DSW (DESERT SOUTHWEST)

COLOR CODE REPRESENTS ALPHA SECTOR,
FIRST MAIN LINE - RED, WITH LTE1000, WC1, AWS, PCS.

TECHNOLOGY COLOR CODE

SECTOR COLOR CODE

SECTOR COLORS

TECHNOLOGY COLOR CODE

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SECTOR TECHNOLOGY
## COMMNET COLOR CODE

### Cable Color Code Schedule

<table>
<thead>
<tr>
<th>Technology</th>
<th>Cable Type</th>
<th>Tape Color</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTE</td>
<td>Power Trunk 1</td>
<td>Orange Wrap</td>
<td>Additional Power or Fiber Trunks for LTE, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>LTE</td>
<td>Fiber Trunk 1</td>
<td>Orange Wrap</td>
<td>Additional Power or Fiber Trunks for LTE, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>GSM/UMTS</td>
<td>Power Trunk 1</td>
<td>Yellow Wrap</td>
<td>Additional Power or Fiber Trunks for GSM/UMTS, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>GSM/UMTS</td>
<td>Fiber Trunk 1</td>
<td>Yellow Wrap</td>
<td>Additional Power or Fiber Trunks for GSM/UMTS, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>CDMA/EVDO</td>
<td>Power Trunk 1</td>
<td>Green Wrap</td>
<td>Additional Power or Fiber Trunks for CDMA, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>CDMA/EVDO</td>
<td>Fiber Trunk 1</td>
<td>Green Wrap</td>
<td>Additional Power or Fiber Trunks for CDMA, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>UMTS</td>
<td>Power Trunk 1</td>
<td>Purple Wrap</td>
<td>Additional Power or Fiber Trunks for UMTS, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>UMTS</td>
<td>Fiber Trunk 1</td>
<td>Purple Wrap</td>
<td>Additional Power or Fiber Trunks for UMTS, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>EVDO</td>
<td>Power Trunk 1</td>
<td>White Wrap</td>
<td>Additional Power or Fiber Trunks for DO, Add 1 Additional Wrap</td>
</tr>
<tr>
<td>EVDO</td>
<td>Fiber Trunk 1</td>
<td>White Wrap</td>
<td>Additional Power or Fiber Trunks for DO, Add 1 Additional Wrap</td>
</tr>
</tbody>
</table>

### Technology Cable Type | Color |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LTE</td>
<td>Black/Blank</td>
</tr>
<tr>
<td>CDMA/EVDO</td>
<td>Grey</td>
</tr>
<tr>
<td>UMTS</td>
<td>Brown</td>
</tr>
<tr>
<td>EVDO</td>
<td>Red</td>
</tr>
<tr>
<td>Coax Jumper X</td>
<td>Red</td>
</tr>
<tr>
<td>Coax Jumper Y</td>
<td>White</td>
</tr>
<tr>
<td>Coax Jumper Z</td>
<td>Blue</td>
</tr>
</tbody>
</table>

### Frequency Color |
| 700 | Black/Blank |
| 850 | Grey        |
| 1900| Brown       |

### Example:
- Color Code for LTE for 700 MHz Power or Fiber Trunk - 1 Orange Wrap, 1 Black or Leave Blank (cable color is already black)

### RRU P/N Code (Located on RRU tag)
- 129555731012 2X2DR RR8885 S8500(668) 850 CDMA/LTE dual mode
- 129555731009 2X2DR RR8885 S8500(864) 850 standard CDMA only
- 129555731101 CDX2 RR8885 S1900(868) 850 CDMA/LTE dual mode
- 129555731010 CDX2 RR8885 S1900(58A) 1900 standard CDMA only
- 129555731037 850 CDMA RR8885 New Single Mode
- 129555731035 1900 CDMA RR8885 New Single Mode

Example: Color Code for GSM/UMTS for 850 MHz Power or Fiber Trunk 1 Yellow Wrap, 1 Grey

### Notes:
- The information contained in this set of construction documents is proprietary by nature. Any use or disclosure other than that which relates to carrier services is strictly prohibited.

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**FIRSTNET**
JEMEZ SPRINGS NM 87025
17816 HIGHWAY 4
**COMMNET**
T-3.1
**ESOF020-HCV02**

**2-Bay Walk Upto Cabinet (WUC)**

**Product Features**
- Sealed Multi-bay Equipment and Power Compartment
- Sealed Battery Compartment
- Corrosion Resistant Aluminum enclosure
- Thermo-siphon HEX cooling
- R6 Thermal Insulation Material
- Attachment Rails for AC Load Center
- Rear Access Hatches
- Optional Dual GPS Antenna Mount

**Specifications**

<table>
<thead>
<tr>
<th>General</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>System cooling capacity</td>
<td>ESOF020-HCV02 Walk Upto Cabinet (WUC)</td>
<td>2.8kW Heat Load with Equip Inlet &lt;55°C @ 46°C ambient</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>689mm x 42&quot; x 62&quot; (including HEX) x 80&quot; (add 6&quot; plinth)</td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td>3H4A</td>
<td></td>
</tr>
<tr>
<td>Door latches</td>
<td>3 point latches (can be pad locked)</td>
<td></td>
</tr>
<tr>
<td>Ground bar</td>
<td>2ea 10-positions</td>
<td></td>
</tr>
<tr>
<td>Lifting Mechanism</td>
<td>4 lifting brackets</td>
<td></td>
</tr>
<tr>
<td>Equipment Compartment</td>
<td>Bay 1 – 22&quot;, 19RU for DC Power System and PDU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bay 2 – 23&quot;, 44RU for equipment</td>
<td></td>
</tr>
<tr>
<td>电池室</td>
<td>Shelves for 3 strings batteries, designed for:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GNB Marathon M121V165FT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enersys S60190F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enersys S60170F</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1660 lbs (batteries, Power System and Load Equipment excluded)</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td>Enclosure Aluminum AL5052, Inner frames Galvanized steel</td>
<td></td>
</tr>
<tr>
<td>Finish</td>
<td>Powder Paint RAL7032</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>cULus LISTED pending</td>
<td></td>
</tr>
</tbody>
</table>

**Support**

- Bryan Kearse
  - Phone: 919-787-3836
  - Cell: 919-800-7107
  - bryan.kearse@deltaaw.com
- Hari Subramanian
  - Phone: 214-415-4977
  - hari.subramanian@deltaaw.com

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*All specifications are subject to change without prior notice.*
**Equipment Details & Specifications**

### 1. Remote Radio Unit
- **Antenna Mounting**: Kit (85010096) included with antenna
- **Pipe Clamp Mounting Bracket**: Supplied with RRU
- **Pipe Clamp Mounting Bracket**: Supplied with RRU
- **Pipe Clamp Mounting Bracket**: Supplied with RRU
- **Pipe Clamp Mounting Bracket**: Supplied with RRU
- **Pipe Clamp Mounting Bracket**: Supplied with RRU

### 2. Remote Radio Unit (RRU)
- **Antenna Mounting Frame**: (Valmont Part #: VFA6-HD)
- **Remote Radio Unit**: 80010992K (or similar)

### 3. Power Cable Ingress Ports (Typ.)
- **Raycap Supplied Base Assembly**: Crossover Plate
- **Raycap Supplied Base Assembly**: Crossover Plate
- **Raycap Supplied Base Assembly**: Crossover Plate
- **Raycap Supplied Base Assembly**: Crossover Plate
- **Raycap Supplied Base Assembly**: Crossover Plate

### 4. Surge Suppressor - DC9-48-60-24-8C-EV
- **Raycap DC9 Over Voltage Protector**: With Dome Cover

### 5. Raycap AHLBA (or similar)
- **Mechanical Net Weight**: 101.4 lbs
- **Dimension (LxWxD)**: 28.7" x 15.4" x 9.5"

### 6. Raycap AHFIB (or similar)
- **Mechanical Net Weight**: 66.1 lbs
- **Dimension (LxWxD)**: 22.05" x 12.13" x 5.87"

### 7. Raycap DC9 Over VOLTAGE PROTECTOR WITH DOME COVER
- **Manufacturer**: Raycap
- **Model**: DC9-48-60-24-8C-EV
- **Weight**: 16 lbs
- **Enclosure Type**: Outdoor NEMA 4X
- **Enclosure Dim (LxWxH)**: 18.28" x 10.24" x 31.4"
- **Weight (System)**: 60 lbs

### 8. Kathrein Model 80010992K
- **Connector**: (12) 4.3-10 Female
- **Connector Position**: Bottom
- **Mechanical Weight**: 133.3 lbs (w/o mounting)
- **Dimensions (HxWxD)**: 105.2" x 20" x 6.9"
- **Mounting Hardware**: 85010096 (included w/ antenna)

### 9. Equipment Details & Specifications
- **Sheet Number**: A-4.1
THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

Connecting Rural America

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME AND UNDER MY DIRECT SUPERVISION AND THAT I AM DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF NEW MEXICO.

EQUIPMENT DETAILS & SPECIFICATIONS

A-4.2

1'-6" DIA. SECTION A-A

PROPOSED 1-5/8"X1-5/8" UNISTRUT (P1000T)

UNISTRUT HEX HEAD GAP SCREW & NUT

PROPOSED EQUIPMENT PER PLAN

PROPOSED 3-1/2" OD GALV. PIPE

PROPOSED 3-1/2" OD GALV. PIPE

PROPOSED 3-1/2" OD GALV. PIPE

SECTION C-C

SECTION E-E

PROPOSED 1/2"Ø GALV. PIPE

PROPOSED 1/2" U-BOLT, A327 OR BETTER

PROPOSED P2800-50 U-SHAPE FITTING (TYP. OF 2 PER U-BOLT)

SECTION B-B

PROPOSED 3-1/2"Ø OD GALV. PIPE

PROPOSED 3-1/2"Ø OD GALV. PIPE

PER PLAN

PER PLAN

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PER PLAN
FIBER TRENCH

- RESTORE SURFACE MATERIAL TO ORIGINAL CONDITION AFTER INSTALLATION OF UTILITIES; GRADE SURFACE TO LEVEL
- UNDISTURBED SOIL
- BACKFILL EARTH TO 90% RELATIVE COMPACTION PER ASTM D1557
- UTILITY WARNING TAPE ENTIRE LENGTH OF CONDUIT RUN
- BACKFILL SAND OR NATIVE SOIL W/SAND EQUIVALENT GREATER THAN 30% COMPACT TO 90% RELATIVE COMPACTION PER ASTM D1557
- 1" PVC SCH 40 FIBER CONDUIT WHERE APPLICABLE (OR PVC SIZING AS REQ'D PER CABLE SIZE)

POWER TRENCH

- RESTORE SURFACE MATERIAL TO ORIGINAL CONDITION AFTER INSTALLATION OF UTILITIES; GRADE SURFACE TO LEVEL
- UNDISTURBED SOIL
- BACKFILL EARTH TO 90% RELATIVE COMPACTION PER ASTM D1557
- UTILITY WARNING TAPE ENTIRE LENGTH OF CONDUIT RUN
- BACKFILL SAND OR NATIVE SOIL W/SAND EQUIVALENT GREATER THAN 30% COMPACT TO 90% RELATIVE COMPACTION PER ASTM D1557
- 3" PVC SCH 40 ELECTRICAL CONDUIT WHERE APPLICABLE (OR PVC SIZING AS REQ'D PER POWER PROVIDER DESIGN)

DUAL UTILITY TRENCH

- RESTORE SURFACE MATERIAL TO ORIGINAL CONDITION AFTER INSTALLATION OF UTILITIES; GRADE SURFACE TO LEVEL
- UNDISTURBED SOIL
- BACKFILL EARTH TO 90% RELATIVE COMPACTION PER ASTM D1557
- UTILITY WARNING TAPE ENTIRE LENGTH OF CONDUIT RUN
- BACKFILL SAND OR NATIVE SOIL W/SAND EQUIVALENT GREATER THAN 30% COMPACT TO 90% RELATIVE COMPACTION PER ASTM D1557
- 1" PVC SCH 40 FIBER CONDUIT WHERE APPLICABLE (OR PVC SIZING AS REQ'D PER CABLE SIZE)
- 3" PVC SCH 40 ELECTRICAL CONDUIT WHERE APPLICABLE (OR PVC SIZING AS REQ'D PER POWER PROVIDER DESIGN)
ANTENNA MOUNTING FRAME (VALMONT PART #: VFA6-HD)
NEW #2 AWG THHN INSULATED GREEN STRANDED COPPER WIRE TO BOTTOM TOWER GROUND BAR, TYP.

NEW #2 AWG TINNED CADWELDED TO GROUND RING, TYP.

NEW GROUND ROD (SPACED 10'-0" MIN.), TYP.

NEW CADWELD CONNECTION, TYP.

NEW ANTENNA BUS BAR W/ INSULATORS, TYP.

NEW GROUND ROD WITH TEST WELL, TYP.

NEW #2 AWG TINNED CADWELDED COPPER WIRE TO TOP TOWER BUS BAR, TYP.

NEW GROUND ROD WITH TEST WELL, TYP.

NEW #2 AWG TINNED CADWELDED COPPER WIRE, TYP.

NEW MECHANICAL CONNECTION, TYP.

INTEGRATED GROUND BAR ON PROPOSED ANTENNA MOUNT, TYP.

NEW #2 AWG TINNED CADWELDED COPPER WIRE, TYP.

NEW MECHANICAL CONNECTION, TYP.

NEW ANTENNA BUS BAR W/ INSULATORS, TYP.

NEW GROUND ROD WITH TEST WELL, TYP.

NEW #2 AWG TINNED CADWELDED COPPER WIRE, TYP.

NEW MECHANICAL CONNECTION, TYP.

INTEGRATED GROUND BAR ON PROPOSED ANTENNA MOUNT, TYP.
GROUNDS WIRE FROM SECTOR FRAMES ONE (1) PER INTERNAL GROUND BAR ON EACH SECTOR FRAME.

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING GROUND WIRES AND CONNECT TO SURFACE MOUNTED BUS BARS, FOLLOW ANTENNA AND BTS MANUFACTURES PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELDS AT BOTH ENDS AND EXIT FROM TOWER OR POLE USING MFRS PRACTICES.
3. ALL GROUND WIRE SHALL BE GREEN INSULATED WIRE ABOVE GROUND.
4. GROUND TEST MUST PASS LESS THAN 5 OHMS AND SUBMIT IN CLOSEOUT PACKAGE.
5. CONTRACTOR TO ABIDE BY AT&T SAFETY STANDARDS DURING SITE CONSTRUCTION.
6. CONTRACTOR SHALL REFER TO AT&T STANDARDS FOR GROUNDING CONNECTIONS & INSTALLATION METHODS.
7. NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
8. GROUNDING ROD NOTES (WHERE APPLICABLE)
9. ELECTRICAL CONTRACTOR SHALL PERFORM AND PROVIDE THE GROUND RESISTANCE TESTING WITH AN APPROVED EQUIPMENT DEVICE THAT HAS A CURRENT CALIBRATION. TEST RESULTS SHALL NOT EXCEED 5 OHMS.