Bench Mark: Chiseled square on northeast wingwall of existing bridge over grant creek. Elev. 529.61

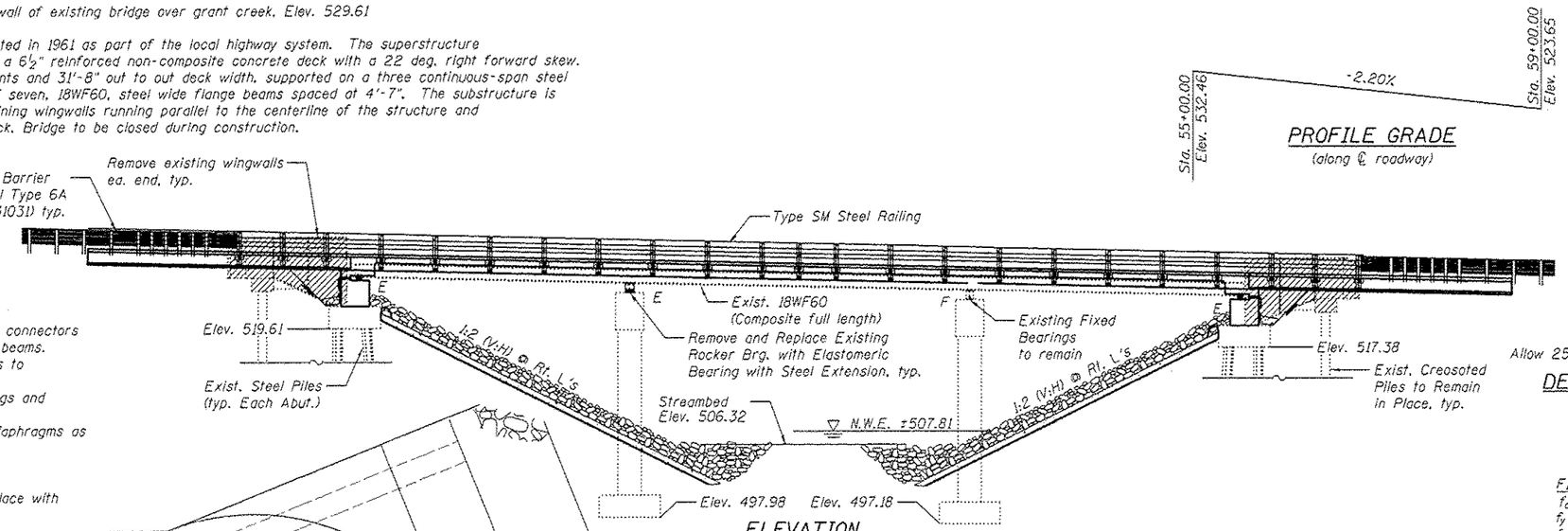
Existing Structure: S.N. 099-0181 was constructed in 1961 as part of the local highway system. The superstructure consists of a 2" concrete wearing surface atop a 6½" reinforced non-composite concrete deck with a 22 deg. right forward skew. The bridge is 105'-3¾" back to back of abutments and 31'-8" out to out deck width, supported on a three continuous-span steel beam superstructure. The spans are made up of seven, 18WF60, steel wide flange beams spaced at 4'-7". The substructure is comprised of two pile bent abutments, with adjoining wingwalls running parallel to the centerline of the structure and two hammerhead piers on spread footings on rock. Bridge to be closed during construction.

No salvage.

STATION 57+58.98
RE-BUILT 2013 BY
STATE OF ILLINOIS
F.A.I. RTE. 55 SEC. 99-2HB-31-3
LOADING H20-44
STRUCTURE NO. 099-0181

SCOPE OF WORK

1. Remove and replace existing concrete deck.
2. Make new deck composite by providing shear connectors along the entire length of the existing steel beams.
3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
4. Remove existing abutments and pier 1 bearings and replace with elastomeric expansion bearings.
5. Remove existing end diaphragms. Add new diaphragms as shown.
6. Repair substructure units as shown.
7. Construct approach slabs.
8. Remove existing concrete slopewalls and replace with riprap.
9. Clean and paint existing beams.



ELEVATION
(Looking East)

PROFILE GRADE
(along ℄ roadway)

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

(New Construction)
2002 AASHTO

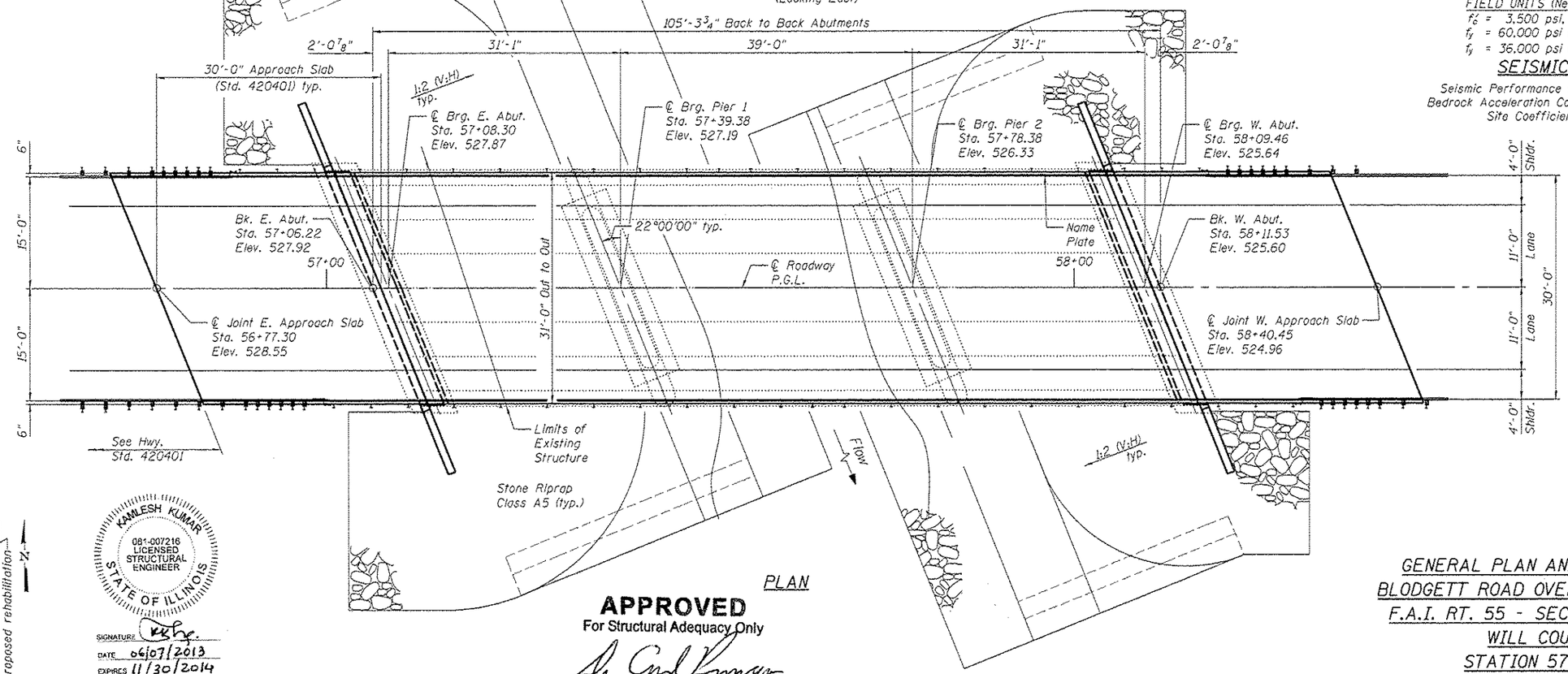
DESIGN STRESSES

FIELD UNITS (Exist. Construction)
f'_c = 3,500 psi
f_s = 40,000 psi (Reinforcement)
f_y = 33,000 psi (Structural Steel)

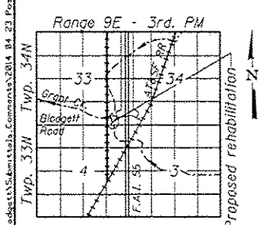
FIELD UNITS (New Construction)
f'_c = 3,500 psi, 5,000 psi (28 Days)
f_s = 60,000 psi (Reinforcement)
f_y = 36,000 psi (Structural Steel)

SEISMIC DATA

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



PLAN



LOCATION SKETCH

KANLESH KUMAR
081-007216
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

SIGNATURE
DATE 06/07/2013
EXPIRES 11/30/2014

APPROVED
For Structural Adequacy Only

Engineer of Bridges & Structures

GENERAL PLAN AND ELEVATION
BLODGETT ROAD OVER GRANT CREEK
F.A.I. RT. 55 - SEC. 99-2HB-3I-3
WILL COUNTY
STATION 57+58.98
STRUCTURE NO. 099-0181

BLOOM COMPANIES, LLC	USER NAME = mokrans	DESIGNED - BDM	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN & ELEVATION STRUCTURE NO. 099-0181	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - KO	REVISED			55	99-2HB-3I-3	WILL	87	39
	PLOT SCALE = N/A	DRAWN - KO	REVISED			CONTRACT NO. 60X60				
	PLOT DATE = 5/8/2014	CHECKED - 8/23/2012	REVISED		SHEET NO. 51 OF 520 SHEETS	ILLINOIS FED. AID PROJECT				

FILENAME = F:\2-13\19_Blodgett\Submittals_Comments\2014_04_23_Post Final Revisions\Cad Files\CADD\Sheets\0999181-G0536-001-GPE.dgn