CONTRACT NO. 83664

EARTH TECH — A tyco INTERNATIONAL LTD. COMPANY	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		96-00099-00-BR	DUPAGE	62	32
	STA. 13+25.00		TO STA. 16+55.00		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET S1 OF S22
Contr. 83664

BENCH MARK 50:
Set PK nail on the East side of Main Street approx. 19 ft. North of the Intersection of Water Street.
Datum Elev. 673.43

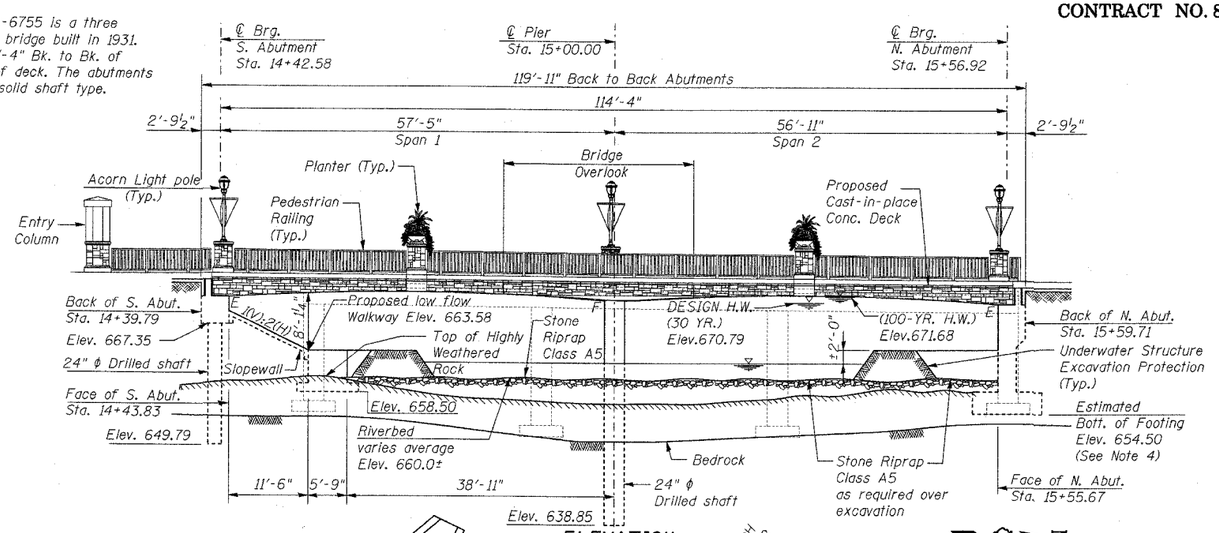
BENCH MARK 54:
Set MAG nail on sidewalk at NE corner of the intersection of Main Street and Chicago Avenue.
Datum Elev. 672.52

No salvage.

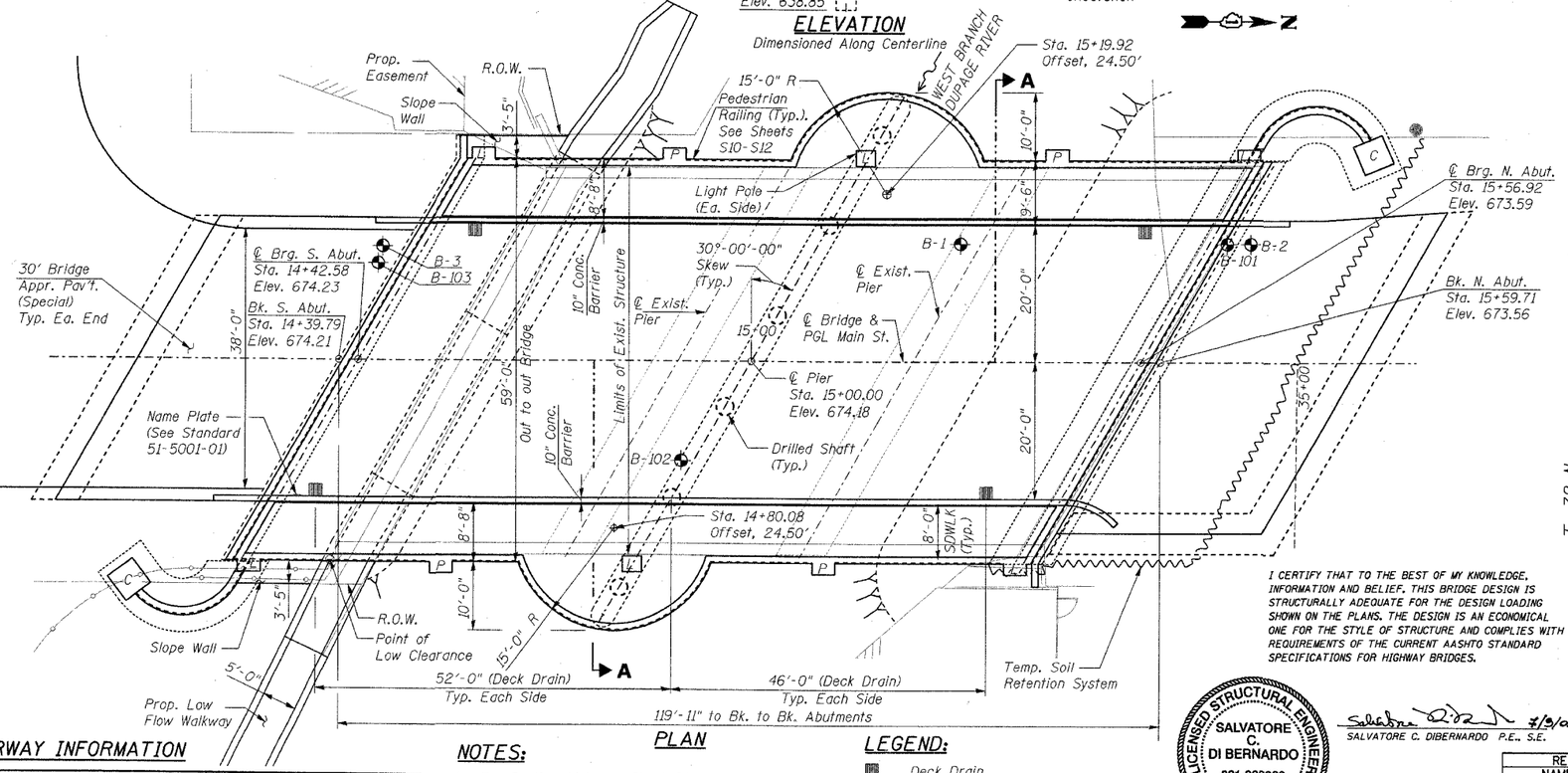
EXISTING STRUCTURE:
The existing structure No. SN. 022-6755 is a three span reinforced concrete tee beam bridge built in 1931. The structure is approximately 104'-4" Bk. to Bk. of abuments and 56'-9⅛" out to out of deck. The abutments are cantilever type. The piers are solid shaft type. The structure is skewed 30°.

W. BRANCH DUPAGE RIVER
REBUILT 2005 BY
CITY OF NAPERVILLE
SEC. 96-00099-00-BR
STATION 15+00.00
STR. NO. 022-6755

NAME PLATE
(See Std. 515001)



ELEVATION
Dimensioned Along Centerline



PLAN

DESIGN SPECIFICATIONS

1996 AASHTO with 1997, 1998, 1999, 2000, and 2002 Interims.

DESIGN STRESSES

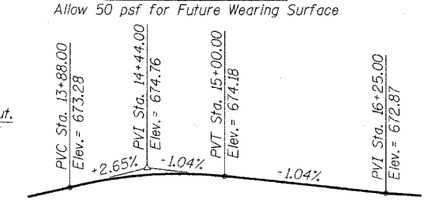
POST-TENSIONED DECK
f'c = 6,000 psi (High-Performance Concrete)
f'ci ≥ 4,000 psi
fy = $3\sqrt{f'c}$ Top of Deck
$6\sqrt{f'c}$ Bottom of Deck
f's = 270,000 psi (P-T Steel, 0.6" Dia. Low Relaxation Strands)
fsi = 189,000 psi (P-T Steel 0.6" Dia. Low Relaxation Strands)
fy = 60,000 psi (Steel Reinf.)
REINFORCED CONCRETE
f'c = 4,000 psi
fy = 60,000 psi
BEARING PRESSURE
Allowable Footing Bearing Pressure = 8 ksf
End Bearing Pressure for drilled shaft = 60 ksf
Skin friction = 2.9 ksf

SEISMIC DATA

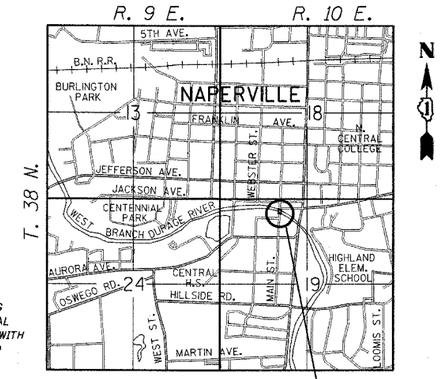
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coef. (A) = 0.04g
Site Coefficient (S) = 1.0

LOADING HS20-44

Allow 50 psf for Future Wearing Surface



PROFILE GRADE MAIN STREET



LOCATION SKETCH

Proposed Structure

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 SPECIFICATIONS FOR HIGHWAY BRIDGES.

LICENSED STRUCTURAL ENGINEER
SALVATORE C. DI BERNARDO
081-005930
ILLINOIS

Salvatore C. Di Bernardo 7/9/04
SALVATORE C. DIBERNARDO P.E., S.E.

WATERWAY INFORMATION

Drainage Area=107.3 sq. mi. Low Grade Elev. 673.55 @ Sta. 15+60 Max. Rec. H.W.F.=671.10

Flood	Frequency (Year)	Q ft³/sec	Opening (ft²) Exist.	Opening (ft²) Prop.	Nat. H.W. Elev.	Head (ft) Exist.	Head (ft) Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
Design	30	3,730	872	935	670.79	0.00	0.00	670.79	670.79
Base	100	4,400	872	959	671.68	0.03	0.02	671.71	671.70
Overtopping									
Max. Calc.	500	5,250	872	962	673.03	0.23	0.11	673.26	673.14

NOTES:

1. For Section A-A see Sheet S6.
2. For Existing and Proposed utilities see Sheet S3.
3. For Temporary Soil Retention System see Sheet S3.
4. Bottom of footing elevation shall be the lesser of 654.50 and of the bottom of the existing footing elevation -6 inches.
5. Existing name plate and light fixtures to be cleaned and returned to the City of Naperville.

LEGEND:

- Deck Drain
- Boring (See Sheet S23)
- L — Acorn Street Light (See Special Provisions)
- C — Entry Column (See Special Provisions)
- P — Planter (See Special Provisions)

REVISIONS	
NAME	DATE

CITY OF NAPERVILLE

GENERAL PLAN AND ELEVATION

MAIN STREET BRIDGE OVER
WEST BRANCH DUPAGE RIVER
STRUCTURE NO. 022-6755 - STA. 15+00.00

SCALE:
DATE JULY 9, 2004
DRAWN BY CVM
CHECKED BY SCD

DATE =Fri Jul 09 12:50:26 2004
DGN =L:\WORK\65154\CADD\DRAWINGS\Bridge\gpelan.dgn