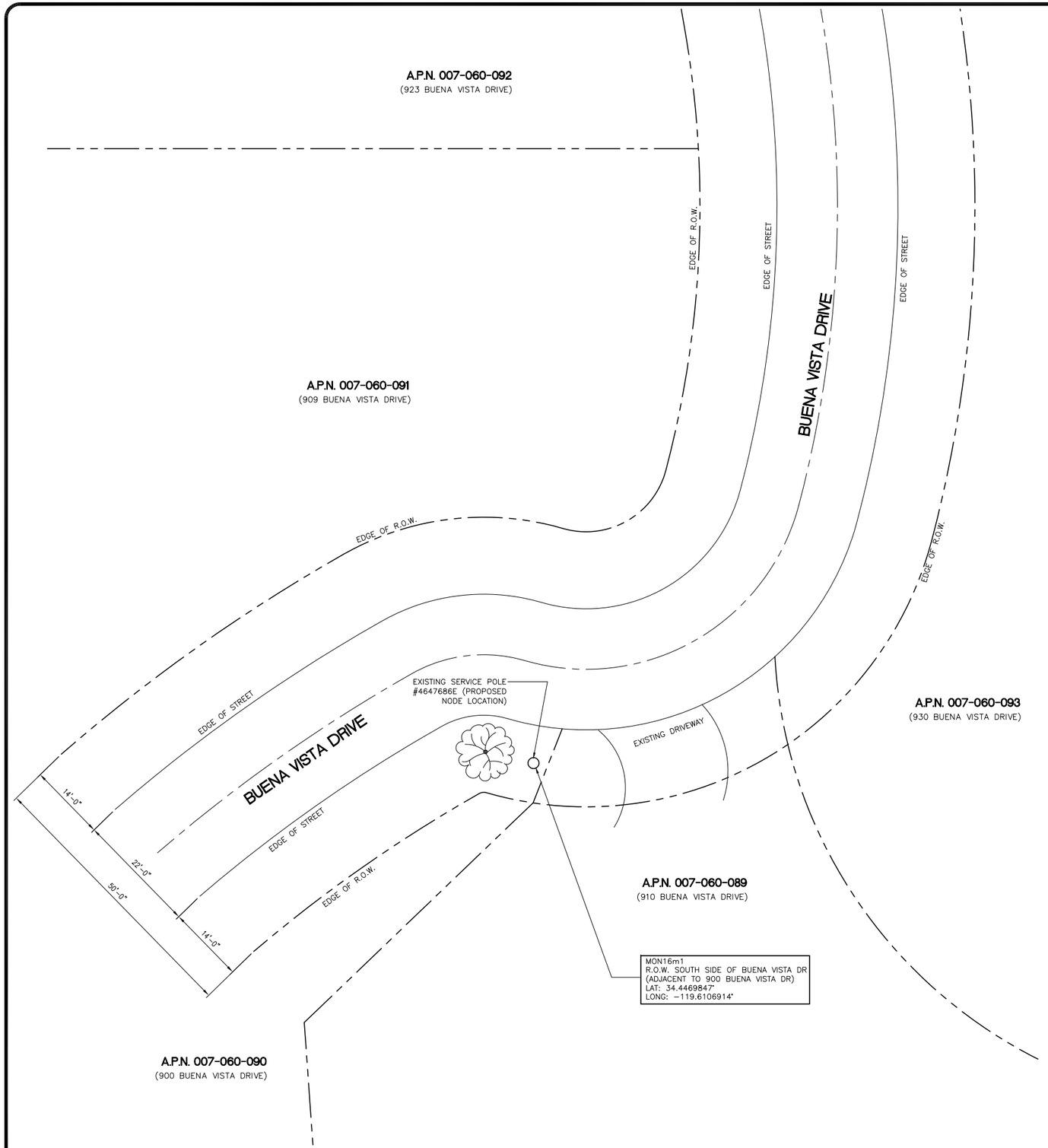
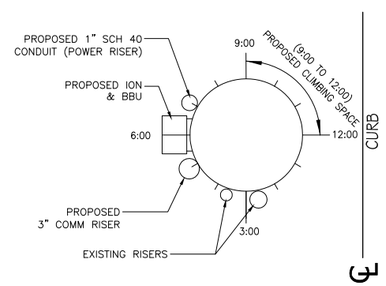


SITE PLAN — SCALE: 1"=10'-0" (0 5' 10') — 1

EXISTING PHOTO — SCALE: N.T.S. — 2

POLE WILL BE STEPPED IN
ACCORDANCE TO GO95 STANDARDS
IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 8:00
1-3" POWER RISER @ 10:00



EXISTING PHOTO — SCALE: N.T.S. — 3

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ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON16m1
VERIZON MONTECITO-MON16m1

SITE ADDRESS: THOMAS BROS PAGE 987 GRID C7
R.O.W. SOUTH SIDE OF BUENA VISTA DR
(ADJACENT TO 900 BUENA VISTA DR)
SANTA BARBARA, CA 93108
LAT: 34.4469847°
LONG: -119.6106914°

SHEET TITLE:

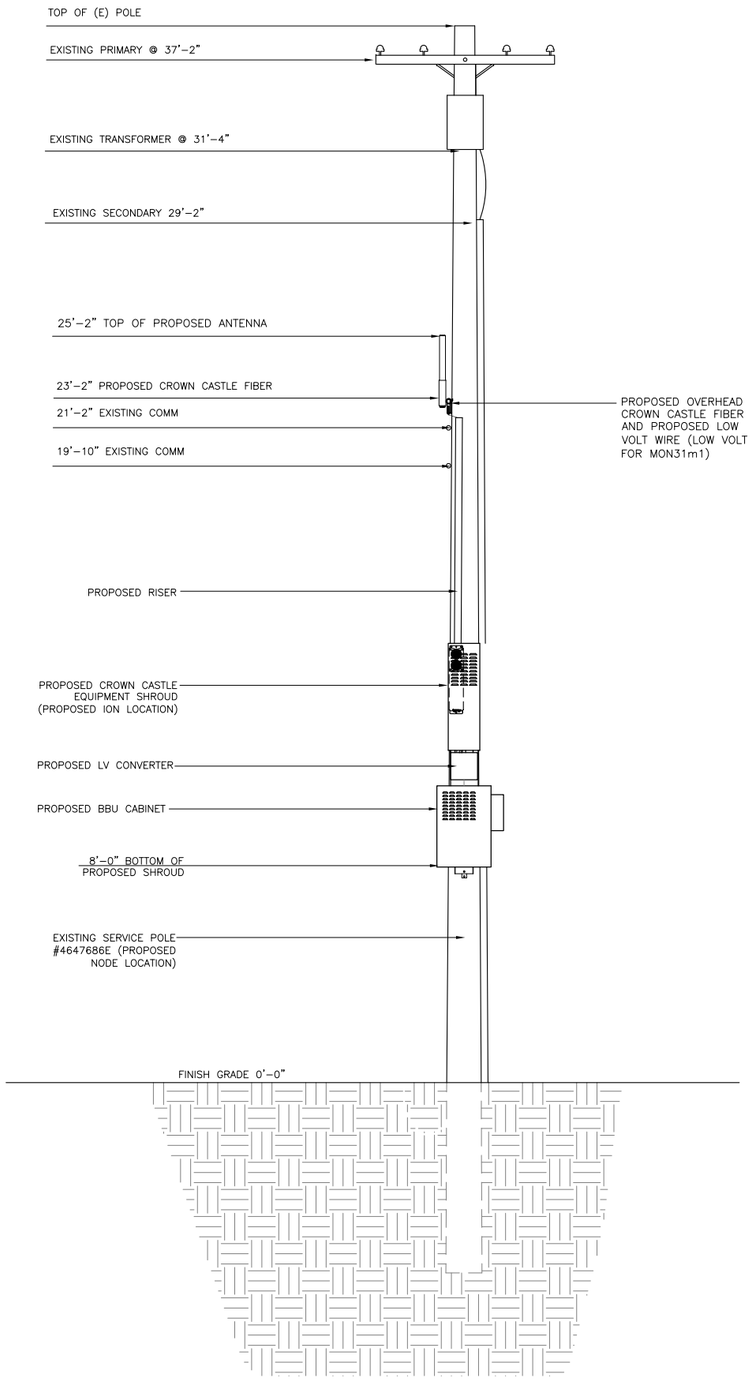
SITE PLAN, ENLARGED SITE PLAN AND EXISTING PHOTO

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

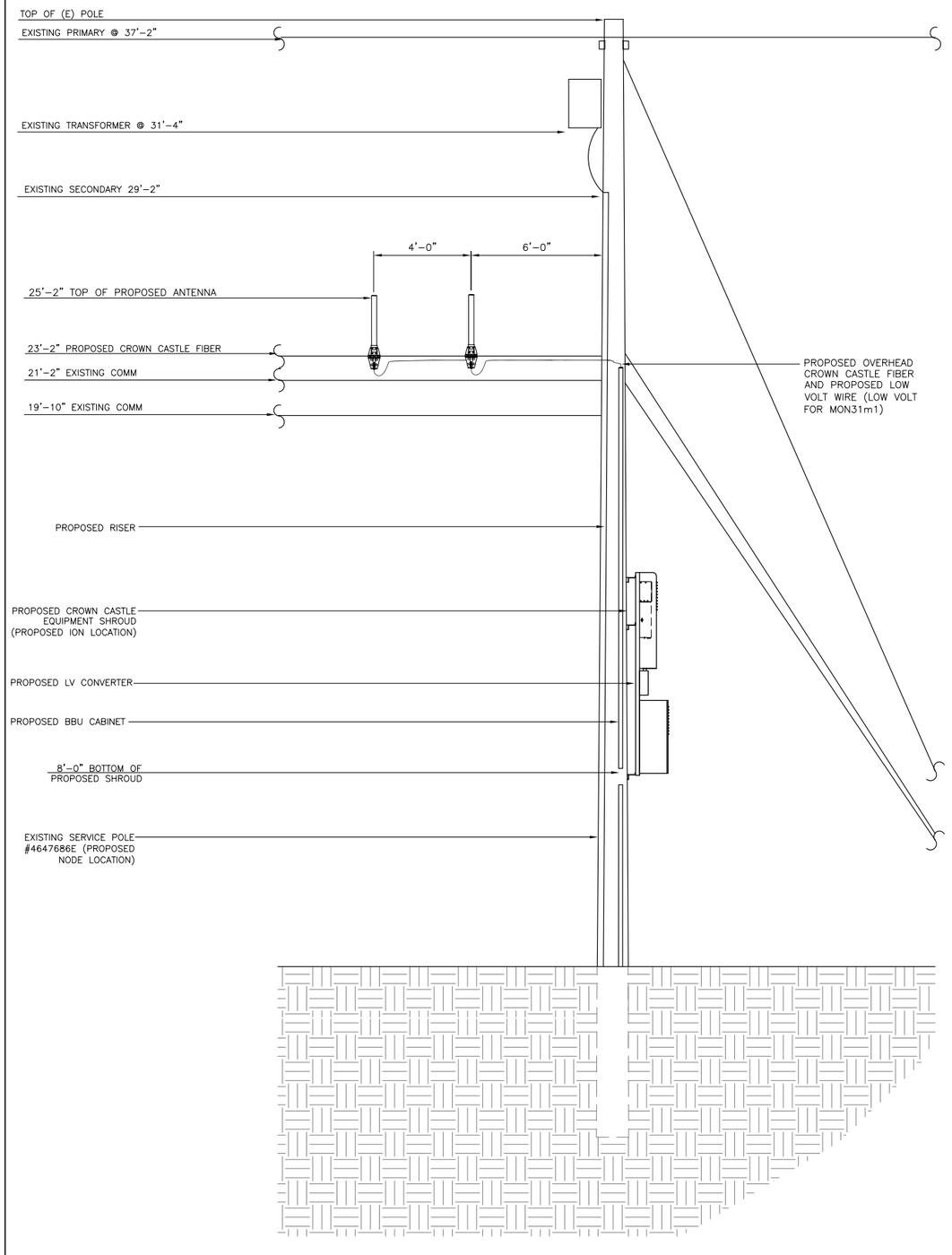
A-1



PROPOSED ELEVATION LOOKING NORTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING EAST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
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SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

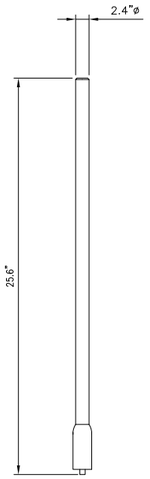
A-2

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 *VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0dBi*

Technical Specifications



Electrical

Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)

Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
ICP3 optimized ..... +10 max.
Noise figure optimized .... +6 max.
4.5 typical

Mechanical****

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM2.90Vac@	4A			6A			8A			10A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	320	285	249	236	209	198	186	165	144
4 batteries:	701	625	546	444	396	346	329	293	258	261	232	203
6 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1487	1338	1165	960	859	750	720	643	562	577	515	450
9 batteries:	1886	1519	1322	1091	978	853	820	733	640	659	587	514

XM2.90Vac@	12A			14A			16A			18A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries:	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	223
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	256

XM2.60Vac@	4A			6A			8A			10A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1886	1519	1322	1091	978	853	820	733	640	659	587	514
8 batteries:	2298	2087	1708	1487	1338	1165	1122	1008	877	904	809	706
9 batteries:	2560	2345	2037	1886	1519	1322	1273	1143	997	1027	921	803

XM2.60Vac@	12A			14A			16A			18A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	186	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	470	523	465	402	458	407	351
9 batteries:	843	753	658	692	617	538	597	531	462	523	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 52 359 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5291 Fax: +370 5 210 5292	P.R. China Tel: +852 2736 8653 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 926 9844 Fax: +7 495 916 1348	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

049-297-10-B002 (06/09)

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CDG

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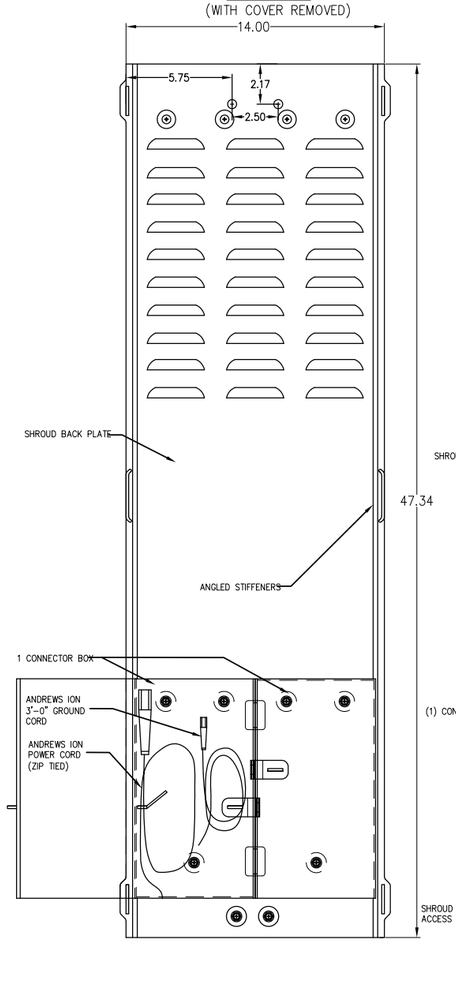
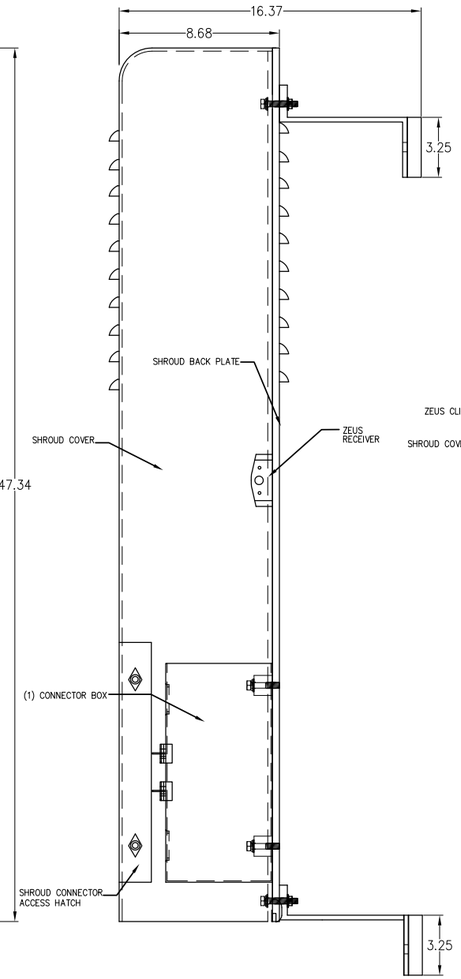
D–1

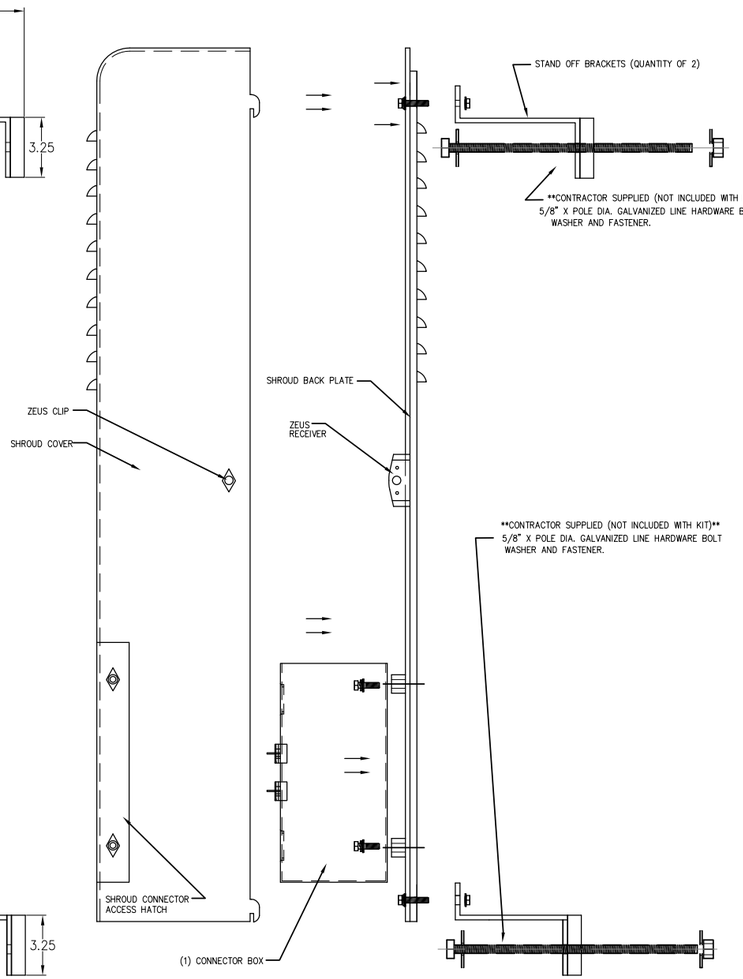
FRONT VIEW
(WITH COVER REMOVED)



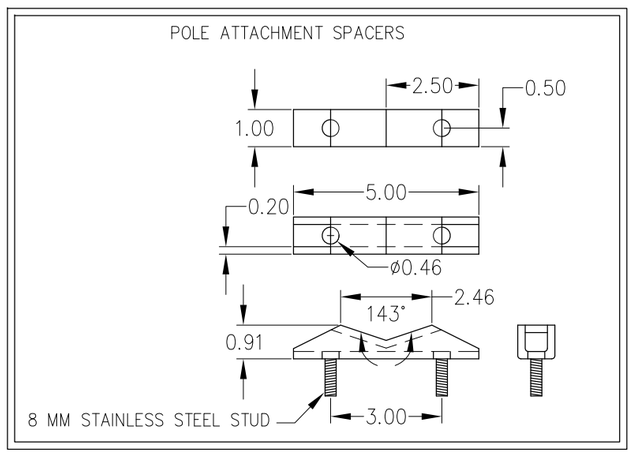
SIDE VIEW



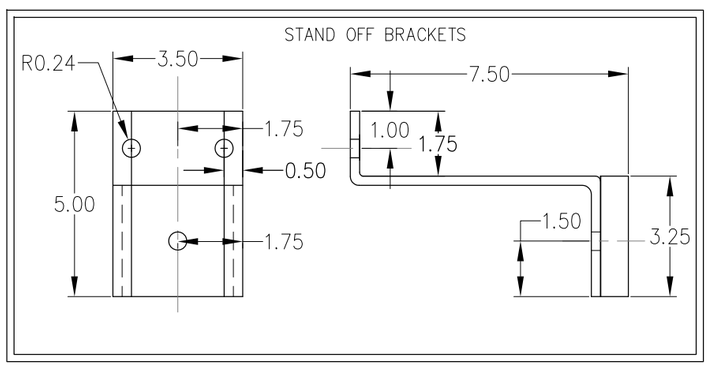
ASSEMBLY



POLE ATTACHMENT SPACERS



STAND OFF BRACKETS



SHROUD DETAIL

N.T.S. | 1

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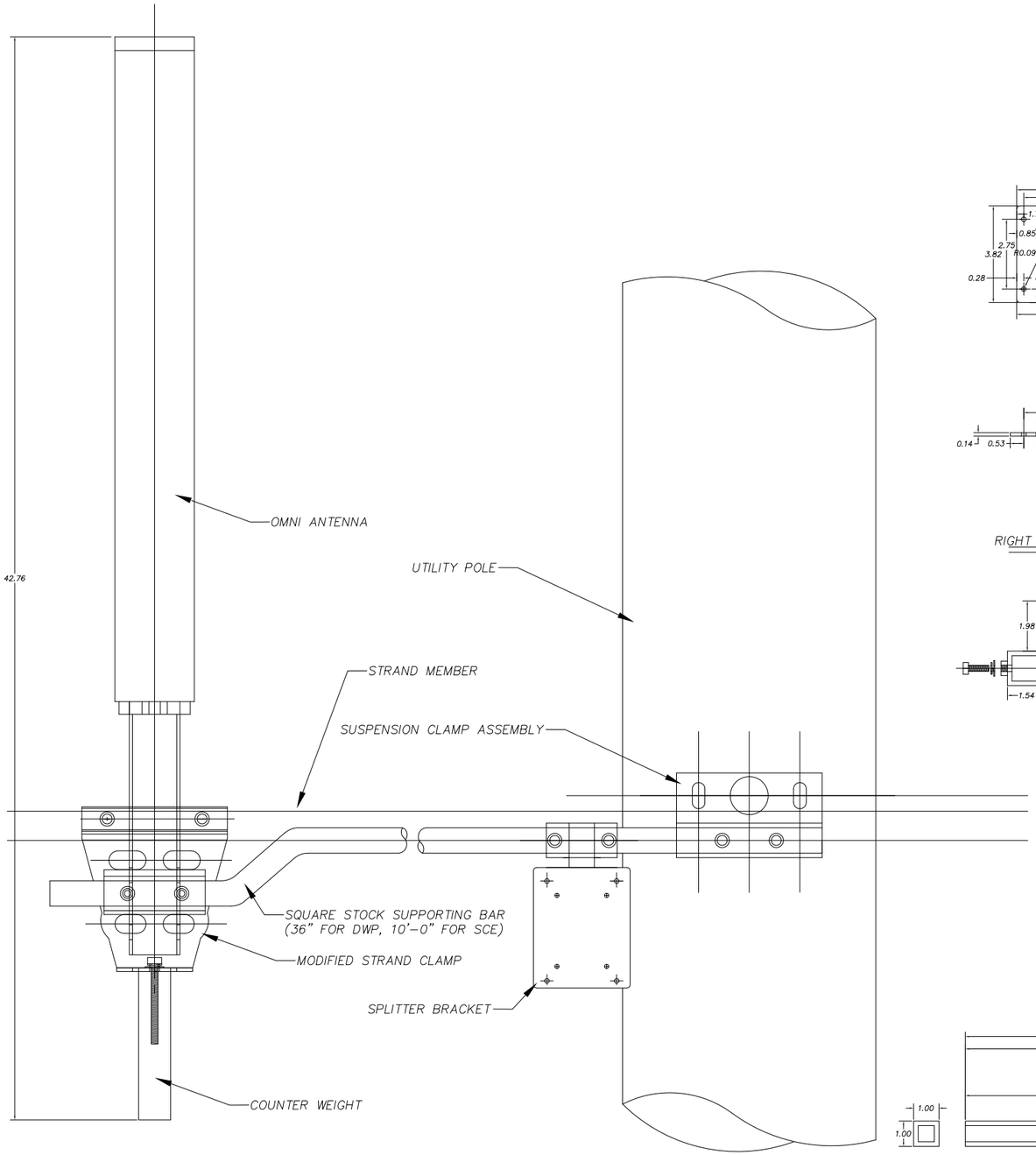
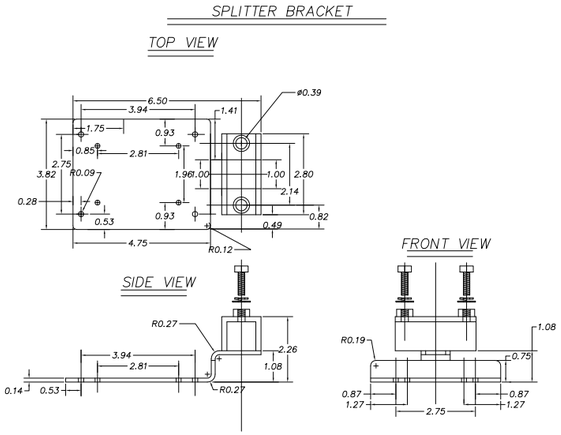
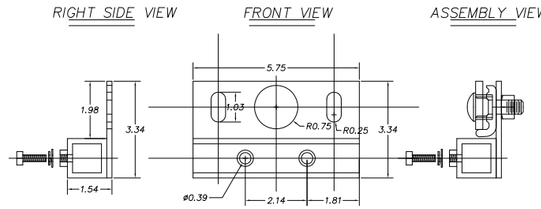


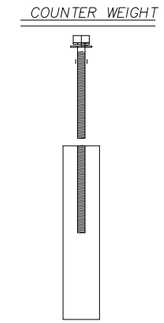
SPLITTER BRACKET



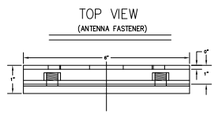
IN-LINE POLE SUSPENSION CLAMP ASSEMBLY



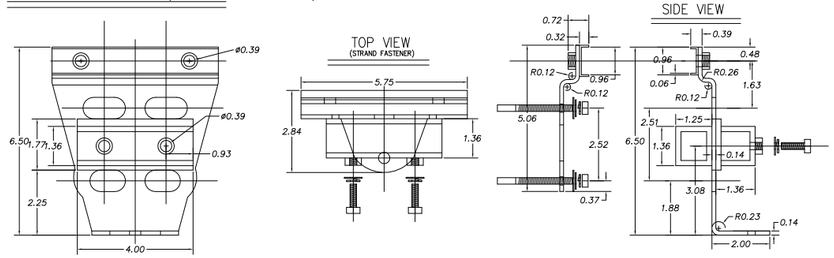
COUNTER WEIGHT



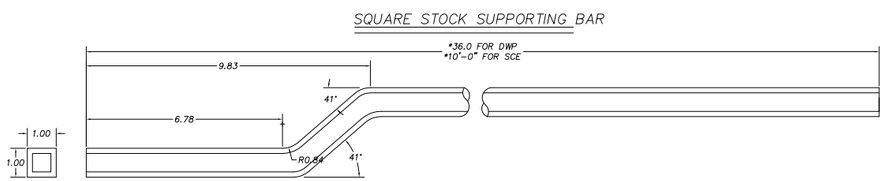
TOP VIEW (ANTENNA FASTENER)



MODIFIED STRAND CLAMP (STRAND FASTENER)



SQUARE STOCK SUPPORTING BAR



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FC

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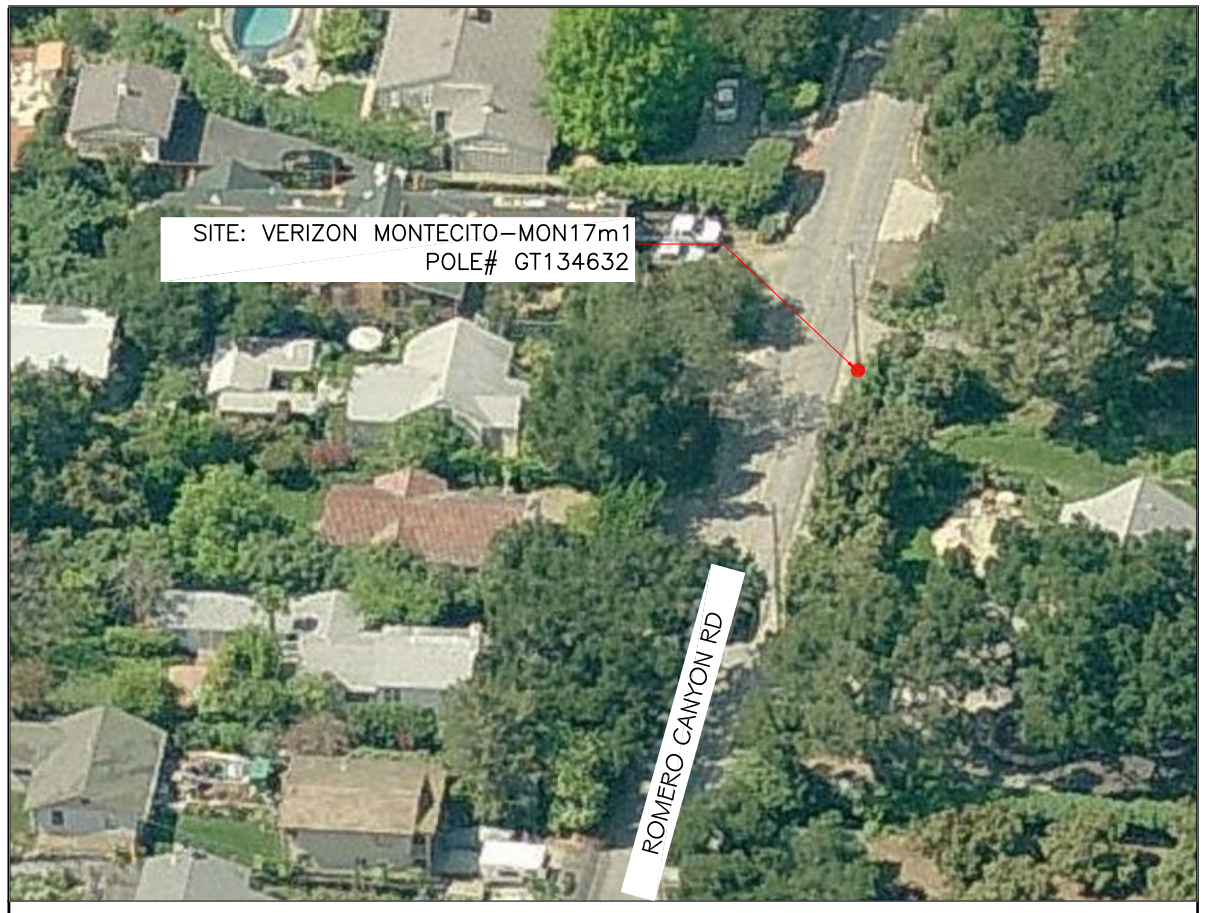
D-3

ANTENNA MOUNT | N.T.S. | 1

CROWN CASTLE NG WEST, LLC

VERIZON MONTECITO-MON17m1

R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 656 ROMERO CANYON RD)
SANTA BARBARA, CA 93108



VICINITY MAP – N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT – ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	–
DIRT TRENCH	–
PUNCH THRU	–
BORE	–
TOTAL	–
R&R SWF TOTAL	–

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE
LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.
ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE
ELECT. CONDUIT
COAXIAL CABLE
MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. EAST SIDE OF ROMERO CANYON RD (ADJACENT TO 656 ROMERO CANYON RD) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, LLC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 310-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2013 CALIFORNIA BUILDING CODE
*2013 CALIFORNIA MECHANICAL CODE
*2013 CALIFORNIA PLUMBING CODE
*2013 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI DIRECTIONAL ANTENNA ON EXISTING UTILITY POLE
2. EQUIPMENT SHROUD AND BBU ON EXISTING POLE

SHEET INDEX:

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/18/2014	ISSUED FOR REVIEW
1	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, LLC

STAMP:

SITE INFO:

SITE NAME:
MON17m1
VERIZON MONTECITO-MON17m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 654 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.4382586°
LONG: -119.6016077°

SHEET TITLE:

TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

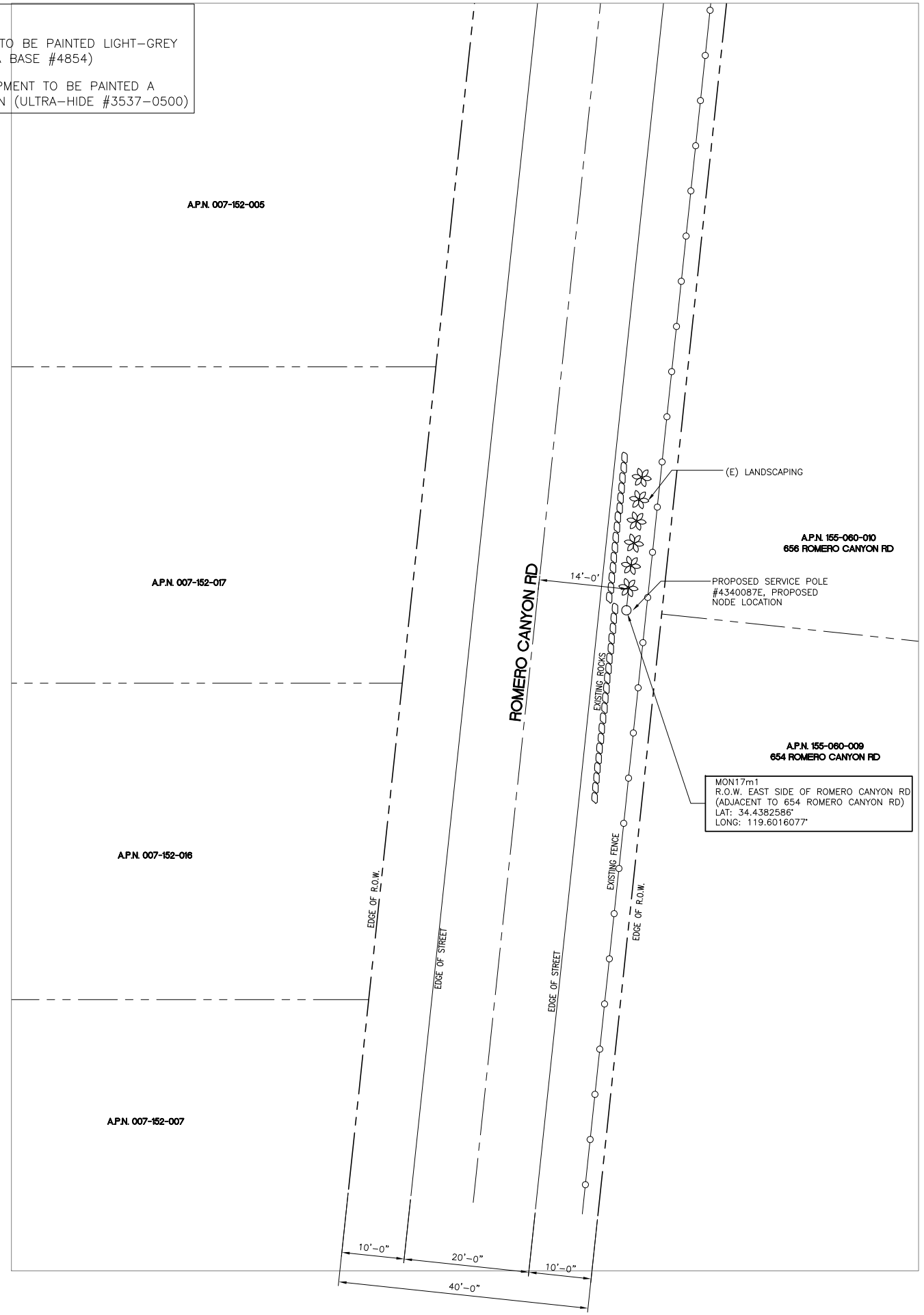
SHEET NUMBER:

T-1

NOTE:

1. ANTENNA TO BE PAINTED LIGHT–GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA–HIDE #3537–0500)

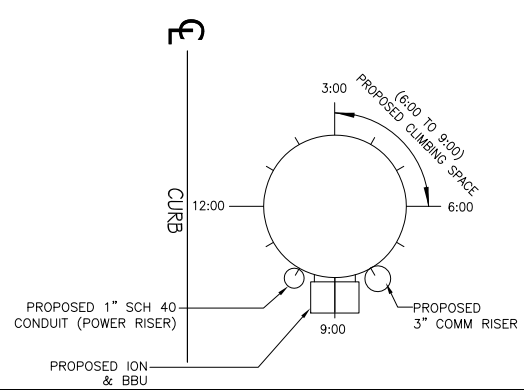


SITE PLAN | SCALE: 1"=10'-0" (0 5' 10') | 1

EXISTING PHOTO | SCALE: N.T.S. | 2

POLE WILL BE STEPPED IN ACCORDANCE TO GO95 STANDARDS IN RESPECT TO CLIMBING SPACE.

1–3" CROWN CASTLE RISER @ 8:00
1–3" POWER RISER @ 10:00



RISER PROFILE | SCALE: N.T.S. | 3

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/18/2014	ISSUED FOR REVIEW
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ENGINEER/CONSULTANT:

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(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, LLC

STAMP:

SITE INFO:

SITE NAME:
MON17m1
VERIZON MONTECITO–MON17m1

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R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 654 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.4382586°
LONG: –119.6016077°

SHEET TITLE:

SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

DRAWN BY:
FC

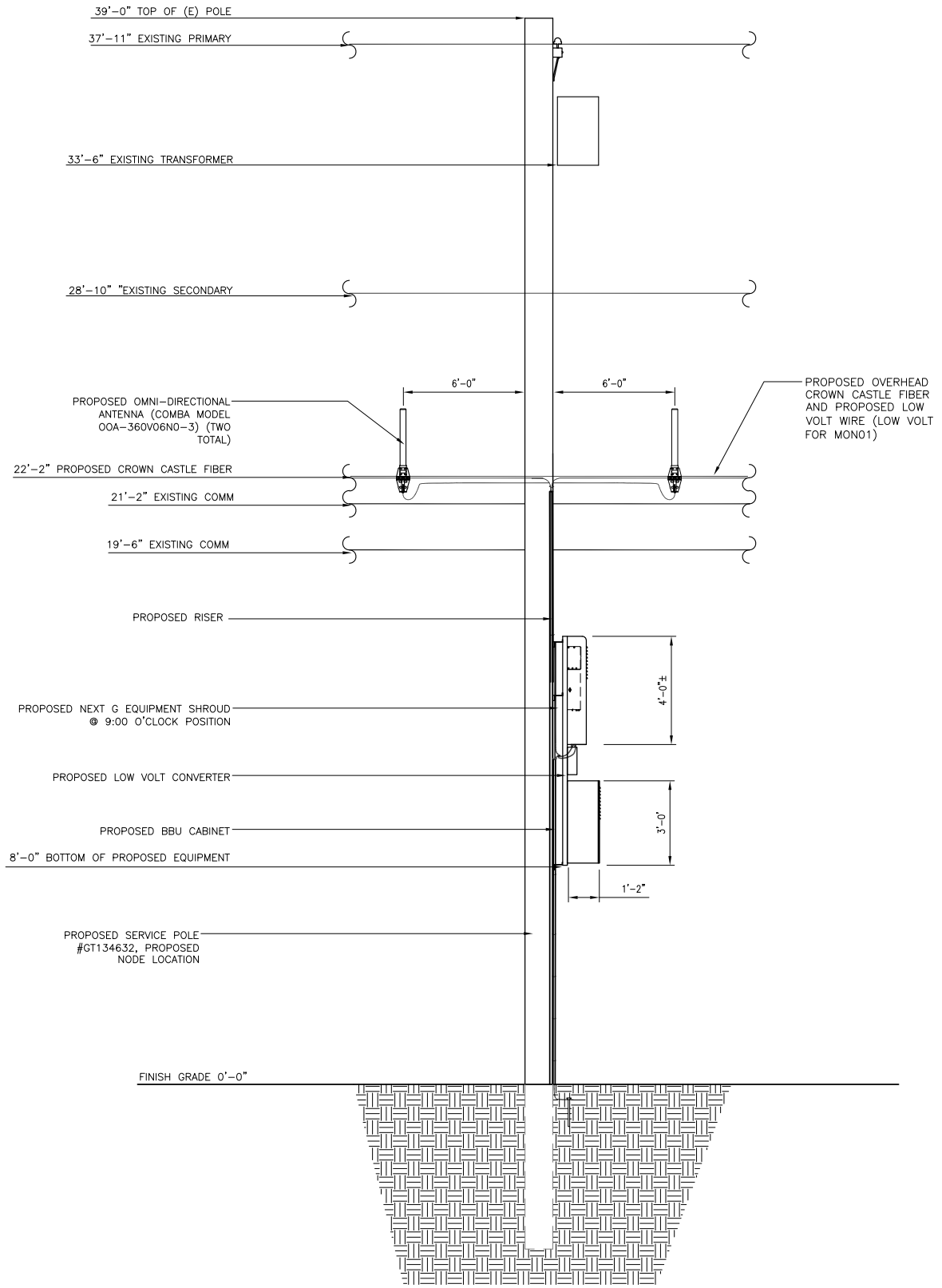
SHEET NUMBER:

A–1

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

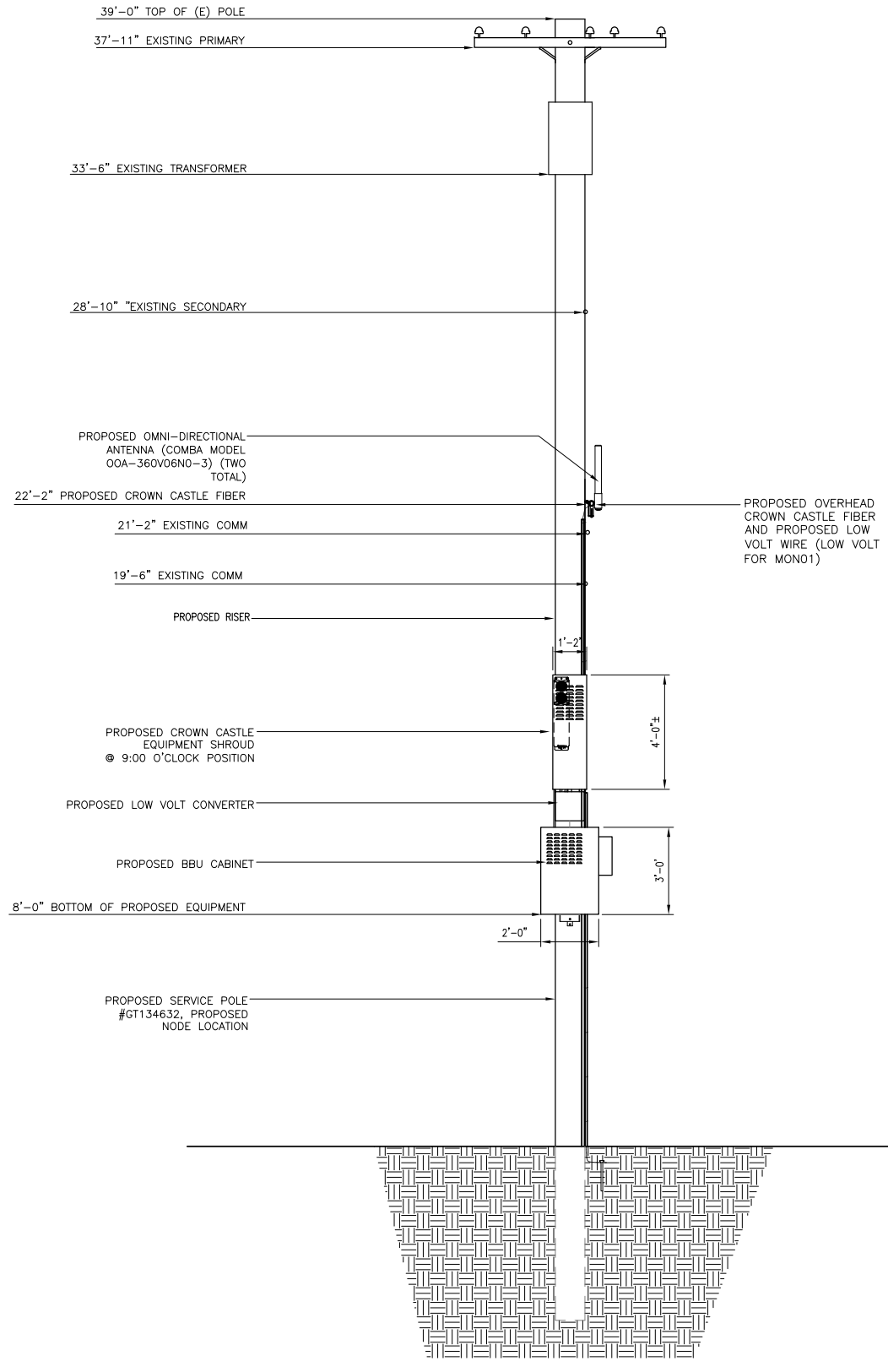
2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)



PROPOSED ELEVATION LOOKING EAST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING NORTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
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ENGINEER/CONSULTANT:

Civil Engineer

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CLIENT:

CROWN CASTLE NG WEST, LLC

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SITE NAME:

MON17m1

VERIZON MONTECITO-MON17m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1

R.O.W. EAST SIDE OF ROMERO CANYON RD (ADJACENT TO 654 ROMERO CANYON RD)

SANTA BARBARA, CA 93108

LAT: 34.4382586°

LONG: -119.6016077°

SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY: FC

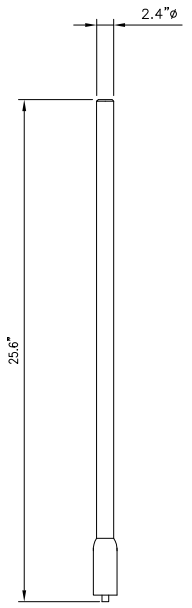
SHEET NUMBER:

A-2

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi



Technical Specifications

Electrical

Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions, HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)

Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
ICP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

Mechanical****

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM280Vac@	4A			6A			8A			10A		
BatteryRuntime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	508	453	396	320	285	249	236	209	198	186	165	144
4 batteries	701	625	546	444	396	348	329	293	256	261	232	203
6 batteries	1091	978	853	701	625	546	523	465	407	418	372	325
8 batteries	1487	1338	1165	960	859	750	720	643	562	577	515	450
9 batteries	1688	1519	1322	1091	978	853	820	733	640	659	587	514
XM280Vac@	12A			14A			16A			18A		
BatteryRuntime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries	478	419	367	385	341	299	329	293	256	288	255	223
9 batteries	538	479	419	440	391	342	377	335	294	329	293	256
XM280Vac@	4A			6A			8A			10A		
BatteryRuntime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries	1091	978	853	701	625	546	523	465	407	418	372	325
6 batteries	1688	1519	1322	1091	978	853	820	733	640	659	587	514
8 batteries	2288	2087	1708	1487	1338	1165	1122	1006	877	904	809	708
9 batteries	2560	2345	2037	1688	1519	1322	1273	1143	997	1027	921	803
XM280Vac@	12A			14A			16A			18A		
BatteryRuntime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries	741	660	577	607	541	470	523	465	402	458	407	351
9 batteries	843	753	658	692	617	538	597	531	462	523	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

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USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 926 9844 Fax: +7 495 916 1949	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

049-297-10-B002 (06/09)

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ENGINEER/CONSULTANT:

Civil Engineer

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26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, LLC

STAMP:

SITE INFO:

SITE NAME:
MON17m1
VERIZON MONTECITO–MON17m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 654 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.4382586°
LONG: –119.6016077°

SHEET TITLE:

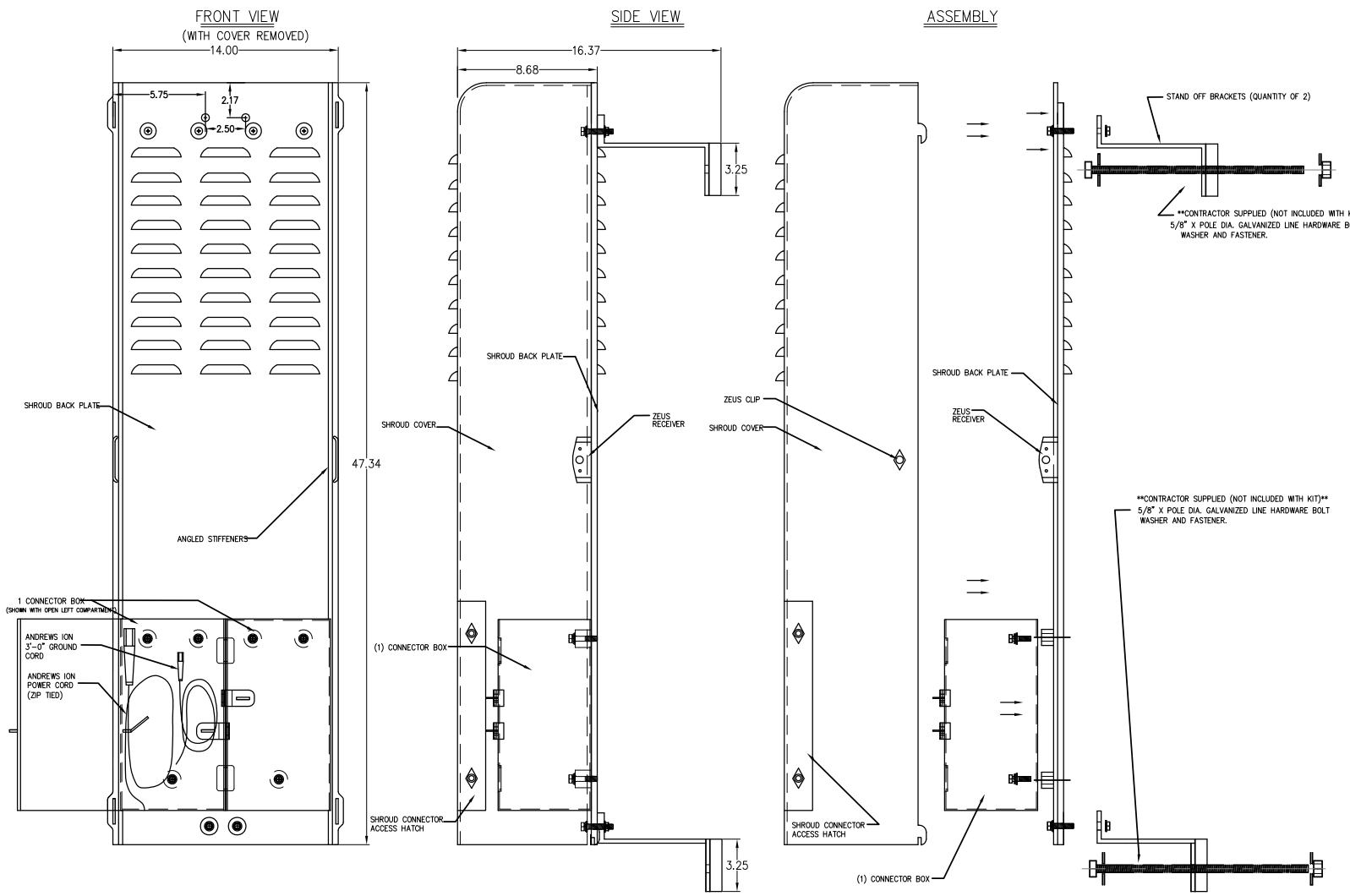
DETAILS

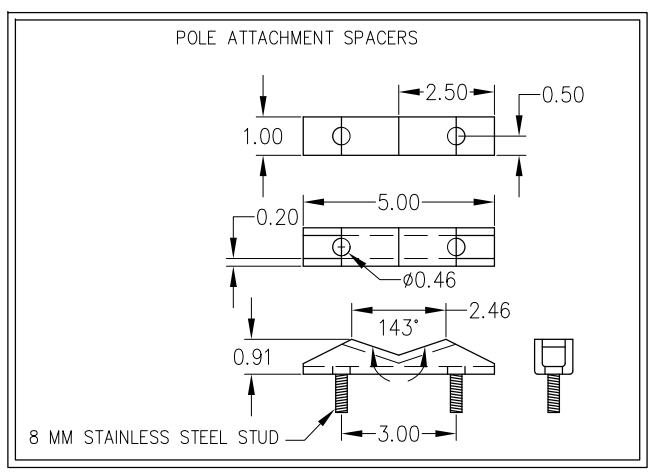
DRAWING INFO:

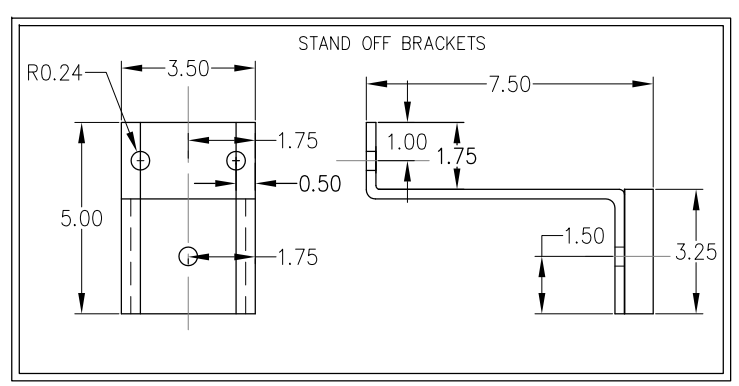
DRAWN BY:
FC

SHEET NUMBER:

D–1







SHROUD DETAIL

N.T.S. | 1

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/18/2014	ISSUED FOR REVIEW
1	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, LLC

STAMP:

SITE INFO:

SITE NAME:
MON17m1
VERIZON MONTECITO-MON17m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 654 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.4382586°
LONG: -119.6016077°

SHEET TITLE:

DETAILS

DRAWING INFO:

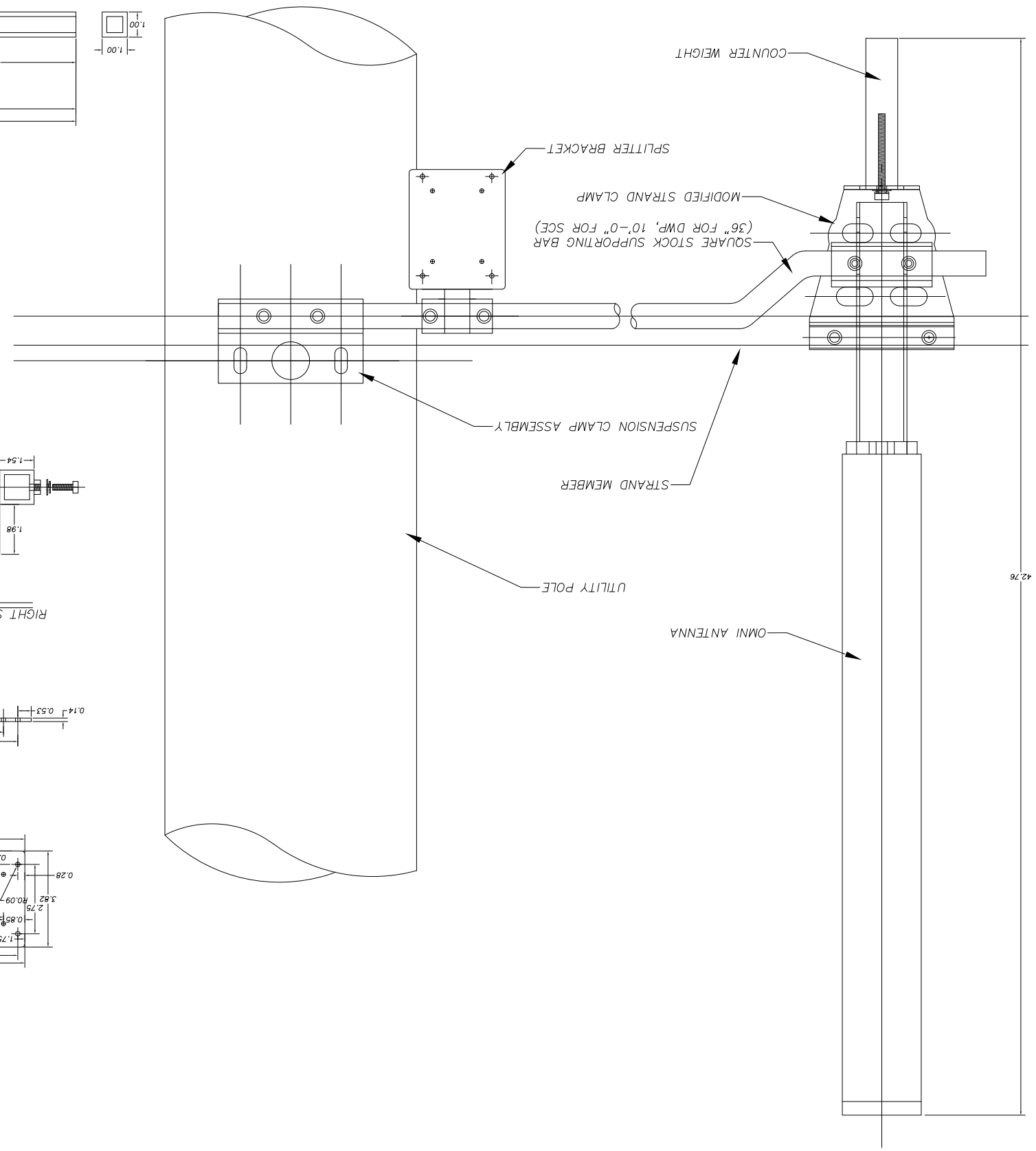
DRAWN BY:
FC

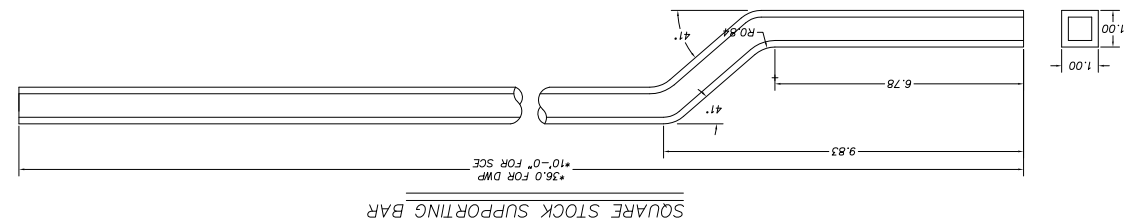
SHEET NUMBER:

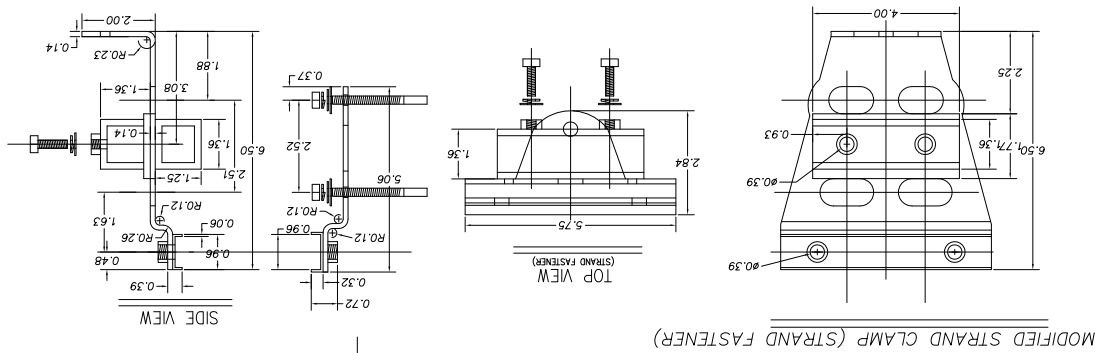
D-2

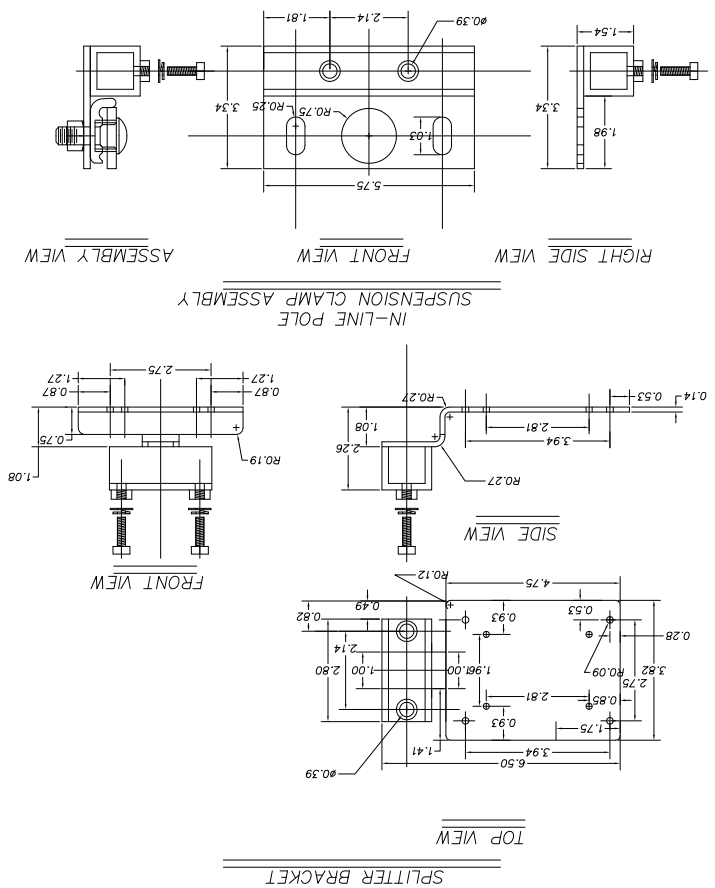
ANTENNA MOUNT

1 | NTS.









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DRAWN BY: FC

DRAWING INFO:

DETAILS

SHEET TITLE:

SITE NAME: MON17m1
VERIZON MONTECITO-MON17m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 654 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.438286°
LONG: -119.601607°

SITE INFO:

STAMP:

CLIENT: CROWN CASTLE NG WEST, LLC

ENGINEER/CONSULTANT:
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
3655 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX
Civil Engineer

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC	ISSUED FOR REVIEW
	02/18/2014	
1	FXC	ISSUED FOR FINAL
	03/08/2014	

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON18

R.O.W. SOUTH SIDE OF BELLA VISTA DR
(ADJACENT TO 2299 BELLA VISTA DR)
SANTA BARBARA, CA 93108

VICINITY MAP – N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT – ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	–
DIRT TRENCH	–
PUNCH THRU	–
BORE	–
TOTAL	–
R&R SWF TOTAL	–

GROUND BUS BAR	LIGHT POLE	ELEVATION REF.
MECH. GRND. CONN.	FOUNDATION	SECTION REF.
CADWELD	SPOT ELEV.	PROP./LEASE LINE
ELECTRIC BOX	SET POINT	MATCH LINE
TELEPHONE BOX	REVISION	WORK POINT
EXISTING SERVICE POLE		TELE. CONDUIT
SIDEWALK FLAG	DETAIL REF.	CENTERLINE
EX. MANHOLE		

ELECT. CONDUIT	MYERS PEDESTAL
COAXIAL CABLE	VAULT STANDARD 2'X3'
	STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF BELLA VISTA (ADJACENT TO 2299 BELLA VISTA) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI ANTENNAS ON EXISTING UTILITY POLE
2. EQUIPMENT PEDESTAL W/ BBU, ION AND ELECTRICAL METER AT BASE OF POLE
3. NEW SHROUD ON POLE WITH NEW ION

SHEET INDEX:

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 01/15/2013	ISSUED FOR REVIEW
1	SA 03/18/2013	ISSUED FOR APPROVAL
2	SA 08/05/2013	ISSUED FOR APPROVAL
3	FC 03/08/2014	ISSUED FOR APPROVAL

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON18
VERIZON MONTECITO-MON18

SITE ADDRESS: THOMAS BROS PAGE xxx GRID xx
R.O.W. SOUTH SIDE OF BELLA VISTA DR
(ADJACENT TO 2299 BELLA VISTA DR)
SANTA BARBARA, CA 93108
LAT: 34.44805
LONG: -119.59984

SHEET TITLE:

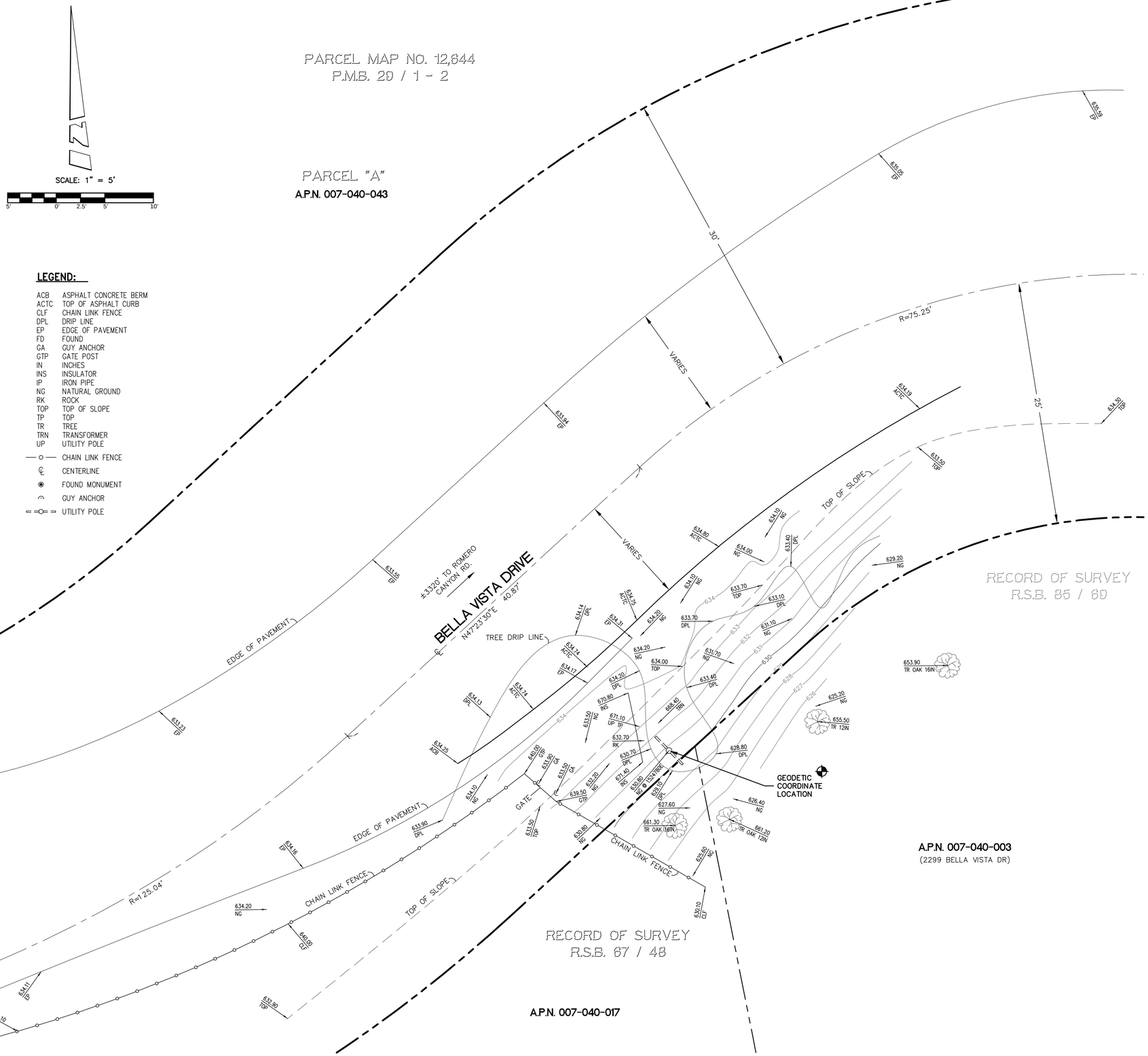
TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

T-1



REV:	DATE/BY:	REVISION DESCRIPTION:
1	07/30/13 MDL	ISSUED FOR REVIEW

COORDINATES:

LATITUDE 34°26'52.94" N
LONGITUDE 119°35'59.17" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

THE CENTERLINE OF BELLA VISTA DRIVE BEING NORTH 62°08'00" EAST PER FOUND MONUMENTS ON RECORD OF SURVEY, R.S.B. 85/69, RECORDS OF SANTA BARBARA COUNTY.
(NOT SHOWN HEREON)

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 500"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 500" AS SHOWN ON THE "CARPINTERIA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 502.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

DATE OF SURVEY:

JULY 18, 2013

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

LIVING PLANTS STATEMENT:

THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY VALID FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.

ENGINEER/CONSULTANT:

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PKWY. SOUTH
LAKE FOREST, CA 92630-8326
(949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

CROWN CASTLE NG WEST, INC.

SURVEYOR:

BERT HAZE AND ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3188 AIRWAY AVENUE, SUITE K1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX
JN. 706.231

STAMP:

PROFESSIONAL LAND SURVEYOR
BERT HAZE
No. 7211
Exp. 3-31-14
STATE OF CALIFORNIA

SITE INFO:

SITE NAME:
MON18
VERIZON MONTECITO-MON18

SITE ADDRESS:
R.O.W. SOUTH SIDE OF BELLA VISTA DR (ADJACENT TO 2299 BELLA VISTA DR) SANTA BARBARA, CA 93108

SHEET TITLE:
TOPOGRAPHIC SURVEY

DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
MON18	MDL	07/30/13

SHEET NUMBER:
1 OF 1 | C-1

LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

NOTE:
TRENCH TO BE HAND DUG.

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 01/15/2013	ISSUED FOR REVIEW
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Civil Engineer

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CLIENT:

CROWN CASTLE
NG WEST, INC.

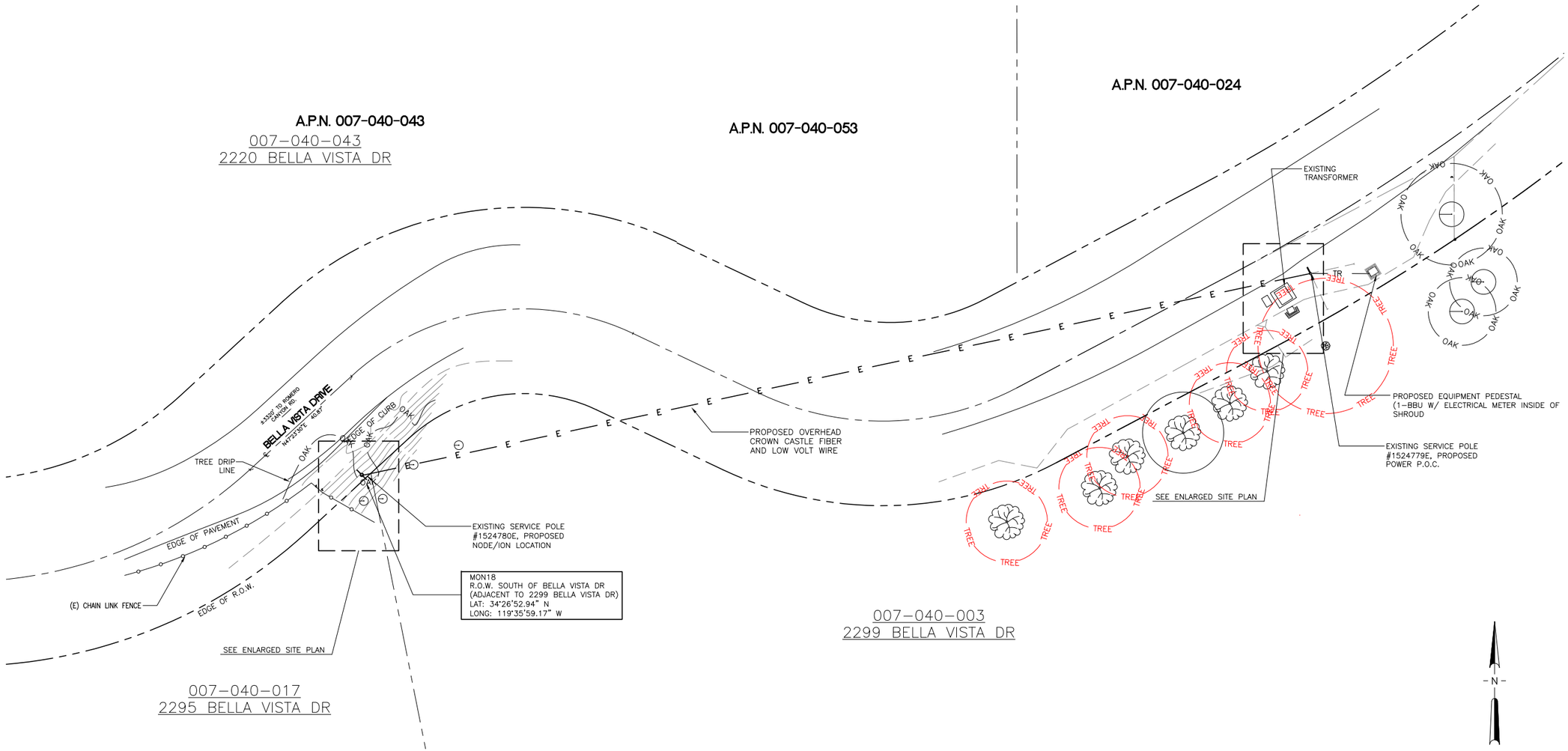
STAMP:

A.P.N. 007-040-043

007-040-043
2220 BELLA VISTA DR

A.P.N. 007-040-053

A.P.N. 007-040-024



SITE INFO:

SITE NAME:
MON18
VERIZON MONTECITO-MON18

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LAT: 34.44805
LONG: -119.59984

SHEET TITLE:

SITE PLAN

DRAWING INFO:

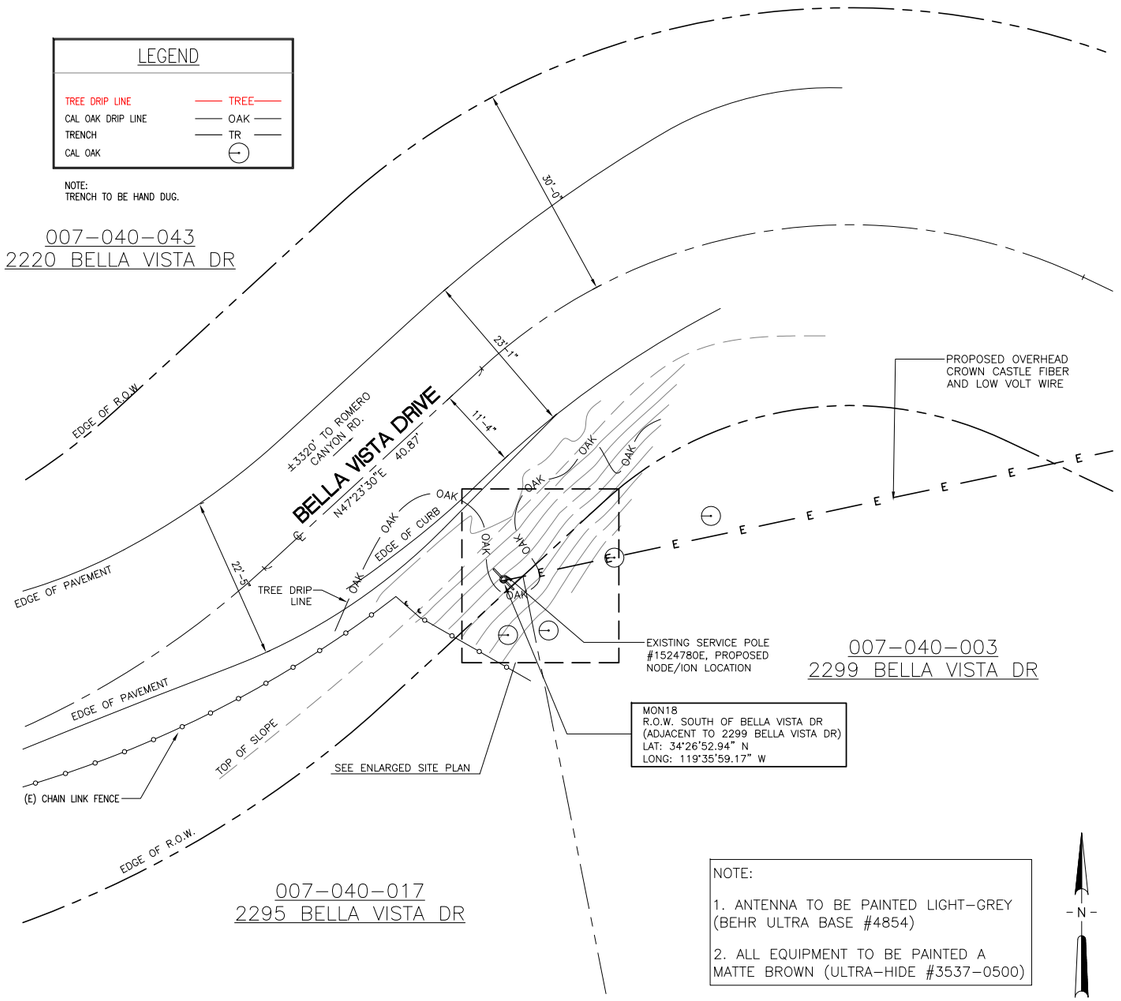
DRAWN BY:
FC

SHEET NUMBER:

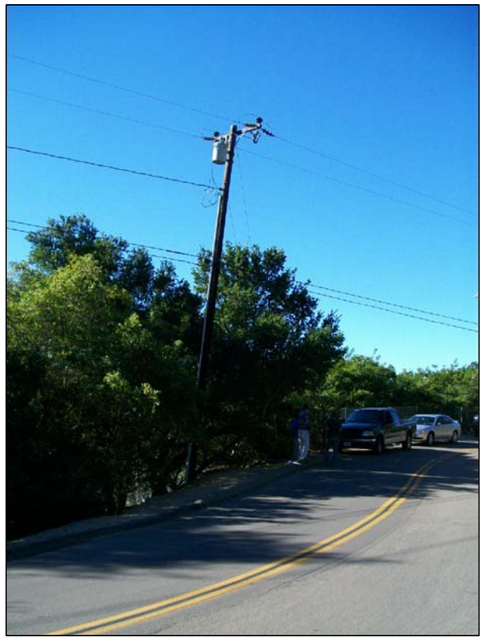
A-1

SITE PLAN

SCALE: 1/16"=1'-0" (0 8' 16')



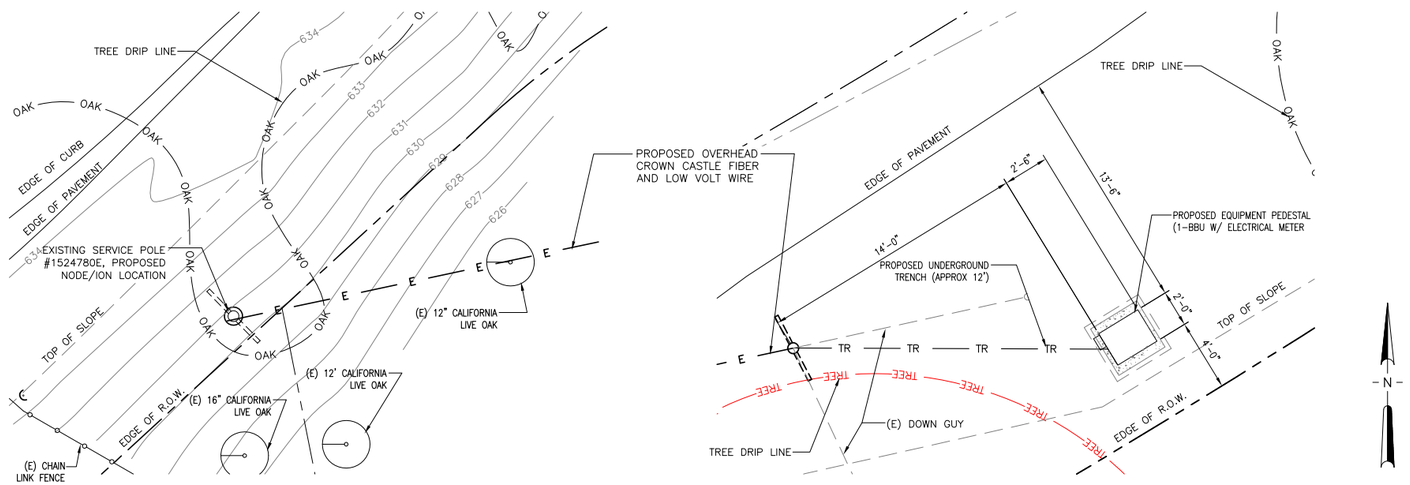
SITE PLAN — SCALE: 1"=10'-0" (0, 5', 10') — 1



NODE POLE

METER POLE

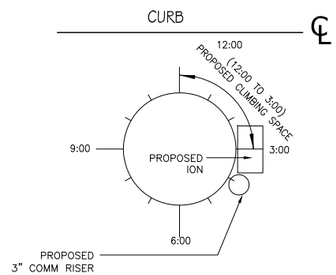
EXISTING PHOTOS — SCALE: N.T.S. — 3



ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" (0, 2', 4') — 1

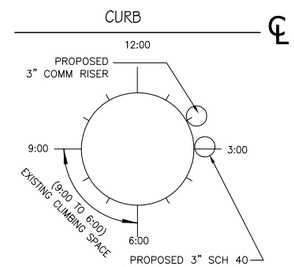
POLE WILL BE STEPPED IN ACCORDANCE TO G095 STANDARDS IN RESPECT TO CLIMBING SPACE.

1-3" NEXTG RISER @ 4:00



NODE POLE

1-3" NEXTG RISER @ 2:00
1-1" POWER RISER @ 3:00



METER POLE

RISER PROFILE — SCALE: N.T.S. — 2

REV:	DATE/BY:	REVISION DESCRIPTION:
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3	FC 03/08/2014	ISSUED FOR APPROVAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC

CONSULTING CIVIL ENGINEERS

26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630

(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:

MON18

VERIZON MONTECITO-MON18

SITE ADDRESS: THOMAS BROS PAGE xxx GRID xx
R.O.W. SOUTH SIDE OF BELLA VISTA DR
(ADJACENT TO 2299 BELLA VISTA DR)
SANTA BARBARA, CA 93108
LAT: 34.44805
LONG: -119.59984

SHEET TITLE:

SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

DRAWN BY: FC

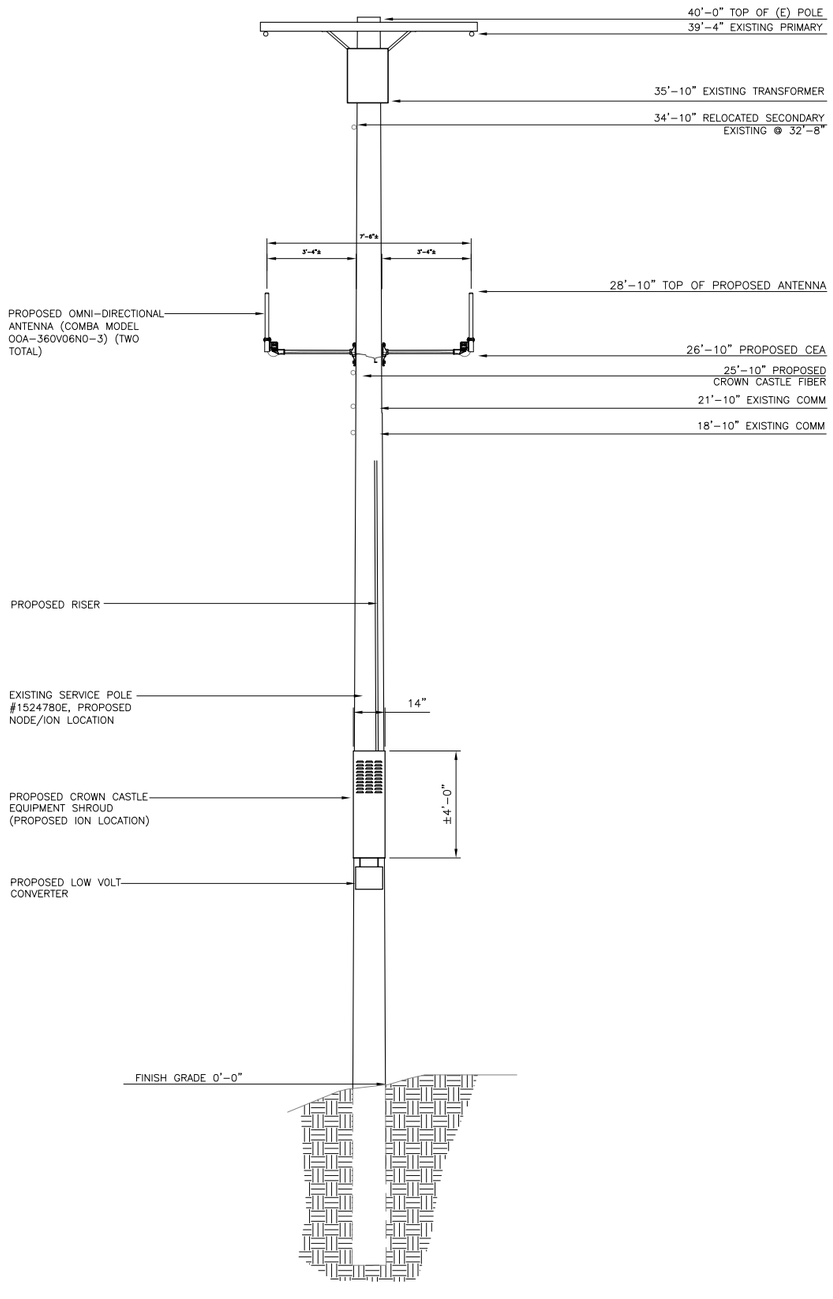
SHEET NUMBER:

A-2

NOTE:

1. ANTENNA TO BE PAINTED LIGHT–GREY (BEHR ULTRA BASE #4854)

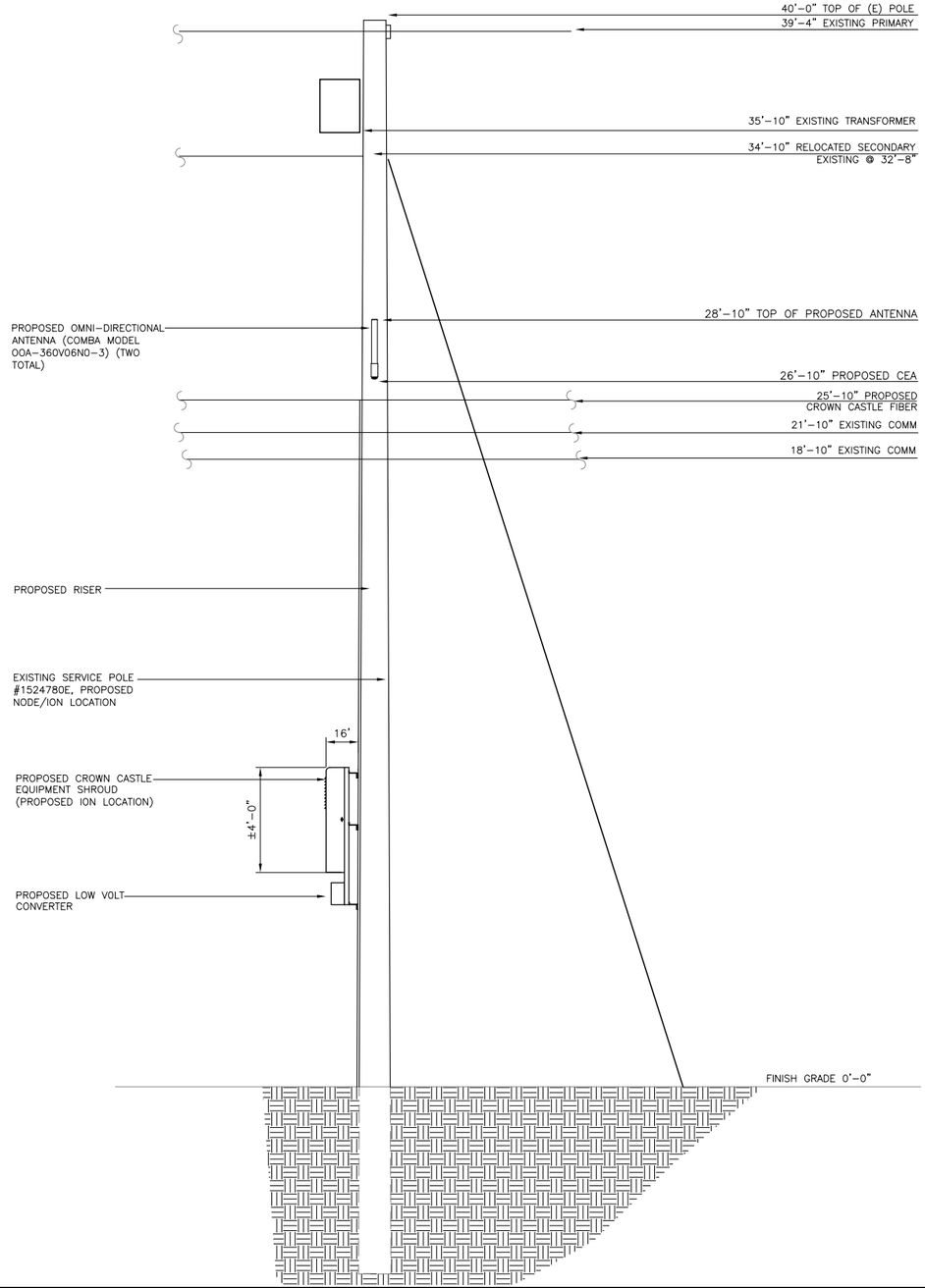
2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA–HIDE #3537–0500)



PROPOSED ELEVATION LOOKING EAST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

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SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:
FC

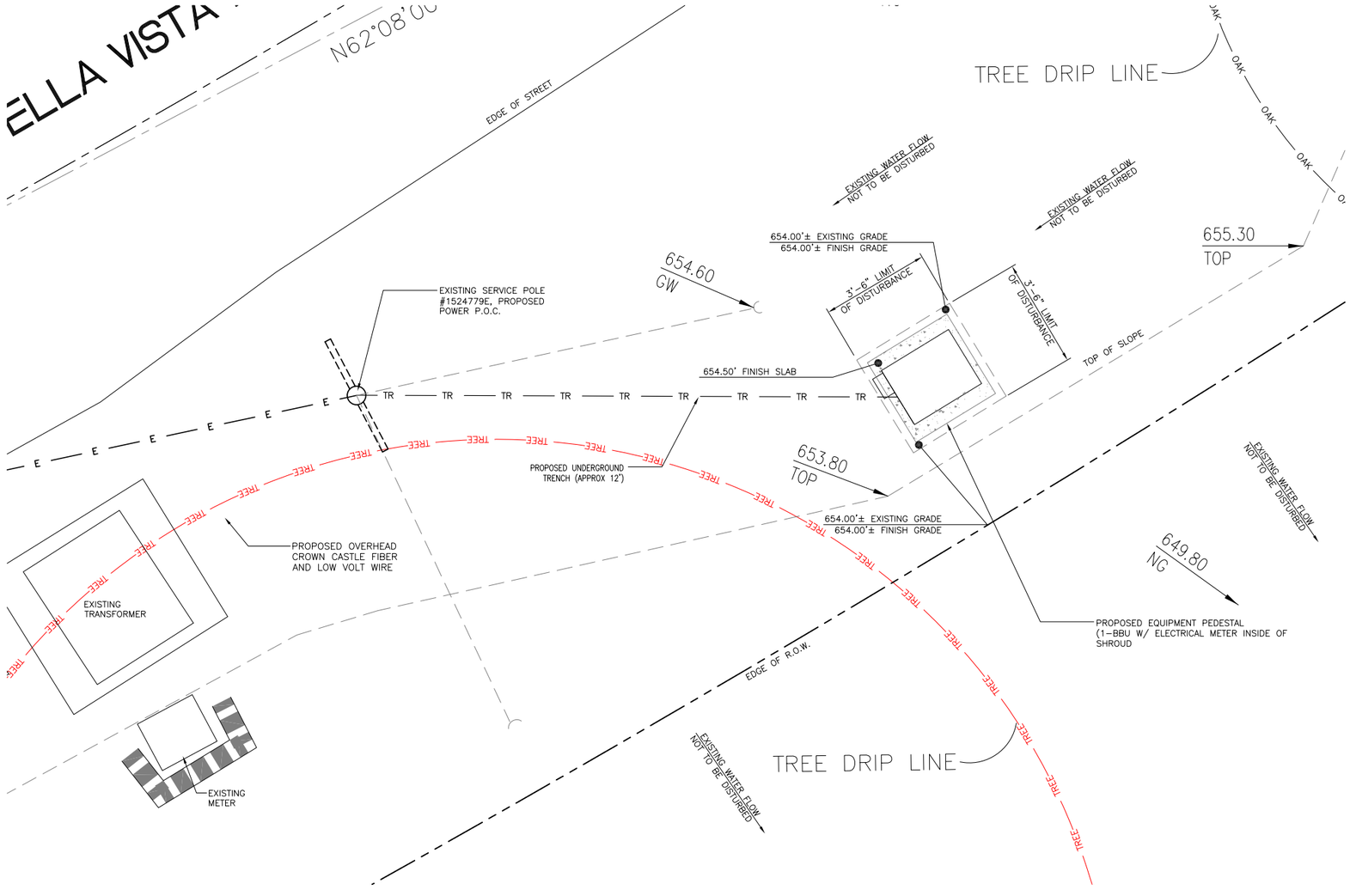
SHEET NUMBER:

A–3

NOTE:
NO CUT AND FILL REQUIRED

GRADING CALCULATION

CONCRETE PAD:	2.997 CF
VAULT:	66.9375 CF
12'Lx3'Dx.5'W TRENCH:	17.25 CF
TOTAL:	87.1845 CF



LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

N

SITE PLAN

SCALE: 1/2"=1'-0" (0 1' 2')

1

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SITE PLAN AND ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-4

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi

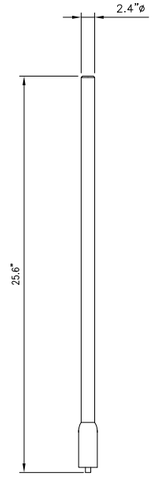
Technical Specifications

Electrical

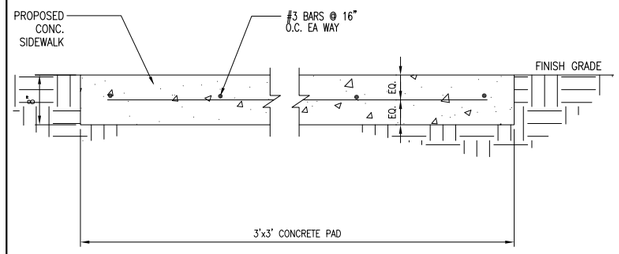
Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

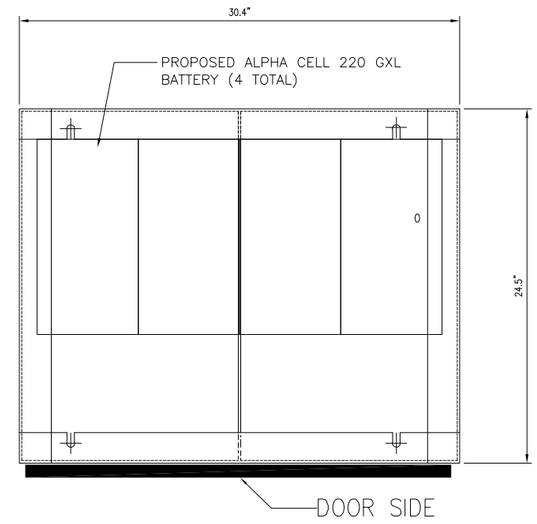
Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)

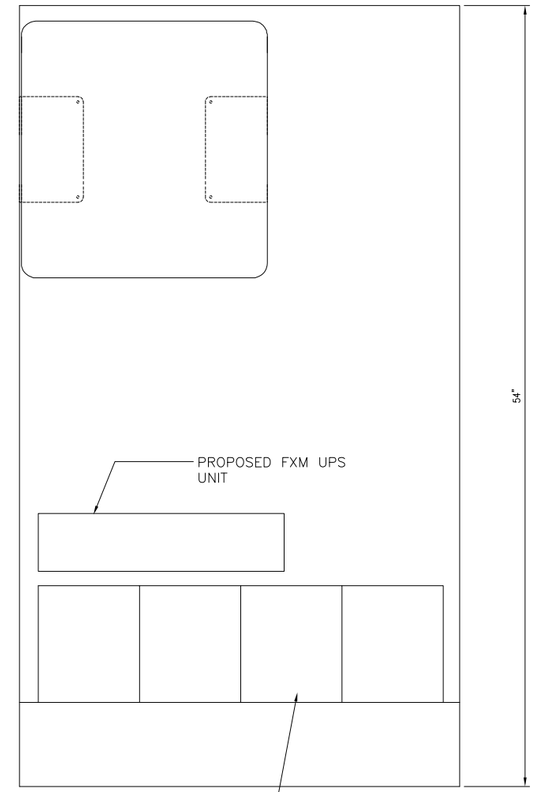


ANTENNA SPECIFICATIONS | N.T.S. | 1



CONCRETE PAD | N.T.S. | 3





Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
IP3 optimized ..... +10 max.
Noise figure optimized .... +6 max.
4.5 typical

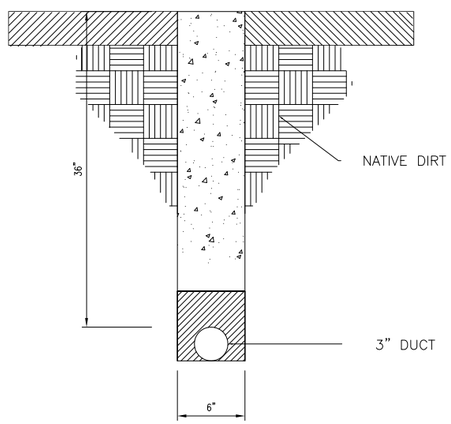
Mechanical**

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

ION-M7P/7P/85P/19P | N.T.S. | 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH | N.T.S. | 4

EQUIPMENT PEDESTAL | N.T.S. | 5

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SHEET TITLE:

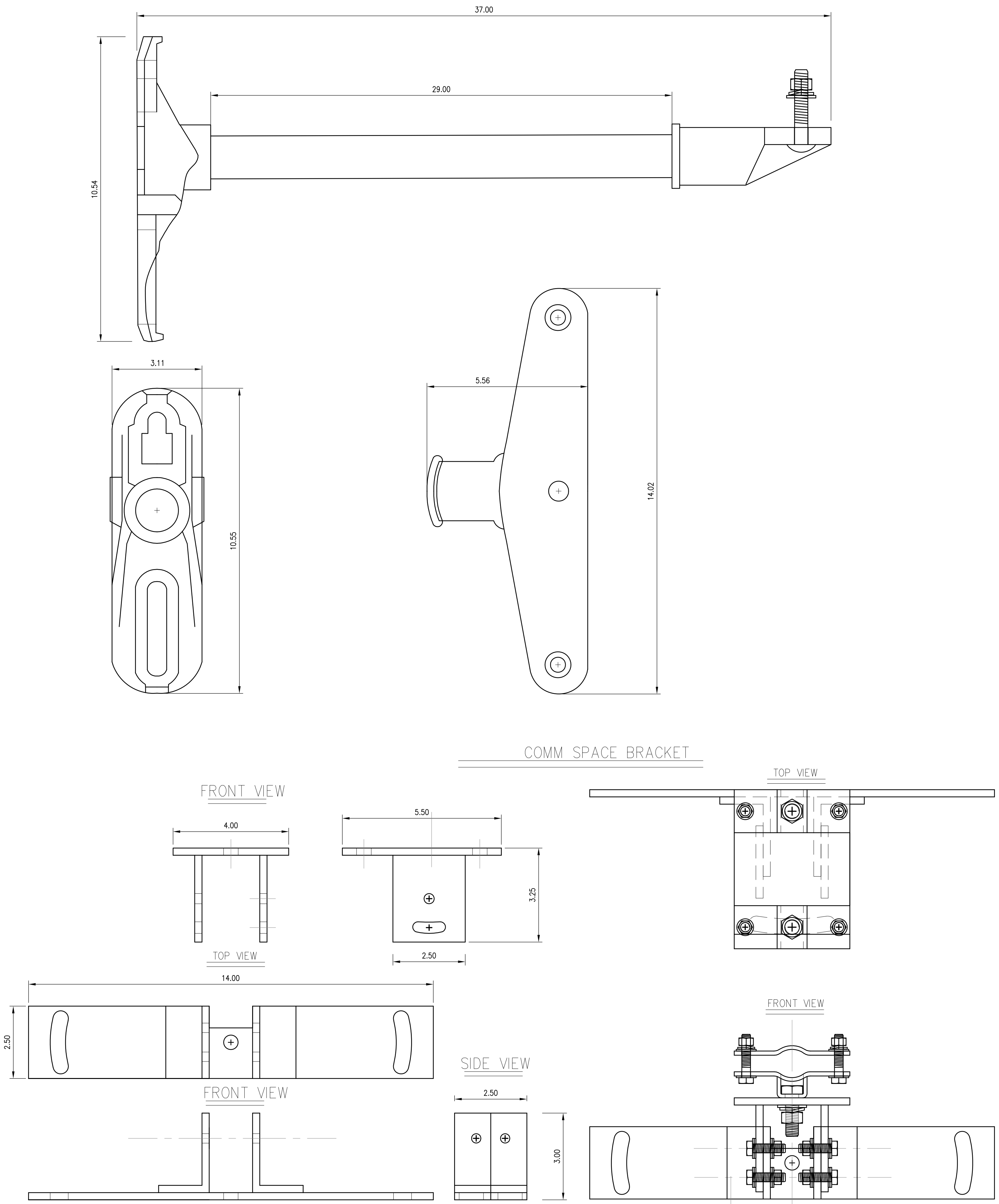
DETAILS

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

D–1



ANTENNA MOUNT | N.T.S. | 1

AlphaCell

General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range			
Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM2 90Vac(3)	4A			6A			8A			10A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	320	285	249	236	209	183	186	165	144
4 batteries:	701	625	546	444	396	346	329	293	256	261	232	203
6 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1487	1336	1165	960	859	750	720	643	562	577	515	450
9 batteries:	1686	1519	1322	1091	978	853	820	733	640	659	587	514

XM2 90Vac(3)	12A			14A			16A			18A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	68
4 batteries:	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	223
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	256

XM2 60Vac(5)	4A			6A			8A			10A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1686	1519	1322	1091	978	853	820	733	640	659	587	514
8 batteries:	2288	2067	1708	1487	1336	1165	1122	1006	877	904	809	706
9 batteries:	2590	2345	2037	1686	1519	1322	1273	1143	997	1027	921	803

XM2 60Vac(7)	12A			14A			16A			18A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	470	523	465	402	458	407	351
9 batteries:	843	753	658	692	617	538	597	531	462	523	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 52 359 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5291 Fax: +370 5 210 5292	P.R. China Tel: +852 2736 8663 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 925 9844 Fax: +7 495 916 1349	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

048-297-10-B002 (08/09)

BATTERY SPECIFICATIONS | N.T.S. | 2

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DETAILS

DRAWING INFO:

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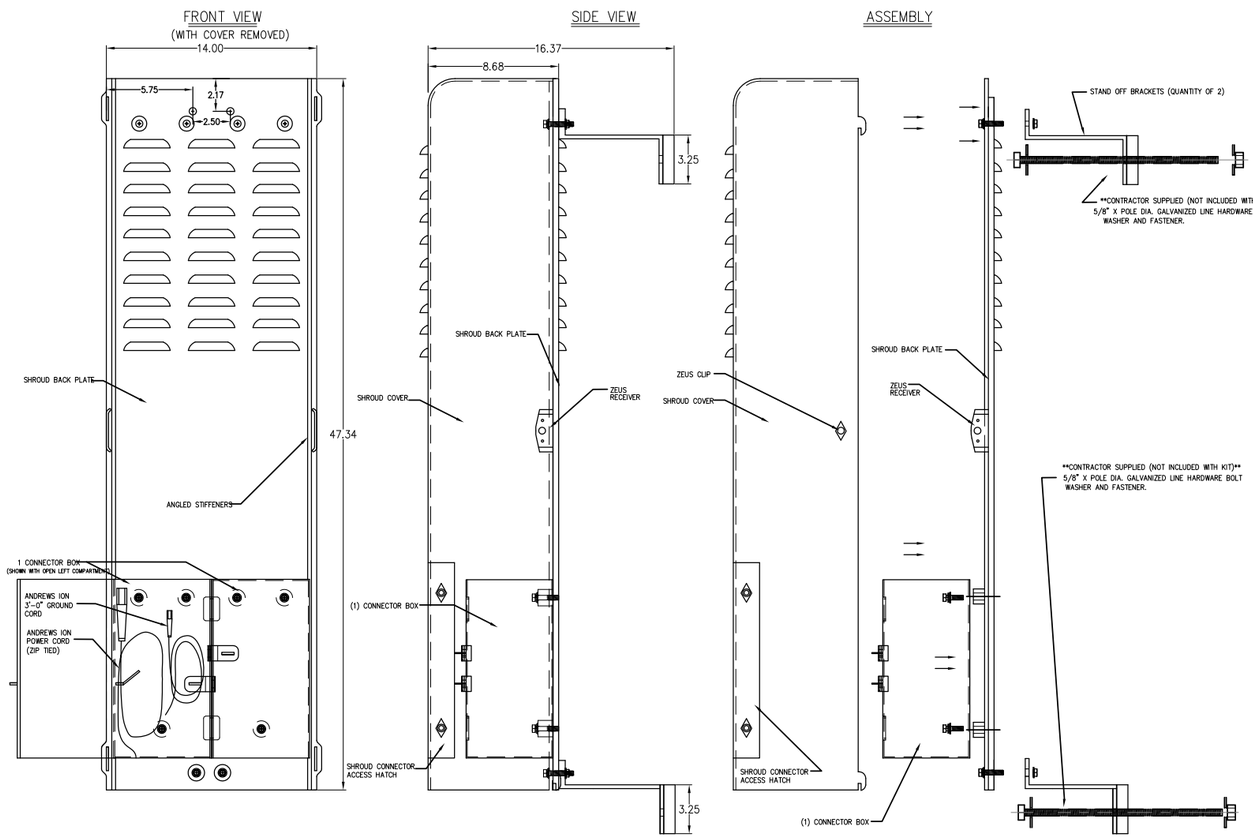
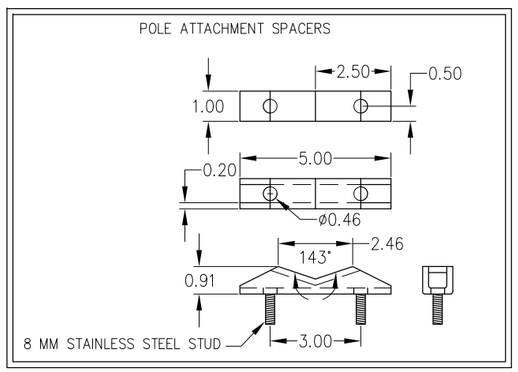
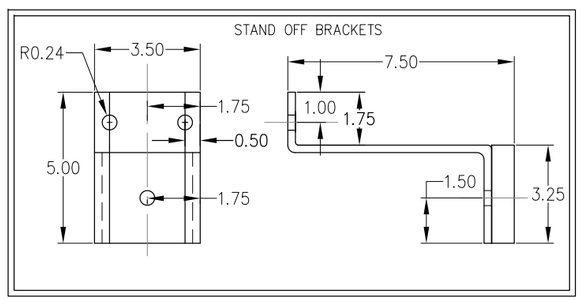
D-2







SHROUD DETAIL | N.T.S. | 1

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DRAWN BY:
FC

SHEET NUMBER:

D-3

CROWN CASTLE NG WEST, LLC

VERIZON MONTECITO-MON19m1

R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ACROSS FROM 969 ROMERO CANYON RD)
SANTA BARBARA, CA 93108

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT - ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

VICINITY MAP - N.T.S.

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE
LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.
ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE
ELECT. CONDUIT
COAXIAL CABLE
MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	-
DIRT TRENCH	-
PUNCH THRU	-
BORE	-
TOTAL	-
R&R SWF TOTAL	-

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF ROMERO CANYON RD. (ACROSS FROM 969 ROMERO CANYON RD) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, LLC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI ANTENNAS ON EXISTING UTILITY POLE
2. EQUIPMENT PEDESTAL W/ BBU, AND ELECTRICAL METER AT BASE OF POLE
3. PROPOSED SHROUD W/ ION ON EXISTING UTILITY POLE

SHEET INDEX:

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2014	ISSUED FOR REVIEW
1	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON19m1
VERIZON MONTECITO-MON19m1

SITE ADDRESS: THOMAS BROS PAGE 987 GRID E7
R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ACROSS FROM 969 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.443777
LONG: -119.592570

SHEET TITLE:

TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

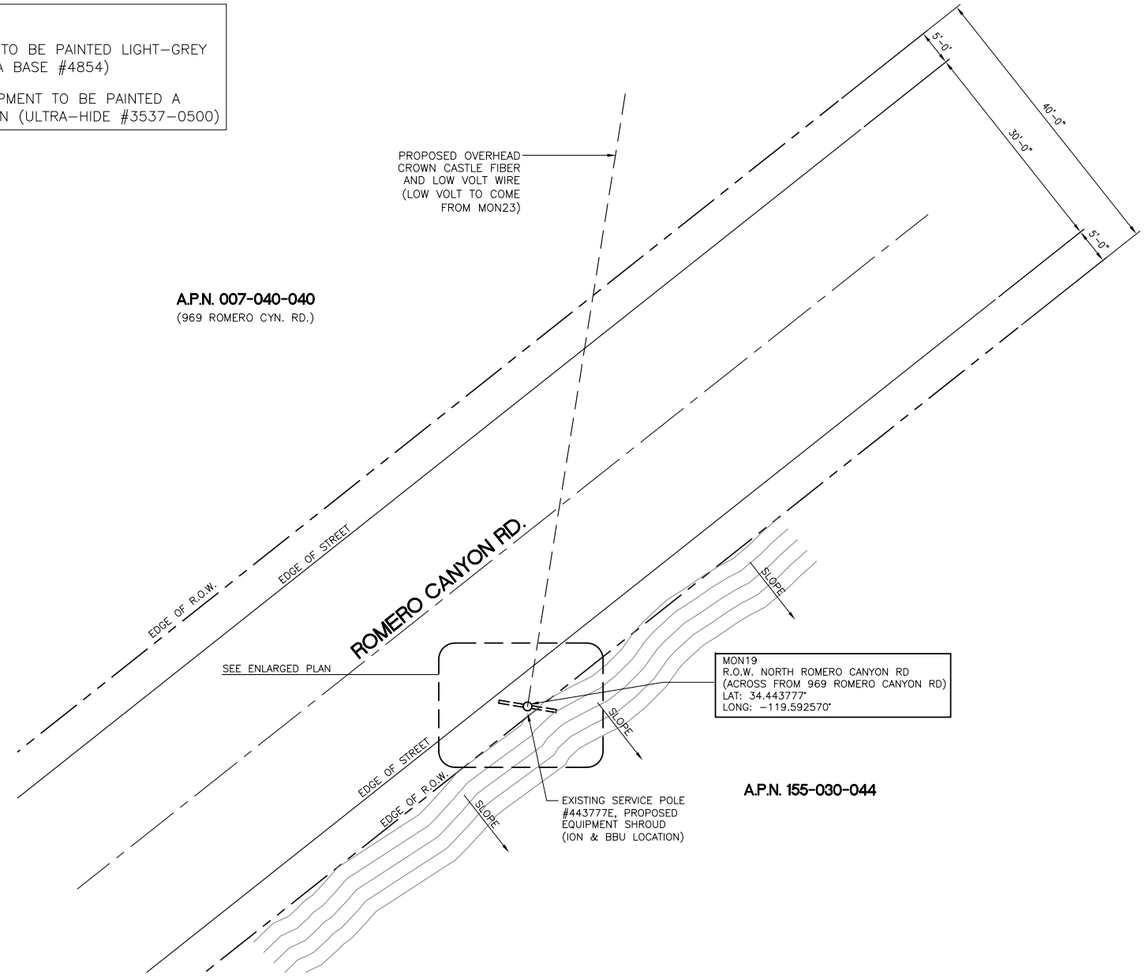
SHEET NUMBER:

T-1

NOTE:

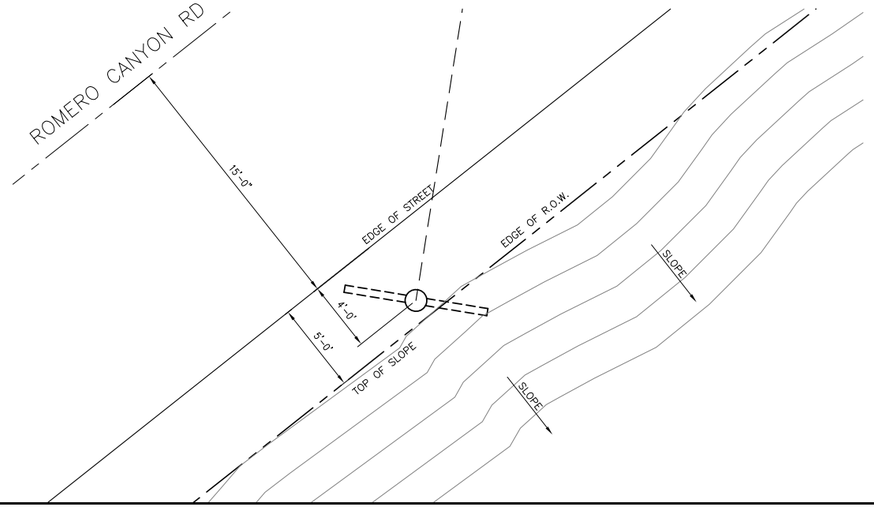
1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)



SITE PLAN — SCALE: 1"=10'-0" (0 5' 10') — 1

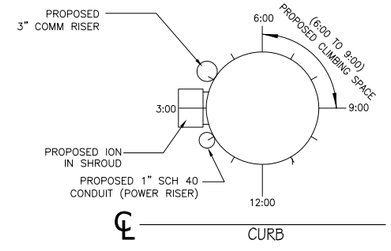
EXISTING PHOTO — SCALE: N.T.S. — 3



ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" (0 2' 4') — 2

POLE WILL BE STEPPED IN ACCORDANCE TO GO95 STANDARDS IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 4:00
1-1" POWER RISER @ 2:00



RISER PROFILE — SCALE: N.T.S. — 4

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2014	ISSUED FOR REVIEW
1	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC

CONSULTING CIVIL ENGINEERS

26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630

(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON19m1
VERIZON MONTECITO-MON19m1

SITE ADDRESS: THOMAS BROS PAGE 987 GRID E7
R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ACROSS FROM 969 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.443777
LONG: -119.592570

SHEET TITLE:

SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

DRAWN BY:
FC

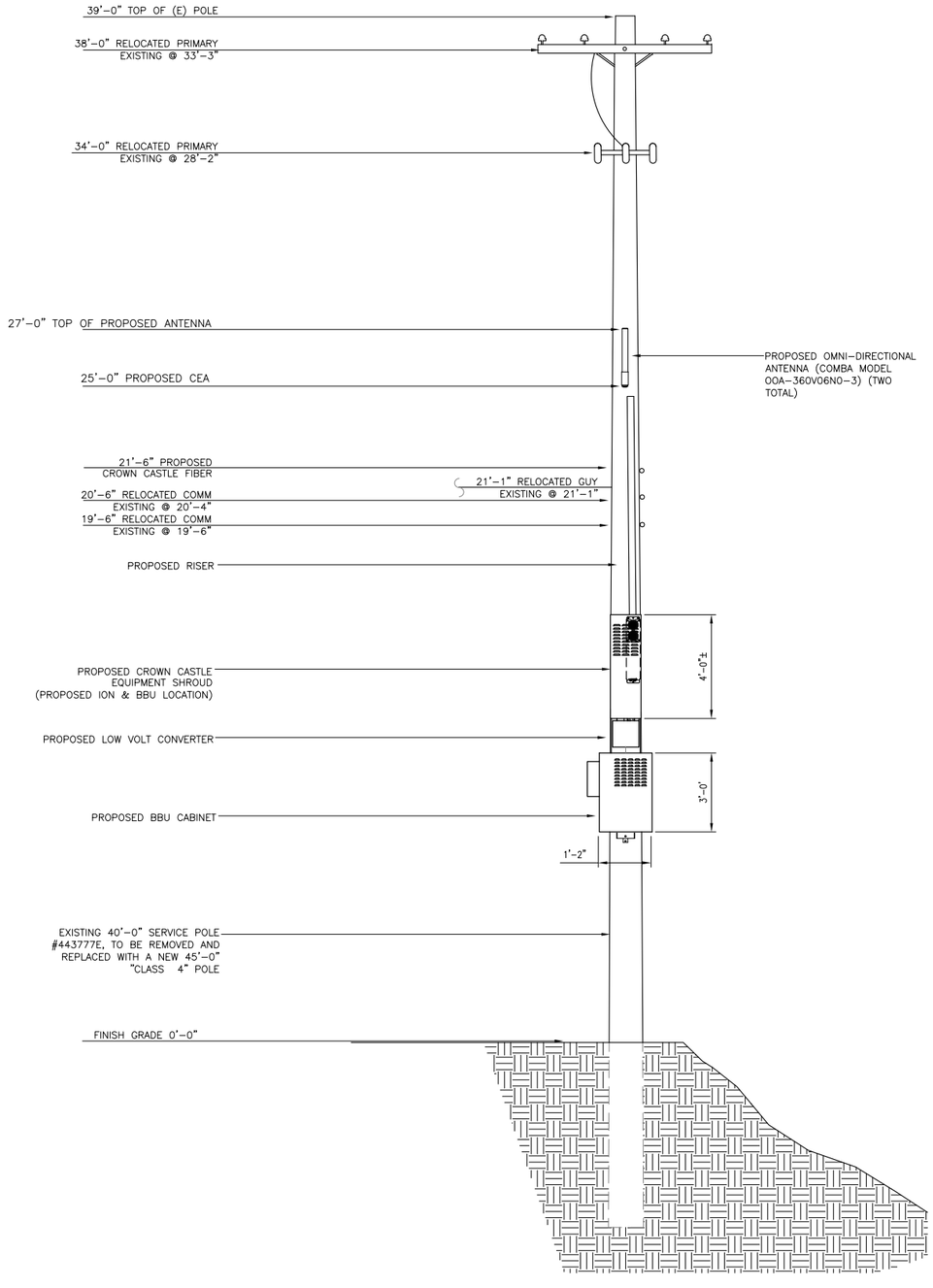
SHEET NUMBER:
A-1

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

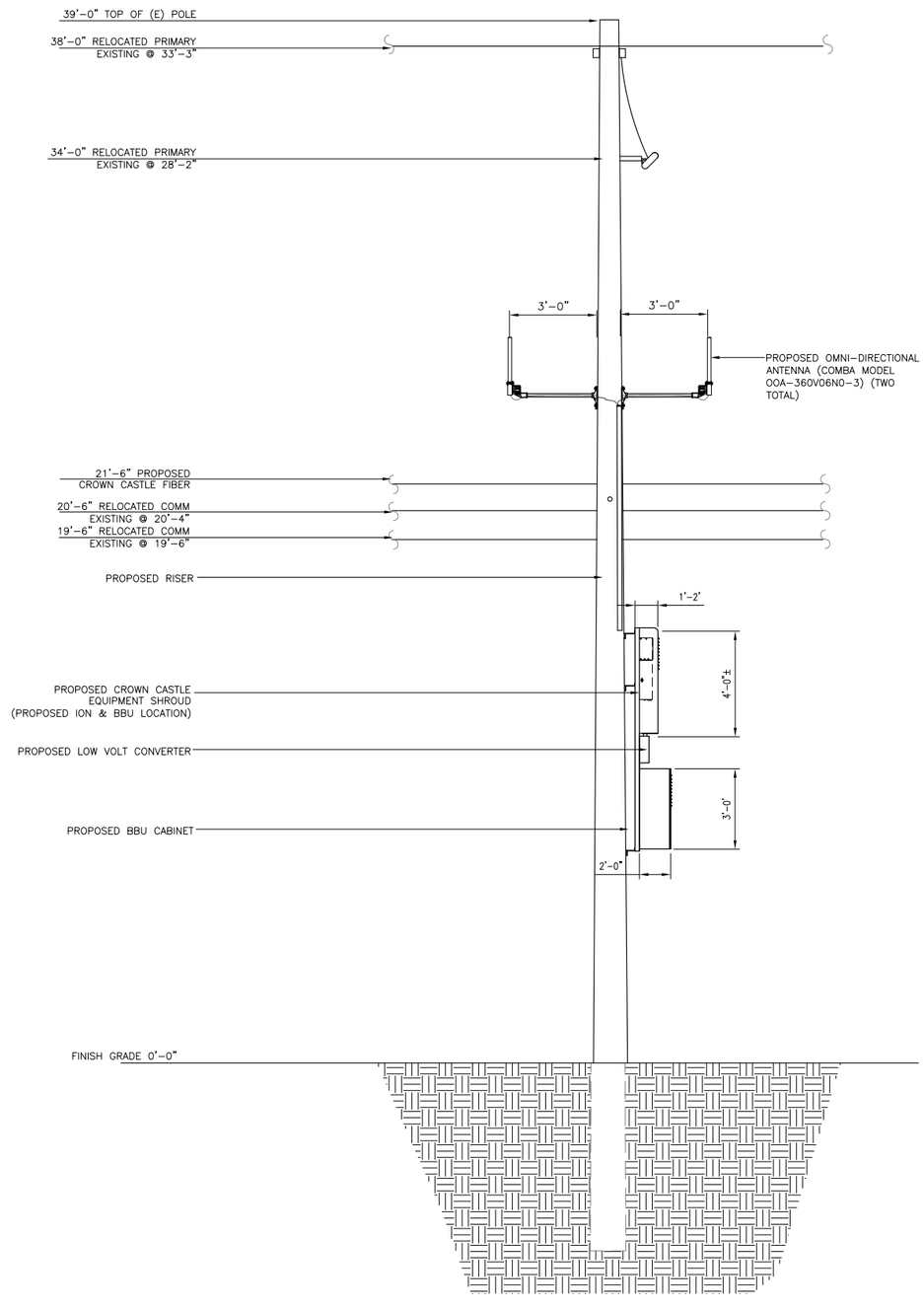
SCE TO REPLACE EXISTING 40'-0" POLE
W/ A NEW "CLASS 4" 45'-0" POLE



PROPOSED ELEVATION LOOKING WEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2014	ISSUED FOR REVIEW
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ENGINEER/CONSULTANT:

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SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

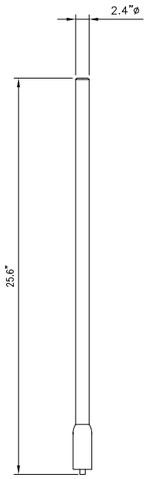
A-3

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0dBi

Technical Specifications



Electrical

Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)

Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40**	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40**	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
ICP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

Mechanical**

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.49/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM2.90Vac@	4A			6A			8A			10A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	320	285	249	236	209	198	186	165	144
4 batteries:	701	625	546	444	396	346	329	293	258	261	232	203
6 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1487	1338	1165	960	859	750	720	643	562	577	515	450
9 batteries:	1886	1519	1322	1091	978	853	820	733	640	659	587	514
XM2.90Vac@	12A			14A			16A			18A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries:	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	223
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	256
XM2.60Vac@	4A			6A			8A			10A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1886	1519	1322	1091	978	853	820	733	640	659	587	514
8 batteries:	2298	2057	1798	1487	1338	1165	1122	1006	877	904	809	706
9 batteries:	2560	2345	2037	1886	1519	1322	1273	1143	997	1027	921	803
XM2.60Vac@	12A			14A			16A			18A		
BatteryRuntime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	186	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	470	523	465	402	458	407	351
9 batteries:	843	753	658	692	617	538	597	531	462	523	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

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Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 22 399 596	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5291 Fax: +370 5 210 5292	P.R. China Tel: +852 2736 8663 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 926 9844 Fax: +7 495 916 1348	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

049-297-10-B002 (06/09)

REV:	DATE/BY:	REVISION DESCRIPTION:
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ENGINEER/CONSULTANT:

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CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON19m1
VERIZON MONTECITO–MON19m1

SITE ADDRESS: THOMAS BROS PAGE 987 GRID E7
R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ACROSS FROM 969 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.443777
LONG: –119.592570

SHEET TITLE:

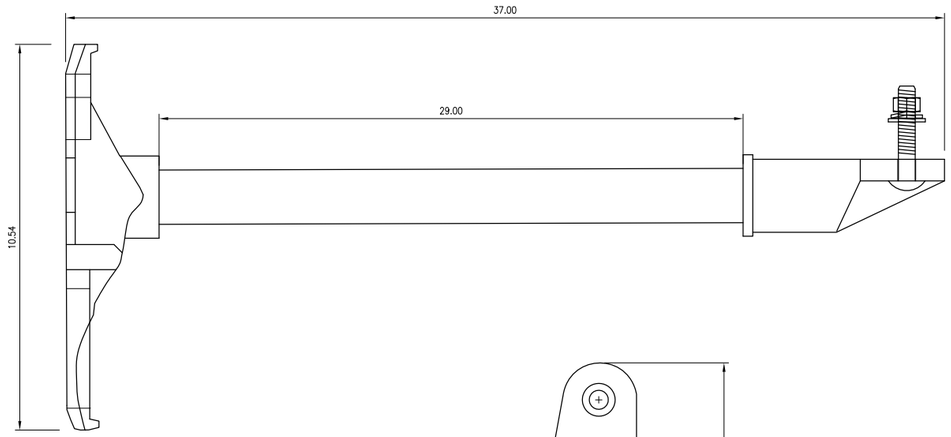
DETAILS

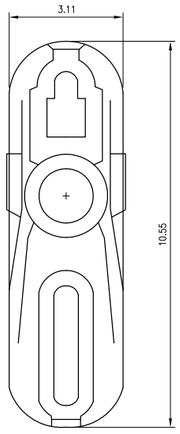
DRAWING INFO:

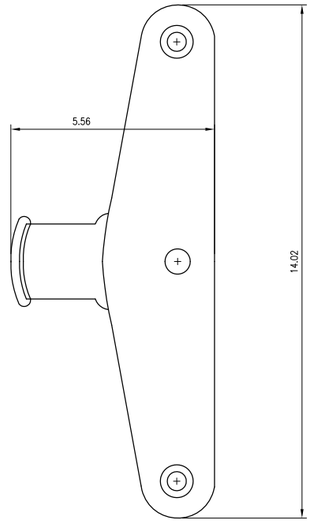
DRAWN BY:
FC

SHEET NUMBER:

D–1







ANTENNA MOUNT

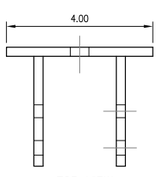
N.T.S. | 1

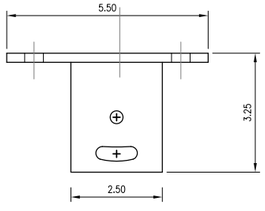
UN-USED

N.T.S. | 2

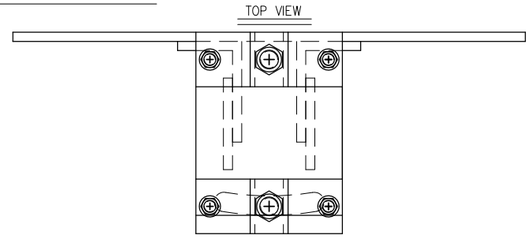
COMM SPACE BRACKET

FRONT VIEW

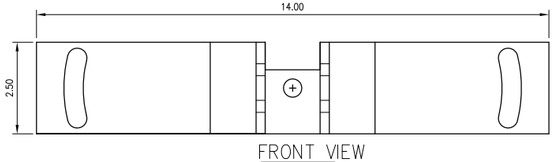




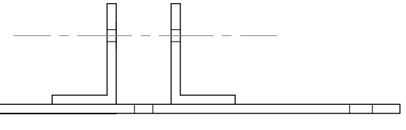
TOP VIEW



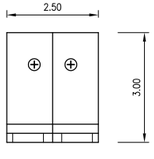
TOP VIEW



FRONT VIEW



SIDE VIEW



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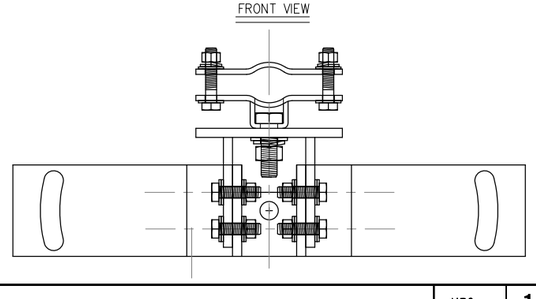

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ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC

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(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

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SITE INFO:

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MON19m1
VERIZON MONTECITO-MON19m1

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(ACROSS FROM 969 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.443777
LONG: -119.592570

SHEET TITLE:

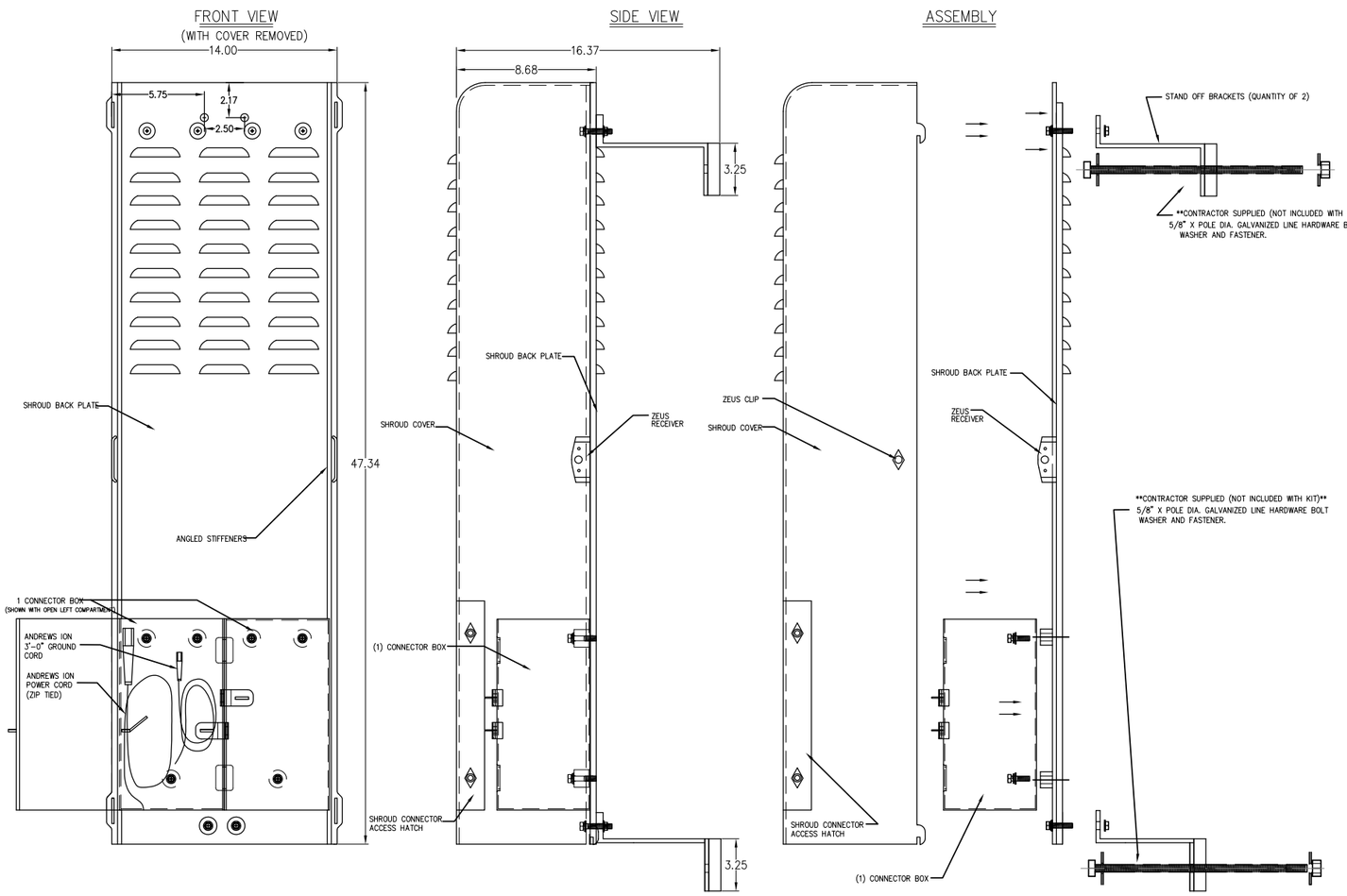
DETAILS

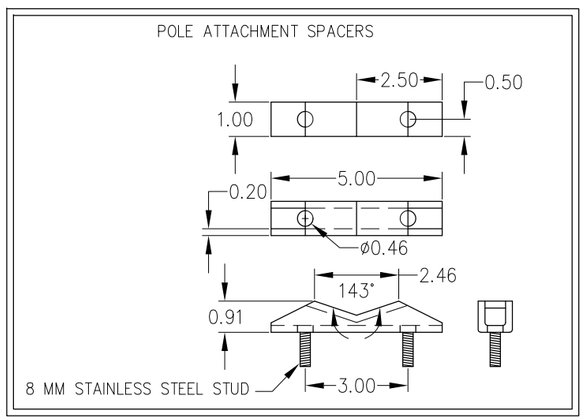
DRAWING INFO:

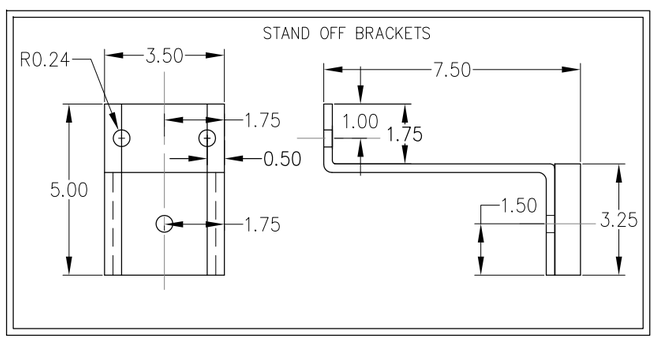
DRAWN BY:
FC

SHEET NUMBER:

D-2







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D-3

SHROUD DETAIL | N.T.S. | 1

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON20

R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ADJACENT TO 850 ROMERO CANYON)
SANTA BARBARA, CA 93108

VICINITY MAP – N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT – ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	–
DIRT TRENCH	–
PUNCH THRU	–
BORE	–
TOTAL	–
R&R SWF TOTAL	–

- GROUND BUS BAR
- MECH. GRND. CONN.
- CADWELD
- ELECTRIC BOX
- TELEPHONE BOX
- EXISTING SERVICE POLE
- SIDEWALK FLAG
- EX. MANHOLE
- LIGHT POLE
- FOUNDATION
- SPOT ELEV.
- SET POINT
- REVISION
- DETAIL REF.
- ELEVATION REF.
- SECTION REF.
- PROP./LEASE LINE
- MATCH LINE
- WORK POINT
- TELE. CONDUIT
- CENTERLINE
- ELECT. CONDUIT
- COAXIAL CABLE
- MYERS PEDESTAL
- VAULT STANDARD 2'X3'
- STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF ROMERO CANYON RD. (ADJACENT TO 850 ROMERO CANYON) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI DIRECTIONAL ANTENNA ON EXISTING UTILITY POLE
2. EQUIPMENT PEDESTAL W/ BBU AND ELECTRICAL METER AT BASE OF POLE

SHEET INDEX:

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0	FXC 03/15/2013	ISSUED FOR REVIEW
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VERIZON MONTECITO-MON20

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LONG: -119.59602

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TITLE SHEET

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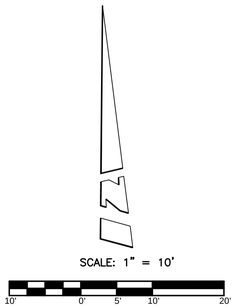
SHEET NUMBER:

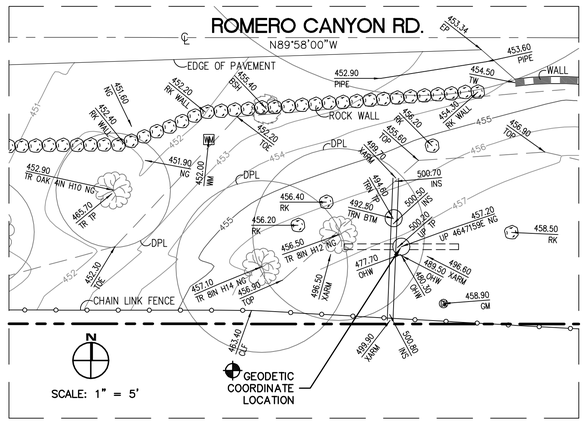
T-1



LEGEND:

AC	ASPHALT CONCRETE
BDK	BRASS DISK
BSH	BUSH
BTM	BOTTOM
CLF	CHAIN LINK FENCE
DPL	DRIP LINE
EM	ELECTRICAL METER
EOC	EDGE OF CONCRETE
EP	EDGE OF PAVEMENT
FD	FOUND
GM	GAS METER
INS	INSULATOR
IP	IRON PIPE
NFOW	NORTH FACE OF WALL
NG	NATURAL GROUND
OHW	OVERHEAD WIRE
RK	ROCK
TOE	TOE OF SLOPE
TOP	TOP OF SLOPE
TP	TOP
TR	TREE
TRN	TRANSFORMER
TW	TOP OF WALL
UP	UTILITY POLE
WM	WATER METER
XARM	CROSS ARM

BLOCK WALL
CHAIN LINK FENCE
CENTERLINE
FOUND MONUMENT
GAS METER
UTILITY POLE
WATER METER



COORDINATES:

LATITUDE 34°26'35.32" N
LONGITUDE 119°35'45.39" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

THE NORTH RIGHT OF WAY LINE OF ROMERO CANYON ROAD, BEING SOUTH 89°58'00" EAST PER RECORD OF SURVEY, R.S.B. 62/22, RECORDS OF SANTA BARBARA COUNTY.

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 472"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 472" AS SHOWN ON THE "CARPINTERIA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 474.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

DATE OF SURVEY:

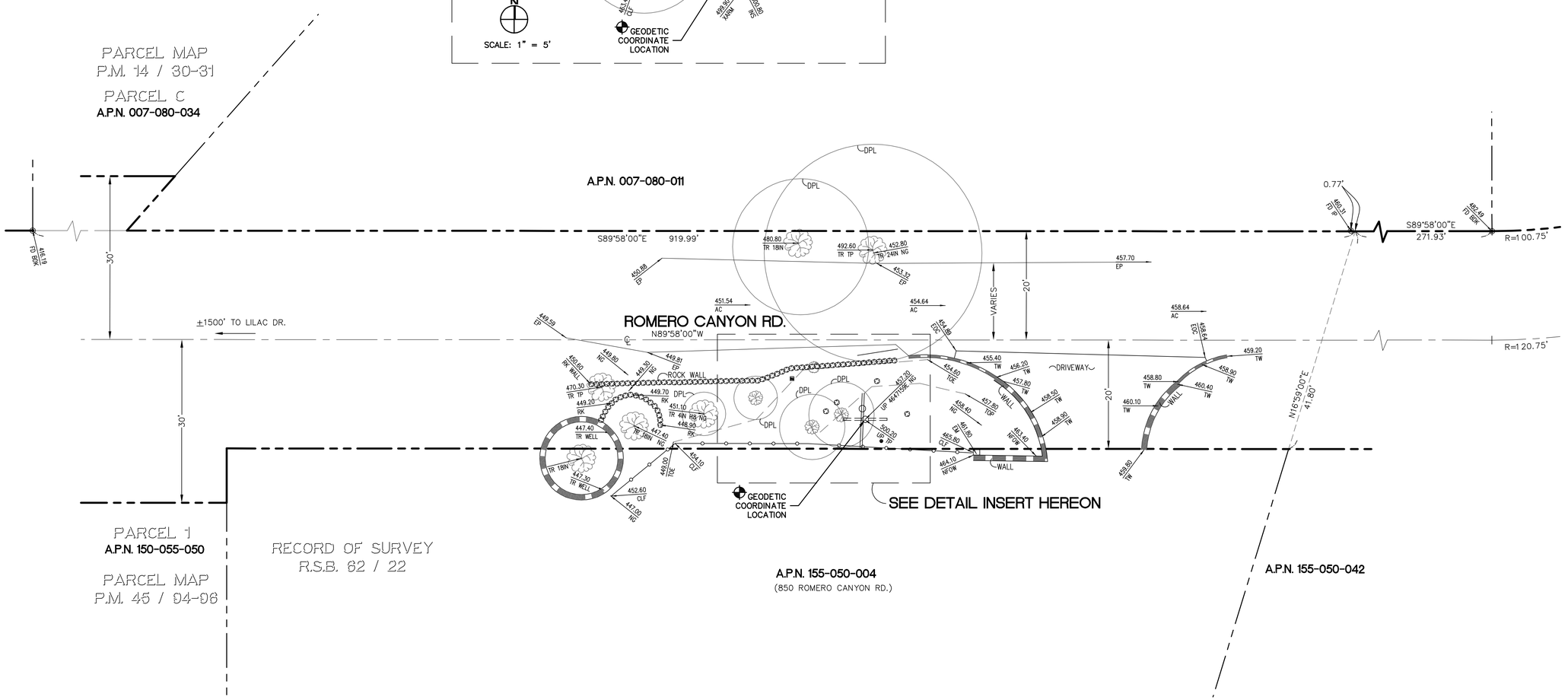
JULY 11, 2013

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

LIVING PLANTS STATEMENT:

THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY VALID FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.



REV:	DATE/BY:	REVISION DESCRIPTION:
1	07/22/13 JA	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PKWY. SOUTH
LAKE FOREST, CA 92630-8326
(949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

CROWN CASTLE NG WEST, INC.

SURVEYOR:

BERT HAZE AND ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3188 AIRWAY AVENUE, SUITE K1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX

JN. 706.233

STAMP:

PROFESSIONAL LAND SURVEYOR
BERT HAZE
No. 7211
Exp. 3-31-14
STATE OF CALIFORNIA

SITE INFO:

SITE NAME:
MON20
VERIZON MONTECITO-MON20

SITE ADDRESS:
R.O.W. SOUTH SIDE OF ROMERO CYN. RD.
(ADJACENT TO 850 ROMERO CYN. ROAD)
SANTA BARBARA, CA 93108

SHEET TITLE:
TOPOGRAPHIC SURVEY

DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
MON20	JA	07/22/13

SHEET NUMBER:
1 OF 1 | C-1

NOTE:

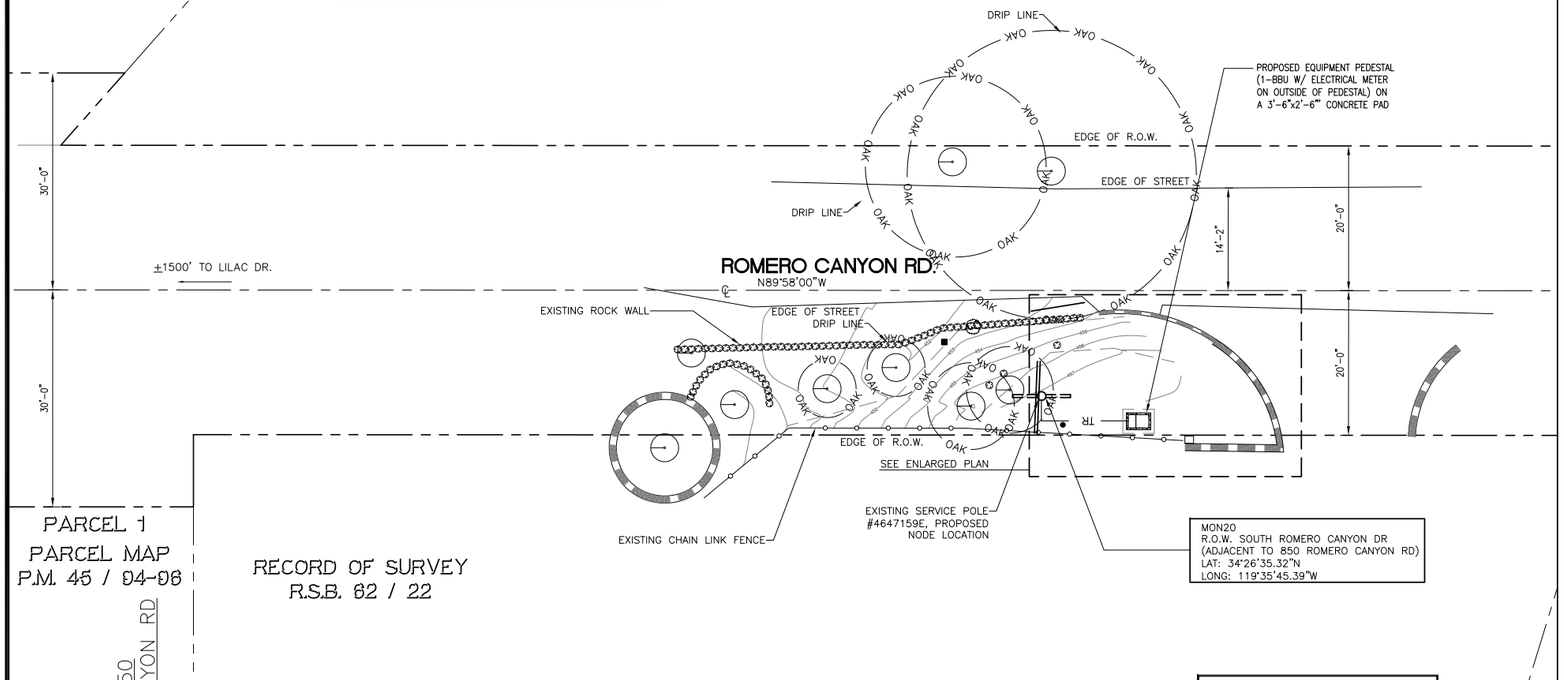
1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

007-080-034
809 ROMERO CANYON RD

PARCEL MAP
P.M. 14 / 30-31
PARCEL C

007-080-011
865 ROMERO CANYON RD



PARCEL 1
PARCEL MAP
P.M. 45 / 94-96

RECORD OF SURVEY
R.S.B. 62 / 22

155-050-050
830 ROMERO CANYON RD

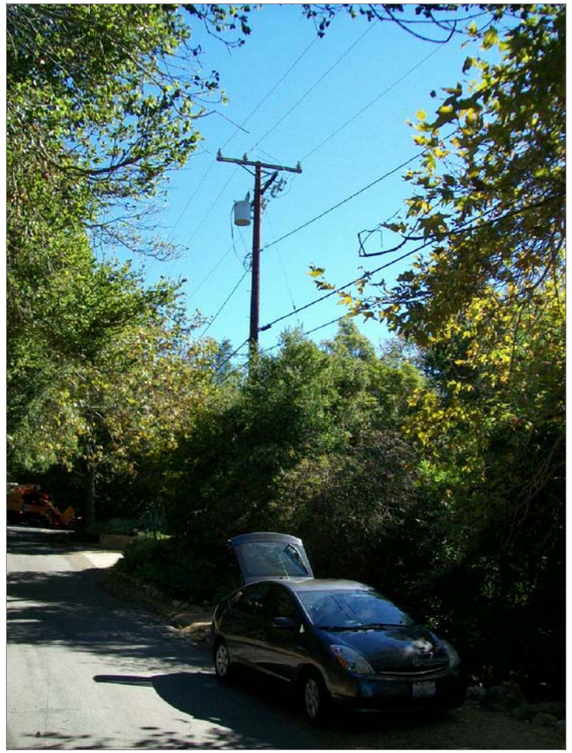
155-050-004
850 ROMERO CANYON RD

LEGEND

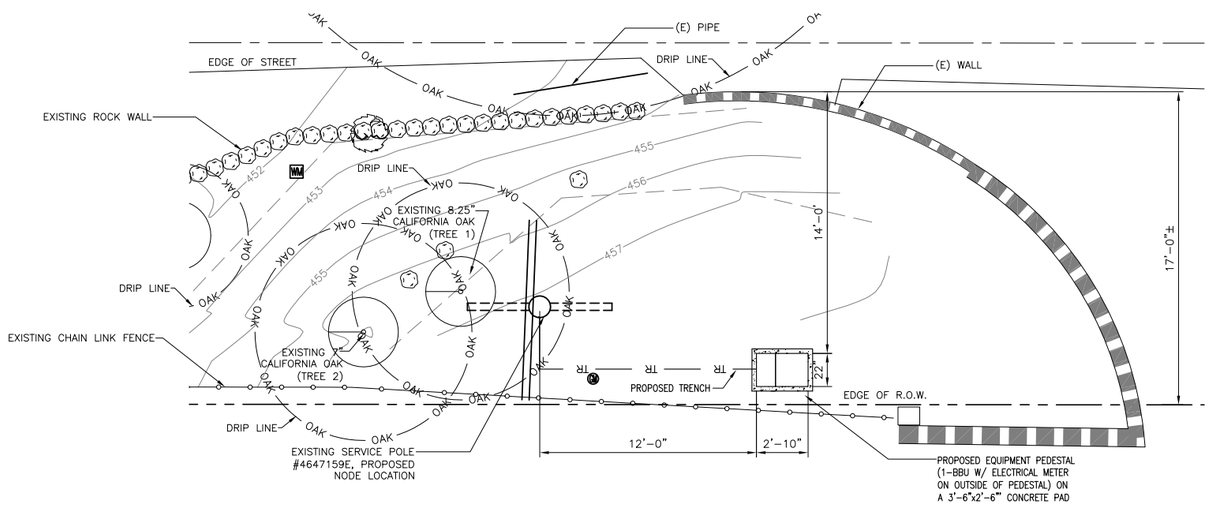
TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

NOTE:
TRENCH TO BE HAND DUG.

SITE PLAN — SCALE: 1"=10'-0" — 1

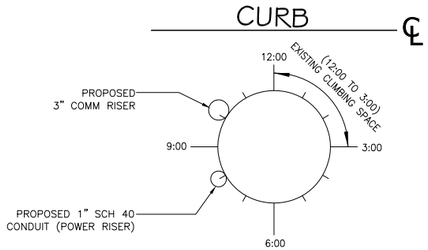


EXISTING PHOTO — SCALE: N.T.S. — 3



ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" — 2

POLE WILL BE STEPPED IN ACCORDANCE TO G095 STANDARDS IN RESPECT TO CLIMBING SPACE.
1-3" CROWN CASTLE RISER @ 10:00
1-1" POWER RISER @ 8:00



RISER PROFILE — SCALE: N.T.S. — 4

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3	FXC 11/06/2013	ISSUED FOR FINAL
4	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON20
VERIZON MONTECITO-MON20

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1
R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ADJACENT TO 850 ROMERO CANYON)
SANTA BARBARA, CA 93108
LAT: 34.44327
LONG: -119.59602

SHEET TITLE:

SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

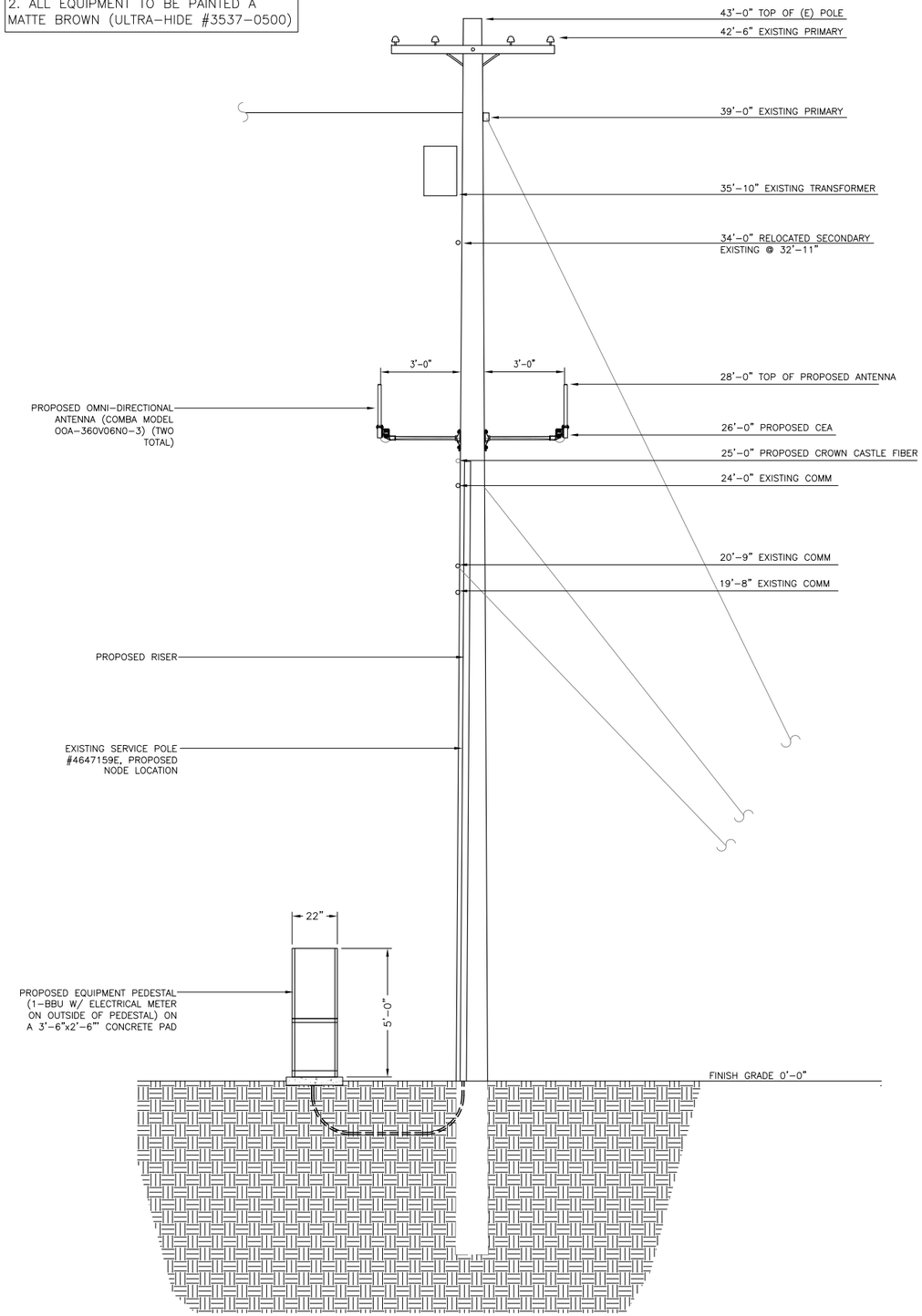
DRAWN BY:
FC

SHEET NUMBER:
A-1

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

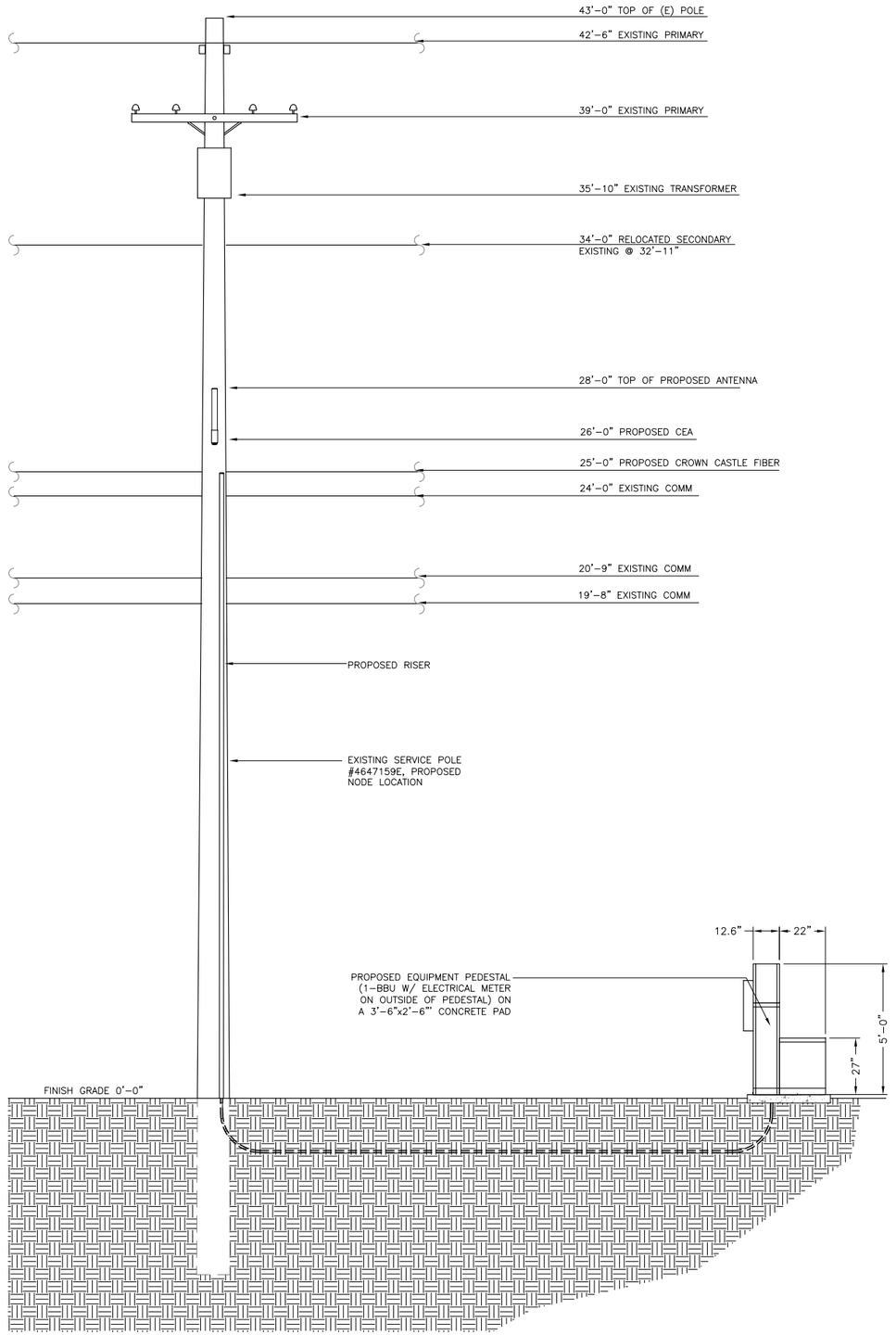
2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)



PROPOSED ELEVATION LOOKING WEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
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CROWN CASTLE NG WEST, INC.

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VERIZON MONTECITO-MON20

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1

R.O.W. SOUTH SIDE OF ROMERO CANYON RD.

(ADJACENT TO 850 ROMERO CANYON)

SANTA BARBARA, CA 93108

LAT: 34.44327

LONG: -119.59602

SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:

FC

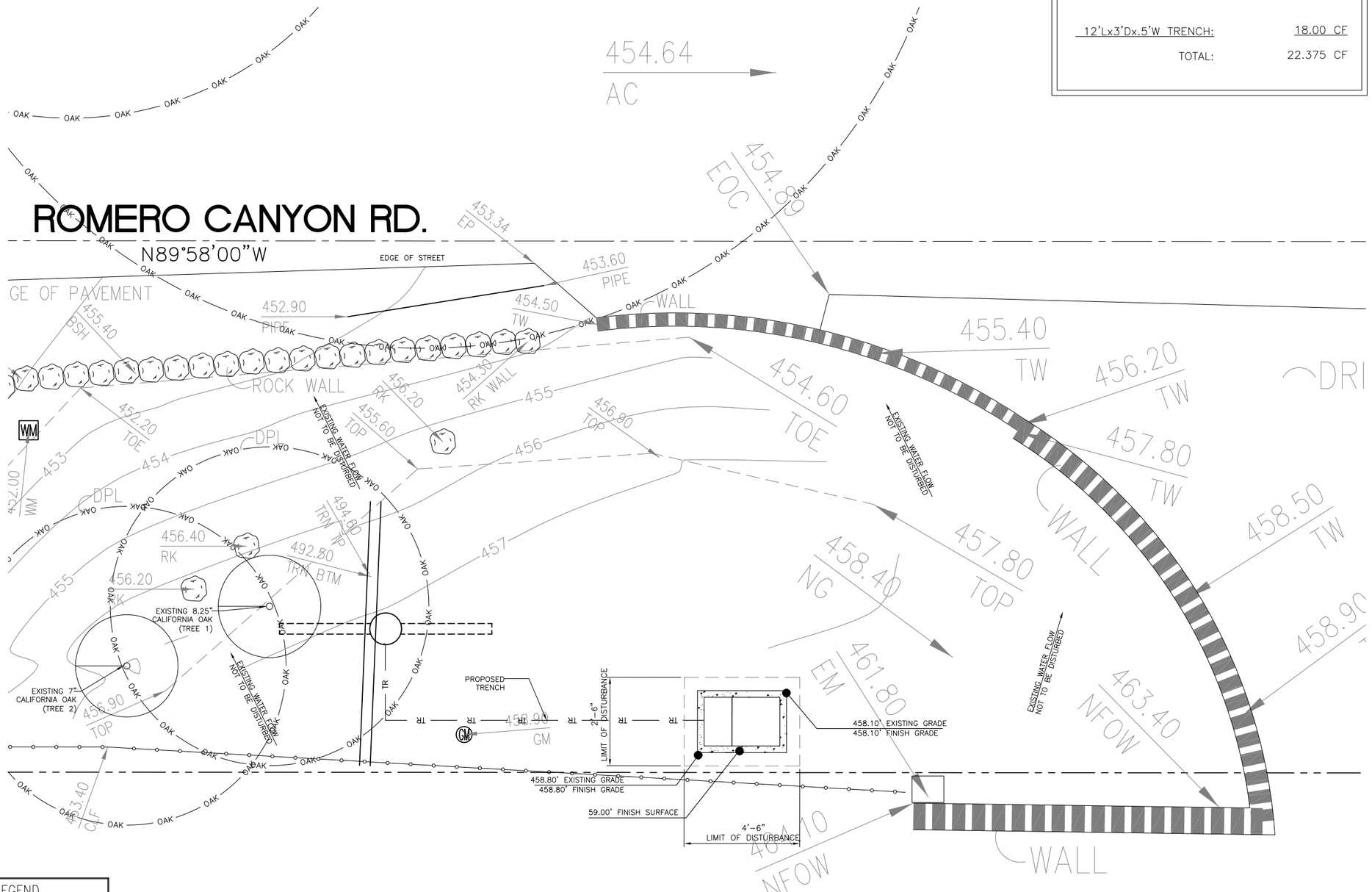
SHEET NUMBER:

A-2

NOTE:
NO CUT AND FILL REQUIRED

GRADING CALCULATION

CONCRETE PAD:	4.375 CF
12'Lx3'Dx.5'W TRENCH:	18.00 CF
TOTAL:	22.375 CF



LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

NOTE:
TRENCH TO BE HAND DUG.

GRADING PLAN

SCALE: 1/2"=1'-0" (0, 1', 2')

1

REV:	DATE/BY:	REVISION DESCRIPTION:
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R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ADJACENT TO 850 ROMERO CANYON)
SANTA BARBARA, CA 93108
LAT: 34.44327
LONG: -119.59602

SHEET TITLE:

GRADING PLAN

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:
A-3

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi

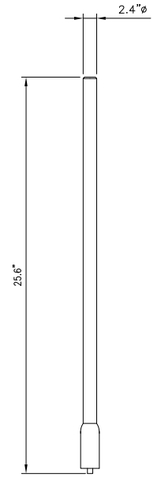
Technical Specifications

Electrical

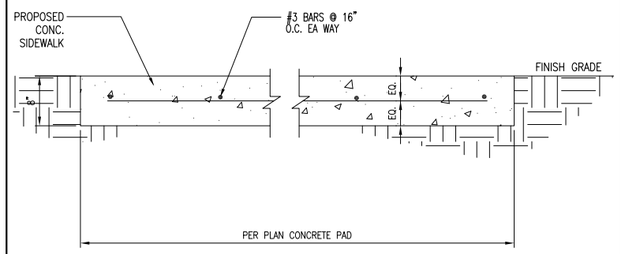
Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1. 2 (2. 65)



ANTENNA SPECIFICATIONS N.T.S. 1



CONCRETE PAD N.T.S. 3

Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope

ION-M7P/7P/85P/19P

Noise figure, dB
IIP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

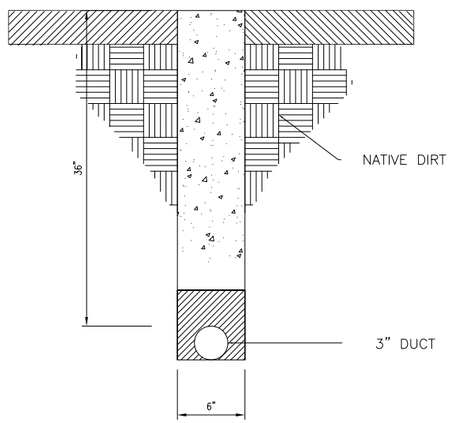
Mechanical***

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

ION-M7P/7P/85P/19P N.T.S. 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH N.T.S. 4

MMOE - Telecom

Multi Mount Outdoor Enclosure

- Compact enclosure design provides ideal fit for locations where aesthetics are important
- Light-weight powder coated aluminum construction offers superior corrosion resistant properties
- Large sun shield, reduces solar heat loading inside the cabinet
- 180° stainless steel piano-hinged door (with two locking open positions) make installation and maintenance easy and convenient
- Thermostat controlled filtered fan cooling and louvered vents ensure reliable operation in high temperature environments
- Various mounting options (including pole mount) make this highly versatile in space constrained mobile broadband applications

Alpha's Multi Mount Outdoor Enclosure (MMOE) - Telecom, is a cost-effective and versatile enclosure ideal for space constrained locations. The Multi Mount can be pole, host, wall or pedestal mounted and can accommodate Alpha's FXM UPS and up to four AlphaGel™ 853GL or 195 GXL front terminal batteries. With a small form factor, the Multi Mount is the perfect choice for locations where confined space necessitates creative installation options.

alpha TECHNOLOGIES

Alpha Multi Mount Outdoor Enclosure - Telecom

Consult your Alpha representative for FXM configurations

Mechanical

Dimensions:
mm: 687H x 569W x 457D
inches: 27H x 22W x 18D
Weight: 27.2kg (60lbs)
Construction: High strength corrosion resistant aluminum
Finish: Powder coated white color
Equipment space: EIA standard 19", 6RU space with one battery shelf
Cable entrance: Bottom of enclosure: 1 x 3" diameter knock-out (2¼" trade size) 4 x 1.125" diameter knock-out (¾" trade size)
Hinge type: Stainless steel piano hinge
Door prop: Aluminum rod, 2 locking open positions
Door latch: Ballcone 216 compression lock with padlock provision

HVAC Specifications

Cooling: Thermostat controlled 48VDC fan, 100 cfm or better. On at 49°C (120°F) Off at 32°C (89°F)
Door installed louvers: Equipped with splash baffle

Enclosure options

Mounting: Pole, host, wall, or pedestal (please specify if pole used is concrete at time of order)

System Specifications

› System Options
- Alpha AC distribution panel
- Alpha universal automatic transfer switch
- Alpha universal generator transfer switch
- AlphaGuard battery balancer
- Battery heater mats
- Transient voltage surge suppression device

Agency Compliance

Telcordia: GR-63-CORE
NEMA rating: 3R

PEDESTAL SPECIFICATIONS N.T.S. 5

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
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ENGINEER/CONSULTANT:

Civil Engineer

CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON20
VERIZON MONTECITO–MON20

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1
R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ADJACENT TO 850 ROMERO CANYON)
SANTA BARBARA, CA 93108
LAT: 34.44327
LONG: –119.59602

SHEET TITLE:

DETAILS

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:
D–1

REV:	DATE/BY:	REVISION DESCRIPTION:
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R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ADJACENT TO 850 ROMERO CANYON)
SANTA BARBARA, CA 93108

LAT: 34.44327
LONG: -119.59602

SHEET TITLE:

DETAILS

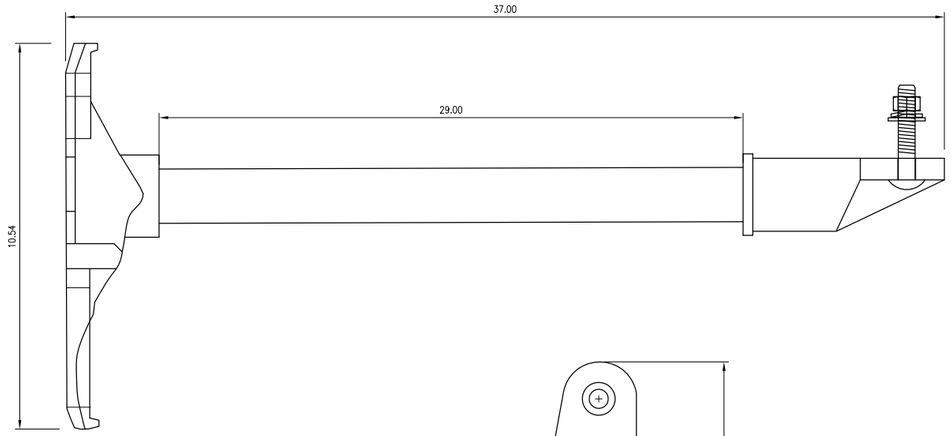
DRAWING INFO:

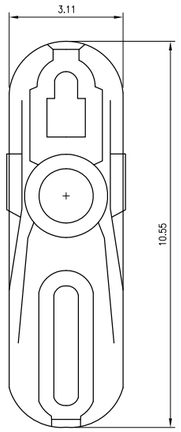
DRAWN BY:
FC

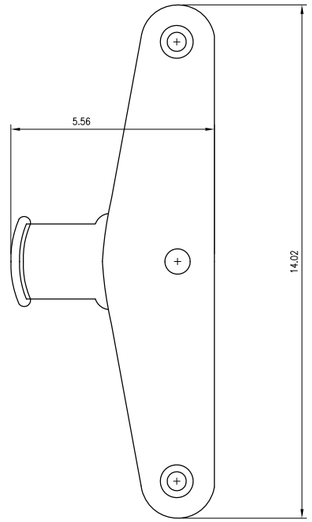
SHEET NUMBER:

D-2

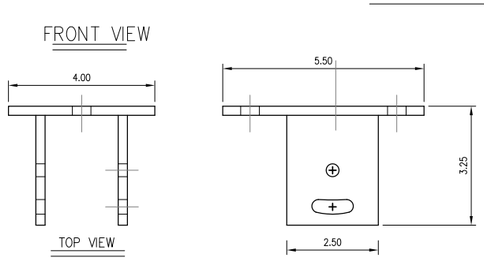
PEDESTAL DETAIL | N.T.S. | 1

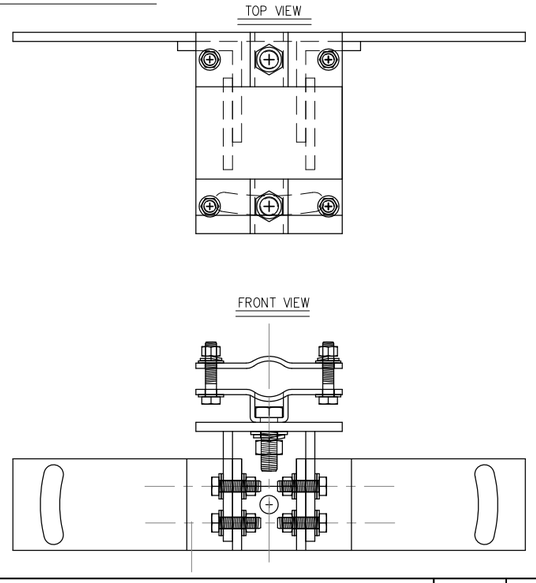






COMM SPACE BRACKET





ANTENNA MOUNT | N.T.S. | 1

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4"- 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM290Wxx[5]	4A			6A			8A			10A		
Battery Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	339	285	249	286	209	183	186	165	144
4 batteries:	701	625	546	444	396	348	329	293	256	261	232	203
6 batteries:	1061	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1497	1388	1185	999	859	750	720	643	562	577	515	450
9 batteries:	1696	1569	1322	1301	978	853	820	733	640	659	587	514

XM218Wxx[5]	12A			14A			16A			18A		
Battery Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries:	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	188	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	225
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	256

XM318Wxx[5]	4A			6A			8A			10A		
Battery Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries:	1061	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1696	1569	1322	1301	978	853	820	733	640	659	587	514
8 batteries:	2288	2097	1768	1497	1388	1185	1122	1005	877	894	809	706
9 batteries:	2580	2345	2037	1999	1769	1322	1273	1143	997	1029	921	803

XM218Wxx[5]	12A			14A			16A			18A		
Battery Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	159
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	761	680	577	607	541	479	525	465	402	458	407	351
9 batteries:	843	753	658	682	617	538	597	531	462	523	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 603 647 8043	Cyprus Tel: +357 25 375 675 Fax: +357 22 369 595	Germany Tel: +49 8122 79889 0 Fax: +49 8122 79889 21	Lithuania Tel: +370 5 210 5091 Fax: +370 5 210 5092	P.R. China Tel: +852 2736 8863 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 925 9044 Fax: +7 495 916 1349	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659076			

049-297-10-E002 (08/09)

BATTERY SPECIFICATIONS | N.T.S. | 2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
1	FXC 03/27/2013	ISSUED FOR FINAL
2	FXC 08/02/2013	ISSUED FOR FINAL
3	FXC 11/06/2013	ISSUED FOR FINAL
4	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON20
VERIZON MONTECITO-MON20

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1
R.O.W. SOUTH SIDE OF ROMERO CANYON RD.
(ADJACENT TO 850 ROMERO CANYON)
SANTA BARBARA, CA 93108
LAT: 34.44327
LONG: -119.59602

SHEET TITLE:

DETAILS

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:
D-3

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON21

R.O.W. SOUTH SIDE OF CAMINO DEL ROSARIO
(ADJACENT TO 2245 CAMINO DEL ROSARIO)
SANTA BARBARA, CA 93108

VICINITY MAP – N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT – ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

GROUND BUS BAR	LIGHT POLE
MECH. GRND. CONN.	FOUNDATION
CADWELD	SPOT ELEV.
[E] ELECTRIC BOX	SET POINT
[T] TELEPHONE BOX	REVISION
EXISTING SERVICE POLE	
SIDEWALK FLAG	
EX. MANHOLE	DETAIL REF.

ELEVATION REF.	—E— ELECT. CONDUIT
SECTION REF.	—A— COAXIAL CABLE
PROP./LEASE LINE	MYERS PEDESTAL
MATCH LINE	VAULT STANDARD 2'X3'
WORK POINT	STEEL POLE
—T— TELE. CONDUIT	
CENTERLINE	

SYMBOLS, LINETYPES AND HATCH PATTERNS

FOOTAGE TOTALS	
ASPHALT CUT	–
DIRT TRENCH	–
PUNCH THRU	–
BORE	–
TOTAL	–
R&R SWF TOTAL	–

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF CAMINO DEL ROSARIO (ADJACENT TO 2245 CAMINO DEL ROSARIO) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI DIRECTIONAL ANTENNAS ON EXISTING UTILITY POLE
2. EQUIPMENT VAULT AT BASE OF EXISTING POLE
3. EQUIPMENT PEDESTAL W/ BBU AND ELECTRICAL METER AT BASE OF POLE

SHEET INDEX:

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/21/2013	ISSUED FOR REVIEW
1	FXC 03/27/2013	ISSUED FOR FINAL
2	FXC 11/06/2013	ISSUED FOR FINAL
3	FXC 03/08/2013	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON21
VERIZON MONTECITO-MON21

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1
R.O.W. SOUTH SIDE OF CAMINO DEL ROSARIO
(ADJACENT TO 2245 CAMINO DEL ROSARIO)
SANTA BARBARA, CA 93108
LAT: 34.44083°
LONG: -119.59919°

SHEET TITLE:

TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

T-1

SCALE: 1" = 5'

5' 0' 2.5' 5' 10'

PARCEL ONE
A.P.N. 155-050-052

PARCEL THREE
A.P.N. 155-050-054

PARCEL MAP NO. 14,409
P.M.B. 53 / 3-5

20' EASEMENT FOR PRIVATE ROAD AND PUBLIC UTILITIES PER INST. NO. 4701, BK. 1433, PG. 527 O.R., SHOWN ON PARCEL MAP NO. 14,409

EASEMENT LINE

DRIVEWAY

TREE DRIP LINE

PROPERTY LINE

450'± TO ROMERO CANYON RD. (PUBLIC ROAD)

S85°52'23"E

CAMINO DEL ROSARIO
(PRIVATE ROAD)
S85°52'23"E 370.82'

FEATHERHILL RD.
(PRIVATE ROAD)
R=210.00'
S85°52'23"E
162.69'

SHOWN AS "NOT PUBLIC ROAD" ON TRACT NO. 10,164

ROCK WALL

EDGE OF BUSH

EDGE OF PAVEMENT

MAILBOX

GRAVEL

APPROX. LOC. PER PARCEL MAP 14,409, NO RIGHT OF WAY/ESMT. INFORMATION AVAILABLE

GEODETIC COORDINATE LOCATION

A.P.N. 155-050-017

TRACT NO. 10,164
M.B. 56 / 76-77

LOT 14
A.P.N. 155-211-001
(2245 CAMINO DEL ROSARIO)

LEGEND:

AC	ASPHALT CONCRETE
ACTC	TOP OF ASPHALT CURB
BSH	BUSH
DPL	DRIP LINE
EDPB	EDISON PULL BOX
EOB	EDGE OF BUSH
EP	EDGE OF PAVEMENT
FD	FOUND
FH	FIRE HYDRANT
ICV	IRRIGATION CONTROL VALVE
IN	INCHES
INS	INSULATOR
IP	IRON PIPE
MON	MONUMENT
NG	NATURAL GROUND
RK	ROCK
SPK	SPIKE
TCRK	TOP OF CURB - ROCK
TP	TOP
TR	TREE
TW	TOP OF WALL
UP	UTILITY POLE
WV	WATER VALVE
℄	CENTERLINE
◉	FOUND MONUMENT
⚲	FOUND MONUMENT
ICV	IRRIGATION CONTROL VALVE
▨	ROCK WALL
=○=	UTILITY POLE
WV	WATER VALVE

COORDINATES:

LATITUDE 34°26'26.89" N
LONGITUDE 119°35'56.93" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

THE CENTERLINE OF CAMINO DEL ROSARIO, BEING SOUTH 85°52'23" EAST PER PARCEL MAP NO. 14,409, P.M.B. 53/3-5, RECORDS OF SANTA BARBARA COUNTY.

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 400"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 400" AS SHOWN ON THE "CARPINTERIA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 402.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

DATE OF SURVEY:

JULY 18, 2013

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

LIVING PLANTS STATEMENT:

THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY VALID FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.

REV:	DATE/BY:	REVISION DESCRIPTION:
1	07/29/13 MDL	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PKWY. SOUTH
LAKE FOREST, CA 92630-8326
(949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

CROWN CASTLE NG WEST, INC.

SURVEYOR:

BERT HAZE AND ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3188 AIRWAY AVENUE, SUITE K1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX

JN. 706.234

STAMP:

PROFESSIONAL LAND SURVEYOR
BERT HAZE
No. 7211
Exp. 3-31-14
STATE OF CALIFORNIA

SITE INFO:

SITE NAME:
MON21
VERIZON MONTECITO-MON21

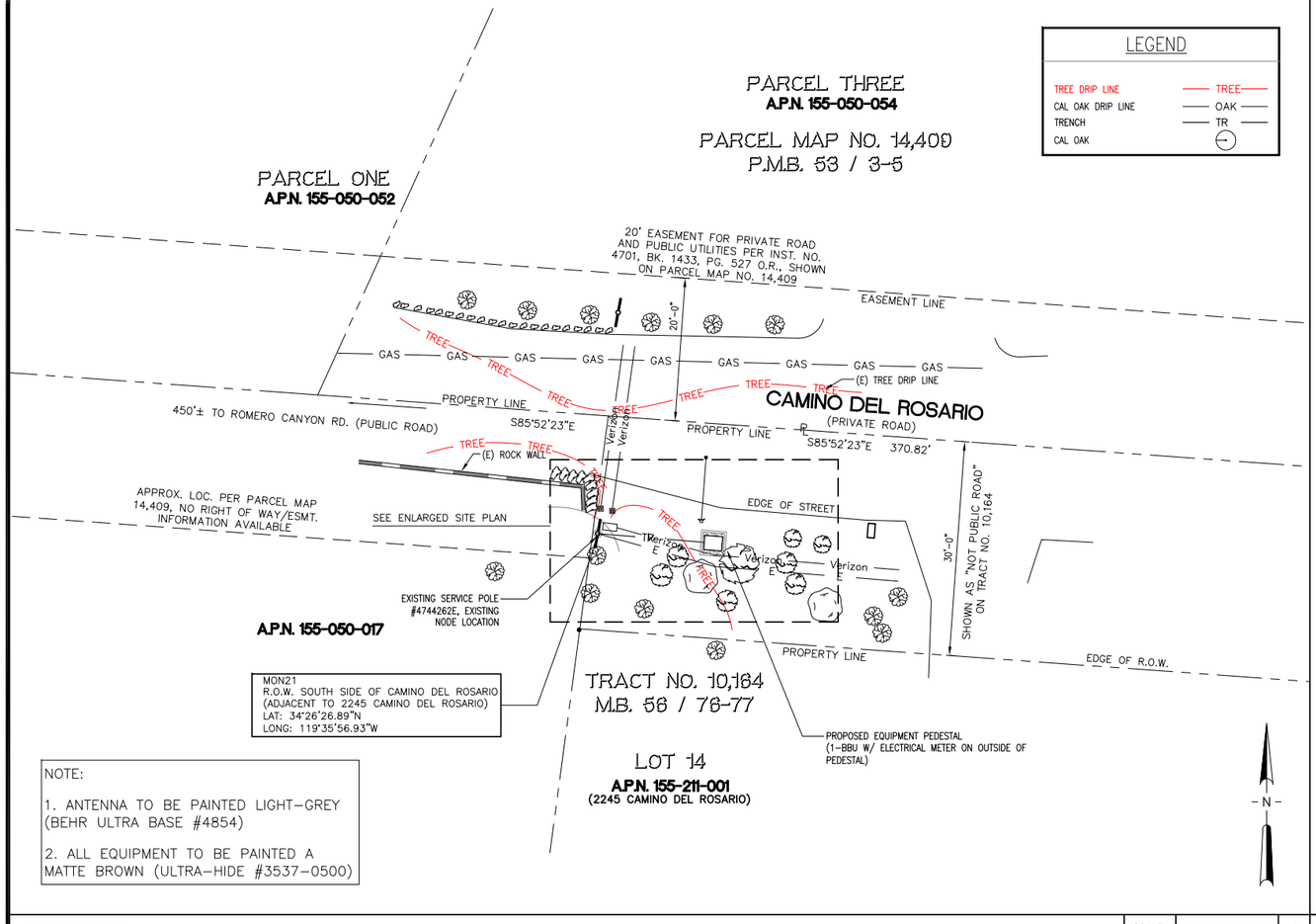
SITE ADDRESS:
R.O.W. SOUTH SIDE OF OF CAMINO DEL ROSARIO
(ADJACENT TO 2245 CAMINO DEL ROSARIO)
SANTA BARBARA, CA 93108

SHEET TITLE:
TOPOGRAPHIC SURVEY

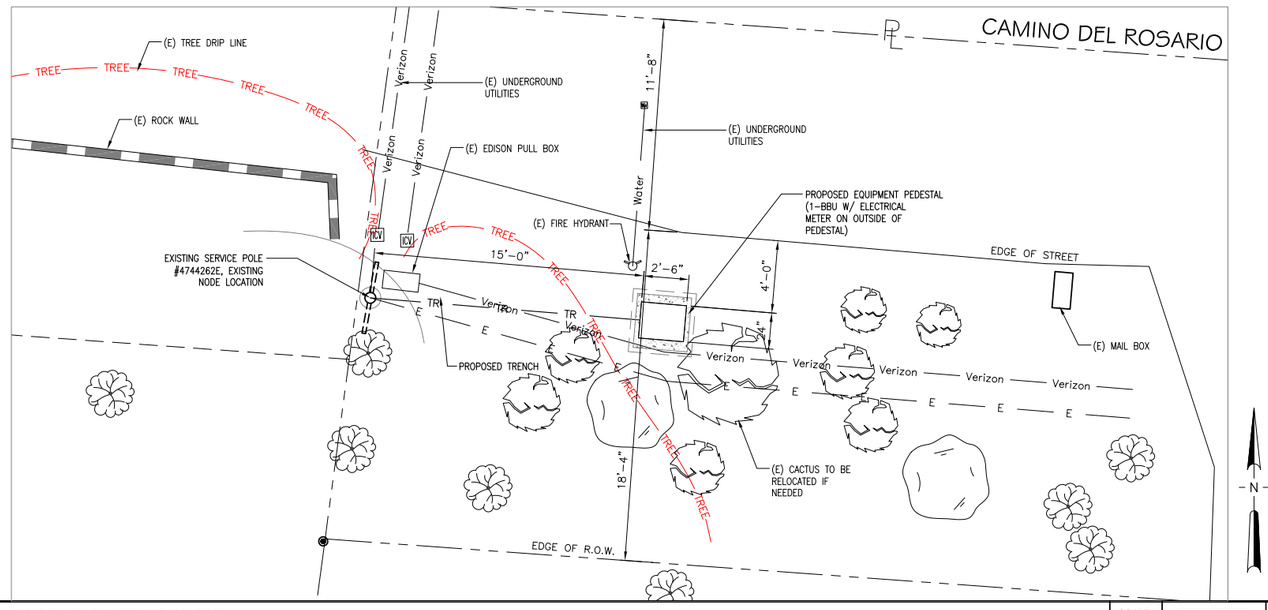
DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
MON21	MDL	07/29/13

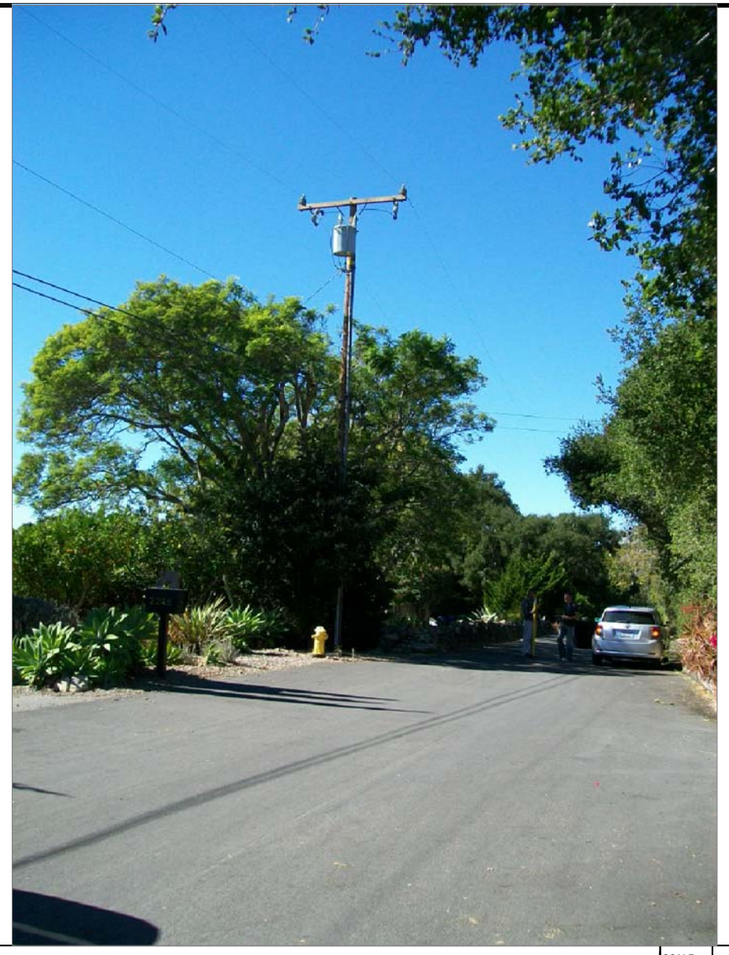
SHEET NUMBER:
1 OF 1 | C-1



SITE PLAN — SCALE: 1"=10'-0" (0, 5', 10') — 1



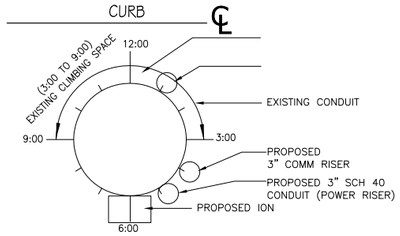
ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" (0, 2', 4') — 2



EXISTING PHOTO — SCALE: N.T.S. — 3

POLE WILL BE STEPPED IN ACCORDANCE TO GO95 STANDARDS IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 4:00
1-3" POWER RISER @ 5:00



RISER PROFILE — SCALE: N.T.S. — 4

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3	FXC 03/08/2013	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer
CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

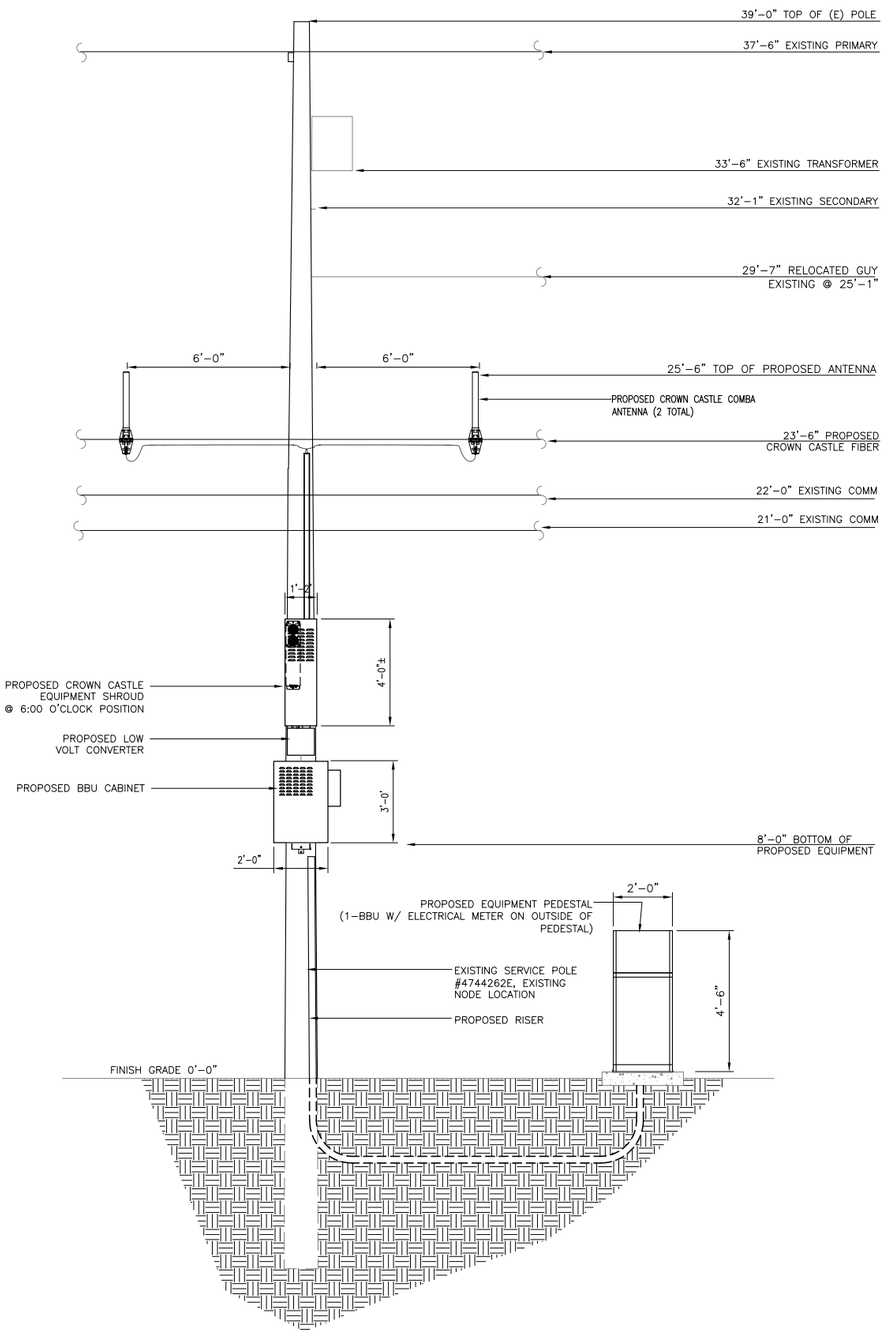
SITE NAME:
MON21
VERIZON MONTECITO-MON21

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1
R.O.W. SOUTH SIDE OF CAMINO DEL ROSARIO (ADJACENT TO 2245 CAMINO DEL ROSARIO)
SANTA BARBARA, CA 93108
LAT: 34.44083°
LONG: -119.59919°

SHEET TITLE:
SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:
DRAWN BY: FC

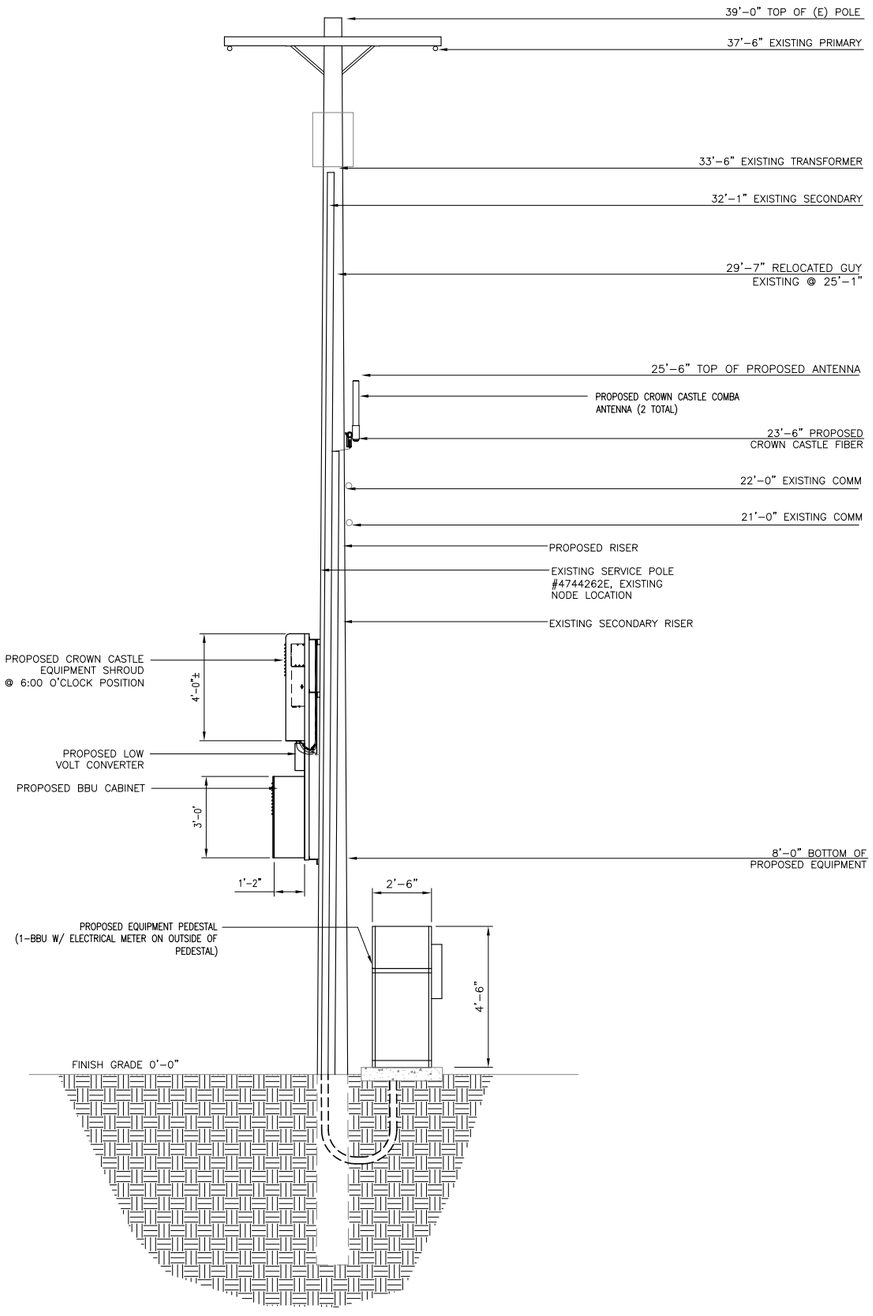
SHEET NUMBER:
A-1



PROPOSED ELEVATION LOOKING NORTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING WEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

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R.O.W. SOUTH SIDE OF CAMINO DEL ROSARIO

(ADJACENT TO 2245 CAMINO DEL ROSARIO)

SANTA BARBARA, CA 93108

LAT: 34.44083°

LONG: -119.59919°

SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:

FC

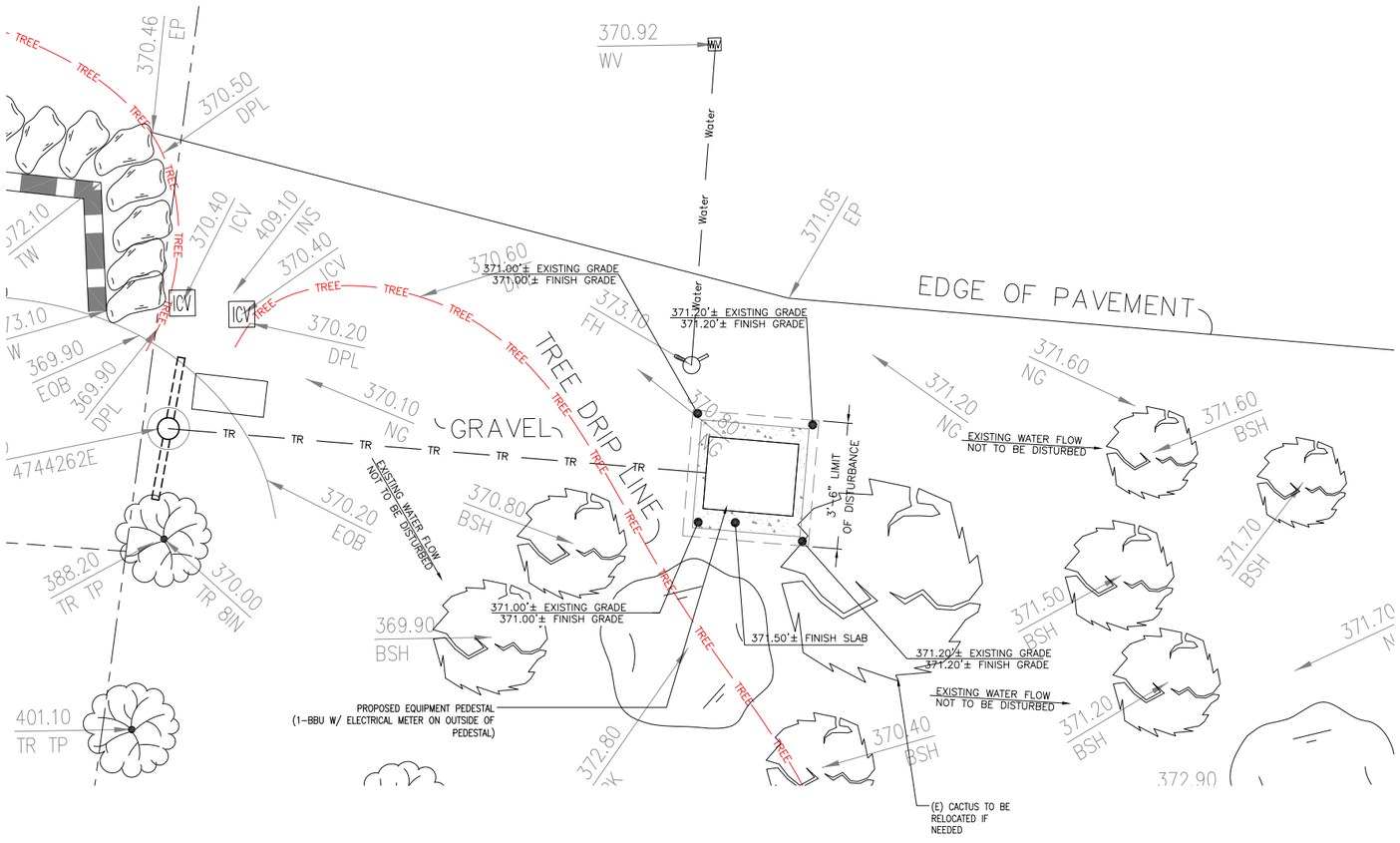
SHEET NUMBER:

A-2

GRADING CALCULATION

CONCRETE PAD:	2.997 CF
15'Lx3'Dx.5'W TRENCH:	22.5± CF
TOTAL:	25.497± CF

NOTE:
NO CUT AND FILL REQUIRED



LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

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(ADJACENT TO 2245 CAMINO DEL ROSARIO)
SANTA BARBARA, CA 93108
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SHEET TITLE:

GRADING PLAN

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-3

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 *VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi*

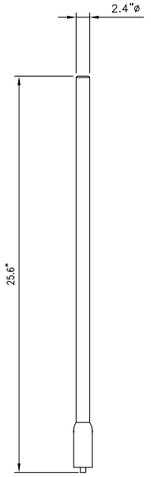
Technical Specifications

Electrical

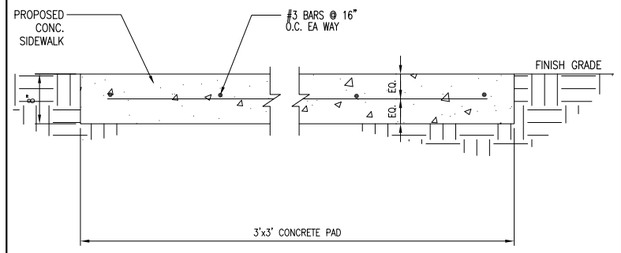
Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

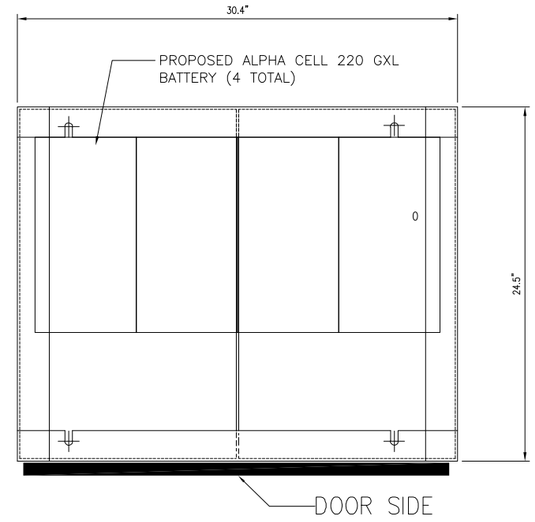
Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)

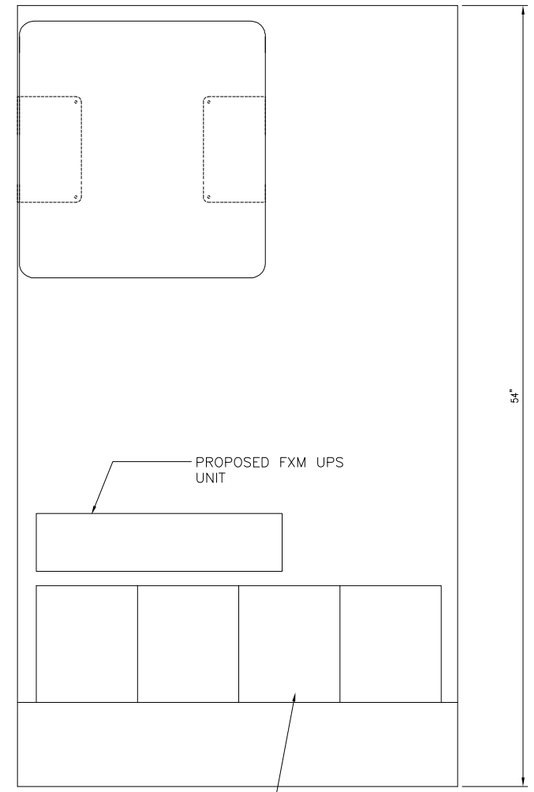


ANTENNA SPECIFICATIONS | N.T.S. | 1



CONCRETE PAD | N.T.S. | 3





Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

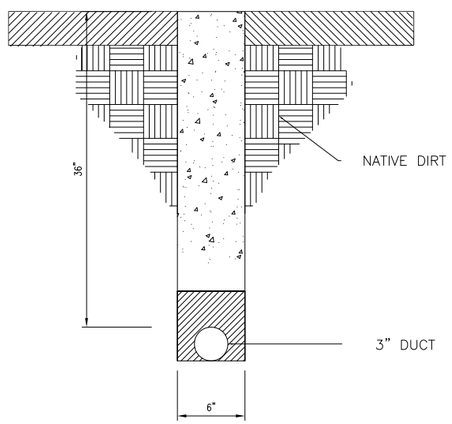
Noise figure, dB
IP3 optimized ..... +10 max.
Noise figure optimized .... +6 max.
4.5 typical

Mechanical****

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

ION-M7P/7P/85P/19P | N.T.S. | 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH | N.T.S. | 4

EQUIPMENT PEDESTAL | N.T.S. | 5

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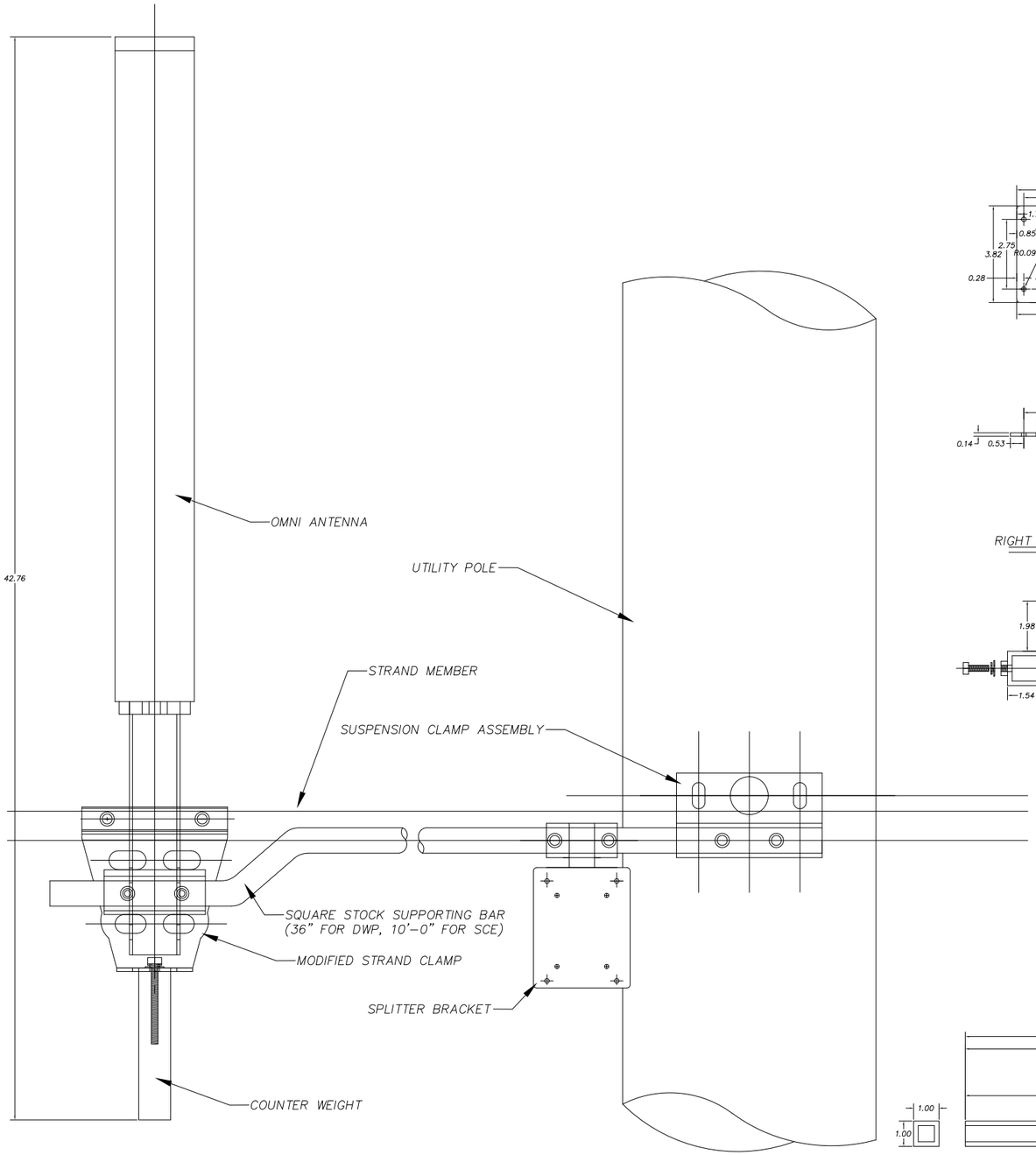
SANTA BARBARA, CA 93108
LAT: 34.44083°
LONG: –119.59919°

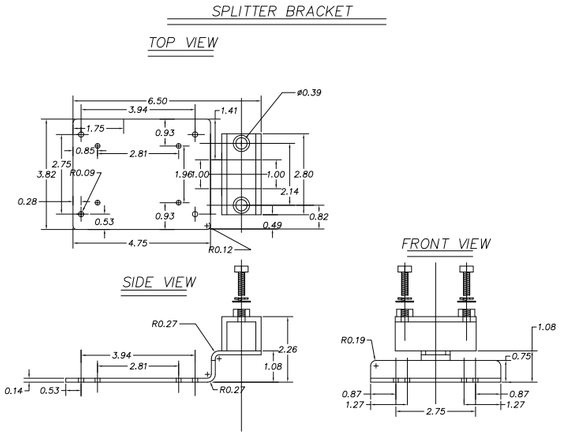
SHEET TITLE:
DETAILS

DRAWING INFO:
DRAWN BY:
FC

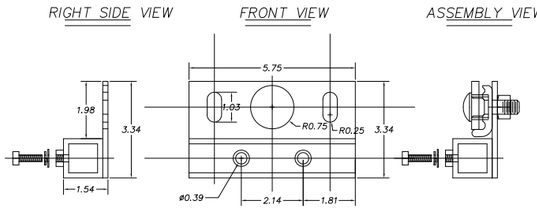
SHEET NUMBER:
D–1



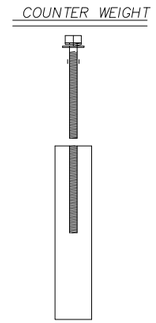
SPLITTER BRACKET



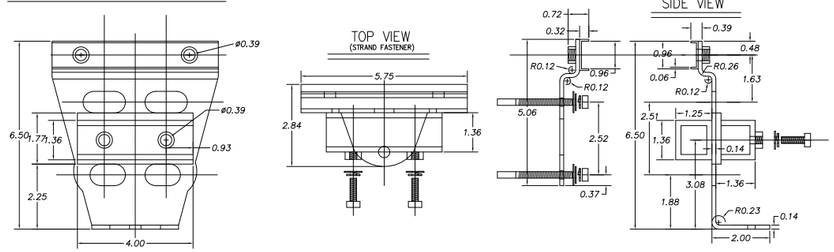
IN-LINE POLE SUSPENSION CLAMP ASSEMBLY



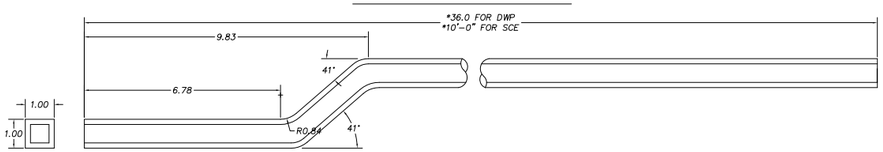
COUNTER WEIGHT



MODIFIED STRAND CLAMP (STRAND FASTENER)



SQUARE STOCK SUPPORTING BAR



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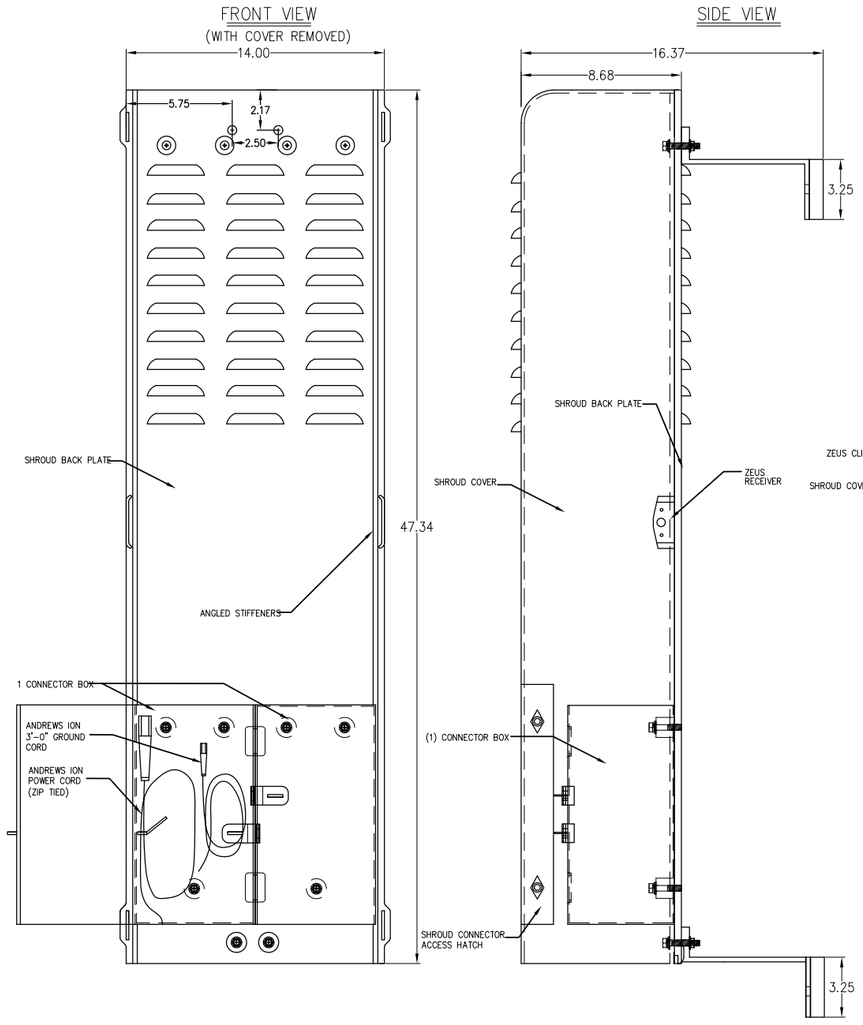
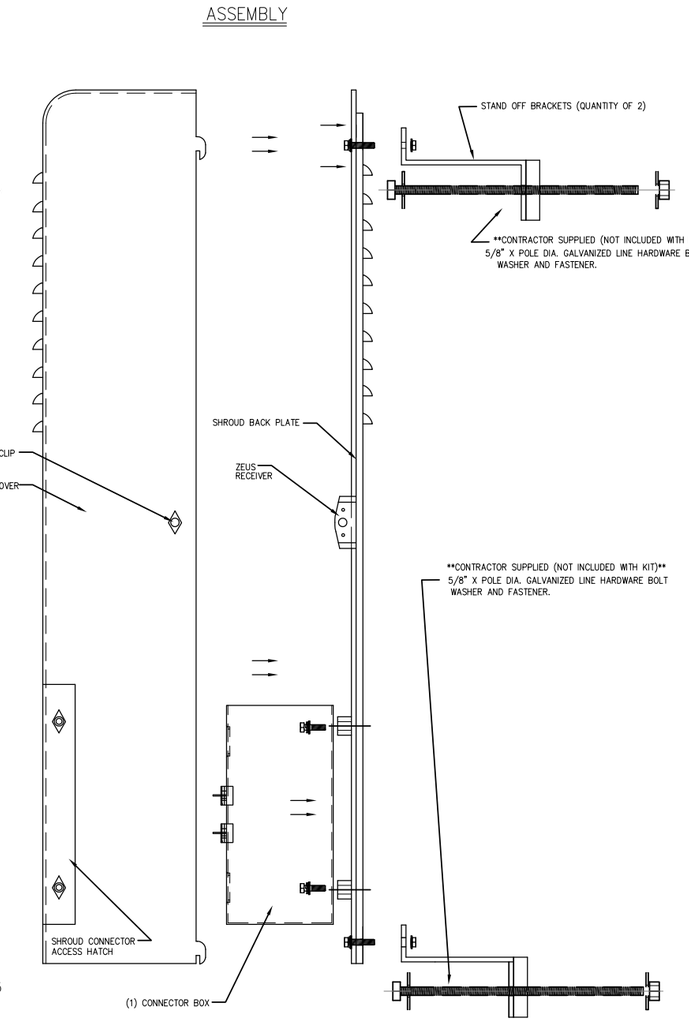
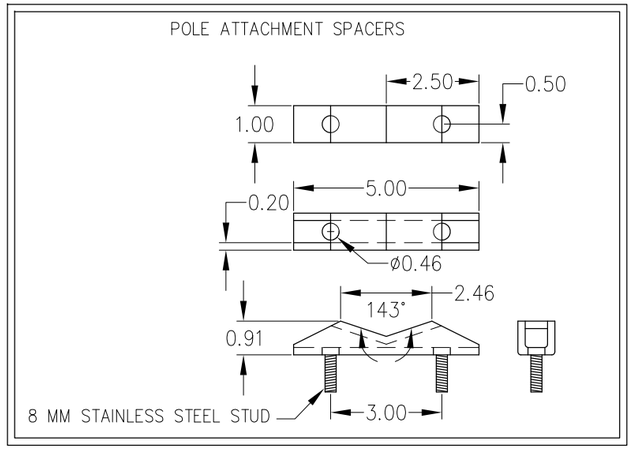
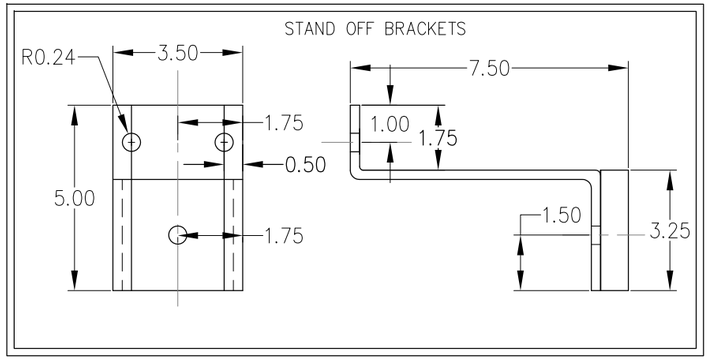
D-2









SHROUD DETAIL

N.T.S. | 1

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SHEET TITLE:

DETAILS

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

D-3

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	96
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	97
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range			
Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% offloat charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM290Vac@	4A			6A			8A			10A		
Battery Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	320	285	249	236	209	193	198	165	144
4 batteries:	701	625	546	444	396	346	329	293	256	261	232	203
6 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1487	1338	1186	960	859	750	720	643	562	577	515	450
9 batteries:	1886	1691	1322	1091	978	853	820	733	640	659	587	514

XM290Vac@	12A			14A			16A			18A		
Battery Runtime:	220	196	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries:	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	223
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	256

XM280Vac@	4A			6A			8A			10A		
Battery Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1886	1519	1322	1091	978	853	820	733	640	659	587	514
8 batteries:	2288	2067	1798	1487	1388	1165	1122	1008	877	904	809	706
9 batteries:	2590	2345	2037	1886	1519	1322	1273	1143	997	1027	921	803

XM280Vac@	12A			14A			16A			18A		
Battery Runtime:	220	196	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	470	523	465	402	458	407	351
9 batteries:	843	753	658	692	617	538	597	531	462	523	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 52 359 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5291 Fax: +370 5 210 5292	P.R. China Tel: +852 2736 8663 Fax: +852 2199 7968	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 925 9844 Fax: +7 495 916 1349	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

049-297-10-B002 (06/09)

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/21/2013	ISSUED FOR REVIEW
1	FXC 03/27/2013	ISSUED FOR FINAL
2	FXC 11/06/2013	ISSUED FOR FINAL
3	FXC 03/08/2013	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer
CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON21
VERIZON MONTECITO-MON21

SITE ADDRESS: THOMAS BROS PAGE 997 GRID D1
R.O.W. SOUTH SIDE OF CAMINO DEL ROSARIO
(ADJACENT TO 2245 CAMINO DEL ROSARIO)
SANTA BARBARA, CA 93108
LAT: 34.44083°
LONG: -119.59919°

SHEET TITLE:
DETAILS

DRAWING INFO:
DRAWN BY:
FC

SHEET NUMBER:
D-4

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON22

R.O.W. SOUTH SIDE OF VELOZ DR
(ADJACENT TO 2135 VELOZ DR)
SANTA BARBARA, CA 93108

VICINITY MAP - N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT - ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	-
DIRT TRENCH	-
PUNCH THRU	-
BORE	-
TOTAL	-
R&R SWF TOTAL	-

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE
LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.
ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE
ELECT. CONDUIT
COAXIAL CABLE
MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF VELOZ DR (ADJACENT TO 2125 VELOZ DR) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI DIRECTIONAL ANTENNA ON EXISTING UTILITY POLE
2. EQUIPMENT SHROUD & BBU ON EXISTING POLE

SHEET INDEX:

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
1	FXC 04/25/2013	ISSUED FOR FINAL
2	FXC 11/06/2013	ISSUED FOR FINAL
3	FXC 02/18/2014	ISSUED FOR FINAL
4	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON22m1
VERIZON MONTECITO-MON22m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. SOUTH SIDE OF VELOZ DR
(ADJACENT TO 2165 VELOZ DR)
SANTA BARBARA, CA 93108
LAT: 34.441587
LONG: -119.602992

SHEET TITLE:

TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

T-1

SCALE: 1" = 5'

5' 0' 2.5' 5' 10'

COORDINATES:

LATITUDE 34°26'30.47" N
LONGITUDE 119°36'16.00" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

THE CENTERLINE OF VELOZ DR. BEING SOUTH 80°25'30" EAST PER RECORD OF SURVEY, COUNTRYSIDE ADDITION, R.M. 34 / 94, RECORDS OF SANTA BARBARA COUNTY.

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 269"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 269" AS SHOWN ON THE "CARPINTERIA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 271.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

DATE OF SURVEY:

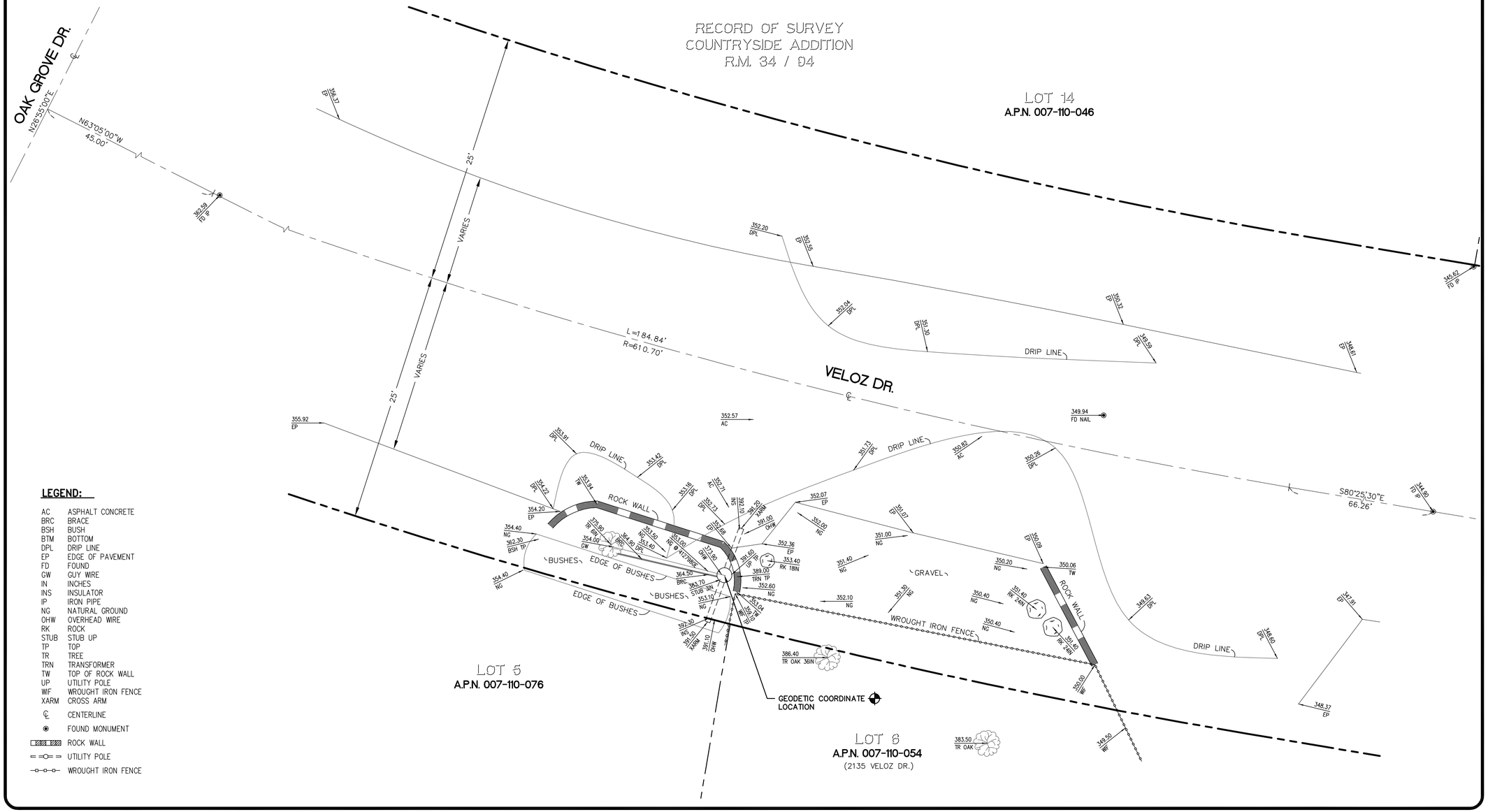
JULY 11, 2013

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

LIVING PLANTS STATEMENT:

THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY VALID FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.



LEGEND:

AC	ASPHALT CONCRETE
BRC	BRACE
BSH	BUSH
BTM	BOTTOM
DPL	DRIP LINE
EP	EDGE OF PAVEMENT
FD	FOUND
GW	GUY WIRE
IN	INCHES
INS	INSULATOR
IP	IRON PIPE
NG	NATURAL GROUND
OHW	OVERHEAD WIRE
RK	ROCK
STUB	STUB UP
TP	TOP
TR	TREE
TRN	TRANSFORMER
TW	TOP OF ROCK WALL
UP	UTILITY POLE
WIF	WROUGHT IRON FENCE
XARM	CROSS ARM
℄	CENTERLINE
◉	FOUND MONUMENT
▭	ROCK WALL
=○=	UTILITY POLE
-o-o-	WROUGHT IRON FENCE

REV:	DATE/BY:	REVISION DESCRIPTION:
1	07/18/13 MDL	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

CONNELL DESIGN GROUP, LLC
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26455 RANCHO PKWY. SOUTH
LAKE FOREST, CA 92630-8326
(949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

CROWN CASTLE
NG WEST, INC.

SURVEYOR:

BERT HAZE
AND ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3188 AIRWAY AVENUE, SUITE K1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX

JN. 706.235

STAMP:

PROFESSIONAL LAND SURVEYOR
BERT HAZE
No. 7211
Exp. 3-31-14
STATE OF CALIFORNIA

SITE INFO:

SITE NAME:
MON22
VERIZON MONTECITO-MON22

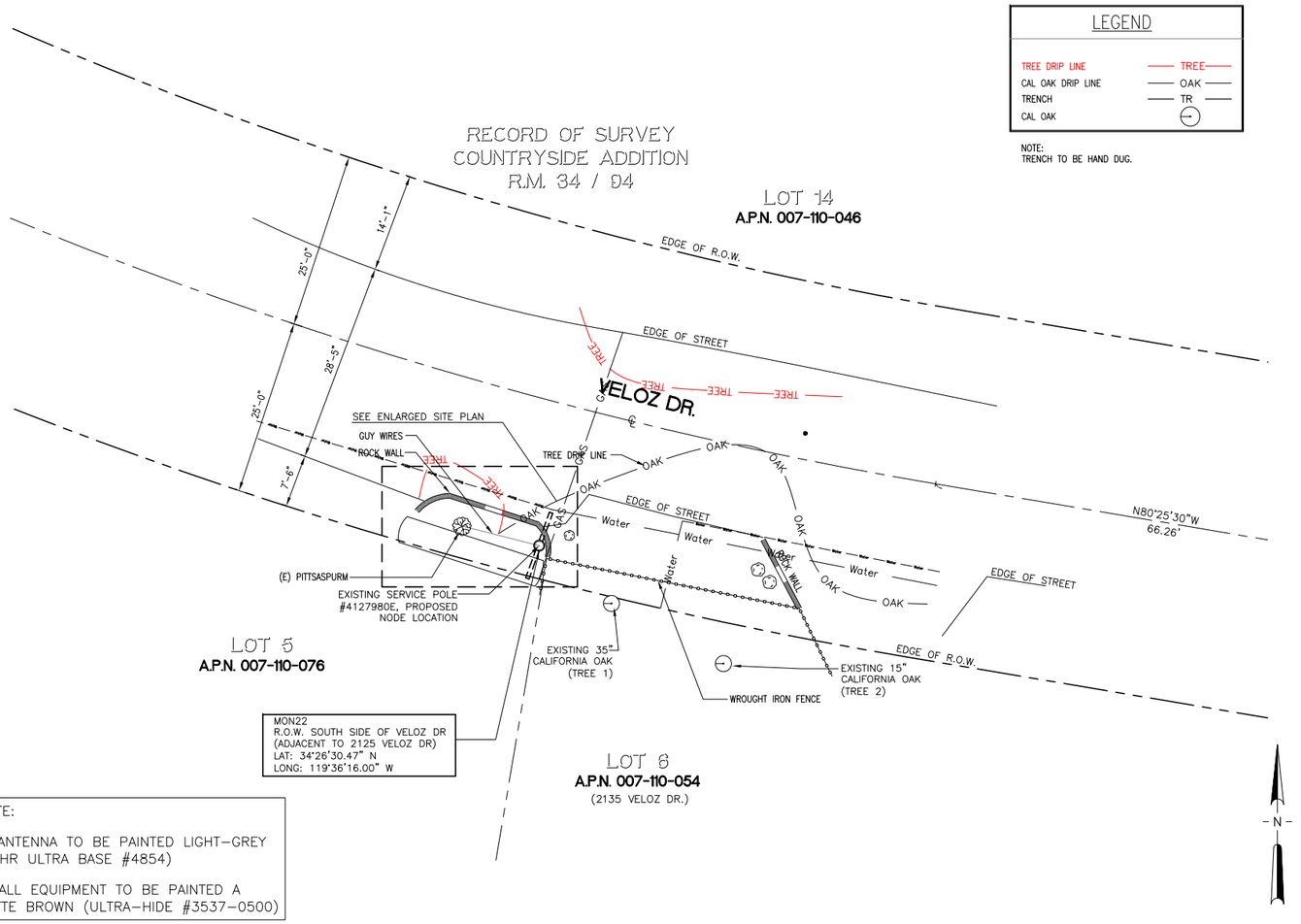
SITE ADDRESS:
R.O.W. SOUTH SIDE OF VELOZ DR.
(ADJACENT TO 2135 VELOZ DR.)
SANTA BARBARA, CA 93108

SHEET TITLE:
TOPOGRAPHIC SURVEY

DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
MON22	MDL	07/18/13

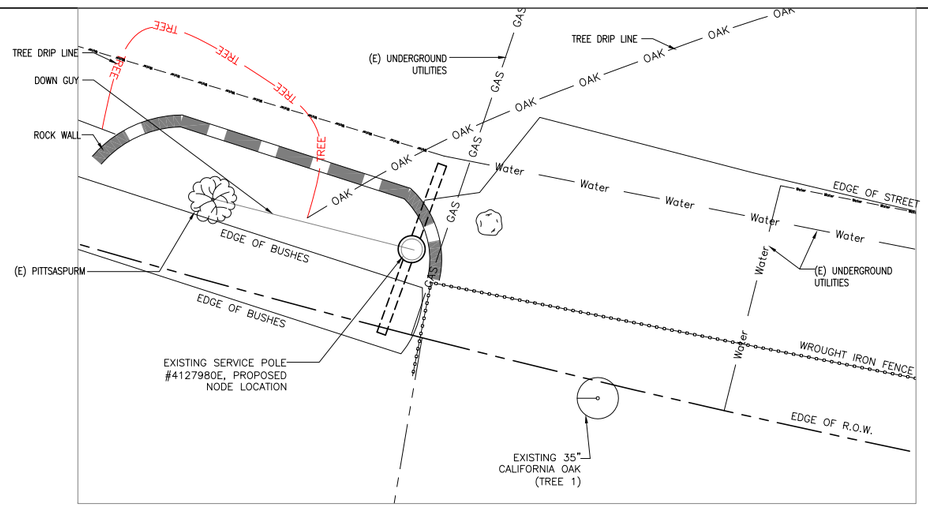
SHEET NUMBER:
1 OF 1 | C-1



NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)
2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

SITE PLAN — SCALE: 1"=10'-0" (0 5' 10') — 1

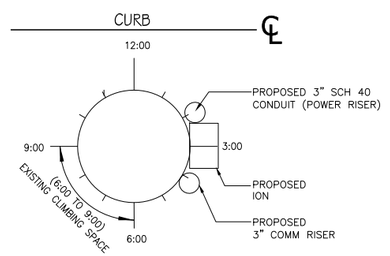


ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" (0 2' 4') — 2

EXISTING PHOTO — SCALE: N.T.S. — 3

POLE WILL BE STEPPED IN ACCORDANCE TO GO95 STANDARDS IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 4:00
1-3" POWER RISER @ 2:00



RISER PROFILE — SCALE: N.T.S. — 4

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
1	FXC 04/25/2013	ISSUED FOR FINAL
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4	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

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SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. SOUTH SIDE OF VELOZ DR
(ADJACENT TO 2165 VELOZ DR)
SANTA BARBARA, CA 93108
LAT: 34.441587
LONG: -119.602992

SHEET TITLE:

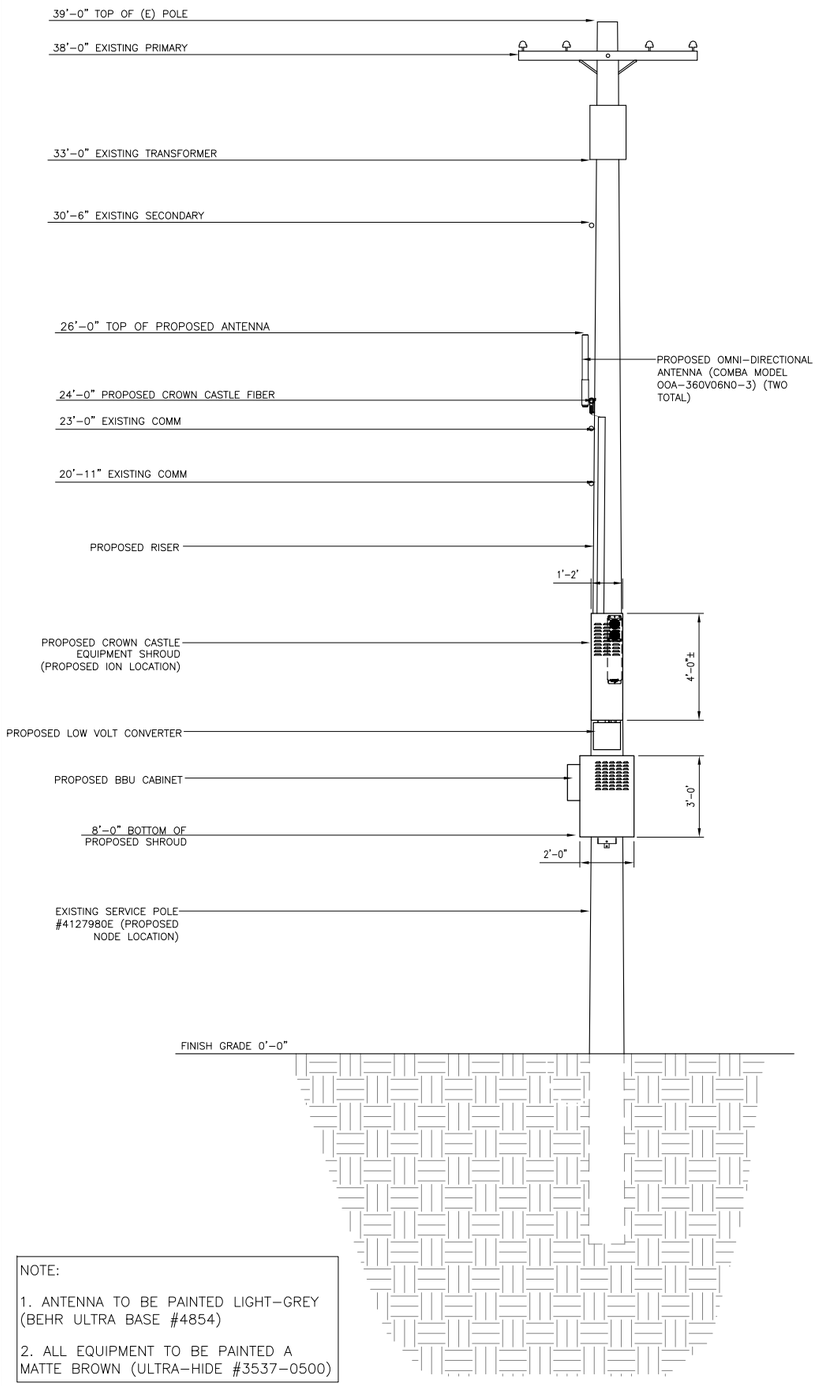
SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-1



NOTE:

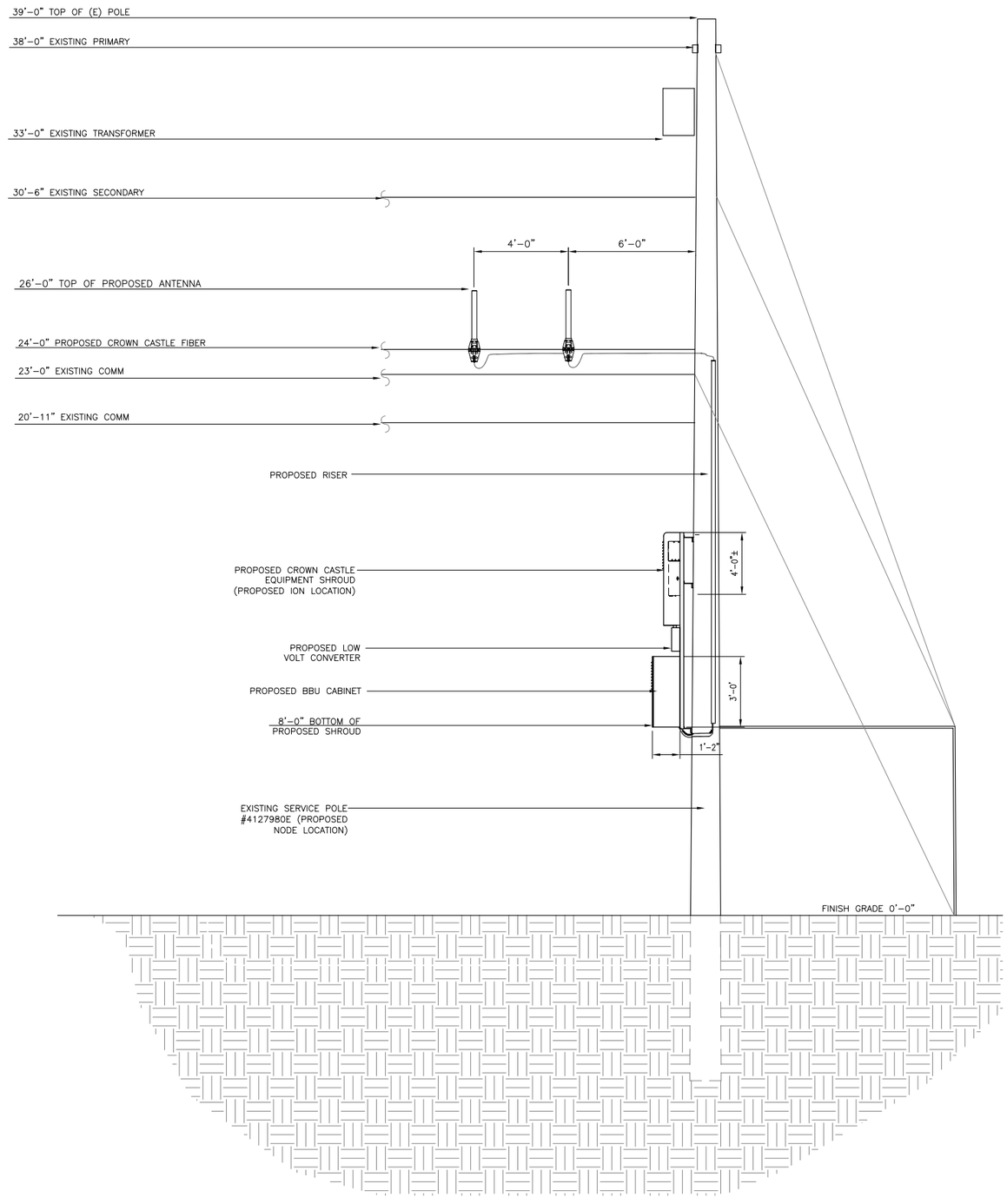
1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

PROPOSED ELEVATION LOOKING EAST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
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(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON22m1
VERIZON MONTECITO-MON22m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. SOUTH SIDE OF VELOZ DR
(ADJACENT TO 2165 VELOZ DR)
SANTA BARBARA, CA 93108
LAT: 34.441587
LONG: -119.602992

SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:
FC

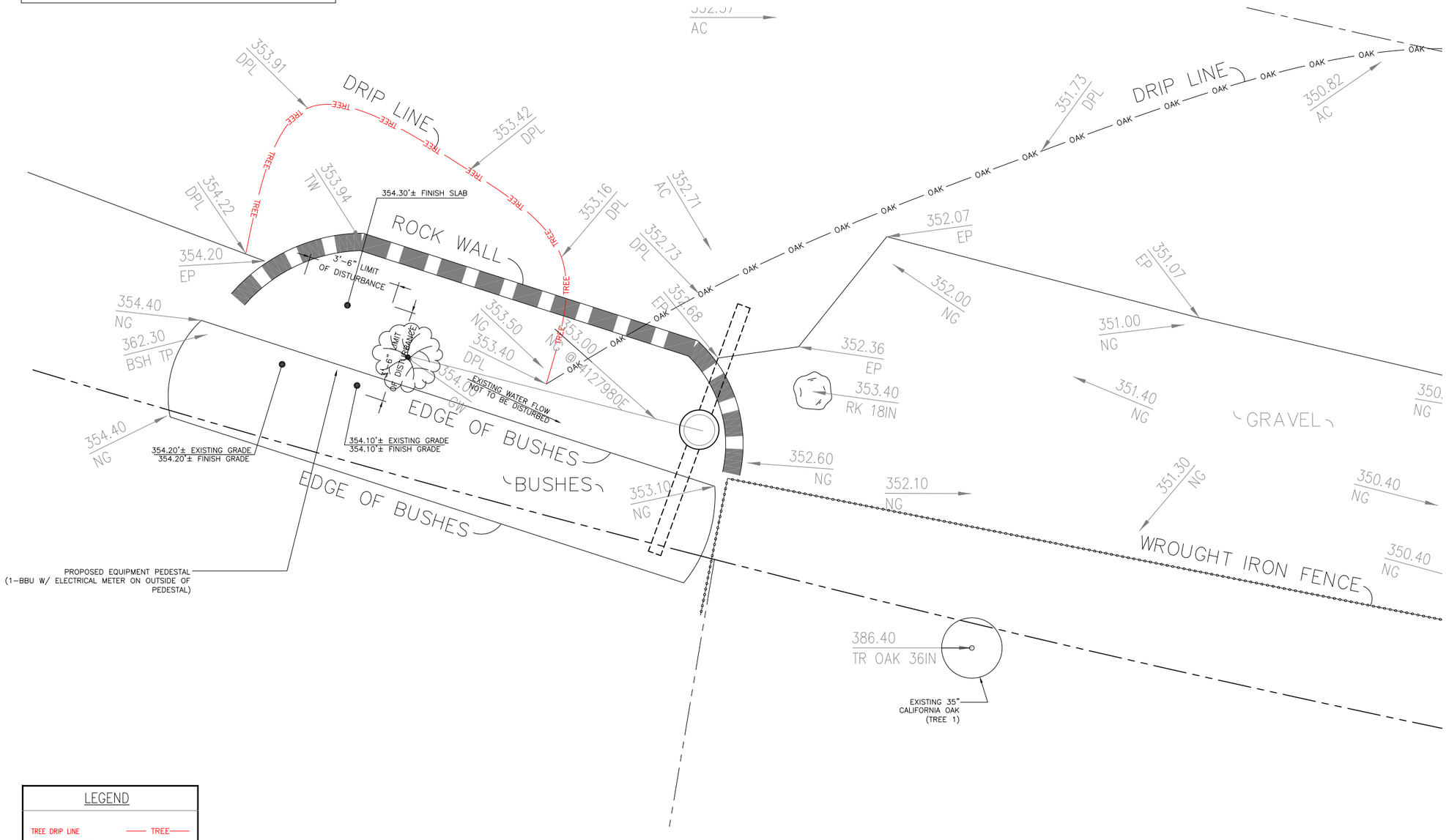
SHEET NUMBER:

A-2

GRADING CALCULATION

CONCRETE PAD:	2.997 CF
12'Lx3'Dx.5'W TRENCH:	18± CF
TOTAL:	20.997± CF

NOTE:
NO CUT AND FILL REQUIRED



LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

NOTE:
TRENCH TO BE HAND DUG.

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2	FXC 11/06/2013	ISSUED FOR FINAL
3	FXC 02/18/2014	ISSUED FOR FINAL
4	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

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VERIZON MONTECITO-MON22m1

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(ADJACENT TO 2165 VELOZ DR)
SANTA BARBARA, CA 93108
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SHEET TITLE:

GRADING PLAN

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-3

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi

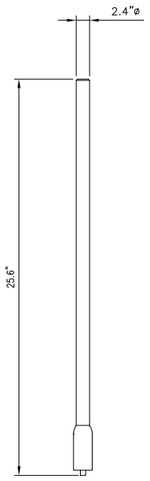
Technical Specifications

Electrical

Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1. 2 (2. 65)



AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2900	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.60/172.7	6.60/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM2180Mod[2]	4A			6A			8A			10A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	508	452	396	329	285	249	236	209	183	188	165	144
4 batteries	701	625	549	444	396	348	329	293	256	261	232	203
6 batteries	1061	979	853	701	625	546	523	465	407	418	372	325
8 batteries	1697	1388	1165	999	859	750	720	643	562	577	515	450
9 batteries	1996	1599	1322	1091	978	853	820	733	640	659	587	514

XM2190Mod[2]	12A			14A			16A			18A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	149	132	115	119	106	92	101	89	77	87	78	68
4 batteries	210	187	163	169	151	132	144	128	112	124	111	96
6 batteries	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries	478	419	367	385	341	299	329	293	256	288	255	225
9 batteries	538	479	419	440	391	342	377	335	294	329	293	256

XM2180Mod[2]	4A			6A			8A			10A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	798	712	622	508	453	396	377	335	294	300	267	233
4 batteries	1091	978	852	701	625	546	523	465	407	418	372	325
6 batteries	1696	1510	1322	1091	978	853	830	733	640	659	587	514
8 batteries	2288	2067	1708	1697	1388	1165	1122	1005	877	904	809	706
9 batteries	2590	2365	2037	1999	1599	1322	1273	1143	997	1037	921	800

XM2190Mod[2]	12A			14A			16A			18A		
Battery Runtime	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries	242	215	188	190	174	151	169	148	125	144	128	107
4 batteries	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries	538	479	419	440	391	340	377	335	290	329	290	252
8 batteries	741	660	577	607	541	479	525	465	402	458	407	351
9 batteries	845	753	658	692	617	538	597	531	462	525	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 52 369 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5291 Fax: +370 5 210 5292	P.R. China Tel: +852 2786 8883 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 525 9944 Fax: +7 495 916 1349	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

049-297-19-B002 (09/09)

Electrical

Power Supply
Mains power, Vac ..... 115 or 230
Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
ICP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

Mechanical****

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

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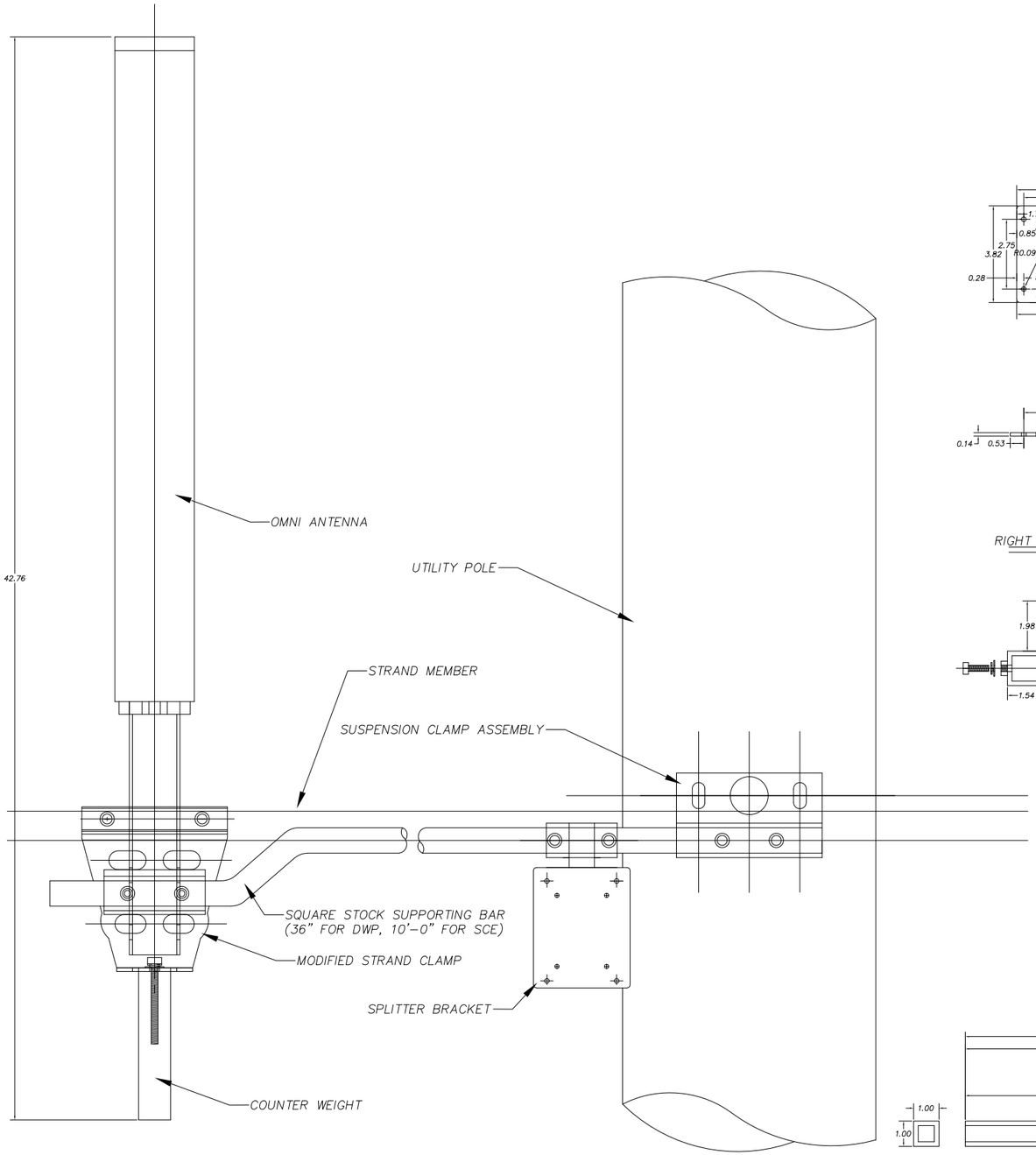
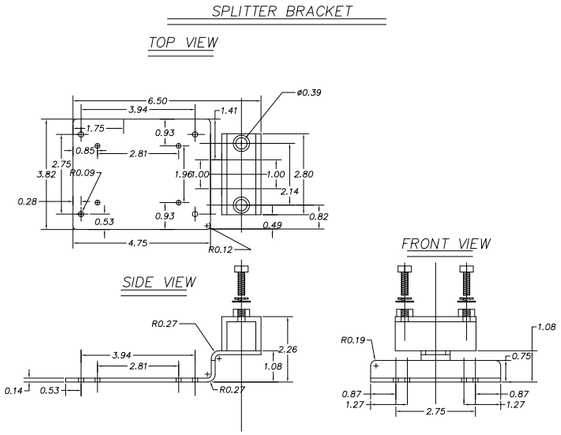
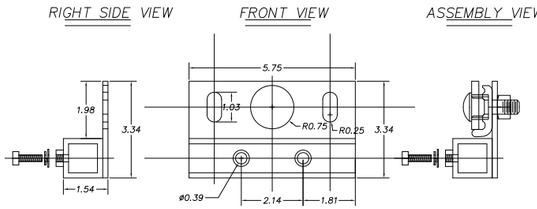
D–1



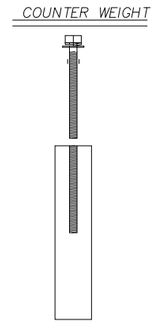
SPLITTER BRACKET



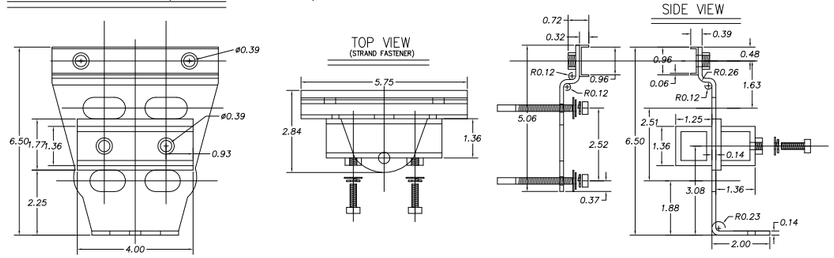
IN-LINE POLE SUSPENSION CLAMP ASSEMBLY



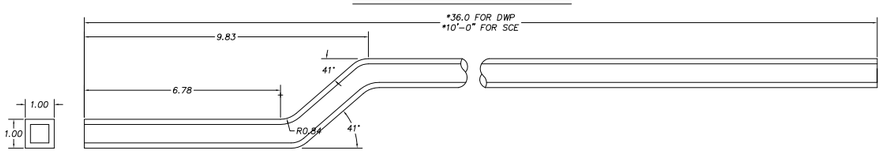
COUNTER WEIGHT



MODIFIED STRAND CLAMP (STRAND FASTENER)



SQUARE STOCK SUPPORTING BAR



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CDG

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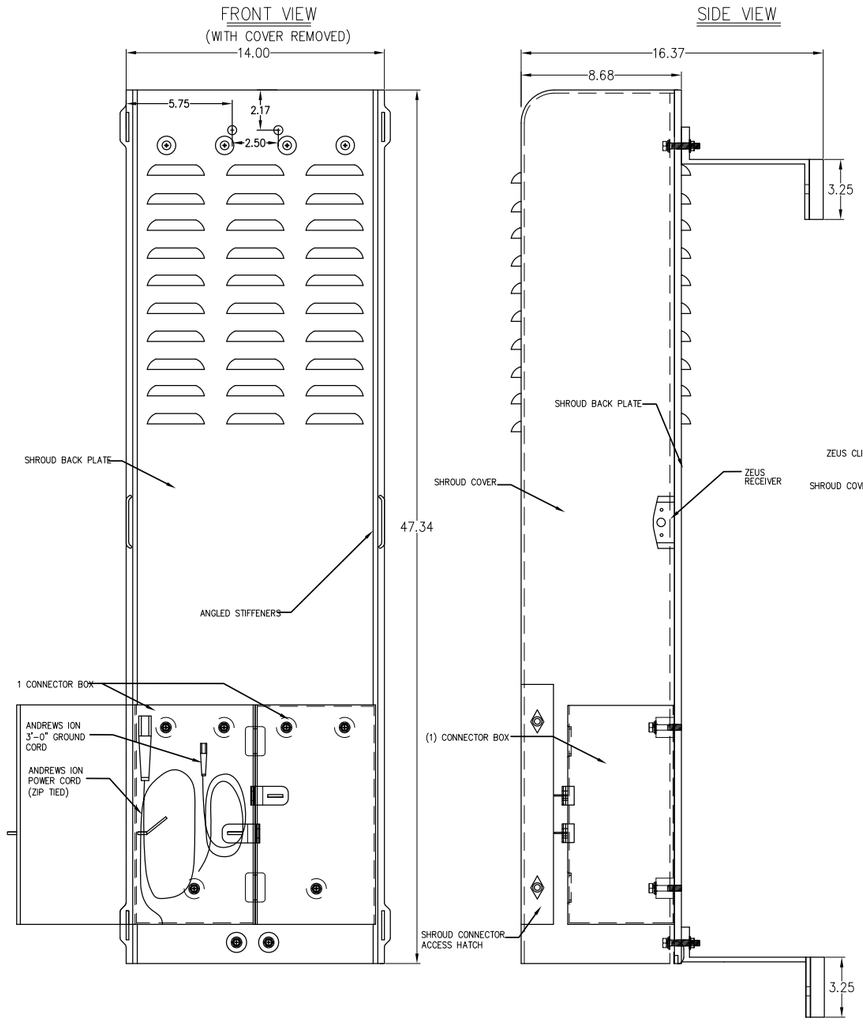
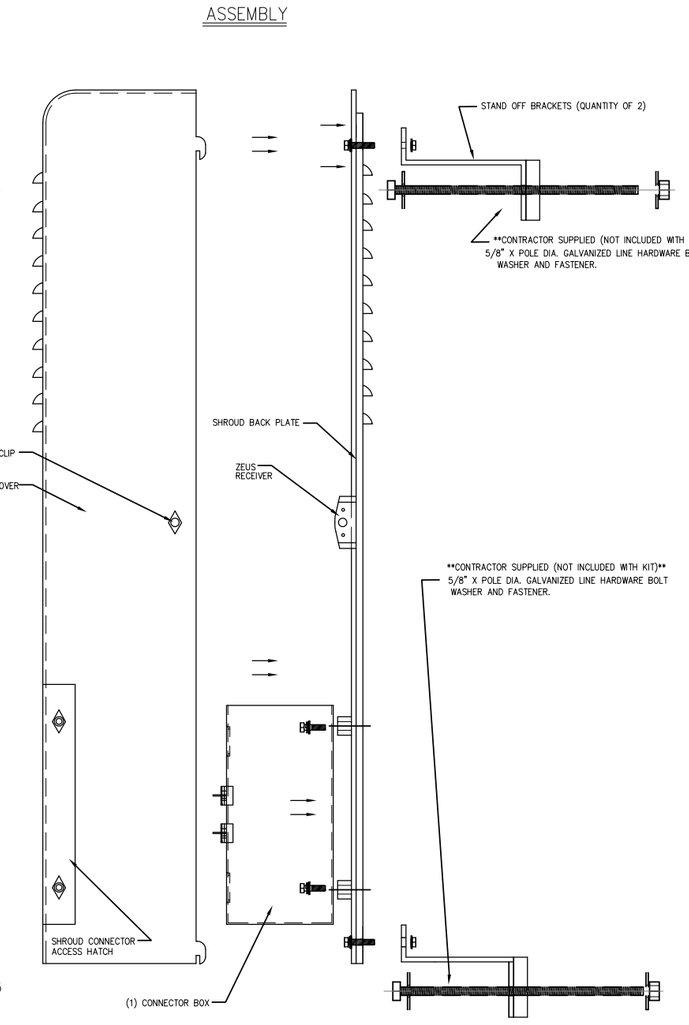
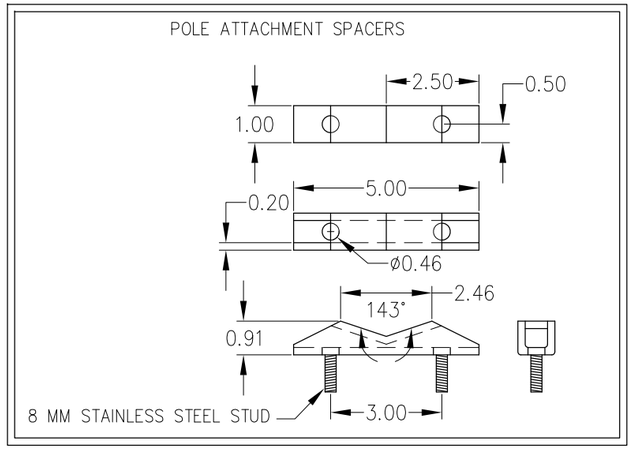
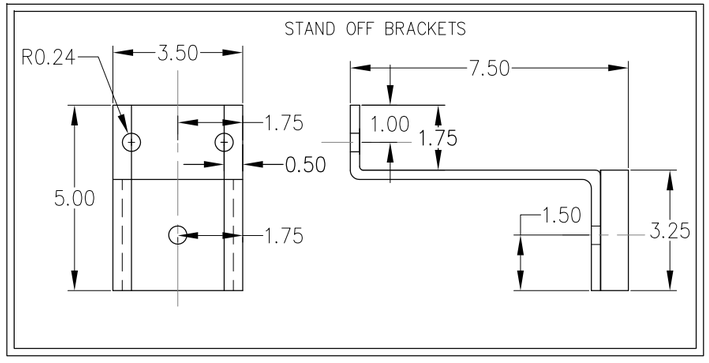
D-2

ANTENNA MOUNT | N.T.S. | 1









SHROUD DETAIL

N.T.S. | 1

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FC

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D-3

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON23

R.O.W. EAST SIDE OF ROMERO CANYON RD.
(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT – ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

VICINITY MAP – N.T.S.

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE
LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.
ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE
ELECT. CONDUIT
COAXIAL CABLE
MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI ANTENNAS ON EXISTING UTILITY POLE
2. EQUIPMENT PEDESTAL W/ BBU, AND ELECTRICAL METER AT BASE OF POLE
3. PROPOSED SHROUD W/ ION ON EXISTING UTILITY POLE

SHEET INDEX:

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	–
DIRT TRENCH	–
PUNCH THRU	–
BORE	–
TOTAL	–
R&R SWF TOTAL	–

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. EAST SIDE OF ROMERO CANYON RD.
(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
1	FXC 03/25/2013	ISSUED FOR FINAL
2	FXC 11/05/2013	ISSUED FOR FINAL
3	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON23
VERIZON MONTECITO-MON23

SITE ADDRESS: THOMAS BROS PAGE 987 GRID E7
R.O.W. EAST SIDE OF ROMERO CANYON RD.
(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.44892
LONG: -119.59215

SHEET TITLE:

TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

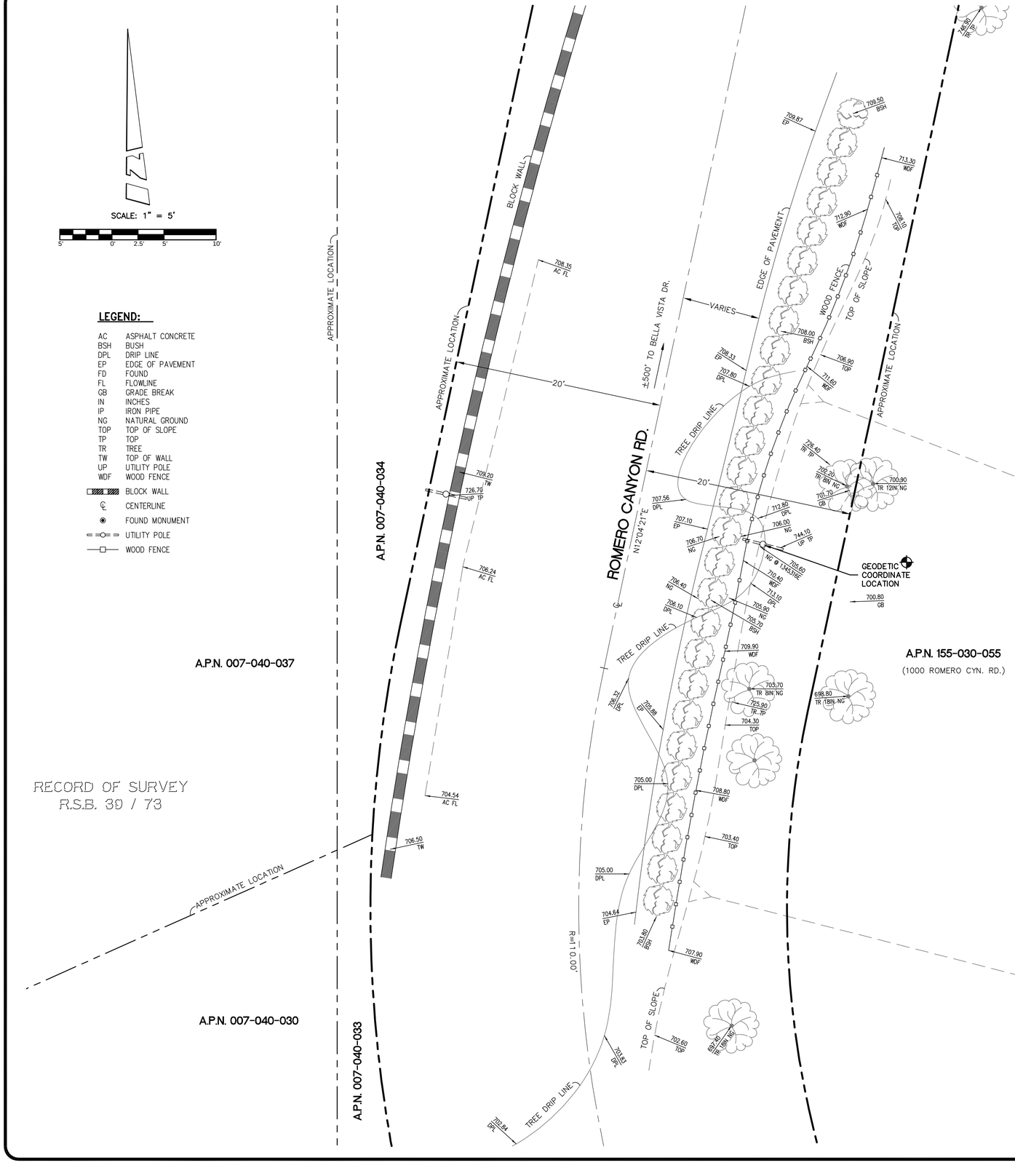
T-1

SCALE: 1" = 5'

5' 0' 2.5' 5' 10'

LEGEND:

AC	ASPHALT CONCRETE
BSH	BUSH
DPL	DRIP LINE
EP	EDGE OF PAVEMENT
FD	FOUND
FL	FLOWLINE
GB	GRADE BREAK
IN	INCHES
IP	IRON PIPE
NG	NATURAL GROUND
TOP	TOP OF SLOPE
TP	TOP
TR	TREE
TW	TOP OF WALL
UP	UTILITY POLE
WDF	WOOD FENCE
	BLOCK WALL
℄	CENTERLINE
	FOUND MONUMENT
	UTILITY POLE
	WOOD FENCE



COORDINATES:

LATITUDE 34°26'54.99" N
LONGITUDE 119°35'32.18" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

ESTABLISHED BY G.P.S. OBSERVATIONS AND PROCESSED TO CALIFORNIA ZONE 5, NORTH AMERICAN DATUM OF 1983.

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 750"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 750" AS SHOWN ON THE "CARPINTERIA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 752.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

DATE OF SURVEY:

JULY 17, 2013

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

LIVING PLANTS STATEMENT:

THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY VALID FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.

REV:	DATE/BY:	REVISION DESCRIPTION:
1	07/25/13 MDL/JA	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PKWY. SOUTH
LAKE FOREST, CA 92630-8326
(949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

CROWN CASTLE NG WEST, INC.

SURVEYOR:

BERT HAZE AND ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3188 AIRWAY AVENUE, SUITE K1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX

JN. 706.236

STAMP:

PROFESSIONAL LAND SURVEYOR
BERT HAZE
No. 7211
Exp. 3-31-14
STATE OF CALIFORNIA

SITE INFO:

SITE NAME:
MON23
VERIZON MONTECITO-MON23

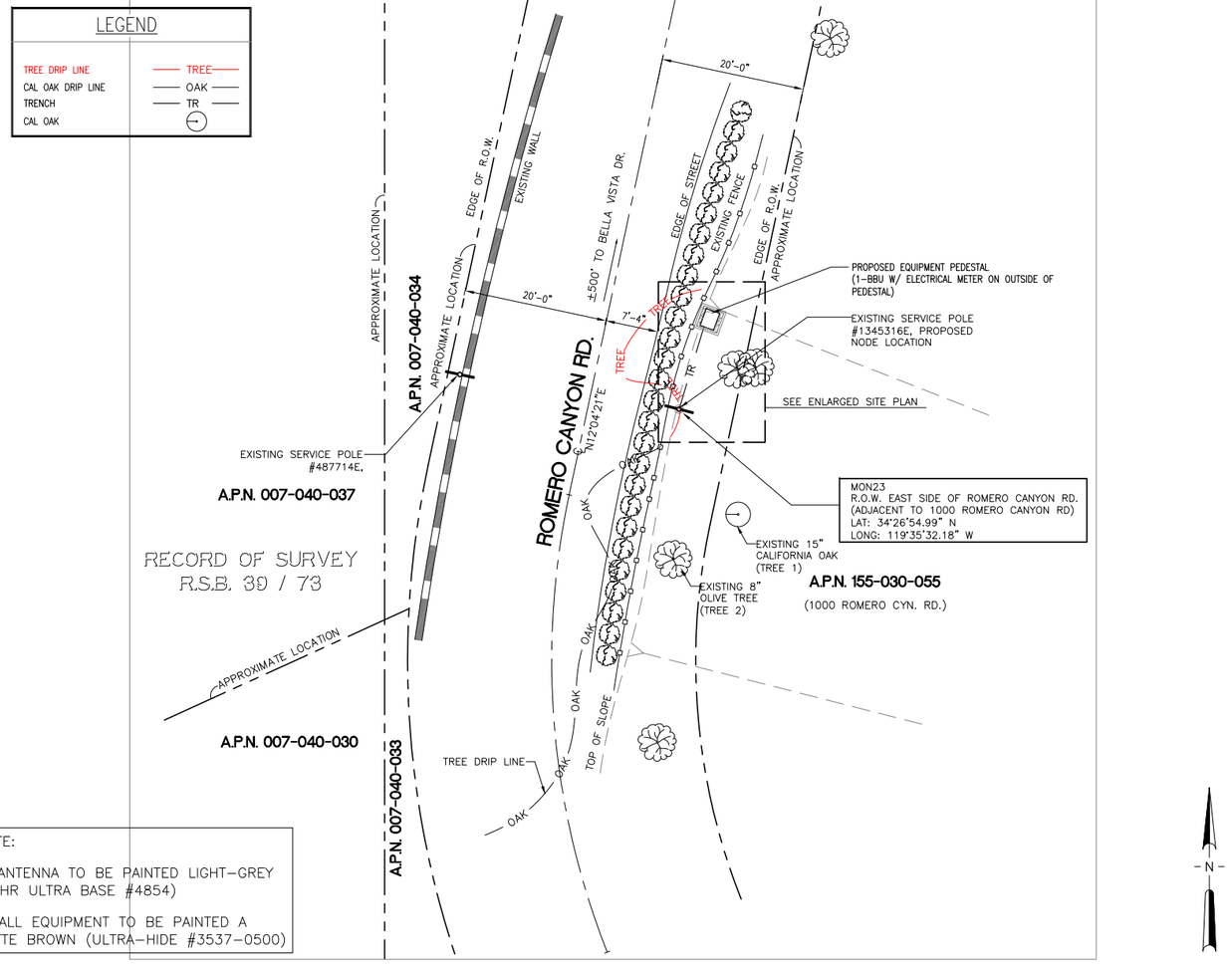
SITE ADDRESS:
R.O.W. EAST SIDE OF ROMERO CANYON RD
(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108

SHEET TITLE:
TOPOGRAPHIC SURVEY

DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
MON23	MDL	07/25/13

SHEET NUMBER:
1 OF 1 | C-1

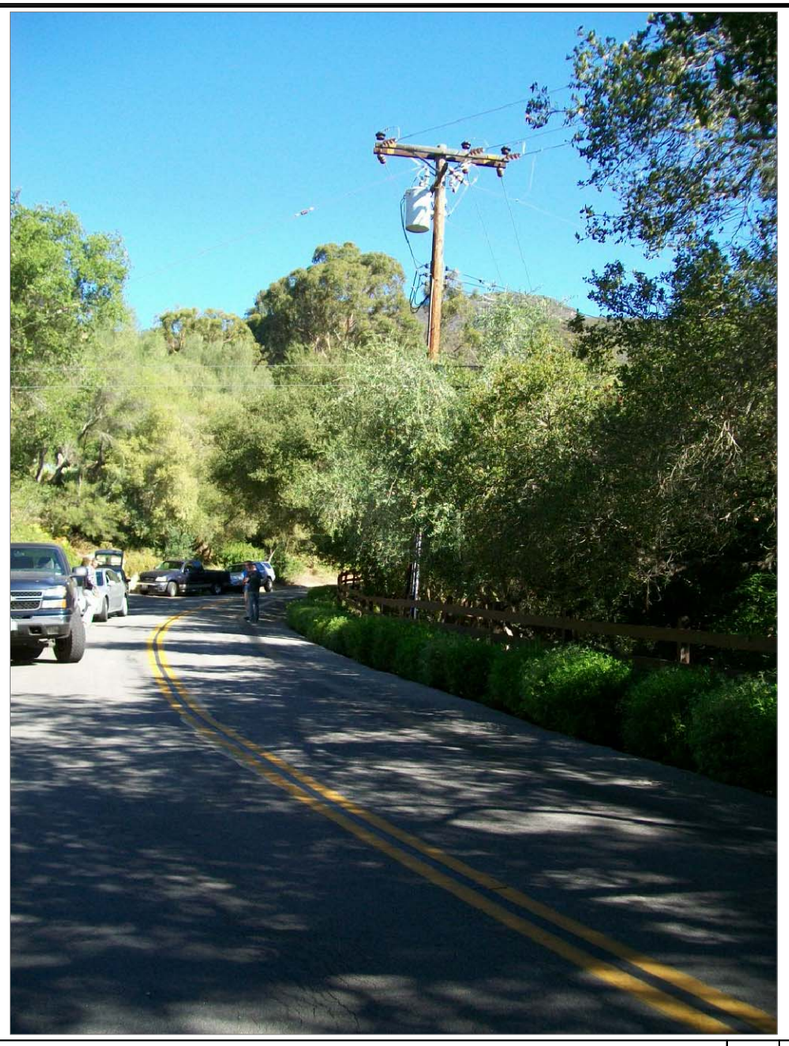


NOTE:

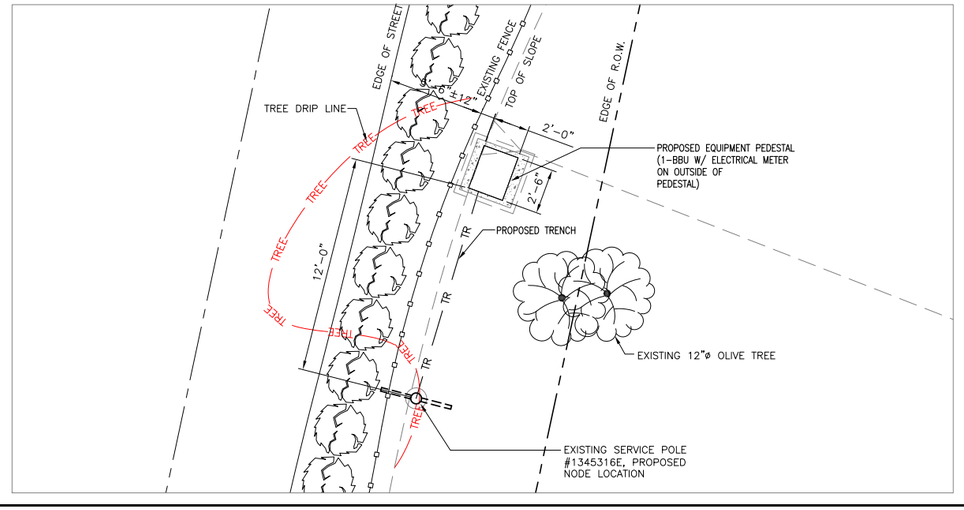
1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

SITE PLAN | SCALE: 1"=10'-0" | 0 5' 10' | 1



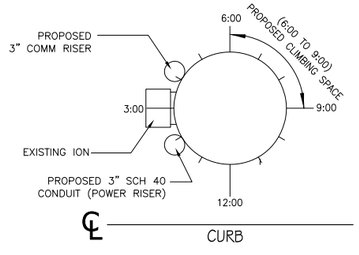
EXISTING PHOTO | SCALE: N.T.S. | 3



ENLARGED SITE PLAN | SCALE: 1/4"=1'-0" | 0 2' 4' | 2

POLE WILL BE STEPPED IN
ACCORDANCE TO GO95 STANDARDS
IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 4:00
1-3" POWER RISER @ 2:00



RISER PROFILE | SCALE: N.T.S. | 4

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
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3	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC

CONSULTING CIVIL ENGINEERS

26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630

(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:

MON23

VERIZON MONTECITO-MON23

SITE ADDRESS: THOMAS BROS PAGE 987 GRID E7
R.O.W. EAST SIDE OF ROMERO CANYON RD.
(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.44892
LONG: -119.59215

SHEET TITLE:

SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

DRAWN BY:
FC

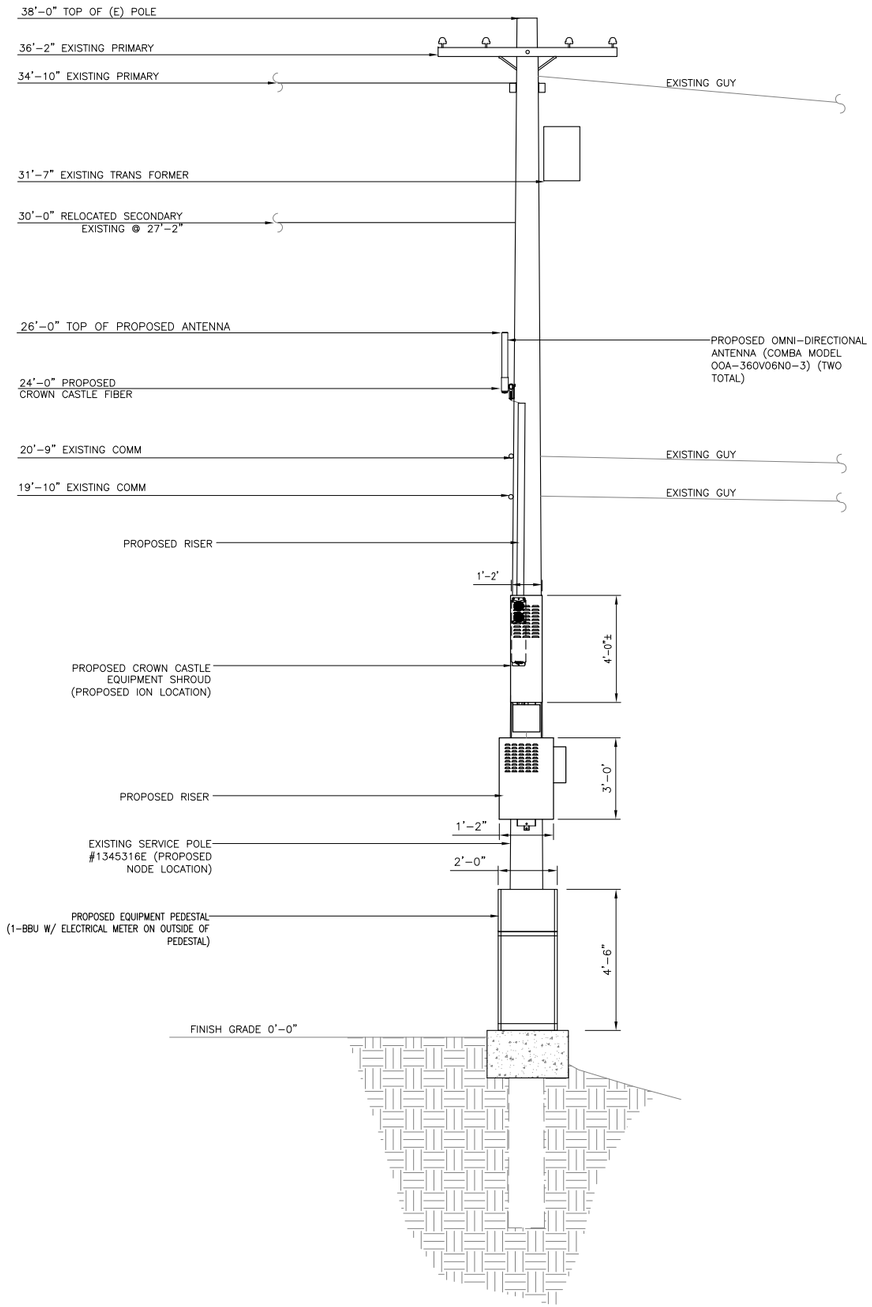
SHEET NUMBER:

A-1

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

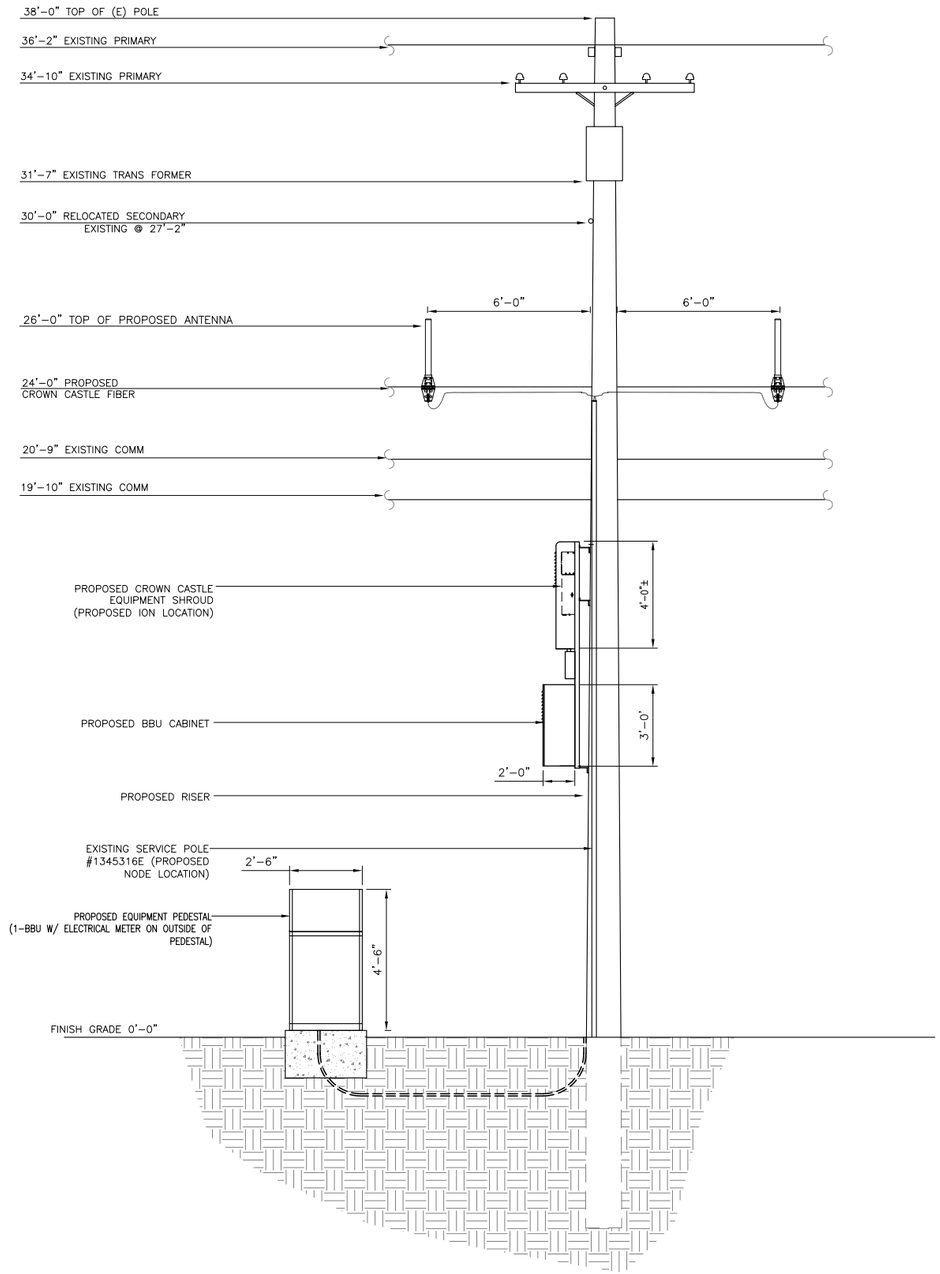
2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING EAST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
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ENGINEER/CONSULTANT:

Civil Engineer

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26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

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(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.44892
LONG: -119.59215

SHEET TITLE:

ELEVATION

DRAWING INFO:

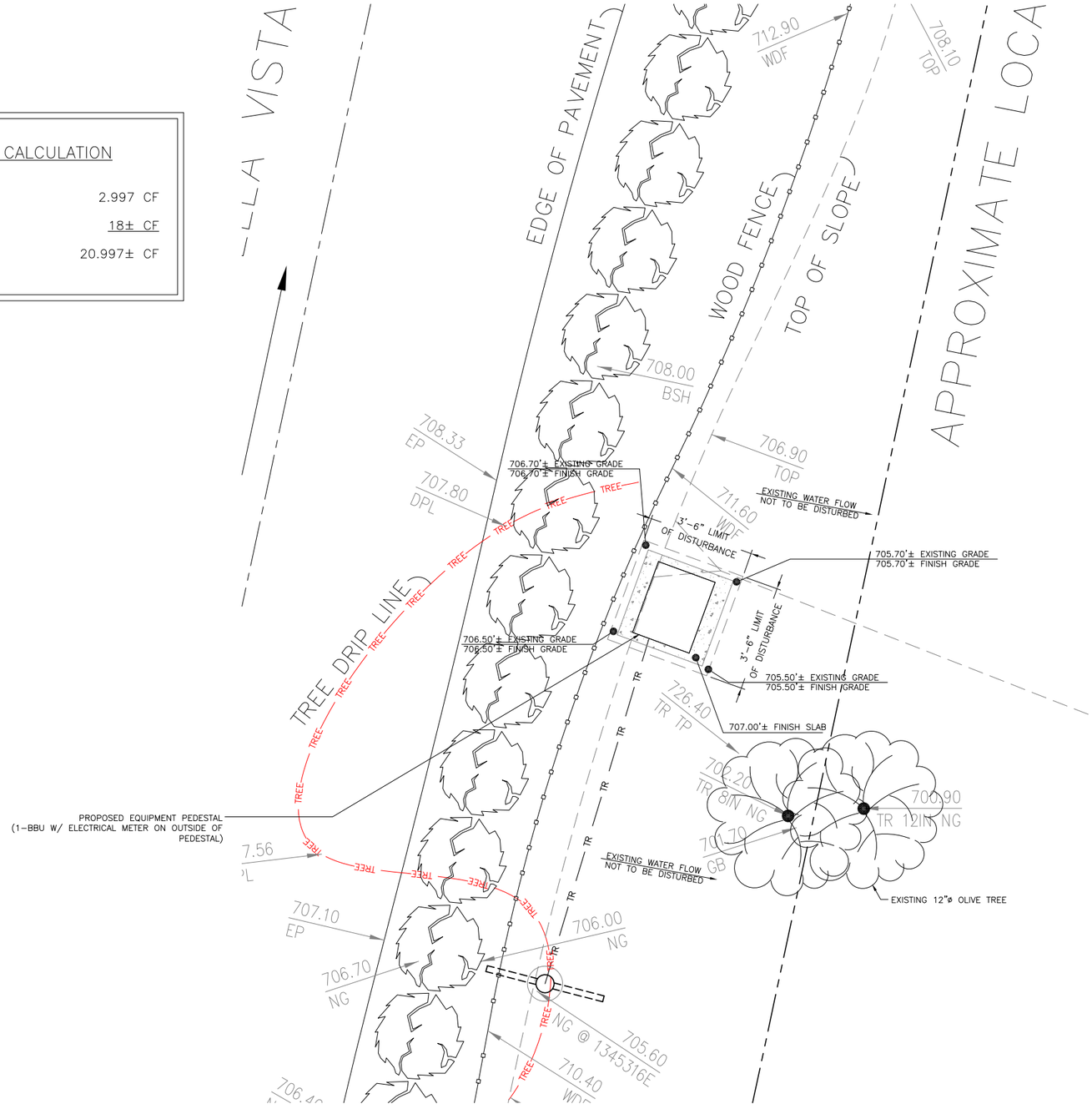
DRAWN BY:
FC

SHEET NUMBER:

A-2

GRADING CALCULATION

CONCRETE PAD:	2.997 CF
12'Lx3'Dx.5'W TRENCH:	18± CF
TOTAL:	20.997± CF



NOTE:
NO CUT AND FILL REQUIRED

LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

REV:	DATE/BY:	REVISION DESCRIPTION:
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SANTA BARBARA, CA 93108
LAT: 34.44892
LONG: -119.59215

SHEET TITLE:

GRADING PLAN

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-3

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi

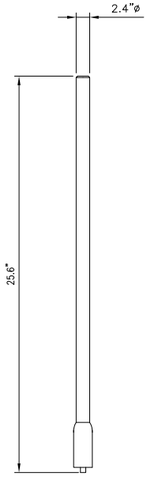
Technical Specifications

Electrical

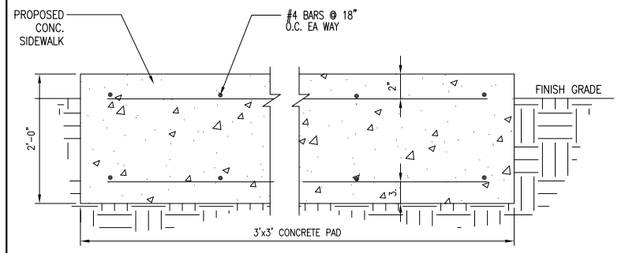
Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

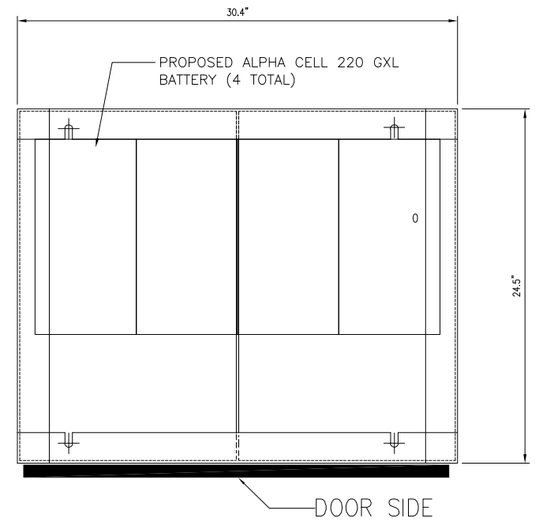
Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)

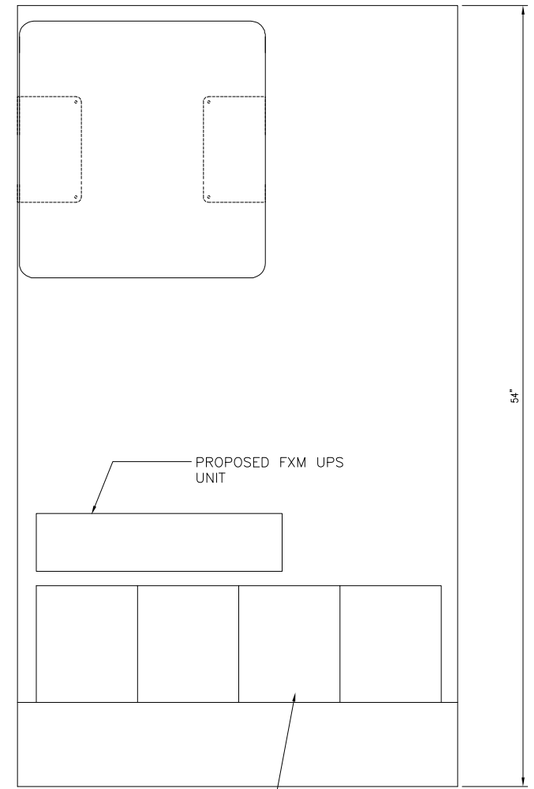


ANTENNA SPECIFICATIONS | N.T.S. | 1



CONCRETE PAD | N.T.S. | 3





Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
IP3 optimized ..... +10 max.
Noise figure optimized .... +6 max.
4.5 typical

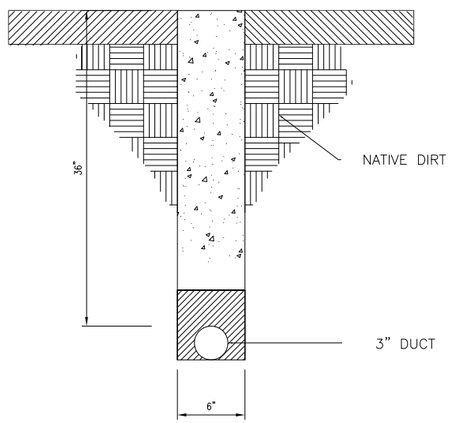
Mechanical****

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

ION-M7P/7P/85P/19P | N.T.S. | 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH | N.T.S. | 4

EQUIPMENT PEDESTAL | N.T.S. | 5

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 03/15/2013	ISSUED FOR REVIEW
1	FXC 03/25/2013	ISSUED FOR FINAL
2	FXC 11/05/2013	ISSUED FOR FINAL
3	FXC 03/08/2014	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON23
VERIZON MONTECITO–MON23

SITE ADDRESS: THOMAS BROS PAGE 987 GRID E7
R.O.W. EAST SIDE OF ROMERO CANYON RD.
(ADJACENT TO 1000 ROMERO CANYON RD)
SANTA BARBARA, CA 93108
LAT: 34.44892
LONG: –119.59215

SHEET TITLE:

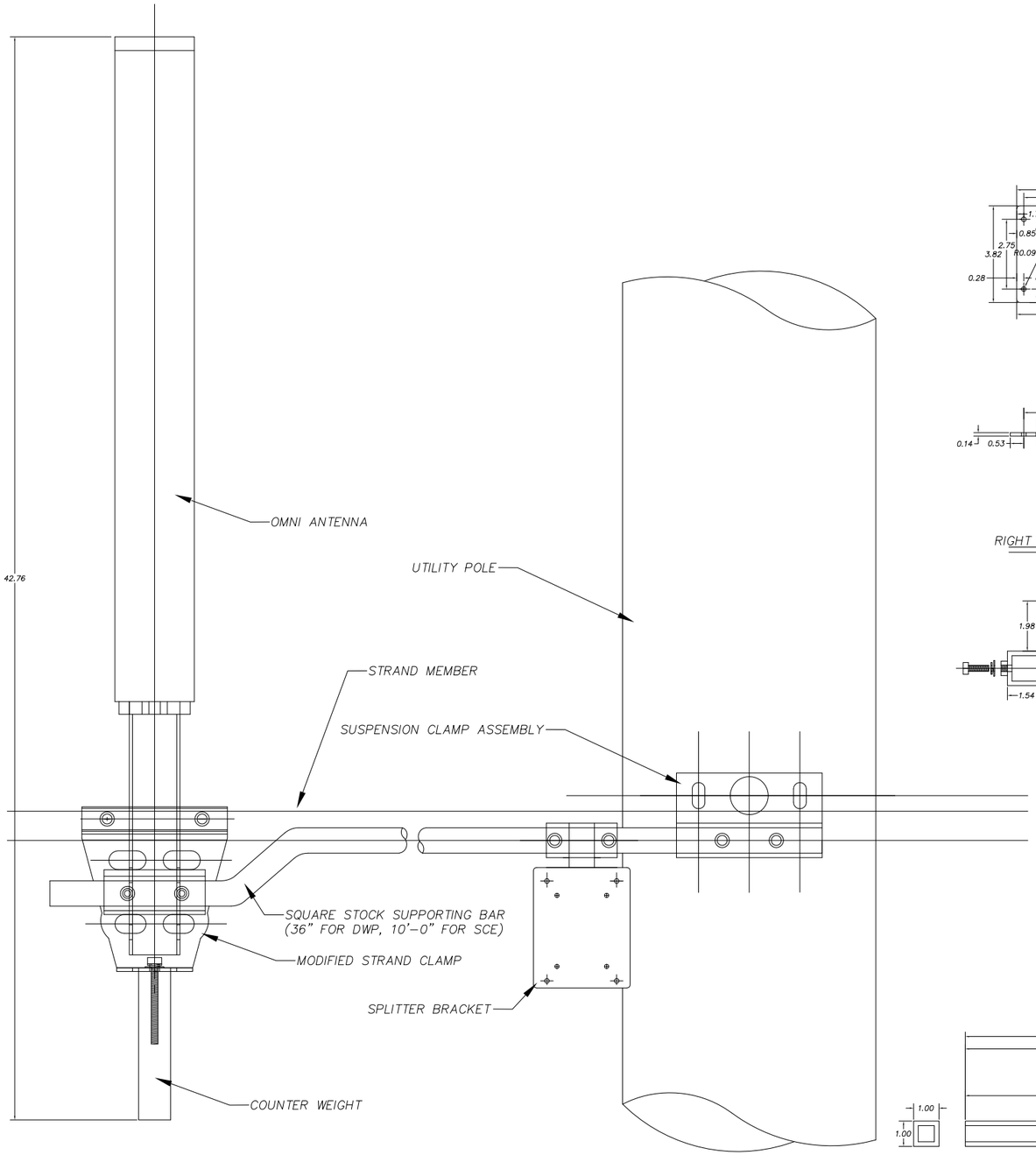
DETAILS

DRAWING INFO:

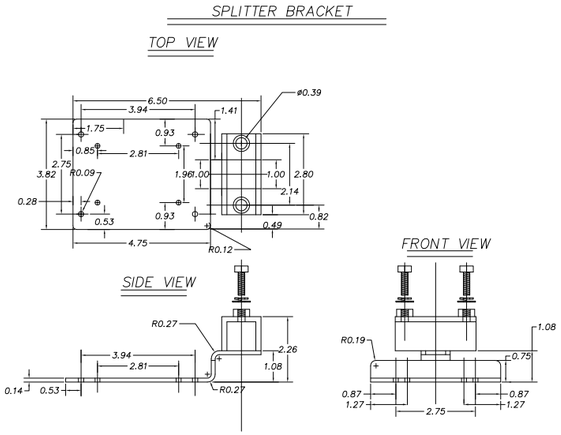
DRAWN BY:
FC

SHEET NUMBER:

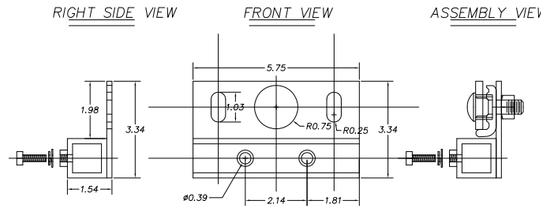
D–1



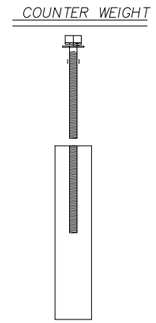
SPLITTER BRACKET



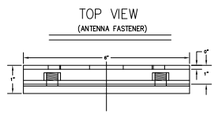
IN-LINE POLE SUSPENSION CLAMP ASSEMBLY



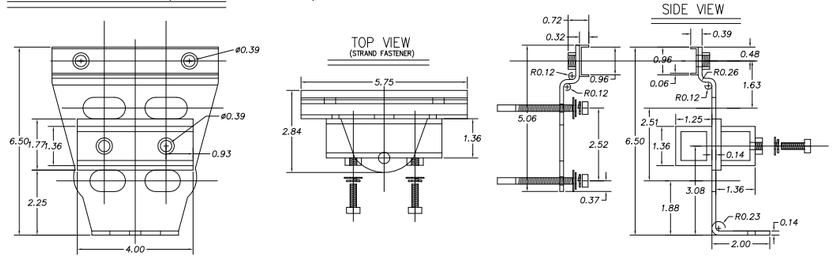
COUNTER WEIGHT



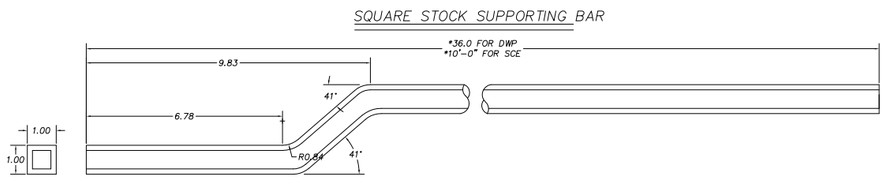
TOP VIEW (ANTENNA FASTENER)



MODIFIED STRAND CLAMP (STRAND FASTENER)



SQUARE STOCK SUPPORTING BAR



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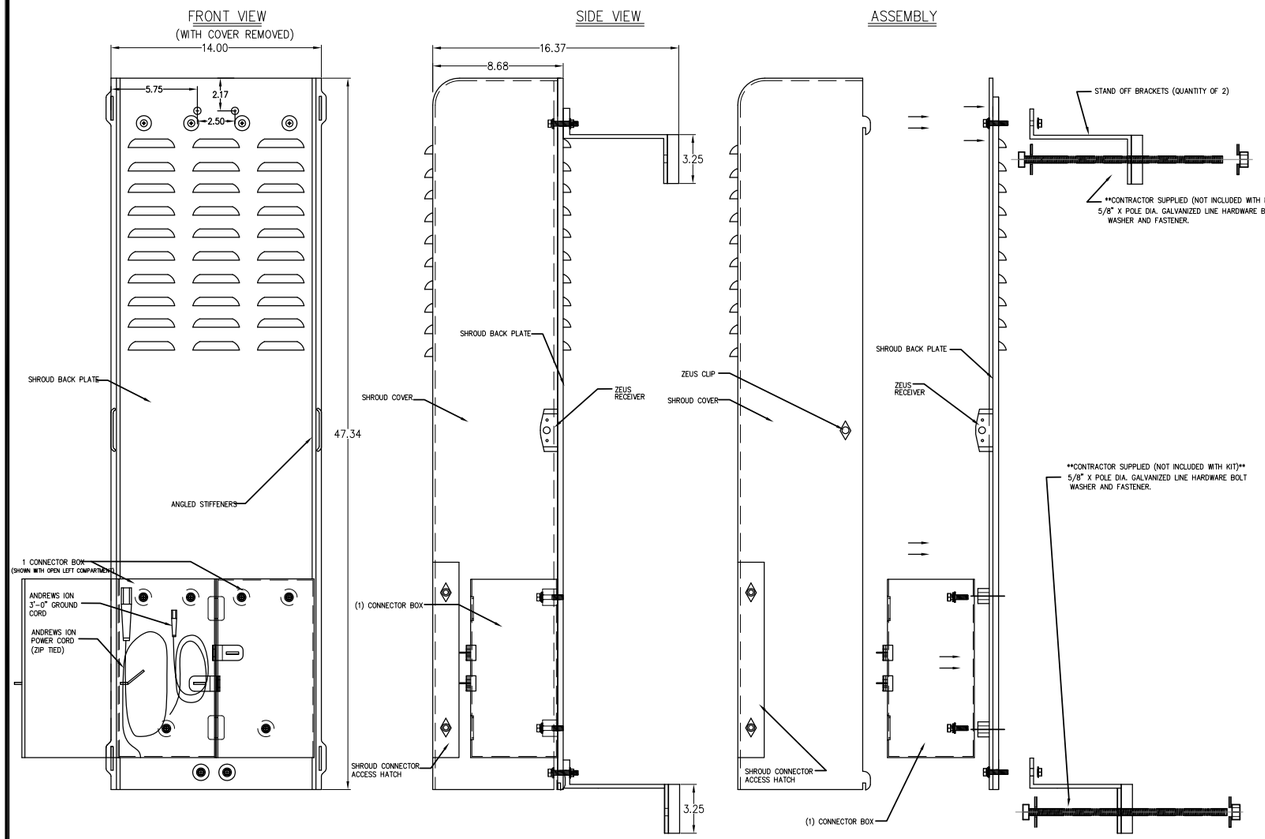
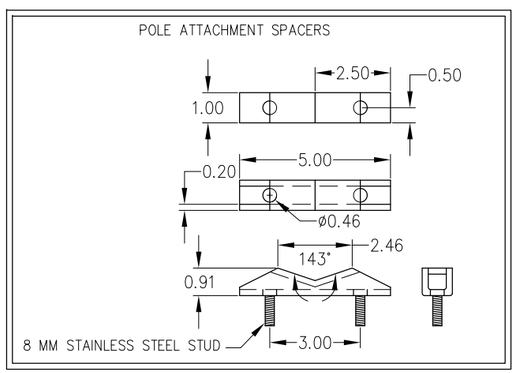
FC

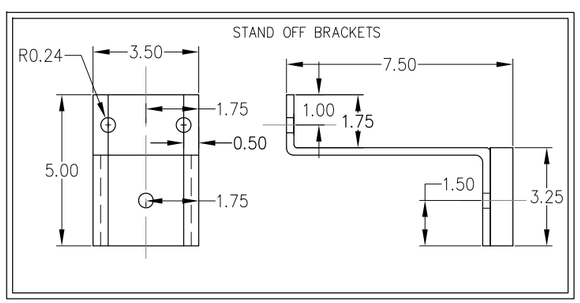
SHEET NUMBER:

D-2

ANTENNA MOUNT | N.T.S. | 1







SHROUD DETAIL | N.T.S. | 1

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement Extended	4 to 5 year full replacement Extended	4 to 5 year full replacement Extended
Service Life:	220	195	165
Runtime (minutes)[2]:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Sealed VRLA:	Extreme	Extreme	Extreme
Heat Resistant:	Low	Low	Low
Hydrogen Emission:	Threaded insert	Threaded insert	Threaded insert
Terminals:	1/4" - 20 UNC	1/4" - 20 UNC	1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM250Vac②	4A			6A			8A			10A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	329	295	249	236	209	183	186	165	144
4 batteries:	701	625	546	444	396	346	329	293	256	261	232	203
6 batteries:	1001	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1497	1338	1165	999	859	750	730	643	562	577	515	450
9 batteries:	1696	1599	1322	1091	978	853	826	733	640	659	587	514
XM295Vac③	12A			14A			16A			18A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries:	210	187	163	169	151	132	144	126	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	225
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	258
XM380Vac②	4A			6A			8A			10A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	708	712	622	500	453	396	377	335	294	300	267	233
4 batteries:	1001	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1696	1599	1322	1001	978	853	800	733	640	659	587	514
8 batteries:	2288	2097	1728	1497	1338	1165	1122	1005	877	904	809	706
9 batteries:	2580	2345	2007	1699	1599	1322	1275	1143	997	1027	921	800
XM260Vac②	12A			14A			16A			18A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	429	525	465	402	458	407	351
9 batteries:	843	753	658	692	617	538	597	531	462	525	465	402

*Above calculations based on an AC load with a .96 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 52 368 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5091 Fax: +370 5 210 5092	P.R. China Tel: +852 2756 6963 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 925 9944 Fax: +7 495 916 1340	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 560870			

049-297-10-B002 (0609)

BATTERY SPECIFICATIONS | N.T.S. | 2

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FC

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D-3

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON29m1

R.O.W. WEST SIDE OF LILAC DR
(ADJACENT TO 663 LILAC DR)
SANTA BARBARA, CA 93108

VICINITY MAP - N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT - ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	-
DIRT TRENCH	-
PUNCH THRU	-
BORE	-
TOTAL	-
R&R SWF TOTAL	-

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE
LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.
ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE
ELECT. CONDUIT
COAXIAL CABLE
MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF ALISOS DR (ADJACENT TO 2091 ALISOS DR) SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI DIRECTIONAL ANTENNAS ON EXISTING UTILITY POLE
2. EQUIPMENT VAULT AT BASE OF EXISTING POLE
3. EQUIPMENT PEDESTAL W/ BBU AND ELECTRICAL METER AT BASE OF POLE

SHEET INDEX:

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 09/02/2013	ISSUED FOR REVIEW
1	FXC 11/06/2013	ISSUED FOR REVIEW
2	FXC 03/08/2013	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer
CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON29m1
VERIZON MONTECITO-MON29m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. WEST SIDE OF LILAC DR
(ADJACENT TO 663 LILAC DR)
SANTA BARBARA, CA 93108
LAT: 34.439831
LONG: -119.608297

SHEET TITLE:

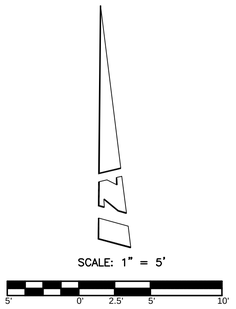
TITLE SHEET

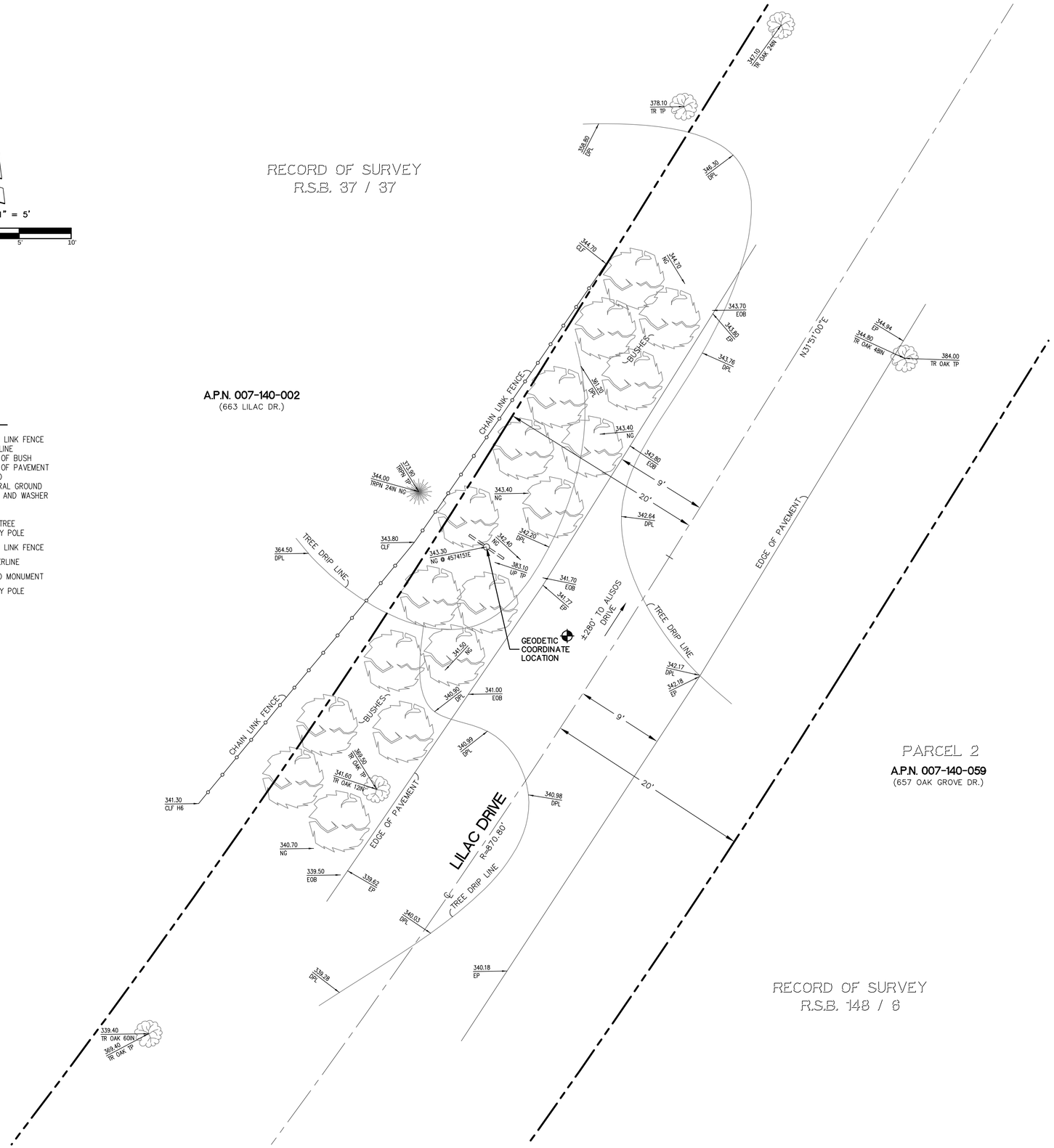
DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

T-1





COORDINATES:

LATITUDE 34°26'23.39" N
LONGITUDE 119°36'29.87" W

NAD 1983 GEODETIC COORDINATES AND ELEVATIONS WERE ESTABLISHED USING SURVEY GRADE "ASHTECH" G.P.S. RECEIVERS AND ASHTECH SURVEY GRADE PRECISION SOFTWARE FOR POST-PROCESSING.

BASIS OF BEARINGS:

THE CENTERLINE OF LILAC DRIVE BEING NORTH 31°51'00" EAST PER FOUND MONUMENTS ON RECORD OF SURVEY, R.S.B. 148/6, RECORDS OF SANTA BARBARA COUNTY.

ASSESSOR'S IDENTIFICATION:

N/A

AREA:

N/A

BENCH MARK REFERENCE:

U.S.G.S. BENCH MARK "BM 269"

UNITED STATES GEOLOGICAL SURVEY BENCH MARK "BM 269" AS SHOWN ON THE "CARPINTERIA" 7.5 MINUTE QUADRANGLE MAP.

ELEVATION: 271.5 FEET A.M.S.L. (NAVD88) (DATUM VERIFIED IN FIELD TO BE WITHIN 1-A ACCURACY STANDARDS)

TITLE REPORT IDENTIFICATION:

N/A

EASEMENT NOTES:

N/A

LEGAL DESCRIPTION:

N/A

DATE OF SURVEY:

AUGUST 01, 2013

SURVEYORS NOTE:

THE RIGHT OF WAY LINES AND THEIR DIMENSIONS SHOWN HEREON ARE PER READILY AVAILABLE RECORDED INFORMATION AND THEIR LOCATIONS ARE APPROXIMATE, PENDING RECEIPT OF TITLE REPORT(S) FOR THE ADJACENT REAL PROPERTY.

LIVING PLANTS STATEMENT:

THE HEIGHTS AND ELEVATIONS FOR THE TREES, BUSHES AND OTHER LIVING PLANTS SHOWN HEREON, SHOULD BE CONSIDERED APPROXIMATE (+/-) AND ONLY VALID FOR THE DATE OF THIS SURVEY. THEY ARE PROVIDED AS A GENERAL REFERENCE AND SHOULD NOT BE USED FOR DESIGN PURPOSES.

LEGEND:

CLF	CHAIN LINK FENCE
DPL	DRIP LINE
EOB	EDGE OF BUSH
EP	EDGE OF PAVEMENT
FD	FOUND
NG	NATURAL GROUND
S/W	SPIKE AND WASHER
TP	TOP
TR	TREE
TRPN	PINE TREE
UP	UTILITY POLE
— o —	CHAIN LINK FENCE
℄	CENTERLINE
◉	FOUND MONUMENT
= =o= =	UTILITY POLE

REV:	DATE/BY:	REVISION DESCRIPTION:
1	08/08/13 MDL	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PKWY. SOUTH
LAKE FOREST, CA 92630-8326
(949) 753-8807 OFFICE - (949) 753-8833 FAX

SITE BUILDER:

CROWN CASTLE
NG WEST, INC.

SURVEYOR:

BERT HAZE
AND ASSOCIATES, INC.
LAND SURVEYING & MAPPING
3188 AIRWAY AVENUE, SUITE K1
COSTA MESA, CALIFORNIA 92626
714 557-1567 OFFICE
714 557-1568 FAX

JN. 706.241

STAMP:

PROFESSIONAL LAND SURVEYOR
BERT HAZE
No. 7211
Exp. 3-31-14
STATE OF CALIFORNIA

SITE INFO:

SITE NAME:
MON29
VERIZON MONTECITO-MON29

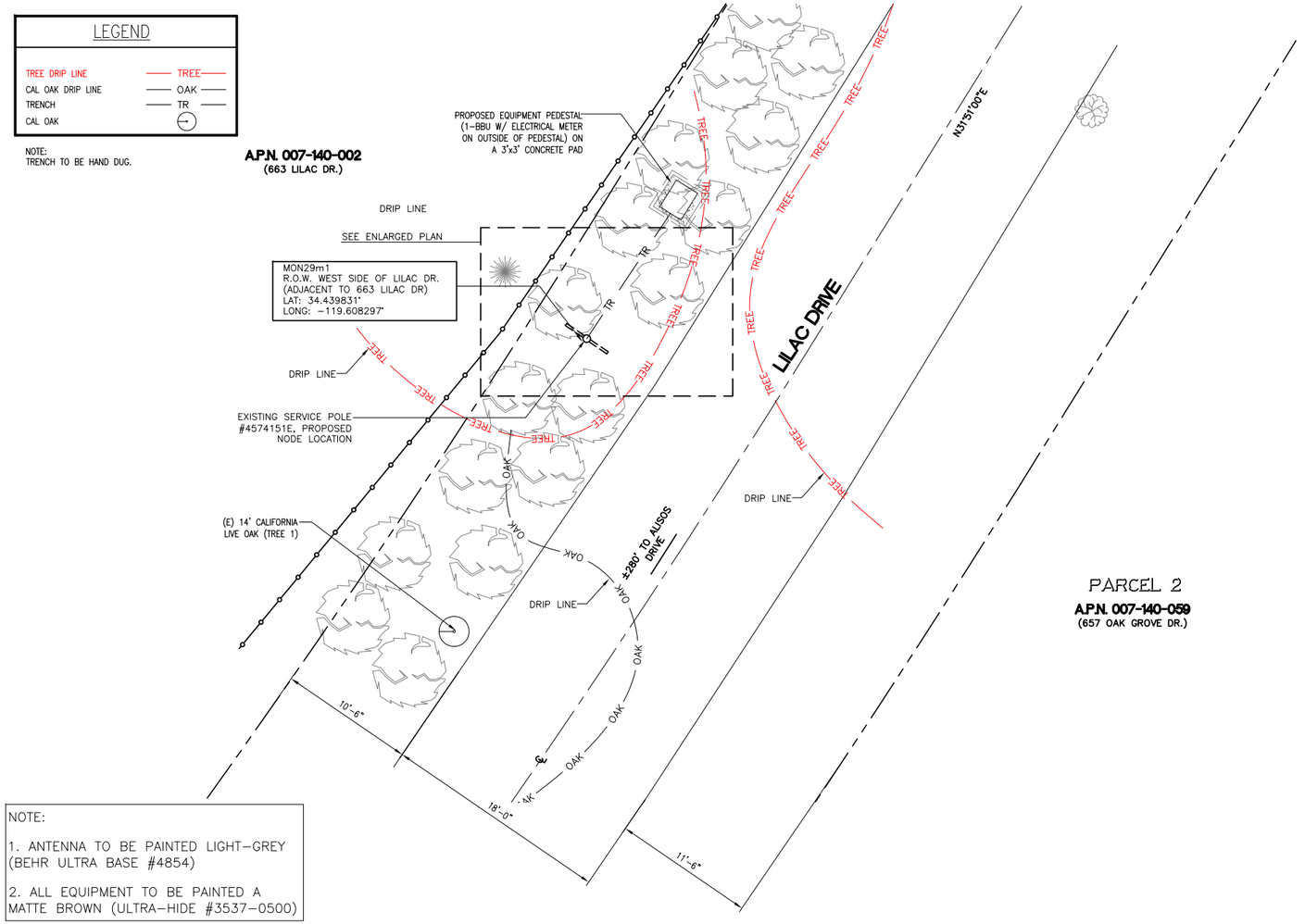
SITE ADDRESS:
R.O.W. WEST SIDE OF LILAC DR
(ADJACENT TO 663 LILAC DR)
SANTA BARBARA, CA 93108

SHEET TITLE:
TOPOGRAPHIC SURVEY

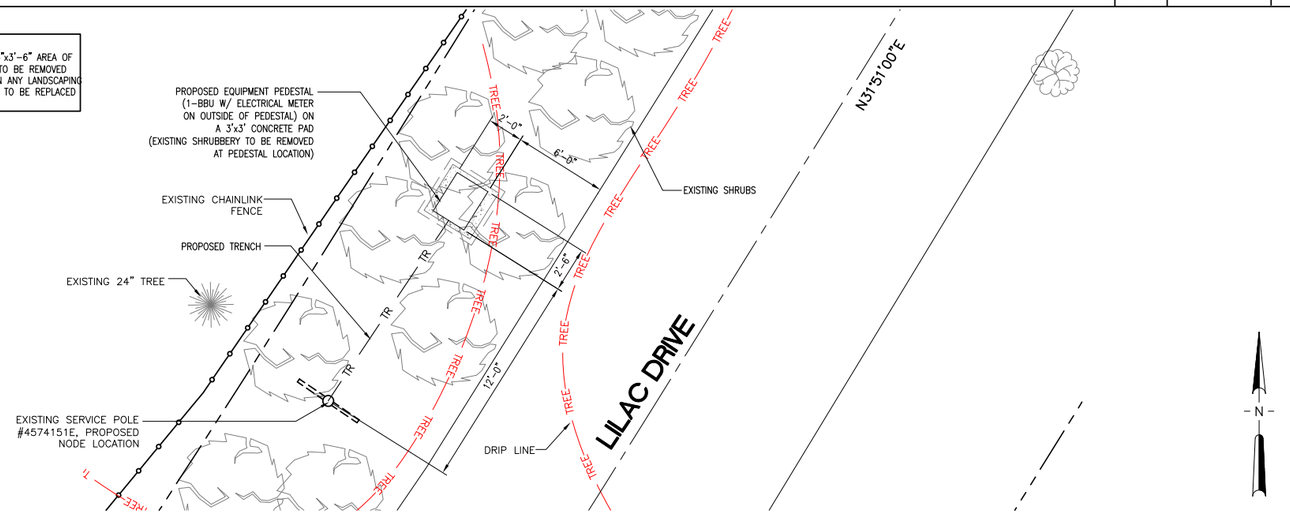
DRAWING INFO:

DWG. NAME:	DRAWN BY:	DATE:
MON29	MDL	08/08/13

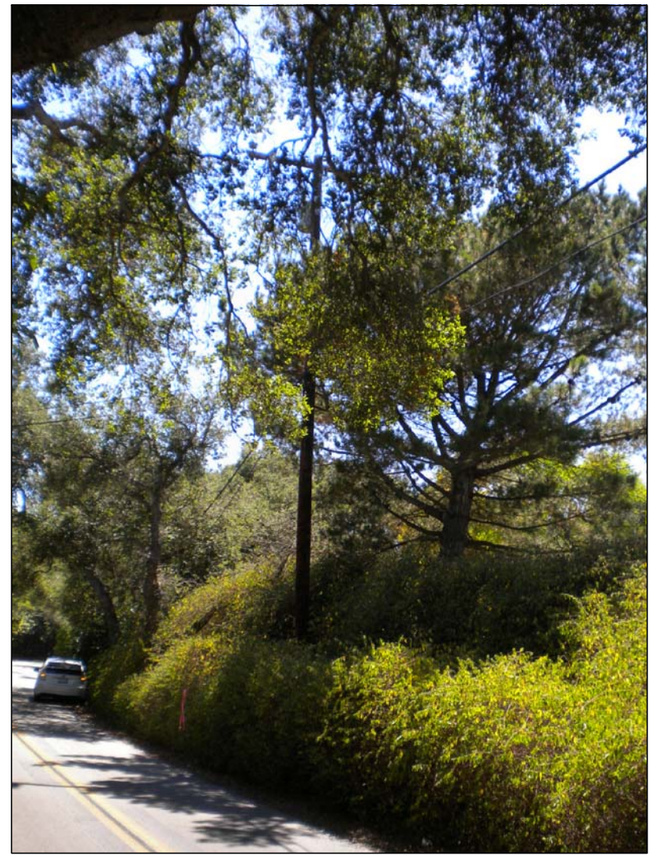
SHEET NUMBER:
1 OF 1 | C-1



SITE PLAN — SCALE: 1"=10'-0" (0 5' 10') — 1



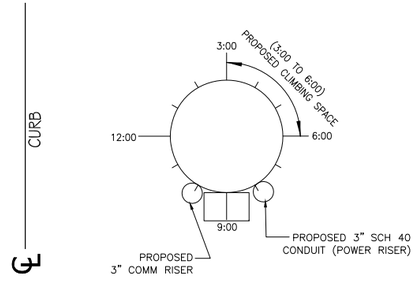
ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" (0 2' 4') — 2



EXISTING PHOTO — SCALE: N.T.S. — 3

POLE WILL BE STEPPED IN ACCORDANCE TO G095 STANDARDS IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 8:00
1-3" POWER RISER @ 10:00



RISER PROFILE — SCALE: N.T.S. — 4

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CONSULTING CIVIL ENGINEERS

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LONG: -119.608297

SHEET TITLE:

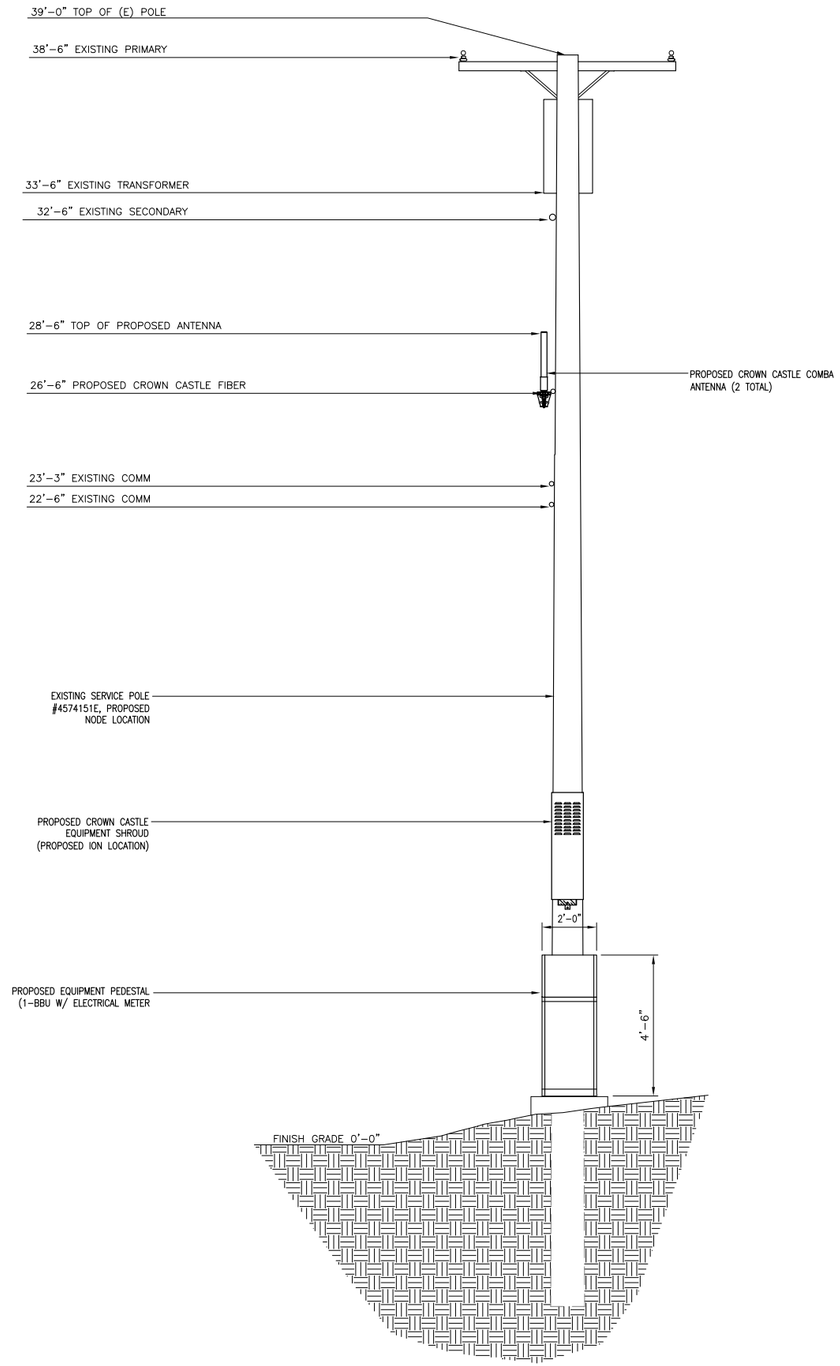
SITE PLAN AND ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

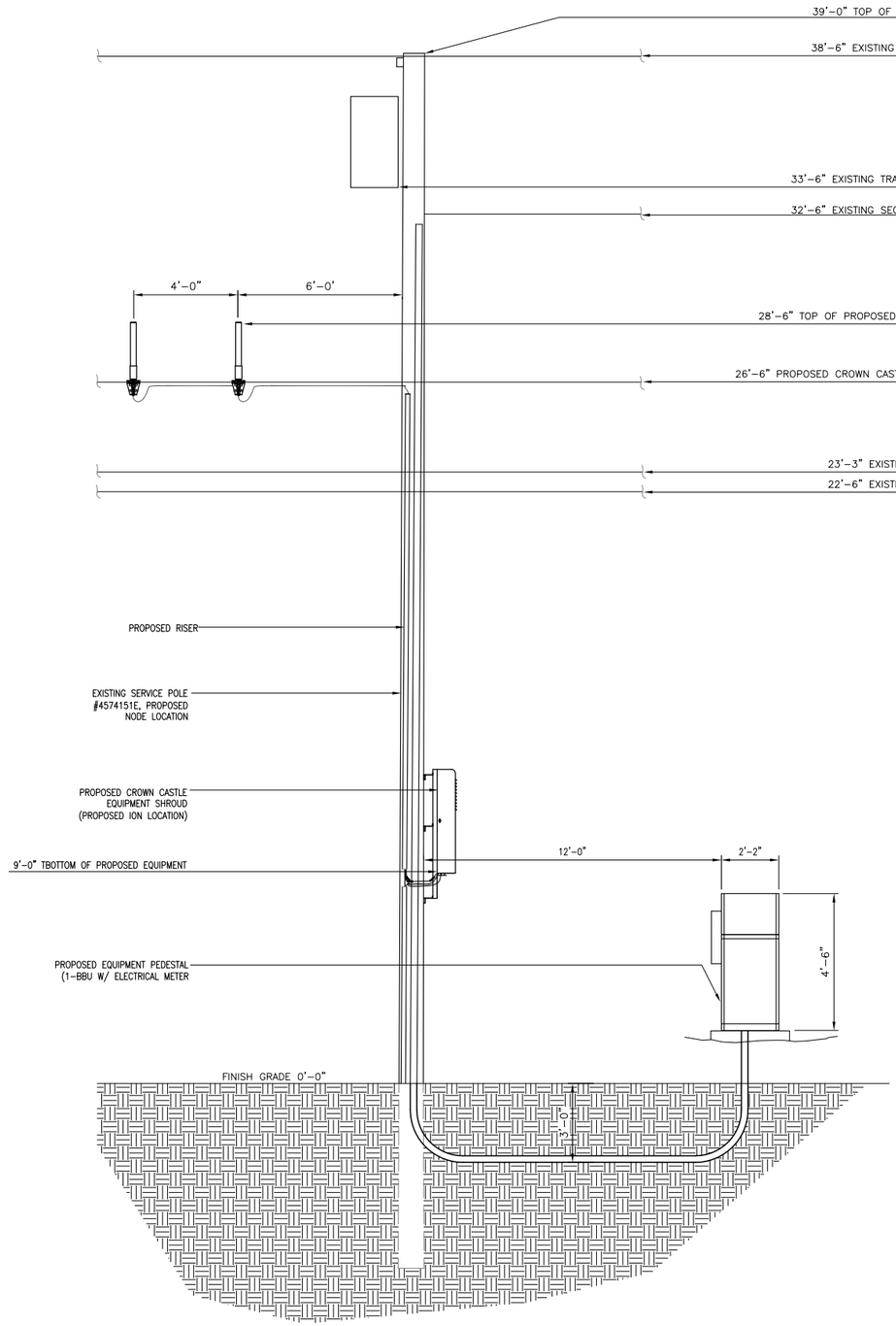
A-1



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING WEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

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SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-2

NOTE:
NO CUT AND FILL REQUIRED

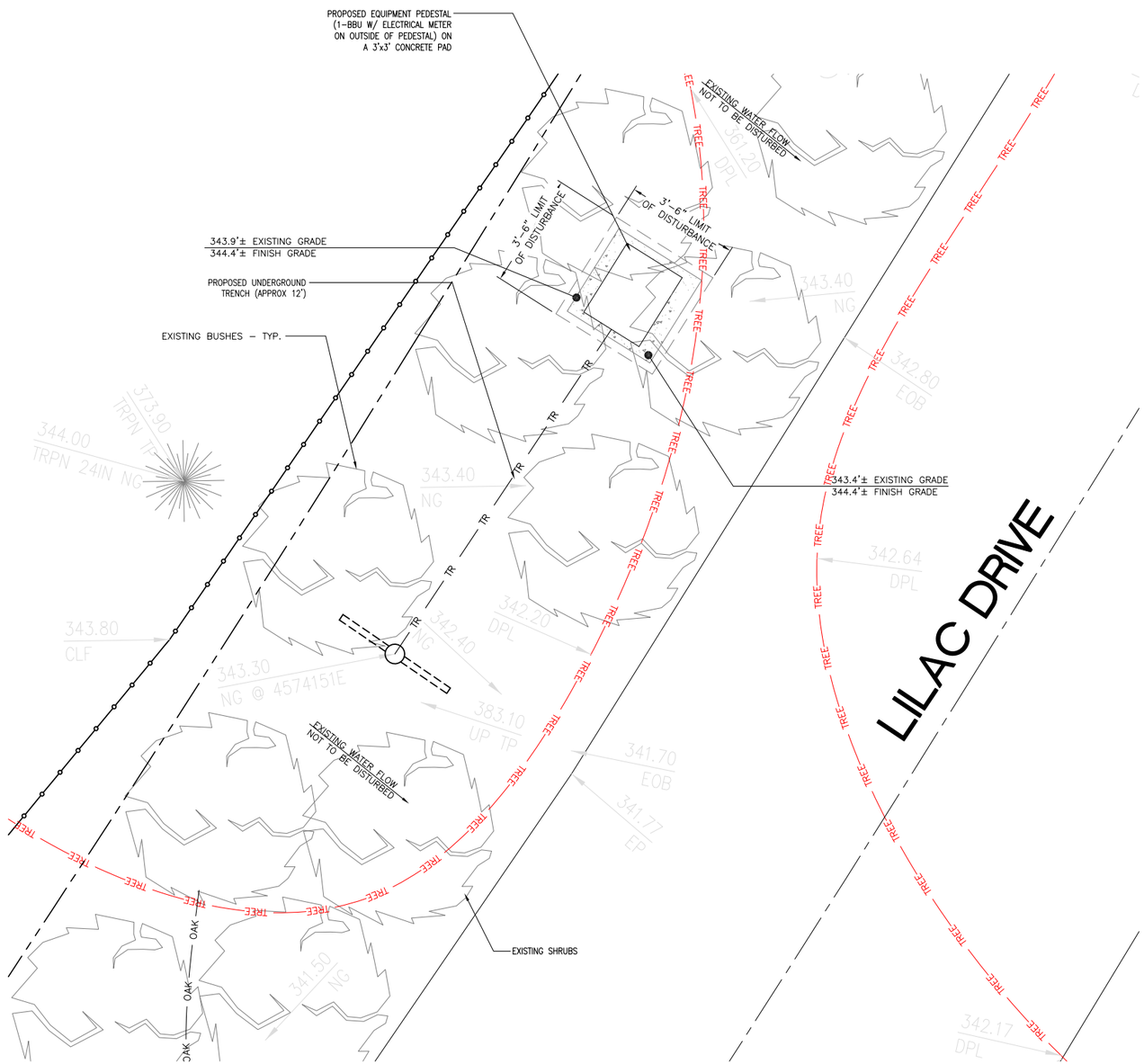
GRADING CALCULATION

CONCRETE PAD:	2.997 CF
12'Lx3'Dx.5'W TRENCH:	18 CF
TOTAL:	20.997 CF

LEGEND

TREE DRIP LINE	TREE
CAL OAK DRIP LINE	OAK
TRENCH	TR
CAL OAK	

NOTE:
TRENCH TO BE HAND DUG.



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SHEET TITLE:

GRADING PLAN

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-3

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi

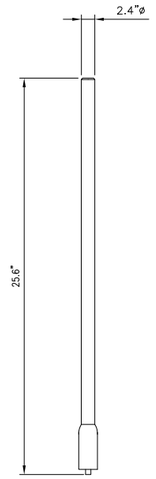
Technical Specifications

Electrical

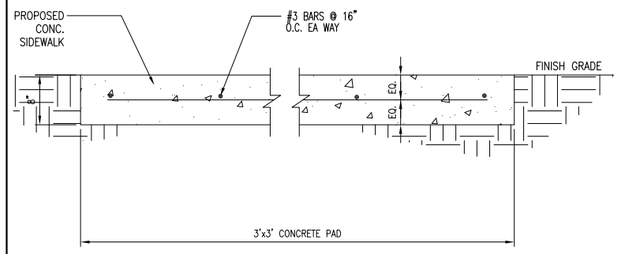
Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

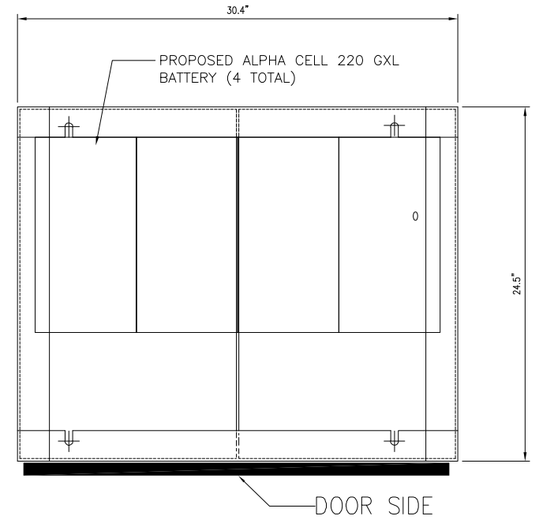
Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1. 2 (2. 65)

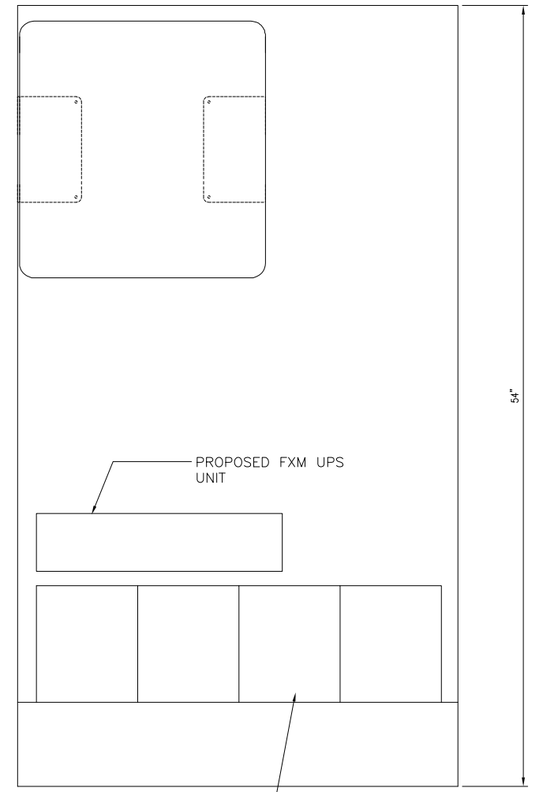


ANTENNA SPECIFICATIONS | N.T.S. | 1



CONCRETE PAD | N.T.S. | 3





Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

20W for Cell, PCS bands and 700MHz MIMO

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

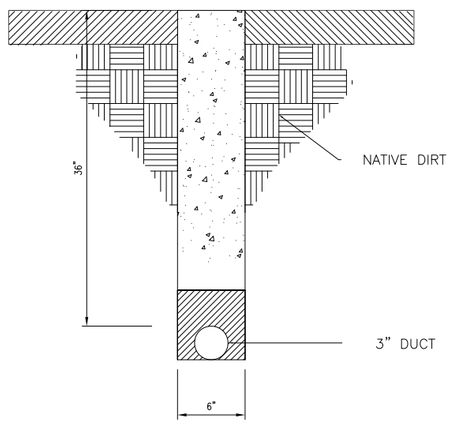
Noise figure, dB
IP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

Mechanical****

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

ION-M7P/7P/85P/19P | N.T.S. | 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH | N.T.S. | 4

EQUIPMENT PEDESTAL | N.T.S. | 5

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26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

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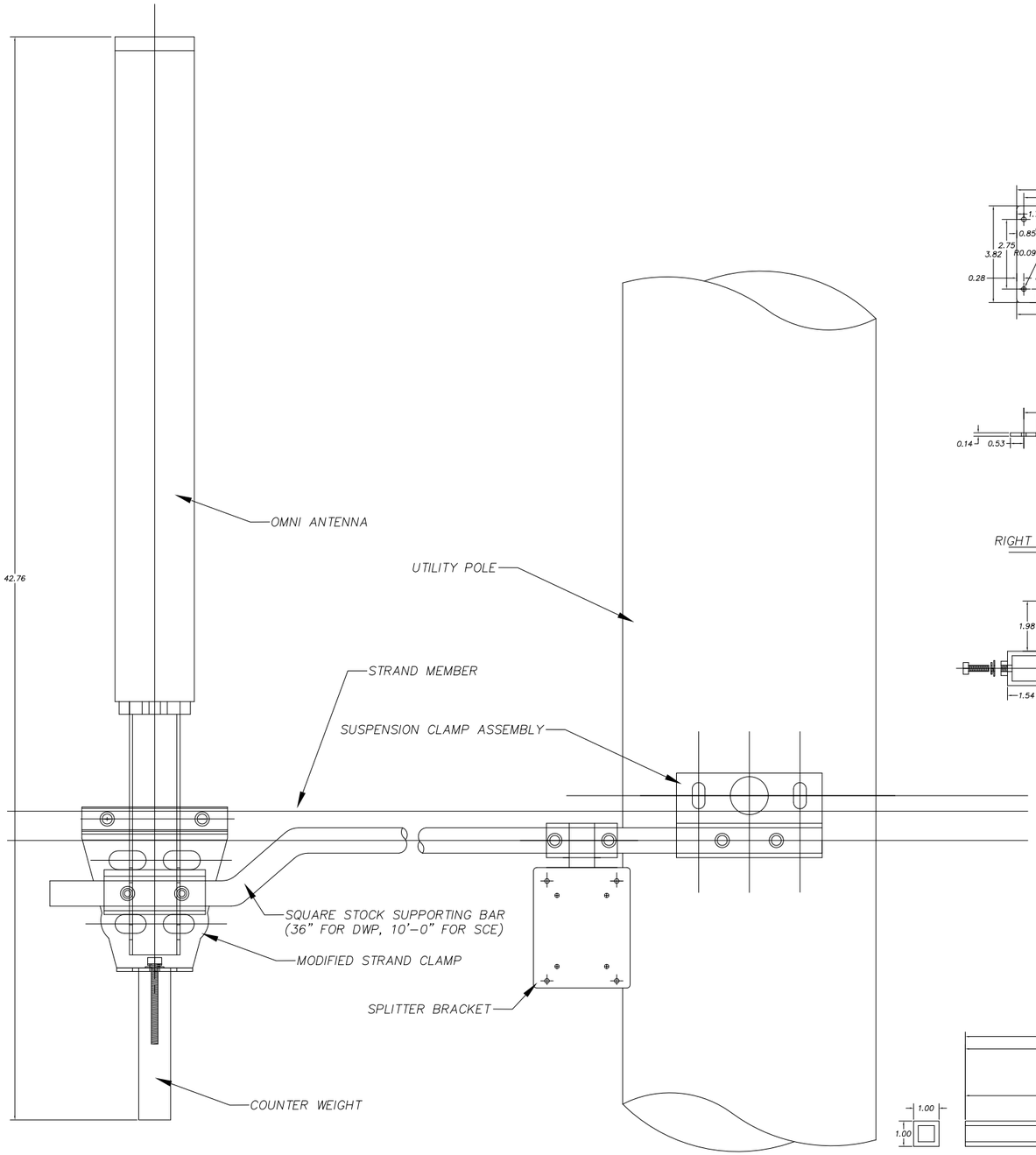
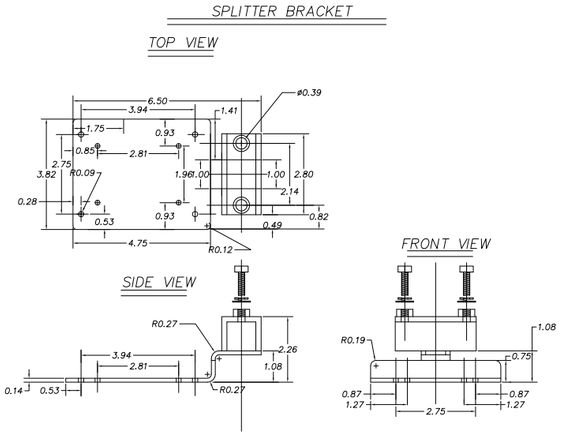
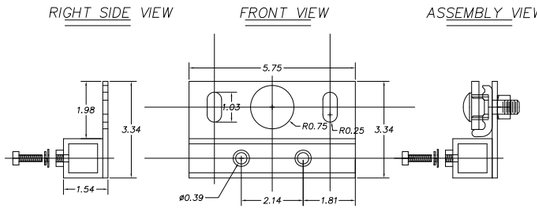
D–1



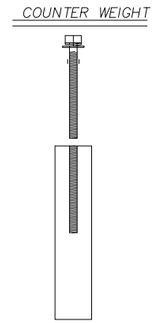
SPLITTER BRACKET



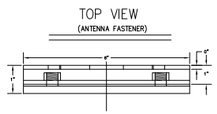
IN-LINE POLE SUSPENSION CLAMP ASSEMBLY



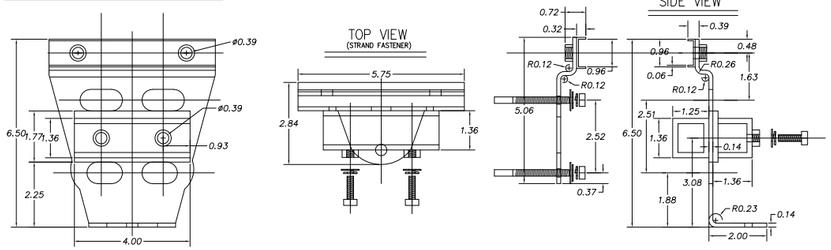
COUNTER WEIGHT



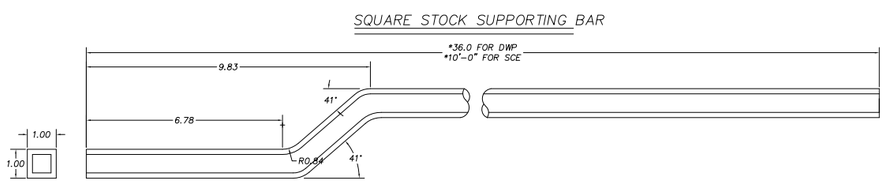
TOP VIEW (ANTENNA FASTENER)



MODIFIED STRAND CLAMP (STRAND FASTENER)



SQUARE STOCK SUPPORTING BAR



ANTENNA MOUNT | N.T.S. | 1

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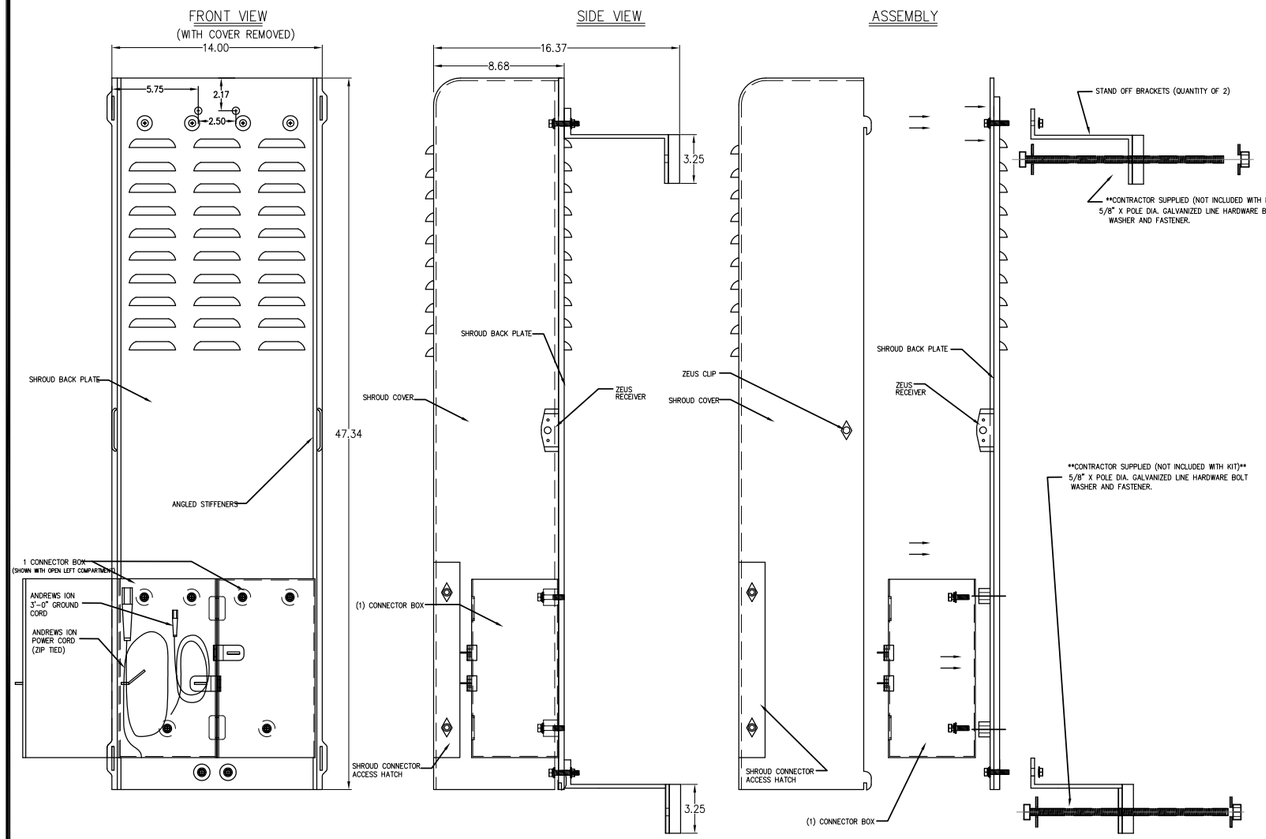
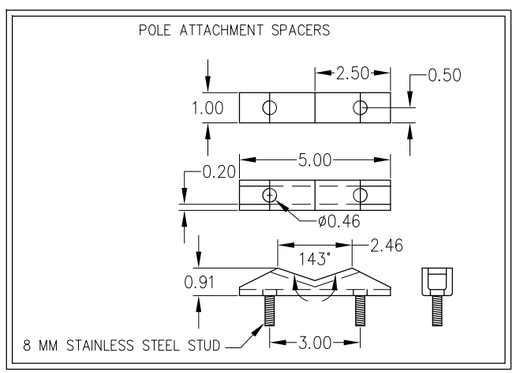
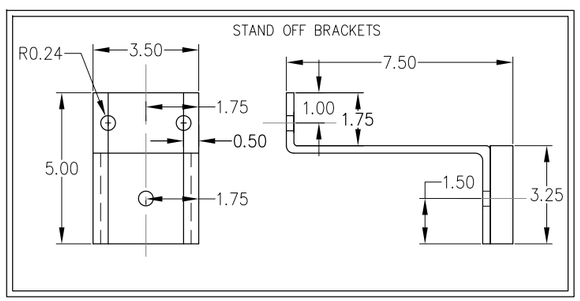






SHROUD DETAIL | N.T.S. | 1

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4"- 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	860
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	84
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM290Mxx[2]	4A			6A			8A			10A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	329	295	249	236	209	183	180	165	144
4 batteries:	701	625	546	444	396	346	329	293	256	261	232	203
6 batteries:	1001	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1497	1338	1165	999	859	750	720	643	562	577	515	450
9 batteries:	1696	1599	1322	1091	978	853	820	733	640	659	587	514
XM290Mxx[3]	12A			14A			16A			18A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	66
4 batteries:	210	187	163	169	151	132	144	126	112	124	111	96
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	296	329	293	256	288	255	225
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	256
XM080Mxx[2]	4A			6A			8A			10A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	599	453	396	377	335	294	300	267	233
4 batteries:	1001	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1696	1599	1322	1091	978	853	820	733	640	659	587	514
8 batteries:	2288	2097	1728	1697	1558	1165	1122	1005	877	904	809	706
9 batteries:	2580	2345	2037	1886	1759	1322	1273	1143	997	1027	921	800
XM260Mxx[2]	12A			14A			16A			18A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	346	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	479	523	465	402	456	407	351
9 batteries:	843	753	658	692	617	534	597	531	462	525	465	402

*Above calculations based on an ACload with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 603 647 8043	Cyprus Tel: +357 25 375 675 Fax: +357 25 365 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5091 Fax: +370 5 210 5290	P.R. China Tel: +852 2758 6863 Fax: +852 2169 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 925 9944 Fax: +7 495 916 1349	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 560679			

049-297-10-B002 (0609)

BATTERY SPECIFICATIONS | N.T.S. | 2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 09/02/2013	ISSUED FOR REVIEW
1	FXC 11/06/2013	ISSUED FOR REVIEW
2	FXC 03/08/2013	ISSUED FOR FINAL

ENGINEER/CONSULTANT:

Civil Engineer
CDG
CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON29m1
VERIZON MONTECITO-MON29m1

SITE ADDRESS: THOMAS BROS PAGE 997 GRID C1
R.O.W. WEST SIDE OF LILAC DR
(ADJACENT TO 663 LILAC DR)
SANTA BARBARA, CA 93108
LAT: 34.439831
LONG: -119.608297

SHEET TITLE:
DETAILS

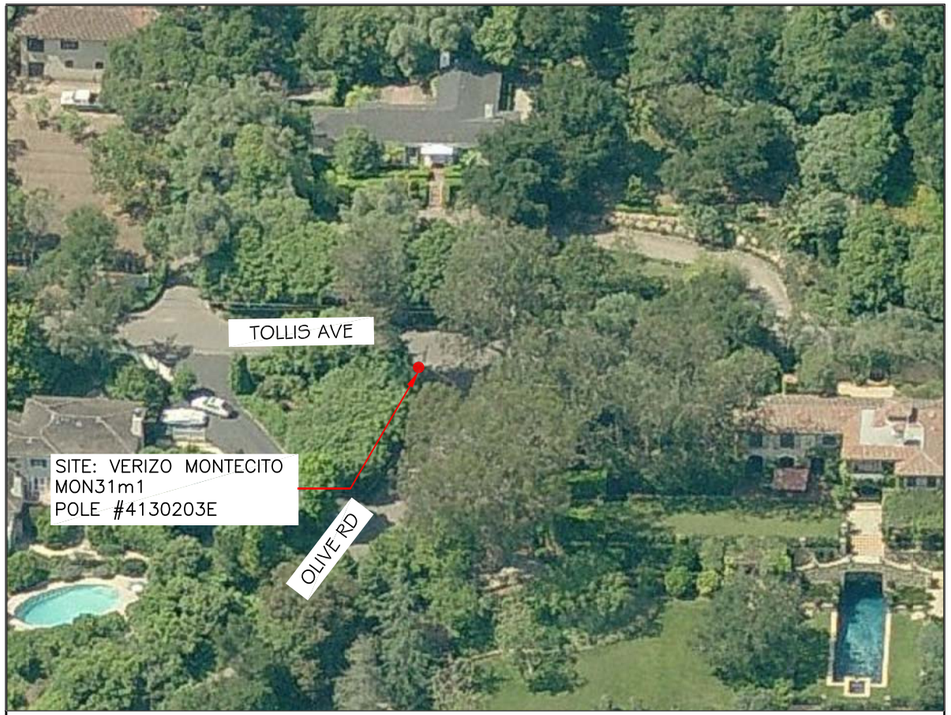
DRAWING INFO:
DRAWN BY:
FC

SHEET NUMBER:
D-3

CROWN CASTLE NG WEST, LLC

VERIZON MONTECITO-MON31m1

R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108



VICINITY MAP – N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT – ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00" FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	–
DIRT TRENCH	–
PUNCH THRU	–
BORE	–
TOTAL	–
R&R SWF TOTAL	–

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE
LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.
ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE
ELECT. CONDUIT
COAXIAL CABLE
MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. (2) OMNI ANTENNA ON EXISTING UTILITY POLE
2. EQUIPMENT SHROUD ON EXISTING POLE
3. EQUIPMENT PEDESTAL W/ BBU AND ELECTRICAL METER AT BASE OF POLE

SHEET INDEX:

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, LLC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: HEIDI PAYNE
PHONE: (949) 300-9493

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2013	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON31m1
VERIZON MONTECITO-MON31m1

SITE ADDRESS: THOMAS BROS PAGE 993 GRID B1
R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108
LAT: 34.4424144°
LONG: -119.6105036°

SHEET TITLE:

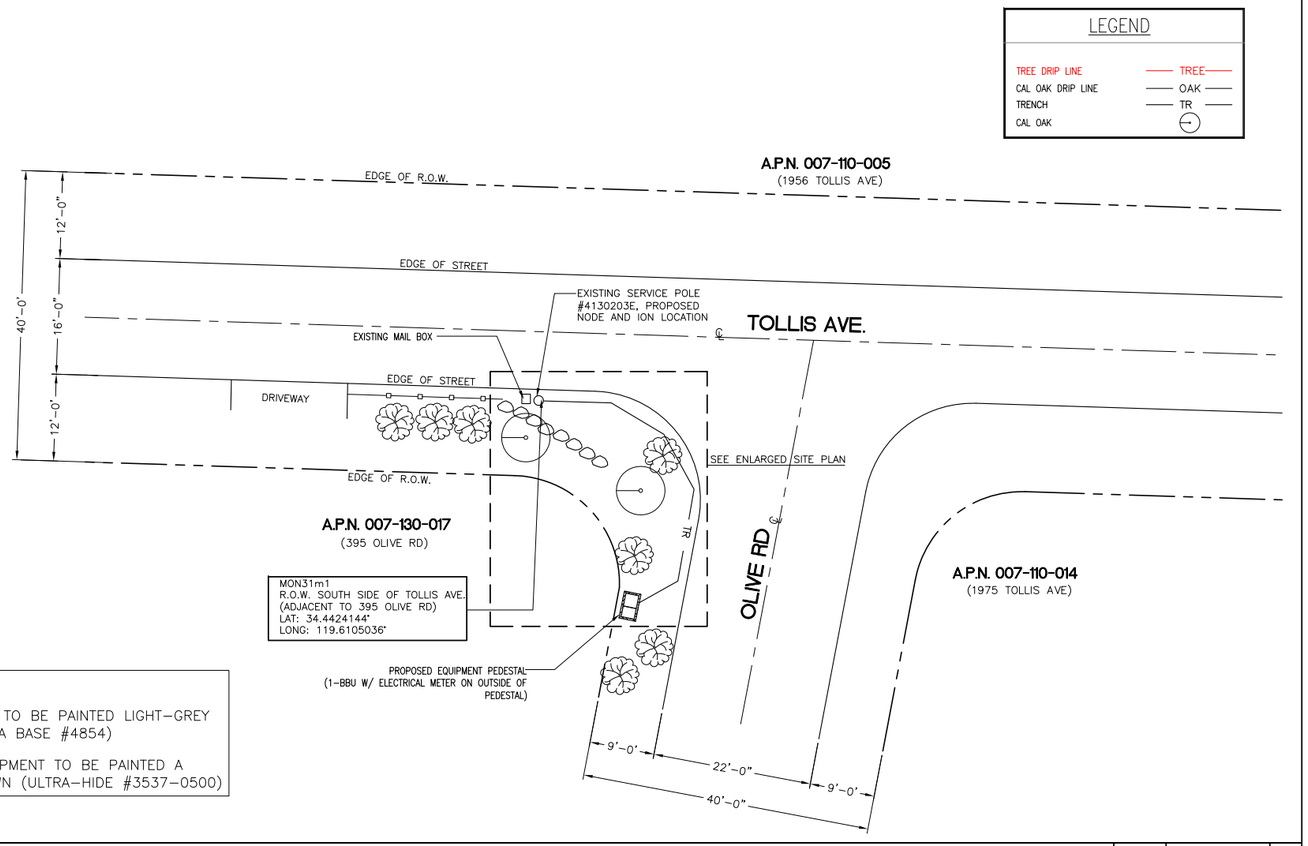
TITLE SHEET

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

T-1

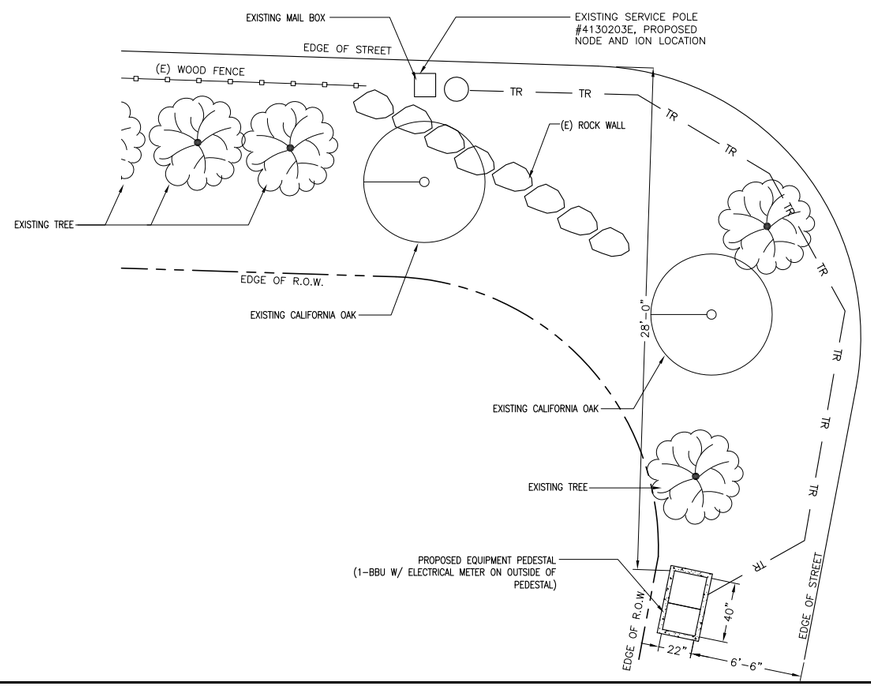


NOTE:

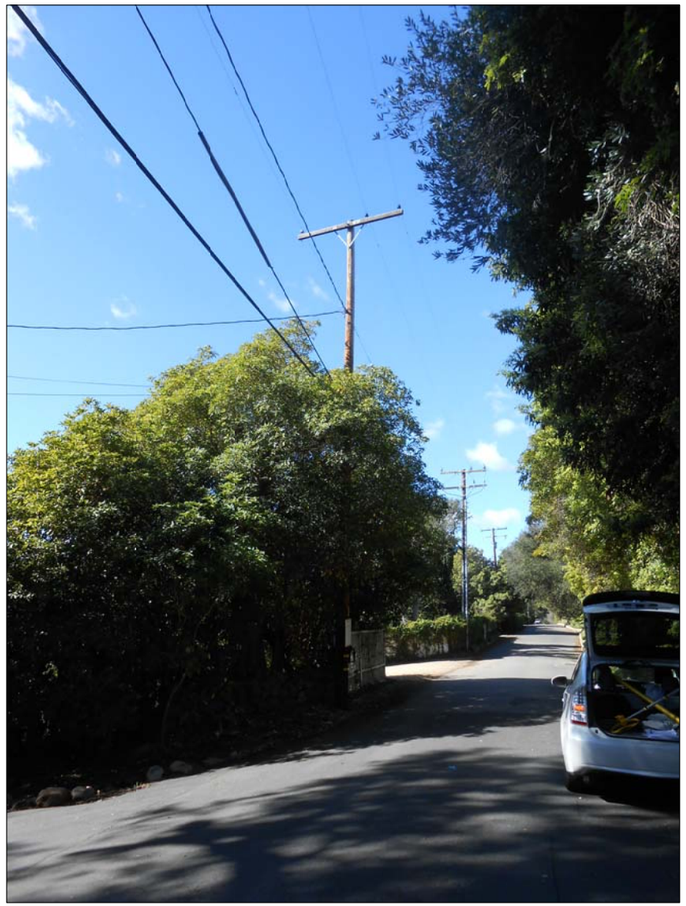
1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)

SITE PLAN — SCALE: 1"=10'-0" — 1



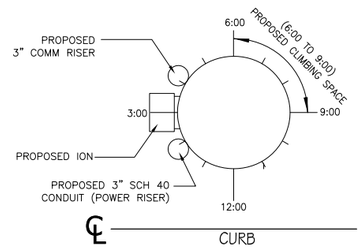
ENLARGED SITE PLAN — SCALE: 1/4"=1'-0" — 2



EXISTING PHOTO — SCALE: N.T.S. — 3

POLE WILL BE STEPPED IN ACCORDANCE TO G095 STANDARDS IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 4:00
1-3" POWER RISER @ 2:00



RISER PROFILE — SCALE: N.T.S. — 2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2013	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC

CONSULTING CIVIL ENGINEERS

26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630

(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:

MON31m1

VERIZON MONTECITO-MON31m1

SITE ADDRESS: THOMAS BROS PAGE 993 GRID B1
R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108
LAT: 34.4424144°
LONG: -119.6105036°

SHEET TITLE:

SITE PLAN, ENLARGED SITE PLAN, EXISTING PHOTO AND RISER PROFILE

DRAWING INFO:

DRAWN BY: FC

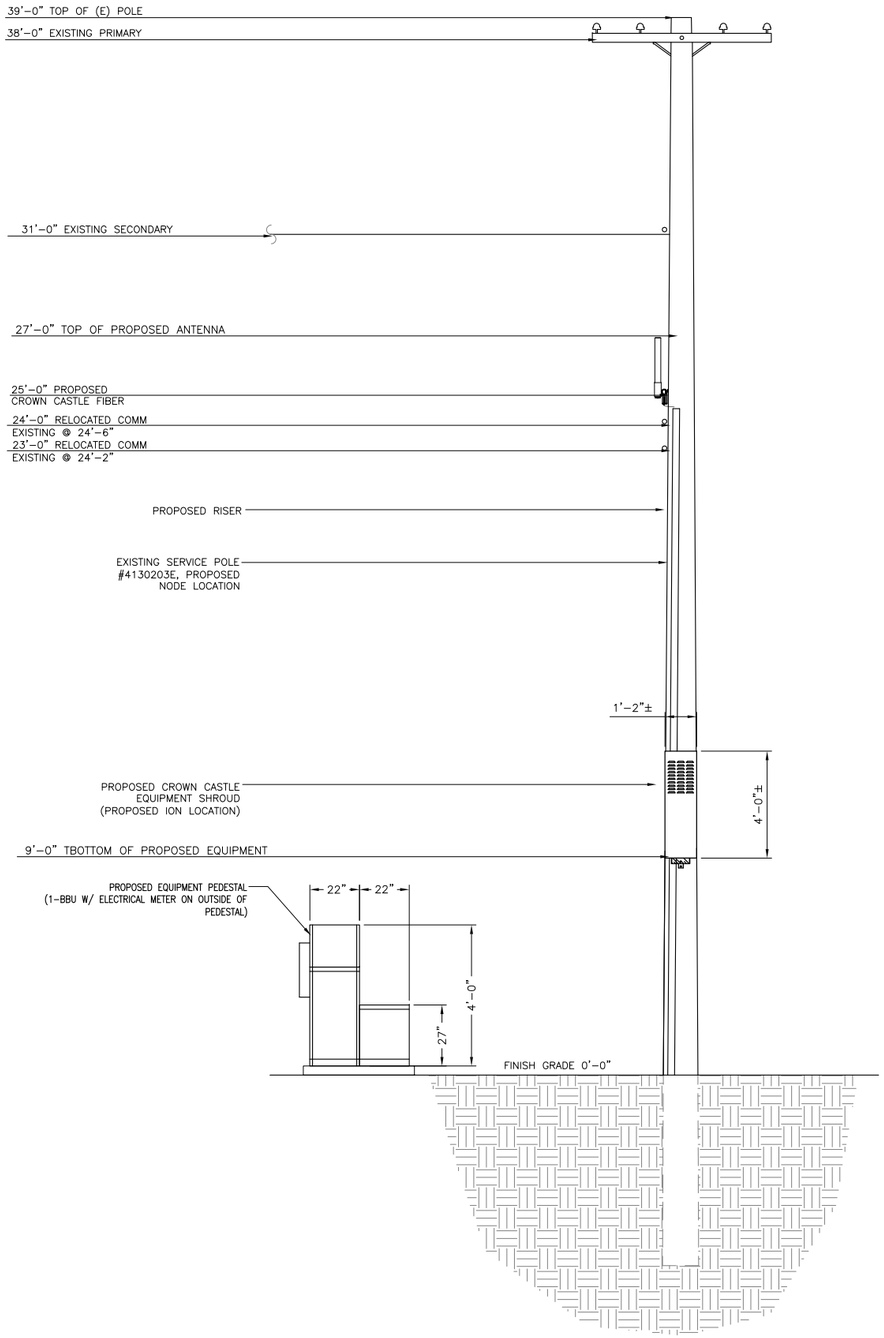
SHEET NUMBER:

A-1

NOTE:

1. ANTENNA TO BE PAINTED LIGHT-GREY (BEHR ULTRA BASE #4854)

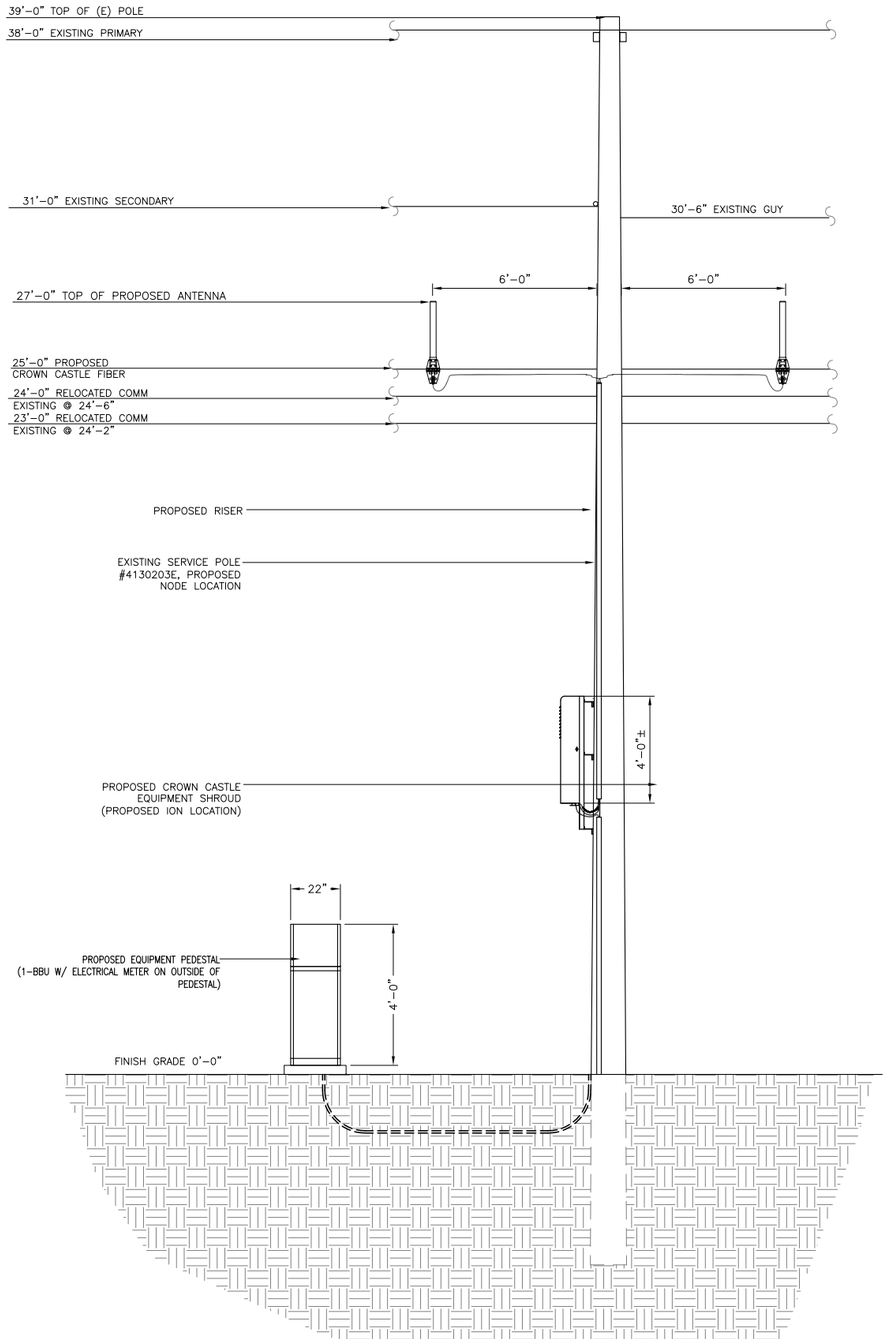
2. ALL EQUIPMENT TO BE PAINTED A MATTE BROWN (ULTRA-HIDE #3537-0500)



PROPOSED ELEVATION LOOKING WEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING SOUTH

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2013	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC

CONSULTING CIVIL ENGINEERS

26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630

(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:

MON31m1

VERIZON MONTECITO-MON31m1

SITE ADDRESS: THOMAS BROS PAGE 993 GRID B1
R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108
LAT: 34.4424144°
LONG: -119.6105036°

SHEET TITLE:

ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

A-2

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0 dBi

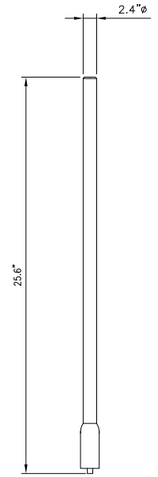
Technical Specifications

Electrical

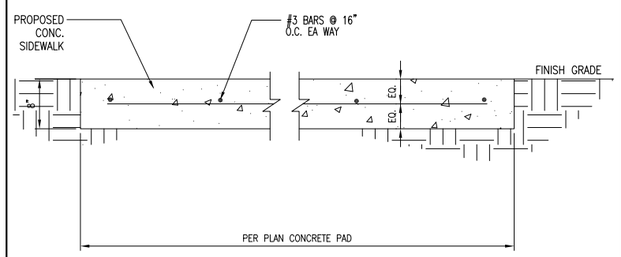
Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

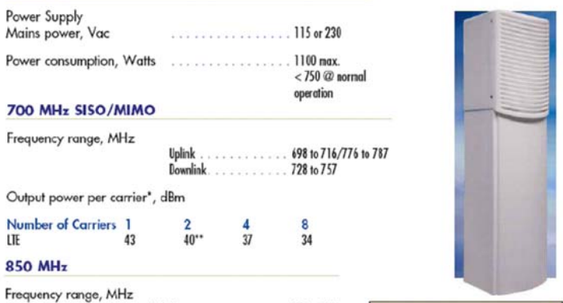
Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)



ANTENNA SPECIFICATIONS | N.T.S. | 1



CONCRETE PAD | N.T.S. | 3



20W for Cell, PCS bands and 700MHz MIMO

Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope®

ION-M7P/7P/85P/19P

Noise figure, dB
IP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

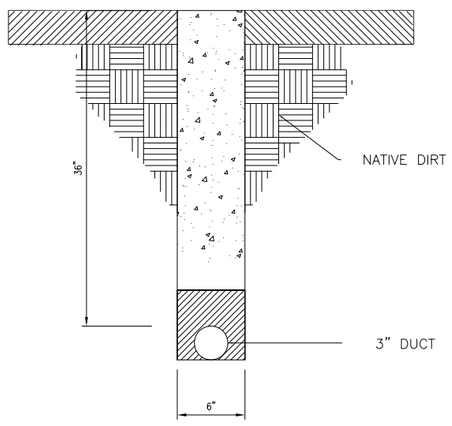
Mechanical***

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

Page 1, February 27, 2013 Company Confidential

ION-M7P/7P/85P/19P | N.T.S. | 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH | N.T.S. | 4

MMOE - Telecom

Multi Mount Outdoor Enclosure

- Compact enclosure design provides ideal fit for locations where aesthetics are important
- Light-weight powder coated aluminum construction offers superior corrosion resistant properties
- Large sun shield, reduces solar heat loading inside the cabinet
- 180° stainless steel piano-hinged door (with two locking open positions) make installation and maintenance easy and convenient
- Thermostat controlled filtered fan cooling and louvered vents ensure reliable operation in high temperature environments
- Various mounting options (including pole mount) make this highly versatile in space constrained mobile broadband applications

Alpha's Multi Mount Outdoor Enclosure (MMOE) - Telecom, is a cost-effective and versatile enclosure ideal for space constrained locations. The Multi Mount can be pole, host, wall or pedestal mounted and can accommodate Alpha's FXM UPS and up to four AlphaGel™ 853GL or 195 GXL front terminal batteries. With a small form factor, the Multi Mount is the perfect choice for locations where confined space necessitates creative installation options.

alpha TECHNOLOGIES™

Alpha Multi Mount Outdoor Enclosure - Telecom

Consult your Alpha representative for P/N configurations

Mechanical

Dimensions:
mm: 687H x 569W x 457D
inches: 27H x 22W x 18D
Weight: 27.2kg (60lbs)
Construction: High strength corrosion resistant aluminum
Finish: Powder coated white color
Equipment space: 6U+ standard 19", 6RU space with one battery shelf
Cable entrance: Bottom of enclosure: 1 x 3" diameter knock-out (2)4" trade size) 4 x 1.125" diameter knock-out (¾" trade size)
Hinge type: Stainless steel piano hinge
Door prop: Aluminum rod, 2 locking open positions
Door latch: Ballcore 216 compression lock with padlock provision

HVAC Specifications

Cooling: Thermostat controlled 48VDC fan, 100 cfm or better. On at 49°C (120°F) Off at 32°C (89°F)
Door installed louvers: Equipped with splash baffle

Enclosure options

Mounting: Pole, host, wall, or pedestal (please specify if pole used is concrete at time of order)

System Specifications

› System Options
- Alpha AC distribution panel
- Alpha universal automatic transfer switch
- Alpha universal generator transfer switch
- AlphaGuard battery balancer
- Battery heater mats
- Transient voltage surge suppression device

Agency Compliance

Telcordia: GR-487-CORE
NEMA rating: 3R

PEDESTAL SPECIFICATIONS | N.T.S. | 5

REV:	DATE/BY:	REVISION DESCRIPTION:
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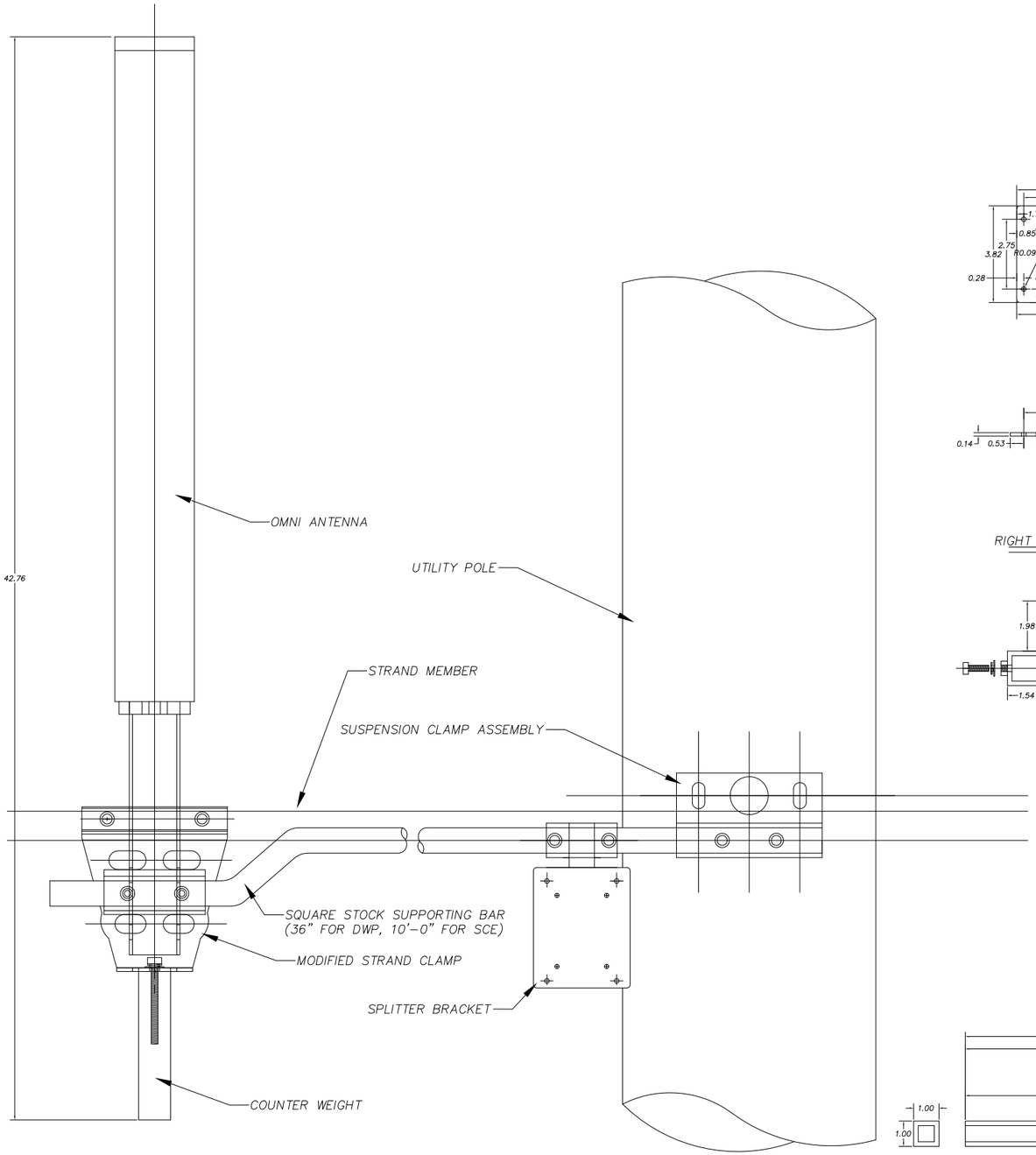
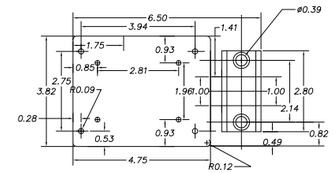
D–1

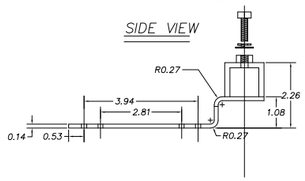


SPLITTER BRACKET

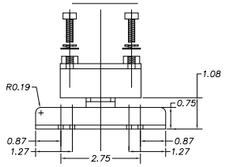
TOP VIEW



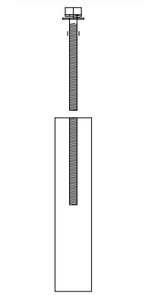
SIDE VIEW



FRONT VIEW



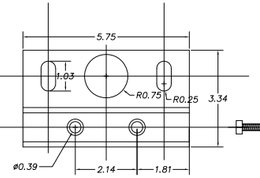
COUNTER WEIGHT



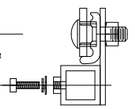
IN-LINE POLE SUSPENSION CLAMP ASSEMBLY

RIGHT SIDE VIEW

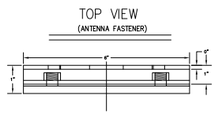
FRONT VIEW



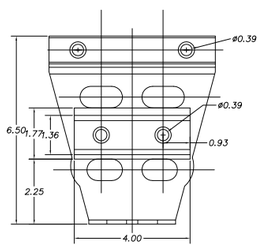
ASSEMBLY VIEW



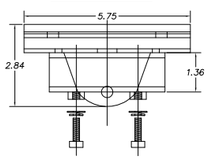
TOP VIEW (ANTENNA FASTENER)



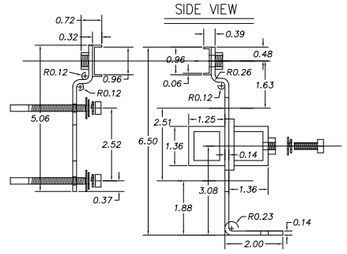
MODIFIED STRAND CLAMP (STRAND FASTENER)



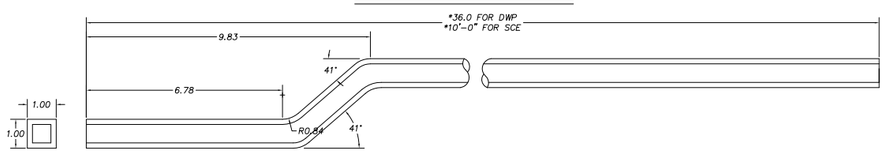
TOP VIEW (STRAND FASTENER)



SIDE VIEW



SQUARE STOCK SUPPORTING BAR



ANTENNA MOUNT | N.T.S. | 1

REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2013	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

Civil Engineer

CDG

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE
NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON31m1
VERIZON MONTECITO-MON31m1

SITE ADDRESS: THOMAS BROS PAGE 993 GRID B1
R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108
LAT: 34.4424144°
LONG: -119.6105036°

SHEET TITLE:

DETAILS

DRAWING INFO:

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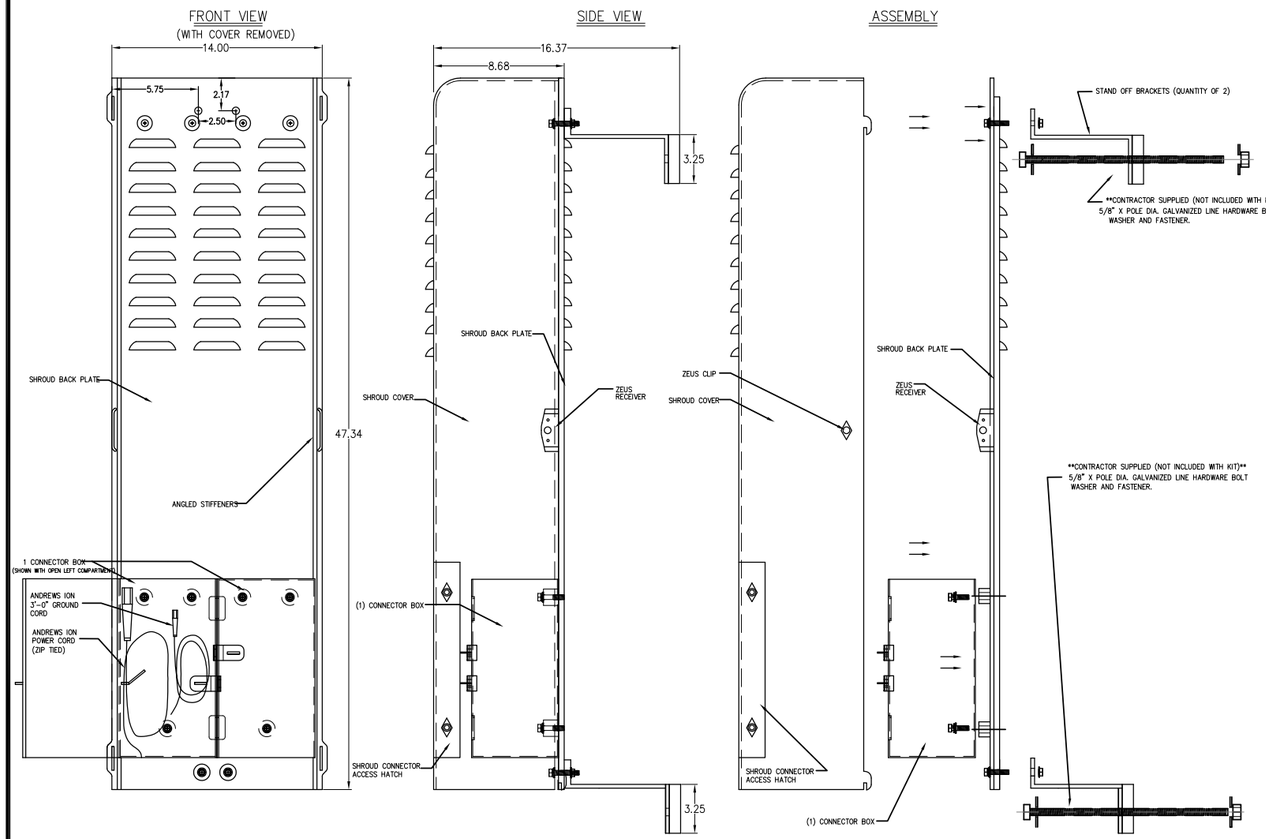
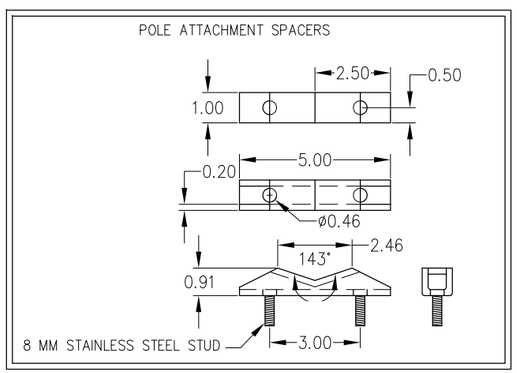
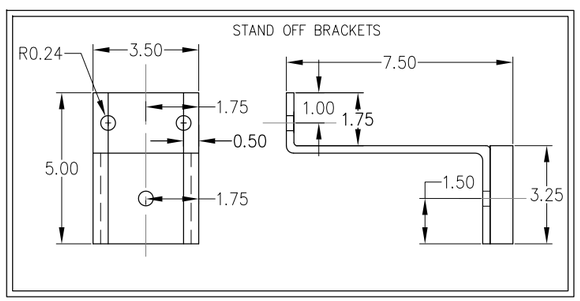
FC

SHEET NUMBER:

D-2







SHROUD DETAIL | N.T.S. | 1

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4"- 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 90Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	109Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM250Wxx[2]	4A			6A			8A			10A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	329	295	249	236	209	183	180	165	144
4 batteries:	701	625	546	444	396	346	329	293	256	261	232	203
6 batteries:	1001	978	853	701	625	546	523	465	407	418	372	325
8 batteries:	1497	1338	1165	999	859	750	730	643	562	577	515	450
9 batteries:	1696	1599	1322	1091	978	853	826	733	640	659	587	514
XM290Wxx[2]	12A			14A			16A			18A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	149	132	115	119	106	92	101	89	77	87	78	68
4 batteries:	210	187	163	169	151	132	144	126	112	124	111	98
6 batteries:	339	301	264	275	245	214	236	209	183	204	182	159
8 batteries:	478	419	367	385	341	299	329	293	256	288	255	225
9 batteries:	538	479	419	440	391	342	377	335	294	329	293	258
XM310Wxx[2]	4A			6A			8A			10A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	599	453	396	377	335	294	300	267	233
4 batteries:	1091	978	853	701	625	546	523	465	407	418	372	325
6 batteries:	1696	1519	1322	1091	978	853	800	733	640	659	587	514
8 batteries:	2288	2067	1758	1497	1338	1165	1122	1005	877	904	809	706
9 batteries:	2580	2345	2007	1699	1519	1322	1275	1143	997	1027	921	803
XM260Wxx[2]	12A			14A			16A			18A		
Battery/Runtime:	220	195	165	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125	144	128	107
4 batteries:	339	301	264	275	245	214	236	209	182	204	182	155
6 batteries:	538	479	419	440	391	340	377	335	290	329	293	252
8 batteries:	741	660	577	607	541	429	525	465	402	456	407	351
9 batteries:	843	750	658	692	617	538	597	531	462	525	465	402

*Above calculations based on an AC load with a .90 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

North America	Europe, Middle East & Africa			Asia Pacific	Latin & South America
Canada Tel: +1 604 430 1476 Fax: +1 604 430 8908 Toll Free: +1 800 667 8743	Cyprus Tel: +357 25 375 675 Fax: +357 52 368 595	Germany Tel: +49 9122 79889 0 Fax: +49 9122 79889 21	Lithuania Tel: +370 5 210 5091 Fax: +370 5 210 5092	P.R. China Tel: +852 2756 6963 Fax: +852 2199 7988	Contact USA office
USA Tel: +1 360 647 2360 Fax: +1 360 671 4936	Russia Tel: +7 495 925 9944 Fax: +7 495 916 1340	United Kingdom Tel: +44 1279 501110 Fax: +44 1279 659870			

049-297-10-B002 (0509)

BATTERY SPECIFICATIONS | N.T.S. | 2

REV:	DATE/BY:	REVISION DESCRIPTION:
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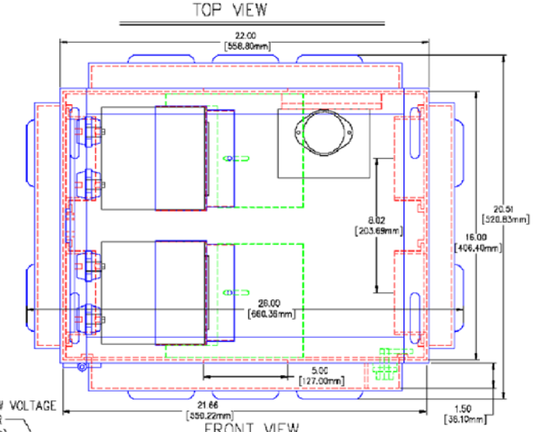
D-3

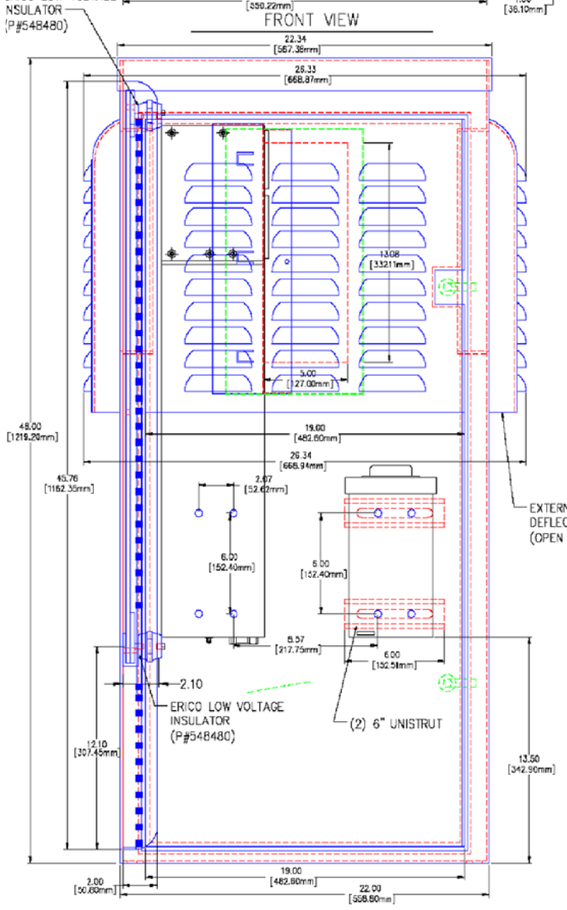
RED HIDDEN LINES Represents any line of an object that is hidden from view.
BLUE SOLID LINES Represents any line of an object that is visible in a particular view.
BLACK HIDDEN LINES Represents items that are "not" included in KIT.

NOTE: DISCONNECT BOX DOES NOT HAVE TO BE LOCATED INSIDE CABINET IT MAY BE INSTALLED ON POLE ALONG WITH METER OR WTR BOX (WIRELESS TARIFF RATE) IF DESIRED.

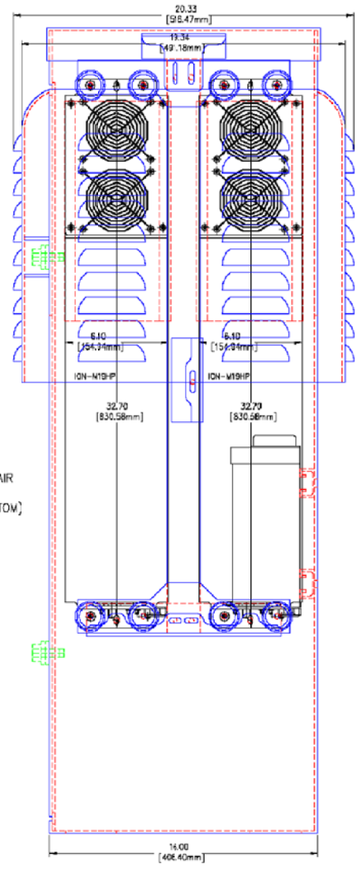
TOP VIEW



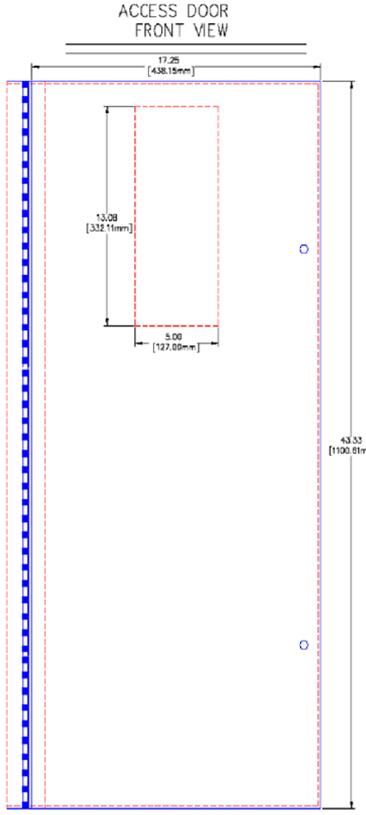
FRONT VIEW



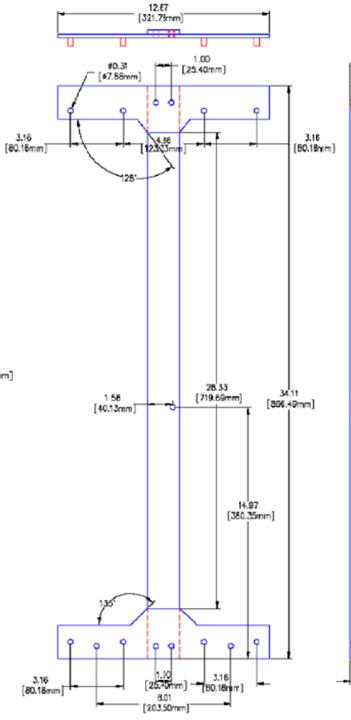
RIGHT VIEW



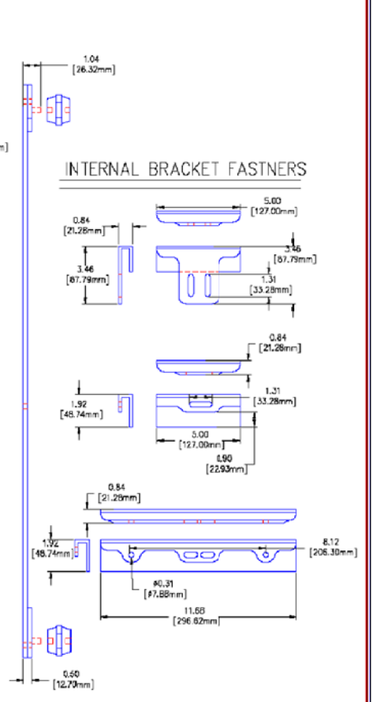
ACCESS DOOR FRONT VIEW



ION MOUNTING BACKPLATE



INTERNAL BRACKET FASTNERS



REV:	DATE/BY:	REVISION DESCRIPTION:
0	FXC 02/10/2013	ISSUED FOR REVIEW

ENGINEER/CONSULTANT:

Civil Engineer

CONNELL DESIGN GROUP, LLC
CONSULTING CIVIL ENGINEERS
26455 RANCHO PARKWAY SOUTH, LAKE FOREST, CA 92630
(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON31m1
VERIZON MONTECITO-MON31m1

SITE ADDRESS: THOMAS BROS PAGE 993 GRID B1
R.O.W. SOUTH SIDE OF TOLLIS AVE.
(ADJACENT TO 395 OLIVE RD)
SANTA BARBARA, CA 93108
LAT: 34.4424144°
LONG: -119.6105036°

SHEET TITLE:

DETAILS

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

D-4

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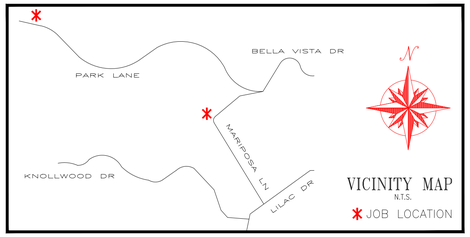

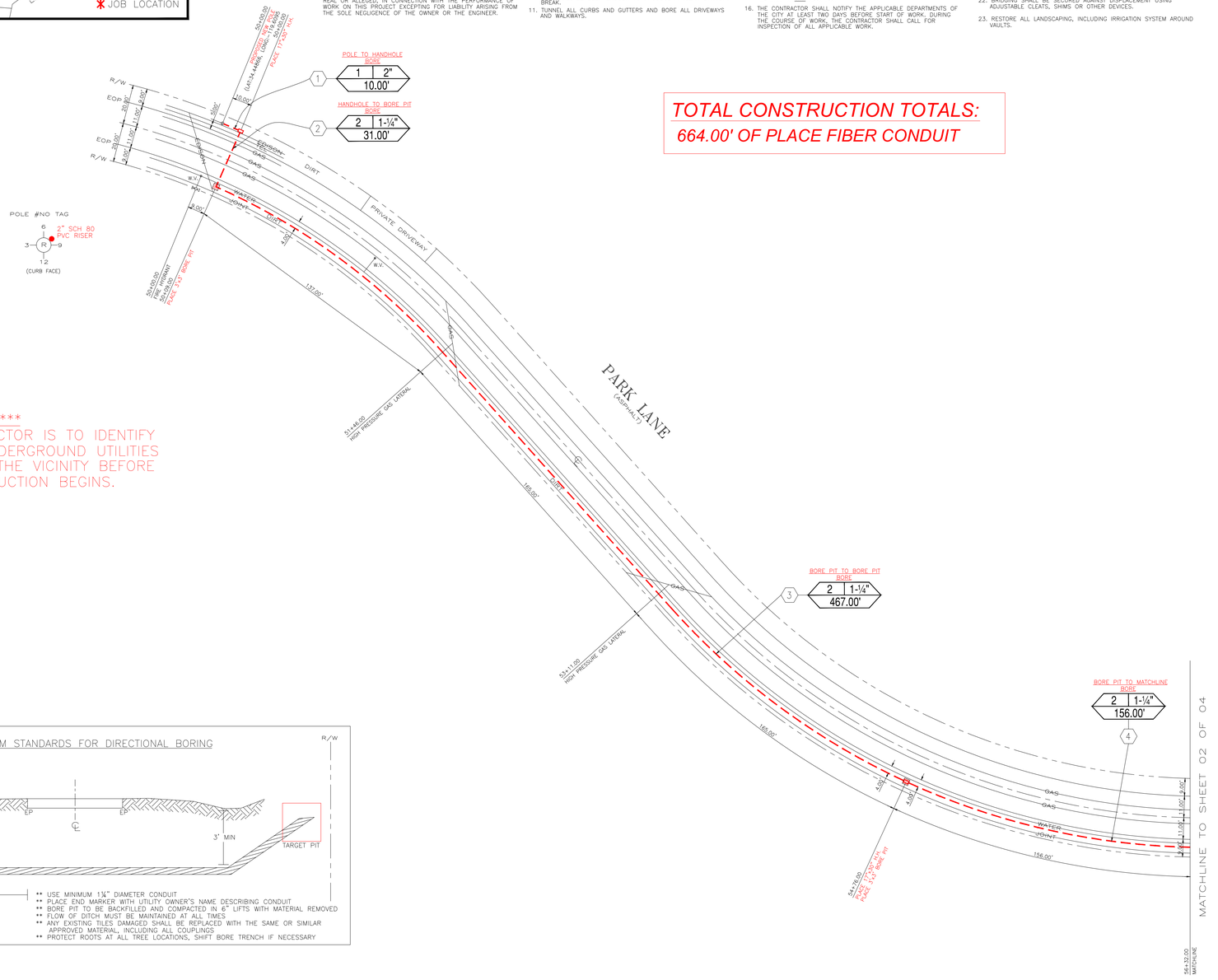

TOTAL CONSTRUCTION TOTALS:
664.00' OF PLACE FIBER CONDUIT

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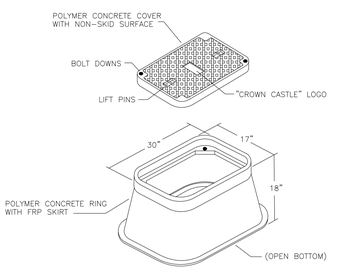
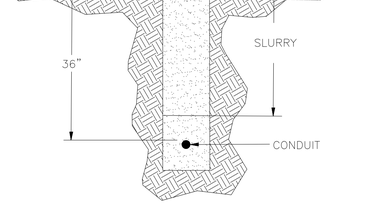
HANDHOLE DETAIL
N.T.S.



CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

DIRT TRENCH DETAIL
N.T.S.



MINIMUM STANDARDS FOR DIRECTIONAL BORING

** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE
CROWN CASTLE NG ONLY = 664.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	17" x 30" (CONC)	0
	17" x 30" (DIRT)	2
CONDUIT	1¼" PVC	654'
	2" PVC	10'
	4" PVC	0'

TRENCH DATA
1. PL. 10.00' (1)-2" DUCT. BORE
2. PL. 31.00' (2)-1¼" DUCT. BORE
3. PL. 467.00' (2)-1¼" DUCT. BORE
4. PL. 156.00' (2)-1¼" DUCT. BORE

DIRT	0'	CONCRETE	0'
BORE	664.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	P℄	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		EDGE OF PAVEMENT (EOP)	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

Engineered By :
connect solutions ENGINEERING
Jon Schweers
Jason Jimenez
4095 E. La Palma Ave., Ste. A
Anaheim, CA 92807
Business (714) 630-4052
Fax (714) 630-3052

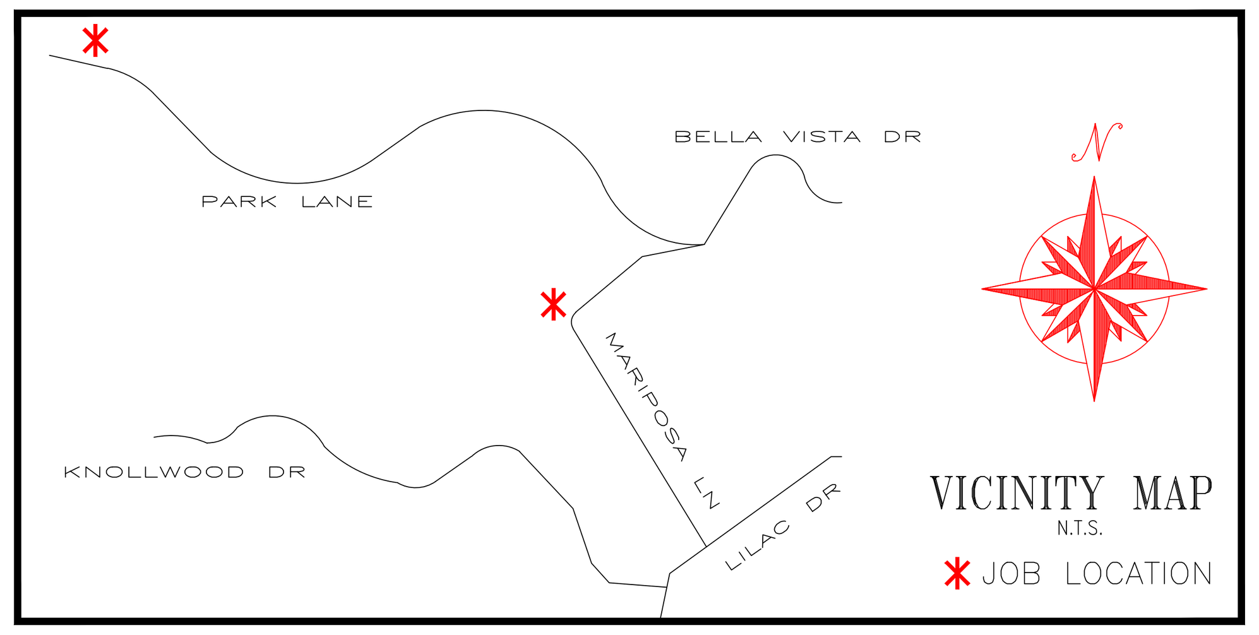
IMPORTANT NOTICE
DIGALERT
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

PROJECT NUMBER:
VRZ210441CAMONUFL04
COUNTY OF SANTA BARBARA
SUB MAP NO. :
THOMAS GUIDE : 987, C-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE
DATE : 06/06/2013	CITY OF MONTECITO	SHEET 01 OF 04
LOCATION : PARK LANE & MARIPOSA LANE		
LOG # : -	GRID # : 6075-1988	PROJECT # : VRZ210441CAMONUFL04
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 987, C-7	ADDRESS # : 995 MARIPOSA LANE MONTECITO, CA 93108
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY		



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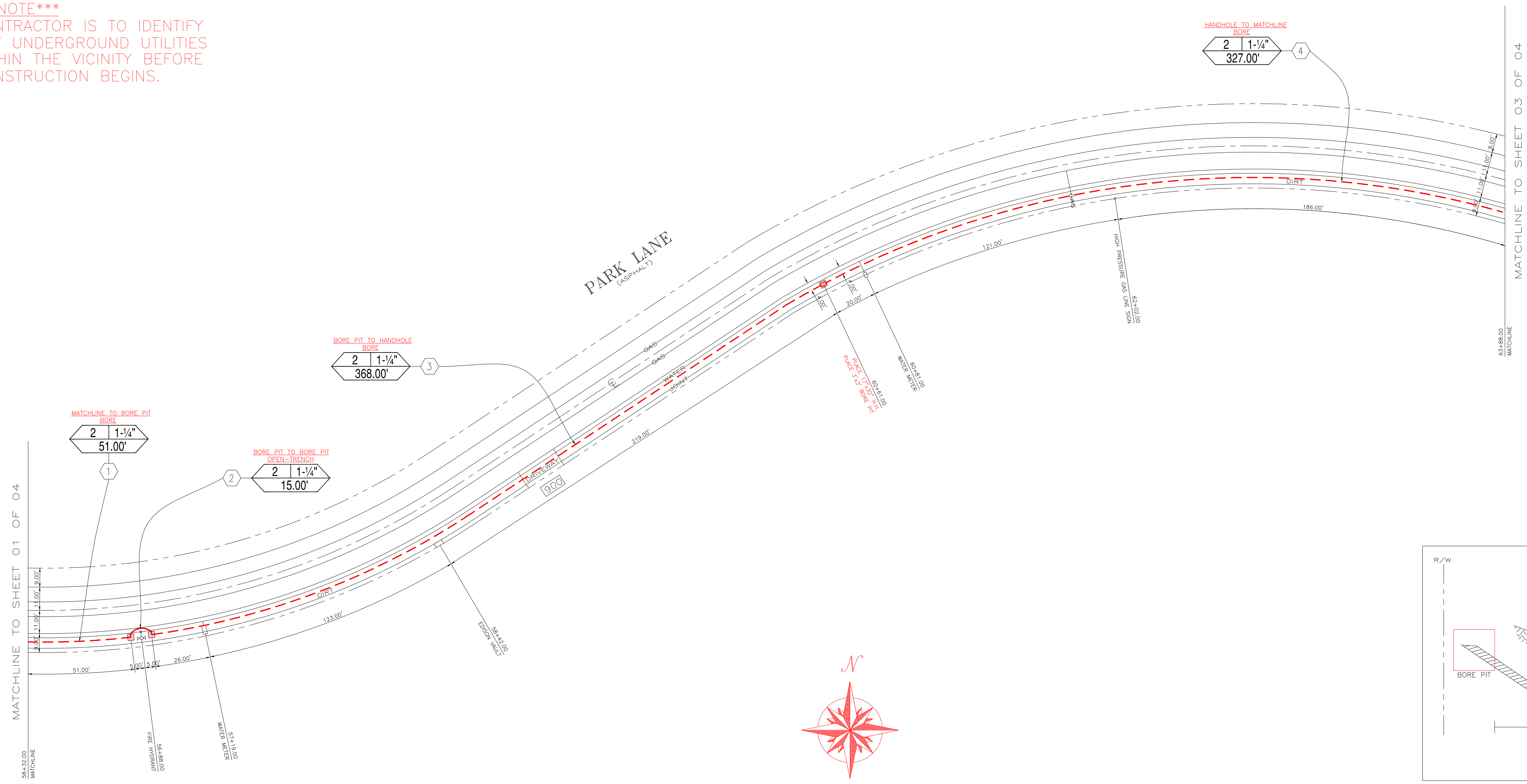

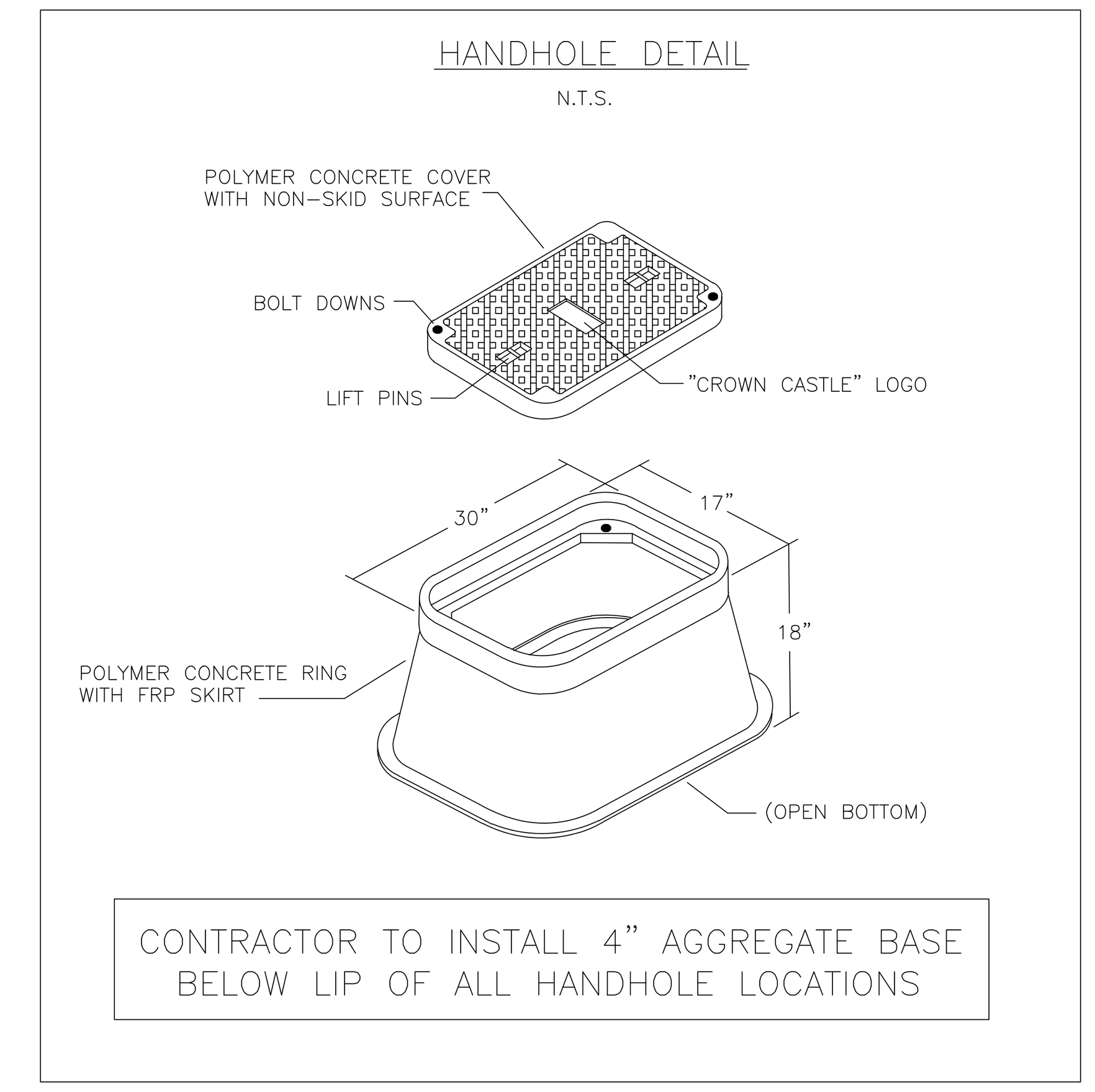

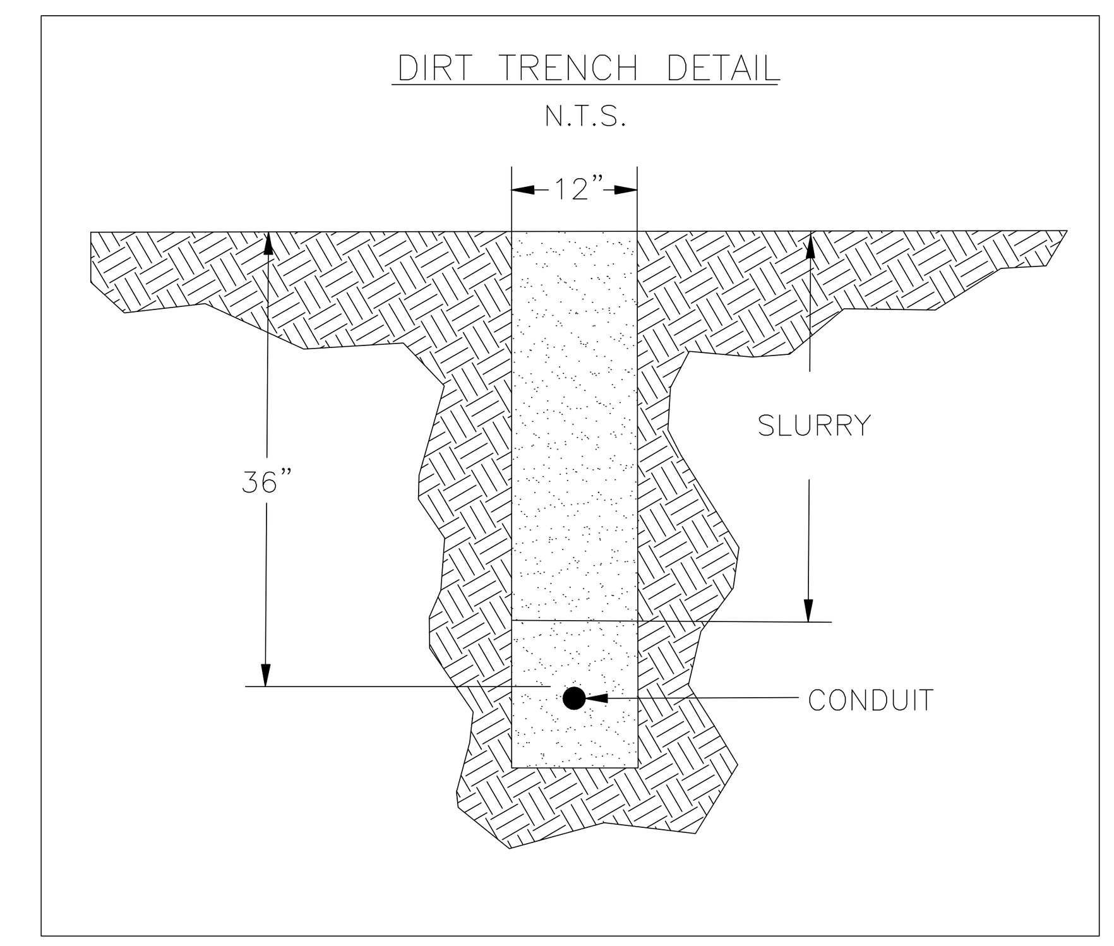

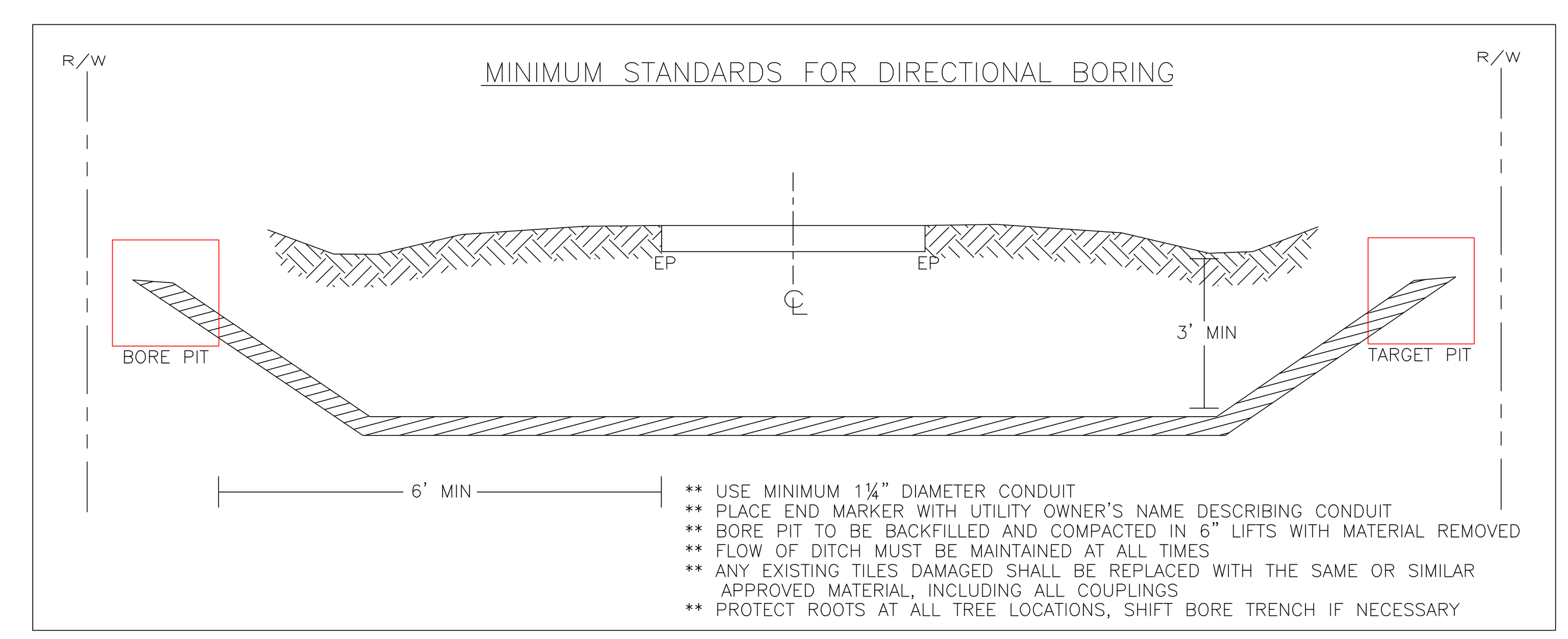

TOTAL TRENCH FOOTAGE
CROWN CASTLE NG ONLY = 761.00'

BILL OF MATERIALS	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	17" x 30" (CONC)	0
	17" x 30" (DIRT)	1
CONDUIT	1¼" PVC	761'
	2" PVC	0'
	4" PVC	0'

TRENCH DATA

1. PL. 51.00' (2)-1¼" DUCT. BORE
2. PL. 15.00' (2)-1¼" DUCT. OPEN-TRENCH
3. PL. 368.00' (2)-1¼" DUCT. BORE
4. PL. 327.00' (2)-1¼" DUCT. BORE

DIRT	15.00'	CONCRETE	0'
BORE	746.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
(red rectangle)	PROPOSED VAULT	℄	CENTER LINE	(solid red)	PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
(hatched)	BORE PIT	PL	PROPERTY LINE	(dashed red)	PROPOSED CC/NG BORE	E	ELECTRIC
⊕	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
⊗	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / CONDUIT SIZE / DISTANCE		EDGE OF PAVEMENT (EOP)	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

Engineered By :
connect solutions ENGINEERING
Jon Schweers
Jason Jimenez
4095 E. La Palma Ave., Ste. A
Anaheim, Ca. 92807
Business (714) 630-4053
Fax (714) 630-3052

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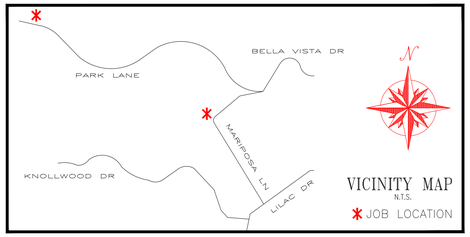
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

PROJECT NUMBER:
VRZ210441CAMONUFL04
COUNTY OF SANTA BARBARA
SUB MAP NO. :
THOMAS GUIDE : 987, C-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE
DATE : 06/06/2013	CITY OF MONTECITO	SHEET 02 OF 04
LOCATION : PARK LANE & MARIPOSA LANE		
LOG # : -	GRID # : 6075-1988	PROJECT # : VRZ210441CAMONUFL04
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 987, C-7	ADDRESS # : 995 MARIPOSA LANE MONTECITO, CA 93108
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY		

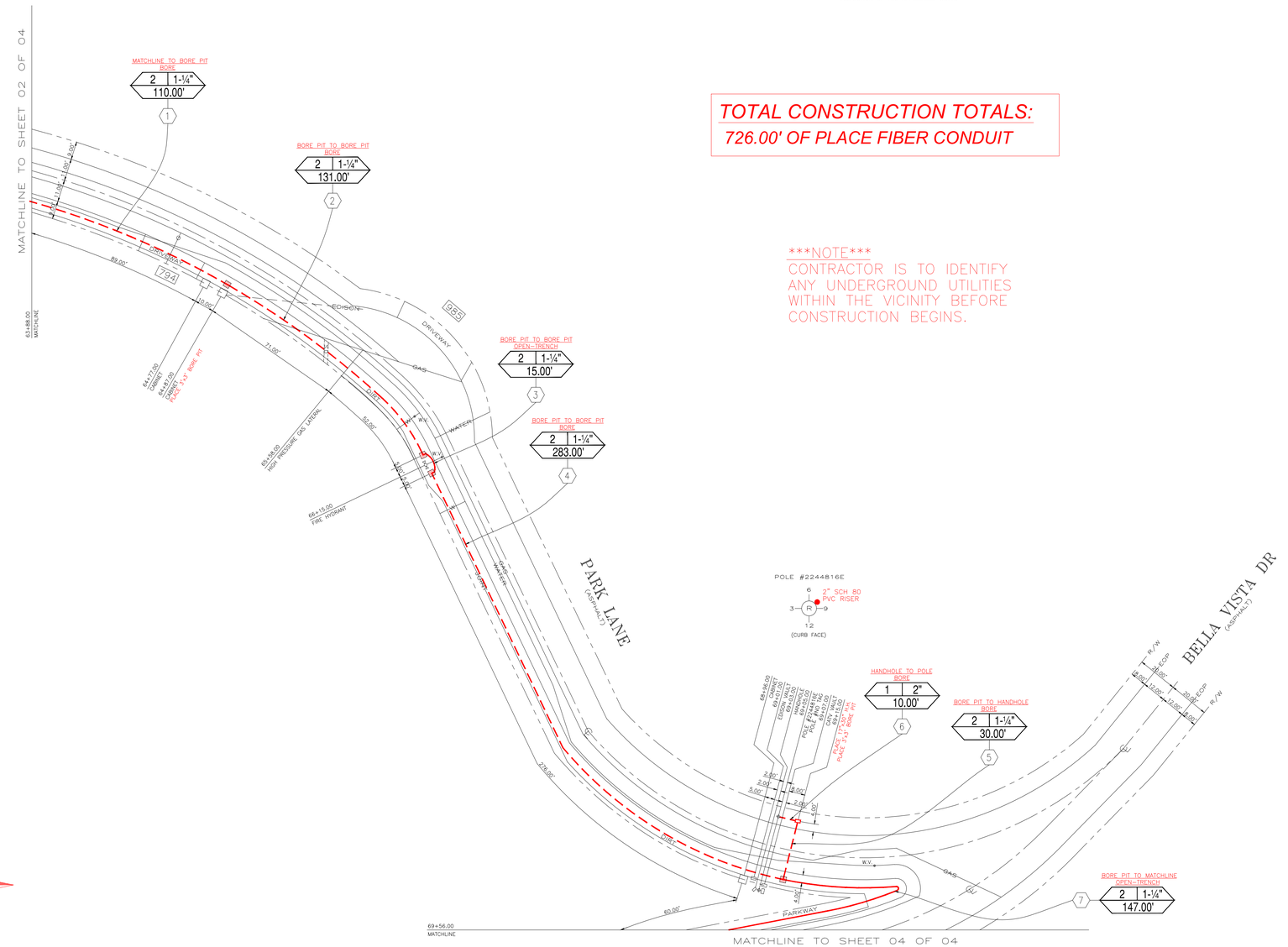


CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO LATEST EDITION OF THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION," ADOPTED BY THE CITY AS MODIFIED BY STANDARD PLANS AND ADDENDUM.
2. THE EXISTENCE AND LOCATION OF UTILITY LINES SHOWN HEREON ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. OTHER UTILITY LINES MAY EXIST; CONTRACTOR SHALL VERIFY PRIOR TO START OF CONSTRUCTION AND SHALL USE EXTREME CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE SAME. HE IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES, VALVES, METERS, TRAFFIC SIGNAL CONDUIT & DETECTOR LOOPS, ETC.; WITHIN LIMITS OF WORK WHETHER THEY ARE SHOWN ON THESE PLANS OR NOT.
3. AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133).
4. INDEMNIFICATION CLAUSE- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTIONS OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
5. ALL WORK AREA AND STREET TRAFFIC CONTROL SHALL BE PER "MATCH" (WORK AREA TRAFFIC CONTROL HANDBOOK) UNLESS NOTED OTHERWISE.
6. ALL PAVEMENTS, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE RECONSTRUCTED PER THE COUNTY OF SANTA BARBARA IMPROVEMENTS STANDARD.
7. PRIOR TO THE BEGINNING OF ANY EXCAVATION AND THROUGHOUT THE COURSE OF CONSTRUCTION WORK THE CONTRACTOR SHALL FULLY COMPLY WITH THE CALIFORNIA OCCUPATIONAL SAFFETY AND HEALTH ACT OF 1973 INCLUDING ALL REVISIONS AND AMENDMENTS THERETO.
8. THE CONTRACTOR SHALL HAVE COPIES OF THE PLANS ON THE PROJECT SITE AND BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE OR BELOW GROUND IMPROVEMENTS, AS A RESULT OF HIS OPERATIONS, AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAME TO THE SATISFACTION OF THE CITY.
10. ALL BACKHOE EXCAVATION SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN STRAIGHT BREAK.
11. TUNNEL ALL CURBS AND GUTTERS AND BORE ALL DRIVEWAYS AND WALKWAYS.
12. EXISTING PORTLAND CEMENT CONCRETE SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN, STRAIGHT BREAK WITHOUT CRACKING, CHIPPING OR LOOSENING ADJOINING PCC. THE EXISTING PCC SHALL BE CUT BEYOND THE CONFIGURATION OF THE TRENCH OR EXCAVATION AREA AS MAY BE REQUIRED BY THE PUBLIC WORKS INSPECTOR TO ELIMINATE SMALL "FLOATING" PIECES OF CONCRETE, SUCH AS WHERE THE EXISTING PCC IS DAMAGED OR CRACKED, IN GENERAL, THE REPLACEMENT SHALL BE TO THE EXTENT THAT THERE ARE NO FLOATING PIECES OF PCC LEFT REMAINING WHICH ARE SMALLER THAN 9 SQUARE FEET IN AREA. IN ADDITION, THE SAW CUT LIMITS SHALL BE LOCATED NO CLOSER THAN 3 FEET FROM A SCORE LINE OR COLD JOINT. MIN. PCC REMOVAL IS 25 SQUARE FEET, SCORE LINE TO SCORE LINE.
13. UNLESS OTHERWISE NOTED: 3" CONDUIT BENDS SHALL HAVE A RADIUS OF 3', 2" CONDUIT BENDS SHALL HAVE A RADIUS OF 2'. PLACE 2 SACK SLURRY MIX AROUND ALL CONDUIT BENDS HAVING A RADIUS OF LESS THAN 50'.
14. ALL CONDUIT SHALL BE DB 120, UNLESS OTHERWISE SPECIFIED. ALL SWEEPS TO POLES SHALL BE SCHEDULE 80.
15. REMOVE AND REPLACE CURB AND GUTTER ABOVE SWEEPS TO VAULTS IN THE SIDEWALK, OR BORE UNDER CURB AND GUTTER. JETTING IS NOT ALLOWED.
16. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE DEPARTMENTS OF THE CITY AT LEAST TWO DAYS BEFORE START OF WORK. DURING THE COURSE OF WORK, THE CONTRACTOR SHALL CALL FOR INSPECTION OF ALL APPLICABLE WORK.
17. ALL SHRUBS, PLANTS, OR TREES THAT HAVE BEEN DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPLANTED OR REPLACED SO AS TO RESTORE THE WORK SITE TO ITS ORIGINAL CONDITION.
18. DURING THE COURSE OF THE WORK, PEDESTRIAN AND VEHICULAR ACCESS MUST BE MAINTAINED AT ALL TIMES.
19. NON-SKID CALTRANS APPROVED STEEL PLATES SHALL BE RECESSED IN TRENCH CROSSING MAJOR STREETS (AREA DESIGNATED BY CITY ENGINEER) AND INSTALLED PER CALTRANS SPECS. PAVEMENT SHALL BE COLD PLANED TO A DEPTH EQUAL TO THE THICKNESS OF THE PLATE AND TO A WIDTH AND LENGTH EQUAL TO THE DIMENSIONS OF THE PLATES.
20. STEEL PLATES USED FOR BRIDGING MUST EXTEND A MINIMUM OF 12" BEYOND EDGES OF TRENCH.
21. TEMPORARY PAVING WITH COLD MIX SHALL BE USED TO FEATHER THE EDGES OF THE PLATES TO MINIMIZE WHEEL IMPACT. CONTRACTOR MAY BE REQUIRED TO WELD PLATES TOGETHER TO MINIMIZE RATTLING. CONTRACTOR MAY BE REQUIRED TO SWEEP UP LOOSE GRAVEL SEVERAL TIMES PER DAY AS DEEMED NECESSARY BY CITY ENGINEER.
22. BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES.
23. RESTORE ALL LANDSCAPING, INCLUDING IRRIGATION SYSTEM AROUND VAULTS.
24. VAULT SHALL BE INSTALLED WITHIN THE RIGHT-OF WAY.
25. NEW PAVEMENT THICKNESS SHALL BE EXISTING PLUS ONE INCH. USE T-SECTION CUT (ADD 6 INCH CUT ON EACH SIDE OF TRENCH WIDTH). TOP 2" WEARING SURFACE SHALL BE A.C. C2-AR-4000, AND BASE PAVEMENT SHALL BE A.C. B-AR-4000.
26. TACK COAT SHALL BE APPLIED OVER ROADWAY SURFACE PRIOR TO PAVEMENT INSTALLATION. TACK COAT SHALL BE AR-4000 HOT TACK EMULSIFIED ASPHALT PER "GREEN BOOK" REQUIREMENTS.
27. 3/4 SACK CEMENT/SAND SLURRY BACKFILL. ALL SLURRY BACKFILL WILL REQUIRE 72 HOURS OF CURE TIME. ALL EXCAVATION AND TRENCHES WILL BE SECURED WITH STEEL PLATES.
28. PERMANENT PAVING SHALL BE COMPLETED WITHIN TWO WEEKS AFTER EXCAVATION. TEMPORARY PAVING USING COLD MIX A.C. IS ACCEPTABLE AFTER ALLOWING 72 HOURS OF CURE TIME ON SLURRY MIX BACKFILL.
29. REPLACE ANY EXISTING STRIPING, MARKINGS AND SURVEY MONUMENTS THAT MAY HAVE BEEN REMOVED OR DAMAGED.
30. ACCESS SHALL BE PROVIDED TO ALL FIRE HYDRANTS, VALVES, VAULTS, METERS, AND PULL BOXES AT ALL TIMES. TRAFFIC SIGNALS, PEDESTRIAN SIGNALS AND STOP SIGNS SHALL REMAIN UNOBSTRUCTED AT ALL TIMES.
31. SEE ADDITIONAL NOTES ON THE EXCAVATION PERMIT.
32. HANDHOLES, VAULT OR SUBSURFACE EQUIPMENT ENCLOSURES SHALL BE MARKED AS TO OWNERSHIP TO FACILITATE IDENTIFICATION BY PERSONS AUTHORIZED BY TO WORK THEREIN AND BY OTHER PERSONS PERFORMING WORK IN THEIR VICINITY.
33. MANHOLES AND HANDHOLES, WHILE NOT BEING WORKED IN SHALL BE SECURELY CLOSED BY COVERS OF SUFFICIENT STRENGTH TO SUSTAIN SUCH LOADS AS MAY REASONABLY BE IMPOSED UPON THEM, AND ARRANGEMENT SHALL BE SUCH THAT A TOOL OR APPLIANCE SHALL BE REQUIRED FOR THEIR OPENING AND COVER REMOVAL.
34. ALL VAULT AND MANHOLES SHALL CONFORM TO APPLICABLE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (A.A.S.H.O.) STANDARD SPECIFICATIONS H20-S16-44 FOR HIGHWAY BRIDGES, LATEST REVISION, RELATING TO DEAD LOADS LIVE LOADS, AND IMPACT LOADS. ADDITIONALLY, LOADS DUE TO A GROUND WATER TABLE OF THREE (3) FEET FROM FINISHED GRADE AND A SURCHARGE OF (2) FEET SHALL BE APPLIED IN CALCULATING DESIGN LOADS.
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

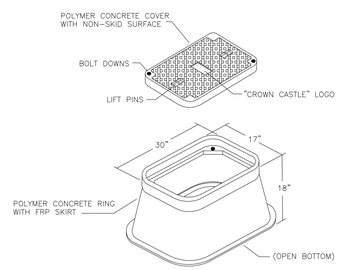
TOTAL CONSTRUCTION TOTALS:
726.00' OF PLACE FIBER CONDUIT

NOTE
CONTRACTOR IS TO IDENTIFY ANY UNDERGROUND UTILITIES WITHIN THE VICINITY BEFORE CONSTRUCTION BEGINS.



HANDHOLE DETAIL

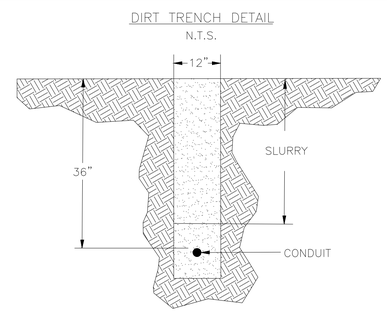
N.T.S.



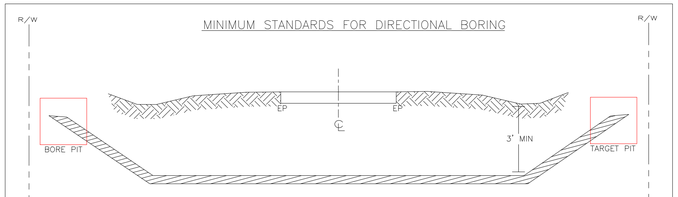
CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

DIRT TRENCH DETAIL

N.T.S.



MINIMUM STANDARDS FOR DIRECTIONAL BORING



** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE

CROWN CASTLE NG ONLY = 726.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	17" x 30" (CONC)	0
	17" x 30" (DIRT)	1
CONDUIT	1¼" PVC	716'
	2" PVC	10'
	4" PVC	0'

TRENCH DATA

1. PL. 110.00' (2)-1¼" DUCT. BORE
2. PL. 131.00' (2)-1¼" DUCT. BORE
3. PL. 15.00' (2)-1¼" DUCT. OPEN-TRENCH
4. PL. 283.00' (2)-1¼" DUCT. BORE
5. PL. 30.00' (2)-1¼" DUCT. BORE
6. PL. 10.00' (1)-2" DUCT. BORE
7. PL. 147.00' (2)-1¼" DUCT. OPEN-TRENCH

DIRT	162.00'	CONCRETE	0'
BORE	564.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	P℄	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		EDGE OF PAVEMENT (EOP)	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

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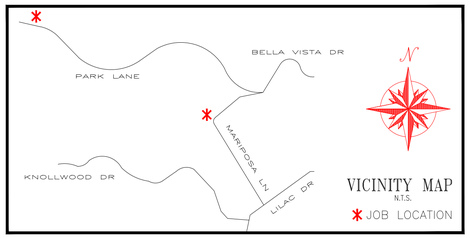
PROJECT NUMBER:
VRZ210441CAMONUFL04
COUNTY OF SANTA BARBARA
SUB MAP NO. :
THOMAS GUIDE : 987, C-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE
DATE : 06/06/2013	CITY OF MONTECITO	SHEET 03 OF 04
LOCATION : PARK LANE & MARIPOSA LANE		
LOG # : -	GRID # : 6075-1988	PROJECT # : VRZ210441CAMONUFL04
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 987, C-7	ADDRESS # : 995 MARIPOSA LANE MONTECITO, CA 93108
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY		



TOTAL CONSTRUCTION TOTALS:

367.00' OF PLACE FIBER CONDUIT

NOTE
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5. ALL WORK AREA AND STREET TRAFFIC CONTROL SHALL BE PER "MUTCH" (WORK AREA TRAFFIC CONTROL HANDBOOK) UNLESS NOTED OTHERWISE.
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11. TUNNEL ALL CURBS AND GUTTERS AND BORE ALL DRIVEWAYS AND WALKWAYS.
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13. UNLESS OTHERWISE NOTED; 3" CONDUIT BENDS SHALL HAVE A RADIUS OF 3', 2" CONDUIT BENDS SHALL HAVE A RADIUS OF 2'. PLACE 2 SACK SLURRY MIX AROUND ALL CONDUIT BENDS HAVING A RADIUS OF LESS THAN 50'.
14. ALL CONDUIT SHALL BE DB 120, UNLESS OTHERWISE SPECIFIED. ALL SWEEPS TO POLES SHALL BE SCHEDULE 80.
15. REMOVE AND REPLACE CURB AND GUTTER ABOVE SWEEPS TO VAULTS IN THE SIDEWALK, OR BORE UNDER CURB AND GUTTER. JETTING IS NOT ALLOWED.
16. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE DEPARTMENTS OF THE CITY AT LEAST TWO DAYS BEFORE START OF WORK. DURING THE COURSE OF WORK, THE CONTRACTOR SHALL CALL FOR INSPECTION OF ALL APPLICABLE WORK.
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22. BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES.
23. RESTORE ALL LANDSCAPING, INCLUDING IRRIGATION SYSTEM AROUND VAULTS.
24. VAULT SHALL BE INSTALLED WITHIN THE RIGHT-OF WAY.
25. NEW PAVEMENT THICKNESS SHALL BE EXISTING PLUS ONE INCH. USE T-SECTION CUT (ADD 6 INCH CUT ON EACH SIDE OF TRENCH WIDTH). TOP 2" WEARING SURFACE SHALL BE A.C. C2-AR-4000, AND BASE PAVEMENT SHALL BE A.C. B-AR-4000.
26. TACK COAT SHALL BE APPLIED OVER ROADWAY SURFACE PRIOR TO PAVEMENT INSTALLATION. TACK COAT SHALL BE AR-4000 HOT TACK EMULSIFIED ASPHALT PER "GREEN BOOK" REQUIREMENTS.
27. 3/4 SACK CEMENT/SAND SLURRY BACKFILL. ALL SLURRY BACKFILL WILL REQUIRE 72 HOURS OF CURE TIME. ALL EXCAVATION AND TRENCHES WILL BE SECURED WITH STEEL PLATES.
28. PERMANENT PAVING SHALL BE COMPLETED WITHIN TWO WEEKS AFTER EXCAVATION. TEMPORARY PAVING USING COLD MIX A.C. IS ACCEPTABLE AFTER ALLOWING 72 HOURS OF CURE TIME ON SLURRY MIX BACKFILL.
29. REPLACE ANY EXISTING STRIPING, MARKINGS AND SURVEY MONUMENTS THAT MAY HAVE BEEN REMOVED OR DAMAGED.
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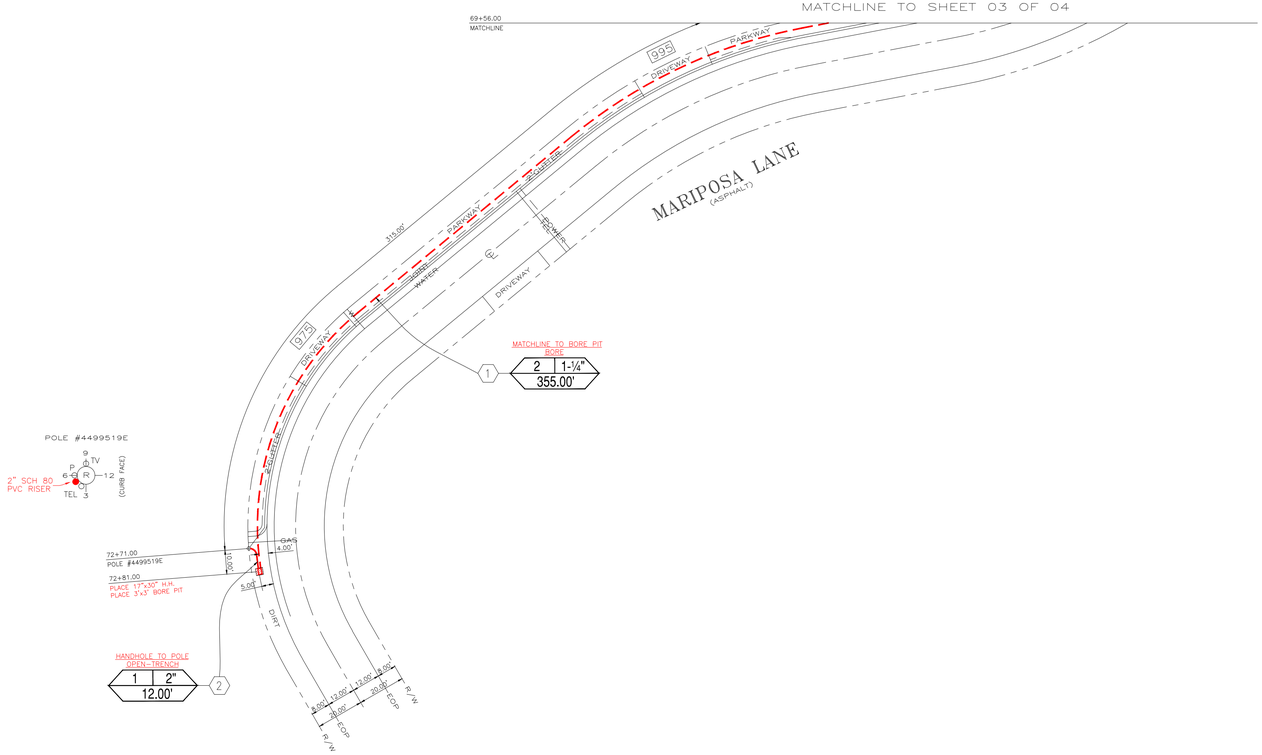
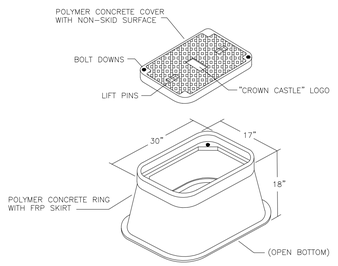
31. SEE ADDITIONAL NOTES ON THE EXCAVATION PERMIT.
32. HANDHOLES, VAULT OR SUBSURFACE EQUIPMENT ENCLOSURES SHALL BE MARKED AS TO OWNERSHIP TO FACILITATE IDENTIFICATION BY PERSONS AUTHORIZED BY TO WORK THEREIN AND BY OTHER PERSONS PERFORMING WORK IN THEIR VICINITY.
33. MANHOLES AND HANDHOLES, WHILE NOT BEING WORKED IN SHALL BE SECURELY CLOSED BY COVERS OF SUFFICIENT STRENGTH TO SUSTAIN SUCH LOADS AS MAY REASONABLY BE IMPOSED UPON THEM, AND ARRANGEMENT SHALL BE SUCH THAT A TOOL OR APPLIANCE SHALL BE REQUIRED FOR THEIR OPENING AND COVER REMOVAL.
34. ALL VAULT AND MANHOLES SHALL CONFORM TO APPLICABLE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (A.A.S.H.O.) STANDARD SPECIFICATIONS H20-S16-44 FOR HIGHWAY BRIDGES, LATEST REVISION, RELATING TO DEAD LOADS LIVE LOADS, AND IMPACT LOADS. ADDITIONALLY, LOADS DUE TO A GROUND WATER TABLE OF THREE (3) FEET FROM FINISHED GRADE AND A SURCHARGE OF (2) FEET SHALL BE APPLIED IN CALCULATING DESIGN LOADS.
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.



HANDHOLE DETAIL

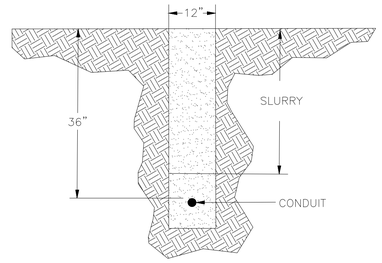
N.T.S.



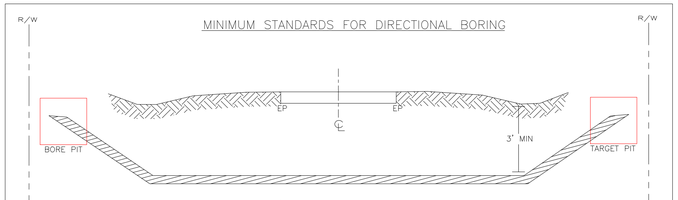
CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

DIRT TRENCH DETAIL

N.T.S.



MINIMUM STANDARDS FOR DIRECTIONAL BORING



** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE

CROWN CASTLE NG ONLY = 367.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	17" x 30" (CONC)	0
	17" x 30" (DIRT)	1
CONDUIT	1¼" PVC	355'
	2" PVC	12'
	4" PVC	0'

TRENCH DATA

① PL. 355.00' (2)-1¼" DUCT.
BORE

② PL. 12.00' (1)-2" DUCT.
OPEN-TRENCH

DIRT	12.00'	CONCRETE	0'
BORE	355.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	P℄	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		EDGE OF PAVEMENT (EOP)	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

Engineered By :
connect solutions ENGINEERING
Jon Schweers
Jason Jimenez
4095 E. La Palma Ave., Ste. A
Anaheim, Ca. 92807
Business (714) 630-4053
Fax (714) 630-3052

IMPORTANT NOTICE
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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

PROJECT NUMBER:
VRZ210441CAMONUFL04

COUNTY OF SANTA BARBARA

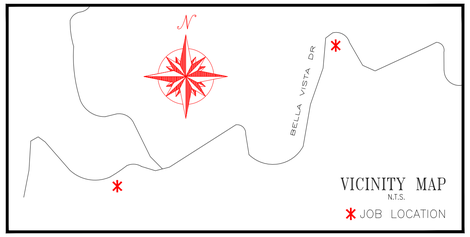
SUB MAP NO. :
THOMAS GUIDE : 987, C-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE
DATE : 06/06/2013	CITY OF MONTECITO	SHEET 04 OF 04
LOCATION : PARK LANE & MARIPOSA LANE		
LOG # : -	GRID # : 6075-1988	PROJECT # : VRZ210441CAMONUFL04
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 987, C-7	ADDRESS # : 995 MARIPOSA LANE MONTECITO, CA 93108

TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY



CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO LATEST EDITION OF THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION," ADOPTED BY THE CITY AS MODIFIED BY STANDARD PLANS AND ADDENDUM.
2. THE EXISTENCE AND LOCATION OF UTILITY LINES SHOWN HEREON ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. OTHER UTILITY LINES MAY EXIST; CONTRACTOR SHALL VERIFY PRIOR TO START OF CONSTRUCTION AND SHALL USE EXTREME CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE SAME. HE IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES, VALVES, METERS, TRAFFIC SIGNAL CONDUIT & DETECTOR LOOPS, ETC.; WITHIN LIMITS OF WORK WHETHER THEY ARE SHOWN ON THESE PLANS OR NOT.
3. AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133).
4. INDEMNIFICATION CLAUSE- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTIONS OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
5. ALL WORK AREA AND STREET TRAFFIC CONTROL SHALL BE PER "MUTCH" (WORK AREA TRAFFIC CONTROL HANDBOOK) UNLESS NOTED OTHERWISE.
6. ALL PAVEMENTS, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE RECONSTRUCTED PER THE COUNTY OF SANTA BARBARA IMPROVEMENTS STANDARD.
7. PRIOR TO THE BEGINNING OF ANY EXCAVATION AND THROUGHOUT THE COURSE OF CONSTRUCTION WORK THE CONTRACTOR SHALL FULLY COMPLY WITH THE CALIFORNIA OCCUPATIONAL SAFFETY AND HEALTH ACT OF 1973 INCLUDING ALL REVISIONS AND AMENDMENTS THERETO.
8. THE CONTRACTOR SHALL HAVE COPIES OF THE PLANS ON THE PROJECT SITE AND BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE OR BELOW GROUND IMPROVEMENTS, AS A RESULT OF HIS OPERATIONS, AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAME TO THE SATISFACTION OF THE CITY.
10. ALL BACKHOE EXCAVATION SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN STRAIGHT BREAK.
11. TUNNEL ALL CURBS AND GUTTERS AND BORE ALL DRIVEWAYS AND WALKWAYS.
12. EXISTING PORTLAND CEMENT CONCRETE SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN, STRAIGHT BREAK WITHOUT CRACKING, CHIPPING OR LOOSENING ADJOINING PCC. THE EXISTING PCC SHALL BE CUT BEYOND THE CONFIGURATION OF THE TRENCH OR EXCAVATION AREA AS MAY BE REQUIRED BY THE PUBLIC WORKS INSPECTOR TO ELIMINATE SMALL "FLOATING" PIECES OF CONCRETE, SUCH AS WHERE THE EXISTING PCC IS DAMAGED OR CRACKED, IN GENERAL, THE REPLACEMENT SHALL BE TO THE EXTENT THAT THERE ARE NO FLOATING PIECES OF PCC LEFT REMAINING WHICH ARE SMALLER THAN 9 SQUARE FEET IN AREA. IN ADDITION, THE SAW CUT LIMITS SHALL BE LOCATED NO CLOSER THAN 3 FEET FROM A SCORE LINE OR COLD JOINT. MIN. PCC REMOVAL IS 25 SQUARE FEET, SCORE LINE TO SCORE LINE.
13. UNLESS OTHERWISE NOTED: 3" CONDUIT BENDS SHALL HAVE A RADIUS OF 3', 2" CONDUIT BENDS SHALL HAVE A RADIUS OF 2', PLACE 2 SACK SLURRY MIX AROUND ALL CONDUIT BENDS HAVING A RADIUS OF LESS THAN 50'.
14. ALL CONDUIT SHALL BE DB 120, UNLESS OTHERWISE SPECIFIED. ALL SWEEPS TO POLES SHALL BE SCHEDULE 80.
15. REMOVE AND REPLACE CURB AND GUTTER ABOVE SWEEPS TO VAULTS IN THE SIDEWALK, OR BORE UNDER CURB AND GUTTER. JETTING IS NOT ALLOWED.
16. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE DEPARTMENTS OF THE CITY AT LEAST TWO DAYS BEFORE START OF WORK. DURING THE COURSE OF WORK, THE CONTRACTOR SHALL CALL FOR INSPECTION OF ALL APPLICABLE WORK.
17. ALL SHRUBS, PLANTS, OR TREES THAT HAVE BEEN DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPLANTED OR REPLACED SO AS TO RESTORE THE WORK SITE TO ITS ORIGINAL CONDITION.
18. DURING THE COURSE OF THE WORK, PEDESTRIAN AND VEHICULAR ACCESS MUST BE MAINTAINED AT ALL TIMES.
19. NON-SKID CALTRANS APPROVED STEEL PLATES SHALL BE RECESSED IN TRENCH CROSSING MAJOR STREETS (AREA DESIGNATED BY CITY ENGINEER) AND INSTALLED PER CALTRANS SPECS. PAVEMENT SHALL BE COLD PLANED TO A DEPTH EQUAL TO THE THICKNESS OF THE PLATE AND TO A WIDTH AND LENGTH EQUAL TO THE DIMENSIONS OF THE PLATES.
20. STEEL PLATES USED FOR BRIDGING MUST EXTEND A MINIMUM OF 12" BEYOND EDGES OF TRENCH.
21. TEMPORARY PAVING WITH COLD MIX SHALL BE USED TO FEATHER THE EDGES OF THE PLATES TO MINIMIZE WHEEL IMPACT. CONTRACTOR MAY BE REQUIRED TO WELD PLATES TOGETHER TO MINIMIZE RATTLING. CONTRACTOR MAY BE REQUIRED TO SWEEP UP LOOSE GRAVEL SEVERAL TIMES PER DAY AS DEEMED NECESSARY BY CITY ENGINEER.
22. BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES.
23. RESTORE ALL LANDSCAPING, INCLUDING IRRIGATION SYSTEM AROUND VAULTS.
24. VAULT SHALL BE INSTALLED WITHIN THE RIGHT-OF WAY.
25. NEW PAVEMENT THICKNESS SHALL BE EXISTING PLUS ONE INCH. USE T-SECTION CUT (ADD 6 INCH CUT ON EACH SIDE OF TRENCH WIDTH). TOP 2" WEARING SURFACE SHALL BE A.C. C2-AR-4000, AND BASE PAVEMENT SHALL BE A.C. B-AR-4000.
26. TACK COAT SHALL BE APPLIED OVER ROADWAY SURFACE PRIOR TO PAVEMENT INSTALLATION. TACK COAT SHALL BE AR-4000 HOT TACK EMULSIFIED ASPHALT PER "GREEN BOOK" REQUIREMENTS.
27. 3/4 SACK CEMENT/SAND SLURRY BACKFILL. ALL SLURRY BACKFILL WILL REQUIRE 72 HOURS OF CURE TIME. ALL EXCAVATION AND TRENCHES WILL BE SECURED WITH STEEL PLATES.
28. PERMANENT PAVING SHALL BE COMPLETED WITHIN TWO WEEKS AFTER EXCAVATION. TEMPORARY PAVING USING COLD MIX A.C. IS ACCEPTABLE AFTER ALLOWING 72 HOURS OF CURE TIME ON SLURRY MIX BACKFILL.
29. REPLACE ANY EXISTING STRIPING, MARKINGS AND SURVEY MONUMENTS THAT MAY HAVE BEEN REMOVED OR DAMAGED.
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35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

NOTE
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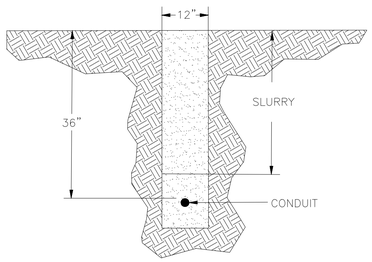
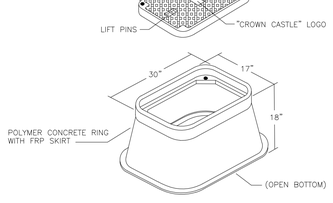
TOTAL CONSTRUCTION TOTALS:
929.00' OF PLACE FIBER CONDUIT

DIRT TRENCH DETAIL
N.T.S.

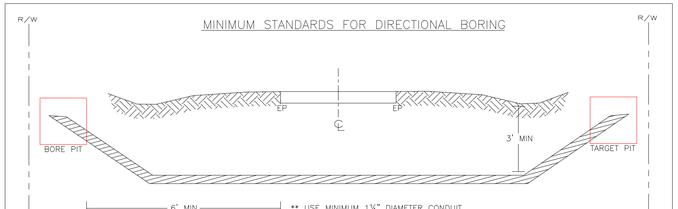


HANDHOLE DETAIL
N.T.S.



CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

MINIMUM STANDARDS FOR DIRECTIONAL BORING



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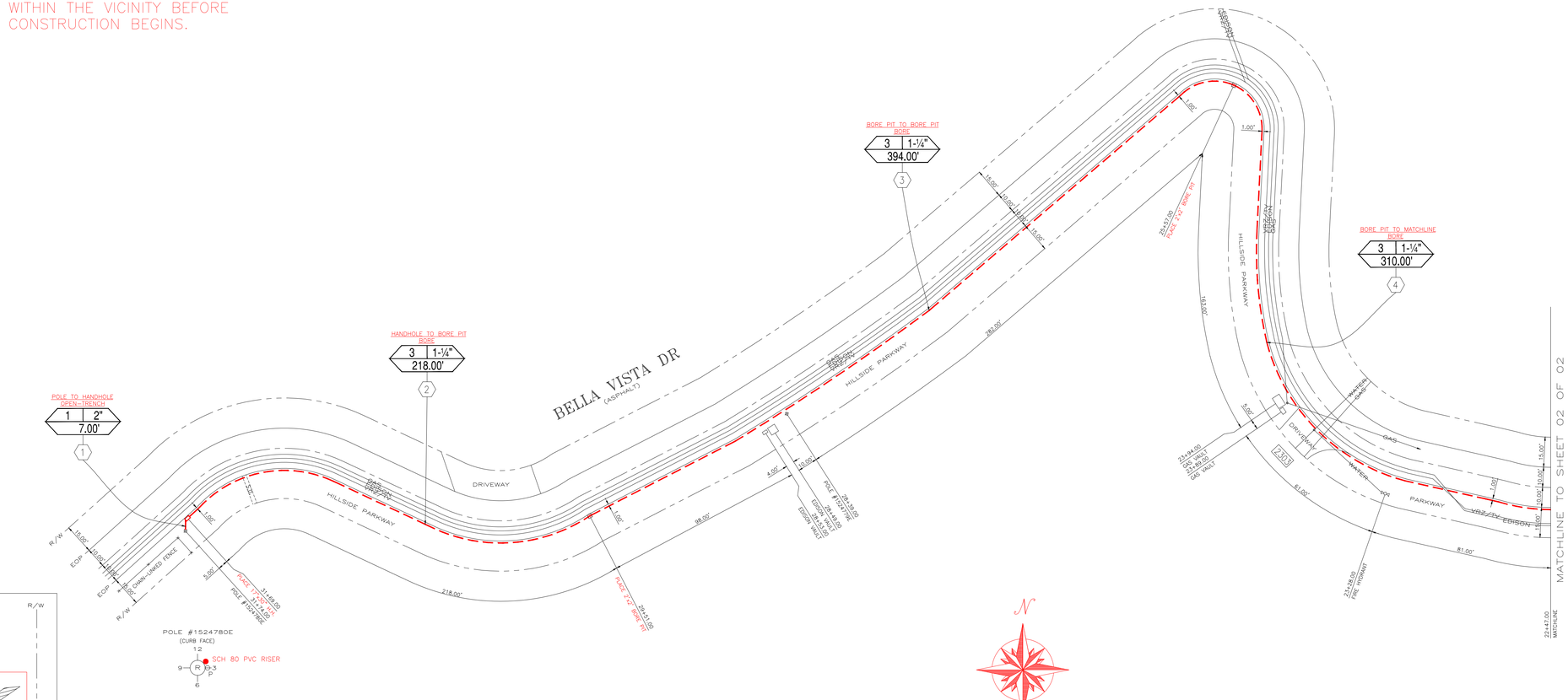

TOTAL TRENCH FOOTAGE
CROWN CASTLE NG ONLY = 929.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	24" x 36" (DIRT)	0
	17" x 30" (DIRT)	1
CONDUIT	1¼" PVC	922'
	2" PVC	7'
	4" PVC	0'

TRENCH DATA

1. PL. 7.00' (1)-2" DUCT. OPEN-TRENCH
2. PL. 218.00' (3)-1¼" DUCT. BORE
3. PL. 394.00' (3)-1¼" DUCT. BORE
4. PL. 310.00' (3)-1¼" DUCT. BORE

DIRT	7.00'	CONCRETE	0'
BORE	922.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	PL	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT				CURB	SS	SANITARY SEWER
	STREET LIGHT	CONDUIT DATA BLOCK: CONDUIT CT. / DISTANCE / CONDUIT SIZE		TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

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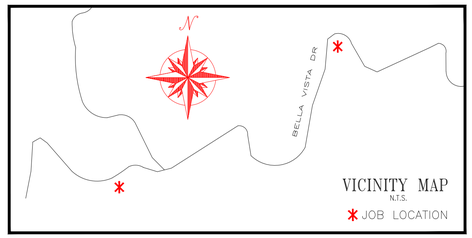
PROJECT NUMBER:
VRZ210441CAMONUFL05
COUNTY OF SANTA BARBARA
SUB MAP NO. :
THOMAS GUIDE : 987, D-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

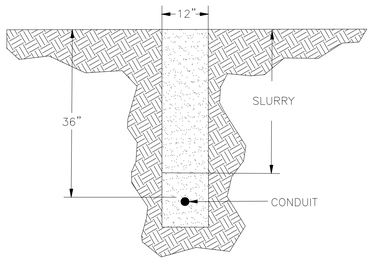
CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE	
DATE : 09/17/2013	CITY OF MONTECITO	SHEET 01 OF 02	
LOCATION : BELLA VISTA DRIVE, 1500' WEST OF ROMERO CANYON ROAD			
LOG # : -	GRID # : 6078-1988	PROJECT # : VRZ210441CAMONUFL05	
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 987, D-7	ADDRESS # : 2353 BELLA VISTA DRIVE MONTECITO, CA 93108	
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY			



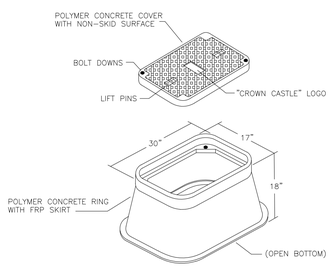
DIRT TRENCH DETAIL

N.T.S.



HANDHOLE DETAIL

N.T.S.

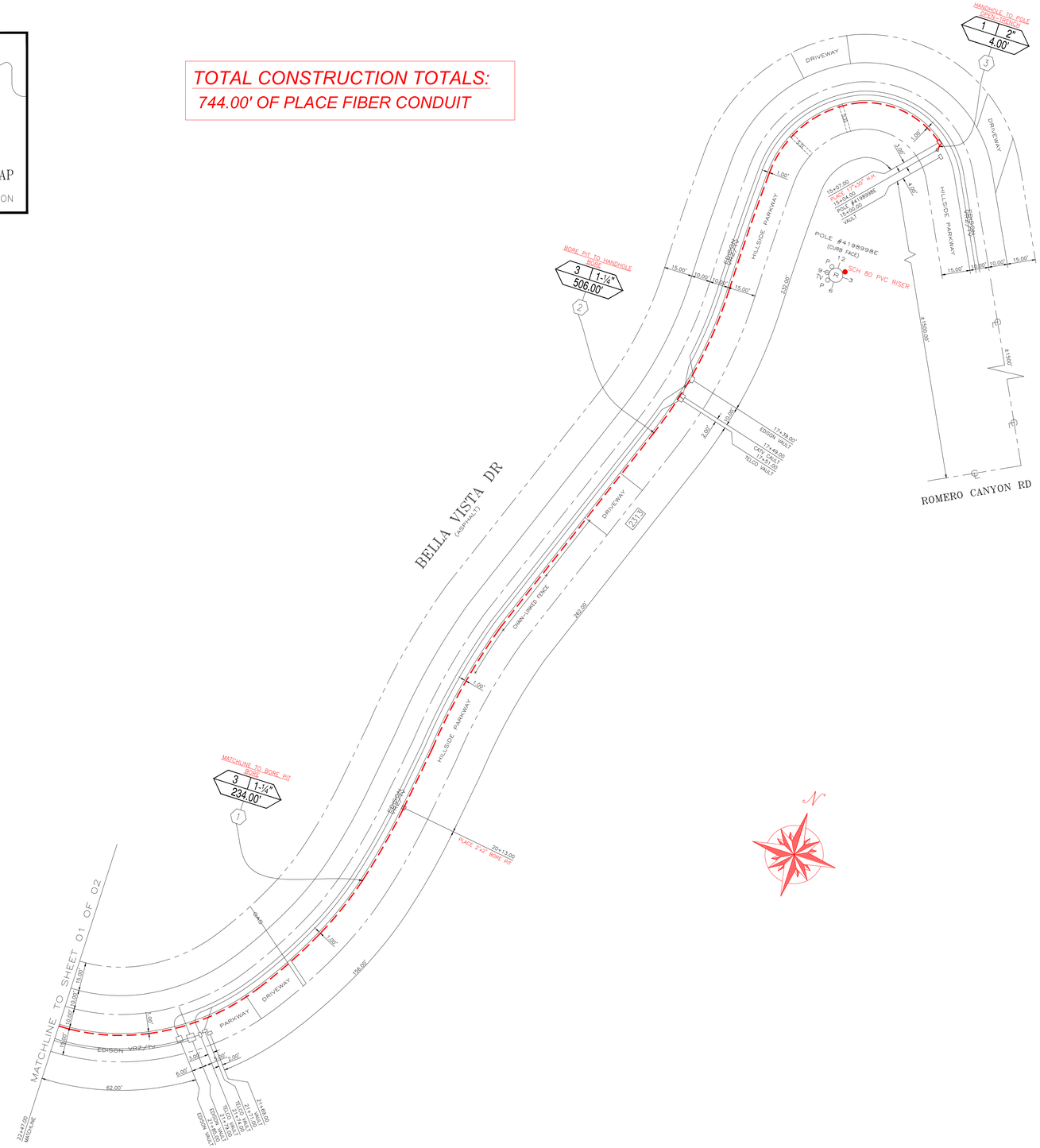


CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

NOTE
CONTRACTOR IS TO IDENTIFY ANY UNDERGROUND UTILITIES WITHIN THE VICINITY BEFORE CONSTRUCTION BEGINS.

TOTAL CONSTRUCTION TOTALS:

744.00' OF PLACE FIBER CONDUIT



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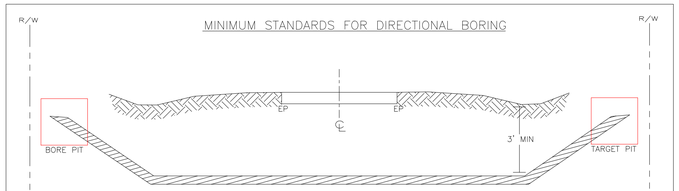
10. ALL BACKHOE EXCAVATION SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN STRAIGHT BREAK.
11. TUNNEL ALL CURBS AND GUTTERS AND BORE ALL DRIVEWAYS AND WALKWAYS.
12. EXISTING PORTLAND CEMENT CONCRETE SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN, STRAIGHT BREAK WITHOUT CRACKING, CHIPPING OR LOOSENING ADJOINING PCC. THE EXISTING PCC SHALL BE CUT BEYOND THE CONFIGURATION OF THE TRENCH OR EXCAVATION AREA AS MAY BE REQUIRED BY THE PUBLIC WORKS INSPECTOR TO ELIMINATE SMALL "FLOATING" PIECES OF CONCRETE, SUCH AS WHERE THE EXISTING PCC IS DAMAGED OR CRACKED. IN GENERAL, THE REPLACEMENT SHALL BE TO THE EXTENT THAT THERE ARE NO FLOATING PIECES OF PCC LEFT REMAINING WHICH ARE SMALLER THAN 9 SQUARE FEET IN AREA. IN ADDITION, THE SAW CUT LIMITS SHALL BE LOCATED NO CLOSER THAN 3 FEET FROM A SCORE LINE OR COLD JOINT, MIN. PCC REMOVAL IS 25 SQUARE FEET, SCORE LINE TO SCORE LINE.
13. UNLESS OTHERWISE NOTED; 3" CONDUIT BENDS SHALL HAVE A RADIUS OF 3', 2" CONDUIT BENDS SHALL HAVE A RADIUS OF 2', PLACE 2 SACK SLURRY MIX AROUND ALL CONDUIT BENDS HAVING A RADIUS OF LESS THAN 50'.
14. ALL CONDUIT SHALL BE DB 120, UNLESS OTHERWISE SPECIFIED. ALL SWEEPS TO POLES SHALL BE SCHEDULE 80.
15. REMOVE AND REPLACE CURB AND GUTTER ABOVE SWEEPS TO VAULTS IN THE SIDEWALK, OR BORE UNDER CURB AND GUTTER. JETTING IS NOT ALLOWED.
16. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE DEPARTMENTS OF THE CITY AT LEAST TWO DAYS BEFORE START OF WORK. DURING THE COURSE OF WORK, THE CONTRACTOR SHALL CALL FOR INSPECTION OF ALL APPLICABLE WORK.
17. ALL SHRUBS, PLANTS, OR TREES THAT HAVE BEEN DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPLANTED OR REPLACED SO AS TO RESTORE THE WORK SITE TO ITS ORIGINAL CONDITION.
18. DURING THE COURSE OF THE WORK, PEDESTRIAN AND VEHICULAR ACCESS MUST BE MAINTAINED AT ALL TIMES.
19. NON-SKID CALTRANS APPROVED STEEL PLATES SHALL BE RECESSED IN TRENCH CROSSING MAJOR STREETS (AREA DESIGNATED BY CITY ENGINEER) AND INSTALLED PER CALTRANS SPECS. PAVEMENT SHALL BE COLD PLANED TO A DEPTH EQUAL TO THE THICKNESS OF THE PLATE AND TO A WIDTH AND LENGTH EQUAL TO THE DIMENSIONS OF THE PLATES.
20. STEEL PLATES USED FOR BRIDGING MUST EXTEND A MINIMUM OF 12" BEYOND EDGES OF TRENCH.
21. TEMPORARY PAVING WITH COLD MIX SHALL BE USED TO FEATHER THE EDGES OF THE PLATES TO MINIMIZE WHEEL IMPACT. CONTRACTOR MAY BE REQUIRED TO WELD PLATES TOGETHER TO MINIMIZE RATTLING. CONTRACTOR MAY BE REQUIRED TO SWEEP UP LOOSE GRAVEL SEVERAL TIMES PER DAY AS DEEMED NECESSARY BY CITY ENGINEER.
22. BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES.
23. RESTORE ALL LANDSCAPING, INCLUDING IRRIGATION SYSTEM AROUND VAULTS.
24. VAULT SHALL BE INSTALLED WITHIN THE RIGHT-OF WAY.
25. NEW PAVEMENT THICKNESS SHALL BE EXISTING PLUS ONE INCH. USE T-SECTION CUT (ADD 6 INCH CUT ON EACH SIDE OF TRENCH WIDTH). TOP 2" WEARING SURFACE SHALL BE A.C. C2-AR-4000, AND BASE PAVEMENT SHALL BE A.C. B-AR-4000.
26. TACK COAT SHALL BE APPLIED OVER ROADWAY SURFACE PRIOR TO PAVEMENT INSTALLATION. TACK COAT SHALL BE AR-4000 HOT TACK EMULSIFIED ASPHALT PER "GREEN BOOK" REQUIREMENTS.
27. 3/4 SACK CEMENT/SAND SLURRY BACKFILL. ALL SLURRY BACKFILL WILL REQUIRE 72 HOURS OF CURE TIME. ALL EXCAVATION AND TRENCHES WILL BE SECURED WITH STEEL PLATES.
28. PERMANENT PAVING SHALL BE COMPLETED WITHIN TWO WEEKS AFTER EXCAVATION. TEMPORARY PAVING USING COLD MIX A.C. IS ACCEPTABLE AFTER ALLOWING 72 HOURS OF CURE TIME ON SLURRY MIX BACKFILL.
29. REPLACE ANY EXISTING STRIPING, MARKINGS AND SURVEY MONUMENTS THAT MAY HAVE BEEN REMOVED OR DAMAGED.
30. ACCESS SHALL BE PROVIDED TO ALL FIRE HYDRANTS, VALVES, VAULTS, METERS, AND PULL BOXES AT ALL TIMES. TRAFFIC SIGNALS, PEDESTRIAN SIGNALS AND STOP SIGNS SHALL REMAIN UNOBSTRUCTED AT ALL TIMES.
31. SEE ADDITIONAL NOTES ON THE EXCAVATION PERMIT.
32. HANDHOLES, VAULT OR SUBSURFACE EQUIPMENT ENCLOSURES SHALL BE MARKED AS TO OWNERSHIP TO FACILITATE IDENTIFICATION BY PERSONS AUTHORIZED BY TO WORK THEREIN AND BY OTHER PERSONS PERFORMING WORK IN THEIR VICINITY.
33. MANHOLES AND HANDHOLES, WHILE NOT BEING WORKED IN SHALL BE SECURELY CLOSED BY COVERS OF SUFFICIENT STRENGTH TO SUSTAIN SUCH LOADS AS MAY REASONABLY BE IMPOSED UPON THEM, AND ARRANGEMENT SHALL BE SUCH THAT A TOOL OR APPLIANCE SHALL BE REQUIRED FOR THEIR OPENING AND COVER REMOVAL.
34. ALL VAULT AND MANHOLES SHALL CONFORM TO APPLICABLE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (A.A.S.H.O.) STANDARD SPECIFICATIONS H20-S16-44 FOR HIGHWAY BRIDGES, LATEST REVISION, RELATING TO DEAD LOADS LIVE LOADS, AND IMPACT LOADS. ADDITIONALLY, LOADS DUE TO A GROUND WATER TABLE OF THREE (3) FEET FROM FINISHED GRADE AND A SURCHARGE OF (2) FEET SHALL BE APPLIED IN CALCULATING DESIGN LOADS.
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

MINIMUM STANDARDS FOR DIRECTIONAL BORING



** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE

CROWN CASTLE NG ONLY = 744.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	24" x 36" (DIRT)	0
	17" x 30" (DIRT)	1
CONDUIT	1¼" PVC	740'
	2" PVC	4'
	4" PVC	0'

TRENCH DATA

1. PL. 234.00' (3)-1¼" DUCT. BORE
2. PL. 506.00' (3)-1¼" DUCT. BORE
3. PL. 4.00' (1)-2" DUCT. OPEN-TRENCH

DIRT	4.00'	CONCRETE	0'
BORE	740.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	PL	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		CURB	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'

30' 40' 60'

Engineered By :

connect solutions ENGINEERING

Jon Schweers
Jason Jimenez

4095 E. La Palma Ave., Ste. A
Anaheim, Ca. 92807
Business (714) 630-4053
Fax (714) 630-3052

IMPORTANT NOTICE

DIGALERT

Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call

CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

PROJECT NUMBER:

VRZ210441CAMONUFL05

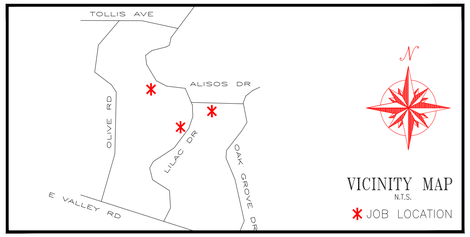
COUNTY OF SANTA BARBARA

SUB MAP NO. :
THOMAS GUIDE : 987, D-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE	
DATE : 09/17/2013	CITY OF MONTECITO	SHEET 02 OF 02	
LOCATION : BELLA VISTA DRIVE, 1500' WEST OF ROMERO CANYON ROAD			
LOG # : -	GRID # : 6078-1988	PROJECT # : VRZ210441CAMONUFL05	
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 987, D-7	ADDRESS # : 2303 BELLA VISTA DRIVE MONTECITO, CA 93108	
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY			



CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO LATEST EDITION OF THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION," ADOPTED BY THE CITY AS MODIFIED BY STANDARD PLANS AND ADDENDUM.
2. THE EXISTENCE AND LOCATION OF UTILITY LINES SHOWN HEREON ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. OTHER UTILITY LINES MAY EXIST; CONTRACTOR SHALL VERIFY PRIOR TO START OF CONSTRUCTION AND SHALL USE EXTREME CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE SAME. HE IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES, VALVES, METERS, TRAFFIC SIGNAL CONDUITS, DETECTOR LOOPS, ETC.; WITHIN LIMITS OF WORK WHETHER THEY ARE SHOWN ON THESE PLANS OR NOT.
3. AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133).
4. INDEMNIFICATION CLAUSE- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTIONS OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
5. ALL WORK AREA AND STREET TRAFFIC CONTROL SHALL BE PER "MUTCH". (WORK AREA TRAFFIC CONTROL HANDBOOK) UNLESS NOTED OTHERWISE.
6. ALL PAVEMENTS, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE RECONSTRUCTED PER THE COUNTY OF SANTA BARBARA IMPROVEMENTS STANDARD.
7. PRIOR TO THE BEGINNING OF ANY EXCAVATION AND THROUGHOUT THE COURSE OF CONSTRUCTION WORK THE CONTRACTOR SHALL FULLY COMPLY WITH THE CALIFORNIA OCCUPATIONAL SAFFETY AND HEALTH ACT OF 1973 INCLUDING ALL REVISIONS AND AMENDMENTS THERETO.
8. THE CONTRACTOR SHALL HAVE COPIES OF THE PLANS ON THE PROJECT SITE AND BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE OR BELOW GROUND IMPROVEMENTS, AS A RESULT OF HIS OPERATIONS, AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAME TO THE SATISFACTION OF THE CITY.
10. ALL BACKHOE EXCAVATION SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN STRAIGHT BREAK.
11. TUNNEL ALL CURBS AND GUTTERS AND BORE ALL DRIVEWAYS AND WALKWAYS.
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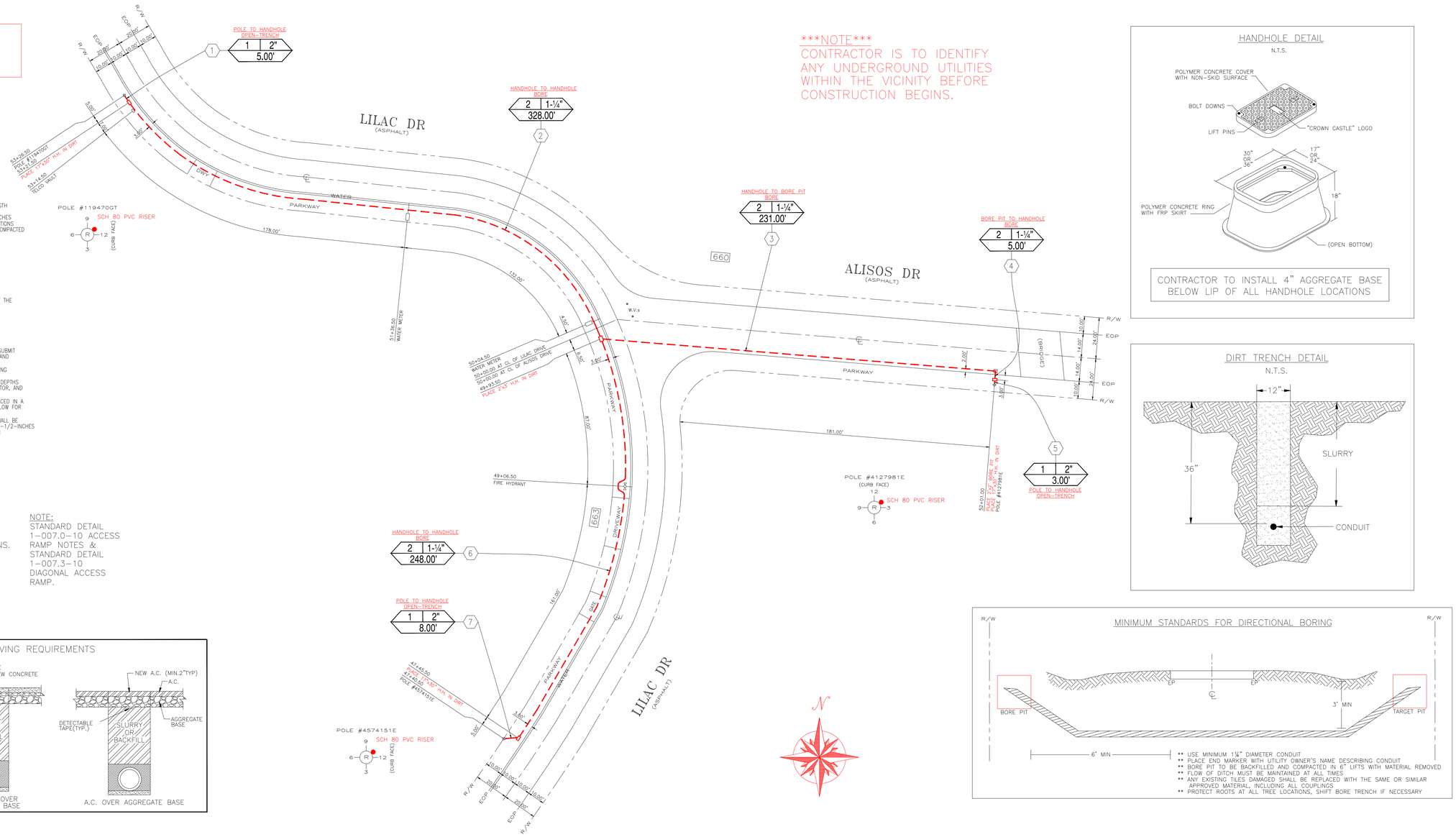
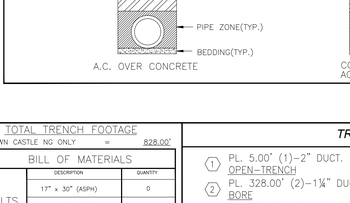
34. ALL VAULT AND MANHOLES SHALL CONFORM TO APPLICABLE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (A.A.S.H.O.) STANDARD SPECIFICATIONS H20-S16-44 FOR HIGHWAY BRIDGES, LATEST REVISION, RELATING TO DEAD LOADS LIVE LOADS, AND IMPACT LOADS. ADDITIONALLY, LOADS DUE TO A GROUND WATER TABLE OF THREE (3) FEET FROM FINISHED GRADE AND A SURCHARGE OF (2) FEET SHALL BE APPLIED IN CALCULATING DESIGN LOADS.
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

TOTAL CONSTRUCTION TOTALS:
828.00' OF PLACE FIBER CONDUIT



NOTE
CONTRACTOR IS TO IDENTIFY ANY UNDERGROUND UTILITIES WITHIN THE VICINITY BEFORE CONSTRUCTION BEGINS.

7-001.0-06 TRENCH BEDDING AND BACKFILL



7-001.1-06 NOTES

1. IMPROVEMENTS CONSTRUCTED UNDER THIS STANDARD DETAIL SHALL CONFORM TO APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS FOR THE PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
2. TRENCH WIDTH SHALL BE AS SHOWN, UNLESS OTHERWISE SPECIFIED ON PLANS.
3. PIPE ZONE MATERIAL SHALL BE SAND WITH A SAND EQUIVALENT GREATER THAN 50.
4. BACKFILL SHALL A MAXIMUM OF 8-INCH LIFTS AND MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING:
   A) CRUSHED AGGREGATE BASE;
   B) CRUSHED MISCELLANEOUS BASE;
   C) BACKFILL MATERIAL WITH SAND EQUIVALENT GREATER THAN 50.
5. THE ENGINEER SHALL APPROVE ALL BACKFILL MATERIAL PRIOR TO BACKFILLING TRENCH. CONTRACTOR MUST SUBMIT SAND EQUIVALENT TESTS, PER ASTM D2419, FOR ALL BACKFILL AND BEDDING, BOTH NATIVE AND IMPORTED, AND IDENTIFY THE SOURCE OF THE MATERIAL.
6. BEDDING AND BACKFILL SHALL BE COMPACTED MECHANICALLY. COMPACTION BY FLOODING, PONDING, OR JETTING SHALL NOT BE PERMITTED.
7. COMPACTION TEST, PER ASTM D1557, CURRENT REVISION, WILL BE REQUIRED BY THE ENGINEER AT VARIOUS DEPTHS IN THE TRENCH, AT INTERVALS NOT TO EXCEED 250 FEET. ALL TESTS SHALL BE PAID FOR BY THE CONTRACTOR, AND PERFORMED BY A LABORATORY APPROVED BY THE CITY, UNLESS OTHERWISE SPECIFIED.
8. A CONTINUOUS LENGTH OF 3-INCH WIDE DETECTABLE TAPE, TERRATAPE OR APPROVED EQUAL, SHALL BE PLACED IN A DIRECT LINE OVER ALL PIPE, AS SHOWN. TAPE COLOR SHALL BE BLUE FOR WATER, GREEN FOR SEWER, YELLOW FOR ELECTRICAL, AND PURPLE FOR RECLAIMED WATER.
9. THE ROADWAY STRUCTURAL SECTION SHALL BE OF THE SAME MATERIAL AND THICKNESS AS EXISTING, BUT SHALL BE A MINIMUM OF 2-1/2-INCHES ASPHALT OVER 6-INCHES AGGREGATE BASE FOR RESIDENTIAL STREETS AND 3-1/2-INCHES ASPHALT OVER 8-INCHES AGGREGATE FOR COMMERCIAL STREETS. FOR ALL CONCRETE STREETS, THE MINIMUM SECTION SHALL BE 6-INCHES OF CLASS 560-C-3250 CONCRETE OVER 6-INCHES AGGREGATE BASE.

NOTE: STANDARD DETAIL 7-004.0-06 UTILITY SEPARATION FROM CITY WATER, SEWER, RECLAIMED PIPELINES, AND STORM DRAINS.

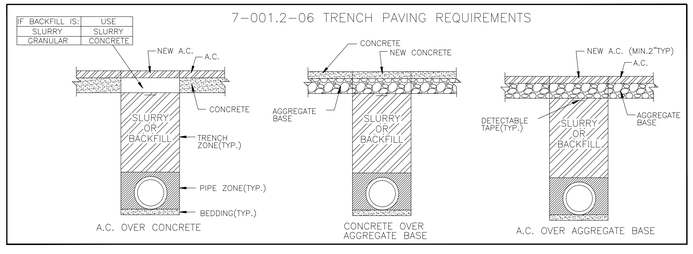
NOTE: STANDARD DETAIL 1-006.0-06 SIDEWALK PLANS.

NOTE: STANDARD DETAIL 1-006.1-06 SIDEWALK SECTIONS.

NOTE: STANDARD DETAIL 1-007.0-10 ACCESS RAMP NOTES & STANDARD DETAIL 1-007.3-10 DIAGONAL ACCESS RAMP.

7-001.2-06 TRENCH PAVING REQUIREMENTS

IF BACKFILL IS:	USE
SLURRY	SLURRY
GRANULAR	CONCRETE



HANDHOLE DETAIL
N.T.S.

CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

DIRT TRENCH DETAIL
N.T.S.

MINIMUM STANDARDS FOR DIRECTIONAL BORING

** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE

CROWN CASTLE NG ONLY = 828.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	24" x 36" (DIRT)	1
	17" x 30" (DIRT)	3
CONDUIT	1¼" PVC	215'
	2" PVC	13'
	4" PVC	0'

TRENCH DATA

1. PL. 5.00' (1)-2" DUCT. OPEN-TRENCH
2. PL. 328.00' (2)-1¼" DUCT. BORE
3. PL. 231.00' (2)-1¼" DUCT. BORE
4. PL. 5.00' (2)-1¼" DUCT. BORE
5. PL. 3.00' (1)-2" DUCT. OPEN-TRENCH
6. PL. 248.00' (2)-1¼" DUCT. BORE
7. PL. 8.00' (1)-2" DUCT. OPEN-TRENCH

DIRT	13.00'	CONCRETE	0'
BORE	215.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	PL	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		CURB	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

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PROJECT NUMBER:
VRZ210441CAMONUFL06

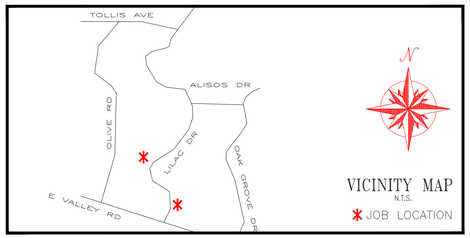
COUNTY OF SANTA BARBARA

SUB MAP NO. :
THOMAS GUIDE : 997, C-1
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

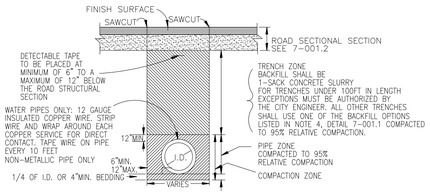
CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE	
DATE : 08/29/2013	CITY OF MONTECITO	SHEET 01 OF 01	
LOCATION : LILAC DRIVE & ALISOS DRIVE			
LOG # : -	GRID # : 6075-1986	PROJECT # : VRZ210441CAMONUFL06	
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 997, C-1	ADDRESS # : 660 LILAC DRIVE MONTECITO, CA 93108	
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY			



TOTAL CONSTRUCTION TOTALS:
482.00' OF PLACE FIBER CONDUIT

7-001.0-06 TRENCH BEDDING AND BACKFILL



7-001.1-06 NOTES

1. IMPROVEMENTS CONSTRUCTED UNDER THIS STANDARD DETAIL SHALL CONFORM TO APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS FOR THE PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
2. TRENCH WIDTH SHALL BE AS SHOWN, UNLESS OTHERWISE SPECIFIED ON PLANS.
3. PIPE ZONE MATERIAL SHALL BE SAND WITH A SAND EQUIVALENT GREATER THAN 50.
4. BACKFILL SHALL A MAXIMUM OF 8-INCH LIFTS AND MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING:
   A) CRUSHED AGGREGATE BASE;
   B) CRUSHED MISCELLANEOUS BASE;
   C) BACKFILL MATERIAL WITH SAND EQUIVALENT GREATER THAN 50.
5. THE ENGINEER SHALL APPROVE ALL BACKFILL MATERIAL PRIOR TO BACKFILLING TRENCH. CONTRACTOR MUST SUBMIT SAND EQUIVALENT TESTS, PER ASTM D2419, FOR ALL BACKFILL AND BEDDING, BOTH NATIVE AND IMPORTED, AND IDENTIFY THE SOURCE OF THE MATERIAL.
6. BEDDING AND BACKFILL SHALL BE COMPACTED MECHANICALLY. COMPACTION BY FLOODING, PONDING, OR JETTING SHALL NOT BE PERMITTED.
7. COMPACTION TEST, PER ASTM D1557, CURRENT REVISION, WILL BE REQUIRED BY THE ENGINEER AT VARIOUS DEPTHS IN THE TRENCH, AT INTERVALS NOT TO EXCEED 250 FEET. ALL TESTS SHALL BE PAID FOR BY THE CONTRACTOR, AND PERFORMED BY A LABORATORY APPROVED BY THE CITY, UNLESS OTHERWISE SPECIFIED.
8. A CONTINUOUS LENGTH OF 3-INCH WIDE DETECTABLE TAPE, TERRATAPE OR APPROVED EQUAL, SHALL BE PLACED IN A DIRECT LINE OVER ALL PIPE, AS SHOWN. TAPE COLOR SHALL BE BLUE FOR WATER, GREEN FOR SEWER, YELLOW FOR ELECTRICAL, AND PURPLE FOR RECLAIMED WATER.
9. THE ROADWAY STRUCTURAL SECTION SHALL BE OF THE SAME MATERIAL AND THICKNESS AS EXISTING, BUT SHALL BE A MINIMUM OF 2-1/2-INCHES ASPHALT OVER 6-INCHES AGGREGATE BASE FOR RESIDENTIAL STREETS AND 3-1/2-INCHES ASPHALT OVER 8-INCHES AGGREGATE FOR COMMERCIAL STREETS. FOR ALL CONCRETE STREETS, THE MINIMUM SECTION SHALL BE 6-INCHES OF CLASS 560-C-3250 CONCRETE OVER 6-INCHES AGGREGATE BASE.

NOTE:
STANDARD DETAIL 7-004.0-06 UTILITY SEPARATION FROM CITY WATER, SEWER, RECLAIMED PIPELINES, AND STORM DRAINS.

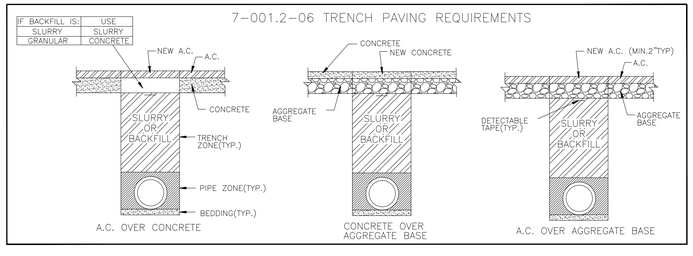
NOTE:
STANDARD DETAIL 1-006.0-06 SIDEWALK PLANS.

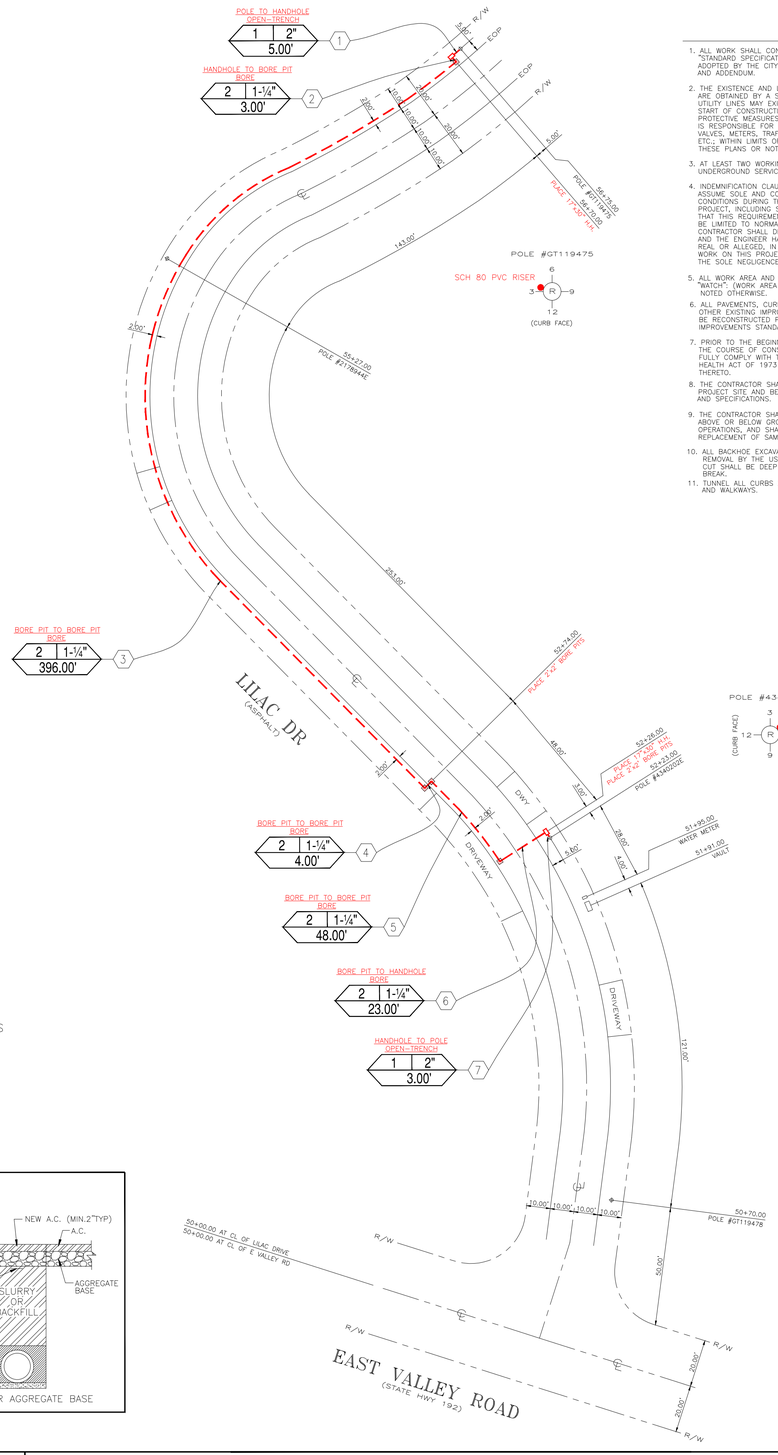
NOTE:
STANDARD DETAIL 1-006.1-06 SIDEWALK SECTIONS.

NOTE:
STANDARD DETAIL 1-007.0-10 ACCESS RAMP NOTES & STANDARD DETAIL 1-007.3-10 DIAGONAL ACCESS RAMP.

7-001.2-06 TRENCH PAVING REQUIREMENTS

IF BACKFILL IS:	USE
SLURRY	SLURRY
GRANULAR	CONCRETE





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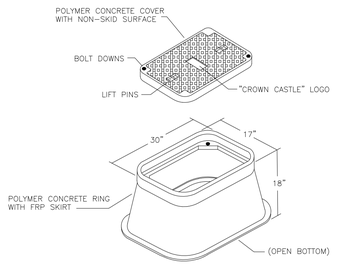
34. ALL VAULT AND MANHOLES SHALL CONFORM TO APPLICABLE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (A.A.S.H.O.) STANDARD SPECIFICATIONS H20-S16-44 FOR HIGHWAY BRIDGES, LATEST REVISION, RELATING TO DEAD LOADS LIVE LOADS, AND IMPACT LOADS. ADDITIONALLY, LOADS DUE TO A GROUND WATER TABLE OF THREE (3) FEET FROM FINISHED GRADE AND A SURCHARGE OF (2) FEET SHALL BE APPLIED IN CALCULATING DESIGN LOADS.
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

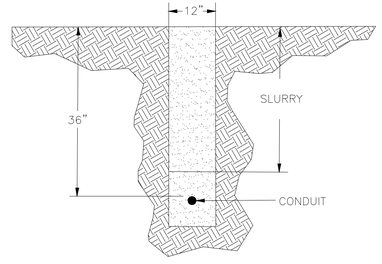
NOTE
CONTRACTOR IS TO IDENTIFY ANY UNDERGROUND UTILITIES WITHIN THE VICINITY BEFORE CONSTRUCTION BEGINS.

HANDHOLE DETAIL
N.T.S.

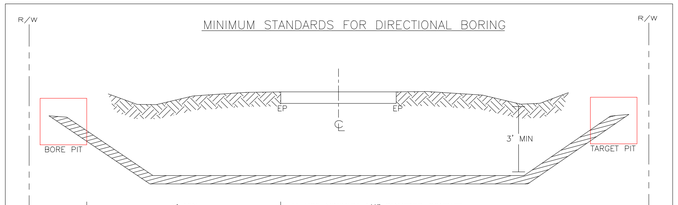


CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

DIRT TRENCH DETAIL
N.T.S.



MINIMUM STANDARDS FOR DIRECTIONAL BORING



** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE
CROWN CASTLE NG ONLY = 482.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	24" x 36" (DIRT)	0
	17" x 30" (DIRT)	2
CONDUIT	1¼" PVC	474'
	2" PVC	8'
	4" PVC	0'

TRENCH DATA

1. PL. 5.00' (1)-2" DUCT. OPEN-TRENCH
2. PL. 3.00' (2)-1¼" DUCT. BORE
3. PL. 396.00' (2)-1¼" DUCT. BORE
4. PL. 4.00' (2)-1¼" DUCT. BORE
5. PL. 48.00' (2)-1¼" DUCT. BORE
6. PL. 23.00' (2)-1¼" DUCT. BORE
7. PL. 3.00' (1)-2" DUCT. OPEN-TRENCH

DIRT	8.00'	CONCRETE	0'
BORE	474.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	PL	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		CURB	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

Engineered By :
connect solutions ENGINEERING
Jon Schweers
Jason Jimenez
4095 E. La Palma Ave., Ste. A
Anaheim, Ca. 92807
Business (714) 630-4053
Fax (714) 630-3052

IMPORTANT NOTICE
DIGALERT
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

PROJECT NUMBER:
VRZ210441CAMONUFL07
COUNTY OF SANTA BARBARA
SUB MAP NO. :
THOMAS GUIDE : 997, C-1
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.		BY : CE
DATE : 09/03/2013	CITY OF MONTECITO	SHEET 01 OF 01	
LOCATION : LILAC DRIVE & EAST VALLEY ROAD			
LOG # : -	GRID # : 6075-1984	PROJECT # : VRZ210441CAMONUFL07	
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 997, C-1	ADDRESS # : 620 LILAC DRIVE MONTECITO, CA 93108	
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY			

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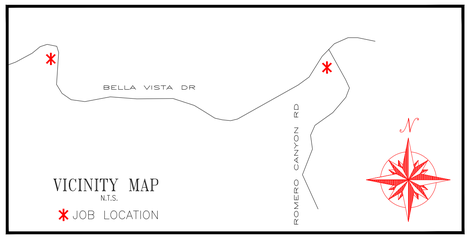
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

VICINITY MAP

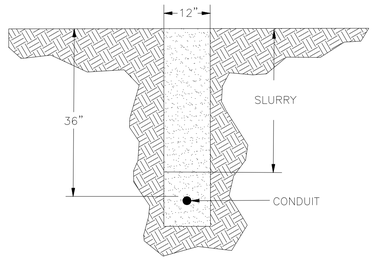
N.T.S.

✱ JOB LOCATION



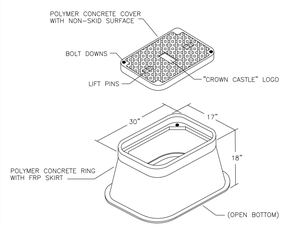
DIRT TRENCH DETAIL

N.T.S.



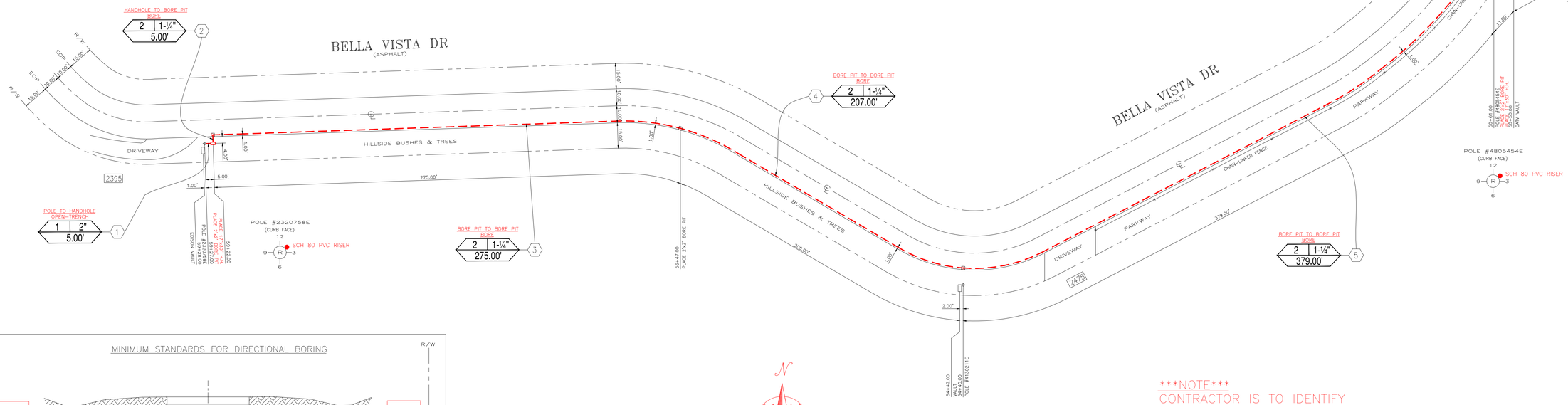
HANDHOLE DETAIL

N.T.S.

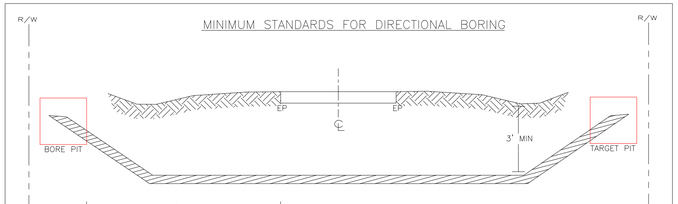


CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

TOTAL CONSTRUCTION TOTALS:
878.00' OF PLACE FIBER CONDUIT



MINIMUM STANDARDS FOR DIRECTIONAL BORING



** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

NOTE
CONTRACTOR IS TO IDENTIFY ANY UNDERGROUND UTILITIES WITHIN THE VICINITY BEFORE CONSTRUCTION BEGINS.

TOTAL TRENCH FOOTAGE

CROWN CASTLE NG ONLY = 878.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	24" x 36" (DIRT)	0
	17" x 30" (DIRT)	2
CONDUIT	1¼" PVC	870'
	2" PVC	8'
	4" PVC	0'

TRENCH DATA

1. PL. 5.00' (1)–2" DUCT. OPEN–TRENCH
2. PL. 5.00' (2)–1¼" DUCT. BORE
3. PL. 275.00' (2)–1¼" DUCT. BORE
4. PL. 207.00' (2)–1¼" DUCT. BORE
5. PL. 379.00' (2)–1¼" DUCT. BORE
6. PL. 4.00' (2)–1¼" DUCT. BORE
7. PL. 3.00' (1)–2" DUCT. OPEN–TRENCH

DIRT	8.00'	CONCRETE	0'
BORE	870.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	PL	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
⊕	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
⊙	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
⊗	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
⋈	FIRE HYDRANT				CURB	SS	SANITARY SEWER
	STREET LIGHT	CONDUIT DATA BLOCK: CONDUIT CT. / DISTANCE / CONDUIT SIZE		TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

Engineered By :
connect solutions ENGINEERING
Jon Schweers
Jason Jimenez
4095 E. La Palma Ave., Ste. A
Anaheim, Ca. 92807
Business (714) 630-4053
Fax (714) 630-3052

IMPORTANT NOTICE
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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

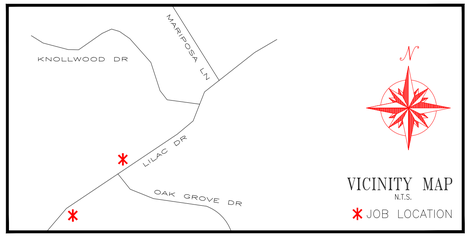
PROJECT NUMBER:
VRZ210441CAMONUFL08
COUNTY OF SANTA BARBARA

SUB MAP NO. :
THOMAS GUIDE : 987, E-7
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE	
DATE : 09/12/2013	CITY OF MONTECITO	SHEET 01 OF 01	
LOCATION : BELLA VISTA DRIVE & ROMERO CANYON ROAD			
LOG # : –	GRID # : 6081-1988	PROJECT # : VRZ210441CAMONUFL08	
SYSTEM # : 130301-1 VERIZON – MONTECITO	T.G.M. # : 987, E-7	ADDRESS # : 2475 BELLA VISTA DRIVE MONTECITO, CA 93108	
TYPE OF DRAWING: SUBSTRUCTURES CROWN CASTLE NG FACILITY			



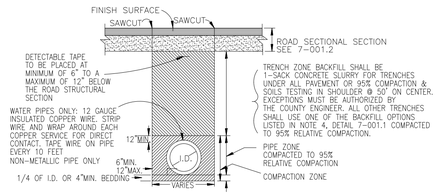
TOTAL CONSTRUCTION TOTALS:

483.00' OF PLACE FIBER CONDUIT

CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO LATEST EDITION OF THE "STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION," ADOPTED BY THE CITY AS MODIFIED BY STANDARD PLANS AND ADDENDUM.
2. THE EXISTENCE AND LOCATION OF UTILITY LINES SHOWN HEREON ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. OTHER UTILITY LINES MAY EXIST; CONTRACTOR SHALL VERIFY PRIOR TO START OF CONSTRUCTION AND SHALL USE EXTREME CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THE SAME. HE IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES, VALVES, METERS, TRAFFIC SIGNAL CONDUIT & DETECTOR LOOPS, ETC.; WITHIN LIMITS OF WORK WHETHER THEY ARE SHOWN ON THESE PLANS OR NOT.
3. AT LEAST TWO WORKING DAYS PRIOR TO STARTING WORK NOTIFY UNDERGROUND SERVICE ALERT (1-800-422-4133).
4. INDEMNIFICATION CLAUSE- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTIONS OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
5. ALL WORK AREA AND STREET TRAFFIC CONTROL SHALL BE PER "MATCH". (WORK AREA TRAFFIC CONTROL HANDBOOK) UNLESS NOTED OTHERWISE.
6. ALL PAVEMENTS, CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED SHALL BE RECONSTRUCTED PER THE COUNTY OF SANTA BARBARA IMPROVEMENTS STANDARD.
7. PRIOR TO THE BEGINNING OF ANY EXCAVATION AND THROUGHOUT THE COURSE OF CONSTRUCTION WORK THE CONTRACTOR SHALL FULLY COMPLY WITH THE CALIFORNIA OCCUPATIONAL SAFFETY AND HEALTH ACT OF 1973 INCLUDING ALL REVISIONS AND AMENDMENTS THERETO.
8. THE CONTRACTOR SHALL HAVE COPIES OF THE PLANS ON THE PROJECT SITE AND BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE OR BELOW GROUND IMPROVEMENTS, AS A RESULT OF HIS OPERATIONS, AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAME TO THE SATISFACTION OF THE CITY.
10. ALL BACKHOE EXCAVATION SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN, STRAIGHT BREAK.
11. TUNNEL ALL CURBS AND GUTTERS AND BORE ALL DRIVEWAYS AND WALKWAYS.
12. EXISTING PORTLAND CEMENT CONCRETE SHALL BE SAW CUT TO FACILITATE REMOVAL BY THE USE OF A POWER DRIVEN SAW. THE DEPTH OF CUT SHALL BE DEEP ENOUGH TO PRODUCE A CLEAN, STRAIGHT BREAK WITHOUT CRACKING, CHIPPING OR LOOSENING ADJOINING PCC. THE EXISTING PCC SHALL BE CUT BEYOND THE CONFIGURATION OF THE TRENCH OR EXCAVATION AREA AS MAY BE REQUIRED BY THE PUBLIC WORKS INSPECTOR TO ELIMINATE SMALL "FLOATING" PIECES OF CONCRETE, SUCH AS WHERE THE EXISTING PCC IS DAMAGED OR CRACKED. IN GENERAL, THE REPLACEMENT SHALL BE TO THE EXTENT THAT THERE ARE NO FLOATING PIECES OF PCC LEFT REMAINING WHICH ARE SMALLER THAN 9 SQUARE FEET IN AREA. IN ADDITION, THE SAW CUT LIMITS SHALL BE LOCATED NO CLOSER THAN 3 FEET FROM A SCORE LINE OR COLD JOINT. MIN. PCC REMOVAL IS 25 SQUARE FEET, SCORE LINE TO SCORE LINE.
13. UNLESS OTHERWISE NOTED: 3" CONDUIT BENDS SHALL HAVE A RADIUS OF 3', 2" CONDUIT BENDS SHALL HAVE A RADIUS OF 2'. PLACE 2 SACK SLURRY MIX AROUND ALL CONDUIT BENDS HAVING A RADIUS OF LESS THAN 50'.
14. ALL CONDUIT SHALL BE DB 120, UNLESS OTHERWISE SPECIFIED. ALL SWEEPS TO POLES SHALL BE SCHEDULE 80.
15. REMOVE AND REPLACE CURB AND GUTTER ABOVE SWEEPS TO VAULTS IN THE SIDEWALK, OR BORE UNDER CURB AND GUTTER. JETTING IS NOT ALLOWED.
16. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE DEPARTMENTS OF THE CITY AT LEAST TWO DAYS BEFORE START OF WORK. DURING THE COURSE OF WORK, THE CONTRACTOR SHALL CALL FOR INSPECTION OF ALL APPLICABLE WORK.
17. ALL SHRUBS, PLANTS, OR TREES THAT HAVE BEEN DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPLANTED OR REPLACED SO AS TO RESTORE THE WORK SITE TO ITS ORIGINAL CONDITION.
18. DURING THE COURSE OF THE WORK, PEDESTRIAN AND VEHICULAR ACCESS MUST BE MAINTAINED AT ALL TIMES.
19. NON-SKID CALTRANS APPROVED STEEL PLATES SHALL BE RECESSED IN TRENCH GROSSING MAJOR STREETS (AREA DESIGNATED BY CITY ENGINEER) AND INSTALLED PER CALTRANS SPECS. PAVEMENT SHALL BE COLD PLANED TO A DEPTH EQUAL TO THE THICKNESS OF THE PLATE AND TO A WIDTH AND LENGTH EQUAL TO THE DIMENSIONS OF THE PLATES.
20. STEEL PLATES USED FOR BRIDGING MUST EXTEND A MINIMUM OF 12" BEYOND EDGES OF TRENCH.
21. TEMPORARY PAVING WITH COLD MIX SHALL BE USED TO FEATHER THE EDGES OF THE PLATES TO MINIMIZE WHEEL IMPACT. CONTRACTOR MAY BE REQUIRED TO WELD PLATES TOGETHER TO MINIMIZE RATTLING. CONTRACTOR MAY BE REQUIRED TO SWEEP UP LOOSE GRAVEL SEVERAL TIMES PER DAY AS DEEMED NECESSARY BY CITY ENGINEER.
22. BRIDGING SHALL BE SECURED AGAINST DISPLACEMENT USING ADJUSTABLE CLEATS, SHIMS OR OTHER DEVICES.
23. RESTORE ALL LANDSCAPING, INCLUDING IRRIGATION SYSTEM AROUND VAULTS.
24. VAULT SHALL BE INSTALLED WITHIN THE RIGHT-OF WAY.
25. NEW PAVEMENT THICKNESS SHALL BE EXISTING PLUS ONE INCH. USE T-SECTION CUT (ADD 6 INCH CUT ON EACH SIDE OF TRENCH WIDTH). TOP 2" WEARING SURFACE SHALL BE A.C. C2-AR-4000, AND BASE PAVEMENT SHALL BE A.C. B-AR-4000.
26. TACK COAT SHALL BE APPLIED OVER ROADWAY SURFACE PRIOR TO PAVEMENT INSTALLATION. TACK COAT SHALL BE AR-4000 HOT TACK EMULSIFIED ASPHALT PER "GREEN BOOK" REQUIREMENTS.
27. ONE SACK CEMENT/SAND SLURRY BACKFILL: ALL SLURRY BACKFILL WILL REQUIRE 72 HOURS OF CURE TIME. ALL EXCAVATION AND TRENCHES WILL BE SECURED WITH STEEL PLATES.
28. PERMANENT PAVING SHALL BE COMPLETED WITHIN TWO WEEKS AFTER EXCAVATION. TEMPORARY PAVING USING COLD MIX A.C. IS ACCEPTABLE AFTER ALLOWING 72 HOURS OF CURE TIME ON SLURRY MIX BACKFILL.
29. REPLACE ANY EXISTING STRIPING, MARKINGS AND SURVEY MONUMENTS THAT MAY HAVE BEEN REMOVED OR DAMAGED.
30. ACCESS SHALL BE PROVIDED TO ALL FIRE HYDRANTS, VALVES, VAULTS, METERS, AND PULL BOXES AT ALL TIMES. TRAFFIC SIGNALS, PEDESTRIAN SIGNALS AND STOP SIGNS SHALL REMAIN UNOBSTRUCTED AT ALL TIMES.
31. SEE ADDITIONAL NOTES ON THE EXCAVATION PERMIT.
32. HANDHOLES, VAULT OR SUBSURFACE EQUIPMENT ENCLOSURES SHALL BE MARKED AS TO OWNERSHIP TO FACILITATE IDENTIFICATION BY PERSONS AUTHORIZED BY TO WORK THEREIN AND BY OTHER PERSONS PERFORMING WORK IN THEIR VICINITY.
33. MANHOLES AND HANDHOLES, WHILE NOT BEING WORKED IN SHALL BE SECURELY CLOSED BY COVERS OF SUFFICIENT STRENGTH TO SUSTAIN SUCH LOADS AS MAY REASONABLY BE IMPOSED UPON THEM, AND ARRANGEMENT SHALL BE SUCH THAT A TOOL OR APPLIANCE SHALL BE PROVIDED FOR THEIR OPENING AND COVER REMOVAL.
34. ALL VAULT AND MANHOLES SHALL CONFORM TO APPLICABLE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS (A.A.S.H.O.) STANDARD SPECIFICATIONS H20-S16-44 FOR HIGHWAY BRIDGES, LATEST REVISION, RELATING TO DEAD LOADS LIVE LOADS, AND IMPACT LOADS. ADDITIONALLY, LOADS DUE TO A GROUND WATER TABLE OF THREE (3) FEET FROM FINISHED GRADE AND A SURCHARGE OF (2) FEET SHALL BE APPLIED IN CALCULATING DESIGN LOADS.
35. MAINTAIN 12" CLEARANCE BETWEEN NEW CONDUIT AND ALL OTHER UTILITES.

7-001.0-06 TRENCH BEDDING AND BACKFILL



7-001.1-06 NOTES

1. IMPROVEMENTS CONSTRUCTED UNDER THIS STANDARD DETAIL SHALL CONFORM TO APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS FOR THE PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
2. TRENCH WIDTH SHALL BE AS SHOWN, UNLESS OTHERWISE SPECIFIED ON PLANS.
3. PIPE ZONE MATERIAL SHALL BE SAND WITH A SAND EQUIVALENT GREATER THAN 50.
4. BACKFILL SHALL A MAXIMUM OF 8-INCH LIFTS AND MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING:
   A) CRUSHED AGGREGATE BASE;
   B) CRUSHED MISCELLANEOUS BASE;
   C) BACKFILL MATERIAL WITH SAND EQUIVALENT GREATER THAN 50.
5. THE ENGINEER SHALL APPROVE ALL BACKFILL MATERIAL PRIOR TO BACKFILLING TRENCH. CONTRACTOR MUST SUBMIT SAND EQUIVALENT TESTS, PER ASTM D2419, FOR ALL BACKFILL AND BEDDING, BOTH NATIVE AND IMPORTED, AND IDENTIFY THE SOURCE OF THE MATERIAL.
6. BEDDING AND BACKFILL SHALL BE COMPACTED MECHANICALLY. COMPACTION BY FLOODING, PONDING, OR JETTING SHALL NOT BE PERMITTED.
7. COMPACTION TEST, PER ASTM D1557, CURRENT REVISION, WILL BE REQUIRED BY THE ENGINEER AT VARIOUS DEPTHS IN THE TRENCH, AT INTERVALS NOT TO EXCEED 250 FEET. ALL TESTS SHALL BE PAID FOR BY THE CONTRACTOR, AND PERFORMED BY A LABORATORY APPROVED BY THE CITY, UNLESS OTHERWISE SPECIFIED.
8. A CONTINUOUS LENGTH OF 3-INCH WIDE DETECTABLE TAPE, TERRATAPE OR APPROVED EQUAL, SHALL BE PLACED IN A DIRECT LINE OVER ALL PIPE, AS SHOWN. TAPE COLOR SHALL BE BLUE FOR WATER, GREEN FOR SEWER, YELLOW FOR ELECTRICAL, AND PURPLE FOR RECLAIMED WATER.
9. THE ROADWAY STRUCTURAL SECTION SHALL BE OF THE SAME MATERIAL AND THICKNESS AS EXISTING, BUT SHALL BE A MINIMUM OF 2-1/2-INCHES ASPHALT OVER 6-INCHES AGGREGATE BASE FOR RESIDENTIAL STREETS AND 3-1/2-INCHES ASPHALT OVER 8-INCHES AGGREGATE FOR COMMERCIAL STREETS. FOR ALL CONCRETE STREETS, THE MINIMUM SECTION SHALL BE 6-INCHES OF CLASS 560-C-3250 CONCRETE OVER 6-INCHES AGGREGATE BASE.

NOTE: STANDARD DETAIL 7-004.0-06 UTILITY SEPARATION FROM CITY WATER, SEWER, RECLAIMED PIPELINES, AND STORM DRAINS.

NOTE: STANDARD DETAIL 1-006.0-06 SIDEWALK PLANS.

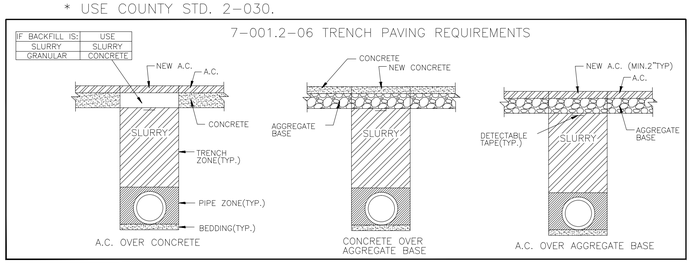
NOTE: STANDARD DETAIL 1-006.1-06 SIDEWALK SECTIONS.

NOTE: STANDARD DETAIL 1-007.0-10 ACCESS RAMP NOTES & STANDARD DETAIL 1-007.3-10 DIAGONAL ACCESS RAMP.

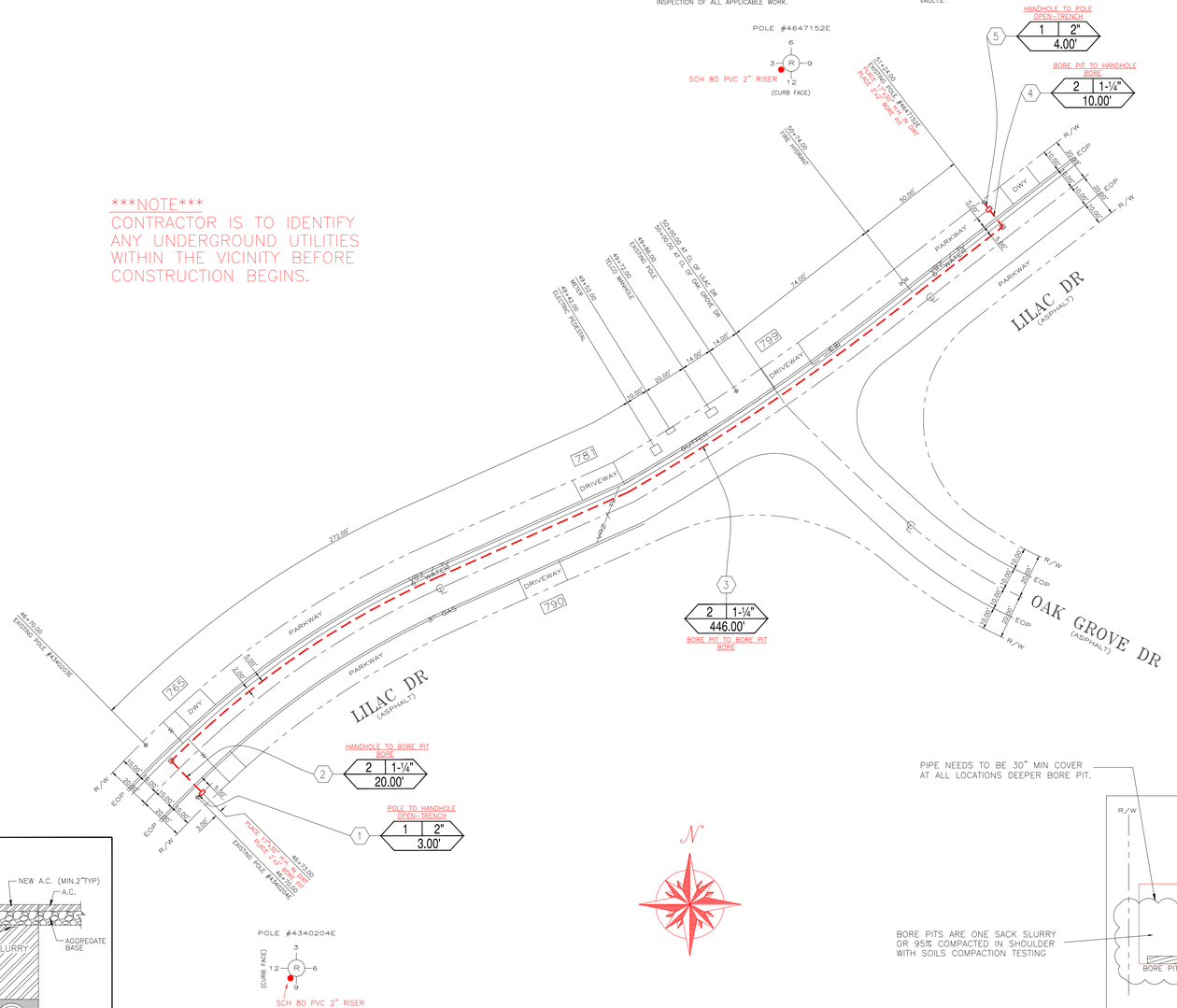
* USE COUNTY STD. 2-030.

7-001.2-06 TRENCH PAVING REQUIREMENTS

IF BACKFILL IS:	USE
SLURRY	SLURRY
GRANULAR	CONCRETE

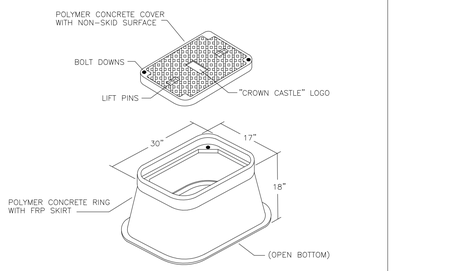


NOTE
CONTRACTOR IS TO IDENTIFY ANY UNDERGROUND UTILITIES WITHIN THE VICINITY BEFORE CONSTRUCTION BEGINS.



HANDHOLE DETAIL

N.T.S.

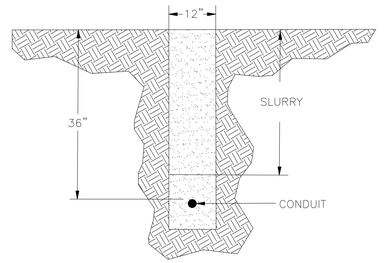


CONTRACTOR TO INSTALL 4" AGGREGATE BASE BELOW LIP OF ALL HANDHOLE LOCATIONS

PROPOSED HANDHOLES SHALL BE IN CONFORMANCE TO ASTM C857-95 AND C858-83 MINIMUM DESIGN SPECIFICATIONS FOR PROPOSED INSTALLATION IN THE PUBLIC RIGHT-OF-WAY AT THE BACK OF CURB.

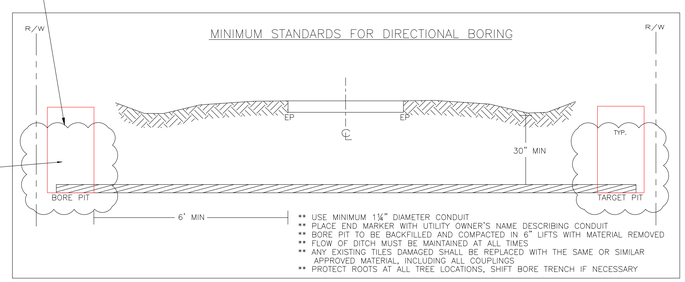
DIRT TRENCH DETAIL

N.T.S.



PIPE NEEDS TO BE 30" MIN COVER AT ALL LOCATIONS DEEPER BORE PIT.

MINIMUM STANDARDS FOR DIRECTIONAL BORING



BORE PITS ARE ONE SACK SLURRY OR 95% COMPACTED IN SHOULDER WITH SOILS COMPACTION TESTING

** USE MINIMUM 1¼" DIAMETER CONDUIT
** PLACE END MARKER WITH UTILITY OWNER'S NAME DESCRIBING CONDUIT
** BORE PIT TO BE BACKFILLED AND COMPACTED IN 6" LIFTS WITH MATERIAL REMOVED
** FLOW OF DITCH MUST BE MAINTAINED AT ALL TIMES
** ANY EXISTING TILES DAMAGED SHALL BE REPLACED WITH THE SAME OR SIMILAR APPROVED MATERIAL, INCLUDING ALL COUPLINGS
** PROTECT ROOTS AT ALL TREE LOCATIONS, SHIFT BORE TRENCH IF NECESSARY

TOTAL TRENCH FOOTAGE

CROWN CASTLE NG ONLY = 483.00'

BILL OF MATERIALS

	DESCRIPTION	QUANTITY
VAULTS	17" x 30" (ASPH)	0
	24" x 36" (DIRT)	0
	17" x 30" (DIRT)	2
CONDUIT	1¼" PVC	476'
	2" PVC	7'
	4" PVC	0'

TRENCH DATA

1. PL. 3.00' (1)-2" DUCT. OPEN-TRENCH
2. PL. 20.00' (2)-1¼" DUCT. BORE
3. PL. 446.00' (2)-1¼" DUCT. BORE
4. PL. 10.00' (2)-1¼" DUCT. BORE
5. PL. 4.00' (1)-2" DUCT. OPEN-TRENCH

DIRT	7.00'	CONCRETE	0'
BORE	476.00'	ASPHALT	0'

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	LINETYPE	DESCRIPTION	ABRV.	DESCRIPTION
	PROPOSED VAULT	℄	CENTER LINE		PROPOSED CC/NG DUCT	SLC	STREET LIGHT CONDUIT
	BORE PIT	PL	PROPERTY LINE		PROPOSED CC/NG BORE	E	ELECTRIC
	UTILITY POLE	R/W	RIGHT OF WAY		CENTER LINE	T	TELEPHONE
	TREE/BUSH	C/S/W	CONCRETE SIDEWALK		RIGHT OF WAY	G	GAS
	WATER VALVE	PKWY	PARKWAY		PROPERTY LINE	SD	STORM DRAIN
	FIRE HYDRANT	CONDUIT DATA BLOCK	CONDUIT CT. / DISTANCE / CONDUIT SIZE		CURB	SS	SANITARY SEWER
	STREET LIGHT			TV	CABLE TV	W	WATER

SCALE: 1" = 30'
30' 40' 60'

Engineered By :
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Anaheim, Ca. 92807
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Fax (714) 630-3053

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PROJECT NUMBER:
VRZ210441CAMONUFL10

COUNTY OF SANTA BARBARA

SUB MAP NO. :
THOMAS GUIDE : 997, C-1
CITY W.O. :
PERMIT NO. :
DATE :

REVISED

CROWN CASTLE

SCALE : 1" = 30'	Crown Castle NG West, Inc.	BY : CE
DATE : 10/15/2013	CITY OF MONTECITO	SHEET 01 OF 01
LOCATION : LILAC DRIVE & OAK GROVE DRIVE		
LOG # : -	GRID # : 6075-1986	PROJECT # : VRZ210441CAMONUFL10
SYSTEM # : 130301-1 VERIZON - MONTECITO	T.G.M. # : 997, C-1	ADDRESS # : 799 LILAC DRIVE MONTECITO, CA 93108
TYPE OF DRAWING:	SUBSTRUCTURES CROWN CASTLE NG FACILITY	

JERROLD T. BUSHBERG Ph.D., DABMP, DABSNM, FAAPM
♦HEALTH AND MEDICAL PHYSICS CONSULTING♦

7784 Oak Bay Circle Sacramento, CA 95831
(800) 760-8414–jbushberg@hampc.com

Bhavani Yella
Crown Castle
890 Tasman Drive
Milpitas, CA 95035

April 23, 2013

Introduction

At your request, I have reviewed the technical specifications and calculated the maximum potential radiofrequency, (RF), power density from the proposed Crown Castle (CC) dual omni Distributed Antenna System (DAS) sites proposed for the right-of-way in Santa Barbara, CA. A DAS is a network of spatially separated antenna sites called "nodes" connected to a common source that provides wireless service within a geographic area. DAS antennae are typically installed near the top of light standards or on utility poles. The idea is to split the transmitted signal among several antenna sites, separated in space so as to provide coverage over the same area as a single antenna but with reduced total power and improved reliability. Thus a single antenna radiating at high power is replaced by a group (i.e., network) of low-power antennas to cover the same area. Some of the other advantages of DAS include the ability to provide service for multiple wireless carriers without the need to have separate antenna sites for each carrier at each location and the ability to place the antennae on existing vertical structures such as light or utility poles.

These proposed DAS nodes will utilize two omni antennae mounted on the cross arm of utility poles. The antenna specified is Comba model OOA-360V06N0-3. The maximum effective radiated power (ERP) from one of the omni antennae will be up to 35.24 watts at approximately 775 MHz utilizing LTE transmission technology; 21.63 watts at approximately 850 MHz and 44.16 watts at approximately 1,900 MHz utilizing CDMA/EVDO transmission technology. The distance from the antenna center to the ground will be at least 22 feet. The minimum distance between the antennae will be at least 6 feet. A list of the proposed DAS node locations and an example of the site configuration are shown in attachment one. The antenna specification details are depicted in attachment two. This analysis represents the worst case RF exposure of any of the proposed utility pole mounted DAS node locations.

Calculation Methodology

Calculations at the level of the antenna were made in accordance with the cylindrical model recommendations for near-field analysis contained in the Federal Communications Commission, Office of Engineering and Technology Bulletin 65 (OET 65) entitled "Evaluating Compliance with FCC-Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." RF exposure calculations at ground level were made using equation 10 from the same OET document. Several assumptions were made in order to provide the most conservative or "worst case" projections of power densities. Calculations were made assuming all channels were operating simultaneously at their maximum design effective radiated power. Attenuation (weakening) of the signal that would result from surrounding foliage or buildings was ignored. Buildings or other structures

can reduce the signal strength by a factor of 10 (i.e., 10 dB) or more depending upon the construction material. In addition, for ground level calculations, the ground or other surfaces were considered to be perfect reflectors (which they are not) and the RF energy was assumed to overlap and interact constructively at all locations (which they would not) thereby resulting in the calculation of the maximum potential exposure. In fact, the accumulations of all these very conservative assumptions, will significantly overestimate the actual exposures that would typically be expected from such a facility. However, this method is a prudent approach that errs on the side of safety.

RF Safety Standards

The two most widely recognized standards for protection against RF field exposure are those published by the American National Standards Institute (ANSI) C95.1 and the National Council on Radiation Protection and measurement (NCRP) report #86. The NCRP is a private, congressionally chartered institution with the charge to provide expert analysis of a variety of issues (especially health and safety recommendations) on radiations of all forms. The scientific analyses of the NCRP are held in high esteem in the scientific and regulatory community both nationally and internationally. In fact, the vast majority of the radiological health regulations currently in existence can trace their origin, in some way, to the recommendations of the NCRP.

All RF exposure standards are frequency-specific, in recognition of the differential absorption of RF energy as a function of frequency. The most restrictive exposure levels in the standards are associated with those frequencies that are most readily absorbed in humans. Maximum absorption occurs at approximately 80 MHz in adults. The NCRP maximum allowable continuous occupational exposure at this frequency is 1,000 $\mu W/cm^2$. This compares to 2,933 $\mu W/cm^2$ at cellular frequencies and 5,000 $\mu W/cm^2$ at PCS frequencies that are absorbed much less efficiently than exposures in the VHF TV band.

The traditional NCRP philosophy of providing a higher standard of protection for members of the general population compared to occupationally exposed individuals, prompted a two-tiered safety standard by which levels of allowable exposure were substantially reduced for "uncontrolled " (e.g., public) and continuous exposures. This measure was taken to account for the fact that workers in an industrial environment are typically exposed no more than eight hours a day while members of the general population in proximity to a source of RF radiation may be exposed continuously. This additional protection factor also provides a greater margin of safety for children, the infirmed, aged, or others who might be more sensitive to RF exposure. After several years of evaluating the national and international scientific and biomedical literature, the members of the NCRP scientific committee selected 931 publications in the peer-reviewed scientific literature on which to base their recommendations. The current NCRP recommendations limit continuous public exposure at cellular frequencies (e.g., ~820MHz) to 550 $\mu W/cm^2$ and to 1,000 $\mu W/cm^2$ at PCS frequencies (~1,900 MHz).

The 1992 ANSI standard was developed by Scientific Coordinating Committee 28 (SCC 28) under the auspices of the Institute of Electrical and Electronic Engineers (IEEE). This standard, entitled "IEEE Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz" (IEEE C95.1-1991), was issued in April 1992 and subsequently adopted by ANSI. A revision of this standard (C95.1-2005) was completed in October 2005 by SCC 39 the IEEE International Committee on Electromagnetic Safety. Their recommendations are similar to the NCRP recommendations for the maximum permissible exposure (MPE) to the public PCS frequencies (950 $\mu W/cm^2$ for continuous exposure at 1,900 MHz) and incorporates the convention of providing for a greater margin of safety for public as compared with occupational exposure. Higher whole body exposures are allowed for brief periods provided that no 30 minute time-weighted average exposure exceeds these aforementioned limits.

On August 9, 1996, the Federal Communications Commission (FCC) established a RF exposure standard that is a hybrid of the current ANSI and NCRP standards. The maximum permissible exposure values used to assess environmental exposures are those of the NCRP (i.e., maximum public continuous exposure at cellular and PCS frequencies of 550 $\mu W/cm^2$ and 1,000 $\mu W/cm^2$ respectively). The FCC issued these standards in order to address its responsibilities under the National Environmental Policy Act (NEPA) to consider whether its actions will "significantly affect the quality of the human environment." In as far as there was no other standard issued by a federal agency such as the Environmental Protection Agency (EPA), the FCC utilized their rulemaking procedure to consider which standards should be adopted. The FCC received thousands of pages of comments over a three-year review period from a variety of sources including the public, academia, federal health and safety agencies (e.g., EPA & FDA) and the telecommunications industry. The FCC gave special consideration to the recommendations by the federal health agencies because of their special responsibility for protecting the public health and safety. In fact, the MPE values in the FCC standard are those recommended by EPA and FDA. The FCC standard incorporates various elements of the 1992 ANSI and NCRP standards which were chosen because they are widely accepted and technically supportable. There are a variety of other exposure guidelines and standards set by other national and international organizations and governments, most of which are similar to the current ANSI/IEEE or NCRP standard, figure one.

The FCC standards "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation" (Report and Order FCC 96-326) adopted the ANSI/IEEE definitions for controlled and uncontrolled environments. In order to use the higher exposure levels associated with a controlled environment, RF exposures must be occupationally related (e.g., wireless company RF technicians) and they must be aware of and have sufficient knowledge to control their exposure. All other environmental areas are considered uncontrolled (e.g., public) for which the stricter (i.e., lower) environmental exposure limits apply. All carriers were required to be in compliance with the new FCC RF exposure standards for new telecommunications facilities by October 15, 1997. These standards applied retroactively for existing telecommunications facilities on September 1, 2000.

The task for the physical, biological, and medical scientists that evaluate health implications of the RF data base has been to identify those RF field conditions that can produce harmful biological effects. No panel of experts can guarantee safe levels of exposure because safety is a null concept, and negatives are not susceptible to proof. What a dispassionate scientific assessment can offer is the presumption of safety when RF-field conditions do not give rise to a demonstrable harmful effect.

Summary & Conclusions

All CC utility pole DAS nodes listed in attachment one, operating with the characteristics as specified above and observing an seven foot public exclusion zone directly in front of and at the same elevation as the antenna, will be in full compliance with FCC RF public and occupational safety exposure standards. These transmitters, by design and operation, are low-power devices. Even under maximal exposure conditions in which the antenna is transmitting at its greatest design basis ERP, the maximum exposure at the elevation of the antenna will not result in RF exposures in excess of the FCC public RF safety standard at seven or more feet from the surface of either antenna, (see appendix A-1). The maximum RF exposure at ground level will not be in excess of 1.0% of, (i.e., 100 times lower than), the FCC public safety standard, (see appendix A-2).

A chart of the electromagnetic spectrum and a comparison of RF power densities from various common sources is presented in figures two and three respectively in order to place exposures from DAS wireless systems in perspective. RF exposure in the neighborhood served by this and other DAS sites are very low due

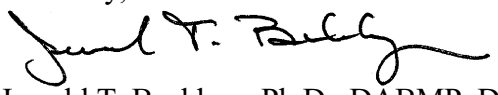
to three main factors. First, as previously stated, DAS is a relatively low-power technology. The maximum power into the antennae will be less than 136.27 watts. In addition, DAS sites utilize directional antennae that focus the RF energy toward the horizon, (i.e., parallel with the ground at the level of the antenna), thus only a very small percentage of the RF energy is emitted directly down toward the ground. This is similar to a lighthouse beacon that sends the majority of its light out toward the horizon with very little reaching the base of the lighthouse or people living nearby. Finally, as shown on the graph in appendix A-2, as one gets farther away from the site, the change in RF exposure intensity becomes more uniform with distance. Eventually there is a very rapid and consistent decrease in exposure with distance. Like all forms of electromagnetic energy, including light, the decrease in exposure at this point is proportional to the square of the increased distance. Thus, if the exposure at this point was 1% of the public exposure standard and one simply moved 10 times further away, (all other conditions being the same), the exposure would be 10^2 or 100 times less than before (i.e., 0.01% of the public exposure standard).

It is also important to realize that the FCC maximum allowable exposures are not set at a threshold between safety and known hazard but rather at 50 times below a level that the majority of the scientific community believes may pose a health risk to human populations. Thus, the previously mentioned maximum ground level exposure from these sites represents a "safety margin" from this threshold of potentially adverse health effects of more than 5,000 times.

Given the low levels of radiofrequency fields that would be generated from these CC antenna installations and given the evidence on RF biological effects in a large data base, there is no scientific basis to conclude that harmful effects will attend the utilization of this proposed wireless telecommunications facility. This conclusion is supported by a large number of scientists that have participated in standard-setting activities in the United States who are overwhelmingly agreed that RF radiation exposure below the FCC exposure limits has no demonstrably harmful effects on humans. An RF caution sign, containing appropriate contact information and indicating the stay back distance beyond which the RF exposures do not exceed the public maximum permissible exposure, should be placed near the antenna (see appendix A-3).

These findings are based on my professional evaluation of the scientific issues related to the health and safety of non-ionizing electromagnetic radiation and my analysis of the technical specification as provided by CC. The opinions expressed herein are based on my professional judgement and are not intended to necessarily represent the views of any other organization or institution. Please contact me if you require any additional information.

Sincerely,



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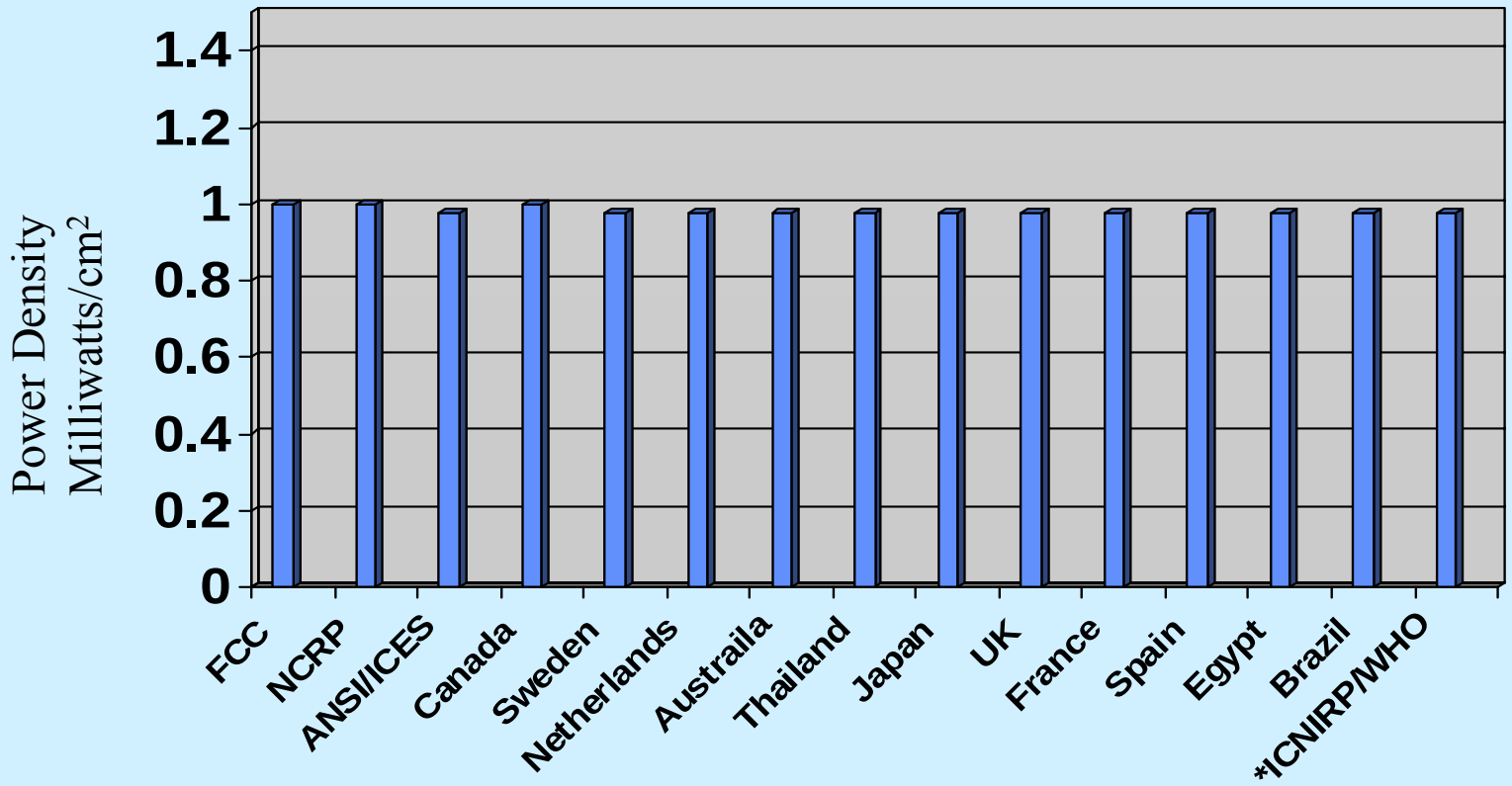
Diplomate, American Board of Science in Nuclear Medicine (DABSNM)
Fellow, American Association of Physicists in Medicine (FAAPM)

Enclosures: Figures 1-3; Attachment 1,2; Appendices A1-A3 and Statement of Experience.

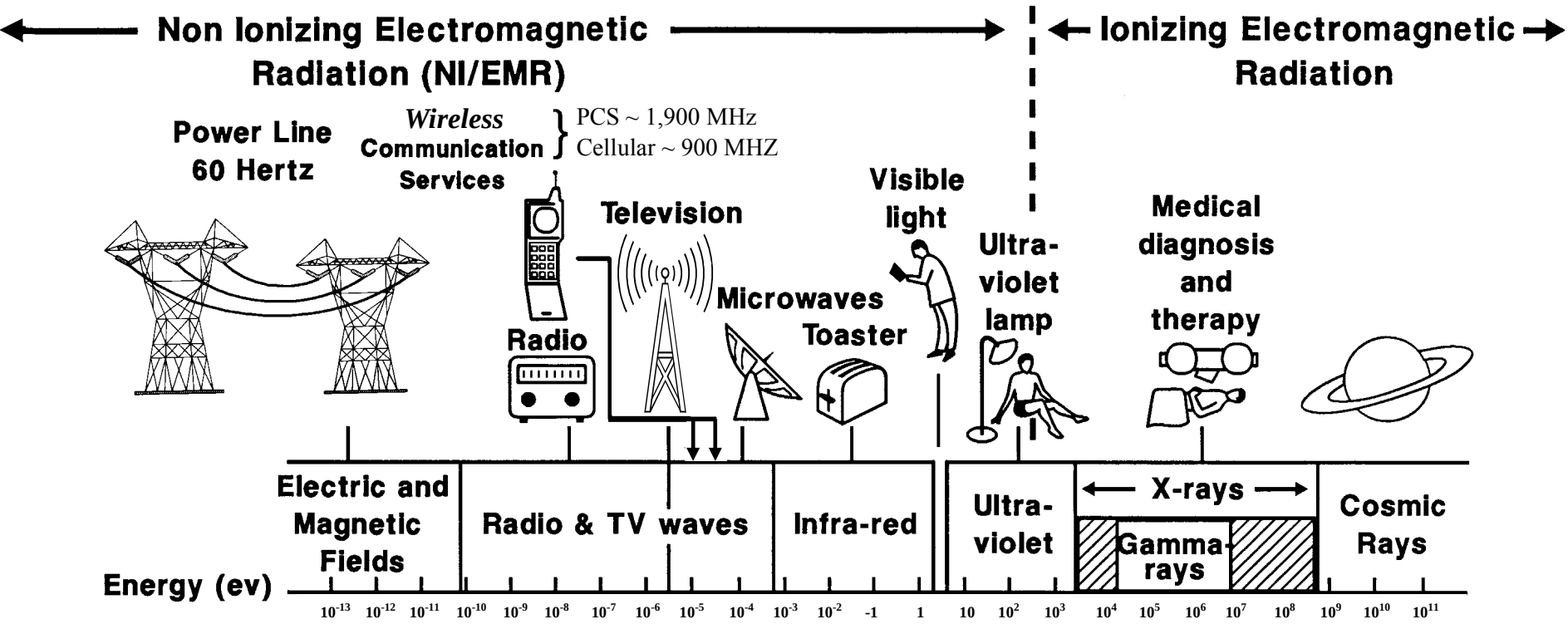
National and International Public RF Exposure Standards (DAS @ 1,950 MHz)



***International Commission on Non-Ionizing Radiation Protection (ICNIRP) Public Safety Exposure Standard. ICNIRP standard recommended by the World Health Organization (WHO). Members of the ICNIRP Scientific Committee were from:**

- **Australia**
- **Finland**
- **France**
- **Germany**
- **Hungary**
- **Italy**
- **Sweden**
- **Japan**
- **United Kingdom**
- **United States**

Figure 1



The Electromagnetic Spectrum

Figure 2

Typical Exposure from Various Radio Frequency / Microwave Sources

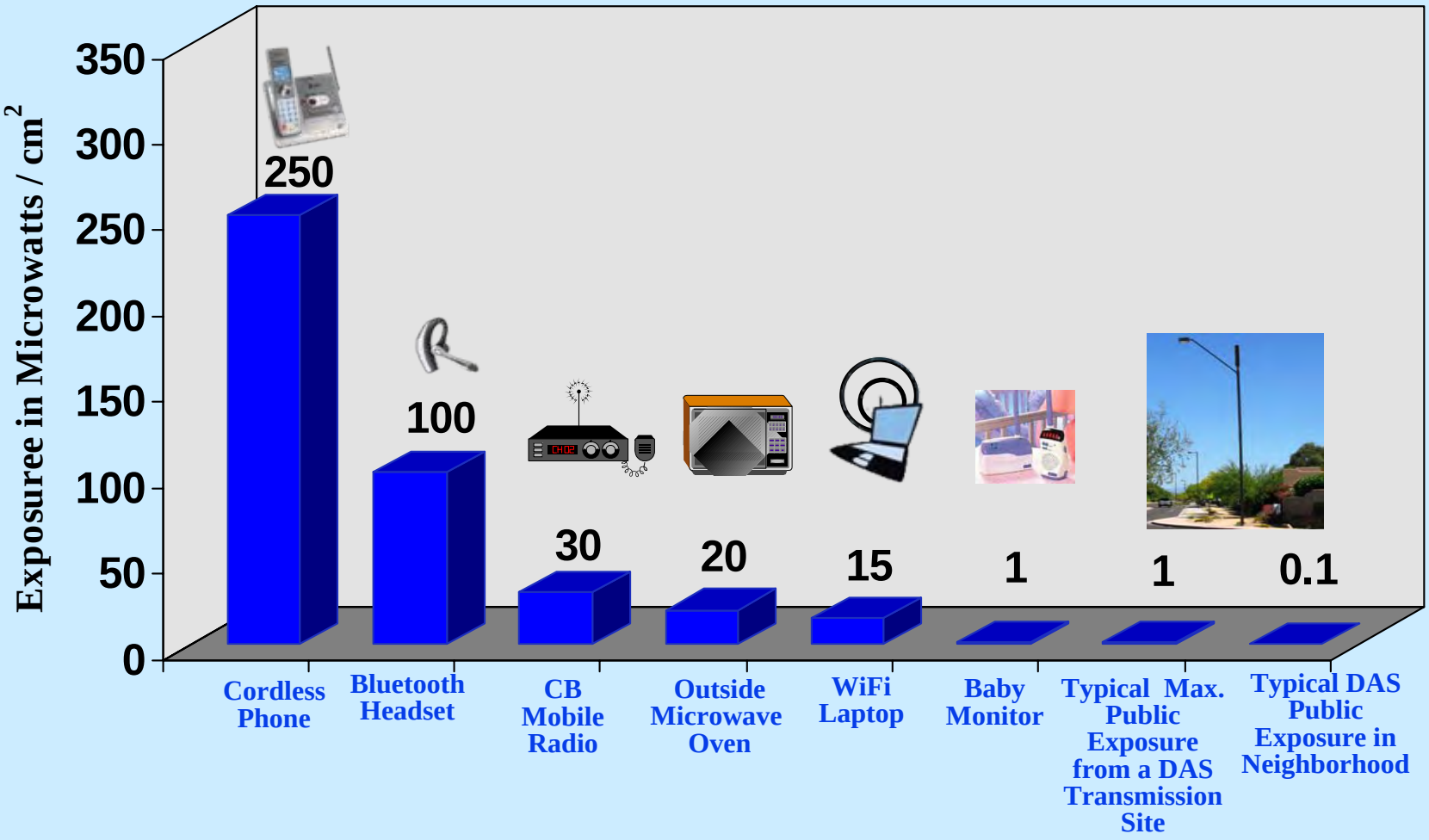


Figure 3

Attachment 1

Proposed Utility Pole Mounted Dual Omni Antenna DAS Nodes

Configuration #3: 2 Comba OOA-360VO6N0-3 - Omni Antenna				
Proposed Remote Site Item #	**Proposed Remote Location(s) or Site ID**	**Proposed Antenna Rad Center (AGL) (feet)**	**Street Address/cross street**	**Antenna Type**
2	MON02	27'	842 Lilac, SB, CA, 93108	2 Comba OOA-360V06N0-3
5	MON05	30'	2104 Bella Vista, SB, CA, 93108	2 Comba OOA-360V06N0-3
6	MON06	22'	727 Lilac, SB, CA, 93108	2 Comba OOA-360V06N0-3
7	MON07	24' 10"	2395 Bella Vista, SB, CA, 93108	2 Comba OOA-360V06N0-3
8	MON08	33'	350 Sheffield Dr, SB, CA, 93108	2 Comba OOA-360V06N0-3
9	MON09	38'	1810 N. Jameson Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
11	MON11M	27'	970 Lilac Dr, SB, CA, 93108	2 Comba OOA-360V06N0-3
12	MON12	31'	2268 E. Valley Dr, SB, CA, 93108	2 Comba OOA-360V06N0-3
13	MON13	30'	2092 Ortega Hill Rd, SB, CA, 93108	2 Comba OOA-360V06N0-3
14	MON14	23' 9"	1934 N. Jameson Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
15	MON15	36'	1698 N. Jameson Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
16	MON16	29'	932 Park Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
17	MON17	24'	628 Orchard Ave, SB, CA, 93108	2 Comba OOA-360V06N0-3
18	MON18	27' 10"	2358 Bella Vista, SB, CA, 93108	2 Comba OOA-360V06N0-3
19	MON19	23' 10"	931 Romero Canyon, SB, CA, 93108	2 Comba OOA-360V06N0-3
20	MON20	27'	850 Romero Canyon, SB, CA, 93108	2 Comba OOA-360V06N0-3
21	MON21	24' 6"	2243 Camino Del Rosario, SB, CA, 93108	2 Comba OOA-360V06N0-3
22	MON22	25'	2117 Veloz Dr, SB, CA, 93108	2 Comba OOA-360V06N0-3
23	MON23	25'	1070 Romero Canyon, SB, CA, 93108	2 Comba OOA-360V06N0-3
24	MON24	30' 6"	290 Sheffield Dr, SB, CA, 93108	2 Comba OOA-360V06N0-3
25	MON25	25'	1891 San Leandro Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
26	MON26	31' 6"	1476 N. Jameson Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
27	MON27	32'	1416 N. Jameson Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
28	MON28	43'	1566 N. Jameson Ln, SB, CA, 93108	2 Comba OOA-360V06N0-3
29	MON29	27' 10"	2047 Alisos Dr, SB, CA, 93108	2 Comba OOA-360V06N0-3
31	MON31	27'	1933 Tollis Ave, SB, CA, 93108	2 Comba OOA-360V06N0-3
32	MON32	26'6"	1634 SanLeandro Ln, SB, CA 93108	Comba OOA-360V06N0-4

CROWN CASTLE NG WEST, INC

VERIZON MONTECITO-MON06

R.O.W. EAST SIDE OF LILAC DR.
(ADJACENT TO 765 LILAC DR)
SANTA BARBARA, CA 93108

VICINITY MAP - N.T.S.

GENERAL NOTES

1. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
2. UPON ISSUANCE OF A PERMIT, NO WORK WILL BE PERMITTED ON WEEKENDS OR HOLIDAYS WITHOUT PERMISSION FROM THE ENGINEERING DEPARTMENT.
3. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE LOCAL JURISDICTION DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES, INCLUDING, BUT NOT LIMITED TO, THE FEDERAL ENDANGERED SPECIES ACT OF 1973 AND AMENDMENTS THERETO (16 USC SECTION 1531 ET.SEQ.).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, SUCH MONUMENTS SHALL BE REPLACED WITH APPROPRIATE MONUMENTS BY A LAND SURVEYOR, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FIELD AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE LOCAL JURISDICTION FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
5. IMPORTANT NOTICE: SECTION 4216 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT, TWO DAYS BEFORE YOU DIG.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
7. CONTRACTOR SHALL SUBMIT TO THE LOCAL JURISDICTION, A CONSTRUCTION PLAN TO PROTECT WATER MAINS PRIOR TO COMMENCING CONSTRUCTION.
8. CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUIT, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
9. CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION. A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK WITHIN 10' OF ALL SEWER, WATER, AND STORMDRAIN MAIN INCLUDING ALL CROSSINGS.
10. THIS PROJECT WILL BE INSPECTED BY ENGINEERING AND CAPITAL PROJECTS DEPARTMENT, FIELD ENGINEERING DIVISION.
11. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY RESIDENT ENGINEER PRIOR TO THE ACCEPTANCE OF THIS PROJECT.
12. PUBLIC IMPROVEMENT SUBJECT TO DESUETUDE OR DAMAGE." IF REPAIR OR REPLACEMENT OF SUCH PUBLIC IMPROVEMENTS IS REQUIRED, THE OWNER SHALL OBTAIN THE REQUIRED PERMITS FOR WORK IN THE PUBLIC RIGHT-OFWAY, SATISFACTORY TO THE PERMIT - ISSUING AUTHORITY.
13. PRIOR TO ANY DISTURBANCE TO THE SITE, EXCLUDING UTILITY MARKS-OUTS AND SURVEYING, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR A PRE-CONSTRUCTION MEETING WITH THE LOCAL JURISDICTION FIELD ENGINEERING DIVISION.
14. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION SHOWN ON THESE PLANS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE. THE CONTRACTOR IS RESPONSIBLE TO ATTEND THE LOCAL JURISDICTIONS MONTHLY UTILITY COORDINATION COMMITTEE THE CONSTRUCTION ACTIVITIES WITH THE CITY AND ALL OTHER CONTRACTORS SO THAT NO TRENCH IS CUT WITHIN ANY OF THE CITY STREETS THAT HAVE BEEN CONSTRUCTED, REPAIRED, OR SLURRY SEALED WITHIN THREE YEARS OF THE STREET CONSTRCTUION/RESURFACING DATE.
15. MANHOLES OR COVERS SHALL BE LABELED "CROWN CASTLE" OR "CROWN CASTLE NG WEST".
16. CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PROGRAM DURING THE PROJECT CONSTRUCTION ACTIVITIES. THE PROGRAM SHALL MEET THE APPLICABLE REQUIREMENTS OF THE STATE WATER RESOURCE CONTROL BOARD.
17. THE CONTRACTOR SHALL HAVE EMERGENCY MATERIALS AND EQUIPMENT ON HAND FOR UNFORESEEN SITUATIONS, SUCH AS DAMAGE TO UNDERGROUND WATER, SEWER, AND STORM DRAIN FACILITIES WHEREBY FLOWS MAY GENERATE EROSION AND SEDIMENT POLLUTION.

SPECIAL NOTES

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE CITY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THE CITY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT.

1. THE CONTRACTOR SHALL VERIFY THE LOCATION EXISTING UNDERGROUND UTILITIES INCLUDING SEWER LATERALS AND WATER SERVICES TO INDIVIDUAL LOTS BOTH VERTICAL AND HORIZONTAL PRIOR TO COMMENCING IMPROVEMENT OPERATIONS.
2. CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS OF PLANS IF REVISION IS NECESSARY BECAUSE OF LOCATION OF EXISTING UTILITIES.
3. LOCATION AND ELEVATIONS OF IMPROVEMENTS, TO BE MET BY WORK, SHALL BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK.
4. GRADES SHOWN ARE FINISH GRADES, CONTRACTOR SHALL DETERMINE NECESSARY SUB GRADE ELEVATIONS AND SHALL CONSTRUCT SMOOTH TRANSITION BETWEEN FINISH GRADES SHOWN.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS PROVISION SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXPECTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
6. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM EXISTING RECORDS AND CORROBORATED, WHERE POSSIBLE WITH FIELD TIES. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATIONS SHOWN, BOTH HORIZONTALLY AND VERTICALLY, PRIOR TO CONSTRUCTION. IF EXISTING LOCATIONS VARY SUBSTANTIALLY FROM THE PLANS, THE ENGINEER SHOULD BE NOTIFIED TO MAKE ANY CONSTRUCTION CHANGES REQUIRED.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT FOR ALL SEWER AND WATER MAIN UNDER CROSSING IN ACCORDANCE WITH PART 1 SECTION 5-2 OF THE STANDARD SPECIFICATION.
9. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNAL LOOPS, CONDUITS, AND LANE STRIPING DAMAGED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL SUBMIT WORK PLANS FOR ALL BORE OPERATIONS TWO WEEKS PRIOR TO COMMENCING WORK.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR THE POTHOLE AND LOCATING OF ALL EXISTING UTILITIES THAT CROSS THE PROPOSED TRENCH LINE AND MUST MAINTAIN 1' MINIMUM VERTICAL CLEARANCE.
12. AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE CITY ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE LOCAL JURISDICTION "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS OR DIKES.
4. THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR OR QUALIFIED PERSON SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON, ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL MEASURES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
9. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
11. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
12. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
13. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
14. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
15. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

TRAFFIC CONTROL NOTES

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN (11" X 17") FOR APPROVAL PRIOR TO STARTING WORK. THE PLAN SHOULD BE SUBMITTED TO THE TRAFFIC CONTROL PERMIT COUNTER. CONTRACTOR SHALL OBTAIN A TRAFFIC CONTROL PERMIT A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO STARTING WORK, AND A MINIMUM FIVE (5) DAYS IF WORK WILL AFFECT A BUS STOP OR AN EXISTING TRAFFIC SIGNAL, OR IF WORK WILL REQUIRE A ROAD OR ALLEY CLOSURE.

FOOTAGE TOTALS	
ASPHALT CUT	-
DIRT TRENCH	-
PUNCH THRU	-
BORE	-
TOTAL	-
R&R SWF TOTAL	-

GROUND BUS BAR
MECH. GRND. CONN.
CADWELD
ELECTRIC BOX
TELEPHONE BOX
EXISTING SERVICE POLE
SIDEWALK FLAG
EX. MANHOLE

LIGHT POLE
FOUNDATION
SPOT ELEV.
SET POINT
REVISION
DETAIL REF.

ELEVATION REF.
SECTION REF.
PROP./LEASE LINE
MATCH LINE
WORK POINT
TELE. CONDUIT
CENTERLINE

E ELECT. CONDUIT
A COAXIAL CABLE

MYERS PEDESTAL
VAULT STANDARD 2'X3'
STEEL POLE

SYMBOLS, LINETYPES AND HATCH PATTERNS

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

*2010 CALIFORNIA BUILDING CODE
*2010 CALIFORNIA MECHANICAL CODE
*2010 CALIFORNIA PLUMBING CODE
*2010 CALIFORNIA ELECTRICAL CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PROJECT DESCRIPTION

PROJECT CONSISTS OF INSTALLATION OF:

1. 92) OMNI ANTENNAS ON EXISTING UTILITY POLE
2. EQUIPMENT VAULT AT BASE OF EXISTING POLE
3. EQUIPMENT PEDESTAL W/ BBU AND ELECTRICAL METER AT BASE OF POLE

SHEET INDEX:

PROJECT DICTIONARY

SITE ADDRESS: R.O.W. EAST SIDE OF LILAC DR.
(ADJACENT TO 765 LILAC DR)
SANTA BARBARA, CA 93108

APPLICANT: CROWN CASTLE NG WEST, INC
2125 WRIGHT AVE, SUITE #C9
LA VERNE, CA 91750
CONTACT: DANIEL NUESKE
PHONE: (714) 472-1577

CIVIL ENGINEER: CONNELL DESIGN GROUP, LLC
26455 RANCHO PARKWAY SOUTH
LAKE FOREST, CA 92630
CONTACT: FRANK CARTER
(949) 310-8233 PHONE
(949) 753-8833 FAX

REV:	DATE/BY:	REVISION DESCRIPTION:
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ENGINEER/CONSULTANT:

Civil Engineer

CDG

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CONSULTING CIVIL ENGINEERS
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(949) 753-8807 OFFICE - (949) 753-8833 FAX

CLIENT:

CROWN CASTLE NG WEST, INC.

STAMP:

SITE INFO:

SITE NAME:
MON06
VERIZON MONTECITO-MON06

SITE ADDRESS: THOMAS BROS PAGE xxx GRID xx
R.O.W. EAST SIDE OF LILAC DR.
(ADJACENT TO 765 LILAC DR)
SANTA BARBARA, CA 93108
LAT: 34.44285
LONG: -119.60799

SHEET TITLE:

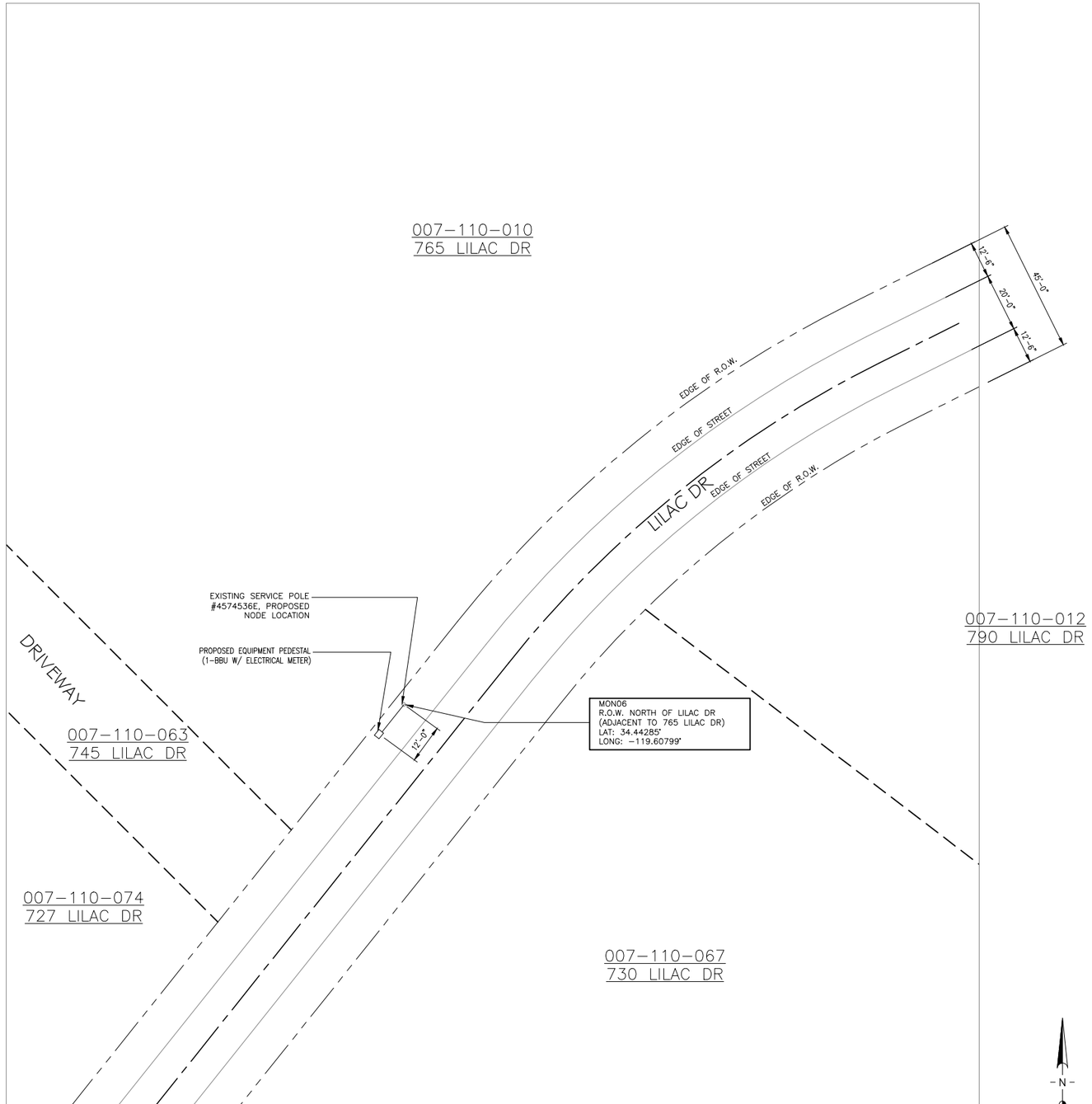
TITLE SHEET

DRAWING INFO:

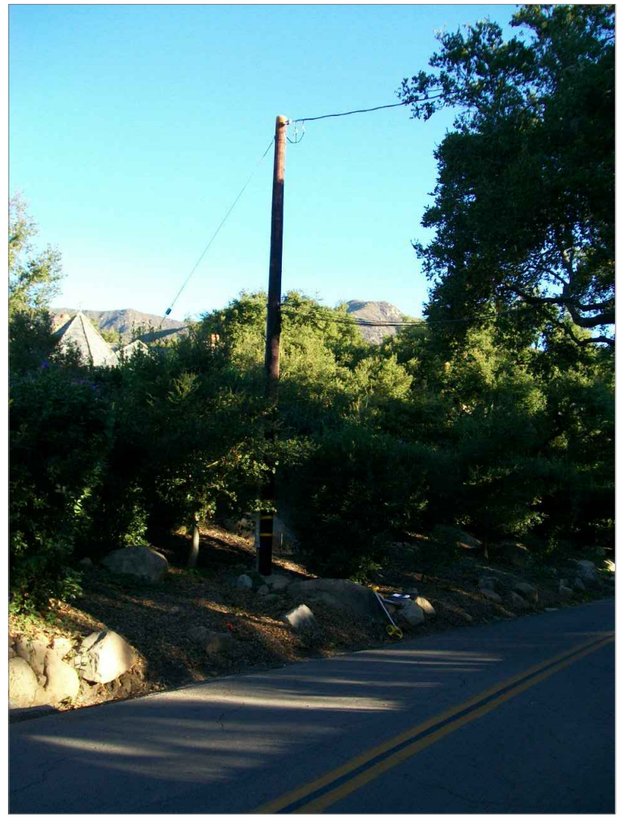
DRAWN BY:
FC

SHEET NUMBER:

T-1



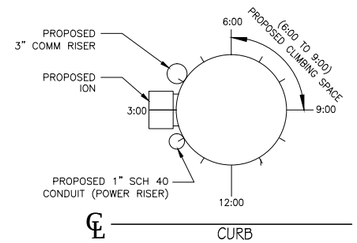
SITE PLAN SCALE: 1"=20'-0" (0, 10', 20') 1



EXISTING PHOTO SCALE: N.T.S. 3

POLE WILL BE STEPPED IN
ACCORDANCE TO GO95 STANDARDS
IN RESPECT TO CLIMBING SPACE.

1-3" CROWN CASTLE RISER @ 4:00
1-1" POWER RISER @ 2:00



RISER PROFILE SCALE: N.T.S. 2

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SHEET TITLE:

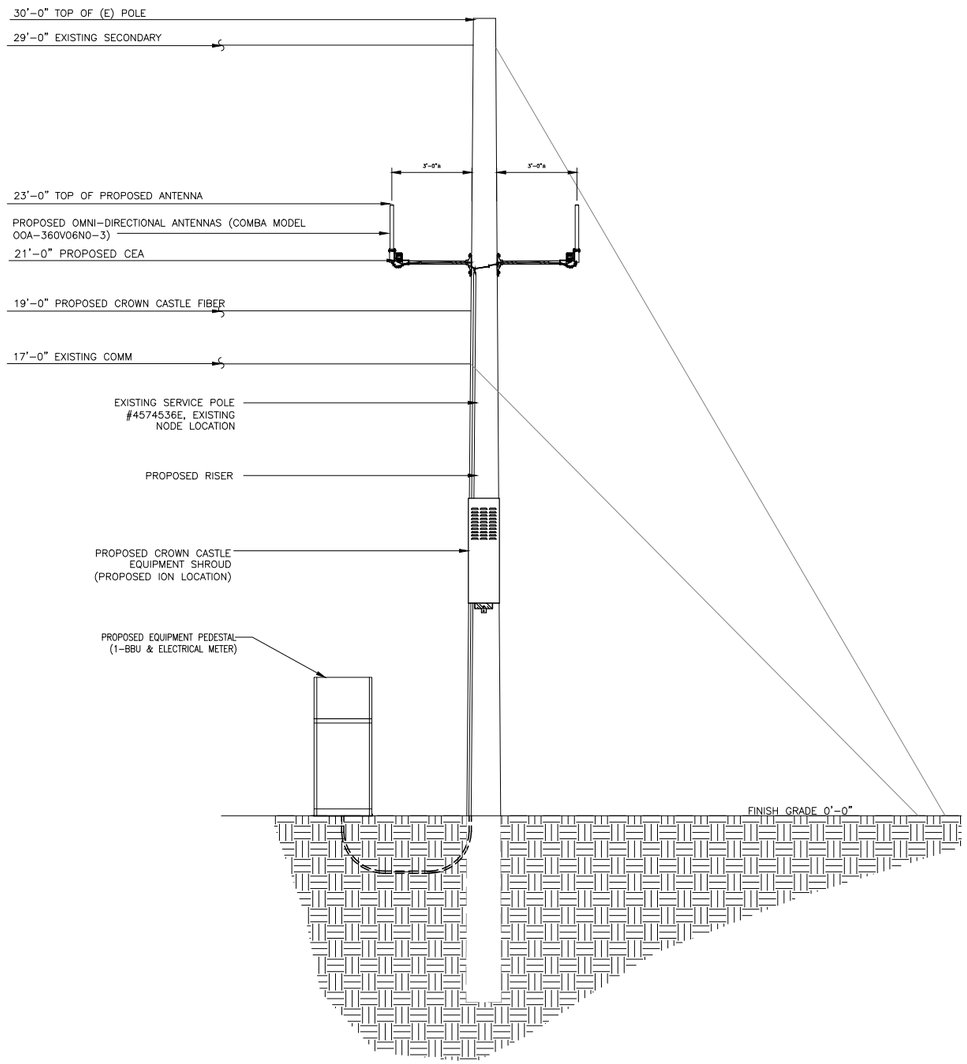
SITE PLAN AND ELEVATION

DRAWING INFO:

DRAWN BY:
FC

SHEET NUMBER:

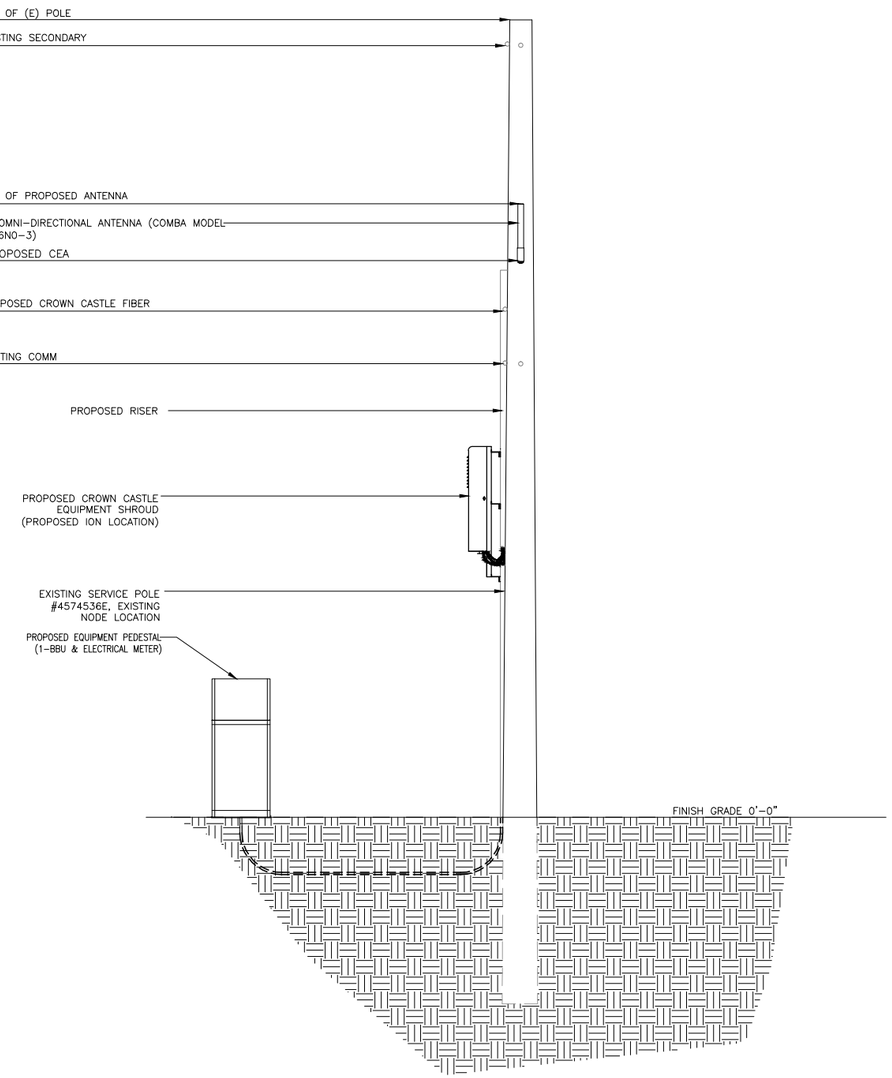
A-1



PROPOSED ELEVATION LOOKING SOUTHWEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

1



PROPOSED ELEVATION LOOKING NORTHWEST

SCALE: 3/8"=1'-0" (0 1' 2' 3')

2

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SHEET TITLE:

ELEVATION

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DRAWN BY:
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SHEET NUMBER:

A-2

Outdoor Omni-directional Antenna

COMBA

OOA-360V06N0-3 VPol, 696-960/1710-2170MHz, 360°, 4.0/6.0dBi

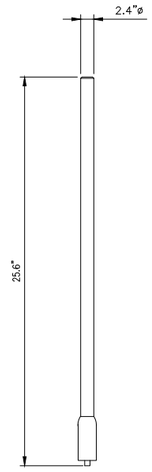
Technical Specifications

Electrical

Frequency Range	MHz	696–960	1710–2170
Polarization		Vertical	
Gain	dBi	4.0±1	6.0±1
Horizontal Beamwidth	deg	360	
Vertical Beamwidth	deg	22–53	20–26
Electrical Downtilt–Fixed	deg	0	
VSWR		1.8	
Maximum Power	W	200	
Impedance		50	
Lightning Protection		Direct Ground	

Mechanical

Dimensions, HxDia	mm(in)	650x60 (25.6x2.4)
Weight, with Mounting kit	kg (lb)	1 (2.2)
Radome Material and Color		Fiberglass, Light Grey
Radiating Element Material		Copper
Connector Type and Location		N–Female, Bottom
Operational Temperature		–55 to +70
Operational Humidity	%	95
Operational Wind Speed	km/h (mph)	200 (124)
Shipping Dimensions,HxWxD	mm (in)	670x100x100 (26.4x3.9x3.9)
Shipping Weight	kg (lb)	1.2 (2.65)



ANTENNA SPECIFICATIONS N.T.S. 1

NOT USED N.T.S. 3

20W for Cell, PCS bands and 700MHz MIMO

Electrical

Power Supply
Mains power, Vac ..... 115 or 230

Power consumption, Watts ..... 1100 max.
< 750 @ normal operation

700 MHz SISO/MIMO

Frequency range, MHz
Uplink ..... 698 to 716/776 to 787
Downlink ..... 728 to 757

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
LTE	43	40**	37	34

850 MHz

Frequency range, MHz
Uplink ..... 824 to 849
Downlink ..... 869 to 894

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
Analog	43	40	37	34
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

1900 MHz

Frequency range, MHz
Uplink ..... 1850 to 1915
Downlink ..... 1930 to 1995

Output power per carrier*, dBm

Number of Carriers	1	2	4	8
GSM	43	40	37	34
CDMA	43	40	37	34
LTE	43	40 **	37	34
UMTS	42	39	36	33

CommScope

ION-M7P/7P/85P/19P

Noise figure, dB
ICP3 optimized ..... +10 max.
Noise figure optimized ..... +6 max.
4.5 typical

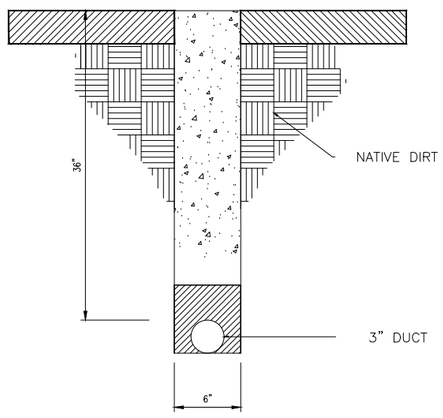
Mechanical**

Height, width, depth, mm (in) ..... 817 x 245 x 218 (32.2 x 9.6 x 8.6)

Weight, kg (lb) 40 (88.2)

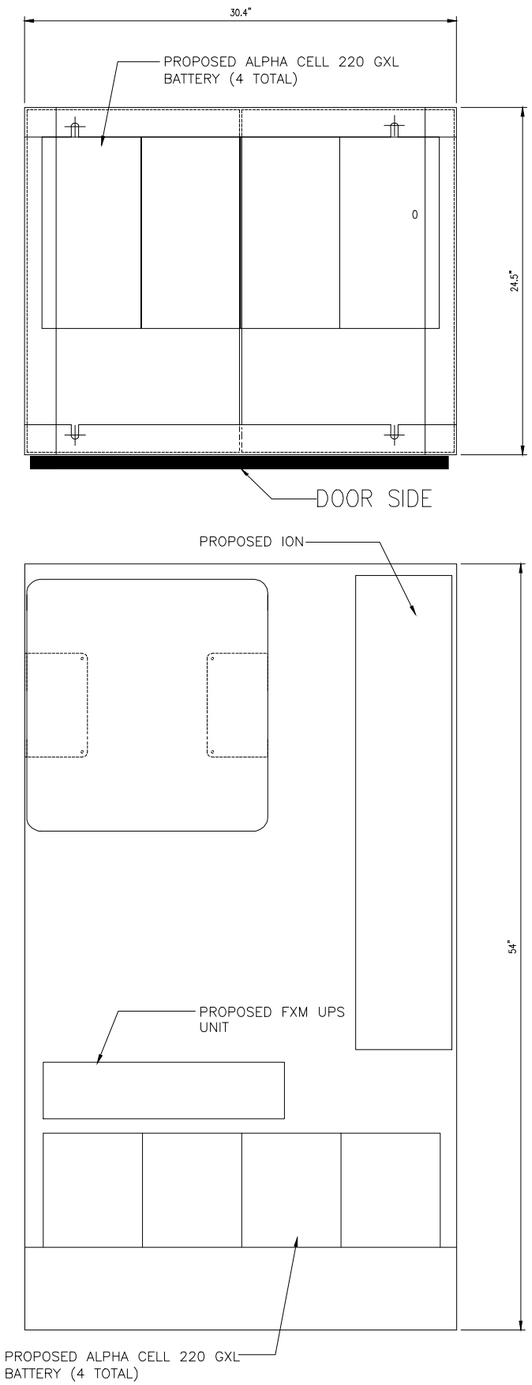
Page 1, February 27, 2013 Company Confidential

ION-M7P/7P/85P/19P N.T.S. 2



* TRENCH TO BE BACK FILL WITH NATIVE MATERIAL & COMPACTED TO 90% OR BETTER & REPLACE LANDSCAPING IN KIND.

TRENCH N.T.S. 4



EQUIPMENT PEDESTAL N.T.S. 5

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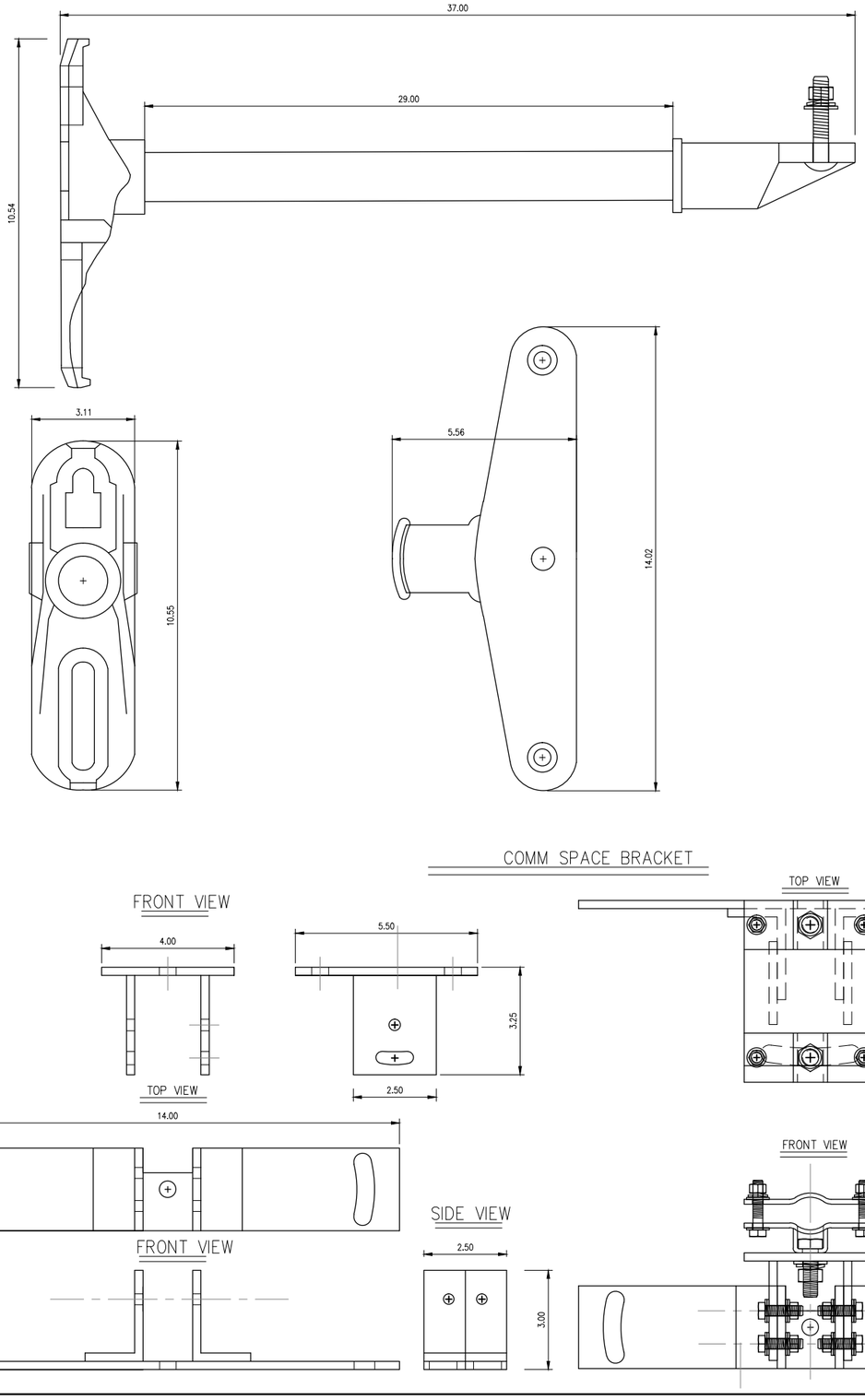

ANTENNA MOUNT | N.T.S. | 1

AlphaCell
General Specifications

Model:	220 GXL	195 GXL	165 GXL
Warranty[1]:	4 to 5 year full replacement	4 to 5 year full replacement	4 to 5 year full replacement
Service Life:	Extended	Extended	Extended
Runtime (minutes)[2]:	220	195	165
Sealed VRLA:	Valve regulated lead acid	Valve regulated lead acid	Valve regulated lead acid
Heat Resistant:	Extreme	Extreme	Extreme
Hydrogen Emission:	Low	Low	Low
Terminals:	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC	Threaded insert 1/4" - 20 UNC

Specifications[4]

Model:	220 GXL	195 GXL	165 GXL
Typical Runtime (minutes)[2]:	220	195	165
Cells Per Unit:	6	6	6
Voltage Per Unit:	12.8	12.8	12.8
Conductance Value:	1175	1100	1000
Max. Discharge Current (A):	900	900	800
Short Circuit Current (A):	2800	2600	2500
10 Second Volts @ 100A:	11.4	11.3	11.2
Ohms Impedance 60Hz:	0.0050	0.0050	0.0055
Nominal Capacity at 20hrs: (to 1.75VPC)	105Ah	100Ah	86
Nominal Capacity at 20hrs: (to 1.70VPC)	110Ah	102Ah	87
BCI Group Size:	31	31	27
Weight (lb/kg):	73/33.2	67/30.5	63/28.6
Height w/ Terminals (in/mm):	8.48/215.4	8.48/215.4	8.05/204.5
Width (in/mm)[3]:	13.42/340.9	13.42/340.9	12.5/317.8
Depth (in/mm)[3]:	6.80/172.7	6.80/172.7	6.83/173.4
Operating Temperature Range Discharge:	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)	-40 to 71°C (-40 to 160°F)
Charge (with temp compensation):	-23 to 60°C (-9.4 to 140°F)	-23 to 50°C (-9.4 to 140°F)	-23 to 60°C (-9.4 to 140°F)
Float Charging Voltage (Vdc):	13.5 to 13.8	13.5 to 13.8	13.5 to 13.8
AC Ripple Charger:	0.5% RMS or 1.5% of float charge voltage recommended for best results. Max. allowed = 4% P-P		

Notes:
[1] Warranty varies by country and region. Warranty valid only when used with Alpha approved Power Supplies, Chargers and Enclosures. Consult your sales person for details.
[2] Runtimes calculated using a 25A DC constant current load.
[3] Dimensions at top of battery.
[4] See AlphaCell Users Guide for Additional Details.

Typical Standby Time in Minutes @ 25°C/77°F

XM220Vac@	4A			8A			16A		
Battery Runtime:	220	195	165	220	195	165	220	195	165
3 batteries:	508	453	396	320	285	249	236	209	183
4 batteries:	707	625	548	444	396	346	329	293	256
6 batteries:	1061	973	853	701	625	548	523	465	407
8 batteries:	1487	1338	1165	960	859	750	720	643	562
9 batteries:	1668	1500	1322	1081	978	853	820	733	640

XM224Vac@	12A			14A			16A		
Battery Runtime:	220	195	165	220	195	165	220	195	165
3 batteries:	149	137	115	119	105	90	101	89	77
4 batteries:	210	187	163	169	151	132	144	128	112
5 batteries:	339	301	264	275	245	214	236	209	183
8 batteries:	478	419	367	385	341	299	329	293	256
9 batteries:	538	479	419	440	391	342	377	335	294

XM280Vac@	4A			8A			16A		
Battery Runtime:	220	195	165	220	195	165	220	195	165
3 batteries:	798	712	622	508	453	396	377	335	294
4 batteries:	1091	976	853	701	625	548	523	465	407
6 batteries:	1668	1519	1322	1081	978	853	820	733	640
8 batteries:	2306	2097	1793	1487	1330	1165	1122	1006	877
9 batteries:	2590	2345	2037	1686	1519	1322	1273	1143	997

XM288Vac@	12A			14A			16A		
Battery Runtime:	220	195	165	220	195	165	220	195	165
3 batteries:	242	215	188	196	174	151	166	148	125
4 batteries:	339	301	264	275	245	214	236	209	183
5 batteries:	538	479	419	440	391	340	377	335	290
8 batteries:	861	660	577	601	541	470	523	465	402
9 batteries:	843	753	650	692	617	530	597	531	462

*Above calculation is based on an AC load with a .30 cable plant power factor.

For contact information visit www.alpha.com

The Alpha Group >

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049-297-1C-P002 (09/09)

BATTERY SPECIFICATIONS | N.T.S. | 2

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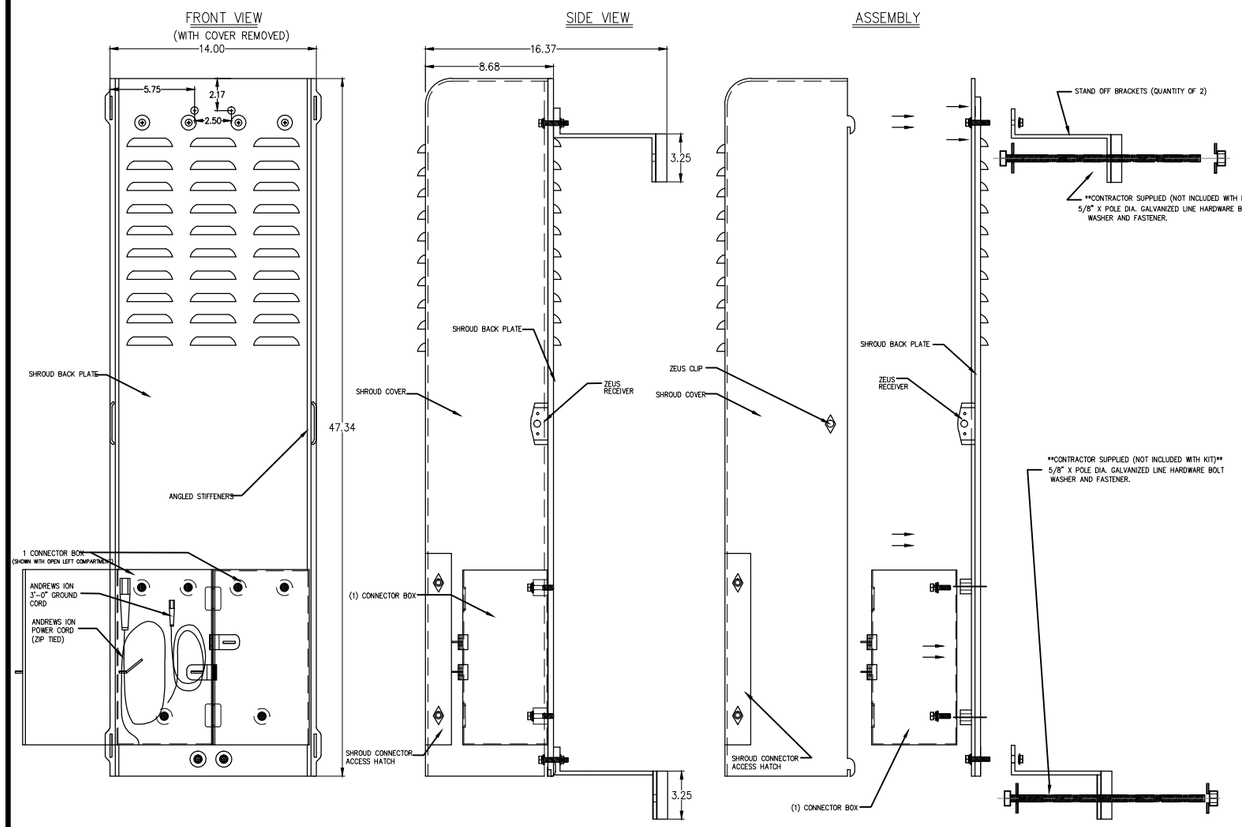

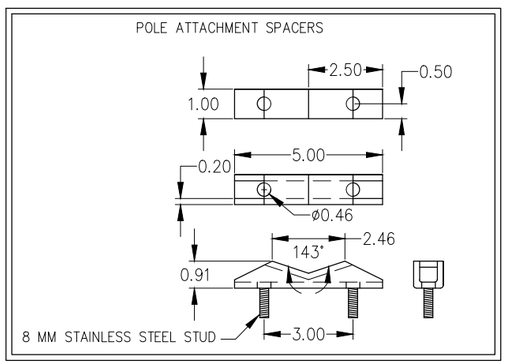

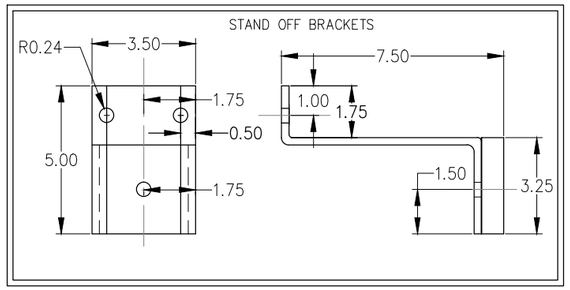

SHROUD DETAIL | N.T.S. | 1

NOT USED | N.T.S. | 2

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