

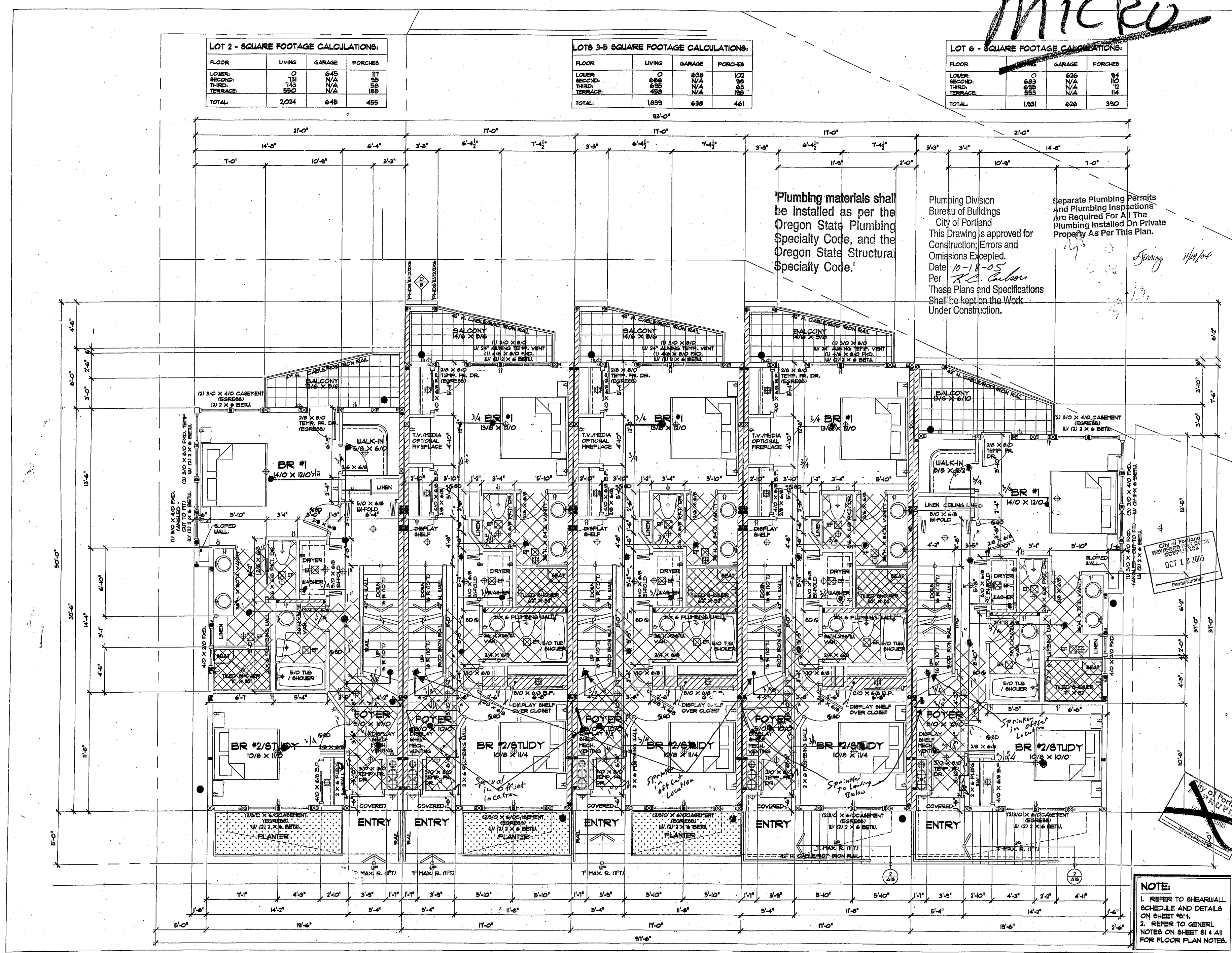
4632,36,40,44+82 SW KELLY AV. DFS-01 CO04-046767-71

OCT 18 2005
MICROFILMED

24X

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LOT 2 - SQUARE FOOTAGE CALCULATIONS:

FLOOR	LIVING	GARAGE	PORCHES
LOWER:	0	645	117
SECOND:	131	N/A	38
THIRD:	143	N/A	38
TERRACE:	550	N/A	185
TOTAL:	2,024	645	455

LOTS 3-5 SQUARE FOOTAGE CALCULATIONS:

FLOOR	LIVING	GARAGE	PORCHES
LOWER:	0	638	102
SECOND:	686	N/A	38
THIRD:	686	N/A	38
TERRACE:	458	N/A	136
TOTAL:	1,830	638	461

LOT 6 - SQUARE FOOTAGE CALCULATIONS:

FLOOR	LIVING	GARAGE	PORCHES
LOWER:	0	626	94
SECOND:	683	N/A	38
THIRD:	683	N/A	38
TERRACE:	550	N/A	114
TOTAL:	1,921	626	380

Plumbing materials shall be installed as per the Oregon State Plumbing Specialty Code, and the Oregon State Structural Specialty Code.

Plumbing Division
Bureau of Buildings
City of Portland
This Drawing is approved for Construction, Errors and Omissions Excepted.
Date: 10-18-05
Per: J.E. Carlson
These Plans and Specifications Shall be kept on the Work Under Construction.

Separate Plumbing Permits And Plumbing Inspections Are Required For All The Plumbing Installed On Private Property As Per This Plan.

JOSEPH E. KRAUSE
ARCHITECT P.C.
(503) 658-4111
Fax (503) 658-4297
15259 S.E. 82 Dr.
Suite 202
Clackamas, Oregon 97015

SW KELLY ST. ROWHOUSE PROJECT - MACADAM DISTRICT - PORTLAND OR

SECOND LEVEL FLOOR PLAN MICRO

04-4676716-69, 70 & 71-0ES-01-CA

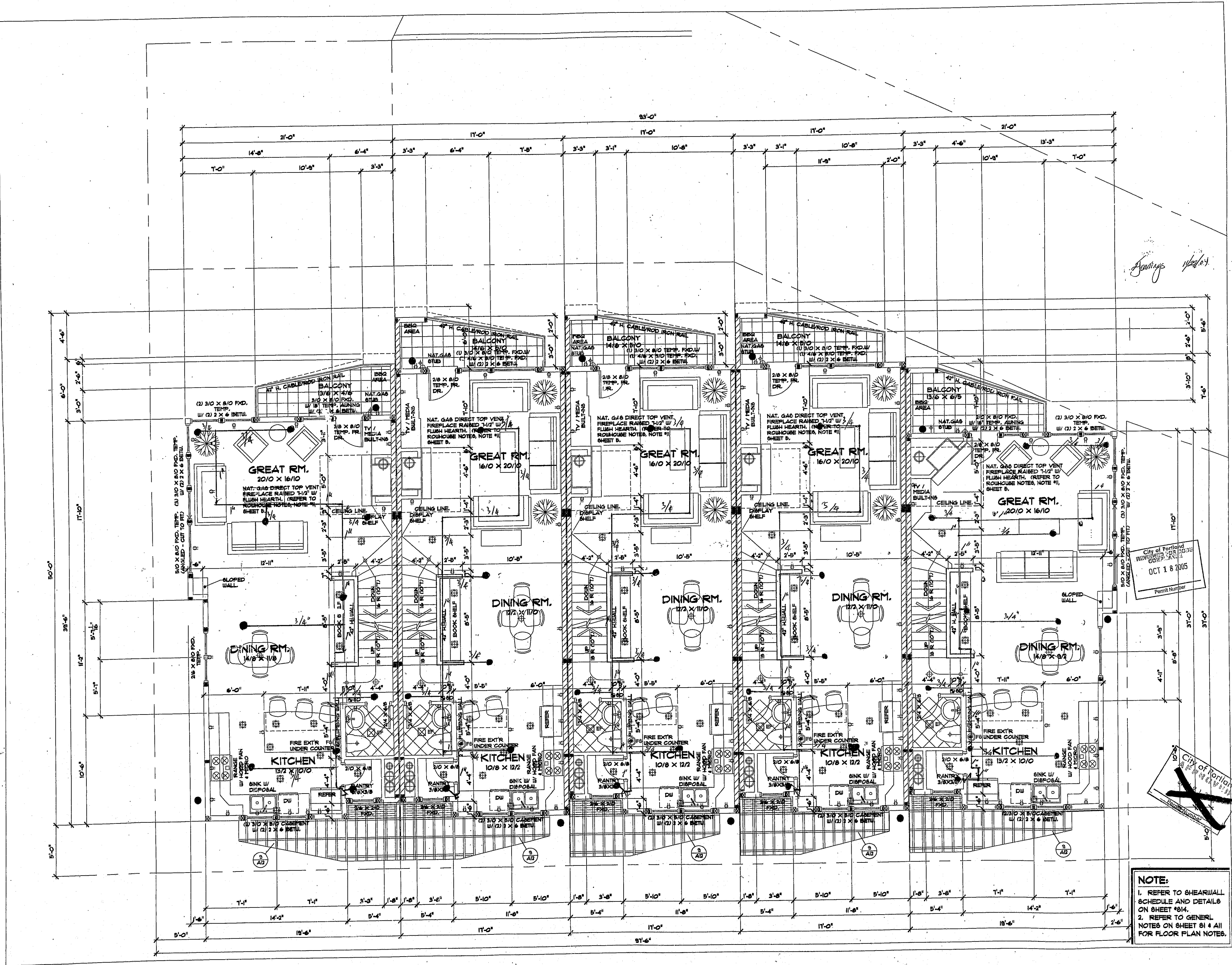
REVISED: 10-NOV-04
REVISED: 15-OCT-04
DATE: 2-SEP-04
PLAN # 1644
SHEET # A6 OF 14

OCT 28 2005
MICROFILMED

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NOTE:
1. REFER TO SHEARWALL
SCHEDULE AND DETAILS
ON SHEET 104.
2. REFER TO GENERAL
NOTES ON SHEET 81 & ALL
FOR FLOOR PLAN NOTES.

REGISTERED ARCHITECT
JOSEPH E. KRAUSE
ARCHITECT P.C.
(503) 656-4111
Fax: (503) 656-6297
15259 S.E. 82 Dr.
Suite 202
Clackamas, Oregon 97015

SW KELLY ST. ROWHOUSE PROJECT - MACADAM DISTRICT - PORTLAND OR
THIRD LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

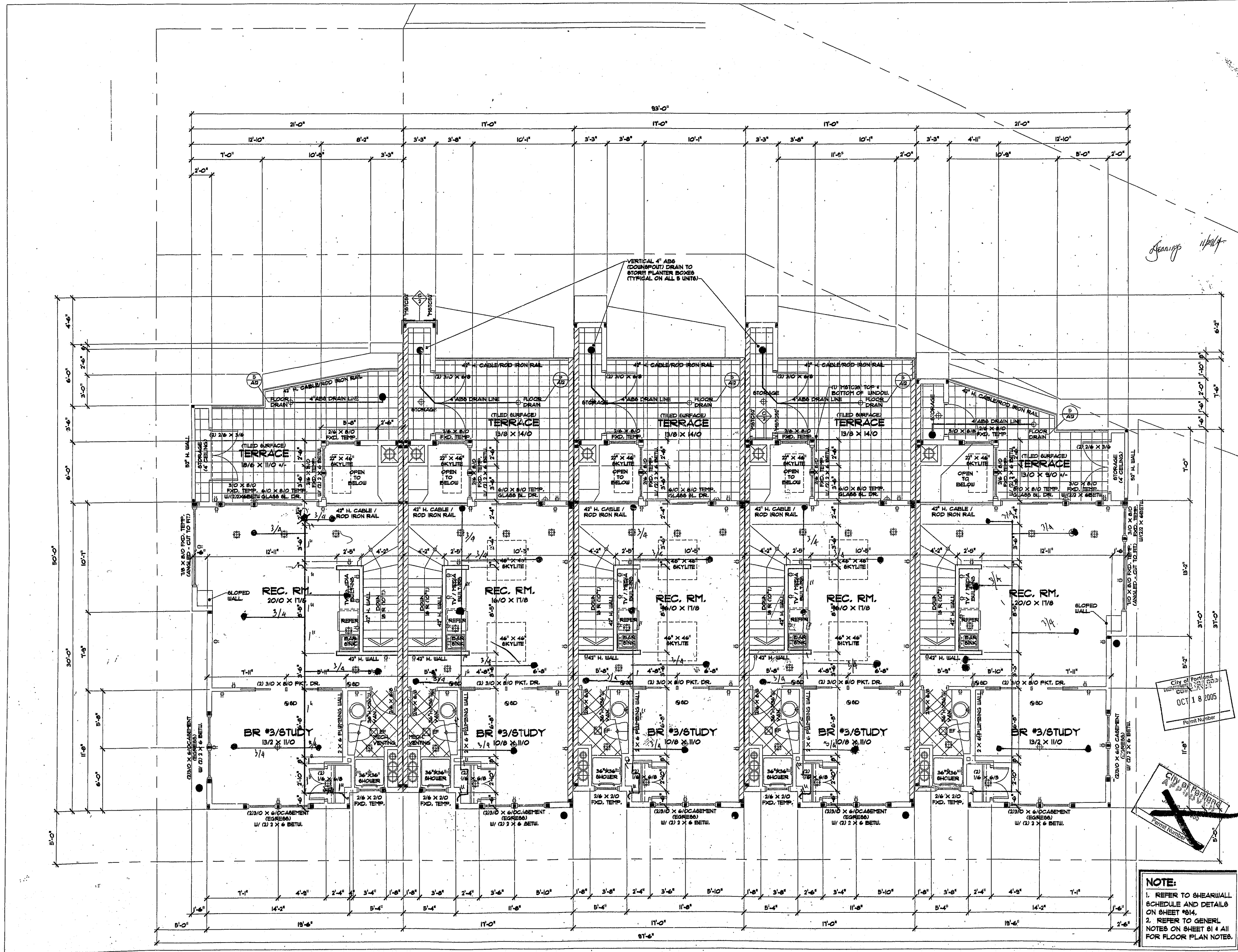
REVISED: 10-NOV-04
DATE: 2-SEP-04
PLAN # 1644
SHEET # A7 OF 14

OCT 18 2005
MICROFILMED

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REGISTERED ARCHITECT
JOSEPH E. KRAUSE
CLATSOP COUNTY, OREGON
STATE OF OREGON
J.E. KRAUSE
ARCHITECT P.C.
(503) 656-1111
Fax (503) 656-6297
12259 S.E. 82 Dr.
Suite 202
Clackamas, Oregon 97015

SW KELLY ST. ROWHOUSE PROJECT - MACADAM DISTRICT - PORTLAND OR
TERRACE LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

REVISED: 10-NOV-04
REVISED: 3-NOV-04
DATE: 2-SEP-04
PLAN #
1644
SHEET #

A8 OF 14

NOTE:
1. REFER TO SHEARWALL
SCHEDULE AND DETAILS
ON SHEET #84.
2. REFER TO GENERAL
NOTES ON SHEET #14 ALL
FOR FLOOR PLAN NOTES.

CO.04.046767 DFS.01. THRU CO.04.046771 DFS.01.

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OCT 28 2005
MICROFILMED



CITY OF
PORTLAND, OREGON
BUREAU OF DEVELOPMENT SERVICES
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



COMMERCIAL BUILDING PERMIT

04-046767-DFS-01-CO

Site Address: 4628 SW KELLY AVE

Issued: 10/26/05

PROJECT INFORMATION		Occ. Group	Const. Type
Row House (3 or more units)	Alteration	R3 U1	V-11/R
Project Description: DEFERRED SUBMITTAL FOR 13D FIRE SPRINKLERS			

APPLICANT	RK WILSON CORP *RONNIE WILSON*	Phone	(503) 723-7435
PROPERTY OWNER	NONE	Phone	
CONTRACTOR	RK WILSON CORP *RONNIE WILSON*	Phone	

Project Details		Project Details	
Code Edition (Year)	1997	Ground Disturbance Area (Sq. Ft.)	1
Lot Area (Sq. Ft.)	20473	Water District	Portland Water Bureau
Zoning - Property (1)	TBD		

PAID
OCT 26 2005
CITY OF PORTLAND

This permit expires if, at any time, 180 days pass without an approved inspection. If you are not able to obtain an inspection approval within 180 days, you may request a one-time only extension of 180 days by calling 503-823-7303.

BEFORE YOU DIG: ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. These rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is 1-800-332-2344).

CITY CONTACT	Slim Nizar	Phone: 503-823-5133
E-Mail:	nizars@ci.portland.or.us	Fax: (503) 823-4172

INSPECTION REQUEST PHONE NUMBERS	Building/Trade Inspections - Call Before 6:00 AM:	(503) 823-7000
TDD: (503) 823-6868		
IVR Inspection Request Number:		
2385456		



CITY OF
PORTLAND, OREGON
BUREAU OF DEVELOPMENT SERVICES
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



COMMERCIAL BUILDING PERMIT

04-046768-DFS-01-CO

Site Address: 4632 SW KELLY AVE

Issued: 10/26/05

PROJECT INFORMATION		Occ. Group	Const. Type
Row House (3 or more units)	Alteration	R3 U1	V-1HR
Project Description: DEFERRED SUBMITTAL FOR 13D FIRE SPRINKLERS			

APPLICANT	RK WILSON CORP *RONNIE WILSON*	Phone (503) 723-7435
PROPERTY OWNER	NONE	Phone
CONTRACTOR	RK WILSON CORP *RONNIE WILSON*	Phone

Project Details		Project Details	
Code Edition (Year)	1997	Ground Disturbance Area (Sq. Ft.)	1
Lot Area (Sq. Ft.)	20473	Water District	Portland Water Bureau
Zoning - Property (1)	TBD		

PAID
OCT 26 2005
CITY OF PORTLAND

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CITY CONTACT	Slim Nizar	Phone: 503-823-5133
E-Mail:	nizars@cl.portland.or.us	Fax: (503) 823-4172

INSPECTION REQUEST PHONE NUMBERS	Building/Trade Inspections - Call Before 6:00 AM:	(503) 823-7000
TDD: (503) 823-6868		
IVR Inspection Request Number:	2385457	



CITY OF
PORTLAND, OREGON
BUREAU OF DEVELOPMENT SERVICES
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



COMMERCIAL BUILDING PERMIT

04-046769-DFS-01-CO

Site Address: 4636 SW KELLY AVE

Issued: 10/26/05

PROJECT INFORMATION		Occ. Group	Const. Type
Row House (3 or more units)	Alteration	R3 U1	V-1HR
Project Description: DEFERRED SUBMITTAL FOR 13D FIRE SPRINKLERS			

APPLICANT RK WILSON CORP *RONNIE WILSON*
PROPERTY OWNER NONE
CONTRACTOR RK WILSON CORP *RONNIE WILSON*

Phone (503) 723-7435
Phone
Phone

Project Details		Project Details	
Code Edition (Year)	1997	Ground Disturbance Area (Sq. Ft.)	1
Lot Area (Sq. Ft.)	20473	Water District	Portland Water Bureau
Zoning - Property (1)	TBD*		

PAID
OCT 26 2005
(CITY OF PORTLAND)

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**BEFORE
YOU DIG**

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is 1-800-332-2344).

CITY CONTACT

Slim Nizar

Phone: 503-823-5133

E-Mail:

nizers@ci.portland.or.us

Fax: (503) 823-4172

**INSPECTION REQUEST
PHONE NUMBERS**

Building/Trade Inspections - Call Before 6:00 AM:

(503) 823-7000

TDD: (503) 823-6868

**IVR Inspection Request
Number:**

2385458



CITY OF
PORTLAND, OREGON
BUREAU OF DEVELOPMENT SERVICES
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



COMMERCIAL BUILDING PERMIT

04-046770-DFS-01-CO

Site Address: 4640 SW KELLY AVE

Issued: 10/26/05

PROJECT INFORMATION		Occ. Group	Const. Type
Row House (3 or more units)	Alteration	R3 U1	V-1HR
Project Description: DEFERRED SUBMITTAL FOR 13D FIRE SPRINKLERS			
APPLICANT		Phone (503) 723-7435	
PROPERTY OWNER		Phone	
CONTRACTOR		Phone	
RK WILSON CORP *RONNIE WILSON*			
NONE			
RK WILSON CORP *RONNIE WILSON*			
Project Details		Project Details	
Code Edition (Year)	1997	Ground Disturbance Area (Sq. Ft.)	1
Lot Area (Sq. Ft.)	20473	Water District	Portland Water Bureau
Zoning - Property (1)	TBD		
		PAID OCT 26 2005 CITY OF PORTLAND	

This permit expires if, at any time, 180 days pass without an approved inspection. If you are not able to obtain an inspection approval within 180 days, you may request a one-time only extension of 180 days by calling 503-823-7303.

**BEFORE
YOU DIG**

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 932-001-0010 through OAR 932-001-0025. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is 1-800-332-2344).

CITY CONTACT

Slim Nizar

Phone: 503-823-5133

E-Mail:

nizars@ci.portland.or.us

Fax: (503) 823-4172

**INSPECTION REQUEST
PHONE NUMBERS**

Building/Trade Inspections - Call Before 6:00 AM:

(503) 823-7000

TDD: (503) 823-6868

**IVR Inspection Request
Number:**

2385459



CITY OF
PORTLAND, OREGON
BUREAU OF DEVELOPMENT SERVICES
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



COMMERCIAL BUILDING PERMIT

04-046771-DFS-01-CO

Site Address: 4644 SW KELLY AVE

Issued: 10/26/05

PROJECT INFORMATION		Occ. Group	Const. Type
Row House (3 or more units)	Alteration	R3 U1	V-N
Project Description: DEFERRED SUBMITTAL FOR 130 FIRE SPRINKLERS			
APPLICANT RK WILSON CORP *RONNIE WILSON* Phone (503) 723-7435			
PROPERTY OWNER NONE		Phone	
CONTRACTOR RK WILSON CORP *RONNIE WILSON*		Phone	

Project Details		Project Details	
Code Edition (Year)	1997	Ground Disturbance Area (Sq. Ft.)	1
Lot Area (Sq. Ft.)	20473	Water District	Portland Water Bureau
Zoning - Property (1)	TBD		

PAID
OCT 26 2005
CITY OF PORTLAND

This permit expires if, at any time, 180 days pass without an approved inspection. If you are not able to obtain an inspection approval within 180 days, you may request a one-time only extension of 180 days by calling 503-823-7303.

**BEFORE
YOU DIG**

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. These rules are set forth in OAR 922-001-0010 through OAR 922-001-0050. You may obtain copies of the rules by calling this center. (Note: the telephone number for the Oregon Utility Notification Center is 1-800-332-2344).

CITY CONTACT

Slim Nizar

Phone: 503-823-5133

E-Mail:

nizars@ci.portland.or.us

Fax: (503) 823-4172

**INSPECTION REQUEST
PHONE NUMBERS**

Building/Trade Inspections - Call Before 6:00 AM:

(503) 823-7000

TDD: (503) 823-6868

**IVR Inspection Request
Number:**

2385460

DOMESTIC FIRE SUPPRESSION SYSTEM

PRESSURE LOSS CALCULATIONS

Sprinkler Information

CONTRACTOR: Northwest Plumbing of Vancouver INC.
 JOB SITE: 4628 & 4644 Kelly
 DATE: 1-Oct

Typo Concealed Pendant Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient $K = 4.2$ GPM
 Temp. Rati 135 Deg F. cover plat 160 Deg F. head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

Multipurpose Fire Suppression System

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CALCULATION AT 32 GPM @ 14.5 P.S.I. from most remote two sprinkler heads
 18 GPM @ 14.5 P.S.I. from most demanding sprinkler head

	INDIVIDUAL LOSS	NET TOTAL
WATER PRESS AT METER	100PSI	100.0 P.S.I.
WATER PRESS AT PRESSURE REGULATOR	80PSI	
DEDUCT METER LOSS	3/4" SIZE) 0.0	80.0 P.S.I.
DEDUCT LOSS FOR ELEVATION	29 FT X .434) 12.59	
1" SYSTEM CONTROL VALVE*	0 psi	
		67.4 P.S.I.

DEDUCT LOSS FROM CITY MAIN

* PEX	0 FT		
0 COUPLING	0 FT		
0 ELBOWS	0 FT		
0 TEE Branch	0 FT		
0 TEE Run	0 FT		
TOTAL	0 FT X 0	0.0	67.4 P.S.I.

DEDUCT LOSS FOR TUBING CONTROL VALVE TO MOST DEMANDING SPRINKLER(S)*

1" Blazemaster	50 X 0.1623	8.1	59.3 P.S.I.
3/4" Blazemaster	12 X 0.1724	2.1	57.2 P.S.I.
* Blazemaster	0 X 0	0.0	0.0 P.S.I.

SIZE QUAN.	DESCRIPTION	TOTAL EQUIV FT		
7 3/4"	3 90-DEG ELBOW	21		
0 3/4"	0 45-DEG ELBOW	0		
0 3/4"	0 TEE Bull Hd	0		
0 3/4"	0 TEE Flo Thru	0		
0 3/4"	0 CHECK VALVE	0		
0 3/4"	0 COUPLING	0		
TOTAL		21 FT X	0.17	3.57
				53.6 P.S.I.

SIZE QUANT	DESCRIPTION	TOTAL EQUIV FT		
7 1"	18 90-DEG ELBOW	126		
1 1"	2 45-DEG ELBOW	2		
5 1"	2 TEE Bull Hd	10		
1 1"	4 TEE Flo Thru	4		
0 1"	0 CHECK VALVE	0		
0 1"	0 COUPLING	0		
TOTAL		142 ft. X	0.1623	23.0
				30.6

SIZE QUANT	DESCRIPTION	TOTAL EQUIV FT		
0 1-1/4"	0 90-DEG ELBOW	0		
0 1-1/4"	0 45-DEG ELBOW	0		
0 1-1/4"	0 TEE Branch	0		
0 1-1/4"	0 TEE Flo Thru	0		
0 1-1/4"	0 CHECK VALVE	0		
0 1-1/4"	0 VALVE	0		
TOTAL		0 FT X	0.00	0.0
				30.6 P.S.I.

30.6 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE

14.5 P.S.I. Required

16.1 PSI Saily Margin for this Sprinkler design

**** Control valve to most demanding two heads on the first floor calculation

*Plans & Calcs approved
 by Joseph Kneidinger
 10-13-05 by KCC*

DOMESTIC FIRE SUPPRESSION SYSTEM PRESSURE LOSS CALCULATIONS

CONTRACTOR: Northwest Plumbing of Vancouver INC.
 JOB SITE: 4628 & 4644 Kelly
 DATE: 1-Oct

Multipurpose Fire Suppression System

Sprinkler Information

Tyco Concealed Pendent Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient $K = 4.2$ GPM
 Temp. Rating 135 Deg F, cover plat 160 Deg F, head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

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CALCULATION AT 32 GPM @ 14.5 P S I from most remote two sprinkler heads
 18 GPM @ 14.5 P S I from most demanding sprinkler head

	INDIVIDUAL LOSS	NET TOTAL
WATER PRESS AT METER	100PSI	100.0 P.S.I.
WATER PRESS AT PRESSURE REGULATOR	80PSI	
DEDUCT METER LOSS 3/4" SIZE	0.0	80.0 P.S.I.
DEDUCT LOSS FOR ELEVATION 1" SYSTEM CONTROL VALVE*	39 FT X .434) 16.93 0 psi	
		63.1 P.S.I.

DEDUCT LOSS FROM CITY MAIN

0	0 PEX	0 FT		
0	0 COUPLING	0 FT		
0	0 ELBOWS	0 FT		
0	0 TEE Branch	0 FT		
0	0 TEE Run	0 FT		
	TOTAL	0 FT X	0	63.1 P.S.I.

DEDUCT LOSS FOR TUBING CONTROL VALVE TO MOST DEMANDING SPRINKLER(S)*

1" Blazemaster	84	X	0.1623	49.5 P.S.I.
3/4" Blazemaster	9	X	0.1724	47.9 P.S.I.
* Blazemaster	0	X	0	0.0 P.S.I.

SIZE QUANT.	DESCRIPTION	TOTAL EQUIV FT		
7	3/4" 2 90-DEG ELBOW	14		
0	3/4" 0 45-DEG ELBOW	0		
0	3/4" 0 TEE Bull Hd	0		
1	3/4" 1 TEE Flo Thru	1		
0	3/4" 0 CHECK VALVE	0		
0	3/4" 0 COUPLING	0		
	TOTAL	15 FT X	0.17	2.55
				45.4 P.S.I.

SIZE QUANT	DESCRIPTION	TOTAL EQUIV FT		
7	1" 6 90-DEG ELBOW	42		
1	1" 2 45-DEG ELBOW	2		
5	1" 3 TEE Bull Hd	15		
1	1" 10 TEE Flo Thru	10		
0	1" 0 CHECK VALVE	0		
1	1" 1 COUPLING	1		
	TOTAL	70 ft. X	0.1623	11.4
				34.0 P.S.I.

SIZE QUANT	DESCRIPTION	TOTAL EQUIV FT		
0	1-1/4" 0 90-DEG ELBOW	0		
0	1-1/4" 0 45-DEG ELBOW	0		
0	1-1/4" 0 TEE Branch	0		
0	1-1/4" 0 TEE Flo Thru	0		
0	1-1/4" 0 CHECK VALVE	0		
0	1-1/4" 0 VALVE	0		
	TOTAL	0 FT X	0.00	0.0
				34.0 P.S.I.

34.0 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE

14.5 P.S.I. Required

19.5 PSI Safety Margin for this Sprinkler design

**** Control valve to most demanding two heads on the second floor calculation

DOMESTIC FIRE SUPPRESSION SYSTEM

PRESSURE LOSS CALCULATIONS

CONTRACTOR: Northwest Plumbing of Vancouver INC.
 JOB SITE: 4628 & 4644 Kelly
 DATE: 1-Oct

Multipurpose Fire Suppression System

Sprinkler Information

Tyco Concealed Pendent Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient $K = 4.2$ G P M
 Temp. Rati 135 Deg F. cover plat 160 Deg F. head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

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CALCULATION AT 32 GPM @ 14.5 P S I from most remote two sprinkler heads
 18 GPM @ 14.5 P S I from most demanding sprinkler head

	100PSI	INDIVIDUAL LOSS	NET TOTAL
WATER PRESS AT METER	80PSI		100.0 P.S.I.
DUCT METER LOSS	3/4" SIZE	0.0	
DUCT LOSS FOR ELEVATION	48 FT X .434)	20.83	80.0 P.S.I.
1" SYSTEM CONTROL VALVE*	0 psi		
TOTAL			59.2 P.S.I.

DEDUCT LOSS FROM CITY MAIN

* PEX	0 FT		
0 COUPLING	0 FT		
0 ELBOWS	0 FT		
0 TEE Branch	0 FT		
0 TEE Run	0 FT		
TOTAL	0 FT X 0	0.0	59.2 P.S.I.
DEDUCT LOSS FOR TUBING CONTROL VALVE TO MOST DEMANDING SPRINKLER(S)*		0.0	
1" Blazemaster	75 X 0.1623	12.2	47.0 P.S.I.
3/4" Blazemaster	13 X 0.1724	2.2	44.8 P.S.I.
* Blazemaster	0 X 0	0.0	0.0 P.S.I.

SIZE QUAN.	DESCRIPTION	TOTAL EQUIV FT			
7 3/4"	3 90-DEG ELBOW	21			
0 3/4"	0 45-DEG ELBOW	0			
0 3/4"	0 TEE Bull Hd	0			
0 3/4"	0 TEE Flo Thru	0			
0 3/4"	0 CHECK VALVE	0			
0 3/4"	0 COUPLING	0			
TOTAL		21 FT X	0.17	3.57	41.2 P.S.I.

SIZE QUANT	DESCRIPTION	TOTAL EQUIV FT			
7 1"	4 90-DEG ELBOW	28			
1 1"	2 45-DEG ELBOW	2			
5 1"	1 TEE Bull Hd	5			
0 1"	1 TEE Flo Thru	1			
0 1"	0 CHECK VALVE	0			
0 1"	0 COUPLING	0			
TOTAL		36 ft. X	0.1623	5.8	35.4 P.S.I.

SIZE QUANT	DESCRIPTION	TOTAL EQUIV FT			
0 1-1/4"	0 90-DEG ELBOW	0			
0 1-1/4"	0 45-DEG ELBOW	0			
0 1-1/4"	0 TEE Branch	0			
0 1-1/4"	0 TEE Flo Thru	0			
0 1-1/4"	0 CHECK VALVE	0			
0 1-1/4"	0 VALVE()	0			
TOTAL		0 FT X	0.00	0.0	35.4 P.S.I.

35.4 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE
 20.9 PSI Safety Margin for this Sprinkler design

14.5 P.S.I. Required

*** Control valve to most demanding two heads on the third floor calculation

DOMESTIC FIRE SUPPRESSION SYSTEM PRESSURE LOSS CALCULATIONS

CONTRACTOR: Northwest Plumbing of Vancouver INC.
 JOB SITE: 4632 & 4636 & 4640 Kelly
 DATE: 1-Oct

Multipurpose Fire Suppression System

Sprinkler Information

Tyco Concealed Pendent Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient K = 4.2 GPM
 Temp. Rati 135 Deg F. cover plat 160 Deg F. head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

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CALCULATION AT 32 GPM @ 14.5 P.S.I. from most remote two sprinkler heads
 18 GPM @ 14.5 P.S.I. from most demanding sprinkler head

			INDIVIDUAL LOSS	NET TOTAL
	WATER PRESS AT METER	100PSI		100.0 P.S.I.
	WATER PRESS AT PRESSURE REGULATOR	80PSI		
	DEDUCT METER LOSS	3/4" (SIZE)	0.0	80.0 P.S.I.
	DEDUCT LOSS FOR ELEVATION	29 FT X .434)	12.59	
	1" SYSTEM CONTROL VALVE*	0 psi		
	DEDUCT LOSS FROM CITY MAIN			67.4 P.S.I.
0	* PEX	0 FT		
0	0 COUPLING	0 FT		
0	0 ELBOWS	0 FT		
0	0 TEE Branch	0 FT		
0	0 TEE Run	0 FT		
	TOTAL	0 FT X	0	67.4 P.S.I.
	DEDUCT LOSS FOR TUBING CONTROL VALVE TO MOST DEMANDING SPRINKLER(S)*		0.0	
	1" Blazemaster	57 X 0.1623	9.3	58.1 P.S.I.
	3/4" Blazemaster	12 X 0.1724	2.1	56.0 P.S.I.
	* Blazemaster	0 X 0	0.0	0.0 P.S.I.
7	SIZE QUAN. DESCRIPTION	TOTAL EQUIV FT		
0	3/4" 3 90-DEG ELBOW	21		
0	3/4" 0 45-DEG ELBOW	0		
0	3/4" 0 TEE Bull Hd	0		
0	3/4" 0 TEE Flo Thru	0		
0	3/4" 0 CHECK VALVE	0		
0	3/4" 0 COUPLING	0		
	TOTAL	21 FT X	0.17	3.57
	SIZE QUANT DESCRIPTION	TOTAL EQUIV FT		52.4 P.S.I.
7	1" 18 90-DEG ELBOW	126		
1	1" 2 45-DEG ELBOW	2		
5	1" 10 TEE Bull Hd	50		
1	1" 4 TEE Flo Thru	4		
0	1" 0 CHECK VALVE	0		
1	1" 0 COUPLING	0		
	TOTAL	182 ft. X	0.1623	29.5
	SIZE QUANT DESCRIPTION	TOTAL EQUIV FT		22.9 P.S.I.
0	1-1/4" 0 90-DEG ELBOW	0		
0	1-1/4" 0 45-DEG ELBOW	0		
0	1-1/4" 0 TEE Branch	0		
0	1-1/4" 0 TEE Flo Thru	0		
0	1-1/4" 0 CHECK VALVE	0		
0	1-1/4" 0 VALVE	0		
	TOTAL	0 FT X	0.00	0.0
				22.9 P.S.I.

22.9 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE

14.5 P.S.I. Required

8.4 PSI Safety Margin for this Sprinkler design

**** Control valve to most demanding two heads on the first floor

DOMESTIC FIRE SUPPRESSION SYSTEM PRESSURE LOSS CALCULATIONS

Sprinkler Information

CONTRACTOR: Northwest Plumbing of Vancouver INC.
 JOB SITE: 4632 & 4636 & 4640 Kelly
 DATE: 1-Oct

Tyco Concealed Pendant Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient K = 4.2 GPM
 Temp. Rath 135 Deg F. cover plat 160 Deg F. head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

Multipurpose Fire Suppression System

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CALCULATION AT 32 GPM @ 14.5 PSI from most remote two sprinkler heads
 18 GPM @ 14.5 PSI from most demanding sprinkler head

	INDIVIDUAL LOSS	NET TOTAL
WATER PRESS AT METER 100PSI		100.0 P.S.I.
WATER PRESS AT PRESSURE REGULATOR 80PSI		
DEDUCT METER LOSS 3/4" SIZE	0.0	80.0 P.S.I.
DEDUCT LOSS FOR ELEVATION 39 FT X .434)	16.93	
1" SYSTEM CONTROL VALVE* 0 psi		
		63.1 P.S.I.

DEDUCT LOSS FROM CITY MAIN

0	PEX	0 FT			
0	COUPLING	0 FT			
0	ELBOWS	0 FT			
0	TEE Branch	0 FT			
0	TEE Run	0 FT			
0	TOTAL	0 FT X	0	0.0	63.1 P.S.I.
	DEDUCT LOSS FOR TUBING CONTROL VALVE TO MOST DEMANDING SPRINKLER(S)*			0.0	
	1" Blazemaster 91 X	0.1623	14.8	48.3 P.S.I.	
	3/4" Blazemaster 9 X	0.1724	1.6	46.7 P.S.I.	
	" Blazemaster 0 X	0	0.0	0.0 P.S.I.	

SIZE QUAN. DESCRIPTION TOTAL EQUIV FT

7	3/4"	2 90-DEG ELBOW	14		
0	3/4"	0 45-DEG ELBOW	0		
0	3/4"	0 TEE Bull Hd	0		
1	3/4"	1 TEE Flo Thru	1		
0	3/4"	0 CHECK VALVE	0		
0	3/4"	0 COUPLING	0		
	TOTAL	15 FT X	0.17	2.55	44.2 P.S.I.

SIZE QUANT DESCRIPTION TOTAL EQUIV FT

7	1"	6 90-DEG ELBOW	42		
1	1"	2 45-DEG ELBOW	2		
5	1"	3 TEE Bull Hd	15		
1	1"	10 TEE Flo Thru	10		
0	1"	0 CHECK VALVE	0		
1	1"	1 COUPLING	1		
	TOTAL	70 ft. X	0.1623	11.4	32.8 P.S.I.

0	1-1/4"	0 90-DEG ELBOW	0		
0	1-1/4"	0 45-DEG ELBOW	0		
0	1-1/4"	0 TEE Branch	0		
0	1-1/4"	0 TEE Flo Thru	0		
0	1-1/4"	0 CHECK VALVE	0		
0	1-1/4"	0 VALVE()	0		
	TOTAL	0 FT X	0.00	0.0	32.8 P.S.I.

32.8 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE

14.5 P.S.I. Required

18.3 PSI Salty Margin for this Sprinkler design

*** Control valve to most demanding two heads on the second floor

DOMESTIC FIRE SUPPRESSION SYSTEM PRESSURE LOSS CALCULATIONS

Sprinkler Information

CONTRACTOR: Northwest Plumbing of Vancouver INC.
 JOB SITE: 4632 & 4636 & 4640 Kelly
 DATE: 1-Oct

Tyco Concealed Pendent Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient $K = 4.2$ G.P.M.
 Temp. Rati 135 Deg F. cover plat 160 Deg F. head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

Multipurpose Fire Suppression System

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CALCULATION AT 32 GPM @ 14.5 P.S.I. from most remote two sprinkler heads
 18 GPM @ 14.5 P.S.I. from most demanding sprinkler head

INDIVIDUAL
LOSSNET
TOTAL

WATER PRESS AT METER 100PSI
 WATER PRESS AT PRESSURE REGULATOR 80PSI
 DEDUCT METER LOSS $3/4"$ (SIZE) 0.0
 DEDUCT LOSS FOR ELEVATION 48 FT X .434 20.63
 1" SYSTEM CONTROL VALVE 0 psi
 59.2 P.S.I.

DEDUCT LOSS FROM CITY MAIN

* PEX 0 FT
 0 COUPLING 0 FT
 0 ELBOWS 0 FT
 0 TEE Branch 0 FT
 0 TEE Run 0 FT
 TOTAL 0 FT X 0 0.0
 59.2 P.S.I.

DEDUCT LOSS FOR TUBING CONTROL

VALVE TO MOST DEMANDING SPRINKLER(S)
 1" Blazemaster 82 X 0.1623 13.3
 3/4" Blazemaster 13 X 0.1724 2.2
 * Blazemaster 0 X 0 0.0
 45.9 P.S.I.
 43.7 P.S.I.
 0.0 P.S.I.

SIZE	QUAN.	DESCRIPTION	TOTAL EQUIV FT
7	3/4"	3 90-DEG ELBOW	21
0	3/4"	0 45-DEG ELBOW	0
0	3/4"	0 TEE Bull Hd	0
1	3/4"	0 TEE Flo Thru	0
0	3/4"	0 CHECK VALVE	0
0	3/4"	0 COUPLING	0
TOTAL			21 FT X
			0.17 3.57
			40.1 P.S.I.

SIZE	QUANT	DESCRIPTION	TOTAL EQUIV FT
7	1"	4 90-DEG ELBOW	28
1	1"	2 45-DEG ELBOW	2
5	1"	1 TEE Bull Hd	5
1	1"	1 TEE Flo Thru	1
0	1"	0 CHECK VALVE	0
0	1"	0 COUPLING	0
TOTAL			36 ft. X
			0.1623 5.8
			34.3 P.S.I.

SIZE	QUANT	DESCRIPTION	TOTAL EQUIV FT
0	1-1/4"	0 90-DEG ELBOW	0
0	1-1/4"	0 45-DEG ELBOW	0
0	1-1/4"	0 TEE Branch	0
0	1-1/4"	0 TEE Flo Thru	0
0	1-1/4"	0 CHECK VALVE	0
0	1-1/4"	0 VALVE	0
TOTAL			0 FT X
			0.00 0.0
			34.3 P.S.I.

34.3 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE

14.5 P.S.I. Required

19.8 PSI Safety Margin for this Sprinkler design

*** Control valve to most demanding two heads on the third floor

DOMESTIC FIRE SUPPRESSION SYSTEM PRESSURE LOSS CALCULATIONS

Sprinkler Information

CONTRACTOR: Northwest Plumbing of Vancouver INC.

JOB SITE: 4628 & 4544 Kelly

DATE: 1-Oct

Multipurpose Fire Suppression System

Tyco Concealed Pendent Sprinkler
 Max working Pressure 175 P.S.I.
 Discharge Coefficient $K = 4.2$ GPM
 Temp. Rating 135 Deg F. cover plat 160 Deg F. head
 Selected Head Coverage
 16' X 16' 32 GPM at 14.5 P.S.I.

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CALCULATION AT 32 GPM @ 14.5 P.S.I. from most remote two sprinkler heads
 18 GPM @ 14.5 P.S.I. from most demanding sprinkler head

	INDIVIDUAL LOSS	NET TOTAL
WATER PRESS AT METER	100PSI	100.0 P.S.I.
WATER PRESS AT PRESSURE REGULATOR	80PSI	
DEDUCT METER LOSS	3/4" SIZE 11.0	89.0 P.S.I.
DEDUCT LOSS FOR ELEVATION	0 FT X .434) 0	
1" SYSTEM CONTROL VALVE*	0 psi	
		89.0 P.S.I.

DEDUCT LOSS FROM CITY MAIN

0	* PEX	0 FT			
0	0 COUPLING	0 FT			
0	0 ELBOWS	0 FT			
0	0 TEE Branch	0 FT			
0	0 TEE Run	0 FT			
	TOTAL	0 FT X 0	0.0		89.0 P.S.I.

DEDUCT LOSS FOR TUBING CONTROL

VALVE TO MOST DEMANDING SPRINKLER(S)*

	1" Type L soft copper	20	X	0.27	5.4	83.6 P.S.I.
	1 1/4" Blazemaster	9	X	0.05	0.5	83.1 P.S.I.
	* Blazemaster	0	X	0	0.0	83.1 P.S.I.

SIZE	QUANT.	DESCRIPTION	TOTAL EQUIV FT			
7	3/4"	0 90-DEG ELBOW	0			
0	3/4"	0 45-DEG ELBOW	0			
0	3/4"	0 TEE Bull Hd	0			
1	3/4"	0 TEE Flo Thru	0			
0	3/4"	0 CHECK VALVE	0			
0	3/4"	0 COUPLING	0			
	TOTAL	0 FT X	0.00	0.00		83.1 P.S.I.

SIZE	QUANT.	DESCRIPTION	TOTAL EQUIV FT			
7	1"	0 90-DEG ELBOW	0			
1	1"	0 45-DEG ELBOW	0			
5	1"	0 TEE Bull Hd	0			
1	1"	0 TEE Flo Thru	0			
0	1"	0 CHECK VALVE	0			
1	1"	0 COUPLING	0			
	TOTAL	0 ft. X	0	0.0		83.1 P.S.I.

SIZE	QUANT.	DESCRIPTION	TOTAL EQUIV FT			
8	1-1/4"	2 90-DEG ELBOW	16			
2	1-1/4"	2 45-DEG ELBOW	4			
0	1-1/4"	0 TEE Branch	0			
0	1-1/4"	0 TEE Flo Thru	0			
0	1-1/4"	0 CHECK VALVE	0			
0	1-1/4"	0 VALVE	0			
	TOTAL	20 FT X	0.05	1.0		82.1 P.S.I.

82.1 P.S.I. EXCEEDS DEMAND AND IS ACCEPTABLE

80.0 P.S.I. Required

2.1 PSI Safety Margin for this Sprinkler design

**** Water meter to Pressure regulator and control valve

**** Residual water pressure at control valve is 82.1 PSI, Pressure regulator will be set to 80 PSI

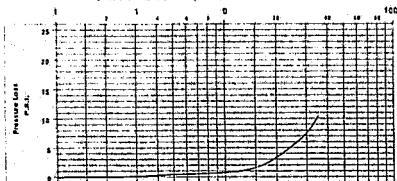
Automatic Meter Reading Systems

AMR

The Iron®, ORION® and TRACE® radio frequency systems easily integrate with all Recordall® Disc meters. All technologies provide an efficient meter data retrieval and information management system. The Iron 50W ERT®, ORION Transmitter and the TRACE Transponder all connect to the Recordall Transmitter Register (RTR®) assembly. Complete systems, including hardware and software, are available to provide a wide range of meter reading information.

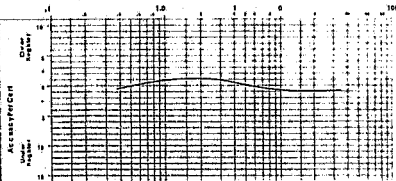
PRESSURE LOSS CHART

Rate of Flow, in Gallons per Minute



ACCURACY CHART

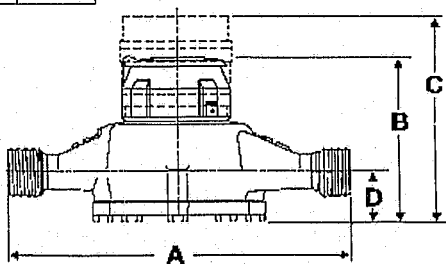
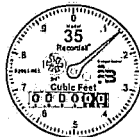
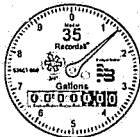
Rate of Flow, in Gallons per Minute



METER SIZE	METER MODEL	A LAYING LENGTH	B HEIGHT REG.	C HEIGHT GEN.	D CENTERLINE BASE	WIDTH	APPROX. SHIPPING WEIGHT
3/4" (20mm)	35	7 1/4" (190mm)	5 1/4" (133mm)	6 1/4" (168mm)	1 1/4" (41mm)	5" (127mm)	5 1/2 lb. (2.5kg)
1" (25mm)	35	9" (229mm)	5 1/4" (133mm)	6 1/4" (168mm)	1 1/4" (41mm)	5" (127mm)	5 1/2 lb. (2.5kg)
3/4" x 1" (20mm)	35	9" (229mm)	5 1/4" (133mm)	6 1/4" (168mm)	1 1/4" (41mm)	5" (127mm)	6 lb. (2.7kg)

Sweep Hand Registration

MODEL	GALLON	CU. FT.	CU. METER
M35	10	1	.1



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Series LFII Residential Concealed Pendent Sprinklers, Flat Plate 4.2 K-factor

General Description

The Series LFII (TY2596) Residential Concealed Pendent Sprinklers are decorative, fast response, fusible solder sprinklers designed for use in residential occupancies such as homes, apartments, dormitories, and hotels.

The cover plate assembly conceals the sprinkler operating components above the ceiling. The flat profile of the cover plate provides the optimum aesthetically appealing sprinkler design. In addition, the concealed design of the Series LFII (TY2596) provides 1/2 inch (12.7 mm) vertical adjustment. This adjustment reduces the accuracy to which the fixed pipe drops to the sprinklers must be cut to help assure a correct fit installation.

The Series LFII are to be used in wet pipe residential sprinkler systems for one- and two-family dwellings and mobile homes per NFPA 13D; wet pipe residential sprinkler systems for residential occupancies up to and including four stories in height per NFPA 13R; or, wet pipe sprinkler systems for the residential portions of any occupancy per NFPA 13.

The Series LFII (TY2596) has a 4.2 (60.5) K-factor that provides the required residential flow rates at reduced pressures, enabling smaller pipe sizes and water supply requirements.

The Series LFII (TY2596) has been designed with heat sensitivity and water distribution characteristics proven to help in the control of residential fires and to improve the chance for occupants to escape or be evacuated.

The Series LFII (TY2596) Residential Concealed Pendent Sprinklers are shipped with a Disposable Protective Cap. The Protective Cap is temporarily removed for installation, and then it can be replaced to help protect the sprinkler while the ceiling is being in-

stalled or finished. The tip of the Protective Cap can also be used to mark the center of the ceiling hole into plaster board, ceiling tiles, etc. by gently pushing the ceiling product against the Protective Cap. When the ceiling installation is complete the Protective Cap is removed and the Cover Plate Assembly installed.

WARNINGS

The Series LFII (TY2596) Residential Concealed Pendent Sprinklers described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the integrity of these devices.

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted relative to any questions.

Sprinkler/Model Identification Number

SINTY2596

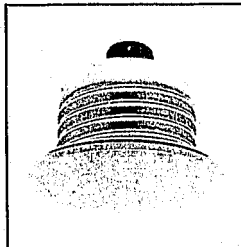
Technical Data

Approvals:
UL and C-UL Listed.

Maximum Working Pressure:
175 psi (12.1 bar)

Discharge Coefficient:
K = 4.2 GPM/psi^{1/2} (60.5 LPM/bar^{1/2})

Temperature Rating:
160°F/71°C Sprinkler with
135°F/57°C Cover Plate



Vertical Adjustment:
1/2 inch (12.7 mm)

Finishes:
Cover Plate:
Flat White, Bright White, Chrome, or
Custom

Physical Characteristics:

Body	Brass
Cap	Bronze
Saddle	Brass
Sealing Assembly	Beryllium Nickel w/ Teflon [†]
Soldered Link Halves	Nickel
Lever	Bronze
Compression Sorew	Brass
Deflector	Copper
Guide Pin Housing	Bronze
Guide Pins	Stainless Steel
Support Cup	Steel
Cover Plate	Copper
Retainer	Brass
Cover Plate Ejection Spring	Stainless Steel

[†]DuPont Registered Trademark

Maximum Coverage Area (A) Fl. x Ft. (m x m)	Maximum Spacing Fl. (m)	Minimum Flow (B) and Residual Pressure For Horizontal Ceiling (Max. 2 Inch Rise for 12 Inch Run)	Minimum Flow (B) and Residual Pressure For Sloped Ceiling (Greater Than 2 Inch Rise Up To Max. 4 Inch Rise for 12 Inch Run)	Minimum Flow (B) and Residual Pressure For Sloped Ceiling (Greater Than 4 Inch Rise Up To Max. 8 Inch Rise for 12 Inch Run)
		160°F/71°C Sprinkler	160°F/71°C Sprinkler	160°F/71°C Sprinkler
12 x 12 (3,7 x 3,7)	12 (3,7)	13 GPM (49,2 LPM) 9,6 psi (0,66 bar)	18 GPM (68,1 LPM) 18,4 psi (1,27 bar)	18 GPM (68,1 LPM) 18,4 psi (1,27 bar)
14 x 14 (4,3 x 4,3)	14 (4,3)	14 GPM (53,0 LPM) 11,1 psi (0,77 bar)	18 GPM (68,1 LPM) 18,4 psi (1,27 bar)	18 GPM (68,1 LPM) 18,4 psi (1,27 bar)
16 x 16 (4,9 x 4,9)	16 (4,9)	16 GPM (60,6 LPM) 14,5 psi (1,00 bar)	18 GPM (68,1 LPM) 18,4 psi (1,27 bar)	18 GPM (68,1 LPM) 18,4 psi (1,27 bar)
18 x 18 (5,5 x 5,5)	18 (5,5)	20 GPM (75,7 LPM) 22,7 psi (1,57 bar)	20 GPM (75,7 LPM) 22,7 psi (1,57 bar)	N/A
20 x 20 (6,1 x 6,1)	20 (6,1)	24 GPM (90,8 LPM) 32,7 psi (2,25 bar)	26 GPM (98,4 LPM) 38,3 psi (2,64 bar)	N/A

(a) For coverage area dimensions less than or between those indicated, it is necessary to use the minimum required flow for the next highest coverage area for which hydraulic design criteria are stated.

(b) Requirement is based on minimum flow in GPM (LPM) from each sprinkler. The associated residual pressures are calculated using the nominal K-factor. Refer to Hydraulic Design Criteria for details.

TABLE A
NFPA 13D AND NFPA 13R HYDRAULIC DESIGN CRITERIA
FOR THE SERIES LFLI (TY2596) RESIDENTIAL CONCEALED PENDENT SPRINKLER

Operation

When exposed to heat from a fire, the Cover Plate, which is normally soldered to the Support Cup at three points, falls away to expose the Sprinkler Assembly. At this point the Deflector supported by the Arms drops down to its operated position. The fusible link of the Sprinkler Assembly is comprised of two link halves that are soldered together with a thin layer of solder. When the rated temperature is reached, the solder melts and the two link halves separate allowing the sprinkler to activate and flow water.

Design Criteria

The Series LFLI (TY2596) Residential Concealed Pendent Sprinklers are UL and C-UL Listed for installation in accordance with the following criteria.

NOTE

When conditions exist that are outside the scope of the provided criteria, refer to the Residential Sprinkler Design Guide TFP490 for the manufacturer's recommendations that may be acceptable to the Authority Having Jurisdiction.

System Type. Only wet pipe systems may be utilized.

Hydraulic Design. The minimum required sprinkler flow rate for systems designed to NFPA 13D or NFPA 13R are given in Table A as a function of temperature rating and the maximum allowable coverage areas. The sprinkler flow rate is the minimum required discharge from each of the total number of "design sprinklers" as specified in NFPA 13D or NFPA 13R.

For systems designed to NFPA 13, the number of design sprinklers is to be the four most hydraulically demanding sprinklers. The minimum required discharge from each of the four sprinklers is to be the greater of the following:

- The flow rates given in Table A for NFPA 13D and 13R as a function of temperature rating and the maximum allowable coverage area.
- A minimum discharge of 0.1 gpm/sq. ft. over the "design area" comprised of the four most hydraulically demanding sprinklers for the actual coverage areas being protected by the four sprinklers.

Obstruction To Water Distribution. Locations of sprinklers are to be in accordance with the obstruction rules of NFPA 13 for residential sprinklers.

Operational Sensitivity. The sprinklers

are to be installed relative to the ceiling mounting surface as shown in Figure 3.

Sprinkler Spacing. The minimum spacing between sprinklers is 8 feet (2,4 m). The maximum spacing between sprinklers cannot exceed the length of the coverage area (Ref. Table A) being hydraulically calculated (e.g., maximum 12 feet for a 12 ft. x 12 ft. coverage area, or 20 feet for a 20 ft. x 20 ft. coverage area).

Installation

The Series LFLI (TY2596) must be installed in accordance with the following instructions:

NOTES

Damage to the fusible Link Assembly during installation can be avoided by handling the sprinkler by the frame arms only (i.e., do not apply pressure to the fusible link Assembly).

A leak tight 1/2 inch NPT sprinkler joint should be obtained with a torque of 7 to 14 ft.lbs. (9,5 to 19,0 Nm). A maximum of 21 ft.lbs. (28,5 Nm) of torque is to be used to install sprinklers. Higher levels of torque may distort the sprinkler inlet with consequent leakage or impairment of the sprinkler.

Do not attempt to compensate for insufficient adjustment in an Escutcheon

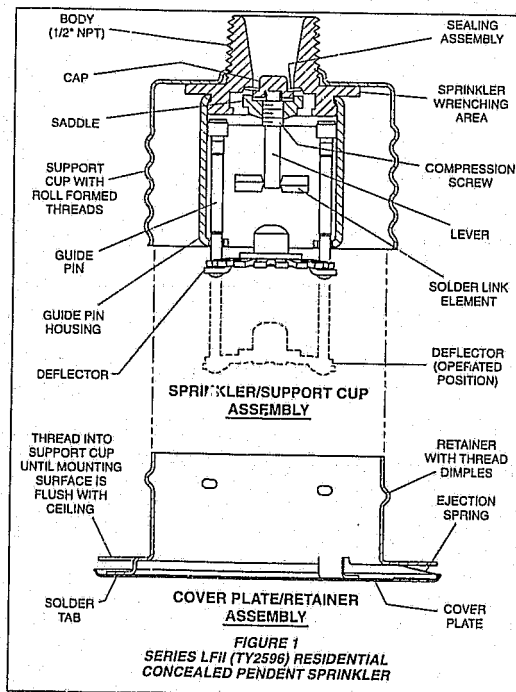


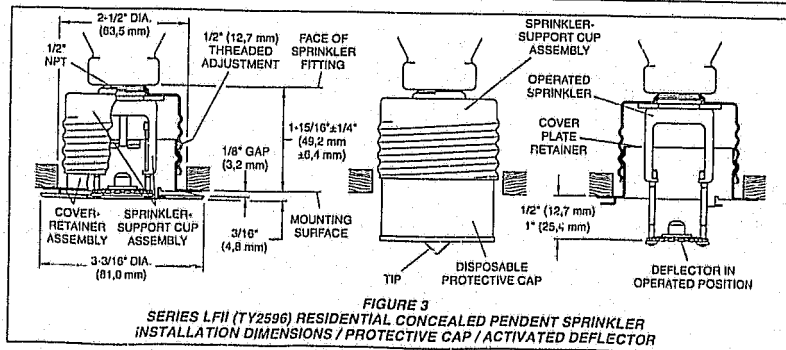
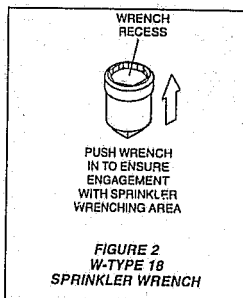
Plate by under- or over-tightening the Sprinkler. Readjust the position of the sprinkler fitting to suit.

Step 1. The sprinkler must only be installed in the pendent position and with the centerline of the sprinkler perpendicular to the mounting surface.

Step 2. Remove the Protective Cap.

Step 3. With pipe thread sealant applied to the pipe threads, and using the W-Type 18 Wrench shown in Figure 2, install and tighten the Sprinkler/Support Cup Assembly into the fitting. The W-Type 18 Wrench will accept a 1/2 inch ratchet drive.

Step 4. Replace the Protective Cap by pushing it upwards until it bottoms out against the Support Cup. The Protective Cap helps prevent damage to the Deflector and Arms during ceiling installation and/or during application of the finish coating of the ceiling. It may also be used to locate the center of the



clearance hole by gently pushing the ceiling material against the center point of the Cap.

NOTE

As long as the protective Cap remains in place, the system is considered to be "Out Of Service".

Step 5. After the ceiling has been completed with the 2-1/2 inch (63 mm) diameter clearance hole and in preparation for installing the Cover Plate Assembly, remove and discard the Protective Cap, and verify that the Deflector moves up and down freely.

If the Sprinkler has been damaged and the Deflector does not move up and down freely, replace the entire Sprinkler assembly. Do not attempt to modify or repair a damaged sprinkler.

Step 6. Screw on the Cover Plate Assembly until its flange comes in contact with the ceiling.

Do not continue to screw on the Cover Plate Assembly such that it lifts a ceiling panel out of its normal position.

If the Cover Plate Assembly cannot be engaged with the Mounting Cup or the Cover Plate Assembly cannot be engaged sufficiently to contact the ceiling, the Sprinkler Fitting must be repositioned.

Care and Maintenance

The Series LFI (TY2596) must be maintained and serviced in accordance with the following instructions:

NOTES

Absence of an Escutcheon Plate may delay the sprinkler operation in a fire situation.

Before closing a fire protection system main control valve for maintenance work on the fire protection system which it controls, permission to shut down the affected fire protection system must be obtained from the proper authorities and all personnel who may be affected by this action must be notified.

Sprinklers which are found to be leaking or exhibiting visible signs of corrosion must be replaced.

Automatic sprinklers must never be painted, plated, coated, or otherwise altered after leaving the factory. Modified or over heated sprinklers must be replaced.

Care must be exercised to avoid damage - before, during, and after installation. Sprinklers damaged by drop-

ping, striking, wrench twist/slippage, or the like, must be replaced.

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any other authorities having jurisdiction. The installing contractor or sprinkler manufacturer should be contacted relative to any questions.

NOTE

The owner must assure that the sprinklers are not used for hanging of any objects and that the sprinklers are only cleaned by means of gently dusting with a feather duster; otherwise, non-operation in the event of a fire or inadvertent operation may result.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified inspection Service.

Limited Warranty

Products manufactured by Tyco Fire Products are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

IN NO EVENT SHALL TYCO FIRE PRODUCTS BE LIABLE, IN CONTRACT, TORT, STRICT LIABILITY OR

UNDER ANY OTHER LEGAL THEORY, FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LABOR CHARGES, REGARDLESS OF WHETHER TYCO FIRE PRODUCTS WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT SHALL TYCO FIRE PRODUCTS LIABILITY EXCEED AN AMOUNT EQUAL TO THE SALES PRICE.

THE FOREGOING WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Ordering Procedure

When placing an order, indicate the full product name. Contact your local distributor for availability.

Sprinkler Assembly:

Series LFI (TY2596), K=4.2, Residential Concealed Pendent Sprinkler without Cover Plate Assembly, P/N 51-122-1-160.

Cover Plate Assembly:

Cover Plate Assembly having a (specify) finish for the Series LFI (TY2596), K=4.2, Residential Concealed Pendent Sprinkler, P/N (specify).

Chrome	P/N 56-122-9-135
Oil White	P/N 56-122-0-135
Bright White	P/N 56-122-4-135
Flat White	P/N 56-122-5-135
Custom	P/N 56-122-X-135

Sprinkler Wrench:

Specify: W-Type 18 Sprinkler Wrench, P/N 56-000-1-265.