

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(e)1.vii:

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. 5:32-2.15(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 _____

Address _____

Telephone (_____) _____

Signature _____

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

OFFICE DATE RECEIVED: _____

VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Zoning Officer									
☐ Planning Board									
☐ Zoning Board									
☐ Sewer Authority									
☐ Water Authority									
☐ Police Department									
☐ Health Department									
☐ Soil Conservation									
☐ N.J. Department of Community Affairs									
☐ N.J. Department of Transportation									
☐ N.J. Department of Environmental Protection									
☐ Utility Dig No.									
☐									
☐									

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional)

Name of Code & Edition	Name of Code & Edition	Other
Building _____	Energy _____	
Electrical _____	Barrier Free _____	
Plumbing _____	Flood Hazard _____	
Fire Protection _____	As Built Elevation Cert. _____	
Mechanical _____	Other _____	

X. CERTIFICATES ISSUED (office use only)

	DATE ISSUED	DATE EXPIRED	DATE REISSUED	DATE EXPIRED
☐ Temporary Certificate of Occupancy	No. _____	_____	_____	_____
☐ Temporary Certificate of Compliance	No. _____	_____	_____	_____
☐ Continued Certificate of Occupancy	No. _____	_____	_____	_____
☐ Certificate of Compliance	No. _____	_____	_____	_____
☒ Certificate of Occupancy	No. <u>3433</u>	<u>2/22/00</u>	_____	_____
☒ Certificate of Approval	No. _____	_____	_____	_____
☐ Lead Abatement Clearance Certificate	No. _____	_____	_____	_____

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

Date Issued 02/22/2000
Control #
Permit # 99-3433.3

IDENTIFICATION

UCC NEW JERSEY
CERTIFICATE

Block 701 Lot 7 Qual
Work Site Location 644 Rt 70 NEW KOHL'S
TENANT FIT UP
Owner in Fee/Occupant LANIHORPE ENTERPRISES-KOHL'S
Address PARK 80 H. PLAZA II
SADDLE BROOK, NJ 07663-
Telephone () -
Contractor JAYEF CONSTRUCTION
Address 35 COLBY AVE.
MANASQUAN, NJ 08736-
Telephone (908)223-5320 Fax ()
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. 22-2797171

Home Warranty No. N/A
Type of Warranty Plan: ☐ State ☒ Private
Use Group M
Maximum Live Load 0
Construction Classification
Maximum Occupancy Load 0
Description of Work/Use:

TENANT FIT UP
OLD CALDOR TO NEW KOHL'S

☐ 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 that was visible at the time of inspection.

☐ TEMPORARY CERTIFICATE OF OCCUPANCY/COMPLIANCE
If this is a Temporary Certificate of Occupancy or Compliance, the following conditions must be met no later than , or the owner will be subject to fine or order to vacate:

☐ CERTIFICATE OF CLEARANCE - LEAD ABATEMENT 5:17

This serves notice that based on written certification, lead abatement was performed as per N.J.A.C. 5:17, 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 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.

☐ 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 , .

CONSTRUCTION OFFICIAL
U.C.C. Form (rev. 3/96)

Fee \$ 0
Paid ☒ Check No. 46911
Collected by: CS

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
PERMIT UPDATE

IDENTIFICATION Block 701 Lot 7 Qual

Work Site Location 644 RT 70 NEW KOHL'S
FIRE SPRINKLER SYSTEM
Owner in Fee LANIHORPE ENTERPRISES-KOHL'S
Address PARK 80 W. PLAZA II
SADDLE BROOK, NJ 07663-
Telephone () -

Contractor RG SOLOMON FIRE PROTECTION
Address ROYAL CT I-15
SPRING LAKE HEIGHTS, NJ 07762-
Telephone (732) 449-8208
Lic. No. or Bldrs. Reg. No.
Federal Emp. No. 22-3496080

Is hereby granted permission to perform the following work:
[] BUILDING [] PLUMBING [] LEAD HAZARD ABATEMENT
[] ELECTRICAL [X] FIRE PROTECTION [] DEMOLITION
[] ELEVATOR DEVICES [] ASBESTOS ABATEMENT [] OTHER
(Subchapter 8 only)
DESCRIPTION OF WORK:
NEW SPRINKLER SYSTEM FROM THE EXISTING RISER
THE OLD CALDOR STORE

Estimated Cost of Work \$ 70,000

Construction Official
U.C.C. FISC (rev. 3/88)

09/30/99
Date

0002
993433**

BLOCK	701 #	0.00
LOT	7 #	0.00
FIRE		878.00
TOTAL		878.00
CHECK		878.00
CHANGE		0.00

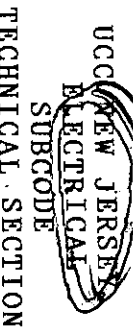
09/30/99 NO. 5 0014A005 10:19

Update Issued 09/30/99
Control # 99-3433+A
Permit # 99-3433+A
Permit Issued 09/09/99

PAYMENTS (Office Use Only)
Building 0
Electrical 0
Plumbing 0
Fire Protection 822
Elevator Devices 0
Other 0
DCA Training Fee 56
Cert. of Occupancy 0
Other 0
Total 878
Check No. 2776
Cash
Collected By HP

Donnell
Tapp
1100
Submitted 5-6-99
From

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS



Date Received 12/10/99
Date Issued ~~04/04/04~~
Control # 12-15-99
Permit # 99-34333+F

TECHNICAL SECTION

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

2. TECHNICAL SITE DATA

FBE (Office Use Only)

Block 701 Lot 7 Qual
Work Site Location 644 RT 70 NEW KOHLS
COMMUNICATION POINTS

NO. SIZE
Lighting Fixtures
Receptacles
Switches
Detectors
Light Poles
Motors-Frac HP
Emergency & Exit Lights
Communications Points
Alarm Devices/F.A.C. Panel
TOTAL NUMBERS

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S
Address PARK 80 W. PLAZA II
SADDLE BROOK, NJ 07663
Tele (610)391-0297 Fax ()
Contractor ACE ELECTRIC INC
Address 3939 KORESWORTH ST
ALBANY, PA 15104
Tele (610)391-0297
Lic. No. or Bids. Reg. No. BB-0939
Federal Emp. No. 23-2820366

Pool Permit/With UV Lights
Storable Pool/Spa/Hot Tub
KW Elect Range/Receptacle
KW Oven/Surface Unit
KW Elect Water Heater
KW Elect Dryer/Receptacle
KW Dishwasher
HP Garbage Disposal
KW Central A/C Unit
HP/KW Space Heater/Air Handler
Baseboard Heat
HP Motors 1/2 HP
KW Transformer/Generator
AMP Service
AMP Subpanels
AMP Motor Control Center
KW Elect Sign/Outline Light
Other
Other

B. ELECTRICAL CHARACTERISTICS

Use Group - Present Proposed
☐ Pole/Pad ☐ Temporary ☐ Other
Building Occupied as Utility Co.
Estimated Cost of Electrical Work \$ 3,200

INSPECTIONS
Type Failure Failure Approval Initial
Rough
Temp Serv
Const Serv
TCO
Other
Service
Final
Temp. Cut-in-Card Date Issued
Final Cut-in-Card Date Issued

JOB SUMMARY (Office Use Only)

PLAN REVIEW

☒ No Plans Required
Joint Plan Review Required:

☐ Bid ☐ Plumb
☐ Fire ☐ Elevator
☐ Elec Plans Approved
Date: 12-15-99

Approved By: [Signature]
SUGCODE APPROVAL
[] CO [] CCO [] JCA
Date: 2-1-00
Approved By: [Signature]

C. CERTIFICATION IN LIEU OF OATH
I hereby certify that I am the (agent of) owner of record and an authorized
to make this application and perform the work listed on this application.

Administrative Surcharge \$
Minimum Fee \$
TOTAL FEE \$
DCA Training Fee \$

Applicant's Signature/Contractor's Seal and Signature
☐ Licensed Electrical Contractor ☐ Exempt Applicant

U.C.C. #120 (rev. 3/96)

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 09/24/99
Date Issued 01/01/54
Control #
Permit # 99-3433+A

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

Block 701 Lot 7 Qual
Work Site Location 644 RT 70 NEW KOHLS

FIRE SPRINKLER SYSTEM

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S
Address PARK 80 W. PLAZA II
SADDLE BROOK, NJ 07663-

Tele. (732) 449-8208 Fax ()
Contractor RG SOLOMON FIRE PROTECTION

Address ROYAL CT I-15
SPRING LAKE HEIGHTS, NJ 07762-

Tele. (732) 449-8208
Lic. No. or Bldgs. Reg. No.

Federal Bnp. No. 22-3496080

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed H
Construct Class Present Proposed
Heating Systems [] New [] Existing [] HVAC
Type: [] Gas [] Oil [] Electric [] Solar
[] Other

Location:
Total Net Cost of Fire Prot Work \$ 70,000

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[] No Plans Required
Joint Plan Review Required:

[] Bldg [] Elect
[] Plumb [] Elevator
Fire Plans Approved

Date: 9/20/99
Approved By: [Signature]

SUBCODE APPROVAL
[] CO [] GCO [] CA

Date:
Approved By:

INSPECTIONS

Type Alarm Sys
Failure Failure Approval Initial

Suppr Test
Standpipe
Fire Pump
Prebng Sys
Mechanical
Smoke Ctl
FCO
Final
Other

Dates (Month/Day)

Initial

D. TECHNICAL SITE DATA

Description of Work:

Water Supply Source
Method of Alarm/Suppr Sys Suppr

Storage Tanks

Type: [] Flammable Liquid [] Combust Liquid
[] LPG [] LHG Capacity 0 Fuel
Alarm Systems [] 110V Interconnected NUMBER

[] System

Alarm Devices (smoke, heat, pulls, water/flow) 0
Supervisory Devices (tamper, low/high air) 0
Signalling Devices (horn/strobes, bells) 0
Other Devices 0

TOTAL 0

Suppression Systems

Fire Pump 0 GPM Type
Dry Pipe/Alarm Valves 0
Pre-action Valves 0
Sprinkler Heads (Dry and Wet) 512
Standpipes 0

Pre-Engineered Systems
Wet Chemical 0
Dry Chemical 0
CO2 Suppression 0
Foam Suppression 0
Halon Suppression 0
Other 0

Kitchen Hood Exhaust System 0
Smoke Control System 0
Gas [] or Oil [] Fired Appliances 0
Other 0
Other 0

Administrative Surcharge \$ 0
Paid [] Check # \$ 0
Minimum Fee \$ 0
TOTAL FEE \$ 872
Collected by: \$ 56
OCA Training Fee \$ 56

FEE (Office Use Only)

Signature

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
BUILDING
SUBCODE
TECHNICAL SECTION

Date Received 08/11/99
Date Issued 9/19/99
Control # C127
Permit # 99-3433

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

Block 701 Lot 1 Quad
Work Site Location 644 RT 70 NEW KOHL'S

TENANT FIT UP

Owner: Lee LANTHOPE ENTERPRISES-KOHL'S

Address: PARK 80 W. PLAZA 11

SADDLE BROOK, NJ 07663-

Telephone: ()

Contractor: JAEF CONSTRUCTION

Address: 35 COLBI AVE.

MANASSAQUAN, NJ 08736-

Telephone: (908) 223-3320 Fax: ()

Lic. No. of Bldgs. Reg. No.

Federal Emp. No. 22-2797171

COMMERCIAL

D. TECHNICAL SITE DATA
DESCRIPTION OF WORK
TENANT FIT UP
OLD CALDON TO NEW KOHL'S

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.

Signature

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial

☐ No Plans Req.

☒ All 9-8-99 FMD

☐ Footing

☐ Foundation

☐ Frame

☐ Other

Joint Plan Review Required:

☐ Elect ☐ Plumb ☐ Fire

SUBCODE APPROVAL ☐ Elev

☐ CO ☐ CCO ☒ XCA

Date: 2-8-00

Approved by: FMD

INSPECTIONS

Type

Footing

Foundation

Slab

Frame

BarrierFree

Insulation

Finishes

Energy

Mechanical

TCO

Other

Final

BarrierFree

Dates (Month/Day)

Failure Failure Approval Initial

Foundation 10-1-99 JC

Slab 10-1-99 JC

Frame 10-1-99 JC

BarrierFree 10-1-99 JC

Insulation 10-1-99 JC

Finishes 10-1-99 JC

Energy 10-1-99 JC

Mechanical 10-1-99 JC

TCO 10-1-99 JC

Other 10-1-99 JC

Final 10-1-99 JC

BarrierFree 10-1-99 JC

FEE (Office Use Only)

32.50

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

0

☐ Demolition

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Est. Cost of Bldg. Work:

1. New Bldg. \$ 1,300,000

2. Alteration \$ 1,300,000

3. Total (1+2) \$ 1,300,000

Industrialized Building:

☐ State Approved

☐ HUD

Administrative Surcharge

Minimum Fee

TOTAL FEE

U.C.C. F110 (rev. 3/96)

9/17/99 Demo

10/4/99 Fm Frame OA 2 & insulate ext walls

10-7-99 Footing unreinforced S 1/3

10-8-99 4-pick Footing

10-12-99 partial Office Frame & ceiling

10-13-99 Footings at Front entry

11-5-99 Front entry curtain w/4 metal studs

11-5-99 Front entry New Footing in
Old entry area

12-15-99 lite gauge metal Framing Above
Old entry Area & ceiling wires
in store Area

COMMERCE

RECEIVED
2000
FBI
DEC 15 1999

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
BUILDING
SUBCODE
TECHNICAL SECTION

Date Received 08/26/99
Date Issued 9/12/99
Control # C31-71
Permit # 99-3342

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

Block 701 Lot 7 Qual
Work Site Location 644 ROUTE 70 - KOHL'S

TEMP TRAILER

Owner in Fee VORNADO REALTY TRUST

Address PARK 80 WEST PLAZA II

SADDLE BROOK, NJ 07663-

Tele. (201) 587-1000

Contractor JAVEFF CONSTRUCTION

Address 35 COLBY AVE

MANASQUAN, NJ 08736-

Tele. (732) 223-5320 Fax (732) 223-6080

Lic. No. or Bldgs. Reg. No.

Federal Emp. No. 22-279711

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial

☒ No Plans Req'd 9-19-99 PM

☐ All

☐ Footing

☐ Foundation

☐ Frame

☐ Other

Joint Plan Review Required:

☐ Elect ☐ Plumb ☐ Fire

SUBCODE APPROVAL ☐ Elev

☐ CO ☐ CCO ☐ CA

Date:

Approved By:

INSPECTIONS

Dates (Month/Day)
Failure Failure Approval Initial

Type

Footing

Foundation

Slab

Frame

BarrierFree

Insulation

Finishes

Energy

Mechanical

TCO TFE Door

Other

Final

BarrierFree

COMMERCIAL

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.

Signature

D. TECHNICAL SITE DATA
DESCRIPTION OF WORK

TEMP TRAILER 50X12 FOR KOHL'S STORE (THE OLD CALDOR STORE)
ACTUAL JOB COST \$3,146.00

① MUST BE Anchored.

② Removed AT completion of 0813
FOR C.O.

FEES (Office Use Only)

\$

TYPE OF WORK

☐ New Building

☐ Addition

☒ Alteration

☐ Roofing

☐ Siding

☐ Fence

☐ Sign

☐ Pool

☐ Asbestos Abatement Subchapter 8

☐ Lead Haz. Abatement MAC 5:17

☒ Other TEMP TRAILER

Demolition

Est. Cost of Bldg. Work:

1. New Bldg. \$ 0

2. Alteration \$ 600

3. Total (1+2) \$ 600

Paid ☐ Check \$

Collected by:

Administrative Surcharge

Minimum Fee

TOTAL FEE

DCA Training Fee

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
BUILDING
SUBCODE
TECHNICAL SECTION

Date Received 11/03/99
Date Issued 01/04/00
Control # 11/8/99
Permit # 99-34333+C

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

Block 701 Lot 7 Qual
Work Site Location 644 RT 70 NW KOLBS

HVAC

Owner in Fee LANTHORPE ENTERPRISES-KOLBS
Address PARK 80 W, PLAZA II
SADDLER BROOK, NJ 07663-

Tele. ()
Contractor VALARCO INC-RECH CONTR
Address 29 KING GEORGE RD
GREEN BROOK, NJ 08812-

Tele. (732) 560-0300 Fax ()
Lic. No. or Bldgs. Reg. No.
Federal Emp. No. 22-1842325

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial
☐ No Plans Req. 11-599 FM
☒ All
[] Footing
[] Foundation
[] Frame
[] Other
Joint Plan Review Required:
[] Elect [] Plumb [] Fire
SUBCODE APPROVAL [] Rlev
[] CO [] CCO [] CA
Date:
Approved By:

INSPECTIONS	Dates (Month/Day)	Initial
Type		
Footing		
Foundation		
Slab		
Frame		
BarrierFree		
Insulation		
Finishes		
Energy		
Mechanical		
TGO		
Other		
Final		
BarrierFree		

B. BUILDING CHARACTERISTICS

Use Group	Present	Proposed	M
Const. Class	Present	Proposed	
No. of Stories	0		
Height of Structure	0 Ft.		
Area Largest Floor	0 Sq. Ft.		
New Bldg. Area/All Floors	0 Sq. Ft.		
Volume of New Structure	0 Cu. Ft.		
Total Land Area Disturbed	0 Sq. Ft.		

C. CERTIFICATION IN LIB OF OATH

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

Signature

D. TECHNICAL SITE DATA
DESCRIPTION OF WORK

1 B-VENT & DUCT WORK

NOTE: Any Rooftop work within 10' of Edge must have protection

TYPE OF WORK	PER (Office Use Only)
[] New Building	0
[] Addition	0
[X] Alteration	5
[] Roofing	0
[] Siding	0
[] Fence	0
[] Sign	0
[] Pool	0
[] Asbestos Abatement Subchapter 8	0
[] Lead Haz. Abatement NJAC 5:17	0
[] Other	0
Other	0
[] Demolition	0

Est. Cost of Bldg. Work:
1. New Bldg. \$
2. Alteration \$
3. Total (1+2) \$

Paid [] Check \$
Collected by: DCA Training Fee

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
BUILDING
SUBCODE
TECHNICAL SECTION

Date Received 11/17/99
Date Issued 12-17-99
Control # C17-18
Permit # 99-4625

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

Block 701 Lot 7 Qual
Work Site Location 644 RT 70 NW KOHLS

SIGN

Owner in Fee KOHL'S DEPT. STORES
Address N56 W17000 RIDGEWOOD DR

WENOMONBB FALLS, WI

Tele. ()
Contractor CO-SIGN

Address 2140 ROUTE 88 SUITE 6-200

BRICK, NJ 08723-

Tele. (732) 899-9646 Fax (732) 892-3137

Lic. No. or Bldgs. Reg. No.

Federal Emp. No. 22-3360111

JOB SUMMARY (Office Use Only)

PLAN REVIEW Date Initial

☐ No Plans Req. *12-13-99 PM*

☒ All

☐ Footing

☐ Foundation

☐ Frame

☐ Other

Joint Plan Review Required:

☐ Bleed ☐ Plumb ☐ Fire

SUBCODE APPROVAL ☐ Elev

☐ CO ☐ CCO ☐ CA

Date:

Approved By:

INSPECTIONS

Type

Footing

Foundation

Slab

Frame

BarrierFree

Insulation

Finishes

Energy

Mechanical

TGO

Other

Final

BarrierFree

Dates (Month/Day)

Failure Failure Approval Initial

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.

Signature

D. TECHNICAL SITE DATA
DESCRIPTION OF WORK

INSTALLATION OF ONE SET OF 5' CHANNEL LETTERS, INSTALLATION OF NEW FACES
IN EXISTING PYLON SIGNS AT ABOVE LOCATION, 2 SIGNS DOUBLE FACED.

*Wiring To Be Done By Elect
Contractor on site.*

FEF (Office Use Only)

TYPE OF WORK

☐ New Building

☐ Addition

☒ Alteration

☐ Roofing

☐ Siding

☐ Fence

☒ Sign

☐ Pool

☐ Asbestos Abatement Subchapter 8

☐ Lead Haz. Abatement NJAC 5:17

Height (exceeds 6')

194 Sq. Ft.

Estimated Cost of Bldg. Work:

1. New Bldg. \$

2. Alteration \$

3. Total (1+2) \$

Administrative Surcharge

Minimum Fee

TOTAL FEE

DCA Training Fee

DUNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

NEW JERSEY
ELECTRICAL
SUBCODE
TECHNICAL SECTION

Date Received 06/11/99
Date Issued 09/09/99
Control #
Permit # 99-3433

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

D. TECHNICAL SITE DATA

FEE (Office Use Only)

Block 701 Lot 1 Quad
Work Site Location 644 RT 70 NEW KOHLS
TENANT FIT UP

NO. SIZE

ITEM

Lighting Fixtures
Receptacles
Switches
Detectors
Light Poles
Motor-Fract HP
Emergency & Exit Lights
Communications Points
Alarm Device/F.A.C. Panel
TOTAL NUMBERS

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S

1004

140

35

Address PARK 80 W. PLAZA II
SADDLE BROOK, NJ 07663-

9

0

0

Telephone 1321741-1222 Fax 1321741-1222
Contractor LITTLE SILVER ELECTRIC

0

0

0

Address 68 BIRCH AVE
LITTLE SILVER, NJ

1

1209

0

Telephone 1321741-1222
Lic. No. or Bldg. Reg. No. 7160

0

0

0

Federal Emp. No. 22-1776092

0

0

0

B. ELECTRICAL CHARACTERISTICS

Proposed N

Use-Group - Present [] Temporary [X] Other KOHL'S

Building Occupied as Utility Co.

12-27-94

Estimated Cost of Electrical Work \$ 325,000

11-16-94

JOB SUMMARY (Office Use Only)

INSPECTIONS

10/7/94 (Month/Day) To

[] No Plans Required

Type

10/8/94 10-12-94 Jmr

[] Bldg [] Plumb

Rough

Temp Sew

[] Fire [] Elevator

Conat Sew

TCO

[] Elect Plans Approved

Other

Service

Date: 10/28/94

Final

Temp. Out-In-Card Date Issued 11/28/94

Approved By: [Signature]

Final Out-In-Card Date Issued

10/28/94

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 and perform the work stated on this application.

Paid [X] Check # 46911

Administrative Surcharge \$

Minimum Fee \$

Applicant's Signature/Contractor's Seal and Signature

Collected by: CS

TOTAL FEE \$

OCA Training Fee \$

[] Licensed Electrical Contractor [] Exempt Applicant

U.C.C. F120 (rev. 3/96)

99-3433

D. TECHNICAL SITE DATA

Block 701 Lot 701
Work Site Location 644 Rt. 70

Owner in Fee 168001 There are other parcels

Address ~~4001 14th Ave~~ Post 80, 1 Cedar St

DEAR MR. CHAS. J. BLOOM, 77 01663

Tele. () _____

Contractor Pro Maintenance Group, Inc. 7/2/99

Address 1766 HWY 34 10/5/99

Farmington, NJ 07727

Tele. (732) 280-6700

Lic. No. 6629

Federal Emp. No. 223-430-998 or Social Security No. 000-00-0000

B. ELECTRICAL CHARACTERISTICS

Use Group	Present	Proposed
	<u>m</u>	<u>m</u>

☐ Pole/Pad # _____ ☐ Temporary ☐ Other _____

Building Occupied as EMPTY SPACES Utility Co. GPU

Est. Cost of Elec. Work \$ 325,000.00

JOB SUMMARY (Office Use Only)

FINAL REVIEW:	INSPECTIONS	Dates (Month/Day)
---------------	------------------------	-------------------

	Type:	Failure	Failure	Approval	Initial
[] No Plans Required					

Joint Plan Review Required: _____

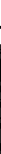
Temporary

	Constr.	Dev.	Constr.	Dev.
[] Fire [] Elevator	_____	_____	_____	_____

	TCO	
☒ Elec. Plans Approved	_____	_____

Date: _____

Other _____

Approved by:  Service

Final

Temp. Cut-in-Card Date Issued _____

Final Cut-in-Card Date Issued 7/1/80

Date: _____

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 and perform the work listed on this application.

Licensed Electrical Contractor () Exempt Applicant

~~Signature - Contractor Seal~~

TECHNICAL SITE DATA		FEE (Office Use Only)	
NO.	SIZE	ITEM	
<u>1064</u>		Fixtures (1)	
<u>140</u>		Receptacles (2)	
<u>55</u>		Switches (3)	
<u>199</u>		Total 1 + 2 + 3	
		Kw Range	
		Kw Oven(s)	
		Kw Surface Unit	
		hp Dishwasher	
		hp Garbage Disposal	
		Kw Dryer	
1064		A/C Unit <u>will update</u>	
<u>1</u>		Burglar Alarms	
		Intercoms Panels	
		Smoke Detectors	
<u>9</u>		hp Whirlpool/spa	
		Pool Bonding	
		Pool Filler Motor	
		Pool Lights	
		<u>304</u> Kw Water Heater(s)	
1		Central heat <u>will update</u>	
		oil, gas, or gas	
<u>10</u>		Kw Baseboard Heat Units	
		Thermostats	
		hp Heat Pump	
		hp Pump(s)	
1		Amp Motor Control Center/Sub Panels	
		Signs	
		Light Standards	
		hp Motors--Fractional H.P.	
		hp Motors--All Others	
		Kw Transformers	
		Kw Generators	
<u>2500</u>		Amp Service Entrance	
		Other	

U.C.C. Form F-120B

1 White = Inspector Copy 2 Canary = Office Copy
3 Pink = Office Copy 4 Gold = Applicant Copy

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
ELECTRICAL
SUBCODE
TECHNICAL SECTION

Date Received 10/05/99
Date Issued 01/07/00
Control # 10-6-99
Permit # 99-3433+B

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

Block 701 Lot 7 Quad

Work Site Location 644 RT 70 NEW KOHL'S

ADDITIONAL ELECTRIC

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S

Address PARK 80 W, PLAZA II

SADDLE BROOK, NJ 07663-

Tele. (321) 741-1222 Fax ()

Contractor LITTLE SILVER ELECTRIC

Address 66 BIRCH AVE

LITTLE SILVER, NJ

Tele. (321) 741-1222

Lic. No. on Bldg. Reg. No. 7160

Federal Emp. No. 22-1778092

B. ELECTRICAL CHARACTERISTICS

Use Group - Present Proposed M

[] Pole/Pad # [] Temporary [X] Other KOHL'S

Building Occupied as Utility Co.

Estimated Cost of Electrical Work \$ 500

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[] No Plans Required

Joint Plan Review Required:

[] Bldg. [] Plumb

[] Fire [] Elevator

[X] Elect Plans Approved

Date: 10-6-99

Approved By: Thomas M. [Signature]

SUBCODE APPROVAL

[] CO [] CCO [] CA

Date: 1-28-00

Approved By: [Signature]

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 and perform the work listed on this application.

Applicant's Signature/Contractor's Seal and Signature

[] Licensed Electrical Contractor [] Exempt Applicant

D. TECHNICAL SITE DATA

NO. SIZE

ITEM

Lighting Fixtures

Receptacles

Switches

Detectors

Light Poles

Motors-Franch HP

Emergency & Exit Lights

Communications Points

Alarm Device/F.A.C. Panel

TOTAL NUMBERS

Pool Permit/with UP Lights

Storable Pool/Spa/Hot Tub

KW Elect Range/Receptacle

KW Oven/Surface Unit

KW Elect Water Heater

KW Elect Dryer/Receptacle

KW Dishwasher

HP Garbage Disposal

KW Central A/C Unit

HP/KW Space Heater/Air Handler

Baseboard Heat

HP Motors 1/2 HP

KW Transformer/Generator

AMP Service

AMP Subpanels

AMP Motor Control Center

KW Elect Sign/Outline Light

Other ADOT'L COUNT

Other

FEE (Office Use Only)

Lighting Fixtures

Receptacles

Switches

Detectors

Light Poles

Motors-Franch HP

Emergency & Exit Lights

Communications Points

Alarm Device/F.A.C. Panel

TOTAL NUMBERS

Pool Permit/with UP Lights

Storable Pool/Spa/Hot Tub

KW Elect Range/Receptacle

KW Oven/Surface Unit

KW Elect Water Heater

KW Elect Dryer/Receptacle

KW Dishwasher

HP Garbage Disposal

KW Central A/C Unit

HP/KW Space Heater/Air Handler

Baseboard Heat

HP Motors 1/2 HP

KW Transformer/Generator

AMP Service

AMP Subpanels

AMP Motor Control Center

KW Elect Sign/Outline Light

Other ADOT'L COUNT

Other

See attached
copy of permit

Paid [] Check #

Collected by:

Administrative Surcharge \$

Minimum Fee \$

TOTAL FEE \$

DCA Training Fee \$



Date Issued
Control #
Permit #

10-6-94
99-34333+B

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

Block 701 Lot 4-7

Work Site Location Kohl's Department Store

654 664 Route 70, Brick, NJ 08723

Owner in Fee Kohl's Department Stores, Inc.

Address N56 W17000 Ridgewood Drive

Menomonee Falls, Wisconsin 53051

Tele. (419) 724-7118

Contractor Little Silver Electric Inc.

Address 68 Birch Avenue

Little Silver, New Jersey 07739

Tele. (732) (908) 741-1222 Fax: 732-530-5925

Lic. No. 7760

Federal Emp. No. 22-1778092 or Social Security No. consent letter on file.

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed 7B-99

☐ Pole/Pad # ☐ Temporary ☐ Other

Building Occupied as Retail Store Utility Co. GPU Energy

Est. Cost of Elec. Work \$ 300,000.00

JOB SUMMARY (Office Use Only)

PLAN REVIEW:

☐ No Plans Required
Joint Plan Review Required:

☐ Bldg. ☐ Plumb.

☐ Fire ☐ Elevator

☐ Elec. Plans Approved

Date: _____

Approved by: _____

SUBCODE APPROVAL

☐ CO ☐ CCO ☒ TCA

Date: 1-28-00

Approved By: [Signature]

INSPECTIONS

Type: 10-2-99 Failure 10/12/99 Initial TC

Temporary

Constr. Serv.

TCO

Other

Service

Final

Temp. Cut-in-Card Date Issued 1-28-00

Final Cut-in-Card Date Issued _____

TECHNICAL SITE DATA

NO. 1561 SIZE 160 ITEM 12

1733

Fixtures (1) + 557+

Receptacles (2) + 30

Switches (3) - 43

Total 1 + 2 + 3 difference 534 =

Kw Range

Kw Oven(s)

Kw Surface Unit

hp Dishwasher

hp Garbage Disposal

Kw Dryer

Kw A/C Unit

Burglar Alarms

Intercoms Panels

Smoke Detectors

Whirlpool/spa

Pool Bonding

Pool Filter Motor

Pool Lights

Kw Water Heater(s)

Kw Central heat:

oil, gas or elec.

Kw Baseboard Heat Units

Thermostats

hp Heat Pump

hp Pump(s)

Amp Motor Control Center/Sub Panels

Signs

Light Standards

hp Motors—Fractional H.P.

hp Motors—All Others

30 Kw Transformers

Kw Generators

Service Entrance — Existing

Other See Attachments

FEE (Office Use Only)

470.-

40.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

150.-

Paid ☐ Check # _____ Administrative Surcharge \$ _____
Minimum Fee \$ _____
DCA Training Fee \$ _____
TOTAL FEE \$ 150.-

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 and perform the work listed on this application.

[Signature]
10-6-94
10-7-94

Signature — Contractor Seal

U.C.C. Form F-120B

☒ Licensed Electrical Contractor ☐ Exempt Applicant

1 White = Inspector Copy
3 Pink = Office Copy
2 Canary = Office Copy
4 Gold = Applicant Copy

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
ELECTRICAL
SUBCODE
TECHNICAL SECTION

Date Received 11/03/99
Date Issued 01/01/99
Control #
Permit # 99-3433+C

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

D. TECHNICAL SITE DATA

FBS (Office Use Only)

Block 701 Lot 7 Qual
Work Site Location 644 RT 70 NEW KOHLS

HVAC

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S
Address PARK 80 W. PLAZA II

SADDLE BROOK, NJ 07663-

Tele. (732)741-1222 Fax ()

Contractor LITTLE SLIVER ELECTRIC

Address 68 BIRCH AVE

LITTLE SLIVER, NJ

Tele. (732)741-1222

Lic. No. or Bldrs. Reg. No. 7760

Federal Bap. No. 22-1778092

B. ELECTRICAL CHARACTERISTICS

Use Group - Present Proposed W

[] Pole/Pad # [] Temporary [] Other

Building Occupied as Utility Co.

Estimated Cost of Electrical Work \$ 6,500

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[] No Plans Required

Joint Plan Review Required:

[] Bidg [] Plumb

[] Fire [] Elevator

[] Elect Plans Approved

Date: 1/3/99

Approved By: [Signature]

SUBCODE APPROVAL

[] CO [] CCO [] CA

Date: 1-28-99

Approved By: [Signature]

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 and perform the work listed on this application.

Applicant's Signature/Contractor's Seal and Signature

[] Licensed Electrical Contractor [] Exempt Applicant

NO.	SIZE	ITEM	FBS (Office Use Only)
0		Lighting Fixtures	
0		Receptacles	
0		Switches	
0		Detectors	
0		Light Poles	
0		Motors-Fract HP	
0		Emergency & Exit Lights	
0		Communications Points	
0		Alarm Devices/P.A.C. Panel	
0		TOTAL NUMBERS	
0		Pool Permit/with UV lights	
0		Storable Pool/Spa/Hot Tub	
0		KW Elect Range/Receptacle	
0		KW Oven/Surface Unit	
0		KW Elect Water Heater	
0		KW Elect Dryer/Receptacle	
0		KW Dishwasher	
0		HP Garbage Disposal	
0		KW Central A/C Unit	360
0		HP/KW Space Heater/Air Handler	
0		Baseboard Heat	
0		HP Motors 1/+ HP	
0		KW Transformer/Generator	
0		AMP Service	
0		AMP Subpanels	
0		AMP Motor Control Center	
0		KW Elect Sign/Outline light	
0		Other 9 FURNACES	81
0		Other	

0000

Paid [] Check #
Collected by: Administrative Surcharge \$
Minimum Fee \$
TOTAL FBS \$ 441
OCA Training Fee \$ 5

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
ELECTRICAL
SUBCODE
TECHNICAL SECTION

Date Received 11/18/99
Date Issued 07/07/54 12/1/99
Control #
Permit # 99-34333+D

A. IDENTIFICATION-APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. DO NOT CHANGE

D. TECHNICAL SITE DATA

FBS (Office Use Only)

Block 701 Lot 7 Qual

Work Site Location 644 RT 70 NEW KOHL'S

COMMUNICATIONS POINTS

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S

Address PARK 80 W. PLAZA II

SADDLE BROOK, NJ 07663-

Tele. (610) 993-8108 Fax ()

Contractor LINECOM INC

Address 270 W LANCASTER AVE

MATTHEW, PA 19355-

Tele. (610) 993-8108

Lic. No. or Bldrs. Reg. No.

Federal Emp. No.

B. ELECTRICAL CHARACTERISTICS

Use Group - Present Proposed M

[] Pole/Pad [] Temporary [] Other

Building Occupied as Utility Co.

Estimated Cost of Electrical Work \$ 6,200

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[X] No Plans Required

Joint Plan Review Required:

[] Bidg [] Plumb

[] Fire [] Elevator

[] Elect Plans Approved

Date: 11/24/99

Approved by: *WV*

SUBCODE APPROVAL

[] CO [] CCO [] CF

Date: 2/1/00

Approved by: *Thud*

INSPECTIONS

Type

Rough

Temp Serv

Const Serv

TCO

Other

Service

Final

Temp. Cut-in-Card Date Issued

Final Cut-in-Card Date Issued

Dates (Month/Day)

Initial

12/31/99

12-6-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

12-17-99

Over

Administrative Surcharge \$

Minimum Fee \$

TOTAL FBS \$

DCA Training Fee \$

U.C.C. #120 (rev. 3/96)

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
PLUMBING
SUBCODE

TECHNICAL SECTION

Date Received 9/11/99
Date Issued 9/19/99
Control # C12-7
Permit # 99-3433

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

Block 701 Lot 7 Quad
Work Site Location 644 RT 70 NEW KOHLIS

TENANT FIT UP

Owner in Fee LANTHORPE ENTERPRISES-KOHLIS

Address PARK 80 W, PLAZA 11

SADDLE BROOK, NJ 07663-

Tele. (908)341-4414 Fax ()

Contractor T. PETERS POLO CO INC

Address P O BOX 1847

TOWNS RIVER, NJ 08754-

Tele. (908)341-4414

Lic. No. or Bldgs. Reg. No. 7116

Federal Emp. No. 22-3145636

COMMERCIAL

B. PLUMBING CHARACTERISTICS

Use Group Present Proposed M
Building Sewer Size [] Public Sewer [] Private Septic
Water Sewer Size [] Public Water [] Private Well
Estimated Cost of Plumbing Work \$ 135,000

C. CERTIFICATION (Office Use Only)

PLAN REVIEW
[] No Plans Required
Joint Plan Review Required:
[] Bldg [] Effect
[] Fire [] Elevator
[] Plumb. Plans Approved
Date: 9/8/99
Approved by: [Signature]
SUBCODE APPROVAL
[] CO [] CCO [] CA
Approved By: [Signature]
Date: 2-8-00

INSPECTIONS

Type Failure Dates (Month/Day)
Slab 9-21-99
Rough 9-28-99
Water 10-15-99

Sewer 2-7-00
Fixtures 2-8-00
Gas Equip. 2-8-00
Gas Piping 11-8-99
Sofar

TCO 12-22-99

Root top units
condensate draining 2-7-00

D. TECHNICAL SITE DATA (List all fixtures.)

NO. FEE (Office Use Only)

Water Closet 118

Urinal / Bidet 30

Bath Tub 0

Lavatory 120

Shower 0

Floor Drain 50

Sink 10

Dishwasher 0

Drinking Fountain 0

Washing Machine 0

Hose Bib 10

Water Heater 0

Fuel Oil Piping 0

Gas Piping 0

Steam Boiler 0

Hot Water Boiler 0

Sewer Pump 0

Interceptor / Separator 0

Backflow Preventer 70

Grease Trap 0

Sewer Connection 15

Water Service Connection 15

Stacks 0

Other 0

Other 0

Other 0

Administrative Surcharge \$ 0

Minimum Fee \$ 0

TOTAL FEE \$ 460

DCA Training Fee \$ 108

Signature/Contractor Seal [] Licensed Plumbing Contractor [] Exempt Applicant

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
PLUMBING
SUBCODE
TECHNICAL SECTION

Date Received 11/03/99
Date Issued 01/04/99
Control #
Permit # 99-3433+C

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

D. TECHNICAL SITE DATA (List all fixtures.)

Block 701 Lot 7 Qual
Work Site Location 644 RT 70 RRW KOHLS

NO.

FIXTURE/EQUIPMENT

FBR (Office Use Only)

BYAC

Owner in Fee LANTHORPE ENTERPRISES-KOHL

Address PARK 80 W. PLAZA 11

SADDLE BROOK, NJ 07663-

Tele. (732) 341-4414 Fax ()

Contractor TIMOTHY PETERS P & H

Address P O BOX 1847

TOMS RIVER, NJ

Tele. (732) 341-4414

Lic. No. or Bids. Reg. No. 810 7116

Federal Emp. No. 22-3145639

COMMERCIAL

B. PLUMBING CHARACTERISTICS

Use Group Present Proposed H

Building Sewer Size Public Sewer Private Septic

Water Sewer Size Public Water Private Well

Estimated Cost of Plumbing Work \$ 13,000

JOB SUMMARY (Office Use Only)

PLAN REVIEW

Joint Plan Review Required

Joint Plan Review Required

Blgd Elect

Fire Elevator

Plumb. Plans Approved

Date: 11/5/99

Approved By: [Signature]

SUBCODE APPROVAL

CO COO CA

Approved By:

Date:

INSPECTIONS

Type Failure Failure Approval Initial

Slab

Rough

Water

Sewer

Fixtures

Gas Equip.

Gas Piping

Solar

FCO

Paid [] Check #
Collected by:

Administrative Surcharge \$
Minimum Fee \$
TOTAL FBR \$
DCA Training Fee \$

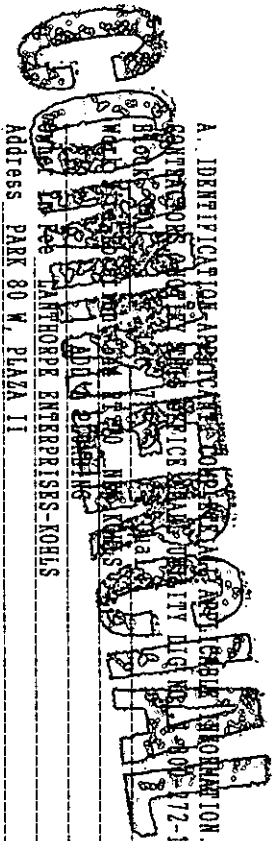
C. CERTIFICATION IN LIEU OF OATH
I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Signature/Contractor Seal
[] Licensed Plumbing Contractor [] Exempt Applicant

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
PLUMBING
SUBCODE
TECHNICAL SECTION

Date Received 02/08/2000
Date Issued 01/01/1954
Control #
Permit # 99-3433+H



A. IDENTIFICATION AND LOCATION. WHEN CHANGING

CONTRACTOR'S OFFICE ADDRESS: 1000 N. 10TH ST. NEW JERSEY 07102-1000
BLOCK: 1000 N. 10TH ST. NEW JERSEY 07102-1000
LOT: 1000 N. 10TH ST. NEW JERSEY 07102-1000
ADDRESS: 1000 N. 10TH ST. NEW JERSEY 07102-1000
SADDLE BROOK, NJ 07663-
Tele. (908) 341-4414 Fax ()
Contractor T. PETERS POLD CO INC
Address P O BOX 1847
TOMS RIVER, NJ 08754-
Tele. (908) 341-4414
Lic. No. or Bldrs. Reg. No. 7116
Federal Emp. No. 22-3145636

D. TECHNICAL SITE DATA (List all fixtures.)

NO. FEE (Office Use Only)

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
0	Water Closet	0
0	Urinal / Bidet	0
0	Bath Tub	0
0	Lavatory	0
0	Shower	0
0	Floor Drain	0
0	Sink MOP SINK	10
0	Dishwasher	0
0	Drinking Fountain	0
0	Washing Machine	0
1	Hose Bib	10
3	Water Heater	105
0	Fuel Oil Piping	0
0	Gas Piping	0
0	Steam Boiler	0
0	Hot Water Boiler	0
0	Sewer Pump	0
0	Interceptor / Separator	0
0	Backflow Preventer	0
0	Greasetrap	0
0	Sewer Connection	0
0	Water Service Connection	0
0	Stacks	0
0	Other	0
0	Other	0

B. PLUMBING CHARACTERISTICS

Use Group Present Proposed M
Building Sewer Size [] Public Sewer [] Private Septic
Water Sewer Size [] Public Water [] Private Well
Estimated Cost of Plumbing Work \$ 500

JOB SUMMARY (Office Use Only)

PLAN REVIEW
[] No Plans Required
Joint Plan Review Required:
[] Bidg [] Elect
[] Fire [] Elevator
[] Plumb. Plans Approved

INSPECTIONS
Type Failure Failure Approval Initial

Date: 2-8-00
Approved By: [Signature]
SUBCODE APPROVAL
[] CO [] CC [] CA
Approved By: [Signature]
Date: 2-8-00

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 and perform the work listed on this application.

Signature/Contractor Seal
[] Licensed Plumbing Contractor [] Exempt Applicant

Paid [] Check #
Collected by: DCA Training Fee \$
Administrative Surcharge \$
Minimum Fee \$
TOTAL FEE \$ 125

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 08/11/99
Date Issued 9/14/99
Control # 942-3433
Permit # 94-3433

HVAC UNIT
SMOKES

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

2. TECHNICAL SITE DATA

Block 701 Lot 1 Quad
Work Site Location 644 RT 70 NEW KOHL

TENANT FILL UP

Owner in Fee LANTHORPE ENTERPRISES-KOHL

Address PARK 60 W. PLAZA II

SADDLE BROOK, NJ 07663-

Tele. (332) 449-8208 Fax ()

Contractor RG SOLOMON FIRE PROTECTION

Address ROYAL CT 1-15

SPRING LAKE HEIGHTS, NJ 0762-

Tele. (332) 449-8208

Lic. No. or Rtds. Reg. No.

Federal Emp. No. 22-3496080

COMMERCIAL

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed N
Constr Class Present Proposed
Heating Systems { } New {X} Existing { } HVAC
Type: {X} Gas { } Oil { } Elect { } Solar
{ } Other
Location:
Total Est Cost of Fire Prot Work \$ 2,400

JOB SUMMARY (Office Use Only)

PLAN REVIEW

Joint Plan Review Required

Joint Plan Review Required

INSPECTIONS
Type Alarm Sys
Super Test
Standpipe
Fire Pump
Prepng Sys
Mechanical
Smoke Ctl

Dates (Month/Day)
Failure/Failure Approval Initial

12/8/98
See above pgs 1 of

Approved By: [Signature]

Subcode Approval

CO 1 CCO 1 CA

Date: 8/13/99

Approved By: [Signature]

Final

Other

Description of Work:
Water Supply Source
Method of Alarm/Superv. Sys Superv

Storage Tanks

Type: { } Flammable Liquid { } Combust Liquid
{ } LPG { } LNG Capacity 0 Fuel

Alarm Systems { } 110V Interconnected NUMBER

{ } System

Alarm Devices (smoke, heat, pull, water/flood)

Supervisory Devices (tamper, low/high air)

Devices (horn/strobes, bells)

TOTAL

Suppression Systems

Fire Pump 0 GPM Type

Dry Pipe/Alarm Valves

Pre-action Valves

Sprinkler Heads (Dry and Wet)

Standpipes

Pre-Engineered Systems

Wet Chemical

Dry Chemical

CO2 Suppression

Foam Suppression

Halon Suppression

Other

Kitchen Hood Exhaust System

Smoke Control System

Gas { } or Oil { } Fired Appliances

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

FEE (Office Use Only)

Minimum Fee

Administrative Surcharge

Collected by:

DCA Training Fee

U.C.C. Fee (rev. 3/96)

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 09/24/99
Date Issued 01/01/54
Control #
Permit # 99-3433+A

A. IDENTIFICATION-APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1900

Block 701 Lot 7
Work Site Location 644 RT 70 - BRV KORELS

FIRE SPRINKLER SYSTEM

Owner in Fee LANTHANUM ENTERPRISES, INC.
Address 644 RT 70 - BRV KORELS

Phone 3200K NJ 07663

Contractor RG SOLIDWORK PROTECTION

Address 644 RT 70 - BRV KORELS

Phone 3200K NJ 07663

Tele. (732) 449-8202

Fic. No. of Bids Reg. No.

Federal Reg. No. 22-2496080

5. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed M
Constr Class Present Proposed
Heating Systems [] Existing [] HVAC
Type: [] Gas [] Oil [] Electric [] Solar
[] Other
Location:
Total Est Cost of Fire Protection \$ 70,000

JOE STURM (Office Use Only)

Fire Alarm

Fire Plans Required

Joint Plan Review Required

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Fire Alarm

Description of Work:
Water Supply Source
Method of Alarm/Suppr Sys Surv

Storage Tanks

Type: [] Flammable Liquid [] Combust Liquid
[] LPG [] LNG Capacity 0 Fuel
Alarm Systems [] Interconnected

Alarm Systems [] System

Alarm Devices (Smoke, Heat, Pulls, Water/Flow)

Supervisory Devices (Tamper, Low/High Air)

Signaling Devices (Horn/Stroke, Bell)

Other Devices

Suppression Systems

Fire Pump 2 GPM 2750

Dry Pipe/Alarm Valves

Pre-action Valves

Sprinkler Heads (Dry and Wet)

Standpipes

Pre-Engineered Systems

Wet Chemical

Dry Chemical

CO2 Suppression

Foam Suppression

Halon Suppression

Other

Kitchen Hood Exhaust System

Smoke Control System

Gas [] or Oil [] Fired Appliances

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

Other

16' height down
for spread skt.

* USE OF OUTDOOR
CLOTHES RACKS
require approval
of fire conditions
or fire insurance
company

* are used to
use and storage

Paid [] Check \$
Collected by: \$
Administrative Surcharge \$
Minimum Fee \$
TOTAL FEE \$
OCA Training Fee \$

Signature

TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS

UCC NEW JERSEY
FIRE PROTECTION
SUBCODE
TECHNICAL SECTION

Date Received 11/03/99
Date Issued 01/01/54
Control # 99-34333+C

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

Block 701 lot 7 Qual
Work Site Location 644 RT 70 NEW KOHL'S

HVAC

Owner in Fee LANTHORPE ENTERPRISES-KOHL'S

Address PARK 80 W. PLAZA II

SADDLE BROOK, NJ 07663-

Tele. (732) 560-0300 Fax ()

Contractor VALARCO INC-NECH CONTR

Address 29 KING GEORGE RD

GREEN BROOK, NJ 08812-

Tele. (732) 560-0300

Lic. No. or Bldgs. Reg. No.

Federal Bmp. No. 22-1842325

COMMERCIAL

B. FIRE PROTECTION CHARACTERISTICS

Use Group Present Proposed M

Constr Class Present Proposed

Heating Systems [] New [] Existing [] HVAC

Type: [] Gas [] Oil [] Electric [] Solar

[] Other

Location:

Total Est Cost of Fire Prot Work \$ 125,000

JOB SUMMARY (Office Use Only)

PLAN REVIEW

Joint Plan Review Required

Joint Plan Review Required

[] Bldg [] Electric

[] Plumb [] Elevator

[] Fire Plans Approved

Date: 11-7-55

Approved By: [Signature]

SUBCODE APPROVAL

[] CO [] CGO

Date: 1-27-00

Approved By: [Signature]

INSPECTIONS

Type

Alarm Sys

Suppr Test

Standpipe

Fire Pump

Prebng Sys

Mechanical

Smoke Ctl

TCO

Final

Other

Dates (Month/Day)

Failure Failure Approval Initial

*Checked by [Signature]
under inspection

D. TECHNICAL SITE DATA

Description of Work:

Water Supply Source

Method of Alarm/Suppr Sys Superv

Storage Tanks

Type: [] Flammable Liquid [] Combust Liquid

[] LPG [] LNG Capacity 0 Fuel

Alarm Systems [] 110v Interconnected NUMBR

[] System

Alarm Devices (smoke, heat, pull, water/flow)

Supervisory Devices (tamper, low/high air)

Signalling Devices (horn/strobes, bells)

Other Devices

TOTAL

Suppression Systems

Fire Pump 0 GPM Type

Dry Pipe/Alarm Valves

Pre-action Valves

Sprinkler Heads (Dry and Wet)

Standpipes

Pre-Engineered Systems

Wet Chemical

Dry Chemical

CO2 Suppression

Foam Suppression

Halon Suppression

Other

Kitchen Hood Exhaust System

Smoke Control System

Gas [] or Oil [] Fired Appliances

Other 9 FURNACES

Other

FBB (Office Use Only)

noo cent smoke detectors
need just detectors

Administrative Surcharge \$

Paid [] Check \$

Minimum Fee \$

Collected by: \$

TOTAL FBB \$

DCA Training Fee \$

U.C.C. F160 (rev. 3/96)

**TOWNSHIP OF BRICK
401 CHAMBERS BRIDGE RD
DIVISION OF INSPECTIONS**

**UCC NEW JERSEY
PLUMBING
SUBCODE
TECHNICAL SECTION**

**Date Received 01/04/2000
Date Issued 01/04/2000
Control #
Permit # 99-3433+G**

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

D. TECHNICAL SITE DATA (List all fixtures.)

Block 701 Lot 7 Qual
Work Site Location 664 RT 70 NEW KOHL'S
IRRG SYSTEM
Owner in Fee LANTHORPE ENTERPRISES-KOHL'S
Address PARK 80 W. PLAZA II
SADDLE BROOK, NJ 07663-
Tele. (908) 341-4414 Fax ()
Contractor T. PETERS POLD CO INC
Address P O BOX 1847
TOMS RIVER, NJ 08754-
Tele. (908) 341-4414
Lic. No. or Bldgs. Reg. No. 7116
Federal Emp. No. 22-3145636

B. PLUMBING CHARACTERISTICS

Use Group Present Proposed M
Building Sewer Size [] Public Sewer [] Private Septic
Water Sewer Size [] Public Water [] Private Well
Estimated Cost of Plumbing Work \$ 1,000

JOB SUMMARY (Office Use Only)

PLAN REVIEW
[] No Plans Required
Joint Plan Review Required:
[] Bldg [] Elect
[] Fire [] Elevator
[] Plumb. Plans Approved

INSPECTIONS
Type Failure Failure Approval Initial
Slab
Rough
Water
Sewer
Fixtures
Gas Equip.
Gas Piping
Solar
TCO

Date: 1-4-00
Approved By: [Signature]
SUBCODE APPROVAL
[] CO [] CCO []
Approved By: [Signature]
Date: 1-4-00

Date: 1-4-00
Approved By: [Signature]
SUBCODE APPROVAL
[] CO [] CCO []
Approved By: [Signature]
Date: 1-4-00

Paid [X] Check # 095
Collected by: CS
Administrative Surcharge \$ 0
Minimum Fee \$ 0
TOTAL FEE \$ 65
DCA Training Fee \$ 1

C. CERTIFICATION IN LIEU OF OATH
I hereby certify that I as the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Signature/Contractor Seal
[] Licensed Plumbing Contractor [] Exempt Applicant

1-27-00 - CHAIN OPEN/LOCK OSY

1-27-00 - Label RTU'S @ CEILING (Peermant)

1-4-00^{OK} - INSTALL STAIRPADS

1-27-00 - Remove OLD Smoke heads

1-4-00^{OK} - Install Long throw heads in dressing room

1-4-00^{OK} - lower heads in front vestibule -

1-4-00^{OK} - install Eschution plates

1-4-00^{OK} - Install 3 EXIT SIGNS Ann appointed @ hall
by rear door

1-4-00^{OK} - Run gen. (test)

- mount extinguishers 14 ext. monitors

- KNOX box

1-4-00^{OK} - TEST MAX PULLS

1-4-00 - TEST A.D.T. camera hook up to F.D.

1-27-00 - 11/11/01 COMPARE

1-27-00 Strobes higher Added 4 / more 4 higher

1-4-00 - leo - A.D.T. TEST ~~Alarm~~ (Fire) - Supervisory - Trouble
1:20 see alarm rec.

2-10-00 - walk thru stock not complete - upper rack
over shelves not stocked -

Girsa
MFR

8:00

14 ext.

2-17-00

2/20 OK: new dingyees back wall racks
sprinkle heads ~~etc~~ missing
(2)

2/20 OK: Kitchen supplies Earle speakers

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 an owner's representative. 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 Kohl's Dept. Store DATE 1/7/00

PROPERTY ADDRESS Bricktowne Center, Brick, NJ

ACCEPTED BY APPROVING AUTHORITIES (NAMES) Brick Building Dept - Fire Prevention

ADDRESS Brick NJ

PLANS INSTALLATION CONFORMS TO ACCEPTED PLANS ☒ YES ☐ NO

EQUIPMENT USED IS APPROVED ☒ YES ☐ NO

IF NO, EXPLAIN DEVIATIONS

INSTRUCTIONS WAS PERSON IN CHARGE OF FIRE EQUIPMENT BEEN INSTRUCTED AS TO LOCATION OF CONTROL VALVES AND CARE AND MAINTENANCE OF THIS NEW EQUIPMENT? ☒ YES ☐ NO

HAVE COPIES OF THE FOLLOWING BEEN LEFT ON THE PREMISES:

1. SYSTEM COMPONENTS INSTRUCTIONS ☒ YES ☐ NO

2. CARE AND MAINTENANCE INSTRUCTIONS ☒ YES ☐ NO

3. NFPA 25 ☒ YES ☐ NO

LOCATION OF SYSTEM SUPPLIES BUILDINGS Kohl's Store

MAKE	MODEL	YEAR OF MANUFACTURE	ORIFICE SIZE	QUANTITY	TEMPERATURE RATING
<u>Central</u>	<u>GB</u>	<u>1999</u>	<u>1/2</u>	<u>211</u>	<u>155°</u>
<u>Central</u>	<u>ESLO</u>	<u>1999</u>	<u>3/4</u>	<u>230</u>	<u>155°</u>
<u>Central</u>	<u>A</u>	<u>1999</u>	<u>1/2</u>	<u>87</u>	<u>250°</u>

PIPE AND FITTINGS Type of Pipe Black Steel 4h 10 #40

Type of Fittings Black cast iron 2 grooved

ALARM VALVE OR FLOW INDICATOR ALARM DEVICE TYPE MAKE MODEL MAXIMUM TIME TO OPERATE THROUGH TEST CONNECTION MIN. SEC.

Flow Potter VAF-F - 45

DRY PIPE OPERATING TEST DRY VALVE MAKE MODEL SERIAL NO. MAKE MODEL SERIAL NO.

TIME TO TRIP THROUGH TEST CONNECTION* WATER PRESSURE AIR PRESSURE TRIP POINT AIR PRESSURE TIME WATER REACHED TEST OUTLET* ALARM OPERATED PROPERLY

MIN. SEC. PSI PSI PSI MIN. SEC. YES NO

Without O.O.D. / / / / / / / / / /

With O.O.D. / / / / / / / / / /

IF NO, EXPLAIN

*MEASURED FROM TIME INSPECTOR'S TEST CONNECTION IS OPENED.

Figure 8-1(a).

DELUGE & PREACTION VALVES	OPERATION ☐ PNEUMATIC ☐ ELECTRIC ☐ HYDRAULIC								
	PIPING SUPERVISED ☐ YES ☐ NO				DETECTING MEDIA SUPERVISED ☐ YES ☐ NO				
	DOES VALVE OPERATE FROM THE MANUAL TRIP AND/OR REMOTE 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 ☐ YES ☐ NO		DOES EACH CIRCUIT OPERATE VALVE RELEASE ☐ YES ☐ NO		MAXIMUM TIME TO OPERATE RELEASE MIN. SEC.		
PRESSURE REDUCING VALVE TEST	LOCATION & FLOOR	MAKE & MODEL	SETTING	STATIC PRESSURE		RESIDUAL PRESSURE (FLOWING)		FLOW RATE	
				INLET (PSI)	OUTLET (PSI)	INLET (PSI)	OUTLET (PSI)	FLOW (GPM)	
TEST DESCRIPTION	HYDROSTATIC: Hydrostatic tests shall be made at not less than <u>200</u> psi (13.6 bars) for <u>two</u> hours or 50 psi (3.4 bars) above static pressure in excess of 150 psi (10.2 bars) for two hours. Differential dry-pipe valve clappers shall be left open during test to prevent damage. All aboveground piping leakage shall be stopped. PNEUMATIC: Establish 40 psi (2.7 bars) air pressure and measure drop, which shall not exceed 1-1/2 psi (0.1 bars) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1-1/2 psi (0.1 bars) in 24 hours.								
TESTS	ALL PIPING HYDROSTATICALLY TESTED AT <u>200</u> PSI FOR <u>2</u> HRS.				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 GAGE LOCATED NEAR WATER SUPPLY TEST CONNECTION: <u>67</u> PSI				RESIDUAL PRESSURE WITH VALVE IN TEST CONNECTION OPEN WIDE <u>59</u> PSI			
	UNDERGROUND MAINS AND LEAD IN CONNECTIONS TO SYSTEM RISERS FLUSHED BEFORE CONNECTION MADE TO SPRINKLER PIPING. VERIFIED BY COPY OF THE U FORM NO. 85B ☐ YES ☐ NO FLUSHED BY INSTALLER OF UNDERGROUND SPRINKLER PIPING ☐ YES ☐ NO				OTHER <u>existing</u> EXPLAIN				
	IF POWDER DRIVEN FASTENERS ARE USED IN CONCRETE, HAS REPRESENTATIVE SAMPLE TESTING BEEN SATISFACTORILY COMPLETED? <u>N/A</u>				IF NO, EXPLAIN				
BLANK TESTING GASKETS	NUMBER USED <u>0</u>		LOCATIONS <u>0</u>				NUMBER REMOVED <u>0</u>		
WELDING	WELDED PIPING ☐ YES ☒ NO								
	IF YES...								
	DO YOU CERTIFY AS THE SPRINKLER CONTRACTOR THAT WELDING PROCEDURES COMPLY WITH THE REQUIREMENTS OF AT LEAST AWS D10.9, LEVEL AR-3?				<u>N/A</u> ☐ YES ☐ NO				
	DO YOU CERTIFY THAT THE WELDING WAS PERFORMED BY WELDERS QUALIFIED IN COMPLIANCE WITH THE REQUIREMENTS OF AT LEAST AWS D10.9, LEVEL AR-3?				<u>N/A</u> ☐ YES ☐ NO				
	DO YOU CERTIFY THAT WELDING WAS CARRIED OUT IN COMPLIANCE WITH A DOCUMENTED QUALITY CONTROL PROCEDURE TO INSURE THAT ALL DISCS ARE RETRIEVED, THAT OPENINGS IN PIPING ARE SMOOTH, THAT SLAG AND OTHER WELDING RESIDUE ARE REMOVED, AND THAT THE INTERNAL DIAMETERS OF PIPING ARE NOT PENETRATED?				<u>N/A</u> ☐ YES ☐ NO				
CUTOUTS (DISCS)	DO YOU CERTIFY THAT YOU HAVE A CONTROL FEATURE TO ENSURE THAT ALL CUTOUTS (DISCS) ARE RETRIEVED?						☒ YES ☐ NO		

Figure 8-1(a) (cont).

SYSTEM ACCEPTANCE

13-65

HYDRAULIC DATA NAMEPLATE	NAMEPLATE PROVIDED ☒ YES ☐ NO	IF NO, EXPLAIN	
REMARKS	DATE LEFT IN SERVICE WITH ALL CONTROL VALVES OPEN: 1-7-00		
SIGNATURES	NAME OF SPRINKLER CONTRACTOR R.G. Solomon Fire Prot. Inc.		
	TESTS WITNESSED BY		
	FOR PROPERTY OWNER (SIGNED) <i>[Signature]</i>	TITLE PROP. SUPT.	DATE 1/7/00
	FOR SPRINKLER CONTRACTOR (SIGNED) <i>[Signature]</i>	TITLE President	DATE 1/7/00
ADDITIONAL EXPLANATION AND NOTES			

FIRE SPRINKLER HYDRAULIC CALCULATIONS

FOR

**KOHL'S
BRICKTOWNE CENTER
BRICK, NEW JERSEY 08723**

**R.G. SOLOMON FIRE PROTECTION Inc.
2010 PILGRAM Rd.
WALL, NEW JERSEY 07719**

**HYDRAULIC CALCULATION #1 RETAIL AREA
HYDRAULIC CALCULATION #2 RETAIL AREA
HYDRAULIC CALCULATION #3 STOCK ROOM**

- ☒ **APPROVED**
- ☐ **APPROVED AS CORRECTED**
- ☐ **REVISE AND RESUBMIT**
- ☐ **NOT APPROVED**

JAYEFF CONSTRUCTION CORPORATION

BY [Signature] DATE 9/23/99

Approval is only for conformance with the design concept of the project with the information given in the Documents. The contractor is responsible for dimensions to confirmed and marked of the job site.



MSG Fire & Safety Inc.
Designers of Fire Protection Systems
590 Route 70 Suite 1A
BRICK, NJ 08723
Tel 732-477-9555
Fax 732-477-5485

**ROBERT W. EITZEN
PROFESSIONAL ENGINEER
STATE OF NEW JERSEY
LICENCE # 24488**

[Signature]

COMMERCIAL



MSG Fire & Safety Inc.

Designers of Fire Protection Systems

Flow Test Report

Location BEHIND Kohl's Date SEPT. 22, 1999

Test Made By MIKE GRANIT Time 10:30 AM

Representative of MSG FIRE & SAFETY INC.

Witness P.J. HAKIM

State Purpose of Test TO DESIGN FIRE SPRINKLER SYSTEM

Remarks _____

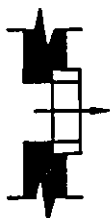
Static Pressure @ Test Hydrant A (psi) 84

Residual Pressure @ Test Hydrant A (psi) 74

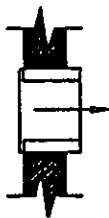
Flow Hydrant	Hydrant Outlet Size	No. Outlets Flowing	Pitot Reading	Hydrant Coefficient	Theoretical Flow (Cd=1.00)	Actual Flow (gpm)
B	2½	1	58	.90	1421	1278
C						
D						
Total Flow						1278



Outlet Smooth and Rounded (Cd=0.90)



Outlet square and sharp (Cd=0.80)



Outlet square and projecting into barrel (Cd=0.70)

Test Performed By: 

Test Witnessed By: 

HYDRAULIC CALCULATIONS

for

KOHL'S calculation #1

BRICKTOWNE CENTER

BRICK, NEW JERSEY 08723

Contract No. 0225

Date September 22, 1999

Design Data:

Remote Area Location	RETAIL AREA #1
Occupancy Classification	ORDINARY Grp.2
Density	0.20 gpm/sq.ft
Remote Area Size	2000.0 sq.ft
Coverage per Sprinkler	360.0 sq.ft
Sprinkler K-Factor	14.50
No. of Sprinkler Calculated	6
In-Rack Demand	0.0 gpm
Source Hose Demand	500.0 gpm
Total Water Including Hose	948.2 gpm
Name of Contractor	R.G. SOLOMON FIRE PROTECTION Inc.
Name of Designer	MSG Fire
Address	2010 PILGRIM Road, WALL, NEW JERSEY 07719
Authority Having Jurisdiction	A.H.J.

GENERAL RESULTS

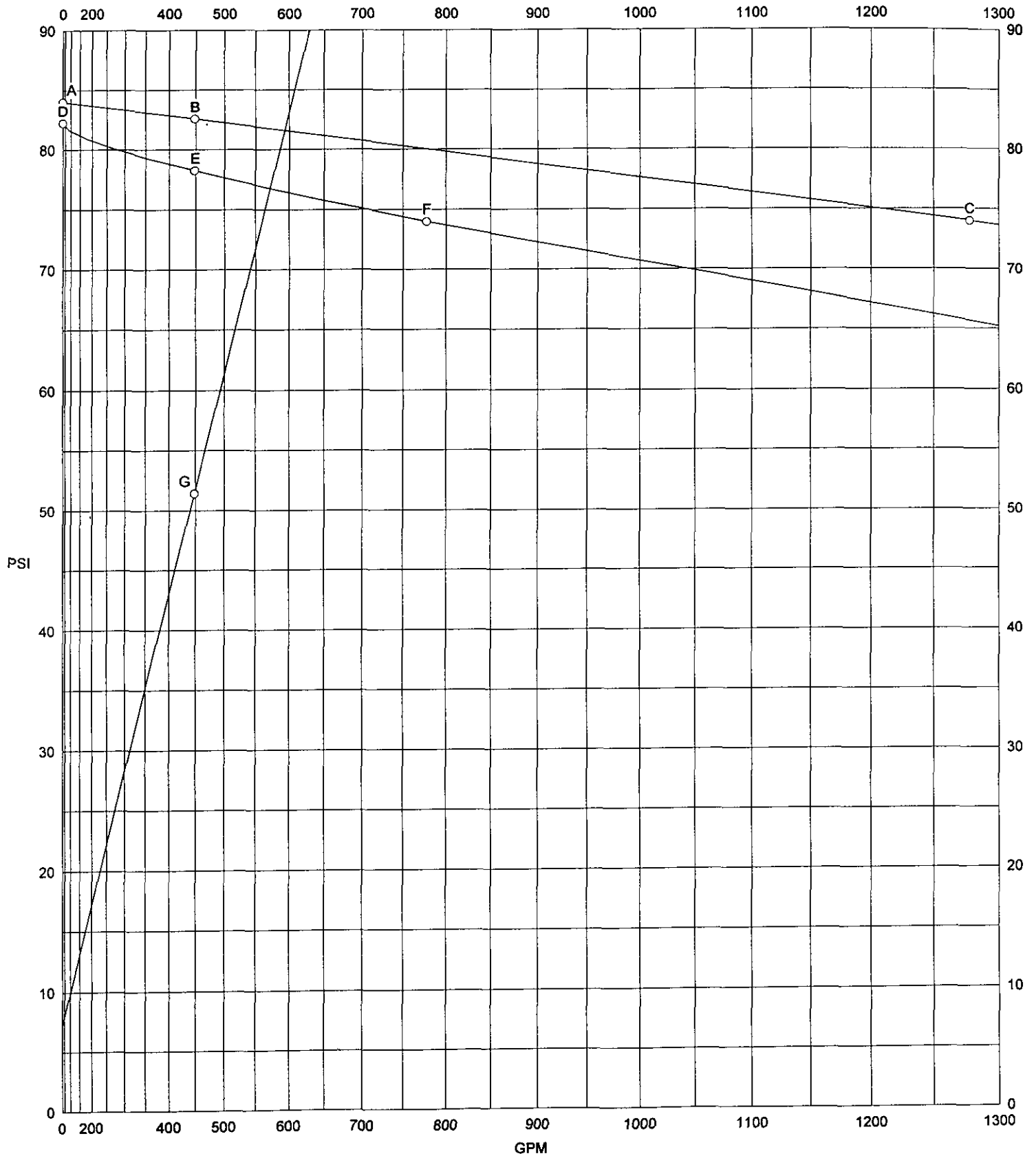
Total Water Including Hose	948.2 gpm
Additional Allowances	0.0 gpm
Discharge from Sprinklers	448.2 gpm
Source Hose Demand	500.0 gpm
Average Imbalance	0.109 gpm
Maximum Imbalance	0.5 gpm
Maximum Velocity @ Pipe: 8	13.6 ft/s
Maximum Fr. Loss @ Pipe: 5	0.134 psi/ft
Remote Area was not Peaked	

Velocity pressures have been used for information only, and are not valid for balancing the system.

SOURCE : 1

Static Pressure	84.0 psi
Residual Pressure	74.0 psi
Flow	1278.0 gpm
Hose Allowance	500.0 gpm
Available Pressure	78.2 psi
Required Pressure	51.4 psi
Safety Factor	34.3%, 26.8 psi
Water Flowing	448.2 gpm

Water Curves for Src : 1



Curve	Values - X : psi @ gpm
Supply Curve @ Src : 1	A : 84 @ 0 - B : 82.6 @ 448.2 - C : 74 @ 1278
Supply Curve with Hose @ Src : 1	D : 82.2 @ 0 - E : 78.2 @ 448.2 - F : 74 @ 778
Demand Curve @ Src : 1	7.1 @ 0 - G : 51.4 @ 448.2

NODES							
#	Type	Value	Elevation	X	Y	Res. Pres.	Discharge
			ft	ft	ft	psi	gpm
1	Src	[...]	-4.5	330.0	160.0	51.4	500.0
2	Head	14.50	12.0	313.5	-142.0	29.6	78.9
3	Head	14.50	12.0	291.5	-142.0	29.6	78.9
4	Head	14.50	12.0	313.5	-162.0	25.4	73.0
5	Head	14.50	12.0	291.5	-162.0	24.7	72.0
6	Head	14.50	12.0	273.5	-162.0	24.7	72.0
7	Head	14.50	12.0	255.5	-162.0	25.6	73.4
8	FPLD	5.0	2.0	336.1	125.5	43.4	-
9	Node	-	2.0	342.2	125.5	43.4	-
10	Node	-	2.0	330.0	125.5	48.5	-
11	Node	-	-4.5	330.0	125.5	51.4	-
12	Node	-	12.0	342.2	125.5	38.6	-
13	Node	-	12.0	368.0	122.5	37.4	-
14	Node	-	12.0	346.2	122.5	38.4	-
15	Node	-	12.0	368.0	119.0	37.2	-
16	Node	-	12.0	318.0	119.0	35.5	-
17	Node	-	12.0	368.0	99.0	36.6	-
18	Node	-	12.0	318.0	99.0	35.5	-
19	Node	-	12.0	318.0	88.0	35.5	-
20	Node	-	12.0	215.0	88.0	35.1	-
21	Node	-	12.0	368.0	79.0	36.0	-
22	Node	-	12.0	215.0	79.0	35.1	-
23	Node	-	12.0	368.0	67.0	35.7	-
24	Node	-	12.0	215.0	67.0	35.0	-
25	Node	-	12.0	368.0	58.0	35.6	-
26	Node	-	12.0	215.0	58.0	35.0	-
28	Node	-	12.0	368.0	38.0	35.2	-
27	Node	-	12.0	215.0	38.0	34.8	-
30	Node	-	12.0	368.0	18.0	34.9	-
29	Node	-	12.0	215.0	18.0	34.6	-
32	Node	-	12.0	368.0	-2.0	34.6	-
31	Node	-	12.0	215.0	-2.0	34.4	-
34	Node	-	12.0	368.0	-22.0	34.3	-
33	Node	-	12.0	215.0	-22.0	34.2	-
36	Node	-	12.0	368.0	-42.0	34.0	-
35	Node	-	12.0	215.0	-42.0	34.0	-
38	Node	-	12.0	368.0	-62.0	33.8	-
37	Node	-	12.0	215.0	-62.0	33.7	-
39	Node	-	12.0	368.0	-82.0	33.5	-
40	Node	-	12.0	215.0	-82.0	33.5	-
41	Node	-	12.0	368.0	-102.0	33.3	-
42	Node	-	12.0	215.0	-102.0	33.3	-
43	Node	-	12.0	368.0	-122.0	33.0	-
44	Node	-	12.0	215.0	-122.0	33.0	-
45	Node	-	12.0	368.0	-142.0	32.8	-
46	Node	-	12.0	215.0	-142.0	32.8	-
47	Node	-	12.0	368.0	-162.0	32.7	-
48	Node	-	12.0	215.0	-162.0	32.6	-
49	Node	-	12.0	368.0	-167.0	32.7	-
50	Node	-	12.0	215.0	-167.0	32.6	-
51	Node	-	12.0	368.0	-172.0	32.7	-
52	Node	-	12.0	215.0	-172.0	32.6	-

PIPES															
#	#	Type	Start/End Nodes				Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. F. Loss		Flow gpm	Velocity ft/s	Type
			Value	Elevation ft	Res. Pres. psi	Discharge gpm					Pres. Elev. Loss psi	Pres. Vel. Loss			
1	2	Head	14.50	12.0	29.6	78.9	Sch10 120	2 2.000	22.0 0.0	0.001	0.012 0.000		7.1	0.6	Branch Line
2	3	Head	14.50	12.0	29.6	78.9	-	2.157	22.0 0.000		0.000				
2	45	Node	-	12.0	32.8	-	Sch10 120	2 2.000	54.5 0.0	0.058	3.145 0.000		86.0	7.5	Branch Line
2	2	Head	14.50	12.0	29.6	78.9	-	2.157	54.5 0.000		0.004				
3	3	Head	14.50	12.0	29.6	78.9	Sch10 120	2 2.000	76.5 0.0	0.041	3.164 0.000		-71.8	6.3	Branch Line
3	46	Node	-	12.0	32.8	-	-	2.157	76.5 0.004		0.004				
4	5	Head	14.50	12.0	24.7	72.0	Sch10 120	2 2.000	22.0 0.0	0.032	0.697 0.000		-62.1	5.5	Branch Line
4	4	Head	14.50	12.0	25.4	73.0	-	2.157	22.0 0.003		0.003				
5	4	Head	14.50	12.0	25.4	73.0	Sch10 120	2 2.000	54.5 0.0	0.134	7.266 0.000		-135.2	11.9	Branch Line
5	47	Node	-	12.0	32.7	-	-	2.157	54.5 0.007		0.007				
6	6	Head	14.50	12.0	24.7	72.0	Sch10 120	2 2.000	18.0 0.0	0.001	0.019 0.000		9.9	0.9	Branch Line
6	5	Head	14.50	12.0	24.7	72.0	-	2.157	18.0 0.001		0.001				
7	6	Head	14.50	12.0	24.7	72.0	Sch10 120	2 2.000	18.0 0.0	0.053	0.950 0.000		-81.9	7.2	Branch Line
7	7	Head	14.50	12.0	25.6	73.4	-	2.157	18.0 0.004		0.004				
8	7	Head	14.50	12.0	25.6	73.4	Sch10 120	2 2.000	40.5 0.0	0.173	6.983 0.008		-155.3	13.6	Branch Line
8	48	Node	-	12.0	32.6	-	-	2.157	40.5 0.008		0.008				
9	15	Node	-	12.0	37.2	-	Sch10 120	2 2.000	50.0 6.2	0.030	1.704 0.000		60.7	5.3	Branch Line
9	16	Node	-	12.0	35.5	-	-	2.157	56.2 0.003		0.003				
10	17	Node	-	12.0	36.6	-	Sch10 120	2 2.000	50.0 6.2	0.019	1.043 0.000		46.6	4.1	Branch Line
10	18	Node	-	12.0	35.5	-	-	2.157	56.2 0.002		0.002				
11	21	Node	-	12.0	36.0	-	Sch10 120	2 2.000	153.0 6.2	0.006	0.937 0.000		25.0	2.2	Branch Line
11	22	Node	-	12.0	35.1	-	-	2.157	159.2 0.001		0.001				
12	24	Node	-	12.0	35.0	-	Sch10 120	2 2.000	153.0 6.2	0.004	0.713 0.000		-21.6	1.9	Branch Line
12	23	Node	-	12.0	35.7	-	-	2.157	159.2 0.001		0.001				
13	26	Node	-	12.0	35.0	-	Sch10 120	2 2.000	153.0 6.2	0.004	0.584 0.000		-19.4	1.7	Branch Line
13	25	Node	-	12.0	35.6	-	-	2.157	159.2 0.001		0.001				
14	28	Node	-	12.0	35.2	-	Sch10 120	2 2.000	153.0 6.2	0.002	0.376 0.000		15.3	1.3	Branch Line
14	27	Node	-	12.0	34.8	-	-	2.157	159.2 0.001		0.001				
15	30	Node	-	12.0	34.9	-	Sch10 120	2 2.000	153.0 6.2	0.001	0.230 0.000		11.7	1.0	Branch Line
15	29	Node	-	12.0	34.6	-	-	2.157	159.2 0.001		0.001				
16	32	Node	-	12.0	34.6	-	Sch10 120	2 2.000	153.0 6.2	0.001	0.133 0.000		8.7	0.8	Branch Line
16	31	Node	-	12.0	34.4	-	-	2.157	159.2 0.000		0.000				

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom Diam. Int. Diam.	Length Eq. Length Total Length ft	Fr. Loss psi/ft	Pres. Fr. Loss psi Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
17	34 33	Node Node	-	12.0 12.0	34.3 34.2	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.070 0.000 0.000	6.2	0.5	Branch Line
18	35 36	Node Node	-	12.0 12.0	34.0 34.0	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.034 0.000 0.000	-4.1	0.4	Branch Line
19	37 38	Node Node	-	12.0 12.0	33.7 33.8	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.014 0.000 0.000	-2.6	0.2	Branch Line
20	39 40	Node Node	-	12.0 12.0	33.5 33.5	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.004 0.000 0.000	1.4	0.1	Branch Line
21	41 42	Node Node	-	12.0 12.0	33.3 33.3	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.001 0.000 0.000	0.4	0.0	Branch Line
22	43 44	Node Node	-	12.0 12.0	33.0 33.0	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.001 0.000 0.000	-0.8	0.1	Branch Line
23	50 49	Node Node	-	12.0 12.0	32.6 32.7	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.010 0.000 0.000	-2.1	0.2	Branch Line
24	9 12	Node Node	-	2.0 12.0	43.4 38.6	Sch10 120 ES	6 6.000 6.367	10.0 58.3 68.3	0.006	0.430 4.330 0.000	448.7	4.5	Branch Line
25	52 51	Node Node	-	12.0 12.0	32.6 32.7	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000	0.010 0.000 0.000	-2.1	0.2	Cross Main
26	16 18	Node Node	-	12.0 12.0	35.5 35.5	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.001	0.022 0.000 0.000	60.7	1.4	Cross Main
27	18 19	Node Node	-	12.0 12.0	35.5 35.5	Sch10 120	4 4.000 4.260	11.0 0.0 11.0	0.003	0.035 0.000 0.000	107.4	2.4	Cross Main
28	19 20	Node Node	-	12.0 12.0	35.5 35.1	Sch10 120 E	4 4.000 4.260	103.0 13.2 116.2	0.003	0.368 0.000 0.000	107.4	2.4	Cross Main
29	20 22	Node Node	-	12.0 12.0	35.1 35.1	Sch10 120	4 4.000 4.260	9.0 0.0 9.0	0.003	0.028 0.000 0.000	107.4	2.4	Cross Main
30	22 24	Node Node	-	12.0 12.0	35.1 35.0	Sch10 120	4 4.000 4.260	12.0 0.0 12.0	0.005	0.056 0.000 0.000	132.4	3.0	Cross Main
31	24 26	Node Node	-	12.0 12.0	35.0 35.0	Sch10 120	4 4.000 4.260	9.0 0.0 9.0	0.006	0.056 0.000 0.001	154.0	3.5	Cross Main
32	26 27	Node Node	-	12.0 12.0	35.0 34.8	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.008	0.154 0.000 0.001	173.3	3.9	Cross Main

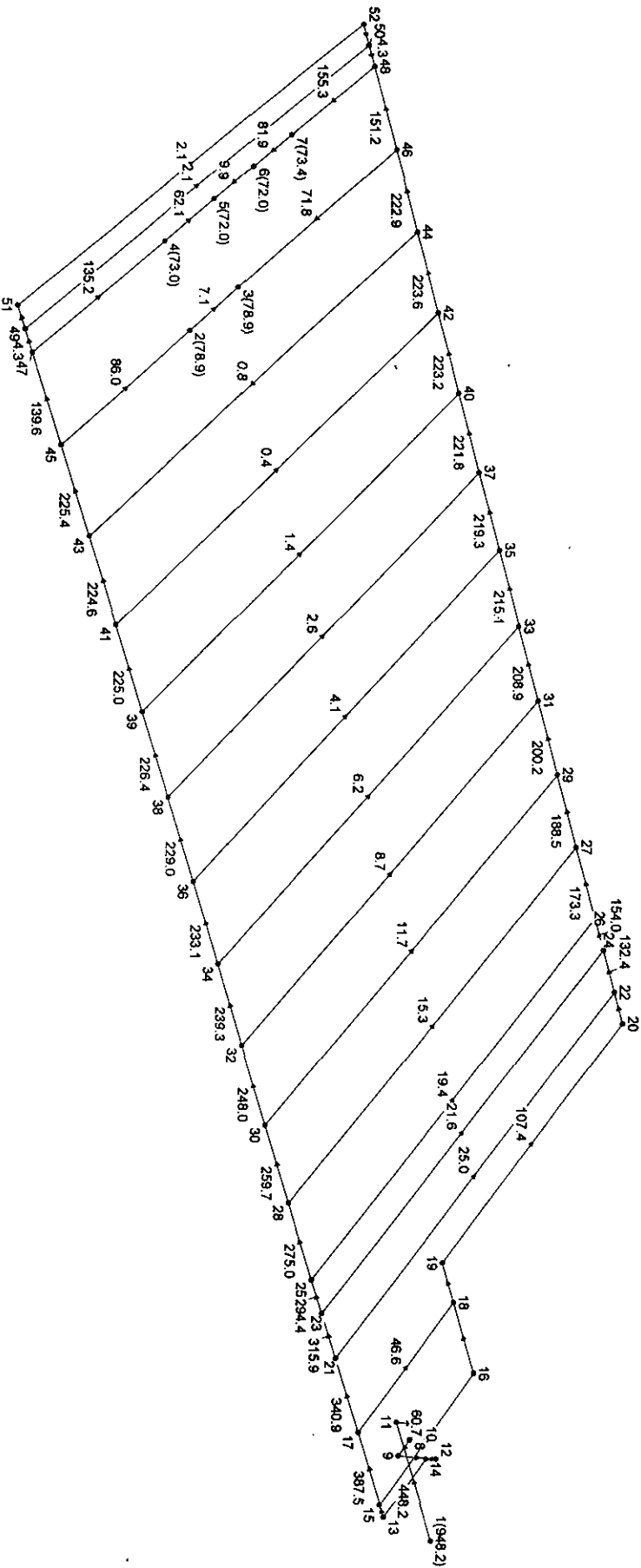
PIPES													
#	Start/End Nodes				Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type	
	#	Type	Value	Elevation ft									Res. Pres. psi
33	27 29	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.009	0.179 0.000	188.5	4.2	Cross Main	
34	29 31	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.010	0.201 0.000	200.2	4.5	Cross Main	
35	31 33	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.011	0.217 0.000	208.9	4.7	Cross Main	
36	33 35	Node Node	-	12.0 12.0	Sch10 120	4 4.260	20.0 0.0	0.012	0.229 0.000	215.1	4.8	Cross Main	
37	35 37	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.012	0.237 0.000	219.3	4.9	Cross Main	
38	37 40	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.012	0.242 0.000	221.8	5.0	Cross Main	
39	40 42	Node Node	-	12.0 12.0	Sch10 120	4 4.260	20.0 0.0	0.012	0.245 0.000	223.2	5.0	Cross Main	
40	42 44	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.012	0.246 0.000	223.6	5.0	Cross Main	
41	44 46	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.012	0.245 0.000	222.9	5.0	Cross Main	
42	46 48	Node Node	-	12.0 12.0	Sch10 120	4 4.260	20.0 0.0	0.006	0.119 0.000	151.2	3.4	Cross Main	
43	48 50	Node Node	-	12.0 12.0	Sch10 120	4 4.000	5.0 0.0	0.000	0.000 0.000	-4.3	0.1	Cross Main	
44	50 52	Node Node	-	12.0 12.0	Sch10 120	4 4.000	5.0 0.0	0.000	0.000 0.000	-2.1	0.0	Cross Main	
47	14 12	Node Node	-	12.0 12.0	Sch10 120	4 4.000	5.0 0.0	0.045	0.223 0.000	-448.2	10.1	Pipe	
48	13 14	Node Node	-	12.0 12.0	Sch10 120	4 4.260	21.8 0.0	0.045	0.969 0.000	-448.2	10.1	Pipe	
49	15 13	Node Node	-	12.0 12.0	Sch10 120	4 4.000	3.5 0.0	0.045	0.156 0.000	-448.2	10.1	Pipe	
50	17 15	Node Node	-	12.0 12.0	Sch10 120	4 4.000	20.0 0.0	0.034	0.680 0.000	-387.5	8.7	Pipe	

KOHL'S CALCULATION #1

PIPES														
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type	
	#	Type	Value	Elevation ft	Res. Pres. psi									Discharge gpm
51	21 17	Node Node	- -	12.0 12.0	36.0 36.6	Sch10 120	4 4.000	20.0 0.0	0.027	0.537 0.000	-340.9	7.7	Pipe	
52	23 21	Node Node	- -	12.0 12.0	35.7 36.0	Sch10 120	4 4.000	12.0 0.0	0.023	0.280 0.001	-315.9	7.1	Pipe	
53	25 23	Node Node	- -	12.0 12.0	35.6 35.7	Sch10 120	4 4.000	9.0 0.0	0.021	0.184 0.000	-294.4	6.6	Pipe	
54	28 25	Node Node	- -	12.0 12.0	35.2 35.6	Sch10 120	4 4.000	20.0 0.0	0.018	0.361 0.000	-275.0	6.2	Pipe	
55	30 28	Node Node	- -	12.0 12.0	34.9 35.2	Sch10 120	4 4.000	20.0 0.0	0.016	0.325 0.000	-259.7	5.8	Pipe	
56	32 30	Node Node	- -	12.0 12.0	34.6 34.9	Sch10 120	4 4.000	20.0 0.0	0.015	0.298 0.000	-248.0	5.6	Pipe	
57	34 32	Node Node	- -	12.0 12.0	34.3 34.6	Sch10 120	4 4.000	20.0 0.0	0.014	0.279 0.001	-239.3	5.4	Pipe	
58	36 34	Node Node	- -	12.0 12.0	34.0 34.3	Sch10 120	4 4.000	20.0 0.0	0.013	0.266 0.000	-233.1	5.2	Pipe	
59	38 36	Node Node	- -	12.0 12.0	33.8 34.0	Sch10 120	4 4.000	20.0 0.0	0.013	0.257 0.000	-229.0	5.2	Pipe	
60	39 38	Node Node	- -	12.0 12.0	33.5 33.8	Sch10 120	4 4.000	20.0 0.0	0.013	0.252 0.001	-226.4	5.1	Pipe	
61	41 39	Node Node	- -	12.0 12.0	33.3 33.5	Sch10 120	4 4.000	20.0 0.0	0.013	0.249 0.000	-225.0	5.1	Pipe	
62	43 41	Node Node	- -	12.0 12.0	33.0 33.3	Sch10 120	4 4.000	20.0 0.0	0.012	0.248 0.000	-224.6	5.1	Pipe	
63	45 43	Node Node	- -	12.0 12.0	32.8 33.0	Sch10 120	4 4.000	20.0 0.0	0.013	0.250 0.000	-225.4	5.1	Pipe	
64	47 45	Node Node	- -	12.0 12.0	32.7 32.8	Sch10 120	4 4.000	20.0 0.0	0.005	0.103 0.000	-139.6	3.1	Pipe	
65	49 47	Node Node	- -	12.0 12.0	32.7 32.7	Sch10 120	4 4.000	5.0 0.0	0.000	0.000 0.000	-4.3	0.1	Pipe	
66	51 49	Node Node	- -	12.0 12.0	32.7 32.7	Sch10 120	4 4.000	5.0 0.0	0.000	0.000 0.000	-2.1	0.0	Pipe	

PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
45	8 9	FPLD Node	5.0 -	2.0 2.0	43.4 43.4	-	Sch10 120 G	6 6,000 6,367	6.1 3.8 9.9	0.006 0.000 0.000	0.062 0.000 0.000	448.7	4.5	Pipe
46	10 8	Node FPLD	- 5.0	2.0 2.0	48.5 43.4	-	Sch10 120 G	6 6,000 6,367	6.1 3.8 9.9	0.006 0.000 0.000	0.062 0.000 0.000	448.7	4.5	Pipe
67	1 11	Src Node	[...] -	-4.5 -4.5	51.4 51.4	500.0 -	Ductile 140 -	8 8,000 8,110	34.5 0.0 34.5	0.001 0.050 0.000	0.000 0.000 0.000	448.2	2.8	Underground
68	11 10	Node Node	- -	-4.5 2.0	51.4 48.5	-	Ductile 140 E	8 8,000 8,110	6.5 24.5 31.0	0.001 0.045 2.814	0.005 2.814 0.000	448.2	2.8	Underground

KOHL'S CALCULATION #1
FLOW DIAGRAM



System Statistics

Materials Info								
Name	Abbr.	Size	HWC	Length	Total Length	Fittings		
						Abbr.	Eq.Length	Amount
Sch10	Sch10	2	120	2548.0	2646.5	E	6.2	16
		4	120	715.3	728.4	E	13.2	1
		6	120	22.2	88.1	E	17.7	1
						G	3.8	2
Ductile	Ductile	8	140	41.0	65.5	E	24.5	1

Fittings Info		
Name	Abbr.	Amount
NFPA EII 90	E	19
NFPA Gate Valve	G	2

HYDRAULIC CALCULATIONS

for

KOHL'S calculation #2

BRICKTOWNE CENTER

BRICK, NEW JERSEY 08723

Contract No. 0225

Date September 22, 1999

Design Data:

Remote Area Location	RETAIL AREA #2
Occupancy Classification	ORDINARY Grp.2
Density	0.20 gpm/sq.ft
Remote Area Size	2000.0 sq.ft
Coverage per Sprinkler	360.0 sq.ft
Sprinkler K-Factor	14.50
No. of Sprinkler Calculated	6
In-Rack Demand	0.0 gpm
Source Hose Demand	500.0 gpm
Total Water Including Hose	947.2 gpm
Name of Contractor	R.G. SOLOMON FIRE PROTECTION Inc.
Name of Designer	MSG Fire
Address	2010 PILGRIM Road,WALL, NEW JERSEY 07719
Authority Having Jurisdiction	A.H.J.

GENERAL RESULTS

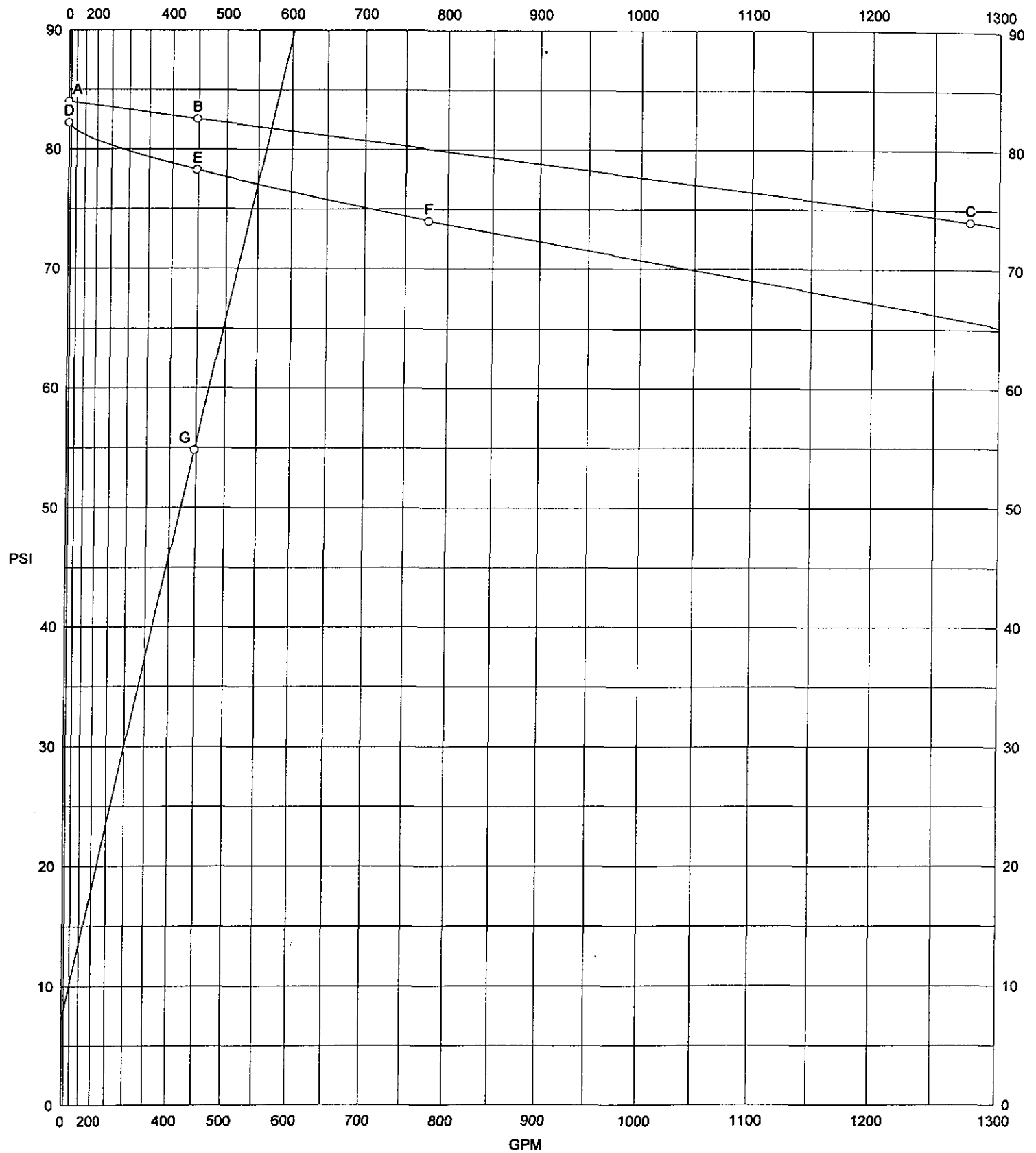
Total Water Including Hose	947.2 gpm
Additional Allowances	0.0 gpm
Discharge from Sprinklers	447.0 gpm
Source Hose Demand	500.0 gpm
Average Imbalance	0.038 gpm
Maximum Imbalance	0.5 gpm
Maximum Velocity @ Pipe: 106	14.0 ft/s
Maximum Fr. Loss @ Pipe: 101	0.126 psi/ft
Remote Area was not Peaked	

Velocity pressures have been used for information only, and are not valid for balancing the system.

SOURCE : 1

Static Pressure	84.0 psi
Residual Pressure	74.0 psi
Flow	1278.0 gpm
Hose Allowance	500.0 gpm
Available Pressure	78.3 psi
Required Pressure	54.8 psi
Safety Factor	30.0%, 23.4 psi
Water Flowing	447.2 gpm

Water Curves for Src : 1



Curve	Values - X : psi @ gpm
Supply Curve @ Src : 1	A : 84 @ 0 - B : 82.6 @ 447.2 - C : 74 @ 1278
Supply Curve with Hose @ Src : 1	D : 82.2 @ 0 - E : 78.3 @ 447.2 - F : 74 @ 778
Demand Curve @ Src : 1	7.1 @ 0 - G : 54.8 @ 447.2

NODES							
#	Type	Value	Elevation	X	Y	Res. Pres.	Discharge
			ft	ft	ft	psi	gpm
1	Src	[...]	-4.5	400.0	285.0	54.8	500.0
101	Head	14.50	12.0	109.0	169.5	25.1	72.7
102	Head	14.50	12.0	109.0	151.5	24.6	72.0
103	Head	14.50	12.0	109.0	133.5	24.7	72.0
104	Head	14.50	12.0	88.0	133.5	29.2	78.4
105	Head	14.50	12.0	109.0	115.5	25.7	73.5
106	Head	14.50	12.0	88.0	115.5	29.3	78.4
8	FPLD	5.0	2.0	327.0	280.0	46.8	-
10	Node	-	2.0	327.0	285.0	51.8	-
11	Node	-	-4.5	327.0	285.0	54.7	-
110	Node	-	12.0	327.0	275.0	42.3	-
160	Node	-	2.0	327.0	275.0	46.8	-
112	Node	-	12.0	327.0	251.0	40.6	-
113	Node	-	12.0	317.0	251.0	39.6	-
114	Node	-	12.0	298.0	251.0	38.9	-
115	Node	-	12.0	279.0	251.0	38.3	-
116	Node	-	12.0	260.0	251.0	37.8	-
117	Node	-	12.0	241.0	251.0	37.3	-
118	Node	-	12.0	222.0	251.0	37.0	-
119	Node	-	12.0	203.0	251.0	36.6	-
120	Node	-	12.0	184.0	251.0	36.3	-
121	Node	-	12.0	165.0	251.0	36.0	-
122	Node	-	12.0	146.0	251.0	35.8	-
123	Node	-	12.0	127.0	251.0	35.6	-
124	Node	-	12.0	109.0	251.0	35.4	-
125	Node	-	12.0	88.0	251.0	35.3	-
126	Node	-	12.0	68.0	251.0	35.3	-
127	Node	-	12.0	82.0	235.0	35.2	-
128	Node	-	12.0	68.0	235.0	35.3	-
129	Node	-	12.0	97.0	224.0	33.5	-
130	Node	-	12.0	88.0	224.0	34.1	-
131	Node	-	12.0	97.0	175.0	31.4	-
132	Node	-	12.0	88.0	175.0	30.8	-
133	Node	-	12.0	97.0	102.0	31.0	-
134	Node	-	12.0	88.0	102.0	30.1	-
135	Node	-	12.0	97.0	73.0	33.2	-
136	Node	-	12.0	88.0	73.0	34.1	-
137	Node	-	12.0	317.0	64.0	36.6	-
138	Node	-	12.0	298.0	64.0	36.6	-
139	Node	-	12.0	279.0	64.0	36.6	-
140	Node	-	12.0	260.0	64.0	36.5	-
141	Node	-	12.0	241.0	64.0	36.4	-
142	Node	-	12.0	222.0	64.0	36.3	-
143	Node	-	12.0	203.0	64.0	36.2	-
144	Node	-	12.0	184.0	64.0	36.0	-
145	Node	-	12.0	165.0	64.0	35.8	-
146	Node	-	12.0	146.0	64.0	35.6	-
147	Node	-	12.0	127.0	64.0	35.3	-
148	Node	-	12.0	109.0	64.0	35.1	-
149	Node	-	12.0	88.0	64.0	35.0	-
150	Node	-	12.0	82.0	64.0	35.0	-

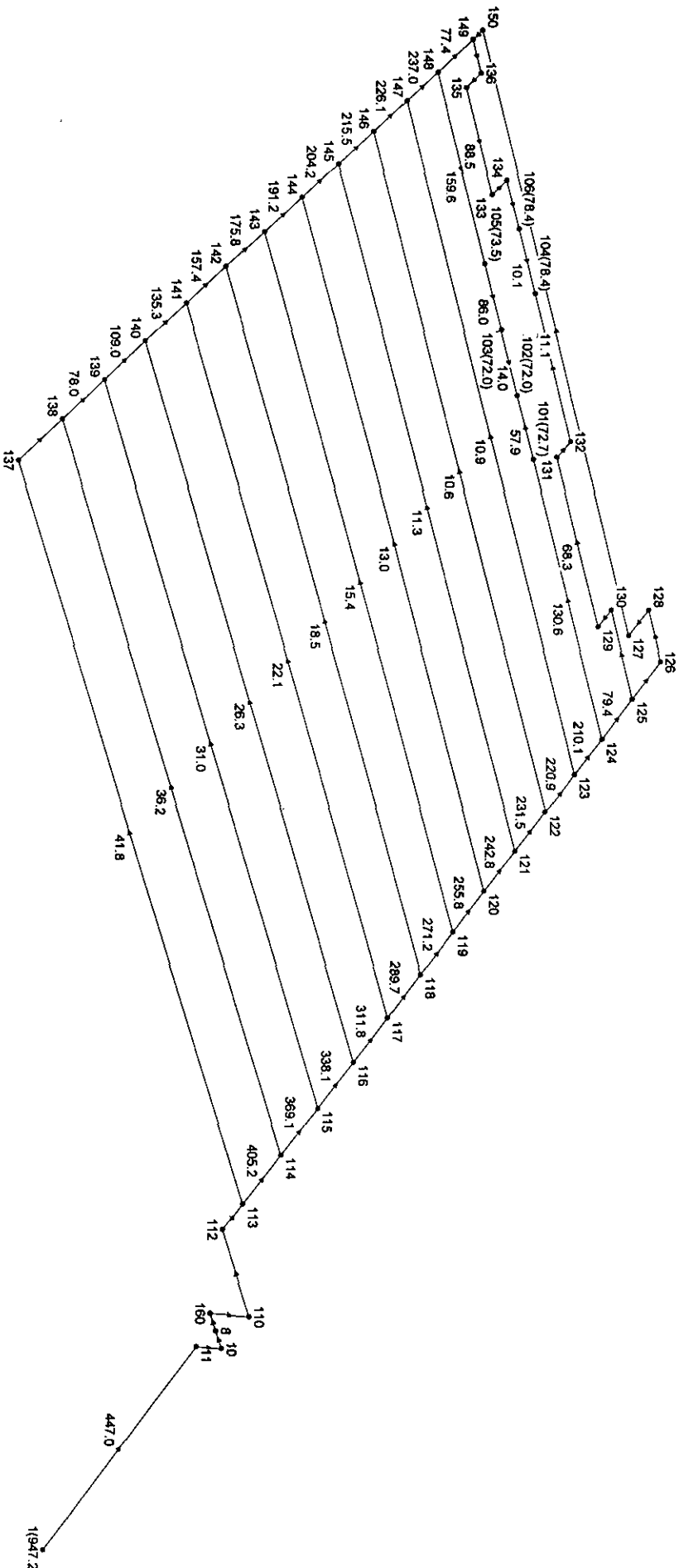
PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length ft	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss psi	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
100	102 101	Head Head	14.50 14.50	12.0 12.0	24.6 25.1	Sch10 120	2 2,000	18.0 0.0	0.028	0.501 0.000	-57.9	5.1	Branch Line
101	101 124	Head Node	14.50 -	12.0 12.0	25.1 35.4	Sch10 120	2 2,000	81.5 0.0	0.126	10.202 0.000	-130.6	11.5	Branch Line
102	103 102	Head Head	14.50 14.50	12.0 12.0	24.7 24.6	Sch10 120	2 2,000	18.0 0.0	0.002	0.036 0.000	14.0	1.2	Branch Line
103	105 103	Head Head	14.50 14.50	12.0 12.0	25.7 24.7	Sch10 120	2 2,000	18.0 0.0	0.058	1.041 0.000	86.0	7.6	Branch Line
104	104 106	Head Head	14.50 14.50	12.0 12.0	29.2 29.3	Sch10 120	2 2,000	18.0 0.0	0.001	0.020 0.000	-10.1	0.9	Branch Line
105	132 104	Node Head	- 14.50	12.0 12.0	30.8 29.2	Sch10 120	2 2,000	41.5 0.0	0.038	1.566 0.000	68.3	6.0	Branch Line
106	148 105	Node Head	- 14.50	12.0 12.0	35.1 25.7	Sch10 120	2 2,000	51.5 0.0	0.182	9.333 0.000	159.6	14.0	Branch Line
107	106 134	Head Node	14.50 -	12.0 12.0	29.3 30.1	Sch10 120	2 2,000	13.5 0.0	0.061	0.823 0.000	-88.5	7.8	Branch Line
108	137 113	Node Node	- -	12.0 12.0	36.6 39.6	Sch10 120	2 2,000	187.0 6.2	0.015	2.940 0.000	-41.8	3.7	Branch Line
111	140 116	Node Node	- -	12.0 12.0	36.5 37.8	Sch10 120	2 2,000	187.0 6.2	0.006	1.245 0.000	-26.3	2.3	Branch Line
112	141 117	Node Node	- -	12.0 12.0	36.4 37.3	Sch10 120	2 2,000	187.0 6.2	0.005	0.904 0.000	-22.1	1.9	Branch Line
113	142 118	Node Node	- -	12.0 12.0	36.3 37.0	Sch10 120	2 2,000	187.0 6.2	0.003	0.648 0.000	-18.5	1.6	Branch Line
114	143 119	Node Node	- -	12.0 12.0	36.2 36.6	Sch10 120	2 2,000	187.0 6.2	0.002	0.463 0.000	-15.4	1.4	Branch Line
115	144 120	Node Node	- -	12.0 12.0	36.0 36.3	Sch10 120	2 2,000	187.0 6.2	0.002	0.338 0.000	-13.0	1.1	Branch Line
116	145 121	Node Node	- -	12.0 12.0	35.8 36.0	Sch10 120	2 2,000	187.0 6.2	0.001	0.263 0.000	-11.3	1.0	Branch Line
117	146 122	Node Node	- -	12.0 12.0	35.6 35.8	Sch10 120	2 2,000	187.0 6.2	0.001	0.232 0.000	-10.6	0.9	Branch Line

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length ft	F. Loss ps/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss psi	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm							
118	147 123	Node Node	-	12.0 12.0	35.3 35.6	-	Sch10 120 E	2 2.000 2.157	187.0 6.2 193.2	0.001 0.242 0.000 0.001	-10.9	1.0	Branch Line
119	130 125	Node Node	-	12.0 12.0	34.1 35.3	-	Sch10 120 E	2 2.000 2.157	27.0 6.2 33.2	0.038 1.251 0.000 0.004	-68.3	6.0	Branch Line
120	128 126	Node Node	-	12.0 12.0	35.3 35.3	-	Sch10 120 E	2 2.000 2.157	16.0 6.2 22.2	0.001 0.029 0.000 0.001	-11.1	1.0	Branch Line
121	128 127	Node Node	-	12.0 12.0	35.3 35.2	-	Sch10 120 E	2 2.000 2.157	14.0 6.2 20.2	0.001 0.026 0.000 0.001	11.1	1.0	Branch Line
122	127 150	Node Node	-	12.0 12.0	35.2 35.0	-	Sch10 120 E	2 2.000 2.157	171.0 6.2 177.2	0.001 0.231 0.000 0.001	11.1	1.0	Branch Line
123	130 129	Node Node	-	12.0 12.0	34.1 33.5	-	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.572 0.000 0.004	68.3	6.0	Branch Line
124	129 131	Node Node	-	12.0 12.0	33.5 31.4	-	Sch10 120 E	2 2.000 2.157	49.0 6.2 55.2	2.082 0.000 0.004	68.3	6.0	Branch Line
125	131 132	Node Node	-	12.0 12.0	31.4 30.8	-	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.572 0.000 0.004	68.3	6.0	Branch Line
126	134 133	Node Node	-	12.0 12.0	30.1 31.0	-	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.923 0.000 0.005	-88.5	7.8	Branch Line
127	133 135	Node Node	-	12.0 12.0	31.0 33.2	-	Sch10 120 E	2 2.000 2.157	29.0 6.2 35.2	0.061 0.000 0.005	-88.5	7.8	Branch Line
128	135 136	Node Node	-	12.0 12.0	33.2 34.1	-	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.061 0.923 0.000 0.005	-88.5	7.8	Branch Line
129	136 149	Node Node	-	12.0 12.0	34.1 35.0	-	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.061 0.923 0.000 0.005	-88.5	7.8	Branch Line
130	110 112	Node Node	-	12.0 12.0	42.3 40.6	-	Sch10 120 E	4 4.000 4.260	24.0 13.2 37.2	0.045 1.647 0.000 0.002	447.0	10.1	Cross Main
131	112 113	Node Node	-	12.0 12.0	40.6 39.6	-	Sch10 120 E	4 4.000 4.260	10.0 13.2 23.2	1.027 0.000 0.002	447.0	10.1	Cross Main
132	113 114	Node Node	-	12.0 12.0	39.6 38.9	-	Sch10 120 E	4 4.000 4.260	19.0 0.0 19.0	0.702 0.000 0.001	405.2	9.1	Cross Main
133	114 115	Node Node	-	12.0 12.0	38.9 38.3	-	Sch10 120 E	4 4.000 4.260	19.0 0.0 19.0	0.591 0.000 0.001	369.1	8.3	Cross Main

PIPES													
#	Start/End Nodes					Material	Size	Length	Fr. Loss	Pres. Fr. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation	Res. Pres.								
			ft	psi			Int. Diam.	ft	psi/ft	psi	gpm	ft/s	
134	115 Node	-	12.0	38.3		Sch10	4	19.0	0.027	0.502	338.1	7.6	Cross Main
	116 Node	-	12.0	37.8		120	4.000	0.0		0.000			
							4.260	19.0		0.001			
135	116 Node	-	12.0	37.8		Sch10	4	19.0	0.023	0.432	311.8	7.0	Cross Main
	117 Node	-	12.0	37.3		120	4.000	0.0		0.000			
							4.260	19.0		0.001			
136	117 Node	-	12.0	37.3		Sch10	4	19.0	0.020	0.377	289.7	6.5	Cross Main
	118 Node	-	12.0	37.0		120	4.000	0.0		0.000			
							4.260	19.0		0.001			
137	118 Node	-	12.0	37.0		Sch10	4	19.0	0.018	0.334	271.2	6.1	Cross Main
	119 Node	-	12.0	36.6		120	4.000	0.0		0.000			
							4.260	19.0		0.001			
138	119 Node	-	12.0	36.6		Sch10	4	19.0	0.016	0.300	255.8	5.8	Cross Main
	120 Node	-	12.0	36.3		120	4.000	0.0		0.001			
							4.260	19.0		0.001			
139	120 Node	-	12.0	36.3		Sch10	4	19.0	0.014	0.272	242.8	5.5	Cross Main
	121 Node	-	12.0	36.0		120	4.000	0.0		0.000			
							4.260	19.0		0.001			
140	121 Node	-	12.0	36.0		Sch10	4	19.0	0.013	0.249	231.5	5.2	Cross Main
	122 Node	-	12.0	35.8		120	4.000	0.0		0.001			
							4.260	19.0		0.001			
141	122 Node	-	12.0	35.8		Sch10	4	19.0	0.012	0.229	220.9	5.0	Cross Main
	123 Node	-	12.0	35.6		120	4.000	0.0		0.001			
							4.260	19.0		0.001			
142	123 Node	-	12.0	35.6		Sch10	4	18.0	0.011	0.197	210.1	4.7	Cross Main
	124 Node	-	12.0	35.4		120	4.000	0.0		0.000			
							4.260	18.0		0.001			
143	137 Node	-	12.0	36.6		Sch10	4	19.0	0.001	0.011	41.8	0.9	Cross Main
	138 Node	-	12.0	36.6		120	4.000	0.0		0.000			
							4.260	19.0		0.000			
144	138 Node	-	12.0	36.6		Sch10	4	19.0	0.002	0.033	78.0	1.8	Cross Main
	139 Node	-	12.0	36.6		120	4.000	0.0		0.000			
							4.260	19.0		0.000			
145	139 Node	-	12.0	36.6		Sch10	4	19.0	0.003	0.062	109.0	2.5	Cross Main
	140 Node	-	12.0	36.5		120	4.000	0.0		0.000			
							4.260	19.0		0.000			
146	140 Node	-	12.0	36.5		Sch10	4	19.0	0.005	0.092	135.3	3.0	Cross Main
	141 Node	-	12.0	36.4		120	4.000	0.0		0.000			
							4.260	19.0		0.000			
147	141 Node	-	12.0	36.4		Sch10	4	19.0	0.006	0.122	157.4	3.5	Cross Main
	142 Node	-	12.0	36.3		120	4.000	0.0		0.001			
							4.260	19.0		0.001			
148	142 Node	-	12.0	36.3		Sch10	4	19.0	0.008	0.150	175.8	4.0	Cross Main
	143 Node	-	12.0	36.2		120	4.000	0.0		0.000			
							4.260	19.0		0.001			
149	143 Node	-	12.0	36.2		Sch10	4	19.0	0.009	0.175	191.2	4.3	Cross Main
	144 Node	-	12.0	36.0		120	4.000	0.0		0.000			
							4.260	19.0		0.001			

#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss ps/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
150	144 Node	-	12.0	36.0	-	Sch10 120	4 4.000	19.0 0.0	0.010	0.198 0.000	204.2	4.6	Cross Main	
151	145 Node	-	12.0	35.8	-	Sch10 120	4 4.260	19.0 0.0	0.012	0.218 0.000	215.5	4.9	Cross Main	
152	146 Node	-	12.0	35.6	-	Sch10 120	4 4.260	19.0 0.0	0.013	0.239 0.000	226.1	5.1	Cross Main	
153	147 Node	-	12.0	35.3	-	Sch10 120	4 4.260	19.0 0.0	0.014	0.247 0.000	237.0	5.3	Cross Main	
154	148 Node	-	12.0	35.1	-	Sch10 120	4 4.260	18.0 0.0	0.002	0.059 0.000	-77.4	1.7	Cross Main	
155	149 Node	-	12.0	35.0	-	Sch10 120	4 4.260	6.0 13.2	0.000	0.001 0.000	11.0	0.2	Cross Main	
70	114 Node	-	12.0	38.9	-	Sch10 120	2 2.000	187.0 6.2	0.012	2.246 0.000	36.2	3.2	Pipe	
71	115 Node	-	12.0	38.3	-	Sch10 120	2 2.157	187.0 6.2	0.009	1.687 0.002	31.0	2.7	Pipe	
156	125 Node	-	12.0	35.3	-	Sch10 120	4 4.000	21.0 13.2	0.002	0.062 0.000	-79.4	1.8	Pipe	
157	126 Node	-	12.0	35.3	-	Sch10 120	4 4.260	20.0 13.2	0.000	0.002 0.000	-11.0	0.2	Pipe	
158	10 Node	-	2.0	51.8	-	Sch10 120	6 6.000	5.0 0.0	0.006	0.031 0.000	447.1	4.5	Pipe	
159	8 Node	-	2.0	46.8	-	Sch10 120	6 6.367	5.0 0.0	0.006	0.031 0.000	447.1	4.5	Pipe	
160	160 Node	-	2.0	46.8	-	Sch10 120	6 6.367	10.0 17.7	0.006	0.174 4.330	447.1	4.5	Pipe	
161	1 Node	-	4.5	54.8	500.0	Ductile 140	8 8.110	73.0 0.0	0.001	0.106 0.000	447.0	2.8	Underground	
162	11 Node	-	4.5	54.7	-	Ductile 140	8 8.110	6.5 24.5	0.001	0.045 2.814	447.0	2.8	Underground	

FLOW DIAGRAM



System Statistics

Materials Info								
Name	Abbr.	Size	HWC	Length	Total Length	Fittings		
						Abbr.	Eq.Length	Amount
Sch10	Sch10	2	120	2668.0	2803.4	E	6.2	22
		4	120	518.0	597.0	E	13.2	6
		6	120	20.0	37.7	E	17.7	1
Ductile	Ductile	8	140	79.5	104.0	E	24.5	1

Fittings Info		
Name	Abbr.	Amount
NFPA EII 90	E	30

HYDRAULIC CALCULATIONS

for

KOHL'S calculation #3

BRICKTOWNE CENTER

BRICK, NEW JERSEY 08723

Contract No. 0225

Date September 22, 1999

Design Data:

Remote Area Location	STOCKROOM
Occupancy Classification	ORDINARY Grp.2
Density	0.30 gpm/sq.ft
Remote Area Size	2000.0 sq.ft
Coverage per Sprinkler	200.0 sq.ft
Sprinkler K-Factor	14.50
No. of Sprinkler Calculated	10
In-Rack Demand	0.0 gpm
Source Hose Demand	500.0 gpm
Total Water Including Hose	1132.5 gpm
Name of Contractor	R.G. SOLOMON FIRE PROTECTION Inc.
Name of Designer	MSG Fire
Address	2010 PILGRIM Road,WALL, NEW JERSEY 07719
Authority Having Jurisdiction	A.H.J.

GENERAL RESULTS

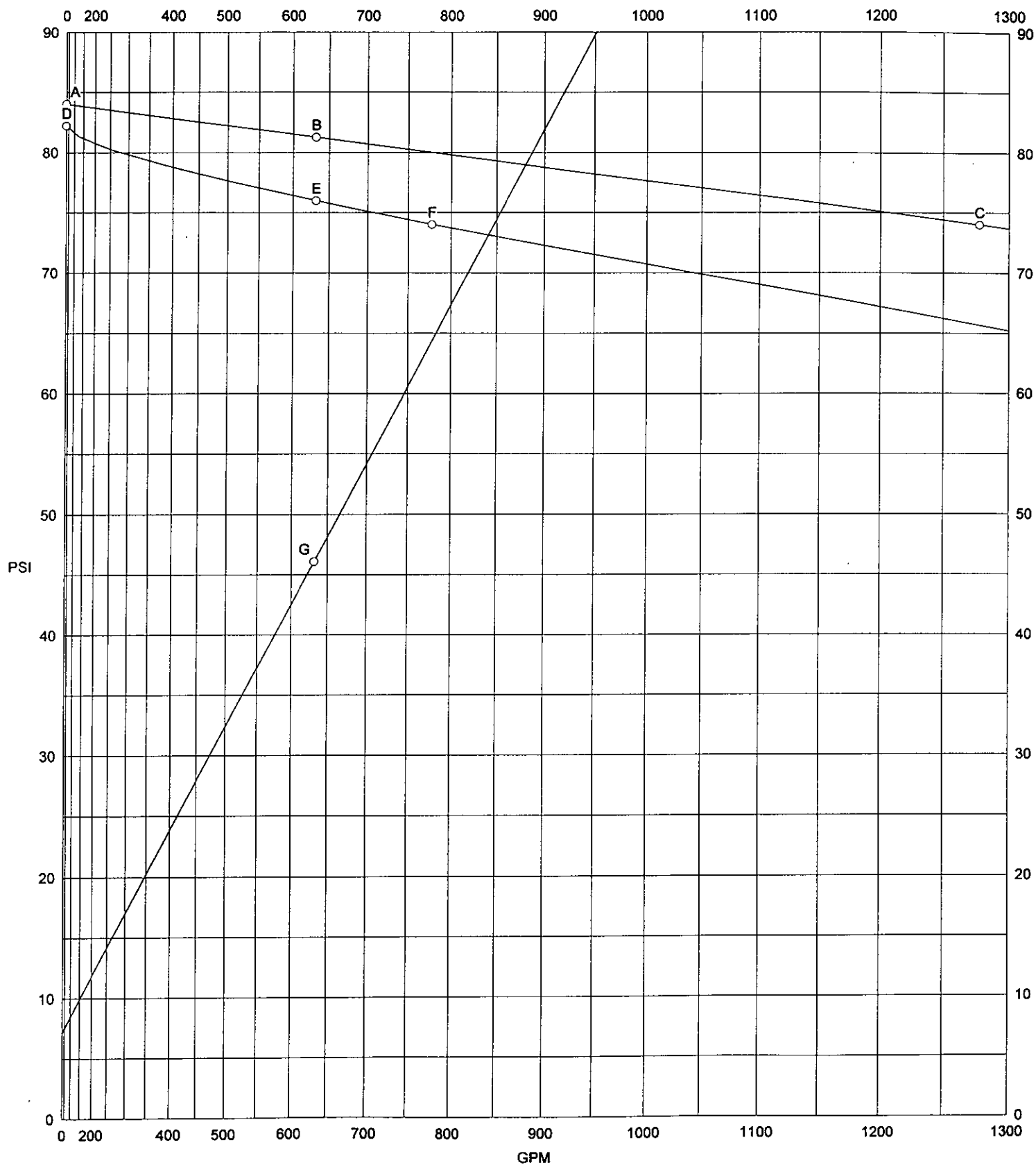
Total Water Including Hose	1132.5 gpm
Additional Allowances	0.0 gpm
Discharge from Sprinklers	632.2 gpm
Source Hose Demand	500.0 gpm
Average Imbalance	0.060 gpm
Maximum Imbalance	0.5 gpm
Maximum Velocity @ Pipe: 71	25.1 ft/s
Maximum Fr. Loss @ Pipe: 69	0.061 psi/ft
Remote Area was not Peaked	

Velocity pressures have been used for information only, and are not valid for balancing the system.

SOURCE : 1

Static Pressure	84.0 psi
Residual Pressure	74.0 psi
Flow	1278.0 gpm
Hose Allowance	500.0 gpm
Available Pressure	76.0 psi
Required Pressure	46.1 psi
Safety Factor	39.4%, 29.9 psi
Water Flowing	632.5 gpm

Water Curves for Src : 1



Curve	Values - X : psi @ gpm
Supply Curve @ Src : 1	A : 84 @ 0 - B : 81.3 @ 632.5 - C : 74 @ 1278
Supply Curve with Hose @ Src : 1	D : 82.2 @ 0 - E : 76 @ 632.5 - F : 74 @ 778
Demand Curve @ Src : 1	7.1 @ 0 - G : 46.1 @ 632.5

NODES							
#	Type	Value	Elevation	X	Y	Res. Pres.	Discharge
			ft	ft	ft	psi	gpm
1	Src	[...]	-4.5	400.0	285.0	46.1	500.0
305	Head	14.50	12.0	279.0	245.0	22.7	69.1
304	Head	14.50	12.0	279.0	235.0	19.5	64.1
309	Head	14.50	12.0	298.0	225.0	20.6	65.8
303	Head	14.50	12.0	279.0	225.0	17.9	61.3
308	Head	14.50	12.0	298.0	215.0	19.6	64.1
302	Head	14.50	12.0	279.0	215.0	17.2	60.1
307	Head	14.50	12.0	298.0	205.0	19.3	63.8
301	Head	14.50	12.0	279.0	205.0	17.1	60.0
306	Head	14.50	12.0	298.0	195.0	19.4	63.8
300	Head	14.50	12.0	279.0	195.0	17.2	60.1
101	Head	14.50	12.0	109.0	169.5	25.6	-
102	Head	14.50	12.0	109.0	151.5	25.6	-
103	Head	14.50	12.0	109.0	133.5	25.6	-
104	Head	14.50	12.0	88.0	133.5	25.6	-
105	Head	14.50	12.0	109.0	115.5	25.5	-
106	Head	14.50	12.0	88.0	115.5	25.6	-
8	FPLD	5.0	2.0	327.0	280.0	37.9	-
10	Node	-	2.0	327.0	285.0	43.0	-
11	Node	-	-4.5	327.0	285.0	45.9	-
110	Node	-	12.0	327.0	275.0	33.2	-
160	Node	-	2.0	327.0	275.0	37.9	-
112	Node	-	12.0	327.0	251.0	30.0	-
113	Node	-	12.0	317.0	251.0	28.1	-
114	Node	-	12.0	298.0	251.0	26.7	-
115	Node	-	12.0	279.0	251.0	25.9	-
116	Node	-	12.0	260.0	251.0	25.9	-
117	Node	-	12.0	241.0	251.0	25.8	-
118	Node	-	12.0	222.0	251.0	25.8	-
119	Node	-	12.0	203.0	251.0	25.7	-
120	Node	-	12.0	184.0	251.0	25.7	-
121	Node	-	12.0	165.0	251.0	25.7	-
122	Node	-	12.0	146.0	251.0	25.7	-
123	Node	-	12.0	127.0	251.0	25.7	-
124	Node	-	12.0	109.0	251.0	25.7	-
125	Node	-	12.0	88.0	251.0	25.7	-
126	Node	-	12.0	68.0	251.0	25.7	-
127	Node	-	12.0	82.0	235.0	25.6	-
128	Node	-	12.0	68.0	235.0	25.7	-
129	Node	-	12.0	97.0	224.0	25.6	-
130	Node	-	12.0	88.0	224.0	25.6	-
131	Node	-	12.0	97.0	175.0	25.6	-
132	Node	-	12.0	88.0	175.0	25.6	-
133	Node	-	12.0	97.0	102.0	25.5	-
134	Node	-	12.0	88.0	102.0	25.6	-
135	Node	-	12.0	97.0	73.0	25.5	-
136	Node	-	12.0	88.0	73.0	25.5	-
137	Node	-	12.0	317.0	64.0	25.2	-
138	Node	-	12.0	298.0	64.0	25.2	-
139	Node	-	12.0	279.0	64.0	25.2	-
140	Node	-	12.0	260.0	64.0	25.3	-
141	Node	-	12.0	241.0	64.0	25.4	-
142	Node	-	12.0	222.0	64.0	25.4	-
143	Node	-	12.0	203.0	64.0	25.4	-
144	Node	-	12.0	184.0	64.0	25.5	-
145	Node	-	12.0	165.0	64.0	25.5	-
146	Node	-	12.0	146.0	64.0	25.5	-
147	Node	-	12.0	127.0	64.0	25.5	-
148	Node	-	12.0	109.0	64.0	25.5	-
149	Node	-	12.0	88.0	64.0	25.5	-
150	Node	-	12.0	82.0	64.0	25.5	-

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length ft	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss psi	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
100	102 101	Head Head	14.50 14.50	12.0 12.0	25.6 25.6	-	Sch10 120	2 2,000	18.0 0.0	0.001 0.000	-9.1	0.8	Branch Line
101	101 124	Head Node	14.50 -	12.0 12.0	25.6 25.7	-	Sch10 120	2 2,000	81.5 81.5	0.074 0.000	-9.1	0.8	Branch Line
102	103 102	Head Head	14.50 14.50	12.0 12.0	25.6 25.6	-	Sch10 120	2 2,000	18.0 0.0	0.016 0.000	-9.1	0.8	Branch Line
103	105 103	Head Head	14.50 14.50	12.0 12.0	25.5 25.6	-	Sch10 120	2 2,000	18.0 0.0	0.016 0.000	-9.1	0.8	Branch Line
104	104 106	Head Head	14.50 14.50	12.0 12.0	25.6 25.6	-	Sch10 120	2 2,000	18.0 0.0	0.011 0.000	7.3	0.6	Branch Line
105	132 104	Node Head	- 14.50	12.0 12.0	25.6 25.6	-	Sch10 120	2 2,000	41.5 0.0	0.025 0.000	7.3	0.6	Branch Line
106	148 105	Node Head	- 14.50	12.0 12.0	25.5 25.5	-	Sch10 120	2 2,000	51.5 0.0	0.047 0.000	-9.1	0.8	Branch Line
107	106 134	Head Node	14.50 -	12.0 12.0	25.6 25.6	-	Sch10 120	2 2,000	13.5 0.0	0.008 0.000	7.3	0.6	Branch Line
108	137 113	Node Node	- -	12.0 12.0	25.2 28.1	-	Sch10 120	2 2,000	187.0 6.2	0.015 0.000	-41.1	3.6	Branch Line
111	140 116	Node Node	- -	12.0 12.0	25.3 25.9	-	Sch10 120	2 2,000	187.0 6.2	0.003 0.000	-17.1	1.5	Branch Line
112	141 117	Node Node	- -	12.0 12.0	25.4 25.8	-	Sch10 120	2 2,000	187.0 6.2	0.002 0.000	-15.1	1.3	Branch Line
113	142 118	Node Node	- -	12.0 12.0	25.4 25.8	-	Sch10 120	2 2,000	187.0 6.2	0.002 0.000	-13.5	1.2	Branch Line
114	143 119	Node Node	- -	12.0 12.0	25.4 25.7	-	Sch10 120	2 2,000	187.0 6.2	0.002 0.000	-12.1	1.1	Branch Line
115	144 120	Node Node	- -	12.0 12.0	25.5 25.7	-	Sch10 120	2 2,000	187.0 6.2	0.001 0.000	-11.0	1.0	Branch Line
116	145 121	Node Node	- -	12.0 12.0	25.5 25.7	-	Sch10 120	2 2,000	187.0 6.2	0.001 0.000	-10.2	0.9	Branch Line
117	146 122	Node Node	- -	12.0 12.0	25.5 25.7	-	Sch10 120	2 2,000	187.0 6.2	0.001 0.000	-9.6	0.8	Branch Line

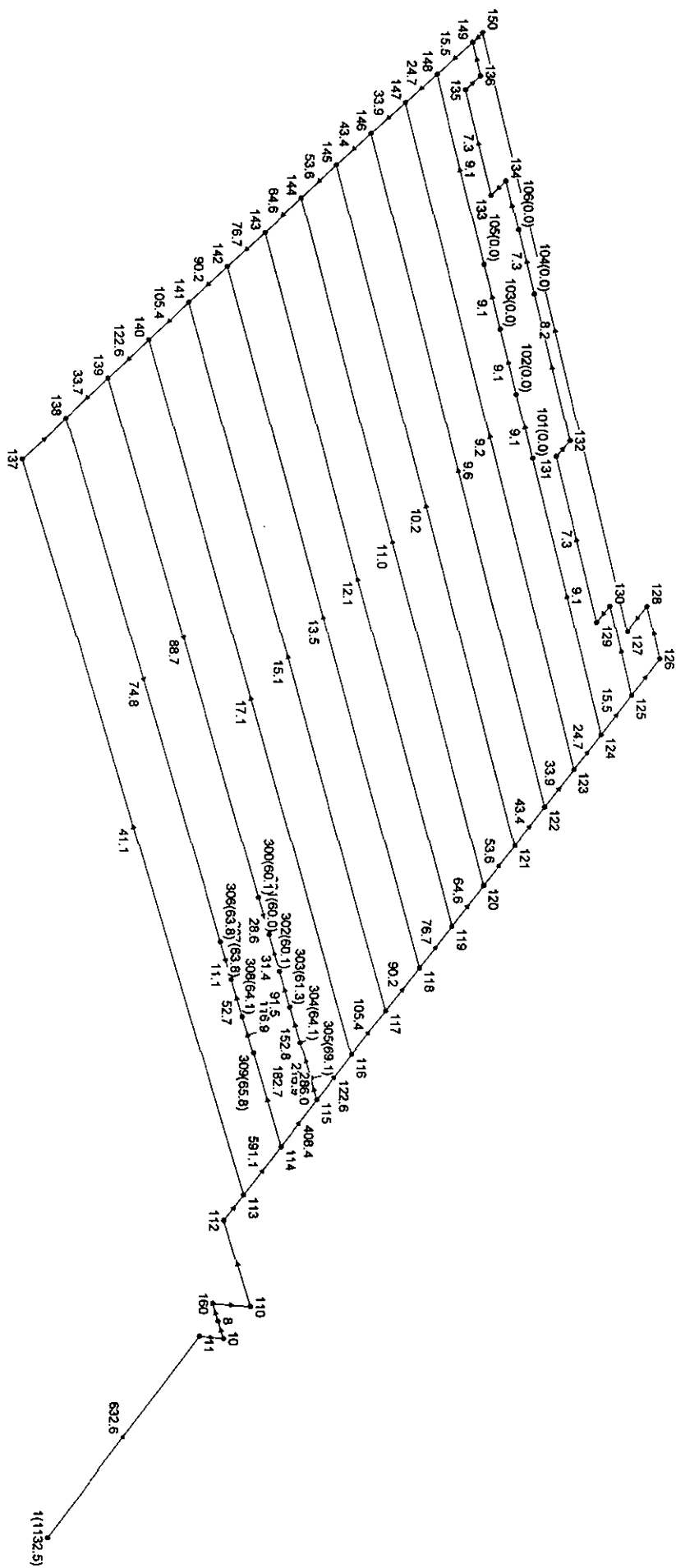
PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom Diam. Int. Diam.	Length Eq. Length Total Length ft	Fr. Loss ps/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss psi	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
118	147 Node 123	-	12.0	25.5	Sch10 120 E	2 2.000 2.157	187.0 6.2 193.2	0.001	0.178 0.000 0.000	-9.2	0.8	Branch Line		
119	130 Node 125	-	12.0	25.6	Sch10 120 E	2 2.000 2.157	27.0 6.2 33.2	0.001	0.020 0.000 0.000	-7.3	0.6	Branch Line		
120	128 Node 126	-	12.0	25.7	Sch10 120 E	2 2.000 2.157	16.0 6.2 22.2	0.001	0.016 0.000 0.000	-8.2	0.7	Branch Line		
121	128 Node 127	-	12.0	25.7	Sch10 120 E	2 2.000 2.157	14.0 6.2 20.2	0.001	0.015 0.000 0.000	8.2	0.7	Branch Line		
122	127 Node 150	-	12.0	25.6	Sch10 120 E	2 2.000 2.157	171.0 6.2 177.2	0.001	0.132 0.000 0.000	8.2	0.7	Branch Line		
123	130 Node 129	-	12.0	25.6	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.001	0.009 0.000 0.000	7.3	0.6	Branch Line		
124	129 Node 131	-	12.0	25.6	Sch10 120 E	2 2.000 2.157	49.0 6.2 55.2	0.001	0.033 0.000 0.000	7.3	0.6	Branch Line		
125	131 Node 132	-	12.0	25.6	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.001	0.009 0.000 0.000	7.3	0.6	Branch Line		
126	134 Node 133	-	12.0	25.6	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.001	0.009 0.000 0.000	7.3	0.6	Branch Line		
127	133 Node 135	-	12.0	25.5	Sch10 120 E	2 2.000 2.157	29.0 6.2 35.2	0.001	0.021 0.000 0.000	7.3	0.6	Branch Line		
128	135 Node 136	-	12.0	25.5	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.001	0.009 0.000 0.000	7.3	0.6	Branch Line		
129	136 Node 149	-	12.0	25.5	Sch10 120 E	2 2.000 2.157	9.0 6.2 15.2	0.001	0.009 0.000 0.000	7.3	0.6	Branch Line		
130	110 Node 112	-	12.0	33.2	Sch10 120 E	4 4.000 4.260	24.0 13.2 37.2	0.085	3.127 0.000 0.002	632.2	14.2	Cross Main		
131	112 Node 113	-	12.0	30.0	Sch10 120 E	4 4.000 4.260	10.0 13.2 23.2	0.085	1.949 0.000 0.002	632.2	14.2	Cross Main		
132	113 Node 114	-	12.0	28.1	Sch10 120 E	4 4.000 4.260	19.0 0.0 19.0	0.075	1.412 0.000 0.002	591.1	13.3	Cross Main		
133	114 Node 115	-	12.0	26.7	Sch10 120 E	4 4.000 4.260	19.0 0.0 19.0	0.038	0.713 0.000 0.001	408.4	9.2	Cross Main		

PIPES													
#	Start/End Nodes					Material	Size	Length	Fr. Loss	Pres. Fr. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation	Res. Pres.								
134	115 Node	-	12.0	25.9	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.004	0.077 0.000 0.000	122.6	2.8	Cross Main
135	116 Node	-	12.0	25.9	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.003	0.058 0.000 0.000	105.4	2.4	Cross Main
136	117 Node	-	12.0	25.8	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.002	0.044 0.000 0.000	90.2	2.0	Cross Main
137	118 Node	-	12.0	25.8	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.002	0.032 0.000 0.000	76.7	1.7	Cross Main
138	119 Node	-	12.0	25.7	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.001	0.024 0.000 0.000	64.6	1.5	Cross Main
139	120 Node	-	12.0	25.7	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.001	0.017 0.000 0.000	53.6	1.2	Cross Main
140	121 Node	-	12.0	25.7	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.001	0.011 0.000 0.000	43.4	1.0	Cross Main
141	122 Node	-	12.0	25.7	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.000	0.007 0.000 0.000	33.9	0.8	Cross Main
142	123 Node	-	12.0	25.7	-	Sch10 120	4 4.000 4.260	18.0 0.0 18.0	0.000	0.004 0.000 0.000	24.7	0.6	Cross Main
143	137 Node	-	12.0	25.2	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.001	0.010 0.000 0.000	41.1	0.9	Cross Main
144	138 Node	-	12.0	25.2	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.000	0.007 0.000 0.000	-33.7	0.8	Cross Main
145	139 Node	-	12.0	25.2	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.004	0.077 0.000 0.000	-122.6	2.8	Cross Main
146	140 Node	-	12.0	25.3	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.003	0.058 0.000 0.000	-105.4	2.4	Cross Main
147	141 Node	-	12.0	25.4	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.002	0.044 0.000 0.000	-90.2	2.0	Cross Main
148	142 Node	-	12.0	25.4	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.002	0.032 0.000 0.000	-76.7	1.7	Cross Main
149	143 Node	-	12.0	25.4	-	Sch10 120	4 4.000 4.260	19.0 0.0 19.0	0.001	0.024 0.000 0.000	-64.6	1.5	Cross Main

PIPES														
#	Start/End Nodes					Material	Size	Length	Fr.Loss	Pres./Fr.Loss		Flow	Velocity	Type
	#	Type	Value	Elevation	Res.Pres.					Discharge	HWC Fittings			
150	144	Node	-	12.0	25.5	Sch10	4	19.0	0.001	0.017	0.017	-53.6	1.2	Cross Main
	145	Node	-	12.0	25.5	120	4.000	0.0		0.000	0.000			
151	145	Node	-	12.0	25.5	Sch10	4	19.0	0.001	0.011	0.011	-43.4	1.0	Cross Main
	146	Node	-	12.0	25.5	120	4.000	0.0		0.000	0.000			
152	146	Node	-	12.0	25.5	Sch10	4	19.0	0.000	0.007	0.007	-33.9	0.8	Cross Main
	147	Node	-	12.0	25.5	120	4.000	0.0		0.000	0.000			
153	147	Node	-	12.0	25.5	Sch10	4	18.0	0.000	0.004	0.004	-24.7	0.6	Cross Main
	148	Node	-	12.0	25.5	120	4.000	0.0		0.000	0.000			
154	149	Node	-	12.0	25.5	Sch10	4	21.0	0.000	0.003	0.003	15.5	0.3	Cross Main
	148	Node	-	12.0	25.5	120	4.000	13.2		0.000	0.000			
155	150	Node	-	12.0	25.5	Sch10	4	6.0	0.000	0.001	0.001	8.2	0.2	Cross Main
	149	Node	-	12.0	25.5	120	4.000	13.2		0.000	0.000			
64	305	Head	14.50	12.0	22.7	Sch10	2	10.0	0.321	3.197	0.000	216.9	19.0	Pipe
	304	Head	14.50	12.0	19.5	120	2.000	0.0		0.011	0.011			
71	115	Node	-	12.0	25.9	Sch10	2	6.0	0.535	3.201	0.000	286.0	25.1	Pipe
	305	Head	14.50	12.0	22.7	120	2.000	0.0		0.015	0.015			
65	304	Head	14.50	12.0	19.5	Sch10	2	10.0	0.168	1.672	0.000	152.8	13.4	Pipe
	303	Head	14.50	12.0	17.9	120	2.000	0.0		0.008	0.008			
75	309	Head	14.50	12.0	20.6	Sch10	2	10.0	0.102	1.019	0.000	116.9	10.3	Pipe
	308	Head	14.50	12.0	19.6	120	2.000	0.0		0.006	0.006			
70	114	Node	-	12.0	26.7	Sch10	2	26.0	0.233	6.051	0.000	182.7	16.0	Pipe
	309	Head	14.50	12.0	20.6	120	2.000	0.0		0.009	0.009			
66	303	Head	14.50	12.0	17.9	Sch10	2	10.0	0.065	0.648	0.000	91.5	8.0	Pipe
	302	Head	14.50	12.0	17.2	120	2.000	0.0		0.005	0.005			
74	308	Head	14.50	12.0	19.6	Sch10	2	10.0	0.023	0.234	0.000	52.7	4.6	Pipe
	307	Head	14.50	12.0	19.3	120	2.000	0.0		0.003	0.003			
67	302	Head	14.50	12.0	17.2	Sch10	2	10.0	0.009	0.090	0.000	31.4	2.8	Pipe
	301	Head	14.50	12.0	17.1	120	2.000	0.0		0.002	0.002			
73	307	Head	14.50	12.0	19.3	Sch10	2	10.0	0.001	0.013	0.013	-11.1	1.0	Pipe
	306	Head	14.50	12.0	19.4	120	2.000	0.0		0.001	0.001			
68	301	Head	14.50	12.0	17.1	Sch10	2	10.0	0.008	0.075	0.000	-28.6	2.5	Pipe
	300	Head	14.50	12.0	17.2	120	2.000	0.0		0.001	0.001			

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss psi Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
72	306 138	Head Node	14.50 -	12.0 12.0	19.4 25.2	Sch10 120	2 2.000 2.157	131.0 0.0 131.0	0.045 0.000 0.004	5.850 0.000 0.004	-74.8	6.6	Pipe
69	300 139	Head Node	14.50 -	12.0 12.0	17.2 25.2	Sch10 120	2 2.000 2.157	131.0 0.0 131.0	0.061 0.000 0.005	8.014 0.000 0.005	-88.7	7.8	Pipe
156	125 124	Node Node	- -	12.0 12.0	25.7 25.7	Sch10 120 E	4 4.000 4.260	21.0 13.2 34.2	0.000 0.000 0.000	0.003 0.000 0.000	-15.5	0.3	Pipe
157	126 125	Node Node	- -	12.0 12.0	25.7 25.7	Sch10 120 E	4 4.000 4.260	20.0 13.2 33.2	0.000 0.000 0.000	0.001 0.000 0.000	-8.2	0.2	Pipe
158	10 8	Node FPLD	- 5.0	2.0 2.0	43.0 37.9	Sch10 120	6 6.000 6.367	5.0 0.0 5.0	0.012 0.000 0.000	0.059 0.000 0.000	632.2	6.4	Pipe
159	8 160	FPLD Node	5.0 -	2.0 2.0	37.9 37.9	Sch10 120	6 6.000 6.367	5.0 0.0 5.0	0.012 0.000 0.000	0.059 0.000 0.000	632.2	6.4	Pipe
160	160 110	Node Node	- -	2.0 12.0	37.9 33.2	Sch10 120 E	6 6.000 6.367	10.0 17.7 27.7	0.012 0.000 0.000	0.330 4.330 0.000	632.2	6.4	Pipe
161	1 11	Src Node	[...] -	-4.5 -4.5	46.1 45.9	Ductile 140	8 8.000 8.110	73.0 0.0 73.0	0.003 0.000 0.000	0.201 0.000 0.000	632.6	3.9	Underground
162	11 10	Node Node	- -	-4.5 2.0	45.9 43.0	Ductile 140 E	8 8.000 8.110	6.5 24.5 31.0	0.003 0.000 0.000	0.085 2.814 0.000	632.6	3.9	Underground

KOHL'S calculation #3
FLOW DIAGRAM



System Statistics

Materials Info								
Name	Abbr.	Size	HWC	Length	Total Length	Fittings		
						Abbr.	Eq.Length	Amount
Sch10	Sch10	2	120	2668.0	2791.1	E	6.2	20
		4	120	518.0	597.0	E	13.2	6
		6	120	20.0	37.7	E	17.7	1
Ductile	Ductile	8	140	79.5	104.0	E	24.5	1

Fittings Info		
Name	Abbr.	Amount
NFPA EII 90	E	28

35 COLBY AVE.
MANASQUAN, NJ 08736
(732) 223-5320 FAX (732) 223-6080

BRICK, NJ 08723

Brick Township, NJ

COMMERCIAL

☐ FOR BIDS DUE

es for distribution

ected prints

SUBMITTED TO BEICK
9/24/99 

If enclosures are not as noted, kindly notify us at once

FIRE SPRINKLER HYDRAULIC CALCULATIONS

FOR

**KOHL'S
BRICKTOWNE CENTER
BRICK, NEW JERSEY 08723**

R.G. SOLOMON FIRE PROTECTION Inc.
2010 PILGRAM Rd.
WALL, NEW JERSEY 07719

HYDRAULIC CALCULATION #1 RETAIL AREA
HYDRAULIC CALCULATION #2 RETAIL AREA
HYDRAULIC CALCULATION #3 STOCK ROOM

☒ **APPROVED**
☐ **APPROVED AS CORRECTED**
☐ **REVISE AND RESUBMIT**
☐ **NOT APPROVED**

JAYEE/CONSTRUCTION CORPORATION

BY [Signature] DATE 9/23/99

Approval is only for conformance with the design concept of the project in compliance with the information given in the contract Documents. The contractor is responsible for dimensions to confirm and coordinate at the job site.



MSG Fire & Safety Inc.
Designers of Fire Protection Systems
590 Route 70 Suite 1A
BRICK, NJ 08723
Tel 732-477-9555
Fax 732-477-5485

ROBERT W. EITZEN
PROFFESIONAL ENGINEER
STATE OF NEW JERSEY
LICENCE # 24488

Presbyterian

COMMERCIAL



MSG Fire & Safety Inc.

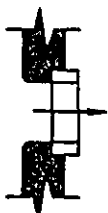
Designers of Fire Protection Systems

Flow Test Report

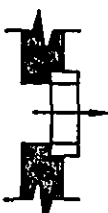
Location BEHIND Kohl's Date SEPT. 22, 1999
 Test Made By MIKE GRANIT Time 10:30 AM
 Representative of MSG FIRE & SAFETY INC.
 Witness P.J. HAKIM
 State Purpose of Test TO DESIGN FIRE SPRINKLER SYSTEM
 Remarks _____

Static Pressure @ Test Hydrant A (psi) 84
 Residual Pressure @ Test Hydrant A (psi) 74

Flow Hydrant	Hydrant Outlet Size	No. Outlets Flowing	Pitot Reading	Hydrant Coefficient	Theoretical Flow (Cd=1.00)	Actual Flow (gpm)
B	2 1/2	1	58	.90	1421	1278
C						
D						
Total Flow						1278



Outlet Smooth and Rounded (Cd=0.90)



Outlet square and sharp (Cd=0.80)



Outlet square and projecting into barrel (Cd=0.70)

Test Performed By: 

Test Witnessed By: 

HYDRAULIC CALCULATIONS

for

KOHL'S calculation #1

BRICKTOWNE CENTER

BRICK, NEW JERSEY 08723

Contract No. 0225

Date September 22, 1999

Design Data:

Remote Area Location	RETAIL AREA #1
Occupancy Classification	ORDINARY Grp.2
Density	0.20 gpm/sq.ft
Remote Area Size	2000.0 sq.ft
Coverage per Sprinkler	360.0 sq.ft
Sprinkler K-Factor	14.50
No. of Sprinkler Calculated	6
In-Rack Demand	0.0 gpm
Source Hose Demand	500.0 gpm
Total Water Including Hose	948.2 gpm
Name of Contractor	R.G. SOLOMON FIRE PROTECTION Inc.
Name of Designer	MSG Fire
Address	2010 PILGRIM Road, WALL, NEW JERSEY 07719
Authority Having Jurisdiction	A.H.J.

GENERAL RESULTS

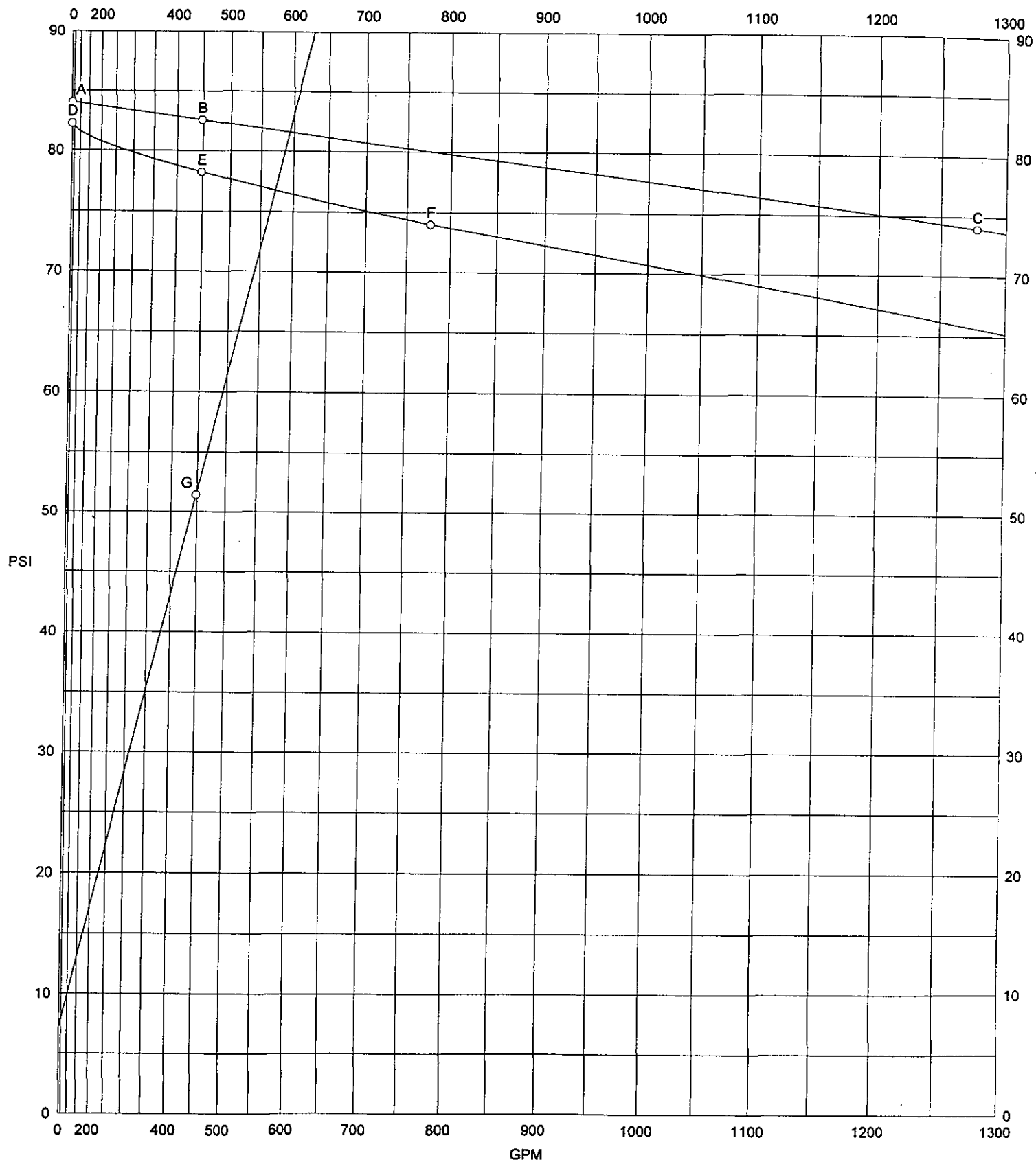
Total Water Including Hose	948.2 gpm
Additional Allowances	0.0 gpm
Discharge from Sprinklers	448.2 gpm
Source Hose Demand	500.0 gpm
Average Imbalance	0.109 gpm
Maximum Imbalance	0.5 gpm
Maximum Velocity @ Pipe: 8	13.6 ft/s
Maximum Fr. Loss @ Pipe: 5	0.134 psi/ft
Remote Area was not Peaked	

Velocity pressures have been used for information only, and are not valid for balancing the system.

SOURCE : 1

Static Pressure	84.0 psi
Residual Pressure	74.0 psi
Flow	1278.0 gpm
Hose Allowance	500.0 gpm
Available Pressure	78.2 psi
Required Pressure	51.4 psi
Safety Factor	34.3%, 26.8 psi
Water Flowing	448.2 gpm

Water Curves for Src : 1



KOHL'S CALCULATION #1

NODES							
#	Type	Value	Elevation	X	Y	Res. Pres.	Discharge
			ft	ft	ft	psi	gpm
1	Src	[...]	-4.5	330.0	160.0	51.4	500.0
2	Head	14.50	12.0	313.5	-142.0	29.6	78.9
3	Head	14.50	12.0	291.5	-142.0	29.6	78.9
4	Head	14.50	12.0	313.5	-162.0	25.4	73.0
5	Head	14.50	12.0	291.5	-162.0	24.7	72.0
6	Head	14.50	12.0	273.5	-162.0	24.7	72.0
7	Head	14.50	12.0	255.5	-162.0	25.6	73.4
8	FPLD	5.0	2.0	336.1	125.5	43.4	-
9	Node	-	2.0	342.2	125.5	43.4	-
10	Node	-	2.0	330.0	125.5	48.5	-
11	Node	-	-4.5	330.0	125.5	51.4	-
12	Node	-	12.0	342.2	125.5	38.6	-
13	Node	-	12.0	368.0	122.5	37.4	-
14	Node	-	12.0	346.2	122.5	38.4	-
15	Node	-	12.0	368.0	119.0	37.2	-
16	Node	-	12.0	318.0	119.0	35.5	-
17	Node	-	12.0	368.0	99.0	36.6	-
18	Node	-	12.0	318.0	99.0	35.5	-
19	Node	-	12.0	318.0	88.0	35.5	-
20	Node	-	12.0	215.0	88.0	35.1	-
21	Node	-	12.0	368.0	79.0	36.0	-
22	Node	-	12.0	215.0	79.0	35.1	-
23	Node	-	12.0	368.0	67.0	35.7	-
24	Node	-	12.0	215.0	67.0	35.0	-
25	Node	-	12.0	368.0	58.0	35.6	-
26	Node	-	12.0	215.0	58.0	35.0	-
28	Node	-	12.0	368.0	38.0	35.2	-
27	Node	-	12.0	215.0	38.0	34.8	-
30	Node	-	12.0	368.0	18.0	34.9	-
29	Node	-	12.0	215.0	18.0	34.6	-
32	Node	-	12.0	368.0	-2.0	34.6	-
31	Node	-	12.0	215.0	-2.0	34.4	-
34	Node	-	12.0	368.0	-22.0	34.3	-
33	Node	-	12.0	215.0	-22.0	34.2	-
36	Node	-	12.0	368.0	-42.0	34.0	-
35	Node	-	12.0	215.0	-42.0	34.0	-
38	Node	-	12.0	368.0	-62.0	33.8	-
37	Node	-	12.0	215.0	-62.0	33.7	-
39	Node	-	12.0	368.0	-82.0	33.5	-
40	Node	-	12.0	215.0	-82.0	33.5	-
41	Node	-	12.0	368.0	-102.0	33.3	-
42	Node	-	12.0	215.0	-102.0	33.3	-
43	Node	-	12.0	368.0	-122.0	33.0	-
44	Node	-	12.0	215.0	-122.0	33.0	-
45	Node	-	12.0	368.0	-142.0	32.8	-
46	Node	-	12.0	215.0	-142.0	32.8	-
47	Node	-	12.0	368.0	-162.0	32.7	-
48	Node	-	12.0	215.0	-162.0	32.6	-
49	Node	-	12.0	368.0	-167.0	32.7	-
50	Node	-	12.0	215.0	-167.0	32.6	-
51	Node	-	12.0	368.0	-172.0	32.7	-
52	Node	-	12.0	215.0	-172.0	32.6	-

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
1	2	Head	14.50	12.0	29.6	Sch10	2	22.0	0.001	0.012	7.1	0.6	Branch Line
	3	Head	14.50	12.0	29.6	120	2.000	0.0	0.000	0.000			
					78.9		2.157	22.0					
2	45	Node	-	12.0	32.8	Sch10	2	54.5	0.058	3.145	86.0	7.5	Branch Line
	2	Head	14.50	12.0	29.6	120	2.000	0.0	0.000	0.004			
					78.9		2.157	54.5					
3	3	Head	14.50	12.0	29.6	Sch10	2	76.5	0.041	3.164	-71.8	6.3	Branch Line
	46	Node	-	12.0	32.8	120	2.000	0.0	0.000	0.004			
					78.9		2.157	76.5					
4	5	Head	14.50	12.0	24.7	Sch10	2	22.0	0.032	0.697	-62.1	5.5	Branch Line
	4	Head	14.50	12.0	25.4	120	2.000	0.0	0.000	0.000			
					73.0		2.157	22.0		0.003			
5	4	Head	14.50	12.0	25.4	Sch10	2	54.5	0.134	7.266	-135.2	11.9	Branch Line
	47	Node	-	12.0	32.7	120	2.000	0.0	0.000	0.007			
					73.0		2.157	54.5					
6	6	Head	14.50	12.0	24.7	Sch10	2	18.0	0.001	0.019	9.9	0.9	Branch Line
	5	Head	14.50	12.0	24.7	120	2.000	0.0	0.000	0.000			
					72.0		2.157	18.0		0.001			
7	6	Head	14.50	12.0	24.7	Sch10	2	18.0	0.053	0.950	-81.9	7.2	Branch Line
	7	Head	14.50	12.0	25.6	120	2.000	0.0	0.000	0.000			
					73.4		2.157	18.0		0.004			
8	7	Head	14.50	12.0	25.6	Sch10	2	40.5	0.173	6.983	-155.3	13.6	Branch Line
	48	Node	-	12.0	32.6	120	2.000	0.0	0.000	0.008			
					73.4		2.157	40.5					
9	15	Node	-	12.0	37.2	Sch10	2	50.0	0.030	1.704	60.7	5.3	Branch Line
	16	Node	-	12.0	35.5	120	2.000	6.2	0.000	0.003			
						E	2.157	56.2		0.003			
10	17	Node	-	12.0	36.6	Sch10	2	50.0	0.019	1.043	46.6	4.1	Branch Line
	18	Node	-	12.0	35.5	120	2.000	6.2	0.000	0.002			
						E	2.157	56.2					
11	21	Node	-	12.0	36.0	Sch10	2	153.0	0.006	0.937	25.0	2.2	Branch Line
	22	Node	-	12.0	35.1	120	2.000	6.2	0.000	0.001			
						E	2.157	159.2		0.001			
12	24	Node	-	12.0	35.0	Sch10	2	153.0	0.004	0.713	-21.6	1.9	Branch Line
	23	Node	-	12.0	35.7	120	2.000	6.2	0.000	0.000			
						E	2.157	159.2		0.001			
13	26	Node	-	12.0	35.0	Sch10	2	153.0	0.004	0.584	-19.4	1.7	Branch Line
	25	Node	-	12.0	35.6	120	2.000	6.2	0.000	0.001			
						E	2.157	159.2		0.001			
14	28	Node	-	12.0	35.2	Sch10	2	153.0	0.002	0.376	15.3	1.3	Branch Line
	27	Node	-	12.0	34.8	120	2.000	6.2	0.000	0.001			
						E	2.157	159.2		0.001			
15	30	Node	-	12.0	34.9	Sch10	2	153.0	0.001	0.230	11.7	1.0	Branch Line
	29	Node	-	12.0	34.6	120	2.000	6.2	0.000	0.001			
						E	2.157	159.2		0.001			
16	32	Node	-	12.0	34.6	Sch10	2	153.0	0.001	0.133	8.7	0.8	Branch Line
	31	Node	-	12.0	34.4	120	2.000	6.2	0.000	0.000			
						E	2.157	159.2		0.000			

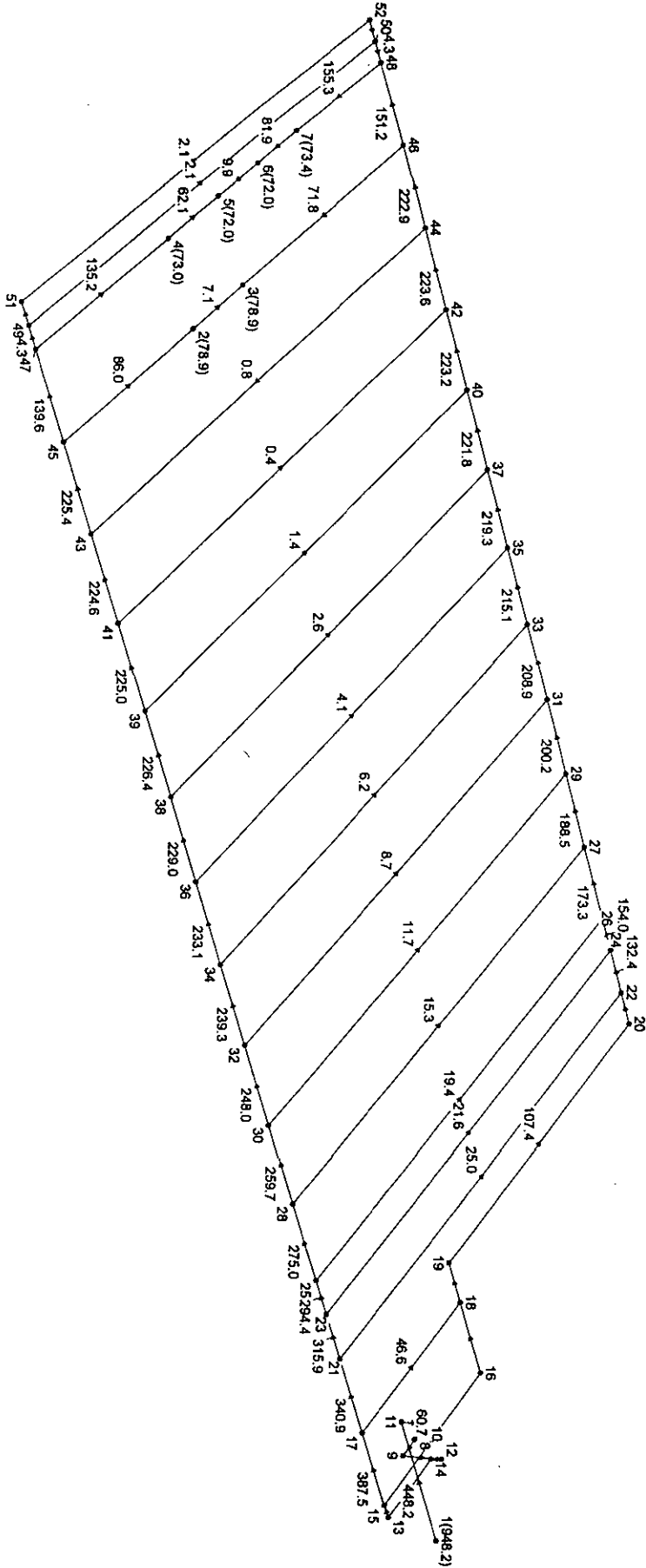
PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
17	34 33	Node Node	-	12.0 12.0	34.3 34.2	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.070 0.000 0.000	6.2	0.5	Branch Line
18	35 36	Node Node	-	12.0 12.0	34.0 34.0	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.034 0.000 0.000	-4.1	0.4	Branch Line
19	37 38	Node Node	-	12.0 12.0	33.7 33.8	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.014 0.000 0.000	-2.6	0.2	Branch Line
20	39 40	Node Node	-	12.0 12.0	33.5 33.5	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.004 0.000 0.000	1.4	0.1	Branch Line
21	41 42	Node Node	-	12.0 12.0	33.3 33.3	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.001 0.000 0.000	0.4	0.0	Branch Line
22	43 44	Node Node	-	12.0 12.0	33.0 33.0	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.001 0.000 0.000	-0.8	0.1	Branch Line
23	50 49	Node Node	-	12.0 12.0	32.6 32.7	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.010 0.000 0.000	-2.1	0.2	Branch Line
24	9 12	Node Node	-	2.0 12.0	43.4 38.6	-	Sch10 120 ES	6 6.000 6.367	10.0 58.3 68.3	0.006 0.000 0.000	0.430 4.330 0.000	448.7	4.5	Branch Line
25	52 51	Node Node	-	12.0 12.0	32.6 32.7	-	Sch10 120 E	2 2.000 2.157	153.0 6.2 159.2	0.000 0.000 0.000	0.010 0.000 0.000	-2.1	0.2	Cross Main
26	16 18	Node Node	-	12.0 12.0	35.5 35.5	-	Sch10 120 -	4 4.000 4.260	20.0 0.0 20.0	0.001 0.000 0.000	0.022 0.000 0.000	60.7	1.4	Cross Main
27	18 19	Node Node	-	12.0 12.0	35.5 35.5	-	Sch10 120 -	4 4.000 4.260	11.0 0.0 11.0	0.003 0.000 0.000	0.035 0.000 0.000	107.4	2.4	Cross Main
28	19 20	Node Node	-	12.0 12.0	35.5 35.1	-	Sch10 120 E	4 4.000 4.260	103.0 13.2 116.2	0.003 0.000 0.000	0.368 0.000 0.000	107.4	2.4	Cross Main
29	20 22	Node Node	-	12.0 12.0	35.1 35.1	-	Sch10 120 -	4 4.000 4.260	9.0 0.0 9.0	0.003 0.000 0.000	0.028 0.000 0.000	107.4	2.4	Cross Main
30	22 24	Node Node	-	12.0 12.0	35.1 35.0	-	Sch10 120 -	4 4.000 4.260	12.0 0.0 12.0	0.005 0.000 0.000	0.056 0.000 0.000	132.4	3.0	Cross Main
31	24 26	Node Node	-	12.0 12.0	35.0 35.0	-	Sch10 120 -	4 4.000 4.260	9.0 0.0 9.0	0.006 0.000 0.001	0.056 0.000 0.001	154.0	3.5	Cross Main
32	26 27	Node Node	-	12.0 12.0	35.0 34.8	-	Sch10 120 -	4 4.000 4.260	20.0 0.0 20.0	0.008 0.000 0.001	0.154 0.000 0.001	173.3	3.9	Cross Main

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
33	27 Node	29 Node	-	12.0	34.8	Sch10 120	4 4.000	20.0 0.0	0.009	0.179 0.000	188.5	4.2	Cross Main
34	29 Node	31 Node	-	12.0	34.6	Sch10 120	4 4.000	20.0 0.0	0.010	0.201 0.001	200.2	4.5	Cross Main
35	31 Node	33 Node	-	12.0	34.4	Sch10 120	4 4.000	20.0 0.0	0.011	0.217 0.000	208.9	4.7	Cross Main
36	33 Node	35 Node	-	12.0	34.2	Sch10 120	4 4.260	20.0 20.0	0.012	0.229 0.001	215.1	4.8	Cross Main
37	35 Node	37 Node	-	12.0	34.0	Sch10 120	4 4.000	20.0 0.0	0.012	0.237 0.000	219.3	4.9	Cross Main
38	37 Node	40 Node	-	12.0	33.7	Sch10 120	4 4.260	20.0 20.0	0.012	0.242 0.001	221.8	5.0	Cross Main
39	40 Node	42 Node	-	12.0	33.5	Sch10 120	4 4.000	20.0 0.0	0.012	0.245 0.000	223.2	5.0	Cross Main
40	42 Node	44 Node	-	12.0	33.3	Sch10 120	4 4.000	20.0 0.0	0.012	0.246 0.001	223.6	5.0	Cross Main
41	44 Node	46 Node	-	12.0	33.0	Sch10 120	4 4.000	20.0 0.0	0.012	0.245 0.000	222.9	5.0	Cross Main
42	46 Node	48 Node	-	12.0	32.8	Sch10 120	4 4.260	20.0 20.0	0.006	0.119 0.001	151.2	3.4	Cross Main
43	48 Node	50 Node	-	12.0	32.6	Sch10 120	4 4.000	5.0 0.0	0.000	0.000	-4.3	0.1	Cross Main
44	50 Node	52 Node	-	12.0	32.6	Sch10 120	4 4.000	5.0 0.0	0.000	0.000	-2.1	0.0	Cross Main
47	14 Node	12 Node	-	12.0	38.4	Sch10 120	4 4.000	5.0 0.0	0.045	0.223 0.000	-448.2	10.1	Pipe
48	13 Node	14 Node	-	12.0	37.4	Sch10 120	4 4.000	21.8 0.0	0.045	0.969 0.000	-448.2	10.1	Pipe
49	15 Node	13 Node	-	12.0	37.2	Sch10 120	4 4.000	3.5 0.0	0.045	0.156 0.000	-448.2	10.1	Pipe
50	17 Node	15 Node	-	12.0	36.6	Sch10 120	4 4.000	20.0 0.0	0.034	0.680 0.000	-387.5	8.7	Pipe

PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
51	21 17	Node Node	-	12.0 12.0	36.0 36.6	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.027 0.537 0.000	-340.9 7.7	Pipe		
52	23 21	Node Node	-	12.0 12.0	35.7 36.0	-	Sch10 120	4 4.000 4.260	12.0 0.0 12.0	0.023 0.280 0.001	-315.9 7.1	Pipe		
53	25 23	Node Node	-	12.0 12.0	35.6 35.7	-	Sch10 120	4 4.000 4.260	9.0 0.0 9.0	0.021 0.184 0.000	-294.4 6.6	Pipe		
54	28 25	Node Node	-	12.0 12.0	35.2 35.6	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.018 0.361 0.001	-275.0 6.2	Pipe		
55	30 28	Node Node	-	12.0 12.0	34.9 35.2	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.016 0.325 0.000	-259.7 5.8	Pipe		
56	32 30	Node Node	-	12.0 12.0	34.6 34.9	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.015 0.298 0.001	-248.0 5.6	Pipe		
57	34 32	Node Node	-	12.0 12.0	34.3 34.6	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.014 0.279 0.000	-239.3 5.4	Pipe		
58	36 34	Node Node	-	12.0 12.0	34.0 34.3	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.013 0.266 0.001	-233.1 5.2	Pipe		
59	38 36	Node Node	-	12.0 12.0	33.8 34.0	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.013 0.257 0.000	-229.0 5.2	Pipe		
60	39 38	Node Node	-	12.0 12.0	33.5 33.8	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.013 0.252 0.000	-226.4 5.1	Pipe		
61	41 39	Node Node	-	12.0 12.0	33.3 33.5	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.013 0.249 0.001	-225.0 5.1	Pipe		
62	43 41	Node Node	-	12.0 12.0	33.0 33.3	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.012 0.248 0.001	-224.6 5.1	Pipe		
63	45 43	Node Node	-	12.0 12.0	32.8 33.0	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.013 0.250 0.001	-225.4 5.1	Pipe		
64	47 45	Node Node	-	12.0 12.0	32.7 32.8	-	Sch10 120	4 4.000 4.260	20.0 0.0 20.0	0.005 0.103 0.000	-139.6 3.1	Pipe		
65	49 47	Node Node	-	12.0 12.0	32.7 32.7	-	Sch10 120	4 4.000 4.260	5.0 0.0 5.0	0.000 0.000 0.000	-4.3 0.1	Pipe		
66	51 49	Node Node	-	12.0 12.0	32.7 32.7	-	Sch10 120	4 4.000 4.260	5.0 0.0 5.0	0.000 0.000 0.000	-2.1 0.0	Pipe		

PIPES														
#	Start/End Nodes						Material: HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
45	8	FPLD Node	5.0	2.0	43.4	Sch10 120 G	6 6.000 6.367	6.1 3.8 9.9	0.006 0.062 0.000	0.000	448.7	4.5	Pipe	
46	10	Node FPLD	-	2.0	48.5 43.4	Sch10 120 G	6 6.000 6.367	6.1 3.8 9.9	0.006 0.062 0.000	0.000	448.7	4.5	Pipe	
67	1	Src Node	[...]	-4.5	51.4	Ductile 140	8 8.000 8.110	34.5 0.0 34.5	0.001 0.000 0.000	0.050 0.000 0.000	448.2	2.8	Underground	
68	11	Node Node	-	-4.5	51.4 48.5	Ductile 140 E	8 8.000 8.110	6.5 24.5 31.0	0.001 0.045 2.814	0.000	448.2	2.8	Underground	

KOHL'S CALCULATION #1
FLOW DIAGRAM



System Statistics

Materials Info								
Name	Abbr.	Size	HWC	Length	Total Length	Fittings		
						Abbr.	Eq.Length	Amount
Sch10	Sch10	2	120	2548.0	2646.5	E	6.2	16
		4	120	715.3	728.4	E	13.2	1
		6	120	22.2	88.1	E	17.7	1
						G	3.8	2
Ductile	Ductile	8	140	41.0	65.5	E	24.5	1

Fittings Info		
Name	Abbr.	Amount
NFPA EII 90	E	19
NFPA Gate Valve	G	2

HYDRAULIC CALCULATIONS

for

KOHL'S calculation #2

BRICKTOWNE CENTER

BRICK, NEW JERSEY 08723

Contract No. 0225

Date September 22, 1999

Design Data:

Remote Area Location	RETAIL AREA #2
Occupancy Classification	ORDINARY Grp.2
Density	0.20 gpm/sq.ft
Remote Area Size	2000.0 sq.ft
Coverage per Sprinkler	360.0 sq.ft
Sprinkler K-Factor	14.50
No. of Sprinkler Calculated	6
In-Rack Demand	0.0 gpm
Source Hose Demand	500.0 gpm
Total Water Including Hose	947.2 gpm
Name of Contractor	R.G. SOLOMON FIRE PROTECTION Inc.
Name of Designer	MSG Fire
Address	2010 PILGRIM Road,WALL, NEW JERSEY 07719
Authority Having Jurisdiction	A.H.J.

GENERAL RESULTS

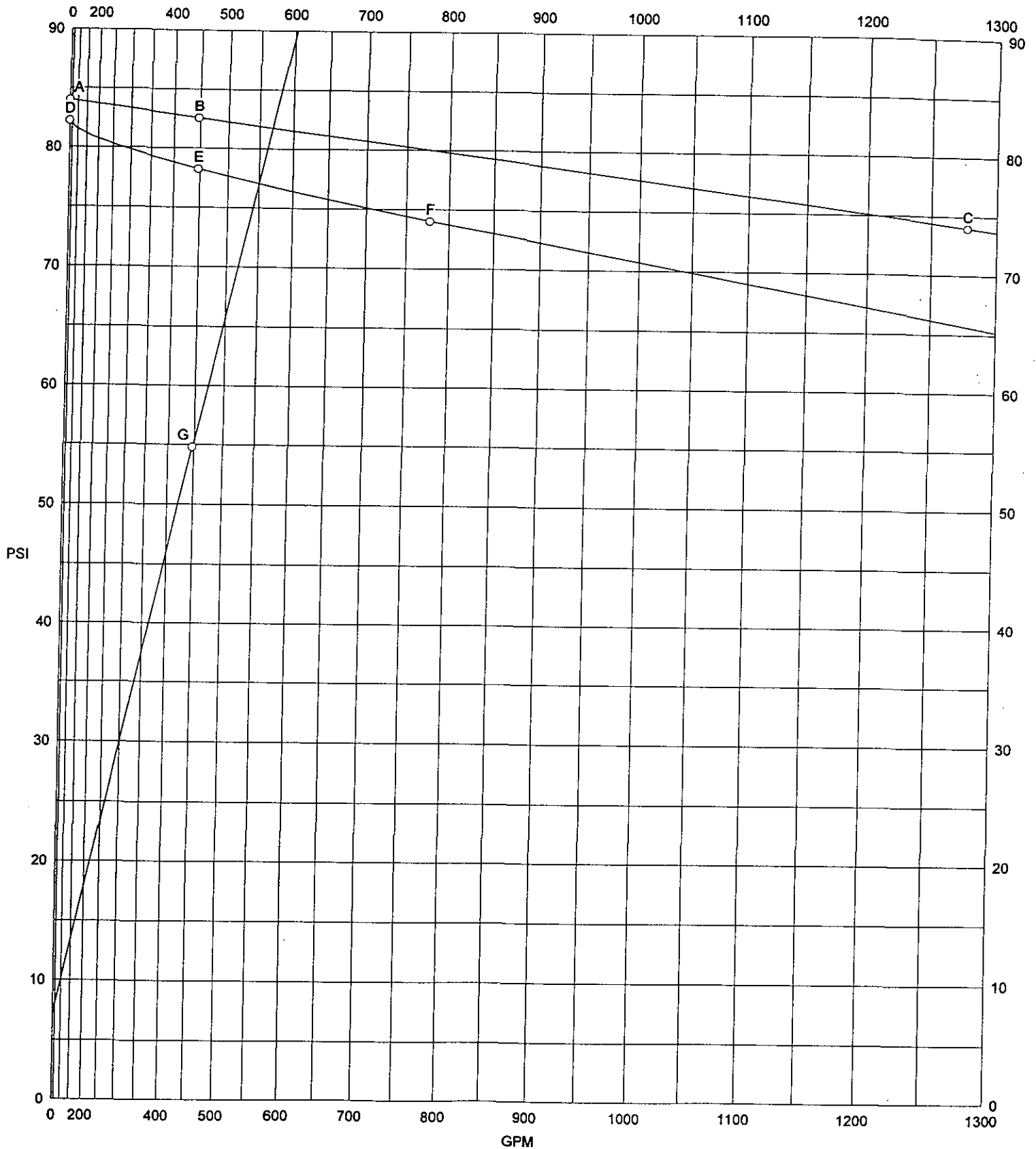
Total Water Including Hose	947.2 gpm
Additional Allowances	0.0 gpm
Discharge from Sprinklers	447.0 gpm
Source Hose Demand	500.0 gpm
Average Imbalance	0.038 gpm
Maximum Imbalance	0.5 gpm
Maximum Velocity @ Pipe: 106	14.0 ft/s
Maximum Fr. Loss @ Pipe: 101	0.126 psi/ft
Remote Area was not Peaked	

Velocity pressures have been used for information only, and are not valid for balancing the system.

SOURCE : 1

Static Pressure	84.0 psi
Residual Pressure	74.0 psi
Flow	1278.0 gpm
Hose Allowance	500.0 gpm
Available Pressure	78.3 psi
Required Pressure	54.8 psi
Safety Factor	30.0%, 23.4 psi
Water Flowing	447.2 gpm

Water Curves for Src : 1



Curve	Values - X: psi @ gpm
Supply Curve @ Src : 1	A : 84 @ 0 - B : 82.6 @ 447.2 - C : 74 @ 1278
Supply Curve with Hose @ Src : 1	D : 82.2 @ 0 - E : 78.3 @ 447.2 - F : 74 @ 778
Demand Curve @ Src : 1	7.1 @ 0 - G : 54.8 @ 447.2

NODES							
#	Type	Value	Elevation	X	Y	Res. Pres.	Discharge
			ft	ft	ft	psi	gpm
1	Src	[...]	-4.5	400.0	285.0	54.8	500.0
101	Head	14.50	12.0	109.0	169.5	25.1	72.7
102	Head	14.50	12.0	109.0	151.5	24.6	72.0
103	Head	14.50	12.0	109.0	133.5	24.7	72.0
104	Head	14.50	12.0	88.0	133.5	29.2	78.4
105	Head	14.50	12.0	109.0	115.5	25.7	73.5
106	Head	14.50	12.0	88.0	115.5	29.3	78.4
8	FPLD	5.0	2.0	327.0	280.0	46.8	-
10	Node	-	2.0	327.0	285.0	51.8	-
11	Node	-	-4.5	327.0	285.0	54.7	-
110	Node	-	12.0	327.0	275.0	42.3	-
160	Node	-	2.0	327.0	275.0	46.8	-
112	Node	-	12.0	327.0	251.0	40.6	-
113	Node	-	12.0	317.0	251.0	39.6	-
114	Node	-	12.0	298.0	251.0	38.9	-
115	Node	-	12.0	279.0	251.0	38.3	-
116	Node	-	12.0	260.0	251.0	37.8	-
117	Node	-	12.0	241.0	251.0	37.3	-
118	Node	-	12.0	222.0	251.0	37.0	-
119	Node	-	12.0	203.0	251.0	36.6	-
120	Node	-	12.0	184.0	251.0	36.3	-
121	Node	-	12.0	165.0	251.0	36.0	-
122	Node	-	12.0	146.0	251.0	35.8	-
123	Node	-	12.0	127.0	251.0	35.6	-
124	Node	-	12.0	109.0	251.0	35.4	-
125	Node	-	12.0	88.0	251.0	35.3	-
126	Node	-	12.0	68.0	251.0	35.3	-
127	Node	-	12.0	82.0	235.0	35.2	-
128	Node	-	12.0	68.0	235.0	35.3	-
129	Node	-	12.0	97.0	224.0	33.5	-
130	Node	-	12.0	88.0	224.0	34.1	-
131	Node	-	12.0	97.0	175.0	31.4	-
132	Node	-	12.0	88.0	175.0	30.8	-
133	Node	-	12.0	97.0	102.0	31.0	-
134	Node	-	12.0	88.0	102.0	30.1	-
135	Node	-	12.0	97.0	73.0	33.2	-
136	Node	-	12.0	88.0	73.0	34.1	-
137	Node	-	12.0	317.0	64.0	36.6	-
138	Node	-	12.0	298.0	64.0	36.6	-
139	Node	-	12.0	279.0	64.0	36.6	-
140	Node	-	12.0	260.0	64.0	36.5	-
141	Node	-	12.0	241.0	64.0	36.4	-
142	Node	-	12.0	222.0	64.0	36.3	-
143	Node	-	12.0	203.0	64.0	36.2	-
144	Node	-	12.0	184.0	64.0	36.0	-
145	Node	-	12.0	165.0	64.0	35.8	-
146	Node	-	12.0	146.0	64.0	35.6	-
147	Node	-	12.0	127.0	64.0	35.3	-
148	Node	-	12.0	109.0	64.0	35.1	-
149	Node	-	12.0	88.0	64.0	35.0	-
150	Node	-	12.0	82.0	64.0	35.0	-

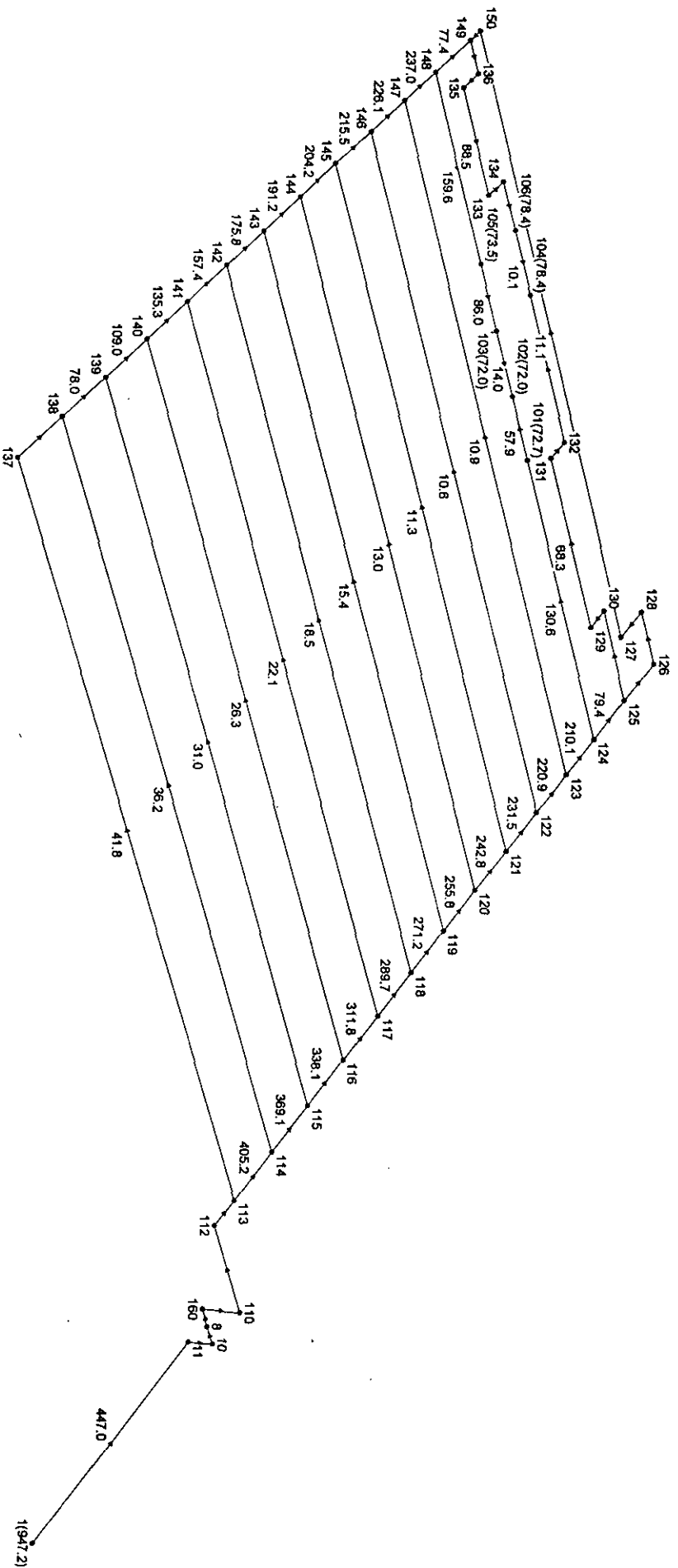
PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
100	102	Head	14.50	12.0	24.6	72.0	Sch10	2	18.0	0.028	0.501	-57.9	5.1	Branch Line
	101	Head	14.50	12.0	25.1	72.7	120	2.000	0.0		0.000			
								2.157	18.0		0.003			
101	101	Head	14.50	12.0	25.1	72.7	Sch10	2	81.5	0.126	10.202	-130.6	11.5	Branch Line
	124	Node	-	12.0	35.4	-	120	2.000	0.0		0.000			
								2.157	81.5		0.007			
102	103	Head	14.50	12.0	24.7	72.0	Sch10	2	18.0	0.002	0.036	14.0	1.2	Branch Line
	102	Head	14.50	12.0	24.6	72.0	120	2.000	0.0		0.000			
								2.157	18.0		0.001			
103	105	Head	14.50	12.0	25.7	73.5	Sch10	2	18.0	0.058	1.041	86.0	7.6	Branch Line
	103	Head	14.50	12.0	24.7	72.0	120	2.000	0.0		0.000			
								2.157	18.0		0.004			
104	104	Head	14.50	12.0	29.2	78.4	Sch10	2	18.0	0.001	0.020	-10.1	0.9	Branch Line
	106	Head	14.50	12.0	29.3	78.4	120	2.000	0.0		0.000			
								2.157	18.0		0.001			
105	132	Node	-	12.0	30.8	-	Sch10	2	41.5	0.038	1.566	68.3	6.0	Branch Line
	104	Head	14.50	12.0	29.2	78.4	120	2.000	0.0		0.000			
								2.157	41.5		0.004			
106	148	Node	-	12.0	35.1	-	Sch10	2	51.5	0.182	9.333	159.6	14.0	Branch Line
	105	Head	14.50	12.0	25.7	73.5	120	2.000	0.0		0.000			
								2.157	51.5		0.008			
107	106	Head	14.50	12.0	29.3	78.4	Sch10	2	13.5	0.061	0.823	-88.5	7.8	Branch Line
	134	Node	-	12.0	30.1	-	120	2.000	0.0		0.000			
								2.157	13.5		0.005			
108	137	Node	-	12.0	36.6	-	Sch10	2	187.0	0.015	2.940	-41.8	3.7	Branch Line
	113	Node	-	12.0	39.6	-	120	2.000	6.2		0.000			
								2.157	193.2		0.002			
111	140	Node	-	12.0	36.5	-	Sch10	2	187.0	0.006	1.245	-26.3	2.3	Branch Line
	116	Node	-	12.0	37.8	-	120	2.000	6.2		0.000			
								2.157	193.2		0.001			
112	141	Node	-	12.0	36.4	-	Sch10	2	187.0	0.005	0.904	-22.1	1.9	Branch Line
	117	Node	-	12.0	37.3	-	120	2.000	6.2		0.000			
								2.157	193.2		0.001			
113	142	Node	-	12.0	36.3	-	Sch10	2	187.0	0.003	0.648	-18.5	1.6	Branch Line
	118	Node	-	12.0	37.0	-	120	2.000	6.2		0.000			
								2.157	193.2		0.001			
114	143	Node	-	12.0	36.2	-	Sch10	2	187.0	0.002	0.463	-15.4	1.4	Branch Line
	119	Node	-	12.0	36.6	-	120	2.000	6.2		0.000			
								2.157	193.2		0.001			
115	144	Node	-	12.0	36.0	-	Sch10	2	187.0	0.002	0.338	-13.0	1.1	Branch Line
	120	Node	-	12.0	36.3	-	120	2.000	6.2		0.000			
								2.157	193.2		0.001			
116	145	Node	-	12.0	35.8	-	Sch10	2	187.0	0.001	0.263	-11.3	1.0	Branch Line
	121	Node	-	12.0	36.0	-	120	2.000	6.2		0.000			
								2.157	193.2		0.001			
117	146	Node	-	12.0	35.6	-	Sch10	2	187.0	0.001	0.232	-10.6	0.9	Branch Line
	122	Node	-	12.0	35.8	-	E	2.000	6.2		0.000			
								2.157	193.2		0.001			

PIPES													
#	Start/End Nodes					Material	Size	Length	Fr. Loss	Pres. Fr. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation	Res. Pres.								
118	147	Node	-	12.0	35.3	Sch10	2	187.0	0.001	0.242	-10.9	1.0	Branch Line
	123	Node	-	12.0	35.6	120	2.000	6.2		0.000			
119	130	Node	-	12.0	34.1	Sch10	2	193.2	0.038	1.251	-68.3	6.0	Branch Line
	125	Node	-	12.0	35.3	120	2.000	27.0		0.000			
120	128	Node	-	12.0	35.3	Sch10	2	33.2	0.001	0.004			
	126	Node	-	12.0	35.3	120	2.000	16.0		0.029	-11.1	1.0	Branch Line
			-	12.0		E	2.157	6.2		0.000			
121	128	Node	-	12.0	35.3	Sch10	2	22.2	0.001	0.026	11.1	1.0	Branch Line
	127	Node	-	12.0	35.2	120	2.000	14.0		0.000			
122	127	Node	-	12.0	35.2	E	2.157	20.2	0.001	0.001			
	150	Node	-	12.0	35.0	Sch10	2	171.0	0.001	0.231	11.1	1.0	Branch Line
			-	12.0		120	2.000	6.2		0.000			
123	130	Node	-	12.0	34.1	Sch10	2	177.2	0.038	0.001			
	129	Node	-	12.0	33.5	120	2.000	9.0		0.572	68.3	6.0	Branch Line
			-	12.0		E	2.157	6.2		0.000			
124	129	Node	-	12.0	33.5	Sch10	2	15.2	0.038	0.004	68.3	6.0	Branch Line
	131	Node	-	12.0	31.4	120	2.000	49.0		2.082			
			-	12.0		E	2.157	6.2		0.004			
125	131	Node	-	12.0	31.4	Sch10	2	55.2	0.038	0.572	68.3	6.0	Branch Line
	132	Node	-	12.0	30.8	120	2.000	9.0		0.000			
			-	12.0		E	2.157	6.2		0.004			
126	134	Node	-	12.0	30.1	Sch10	2	15.2	0.061	0.923	-88.5	7.8	Branch Line
	133	Node	-	12.0	31.0	120	2.000	6.2		0.000			
			-	12.0		E	2.157	15.2		0.005			
127	133	Node	-	12.0	31.0	Sch10	2	29.0	0.061	2.142	-88.5	7.8	Branch Line
	135	Node	-	12.0	33.2	120	2.000	6.2		0.000			
			-	12.0		E	2.157	35.2		0.005			
128	135	Node	-	12.0	33.2	Sch10	2	9.0	0.061	0.923	-88.5	7.8	Branch Line
	136	Node	-	12.0	34.1	120	2.000	6.2		0.000			
			-	12.0		E	2.157	15.2		0.005			
129	136	Node	-	12.0	34.1	Sch10	2	9.0	0.061	0.923	-88.5	7.8	Branch Line
	149	Node	-	12.0	35.0	120	2.000	6.2		0.000			
			-	12.0		E	2.157	15.2		0.005			
130	110	Node	-	12.0	42.3	Sch10	4	24.0	0.045	1.647	447.0	10.1	Cross Main
	112	Node	-	12.0	40.6	120	4.000	13.2		0.000			
			-	12.0		E	4.260	37.2		0.002			
131	112	Node	-	12.0	40.6	Sch10	4	10.0	0.045	1.027	447.0	10.1	Cross Main
	113	Node	-	12.0	39.6	120	4.000	13.2		0.000			
			-	12.0		E	4.260	23.2		0.002			
132	113	Node	-	12.0	39.6	Sch10	4	19.0	0.037	0.702	405.2	9.1	Cross Main
	114	Node	-	12.0	38.9	120	4.000	0.0		0.000			
			-	12.0		-	4.260	19.0		0.001			
133	114	Node	-	12.0	38.9	Sch10	4	19.0	0.031	0.591	369.1	8.3	Cross Main
	115	Node	-	12.0	38.3	120	4.000	0.0		0.000			
			-	12.0		-	4.260	19.0		0.001			

PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
134	115 Node	-	12.0	38.3	-	-	Sch10 120	4 4.000	19.0 0.0	0.027	0.502 0.000	338.1	7.6	Cross Main
135	116 Node	-	12.0	37.8	-	-	Sch10 120	4 4.260	19.0 0.0	0.023	0.432 0.000	311.8	7.0	Cross Main
136	117 Node	-	12.0	37.3	-	-	Sch10 120	4 4.260	19.0 0.0	0.020	0.377 0.000	289.7	6.5	Cross Main
137	118 Node	-	12.0	37.0	-	-	Sch10 120	4 4.260	19.0 0.0	0.018	0.334 0.000	271.2	6.1	Cross Main
138	119 Node	-	12.0	36.6	-	-	Sch10 120	4 4.000	19.0 0.0	0.016	0.300 0.000	255.8	5.8	Cross Main
139	120 Node	-	12.0	36.3	-	-	Sch10 120	4 4.260	19.0 0.0	0.014	0.272 0.000	242.8	5.5	Cross Main
140	121 Node	-	12.0	36.0	-	-	Sch10 120	4 4.260	19.0 0.0	0.013	0.249 0.000	231.5	5.2	Cross Main
141	122 Node	-	12.0	35.8	-	-	Sch10 120	4 4.260	19.0 0.0	0.012	0.229 0.000	220.9	5.0	Cross Main
142	123 Node	-	12.0	35.6	-	-	Sch10 120	4 4.000	18.0 0.0	0.011	0.197 0.000	210.1	4.7	Cross Main
143	137 Node	-	12.0	36.6	-	-	Sch10 120	4 4.000	19.0 0.0	0.001	0.011 0.000	41.8	0.9	Cross Main
144	138 Node	-	12.0	36.6	-	-	Sch10 120	4 4.260	19.0 0.0	0.002	0.033 0.000	78.0	1.8	Cross Main
145	139 Node	-	12.0	36.6	-	-	Sch10 120	4 4.260	19.0 0.0	0.003	0.062 0.000	109.0	2.5	Cross Main
146	140 Node	-	12.0	36.5	-	-	Sch10 120	4 4.000	19.0 0.0	0.005	0.092 0.000	135.3	3.0	Cross Main
147	141 Node	-	12.0	36.4	-	-	Sch10 120	4 4.260	19.0 0.0	0.006	0.122 0.000	157.4	3.5	Cross Main
148	142 Node	-	12.0	36.3	-	-	Sch10 120	4 4.260	19.0 0.0	0.008	0.150 0.000	175.8	4.0	Cross Main
149	143 Node	-	12.0	36.2	-	-	Sch10 120	4 4.260	19.0 0.0	0.009	0.175 0.000	191.2	4.3	Cross Main
149	144 Node	-	12.0	36.0	-	-	Sch10 120	4 4.260	19.0 0.0	0.001	0.001			Cross Main

PIPES													
#	Start/End Nodes					Material	Size	Length	Fr. Loss	Pres. Fr. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation	Res. Pres.								
			ft	psi	gpm		Int. Diam.	ft	psi/ft	psi	gpm	f/s	
150	144	Node	-	12.0	36.0	Sch10	4	19.0	0.010	0.198	204.2	4.6	Cross Main
	145	Node	-	12.0	35.8	120	4.000	0.0		0.000			
					-		4.260	19.0		0.001			
151	145	Node	-	12.0	35.8	Sch10	4	19.0	0.012	0.218	215.5	4.9	Cross Main
	146	Node	-	12.0	35.6	120	4.000	0.0		0.000			
					-		4.260	19.0		0.001			
152	146	Node	-	12.0	35.6	Sch10	4	19.0	0.013	0.239	226.1	5.1	Cross Main
	147	Node	-	12.0	35.3	120	4.000	0.0		0.000			
					-		4.260	19.0		0.001			
153	147	Node	-	12.0	35.3	Sch10	4	18.0	0.014	0.247	237.0	5.3	Cross Main
	148	Node	-	12.0	35.1	120	4.000	0.0		0.000			
					-		4.260	18.0		0.001			
154	149	Node	-	12.0	35.0	Sch10	4	21.0	0.002	0.059	-77.4	1.7	Cross Main
	148	Node	-	12.0	35.1	120	4.000	13.2		0.000			
					-	E	4.260	34.2		0.000			
155	150	Node	-	12.0	35.0	Sch10	4	6.0	0.001	0.001	11.0	0.2	Cross Main
	149	Node	-	12.0	35.0	120	4.000	13.2		0.000			
					-	E	4.260	19.2		0.000			
70	114	Node	-	12.0	38.9	Sch10	2	187.0	0.012	2.246	36.2	3.2	Pipe
	138	Node	-	12.0	36.6	120	2.000	6.2		0.000			
					-	E	2.157	193.2		0.002			
71	115	Node	-	12.0	38.3	Sch10	2	187.0	0.009	1.687	31.0	2.7	Pipe
	139	Node	-	12.0	36.6	120	2.000	6.2		0.000			
					-	E	2.157	193.2		0.002			
156	125	Node	-	12.0	35.3	Sch10	4	21.0	0.002	0.062	-79.4	1.8	Pipe
	124	Node	-	12.0	35.4	120	4.000	13.2		0.000			
					-	E	4.260	34.2		0.000			
157	126	Node	-	12.0	35.3	Sch10	4	20.0	0.000	0.002	-11.0	0.2	Pipe
	125	Node	-	12.0	35.3	120	4.000	13.2		0.000			
					-	E	4.260	33.2		0.000			
158	10	Node	-	2.0	51.8	Sch10	6	5.0	0.006	0.031	447.1	4.5	Pipe
	8	FPLD	5.0	2.0	46.8	120	6.000	0.0		0.000			
					-		6.367	5.0		0.000			
159	8	FPLD	5.0	2.0	46.8	Sch10	6	5.0	0.006	0.031	447.1	4.5	Pipe
	160	Node	-	2.0	46.8	120	6.000	0.0		0.000			
					-		6.367	5.0		0.000			
160	160	Node	-	2.0	46.8	Sch10	6	10.0	0.006	0.174	447.1	4.5	Pipe
	110	Node	-	12.0	42.3	120	6.000	17.7		4.330			
					-	E	6.367	27.7		0.000			
161	1	Src	[...]	-4.5	54.8	Ductile	8	73.0	0.001	0.106	447.0	2.8	Underground
	11	Node	-	-4.5	54.7	140	8.000	0.0		0.000			
					-		8.110	73.0		0.000			
162	11	Node	-	-4.5	54.7	Ductile	8	6.5	0.001	0.045	447.0	2.8	Underground
	10	Node	-	2.0	51.8	140	8.000	24.5		2.814			
					-	E	8.110	31.0		0.000			

FLOW DIAGRAM



System Statistics

Materials Info								
Name	Abbr.	Size	HWC	Length	Total Length	Fittings		
						Abbr.	Eq.Length	Amount
Sch10	Sch10	2	120	2668.0	2803.4	E	6.2	22
		4	120	518.0	597.0	E	13.2	6
		6	120	20.0	37.7	E	17.7	1
Ductile	Ductile	8	140	79.5	104.0	E	24.5	1

Fittings Info		
Name	Abbr.	Amount
NFPA EII 90	E	30

HYDRAULIC CALCULATIONS

for

KOHL'S calculation #3

BRICKTOWNE CENTER

BRICK, NEW JERSEY 08723

Contract No. 0225

Date September 22, 1999

Design Data:

Remote Area Location	STOCKROOM
Occupancy Classification	ORDINARY Grp.2
Density	0.30 gpm/sq.ft
Remote Area Size	2000.0 sq.ft
Coverage per Sprinkler	200.0 sq.ft
Sprinkler K-Factor	14.50
No. of Sprinkler Calculated	10
In-Rack Demand	0.0 gpm
Source Hose Demand	500.0 gpm
Total Water Including Hose	1132.5 gpm
Name of Contractor	R.G. SOLOMON FIRE PROTECTION Inc.
Name of Designer	MSG Fire
Address	2010 PILGRIM Road,WALL, NEW JERSEY 07719
Authority Having Jurisdiction	A.H.J.

GENERAL RESULTS

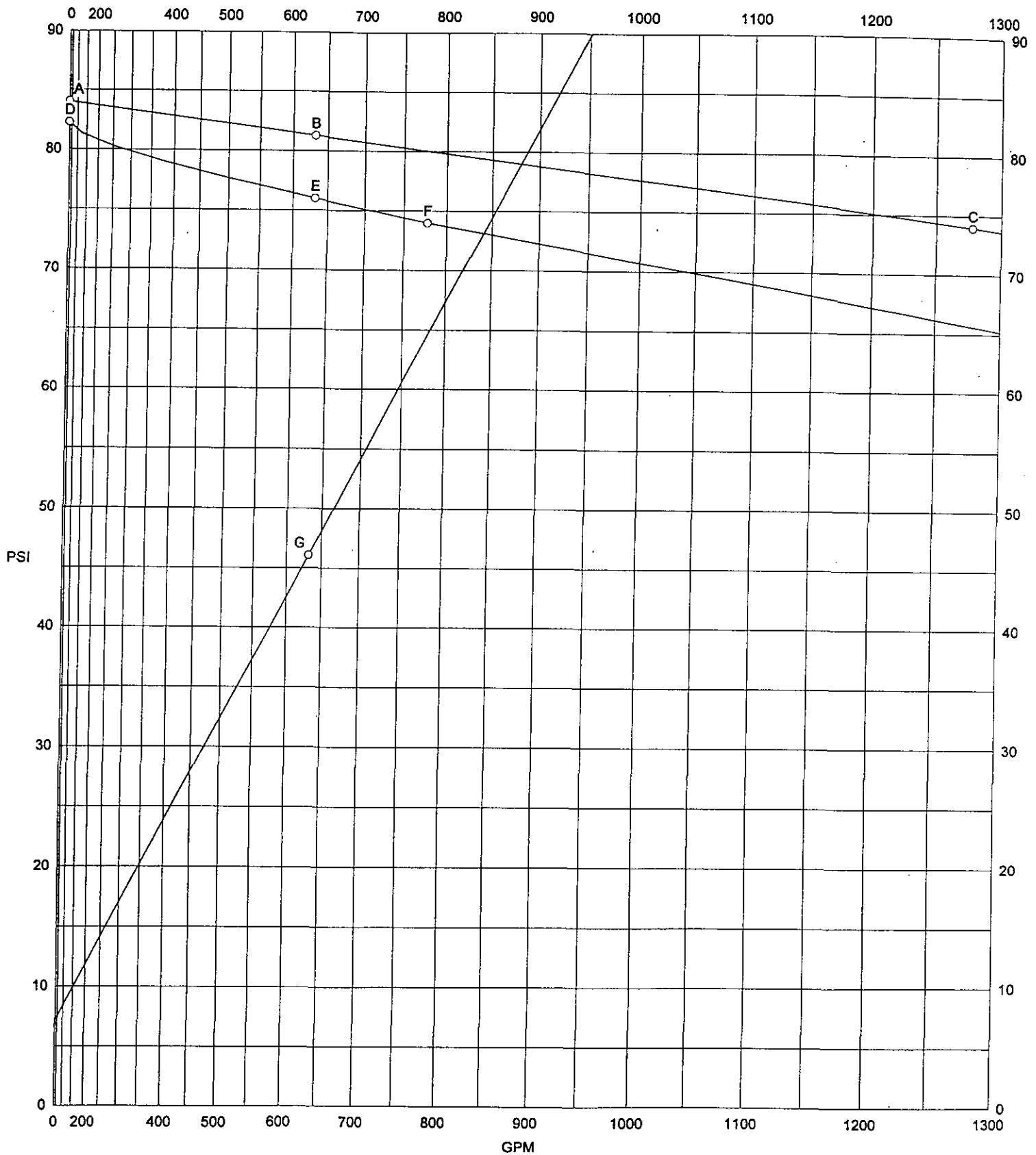
Total Water Including Hose	1132.5 gpm
Additional Allowances	0.0 gpm
Discharge from Sprinklers	632.2 gpm
Source Hose Demand	500.0 gpm
Average Imbalance	0.060 gpm
Maximum Imbalance	0.5 gpm
Maximum Velocity @ Pipe: 71	25.1 ft/s
Maximum Fr. Loss @ Pipe: 69	0.061 psi/ft
Remote Area was not Peaked	

Velocity pressures have been used for information only, and are not valid for balancing the system.

SOURCE : 1

Static Pressure	84.0 psi
Residual Pressure	74.0 psi
Flow	1278.0 gpm
Hose Allowance	500.0 gpm
Available Pressure	76.0 psi
Required Pressure	46.1 psi
Safety Factor	39.4%, 29.9 psi
Water Flowing	632.5 gpm

Water Curves for Src : 1



Curve	Values - X: psi @ gpm
Supply Curve @ Src : 1	A : 84 @ 0 - B : 81.3 @ 632.5 - C : 74 @ 1278
Supply Curve with Hose @ Src : 1	D : 82.2 @ 0 - E : 76 @ 632.5 - F : 74 @ 778
Demand Curve @ Src : 1	7.1 @ 0 - G : 46.1 @ 632.5

NODES							
#	Type	Value	Elevation	X	Y	Res. Pres.	Discharge
			ft	ft	ft	psi	gpm
1	Src	[...]	-4.5	400.0	285.0	46.1	500.0
305	Head	14.50	12.0	279.0	245.0	22.7	69.1
304	Head	14.50	12.0	279.0	235.0	19.5	64.1
309	Head	14.50	12.0	298.0	225.0	20.6	65.8
303	Head	14.50	12.0	279.0	225.0	17.9	61.3
308	Head	14.50	12.0	298.0	215.0	19.6	64.1
302	Head	14.50	12.0	279.0	215.0	17.2	60.1
307	Head	14.50	12.0	298.0	205.0	19.3	63.8
301	Head	14.50	12.0	279.0	205.0	17.1	60.0
306	Head	14.50	12.0	298.0	195.0	19.4	63.8
300	Head	14.50	12.0	279.0	195.0	17.2	60.1
101	Head	14.50	12.0	109.0	169.5	25.6	-
102	Head	14.50	12.0	109.0	151.5	25.6	-
103	Head	14.50	12.0	109.0	133.5	25.6	-
104	Head	14.50	12.0	88.0	133.5	25.6	-
105	Head	14.50	12.0	109.0	115.5	25.5	-
106	Head	14.50	12.0	88.0	115.5	25.6	-
8	FPLD	5.0	2.0	327.0	280.0	37.9	-
10	Node	-	2.0	327.0	285.0	43.0	-
11	Node	-	-4.5	327.0	285.0	45.9	-
110	Node	-	12.0	327.0	275.0	33.2	-
160	Node	-	2.0	327.0	275.0	37.9	-
112	Node	-	12.0	327.0	251.0	30.0	-
113	Node	-	12.0	317.0	251.0	28.1	-
114	Node	-	12.0	298.0	251.0	26.7	-
115	Node	-	12.0	279.0	251.0	25.9	-
116	Node	-	12.0	260.0	251.0	25.9	-
117	Node	-	12.0	241.0	251.0	25.8	-
118	Node	-	12.0	222.0	251.0	25.8	-
119	Node	-	12.0	203.0	251.0	25.7	-
120	Node	-	12.0	184.0	251.0	25.7	-
121	Node	-	12.0	165.0	251.0	25.7	-
122	Node	-	12.0	146.0	251.0	25.7	-
123	Node	-	12.0	127.0	251.0	25.7	-
124	Node	-	12.0	109.0	251.0	25.7	-
125	Node	-	12.0	88.0	251.0	25.7	-
126	Node	-	12.0	68.0	251.0	25.7	-
127	Node	-	12.0	82.0	235.0	25.6	-
128	Node	-	12.0	68.0	235.0	25.7	-
129	Node	-	12.0	97.0	224.0	25.6	-
130	Node	-	12.0	88.0	224.0	25.6	-
131	Node	-	12.0	97.0	175.0	25.6	-
132	Node	-	12.0	88.0	175.0	25.6	-
133	Node	-	12.0	97.0	102.0	25.5	-
134	Node	-	12.0	88.0	102.0	25.6	-
135	Node	-	12.0	97.0	73.0	25.5	-
136	Node	-	12.0	88.0	73.0	25.5	-
137	Node	-	12.0	317.0	64.0	25.2	-
138	Node	-	12.0	298.0	64.0	25.2	-
139	Node	-	12.0	279.0	64.0	25.2	-
140	Node	-	12.0	260.0	64.0	25.3	-
141	Node	-	12.0	241.0	64.0	25.4	-
142	Node	-	12.0	222.0	64.0	25.4	-
143	Node	-	12.0	203.0	64.0	25.4	-
144	Node	-	12.0	184.0	64.0	25.5	-
145	Node	-	12.0	165.0	64.0	25.5	-
146	Node	-	12.0	146.0	64.0	25.5	-
147	Node	-	12.0	127.0	64.0	25.5	-
148	Node	-	12.0	109.0	64.0	25.5	-
149	Node	-	12.0	88.0	64.0	25.5	-
150	Node	-	12.0	82.0	64.0	25.5	-

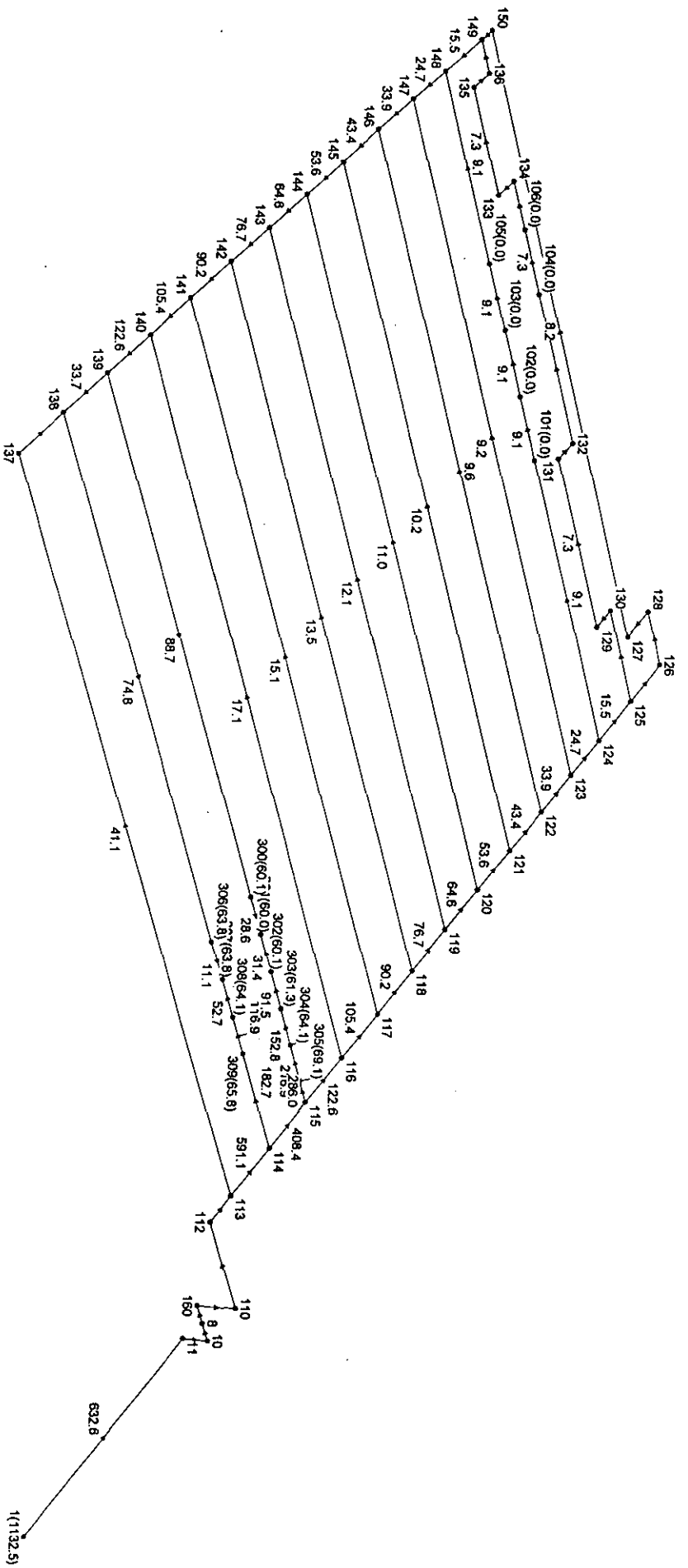
PIPES													
#	Start/End Nodes					Material	Size	Length	Fr.Loss	Pres./Fr.Loss		Flow	Velocity
	#	Type	Value	Elevation	Res.Pres.					Pres.Elev.Loss	Pres.Vel.Loss		
				ft	psi		ft	ft	psi/ft	psi		gpm	ft/s
						HWC Fittings	Norm.Diam. Int.Diam.	Eq.Length Total Length					
100	102	Head	14.50	12.0	25.6	Sch10	2	18.0	0.001	0.016	0.000	-9.1	0.8
	101	Head	14.50	12.0	25.6	120	2.000	0.0		0.000			Branch Line
101	101	Head	14.50	12.0	25.6	Sch10	2	18.0	0.001	0.074	0.000	-9.1	0.8
	124	Node	-	12.0	25.7	120	2.000	81.5		0.000			Branch Line
102	103	Head	14.50	12.0	25.6	Sch10	2	18.0	0.001	0.016	0.000	-9.1	0.8
	102	Head	14.50	12.0	25.6	120	2.000	0.0		0.000			Branch Line
103	105	Head	14.50	12.0	25.5	Sch10	2	18.0	0.001	0.016	0.000	-9.1	0.8
	103	Head	14.50	12.0	25.6	120	2.000	0.0		0.000			Branch Line
104	104	Head	14.50	12.0	25.6	Sch10	2	18.0	0.001	0.011	0.000	7.3	0.6
	106	Head	14.50	12.0	25.6	120	2.000	0.0		0.000			Branch Line
105	132	Node	-	12.0	25.6	Sch10	2	18.0	0.001	0.025	0.000	7.3	0.6
	104	Head	14.50	12.0	25.6	120	2.000	41.5		0.000			Branch Line
106	148	Node	-	12.0	25.5	Sch10	2	51.5	0.001	0.047	0.000	-9.1	0.8
	105	Head	14.50	12.0	25.5	120	2.000	0.0		0.000			Branch Line
107	106	Head	14.50	12.0	25.6	Sch10	2	13.5	0.001	0.008	0.000	7.3	0.6
	134	Node	-	12.0	25.6	120	2.157	51.5		0.000			Branch Line
108	137	Node	-	12.0	25.2	Sch10	2	187.0	0.015	2.847	0.000	-41.1	3.6
	113	Node	-	12.0	28.1	120	2.000	6.2		0.000			Branch Line
111	140	Node	-	12.0	25.3	Sch10	2	187.0	0.003	0.565	0.000	-17.1	1.5
	116	Node	-	12.0	25.9	120	2.157	193.2		0.001			Branch Line
112	141	Node	-	12.0	25.4	Sch10	2	187.0	0.002	0.448	0.000	-15.1	1.3
	117	Node	-	12.0	25.8	120	2.157	193.2		0.001			Branch Line
113	142	Node	-	12.0	25.4	Sch10	2	187.0	0.002	0.361	0.000	-13.5	1.2
	118	Node	-	12.0	25.8	120	2.000	6.2		0.000			Branch Line
114	143	Node	-	12.0	25.4	Sch10	2	187.0	0.002	0.296	0.000	-12.1	1.1
	119	Node	-	12.0	25.7	120	2.157	193.2		0.001			Branch Line
115	144	Node	-	12.0	25.5	Sch10	2	187.0	0.001	0.249	0.000	-11.0	1.0
	120	Node	-	12.0	25.7	120	2.157	193.2		0.001			Branch Line
116	145	Node	-	12.0	25.5	Sch10	2	187.0	0.001	0.215	0.000	-10.2	0.9
	121	Node	-	12.0	25.7	E	2.157	193.2		0.001			Branch Line
117	146	Node	-	12.0	25.5	Sch10	2	187.0	0.001	0.193	0.000	-9.6	0.8
	122	Node	-	12.0	25.7	E	2.157	193.2		0.000			Branch Line

PIPES												
#	Start/End Nodes				Material HWC Fittings	Size Nom.Diam. Int.Diam.	Length Eq.Length Total Length ft	Fr.Loss psi/ft	Pres.Fr.Loss Pres.Elev.Loss Pres.Vel.Loss psi	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res.Pres. psi	Discharge gpm						
118	147 Node	Node	-	12.0	25.5	-	Sch10 120	0.001	0.178 0.000	-9.2	0.8	Branch Line
119	130 Node	Node	-	12.0	25.6	-	Sch10 120	0.001	0.020 0.000	-7.3	0.6	Branch Line
120	128 Node	Node	-	12.0	25.7	-	Sch10 120	0.001	0.016 0.000	-8.2	0.7	Branch Line
121	128 Node	Node	-	12.0	25.7	-	Sch10 120	0.001	0.015 0.000	8.2	0.7	Branch Line
122	127 Node	Node	-	12.0	25.6	-	Sch10 120	0.001	0.132 0.000	8.2	0.7	Branch Line
123	130 Node	Node	-	12.0	25.6	-	Sch10 120	0.001	0.009 0.000	7.3	0.6	Branch Line
124	129 Node	Node	-	12.0	25.6	-	Sch10 120	0.001	0.033 0.000	7.3	0.6	Branch Line
125	131 Node	Node	-	12.0	25.6	-	Sch10 120	0.001	0.009 0.000	7.3	0.6	Branch Line
126	134 Node	Node	-	12.0	25.6	-	Sch10 120	0.001	0.009 0.000	7.3	0.6	Branch Line
127	133 Node	Node	-	12.0	25.5	-	Sch10 120	0.001	0.021 0.000	7.3	0.6	Branch Line
128	135 Node	Node	-	12.0	25.5	-	Sch10 120	0.001	0.009 0.000	7.3	0.6	Branch Line
129	136 Node	Node	-	12.0	25.5	-	Sch10 120	0.001	0.009 0.000	7.3	0.6	Branch Line
130	110 Node	Node	-	12.0	33.2	-	Sch10 120	0.085	3.127 0.000	632.2	14.2	Cross Main
131	112 Node	Node	-	12.0	30.0	-	Sch10 120	0.085	1.949 0.002	632.2	14.2	Cross Main
132	113 Node	Node	-	12.0	28.1	-	Sch10 120	0.075	1.412 0.000	591.1	13.3	Cross Main
133	114 Node	Node	-	12.0	26.7	-	Sch10 120	0.038	0.713 0.000	408.4	9.2	Cross Main

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow gpm	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi								
134	115 Node	-	12.0	25.9	-	Sch10 120	4 4.000	19.0 0.0	0.004	0.077 0.000	122.6	2.8	Cross Main
135	116 Node	-	12.0	25.9	-	Sch10 120	4 4.000	19.0 0.0	0.003	0.058 0.000	105.4	2.4	Cross Main
136	117 Node	-	12.0	25.8	-	Sch10 120	4 4.000	19.0 0.0	0.002	0.044 0.000	90.2	2.0	Cross Main
137	118 Node	-	12.0	25.8	-	Sch10 120	4 4.260	19.0 0.0	0.002	0.032 0.000	76.7	1.7	Cross Main
138	119 Node	-	12.0	25.7	-	Sch10 120	4 4.000	19.0 0.0	0.001	0.024 0.000	64.6	1.5	Cross Main
139	120 Node	-	12.0	25.7	-	Sch10 120	4 4.000	19.0 0.0	0.001	0.017 0.000	53.6	1.2	Cross Main
140	121 Node	-	12.0	25.7	-	Sch10 120	4 4.260	19.0 0.0	0.001	0.011 0.000	43.4	1.0	Cross Main
141	122 Node	-	12.0	25.7	-	Sch10 120	4 4.260	19.0 0.0	0.000	0.007 0.000	33.9	0.8	Cross Main
142	123 Node	-	12.0	25.7	-	Sch10 120	4 4.260	18.0 0.0	0.000	0.004 0.000	24.7	0.6	Cross Main
143	137 Node	-	12.0	25.2	-	Sch10 120	4 4.000	19.0 0.0	0.001	0.010 0.000	41.1	0.9	Cross Main
144	138 Node	-	12.0	25.2	-	Sch10 120	4 4.000	19.0 0.0	0.000	0.007 0.000	-33.7	0.8	Cross Main
145	139 Node	-	12.0	25.2	-	Sch10 120	4 4.260	19.0 0.0	0.004	0.077 0.000	-122.6	2.8	Cross Main
146	140 Node	-	12.0	25.3	-	Sch10 120	4 4.260	19.0 0.0	0.003	0.058 0.000	-105.4	2.4	Cross Main
147	141 Node	-	12.0	25.4	-	Sch10 120	4 4.260	19.0 0.0	0.002	0.044 0.000	-90.2	2.0	Cross Main
148	142 Node	-	12.0	25.4	-	Sch10 120	4 4.000	19.0 0.0	0.002	0.032 0.000	-76.7	1.7	Cross Main
149	143 Node	-	12.0	25.4	-	Sch10 120	4 4.260	19.0 0.0	0.001	0.024 0.000	-64.6	1.5	Cross Main

PIPES													
#	Start/End Nodes					Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss ps/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow	Velocity	Type
	#	Type	Value	Elevation	Res. Pres.								
150	144 Node	-	12.0	25.5	-	Sch10 120	4 4.000	19.0 0.0	0.001	0.017 0.000	gpm	f/s	Cross Main
	145 Node	-	12.0	25.5	-	-	4.260	19.0		0.000	-53.6	1.2	
151	145 Node	-	12.0	25.5	-	Sch10 120	4 4.000	19.0 0.0	0.001	0.011 0.000	-43.4	1.0	Cross Main
	146 Node	-	12.0	25.5	-	-	4.260	19.0		0.000			
152	146 Node	-	12.0	25.5	-	Sch10 120	4 4.000	19.0 0.0	0.000	0.007 0.000	-33.9	0.8	Cross Main
	147 Node	-	12.0	25.5	-	-	4.260	19.0		0.000			
153	147 Node	-	12.0	25.5	-	Sch10 120	4 4.000	18.0 0.0	0.000	0.004 0.000	-24.7	0.6	Cross Main
	148 Node	-	12.0	25.5	-	-	4.260	18.0		0.000			
154	149 Node	-	12.0	25.5	-	Sch10 120	4 4.000	21.0 13.2	0.000	0.003 0.000	15.5	0.3	Cross Main
	148 Node	-	12.0	25.5	-	E	4.260	34.2		0.000			
155	150 Node	-	12.0	25.5	-	Sch10 120	4 4.000	6.0 13.2	0.000	0.001 0.000	8.2	0.2	Cross Main
	149 Node	-	12.0	25.5	-	E	4.260	19.2		0.000			
64	305 Head	14.50	12.0	22.7	69.1	Sch10 120	2 2.000	10.0 0.0	0.321	3.197 0.000	216.9	19.0	Pipe
	304 Head	14.50	12.0	19.5	64.1	-	2.157	10.0		0.011			
71	115 Node	-	12.0	25.9	-	Sch10 120	2 2.000	6.0 0.0	0.535	3.201 0.000	286.0	25.1	Pipe
	305 Head	14.50	12.0	22.7	69.1	-	2.157	6.0		0.015			
65	304 Head	14.50	12.0	19.5	64.1	Sch10 120	2 2.000	10.0 0.0	0.168	1.672 0.000	152.8	13.4	Pipe
	303 Head	14.50	12.0	17.9	61.3	-	2.157	10.0		0.008			
75	309 Head	14.50	12.0	20.6	65.8	Sch10 120	2 2.000	10.0 0.0	0.102	1.019 0.000	116.9	10.3	Pipe
	308 Head	14.50	12.0	19.6	64.1	-	2.157	10.0		0.006			
70	114 Node	-	12.0	26.7	-	Sch10 120	2 2.000	26.0 0.0	0.233	6.051 0.000	182.7	16.0	Pipe
	309 Head	14.50	12.0	20.6	65.8	-	2.157	26.0		0.009			
66	303 Head	14.50	12.0	17.9	61.3	Sch10 120	2 2.000	10.0 0.0	0.065	0.648 0.000	91.5	8.0	Pipe
	302 Head	14.50	12.0	17.2	60.1	-	2.157	10.0		0.005			
74	308 Head	14.50	12.0	19.6	64.1	Sch10 120	2 2.000	10.0 0.0	0.023	0.234 0.000	52.7	4.6	Pipe
	307 Head	14.50	12.0	19.3	63.8	-	2.157	10.0		0.003			
67	302 Head	14.50	12.0	17.2	60.1	Sch10 120	2 2.000	10.0 0.0	0.009	0.090 0.000	31.4	2.8	Pipe
	301 Head	14.50	12.0	17.1	60.0	-	2.157	10.0		0.002			
73	307 Head	14.50	12.0	19.3	63.8	Sch10 120	2 2.000	10.0 0.0	0.001	0.013 0.000	-11.1	1.0	Pipe
	306 Head	14.50	12.0	19.4	63.8	-	2.157	10.0		0.001			
68	301 Head	14.50	12.0	17.1	60.0	Sch10 120	2 2.000	10.0 0.0	0.008	0.075 0.000	-28.6	2.5	Pipe
	300 Head	14.50	12.0	17.2	60.1	-	2.157	10.0		0.001			

PIPES														
#	Start/End Nodes						Material HWC Fittings	Size Nom. Diam. Int. Diam.	Length Eq. Length Total Length	Fr. Loss psi/ft	Pres. Fr. Loss Pres. Elev. Loss Pres. Vel. Loss	Flow	Velocity ft/s	Type
	#	Type	Value	Elevation ft	Res. Pres. psi	Discharge gpm								
72	306 138	Head Node	14.50 -	12.0 12.0	19.4 25.2	63.8 -	Sch10 120	2 2,000	131.0 0.0	0.045	5.850 0.000	-74.8	6.6	Pipe
69	300 139	Head Node	14.50 -	12.0 12.0	17.2 25.2	60.1 -	Sch10 120	2 2,000	131.0 0.0	0.061	8.014 0.000	-88.7	7.8	Pipe
156	125 124	Node Node	- -	12.0 12.0	25.7 25.7	- -	Sch10 120	4 4,000	21.0 13.2	0.000	0.003 0.000	-15.5	0.3	Pipe
157	126 125	Node Node	- -	12.0 12.0	25.7 25.7	- -	Sch10 120 E	4 4,000	20.0 13.2	0.000	0.001 0.000	-8.2	0.2	Pipe
158	10 8	Node FPLD	- 5.0	2.0 2.0	43.0 37.9	- -	Sch10 120 E	6 6,000	5.0 0.0	0.012	0.059 0.000	632.2	6.4	Pipe
159	8 160	FPLD Node	5.0 -	2.0 2.0	37.9 37.9	- -	Sch10 120	6 6,000	5.0 0.0	0.012	0.059 0.000	632.2	6.4	Pipe
160	160 110	Node Node	- -	2.0 12.0	37.9 33.2	- -	Sch10 120 E	6 6,000	10.0 17.7	0.012	0.330 4.330	632.2	6.4	Pipe
161	1 11	Src Node	[...] -	-4.5 -4.5	46.1 45.9	500.0 -	Ductile 140	8 8,000	73.0 0.0	0.003	0.201 0.000	632.6	3.9	Underground
162	11 10	Node Node	- -	-4.5 2.0	45.9 43.0	- -	Ductile 140 E	8 8,000	6.5 24.5	0.003	0.085 2.814	632.6	3.9	Underground



Certificate of Occupancy Single Family Dwelling

Location Kohl's Block 701 Lot 78

Final Inspections needed as follows:

1. Final Building
2. Final Plumbing
3. Final Electric
4. Final Fire
5. Certificate of Compliance BTMUA
6. Final Engineering
7. Report of Compliance, Ocean County Soil
8. Home Owners Warranty (HOW) or Affidavit by Owner

Certificate of Approval Additions and Alterations

Final inspections on all the Technical Sections that were paid for Building, Plumbing, Fire, and Electrical.

Report of Compliance from Ocean County Soils needed when; more than 5000 square feet are disturbed, almost always when more than 1 house is constructed as in Major and Minor Subdivisions. Affordable Housing when applicable. Stamped in Red when review is needed.

	FINALS	FINALS	FINALS
Building.	Approved.	OK <u>2/8/00</u>	<u>OK</u>
Plumbing.	Approved.	<u>2/8/00</u>	<u>OK</u>
Fire.	Approved.	<u>2/22/00</u>	<u>OK</u>
Electric.	Approved.	<u>OK</u>	
Ctf of Comp BTMUA.	Approved.	<u>OK</u>	
HOW	Approved.	<u>N/A</u>	
Engineering	Approved.	<u>N/A</u>	
Soil.	Approved.	<u>N/A</u>	
Affordable Housing.	Approved.	<u>- PAID</u>	<u>OK</u>
Commercial Occupancy Load	Completed		
Public Works Garbage Can Receipt	Received		
Application for CO	Completed		

C/A

BLOCK

LOT

ADDRESS

**THE BRICK TOWNSHIP
MUNICIPAL UTILITIES AUTHORITY**

1551 HIGHWAY 88 WEST
BRICK, NEW JERSEY 08724
458-7000

CERTIFICATE OF COMPLIANCE

Date.....2/1/00.....

NAME.....Kohl's Department Store.....

ADDRESS.....P.O. BOX 359 Milwaukee, WI 53201.....

PROPERTY LOCATION.....664 Hwy 70.....

Account No.....K326400..... Block.....701..... Lot.....7-8.....
K785612 sprinkler acct.

I hereby certify that the above applicant has complied with all Rules
and Regulations of this Authority and has paid all required fees and charges.

For the Authority.....Carol Gindel.....

BRICK
THE BRICK TOWNSHIP



Permit No. 99-3433
UTILITIES
MUNICIPAL UTILITIES AUTHORITY

1551 Highway 88 West • Brick, New Jersey 08724-2399
(732) 458-7000 • FAX (732) 458-7725
www.brickmua.com

KEVIN F. DONALD
Executive Director

December 13, 1999

Mr. Eric Thieleman
Jayeff Construction Corp.
35 Colby Avenue
Manasquan, NJ 08736

COMMISSIONERS

PATRICK L. BOTTAZZI
Chairman

THOMAS G. MAIORINE
Vice Chairman

BRIAN MACFIE
Secretary

JOHN C. EKARIUS
Treasurer

WILLIAM MILLER
Asst. Sec./Treas.

Re: Kohl's Department Store - Old Caldor Store
Shop-Rite Shopping Center
Block 701, Lots 7 & 9.03
Chamber Bridge Road & Route 70

Dear Mr. Thieleman:

I apologize for not responding in a more timely manner to your letter of transmittal regarding the change of use for this store and the various changes to the interior plumbing in the existing store. After reviewing the submitted KKE Architect's A2 floor plan and the Larson Gibbens Inc.'s P1 and P2 Plumbing Plans we do not take exception to the plan. The KKE Architects Floor Plan, Project No. 99-04-3067-01(sheet A2 dated June 25, 1999 with a latest revision date of September 24, 1999) and the Larson Gibbens Inc. Plumbing Plan (sheets P1 and P2, dated June 27, 1999) have been reviewed.

Please be advised that the various changes proposed to the interior plumbing requires the approval of the Brick Township Construction Subcode Official - Plumbing Department prior to the installation of same. The water meter will be installed at a location acceptable to our Meter Department.

Should you have any questions, please do not hesitate to contact me.

Very truly yours,

James R. Allen
Senior Engineer

JRA:lp
c: T. Siddiqui
P. Canal

Via Fax & Regular Mail

C:\My Documents\Project\kohls-12-13-99.wpd

Post-it® Fax Note	7871	Date	12/13/99	Page	2
To	ERIC Thieleman	From	JIM ALLEN		
Co./Dept.		Co.	BTMUA		
Phone #	732-262-8665	Phone #	Ext. 288		
Fax #	732-262-8670	Fax #			

FOR: KEVIN BATZEL - BRICK FIRE SAFETY

Kohl's DEPT. STORES, INC.

N 56 W 17000 RIDGEWOOD DRIVE

MENOMONEE FALLS, WISCONSIN 53051

CONSTRUCTION - MIKE ALLARD

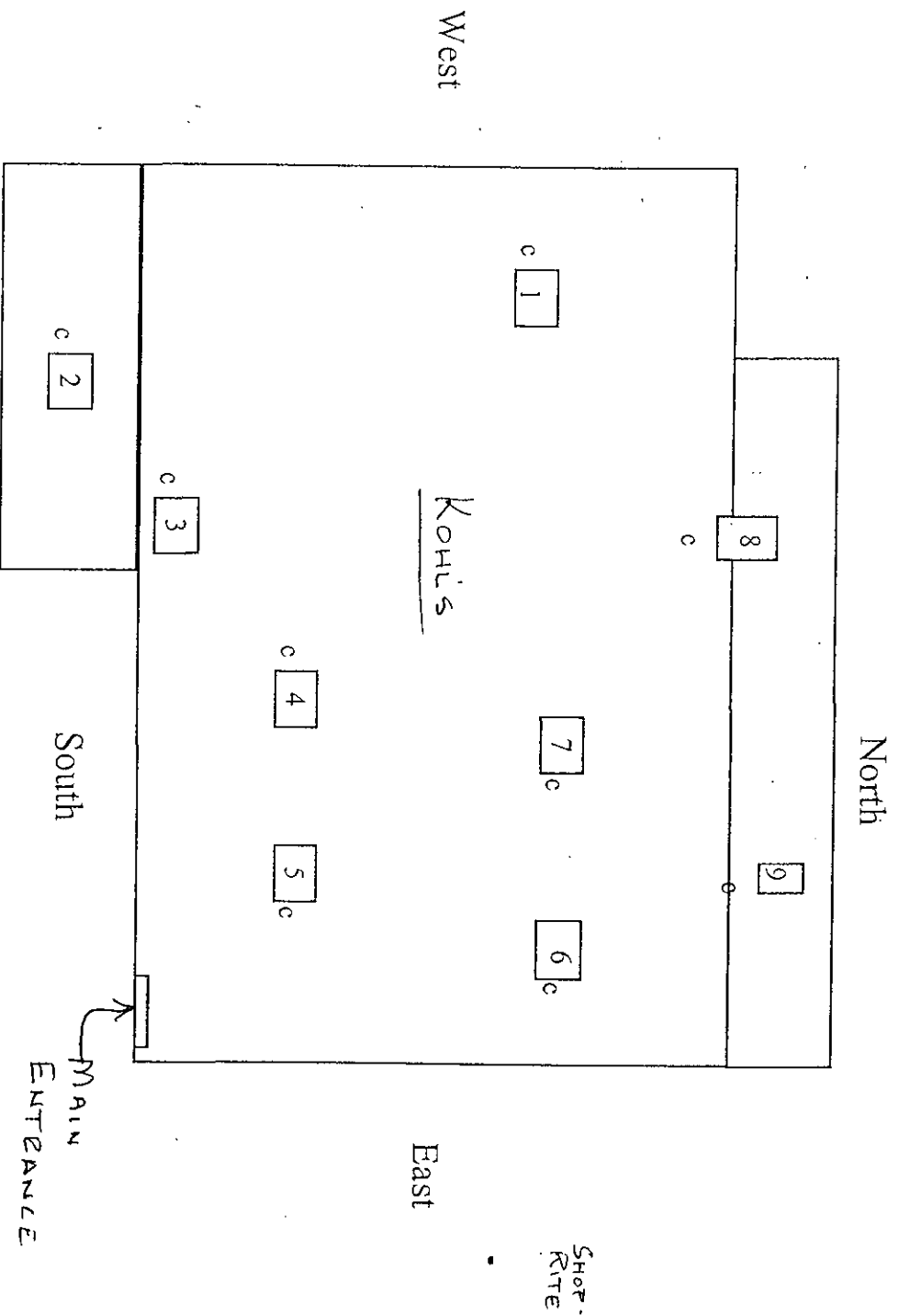
MAINTENANCE - TERRY MUELLER

MSG FIRE & SAFETY

477-9555

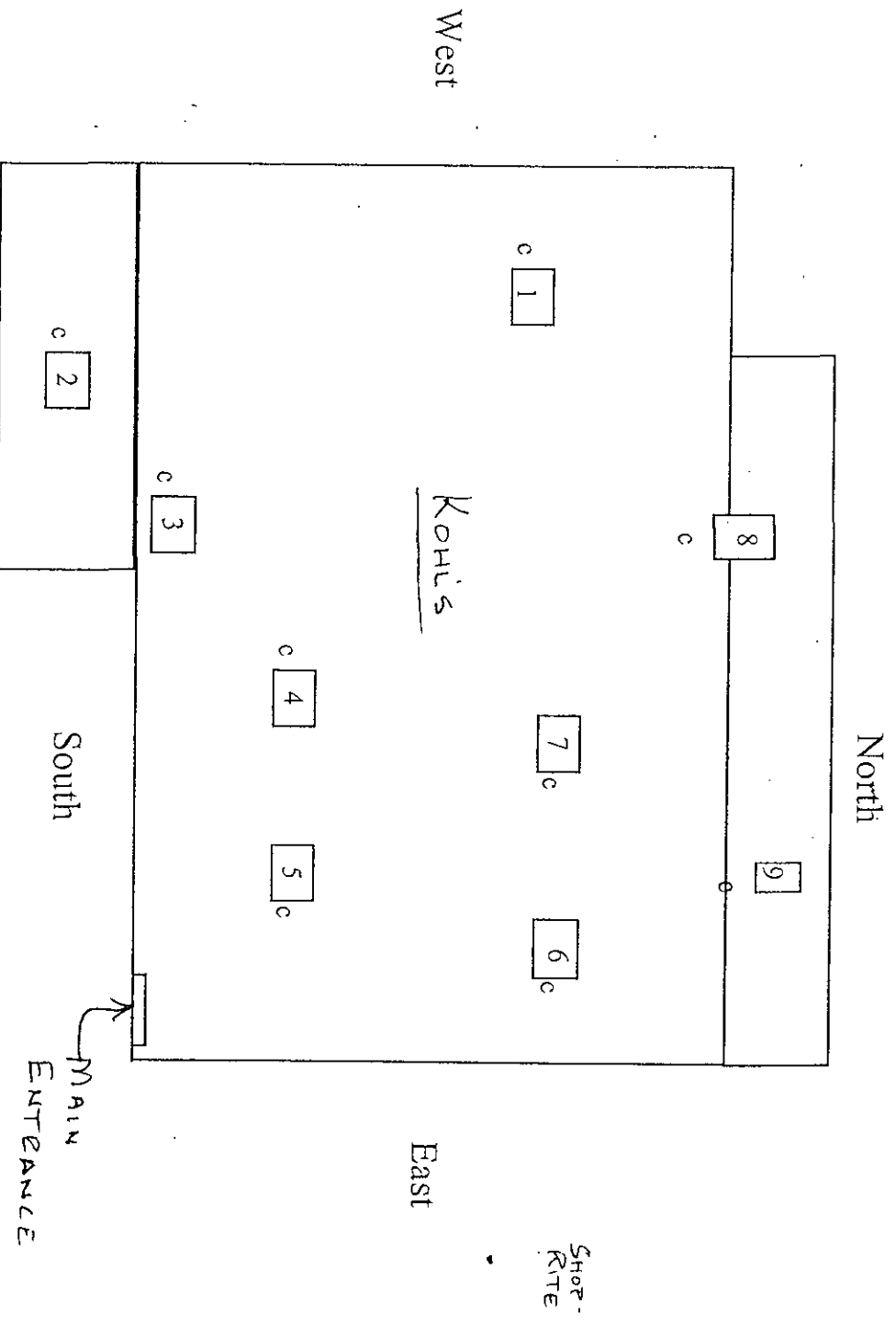
MIKE GRANIT

Brick #390 RTU Layout



Note: RTU #8 serves the back stockroom and the North edge of the sales floor

Brick #390 RTU Layout



Note: RTU #8 serves the back stockroom and the North edge of the sales floor

COUNTER FORM
PLEASE PRINT

ELECTRICAL SUBCODE	FIRE PROTECTION SUBCODE
CONTRACTOR:	CONTRACTOR: <u>R.G. SOLOMON FIRE PROT. INC.</u>
ADDRESS:	ADDRESS: <u>2010 PILGRIM ROAD</u> <u>WALL, N.J. 07719</u>
PHONE:	PHONE: <u>732-556-0981</u>
LIC. #: EXP. DATE:	LIC. #: EXP. DATE:
FEDERAL EMPL. #: (or S.S. #):	FEDERAL EMPL. #: (or S.S. #): <u>22-349-6080</u>
TECHNICAL DATA (LIST ALL FIXTURES)	TECHNICAL DATA (DESCRIPTION OF WORK)
DESCRIPTION QTY SIZE	<u>NEW SPRINKLER SYSTEM</u> <u>FROM THE RISER (EXISTING)</u>
ITEMS	
Lighting Fixtures	
Receptacles	
Switches	
Detectors	
Light Poles	
Motors - Fract. HP	
Emergency & Exit Lights	
Communications Points	
Alarm Devices/E.A.C. Panel	
TOTAL NUMBERS	
Pool Permit w/UW Lights	Water Supply Source <u>CITY</u>
Storable Pool/Spa/Hot Tub	Method of Valve Supervision <u>TAMPER (2)</u>
KW Elec. Range / Receptacle KW	Local Alarm Supervision <u>FLOW (1)</u>
KW Oven / Surface Unit KW	Central Supervision <u>YES</u>
KW Elec. Water Heater KW	Proprietary Supervision <u>—</u>
KW Elec. Dryer / Receptacle KW	
KW Dishwasher KW	Flammable Liquid Storage Tanks Capacity: Fuel:
HP Garbage Disposal HP	Combustible Liquid Storage Tanks Capacity: Fuel:
KW Central A/C Unit KW	L.G.P. Storage Tanks Capacity: Fuel:
HP/KW Space Heater/Air Handler HP/KW	
KW Baseboard Heat KW	DESCRIPTION NUMBER
HP Motors 1/+ HP HP	Wet Sprinkler Heads
KW Transformer/Generator KW	Dry Sprinkler Heads
AMP Service AMP	Total <u>(512)</u>
AMP Subpanels AMP	
AMP Motor Control Center AMP	Smoke Detectors <u>N/A</u>
AMP Elec. Sign/Outline Light KW	Heat Detectors <u>N/A</u>
Other	Total <u>N/A</u>
Other	
Other	Stand Pipes <u>N/A</u>
Other	Kitchen Hood Exhaust Systems <u>N/A</u>
Estimated Cost of Electrical Work: \$	
Signature (print name):	Pre-Engineered Systems <u>—</u>
Estimated Cost of Electrical Work: \$	Co2 Suppression <u>—</u>
Signature (print name):	Halon Suppression <u>—</u>
Owner ☐ Contractor ☐	Foam Suppression <u>—</u>
SUBCODE APPROVAL:	Dry Chemical <u>—</u>
PLANS: Required ☐ Approved ☐	Wet Chemical <u>—</u>
Approved by:	
Date:	Gas or Oil Fired Appliance <u>—</u>
	Other <u>—</u>
	Other <u>—</u>
CONTRACTOR AFFIX SEAL:	Estimated Cost of Fire Protection Work: \$ <u>70,000.00</u>
	Signature: <u>[Signature]</u>
	Owner ☐ Contractor ☒
	SUBCODE APPROVAL:
	PLANS: Required ☐ Approved ☐
	Approved by:
	Date:

COUNTER FORM
PLEASE PRINT

TOWNSHIP OF BRICK

401 Chambers Bridge Road
Brick, New Jersey 08723
Tel: 732-262-1027

Site Location:	Date Rec'd:
Block: Lot:	Date Issued:
Owner in Fee:	Control #:
Address:	Permit #:
State: Zip: Phone: ()	
SS #: Provide only if Applicant is owner	

PLUMBING SUBCODE	BUILDING SUBCODE
CONTRACTOR:	CONTRACTOR:
ADDRESS:	ADDRESS:
PHONE:	PHONE:
LIC #:	LIC #:
LIC EXPIRATION DATE:	LIC EXPIRATION DATE:
FEDERAL EMP. # (or S.S. #):	FEDERAL EMP. # (or S.S. #):
TECHNICAL SITE DATA (LIST ALL FIXTURES)	TECHNICAL SITE DATA
NO. FIXTURE/EQUIPMENT	DESCRIPTION OF WORK:
Water Closet	
Urinal / Bidet	
Bath Tub	
Lavatory	
Shower	
Floor Drain	
Sink	
Dishwasher	
Drinking Fountain	
Washing Machine	
Hose Bibb	
Gas Piping	
Fuel Oil Piping	
Water Heater	
Steam Boiler	
Hot Water Boiler	
Sewer Pump	
Interceptor / Separator	
Backflow Preventer	
Greasetrap	
Water Cooled AC or Refrig. Unit	
Sewer Connection	
Septic (Disposal System) Closure	
Water Service Connection	
Gas Service Connection	
Active Solar System	
Vent Through Roof	
Other	
Estimated Cost of Plumbing Work: \$	
Signature:	
Owner ☐ Contractor ☐	
SUBCODE APPROVAL:	Estimated Cost of Building Work:
PLANS: Required ☐ Approved ☐	New Building (1): \$
Approved by:	Alteration (2): \$
Date:	TOTAL (1+2): \$
CONTRACTOR AFFIX SEAL:	SUBCODE APPROVAL:
	PLANS: Required ☐ Approved ☐
	Approved by:
	Date: