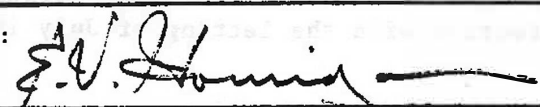


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TO:	ENGINEERING INSTRUCTION	
	NEW YORK STATE DEPARTMENT OF TRANSPORTATION	

**SUPERSEDED BY EI 86-001
EFFECTIVE 5/15/86**

SUBJECT: Operating Policy and Procedures Manual;
Bridge Design Manual. Special Specifications For
Bridges.
Subject Code: 7.35-6

Distribution:	31 <input checked="" type="checkbox"/> Main Office	33 <input checked="" type="checkbox"/> Regions	34 <input checked="" type="checkbox"/> Special	Code: <u>E.I. 85-20</u>
APPROVED:	 <u>E.V. HOURIGAN, Deputy Chief Engineer (Structures)</u>			Date: <u>March 18, 1985</u>
				Supersedes:

Section 552, Sheet Piling and Cofferdams, has been revised. The revision results in the following changes to the specification:

1. The specification now allows Permanent Steel Sheet Piling in ASTM grades other than A328. Currently ASTM grades A572 and A690 are used for permanent sheeting when strength or environmental conditions require.
2. Permanent Cofferdams have been deleted. Cofferdams are considered to be temporary in nature. In those instances where sheeting is used to protect the cofferdam de-watering and construction operations, and also to serve a permanent function, the sheeting shall be permanent sheet piling, Item 552.02. A cofferdam item(s) shall also be included to provide for the costs of de-watering and construction protection. The Contractor has the option of installing separate cofferdam protection, or incorporating the permanent sheeting in the cofferdam system. If the latter option is chosen, the cofferdam item will cover all additional bracing required to strengthen the sheeting system, if required, and any work necessary to return the permanent sheeting to its required function after the cofferdam operation is complete.
3. The Contractor has total responsibility for installing, maintaining and removing the cofferdam system. Where stream diversion or other alternates are allowed, the work shall be paid for at the price bid for the cofferdam at that location.
4. Cofferdams will be paid for on an each basis. For structures requiring multiple cofferdams, the similarity of work at each location should be considered. At those locations where the cofferdam work to be done is similar, use a single item number. Where different conditions exist, use additional item numbers to the extent necessary.
5. Pay item numbers for the new cofferdam items are:
 - a). 552.06XX - COFFERDAMS
 - b). 552.07XX - COFFERDAMS (Water Discharge Control)

Both items have the last two numbers to the right of the decimal point serialized. Therefore, item numbers may be created as needed.

[Stamp: 518-453-6113]

If there are any questions regarding the section revisions contact
J.M. O'Connell at 518-453-6120.

Questions regarding the pay items should be directed to R. Ecuyer at
518-453-6113.

All section and pay item revisions are transmitted with this Engineering
Instruction. The revisions become effective with the letting of July 18,
1985 (P.S. & E. April 25, 1985).

SHEET PILING AND COFFERDAMS

Make the following changes to the Standard Specification of January 2, 1985:

Page 5-33.

Subsection 552-1.04. Delete the entire subsection. Replace with:

552-1.04 COFFERDAMS - Under this work, the Contractor shall furnish, place, maintain, and remove cofferdams together with all necessary waling and bracing, and unwatering equipment.

Subsection 552-1.05 Delete the entire subsection. Replace with:

552-1.05 COFFERDAMS (WATER DISCHARGE CONTROL) - The requirements of Subsection 552-1.04 shall apply. The Contractor shall also construct, maintain, and backfill adequate settlement basins for water discharge control.

Subsection 552-2.01. Delete Part C. Replace with:

"C. Permanent Steel Sheet Piling. Steel Sheet Piling shall be new and unused conforming to the requirements of ASTM A328 unless otherwise indicated on the plans. Stock steel may be used. The Contractor shall furnish to the Engineer, certified copies of physical and chemical test results which shall include a sworn statement by a qualified mill representative to the effect that the subject material conforms to the requirements of the steel specified.

Page 5-34

Subsection 552-2.04. Delete the entire subsection. Replace with:

552-2.04 COFFERDAMS - The materials shall be either timber sheet piling or steel sheet piling of a quality equivalent to that specified in Subsection 552-2.02 or as otherwise indicated on the plans. If water discharge control is not required, the cofferdams may be constructed of earth, earth-filled bags, or other materials approved by the Engineer.

Subsection 552-2.05. Delete the entire subsection.

Subsection 502-3.04. Delete the entire subsection. Replace with:

552-3.04 COFFERDAMS - Cofferdams shall be constructed so as to keep the excavations free from earth, water, ice, or snow and to permit the excavations to be carried to depths up to 3 feet below the foundation elevations

552-3.04 COFFERDAMS (cont'd)

shown on the plans. If timber piling is used, adjacent sheets shall be in contact. Steel sheet piling shall have adjacent sheets interlocked.

In the event that permanent or temporary sheet piling is required by the plans at the location of the cofferdam, the Contractor may elect to incorporate this material into the cofferdam system. Additional bracing may be required to satisfactorily perform excavation, unwatering, and other required construction operations. The permanent sheeting system shall be returned to its intended condition after all cofferdam equipment and material, including any additional bracing, has been removed. All damage done to the temporary system, if still required, or permanent sheeting, shall be repaired at the Contractor's expense, to the satisfaction of the Engineer.

Unless otherwise indicated on the plans, cofferdams shall be maintained in an unwatered condition during foundation construction. The placement of foundation concrete shall not be impeded by water standing or flowing within the cofferdam.

Unwatering equipment and any necessary bracing shall be of adequate quality and capacity and shall be so arranged as to permit their proper functioning in connection with the cofferdam. Unwatering equipment and bracing shall be so located to permit construction of the structure in accordance with the plans.

The cofferdam system shall be of sufficient size and strength to meet the requirements of Title 29, Code Of Federal Regulations, Part 1926, Safety And Health Regulations For Construction (OSHA).

All damage caused by the failure of a cofferdam to perform its proper functions or from any cause whatsoever shall be the responsibility of the Contractor. It shall also be the Contractor's responsibility to protect all stream banks from erosion by reason of restriction of the channel caused by the erection of the cofferdam. All material which erodes from the banks during the time that the cofferdam is in place shall be replaced by the Contractor at his own expense. The Engineer shall be the sole determiner of the nature and extent of damage. He shall approve all repair methods proposed by the Contractor.

552-3.04 COFFERDAMS (cont'd)

It shall be the Contractor's responsibility to place the cofferdam so that it will not interfere with the batter piles, if any, in the foundation.

When water discharge control is required by the plans, the Contractor shall construct a settlement basin, if necessary, to retain the discharge for a sufficient period of time in order that the discharge entering the stream will be as clear as the flowing stream. Prior to beginning construction of any cofferdam, the Contractor shall submit to the Engineer, for review and approval, the methods he will employ.

Page 5-35.

Subsection 552-4.04. Delete the entire subsection. Replace with:

552-4.04 COFFERDAMS - Payment will be made at the unit price bid for each cofferdam actually established where shown on the plans. When a cofferdam is established in conjunction with permanent or temporary sheet piling, payment will be made for each cofferdam established, including any miscellaneous sheeting, additional bracing, or other material necessary to complete the work. The permanent or temporary sheet piling, if used as part of the cofferdam, will be paid for under a separate item.

In those cases where the plans permit the Contractor the option of diverting the stream in lieu of constructing a cofferdam, the cost of the diversion shall be paid at the unit price bid for the cofferdam work.

Page 5-36.

Subsection 552-5.04. Delete the entire subsection. Replace with:

552-5.04 COFFERDAMS - The unit price bid for each cofferdam shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work, including pile driving equipment, waling and bracing, maintaining in a unwatered condition, and final removal.

In the event that the Contractor is required to lower a foundation in excess of 3 feet below the elevations shown on the plans, changes to the respective cofferdam will be classified as extra work and will be paid for in accordance with Subsection 104-03, Contingencies, Extra Work, Deductions.

552-5.04. COFFERDAMS (cont'd)

Additional quantities of other items of the Contract, made necessary by the lowering of a foundation, will be paid for at the unit prices bid for the respective items involved.

Progress payments will be made. Fifty percent of the bid price will be paid after installation and initial unwatering. An additional twenty-five percent will be paid after all unwatering operations have been completed. The remaining percentage will be paid upon satisfactory removal of the cofferdam.

When the stream diversion option is employed, fifty percent of the bid price will be paid after the foundation area is effectively unwatered. The remaining percentage will be paid when all temporary material and equipment have been removed and the waterway restored to its permanent location.

Page 5-36.

Subsection 552-5.05. Delete the entire subsection. Replace with:

552.5.05. COFFERDAMS (WATER DISCHARGE CONTROL) - The provisions of Subsection 552-5.04 shall apply and, in addition, the cost of constructing, maintaining, and backfilling the settlement basins shall be included in the unit price bid.

Delete the following items:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
552.0601	Temporary Cofferdams	Square Foot
552.0602	Permanent Cofferdams	Square Foot
552.0701	Temporary Cofferdams (Water Discharge Control)	Square Foot
552.0702	Permanent Cofferdams (Water Discharge Control)	Square Foot

Replace with the following items:

<u>Item No.</u>	<u>Item</u>	<u>Pay Unit</u>
552.06	Cofferdams	Each
552.07	Cofferdams (Water Discharge Control)	Each