

ADVANCE PLANNING REPORT

**STATE ROUTE 112 (US 41A) CLARKSVILLE HIGHWAY
FROM NORTH OF STATE ROUTE 12 (ASHLAND CITY HIGHWAY)
TO SOUTH OF STATE ROUTE 155 (BRILEY PARKWAY)
NASHVILLE, DAVIDSON COUNTY**

PREPARED BY
THE TENNESSEE DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION

Approved by: Ed Cole
Chief of Env. & Pln.

3/17/04
Date

[Signature]
Chief Engineer

3/17/04
Date

REVISION

Recommended by:	INITIALS	DATE	Recommended by:	INITIALS	DATE
TRANS. DIRECTOR PLANNING DIVISION	R.E.C.	02/09/04	TRANS. DIRECTOR PLANNING DIVISION		
TRANS. DIRECTOR ENV. PLN. AND PERMITS	[Signature]	02/20/04	TRANS. DIRECTOR ENV. PLN. AND PERMITS		
ENG. DIRECTOR DESIGN DIVISION	[Signature]	3/4/04	ENG. DIRECTOR DESIGN DIVISION		
ENG. DIRECTOR STRUCTURES DIVISION	[Signature]	3/5/04	ENG. DIRECTOR STRUCTURES DIVISION		
^{for} TRANS. DIRECTOR PROG. DEV. DIVISION	[Signature]	3/9/04	TRANS. DIRECTOR PROG. DEV. DIVISION		
ASSISTANT CHIEF ENGINEER	[Signature]	3/15/04	ASSISTANT CHIEF ENGINEER		
ASSISTANT CHIEF OF ENV. & PLN.	[Signature]		ASSISTANT CHIEF OF ENV. & PLN.		



BRILEY PARKWAY
STATE ROUTE 155

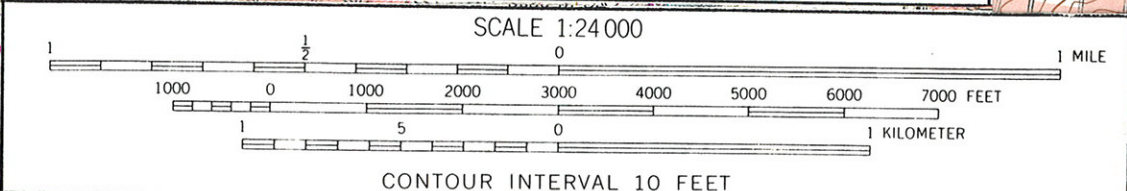
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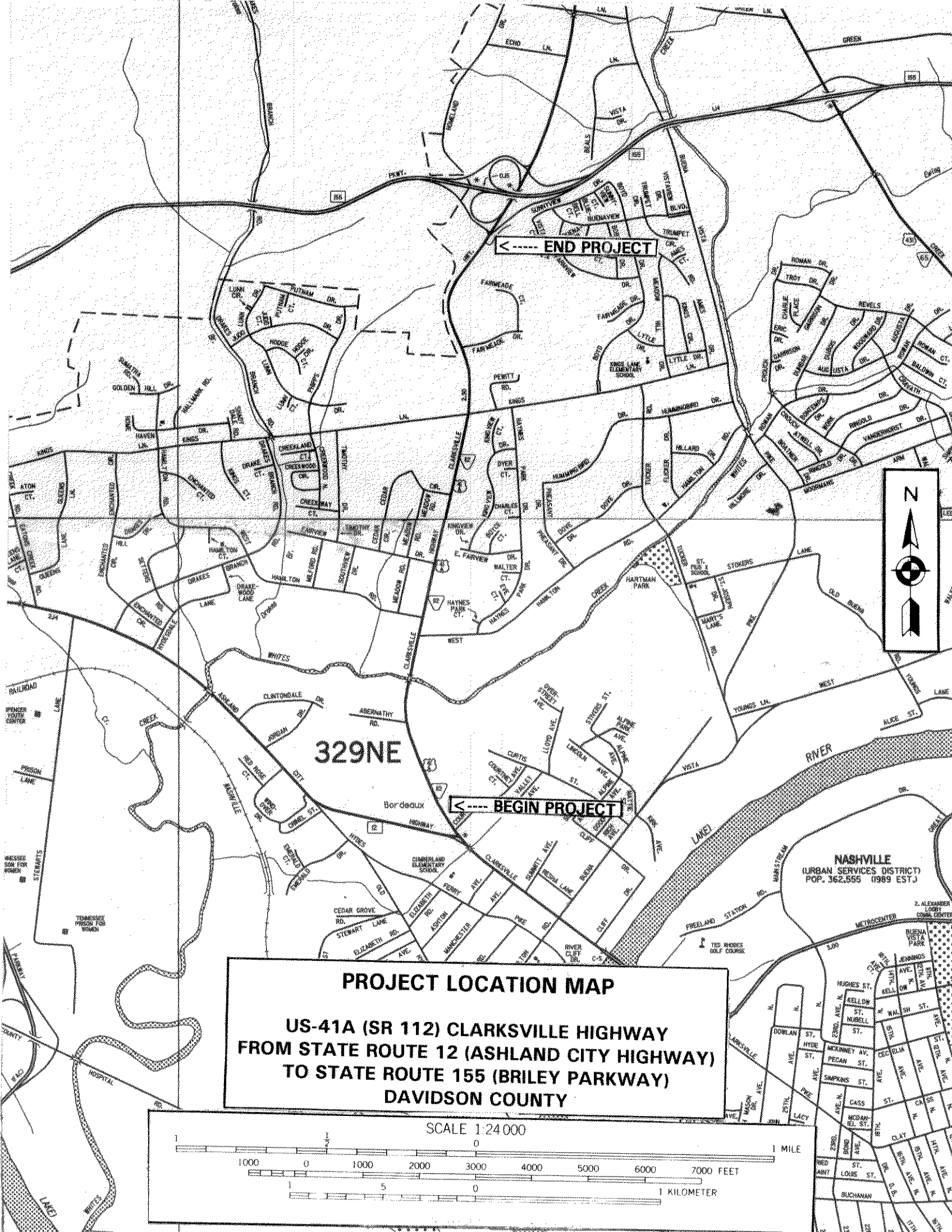
SR 112 / US-41A
CLARKSVILLE HWY.

<----- BEGIN PROJECT

PROJECT LOCATION MAP

**US-41A (SR 112) CLARKSVILLE HIGHWAY
FROM STATE ROUTE 12 (ASHLAND CITY HIGHWAY)
TO STATE ROUTE 155 (BRILEY PARKWAY)
DAVIDSON COUNTY**





← END PROJECT

← BEGIN PROJECT

329NE

PROJECT LOCATION MAP

US-41A (SR 112) CLARKSVILLE HIGHWAY
FROM STATE ROUTE 12 (ASHLAND CITY HIGHWAY)
TO STATE ROUTE 155 (BRILEY PARKWAY)
DAVIDSON COUNTY

SCALE 1:24000



DATA TABLE

Item: State Route 112

EXISTING

PROPOSED

Functional Class	Urban Minor Arterial	
System Class	STP	
Length (miles)	2.0	
Cross Section (feet)	24-36/32-42/50-70*	72 / 102
Base Year ADT (2008)	13,000 - 19,000	
Design Year ADT (2028)	14,350 - 23,630	
DHV (11%)	1,580 - 2,600	
Percent Trucks (ADT)	4%	

RIGHT-OF-WAY ESTIMATES

Right-of-Way Acquisition (acres)	14
Tracts Affected	61
Family Displacements	4**
Business Displacements	1
Non-Profit Displacements	0

COST ESTIMATES

Construction Cost	\$ 6,695,000
Preliminary Engineering Cost	\$ 610,000
Right-of-Way Cost	\$ 2,700,000
Utility Adjustment Cost (local)	\$ 1,705,000
Utility Adjustment Cost (State)	\$ 100,000
Total Estimated Project Cost	\$11,810,000

*Sections with left turn lanes are located through the area of Kroger Shopping Center and at the Kings Lane intersection.

**Family displacements include 1 triplex and 1 house.

PURPOSE OF STUDY

The purpose of this study is to determine the need and feasibility of improving State Route 112 (US-41A, Clarksville Highway) from just north of the intersection of State Route 12 (Ashland City Highway) to the State Route 155 (Briley Parkway) interchange. The objectives of this study are to evaluate the existing conditions, develop recommendations for improvement, estimate the costs of project implementation and identify the locations of preliminary environmental concern. This study was initiated in response to a request from State Representative Edith Langster.

DEFICIENCIES

The existing two-lane highway study section is deficient in the following categories:

Geometrics X Structures ___ Operational X Railroad Crossing NA

Accident Rate (accidents per million vehicle miles traveled) 3.53 (section)

Statewide Average Accident Rate 2.89, urban 2 lane

Level of Service, (Existing 2 lane) 2008 DHV="E", 2028 DHV="F"

PROPOSED IMPROVEMENT

It is proposed to upgrade the existing two-lane route to provide a five lane highway consisting of four 12' traffic lanes, a 12' continuous center turn lane, 4' shoulders/bikeways with gutters, curbs, grass utility strips and 8' sidewalks within a 102' right-of-way. See the attached copy of the e-mail correspondence from Metro Nashville Public Works and the proposed typical section. The vertical and horizontal alignments will be improved to provide for a 50 MPH design speed. Easements will be required outside the right-of-way. The proposed improvement would tie into the existing four lane roadways at each end of the project.

Most of the route will be widened symmetrically about the present roadway centerline. The proposed widening will shift in some areas in order to minimize property damages. There is one bridge crossing over Whites Creek that will require replacement. The existing traffic signals will be modified at Kings Lane and at West Hamilton Road (east).

LEVEL OF SERVICE

Traffic operational analyses utilizing base year (2008) and design year (2028) DHV traffic volumes were conducted for the existing two lane and proposed multilane route conditions. The results of the analysis for the proposed route conditions indicate an improved traffic flow in the base year and the design year.

The results are as follows: Existing route capacity shows a level of service (LOS) "E" during the base year (2008) and a (LOS) "F" during the design year (2028).

Proposed route capacity analysis shows a level of service (LOS) "B" during the base year (2008) and a LOS "C" during the design year (2028).

ENVIRONMENTAL CONSIDERATIONS

Detailed environmental technical studies were not prepared for this project; however, preliminary investigations were conducted to identify environmentally sensitive areas for historic, archaeological, and ecological considerations.

BICYCLE AND PEDESTRIAN CONSIDERATIONS

Bicyclists may utilize the proposed 4' paved shoulders as shared bicycle lanes in both directions. Eight-foot sidewalks are proposed for pedestrian travel.

FIELD INVESTIGATION

A field review of this project was conducted on Tuesday, September 23, 2003 by the following representatives:

C. L. Tilley, TDOT Functional Design
Gary Webber, TDOT Planning
Stephanie Vincent, TDOT Planning
Laura Kirby, TDOT Title 6 Office
Gary Fottrell, Federal Highway Administration
Matt Ashby, Metro Nashville Public Works
Brad Thompson, Nashville Area MPO

CHECK LIST OF DETERMINANTS FOR LOCATION STUDY

If preliminary field reviews indicate the presence of any of the following facilities or ESE categories, place an "X" in the blank opposite the item. Where more than one alternate is to be considered, place its letter designation in the blank.

- | | |
|---|---|
| 1. Agricultural land usage..... | X |
| 2. Airport (existing or proposed)..... | |
| 3. Commercial area, shopping center..... | X |
| 4. Floodplains..... | X |
| 5. Forested land..... | |
| 6. Historical, archaeological, cultural, or natural
landmark, or cemeteries..... | |
| 7. Industrial park, factory..... | |
| 8. Institutional usages: | |
| a. School or other educational institution..... | |
| b. Church or other religious institution..... | X |
| c. Hospital or other medical facility..... | |
| d. Public Building, e.g., fire station..... | X |
| e. Defense installation..... | |
| 9. Recreational usages: | |
| a. Park or recreational area, State Natural Area.... | |
| b. Wildlife refuge or wildlife management area.... | |
| 10. Residential establishment..... | X |
| 11. Urban area, city, town, or community.....
(Nashville, Pop. 569,891) | X |
| 12. Waterway, lake, pond, river, stream, spring, wetland..... | X |
| permit required: | |
| Coast Guard..._____ Section 404... X | |
| Section 10..._ TVA Section 26a Review..._____ | |
| NPDES... X Aquatic Resource Alteration... X | |
| Class V Injection Wells..._____ | |
| 13. Location coordinated with local officials..... | X |
| 14. Railroad Crossings..... | |
| 15. Hazardous Material Site or Underground Storage Tanks... | X |
| 16. Other..... | |

Gary Webber - FW: Clarksville Highway from Ashland City Highway to Briley Parkway

From: "Ashby, Matthew (Public Works)" <matthew.ashby@nashville.gov>
To: "Gary Webber (E-mail)" <gary.webber@state.tn.us>
Date: 9/30/2003 9:30 AM
Subject: FW: Clarksville Highway from Ashland City Highway to Briley Parkway

Gary,

Refer to pages 11 and 12 of the attached link....

ftp://ftp.nashville.org/web/mpc/sidewalks/Mar2003/appendix_b.pdf

Also, please read the note below from the sidewalk program manager. I talked to her and she said that they were providing the 6 foot grass strip for utilities.

-----Original Message-----

From: Jackson, Renee (Public Works)
Sent: Thursday, September 25, 2003 8:45 AM
To: Ashby, Matthew (Public Works)
Subject: Clarksville Highway from Ashland City Highway to Briley Parkway

Matt,

I understand that Clarksville Highway from Ashland City Highway to Briley Parkway will be widen to an approx. 92 ft. right-of-way. With this project in the initial planning stages, now would be a good time to address sidewalks in accordance with Nashville's Strategic Plan for Sidewalks and Bikeways. Since Clarksville Highway is a major arterial, the typical sidewalk section would be a 6-foot wide grass strip behind the back of curb and an 8-foot wide sidewalk. This typical section would be requested along both sides of Clarksville Highway.

Please request that this recommended sidewalk typical section be incorporated into the plans for the widening of Clarksville Highway.

Thanks

Renee C. Jackson, M.Eng., P.E.
Metro Public Works, Engineering Division
Phone: (615) 862-8758
Fax: (615) 862-5568
Mobile: (615) 566-0940

**TENNESSEE DEPARTMENT OF TRANSPORTATION
DESIGN CRITERIA FOR LOCATION AND DESIGN PHASE**

ROUTE State Route 112 (US 41A/Clarksville Hwy.) SECTION _____

REGION III COUNTY Davidson PROJECT NO. _____

LOCATION: From North of State Route 12 (Ashland City Hwy.)

TO: State Route 155 (Briley Parkway)

2008 ADT..... 13,000 – 19,700

2028 ADT..... 14,350 – 23,630

PERCENT TRUCKS..... 4

DHV (11%)..... 1,580 - 2,600

FUNCTIONAL CLASSIFICATION..... URBAN MINOR ARTERIAL

MINIMUM DESIGN SPEED..... 50 mph

MAXIMUM CURVE..... 6° - 00° (SE: 4%)

MAXIMUM GRADE..... 7%

MINIMUM STOPPING SIGHT DISTANCE..... 425'

SURFACE WIDTH..... 2 @ 24'

NUMBER OF LANES..... 4

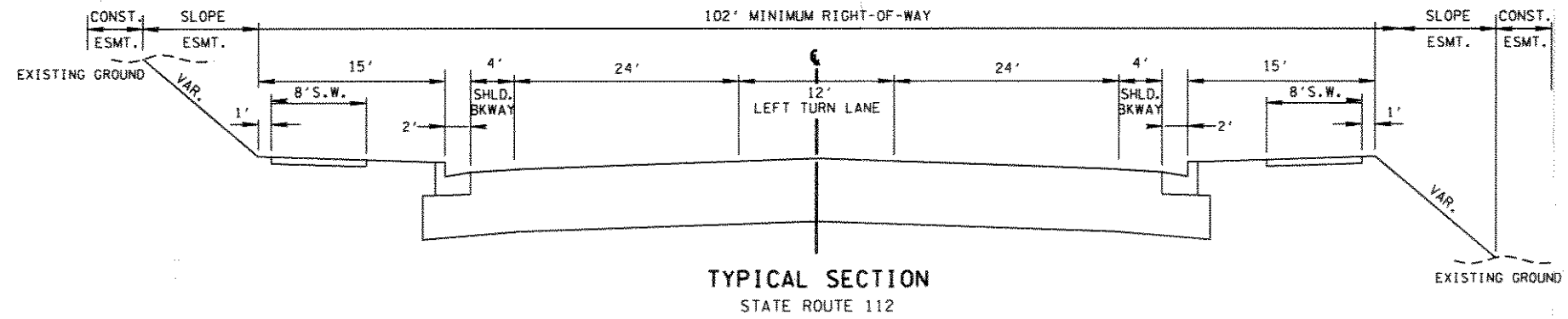
USEABLE SHOULDER WIDTH..... 2 @ 6' includes C&G

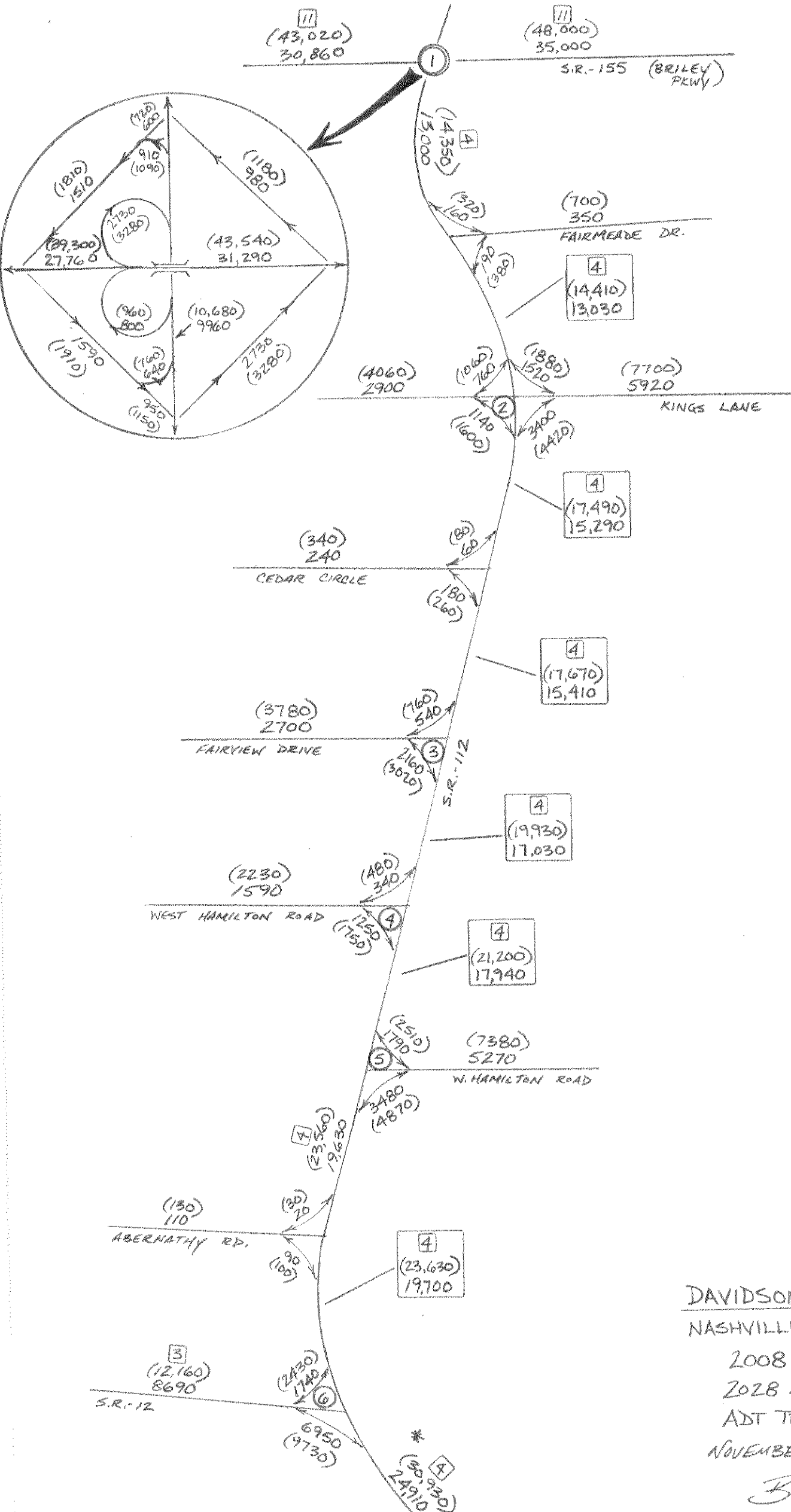
MEDIAN WIDTH..... 12' turn lane

MINIMUM RIGHT-OF-WAY..... 102'

SIGNALIZATION..... King's Lane & W. Hamilton Road (rt.)

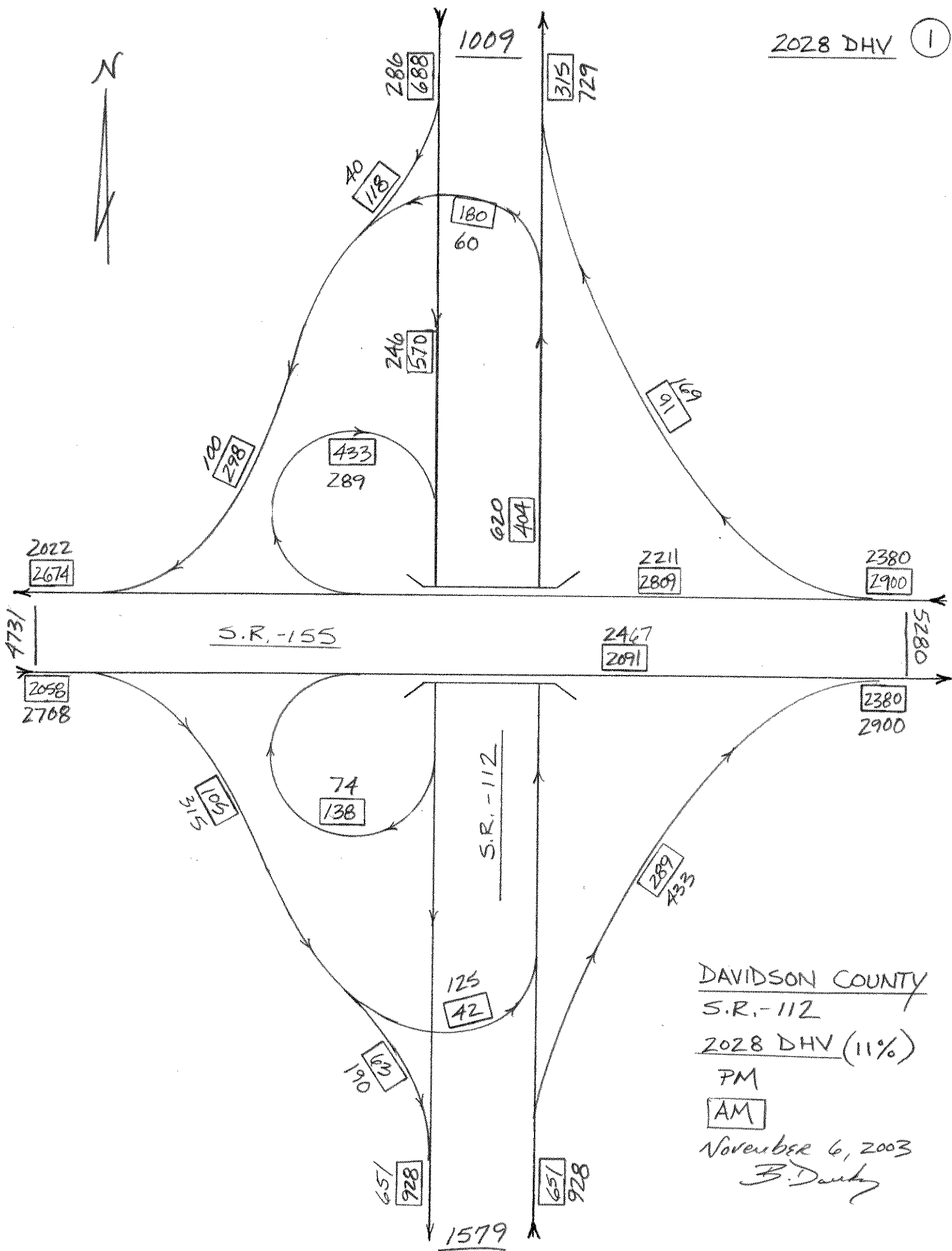
REMARKS See functional plans for additional information. *Easements will
be necessary outside the right-of-way limits.



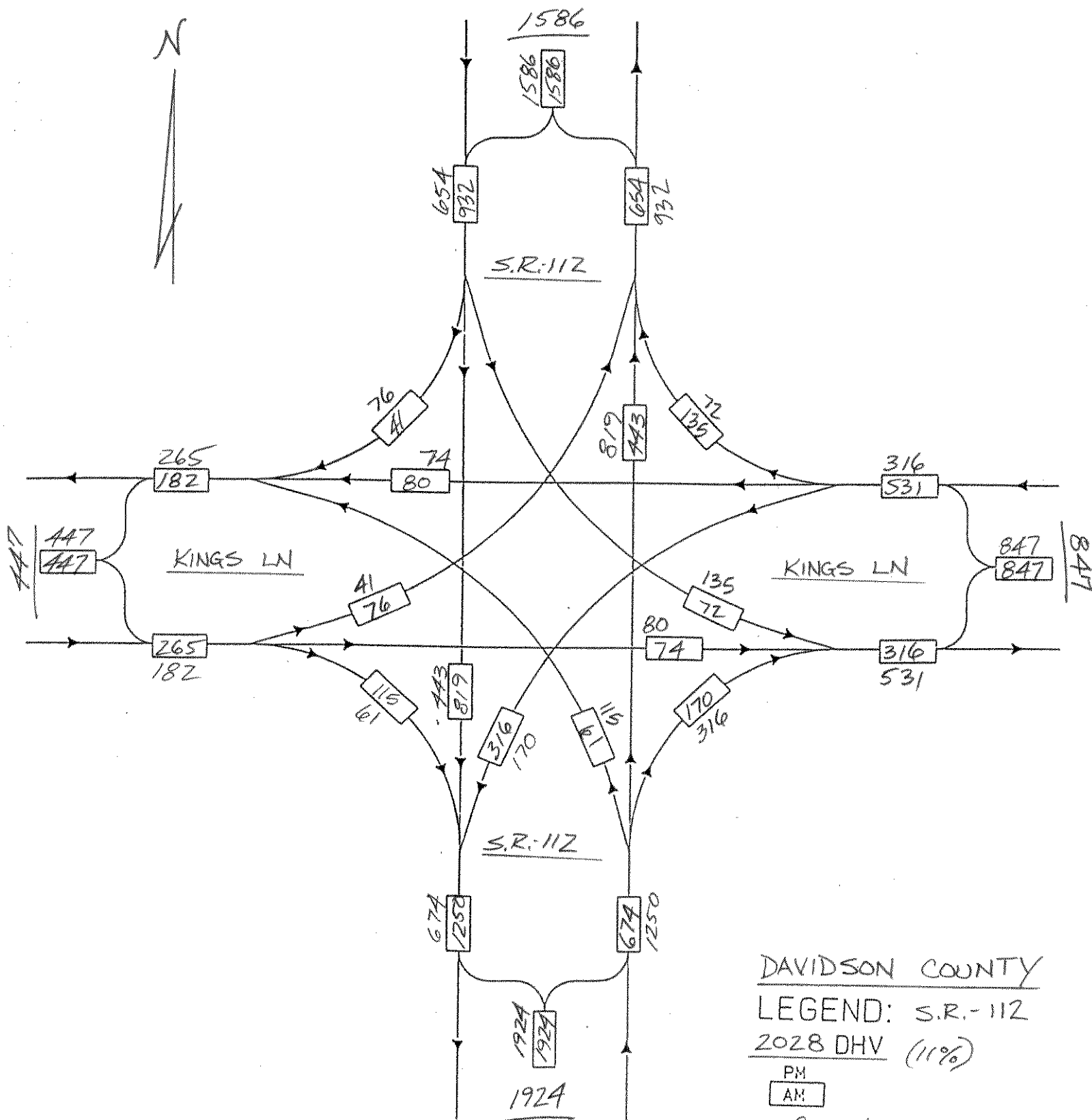


DAVIDSON COUNTY
 NASHVILLE S.R.-112
 2008-ADT 000
 2028 ADT -(000)
 ADT TRUCK %- []
 NOVEMBER 6, 2003
 B. D. Duke

* - NOT INCLUDED IN TOTAL ADT.



DAVIDSON COUNTY
S.R. -112
2028 DHV (11%)
PM
AM
November 6, 2003
B. Dandy



DAVIDSON COUNTY

LEGEND: S.R.-112

2028 DHV (11%)

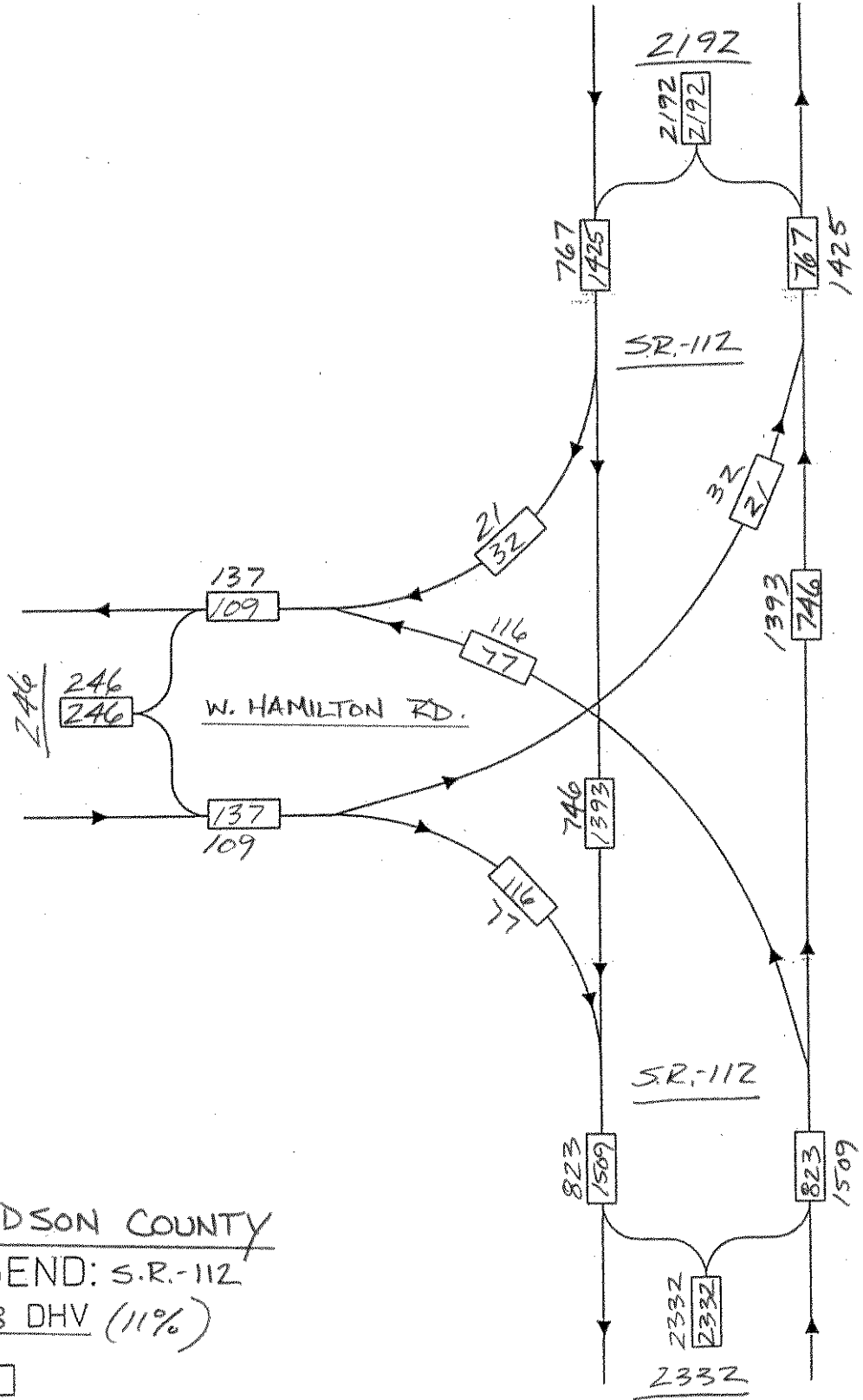
PM
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November 6, 2003

B. Danks

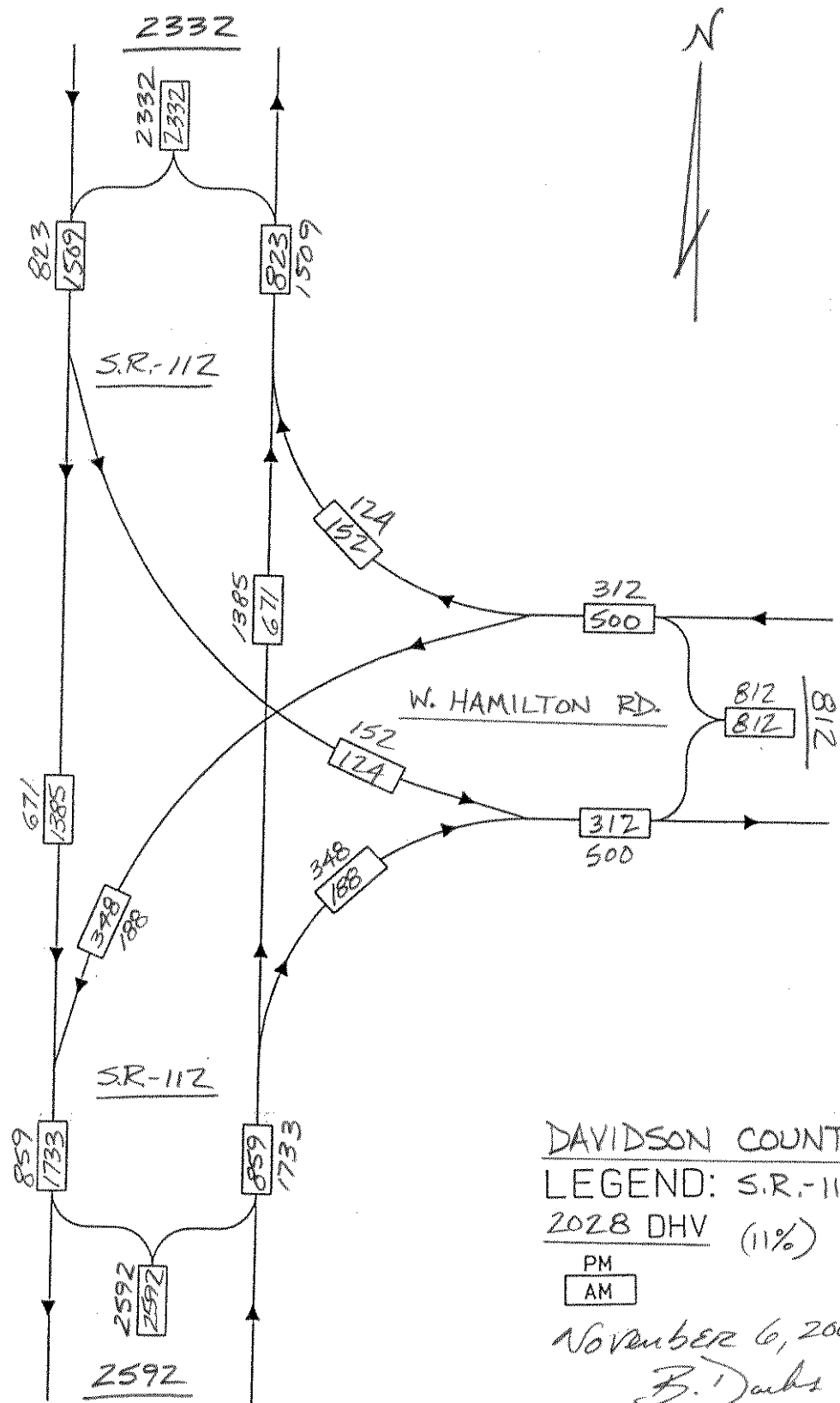
DAVIDSON COUNTY

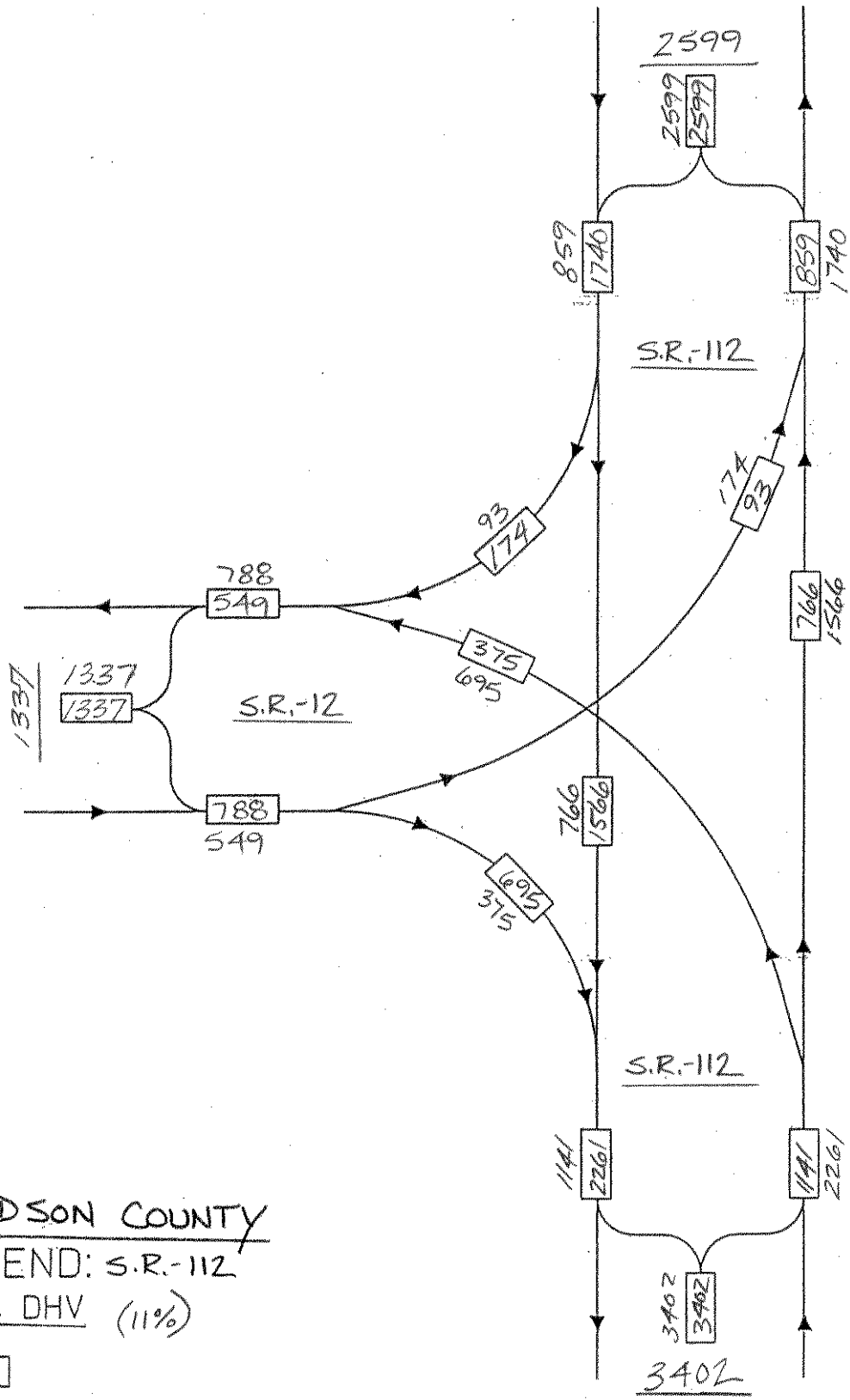




DAVIDSON COUNTY
LEGEND: S.R.-112
2028 DHV (11%)
PM
AM

NOVEMBER 6, 2003
B. Danks.





DAVIDSON COUNTY
 LEGEND: S.R.-112
 2028 DHV (11%)

PM
 AM

NOVEMBER 6, 2003
 B. D. Dukes

COST DATA SHEET

ROUTE SR-112 (US-41A) ALTERNATE _____ SECTION _____

REGION III COUNTY Davidson LENGTH 2.0 miles

CROSS SECTION (feet) 72/102

RIGHT-OF-WAY COST

Land, Improvements, and Damages (14 acres).....	\$	2,325,000
Incidentals (61 Tracts).....	\$	220,000
Relocation Payments (4 Residences).....	\$	155,000
(1 Businesses)		
(0 Non-Profits)		
TOTAL \$		2,700,000

UTILITY RELOCATION COST

Reimbursable.....	\$	100,000
Non-Reimbursable.....	\$	1,705,000
TOTAL \$		1,805,000

CONSTRUCTION COST

Clear and Grubbing.....	\$	65,000
Earthwork.....	\$	275,000
Pavement Removal.....	\$	NA
Drainage (Includes Erosion Control).....	\$	600,000
Structures.....	\$	1,255,000
Railroad Crossing.....	\$	NA
Paving.....	\$	2,550,000
Retaining Walls.....	\$	250,000
Maintenance of Traffic.....	\$	90,000
Topsoil.....	\$	30,000
Seeding.....	\$	20,000
Sodding.....	\$	40,000
Signing.....	\$	10,000
Signalization.....	\$	150,000
Fence.....	\$	NA
Guardrail.....	\$	10,000
Rip Rap or Slope Protection.....	\$	20,000
Other Construction Items (8.5%).....	\$	455,000
Mobilization.....	\$	265,000
10% Engineering and Contingencies.....	\$	610,000
TOTAL CONSTRUCTION COST \$		6,695,000
10% Preliminary Engineering.....	\$	610,000

TOTAL PROJECT COST **\$ 11,810,000**

Index Of Sheets

SHEET NO.	DESCRIPTION
1 TITLE SHEET
2 TYPICAL SECTION
3-7 PROPOSED LAYOUT

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

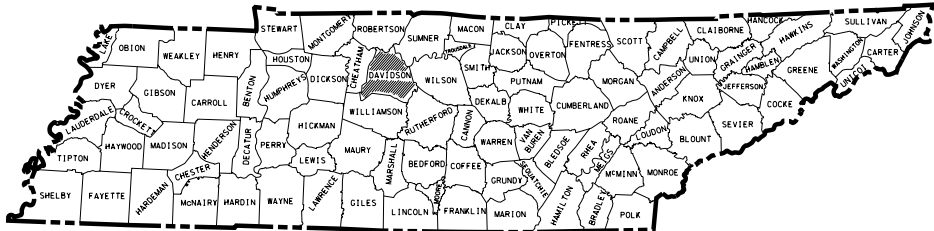
DAVIDSON COUNTY

STATE ROUTE 112 (U.S. 41A)

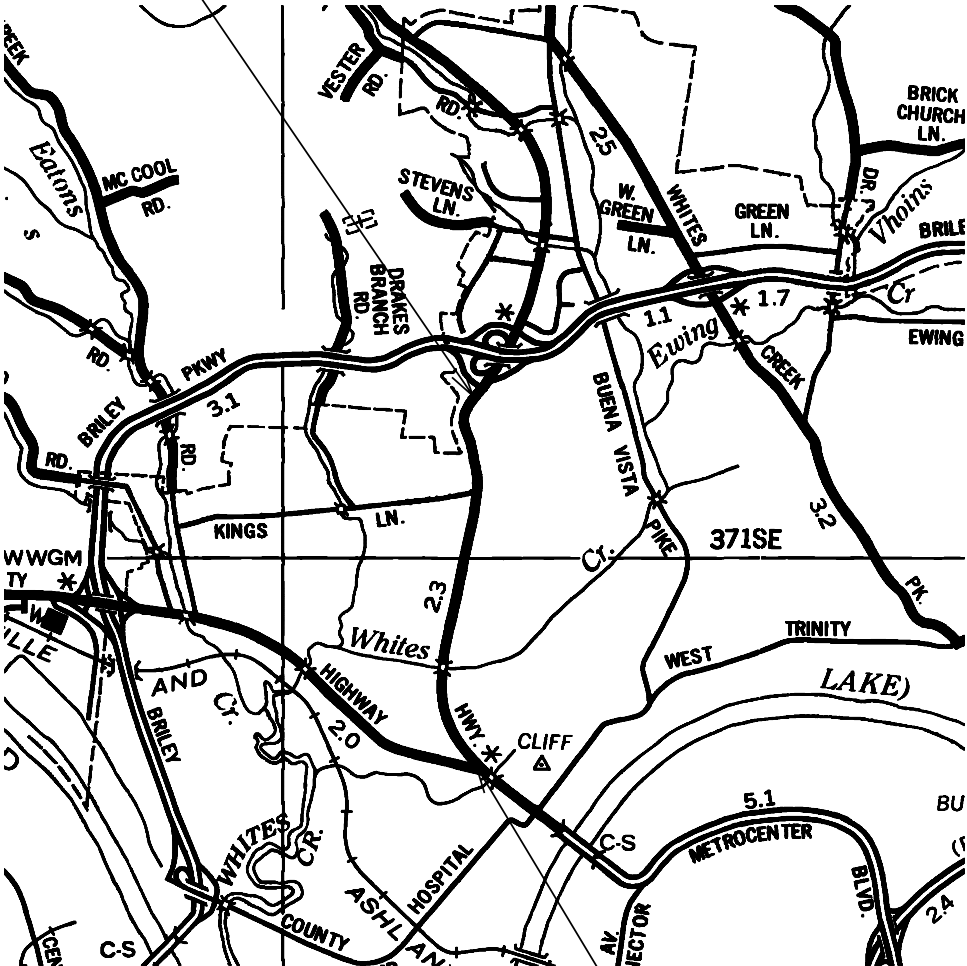
FROM STATE ROUTE 12 (ASHLAND CITY HIGHWAY)
TO STATE ROUTE 155 (BRILEY PARKWAY)

STATE HIGHWAY NO. 112 F.A.H.S. NO.

TENN.	YEAR	SHEET NO.
	2003	1
FED. AID PROJ. NO.		
STATE PROJ. NO.		



END PROJECT



SCALE: 1"= 100

BEGIN PROJECT

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

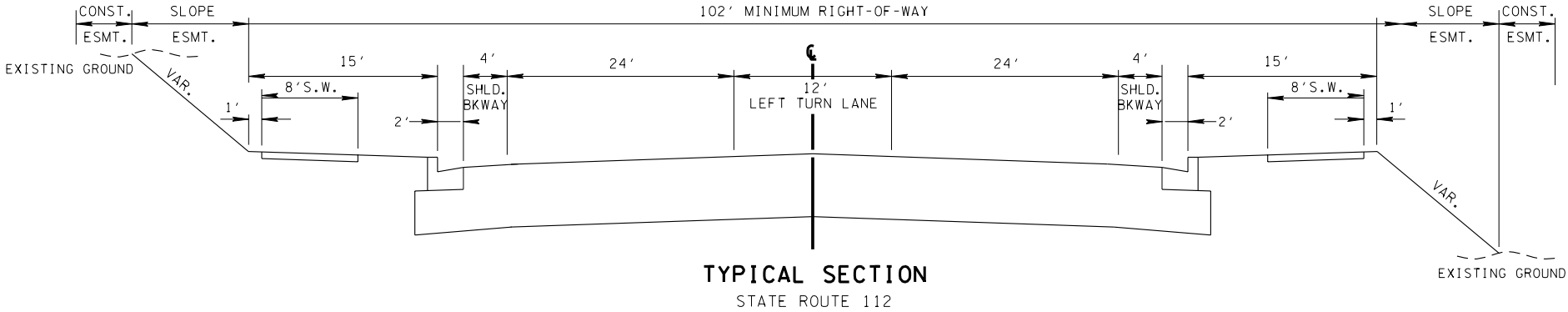
THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

TDOT ROAD SP. SV. 2 C.L. TILLEY
DESIGNER T.PATE CHECKED BY
P.E. NO.

APPROVED: DIRECTOR, DESIGN DIVISION
DATE:
APPROVED: COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		2



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		3



TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		4



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DAVIDSON COUNTY
S.R. 112

SCALE 1" = 100'

3/17/2004
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TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		5



2/12/2004
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DAVIDSON COUNTY
S.R. 112

SCALE: 1" = 100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		6



3/17/2004
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TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		7

