paradigm design inc.
Architects • Civil Engineers

March 23, 2015

Mr. Kurt Hauk
City of Watertown Engineer
245 Washington St., Rm. 305
Watertown, NY 13601

Re: Renzi Foodservice Addition
Watertown, NY
Job #1410145

Dear Mr. Hauk:

Enclosed you will find required application documents as well as site and building plans, for a proposed building addition to the existing Renzi food service facility located on Rail Drive. The following is a brief description of the project.

The existing facility was constructed in 2003, and subsequently expanded in 2006/2007 and 2011/2012 to the present day facility. Due to increasing demand, the Owner has recognized the need to expand the existing warehouse area to the east side of the existing building. In addition, a small office expansion along with associated automobile parking is also proposed on the west side of the existing facility. The intent of the building addition is to match the existing building color and style.

The warehouse expansion will extend south from the existing building toward existing railroad tracks. The existing fire apparatus road will be modified to allow emergency vehicles to access the new addition in accordance with 2010 NY Fire Code. Runoff from the addition will be diverted to two new storm water "pocket ponds", both of which have been designed in accordance with current NY DEC storm water regulations.

Construction is anticipated to begin in late April (after securing all necessary approvals from City of Watertown and NY DEC), with completion tentatively scheduled for October 2015.

We look forward to working with you on this project, and ask that you do not hesitate to contact me at (616) 785-5567 with any questions or additional information necessary to complete your review of this project.

Respectfully submitted,

PARADIGM DESIGN, INC.

John R. Walsh, P.E.
Corporate Director

Cc: Bob Ross – Food Tech, LLC
File

550 3 MILE ROAD NW, GRAND RAPIDS, MI 49544 PHONE (616) 785-5656 FAX (616) 785-5657

CITY OF WATERTOWN
SITE PLAN APPLICATION PROCESS

The applicant is responsible for completeness of application and inclusion of all required information.

****INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED****

In order to expedite the Site Plan review process, all applicants are encouraged to have a pre-application meeting with Planning & Engineering staff. Staff can be reached at (315) 785-7740.

In the interest of expediting site plan approvals, the City of Watertown wishes to advise you of the procedures in applying for these referrals:

A. Fill out the Site Plan / Site Plan Waiver - Determination Flow Chart below:

1. Is the use a one, two, or three family dwelling?
   - ☐ YES (Site Plan Review is **not** required. You may apply directly for Building Permit.)
   - ■ NO (Go to question 2)

2. Is your building or parking lot construction or expansion less than or equal to 400 sq. ft.?
   - ☐ YES (Site Plan Review is not required. You may apply directly for Building Permit.)
   - ■ NO (Go to question 3)

3. Does your building or parking lot construction or expansion exceed 2500 sq. ft.?
   - ■ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (Go to question 4)

4. Is your proposed building the first on the lot?
   - ☐ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (Go to question 5)

5. Does your project involve a change in the property boundaries?
   - ☐ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (Go to question 6)

6. Does your building or parking lot construction or expansion change or impair the overall grading, circulation, drainage, utility services, and appearance and visual effect of the property?
   - ☐ YES (Site Plan Review required. Submit the Site Plan Application Form.)
   - ☐ NO (*Site Plan Waiver allowed. Submit the Site Plan Waiver Form.)

   * The City of Watertown Planning Board reserves the right to require Site Plan Review.

B. SITE PLAN APPROVAL SUBMITTAL REQUIREMENTS*

1. **3 complete, collated sets of the site plan application package** that includes the following documents:
   a. Cover letter explaining the proposal.
   b. Completed Site Plan Application Form.
   c. Full size copies of all required plans (24"x36"), including 1 stamped & signed original.
   d. Engineering Report.

2. **13 complete, collated sets of the site plan application package** that includes the following documents:
   a. Cover letter explaining the proposal.
   b. Completed Site Plan Application Form.
   c. Reduced size copies of all required plans (11"x17") if they are legible. (otherwise submit full size sets)

3. **An electronic (pdf) copy** of the entire site plan application package to include the following:
   a. A single, combined pdf containing the cover letter, the site plan application form and the Engineering Report.
   b. A single, combined pdf containing all of the plan sheets and drawings.
   c. The pdf may be submitted via email or on a CD.

Note: When Jefferson County Planning Board (239-M) Review is necessary, one additional full size set as described in # 1 above is required.

*Planning Board Recommendation and City Council Approval is required for Site Plans.

C. WAIVER OF SITE PLAN APPROVAL SUBMITTAL REQUIREMENTS**

1. **2 complete, collated sets of the site plan application package** that includes the following documents:
   a. Cover letter explaining the proposal.
   b. Completed Site Plan Waiver Application Form.
   c. Full size copies of all required plans (24"x36"), including 1 signed original.

2. **8 complete, collated sets of the site plan application package** that includes the following documents:
   a. Cover letter explaining the proposal.
   b. Completed Site Plan Waiver Application Form.
   c. Reduced size copies of all required plans (11"x17") if they are legible. (otherwise submit full size sets)

3. **An electronic (pdf) copy** of the entire site plan waiver application package to include the following:
   a. A single, combined pdf containing the cover letter and the site plan waiver application form.
   b. A single, combined pdf containing all of the plan sheets and drawings.
   c. The pdf may be submitted via email or on a CD.

** Site Plan Approval of City Council may be waived by the City Planning Board.

D. Address submittals to:

Kurt W. Hauk, P.E.
City Engineer
Room 305, City Hall
245 Washington Street
Watertown, NY 13601

E. A **$50.00** application fee must accompany the submittal.
A **$50.00** application fee must accompany each resubmittal. You will be notified by the Engineering Department if an application requires a resubmittal.
Make checks payable to the City of Watertown.

F. All Site Plan submittals must be received by the City Engineer at least 14 calendar days prior to the next Planning Board Meeting; 21 calendar days if Jefferson County Planning Board action is necessary. Failure to meet the submittal deadline will result in **not** making the agenda for the upcoming Planning Board Meeting. **THERE ARE NO EXCEPTIONS.** The City Planning Board meets on the first Tuesday of each month at 3:00 P.M. in the City Council Chambers on the 3rd Floor of City Hall.

G. 2014 Meeting Schedules.

CITY OF WATERTOWN PLANNING BOARD 2014 (1ST TUES. MONTH @ 3:00 PM)		**CITY OF WATERTOWN CITY COUNCIL 2014 (1ST & 3RD MONDAY @ 7 PM)**	**JEFFERSON COUNTY PLANNING BOARD 2014 (LAST TUES. MONTH)**	
MEETING DATE	DEADLINE	MEETING DATE	MEETING DATE	DEADLINE
Jan. 7	Dec. 24	Jan. 6, 20	Jan. 28	Jan. 14
Feb. 4	Jan. 21	Feb. 3, 17*	Feb. 25	Feb. 11
March 4	Feb. 18	March 3, 17	March 25	March 11
April 1	March 18	Apr. 7, 21	April 29	April 15
May 6	April 22	May 5, 19	May 27	May 13
June 3	May 20	Jun. 2, 16	June 24	June 10
July 1	June 17	July 7, 21	July 29	July 15
Aug. 5	July 22	Aug. 4, 18	Aug. 26	Aug. 12
Sept. 2	Aug. 19	Sept. 1*, 15	Sept. 30	Sept. 16
Oct. 7	Sept. 23	Oct. 6, 20	Oct. 28	Oct. 14
Nov. 4	Oct. 21	Nov. 3, 17	Nov. 25	Nov. 11
Dec. 2	Nov. 18	Dec. 1, 15	Dec. 30	Dec. 16

* = Meeting Date changed due to Holiday

CITY OF WATERTOWN
SITE PLAN APPLICATION

1869

** Provide responses for all sections. INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED. Failure to submit required information by the submittal deadline will result in **not** making the agenda for the upcoming Planning Board meeting.

PROPERTY LOCATION

Proposed Project Name: Renzi Foodservice - Building Addition

Tax Parcel Number: 9-43-101.008

Property Address: 901 Rail Drive

Existing Zoning Classification: Light Industrial

OWNER OF PROPERTY

Name: MLR Realty, LLC

Address: 901 Rail Drive
Watertown, NY

Telephone Number: _____

Fax Number: _____

APPLICANT

Name: FoodTech, Inc (Attn: Bob Ross)

Address: 300 Ledgewood Place (Suite 300)
Rockland, MA 02370

Telephone Number: (781)261-9700

Fax Number: _____

Email Address: bross@foodtech.com

ENGINEER/ARCHITECT/SURVEYOR

Name: Paradigm Design, Inc (John Walsh)

Address: 550 3 Mile Rd NW
Grand Rapids, MI 49544

Telephone Number: (616)785-5567

Fax Number: _____

Email Address: jwalsh@paradigmae.com

OPTIONAL MATERIALS:

☐ **PROVIDE AN ELECTRONIC (.DWG) COPY OF THE SITE PLAN WITH AS-BUILT REVISIONS. This will assist the City in keeping our GIS mapping up-to-date.**

REQUIRED MATERIALS:

** The following drawings with the listed information **ARE REQUIRED, NOT OPTIONAL.** If the required information is not included and/or addressed, the Site Plan Application will **not** be processed.

■ **COMPLETED ENVIRONMENTAL ASSESSMENT FORM** (Contact us if you need help choosing between the Short EAF and the Full EAF):
http://www.dec.ny.gov/permits/6191.html

■ **ELECTRONIC COPY OF ENTIRE SUBMISSION** (PDF preferred)

■ **BOUNDARY & TOPOGRAPHIC SURVEY**
(Depict existing features as of the date of the Site Plan Application. This Survey and Map must be performed and created by a Professional Land Surveyor licensed and currently registered to practice in the State of New York. This Survey and Map must be stamped and signed with an original seal and signature on at least one copy, the rest may be copies thereof.

- ■ All elevations are National Geodetic Vertical Datum of 1929 (NGVD29).
- ■ 1' contours are shown & labeled with appropriate spot elevations.
- ■ All existing features on and within 50 feet of the subject property are shown and labeled.
- ■ All existing utilities on and within 50 feet of the subject property are shown and labeled.
- ■ All existing easements and/or right-of-ways are shown and labeled.
- ■ Existing property lines (bearings & distances), margins, acreage, zoning, existing land use, reputed owner, adjacent reputed owners & tax parcel numbers are shown and labeled.
- ■ The north arrow & graphic scale are shown.

■ **DEMOLITION PLAN** (If Applicable)

- ■ All existing features on and within 50 feet of the subject property are shown and labeled.
- ■ All items to be removed are labeled in darker text.

■ SITE PLAN

- ■ All proposed above ground features are depicted and clearly labeled.
- ■ All proposed features are clearly labeled "proposed".
- ■ All proposed easements & right-of-ways are shown and labeled.
- ■ Land use, zoning, & tax parcel number are shown.
- ■ The Plan is adequately dimensioned including radii.
- ■ The line work & text for all proposed features is shown darker than existing features.
- ■ All vehicular & pedestrian traffic circulation is shown including a delivery or refuse vehicle entering and exiting the property.
- ■ Proposed parking & loading spaces including ADA accessible spaces are shown and labeled.
- ■ Refuse Enclosure Area (Dumpster), if applicable, is shown. Section 161-19.1 of the Zoning Ordinance states, "No refuse vehicle or refuse container shall be parked or placed within 15 feet of a party line without the written consent of the adjoining owner, if the owner occupies any part of the adjoining property".
- ■ The north arrow & graphic scale are shown.

■ GRADING PLAN

- ■ All proposed below ground features including elevations & inverts are shown and labeled.
- ■ All proposed above ground features are shown and labeled.
- ■ The line work & text for all proposed features is shown darker than existing features.
- ■ All proposed easements & right-of-ways are shown and labeled.
- ■ 1' existing contours are shown dashed & labeled with appropriate spot elevations.
- ■ 1' proposed contours are shown & labeled with appropriate spot elevations.
- ■ All elevations are National Geodetic Vertical Datum of 1929 (NGVD29).

■ Sediment & Erosion control are shown & labeled on the grading plan unless separate drawings have been provided as part of a Stormwater Pollution Prevention Plan (SWPPP).

■ **UTILITY PLAN**

■ All proposed above & below ground features are shown and labeled.

■ All existing above & below ground utilities including sanitary, storm water, water, electric, gas, telephone, cable, fiber optic, etc. are shown and labeled.

N/A All proposed easements & right-of-ways are shown and labeled.

■ The Plan is adequately dimensioned including radii.

■ The line work & text for all proposed features is shown darker than existing features.

■ The following note has been added to the drawings stating, "All water main and service work must be coordinated with the City of Watertown Water Department. The Water Department requirements supersede all other plans and specifications provided."

N/A **LANDSCAPING PLAN**

☐ All proposed above ground features are shown and labeled.

☐ All proposed trees, shrubs, and other plantings are shown and labeled.

☐ All proposed landscaping & text are shown darker than existing features.

☐ All proposed landscaping is clearly depicted, labeled and keyed to a plant schedule that includes the scientific name, common name, size, quantity, etc.

☐ For additional landscaping requirements where nonresidential districts and land uses abut land in any residential district, please refer to Section 310-59, Landscaping of the City's Zoning Ordinance.

■ **Site Plan complies with and meets acceptable guidelines set forth in Appendix A - Landscaping and Buffer Zone Guidelines (August 7, 2007).**

N/A **PHOTOMETRIC PLAN** (If Applicable)

☐ All proposed above ground features are shown.

☐ Photometric spot elevations or labeled photometric contours of the property are clearly depicted. Light spillage across all property lines shall not exceed 0.5 foot-candles.

■ CONSTRUCTION DETAILS & NOTES

■ All details and notes necessary to adequately complete the project including, but not limited to, landscaping, curbing, catch basins, manholes, water line, pavement, sidewalks, trench, lighting, trash enclosure, etc. are provided.

N/A Maintenance & protection and traffic plans & notes for all required work within City streets including driveways, water laterals, sanitary laterals, storm connections, etc. are provided.

N/A The following note must be added to the drawings stating:
"All work to be performed within the City of Watertown margin will require sign-off from a Professional Engineer, licensed and currently registered to practice in the State of New York, that the work was built according to the approved site plan and applicable City of Watertown standards. Compaction testing will be required for all work to be performed within the City of Watertown margin and must be submitted to the City of Watertown Codes Department."

■ PRELIMINARY ARCHITECTUAL PLANS (If Applicable)

■ Floor plan drawings, including finished floor elevations, for all buildings to be constructed are provided.

■ Exterior elevations including exterior materials and colors for all buildings to be constructed are provided.

■ Roof outline depicting shape, slope and direction is provided.

■ ENGINEERING REPORT

**** The engineering report at a minimum includes the following:**

■ Project location

■ Project description

■ Existing & proposed sanitary sewer flows & summary

■ Water flows & pressure

■ Storm Water Pre & Post Construction calculations & summary

■ Traffic impacts

■ Lighting summary

■ Landscaping summary

■ GENERAL INFORMATION

■ ALL ITEMS ARE STAMPED & SIGNED WITH AN ORIGINAL SIGNATURE BY A PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR SURVEYOR LICENSED AND CURRENTLY REGISTERED TO PRACTICE IN THE STATE OF NEW YORK.

■ If required, a copy of the Stormwater Pollution Prevention Plan (SWPPP) submitted to the NYSDEC will also be sent to the City of Watertown Engineering Department.

N/A ** If required, a copy of all submittals sent to the New York State Department of Environmental Conservation (NYSDEC) for the sanitary sewer extension permit will also be sent to the City of Watertown Engineering Department.

N/A ** If required, a copy of all submittals sent to the New York State Department of Health (NYSDOH) will also be sent to the City of Watertown Engineering Department.

** When NYSDEC or NYSDOH permitting is required, the property owner/applicant shall retain a licensed Professional Engineer to perform inspections of the proposed utility work and to certify the completed works were constructed in substantial conformance with the approved plans and specifications.

■ Signage will not be approved as part of this submission. It requires a sign permit from the Codes Department. See Section 310-52.2 of the Zoning Ordinance.

■ Plans have been collated and properly folded.

N/A If an applicant proposes a site plan with multiple buildings and any of those buildings front on a private drive, the City Council will name the private drive by resolution and the building(s) will be given an address number on that private drive by City staff. The applicant may propose a name for the private drive for the City Council's consideration.

Proposed Street Name: _____

N/A Explanation for any item not checked in the Site Plan Checklist.

items marked "N/A" are not applicable to this project, primarily due to the project being an expansion to an existing facility

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information

Name of Action or Project:
Renzi Foodservice - Building Expansion

Project Location (describe, and attach a location map):
901 Rail Drive, Watertown, NY

Brief Description of Proposed Action:
The project consists of an approximately 39,000 square foot warehouse expansion on the southeast corner of the existing building, along with gravel semi trailer parking spaces on the easterly buildnig wall. The project will also include an approximately 1,000 square foot office expansion on the west side of the building along with 35 +/- additional auto parking spaces adjacent to the office expansion.

Name of Applicant or Sponsor:	Telephone: (315) 788-5610
MLR Realty LLC	E-Mail:

Address:
901 Rail Drive

City/PO:	State:	Zip Code:
Watertown	NY	13601

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Site Plan Approval & Building Permit (City of Watertown) & Storm Water Notice of Intent (NY DEC)	☐	☑

3.a. Total acreage of the site of the proposed action? 21.0 +/- acres
b. Total acreage to be physically disturbed? 2.9 +/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 21.0 +/- acres

4. Check all land uses that occur on, adjoining and near the proposed action.
☐ Urban ☐ Rural (non-agriculture) ☑ Industrial ☐ Commercial ☐ Residential (suburban)
☑ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____
☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	✓	☐
b. Consistent with the adopted comprehensive plan?	☐	✓	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	✓
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	✓	☐
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	✓	☐
b. Are public transportation service(s) available at or near the site of the proposed action?	✓	☐
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	✓	☐
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	☐	✓
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	☐	✓
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	☐	✓
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	✓	☐
b. Is the proposed action located in an archeological sensitive area?	☐	✓
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	✓
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	✓	☐

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:
☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional
☐ Wetland ☐ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	☐	✓
16. Is the project site located in the 100 year flood plain?	✓	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☑ NO ☐ YES	☐	✓
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: ☐ NO ☑ YES		

The runoff from proposed project will be routed through a storm water wet detention basin designed based on current DEC storm water regulations (existing site runoff will continue to be routed separately through existing storm water system on site)

	NO	YES
18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size:	✓	
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	✓	
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	✓	

I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

X

Applicant/sponsor name: John M Renzi Date: 3/16/2015

Signature: John M Renzi

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?		
2. Will the proposed action result in a change in the use or intensity of use of land?		
3. Will the proposed action impair the character or quality of the existing community?		
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?		
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?		
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?		
7. Will the proposed action impact existing: a. public / private water supplies?		
b. public / private wastewater treatment utilities?		
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?		
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?		

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency	Date
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT

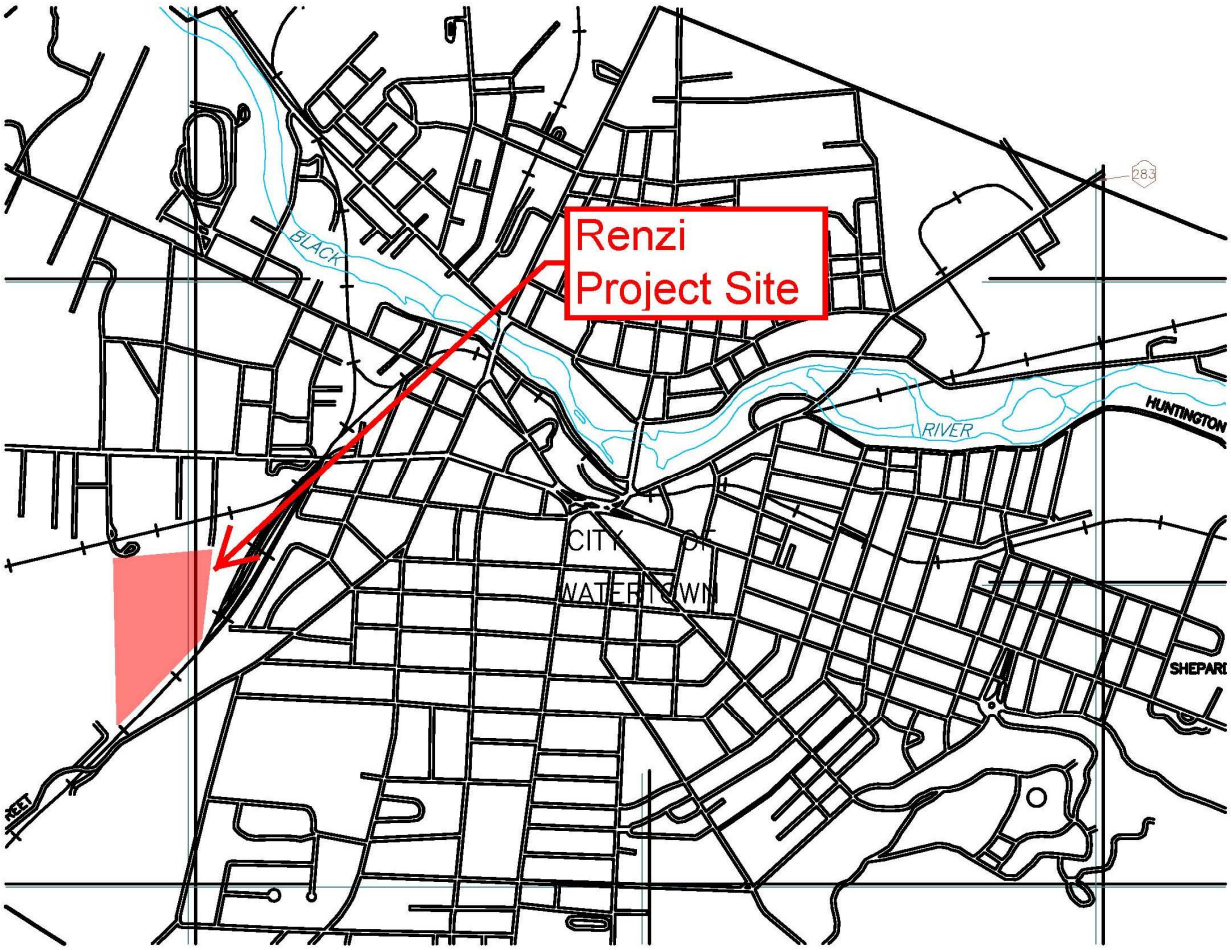
Engineering Summary & Report

Office and Warehouse Addition
for
Renzi Food Supply
Watertown, NY

Job No. 1410145
March 19, 2015

PARADIGM DESIGN, INC.
550 3 Mile N.W., Suite B
Grand Rapids, MI 49544
PH: (616) 785-5656
Fax: (616) 785-5657

LOCATION MAP



PROJECT SUMMARY

The site consists of an existing 58,491 sft food distribution warehouse, with associated loading and parking areas. The site is located at 901 Rail Drive, in the City of Watertown. The original building was constructed in 2003/2004, with an addition in 2006/2007 and 2011/2012 taking the site to its current condition. The building is served by an 8" dead-end water main for both fire protection and domestic water supply. Sanitary sewer is pumped from an existing lift station near the Northeast corner of the existing building, which discharges to public sewer near Rail Drive through a 2 inch diameter force main. Both sanitary and water services will remain unchanged as part of this proposed project (note that the warehouse expansion results in no additional plumbing fixtures, and the office expansion only adds minimal fixtures resulting in a negligible flow increase from the project).

Storm water runoff from the existing site sheet flows to an existing infiltration basin located at the northwest corner of the parking lot. During larger rain events this basin will overflow through an earthen berm (broad-crested weir) to Beaver Meadows, which is a 1,000 + acre wetland located downstream of the project site. This existing basin will not be utilized for the new building addition. Two proposed wet ponds will be constructed to serve the storm water runoff from the new building addition.

To the extent possible, low-impact development (LID) techniques will be used on site. These include vegetated swales to carry roof and parking lot runoff from the new addition to the proposed wet ponds, the disconnection of rooftop runoff, and making the fire apparatus road gravel rather than paved surface.

Construction is anticipated to begin in late April 2015 (pending necessary City and State approvals) and be completed in October 2015.

SITE DATA

- Traffic Data (estimated ADT)
  - Existing
    - Auto: 50 trips (estimated)
    - Truck: 34 trips (17 trucks, entering and exiting during same hour)
  - Proposed
    - Auto: The project will add four (4) employees during the peak shift, resulting in a negligible increase in auto trips
    - Truck: 58 trips (12 additional trucks, entering and exiting during same hour)
      - Source – ITE Trip Generation, 9th Edition, Land Use 150
      - Note that the bulk of these additional trips are currently "in use" today as the two Watertown facilities function as "cross-dock" space (meaning Renzi trucks are already moving product between the 2 facilities)

- Site Landscaping
  - All existing site buffers will remain as part of this project
  - Street Trees (15' greenspace w/ trees at 40' on center)
    - Existing tree cluster along Rail Drive to remain, and will be used to meet street tree requirement
  - Exterior Parking Lot Plantings
    - "street" trees will be planted along main entry drive prior to entering the larger parking lot/truck maneuvering area. The remainder of the parking lot perimeter will remain open for snow storage
    - North and west side of existing parking lot also have large wooded areas to help achieve intent of this requirement
  - Interior Parking lot plantings
    - Existing site does not have any interior islands, in order to allow better snow removal and truck maneuvering within the site
    - Site is surrounded by existing woods

- Site Lighting
  - Existing
    - 12 light poles within site driveway and parking lot
    - 23' – 28' fixture height (20' & 25' poles on 3' base)
  - Proposed
    - Same as existing (no new light poles)
      - Only building wall pack units to be added

UTILITY DATA

Water & Sewer Flow (domestic use)

- Existing Usage (from 2010 water bills)
    - Average = 41.5 hundred cubic feet per quarter
        - 1400 cubic feet per month
        - 10,400 gallons per month
        - 350 gallons per day (using 30 days per month)
- Proposed Usage
    - No increase is proposed
        - 350 gallons per month

Water Flow & Pressure (fire protection)

- Existing System (Rail Drive)
    - Static Pressure: 100 psi
    - Flow test (7/18/2011 – City Water Dept.)
        - 3,996 gpm @ 20 psi residual pressure
- Existing System (Renzi building)
    - sprinkled
- Proposed System (Renzi building)
    - In process of being designed by fire protection contractor

STORM DRAINAGE

See attached Stormwater Pollution Prevention Plan and calculations following this report with the New York DEC Notice of Intent (attached).

Stormwater Pollution Prevention Plan

for:

Renzi FoodService
901 Rail Drive
City of Watertown, Jefferson County, NY

Operator(s):

MLR Realty, LLC
Attn: John Renzi
901 Rail Drive
Watertown, NY 13601

SWP3 Contact(s):

Paradigm Design, Inc.
John Walsh, PE
550 3 Mile Road NW, Suite B
Grand Rapids, MI 49544
(616) 785-5567
jwalsh@paradigmae.com

SWPPP Preparation Date:

March 19, 2015

Estimated Project Dates:

Project Start Date: April 2015
Project Completion Date: October 2015

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name: Renzi Foodservice
Project Street/Location: 901 Rail Drive
City: Watertown State: NY ZIP Code: 13601
County or Similar Subdivision: Jefferson County

Latitude/Longitude
Latitude: 43.969º N
Longitude: 75.932º W

Method for determining latitude/longitude:
☐ USGS topographic map (Quad map) ☒ DEC Web site ☐ GPS
☐ Other (please specify): _____

1.2 Contact Information/Responsable Parties

Operator(s):
MLR Realty, LLC
John Renzi
901 Rail Drive
Watertown, NY 13061

Project Manager(s) or Site Supervisor(s):
Insert Company or Organization Name: Food Tech, LLC
Insert Name: Bob Ross
Insert Address: 300 Ledgewood Place
Insert City, State, Zip Code: Rockland, MA 02370
Insert Telephone Number: 781-261-9700
Insert Fax/Email: bross@foodtech.com

This SWPPP was Prepared by:
Paradigm Design, Inc.
John Walsh
550 3 Mile Road NW, Suite B
Grand Rapids, MI 49544
(616) 785-5567
jwalsh@paradigmae.com

Contractor(s):

Insert Company or Organization Name: TBD – Site Contractor
Insert Name:
Insert Address:
Insert City, State, Zip Code:
Insert Telephone Number:
Insert Fax/Email:
Repeat as necessary

Emergency 24-Hour Contact:
Insert Name:
Insert Company or Organization Name:
Insert Telephone Number:

1.3 Nature and Sequence of Construction Activity

Describe the general scope of the work for the project, major phases of construction, etc:

Construction of an approximately 38,819+/- s.f. building addition along with associated drainage improvements. Major phases of construction will include: temporary control measures, site grading, underground utilities, building/foundations, permanent controls (curb, paving, etc), finish grading and landscaping.

What is the function of the construction activity?

☐ Residential ☐ Commercial ☒ Industrial ☐ Road Construction ☐ Linear Utility

☐ Other (please specify):

Estimated Project Start Date: April 2015

Estimated Project Completion Date: October 2015

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type(s): Based on soil report from Kenney Geotechnical Services the soil consists primarily of clayey sand overlying bedrock. Report has been attached to package.

Slopes (describe current slopes and note any changes due to grading or fill activities): Currently, existing slopes range from 1% to 33%, with proposed slopes similar in nature.

Drainage Patterns (describe current drainage patterns and note any changes dues to grading or fill activities): The entire existing site (pre-developed and post-developed) drains to the west to Beaver Meadows. This is a 1,000+ acre wetland area extending westerly from the site.

Vegetation: The pre-existing site is primarily wooded.

1.5 Construction Site Estimates

The following are estimates of the construction site.

Total project area:	6.33 acres
Construction site area to be disturbed:	6.33 acres
Percentage impervious area before construction:	13.4%
Runoff curve number before construction:	61
Percentage impervious area after construction:	50 %
Runoff coefficient after construction	74

1.6 Receiving Waters

Description of receiving waters: Beaver Meadows (regulated wetland) from an existing infiltration basin (only during larger storm events when spillway is activated; smaller events have no discharge to wetlands as runoff infiltrates through basin). A new wet pond is proposed upstream of existing infiltration basin for the new building addition.

Description of storm sewer systems: No storm sewer exists on site, with the exception of (2) existing culvert crossings at existing railroad siding, and a proposed culvert and outlet control structure at the new wet pond north of the proposed building addition.

1.7 Potential Sources of Pollution

Source	Stormwater Pollutants
Clearing, grading & excavating	Trash, debris, solids
Concrete washout and waste	pH, trash, debris, solids
Building Construction	Trash, debris, solids
Vehicle/Equipment Fueling	Oil & grease, trash, debris, solids
Vehicle/Equipment use & storage	Oil & grease, trash, debris, solids
Landscaping	Nutrients, trash, debris, solids

1.8 Historic Preservation

Are there any historic sites on or near the construction site?

☐ Yes ☒ No

1.9 Applicable Federal, Tribal, State or Local Programs

None

1.10 Maps/Plans

1. C1.0 OVERALL SITE PLAN (including location map)
2. C1.1 EXISTING CONDITIONS
3. C2.0 HORIZONTAL CONTROL AND UTILITY PLAN
4. C2.1 FIRE ACCESS PLAN
5. C3.0 GRADING PLAN (including swppp information)
6. C3.1 EXCAVATION PROFILES
7. C5.0 SITE DETAILS

SECTION 2: STORM WATER MANAGEMENT

2.1 Design Parameters

Storm Water Management:

- Design new wet pond (P-5) based on current New York Storm Water manual standards
  - Water Quality: Met through permanent pool
  - Channel Protection Volume: Release 1 year storm event over 24 hours
  - Overbank Flood Control: Detain post-developed runoff from the 10 year storm to pre-developed 10 year release rate
  - Extreme Flood Control: Detain post-developed runoff from 100 year storm to pre-development 100 year discharge

Storm Sewer Design:

- N/A

2.2 Narrative

The existing developed site drains via overland flow to an infiltration basin located at the northwest corner of the existing site. It was determined that the existing infiltration basin would not have sufficient storage capacity for the increase in stormwater runoff from the proposed addition; therefore two new wet pocket ponds will be constructed to serve the proposed building addition's increase in storm water runoff.

Renzi Foodservice is proposing to construct an approximately 38,819 sft building addition. Per the *New York State Stormwater Management Design Manual* the proposed building addition falls into the category of a redevelopment project. The existing impervious area will remain, and continue to drain to the existing infiltration basin at the NW corner of the property. The proposed building addition and contributing drainage area of 6.33 acres will utilize two new proposed wet pocket ponds. One of the ponds will be west of the existing building and discharge into the existing infiltration basin, and the second pond will be northeast of the proposed building addition and discharge into an existing drainage ditch which ultimately drains to Beaver Meadows, a 1,000 + acre wetland located downstream of the project site. Site soils (per Kenney Geotechnical Services) consist primarily of clayey sand overlying bedrock.

<u>Water Quality & Runoff Reduction</u>

The water quality volume and all following storage requirements were calculated utilizing the *New York State Stormwater Management Design Manual.* The water quality volume was determined using Equation 1 from table 4.1 of the design manual.

Equation 1: $$WQv = (P * Rv * A)/12$$

3

Due to the small drainage areas both of the proposed wet ponds will be designed as pocket ponds (P-5) per the design manual. Pocket ponds allow for 50% of the water quality to be released over 24 hours and the other 50% is accounted for in the permanent pool volume, or 100% of the volume to be accounted for in the wet pond volume. The proposed ponds are designed to account for 100% of the water quality volumes within the permanent pool.

In accordance with the design manual, the project is required to reduce the site's water quality volume using green infrastructure techniques (runoff reduction volume). This minimum runoff reduction volume is calculated per chapter 4 of the design manual, see attached calculations.

The proposed site's required minimum runoff reduction volume has been met with the vegetated swale and rooftop runoff disconnection green infrastructure techniques as defined in chapter 5 of the design manual. The vegetated swales have been designed in accordance with the design manual to convey the water quality runoff with a velocity < 1.0 fps, at a flow depth < 4 inches, and a retention time of at least 10 minutes. The swales can also adequately convey the 10 year storm event with 6 inches of freeboard and a velocity < 5 fps.

The rooftop runoff disconnection has also been designed in accordance with the design manual. Per the requirements found in chapter 5 of the design manual only part of the roof was counted toward the rooftop runoff disconnection. Per the design manual the maximum allowable area to contribute to the reduction is 2,000 sft per roof drain with a maximum contributing flow path length of 75 ft. 2,000 sft per roof drain has been used rather than 500 sft, as the roof drains will discharge in to a vegetated swale which shall adequately accommodate the flow.

By utilizing the vegetated swale and rooftop runoff disconnection green infrastructure techniques, the proposed site's water quality volume was reduced by more than the minimum required runoff reduction volume (RRv) of 0.047 ac-ft.

See Table 1: Wet Pond Design Summary below for required and provided water quality volumes along with the runoff reduction provided.

Channel Protection

The channel protection (1 year storm event) volume and discharge rate were calculated utilizing appendix B of the design manual. See Table 1: Wet Pond Design Summary below for required and provided storage volumes. The allowable releases will be released via a 1" diameter orifices for both the east and west ponds see attached calculations.

Overbank Flood & Extreme Storm

The overbank flood (10 year storm event) and the extreme storm (100 year storm event) volumes and discharge rates were calculated using the SCS TR-55 method within *Hydraflow Hydrographs Extension for AutoCAD Civil 3D*. See Table 1: Wet Pond Design Summary below for required and provided release rates and storage volumes. The

allowable release for both storm events will be released via the 1” diameter orifice and a 12” diameter orifice in the east pond. In the west pond the allowable release for both storm events will be release via a 1” diameter orifice and a 10 ft wide broad crested weir. As seen in the table below both proposed wet ponds adequately serve the proposed building addition and surrounding drainage area of 6.33 acres by maintaining release rates under existing runoff conditions for the overbank flood (10 year storm event) and the extreme storm (100 year storm event).

Table 1: Pond Design Summary

	West Pond		East Pond		Combined	
	Required Volume(ac-ft)	Provided Volume(ac-ft)	Required Volume(ac-ft)	Provided Volume(ac-ft)	Required Volume(ac-ft)	Provided Volume(ac-ft)
WQv	0.043	n/a	0.098	n/a	0.141	n/a
RRv	0.011	0.024	0.036	0.040	0.047	0.064
New WQv	0.018	0.140	0.058	0.280	0.076	0.420
CPv	0.13	0.13	0.15	0.16	0.28	0.29
	Required Release(cfs)	Provided Release(cfs)	Required Release(cfs)	Provided Release(cfs)	Required Release(cfs)	Provided Release(cfs)
Overbank Flood(10 yr)	2.075	0.365	1.823	0.240	3.898	0.605
Extreme Storm(100 yr)	4.090	3.349	4.203	1.226	8.293	4.575

Additional information and calculations are included following this report with the New York DEC Notice of Intent & SWPPP (attached).

405.50 Calculations

Storm water calculations and associated maps and figures are located in the appendix.

SECTION 3: EROSION AND SEDIMENT CONTROL BMPS

3.1 Minimize Disturbed Area and Protect Natural Features and Soil

There are no natural areas on this site that will need to be protected. The existing wetlands on the west side of the site are over 400' from project disturbed area. Topsoil is required to be stockpiled to heights not exceeding 72 inches and shall be graded to drain. Disturbed areas will be minimized to the extent possible.

3.2 Phase Construction Activity

Due to the nature and size of this site, phased construction is not anticipated. We do encourage the contractor to minimize the amount and duration of exposed soil at any time. Due to change in grade (from existing to proposed), this grading will likely expose most of the disturbed area at one time.

Construction is slated to begin in April of this year and permanent erosion control measures (i.e. curb, storm sewer, paving and seeding) will be installed as quickly as possible once the initial earthwork is completed.

3.3 Stabilize Soils

BMP Description: Hydroseed	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	As soon as fine grading is complete, hydroseed will be spread in all disturbed locations per the attached site plan.
Maintenance and Inspection:	As necessary to establish turf
Responsible Staff:	Contractor

3.4 Protect Slopes

BMP Description: Hydroseed w/ Erosion Control Blanket	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	As soon as fine grading is complete, hydroseed and erosion control blanket will be installed on slopes to protect them from erosion per the drawings and specifications
Maintenance and Inspection:	As necessary to establish a vigorous growth of grass.
Responsible Staff:	Contractor

3.5 Protect Storm Water Basins

BMP Description: Staked Hay bales	
☐ ***Permanent***	☒ ***Temporary***
Installation Schedule:	Prior to site disturbance, staked hay bales will be installed within swales leading to infiltration basin.
Maintenance and Inspection:	Weekly or after each rainfall event
Responsible Staff:	Contractor to engage certified storm water operator

3.6 Establish Perimeter Controls and Sediment Barriers

BMP Description: Staked Hay Bale	
☐ ***Permanent***	☒ ***Temporary***
Installation Schedule:	Prior to site disturbance, staked hay bales will be installed per site plan drawings (within proposed drainage swales)
Maintenance and Inspection:	Weekly or after each rainfall event
Responsible Staff:	Contractor to engage certified storm water operator

3.7 Establish Stabilized Construction Exits

BMP Description: Construction Entrance	
☐ ***Permanent***	☒ ***Temporary***
Installation Schedule:	Prior to site disturbance, a construction entrance will be constructed (See drawings).
Maintenance and Inspection:	Weekly or after each rainfall event
Responsible Staff:	Contractor to engage certified storm water operator

SECTION 4: GOOD HOUSEKEEPING BMPS

4.1 Material Handling and Waste Management

BMP Description: Trash Dumpster	
Installation Schedule:	Prior to start of building construction, a metal dumpster will be provided for disposal of construction debris and trash from the site.
Maintenance and Inspection:	The dumpster will be emptied a minimum of once per week or whenever deemed necessary by the site supervisor. Trash and construction debris will be disposed of in a local landfill.
Responsible Staff:	Contractor

4.2 Establish Proper Building Material Staging Areas

BMP Description: Hazardous Material Storage	
Installation Schedule:	Every effort will be made to only store the amount of materials necessary for the project and all materials will be stored in a neat and orderly manner in appropriate containers and, if possible, under roof or other enclosures. Products will be kept in their original containers with original manufacturer labels.
Maintenance and Inspection:	The site supervisor will inspect the storage area daily to ensure proper use and disposal.
Responsible Staff:	Contractor

4.3 Designate Washout Areas

BMP Description: Concrete wash-out area	
Installation Schedule:	Prior to concrete activities, site supervisor will designated an area for concrete washout. It shall be located as far as possible from any storm sewer. Once concrete construction is complete, the material in the washout are will be properly disposed of.
Maintenance and Inspection:	Daily during concrete construction activities
Responsible Staff:	Contractor

4.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

BMP Description: On-site Fueling and Maintenance Area

Installation Schedule:	Site supervisor shall designate an area for on-site fueling and maintenance prior to equipment being used on site. The area shall be clean and dry, as far as possible from any storm drains and shall include a spill kit.
Maintenance and Inspection:	Daily
Responsible Staff:	Contractor

4.5 Spill Prevention and Control Plan

The following practices will be followed for spill prevention and clean-up on the project site:

1. Manufacturer's recommended methods for spill clean-up will be clearly posted and building site personnel will be made aware of the procedures and the location of the information and clean-up supplies.
2. Materials and equipment necessary for spill clean-up will be kept in the material storage area onsite.
3. All spills will be cleaned up immediately after discovery.
4. Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of size.

SECTION 5: SELECTING POST-CONSTRUCTION BMPs

BMP Description: Storm Sewer	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	Storm sewer relocation and new construction will occur following the completion of demolition and grading operations.
Maintenance and Inspection:	Contractor will hire an independent testing laboratory to monitor installation of storm sewers.
Responsible Staff:	Contractor and Independent Testing Laboratory

BMP Description: Outlet Protection	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	Storm sewer ends will have flared end sections with rip-rap at pipe outlet
Maintenance and Inspection:	Weekly or after each rainfall event
Responsible Staff:	Contractor

BMP Description: Paving	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	Paving installation will occur at a point when no heavy equipment is needed on-site.
Maintenance and Inspection:	Contractor will hire an independent testing laboratory to monitor installation of curbs.
Responsible Staff:	Contractor and Independent Testing Laboratory

BMP Description: Hydroseed	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	Hydroseeding will occur upon completion of fine grading, landscaping and irrigation installation.
Maintenance and Inspection:	Contractor will monitor installation
Responsible Staff:	Site Supervisor

SECTION 6: INSPECTIONS

6.1 Inspections

1. ***Inspection Personnel:*** Identify the person(s) who will be responsible for conducting inspections and describe their qualifications: Contractor is required to provide a certified storm water operator meeting the guidelines of the phase II rule to make inspections.

2. ***Inspection Schedule and Procedures:***

   Inspections will occur on a weekly basis and after each rain event by the storm water operator. Gordon Food Service Personnel will also perform inspections on a periodic basis when they visit the site.

   Contractor will be required to address any deficiencies identified within 24 hours of notification.

   Inspection Report shall contain, at a minimum, the information shown on the attached sample report.

SWPPP APPENDICES

Appendix A – Notice of Intent & Notice of Termination

Appendix B – Drainage Calculations

Appendix C – Soil Report

Appendix D –Site Plans

Appendix A – Notice of Intent & Notice of Termination

0644089821

NOTICE OF INTENT

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

NYR ☐☐☐☐☐☐
(for DEC use only)

Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002

All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

-IMPORTANT-
RETURN THIS FORM TO THE ADDRESS ABOVE
OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)
MLR Realty, LLC

Owner/Operator Contact Person Last Name (NOT CONSULTANT)
Renzi

Owner/Operator Contact Person First Name
John

Owner/Operator Mailing Address
901 Rail Drive

City
Watertown

State
NY

Zip
13601 -

Phone (Owner/Operator)
- -

Fax (Owner/Operator)
- -

Email (Owner/Operator)

FED TAX ID
- (not required for individuals)

Project Site Information

Project/Site Name
Renzi Foodservice

Street Address (NOT P.O. BOX)
901 Rail Drive

Side of Street
○ **North** ● **South** ○ **East** ○ **West**

City/Town/Village (THAT ISSUES BUILDING PERMIT)
Watertown

State: NY
Zip: 13601 -
County: Jefferson
DEC Region: 6

Name of Nearest Cross Street
Bellew

Distance to Nearest Cross Street (Feet)
150

Project In Relation to Cross Street
○ **North** ○ **South** ● **East** ○ **West**

Tax Map Numbers
Section-Block-Parcel
9-43-101.008

Tax Map Numbers
9-43-101.008

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting): 425189

Y Coordinates (Northing): 4868906

2. What is the nature of this construction project?

● **New Construction**

○ **Redevelopment with increase in impervious area**

○ **Redevelopment with no increase in impervious area**

3. Select the predominant land use for both pre and post development conditions.
SELECT ONLY ONE CHOICE FOR EACH

Pre-Development Existing Land Use

- ● FOREST
- ○ PASTURE/OPEN LAND
- ○ CULTIVATED LAND
- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ○ INDUSTRIAL
- ○ COMMERCIAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY
- ○ PARKING LOT
- ○ OTHER

Post-Development Future Land Use

- ○ SINGLE FAMILY HOME
- ○ SINGLE FAMILY SUBDIVISION — Number of Lots
- ○ TOWN HOME RESIDENTIAL
- ○ MULTIFAMILY RESIDENTIAL
- ○ INSTITUTIONAL/SCHOOL
- ● INDUSTRIAL
- ○ COMMERCIAL
- ○ MUNICIPAL
- ○ ROAD/HIGHWAY
- ○ RECREATIONAL/SPORTS FIELD
- ○ BIKE PATH/TRAIL
- ○ LINEAR UTILITY (water, sewer, gas, etc.)
- ○ PARKING LOT
- ○ CLEARING/GRADING ONLY
- ○ DEMOLITION, NO REDEVELOPMENT
- ○ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
- ○ OTHER

***Note:** for gas well drilling, non-high volume hydraulic fractured wells only

4. In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)

Total Site Area	Total Area To Be Disturbed	Existing Impervious Area To Be Disturbed	Future Impervious Area Within Disturbed Area
21.4	6.3	0.4	1.7

5. Do you plan to disturb more than 5 acres of soil at any one time? ● **Yes** ○ **No**

6. Indicate the percentage of each Hydrologic Soil Group(HSG) at the site.

A	B	C	D
25 %	50 %	25 %	%

7. Is this a phased project? ○ **Yes** ● **No**

8. Enter the planned start and end dates of the disturbance activities.

Start Date 04 / 20 / 2015 – **End Date** 10 / 31 / 2015

9. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Name

Beaver Meadows

9a. Type of waterbody identified in Question 9?

- ○ Wetland / State Jurisdiction On Site (Answer 9b)
- ☑ Wetland / State Jurisdiction Off Site
- ○ Wetland / Federal Jurisdiction On Site (Answer 9b)
- ○ Wetland / Federal Jurisdiction Off Site
- ○ Stream / Creek On Site
- ○ Stream / Creek Off Site
- ○ River On Site
- ○ River Off Site
- ○ Lake On Site
- ○ Lake Off Site
- ○ Other Type On Site
- ○ Other Type Off Site

9b. How was the wetland identified?

- ○ Regulatory Map
- ○ Delineated by Consultant
- ○ Delineated by Army Corps of Engineers
- ● Other (identify) previous design

10. Has the surface waterbody(ies) in question 9 been identified as a 303(d) segment in Appendix E of GP-0-15-002? ○ **Yes** ● **No**

11. Is this project located in one of the Watersheds identified in Appendix C of GP-0-15-002? ○ **Yes** ● **No**

12. Is the project located in one of the watershed areas associated with AA and AA-S classified waters? ○ **Yes** ● **No**
If no, skip question 13.

13. Does this construction activity disturb land with no existing impervious cover and where the Soil Slope Phase is identified as an E or F on the USDA Soil Survey? ○ **Yes** ● **No**
If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area? ○ **Yes** ● **No**

15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)? ○ **Yes** ● **No** ○ **Unknown**

16. What is the name of the municipality/entity that owns the separate storm sewer system?

N / A

17. Does any runoff from the site enter a sewer classified as a Combined Sewer? ○ **Yes** ● **No** ○ **Unknown**

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? ○ **Yes** ● **No**

19. Is this property owned by a state authority, state agency, federal government or local government? ○ **Yes** ● **No**

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) ○ **Yes** ● **No**

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)? ● **Yes** ○ **No**

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)? ● **Yes** ○ **No**
If No, skip questions 23 and 27-39.

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual? ● **Yes** ○ **No**

24. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ☑ **Professional Engineer (P.E.)**
- ○ **Soil and Water Conservation District (SWCD)**
- ○ **Registered Landscape Architect (R.L.A)**
- ○ **Certified Professional in Erosion and Sediment Control (CPESC)**
- ○ **Owner/Operator**
- ○ **Other**

SWPPP Preparer: Paradigm Design, Inc

Contact Name (Last, Space, First): Bill Hadlock

Mailing Address: 550 3 Mile Rd NW

City: Grand Rapids

State: MI Zip: 49544 -

Phone: 616 - 785 - 5656 Fax: 616 - 785 - 5657

Email: bhadlock@paradigmae.com

SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name: Bill **MI**: M

Last Name: Hadlock

Signature

Date / /

25. Has a construction sequence schedule for the planned management practices been prepared? ○ Yes ● No

26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

Temporary Structural

- ○ Check Dams
- ○ Construction Road Stabilization
- ○ Dust Control
- ○ Earth Dike
- ○ Level Spreader
- ○ Perimeter Dike/Swale
- ○ Pipe Slope Drain
- ○ Portable Sediment Tank
- ○ Rock Dam
- ○ Sediment Basin
- ○ Sediment Traps
- ☒ Silt Fence
- ☒ Stabilized Construction Entrance
- ○ Storm Drain Inlet Protection
- ☒ Straw/Hay Bale Dike
- ○ Temporary Access Waterway Crossing
- ○ Temporary Stormdrain Diversion
- ○ Temporary Swale
- ○ Turbidity Curtain
- ○ Water bars

Biotechnical

- ○ Brush Matting
- ○ Wattling

Vegetative Measures

- ○ Brush Matting
- ○ Dune Stabilization
- ☒ Grassed Waterway
- ○ Mulching
- ○ Protecting Vegetation
- ○ Recreation Area Improvement
- ☒ Seeding
- ○ Sodding
- ☒ Straw/Hay Bale Dike
- ○ Streambank Protection
- ○ Temporary Swale
- ○ Topsoiling
- ☒ Vegetating Waterways

Permanent Structural

- ○ Debris Basin
- ○ Diversion
- ○ Grade Stabilization Structure
- ☒ Land Grading
- ○ Lined Waterway (Rock)
- ○ Paved Channel (Concrete)
- ○ Paved Flume
- ○ Retaining Wall
- ☒ Riprap Slope Protection
- ☒ Rock Outlet Protection
- ○ Streambank Protection

Other

Post-construction Stormwater Management Practice (SMP) Requirements

Important: Completion of Questions 27-39 is not required if response to Question 22 is No.

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- ○ **Preservation of Undisturbed Areas**
- ○ **Preservation of Buffers**
- ○ **Reduction of Clearing and Grading**
- ○ **Locating Development in Less Sensitive Areas**
- ○ **Roadway Reduction**
- ○ **Sidewalk Reduction**
- ○ **Driveway Reduction**
- ○ **Cul-de-sac Reduction**
- ○ **Building Footprint Reduction**
- ○ **Parking Reduction**

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- ● All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- ○ Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

Total WQv Required

0.141 **acre-feet**

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing Area (acres)		Total Contributing Impervious Area (acres)
RR Techniques (Area Reduction)			
○ Conservation of Natural Areas (RR-1)		and/or	
○ Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or	
○ Tree Planting/Tree Pit (RR-3)		and/or	
☒ Disconnection of Rooftop Runoff (RR-4)	0.44	and/or	0.44
RR Techniques (Volume Reduction)			
☒ Vegetated Swale (RR-5)			6.33
○ Rain Garden (RR-6)			
○ Stormwater Planter (RR-7)			
○ Rain Barrel/Cistern (RR-8)			
○ Porous Pavement (RR-9)			
○ Green Roof (RR-10)			
Standard SMPs with RRv Capacity			
○ Infiltration Trench (I-1)			
○ Infiltration Basin (I-2)			
○ Dry Well (I-3)			
○ Underground Infiltration System (I-4)			
○ Bioretention (F-5)			
○ Dry Swale (O-1)			
Standard SMPs			
○ Micropool Extended Detention (P-1)			
○ Wet Pond (P-2)			
○ Wet Extended Detention (P-3)			
○ Multiple Pond System (P-4)			
☒ Pocket Pond (P-5)			1.26
○ Surface Sand Filter (F-1)			
○ Underground Sand Filter (F-2)			
○ Perimeter Sand Filter (F-3)			
○ Organic Filter (F-4)			
○ Shallow Wetland (W-1)			
○ Extended Detention Wetland (W-2)			
○ Pond/Wetland System (W-3)			
○ Pocket Wetland (W-4)			
○ Wet Swale (O-2)			

Table 2 - Alternative SMPs
(DO NOT INCLUDE PRACTICES BEING USED FOR PRETREATMENT ONLY)

Alternative SMP	Total Contributing Impervious Area (acres)
○ **Hydrodynamic**	___ . ___
○ **Wet Vault**	___ . ___
○ **Media Filter**	___ . ___
○ **Other** _____	___ . ___

Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment.

Name _____

Manufacturer _____

Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.

30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.

Total RRv provided

0.064 **acre-feet**

31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).

○ **Yes** ● **No**

If Yes, go to question 36.
If No, go to question 32.

32. Provide the Minimum RRv required based on HSG.
[Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]

Minimum RRv Required

0.047 **acre-feet**

32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?

● **Yes** ○ **No**

If Yes, go to question 33.
Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

WQv Provided

0.42 **acre-feet**

Note: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)

34. Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a). 0.484

35. Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? ● **Yes** ○ **No**

If Yes, go to question 36.
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

36. Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.

CPv Required

0.28 **acre-feet**

CPv Provided

0.29 **acre-feet**

36a. The need to provide channel protection has been waived because:

○ Site discharges directly to tidal waters or a fifth order or larger stream.

○ Reduction of the total CPv is achieved on site through runoff reduction techniques or infiltration systems.

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

Total Overbank Flood Control Criteria (Qp)

Pre-Development

3.898 **CFS**

Post-development

0.605 **CFS**

Total Extreme Flood Control Criteria (Qf)

Pre-Development

8.293 **CFS**

Post-development

4.575 **CFS**

37a. The need to meet the Qp and Qf criteria has been waived because:

- ○ Site discharges directly to tidal waters or a fifth order or larger stream.
- ○ Downstream analysis reveals that the Qp and Qf controls are not required

38. Has a long term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed? ○ **Yes** ● **No**

If Yes, Identify the entity responsible for the long term Operation and Maintenance

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

40. Identify other DEC permits, existing and new, that are required for this project/facility.

- ○ Air Pollution Control
- ○ Coastal Erosion
- ○ Hazardous Waste
- ○ Long Island Wells
- ○ Mined Land Reclamation
- ○ Solid Waste
- ○ Navigable Waters Protection / Article 15
- ○ Water Quality Certificate
- ○ Dam Safety
- ○ Water Supply
- ○ Freshwater Wetlands/Article 24
- ○ Tidal Wetlands
- ○ Wild, Scenic and Recreational Rivers
- ○ Stream Bed or Bank Protection / Article 15
- ○ Endangered or Threatened Species(Incidental Take Permit)
- ○ Individual SPDES
- ○ SPDES Multi-Sector GP N Y R
- ○ Other
- ○ None

41. Does this project require a US Army Corps of Engineers Wetland Permit? ○ **Yes** ● **No**
If Yes, Indicate Size of Impact. .

42. Is this project subject to the requirements of a regulated, traditional land use control MS4? ○ **Yes** ● **No**
(If No, skip question 43)

43. Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI? ○ **Yes** ● **No**

44. If this NOI is being submitted for the purpose of continuing or transferring coverage under a general permit for stormwater runoff from construction activities, please indicate the former SPDES number assigned. N Y R

Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name: John

MI: M

Print Last Name: Renzi

Owner/Operator Signature:

Date: / /

New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505
(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ___ ___ ___ ___ ___ ___

I. Owner or Operator Information

1. Owner/Operator Name: John Renzi

2. Street Address: 901 Rail Drive

3. City/State/Zip: Watertown, NY 13601

4. Contact Person: John Renzi | 4a.Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name: Renzi Food Service

6. Street Address: 901 Rail Drive

7. City/Zip: Watertown, NY 13601

8. County: Jefferson

III. Reason for Termination

9a. □ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ___ ___ ___ ___ ___ ___
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. □ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? □ yes □ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? □ yes □ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

_____

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? □ yes □ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

□ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? □ yes □ no

(If Yes, complete section VI - "MS4 Acceptance" statement

V. Additional Information/Explanation:

(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:	Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued	
VII. Qualified Inspector Certification - Final Stabilization:	
I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):	
I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:
IX. Owner or Operator Certification	
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.	
Printed Name:	
Title/Position:	
Signature:	Date:

(NYS DEC Notice of Termination - January 2015)

Appendix B – Drainage Calculations

Date: 3/10/15
Calculated By: CMV
Project Number: 1410145

Project Name: Renzi Foods

East Pond Storm Water Volume Calculations

(See New York Stormwater Management Design Manual Chp. 6)

Base Data

Location:	Watertown, NY	
Proposed Site Area (ac):	3.45	
Total Contributing Drainage Area (ac):	3.45	
Preconstruction Impervious Area (ac):	0.27	
Post Construction Impervious Area (ac):	1.53	
Redevelopment Impervious Area, Aic (ac):	1.26	
Redevelopment Impervious Cover, I (%):	37%	
HSG Soil Types:	A/B	

Original Water Quality Volume (WQv)

Runoff Coefficient, Rv:	0.38	*R_v = 0.05+0.009*I (Min = 0.2)*
90% Rainfall Event, P (in):	0.89	*(see figure 4.1)*
WQv (ac-ft):	0.098	*WQ_v = (P*R_v*A)/12*

Runoff Reduction Volume (RR_v)

Vegetated Swale Reduction (ac-ft):	0.020	*(20% reduction of WQv, see attached calc's)*
Disconnection of rooftop runoff (acres):	0.30	*(max of 75 ft up the roof, 75ft x 172 ft)*
# of Downspouts required:	7.0	*(2,000 sf per downspout, per sec. 5.3.5)*

New Water Quality Volume (WQv)

Total Contributing Drainage Area (ac):	3.45	
New Impervious Area (ac):	0.96	
New Impervious Cover, I (%):	28%	
New Rv:	0.30	
New WQv (ac-ft):	0.058	*WQv = (P*New Rv*A)/12-Swale Reduction*
Required Permanent Pool Volume (cft):	2,506	
Provided Permanent Pool Volume (cft):	12,353	*(oversized to provide avg. depth of 4 ft, per pg 10-14 of manual)*
WQv Elevation (ft):	402.40	
HSG Reduction Factor, S:	0.40	*(per HSG Soil Type B)*
Rv*, I = 100%:	0.95	*R_v = 0.05+0.009*I (Min = 0.2)*
Ai:	0.50	*Ai = SAic*
Min Runoff Reduction Volume Required (ac-ft):	0.036	*Min RRv = (PRv*Ai)/12*
Runoff Reduction Volume Provided (ac-ft):	0.040	*(WQv-New WQv)*

Date: 3/10/15
Calculated By: CMV
Project Name: Renzi Foods
Project Number: 1410145

East Pond Storm Water Volume Calculations

(See New York Stormwater Management Design Manual Chp. 6)

Channel Protection Volume/1 yr Design Storm (Cpv)

Extended Detention Time for 1 year event, T (hr):	24	
Unit Peak Discharge, q_u (csm/in):	625	*(per TR-55 Table 4-1 & Exhibit 4-II)*
Peak Inflow Discharge, q_i (cfs):	1.00	*(1-year post-development peak discharge per Hydraflow)*
Ratio of Outflow to Inflow, q_o/q_i	0.03	*(Appendix B Figure B.1)*
Ratio of Runoff Storage to Runoff Volume, V_s/V_r	0.64	*(Appendix B Equation 2.1.16)*
1-year Rainfall Event, P (in):	1.90	*(see figure 4.2)*
1-year Post-Development Runoff, Q_d (in)	0.83	*(per TR-55 equation 2-3)*
Storage Volume, V_s (ac-ft):	0.15	*(Appendix B Equation 2.1.17)*
Required Storage Volume, V_s (cft):	6,534	
Provided Storage Volume (cft):	7,204	
Orifice Size (in):	1.00	
1" Orifice Invert Elevation (ft):	402.40	
Cpv Elevation (ft):	403.40	
1" Orifice Head, H (ft):	0.96	
Orifice Coefficient, c:	0.60	
Allowable Peak Outflow Discharge, q_o (cfs):	0.03	*$(q_i)*(q_o/q_i)$*
Provided Release Rate (cfs):	0.03	

Forebay & Permanent Pool Volumes

Forebay Volume Required (cft):	251	*(10% of WQ_v)*
Forebay Volume Provided (cft):	1,373	*(oversized to provide avg. depth of 4 ft, per pg 10-*
Permanent Pool Volume Required (cft):	2,255	*(90% of WQ_v)*
Permanent Pool Volume Provided (cft):	10,980	*(oversized to provide avg. depth of 4 ft, per pg 10-*

Emergency Spillway

Post-Development 100 year Peak Discharge (cfs):	9.5	
Side Slope:	1V:4H	
Bottom Width (ft):	10	
Emergency Spillway Elevation (ft):	404.50	
Top of Spillway Elevation (ft):	405.50	
Provided Flow (cfs):	12.30	*(Per Hydraflow Weir Report)*
@ a flow depth (ft):	0.50	*(Per Hydraflow Weir Report)*

Date: 3/19/15
Calculated By: CMV
Project Name: Renzi Foods
Project Number: 1410145

West Pond Storm Water Volume Calculations

(See New York Stormwater Management Design Manual Chp. 6)

Base Data

Location:	Watertown, NY	
Proposed Site Area (ac):	2.88	
Total Contributing Drainage Area (ac):	2.88	
Preconstruction Impervious Area (ac):	0.58	
Post Construction Impervious Area (ac):	0.96	
Redevelopment Impervious Area (ac):	0.38	
Redevelopment Impervious Cover, I (%):	13%	
HSG Soil Types:	A/B	

Original Water Quality Volume (WQv)

Runoff Coefficient, Rv:	0.20	*R_v = 0.05+0.009*I (Min = 0.2)*
90% Rainfall Event, P (in):	0.89	*(see figure 4.1)*
WQv (ac-ft):	0.043	*WQ_v = (P*R_v*A)/12*

Runoff Reduction Volume (RR_v)

Vegetated Swale Reduction (ac-ft):	0.009	*(20% reduction of WQv, see attached calc's)*
Existing # of Downspouts:	3.0	
Disconnection of rooftop runoff (acres):	0.14	*(2,000 sf per downspout, per sec. 5.3.5)*

New Water Quality Volume (WQv)

Total Contributing Drainage Area (ac):	2.88	
New Impervious Area (ac):	0.24	
New Impervious Cover, I (%):	8%	
New Rv:	0.13	
New WQv (ac-ft):	0.018	*WQv = (P*New Rv*A)/12-Swale Reduction*
Required Permanent Pool Volume (cft):	797	
Provided Permanent Pool Volume (cft):	6,195	*(oversized to provide avg. depth of 4 ft, per pg 10-14 of manual)*
WQv Elevation (ft):	398.00	
HSG Reduction Factor, S:	0.40	*(per HSG Soil Type B)*
Rv*, I = 100%:	0.95	*R_v = 0.05+0.009*I (Min = 0.2)*
Ai:	0.15	*Ai = S*Aic*
Min Runoff Reduction Volume Required (ac-ft):	0.011	*Min RRv = (PRv*Ai)/12*
Runoff Reduction Volume Provided (ac-ft):	0.024	*(WQv-New WQv)*

Project Name: Renzi Foods

Date: 3/19/15
Calculated By: CMV
Project Number: 1410145

West Storm Water Volume Calculations

(See New York Stormwater Management Design Manual Chp. 6)

Channel Protection Volume/1 yr Design Storm (Cpv)

Extended Detention Time for 1 year event, T (hr):	24	
Unit Peak Discharge, q_u (csm/in):	550	*(per TR-55 Table 4-1 & Exhibit 4-II)*
Peak Inflow Discharge, q_i (cfs):	0.54	*(1-year post-development peak discharge per Hydraflow)*
Ratio of Outflow to Inflow, q_o/q_i	0.04	*(Appendix B Figure B.1)*
Ratio of Runoff Storage to Runoff Volume, V_s/V_r	0.63	*(Appendix B Equation 2.1.16)*
1-year Rainfall Event, P (in):	1.90	*(see figure 4.2)*
1-year Post-Development Runoff, Q_d (in)	0.83	*(per TR-55 equation 2-3)*
Storage Volume, V_s (ac-ft):	0.13	*(Appendix B Equation 2.1.17)*
Required Storage Volume, V_s (cft):	5,663	
Provided Storage Volume (cft):	5,825	
Orifice Size (in):	1.00	*(min. allowable orifice size)*
1" Orifice Invert Elevation (ft):	398.00	
Cpv Elevation (ft):	399.10	
1" Orifice Head, H (ft):	1.06	
Orifice Coefficient, c:	0.60	
Allowable Peak Outflow Discharge, q_o (cfs):	0.02	*$(q_i)*(q_o/q_i)$*
Provided Release Rate (cfs):	0.03	

Forebay & Permanent Pool Volumes

Forebay Volume Required (cft):	80	*(10% of WQ_v)*
Forebay Volume Provided (cft):	1,298	*(oversized to provide avg. depth of 4 ft, per pg 10-14 of manual)*
Permanent Pool Volume Required (cft):	718	*(90% of WQ_v)*
Permanent Pool Volume Provided (cft):	4,897	*(oversized to provide avg. depth of 4 ft, per pg 10-14 of manual)*

Emergency Spillway

Post-Development 100 year Peak Discharge (cfs):	6.25	
Side Slope:	1V:4H	
Bottom Width (ft):	10	
Emergency Spillway Elevation (ft):	399.10	
Top of Spillway Elevation (ft):	400.00	
Provided Flow (cfs):	12.30	*(Per Hydraflow Weir Report)*
@ a flow depth (ft):	0.50	*(Per Hydraflow Weir Report)*

Date: 3/10/15
Calculated By: CMV
Project Number: 1410145

Project Name: Renzi Foods

East Vegetated Swale #1 Calculations

(See New York Stormwater Management Design Manual Chp. 6)

Drainage Swale (1H:3V side slope)

Drainage Area:	1.65	
Contributing Imperviuos Area:	0.69	
Q_{WQV} (cfs):	0.56	*(Appendix B)*
Length (ft):	235	
Bottom width (ft):	4	
Q_{WQV} Flow Depth (ft):	0.29	*(Depth<4 in, meets design criteria per Chp. 5)*
Trapezoid Area (sft):	1.44	
n:	0.15	*(Appendix L)*
Slope (ft/ft):	0.01	
Perimeter *(wetted side)* (ft):	5.86	
Average flow width (ft):	4.88	
Q_{WQV} Provided (cfs):	**0.56**	
V_{WQV} (fps):	**0.39**	*(V<1 fps, meets design criteria per Chp. 5)*
Retention Time (min):	**10.06**	*(Time > 10 minutes, meets design criteria per Chp. 5)*
Q_{10} (cfs):	3.37	*(Hydraflow)*
Q_{10} Flow Depth (ft):	0.64	
Trapezoid Area (sft):	3.75	
n:	0.10	*(Appendix L)*
Slope (ft/ft):	0.01	
Perimeter *(wetted side)* (ft):	8.02	
Average flow width (ft):	5.91	
Q_{10} Provided (cfs):	**3.37**	
V_{10} (fps):	**0.90**	*(V<5 fps, meets design criteria per Chp. 5)*

Hydrologic Soil Group: A&B

* Per Section 5.3.3 of design manual the proposed vegateted swale provides runoff reduction of 20% from the original required WQv.

Date: 3/19/15
Calculated By: CMV
Project Number: 1410145

Project Name: Renzi Foods

East Vegetated Swale #2 Calculations

(See New York Stormwater Management Design Manual Chp. 6)

Drainage Swale (1H:3V side slope)

Drainage Area:	1.21	
Contributing Imperviuos Area:	0.67	
Q_{WQV} (cfs):	0.56	*(Appendix B)*
Length (ft):	235	
Bottom width (ft):	4	
Q_{WQV} Flow Depth (ft):	0.29	*(Depth<4 in, meets design criteria per Chp. 5)*
Trapezoid Area (sft):	1.44	
n:	0.15	*(Appendix L)*
Slope (ft/ft):	0.01	
Perimeter *(wetted side)* (ft):	5.86	
Average flow width (ft):	4.88	
Q_{WQV} Provided (cfs):	**0.56**	
V_{WQV} (fps):	**0.39**	*(V<1 fps, meets design criteria per Chp. 5)*
Retention Time (min):	**10.06**	*(Time > 10 minutes, meets design criteria per Chp. 5)*
Q_{10} (cfs):	2.24	*(Hydraflow)*
Q_{10} Flow Depth (ft):	0.54	
Trapezoid Area (sft):	3.01	
n:	0.11	*(Appendix L)*
Slope (ft/ft):	0.01	
Perimeter *(wetted side)* (ft):	7.39	
Average flow width (ft):	5.61	
Q_{10} Provided (cfs):	**2.24**	
V_{10} (fps):	**0.74**	*(V<5 fps, meets design criteria per Chp. 5)*

Hydrologic Soil Group: A&B

* Per Section 5.3.3 of design manual the proposed vegateted swale provides runoff reduction of 20% from the original required WQv.

Date: 3/19/15
Calculated By: CMV
Project Number: 1410145

Project Name: Renzi Foods

West Vegetated Swale Calculations

(See New York Stormwater Management Design Manual Chp. 6)

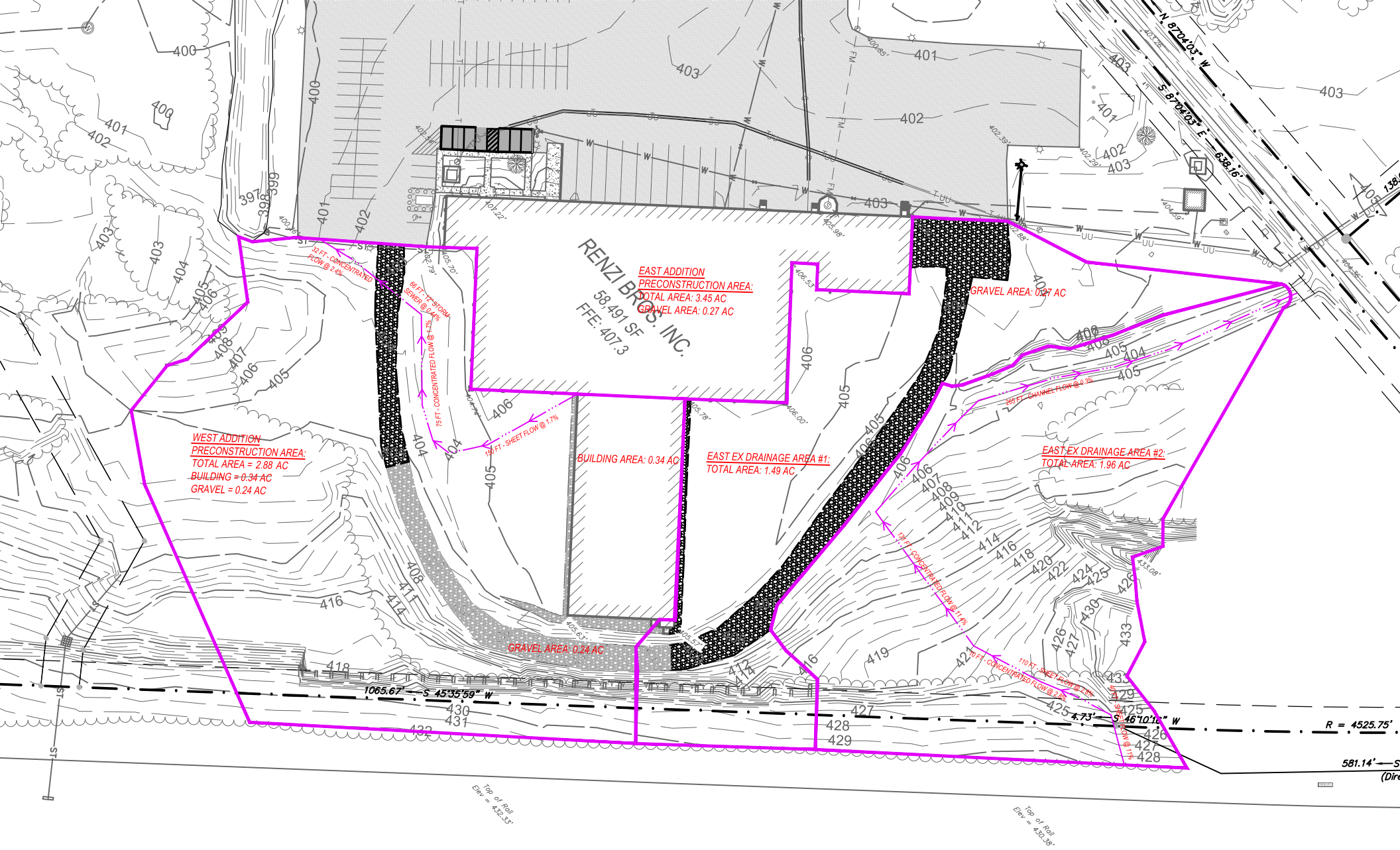
Drainage Swale

Drainage Area:	2.72	
Contributing Imperviuos Area:	0.55	
Q_{WQV} (cfs):	0.62	*(Appendix B)*
Length (ft):	250	
Bottom width (ft):	4	
Q_{WQV} Flow Depth (ft):	0.29	*(Depth < 4", meets design criteria per Chp. 5)*
Trapezoid Area (sft):	1.42	
n:	0.15	*(Appendix L)*
Slope (ft/ft):	0.01	
Perimeter *(wetted side)* (ft):	5.84	
Average flow width (ft):	4.88	
Q_{WQV} Provided (cfs):	**0.55**	
V_{WQV} (fps):	**0.39**	*(V<1 fps, meets design criteria per Chp. 5)*
Retention Time (min):	**10.76**	*(Time > 10 minutes, meets design criteria per Chp. 5)*
Q_{10} (cfs):	2.62	*(Hydraflow)*
Q_{10} Flow Depth (ft):	0.58	
Trapezoid Area (sft):	3.36	
n:	0.11	*(Appendix L)*
Slope (ft/ft):	0.01	
Perimeter *(wetted side)* (ft):	7.69	
Average flow width (ft):	5.75	
Q_{10} Provided (cfs):	**2.62**	
V_{10} (fps):	**0.78**	*(V<5 fps, meets design criteria per Chp. 5)*

Hydrologic Soil Group: A&B

* Per Section 5.3.3 of design manual the proposed vegateted swale provides runoff reduction of 20%

DRAINAGE AREA MAPS

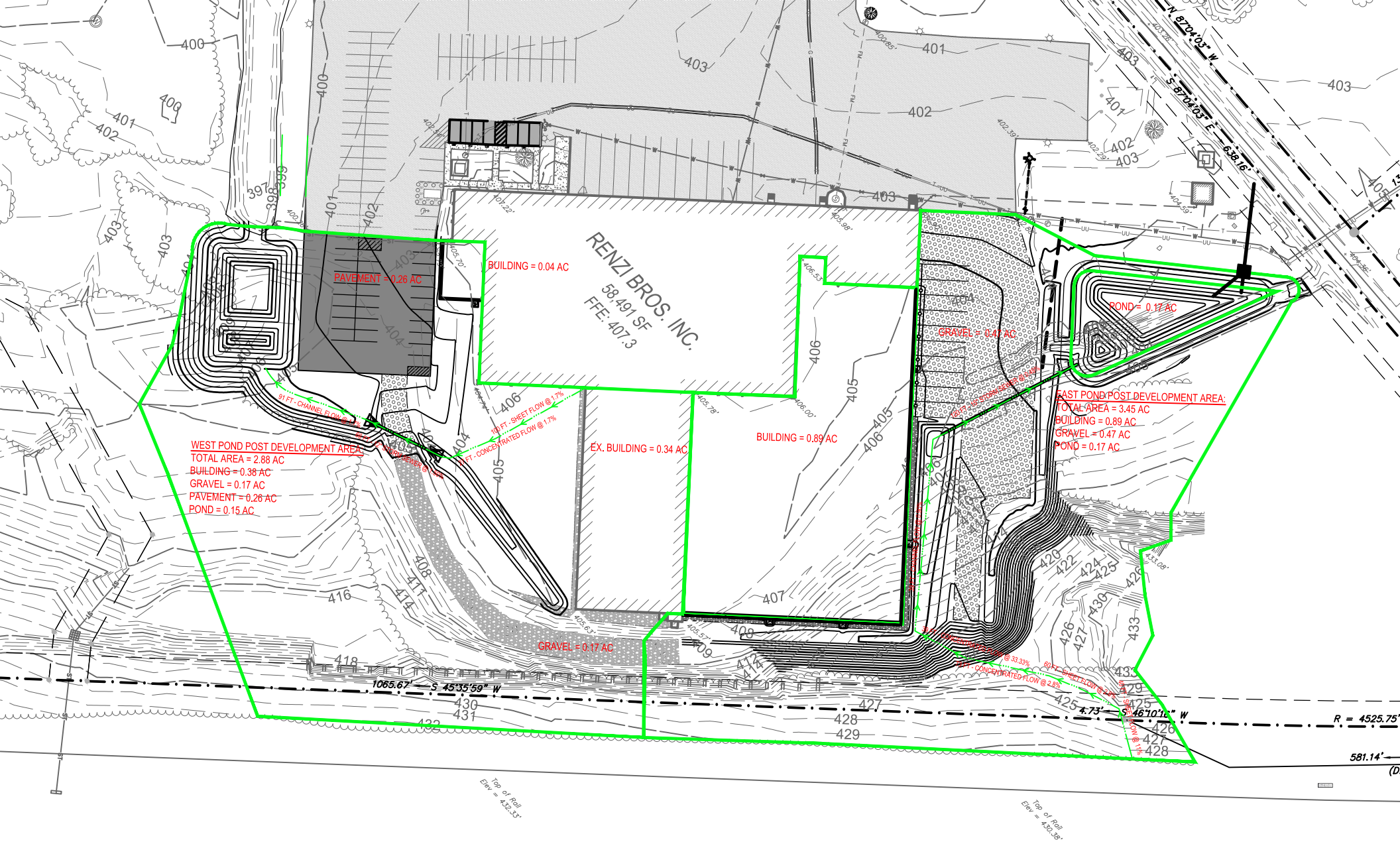


PRECONSTRUCTION DRAINAGE MAP

SCALE: 1" = 100'

0 100' 200'

N

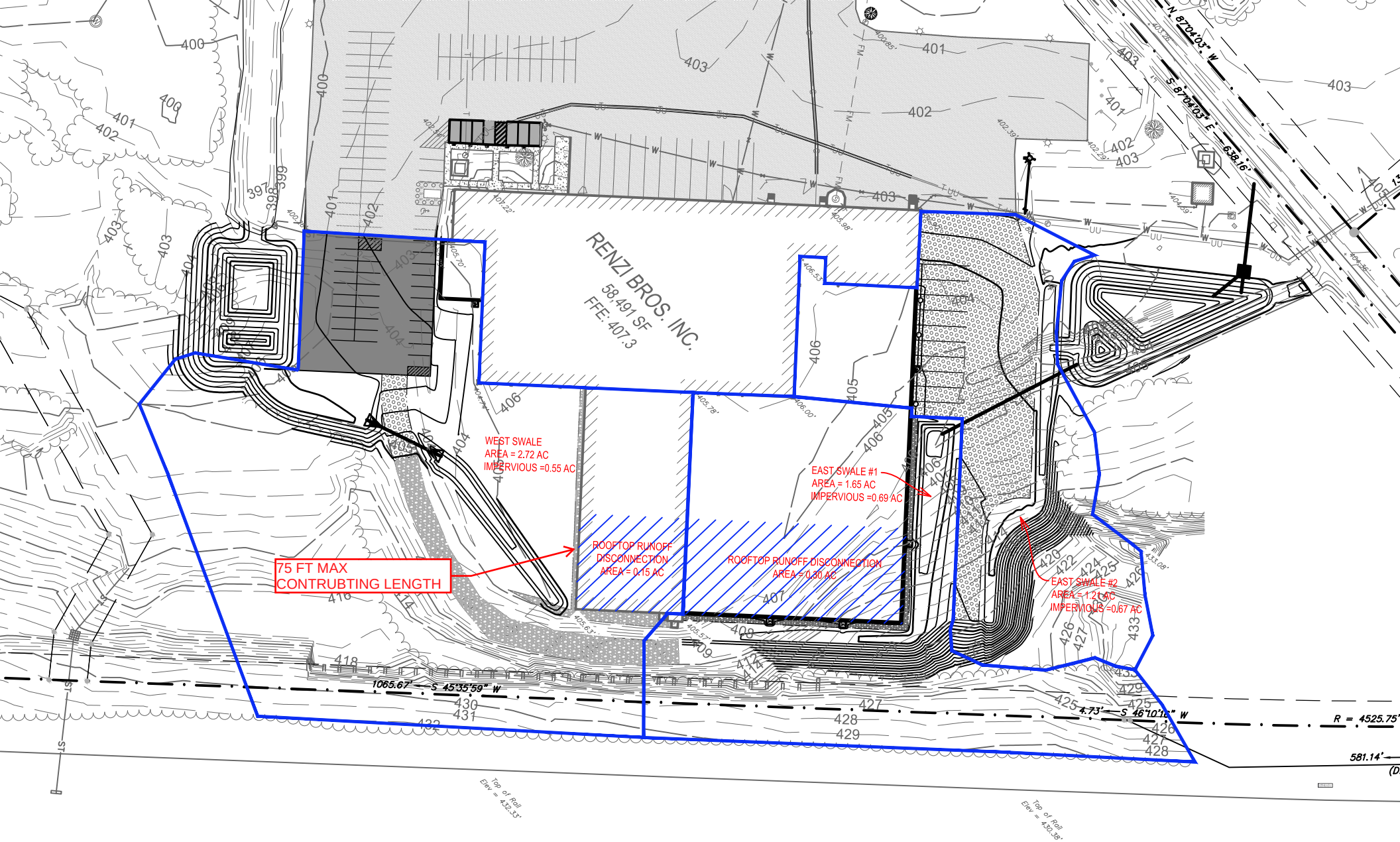


POST CONSTRUCTION DRAINAGE MAP

SCALE: 1" = 100'

0 100' 200'

N



RUNOFF REDUCTION MAP

SCALE: 1" = 100'

0 100' 200'

N

SUPPORTING HYDRAFLOW REPORT

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
East Pond											
1	SCS Runoff	------	0.034	-------	-------	-------	1.823	-------	-------	4.203	Preconstruction East Addition
2	SCS Runoff	------	1.006	-------	-------	-------	5.357	-------	-------	9.057	Post Development (No Controls) East
3	Reservoir	2	0.018	-------	-------	-------	0.240	-------	-------	1.226	Proposed Pond East Add
West Pond											
5	SCS Runoff	------	0.145	-------	-------	-------	2.075	-------	-------	4.090	Preconstruction West Addition
6	SCS Runoff	------	0.536	-------	-------	-------	3.561	-------	-------	6.236	Post construction West Addition (No Controls)
7	Reservoir	6	0.016	-------	-------	-------	0.365	-------	-------	3.349	Proposed Pond West Add
Swales											
9	SCS Runoff	------	0.826	-------	-------	-------	3.371	-------	-------	5.456	East Swale #1
10	SCS Runoff	------	0.473	-------	-------	-------	2.237	-------	-------	3.705	East Swale #2
11	SCS Runoff	------	0.099	-------	-------	-------	2.616	-------	-------	5.258	West Swale

used for vegetated swale caluclations

Hydrograph Report

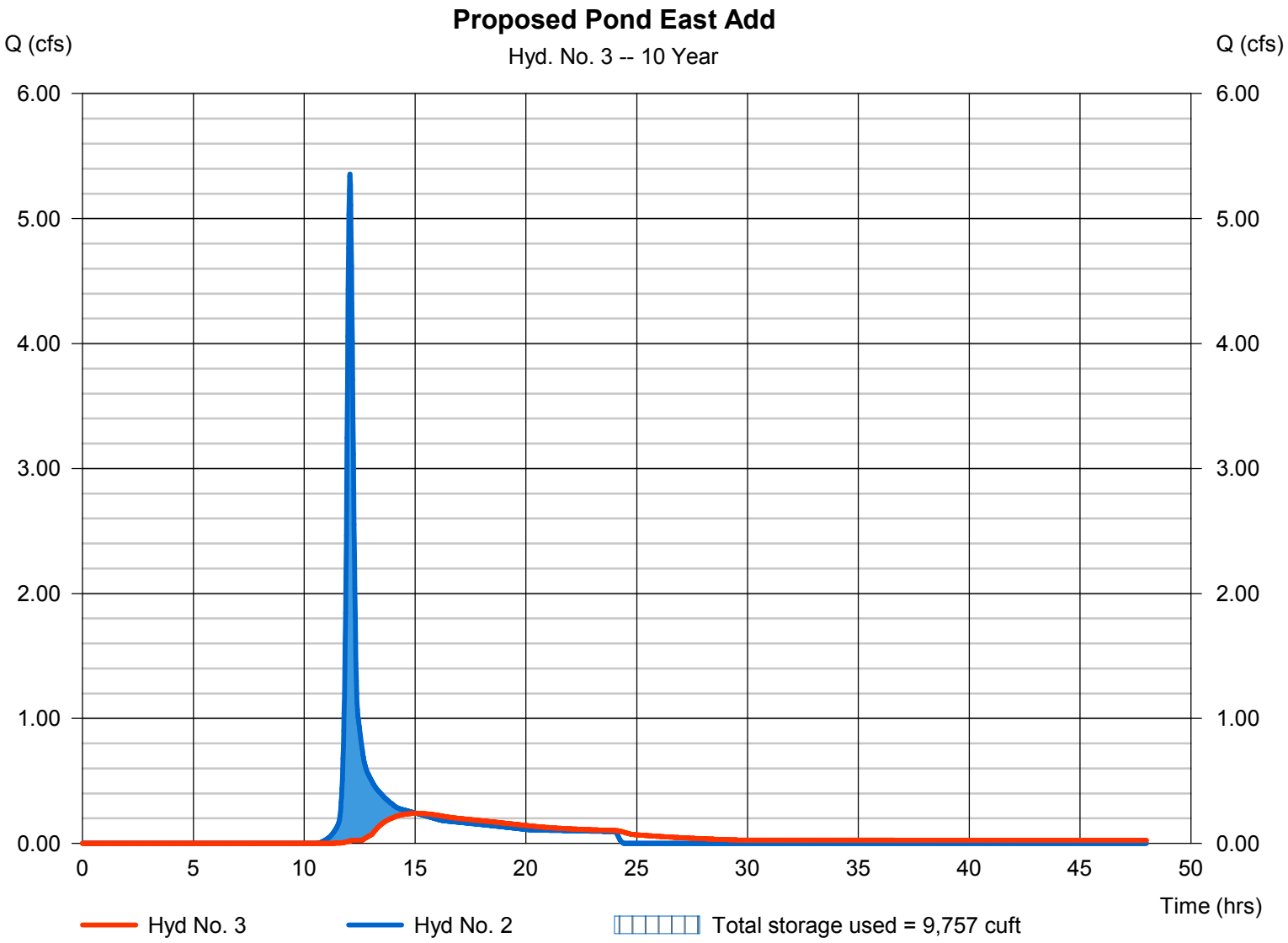
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3 Saturday, 03 / 21 / 2015

Hyd. No. 3

Proposed Pond East Add

Hydrograph type	=	Reservoir	Peak discharge	=	0.240 cfs
Storm frequency	=	10 yrs	Time to peak	=	15.07 hrs
Time interval	=	1 min	Hyd. volume	=	9,350 cuft
Inflow hyd. No.	=	2 - Post Development (No Controls) East Add	Max. Elevation	=	403.72 ft
Reservoir name	=	Pond Building Addition	Max. Storage	=	9,757 cuft

Storage Indication method used.



Hydrograph Report

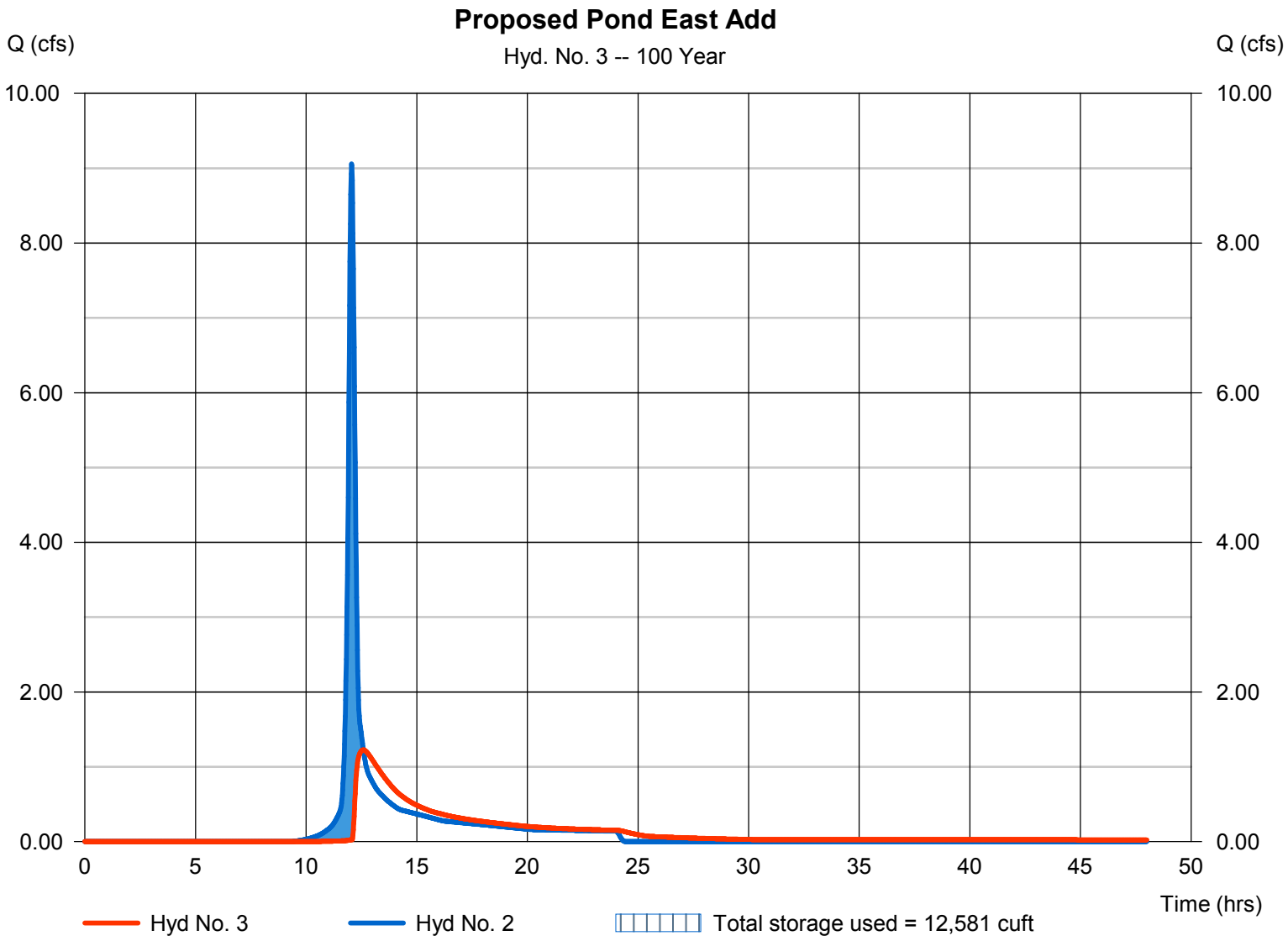
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3 Saturday, 03 / 21 / 2015

Hyd. No. 3

Proposed Pond East Add

Hydrograph type	= Reservoir	Peak discharge	= 1.226 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.58 hrs
Time interval	= 1 min	Hyd. volume	= 19,562 cuft
Inflow hyd. No.	= 2 - Post Development (No Controls) East Add	Max. Elevation	= 404.07 ft
Reservoir name	= Pond Building Addition	Max. Storage	= 12,581 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3 Saturday, 03 / 21 / 2015

Pond No. 1 - Pond Building Addition

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 402.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	402.50	5,644	0	0
1.00	403.30	7,191	6,401	6,401
2.00	404.30	8,903	8,031	14,432
3.00	405.30	10,725	9,799	24,231
4.00	406.30	12,647	11,672	35,903

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	1.00	12.00	0.00
Span (in)	= 12.00	1.00	12.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 402.35	402.40	403.50	0.00
Length (ft)	= 86.00	1.00	1.00	0.00
Slope (%)	= 0.37	0.20	0.20	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

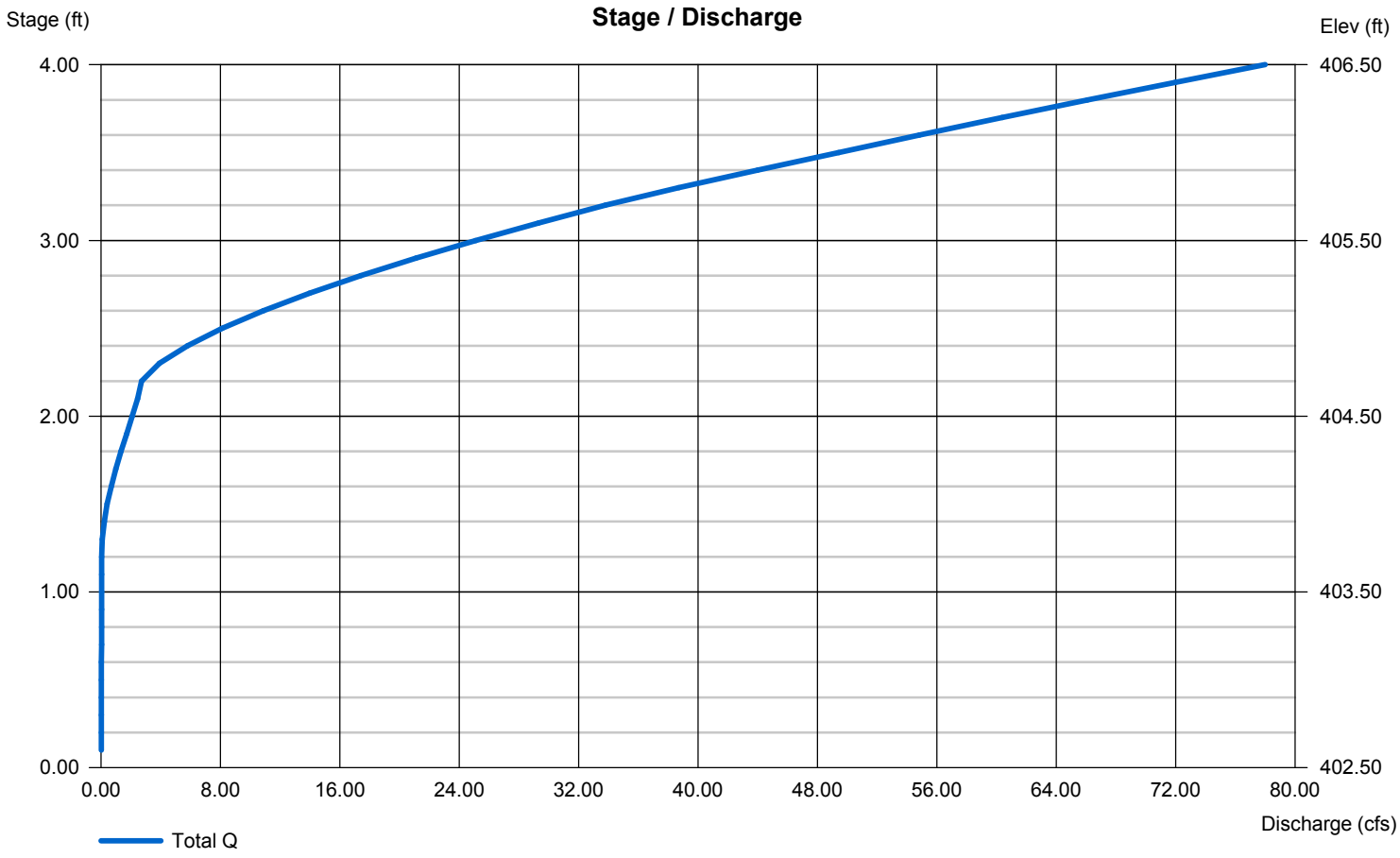
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.28	10.00	Inactive	0.00
Crest El. (ft)	= 405.50	404.50	403.50	0.00
Weir Coeff.	= 3.33	3.00	3.33	3.33
Weir Type	= 1	Broad	Rect	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

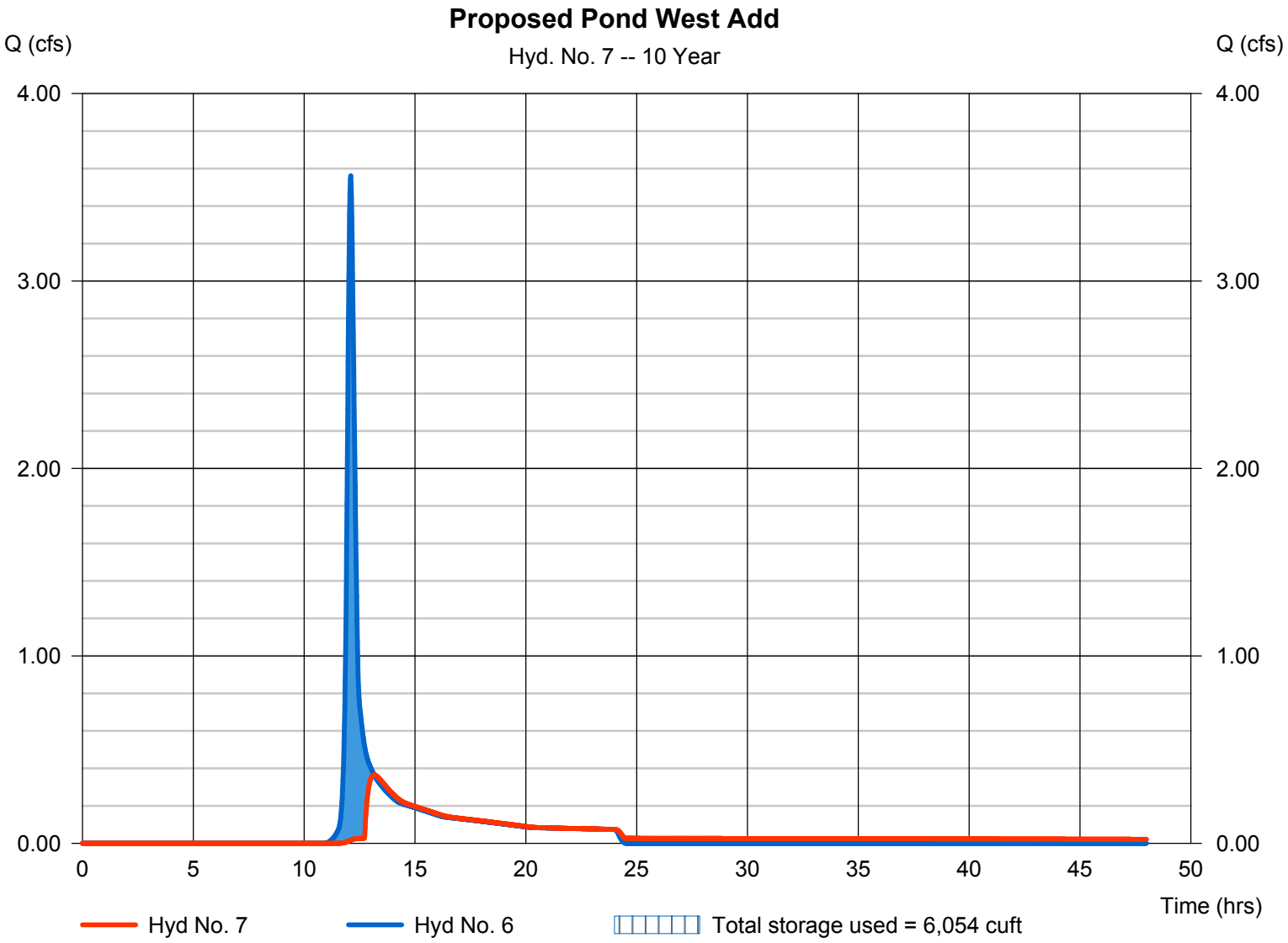
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3 Saturday, 03 / 21 / 2015

Hyd. No. 7

Proposed Pond West Add

Hydrograph type	=	Reservoir	Peak discharge	=	0.365 cfs
Storm frequency	=	10 yrs	Time to peak	=	13.17 hrs
Time interval	=	1 min	Hyd. volume	=	7,967 cuft
Inflow hyd. No.	=	6 - Post construction West Addition	Max. Elevation	=	399.14 ft
Reservoir name	=	Pond Parking Addition	Max. Storage	=	6,054 cuft

Storage Indication method used.



Hydrograph Report

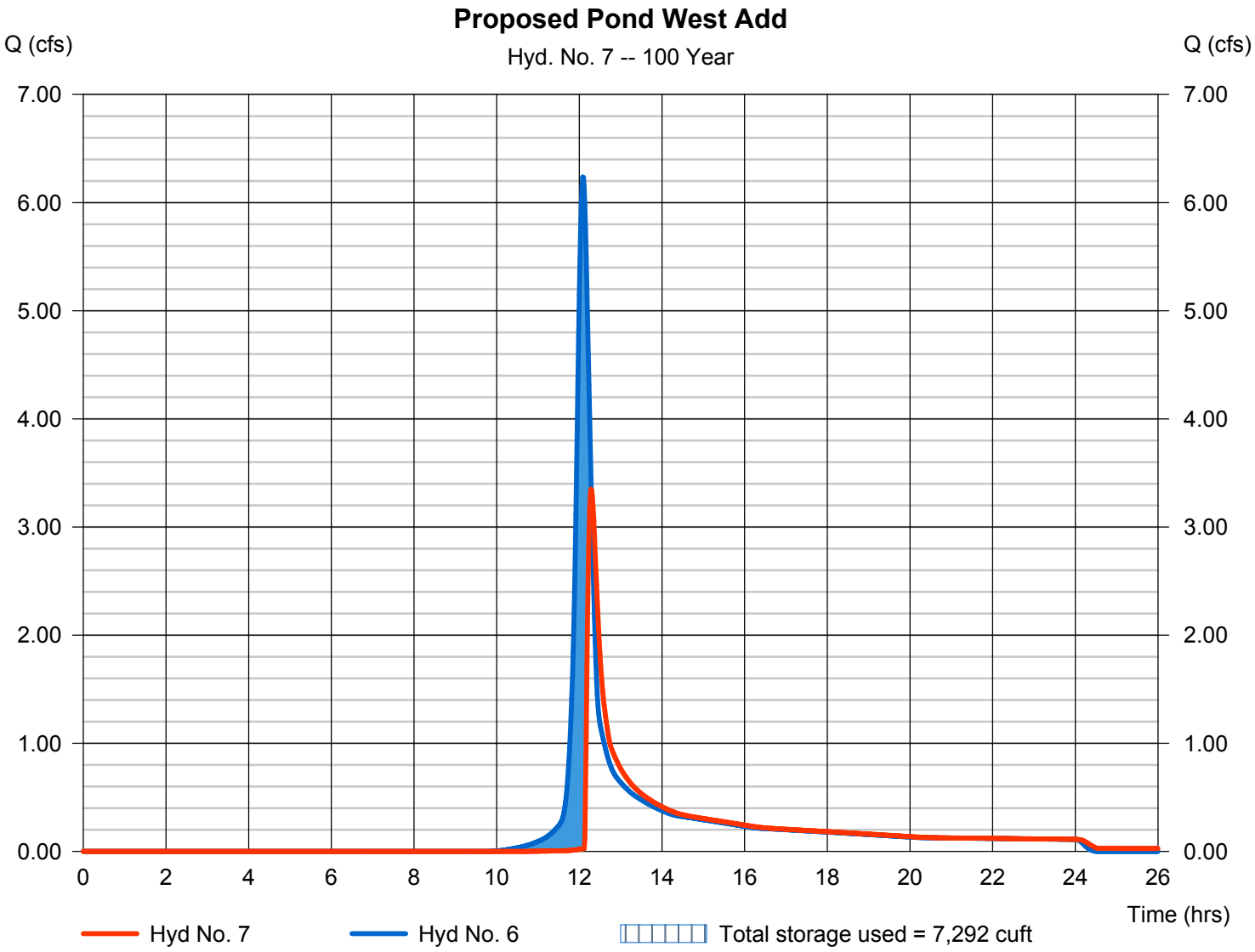
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3 Saturday, 03 / 21 / 2015

Hyd. No. 7

Proposed Pond West Add

Hydrograph type	=	Reservoir	Peak discharge	=	3.349 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.28 hrs
Time interval	=	1 min	Hyd. volume	=	16,049 cuft
Inflow hyd. No.	=	6 - Post construction West Addition	Max. Elevation	=	399.33 ft
Reservoir name	=	Pond Parking Addition	Max. Storage	=	7,292 cuft

Storage Indication method used.



Pond Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2014 by Autodesk, Inc. v10.3 Saturday, 03 / 21 / 2015

Pond No. 2 - Pond Parking Addition

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 398.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	398.00	4,605	0	0
1.00	399.00	5,784	5,183	5,183
2.00	400.00	7,090	6,425	11,608

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	1.00	Inactive	0.00
Span (in)	= 12.00	1.00	0.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 397.90	398.00	0.00	0.00
Length (ft)	= 20.00	1.00	0.00	0.00
Slope (%)	= 0.30	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

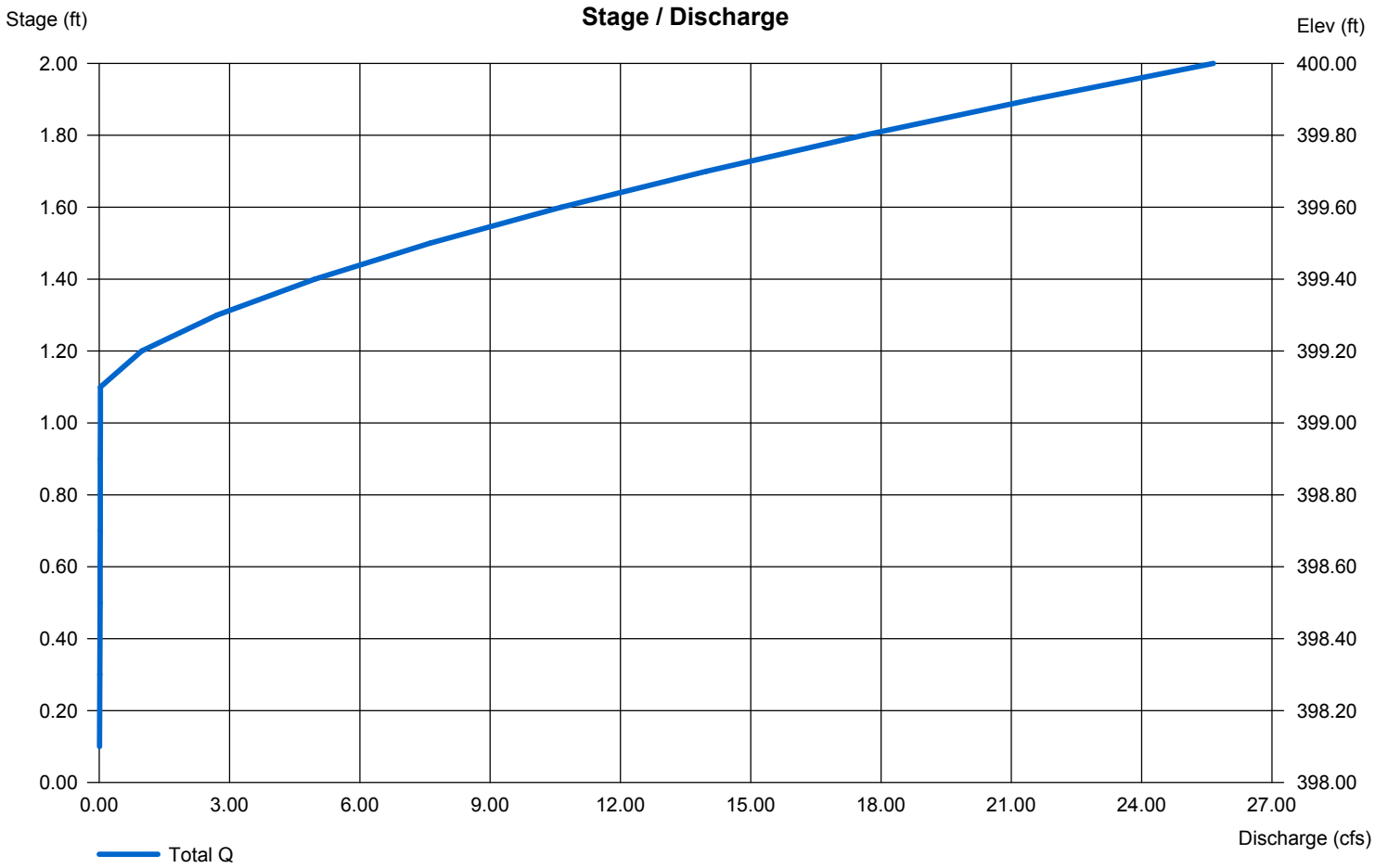
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	Inactive	10.00	Inactive	0.00
Crest El. (ft)	= 0.00	399.10	0.00	0.00
Weir Coeff.	= 3.33	3.00	3.33	3.33
Weir Type	= 1	Broad	Ciplti	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Weir Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Mar 10 2015

Renzi Emergency Spillway

Trapezoidal Weir

Crest	= Broad
Bottom Length (ft)	= 10.00
Total Depth (ft)	= 1.25
Side Slope (z:1)	= 4.00

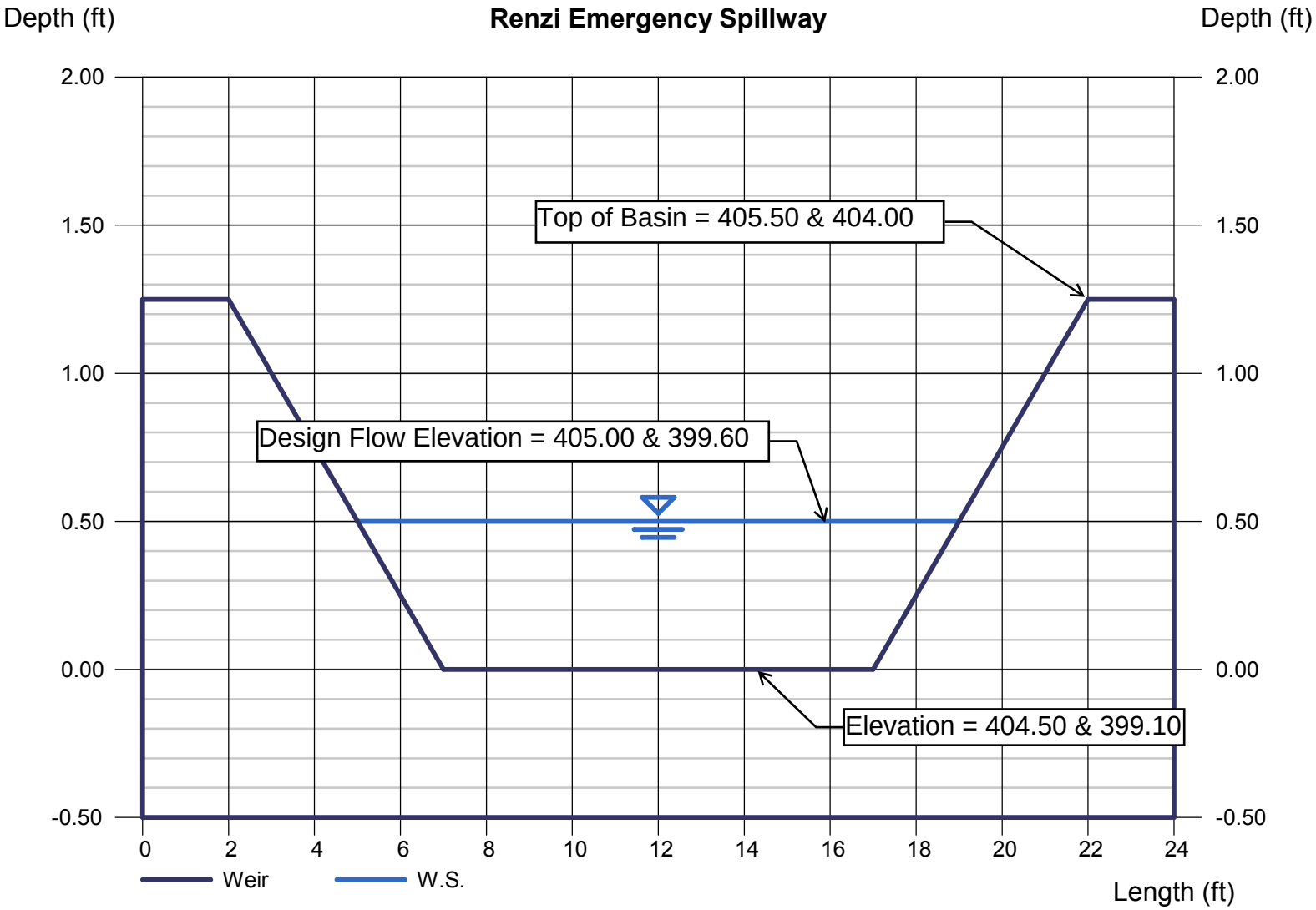
Calculations

Weir Coeff. Cw	= 3.00
Compute by:	Q vs Depth
No. Increments	= 10

Highlighted

Depth (ft)	= 0.50
Q (cfs)	= 12.30
Area (sqft)	= 6.00
Velocity (ft/s)	= 2.05
Top Width (ft)	= 14.00

Spillway design is for both East and West Proposed Ponds



SUPPORTING NY STATE DESIGN MANUAL APPENDIX B CALUCLATIONS

This Appendix presents two hydrologic and hydraulic analysis tools that can be used to size stormwater management practices (SMPs). The first is the TR-55 (NRCS, 1986) "short-cut" sizing technique, used to size practices designed for extended detention, slightly modified to incorporate the small flows necessary to provide channel protection. The second is a method used to determine the peak flow from water quality storm events. (This is often important when the water quality storm is diverted to a water quality practice, with other larger events bypassed).

B.1 Storage Volume Estimation

This section presents a modified version of the TR-55 short cut sizing approach. The method was modified by Harrington (1987), for applications where the peak discharge is very small compared with the uncontrolled discharge. This often occurs in the 1-year, 24-hour detention sizing.

Using TR-55 guidance (NRCS, 1986), the unit peak discharge (qu) can be determined based on the the Curve Number and Time of Concentration. Knowing q_U and T (extended detention time), q_O/q_I (peak outflow discharge/peak inflow discharge) can be estimated from Figure B.1.

Figure B.2 can also be used to estimate V_S/V_r. For a Type II or Type III rainfall distribution, V_S/V_r can also be calculated using the following equation:

$$V_S/V_r = 0.682 - 1.43\,(q_O/q_I) + 1.64\,(q_O/q_I)^2 - 0.804\,(q_O/q_I)^3 \qquad (2.1.16)$$

Where: V_S = required storage volume (acre-feet)

V_r = runoff volume (acre-feet)

q_O = peak outflow discharge (cfs)

q_I = peak inflow discharge (cfs)

The required storage volume can then be calculated by:

$$V_S = \frac{(V_S/V_r)(Q_d)(A)}{12} \qquad (2.1.17)$$

Where: V_S and V_r are defined above

Q_d = the post-developed runoff for the design storm (inches)

A = total drainage area (acres)

While the TR-55 short-cut method reports to incorporate multiple stage structures, experience has shown that an additional 10-15% storage is required when multiple levels of extended detention are provided.

Figure B.1 Detention Time vs. Discharge Ratios (Source: MDE, 2000)

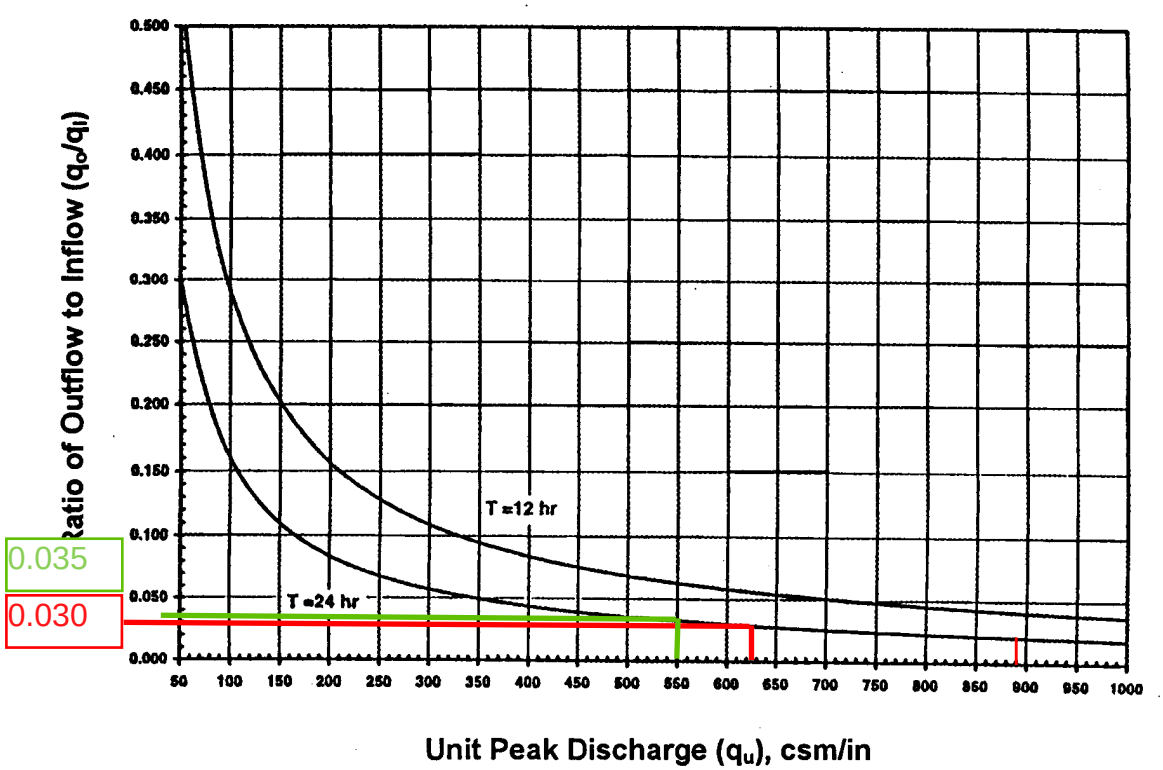
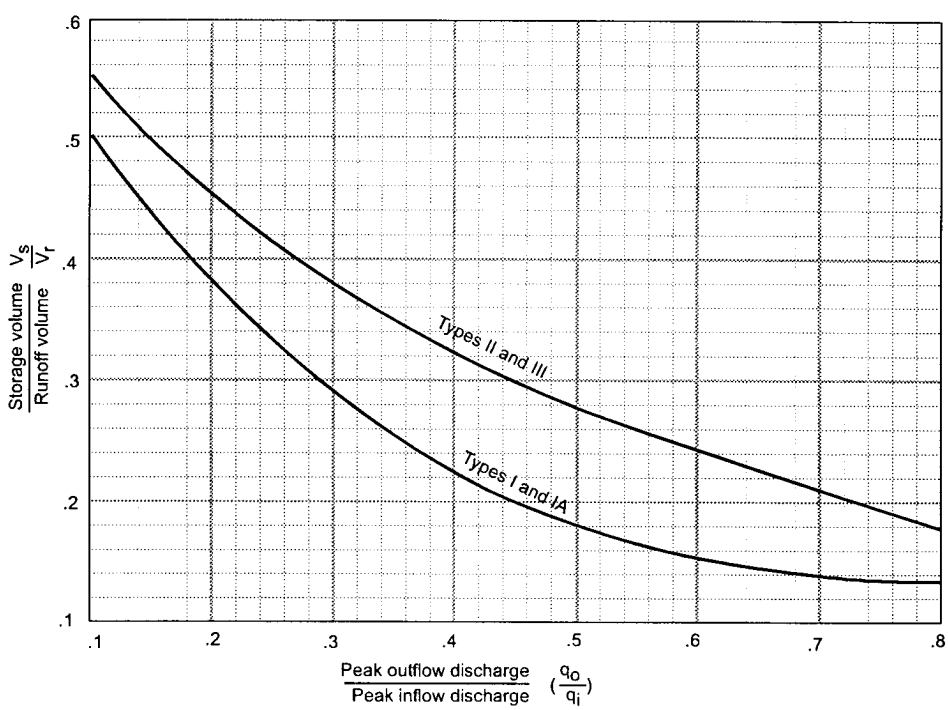


Figure B.2 Approximate Detention Basin Routing For Rainfall Types I, IA, II, and III (Source: NRCS, 1986)



B.2 Water Quality Peak Flow Calculation

The peak rate of discharge for the water quality design storm is needed for the sizing of diversion structures for off-line practices such as sand filters. An arbitrary storm would need to be chosen using the Rational method, and conventional SCS methods have been found to underestimate the volume and rate of runoff for rainfall events less than 2". This discrepancy in estimating runoff and discharge rates can lead to situations where a significant amount of runoff by-passes the filtering treatment practice due to an inadequately sized diversion structure and leads to the design of undersized bypass channels.

The following procedure can be used to estimate peak discharges for small storm events. It relies on the Water Quality Volume and the simplified peak flow estimating method above. A brief description of the calculation procedure is presented below.

Using the water quality volume (WQ_V), a corresponding Curve Number (CN) is computed utilizing the following equation:

$$\mathbf{CN = 1000/[10 + 5P + 10Q - 10(Q^2 + 1.25\,QP)^{1/2}]}$$

CN = 88

CN = 88

CN = 88

Where

P = rainfall, in inches (use the 90% rainfall event from Figure 4.1 for the Water Quality Storm)

Q = runoff volume, in inches

P = 0.89 in
Q = 0.18 in

P = 0.89 in
Q = 0.18 in

P = 0.89 in
Q = 0.18 in

Once a CN is computed, the time of concentration (t_c) is computed using guidance provided in TR-55.

Using the computed CN, t_c and drainage area (A), in acres; the peak discharge (Q_p) for the water quality storm event is computed (either Type II or Type III in the State of New York).

Read initial abstraction (Ia), compute Ia/P

Read the unit peak discharge (qu) for appropriate t_c

Using the water quality volume (WQ_V), compute the peak discharge (Q_p)

$$\mathbf{Q_p = q_u * A * WQ_V}$$

where Q_p = the peak discharge, in cfs

q_u = the unit peak discharge, in cfs/mi²/inch

A = drainage area, in square miles

WQ_V = Water Quality Volume, in watershed inches

Qu = 625 (per TR-55)
A = 0.005 sq miles
WQv = 0.18 in

Qp = 0.56 cfs

Qu = 550 (per TR-55)
A = 0.002 sq miles
WQv = 0.18 in

Qp = 0.62 cfs

Qu = 625 (per TR-55)
A = 0.005 sq miles
WQv = 0.18 in

Qp = 0.56 cfs

WEST SWALE

EAST SWALE #1

EAST SWALE #2

Chapter 4 Graphical Peak Discharge Method

This chapter presents the Graphical Peak Discharge method for computing peak discharge from rural and urban areas. The Graphical method was developed from hydrograph analyses using TR-20, "Computer Program for Project Formulation—Hydrology" (SCS 1983). The peak discharge equation used is:

$$q_p = q_u A_m Q F_p \qquad \text{[eq. 4-1]}$$

where:

q_p = peak discharge (cfs)
q_u = unit peak discharge (csm/in)
A_m = drainage area (mi²)
Q = runoff (in)
F_p = pond and swamp adjustment factor

The input requirements for the Graphical method are as follows: (1) T_c (hr), (2) drainage area (mi²), (3) appropriate rainfall distribution (I, IA, II, or III), (4) 24-hour rainfall (in), and (5) CN. If pond and swamp areas are spread throughout the watershed and are not considered in the T_c computation, an adjustment for pond and swamp areas is also needed.

Peak discharge computation

For a selected rainfall frequency, the 24-hour rainfall (P) is obtained from appendix B or more detailed local precipitation maps. CN and total runoff (Q) for the watershed are computed according to the methods outlined in chapter 2. The CN is used to determine the initial abstraction (I_a) from table 4-1. I_a / P is then computed.

If the computed I_a / P ratio is outside the range in exhibit 4 (4-I, 4-IA, 4-II, and 4-III) for the rainfall distribution of interest, then the limiting value should be used. If the ratio falls between the limiting values, use linear interpolation. Figure 4-1 illustrates the sensitivity of I_a / P to CN and P.

Peak discharge per square mile per inch of runoff (q_u) is obtained from exhibit 4-I, 4-IA, 4-II, or 4-III by using T_c (chapter 3), rainfall distribution type, and I_a / P ratio. The pond and swamp adjustment factor is obtained from table 4-2 (rounded to the nearest table value). Use worksheet 4 in appendix D to aid in computing the peak discharge using the Graphical method.

WEST SWALE

EAST SWALE #1

EAST SWALE #2

Figure 4-1 Variation of I_a / P for P and CN

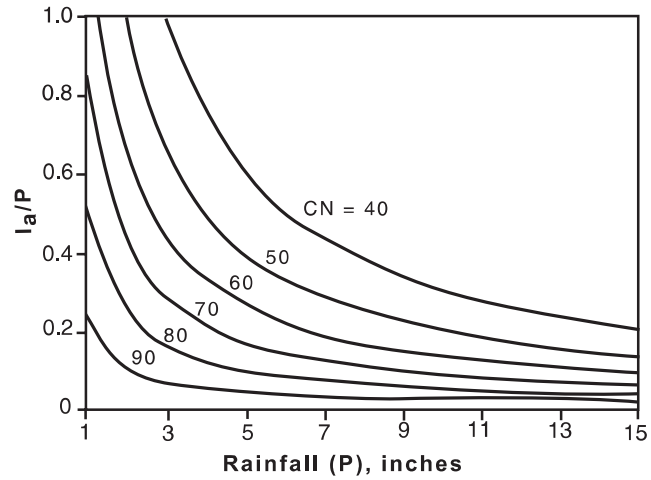
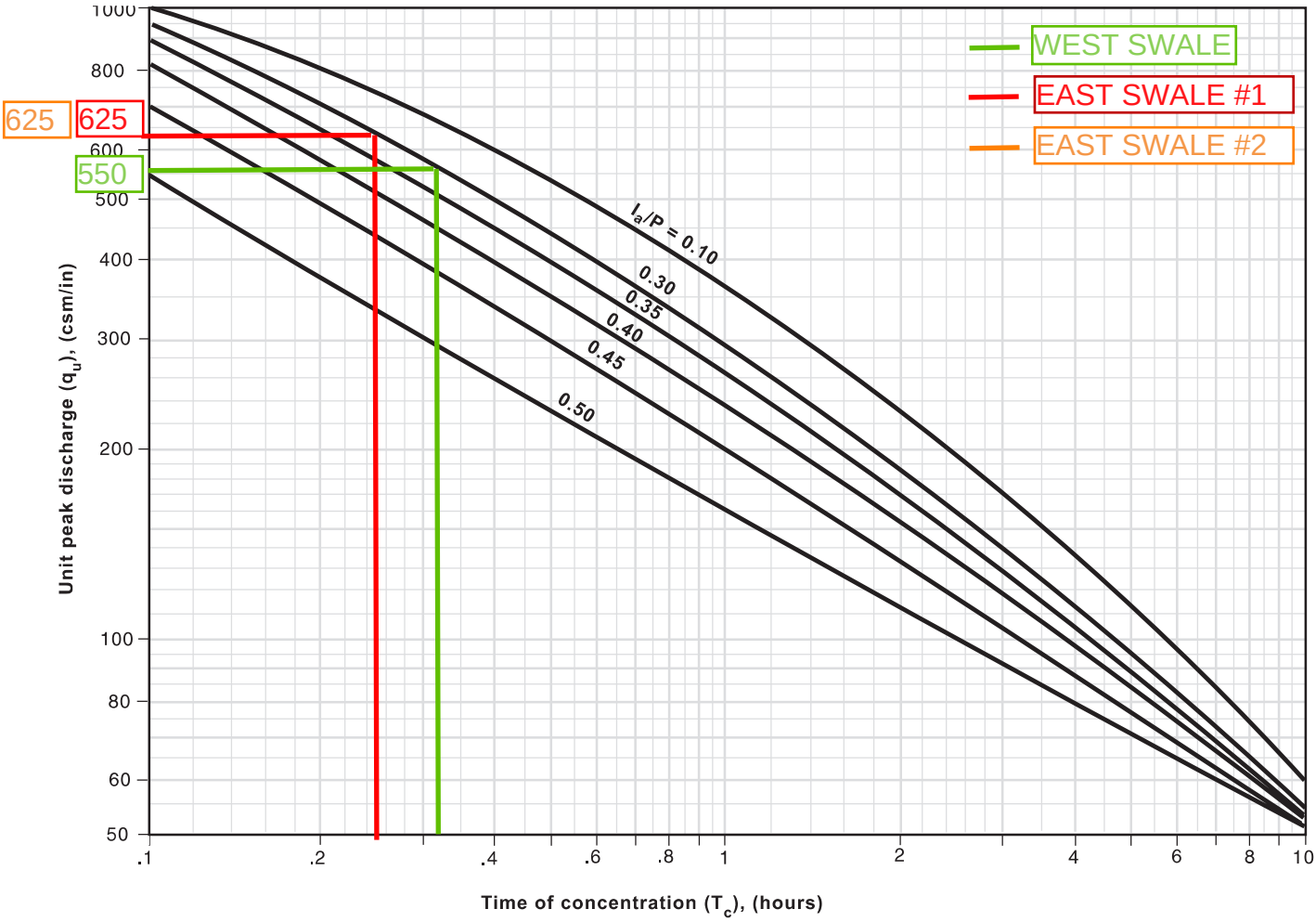


Table 4-1 I_a values for runoff curve numbers

Curve number	I_a (in)	Curve number	I_a (in)
40	3.000	70	0.857
41	2.878	71	0.817
42	2.762	72	0.778
43	2.651	73	0.740
44	2.545	74	0.703
45	2.444	75	0.667
46	2.348	76	0.632
47	2.255	77	0.597
48	2.167	78	0.564
49	2.082	79	0.532
50	2.000	80	0.500
51	1.922	81	0.469
52	1.846	82	0.439
53	1.774	83	0.410
54	1.704	84	0.381
55	1.636	85	0.353
56	1.571	86	0.326
57	1.509	87	0.299
58	1.448	88	0.273
59	1.390	89	0.247
60	1.333	90	0.222
61	1.279	91	0.198
62	1.226	92	0.174
63	1.175	93	0.151
64	1.125	94	0.128
65	1.077	95	0.105
66	1.030	96	0.083
67	0.985	97	0.062
68	0.941	98	0.041
69	0.899		

Exhibit 4-II Unit peal discharge (q_u) for NRCS (SCS) type II rainfall distribution

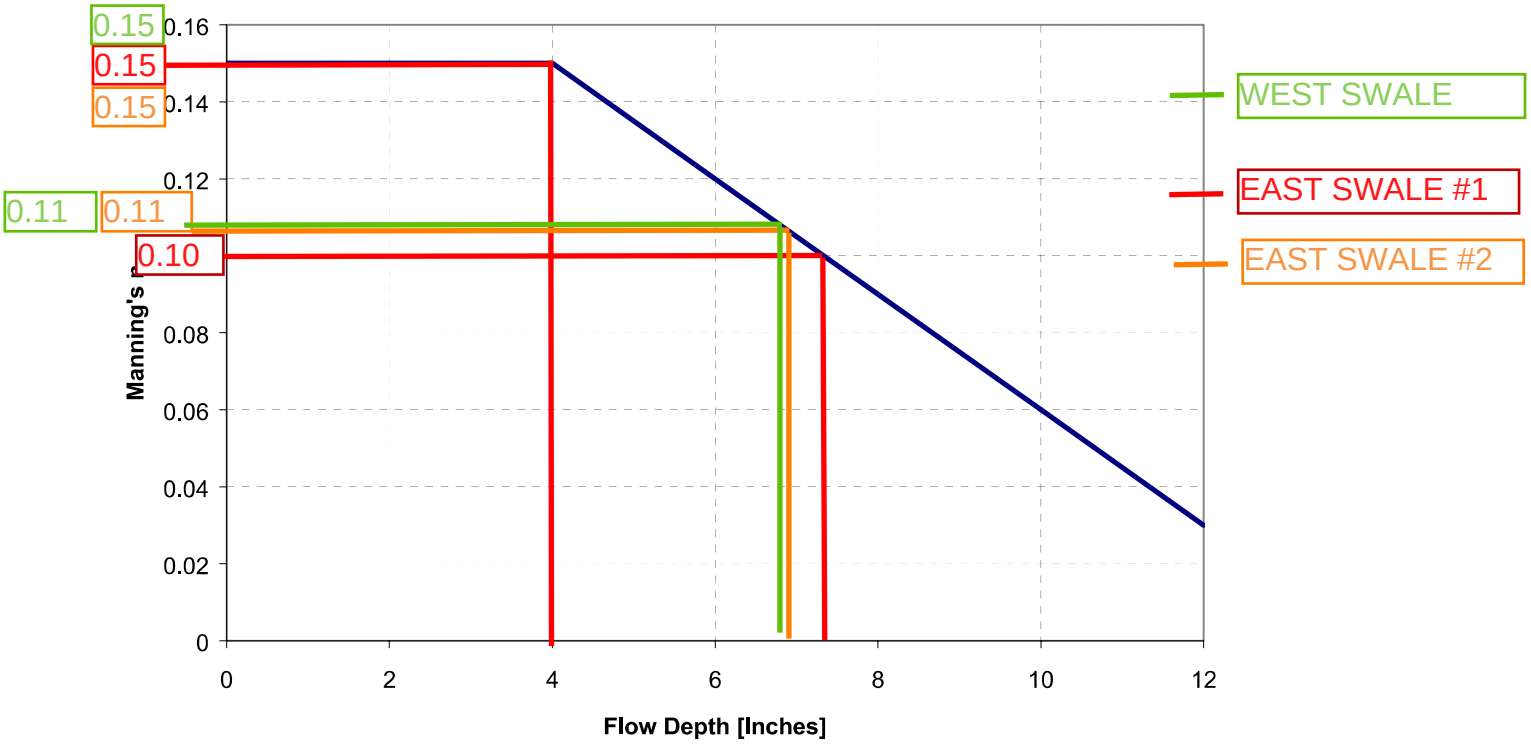


Ia = 0.273 P = 0.89 Ia/P = 0.31 Tc = 0.25 hr	Ia = 0.273 P = 0.89 Ia/P = 0.31 Tc = 0.32 hr	Ia = 0.273 P = 0.89 Ia/P = 0.31 Tc = 0.25 hr

Manning's n value

The roughness coefficient, n, varies with the type of vegetative cover and flow depth. At very shallow depths, where the vegetation height is equal to or greater than the flow depth, the n value should be approximately 0.15. This value is appropriate for flow depths up to 4 inches typically. For higher flow rates and flow depths, the n value decreases to a minimum of 0.03 for grass channels at a depth of approximately 12 inches. The n value must be adjusted for varying flow depths between 4" and 12" (see Figure L.1).

Figure L.1 Manning's n Value with Varying Flow Depth (Source: Claytor and Schueler, 1986)



Appendix C – Soil Report

Geotechnical Evaluation Report

Proposed Additions

Renzi Food Services

901 Rail Drive

Watertown, NY

Prepared For:

Food Tech, Inc.

300 Ledgewood Place, Ste. 304

Rockland, MA 02370

Kenney Geotechnical Services

Prepared by:

Kenney Geotechnical Engineering Services, PLLC

DECEMBER 12, 2014

STATE OF NEW YORK
CHRISTOPHER MEAGHER KENNEY
066949
LICENSED PROFESSIONAL ENGINEER

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EXECUTIVE SUMMARY

The subsurface investigation encountered variable subsurface conditions. It appears that a limestone bedrock surface dips downward towards the north beneath the site. The limestone is more than 20 feet below the ground surface at the north end of the addition and within one foot of the ground surface at the south end of the addition. The overburden above bedrock consisted predominantly of medium-dense poorly graded sand. A soft to medium stiff clay layer was encountered below the sand at depths of 12.5 feet to 19.0 feet in areas where bedrock was not present at that depth.

The bedrock encountered consisted of a medium hard limestone and appears to be rippable. A hoe-ram may be necessary where bedrock becomes more resistant to excavation. Mapping indicating the approximate rock surface elevation is attached to this report.

Groundwater was encountered at a depth of 9 to 9.5 feet at the time of the subsurface investigation. The poorly-graded sand appears to be permeable and will allow seepage.

Shallow foundations can be utilized for the proposed structure. Bearing grade must be well-compacted prior to the placement of formwork and reinforcing bars. An allowable bearing pressure of 3,000 pounds per square foot is suggested for design. It may be necessary to place structural fill to re-establish bearing grade at locations where bedrock is removed.

The subsurface conditions encountered suggest that Site Class D is appropriate for seismic design for sections of the site where bedrock depth is greater than 15 feet below ground level. The estimated design spectral response acceleration parameters are $\mathbf{S_{DS} = .208g}$ and $\mathbf{S_{D1} = .120g}$ in areas where sand is present. Site Class B is considered appropriate for seismic design for sections of the site where bedrock depth is less than 15 feet below ground level. The estimated design spectral response acceleration parameters are $\mathbf{S_{DS} = .130g}$ and $\mathbf{S_{D1} = .050g}$ where bedrock is present. Liquefaction, surface rupture from faulting or lateral spreading is estimated to have a low probability of occurrence given the soil conditions encountered and typical regional seismicity.

INTRODUCTION

This report presents the results of the geotechnical investigation performed for the proposed additions to Renzi Food Services in Watertown, NY. This geotechnical report presents the data developed during the subsurface investigation and provides analysis and recommendations for the proposed construction.

No environmental services are included in this study. No conclusions have been drawn regarding environmental conditions of the site, potential contaminants, potential special treatment or disposal of site materials, or other environmental considerations.

This report has been prepared for the exclusive use of Food Tech, Inc.

AUTHORIZATION

Our services for this project were authorized by Robert W. Ross, PE, Vice President, Food Tech, Inc.

PROJECT DESCRIPTION, PURPOSE OF EVALUATION, AND SCOPE OF WORK

The proposed project entails construction of two additions totaling 41,122 square feet. The additions include a 39,830 square foot storage and cooling expansion at the east side of the existing building as well as a small 1,292 square foot employee office and amenities space to the northwest corner of existing building. The attached Site Plan prepared by Food Tech, Inc. illustrates the proposed work.

The proposed project also includes a new truck access road connecting Rail Drive to the existing parking lot, east of the current access road. The attached Site Plan shows the proposed road location.

The scope of the geotechnical investigation performed for this project consisted of the advancement of six test borings, seven pavement borings, 28 rock probes, one test pit, and one infiltration test as well as the preparation of this report. The test borings were continuously sampled during Standard Penetration Testing in the upper 10 feet of ground, and were advanced to practical refusal or a maximum depth of 20 feet. The pavement borings were continuously sampled during Standard Penetration Testing to a total depth of 6 feet. The rock probes were performed by advancing solid stem augers to reasonable refusal or a maximum depth of 15 feet.

DESIGN CRITERIA

Anticipated design loads are as follows:

a. Building:
   1) Wall loads will be up to 1000 lbf
   2) Interior column loads will be up to 100,000 pounds
   3) Exterior column loads will be up to 45,000 pounds

Anticipated truck loading is as follows:

1) 18,000 lb single-axle load
2) 34,000 lb tandem-axle load
3) 50 tractor trailers per day at six days per week of operation
4) Projected life of 20 years

The following ASTM Standards were utilized during this study:

- ASTM D1586 "Penetration Test and Split-Barrel Sampling of Soils"
- ASTM D2487 "Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)"
- ASTM D5434 "Standard Guide for Field Logging of Subsurface Exploration of Soil and Rock"
- ASTM D422 "Test Method for Particle Size Analysis of Soils"
- ASTM D4318 " Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils"

Local geotechnical practice was also considered in the performance of this study.

SITE CONDITIONS

The proposed site is located in an industrial/business area in Watertown, Jefferson County, New York. The project site is currently an undeveloped lawn and brush area to the east and northwest of the existing building, as indicated on Figure 1. The area to the north, east and west of the existing building is relatively level. The land rises to the south and southeast. Bedrock outcrops are exposed beneath an adjoining railroad embankment along the south property line. The ground surface rises approximately 20 feet above the finished floor elevation of the existing building at the south end of the property.

The site is located in central Jefferson County. The site lies within the Tug Hill Plateau physiographic province. Major topographic and geologic features in this area were formed during the last glacial advance and retreat, which ended approximately 12,000 years ago. Regional surficial geologic mapping suggests that soils in the site vicinity consists of well sorted sand and gravel. Bedrock mapping shows Hillier shale and limestone of the Cobourg Formation underlies soil in the area.

FIELD STUDY

Test boring locations were staked and ground elevations measured on November 12, 2014. The finished floor of the existing building was arbitrarily established as a benchmark with an elevation of 100.0 feet. The benchmark location is illustrated on Figure 4 attached to this report.

Test borings were performed during the period of November 13, 2014 to November 17, 2014. Hollow stem augering techniques were utilized to advance the test borings. Standard Penetration Testing (ASTM D1586) was performed to obtain samples. Boring locations were selected, field-located, and surveyed for elevation by Kenney Geotechnical Engineering Services, PLLC. Borings were advanced to depths of up to 20 by using a track-mounted Geoprobe 7822DT drill rig equipped with an automatic sampling hammer. Soil samples obtained during the subsurface investigation were classified by a Geotechnical Engineer using the Unified Soil Classification System. Boring logs documenting the subsurface conditions encountered are attached.

Solid stem augering techniques were utilized to advance rock probes to a maximum depth of 15 feet or to refusal. No sampling was performed during the advancement of the rock probes.

A test pit was excavated by Marzano Excavation on December 8, 2014 at the south end of the proposed cooler and dry storage addition where bedrock is present near the ground surface. A Komatsu PC220 with a toothed bucket was used to excavate the test pit.

The boring logs and related information depict subsurface conditions only at the specific locations and times indicated. Subsurface conditions and water levels at other locations may differ from conditions at the locations where sampling was conducted. The passage of time may also result in changes in the conditions interpreted to exist at the locations where sampling was conducted.

SUBSURFACE CONDITIONS

The following interpretation of subsurface conditions is based on our review of the recovered samples, the boring logs, drilling observations, laboratory testing results, and our professional experience.

The test borings encountered variable subsurface conditions including shallow bedrock at the south end of the addition and loose sand at the north end of the addition. The test borings suggest that the bedrock surface dips downward towards the north so that it is more than 20 feet below the ground surface of the north end of the addition, and within one foot of the ground surface at the south end of the addition. The overburden above bedrock consisted predominantly of medium-dense poorly graded sand. A soft to medium stiff clay layer was encountered below the sand at depths of 12.5 feet to 19.0 feet in areas where bedrock was not present at that depth.

The bedrock encountered in the test pit consists of a medium-hard limestone with horizontal discontinuities spaced at 4 to 8 inch intervals. The limestone could be ripped to a depth of 3.5 feet in the test pit by wedging the teeth of the excavator bucket into the horizontal discontinuities.

Groundwater was encountered at depths of 9 to 9.5 feet at boring locations B-1, B-2, and B-5 at the time of the subsurface investigation. An infiltration test resulted in an infiltration rate of more than 3 inches per minute. The groundwater table will vary with the seasons and changes in precipitation patterns and may be higher

during the wetter seasons. No long term groundwater data was generated during this study and the range of possible groundwater elevation is unknown.

LABORATORY TESTING

Laboratory testing performed for this project consisted of natural moisture content determination, Atterberg Limits testing, and grain size distribution testing. Laboratory testing is summarized in the attached analysis results sheets.

RECOMMENDATIONS AND CONCLUSIONS

A. General

Test borings indicate that bedrock is present near the ground surface at the south-east side of the existing building, where the proposed cooler and dry storage addition is planned. The bedrock encountered consisted of a medium hard limestone and appears to be rippable at locations where horizontal discontinuities are spaced less than 8 inches. A hoe-ram may be necessary where bedrock becomes more resistant to excavation and bedrock discontinuities are not easily accessible. No bedrock was encountered at the location of the employee amenities addition. A map showing encountered bedrock elevations can be found in Figure 4, following this report.

Sand was encountered at bearing grade and within the footprint of the new addition. The sand was loose to medium dense.

B. Temporary Excavations

We anticipate that temporary excavations will be no more than 5 feet deep and will be open cut. Temporary excavation slopes must be evaluated by the Contractor's on-site Responsible Person. We anticipate that site soils encountered to a depth of five feet will consist of either sand or limestone bedrock. We anticipate the sand will be classified as a Type C soil. Type C materials must be graded to slopes no greater than 1.5:1 (horizontal to vertical) during excavation. Below depths of approximately 9 feet the soils will be wet, and shoring and dewatering may be necessary for deeper excavations.

The sand will be prone to erosion during heavy precipitation due to rapid infiltration rates. The Contractor must continually re-evaluate slopes to ensure safe conditions exist for on-site personnel. Consideration should be given to applying sheets of polyethylene to cut slopes in soil to prevent washouts during rain events.

The stability of excavations in the limestone will be dependent on the orientation of non-horizontal discontinuities in bedrock. Any discontinuities that may form a rock wedge that dips toward the open excavation must be carefully evaluated for stability. The sides of excavation in rock should be periodically raked to remove loose pieces, especially following freeze/thaw cycles.

C. Utility Trenches

Bedrock removal may be necessary for utility trenches at the south side of proposed addition and should be removed as previously mentioned in section B. In confined areas, small compaction equipment may be necessary such as a vibratory plate, jumping jack or walk-behind vibratory roller. In-place density testing should be performed at a frequency of one test per 25 feet per lift in trenches. Utility trench fill should be placed in level lifts no greater than 8 inches in thickness and should be compacted to at least 95% the Modified Proctor (ASTM D-1557) maximum dry density. Structural fill should consist of imported granular material conforming to NYSDOT Specification Item 203-2.02 Type C, NYSDOT Item No. 304.03, Subbase

Course, Type 2 crushed rock, or approved equal. Existing on-site soil that is free of organics can be re-utilized as structural fill. Field moisture contents for structural fill should be maintained within 2 percentage points of the optimum moisture content established by laboratory testing to provide adequate compaction. Adequate frost cover and protection must be provided during winter weather construction. Earthwork cannot be performed with frozen material.

D. Earthwork

Where rock removal will be necessary for foundation construction, it is recommended that an excavator with toothed bucket is used to rip bedrock. A hoe-ram may be necessary at locations where more resistant bedrock is present. Place structural fill as necessary to re-establish bearing grade after ripping.

Earthwork must be performed using methods that will result in a stable excavations and fills. Typical temporary earthwork measures such as temporary drainage swales, stabilized haul roads, and the use of protective layers of crushed stone can be employed at this site. Additional recommendations are as follows:

- Strip existing topsoil, pavement, roots and organics from all areas that will receive new construction to establish subgrade.
- Proof-roll exposed slab-on-grade subgrade with a fully loaded dump truck, or accepted alternative equipment, under the observation of geotechnical personnel. Areas that rut, weave, or deflect should be over-excavated and replaced with compacted structural fill (see below for structural fill characteristic requirements).
- Utilize structural fill to raise site grades to the desired elevation. Structural fill should consist of imported granular material conforming to NYSDOT Specification Item 203-2.02 Type C, NYSDOT Item No. 304.03, Subbase Course, Type 2 crushed rock, or approved equal. Existing on-site sand can potentially be re-utilized as structural fill provided that proper moisture control is performed during earthwork.
- Field moisture contents for structural fill should be maintained within 2 percentage points of the optimum moisture content established by laboratory testing to provide adequate compaction. All fill should be placed in level lifts having a loose thickness no greater than 12 inches, and should be compacted with vibratory rollers to at least the following minimum percentages of the Modified Proctor (ASTM D-1557) maximum dry density:

    - Below footings: 95%
    - Beneath slab-on-grade or pavements: 95%
    - Utility trench backfill: 95%
    - Beneath landscape areas: 90%
    - Beneath sidewalks and exterior slabs: 95%

    Bulk samples of proposed structural fill materials should be delivered to the testing laboratory at least two weeks prior to the initiation of earthwork. In-place density testing should be performed at a frequency of one test per 500 square feet per lift in open areas and one test per 25 feet per lift in trenches.
- If the structure is to be constructed during the winter months, or if the building interiors will be subjected to freezing temperatures after footer construction, adequate frost cover and protection must be provided. Earthwork cannot be performed with frozen material.
- Permanent slopes should be graded no steeper than 3 horizontal: 1 vertical.

E. Foundations

It is recommended that shallow foundations bear on either limestone bedrock or native sand. Assuming the recommendations in this report are followed, we suggest that shallow foundations are designed for an allowable bearing pressure of 3,000 lbs./sq. ft. To prevent failure by punching shear, we recommend that the minimum width of isolated shallow foundations is 24 inches, and that continuous footings are at least 18

inches wide. All exterior footings should bear at least 48 inches below finished exterior grade for frost protection unless an insulated frost protection system is installed. We anticipate that less than one inch of total settlement, and less than 0.25 inches of differential settlement, will occur if the footing bearing grade is adequately protected during construction. Drainage should be maintained away from foundations both during and after construction. Each footing excavation should be inspected by qualified geotechnical personnel and approved prior to placing reinforcing steel and concrete. Where rock removal is necessary structural fill is to be used to bring bearing grade to the appropriate elevation. When structural fill placement is greater than 12 inches, compaction and density testing will be necessary.

F. Interior Concrete Slabs on Grade

All topsoil, pavement, organic matter, roots, etc. must be removed from beneath the subgrade. All subgrade areas should be proof-rolled as discussed in the Earthwork recommendations. A preliminary subgrade modulus of 150 pci is suggested for design; however, a higher value may be utilized if ground improvement is performed. If necessary for grading, place structural fill over stripped ground in order to achieve new floor slab elevations. Structural fill placed to establish floor slab subgrade should conform to the recommendations for materials and compaction presented in Section D, Earthwork recommendations.

The subbase for the slab-on-grade should consist of a minimum of 6 inches of gravel or crushed stone conforming to NYSDOT specifications for Item 304-2.02 Type 2 or 4. Follow compaction requirements presented for earthwork.

G. Exterior Concrete Slabs on Grade (Sidewalks, Curbs, Gutters, Misc.)

Earthwork for exterior slabs should be performed as discussed in Section D. Type I/II cement is sufficient for use in the concrete for the sidewalks.

H. Pavement Design

The following describes the recommended asphalt pavement cross-sections recommended for this site:

- For truck access road: 1.5" Top Course (NYSDOT Item 402.12), 2.5" Binder Course (NYSDOT Item 402.25), and 14" of compacted crusher run subbase.

- For new parking addition" 1" Top Course (NYSDOT Item 402.12), 2"Binder Course (NYSDOT Item 402.25), and 12" of compacted crusher run subbase.

Proposed pavement design should have low susceptibility to frost based on a subgrade consisting of clean poorly graded sands.

I. Sliding Resistance of Soils

Item	Value	Units	Notes
Unit Weight (On-site soil):	115	pcf	Will vary with compaction effort.
Internal Friction Angle	31	degrees	Will vary with compaction effort.
Lateral Sliding Resistance (Concrete to soil):	150	psf/ft	Per foot of burial depth.
Coefficient of Active Earth Pressure, Ka:	0.32	-	Assumes horizontal backfill
Coefficient of At-Rest Earth Pressure, Ko:	0.48	-	For restrained walls
Coefficient of Passive Earth Pressure, Kp:	3.12	-	Assumes horizontal backfill

J. Lateral Earth Pressures

Design of subsurface walls subjected to lateral earth pressure must consider the type of wall, degree of restraint against wall rotation, and other factors. The following equivalent fluid pressures are recommended for this project.

Item	Value	Units	Notes
Unit Weight (On-site soil):	115	pcf	Will vary with compaction effort.
Drained Equivalent Fluid Pressure	37	psf/ft	Assumes horizontal backfill
Undrained Equivalent Fluid Pressure	102	psf/ft	Assumes horizontal backfill
Equipment Surcharge Pressure	420	psf/ft	Assumes 10-ton smoothdrum roller
Dynamic Equivalent Fluid Pressure	see	note	Increase static EFP by 20%

It is recommended that drainage is provided for all walls to reduce hydrostatic wall loading and possible frost action. Backfill against any walls should consist of a relatively well-graded free-draining granular material having no more than 10% passing the No. 200 sieve. The granular backfill zone behind walls should be at least one foot wide as measured horizontally from the face of the wall. Backfill against walls should be placed in loose lifts no greater than 6 inches in thickness. A nonwoven geotextile filter should be placed between the granular backfill and in situ soil to prevent the migration of fine grained soil.

K. Seismic Hazard Concerns, Liquefaction, Seismicity, and Faulting

The subsurface conditions encountered and "N" values recorded suggest that **Site Class D** is appropriate for seismic design for sections of the site where bedrock depth is greater than 15 feet below ground level. The estimated design spectral response acceleration parameters are **S_{DS} = .208g** and **S_{D1} = .120g. Site Class B** is considered appropriate for seismic design for sections of the site where bedrock depth is less than 15 feet below ground level. The estimated design spectral response acceleration parameters are **S_{DS} = .130g** and **S_{D1} = .050g.** Liquefaction, surface rupture from faulting or lateral spreading is estimated to have a low probability of occurrence given the soil conditions encountered and typical regional seismicity.

LIMITATIONS

The recommendations presented in this report are predicated on the performance of construction observation and testing by qualified geotechnical personnel. We request continued involvement with this project so that we may assess subsurface conditions exposed during construction to determine if modifications to our recommendations are necessary.

REFERENCES

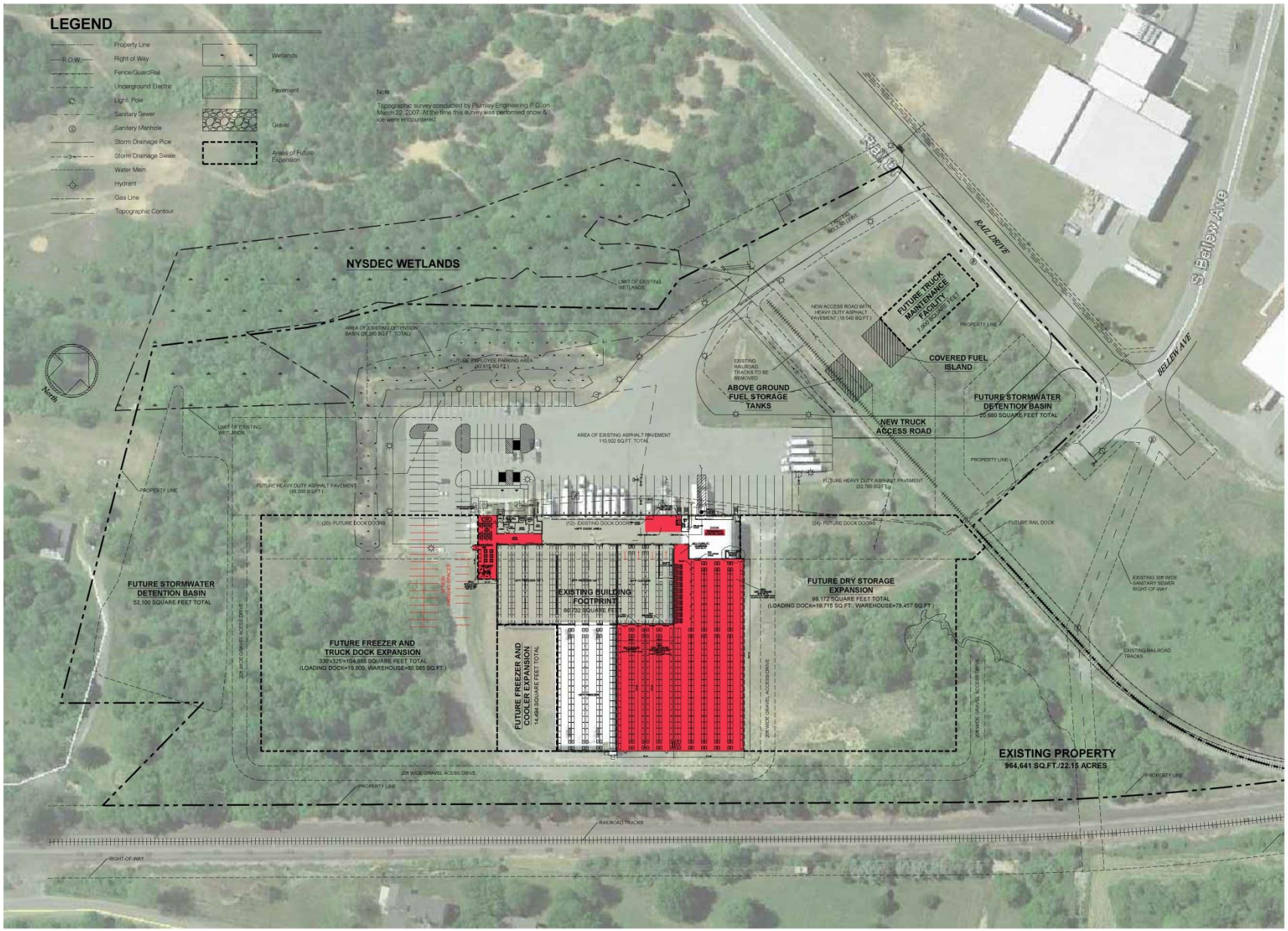
"Surficial Geologic Map of New York – Adirondack Region", New York State Museum, 1986

"Bedrock Map of New York –Adirondack Region", New York State Museum, 1970.

FIGURES

Figure 1 – Site Location Map
Figure 2 – Boring Location Plan
Figure 3 – Rock Probe Location Plan
Figure 4 – Rock Probe Elevations of Bedrock
Figure 5 – Boring Logs
Figure 6 – Boring Log Key
Figure 7 – Boring Log Legend
Figure 8 – Laboratory Testing Results
Figure 9 – USGS Seismic Summary Report

Fig. 1 – Site Plan



PROPOSED SITE PLAN
SCALE: 1" = 50'-0"

Disclaimer

This drawing as prepared by Food Tech, INC., is schematic and conceptual in nature. It is intended to illustrate the owners operational requirements and is NOT FOR CONSTRUCTION, permitting or approvals from local authorities. The scale of this drawing may be distorted due to electronic transmission and reproduction. Confirmation of field dimensions and existing conditions is advised. This drawing is the property of Food Tech, INC. and shall not be reproduced or reused without our written approval.

ACTION	DATE	DESCRIPTION
-	00-0-00	-

Planning Study for:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

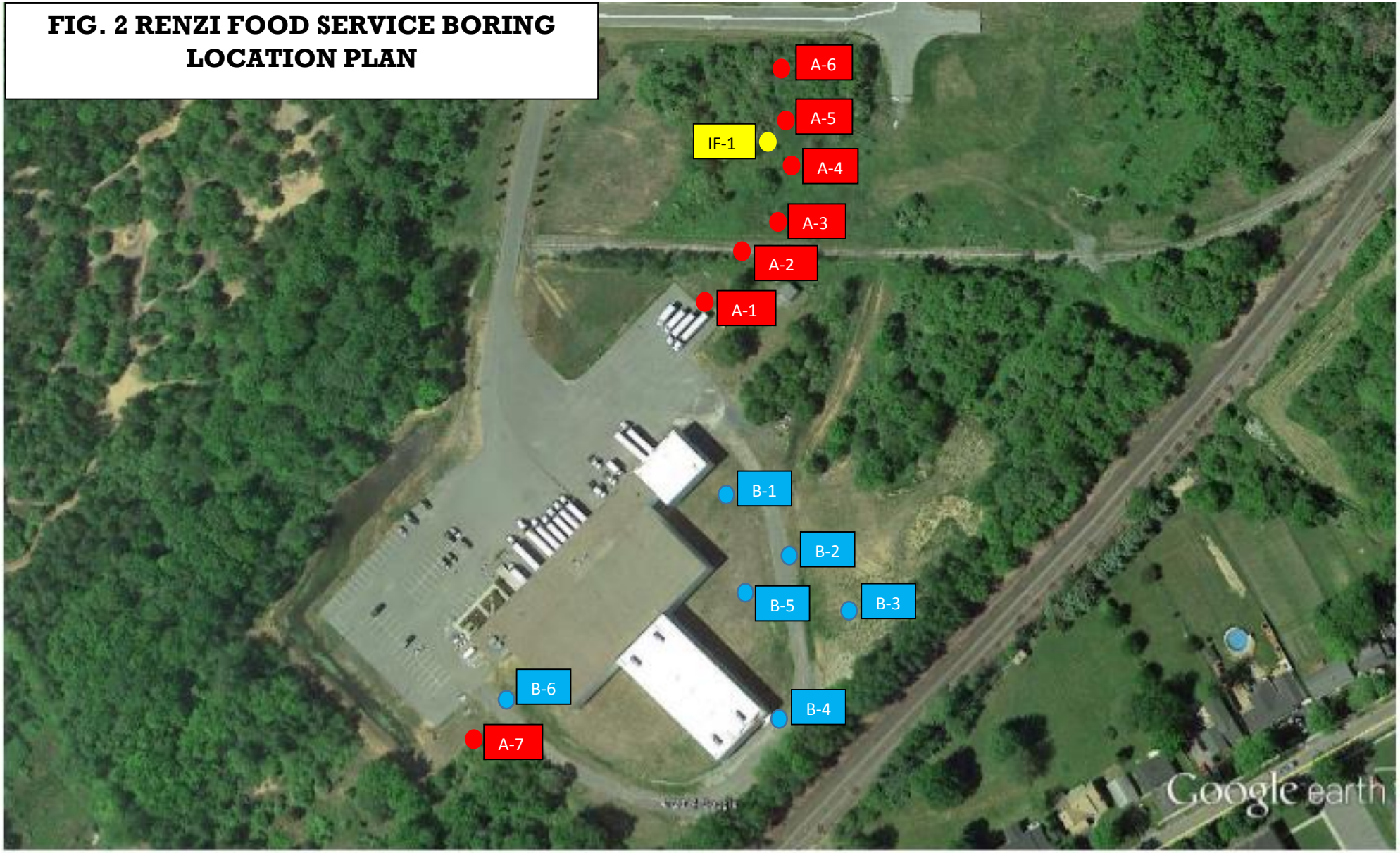
PROPOSED SITE PLAN

Food Tech
An EMCOR Company
300 LEDGEWOOD PL. STE 304, ROCKLAND, MA 02370
foodtech.com
Tel: (781) 261-9700

DATE: 7-25-14
DESIGNED BY:
DRAWN BY: MN
CHECKED BY:

DRAWING NO.
C-3

FIG. 2 RENZI FOOD SERVICE BORING LOCATION PLAN



Google earth

feet 800

meters 200

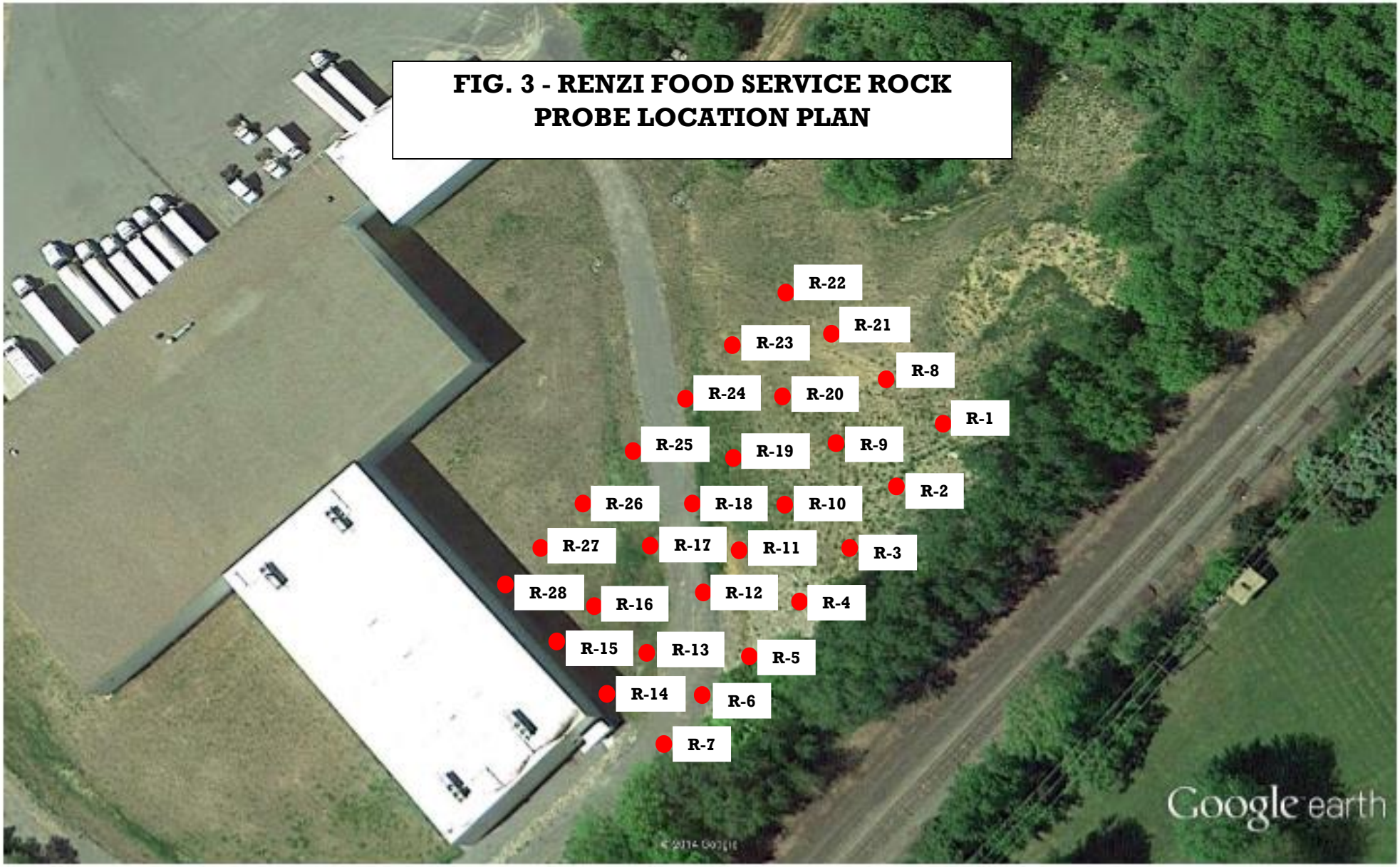


FIG. 3 - RENZI FOOD SERVICE ROCK PROBE LOCATION PLAN

Google earth

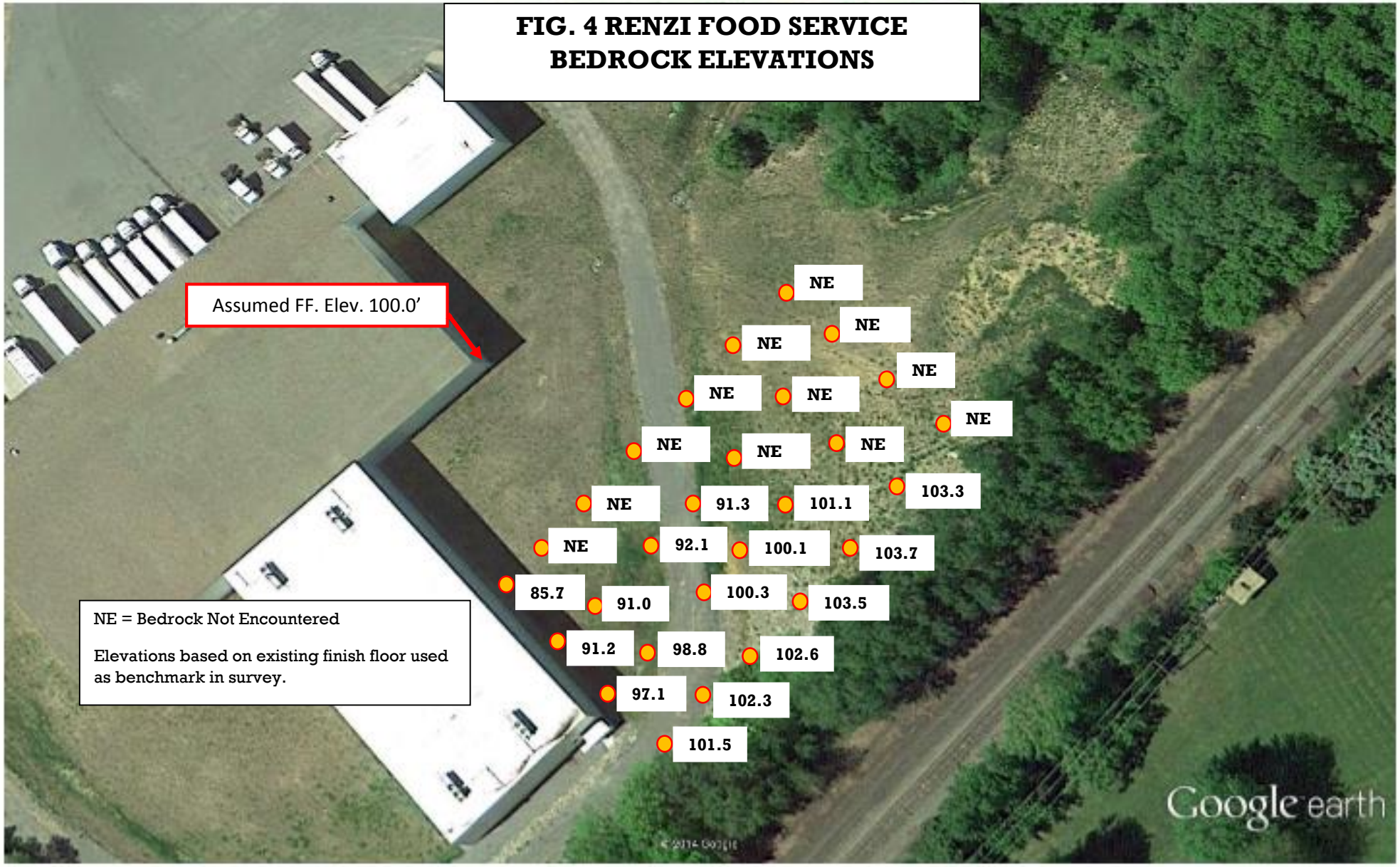
feet 300

meters 100

Kenney Geotechnical Engineering Services, PLLC
Office: 7246 State Fair Blvd., Syracuse, NY 13209
Mail :P.O. Box 156 Baldwinsville, N.Y. 13027
Phone: (315) 638-2706 Fax: (315) 638-1544

Kenney Geotechnical Services

FIG. 4 RENZI FOOD SERVICE BEDROCK ELEVATIONS



Google earth

feet 300
meters 100

Kenney Geotechnical Services
7246 State Fair Blvd
Baldwinsville, N.Y. 13209
Telephone: 315-638-2706
Fax: 315-638-1544

KEY TO SYMBOLS

CLIENT FOOD TECH, INC.

PROJECT NAME RENZI FOOD SERVICE

PROJECT NUMBER 2014-162

PROJECT LOCATION 901 RAIL DRIVE WATERTOWN, NY

LITHOLOGIC SYMBOLS
(Unified Soil Classification System)

- BEDROCK: Bedrock
- CL-ML: USCS Low Plasticity Silty Clay
- CLS: USCS Low Plasticity Sandy Clay
- GW-GC: USCS Well-graded Gravel with Clay
- GWS: USCS Well-graded Sandy Gravel
- SP: USCS Poorly-graded Sand
- SP-SC: USCS Poorly-graded Sand with Clay
- SP-SM: USCS Poorly-graded Sand with Silt
- TOPSOIL: Topsoil

SAMPLER SYMBOLS

- Standard Penetration Test

WELL CONSTRUCTION SYMBOLS

ABBREVIATIONS

LL - LIQUID LIMIT (%)
PI - PLASTIC INDEX (%)
W - MOISTURE CONTENT (%)
DD - DRY DENSITY (PCF)
NP - NON PLASTIC
-200 - PERCENT PASSING NO. 200 SIEVE
PP - POCKET PENETROMETER (TSF)

TV - TORVANE
PID - PHOTOIONIZATION DETECTOR
UC - UNCONFINED COMPRESSION
ppm - PARTS PER MILLION

- Water Level at Time Drilling, or as Shown
- Water Level at End of Drilling, or as Shown
- Water Level After 24 Hours, or as Shown

KEY TO SYMBOLS - GINT STD US LAB.GDT - 12/15/14 09:53 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2014-162 RENZI FOOD SERVICE.GPJ

Project: RENZI FOOD SERVICE
Project Location: 901 RAIL DRIVE WATERTOWN, NY
Project Number: 2014-162

Key to Soil Symbols and Terms

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE-GRAINED SOILS (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

Descriptive Terms	Relative Density	SPT Blow Count
Very loose	0 to 15 %	< 4
Loose	15 to 35 %	4 to 10
Medium dense	35 to 65 %	10 to 30
Dense	65 to 85 %	30 to 50
Very dense	85 to 100 %	> 50

FINE-GRAINED SOILS (major portions passing on No. 200 sieve): includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

Descriptive Terms	Unconfined Compressive Strength kPa	SPT Blow Count
Very soft	< 25	< 2
Soft	25 to 50	2 to 4
Medium stiff	50 to 100	4 to 8
Stiff	100 to 200	8 to 15
Very stiff	200 to 400	15 to 30
Hard	> 400	> 30

GENERAL NOTES

1. Classifications are based on the United Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.

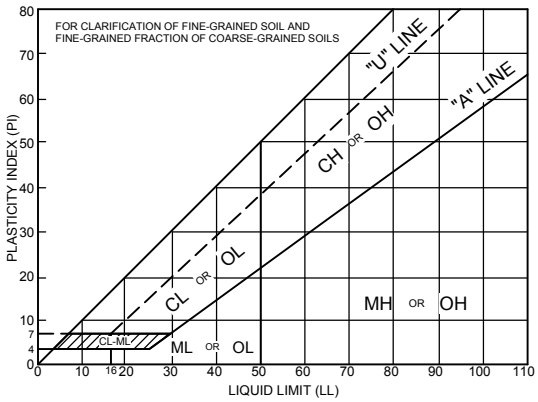
2. Surface elevations are based on topographic maps and estimated locations.

3. Descriptions on these boring logs apply only at the specific boring locations and at the time the borings were made. They are not guaranteed to be representative of subsurface conditions at other locations or times.

Major Divisions			Group Symbols	Typical Names	Laboratory Classification Criteria	
Coarse-Grained soils (More than half the material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravel (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel from grain size curve, Depending on percentage of fines (fraction smaller than No. 200 sieve) coarse-grained soils are classified as follows: Less than 5 percent..... GW, GP, SW, SP; More than 12 percent..... GM, GC, SM, SC; 6 to 12 percent..... Borderline case4s requiring dual symbols**	$C_U = \frac{D_{60}}{D_{10}}$ greater than 4; $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW
		Gravel with fines (Appreciable amount of fines)	GM* d / u	Silty gravels, gravel-sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4
			GC	Clayey gravels, gravel-sand-silt mixtures		Atterberg limits above "A" line or P.I. greater than 7
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines		$C_U = \frac{D_{60}}{D_{10}}$ greater than 6; $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3
			SP	Poorly-graded sands, gravelly sands, little or no fines		Not meeting all gradation requirements for SW
		Sands with fines (Appreciable amount of fines)	SM* d / u	Silty sands, sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4
			SC	Clayey sands, sand-clay mixtures		Atterberg limits above "A" line or P.I. greater than 7
Fine-Grained soils (More than half the material is smaller than No. 200 sieve size)	Silts and Clays (Liquid limit less than 60)		ML	Inorganic silts and very fine sands, rock floor, silty or clayey fine sands or clayey silts with slight plasticity		
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays		
			OL	Organic silts and organic silty clays of low plasticity		
	Silts and Clays (Liquid limit greater than 60)		MH	Inorganic silts, micaceous or disto-maceous fine sandy or silty soils, organic silts		
			CH	Inorganic clays of high plasticity, fat clays		
			OH	Organic clays of medium to high plasticity, organic silts		
	Highly Organic Soils		Pt	Peat and other highly organic soils		

Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols

Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols



Plasticity Chart

Particle Size			
Sieve sizes	< #200	#200 to #40	
		#40 to #10	
		#10 to #4	
mm	< 0.074	0.074 to 0.42	
		0.42 to 2.00	
		2.00 to 4.76	
Material	Silt or clay	Sand	Fine
			Medium
			Coarse

Particle Size			
Sieve	#4 to 3/4 in.	3/4 in. to 3 in.	3 in. to 12 in.
	12 in. to 36 in.		
mm	4.76 to 19.1	19.1 to 76.2	76.2 to 304.8
	304.8 to 914.4		
Material	Gravel	Fine	Coarse
	Cobble		
	Boulders		

* Division of GM and SM groups into subdivisions of d and u are for roads and airfields only. Subdivision is based on Atterberg Limits: suffix d used when L.L. is 23 or less and the P.I. is 6 or less; the suffix is used when L.L. is greater than 26.

** Borderline classifications used for soils possessing characteristics of two groups are designated by combinations of groups symbols. For example; GW-GC, well-graded gravel-sand mixture with clay binder.

Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: B-1 Sheet 1 of 1

SURFACE ELEVATION: 98.5 ft.

LATITUDE (degrees): 43.968795 | LONGITUDE (degrees): -75.932051

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
	1	BROWN, POORLY GRADED SAND WITH CLAY, ORGANICS, MOIST, LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH. SURFACE ELEVATION BASED ON ASSUMED BENCHMARK ELEVATION OF 100.0 FEET.
2.5	2	LIGHT BROWN, POORLY GRADED SAND, MOIST, LOOSE TO MEDIUM DENSE.	
5.0	3		
	4		
7.5			
	5	LIGHT BROWN, POORLY GRADED SAND, WET, LOOSE TO MEDIUM DENSE.	
10.0			
12.5			
15.0	6		
17.5	7	YELLOW-BROWN TO OLIVE-BROWN, SANDY LEAN CLAY, WET, MEDIUM STIFF.	
20.0		End of Boring @ 20 feet	

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/13/14	09:55	BCR	18 ft.		9.5 ft.

BORING STARTED	11/13/14
BORING COMPLETED	11/13/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

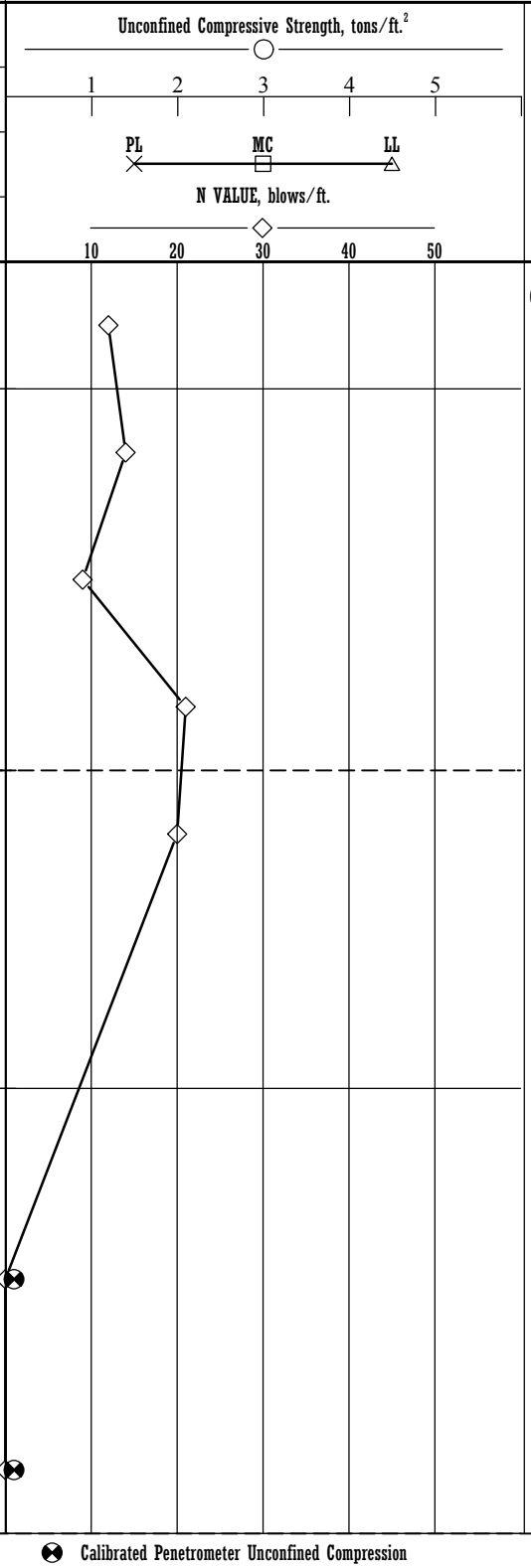
BORING NUMBER: B-2 Sheet 1 of 1

SURFACE ELEVATION: 99.9 ft.

LATITUDE (degrees): 43.968578 | LONGITUDE (degrees): -75.931779

DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)

DEPTH	SAMPLE NO.	DESCRIPTION
	1	BROWN, POORLY GRADED SAND WITH CLAY, ORGANICS, MOIST, MEDIUM DENSE.
2.5	2	YELLOW-BROWN, POORLY GRADED SAND, MOIST, LOOSE TO MEDIUM DENSE.
5.0	3	
	4	
7.5		YELLOW-BROWN, POORLY GRADED SAND, WET, MEDIUM DENSE.
	5	
10.0		
12.5		GRAY, LEAN CLAY WITH SILT, WET, VERY SOFT.
15.0	6	
17.5	7	
20.0		End of Boring @ 20 feet



REMARKS: COORDINATES OBTAINED FROM GOOGLE EARTH. SURFACE ELEVATION BASED ON ASSUMED BENCHMARK ELEVATION OF 100.0 FEET.

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/13/14	10:50	BCR	18 ft.		9.0 ft.

BORING STARTED	11/13/14
BORING COMPLETED	11/13/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: B-3 Sheet 1 of 1

SURFACE ELEVATION: 110.85 ft.

LATITUDE (degrees): 43.968403 | LONGITUDE (degrees): -75.931438

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
	1	LIGHT BROWN, LEAN CLAY WITH SAND, ORGANICS, MOIST, MEDIUM STIFF.	COORDINATES OBTAINED FROM GOOGLE EARTH. SURFACE ELEVATION BASED ON ASSUMED BENCHMARK ELEVATION OF 100.0 FEET.
2.5	2	BLACK, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
5.0	3	BROWN, WELL GRADED GRAVEL WITH SAND, MOIST, MEDIUM DENSE.	
7.5	4	BLACK, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
10.0	5	BROWN, CLAYEY WELL GRADED GRAVEL WITH SAND, WET, MEDIUM DENSE.	
12.5	6	GRAY, WELL GRADED GRAVEL WITH SAND, WET, VERY DENSE.	100
		End of Boring @ 13 feet	AUGER AND SPLIT SPOON REFUSAL AT 13 ft.
15.0			
17.5			
20.0			

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/13/14	11:40	BCR	12.5 ft.		DRY

BORING STARTED	11/13/14
BORING COMPLETED	11/13/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: B-4 Sheet 1 of 1

SURFACE ELEVATION: 98.4 ft.

LATITUDE (degrees): 43.967999 | LONGITUDE (degrees): -75.931824

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	N VALUE	REMARKS
				BROWN, SANDY ORGANIC SOIL, MOIST, SOFT.		COORDINATES OBTAINED FROM GOOGLE EARTH. SURFACE ELEVATION BASED ON ASSUMED BENCHMARK ELEVATION OF 100.0 FEET.
	1			BEDROCK.	100	
0.5				End of Boring @ 0.5 feet		AUGER AND SPLIT SPOON REFUSAL AT 0.5 ft.; OFFSET THREE SEPARATE OCCASIONS.
1.0						
1.5						
2.0						

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/13/14	13:05	BCR	0 ft.		DRY

BORING STARTED	11/13/14
BORING COMPLETED	11/13/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: B-5 Sheet 1 of 1

SURFACE ELEVATION: 98.6 ft.

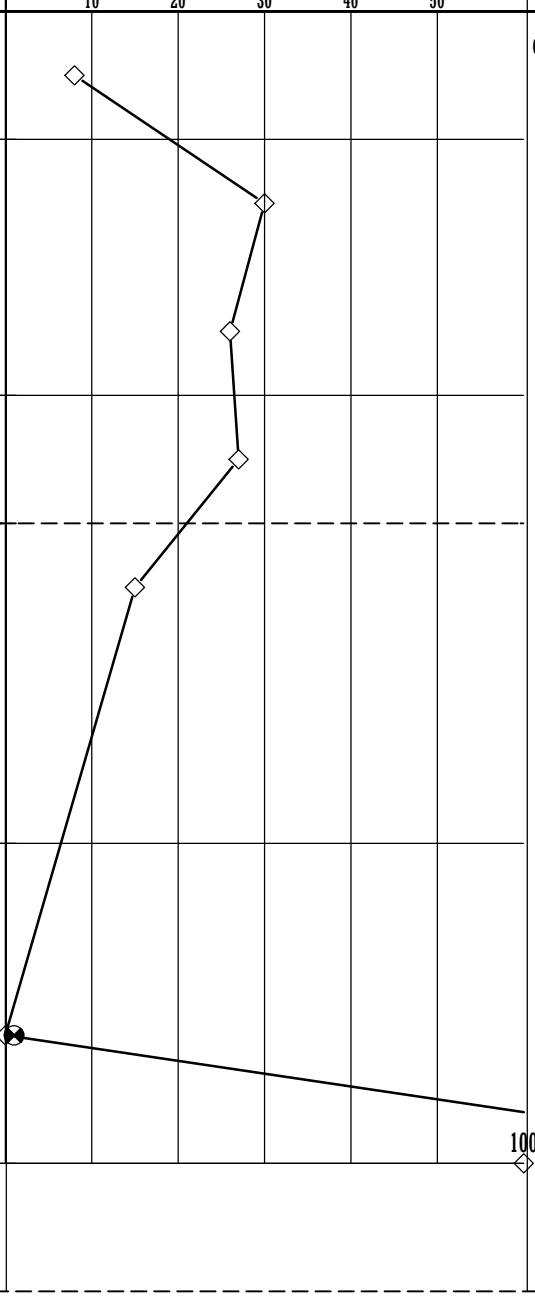
LATITUDE (degrees): 43.968465 | LONGITUDE (degrees): -75.931983

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
	1	LIGHT BROWN, POORLY GRADED SAND, MOIST, LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH. SURFACE ELEVATION BASED ON ASSUMED BENCHMARK ELEVATION OF 100.0 FEET.
2.5	2	YELLOW-BROWN, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
5.0	3		
	4	YELLOW-BROWN, POORLY GRADED SAND WITH CLAY, MOIST, MEDIUM DENSE.	
7.5	5	YELLOW-BROWN, POORLY GRADED SAND WITH CLAY, WET, MEDIUM DENSE.	
10.0			
12.5		GRAY, LEAN CLAY WITH SILT, WET, VERY SOFT.	
15.0	6		
17.5	7	End of Boring @ 18 feet	AUGER AND SPLIT SPOON REFUSAL AT 18 ft.
20.0			



Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/13/14	14:30	BCR	18 ft.		9.0 ft.

BORING STARTED	11/13/14
BORING COMPLETED	11/13/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: B-6 Sheet 1 of 1

SURFACE ELEVATION: 97.2 ft.

LATITUDE (degrees): 43.968119 | LONGITUDE (degrees): -75.933142

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
	1	BROWN, POORLY GRADED SAND, ORGANICS, MOIST, LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH. SURFACE ELEVATION BASED ON ASSUMED BENCHMARK ELEVATION OF 100.0 FEET.
2.5	2	YELLOW-BROWN, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
5.0	3		
	4		
7.5		BROWN, POORLY GRADED SAND, WET, LOOSE.	
	5		
10.0			
12.5			
15.0	6		
17.5	7		
20.0		End of Boring @ 20 feet	

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	09:15	BCR	18 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-1 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.969432

LONGITUDE (degrees): -75.932128

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
				BROWN, POORLY GRADED SAND WITH CLAY, ORGANICS, MOIST, LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
1.0	1				
2.0				LIGHT BROWN, POORLY GRADED SAND, MOIST, LOOSE.	
3.0	2				
4.0				YELLOW-BROWN, POORLY GRADED SAND, WET, LOOSE.	
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	10:00	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-2 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.969611 | LONGITUDE (degrees): -75.931988

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
				BROWN, POORLY GRADED SAND, ORGANICS, MOIST, LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
1.0	1				
2.0				YELLOW-BROWN, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
3.0	2				
4.0					
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	10:35	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-3 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.969733

LONGITUDE (degrees): -75.931713

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
				DARK BROWN, POORLY GRADED SAND WITH SILT, ORGANICS, MOIST, VERY LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
1.0	1				
2.0				YELLOW-BROWN, POORLY GRADED SAND, MOIST, LOOSE.	
3.0	2				
4.0					
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	11:20	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-4 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.969927

LONGITUDE (degrees): -75.931604

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
				DARK BROWN, POORLY GRADED SAND WITH SILT, ORGANICS, MOIST, VERY LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
1.0	1				
2.0				YELLOW-BROWN TO BROWN, POORLY GRADED SAND, MOIST, LOOSE.	
3.0	2				
4.0					
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	12:00	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-5 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.970096

LONGITUDE (degrees): -75.931606

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
				DARK BROWN, POORLY GRADED SAND WITH SILT, ORGANICS, MOIST, VERY LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
1.0	1				
2.0				BROWN, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
3.0	2				
4.0				YELLOW-BROWN, POORLY GRADED SAND, MOIST, LOOSE.	
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	13:15	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

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Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-6 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.970250 | LONGITUDE (degrees): -75.931623

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
				DARK BROWN, POORLY GRADED SAND WITH SILT, ORGANICS, MOIST, VERY LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
1.0	1				
2.0				YELLOW-BROWN, POORLY GRADED SAND, MOIST, LOOSE.	
3.0	2				
4.0					
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	13:45	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

LOG A GNGN03 - LOG A GNGN03.GDT - 12/15/14 09:44 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2014-162 RENZI FOOD SERVICE.GPJ

Kenney Geotechnical Services

Job No. 2014-162

CLIENT: FOOD TECH, INC.	PROJECT: RENZI FOOD SERVICE
ENGINEER: FOOD TECH, INC.	LOCATION: 901 RAIL DRIVE WATERTOWN, NY

BORING NUMBER: A-7 Sheet 1 of 1

SURFACE ELEVATION:

LATITUDE (degrees): 43.967983

LONGITUDE (degrees): -75.933306

Unconfined Compressive Strength, tons/ft.^{2}: 1 2 3 4 5

PL MC LL

N VALUE, blows/ft.: 10 20 30 40 50

DEPTH	SAMPLE NO.	SAMPLER TYPE / RECOVERY	GRAPHIC LOG	DESCRIPTION OF MATERIALS (LABORATORY CLASSIFICATION)	REMARKS
1.0	1			BROWN, POORLY GRADED SAND WITH SILT, ORGANICS, MOIST, LOOSE.	COORDINATES OBTAINED FROM GOOGLE EARTH.
2.0				YELLOW-BROWN TO BROWN, POORLY GRADED SAND, MOIST, MEDIUM DENSE.	
3.0	2				
4.0					
5.0	3				
6.0				End of Boring @ 6 feet	
7.0					
8.0					
9.0					
10.0					

Calibrated Penetrometer Unconfined Compression

WATER LEVEL MEASUREMENTS

DATE	TIME	SAMPLED	CASING	CAVE-IN	WATER
11/14/14	14:25	BCR	4 ft.		DRY

BORING STARTED	11/14/14
BORING COMPLETED	11/14/14
DRILLER: KENNEY GEOTECH	RIG: 7822-DT
DRAWN BY: D. DUHAMEL	APPROVED

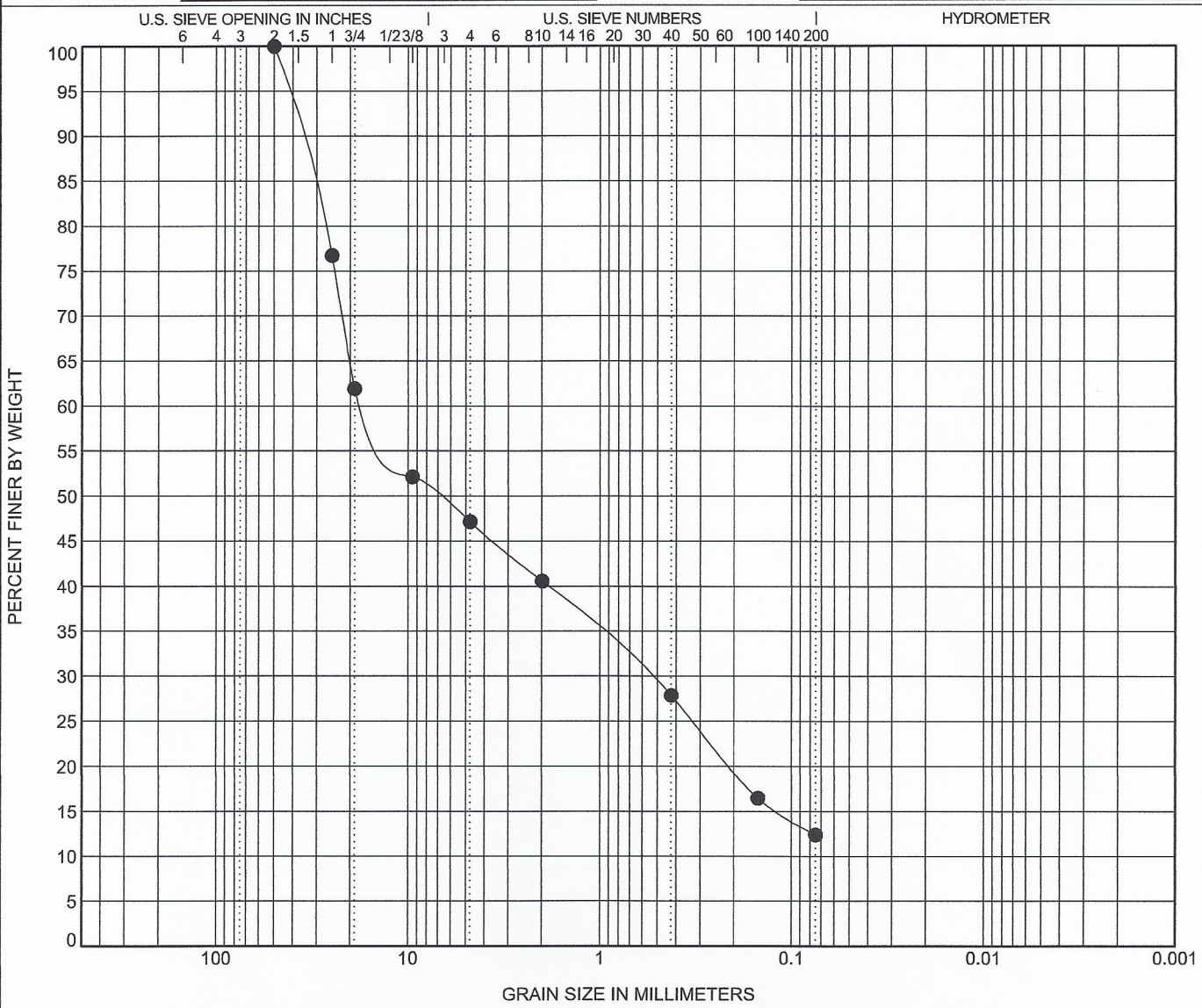
LOG A GNGN03 - LOG A GNGN03.GDT - 12/15/14 09:44 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\2014-162 RENZI FOOD SERVICE.GPJ

Kenney Geotechnical Services
7246 State Fair Blvd
Baldwinsville, N.Y. 13209
Telephone: 315-638-2706
Fax: 315-638-1544

GRAIN SIZE DISTRIBUTION

CLIENT RENZI FOOD SERVICES **PROJECT NAME** RENZI FOOD SERVICES

PROJECT NUMBER 2014-162 **PROJECT LOCATION** 901 RAIL DRIVE WATERTOWN NY



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification		Classification	LL	PL	PI	Cc	Cu
● B-3	5.0	Well Graded Gravel with Silt and Sand (GW-GM)				0.37	331.84

Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-3	5.0	50	16.565	0.55		52.9	34.7	12.4	

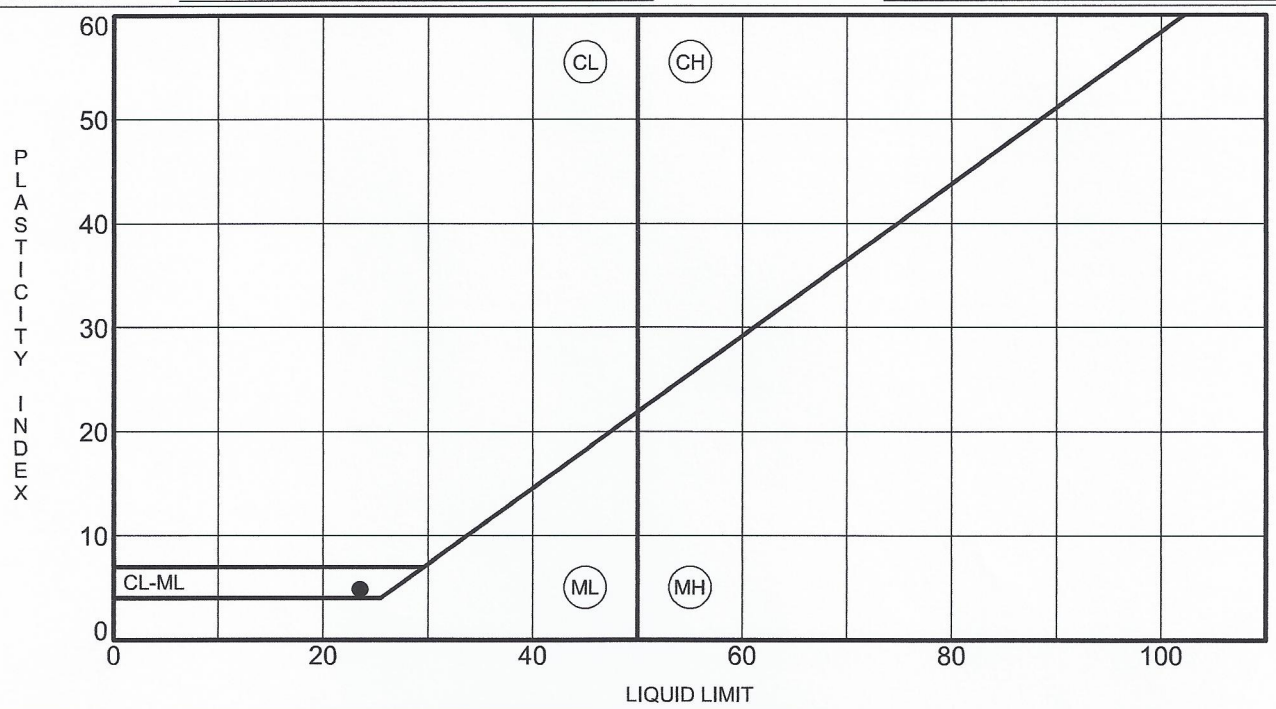
GRAIN SIZE - GINT STD US LAB.GDT - 11/25/14 17:02 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\RENZI FOOD SERVICES LAB TESTING.GPJ

Kenney Geotechnical Services
7246 State Fair Blvd
Baldwinsville, N.Y. 13209
Telephone: 315-638-2706
Fax: 315-638-1544

ATTERBERG LIMITS' RESULTS

CLIENT RENZI FOOD SERVICES **PROJECT NAME** RENZI FOOD SERVICES

PROJECT NUMBER 2014-162 **PROJECT LOCATION** 901 RAIL DRIVE WATERTOWN NY



	Specimen Identification		LL	PL	PI	Fines	Classification
●	B-2	16.0	23	19	4		Lean Clay with Silt (CL-ML)

ATTERBERG LIMITS - GINT STD US LAB.GDT - 11/25/14 17:09 - C:\PROGRAM FILES (X86)\GINT\PROJECTS\RENZI FOOD SERVICES LAB TESTING.GPJ

USGS Design Maps Summary Report

User–Specified Input

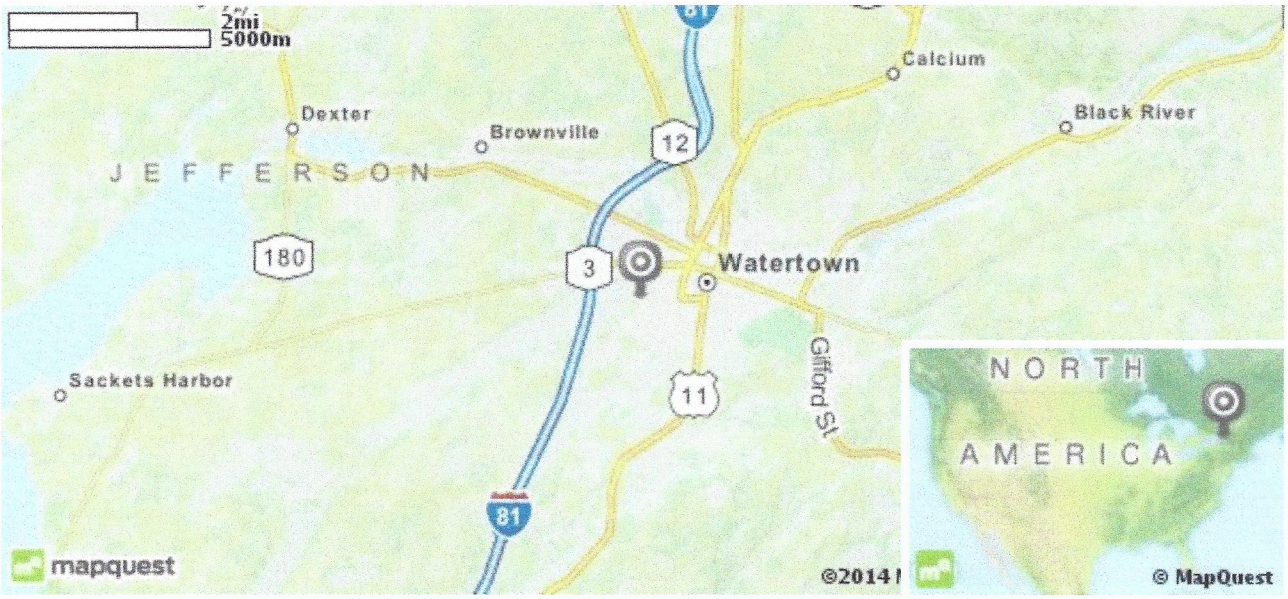
Report Title Renzi Food Services
Fri December 5, 2014 16:09:35 UTC

Building Code Reference Document 2012 International Building Code
(which utilizes USGS hazard data available in 2008)

Site Coordinates 43.96847°N, 75.93198°W

Site Soil Classification Site Class D – "Stiff Soil"

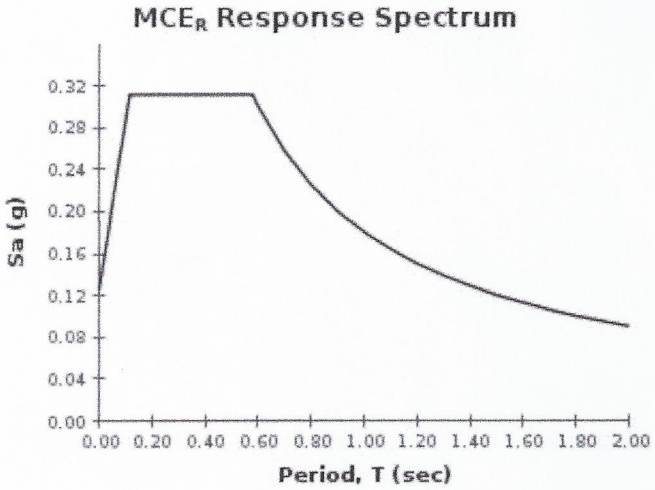
Risk Category I/II/III

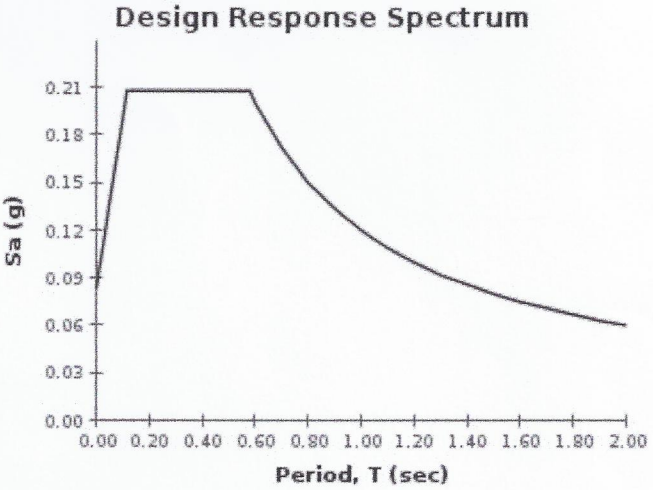


USGS–Provided Output

S_S =	0.195 g	S_{MS} =	0.311 g	S_{DS} =	0.208 g
S_1 =	0.075 g	S_{M1} =	0.180 g	S_{D1} =	0.120 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the

USGS Design Maps Summary Report

User-Specified Input

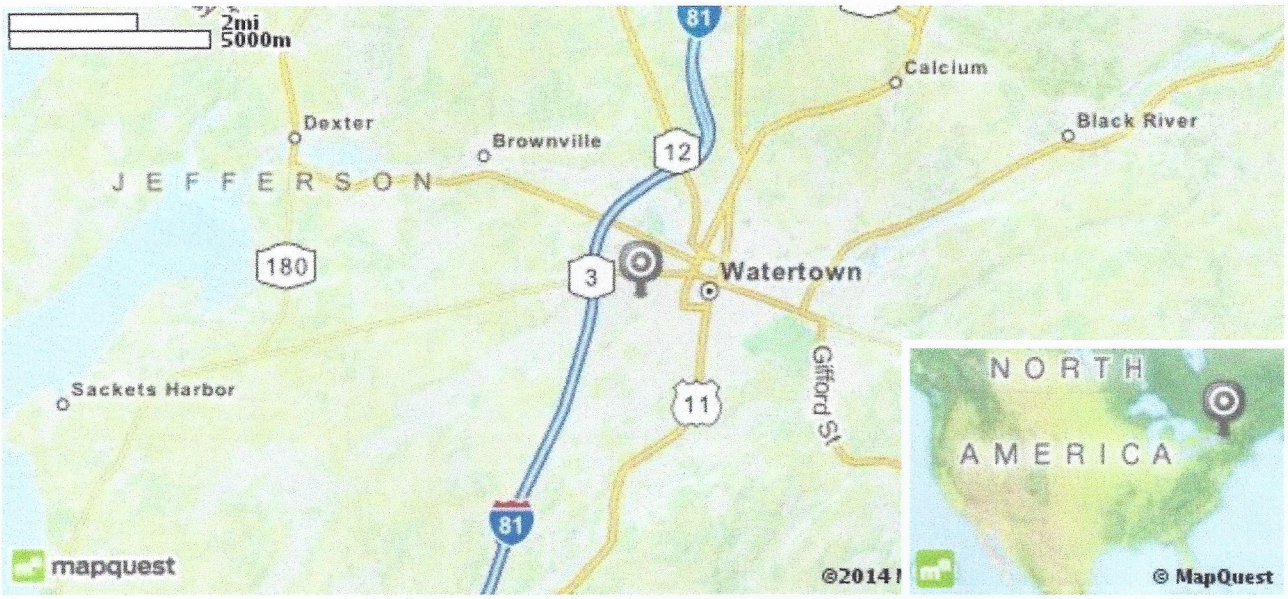
Report Title Renzi Food Service
Thu December 11, 2014 17:19:52 UTC

Building Code Reference Document 2012 International Building Code
(which utilizes USGS hazard data available in 2008)

Site Coordinates 43.97045°N, 75.9328°W

Site Soil Classification Site Class D – "Stiff Soil"

Risk Category I/II/III

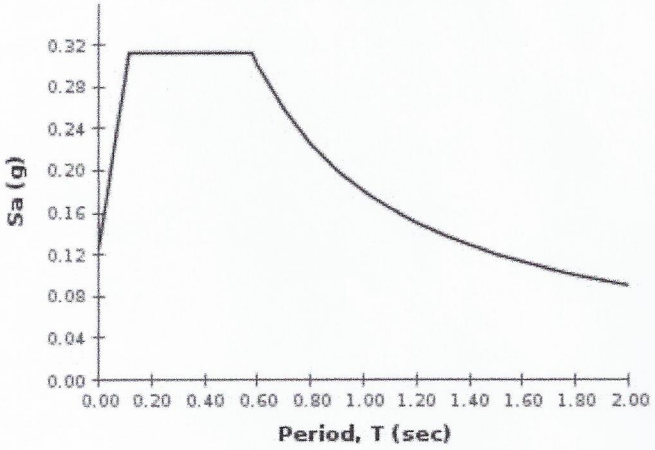


USGS-Provided Output

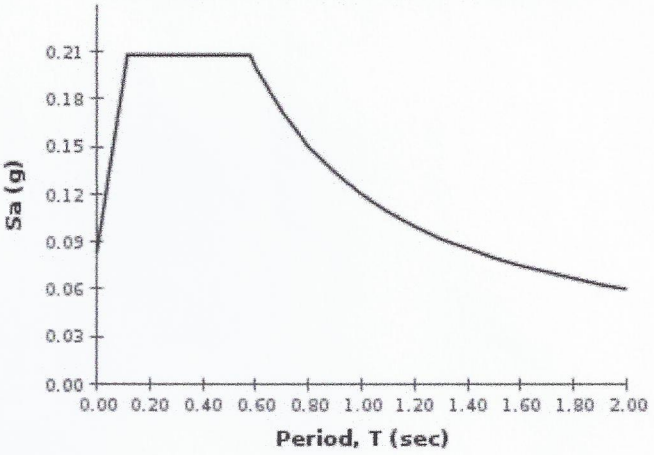
S_S =	0.195 g	S_{MS} =	0.312 g	S_{DS} =	0.208 g
S_1 =	0.075 g	S_{M1} =	0.180 g	S_{D1} =	0.120 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.

MCE_R Response Spectrum



Design Response Spectrum



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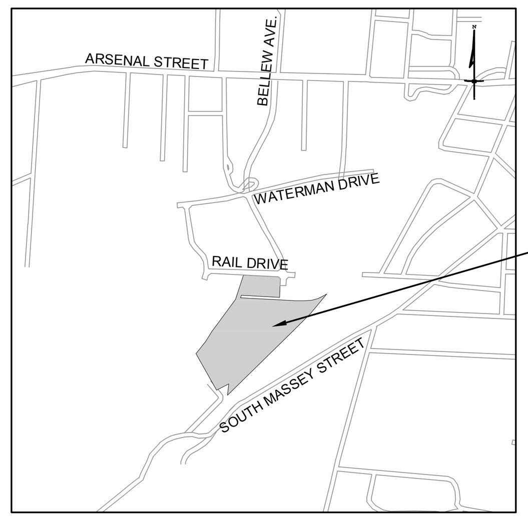
Appendix D –Site Plans



LOCATION MAP
NOT TO SCALE

STANDARD NOTES:

1. Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law.

2. Only boundary survey maps with the surveyor's embossed seal or red ink seal are genuine true and correct copies of the surveyor's original work and opinion.

3. Certifications on this boundary survey map signify that the map was prepared in accordance with the current existing Code of Practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors, Inc. The certification is limited to persons for whom the boundary survey map is prepared, to the title company, to the governmental agency, and to the lending institution listed on this boundary survey map.

4. The certifications hereon are not transferable.

5. The location of underground improvements or encroachments are not always known and often must be estimated. If any, underground improvements or encroachments are not covered by this certificate.

GENERAL NOTES:

1. The subject parcel is Jefferson County Tax Parcel No. 9-43-101.008.

2. The subject parcel is a portion of City of Watertown City Center Industrial Park. Zoning is per the City Center Industrial Park Declaration of Covenants and Restrictions.

Article 2 - Site Requirements

Minimum Setback Requirements:
Front Yard Setback = 35 feet
Rear Yard Setbacks = 20 feet
Side Yard Setback = 20 feet

Minimum Lot Dimensions:
Width = 150 feet
Area = 44,000 sq. feet

Maximum Building Height = 40 feet
Maximum Lot Coverage by Buildings = 35%

3. All adjoiners are per the City of Watertown Assessment Office.

4. Adjoining property lines should be considered approximate and are shown for reference only.

5. The subject parcel is located in Flood zone X (unshaded), area above the 500-year flood level, per FEMA Flood Insurance Rate Map number 3603540001E, revised January 17, 1990.

6. The underground utilities and features shown hereon have been located from above ground visible features and other available records and therefore their location should be considered approximate only. Other underground utilities and features may exist, either in service or abandoned, that are not indicated on this survey. Dig Safely. New York. (UFPO) should be contacted prior to performing any excavation activities.

7. The field survey was performed on July 26, 2011- July 29, 2011, August 01, 2011, August 05, 2011, August 06, 2012, November 05, 2014, November 07, 2014 and November 20, 2014.

8. Rail Drive and Bellew Avenue South are public roads with a reputed width of 66 feet.

9. The Horizontal Datum for this survey is based on NYS Central Zone NAD83(96) (North American Datum 1983/1996).

10. The Vertical Datum for this survey is based on the North Geodetic Vertical Datum of 1929 (NGVD29).

MAP REFERENCE:

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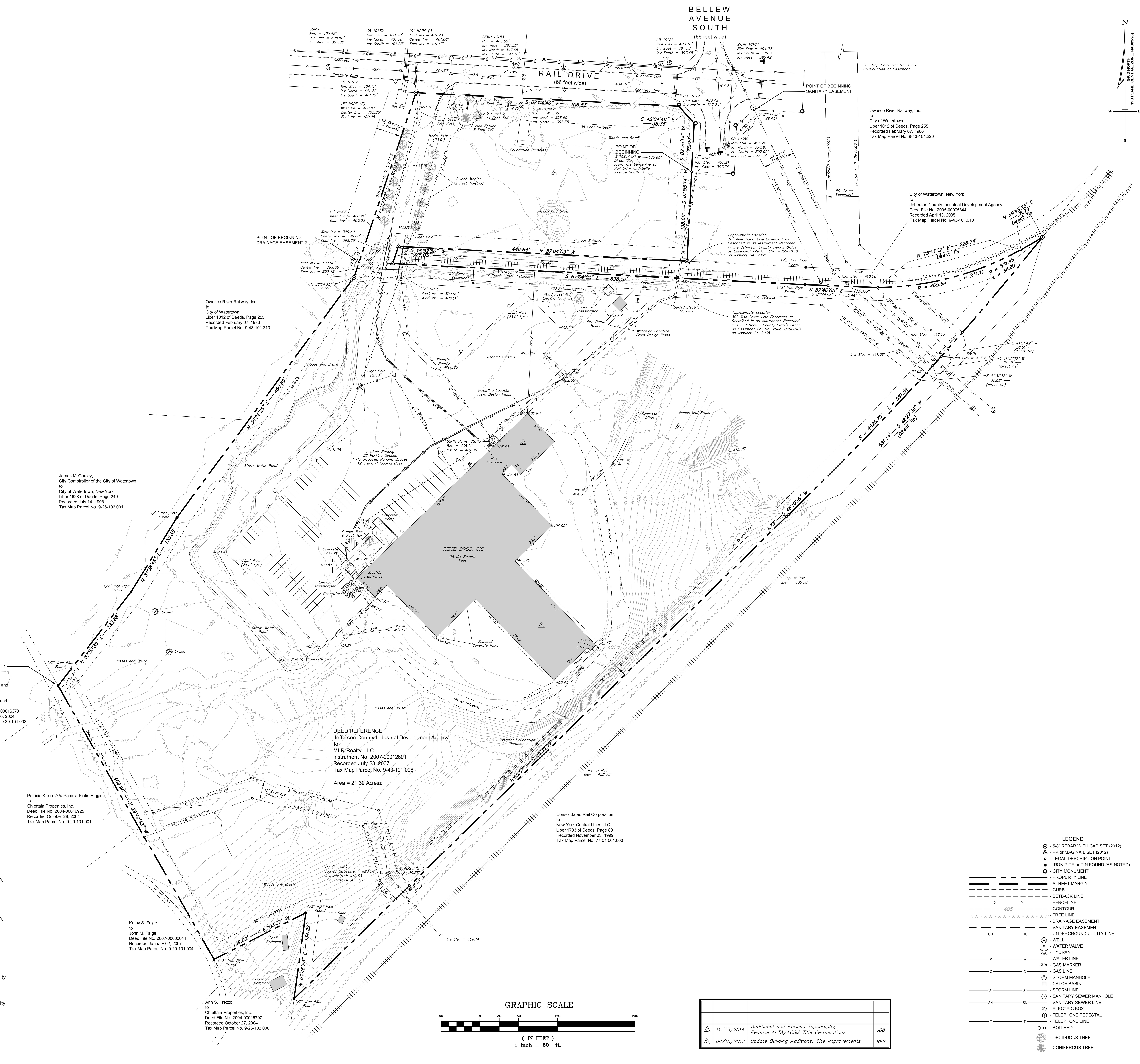

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

2	11/25/2014	Additional and Revised Topography, Remove ALTA/ACSM Title Certifications	JDB
1	08/15/2012	Update Building Additions, Site Improvements	RES

LEGEND

- 5/8" REBAR WITH CAP SET (2012)
- PK or MAG NAIL SET (2012)
- LEGAL DESCRIPTION POINT
- IRON PIPE or PIN FOUND (AS NOTED)
- CITY MONUMENT
- PROPERTY LINE
- STREET MARGIN
- CURB
- SETBACK LINE
- FENCELINE
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AUBERTINE and CURRIER
ARCHITECTS, ENGINEERS & LAND SURVEYORS, PLLC

522 Bradley Street
Watertown, New York 13601

aubertinecurrier.com

Phone: (315)782-2005
Fax: (315)782-1472

The above Architect, Engineer or Land Surveyor states that to the best of his or her knowledge, information and belief, the plans and specifications are in accordance with applicable requirements of New York State. It is a violation of New York State Law for any person, unless acting under the direct supervision of a Registered Architect, Licensed Professional Engineer or Licensed Land Surveyor to alter this document in any way. If altered, such licensee shall affix his or her seal and the notification "altered by" followed by his or signature, date and a specific description of the alteration.
© COPYRIGHT 2014
AUBERTINE and CURRIER ARCHITECTS, ENGINEERS & LAND SURVEYORS, PLLC

TOPOGRAPHIC SURVEY of the LANDS of MLR REALTY, LLC

901 RAIL DRIVE
CITY of WATERTOWN
JEFFERSON COUNTY, NEW YORK

PROJECT NO: 2011-080.002
SCALE: 1" = 60'
DRAWN BY: RES, JDB
CHECKED BY: JJJ, RES
ISSUE DATES:
August 15, 2011
August 17, 2012
November 25, 2014

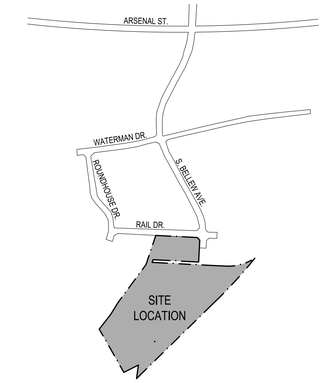
2011-080.002 Survey.dwg

VF-103

RENZI FOOD SERVICE

Facility Expansion
901 Rail Drive
Watertown, NY 13601

OVERALL SITE PLAN
SCALE: 1" = 100'
0 100' 200'



LOCATION MAP

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UTILITY CONTACTS

ELECTRIC COMPANY:	NATIONAL GRID 300 ERIE BLVD. WEST SYRACUSE, NY 13202 (800) 642-4272
GAS COMPANY:	ENERGETIX 50 METHODIST HILL DR. (SUITE 1500) ROCHESTER, NY 14623 (800) 544-0182
WATER:	CITY OF WATERTOWN 245 WASHINGTON ST. WATERTOWN, NY 13601 (315) 785-7757
SANITARY SEWER:	SANITARY SEWER: CITY OF WATERTOWN 245 WASHINGTON ST. WATERTOWN, NY 13601 (315) 785-7757
STORM SEWER/ DRAINAGE:	CITY OF WATERTOWN ENGINEERING DEPARTMENT 245 WASHINGTON ST. WATERTOWN, NY 13601 (315) 785-7740
FIRE DISTRICT:	CITY OF WATERTOWN FIRE DEPARTMENT 224 S. MASSEY ST. WATERTOWN, NY 13601 (315) 785-7800

DEVELOPMENT REFERENCE

OWNER / DEVELOPER APPLICANT:	MLR REALTY, LLC 901 RAIL DRIVE WATERTOWN, NY 1360
ARCHITECT:	FOOD TECH 300 LEDGEWOOD PL, STE 304 ROCKLAND, MA 02370 PH: 781-261-9700
CIVIL ENGINEER:	PARADIGM DESIGN, INC. 550 3 MILE ROAD NW, SUITE B GRAND RAPIDS, MI 49544 PH: 616-785-5656
SURVEYOR:	AUBERTINE & CURRIER, PLLC 522 BRADLEY STREET WATERTOWN, NY 13601 PH: 315-782-2005

SITE DATA:
SITE: 21.39 ACRES
ZONED: LIGHT INDUSTRIAL
USE: FOOD DISTRIBUTION

EXISTING BUILDING:	58,491 SF
PROPOSED EXPANSION:	40,391 SF
TOTAL BUILDING:	98,882 SF

SHEET INDEX

C1.0	COVER SHEET
C1.1	EXISTING CONDITIONS AND ON-SITE REMOVALS
C2.0	HORIZONTAL CONTROL PLAN
C2.1	FIRE ACCESS PLAN
C3.0	GRADING AND DRAINAGE PLAN
C5.0	SITE DETAILS

REV	DATE	DESCRIPTION
1	03-23-15	FOR SITE PLAN REVIEW

BILL M. HADLOCK, P.E.
NY - REGISTRATION #086090
EXP. DATE 12/31/2016

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

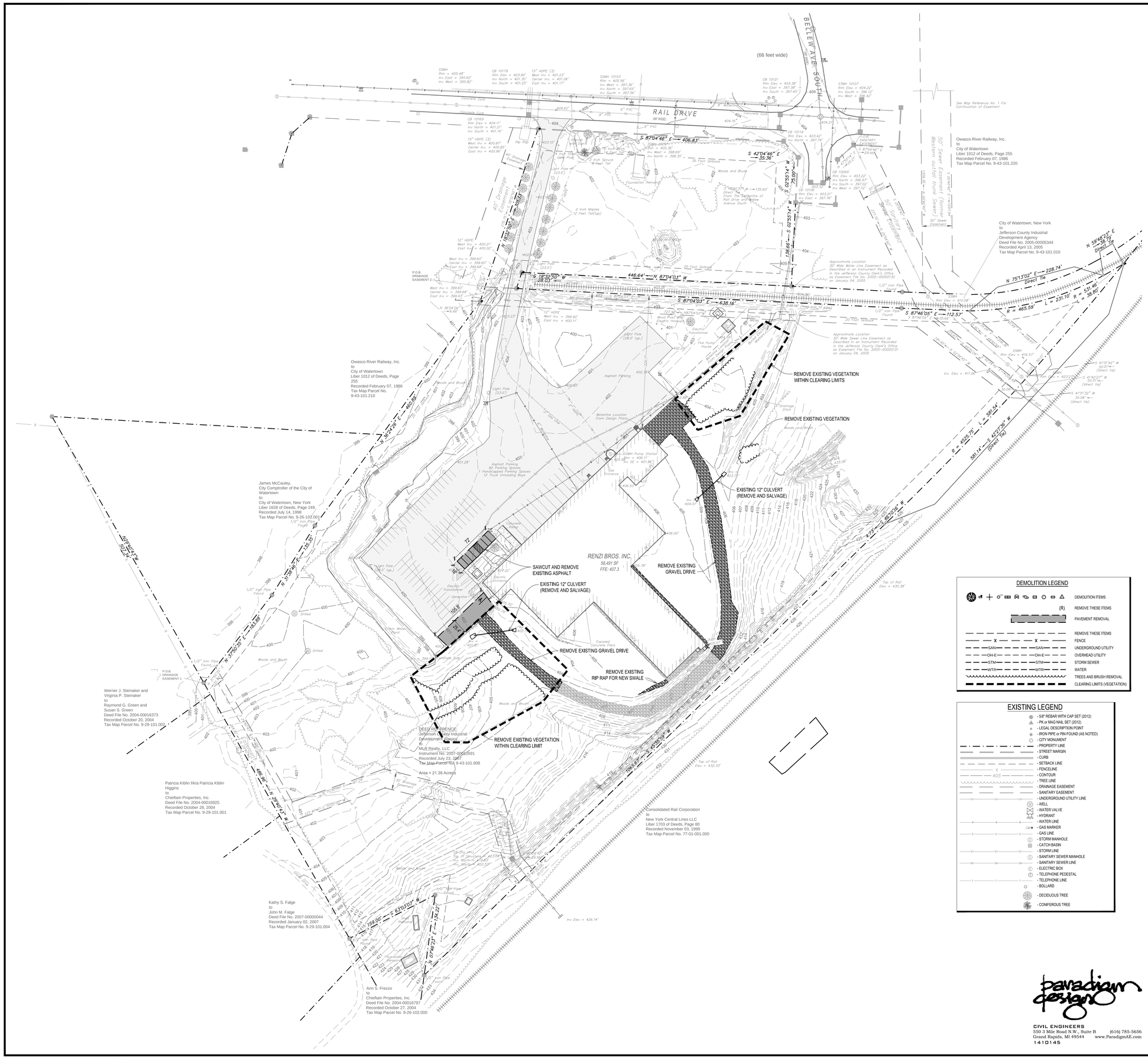
TITLE SHEET

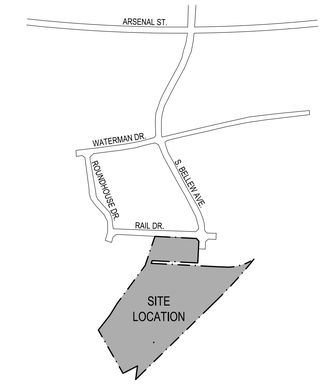
Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
foodtech.com
Tel: (781) 261-9700

DATE : 00-00-00
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY : ---

DRAWING NO.
C1.0

101430





LOCATION MAP

DEMOLITION LEGEND

- DEMOLITION ITEMS
- (R) REMOVE THESE ITEMS
- PAVEMENT REMOVAL
- REMOVE THESE ITEMS
- FENCE
- UNDERGROUND UTILITY
- OVERHEAD UTILITY
- STORM SEWER
- WATER
- TREES AND BRUSH REMOVAL
- CLEARING LIMITS (VEGETATION)

EXISTING LEGEND

- 5/8" REBAR WITH CAP SET (2012)
- PK or MAG NAIL SET (2012)
- LEGAL DESCRIPTION POINT
- IRON PIPE or PIN FOUND (AS NOTED)
- CITY MONUMENT
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- SANITARY SEWER LINE
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- CONIFEROUS TREE

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CIVIL ENGINEERS
550 3 Mile Road N.W., Suite B (616) 785-5656
Grand Rapids, MI 49544 www.ParadigmAE.com
141O145

Know what's below. Call before you dig.

N

0 60' 120'

NOTE: ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS FROM FIELD DATA AND AVAILABLE INFORMATION. THEY SHOULD NOT BE INTERPRETED AS EXACT LOCATIONS NOR SHOULD THEY BE ASSUMED TO BE THE ONLY UTILITIES IN THE AREA.

REV	DATE	DESCRIPTION
1	03-23-15	FOR SITE PLAN REVIEW

BILL M. HADLOCK, P.E.
NY - REGISTRATION #086090
EXP. DATE 12/31/2016

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

EXISTING CONDITIONS

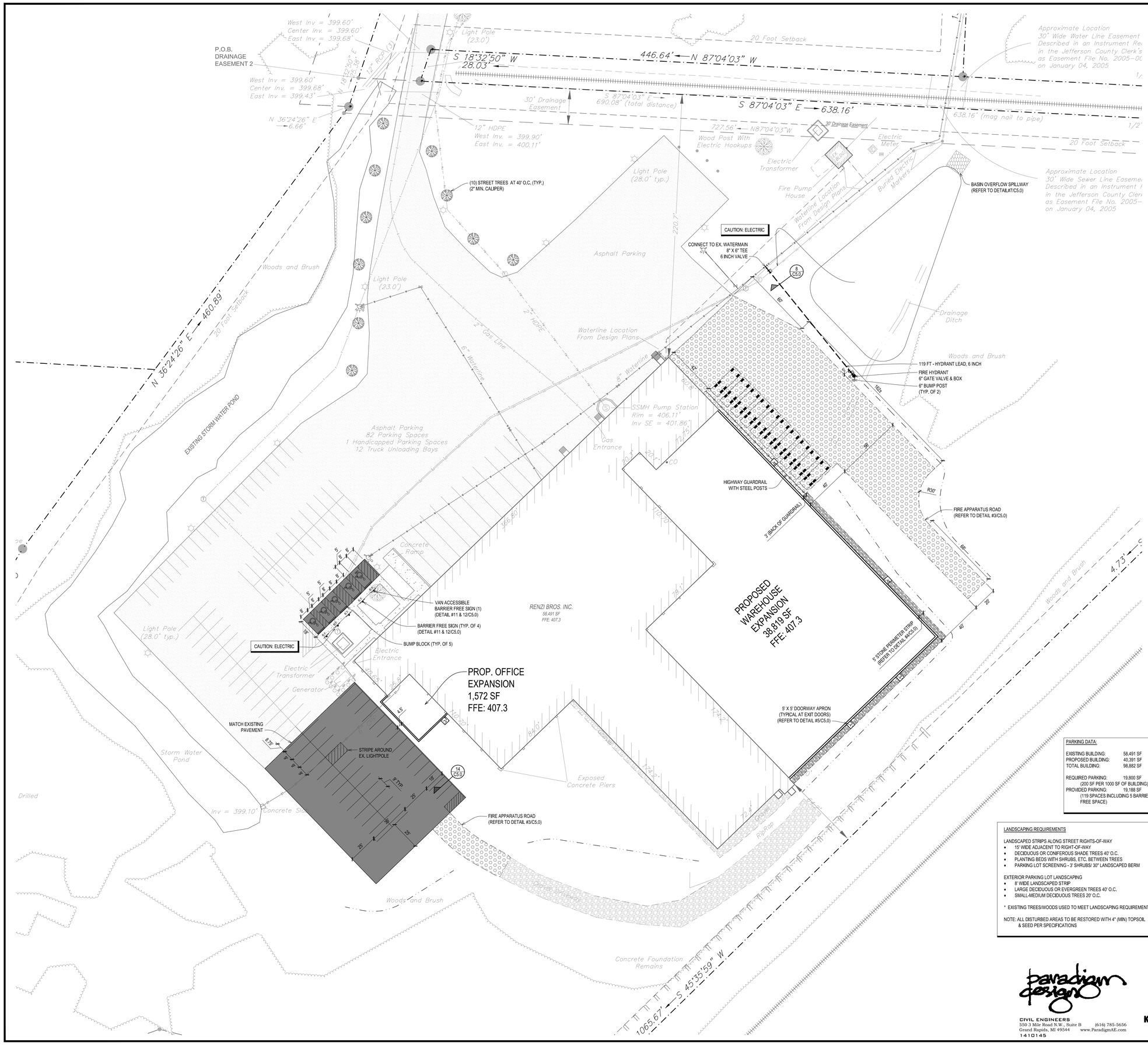
Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
Tel: (781) 261-9700
foodtech.com

DATE: 00-00-00
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY: ---

DRAWING NO.

C1.1

101430



PROPOSED LEGEND

SIGN	SIGN WITH BASE	SOIL BORING
MANHOLE	CATCH BASIN	CLEAN OUT
HYDRANT	WATER VALVE	WATER SHUT OFF
FLARED END SECTION	PIPE PLUG	PIPE CAP
90° BEND	45° BEND	22.5° BEND
11.25° BEND	WYE	TEE
CROSS	LIGHT POLE	LIGHT POLE

- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- BITUMINOUS PAVEMENT
- STONE PERIMETER STRIP
- GRAVEL PARKING/FIRE ACCESS
- EROSION CONTROL BLANKET
- OVERFLOW SPILLWAY
- 6" CURB
- BITUMINOUS VALLEY GUTTER
- DITCH
- 680 CONTOUR LINE
- STORM SEWER
- G NATURAL GAS
- SF SILT FENCE
- GRADING LIMITS

PARKING DATA:

EXISTING BUILDING:	58,491 SF
PROPOSED BUILDING:	40,391 SF
TOTAL BUILDING:	98,882 SF
REQUIRED PARKING:	19,800 SF
(200 SF PER 1000 SF OF BUILDING)	
PROVIDED PARKING:	19,188 SF
(119 SPACES INCLUDING 5 BARRIER FREE SPACE)	

LANDSCAPING REQUIREMENTS

LANDSCAPED STRIPS ALONG STREET RIGHTS-OF-WAY
- 15' WIDE ADJACENT TO RIGHT-OF-WAY
- DECIDUOUS OR CONIFEROUS SHADE TREES 40' O.C.
- PLANTING BEDS WITH SHRUBS, ETC. BETWEEN TREES
- PARKING LOT SCREENING - 3' SHRUBS/ 30" LANDSCAPED BERM

EXTERIOR PARKING LOT LANDSCAPING
- 6' WIDE LANDSCAPED STRIP
- LARGE DECIDUOUS OR EVERGREEN TREES 40' O.C.
- SMALL-MEDIUM DECIDUOUS TREES 20' O.C.

* EXISTING TREES/WOODS USED TO MEET LANDSCAPING REQUIREMENTS

NOTE: ALL DISTURBED AREAS TO BE RESTORED WITH 4" (MIN) TOPSOIL & SEED PER SPECIFICATIONS

EXISTING LEGEND

- 5/8" REBAR WITH CAP SET (2012)
- PK or MAG NAIL SET (2012)
- LEGAL DESCRIPTION POINT
- IRON PIPE or PIN FOUND (AS NOTED)
- CITY MONUMENT
- PROPERTY LINE
- STREET MARGIN
- CURB
- SETBACK LINE
- FENCELINE
- CONTOUR
- TREE LINE
- DRAINAGE EASEMENT
- SANITARY EASEMENT
- UNDERGROUND UTILITY LINE
- WELL
- WATER VALVE
- HYDRANT
- WATER LINE
- GAS MARKER
- GAS LINE
- STORM MANHOLE
- CATCH BASIN
- STORM LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER LINE
- ELECTRIC BOX
- TELEPHONE PEDESTAL
- TELEPHONE LINE
- BOLLARD
- DECIDUOUS TREE
- CONIFEROUS TREE

N

0 30' 60'

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CIVIL ENGINEERS
550 3 Mile Road N.W., Suite B (616) 785-5656
Grand Rapids, MI 49544 www.ParadigmAE.com
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NOTE: ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS FROM FIELD DATA AND AVAILABLE INFORMATION. THEY SHOULD NOT BE INTERPRETED AS EXACT LOCATIONS NOR SHOULD THEY BE ASSUMED TO BE THE ONLY UTILITIES IN THE AREA.

REV	DATE	DESCRIPTION
1	03-23-15	FOR SITE PLAN REVIEW

BILL M. HADLOCK, P.E.
NY - REGISTRATION #086090
EXP. DATE 12/31/2016

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

HORIZONTAL CONTROL AND UTILITY PLAN

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
foodtech.com
Tel: (781) 261-9700

DATE : 00-00-00
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY : ---

DRAWING NO.

C2.0

101430

HYDRANT FLOW DATA:

SOUTHEAST CORNER OF BELEW AND RAIL DRIVE (NOT SHOWN)
2012 TEST BY CITY:
STATIC: 100 PSI
FLOW: 3,996 GPM @ 20 PSI RESIDUAL

P.O.B. DRAINAGE EASEMENT 2

West Inv = 399.60'
Center Inv. = 399.60'
East Inv = 399.68'

West Inv = 399.60'
Center Inv. = 399.68'
East Inv = 399.43'

N 36°24'26" E 6.66'

S 18°32'50" W 28.03'

446.64' N 87°04'03" W

S 87°04'03" E 690.08' (total distance)

S 87°04'03" E 638.16'

727.56' N87°04'03"W

638.16' (mag nail to pipe)

51.92' (point to mag nail)

12" HDPE
West Inv. = 399.90'
East Inv. = 400.11'

30' Drainage Easement

20 Foot Setback

Light Pole (23.0')

Wood Post With Electric Hookups

Electric Transformer

Electric Meter

Fire Pump House

Buried Electric Markers

Approximate Location 30' Wide Water Line Easement Described in an Instrument Re in the Jefferson County Clerk's as Easement File No. 2005-0 on January 04, 2005

Approximate Location 30' Wide Sewer Line Easeme Described in an Instrument in the Jefferson County Cler as Easement File No. 2005- on January 04, 2005

Light Pole (28.0' typ.)

Asphalt Parking

Woods and Brush

Light Pole (23.0')

EXISTING HYDRANT

N 36°24'26" E 460.89'

20 Foot Setback

EXISTING STORM WATER POND

2" HDPE

2" Gas Line

6" Waterline

Waterline Location From Design Plans

CONNECT TO EX. WATERMAIN
8" X 6" TEE
6 INCH VALVE

PROPOSED STORM WATER BASIN
(SEE SHEET 3.0 FOR POND DATA)

Drainage Ditch

Woods and Brush

119 FT - HYDRANT LEAD, 6 INCH

FIRE HYDRANT
6" GATE VALVE & BOX

SSMH Pump Station
Rim = 406.11'
Inv SE = 401.86'

Gas Entrance

Asphalt Parking
82 Parking Spaces
1 Handicapped Parking Spaces
12 Truck Unloading Bays

EXISTING HYDRANT

Concrete Ramp

RENZI BROS. INC.
58,491 SF
FFE: 407.3

PROPOSED WAREHOUSE EXPANSION
38,819 SF
FFE: 407.3

Light Pole (28.0' typ.)

Electric Entrance

Electric Transformer

Generator

PROP. OFFICE EXPANSION
1,572 SF
FFE: 407.3

Storm Water Pond

Exposed Concrete Piers

Drilled

Inv = 399.10'

Concrete Slab

Woods and Brush

Concrete Foundation Remains

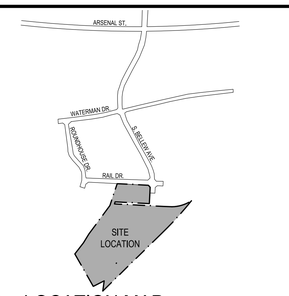
1065.67' S 45°35'59" W

112' (ACCESS ROAD TO BUILDING) (MAX PERMITTED = 150')

GRAVEL FIRE ACCESS ROAD

Woods and Brush

4.73'



LOCATION MAP

PROPOSED LEGEND

SIGN	SIGN WITH BASE	SOIL BORING
MANHOLE	CATCH BASIN	CLEAN OUT
HYDRANT	WATER VALVE	WATER SHUT OFF
FLARED END SECTION	PIPE PLUG	PIPE CAP
90° BEND	45° BEND	22.5° BEND
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- W WATER LINE
- GM GAS MARKER
- G GAS LINE
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- CATCH BASIN
- ST STORM LINE
- SS SANITARY SEWER MANHOLE
- SS SANITARY SEWER LINE
- E ELECTRIC BOX
- T TELEPHONE PEDESTAL
- T TELEPHONE LINE
- BOLLARD
- DECIDUOUS TREE
- CONIFEROUS TREE

FIRE FLOW SUMMARY:

- APPLICABLE CODE REFERENCE: 2010 FIRE CODE - STATE OF NY
- NUMBER OF STORIES: 1
- TYPE OF CONSTRUCTION: IIIB
- BUILDING FIRE AREA: 98,518 SF (LARGEST AREA BETWEEN 4 HR. FIRE SEPARATION WALLS)
- FULL AUTOMATIC SPRINKLER SYSTEM: YES / NO
- REQUIRED FIRE FLOW: 1,625 GPM @ 20 PSI *(ABOVE FIRE FLOW REPRESENTS 75% REDUCTION FOR AUTOMATIC SPRINKLER SYSTEM)

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N

0 30' 60'

REV	DATE	DESCRIPTION
1	03-23-15	FOR SIT EPLAN REVIEW

BILL M. HADLOCK, P.E.
NY - REGISTRATION #086090
EXP. DATE 12/31/2016

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

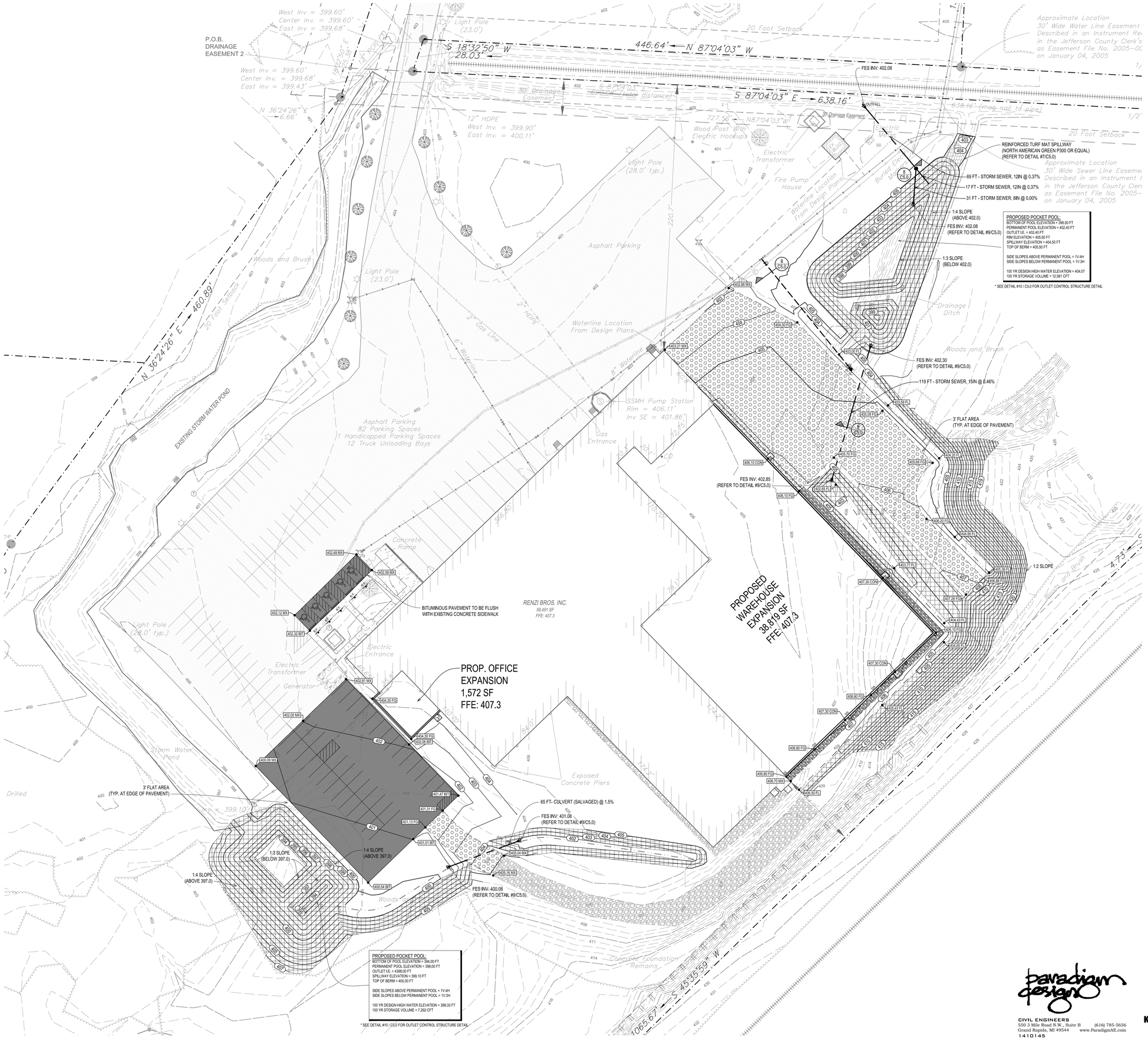
FIRE ACCESS PLAN

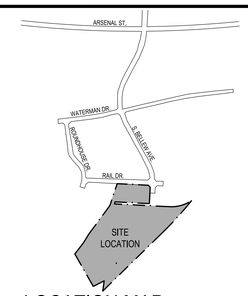
Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
Tel: (781) 261-9700
foodtech.com

DATE: 00-00-00
DESIGNED BY:
DRAWN BY: ---
CHECKED BY: ---

DRAWING NO.
C2.1

101430





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GRADING LIMITS

#	KEYNOTE ANNOTATION	# P	PERMANENT SOIL EROSION & SEDIMENTATION CONTROL MEASURE
	PIPE FLOW ARROW	# T	TEMPORARY SOIL EROSION & SEDIMENTATION CONTROL MEASURE
	SURFACE FLOW ARROW	675.00 FG	PROPOSED SPOT GRADE
BIT	BITUMINOUS GRADE	CON	CONCRETE GRADE
FW	FRONT OF WALK GRADE	BW	BACK OF WALK GRADE
FG	FINISHED GROUND	TC	TOP OF CURB GRADE
RIM	STRUCTURE RIM ELEVATION	FL	FLOW LINE GRADE
MX	MATCH EXISTING ELEVATION	TYP	TYPICAL MEASURE

EXISTING LEGEND

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NY - REGISTRATION F086090
EXP. DATE 12/31/2016

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

GRADING PLAN

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
foodtech.com
Tel: (781) 261-9700

DATE: 00-00-00
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY: ---

DRAWING NO.
C3.0

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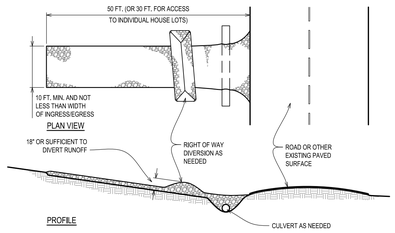


1. STONE SIZE - TWO INCH STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FT. (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30 FT. MINIMUM LENGTH APPLIES).

3. THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6 IN. THICK.

4. WIDTH - THE ENTRANCE SHALL BE AT LEAST 10 FT. WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

5. BEDDING - A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LB. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LB.

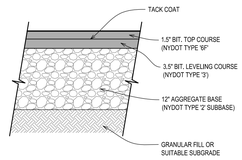
6. CULVERT - A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.

7. WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.

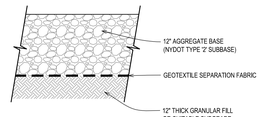
8. MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.

9. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

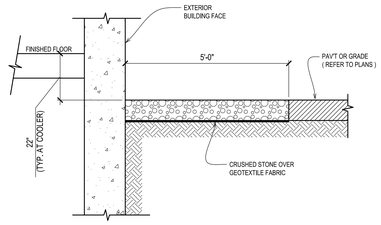
1 SPECIFICATIONS FOR CONSTRUCTION ENTRANCE
NOT TO SCALE



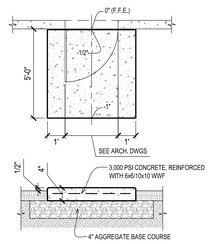
2 BITUMINOUS PAVEMENT SECTION
NOT TO SCALE



3 FIRE APPARATUS ROAD
NOT TO SCALE

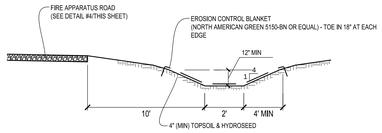


4 BUILDING PERIMETER STRIP
NOT TO SCALE

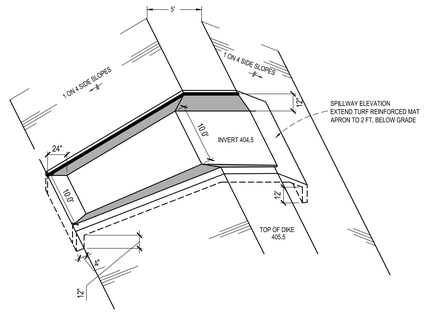


GENERAL NOTES:
1. PROVIDE 1/4" TOOLED RADIUS EDGES WITH 3" EDGING TOOL

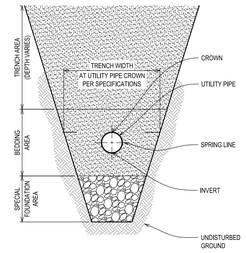
5 DOORWAY APRON
NOT TO SCALE



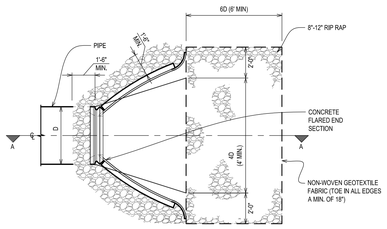
6 DRAINAGE SWALE
NOT TO SCALE

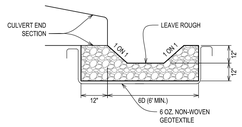


7 BASIN OVERFLOW SPILLWAY
NOT TO SCALE



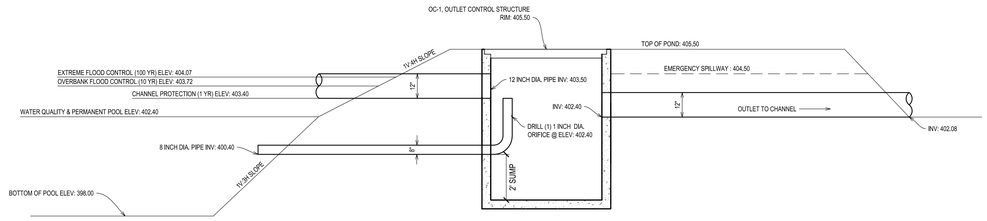
8 UTILITY TRENCH
NOT TO SCALE





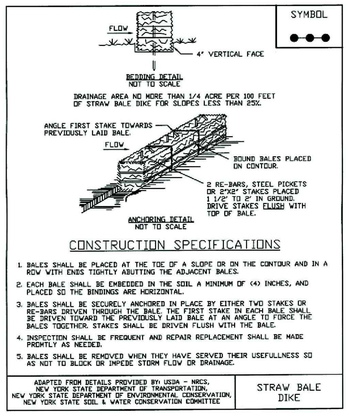
SECTION A-A

9 CONCRETE END SECTION DETAIL
NOT TO SCALE

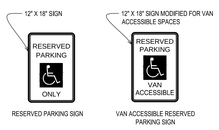


10 OUTLET CONTROL STRUCTURE
NOT TO SCALE

Figure 5A.7
Straw Bale Dike



15 STRAW BALE DIKE
NOT TO SCALE



SIGN MATERIALS:

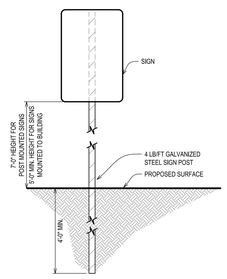
GENERAL: SIGNS SHALL CONFORM WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

MOUNTING HARDWARE: STAINLESS STEEL.

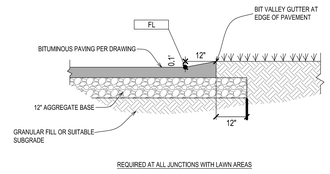
PANEL MATERIAL: ALUMINUM SHEET.

SIGN FACE: REFLECTORIZED BACKGROUND, REFLECTORIZED LEGEND.

11 BARRIER FREE SIGNS
NOT TO SCALE

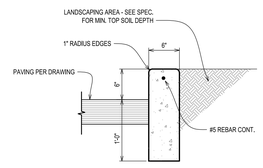


12 SIGN MOUNTING
NOT TO SCALE



REQUIRED AT ALL JUNCTIONS WITH LAWN AREAS

13 BITUMINOUS PAVEMENT EDGE
NOT TO SCALE



14 6" CURB
NOT TO SCALE

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NY - REGISTRATION #086090
EXP. DATE 12/31/2016

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901 Rail Drive
Watertown, New York 13601

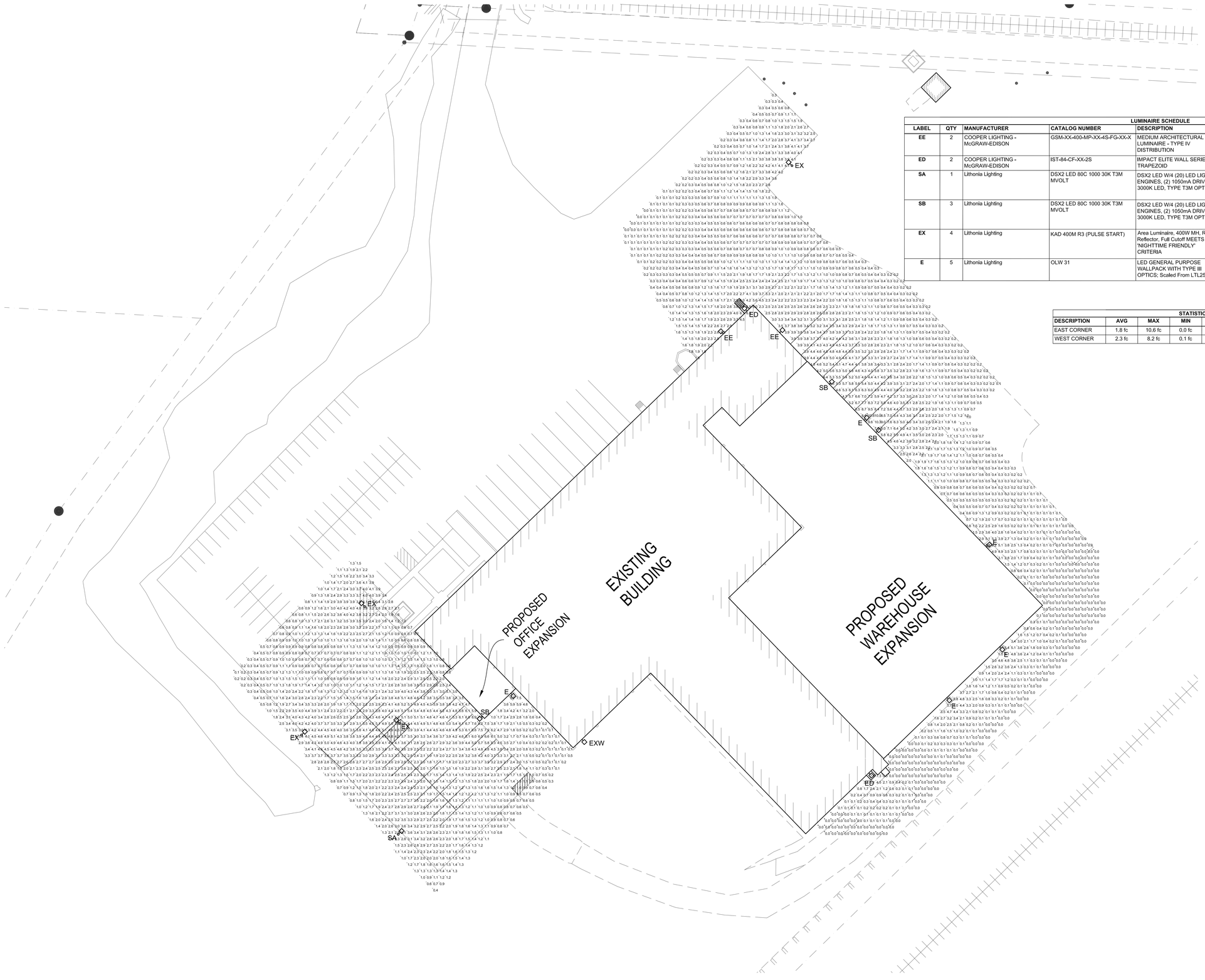
DETAIL SHEET

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
foodtech.com

DATE : 00-00-00
DESIGNED BY : ---
DRAWN BY : ---
CHECKED BY : ---

DRAWING NO.
C5.0

101430



LUMINAIRE SCHEDULE							
LABEL	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	FILENAME	LUMENS PER LAMP	WATTAGE	LLF
EE	2	COOPER LIGHTING - McGRAW-EDISON	GSM-XX-400-MP-XX-4S-FG-XX-X	MEDIUM ARCHITECTURAL AREA LUMINAIRE - TYPE IV DISTRIBUTION	GSM-XX-400-MP-XX-4S-FG-XX-X.IES	40000	452	0.55
ED	2	COOPER LIGHTING - McGRAW-EDISON	IST-84-CF-XX-2S	IMPACT ELITE WALL SERIES - TRAPEZOID	IST-84-CF-XX-2S.IES	3200	86	0.8
SA	1	Lithonia Lighting	DSX2 LED 80C 1000 30K T3M MVOLT	DSX2 LED W/4 (20) LED LIGHT ENGINES, (2) 1050mA DRIVERS, 3000K LED, TYPE T3M OPTICS	DSX2_LED_80C_1000_30K_T3M_MVOLT.IES	23925	277	0.9
SB	3	Lithonia Lighting	DSX2 LED 80C 1000 30K T3M MVOLT	DSX2 LED W/4 (20) LED LIGHT ENGINES, (2) 1050mA DRIVERS, 3000K LED, TYPE T3M OPTICS	DSX2_LED_80C_1000_30K_T3M_MVOLT.IES	23925	277	0.9
EX	4	Lithonia Lighting	KAD 400M R3 (PULSE START)	Area Luminaire, 400W MH, R3 Reflector, Full Cutoff MEETS THE "NIGHTTIME FRIENDLY" CRITERIA	KAD_400M_R3_(PULSE_START).IES	36000	456	0.55
E	5	Lithonia Lighting	OLW 31	LED GENERAL PURPOSE WALLPACK WITH TYPE III OPTICS; Scaled From LTL25215	OLW_31.IES	3965	44.2	0.9

STATISTICS						
DESCRIPTION	AVG	MAX	MIN	MAX/MIN	AVG/MIN	AVG/MAX
EAST CORNER	1.8 fc	10.6 fc	0.0 fc	N/A	N/A	0.2:1
WEST CORNER	2.3 fc	8.2 fc	0.1 fc	82.0:1	23.0:1	0.3:1

N
W E
S

LIGHTING PHOTOMETRICS FOR EXPANSION AREAS

SCALE: 1" = 30'

0 10 20 30 60

REV	DATE	DESCRIPTION
-	00-00-00	-

Distribution Facility Expansion For:

RENZI FOODSERVICE

901 Rail Drive

Watertown, New York 13601

LIGHTING PHOTOMETRICS FOR EXPANSION AREAS

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
Tel: (781) 261-9700
foodtech.com

DATE : 3-23-15
DESIGNED BY: VPM
DRAWN BY: AMM
CHECKED BY: CLH

DRAWING NO.

EP1.1

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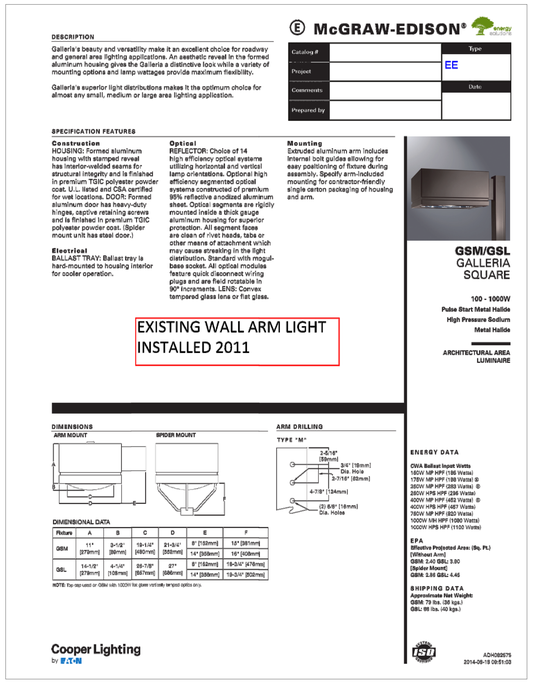

McGRAW-EDISON®

Catalog #	Type
Project	EE
Comments	Date
Prepared by	

DESCRIPTION

Galleria's beauty and versatility make it an excellent choice for roadway and general area lighting applications. An aesthetic reveal in the formed aluminum housing gives the Galleria a distinctive look while a variety of mounting options and lamp wattages provide maximum flexibility.

Galleria's superior light distributions makes it the optimum choice for almost any small, medium or large area lighting application.

SPECIFICATION FEATURES

Construction
HOUSING: Formed aluminum housing with stamped reveal has interior-welded seams for structural integrity and is finished in premium TGIC polyester powder coat. U.L. listed and CSA certified for wet locations. DOOR: Formed aluminum door has heavy-duty hinges, captive retaining screws and is finished in premium TGIC polyester powder coat. (Spider mount unit has steel door.)

Electrical
BALLAST TRAY: Ballast tray is hard-mounted to housing interior for cooler operation.

Optical
REFLECTOR: Choice of 14 high efficiency optical systems utilizing horizontal and vertical lamp orientations. Optional high efficiency segmented optical systems constructed of premium 99% reflective anodized aluminum sheet. Optical segments are rigidly mounted inside a thick gauge aluminum housing for superior protection. All segment faces are clean of rivet heads, tabs or other means of attachment which may cause streaking in the light distribution. Standard with mogul-base socket. All optical modules feature quick disconnect wiring plugs and are field rotatable in 90° increments. LENS: Convex tempered glass lens or flat glass.

Mounting
Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. Specify arm-included mounting for contractor-friendly single carton packaging of housing and arm.

GSM/GSL
GALLERIA SQUARE

100 - 1000W
Pulse Start Metal Halide
High Pressure Sodium
Metal Halide

ARCHITECTURAL AREA LUMINAIRE

EXISTING WALL ARM LIGHT INSTALLED 2011

DIMENSIONS

ARM MOUNT

SPIDER MOUNT

ARM DRILLING

TYPE "M"

DIMENSIONAL DATA

Fixture	A	B	C	D	E	F
GSM	11" [279mm]	3-1/2" [89mm]	19-1/4" [489mm]	21-5/8" [550mm]	9" [228mm]	16" [406mm]
GSL	14-1/8" [359mm]	4-1/4" [108mm]	26-7/8" [683mm]	27" [686mm]	9" [228mm]	19-3/4" [502mm]

NOTE: Flat door used on GSM or GSL 100W. For greater vertical lamp or optics area.

ENERGY DATA
CWA Ballast Input Watts
140W MP HPF (180 Watts)
175W MP HPF (190 Watts) ①
200W MP HPF (220 Watts) ①
250W HPS HPF (296 Watts)
400W MP HPF (482 Watts) ①
400W HPS HPF (467 Watts)
750W MP HPF (822 Watts)
1000W MH HPF (1080 Watts)
1000W HPS HPF (1150 Watts)

EPA
Effective Projected Area: (Sq. Ft.)
(Without Arm)
GSM: 2.40 GSL: 3.80
(Spider Mount)
GSM: 2.56 GSL: 4.46

SHIPPING DATA
Approximate Net Weight:
GSM: 79 lbs. (36 kgs.)
GSL: 98 lbs. (45 kgs.)

Cooper Lighting by EATON

ISO 9001

ACH080676
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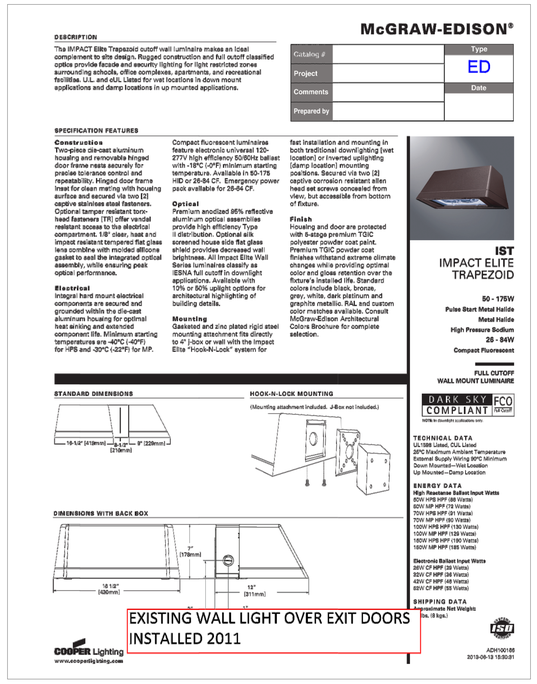

McGRAW-EDISON®

Catalog #	Type
Project	ED
Comments	Date
Prepared by	

DESCRIPTION

The IMPACT Elite Trapezoid cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cULlisted for wet locations in down mount applications and damp locations in up mounted applications.

SPECIFICATION FEATURES

Construction
Two-piece die-cast aluminum housing and removable hinged door frame resist securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx-head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clean, hard and impact resistant tempered flat glass lens combine with molded silicone gasket to seal the integrated optical assembly, while ensuring peak optical performance.

Electrical
Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for M/P. Compact fluorescent luminaires feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (-0°F) minimum starting temperature. Available in 50-175 HID or 26-84 CF. Emergency power pack available for 26-84 CF.

Optical
Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications. Available with 10% or 80% uplight options for architectural highlighting of building details.

Mounting
Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" J-box or wall with the Impact Elite "Hook-N-Lock" system for fast installation and mounting in both traditional down/uplighting (wet location) or inverted uplighting (damp location) mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

Finish
Housing and door are protected with 8-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.

IST
IMPACT ELITE TRAPEZOID

50 - 175W
Pulse Start Metal Halide
Metal Halide
High Pressure Sodium
26 - 84W
Compact Fluorescent

FULL CUTOFF WALL MOUNT LUMINAIRE

DARK SKY COMPLIANT FCO

STANDARD DIMENSIONS

HOOK-N-LOCK MOUNTING

(Mounting attachment included. J-Box not included.)

DIMENSIONS WITH BACK BOX

EXISTING WALL LIGHT OVER EXIT DOORS INSTALLED 2011

TECHNICAL DATA
UL1598 Listed, CUL Listed
25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

ENERGY DATA
High Reactance Ballast Input Watts
50W HPS HPF (68 Watts)
50W MP HPF (79 Watts)
70W HPS HPF (91 Watts)
70W MP HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MP HPF (128 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)

Electronic Ballast Input Watts
26W CF HPF (28 Watts)
32W CF HPF (36 Watts)
42W CF HPF (48 Watts)
62W CF HPF (65 Watts)

SHIPPING DATA
Approximate Net Weights:
50 lbs. (18 kgs.)

COOPER Lighting
www.cooperlighting.com

ISO 9001

ACH100166
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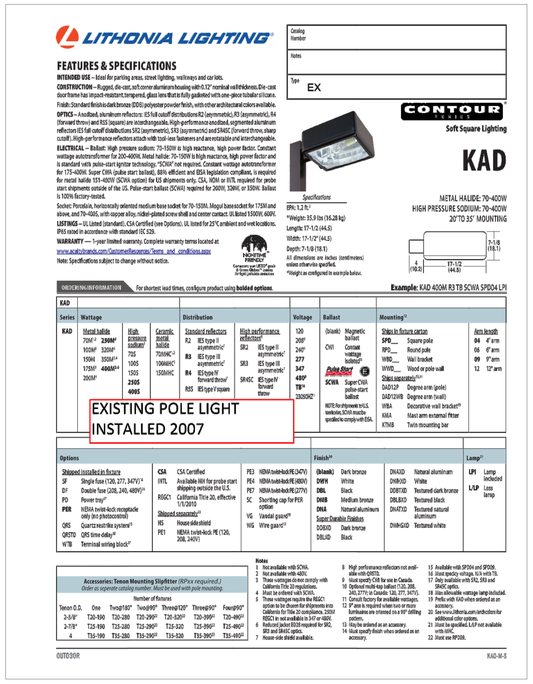
EXISTING WALL LIGHT OVER EXIT DOORS INSTALLED 2011



LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	EX

FEATURES & SPECIFICATIONS

INTENDED USE – Ideal for parking areas, street lighting, walkways and car lots.

CONSTRUCTION – Rugged, die-cast, tri-corner aluminum housing with 0.12" nominal wall thickness. Die-cast door frame has impact-resistant, tempered, glass lens that is fully gasketed with one-piece tubular silicone. Finish: Standard finish is dark bronze (DDB) polyester powder finish, with other architectural colors available.

OPTICS – A rectilinear, aluminum reflector is: IES full cutoff distributions R2 (asymmetric), R3 (asymmetric), R4 (forward throw) and R5S (square) are interchangeable. High-performance anodized, segmented aluminum reflectors IES full cutoff distributions SR2 (asymmetric), SR3 (asymmetric) and SR4SC (forward throw, sharp cutoff). High-performance reflectors attach with tool-less fasteners and are rotatable and interchangeable.

ELECTRICAL – Ballast: High pressure sodium: 70-150W is high reactance, high power factor. Constant wattage autotransformer for 200-400W. Metal halide: 70-150W is high reactance, high power factor and is standard with pulse-start ignitor technology. "SCWA" not required. Constant wattage autotransformer for 175-400W. Super CWA (pulse start ballast), 88% efficient and EISA legislation compliant, is required for metal halide 175-400W (SCWA option) for US shipments only. CSA, NOM or IHTL required for probe start shipments outside of the US. Pulse start ballast (SCWA) required for 200W, 320W or 350W. Ballast is 100% factory-tested.

Socket: Porcelain, horizontally oriented medium base socket for 70-150W. Mogul base socket for 175W and above, and 70-400W, with copper alloy, nickel-plated screw shell and center contact. UL listed 150V, 660W.

LISTINGS – UL Listed (standard). CSA Certified (see Options). UL listed for 25°C ambient and wet locations. IP66 rated in accordance with standard IEC 529.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
Note: Specifications subject to change without notice.

Healthier Indoor Environment — Contributes to LEED credits for Low Emitting Materials and Indoor Air Quality (EQ) credits.

Consumers spend 90% of their time indoors. Healthier Indoor Environment products are designed to contribute to healthier indoor environments.

CONTOUR SERIES
Soft Square Lighting

KAD

METAL HALIDE: 70-400W
HIGH PRESSURE SODIUM: 70-400W
20"TO 35' MOUNTING

Specifications
EPA: 1.2 ft.²
*Weight: 35.9 lbs (16.28 kg)
Length: 17-1/2 (44.5)
Width: 11-1/2" (44.5)
Depth: 7-1/8 (18.1)
All dimensions are inches (centimeters) unless otherwise specified.
*Weight as configured in example below.

Example: KAD 400M R3 TB SCWA SPD04 LPI

ORDERING INFORMATION For shortest lead times, configure product using bolded options.

KAD							
Series	Wattage		Distribution		Voltage	Ballast	Mounting[1]
KAD	Metal halide: 70W[2] **250W**[2] 100W[2] 320W[2] 150W 350W[2,4] 175W[2] **400W**[2,4] 200W[2]	High pressure sodium[2]: 70S 100S 150S **250S** **400S**	Ceramic metal halide: 70HMC[2] 100HMC[2] 150HMC	Standard reflectors: R2 IES type II asymmetric[2] R3 IES type III asymmetric[2] R4 IEStype IV forward throw[2] R5S IES type V square	High performance reflectors[2]: SR2 IES type II asymmetric[2] SR3 IES type III asymmetric[2] SR4SC IES type IV forward throw	120 208[2] 240[2] 277 347 **480**[2] **TB**[3] 3200KH[2]	(blank) Magnetic ballast CWI Constant wattage ballast[2] **Pulse Start Metal Halide** SCWA Super CWA pulse-start ballast NOTE: For shipments to U.S. territories, SCWA must be specified to comply with EISA.

Shipped separately[5,6]
DAD12LP Degree arm (pole)
DAD12WB Degree arm (wall)
WBA Decorative wall bracket[8]
KAA Mast arm external fitter
KTMB Twin mounting bar

Shipped in fixture carton
SPD___ Square pole
RPD___ Round pole
WBD___ Wall bracket
WWD___ Wood or pole wall

Arm length
04 4' arm
06 6' arm
09 9' arm
12 12' arm

EXISTING POLE LIGHT INSTALLED 2007

Example: KAD 400M R3 TB SCWA SPD04 LPI

Options

Shipped installed in fixture
SF Single fuse (120, 277, 347V)[1]
DF Double fuse (208, 240, 480V)[1]
PCI Power tap[9]
PER NEMA twist-lock receptacle only (no photocontrol)
QRS Quick receptacle system[9]
QRSTD QRS time delay[9]
WTB Terminal wiring block[9]

CSA CSA Certified
IHTL Available NW for probe-start shipping outside the U.S.
RSSC1 California Title 20, effective 1/1/2013

Shipped separately[5]
HS House-side shield
PE1 NEMA twist-lock PE (120, 208, 240V)
PE3 NEMA twist-lock PE (347V)
PE4 NEMA twist-lock PE (480V)
PE7 NEMA twist-lock PE (277V)
SC Shorting cap for PER option
VG Vandal guard[9]
WG Wire guard[9]

Finish[10]
(blank) Dark bronze
DWH White
DBL Black
DMB Medium bronze
DNA Natural aluminum

Super Durable Finishes
DCBRZ Dark bronze
DBLXD Black
DNAXD Natural aluminum
DWHXD White
DDBTXD Textured dark bronze
DBLBXD Textured black
DNATXD Textured natural aluminum
DWHGXD Textured white

Lamp[11]
LPI Lamp included
LLP Less lamp

Accessories: Tenon Mounting Slipfitter (RPxx required.) Order as separate catalog number. Must be used with pole mounting.

Tenon O.D.	One	Two@180°	Two@90°	Three@120°	Three@90°	Four@90°
2-3/8"	T20-190	T20-280	T20-290[2]	T20-320[2]	T20-390[2]	T20-490[2]
2-7/8"	T25-190	T25-280	T25-290[2]	T25-320	T25-390[2]	T25-490[2]
4	T35-190	T35-280	T35-290[2]	T35-320	T35-390[2]	T35-490[2]

Notes
1 Not available with SCWA.
2 Not available with 480V.
3 These wattages do not comply with California Title 20 regulations.
4 Not available in California.
5 These wattages require Box REQ'D option to be chosen for shipments into California for Title 20 compliance. 200W REQ'D is not available in 347 or 480V.
6 Reduced Jacket REQD required for SRC, SR3 and SR4SC optics.
7 House-side shield available.
8 High performance reflectors not available with QRSTD.
9 Not available with HS.
10 Optional multi-step ballast (120, 208, 240, 277, 347V) is available in 150W.
11 Consult factory for available wattages.
12 4" arm is required when two or more luminaires are oriented in a 90° drilling pattern.
13 Hog Ring ordered as an accessory.
14 Must specify finish when ordered as an accessory.
15 Available with SPD04 and SPD08.
16 Must specify voltage, N/A with TB.
17 Only available with DS2, DS3 and SRA3C optics.
18 Prefix with SAD when ordered as an accessory.
20 See www.lithonia.com/productsfor additional color options.
21 Must be specified, LLP not available with HSC.
22 Must use RPD08.

OUTDOOR KAD-M-5

EXISTING POLE LIGHT INSTALLED 2007

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	E

FEATURES & SPECIFICATIONS

INTENDED USE
Provides maintenance-free general illumination for outdoor use in residential and commercial applications such as retail, education, multi-unit housing and storage. Ideal for lighting building facades, parking areas, walkways, garages, loading areas and any other outdoor space requiring reliable security lighting.

CONSTRUCTION
Sturdy weather-resistant aluminum housing with a dark bronze finish.

High performance LEDs are powered by an MVOLT driver providing 2730 and 3970 delivered lumens at 5000K. 100,000 hours LED lifespan based on IESNA LM-80-08 results and calculated per IESNA TM-21-11 methodology. Fixture is maintenance-free.

Rated for outdoor installations -40°C minimum ambient.

Adjustable Dusk-to-Dawn, photocell standard automatically turns light on at dusk and off at dawn for convenience and energy savings.

Photocell can be disabled by rotating the photocell cover.

OPTICS
Precision-molded acrylic lenses provide optimal luminaire spacing with Type 3 distribution.

Nighttime Friendly™ full cutoff above 90° angle, standard.

INSTALLATION
Wall or arm mount (mounting arm sold separately).

All mounting hardware included.

LISTINGS
UL Certified to US safety standards. C-UL Certified to Canadian safety standards. Wet location listed.

Tested in accordance with IESNA LM-79 and LM-80 standards. DLC qualified product.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx
NOTE: Specifications are subject to change without notice.

Outdoor General Purpose

OLW

LED WALL PACK

Healthier Indoor Environment — Contributes to LEED credits for Low Emitting Materials and Indoor Air Quality (EQ) credits.

Consumers spend 90% of their time indoors. Healthier Indoor Environment products are designed to contribute to healthier indoor environments.

Specifications
All dimensions are inches (centimeters)

NEW LED WALL LIGHT ABOVE EXIT DOORS

ORDERING INFORMATION For shortest lead times, configure products using bolded options. Example: OLW 23

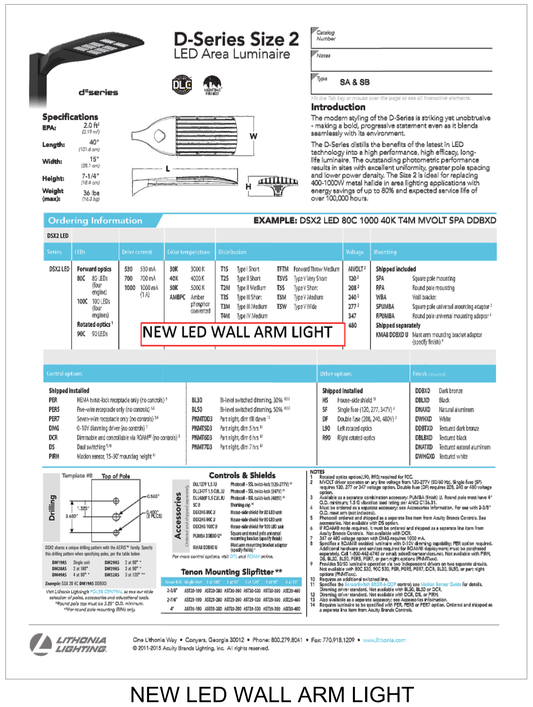
OLW					
Series	Lumens / Color temperature (CCT)	Voltage	Features	Finish
OLW LED Wall Light	23 2730 delivered lumens / 5000K[1] 31 3970 delivered lumens / 5000K[1]	(blank) MVOLT (120V-277V)	(blank) Photocell included	(blank) DDB Dark Bronze

Accessories: Order as separate catalog number.
OSA DDB W6 9.4" Steel mounting arm

Notes
1 Correlated Color Temperature (CCT) above is nominal per ANSI C78.377-2008.

COMMERCIAL OUTDOOR OLW

NEW LED WALL LIGHT ABOVE EXIT DOORS



D-Series Size 2
LED Area Luminaire

Catalog Number	
Notes	
Type	SA & SB

Specifications
EPA: 2.0 ft² (0.19 m²)
Length: 40" (101.6 cm)
Width: 15" (38.1 cm)
Height: 7-1/4" (18.4 cm)
Weight (max): 36 lbs (16.3 kg)

Introduction
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with the environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. The Size 2 is ideal for replacing 400-1000W metal halide in area lighting applications with energy savings of up to 80% and expected service life of over 100,000 hours.

Ordering Information EXAMPLE: DSX2 LED 80C 1000 40K T4M MVOLT SPA DDBXD

DSX2 LED							
Series	LEDs	Driver current	Color temperature	Distribution		Voltage	Mounting
DSX2 LED	**Forward optics** 80C 80 LEDs (four engines) 100C 100 LEDs (four engines) **Rotated optics**[1] 90C 90 LEDs	530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber (PC filter) (specified)	T1S Type I Short T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium	BTTM Forward Throw Medium TFTM Type V Very Short TFS Type V Short TFM Type V Medium TFW Type V Wide	MVOLT[2,3] 120[1] 208[1] 240[1] 277[1] 347 480[1] **TB**[4] 3200KH[1]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[5] RPUMBA Round pole universal mounting adaptor[5] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[6]

NEW LED WALL ARM LIGHT

Control options
Shipped installed
PER NEMA twist-lock receptacle only (no controls)[1,7]
PER5 Five-wire receptacle only (no controls)[1,7]
PER7 Seven-wire receptacle only (no controls)[1,7]
DMG 0-10V dimming driver (no controls)
DCR Dimmable and controllable via ROAM® (no controls)[7]
DS Dual switching[1,8]
PIR1H Motion sensor, 15-30' mounting height[9,10]
BL30 Bi-level switched dimming, 30%[9,10]
BL50 Bi-level switched dimming, 50%[9,10]
PIRHTC30 Part night, dim 30 dim[9]
PIRHTC50 Part night, dim 50 dim[9]
PIRHTC60 Part night, dim 60 dim[9]
PIRHTC70 Part night, dim 70 dim[9]

Other options
Shipped installed
HS House-side shield[11]
SF Single fuse (120, 277, 347V)[1]
DF Double fuse (208, 240, 480V)[1]
LPO Left-rotated optics
RPO Right-rotated optics

Finish (required)
DDBXD Dark bronze
DBLXD Black
DNAXD Natural aluminum
DWHXD White
DDBTXD Textured dark bronze
DBLBXD Textured black
DNATXD Textured natural aluminum
DWHGXD Textured white

Drilling

Template #8 Top of Pole

DSX2 shares a unique drilling pattern with the AERIS™ family. Specify this drilling pattern when specifying poles, per the table below.

DM19AS	Single unit	DM29AS	2 @ 180° *
DM28AS	2 @ 90°	DM39AS	3 @ 90° *
DM49AS	4 @ 90° *	DM25AS	2 @ 120° **

Example: DSX 2 HS DM19AS DDBXD

Visit Lithonia Lighting's POLE DRILLING to see our wide selection of poles, accessories and refurbished tools.
*Round pole top must be 2.8" O.D. minimum.
**For round pole mounting RPA5 only.

Accessories

Controls & Shields
DLL127 F1.5 CR Photocell - SSL twist-lock (120-277V)[12]
DLL347 F1.5 CR JU Photocell - SSL twist-lock (347V)[12]
DLL480 F1.5 CR JU Photocell - SSL twist-lock (480V)[12]
ICS Shorting cap[12]
DSHS KNC 2 House-side shield for 80 LED unit
DSHS KNC 5 House-side shield for 530/700 unit
DSHS KNC 10/C 10 Square and round pole universal mounting bracket (specify finish)
DM4AS DDBXD Mast arm mounting bracket adaptor (specify finish)

For more control options, see DSX2 and DSX2 online.

Tenon Mounting Slipfitter**

Tenon O.D.	One	Two@180°	Two@90°	Three@120°	Three@90°	Four@90°
2-3/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

NOTES
1 Required ballast options (120, 277, 347V) required for SCWA.
2 Not available with SCWA. Not available with PER (120V-277V) (DS-NEC Pkg), PER5 (DS-NEC Pkg), Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
3 Operates on a separate combination accessory PLUG-N-TRAIL®. Round poles must have 4" O.D. minimum. 1.5-0 double-tap wiring per ANSI C136.41.
4 Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" O.D. tenon arm (not included).
5 Provides universal and shipped as a separate line item from Acuity Brands Controls. See Accessories information for more information.
6 If ROAM® mode required, U must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR.
7 Not available with 347V, 480V, 277V, 120V, 3200K or 5000K or 700 mA.
8 Specifies a NEMA® enabled luminaire with 0-10V dimming capability. PER option required. Additional hardware and services may be required for ROAM® deployment; must be purchased separately from Acuity Brands or an overall network integrator. Consult factory. Not available with PER5, DS, BL30, BL50, PIR1H, PIRHTC30, PIRHTC50, PIRHTC60, PIRHTC70.
9 Provides 0-10V leads to allow for use with a compatible luminaire driver or two separate circuits. Not available with DCR, DS, NEC 5DS, PER, PER5, PER7, DCR, BL30, BL50, or per-light options (PIR/PIRHTC).
10 Not available in Canada or any other extreme cold environment.
11 Specifies the Accessories DSHS KNC 2 option(s); see Market Server Guide for details.
12 Dimming driver standard. Not available with BL30, BL50 or DCR.
13 Not available with SF, DF, PER, PER5, PER7, DCR, DS, BL30, BL50.
14 Also available as a separate accessory; see Accessories information.
15 Requires luminaire to be specified with PER, PER5 or PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

LITHONIA LIGHTING®
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NEW LED WALL ARM LIGHT

REV	DATE	DESCRIPTION

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

LIGHTING PHOTOMETRICS FOR EXPANSION AREAS

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
foodtech.com
Tel: (781) 261-9700

DATE : 3-23-15
DESIGNED BY: VPM
DRAWN BY: AMM
CHECKED BY : CLH

DRAWING NO.
EP1.2

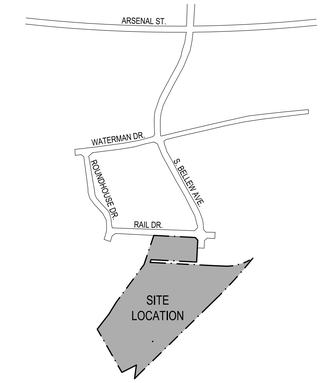
101430

3/23/2015 2:10:08 PM

RENZI FOOD SERVICE

Facility Expansion
901 Rail Drive
Watertown, NY 13601

OVERALL SITE PLAN
SCALE: 1" = 100'



LOCATION MAP

MAP REFERENCE:

1. "Subdivision Final Plat City Center Industrial Park, Bellew Ave. South, Haney St., Waterman Drive, Roundhouse Drive, Rail Drive, City of Watertown, County of Jefferson, State of New York" dated September 30, 2003, and last revised January 07, 2004, prepared by GYMO Architecture, Engineering and Land Surveying P.C., filed in the Jefferson County Clerk's Office as File No. 3215 on January 14, 2004.

2. "Subdivision Final Plat City Center Industrial Park, Bellew Ave. South, Haney St., Waterman Drive, Roundhouse Drive, Rail Drive, City of Watertown, County of Jefferson, State of New York" dated September 30, 2003, and last revised October 15, 2008, prepared by GYMO Architecture, Engineering and Land Surveying P.C., filed in the Jefferson County Clerk's Office as File No. 4655 on November 21, 2008.

3. "As-Built Site and Utility Plan, Distribution Facility Phase 1, Renzi Bros. Inc., City Center Industrial Park" dated January 21, 2005 and last revised February 28, 2005, prepared by GYMO Architecture, Engineering and Land Surveying P.C.

4. "ALTA/ACSM Land Title Survey of the Lands of MLR Realty, LLC, 901 Rail Drive, City of Watertown, Jefferson County, New York" dated August 15, 2011, prepared by Aubertine and Currier, Architects, Engineers & Land Surveyors, PLLC.

5. "ALTA/ACSM Land Title Survey of the Lands of MLR Realty, LLC, 901 Rail Drive, City of Watertown, Jefferson County, New York" dated August 17, 2012, prepared by Aubertine and Currier, Architects, Engineers & Land Surveyors, PLLC.

UTILITY CONTACTS

ELECTRIC COMPANY:	NATIONAL GRID 300 ERIE BLVD. WEST SYRACUSE, NY 13202 (800) 642-4272
GAS COMPANY:	ENERGETIX 50 METHODIST HILL DR. (SUITE 1500) ROCHESTER, NY 14623 (800) 544-0182
WATER:	CITY OF WATERTOWN 245 WASHINGTON ST. WATERTOWN, NY 13601 (315) 785-7757
SANITARY SEWER:	SANITARY SEWER: CITY OF WATERTOWN 245 WASHINGTON ST. WATERTOWN, NY 13601 (315) 785-7757
STORM SEWER/ DRAINAGE:	CITY OF WATERTOWN ENGINEERING DEPARTMENT 245 WASHINGTON ST. WATERTOWN, NY 13601 (315) 785-7740
FIRE DISTRICT:	CITY OF WATERTOWN FIRE DEPARTMENT 224 S. MASSEY ST. WATERTOWN, NY 13601 (315) 785-7800

DEVELOPMENT REFERENCE

OWNER / DEVELOPER APPLICANT:	MLR REALTY, LLC 901 RAIL DRIVE WATERTOWN, NY 1360
ARCHITECT:	FOOD TECH 300 LEDGEWOOD PL, STE 304 ROCKLAND, MA 02370 PH: 781-261-9700
CIVIL ENGINEER:	PARADIGM DESIGN, INC. 550 3 MILE ROAD NW, SUITE B GRAND RAPIDS, MI 49544 PH: 616-785-5656
SURVEYOR:	AUBERTINE & CURRIER, PLLC 522 BRADLEY STREET WATERTOWN, NY 13601 PH: 315-782-2005

SITE DATA:
SITE: 21.39 ACRES
ZONED: LIGHT INDUSTRIAL
USE: FOOD DISTRIBUTION

EXISTING BUILDING:	58,491 SF
PROPOSED EXPANSION:	40,391 SF
TOTAL BUILDING:	98,882 SF

SHEET INDEX

C1.0	COVER SHEET
C1.1	EXISTING CONDITIONS AND ON-SITE REMOVALS
C2.0	HORIZONTAL CONTROL PLAN
C2.1	FIRE ACCESS PLAN
C3.0	GRADING AND DRAINAGE PLAN
C5.0	SITE DETAILS

REV	DATE	DESCRIPTION
1	03-23-15	FOR SITE PLAN REVIEW

BILL M. HADLOCK, P.E.
NY - REGISTRATION #086090
EXP. DATE 12/31/2016

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

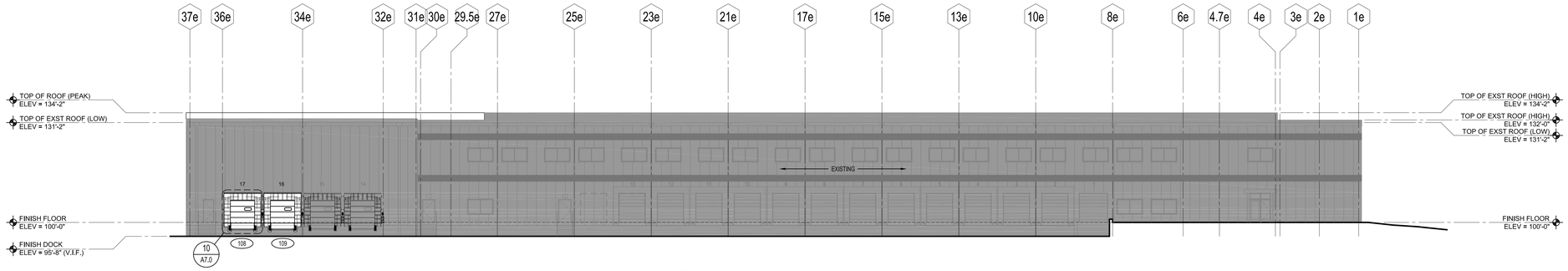
TITLE SHEET

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
foodtech.com
Tel: (781) 261-9700

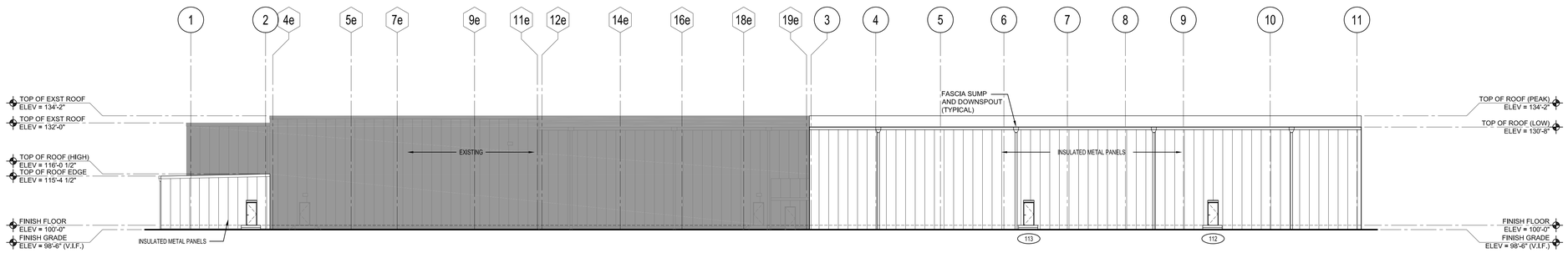
DATE : 00-00-00
DESIGNED BY: ---
DRAWN BY: ---
CHECKED BY : ---

DRAWING NO.
C1.0

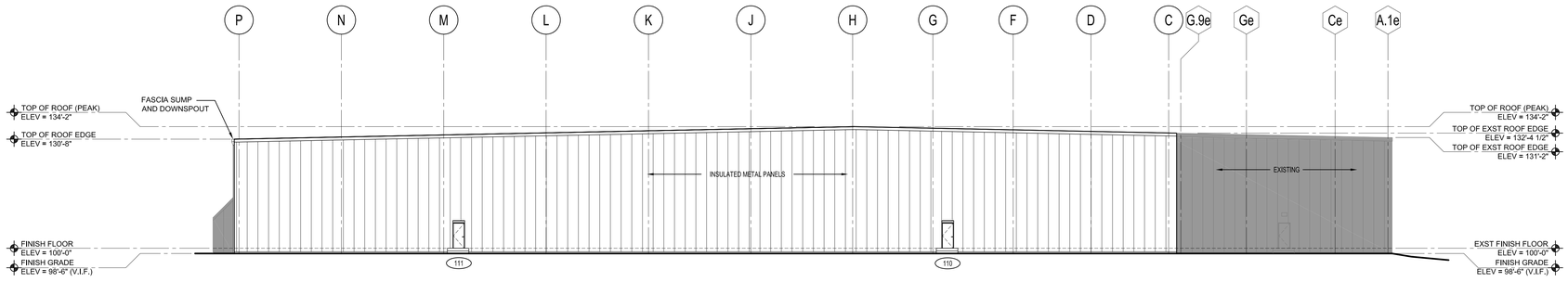
101430



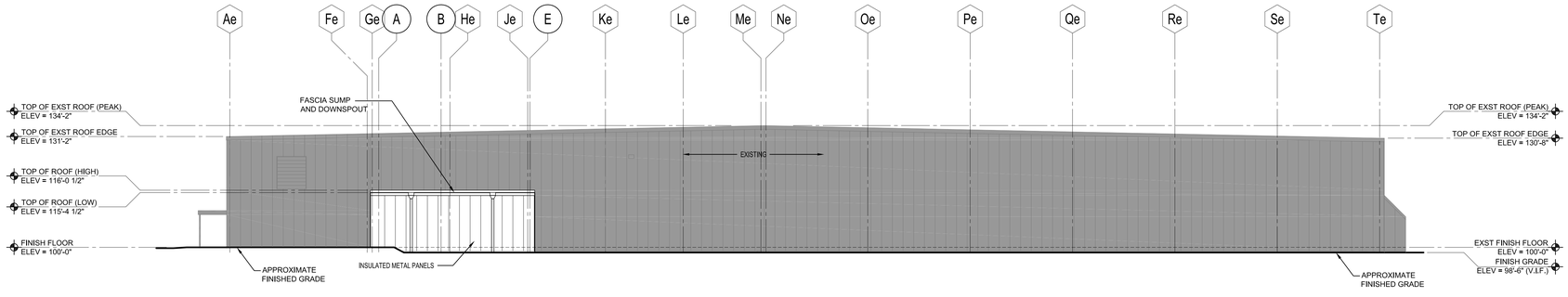
A NORTH ELEVATION
SCALE: 1/16" = 1'-0"



B SOUTH ELEVATION
SCALE: 1/16" = 1'-0"



C EAST ELEVATION
SCALE: 1/16" = 1'-0"



D WEST ELEVATION
SCALE: 1/16" = 1'-0"

CROSS-HATCHING INDICATES
AREA OF EXISTING FACILITY

REV	DATE	DESCRIPTION

Distribution Facility Expansion For:
RENZI FOODSERVICE
901 Rail Drive
Watertown, New York 13601

EXTERIOR BUILDING ELEVATIONS

Food Tech
An EMCOR Company
300 LEDGEWOOD PL, STE 304, ROCKLAND, MA 02370
Tel: (781) 261-9700
foodtech.com

DATE : 03-27-15
DESIGNED BY: FTI
DRAWN BY: TLD
CHECKED BY : BVR

DRAWING NO.
A3.0

101430