

EXHIBIT A



TOWNSHIP OF WEST ORANGE

66 MAIN STREET, WEST ORANGE, N.J. 07052

Department of Planning and Development

ROBERT D. PARISI
Mayor

PLANNING BOARD

Tel: (973) 325-4111

Fax: (973) 325-6359

Email: planningboard@westorange.org

September 11, 2013

Via Electronic and First Class Mail Delivery

Mr. William C. Sullivan, Jr., Esq.
Scarinci & Hollenbeck, LLC
1100 Valley Brook Avenue
PO Box 790
Lyndhurst, New Jersey 07071-0790

Re: PB-13-16/Valley Road Residential, LLC
Block: 9; Lots: 1, 7, 44, 50 & 56; Zone: MUBR
22-26 Central Avenue; 9-15 Mitchell Street
Preliminary Site Plan with "C" Variance.

Dear Mr. Sullivan:

Enclosed please find copy of the Resolution adopted at the September 10, 2013 Planning Board meeting for the above-referenced matter.

In addition, an Affidavit of Compliance is enclosed. Please complete and submit this document to the Zoning Official after completing all conditions in the Resolution.

If I may be of further assistance, please contact me at (973) 325-4111.

Very truly yours,

Robin Miller
Planning Board Secretary

Enclosures

cc: Joseph Alpert, Valley Road Residential, LLC
File



**RESOLUTION OF THE PLANNING BOARD
OF THE
TOWNSHIP OF WEST ORANGE**

Decided: August 7, 2013
Memorialized: September 10, 2013

**APPROVAL OF APPLICATION
VALLEY ROAD RESIDENTIAL, LLC
PRELIMINARY SITE PLAN APPROVAL WITH "C" VARIANCE
22-26 CENTRAL AVENUE and 9-15 MITCHELL STREET
BLOCK: 9; LOTS: 1, 7, 44, 50 & 56; ZONE: MUBR
APPLICATION NO. PB-13-16**

WHEREAS, Valley Road Residential, LLC ("Applicant") having made application for preliminary and final site plan approval to the Township of West Orange Planning Board (Application #PB-13-16) regarding property located at 22-26 Central Avenue and 9-15 Mitchell Street, West Orange, NJ (the "Premises"), and known as Lots 1, 7, 44, 50 & 56 in Block 9 on the tax map of the Township of West Orange; and

WHEREAS the Board having accepted jurisdiction based upon proof of publication and notices provided in accordance with the Municipal Land Use Law; and

WHEREAS, a public hearing having been conducted at a meeting held on August 7, 2013 and the Applicant having appeared and been represented by William C. Sullivan, Jr., Esq. of Scarinci Hollenbeck, and the Board having heard testimony of the Applicant's witnesses Barry J. Sutherland, PE, Stephen Schoch, AIA, Joseph Alpert, Sean Morowski, PP, and Brian Dempsey, PE, and the Board having considered the memorandum from Acting Board Planner Paul Grygiel, PP dated July 26, 2013, and the memorandum from Board Consulting Engineer Eric Keller, PE, PP dated August 1, 2013, and considered the exhibits submitted by the Applicant, and granted an opportunity for the public to be heard, and having deliberated on the merits of the application;

NOW, BE IT RESOLVED AS FOLLOWS:

EVIDENCE SUBMITTED

In summary, the following evidence was submitted in connection with the application and considered by the Board:

- I. The Board received the application and documents submitted therewith, including (i) a West Orange Planning Board Application, (ii) Checklist, (iii) survey prepared by Innovative Land Surveying dated 8/7/08; (iv) architectural

drawings prepared by Kitchen & Associates dated April 3, 2013 (A1.1, A1.2, A1.3, A2.1 and A2.2); (v) Site Plan Drawings by TRC Engineers, Inc. dated July 11, 2013 (15 sheets); and (vi) Traffic Impact Study prepared by TRC Engineers, Inc. dated July 26, 2013.

2. The following exhibits were introduced and accepted into evidence:

Ex. A-1	A site rendering dated July 11, 2013
Ex. A-2	NJ DEP stream encroachment plan (SP 01) dated 10/8/07
Ex. A-3	an aerial picture of the premises from satellite photo
Ex. A-4	Colorized Sketch Elevations

3. Applicant's attorney William C. Sullivan, Jr., Esq. began the presentation by noting that Applicant was a consortium of two (2) private developers and HANDS a not-for-profit community group which has a five percent interest. He stated that the site is in a redevelopment zone and the redevelopment plan is the applicable zoning standard. The application is for a 100 unit rental residential building with parking and that the site straddles the West Orange and Orange border. The instant application is for the 1.55 acres which are in West Orange.

4. Mr. Sullivan noted that Applicant is seeking a variance for a portion of the upper floors of the building which would be on the property line rather than setback.

5. Barry Sutherland, PE was sworn and qualified as an expert in engineering. He introduced Exhibits A-1 and A-2. He reviewed the Existing Condition and Demolition Plan stating that the site is 1.55 acres with an existing masonry building and the balance is asphalt and stone. The East Branch of the Rahway River was previously piped underground and runs through the site near the easterly boundary. The river will be "daylighted" as part of this project.

6. The proposal is for demolition of the existing structure and construction of a new 100 unit building known as Bldg. C having 30,000 sq. ft. footprint, and a 15,000 sq. ft. parking lot. (Bldgs. A and B having 128 units have received site plan approval to be built on the Orange side of the project.) Bldg. C will have 3 stories with 33 one bedroom units, 59 two bedroom units and 8 three bedroom units. There will be 40 surface parking spaces and 60 inside the garage underneath the building. In addition to having one space per unit in the building, the building tenants will also have access to 30 spaces in the garage to be built on the Orange property. The site has contaminated soil for which the owner received a \$600,000 grant from the State to remove. The project will conform with the zoning standards except for a portion of the upper floors on the western side of the building which will be on the property line and not setback. He stated that the roof drainage will be piped to an underground detention facility. Referring to Omland Engineering's review letter dated August 1, 2013 he stated Applicant will comply with comments 17, 20, 21, 23, 34 and 35, but noted that

compliance with #17 would only be possible if it did not interfere with Applicant's existing NJDEP permit. He reviewed the Lighting Plan and described the decorative lighting on Central Avenue, Mitchell Street, the parking lots and on the building. There will be lighting on the walk path and Applicant agreed to provide a foot candles analysis for review by the Board Engineer. Regarding landscaping he reviewed Drawing C400 and stated there would be shade trees on Central Avenue and Mitchell Street where there is enough space. Shrubs will be planted and grass seeded on the West Orange side of the river channel pursuant to a plan submitted to the Board at final site plan approval. The plantings in the channel will be water resistant because the flood zone reaches all the way to the top of the channel. Regarding pedestrian circulation around the parking area, he stated that there was not enough room for sidewalks around the perimeter. Applicant agreed to submit information about the culvert headwalls per Omland letter Item 12. He stated Applicant will provide benches and trash receptacles along the river walkway. In response to Board questions, he stated that Applicant would install an emergency call box in the parking lot and would provide a fire suppression report.

7. Applicant called Stephen Schoch, AIA of Kitchen & Associates who was sworn and qualified as an expert in architecture. He introduced Exhibits A-3 and A-4. He noted that the project is a Transit Oriented Development and that the design being proposed is similar in style to what was already approved for the Orange side of the project. The building will be fully sprinklered. The floor plan will have a central corridor with units on each side. Materials selected were looked at for sustainability and while not LEED certified will meet Energy Star criteria. Applicant agreed to look at roof color to reflect heat.

Responding to Board questions he testified that there would be a washer and dryer in each unit, trash pickup will be on Central Avenue, parking calculations were based on TOD rather than RSIS which was based on greenfield suburbs, that the project will have "eyes on the street" which will help promote safety through "defensible design." There will be security cameras in the parking area and on the walk path. Exterior materials will be 50% red brick panels, lighter colored panels, brownstone base and dark gray panels with aluminum colored window frames. The garage will be a masonry base with openings for ventilation. Bike racks will be provided in three corners of the parking area, to provide capacity for at least one bike per unit.

8. Applicant called Joseph Albert who was sworn and testified that he is a principal of the Applicant. They purchased the building in 2008 and due to the economic downturn their plans to construct the project were put on hold. At this time there is Hurricane Sandy monies available for the project through NJ HMTA and Applicant would like to take advantage of their limited availability while they last.

9. Sean Moronski, PP was sworn and qualified as an expert in planning. He testified that the proposed project was conforming except for one side yard setback variance. Referring to A1.1, he observed that the ordinance requires that upper floors be set back a minimum of 4 feet from the property line but that along the westerly side of the building for approximately 65 feet from Mitchell Street the upper floors would be right at property line. He noted that the vast majority of the building does conform in this respect. As for the positive criteria for the variance relief, he testified that the project would promote public welfare by upgrading an abandoned factory site and restoring it to productive use. He opined that the project would also promote a desirable visual environment by removing an abandoned building and replacing it with attractive new construction. Regarding the negative criteria, he stated that there was none because the project would facilitate clean up of the area and provide transit oriented development in furtherance of the Master Plan.

10. Brian Dempsey was called, sworn and qualified as an expert in traffic engineering. He referred to the Traffic Impact Report dated July 26, 2013, which concluded that the project would have no impact on traffic in the area and would not lower the Level of Service of the adjoining streets or intersections. He stated that Applicant would address the traffic comments in the Onland review letter.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

11. The subject premises are in the Harvard Press Redevelopment Area between Mitchell Street and Central Avenue on the City of Orange border.

12. The project calls for demolition of the existing buildings and construction of a new 100 unit rental building, 100 parking spaces and "daylighting" of the East Branch of the Rahway River which runs through the property. The project is in conjunction with a counterpart project on adjoining property in Orange. An eight-foot wide walkway will be constructed along the river with lighting, benches and trash receptacles.

13. The project complies with the zoning standards in the redevelopment zone, except for a portion of the westerly wall near Mitchell Street where the upper floors will be on the property line and not set back 4 feet as required. Variance relief is requested.

14. The project furthers many of the goals of the Redevelopment plan including the revitalization of the site and removal of abandoned buildings. Construction of a new 5 story residential building with off-street parking which is within easy walking distance of the Highland Avenue train station is clearly "smart growth" and transit oriented development.

15. The variance relief is warranted under c(2) analysis because the benefits of this project outweigh any detriments. New construction in furtherance of the

redevelopment plan, daylighting the river way and providing pedestrian access to it and removing aging, dilapidated structures will promote the general welfare by promoting the appropriate use of the land pursuant to MLUL §2(a) and promote a desirable visual environment furthering MLUL §2(j). Having approximately 65 feet of the upper floors of the building on the property line near Mitchell Street rather than set back 4 feet will not cause substantial detriment to the zone plan or ordinance because the vast majority of the upper floors comply with this standard and it will not be a substantial detriment.

16. The project is an improvement that the Township has planned for and the minor variance relief does not cause substantial detriments, which outweigh the many benefits associated with the project.

THE DECISION

WHEREAS, the Board, having reviewed the application for preliminary and final site plan approval and having considered the impact of the proposed application on the Township's master plan and zoning ordinance and the surrounding property owners, and having considered whether the proposal complies with and furthers the goals of the land use and zoning ordinances of the Township of West Orange and the Municipal Land Use Law; and upon the imposition of specific conditions to be fulfilled, hereby, concludes that good cause has been shown to approve the application as follows;

NOW THEREFORE, BE IT RESOLVED by the Planning Board of the Township of West Orange that the application for preliminary site plan approval with variance relief all as set forth in the plans, reports, representations, testimony, stipulations and Exhibits offered by the Applicant is granted subject to the following conditions:

1. The Applicant shall comply with all applicable Township, County, State and Federal laws, ordinances, regulations and directives, including without limitation, obtaining all applicable local, state and federal approvals and/or permits. Without limitation of the foregoing, prior to the signing of the approved site plans, and prior to the commencement of any land disturbance or construction, the Applicant shall submit to this Board, with a copy to the Board Engineer, proof that it has obtained all required governmental approvals.

2. If another governmental entity or agency grants a waiver or variance affecting the plans and/or exhibits submitted by the Applicant, this approval or the conditions attached to it, then the Applicant shall re-apply to this Board respecting the same and this Board shall have the right to view that issue as it relates to this approval and these conditions and modify and amend same, if appropriate.

3. In the event that any other required regulatory approval conflicts with the terms and conditions hereof, or materially alters the same, or the terms and conditions hereof are materially altered by any change in applicable law or regulation other than those municipal

regulations for which change is prohibited by the Municipal Land Use Law (MLUL), or in the event Applicant or its successors or assigns construct or attempt to construct any improvement in conflict with or in violation of the terms of this approval, the Board hereby reserves the right to withdraw, amend or supplant the instant approval.

4. All construction, use and development of the property shall be in conformance with the plans approved herein, all representations of the Applicant and its witnesses during the public hearing, all exhibits introduced by the Applicant, and all terms and conditions of this resolution.

5. The Applicant shall pay all outstanding taxes, tax liens, application fees and technical review fees, as well as any inspection fees that may be required hereunder. The Applicant shall pay any additional fees or escrow deposits which may be due and owing within thirty (30) days of notification or this approval shall be deemed withdrawn.

6. All notes included in the approved plans, including notes required by this Resolution, shall be deemed conditions of approval having the same force and effect as conditions expressly set forth in this Resolution.

7. Applicant to provide an updated lighting plan subject to the review and approval of the Board Engineer.

8. Applicant will comply with the items set forth in the Omland review letter dated August 1, 2013 except Item #11 and Item #17 will be complied with if doing so will not interfere with Applicant's existing DEP permit.

9. Applicant will provide emergency call box in the parking lot.

10. Applicant will provide updated landscaping plan with smaller trees, large shrubs along the walkway to provide a safety buffer from the river channel subject to Board review and approval.

11. Applicant will provide benches and trash receptacles along the river walkway.

12. Applicant to provide a sustainable material list and an exterior material list subject to the review and approval of the Board. Applicant shall consider having the roof color a lighter shade to avoid heat island effect.

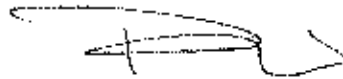
13. Applicant is responsible for the perpetual maintenance obligations associated with the "daylighted" portion of the East Branch of the Rahway River on site, as well as all other property maintenance issues associated with the site improvements.

14. Applicant to provide a listing or summary of energy efficiencies designed into the building and site improvements

15. The plans are to be reviewed and approved by the West Orange Fire Department as to the placement of hydrants and emergency access

16. Applicant must obtain Final Site Plan Approval prior to the commencement of any site improvements shown on the preliminary site plans.

Certified to be a true copy of the Resolution adopted on the 10th day of September 2013.



Robin Miller, Secretary

Vote on the Action Taken by the Board

Board Member	Motion	Second	Aye	Nay	Abstain	Absent
BAGOFF		*	*			
CARLUCCI						*
EBEN (1 st Alt.)			*			
GHEBREMICHAEL			*			
GURLAND					*	
KLEIN (2 nd Alt.)			*			
LESTER						*
MCCARTNEY			*			
WESTON			*			
WILKES						*
HELLER (Chair)	*		*			

Vote on the Memorializing Resolution

Board Member	Motion	Second	Aye	Nay	Abstain	Absent
BAGOFF			*			
CARLUCCI						
EBEN (1 st Alt.)		*	*			
GHEBREMICHAEL						*
GURLAND						
KLEIN (2 nd Alt.)			*			
LESTER						
MCCARTNEY			*			
WESTON			*			
WILKES						
HELLER (Chair)	*		*			



EXHIBIT B



57 East Willow Street
Millburn, NJ 07041

December 31, 2013

Valley Road Residential, LLC
c/o The Alpert Group
1 Parker Plaza
Fort Lee, New Jersey 07024

Attn: Mr. Joe Alpert

Re: *Site Investigation/ Remedial Investigation Report/ Remedial Action Workplan*
Former Fregans Automotive
22-24 Central Avenue
West Orange, New Jersey
Block 9; Lot 44
PI No. 450839
TRC Project 2894-195119

Dear Mr. Alpert:

On behalf of Valley Road Residential, LLC, TRC Environmental Corporation (TRC) has prepared the attached *Site Investigation/ Remedial Investigation Report* in accordance with the NJDEP's *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and appropriate guidance documents for the above-referenced property.

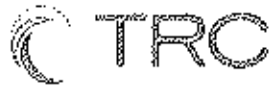
If you have any questions or need additional information, please call.

Very truly yours,

TRC ENVIRONMENTAL CORPORATION

Kristen Rillen
Associate Project Manager

Rebecca K. Hollender, CPG, LSRP
Principal Consultant
LSRP ID No. 585022



NJDEP PI NO. 450839

***SITE INVESTIGATION/ REMEDIAL INVESTIGATION REPORT AND
REMEDIAL ACTION WORKPLAN***

**FORMER FREGANS AUTOMOTIVE
22-24 CENTRAL AVENUE
BLOCK 9, LOT 44
WEST ORANGE, ESSEX COUNTY, NEW JERSEY**

TRC JOB NUMBER: 2894-195119

prepared for:

Valley Road Residential, LLC
c/o The Alpert Group
1 Parker Plaza
Fort Lee, New Jersey 07024

prepared by:

TRC Environmental Corporation
57 East Willow Street
Millburn, New Jersey 07041

December 31, 2013



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NJDEP PI NO. 450839

***SITE INVESTIGATION/ REMEDIAL INVESTIGATION REPORT AND
REMEDIAL ACTION WORKPLAN***

**FORMER FREGANS AUTOMOTIVE
22-24 CENTRAL AVENUE
BLOCK 9, LOT 44
WEST ORANGE, ESSEX COUNTY, NEW JERSEY**

1.0 INTRODUCTION

TRC Environmental Corporation, Inc. (TRC) has prepared the following *Soil and Ground Water Site Investigation/ Remedial Investigation/ Remedial Action Report and Remedial Action Workplan* (SI/RI/RAR/RAW) for Former Fregan's Automotive in West Orange, Essex County, New Jersey (Figure 1).

Based on the *Preliminary Assessment Report* (PAR) that was prepared for the Site by TRC, ten areas of concern (AOCs) were identified. During the September 29, 2008 NJDEP Site inspection, a concrete-lined circular pit was observed in a rear room of the building. According to Mr. Steve Kchayes of the New Jersey Department of Environmental Protection (NJDEP), this pit may have formerly contained a sump. No visual evidence of staining or corrosion was observed in or around the pit, however TRC added it as an eleventh AOC. A total of five AOCs warranted additional investigation and this report summarizes the investigation conducted at these AOCs.

A ground penetrating radar investigation and a soil investigation consisting of soil borings and sampling was completed at the following AOCs:

AOC 2: Inactive Heating Oil Underground Storage Tank
AOC 3: Waste Oil Storage Area
AOC 5: Fill Material
AOC 6: Floor Staining
AOC 11: Concrete Lined Pit

Based on the soil investigation, no impact was observed from any of the AOCs. The Site is underlain by historic fill material, contaminated with polycyclic aromatic hydrocarbons (PAHs) and metals. Therefore engineering controls (capping system) and institutional controls (deed notice) will be established for the Site.

Additionally, a ground water investigation was conducted that included the installation and sampling of seven temporary well points and three permanent monitoring wells. Based on the results of the ground water investigation, a plume containing chlorinated volatile organic compounds (VOCs) is migrating onto the site from the adjacent, upgradient property. In addition, ground water is impacted by the site-wide historic fill material. Therefore, a CEA will be established for the site.

Site information and history are included in Section 2.0; a Technical Overview of the investigation activities performed during August and November 2012 is included in Section 3.0. Descriptions of the soil and ground water site investigation and remedial investigation activities with their findings are presented in Sections 4.0 and 5.0, respectively. A summary of the remedial action is included in Section 6.

2.0 SITE INFORMATION

2.1 Site Description

Former Fregan's Automotive is located on Central Avenue at Block 9, Lot 44 in West Orange, Essex County, New Jersey in a mixed use area. The site is approximately 0.15 acres in size and consists of one single-story building situated in the central portion of the property. The site is bordered by Selecto-Flash to the north, Harvard Printing Company to the south and west, and Central Avenue to the east (Figure 1).

2.2 Site History

The eastern portion of the Site has been developed from before 1895, and was included as part of a larger lot that adjoined the Site to the east and south and contained a hat manufacturer. The current on-site building, constructed in 1911, was used as a stock house around that time. The southeastern portion of the building was formerly connected to the building on the eastern adjoining lot (Lot 50).

In 1936, the Site was listed as Bristow S R Office Supplies, Electro Massage Tooth Brush Company, and Krucar J F Mach, and has been used as a machine shop since at least 1939. The Bates Manufacturing Company, a manufacturer of numbering machines, owned and operated the Site from 1965 to 1977 as a machine shop and warehouse, and it has been used as a machine shop since that time. Bates occupied the western adjoining property from at least 1939 to at least 1964. The Site was used as an automotive repair facility until 1995 when it was purchased by Valley Road Residential, LLC in 2008. The property has not been operation since the purchase.

2.3 Geology

Based on the 1996 USGS *Bedrock Geologic Map of North Jersey*, the Site is located in the Newark Basin and is underlain by the Passaic formation. The Passaic formation consists of reddish-brown to brownish-purple and grayish-red siltstone and shale with a maximum thickness of approximately 3,600 meters.

Based on published surveys, bedrock beneath the region consists of the Passaic Formation of the Newark Group of Late Triassic age. The Passaic Formation is dominantly shale and sandstone, overlain by Pleistocene age unconsolidated clay, sand and gravel. The formation consists dominantly of interbedded brown, reddish-brown, and gray shale, sandy shale, sandstone and some conglomerate. Bedrock was not encountered during investigation activities.

2.4 Hydrogeology

The depth to water at the site is approximately 20 feet below surface. Ground water is anticipated to flow southerly toward the East Branch of the Rahway River.

2.5 Receptor Evaluation - Land Use

The subject property is located in a mixed commercial/residential area of West Orange, New Jersey. The site is surrounded by commercial properties; there are no schools, child care centers, parks or playgrounds within 200 feet of the property boundary. There are three residences located southwest of the property within the 200 foot buffer. The land use/land cover map from the NJDEP's GIS database is included as Figure 3.

2.6 Receptor Evaluation - Vapor Intrusion

Due to the future construction plans to demolish the current site building, an evaluation of the vapor intrusion pathway was not conducted. Current building plans call for an open parking deck to be constructed at ground level. Should an occupied building be erected on the property, the installation of a passive vapor mitigation will be discussed.

2.7 Receptor Evaluation - Ecological

The closest surface water body is the East Branch of the Rahway River, which is approximately 150 feet east of the property. The National Wetlands Inventory map does not identify any wetland areas on or adjacent to the site (Figure 4). In addition, the September 29, 2008 site inspection confirmed that there were no environmentally sensitive natural resources on or adjacent to the site.

Therefore, since there are no environmentally sensitive natural resources on or adjacent to the site, no further ecological evaluation is necessary.

2.8 Areas of Concern (AOC) Summary

The following 5 Areas of Concern (AOCs) have been identified at the Site and are presented on Figure 2:

AOC 2: Inactive Heating Oil Underground Storage Tank

AOC 3: Waste Oil Storage Area

AOC 5: Fill Material

AOC 6: Floor Staining

AOC 11: Concrete Lined Pit

2.9 Summary of Pertinent Documents

The results of historical environmental investigations and activities conducted at the site are detailed in the following table of pertinent documents, which were used as supporting reference material for this report.

Pertinent Document	Date
<i>Preliminary Assessment/Site Investigation</i> prepared by TRC Environmental Corporation	October 12, 2007

2.10 Applicable Regulatory Timeframes

The Preliminary Assessment Report associated with case numbers 02-03-01-0004-21 and 08-01-12-0048-22 was previously submitted on May 24, 2012.

The regulatory timeframe for completion of the site investigation is defined in N.J.A.C. 7:26E-3.14(b)1 and is one year after the applicable requirement to remediate pursuant to N.J.A.C. 7:26C-2.2. The applicable regulatory timeframe to complete the remedial investigation is defined in N.J.A.C. 7:26E-4.10(a)1i(2) and is three years after the requirement to remediate pursuant to N.J.A.C. 7:26C-2.2.

2.11 Contact Information

The following is a list of the applicable contact information:

Site Owner / Operator	Valley Road Residential, LLC c/o The Alpert Group 1 Parker Plaza Fort Lee, New Jersey 07024	Joe Alpert (201) 232-8244
Licensed Site Remediation Professional	TRC Environmental Corp. 57 East Willow Street Millburn, NJ 07041	Rebecca K. Hollender LSRP No. 512625 (973) 564-6006 x 260

3.0 TECHNICAL OVERVIEW

This section provides an overview of the technical approach and methods employed during the site investigation activities conducted between August 7 and 9, 2012. The site investigation included a geophysical survey, exploratory test pits, soil and ground water sampling along with temporary well installation and sampling.

The remediation standards and screening levels used to evaluate soil and ground water are discussed in Section 3.3 below.

Prior to conducting any fieldwork, a detailed field sampling workplan and a site-specific Health and Safety Plan (HASP) and Quality Assurance Project Plan were prepared (QAPP). The HASP, required for OSHA compliance, included information such as emergency contacts, phone numbers, safety procedures, spill/discharge notification numbers, potential contaminants of concern, levels of protection and air monitoring. The QAPP was prepared to ensure that all sampling and laboratory analyses were conducted properly.

3.1 Remediation Objective

The objective of the remediation activities at this site is to identify, delineate and remediate contaminants of concern to the applicable remediation standards.

3.2 Summary of Recent Investigations

On August 3, 2012, a site investigation of the above-referenced five AOCs was completed in accordance with TRSR. The soil site investigation consisted of the completion of 7 soil borings, and analysis of 11 soil samples. Soil concentrations above the applicable NJDEP standards have not been completely delineated.

The ground water site investigation included the installation and sampling of four temporary well points. Ground water concentrations above the GWQS have not been delineated.

On November 9, 2012, a remedial investigation was conducted at the Site. Two temporary wells and one soil sample were collected to delineated exceedances in soil and ground water.

On December 6, 2012, a 1,000-gallon underground storage tank was removed. Post-excavation samples were collected to ensure there was not a release.

A summary of all samples and analyses discussed in this report is included as Table I. The analytical results and calculations are summarized in Tables II through XVII and presented on Figures 5 and 6. Soil boring and temporary well logs are included as Appendix B. The laboratory data reports and electronic data submittal are included as Appendix C.

3.3 Applicable Remediation Standards

The soil and ground water analytical data were compared to the current NJDEP remediation standards; i.e., soil remediation standards (SRS); default impact to ground water soil screening levels (DIGWSL); residential direct contact soil remediation standards (RDCSR); non-residential direct contact soil remediation standards (NRDCSR) and ground water quality standards (GWQS).

A standard rounding procedure was applied to the data for presentation purposes. The findings are compared to the applicable remediation standards and screening levels and presented in Sections 4.0 and 5.0. The remediation standards and screening levels used to evaluate soil and ground water are discussed below.

Extractable Petroleum Hydrocarbons

EPII concentrations were evaluated as either a Category 1 discharge (No. 2 fuel oil and/or diesel fuel) or Category 2 discharge (petroleum hydrocarbon mixtures other than No. 2 fuel oil and/or diesel fuel) pursuant to the NJDEP's August 9, 2010 *Protocol for Addressing Extractable Petroleum Hydrocarbons*. The appropriate discharge category for each AOC was determined based on the history of operations within that area. For AOCs where potential petroleum hydrocarbon discharge types were unknown, the procedures for evaluating Category 2 discharges were used.

Results from Category 1 AOCs were compared to the NJDEP's EPH residential soil remediation criterion (EPH RSRC) of 5,100 parts per million (ppm), the EPH non-residential soil remediation criterion (EPH NRSRC) of 54,000 ppm and the Category 1 residual/free product limit of 8,000 ppm.

Results from Category 2 AOCs were compared to the NJDEP's EPH trigger for development of sample-specific human health based criterion (EPH trigger level) of 1,700 ppm and the Category 2 residual/free product limit of 17,000 ppm.

Direct Contact Soil Remediation Standards

All soil results were compared to the NJDEP's June 2, 2008 residential direct contact SRS (RDCSRS) and non-residential direct contact SRS (NRDCSRS).

Default Impact to Ground Water Soil Screening Levels

Soil analytical results for all parameters in samples collected from the unsaturated zone were compared to the NJDEP's default impact to ground water soil screening levels (DIGWSLs, June 2, 2008) to evaluate potential future ground water impact from unsaturated soil. Ground water was not encountered during the investigation of soil, so no samples were collected from saturated zone soils.

3.4 Sampling Procedures

The sampling activities were performed in accordance with NJDEP's TRSR and most recent *Field Sampling Procedures Manual*. Sampling equipment was decontaminated between locations to prevent potential cross contamination between the sampling locations.

All borings were installed by Subsurface Environmental Technologies, LLC, under the supervision of a TRC scientist. The soil lithology was observed by collecting vertical core samples from either a 2-foot long split spoon sampler (auger) or a 5-foot long macrocore (direct push drilling), depending upon the drilling method employed at each depth and location. The soil column lithology was logged per the Burmeister Soil Classification System, and soil cores were examined for staining, discoloration, odors, and debris indicative of artificial fill and potential contamination (ash, coal fragments, wood chips, cinders, petroleum staining, etc.). The boring logs are provided in Appendix B.

Field screening was performed through physical observations (visual and olfactory) as well as the use of field screening methodologies including the use of properly calibrated photoionization detector (PID). All soil samples collected for VOC analysis were collected using an Encore® sampler.

All monitoring and temporary well sampling was conducted in accordance with the NJDEP's and most recent *Field Sampling Procedures Manual* (FSPM). Each sample was collected using volume-average purging techniques (regular purge method) followed by sampling with a dedicated Teflon bailer.

All soil and ground water samples collected were analyzed by Accutest Laboratories (Accutest) of Dayton, New Jersey, a New Jersey-certified laboratory (Certification No. 12129). The laboratory data packages and electronic data deliverables are included in Appendix C.

3.5 Subcontractors

Geophysical & Markout	Nova Geophysical & Environmental, Inc. Forest Hills, New York 11375	Levent Eskicakit (347) 556-7787
Driller	Subsurface Environmental Technologies, LLC Pennington, New Jersey 08534	Joel Bernstein (609) 730-0005
Laboratory	Accutest Laboratories, Inc. Dayton, New Jersey NJ Certification No. 12129	Matt Cordova (732) 329-0200
Subcontractor	Independence Constructors, Inc. Bridgewater, New Jersey	Chris Trebus (908) 707-3296

3.6 Reliability of the Laboratory Analytical Data

Based on a review of the laboratory reports, TRC did not further qualify or reject any data points. Therefore, these data are considered to be valid and useful for the intended purposes. All method specified calibrations and quality control performance criteria were met for this job, except as noted in the conformance/non-conformance summaries provided in the laboratory deliverable packages.

3.7 Factors Influencing Data

There were no significant events or seasonal variations that are known to have affected the sampling procedures or the results of the sampling presented in this report.

4.0 SOIL AND GROUND WATER SITE INVESTIGATION

On August 3, 2012, a soil investigation of the five AOCs previously mentioned in Section 2.9 was completed in accordance with N.J.A.C. 7:26E-3. The soil site investigation included a geophysical survey, and soil borings. During this period, seven soil borings were advanced throughout the site (Figure 5). A total of nine soil samples were collected during the investigation.

A summary of all soil samples and analyses discussed in this report is included as Table I. The soil analytical results are summarized in Tables II through X and presented on Figure 5. Soil boring and temporary well logs are included as Appendix B. The laboratory data reports and electronic data submittal are included as Appendix C.

The ground water activities discussed in this section include the installation, development and sampling of two temporary well points to investigate AOC 5: Fill Material; one temporary well point to investigate AOC 2; one temporary well point to investigate AOC 3; and one temporary well point to investigate AOC 6.

Field readings of pH, temperature, conductivity, salinity, oxidation-reduction potential (ORP), and dissolved oxygen (DO) were taken in accordance with NJDEP procedures before purging, after purging and after sampling. Three well volumes of the water column were purged from each well using a submersible pump and dedicated Teflon tubing.

Following purging procedures, ground water samples were collected using dedicated Teflon bailers, transferred to bottles, and transported on ice to Accutest Laboratories, Inc. (Accutest) of Dayton, New Jersey (Cert. No. 12129).

Ground water sampling measurements and calculations are included as Table IX. A summary of ground water samples and analyses discussed in this report is included in Table I, analytical results are summarized in Tables XI through XVII and presented on Figure 6. Temporary and monitoring well logs are provided as Appendix B.

4.1 Geophysical Survey

Prior to any ground intrusive work, a geophysical survey was conducted at the Site by Nova Geophysical & Environmental, Inc. (Nova) of Forest Hills, New York under the supervision of a TRC geologist. The survey utilized a GSSI ground penetrating radar system with 500 megahertz (Mhz) antenna to help identify the presence any potentially harmful underground anomalies such as buried drums, tanks, pipes, USTs or other metallic objects.

4.2 AOC 2: Inactive Heating Oil Underground Storage Tank (UST)

There is an UST fill port and vent pipe located in the rear portion of the facility exterior. According to Mr. Donald Fregans, Site owner and operator, he was not aware of the presence of this tank when he purchased the property in 1995, and has not used this tank. He indicated that the UST formerly contained heating oil, but he was not aware of the tank's capacity or integrity.

4.2.1 AOC 2 Sample Collection and Analytical Results

On August 3, 2012, TRC advanced one soil boring 2(2), on the south side of the suspected UST. Due to safety considerations, the boring was advanced within five feet from the south side of the

tank. The position of the tank did not allow for additional borings on the opposite side or either end of the tank. The soil boring collected reached a total depth of 10 feet below surface. The soils were screened with a PID and no elevated PID readings were observed.

One soil sample was collected from 8.0 to 8.5 feet below ground surface, the anticipated 6-inch interval below the bottom of the tank. The sample was submitted for extractable petroleum hydrocarbon (EPH) analysis.

The soil analytical results are presented on Figure 5 and summarized in Tables II through X; soil boring logs are provided in Appendix B.

EPH was detected at 38; below the EPH product determination of 8,000.

A ground water sample was collected from temporary well TW-3, which is located in the soil boring 2(2) borehole. One sample was collected and analyzed for PAHs and TAL Metals.

Ground water analytical results are presented on Figure 6 and summarized in Tables XI through XVII; temporary well logs are provided in Appendix B.

TCE was detected in TW-3 at 1.8 ppm; above the standard of 1. Several metals including aluminum (120,000 ppb), arsenic (159 ppb), beryllium (88 ppb), chromium (277 ppb), iron (143,000 ppb), lead (226 ppb) and manganese (1850 ppb), mercury (251 ppb), and nickel (162 ppb) were detected in TW-3 above their respective standards.

On December 6, 2012 Independence Constructors, Inc. (ICI) of Bridgewater, New Jersey removed the 10,000-gallon oil tank.

Approximately 6 inches of petroleum product remained in the tank, therefore a hole was sawed in the top of the tank and Lorco removed the remaining tank contents. A member of the ICI team entered the tank and cleaned the tank interior to ensure the majority of product was removed from the tank walls. Lorco then sucked out the tank once more to ensure the majority of product was removed before the tank was removed from the ground.

During tank cleaning activities, members of the ICI team worked to remove all lines associated with the tank. The lines appeared to be cut already and crimped in several locations, however one sample, SS-4/1.5-2.0 was collected from beneath one of the joints in the feeder line. The sample was analyzed for VOCs and fully fractionated EPH.

As the excavation continued, it was determined that the tank was set on a concrete pad, therefore eliminating the possibility of collecting true center-line samples from the excavation base. Once the tank was successfully removed and inspected, samples SS-1/8.0-8.5, SS-2/8.0-8.5 and SS-3/8.0-8.5 were collected adjacent to the concrete pad.

Analytical results indicate that the tank remained intact and there was no release to the environment.

4.2.2 Conclusions and Recommendations for AOC 2

Based on the soil and ground water results, no evidence of a discharge was observed from

the UST. The UST was closed in accordance with the applicable rules and regulations, therefore no further action is required at this AOC and an unrestricted use RAO is appropriate.

4.3 AOC 3: Waste Oil Storage Area

Eight plastic and metal 55-gallon drums were located in the eastern portion of the building and are used to heat one of the three ceiling-mounted space heaters. These containers appeared in fair condition with some staining. An approximately 50-square foot heavily oil-stained area was present near these drums, although no visible evidence of cracks or damaged surfaces was observed in the concrete floor.

4.3.1 AOC 3 Sample Collection and Analytical Results

On August 3, 2012, TRC advanced soil one soil boring, 3(1) at the most heavily stained area of the floor (Figure 2). The soil boring reached a total depth of 5 feet below surface. Soil samples were collected from 0.0 to 0.5 feet bgs and 3.5 to 4.0 feet bgs. Sample 3(1)/0.0-0.5 was analyzed for fractionated EPH, BNs+15, PCBs and TAL Metals. Sample 3(1)/3.5-4.0 was analyzed for VOCs+10 and mercury.

The 3(1) borehole was converted into temporary well TW-4, installed to 15 feet and screened from 10 to 15 feet bgs. The well was sampled and analyzed for TAL/TCL +30.

The soil analytical results are presented on Figure 5 and summarized in Tables II through X; soil boring logs are provided in Appendix B.

Benzo(a)pyrene was the only compound detected above the Residential Direct Contact Soil Remediation Standard (RDSCRS) at 0.2 ppm.

Mercury was the only compound detected above the Non Residential Direct Contact Soil Remediation Standard (NRDSCRS) at 162 ppm, above NRDSCRS of 65 ppm.

The ground water results are presented on Figure 6 and summarized on Tables XI through XVII. Temporary well logs are included as Appendix B.

In sample TW-4, TCE was detected at 2.8 ppb, and several metals, including aluminum (19600 ppb), arsenic (25.6 ppb), beryllium (2.5 ppb), iron (34900 ppb), lead (143 ppb), manganese (662 ppb), and mercury (220 ppb) were also detected above their respective GWQS.

On November 9, 2012, one soil boring was installed at the same location as the previous boring, 3(1), and a sample was collected from 5.5 to 6.0 feet bgs to vertically delineate mercury in soil. The soil sample was submitted to Accutest for mercury analysis. The soil analytical results are in Tables II through X; soil boring logs are provided in Appendix A.

Soil sample 3(1)/5.5-6.0 contained mercury at 3 ppm, below RDSCRS of 23 ppm and the NRDSCRS of 65ppm.

4.3.2 Conclusions and Recommendations for AOC 3

Mercury and b(a)p were detected above their respective standards in soil, and ground water contains several exceedances of metals: those exceedances are likely attributable to historic hat

manufacturing operations or the historic fill material at the Site. Compounds associated with AOC 3 were not detected in soil or ground water, therefore no further action is required at this AOC and an unrestricted use RAO is appropriate.

4.4 AOC 5: Fill Material

According to property owner, the unpaved path on the northwestern portion of the Site is "dirt filled", and the unpaved path on the southwestern portion of the Site is "debris filled".

Further investigation revealed that these areas are in areas of mapped historic fill, according to NJDEP's Digital Geodata Series DGS04-7.

4.4.1 AOC 5 Sample Collection and Analytical Results

On August 3, 2012, TRC advanced soil borings 5(1) through 5(4) in the unimproved, vegetated areas surrounding the site (Figure 5). The soil borings reached a total depth of five feet below surface. One soil sample was collected from each soil boring; a sample was collected from 5(2) and 5(3) at 1.5 -2.0 feet, from 5(1) at 30.-3.5 feet and from 5(4) at 4.0-4.5 feet. In each case, samples were collected at the interval exhibiting the highest potential for contamination or PID reading.

All soil samples were submitted for PAH and metals analysis, with the exception of 5(4), which was analyzed for non-fractionated EPH, TAL/TCL +30 and VOCs +10. The soil analytical results are presented on Figure 5 and summarized in Tables II through X; soil boring logs are provided in Appendix B.

VOCs+10, PCBs, pesticides and cyanide were not detected at concentrations above the applicable RDCSRS, NRDCSRS or DIGWSL. EPH was detected in sample 5(4)/4.0-4.5 at 129 ppm, below the applicable criteria.

In sample 5(1)/30.-3.5, aluminum (7710 ppm), beryllium (0.93 ppm), cadmium (2.5 ppm), lead (342 ppm) and mercury (14 ppm) were detected at concentrations above their respective DIGWSL, but below their respective RDCSRS and NRDCSRS. No other metals were detected above the applicable criteria.

In sample 5(2)/1.5-2.0, aluminum (6850 ppm), lead (159 ppm), and manganese (136 ppm) were detected at concentrations above their respective DIGWSL, but below their respective RDCSRS and NRDCSRS. Mercury was detected at 83 ppm, above the RDCSRS and NRDCSRS.

In sample 5(3)/1.5-2.0, benzo(a)anthracene (0.58), benzo(a)pyrene (0.55), lead (1790 ppm), manganese (161 ppm), mercury (5.5 ppm), and zinc (837 ppm) were detected at concentrations above their respective DIGWSL, but below their respective RDCSRS and NRDCSRS with the exception of benzo(a)pyrene and lead. Benzo(a)pyrene and lead were detected above their least stringent limits of 0.2 ppm and 800 ppm, respectively.

Temporary wells TW-1 and TW-2 were installed in the boreholes for 5(1) and 5(3). Temporary ground water monitoring points were installed to 15 feet and screened from 10 to 15 feet. A ground water sample was collected at each locations and analyzed for TAL/TCL +30.

The ground water results are summarized on Tables XI through XVII. Temporary well logs are

included as Appendix A.

Temporary well TW-1 contained concentrations of benzene (4.3 ppb), TCE (45.6 ppb) and vinyl chloride (3.5 ppb) above the GWQS. Several metals were also detected at concentrations above the GWQS.

Temporary well TW-2 contained concentrations of TCE (1.1 ppb) and several metals above the GWQS.

4.4.2 Conclusions and Recommendations for AOC 5

Based on the NJDEP's October 20, 2011 *Historic Full Material and Diffuse Anthropogenic Pollutants Technical Guidance*, the presence of lead and benzo(a)pyrene are indicative of historic fill material. Institutional controls (deed notice) will be implemented to address all historic fill material across the site.

4.5 AOC 6: Floor Staining

Numerous oily floor stains are located throughout the 1st floor of the building; particularly in the automobile service area and in the former boiler room (see AOC 8). An oil-stained area near several 55-gallon waste oil drums is discussed in AOC 3 above. The concrete floor in these areas appeared in good condition with no visual evidence of cracks or deterioration, with the exception of an approximately 10-square foot unimproved area around a vertical supporting beam in the northeastern portion of the Site building.

4.5.1 AOC 6 Sample Collection and Analytical Results

On August 3, 2012, TRC advanced soil boring 6(1) in the approximately 10-square foot unimproved area around a vertical support beam in the northeast portion of the building. One soil sample was collected from 0.0-0.5 feet below ground surface, as this interval registered the highest PID reading, and was submitted for Fractionated EPH, TAL Metals, VOCs+10, BNs+15, and PCB analyses.

Due to the proximity of 6(1) to an existing beam, there was not ample room to maneuver the Geoprobe to achieve a temporary well point in the same location. Temporary well TW-5 was installed approximately five feet from soil boring 6(1) to a depth of 15 feet and screened from 10 to 15 feet bgs. A ground water sample was collected and analyzed for TAL/TCL +30.

The soil analytical results are summarized in Tables II through X; soil boring logs are provided in Appendix A.

In sample 6(1)/0.0-0.5, total EPH was detected at 2,410 ppm. The concentrations were run using the NJDEP EPH calculator and the calculated concentration is 6,500 ppm; below the allowable EPH soil remediation criterion.

Additionally, several semivolatile compounds including benzo(b)fluoranthene (0.66 ppm), dibenz(a,h)anthracene (0.26) and Indeno(1,2,3-cd)pyrene (0.64 ppm) were detected above the RDCSRs.

The ground water analytical results are summarized in Tables XI and XVII.

Ground water results indicated aluminum (17600 ppm), arsenic (18.9 ppb), beryllium (1.4 ppb), iron (33200 ppb), lead (30 ppb), manganese (2670 ppb), mercury (14 ppb) in excess of the GWQS.

4.5.2 Conclusions and Recommendations for AOC 6

The exceedances detected in soil and ground water are consistent with compounds found in historic fill material (PAHs and metals). The compounds detected are not consistent with the petroleum staining observed in AOC 6, therefore no further action is required at this AOC and an unrestricted use RAO is appropriate.

4.6 AOC 11: Concrete Lined Pit

During the September 29, 2008 NJDEP Site inspection, a concrete-lined circular pit was observed in a rear room of the building. According to Mr. Steve Kchayes of the New Jersey Department of Environmental Protection (NJDEP), this pit may have formerly contained a sump. No visual evidence of staining or corrosion was observed in or around the pit.

4.6.1 AOC 11 Sample Collection and Analytical Results

TRC advanced one boring 11(1) through the floor near the concrete pit identified by the NJDEP during the September 2008 site visit.

One soil sample 11(1) was collected from the 6-inch interval beneath the pit for EPH, and TAL/TCL+30 analyses. The soil analytical results are summarized in Tables 11 through X; soil boring logs are provided in Appendix A.

EPH was detected at 38 ppm. No contaminants were detected above the applicable standards, with the exception of PCBs, which were detected at 0.33 ppm, above the standard of 0.2 ppm.

4.6.2 Conclusions and Recommendations for AOC 11

The exceedance of PCBs is not consistent with compounds used at the Site and are likely attributable to historic fill material. Therefore no further action is required at this AOC and an unrestricted use RAO is appropriate.

5.0 SOIL AND GROUND WATER REMEDIAL INVESTIGATION

On November 9, 2012, a soil investigation of the two AOCs previously mentioned in Section 4.0 was completed in accordance with N.J.A.C. 7:26F-3. The soil site investigation included a installation of two soil borings: one boring in AOC 11: Sump, and AOC 3: Floor Staining (Figure 2). A total of two soil samples were collected during the remedial investigation.

A summary of all soil samples and analyses discussed in this report is included as Table 1. The soil analytical results are summarized in Tables II through X and presented on Figure 5. Soil boring and temporary well logs are included as Appendix B. The laboratory data reports and electronic data submittal are included with this report under separate cover.

The ground water remedial investigation activities discussed in this section include the installation, development and sampling of two temporary well points to investigate AOC 5: Fill Material.

5.1 Temporary Well Investigation

Temporary wells TW-1 and TW-2 contained concentrations of VOCs consistent with ground water contamination at Selecto-Flash, an adjacent property located west of the Site.

5.1.1 Temporary Well Installation, Sample Collection and Analytical Results

On November 9, 2012, two temporary monitoring wells (TW6 and TW7) were installed by a New Jersey-licensed well driller from Subsurface Environmental Technologies, LLC, under the supervision of a TRC scientist to investigate the ground water quality downgradient of this AOC (Figure 6).

The temporary well points were installed to approximately 15 feet below surface and constructed with 1-inch diameter PVC screen designed to intercept the water table, which was encountered at approximately 12 feet below surface.

Following regular purging procedures performed in accordance with the NJDEP's TRSR and most recent FSPM, ground water samples were collected and submitted to Accutest for VOCs+10 and mercury analyses.

Temporary well locations and results are presented on Figure 6. The ground water analytical results are summarized in Tables XI through XVII. Temporary well logs are included in Appendix B.

At TW6, PCE (5.8 ppb), TCE (36.9 ppb), and vinyl chloride (33.5 ppb) were detected at concentrations above their respective GWQS of 1, 1, and 1 ppb. At TW7, TCE (29.2 ppb) and vinyl chloride (2.6) were detected at concentrations above their respective GWQS of 1 ppb.

5.1.2 Conclusions and Recommendations

Based on the ground water analytical results, TW1 and TW2 contained exceedences of chlorinated VOCs, consistent with the ground water contaminants present at Selecto Flash. These contaminants are attributable off-site contamination migrating onto the site.

5.2 Monitoring Well Installation and Sampling

On August 16, 2013, TRC oversaw the installation of three monitoring wells by New Jersey licensed driller Subsurface Environmental Technologies (SET) of Pennington, New Jersey. Monitoring well MW-1 was installed in the grass along the western property boundary in the former location of TW-1; MW-2 was installed in the grass along the western property boundary in the former location of TW-2, and MW-3 was installed in the southeastern portion of the site, inside the building in the former location of TW-4. Wells were installed to 15 feet bgs and screened from 10-15'. Monitoring well logs are included in Appendix A.

On September 16, 2013, TRC conducted ground water sampling at the Site. Ground water level measurements were collected from the monitoring wells prior to sample collection during the field mobilization. Based on the ground water level measurements at SelectoFlash to the East and Harvard Printing Company to the West, the expected ground water flow direction at the Site is northeasterly, consistent with previous findings.

Wells MW-1, MW-2 and MW-3 were purged using the low flow purge and sample technique. All wells were analyzed for total VOCs and metals as well as dissolved metals.

Analytical results indicate the following compounds were detected in monitoring wells MW-1, MW-2 and MW-3:

Well	Contaminant	Concentration (ppb)	GWQS (ppb)
MW-1	PCE	2.1	1
	TCE	39.6	1
MW-2	TCE	1.6	1
	Arsenic	7.4 (filtered 7.2)	3
MW-3	TCE	22	1

5.2.1 Conclusions and Recommendations

The total and dissolved arsenic detected in MW-2 are attributable to historic fill material that is found throughout the Site. Volatile Organic Compounds PCE and TCE are not contaminants of concern at the site and are attributable to off-site contamination from an adjoining site.

6.0 REMEDIAL ACTION WORKPLAN

The following Remedial Action Workplan (RAW) was prepared in accordance with the TRSR to address the contaminants of concern in soil and ground water. As established in the Site Investigation, historic fill material is considered to be source of both soil and ground water impacts at the Site.

Soil impacts include low-level VOCs (PCE and TCE), PAHs, and metals due to historic fill material. N.J.A.C. 7:26E-6.2(d) requires that engineering and institutional controls be proposed if the historic fill material is not treated or removed from the Site. Given that large sections of the site will be paved as a result of planned future development, the proposition is a Site-wide Deed Notice be used as an institutional control and use the proposed pavement, clean fill and property fence as engineering controls.

Ground water impacts are limited to dissolved metals. N.J.A.C. 7:26E-3.12(b)6 requires either a ground water Classification Exception Area (CEA) to be established or a ground water RI to be completed. The ground water RI is required if the historic fill is limited to the Site or a portion of the Site; a CEA is appropriate if the historic fill is present beyond the limits of the Site. Based on the New Jersey Geological Survey digital geodata "DGS04-7 Historic Fill for New Jersey as of February 2009," historic fill was emplaced throughout West Orange, including the Site and the properties adjacent to the Site. Therefore, the historic fill extends beyond the Site property boundaries. A CEA will be established for the entire Site footprint.

6.1 Soil Remedial Action Workplan

Soil at the Site is impacted by PAH compounds (benzo(a)anthracene, benzo(a)pyrene), and PP metals (lead and mercury). These organic compounds and metals are present in the soil at concentrations above their respective RDCSRS and/or NRDCSRS due to the presence of historic fill at the Site. The historic fill was placed by others prior to the purchase of the Site by Valley Road Residential, LLC in 2008.

Because the historic fill is site-wide, the Deed Notice will be established for the entire property. Among other requirements, the Deed Notice will restrict land use at the Site to address the presence of organic compounds and metals at concentrations above their respective RDCSRS. The Deed Notice will also require the monitoring and maintenance of existing engineering controls to address the presence of organic compounds and metals at concentrations above their respective NRDCSRS.

To ensure the Deed Notice remains protective of human health and the environment, Valley Road Residential, LLC will submit biennial certifications to the NJDEP. These biennial certifications shall include, at a minimum, information regarding the Site and a protectiveness evaluation.

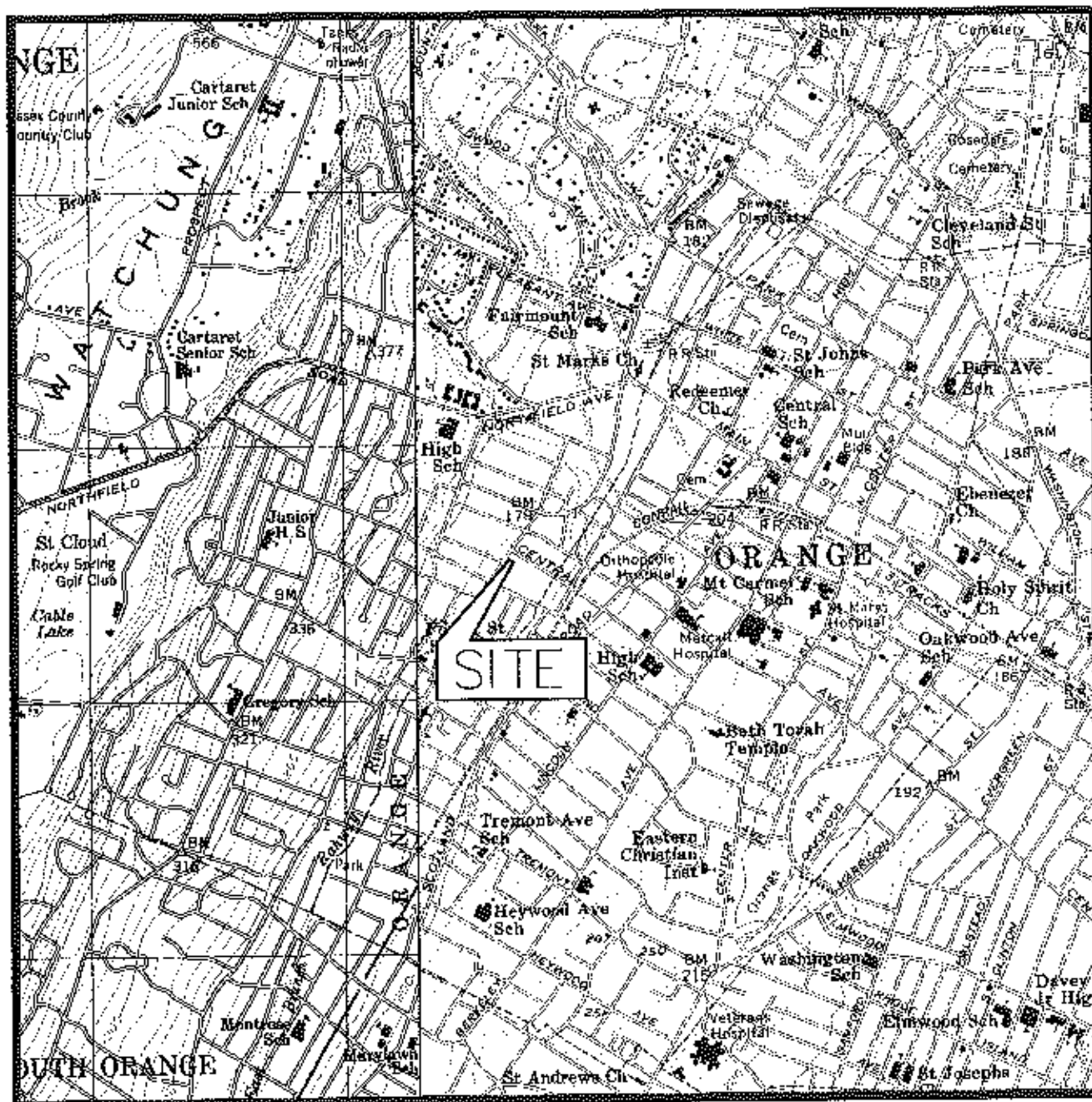
The engineering controls will be concrete and asphalt pavement associated with the proposed redevelopment of the Site. The pavement and concrete slabs will prevent direct contact with underlying soil.

6.2 Ground Water Remedial Action Workplan

Ground water at the Site is impacted by PP-Metals (aluminum, arsenic, beryllium, cadmium, total chromium, iron lead, manganese, mercury and nickel) and VOCs (PCE and TCE). Metals are attributable to the presence of historic fill throughout the Site and the VOCs are attributable to offsite contamination. Valley Road Residential, LLC proposes establishment of a ground water CEA and a Well Restriction Area (WRA). The CEA would be site-wide throughout the entire saturated thickness of the historic fill (i.e., from first water at approximately six fbg to the top of the native soil, or up to 10 fbg. The CEA duration will be indeterminate, as historic fill is present at and in the vicinity of the Site and the PAH compounds and PP Metals in the historic fill are unlikely to attenuate. Valley Road Residential, LLC will submit biennial certification to the NJDEP to document that the CEA remain protective of human health and the environment.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results, contamination in soil and ground water at the Site is related to historic fill material and off-site impacts. The remedial action measures outlined above are sufficient measures of managing human contact with on-site contamination.

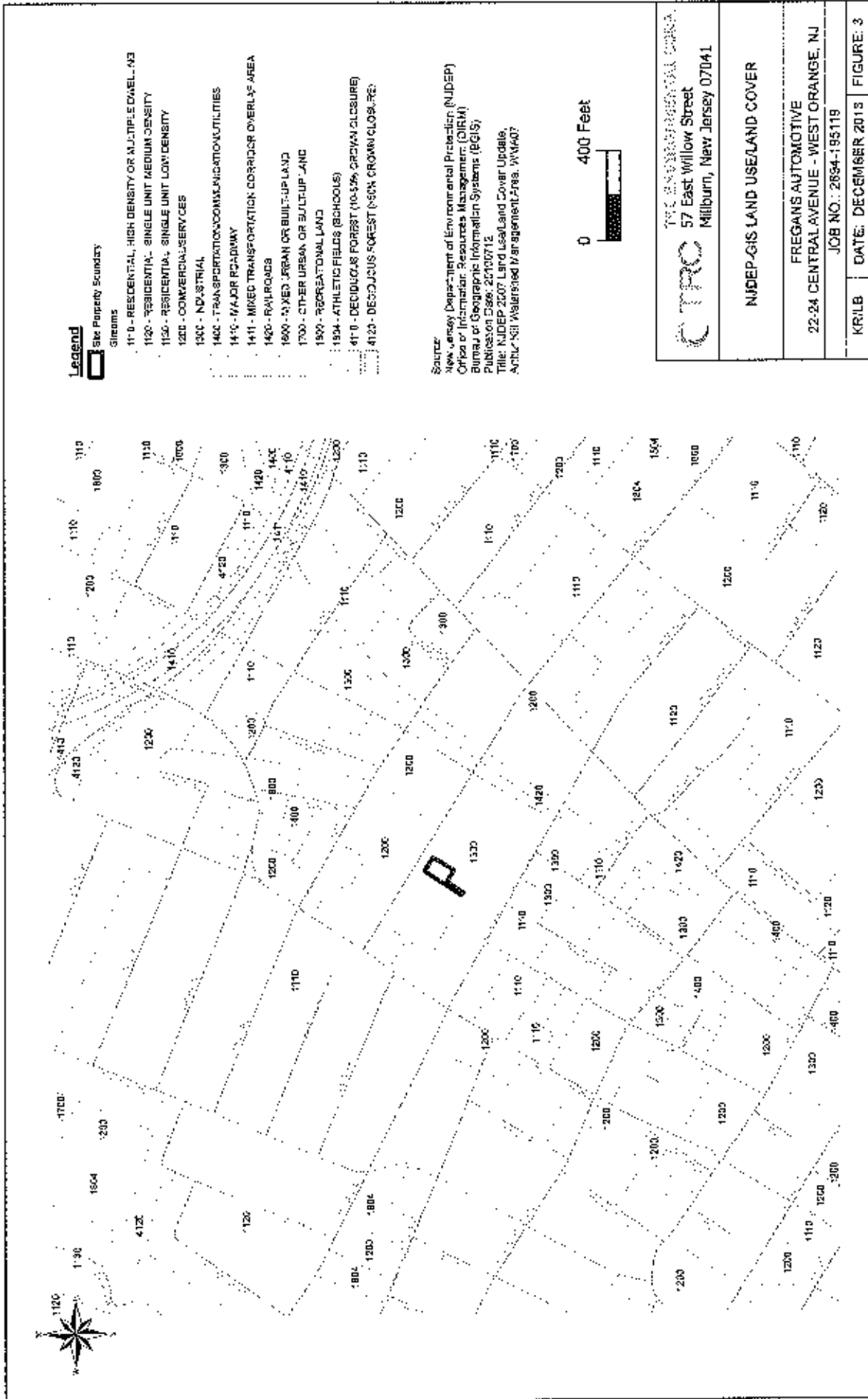


ORANGE, N.J. QUADRANGLE, 1955
PHOTOREVISED 1981
7.5 MINUTE SERIES (Topographic)

40° 46.21'N, 74° 14.69'W (NAD83/WGS84)
CONTOUR INTERVAL 20 FEET



57 East Willow Street Millburn, New Jersey 07041		
SITE LOCATION		
FREGAN'S AUTOMOTIVE - WEST ORANGE, NEW JERSEY		
JOB NO. 2894-152776		
KR/ODL	DATE: DECEMBER 2013	FIGURE: 1



Legend

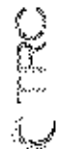


Sitemaps

- 1110 - RESIDENTIAL HIGH DENSITY OR MULTIPLE DWELLING
- 1120 - RESIDENTIAL SINGLE UNIT MEDIUM DENSITY
- 1130 - RESIDENTIAL SINGLE UNIT LOW DENSITY
- 1200 - COMMERCIAL SERVICES
- 1300 - INDUSTRIAL
- 1400 - TRANSPORTATION/COMMUNICATION UTILITIES
- 1410 - MAJOR ROADWAY
- 1411 - MIXED TRANSPORTATION CORRIDOR OVERLAY AREA
- 1420 - RAILROADS
- 1600 - MIXED URBAN OR BUILT-UP LAND
- 1700 - OTHER URBAN OR BUILT-UP LAND
- 1900 - RECREATIONAL LAND
- 1934 - ATHLETIC FIELDS (SCHOOLS)
- 4110 - DECIDUOUS FOREST (10-50% CROWN CLOSURE)
- 4120 - DECIDUOUS FOREST (50% CROWN CLOSURE)

Source:
New Jersey Department of Environmental Protection (NJDEP)
Office of Information Resources Management (OIRM)
Bureau of Geographic Information Systems (BGIS)
Publication Date: 2/10/2013
Title: NJDEP 2007 Land Use/Land Cover Update
Author: NJDEP Watershed Management Area, WMA07

0 400 Feet



THE ENVIRONMENTAL GROUP
57 East Willow Street
Millburn, New Jersey 07041

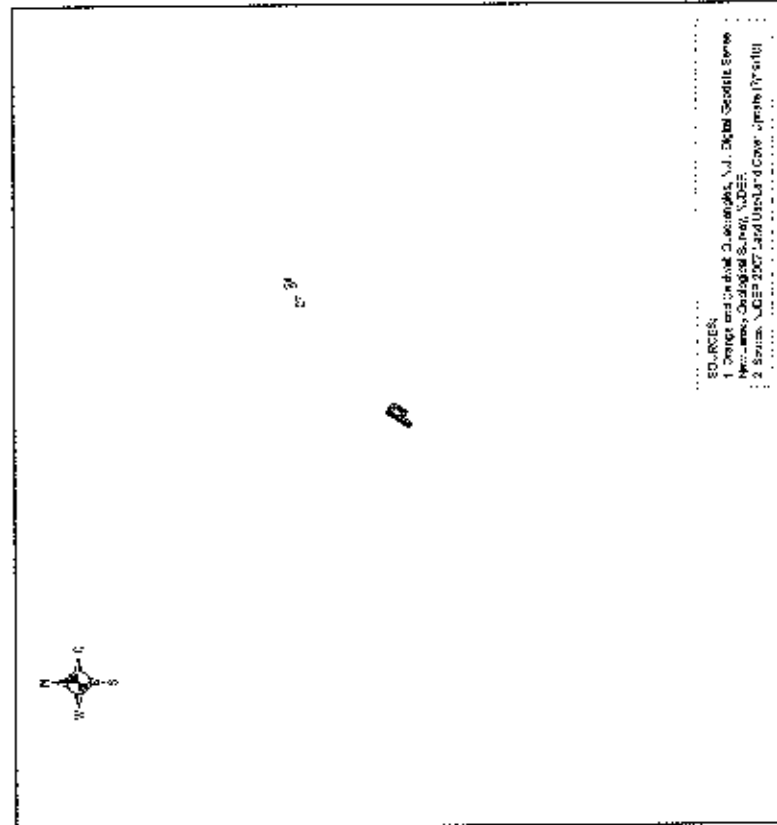
NJDEP-GIS LAND USE/LAND COVER

FREGANS AUTOMOTIVE

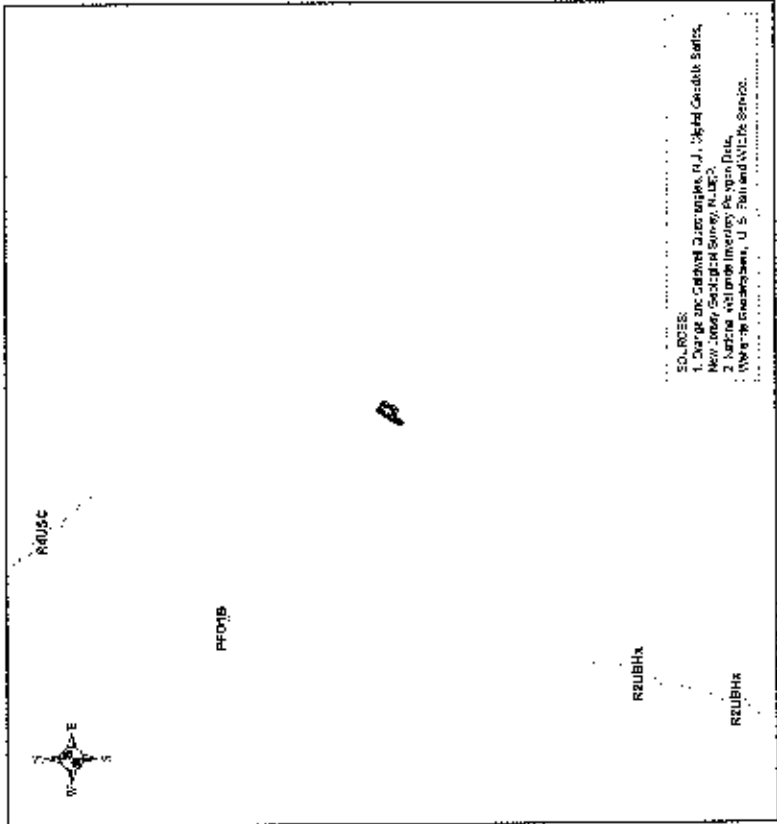
22-24 CENTRAL AVENUE - WEST ORANGE, NJ

JOB NO.: 2634-195119

KR/LB DATE: DECEMBER 2013 FIGURE: 3



NJDEP FRESH WATER WETLANDS MAP



NATIONAL WETLANDS MAP

PROB - Freshwater Forest/Shrub Wetland
 R2UBHx - Riverine
 R4USC - Riverine

CITRC
 57 East Willow Street
 Millburn, New Jersey 07041

**NJDEP AND NATIONAL FRESH WATER
 WETLANDS MAPS**

FREGANS AUTOMOTIVE
 22-24 CENTRAL AVENUE - WEST ORANGE, NJ

JOB NO.: 2884-195119
DATE: DECEMBER 2013

FIGURE: 4

[illegible][illegible]

Year	1995	2000	2005	2010	2015	2020
Population (millions)	1.2	1.5	1.8	2.1	2.4	2.7
GDP (billions of dollars)	0.5	1.0	1.5	2.0	2.5	3.0
Life expectancy (years)	55	60	65	70	75	80

1. $2x^2 + 3x - 5$	2. $4x^2 - 7x + 2$
3. $x^2 - 6x + 9$	4. $3x^2 + 8x - 4$
5. $x^2 + 5x + 6$	6. $2x^2 - 9x + 4$
7. $x^2 - 10x + 25$	8. $5x^2 + 12x - 7$
9. $x^2 + 7x + 12$	10. $4x^2 - 11x + 6$
11. $x^2 - 8x + 16$	12. $3x^2 + 5x - 2$
13. $x^2 + 9x + 14$	14. $2x^2 - 13x + 7$
15. $x^2 - 12x + 36$	16. $6x^2 + 15x - 9$
17. $x^2 + 11x + 18$	18. $4x^2 - 14x + 9$
19. $x^2 - 14x + 49$	20. $5x^2 + 18x - 11$
21. $x^2 + 13x + 20$	22. $3x^2 - 17x + 12$
23. $x^2 - 16x + 64$	24. $7x^2 + 22x - 15$
25. $x^2 + 15x + 24$	26. $4x^2 - 19x + 10$
27. $x^2 - 18x + 81$	28. $6x^2 + 25x - 16$
29. $x^2 + 17x + 26$	30. $5x^2 - 20x + 15$
31. $x^2 - 20x + 100$	32. $8x^2 + 27x - 20$
33. $x^2 + 19x + 30$	34. $4x^2 - 21x + 11$
35. $x^2 - 22x + 121$	36. $9x^2 + 30x - 21$
37. $x^2 + 21x + 32$	38. $5x^2 - 24x + 16$
39. $x^2 - 24x + 144$	40. $7x^2 + 32x - 25$
41. $x^2 + 23x + 36$	42. $6x^2 - 29x + 18$
43. $x^2 - 26x + 169$	44. $8x^2 + 33x - 24$
45. $x^2 + 25x + 40$	46. $5x^2 - 27x + 18$
47. $x^2 - 28x + 196$	48. $9x^2 + 36x - 27$
49. $x^2 + 27x + 48$	50. $6x^2 - 31x + 20$
51. $x^2 - 30x + 225$	52. $7x^2 + 37x - 30$
53. $x^2 + 29x + 50$	54. $4x^2 - 25x + 14$
55. $x^2 - 32x + 256$	56. $10x^2 + 40x - 30$
57. $x^2 + 31x + 56$	58. $5x^2 - 33x + 22$
59. $x^2 - 34x + 324$	60. $8x^2 + 41x - 36$
61. $x^2 + 33x + 60$	62. $6x^2 - 35x + 24$
63. $x^2 - 36x + 361$	64. $9x^2 + 42x - 36$
65. $x^2 + 35x + 66$	66. $7x^2 - 39x + 28$
67. $x^2 - 38x + 400$	68. $11x^2 + 44x - 40$
69. $x^2 + 37x + 70$	70. $6x^2 - 41x + 30$
71. $x^2 - 40x + 400$	72. $8x^2 + 45x - 40$
73. $x^2 + 39x + 78$	74. $7x^2 - 43x + 32$
75. $x^2 - 42x + 441$	76. $12x^2 + 48x - 48$
77. $x^2 + 41x + 80$	78. $8x^2 - 45x + 32$
79. $x^2 - 44x + 484$	80. $9x^2 + 50x - 50$
81. $x^2 + 43x + 84$	82. $10x^2 - 47x + 36$
83. $x^2 - 46x + 529$	84. $11x^2 + 52x - 50$
85. $x^2 + 45x + 88$	86. $12x^2 - 49x + 40$
87. $x^2 - 48x + 576$	88. $13x^2 + 54x - 55$
89. $x^2 + 47x + 90$	90. $14x^2 - 51x + 42$
91. $x^2 - 50x + 625$	92. $15x^2 + 57x - 60$
93. $x^2 + 49x + 96$	94. $16x^2 - 53x + 48$
95. $x^2 - 52x + 729$	96. $17x^2 + 60x - 65$
97. $x^2 + 51x + 100$	98. $18x^2 - 55x + 50$
99. $x^2 - 54x + 810$	100. $19x^2 + 63x - 70$
101. $x^2 + 53x + 105$	102. $20x^2 - 59x + 56$
103. $x^2 - 56x + 900$	104. $21x^2 + 66x - 75$
105. $x^2 + 55x + 110$	106. $22x^2 - 61x + 60$
107. $x^2 - 58x + 1024$	108. $23x^2 + 70x - 80$
109. $x^2 + 57x + 116$	110. $24x^2 - 63x + 64$
111. $x^2 - 60x + 1100$	112. $25x^2 + 75x - 90$
113. $x^2 + 59x + 120$	114. $26x^2 - 65x + 70$
115. $x^2 - 62x + 1296$	116. $27x^2 + 80x - 100$
117. $x^2 + 61x + 126$	118. $28x^2 - 67x + 78$
119. $x^2 - 64x + 1280$	120. $29x^2 + 85x - 110$
121. $x^2 + 63x + 130$	122. $30x^2 - 69x + 84$
123. $x^2 - 66x + 1369$	124. $31x^2 + 90x - 120$
125. $x^2 + 65x + 136$	126. $32x^2 - 71x + 90$
127. $x^2 - 68x + 1444$	128. $33x^2 + 96x - 130$
129. $x^2 + 67x + 140$	129. $34x^2 - 73x + 98$
131. $x^2 - 70x + 1500$	130. $35x^2 + 100x - 140$
132. $x^2 + 69x + 144$	131. $36x^2 - 75x + 105$
133. $x^2 - 72x + 1584$	132. $37x^2 + 105x$

1

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0.666	1	10.0
0.666	1	20.0
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FOURER
932X 4000
HOC6664

[illegible]

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N	Δt	Δx	$\Delta t/\Delta x$
10	0.001	0.001	1.0
20	0.0005	0.0005	1.0
40	0.00025	0.00025	1.0
80	0.000125	0.000125	1.0
160	6.25e-5	6.25e-5	1.0
320	3.125e-5	3.125e-5	1.0
640	1.5625e-5	1.5625e-5	1.0
1280	7.8125e-6	7.8125e-6	1.0
2560	3.90625e-6	3.90625e-6	1.0
5120	1.953125e-6	1.953125e-6	1.0
10240	9.765625e-7	9.765625e-7	1.0
20480	4.8828125e-7	4.8828125e-7	1.0
40960	2.44140625e-7	2.44140625e-7	1.0
81920	1.220703125e-7	1.220703125e-7	1.0
163840	6.103515625e-8	6.103515625e-8	1.0
327680	3.0517578125e-8	3.0517578125e-8	1.0
655360	1.52587890625e-8	1.52587890625e-8	1.0
1310720	7.62939453125e-9	7.62939453125e-9	1.0
2621440	3.814697265625e-9	3.814697265625e-9	1.0
5242880	1.9073486328125e-9	1.9073486328125e-9	1.0
10485760	9.5367431640625e-10	9.5367431640625e-10	1.0
20971520	4.76837158203125e-10	4.76837158203125e-10	1.0
41943040	2.384185791015625e-10	2.384185791015625e-10	1.0
83886080	1.1920928955078125e-10	1.1920928955078125e-10	1.0
167772160	5.9604644775390625e-11	5.9604644775390625e-11	1.0
335544320	2.98023223876953125e-11	2.98023223876953125e-11	1.0
671088640	1.490116119384765625e-11	1.490116119384765625e-11	1.0
1342177280	7.450580596923828125e-12	7.450580596923828125e-12	1.0
2684354560	3.7252902984619140625e-12	3.7252902984619140625e-12	1.0
5368709120	1.86264514923095703125e-12	1.86264514923095703125e-12	1.0
10737418240	9.31322574615478515625e-13	9.31322574615478515625e-13	1.0
21474836480	4.656612873077392578125e-13	4.656612873077392578125e-13	1.0
42949672960	2.3283064365386962890625e-13	2.3283064365386962890625e-13	1.0
85899345920	1.16415321826934814453125e-13	1.16415321826934814453125e-13	1.0
171798691840	5.82076609134674072265625e-14	5.82076609134674072265625e-14	1.0
343597383680	2.910383045673370361328125e-14	2.910383045673370361328125e-14	1.0
687194767360	1.4551915228366851806640625e-14	1.4551915228366851806640625e-14	1.0
1374389534720	7.2759576141834259033203125e-15	7.2759576141834259033203125e-15	1.0
2748779069440	3.63797880709171295166015625e-15	3.63797880709171295166015625e-15	1.0
5497558138880	1.818989403545856475830078125e-15	1.818989403545856475830078125e-15	1.0
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TABLE 2. *U.S. and International Data: Openness to Trade in U.S. Exports, Imports, and Services and U.S. Exports, Imports, and Services as a Percent of Gross Domestic Product, 1970-2000*

	1970	1980	1990	2000
U.S. Exports	10.1	14.1	17.1	20.1
U.S. Imports	10.1	14.1	17.1	20.1
U.S. Services	10.1	14.1	17.1	20.1
U.S. Exports as % of GDP	10.1	14.1	17.1	20.1
U.S. Imports as % of GDP	10.1	14.1	17.1	20.1
U.S. Services as % of GDP	10.1	14.1	17.1	20.1

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *U.S. International Trade in Goods and Services*, Washington, D.C., 2001.

[illegible]

RESERVED	
GILBERT ROAD	
2204 CENTRAL AVENUE	

10 FT.
DRAINAGE SLOPE

FILE 202506121506\JH00000001 AND 202506121506\JH00000002 DATE 12/31/2025 20081204

[illegible]

Table I
Soil and Ground Water Sample Summary
Former Fragans Automotive - West Orange, New Jersey
Page 1 of 10

Sample Location	Sample Depth (Feet Below Surface)	Sample Dates	Sample Parameter/ Method	Container Type	Sampling Method
2(2)	8.0-8.5	08/03/12	Non-Fractionated EPH (BNJEPCAT1)	1 x 300 mL glass	Direct Push
3(1)	0.0-0.5	08/03/12	Fractionated EPH (BNJEPCAT1), BNs+15 (B270), PCBs (B082), TAL Metals (SW840)	1 x 300 mL glass	Direct Push
	3.5-4.0	08/03/12	VOCS+10 (B260), Mercury (B010)	1 x 300 mL glass	Direct Push
	5.5-6.0	11/28/12	Mercury (B010)	1 x 300 mL glass	Direct Push
	3.0-3.5	08/03/12	PAHs, Metals	1 x 300 mL glass	Direct Push
5(1)	3.0-3.5	08/03/12	PAHs, Metals	1 x 300 mL glass	Direct Push
5(2)	1.5-2.0	08/03/12	PAHs, Metals	1 x 300 mL glass	Direct Push
5(3)	1.5-2.0	08/03/12	PAHs, Metals	1 x 300 mL glass	Direct Push
5(4)	4.0-4.5	08/03/12	Non-Fractionated EPH (BNJEPCAT1), TAL/TCL+30	1 x 300 mL glass	Direct Push
6(1)	0.0-0.5	08/03/12	Fractionated EPH (BNJEPCAT1), TAL Metals (B010), VOCS+10 (B260), BNs+15 (B270), PCBs (B082)	1 x 300 mL glass	Direct Push
11(1)	1.5-2.0	08/03/12	Fractionated EPH (BNJEPCAT1), TAL/TCL+30	1 x 300 mL glass	Direct Push
	5.5-6.0	11/28/12	PCBs (B082)	1 x 300 mL glass	Direct Push
TW-1	10-15	08/03/12	TAL/TCL+30	1 x 250 mL plastic	Dedicated Teflon Bailor
TW-2	10-15	08/03/12	TAL/TCL+30	1 x 250 mL plastic	Dedicated Teflon Bailor
TW-3	10-15	08/03/12	TAL/TCL+30	1 x 250 mL plastic	Dedicated Teflon Bailor
TW-4	10-15	08/03/12	TAL/TCL+30	1 x 250 mL plastic	Dedicated Teflon Bailor
		11/28/12	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor
TW-5	10-15	08/03/12	TAL/TCL+30	1 x 250 mL plastic	Dedicated Teflon Bailor
TW-6	10-15	11/28/12	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor
		11/28/12	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor
TW-7	10-15	11/28/12	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor
MW-1	10-15	08/16/13	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor
MW-2	10-16	08/16/13	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor
MW-3	10-17	08/16/13	VOCS+15 (B260), Mercury (B010)	1 x 250 mL plastic	Dedicated Teflon Bailor

VOCS = Volatile Organic Compounds
 BNs = Base Neutrals
 LFPS = Low Flow Purge and Sample

Table II
Total Non-Fractionated Extractable Petroleum Hydrocarbons (EPH) in Soil
Fregans Automotive - West Orange, New Jersey
 Page 2 of 10

Sample No./Depth:		21218.0-8.5	54114.0-4.6
Date Sampled:		08/09/12	08/03/12
Lab Sample No.:		JB12314-4	JB12814-3
Laboratory:		Absoltest	Aqualab
EPH CATEGORY 1			
EPH (ppm)	EPH RSL	EPH NPL	EPH Product Determination
EPH (C9-C28)			15.4
EPH (C29-C40)			22.2
Total EPH (C9-C40)	5100	54000	8000
			37.6
			48.7
			76.8
			129

EPH RSL = NJDEP's Extractable Petroleum Hydrocarbon Residential Screening Level.
 EPH NPL = NJDEP's Extractable Petroleum Hydrocarbon Non-Residential Screening Level.

Table III
Total Fractionated Extractable Petroleum Hydrocarbons (EPH) in Soil
Fregans Automotive - West Orange, New Jersey

TRC Sample No.:		S(1)D-0-0.5	6(1)D-0-5	11(1)A-2-0
Date Sampled:		08/03/12	08/03/12	08/03/12
Lab Sample No.:		JB12814-6	JB12814-7	JB12814-5
Laboratory:		Accutest	Accutest	Accutest
Equivalent Carbon Range				
Aliphatics	EO9-EC12	ND	ND	ND
	EC12-EC18	ND	ND	24.8
	EC18-EC21	ND	142	55
	EC21-EC40	\$2.9	1850	256
Aromatics	EC10-EC12	ND	ND	ND
	EC12-EC18	ND	ND	ND
	EC18-EC21	ND	51.5	13
	EC21-EC38	28.4	561	89.8
Total Concentration		111.3	2404.5	439.4
Calculated EPH SRC		68,000	68,000	71,000
Allowable EPH SRC		17,000	17,000	17,000
Above/Below Allowable EPH SRC (i.e., PASS or FAIL)		PASS	PASS	PASS

All concentrations given in parts per million (ppm)
 SRC = NJDEP Soil Remediation Criterion
 Allowable EPH SRC = Accounts for residual product
 ND = Not Detected
 — * no calculation necessary due to non detect

Table IV
Volatile Organic Compounds (VOCs) in Soil
Fregans Automotive - West Orange, NJ
 Page 4 of 10

	TRC Sample No./Depth:	S(1)/S.5-4.0	S(4)/M.0-4.5	B(1)/O.0-0.5	11(1)/1.5-2.0
	Date Sampled:	08/03/12	08/03/12	08/03/12	08/03/12
	Lab Sample No.:	JB12914-9R	JB12914-3A	JB12914-7R	JB12914-6R
	Laboratory:	Accutest	Accutest	Accutest	Accutest
VOCs (ppm)	RDCSRS	NRDCSRS			
Acetone	70000	—	ND	ND	ND
Benzene	2	5	ND	ND	ND
Bromodichloromethane	1	3	ND	ND	ND
Bromoform	51	280	ND	ND	ND
Bromomethane	25	59	ND	ND	ND
2-Butanone (MEK)	3100	44000	ND	ND	ND
Carbon disulfide	7800	110000	ND	ND	ND
Carbon tetrachloride	0.6	2	ND	ND	ND
Chlorobenzene	510	7400	ND	ND	ND
Chloroethane	220	1100	ND	ND	ND
Chloroform	0.6	2	ND	ND	ND
Chloromethane	4	12	ND	ND	ND
Dibromochloromethane	3	8	ND	ND	ND
1,1-Dichloroethane	8	24	ND	ND	ND
1,2-Dichloroethane	0.9	3	ND	ND	ND
1,1-Dichloroethane	11	130	ND	ND	ND
cis-1,2-Dichloroethane	230	560	ND	ND	ND
trans-1,2-Dichloroethane	300	720	ND	ND	ND
1,2-Dichloropropane	2	5	ND	ND	ND
cis-1,3-Dichloropropene	total = 2	total = 7	0.004 J	ND	ND
trans-1,3-Dichloropropene			ND	ND	ND
Ethylbenzene	7800	110000	ND	ND	1.07
2-Hexanone	—	—	ND	ND	ND
4-Methyl-2-pentanone (MIBK)	—	—	ND	ND	ND
Methylene chloride	34	87	ND	0.0063 J	0.004 J
Styrene	50	250	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	3	ND	ND	ND
Tetrachloroethene	2	5	0.0014 J	ND	0.0008 J
Toluene	6300	91000	ND	ND	1.43
1,1,1-Trichloroethane	290	4200	ND	ND	ND
1,1,2-Trichloroethane	2	6	ND	ND	ND
Trichloroethylene	7	20	0.056	ND	0.0039 J
Vinyl chloride	0.7	2	ND	ND	ND
Xylenes (total)	12000	170000	ND	ND	11.2
Total Targeted VOCs			0.061	0.0063	14.59
Total TICs			ND	ND	ND
Total VOCs			0.081	0.0083	14.59

ND = Not Detected; NA = Not Analyzed.

RDCSRS = NJDEP's Residential Direct Contact Soil Remediation Standard

NRDCSRS = NJDEP's Non-Residential Direct Contact Soil Remediation Standard

DIGWSL = NJDEP's Default Impact to Ground Water Screening Level

0.04 indicates concentration above most stringent criteria

Table V
Base Neutrals (BNs) in Soil
Fregans Automotive - West Orange, NJ
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TRC Sample No./Depth:	3(1)/0-0.5	5(4)/4.0-4.5	6(1)/0-0.5
Date Sampled:	08/03/12	08/03/12	08/03/12
Lab Sample No.:	JB12914-BR	JB12914-3A	JB12914-7R
Laboratory:	Accutest	Accutest	Accutest

BNE (ppm)	RDGSRs	NRDGSRS			
Acenaphthene	3400	37000	0.081	ND	0.050
Acenaphthylene	—	350000	0.035	ND	0.031
Anthracene	17000	50000	0.29	0.012 J	0.16
Benzo(a)anthracene	0.6	2	0.63	0.036	0.45
Benzo(b)fluoranthene	0.2	0.2	0.48	0.032	0.63
Benzo(g,h,i)perylene	0.6	2	0.47	0.041	0.65
Benzo(k)fluoranthene	380000	30000	0.39	0.031	0.85
Benzo(k)fluoranthene	8	23	0.34	0.020 J	0.6
4-Bromophenyl phenyl ether	—	—	ND	ND	ND
Butylbenzyl phthalate	1280	14000	ND	ND	0.34
2-Chloronaphthalene	—	—	ND	ND	ND
4-Chloronaphthalene	—	—	ND	ND	ND
Carbazole	24	86	0.12	ND	0.098
Chrysene	62	230	0.58	0.045	0.62
bis(2-Chloroethoxy)methane	—	—	ND	ND	ND
bis(2-Chloroethyl)ether	0.4	2	ND	ND	ND
bis(2-Chloroisopropyl)ether	23	87	ND	ND	ND
4-Chlorophenyl phenyl ether	—	—	ND	ND	ND
1,2-Dichlorobenzene	5300	59000	NA	NA	NA
1,3-Dichlorobenzene	5300	59000	NA	NA	NA
1,4-Dichlorobenzene	5	13	NA	NA	NA
2,4-Dichlorobenzene	total = 0.7	total = 3	ND	ND	ND
2,6-Dichlorobenzene	—	—	ND	ND	ND
3,3'-Dichlorobenzidine	7	4	ND	ND	ND
Dibenz(a,h)anthracene	0.2	0.2	0.13	ND	0.26
Dibenzofuran	—	—	0.048 J	ND	0.035 J
Di-n-butyl phthalate	8100	88000	ND	ND	0.094
Di-n-octyl phthalate	2400	27000	ND	ND	0.12
Diethyl phthalate	49000	550000	ND	ND	ND
Dimethyl phthalate	—	—	ND	ND	0.18
di(2-Ethylhexyl)phthalate	36	140	0.083 J	ND	1.95
Fluoranthene	2300	24000	1.33	0.083	1.21
Fluorene	2300	24000	0.084	ND	0.016
Hexachlorobenzene	0.3	1	ND	ND	ND
Hexachlorobutadiene	6	25	ND	ND	ND
Hexachlorocyclopentadiene	45	190	ND	ND	ND
Hexachlorocyclopentadiene	35	140	ND	ND	ND
Hexachlorocyclopentadiene	0.8	2	0.32	0.021 J	0.84
Indeno(1,2,3-cd)pyrene	510	2000	ND	ND	ND
Isophthalic acid	230	2400	ND	ND	ND
2-Methylnaphthalene	39	23000	ND	ND	ND
2-Nitroaniline	—	—	ND	ND	ND
3-Nitroaniline	—	—	ND	ND	ND
4-Nitroaniline	—	—	ND	ND	ND
Naphthalene	6	17	0.043	ND	0.025 J
Nitrobenzene	37	340	ND	ND	ND
N-Nitrosodi-n-propylamine	0.2	0.3	ND	ND	ND
N-Nitrosodiphenylamine	99	390	ND	ND	ND
Phenanthrene	—	380000	1.03	0.071	0.74
Pyrene	1700	18000	0.91	0.071	0.89
1,2,4-Trichlorobenzene	73	820	ND	ND	ND
Total Targeted BNEs			3.94	0.25	8.21
Total TICs			1.37	0.12	12.28 J
Total BNEs			3.94	1.88	18.49

ND = Not Detected; NA = Not Analyzed.

RDGSRs = NJDEP's Residential Direct Contact Soil Remediation Standard

NRDGSRS = NJDEP's Non-Residential Direct Contact Soil Remediation Standard

DIGWSL = NJDEP's Default Impact to Ground Water Screening Level

Bold indicates concentration above most stringent criteria

J = Estimated concentration

Table VI
Base Neutrals (BNs) and Acid Extractables (AEs) in Soil
Fregan's Automotive - West Orange, NJ
 Page 6 of 10

TRC Sample No./Depth: 11C101.5-2.0
 Date Sampled: 08/05/12
 Lab Sample No.: J012014-04
 Laboratory: Acculab

BNs & AEs (µg/g)	RDCSRS	NRDCSRS	Acculab
Acephenanthrene	3400	37000	0.040
Acenaphthylene	—	100000	0.005
Anthracene	17000	30000	0.12
Benz[a]anthracene	0.0	2	0.41
Benz[a]pyrene	0.2	0.2	0.38
Benz[b]fluoranthene	0.4	2	0.52
Benz[b]fluoranthene	30000	30000	0.3
Benz[b]fluoranthene	0	23	0.15
4-Ethylphenyl phenyl ether	—	—	ND
Bis(2-ethylphenyl) phthalate	1200	14000	ND
2-Chlorophthalate	—	—	ND
4-Chlorophthalate	—	—	ND
Carbazole	24	90	0.073
Chrysene	82	100	0.38
1,2-Dichlorobenzene	—	—	ND
1,2-Dichlorobenzene	0.4	2	ND
1,2-Dichlorobenzene	83	67	ND
4-Chlorophenyl phenyl ether	—	—	ND
1,2-Dichlorophenyl ether	—	—	ND
1,2-Dichlorobenzene	3300	60000	NA
1,3-Dichlorobenzene	3700	60000	NA
1,4-Dichlorobenzene	5	13	NA
2,4-Dinitrophenol	total = 0.7	total = 3	ND
2,6-Dinitrophenol	—	—	ND
3,3-Dichlorobenzene	1	4	ND
Chlorobenzene	0.2	0.2	0.071
Chlorobenzene	—	—	0.025
Di-n-butyl phthalate	6700	60000	0.037
Di-n-octyl phthalate	2400	27000	ND
Diethyl phthalate	49000	500000	ND
Dimethyl phthalate	—	—	ND
1,2-Ethylphenyl phthalate	35	100	ND
Fluoranthene	2300	24000	0.74
Fluorene	8300	24000	0.045
1-Methylbenzene	0.3	1	ND
1-Methylbenzene	5	25	ND
1-Methylbenzene	45	110	ND
1-Methylbenzene	35	140	ND
Indene(1,2,3-cd)pyrene	0.6	2	ND
Isophthalate	510	2000	ND
2-Methylphenyl phthalate	230	2400	ND
2-Nitrophenol	39	23000	ND
3-Nitrophenol	—	—	ND
4-Nitrophenol	—	—	ND
1-Nitrophenol	8	17	0.030
1-Nitrophenol	37	340	ND
1-Nitrophenol	0.2	0.3	ND
1-Nitrophenol	99	390	ND
Phenanthrene	—	30000	0.54
Pyrene	1700	18000	0.62
1,2,4-Trichlorobenzene	73	820	ND
2-Chlorophenol	260	2200	ND
4-Chloro-3-methyl phenol	—	—	ND
2,4-Dichlorophenol	160	2100	ND
2,4-Dimethylphenol	1200	14000	ND
2,4-Dichlorophenol	120	1400	60
4,6-Dinitrophenol	5	68	ND
2-Methylphenol	310	3400	ND
3-Methylphenol	—	—	ND
4-Methylphenol	37	340	ND
2-Nitrophenol	—	—	ND
4-Nitrophenol	—	—	ND
2-Nitrophenol	3	10	ND
Phenol	18000	210000	ND
2,4,5-Trichlorophenol	6100	68000	ND
2,4,6-Trichlorophenol	79	74	ND
Total Unresolved BNs & AEs	—	—	4.57
Total TIC ₁	—	—	4.38
Total BNs & AEs	—	—	8.95

ND = Not Detected, NA = Not Analyzed.

RDCSRS = NJDEP's Residential Direct Contact Soil Remediation Standard

NRDCSRS = NJDEP's Non-Residential Direct Contact Soil Remediation Standard

DIGWSL = NJDEP's Default Impact to Ground Water Screening Level

0.01 indicates concentration above most significant criteria

J = Estimated concentration

Table VII
Polycyclic Aromatic Hydrocarbons (PAHs) in Soil
Fragans Automotive - West Orange, New Jersey
Page 7 of 10

TRC Sample No./Depth:		S113/0.3-5		S121/1.5-2.0		S137/1.5-2.0	
Date Sampled:		08/03/12		08/03/12		08/03/12	
Lab Sample No.:		JB12914-5		JB12914-2		JB12914-1	
Laboratory:		Acculab		Acculab		Acculab	
PAHs (ppm)	ROCSRS	NRDCSRS	ND	ND	ND	ND	0.025
Acenaphthene	3400	37000	ND	ND	ND	0.014 J	0.25
Acenaphthylene	—	300000	ND	ND	0.023 J	0.25	0.58
Anthracene	17000	30000	ND	ND	0.081	0.58	0.55
Benz[a]anthracene	0.6	2	0.07	0.07	0.08	0.50	0.36
Benz[a]pyrene	0.2	0.2	0.073	0.085	0.058	0.36	0.8
Benz[b]fluoranthene	0.6	2	0.066	0.064	0.046	0.39	0.12
Benz[g,h,i]perylene	39000	30000	0.054	0.084	0.019 J	1.56	0.51
Benz[k]fluoranthene	6	23	0.073	0.019 J	0.12	1.56	0.33
Chrysene	62	230	0.024 J	0.19	0.051	0.33	1.32
Dibenz[a,h]anthracene	0.2	0.2	0.076	0.051	0.029 J	1.32	1.5
Fluoranthene	2300	24000	ND	ND	0.051	0.33	1.32
Indeno[1,2,3-cd]pyrene	0.6	2	0.059	0.051	0.029 J	1.32	1.5
Naphthalene	6	17	ND	ND	0.029 J	1.32	1.5
Phenanthrene	—	300000	ND	0.12	0.16	1.5	1.5
Pyrene	1700	14000	0.075	0.16	0.16	1.5	1.5

ND = Not Detected; NA = Not Analyzed.

ROCSRS = NJDEP's Residential Direct Contact Soil Remediation Standard

NRDCSRS = NJDEP's Non-Residential Direct Contact Soil Remediation Standard

DIGWBL = NJDEP's Default Impact to Ground Water Screening Level

Bold indicates concentration above most stringent criteria

J = Estimated concentration

**Table VII:
Polychlorinated Biphenyls (PCBs) in Soil
Fregan's Automotive - West Orange, NJ**

Page 8 of 10

TRC Sample No./Depth:		3(1)0.0-0.5	5(4)0.4-0.5	6(1)0.0-0.5	11(3)1.5-2.0	11(5)5.5-6.0
Core Sampled:		08/03/12	08/03/12	08/03/12	08/03/12	11/08/12
Lab Sample No.:		JB12914-8R	JB12914-3A	JB12914-7R	JB12914-6A	JB20823-3
Laboratory:		Acculab	Acculab	Acculab	Acculab	Acculab
PCBs (ppm)	RDCSRS	NRDCSRS				
Acculab 1016	—	—	ND	ND	ND	ND
Acculab 1221	—	—	ND	ND	ND	ND
Acculab 1232	—	—	ND	ND	ND	ND
Acculab 1242	—	—	ND	ND	ND	ND
Acculab 1248	—	—	ND	ND	ND	ND
Acculab 1254	—	—	ND	ND	ND	ND
Acculab 1260	—	—	ND	ND	ND	ND
Acculab 1268	—	—	ND	ND	ND	ND
Acculab 1282	—	—	ND	ND	ND	ND
Total PCBs	0.2	1	ND	ND	ND	0.53

ND = Not Detected; NA = Not Analyzed

RDCSRS = NJDEP's Residential Direct Contact Soil Remediation Standard

NRDCSRS = NJDEP's Non-Residential Direct Contact Soil Remediation Standard

DIGWSL = NJDEP's Default Impact to Ground Water Screening Levels

NA indicates concentration above most stringent criteria

Table IX
Metals in Soil
Fregan's Automotive - West Orange, NJ
 Page 9 of 10

TRC Sample No./Depth:		3(1)0.0-0.5	3(1)5.5-4.0	3(1)6.5-6.0	5(1)3.0-3.5	5(2)1.5-2.0	5(2)1.5-2.0	5(4)4.0-4.5	5(1)0.0-0.5
Date Sampled:		08/03/12	08/03/12	11/03/12	08/03/12	08/03/12	08/03/12	08/03/12	08/03/12
Lab Sample No.:		JB12814-8R	JB12814-9	J320823-1	JB12814-5	J312914-2	JB12814-1	JB12814-3A	JB12814-7R
Laboratory:		Acculab	Acculab	Acculab	Acculab	Acculab	Acculab	Acculab	Acculab
Metals (ppm)	ROCSAS	NRCSRS							
Aluminum	78000	450	5990	NA	NA	7710	6850	3880	9120
Antimony	31		<2.4	NA	NA	<2.5	<2.5	<2.5	7.6
Arsenic	78	19	3.8	NA	NA	9.3	8.5	7.7	14.3
Barium	16000	59000	103	NA	NA	64.5	34.4	83.3	1110
Beryllium	15	140	0.37	NA	NA	0.93	0.38	0.38	0.31
Cadmium	78	79	<0.50	NA	NA	2.5	<0.54	<0.59	10.7
Calcium	20		22300	NA	NA	3080	3090	4180	22000
Hexavalent Chromium	20	20	NA	NA	NA	NA	NA	NA	NA
Chromium	16000	590	14.5	NA	NA	16.5	12.5	13	128
Cobalt	1500		<5.0	NA	NA	7.1	<6.4	8.2	15.4
Copper	3100	45000	99	NA	NA	343	247	329	443
Iron			<1700	NA	NA	48000	16700	22000	10900
Lead	400	800	275	NA	NA	342	189	1790	717
Magnesium			2390	NA	NA	770	1700	1020	5782
Manganese	11000	5900	167	NA	NA	282	136	151	713
Mercury	23	55	NA	162	9	14.1	22.8	5.5	2.3
Nickel	1500	23000	14.8	NA	NA	30.3	15.5	15.8	75.5
Potassium			<1200	NA	NA	<1200	<1300	<1200	1390
Selenium	290		<2.4	NA	NA	<2.3	<2.5	<2.3	<6.1
Silver	590	5700	<0.50	NA	NA	<0.58	<0.54	<0.58	<1.5
Sodium			<1200	NA	NA	<1200	<1300	<1200	1340
Thallium	5	79	<1.2	NA	NA	<1.2	<1.3	<1.2	<3.1
Vanadium	78	1100	18.4	NA	NA	18.7	19.4	18.8	34.9
Zinc	23000	119000	183	NA	NA	591	121	837	2120

Table X
Pesticides and Herbicides in Soil
Fregan's Automotive - West Orange, New Jersey
Page 10 of 10

		TRC Sample No./Depth:		51444-0-4.5		11(1)1-5-2.0	
		Data Sampled:		08/03/12		05/03/12	
		Lab Sample No.:		JB12014-3A		JB12014-6A	
		Laboratory:		Accutest		Accutest	
Pesticides & Herbicides (ppm)	RDCSRS	MEDCSRS					
Aldrin	0.04	0.2	ND				ND
alpha-BHC	0.1	0.5	ND				ND
beta-BHC	0.4	2	ND				ND
delta-BHC	—	—	ND				ND
gamma-BHC (Lindane)	0.4	2	ND				ND
Chlordane (alpha & gamma)	0.2	1	ND				ND
Dieldrin	0.04	0.2	ND				ND
4,4'-DDC	3	12	ND				ND
4,4'-DDE	2	9	ND				ND
4,4'-DDT	2	8	0.0024				ND
Endrin	23	346	ND				ND
Endosulfen sulfate	470	5800	ND				ND
Endrin aldehydes	—	—	ND				ND
Endosulfen-I & II	470	5800	ND				ND
Heptachlor	0.2	0.7	ND				ND
Heptachlor epoxides	0.07	0.3	ND				ND
Methoxychlor	390	5700	ND				ND
Toxaphene	0.5	3	ND				ND
Trichloro-n-xylene (a)	—	—	NA				NA
Decachlorobiphenyl (a)	—	—	NA				NA
2,4,5-T	—	—	NA				NA
2,4,5-TP (Silvex)	—	—	NA				NA
2,4-D	—	—	NA				NA

SAMPLING DATE: 9/10/12

Ground Water Sampling Measurements and Calculations
Weather: 80s Clear

Table XI

Site Name/Location: Firearms Automotive, West Orange, NJ Rev. 04/12

PRE-PURGE INFORMATION									
Well No. or Name	Total Depth (ft)	Depth To Water (ft)	Water Column (ft)	Multi-plier	Est. Purge Vol. (gal)	PID (ppm)	Depth to Prod. (ft)	Prod. Thick. (ft)	
TW-2	11:02	15:00	9.34	5.66	0.0	ND	ND	ND	
TW-1	11:03	15:00	9.76	5.24	0.0	ND	ND	ND	
TW-3	11:11	15:00	8.73	6.27	0.0	ND	ND	ND	
TW-4	11:14	15:00	9.41	5.59	0.0	ND	ND	ND	
TW-5	11:22	15:00	9.06	5.94	0.0	ND	ND	ND	

PURGING INFORMATION									
Well No. or Name	Pump Intake Depth (ft)	Pump On	Pump Off	Purge Rate (gpm)	Total Purge Vol. (gal)	Post-Purge DTW (ft)	Pump Type	Water Conditions (During Purging)	
TW-2	13	11:31				14.57	Peri		
TW-1	13.0	11:14				14.12	Peri		
TW-3	13.0	11:57				13.37	Peri		
TW-4	13.0	12:09				14.01	Peri		
TW-5	13.0	12:32				14.59	Peri		

SAMPLING INFORMATION									
Well No. or Name	80% Recov. (ft)	Depth To Water (ft)	Sample Time	Sample Method	Comments/Water Condition at Time of Sample				
TW-2	10.47		11:44	Bailer					
TW-1	10.81		11:23	Bailer					
TW-3	9.98		12:05	Bailer					
TW-4	10.63		12:20	Bailer					
TW-5	10.25		12:45	Bailer					

Total depth includes back-up height, if applicable.

Multiplier includes a factor of 3 to calculate the required volume of ground water to be removed from the well. 80% recovery is calculated by subtracting 80% of the water column height from the total depth (Total Depth - (0.80 x Water Column)).

PID (ppm) is 12.6 at 25°C, unless otherwise noted.

Analysis: Methods (EPA): Temp (ISM 2550 B); pH (ISM 4500-H-B); Cond (120); and SAL 2570-B; DO (ISM 4500-O-S); Salinity (ISM 2520 B); Turbidity (EPA 100.1); K₂S = conductivity corrected to 25°C.

Turbidity readings are after screening data measured with radial meter. TRC is not certified for New Jersey for this parameter.

*Sample method: bailer, submersible pump, peristaltic, etc.

Reviewed & Approved by:

Laboratory Manager or Designated Supervisor

PRE-PURGE					
Temp (°C)	pH (su)	K ₂ S (uS/cm)	Salinity (ppt)	ORP (mV)	D.O. (ppm)

POST-PURGE					
Temp (°C)	pH (su)	K ₂ S (uS/cm)	Salinity (ppt)	ORP (mV)	D.O. (ppm)

POST-SAMPLE					
Temp (°C)	pH (su)	K ₂ S (uS/cm)	Salinity (ppt)	ORP (mV)	D.O. (ppm)
24.26	7.91	0.265		-10	6.68
Not enough water for parameters					
20.10	6.80	0.41		-79	6.74
20.37	7.28	0.395		-107	6.04
Not enough water for parameters					

NJDEP Certification No. 07734

TRC Meter Numbers	TRC Job No.
pH: _____ Cond: _____ D.O.: _____	Name: _____ Serial No.: _____
ORP: _____	Rental Meter

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OF THE

3100 National Road, Suite 100, West Chester, OH 43081

PUMP-OUT INFORMATION										PUMP-IN INFORMATION										INSTAL. PUMP PARAMETERS										Notes
Well	Time	Total Depth to Pump [ft]	PID	Depth to Pump [ft]	Flow Rate [gpm]	Turns	Pump Status	Pump Start Time	Pump Stop Time	Flow Rate [gpm]	Total Pump Volume [gal]	Temp. [°C]	pH	Na	D.O.	Diss. Org. [mg/l]	Turb. [NTU]	Wet. Cond. [µS/cm]												
W1	14:46	16.52	NO	16.52	0.02	15.5	15.5	14:46	14:46	0.02	16.52	15.5	7.5	207	7.5	145	145	145	145											
W2	14:47	16.53	NO	16.53	0.02	15.5	15.5	14:47	14:47	0.02	16.53	15.5	7.5	207	7.5	145	145	145	145											
W3	14:48	16.54	NO	16.54	0.02	15.5	15.5	14:48	14:48	0.02	16.54	15.5	7.5	207	7.5	145	145	145	145											
W4	14:49	16.55	NO	16.55	0.02	15.5	15.5	14:49	14:49	0.02	16.55	15.5	7.5	207	7.5	145	145	145	145											
W5	14:50	16.56	NO	16.56	0.02	15.5	15.5	14:50	14:50	0.02	16.56	15.5	7.5	207	7.5	145	145	145	145											
W6	14:51	16.57	NO	16.57	0.02	15.5	15.5	14:51	14:51	0.02	16.57	15.5	7.5	207	7.5	145	145	145	145											
W7	14:52	16.58	NO	16.58	0.02	15.5	15.5	14:52	14:52	0.02	16.58	15.5	7.5	207	7.5	145	145	145	145											
W8	14:53	16.59	NO	16.59	0.02	15.5	15.5	14:53	14:53	0.02	16.59	15.5	7.5	207	7.5	145	145	145	145											
W9	14:54	16.60	NO	16.60	0.02	15.5	15.5	14:54	14:54	0.02	16.60	15.5	7.5	207	7.5	145	145	145	145											
W10	14:55	16.61	NO	16.61	0.02	15.5	15.5	14:55	14:55	0.02	16.61	15.5	7.5	207	7.5	145	145	145	145											
W11	14:56	16.62	NO	16.62	0.02	15.5	15.5	14:56	14:56	0.02	16.62	15.5	7.5	207	7.5	145	145	145	145											
W12	14:57	16.63	NO	16.63	0.02	15.5	15.5	14:57	14:57	0.02	16.63	15.5	7.5	207	7.5	145	145	145	145											
W13	14:58	16.64	NO	16.64	0.02	15.5	15.5	14:58	14:58	0.02	16.64	15.5	7.5	207	7.5	145	145	145	145											
W14	14:59	16.65	NO	16.65	0.02	15.5	15.5	14:59	14:59	0.02	16.65	15.5	7.5	207	7.5	145	145	145	145											
W15	15:00	16.66	NO	16.66	0.02	15.5	15.5	15:00	15:00	0.02	16.66	15.5	7.5	207	7.5	145	145	145	145											
W16	15:01	16.67	NO	16.67	0.02	15.5	15.5	15:01	15:01	0.02	16.67	15.5	7.5	207	7.5	145	145	145	145											
W17	15:02	16.68	NO	16.68	0.02	15.5	15.5	15:02	15:02	0.02	16.68	15.5	7.5	207	7.5	145	145	145	145											
W18	15:03	16.69	NO	16.69	0.02	15.5	15.5	15:03	15:03	0.02	16.69	15.5	7.5	207	7.5	145	145	145	145											
W19	15:04	16.70	NO	16.70	0.02	15.5	15.5	15:04	15:04	0.02	16.70	15.5	7.5	207	7.5	145	145	145	145											
W20	15:05	16.71	NO	16.71	0.02	15.5	15.5	15:05	15:05	0.02	16.71	15.5	7.5	207	7.5	145	145	145	145											

PHYSICAL READING

[illegible]

1. *Abstract*

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065331b. 91.EC-794

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Table XII
Volatile Organic Compounds (VOCs) in Ground Water
Fragans Automotive - West Orange, New Jersey
Page 3 of 9

TRC Sample No.:	TW-1	TW-2	TW-3	TW-4	TW-5	TW-6	TW-7
Date Sampled:	08/03/12	08/03/12	08/03/12	08/03/12	11/09/12	08/03/12	11/09/12
Lab Sample No.:	JB12914-10	JB12914-11	JB12914-12	JB20925-1	JB12914-13	JB20925-3	JB20925-2
Laboratory:	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest
VOCs (ppb)	GWQS						
Acetone	6000	8.6 J	28.6	ND	18.8	ND	ND
Benzene	1	4.3	ND	ND	ND	0.95 J	ND
Bromochloromethane	100*	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	ND	ND	ND	ND	ND	ND
Bromoform	4	ND	ND	ND	ND	ND	ND
Bromomethane	10	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	300	ND	ND	ND	ND	ND	ND
Carbon disulfide	700	ND	0.68 J	0.32 J	ND	ND	1.8 J
Carbon tetrachloride	1	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND
Chloroethane	5*	ND	ND	ND	ND	ND	ND
Chloroform	70	ND	ND	ND	ND	ND	ND
Chloromethane	100*	ND	ND	ND	0.28 J	ND	ND
Cyclohexane	100*	2.3 J	ND	ND	1.8 J	ND	ND
1,2-Dibromo-3-chloropropane	0.02	ND	ND	ND	ND	ND	ND
Dibromochloromethane	1	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	0.03	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	600	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	1000	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	60	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	2	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1	ND	ND	ND	ND	ND	0.24 J
cis-1,2-Dichloroethene	70	28.9	0.48 J	2.3	4.8	3.9	45.8
trans-1,2-Dichloroethene	100	0.95 J	ND	ND	0.3 J	0.43 J	0.50 J
1,2-Dichloropropane	1	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene ¹	1	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene ¹	1	ND	ND	ND	ND	ND	ND
1,3-Dichloropropene (cis and trans)	1	NA	NA	NA	NA	NA	NA
1,4-Dioxane	10**	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	15.2	0.24 J	ND	ND	9.1	ND
Trichlorotrifluoromethane (Freon 113)	100*	ND	ND	ND	ND	ND	ND
2-Hexanone	300**	ND	ND	ND	ND	ND	ND
Isopropylbenzene	700	ND	ND	ND	ND	1.1 J	ND
Methyl Acetate	7000	ND	ND	ND	ND	ND	ND
Methylcyclohexane	100*	2.3 J	ND	ND	ND	4.2 J	0.54 J
Methyl Tert Butyl Ether	70	ND	ND	ND	ND	0.23 J	ND
4-Methyl-2-pentanone (MIBK)	100*	ND	ND	ND	ND	ND	ND
Methylene chloride	3	ND	ND	ND	ND	ND	ND
Styrene	100	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	1	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	1	0.34 J	0.43 J	ND	ND	ND	8.6
Toluene	600	1.3	0.52 J	ND	ND	1.5	ND
1,2,3-Trichlorobenzene	100*	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	9	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	3	ND	ND	ND	ND	ND	ND
Trichloroethylene	1	45.6	1.1	1.8	2.8	20.4	36.8
Trichlorofluoromethane (Freon 11)	2000	ND	ND	ND	ND	ND	ND
Vinyl chloride	1	3.5	ND	ND	0.78 J	0.52 J	33.5
m,p-Xylene ²	1000	19.4	0.99 J	ND	ND	20.8	ND
o-Xylene ²	1000	2.1	0.67 J	ND	ND	6.8	ND
Xylenes (total)	1000	21.4	1.7	ND	ND	27.7	ND
Total Targeted VOCs		131.1	31.6	4.4	27.3	72.2	124.6
Total THCs	600					116 J	0
Total VOCs		131	32	4	27	188	125

* = Inform Capable Value

** = Inform Specific Value

ND = Not Detected

NA = Not Analyzed

GWQS = NJDEP Ground Water Quality Standard

¹ GWQS not available; GWQS for 1,3-Dichloropropene (cis and trans) assumed for cis- and trans- individually.

² GWQS not available; GWQS for Xylenes (total) assumed for m,p-Xylene and o-Xylene.

(F) = Filtered sample

Bold = Concentration exceeds GWQS.

J = estimated concentration

Table XBI
Base Neutrals (BNs) and Acid Extractables (AEs) in Ground Water
Fregans Automotive - West Orange, New Jersey
Page 4 of 8

TRC Sample No.: TW-1		TW-2		TW-3		TW-4		TW-5	
Date Sampled: 08/03/12		08/03/12		08/03/12		08/03/12		08/03/12	
Lab Sample No.: JB12914-10		JB12914-11		JB12914-11		JB12914-12		JB12914-13	
Laboratory: Acculab		Acculab		Acculab		Acculab		Acculab	
BNs & AEs (ppb)	GWQS								
2-Chlorophenol	40	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-2-methylphenol	700*	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	20	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	700	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	40	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-cresol	1**	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	5*	ND	ND	ND	ND	ND	ND	ND	ND
3,4,5-Trichlorophenol	5*	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	700*	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	700*	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	0.3	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	700	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	20	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	400	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	3	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	100*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	100	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	400	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.3	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	30	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	5000**	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	5	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	7	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	300	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	100*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	30	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.3	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	100	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	4000	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700**	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	3	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	300	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	300	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	7	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	40	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	7	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	40	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	30**	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	300	0.27	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	8	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	10	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	10	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	100*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	200*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	700*	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	200	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	4.9	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	300	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	3	ND	ND	ND	ND	ND	ND	ND	ND

* = Inflection Growth Value
 ** = Inflection Growth Value
 ND = Not Detected
 NA = Not Analyzed
 GWQS = NJDEP Ground Water Quality Standard
 † GWQS not available, GWQS for 1,3-
 Dioxane = Concentration exceeds GWQS.
 ‡ = Estimated concentration

Table XIV
Polyyclic Aromatic Hydrocarbons (PAHs) in Ground Water
Frigans Automotive - West Orange, New Jersey
Page 5 of 9

TRC Sample No.:		TW-1	TW-2	TW-3	TW-4	TW-5
Date Sampled:		08/03/12	08/03/12	08/03/12	08/03/12	08/03/12
Lab Sample No.:		JB121914-10	JB12914-14	JB12914-11	JB12914-12	JB12914-13
Laboratory:		Acclutest	Acclutest	Acclutest	Acclutest	Acclutest
PAHs (ppb)	GWQS					
Acenaphthene	400	ND	ND	ND	ND	ND
Acenaphthylene	100*	ND	ND	ND	ND	ND
Anthracene	2000	ND	ND	ND	ND	ND
Benzo(a)anthracene	0.1	ND	ND	ND	ND	ND
Benzo(a)pyrene	0.1	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.2	ND	ND	ND	ND	ND
Benzo(b,k)fluoranthene	100*	ND	ND	ND	ND	ND
Benzo(e,k)fluoranthene	0.5	ND	ND	ND	ND	ND
Chrysene	5	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	0.3	ND	ND	ND	ND	ND
Fluoranthene	300	ND	ND	ND	ND	ND
Indene(1,2,3-cd)pyrene	300	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.2	ND	ND	ND	ND	ND
Naphthalene	300	0.27	ND	ND	ND	0.76
Phenanthrene	100*	ND	ND	ND	ND	ND
Pyrene	200	ND	ND	ND	ND	ND

Table XV
Metals (TAL) in Ground Water
Fragans Automotive - West Orange, New Jersey
6 of 9

TAL Metals (ppb)	GWQS	TW-1		TW-2		TW-3		TW-4		TW-5		TW-6		TW-7	
		Date Sampled:	08/03/12	Date Sampled:	08/03/12	Date Sampled:	08/03/12	Date Sampled:	11/09/12	Date Sampled:	08/03/12	Date Sampled:	11/09/12	Date Sampled:	11/09/12
		Lab Sample No.:	JB12914-10	Lab Sample No.:	JB12914-14	Lab Sample No.:	JB12914-11	Lab Sample No.:	JB12914-12	Lab Sample No.:	JB20925-1F	Lab Sample No.:	JB12914-13	Lab Sample No.:	JB20925-2F
		Laboratory:	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest	Accutest
Aluminum	200	17800	120000 b	5210	19800	NA	NA	NA	NA	17800	NA	NA	NA	NA	
Antimony	6	<6.0	<12 b	<6.0	<6.0	NA	NA	NA	NA	<6.0	NA	NA	NA	NA	
Arsenic	3	21	159 b	14.4	26.6	NA	NA	NA	NA	16.5	NA	NA	NA	NA	
Barium	6000	488	4370 b	247	587	NA	NA	NA	NA	780	NA	NA	NA	NA	
Beryllium	1	1.6	8.8 b	<1.0	2.8	NA	NA	NA	NA	1.4	NA	NA	NA	NA	
Bismuth	4	8.5	<6.0 b	<3.0	<3.0	NA	NA	NA	NA	<3.0	NA	NA	NA	NA	
Cadmium	-	38800	66900 b	31800	61000	NA	NA	NA	NA	110000	NA	NA	NA	NA	
Chromium Total	70	41.9	277 b	10.4	51	NA	NA	NA	NA	44.4	NA	NA	NA	NA	
Cobalt	100**	<50	<100 b	<50	<50	NA	NA	NA	NA	<50	NA	NA	NA	NA	
Copper	1300	213	522 b	14.2	212	NA	NA	NA	NA	121	NA	NA	NA	NA	
Iron	300	23400	143000 g	10700	34900	NA	NA	NA	NA	33200	NA	NA	NA	NA	
Lead	5	226	630 b	5.3	143	NA	NA	NA	NA	29.6	NA	NA	NA	NA	
Magnesium	-	6200	21500 b	10700	15600	NA	NA	NA	NA	18800	NA	NA	NA	NA	
Manganese	50	365	1850 b	463	862	NA	NA	NA	NA	2670	NA	NA	NA	NA	
Mercury	2	215 b	251 b	<0.40 b	220 b	301 g	<0.20	NA	NA	13.7 b	16 g	<0.20	NA	<0.20	
Nickel	100	53.6	162 b	10.3	43.7	NA	NA	NA	NA	98.2	NA	NA	NA	NA	
Phosphorus	-	<10000	<20000 b	<10000	<10000	NA	NA	NA	NA	<10000	NA	NA	NA	NA	
Selenium	40	30.1	37.4 b	<10	<10	NA	NA	NA	NA	<10	NA	NA	NA	NA	
Silver	40	<10	<20 b	<10	<10	NA	NA	NA	NA	<10	NA	NA	NA	NA	
Sodium	50000	<10000	<20000 b	18000	<10000	NA	NA	NA	NA	40700	NA	NA	NA	NA	
Thallium	2	<2.0	<8.0 g	<2.0	<2.0	NA	NA	NA	NA	<2.0	NA	NA	NA	NA	
Vanadium	-	58.7	271 b	<50	72	NA	NA	NA	NA	62.3	NA	NA	NA	NA	
Zinc	2000	461	498 b	32.7	167	NA	NA	NA	NA	122	NA	NA	NA	NA	

** = Interim Specific Value
 ND = Not Detected
 NA = Not Analyzed
 GWQS = NJDEP Ground Water Quality
 Standard
 (a) Elevated sample detection limit due
 to difficult sample matrix
 (b) Elevated detection limit due to
 dilution required for high interfering
 element
 Bold = Concentration exceeds GWQS
 : = estimated concentration

Table XV
Metals (TAL) in Ground Water
Fregans Automotive - West Orange, New Jersey
7 of 9

TRC Sample No.:		MW-1	MW-1 (F)	MW-2	MW-2 (F)	MW-3	MW-3 (F)
Date Sampled:		09/16/13	09/16/13	09/16/13	09/16/13	09/16/13	09/16/13
Lab Sample No.:		JB47585-2	JB47585-2F	JB47585-1	JB47585-1F	JB47585-3	JB47585-3F
Laboratory:		Acquest	Acquest	Acquest	Acquest	Acquest	Acquest
TAL Metal (ppb)	GWQS						
Aluminum	200	<200	<200	254	<200	301	<200
Antimony	5	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Arsenic	3	<3.0	<3.0	7.4	<3.0	<3.0	<3.0
Barium	6000	<200	<200	<200	<200	<200	<200
Beryllium	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium	4	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Calcium	-	32500	35500	46100	50900	38500	40700
Chromium, Total	70	<10	<10	<10	<10	<10	<10
Cobalt	100**	<50	<50	<50	<50	<50	<50
Copper	1300	<10	<10	<10	<10	<10	<10
Iron	300	139	<100	2700	2050	451	<100
Lead	5	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Magnesium	-	5540	5790	6490	7050	5430	5950
Manganese	50	24.4	26.3	315	333	116	128
Mercury	2	<0.20	<0.20	<0.20	<0.20	0.38	<0.20
Nickel	100	24.5	26.7	<10	<10	<10	<10
Potassium	-	<10000	<10000	<10000	<10000	<10000	<10000
Selenium	40	<10	<10	<10	<10	<10	<10
Silver	40	<10	<10	<10	<10	<10	<10
Sodium	50000	<10000	<10000	11300	12400	<10000	<10000
Thallium	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Vanadium	-	<50	<50	<50	<50	<50	<50
Zinc	2000	256	274	24.2	<20	38.7	40

** = Interim Specific Value.
 ND = Not Detected
 NA = Not Analyzed
 GWQS = NJDEP Ground Water Quality Standard
 (a) Elevated sample detection limit due to difficult sample matrix.
 (b) Elevated detection limit due to dilution required for high interfering element
 Bold = Concentration exceeds GWQS.
 J = estimated concentration

Table XVI
Polychlorinated Biphenyls (PCBs) in Ground Water
Frigans Automotive - West Orange, New Jersey
Page 8 of 9

TRC Sample No.:		TW-1		TW-2		TW-3		TW-4		TW-5	
Date Sampled:		08/03/12		08/03/12		08/03/12		08/03/12		08/03/12	
Lab Sample No.:		JB121814-10		JB12814-14		JB12814-11		JB12814-12		JB12814-13	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest	
PCBs (ppb)		GWQS									
Aroclor 1016		—		ND		ND		ND		ND	
Aroclor 1221		—		ND		ND		ND		ND	
Aroclor 1232		—		ND		ND		ND		ND	
Aroclor 1242		—		ND		ND		ND		ND	
Aroclor 1248		—		ND		ND		ND		ND	
Aroclor 1254		—		ND		ND		ND		ND	
Aroclor 1260		—		ND		ND		ND		ND	
Aroclor 1262		—		ND		ND		ND		ND	
Aroclor 1268		—		ND		ND		ND		ND	
Total PCBs		0.5		ND		ND		ND		ND	

Table XVII
Pesticides and Herbicides In Ground Water
Fregans Automotive - West Orange, New Jersey
Page 9 of 9

TRC Sample No.:		TW-1		TW-2		TW-3		TW-4		TW-5	
Date Sampled:		08/03/12		08/03/12		08/03/12		08/03/12		08/03/12	
Lab Sample No.:		JB12914-10		JB12914-14		JB12914-11		JB12914-12		JB12914-13	
Laboratory:		Accutest		Accutest		Accutest		Accutest		Accutest	
Pesticides (ppb)	GWCS										
Aldrin	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
beta-BHC	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
delta-BHC	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlordane	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDT	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin ketone	100*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan sulfate	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	100*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-I	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan-II	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX A

Soil Boring and Temporary Well Logs

CTRO Environmental Corporation 57 E. Willow Street, Millburn, NJ 07041 (973) 564-5006				TEMPORARY WELL AND SOIL BORING LOG		WELL NUMBER 2(1)/TW-3	
PROJECT NAME: Fregan's Automotive				LOCATION: West Orange, NJ			
PROJECT NO.: 2894-195119				CONTRACTOR: SET			
SAMPLER TYPE/DIA.: Macrocore/2"				TYPE OF WELL: Temporary			
DEPTH TO BEDROCK: 10.5 feet				DRILLING METHOD: Direct Push			
TOTAL DEPTH DRILLED: 11.75 feet				BIT TYPE: NA			
START DATE: 08/03/12				FINISH DATE: 08/03/12			
DRILLER: S. Weigand				LOGGED BY: J. Morris			

DEPTH FROM SURFACE (FEET)	BLOW COUNT PER 6 IN.	RECOVER Y (INCHES)	PID (ppm)	SAMPLE DESIGNATION	WELL DIAGRAM	UNITED	LITHOLOGIC CLASSIFICATION AND COMMENTS
0							Unpaved.
1		42	ND	2(2)/8.0-8.5			0.0 to 0.5' - Dark brown, fine to medium SAND, some silt, trace fine gravel.
2			ND				
3			ND				
4			ND				
5			ND				
6		28	ND				6.0 to 10.0' - Light brown to brown SILT and CLAY.
7			ND				
8			ND				
9			ND				
10			ND				
							End of Boring 10 feet.

CASING TYPE/DIAMETER (IN.) INNER: <u>PVC/1</u> OUTER: <u>N/A</u>		STATIC WATER LEVEL: _____ feet below surface DEPTH WATER ENCOUNTERED: _____ feet below surface	
SCREENED OR OPEN INTERVAL: <u>0.75 - 10</u> (FEET BELOW SURFACE)		MEASURING POINT ELEVATION: <u>NA</u> ft. a.s.l. GROUND SURFACE ELEVATION: <u>NA</u> ft. a.s.l.	

TRC Environmental Corporation 57 E. Willow Street, Millburn, NJ 07041 (973) 684-6006					TEMPORARY WELL AND SOIL BORING LOG		WELL NUMBER 3(1)/TW-4		
PROJECT NAME: Fegan's Automotive					LOCATION: West Orange, NJ				
PROJECT NO.: 2894-195119					CONTRACTOR: SET				
SAMPLER TYPE/DIA.: Macrocore/2"					TYPE OF WELL: Temporary				
DEPTH TO BEDROCK: 10.5 feet					DRILLING METHOD: Direct Push				
TOTAL DEPTH DRILLED: 11.75 feet					BIT TYPE: NA				
					START DATE: 08/03/12				
					FINISH DATE: 08/03/12				
					DRILLER: S. Welgand				
					LOGGED BY: J. Morris				

DEPTH FROM SURFACE (FEET)	BLOW COUNT PER 6 IN.	RECOVER Y (INCHES)	PID (ppm)	SAMPLE DESIGNATION	WELL DIAGRAM	UNIFIED	LITHOLOGIC CLASSIFICATION AND COMMENTS
0				3(1)/0.0-0.5			Unpaved.
1			ND				0.0 to 5.5' - Brown to dark brown, fine to medium SAND, some coarse sand, trace silt; fill material.
2			ND				
3		30	ND				
4			ND	3(1)/3.5-4.0			
5			ND				
6			ND				5.5 to 14.0' - Brown to grayish-brown SILT and CLAY.
7			ND				
8		36	ND				
9			ND				
10			ND				
11			ND				
12			ND				
13		20	ND				14.0 to 15.0' - Reddish-brown SILT and CLAY, little fine to medium gravel.
14			ND				
15			ND				

CASING TYPE/DIAMETER (IN.) INNER: <u>PVC/1</u> OUTER: <u>N/A</u>	STATIC WATER LEVEL: _____ feet below surface DEPTH WATER ENCOUNTERED: _____ feet below surface
SCREENED OR OPEN INTERVAL: <u>0.75 - 10</u> (FEET BELOW SURFACE)	MEASURING POINT ELEVATION: <u>NA</u> ft. msl GROUND SURFACE ELEVATION: <u>NA</u> ft. msl

Environmental Corporation 57 E. Willow Street, Millburn, NJ 07041 (973) 584-8008				TEMPORARY WELL AND SOIL BORING LOG		WELL NUMBER 5(1)/TW-1	
PROJECT NAME: Fegan's Automotive				LOCATION: West Orange, NJ			
PROJECT NO.: 2894-195119				CONTRACTOR: SET			
SAMPLER TYPE/DIA: Macrocore/2"				TYPE OF WELL: Temporary		START DATE: 08/03/12	
DEPTH TO BEDROCK: 10.5 feet				DRILLING METHOD: Direct Push		FINISH DATE: 08/03/12	
TOTAL DEPTH DRILLED: 11.75 feet				BIT TYPE: NA		DRILLER: S. Weigand LOGGED BY: J. Morris	

DEPTH FROM SURFACE (FEET)	BLOW COUNT PER 6 IN.	RECOVER Y (INCHES)	PID (ppm)	SAMPLE DESIGNATION	WELL DIAGRAM	UNITED	LITHOLOGIC CLASSIFICATION AND COMMENTS
0							Unpaved.
1			ND				0.0 to 0.5' - Dark brown, fine to medium SAND, little silt, trace fine gravel and coarse sand.
2			ND				0.5 to 6.0' - Brown to dark brown, fine to medium SAND, some silt, little coarse sand; fill material.
3		32	ND				
4			59.5	5(1)/3.0-3.5			
5			58.3				
6			ND				
7			ND				
8			ND				6.0 to 14.0' - Brown to gray-brown SILT and CLAY.
9		30	ND				
10			ND				
11			ND				
12			ND				
13		28	ND				
14			ND				
			ND				
			ND				

CASING TYPE/DIAMETER (IN.) INNER: <u>PVC/1</u> OUTER: <u>N/A</u>		STATIC WATER LEVEL: _____ feet below surface	
SCREENED OR OPEN INTERVAL: <u>0.75 - 14</u> (FEET BELOW SURFACE)		DEPTH WATER ENCOUNTERED: <u>8</u> feet below surface	
		MEASURING POINT ELEVATION: <u>NA</u> ft. MSL	
		GROUND SURFACE ELEVATION: <u>NA</u> ft. MSL	

[illegible]

Environmental Corporation 57 E. Willow Street, Millburn, NJ 07041 (973) 564-6006					TEMPORARY WELL AND SOIL BORING LOG		WELL NUMBER 5(3)/TW-2	
PROJECT NAME: Fregan's Automotive					LOCATION: West Orange, NJ			
PROJECT NO.: 2894-195119					CONTRACTOR: SET			
SAMPLER TYPE/DIA: Macrocore/2"					TYPE OF WELL: Temporary		START DATE: 08/03/12	
DEPTH TO BEDROCK: 10.5 feet					DRILLING METHOD: Direct Push		FINISH DATE: 08/03/12	
TOTAL DEPTH DRILLED: 11.75 feet					BIT TYPE: NA		DRILLER: S. Weigand	
							LOGGED BY: J. Morris	

DEPTH FROM SURFACE (FEET)	BLOW COUNT PER 8 IN.	RECOVERY (INCHES)	PID (ppm)	SAMPLE DESIGNATION	WELL DIAGRAM	UNITED	LITHOLOGIC CLASSIFICATION AND COMMENTS
0							Unpaved.
1			ND				0.0 to 0.5' - Dark brown, fine to medium SAND, some silt, trace coarse sand and fine gravel.
2			ND	5(3)/1.5-2.0			0.5 to 6.0' - Brown to dark brown, fine to medium SAND and SILT, some coarse sand, little fine gravel; fill like, intermittent asphalt like material and reddish brown fragments.
3		32	ND				
4			ND				
5			ND				
6			ND				
7			ND				6.0 to 13.0' - Grayish brown CLAY and SILT.
8		44	ND				
9			ND				
10			ND				
11			ND				
12		30	ND				
13			ND				
14							<u>Well Construction Details</u> +0.5 to 0.75 ft. below surface - 1" diameter PVC riser 0.75 to 13 ft. below surface - 1" diameter 0.01 slot PVC screen

CASING TYPE/DIAMETER (IN.) INNER: PVC/1 OUTER: N/A		STATIC WATER LEVEL: _____ feet below surface	
		DEPTH WATER ENCOUNTERED: _____ feet below surface	
SCREENED OR OPEN INTERVAL: 0.75 - 13 (FEET BELOW SURFACE)		MEASURING POINT ELEVATION: NA ft.msl	
		GROUND SURFACE ELEVATION: NA ft.msl	

TRC Environmental Corporation 57 E. Willow Street, Millburn, NJ 07041 (973) 584-8006				WELL LOG		WELL NUMBER TW-5	
PROJECT NAME: Fregan's Automotive LOCATION: West Orange, NJ				START DATE: 08/03/12 FINISH DATE: 08/03/12 DRILLER: S. Weigand LOGGED BY: J. Morris			
PROJECT NO.: 2894-195119 CONTRACTOR: SET							
SAMPLER TYPE/DIA: Macrocore/2" TYPE OF WELL: Temporary DEPTH TO BEDROCK: 10.6 feet DRILLING METHOD: Direct Push TOTAL DEPTH DRILLED: 11.75 feet BIT TYPE: NA							

DEPTH FROM SURFACE (FEET)	BLOW COUNT PER 6 IN.	RECOVER Y (INCHES)	PID (ppm)	SAMPLE DESIGNATION	WELL DIAGRAM	UNIFIED	LITHOLOGIC CLASSIFICATION AND COMMENTS
0							0.0 to 0.5' - Dark brown, fine to medium SAND, some medium gravel, trace silt. 0.5 to 1.0' - Brown, fine to coarse SAND, some fine to medium gravel. 1.0 to 2.5' - Reddish-brown, fine to medium SAND, some fine gravel; brick like. 2.5 to 3.5' - Concrete like fragments. 3.5 to 5.0' - Brown, fine to medium SAND, some fine gravel, trace silt. 5.5 to 14.0' - Brown to grayish-brown SILT and CLAY. 14.0 to 15.0' - Reddish-brown SILT and CLAY, little fine to medium gravel.
1		44	ND				
2			ND				
3			ND				
4			ND				
5			ND				
6		31	ND				
7			ND				
8			ND				
9			ND				
10			ND				
11		27	ND				
12			ND				
13			ND				
14			ND				
15			ND				

CASING TYPE/DIAMETER (IN.) INNER: <u>1</u> OUTER: <u>NA</u>	STATIC WATER LEVEL: _____ feet below surface DEPTH WATER ENCOUNTERED: _____ feet below surface
SCREENED OR OPEN INTERVAL: <u>0.75-15</u> (FEET BELOW SURFACE)	MEASURING POINT ELEVATION: _____ ft., msl GROUND SURFACE ELEVATION: _____ ft., msl

TRC Environmental Corporation 57 E. Willow Street, Millburn, NJ 07041 (973) 554-8006					WELL LOG		WELL NUMBER TW-7	
PROJECT NAME: Fegan's Automotive					LOCATION: West Orange, NJ			
PROJECT NO.: 2894-195119					CONTRACTOR: SET			
SAMPLER TYPE/DIA.: Mac/core 2"					TYPE OF WELL: Temporary			
DEPTH TO BEDROCK: 10.5 feet					DRILLING METHOD: Direct Push			
TOTAL DEPTH DRILLED: 11.75 feet					BIT TYPE: NA			
START DATE: 11/09/12 FINISH DATE: 11/09/12 DRILLER: S. Weigand LOGGED BY: K. Riller								

DEPTH FROM SURFACE (FEET)	BLOW COUNT PER 6 IN.	RECOVERY (INCHES)	PID (ppm)	SAMPLE DESIGNATION	WELL DIAGRAM	UNIFIED	LITHOLOGIC CLASSIFICATION AND COMMENTS
0							Unpaved.
1							0.0 to 0.5' - Dark brown, fine to medium SAND, some silt, trace fine gravel.
2							0.5 to 6.0' - Brown to dark brown, fine to medium SAND and SILT, some coarse sand and fine gravel: fill material.
3							
4							
5							
6							6.0 to 14.0' - Brown to gray-brown SILT and CLAY.
7							
8							
9							
10							
11							
12							
13							
14							
15							<u>Well Construction Details</u> ±0.5 to 0.75 ft. below surface - 1" diameter PVC riser 0.75 to 14 ft. below surface - 1" diameter 0.01 slot PVC screen

CASING TYPE/DIAMETER (IN.) INNER: <u>1</u> OUTER: <u>NA</u>	STATIC WATER LEVEL: _____ feet below surface DEPTH WATER ENCOUNTERED: _____ feet below surface
SCREENED OR OPEN INTERVAL: <u>0.75 - 14.0</u> (FEET BELOW SURFACE)	MEASURING POINT ELEVATION: _____ ft., msl GROUND SURFACE ELEVATION: _____ ft., msl

From: Paul Grygiel <PGrygiel@ppgplanners.com>

To: Shirleymbishop <Shirleymbishop@aol.com>; JSayers <JSayers@westorange.org>; JGross <JGross@westorange.org>

Cc: rtrenk <rtrenk@trenklawfirm.com>; MMoon <MMoon@trenklawfirm.com>

Subject: RE: Valley Road Residential and Fair Share Plan and Spending Plan

Date: Thu, Feb 23, 2017 2:04 pm

My best guess as to Planning Board reaction: ambivalent to positive. They recently reviewed the redevelopment plan for this area and seemed to be interested in development moving forward on the Harvard Press and Selecto-Flash sites. I don't believe they have any preference as to whether affordable units are located there or in the Edison redevelopment.

I will work with the Planning Board secretary and chairman to be ready to take action at their April 5th meeting. I would suggest having the draft amendment ready for distribution to the Board and public review before March 17th, so we have adequate time to notice the County and neighboring municipalities. Thanks.

Paul Grygiel, AICP, PP / Principal

PHILLIPS PREISS GRYGIEL LLC / Planning & Real Estate Consultants

33-41 Newark Street, Third Floor, Suite D / Hoboken, NJ 07030

Phone 201.420.6262 / Fax 420.6222 / pgrygiel@ppgplanners.com

From: Shirleymbishop@westorange.org [mailto:Shirleymbishop@aol.com]

Sent: Thursday, February 23, 2017 3:41 PM

To: JGross@westorange.org; JSayers@westorange.org; Paul Grygiel <PGrygiel@ppgplanners.com>

Cc: rtrenk@trenklawfirm.com; MMoon@trenklawfirm.com

Subject: Valley Road Residential and Fair Share Plan and Spending Plan

Hello;

As you are aware, Joe Alpert is requesting that \$3M be committed in a spending plan as a bridge loan for his Valley Road Residential project until Prism reimburses.

In order to have that money in the spending plan, his project must be in the Fair Share Plan (FSP).

As a result, there has to be an amendment to the FSP.

I am preparing a draft amendment for your review.

The amendment to the FSP must be adopted by the planning board with 10 days notice to the surrounding towns and a copy to the Essex County Planning Board.

FSHC and the Court Master must receive copies also.

Any idea as to how this proposed amendment will be received by the planning board?

Positive/negative/ ambivalent???

I am looking at the April 5 planning board meeting/.

The May planning board meeting is too late for the May 2 application deadline so April 5 is do or die.

The March 1 planning board meeting is too soon what with the 10 day notice.

After the planning board adopts the amendment to the FSP, then the Council by Resolution endorses the amended FSP.

I see this occurring at the April 18 Council meeting.

As to amending the spending plan, I have to do a full blown one with projections of development fees to 2025.

Do you have any idea as to what development fees I should project each year through 2025?
is \$100,000 a year too little or too much?

As you know, the 2.5% non-residential fee is mandatory.

I will also need specific information for an amended spending plan from John such as:

actual development fees collected through December 2016

actual interest earned through 2016

housing activity expenditures through 2016

administrative expenditures through 2016

affordability assistance expenditures through 2016

All of the above should be in the CTM system.

I see the spending plan being adopted by Resolution at the April 18 Council meeting also.

Any questions, I am in the office today and can be reached by cell phone tomorrow: 609 865-0458.

Nothing is simple and FSHC is the wild card in all of this!

I have no idea what Kevin will do, if anything.

Thank you.

Shirley

Shirley M. Bishop, P.P., LLC
100 Overlook Center, Floor 2
Princeton, NJ 08540

Office: 8:30- 5p.m.: 609 844-7720

After 5 p.m. : 609 375-2358

Fax : 609 844-7722

EXHIBIT C

Valley Road Residential Project Description

The Valley Road Residential project will create 100 units of new mixed-income multifamily, rental housing for families.

The Valley Road Residential project will be located at 22-24 Central Avenue in the City of West Orange in Essex County. Development of the project will contribute to the other revitalization initiatives underway in the surrounding area including the opening and beautification of the East Branch of the Rahway River and redevelopment of the Valley neighborhood as a vibrant mixed-use residential neighborhood and arts district. The site is also ideally situated three blocks from the Highland Rail Station.

The Alpert Group LLC is the developer and property manager for the Valley Road Residential project. The Alpert Group, LLC is a third generation, family owned and operated full-service real estate management and development company based in Fort Lee. Since it's founding over 40 years ago, the company has developed over 3,000 units in new construction and adaptive reuse housing projects. Currently, The Alpert Group owns and manages a portfolio of over 2,500 units. The Alpert Group has extensive experience working with the requirements of municipal, state, and federal affordable housing programs such as local Affordable Housing Trust Funds, HOME, Section 8 Rehabilitation, and the low income housing tax credit program.

Other development team members for the Valley Road Residential Project include Kitchen Associates (Architect), Brach Eichler (Attorney), and Monarch Housing Associates (Housing Development Consultant). The project general contractor will be selected through a bidding process.

The Valley Road Residential Project will entail the adaptive re-use of a vacant light industrial site into 100 high-quality apartments. The housing will be in a newly constructed 5-story building. The development will offer a wide range of apartment types to accommodate singles and families including: 33 one-bedroom units; 58 two-bedroom units; 8 three-bedroom units; and 1 two-bedroom superintendent's unit. All apartments will have private kitchens and bathrooms, Energy Star appliances, and window blinds. The development will include on-site parking, elevator service, community room space, common laundry facilities, security features, and offices for property management functions.

The Valley Road Residential project is a mixed-income family project which will serve a wide range of households. Of the 100 units in the project, 48 units will be reserved for households with incomes of 60% AMI or less, 7 units will be reserved for households with incomes of 30% AMI or less and 44 units will be offered as market-rate housing, and 1 unit will be a superintendent's unit.

A construction start is planned for January 2018 with lease-up of units beginning in January 2019.



3 - CENTRAL AVE.



2 - WATERWAY



1 - CENTRAL AVE.



6 - MITCHELL ST.



5 - MITCHELL ST.



4 - SOUTH JEFFERSON ST.



7 - MITCHELL ST.



KEY PLAN

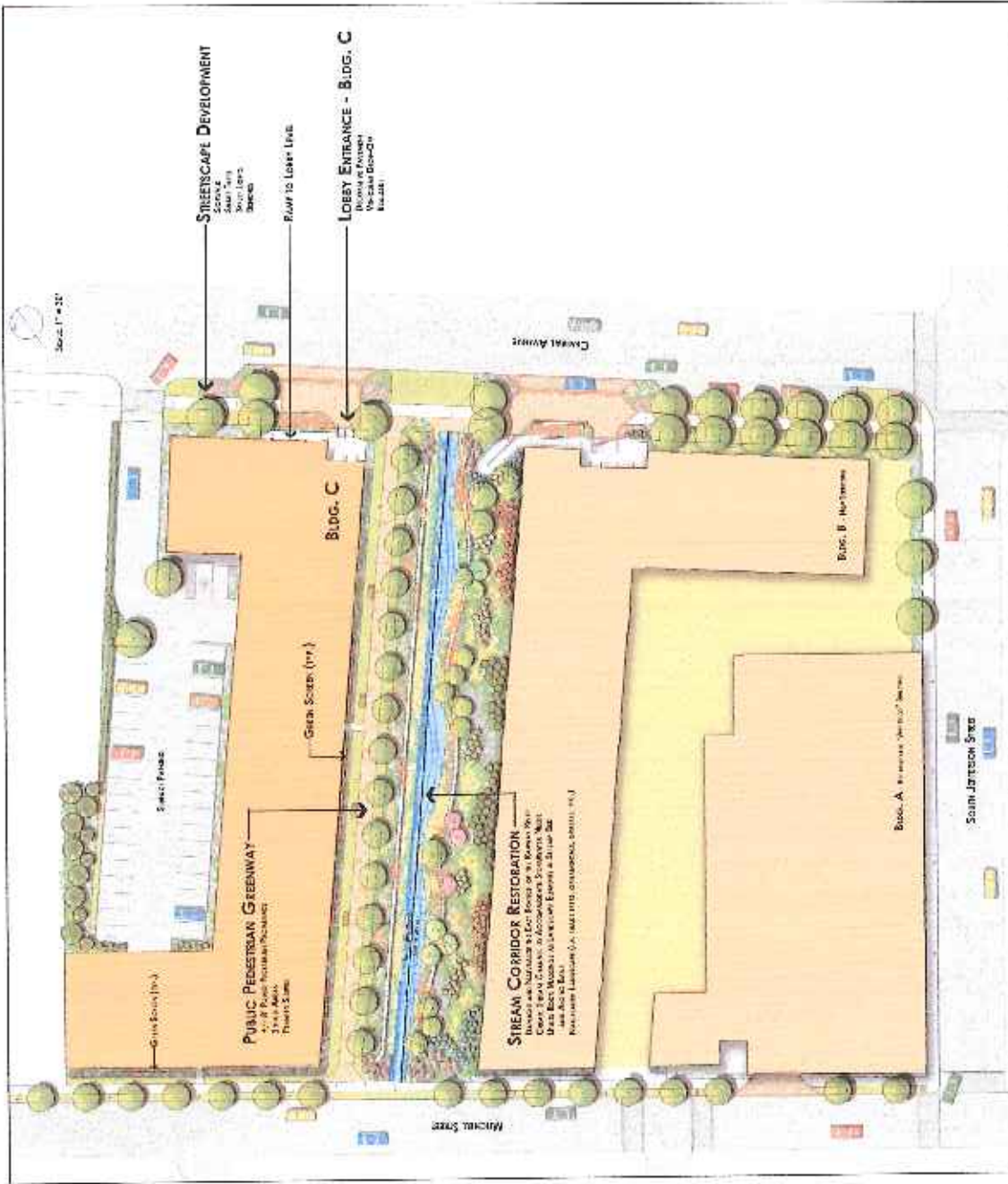
SITE PHOTOS



STREAM CORRIDOR - EXISTING



STREAM CORRIDOR - FUTURE



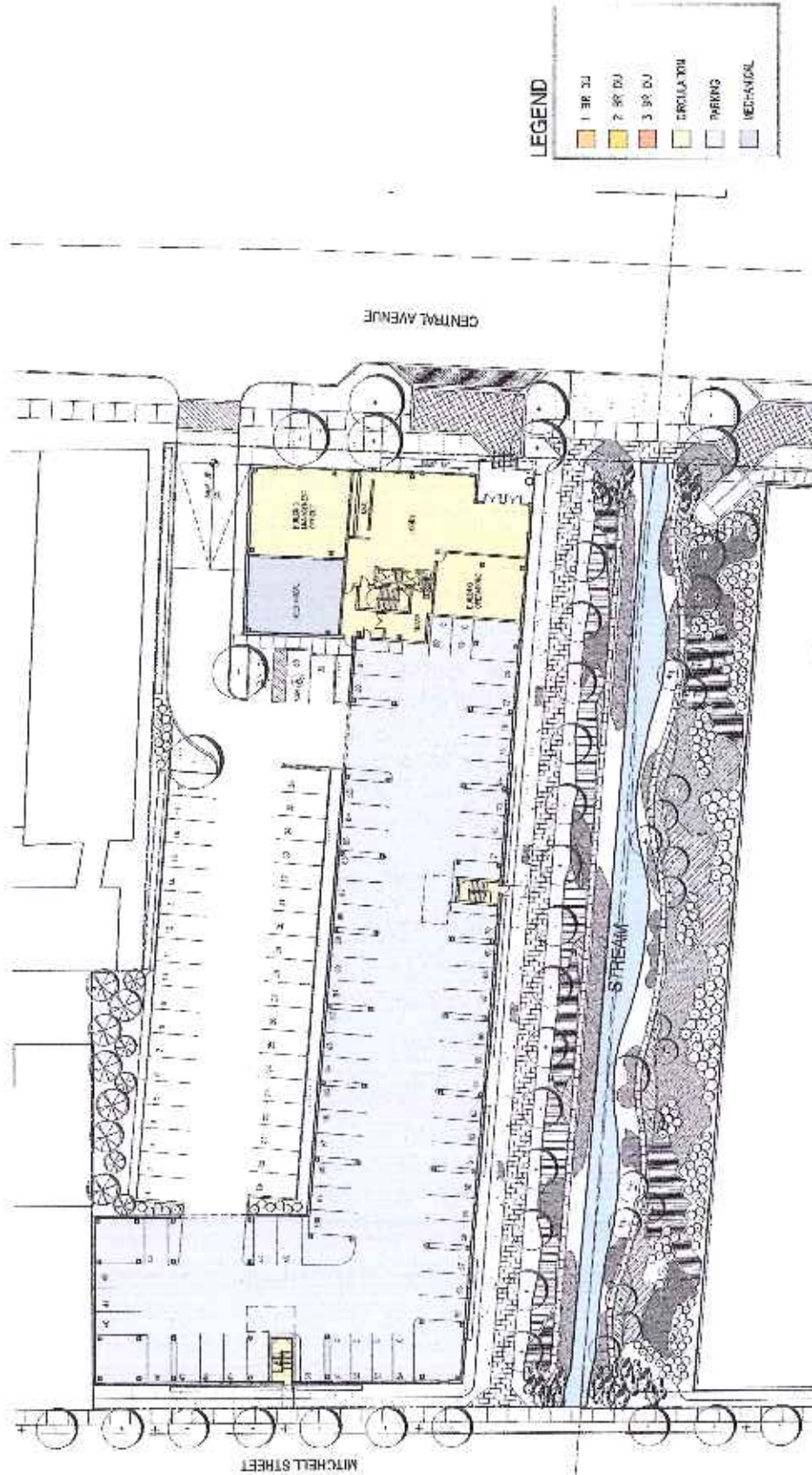
SITE PLAN

HARVARD PRINTING COMPANY SITE

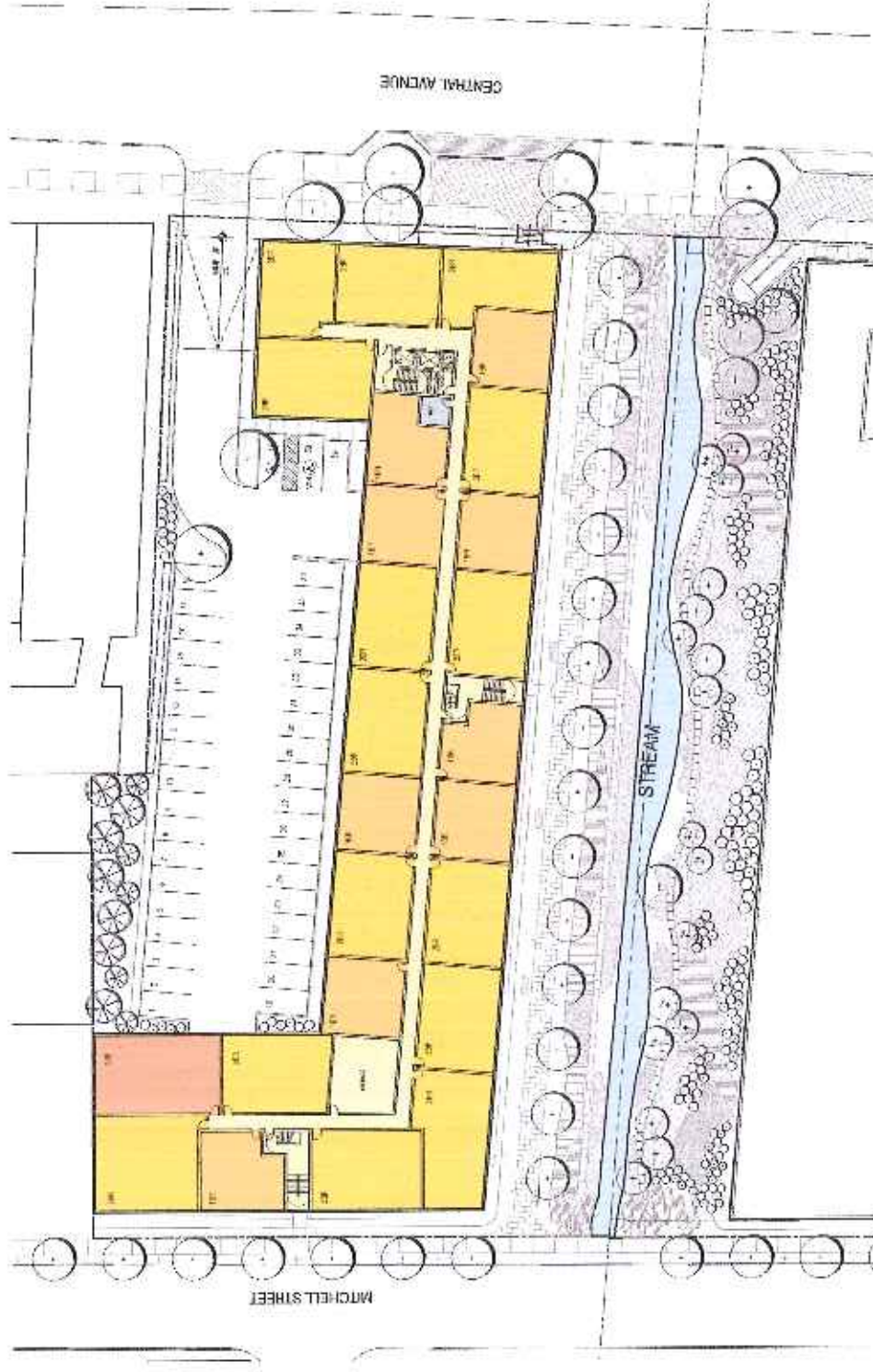
WEST ORANGE, NEW JERSEY



VIEW FROM CENTRAL AVENUE



GROUND LEVEL



SECOND LEVEL

FINISH	0'-0"
17th FLOOR	17'-0"
16th FLOOR	16'-0"
15th FLOOR	15'-0"
14th FLOOR	14'-0"
13th FLOOR	13'-0"
12th FLOOR	12'-0"
11th FLOOR	11'-0"
10th FLOOR	10'-0"
9th FLOOR	9'-0"
8th FLOOR	8'-0"
7th FLOOR	7'-0"
6th FLOOR	6'-0"
5th FLOOR	5'-0"
4th FLOOR	4'-0"
3rd FLOOR	3'-0"
2nd FLOOR	2'-0"
1st FLOOR	1'-0"
GROUND	0'-0"



MITCHELL STREET ELEVATION

CENTRAL AVENUE ELEVATION



FINISH	0'-0"
17th FLOOR	17'-0"
16th FLOOR	16'-0"
15th FLOOR	15'-0"
14th FLOOR	14'-0"
13th FLOOR	13'-0"
12th FLOOR	12'-0"
11th FLOOR	11'-0"
10th FLOOR	10'-0"
9th FLOOR	9'-0"
8th FLOOR	8'-0"
7th FLOOR	7'-0"
6th FLOOR	6'-0"
5th FLOOR	5'-0"
4th FLOOR	4'-0"
3rd FLOOR	3'-0"
2nd FLOOR	2'-0"
1st FLOOR	1'-0"
GROUND	0'-0"



STREAM CORRIDOR ELEVATION



Exhibit 12:

Project Schedule

Construction Loan Closing	1/18
Construction Commencement	1/18
Construction Completion	1/19

SCHEDULE 10-A: PROJECT DESCRIPTION

*Low - Rise (1 - 3), MidHi - Rise (4 + stories), Townhouse or Semi-detached

** 40-60 set-aside means 40% or more of the residential units will be restricted and occupied by households whose income is 40% or less than the area median income.
 *** 20-50 set-aside means 20% or more of the residential units will be rent restricted and occupied by households whose income is 50% or less of area median income.

SCHEDULE 10-B: EST. DEVELOPMENT COSTS AND CAPITAL REQUIREMENTS

Indorsement	HMFA#	Sp. Nds. #
Commitment	Prepared by:	
Re-Commitment	Reviewed by:	
Bond Sale	(Director of Technical Services)	
Closing	If Applicable:	
	(Director of MF Programs & Credit)	
	Director of Special Needs:	Date
	Will loan/s be repaid from project revenues?	Date
	(If Source is a grant, enter "G")	
	Y or N or G	

1. SOURCES OF FUNDS DURING CONSTRUCTION:

a) Conventional Construction Loan - Note I			
b) Conventional Construction Loan Note II			\$ 7,350,000
c) Municipal Affordable Housing Trust Fund	\$3,000,000	N	\$ 9,205,000
d) LIHTC	\$15,416,569	N	\$ 3,000,000
e) Seller Note	\$1,773,984	N	\$ 3,852,887
f)			\$ 1,773,984
g)			\$
h) Deferred Developer's Fee			\$ 3,498,400
TOTAL SOURCES OF CONSTRUCTIONS FUNDS:			\$ 28,680,271

2. USES OF FUNDS DURING CONSTRUCTION:

A. ACQUISITION COSTS:		% of Const Cost OR Cost/Unit
a) Land	(at \$ per Acre)	
b) Building Acquisition	Should be between \$15,000 & \$25,000 per unit	\$ 960,000
c) Relocation		\$ 960,000
d) Other:		\$19,250
Total Acquisition as a percent of Total Project Costs:		6.60%
		5,100
		1,925,000
B. CONSTRUCTION COSTS		
a) Demolition		\$
b) Off-site Improvements		\$
c) Residential Structures		\$ 18,726,000
d) Community Service Facility		NO- Prevailing wage
e) Environmental Clearances		
f) Surety & Bonding	should be between .75% and 2% of Construction Costs	
g) Building Permits		258,390
h) Garage Parking	garage should be approx \$15,000/space; parking lot around \$700/space	75,000
i) General Requirements	should be about 6% of construction costs	
j) Contractor Overhead & Profit	should not exceed 8% of construction costs - usually 2% for Overhead & 6% for Profit	
k) Fire Suppression System		
l) Green Features (for Solar and LEED Certification costs)		
m) Other		
Total Const't Costs as a percent of Total Project Costs:		68.63%
		19,059,390
C. DEVELOPERS FEE		
14.53% HMFA Policy is that the Developer fee is earned as a percentage of construction completion.		3,498,400
D. CONTINGENCY		
Non-Deferred Amt.: \$1,877,197 7.85%		
a) Third Costs	5.000% 5% for New Construction & 10% for Rehabilitation	952,970
b) Soft Costs	2.000% should be a Maximum of 5%	53,545
		1,006,515
E. PROFESSIONAL SERVICES		
a) Appraisal & Market Study		\$ 15,000
b) Architect		\$ 363,825
c) Engineer		\$ 239,330
d) Attorney		\$ 603,155
e) Cost Certification/Audit		\$ 200,000
f) Environmental Consultant		\$ 20,000
g) Testing Engineer		\$ 20,000
h) Geotechnical Engineering Report		\$ 25,000
i) Surveyor		\$ 10,000
j) Professional Planner		\$ 25,000
k) Energy Star Rater		\$ 50,000
Total Professional Fees as a % of Total Project Costs:		3.31%
		25,000
		965,000
F. PRE-OPERATIONAL EXPENSES *		
* Non-eligible costs in TC basis		
a) Operator fees (pre-construction completion) *	Should not exceed \$250 per unit	\$ 100,000
b) Advertising and Promotion (pre-construction completion) *		
c) Staffing and Start-up Supplies (pre-construction completion) *		
d) Other: * marketing and lease up		

Construction Interest Rate Calculation	
Note I Weighted:	363,825
Note II Weighted:	239,330
TOTAL:	603,155
Const'l Int. Rate:	4.9419%

e) Other: * **Total Pre-Opt Costs as a % of Total Project Costs:** 0.34% 100,000

G. CARRYING AND FINANCING COSTS DURING CONSTRUCTION

(percentage of total development costs)

5.51%

a) Interest @	4.9419 % for (15 mos.) on \$	9,933,000	613,595
b) R.R. Tax \$	(per annum) x	1.00 Yrs.	100,000
c) Insurance \$	(per annum) x	1.00 Yrs.	150,000
d) Title Insurance and Recording Expenses			37,500
e) Utility Connection Fees			
f) Points to reduce HMFA Servicing Fees (cont'd & perm only)	2%	on \$	16,555,000
g) Other lender fees (Cont'd & Perm Only)		\$	311,100
h) HMFA Constr. Loan Serv. Fee	0.50 % for (12 mos.) on	16,555,000	82,775
i) Other financing and site plan fees			2,500
j) Tax Credit Fees	If the HMFA will be selling Bonds for the project either before or during the time the Development is under construction, these costs should be accounted for during the construction period.		
k) Negative Arbitrage (if Bonds are sold during Construction)			164,796
l) Syndication Asset Management Fee			(ESTIMATE)
m) Municipal Escrows			(ESTIMATE)
n) Furniture, Fixtures & Equipment (F F & E)			50,000
o) CDBG FMR (1% Fee)	1%	on \$	75,000
p) Paystach and Performance Bond, 30% Warranty Bond or 10% Letter of Credit			1,607,266

II. Working Capital Reserve

Total Carrying/Fin. Costs as % of Total Project Costs: 5.51%

- a) Debt Service & Operating Expenses (MF guidelines and/or 1YR for TF units)
b) Rental Agent Rent-up Fee (during Rent-up)
c) Advertising and Promotion (during Rent-up)

I. Other Escrows

- a) Insurance (1 YR. If the total # of TF units is greater than 50% of the total # of units, if less than 50% MF guidelines)
b) Taxes (1 YR. If the total # of TF units is greater than 50% of the total # of units, if less than 50% MF guidelines)
c) Debt Service Payment & Servicing Fee for 1 Month
d) Mortgage Insurance Premium (MIP) 1 year plus 3 months
e) Repair & Replacement Reserves (\$2,000/unit or \$1,000/bed)- N/A if MF Financing is used
f) Operating Deficit Reserve
g) Sp. Nds. Housing Trust Fund Escrow for Annual Expenses - Trust Fund Only
h) Other:
i) Other:
j) Other:
k) Other:

Total Escrows as a % of Total Project Costs: 1.70%

3. USES OF FUNDS DURING CONSTRUCTION:

4. BALANCE OF FUNDS NEEDED FOR CONSTRUCTION (average / shortage):

5. SOURCES OF FUNDS FOR PERMANENT FUNDING:

a) LIHTC		\$	2,179,184
b)		\$	
c)		\$	
d)		\$	
e)		\$	
f)		\$	
g)		\$	
h)		\$	
TOTAL SOURCES FOR PERMANENT CLOSING:			\$ 2,179,184

6. USES OF FUNDS FOR PERMANENT CLOSING:

A. DEVELOPER'S FEE:

B. CONSTRUCTION LOAN PAYOFF

C. Enterprise Operating Reser (ESTIMATE)

D. Cost of Insurance * (ESTIMATE)

E. Tax Credit Fees

F. Other:

* Non-eligible costs in TC basis

Total Costs at Perm. Closing as % of Total Project Costs: 1.04%

7. USES OF FUNDS FOR PERMANENT CLOSING

8. BALANCE NEEDED TO CLOSE (average / shortage):

9. TOTAL PROJECT COSTS

10. MAXIMUM MORTGAGE LOAN

11. 55% of Basis Test:

Mortgage Loan as a % of Total Project Costs:		25.20%
Aggregate Basis:	\$	28,440,580
55% of Basis (estimated):		15,642,319
Less 1st Mfg., 1st Note:		7,350,000
Equals 1st. Mfg., 2nd Note Needed:		8,292,319

Check each line item for Eligibility

12. REPAYMENT OF SECOND NOTE (IF APPLICABLE)

Interest @	2.60%	(9) mos.	Principal \$	9,205,000	\$	9,384,498	LIHTC Equity
				179,498	\$		
			Total \$	9,384,498	Total \$	9,384,498	
					\$	0	

By: _____
(Developer or Authorized Signatory)

By: _____
NHMFA Executive Director or Designee

SCHEDULE 10-C: OPERATING EXPENSES

Sponsoring Entity: _____
Dev. Name: Valley Road Mixed Income

HMF# _____
Prepared by: _____
Reviewed by: _____
Director of Property Management

Sp. Nds.# _____
03/06/17
Date

I. ADMINISTRATIVE EXPENSE

Stationery & Suppl.	2,000
Telephone	6,000
Dues & Sub.	300
Postage	800
Insp. & Other Fees	2,500
Advertising	3,000
Legal Services	3,500
Auditing (Year End)	11,300
Misc. Adm. Expenses	3,680
Other:	
Bookkeeping/Accounting and/or Computer Charges	7,620
Other:	
TOTAL \$	40,500

II. SALARIES & RELATED CHARGES

	# of Employees	Total Wages inc. benefits
Superintendent	1.00	45,000
Janitorial	1.00	25,000
Grounds & Landscaping		
Security		
Other: Transportation & Recreation		
Site Office & Admin	1.00	40,000
Maintenance		
Other Salaries: Supportive Services		
Empl. Benefits		27,500
Empl. Payroll Taxes		11,000
Worker's Comp.		2,200
Other:		
TOTAL \$	3.00	150,700

III. MAINTENANCE AND REPAIRS

Masonry	1,000
Carpentry	1,000
Plumbing	2,000
Electrical	1,400
Kitchen Equipment	
Elevator	
Windows & Glass	1,000
Vehicles & Equip.	
Snow Removal	6,000
Grounds & Landscaping	6,000
Paint & Dec. Supl.	5,000
Small Equip. & Tools	3,000
Joint, Sup. & Tools	3,000
HVAC Supplies	1,000
Misc. Maint. Suppl.	3,880
Other:	3,720
TOTAL \$	37,000

IV. MAINTENANCE CONTRACTS

Security	5,000
Elevator	7,000
Rubbish Removal	
Heating & AC Maint.	4,500
Grounds, Parking & Landscaping	10,000
Externalsing	5,000
Cyclical Apt. Painting	15,000
Other:	
TOTAL \$	46,500

V. UTILITY EXPENSE

Water Charges	25,000
Sewer Charges	20,000
Electricity	45,000
Gas	
Fuel	
Less Solar Energy Savings	
TOTAL \$	90,000

VI. REAL ESTATE TAX CALCULATION FOR TAX ABATEMENT

Gross Rents	\$	1,309,433
Less Vacancy	(-)	91,660
Less Utilities (if applicable)	(-)	
Gross Sheltered Rents	\$	1,217,773
x Rate	x	10.00 %
Real Estate Taxes	\$	121,777

OR

ACTUAL TAXES
IF NO P.I.T.O.T.

SCHEDULE 10-D : ANTICIPATED GROSS RENTS

Mortgage Amount: 7,350,000
Mortgage Interest Rate: 4.95 %
Term (years): 30 Yrs. The Interest rate has been reduced by: basis points as the Cost-of-Issuance is being paid out-of-pocket by the sponsor.
Amortization (Y,S,M): M
FMR Area: Essex
FMR per Month (2013):
HIMFA # _____
Prepared by: _____
Reviewed by: _____
Sp. Nbr. #: 03/06/17
Date: _____

Studio/ENT. Apt. _____ per month
1 BR Unit _____ per month
2 BR Unit _____ per month
3 BR Unit _____ per month
4 BR Unit _____ per month
5 BR Unit _____ per month

Date of Income Limits Chart Used: _____
Date of Utility Chart Used: _____

Rental Subsidy Per Unit:

Studio/ENT. Apt. _____ per month
1 BR Unit _____ per month
2 BR Unit _____ per month
3 BR Unit _____ per month
4 BR Unit _____ per month
5 BR Unit _____ per month

ANTICIPATED GROSS RENTS

	No. of Bedrooms	No. of Units	Target ** Occupancy	Tenant's Gross Rent	Square Feet of Individual Units	Allowance for Tenant Paid Utilities***	Net Rent	Monthly	Annual
List the Units With & Without Subsidy:	1 BR Unit	1	Very Low 30%	504	835	137	367	367	4,404
	2 BR Unit	5	Very Low 30%	606	1,090	177	429	2,145	25,740
	3 BR Unit	1	Very Low 30%	699	1,225	218	481	481	5,772
For those with Subsidy only list the actual rent they will pay.	1 BR Unit	10	Low 57.5%	967	835	137	830	8,300	99,600
	2 BR Unit	31	Low 57.5%	1,162	1,090	177	985	30,535	366,420
	3 BR Unit	7	Low 57.5%	1,341	1,225	218	1,123	7,861	94,332
	1 BR Unit	22	Market	1,193	835		1,193	26,246	314,952
	2 BR Unit	22	Market	1,463	1,090		1,463	32,186	386,232
Subsidy per Unit					Monthly Subsidy				
Super's Apt *	2 BR Unit	1	N/A						

TOTALS

100 Units
SN Units
SN Beds

Total Subsidy/ Yr. _____

108,121

Anticipated Annual Gross Rents 1,297,452

- * Indicate on a separate line which apartment is for the Superintendent. If it's rent-free, put \$0 in the Rent column.
** Indicate "Very Low", "Low", "Mod" or "Mkt" AND the percentage of median income.
Very Low Income - 30% or less of median income
Low Income - 30% to 50% of median income
Moderate Income - 50% to 80% of median income
Market Income - 80%+ of median income
*** NOTE: For Underwriting Purposes Only, Target Occupancy is based on (1) person per Bedroom
Where tenants pay their own utilities, a "utility allowance" must be subtracted from the maximum chargeable rent when determining their rental charge.

NOTE: The percentage listed in this section is merely the percentage of the Gross Rent as to the applicable Area Median Income.

EQUIPMENT AND SERVICES

(a)

Equipment:

Ranges
Refrigerator
Air Conditioning
Laundry Facilities
Disposal
Dishwasher
Carpet
Drapes
Swimming Pool
Tennis Court
Other:

X
X
X
X

X
X

(b)

Services:

Heat
Hot Water
Cooking
Air Conditioning
Household Electric
Water
Sewer
Parking
Other:
Other:

Gas, Electric or Oil

elec
elec
elec
elec
elec

Paid by Tenant

yes
yes
yes
yes
yes
no
no
no

COMMERCIAL SPACE

(Include all utility costs associated with the commercial space in your description)

Sponsoring Entity: _____

Dev. Name: Valley Road Mixed Income

IDMFA# _____

Prepared by: _____

Reviewed by: _____

(Director of Property Management - Expenses Only)

Sp. Nbr. # _____

03/06/17

Date

RENTAL INCOME

Apartment Rents _____ \$ 1,297,452
 Vacancy Loss (7.00 %) _____ 90,822
NET APT. RENTS _____ **1,206,630**

Commercial Income _____ per Sq. Ft.
 Garage & Parking _____ per Sq. Ft.
 Commercial Vacancy _____ %
NET COMMERCIAL RENTALS _____
TOTAL RENTAL SUBSIDY _____
 Less Vacancy on the Subsidy _____ %
TOTAL RENTAL INCOME _____

OTHER INCOME

Laundry Machines _____
 Less Vacancy 7.00% _____ 11,981
TOTAL OTHER INCOME _____ **839**
 _____ **11,142**

TOTAL REVENUE

\$ **1,217,773**

EXPENSES

Administrative (Schedule I) _____ \$ 40,500
 Salaries (Schedule II) _____ 150,700
 Maint. & Repairs (Schedule III) _____ 37,000
 Maint. Contracts (Schedule IV) _____ 46,500
 Utilities (Schedule V) _____ 90,000
 Management Fee 38.22 per unit* _____ 45,869
 Supportive Services _____ %
 PILOT (Schedule VI) _____
 Insurance \$550 per Unit _____ 121,777
 Reserve for Repair and Replacement \$300 per unit _____ 55,000
 _____ per bed 2-Story & below - \$500; 3-Story & above - \$550
 _____ 30,000 *** Should be \$450 per unit or \$225 per bed for TF units

TOTAL EXPENSES

\$ **617,346**

NET OPERATING INCOME

\$ **600,426**

DEBT SERVICE - IF AMORTIZING LOAN

1. Principal and Interest _____
 2. Mortg & Bond Serv Fee 0.40 % _____
 3. MIP _____ %

\$ 470,785
 29,400

AGENCY DEBT SERVICE

\$ 500,185

DEBT SERVICE ON OTHER
 MORTGAGE LOANS (GROUND LEASE)

\$

TOTAL DEBT SERVICE

\$ 500,185

NET INCOME

\$ 100,241

Less Return on Equity (_____ % on \$ _____)

17,353,741

Project Profit/(Loss)

\$ 100,241

CHECK "X" THE APPROPRIATE LOAN TYPE IN THE CORRECT BOX BELOW

ENTER SOURCE OF LOAN

"X" Enter % for each loan

"X"

Core Expenses
 329,700
 3,297
 \$4,000 Max

SNHTF	X	1%
Simple Interest Rate: _____		
TV Cash Flow Payment: _____		

SECOND MORTGAGE: X

Interest Rate:	#NUM!	TERM (YRS)	180
2nd Mortgage Amount:	\$550,000		
MIP:	%	MIP Payment:	_____
Mortgage P & I:	_____		
Total Payment:	_____		

	NET OPERATING INCOME	
DSR -	TOTAL AGENCY DEBT SERVICE (incl. Sprr Needs Funds)	1.20

DEBT SERVICE RATIO CALCULATION for 1st Mortgage :

DSR -	NET OPERATING INCOME	
	AGENCY DEBT SERVICE (1st Mtg)	1.20041

New Mortgage
Amount

7,350,000

PROJECTIONS		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
RENTAL INCOME															
Assessment: Rents		1,344,072	1,384,394	1,426,926	1,468,704	1,512,755	1,558,149	1,604,832	1,652,039	1,702,820	1,753,708	1,806,520	1,860,510	1,916,325	1,973,875
Less: Vacancy rates		-51,085	-55,305	-59,613	-63,809	-68,944	-74,070	-79,242	-84,373	-89,482	-94,566	-99,632	-104,686	-109,728	-114,762
NET A-T, RENTS		1,249,987	1,287,487	1,326,111	1,356,895	1,406,871	1,449,077	1,482,540	1,537,326	1,583,443	1,630,349	1,675,878	1,720,274	1,762,785	1,813,548
Commercial Income															
Garage & Parking	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less: Commercial vacancy	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET COMMERCIAL RENTALS															
TOTAL RENTAL INCOME		1,249,987	1,287,487	1,326,111	1,356,895	1,406,871	1,449,077	1,482,540	1,537,326	1,583,443	1,630,349	1,675,878	1,720,274	1,762,785	1,813,548
TOTAL RENTAL SURPLUS															
Laundry Vacancies	11,381	0	12,463	12,955	13,477	14,016	14,575	15,160	15,766	16,397	17,052	17,735	18,444	19,182	19,948
Less: Vacancy on the Surplus	7	538	372	497	643	801	971	1,161	1,381	1,632	1,914	2,227	2,571	2,945	3,350
TOTAL OTHER INCOME		11,742	11,588	12,051	12,533	13,033	13,556	14,059	14,662	15,249	15,859	16,433	17,152	17,899	18,552
TOTAL REVENUE		1,261,729	1,299,074	1,338,163	1,374,428	1,449,905	1,482,634	1,505,548	1,551,988	1,599,692	1,646,338	1,698,311	1,747,427	1,800,027	1,854,000
Yearly Per Unit Cost															
OPERATING EXPENSES															
Administrative	\$405	40,500	42,120	43,635	45,557	47,379	49,274	51,245	53,295	55,427	57,644	59,950	62,345	64,822	67,455
Salaries and Benefits	\$1,507	150,700	156,726	162,997	169,517	176,286	183,350	190,694	198,311	206,243	214,432	223,073	231,996	241,278	250,927
Maintenance & Repairs	\$370	37,000	38,460	40,216	41,620	43,285	44,916	46,637	48,489	50,367	52,263	54,183	56,950	58,828	61,668
Maintenance Contracts	\$465	46,500	48,260	50,264	52,308	54,399	56,574	58,837	61,191	63,638	66,184	68,831	71,595	74,449	77,426
Utilities	\$500	50,000	52,000	54,000	56,000	58,000	60,000	62,000	64,000	66,000	68,000	70,000	72,000	74,000	76,000
Management Fee	36.22	45,969	47,245	48,662	50,122	51,628	53,175	54,773	56,413	58,105	59,846	61,644	63,493	65,398	67,360
PILOT air Handling	0.00	125,907	125,907	133,616	137,343	141,991	146,263	150,865	155,199	159,869	164,981	169,637	174,743	180,002	185,420
Insurance	\$530	53,000	57,200	59,483	61,866	64,342	66,915	69,593	72,375	75,271	78,282	81,413	84,570	88,057	91,579
Replacement Reserves	\$300	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Supplies Services	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EXPENSES		621,802	643,841	666,428	689,071	714,806	740,387	766,488	793,318	822,333	851,853	882,540	914,346	947,354	981,612
Total Per Unit Cost		9,217	9,436	9,654	9,871	10,089	10,307	10,525	10,743	10,961	11,179	11,397	11,615	11,833	12,051
Expense/Income Ratio		0.49	0.50	0.50	0.50	0.50	0.51	0.51	0.51	0.51	0.52	0.52	0.52	0.53	0.53
INCOME AVAILABLE FOR DEBT		639,447	635,432	671,735	685,357	735,300	744,159	726,052	765,360	776,311	794,915	815,331	833,082	852,669	872,859
Amount Debt Service/Net Mortgage															
Debt Service-2nd New		555,938	565,988	575,988	585,938	595,938	605,938	615,938	625,938	635,938	645,938	655,938	665,938	675,938	685,938
Total Debt Service		555,938	565,988	575,988	585,938	595,938	605,938	615,938	625,938	635,938	645,938	655,938	665,938	675,938	685,938
Debt Service Ratio		1.13	1.16	1.21	1.24	1.27	1.30	1.33	1.36	1.39	1.43	1.46	1.50	1.53	1.57
Debt from Conditions and Reserve		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CASH FLOW AFTER AMORT. DEBT SERVICE		63,459	93,446	115,748	132,369	149,312	166,576	184,171	202,382	220,343	238,927	257,843	277,094	295,680	316,311

