

GENERAL

All details shall be considered typical and shall apply at all same and similar conditions.

The Contractor shall field measure and verify all dimensions of the existing bridge and all dimensions related thereto.

The Contractor shall be responsible for all temporary shoring and bracing required to maintain the structural stability of the bridge during construction.

All work shall be in accordance with AASHTO and Connecticut DOT specifications.

All work shall comply with conditions of approval from any regulatory authorities having jurisdiction, such as Trumbull IWWC and CT DEP.

The Contractor shall be solely responsible for construction site safety.

All elevations are referenced to N.G.V.D. 1929

FOUNDATION

Design assumption: soil bearing capacity is 2 tons per square foot.

Concrete shall bear on undisturbed virgin soil, free of frost, mud, and ice.

Inspections of the soil shall be made prior to placement of any stone or concrete. The Inspector shall verify that soil is suitable to support proposed foundations.

Place 6 inches of crushed stone under concrete abutment. Crushed stone shall be placed after the subsoil has been inspected and approved.

The Contractor shall be responsible for all dewatering, shoring, sheeting, or bracing required to maintain a safe, dry, and stable excavation. All OSHA rules and regulations shall be strictly adhered to.

No concrete shall be placed in water.

Soil adjacent to and below concrete shall be kept from freezing at all times.

If suitable bearing soils are not encountered at bottom of concrete abutment, carry excavations deeper as directed by the Engineer.

Provide a granular sub-base consisting of a minimum 6 inches of 3/4 inch crushed stone under all slabs on grade.

The Contractor shall verify the location of all underground utility lines, sewers, and fuel storage tanks to avoid any damage. Contractor shall contact 'Call Before You Dig' prior to any excavation. (800) 922-4455.

CAST-IN-PLACE CONCRETE

Concrete strength at 28 days: 4000 psi

Air-entrain all concrete.

Reinforcing steel: ASTM A615 grade 60, epoxy coated.

Concrete work shall be in accordance with ACI 301-99 and ACI 318-02.

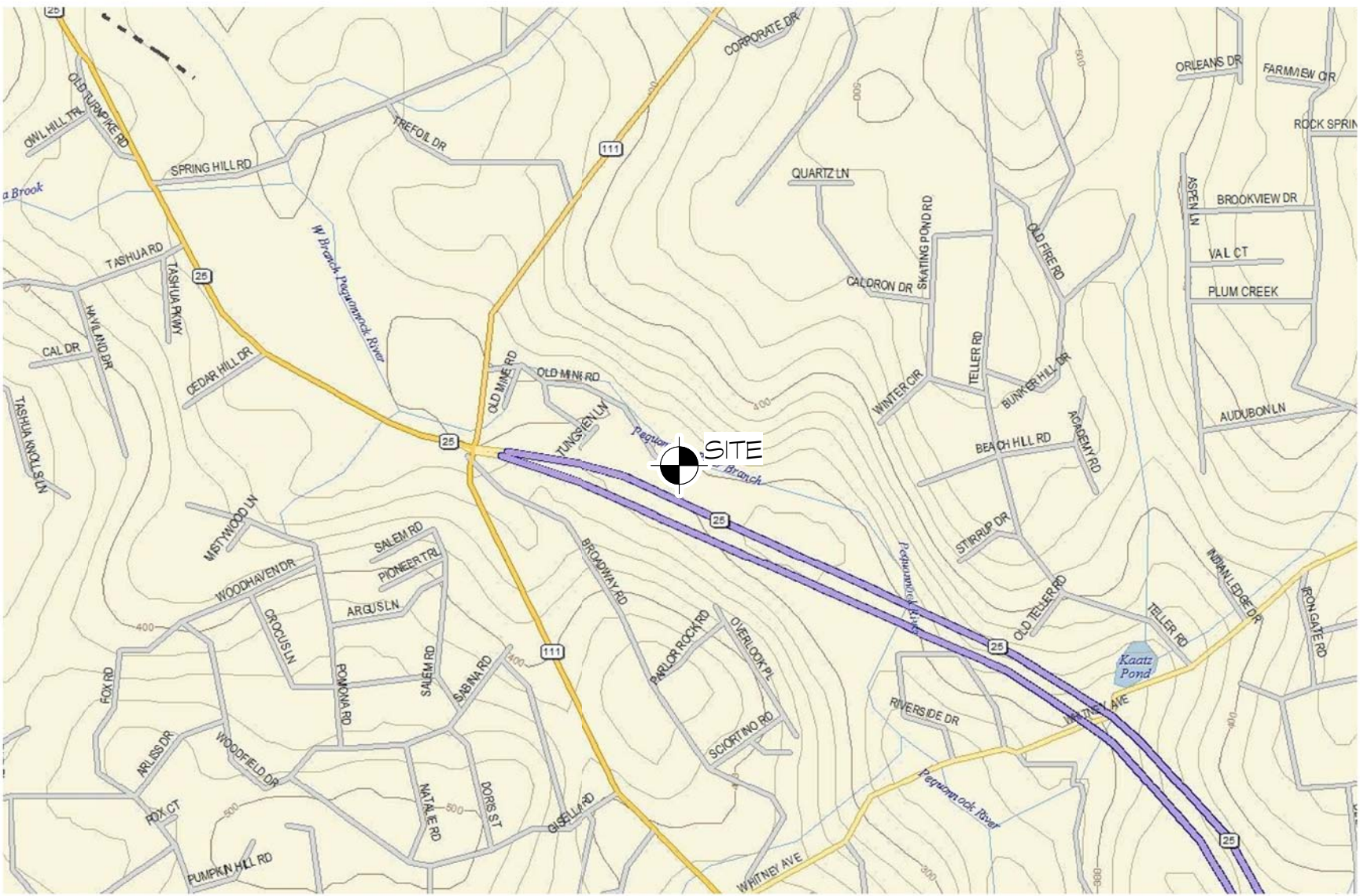
Maximum slump: 5 inches

Calcium chloride shall not be used.

The testing laboratory shall cast 4 test cylinders for each 50 yards or each day's pour. Slump tests shall be performed when cylinders are cast. Test 1 cylinder at 7 days and 3 cylinders at 28 days.

Inspections shall be made of reinforcing steel and concrete placement.

Cold weather concrete work shall conform to ACI 306.1. Protect concrete from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures. Use non-chloride accelerating admixture in all concrete that will be placed in temperatures below 40° F for 24 hours following pour.



VICINITY MAP

PRECAST PLANK

Precast concrete plank shall comply with the following codes and standards:
ACI 318-02 'Building Code Requirements for Reinforced Concrete'.
Prestressed Concrete Institute MNL 116, 'Manual for Quality Control for Plants and Production of Precast Concrete Products'.

Fabricator must be a producer member of the Prestressed Concrete Institute (PCI) and/or participate in its Plant Certification Program.

Concrete compressive strength at 28 days: 5000 psi.

Precast plank shall be designed to resist all loads including self-weight, dead, live, transportation, handling, and erection stresses.

Shop Drawings: Submit shop drawings showing complete information for fabrication and installation of precast concrete units. Indicate member dimensions and cross-section and prestressing strand pattern. Shop drawings shall be signed & sealed by a professional engineer licensed in the state of Connecticut.

Prestressing strand: uncoated, 7-wire strand complying with ASTM A 416, Grade 270.

Reinforcing steel: ASTM A615 grade 60, epoxy coated

Cement Grout: Portland cement, ASTM C 150, Type I, and clean, natural sand. Mix at ratio of 1.0 part cement to 3.0 parts sand, by volume, with minimum water required for placement and hydration.

Water: Potable and free from foreign materials in amounts harmful to concrete and embedded steel.

Use of calcium chloride or admixtures containing calcium chloride is not permitted.

Fabricate precast concrete units complying with manufacturing and testing procedures, quality control recommendations, and dimensional tolerances of PCI MNL-116.

Pretensioning of tendons for prestressed concrete may be accomplished either by single strand tensioning method or multiple-strand tensioning method. Comply with PCI MNL-116 requirements.

The top shall have a rake finish. Remove irregularities, fins, and other projections.

The longitudinal joints between adjacent precast units shall be grouted with cement grout.

Precast slabs shall be designed to support the following loads:
Live Load: HS20
Superimposed Dead Load: future wearing surface: 50 PSF

A minimum of four compression test specimens shall be made for each (50) cubic yards of concrete or not less than four for each day's placement. Two cylinders shall be tested prior to the release of the prestress tendons and two shall be tested at (28) days. Records shall be kept, identifying each cylinder with the locations of placement from which test cylinders were taken.

Failure of a test cylinder to achieve the specified (28) day compression strength shall be cause for rejection of precast members.

Inspections shall be made of plank in the field.

STRUCTURAL STEEL

Structural steel:
ASTM A992 for wide-flange shapes
ASTM A36 for other rolled shapes

Bolts: ASTM A325, 3/4 inch diameter, hot-dip galvanized tension control bolts with dome head and twist-off spline. Provide hardened washer under nut.

SMAW welding electrodes: ASTM A233, E70xx series, low hydrogen.

Steel work shall be in accordance with AISC 'Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings.'

Welders shall be certified in accordance with AWS standard qualification procedures.

Submit Erection Plans and complete shop drawings of all structural steel for review.

Inspections shall be made of the structural steel in the shop and in the field.

All structural steel, connections & associated hardware shall be hot-dip galvanized.

DEMOLITION

Existing metal grating shall be removed.

Remove existing steel girders after new concrete abutments have been placed.

Remove portions of existing stone & concrete walls as required to allow for installation of new steel beams

Install sedimentation and erosion controls.

Excavate and construct new bridge foundations.

Backfill foundations up to rough grade

Remove existing bridge grating and steel beams

Install new steel platform and grating over spillway

Install new precast bridge slabs, connections, and grout.

Raise existing stone walls install guardrails

Place slab base material and construct approach slabs

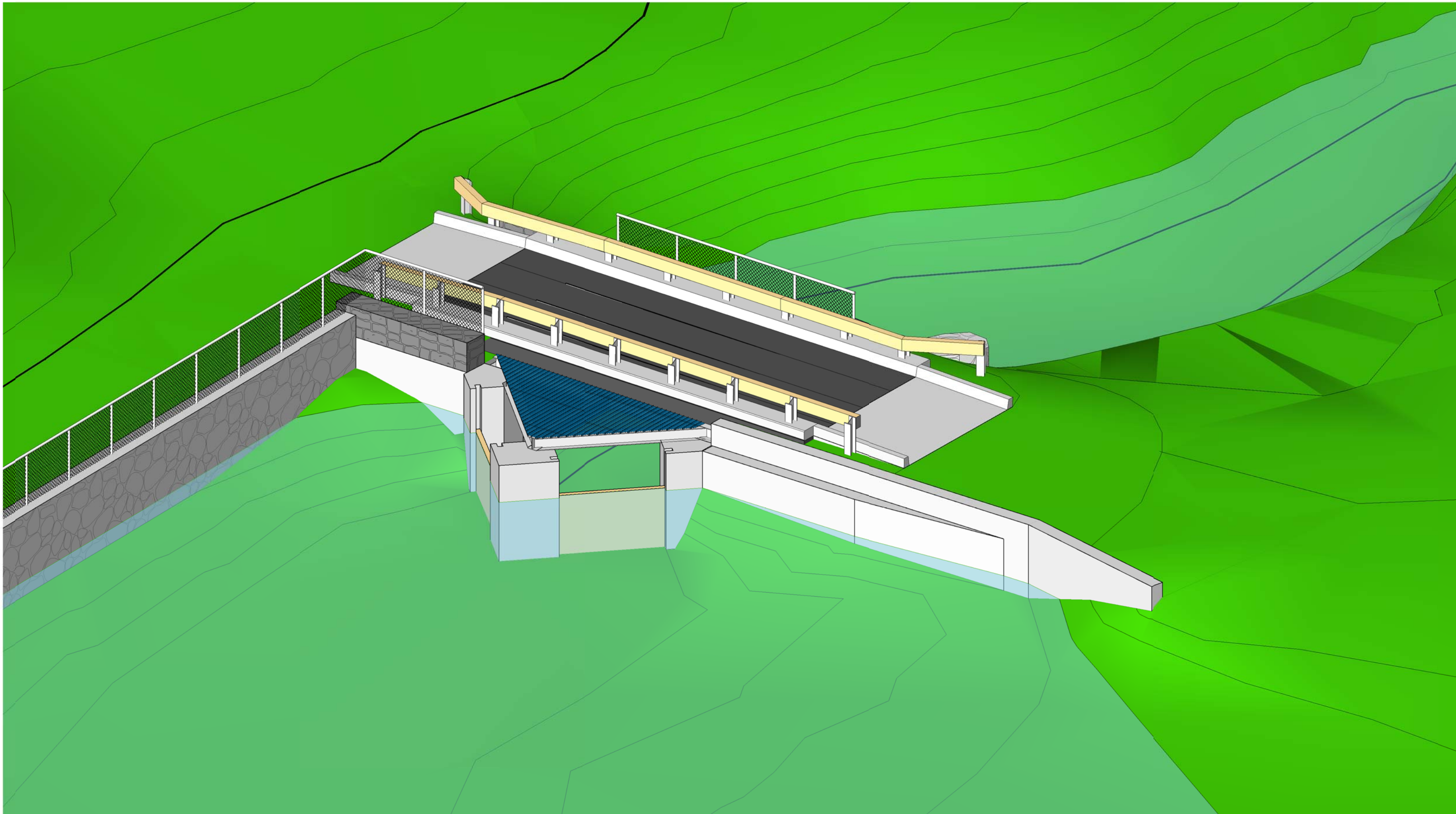
Construct concrete curbs

Install chain link fencing

Fine grade, gravel, topsoil, seed and patch bituminous paving

Remove erosion and sedimentation controls

ANTICIPATED SEQUENCE OF CONSTRUCTION



ISOMETRIC

Structural and Architectural Engineering

DeStefano & Chamberlain

Incorporated

50 Thorpe Street
Fairfield, CT 06824-5725
Tel. 203 254-7131
Fax 203 254-0263
www.dcstructural.com

Ownership and conditions of use:
Drawings and Specifications, as instruments of professional service are and shall remain the property of DeStefano & Chamberlain. Documents are not to be used, in whole or in part, for other projects or purposes or by any other parties than those authorized by contract without the specific written authorization of DeStefano & Chamberlain. Copyright 2008 DeStefano & Chamberlain, Inc.

The structure has been engineered and is properly anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy up to the Base Flood Elevation and velocities present at the site, resistant to impacts from water-borne debris, and will remain free from and not be the cause of scour and erosion.

Revisions/Submission:	
Date	Description
06/15/10	Abutment locations moved
Seal	

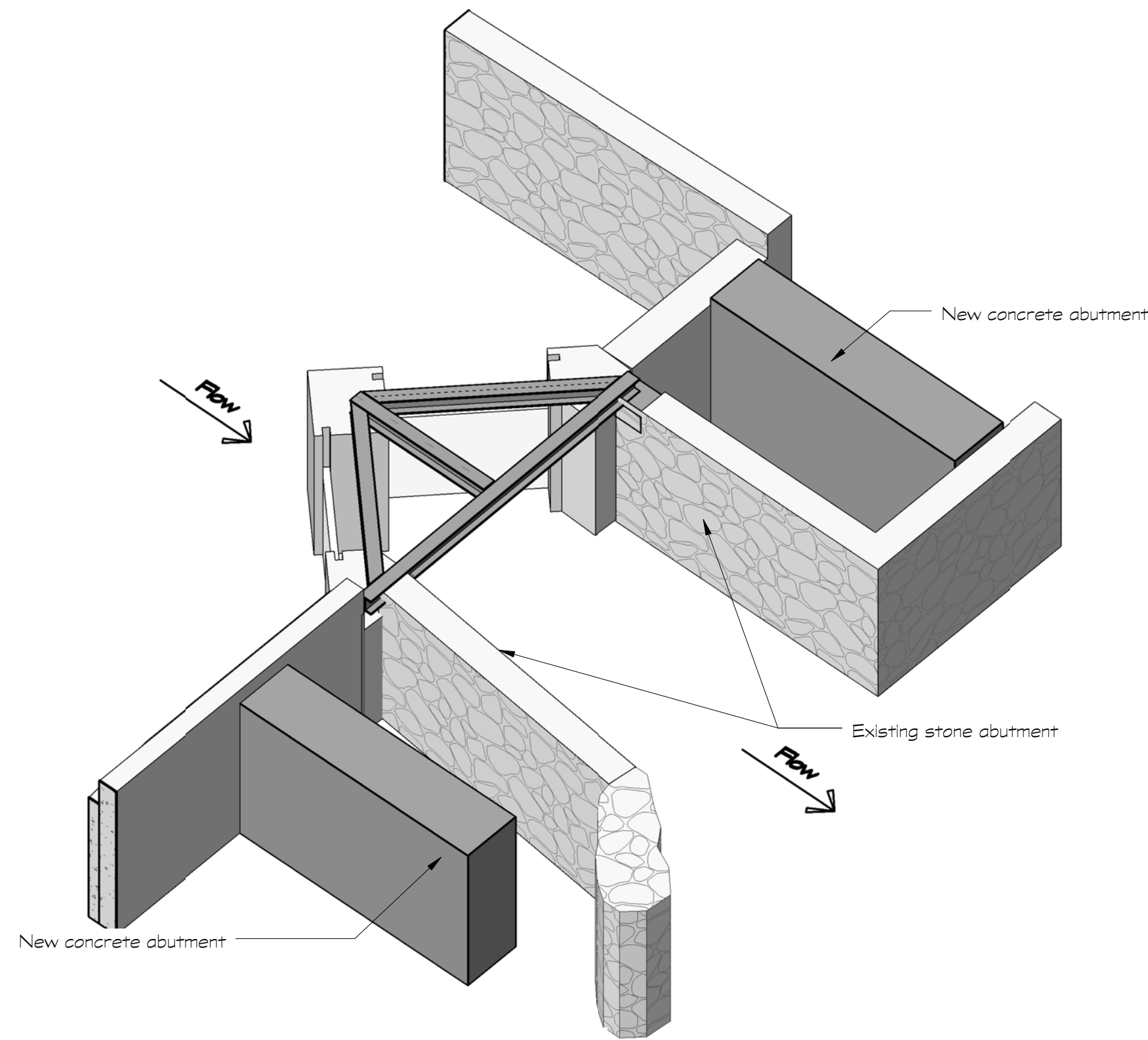
OLD MINE PARK BRIDGE

Old Mine Road,
Trumbull - CT

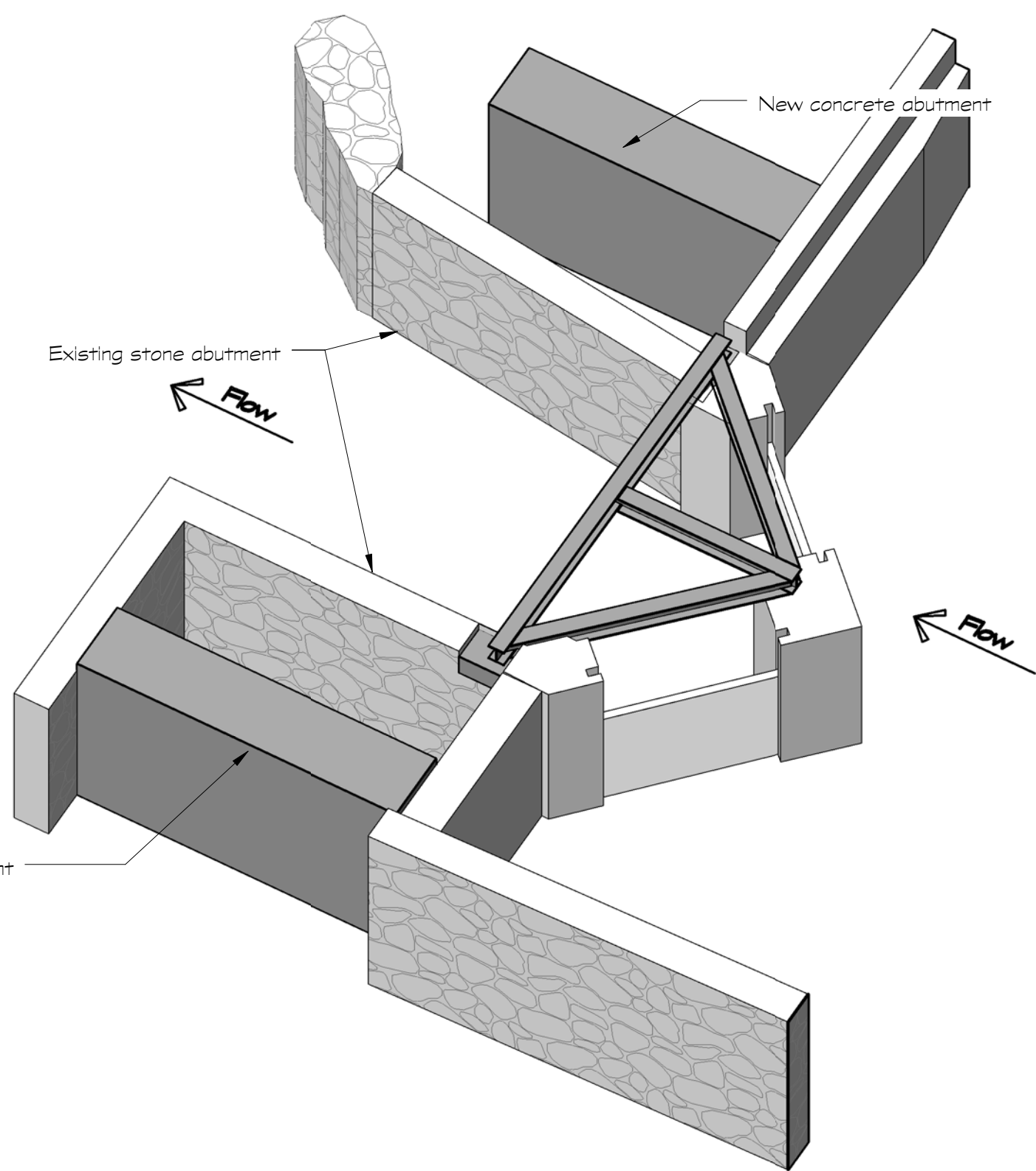
GENERAL NOTES

Project Number: 09-629	Date: 9-3-09
Scale: As Indicated	Drawing number: B001
Designed by: JRG	
Drawn by: KAF	
Checked by: KHC	

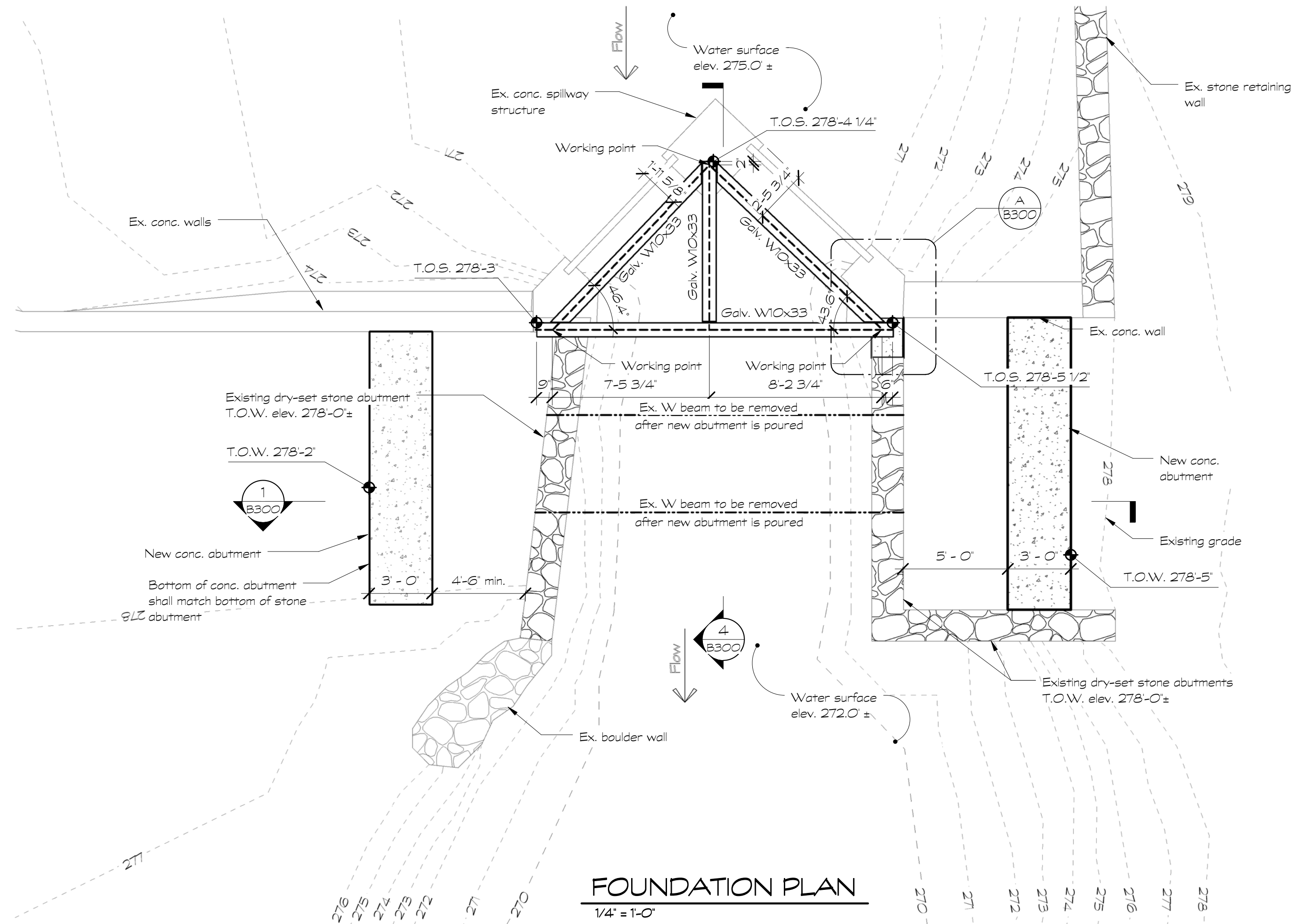
Ownership and conditions of use:
Drawings and Specifications, as instruments of
professional service are and shall remain the property
of DeStefano & Chamberlain. Documents are not to
be used, in whole or in part, for other projects or
purposes or by any other parties than those
authorized by contract without the specific written
authorization of DeStefano & Chamberlain.
Copyright 2008 DeStefano & Chamberlain, Inc.



ISOMETRIC



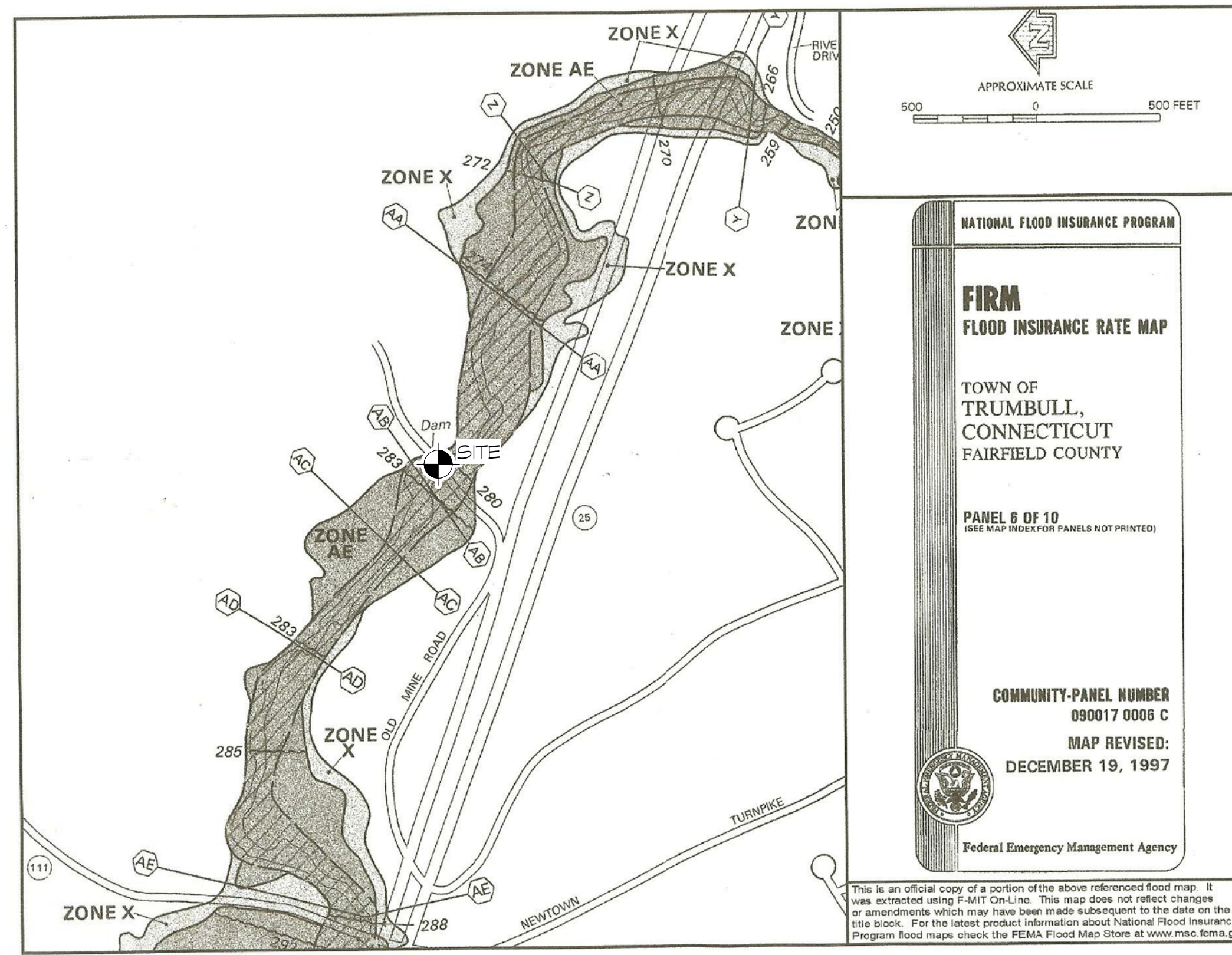
ISOMETRIC



FOUNDATION PLAN

1/4" = 1'-0"

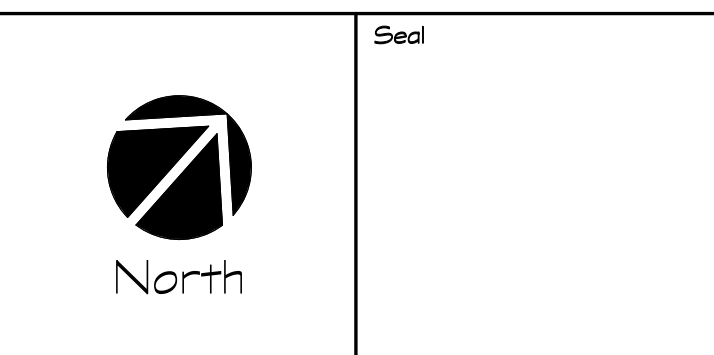
All dimensions related to the existing concrete spill-way shall be field verified prior to fabricating & installing new steel beams.



FLOOD MAP

Revisions/Submission:

Date	Description
06/15/10	Abutment locations moved



OLD MINE PARK BRIDGE

Old Mine Road,
Trumbull - CT

FOUNDATION PLAN

Project Number: 09-629	Date: 9-3-09
Scale: 1/4" = 1'-0"	Drawing number: B100
Designed by: JRG	
Drawn by: KAF	
Checked by: KHC	

Ownership and conditions of use:
Drawings and Specifications, as instruments of
professional service are and shall remain the property
of DeStefano & Chamberlain. Documents are not to
be used, in whole or in part, for other projects or
purposes or by any other parties than those
authorized by contract without the specific written
authorization of DeStefano & Chamberlain.
Copyright 2008 DeStefano & Chamberlain, Inc.

Revisions/Submission:

Date	Description
06/15/10	Abutment locations moved



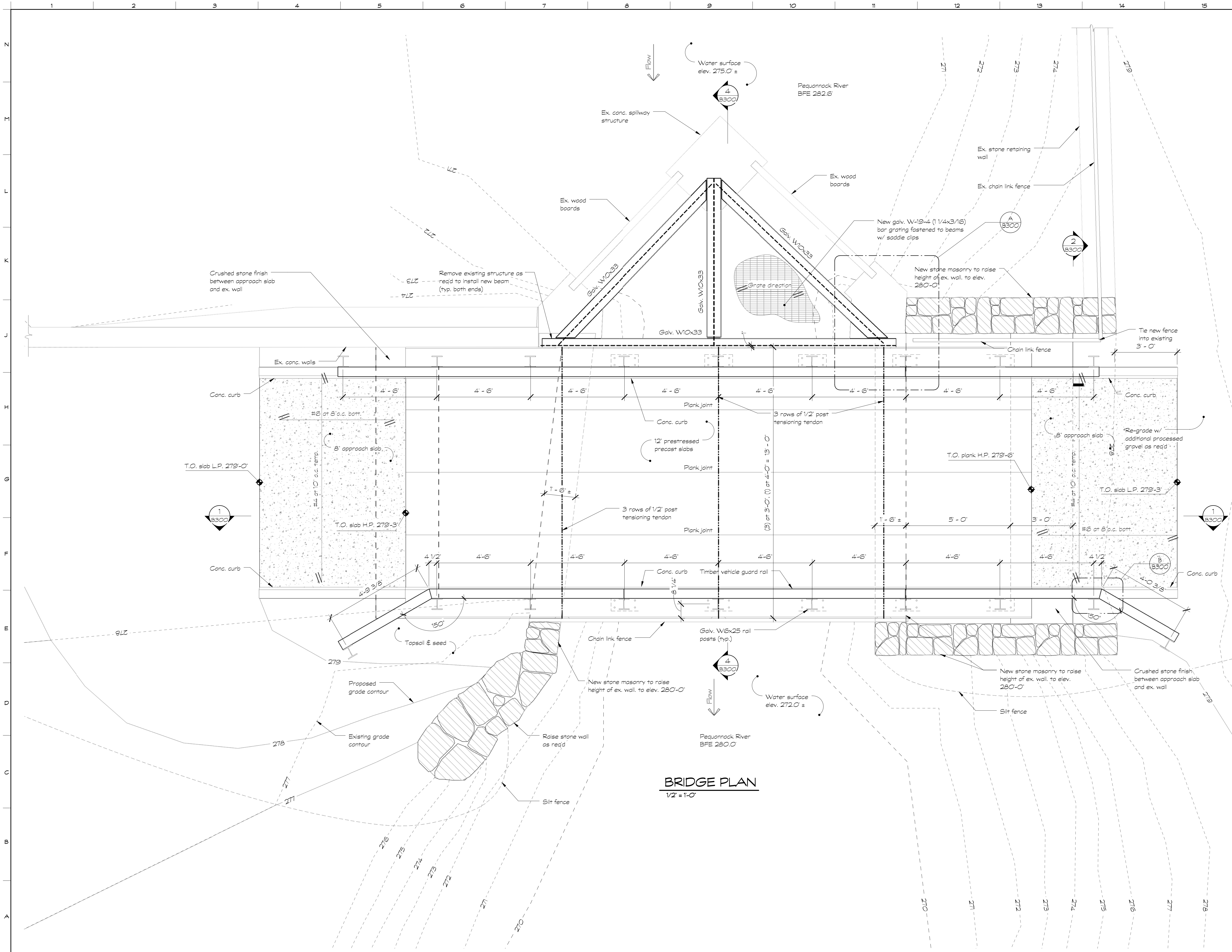
Seal

OLD MINE PARK BRIDGE

Old Mine Road,
Trumbull - CT

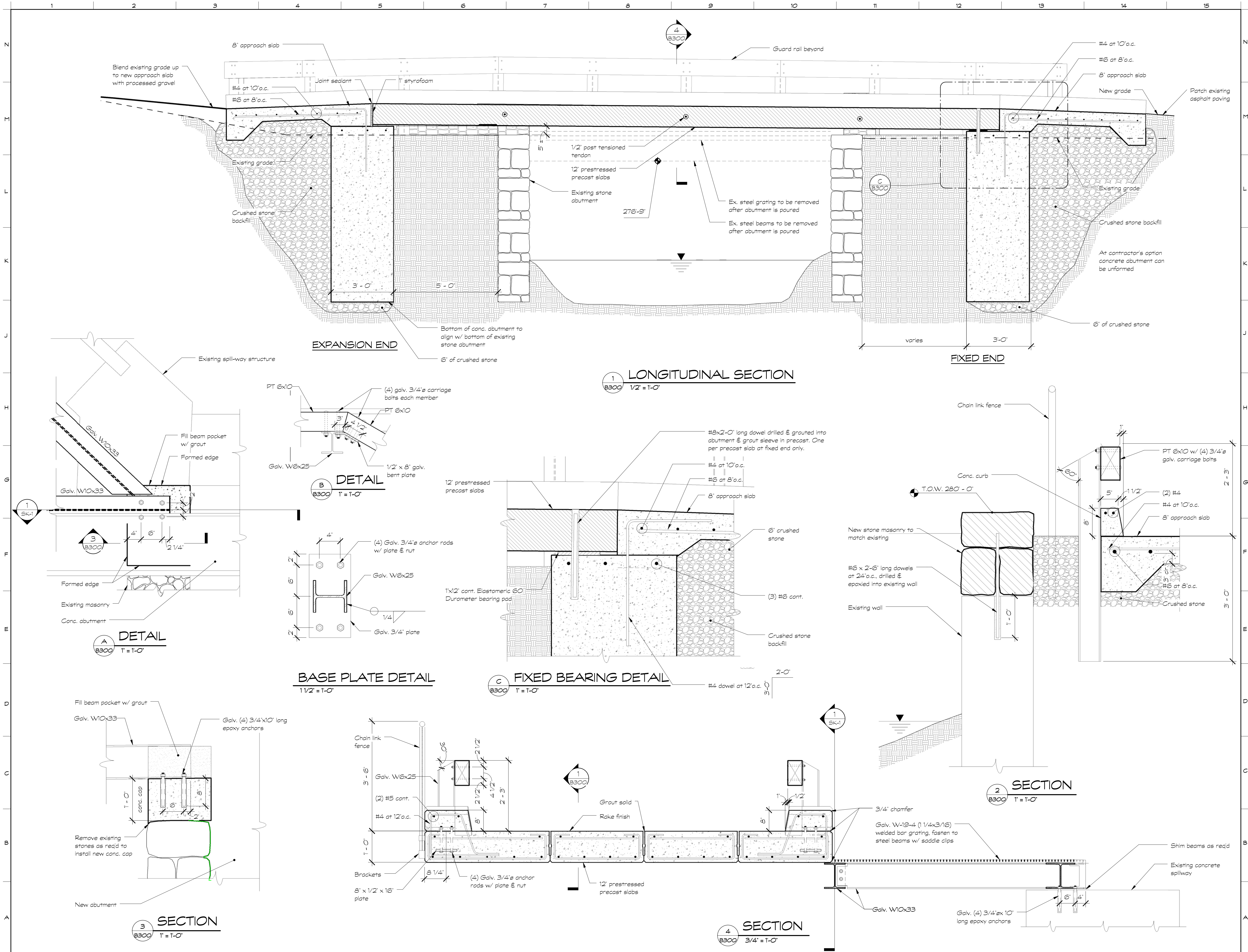
BRIDGE PLAN

Project Number: 09-629	Date: 9-3-09
Scale: 1/2" = 1'-0"	Drawing number: B101
Designed by: JRG	
Drawn by: KAF	
Checked by: KHC	



BRIDGE PLAN
1/2" = 1'-0"

Ownership and conditions of use:
Drawings and Specifications, as instruments of
professional service are and shall remain the property
of DeStefano & Chamberlain. Documents are not to
be used, in whole or in part, for other projects or
purposes or by any other parties than those
authorized by contract without the specific written
authorization of DeStefano & Chamberlain.
Copyright 2008 DeStefano & Chamberlain, Inc.



Revisions/Submission:	
Date	Description
06/15/10	Abutment locations moved
Seal	

OLD MINE PARK BRIDGE	
Old Mine Road, Trumbull - CT	
SECTIONS AND DETAILS	
Project Number: 09-629	Date: 9-3-09
Scale: As Indicated	Drawing number: B300
Designed by: JRG	B300
Drawn by: KAF	
Checked by: KHC	