

BLOCK 1170 LOT 18 QUALIFICATION CODE _____ ADDRESS (SITE) 425 Jack Martin Blvd PERMIT NO. 19-1771-



CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

I. IDENTIFICATION

1. Proposed Work Site at: 425 Jack Martin Blvd Brickton

2. Name of Owner in Fee: Ocean Medical - Campy at Emoryway

Tel. () e-mail

Address 1350 Campus Parkway Vestavia, NJ 07753

3. Ownership in Fee: Public ☐ Private ☐

4. Principal Contractor: ABC Fire and Sph Tel. (908) 259-9110

Address 150 Fairfield Ave e-mail

Kenilworth NJ 07033

License No. OR, if new home, Builder Reg. No. P00044 Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. 22-3457245 FAX: ()

5. Architect or Engineer Contact

Address e-mail

Tel. () FAX: ()

6. Responsible Person in Charge once Work has Begun PAU. MEJIA

Tel. (201) 761-9632 FAX: ()

V. FEE SUMMARY (for office use only)		Update	Update
1. Building	\$		
2. Electrical			
3. Plumbing			
4. Fire Protection	<u>290</u> ✓		
5. Elevator Devices			
6. Subtotal			
7. Less 20% for State Plan Review	\$		
8. Subtotal	\$		
9. State Permit Surcharge Fee	<u>289</u>		
10. Subtotal	\$		
11. Cert. of Occupancy			
12. Other			
13. TOTAL	\$ <u>579</u>		

VI. BUILDING/SITE CHARACTERISTICS (office use only)

1. Number of Stories

2. Height of Structure ft.

3. Area — Largest Floor sq. ft.

4. New Building Area sq. ft.

5. Volume of New Structure cu. ft.

6. Max. Live Load

7. Max. Occupancy Load

8. If Industrialized Building: State Approved HUD

9. Total Land Area Disturbed sq. ft.

10. Flood Hazard Zone

11. Base Flood Elevation

12. Wetlands yes no

IIa. PROPOSED WORK

☐ Minor Work ☐ New Building ☐ Addition ☐ Demolition

☒ Repair ☐ Alteration ☐ Renovation ☐ Reconstruction

☐ Asbestos Abat. - Subch. 8 ☐ Lead Hazard Abatement ☐ Radon Remediation ☐ Annual Permit

IIb. SUBCODES (Check all that apply)

☐ Building

☐ Electrical

☐ Plumbing

☒ Fire Protection

☐ Elevator

FOR OFFICE USE ONLY (Optional)

Est. Cost	Plans Rec'd by	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates Approval	Rejection	Re-viewer
	<u>mfr</u>	<u>2/25/19</u>						

TOTAL COST

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL (primary use)

1. State Specific Use:

2. Use Group, Proposed:

3. Change in Use Group, Indicate Present:

4. No. of dwelling units: total Units Income-restricted

Gained, Sale

Gained, Rental

Lost, Sale

Lost, Rental

B. NON-RESIDENTIAL (primary use)

1. State Specific Use:

2. Use Group, Proposed:

3. Change in Use Group, Indicate Present:

C. MIXED USE -List secondary use(s):

D. Construct. Classification: Present Proposed

III. PLAN REVIEW (optional)

DO YOU WANT:

1. ☐ Partial Releases

2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/ Dumbwaiters/Moving Walks

2. ☐ High Pressure Boilers

3. ☐ Pressure Vessels

4. ☐ Refrigeration Systems

5. ☐ Cross-Connections/Backflow Preventers

6. ☐ Hazardous Uses/Places of Assembly

7. ☐ Sprinklers/Standpipes

8. ☐ Smoke Control Systems in Open Wells

9. ☐ Underground Storage Tanks

10. ☐ Swimming Pools, Spas and Hot Tubs

11. ☐ LPGas Tanks

12. ☐ Fire Alarm

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(f)1.ix:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☒ Check if contractor.

Agent Name A.P.C. Fire and Safety

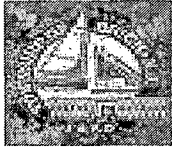
Address 750 FAIRFIELD AVE

Kenilworth, N.J. 07033

Telephone (908) 259 9110

Signature [Signature]

III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.



Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 7/17/2019
Control Number C-19-000685
Permit Number 19-1771
Permit Issue Date 7/8/2019
Certificate Number 19-1771

Certificate

Construction Code Division

(Certificate of Approval)

Identification

Work Site Location: 425 JACK MARTIN BLVD. EMERGENCY CANOPY Brick Township, NJ Block: 1170 Lot: 18 Qual: _____
Owner in Fee: OCEAN MEDICAL CENTER %MERIDIAN
Owner Address: 1350 CAMPUS PKWY STE 1500 NEPTUNE NJ 07753
Telephone: _____
Contractor ABC FIRE & SAFETY INC
Address 750 FAIRFIELD AVENUE KENILWORTH NJ 07033
Telephone: (908) 259-9110 Fax: (908) 259-9021
License Number or Builders Registration Number: _____ Federal Emp. Number: _____

Home Warranty Number: _____

Type of Warranty Plan: ☐ State ☐ Private

Use Group: I-2 Construction Classification: _____

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: ALTERATION - COMMERCIAL - - EMERGENCY CANOPY ...DRY SYSTEM SPRINKLERS

Certificate Comments:

☐ Certificate of Occupancy

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☒ Certificate of Approval

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ Certificate of Continued Occupancy

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ Temporary Certificate of Compliance

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:

Conditions to be met:

☐ Certificate of Clearance - Lead Abatement 5:17

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work
- ☐ Partial or limited time period (years); see file

☐ Certificate of Clearance - Asbestos Abatement

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work
- ☐ Partial or limited time period (years); see file

☐ Certificate of Compliance

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☐ Temporary Certificate of Occupancy

The following conditions must be met no later than: or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:

Conditions to be met:

Daniel Newman Jr

Construction Official

Fee: \$0.00

Check Number: _____

Collected By: _____



FIRE PROTECTION SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 1170 Lot 18 Qualification Code _____
Work Site Location Ocean Medical Emergency Center
425 Jack Martin Blvd Brick, NJ 08724
Owner in Fee: Ocean Medical
Tel. _____ e-mail _____

Address _____
Contractor: ABC Fire & Safety municipality _____ Tel. 908-257-9110
Address 150 Fairfield Ave e-mail _____
Kenilworth NJ 07033

Fire Protection Equipment, NJ Div of Fire Safety Permit No. P00044
Fire Protection Equipment, NJ Div of Fire Safety Installer No. _____
Fire Alarm Contractor No. _____ Exp. Date _____
Home Improvement Contractor Registration No. or Exemption Reason _____
Federal Emp. ID No. 22-3457245 FAX: _____

B. FIRE PROTECTION CHARACTERISTICS

Use Group: Present ☒ Proposed _____
Constr. Class: Present ☒ Proposed _____
Fuel Storage Tank:
Fuel Type: ☐ Flammable OR ☐ Combustible
Capacity _____

Heating System: ☐ New OR ☐ Modification to Existing
OR ☐ Conversion OR ☐ Replacement

Fuel Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar
☐ Other _____

Location: _____
Total Cost of Fire Protection Work \$ 152,000

JOB SUMMARY (Office Use Only)		INSPECTIONS		Dates (Month/Day)	
PLAN REVIEW	Type:	Failure	Failure	Approval	Initial
☐ No Plans Required	Alarm System				
☐ Partial Underslab Utilities Approved	Suppression Sys.				
Date: _____ Approved by: _____	Standpipe				
☐ Fire Protection Plans Approved	Fire Pump				
Date: _____ Approved by: _____	Pre-Eng. System				
Joint Plan Review Required:	Mechanical				
☐ Bldg. ☐ Elec. ☐ Plumb. ☐ Elev.	Smoke Control				
SUBCODE APPROVAL for PERMIT	TCO				
Date: <u>2/28/15</u>	Flam/Combust Tanks				
Approved by: <u>[Signature]</u>	Fireplace Venting				
SUBCODE APPROVAL for CERTIFICATE	Final				
☐ CO ☐ CCO ☐ CA	Other				
Date: <u>2/28/15</u>					
Approved by: <u>[Signature]</u>					

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Applicant/Contractor sign here: Vita Ciaramitaro

Print name here: Vita Ciaramitaro

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: convert wet system to dry system and fire pump
Water Supply Source _____
Method of Alarm/Suppression System Supervision _____

	NUMBER	FEE (Office Use Only)
Flammable/Combustible Tanks		\$
Alarm Systems		
☐ System		
☐ 110v Interconnected		
☐ CO Detectors/110v		
Alarm Devices (i.e., smoke, heat, pulls, water/flow)		
Supervisory Devices (i.e., tampers, low/high air)		
Signaling Devices (i.e., horn/strobes, bells)		
Other Devices		
TOTAL	<u>0</u>	
Suppression Systems		
Fire Pump _____ GPM Type _____		
Dry Pipe/Alarm Valves		
Pre-action Valves		
Sprinkler Heads (Dry and Wet)	<u>147</u>	
Standpipes		
Pre-engineered Systems		
Wet Chemical		
Dry Chemical		
CO ₂ Suppression		
Foam Suppression		
FM200 Suppression		
Other		
Other Systems		
Kitchen Hood Exhaust System		
Smoke Control System		
Fuel-Fired Appliances ☐ Gas ☐ Oil ☐ Solid		
Fireplace Venting/Metal Chimney		
Other		

Administrative Surcharge \$ _____
Minimum Fee \$ _____
State Permit Surcharge Fee \$ _____
TOTAL FEE \$ _____

19-1771

Contractor's Material and Test Certificate for Aboveground Piping**PROCEDURE**

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by the property owner or their authorized agent. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

Property name Ocean Medical Center Date July 19/2019

Property address 425 JACK MARTIN Blvd.

Accepted by approving authorities (names) Brick Building Department

Plans

Address

Installation conforms to accepted plans

☒ Yes☐ No

Equipment used is approved

☒ Yes☐ No

If no, explain deviations

Instructions

Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment?
If no, explain

☒ Yes☐ No

Have copies of the following been left on the premises?

☒ Yes☐ No

1. System components instructions

☒ Yes☐ No

2. Care and maintenance instructions

☒ Yes☐ No

3. NFPA 25

☒ Yes☐ No**Location of system**Supplies buildings Basement**Sprinklers**

Make	Model	Year of manufacture	Orifice size	Quantity	Temperature rating
<u>VICTOR</u>	<u>VSI</u>	<u>2019</u>	<u>1/2</u>	<u>73</u>	<u>155 F</u>

Pipe and fittings

Type of pipe STEEL GALVANIZED
Type of fittings STEEL GALVANIZED AND GROUND

Alarm valve or flow indicator

Alarm device			Maximum time to operate through test connection	
Type	Make	Model	Minutes	Seconds
<u>PRESSURE</u>	<u>STOR</u>	<u>PS-10</u>	<u>0</u>	<u>45</u>

Dry pipe operating test

Dry valve					Q. O. D.					
Make		Model		Serial no.	Make		Model		Serial no.	
TYCO		DPV-1								
	Time to trip through test connection ^{a,b}		Water pressure	Air pressure	Trip point air pressure		Time water reached test outlet ^{a,b}		Alarm operated properly	
	Minutes	Seconds	psi	psi	psi		Minutes	Seconds	Yes	No
Without Q.O.D.	0	45	160	40	20		0	40	Yes	No
With Q.O.D.										
If no, explain										

If no, explain

© 2006 National Fire Protection Association

NFPA 13 (p. 1 of 3)

^a Measured from time inspector's test connection is opened^b NFPA 13 only requires the 60-second limitation in specific sections**FIGURE 24.1 Contractor's Material and Test Certificate for Aboveground Piping.**

Deluge and preaction valves <i>n/a</i>	Operation ☐ Pneumatic ☐ Electric ☐ Hydraulics							
	Piping supervised ☐ Yes ☐ No				Detecting media supervised ☐ Yes ☐ No			
	Does valve operate from the manual trip, remote, or both control stations? ☐ Yes ☐ No							
	Is there an accessible facility in each circuit for testing? ☐ Yes ☐ No						If no, explain	
	Make	Model	Does each circuit operate supervision loss alarm?		Does each circuit operate valve release?		Maximum time to operate release	
		Yes	No	Yes	No	Minutes	Seconds	
Pressure reducing valve test <i>n/a</i>	Location and floor	Make and model	Setting	Static pressure		Residual pressure (flowing)		Flow rate
				Inlet (psi)	Outlet (psi)	Inlet (psi)	Outlet (psi)	Flow (gpm)
Test description	<u>Hydrostatic</u>: Hydrostatic tests shall be made at not less than <u>200 psi (13.6 bar)</u> for <u>2 hours</u> or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.2 bar) for 2 hours. Differential dry-pipe valve clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped. <u>Pneumatic</u>: Establish <u>40 psi (2.7 bar)</u> air pressure and measure drop, which shall not exceed <u>1 1/2 psi (0.1 bar)</u> in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed <u>1 1/2 psi (0.1 bar)</u> in <u>24 hours</u>.							
Tests	All piping hydrostatically tested at <u>200</u> psi (<u> </u> bar) for <u>2</u> hours						If no, state reason	
	Dry piping pneumatically tested ☒ Yes ☐ No							
	Equipment operates properly ☒ Yes ☐ No							
	Do you certify as the sprinkler contractor that additives and corrosive chemicals, sodium silicate or derivatives of sodium silicate, brine, or other corrosive chemicals were not used for testing systems or stopping leaks? ☒ Yes ☐ No							
	Drain test	Reading of gauge located near water supply test connection: <u>100</u> psi (<u> </u> bar)				Residual pressure with valve in test connection open wide: <u>140</u> psi (<u> </u> bar)		
	Underground mains and lead-in connections to system risers flushed before connection made to sprinkler piping Verified by copy of the Contractor's Material and Test Certificate for Underground Piping. ☐ Yes ☐ No <u>Other</u> Explain <u>existing water</u> Flushed by installer of underground sprinkler piping ☐ Yes ☐ No							
If powder-driven fasteners are used in concrete, has representative sample testing been satisfactorily completed? ☐ Yes ☐ No						If no, explain <u>n/a</u>		
Blank testing gaskets <i>n/a</i>	Number used		Locations				Number removed	
Welding <i>n/a</i>	Welding piping ☐ Yes ☐ No							
	If yes . . .							
	Do you certify as the sprinkler contractor that welding procedures used complied with the minimum requirements of AWS B2.1, ASME Section IX <i>Welding and Brazing Qualifications</i> , or other applicable qualification standard as required by the AHJ? ☐ Yes ☐ No							
	Do you certify that all welding was performed by welders or welding operators qualified in accordance with the minimum requirements of AWS B2.1, ASME Section IX <i>Welding and Brazing Qualifications</i> , or other applicable qualification standard as required by the AHJ? ☐ Yes ☐ No							
Do you certify that the welding was conducted in compliance with a documented quality control procedure to ensure that (1) all discs are retrieved; (2) that openings in piping are smooth, that slag and other welding residue are removed; (3) the internal diameters of piping are not penetrated; (4) completed welds are free from cracks, incomplete fusion, surface porosity greater than 1/16 in. diameter, undercut deeper than the lesser of 25% of the wall thickness or 1/2 in.; and (5) completed circumferential butt weld reinforcement does not exceed 3/32 in.?								
© 2006 National Fire Protection Association								
NFPA 13 (p. 2 of 3)								

FIGURE 24.1 Continued

Cutouts (discs)	Do you certify that you have a control feature to ensure that all cutouts (discs) are retrieved? ☒ Yes ☐ No	
Hydraulic data nameplate	Nameplate provided ☒ Yes ☐ No	If no, explain
Remarks	Date left in service with all control valves open <u>July 10/2019</u>	
Signatures	Name of sprinkler contractor <u>A.B.C. Fire and safety</u>	
	Tests witnessed by	
	The property owner or their authorized agent (signed)	Title Date
	For sprinkler contractor (signed)	Title Date
Additional explanations and notes		
© 2006 National Fire Protection Association NFPA 13 (p. 3 of 3)		

FIGURE 24.1 Continued



CONSTRUCTION PERMIT

Date Issued 7/18/19
Control # C-19-000685
Permit # 19-177

IDENTIFICATION Block: 1170 Lot: 18 Qualifier _____
Work Site Location: 425 JACK MARTIN BLVD. EMERGENCY CANOPY Contractor ABC FIRE & SAFETY INC
Brick Township, NJ Address 750 FAIRFIELD AVENUE KENILWORTH NJ 07033
Owner in Fee OCEAN MEDICAL CENTER %MERIDIAN
1350 CAMPUS PKWY STE 1500 NEPTUNE NJ Telephone: (908) 259-9110
07753 Lic. No. or Bldrs. Reg. No. 9358 P00044
Telephone: _____ Federal Employee No. _____

Is hereby granted permission to perform the following work:

- ☐ BUILDING ☐ PLUMBING ☐ LEAD HAZARD ABATEMENT
☐ ELECTRICAL ☒ FIRE PROTECTION ☐ DEMOLITION
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT (Subchapter 8 only) ☐ OTHER

DESCRIPTION OF WORK:

ALTERATION - COMMERCIAL - EMERGENCY CANOPY ... DRY SYSTEM SPRINKLERS

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$152,000

D. Newman
Construction Official

3/1/19
Date

U.C.C. F170
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR 7/18/19 4 GOLD - APPLICANT 7/18/19

PAYMENTS (Office Use Only)

Building	\$0
Electrical	\$0
Plumbing	\$0
Fire Protection	\$290
Elevator Devices	\$0
Other	\$0.00
DCA Training Fee	\$289
CO Fee	
Other	\$0
Total	\$579
Check No.	<u>1166</u>
Cash	\$0
Credit	\$0
Collected By	<u>P. Freeman</u>

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

☐ Required inspections for all subcodes for one- and two-family dwellings are as follows:

1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
2. Foundations and all walls up to grade level prior to back filling.
3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

☒ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.



State of New Jersey
Department of Community Affairs
Division of Fire Safety



Hereby Issues To

ABC FIRE & SAFETY INC

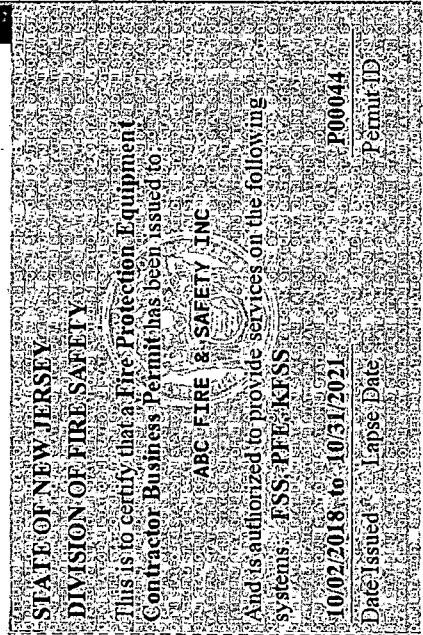
Fire Protection Equipment Contractor Business Permit

In The Following Fire Protection Areas:

Fire Sprinkler System
Portable Fire Extinguisher
Kitchen Fire Suppression System

P00044 10/02/2018 to 10/31/2021
Permit ID Date Issued Lapse Date

Sheila Y. Oliver
Commissioner



PLEASE DETACH HERE

Fire Protection System Abbreviation Key:
AFPES-All Fire Protection Equipment Systems
FSS-Fire Sprinkler System
SHFSS-Special Hazard Fire Suppression System
FAS-Fire Alarm System
PFE-Portable Fire Extinguisher
KFSS-Kitchen Fire Suppression System

PLEASE DETACH HERE

PJH

FIRE SPRINKLER DESIGN, L.L.C.

450 High Street
Long Branch, NJ 07740
Telephone: 732-440-4657
Facsimile: 732-440-4658
Website: pjhfiresprinklerdesign.com



HYDRAULIC CALCULATIONS

CONTRACTOR:

**ABC FIRE & SAFETY INC.
750 FAIRFIELD AVENUE
KENILWORTH, NJ 07033**

PROJECT:

**OCEAN MEDICAL CENTER
425 JACK MARTIN BOULEVARD
BRICK, NJ 08724**

CONTRACT NO: FS19-0018 DATE: 02-14-2019

DESIGN DATA: CALCULATION #1

AREA: EXISTING AMBULANCE CANOPY

HAZARD: LIGHT

OCCUPANCY: INSTITUTIONAL

DENSITY: .01 GPM/FT. 1,950 SQ. FT.

**AREA INCREASED BY 30% AS PER NFPA #13
2013 FOR DRY SYSTEM**

NO. SPRINKLERS CALCULATED: 19

MAX AREA PER SPRINKLER: 225 SQ. FT.

HOSE ALLOWANCE: 100 GPM

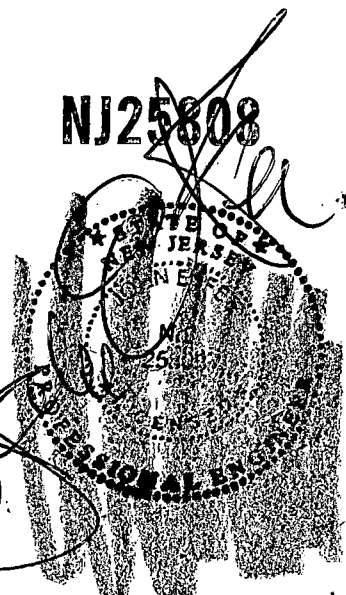
TOTAL WATER REQUIRED: 552.687 GPM

TOTAL PRESSURE REQUIRED: 160.028 PSI

SAFETY FACTOR: 13.29 PSI

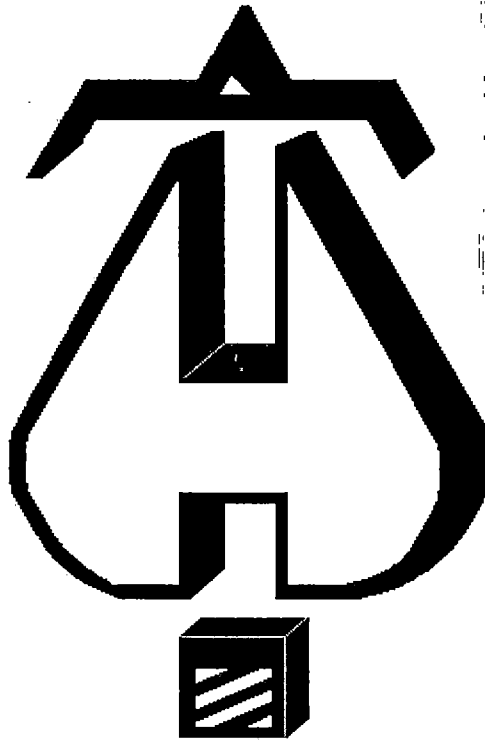
NJ25808

FEB 14 2019





100-100000



... Fire Protection by Computer Design

ABC Fire & Safety Inc.
750 Fairfield Avenue
Kenilworth, NJ 07033
908-259-9200

Job Name : Ocean Medical Center
Building : Existing Emergency & Ambulance Canopies
Location : 425 Jack Martin Boulevard, Brick, NJ 08724
System : Existing
Contract : FS19-0018
Data File : FS19-0018 Ocean Medical Center Submittal 02-14-2019 Area 1.W

Hydraulic Design Information Sheet

Name - Ocean Medical Center Date - 02-14-2018
Location - 425 Jack Martin Boulevard, Brick, NJ 08724
Building - Existing Emergency & Ambulance Canopies System No. - Existing
Contractor - ABC Fire & Safety Inc. Contract No. - FS19-0018
Calculated By - PJH Fire Sprinkler Design, L.L.C. Drawing No. - FS-1
Construction: () Combustible (X) Non-Combustible Ceiling Height - 23'-4"
Occupancy - Institutional

S (X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. () 1 () 2 () 3 () Ex.Haz.
Y () NFPA 231 () NFPA 231C () Figure Curve

S Other

T Specific Ruling Made By Date

M	Area of Sprinkler Operation - 1950 Sq F	System Type	Sprinkler/Nozzle
	Density - 0.10	() Wet	Make Tyco
D	Area Per Sprinkler - Varies	(X) Dry	Model TY3535
E	Elevation at Highest Outlet - Na	() Deluge	Size 1"
S	Hose Allowance - Inside - Na	() Preaction	K-Factor 5.6
I	Rack Sprinkler Allowance - Na	() Other	Temp.Rat.155°
G	Hose Allowance - Outside - 100 gpm		

N
Note

Calculation Flow Required - 552.687 Press Required - 160.028
Summary C-Factor Used: 100 Overhead Underground

W	Water Flow Test:	Pump Data:	Tank or Reservoir:
A	Date of Test -		Cap. -
T	Time of Test -	Rated Cap.-	Elev.-
E	Static Press -	@ Press -	
R	Residual Press -	Elev. -	Well
	Flow -		Proof Flow
S	Elevation -		

U Location -

P
L Source of Information -
Y

C	Commodity	Class	Location
O	Storage Ht.	Area	Aisle W.
M	Storage Method: Solid Piled	% Palletized	% Rack
M	() Single Row () Conven. Pallet () Auto. Storage () Encap.		
S	() Double Row () Slave Pallet () Solid Shelf () Non		
T	() Mult. Row () Open Shelf		
O			
R	Flue Spacing	Clearance:Storage to Ceiling	
A	Longitudinal	Transverse	
G			
E	Horizontal Barriers Provided:		

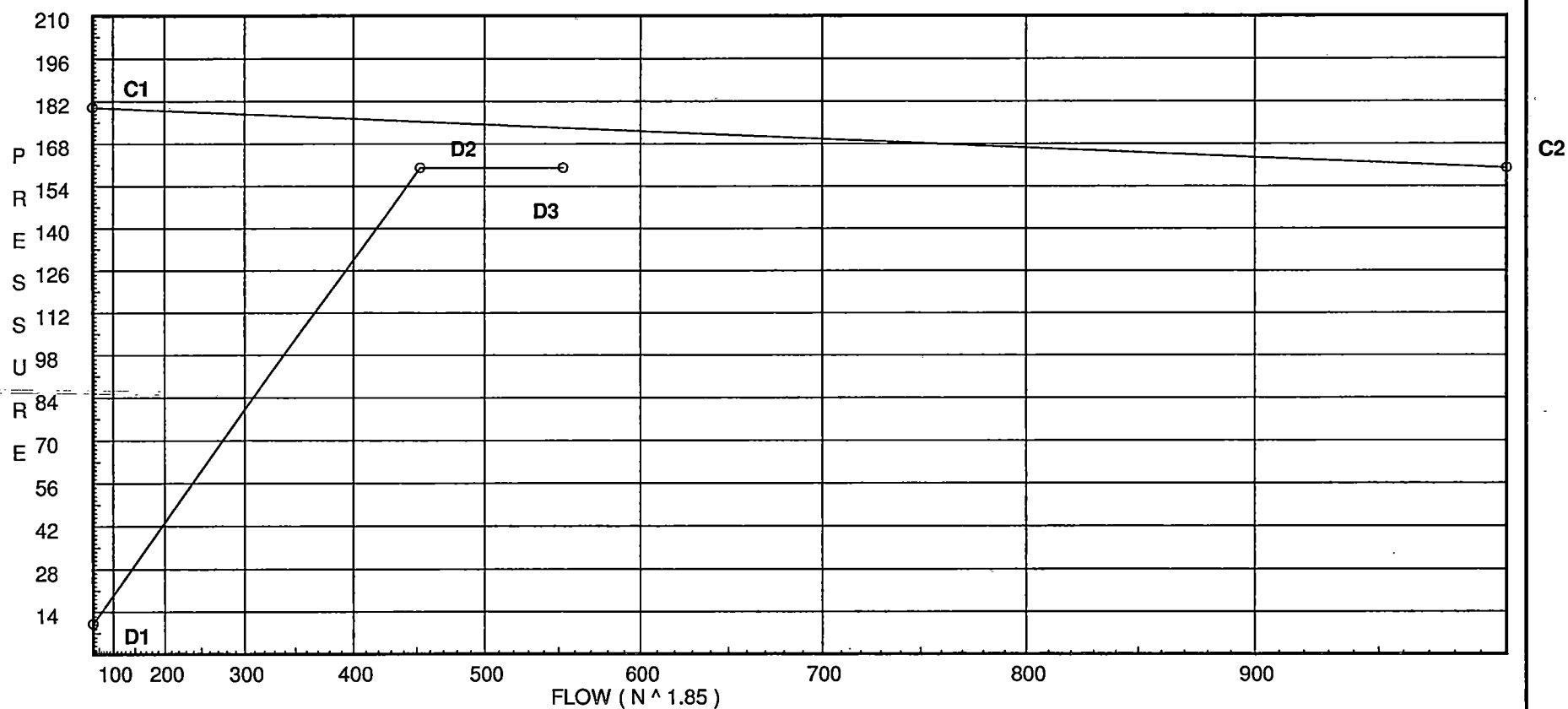
Water Supply Curve C

ABC Fire & Safety Inc.
Ocean Medical Center

Page 2
Date 02-14-2019

City Water Supply:
C1 - Static Pressure : 180
C2 - Residual Pressure: 160
C2 - Residual Flow : 1000

Demand:
D1 - Elevation : 10.104
D2 - System Flow : 452.687
D2 - System Pressure : 160.028
Hose (Demand) : 100
D3 - System Demand : 552.687
Safety Margin : 13.295



Fittings Used Summary

ABC Fire & Safety Inc.
Ocean Medical Center

Page 3
Date 02-14-2019

Fitting Legend

Abbrev.	Name	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24
B	NFPA 13 Butterfly Valve	0	0	0	0	0	6	7	10	0	12	9	10	12	19	21	0	0	0	0	0
Dvc	Dry Vic 768 NXT					3	9	8	17		21		22	50							
E	NFPA 13 90° Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
T	NFPA 13 90° Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121

Units Summary

Diameter Units Inches
Length Units Feet
Flow Units US Gallons per Minute
Pressure Units Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

Flow Summary - NFPA 2007

ABC Fire & Safety Inc.
Ocean Medical Center

Page 4
Date 02-14-2019

SUPPLY ANALYSIS

<i>Node at Source</i>	<i>Static Pressure</i>	<i>Residual Pressure</i>	<i>Flow</i>	<i>Available Pressure</i>	<i>Total Demand</i>	<i>Required Pressure</i>
DR2	180.0	160	1000.0	173.322	552.69	160.028

NODE ANALYSIS

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
100	23.33	5.6	11.03	18.6	
101	26.0		10.53		
102	26.0		11.2		
103	26.0		11.52		
104	26.0		12.7		
105	26.0		15.28		
106	26.0		19.69		
107	26.0		25.29		
108	26.0		28.95		
109	26.0		35.1		
DR2	0.0		160.03	100.0	
110	23.33	5.6	11.32	18.84	
111	26.0		10.84		
112	23.33	5.6	12.38	19.71	
113	26.0		11.95		
114	23.33	5.6	14.7	21.47	
115	26.0		14.4		
116	23.33	5.6	18.69	24.21	
117	26.0		18.6		
118	23.33	5.6	22.93	26.82	
119	26.0		23.06		
120	26.0		24.38		
121	26.0		24.61		
122	26.0		24.42		
123	23.33	5.6	12.71	19.96	
124	26.0		12.3		
125	26.0		13.07		
126	26.0		13.43		
127	26.0		14.78		
128	26.0		17.72		
129	26.0		23.0		
130	23.33	5.6	13.04	20.22	
131	26.0		12.65		
132	23.33	5.6	14.25	21.14	
133	26.0		13.92		
134	23.33	5.6	16.9	23.02	
135	26.0		16.72		
136	23.33	5.6	21.68	26.07	
137	26.0		21.74		
138	23.33	5.6	26.13	28.63	
139	26.0		26.43		
140	26.0		27.92		

Flow Summary - NFPA 2007

ABC Fire & Safety Inc.
Ocean Medical Center

Page 5
Date 02-14-2019

NODE ANALYSIS (cont.)

<i>Node Tag</i>	<i>Elevation</i>	<i>Node Type</i>	<i>Pressure at Node</i>	<i>Discharge at Node</i>	<i>Notes</i>
141	23.33	5.6	19.97	25.02	
142	26.0		19.94		
143	23.33	5.6	20.71	25.49	
144	26.0		20.72		
145	26.0		21.94		
146	26.0		22.84		
147	23.33	5.6	21.52	25.98	
148	26.0		21.58		
149	23.33	5.6	18.52	24.1	
150	26.0		18.42		
151	26.0		18.96		
152	26.0		21.91		
153	23.33	5.6	20.69	25.47	
154	26.0		20.7		
155	23.33	5.6	22.37	26.49	
156	26.0		22.47		
157	26.0		23.77		
158	23.33	5.6	31.52	31.44	
159	26.0		32.09		
160	26.0		33.88		

EOÓ

ABC Fire & Safety Inc.
Ocean Medical Center

Page 6
Date 02-14-2019

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
100 to 101	23.33 26	5.60	18.60 18.6	1 1.049	E	1.427 0.0	2.670 1.427	100 0.1594	11.032 -1.156			
101 to 102	26 26		0.0 18.6	1 1.049	T	3.568 0.0	0.650 3.568	100 0.1593	10.529 0.0	Vel = 6.90		
102 to 103	26 26		0.0 18.6	1.25 1.442		0.0 0.0	9.540 0.0	100 0.0339	11.201 0.0	Vel = 6.90		
103 to 104	26 26		18.6 18.84	1.442 1.25		0.0 0.0	9.540 0.0	0.0339 100	0.323 11.524	Vel = 3.65		
104 to 105	26 26		37.44 19.71	1.442 1.25		0.0 0.0	9.540 0.0	0.1235 100	1.178 12.702	Vel = 7.36		
105 to 106	26 26		57.15 21.47	1.442 1.25		0.0 0.0	9.530 0.0	0.2701 100	2.574 15.276	Vel = 11.23		
106 to 107	26 26		78.62 24.21	1.442 1.25	T	0.0 0.0	9.060 5.304	0.4872 100	4.414 19.690	Vel = 15.45		
107 to 108	26 26		102.83 179.36	1.442 2.5		0.0 0.0	6.994 13.300	0.8007 100	5.600 25.290	Vel = 20.20		
108 to 109	26 26		282.19 139.05	2.635 2.5		0.0 0.0	13.300 10.650	0.2750 100	3.658 28.948	Vel = 16.60		
109 to DR2	26 0		421.24 31.45	2.635 2.5		0.0 35.273	10.650 122.410	0.5773 100	6.148 35.096	Vel = 24.78		
DR2			452.69	2.635	Dvc	7.838	172.381	0.6594	113.671	Vel = 26.63		
DR2			100.00 552.69						160.028	Qa = 100.00 K Factor = 43.69		
110 to 111	23.33 26	5.60	18.84 18.84	1 1.049	E	1.427 0.0	2.670 1.427	100 0.1630	11.323 -1.156			
111 to 103	26 26		0.0 18.84	1 1.049	T	3.568 0.0	0.650 3.568	100 0.1633	10.835 0.0	Vel = 6.99		
103			0.0 18.84						11.524	K Factor = 5.55		
112 to 113	23.33 26	5.60	19.71 19.71	1 1.049	E	1.427 0.0	2.670 4.097	100 0.1772	12.384 -1.156			
113 to 104	26 26		0.0 19.71	1 1.049	T	3.568 0.0	0.650 3.568	100 0.1773	11.954 0.0	Vel = 7.32		
104			0.0 19.71						0.748	Vel = 7.32		
104									12.702	K Factor = 5.53		

Final Calculations - Hazen-Williams

ABC Fire & Safety Inc.
Ocean Medical Center

Page 7
Date 02-14-2019

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
114 to 115	23.33 26	5.60	21.47 21.47	1 1.049	E	1.427 0.0	2.670 1.427	100	14.703 -1.156			
						0.0	4.097	0.2080	0.852	Vel =	7.97	
115 to 105	26 26		0.0 21.47	1 1.049	T	3.568 0.0	0.650 3.568	100	14.399 0.0			
						0.0	4.218	0.2079	0.877	Vel =	7.97	
105			0.0 21.47						15.276	K Factor =	5.49	
116 to 117	23.33 26	5.60	24.21 24.21	1 1.049	E	1.427 0.0	2.670 1.427	100	18.688 -1.156			
						0.0	4.097	0.2597	1.064	Vel =	8.99	
117 to 106	26 26		0.0 24.21	1 1.049	T	3.568 0.0	0.650 3.568	100	18.596 0.0			
						0.0	4.218	0.2594	1.094	Vel =	8.99	
106			0.0 24.21						19.690	K Factor =	5.46	
118 to 119	23.33 26	5.60	26.82 26.82	1 1.049	E	1.427 0.0	2.670 1.427	100	22.930 -1.156			
						0.0	4.097	0.3136	1.285	Vel =	9.96	
119 to 120	26 26		0.0 26.82	1 1.049	T	3.568 0.0	0.650 3.568	100	23.059 0.0			
						0.0	4.218	0.3137	1.323	Vel =	9.96	
120 to 107	26 26		0.0 26.82	1.25 1.442	T	5.304 0.0	8.320 5.304	100	24.382 0.0			
						0.0	13.624	0.0666	0.908	Vel =	5.27	
107 to 121	26 26		-179.37 -152.55	2.5 2.635		0.0 0.0	7.660 0.0	100	25.290 0.0			
						0.0	7.660	-0.0881	-0.675	Vel =	8.98	
121 to 122	26 26		76.06 -76.49	2.5 2.635		0.0 0.0	7.980 7.980	100	24.615 0.0			
						0.0	7.980	-0.0247	-0.197	Vel =	4.50	
122			0.0 -76.49						24.418	K Factor =	-15.48	
123 to 124	23.33 26	5.60	19.96 19.96	1 1.049	E	1.427 0.0	2.670 1.427	100	12.709 -1.156			
						0.0	4.097	0.1818	0.745	Vel =	7.41	
124 to 125	26 26		0.0 19.96	1 1.049	T	3.568 0.0	0.660 3.568	100	12.298 0.0			
						0.0	4.228	0.1816	0.768	Vel =	7.41	
125 to 126	26 26		0.0 19.96	1.25 1.442		0.0 0.0	9.540 9.540	100	13.066 0.0			
						0.0	9.540	0.0386	0.368	Vel =	3.92	
126 to 127	26 26		20.23 40.19	1.25 1.442		0.0 0.0	9.540 9.540	100	13.434 0.0			
						0.0	9.540	0.1408	1.343	Vel =	7.90	
127 to 128	26 26		21.14 61.33	1.25 1.442		0.0 0.0	9.550 9.550	100	14.777 0.0			
						0.0	9.550	0.3077	2.939	Vel =	12.05	

Final Calculations - Hazen-Williams

ABC Fire & Safety Inc.
Ocean Medical Center

Page 8
Date 02-14-2019

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
128 to 129	26 26		23.02 84.35	1.25 1.442		0.0 0.0	9.520 9.520	100 0.5549	17.716 0.0 5.283		Vel = 16.57	
129 to 108	26 26		26.07 110.42	1.25 1.442	T	5.304 0.0	1.210 5.304 6.514	100 0.9133	22.999 0.0 5.949		Vel = 21.69	
108			0.0 110.42						28.948		K Factor = 20.52	
130 to 131	23.33 26	5.60	20.22	1	E	1.427 0.0	2.670 1.427 4.097	100	13.041 -1.156 0.762		Vel = 7.51	
131 to 126	26 26		0.0 20.22	1 1.049	T	3.568 0.0	0.660 3.568 4.228	100 0.1861	12.647 0.0 0.787		Vel = 7.51	
126			0.0 20.22						13.434		K Factor = 5.52	
132 to 133	23.33 26	5.60	21.14	1	E	1.427 0.0	2.670 1.427 4.097	100	14.252 -1.156 0.827		Vel = 7.85	
133 to 127	26 26		0.0 21.14	1 1.049	T	3.568 0.0	0.660 3.568 4.228	100 0.2020	13.923 0.0 0.854		Vel = 7.85	
127			0.0 21.14						14.777		K Factor = 5.50	
134 to 135	23.33 26	5.60	23.02	1	E	1.427 0.0	2.670 1.427 4.097	100	16.903 -1.156 0.969		Vel = 8.55	
135 to 128	26 26		0.0 23.02	1 1.049	T	3.568 0.0	0.660 3.568 4.228	100 0.2365	16.716 0.0 1.000		Vel = 8.55	
128			0.0 23.02						17.716		K Factor = 5.47	
136 to 137	23.33 26	5.60	26.07	1	E	1.427 0.0	2.670 1.427 4.097	100	21.676 -1.156 1.220		Vel = 9.68	
137 to 129	26 26		0.0 26.07	1 1.049	T	3.568 0.0	0.660 3.568 4.228	100 0.2978	21.740 0.0 1.259		Vel = 9.68	
129			0.0 26.07						22.999		K Factor = 5.44	
138 to 139	23.33 26	5.60	28.63	1	E	1.427 0.0	2.670 1.427 4.097	100	26.133 -1.156 1.450		Vel = 10.63	
139 to 140	26 26		0.0 28.63	1 1.049	T	3.568 0.0	0.660 3.568 4.228	100 0.3541	26.427 0.0 1.497		Vel = 10.63	
140 to 108	26 26		0.0 28.63	1.25 1.442	T	5.304 0.0	8.330 5.304 13.634	100 0.0751	27.924 0.0 1.024		Vel = 5.62	

Final Calculations - Hazen-Williams

ABC Fire & Safety Inc.
Ocean Medical Center

Page 9
Date 02-14-2019

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
108			0.0 28.63						28.948		K Factor = 5.32	
141 to 142	23.33 26	5.60	25.02	1	E	1.427 0.0	2.670 1.427	100	19.966 -1.156			
142 to 122	26 26		25.02	1.049		0.0	4.097	0.2761	1.131		Vel = 9.29	
142 to 122	26 26		0.0	1	E T	1.427 3.568	11.230 4.995	100	19.941 0.0			
122			25.02	1.049		0.0	16.225	0.2759	4.477		Vel = 9.29	
122			0.0 25.02						24.418		K Factor = 5.06	
143 to 144	23.33 26	5.60	25.49	1	E	1.427 0.0	2.670 1.427	100	20.711 -1.156			
144 to 145	26 26		25.49	1.049		0.0	4.097	0.2853	1.169		Vel = 9.46	
144 to 145	26 26		0.0	1	T	3.568 0.0	0.690 3.568	100	20.724 0.0			
145 to 146	26 26		25.49	1.049		0.0	4.258	0.2856	1.216		Vel = 9.46	
145 to 146	26 26		0.0	1.25		0.0	11.970 0.0	100	21.940 0.0			
146 to 122	26 26		25.49	1.38		0.0	11.970	0.0751	0.899		Vel = 5.47	
146 to 122	26 26		25.98	1.25	T	4.282 0.0	1.450 4.282	100	22.839 0.0			
122			51.47	1.38		0.0	5.732	0.2755	1.579		Vel = 11.04	
122			0.0 51.47						24.418		K Factor = 10.42	
147 to 148	23.33 26	5.60	25.98	1	E	1.427 0.0	2.670 1.427	100	21.524 -1.156			
148 to 146	26 26		25.98	1.049		0.0	4.097	0.2956	1.211		Vel = 9.64	
148 to 146	26 26		0.0	1	T	3.568 0.0	0.690 3.568	100	21.579 0.0			
146			25.98	1.049		0.0	4.258	0.2959	1.260		Vel = 9.64	
146			0.0 25.98						22.839		K Factor = 5.44	
149 to 150	23.33 26	5.60	24.10	1	E	1.427 0.0	2.670 1.427	100	18.525 -1.156			
150 to 151	26 26		24.1	1.049		0.0	4.097	0.2575	1.055		Vel = 8.95	
150 to 151	26 26		0.0	1	E	1.427 0.0	0.670 1.427	100	18.424 0.0			
151 to 152	26 26		24.1	1.049		0.0	2.097	0.2575	0.540		Vel = 8.95	
151 to 152	26 26		0.0	1		0.0	11.430 0.0	100	18.964 0.0			
152 to 121	26 26		24.1	1.049		0.0	11.430	0.2575	2.943		Vel = 8.95	
152 to 121	26 26		25.47	1.25	T	4.282 0.0	6.250 4.282	100	21.907 0.0			
121			49.57	1.38		0.0	10.532	0.2571	2.708		Vel = 10.63	
121			0.0 49.57						24.615		K Factor = 9.99	
153 to 154	23.33 26	5.60	25.47	1	E	1.427 0.0	2.670 1.427	100	20.686 -1.156			
154			25.47	1.049		0.0	4.097	0.2851	1.168		Vel = 9.46	

Final Calculations - Hazen-Williams

ABC Fire & Safety Inc.
Ocean Medical Center

Page 10
Date 02-14-2019

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqv.	Ln.	Pipe Ftng's Total	CFact Pf/Ft	Pt Pe Pf	*****	Notes	*****
154 to 152	26 26		0.0 25.47	1 1.049	T	3.568 0.0	0.670 3.568	100 0.2853	20.698 0.0			
						0.0	4.238		1.209	Vel =	9.46	
152			0.0 25.47						21.907	K Factor =	5.44	
155 to 156	23.33 26	5.60	26.49	1 1.049	E	1.427 0.0	2.670 1.427	100	22.368 -1.156			
						0.0	4.097	0.3066	1.256	Vel =	9.83	
156 to 157	26 26		0.0 26.49	1 1.049	T	3.568 0.0	0.670 3.568	100	22.468 0.0			
						0.0	4.238	0.3065	1.299	Vel =	9.83	
157 to 121	26 26		0.0 26.49	1.25 1.442	T	5.304 0.0	7.720 5.304	100	23.767 0.0			
						0.0	13.024	0.0651	0.848	Vel =	5.20	
121			0.0 26.49						24.615	K Factor =	5.34	
158 to 159	23.33 26	5.60	31.44	1 1.049	E	1.427 0.0	2.670 1.427	100	31.523 -1.156			
						0.0	4.097	0.4210	1.725	Vel =	11.67	
159 to 160	26 26		0.0 31.44	1 1.049	T	3.568 0.0	0.670 3.568	100	32.092 0.0			
						0.0	4.238	0.4212	1.785	Vel =	11.67	
160 to 109	26 26		0.0 31.44	1.25 1.442	T	5.304 0.0	8.330 5.304	100	33.877 0.0			
						0.0	13.634	0.0894	1.219	Vel =	6.18	
109			0.0 31.44						35.096	K Factor =	5.31	