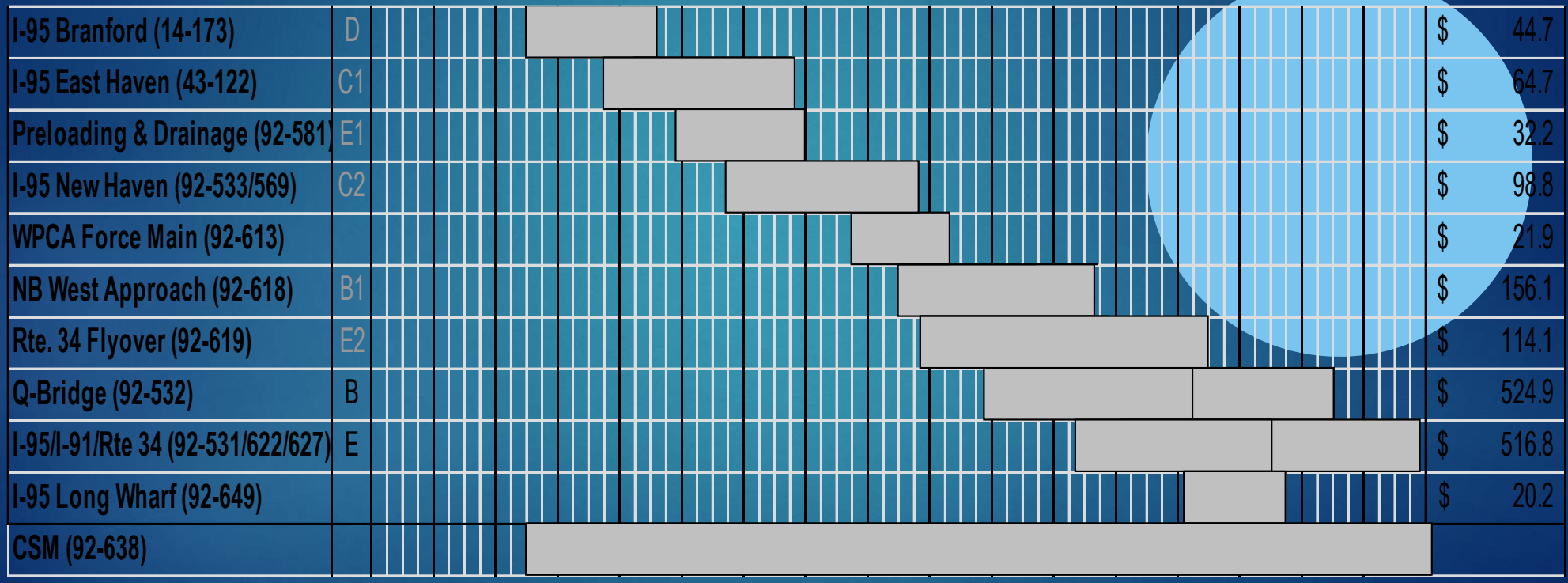
I-95 New Haven Harbor Crossing Corridor Improvement Program

Construction Phase Environmental Process

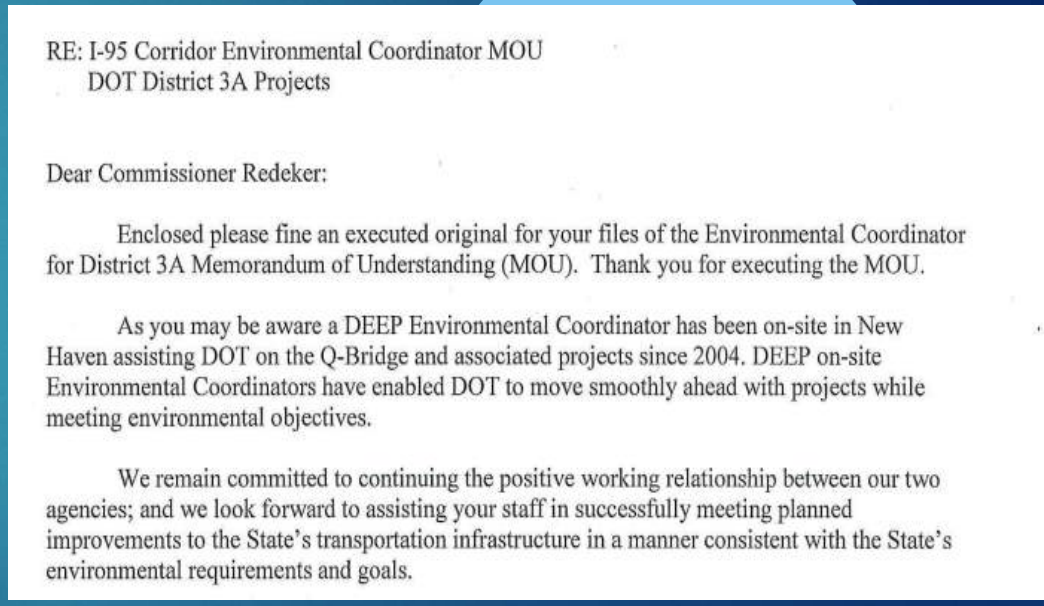
Environmental Team: Beverly Flowers
Heather Falzano

Program Schedule



DOT/ DEEP Memorandum of Understanding

- Due to the schedule, size and complexity of the New Haven Corridor Program, a Memorandum of Understanding was implemented between DOT and DEP, to assign a dedicated DEP Environmental Analyst.
- DEP was assigned to District 3A to keep the Program in compliance with permit conditions and minimize impacts to cost and schedule while responding to changing conditions.
- The original DOT/DEP relationship was such that all environmental requests were funneled through OEP to coordinate with all regulatory agencies. The MOU removed OEP from the process and District 3A Environmental Coordinator filled this role.



RE: I-95 Corridor Environmental Coordinator MOU
DOT District 3A Projects

Dear Commissioner Redeker:

Enclosed please fine an executed original for your files of the Environmental Coordinator for District 3A Memorandum of Understanding (MOU). Thank you for executing the MOU.

As you may be aware a DEEP Environmental Coordinator has been on-site in New Haven assisting DOT on the Q-Bridge and associated projects since 2004. DEEP on-site Environmental Coordinators have enabled DOT to move smoothly ahead with projects while meeting environmental objectives.

We remain committed to continuing the positive working relationship between our two agencies; and we look forward to assisting your staff in successfully meeting planned improvements to the State's transportation infrastructure in a manner consistent with the State's environmental requirements and goals.

Permit Revision Process for Compliance with OLISP, FM, USCG and ACOE:

TRADITIONAL Path

OEP is responsible for all State projects

OEP receives change request from all five state districts, 1, 1A, 2, 3, 3A.

OEP approves or comments on request for change

OEP forwards package to DEEP

DEEP Supervisor assigns project to DEEP Analyst

DEEP Analyst adds the project to their que of work

DEEP approves the request or submits comments to OEP

OEP consults with DEEP to satisfy comments

OEP sends packages to ACOE and USCG

OEP is responsible for entering permits into a computer system

Permits and documents are available to Construction

REVISED Path

Proposed changes were submitted to Heather

Heather makes any necessary comments for District 3A for coordination with the District Staff, Design Team, CEI and Contractor

Heather also forwards District 3A's request to Beverly and tracks the transaction on a status sheet.

Beverly reviews the request and provide comments either in an email or in workshop in collaboration with District's comments.

The Draft request is provided to Beverly who coordinates responses with appropriate DEEP Personnel to streamline the process.

Final package is compiled for District Engineer's signature.

Bev hand delivers the package within 24 hours, stamps it in, and delivers it to the appropriate person. Thereby eliminating the processing time.

DEEP administrative staff will e-mail the signed letter to Bev, who e-mails to Heather.

In Summary

- DEEP analyst on-site decreased DEEP response time for preliminary and final authorizations. Thereby saving money to Contractor's design aspect of the Project request revisions.

MOU Encouraged Transparency

Drivers of Transparency

- DOT/DEEP site reviews
- DEEP Progress Meeting Attendance
- DEEP Physical office in building
- DOT open door policy
- DEEP's accessibility and DOT's expectation to do it right

Positive Actions

- Training at all levels
- Lack of knowledge of the special conditions and Contractor progress meeting discussions did not reflect the actual field conditions led to Bi-weekly Environmental Meetings.
- Utilized Beverly's expertise to create solutions in the field.

Evolution of the Environmental Process

- This discovery of additional environmental input and education needed for the Contractor's upcoming work led to the Bi-weekly Environmental Meetings for all projects to discuss more detail of the projects work.
- At this time, Beverly and myself began our own Corridor-Wide Project **workshops** at least weekly and if necessary prompt-to meetings. During the workshops the project modification status was tracked using this worksheet.

		Corridor Status 4/14/2014				
		Contract B				
		Permit	Discussed w/ Beverly	Additional Concerns	Date	Resolution
1		T11201 Tidal Wetland Cretn	Bev Review my comments	Deminimis	4/10/2014	Letter is in for Mark's signature to pull final sheets prior to planting
2		Review Draft Blasting Plan	Question about monitoring	New blaster=new plan	4/10/2014	Beverly reviewing w/Kevin for Contractor to finalize monitoring aspect of plan
3		T11386 Temp Ramp/95 drainage FM1183	Temporary Drainage Changes East Side I95		10/21/2013	Accepted FYI
4		Temporary West stone swale			10/28/2013	Provided to Beverly as an FYI 4/10/2014
		Western Fender timber piles			4/14/2014	
		Contract 92-522			4/14/2014	
1		Cofferdam decrease impacts			4/14/2014	
2		Trestle Plan Minor modifications				
3		IW extension Letter				
4		Bev will check on west river & long wharf COP	do we need a deminimus to the COP			
5		West side Fill for staging in wetland mitigation			4/10/2014	Approved
		Contract E				
1		Pier 10 Footing Demolition	PB working on revised plans		2/20/2014	Beverly ok with adding to FYI process
2		PS- 8 Footing Enclosure	T9553 to Bev		2/20/2014	Awaiting Reply
		Contract 92-649 Long Wharf				
1		TPR			1/27/2014	APPROVED LETTER PROVIDED 2/20/2014
2		HDS	Submittal to DEEP in in CM T0865		2/20/2014	
3		Trnsm. # 00843	Cofferdam & Drainage Modifications due to Force Main T843		2/10/2014	Awaiting reply
4		Drainage Swales from Commuter Lot	Survey is checking		1/27/2014	
		DCR 20 A-Leave exising drainage		Discussed with Bev. No further action	7/31/2014	Lochner Approved 7/14/2014

Lessons Learned

Environmental - Lessons Learned Fall 2012

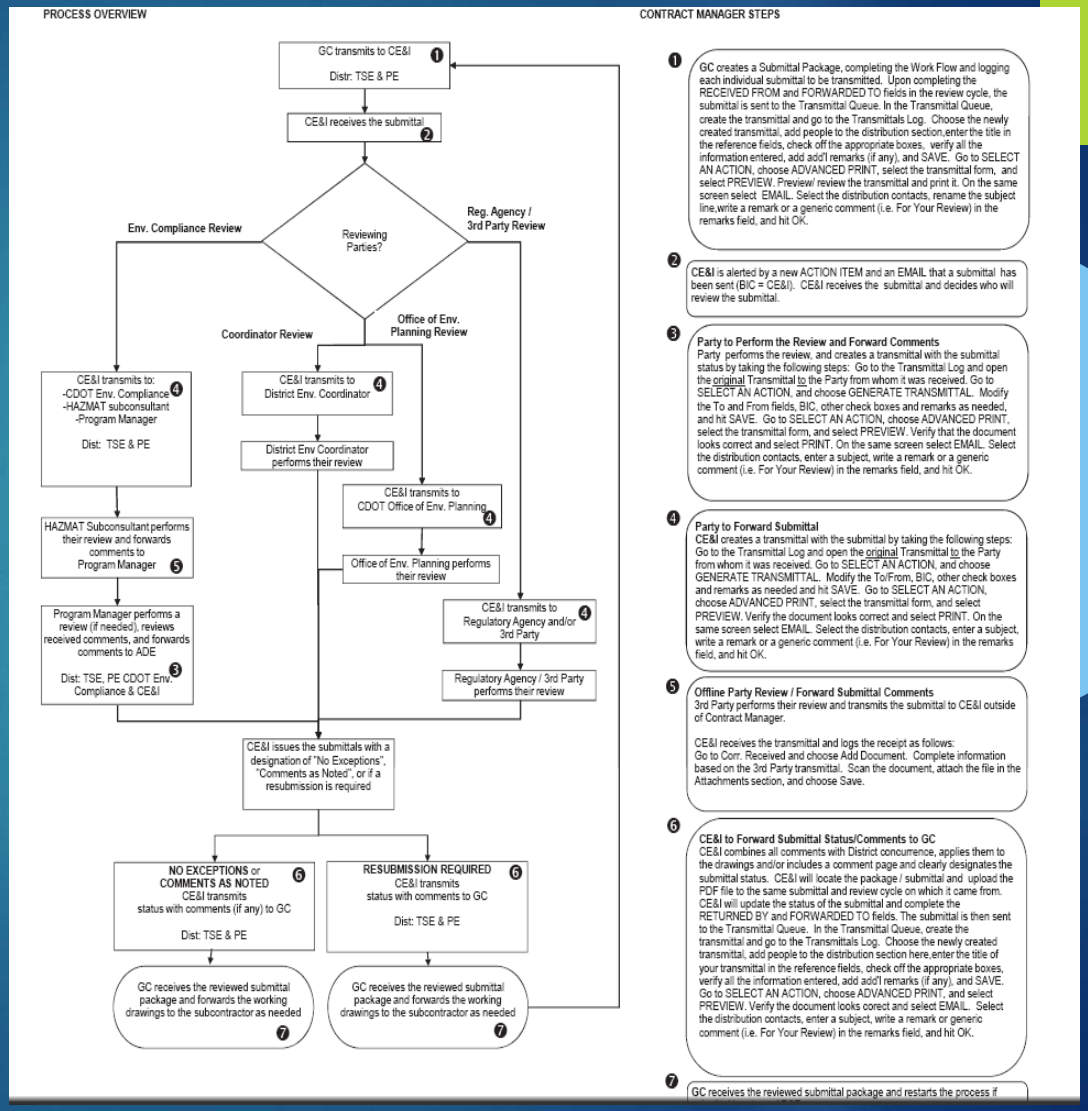
No.	Origin	Category	Issue	Solution	Action	BIC
1	CEI	Demoliton	Protect ground with liner during steel removal demolition	Use liner capable of sustaining large load and heat from torch cutting		
2	CEI	Demoliton	Dust control during concrete demolition	Apply water closer to the demolition operation		
3	CEI	Demoliton	Paint chip cleanup general	Clean up daily. Contractor to be proactive rather than reactive.		
4	CEI	Demoliton	Paint chip cleanup vacuum	HEPA vacuums need to be maintained regularly.		
5	CEI	Demoliton	Fumes from cutting steel with torch without removing paint first.	Suction hose to collect fumes must be held very close to the cutting operation		
6	CEI	Demolition of Trestle	Debris falling into water	Use enough floats below work, clean floats regularly to prevent buildup of debris and use care with hoe ram.		
7	CEI	Erosion Control	Silt fence installation	Install silt fence in trench rather than on ground with backfill works best.		
8	CEI	Erosion Control	Hay bale installation	Trench hay bales into ground and abut them tightly together.		
9	CEI	Erosion Control	Silt fence attachment to posts	Use staples to secure fence to posts. Tie wire accelerates deterioration of fabric		
10	CEI	Cost Plus Work	Cost Plus work	Contractor needs to coordinate with inspector prior to starting the work		

State and Federal Commitments

- **WSP the Program Consultants:** Quarterly Environmental Meetings for All Projects: Tracked response times, Inspection Reports, Federal commitments, friendly project competition
- Monitored Revisions, COP's, and other Environmental Documents necessary for the program in Primavera Contract Manager
- Attended Environmental meetings with Contractors, and workshops for sensitive issues
- WSP made all documents readily accessible to The District, DEEP and the Contractor
- Created Environmental Management Plan




Environmental Processes Flow Chart



Education and Communication

- Led to quality alternatives
- Led to true compliance through proactive measures
- Less Impacts to the Environment

Cost Benefits for the Taxpayers

$534,628 in Claims

Project No. 92-538 – Buckeye pipeline relocation of (2) 12" Pipelines. The project was experiencing frac outs were beninite a clay used to cut through the bottom of the river would break through the sub-surface and spill into the water. The permit required the contractor to stop and figure how to contain the material. T he had a claim of $534,628 for 217.5 hours in delays in receiving COP's and approvals to resume construction operations.

No Claims

Savings of $534,628

92-532 Greater New Haven Water Pollution Control Force main Relocation

Kevin Zawoy

(Bev his seeing eye dog)

Could make quick assessments and recommendations. We encountered the same problems but the impacts were minimized. There were no claims for environmental delays including, receiving COPs, and approval.

With Team

Savings of $100,000

Project No. 92-532- Surface and Drainage Revision (east side Swale).

Working with **Jeff Caiola**, the team saved $100,000 for eliminating additional drainage and railroad crossing.

Revised system substitutes surface treatment systems with greater particulate removal properties for the design hard piping system

Specific Examples projected savings by DOT

Two for one Trestle

Project No 92-618 and 92-532- Construction Access Trestle COPs

Kevin Zawoy

accepted only one COP for the construction access trestles built under the two different contracts. The standard process would require 2 separate COP's. One for the contractor's proposed trestle layout in project t 92-618, and another for the contactors proposed layout in project 92-532.

$1,000,000

State Street Remediation

DEEP **Don Gonyea** Specialized personal attended Corridor meetings to work with the project and permit conditions to resolve dewatering treatment measures . Re-evaluating the discharging limits.

$1,000,000

Eliminate Stone Removal

DOT DEEP Hartford Visit: Kevin Zawoy, Dan Biron and Mike Grzywinski

Agreement to allow two inch stone surrounding the new pier footings. Thereby eliminating the cost for different contractor to remove the material.

State Wide Innovation

- New seeding Mixes for high wind and steep slopes, earth guard, geo matrix and flexterra.
- Z110 soil stabilizer
- On-site Experimented with Mechanical Sweeper: Mega-Wind
- GWTF On site
- Management of Re-use Stockpile Areas
- Latex Modified Concrete Handling during placement and disposal
- Emergency Form

Value to the Departments

Opportunity to continue this model

- Exceeded DEEP processing times. The team's turnaround from request to application was less than 30 days
- Improved Schedule
- Less impacts to Environment
- Cost Savings
- Contractor Cooperation with problem solving being responsible
- DOT/DEEP Education: Constructibility

- Relationships are the most important
- Patience, passion, and taking responsibility led to creating a positive environment for the work to get done in compliance.

Future Partnering Model

- Incorporate OEP as part of the team Expertise
- Program Management Software includes an pathway Environmental documentation
- Patience with all the moving parts
- Team Support
- Cooperative nature of all parties involved
- Deep has a path to paperless
- Deep anticipated mitigation project list
- Designer Initiated Change Orders
  - Specific environmental package
  - Have an environmental review cycle

Beverly's Interaction with the DOT

Argue

Talk

Works with others