INTERIM REMEDIAL ACTION PLAN
MERIDEN HUB SITE
FORMER CANBERRA INDUSTRIAL AND INTERNATIONAL SILVER COMPANY
77 STATE STREET
MERIDEN, CT

Prepared For:
City of Meriden
Economic Development Office
City Hall
142 East Main Street
Meriden, CT

Prepared By:
Metcalf & Eddy, Inc.
860 North Main Street Extension
Wallingford, CT 06492

On Behalf Of:
Milone & MacBroom, Inc.
99 Realty Drive
Cheshire, CT 06410

MARCH 1, 2007
REVISED APRIL 23, 2007

METCALF & EDDY | AECOM

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Ms. Peggy Brennan
Economic Development Director
Economic Development Office
City Hall
142 East Main Street, Room 217
Meriden, CT 06450

April 27, 2007

Post-it® Fax Note 7671	Date	# of pages ▶ 1
To John Albrecht	From D Ringquist	
Co./Dept.	Co.	
Phone #	Phone #	
Fax # 203 269 8788	Fax #	

Subject: Meriden HUB Site
77 State Street
Interim Remedial Action Plan

Dear Ms. Brennan,

The Connecticut Department of Environmental Protection has reviewed the document entitled Interim Remedial Action Plan, Meriden Hub Site, Former Canberra Industrial and International Silver Company, prepared by Metcalf & Eddy, Inc. and dated March 1, 2007, revised April 23, 2007. This plan was submitted as part of an ongoing redevelopment project being conducted by the City of Meriden and funded by an EPA Brownfields Program cleanup grant.

The Interim Remedial Action Plan (IRAP) describes the demolition of the former Meriden Mall and Canberra Industries building and slab, followed by offsite removal of all building debris except for clean building concrete. This concrete will be crushed, placed on a geotextile fabric and covered with a seeded topsoil at the site, pending final remediation of the site that is expected in 2009. The IRAP also describes that, although not expected based on the results of previous investigations, any "grossly contaminated soil (e.g. free draining petroleum)" that is discovered as the building slab is removed will be containerized and disposed of offsite.

As a result of our review of the above referenced plan, the CTDEP concurs with the interim measures proposed. It is understood that these measures are intended as a means to demolish the buildings on site while maintaining a condition that is protective of human health and the environment, and that a final remedial action plan will be prepared and implemented in the future as a permanent remedy.

Please call me at 860-424-3573 if you have any questions.

Sincerely,

David Ringquist

David Ringquist
Sanitary Engineer 3
Remediation Division

C: John L. Albrecht, Metcalf & Eddy | AECOM, 860 N. Main Street Ext., Wallingford, CT 06492

SECTION 1

ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES (ABCA)

METCALF & EDDY | AECOM

Memorandum

DATE: March 6, 2007

TO: Ms. Peggy Brennan – City of Meriden

FROM: John Albrecht, LEP – Associate
David Williams, CPG, LEP – Sr. Project Scientist

SUBJECT: **Analysis of Brownfields Cleanup Alternatives (ABCA)**
Interim Remedial Actions – Meriden HUB site
77 State Street, Meriden, CT

INTRODUCTION AND SITE HISTORY

At the request of the City of Meriden, Metcalf & Eddy, Inc. (M&E) is submitting this Interim Remedial Action Plan (IRAP) for CTDEP review and approval. The purpose of the IRAP is to establish interim measures that will minimize the potential for direct exposure to surficial soil contamination in the interim between demolition and remediation/re-development of the site. Final remediation will be conducted in accordance with the Connecticut Remediation Standard Regulations (RSRS).

The City of Meriden has contracted J. R. Contracting and Environmental Consulting, Inc. to demolish the structure located on the Brownfield site known as the Meriden HUB site at 77 State Street in Meriden, CT. Figure 1 depicts the site location. The demolition is being conducted to allow for the redevelopment of the site. Redevelopment plans call for a city park, flood control space and commercial land uses. J. R. Contracting is conducting the demolition and interim remedial actions in accordance with the plans and specifications for the project which were prepared by TRC. Drawings prepared by TRC that are pertinent to the interim remedial actions are included in this submittal.

The City of Meriden owns the approximately 14 acre property. The City was awarded an EPA Brownfield Cleanup Grant that will be utilized for the interim remedial actions. A requirement of the grant is that the site be entered the CTDEP Voluntary Remediation Program (VRP) described in Connecticut General Statutes (CGS) Section 22a-133x. An Environmental Condition Assessment Form (ECAF) and fee for entering into the VRP were submitted by the City under a separate cover.

In 1863 the Meriden Britannia Company, a silver plate and sterling silver flatware manufacturer, expanded its operations onto the site. In 1898 the company merged with several other silver manufacturers and became the International Silver Company (Insilco). Insilco operated on the site until the late 1950s. Several other businesses operated on the site during this period, including auto service and filling stations, dry cleaners, a glass cutting factory and a door manufacturing company. By 1970, the previous site buildings had been razed, and a large building which contained Meriden Mall and two smaller buildings, each containing banks, were located on the site. Harbor Brook, which flowed through the center of the site, had been diverted into a subsurface drainage structure. In 1976, the mall building was renovated to contain a factory and several small retail stores. The factory area was occupied by Canberra Industries from 1983 to 1993. In 1993, Canberra Industries relocated, however the stores in the building as well as the two banks continued to operate through 2003. Presently, all of the retail stores are closed, and the large building is vacant. One of the bank buildings is still operating, and the other one has been razed.

REMEDIATION STANDARD REGULATIONS

The RSRs contain numerical, default criteria for contaminated soil associated with a release area that are based on both the potential for direct human health impacts from exposure to contaminants (direct exposure criteria) and on the potential for the soils to have an adverse impact on groundwater (pollutant mobility criteria). Two sets of direct exposure criteria are specified; one derived for residential land use and the other derived for industrial and certain commercial land use. Similarly, two sets of pollutant mobility criteria are

specified; one for areas with a groundwater classification of GA/GAA and one for a groundwater classification of GB. Class GA/GAA groundwater is groundwater that is an existing or potential source of potable water and is presumed to be suitable for human consumption without the need for treatment. Class GB groundwater is presumed to have been degraded by past urban or industrial activities and may not be suitable for human consumption without treatment. The site is located in a GB classified groundwater area. Additional information on these criteria is presented in the following sections.

Direct Exposure Criteria

The RSR definition of "residential activity" includes activities related to a residence or dwelling, as well as activities related to schools, hospitals, daycare centers, playgrounds, or outdoor recreation areas. The residential direct exposure criteria (R DEC) apply in areas with residential activities, but are also the default criteria used to evaluate potential human exposure in all areas. Industrial/commercial direct exposure criteria (I/C DEC) may be applied to areas that do not fit the definition of residential activity, but an Environmental Land Use Restriction must be executed to prevent residential uses of the property. These criteria are for comparison to soils data analyzed on a mass of contaminant to mass of soil basis (typically milligram per kilogram, or mg/kg).

Pollutant Mobility Criteria

The RSRs for organic contaminants include a set of numerical pollutant mobility criteria for contaminated soils on a mass/mass basis. Alternatively, organic contaminants can be analyzed on a TCLP (toxicity characteristic leachate procedure) or SPLP (synthetic precipitation leachate procedure) basis and the results (on a mass of contaminant to liter of leachate basis, or mg/L) can be compared to the groundwater protection criteria (GWPC). For GB aquifer areas, the results are compared to the GWPC times a factor of ten.

The RSR pollutant mobility criteria for inorganic contaminants are based on TCLP or SPLP analysis of the soil. For GA areas, the pollutant mobility criteria equals the groundwater protection criteria and for GB areas are specified as ten times the groundwater protection criteria. However, under certain circumstances, the same ten times factor may be applied in GA areas.

Depending on the groundwater classification, the RSRs include various options such as alternate pollutant mobility criteria or the application of dilution factors. If site-specific criteria or dilution factors are proposed, a site-specific demonstration must be made that after dilution with on-site groundwater, the groundwater protection criteria will not be exceeded.

ANALYSIS OF ALTERNATIVES

This draft ABCA documents M&E's analysis of interim remedial measures described in the Interim Remedial Action Plan (IRAP), for the Meriden HUB site. This ABCA was prepared to meet requirements of the EPA cleanup grant issued to the City of Meriden. Specifically, information used to evaluate five interim remedial alternatives for the site is summarized. The interim remedial alternatives considered are:

- No Action – with concrete slab removed;
- No Action – with concrete slab in place;
- Backfill with clean imported bank run gravel and topsoil or;
- Backfill with site soils, crushed building concrete and masonry;
- Backfill with site soils, crushed building concrete and masonry, topsoil and turf;

These interim remedies are evaluated and compared in terms of effectiveness, implementability, and cost. This comparison follows, in part, the guidance used for conducting Feasibility Studies under CERCLA [EPA, 1988]. Summaries of comparison information are presented in Tables 1 through 5. The No Action alternatives are included as a baseline for comparison to other alternatives in accordance with EPA Remedial Investigation/Feasibility Study guidance.

Summary of Alternatives

Alternative 1. No Action – with the concrete floor slab removed
No interim remedial action occurs under this alternative. The concrete slab is removed during demolition. This alternative would leave potential contaminated soil exposed at or near the surface creating a risk to exposure.

Alternative 2. No Action – with the concrete floor slab left in place
No interim remedial action occurs under this alternative. The concrete slab remains in place. For aesthetic reasons and using available funding, the City of Meriden has contracted the removal of the concrete slab during demolition. This alternative would provide a temporary remedy for the site but would prevent the City from utilizing available funding to have the slab removed during demolition. Furthermore, leaving the remains of the structure in place with exposed jagged concrete would be an unsightly blight on the community, which is precisely what the City intends to avoid.

***Alternative 3.* Backfill with clean imported bank run gravel and topsoil**
This alternative would include the removal of the concrete floor slab and the backfilling of any depression with clean imported bank run gravel and topsoil. This alternative would provide a temporary remedy for the site and would provide an aesthetically pleasing environment, but would be the most costly for the City to implement. Furthermore, this would likely require stripping materials from a Greenfield, which is not an environmentally responsible action. Also, the final redevelopment of this property includes flood control requiring the removal of approximately 24,000 cy of soil. Therefore bringing in soil is not appropriate. Due to these reasons and the high cost associated with backfilling with imported material, this option is not recommended.

Alternative 4. Backfill with site soil, crushed building concrete and masonry.
This alternative includes the removal of the concrete floor slab and backfilling any depression left behind with site soil and crushed building concrete and masonry. This alternative would provide a temporary remedy for the site but would not be acceptable to the City for aesthetic reasons.

Alternative 5. Backfill with site soils, crushed building concrete and masonry, topsoil and turf

This alternative includes the removal of the concrete floor slab and backfilling any depression left behind with site soil and crushed building concrete and masonry. Top soil and turf would be placed level on the crushed concrete and masonry. This alternative would provide a temporary remedy for the site, would stabilize the area, and would provide the City with an aesthetically pleasing environment.

Evaluation of Engineered Control

In order to implement Alternative 5, several steps have been taken and/or are in progress. These include the following:

- This draft analysis is being made available for EPA, CTDEP and public comment;
- An Interim Remedial Action Plan (IRAP), has been completed and is available for comment at the Meriden Public Library at 105 Miller Street; and
- Technical specifications have been prepared for completing Alternative 5 once EPA, CTDEP and public comments are addressed.

Additional information related to the proposed implementation of Alternative 5 is provided in the IRAP (M&E, 2007). A final RAP will be prepared in 2007 which will address the final remediation redevelopment and post remediation monitoring.

References

Consulting Environmental Engineers, Inc., October 2005: *Phase II Environmental Site Assessment and Groundwater Monitoring, Meriden-HUB Former Canberra Industries/Meriden Mall Facility, 1 & 77 State and 30 & 50 East Main Streets, Meriden, Connecticut.*

Metcalf & Eddy, Inc., March 2004: *Phase I Environmental Site Assessment, Meriden HUB, Meriden, Connecticut.*

Metcalf & Eddy, Inc., December 2004: *Targeted Brownfields Assessment Report, Meriden HUB Site, 1 & 77 State Street and 30 & 50 East Main Street, Meriden, Connecticut.*

Table 1
Screening of Interim Remedial Alternatives
Alternative 1: No Action – with the concrete floor slab removed

Description: Under this alternative, no remedial action would occur.

EFFECTIVENESS	IMPLEMENTABILITY	COST
Advantages	**Advantages**	**Advantages**
• None.	• No action makes this the easiest alternative to implement.	• No capital cost. • No O&M cost.
Disadvantage	**Disadvantage**	**Disadvantage**
• Does not mitigate on-site risk due to direct exposure.	• Additional remedial actions will be required in the future.	• Additional remedial actions will be required in the future at unknown cost.

Conclusion: The No Action alternative is not protective of human health or the environment. It does not reduce on-site risk to exposure and is not recommended for implementation.

Table 2
Screening of Interim Remedial Alternatives
Alternative 2: No Action – with the concrete floor slab left in place

Description: Under this alternative, no remedial action would occur.

EFFECTIVENESS	IMPLEMENTABILITY	COST
Advantages	**Advantages**	**Advantages**
• None.	• No action makes this the easiest alternative to implement.	• No capital cost. • No O&M cost.
Disadvantage	**Disadvantage**	**Disadvantage**
• Does not provide an aesthetically pleasing environment.	• The City would have to re-structure the demolition contract.	• The City would have to forfeit available funding.

Conclusion: The No Action alternative is protective of human health and the environment, but does not provide an aesthetically pleasing environment, and is not recommended for implementation.

Table 3
Screening of Interim Remedial Alternatives
Alternative 3: Backfill with clean imported bank run gravel and topsoil and turf

Description: This alternative includes the removal of the concrete floor slab and the placement of clean backfill and topsoil in any depression left behind to address exposure to potentially contaminated soil at the surface.

EFFECTIVENESS	IMPLEMENTABILITY	COST
Advantages	**Advantages**	**Advantages**
• Likely to address exposure to contaminated soil. • Stabilizes area. • Temporary remedy and aesthetically acceptable.	• None.	• None.
Disadvantage	**Disadvantage**	**Disadvantage**
• None.	• Significant effort involved in removing concrete and masonry debris off-site and importing clean fill on-site.	• High cost to remove concrete and masonry debris and import clean fill. • Potential disturbance to Greenfield to obtain clean fill is not environmentally responsible.

Conclusion: Importation of clean back fill and topsoil is a common interim procedure for addressing exposure to contaminated soil at the surface. However, due to the high cost, with this alternative is not considered feasible.

Table 4
Screening of Interim Remedial Alternatives
Alternative 4: Backfill with site soil, crushed building concrete and masonry

Description: This alternative includes the removal of the concrete floor slab and the placement of site soil, crushed building concrete and masonry in any depression left behind to address exposure to potentially contaminated soil at the surface.

EFFECTIVENESS	IMPLEMENTABILITY	COST
Advantages	**Advantages**	**Advantages**
• Likely to address risk to direct exposure to contaminated soil. • Stabilizes area. • Temporary remedy.	• Less effort involved compared with Alternative 3.	• Less costly compared to Alternative 3.
Disadvantage	**Disadvantage**	**Disadvantage**
• Does not provide the aesthetics the City requires.	• None.	• None.

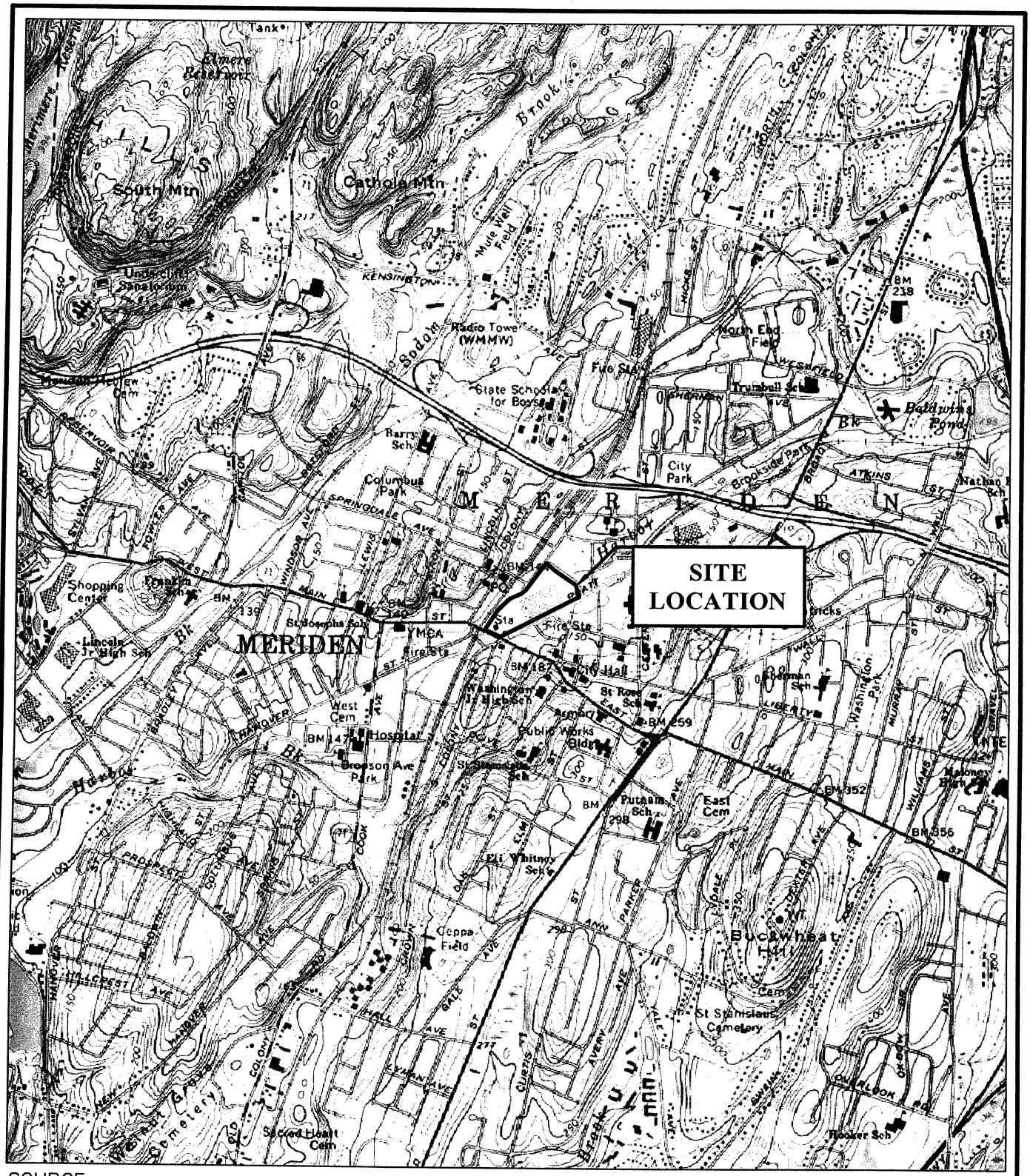
Conclusion: Backfilling any depression left behind with crushed building concrete and masonry is less costly and requires less effort than Alternative 3, but does not provide the quality the City requires and, therefore, this alternative is not recommended.

Table 5
Screening of Interim Remedial Alternatives
Alternative 5: Backfill with site soil, crushed building concrete and masonry overlain with topsoil and turf

Description: This alternative includes the removal of the concrete floor slab and the placement of crushed building concrete and masonry in any depression left behind. Topsoil and turf are placed level on the concrete and masonry to provide a stable and aesthetically pleasing environment.

EFFECTIVENESS	IMPLEMENTABILITY	COST
Advantages	**Advantages**	**Advantages**
• Likely to address risk to direct exposure to contaminated soil. • Stabilizes area. • Provides an aesthetically pleasing environment.	• Less effort involved, compared with Alternative 3.	• Less costly than Alternative 3.
Disadvantage	**Disadvantage**	**Disadvantage**
• None.	• More effort involved, compared with Alternative 4.	• More costly compared to Alternative 4.

Conclusion: This alternative includes the removal of the concrete floor slab and the placement of crushed building concrete and masonry in any depression left behind. Topsoil and turf are placed level on the concrete and masonry debris. This alternative requires slightly more effort and is more costly than others, but addresses the risk to exposure to contaminated soil at the surface while providing the City with an aesthetically pleasing environment. This alternative is recommended.



SOURCE:
USGS QUADRANGLE
MERIDEN, CT
MAP VERSION 1992

1" = 2000'

0 2000 4000 6000

SCALE FEET

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MILONE & Mac BROOM AND CITY OF MERIDEN, CONNECTICUT

MERIDEN HUB

FIGURE 1

SITE LOCATION MAP

PATH, FILENAME: P:\60017968-MER\C\CZMER002.DWG

ANSI A – 3-8-05

LAST UPDATE: Thursday, March 01, 2007 2:29:18 PM

PLOT DATE: Friday, March 02, 2007 1:36:09 PM

ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES (ABCA), COMMUNITY RELATIONS PLAN AND INTERIM REMEDIAL ACTION PLAN (IRAP)

MERIDEN HUB SITE
FORMER CANBERRA INDUSTRIAL AND INTERNATIONAL SILVER COMPANY
77 STATE STREET
MERIDEN, CT

Prepared For:
City of Meriden
Economic Development Office
City Hall
142 East Main Street
Meriden, CT

Prepared By:
Metcalf & Eddy, Inc.
860 North Main Street Extension
Wallingford, CT 06492

MARCH 8, 2007

SECTION 2

COMMUNITY RELATIONS PLAN

Community Relations Plan
Meriden HUB Site – Interim Remedial Actions
Meriden, CT
March 6, 2007

1. Introduction and Overview

This document serves as the Community Relations Plan (CRP) for the proposed interim remedial activities to occur at the Meriden HUB property in Meriden, Connecticut. This plan was developed to address community outreach and information sharing for the remediation and development planning process, as well as the interim remedy implementation. The remedial activities are being funded in part by a grant from the U.S. Environmental Protection Agency (EPA), the city, and by others. The EPA grant was awarded to the city in 2006, based on the grant application submitted in December 2005.

The City of Meriden actively engages the community in its brownfields redevelopment efforts through its Comprehensive Economic Development Strategy (CEDS) Steering Committee. The CEDS Steering Committee is comprised of 24 representatives of various entities, organizations and individuals representing the interests of the public, private and not-for-profit sectors and oversees the City's economic development plan. The CEDS Blight and Brownfields Subcommittee more specifically focuses on the remediation of brownfields in the city. The Subcommittee seeks the active participation of community groups and stakeholders in brownfields redevelopment. This subcommittee serves as the advisory group for Meriden's 2004 EPA Brownfields Assessment Grant and will continue in this capacity for the 2005 EPA Brownfield Cleanup Grant for the HUB project.

2. Spokesperson and Information Repository

The spokesperson for the project is:

Ms. Peggy Brennan
Economic Development Director
Economic Development Office
City Hall
142 East Main Street, Room 217
Meriden, CT 06450
Phone: 203-630-4152
Fax: 203-630-4274
Email: pbrennan@ci.meriden.ct.us

The information repository is located at the Meriden Public Library, 105 Miller Street, Meriden.. The library is open Monday, Tuesday and Wednesday from 10AM to 9PM; Thursday, Friday and Saturday 10AM to 5PM; Sundays (October to March) 1PM to 5PM. The phone number of the library is 203-238-2344. Many documents are also available on the website www.cityofmeriden.org.

3. Site Description and History

The Meriden HUB is located at 1 & 77 State Street and 30 & 50 East Main Street in downtown Meriden, Connecticut. The approximately 14 acre site encompasses a city block. It is bordered by State Street to the north, Mill Street to the east, East Main Street to the west, and Pratt Street to the south as shown in Figure 1, located in Appendix A. The HUB site, with its vacant 200,000 sq ft structure, is unmarketable due to ongoing stormwater and flooding problems. Harbor Brook runs into and under the site from the northeast to the southwest. Clark Brook runs onto and under the site from north to south and joins Harbor Brook under the site. Jordan Brook enters the northeast side of the site and joins Harbor Brook in the vicinity of the building. The redevelopment plan for the site includes remediation of soil and groundwater contamination, demolition of all structures and daylighting and rerouting of Harbor Brook to allow for improved flood control in the downtown. The City plans to utilize the parcel for public open space as a downtown center park. The site reuse may also include opportunities for commercial development. Two major commercial streets in the downtown, Colony and West Main Streets, have experienced significant reinvestment activity over the past year. Both streets, however, are negatively impacted by the vacant HUB site. The cleanup of the HUB site, implementation of flood control measures and the resulting public green space will serve as a strong catalyst for continued revitalization of Meriden's downtown.

In 1863 the Meriden Britannia Company, a silver plate and sterling silver flatware manufacturer, expanded its operations onto the site. In 1898 the company merged with several other silver manufacturers and became the International Silver Company (Insilco). Insilco operated on the site until the late 1950s. Several other businesses operated on the site during this period, including auto service and filling stations, dry cleaners, a glass cutting factory and a door manufacturing company. By 1970, the previous site buildings had been razed, and a large building which contained Meriden Mall and two smaller buildings, each containing banks, were located on the site. Harbor Brook, which flowed through the center of the site, had been diverted into a subsurface drainage structure. In 1976, the mall building was renovated to contain a factory and several small retail stores. The factory area was occupied by Canberra Industries from 1983 to1993. In 1993, Canberra Industries relocated, however the stores in the building as well as the two banks continued to operate through 2003. Presently, all of the retail stores are closed, and the large building is vacant. One of the bank buildings is still operating, and the other one has been razed.

The site has been entered into the CTDEP Voluntary Remediation Program described in Connecticut General Statutes (CGS) Section 22a-133. All investigation and remediation at the site is subject to review and approval by the CTDEP.

Additionally, EPA provided support under its Targeted Brownfields Assessment program in the summer, fall and winter of 2005. M&E completed a number of studies at the site, collecting soil and groundwater samples to supplement historical data collected at the site. Soil samples indicated metals (arsenic and lead) and petroleum related compounds (extractable total

petroleum hydrocarbons and poly cyclic aromatic hydrocarbons) at concentrations in a number of locations which exceed CTDEP regulatory criteria.

A list of environmental documents related to the site includes:

- Consulting Environmental Engineers, Inc., October 2005: Phase II Environmental Site Assessment and Groundwater Monitoring, Meriden-HUB Former Canberra Industries/Meriden Mall Facility, 1 & 77 State and 30 & 50 East Main Streets, Meriden, Connecticut.
- Metcalf & Eddy, Inc., March 2004: Phase I Environmental Site Assessment, Meriden HUB, Meriden, Connecticut.
- Metcalf & Eddy, Inc., December 2004: Targeted Brownfields Assessment Report, Meriden HUB Site, 1 & 77 State Street and 30 & 50 East Main Street, Meriden, Connecticut.
- Metcalf & Eddy, Inc., February 2007: *Phase II/III Environmental Site Assessment, Meriden HUB, Meriden, Connecticut.*

4. Nature of Threat to Public Health and the Environment

Metals and petroleum related compounds are present in surface and subsurface soils across the site. In a number of areas, the concentrations of metals and petroleum related compounds exceed State direct exposure criteria (DEC) and pollutant mobility criteria (PMC). Potential exposure exists to local adult and child residents, adult workers nearby, and adult/child trespassers since the site is located in the downtown area, with housing and places nearby. The entire site will be fenced to discourage trespassers during demolition of the building. Interim remedial actions consisting of approximately 2 feet of crushed concrete placed on geotextile fabric, and four inches of topsoil and grass cover will be conducted to stabilize the site during the interim between demolition and full remediation/redevelopment. Once demolition is complete and the interim remedial actions have been conducted, the fencing will be moved to surround the temporary cap area until the grass cover has been established. Once the grass cover is established, the fencing will be removed. Conceptual planning for a final, permanent remedy that would eliminate the threat of exposure to the contaminated materials is on-going.

5. Community Background

The entire community will benefit from this cleanup since the reused site will positively impact reinvestment in the downtown and generate additional property tax income to the city. The creation of the public open space will also improve the city's quality of life. The City of Meriden was originally part of Wallingford. It was granted a separate meetinghouse in 1727, became a town in 1806, and incorporated as a city in 1867. In the 1800s, Meriden earned the nickname "Silver City," due to the large number of cutlery and related products which were manufactured here by companies such as **International Silver** and **Meriden Cutlery**.

According to the United States Census Bureau, the city has a total area of 62.5 km² (24.1 mi²). 61.5 km² (23.8 mi²) of it is land and 1.0 km² (0.4 mi²) of it (1.66%) is water. As of 2000, there were 58,244 people, 22,951 households, and 14,964 families residing in the city. The population

density was 946.9/km² (2,452.8/mi²). There were 24,631 housing units at an average density of 400.4/km² (1,037.3/mi²).

The city of Meriden is connected to the Connecticut cities of New Haven and Hartford, and the Massachusetts city of Springfield by regional rail service provided by Amtrak, which runs south-to-north through the center of the city. Interstate 91 provides access to Hartford, Springfield, Massachusetts, and New Haven. Interstate 691 provides access to Interstate 84 and points west such as Waterbury. The Wilbur Cross Parkway, which provides access to points south such as Wallingford, New Haven, and New York City becomes the Berlin Turnpike on the northern end of Meriden.

6. Key Concerns

The key concerns for the site and the project can be summarized as follows:
Health and safety of the general public and construction workers as cleanup work proceeds
Adhering to the EPA cooperative agreement for the cleanup grant
Meeting expectations of the CTDEP for the final cleanup implementation
Expedited remediation to allow for expedited development
Obtaining the needed flood storage capacity
Creating a destination development and community central park that provides a sense of place and civic pride to the citizens of Meriden
Develop new business opportunities on as much of the property as possible without adversely impacting flood storage

7. Continued Community Involvement

The City of Meriden is committed to the involvement of local stakeholders throughout the clean up and planning process. In fact, the City committed to a broad-based brownfields process in July 2002 and has had over 16 regular meetings of the Blight and Brownfields Subcommittee since that time. Since receiving a USEPA Brownfields Assessment Grant in 2004, the community has been involved in every phase of grant implementation, starting with site prioritization. The City held a community meeting on November 9, 2005 to discuss the inventory and prioritization process as well as assessment and potential cleanup plans for the HUB. This process will continue as site cleanup and redevelopment progresses.

The community has been involved in the revitalization of this site through a process conducted by City Center Initiative Advisory Group. Consensus Building Institute of Cambridge Mass was hired to facilitate the community meetings. Five meetings have been held to date to discuss the downtown revitalization, including the HUB site.

In addition, the Subcommittee has developed a webpage link to the City's website focused on brownfields activities and a community/stakeholder mailing list. So far, one community-wide meeting has been held in the evening at a local church in the downtown area. With appropriate topics, a community-wide meeting will be held once a quarter. At these meetings, all brownfields issues and progress are discussed. Community-wide meetings are planned at key milestones of the cleanup process, including the development of the remedial action plan, prior to initiation of

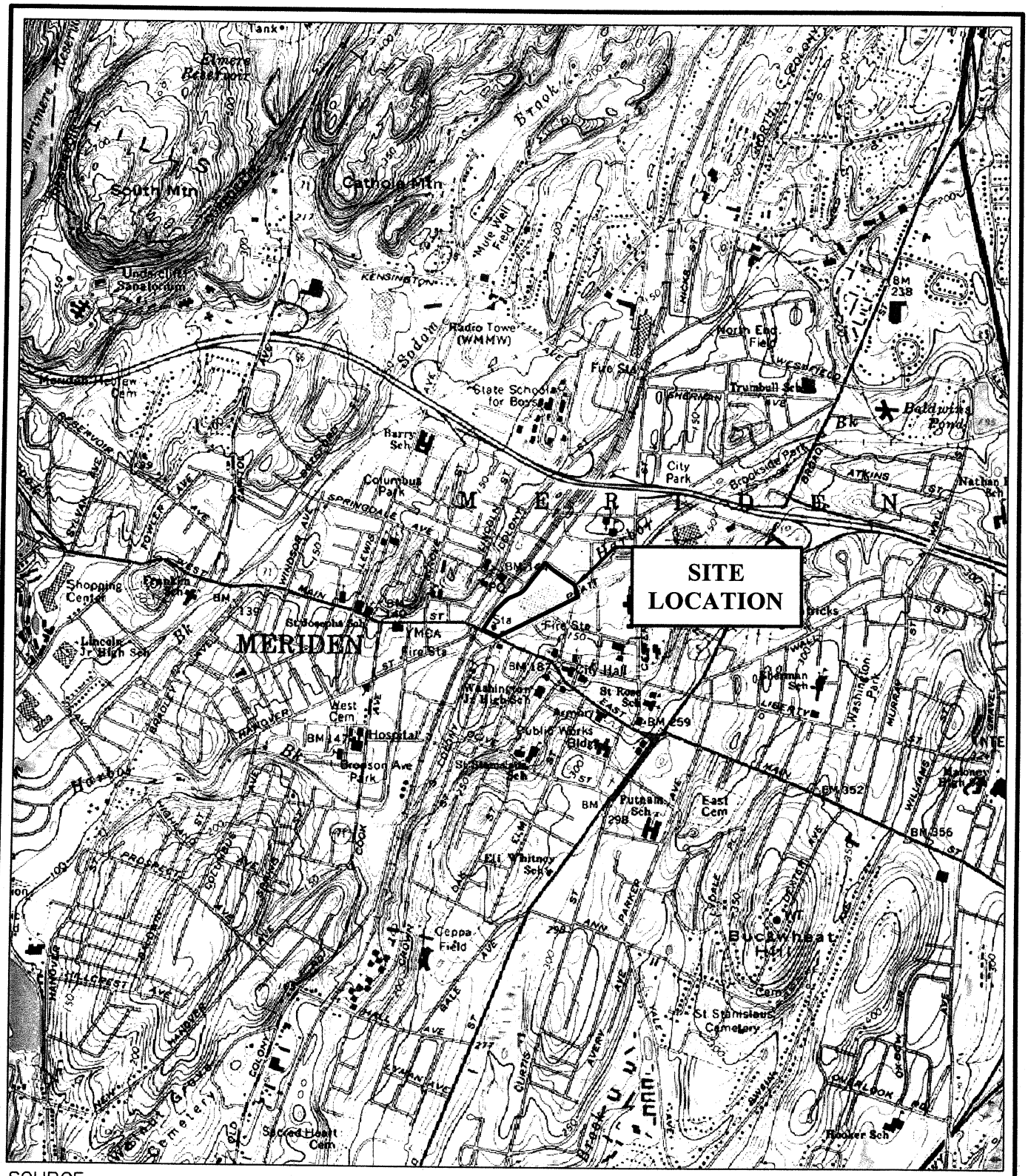
work and at project completion. Information about the cleanup process will be posted on the website and distributed to the community/stakeholder mailing list.

A list of community-based organizations involved in this project is provided below.

Representative	Organization	Interest	Phone
Kenneth Mango	Luby, Olsen, Mango, Gaffney & DeFrances	Bus and Industry	203-639-3560
Sean Moore	Meriden Chamber of Commerce	Bus and Industry	203-235-7901
Tom Marano	Northeast Utilities	Bus and Industry	860-665-5121
Phil Ashton	Flood Control Implem. Agency	Flood Control	203-237-7385
Mary Ellen Mordarski	Neighborhood Representative	Meriden Resident	203-238-0305
Robyn-Jay Bage	Women & Families Center	Community Health	203-235-9297
Alan Bolduc	Sentry Commercial	Development	860-808-1247
Peter Shiue	Colliers Dow & Condon	Development	203-562-5000
Stephen F Zerio	City of Meriden	City Council	203-630-4125
Larry Kendzior	City of Meriden	City Manager	203-630-4123
Peggy Brennan	City of Meriden	Econ Development	203-630-4151
Juliet Burdelski	City of Meriden	Comm Development	203-630-4105
Dominick Caruso	City of Meriden	Planning & Develop	203-630-4081
Thomas Skoglund	City of Meriden	Planning	203-630-4081
Trudy Magnolia	City of Meriden	Econ Development	203-630-4151
Linda Calabrese	City of Meriden	Tax Collector	203-630-4062
Robert Bass, P.E.	City of Meriden	Assoc. City Engineer	203-630-4018
Scott Bryden	City of Meriden	Department of Health	203-630-4280
Kevin Hood	UCONN	Env. Research Institute	860-486-2546
Kathleen Castagna	US EPA	Site Remediation & Restoration	617-918-1429
David Ringquist	CTDEP	Environmental	860-424-3573
Mike Taylor	Vita Nuova	Consultant	203-270-3413

The city plans to continue community involvement through several measures. A legal notice will be placed in the local newspaper announcing the intended response actions at the site and to notify residents of public meetings regarding cleanup documents and schedule. The legal notice will also announce the location of the repository of information on this project, which will include this Community Relations Plan and background environmental documents. This information will also be posted on the city's website. A notice will also announce the start of a comment period on the draft Interim Remedial Action Plan (IRAP), the Analysis of Brownfield Cleanup Alternatives (ABCA) and other pertinent documents. The city will accept comments on this plan during the comment period and will provide written responses that will become a part of the administrative record. The information repository will be updated with the inclusion of all meeting minutes, status reports, and other communications as they are generated. Information will be specific as it relates to meeting both State and Federal requirements.

APPENDIX A



SOURCE:
USGS QUADRANGLE
MERIDEN, CT
MAP VERSION 1992

0 2000 4000 6000

1" = 2000'

SCALE FEET

METCALF & EDDY | AECOM

MILONE & Mac BROOM AND CITY OF MERIDEN, CONNECTICUT

MERIDEN HUB

FIGURE 1
SITE LOCATION MAP

LAST UPDATE: Thursday, March 01, 2007 2:29:18 PM

PLOT DATE: Friday, March 02, 2007 1:36:09 PM

PATH/FILENAME: P:\60017968-MER\C\CZMER002.DWG

ANSI A – 3-8-05

INTERIM REMEDIAL ACTION PLAN
MERIDEN HUB SITE
FORMER CANBERRA INDUSTRIAL AND INTERNATIONAL SILVER COMPANY
77 STATE STREET
MERIDEN, CT

Prepared For:
City of Meriden
Economic Development Office
City Hall
142 East Main Street
Meriden, CT

Prepared By:
Metcalf & Eddy, Inc.
860 North Main Street Extension
Wallingford, CT 06492

On Behalf Of:
Milone & MacBroom, Inc.
99 Realty Drive
Cheshire, CT 06410

MARCH 1, 2007
REVISED APRIL 23, 2007

METCALF & EDDY | AECOM

INTERIM REMEDIAL ACTION PLAN
MERIDEN HUB SITE
FORMER CANBERRA INDUSTRIAL
AND INTERNATIONAL SILVER COMPANY
77 STATE STREET
MERIDEN, CT

TABLE OF CONTENTS

FIGURES

SITE PLANS

1.0 INTRODUCTION

At the request of the City of Meriden, Metcalf & Eddy, Inc. (M&E) is submitting this Interim Remedial Action Plan (IRAP) for CTDEP review and approval. The purpose of the IRAP is to establish interim measures that will minimize the potential for direct exposure to surficial soil contamination in the interim between demolition and remediation/re-development of the site. Final remediation will be conducted in accordance with the Connecticut Remediation Standard Regulations (RSRs).

The City of Meriden has contracted J. R. Contracting and Environmental Consulting, Inc. to demolish the structure located on the Brownfield site known as the Meriden HUB site at 77 State Street in Meriden, CT. Figure 1 depicts the site location. The demolition is being conducted to allow for the redevelopment of the site. Redevelopment plans call for a city park, flood control space and commercial land uses. J. R. Contracting is conducting the demolition and interim remedial actions in accordance with the plans and specifications for the project which were prepared by TRC. Drawings prepared by TRC that are pertinent to the interim remedial actions are included in this submittal.

The City of Meriden owns the approximately 14 acre property. The City was awarded an EPA Brownfield Cleanup Grant that will be utilized for the interim remedial actions. A requirement of the grant is that the site be entered the CTDEP Voluntary Remediation Program (VRP) described in Connecticut General Statutes (CGS) Section 22a-133x. An Environmental Condition Assessment Form (ECAF) and fee for entering into the VRP were submitted by the City under a separate cover.

2.0 BACKGROUND

In 1863 the Meriden Britannia Company, a silver plate and sterling silver flatware manufacturer, expanded its operations onto the site. In 1898 the company merged with several other silver manufacturers and became the International Silver Company (Insilco). Insilco operated on the site until the late 1950s. Several other businesses operated on the site during this period, including auto service and filling stations, dry cleaners, a glass cutting factory and a door manufacturing company. By 1970, the previous site buildings had been razed, and a large building which contained Meriden Mall and two smaller buildings, each containing banks, were located on the site. Harbor Brook, which flowed through the center of the site, had been diverted into a subsurface drainage structure. In 1976, the mall building was renovated to contain a factory and several small retail stores. The factory area was occupied by Canberra Industries from 1983 to 1993. In 1993, Canberra Industries relocated, however the stores in the building as well as the two banks continued to operate through 2003. Presently, all of the retail stores are closed, and the large building is vacant. One of the bank buildings is still operating, and the other one has been razed.

Previous studies completed by M&E (March and December 2004) and Consulting Environmental Engineers, Inc. (October 2005) identified soil contamination in exceedance of the Residential and Industrial/Commercial Direct Exposure Criteria

(RDEC, I/CDEC) in a number of locations within specific Areas of Concern (AOCs). Constituents of Concern (COCs) detected in the soil included semi-volatile organic compounds (SVOCs), (including a number of polyaromatic hydrocarbons (PAHs)), extractable total petroleum hydrocarbons (ETPH), and metals (antimony, arsenic, lead and mercury). Figure 2 depicts site AOCs and the locations were RSRs exceedances have been identified in the soil on the site. As shown on Figure 2, a number of locations depict GBPMC exceedances. Three of those locations correspond to detected concentrations of metals (lead, antimony) and/or PAHs above the GBPMC. A complete Phase III report is being prepared by M&E in conjunction with the redevelopment plans for the site and will be provided to CTDEP for review and approval upon its completion. In addition, the final remedial action plan (RAP) will be provided for CTDEP review and approval.

As shown on Figure 2, the concrete slab overlaps AOCs 3, 5, 6, 7 and 11. Urban fill is present beneath the slab to four feet below grade, and in a number of locations to eight feet below grade. The vast majority of the contaminants (PAHs, metals and ETPH) which exceed the RSR criteria are located within the urban fill.

RSR exceedances of total PAHs beneath the concrete slab are in the 1-45 mg/kg range, with the highest concentrations in the fill (6-8' bgs) near the northwest corner of the slab in AOC #3 . RSR exceedances of ETPH beneath the concrete slab are in the 800-1,700 mg/kg range, with the highest concentration also located near the northwest corner of the slab in AOC #3. Higher ETPH concentrations are present east and north of the slab and are covered by the existing asphalt parking lot.

RSR exceedances of total antimony, lead and arsenic were detected in a number of locations. Lead exceedances beneath the slab are in the 530-6,630 mg/kg range, with the highest concentration in the fill (5-8'bgs) near the southwest edge of the concrete slab in AOC #3. Antimony exceedances beneath the slab are in the 68-105 mg/kg range, with the highest concentration in the fill (6-8' bgs) near the southwest corner of the concrete slab in AOC #3. Higher concentrations are present north of the slab. Total arsenic exceedances are in the 10-11 mg/kg range in the fill (5-8' bgs) near the southern edge of the slab and north of the slab in AOC #3. Additionally, total mercury was detected at 27 mg/kg in the fill (2-4' bgs) near the southwest corner of the concrete slab in AOC #3.

3.0 SUB SLAB EVALUATION AND SAMPLING

Once the slab is removed, M&E will conduct a visual inspection of materials beneath the slab and will screen surficial soils with a photoionization detector (PID). Where contaminated soil is identified based on elevated PID readings and/or visual observations (staining), samples will be collected and analyzed for PAHs by EPA Method 8270, VOCs by EPA Method 8260 (with CTDEP soil preservation), and total priority pollutant metals. The SPLP extract of select samples will be analyzed for these same parameters. The results of this sampling will be documented in the interim remedial action report and will be incorporated into the final remediation design.

4.0 DEMOLITION ACTIVITIES

Demolition of the site structure will include removal of the concrete foundation slab, below grade stairways, sidewalks, building footers and frost wall. During the removal of these features, contaminated soil may be encountered. Disturbance of contaminated soil will be minimal and shall only be conducted to allow for removal of footings, piers, and frost walls. Removal of contaminated soil from the building area is not anticipated. However, if any grossly contaminated soil (e.g. free draining petroleum) is observed in the field during demolition activities it will be excavated and placed directly into poly-lined roll off containers and characterized for off-site disposal contaminated soils will not be stockpiled on-site.

Refer to the *Construction Details* DT-2 for additional information. Any excavated soils to be disposed of off site will be sampled and characterized for disposal requirements and will be handled and disposed of in accordance with all applicable state and federal regulations.

5.0 DUST CONTROL

To minimize the potential for the COCs at the site to be released in particulate form during site activities, dust control measures will be implemented if dust is observed during remedial activities. Dust control measures are detailed in *Sediment and Erosion Control Notes* provided on sheet DT-3.

6.0 SEDIMENTATION AND EROSION CONTROL

Prior to the demolition of the site structure, an erosion and sedimentation control system will be established to minimize potential impacts to the environment relating to erosion and sedimentation. Temporary sedimentation and erosion controls include silt fencing, hay bales, and filter traps placed around catch basins (see sheets DT-2 and DT-3).

7.0 SITE SECURITY

A temporary metal gated chain-link fence will be installed around the perimeter of the property to secure the site during demolition activities as shown on sheet S-2 *Site Plan Temporary Facilities*. Once demolition activities are completed and the temporary remedial action has been completed, the security fencing will be re-located to the perimeter of the former building area until grass cover is established. Once the grass cover is established, the fencing shall be removed. Refer to Sheet S-2 and the *Construction Details* (DT-2) for additional information.

8.0 INTERIM MEASURES

To minimize the potential for exposure to contaminated soil in the interim period until remediation and flood control plans and construction are finalized, the temporary cover described below is purposed.

Interim Remedial Actions

After the site structure has been demolished and the debris has been cleared away, clean building concrete will be separated, crushed and placed on top of geotextile fabric. The concrete to be used will be free of staining and will not be mixed with asbestos since asbestos abatement was completed in early April 2007. Lead paint testing was conducted by TRC prior to the start of demolition. Painted surfaces were tested with an XRF and only very low concentrations of lead were detected. The fabric will cover bare ground and will be utilized to demarcate the boundary between "clean" and "dirty" material. To further prevent exposure to potential contaminated soil at the surface and to stabilize the area, four inches of topsoil and grass cover will be place on the crushed concrete. Refer to the typical construction detail in *Final Grading Plan if Foundations and Footings are Removed* shown on sheet S-3 for additional information.

The interim remedial actions taken will be temporary in nature since final remediation is expected to begin in 2009.

9.0 HEALTH AND SAFETY

A Health and Safety Plan (HASP) will be prepared to meet the requirements of 29 CFR 1920.120. All work will be conducted in accordance with the HASP. It is assumed that modified Level D personal protection will be sufficient for the interim remediation field activities.

10.0 PERMITS AND APPROVALS

All permits and approvals required to conduct the work including a Flood Management Certification were obtained by J. P. Contracting and TRC.

11.0 DECONTAMINATION

Decontamination of on-site heavy equipment will be performed as necessary to minimize the potential spreading of contamination, and will be conducted only over the excavation to prevent runoff away from the work zone . Since these excavation areas will be remediated in the future, in conjunction with the redevelopment, these actions are appropriate. Brushing, high pressure water, or a steam cleaner will be used for equipment decontamination as needed. Asphalt paving at the site is scheduled to remain intact, therefore tracking of contaminated soils is not anticipated.

12.0 DOCUMENTATION AND REPORTING

M&E and TRC will oversee the implementation of interim remedial activities. J. R. Contracting will provide as-built drawings of the interim remedial actions that will show the limits of the interim remedial actions as well as other details including site boundary, topography, and utilities.

Following completion of interim remedial activities, M&E will prepare an Interim Remedial Action Report for submittal to CTDEP. The report will describe the completed work at the site, and will include a project narrative; a discussion of results of samples collected beneath the slab by M&E; a discussion of the nature and extent of contaminants detected; record site plan(s) showing the vertical and horizontal limits of excavation, sampling locations, and final grades; laboratory reports; and a discussion of future actions.

13.0 SCHEDULE

Removal of asbestos-containing materials and regulated materials such as PCB light ballast, and mercury switches is underway at the site. Demolition of the structure is schedule to begin in late April. Interim remedial actions are currently scheduled for early May and will likely be completed by June 2007. Final remedial actions and redevelopment of the site are expected to begin in 2009; however the schedule is dependant upon several factors including funding, development of final redevelopment concepts, design and permitting.

SOURCE:
USGS QUADRANGLE
MERIDEN, CT
MAP VERSION 1992

1" = 2000'

0 2000 4000 6000

SCALE FEET

METCALF & EDDY | AECOM

MILONE & Mac BROOM AND CITY OF MERIDEN, CONNECTICUT

MERIDEN HUB

FIGURE 1
SITE LOCATION MAP

PATH/FILENAME: P:\60017968-MER\C\CZMER002.DWG
ANSI A – 3
LAST UPDATE: Tuesday, May 08, 2007 10:40:47 AM
PLOT DATE: Wednesday, May 30, 2007 9:32:

LEGEND

- CEE-33 — SOIL BORING
- MW-CEE-41 — SOIL BORING / TEMPORARY MONITORING WELL
- MW-1 91.94' — EXISTING MONITORING WELL (INSTALLED BY OTHERS)
- B-103 — BORING REFUSAL
- TP-4 — TEST PIT
- R DEC EXCEEDANCE
- I/C DEC EXCEEDANCE
- GB PMC EXCEEDANCE
- URBAN FILL 0–4' BGS
- URBAN FILL >4' BGS
- 0–2 — DEPTH INTERVAL (FT BGS) OF EXCEEDANCE
- A——A' — CROSS SECTION LOCATION

AOC #3
MERIDEN BRITANNIA COMPANY / FORMER INTERNATIONAL SILVER CO. (INSILCO)

AOC #10
FORMER PLUMBING AND PIPE SHOP

AOC #9
FORMER GASOLINE FILLING STATION

AOC #7
FORMER MACHINE SHOP

AOC #2
FORMER HARBOR BROOK FILL

AOC #8
FORMER WELDING SHOP

AOC #1
SITE WIDE FILL

AOC #4
FORMER DRY CLEANERS/ WELDING SHOP

AOC #11
FORMER CANBERRA INDUSTRIES, INC.

AOC #5
FORMER GASOLINE FILLING STATION

AOC #6
FORMER AUTO SALES AND SERVICE

STATE STREET
MILL STREET
EAST MAIN STREET
PRATT STREET
Clark Brook Conduit
Harbor Brook Conduit
Jordan Brook Box Culvert
EXISTING BUILDING

REFERENCE:

CONSULTING ENVIRONMENTAL ENGINEERS, INC.
PHASE II ESA REPORT, MERIDEN HUB
MERIDEN, CONNECTICUT.

METCALF & EDDY | AECOM

SCALE:
0 50 100 150
1" = 50'
SCALE FEET

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

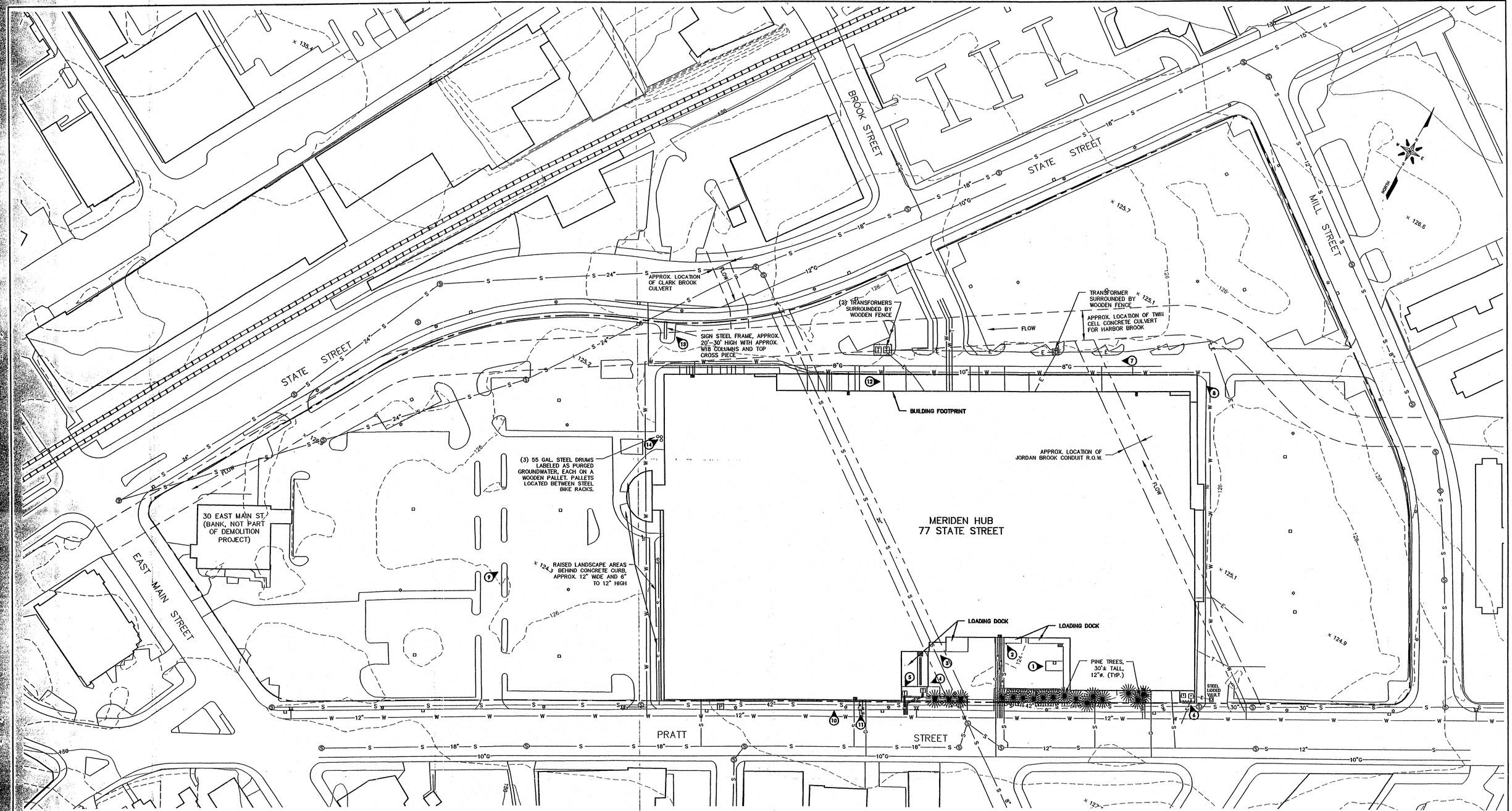
MILONE & Mac BROOM, INC AND CITY OF MERIDEN, CONNECTICUT
INTERIM REMEDIAL ACTION PLAN
MERIDEN HUB SITE
77 STATE STREET, MERIDEN, CT

FIGURE 2
SOIL REMEDIATION CRITERIA EXCEEDANCE SUMMARY PLAN

FEBRUARY 2007

JOB 60017968
FILE NO.
CAD FILE CZMER002A
SHEET

PATH/FILENAME: P:\60017968-MER\C\CZMER002A.DWG
LAST UPDATE: Tuesday, May 08, 2007 10:40:53 AM
PLOT DATE: Wednesday, May 30, 2007 10:03:54 AM
ARCH D - 3-7-05



NOTES:
1) LOCATIONS AND DIMENSIONS ARE APPROXIMATE, WITH ACCURACY IN SOME CASES LIMITED TO RECORDS MADE AVAILABLE TO TRC. NOT ALL SITE FEATURES OR OBJECTS ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATIONS OF RELEVANT SITE FEATURES.
2) THE CONTRACTOR IS RESPONSIBLE FOR CALLING "CALL BEFORE YOU DIG" AND SHALL CONFIRM ALL UTILITY LOCATIONS BY HAND DIGGING, TEST PITTING, AIR KNIFE, OR OTHER SUITABLE METHODS AS REQUIRED.

LEGEND

———	RIGHT-OF-WAY	☼	STREET/PARKING LIGHT
———	APPROXIMATE PROPERTY BOUNDARY	□	CATCH BASIN
———	2 FOOT CONTOUR	X 125.0	SPOT ELEVATION
———100———	10 FOOT CONTOUR	T	TRANSFORMER
——— X ———	FENCE	Ⓢ	SANITARY MANHOLE
———	BUILDING		TREE
———	EDGE OF PAVEMENT OR SIDEWALK		
———W———	WATER PIPE		FIRE HYDRANT
———E———	ELECTRIC SERVICE	P	PAY PHONE
———S———	SANITARY SEWER		
———G———	GAS SERVICE	⑩	PHOTO DIRECTION AND IDENTIFICATION NUMBER
———T———	TELEPHONE/COMMUNICATIONS SERVICE		

0 50' 100'
GRAPHIC SCALE

SYMBOL	REVISIONS	DATE	APPROVAL

J:\CAD\30828\Hub\SSE Bld\
Plate-1.dwg Layout:S1-Existing Site Plan August 15, 2006-9:08AM Rolorna

TRC
Customer-Focused Solutions
21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

CARL N. STOPPER
PROFESSIONAL ENGINEER
STATE OF CONNECTICUT
No. 13255
DATE Aug. 15, 2006

CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CONNECTICUT

DEMOLITION OF THE MERIDEN HUB
77 STATE STREET,
MERIDEN, CONNECTICUT

SITE PLAN
EXISTING CONDITIONS

DESIGN:	SL	06/14/06	
DRAWN:	KDH	06/15/06	
CHECKED:	CNS	07/28/06	SCALE: 1"=50'

S-1

STATE STREET

BROOK STREET

MILL STREET

TRUCK ROUTE:
FROM I-691, EXIT 7 TO STATE ST.

8' HIGH SECURITY FENCE (SEE DETAIL 7, DWG. DT-2). INSTALL AS PART OF SITE MOBILIZATION. SEE SECURITY FENCE NOTE.

PROPOSED LOCATION FOR OFFICE OR STORAGE TRAILERS

POSSIBLE CONTRACTOR PROCESSING, STOCKPILING OR STAGING AREA

8' HIGH x 24' WIDE LOCKING CHAIN LINK GATE (SEE DETAIL 5, DWG. DT-2). INSTALL AS PART OF SITE MOBILIZATION. REMOVE AND RELOCATE TO ALIGN WITH ENTRANCE DRIVEWAY WHEN RELOCATING SECURITY FENCE TO PERIMETER OF TEMPORARY SOIL CAP.

APPROX. LOCATION OF CLARK BROOK CULVERT

(2) TRANSFORMERS SURROUNDED BY WOODEN FENCE

TRANSFORMER SURROUNDED BY WOODEN FENCE

APPROX. LOCATION OF TWIN CELL CONCRETE CULVERT FOR HARBOR BROOK

SIGN STEEL FRAME, APPROX. 20'-30' HIGH WITH APPROX. W18 COLUMNS AND TOP CROSS PIECE

BUILDING FOOTPRINT

INSTALL FILTER FABRIC SCREEN TO FENCE HEIGHT ALONG ENTIRE PERIMETER

SECURITY FENCE NOTE:
INSTALL 8' HIGH SECURITY FENCE WITH FILTER FABRIC AS SHOWN AS PART OF SITE MOBILIZATION. AFTER DEMOLITION AND INITIAL 2" SOIL COVER PLACEMENT IS COMPLETE, RELOCATE THE SECURITY FENCE AND FILTER FABRIC TO COMPLETELY ENCLOSE (INCLUDING ALONG PRATT STREET SIDEWALK) PERIMETER OF TEMPORARY SOIL CAP. RELOCATE THE STATE STREET ENTRANCE 8' HIGH x 24' WIDE LOCKING CHAIN LINK GATE TO ALIGN WITH STATE STREET ENTRANCE DRIVEWAY FOR FUTURE VEHICLE ACCESS. REMOVE SECURITY FENCE WITH APPROVAL FROM OWNER'S REPRESENTATIVE AFTER FIRST MOWING OF ESTABLISHED TURF.

APPROX. LOCATION OF JORDAN BROOK CONDUIT R.O.W.

30 EAST MAIN ST. (BANK, NOT PART OF DEMOLITION PROJECT)

EAST MAIN STREET

POSSIBLE CONTRACTOR STAGING AREA. DO NOT PROCESS OR STOCKPILE MATERIALS IN THIS AREA.

POSSIBLE CONTRACTOR PROCESSING, STOCKPILING OR STAGING AREA

MERIDEN HUB
77 STATE STREET

ENSURE SAFE PEDESTRIAN PASSAGE ALONG PRATT STREET SIDEWALK OR REDIRECT PEDESTRIAN TRAFFIC WITH APPROPRIATE SIGNAGE APPROVED BY THE OWNER'S REPRESENTATIVE.

6' HIGH x 24' WIDE LOCKING CHAIN LINK GATE (SEE DETAIL 5, DWG. DT-2). INSTALL AS PART OF SITE MOBILIZATION. REMOVE GATE WHEN RELOCATING SECURITY FENCE TO PERIMETER OF TEMPORARY SOIL CAP.

8' HIGH SECURITY FENCE (SEE DETAIL 7, DWG. DT-2). INSTALL AS PART OF SITE MOBILIZATION. SEE SECURITY FENCE NOTE.

3' HIGH SILT FENCE (SEE DETAIL 1, DWG. DT-2)

6' HIGH TEMPORARY CHAIN LINK FENCE (SEE DETAIL 6, DWG. DT-2). INSTALL PRIOR TO FINAL PHASES OF BUILDING DEMOLITION ALONG PRATT STREET. REMOVE IN CONJUNCTION WITH BUILDING FOOTPRINT SECURITY FENCE INSTALLATION.

LOADING DOCK

LOADING DOCK

PINE TREES, 30'± TALL, 12"ø. (TYP.)

STEEL LOADED WALL

PRATT STREET

TRUCK ROUTE:
EAST ON PRATT ST. TO CAMP ST.
RIGHT ON CAMP ST. TO ROUTES 5, 15, OR I-691.

NOTES:
1) ENTER SITE SOUTHBOUND FROM STATE STREET. EXIT SITE NORTHBOUND ON PRATT STREET. DO NOT ALLOW VEHICLES TO PROCEED DIRECTLY SOUTH INTO MERIDEN CENTER, INTO RESIDENTIAL AREAS, OR ONTO MILL STREET.
2) INSTALL SECURITY FENCE AND LOCKING GATES PRIOR TO DEMOLITION AS SHOWN. EXISTING CHAIN LINK FENCING MAY BE UTILIZED TO CREATE PARTS OF THE EXCLUSION ZONE WHERE APPROPRIATE.
3) INSTALL SOIL EROSION AND SEDIMENT CONTROLS, INCLUDING FILTER FABRIC AT THE CATCH BASINS (SEE DETAIL 4, DWG. DT-2). INSTALL SILT FENCE WHERE INDICATED TO PREVENT SEDIMENT TRANSPORT DURING SLAB REMOVAL (IF APPROVED) AND GRADING ACTIVITIES. MAINTAIN SILT FENCE UNTIL TURF IS ESTABLISHED.
4) OBTAIN TEMPORARY SITE SERVICE CONNECTIONS (ELECTRIC & WATER) THROUGH COORDINATION WITH CL&P AND THE CITY OF MERIDEN.
5) ENSURE THAT HEAVY MATERIALS ARE NOT STAGED, AND HEAVY EQUIPMENT IS NOT OPERATED ABOVE UNDERGROUND DRAINAGE CONDUITS OR OTHER UNDERGROUND STRUCTURES TO REMAIN THAT COULD BE DAMAGED BY EXCESSIVE WEIGHT. DO NOT OPERATE CRANES ABOVE HARBOR BROOK CULVERT, OR SANITARY OR STORM SEWERS.

DRAWINGS BY CARDINAL ENGINEERING ASSOCIATES (1968) SHOWING THE LOCATION AND CONSTRUCTION OF THE HARBOR BROOK CULVERT CAN BE OBTAINED FROM THE CITY'S ENGINEERING DIVISION. DO NOT REMOVE OR OTHERWISE DAMAGE THE EXISTING 20 INCH SANITARY SEWER LINE OR JORDAN BROOK DRAINAGE CONDUIT.
6) LIMIT STOCKPILE HEIGHTS TO 10'
7) SWEEP STREETS AND KEEP AREAS CLEAN THROUGHOUT PROJECT DURATION IN ACCORDANCE WITH SPECIFICATION SECTION 02050.
8) LOCATIONS AND DIMENSIONS ARE APPROXIMATE, WITH ACCURACY IN SOME CASES LIMITED TO RECORDS MADE AVAILABLE TO TRC. NOT ALL SITE FEATURES OR OBJECTS ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATIONS OF RELEVANT SITE FEATURES.
9) THE CONTRACTOR IS RESPONSIBLE FOR CALLING "CALL BEFORE YOU DIG" AND SHALL CONFIRM ALL UTILITY LOCATIONS BY HAND DIGGING, TEST PITTING, AIR KNIFE, OR OTHER SUITABLE METHODS AS REQUIRED.
10) COORDINATE WITH THE CITY OF MERIDEN WATER DIVISION (230-630-4256) AND ENGINEERING DIVISION (203-630-4018) FOR TEMPORARY WATER SERVICE TO THE SITE.

LEGEND

- RIGHT-OF-WAY
- APPROXIMATE PROPERTY BOUNDARY
- 2 FOOT CONTOUR
- 10 FOOT CONTOUR
- EXISTING FENCE
- BUILDING
- EDGE OF PAVEMENT OR SIDEWALK
- WATER PIPE
- ELECTRIC SERVICE
- SANITARY SEWER
- GAS SERVICE
- TELEPHONE/COMMUNICATIONS SERVICE
- PROPOSED SECURITY CHAIN LINK FENCE
- PROPOSED TEMPORARY CHAIN LINK FENCE DURING FINAL PHASES OF DEMOLITION ALONG PRATT STREET
- STREET/PARKING LIGHT
- CATCH BASIN
- SPOT ELEVATION
- TRANSFORMER
- SANITARY MANHOLE
- TREE
- FIRE HYDRANT
- PAY PHONE
- DEMOLITION PROJECT MAIN VEHICULAR TRAFFIC ROUTE
- SILT FENCING / FILTER FABRIC

0 50' 100'
GRAPHIC SCALE

SYMBOL	REVISIONS	DATE	APPROVAL

TRC
Customer-Focused Solutions
21 Griffin Road North
Windsor, CT 06095
(860) 298-9692

CARL N. STOPPER
PROFESSIONAL ENGINEER
CT PE No. 13255

STATE OF CONNECTICUT
CARL N. STOPPER
No. 13255
LICENSED PROFESSIONAL ENGINEER

DATE May 15, 2006

CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CONNECTICUT

DEMOLITION OF THE MERIDEN HUB
77 STATE STREET,
MERIDEN, CONNECTICUT

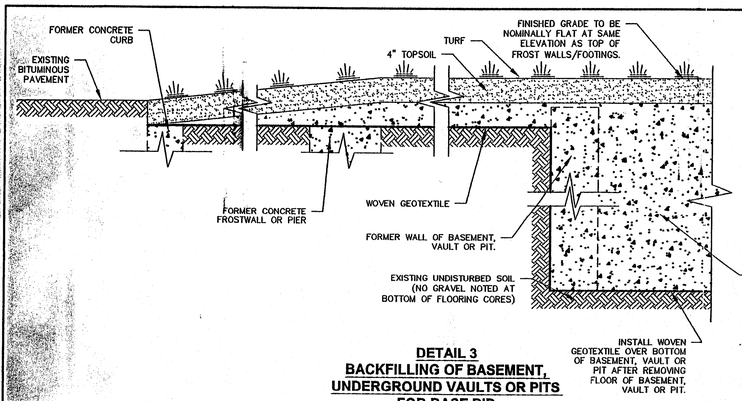
SITE PLAN
TEMPORARY FACILITIES

DESIGN:	SL	06/14/06
DRAWN:	KDH	06/15/06
CHECKED:	CNS	07/28/06

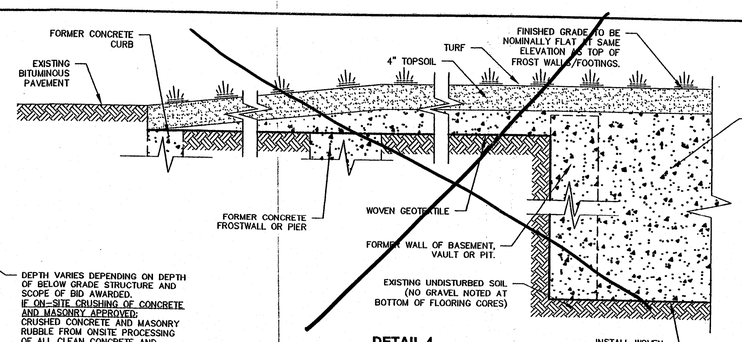
SCALE: 1"=50'

S-2

J:\CAD\50239\Hub\GSK Bk\
Plots-1.dwg Layout:S2-Site Plan Temporary Facilities August 10, 2006-9:19AM Rolome

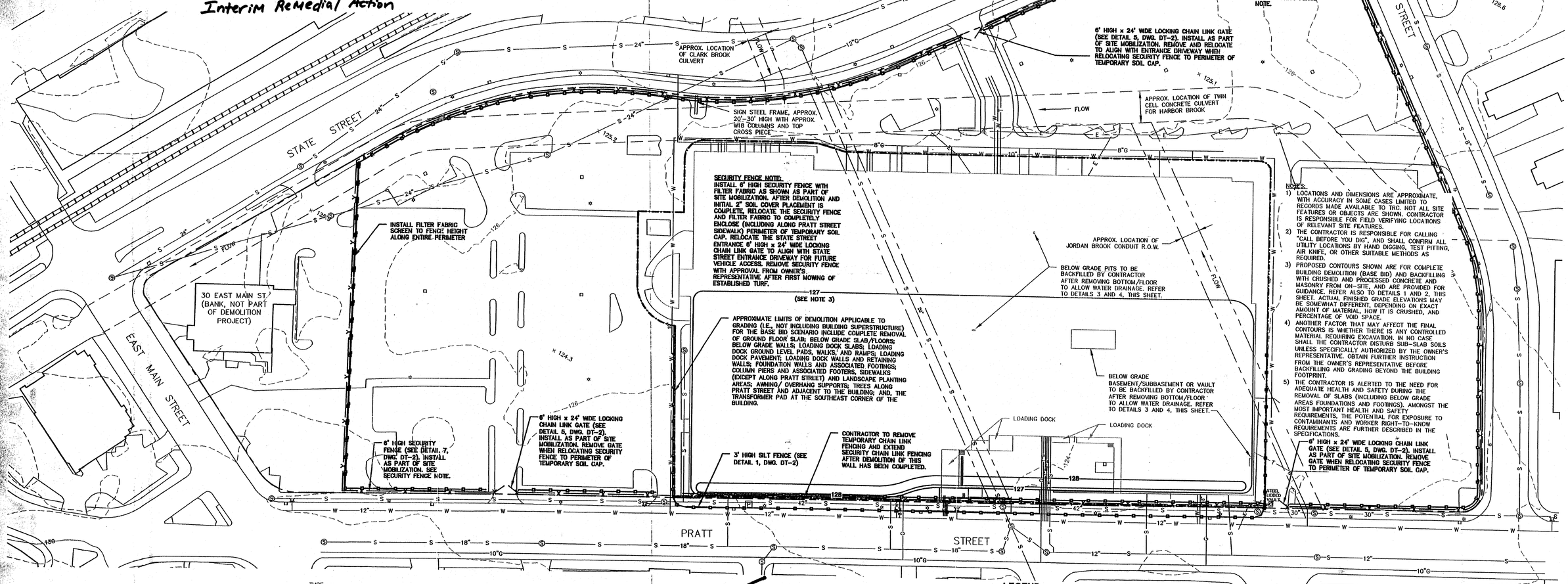


DETAIL 3
BACKFILLING OF BASEMENT, UNDERGROUND VAULTS OR PITS FOR BASE BID
NTS

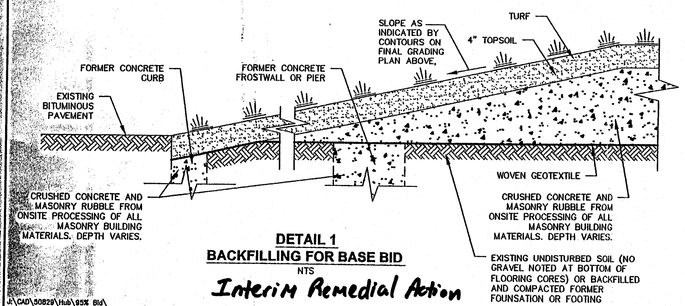


DETAIL 4
BACKFILLING OF BASEMENT, UNDERGROUND VAULTS OR PITS IF ON-SITE CRUSHING OF CONCRETE AND MASONRY NOT APPROVED
NTS

Interim Remedial Action

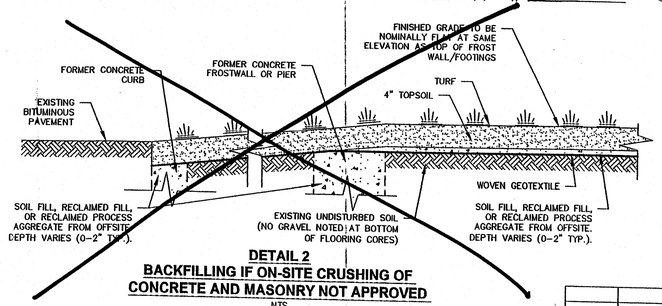


NOTES:
1) LOCATIONS AND DIMENSIONS ARE APPROXIMATE, WITH ACCURACY IN SOME CASES LIMITED TO RECORDS MADE AVAILABLE TO TRC. NOT ALL SITE FEATURES OR OBJECTS ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATIONS OF RELEVANT SITE FEATURES.
2) THE CONTRACTOR IS RESPONSIBLE FOR CALLING "CALL BEFORE YOU DIG", AND SHALL CONFIRM ALL UTILITY LOCATIONS BY HAND DIGGING, TEST PITTING, AIR KNIFE, OR OTHER SUITABLE METHODS AS REQUIRED.
3) PROPOSED CONTOURS SHOWN ARE FOR COMPLETE BUILDING DEMOLITION (BASE BID) AND BACKFILLING WITH CRUSHED AND PROCESSED CONCRETE AND MASONRY FROM ON-SITE, AND ARE PROVIDED FOR GUIDANCE. REFER ALSO TO DETAILS 1 AND 2, THIS SHEET. ACTUAL FINISHED GRADE ELEVATIONS MAY BE SOMEWHAT DIFFERENT, DEPENDING ON EXACT AMOUNT OF MATERIAL, HOW IT IS CRUSHED, AND PERCENTAGE OF VOID SPACE.
4) ANOTHER FACTOR THAT MAY AFFECT THE FINAL CONTOURS IS WHETHER THERE IS ANY CONTROLLED MATERIAL REQUIRING EXCAVATION. IN NO CASE SHALL THE CONTRACTOR DISTURB SUB-SLAB SOILS UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER'S REPRESENTATIVE. OBTAIN FURTHER INSTRUCTION FROM THE OWNER'S REPRESENTATIVE BEFORE BACKFILLING AND GRADING BEYOND THE BUILDING FOOTPRINT.
5) THE CONTRACTOR IS ALERTED TO THE NEED FOR ADEQUATE HEALTH AND SAFETY DURING THE REMOVAL OF SLABS (INCLUDING BELOW GRADE AREAS FOUNDATIONS AND FOOTINGS), AMONGST THE MOST IMPORTANT HEALTH AND SAFETY REQUIREMENTS, THE POTENTIAL FOR EXPOSURE TO CONTAMINANTS AND WORKER RIGHT-TO-KNOW REQUIREMENTS ARE FURTHER DESCRIBED IN THE SPECIFICATIONS.
6' HIGH x 24' WIDE LOCKING CHAIN LINK GATE (SEE DETAIL 5, DWG. DT-2). INSTALL AS PART OF SITE MOBILIZATION. REMOVE GATE WHEN RELOCATING SECURITY FENCE TO PERIMETER OF TEMPORARY SOIL CAP.



DETAIL 1
BACKFILLING FOR BASE BID
NTS

Interim Remedial Action



DETAIL 2
BACKFILLING IF ON-SITE CRUSHING OF CONCRETE AND MASONRY NOT APPROVED
NTS

LEGEND

	RIGHT-OF-WAY	☼	STREET/PARKING LIGHT
	APPROXIMATE PROPERTY BOUNDARY	□	CATCH BASIN
	EXIST. 2 FOOT CONTOUR	X 125.0	EXIST. SPOT ELEVATION
100	EXIST. 10 FOOT CONTOUR	S	SANITARY MANHOLE
	BUILDING		FIRE HYDRANT
	FORMER BUILDING FOOTPRINT	P	PAY PHONE
	EDGE OF PAVEMENT OR SIDEWALK		TREE
S	SANITARY SEWER	X	PROPOSED EXCLUSION ZONE/CHAIN LINK FENCE
W	WATER PIPE	128	PROPOSED FINAL CONTOUR FOR BID ALTERNATIVE A AND B
E	ELECTRIC SERVICE		SILT FENCING / FILTER FABRIC
G	GAS SERVICE		
T	TELEPHONE/ COMMUNICATIONS SERVICE		

GRAPHIC SCALE 0 50' 100'

SYMBOL	REVISIONS	DATE	APPROVAL

TRC
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Windsor, CT 06095
(860) 298-9692

CARL N. STOPPER
PROFESSIONAL ENGINEER
CT PE 13255
STATE OF CONNECTICUT CARL N. STOPPER No. 13255 LICENSED PROFESSIONAL ENGINEER
DATE Aug. 15, 2006

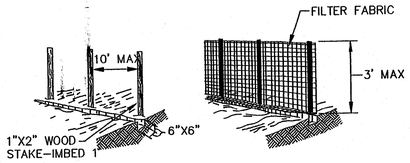
CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CONNECTICUT

DEMOLITION OF THE MERIDEN HUB
77 STATE STREET,
MERIDEN, CONNECTICUT

FINAL GRADING PLAN IF FOUNDATIONS AND FOOTINGS ARE REMOVED

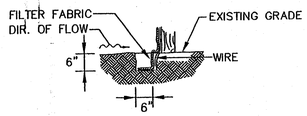
DESIGN:	SL	06/14/06		
DRAWN:	KDH	06/15/06		
CHECKED:	CNS	07/28/06	SCALE: 1"=50'	S-3

J:\CAD\30829\Hub\85% Bid\Plate-1.dwg Layout:S3-Final Grading Plan August 15, 2006-10:04AM Rokema

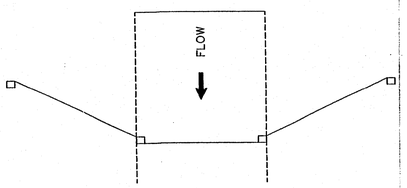


1. SET STAKE AND EXCAVATE A 6" X 6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.
2. STAPLE FILTER FABRIC TO THE STAKE, OVERLAP A MINIMUM OF 6-INCHES AND EXTEND INTO TRENCH.
3. BACKFILL AND COMPACT THE EXCAVATED SOIL INTO THE TRENCH.
4. FILTER FABRIC SHALL MEET CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

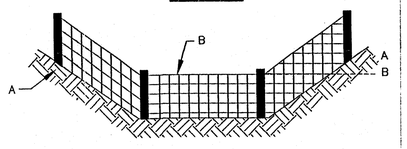
EXTENSION OF FABRIC INTO THE TRENCH.



TEMPORARY SEDIMENT AND EROSION CONTROL BARRIER-SILT FENCE (1)
NTS



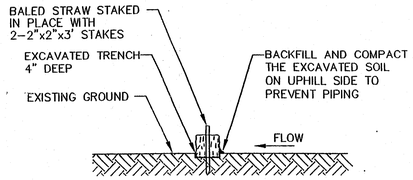
PLAN VIEW



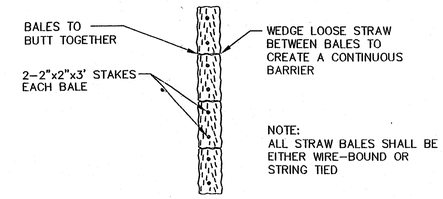
ELEVATION

POINT 'A' SHOULD BE HIGHER THAN POINT 'B'.

SILT FENCE SWALE BARRIER (2)
NTS

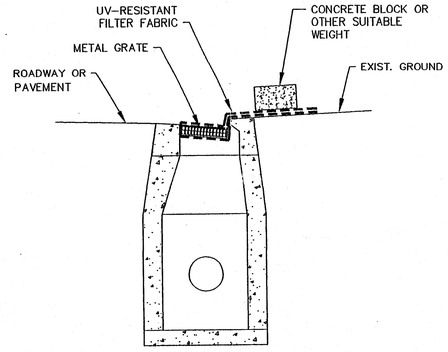


ELEVATION

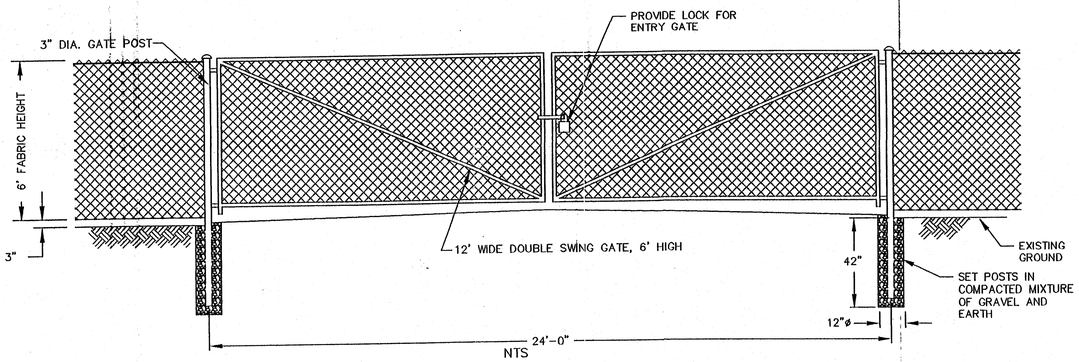


PLAN

TEMPORARY SEDIMENT AND EROSION CONTROL BARRIER-STRAW BALES (3)
NTS

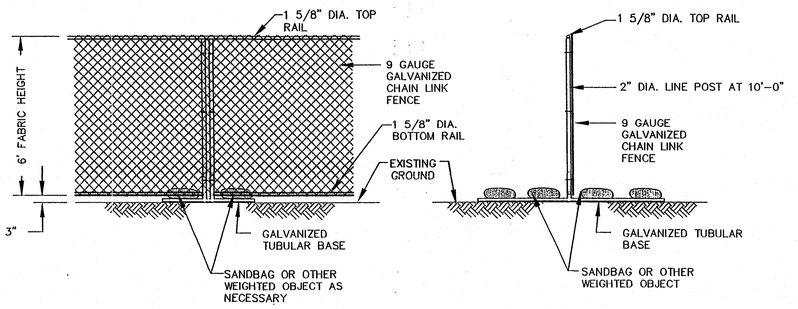


FILTER FABRIC TRAPS AT CATCH BASINS (4)
NTS



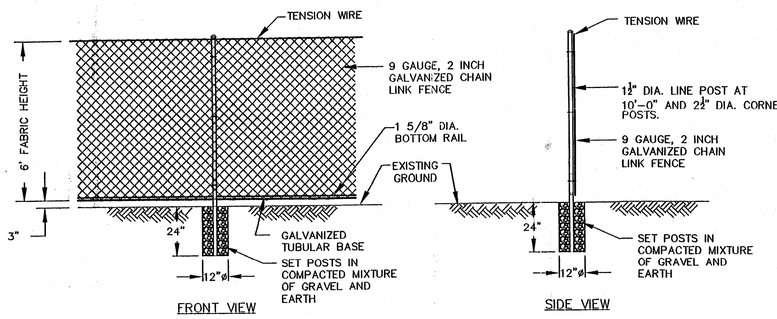
NTS

DOUBLE LOCKING CHAIN LINK GATE DETAIL (5)



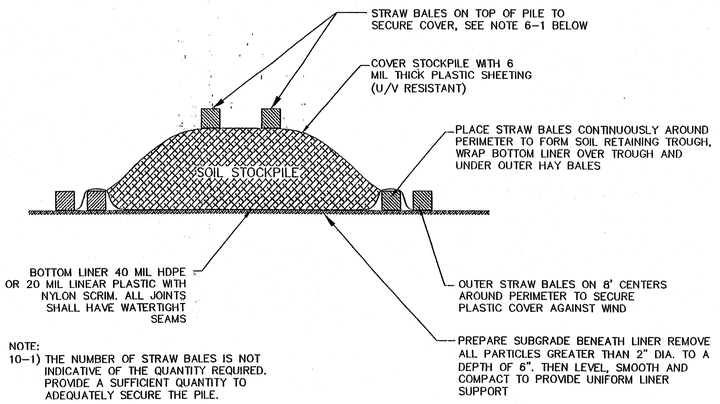
FRONT VIEW SIDE VIEW

TEMPORARY FENCE DETAIL (6)
NTS



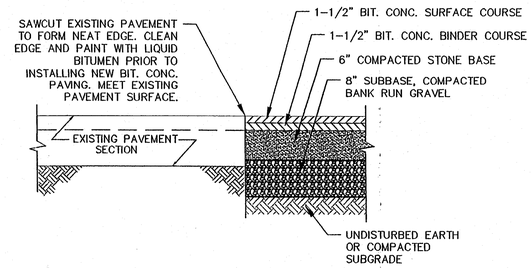
FRONT VIEW SIDE VIEW

SECURITY FENCE DETAIL (7)
NTS



NOTE:
10-1) THE NUMBER OF STRAW BALES IS NOT INDICATIVE OF THE QUANTITY REQUIRED. PROVIDE A SUFFICIENT QUANTITY TO ADEQUATELY SECURE THE PILE.

TYPICAL SOIL STOCKPILE - IMPACTED SOIL (8)
NTS



BITUMINOUS CONCRETE PAVEMENT REPAIR DETAIL (9)
NTS

SYMBOL	REVISIONS	DATE	APPROVAL

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CARL N. STOPPER
PROFESSIONAL ENGINEER
CT. PE # 13255
STATE OF CONNECTICUT CARL N. STOPPER No. 13255 LICENSED PROFESSIONAL ENGINEER
DATE April 15, 2006

CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CONNECTICUT

DEMOLITION OF THE MERIDEN HUB
77 STATE STREET,
MERIDEN, CONNECTICUT

CONSTRUCTION DETAILS

DESIGN:	SL	06/14/06
DRAWN:	KDH	06/15/06
CHECKED:	CNS	07/28/06

SCALE: NONE

DT-2

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SOIL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION

LOCATIONS AND DIMENSIONS ARE APPROXIMATE. NOT ALL SITE FEATURES OR OBJECTS ARE SHOWN. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING LOCATIONS OF RELEVANT SITE FEATURES. THE CONTRACTOR IS REQUIRED TO FOLLOW BEST MANAGEMENT PRACTICES ACCORDING TO THE STATE OF CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (MOST RECENT EDITION) AND THE PROJECT DRAWINGS AND SPECIFICATIONS. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO:

1. PROVIDING SILT FENCE OR STRAW BALE SEDIMENT BARRIERS UNTIL THE SOIL COVER IS RESTORED.
2. ENCLOSING STOCKPILE AREAS AND CONSTRUCTION-LAY-DOWN AREAS WITH A SEDIMENT BARRIER.
3. IN ADDITION TO SILT FENCING, STRAW BALE BARRIERS, AND CATCH BASIN SEDIMENT TRAPS, OTHER EROSION AND SEDIMENT CONTROL DEVICES (e.g. RUN-ON BERMS) SHALL BE EMPLOYED ON AN AS-NEEDED BASIS, DEPENDING ON SITE-SPECIFIC CONDITION, AND IN ACCORDANCE WITH THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.
4. STABILIZING THE SITE BY ESTABLISHING TURF AS SOON AS POSSIBLE AFTER ALL GRADES ARE COMPLETED.
5. PERIODICALLY INSPECTING STORM DRAINS FOR ACCUMULATED SEDIMENT AND REMOVING WHEN THE DEPTH EXCEEDS SIX INCHES. ALL INSPECTIONS SHALL BE PERFORMED AT A MINIMUM OF ONE EVERY SEVEN CALENDAR DAYS OR WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT PRODUCES 0.5 INCHES OR MORE PRECIPITATION.
6. PERIODICALLY INSPECTING SEDIMENT BARRIERS FOR ACCUMULATED SEDIMENT. REMOVING BUILT UP SEDIMENT WHEN IT HAS REACHED THE LESSER OF ONE-THIRD OF THE HEIGHT OF THE BARRIER OR SIX INCHES IN HEIGHT.
7. PERIODICALLY INSPECTING SILT FENCES FOR DEPTH OF SEDIMENT, TEARS IN THE FABRIC AND FABRIC ATTACHMENT TO POSTS. INSPECTING POSTS TO ENSURE THEY ARE FIRMLY ANCHORED IN THE GROUND. ALSO INSPECTING STRAW BALES FOR DEPTH OF SEDIMENT, DAMAGE, BROKEN BALE TIES, AND LEAKS.
8. INSPECTING BERM, IF EMPLOYED, FOR WASHOUTS OR MOVEMENT AND REPAIRING AS REQUIRED. REINFORCING BERMS SUSCEPTIBLE TO EROSION WITH STONE. REMOVING AND REPLACING INDIVIDUALLY ANY RIPRAP EXPERIENCING MOVEMENT OR WASHOUT IN RESPONSE TO THE OBSERVED RUNOFF FLOW PATTERNS. INCORPORATING LARGE STONES INTO THE STRUCTURE FOR ANCHORING, IF NECESSARY.
9. IN ADDITION TO SITE PERIMETER CONTROLS AND GENERAL MEASURES, PERFORM WORK ACCORDING TO BEST MANAGEMENT PRACTICES TO MINIMIZE SOIL EROSION AND CONTROL SEDIMENT MIGRATION.
10. SNOW SHALL BE PILED SO AS NOT TO INTERFERE WITH SEDIMENT AND EROSION CONTROLS AND DRAINAGE SWALES. RUTS CREATED BY VEHICULAR TRAFFIC OVER SOFTENED OR UNSTABLE SOIL SHALL BE LEVELED ON A DAILY BASIS AND MIXED WITH DRIER SOIL TO STABILIZE THE SURFACE GRADE.
11. THE CONTRACTOR SHALL EMPLOY CONSTRUCTION METHODS AND MEANS THAT KEEP FLYING DUST TO A MINIMUM AND SHALL NOT DISCHARGE INTO THE ATMOSPHERE OF SUCH QUANTITY, CHARACTER OR DURATION THAT IT INTERFERES WITH THE COMFORTABLE ENJOYMENT OF LIFE AND PROPERTY OR IS HARMFUL TO PLANTS OR ANIMALS. THE CONTRACTOR SHALL PROVIDE SUFFICIENT WATER AND MEANS OF STORING, SPREADING AND SPRAYING AT ALL TIMES DURING CONSTRUCTION TO CONTROL FLYING DUST AS NECESSITATED BY WEATHER CONDITIONS AND CONSTRUCTION ACTIVITIES.
12. CLEANUP ANY MATERIALS THAT SPILL ONTO THE STREETS IMMEDIATELY. PROVIDE A MECHANICLE STREET SWEEPER FOR REGULARLY CLEANING THE SITE AND STREETS AS INDICATED IN SPECIFICATION 02050.

MAINTENANCE

THE CONTRACTOR SHALL PROVIDE, INSPECT, AND MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PHASE OF THE PROJECT UNTIL PERMANENT MEASURES HAVE BEEN INSTALLED.

ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

SEQUENCE

THE CONTRACTOR SHALL WORK IN SEQUENCE APPROVED IN THE SOIL EROSION AND SEDIMENT CONTROL PLAN, AND GENERALLY PROVIDE MEASURES AS FOLLOWS:

1. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL (SILT FENCE, STRAW BALES, AND CATCH BASIN SEDIMENT TRAPS) PRIOR TO ANY DEMOLITION RELATED ACTIVITIES AS SHOWN ON THE DRAWINGS.
2. INSTALL SEDIMENT BARRIERS DOWNGRADIENT OF PROPOSED DEMOLITION AREAS AS SHOWN ON THE DRAWINGS.
3. INSTALL CATCH BASIN SEDIMENT TRAPS AT ALL CATCH BASINS IN THE VICINITY OF DEMOLITION ACTIVITIES.
4. PERIODICALLY INSPECT EROSION AND SEDIMENT CONTROLS THROUGHOUT CONSTRUCTION PERIOD. REMOVE SEDIMENT AND REPAIR CONTROLS AS REQUIRED.
5. REMOVE ALL ACCUMULATED SEDIMENT IN CATCH BASINS AFTER THE SITE IS FULLY STABILIZED.

SYMBOL	REVISIONS	DATE	APPROVAL

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CARL N. STOPPER
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DATE Aug 15, 2006

CITY OF MERIDEN
142 EAST MAIN STREET
MERIDEN, CONNECTICUT

DEMOLITION OF THE MERIDEN HUB
77 STATE STREET,
MERIDEN, CONNECTICUT

SEDIMENT AND EROSION CONTROL NOTES

DESIGN:	SL	06/14/06	SCALE: NONE	DT-3
DRAWN:	KDH	06/15/06		
CHECKED:	CNS	07/28/06		

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