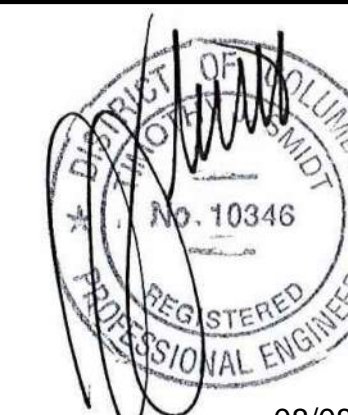


DRAWING NOTES

- (1) EXTEND TWO (2) - 4" EMPTY SCHEDULE 40 PVC CONDUITS FROM EXISTING UTILITY COMPANY MANHOLE TRANSFORMER #14939 TO PROPOSED UTILITY COMPANY BACKBOARD/TROUGH (APPROXIMATELY 375 L.F.). COORDINATE EXACT ROUTING AND TERMINATION POINT WITH UTILITY COMPANY VERIZON WIRELESS REPRESENTATIVE IN THE FIELD PRIOR TO START OF WORK.
- (2) PROPOSED 10'-0" LONG UTILITY SERVICE BACKBOARD WITH 18"x18"x10'-0" SEALABLE WEATHERPROOF TROUGH. BACKBOARD SHALL COMPLY TO PEFCO STANDARDS. REFER TO DETAILS ON SHEET E-8 FOR ADDITIONAL INFORMATION.
- (3) EXTEND TWO (2) - 4" EMPTY SCHEDULE 40 PVC CONDUITS BELOW GRADE FROM PROPERTY LINE AT T STREET NE TO PROPOSED FIBER HANDHOLE OUTSIDE OF NEW COMPOUND FOR EXTENSION OF FIBER (APPROXIMATELY 375 L.F.). COORDINATE EXACT ROUTING WITH VERIZON WIRELESS REPRESENTATIVE IN THE FIELD. PROVIDE NYLON PULL ROPE AND ENDCAPS.
- (4) PROVIDE 24"x36"x30" DEEP PULLBOX FOR EXTENSION OF TELEPHONE SERVICE CABLES. PULLBOXES BENEATH ACCESS DRIVE SHALL BE COMPOSITE QUARTZITE TIER 1 AND APPROVED TRAFFIC RATED COVER (H-20). PROVIDE 1" DIA. 10' MIN. OF PEA GRAVEL IN BASE OF BOX. COORDINATE PULLBOX LOCATION WITH EXISTING FIELD CONDITIONS. REFER TO DETAIL, THIS SHEET FOR ADDITIONAL INFORMATION.
- (5) CONTRACTOR SHALL COORDINATE INSTALLATION METHOD FOR CONDUITS BEING EXTENDED BELOW GRADE (ASPHALT/ GRAVEL DRIVE, GRASS AREAS, ETC.) WITH LANDLORD PRIOR TO START OF WORK. COORDINATE FINAL ROUTING WITH ALL EXISTING UNDERGROUND UTILITIES.
- (6) ALL CONDUITS BELOW GRADE SHALL BE SCHEDULE 40 PVC. ALL CONDUITS EXTENDING BELOW AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE SCHEDULE 80 PVC. ALL CONDUITS ABOVE GRADE AND/OR EXPOSED TO WEATHER SHALL BE RIGID GALVANIZED STEEL. NO SLIGHT OR PVC CONDUIT ABOVE GRADE SHALL BE PERMITTED. DUE SEAL SHALL BE INSTALLED IN ALL CONDUITS ENTERING CABINETS, EQUIPMENT, AND GENERATOR.
- (7) CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO START OF WORK.
- (8) CONTRACTOR SHALL OBTAIN THE LATEST ELECTRIC SERVICE DESIGN DRAWINGS FROM THE UTILITY COMPANY AND COORDINATE ANY CONCRETE ENCASUREMENT REQUIREMENTS TO BE ADDED TO EXISTING UTILITY COMPANY DRAWINGS. HAD SUPERGRADE ELECTRIC SERVICE DESIGN AS SHOWN IN CONSTRUCTION DOCUMENTS. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY AND VERIZON WIRELESS REPRESENTATIVE.
- (9) PROPOSED LOCATION OF CONCRETE FILLED PROTECTIVE BOLLARD. FINAL BOLLARD LOCATIONS SHALL BE APPROVED BY UTILITY COMPANY PRIOR TO INSTALLATION. REFER TO DETAIL, SHEET E-8 FOR ADDITIONAL INFORMATION.



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08/08/2024

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REVISIONS:

NO.	DESCRIPTION	DATE
	Vzw COMMENTS	08/08/24
	PERMIT DRAWINGS	06/26/24

LAST REV.:

PROJECT NO: 23002Y

DATE: JUNE 26, 2024

SCALE: AS NOTED

TITLE:

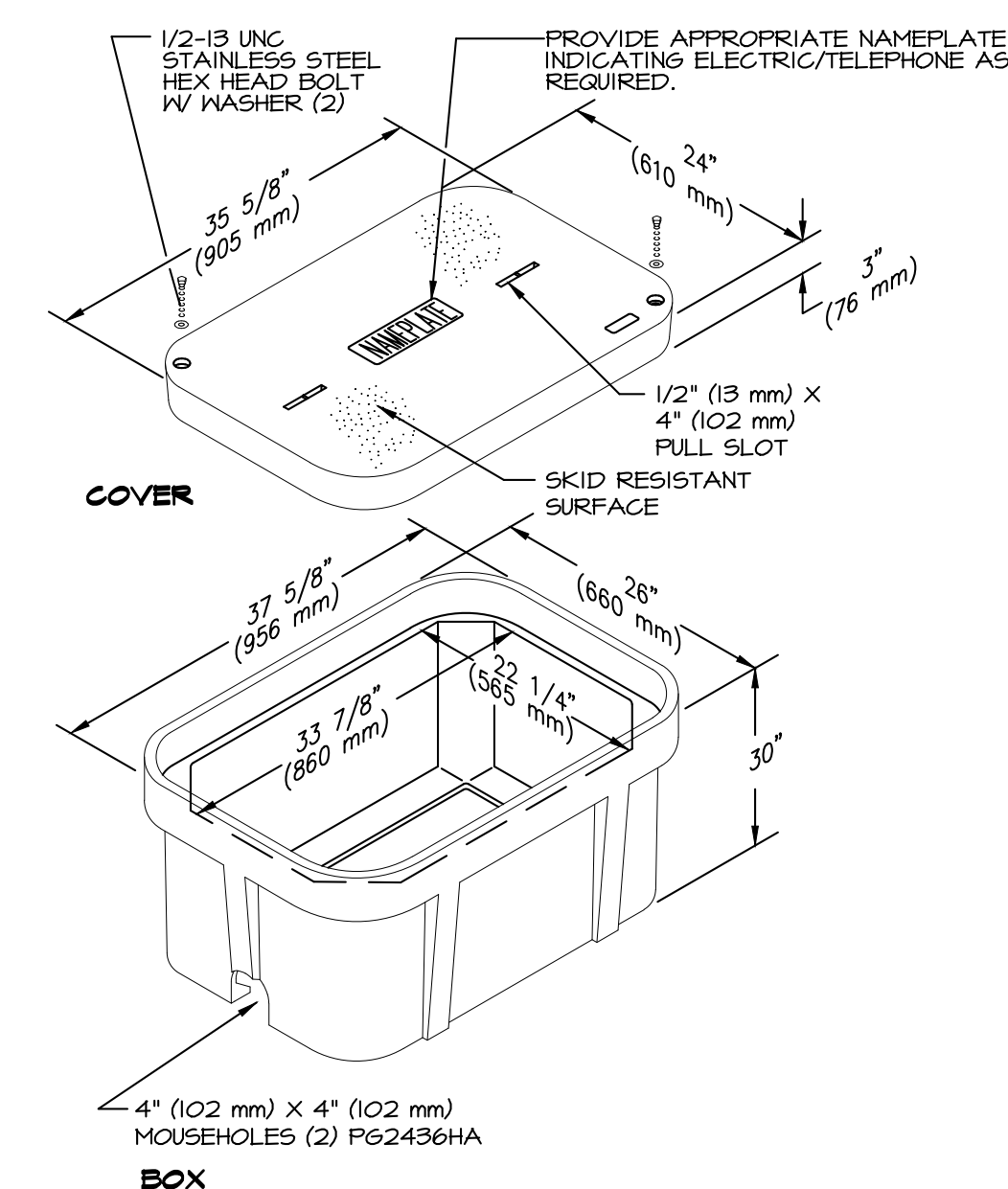
ROUTING SITE
PLAN, DETAIL,
AND NOTES

SHEET:

III-5

E005

TEI#23002Y



④ DETAIL - JUNCTION BOX

NO SCALE



SCALE: 1/16" = 1'-0"

MINIMUM REQUIRED CLEARANCE FOR AIRFLOW

609.6 [24.00]

198.8 [7.83]

162.7 [6.41]

30

AIR DISCHARGE

LIFT OFF SERVICE PANEL W/ LOCKABLE LATCHES

124.3 [4.89]

1092.8 [43.02]

30

KOHLER PowerSystems

KOHLER Power.com

968.5 [38.13]

OIL DRAIN

451.6 [17.78]

COOLANT DRAIN

1935.0 [76.18]

A



Diagram illustrating the grounding and bonding requirements for a service disconnect switch assembly. The diagram shows a cross-section of the switch enclosure with various components and their connections to the ground system.

Labels and Connections:

- #4 AWG TO CONDUIT BUSHING:** Connection to the top of the enclosure.
- #4 AWG BONDING JUMPER TO SERVICE EQUIPMENT ENCLOSURE:** Connection to the top of the enclosure.
- GROUNDING CONDUCTOR TERMINAL BAR (NEUTRAL):** Connection to the neutral terminal bar (N) inside the enclosure.
- PROVIDE #4 AWG MAIN BONDING JUMPER BETWEEN NEUTRAL GROUND BUS AND EQUIPMENT GROUND BUS:** Connection between the neutral terminal bar (N) and the equipment ground bus.
- EQUIPMENT GROUND BUS:** Connection to the equipment ground bus.
- GRADE:** Indicated by a horizontal line.
- EXTEND #2 AWG SERVICE GROUND CONDUCTOR TO DRIVEN GROUND ROD:** Connection from the equipment ground bus to a ground rod.
- GROUND ROD BELOW GRADE:** Indicated by a vertical line below the grade line.
- 6'-0" MINIMUM:** Dimension indicating the distance between the two ground rods.
- RIGID STEEL CONDUIT:** Connection to the top of the enclosure.
- SERVICE DISCONNECT (FUSED DISCONNECT SWITCH):** The main switch assembly.
- INCOMING UTILITY GROUNDED CONDUCTOR:** Connection to the bottom of the enclosure.

DETAIL - TYPICAL ELECTRIC SERVICE
GROUNDING ELECTRODE
NO SCALE

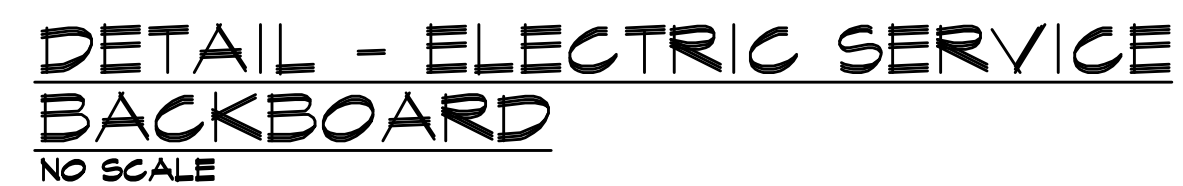
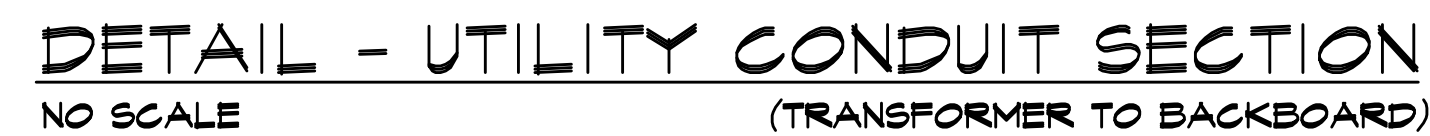
SHEET:

E-6

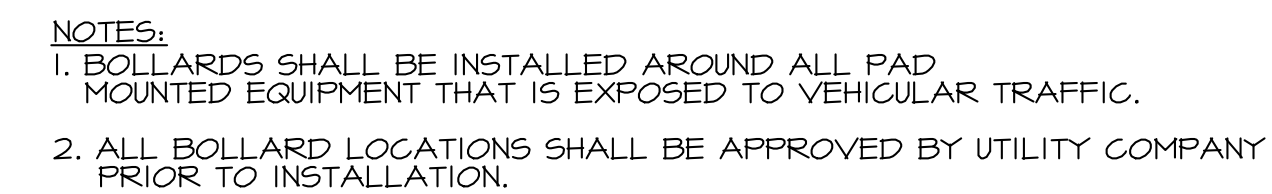
E006

Green thermoset insulation, 90°C wet or dry continuous operating temperature, 130°C emergency, 250°C short circuit





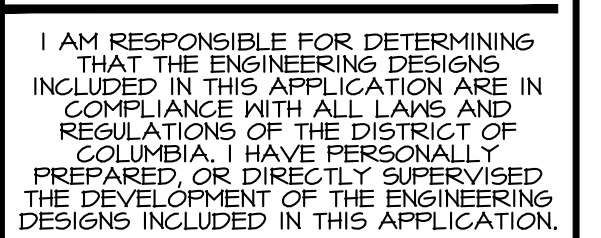
- E:\PROJECTS\2015\115-00000\Drawings\Sheet\115-00000.dwg 05-Apr-2018
- 1252.2-5
- An isometric drawing of a rectangular transformer padmount enclosure. The top surface has dimensions of 43" by 37.5". One side wall is labeled B=12". The front edge of the enclosure is dimensioned as 50.5". A ground rod, labeled (1), is shown extending from the bottom center of the front face. Another ground rod, labeled (2), is shown at the rear right corner. A cable or pipe, labeled (3), enters the top right side of the enclosure. The enclosure sits on a base with a 5° slope indicated. To the right of the enclosure, there is a representation of ground level with rocks and vegetation, labeled GRADE.
- A plan view diagram of a grounding mat, labeled DETAIL B GROUNDING MAT. It consists of several concentric squares. The outermost square has a side length of 26". Inside it are two more squares with side lengths of 2' each. The innermost square is labeled "TOP OUTSIDE EDGE OF PAD". A "FLANGE" is indicated on the right side of the middle square. A "PISTAL FOR C & P" is shown on the right side of the innermost square. Dimensions include 2' for the width of the flange area, 32" for the height of the central area, and 2' for the width of the central area. A label (1) points to a specific feature on the innermost square.
- #### NOTES
1. THE FRONT EDGE OF THE BOXPAD (LABELED FRONT) AND CONSEQUENTLY THE FRONT OF THE TRANSFORMER SHOULD BE ORIENTED IN SUCH A WAY AS TO PROVIDE A MINIMUM OF 10 FT OF RELATIVELY FLAT HORIZONTAL GROUND IN FRONT FOR DRAINAGE PURPOSES.
 2. THE BOXPAD SHOULD BE LEVELED BEFORE THE TRANSFORMER IS INSTALLED.
 3. INSTALL #2 BAR COPPER GROUND WIRE (ITEM WV) WITHOUT BREAKING CONTINUITY AS SHOWN ON DRAWING DETAIL B. LEAVE 3 FT MIN. OF GROUND WIRE SLACK WITHIN BOXPAD TO BE CONNECTED TO THE PRIMARY NEUTRAL.
 4. INSTALL GROUND ROD (ITEM ES) AND GROUND ROD CLAMP (ITEM ET) A MAXIMUM OF 6" ABOVE THE BOTTOM FLANGE OF THE BOXPAD.
 5. ACCESSORIES TO THE BOXPAD INCLUDE THE BOXPAD 4" SPACER (19718-B03B), THE 10" SPACER (19719-B03T), AND THE BOXPAD COVER (19718-B03B).
- DRAWN: AVY DWG.PED: ANA DATE: 09-06-07 REVIEWED: RDS DATE: 05/05/16 APPRVD: AAT DATE: 05/05/16 NEXT REVIEW: 05/20 REV:
-
- PHI**
- DISTRIBUTION
STANDARDS
- SINGLE PHASE LOW PROFILE PADMOUNT
TRANSFORMER INSTALLATION



DETAIL - BOLLARD
NO SCALE



DETAIL - ELECTRIC SERVICE BACKBOARD
NO SCALE



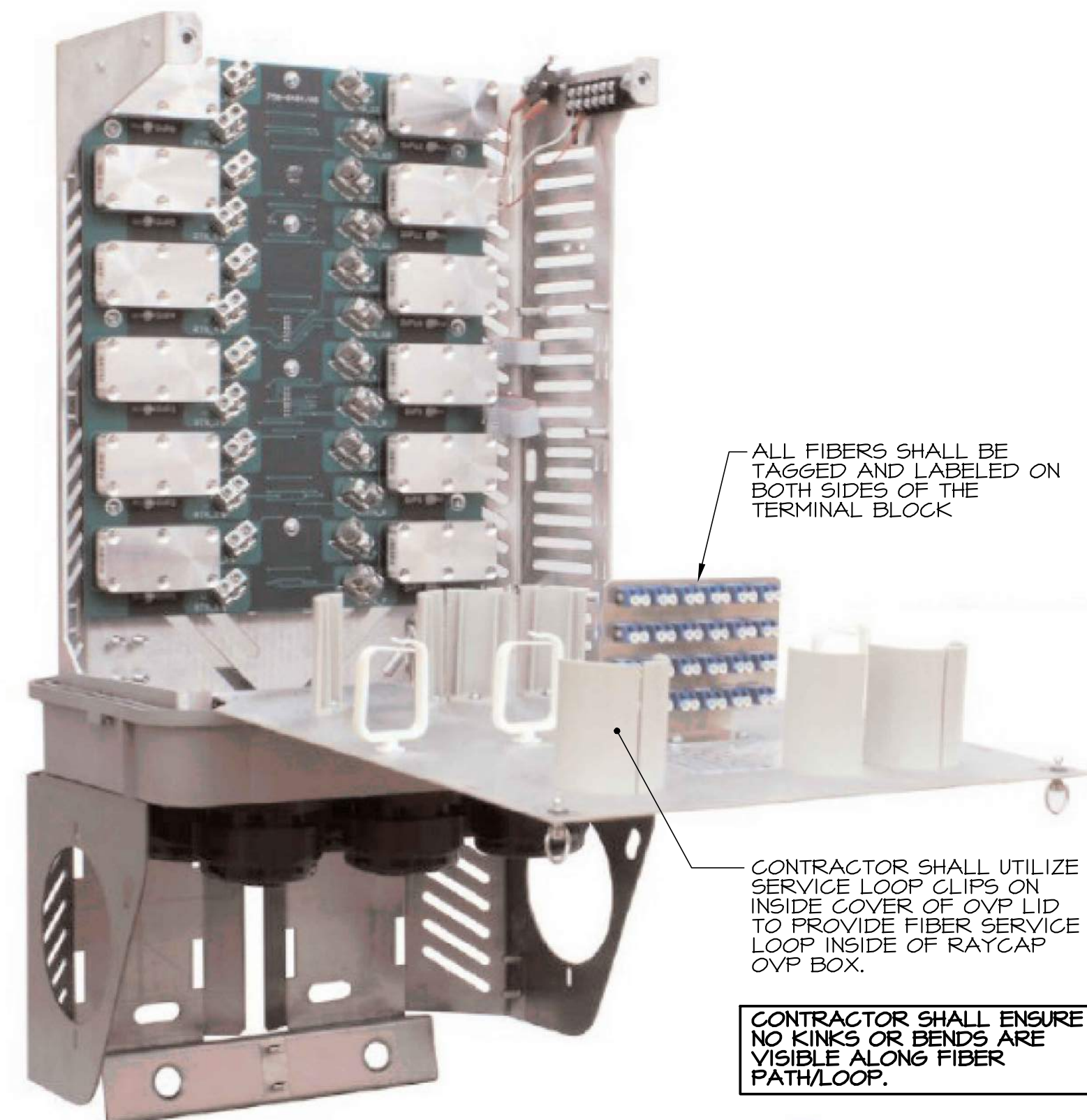
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DISTRICT OF COLUMBIA

LAST REV.:	
PROJECT NO:	23002Y
DATE:	JUNE 26, 2024
SCALE:	AS NOTED

TITLE:
DETAILS

SHEET:

E-8
E008



DETAIL- RAYCAP FIBER LOOP
NO SCALE

Feed Hybrid trunk through Insert.

Feed enough of the cable to strip and connect to power connectors.

Connect wires according to the *Verizon Wireless established color guide*.

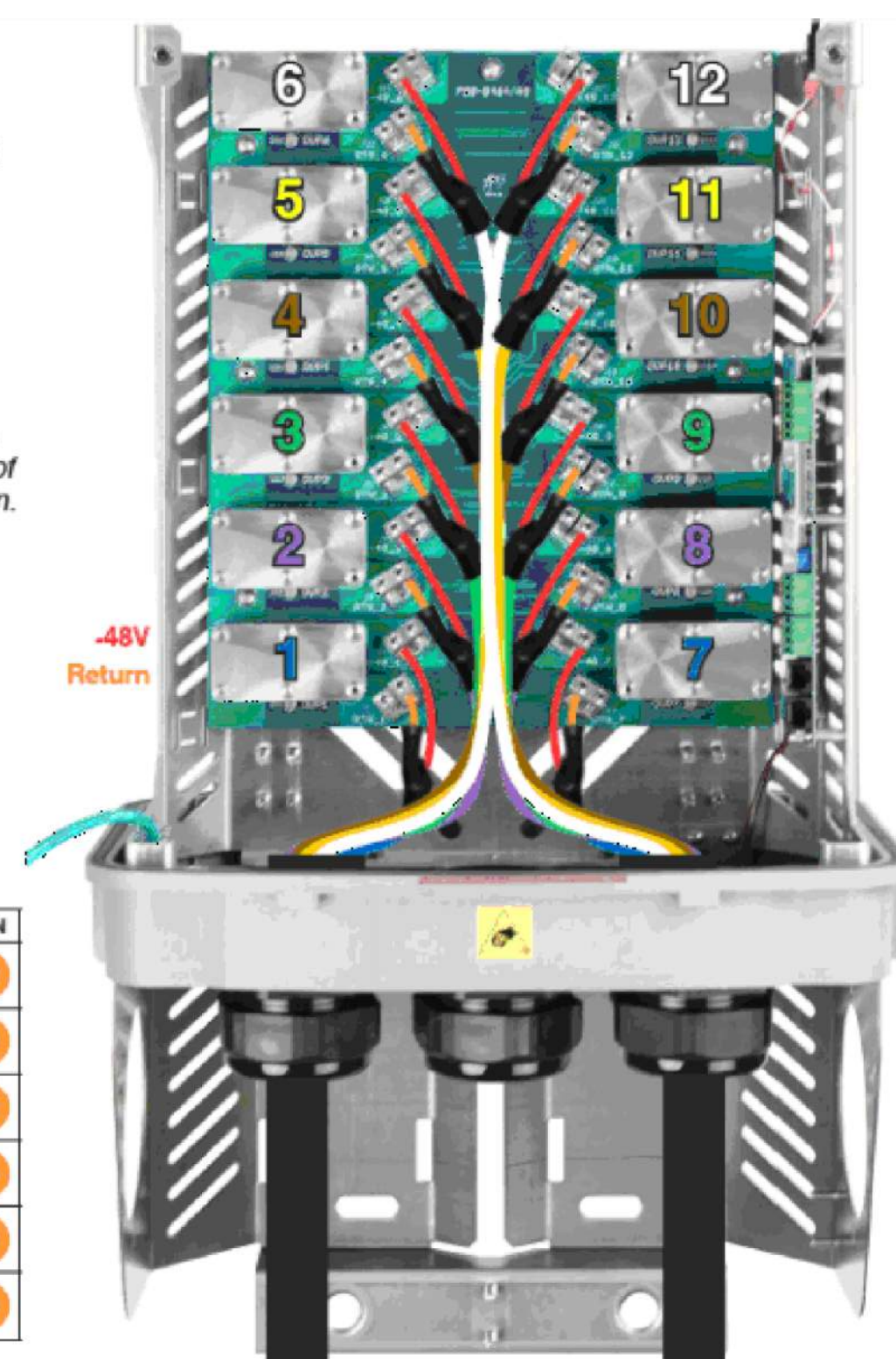
Note:
Bring all cables through cable glands.
Ensure all fiber is separated and out of
the way during copper wire installation.

To assist in ease of wiring, proceed by wiring in the following order:

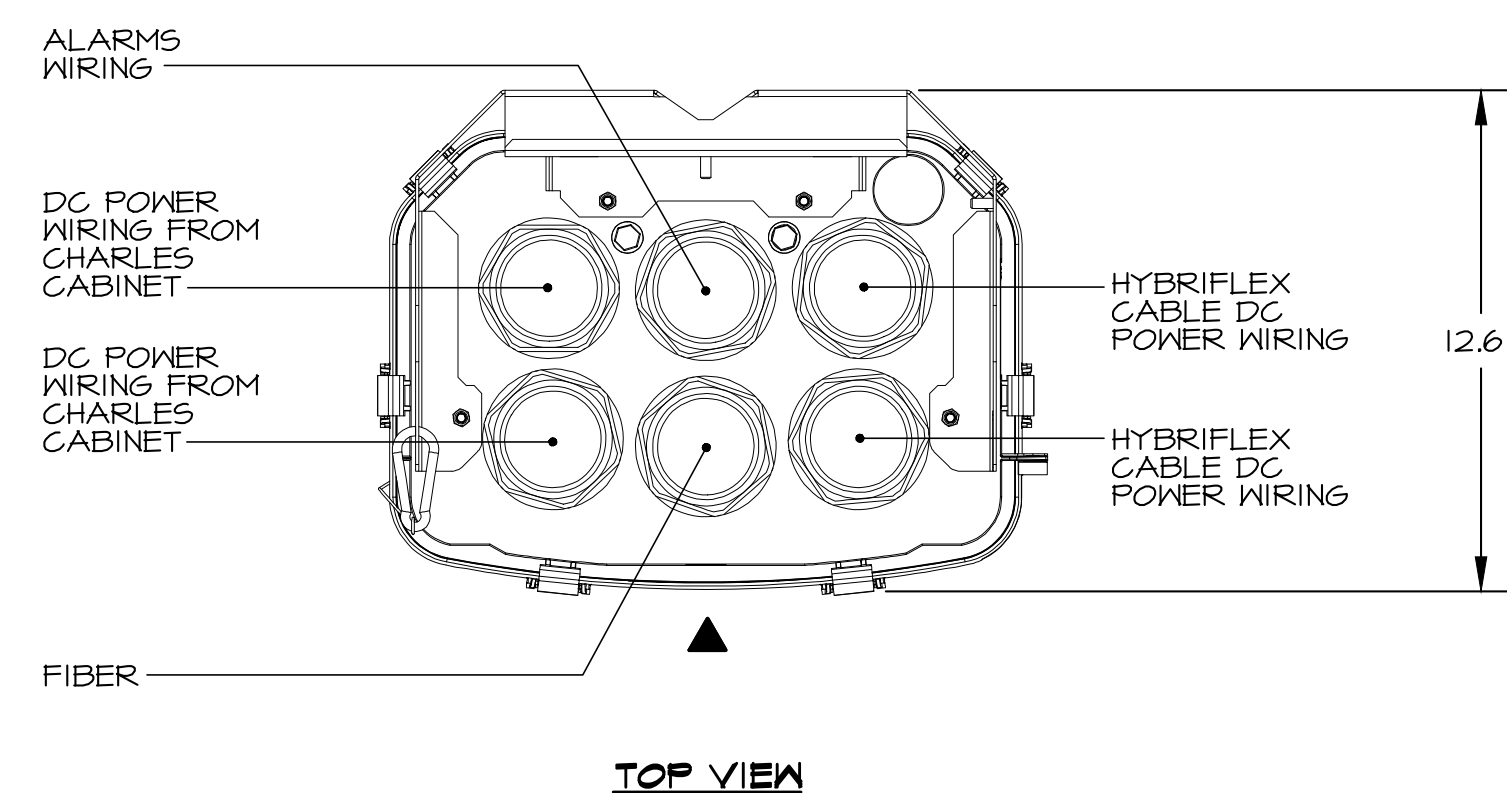
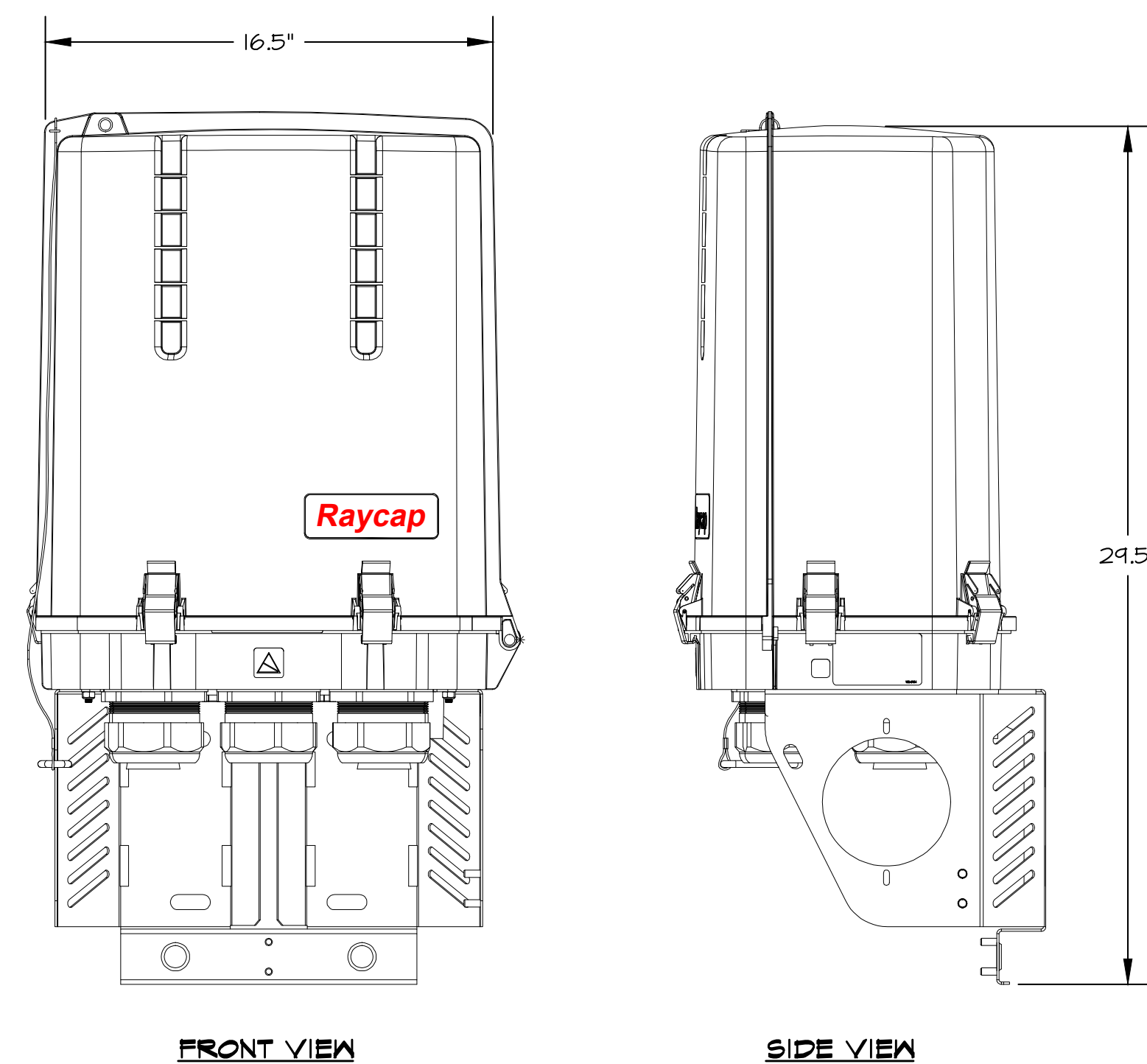
1st: OVP #1 and OVP #7
2nd: OVP #2 and OVP #8
3rd: OVP #3 and OVP #9
4th: OVP #4 and OVP #10
5th: OVP #5 and OVP #11
6th: OVP #6 and OVP #12

Torque: 40 in-lbs (10-6 AWG)

Circuit	Identification Color	-48V	RTN
1, 7	Blue		
2, 8	Violet		
3, 9	Green		
4, 10	Brown		
5, 11	Yellow		
6, 12	White		

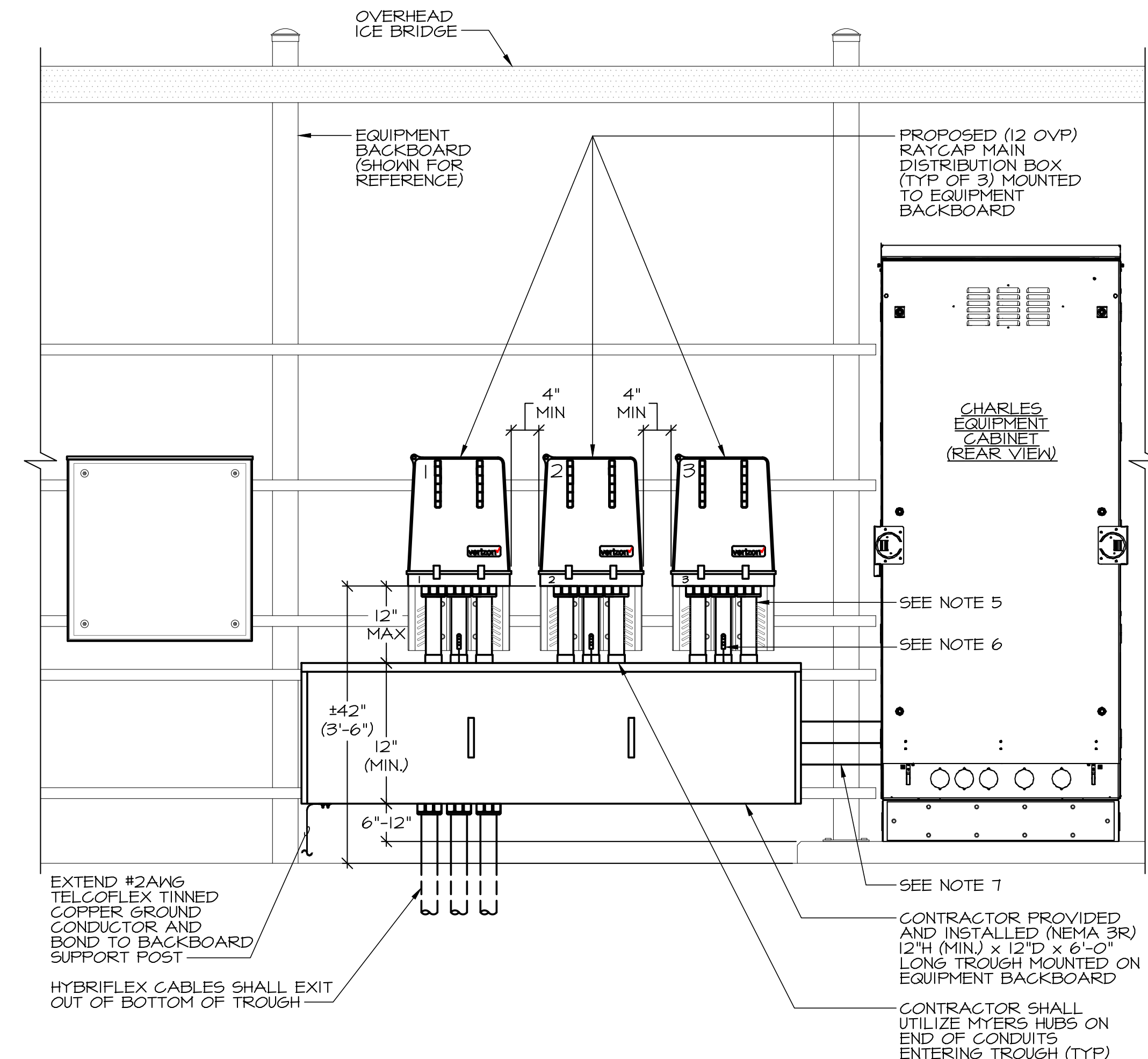


DETAIL- RAYCAP 12-OVP IDENTIFIERS



MANUFACTURER:	RAYCAP
MODEL #:	RVZDC-6627-PF-48 (12 OVP)
DIMENSIONS:	12.6"D X 16.5"W X 29.5"H
WEIGHT:	32 LBS (SYSTEM)

DETAIL - MAIN DISTRIBUTION BOX
NO SCALE (12 EXP)



1. ALL RAYCAP MAIN DISTRIBUTION BOXES SHALL BE MOUNTED AT 42" MAX ABOVE FINISHED GRADE/SLAB, MEASURED AT LID GASKET SEAM. NO OBSTRUCTIONS DIRECTLY ABOVE THE DISTRIBUTION BOX SO THAT THE COVER CAN BE REMOVED.
2. ALL HARDWARE SHALL BE GALVANIZED STEEL (UNLESS OTHERWISE APPROVED).
3. ALL EXTERIOR CONDUIT ENTERING CHARLES CABINET SHALL BE RIGID GALVANIZED STEEL (UNLESS OTHERWISE APPROVED).
4. RAYCAP TROUGH SHALL BE 12" (MIN) X 12"D X 6'-0" LONG NEMA 3R CLASS. BOTTOM OF RAYCAP TROUGH SHALL MEASURE 6" ABOVE TOP OF FINISHED EQUIPMENT CABINET CONCRETE SLAB. TROUGH SHALL FULLY WEATHERPROOF WITH TROUGH LID HANDLES, GASKETED, AND FABRICATED BY S.A.R. METAL PRODUCTS (OR APPROVED EQUAL). PROVIDE FOUR (4) SCREENED VENT HOLES, ONE IN EACH CORNER, TO ALLOW FOR DRAINAGE.
5. REMOVE ALL SIX (6) BLACK, HYBRIFLEX CABLE COMPRESSION FITTINGS SUPPLIED WITH THE 12-OVP RAYCAP BOX AND SALVAGE FOR REUSE. INSTALL SIX (6) RIGID GALVANIZED STEEL CONDUITS (SIZED TO MATCH COMPRESSION FITTINGS BEING REMOVED) WITH NEW COMPRESSION CONNECTORS AND BUSHINGS BETWEEN THE RAYCAP BOX AND THE TOP OF THE TROUGH. LENGTH OF CONDUITS BETWEEN BOTTOM OF RAYCAP AND TOP OF TROUGH SHALL NOT EXCEED 12". THREE (3) CONDUITS SHALL BE INSTALLED SIDE BY SIDE IN THE REAR AND THREE (3) CONDUITS SHALL BE INSTALLED SIDE BY SIDE IN THE FRONT.
 - 5.1. TWO (2) CONDUITS SHALL BE UTILIZED FOR EXTENSION OF DC WIRING FROM CHARLES EQUIPMENT CABINET.
 - 5.2. ONE (1) CONDUIT SHALL BE UTILIZED FOR EXTENSION OF FIBER.
 - 5.3. ONE (1) CONDUIT SHALL BE UTILIZED FOR EXTENSION OF ALARMS WIRING.
 - 5.4. TWO (2) CONDUITS SHALL BE UTILIZED FOR EXTENSION OF HYBRIFLEX CABLES.
6. EXTEND #6AWG TELCOFLEX TINNED COPPER GROUND CONDUCTOR FROM BASE OF THE RAYCAP BOX AND BOND TO BACKBOARD SUPPORT POST.
7. EXTEND THREE (3) RIGID GALVANIZED STEEL CONDUITS FROM SIDE OF RAYCAP TROUGH THROUGH SIDE OF CHARLES EQUIPMENT CABINET.
 - 7.1. TWO (2) 2" RIGID GALVANIZED STEEL CONDUITS SHALL BE UTILIZED FOR EXTENSION OF DC WIRING.
 - 7.2. ONE (1) 2" RIGID GALVANIZED STEEL CONDUIT SHALL BE UTILIZED FOR EXTENSION OF FIBER AND ALARMS.
8. PULL STRING SHALL BE TERMINATED INSIDE RAYCAP TROUGH FOR USE BY OTHERS.
9. VERIZON WIRELESS SUPPLIED PEEL AND STICK LABEL READING "VERIZON" TO BE INSTALLED ON RAYCAP DISTRIBUTION BOX MOUNTED ON BACKBOARD. PROVIDE AND INSTALL APPROPRIATE SIGNAGE AT FINAL RAYCAP BOX/TROUGH LOCATION. SIGNAGE SHALL CONSIST OF SHOCK HAZARD SIGNS AND VERIZON WIRELESS ANTENNA SECTOR IDENTIFICATION/DESIGNATION. COORDINATE FINAL MOUNTING LOCATION OF EACH SIGN WITH VERIZON WIRELESS REPRESENTATIVE.
10. CONTRACTOR SHALL PROVIDE AND INSTALL MEANS AND METHODS FOR SUPPORTING THE FIBER CABLES UP OFF THE BOTTOM OF RAYCAP TROUGH. METHOD INCLUDING PROVIDING A SHOCK OR TILTING THREADED COUPLING WITH GROUND LUG WHICH MAY BE USED IN CONJUNCTION WITH PIM FRIENDLY TIE-WRAPPS TO CREATE FIBER CABLE SUPPORT FROM TOP OF TROUGH. METHOD UTILIZED SHALL BE APPROVED BY VERIZON WIRELESS REPRESENTATIVE.

DETAIL- BACKBOARD MOUNTED RAYCAP BOX
NO SCALE



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REVISIONS:

NO.	DESCRIPTION	DATE
	VZW COMMENTS	08/08/24
	PERMIT DRAWINGS	06/26/24

LAST REV.:

PROJECT NO:	23002Y
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DATE: JUNE 26, 2024

SCALE:	AS NOTED
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SCALE:	AS NOTED
TITLE:	

TITLE: RAYCAR

KATCAP DETAILS

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

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III-9

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