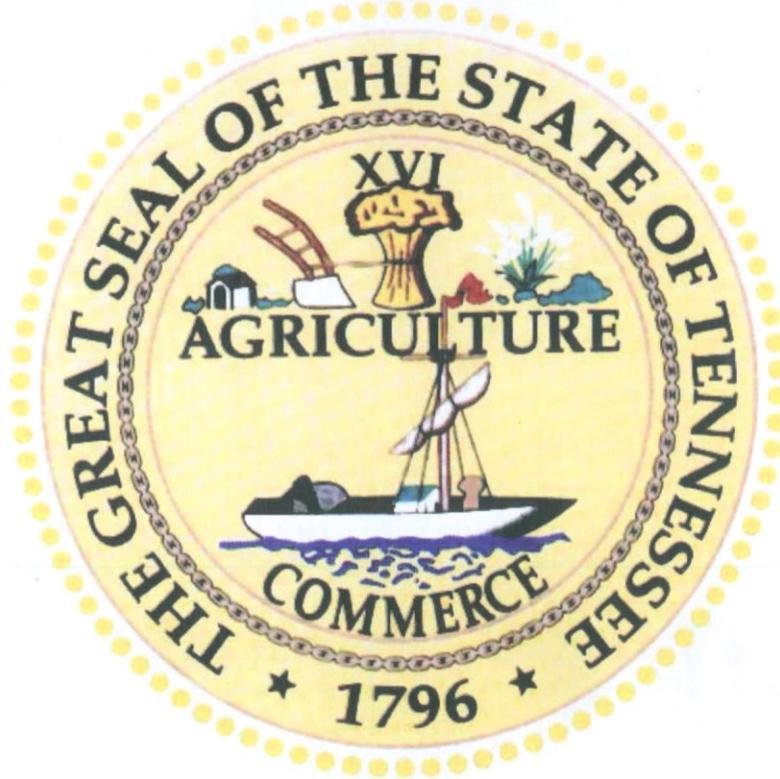


TRANSPORTATION PLANNING REPORT

Special Bridge Replacement Program
LOCAL ROUTE 0A622 NORTH 11TH STREET, L.M. 0.27
CAMPBELL COUNTY
PIN 117272.00



PREPARED BY
ARCADIS
FOR THE
TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION

Approved by _____
Chief of Environment and Planning

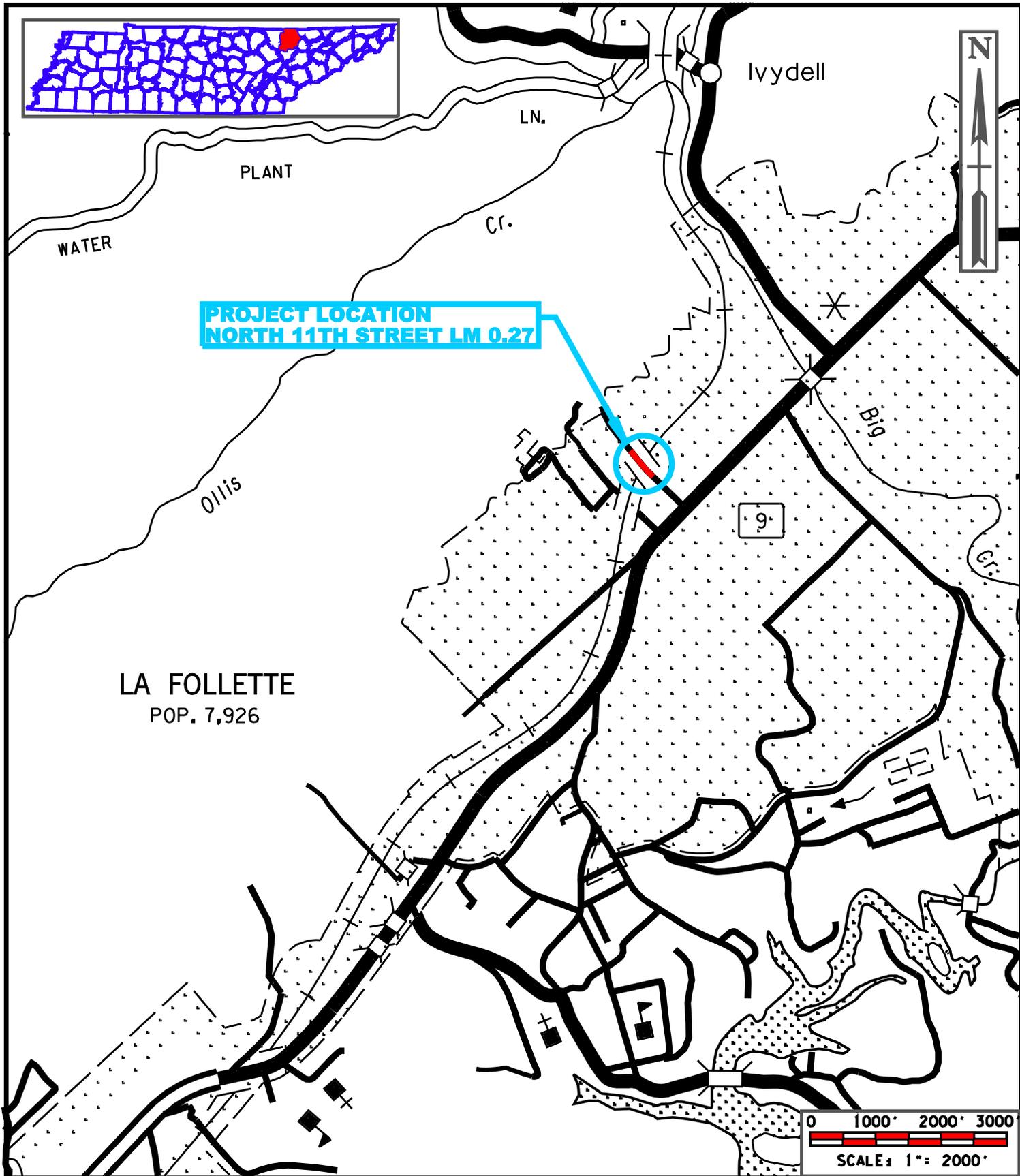
Date 1/9/13

Approved by _____
Deputy Commissioner and Chief Engineer

Date 1/23/13

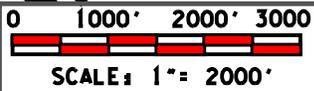
Approved by:	Signature	DATE
Transportation Director Project Planning Division		1-3-13
Engineering Director Design Division		1-3-13
Engineering Director Structures Division		1-7-13

This document is covered by 23 USC § 409 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 409.



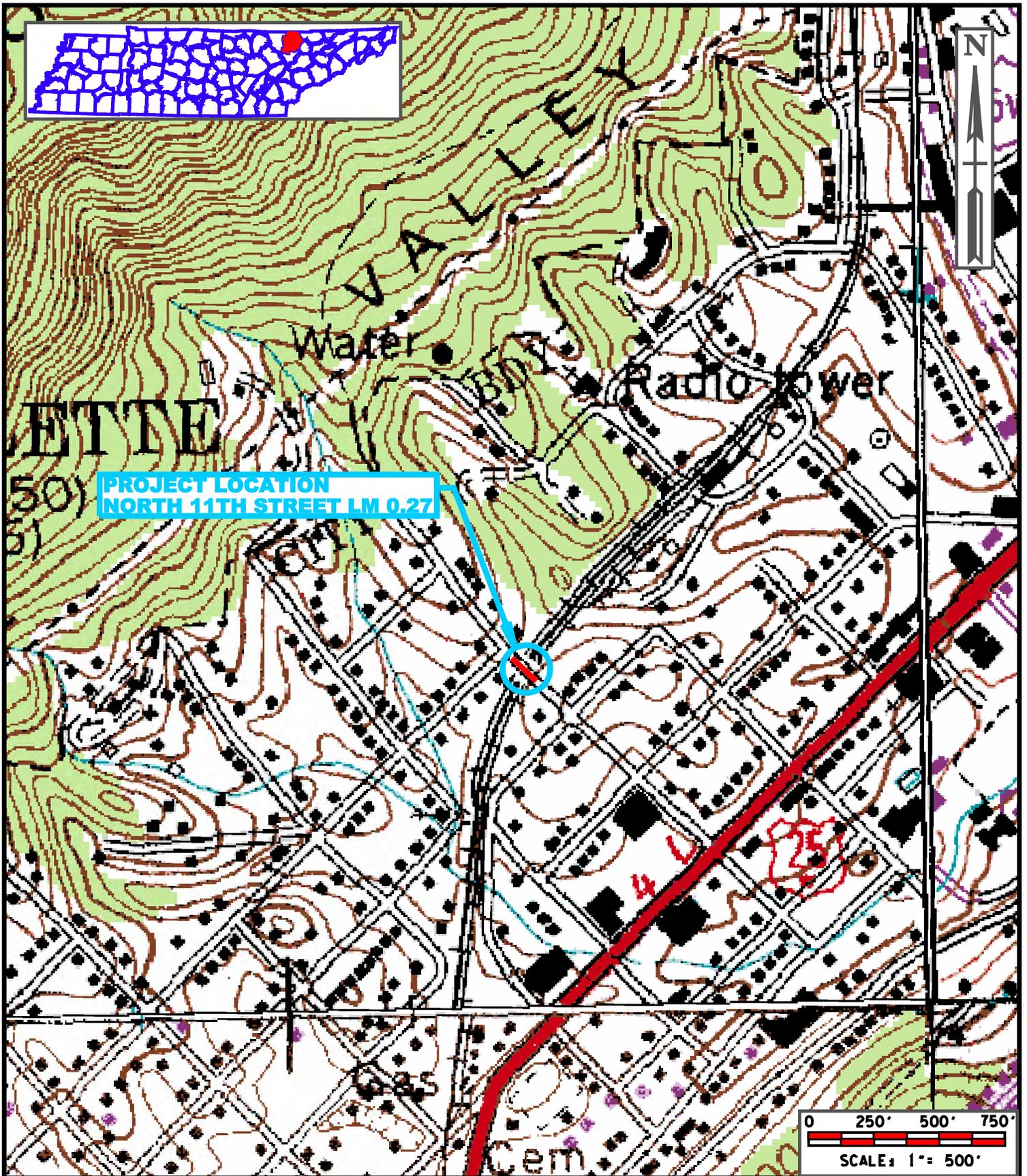
LA FOLLETTE
POP. 7,926

**PROJECT LOCATION
NORTH 11TH STREET LM 0.27**



**LOCATION MAP
LOCAL ROUTE 0A622 (NORTH 11TH STREET)
BRIDGE OVER CSX RAILROAD @ L.M. 0.27
BRIDGE NUMBER 070A6220001
CAMPBELL COUNTY, TN**

DRAWN BY: BH	CHECKED BY: CB
LR 0A622 (NORTH 11TH ST) L.M. 0.27	
PIN 117272.00	
	DATE: 12-3-12



PROJECT LOCATION
NORTH 11TH STREET L.M. 0.27



VICINITY MAP
LOCAL ROUTE 0A622 (NORTH 11TH STREET)
BRIDGE OVER CSX RAILROAD @ L.M. 0.27
BRIDGE NUMBER 070A6220001
CAMPBELL COUNTY, TN

DRAWN BY:

BH

CHECKED BY:

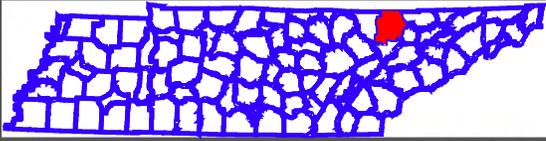
CB

LR 0A622 (NORTH 11TH ST) L.M. 0.27

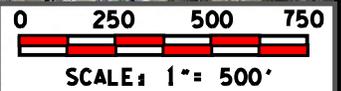
PIN 117272.00

DATE:

12-3-12



**PROJECT LOCATION
NORTH 11TH STREET LM 0.27**



**AERIAL MAP
LOCAL ROUTE 0A622 (NORTH 11TH STREET)
BRIDGE OVER CSX RAILROAD @ L.M. 0.27
BRIDGE NUMBER 070A6220001
CAMPBELL COUNTY, TN**

DRAWN BY:

BH

CHECKED BY:

CB

LR 0A622 (NORTH 11TH ST) L.M. 0.27

PIN 117272.00

DATE:

12-3-12

**TRANSPORTATION PLANNING WORKSHEET
BRIDGE REPLACEMENT ANALYSIS, NEEDS, AND COSTS**

County: Campbell Route: Local Route 0A622 (North 11th Street) Log Mile: 0.27
 Feature Crossed: CSX Railroad System: Local
 Functional Class: Local (Urban) Bridge ID: 070A6220001

EXISTING CONDITIONS

 2016 AADT: 230 App. Cross Section: 21'-11"/25'-11"/60' No. Lanes: 2
 Approach Alignment: Tangent Year Built: 1992 Load Limit: 5 Tons
 Width (out to out): 25'-11" Sidewalks: Right -- Left -- Length: 159
 No. Spans: Approach: -- Main: 3
 Substructure: Concrete Vertical Clearance: 24' Sufficiency Rating: 24.2
 Other: Cracks in the prestressed beams were observed (see photos).

PROPOSED IMPROVEMENTS

STANDARDS FROM RD01-TS- 1A Type of Work: Replace
 Design Year: 2036 Design AADT: 270 Terrain Rolling ADL (F): -- (R): --
 Project Length: 259' Bridge Length: 159 ft Approach Length: 50'
 Design Speed (MPH): 35 Posted Speed (MPH): 35
 Approach Width:* 22'/28'/60' Bridge Width (O to O): 28 ft No. Lanes: 2
 Right-of-Way Required: No Tract(s) Structure Type: Prestressed Bridge

MAINTENANCE OF TRAFFIC

Temporary Detour: Temporary Runaround: Stage Construct:
 Alternate Route: Through traffic will be detoured south on Jackson Pike, then west on West Central Avenue, then north on 19th Street, then east on W Forrest Street (See Figure 2 – Detour Map). Approximate one (1) mile detour.
 Remarks: Single phase construction utilizing above detour route.

ESTIMATED COST

Right-of-Way: \$0 Approaches: \$42,100 Structure: \$248,100
 Preliminary Engineering: \$38,500 Other: \$42,800 Misc./Cont.: \$35,000
 Mobilization: \$16,700 Total: \$423,200
 Remarks: Vertical and horizontal alignment to remain the same.

Field Investigation by: Glenda Tyus (Planning), David Duncan (Planning), Lisa Reaney (Planning), Doug Shook (Reg. 1 ROW), Mark Parrish (Reg. 1 Design), Jay Morgan (Reg. 1 Design), Jessica Wilson (TDOT Bike&PED Coordinator), Clint Butler and Harvey McKaig (ARCADIS), Not present: Jim Mullens (Public Works Dir, City of LaFollette)

Route:	Local Route 0A622 (North 11th Street)
Description:	Bridge over CSX Railroad (070A6220001)
	L.M. 0.27
County:	Campbell
Length:	159.1 FT
Date:	December 3, 2012

<u>DESCRIPTION</u>	<u>LOCAL</u>	<u>STATE</u>	<u>FEDERAL</u>	<u>TOTAL</u>
Right-of-Way	\$ -	\$ -	\$ -	\$ -
Clearing and Grubbing	\$ 1,000	\$ -	\$ 4,000	\$ 5,000
Earthwork	\$ -	\$ -	\$ -	\$ -
Railroad Crossing or Separation	\$ -	\$ -	\$ -	\$ -
Drainage	\$ -	\$ -	\$ -	\$ -
Utilities	\$ -	\$ -	\$ -	\$ -
Structures (Replace Superstructure Only)	\$ 49,600	\$ -	\$ 198,500	\$ 248,100
Pavement Removal	\$ 100	\$ -	\$ 400	\$ 500
Paving	\$ 3,600	\$ -	\$ 14,300	\$ 17,900
Roadway and Pavement Appurtenances	\$ -	\$ -	\$ -	\$ -
Retaining Walls	\$ -	\$ -	\$ -	\$ -
Topsoil	\$ -	\$ -	\$ -	\$ -
Seeding	\$ -	\$ -	\$ -	\$ -
Sodding	\$ -	\$ -	\$ -	\$ -
Rip-Rap or Slope Protection	\$ -	\$ -	\$ -	\$ -
Fencing	\$ -	\$ -	\$ -	\$ -
Signing	\$ -	\$ -	\$ -	\$ -
Pavement Markings	\$ -	\$ -	\$ 200	\$ 200
Lighting	\$ -	\$ -	\$ -	\$ -
Signalization	\$ -	\$ -	\$ -	\$ -
Guardrail	\$ 2,700	\$ -	\$ 10,800	\$ 13,500
Other Construction Items (15%)	\$ 8,600	\$ -	\$ 34,200	\$ 42,800
Maintenance of Traffic	\$ 1,000	\$ -	\$ 4,000	\$ 5,000
Mobilization (5%)	\$ 3,400	\$ -	\$ 13,300	\$ 16,700
CONSTRUCTION COST (rounded)	\$ 70,000	\$ -	\$ 279,700	\$ 349,700
Engineering and Contingency (10%)	\$ 7,000	\$ -	\$ 28,000	\$ 35,000
TOTAL CONSTRUCTION COST (rounded)	\$ 77,000	\$ -	\$ 307,700	\$ 384,700
Preliminary Engineering (10%)	\$ 7,700	\$ -	\$ 30,800	\$ 38,500
PROJECT COST ¹(rounded)	\$ 84,700	\$ -	\$ 338,500	\$ 423,200

¹ For estimating future project costs, a compounded inflation rate of 10 % should be applied from the date of this estimate.

TDOT PAY ITEM	TDOT DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
-	Right-of-Way	LS	LS	\$ -	\$ -
RIGHT-OF-WAY TOTAL (ROUNDED)					\$ -
201-01	Clearing and Grubbing	LS	LS	\$ 5,000.00	\$ 5,000
CLEAR AND GRUBBING TOTAL (ROUNDED)					\$ 5,000
203-03	Borrow Excavation (Unclassified)	CY	0	\$ 15.00	\$ -
EARTHWORK TOTAL (ROUNDED)					\$ -
202-03.01	Removal of Asphalt Pavement	SY	90	\$ 5.00	\$ 450
415-01.02	Cold Planning Bituminous Pavement	SY	0	\$ 3.50	\$ -
PAVEMENT REMOVAL TOTAL (ROUNDED)					\$ 500
209-08.02	Temporary Silt Fence (w/ backing)		0	\$ 3.25	\$ -
DRAINAGE TOTAL (ROUNDED)					\$ -
	Underground Utilities	LF	0	\$ 40.00	\$ -
UTILITIES TOTAL (ROUNDED)					\$ -
	Removal of Existing Bridge	SF	4134	\$ 15.00	\$ 62,010
	Prestressed Conc. Bridge-Superstructure Only	SF	4,134	\$ 45.00	\$ 186,030
STRUCTURES TOTAL (ROUNDED)					\$ 248,100
Asphalt					
--	Full Depth Paving	SY	470	\$ 38.00	\$ 17,860
411-03.10	ACS Mix (PG76-22) Grading D	TON	0.0	\$ 85.00	\$ -
403-01	Bituminous Material for Tack Coat (TC)	TON	0.0	\$ 480.00	\$ -
303-01	Mineral Aggregate, TY A Base, Grading D	TON	0.0	\$ 14.93	\$ -
PAVING TOTAL (ROUNDED)					\$ 17,900
RETAINING WALLS TOTAL (ROUNDED)					\$ -
712-01	Traffic Control	LS		\$ 5,000.00	\$ 5,000
MAINTENANCE OF TRAFFIC TOTAL (ROUNDED)					\$ 5,000
716-02.05	Plastic Pavement Marking (Stop Bar)	LF	15	\$ 12.41	\$ 186
716-11.01	Spray Thermo Pvmt Mrkng (4" Line)	LM	0.00	\$ 1,100.00	\$ -
PAVEMENT MARKINGS TOTAL (ROUNDED)					\$ 200
730-40	Temporary Traffic Signal System	EACH	0	\$ 18,000.00	\$ -
SIGNALIZATION TOTAL (ROUNDED)					\$ -
FENCE TOTAL (ROUNDED)					\$ -
705-02.02	Single Guardrail (Type 2)	LF	163	\$ 15.55	\$ 2,535
705-04.05	Guardrail Terminal (Type-In-Line)	LF	0	\$ 472.00	\$ -
705-04.04	Guardrail Terminal (Type 21)	EACH	2	\$ 1,773.47	\$ 3,547
705-01.01	Guardrail at Bridge Ends	LF	130	\$ 56.85	\$ 7,391
706-01	Guardrail Removed	LF	0	\$ 2.00	\$ -
705-04.07	Type 38 End Terminal	EACH	0	\$ 2,500.00	\$ -
705-02.50	Shop Curved Guardrail	LF	0.0	\$ 19.04	\$ -
GUARDRAIL TOTAL (ROUNDED)					\$ 13,500
709-05.06	Machined Rip-Rap (Class A-1)	TON	0	\$ 30.00	\$ -
RIP-RAP OR SLOPE PROTECTION TOTAL (ROUNDED)					\$ -



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

PROJECT PLANNING DIVISION
SUITE 1000, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243
(615) 741-2208

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

MEMORANDUM

TO: Project Planning Division

FROM: Clint Butler, PE
ARCADIS

DATE: December 3, 2012

SUBJECT: TPR Field Review (Special Bridge Replacement Program)
Local Route 0A622 (North 11th Street) over CSX Railroad, Log Mile 0.27
Campbell County
PIN 117272.00

A field review was held for the above-mentioned project on August 16, 2012.

The existing structure consists of a three (3) span prestressed concrete bridge with an out-to-out width of twenty-six (26) feet. Overall bridge length is 159 feet with approximately twenty-four (24) feet of vertical clearance. Bridge sufficiency rating is 24.2. No local officials were present on the initial site visit; however, Mr. Jim Mullens, Public Works Director, for the City of LaFollette has been contacted and is in agreement with any road closures and/or detours for the construction of the bridge.

Construction will consist of replacing the superstructure. The proposed alignment and elevation for this structure will match the existing centerline and will be designed to meet the TDOT design standard RD01-TS-1A for a design speed of 35 mph and a posted 35 mph speed limit. Construction of the proposed structure is to be completed in a single phase.

Based on low traffic volume, it is recommended that through traffic be detoured south on Jackson Pike, then west on West Central Avenue, then north on 19th Street and east on West Forrest Street (approximately one (1) mile) during bridge construction (See Figure 2 – Detour Map).

The route has a base year (2016) AADT of 230 and a design year (2036) AADT of 270. The bridge over CSX railroad will consist of an out-to-out width of twenty six (26) feet with nine (9) foot lanes and four (4) foot shoulders. The proposed structure is to be a three (3) span

prestressed concrete bridge with a total length of approximately 159 feet. The bridge deck will be widened and the proposed vertical clearance shall remain the same. No right-of-way is to be acquired.

The required approach work, estimated replacement and preliminary engineering costs for this bridge is approximately \$423,200.

CB

cc: file

CHECK LIST OF DETERMINANTS FOR LOCATION STUDY

If any of the following facilities or ESE categories are located within the project area or corridor, 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		
2. Airport (existing or proposed)		
3. Commercial area, shopping center		
4. Floodplains		
5. Forested land		
6. Historical, cultural, or natural landmark		
7. Industrial park, factory		
8. Institutional usages		
a. School or other educational institution		
b. Church or other religious institution (Cemetery)		
c. Hospital or other medical facility		
d. Public building, e.g., fire station		
e. Defense installation		
9. Recreation usages		
a. Park or recreational area		
b. Game preserve or wildlife area		
10. Residential establishment		X
11. Urban area, town, city, or community		X
12. Waterway, lake, pond, river, stream, spring		
Permit required:	Coast Guard	
	Section 404	
	TVA Section 26a review	
	NPDES	
	Aquatic Resource Alteration	
13. Other		
14. Location coordinated with local officials		
15. Railroad crossings		X
16. Hazardous materials site		

**TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION**

PROJECT NO.: 99109-1453-04 ROUTE: 0A622 N. 11th Street
 COUNTY: Campbell CITY: LaFollette
 PROJECT PIN NUMBER: 117272.00
 PROJECT DESCRIPTION: Bridge Replacement Project Bridge over CSX Railroad
L.M. 0.27

DIVISION REQUESTING:

MAINTENANCE PAVEMENT DESIGN
 PLANNING STRUCTURES
 PROG. DEVELOPMENT & ADM. SURVEY & DESIGN
 PUBLIC TRANS. & AERO. TRAFFIC SIGNAL DESIGN
 OTHER
 YEAR PROJECT PROGRAMMED FOR CONSTRUCTION: _____
 PROJECTED LETTING DATE: _____

TRAFFIC ASSIGNMENT:

BASE YEAR		DESIGN YEAR					DESIGN ROADWAY % TRUCKS		DESIGN AVERAGE DAILY LOADS	
AADT	YEAR	AADT	DHV	%	YEAR	DIR.DIST.	DHV	AADT	FLEX	RIGID
230	2016	270	30	11	2036	65-35	2	3		

REQUESTED BY: NAME Gena Gilliam DATE 5/11/12
 DIVISION Project Planing
 ADDRESS 10th Floor, JKP Bldg
Nashville, TN 37243

REVIEWED BY: TONY ARMSTRONG Tony Armstrong DATE 5-18-12
 TRANSPORTATION MANAGER 1
 SUITE 1000, JAMES K. POLK BUILDING

APPROVED BY: DUDLEY DANIEL Dudley Daniel DATE 21/11/12
 TRANSPORTATION MANAGER 2
 SUITE 1000, JAMES K. POLK BUILDING

COMMENTS:

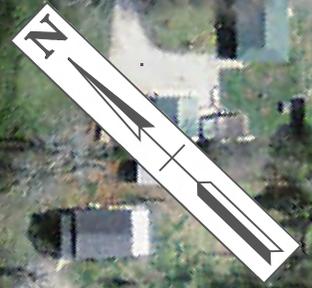
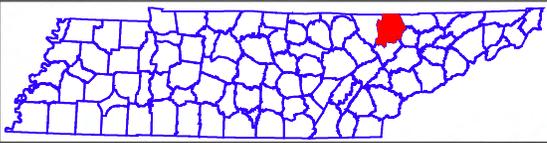
This Traffic is based on 2008 Structure Count from ADAM. The Future Traffic Count is based on the Growth Rate from the ADAM Computer Program.

DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT.

NOTE: FOR BRIDGE REPLACEMENT PROJECTS, ADLs ARE NOT REQUIRED FOR ADTs OF 1000 OR LESS AND PERCENTAGE OF TRUCKS OF 7% OR LESS.

SEE ATTACHMENTS FOR TURNING MOVEMENTS AND/OR OTHER DETAILS.

(REV. 4/10/12)



CSX

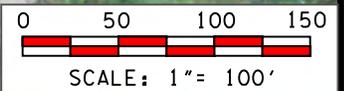
BRIDGE SUPERSTRUCTURE TO BE REPLACED IN-KIND

N 11TH ST

9' LANES W/
4' SHOULDERS

PROSPECT ST

W FORREST ST



**BRIDGE REPLACEMENT
LOCAL ROUTE 0A622 (NORTH 11TH STREET)
BRIDGE OVER CSX RAILROAD @ L.M. 0.27
BRIDGE NUMBER 070A6220001
CAMPBELL COUNTY, TN**

DRAWN BY:

BH

CHECKED BY:

CB

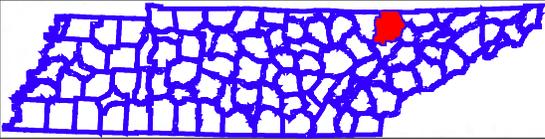
LR 0A622 (NORTH 11TH ST) L.M. 0.27

PIN 117272.00

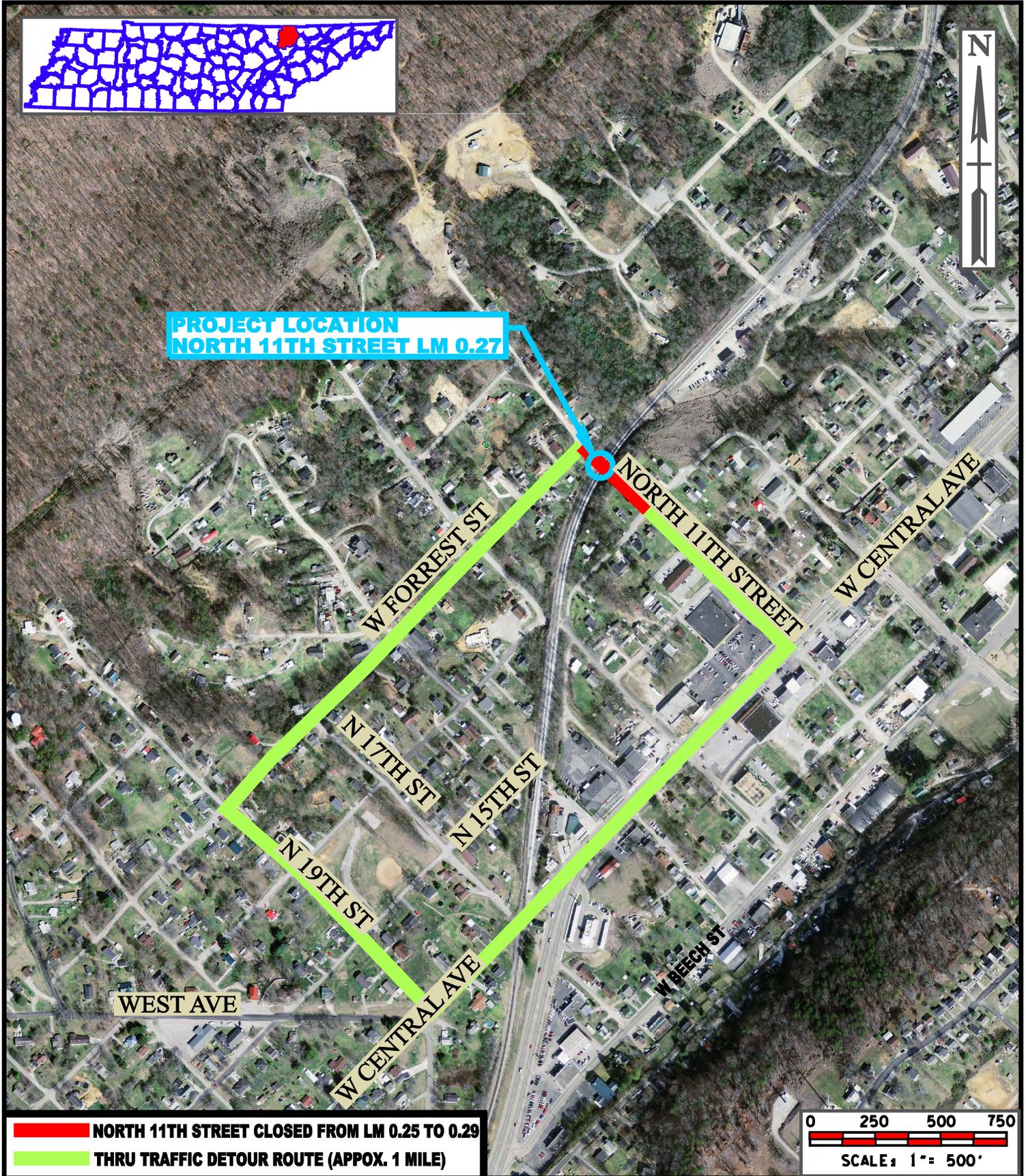
FIGURE 1

DATE:

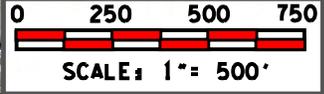
12-3-12



**PROJECT LOCATION
NORTH 11TH STREET LM 0.27**



— NORTH 11TH STREET CLOSED FROM LM 0.25 TO 0.29
— THRU TRAFFIC DETOUR ROUTE (APPOX. 1 MILE)



DETOUR MAP
LOCAL ROUTE 0A622 (NORTH 11TH STREET)
BRIDGE OVER CSX RAILROAD @ L.M. 0.27
BRIDGE NUMBER 070A6220001
CAMPBELL COUNTY, TN

DRAWN BY:
BH

CHECKED BY:
CB

LR 0A622 (NORTH 11TH ST) L.M. 0.27

PIN 117272.00

FIGURE 2

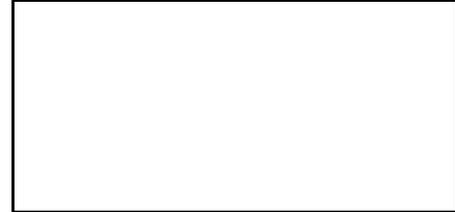
DATE:
12-3-12

SITE INSPECTION

INSPECTION MADE BY: Clint Butler BRIDGE ID: 070A6220001 COUNTY: Campbell
 Date: 8/16/12 Route Name: Local Route 0A622 (North 11th Street) Stream Name: CSX Railroad @ L.M. 0.27

CHANNEL

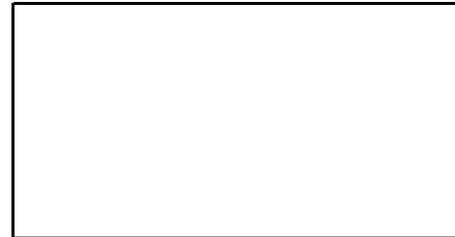
Approx depth and width of channel: Horizontal: _____ Vertical: _____
 Depth of normal flow: _____ In Reservoir: Yes No
 Depth of Ordinary High Water: _____
 Type of material in stream bed: _____
 Type of vegetation on banks: _____
 "N" factor of the channel: _____
 Are channel banks stable: Yes No
 If the streambed is gravel: $D_{30} =$ -- $D_{85} =$ --
 Skew of the channel with the roadway: _____°



Channel Shape Sketch

FLOODPLAIN

Is the skew same as the channel? Yes No
 Is it symmetrical about the channel? Yes No
 Type of vegetation in the floodplain and "N" factors
 Left U.S.: _____ Right U.S.: _____
 Left D.S.: _____ Right D.S.: _____
 Are roadway approaches lower than the structure? Yes No
 Are there any buildings in the floodplain? Yes No
 Approx. floor elevations: _____
 Flood information from local residents:
 (elevations & dates) _____



Floodplain Sketch

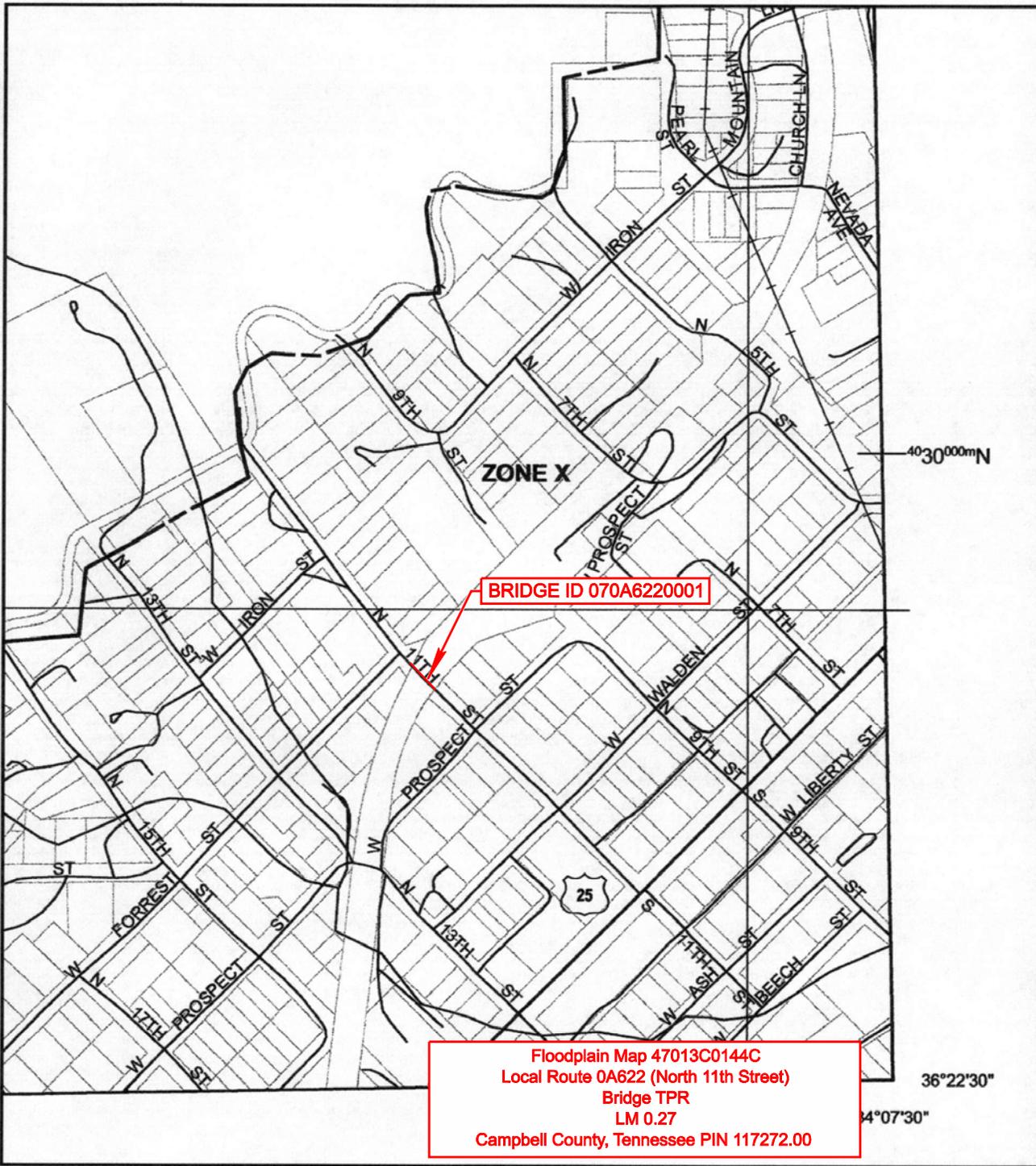
EXISTING STRUCTURE

Length: 159 No. of spans: 3 Structure type: Prestressed Bridge No. of lanes: 2 Skew: 90°
 Width (out to out): 25'-11" Width (curb to curb): 21'-11" Approach: paved graveled
 Sidewalks on Structure: Yes No Bridgerail type: Concrete Barrier Bridgerail height = 3'
 Superstructure depth: _____ Finished Grade to low girder = _____ Girder depth = _____
 Are any substructures in the channel? Yes No Vertical Clearance = 24.0 ft
 Indications of overtopping: _____ NA
 High water marks: _____ NA
 Local scour: Yes, NA No
 Any signs of stream aggradation or degradation? NA
 Any drift or drift potential? Yes, NA No
 Any obstructions (pipes, stock fences, etc.)? NA

PROPOSED STRUCTURE

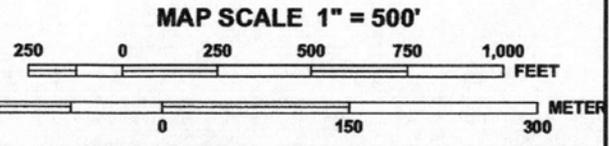
Replacement Rehabilitate Widening New Location
 Bridge length: 159 ft Bridge type: Prestressed Bridge Span arrangement: 3 Skew: 90°
 Bridge width: 26' ft Sidewalks: None Design Speed (MPH): 40 ADT (2036) = 270
 Proposed grade: Maintain Existing Proposed alignment: Maintain Existing
 Method of maintaining traffic: Stage construction On site detour Close road Shift Centerline
 Cost of proposed Structure: \$45 per ft² X 159 / 26 length (ft) / width (ft) Cost = \$186,000
 Cost of bridge removal: \$15 per ft² X 159 / 26.0 length (ft) / width (ft) Cost = \$62,000
 Detour structure: Type and size = N/A Cost = \$0

Total Structure Cost = \$248,100



BRIDGE ID 070A6220001

Floodplain Map 47013C0144C
 Local Route 0A622 (North 11th Street)
 Bridge TPR
 LM 0.27
 Campbell County, Tennessee PIN 117272.00



PANEL 0144C

FIRM
FLOOD INSURANCE RATE MAP
CAMPBELL COUNTY,
TENNESSEE
AND INCORPORATED AREAS

PANEL 144 OF 425
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CAMPBELL COUNTY	470016	0144	C
LA FOLLETTE, CITY OF	475435	0144	C

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

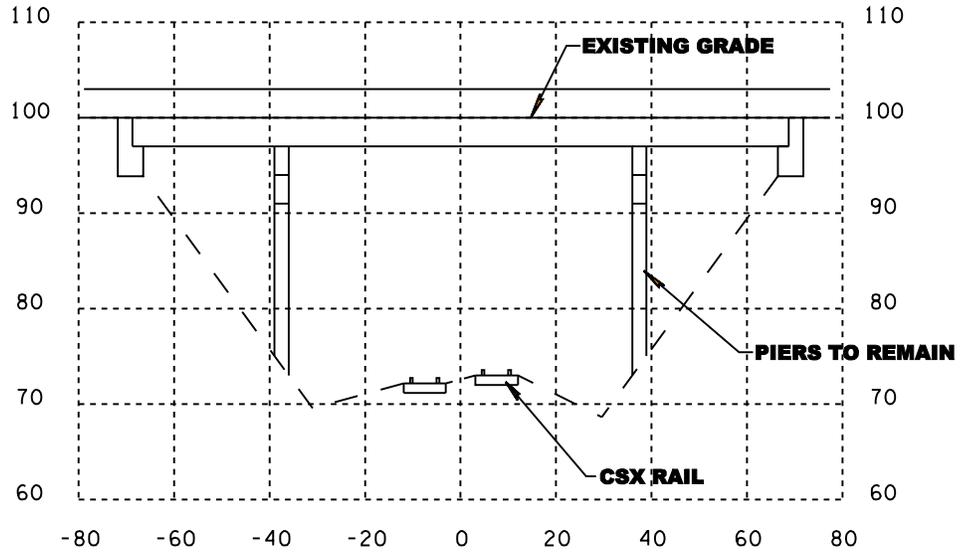


MAP NUMBER
47013C0144C
EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

**EXISTING SUPERSTRUCTURE
REPLACE IN-KIND**



SCALE: 1" = 40' H

1" = 20' V

BRIDGE SECTIONS
CAMPBELL COUNTY
LOCAL ROUTE 0A622 (NORTH 11TH STREET)
BRIDGE OVER CSX @ L.M. 0.27
BRIDGE ID 070A6220001



View of Structure



View Looking Southwest from Structure



View Looking Northeast from Structure



View Looking South along Tracks from Structure



View of Bridge from South Approach



View of South Approach from Structure



View of North Approach from Structure



View of Bridge from North Approach



Crack in Prestressed Concrete Beam



View of Substructure



View of Substructure