

# CALAROGA INVERTED SIPHON & INTERCEPTOR SEWER IMPROVEMENT

## CITY PROJECT NO. PW 0408

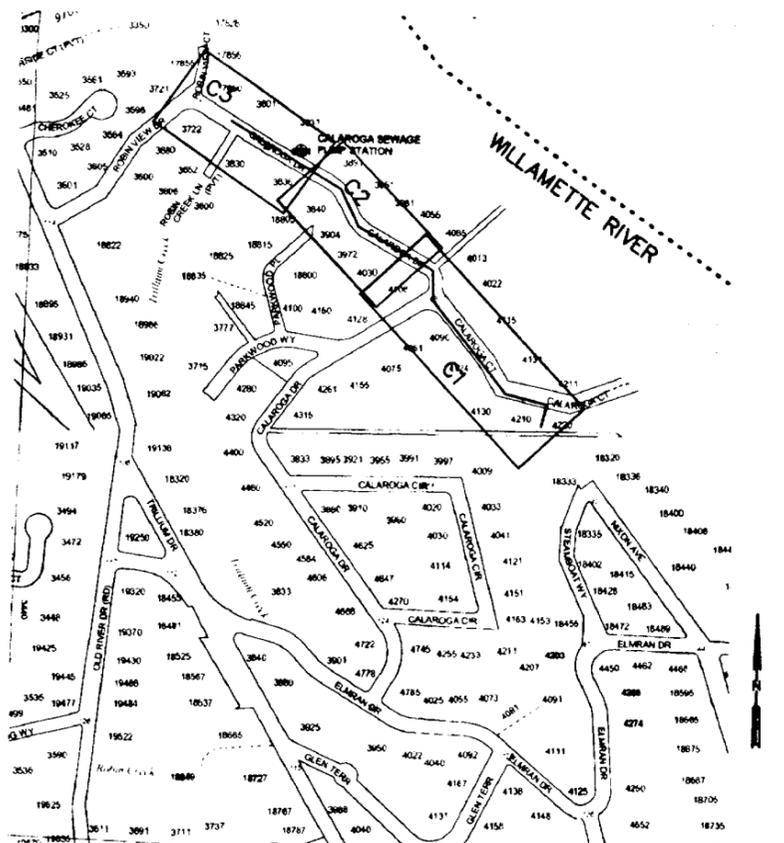
### PROJECT CONTACTS

CITY PROJECT MANAGER

KELLI GROVER, PE  
(503) 722-5503

CITY MAINTENANCE SUPERVISOR

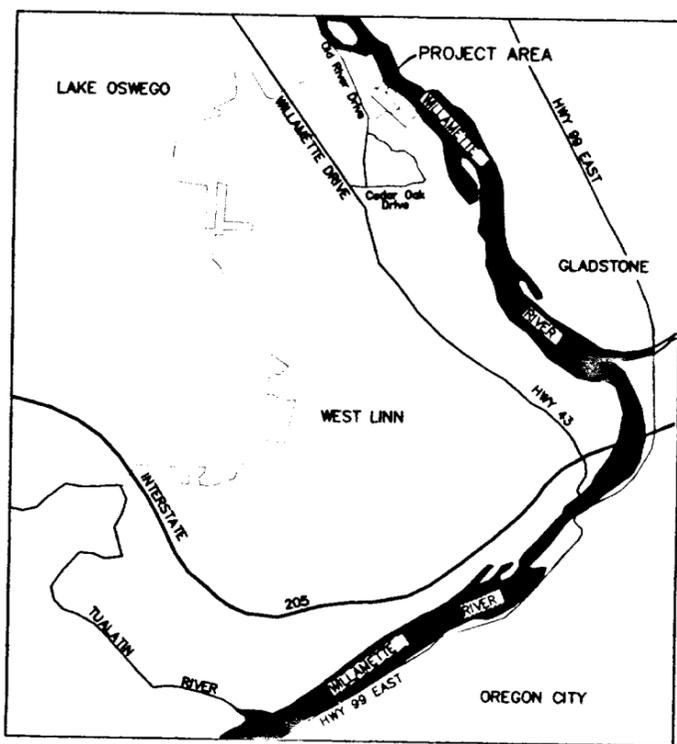
MIKE CARDWELL  
(503) 656-6081



LOCATION MAP

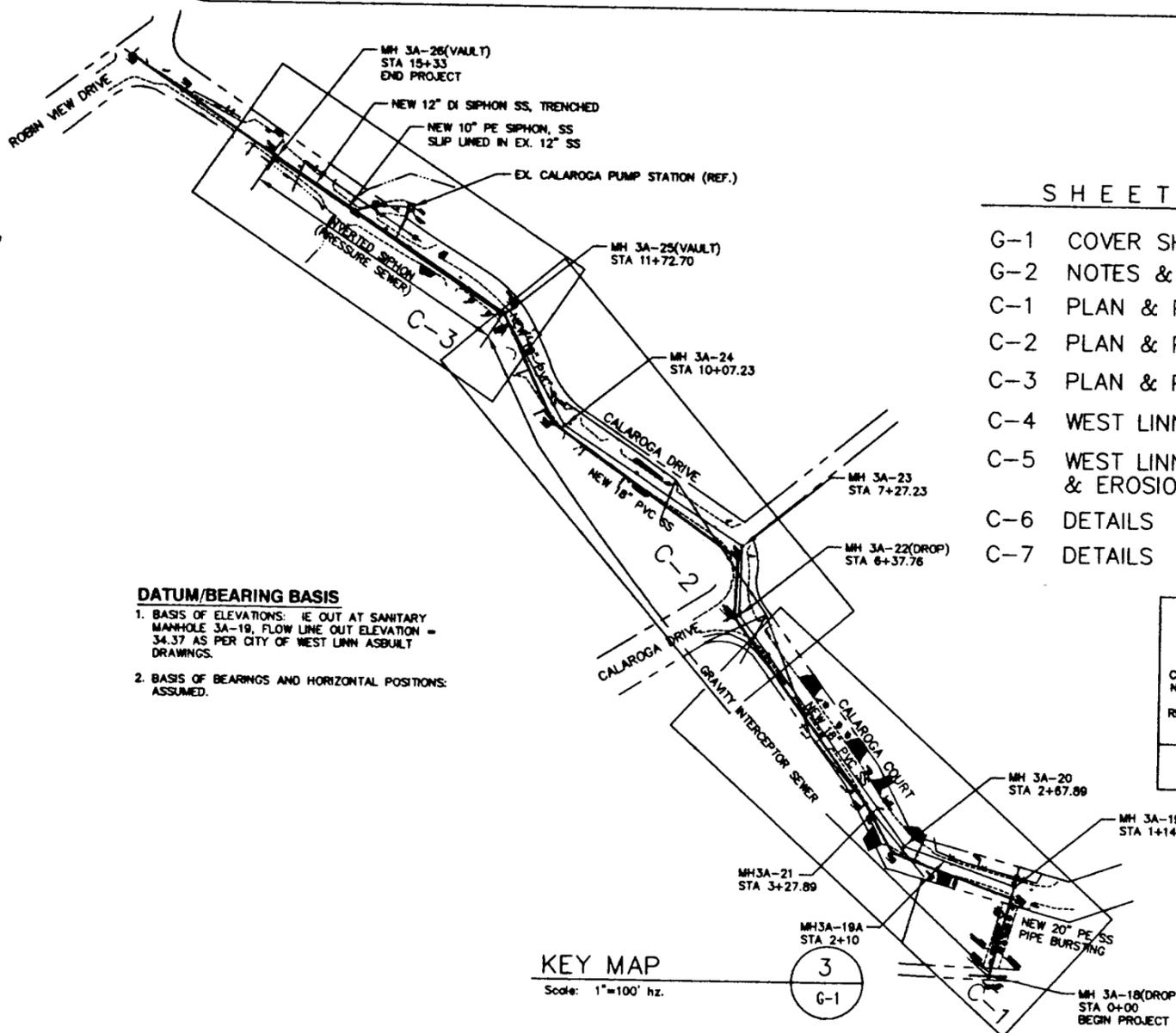
Scale: 1"=300' hz.

Source: City of West Linn website



VICINITY MAP

Scale: 1"=3000' hz.



KEY MAP

Scale: 1"=100' hz.

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#### RECORD DRAWING

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION SUBMITTED BY OTHERS. THEY INTEND TO REPRESENT REVISIONS BASED ON CONSTRUCTION RECORDS. DRAKE & ASSOCIATES HAS NOT VERIFIED THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

REVISION DATE: NOVEMBER 2004  
PREPARED BY: DRAKE & ASSOCIATES

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CITY OF WEST LINN  
Section 13, Township 2 S., R 1 E, W.M.  
Oregon  
Clackamas County  
CALAROGA INVERTED SIPHON & INTERCEPTOR SEWER IMPROVEMENT  
CITY PROJECT NO. PW 0408

REV.	DATE	BY

PROJECT NO.  
1000 - 1 & 2  
DATE 4/26/04  
DESIGNED G. Drake  
CADD G. Haffner  
CHECKED G. Drake  
SHEET TITLE  
COVER SHEET  
SHEET NUMBER  
G-1

WARNING  
0 1/2 1  
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

GENERAL NOTES

- ALL NEW IMPROVEMENTS SHALL BE IN ACCORDANCE WITH CITY OF WEST LINN PUBLIC WORKS STANDARDS, MAY 22, 2000, UNLESS NOTED OTHERWISE BY THESE PLANS OR OTHER CONTRACT DOCUMENTS.
- SCREENED (LIGHT) ITEMS ON THE DRAWINGS INDICATES EXISTING FACILITIES BASED ON THE BEST AVAILABLE INFORMATION. BOLD (DARK) ITEMS INDICATE NEW IMPROVEMENTS OR WORK AS NOTED.
- TOPOGRAPHIC SURVEYS AND MAPPING WERE DEVELOPED BY COMPASS ENGINEERING AND SURVEYING, MILWAUKEE, OREGON.
- BEFORE EXCAVATING FOR THIS CONTRACT, CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND FACILITIES AND COORDINATE HIS WORK WITH THE UTILITY COMPANY REPRESENTATIVE (CALL MIN. 48 HOURS PRIOR TO EXCAVATION PER ORS 757.541 TO 757.571). THE EXISTENCE AND LOCATION OF ANY UNDERGROUND FACILITY, PIPES, OR STRUCTURES SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM AVAILABLE RECORDS, AND FIELD SURVEYS AND MAY NOT REFLECT ALL EXISTING UTILITIES. THIS INFORMATION IS NOT GUARANTEED TO BE COMPLETE OR ACCURATE. LOCATIONS OF ALL EXISTING UTILITIES SHALL BE CONFIRMED BY FIELD MEASUREMENTS BY CONTRACTOR PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR SHALL KEEP EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
 

UTILITY NOTIFICATION CENTER	(503) 248-5699
UTILITY ONE LOCATES	(503) 248-6699
CITY OF WEST LINN PUBLIC WORKS (SEWER & WATER)	(503) 858-6081
US WEST (TELEPHONE)	(800) 340-6342
NW NATURAL GAS	(800) 523-7661
PGE (ELECTRIC)	(800) 544-1793
COMCAST (CABLE TV)	(888) 824-8284
- CONTRACTOR SHALL MAKE TIMELY EXPLORATORY EXCAVATIONS AND LOCATE MAJOR EXISTING UNDERGROUND FACILITIES AHEAD OF CONSTRUCTION. OWNER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING MAJOR UNDERGROUND FACILITIES.
- HORIZONTAL LOCATION OF NEW IMPROVEMENTS SHALL BE BASED ON DIMENSIONS TO PHYSICAL FEATURES (EX MANHOLES, EX SEWERS, EDGE OF PAVEMENT, ETC). DIMENSIONS REFER TO CENTER OF MANHOLE, PIPELINE, STRUCTURES OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE. LENGTH OF NEW PIPELINES IS ASSUMED TO BE CENTER OF MANHOLE/VAULT TO CENTER OF MANHOLE/VAULT MEASURED HORIZONTALLY.
- NEITHER THE OWNER, ENGINEER, OR THEIR FIELD REPRESENTATIVES WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS LAWS AND REGULATIONS.
- RIGHT OF WAY AND PROPERTY LINES SHOWN ARE APPROXIMATE. NO BOUNDARY SURVEYS HAVE BEEN COMPLETED.
- PAVEMENT RESTORATION REQUIREMENTS ARE ESTIMATED BASED ON ANTICIPATED CONSTRUCTION ACTIVITIES AND EXISTING FIELD CONDITIONS. FINAL REQUIREMENTS MAY VARY AND WILL BE DETERMINED BY THE OWNER FOLLOWING TRENCHING OPERATIONS. STRIPING, REFLECTORS AND OTHER MARKINGS THAT ARE DISTURBED WILL BE RESTORED.
- CONTRACTOR SHALL MAINTAIN LOCAL ACCESS FOR RESIDENTS AND FOR EMERGENCY VEHICLES AS MUCH AS POSSIBLE AT ALL TIMES. NOTICE TO AFFECTED PROPERTIES SHALL BE TIMELY AND CURRENT. COORDINATE DAILY CONSTRUCTION OPERATIONS & TEMPORARY STREET RESTRICTIONS WITH POLICE, FIRE, AMBULANCE, SCHOOL BUS, AND OTHER AFFECTED STREET USERS.
- APPROXIMATE LOCATION OF EASEMENTS ARE SHOWN ON THE PLANS. REFER TO SPECIFICATIONS FOR DOCUMENTATION OF EASEMENTS BY REFERENCE NUMBER.
- REFER TO CITY OF WEST LINN "AS-BUILT" DRAWINGS, APRIL 1971, ROBINWOOD SANITARY SEWER SYSTEM, ROBINWOOD INTERCEPTOR (COPY IN SPECIFICATIONS).

RESTORATION NOTES

- RESTORATION REQUIREMENTS ARE INTENDED TO CONVEY GENERAL EXTENT AND TYPE ANTICIPATED AT TIME OF BIDDING. OWNER RESERVES THE RIGHT TO DETERMINE ACTUAL EXTENT AND TYPE OF FINAL SURFACE RESTORATION FOLLOWING CONSTRUCTION OF SEWER PIPELINES. CONTRACTOR WILL CLEAN ROADWAYS AND OWNER WILL IDENTIFY FINAL SURFACE RESTORATION NEEDS.
- OTHER SURFACE RESTORATION SUCH AS BUT NOT LIMITED TO CRUSHED ROCK, LANDSCAPE, CEMENT CONCRETE, MAY BE IDENTIFIED AND REQUIRED BY OWNER.

RESTORATION REQUIREMENTS	
STA 0+00 TO 0±15	LANDSCAPE RESTORATION
STA 0±15 TO 1±00	NO SURFACE DISTURBANCE ALLOWED
STA 1±00 TO 6±25	ACP STREET REPLACEMENT
STA 6±25 TO 15+40	ACP STREET T-CUT

EROSION CONTROL NOTES

- THE IMPLEMENTATION OF EROSION CONTROL MEASURES (ECM) IS REQUIRED BY THE CONTRACTOR. INSTALLATION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF ECM IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO CONSTRUCTION ACTIVITIES THAT DISTURBS SURFACES AND CONTINUING UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE OWNER AND VEGETATION/PAVING IS RE-ESTABLISHED.
- THE ECM SHOWN ON THESE PLANS MUST BE INSTALLED, MAINTAINED, REPLACED, AND UPGRADED IN SUCH A MANNER TO INSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, STREAMS, CREEKS, ROADWAYS AND PRIVATE PROPERTY.
- THE ECM SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. THE CONTRACTOR SHALL ADAPT AND UPGRADE THE ECM BASED ON HIS CONSTRUCTION OPERATION AND WEATHER CONDITIONS.
- THE ECM SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED OR UPGRADED AS NEEDED TO INSURE THAT SEDIMENT-LADEN WATER IS INTERCEPTED AND CONTROLLED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- ECM SHALL BE REMOVED FROM THE PROJECT AREA BY THE CONTRACTOR AFTER PAVING AND VEGETATION IS RE-ESTABLISHED.
- EROSION PREVENTION AND SEDIMENT CONTROL, PLANNING AND DESIGN MANUAL, DECEMBER 2000, BY CITY OF WEST LINN, WATER ENVIRONMENT SERVICES AND UNIFIED SEWERAGE AGENCY (NOW CLEAN WATER SERVICES) IS REFERENCED STANDARD FOR EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. STANDARD DETAIL DRAWINGS FROM THIS MANUAL ARE INCLUDED IN THIS PLAN SET FOR REFERENCE.

EXISTING LEGEND

	WATER LINE		GAS VALVE
	GAS LINE		MAILBOX
	SANITARY SEWER LINE		POWER POLE
	STORM SEWER LINE		POWER POLE ANCHOR
	UNDERGROUND POWER LINE		LIGHT POLE
	OVERHEAD POWER LINE		SANITARY SEWER MANHOLE
	UNDERGROUND PHONE LINE		STORM SEWER MANHOLE
	ELEVATION CONTOUR		CATCH BASIN
	EDGE OF EXISTING ACP ROADWAY		SIGN
	CONCRETE		TREE, CONIFEROUS
			TREE, DECIDUOUS
			WATER METER
			FIRE HYDRANT
			WATER VALVE

PROPOSED LEGEND

	CONSTRUCTION NOTES
	MANHOLE
	VAULT
	SEWER PIPE, TRENCHING
	SEWER PIPE, BURSTING
	SEWER PIPE, SLIP LINING
	RELOCATED GAS (BY OTHERS)
	SEDIMENT FENCE
	WATTLE OR BIO-FILTER BAG
	VALVE
	PERMANENT EASEMENT
	TEMPORARY EASEMENT
	EASEMENT REFERENCE

ABBREVIATIONS

ACP	ASPHALT CONCRETE PAVEMENT	NE	NORTHEAST
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CMP	CORRUGATED METAL PIPE	OH	OVERHEAD
CLR	CLEAR	PP	POWER POLE
CONC.	CONCRETE	PS	PUMP STATION
CT	COURT	PSI	POUNDS PER SQUARE INCH
DI	DUCTILE IRON	PT	POINT
DIA	DIAMETER	PVC	POLYVINYL CHLORIDE
DR	DRIVE	PE	POLYETHYLENE
DWG.	DRAWING	RT	RIGHT
E	EAST	S	SLOPE, SOUTH
ECM	EROSION CONTROL MEASURE	SAN	SANITARY
EXIST/EX.	EXISTING	SS	SANITARY SEWER
EL/ELEV	ELEVATION	SSL	SANITARY SEWER LATERAL
FM	FORCE MAIN	ST	STORM DRAIN
G	GAS PIPE	STA	STATION
GRAV.	GRAVITY	STD.	STANDARD
HZ	HORIZONTAL	SW	SOUTHWEST
ID	INSIDE DIAMETER	TL	TAX LOT
IE	INVERT ELEVATION	UGP	UNDERGROUND POWER
LF	LINEAR FOOT	UGT	UNDERGROUND TELEPHONE
LT	LEFT	UNO	UNLESS NOTED OTHERWISE
MAX	MAXIMUM	VT	VERTICAL
MIN.	MINIMUM	W	WATER MAIN, WEST
MH	MANHOLE	WL	WATER LINE
N	NORTH	%	PERCENT

DESIGN BASIS

<b>CURRENT FLOWS</b>	<ul style="list-style-type: none"> <li>PEAK ≈ 3.0 CUBIC FEET PER SECOND (CFS)</li> <li>AVERAGE DRY WEATHER ≈ 0.3 CFS</li> </ul>
<b>FUTURE FLOWS</b>	<ul style="list-style-type: none"> <li>PEAK (INVERTED SIPHON) ≈ 4.6 CFS</li> <li>PEAK (GRAVITY INTERCEPTOR) ≈ 4.8 CFS</li> <li>AVERAGE DRY WEATHER ≈ 0.5 CFS</li> </ul>
<b>INVERTED SIPHON SEGMENT PRIMARY DESIGN CRITERIA</b>	<ul style="list-style-type: none"> <li>PEAK FLOW - 4.6 CFS MIN.</li> <li>MEAN VELOCITY - 3.0 FEET PER SECOND (MIN.)</li> <li>TWO PIPE ARRANGEMENT</li> <li>INLET CONTROL MANHOLE</li> <li>PIPE COEFFICIENT "n" = 0.013</li> </ul>
<b>GRAVITY INTERCEPTOR SEGMENT PRIMARY DESIGN CRITERIA</b>	<ul style="list-style-type: none"> <li>PEAK FLOW - 4.8 CFS MIN. AT 70% FULL</li> <li>MEAN VELOCITY - 2.5 FEET PER SECOND (MIN.)</li> <li>PIPE COEFFICIENT "n" = 0.013</li> <li>DEPTH - SUFFICIENT TO RECONNECT EXISTING SEWER LATERALS</li> </ul>
<b>REFERENCES</b>	<ul style="list-style-type: none"> <li>CITY OF WEST LINN SANITARY SEWER MASTER PLAN UPDATE, DEC. 20, 1999</li> <li>CALAROGA PREDESIGN EVALUATION, DEC. 2003</li> <li>CITY OF WEST LINN PUBLIC WORKS STANDARDS, SANITARY SEWER REQUIREMENTS, MAY 22, 2000</li> </ul>

DRAKE & ASSOCIATES, LLC



Tigard Oregon 97223  
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Section 13, Township 2 S., R 1 E, W.M.  
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