.0 (645)	10.5 (3.2)	10.5 (3.2)	10.5 (3.2)
	8 (2.4)	10.0 (3.0)	6.5 (349)	10.5 (3.2)	10.5 (3.2)	10.5 (3.2)	12.5 (3.8)	14.0 (753)	11.5 (3.5)	11.5 (3.5)	11.5 (3.5)
	9 (2.7)	11.0 (3.4)	9.5 (511)	--	12.0 (3.7)	12.0 (3.7)	13.5 (4.1)	16.5 (887)	--	12.5 (3.8)	12.5 (3.8)
	10 (3.0)	12.5 (3.8)	13.0 (699)	--	--	13.5 (4.1)	14.0 (4.3)	19.5 (1048)	--	13.5 (4.1)	13.5 (4.1)
	11 (3.4)	13.5 (4.1)	17.0 (914)	--	--	14.5 (4.4)	15.0 (4.6)	22.5 (1210)	--	--	14.5 (4.4)
	12 (3.7)	15.0 (4.6)	21.5 (1156)	--	--	16.0 (4.9)	16.0 (4.9)	25.5 (1371)	--	--	15.5 (4.7)
GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND TIP OF SHORING	< 6 (1.8)	11.5 (3.5)	4.5 (242)	11.5 (3.5)	11.5 (3.5)	11.5 (3.5)	16.0 (4.9)	12.0 (645)	13.0 (4.0)	13.0 (4.0)	13.0 (4.0)
	7 (2.1)	13.0 (4.0)	7.0 (376)	13.0 (4.0)	13.0 (4.0)	13.0 (4.0)	17.0 (5.2)	14.5 (780)	14.5 (4.4)	14.5 (4.4)	14.5 (4.4)
	8 (2.4)	15.0 (4.6)	10.0 (538)	--	15.0 (4.6)	15.0 (4.6)	18.0 (5.5)	17.0 (914)	--	15.5 (4.7)	15.5 (4.7)
	9 (2.7)	17.0 (5.2)	14.0 (753)	--	17.0 (5.2)	17.0 (5.2)	19.0 (5.8)	20.0 (1075)	--	17.0 (5.2)	17.0 (5.2)
	10 (3.0)	18.5 (5.6)	19.5 (1048)	--	--	18.5 (5.6)	20.0 (6.1)	23.5 (1263)	--	--	18.5 (5.6)
	11 (3.4)	20.5 (6.3)	26.0 (1398)	--	--	--	21.0 (6.4)	28.0 (1505)	--	--	20.0 (6.1)
	12 (3.7)	22.5 (6.9)	33.0 (1774)	--	--	--	22.0 (6.7)	33.0 (1774)	--	--	21.5 (6.6)

NOTE: MINIMUM REQUIRED EXTENSION IS 6" (150mm) FOR "SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT" AND 32" (800 mm) FOR "SURCHARGE CASE WITH TRAFFIC IMPACT".

GEOTECHNICAL ENGINEERING UNIT
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD DRAWING NO. 1801.01

STANDARD TEMPORARY SHORING

DATE: 2-20-07

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201303

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION
000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING
0009095000-E	SP	50	TON	GENERIC MISCELLANEOUS ITEM EXCAVATION, HAULING, AND DISPOSAL OF CONTAMINATED SOIL
000100000-E	200	Lump Sum		CLEARING & GRUBBING... ACRE(S)
000800000-E	200	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
002200000-E	225	18,000	CY	UNCLASSIFIED EXCAVATION
002900000-N	SP	Lump Sum		REINFORCED BRIDGE APPROACH FILL, STATION ***** (32+18.000)
003600000-E	225	2,166	CY	UNDERCUT EXCAVATION
008000000-E	SP	1,000	TON	CLASS IV SUBGRADE STABILIZATION
010600000-E	230	132,400	CY	BORROW EXCAVATION
013400000-E	240	2,340	CY	DRAINAGE DITCH EXCAVATION
014100000-E	240	290	LF	BERM DITCH CONSTRUCTION
015600000-E	250	8,000	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT
016300000-E	250	2,350	SY	REMOVAL OF EXISTING CONCRETE PAVEMENT
017700000-E	250	5,100	SY	BREAKING OF EXISTING ASPHALT PAVEMENT
019500000-E	265	2,000	CY	SELECT GRANULAR MATERIAL
019600000-E	270	2,000	SY	FABRIC FOR SOIL STABILIZATION
019900000-E	SP	2,994	SF	TEMPORARY SHORING
031800000-E	300	540	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS
038400000-E	310	200	LF	30" RC PIPE CULVERTS, CLASS III
039000000-E	310	320	LF	36" RC PIPE CULVERTS, CLASS III
070800000-E	310	524	LF	15" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
071400000-E	310	52	LF	18" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK
080600000-E	310	8	EA	15" BIT COAT CS PIPE ELBOWS, TYPE B 0.064" THICK
097310000-E	330	248	LF	*** WELDED STEEL PIPE IN SOIL (15")
099500000-E	340	1,128	LF	PIPE REMOVAL
101100000-N	500	Lump Sum		FINE GRADING
122000000-E	545	100	TON	INCIDENTAL STONE BASE
148900000-E	610	10,700	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B
149100000-E	610	2,100	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C
149800000-E	610	7,500	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE H19.0B
150300000-E	610	700	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE H19.0C
151900000-E	610	7,100	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B
152300000-E	610	700	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C
152420000-E	610	530	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5D
156000000-E	620	1,362	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22
156500000-E	620	42	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 70-22
157000000-E	620	30	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 76-22
169300000-E	654	48	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR
184000000-E	665	2,940	LF	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE)
200000000-N	806	50	EA	RIGHT OF WAY MARKERS
202200000-E	815	448	CY	SUBDRAIN EXCAVATION
203300000-E	815	336	CY	SUBDRAIN FINE AGGREGATE
204400000-E	815	2,000	LF	6" PERFORATED SUBDRAIN PIPE
205500000-E	815	60	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
206600000-N	815	4	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET

ItemNumber	Sec #	Quantity	Unit	Description
207700000-E	815	24	LF	6" OUTLET PIPE (SUBDRAINS)
220900000-E	838	3.4	CY	ENDWALLS
225300000-E	840	2.1	CY	PIPE COLLARS
226400000-E	840	0.6	CY	PIPE PLUGS
227500000-E	SP	6.1	CY	FLOWABLE FILL
228600000-N	840	57	EA	MASONRY DRAINAGE STRUCTURES
230800000-E	840	32.09	LF	MASONRY DRAINAGE STRUCTURES
236400000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.16
236500000-N	840	6	EA	FRAME WITH TWO GRATES, STD 840.22
236600000-N	840	7	EA	FRAME WITH TWO GRATES, STD 840.24
236700000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.29
237400000-N	840	6	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)
237400000-N	840	11	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)
237400000-N	840	10	EA	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)
239600000-N	840	9	EA	FRAME WITH COVER, STD 840.54
240700000-N	840	2	EA	STEEL FRAME WITH TWO GRATES, STD 840.37
254200000-E	846	2,200	LF	1'-6" CONCRETE CURB & GUTTER
254900000-E	846	4,500	LF	2'-6" CONCRETE CURB & GUTTER
265500000-E	852	1,300	SY	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)
281500000-N	858	3	EA	ADJUSTMENT OF DROP INLETS
290500000-N	859	2	EA	CONVERT EXISTING DROP INLET TO JUNCTION BOX
300000000-N	SP	1	EA	IMPACT ATTENUATOR UNIT, TYPE 350
303000000-E	862	2,600	LF	STEEL BM GUARDRAIL
304500000-E	862	50	LF	STEEL BM GUARDRAIL, SHOP CURVED
306000000-E	862	137.5	LF	STEEL BM GUARDRAIL, DOUBLE FACED
315000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
321000000-N	862	5	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
321500000-N	862	3	EA	GUARDRAIL ANCHOR UNITS, TYPE III
327000000-N	SP	8	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
336000000-E	863	3,665	LF	REMOVE EXISTING GUARDRAIL
338000000-E	862	375	LF	TEMPORARY STEEL BM GUARDRAIL
338200000-E	862	50	LF	TEMPORARY STEEL BM GUARDRAIL (SHOP CURVED)
338300000-E	862	225	LF	TEMPORARY STEEL BM GUARDRAIL, DOUBLE FACED
338700000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** TEMPORARY (AT-1)
338700000-N	862	3	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** TEMPORARY (B-77)
338700000-N	862	2	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** TEMPORARY (B-83)
338910000-N	SP	1	EA	GUARDRAIL ANCHOR UNITS, TYPE 350 TEMPORARY
353600000-E	866	3,800	LF	CHAIN LINK FENCE, 48" FABRIC
354200000-E	866	1,030	EA	METAL LINE POSTS FOR 48" CHAIN LINK FENCE
354800000-E	866	40	EA	METAL TERMINAL POSTS FOR 48" CHAIN LINK FENCE
355700000-E	866	30	LF	ADDITIONAL BARBED WIRE
362800000-E	876	255	TON	RIP RAP, CLASS I
364900000-E	876	758	TON	RIP RAP, CLASS B

ItemNumber	Sec #	Quantity	Unit	Description
365600000-E	876	3,324	SY	FILTER FABRIC FOR DRAINAGE
404800000-E	902	4	CY	REINFORCED CONCRETE SIGN FOUNDATIONS
405700000-E	SP	21.94	CY	OVERHEAD FOOTING
406000000-E	903	3,611	LB	SUPPORTS, BREAKAWAY STEEL BEAM
407200000-E	903	1,317	LF	SUPPORTS, 3-LB STEEL U-CHANNEL
407800000-E	903	1	EA	SUPPORTS, 2-LB STEEL U-CHANNEL
408200000-E	903	75	LF	SUPPORTS, WOOD
408210000-N	SP	Lump Sum		SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (37+00 -Y2-WBL)
408210000-N	SP	Lump Sum		SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (44+50 -Y2-WBL)
409600000-N	904	6	EA	SIGN ERECTION, TYPE D
410200000-N	904	25	EA	SIGN ERECTION, TYPE E
410800000-N	904	12	EA	SIGN ERECTION, TYPE F
410900000-N	904	5	EA	SIGN ERECTION, TYPE *** (OVERHEAD) (A)
410900000-N	904	2	EA	SIGN ERECTION, TYPE *** (OVERHEAD) (B)
411000000-N	904	5	EA	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)
411000000-N	904	1	EA	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)
411400000-N	904	1	EA	SIGN ERECTION, MILEMARKERS
411600000-N	904	3	EA	SIGN ERECTION, OVERLAY (GROUND MOUNTED)
411610000-N	904	4	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (A)
411610000-N	904	8	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (E)
411610000-N	904	2	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (F)
411630000-N	904	7	EA	SIGN ERECTION, LOGO TO PANEL
413800000-N	907	4	EA	DISPOSAL OF SUPPORT, STEEL BEAM
415200000-N	907	2	EA	DISPOSAL OF SIGN SYSTEM, STEEL BEAM
415500000-N	907	71	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
415800000-N	907	3	EA	DISPOSAL OF SIGN SYSTEM, WOOD
419200000-N	907	3	EA	DISPOSAL OF SUPPORT, U-CHANNEL
423400000-N	907	1	EA	DISPOSAL OF SIGN, A OR B (OVERHEAD)
440000000-E	1110	617	SF	WORK ZONE SIGNS (STATIONARY)
440500000-E	1110	1,196	SF	WORK ZONE SIGNS (PORTABLE)
441000000-E	1110	224	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
441500000-N	1115	4	EA	FLASHING ARROW PANELS, TYPE C
442000000-N	1120	6	EA	CHANGEABLE MESSAGE SIGN
443000000-N	1130	331	EA	DRUMS
443500000-N	1135	100	EA	CONES
444500000-E	1145	160	LF	BARRICADES (TYPE III)
445000000-N	1150	3,200	HR	FLAGGER
446500000-N	1160	2	EA	TEMPORARY CRASH CUSHIONS
447000000-N	1160	2	EA	RESET TEMPORARY CRASH CUSHIONS
448000000-N	1165	4	EA	TMA
448500000-E	1170	470	LF	PORTABLE CONCRETE BARRIER
449000000-E	1170	1,280	LF	PORTABLE CONCRETE BARRIER (ANCHORED)
449500000-E	1170	460	LF	PORTABLE CONCRETE BARRIER (DRAINAGE)
450000000-E	1170	470	LF	RESET PORTABLE CONCRETE BARRIER
451000000-N	SP	800	HR	POLICE
465000000-N	1251	325	EA	TEMPORARY RAISED PAVEMENT MARKERS
468500000-E	1205	14,928	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
468600000-E	1205	5,811	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)

5/28/99

STATE OF NORTH CAROLINA
SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
4695000000-E	1205	1,776	LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)
4710000000-E	1205	460	LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)
4721000000-E	1205	32	EA	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)
4725000000-E	1205	76	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)
4770000000-E	1205	468	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (III)
4770000000-E	1205	936	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (IV)
4805000000-N	1205	7	EA	COLD APPLIED PLASTIC PAVEMENT MARKING SYMBOL, TYPE ** (III)
4810000000-E	1205	49,425	LF	PAINT PAVEMENT MARKING LINES (4")
4820000000-E	1205	5,936	LF	PAINT PAVEMENT MARKING LINES (8")
4835000000-E	1205	870	LF	PAINT PAVEMENT MARKING LINES (24")
4840000000-N	1205	80	EA	PAINT PAVEMENT MARKING CHARACTER
4845000000-N	1205	110	EA	PAINT PAVEMENT MARKING SYMBOL
4850000000-E	1205	12,461	LF	REMOVAL OF PAVEMENT MARKING LINES (4")
4860000000-E	1205	1,026	LF	REMOVAL OF PAVEMENT MARKING LINES (8")
4870000000-E	1205	186	LF	REMOVAL OF PAVEMENT MARKING LINES (24")
4875000000-N	1205	34	EA	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS
4905000000-N	1253	487	EA	SNOWPLOWABLE PAVEMENT MARKERS
5255000000-N	1413	Lump Sum		PORTABLE LIGHTING
5325800000-E	1510	1,102	LF	8" WATER LINE
5326200000-E	1510	120	LF	12" WATER LINE
5546000000-E	1515	2	EA	8" VALVE
5648000000-N	1515	7	EA	RELOCATE WATER METER
5672000000-N	1515	1	EA	RELOCATE FIRE HYDRANT
5801000000-E	1530	1,200	LF	ABANDON 8" UTILITY PIPE
6000000000-E	1605	3,500	LF	TEMPORARY SILT FENCE
6006000000-E	1610	440	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	1,030	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	775	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	17.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	650	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	2.5	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	350	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	4	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6030000000-E	1630	7,700	CY	SILT EXCAVATION
6036000000-E	1631	5,500	SY	MATting FOR EROSION CONTROL
6037000000-E	SP	50	SY	COIR FIBER MAT
6038000000-E	SP	750	SY	PERMANENT SOIL REINFORCEMENT MAT
6042000000-E	1632	1,250	LF	1/4" HARDWARE CLOTH
6071030000-E	SP	760	LF	COIR FIBER BAFFLES
6071050000-E	SP	1	EA	*** SKIMMER (1-1/2")
6071050000-E	SP	3	EA	*** SKIMMER (2-1/2")
6071050000-E	SP	1	EA	*** SKIMMER (4")
6071050000-E	SP	1	EA	*** SKIMMER (5")
6084000000-E	1660	25.5	ACR	SEEDING & MULCHING
6087000000-E	1660	10.5	ACR	MOWING
6090000000-E	1661	150	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.5	TON	FERTILIZER FOR REPAIR SEEDING

ItemNumber	Sec #	Quantity	Unit	Description
6096000000-E	1662	425	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	19	TON	FERTILIZER TOPDRESSING
6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL
7060000000-E	1705	5,580	LF	SIGNAL CABLE
7120000000-E	1705	40	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
7144000000-E	1705	17	EA	VEHICLE SIGNAL HEAD (12", 5 SECTION)
7252000000-E	1710	2,263	LF	MESSENGER CABLE (1/4")
7264000000-E	1710	1,330	LF	MESSENGER CABLE (3/8")
7279000000-E	1715	490	LF	TRACER WIRE
7300000000-E	1715	1,920	LF	UNPAVED TRENCHING (***** (1, 1")
7301000000-E	1715	490	LF	DIRECTIONAL DRILL (***** (1, 2")
7324000000-N	1716	21	EA	JUNCTION BOX (STANDARD SIZE)
7348000000-N	1716	6	EA	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)
7360000000-N	1720	14	EA	WOOD POLE
7372000000-N	1721	37	EA	GUY ASSEMBLY
7408000000-E	1722	5	EA	1" RISER WITH WEATHERHEAD
7420000000-E	1722	16	EA	2" RISER WITH WEATHERHEAD
7432000000-E	1722	3	EA	2" RISER WITH HEAT SHRINK TUBING
7444000000-E	1725	5,765	LF	INDUCTIVE LOOP SAWCUT
7456000000-E	1726	6,930	LF	LEAD-IN CABLE (***** (18-2)
7456000000-E	1726	805	LF	LEAD-IN CABLE (***** (18-4)
7516000000-E	1730	3,300	LF	COMMUNICATIONS CABLE (**FIBER) (12)
7552000000-N	1731	4	EA	INTERCONNECT CENTER
7564000000-N	1732	4	EA	FIBER-OPTIC TRANSCEIVER, DROP & REPEAT
7566000000-N	1733	6	EA	DELINEATOR MARKER
7568000000-N	SP	1	EA	FURNISH FIBER-OPTIC RESTORATION KIT
7574000000-N	SP	1	EA	FURNISH FIBER-OPTIC TRANSCEIVER
7575142000-N	SP	3	EA	900MHZ WIRELESS RADIO SYSTEM
7575160000-E	1734	2,400	LF	REMOVE EXISTING COMMUNICATIONS CABLE
7576000000-N	SP	16	EA	METAL STRAIN SIGNAL POLE
7613000000-N	SP	16	EA	SOIL TEST
7614100000-E	SP	96	CY	DRILLED PIER FOUNDATION
7636000000-N	1745	11	EA	SIGN FOR SIGNALS
7684000000-N	1750	3	EA	SIGNAL CABINET FOUNDATION
7756000000-N	1751	3	EA	CONTROLLER WITH CABINET (TYPE 2070L, BASE MOUNTED)
7768000000-N	1751	1	EA	CONTROLLER WITH CABINET (TYPE 2070L, POLE MOUNTED)
7780000000-N	1751	16	EA	DETECTOR CARD (TYPE 2070L)
7901000000-N	1753	3	EA	CABINET BASE EXTENDER
7948000000-N	SP	1	EA	TRAFFIC SIGNAL REMOVAL
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH WIRELESS LIGHTNING ARRESTOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH WIRELESS RADIO MODEM
***** BEGIN SCHEDULE AA ***** ***** (3 ALTERNATES) *****				
0366000000-E	310	1,768	LF	15" RC PIPE CULVERTS, CLASS III
AA1				
0372000000-E	310	944	LF	18" RC PIPE CULVERTS, CLASS III
AA1				
0378000000-E	310	1,192	LF	24" RC PIPE CULVERTS, CLASS III
AA1				
*** OR ***				
0366000000-E	310	1,488	LF	15" RC PIPE CULVERTS, CLASS III
AA2				

ItemNumber	Sec #	Quantity	Unit	Description
0372000000-E	310	836	LF	18" RC PIPE CULVERTS, CLASS III
AA2				
0378000000-E	310	812	LF	24" RC PIPE CULVERTS, CLASS III
AA2				
0536000000-E	SP	280	LF	**** HDPE PIPE CULVERTS (15")
AA2				
0536000000-E	SP	108	LF	**** HDPE PIPE CULVERTS (18")
AA2				
0536000000-E	SP	380	LF	**** HDPE PIPE CULVERTS (24")
AA2				
*** OR ***				
0366000000-E	310	1,488	LF	15" RC PIPE CULVERTS, CLASS III
AA3				
0372000000-E	310	836	LF	18" RC PIPE CULVERTS, CLASS III
AA3				
0378000000-E	310	812	LF	24" RC PIPE CULVERTS, CLASS III
AA3				
0540000000-E	SP	280	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (15", 0.064")
AA3				
0540000000-E	SP	108	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (18", 0.064")
AA3				
0540000000-E	SP	380	LF	**** ALUMINIZED CORRUGATED STEEL PIPE CULVERTS, **** THICK (24", 0.064")
AA3				
***** END SCHEDULE AA *****				

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL NO.	SHEET NO.	PROPERTY OWNER NAME
1	4	WILBURN P. WALKER
2	4	JOHN V. WALKER
3	4	TRAVCO-BRT LIMITED PARTNERSHIP
4	4,5,&7	J.B. HARRISON PROPERTIES, LLC
5	4&5	BURNETTE KELLEY PARTNERS, LLC
6	5	UNKNOWN
7	5	801 ATHENA, LLC
8	5&6	WENSTAR PROPERTIES, LP
9	5	JAMES R. OWINGS & DAVID G. HARMON
10	6	QUALITY OIL COMPANY
11	6	NORTHWEST PROPERTY GROUP
12	6	CVS 5379 NC, LLC
13	6	HARRISON FAMILY PROPERTIES, LLC

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "12102-8"

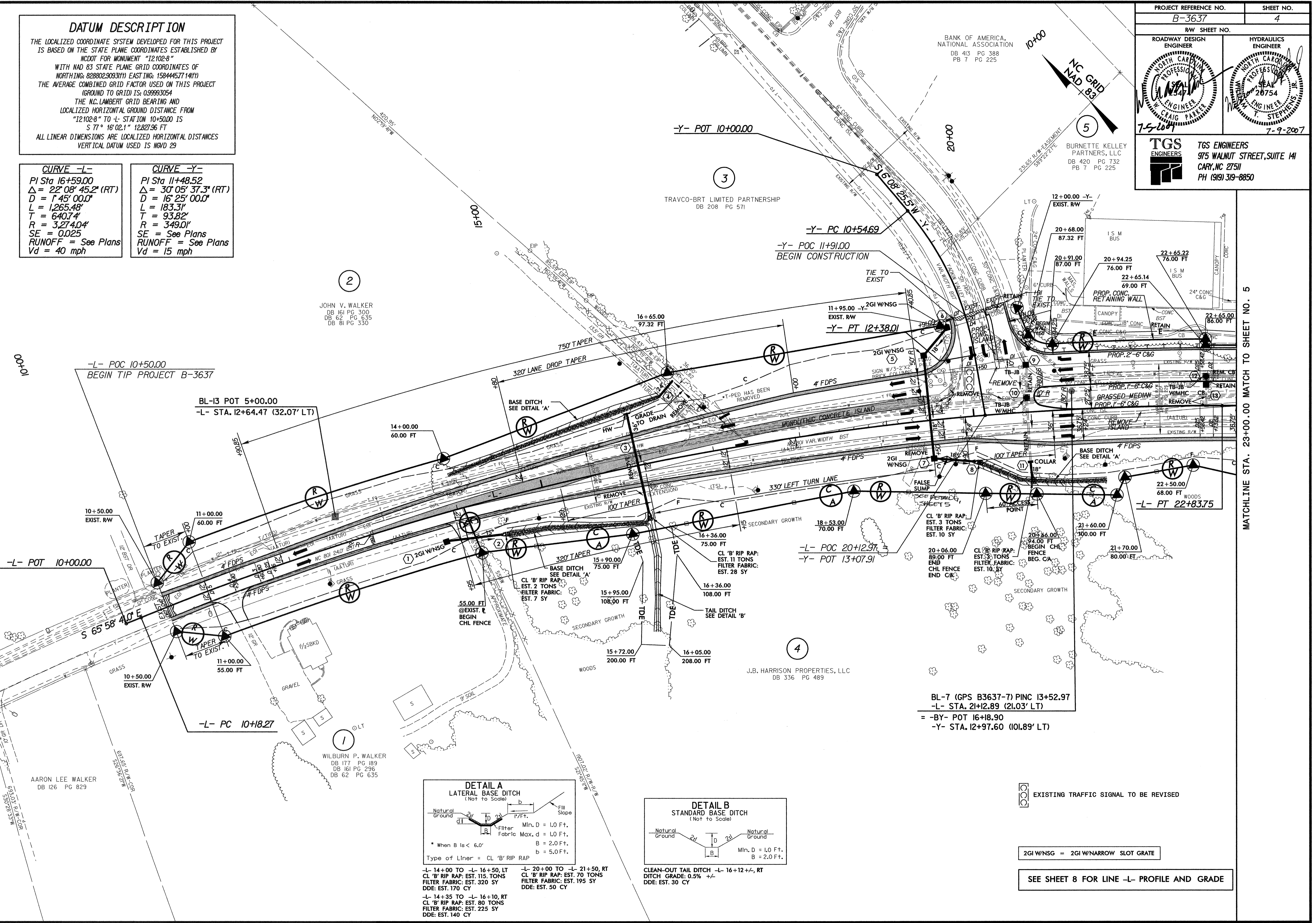
WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 8288029033(Ft) EASTING: 15844457714(Ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99993054

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "12102-8" TO -L- STATION 10+50.00 IS
 S 77° 16' 02.1" 12827.96 FT

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

CURVE -L-	CURVE -Y-
PI Sta 16+59.00	PI Sta 11+48.52
$\Delta = 22^\circ 08' 45.2"$ (RT)	$\Delta = 30^\circ 05' 37.3"$ (RT)
D = 1'45"00.0"	D = 16'25"00.0"
L = 1265.48'	L = 183.31'
T = 640.74'	T = 93.82'
R = 3274.04'	R = 349.01'
SE = 0.025	SE = See Plans
RUNOFF = See Plans	RUNOFF = See Plans
Vd = 40 mph	Vd = 15 mph



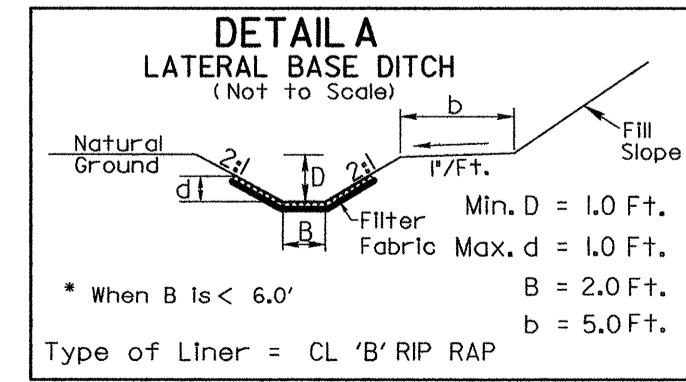
2
 JOHN V. WALKER
 DB 161 PG 300
 DB 62 PG 635
 DB 81 PG 330

AARON LEE WALKER
 DB 126 PG 829

1
 WILBURN P. WALKER
 DB 177 PG 189
 DB 161 PG 296
 DB 62 PG 635

4
 J.B. HARRISON PROPERTIES, LLC
 DB 336 PG 489

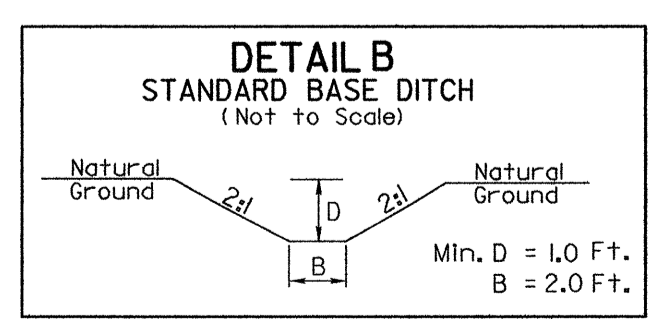
3
 TRAVCO-BRT LIMITED PARTNERSHIP
 DB 208 PG 571



-L- 14+00 TO -L- 16+50, LT
 CL 'B' RIP RAP: EST. 115 TONS
 FILTER FABRIC: EST. 320 SY
 DDE: EST. 170 CY

-L- 14+35 TO -L- 16+10, RT
 CL 'B' RIP RAP: EST. 80 TONS
 FILTER FABRIC: EST. 225 SY
 DDE: EST. 140 CY

-L- 20+00 TO -L- 21+50, RT
 CL 'B' RIP RAP: EST. 70 TONS
 FILTER FABRIC: EST. 195 SY
 DDE: EST. 50 CY



CLEAN-OUT TAIL DITCH -L- 16+12+/-, RT
 DITCH GRADE: 0.5% +/-
 DDE: EST. 30 CY

EXISTING TRAFFIC SIGNAL TO BE REVISED

2GI WNSG = 2GI W/NARROW SLOT GRATE

SEE SHEET 8 FOR LINE -L- PROFILE AND GRADE

MATCHLINE STA. 23+00.00 MATCH TO SHEET NO. 5

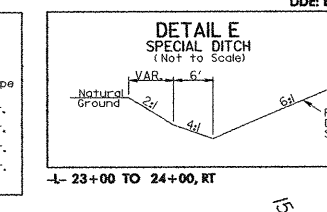
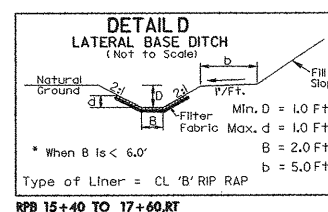
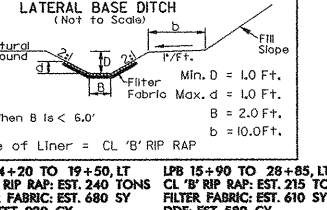
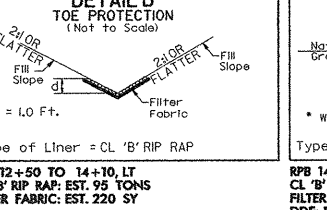
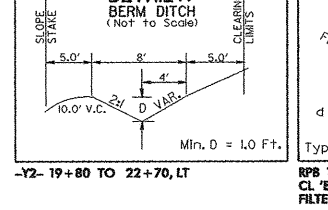
5/14/2007

NO.	DESCRIPTION

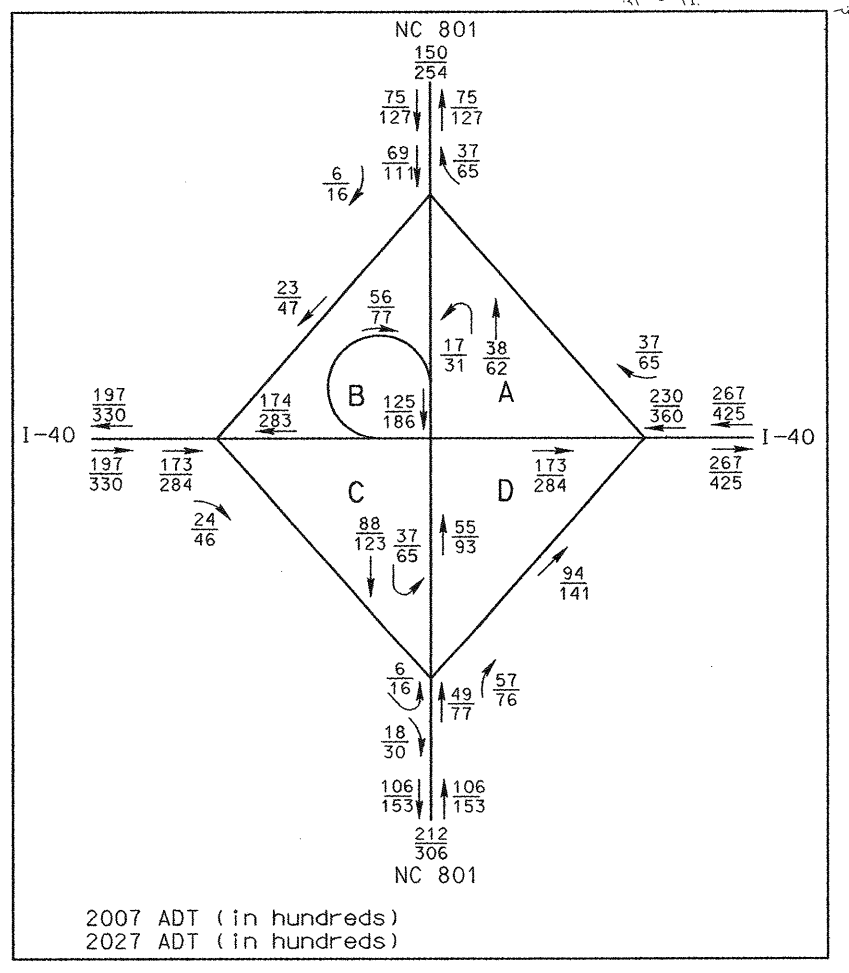
CURVE -RBP- #1
 Pts Sta 11+30.12 PI Sta 11+91.63 Pts Sta 16+44.71
 Gs = 7' 26" 54.4" Δ = 23' 22" 55.0" (LT) Gs = 7' 26" 54.4"
 Ls = 195.00 D = 7' 38" 22.0" Ls = 195.00
 LT = 130.12 T = 304.6 T = 130.12
 R = 196.63 SE = 0.05
 RUNOFF = See Plans
 Vd = 50 mph

CURVE -RBP- #2
 Pts Sta 20+08.20 PI Sta 21+04.62 Pts Sta 22+10.23
 Gs = 7' 26" 54.4" Δ = 4' 48" 53.2" (RT) Gs = 7' 26" 54.4"
 Ls = 195.00 D = 7' 38" 22.0" Ls = 195.00
 LT = 130.12 T = 304.6 T = 130.12
 R = 196.63 SE = 0.05
 RUNOFF = See Plans
 Vd = 50 mph

CURVE -LPB-
 Pts Sta 10+43.79 PI Sta 12+46.13 Pts Sta 22+19.02
 Gs = 14' 09" 33.5" Δ = 8' 17" 03.8" (RT) Gs = 22' 20" 43.3"
 Ls = 215.00 D = 13' 10" 11.2" Ls = 195.00
 LT = 143.79 T = 62.5 T = 150.05
 R = 435.00 SE = 0.05
 RUNOFF = See Plans
 Vd = 35 mph

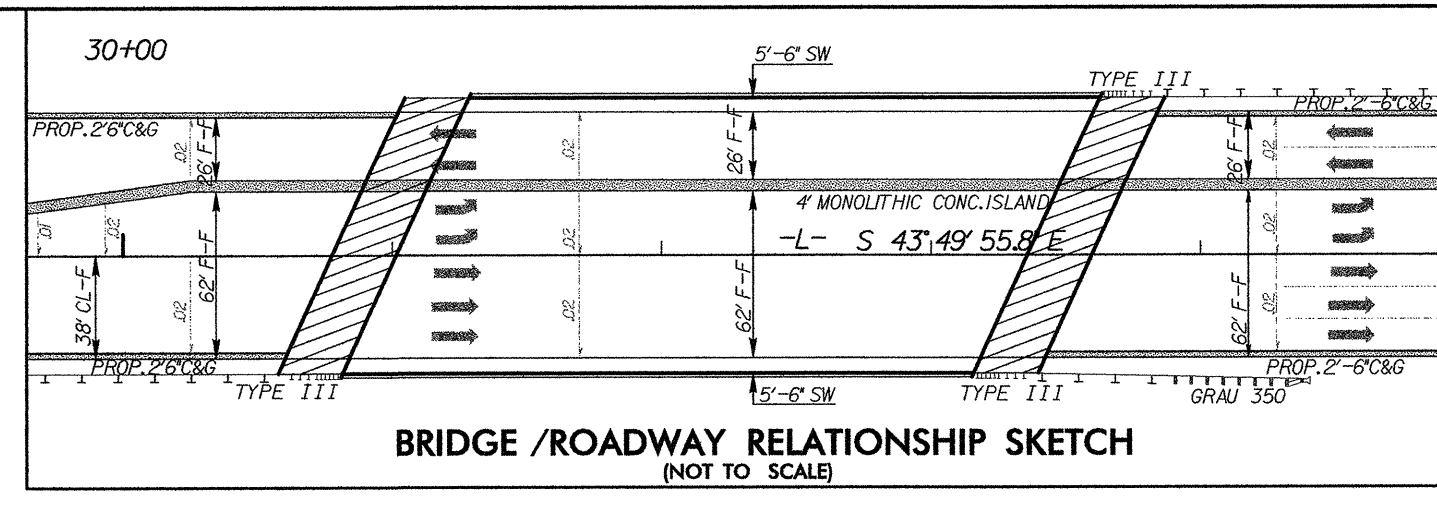
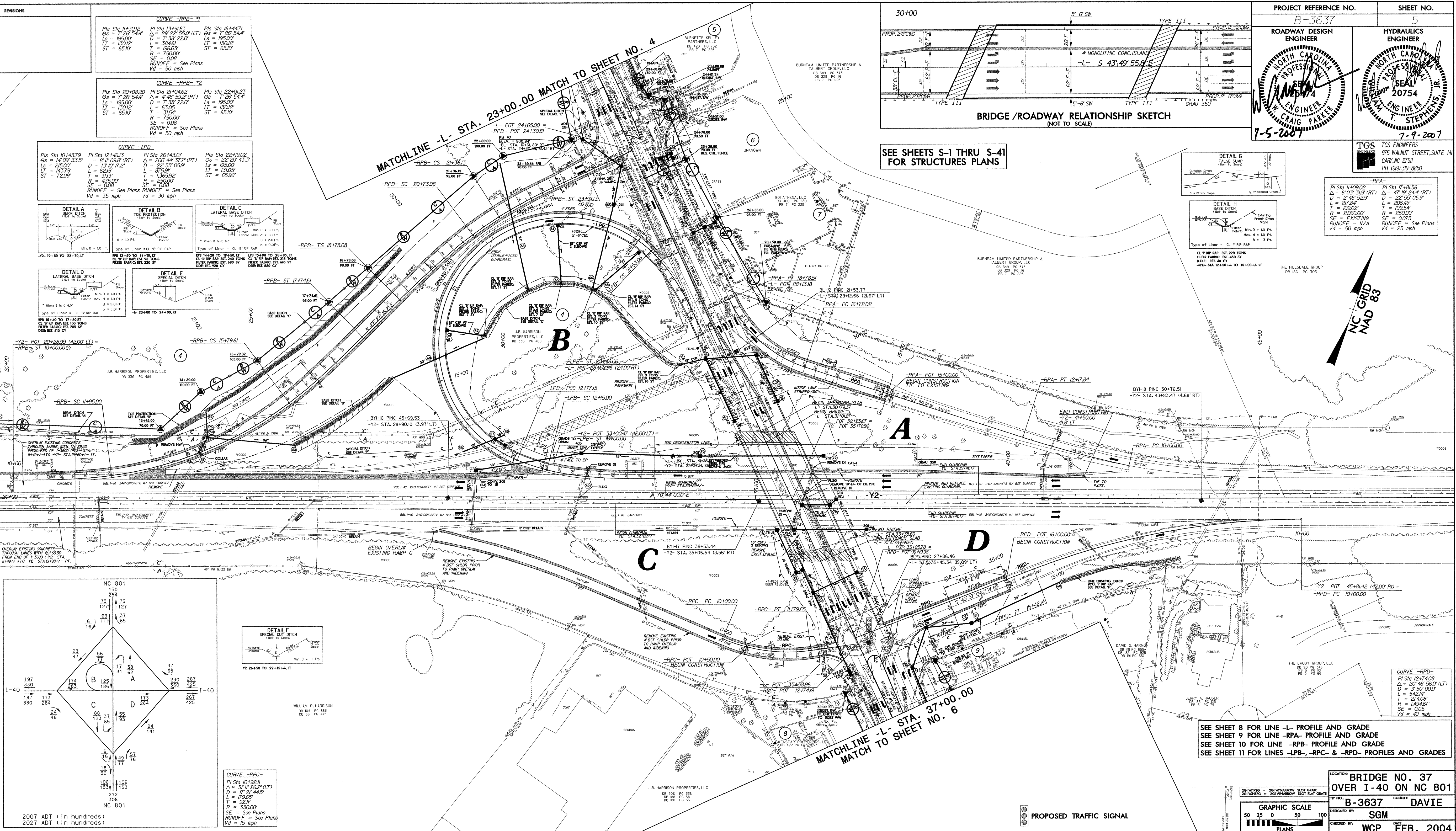


MATCHLINE -Y2- STA. 20+00.00 MATCH TO SHEET NO. 7



CURVE -RBP-
 Pts Sta 10+92.11 PI Sta 10+92.11
 Δ = 37' 11" 26.2" (LT)
 D = 17' 27" 44.2"
 Ls = 179.65
 LT = 92.07
 R = 330.00
 SE = See Plans
 RUNOFF = See Plans
 Vd = 15 mph

MATCHLINE -L- STA. 23+00.00 MATCH TO SHEET NO. 4



SEE SHEETS S-1 THRU S-41 FOR STRUCTURES PLANS

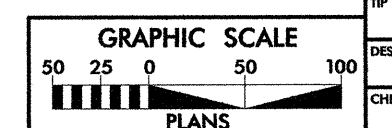
PROJECT REFERENCE NO. B-3637	SHEET NO. 5
ROADWAY DESIGN ENGINEER W. CRAIG PARKER	HYDRAULICS ENGINEER STEPHEN STEPHENS
7-5-2001	7-9-2007

TGS ENGINEERS
 975 WAMIT STREET, SUITE 101
 CARY, NC 27513
 PH (919) 319-8850

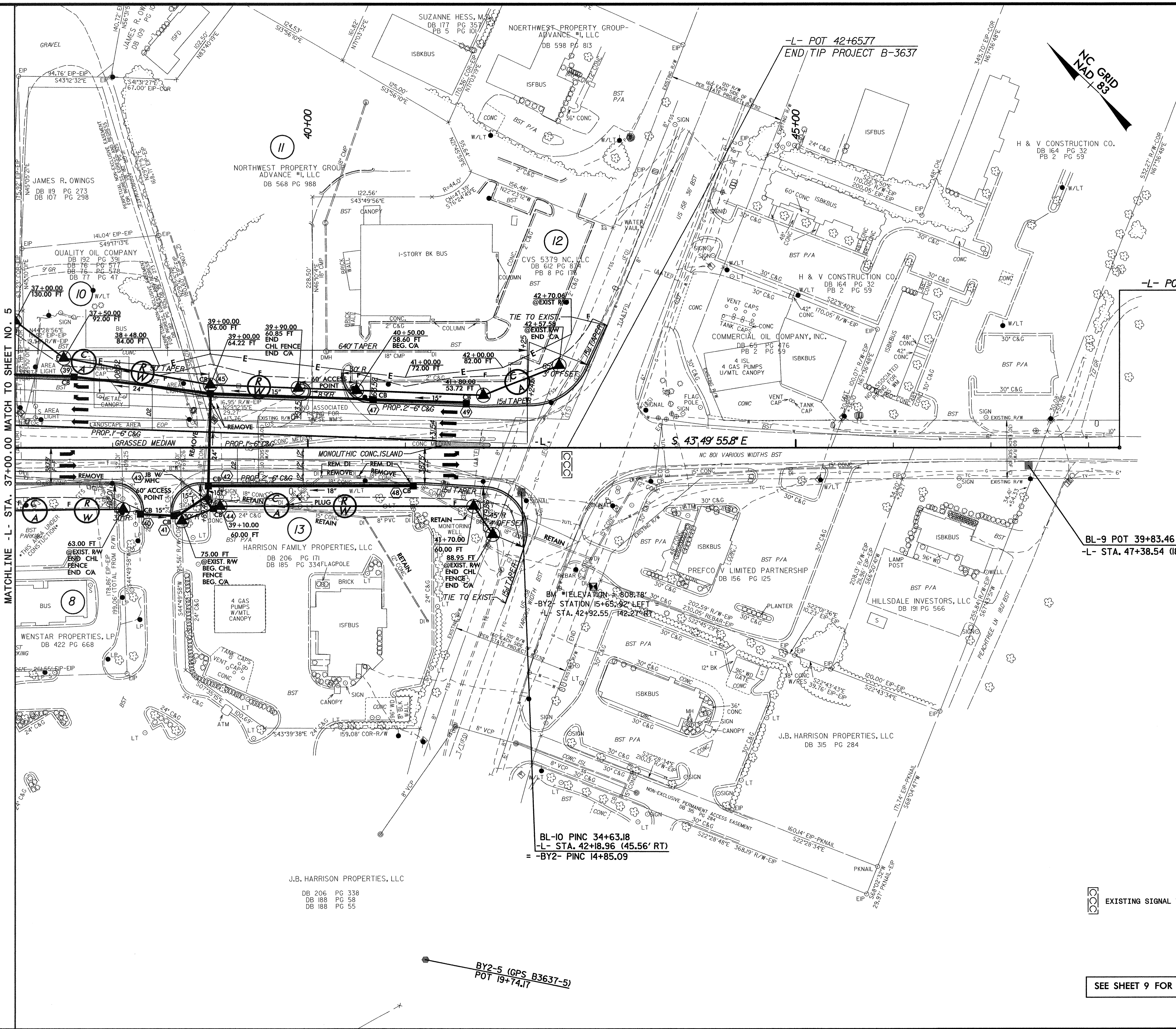


SEE SHEET 8 FOR LINE -L- PROFILE AND GRADE
 SEE SHEET 9 FOR LINE -RPA- PROFILE AND GRADE
 SEE SHEET 10 FOR LINE -RBP- PROFILE AND GRADE
 SEE SHEET 11 FOR LINES -LPB-, -RPC- & -RPD- PROFILES AND GRADES

LOCATION: **BRIDGE NO. 37 OVER I-40 ON NC 801**
 PROJECT NO.: **B-3637** COUNTY: **DAVIE**
 DESIGNED BY: **SGM**
 CHECKED BY: **WCP** DATE: **FEB. 2004**



PROJECT REFERENCE NO. B-3637		SHEET NO. 6	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		SEAL 20754	
		TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



MATCHLINE -L- STA. 37+00.00 MATCH TO SHEET NO. 5

-L- POT 42+65.77
END TIP PROJECT B-3637

-L- POT 48+31.61

BL-9 POT 39+83.46
-L- STA. 47+38.54 (18.47' RT)

BL-10 P/NC 34+63.18
-L- STA. 42+18.96 (45.56' RT)
= -BY2- P/NC 14+85.09

J.B. HARRISON PROPERTIES, LLC
DB 206 PG 338
DB 188 PG 58
DB 188 PG 55

EXISTING SIGNAL TO BE REVISED

SEE SHEET 9 FOR LINE -L- PROFILE AND GRADE

BY2-5 (GPS B3637-5)
POT 19+74.17

5/14/09

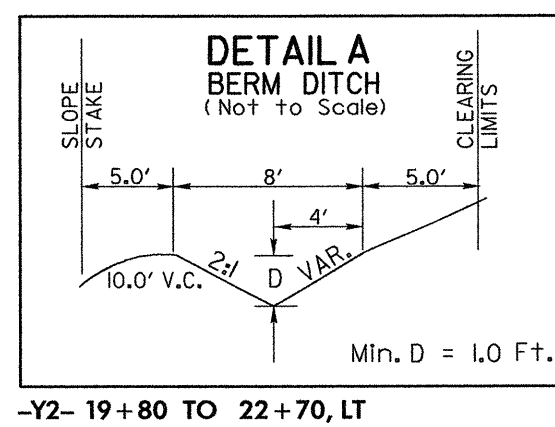
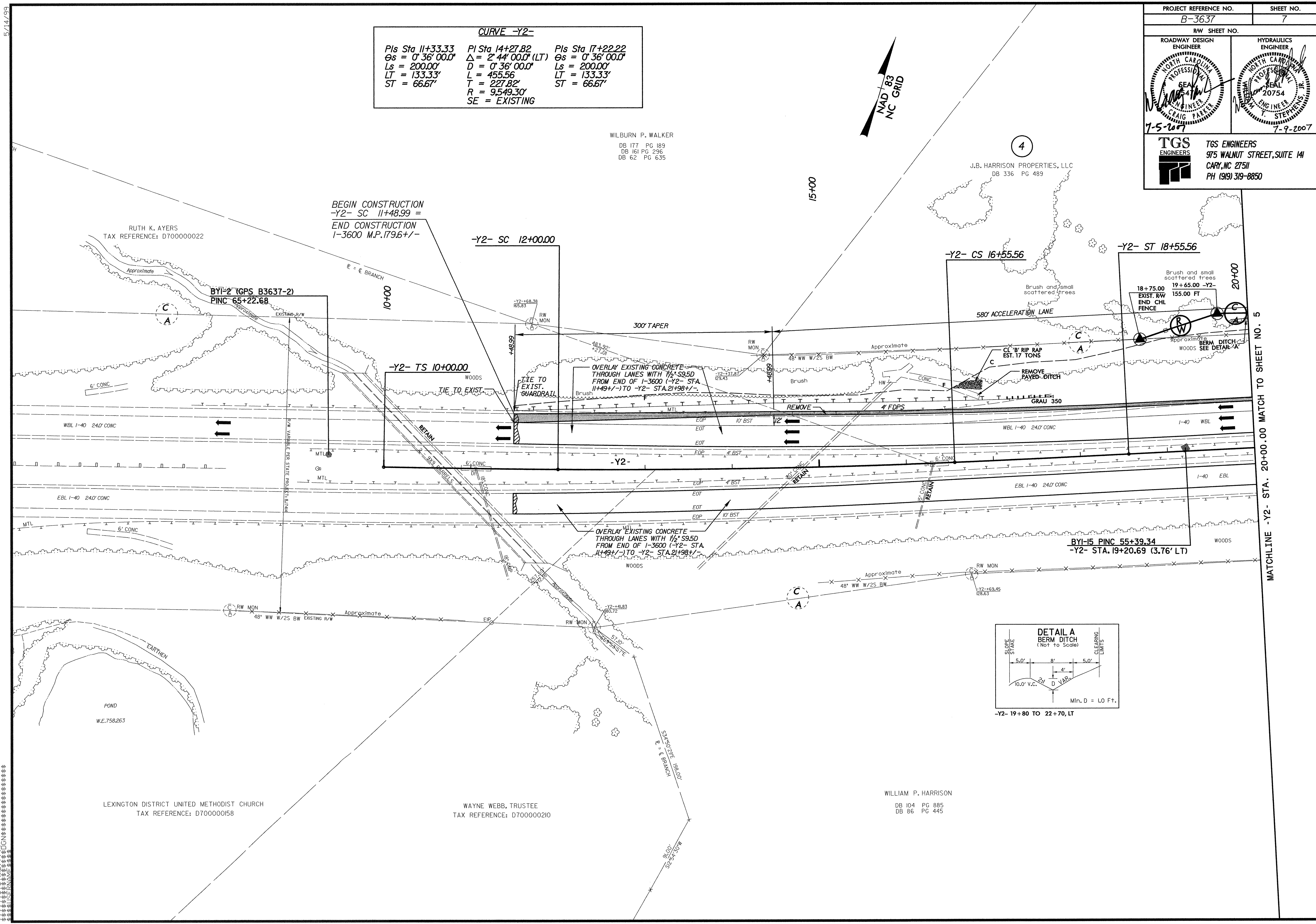
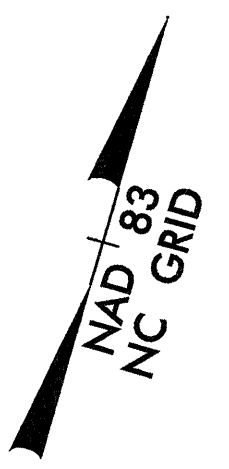
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PROJECT REFERENCE NO. B-3637		SHEET NO. 7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
		TGS ENGINEERS 975 WALNUT STREET, SUITE 101 CARY, NC 27511 PH (919) 319-8850	

CURVE -Y2-

Pls Sta 11+33.33	PI Sta 14+27.82	Pls Sta 17+22.22
$\Theta_s = 0^\circ 36' 00.0''$	$\Delta = 2^\circ 44' 00.0''$ (LT)	$\Theta_s = 0^\circ 36' 00.0''$
$L_s = 200.00'$	$D = 0^\circ 36' 00.0''$	$L_s = 200.00'$
$LT = 133.33'$	$L = 455.56'$	$LT = 133.33'$
$ST = 66.67'$	$T = 227.82'$	$ST = 66.67'$
	$R = 9,549.30'$	
	$SE = EXISTING$	

WILBURN P. WALKER
 DB 177 PG 189
 DB 161 PG 296
 DB 62 PG 635



RUTH K. AYERS
 TAX REFERENCE: D70000022

BYI-2 (GPS B3637-2)
 PINC 65+22.68

BEGIN CONSTRUCTION
 -Y2- SC 11+48.99 =
 END CONSTRUCTION
 1-3600 M.P. 179.6 +/-

J.B. HARRISON PROPERTIES, LLC
 DB 336 PG 489

LEXINGTON DISTRICT UNITED METHODIST CHURCH
 TAX REFERENCE: D700000158

WAYNE WEBB, TRUSTEE
 TAX REFERENCE: D700000210

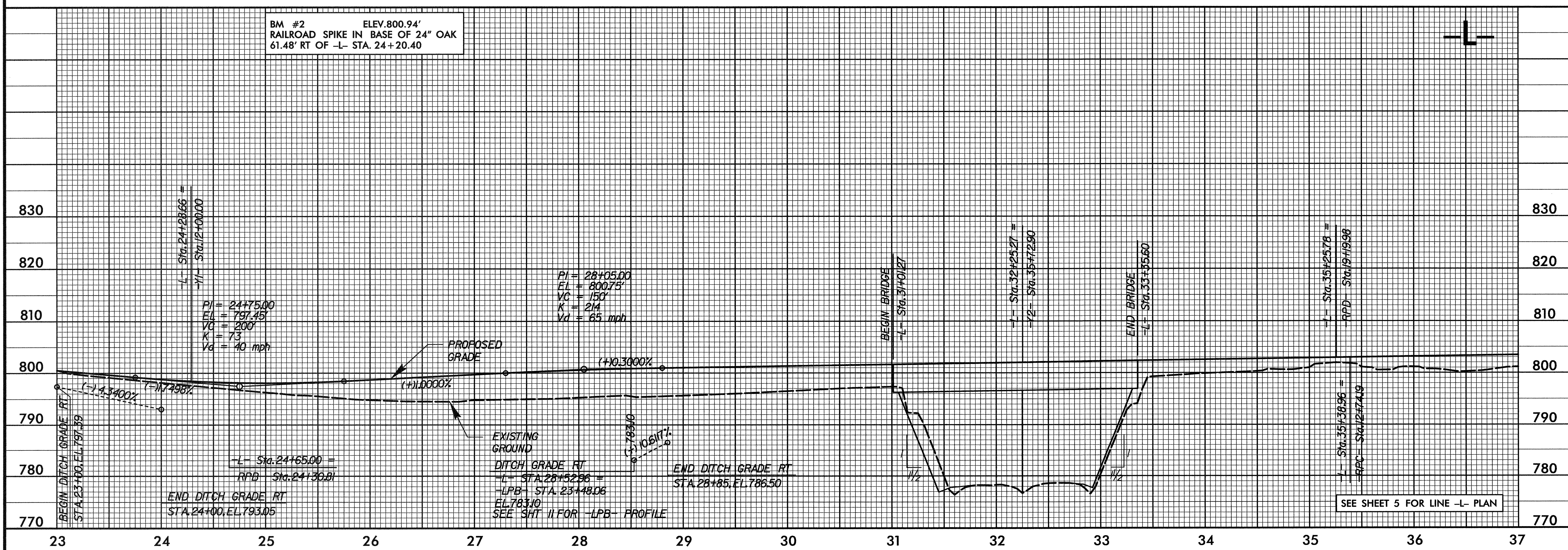
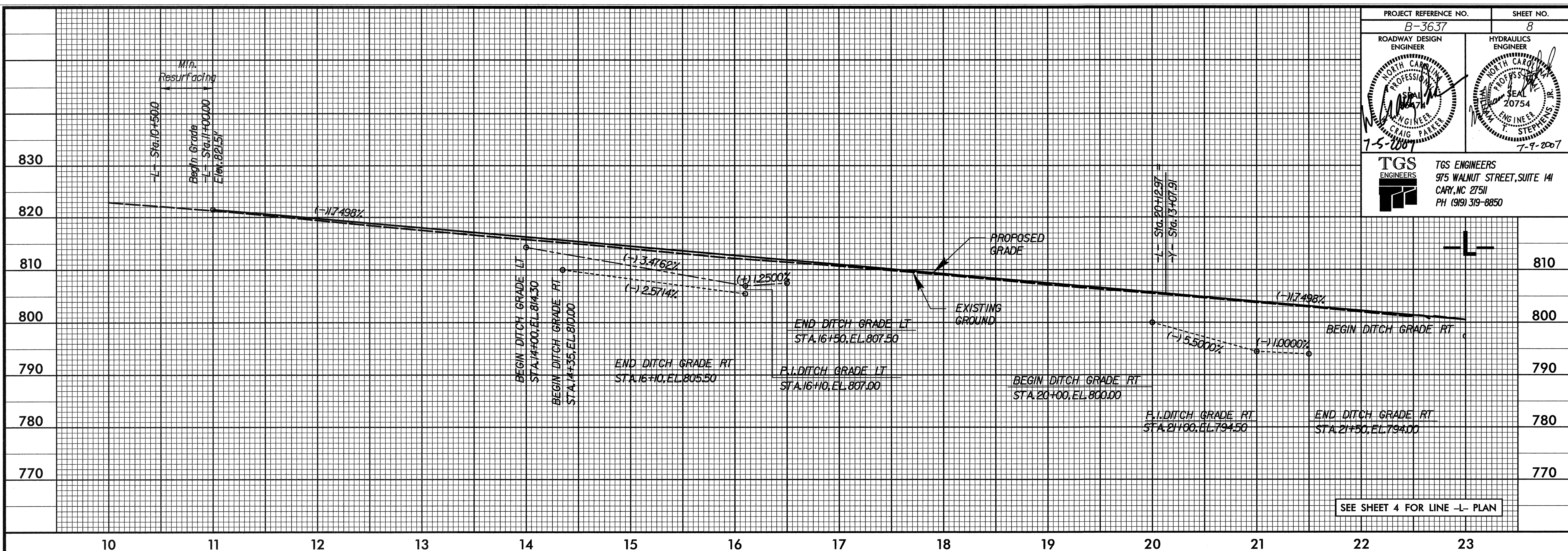
WILLIAM P. HARRISON
 DB 104 PG 885
 DB 86 PG 445



MATCHLINE -Y2- STA. 20+00.00 MATCH TO SHEET NO. 5

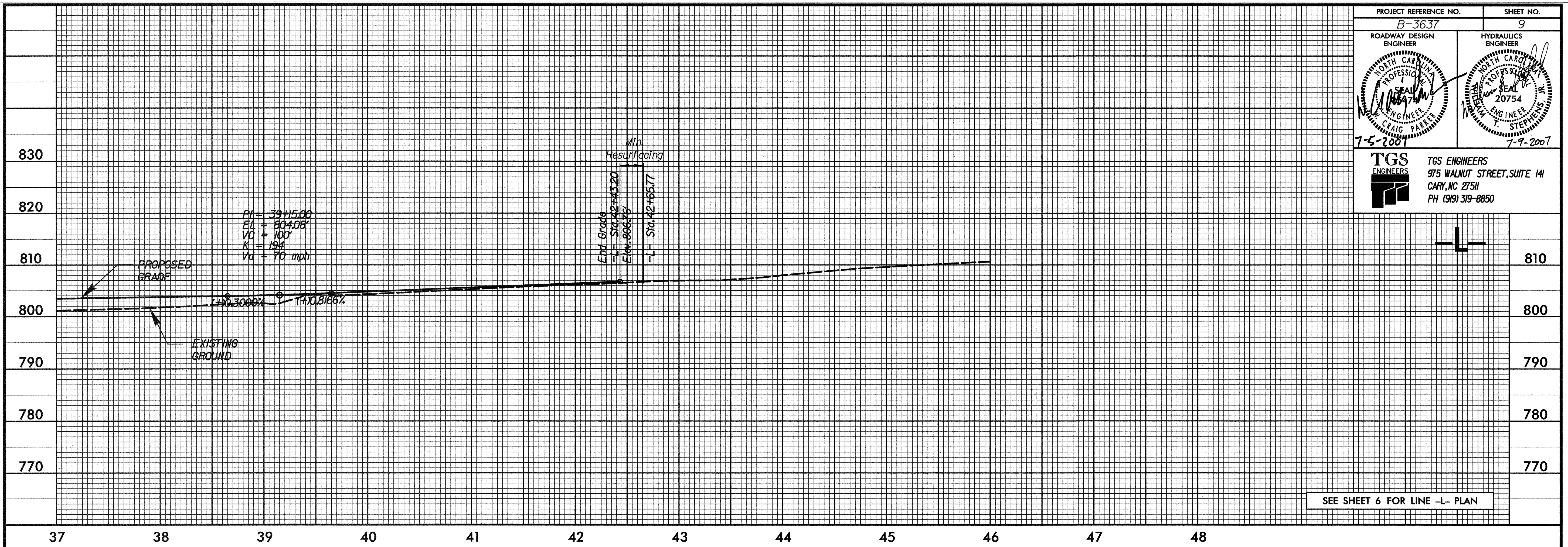
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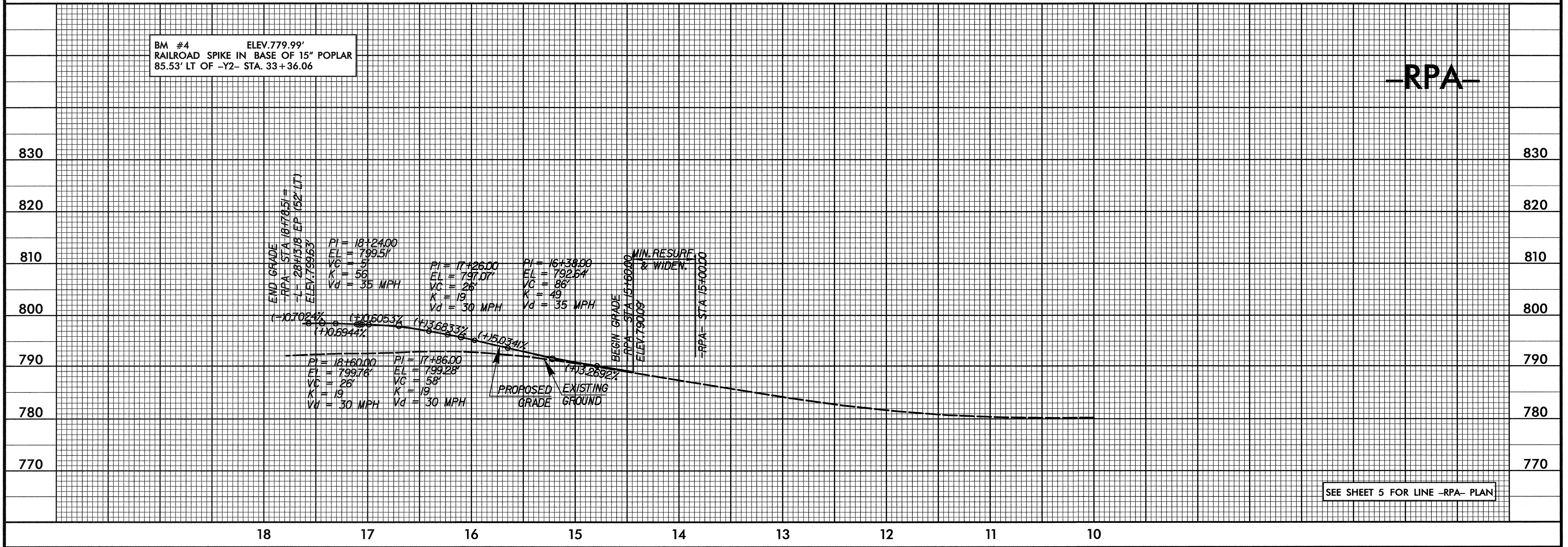
PROJECT REFERENCE NO. B-3637	SHEET NO. 8
ROADWAY DESIGN ENGINEER CRAIG PARKER 7-5-2007	HYDRAULICS ENGINEER T. STEPHENS 7-9-2007
TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



PROJECT REFERENCE NO. B-3637	SHEET NO. 9
ROADWAY DESIGN ENGINEER CRAIG PATKER 7-5-2007	HYDRAULICS ENGINEER STEPHEN S. STEPHENS 7-9-2007
 	
TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



SEE SHEET 6 FOR LINE -L- PLAN

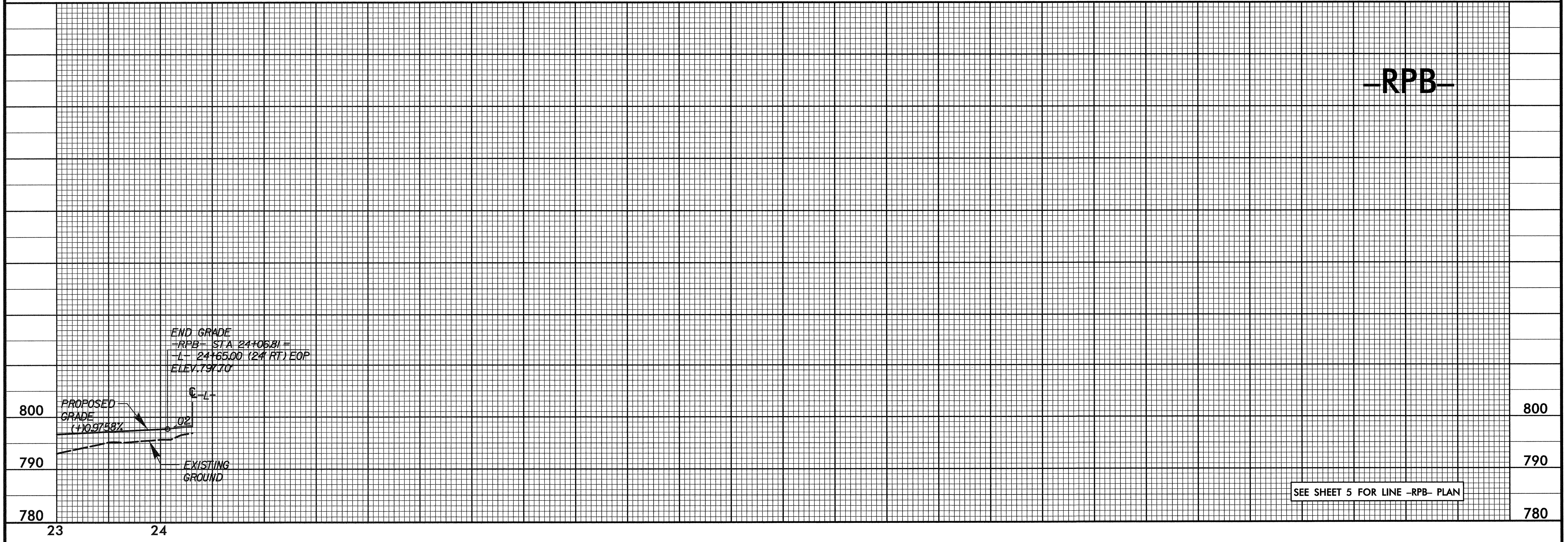
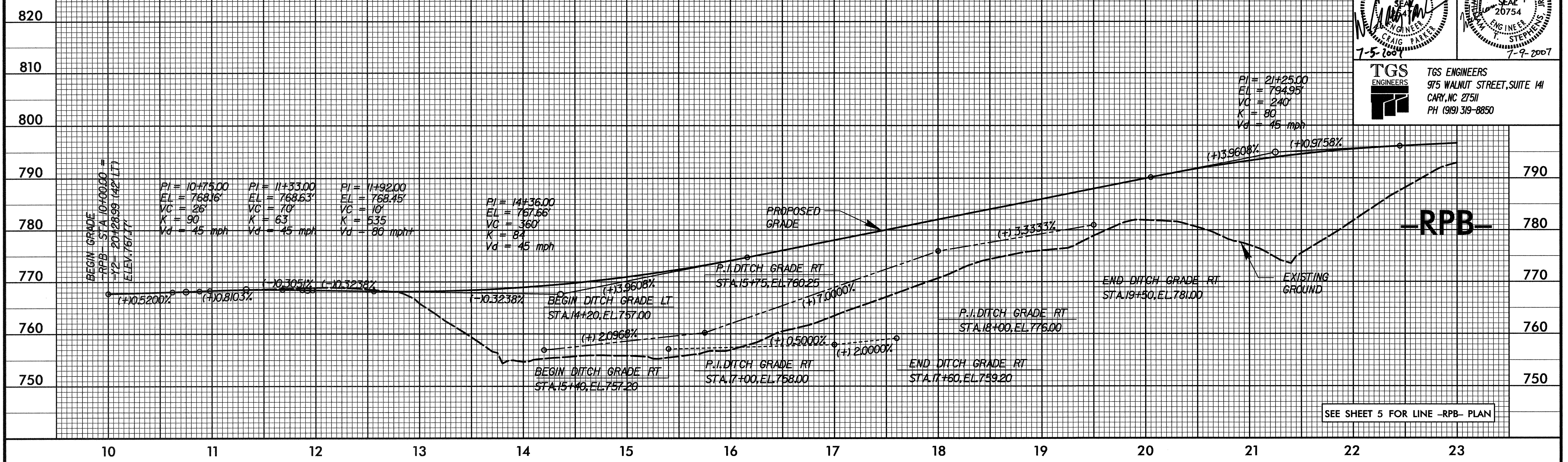


SEE SHEET 5 FOR LINE -RPA- PLAN

-RPA-

BM #2 ELEV. 800.94'
RAILROAD SPIKE IN BASE OF 24" OAK
61.48' RT OF -L- STA. 24+20.40

PROJECT REFERENCE NO. B-3637	SHEET NO. 10
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER
 TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	



7:00 PM 6/26/2007 11:30:35 AM

PROJECT REFERENCE NO. B-3637	SHEET NO. 11
ROADWAY DESIGN ENGINEER CRAIG PARKER 7-5-001	HYDRAULICS ENGINEER STEPHENS 7-9-2007
TGS ENGINEERS 975 WALNUT STREET, SUITE 141 CARY, NC 27511 PH (919) 319-8850	

