STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

August 20, 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RECEIVED
AUG 2 6 2008
ENVIRONMENTAL PLANNING DIVISION

Edgar Hurle
CT DOT
P.O. Box 317546
Newington, CT 06131-7546

SUBJECT: PERMIT NO. 200600415-KZ
CT DOT
Milford/Stratford

Dear Mr. Hurle:

Enclosed is the signed permit which constitutes the approval of your application to conduct regulated activities. Your attention is directed to the conditions of the enclosed permit. Construction or work must conform to that which is authorized.

If you have not already done so, you should contact your local Planning and Zoning Office to determine local permit requirements on your project, if any. Also, your activity may be eligible for General Permit authorization from the U.S. Army Corps of Engineers. The State of Connecticut forwarded a copy of its tentative determination for this activity to the Corps for its determination of General Permit eligibility. You do not need to apply directly to the Corps unless they notify you. If General Permit eligibility has already been determined, an authorization letter will be attached to this permit. Otherwise, authorization will be mailed separately. For more information regarding this new federal process, you may write to the Corps New England Division, Regulatory Branch, 696 Virginia Road, Concord, Massachusetts 01742-2751; or, call (800) 343-4789.

If you have any questions concerning your permit, please contact staff of the Permit section at (860)424-3626.

Sincerely,

Kevin Zawoy
Environmental Analyst
Office of Long Island Sound Programs

KZ:ko

Enc.

Sent Certified Mail, Return Receipt Requested to: Commissioner of Transportation; Adjacent Property Owners; All Parties; the Mayor, First Selectman or Town Manager; Shellfish Commission; the Planning and Zoning Commissions; and the Harbor Management Commission.

Copies Furnished to:

STV Incorporated
Conservation Commission
DEP/Wildlife Division
DEP/Fisheries Division
Dept. of Agriculture/Aquaculture Division
DOT/Bureau of Aeronautics and Ports
File No. 200600415-KZ
Desk Copy

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PERMIT

Permit No: 200600415-KZ

Municipalities: Milford/Stratford

Work Area: Housatonic River off property located at the Moses Wheeler Bridge, Bridge No. 00135 Interstate 95

Permittee: CT DOT
Edgar Hurle
P.O. Box 3175436
Newington, CT 06131-7546

Pursuant to sections 22a-359 through 22a-363f of the Connecticut General Statutes ("CGS"), CGS sections 22a-28 through 22a-35, section 401 of the Federal Clean Water Act, as amended, and in accordance with CGS section 22a-98 and the Connecticut Water Quality Standards dated December 2002, a permit is hereby granted by the Commissioner of Environmental Protection ("Commissioner") to replace the existing Moses Wheeler Bridge, reconstruct an existing state boat launching ramp, and conduct tidal wetlands mitigation activities for transportation purposes as is more specifically described below in the SCOPE OF AUTHORIZATION, in the Housatonic River off property identified as the "work area" above.

*****NOTICE TO PERMITTEES AND CONTRACTORS*****

FAILURE TO CONFORM TO THE TERMS AND CONDITIONS OF THIS PERMIT MAY SUBJECT THE PERMITTEE AND ANY CONTRACTOR TO ENFORCEMENT ACTIONS, INCLUDING PENALTIES AND INJUNCTIONS, AS PROVIDED BY LAW.

SCOPE OF AUTHORIZATION

The Permittee is hereby authorized to conduct the following work as described in application #200600415-KZ, including 81 sheets of plans dated November 11, 2005, November 12, 2006, and January 2, 2007 submitted by the Permittee to the Commissioner and attached hereto as follows:

1. replace in its entirety the existing Moses Wheeler Bridge with a new three girder precast segmental concrete superstructure bridge located within the footprint and directly north of the existing bridge as shown on Figures 12, 13, 14 and 15 within an area waterward of the high tide line as follows:

   A. install two temporary trestles with associated access ramps located on the south side of the existing Moses Wheeler Bridge, including the use of 600-mm diameter pipe piles as shown on Figures 16, 17A and 17B;

B. remove the existing six lane Moses Wheeler Bridge which is approximately 28 meters wide by 974 meters long and replace such bridge with a new six lane solid deck concrete bridge superstructure that is 41.52 meters wide by 928.75 meters long, which will carry a IMS conduit, a cable TV conduit, two conduits for highway illumination circuits, a future IMS cable conduit, a fire protection pipe system, and a conduit for the navigation light circuits;

C. remove nine existing concrete piers which support the existing bridge, requiring installation of temporary sheet pile enclosures, the excavation of approximately 7,109 cubic meters of material for the removal of the piers within these temporary enclosures, and backfill with approximately 5,216 cubic meters of clean fill to the elevation of the surrounding substrate or proposed grade as follows:

i. remove existing Pier 4W to an elevation of no less than -0.30 meters as shown on Figure 19 as follows:

a. install temporary sheet pile enclosure, measuring approximately 6.4 meters wide by 31.0 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 266 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.i.a, above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.i.a above, with a total of approximately 199 cubic meters of soil material comprised of approximately 139 cubic meters of granular fill and approximately 60 cubic meters of planting substrate/topsoil material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 10., below, to the elevation of the proposed finished grade in the Tidal Wetland Creation Site in Wetland Area 1 as shown on Figures 57A and 57B; and

ii. remove existing Pier 3W to an elevation no less than one meter below existing substrates shown on Figures 20 and 21 as follows:

a. install temporary sheet pile enclosure, measuring approximately 14.5 meters wide by 31.1 meters long, around the perimeter of the existing pier and the middle and south column of proposed Pier 5;

b. excavate a total of approximately 975 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.ii.a, above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.ii.a above, with a total of approximately 886 cubic meters of soil material comprised of approximately 615 cubic meters of granular fill and approximately 271 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 9., below, to the elevation of the surrounding substrate; and

iii. remove existing Pier 2W to an elevation no less than one meter below existing substrates shown on Figure 22 and as follows:

a. install temporary sheet pile enclosure, measuring approximately 7.3 meters wide by 32.0 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 562 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.iii.a, above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.iii.a above, with a total of approximately 474 cubic meters of soil material comprised of approximately 239 cubic meters of granular fill and approximately 235 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 11., below, to the elevation of the surrounding substrate; and

iv. remove existing Pier 1W to an elevation of no less than -8.44 meters as shown on Figures 23 and 24 as follows:

a. install temporary sheet pile enclosure, measuring approximately 9.5 meters wide by 32.0 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 1,456 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.iv.a, above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.iv.a above, with a total of approximately 1,022 cubic meters of soil material comprised of approximately 719 cubic meters of granular fill and approximately 303 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 11., below, to the elevation of the surrounding substrate; and

v. remove existing Pier 1E to an elevation of no less than -8.44 meters as shown on Figures 25 and 26 as follows:

a. install temporary sheet pile enclosure, measuring approximately 9.5 meters wide by 32.0 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 1,512 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.v.a, above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.v.a above, with a total of approximately 1,104 cubic meters of soil material comprised of approximately 801 cubic meters of granular fill and approximately 303 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 11., below, to the elevation of the surrounding substrate; and

vi. remove existing Pier 2E to an elevation of no less than one meter below the existing substrate as shown on Figure 28 and as follows:

a. install temporary sheet pile enclosure, measuring approximately 7.3 meters wide by 32.0 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 887 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.vi.a. above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.vi.a above, with a total of approximately 552 cubic meters of soil material comprised of approximately 317 cubic meters of granular fill and approximately 235 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 11., below, to the elevation of the surrounding substrate; and

vii. remove existing Pier 3E to an elevation of no less than one meter below the existing substrate as shown on Figure 28 and as follows:

a. install temporary sheet pile enclosure, measuring approximately 8.7 meters wide by 31.1 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 837 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.vii.a. above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.vii.a above, with a total of approximately 564 cubic meters of soil material comprised of approximately 293 cubic meters of granular fill and approximately 271 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 11., below, to the elevation of the surrounding substrate; and

viii. remove existing Pier 4E to an elevation of no less than one meter below the existing substrate as shown on Figures 29 and 30 as follows:

a. install temporary sheet pile enclosure, measuring approximately 7.3 meters wide by 31.1 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 476 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.viii.a. above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.viii.a above, with a total of approximately 324 cubic meters of soil material comprised of approximately 96 cubic meters of granular fill and approximately 228 cubic meters of material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 9., below, to the elevation of the surrounding substrate; and

ix. remove existing Pier 5E to an elevation of no less than -0.30 meters shown on Figure 32 and as follows:

a. install temporary sheet pile enclosure, measuring approximately 8.7 meters wide by 31.1 meters long, around the perimeter of the existing pier;

b. excavate a total of approximately 139 cubic meters below the high tide line from within the temporary sheet pile enclosure described in paragraph 1.C.ix.a, above;

c. backfill the temporary sheet pile enclosure described in paragraph 1.C.ix.a above, with a total of approximately 92 cubic meters of planting substrate/topsoil material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 10., below, to the elevation of the surrounding substrate; and

D. remove a total of approximately 123.4 linear meters of existing wooden bridge fender system and 138 wooden piles, of which 58.5 linear meters and 67 piles are located adjacent to existing Pier 1W and 64.9 linear meters and 71 piles are located adjacent to existing Pier 1E, for the full depth of the existing fender system, as shown on Figure 59;

E. remove a total of approximately 30 linear meters of existing wooden bridge fender system and 32 wooden piles on the southerly side of existing Pier 2W as shown on Figures 13 and 16, to an elevation no less than one meter below existing substrate;

F. remove a total of approximately 43 linear meters of existing wooden bridge fender system and 27 wooden piles along the easterly side of existing Pier 3W as shown on Figures 13 and 16, to an elevation no less than one meter below existing substrate;

G. remove five existing wooden pile dolphins located within the State right-of-way in the vicinity of existing Piers 2W and 1W as shown on Figures 13 and 16, in their entirety.

H. install a total of approximately 112 linear meters of wooden pile supported temporary fender system, of which 55 meters is on the west side and 57 meters is on the east side of the 24.39 meter wide temporary navigation channel to be maintained open during bridge construction between existing Piers 1W and 1E;

I. install the drilled shaft columns for proposed bridge Piers 5, 6, 7, 8, and 9 requiring the use of temporary foundation seal assemblies as shown on Figure 18 and steel casings, approximately 2,948 cubic meters of excavation, 2,940 cubic meters of reinforced concrete, 138 cubic meters of granite for facing for installation of the drilled shafts, approximately 346 cubic meters of clean granular fill, and 317 cubic meters of clean soil backfill material as follows:

i. install Pier 5 as follows as shown on Figures 20 and 21 and as follows:

a. excavate approximately 207 cubic meters of material and drive spud piles and construct erection frame to support the temporary foundation seal assemblies and steel casings described in paragraph 1.I.i.b., below;

b. place and secure temporary foundation seal assemblies on the erection frames described in paragraph 1.I.i.a., above, and install the steel drilled shaft casings through the foundation seal assemblies to bedrock;

c. excavate approximately 304 cubic meters of earthen material and 19 cubic meters of bedrock from within the confines of the steel drilled shaft casing described in paragraph 1.I.i.b., above;

d. place reinforcing steel cage and approximately 419 cubic meters of concrete within the confines of the excavated area described in paragraph 1.I.i.c., above, to form the drilled shaft and concrete column;

e. dewater the temporary foundation seal assemblies described in paragraph 1.I.i.b., above, and install approximately 28 cubic meters of granite facing on the pier columns described in paragraph 1.I.i.d., above,

f. dismantle and remove the temporary foundation seal assemblies, erection frame and spud piles described in paragraph 1.I.i.a., above;

g. restore surrounding areas adjacent to the authorized pier to prework conditions by placing 169 cubic meters of granular fill and approximately 38 cubic meters of clean soil backfill material within the confines of the excavated area described in paragraph 1.I.i.a., above, to the elevation of the surrounding substrate and as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 9., below; and

ii. install Pier 6 as follows as shown on Figures 23 and 24 and as follows:

a. drive spud piles and construct erection frame to support the temporary foundation seal assemblies and steel drilled shaft casings described in paragraph 1.I.ii.b., below;

b. place and secure temporary foundation seal assemblies on the erection frames described in paragraph 1.I.ii.a., above, and install the steel drilled shaft casings through the foundation seal assemblies to bedrock;

c. excavate approximately 589 cubic meters of earthen material and 19 cubic meters of bedrock from within the confines of the steel drilled shaft casing described in paragraph 1.I.ii.b., above;

d. place reinforcing steel cage and approximately 798 cubic meters of concrete within the confines of the excavated area described in paragraph 1.I.ii.c., above, to form the drilled shaft and concrete column;

e. dewater the temporary foundation seal assemblies described in paragraph 1.I.ii.b., above, and install approximately 28 cubic meters of granite facing on the pier columns described in paragraph 1.I.ii.d., above,

f. dismantle and remove the temporary foundation seal assemblies, erection frame and spud piles described in paragraph 1.I.ii.a., above; and

iii. install Pier 7 as follows as shown on Figures 25 and 26 and as follows:

a. drive spud piles and construct erection frame to support the temporary foundation seal assemblies and steel casings described in paragraph 1.I.iii.b., below;

b. place and secure temporary foundation seal assemblies on the erection frames described in paragraph 1.I.iii.a., above, and install the steel drilled shaft casings through the foundation seal assemblies to bedrock;

c. excavate approximately 470 cubic meters of earthen material and 19 cubic meters of bedrock from within the confines of the steel drilled shaft casing described in paragraph 1.I.iii.b., above;

d. place reinforcing steel cage and approximately 661 cubic meters of concrete within the confines of the excavated area described in paragraph 1.I.iii.c., above, to form the drilled shaft and concrete column;

e. dewater the temporary foundation seal assemblies described in paragraph 1.I.iii.b., above, and install approximately 28 cubic meters of granite facing on the pier columns described in paragraph 1.I.iii.d., above,

f. dismantle and remove the temporary foundation seal assemblies, erection frame and spud piles described in paragraph 1.I.iii.a., above; and

iv. install Pier 8 as follows as shown on Figures 27 and 28 and as follows:

a. drive spud piles and construct erection frame to support the temporary foundation seal assemblies and steel casings described in paragraph 1.I.iv.b., below;

b. place and secure temporary foundation seal assemblies on the erection frames described in paragraph 1.I.iv.a., above, and install the steel drilled shaft casings through the foundation seal assemblies to bedrock;

c. excavate approximately 403 cubic meters of earthen material and 19 cubic meters of bedrock from within the confines of the steel drilled shaft casing described in paragraph 1.I.iv.b., above;

d. place reinforcing steel cage and approximately 554 cubic meters of concrete within the confines of the excavated area described in paragraph 1.I.iv.c., above, to form the drilled shaft and concrete column;

e. dewater the temporary foundation seal assemblies described in paragraph 1.I.iv.b., above, and install approximately 28 cubic meters of granite facing on the pier columns described in paragraph 1.I.iv.d., above,

f. dismantle and remove the temporary foundation seal assemblies, erection frame and spud piles described in paragraph 1.I.i.a., above; and

v. install Pier 9 as follows as shown on Figures 29 and 30 and as follows:

a. excavate approximately 455 cubic meters of material and drive spud piles and construct erection frame to support the temporary foundation seal assemblies and steel casings described in paragraph 1.I.v.b., below;

b. place and secure temporary foundation seal assemblies on the erection frames described in paragraph 1.I.v.a., above, and install the steel drilled shaft casings through the foundation seal assemblies to bedrock;

c. excavate approximately 425 cubic meters of earthen material and 19 cubic meters of bedrock from within the confines of the steel drilled shaft casing described in paragraph 1.I.v.b., above;

d. place reinforcing steel cage and approximately 507 cubic meters of concrete within the confines of the excavated area described in paragraph 1.I.v.c., above, to form the drilled shaft and concrete column;

e. dewater the temporary foundation seal assemblies described in paragraph 1.I.v.b., above, and install approximately 28 cubic meters of granite facing on the pier columns described in paragraph 1.I.v.d., above,

f. dismantle and remove the temporary foundation seal assemblies, erection frame and spud piles described in paragraph 1.I.v.a., above;

g. restore surrounding areas adjacent to the authorized pier to prework conditions by placing 265 cubic meters of granular fill and approximately 190 cubic meters of planting substrate/topsoil material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 10., below, to the elevation of the surrounding substrate within the confines of the excavated area described in paragraph 1.I.v.a., above; and

J. install a total of 123.4 meters of new wooden pile supported fender system, of which 58.5 meters is located along the west side and 64.9 meters is located along the east side of the navigation channel between Piers 6 and 7, as shown on Figures 16, 17A and 17B.

2. conduct tidal wetland creation on the east and west sides of the river as follows:

A. construct wetland mitigation in Wetland Area 1 on the west bank of the Housatonic River in the footprint of the proposed bridge and the area south of the bridge to the State's right-of-way limit as shown on Figures 57A and 57B, as follows:

i. excavate approximately 1,900 cubic meters of material to facilitate tidal wetland creation described in paragraph 2.A., above;

ii. place approximately 576 cubic meters of planting substrate/topsoil material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 10., below, atop the excavated area described in paragraph 2.A., above;

iii. conduct tidal wetland plantings in the planting substrate/topsoil material described in paragraph 2.A.ii. above, and as specified in "Notes" on Figure 57B; and

B. construct wetland mitigation in Wetland Area 2 on the east bank of the Housatonic River in the footprint of the proposed bridge and the area north of the bridge as shown on Figures 56 and 57, as follows:

i. excavate approximately 1,100 cubic meters of material to facilitate tidal wetland creation described in paragraph 2.B., above;

ii. place approximately 426 cubic meters of planting substrate/topsoil material as required pursuant to SPECIAL TERMS AND CONDITIONS paragraph 10., below, atop the excavated area described in paragraph 2.A., above;

iii. conduct tidal wetland plantings in the planting substrate/topsoil material described in paragraph 2.A.ii. above, and as specified in "Notes" on Figure 57; and

3. remove and reconstruct the State boat launch ramp in Milford on the south side of the Moses Wheeler Bridge within an area waterward of the high tide line as shown on Figure 58, as follows:

A. excavate approximately 605 cubic meters of material, including the removal of the existing boat launch ramp and concrete abutment ramp, and place approximately 44 cubic meters of granular fill to prepare the subgrade to correct line and grade on which to construct the new boat launch ramp;

B. place approximately 45 cubic meters of standard riprap on prepared subgrade as described in paragraph 3.A., above, at bottom of new ramp and place approximately 170 cubic meters of special riprap as subbase material under the new precast concrete panels as described in paragraph 3.D., below, from the bottom to top of the ramp;

C. lay steel rails on the special riprap subbase material as described in paragraph 3.B., above, and set rails into the riprap subbase to establish correct line and grade;

D. lower approximately 91 cubic meters of interlocking precast concrete panels into place on the steel rails described in paragraph 3.C., above, keying and pushing panels into position at the

lower concrete support blocks, described in paragraph 3.E., below, and repeat this precast panel installation procedure until the boat launch ramp surface is complete;

E. construct two intermediate concrete support blocks by placing approximately 20 cubic meters of concrete at approximately the third points along the ramp during installation of the precast concrete panels as described in paragraph 3.D., above;

F. construct a concrete anchor wall at the top of the boat ramp panels by placing approximately 10 cubic meters of concrete to secure the installed precast concrete panels as described in paragraph 3.D., above;

G. construct two concrete abutment end blocks at the top of the boat launch ramp as ramp access to new floating docks by placing 29 cubic meters of concrete;

H. place approximately 72 cubic meters of bituminous concrete pavement and processed aggregate base material at the top of the boat launch ramp to meet the parking lot and access road pavement; and

I. install two 2.4 meter wide x 30 meter long floating docks each supported by 4 timber piles located along the edges of the proposed boat launch ramp as shown on Figure 58 of the plans attached hereto.

UPON INITIATION OF ANY WORK AUTHORIZED HEREIN, THE PERMITTEE ACCEPTS AND AGREES TO COMPLY WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

SPECIAL TERMS AND CONDITIONS

1. Except as specifically authorized by this permit, no equipment, material or debris shall be deposited, placed or stored in any tidal wetland or watercourse, nor shall any tidal wetland or watercourse be used as a staging area or accessway other than as provided herein.

2. Prior to the demolition of the existing bridge authorized herein, the Permittee shall submit for the review and written approval of the Commissioner a temporary protective barrier system plan ("Debris Containment Plan") for the existing bridge to contain debris. The plan shall include the type, size, location, and scheduled maintenance plan of the barriers, and shall assess any navigational conflicts. The review and approval will not be unreasonable withheld.

3. Prior to the commencement of work on-site, the Permittee shall install and maintain a sediment control system ("SCS") along all shoreline areas to prevent sediments from migrating into the Housatonic River. The SCS shall be installed within the approximate areas identified on Figures 7, 20, 29, 40, 46 and VS-2 of the plans attached hereto and in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control, DEP-Bulletin 34.

4. Unless otherwise authorized in writing by the Commissioner, the Permittee shall develop and submit a Temporary Boating Access Plan ("Plan") for the review and written approval of the

Commissioner. Such Plan, if found to be feasible and prudent by the Commissioner, shall provide a mitigation proposal for the temporary loss of public boating access at the Milford public boat launch facility during the reconstruction of the Moses Wheeler Bridge. Such Plan shall also include a schedule for such mitigation. Such Plan shall be submitted to the Commissioner no later than twelve months after the issuance of this authorization. The Permittee shall implement the Plan in accordance with the approval of such Plan as directed by the Commissioner.

5. Prior to the reconstruction of the public boat launch ramp described in the SCOPE OF AUTHORIZATION paragraph 3., above, the Permittee shall install and maintain in optimal operating condition around the perimeter of the work site a turbidity control curtain until the work is completed and the site has been stabilized. All in water work to complete the reconstruction of the boat launch ramp shall also take place during low water conditions.

6. Not later than thirty (30) days prior to the mooring of barges authorized herein, the Permittee shall submit for the Commissioner's review and written approval a Barge Location Plan for construction and dewatering barges.

7. The Permittee shall maintain a minimum of a 12.1 meter (40-foot) wide navigational channel under the Moses Wheeler Bridge at all times except for the designated full channel closure time periods described in Figure CHN-1 of the plans attached hereto

8. Prior to the demolition of the existing bridge piers authorized in the SCOPE OF AUTHORIZATION paragraph 1.C., above, the Permittee shall submit for the review and written approval of the Commissioner a plan ("Backfill Plan") for backfilling existing Piers 3W and 4E, and proposed Pier 5 as described in the SCOPE OF AUTHORIZATION paragraphs 1.C.ii. and 1.C.viii., and 1.I.i., respectively with a top 1 meter layer of soil material that is similar to surrounding harbor bottom material. The plan must include sediment grain size data that characterizes the top 33 cm layer of bottom sediment material adjacent to each bridge pier authorized to be removed from areas waterward of the high tide line. Such sediment sample data must contain the existing grain size data and a sediment description.

9. The Permittee shall place a 0.3 meter deep layer of natural or manmade planting substrate ("soil") containing no less than 75% sand by weight and with an organic content no less than 10% and no more than 15% for the backfilling of the demolished upper 33 cm layer of existing bridge Piers 4W and 5E, all disturbed areas waterward of the high tide line associated with the tidal wetland mitigation plan, and the backfilling of proposed bridge Pier 9 as described in the SCOPE OF AUTHORIZATION paragraphs 1.C.i. and 1.C.ix., 2., and 1.I.v., respectively. The soil must be analyzed by USDA-approved methodology for organic matter by loss-ignition of oven-dried samples dried at 105 degrees centigrade. The mineral fraction must be analyzed to determine weight percentage of sand, as determined after passing a 2-millimeter sieve. Sand particles are defined to be between 0.05 and 2.0 millimeters in diameter. The soil must be free of seed and roots of invasive species and inspected and approved by the Connecticut Department of Transportation Office of Environmental Planning prior to its use.

10. The Permittee shall backfill existing demolished Piers 2W, 1W, 1E, 2E and 3E described in the SCOPE OF AUTHORIZATION paragraphs 1.C.iii. through 1.C.vii. with 1 meter layer of material that includes a top 15 cm layer of oyster cultch (shell) or other shell that is acceptable to the Department of Agriculture/Bureau of Aquaculture.

11. The Permittee shall conduct water monitoring for elevated turbidity levels from June 1st through September 30th, inclusive, of any year while conducting work to remove existing bridge piers or to install new bridge piers authorized in the SCOPE OF AUTHORIZATION paragraphs C. and I., above, to protect spawning shellfish. Such water monitoring shall include taking sample readings hourly no more than 50 feet upstream and downstream of either bridge pier demolition or installation work. If at any time during such activity water readings are increased by more than 5 n.t.u. over ambient, the Permittee shall immediately cease all work and modify work conditions to reduce on-site turbidity levels. The Permittee shall not recommence work until water readings have resumed to a level that is not more than 5 n.t.u. over ambient.

12. The Permittee shall not conduct any pile driving or driving of sheet pile with impact hammers for more than twelve hours per day from April 1st through June 30th, inclusive, of any year in order to protect the upstream migration of anadromous fish. Such work is prohibited during any two consecutive 12-hour periods during which pile driving or driving of sheet pile with impact hammers occurs during a 24-hour period.

13. Prior to the demolition of the existing bridge authorized in the SCOPE OF AUTHORIZATION paragraph 1.C., above, the Permittee shall submit within thirty 30) days prior to the commencement of demolition activities, a Demolition Plan for the Commissioner's review and written approval. Such Demolition Plan must contain a description of the proposed methods for removal of the existing piers, including: the equipment that will be utilized; a discussion of how potential adverse environmental impacts to fisheries resources will be eliminated or minimized; and a timetable for implementation and completion. The Permittee shall conduct all demolition activities in accordance with the plan approved in writing by the Commissioner. If the Permittee elects to utilize blasting to remove the existing piers, then the following conditions shall apply:

    A. blasting activities are prohibited between April 1st and June 30th, inclusive, of any year in order to protect anadromous fish during the spawning period. The Commissioner may consider a written request from the Permittee to modify the closure period. Such request must detail how impacts to anadromous fish will be minimized;

    B. during the blasting activities authorized herein, the Permittee shall conduct an underwater blasting monitoring study. The purpose of the study will be to measure underwater pressure waves, assess fish affected by the blasts and evaluate the effectiveness of mitigation measures. The Permittee shall retain one or more qualified consultants acceptable to the Commissioner to prepare the documents and implement or oversee such study. Not later than one hundred eighty (180) days prior to planned commencement of blasting, the Permittee shall submit for the Commissioner's review and written approval a scope of study that has been prepared in consultation with DEP Inland Fisheries Division staff. The results of such study must be submitted for the Commissioner's review and written approval no later

than six (6) months following the completion of blasting associated activities authorized herein;

C. the Permittee shall notify the DEP-Fisheries Division in writing a minimum of two (2) weeks before blasting is proposed to commence. Such notification shall include a contact person and the dates, times, and locations of proposed blasting;

If the Permittee chooses to utilize hoe ramming to remove the existing piers, then the following conditions shall apply:

D. hoe ramming is prohibited between April 1st and June 30th, inclusive, of any year in order to protect anadromous fish during the spawning period. The Commissioner may consider a written request from the Permittee to modify the closure period. Such request must describe how impact to anadromous fish will be minimized. In particular, the request shall describe the hoe rams that are proposed to be employed and evaluate, either by field study or literature review, the underwater sound levels such hoe rams may produce relative to levels that are harmful to fish;

E. if the applicant demonstrates that the hoe rams to be employed are unlikely to produce harmful sound levels, then hoe ramming may be allowed during the period April 1st and June 30th, inclusive, but only during a period of 12 consecutive hours during any 24 hour period. There are to be no two consecutive 12 hour periods of hoe ramming;

F. the Commissioner may consider a written request from the Permittee to modify the 12 hour closure period. Such request must include the results of a field study or literature study that demonstrates the underwater acoustics produced by the proposed hoe rams will not interfere with the migration of anadromous fish; and

G. if the Commissioner approves hoe ramming activities between April 1st and June 30th, the Permittee may be required to conduct an underwater acoustic monitoring study. The purpose of the study will be to measure and characterize the underwater acoustics generated by the hoe rams and to evaluate, based on existing literature, such acoustics relative to levels that may be harmful to fish or deter fish migration. The Permittee shall retain one or more qualified consultants acceptable to the Commissioner to prepare the documents and implement or oversee such study. The study shall be developed in consultation with the DEP Inland Fisheries Division staff. Not later than one hundred eighty (180) days prior to planned commencement of hoe ramming, the Permittee shall submit for the Commissioner's review and written approval a scope of study for implementing such monitoring study. The results of such study must be submitted for the Commissioner's review and written approval no later than six (6) months following the completion of hoe ramming associated activities authorized herein.

14. The Permittee shall complete the tidal wetland mitigation work described in the <u>SCOPE OF AUTHORIZATION</u> paragraph 2., above, prior to the completion of the construction of the bridge.

15. The Permittee shall only use plant species that are native to Long Island Sound to plant the tidal wetland mitigation areas described in the SCOPE OF AUTHORIZATION paragraph 2. Prior to the initiation of work to complete these activities, the Permittee shall provide to the Commissioner the name and address of the company where the plant source material utilized to complete this work will be secured.

16. The Permittee shall comply with the Monitoring Report and the Maintenance Report as described on sheet MON1 of the plans attached hereto for a minimum of two growing seasons following the completion of work The Permittee shall complete the Monitoring Report and Maintenance Report for the tidal wetland mitigation areas described in the SCOPE OF AUTHORIZATION paragraph 2., above.

17. Prior to the completion of the work authorized herein, the Permittee shall install along the western side of the project site pre-cast infiltration chambers and the six hydrodynamic separators, four located just prior to the infiltration chambers and two located just prior to the discharge into Ferry Creek as shown on Figures nos. 4, 5, 7, 39, 40, EN-1 and EN-2 of the plans attached hereto, to improve the water quality of discharged stormwater into the harbor. The hydrodynamic separators shall be obtained from an approved vendor on the DOT approved products list. In addition, during the first year of operation of the infiltration system and hydrodynamic separators, the Permittee shall submit for review of the Commissioner quarterly inspection reports that document site observations, necessary modifications or repairs, and the volume of sediment removed.

18. Prior to the completion of the work authorized herein, the Permittee shall install wet ponds No.1, 2 and 3 along the project site as shown on Figures nos. 2, 5, 6, 8, 46 and 48 of the plans attached hereto. In addition, during the first year of operation of the detention basins, the Permittee shall submit for review of the Commissioner quarterly inspection reports that document site observations including the presence of mosquitoes during the breeding season, necessary modifications or repairs, methods to address any mosquito breeding concerns, and the volume of sediment removed.

19. The Permittee shall obtain all necessary permits from the DEP Bureau of Water Management for temporary water discharges during construction into the Housatonic River in accordance with sections 22a-430 and 22a-430(b) of the CGS.

20. All temporary trestles authorized herein shall be removed within six (6) months from the completion of the bridge construction and demolition work. Removal shall consist of pulling the piles out entirely. Removal of the trestles shall be conducted in the reverse order of the installation process, to eliminate the staging of construction equipment within regulated areas

21. Any area disturbed by the work authorized herein including areas affected by the placement of temporary fill, shall be restored to their pre-work conditions including reestablishing all original contours and revegetating with suitable vegetation as required in SPECIAL TERMS AND CONDTIONS paragraph 15., above.

22. The Permittee shall not store materials that are either hazardous or prone to erosion, or clean or repair any machinery within 8 meters of a tidal wetland or tidal watercourse.

23. A complete copy of this permit, including its drawings, special conditions, and any amendments, shall be maintained at the work site whenever work is being performed. The Permittee shall assure that all contractors, subcontractors and other personnel performing the authorized work are aware of and understand all permit terms and conditions.

24. Dragging the bottom with a spoil barge, scow, vessel, beam or similar equipment outside of the area authorized by this permit to be dredged or excavated is prohibited.

25. Side casting or in-water rehandling of excavated material is prohibited.

26. Scows or barges shall be loaded and navigated in a manner that prevents spillage and washout of dredged or excavated material. Any incidents shall be immediately reported to the Commissioner.

GENERAL TERMS AND CONDITIONS

1. All work authorized by this permit shall be completed within eight years from date of issuance of this permit ("work completion date") in accordance with all conditions of this permit and any other applicable law.

    a. The Permittee may request a two-year extension of the work completion date. Such request shall be in writing and shall be submitted to the Commissioner at least 30 days prior to said work completion date. Such request shall describe the work done to date, work which still needs to be completed and the reason for such extension. The Commissioner shall grant or deny such request in her sole discretion.

    b. Any work authorized herein conducted after said work completion date or any authorized one year extension thereof is a violation of this permit and may subject the Permittee to enforcement action, including penalties, as provided by law.

2. Not later than two weeks prior to the commencement of any work authorized herein, the Permittee shall submit to the Commissioner, on the form attached hereto as Appendix A, the name(s) and address(es) of any contractor(s) employed to conduct such work and the expected date for commencement and completion of such work.

3. On or before (a) 90 days after completion of the work authorized herein, or (b) upon expiration of the work completion date or any authorized one year extension thereof, whichever is earlier, the Permittee shall submit to the Commissioner "as built" plans prepared by a licensed engineer, licensed surveyor or licensed architect, as applicable, of the work area showing all contours, bathymetries, tidal datums and structures.

4. In conducting the work authorized herein, the Permittee shall not deviate from the attached plans, as may be modified by this permit. The Permittee shall not make de minimis changes from said plans without prior written approval of the Commissioner.

5. The Permittee shall maintain all structures or other work authorized herein in good condition. Any such maintenance shall be conducted in accordance with applicable law including, but not limited to, CGS sections 22a-28 through 22a-35 and CGS sections 22a-359 through 22a-363f.

6. Prior to the commencement of any work authorized hereunder, the Permittee shall cause a copy of this permit to be given to any contractor(s) employed to conduct such work. At the work area the Permittee shall, whenever work is being performed, make available for inspection a copy of this permit and the final plans for the work authorized herein.

7. The Permittee shall notify the Commissioner in writing of the commencement of any work and completion of all work authorized herein no later than three days prior to the commencement of such work and no later than seven days after the completion of such work.

8. The Permittee shall dispose of aquatic sediments in accordance with the terms and conditions of this permit. All waste material generated by the performance of the work authorized herein shall be disposed of by the Permittee at an upland site approved for the disposal of such waste material, as applicable.

9. In undertaking the work authorized hereunder, the Permittee shall not cause or allow pollution of wetlands or watercourses, including pollution resulting from sedimentation and erosion. For purposes of this permit, "pollution" means "pollution" as that term is defined by CGS section 22a-423.

10. Upon completion of any work authorized herein, the Permittee shall stabilize all areas impacted by construction, or used as a staging area or accessway in connection with such work.

11. Any document required to be submitted to the Commissioner under this permit or any contact required to be made with the Commissioner shall, unless otherwise specified in writing by the Commissioner, be directed to:

    Permit Section
    Office of Long Island Sound Programs
    Department of Environmental Protection
    79 Elm Street
    Hartford, Connecticut 06106-5127
    (860) 424-3034
    Fax # (860) 424-4054

12. The date of submission to the Commissioner of any document required by this permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date

three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this permit means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or a Connecticut or federal holiday shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or a Connecticut or federal holiday.

13. The work specified in the SCOPE OF AUTHORIZATION is authorized solely for the purpose set out in this permit. No change in the purpose or use of the authorization work or facilities as set forth in this permit may occur without the prior written authorization of the Commissioner. The Permittee shall, prior to undertaking or allowing any change in use or purpose from that which is authorized by this permit, request authorization from the Commissioner for such change. Said request shall be in writing and shall describe the proposed change and the reason for the change.

14. This permit may be revoked, suspended, or modified in accordance with applicable law.

15. This permit is not transferable without prior written authorization of the Commissioner. A request to transfer a permit shall be submitted in writing and shall describe the proposed transfer and the reason for such transfer. The Permittee's obligations under this permit shall not be affected by the passage of title to the work area to any other person or municipality until such time as a transfer is authorized by the Commissioner.

16. The Permittee shall allow any representative of the Commissioner to inspect the work authorized herein at reasonable times to ensure that it is being or has been accomplished in accordance with the terms and conditions of this permit.

17. In granting this permit, the Commissioner has relied on representations of the Permittee, including information and data provided in support of the Permittee's application. Neither the Permittee's representations nor the issuance of this permit shall constitute an assurance by the Commissioner as to the structural integrity, the engineering feasibility or the efficacy of such design.

18. In the event that the Permittee becomes aware that he did not or may not comply, or did not or may not comply on time, with any provision of this permit or of any document required hereunder, the Permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the Permittee shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the Permittee shall comply with any dates which may be approved in writing by the Commissioner. Notification by the Permittee shall not excuse noncompliance or delay and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically stated by the Commissioner in writing.

19. In evaluating the application for this permit the Commissioner has relied on information and data provided by the Permittee and on the Permittee's representations concerning site conditions, design specifications and the proposed work authorized herein, including but not limited to representations concerning the commercial, public or private nature of the work or structures authorized herein, the water-dependency of said work or structures, its availability for access by the general public, and the ownership of regulated structures or filled areas. If such information proves to be false, deceptive, incomplete or inaccurate, this permit may be modified, suspended or revoked, and any unauthorized activities may be subject to enforcement action.

20. The Permittee may not conduct work waterward of the high tide line or in tidal wetlands at this permit site other than the work authorized herein, unless otherwise authorized by the Commissioner pursuant to CGS section 22a-359 et. seq. and/or CGS section 22a-32 et. seq.

21. The issuance of this permit does not relieve the Permittee of his obligations to obtain any other approvals required by applicable federal, state and local law.

22. Any document, including but not limited to any notice, which is required to be submitted to the Commissioner under this permit shall be signed by the Permittee and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments and certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief, and I understand that any false statement made in this document or its attachments may be punishable as a criminal offense."

23. This permit is subject to and does not derogate any present or future property rights or powers of the State of Connecticut, and conveys no property rights in real estate or material nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the property or activity affected hereby.

Issued on 8/18, 2008

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Gina McCarthy
Commissioner

Permit Application No. 200600415-KZ

OFFICE OF LONG ISLAND SOUND PROGRAMS

APPENDIX A

TO: **Permit Section**
Department of Environmental Protection
Office of Long Island Sound Programs
79 Elm Street
Hartford, CT 06106-5127

PERMITTEE: CT DOT
Edgar Hurle
P.O. Box 316546
Newington, CT 06131-7546

Permit No: 200600415-KZ, Milford/Stratford

CONTRACTOR 1: _____

Address: _____

_____

Telephone #: _____

CONTRACTOR 2: _____

Address: _____

_____

Telephone #: _____

CONTRACTOR 3: _____

Address: _____

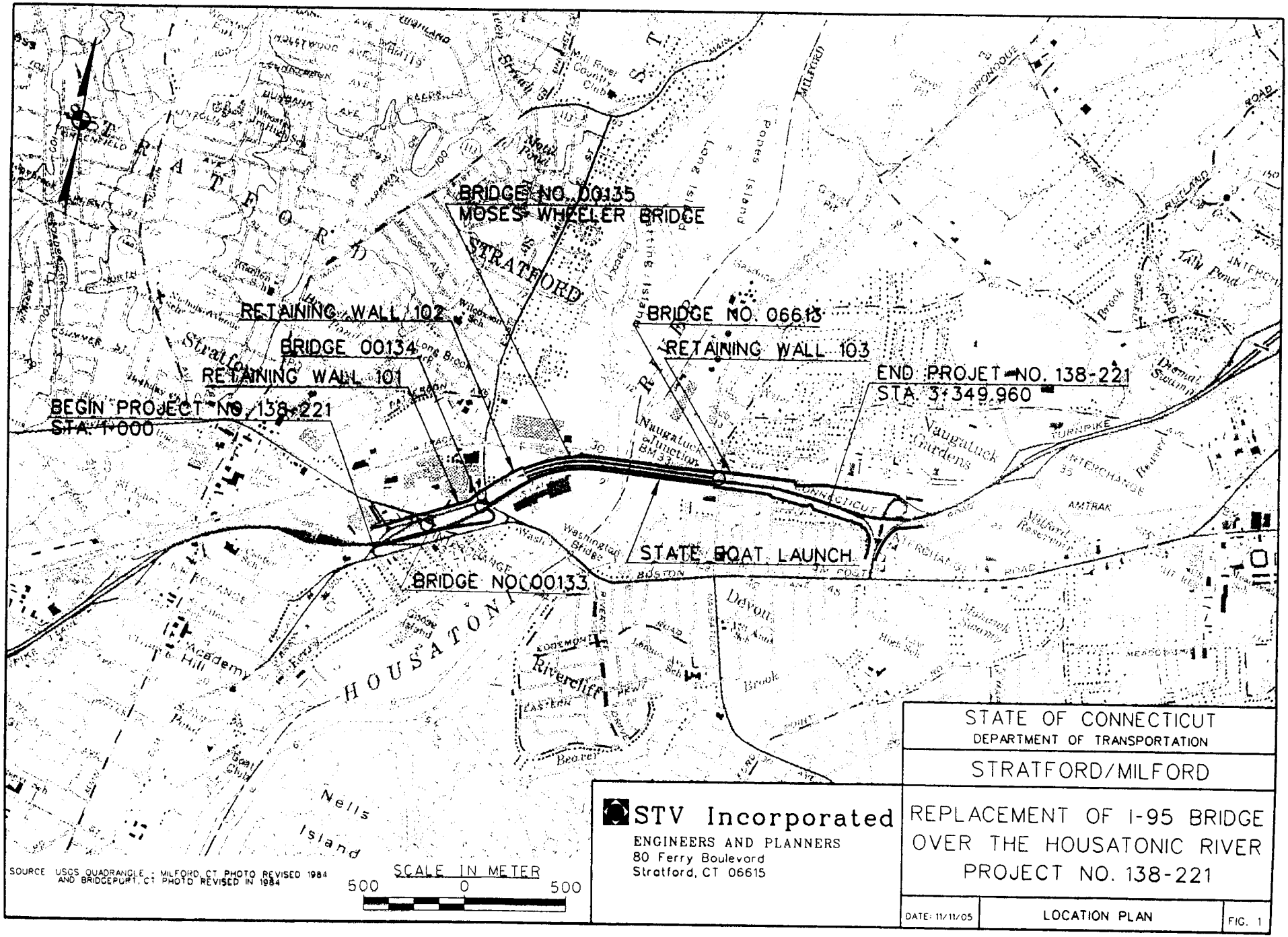
_____

Telephone #: _____

EXPECTED DATE OF COMMENCEMENT OF WORK: _____

EXPECTED DATE OF COMPLETION OF WORK: _____

PERMITTEE: _____
(signature) (date)



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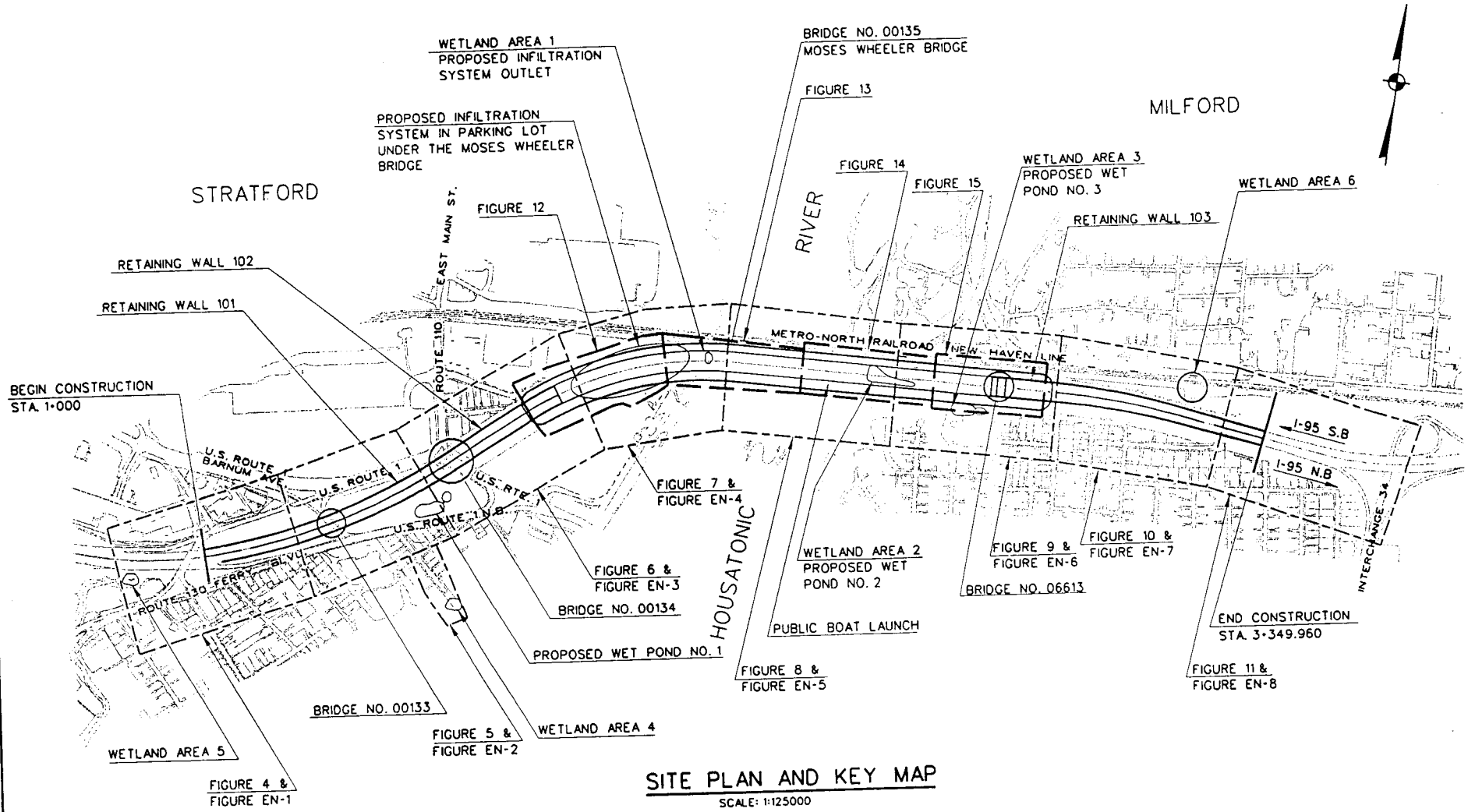
Stratford, CT 06615

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

STRATFORD/MILFORD

REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	LOCATION PLAN	FIG. 1



SITE PLAN AND KEY MAP

SCALE: 1:125000

HIGHWAY FIGURE BOUNDRY (FIG. 4 TO 11 AND EN-1 TO EN-8)

BRIDGE FIGURE BOUNDRY (FIG. 12 TO 15)

NOTE: ALL STATIONING AND DIMENSIONS ARE IN METERS UNLESS NOTES OTHERWISE

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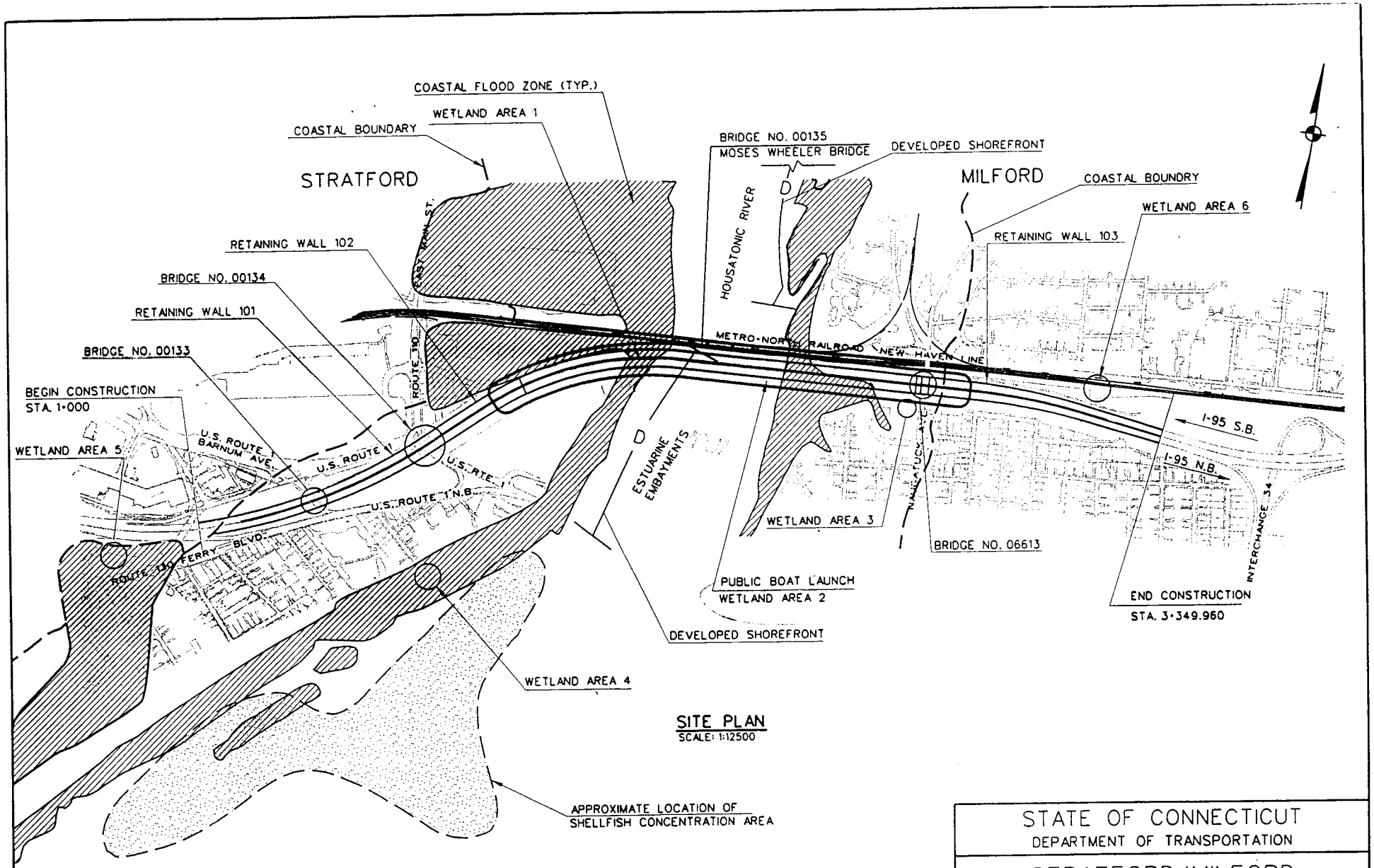
PROJECT NO. 138-221

DATE: 11/11/05	SITE PLAN & KEY MAP	FIG. 2



LIMITS OF COASTAL RESOURCES ARE BASED ON CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION MAP TITLED "COASTAL RESOURCES", DATED 1979, MILFORD, CT QUADRANGLE

LIMITS OF SHELLFISH CONCENTRATION AREA IS BASED ON CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION MAP TITLED "SHELLFISH CONCENTRATION AREAS", DATED 1979, MILFORD, CT QUADRANGLE

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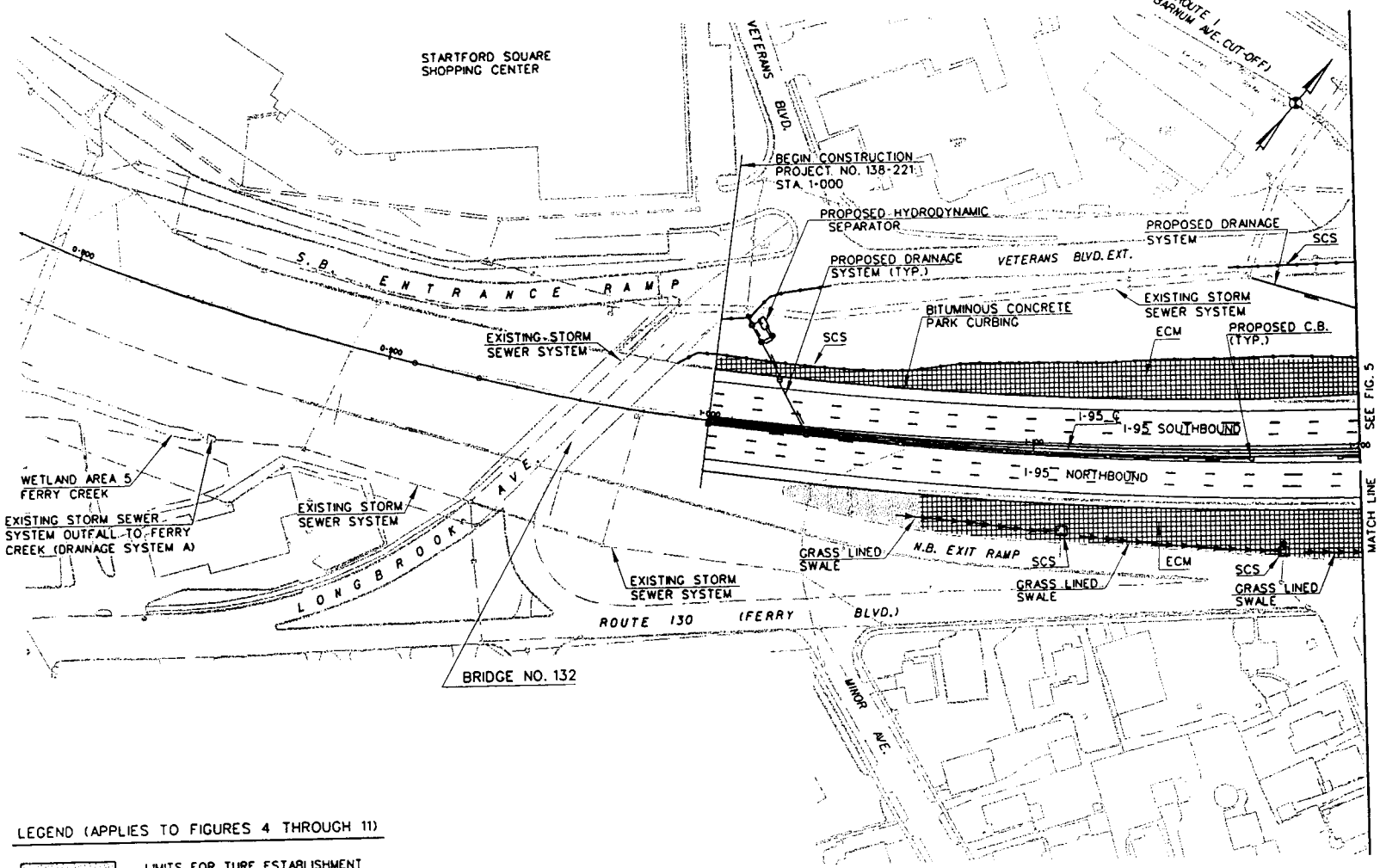
PROJECT NO. 138-221

DATE: 11/11/05	COASTAL RESOURCES	FIG. 3



LEGEND (APPLIES TO FIGURES 4 THROUGH 11)

LIMITS FOR TURF ESTABLISHMENT AND FURNISH AND PLACING SOIL

GRASS LINED DRAINAGE SWALE (UNLESS NOTED OTHERWISE)

SEDIMENTATION CONTROL SYSTEMS (SCS)

SCS — HAY BALES OR GEOTEXTILE FENCE SYSTEM AT TOE OF FILL SLOPE

SCS — HAY BALES OR GEOTEXTILE FENCE AT CATCH BASINS IN A DEPRESSION

SCS — HAY BALES OR GEOTEXTILE FENCE CHECK DAM IN DRAINAGE SWALE

ECM — EROSION CONTROL MATTING (ECM) ON EMBANKMENTS, INCLUDES TOPSOIL AND TURF ESTABLISHMENT

GENERAL HIGHWAY PLAN

SCALE: 1:2000

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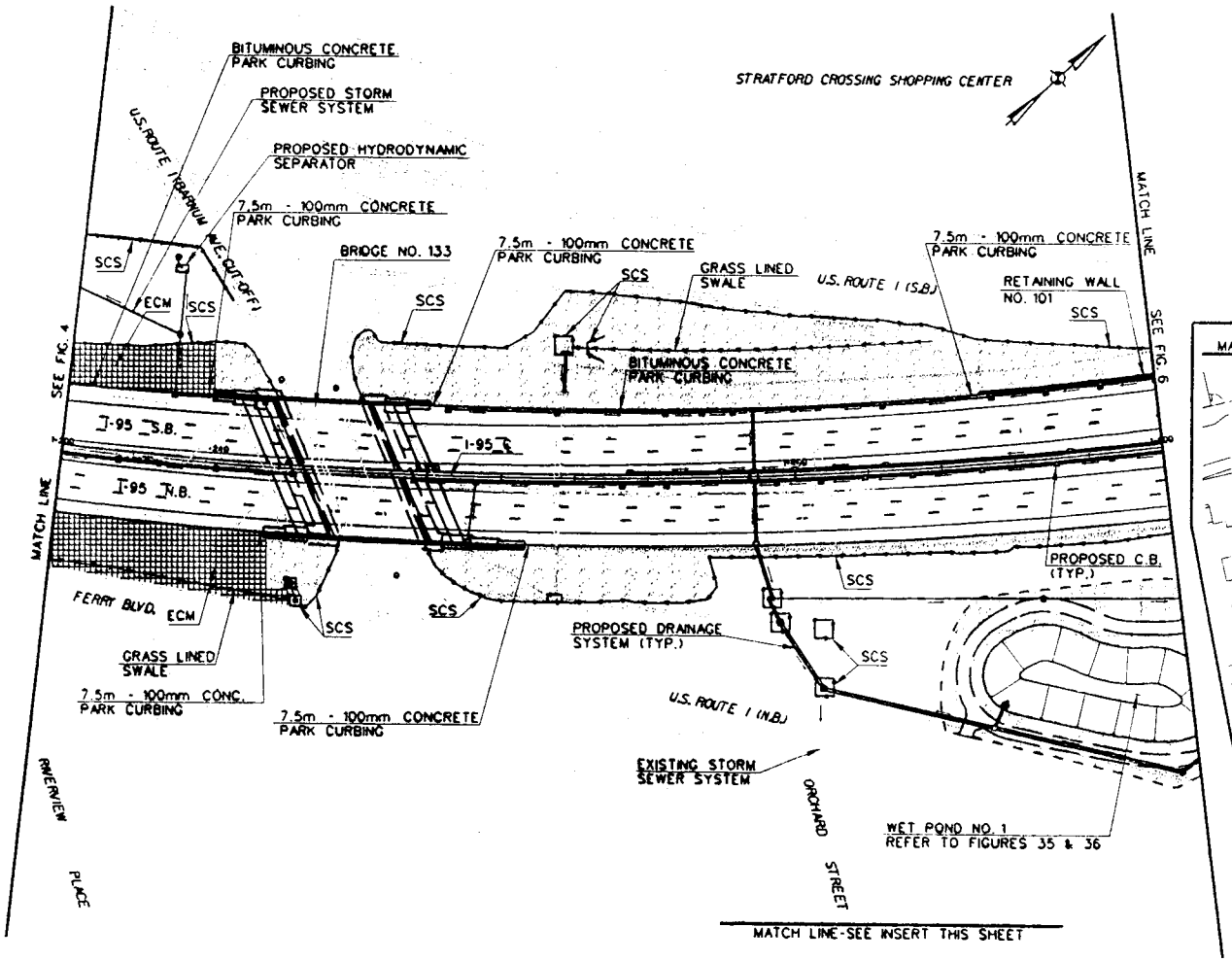
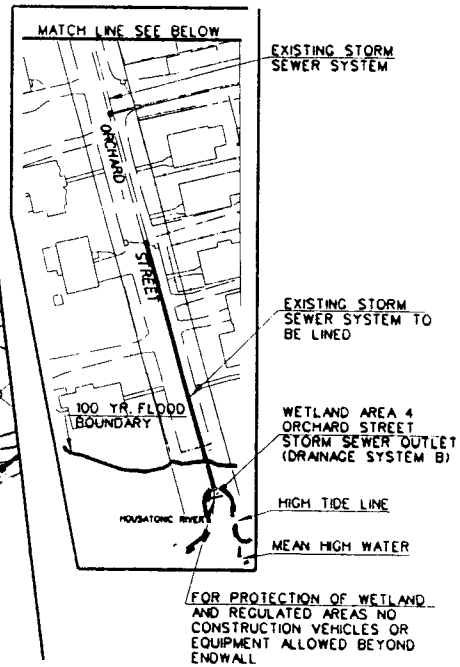
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	HIGHWAY PLAN	FIG. 4





NOTES:

1. PROPOSED WET POND NO. 1 AREA WILL BE USED AS AN EQUIPMENT STAGING AND WASTE STOCKPILE AREA. THE PROPOSED POND WILL BE CONSTRUCTED DURING THE FINAL CONSTRUCTION STAGE OF THE PROJECT.
2. AREAS WITHIN THE STATE RIGHT OF WAY WILL BE USED FOR EQUIPMENT STAGING AND WASTE STOCKPILE AREAS.

GENERAL HIGHWAY PLAN

SCALE: 1:2000

WATER ELEVATIONS DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.15	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND

MHW - - - - - - MEAN HIGH WATER ELEVATION

HTL — — — HIGH TIDE LINE

——— 100 YEAR FLOOD BOUNDARY

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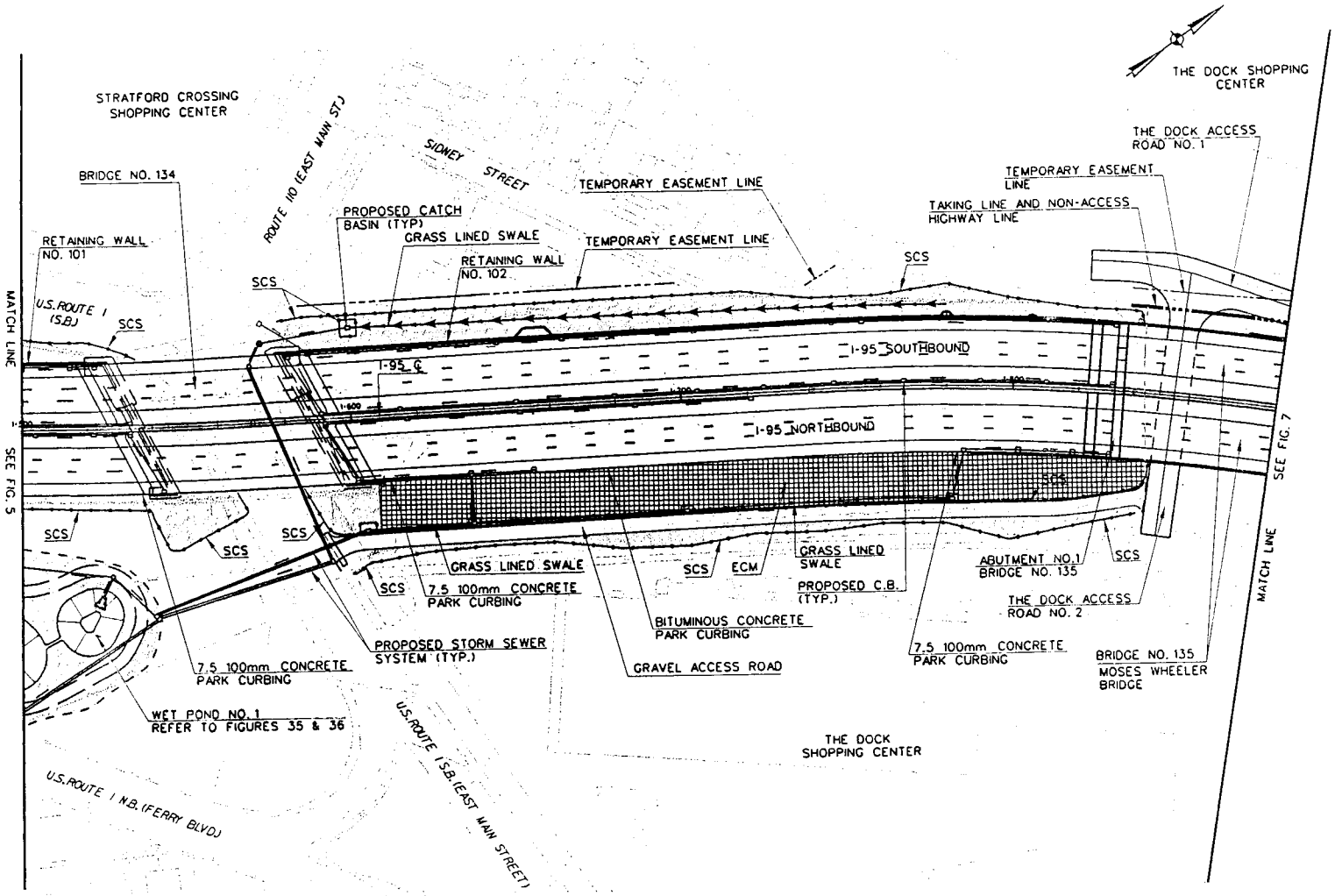
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	HIGHWAY PLAN	FIG. 5



GENERAL HIGHWAY PLAN

SCALE: 1:2000

NOTES:
1. PROPOSED WET POND NO. 1 AREA WILL BE USED AS AN EQUIPMENT STAGING AND WASTE STOCKPILE AREA. THE PROPOSED POND WILL BE CONSTRUCTED DURING THE FINAL CONSTRUCTION STAGE OF THE PROJECT.
2. AREAS WITHIN THE STATE RIGHT OF WAY WILL BE USED FOR EQUIPMENT STAGING AND WASTE STOCKPILE AREAS.

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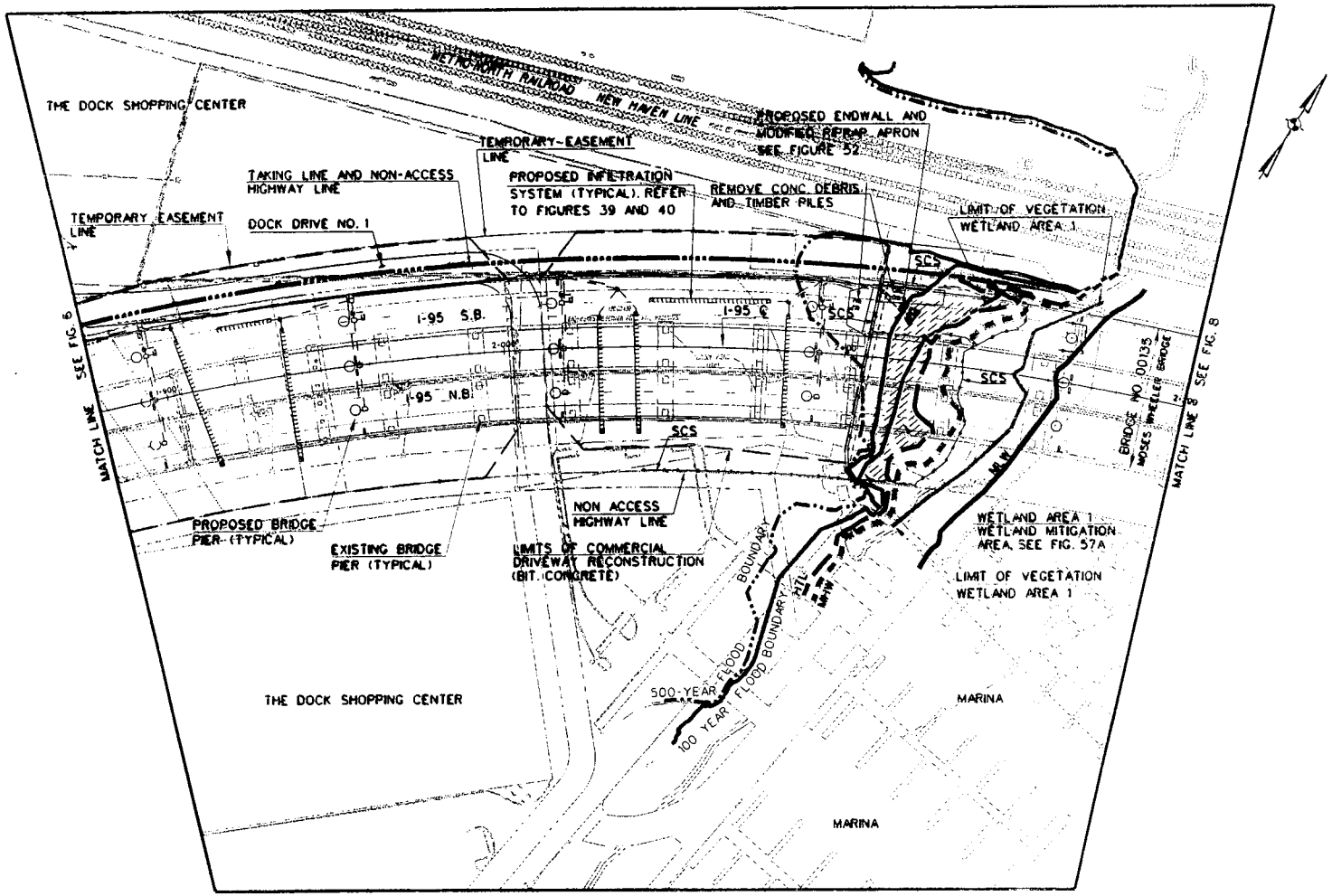
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	HIGHWAY PLAN	FIG. 6



GENERAL HIGHWAY PLAN

SCALE: 1:2000

WATER ELEVATIONS DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.10	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND

- MLW — MEAN LOW WATER ELEVATION
- MHW — MEAN HIGH WATER ELEVATION
- HTL — HIGH TIDE LINE
- WETLAND VEGETATION LIMIT
- 100 YEAR FLOOD BOUNDARY
- 500 YEAR FLOOD BOUNDARY

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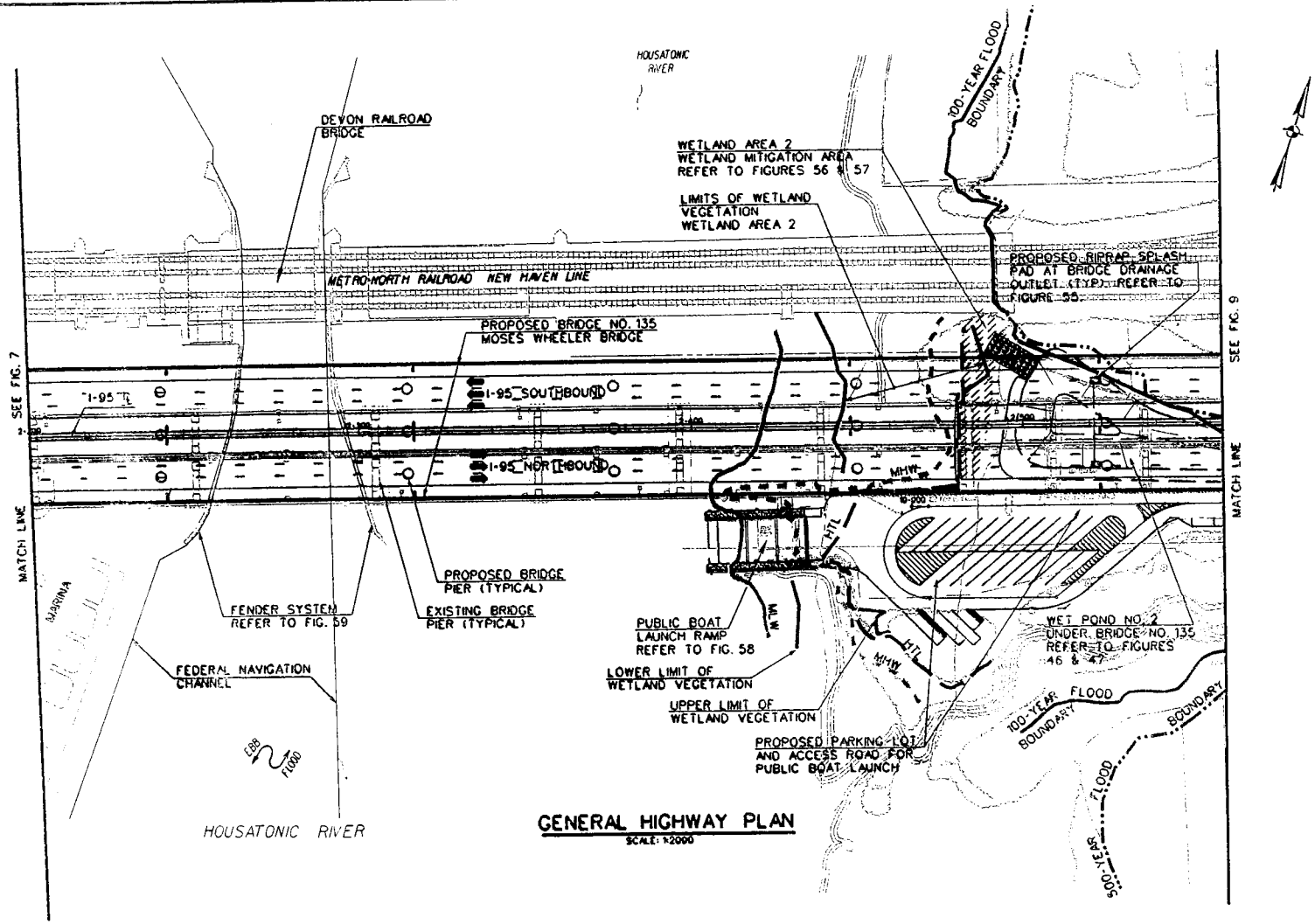
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06	HIGHWAY PLAN	FIG. 7



GENERAL HIGHWAY PLAN

SCALE: 1:2000

WATER ELEVATIONS DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.10	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND

- MLW — MEAN LOW WATER ELEVATION
- MHW — MEAN HIGH WATER ELEVATION
- HTL — HIGH TIDE LINE
- WETLAND VEGETATION LIMIT
- 100 YEAR FLOOD BOUNDARY
- 500 YEAR FLOOD BOUNDARY

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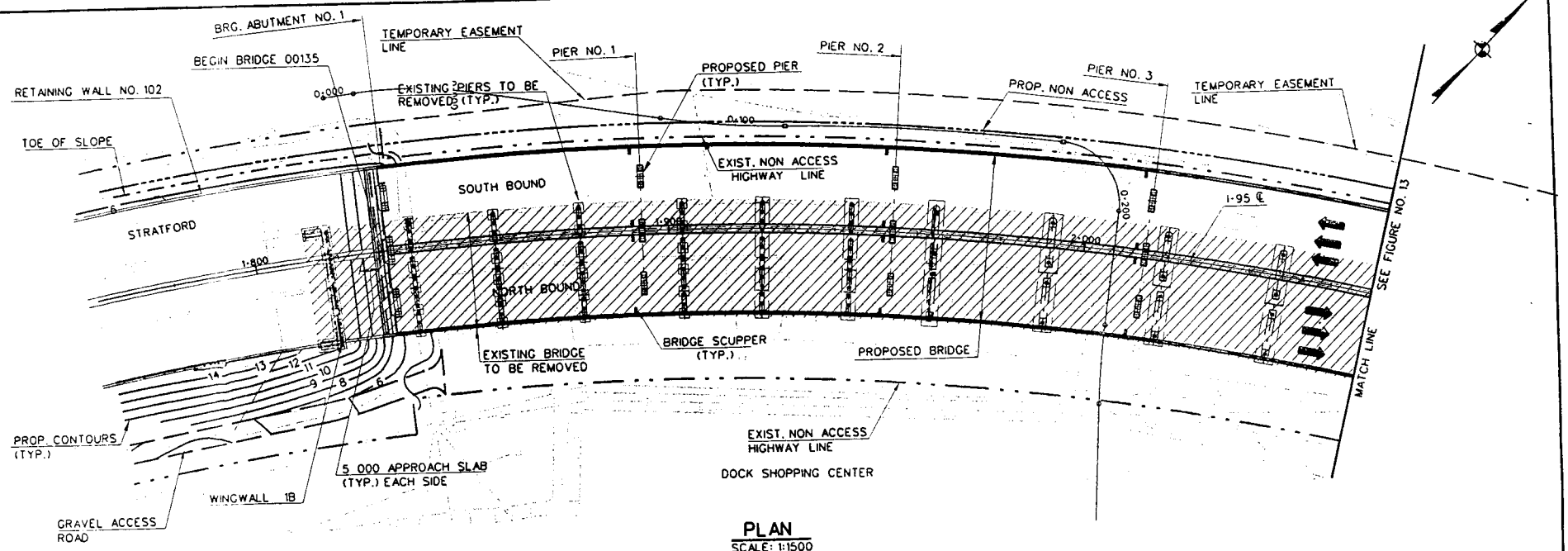
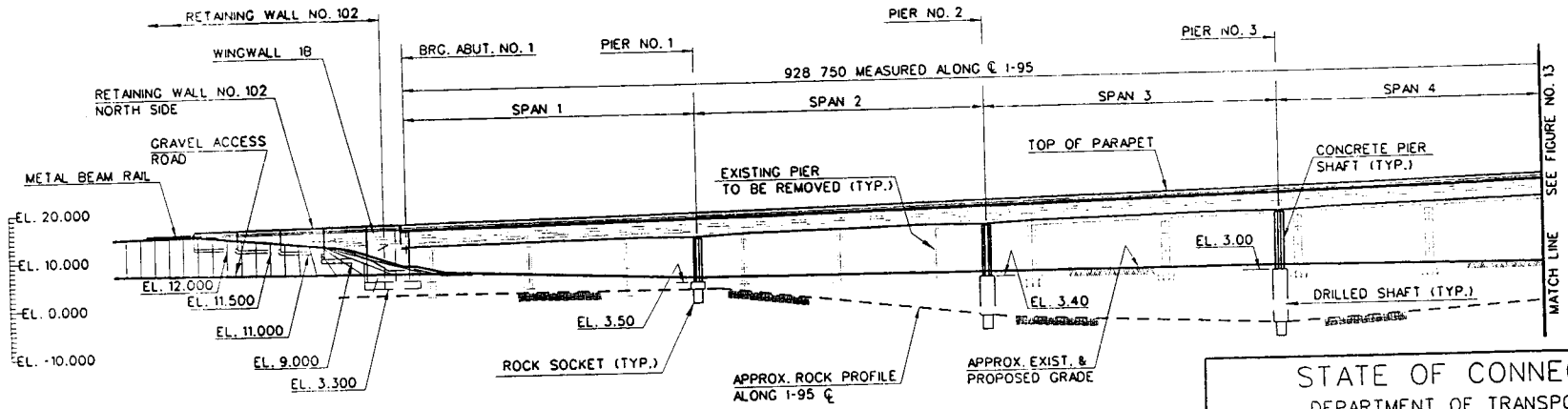
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06	HIGHWAY PLAN	FIG. 8



PLAN

SCALE: 1:1500



ELEVATION - SOUTH FASCIA

SCALE: 1:1500

NOTE:
THIS PORTION OF THE PROJECT IS ABOVE THE 100 YEAR FLOOD ZONE.

LEGEND

LIMITS OF EXISTING MOSES WHEELER BRIDGE

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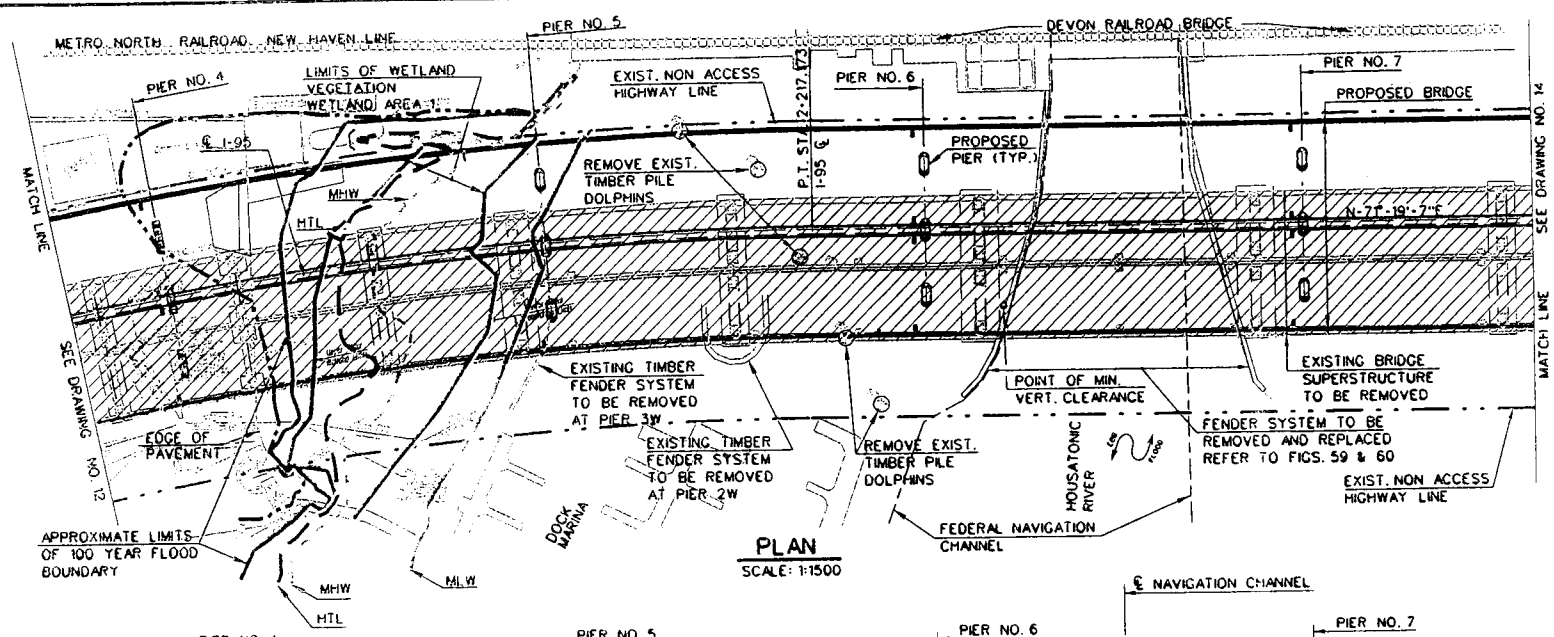
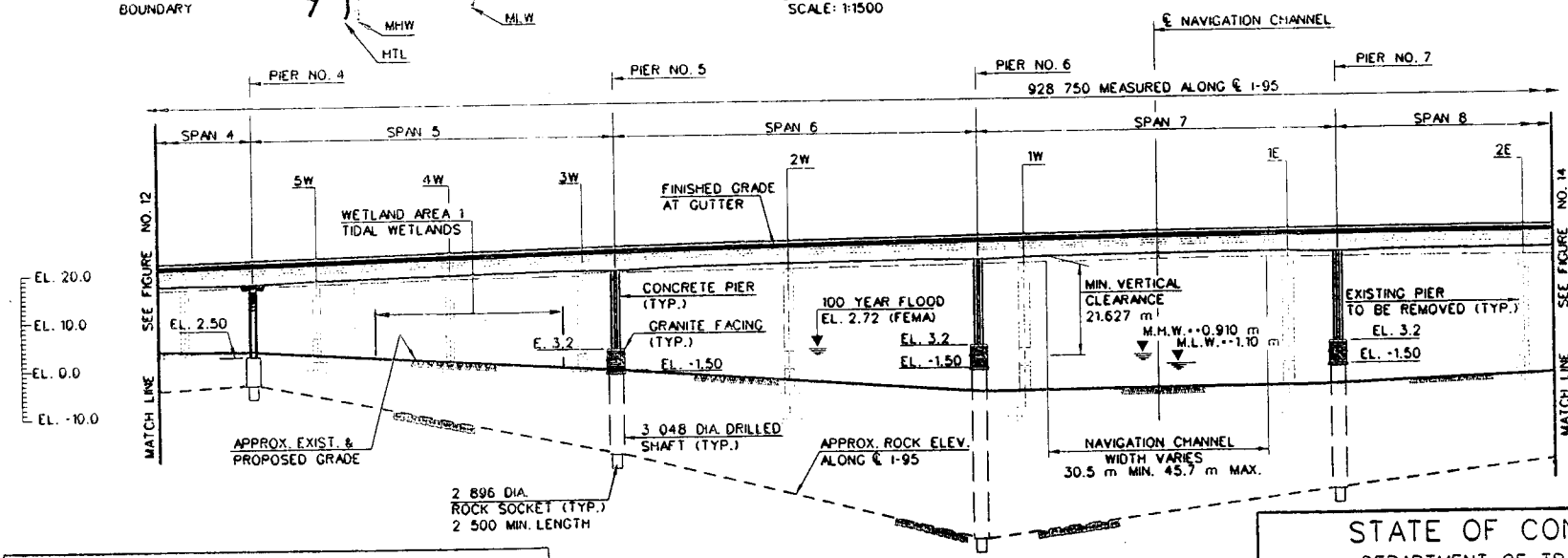
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	GENERAL BRIDGE PLAN	FIG. 12



PLAN
SCALE: 1:1500



ELEVATION - SOUTH FASCIA
SCALE: 1:1500

WATER ELEVATIONS DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.10	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND
- MLW — MEAN LOW WATER ELEVATION
- MHW — MEAN HIGH WATER ELEVATION
- HTL — HIGH TIDE LINE
- WETLAND VEGETATION LIMIT
- 100 YEAR FLOOD BOUNDARY
- 500 YEAR FLOOD BOUNDARY
- LIMITS OF EXISTING MOSES WHEELER BRIDGE

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80 Ferry Boulevard
Stratford, CT 06615

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DEPARTMENT OF TRANSPORTATION

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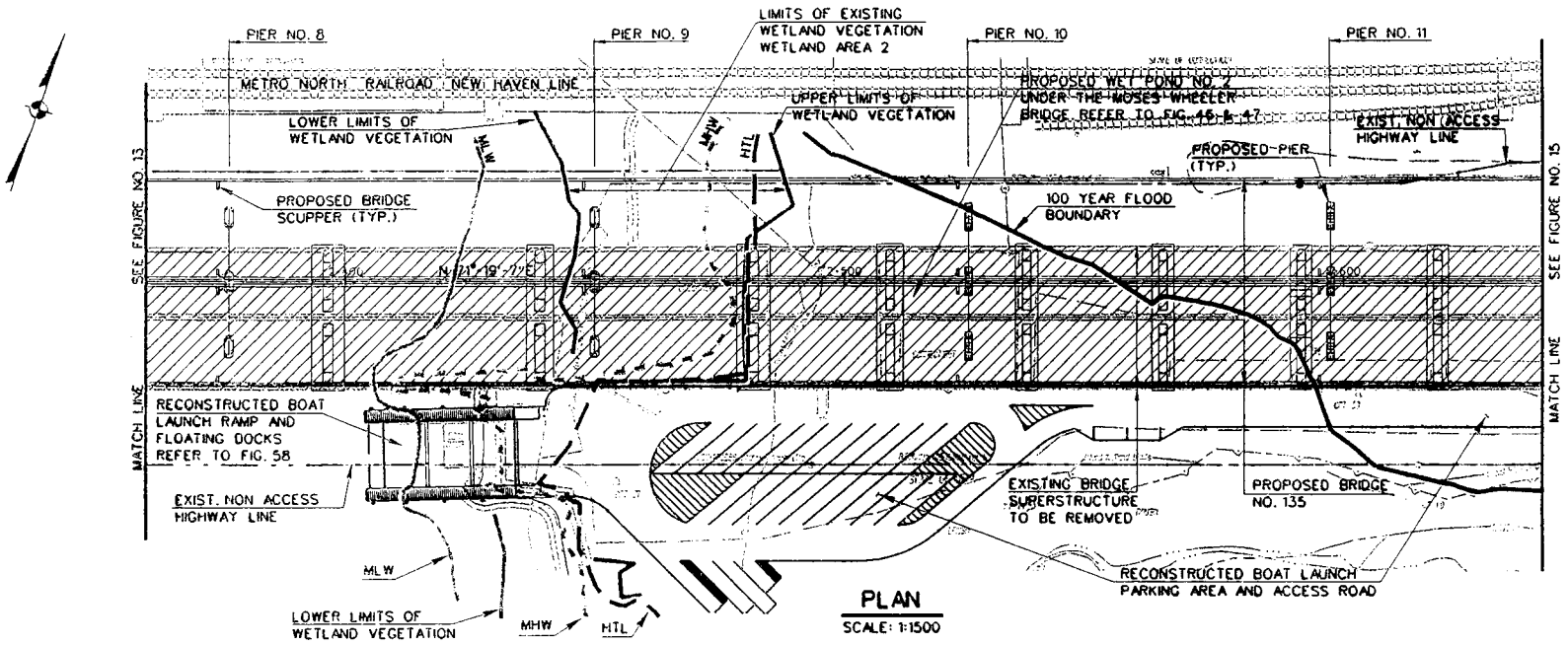
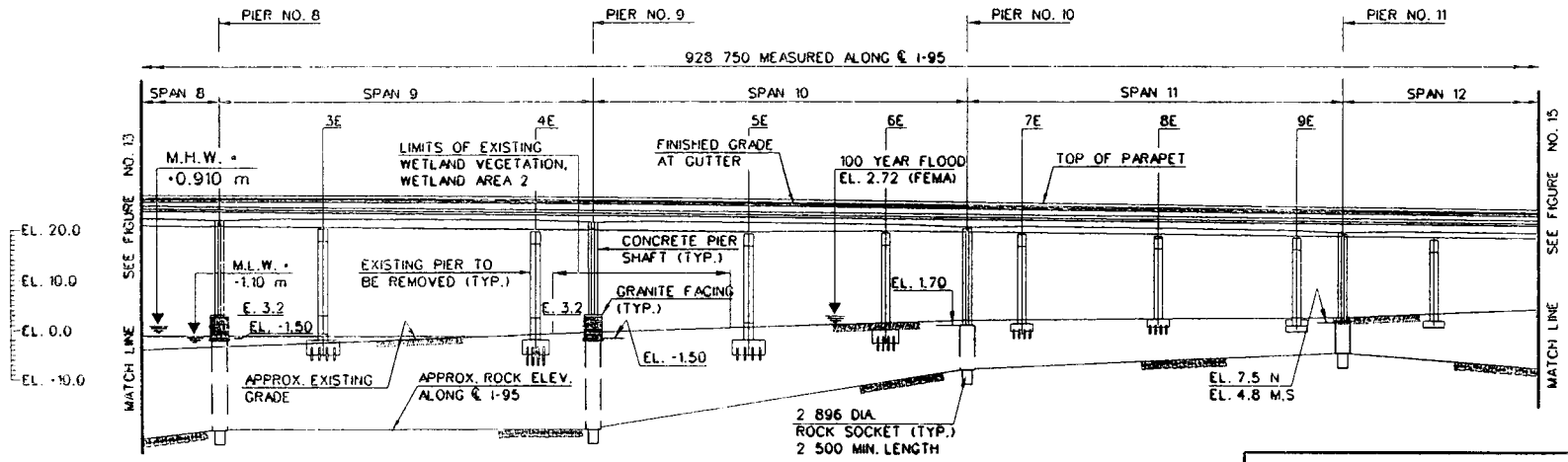
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06 | GENERAL BRIDGE PLAN | FIG. 13



PLAN

SCALE: 1:1500



ELEVATION - SOUTH FASCIA

SCALE: 1:1500

WATER ELEVATIONS

DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.10	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND

- MLW — MEAN LOW WATER ELEVATION
- MHW — MEAN HIGH WATER ELEVATION
- MTL — HIGH TIDE LINE
- WETLAND VEGETATION LIMIT
- 100 YEAR FLOOD BOUNDARY
- 500 YEAR FLOOD BOUNDARY
- LIMITS OF EXISTING MOSES WHEELER BRIDGE

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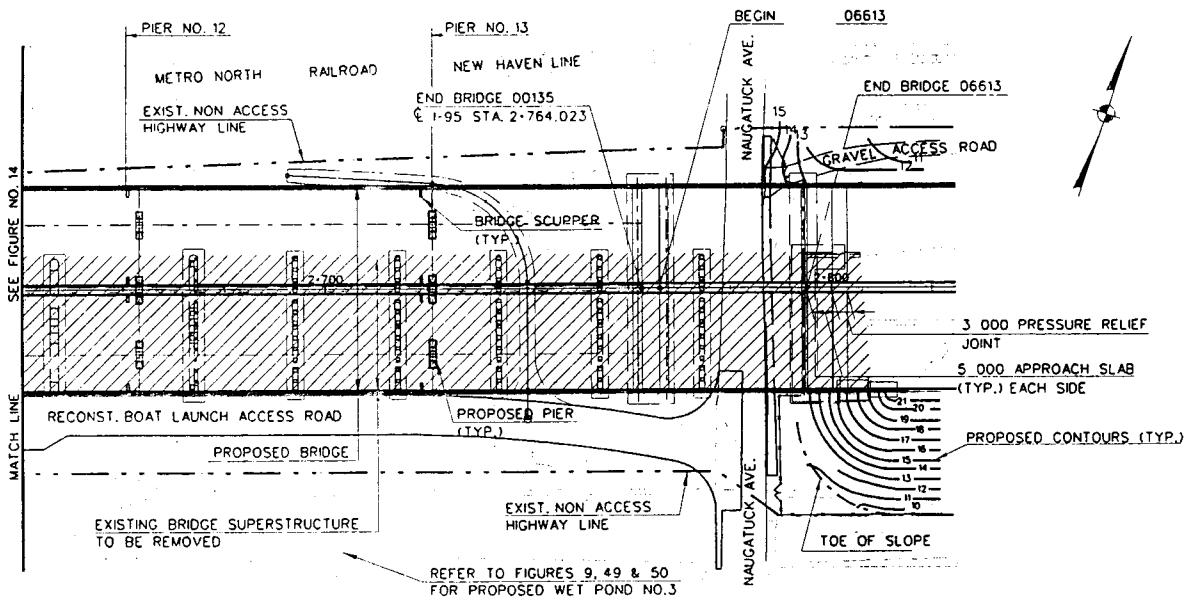
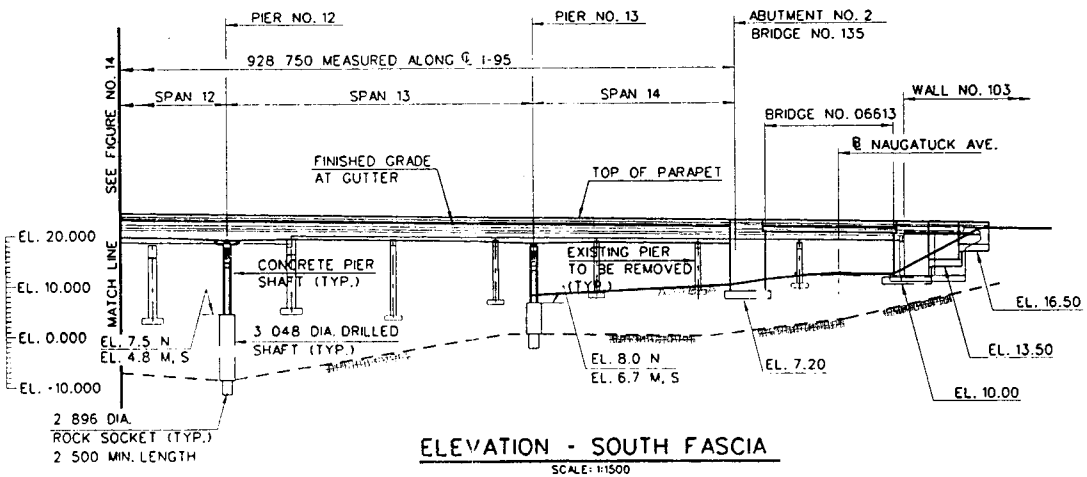
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06 | GENERAL BRIDGE PLAN | FIG. 14



PLAN

SCALE: 1:1500



ELEVATION - SOUTH FASCIA

SCALE: 1:1500

LEGEND

LIMITS OF EXISTING MOSES WHEELER BRIDGE

WATER ELEVATIONS		
DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.15	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

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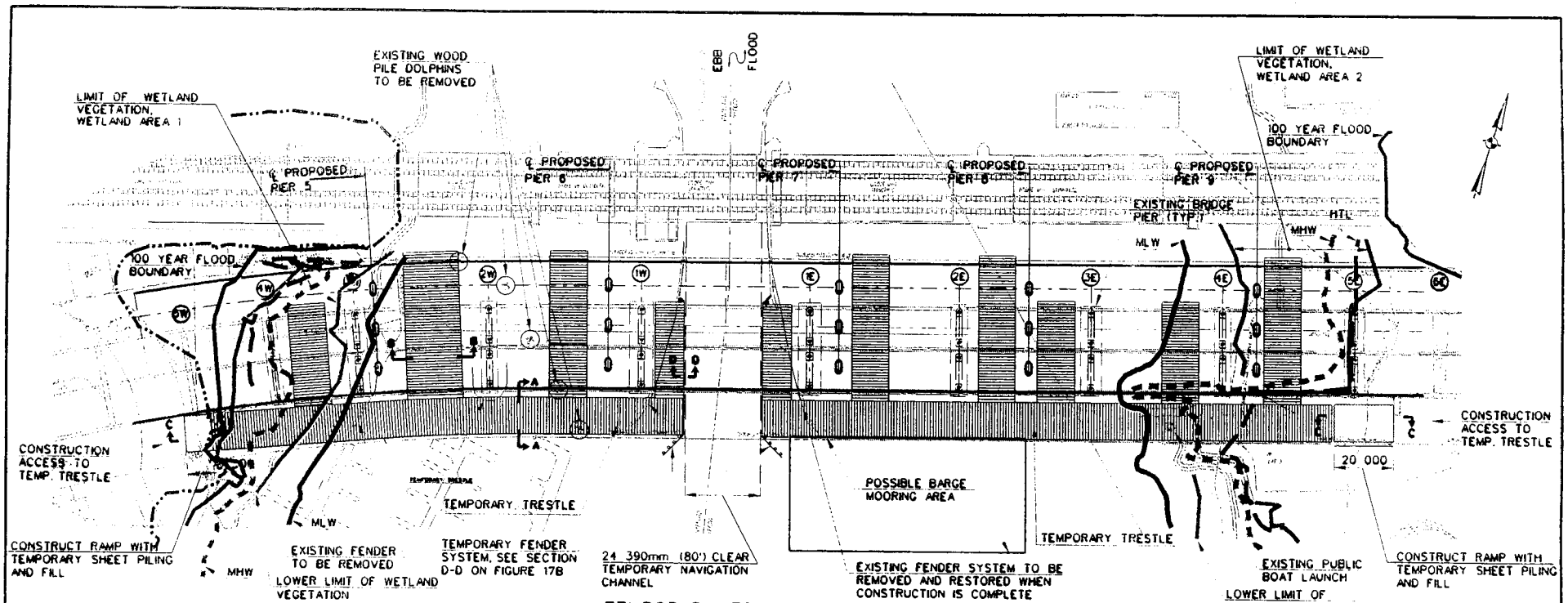
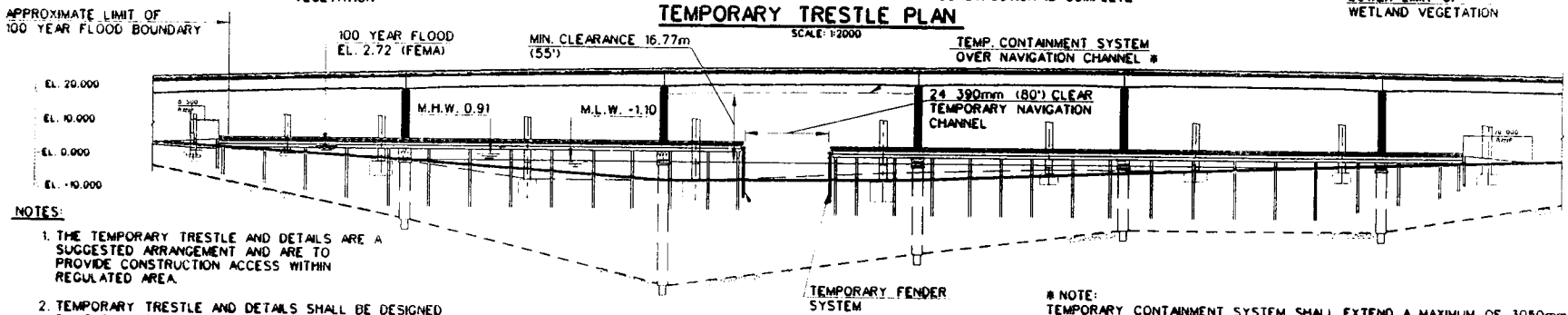
REPLACEMENT OF I-95 BRIDGE
OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05 | GENERAL BRIDGE PLAN | FIG. 15



TEMPORARY TRESTLE PLAN

SCALE: 1:2000



TEMPORARY TRESTLE ELEVATION

SCALE: 1:2000

NOTES:

1. THE TEMPORARY TRESTLE AND DETAILS ARE A SUGGESTED ARRANGEMENT AND ARE TO PROVIDE CONSTRUCTION ACCESS WITHIN REGULATED AREA.
2. TEMPORARY TRESTLE AND DETAILS SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE AASHTO CONSTRUCTION HANDBOOK FOR BRIDGE TEMPORARY WORKS, 1995, TO SUIT HIS MEANS AND METHODS OF CONSTRUCTION.
3. BOTTOM OF TRESTLE ELEVATION SHALL BE AT OR ABOVE ELEV. 2.80 METERS.

* NOTE:
TEMPORARY CONTAINMENT SYSTEM SHALL EXTEND A MAXIMUM OF 3050mm (10') FROM BRIDGE. THE TEMPORARY RESTRICTED HEIGHT OF THE CHANNEL WILL HAVE A MINIMUM CLEARANCE OF 16 770mm (55') DURING CONSTRUCTION.

WATER ELEVATIONS

DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.10	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND

- MLW — MEAN LOW WATER ELEVATION
- MHW — MEAN HIGH WATER ELEVATION
- HTL — HIGH TIDE LINE
- WETLAND VEGETATION LIMIT
- 100 YEAR FLOOD BOUNDARY
- 500 YEAR FLOOD BOUNDARY

(3E) EXISTING BRIDGE PIER NUMBER

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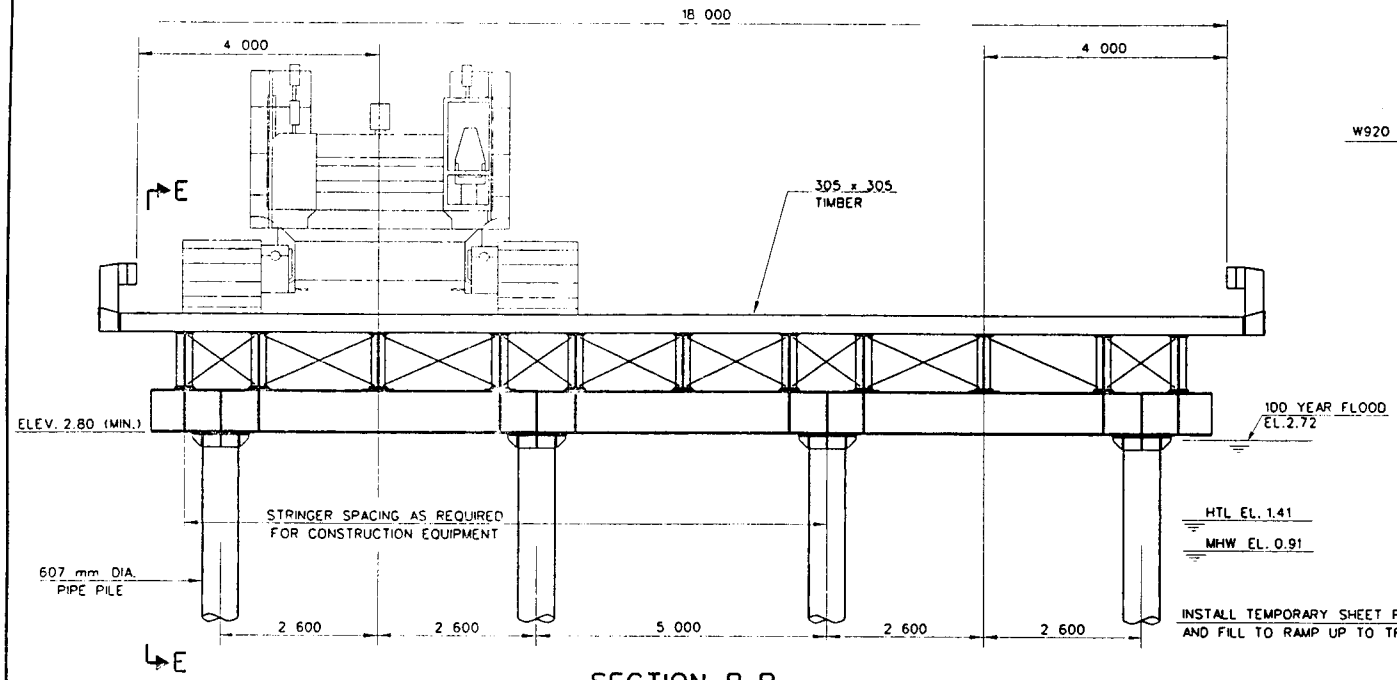
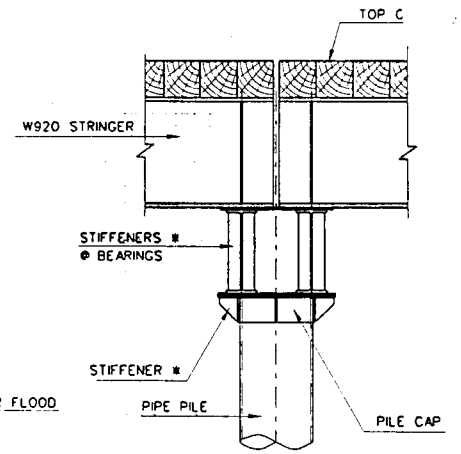
PROJECT NO. 138-221

DATE: 11/22/06	TEMPORARY CONSTRUCTION TRESTLE	FIG. 16



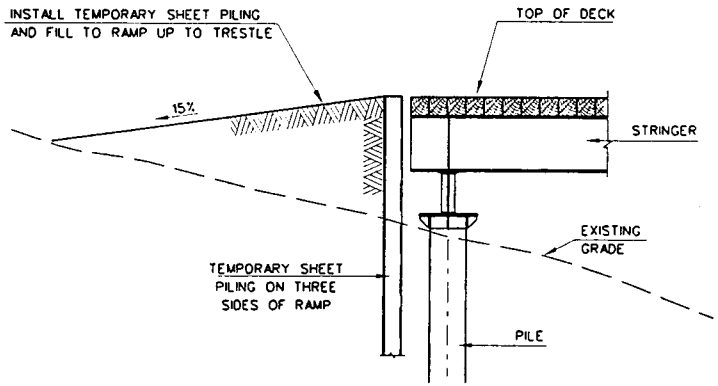
SECTION B-B

SCALE: 1:125



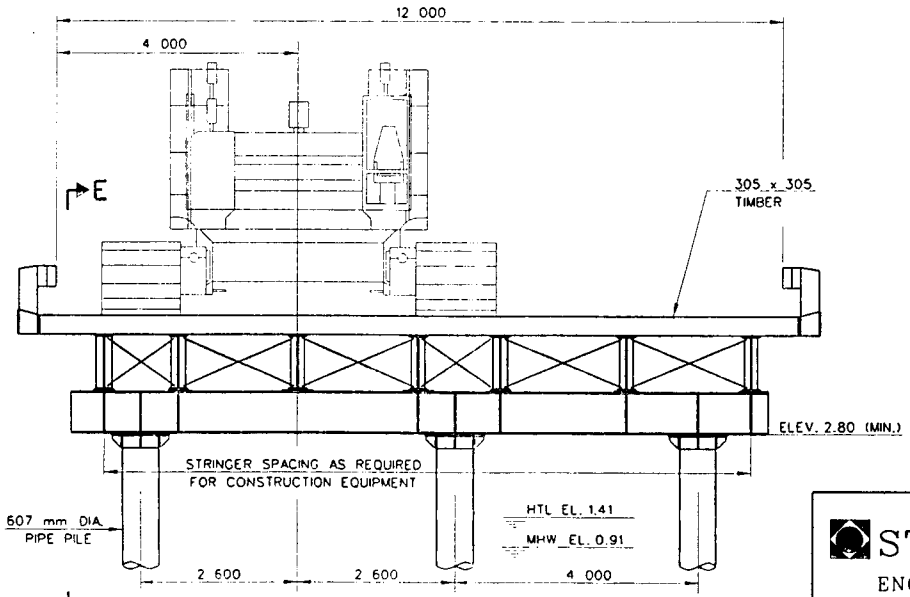
SECTION E-E

NTS



SECTION C-C

NTS



SECTION A-A

SCALE: 1:125

NOTE :
PROPOSED TEMPORARY RAMPS ARE LOCATED ABOVE THE HIGH TIDE LINE. ONLY THE RAMP IN MILFORD IS LOCATED WITHIN THE 100 YEAR FLOOD ZONE.

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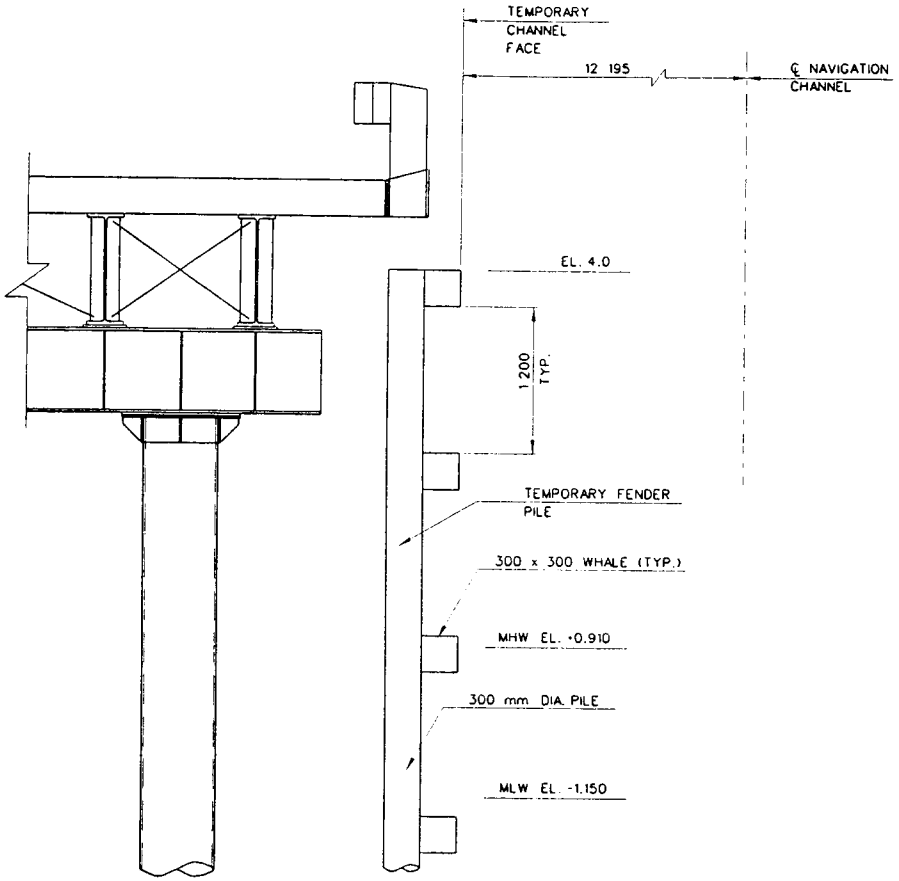
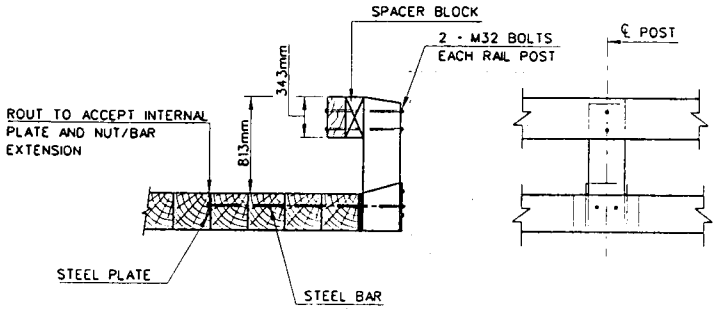
DATE: 11/11/05	TEMPORARY TRESTLE DETAILS	FIG. 17A



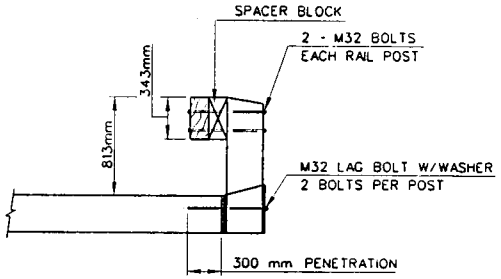
SECTION D-D

SCALE: 1:62.5



SECTION AT ENDS OF TRESTLE

FRONT VIEW



SECTION NORMAL TO ℄

RAILING DETAIL

SCALE: 1:62.5

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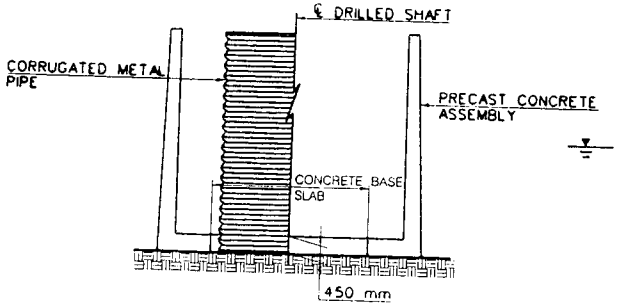
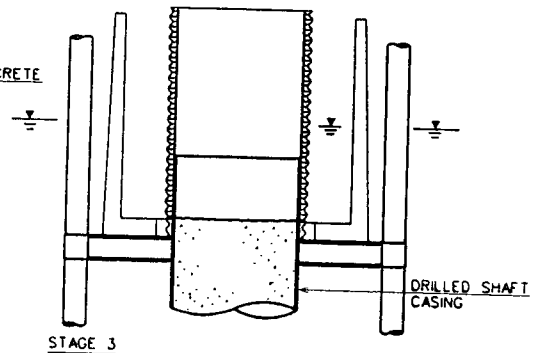
DATE: 11/11/05	TEMPORARY TRESTLE DETAILS	FIG. 17B



STAGE 1

ERECT SIDE WALLS AND CORRUGATED MULTI-PLATE PIPES AT CASTING SITE.
PLACE INSERTS AND REINFORCING, AND CAST CONCRETE BASE SLAB. REMOVE TO PROJECT SITE.

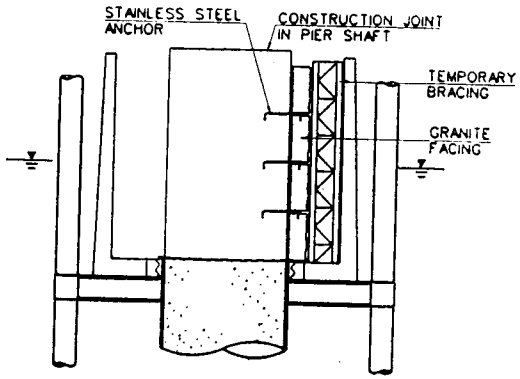
STAGE 1



STAGE 3

WITH THE PRECAST ASSEMBLY AS A TEMPLATE PLACE DRILLED SHAFT CASING THROUGH CORRUGATED PIPE. CONSTRUCT DRILL SHAFT, AND PLACE REINFORCING CAGE AND CONCRETE ACCORDING TO FOUNDATION REQ. TOP OF SHAFT CONCRETE SHOULD NOT EXTEND MORE THAN 75mm ABOVE BASE SLAB.

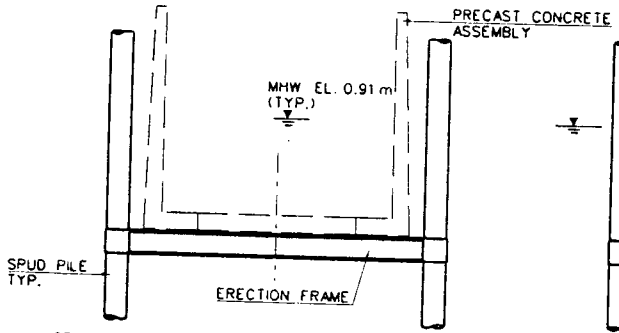
STAGE 3



STAGE 5

DE-WATER ASSEMBLY, CUT AND REMOVE CASING AT TOP OF SHAFT CONCRETE CONSTRUCT GRANITE FACING.

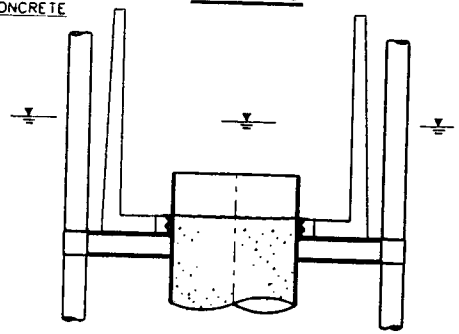
STAGE 5



STAGE 2

1. DRIVE SPUD PILES AND CONSTRUCT ERECTION FRAME.
2. TOW ASSEMBLY TO PIER SITE AND POSITION ABOVE ERECTION FRAME
3. MAINTAINING ACCURATE POSITION, FLOOD ASSEMBLY TO LAND ON ERECTION FRAME. SECURE ASSEMBLY TO ERECTION FRAME.

STAGE 2

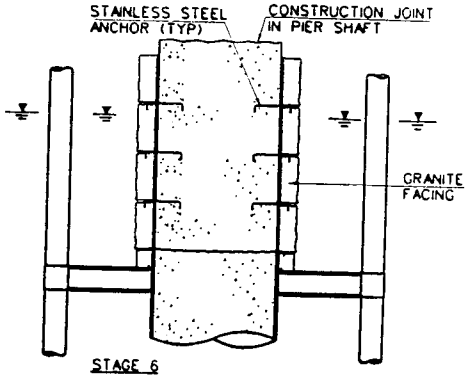


STAGE 4

CUT CORRUGATED PIPE FLUSH WITH TOP OF BASE SLAB. REMOVE REMNANT. PLACE GROUT TO FILL THE ANNULAR SPACE BETWEEN THE CASING AND BOTTOM SLAB OF THE ASSEMBLY. THE CONTRACTOR SHALL HAND PLACE THE GROUT CAREFULLY TO AVOID SPILLAGE TO RIVER.

TEMPORARILY RESTRAIN PRECAST CONCRETE ASSEMBLY TO RESIST ACCIDENTAL UPLIFT.

STAGE 4



STAGE 6

COMPLETE CONSTRUCTION OF GRANITE FACING. FLOOD ASSEMBLY. DISMANTLE AND REMOVE ASSEMBLY REMOVE SPUD PILES AND ERECTION FRAME

STAGE 6

NOT TO SCALE

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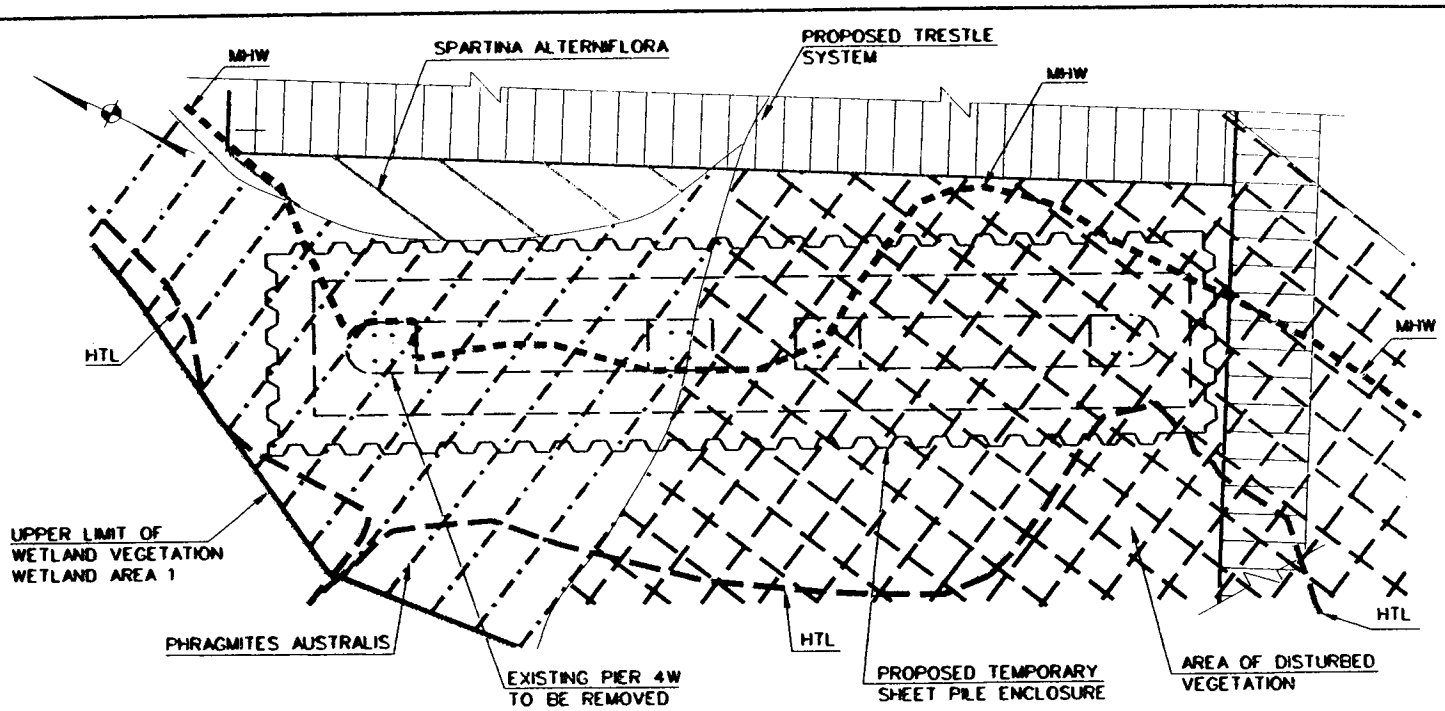
PROJECT NO. 138-221

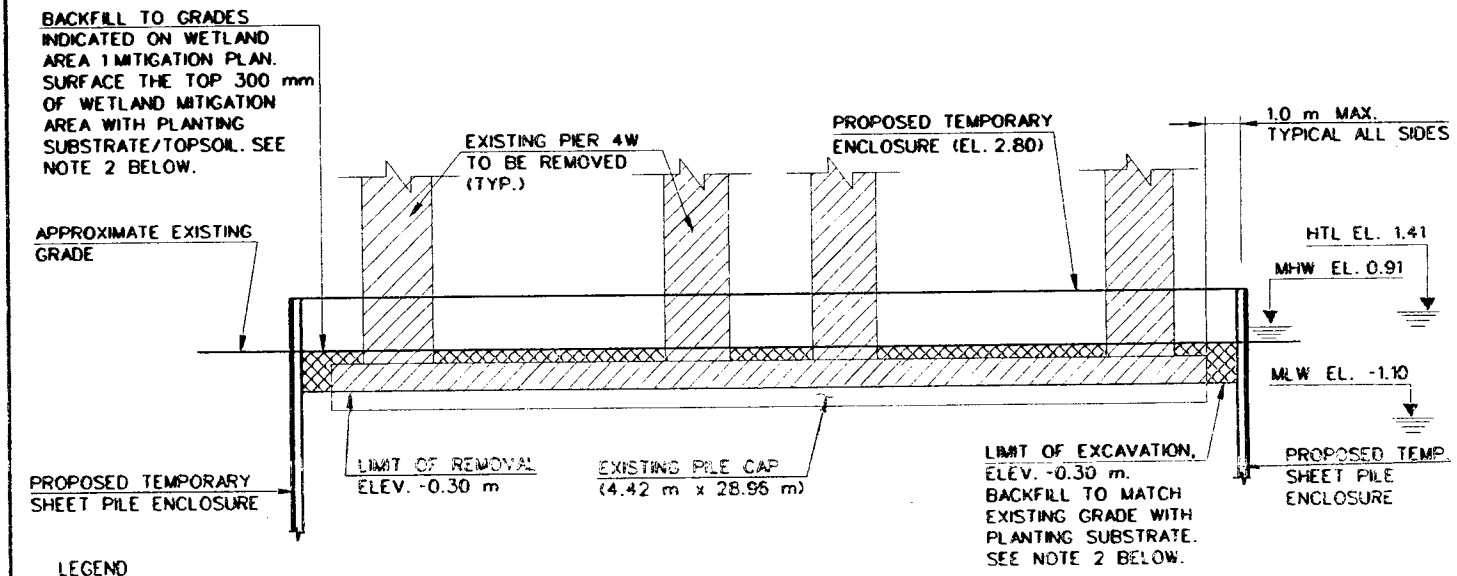
DATE: 11/11/05	TEMPORARY FOUNDATION SEAL DETAIL	FIG. 18



PIER PLAN

SCALE: 1:250

PIER 4W IS LOCATED IN WETLAND MITIGATION AREA IN WETLAND AREA 1. REFER TO FIGURES 57A AND 57B FOR PROPOSED GRADES IN THIS AREA.



LEGEND

- LIMIT OF REMOVAL OF EXISTING PIER AND PILE CAP
- LIMIT OF EXCAVATION AND BACKFILL

ELEVATION

SCALE: 1:250

NOTES:

1. REFER TO FIG. 13 FOR SITE VICINITY PLAN AND FIG. VS-1 FOR VEGETATION SKETCH.
2. THE WETLAND MITIGATION AREA SHALL BE SURFACED WITH PLANTING SUBSTRATE/TOPSOIL. PLANTING SUBSTRATE/TOPSOIL IS A NATURAL OR MANMADE MATERIAL WHICH CONSISTS OF SOILS CONTAINING NOT LESS THAN 75% SAND BY WEIGHT AND AN ORGANIC CONTENT OF NOT LESS THAN 10% AND NOT MORE THAN 15%.

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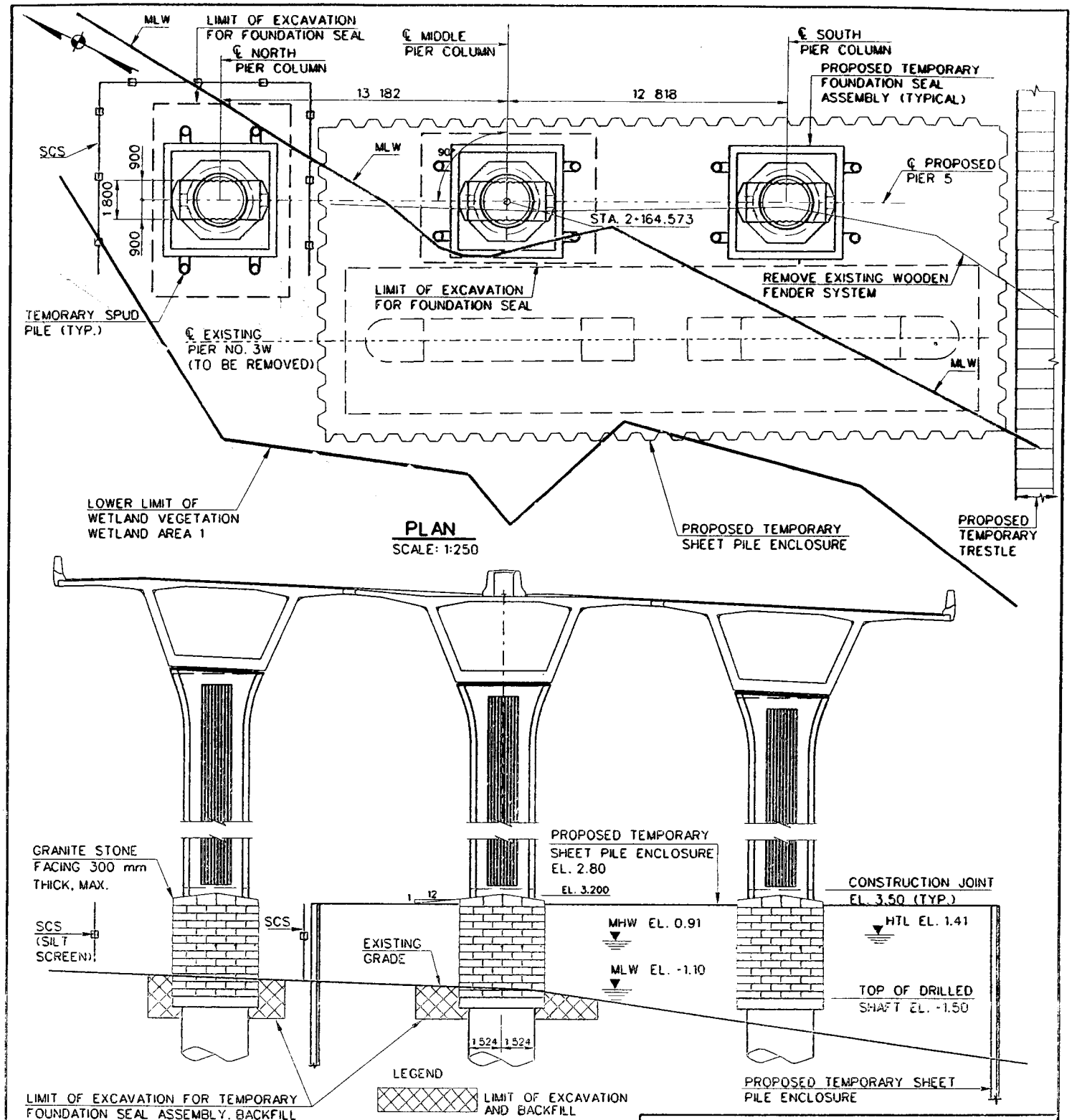
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06 | PIER 4W - PLAN | FIG. 19



NOTES:

1. REFER TO FIG. 13 FOR SITE VICINITY PLAN AND FIG. VS-1 FOR VEGETATION SKETCH.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTRUAL SOIL" IS SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF EXISTING SOIL REMOVED FROM THIS AREA. BACKFILL EXCAVATIONS BELOW 1 METER WITH GRANULAR FILL.

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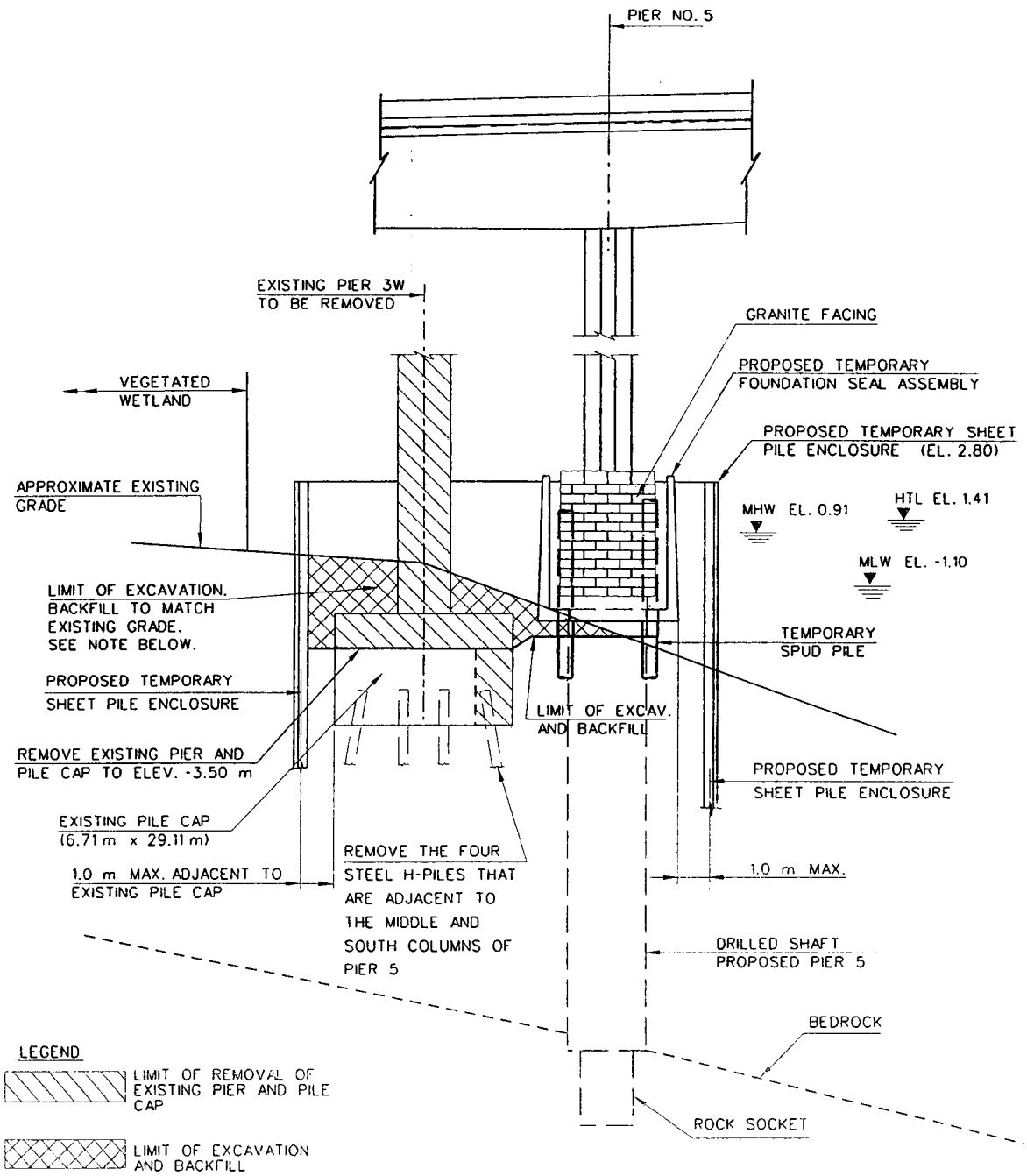
DATE: 11/22/06	PIER 5 AND PIER 3W	FIG. 20



SIDE ELEVATION

SCALE: 1:250

REVISED 10/2/06

NOTES:

1. REFER TO FIGURE 20 FOR PLAN VIEW.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTURAL SOIL" IS SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF THE EXISTING SOIL REMOVED FROM THIS AREA. BACKFILL EXCAVATION BELOW THE TOP 1 METER WITH GRANULAR FILL.

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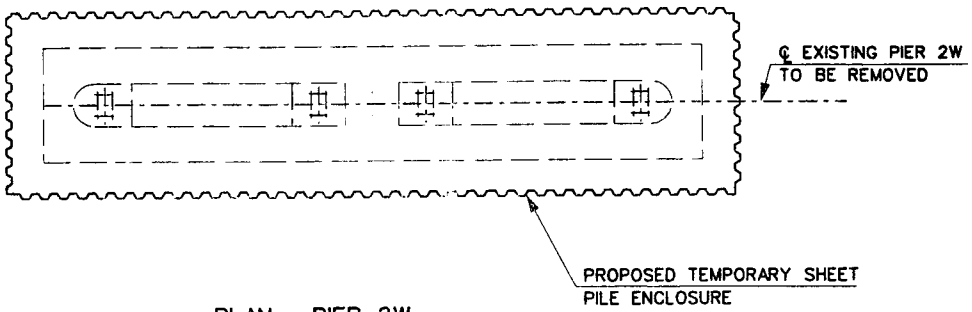
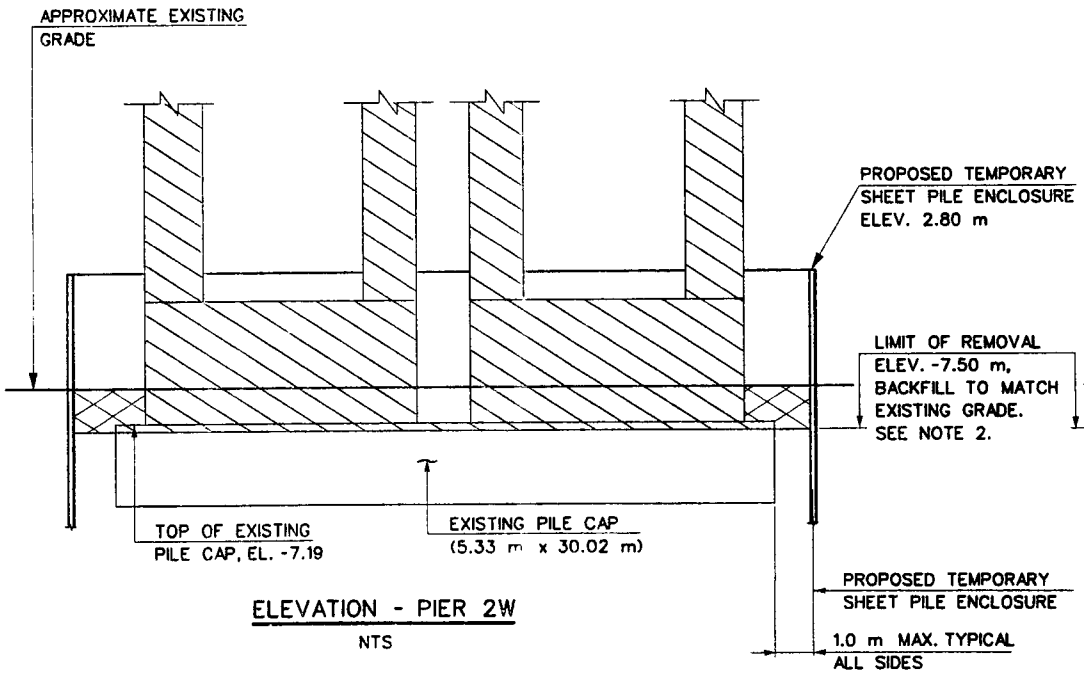
DATE: 11/22/06	PIER 5 AND PIER 3W	FIG. 21

NOTES:

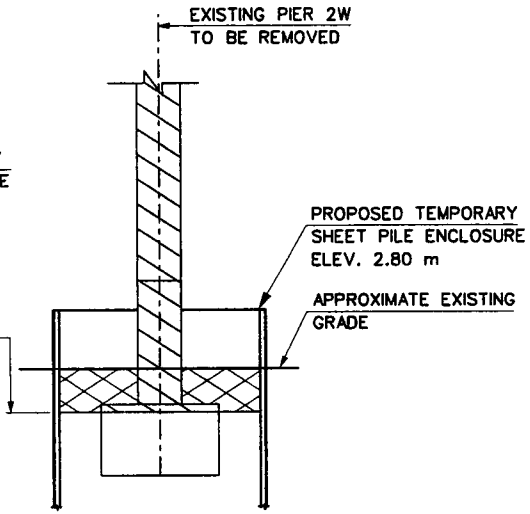
1. REFER TO FIG. 13 FOR SITE VICINITY PLAN. PIER 2W IS LOCATED IN OPEN WATER.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTURAL SOIL" IS SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF THE EXISTING SOIL REMOVED FROM THIS AREA. BACKFILL EXCAVATIONS BELOW A DEPTH OF 1 METER WITH GRANULAR FILL.



PLAN - PIER 2W
NTS



ELEVATION - PIER 2W
NTS



SIDE ELEVATION - PIER 2W
NTS

LEGEND

LIMIT OF REMOVAL OF EXISTING PIER AND PILE CAP

LIMIT OF EXCAVATION AND BACKFILL

WATER ELEVATIONS DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.10	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD ELEVATION	2.72	10.0

NOTE: PROJECT USES NAVD 1988 DATUM

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REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
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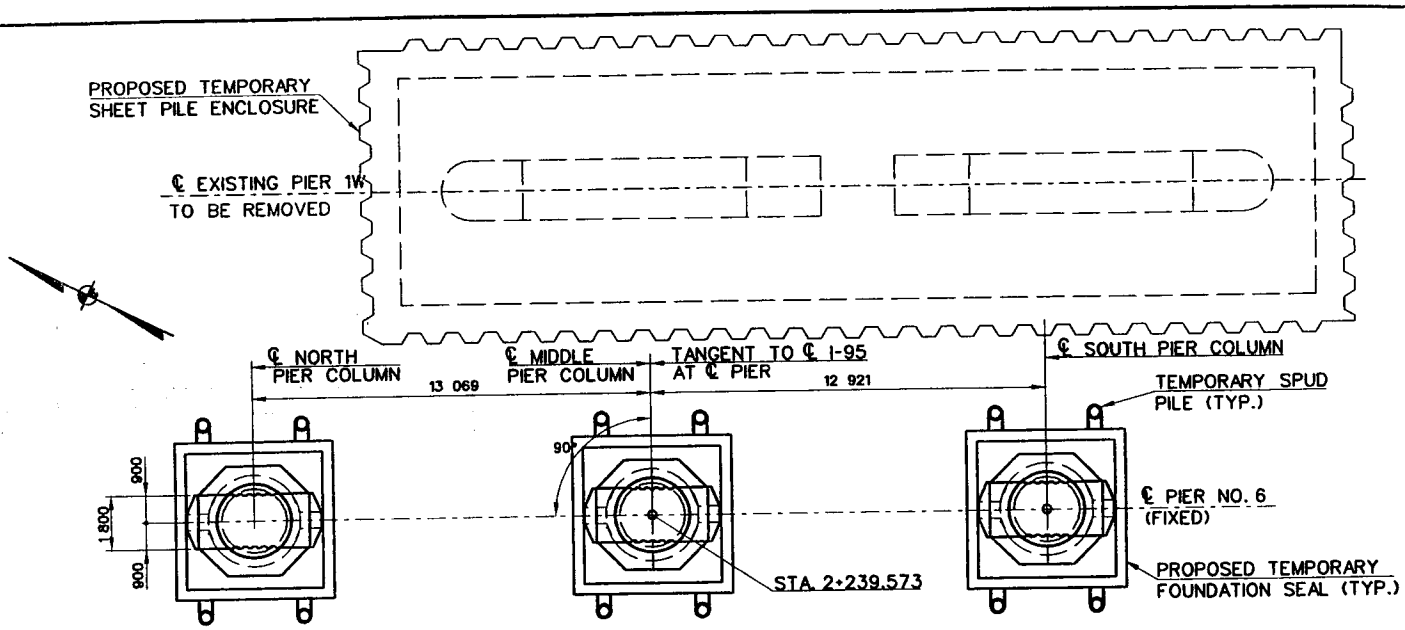
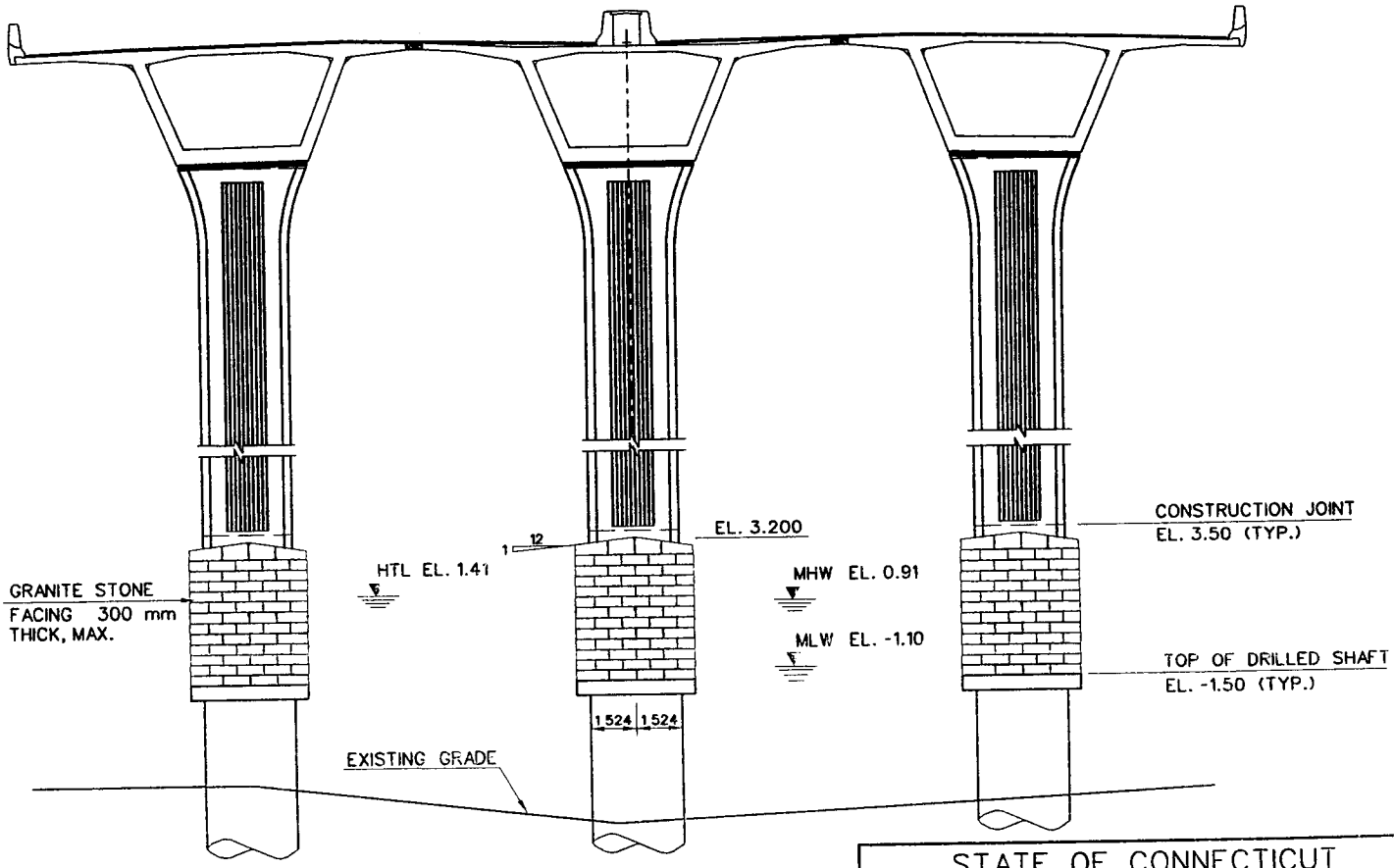
DATE: 11/22/06 | DEMOLITION, PIER 2W | FIG. 22



PLAN
SCALE: 1:250



ELEVATION
SCALE: 1:250

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NOTE:
REFER TO FIG. 13 FOR SITE VICINITY PLAN. PIER 1W AND PIER 6 ARE LOCATED IN OPEN WATER.

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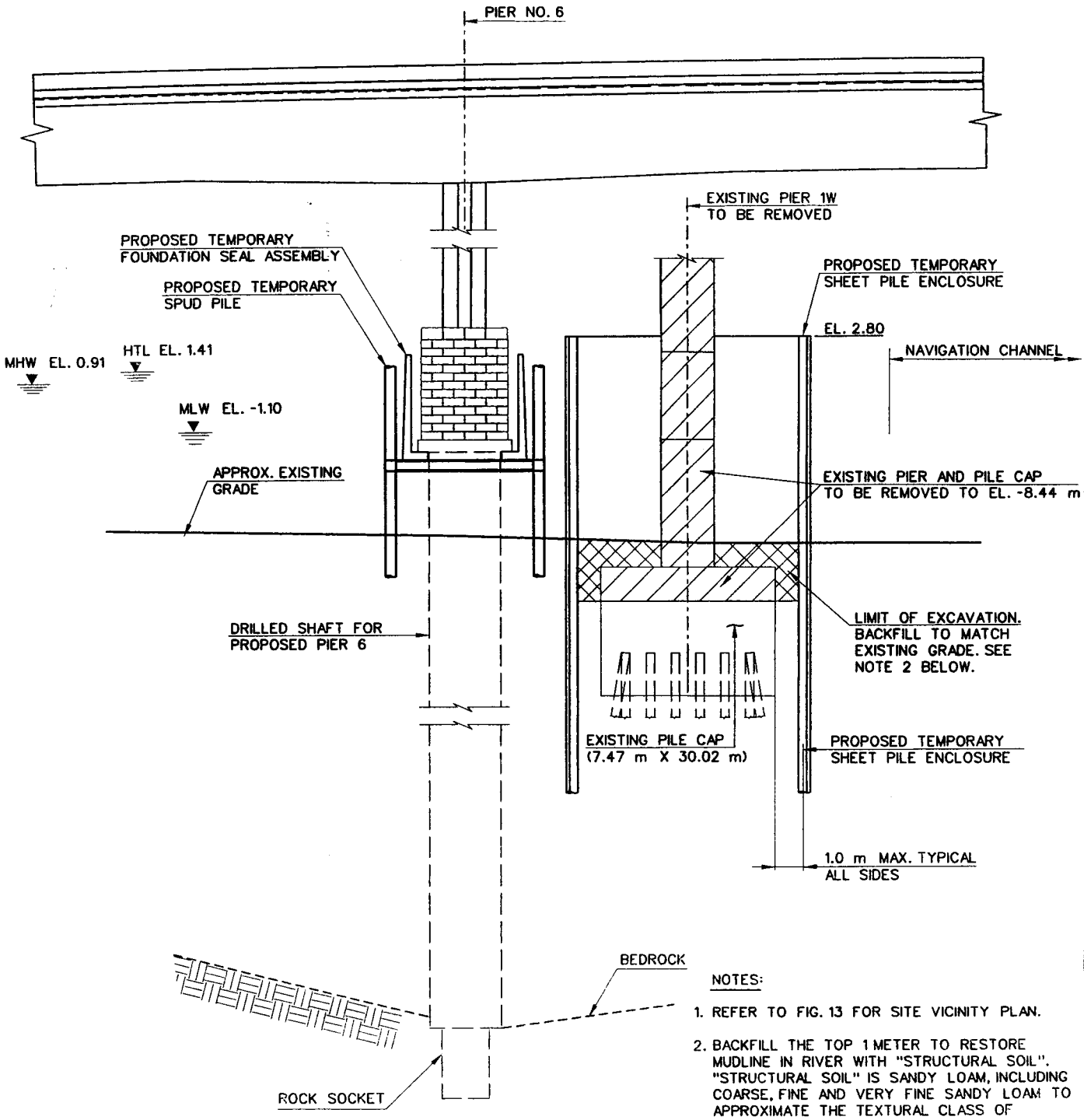
DATE: 11/22/06	PIER 6 AND PIER 1W	FIG. 23



NOTES:

1. REFER TO FIG. 13 FOR SITE VICINITY PLAN.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTURAL SOIL" IS SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF THE EXISTING SOIL REMOVED FROM THIS AREA. BACKFILL EXCAVATIONS BELOW A DEPTH OF 1 METER WITH GRANULAR FILL.

LEGEND

LIMIT OF REMOVAL OF EXISTING PIER AND PILE CAP

LIMIT OF EXCAVATION AND BACKFILL

SIDE ELEVATION
SCALE: 1:250

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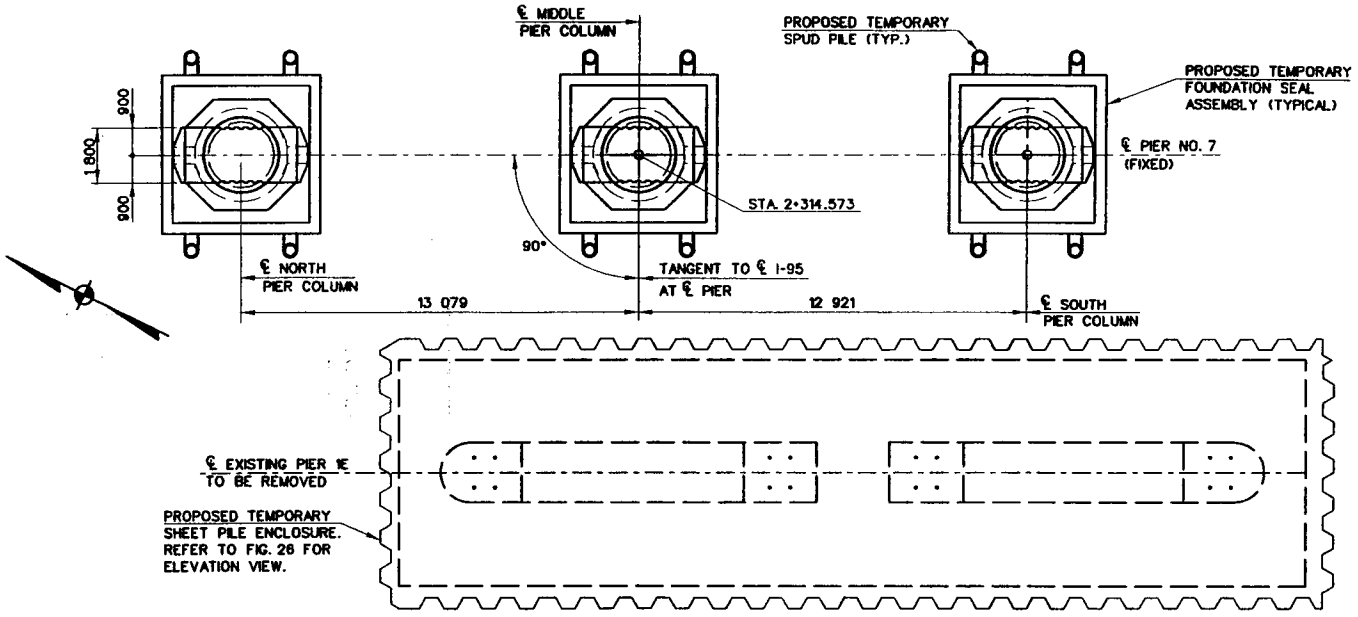
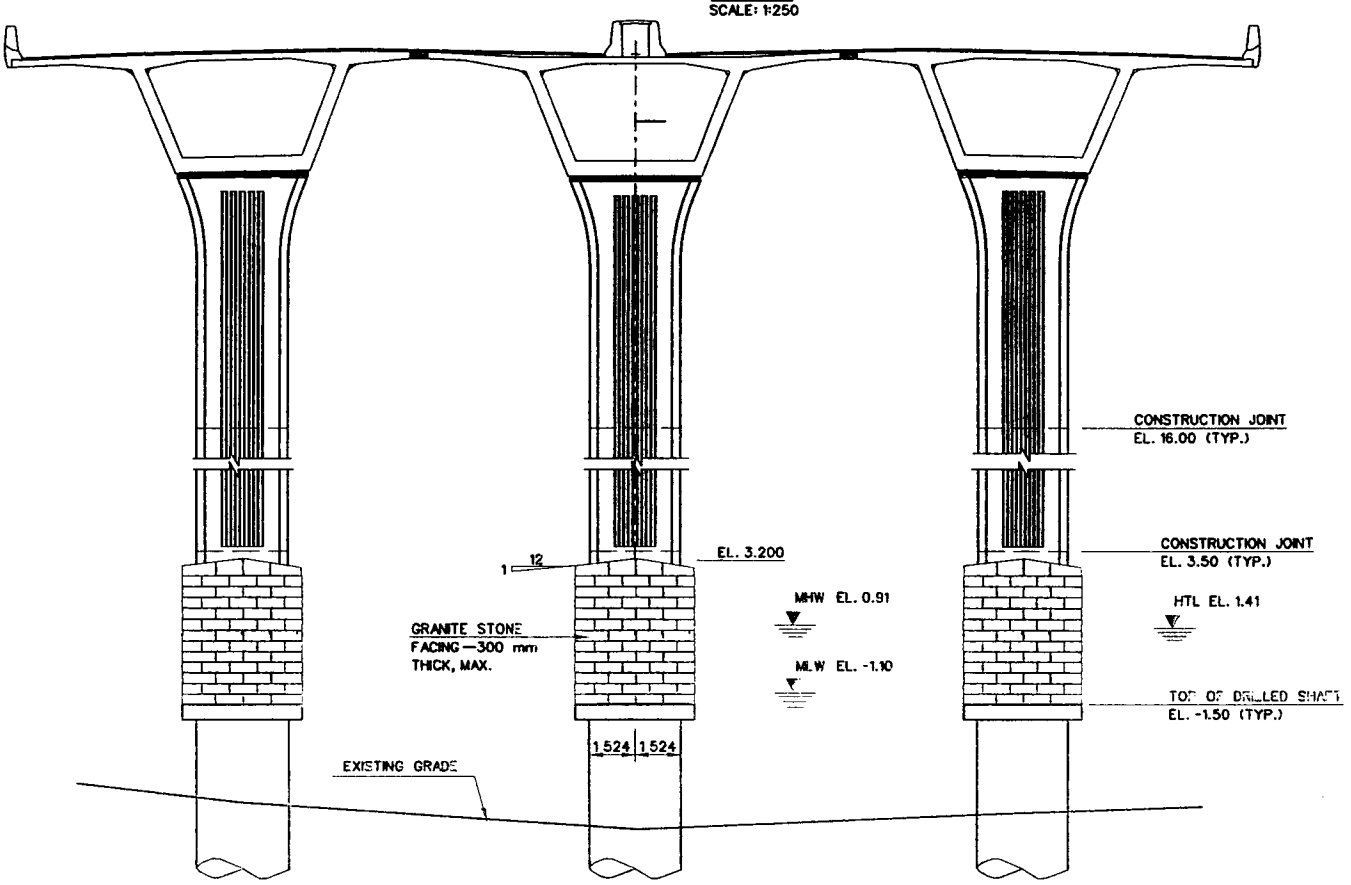
DATE: 11/22/06 | PIER 6 AND PIER 1W | FIG. 24



PLAN
SCALE: 1:250



ELEVATION
SCALE: 1:250

NOTE:
REFER TO FIG. 13 FOR SITE VICINITY PLAN.
PIER 7 AND EXISTING PIER 1E ARE LOCATED IN OPEN WATER.

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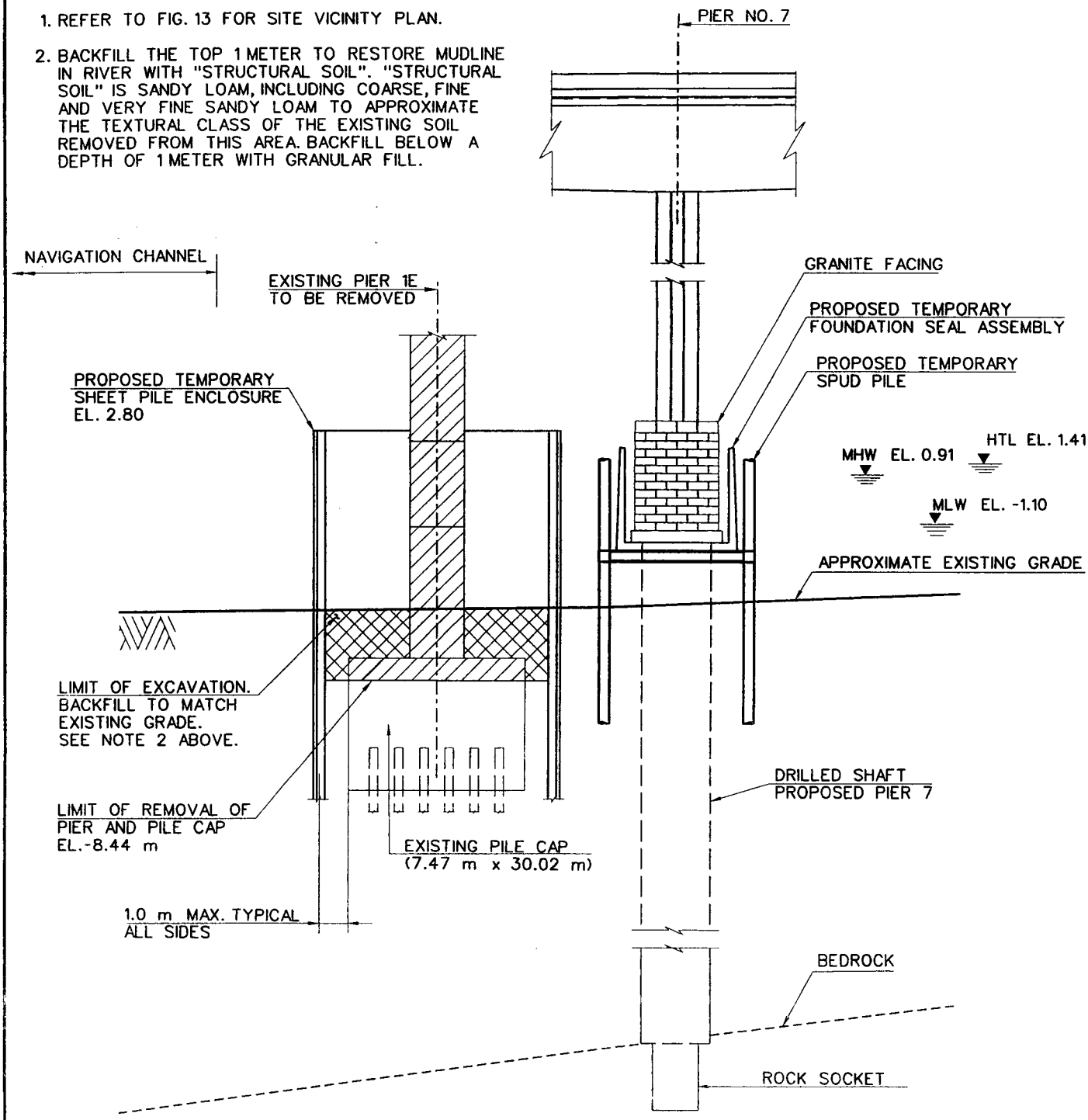
DATE: 11/22/06	PIER 7 AND PIER 1E	FIG. 25

NOTES:

1. REFER TO FIG. 13 FOR SITE VICINITY PLAN.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTURAL SOIL" IS SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF THE EXISTING SOIL REMOVED FROM THIS AREA. BACKFILL BELOW A DEPTH OF 1 METER WITH GRANULAR FILL.



SIDE ELEVATION
SCALE 1:250

LEGEND

LIMIT OF REMOVAL OF EXISTING PIER AND PILE CAP

LIMIT OF EXCAVATION AND BACKFILL

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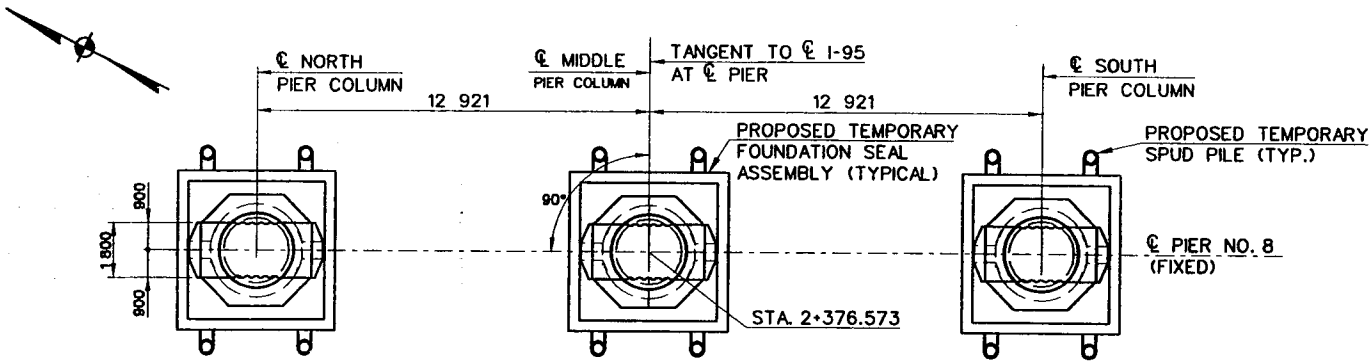
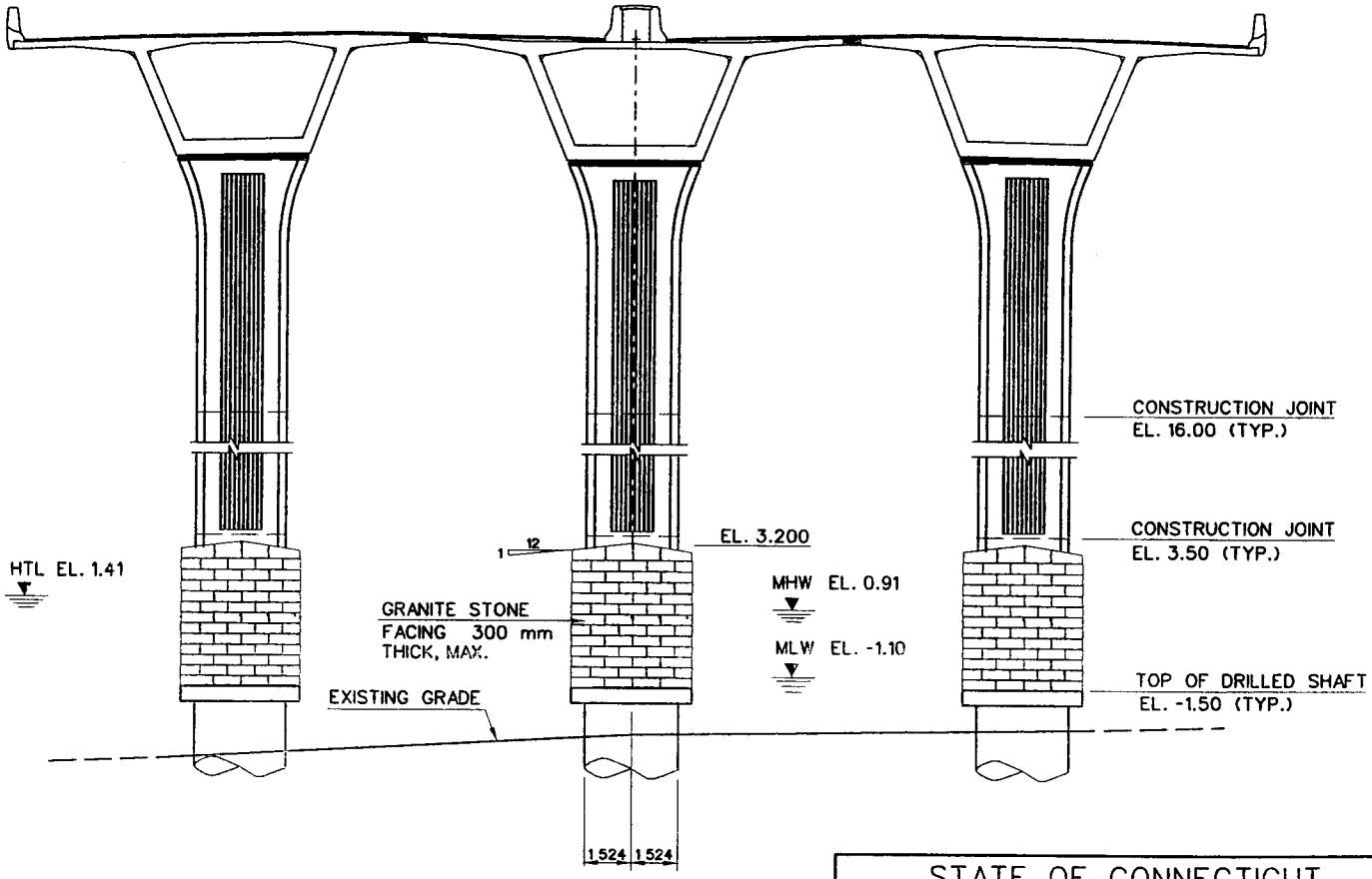
DATE: 11/22/06	PIER 7 AND PIER 1E	FIG. 26



PLAN
SCALE: 1:250



ELEVATION
SCALE: 1:250

NOTE:
REFER TO FIG. 14 FOR SITE VICINITY PLAN.
PIER 8 IS LOCATED IN OPEN WATER.

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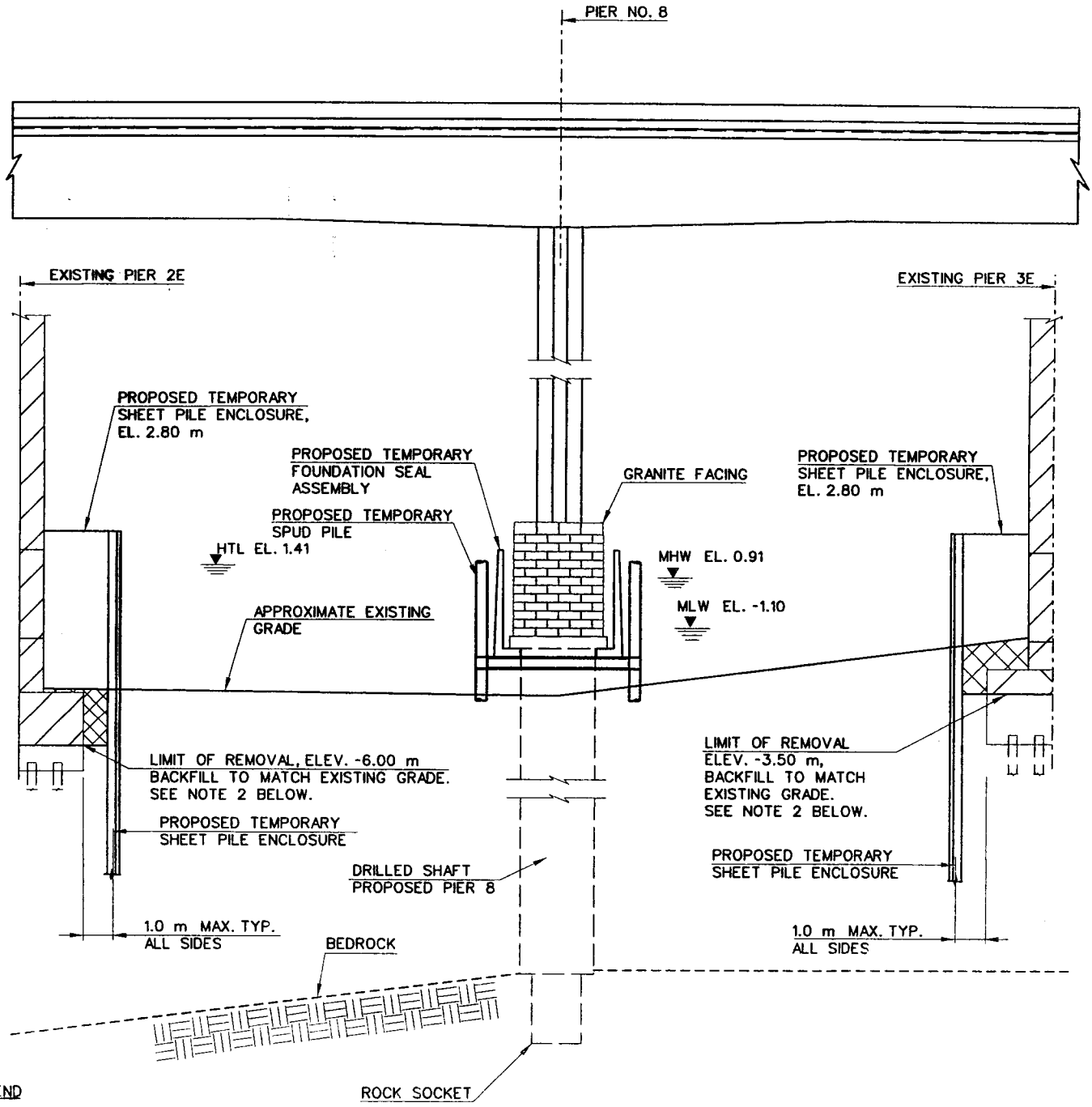
DATE: 11/22/06	PIER 8	FIG. 27



LEGEND

LIMIT OF REMOVAL OF EXISTING PIER AND PILE CAP

LIMIT OF EXCAVATION AND BACKFILL

SIDE ELEVATION

SCALE: 1:250

NOTES:

1. REFER TO FIG. 13 AND FIG. 14 FOR SITE VICINITY PLAN.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTURAL SOIL" IS A SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF THE EXISTING SOIL REMOVED FROM THIS AREA. BACKFILL EXCAVATIONS BELOW A DEPTH OF 1 METER WITH GRANULAR FILL.

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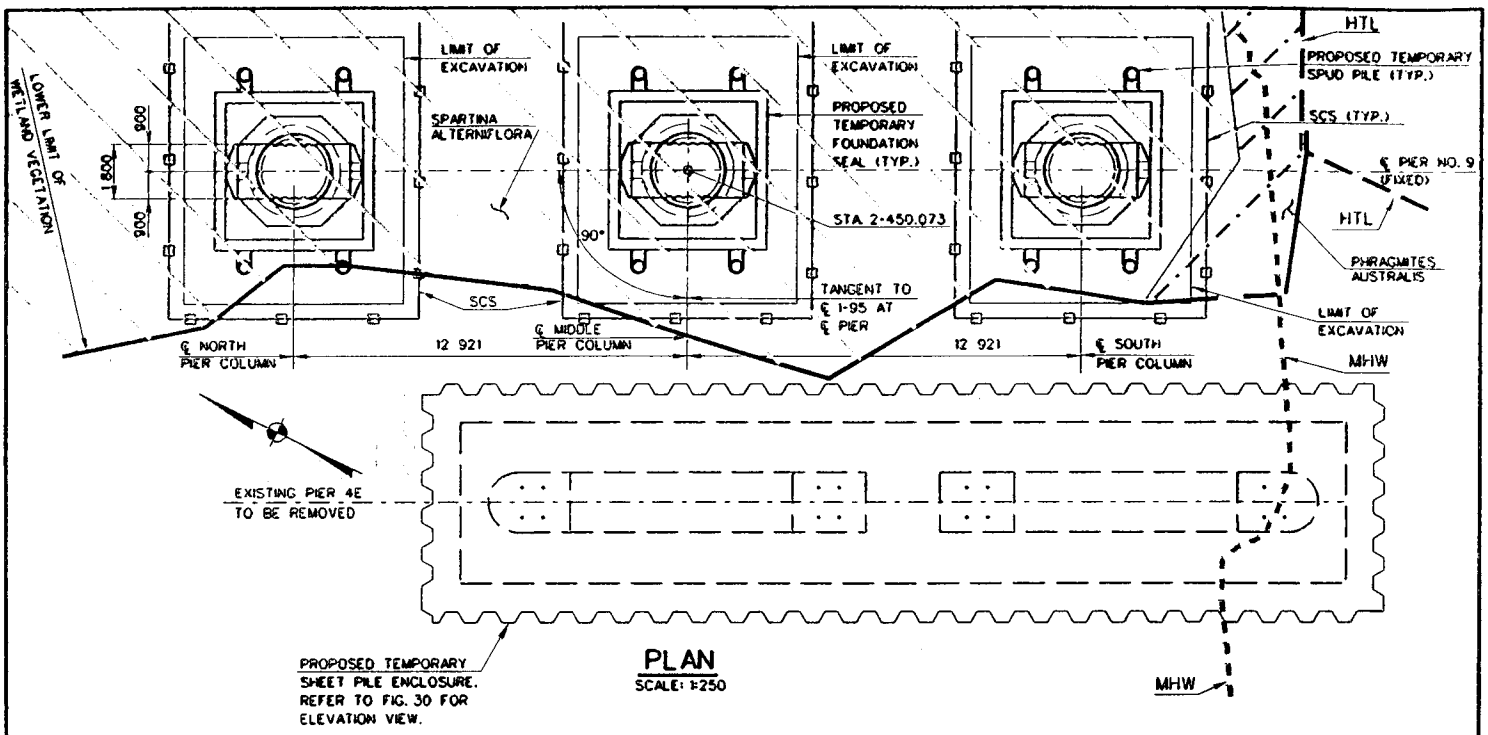
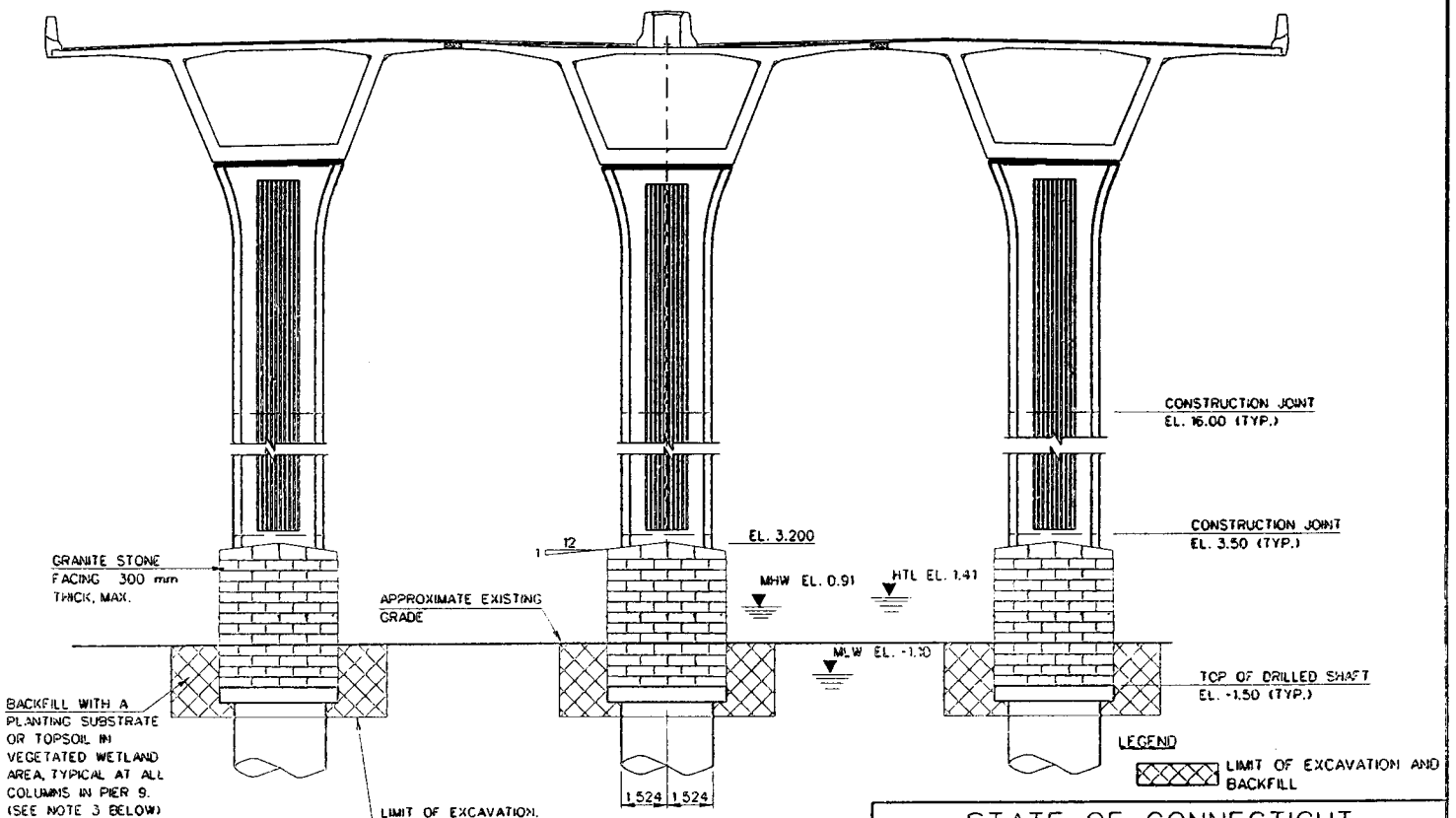
DATE: 11/22/06 | PIER 8, PIER 2E AND PIER 3E | FIG. 28



PLAN
SCALE: 1:250



ELEVATION
SCALE: 1:250

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NOTES:

1. REFER TO FIG. 14 FOR SITE VICINITY PLAN AND TO FIG. VS-2 FOR VEGETATION SKETCH.
2. GEOTEXTILE FENCE SYSTEM (SCS) TO BE USED ABOVE HIGH TIDE LINE. SILT SCREEN TO BE USED BELOW HIGH TIDE LINE AND IN RIVER CHANNEL. SEE DETIALS ON FIGURE 55.
3. BACKFILL THE TOP 1 METER IN WETLAND AREA WITH NATURAL OR MANMADE PLANTING SUBSTRATE/TOPSOIL. PLANTING SUBSTRATE/TOPSOIL IS A NATURAL OR MANMADE MATERIAL WHICH CONSIST OF SOILS CONTAINING NOT LESS THAN 75% SAND BY WEIGHT AND AN ORGANIC CONTENT NOT LESS THAN 10% AND NOT MORE THAN 15%.

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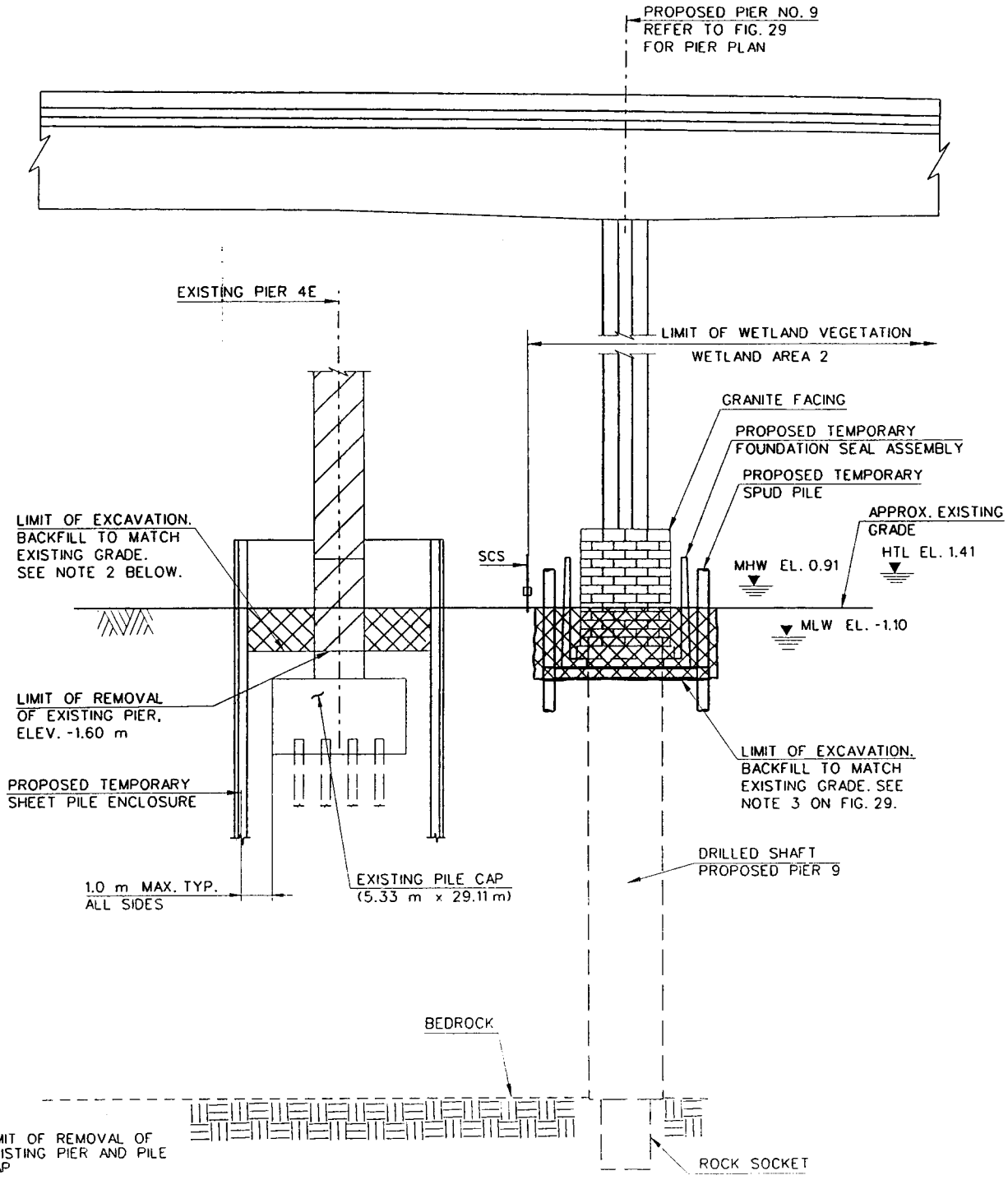
DATE: 11/22/06	PIER 9 AND PIER 4E	FIG. 29



LEGEND

LIMIT OF REMOVAL OF EXISTING PIER AND PILE CAP

LIMIT OF EXCAVATION AND BACKFILL

SIDE ELEVATION

SCALE 1:250

NOTES:

1. REFER TO FIGURE 14 FOR SITE VICINITY PLAN. EXISTING PIER 4E IS LOCATED IN OPEN WATER.
2. BACKFILL THE TOP 1 METER TO RESTORE MUDLINE IN RIVER WITH "STRUCTURAL SOIL". "STRUCTURAL SOIL" IS A SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM TO APPROXIMATE THE TEXTURAL CLASS OF THE EXISTING SOIL REMOVED AT PIER 4E. BACKFILL EXCAVATIONS BELOW A DEPTH OF 1 METER WITH GRANULAR FILL.

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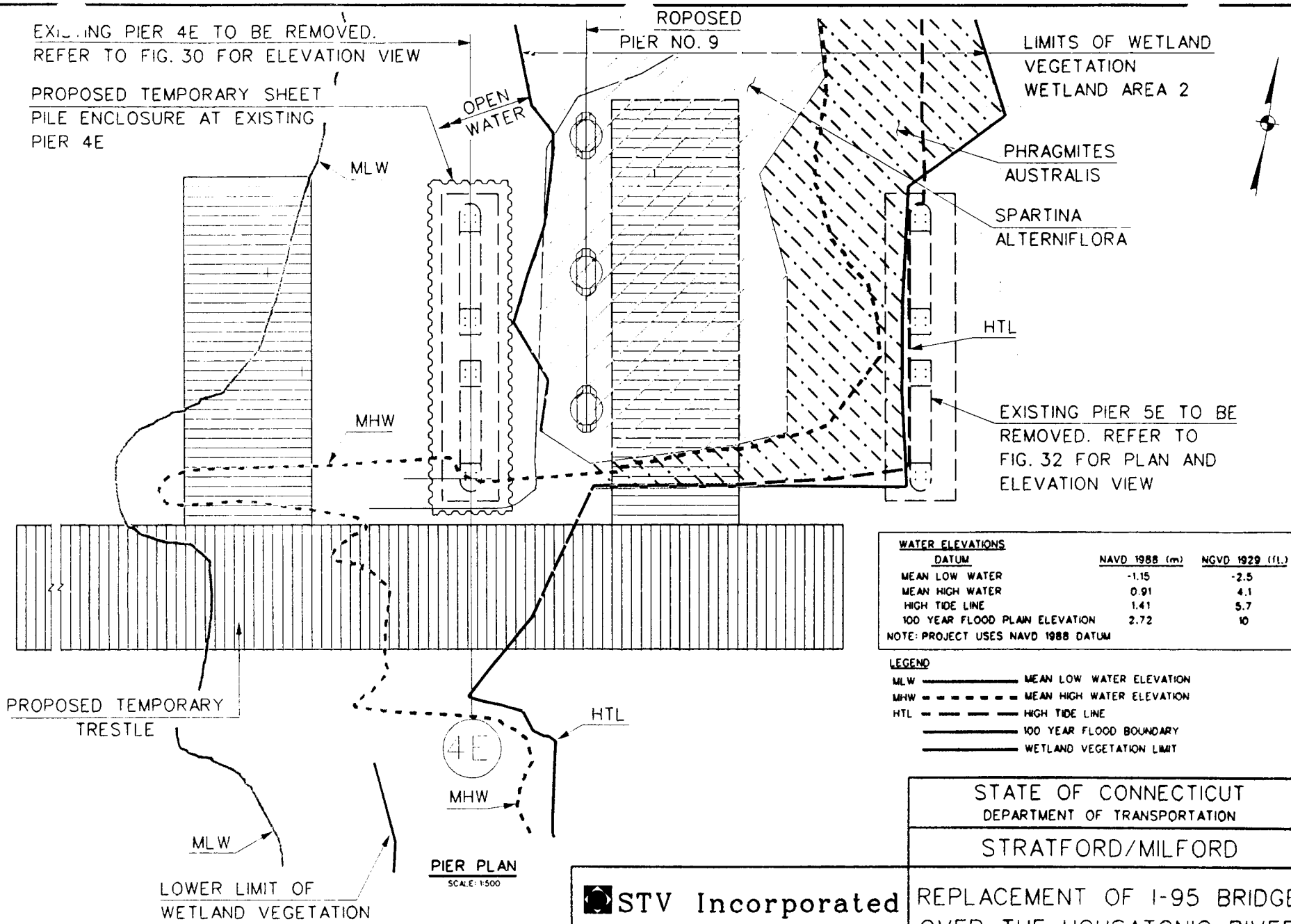
DATE: 11/22/06	PIER 9 AND PIER 4E	FIG. 30



WATER ELEVATIONS DATUM	NAVD 1988 (m)	NGVD 1929 (ft.)
MEAN LOW WATER	-1.15	-2.5
MEAN HIGH WATER	0.91	4.1
HIGH TIDE LINE	1.41	5.7
100 YEAR FLOOD PLAIN ELEVATION	2.72	10

NOTE: PROJECT USES NAVD 1988 DATUM

LEGEND

- MLW — MEAN LOW WATER ELEVATION
- MHW — MEAN HIGH WATER ELEVATION
- HTL — HIGH TIDE LINE
- 100 YEAR FLOOD BOUNDARY
- WETLAND VEGETATION LIMIT

NOTE:
REFER TO FIG. 14 FOR SITE VICINITY AND
TO FIG. VS-2 FOR VEGETATION SKETCH.

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REPLACEMENT OF I-95 BRIDGE
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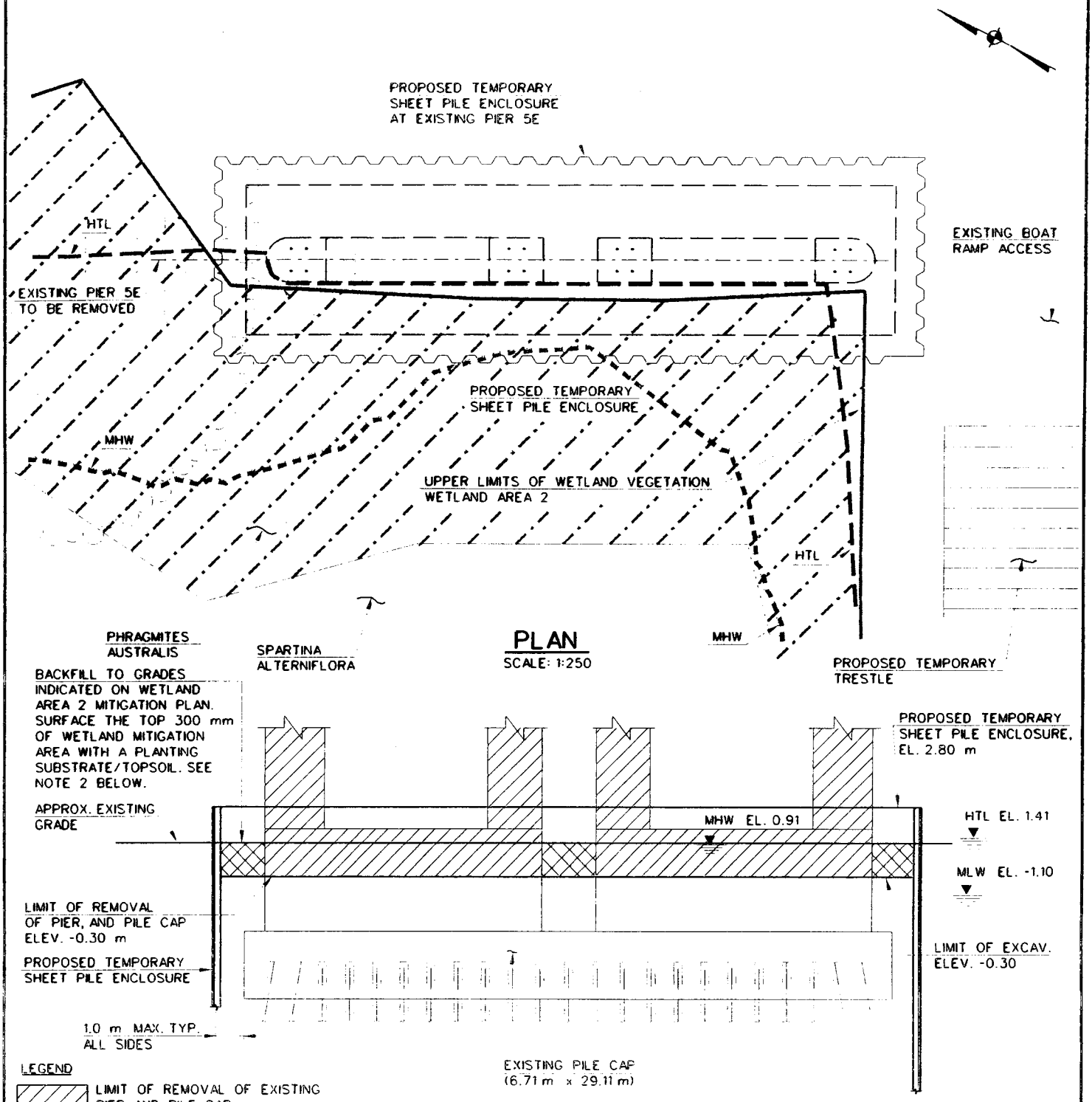
DATE: 11/11/05 | PIER 4E AND PIER 9 - PLAN | FIG. 31



ELEVATION

SCALE: 1:250

REVISED 10/2/06

NOTES

1. REFER TO FIG. 14 FOR SITE VICINITY PLAN AND FIG. VS-2 FOR VEGETATION SKETCH.
2. BACKFILL IN VEGETATED WETLAND AREAS SHALL CONSIST OF NATURAL OR MANMADE PLANTING SUBSTRATE OR TOPSOIL, CONSISTING OF SOILS CONTAINING NOT LESS THAN 75% SAND BY WEIGHT AND AN ORGANIC CONTENT OF NOT LESS THAN 10% AND NOT MORE THAN 15%.

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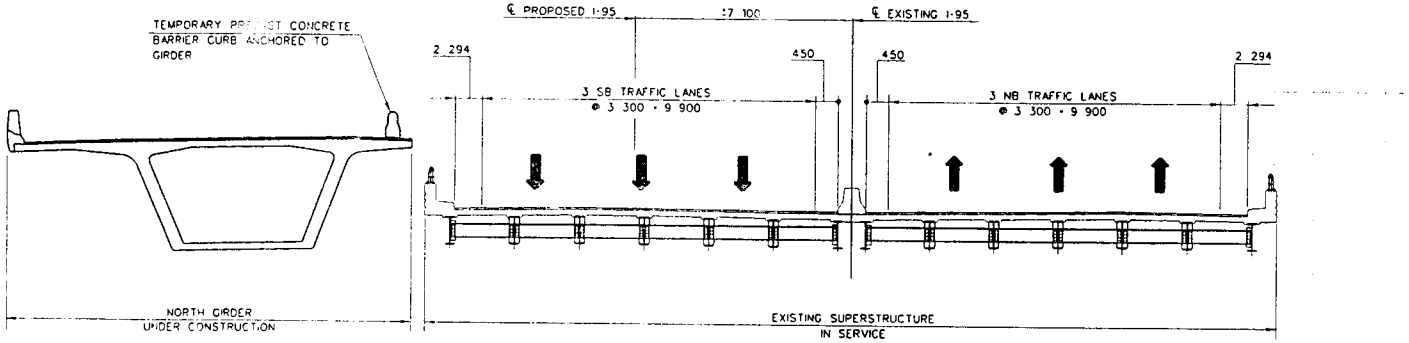
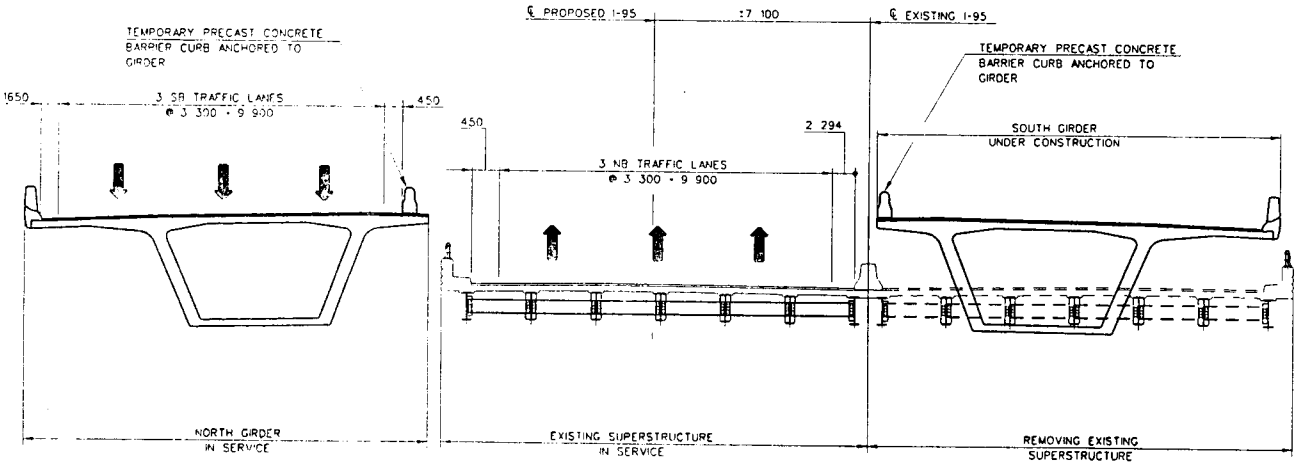
DATE: 11/22/06	PIER 5E	FIG. 32



STAGE 1 - SECTION

NOT TO SCALE



STAGE 2 - SECTION

NOT TO SCALE

NOTE: FOR SEQUENCE OF CONSTRUCTION ASSOCIATED WITH THIS STAGE CONSTRUCTION SCHEME SEE FIGURES 34A AND 34B.

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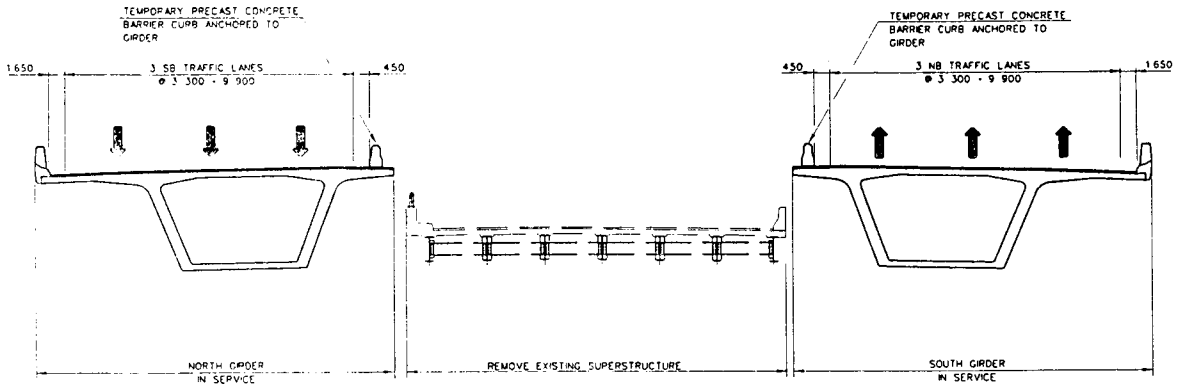
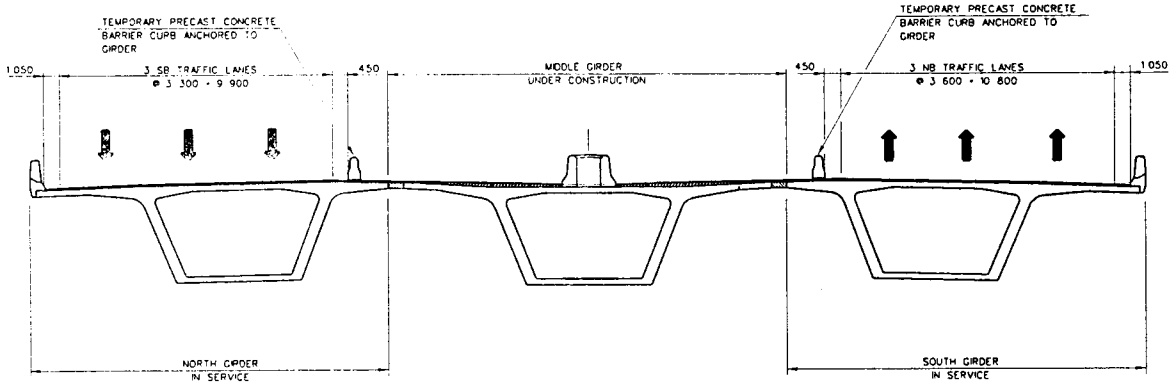
DATE: 11/11/05	STAGE CONSTRUCTION	FIG. 33



STAGE 3 - PHASE I - SECTION

NOT TO SCALE



STAGE 3 - PHASE II - SECTION

NOT TO SCALE

NOTE: FOR SEQUENCE OF CONSTRUCTION ASSOCIATED WITH THIS STAGE CONSTRUCTION SCHEME SEE FIGURES 34A AND 34B.

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DATE: 11/11/05	STAGE CONSTRUCTION	FIG. 34

SUGGESTED SEQUENCE OF CONSTRUCTION

THE STAGE CONSTRUCTION SCHEME HAS BEEN DEVELOPED TO MAINTAIN THREE LANES OF TRAVEL ON I-95 N.B. AND S.B. DURING CONSTRUCTION. THE BRIDGES AND RETAINING WALLS WILL BE CONSTRUCTED IN STAGES 1, 2 AND 3. CONSTRUCTION STAGE 4 IS NECESSARY TO ALLOW COMPLETION OF PORTIONS OF THE CONCRETE BASE ON THE HIGHWAY APPROACH SECTIONS TO THE MOSES WHEELER BRIDGE. THE MAJOR ITEMS OF WORK TO BE PERFORMED IN EACH CONSTRUCTION STAGE ARE DESCRIBED BELOW.

CONSTRUCTION STAGE 1: TRAFFIC IS MAINTAINED ON THE EXISTING MOSES WHEELER BRIDGE WHILE THE NORTH SIDE OF THE NEW BRIDGES AND HIGHWAY APPROACHES ARE CONSTRUCTED. STAGE 1 IS ANTICIPATED TO TAKE 25 MONTHS TO COMPLETE. THE MAJOR ITEMS OF WORK TO BE ACCOMPLISHED INCLUDE:

- INSTALL SEDIMENTATION CONTROL SYSTEMS AND CLEAR AND GRUB ON THE NORTH SIDE OF THE FREEWAY.
- SET-UP WASTE STOCKPILE/MANAGEMENT AREA AND STORAGE YARD IN STRATFORD ON STATE PROPERTY BETWEEN I-95 AND FERRY BOULEVARD. THIS WASTE/STOCKPILE AREA IS LOCATED WHERE WET POND NO. 1 WILL BE CONSTRUCTED IN STAGE 4.
- CLOSE STATE BOAT LAUNCH IN MILFORD TO PUBLIC USE AND SET UP STORAGE AND WORK AREA UNDER THE EXISTING BRIDGE AND ALONG THE BOAT LAUNCH ACCESS ROADWAY AND PARKING AREA.
- CLOSE THE AREA UNDER THE MOSES WHEELER BRIDGE IN STRATFORD TO PUBLIC ACCESS AND SET UP WORK ZONE AND ACCESS ROADS INTO THIS WORK AREA.
- CONSTRUCT TEMPORARY TRESTLES FROM RIVER BANKS IN MILFORD AND STRATFORD.
- DEMOLISH HOUSE ON PROPERTY TAKEN ON NAUGATUCK AVENUE AND CONSTRUCT WET POND NO. 3.
- CONSTRUCT STORM SEWER TRUNK LINES AT STREET LEVEL IN MILFORD (DRAINAGE SYSTEM C) AND IN STRATFORD (DRAINAGE SYSTEM E).
- CONSTRUCT INFILTRATION SYSTEM UNDER MOSES WHEELER BRIDGE.
- CONSTRUCT DRILLED SHAFTS, NORTH COLUMNS AND THE NORTH GIRDER OF THE NEW MOSES WHEELER BRIDGE (BRIDGE NO. 135).
- CONSTRUCT STAGE 1 (THE NORTH ONE-THIRD) OF BRIDGE NOS. 133, 134, AND 06613.
- CONSTRUCT RETAINING WALL NOS. 101, 102 AND 103.
- CONSTRUCT EMBANKMENTS ON NORTH SIDE OF I-95, PAVEMENTS AND STORM DRAINAGE SYSTEMS ON THE NORTH SIDE OF FREEWAY APPROACH SECTIONS.
- SHIFT THE I-95 S.B. TRAFFIC ONTO THE NEWLY CONSTRUCTED NORTH SECTION OF I-95 AND BRIDGES TO COMMENCE CONSTRUCTION STAGE 2.

CONSTRUCTION STAGE 2: I-95 S.B. TRAFFIC IS MAINTAINED ON THE NEWLY CONSTRUCTED NORTH SECTION IN THIS STAGE AND THE I-95 N.B. TRAFFIC IS OPERATING WHERE THE I-95 S.B. TRAFFIC OPERATED DURING CONSTRUCTION STAGE 1. THE WORK ZONE ON I-95 IS THE SOUTH SIDE OF I-95 IN THIS STAGE. CONSTRUCTION STAGE 2 IS ANTICIPATED TO REQUIRE 22 MONTHS TO COMPLETE AND INCLUDES THE FOLLOWING MAJOR WORK ITEMS:

- INSTALL SEDIMENTATION CONTROL SYSTEMS ALONG AND THROUGHOUT THE STAGE 2 WORK ZONE. SEDIMENTATION CONTROLS INSTALLED IN CONSTRUCTION STAGE 1 SHALL BE MAINTAINED IN SERVICE.
- PERFORM CLEARING AND GRUBBING ALONG THE SOUTH SIDE OF I-95.
- DEMOLISH THE SOUTH SIDE OF BRIDGE NOS. 133, 134 AND THE SOUTHERLY ONE-HALF OF THE SUPERSTRUCTURE OF THE EXISTING MOSES WHEELER BRIDGE. THE SUBSTRUCTURE OF THE MOSES WHEELER BRIDGE WILL BE DEMOLISHED IN CONSTRUCTION STAGE 3.
- CONSTRUCT DRILLED SHAFTS, THE SOUTH COLUMNS AND SOUTH GIRDER OF THE NEW MOSES WHEELER BRIDGE.
- CONSTRUCT THE SOUTH SIDE OF NEW BRIDGE NOS. 133, 134 AND 06613.
- RECONSTRUCT PAVEMENTS AND STORM DRAINAGE SYSTEMS ON THE SOUTH ONE-THIRD OF THE HIGHWAY APPROACH SECTIONS.
- SHIFT THE I-95 N.B. TRAFFIC ONTO THE NEWLY CONSTRUCTED SOUTH SECTION OF I-95 TO COMMENCE CONSTRUCTION STAGE 3.

(CONTINUED ON FIG. 34B)

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DATE: 11/11/05	SEQUENCE OF CONSTRUCTION	FIG.34A

SUGGESTED SEQUENCE OF CONSTRUCTION
(CONTINUED FROM FIG. 34A)

CONSTRUCTION STAGE 3: THE I-95 S.B. TRAFFIC IS MAINTAINED IN THE SAME LOCATION AS IN STAGE 2. THE I-95 N.B. TRAFFIC HAS BEEN SHIFTED TO OPERATE ON THE SOUTH SIDE OF I-95 THAT WAS CONSTRUCTED IN STAGE 2. THE WORK ZONE IN STAGE 3 IS THE CENTER SECTION OF I-95. CONSTRUCTION STAGE 3 IS ANTICPATED TO TAKE 19 MONTHS TO COMPLETE. THE MAJOR ITEMS OF WORK TO BE CONSTRUCTED IN THIS STAGE INCLUDE:

- RESET SEDIMENTATION CONTROL SYSTEMS FOR ACCESS TO THE WORK ZONE. MAINTAIN SEDIMENTATION CONTROLS PREVIOUSLY INSTALLED.
- DEMOLISH THE REMAINDER OF THE OLD PORTIONS OF BRIDGE NOS. 133 AND 134.
- DEMOLISH THE NORTHERLY HALF OF THE SUPERSTRUCTURE OF THE OLD MOSES WHEELER BRIDGE.
- CONSTRUCT DRILLED SHAFTS, CENTER COLUMNS AND THE CENTER GIRDER OF THE NEW MOSES WHEELER BRIDGE.
- CONSTRUCT THE CENTER SECTIONS OF NEW BRIDGE NOS. 133, 134 AND 06613.
- RECONSTRUCT PAVEMENTS AND STORM DRAINAGE SYSTEMS IN THE CENTER ONE-THIRD OF I-95. CONSTRUCT THE MEDIAN BARRIERS ON I-95.
- INSTALL TEMPORARY SHEET PILE ENCLOSURES AROUND THE EXISTING MOSES WHEELER BRIDGE PIERS 4W, 3W, 2W, 1W, 1E, 2E, 3E, 4E AND 5E.
- DEMOLISH THE EXISTING SUBSTRUCTURE ELEMENTS OF THE MOSES WHEELER BRIDGE. CONSTRUCT WET POND NO. 2 AND THE WETLAND MITIGATION AREA UNDER THE MOSES WHEELER BRIDGE IN MILFORD (THIS WORK MAY BE COMPLETED IN STAGE 4).
- REMOVE ALL TEMPORARY TRAFFIC CONTROL SYSTEMS ON I-95 AND OPEN THE NEW FREEWAY TO TRAFFIC.

CONSTRUCTION STAGE 4: THIS STAGE IS NECESSARY TO ALLOW COMPLETION OF SOME SECTIONS OF THE NEW CONCRETE BASE AND PAVEMENTS ON THE MILFORD AND STRATFORD HIGHWAY APPROACHES THAT WERE RECONSTRUCTED IN STAGES 1, 2 AND 3. THIS WORK WILL BE DONE AT NIGHT DURING TIMES WHEN TRAFFIC LANES CAN BE TEMPORARILY CLOSED AT LOCALIZED WORK AREAS ON THE FREEWAY. CONSTRUCTION STAGE 4 IS ANTICIPATED TO TAKE 6 MONTHS TO COMPLETE. THE WORK TO BE PERFORMED IN THIS STAGE INCLUDES:

- COMPLETE THE PERMANENT PAVEMENT SECTIONS ON THE I-95 HIGHWAY APPROACHES.
- REMOVE THE TEMPORARY TRESTLES FROM THE RIVER.
- RECONSTRUCT THE STATE BOAT LAUNCH RAMP, ACCESS ROAD AND PARKING AREA AND OPEN THE BOAT LAUNCH TO PUBLIC USE.
- REMOVE THE WASTE STOCKPILE/MANAGEMENT AREA.
- CONSTRUCT WET POND NO. 1.
- REMOVE ALL SEDIMENATION CONTROLS AND REMAINING TEMPORARY CONSTRUCTIONS.

NOTE: THIS IS A SUGGESTED SEQUENCE OF CONSTRUCTION. THE CONTRACTOR MAY MODIFY THIS SEQUENCE OF CONSTRUCTION TO COMPLETE THE ELEMENTS OF CONSTRUCTION ON A DIFFERENT SCHEDULE TO THE BENEFIT OF HIS WORK FORCES AND TO EXPEDITE CONSTRUCTION.

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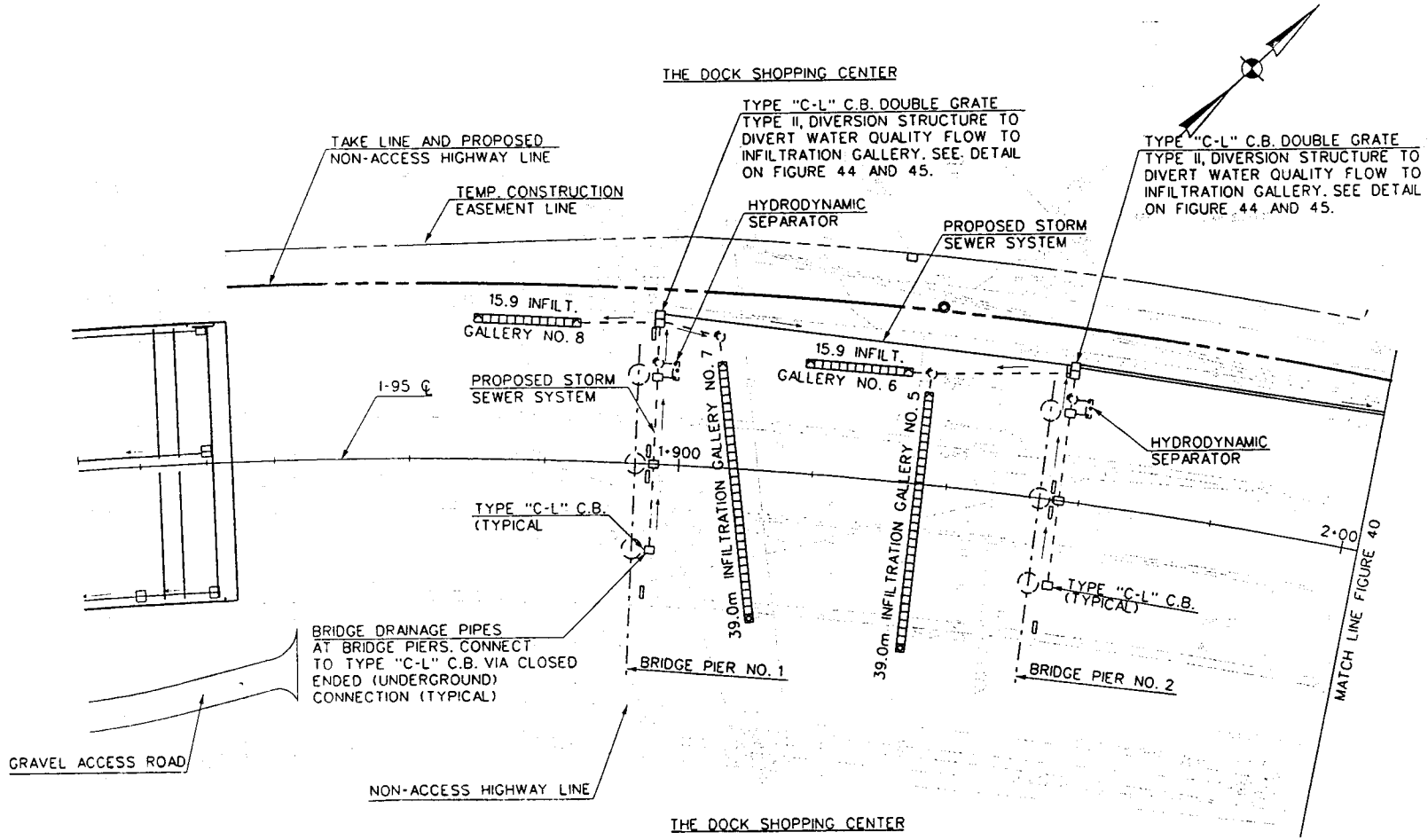
PROJECT NO. 138-221

DATE: 11/11/05	SEQUENCE OF CONSTRUCTION	FIG.34B



PLAN - INFILTRATION SYSTEM

SCALE: 1:1000

NOTES:
1. THE PROPOSED INFILTRATION SYSTEM IS LOCATED IN THE PAVED PARKING LOT UNDER THE PROPOSED MOSES WHEELER BRIDGE. FOR CLARITY THIS PLAN VIEW DOES NOT SHOW THE PROPOSED MOSES WHEELER BRIDGE DECK.
2. ALL STORMWATER HANDLED IN THIS INFILTRATION SYSTEM COMES OFF THE BRIDGE DECK OF THE MOSES WHEELER BRIDGE. FOR DETAILS OF THE INFILTRATION SYSTEM SEE FIGURES 41 THROUGH 45.

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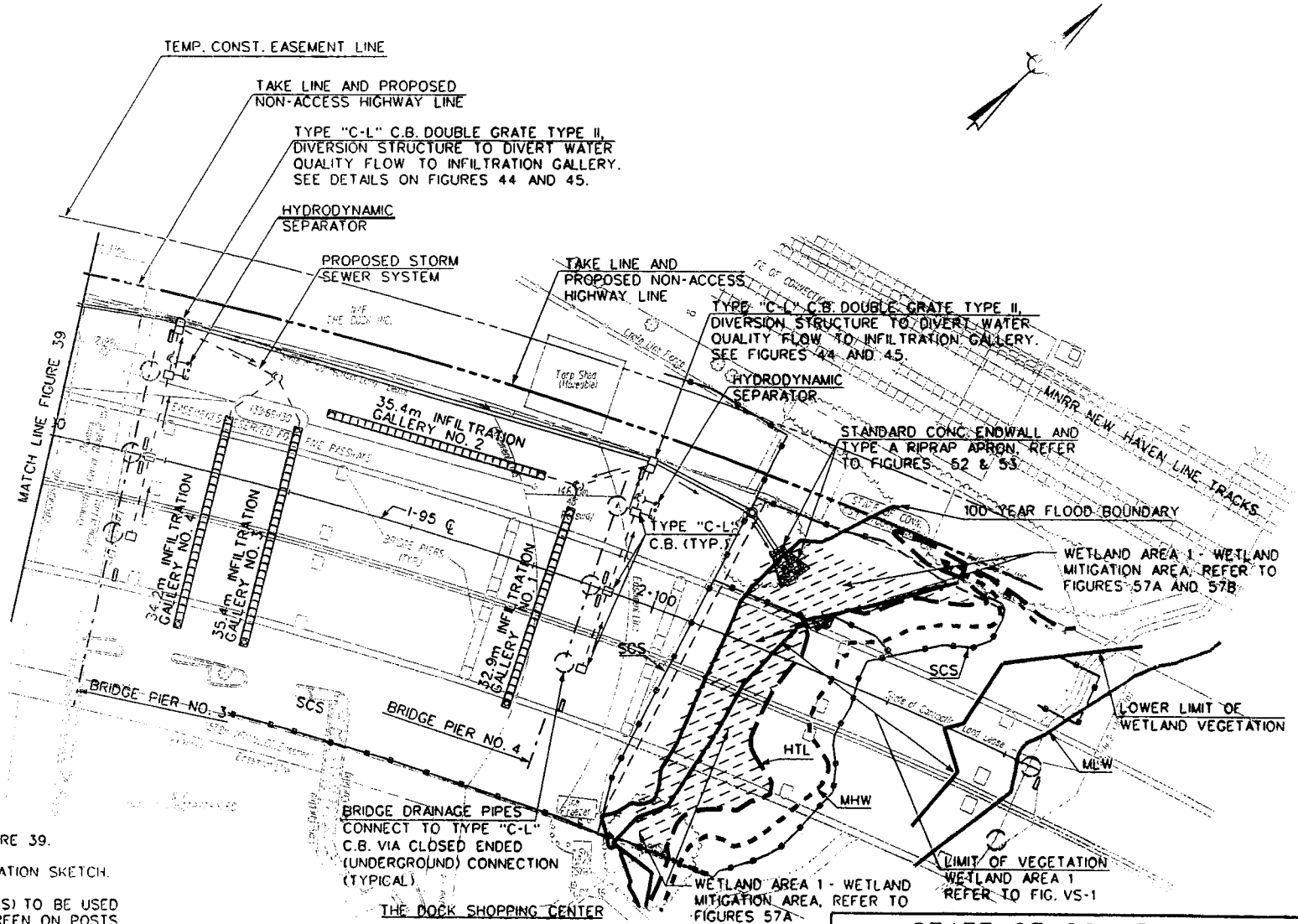
PROJECT NO. 138-221

DATE: 11/11/05 | PROPOSED INFILTRATION SYSTEM | FIG. 39



PLAN - INFILTRATION SYSTEM

SCALE: 1:1000

NOTES:

1. SEE NOTES 1, 2 AND 3 ON FIGURE 39.
2. REFER TO FIG. VS-1 FOR VEGETATION SKETCH.
3. GEOTEXTILE FENCE SYSTEM (SCS) TO BE USED ABOVE HIGH TIDE LINE. SILT SCREEN ON POSTS TO BE USED BELOW HIGH TIDE LINE. SEE FIGURE 55 FOR DETAILS.

LEGEND

MLW	MEAN LOW WATER ELEVATION
MHW	MEAN HIGH WATER ELEVATION
HTL	HIGH TIDE LINE
	WETLAND VEGETATION LIMIT
	100 YEAR FLOOD BOUNDARY

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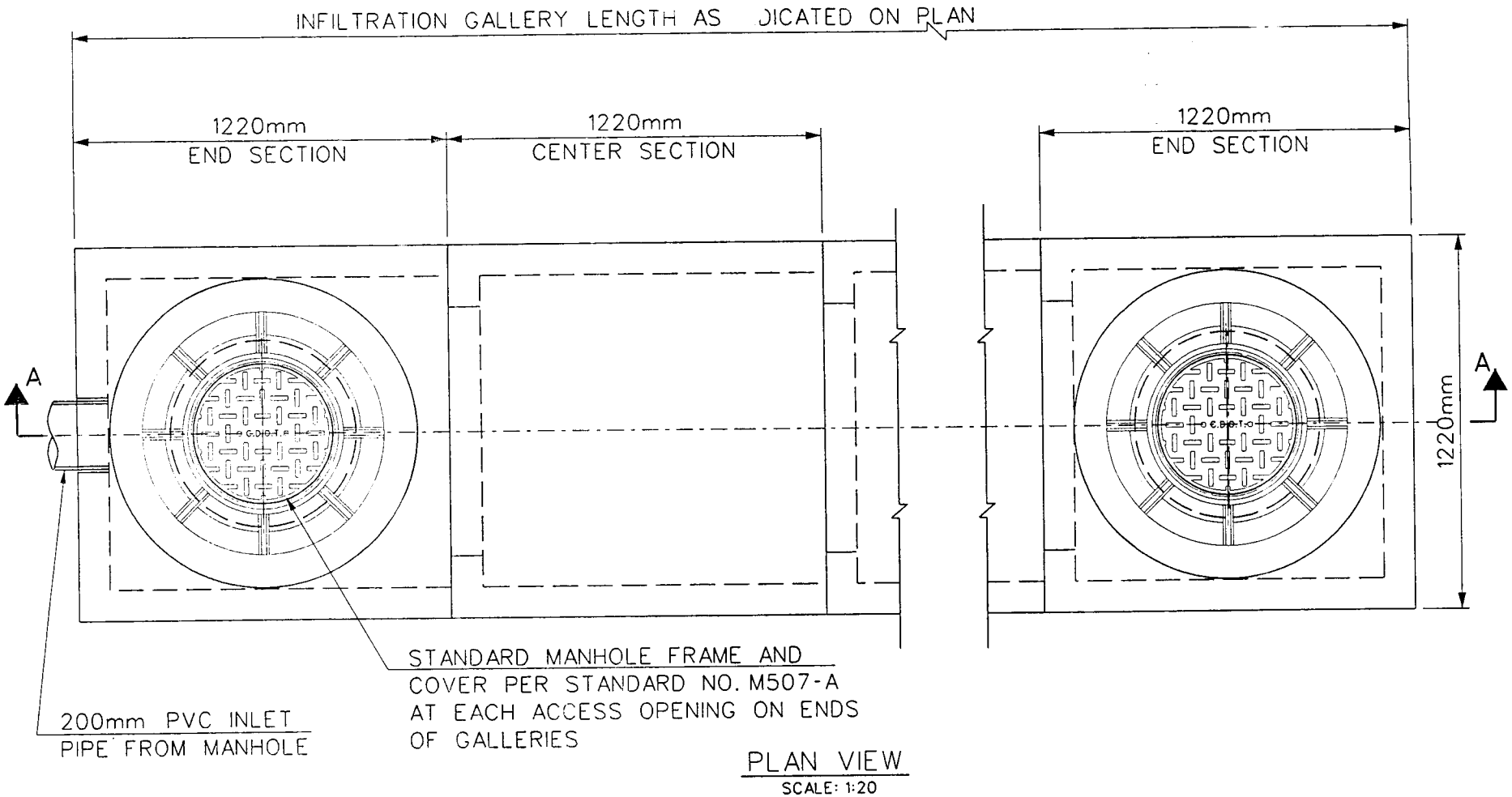
PROJECT NO. 138-221

DATE: 11/22/06	PROPOSED INFILTRATION SYSTEM	FIG. 40



PLAN VIEW
SCALE: 1:20

TYPICAL DETAILS- PRECAST INFILTRATION GALLERY (1 OF 3)

NOTES:

1. PRECAST INFILTRATION GALLERY SHALL CONFORM TO THE REQUIREMENTS FOR PRECAST UNITS FOR DRAINAGE STRUCTURES OF ARTICLE M.08.02 OF THE STANDARD SPECIFICATIONS (FORM 815)
2. THE DESIGN LOADING FOR PRECAST INFILTRATION GALLERY SHALL BE AASHTO HS20-44.

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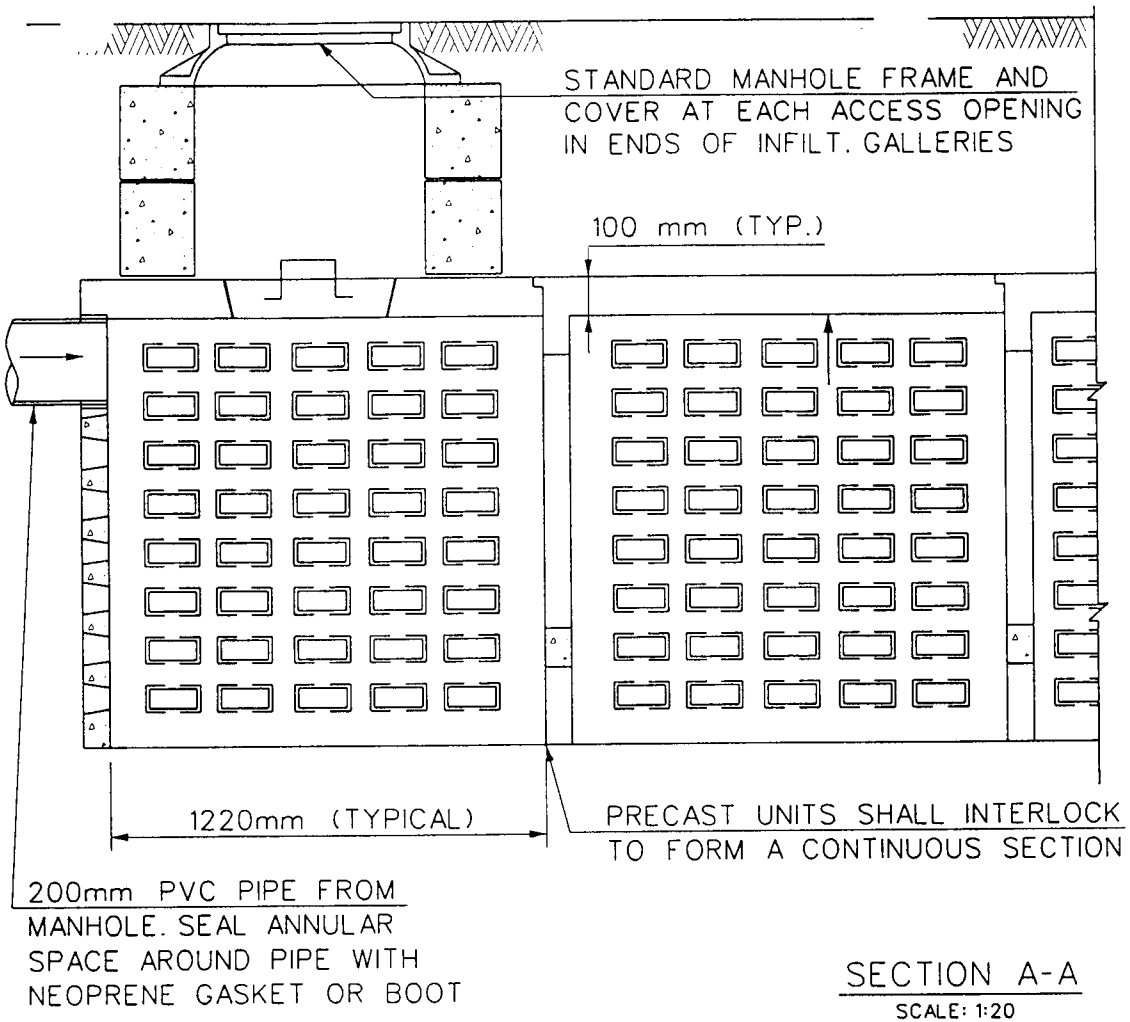
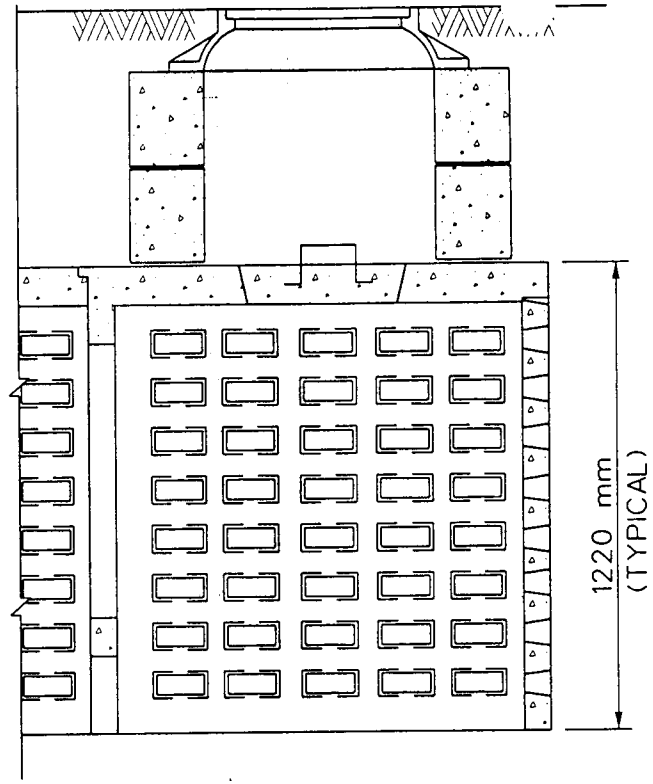
DATE: 11/11/05	PRECAST INFILTRATION GALLERIES TYPICAL DETAILS	FIG. 41



SECTION A-A

SCALE: 1:20



TYPICAL DETAILS- PRECAST INFILTRATION GALLERY (2 OF 3)

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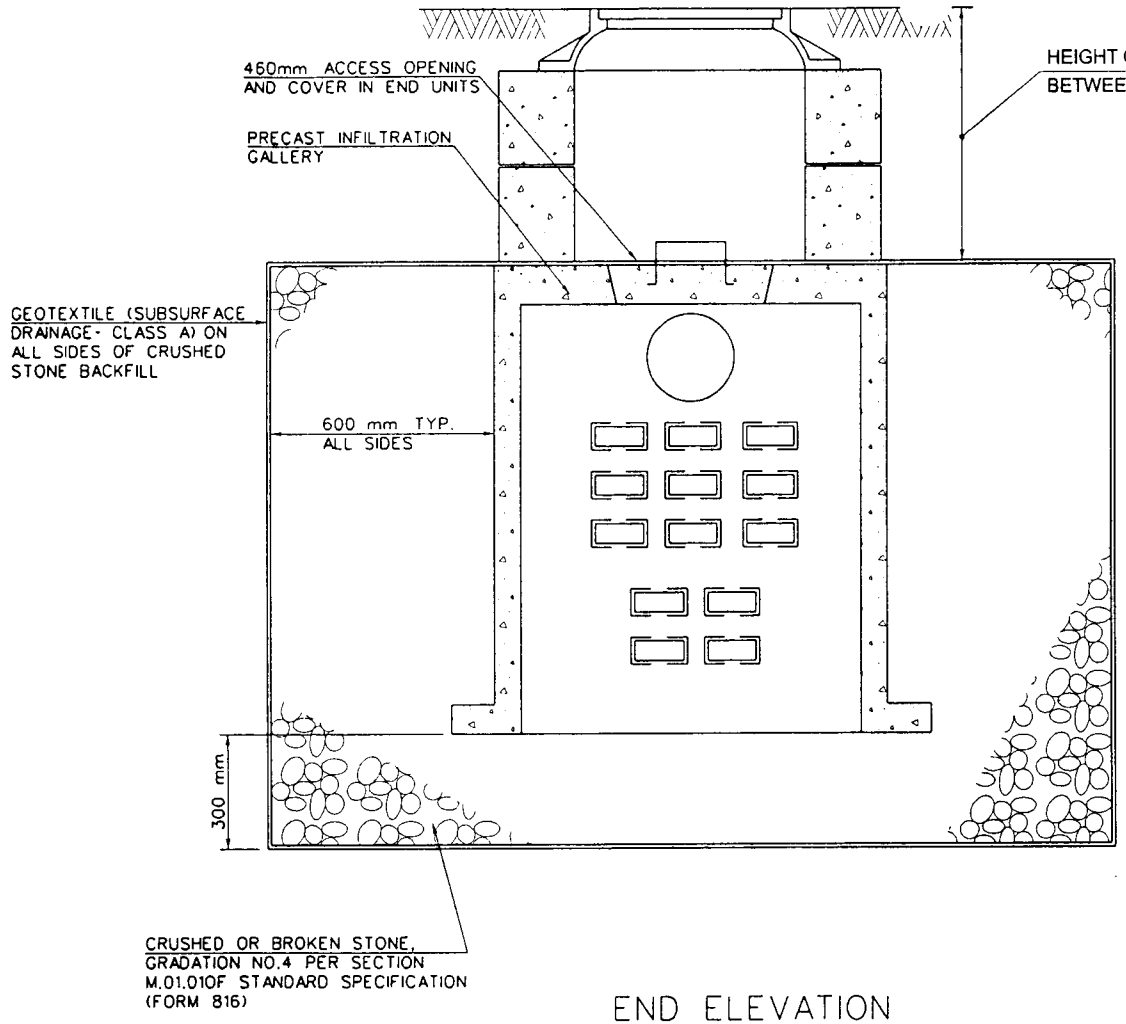
DATE: 11/11/05	PRECAST INFILTRATION GALLERIES TYPICAL DETAILS	FIG. 42



END ELEVATION
SCALE: 1:20

INFILTRATION GALLERY ELEVATION DATA TABLE			
INFILTRATION GALLERY I.D. NO.	BOTTOM OF EXCAVATION ELEV.	APPROX. GROUNDWATER ELEV.	APPROX. TOP OF ROCK ELEV.
1	1.350	0.80	- 2.20
2	1.350	0.80	- 2.20
3	1.600	1.00	- 9.10
4	1.600	1.00	- 9.10
5	1.800	1.10	- 5.40
6	1.880	1.10	- 5.40
7	2.100	1.30	UNKNOWN
8	2.100	1.40	- 1.80

FOR LOCATIONS AND LENGTHS OF INFILTRATION GALLERIES BY I.D. NO. SEE FIGURES 39 AND 40.

GROUNDWATER ELEVATION DATA IN THIS TABLE IS BASED ON MEASUREMENTS TAKEN IN MAY 2004 AT OBSERVATION WELLS IN THE AREA OF THE PROPOSED INFILTRATION SYSTEMS.

TYPICAL DETAILS- PRECAST INFILTRATION GALLERY
(3 OF 3)

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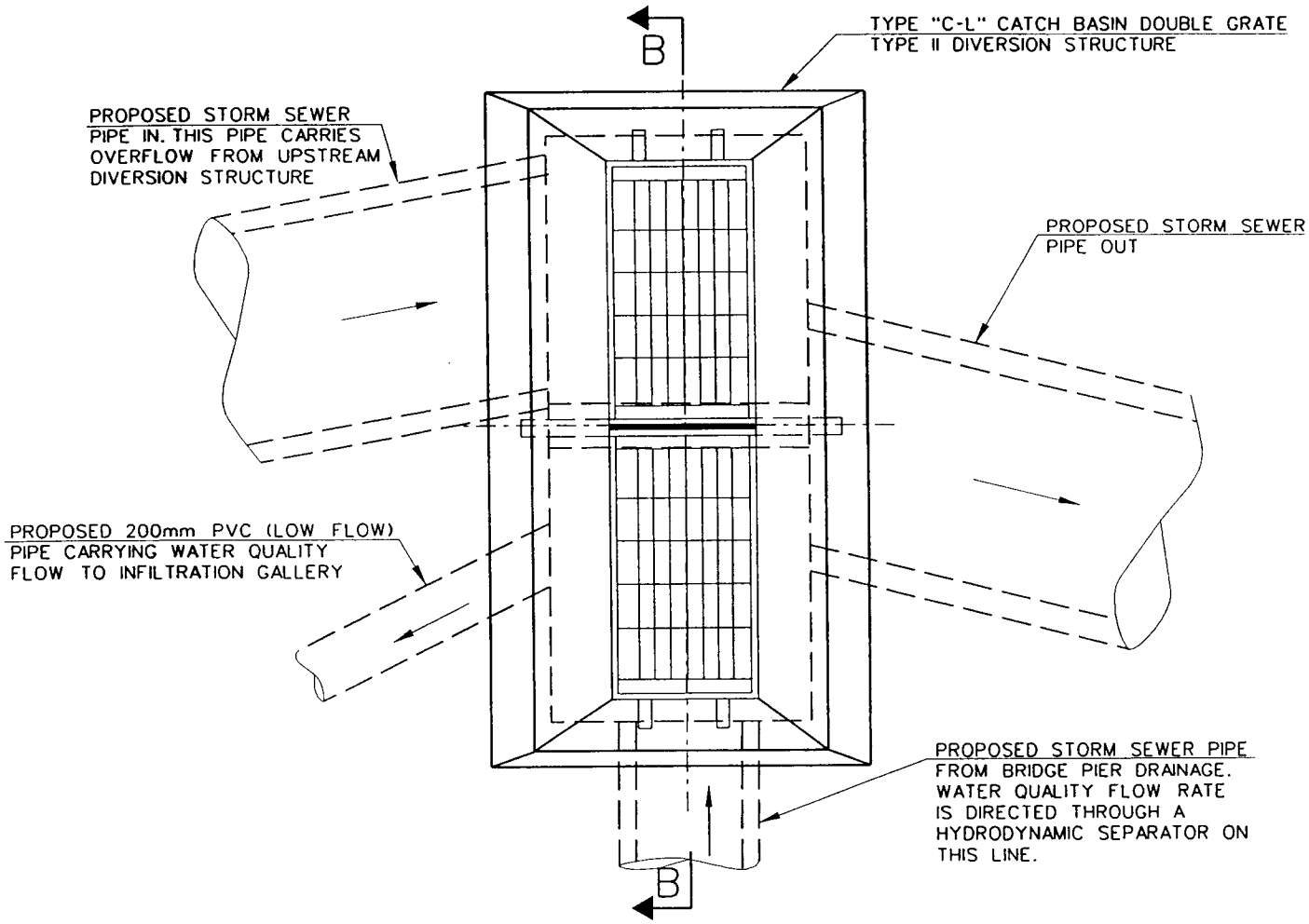
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	PRECAST INFILTRATION GALLERIES TYPICAL DETAILS	FIG. 43



PLAN - TYPICAL DIVERSION STRUCTURE

SCALE 1:25

NOTES: 1. THESE CATCH BASIN UNITS ARE FLOW DIVERSION STRUCTURES. WATER QUALITY FLOW (WQF) RATE IS DIRECTED TO THE INFILTRATION GALLERY VIA THE 200mm DIAMETER PVC PIPES. STORMWATER FLOWS IN EXCESS OF THE WQF RATE ARE CARRIED TO AN OUTFALL AT THE HOUSATONIC RIVER VIA THE STORM SEWER PIPE SYSTEM.

2. STORMWATER RUNOFF ON THE BRIDGE DECK IS INTERCEPTED IN BRIDGE SCUPPERS AND DIRECTED DOWN BRIDGE PIERS IN BRIDGE DRAINAGE PIPES. BRIDGE DRAINAGE PIPES ARE CONNECTED TO TYPE "C-L" CATCH BASINS IN THE PAVED PARKING AREA UNDER THE BRIDGE BY A CLOSED ENDED (UNDERGROUND) CONNECTION.

3. STORMWATER TREATMENT SYSTEMS IN THE PAVED PARKING AREA LOCATED UNDER THE BRIDGE AND ADJACENT TO THE DOCK SHOPPING CENTER ARE SIZED FOR THE FOLLOWING:

BRIDGE DRAINAGE AT BRIDGE PIER NO.	WQV TO INFILTRATION GALLERY	WQF RATE TO HYDRODYNAMIC SEPARATOR UNITS
1	2,086 FT^3	0.6 CFS
2	2,086 FT^3	0.6 CFS
3	2,600 FT^3	0.7 CFS
4	2,573 FT^3	0.7 CFS

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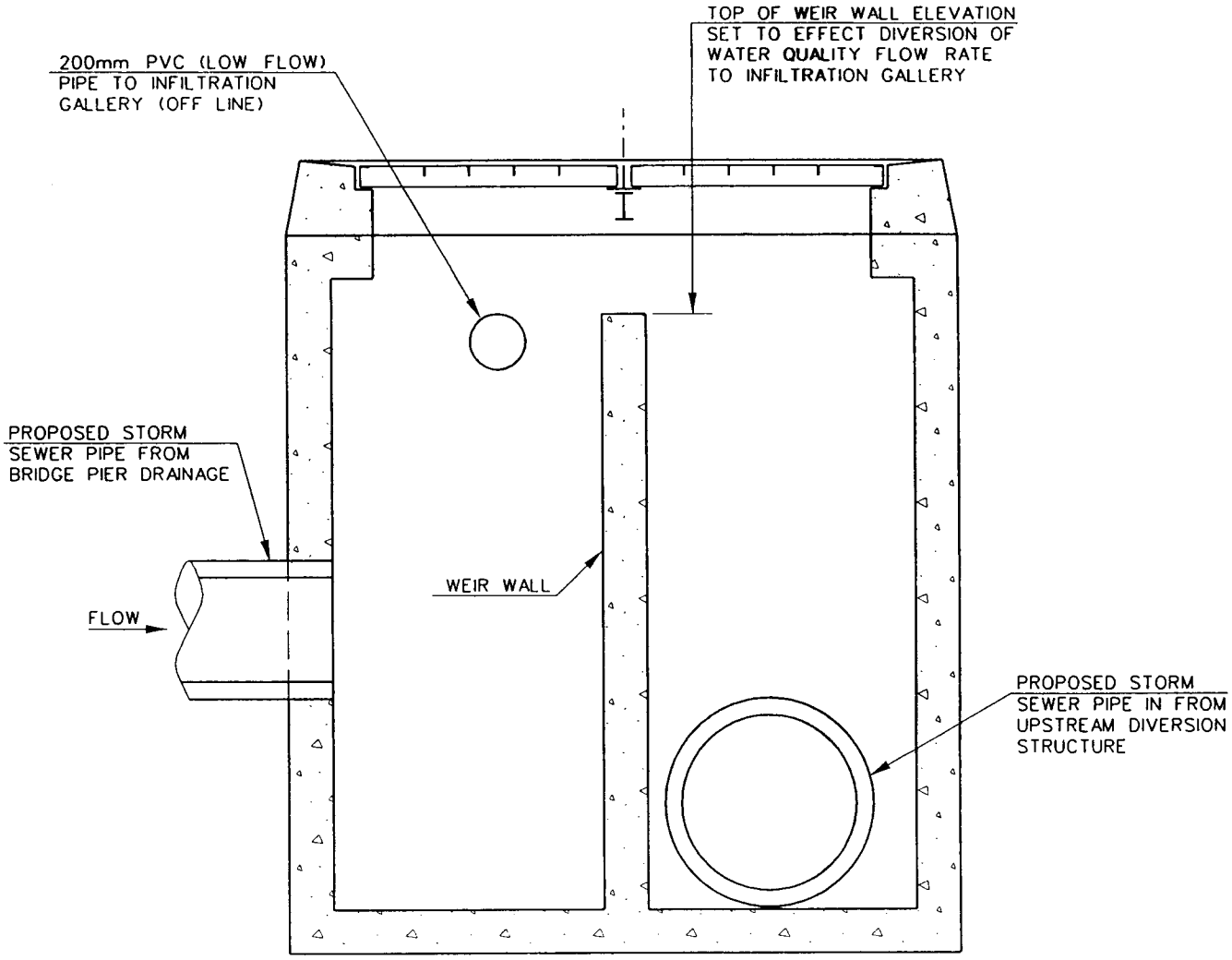
PROJECT NO. 138-221

DATE: 11/11/05 | INFILTRATION SYSTEM DETAIL | FIG. 44



SECTION B-B
TYPICAL DIVERSION STRUCTURE

SCALE 1:25

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REPLACEMENT OF I-95 BRIDGE
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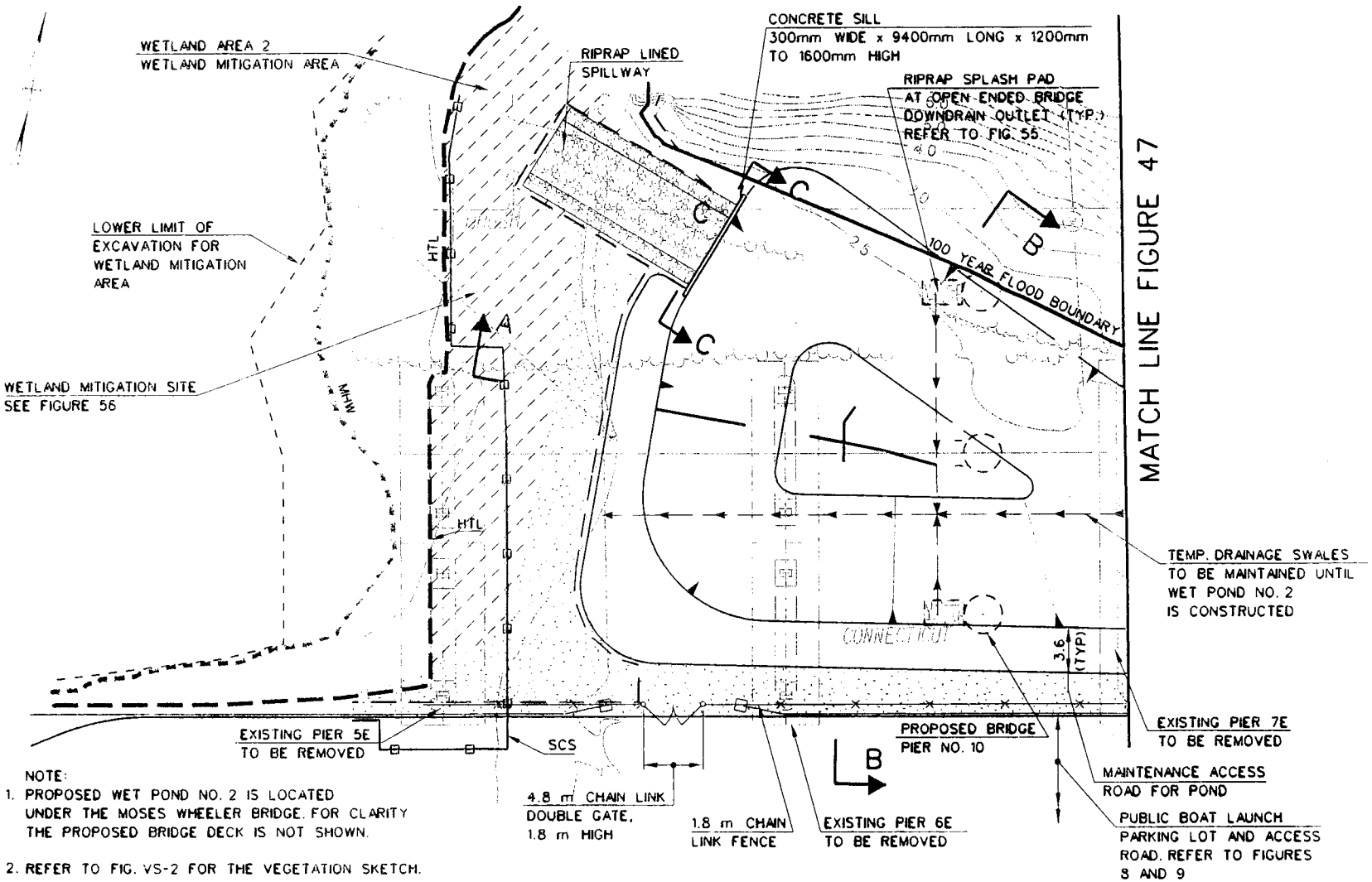
PROJECT NO. 138-221

DATE: 11/11/05	INFILTRATION SYSTEM DETAIL	FIG. 45



NOTE:

1. PROPOSED WET POND NO. 2 IS LOCATED UNDER THE MOSES WHEELER BRIDGE. FOR CLARITY THE PROPOSED BRIDGE DECK IS NOT SHOWN.
2. REFER TO FIG. VS-2 FOR THE VEGETATION SKETCH.
3. PROPOSED WET POND NO. 2 WILL BE CONSTRUCTED IN THE FINAL STAGE OF THE PROJECT AFTER THE NEW MOSES WHEELER BRIDGE IS COMPLETE AND THE EXISTING BRIDGE HAS BEEN DEMOLISHED
4. FOR SECTIONS A-A, B-B AND C-C SEE FIGURE 48.

PLAN - WET POND NO. 2

SCALE: 1:500

LEGEND

MHW	MEAN HIGH WATER ELEVATION
HTL	HIGH TIDE LINE
	100 YEAR FLOOD BOUNDARY

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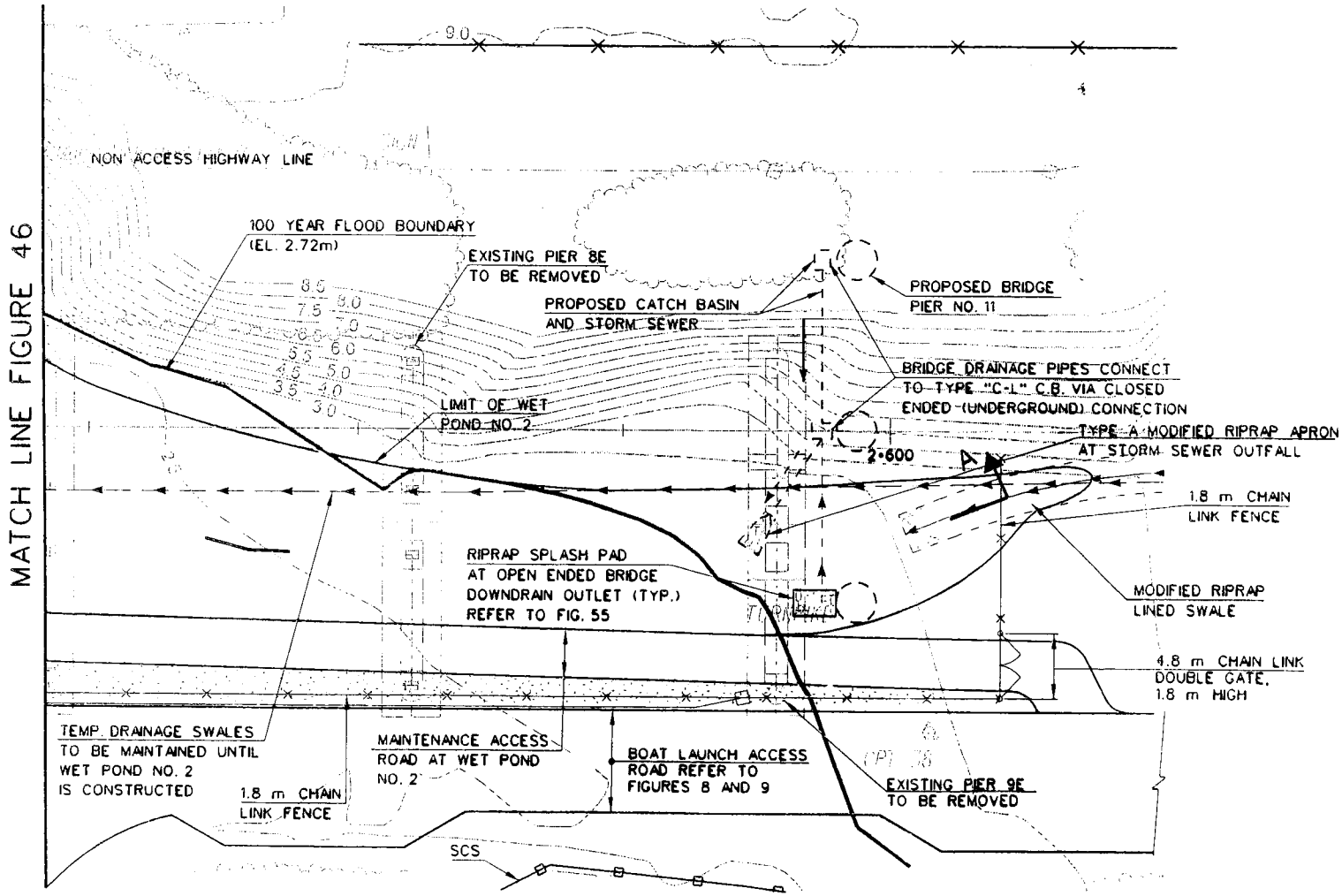
DATE: 11/22/06	PROPOSED WET POND NO. 2	FIG. 46



PLAN - RETENTION POND NO. 2

SCALE: 1:500

NOTE:
PROPOSED WET POND NO. 2 IS LOCATED UNDER THE MOSES WHEELER BRIDGE.
THE PROPOSED BRIDGE DECK IS NOT SHOWN FOR CLARITY.

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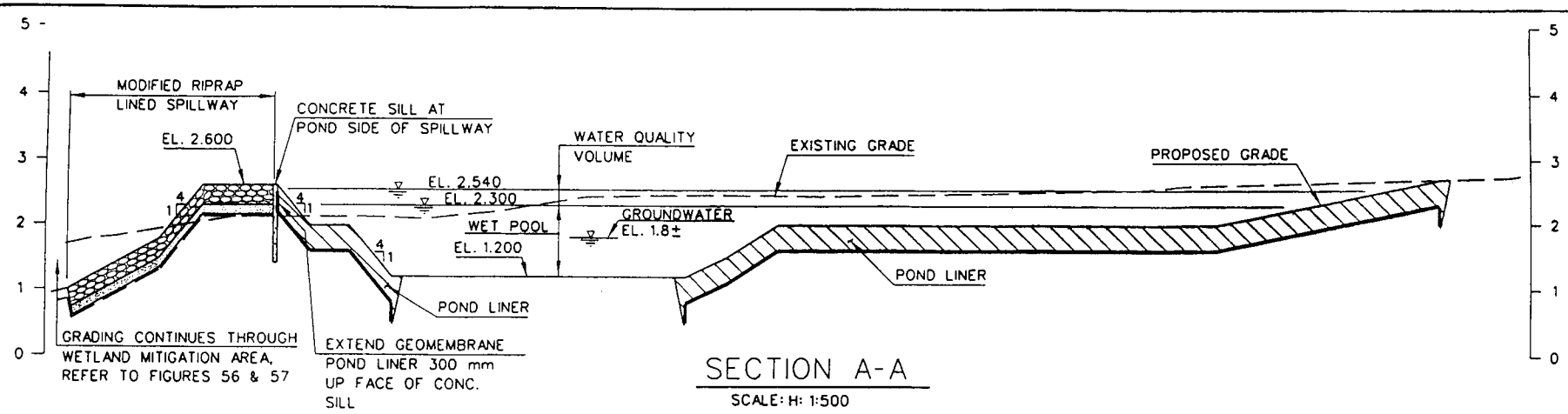
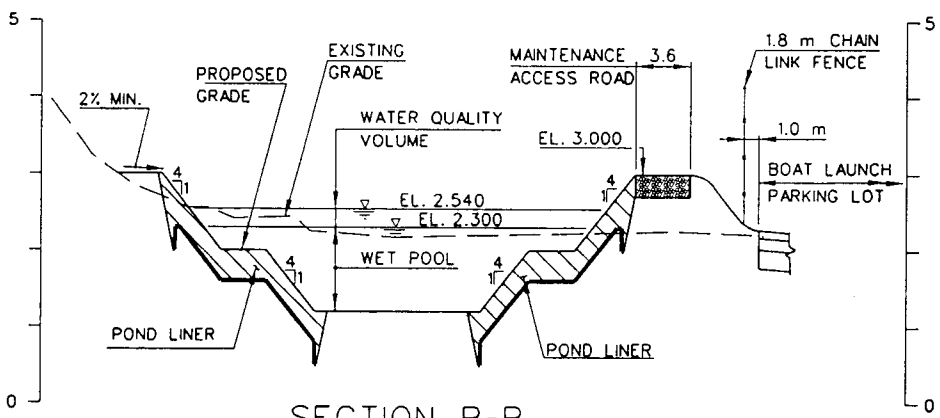
PROJECT NO. 138-221

DATE: 11/22/06	PROPOSED WET POND NO. 2	FIG. 47



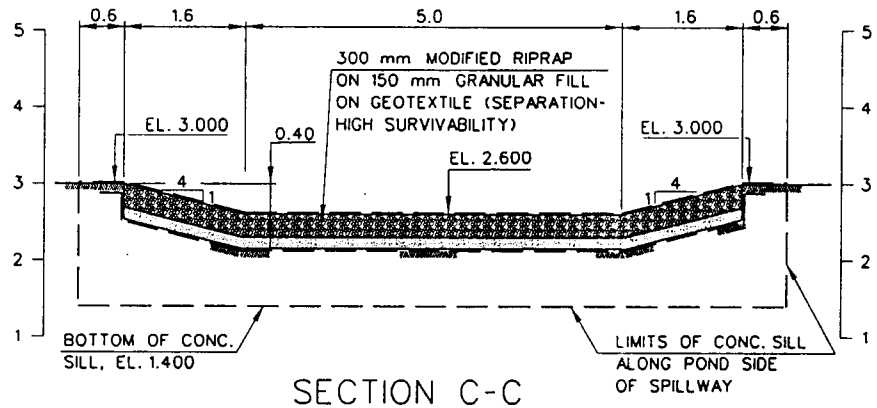
SECTION A-A

SCALE: H: 1:500
V: 1:100



SECTION B-B

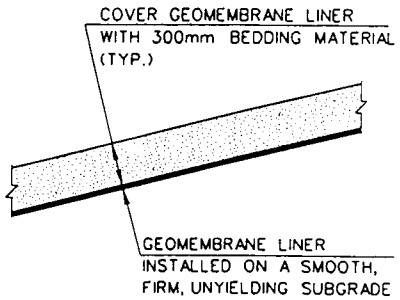
SCALE: H: 1:500
V: 1:100



SECTION C-C

SCALE: 1:100

SECTION AND DETAILS - WET POND NO. 2



EMBED GEOMEMBRANE LINER IN ANCHOR TRENCHES AT UPPER AND LOWER LIMITS OF THE POND LINER.

TYPICAL SECTION POND LINER

N.T.S.

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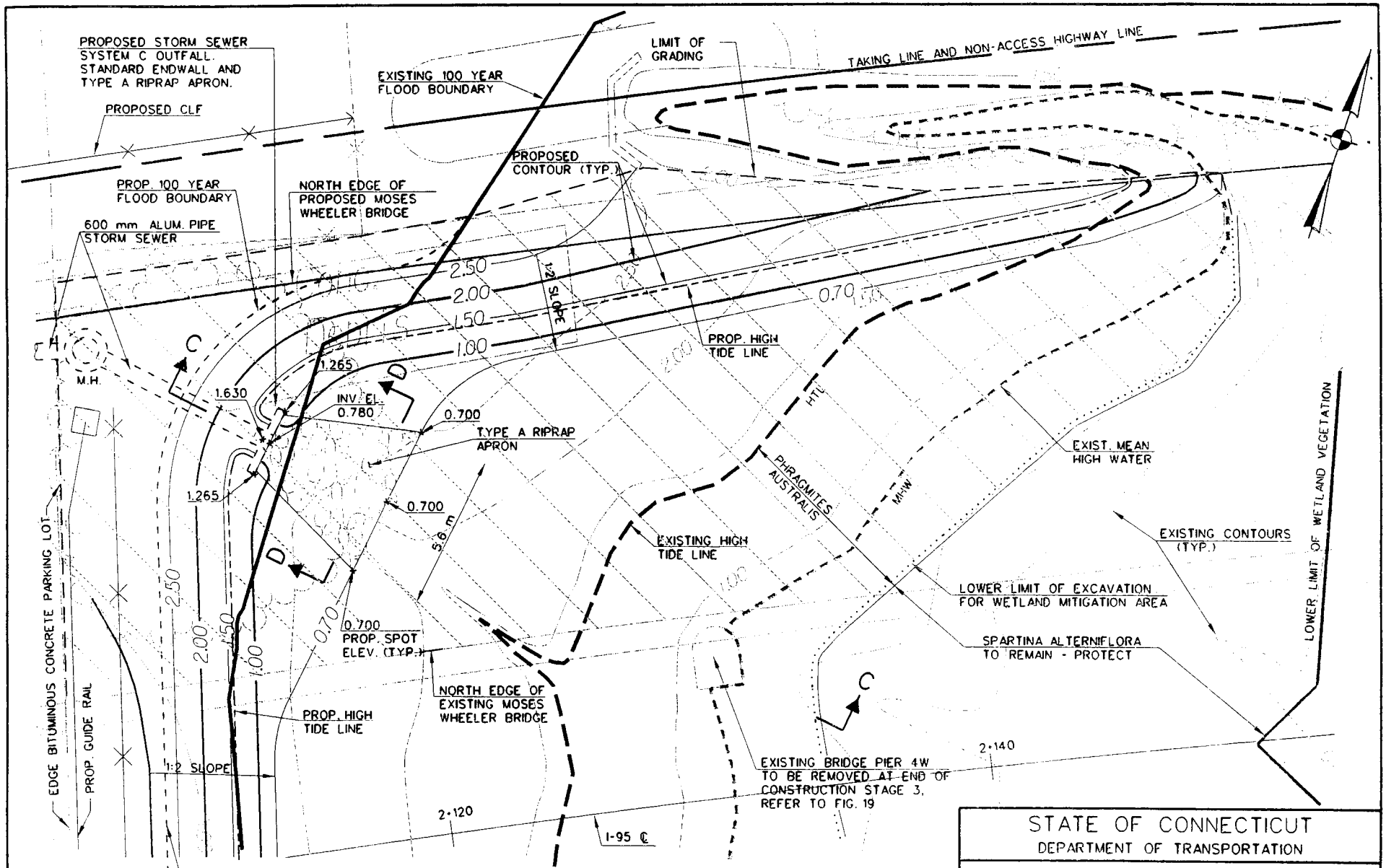
PROJECT NO. 138-221

DATE: 11/11/05	WET POND NO. 2 SECTIONS AND DETAILS	FIG. 48



PLAN
STRATFORD STORM SEWER OUTFALL

SCALE: 1:200

NOTE: REFER TO FIG. 53 FOR SECTION C-C AND SECTION D-D AND NOTES.

LEGEND

INDICATES PORTION OF WETLAND MITIGATION AREA TO BE GRADED AND PLANTED IN CONSTRUCTION STAGE 1 PRIOR TO THE CONSTRUCTION OF THIS STORM SEWER OUTFALL

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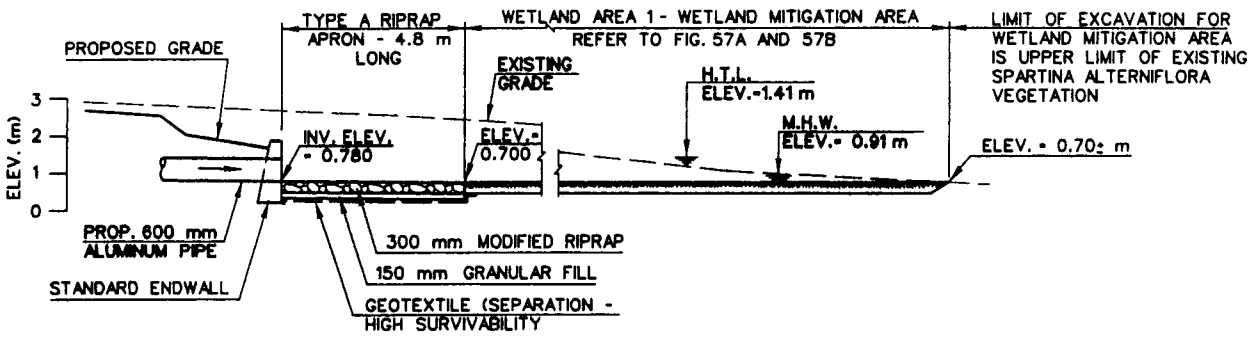
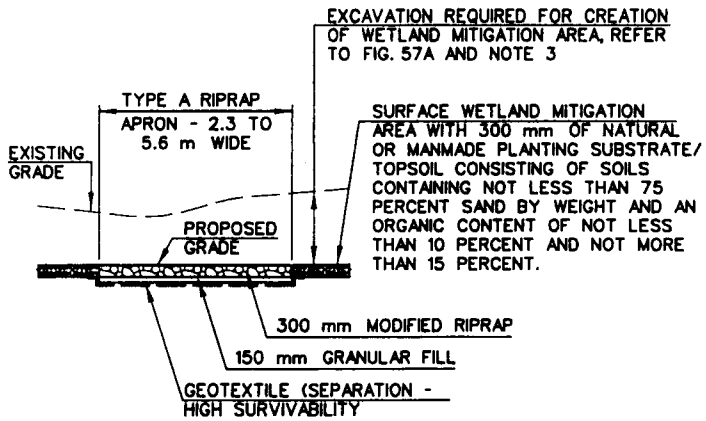
PROJECT NO. 138-221

DATE: 11/22/06	DRAINAGE SYSTEM C PROPOSED STORM SEWER OUTFALL	FIG. 52



SECTION C-C

SCALE: 1:200



SECTION D-D

SCALE: 1:200

NOTES:

1. REFER TO FIGURE 52 FOR THE LOCATION OF SECTIONS C-C AND D-D.
2. THIS PROPOSED 600 mm STORM SEWER SYSTEM HANDLES ONLY RUNOFF FROM THE NEW MOSES WHEELER BRIDGE DECK, BETWEEN PIERS 1 AND 5. FOR LAYOUT OF STORM SEWER SYSTEM REFER TO FIGURES 39 AND 40.
3. THIS STORM SEWER OUTFALL WILL BE INSTALLED IN CONSTRUCTION STAGE 1 TO ACCEPT RUNOFF FROM THE BRIDGE DECK ON THE NORTH GIRDER OF THE NEW MOSES WHEELER BRIDGE. CREATION OF THE WETLAND MITIGATION AREA TO THE NORTH OF THE EXISTING MOSES WHEELER BRIDGE SHALL BE PERFORMED PRIOR TO THE CONSTRUCTION OF THIS STORM SEWER OUTFALL.
4. CREATION OF THE PORTION OF THE WETLAND MITIGATION AREA UNDER AND TO THE SOUTH OF THE EXISTING MOSES WHEELER BRIDGE WILL BE PERFORMED AT THE END OF CONSTRUCTION STAGE 4 AFTER THE EXISTING BRIDGE HAS BEEN DEMOLISHED.
5. REFER TO FIGURES 57A AND 57B FOR PLANS OF THE WETLAND MITIGATION AREA.

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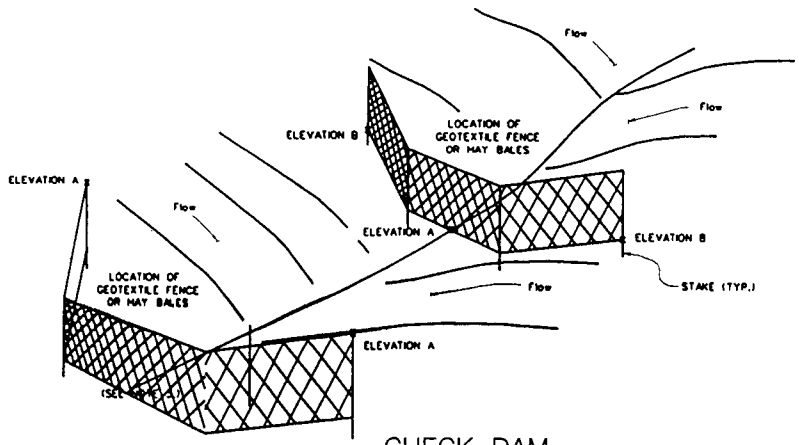
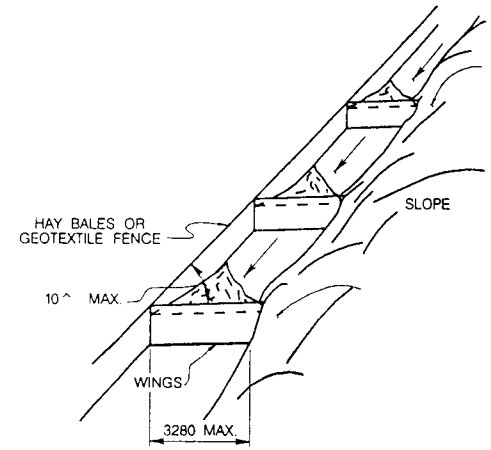
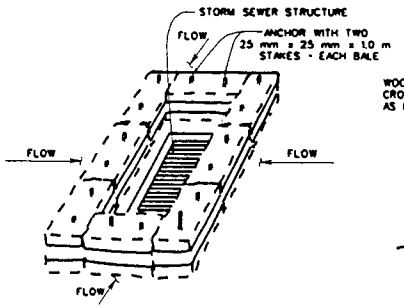
DATE: 11/22/06	DRAINAGE SYSTEM C PROPOSED STORM SEWER OUTFALL	FIG. 53



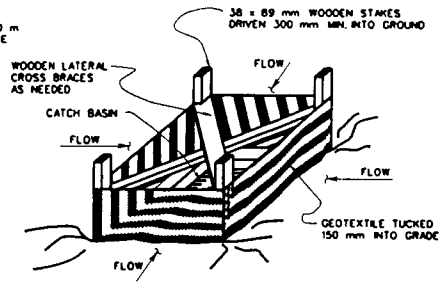
CHECK DAM



TREATMENT AT TOE OF SLOPE

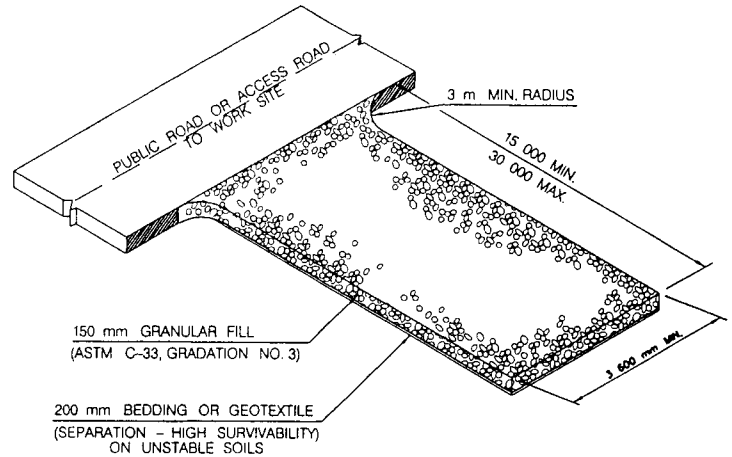


HAY BALE
AT CATCH BASIN



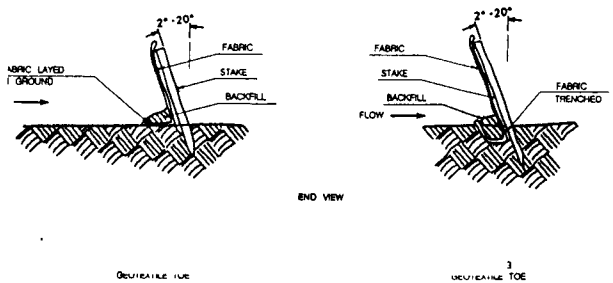
GEOTEXTILE FENCE
AT CATCH BASIN

TREATMENT FOR A
CATCH BASIN IN A DEPRESSION



TYPICAL CONSTRUCTION ENTRANCE

Revised: 3/18/03



GEOTEXTILE FENCE SYSTEM

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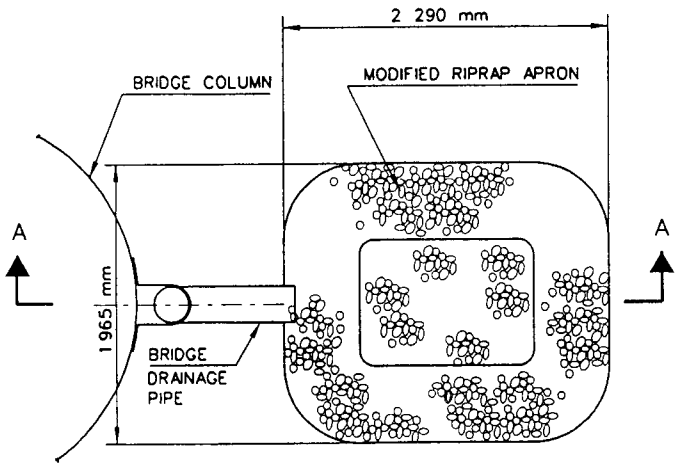
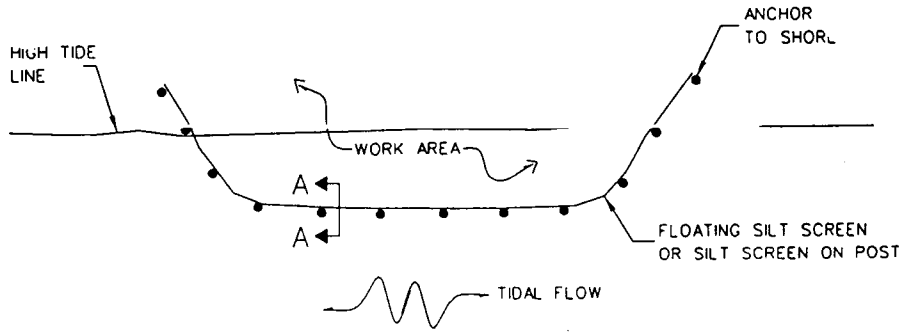
PROJECT NO. 138-221

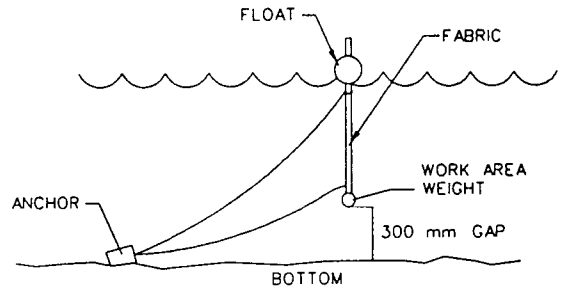
DATE: 11/11/05	SEDIMENTATION AND EROSION CONTROL MEASURES	FIG. 54



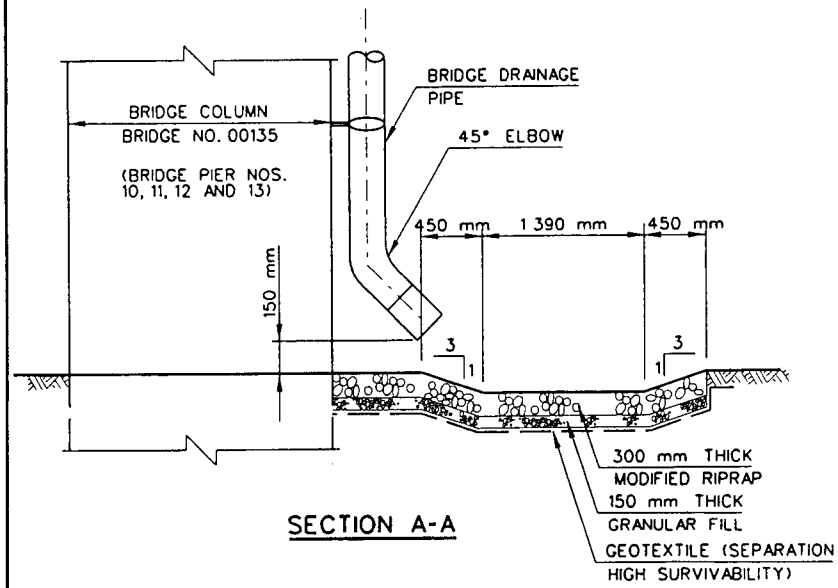
PLAN



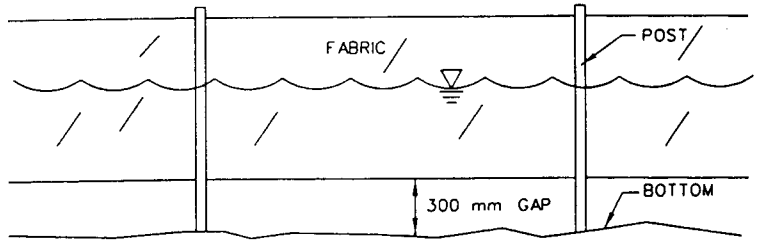
PLAN - SILT SCREEN



SECTION A-A - (FLOATING SILT SCREEN)



SECTION A-A



ELEVATION - (SILT SCREEN ON POSTS)

OPEN ENDED SCUPPER OUTLET WITH RIPRAP APRON

NOT TO SCALE

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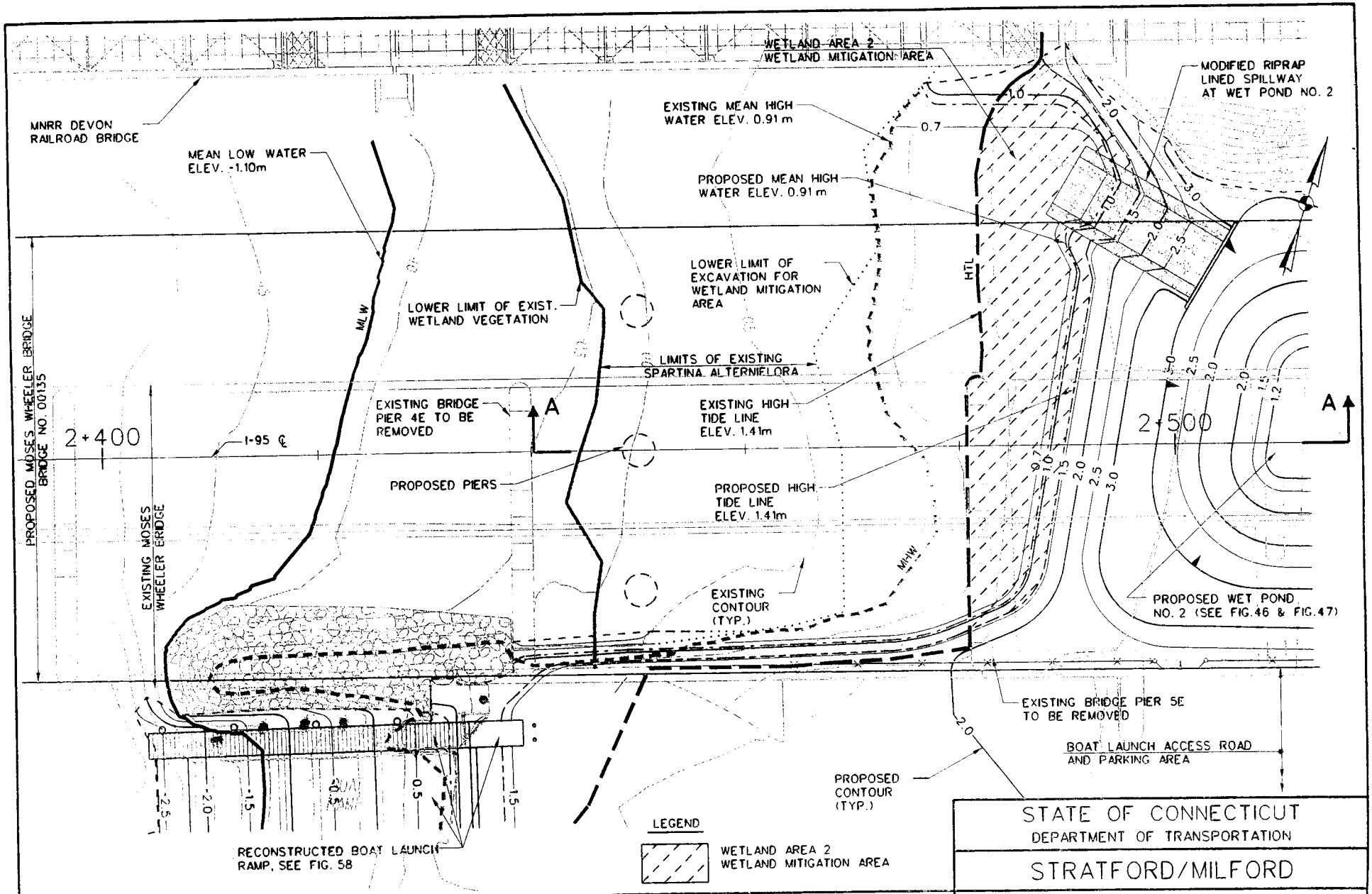
PROJECT NO. 138-221

DATE: 11/11/05	EROSION CONTROL DETAILS	FIG. 55



WETLAND MITIGATION PLAN
WETLAND AREA 2

SCALE- 1:500

REFER TO FIG. 57 FOR SECTION A-A

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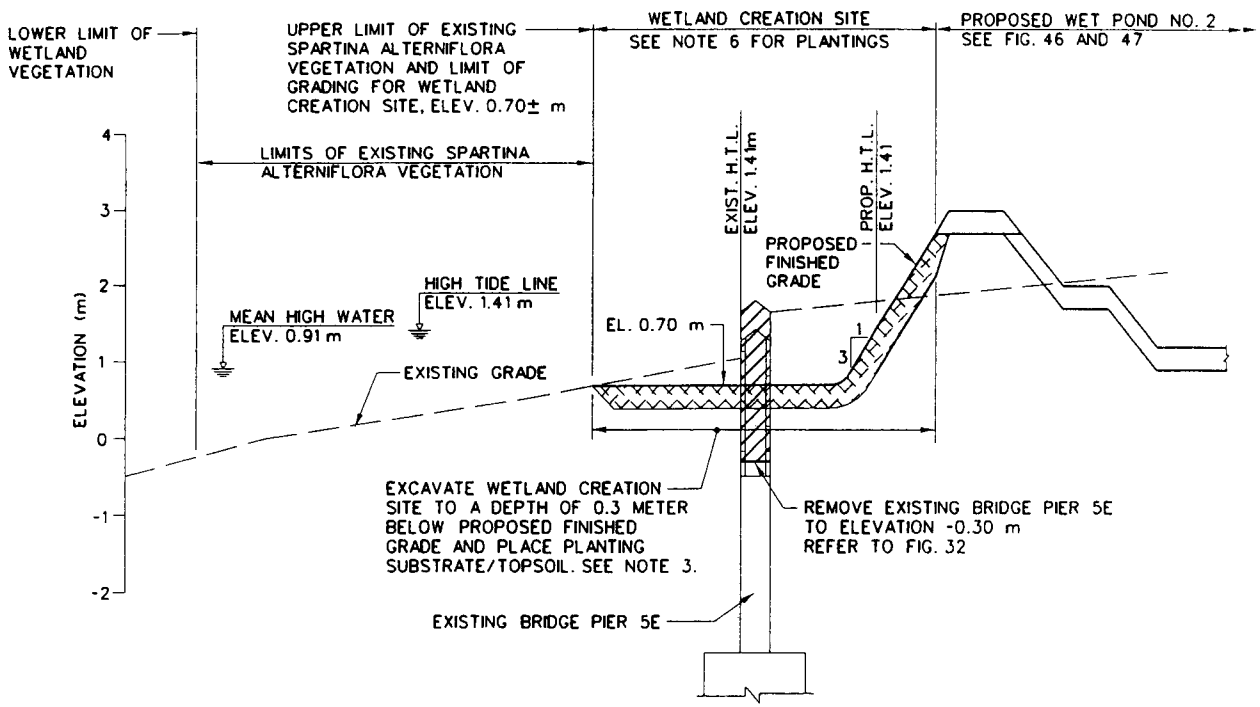
PROJECT NO. 138-221

DATE: 11/22/06	WETLAND MITIGATION SITE	FIG. 56



SECTION A-A

SCALE - HORIZ. 1:500
VERT. 1:100

REFER TO FIGURE 56 FOR LOCATION OF SECTION A-A
SECTION A-A IS CUT ALONG THE I-95 ℄

NOTES:

1. A WETLAND SCIENTIST FROM THE CONNECTICUT DEPARTMENT OF TRANSPORTATION OFFICE OF ENVIRONMENTAL PLANNING WILL BE ON-SITE TO MONITOR AND DIRECT CONSTRUCTION OF THE WETLAND CREATION SITE.
2. THE TIDAL WETLAND MITIGATION WORK CONSISTS OF PREPARING APPROPRIATE SITE GRADES, PLACING APPROVED PLANTING SUBSTRATE/TOPSOIL, AND THE FURNISHING AND PLACING OF PLANTINGS.
3. PLANTING SUBSTRATE/TOPSOIL USED TO SURFACE THE WETLAND CREATION SITE SHALL BE A NATURAL OR MANMADE PLANTING SUBSTRATE WHICH SHALL CONSIST OF SOILS CONTAINING NO LESS THAN 75% SAND BY WEIGHT AND AN ORGANIC CONTENT NOT LESS THAN 10% AND NOT MORE THAN 15%.
4. EXISTING TOPSOIL STRIPPED FROM THE WETLAND CREATION SITE SHALL NOT BE REUSED BUT SHALL BE REMOVED FROM THE AREA AND PROPERLY DISPOSED OF AT AN UPLAND SITE.
5. EXISTING BRIDGE PIER 5E WILL BE REMOVED AT THE END OF CONSTRUCTION STAGE 3, AFTER THE EXISTING MOSES WHEELER BRIDGE IS FULLY OUT OF SERVICE. CONSTRUCTION OF PROPOSED WET POND NO. 2 AND THIS WETLAND CREATION SITE WILL BE CONSTRUCTED IN CONSTRUCTION STAGE 4.
6. PLANTINGS IN THE WETLAND CREATION SITE SHALL CONSIST OF THE FOLLOWING:
   - ESTABLISH SHORELINE GRASS ON THE EMBANKMENT AREAS ABOVE THE PROPOSED HIGH TIDE LINE.
   - PLANT SHRUBS, CONSISTING OF GROUNDED TREE, HIGH TIDE BUSH, SWEET GALE AND ROSE MALLOW ACCORDING TO THE PLANTING PLAN IN THE DESIGN DRAWINGS, ON THE EMBANKMENT OF THE WETLAND CREATION SITE ABOVE THE PROPOSED HIGH TIDE LINE (ELEV. 1.41 m).
   - PLANT PLUGS OF SALTMEADOW HAY (SPARTINA PATENS) AT 600 mm (24") ON CENTER ON THE EMBANKMENT OF THE WETLAND CREATION SITE BETWEEN THE PROPOSED MEAN HIGH WATER (ELEV. 0.91 m) AND THE PROPOSED HIGH TIDE LINE (ELEV. 1.41 m).
   - PLANT PLUGS OF SMOOTH CORDGRASS (SPARTINA ALTERNIFLORA) AT 900 mm (36") ON CENTER IN THE THE WETLAND CREATION SITE AREA BETWEEN THE LOWER LIMIT OF GRADING AND PROPOSED HIGH TIDE ELEVATION (ELEV. 0.91 m).

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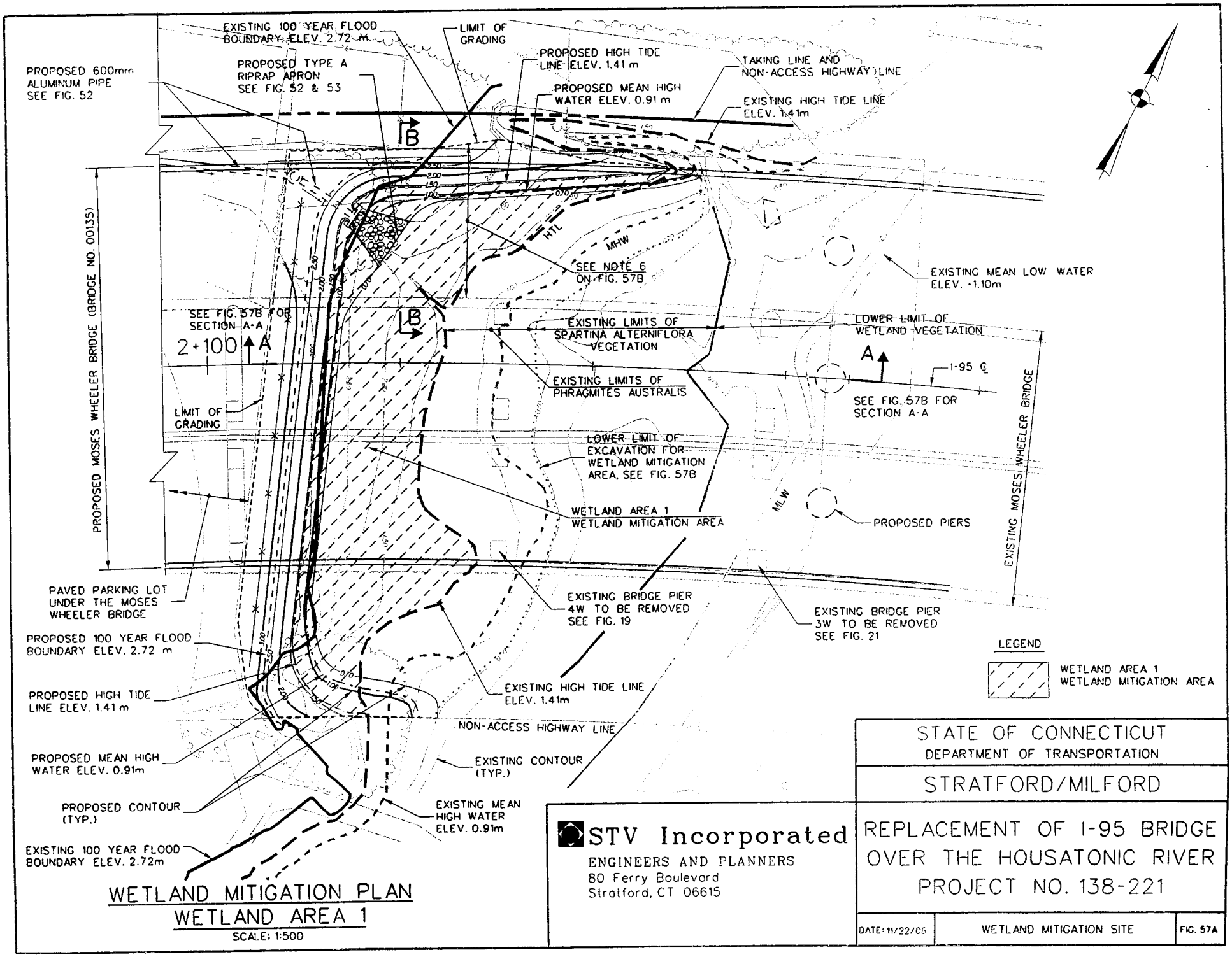
DATE: 11/22/06	WETLAND MITIGATION SECTION	FIG. 57



WETLAND MITIGATION PLAN
WETLAND AREA 1

SCALE: 1:500

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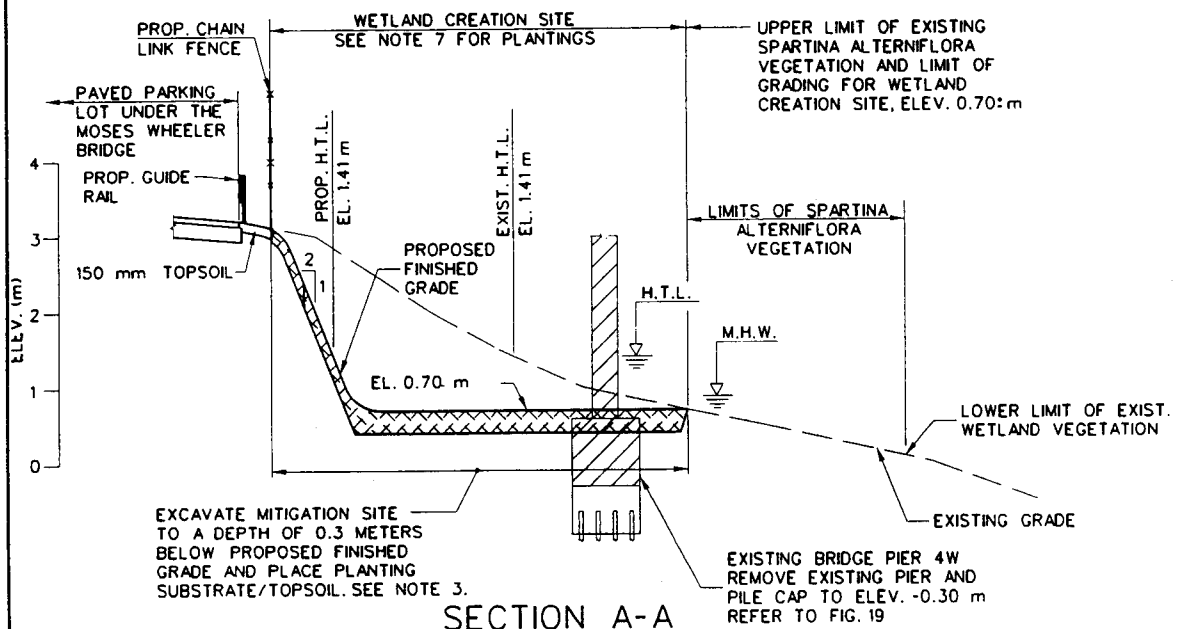
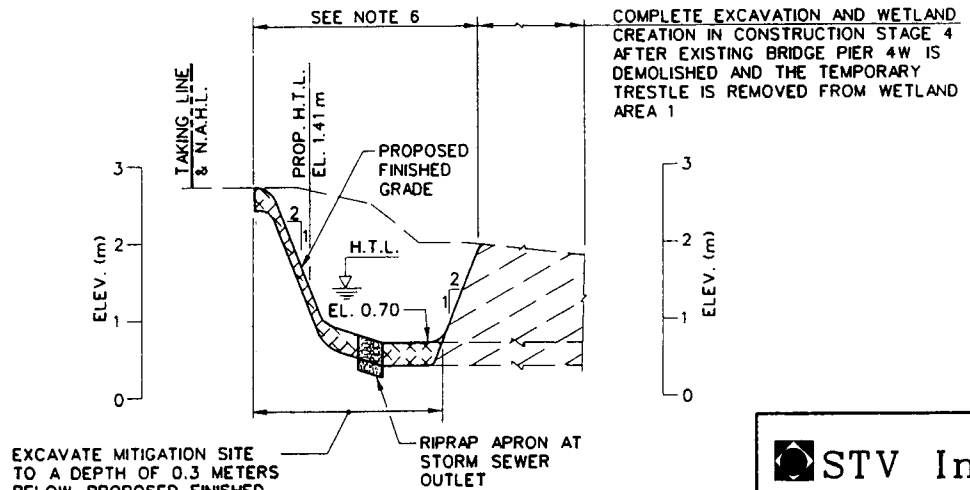
DATE: 11/22/06	WETLAND MITIGATION SITE	FIG. 57A



SECTION A-A

SCALE: HORIZ. 1:250
VERT. 1:50
REFER TO FIGURE 57A FOR LOCATION OF SECTION A-A
SECTION A-A IS CUT ALONG THE I-95 ℄



SECTION B-B

STA. 2+120 I-95 ℄
SCALE: HORIZ. 1:250
VERT. 1:50

NOTES:

1. A WETLAND SCIENTIST FROM THE CONNECTICUT DEPARTMENT OF TRANSPORTATION OFFICE OF ENVIRONMENTAL PLANNING WILL BE ON-SITE TO MONITOR AND DIRECT CONSTRUCTION OF THE WETLAND CREATION SITE.
2. THE TIDAL WETLAND MITIGATION WORK CONSISTS OF PREPARING APPROPRIATE SITE GRADES, PLACING APPROVED PLANTING SUBSTRATE/TOPSOIL, AND THE FURNISHING AND PLACING OF PLANTINGS.
3. PLANTING SUBSTRATE/TOPSOIL USED TO SURFACE THE WETLAND CREATION SITE SHALL BE A NATURAL OR MANMADE PLANTING SUBSTRATE WHICH SHALL CONSIST OF SOILS CONTAINING NO LESS THAN 75% SAND BY WEIGHT AND AN ORGANIC CONTENT NOT LESS THAN 10% AND NOT MORE THAN 15%.
4. EXISTING TOPSOIL STRIPPED FROM THE WETLAND MITIGATION AREA SHALL NOT BE REUSED BUT SHALL BE REMOVED FROM THE AREA AND PROPERLY DISPOSED OF AT AN UPLAND SITE.
5. EXISTING BRIDGE PIER 4W WILL BE REMOVED AT THE END OF CONSTRUCTION STAGE 3, AFTER THE EXISTING MOSES WHEELER BRIDGE IS FULLY REMOVED FROM SERVICE.
6. THE PORTION OF THE WETLAND CREATON SITE TO THE NORTH OF THE EXISTING MOSES WHEELER BRIDGE WILL BE CONSTRUCTED IN CONSTRUCTION STAGE 1, IN COORDINATION WITH THE CONSTRUCTION OF THE STRATFORD STORM SEWER OUTFALL (REFER TO FIGURES 52 AND 53). CREATION OF THE REMAINDER OF THIS WETLAND CREATION SITE WILL BE PERFORMED IN CONSTRUCTION STAGE 4, AFTER THE EXISTING MOSES WHEELER BRIDGE HAS BEEN REMOVED.
7. PLANTINGS IN THIS WETLAND CREATION SITE SHALL CONSIST OF THE FOLLOWING:
   - ESTABLISH SHORELINE GRASS ON THE EMBANKEMENT AREAS ABOVE THE PROPOSED HIGH TIDE LINE (ELEV. 1.41 m).
   - PLANT SHRUBS CONSISTING OF GROUNDED TREE, HIGH TIDE BUSH, SWEET GALE AND ROSE MALLOW ACCORDING TO THE PLANTING PLAN IN THE DESIGN DRAWINGS, ON THE EMBANKMENT OF THE WETLAND CREATION SITE ABOVE THE PROPOSED HIGH TIDE LINE.
   - PLANT PLUGS OF SALTMEADOW HAY (SPARTINA PATENS) AT A SPACING OF 600 mm (24") ON-CENTER ON THE EMBANKMENT OF THIS WETLAND CREATION SITE BETWEEN THE PROPOSED MEAN HIGH WATER LINE (ELEV. 0.91 m) AND THE PROPOSED HIGH TIDE LINE (ELEV. 1.41 m).
   - PLANT PLUGS FO SMOOTH CORDGRASS (SPARTINA ALTERNIFLORA) AT A SPACING OF 900 mm (36") ON-CENTER IN THE WETLAND CREATION SITE BETWEEN THE LOWER LIMIT OF GRADING FOR THIS WETLAND CREATION SITE AND THE PROPOSED HIGH TIDE LINE (ELEV. 1.41 m).

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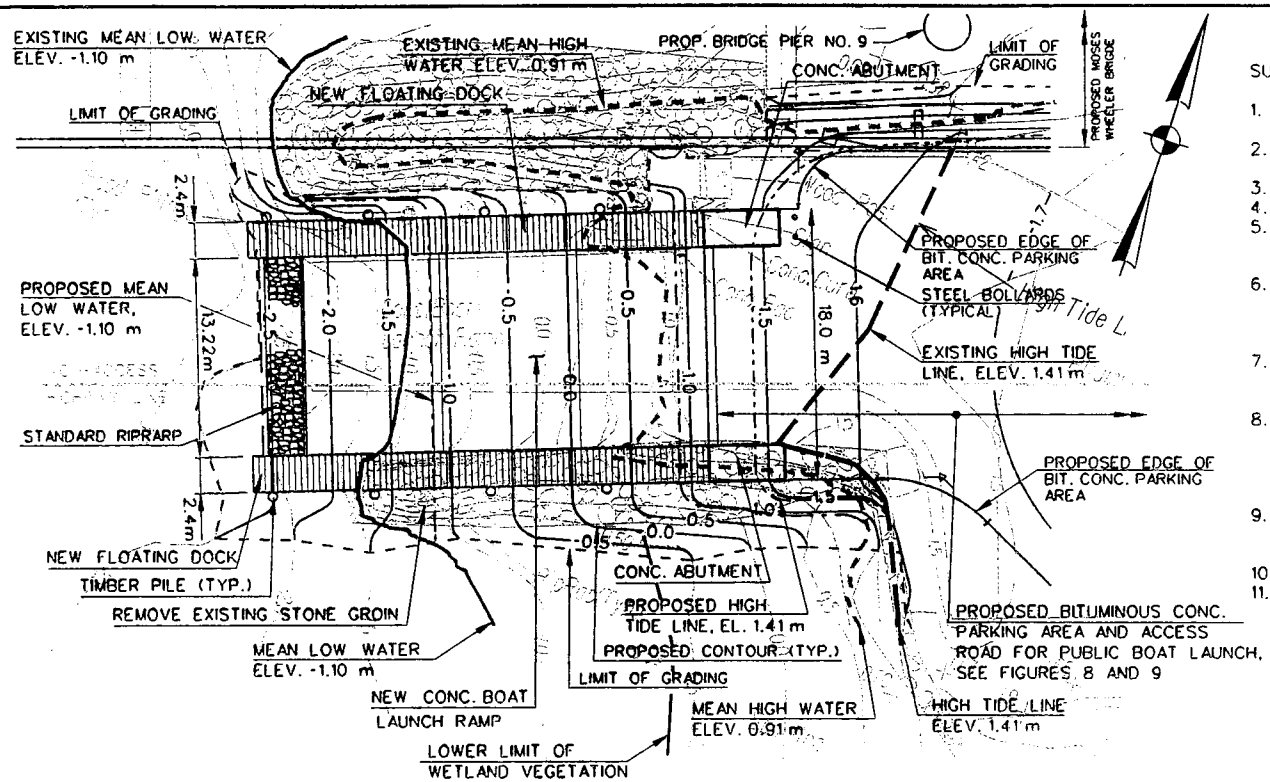
PROJECT NO. 138-221

DATE: 11/22/06	WETLAND MITIGATION SECTION	FIG. 57B

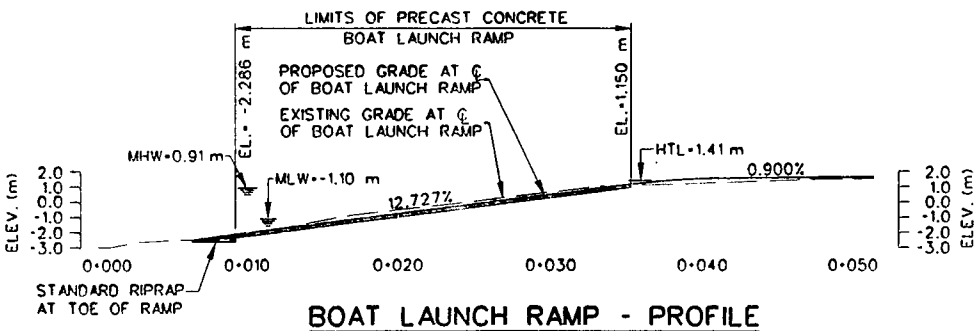


BOAT LAUNCH RAMP - PLAN

SCALE 1:500

SUGGESTED RAMP CONSTRUCTION PROCEDURE

1. CONSTRUCT TURBIDITY CONTROL CURTAIN AROUND PERIMETER OF SITE.
2. REMOVE EXISTING CONCRETE RAMP, FLOATING DOCK AND STONE GROIN ON SOUTH SIDE OF EXISTING BOAT RAMP.
3. PREPARE SUBGRADE TO CORRECT LINE AND GRADE.
4. PLACE RIPRAP AT TOE OF RAMP.
5. PLACE SPECIAL RIPRAP IN WINDROWS PARALLEL WITH THE SHORE EVERY 3 000 mm FROM THE TOE TO THE TOP OF THE RAMP.
6. LAY STEEL RAILS (W150 X 30) ON TOP OF WINDROWS, PERPINDICULAR TO SHORE IN ACCORDANCE WITH PLAN. PUSH RAILS INTO WINDROWS TO CORRECT LINE AND GRADE.
7. USE A MECHANICALLY PULLED GRADE BAR SET ON THE RAILS TO LEVEL THE SPECIAL RIPRAP TO CORRECT GRADE.
8. SET INITIAL CONCRETE PANEL ON RAILS AT TOP OF RAMP AND PUSH WATERWARD UNTIL LOWER EDGE IS JUST UNDER THE WATER SURFACE. PUT IN PLACE A SECOND PANEL KEYED INTO THE PREVIOUS PANEL AND PUSH WATERWARD.
9. REPEAT ABOVE PROCEDURE CAREFULLY CHECKING PANEL ALIGNMENT AND ADJUSTING AS NECESSARY UNTIL ALL PANELS IN ONE COLUMN ARE PLACED.
10. CONSTRUCT INTERMEDIATE SUPPORT BLOCK.
11. REPEAT ABOVE PROCEDURE FOR ADDITIONAL PANEL COLUMNS.



BOAT LAUNCH RAMP - PROFILE

SCALE 1:500

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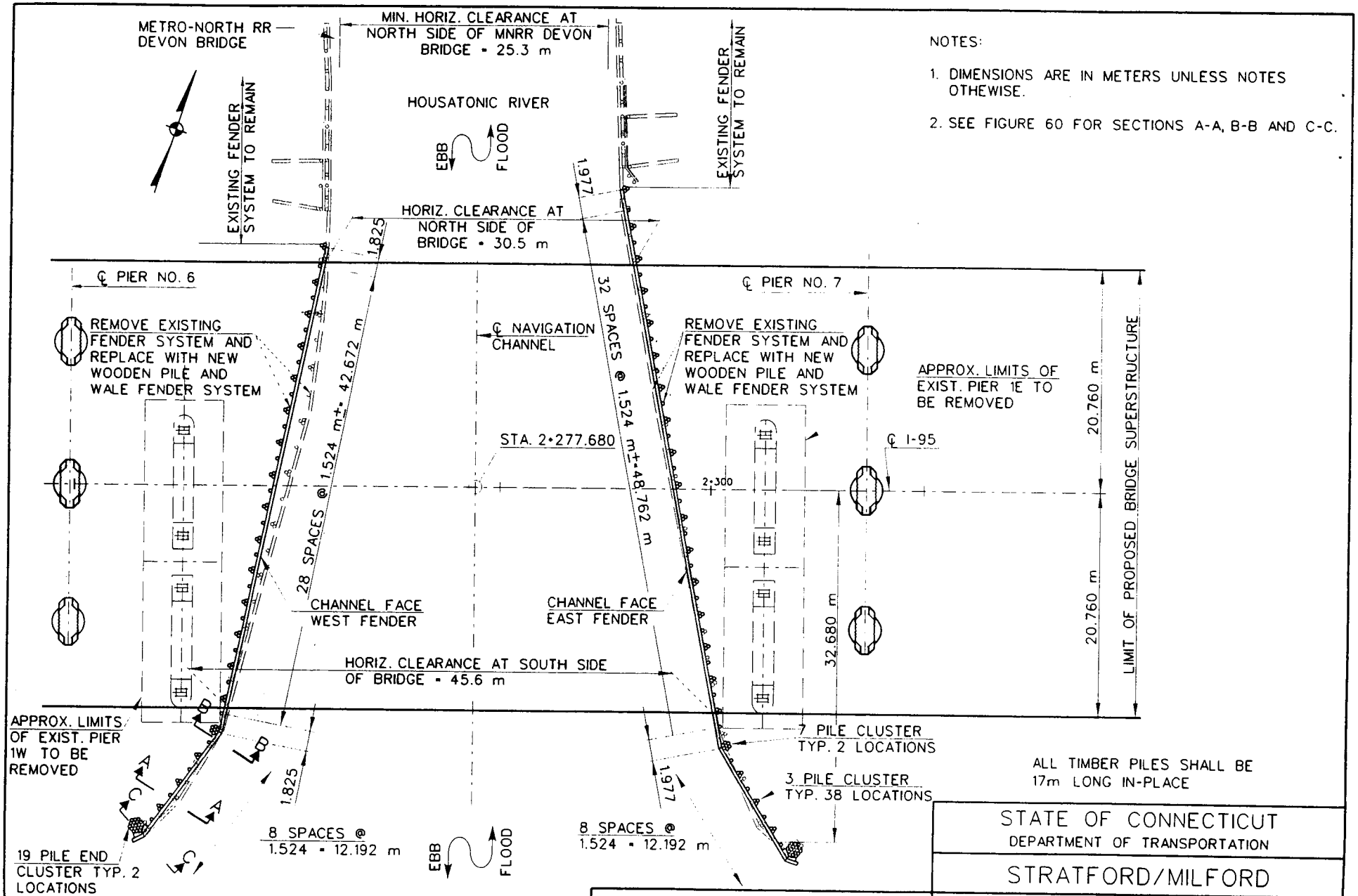
DATE: 11/22/06	BOAT LAUNCH RAMP	FIG. 58



NOTES:

1. DIMENSIONS ARE IN METERS UNLESS NOTES OTHEWISE.
2. SEE FIGURE 60 FOR SECTIONS A-A, B-B AND C-C.

ALL TIMBER PILES SHALL BE 17m LONG IN-PLACE

PLAN - PROPOSED FENDER SYSTEM

SCALE: 1:500

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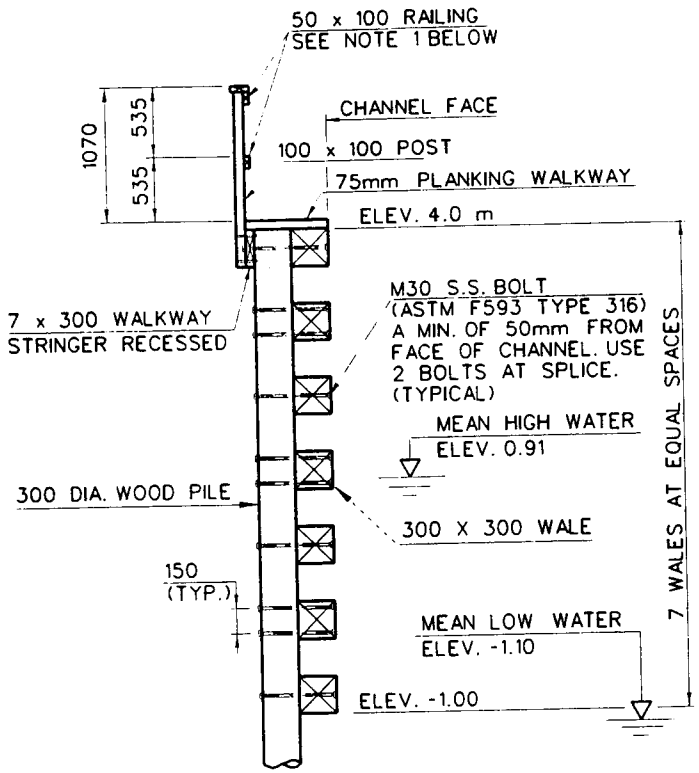
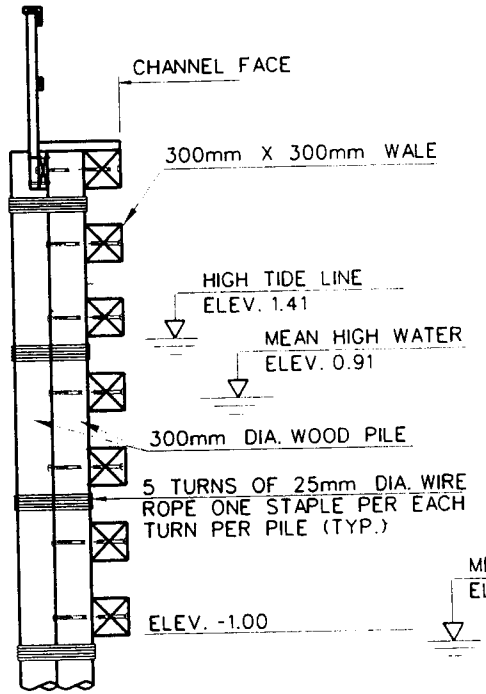
DATE: 11/22/06	PROPOSED FENDER SYSTEM - PLAN	FIG. 59



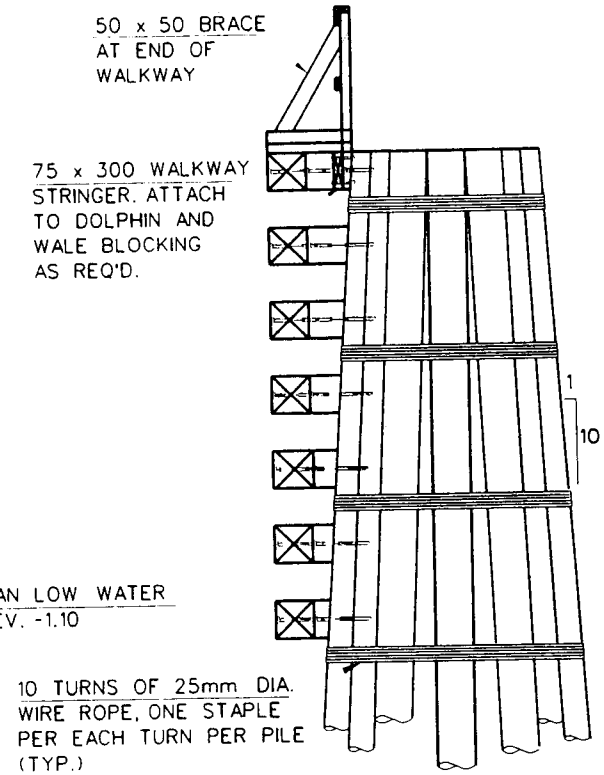
SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE



SECTION C-C

NOT TO SCALE

NOTES:

1. RAILING SHALL EXTEND FULL LENGTH OF FENDER SYSTEM.
2. PROVIDE RAILING POST AT EACH PILE OR AT A MAXIMUM SPACING OF 1.5m.
3. BOLTS ON THE FACE OF THE FENDER SYSTEM SHALL BE COUNTERSUNK.
4. ELEVATIONS ARE IN METERS AND ARE BASED ON NAVD 1988.
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLES NOTED OTERWISE.

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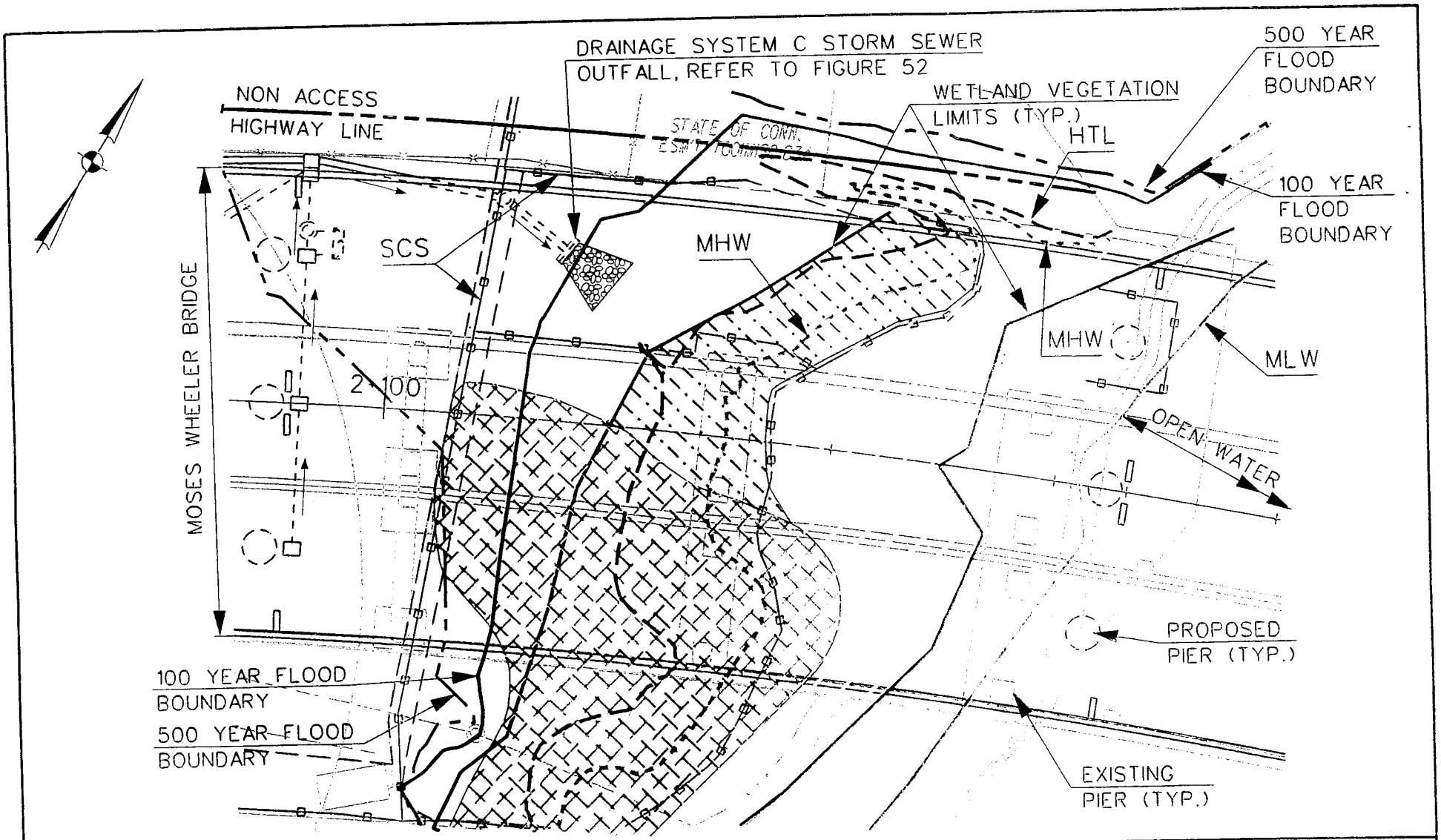
PROJECT NO. 138-221

DATE: 11/22/06	PROPOSED FENDER SYSTEM - DETAILS	FIG. 60



PLAN
SCALE 1:500

LEGEND

DISTURBED VEGETATION

PHRAGMITES AUSTRALIS

SPARTINA ALTERNIFLORA

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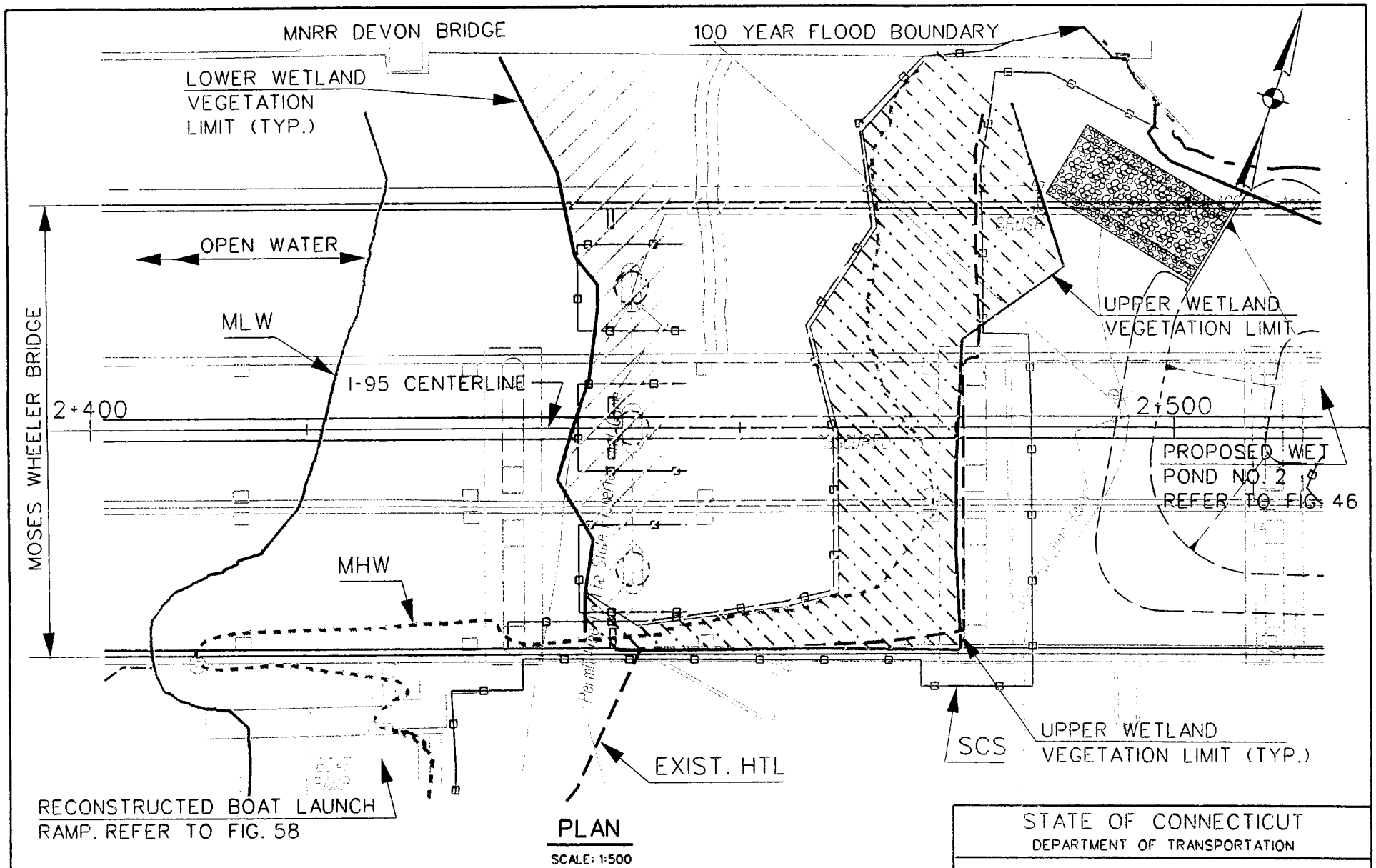
DATE: 11/22/06	VEGETATION SKETCH WETLAND AREA 1	FIG. VS-1



PLAN

SCALE: 1:500

LEGEND

PHRAGMITES AUSTRALIS (EXIST.)

SPARTINA ALTERNIFLORA (EXIST.)

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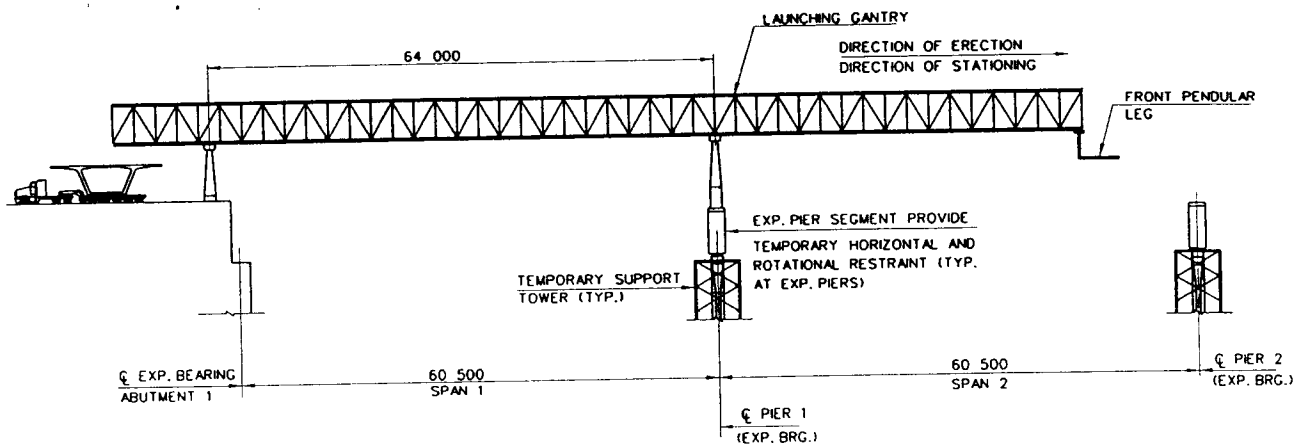
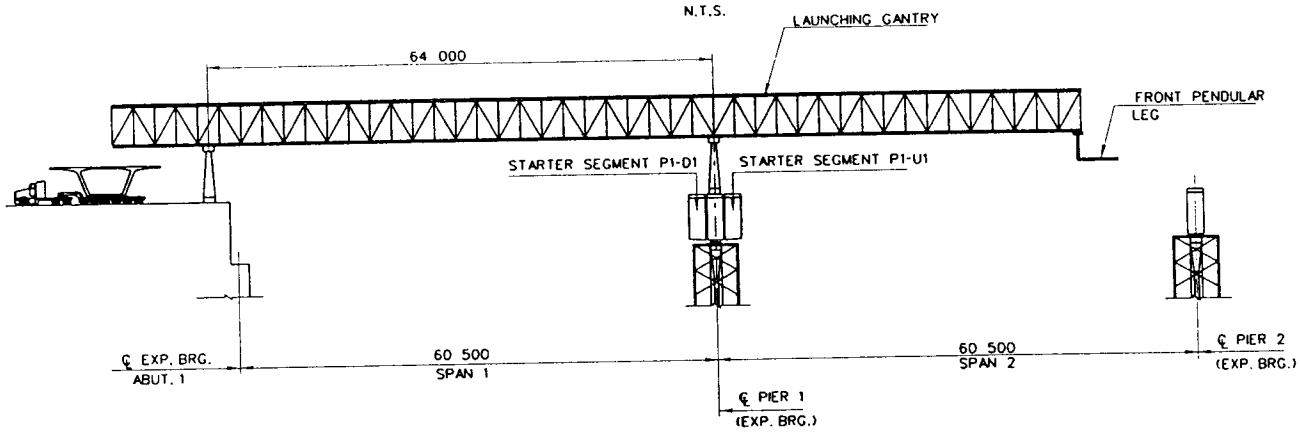
DATE: 11/22/06	VEGETATION SKETCH WETLAND AREA 2	FIG. VS-2



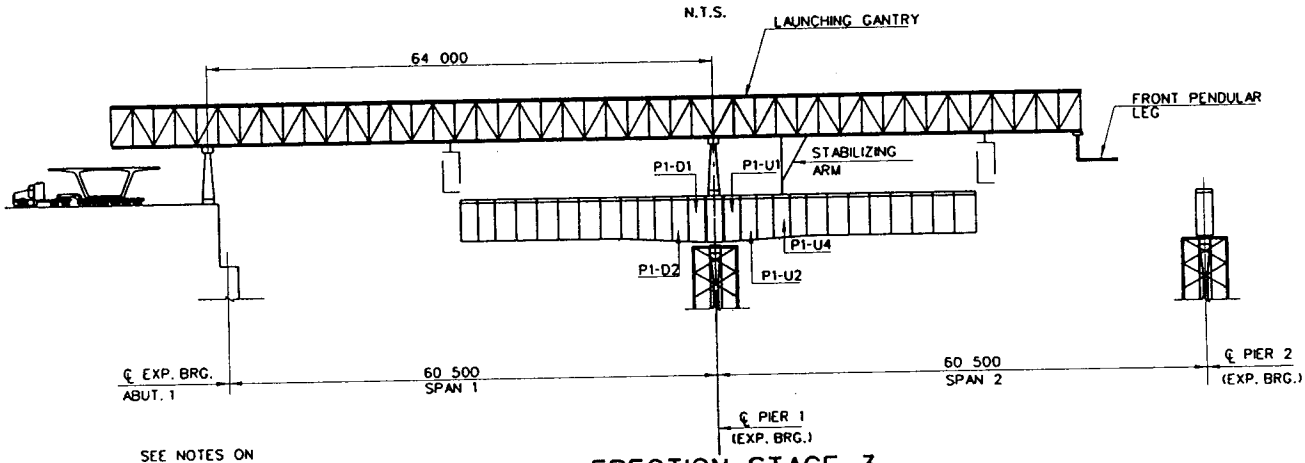
ERECTION STAGE 1

N.T.S.



ERECTION STAGE 2

N.T.S.



SEE NOTES ON ERECTION SCHEMATIC SHEET 2, FIG. ES-2

ERECTION STAGE 3

N.T.S.

GENERAL NOTES:

1. ALL DIMENSIONS ON THESE ERECTION SCHEMATIC SHEETS (FIGURES ES-1 THROUGH ES-12) ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. FIGURES ES-1 THROUGH ES-12 PRESENT ERECTION SCHEME FOR THE PROPOSED MOSES WHEELER BRIDGE (BRIDGE NO. 00135) SUPERSTRUCTURE. THIS CONSTRUCTION OCCURS AFTER THE BRIDGE PIERS & ABUTMENTS HAVE BEEN COMPLETED.
3. REFER TO FIGURE 33 AND 34 FOR SEQUENCE OF CONSTRUCTION OF THE NORTH, SOUTH AND MIDDLE GIRDERS OF THE BRIDGE.

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PROJECT NO. 138-221

DATE: 11/11/05	ERECTION SCHEMATIC SHEET 1	FIG. ES-1

ERECTION NOTES: FOR ERECTION SCHEMATIC SHEET 1 (FIG. ES-1)

STAGE 1

1.1 CAST PIER SEGMENTS IN PLACE DURING CONSTRUCTION OF SUBSTRUCTURE. AT EXPANSION PIERS 1, 2, 3, 4, 10, 11, 12 AND 13, TEMPORARY SUPPORT TOWERS ARE NECESSARY TO STABILIZE THE STRUCTURE DURING CANTILEVER ERECTION (NOTE: DESIGN OF SUPPORT TOWERS AND STABILITY OF STRUCTURE DURING ERECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR)

1.2 SET BEARINGS AND TEMPORARILY RESTRAIN THE SAME AGAINST HORIZONTAL TRANSLATION AND ROTATION WITH TEMPORARY SUPPORTS AND/OR TIE-DOWNS DURING ERECTION OF CANTILEVER.

1.3 ADVANCE GANTRY SO THAT CENTER SUPPORT IS POSITIONED AT PIER 1 AND READY GANTRY FOR PIER 1 BALANCED CANTILEVER ERECTION.

STAGE 2

2.1 SUSPEND STARTER SEGMENT P1-U1 FROM GANTRY ON UP-STATION SIDE OF PIER 1. POSITION SEGMENT ON TEMPORARY SUPPORT FRAME AND BLOCK CLOSURE JOINT. USE TEMPORARY POST-TENSIONING BARS AND TEMPORARY SUPPORT JACKS TO ADJUST SEGMENT ELEVATION AND ALIGNMENT.

2.2 REPEAT STEP 2.1 FOR STARTER SEGMENT P1-D1 ON DOWN-STATION SIDE OF PIER 1.

2.3 CAST CLOSURE JOINTS BETWEEN PIER SEGMENT P1 AND STARTER SEGMENTS P1-U1 AND P1-D1.

2.4 WHEN STARTER SEGMENT CLOSURE JOINT CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA, STRESS PERMANENT CANTILEVER TENDONS 101. RELIEVE FORCE IN SUPPORT JACK ON UPSTATION SIDE OF PIER AND READJUST UNTIL JUST SNUG.

STAGE 3

3.1 BEGINNING WITH THE UPSTATION SIDE OF PIER, SUSPEND SEGMENT P1-U2 FROM GANTRY. ADJUST SEGMENT ALIGNMENT AND ELEVATION. APPLY EPOXY TO JOINT FACE OF SEGMENT. COMPRESS EPOXY BETWEEN SEGMENTS P1-U2 AND P1-U1 USING TEMPORARY POST-TENSIONING BARS.

3.2 REPEAT STEP 3.1 FOR SEGMENT P1-D2 ON DOWNSTATION SIDE OF PIER.

3.3 STRESS PERMANENT CANTILEVER TENDONS 102. RELIEVE FORCE IN SUPPORT JACK ON UPSTATION SIDE OF PIER AND READJUST UNTIL JUST SNUG.

3.4 REPEAT STEPS 3.1 THRU 3.3 FOR SEGMENT PAIRS P1-3 THRU P1- 4. ALTERNATE SEGMENT ERECTION ON THE UPSTATION AND DOWSTATION SIDES OF THE PIER WITH THE UPSTATION SEGMENT ERECTED FIRST. AT ANY ONE TIME THE CANTILEVER SHALL NEVER BE MORE THAN ONE SEGMENT OUT OF BALANCE.

3.5 ATTACH GANTRY STABILIZER ARM TO SEGMENT P1-U4.

3.6 PROCEED WITH ERECTION OF SEGMENT PAIRS P1-5 THROUGH P1-13 FOLLOWING STEP 3.4 PROCEDURE.

3.7 ERECT SEGMENT PAIR P1-13 FOLLOWING STEP 3.3 PROCEDURE. NOTE THAT THE FINAL SEGMENT PAIR P1-13 DOES NOT REQUIRE PERMANENT CANTILEVER TENDONS AND IS HELD IN PLACE BY TEMPORARY POST-TENSIONING BARS UNTIL CLOSURE IS MADE AT BOTH ENDS.

NOTE:
FOR SCHEMATIC SECTION AT TEMPORARY SUPPORT SEE ERECTION SCHEMATIC SHEET 3, FIGURE ES-3.

REFER TO FIGURE 12 FOR SITE VICINITY PLAN.

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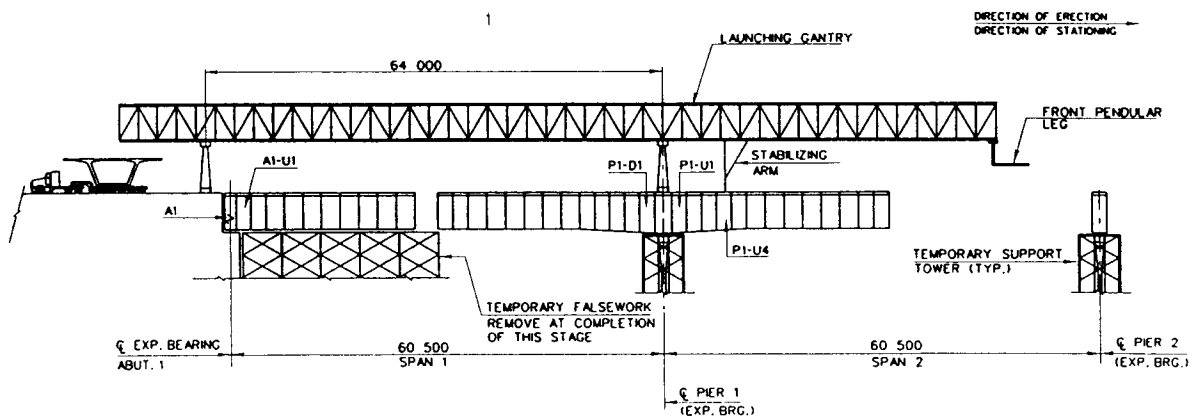
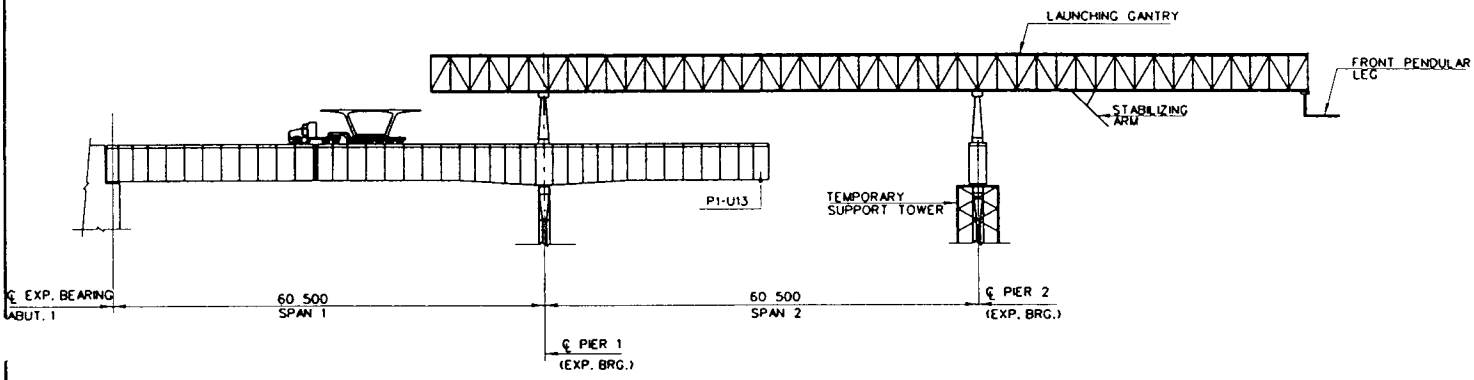
DATE: 11/11/05	ERECTION SCHEMATIC SHEET 2	FIG. ES-2



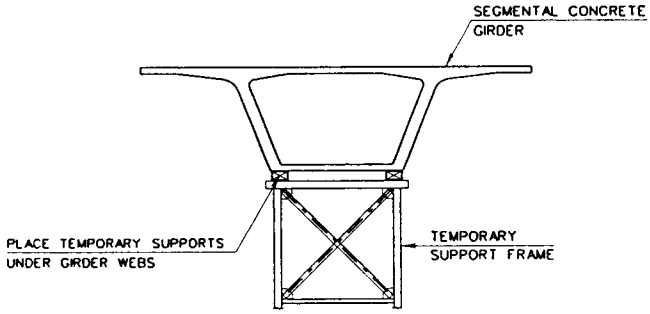
ERECTION STAGE 4

N.T.S.



ERECTION STAGE 5

N.T.S.



SECTION AT TEMPORARY SUPPORT

N.T.S.

SEE NOTES ON
ERECTION SCHEMATIC SHEET 4, FIG. ES-4

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DATE: 11/11/05	ERECTION SCHEMATIC SHEET 3	FIG. ES-3

ERECTION NOTES: FOR ERECTION SCHEMATIC SHEET 3 (FIG. ES-3)

STAGE 4

4.1 ASSEMBLE TEMPORARY FALSEWORK AT ABUTMENT END OF SPAN 1.

4.2 PLACE SEGMENT A1-U1 ON TEMPORARY FALSEWORK. ADJUST ALIGNMENT AND ELEVATION.

4.3 PLACE SEGMENT A1-U2 ON TEMPORARY FALSEWORK. ADJUST ALIGNMENT AND ELEVATION. APPLY EPOXY TO JOINT FACE OF SEGMENT. COMPRESS EPOXY BETWEEN SEGMENTS A1-U1 AND A1-U2 WITH TEMPORARY POST-TENSIONING BARS.

4.4 REPEAT STEP 4.3 PROCEDURE FOR THE REMAINING PRECAST SEGMENTS IN SPAN 1.

4.5 SET IN PLACE PERMANENT BEARINGS AT ABUTMENT 1. CAST-IN-PLACE ABUTMENT SEGMENT A1 OVER BEARINGS AND MATCH CAST AGAINST SEGMENT A1-U1.

4.6 LOCK CANTILEVER P1-D AND FALSEWORK SEGMENTS A1-U TOGETHER WITH STRONGBACK SYSTEM AT SPAN 1 CLOSURE JOINT.

4.7 CAST CLOSURE JOINT IN SPAN 1. WHEN CLOSURE JOINT CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA, STRESS CONTINUITY TENDONS 201 THRU 208. STRESS 4-STRAND TOP SLAB TENDONS BETWEEN SEGMENT A1 AND P1-D12.

4.8 TEMPORARILY LOCK PERMANENT BEARINGS AGAINST HORIZONTAL MOVEMENT AT ABUTMENT 1. RELEASE STABILIZER ARM AT SEGMENT P1-U4. RELEASE TEMPORARY SUPPORT JACKS AND TEMPORARY HORIZONTAL RESTRAINT AT PIER 1.

4.9 REMOVE TEMPORARY SUPPORT TOWER AT PIER 1.

STAGE 5

5.1 AT PIER 2 SET BEARINGS AND TEMPORARILY RESTRAIN AGAINST HORIZONTAL TRANSLATION AND ROTATION WITH TEMPORARY SUPPORTS AND/OR TIE-DOWNS DURING ERECTION OF CANTILEVER

5.2 ADVANCE GANTRY SO THAT CENTER SUPPORT IS POSITIONED AT PIER 2 AND READY GANTRY FOR PIER 2 BALANCED CANTILEVER ERECTION.

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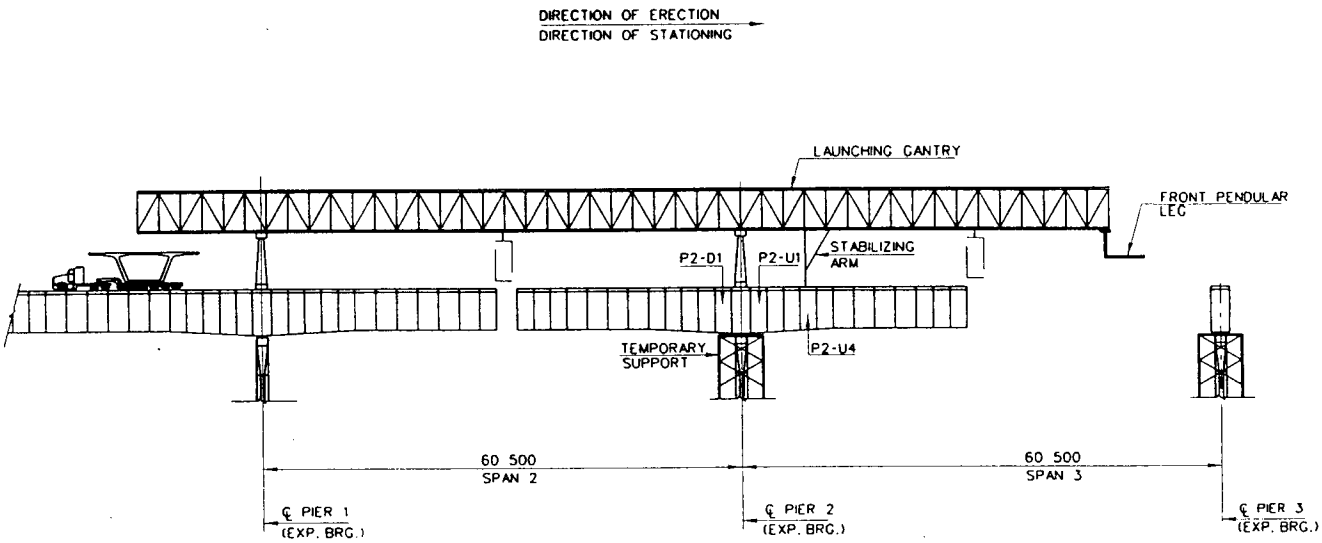
DATE: 11/11/05	ERECTION SCHEMATIC SHEET 4	FIG. ES-4



ERECTION STAGE 6

N.T.S.

SEE NOTES ON
ERECTION SCHEMATIC SHEET 6, FIG. ES-6

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DATE: 11/11/05	ERECTION SCHEMATIC SHEET 5	FIG. ES-5

ERECTION NOTES: FOR ERECTION SCHEMATIC SHEET 5 (FIG. ES-5)

STAGE 6

6.1 SUSPEND STARTER SEGMENT P2-U1 FROM GANTRY ON UP-STATION SIDE OF PIER 2. BLOCK STARTER SEGMENT CLOSURE JOINT. USE TEMPORARY POST-TENSIONING BARS TO ADJUST SEGMENT ELEVATION AND ALIGNMENT.

6.2 REPEAT STEP 6.1 FOR STARTER SEGMENT P2-D1 ON DOWN-STATION SIDE OF PIER 2.

6.3 CAST CLOSURE JOINTS BETWEEN PIER SEGMENT P2 AND STARTER SEGMENTS P2-U1 AND P2-DL

6.4 WHEN STARTER SEGMENT CLOSURE JOINT CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA, STRESS PERMANENT CANTILEVER TENDONS 101.

6.5 SUSPEND SEGMENT P2-U2 FROM GANTRY ON UP-STATION SIDE OF PIER 2. ADJUST SEGMENT ALIGNMENT AND ELEVATION. APPLY EPOXY TO JOINT FACE OF SEGMENT. COMPRESS EPOXY BETWEEN SEGMENTS P2-U2 AND P2-U1 USING TEMPORARY POST-TENSIONING BARS.

6.6 REPEAT STEPS 6.5 FOR SEGMENT P2-D2 ON DOWNSTATION SIDE OF PIER.

6.7 STRESS PERMANENT CANTILEVER TENDONS 102.

6.8 REPEAT STEPS 6.5 THRU 6.7 FOR SEGMENT PAIRS P2-3 AND P2-4. ALTERNATE SEGMENT ERECTION ON THE UPSTATION AND DOWNSTATION SIDES OF THE PIER WITH THE UPSTATION SEGMENT BEING ERECTED FIRST SO CANTILEVER IS NEVER MORE THAN ONE SEGMENT OUT-OF-BALANCE AT ANY TIME.

6.9 ATTACH GANTRY STABILIZER ARM TO SEGMENT P2-U4. RELEASE TEMPORARY ROTATIONAL RESTRAINT AT PIER 2. REMOVE TEMPORARY SUPPORT FRAME. (NOTE: RELEASE OF TEMPORARY ROTATIONAL RESTRAINT AND REMOVAL OF TEMPORARY SUPPORT FRAME APPLIES ONLY AT EXPANSION PIERS).

6.10 PROCEED WITH ERECTION OF SEGMENT PAIRS P2-5 THRU P2-12 IN ACCORDANCE WITH STEP 6.8 ABOVE.

6.11 ERECT SEGMENT PAIR P2-12 BY THE METHOD IN STEP 6.8. NOTE THAT THE FINAL SEGMENT PAIR P2-12 DO NOT REQUIRE PERMANENT CANTILEVER TENDONS AND ARE HELD IN PLACE BY TEMPORARY POST-TENSIONING BARS UNTIL CLOSURE IS MADE AT BOTH ENDS.

6.12 LOCK CANTILEVERS P2-D AND PI-U TOGETHER WITH STRONGBACK SYSTEM AT SPAN 2 CLOSURE JOINT.

6.13 ZERO OUT FORCES IN STABILIZER ARM AT SEGMENT P2-U4 BUT DO NOT DISENGAGE.

6.14 CAST CLOSURE JOINT IN SPAN 2. WHEN CLOSURE JOINT CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA, STRESS CONTINUITY TENDONS 201 THRU 208. STRESS PERMANENT 35mm POST-TENSIONING BARS AT MID-SPAN CLOSURE JOINT. REMOVE STRONGBACK SYSTEM.

6.15 DISENGAGE STABILIZER ARM FROM SEGMENT P2-U4. (NOTE: STABILIZER ARM TO REMAIN ENGAGED AT SEGMENT P2-U4 UNTIL CLOSURE IS MADE AND CONTINUITY TENDONS ARE STRESSED IN SPAN 2.

6.16 REMOVE BEARING RESTRAINT AND TEMPORARY SUPPORT TOWERS AT PIER 2.

6.17 REPEAT STAGE 5 AND 6 FOR BALANCED CANTILEVER ERECTION AT EXPANSION PIERS 3 AND 4 AND MIDSPAN CLOSURE IN SPANS 2 AND 3.

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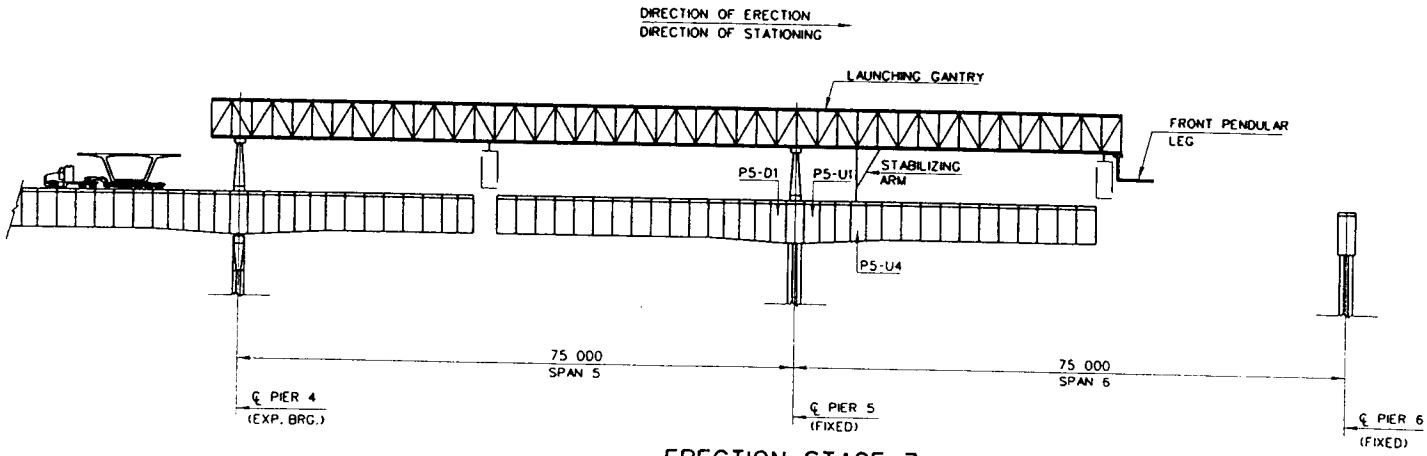
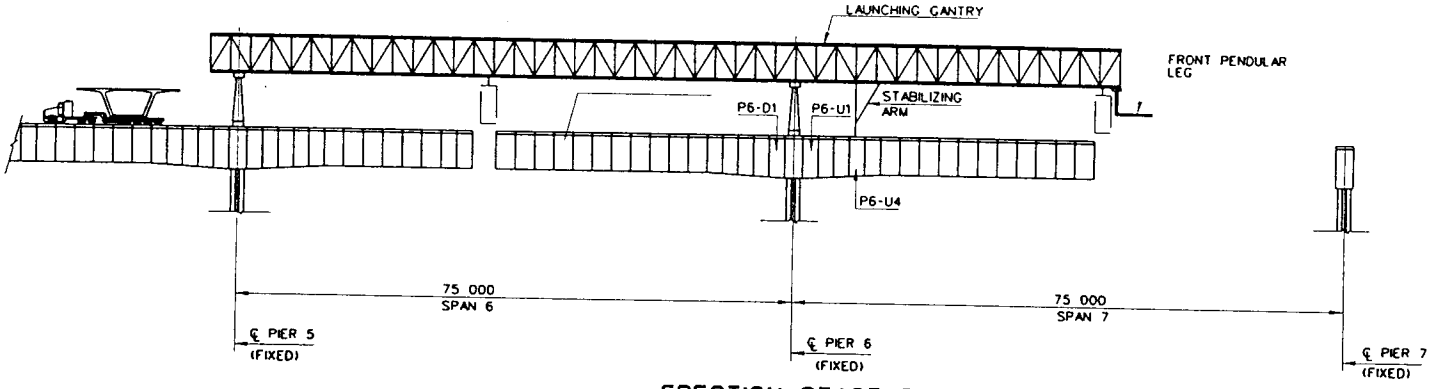
DATE: 11/11/05	ERECTION SCHEMATIC SHEET 6	FIG. ES-6



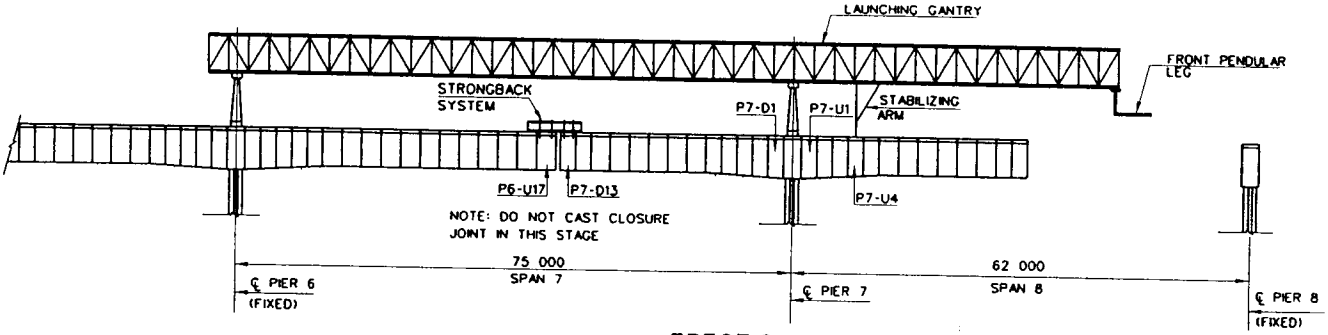
ERECTION STAGE 7

N.T.S.



ERECTION STAGE 8

N.T.S.



ERECTION STAGE 9

N.T.S.

SEE NOTES ON
ERECTION SCHEMATIC SHEET 8, FIG. ES-8, FIGURE ES-8.

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DATE: 11/11/05	ERECTION SCHEMATIC SHEET 7	FIG. ES-7

ERECTION NOTES: FOR ERECTION SCHEMATIC SHEET 7 (FIG. ES-7)

STAGE 7

7.1 ADVANCE GANTRY SO THAT MOVABLE CENTER SUPPORT IS POSITIONED AT FIXED PIER 5 AND READY GANTRY FOR PIER 5 CANTILEVER ERECTION.

7.2 REPEAT STEPS 6.1 THRU 6.15 FOR BALANCED CANTILEVER CONSTRUCTION AT PIER 5 AND MID-SPAN CLOSURE IN SPAN 5

7.3 UNLOCK BEARINGS AT ABUTMENT NO. 1

7.4 DISENGAGE STABILIZER ARM FROM SEGMENT P5-U4.

STAGE 8

8.1 ADVANCE GANTRY UNTIL MOVABLE CENTER SUPPORT IS POSITIONED AT PIER 6 AND READY GANTRY FOR PIER 6 CANTILEVER ERECTION.

8.2 REPEAT STEPS 6.1 THRU 6.15 FOR BALANCED CANTILEVER CONSTRUCTION AT FIXED PIER 6 AND MID-SPAN CLOSURE IN SPAN 6.

STAGE 9

9.1 ERECT BALANCED CANTILEVER AT FIXED PIER 7 FOLLOWING PROCEDURE FROM STEPS 6.1 THRU 6.15. USE STRONGBACK SYSTEM TO LOCK TOGETHER UPSTATION CANTILEVER AT PIER 6 AND DOWNSTATION CANTILEVER AT PIER 7, BUT DO NOT CAST CLOSURE JOINT AT THIS TIME.

9.2 ZERO OUT FORCE IN STABILIZER ARM AT SEGMENT P7-U4, BUT DO NOT DISENGAGE.

9.3 POSITION PRECAST COMPRESSION BLOCKS BETWEEN SEGMENTS P6-U17 AND P7-D13, USE TEMPORARY P.T. BARS TO JOIN ASSEMBLY AND GROUT IN PLACE. (SEE TEMPORARY BLOCKING AT JACKING CLOSURES FOR DETAILED PROCEDURE).

9.4 STRESS TEMPORARY POST-TENSIONING TENDONS IN ACCORDANCE WITH DETAILED PROCEDURE.

9.5 PLACE 25mm PLATE OVER THE CLOSURE JOINT AND FASTEN TO DECK

9.6 RELEASE STABILIZER ARM AT SEGMENT P7-U4.

NOTE:

REFER TO FIGURE 13 FOR SITE VICINITY PLAN.

ALL CONSTRUCTION OCCURS AT THE BRIDGE DECK ELEVATION.

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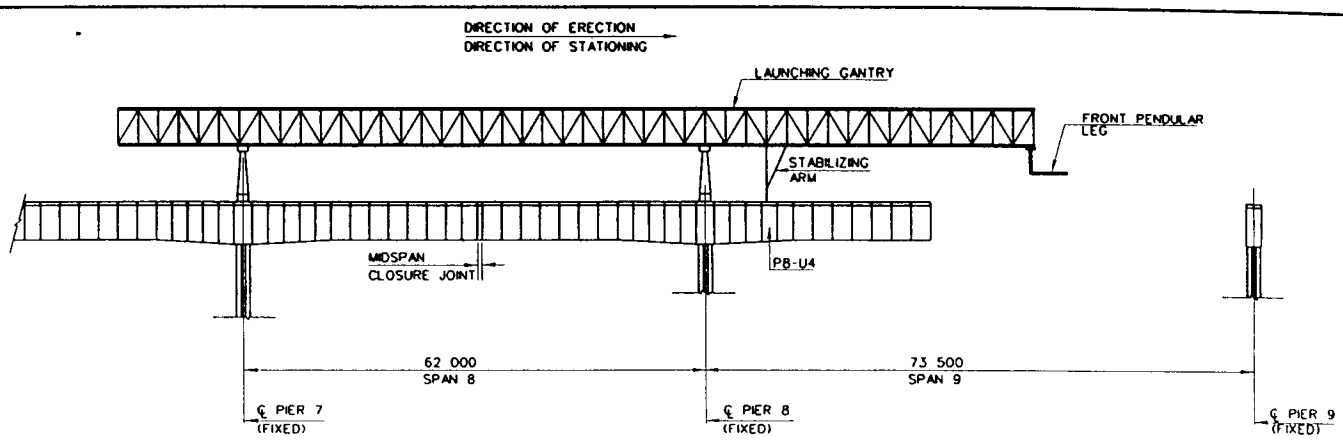
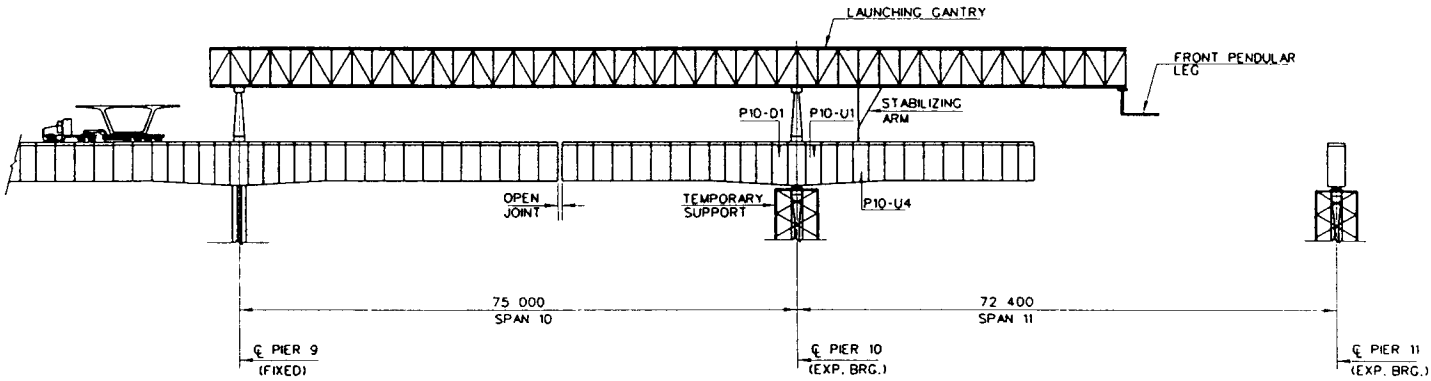
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	ERECTION SCHEMATIC SHEET 8	FIG.ES-8



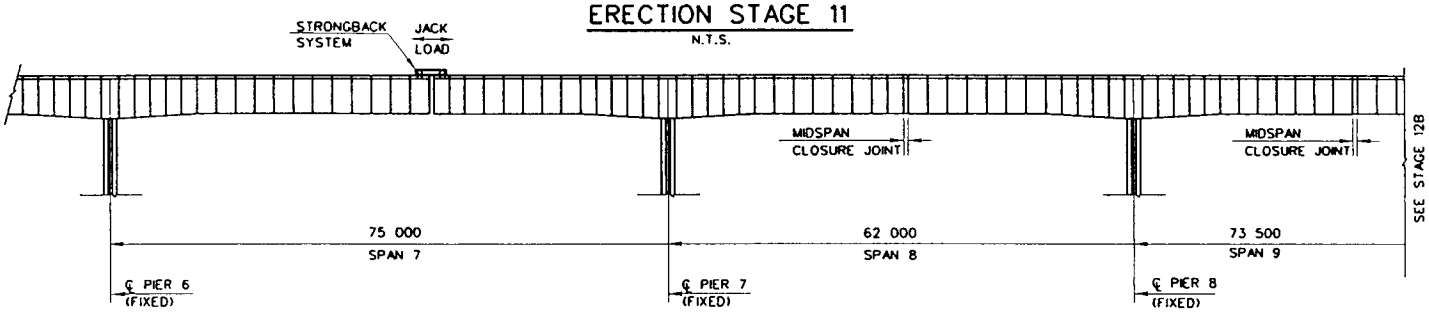
ERECTION STAGE 10

N.T.S.



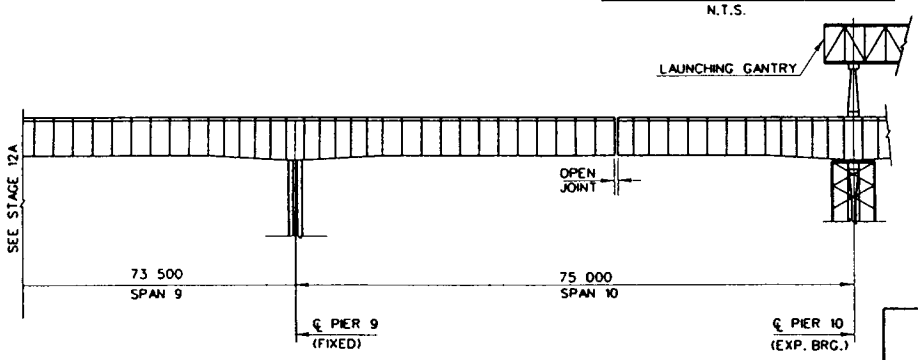
ERECTION STAGE 11

N.T.S.



ERECTION STAGE 12A

N.T.S.



ERECTION STAGE 12B

N.T.S.

SEE NOTES ON
ERECTION SCHEMATIC SHEET 10, FIG. ES-10

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REPLACEMENT OF I-95 BRIDGE
OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	ERECTION SCHEMATIC SHEET 9	FIG. ES-9

ERECTION NOTES: FOR ERECTION SCHEMATIC SHEET 9 (FIG. ES-9)

STAGE 10

10.1 ADVANCE GANTRY SO THAT MOVABLE CENTER SUPPORT IS POSITIONED AT FIXED PIER 8 AND READY GANTRY FOR PIER 8 CANTILEVER ERECTION.

10.2 ERECT BALANCED CANTILEVERS AT FIXED PIER 8 FOLLOWING PROCEDURE FROM STEPS 6.1 THRU 6.11.

10.3 LOCK CANTILEVERS P8-D AND P7-U TOGETHER WITH TEMPORARY BLOCKING AND STRONGBACK SYSTEM AT SPAN 8 CLOSURE JOINT.

10.4 ZERO OUT FORCES IN STABILIZER ARM AT SEGMENT P8-U4 BUT DO NOT DISENGAGE.

10.5 CAST CLOSURE JOINT IN SPAN 8.

10.6 WHEN CLOSURE JOINT CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA STRESS CONTINUITY TENDONS 201. (NOTE: SPAN 8 CONTINUITY TENDONS 202 THRU 205 ARE NOT STRESSED UNTIL AFTER CLOSURE IS MADE IN SPAN 7).

10.7 REPEAT STEPS 6.1 THRU 6.13 FOR CANTILEVER ERECTION AT FIXED PIER 9.

10.8 CAST CLOSURE JOINT IN SPAN 9. WHEN CLOSURE JOINT CONCRETEHAS REACHED A STRENGTH OF 24.5 MPA STRESS CONTINUITY TENDONS 201. (NOTE: SPAN 9 CONTINUITY TENDONS 202 THRU 207 ARE NOT STRESSED UNTIL AFTER CLOSURE IS MADE IN SPAN 7).

10.9 DISENGAGE STABILIZER ARM FROM SEGMENT P9-U4.

STAGE 11

11.1 AT EXPANSION PIER 10 SET BEARINGS AND TEMPORARILY RESTRAIN AGAINST HORIZONTAL TRANSLATION AND ROTATION WITH TEMPORARY SUPPORTS AND/OR TIE-DOWNS DURING ERECTION OF CANTILEVER.

11.2 ADVANCE GANTRY SO THAT MOVABLE CENTER SUPPORT IS POSITIONED AT EXPANSION PIER 10 AND READY GANTRY FOR PIER 10 CANTILEVER ERECTION.

11.3 ERECT CANTILEVERS AT EXPANSION PIER 10 FOLLOWING PROCEDURE FROM STEPS 6.1 THRU 6.11. DO NOT LOCK CANTILEVERS P10-D AND P9-U TOGETHER AT THIS TIME.

STAGE 12

12.1 WITH GANTRY POSITIONED AT PIERS 10 AND 11, DE-STRESS TEMPORARY TOP POST-TENSIONING BARS AT SPAN 7 MIDSPAN CLOSURE JOINT. DE-STRESS TEMPORARY CONTINGENCY TENDONS AND REMOVE TEMPORARY CLOSURE JOINT BLOCKING.

12.2 JACK CANTILEVERS P7-D AND P6-U APART IN SPAN 7 USING THE LOADS AND PROCEDURE SPECIFIED ON THE JACKING DETAIL. LOCK-OFF JACKS AND CAST CLOSURE.

12.3 WHEN CLOSURE JOINT CONCRETE HAS REACHED STRENGTH OF 24.5MPA, STRESS SPAN 7 PERMANENT CONTINUITY TENDONS 201 THRU 207. STRESS PERMANENT 35mm POST-TENSIONING BARS AT SPAN 7 MIDSPAN CLOSURE JOINT.

12.4 STRESS CONTINUITY TENDONS 202 THRU 207 IN SPAN 6. STRESS CONTINUITY TENDONS 202 THRU 205 IN SPAN 8. STRESS CONTINUITY TENDONS 202 THRU 207 IN SPAN 9.

NOTE:

REFER TO FIGURES 13 AND 14 FOR SITE VICINITY PLAN.

ALL CONSTRUCTION OCCURS AT THE BRIDGE DECK ELEVATION.

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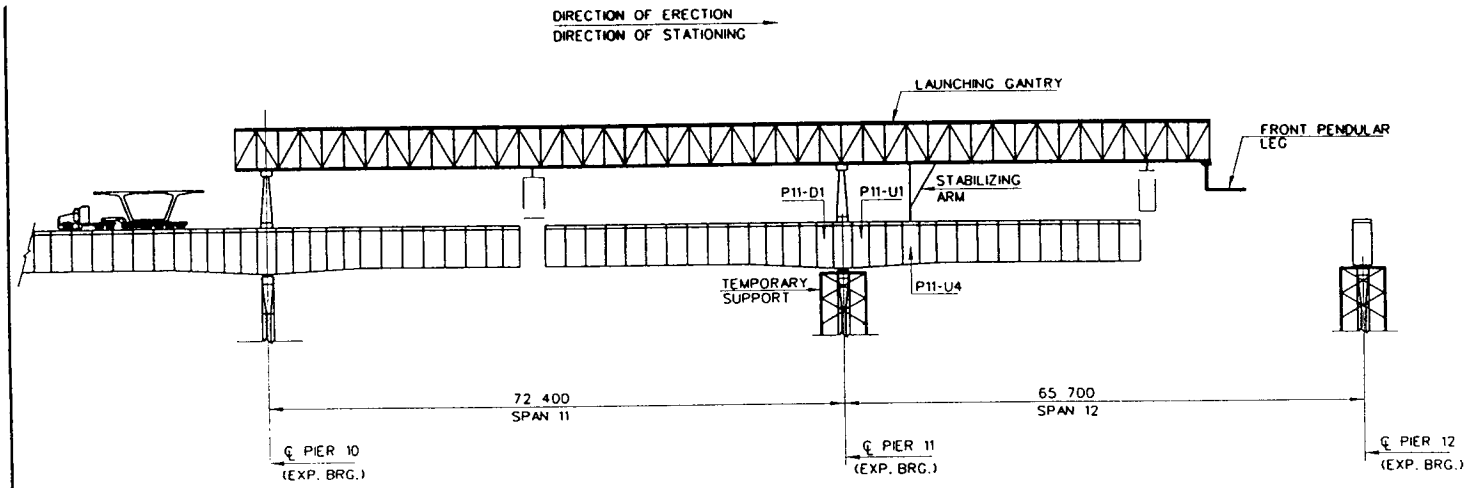
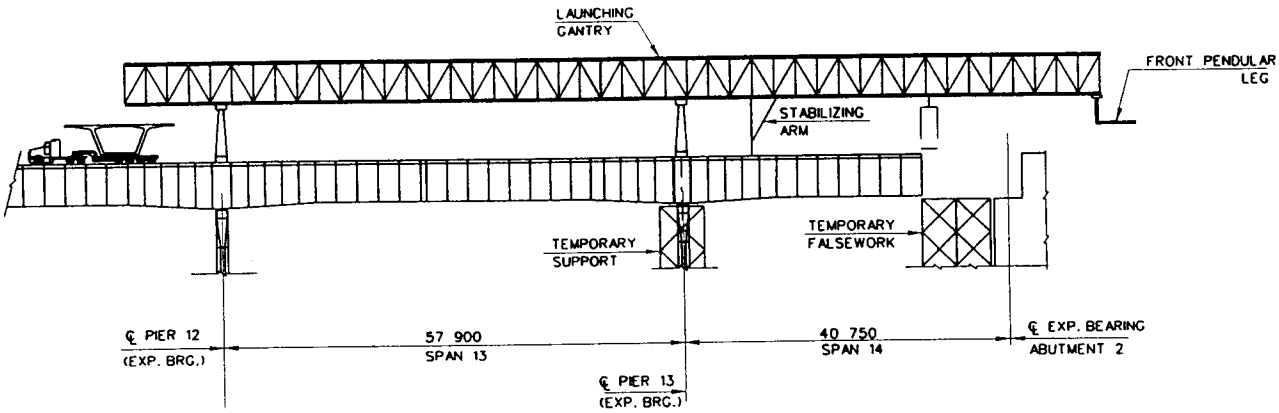
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	ERECTION SCHEMATIC SHEET 10	FIG.ES-10



ERECTION STAGE 13

N.T.S.



ERECTION STAGE 14

N.T.S.

SEE NOTES ON
ERECTION SCHEMATIC SHEET 12, FIG. ES-12

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REPLACEMENT OF I-95 BRIDGE
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PROJECT NO. 138-221

DATE: 11/11/05	ERECTION SCHEMATIC SHEET 11	FIG. ES-11

ERECTION NOTES: FOR ERECTION SCHEMATIC SHEET 11 (FIG. ES-11)

STAGE 13

13.1 WITH GANTRY POSITIONED AT PIERS 10 AND 11 READY GANTRY FOR PIER 11 CANTILEVER ERECTION.

13.2 ERECT CANTILEVERS AT EXPANSION PIER 11 AND CAST CLOSURE JOINT IN SPAN 11 FOLLOWING PROCEDURE FROM STEPS 6.1 THRU 6.15.

13.3 REPEAT STAGE 5 AND 6 FOR CANTLEVER ERECTION AT PIERS 12 AND 13 AND CLOSURE JOINTS IN SPAN 12 AND 13. (NOTE: FINAL SEGMENT PAIR P12-10 REQUIRE PERMANENT CANTILEVER TENDONS 111).

STAGE 14

14.1 ASSEMBLE TEMPORARY FALSEWORK AT ABUTMENT END OF SPAN 2.

14.2 PLACE SEGMENT P13-U14 ON TEMPORARY FALSEWORK (NOTE: SEGMENTS P13-U14, P13-U15 AND P13-U16 ARE MATCH-CAST WITH SEGMENTS P13-U13, P13-U14, AND P13-U15 RESPECTIVELY). ADJUST ALIGNMENT AND ELEVATION. APPLY EPOXY TO JOINT FACE OF SEGMENT. COMPRESS EPOXY BETWEEN SEGMENTS P13-U14 AND P13-U13 WITH TEMPORARY POST-TENSIONING BARS.

14.3 REPEAT STEP 13.2 PROCEDURE FOR THE REMAINING PRECAST SEGMENTS IN SPAN 14.

14.4 SET IN PLACE PERMANENT BEARINGS AT ABUTMENT 2. CAST-IN-PLACE ABUTMENT SEGMENT A2 OVER BEARINGS AND MATCH CAST AGAINST SEGMENT P13-U16.

14.5 WHEN ABUTMENT SEGMENT A2 CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA STRESS SPAN 14 CONTINUITY TENDONS 201 THRU 203.

STAGE 15

15.1 RELOCATE GANTRY TO WEST END OF BRIDGE TO BEGIN ERECTION OF SOUTH GIRDER.

15.2 REPEAT STAGES 1 THRU 14 FOR ERECTION OF SOUTH GIRDER .

STAGE 16

16.1 RELOCATE GANTRY TO WEST END OF BRIDGE TO BEGIN ERECTION OF MIDDLE GIRDER.

16.2 REPEAT STAGES 1 THRU 13 FOR ERECTION OF MIDDLE GIRDER .

STAGE 17

17.1 CAST-IN-PLACE LONGITUDINAL CLOSURE STRIP BETWEEN MIDDLE GIRDER AND EXTERIOR GIRDERS .

17.2 WHEN LONGITUDINAL CLOSURE STRIP CONCRETE HAS REACHED A STRENGTH OF 24.5 MPA, STRESS CLOSURE STRIP TENDONS.

NOTE:

REFER TO FIGURES 14 AND 15 FOR SITE VICINITY PLAN.

ALL CONSTRUCTION OCCURS AT THE BRIDGE DECK ELEVATION.

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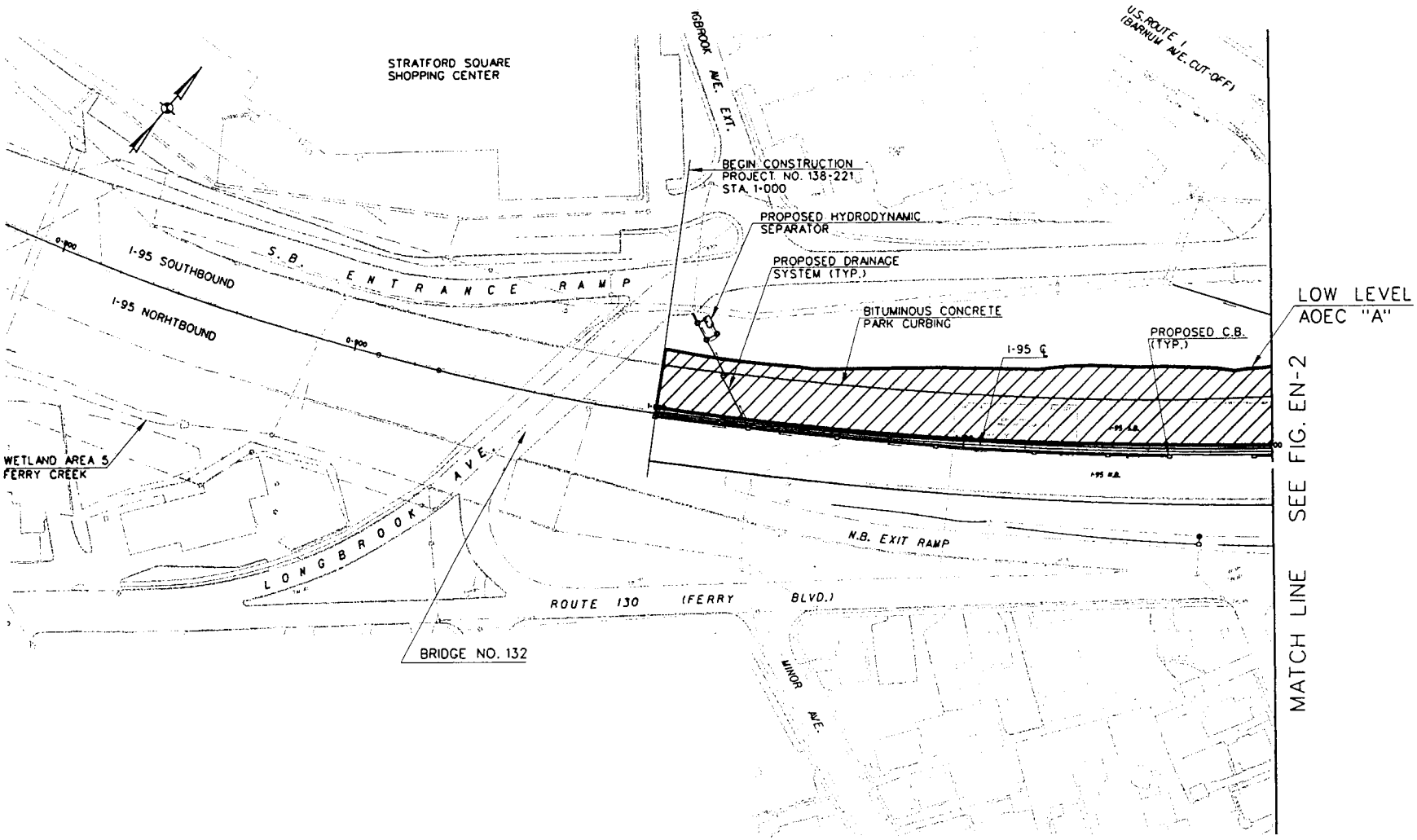
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/11/05	ERECTION SCHEMATIC SHEET 12	FIG.ES-12



AREAS OF ENVIRONMENTAL CONCERN

SCALE: 1:2000

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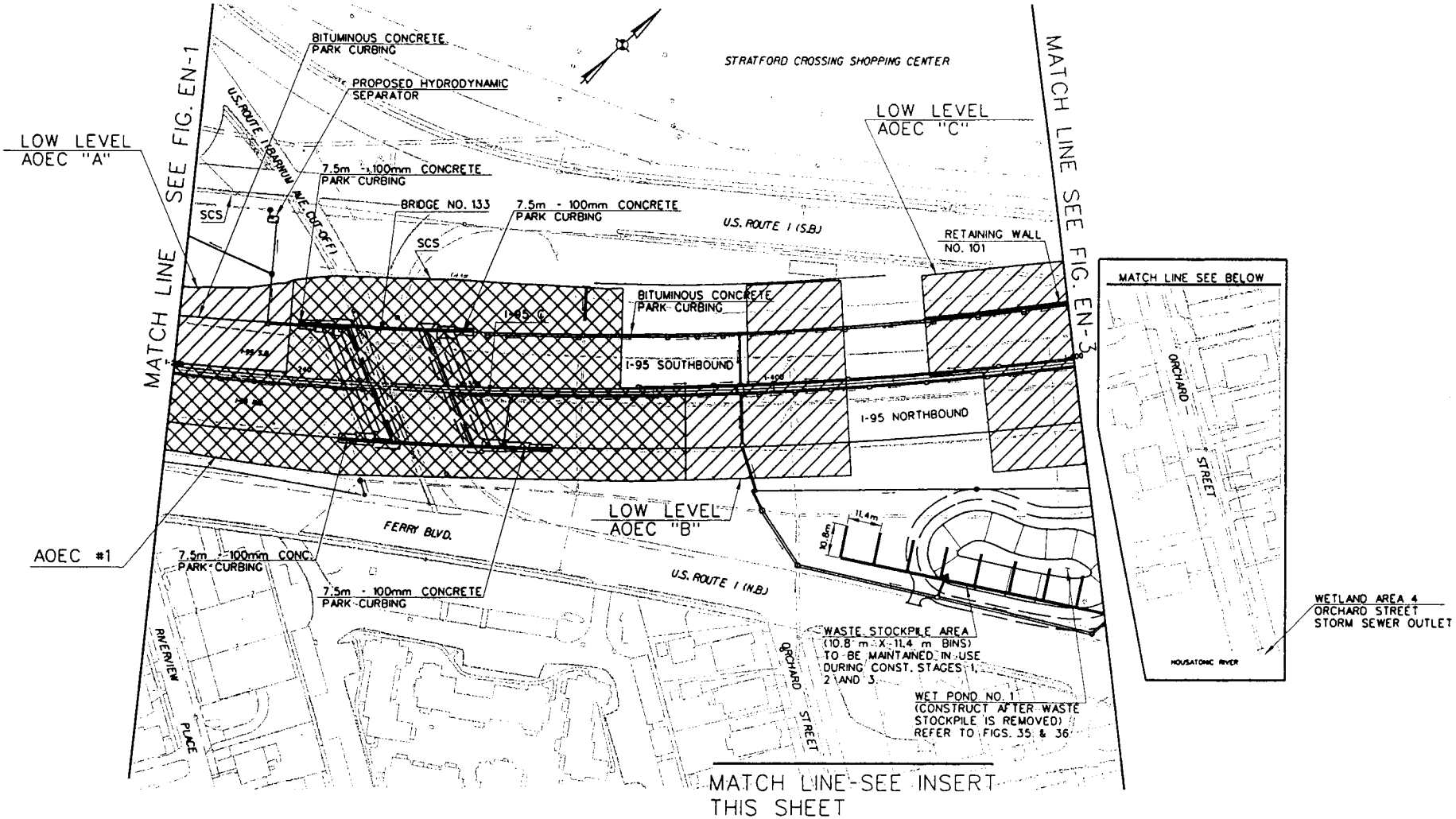
PROJECT NO. 138-221

DATE: 11/11/05	AREA OF ENVIRONMENTAL CONCERN	FIG. EN-1



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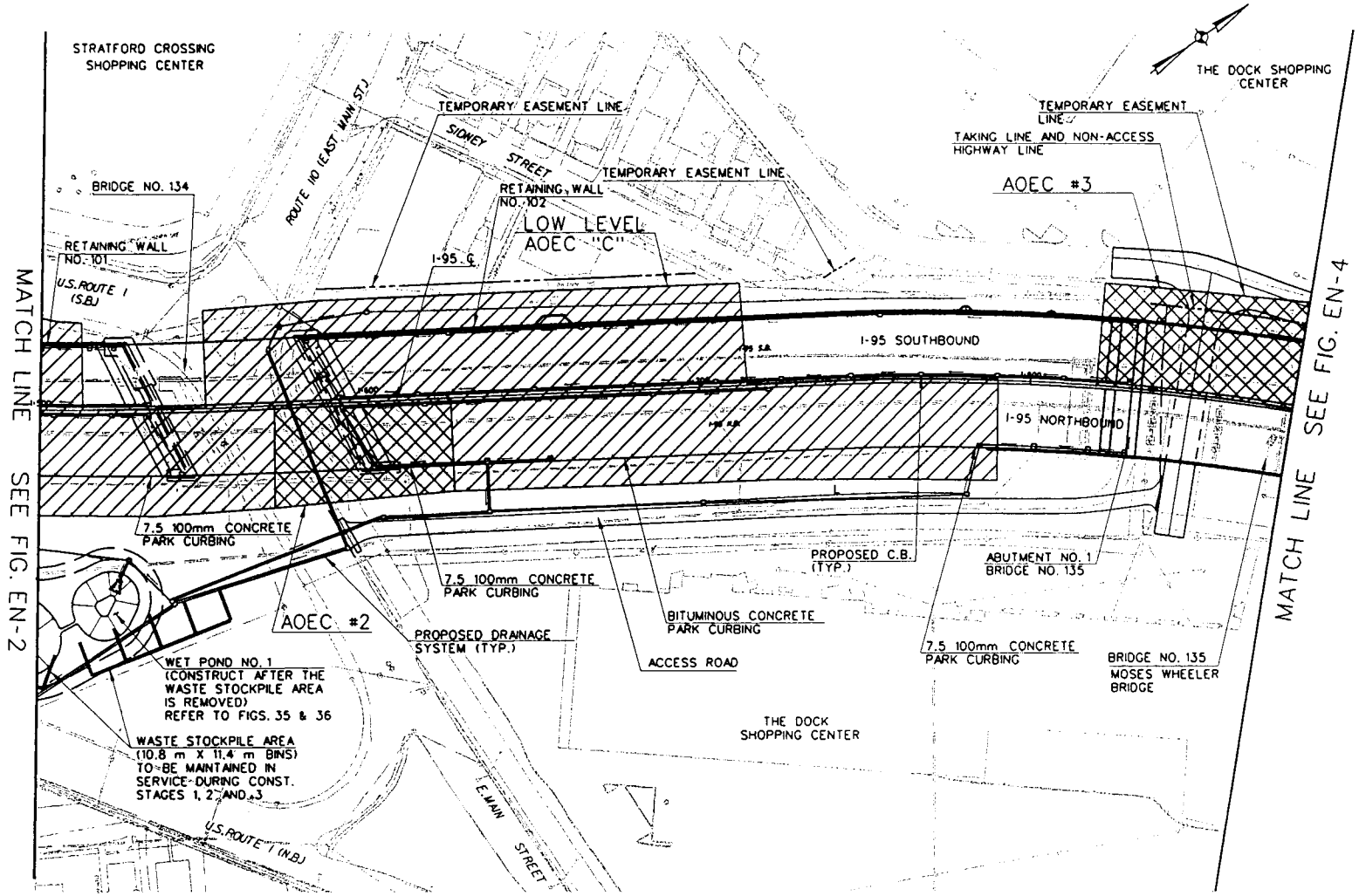
PROJECT NO. 138-221

DATE: 11/11/05	AREAS OF ENVIRONMENTAL CONCERN	FIG. EN-2



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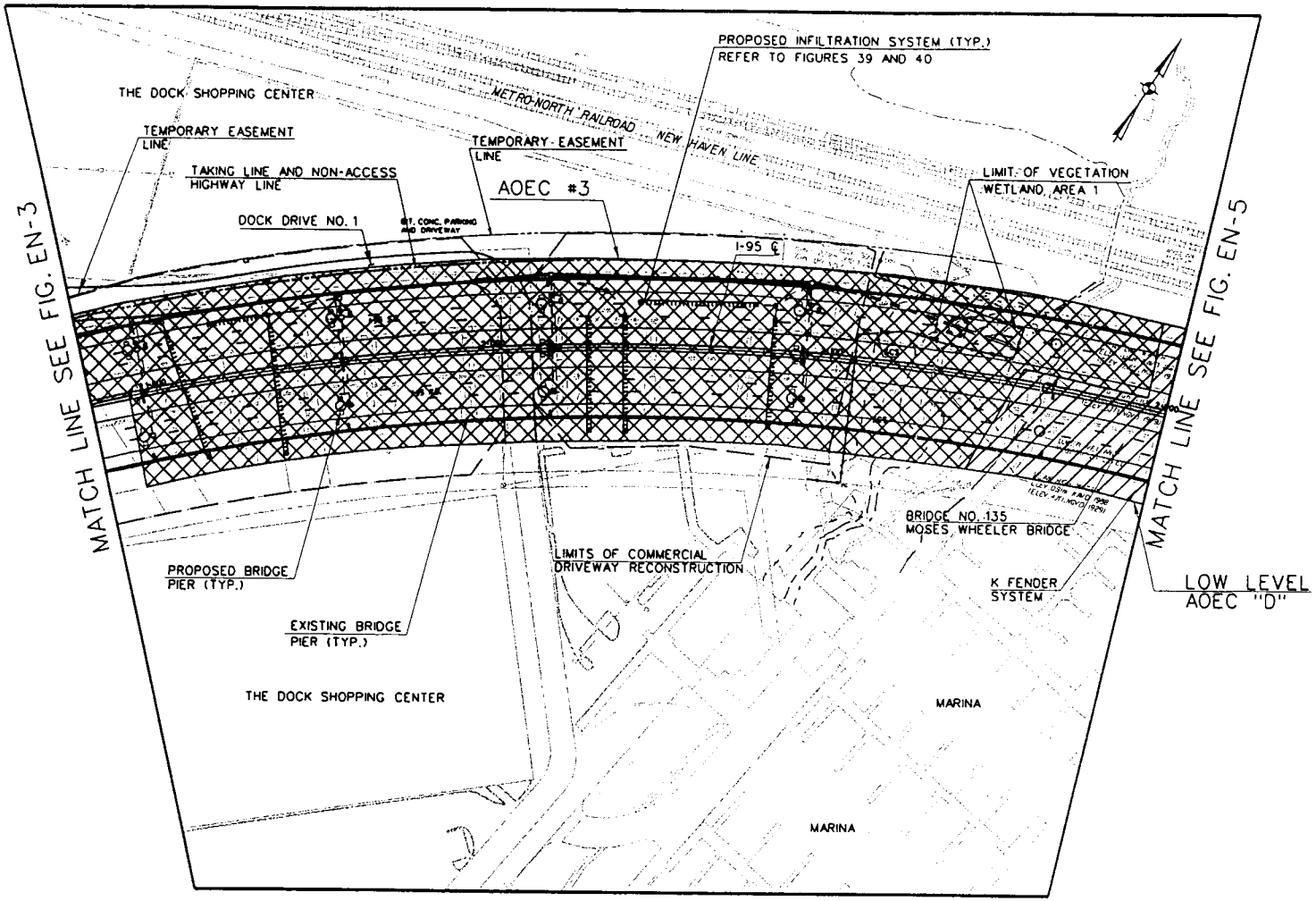
PROJECT NO. 138-221

DATE: 11/11/05	AREA OF ENVIRONMENTAL CONCERN	FIG. EN-3



AREA OF ENVIRONMENTAL CONCERN

SCALE: 1:2000

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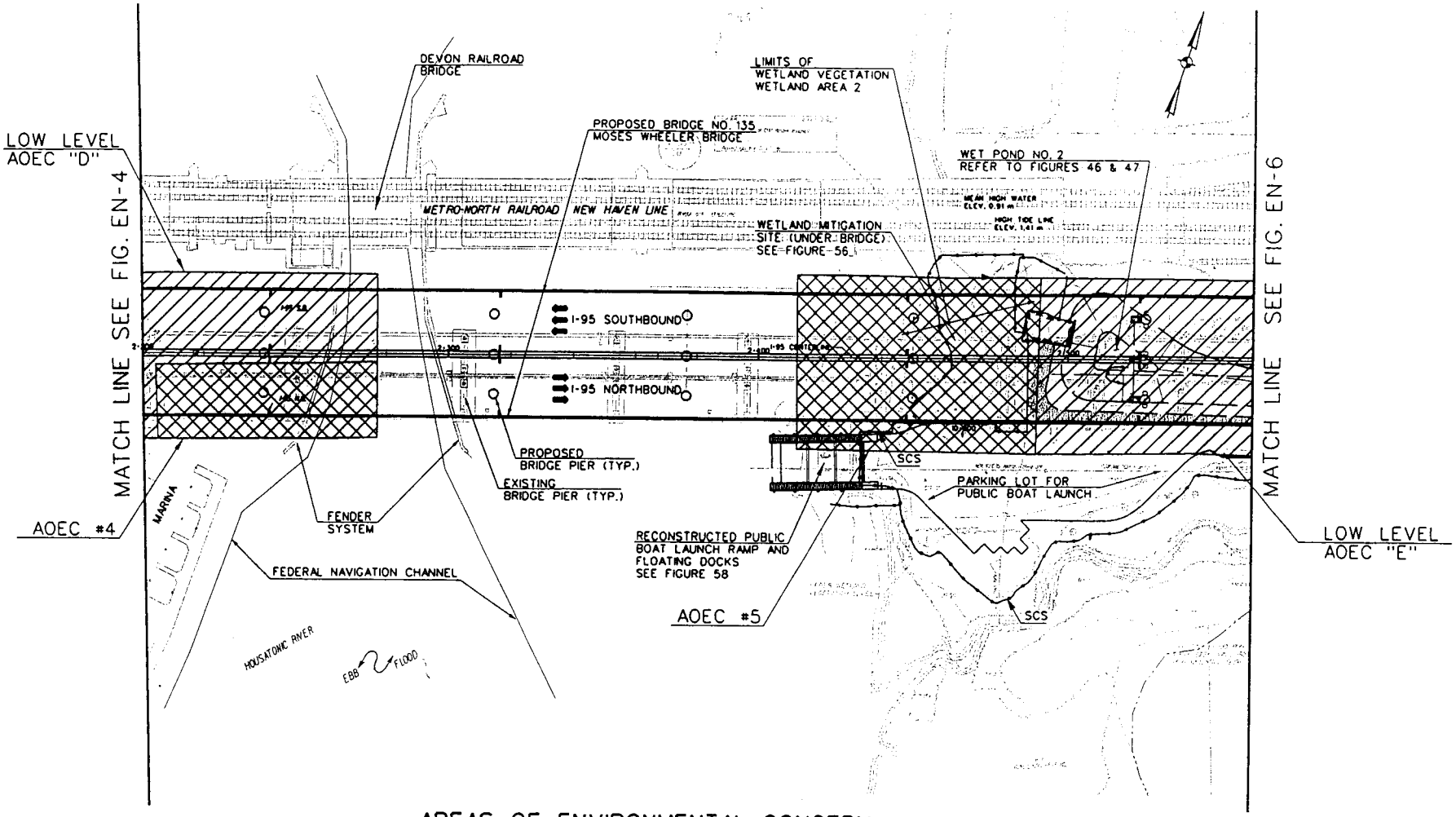
PROJECT NO. 138-221

DATE: 11/11/05	AREA OF ENVIRONMENTAL CONCERN	FIG. EN-4



AREAS OF ENVIRONMENTAL CONCERN

SCALE: 1:2000

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REPLACEMENT OF I-95 BRIDGE
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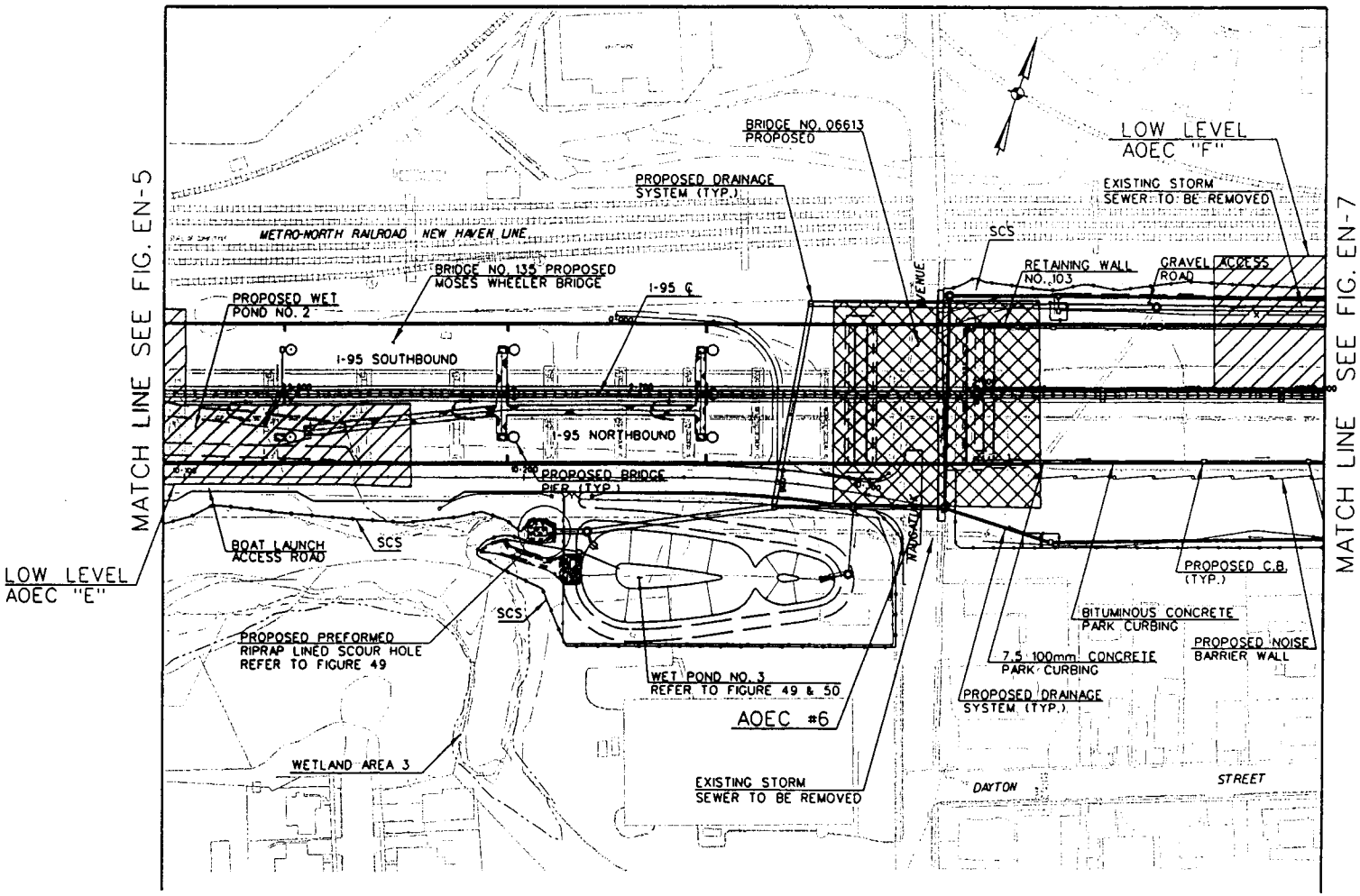
PROJECT NO. 138-221

DATE: 11/11/05	AREAS OF ENVIRONMENTAL CONCERN	FIG. EN-5



AREAS OF ENVIRONMENTAL CONCERN

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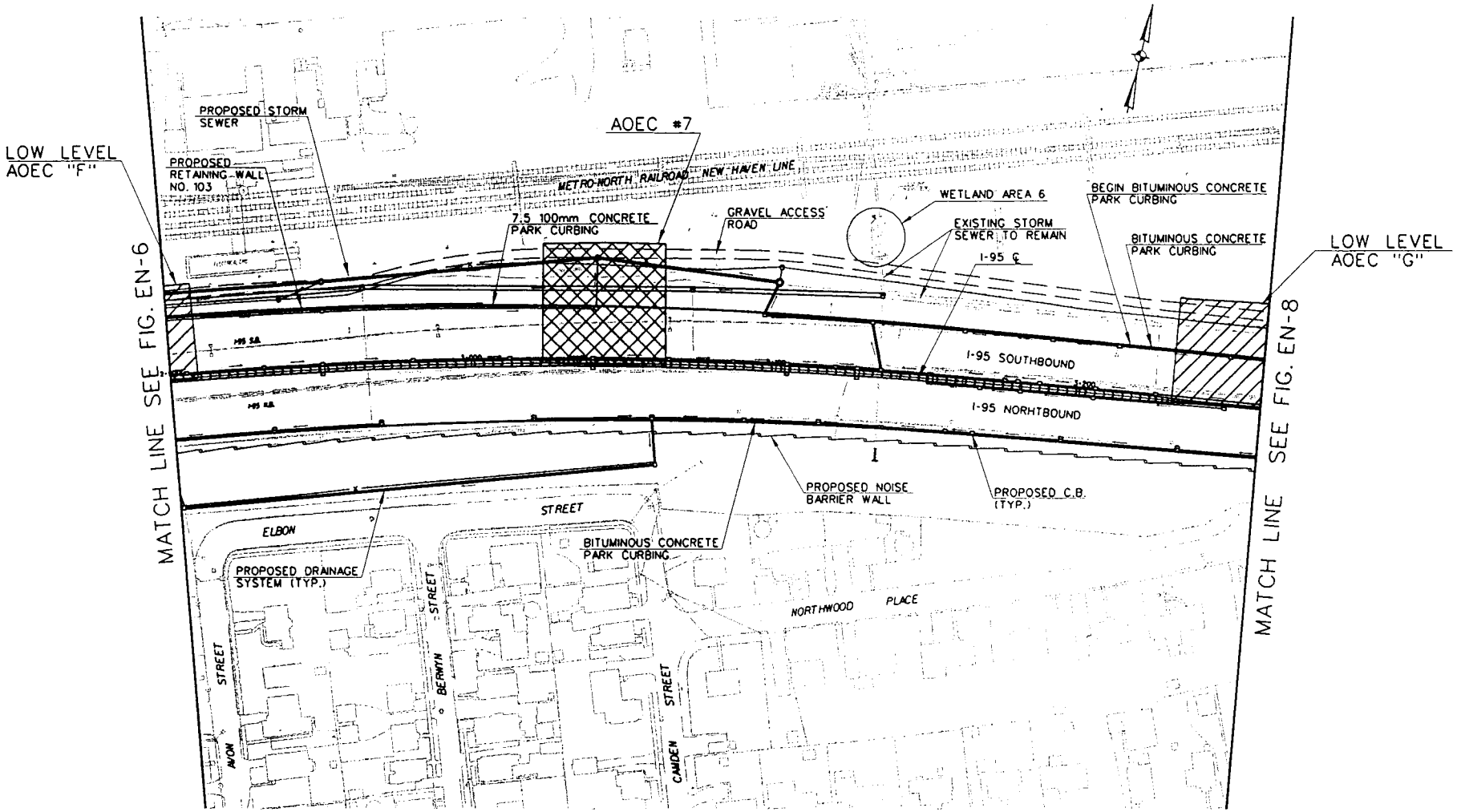
PROJECT NO. 138-221

DATE: 11/11/05	AREA OF ENVIRONMENTAL CONCERN	FIG. EN-6



AREAS OF ENVIRONMENTAL CONCERN

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REPLACEMENT OF I-95 BRIDGE
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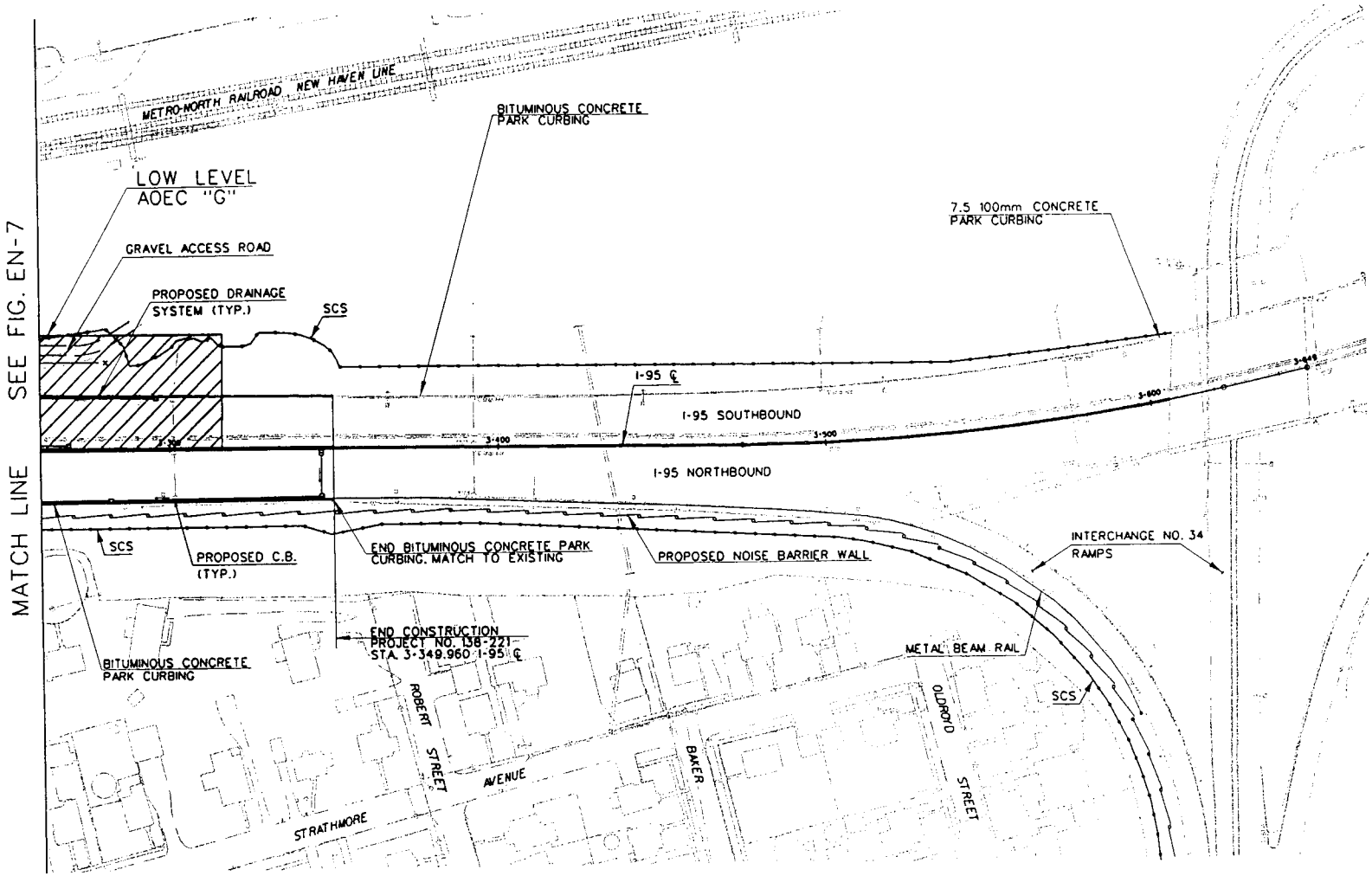
PROJECT NO. 138-221

DATE: 11/11/05	AREA OF ENVIRONMENTAL CONCERN	FIG. EN-7



AREAS OF ENVIRONMENTAL CONCERN

SCALE: 1:2000

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PROJECT NO. 138-221

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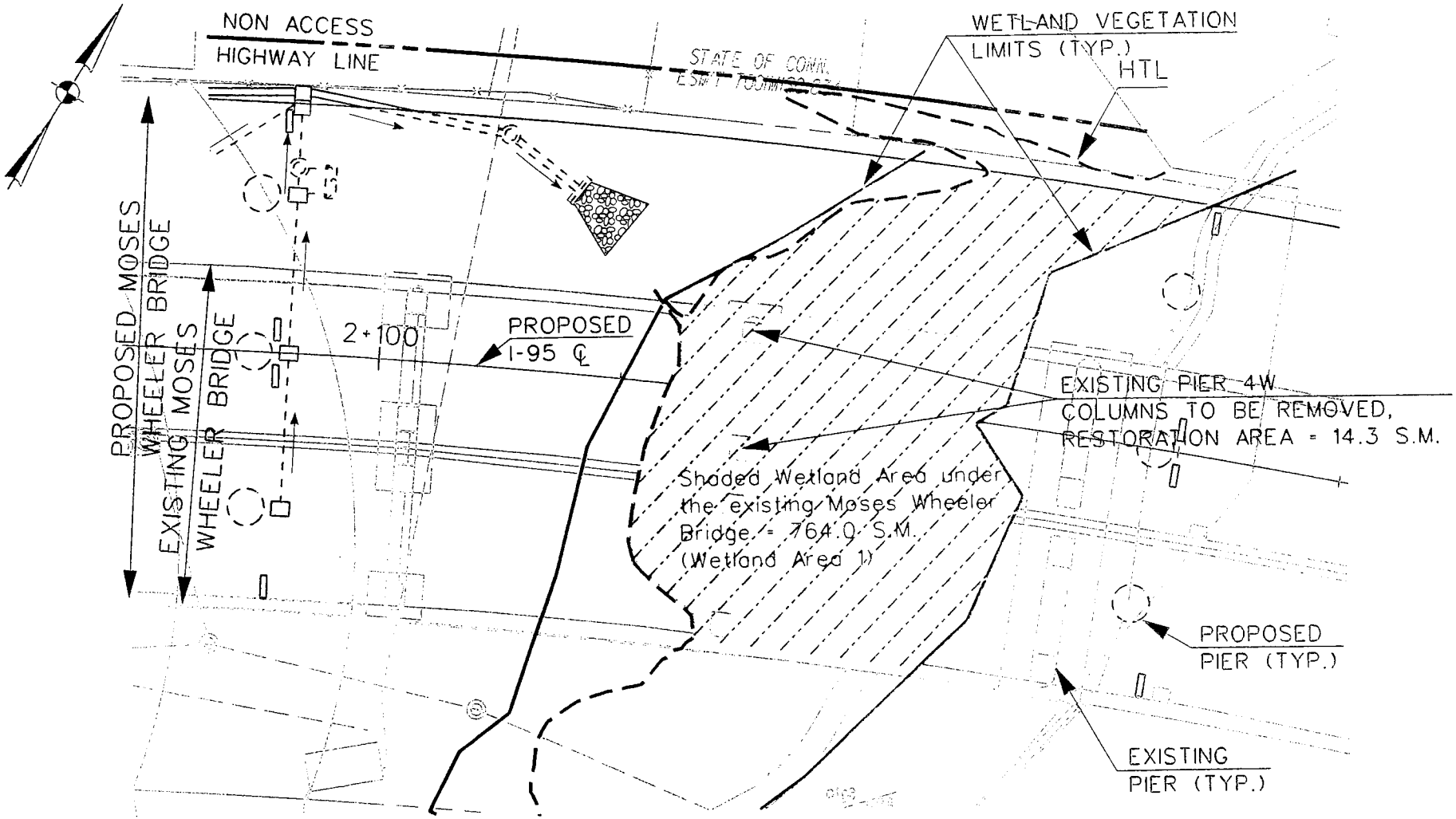
DATE: 11/11/05	AREA OF ENVIRONMENTAL CONCERN	FIG. EN-8



LEGEND

SHADOW AREA IN WETLANDS UNDER EXISTING BRIDGE, AREA = 764.0 S.M.

SHADOW AREA IN WETLANDS UNDER NEW BRIDGE, AREA = 1081.9 S.M.

PLAN
SCALE 1:500

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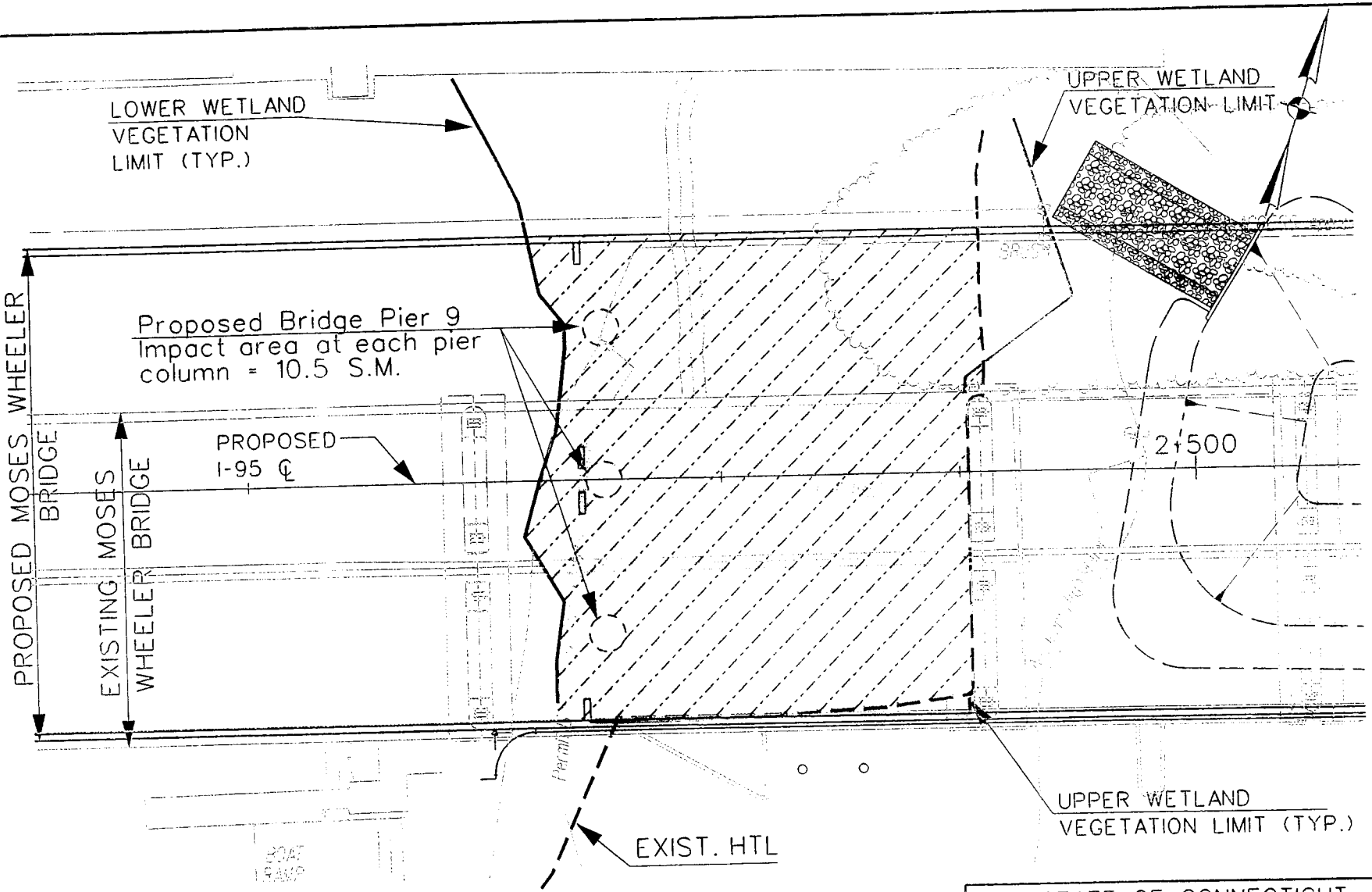
REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06	SHADOW IMPACT AREAS UNDER MOSES WHEELER BRIDGE	FIG. S-1



PLAN

SCALE: 1:500

LEGEND

SHADOW AREA IN WETLANDS UNDER EXISTING BRIDGE, AREA = 947.0 S.M.

SHADOW AREA INWETLANDS UNDER PROPOSED BRIDGE, AREA = 1,421.5 S.M.

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REPLACEMENT OF I-95 BRIDGE OVER THE HOUSATONIC RIVER
PROJECT NO. 138-221

DATE: 11/22/06	SHADOW IMPACT AREAS UNDER MOSES WHEELER BRIDGE	FIG. M-1

Replacement of the Moses Wheeler Bridge over the Housatonic River
State Project No. 138-221
Stratford/Milford, CT

List of Temporary Impacts to Navigation Channel

Construction Stage	Construction Activity	Navigation Channel Closure Type & Period
1	Install new C&S cables on MNRR Devon Bridge - lifting cables over the navigation channel	Full closure 2 days
1	Assemble segmental precast concrete girders for North girder over the navigation channel	Full closure 5 days
2	Assemble segmental precast concrete girders for South girder over the navigation channel	Full closure 5 days
2	Install temporary debris shield under existing N.B. superstructure over the navigation channel	Partial closure 6 days
2	Remove floor beams and purlins/brace main girders (N.B.) over the navigation channel	Partial closure 8 days
2	Remove temporary debris shield under N.B. superstructure over the navigation channel	Partial closure 4 days
2	Remove main girders from N.B. superstructure over the navigation channel	Full closure 2 days
3	Assemble segmental precast concrete girders for Middle girder over the navigation channel	Full closure 5 days
3	Construct new fender system after demolition of Piers 1E and 1W	Partial closure 20 days
3	Install temporary debris shield under existing S.B. superstructure over the navigation channel	Partial closure 6 days
3	Remove floor beams/purlins and brace main girders (S.B.) over the navigation channel	Partial closure 8 days
3	Remove temporary debris shield under N.B. superstructure over the navigation channel	Partial closure 4 days
3	Remove main girders from S.B. superstructure over the navigation channel	Full closure 2 days
3	Remove existing timber fender system along the navigation channel adjacent to Piers 1W & 1E	Partial closure 10 days
3	Construct temporary fender system adjacent to temporary trestles	Partial closure 10 days

Note: A partial channel closure will maintain 12.1-meters (40-feet) of navigation channel open to boat traffic during the construction activity.

DATED 1-2-07

FIGURE CHN-1

Monitoring Report

DOT OEP staff or their consultant shall prepare an annual report for the monitoring of the creation/mitigation areas on the eastern and western shores of the river. Such monitoring report will be submitted no later than December 15th of any year for the first two growing seasons following the completion of this work, which shall provide, at a minimum, the following information:

1) summary of the problems needing immediate attention (e.g., problems with hydrology, invasive species, erosion, and loss of herbivory, etc.);
2) the location and source of all plant material used to complete the mitigation work,
3) dates on which work at the mitigation site began and ended;
4) description of monitoring inspections that occurred since the last report;
5) remedial actions taken during the monitoring year, such as: removing debris, replanting, controlling invasive plant species, applying additional topsoil or soil amendments, adjusting hydrology;
6) visual estimates of percent cover of tidal wetland grasses established and percent cover of invasive species in the mitigation area;
7) percent survival of tidal wetland plantings;
8) plan for removal of invasive plant species;
9) status and condition of all erosion control measures within the mitigation area;
10) observations or fish and wildlife using the site;
11) general health and vigor of the surviving plants;
12) remedial measures recommended to achieve or maintain the proposed functions and values of the mitigation site.

The monitoring reports shall also include as applicable:

- Appendix A -a copy of the permit's mitigation special conditions and summary of the mitigation goals,
- Appendix B -an as-built planting plan showing the location and extent of the proposed planting communities (e.g., planting zones), species planted, the location of the high tide line, mean high water line, and mean low water line, and the location of any erosion and sedimentation control devices;
- Appendix C- representative photographs of the mitigation site taken from the same location for each monitoring event.

Maintenance Report

DOT OEP staff or their consultant shall for a minimum of two (2) years following completion of the creation/mitigation areas conduct the following maintenance procedures:

1) if applicable, remove all invasive plant species within six (6) meters of the mitigation planting areas;
2) remove any construction debris such as garbage or excessive decayed plant material from the mitigation area;
3) replace dead or missing plants which have not already been compensated for by a suitable volunteer species;
4) repair or establishment of erosion control measures.

DOT OEP staff or their consultant shall submit to the Commissioner no later than December 15th of any year documentation stating that indicates that such work has been completed.