

## **RESOLUTION NO. 1807**

### **A RESOLUTION CONSENTING TO IMPROVEMENTS AND SUBLETTING OF SPACE AT RESERVOIR #2 LEASED TO SPRINT**

#### **THE TROUTDALE CITY COUNCIL FINDS AS FOLLOWS:**

1. The City entered into a lease agreement ("Agreement") for placement of cell phone antenna on Water Reservoir #2 and for placement of related communications equipment within 450 square feet of that reservoir site located at 24451 Stark Street. The Agreement was with Sprint Spectrum L.P. ("Sprint").
2. The Agreement was approved by the City Council via Resolution No. 1232 on March 26, 1996, with an initial Commencement Date of April 25, 1996. The terms of the Agreement called for an initial term of five (5) years and an automatic renewal term of five (5) years which expired on April 24, 2006.
3. Sprint asked to amend the Agreement to provide for two additional renewal periods of five (5) years, and the City Council approved the amendment via Resolution No. 1789 on January 10, 2006.
4. Sprint is now affiliated with Nextel West Corp ("Nextel") and desires to modify the antenna, add communications equipment for Nextel within its 450 square feet of leased space, and sublet a portion of that space to Nextel. The Agreement requires Sprint to obtain the City's written consent for improvements and for subletting, "which consent will not be unreasonably withheld, delayed, or conditioned".

#### **NOW THEREFORE BE IT RESOLVED BY THE COUNCIL OF THE CITY OF TROUTDALE**

Section 1. The City Council approves and the Mayor is authorized to sign the Landlord's Consent form, attached hereto and made a part hereof, consenting to Sprint's upgrade and sublet of space to Nextel.

Section 2. This resolution is effective immediately upon adoption.

**YEAS: 6**  
**NAYS: 0**  
**ABSTAINED: 0**

*Paul A. Thalhoffer*  
Paul A. Thalhoffer, Mayor

*May 12, 2006*  
Date

*Debbie Stickney*  
Debbie Stickney, City Recorder

Adopted: May 9, 2006

**Sprint**



Together with NEXTEL

**Sprint Nextel**

10545 Willows Rd NE, Suite 100

Redmond, WA 98052

Office: (425) 278-7400

March 29, 2006

Paul Thalhofer  
Mayor  
Troutdale City Hall  
104 SE Kibling Ave.  
Troutdale, OR 97060-2099

**RE: Request for Consent**

Dear Mayor Thalhofer:

On April 25, 1996, the City of Troutdale ("Lessor") and Sprint Spectrum L.P. ("Lessee") entered into that certain PCS Site Agreement ("Lease") for 450 square feet of land and antenna space on the water tank Reservoir #2 located at 24451 SE Stark, Troutdale, OR 97060.

In an effort to improve Lessee's overall wireless coverage in the greater Portland Area, all of Lessee's communication facilities are currently being upgraded to provide Lessee's customers with improved wireless service. Lessee intends to upgrade its Communication Facilities at the City of Troutdale's water tank Reservoir #2 as part of this larger system-wide upgrade and expansion. Thus, Lessee hereby requests Lessor's consent to sublet space within the Site to Lessee's affiliate Nextel West Corp. ("Nextel") and the right to modify and upgrade its equipment and antennas within the Site. According to Section 5 of the Lease, Lessee has the right to sublet space within the Site upon Lessor's written consent, which "will not be unreasonably withheld, delayed or conditioned." According to Section 7 of the Lease, Lessee has the reasonable right to upgrade and replaced equipment within the Site upon Lessor's written consent, which "will not be unreasonably withheld, delayed, or conditioned." The construction plans showing the upgrade and replacement of Lessee's equipment within the Site are attached to this letter for your review and approval.

Please acknowledge your consent to the construction plans and Lessee's sublet of space to Nextel by signing where indicated below and where indicated on the construction plans and returning this original letter and the signed construction plans back to me. I appreciate the time you and your staff have taken on this site upgrade. If you have any questions or would like any additional information, please feel free to contact me at 503.944.9704.

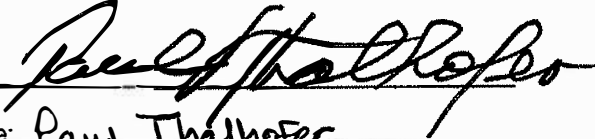
Sincerely,

A handwritten signature in black ink, appearing to read "Alan Cagle".

Alan Cagle  
Site Development Manager

**LANDLORD'S CONSENT**

The City of Troutdale hereby consents to Sprint Spectrum LP's plans to upgrade and replace its equipment on the Site in accordance with the attached drawings dated March 10, 2006. In addition, the City of Troutdale hereby consents to Sprint Spectrum LP's sublet of space within the Site to Sprint Spectrum LP's affiliate, Nextel West Corp.

By: 

Name: Paul Thalhofer

Title: Mayor

Date: May 12, 2006



**GENERAL NOTES**

1. THE FACILITY IS AN UNOCCUPIED SPECIALIZED MOBILE RADIO FACILITY
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
4. THE CONTRACTOR SHALL RECEIVE, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK.
5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES, OR REGULATIONS TAKE PRECEDENCE.
6. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
7. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE PROJECT MANAGER AND WITH LANDLORD'S AUTHORIZED REPRESENTATIVE.
8. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL PROVIDE SITE FOREMAN WITH A CELLULAR PHONE AND PAGER, AND KEEP SAME ON SITE WHENEVER ANY PERSONNEL ARE ON SITE.
10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, GALVANIZED SURFACES, ETC., AND UPON COMPLETION OF WORK, REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF THE PROJECT MANAGER AND/OR LANDLORD.
12. ON A DAILY BASIS, KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
13. CONTRACTOR TO PROVIDE COMPLETE SET OF AS-BUILT DRAWINGS WITHIN 7 WORKING DAYS OF PROJECT COMPLETION.
14. WHERE A CONSTRUCTION DETAIL IS NOT SHOWN OR NOTED, THE DETAIL SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
15. ASTM SPECIFICATIONS NOTED ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE PROSECUTION OF THIS WORK.
17. ALL ITEMS REMOVED OR DAMAGED DURING CONSTRUCTION WORK SHALL BE REPLACED OR REPAIRED TO MATCH EXISTING.

**SPECIAL INSPECTIONS SPECIFICATIONS:**

1. THE REQUIRED SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT SPECIAL INSPECTOR PER SECTION 1703 2004 OREGON SPECIALTY CODE (OSSC) FOR THE FOLLOWING ITEMS:
2. THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THEIR REPORT TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR AND BUILDING OFFICIAL AS EACH TEST IS COMPLETED.
3. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. SPECIAL INSPECTOR TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
4. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS FOR THE MATERIAL USED IF THE CONSTRUCTION TOOK PLACE ON SITE. CONTINUOUS INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.

THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT CERTIFYING THAT ALL WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PERMIT PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS.

**SITE NOTES:**

**SITE WORK:**

1. USE APPROVED MATERIAL FROM FOUNDATION EXCAVATION TO FILL AND GRADE SITE WITH CROWN AS INDICATED. COMPACT TO 95%.
2. GRADE SITE WITH CROWN FROM SHELTER. SLOPE TO ALL EDGES OF SITE PERIMETER AT 2.5%.
3. EXCAVATE MINIMUM NECESSARY TO GRUB SITE, REMOVE SOD, ROOTS, AND ALL UNSUITABLE SOIL FROM PROJECT.
4. FINISH SITE WITH 4" OF 3/4" MINUS WITH NO FINES, OVER 4" OF 1 1/2" MINUS CRUSHED ROCK, APPLY OVER GEOTEXTILE, COMPACT TO 98% MAX DENSITY PER ASTM D1557. TREAT GRAVELED SITE WITH APPROVED WEED STERILIZER.
5. MIRAFI BRAND GEOTEXTILE FABRIC OVER COMPACTED SUBGRADE UNDER ALL NEW GRANULAR SURFACES.
6. WHERE NECESSARY DUE TO SOIL SITE CONDITIONS, REMOVE UNSUITABLE MATERIAL AND REPLACE WITH 4-6" LIFTS OF 4" MINUS CRUSHED ROCK COMPACTED TO 95% REVIEW WITH PROJECT MANAGER PRIOR TO PROCEEDING WITH WORK.
7. SLAB BASE: 3/4" MINUS CRUSHED ROCK COMPACTED TO 92% MODIFIED PROCTOR MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557 OR ASTM T-180.

**CONCRETE:**

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301-318-95 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO A 158 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
  - A. CONCRETE CAST AGAINST EARTH..... 3 IN.
  - B. CONCRETE EXPOSED TO EARTH OR WEATHER:
    - #6 AND LARGER..... 2 IN.
    - #5 AND SMALLER & W/F..... 1-1/2 IN.
  - C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
    - SLAB AND WALL..... 3/4 IN.
    - BEAMS AND COLUMNS..... 1-1/2 IN.
5. TOOL OR CHAMFER SIZE AS INDICATED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4
6. INSTALL CONCRETE ANCHORS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN STRUCTURAL CONCRETE SLABS.

**LEGEND**

**SYMBOLS**

	DETAIL REFERENCE	ROOM NAME [0000]	ROOM NAME ROOM NUMBER
	BUILDING SECTION	0'-0" A.F.F.	HEIGHT MARKER
	WALL SECTION	[0000]	FINISH SPOT GRADE
	EXTERIOR ELEVATION	[0000]	EXISTING SPOT GRADE
	GRID LINE	[000]	DOOR NUMBER
	MATCH LINE	[000]	WINDOW TYPE
	WORK POINT	[000]	KEY NOTE
	INTERIOR ELEVATION	[000]	WALL TYPE
		[000]	EQUIPMENT TYPE
		[000]	REVISION

**LINE TYPES**

	NEW WORK	SS --- SS	SANITARY SEWER
	DEMOLITION WORK	SD --- SD	STORM SEWER
	CENTERLINE	CL --- CL	FLOOR DRAIN
	PROPERTY / LEASE LINE	PL --- PL	ROOF DRAIN
	BREAK LINE	BL --- BL	GAS
	EXISTING CONTOUR	ES --- ES	WATER
	NEW CONTOUR	NS --- NS	HOT WATER
	EXISTING CHAIN LINK FENCE	EL --- EL	COLD WATER
	EXISTING WOOD FENCE	EW --- EW	ANTENNA COAX CABLE
	CHAIN LINK FENCE	CL --- CL	GROUND
	POWER	P --- P	GENERATOR
	TELCO	T --- T	ELECTRICAL CONDUIT
	POWER & TELCO	PT --- PT	CONDUIT
	OVERHEAD POWER	OP --- OP	
	OVERHEAD TELCO	OT --- OT	
	OVERHEAD	O --- O	

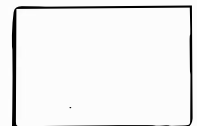
**STRUCTURAL STEEL:**

1. ALL METAL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATION GALVANIZED ASTM A36 UNLESS NOTED OTHERWISE.
2. STRUCTURAL TUBING MEMBERS SHALL CONFORM TO ASTM A500, GRADE A OR A501.
3. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM 307 BOLTS

Sprint  
10545 WILLOWS ROAD NE  
SUITE 100  
REDMOND, WA 98052



NO.	DATE	DESCRIPTION
1	02/13/05	2D REVIEW
2	03/10/05	2D FINAL
3	04/05/05	CD REVIEW



11x17 SETS ARE 50% REDUCTIONS

SITE NAME

**MOUNTAIN VIEW**

SITE NUMBER

**OR0234-C**

SITE ADDRESS

**24451 SE STARK AVE.  
TROUTDALE, OR 97060**

SHEET TITLE

**GENERAL NOTES  
AND LEGENDS**

SHEET NUMBER

**T-2.0**

OR0234-C 00-1006 1





NO.	DATE	DESCRIPTION
1	02/13/05	20 REVIEW
2	03/10/05	20 FINAL
3	04/29/06	05 REVIEW

GAZLEY  
 PLOUSMAN  
 ARCHITECTS  
 200 W. Long  
 Portland, OR 97201  
 503.222.2000

11217 SITES ARE 50% REDUCTIONS

SITE NAME  
**MOUNTAIN VIEW**

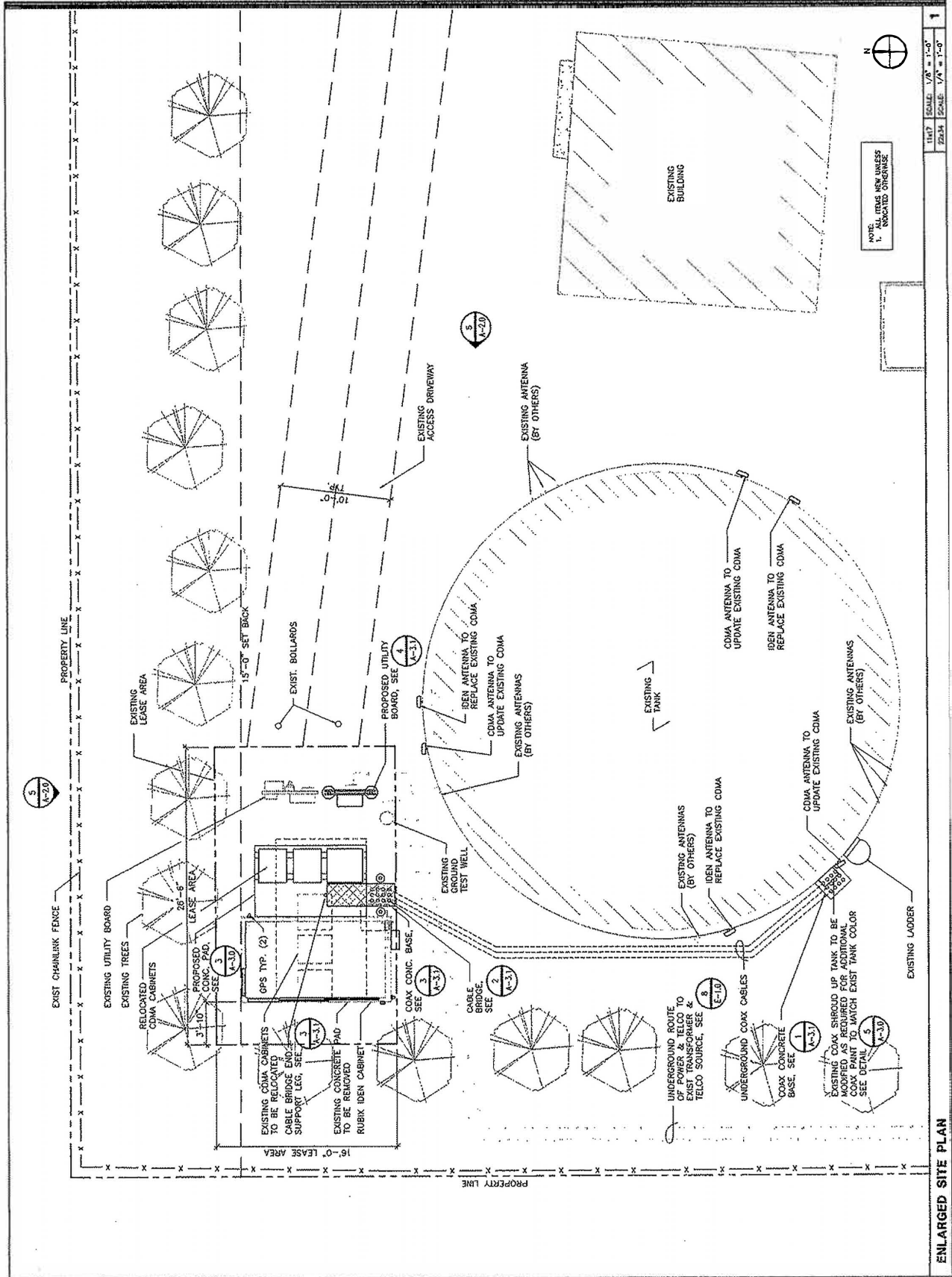
SITE NUMBER  
**OR0234-C**

SITE ADDRESS  
**24451 SE STARK AVE  
 TROUTDALE, OR 97060**

SHEET TITLE  
**ENLARGED  
 SITE PLAN**

SHEET NUMBER  
**A-1.1**

DATE  
 09-08-06



NOTE: UTILITY AND WELLS INDICATED OTHERWISE



NO.	DATE	DESCRIPTION
1	02/19/08	2D REVIEW
2	03/10/08	2D FINAL
3	04/23/08	CD REVIEW

GAZLEY  
FLOWLAND  
ARCHITECTS  
2700 15th Avenue  
Seattle, WA 98108  
206.461.1000  
www.gazley.com

31471 SDRS ABE SIX REDUCTIONS  
SITE NAME

**MOUNTAIN VIEW**

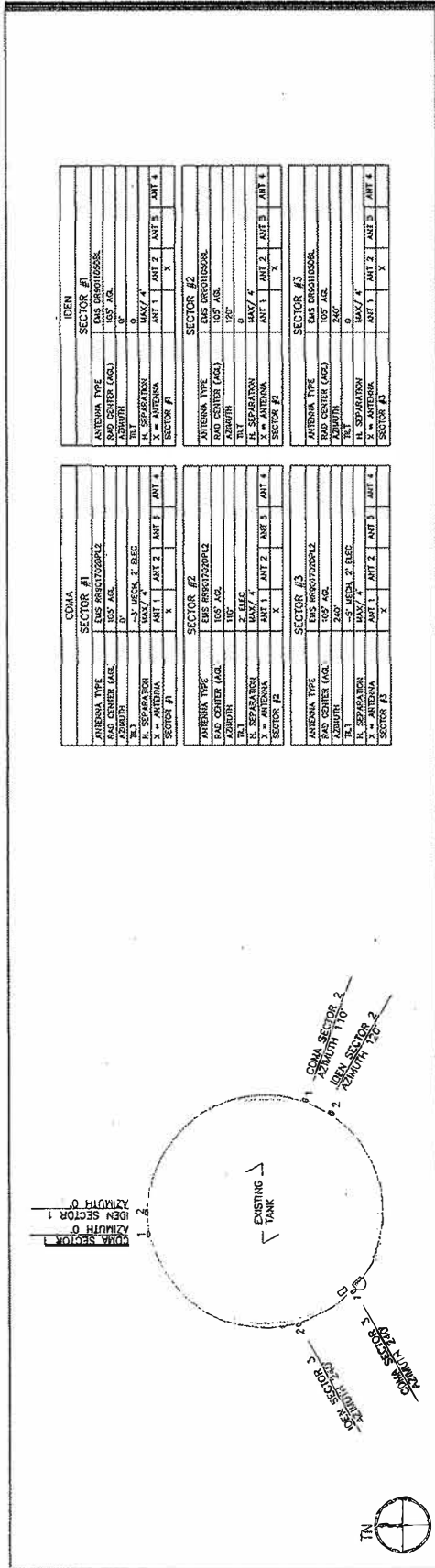
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**OR0234-C**

SITE ADDRESS  
**24451 SE STARK AVE  
TROUTDALE, OR 97060**

SHEET TITLE  
**ELEVATIONS**

SHEET NUMBER  
**A-2.0**

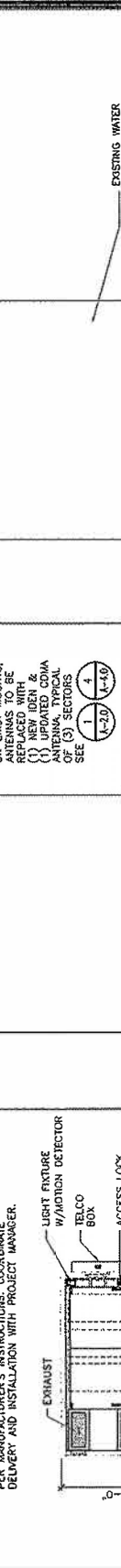
DATE  
04/23/08



ANTENNA CONFIGURATION

PREFABRICATED CABINET NOTES  
1. CABINET TO BE DELIVERED TO SITE BY MANUFACTURER GENERAL CONTRACTOR TO INSTALL AND INSTALLATION WITH PROJECT MANAGER.  
2. SEAL ALL PENETRATIONS AND CONNECTIONS TO EXTERIOR OF CABINET WITH UV RATED SEALANT.  
3. EXHAUST LIGHT EXHAUST W/MOTION DETECTOR TELCO BOX ACCESS LOCK SLIDING DOORS CONDENSER INTAKE FINISHED GRADE

SECTOR #	ANTENNA TYPE	SECTOR #	ANTENNA TYPE
1	CDMA	1	CDMA
2	CDMA	2	CDMA
3	CDMA	3	CDMA
4	CDMA	4	CDMA



WEST CABINET ELEV. SOUTH CABINET ELEV.

EXISTING LADDER EXISTING WATER TANK EXISTING UTILITY BOARD EXISTING LANDSCAPING

TOP OF TANK 462'-0" AMSL ANTENNA RAD CENTER 458'-6" AMSL

NOTE: 1. THE FOREGROUND FENCE AND TREES ARE NOT SHOWN FOR CLARITY. 2. ALL ITEMS ARE NEW UNLESS INDICATED OTHERWISE.

SCALE: 1"=10'-0" SCALE: 1"=10'-0"

1 2 3 4 5



NO.	DATE	DESCRIPTION
1	02/12/06	TO REXON
2	03/09/06	TO PNL
3	04/05/06	TO REXON
4		

**GAZLEY FLOWMAN ARCHITECTS**  
 2100 1st Ave. S.W.  
 Seattle, WA 98148  
 206.461.1000



1147 SSTS ARG 809 REDUCTIONS  
 SITE NAME

**MOUNTAIN VIEW**

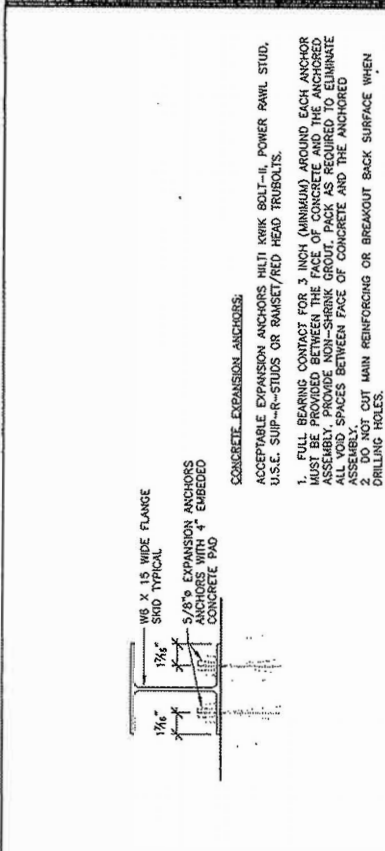
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**ORO234-C**

SHEET ADDRESS  
**24451 SE STARK AVE.  
 TROUTDALE, OR 97080**

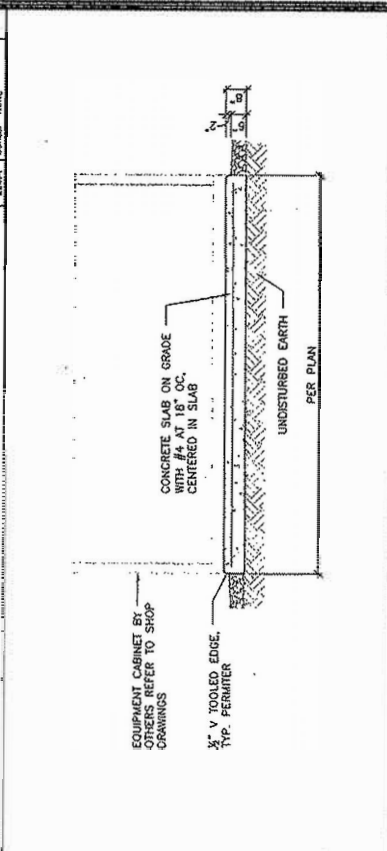
SHEET TITLE  
**CONSTRUCTION  
 DETAILS**

SHEET NUMBER  
**A-3.0**

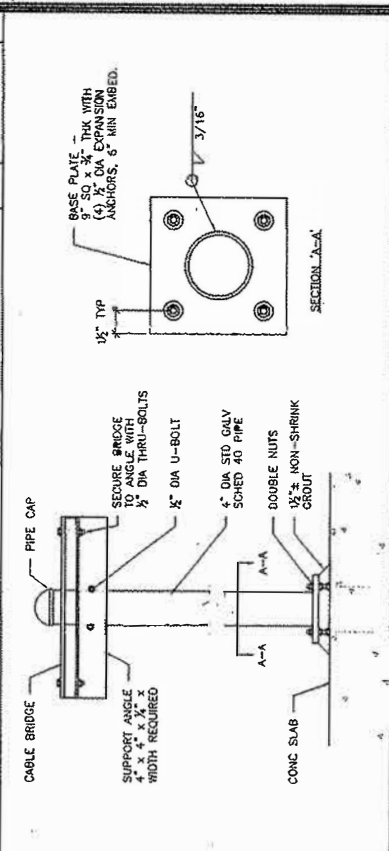
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 SPA JOB # 02-005



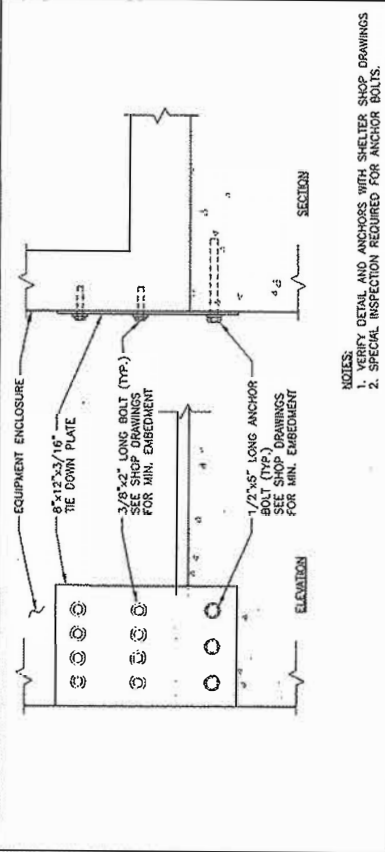
**CDMA EQUIPMENT SKID BOLTING**



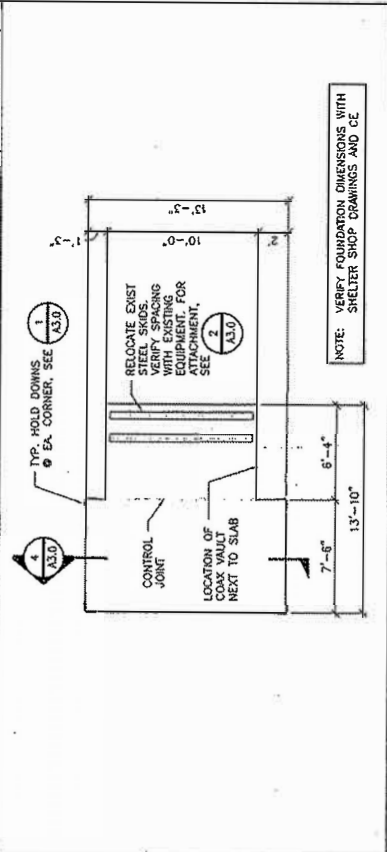
**FOUNDATION SECTION**



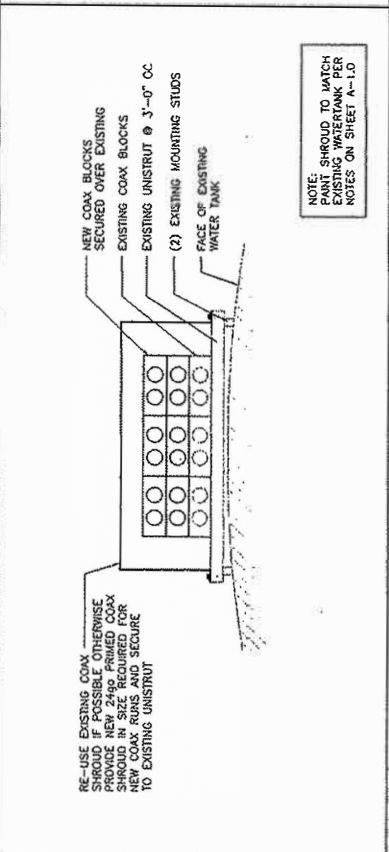
**CABLE BRIDGE SUPPORT LEG**



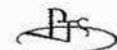
**RUBIX CABINET TIE DOWN**



**FOUNDATION PLAN**



**NOT USED**



PACIFIC TELECOM



REVISIONS		
NO.	DATE	DESCRIPTION
1	02/13/06	ZB REVIEW
2	03/16/06	ZD FINAL
3	04/05/06	CD REVIEW

GAZLEY FLOWMAN ARCHITECTS  
207 N. 1st Ave.  
Portland, OR 97201  
503.251.2000  
503.251.2000



11x17 SETS ARE 50% REDUCTIONS

SITE NAME

MOUNTAIN VIEW

SITE NUMBER

OR0234-C

SITE ADDRESS

24451 SE STARK AVE.  
TROUTDALE, OR 97060

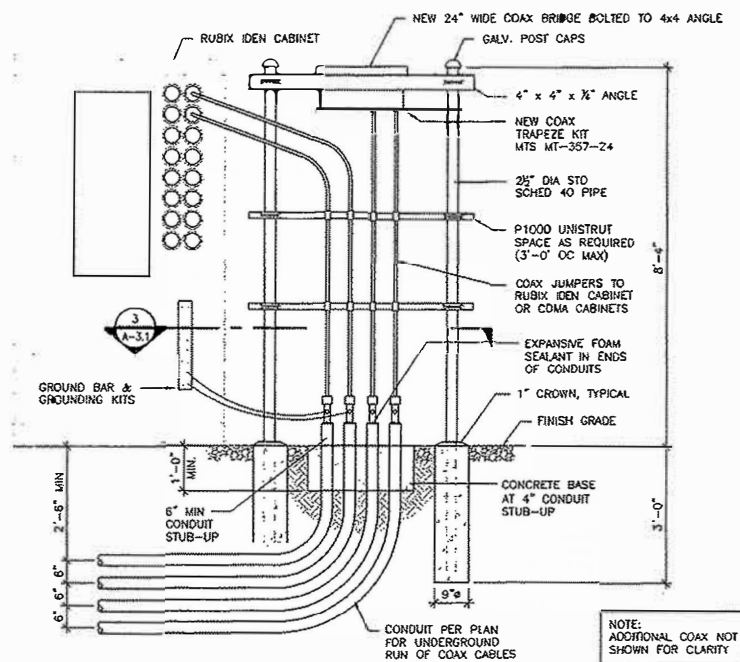
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CONSTRUCTION  
DETAILS

SHEET NUMBER

A-3.1

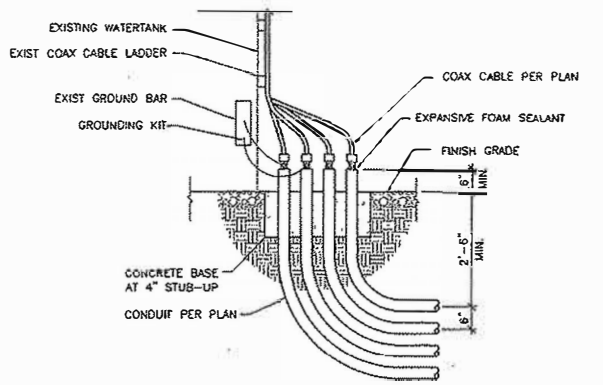
CPA JOB # 06-006



NOTE:  
ADDITIONAL COAX NOT  
SHOWN FOR CLARITY

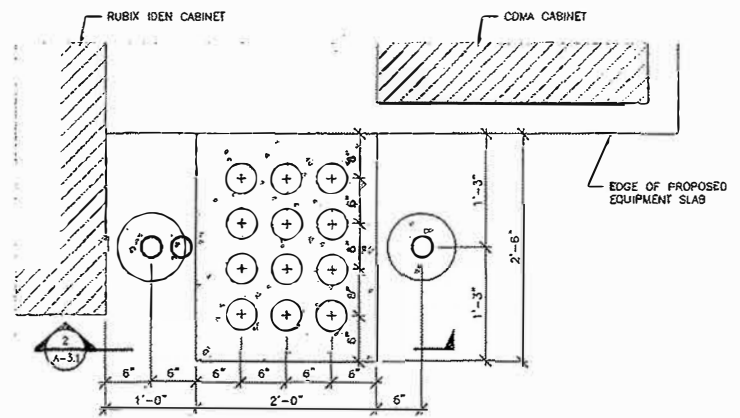
1 UNDERGROUND CONDUIT AT SHELTER

11x17	SCALE: 3/8" = 1'-0"	2
22x34	SCALE: 3/4" = 1'-0"	



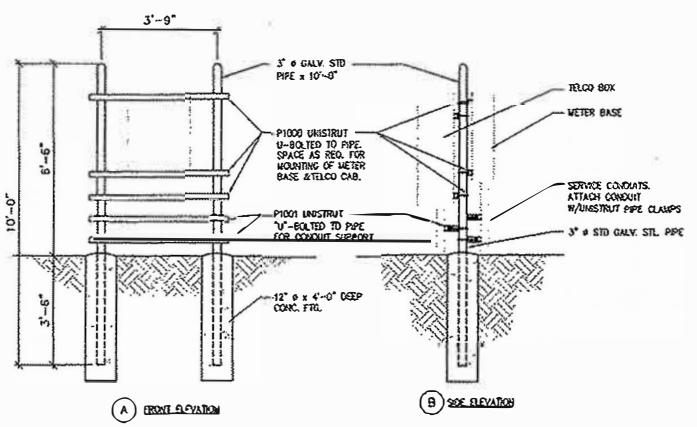
2 UNDERGROUND CONDUIT AT TANK

11x17	SCALE: 3/8" = 1'-0"	1
22x34	SCALE: 3/4" = 1'-0"	



3 CONCRETE BASE

11x17	SCALE: 3/4" = 1'-0"	3
22x34	SCALE: 1 1/2" = 1'-0"	



4 UTILITY BACKBOARD

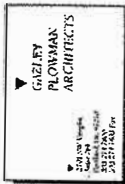
11x17	SCALE: NONE	4
22x34	SCALE: NONE	







NO.	DATE	DESCRIPTION
1	04/25/08	ISSUE FOR REVIEW
2		
3		
4		
5		



1117 SE STARK AVE SWY RESTRICTIONS

SITE NAME  
**MOUNTAIN VIEW**

SITE NUMBER  
**OR0234-C**

SITE ADDRESS  
**24451 SE STARK AVE.  
 TROUTDALE, OR 97060**

SHEET TITLE  
**GROUNDING PLAN  
 AND DETAILS**

SHEET NUMBER  
**E-2.0**

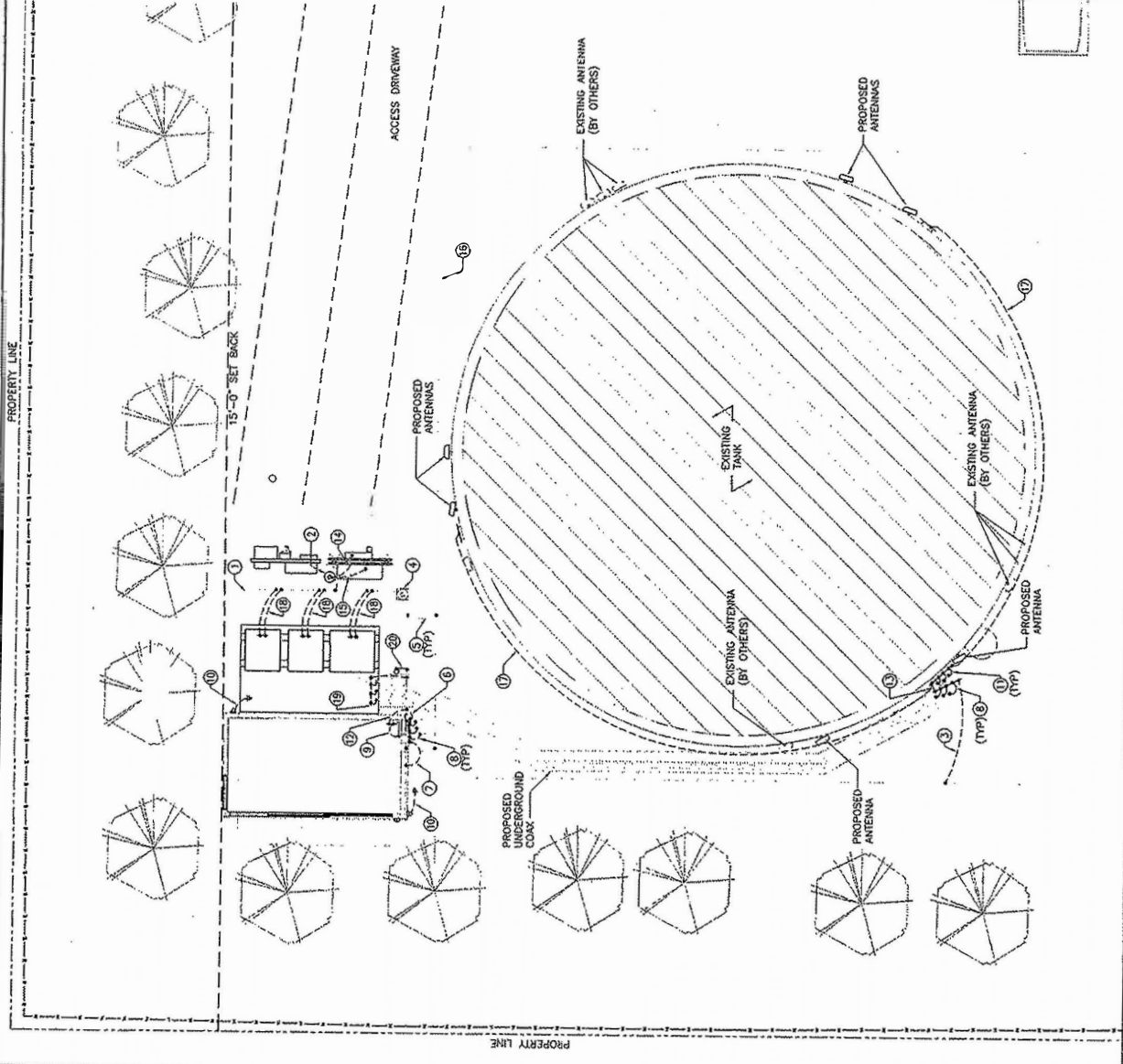
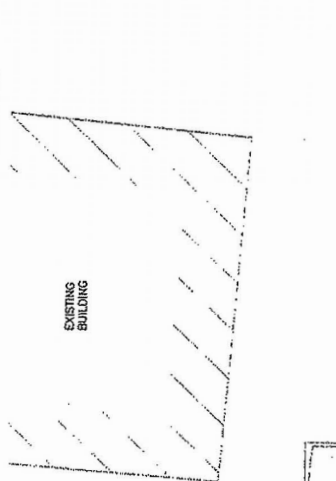
DATE  
 06-08-08

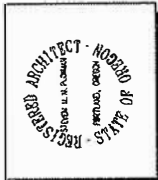
**GROUNDING PLAN - KEYED NOTES**

- 1 EXISTING EQUIPMENT PERIMETER GROUND RING. FIELD VERIFY.
- 2 GROUND ROD. 3/4" x 10'-0"
- 3 CONNECT COAX TANK/BASE GROUND BUS TO EXISTING TOWER GROUND RING. SEE DTLS 4/E-2.1 & 3/E3.0.
- 4 EXISTING GROUND TEST WELL.
- 5 EXISTING EQUIPMENT GROUND RING CONNECTION TO EXISTING TANK GROUND RING IN 2 LOCATIONS.
- 6 CONNECT ENTRY PORT PLATE TO EXTERIOR COAX ENTRY BUS. SEE DTLS 4/E-2.1 & 3/E3.0.
- 7 CONNECT EXTERIOR COAX ENTRY BUS TO EXISTING GROUND RING. USE 1" NON-METALLIC CONDUIT. SEE DTLS 4/E-2.1 & 3/E3.0.
- 8 CONNECT COAX GROUNDING KITS TO EXTERIOR COAX ENTRY BUS AND COAX TANK/BASE GROUND BUS. SEE DTLS 4/E-2.1 & 3/E3.0.
- 9 GROUND AT POLYPHASE PROVIDED WITH SHELTER (#6 AWG, GREEN); SEE DTLS 6/E-2.1 & 3/E3.0.
- 10 CONNECT GPS ANTENNAS TO THE EXTERIOR COAX ENTRY BUS. SEE DTLS 4/E-2.1 & 3/E3.0.
- 11 CONNECT COAX ANTENNA GROUND BUS TO COAX TANK/TOP GROUND BUS. SEE DTLS 4/E-2.1 & 3/E3.0.
- 12 CONNECT INTERIOR GROUND BUS PROVIDED WITH SHELTER TO EXISTING GROUND RING. SEE DTLS 4/E-2.1 & 3/E3.0.
- 13 CONNECT COAX TANK/TOP GROUND BUS TO COAX TANK/BASE GROUND BUS. SEE DTLS 4/E-2.1 & 3/E3.0.
- 14 CONNECT METERBASE/MAIN DISCONNECT TO GROUND ROD AND THEN TO EXISTING GROUND RING.
- 15 CONNECT TELCO GROUND BUS TO GROUND ROD AND THEN TO EXISTING GROUND RING.
- 16 EXISTING TANK TOWER GROUND RING. FIELD VERIFY.
- 17 CONNECT COAX ANTENNA GROUND BUS TO COAX TANK/TOP GROUND BUS. SEE DTLS 4/E2.1 & 3/E3.0.
- 18 GROUND EXISTING LUCCENT EQUIPMENT TO EXISTING GROUND RING USING INHIBITED CU. LEADS AND CONNECT TO EXISTING GROUND RING.
- 19 REMOVE EXISTING COAX GROUND BAR. MOUNT TO CONCRETE PAD WITH POLYPHASE PROVIDED WITH SHELTER. COAX TANK/TOP GROUND BUS TO EXISTING GROUND RING. OTHERWISE PROVIDE NEW CONNECTION TO NEW GROUND RING. EACH LEG OF CABLE BROKE TO EXISTING GROUND RING. (TYPICAL AT EACH LEG) SEE DTLS 3/E3.0.

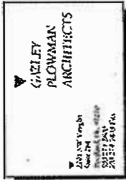
ALL GROUNDING WIRES TO BE #2 AWG SOLID BARE TINNED COPPER UNLESS NOTED OTHERWISE

- LEGEND**
- ⊗ GROUND TESTWELL
  - ⊙ GROUND ROD
  - CONNECTION POINT





NO.	DATE	DESCRIPTION	WORK TO REVIEW
1	04/24/06		
2			
3			



1117 SETS ARE 50% REDUCTIONS

SITE NAME

**MOUNTAIN VIEW**

SITE NUMBER

**OR0234-C**

SITE ADDRESS

**24451 SE STARK AVE.  
 TROUTDALE, OR 97060**

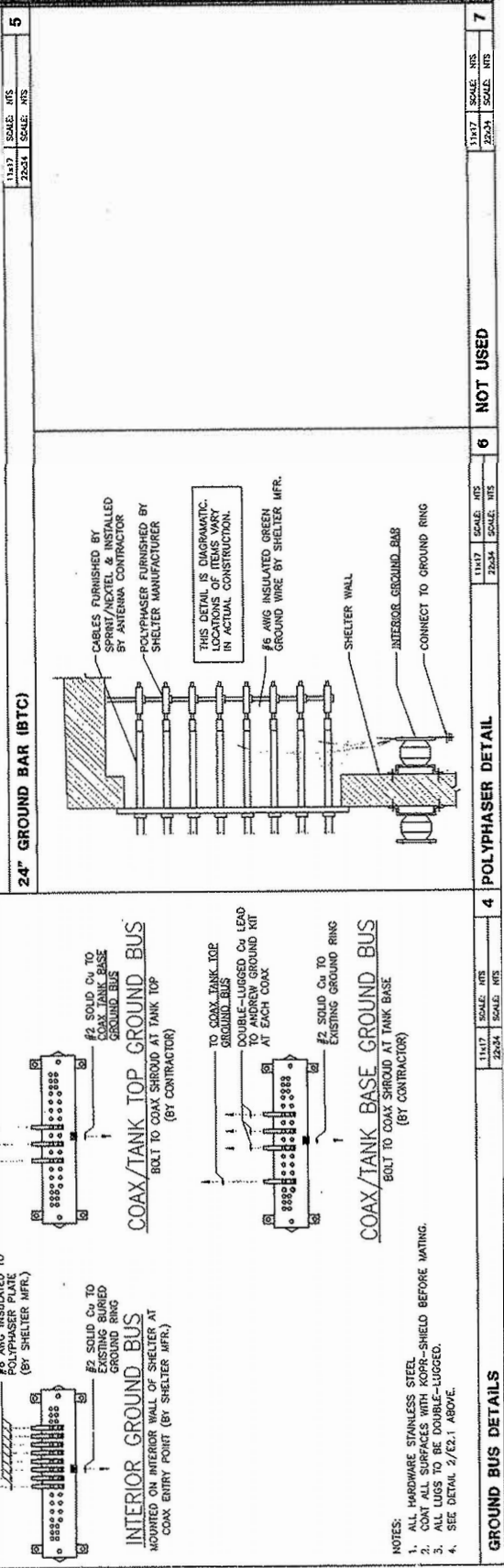
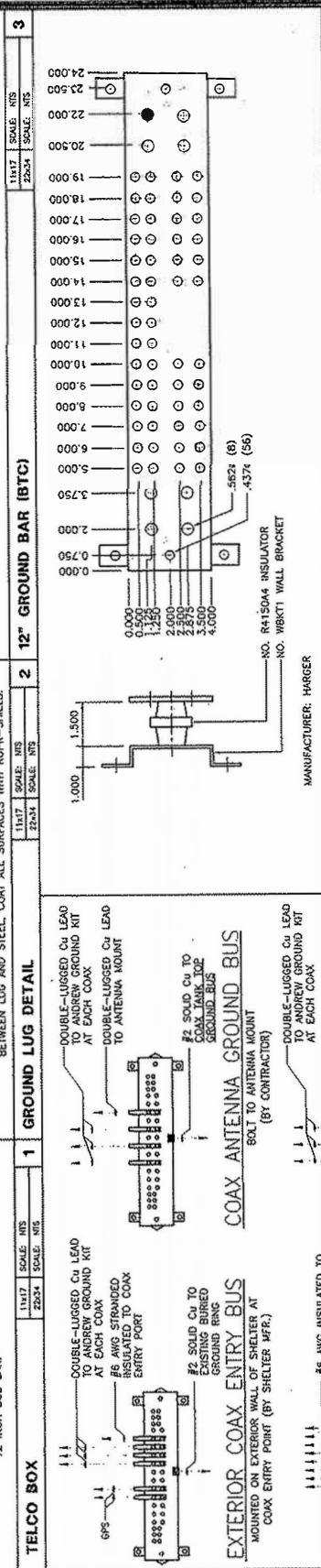
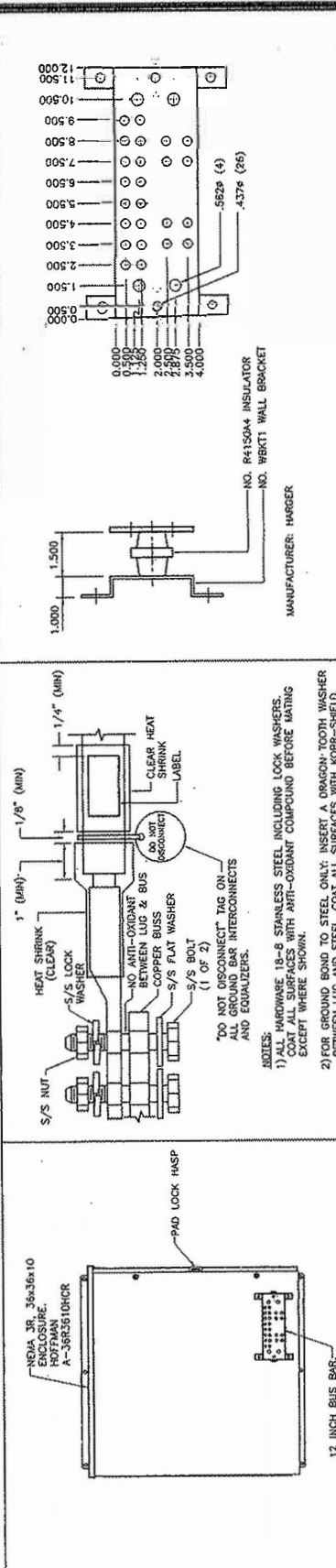
SHEET TITLE

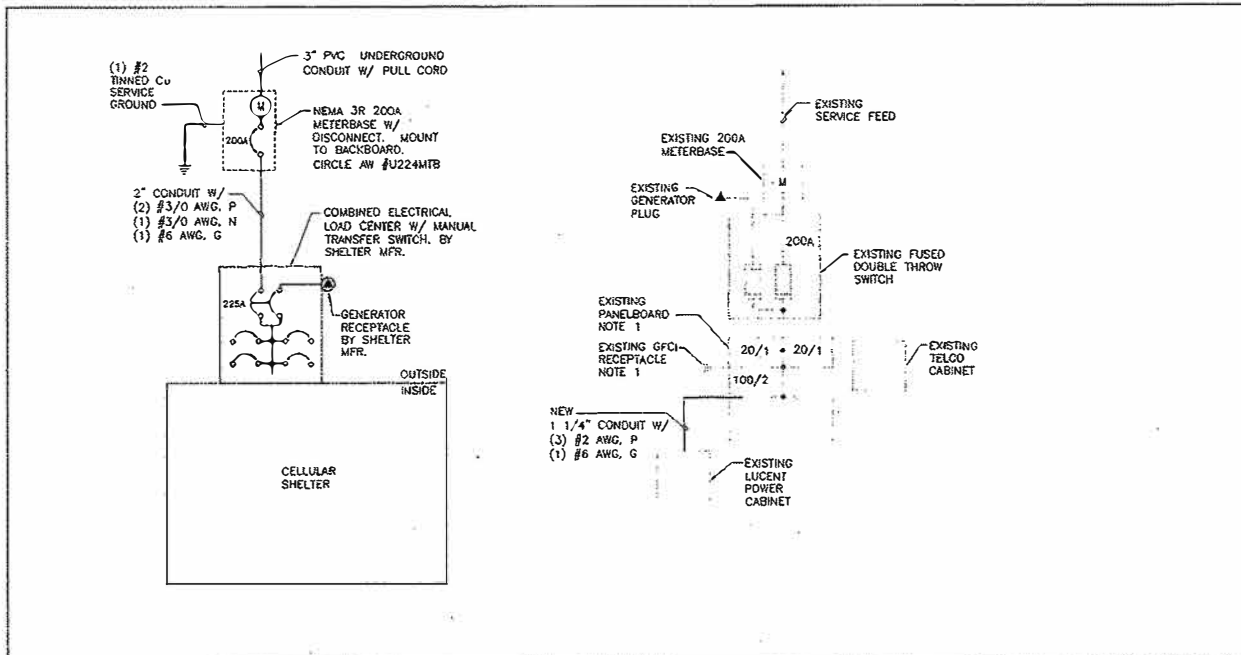
**GROUNDING  
 DETAILS**

SHEET NUMBER

**E-2.1**

06-0117 01





**MOUNTAIN VIEW**  
Sprint

10545 WILLOWS ROAD NE  
SUITE 100  
REDMOND, WA 98052

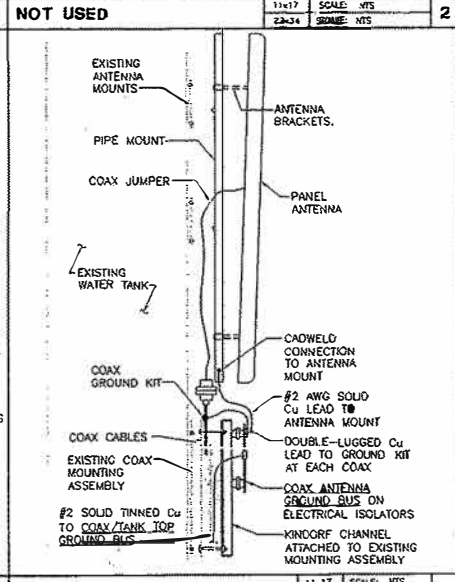
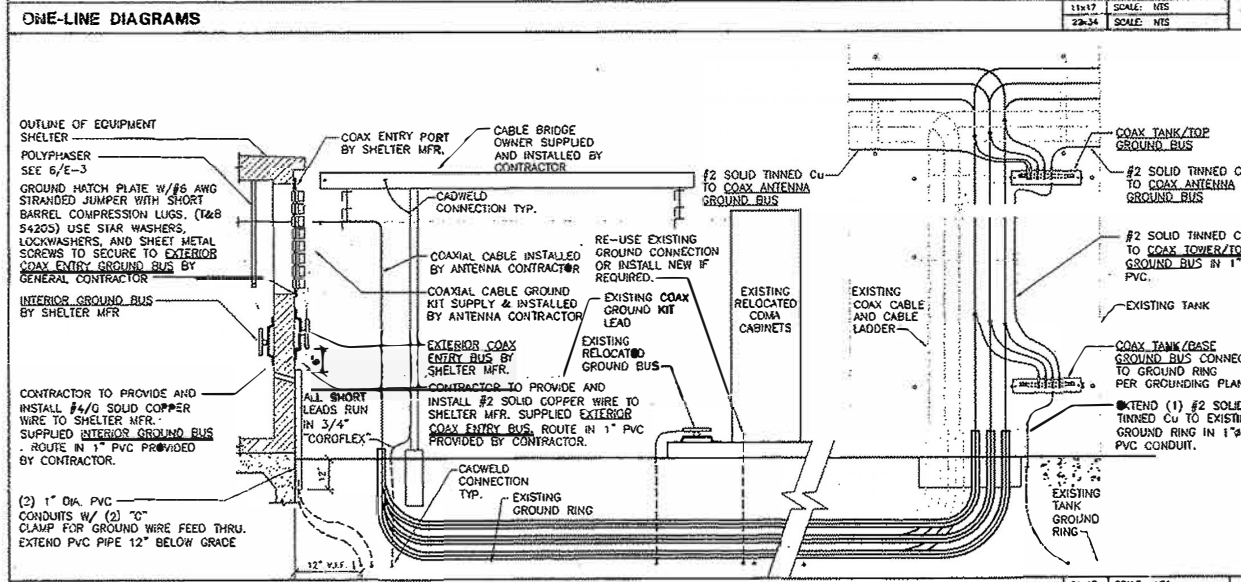
REGISTERED ARCHITECT  
 PORTLAND, OREGON  
 STATE OF OREGON

REVISIONS		
NO.	DATE	DESCRIPTION
1	04/05/06	BOX CD REVIEW

GAZLEY  
PLOWMAN  
ARCHITECTS

2011 NW 3rd Ave  
Portland, OR 97209  
503 274 1200  
200 274 7600 Fax

11x17 SCALE: NTS 22-34 SCALE: NTS	1 NOT USED
11x17 SCALE: NTS 22-34 SCALE: NTS	2



**SHELTER AND TANK GROUNDING RISER DIAGRAM**

**ANTENNA GROUNDING DETAIL**

REGISTERED ARCHITECT  
PORTLAND, OREGON  
STATE OF OREGON

GAZLEY  
PLOWMAN  
ARCHITECTS

2011 NW 3rd Ave  
Portland, OR 97209  
503 274 1200  
200 274 7600 Fax

**RoW**  
REGISTERED ARCHITECT  
PORTLAND, OREGON  
STATE OF OREGON

2011 NW 3rd Ave  
Portland, OR 97209  
503 274 1200  
200 274 7600 Fax

11x17 SPTS ARE 50% REDUCTIONS

SITE NAME \_\_\_\_\_

**MOUNTAIN VIEW**

SITE NUMBER \_\_\_\_\_

**OR0234-C**

SITE ADDRESS \_\_\_\_\_

**24451 SE STARK AVE.  
TROUTDALE, OR 97060**

SHEET TITLE \_\_\_\_\_

**POWER AND  
GROUNDING  
DETAILS**

SHEET NUMBER \_\_\_\_\_

**E-3.0**

06-008 E30

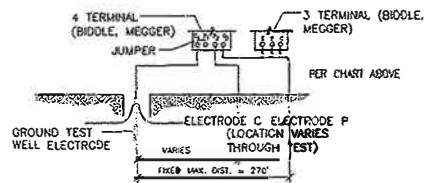
PROCEDURE FOR TESTING GROUNDING NETWORK

- STEP 1 READ AND OBSERVE SAFETY INSTRUCTIONS ENCLOSED WITH RESISTANCE METER, INCLUDING USE OF RUBBER GLOVES TO CONDUCT TEST.
- STEP 2 DETERMINE APPROXIMATE DIAMETER OF GROUNDING RING FOR THE SITE. EXAMPLE DIAMETER OF RING = 30 FEET
- STEP 3 FROM CHART BELOW (BIDDLE TABLE 1), DETERMINE DISTANCE FROM GROUND TEST WELL TO ELECTRODE C. ALSO DETERMINE DISTANCE TO ELECTRODE P (WHICH IS ABOUT 62% OF DISTANCE TO ELECTRODE C).

MAXIMUM DIMENSION (FT)	TEST WELL TO 'P' TEST WELL TO 'C' (FT)	DISTANCE FROM TEST WELL TO 'C' (FT)
10	100	160
12	105	170
14	120	180
16	125	200
18	130	210
20	140	220
22	150	230
24	160	240
26	170	250
28	180	260
30	190	270
32	200	280
34	210	290
36	220	300
38	230	310
40	240	320
42	250	330
44	260	340
46	270	350
48	280	365
50	290	380
52	300	390
54	310	400
56	320	410
58	330	420
60	340	430
62	350	440
64	365	450
66	380	460
68	390	470
70	400	480
72	410	490
74	420	500
76	430	510
78	440	520
80	450	530
82	460	540
84	470	550
86	480	560
88	490	570
90	500	580
92	510	590
94	520	600
96	530	610
98	540	620
100	550	630
102	560	640
104	570	650
106	580	660
108	590	670
110	600	680
112	610	690
114	620	700
116	630	710
118	640	720
120	650	730
122	660	740
124	670	750
126	680	760
128	690	770
130	700	780
132	710	790
134	720	800
136	730	810
138	740	820
140	750	830
142	760	840
144	770	850
146	780	860
148	790	870
150	800	880
152	810	890
154	820	900
156	830	910
158	840	920
160	850	930
162	860	940
164	870	950
166	880	960
168	890	970
170	900	980
172	910	990
174	920	1000

SEE NOTES IN BIDDLE MANUAL: "GETTING DOWN TO EARTH"

- STEP 4 ATTACH LEAD FROM INSTRUMENT TERMINAL TO GROUND WELL TEST PORT, PER THIS SKETCH. CONNECT C2 OR C TERMINAL, AS REQUIRED, TO ELECTRODE C. HOOKUP ADDITIONAL LEAD FROM TERMINAL P OR P2 TO ELECTRODE P. THE PLACEMENT OF WHICH WILL VARY THROUGH THE COURSE OF THE TEST.



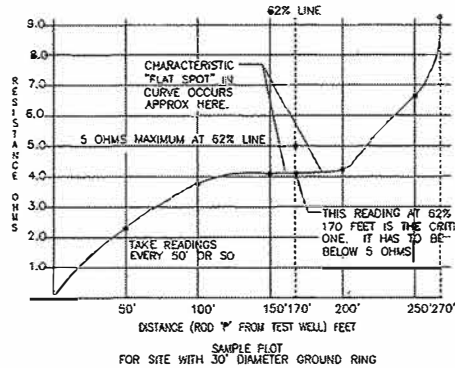
- STEP 5 ENERGIZE TEST EQUIPMENT AND CONDUCT MEGGER TEST WITH ELECTRODE P AT 50 FOOT INTERVALS BETWEEN TEST WELL AND ELECTRODE C. ALSO TEST AT 62% OF MAXIMUM DISTANCE. ALLOW RESISTANCE VALUE TO STABILIZE FOR 10 MINUTES AT EACH LOCATION BEFORE MOVING ELECTRODES. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SAFETY PRECAUTIONS REGARDING DE-ENERGIZING BEFORE REMOVING ELECTRODE.

- STEP 6 RECORD VALUES ON PLOT, PER EXAMPLE.

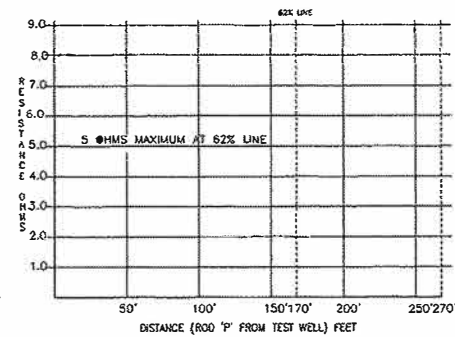
IF PLOT DOES NOT INDICATE A CHARACTERISTIC DOUBLE CURVE, REPEAT TEST WITH A LARGER MAXIMUM DISTANCE. PLOT BOTH SERIES OF TESTS.

AVERAGE GROUND RESISTANCE, MEASURED IN OHMS, IS READ FROM THE FLAT SPOT IN THE CURVE THAT NORMALLY OCCURS AT APPROXIMATELY 62% OF MAXIMUM DISTANCE. SIGN AND DATE TEST RESULTS.

- STEP 7 IF RESISTANCE IS GREATER THAN 5 OHMS, THEN CONTACT PROJECT MANAGER FOR DIRECTIONS ON AUGMENTING GROUND NETWORK.



SAMPLE PLOT FOR SITE WITH 30' DIAMETER GROUND RING



ACTUAL PLOT FOR THIS SITE CONTRACTOR TO FILL OUT BASED ON SITE DATA

**AC POWER FAIL**  
THE AC FAIL RELAY IS CONNECTED TO EACH PHASE OF THE INCOMING POWER. THE NORMALLY OPEN CONTACTS CLOSE UPON POWER-UP OF THE BUILDING. CONTACTS OPEN UPON LOSS OF POWER SENDING AN ALARM.

**HVAC FAIL ALARM #1**  
WHEN HIGH PRESSURE OR LOW PRESSURE SWITCHES ACTIVATE THE LOCK-OUT RELAY, THE ALARM CONTACTS WILL OPEN SENDING AN ALARM.

**SITE ENTRY DOOR ALARM**  
THE MAGNETIC DOOR ALARMS ARE WIRED NORMALLY CLOSED. CONTACTS OPEN UPON DOOR OPENING SENDING AN ALARM.

**HIGH TEMP ALARM**  
THE HIGH TEMP ALARM IS SET TO OPEN ON TEMP. INCREASE (OR RISE)

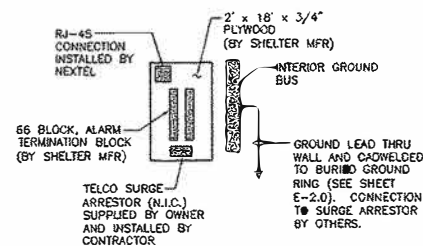
**LOW TEMP ALARM**  
THE LOW TEMP ALARM IS SET TO OPEN ON TEMP. DECREASE (OR FALL)

**SMOKE ALARM**  
THE SMOKE ALARM CONTACTS ARE NORMALLY CLOSED UNDER A "NO SMOKE" CONDITION. WHEN SMOKE IS DETECTED THESE CONTACTS OPEN SENDING AN ALARM.

**SURGE ARRESTOR ALARM**  
FOR SURGE ARRESTOR ALARM, CONNECT TO COMMON AND NORMALLY CLOSED ON TERMINAL BLOCKS. NORMALLY CLOSED CONTACTS WILL BE CLOSED IN NORMAL POWER CONDITION. CONTACTS WILL OPEN IF ELEMENTS BLOW OR AC POWER FAILS.

NOTE: ALL ALARM WIRING SHALL BE #24 AWG PAIRED SOLID CONDUCTORS

ALARM SCHEMATIC



- TESTING NOTES**
1. HVAC UNITS OPERATIONAL AND TESTED WITH O & M MANUALS ON SITE
  2. GENERATOR TESTED
  3. ENVIRONMENTAL ALARMS (SMOKE / ENTRY / HI-LO TEMP UNITS) TESTED
  4. EQUIPMENT CABINET LIGHTS TESTED
  5. SWEEP TEST SPECIFICATIONS ARE INCLUDED IN BID PACKAGE
  6. GROUND TEST TO BE PERFORMED BY THIRD PARTY SERVICES. THE RESULTS TO BE SENT TO CONSTRUCTION ENGINEER A MINIMUM OF 8 BUSINESS DAYS BEFORE CONSTRUCTION COMPLETION.

FALL OF POTENTIAL TEST

2 TELCO BOARD

3 TESTING NOTES

4

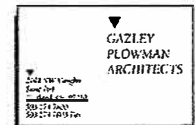
MOUNTAIN VIEW



10545 WILLOWS ROAD NE  
SUITE 100  
REDMOND, WA 98052



NO.	DATE	DESCRIPTION
1	04/05/06	ISSUE CD REVIEW



11x17 SETS ARE 50% REDUCTIONS

SITE NAME

MOUNTAIN VIEW

SITE NUMBER

OR0234-C

SITE ADDRESS

24451 SE STARK AVE.  
TROUTDALE, OR 97060

SHEET TITLE

GROUNDING NOTES,  
TESTING NOTES,  
ALARM SCHEMATIC,  
TELCO BOARD

SHEET NUMBER

E-4.0

06-006 E00 1