

Bench Mark: Northwest flange bolt of fire hydrant on the SW corner of 163rd St. and Sherwood Dr. at house #8711.
Elevation 697.97

Existing Structure: No structure number. Single span 21'-10" bk to bk abutments. Timber girders with timber decking. Out to out dimension approximately 6'-4". Unknown type of concrete abutment. Original construction date and plans not available. The contractor shall remove the existing structure as required and replace it with a prefabricated steel truss pedestrian bridge supported on open pile bent abutments. No stage construction required.

No Salvage

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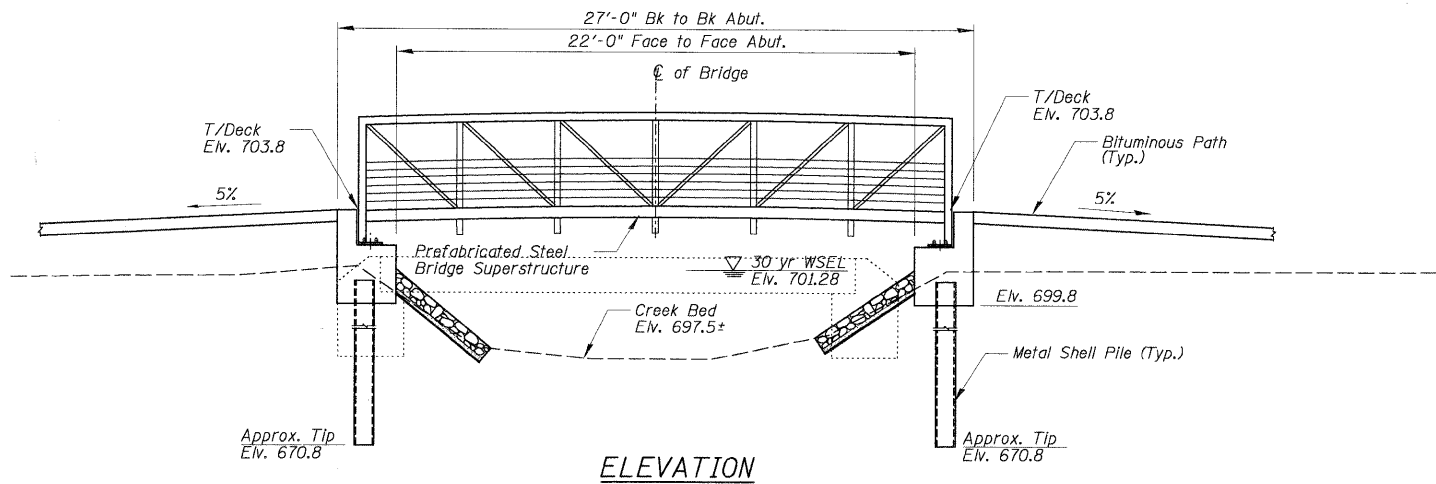
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NOTES:
1. Camber Overall Bridge Profile 1% Of The Bridge Length But At No Point Along The Bridge Shall The Deck Slope Be Greater Than 5%. In Addition, All Truss Verticals Shall Be Plumb.

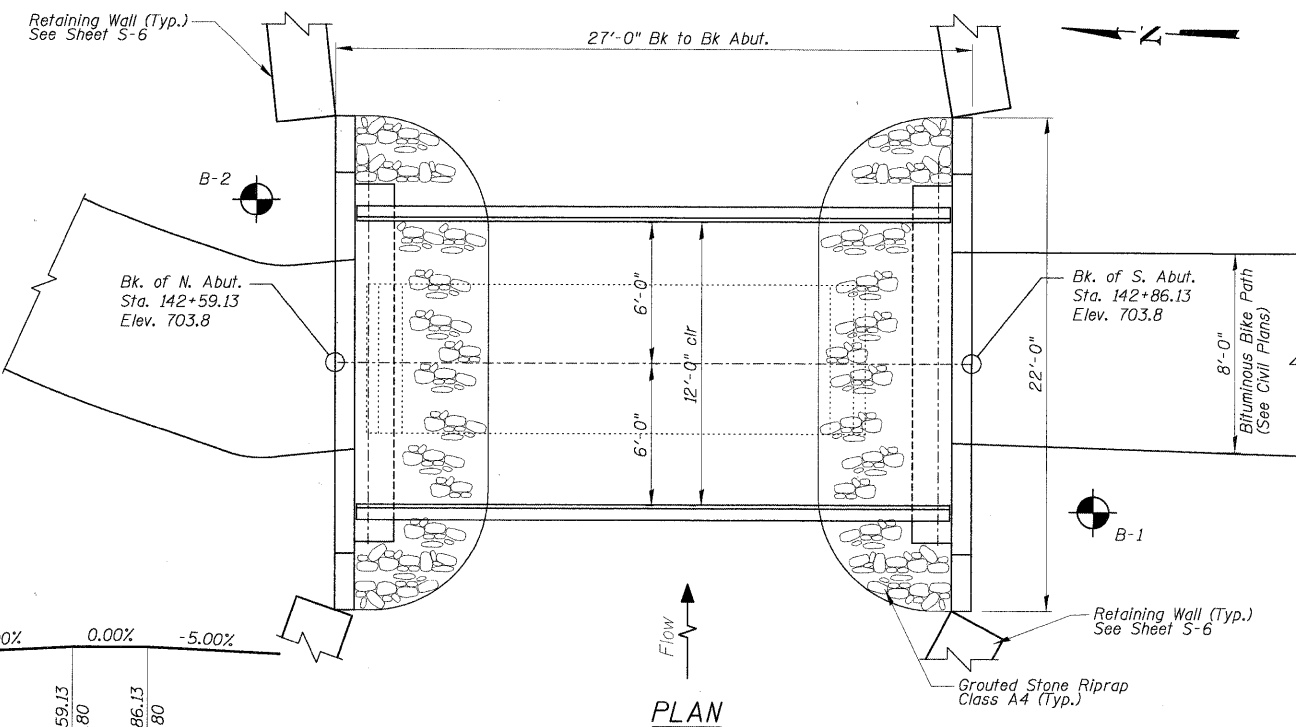
BILL OF MATERIAL (BRIDGE)

ITEM	DESCRIPTION	UNIT	QUANTITY
*	Grouted Stone Riprap, Class A4	Sq. Yd.	20
28200200	Filter Fabric	Sq. Yd.	20
50100100	Removal of Existing Structures	Each	1
50200100	Structure Excavation	Cu. Yd.	38
50300225	Concrete Structures	Cu. Yd.	13.3
50800105	Reinforcement Bars	Lbs.	1560
51200956	Furnishing Metal Shell Piles 12" x 0.179"	Foot	120
51202305	Driving Piles	Foot	120
*X0322508	Pedestrian Truss Superstructure	Sq. Ft.	304

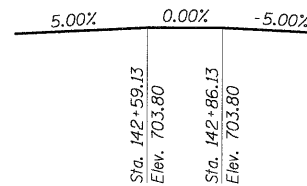
* Special Provision



ELEVATION



PLAN



PROFILE GRADE
(along centerline of bike path)

WATERWAY INFORMATION

Drainage Area = 0.48 sq. mi. Low Grade Elev. 703.80 @ Sta. 143+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Nat. H.W.E. Exist. Prop.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	10	127	46.7 74.0	701.09	0.06 0.02	701.15 701.11
Base	30	185	51.4 80.2	701.29	0.13 0.04	701.42 701.33
Overtopping	50	204	95.1 102.5	701.99	0.05 0.04	702.04 702.03
Max. Calc.	100	253	128.9 118.9	702.39	0.02 0.05	702.41 702.44
	500	360	162.6 133.6	702.78	0.02 0.11	702.80 702.89

SUPERSTRUCTURE DESIGN SPECIFICATIONS

AASHTO "Guide Specifications For Design Of Pedestrian Bridges"

SUBSTRUCTURE DESIGN SPECIFICATIONS

2002 AASHTO "Standard Specifications For Highway Bridges," 17th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi (IDOT Class SI)
fy = 60,000 psi (Reinforcement Bars)

LOADING H6 (12000#)

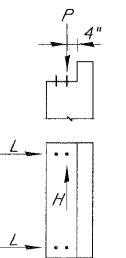
Distributed Live Load = 85 psf

PILE DATA

Type: Metal Shell Pile - 12" Dia. x 0.179" Walls
The Metal Shell Piles Shall Be According To ASTM A252 Grade 3
Nominal Required Bearing: 60 kips
Allowable Resistance Available: 20 kips
Estimated Length: 30 Feet
No. Required: 2 Each Abutment
No Test Piles

BRIDGE REACTION TABLE

ITEM	P (LBS) BRG.	H (LBS) ABUTMENT	L (LBS)
DEAD LOAD	2,500	---	---
UNI. LIVE LOAD	6,420	---	---
VEHICLE LOAD	6,000	---	---
UPLIFT WIND	2,395	---	---
20 PSF	---	---	---
WIND	+590	2,440	---
THERMAL	---	---	875

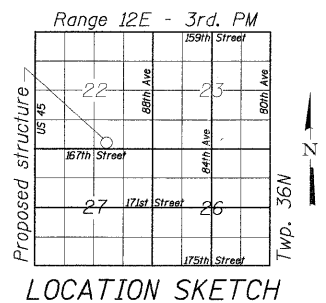


All Footings Have Been Designed Based On The Bridge Reactions Shown
"P"- Vertical Load Per Base Plate
"H"- Horizontal Load Per Footing
"L"- Longitudinal Load Per Base Plate

I Certify That To The Best Of My Knowledge, Information And Belief, This Bridge Design Is Structurally Adequate For The Design Loading Shown On The Plans. The Design Is An Economical One For The Style Of Structure And Complies With Requirements Of The Current "AASHTO Standard Specification For Highway And Bridges".



10/29/2008
Majid Mobasseri
MAJID MOBASSERI
ILLINOIS REGISTRATION No. 081-005058
STRUCTURAL ENGINEER
EXPIRATION DATE: 11/30/08



LOCATION SKETCH

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9975 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

FILE NAME =	USER NAME = MAJIDMOB	DESIGNED - WJS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\0-land\111\080156\Struct\080156-S1.PLT		DRAWN - PDR	REVISED -			N/A	06-00021-00-BT	COOK	60	21	
PLOT SCALE = 4'		CHECKED - MM	REVISED -			CONTRACT NO. 63084					
PLOT DATE = 10/28/2008		DATE -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRM-8003043					