

ELAC & South Gate Educational Center- Campus Standards Matrix

Note: Campus preferences are indicated first followed by additional manufacturers which are being considered by

| . | STANDARD | CAMPUS ALTERNATIVES |
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| 1 | DIV. 07: THERMAL & MOISTURE PROTECTION | |
| 2 | ROOFING | |
| 3 | GENERAL | Modified Bitumen 30-yr Warranty, 4- ply. Build-up roof multi-ply SARNAFIL , Tremco or Johns Manville Corporation, |
| 4 | FIREPROOFING | |
| 5 | GENERAL | Monokote, KAFCO, PDI |
| 6 | DIV. 08: OPENINGS | |
| 7 | DOORS & FRAMES | Metal doors and frames required |
| 8 | HARDWARE | |
| 9 | KEYS - *Coordinate/verify with locksmith* | Schlage SFIC, 7 Pin, Everest 29 R |
| 10 | CYLINDERS | ELAC uses Schlage housings prepped for Small Format Interchangeable Core (SFIC). Use Schlage brand only, do not substitute. |
| 11 | LEVER LOCKSETS | Avoid Cylindrical. Where possible, use Schlage mortise locksets with satin-stainless anti-microbial finish. Example: L9000-06N-630AM (L =mortise lockset, N =escutcheon, 630 = satin stainless, AM = anti-microbial). |
| 12 | CABINET LOCKSETS | OLYMPUS NOTE: Required at all cabinet door & drawers |
| 13 | HINGES | HAGER, IVES, MARKAR 300 SERIES, CONTINUOUS SS |
| 14 | EXIT DEVICES | VON DUPRIN-98 SERIES, CD, XP @ EXTERIOR AX (ADA Panic Device series) Avoid using Vertical Rods. Use Rim Exits from 98 series Von Duprin. All exit devices shall have: AX - ADA Compliant PA - Pushpad Armor 630AM finish For non-electrified locksets, have CD - cylindrical dogging |
| 15 | KEY REMOVABLE MULLION POST for double door exit device opening | (NON FIRE) VON DUPRIN KR4954, (FIRE RATED) VON DUPRIN KR9954 |
| 16 | CLOSER | LCN-4040 EDA or HEDA, XP, Swing to Wall |
| 17 | ADA COMPLIANT PEDESTRIAN SWING DOOR OPERATOR**MUST BE INTEGRATED WITH LENEL | Record 8100 series automatic door opener, surface mount installed application, for doors weighing less than 350 LBS.**Must be integrated with Lenel access control system. |
| 18 | CARD READER | Card reader models shall be: 920PBPTK20000 (standard) and 921PBPTK20000 (keypad) HID-ICLASS SE 13.56 MGHZ, R40 Typ. Requires ICLASS Standard Capability, NOTE: Required at all building entries, classroom doors (if more than one door, then at least one required), all building utility rooms (electrical, mechanical, BDF/IDF, Janitorial closets), staff restrooms, staff/faculty offices. Refer to latest |
| 19 | ELECTRIC STRIKES: RIM EXIT DEVICES | HES-9500 FRAME MOUNTED, HES-9600 MULLION MOUNTED |
| 20 | ELECTRIC CYLINDRICAL LOCKS | Avoid using Electrified Cylindrical and Electrified Strikes style locksets. Use Electrified mortise locksets and Quiet Electric Latching Rim Exit devices instead. All electronic access control equipment (except card reader) shall be connected with moxex style connectors. Electrified locksets shall also have RX switch built in. NOTE: NO cutting Fire Door frame shall be PERMITTED |

| | STANDARD | CAMPUS ALTERNATIVES |
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| 21 | ELECTRIC STRIKES: MORTISE LOCKS | Avoid using Electrified Cylindrical and Electrified Strikes style locksets. Use Electrified mortise locksets and Quiet Electric Latching Rim Exit devices instead. All electronic access control equipment (except card reader) shall be connected with molex style connectors. Electrified locksets shall also have RX switch built in. NOTE: NO cutting Fire Door frame shall be PERMITTED |
| 22 | KEY SYSTEMS | See comments above. ELAC has standardized on Schlage key system. |
| 23 | DIV. 09: FINISHES | |
| 24 | FLOOR/ WALL FINISHES | |
| 25 | CARPET | Tandus 36X36 (District contract in effect) |
| 26 | RESILIENT FLOORING | FORBO, Estri, <i>Armstrong, Mannington, Parterre, International</i> |
| 27 | CARPET MODULES | Tandus 36X36 (District contract in effect) |
| 28 | RESILIENT TILES/SHEET FLOORING | FORBO, Estri, <i>Armstrong, Mannington, Parterre, International</i> |
| 29 | HARD SURFACE (GYMNASIUM) | MONDO, <i>Aacer, Noble House, Teraflex,</i> |
| 30 | WALL BASE | Roppe, <i>Burke</i> |
| 31 | RAISED FLOORING SYSTEMS | Tate, <i>Interface AR, Maxcess, Smith</i> |
| 32 | PORCELAIN TILE-CERAMIC | Specific to design standard |
| 33 | WALL COVERINGS | Ultra Hide, <i>Vista Paint, Benjamin Moore</i> |
| 34 | PAINT | Vista, Dulux, ICI, <i>Dunn Edwards, Frazee, Sherwin Williams</i> |
| 35 | COATINGS | Dulux, ICI, <i>Master Coating, Technologies, Scuffmaster</i> |
| 36 | CEILING SYSTEMS | |
| 37 | ACOUSTICAL TILE | Armstrong, <i>USG, Statfor, Acousticolor 2X4 preferred</i> NOTE: Required 2x4 tiles |
| 38 | GRID SYSTEM | Armstrong, <i>USG, Stratford, AcoustiColor 2X4 preferred</i> |
| 39 | DIV. 10: SPECIALTIES | |
| 40 | SOAP & PAPER TOWEL DISPENSERS | CLEA, <i>BRADLEY, BOBRICK</i> |
| 41 | HAND DRYER | BOBRICK, Trim Line-Surface-Mounted ADA dryer B-7120 (22-ga mild steel zinc plated w/ high-gloss white epoxy paint finish), Xlerator (ADA compliant), Saniflow (ADA compliant) |
| 42 | BATHROOM PARTITIONS | BOBRICK, Bradley, Trespa, Santana, Flush metal, Accurate NOTE: Required Water & Fire Resistant, Solid Color Reinforced Composite. |
| 43 | RESTROOM ACCESSORIES | BOBRICK, Bradley, Xlerator, American |
| 44 | LOCKERS | Debourgh, Lyon, Penco, Republic |
| 45 | STORAGE/TRANSFER | Tyga-Box System or EQUAL |
| 46 | FIRE EXTINGUISHERS/ CABINET W/LOCKS | |
| 47 | GENERAL | Larsens, Potter Roeme, JL Industries (KEY # LL24) NOTE: Required Semi or fully recessed cabinets |
| 48 | DIV. 11: EQUIPMENT | |
| 49 | FOOD SERVICE EQUIPMENT | Hobart, Wolfe, Dwyer WITH SERVICE WARRANTY 1-5 YRS |
| 50 | KITCHEN, APPLIANCES | KitchenAid, <i>Frigidaire, Samsung, Chambers,</i> |
| 51 | DIV. 12: FURNISHINGS | |
| 52 | BLEACHERS | |
| 53 | INTERIOR, GYMNASIUM, TELESCOPIC, STND. | Irwin Telescopic, Studisteel, Southern Bleacher Company |
| 54 | WINDOW COVERING | |
| 55 | SOLAR SHADE | Mecho Shade, <i>Levolor, Suntec</i> |
| 56 | BLINDS - VERTICAL/ HORIZONTAL | Levelor, <i>Rivera, Hunter-Douglas</i> |
| 57 | BIKE RACK | |
| 58 | GENERAL | Brandir, Cycloops (frames to be of a lockable design) |
| 59 | DIV. 13: SPECIAL CONSTRUCTION | |

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| 60 | MODULAR STRUCTURES | GE, Capital, Williams Scotsman, Aurora |
| 61 | DIV. 14: CONVEYING EQUIPMENT | |
| 62 | STANDARD ELEVATORS | Mitsubishi, Kone, Schindler |
| 63 | ELEVATOR CAMERA | <p>If elevator manufacturer offers CAT6 (or higher grade) network cable in travel cable options, that cable should be ordered with the elevator and an Axis camera for IP direct connection without media conversion used so long as the total cable run is under 290 ft from IDF to elevator camera. If the copper is over 290', SM fiber in the elevator travel cable with media conversion will also allow Axis IP camera usage.</p> <p>If elevator manufacturer does not offer either fiber or CAT6 (or higher grade) data travel cable options, use Sony or Panasonic analog camera with cable service loops, duplex power, and media converter located inside can mounted to wall in elevator machine room. In that can convert from analog (e.g. coax) to digital (e.g. CAT cable to match building CAT cable or SM fiber - either way homerun from can to floor's IDF).</p> <p>NOTE: Required in every elevator cab, including service elevator</p> |
| 64 | CONTROLLER | <p>MOTION CONTROLS.....</p> <p>NOTE: Required that controls are universal & not proprietary.</p> |
| 65 | ELEVATOR DOORS | GAL DOOR EQUIPMENT |
| 66 | ELEVATOR CAB LIGHT FIXTURE | ERIM FIXTURES |
| 67 | WHEELCHAIR LIFTS | Mitsubishi, Garaventa |
| 68 | EXIT STAIR EVACUATION CHAIRS | <p>Garaventa Evacuation chairs, EVACU-TRAC CD7 or better</p> <p>NOTE: Required at every exit stair, every floor.</p> |
| 69 | DIV. 21: FIRE SUPPRESSION | |
| 70 | HYDRANTS | James Jones or EQUAL |
| 71 | DIV. 22: PLUMBING | |
| 72 | PIPE | |
| 73 | DOMESTIC/POTABLE | C900 BLUE, COPPER K, #80 PVC. Lead free on all ferus transitions, brass/copper (Portable Water) |
| 74 | UNDERGROUND WATER IRRIGATION PIPING | Schedule 40 and Schedule 80 PVC ½" TO 3"; C900 pipe, AWWA approved valving, resilient wedge, sleeved cans with approved concrete lids/enclosures (traffic rated, if necessary) |
| 75 | UNDERGROUND SANITARY PIPING | CAST IRON, SDR-35 |
| 76 | ABOVE GROUND SANITARY PIPING | CAST IRON TYLER PIPE/DWV COPPER |
| 77 | PIPE TUBING AND FITTINGS | C-900, MEGA LUG FTGS APPROVED CI CONN FLANGE. LEAD FREE FOR ALL POTABLE FITTING MATERIAL (FLANGES/BRASS/COPPER). |
| 78 | STEEL PIPE FUEL GAS/NATURAL GAS | BLACK SCH 40 INDOOR ONLY W/ SIMILAR FTGS. GALVANIZED FOR EXPOSED (ATMOSPHERE) TRANSITIONS AND MANIFOLDS. FULL PORT VALVING OF EQUAL OR GREATER. |
| 79 | BRASS PIPE | Red Brass, Schedule 40. LEAD FREE MATERIAL FOR ALL MATERIAL USED WITH POTABLE WATER DISTRIBUTION. |
| 80 | COPPER TUBING | Type "K" or "TYPE L" GRADES ONLY, NO "M", No Substitutes |
| 81 | BRASS SCHEDULE 40 SOLDER JOINT FTG's | Domestic. LEAD FREE MATERIAL FOR ALL MATERIAL USED WITH POTABLE WATER DISTRIBUTION. |
| 82 | SCREWED FITTINGS | Domestic |
| 83 | GAS PIPING UNDERGROUND | POLY PIPE, STEEL TRANSITION, YELLOW TRACER WIRE, BUTT FUSION OR SOCKET. APPROVED GAS ¼ TURN VALVING, SLEEVED CANS AND RISERS ON ALL SHUT OFFS IN APPROVED CONCRETE LIDS/ENCLOSURES (TRAFFIC RATED IF NECESSARY). |

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| 84 | BUILDING DRAIN, WASTE & VENT | CAST IRON NO HUB, NO HUB COUPLINGS, CAST IRON, FTGS./DWV COPPER (Domestic ONLY) |
| 85 | PIPE AND FITTINGS | Standard D2751-88 Cast Iron, no-hub pipe and fittings (waste) (Domestic ONLY) |
| 86 | PLUMBING FIXTURES | |
| 87 | TOILET FIXTURES (Low Flow, Vitreous China) | American Standard, <i>Zurn, Kohler</i> , 1.28 GPF (Sloan valves-#111- 1.280ES0S-YO Royal Optima) |
| 88 | SINKS | American Standard, <i>Kohler, Zurn</i> (Vitreous China Lavatories) |
| 89 | KITCHEN SINKS | Elkay, <i>Kohler, Zurn, Franke</i> (Stainless Steel) (or as determined acceptable by ELAC) |
| 90 | SERVICE SINKS | Chicago Wall mount (Faucets & Sinks). SERVICE SINK (HOPPER/CUSTODIAL) TO HAVE VACUUM BREAKER ON ALL WALL FAUCET(S). |
| 91 | URINALS (Low Flow) | American Standard, <i>Sloan (valve) Kohler (china porcelain)</i> . TOUCHLESS FLUSH VALVE, SLOAN PRODUCTS (NO ZURN). |
| 92 | URINALS (Waterless) | DO NOT USE |
| 93 | FAUCETS | Chicago/Brass Craft-automatic, OR MANUAL ONLY, NO ZURN OR SUBSTITUTE. TOUCHLESS SENSOR FIXTURES IN ALL PUBLIC CORE AND PRIVATE RESTROOMS. CHICAGO/SLOAN PRODUCTS. (NO ZURN OR ALTERNATES) PRODUCT TO MIMIC MAIN CAMPUS AND SATELLITES. CAMPUS PREFERS SINGLE FIXTURE SENSOR VERSUS BATTERY OF FIXTURES WITH TRANSFORMER AND HARD-WIRED WALL FIXTURES AND RECEPTICLES. |
| 94 | FLUSH VALVES - TOILETS, URINALS | Sloan ONLY, MANUAL OR SENSOR...NO ZURN OR SUB, 1.28 GPF. TOUCHLESS SENSOR FIXTURES IN ALL PUBLIC CORE AND PRIVATE RESTROOMS. CHICAGO/SLOAN PRODUCTS. (NO ZURN OR ALTERNATES) PRODUCT TO MIMIC MAIN CAMPUS AND SATELLITES. CAMPUS PREFERS SINGLE FIXTURE SENSOR VERSUS BATTERY OF FIXTURES WITH TRANSFORMER AND HARD-WIRED WALL FIXTURES AND RECEPTICLES. |
| 95 | DOMESTIC WATER HEATER | RHEEM, BRADFORD WHITE, Lochinvar NO AO SMITH |
| 96 | CIRCULATING PUMP | GRUNDFOS or Honeywell WITH EQUAL TIMERS IF NECESSARY/NO SUBSTITUTE |
| 97 | PLUMBING VALVES AND ACCESSORIES | |
| 98 | GENERAL | NIBCO, <i>Kohler, Sloan</i> , DOMESTIC PRODUCT ONLY, LEAD FREE WHERE APPLICABLE/ NO SUBSTITUTE |
| 99 | EXPANSION TANKS | AMTROL, <i>Watts</i> |
| 100 | BACKFLOW PREVENTERS | Watts, <i>Zurn/WILKINS</i> . LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 101 | EXTINGUISHERS/CABINETS | Larsens, <i>Potter Roeme, JL Industries</i> NOTE: Required Semi or fully recessed cabinets |
| 102 | CLEAN OUTS | J.R. <i>Smith, Zurn</i> , |
| 103 | FLOOR DRAINS | J.R. <i>Smith Model 2005Y (round top)</i> , |
| 104 | TRAP PRIMERS | Sloan tail piece (use for system having low-flow fixtures) automatic or connect to flush valve |
| 105 | ROOF DRAINS | J.R. <i>Smith, Zurn, Josam</i> |
| 106 | BALL VALVES | NIBCO (BRASS, FULL PORT) LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 107 | GATE VALVES | NIBCO (UNION BONNET, RAISED STEM) LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 108 | GLOBE VALVES | NIBCO (BRASS) LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |

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| 109 | CHECK VALVES | NIBCO (BRASS) LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 110 | VALVES(WATER, BELOW GROUND) | STOCKHAM (CAST IRON FLANGED AWWA WITH OPERATING NUT) |
| 111 | BACKWATER VALVES | Zurn, JR Smith |
| 112 | DRAIN PUMPS | Well Pump, Peerless, ZOELLER. |
| 113 | PRESSURE REGULATOR | Watts LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 114 | CHECK VALVES for 4" or larger line | Zurn. LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 115 | HOSE BIBB BOX | Stainless steel recessed w/ loose key handle, Acorn 8141/8102 NOTE: Required 2-3 exterior lockable hose bibs per elevation. |
| 116 | PISTON WATER HAMMER | MIFAB MWA Series. LEAD FREE IN ALL POTABLE WATER APPLICATIONS. |
| 117 | BOILER | Lockinvar, Raypack (NO Condensing Boilers) |
| 118 | EMERGENCY EYEWASH & SHOWER | |
| 119 | EMERGENCY EYEWASH & SHOWERS | Haws, Bradley, Watersaver NOTE: Floor drain required at every eye wash/emergency shower station. |
| 120 | WATER FOUNTAINS | |
| 121 | DRINKING WITH BOTTLE FILLING | Haws, Halsey Taylor, |
| 122 | DIV. 23: HEATING, VENTILLATION & AIR CONDITIONING (HVAC) | |
| 123 | HVAC | HVAC (MUST HAVE BACNET CONTROL PANEL TO TALK TO CAMPUS NETWORK) Honeywell, Johnson FX, Vykon full open |
| 124 | A/C UNITS, ROOF MOUNTED | (GAS ELECTRICS/HEAT PUMPS)CARRIER, YORK & TRANE, Daikin (McQuay) Honeywell, Johnson FX, Vykon. Fully open BACnet |
| 125 | A/C UNITS WALL MOUNTED | BARD, HEAT PUMPS, TRANE |
| 126 | AIR HANDLERS – CUSTOM | TEMTRON, UNITED METAL PRODUCTS, TRANE, ENERGY LABS, Daikin (McQuay) w/BACnet |
| 127 | AIR HANDLERS | CARRIER, YORK, TRANE, Daikin (McQuay) |
| 128 | HVAC HYDRONIC CONTROL VALVE | BELIMO TWO WAY and Victaulic IMI smart valves |
| 129 | HVAC HEATING & COOLING CONTROL VALVE | BELIMO PICCV TWO WAY WITH RESERVING SWITCH and Victaulic IMI smart valves |
| 130 | HVAC HYDRONIC PIPE FLANGE ADAPTER CONNECTIONS | OMNI, |
| 131 | MOTORS | BALDOR, GE, DAYTON |
| 132 | PUMPS | PACO, BELL & GOSSETT, ARMSTRONG |
| 133 | COOLING TOWERS | BALTIMORE AIR COIL, MARLEY, EVAPCO (STAINLESS STEEL) |
| 134 | OTHER FILTERS | AMERICAN, FAN & TRIDERN, 3-M |
| 135 | BOILER CONTROLS-HOT WATER | Lockinvar, Raypack, Parker w/BACnet card to EMES |
| 136 | BOILER CONTROLS-STEAM | Parker w/BACnet card to EMES |
| 137 | FAN COILS DX | Carrier, York, Trane, w/BACnet card to EMES |
| 138 | COMPUTER ROOM AC UNITS | APC, LIEBERT, DATA AIRE w/BACnet card to EMES |
| 139 | CHILLED WATER FAN COILS | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 140 | AIR COOLED CHILLER | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 141 | CENTRIFUGAL WATER-COOLED CHILLER | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 142 | SCREW-TYPE AIR COOLED CHILLER | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 143 | SCREW-TYPE WATER COOLED CHILLER | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 144 | SCROLL-TYPE AIR COOLED CHILLER | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 145 | CHILLER-GENERAL | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 146 | ABSORBTION CHILLER | Carrier, York, Trane, McQuay, Daikin w/BACnet card to EMS |
| 147 | OTHER ABSORBTION CHILLER | BROAD, THERMAX w/BACnet card to EMES |
| 148 | VENTILATORS AND EXHAUST FANS | COOK, GREENHECK |

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| 149 | FIRE SMOKE DAMPER | BELIMO W/ END SWITCH TO COMMUNICATE TO EMS, <i>RUSKIN AND KRUGER w/BACnet card</i> |
| 150 | VARIABLE FREQUENCY DRIVES | ABB, DANFOSS, TOSHIBA (With BACnet compatibility) |
| 151 | HYDRONIC PIPING | CARBON STEEL, SCH 80, INSULATED PVC PERMA PIPE, THERMACOR AND ROVANCO |
| 152 | AIR CONDITIONING THERMOSTAT | TOTAL LINE, 3-HEATING/2-COOL/HEATPUM/DIGITAL 7 DAY PROGRAMMABLE PIN P 374-2800 |
| 153 | THERMOSTAT LOCK BOX | HONEYWELL/LARGE OPQUE/PINTG 512B1007 |
| 154 | DIV. 25: INTEGRATED AUTOMATION | |
| 155 | ENERGY MANAGEMENT SYSTEM | Fully open protocol BACnet/Honeywell, Vykon, Johnson FX |
| 156 | DIV. 26: ELECTRICAL | |
| 157 | ELECTRICAL FIXTURES | |
| 158 | INTERIOR LIGHT FIXTURES(florescent, LED) No incandescence light fixture | Prudential, Lithonia, HE Williams, Lightolier. Smart system, preferably in the IoT platform. The controls will have to communicate and work with HVAC controls through BACnet. Enlighted, Blue Ridge Tech |
| 159 | CONNECT WITH EMERGENCY LIGHTS | Alertron to emergency grid |
| 160 | EXIT SIGNS | LED, Active Safety™, Pentico, Lithonia, Exitronix |
| 161 | ELECTRONIC WIRELESS WALL CLOCKS | PRIMEX ONLY NO SUB |
| 162 | ELECTRICAL OUTLETS | NOTE: Required 2-3 dedicated lockable electrical outlets per elevation. |
| 163 | INTERIOR SUSPENDED LIGHTS | Prudential, Lithonia, Philips |
| 164 | LIGHTING/INDOOR-OUTDOOR | |
| 165 | VANDAL PROOF LIGHTING FIXTURES | Rude, Stanco, Sequoia, BE, Lualux, Matalux. Smart system, preferably in the IoT platform. The controls will have to communicate and work with HVAC controls through BACnet. Enlighted, Blue Ridge Tech |
| 166 | LANDSCAPING FIXTURES | |
| 167 | EXTERIOR LIGHTS-PARKING LOT | LED (Lamp wattage to match existing) |
| 168 | LIGHT SENSORS | "Watt Stopper", LUTRON |
| 169 | PARKING LOT | Philips, Gardco, Gullwing LED GL 13 & GL 18 |
| 170 | ATHLETIC FIELD | Musco, <i>Morris, Lithonia</i> |
| 171 | ELECTRICAL EQUIPMENT | |
| 172 | MAIN SWITCHBOARD | Square D, GE, Cutler Hammer. Selection to match existing |
| 173 | MAIN DISTRIBUTION SWITCHBOARDS | Square D, GE, Cutler Hammer. Selection to match existing |
| 174 | DRY TYPE TRANSFORMERS | Square D, GE, Cutler Hammer. |
| 175 | MAGNETIC MOTOR STARTERS | Square D, GE, Cutler Hammer. |
| 177 | SOFT START MOTOR STARTERS | Square D, GE, Cutler Hammer. |
| 178 | PANELBOARDS | Square D, GE, Cutler Hammer. |
| 179 | MCC (MOTOR CONTROL CENTERS) | Square D, GE, Cutler Hammer. |
| 180 | DRIVES | ABB, <i>Toshiba, Square D</i> |
| 181 | ELECTRICAL FINISH FACE PLATES | STAINLESS FINISH PLATES |
| 182 | ELECTRIC VEHICLES/ CHARGERS | |
| 183 | ELECTRICAL VEHICLES AND CHARGERS | STAINLESS FINISH PLATES |
| 184 | CHARGER Mfr | STAINLESS FINISH PLATES |
| 185 | EMERGENCY POWER SYSTEM-GRID MATRIX | |
| 186 | CONNECT WITH SUMP PUMPS | Alertron to emergency grid |
| 187 | CONNECT WITH CO2 SENSORS | Alertron to emergency grid |
| 188 | CONNECT WITH EMS/CMMMS | Alertron to emergency grid |
| 189 | EMERGENCY MANAGEMENT SYSTEM | |

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| 190 | EMERGENCY MANAGEMENT SYSTEM | Fully open protocol BACnet/Honeywell. Smart system, preferably in the IoT platform. The controls will have to communicate and work with HVAC controls through BACnet. Enlighted, Blue Ridge Tech, Johnson FX |
| 191 | ENERGY MANAGEMENT SYSTEM | Fully open protocol BACnet/Honeywell |
| 192 | FIRE PROTECTION | |
| 193 | ELECTRONICS | Alerton |
| 194 | LIGHTING SUPPLIES | |
| 195 | LIGHT BULBS, FLOURESCNETS T-8's | Sylvania, GE, Phillips, 4100K, Min 80CRI, (Sylvania Preferred), LED |
| 196 | BALLASTS | Sylvania, <i>Phillips, GE</i> (Sylvania Preferred) |
| 198 | EMERGENCY POWER SYSTEMS | |
| 199 | GENERATORS | Onan, Caterpillar, APC, Kohler |
| 200 | UPS | APC, MGE, Schneider Electric (For BDF and IDFs, use rackmountable 5KVA APC or Eaton models with minimum 30min runtime at maximum UPS load, L6-30 plug, network card, 2 L6-30 rack PDUs per UPS, appropriate power cords, and all brackets). |
| 201 | DIV. 27: COMMUNICATIONS | |
| 202 | 27 05 00 COMMON RESULTS FOR COMM | |
| 203 | Structured Cabling System Warranty | Minimum 25 year warranty |
| 204 | 27 05 26 GROUNDING & BONDING | |
| 205 | Bus Bar | Lyncote XIT, <i>Chatsworth, Hargar</i> |
| 206 | 27 05 28 PATHWAYS FOR COMM SYSTEMS | |
| 207 | EMT Conduits & Couplings & Connectors | Appleton, Crouse-Hinds |
| 208 | Conduit Supports | Kindorf, Unistrut, Thomas & Betts |
| 209 | Hangers & Cable Ties | Chatsworth Products, Cooper B-Line, Caddy, Mono |
| 210 | Metal Outlet Boxes - Double Gang, Extra Deep | Appleton, <i>Raco, Steel City</i> |
| 211 | Pull Boxes and Cabinets | Hoffman Enclosures, <i>Wire Guard</i> |
| 212 | Cable Tray | 24" (MORE IF REQUIRED) CPI, Cooper B-Line, Panduit, Leviton, Homaco, Square D |
| 213 | 27 05 43 UG DUCTS & RACEWAY FOR COMM | |
| 214 | Manholes | Utility Vault (Oldcastle), <i>Jensen, Brooks</i> |
| 215 | Pull boxes | Utility Vault (Oldcastle), <i>Jensen, Brooks</i> w/ Spring Loaded LID |
| 216 | MH/PB Hardware | INWESCO products |
| 217 | Conduits (Schedule 40 or Type C) | Carlton, Wiremold, Panduit |
| 218 | Detectable Warning Tape | Carlton |
| 219 | Pull, Rope 1700 lb tensile strength | Carlton |
| 220 | Bonding ribbon (In vaults) | INWESCO Cat 12A55 |
| 221 | Bonding ribbon clamps (In vaults) | INWESCO Cat 12A56 |
| 222 | Fargo Clamp | INWESCO Cat 12A57 |
| 223 | Ground Rod | INWESCO Cat 12A60 |
| 224 | Ground Inserts (Cast Bronze) | INWESCO Cat 12H69 |
| 225 | Manhole Lids | Alhambra Foundry, <i>OPW manhole</i> |
| 226 | Manhole Ladders | Alhambra Foundry - Model A-3382 w/ A3383 Support bar |
| 227 | 27 11 00 COMM EQUIP. ROOM FITTINGS | |
| 228 | Ladder Racks | 24" CPI, Cooper B-Line, Panduit, Leviton, Homaco, Square D |
| 229 | Equipment Racks | APC NetShelter, <i>SIEMON VERSAPOD, V600, V800, Netshelter SX, Netshelter SV</i> |
| 230 | Wall-Mounted Cabinets | Cooper B-Line DAMAC |

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| 231 | Cable Managers | VERTICAL MANAGERS: CPI 10" or 12" Evolution series; HORIZONTAL MANAGERS: SIEMON WM - 145-5, Chatsworth, Ortronics and APC |
| 232 | Fiber Optic Terminals (FOT's)-Housing | SIEMON RIC-3-72-01, SIEMON RIC 3-48-01, SIEMON RIC 3-36-01, LIGHTSTACK LS-1V-01, LS-4V-01 |
| 233 | Fiber Terminal Adapters and Connectors | SIEMON RIC-FLC6-01, LIGHTSTACK LS-12-LC-5V-01, LIGHTSTACK LS-12-LC-SM-01 |
| 234 | Plywood | Arch. Wood Protection, Chemco, National Plywood Industries |
| 235 | Fire Retardant Paint | Flamort Co., Inc., FireNoMore International, |
| 236 | Fire Retardant | International Fire Retardants, Inc. or EQUAL |
| 237 | Patch panels | PATCH PANELS: SIEMON ZXAS-PNL (F)-V48K, TERA Z6AS-PNL (A)-U48K, ZMAX ZSPNLAV48E |
| 238 | Cable Tags & Splice Labels | CABLE TAGS AND SPLICE LABELS: 3M, Panduit, Tech Products |
| 239 | Protector Panels | Circa, Emerson, CommScope, Cook |
| 240 | 27 13 00 COMM BACKBONE CABLING | |
| 241 | Fiber Tube Cable (OSP and Riser) | SUMITOMO FUTUREFLEX: SM AND MM (MM ABF-50U OM4 or equal) |
| 242 | Fiber Cable - OSP and Riser | Sumitomo Electric FutureFLEX ABF-50U OM4 or equal |
| 243 | Copper OSP Cable | Siemon, General Cable, Superior Essex, CommScope |
| 244 | Splice Cases - Outside | Preformed, 3M, PSI |
| 245 | Splice Cases - Inside | Reliable, 3M |
| 246 | Splice Bay & Relay Labels | 3M, 5000 Scotchlite Decal System |
| 247 | ABF Tube Clips | Sumitomo Electric FutureFLEX |
| 248 | 27 15 00 COMM HORIZONTAL CABLING | |
| 249 | Station Cabling | MINIMUM 25 YEAR WARRANTY, CAT6A, shielded F/UTP (Siemon ZMAX 6A F/UTP), SIEMON 9T7R4E1006R1, TERA E109T7P4E1006R1, ZMAX 6AF-UTP-9A6P4A506RIA |
| 250 | Jacks | SIEMON Z6ASK01, TERA T7F011, ZMAX Z6ASK03 |
| 251 | Faceplates | SIEMON, TERA, ZMAX |
| 252 | Emergency Phone (Blue light) | Talk-A-Phone WEBS ETP-WM & WEBS ETP-MT/R bases w/ VOIP 500D NOTE: Required - parking structures: 4-min. per floor, surface parking lots at every 50 ft radius (250 LF max from source) |
| 253 | Elevator Phone | Talk-A-Phone VOIP 500D or as current future upgrade |
| 254 | CLASSROOM VOIP INTERCOM | Cisco Singlewire Informacast for Mass Notification, Valcom, Algo, Cyberdata, 2N |
| 255 | 27 40 00 AUDIO VISUAL | |
| 256 | CONTROL SYSTEM | UTELOGY control on OFOI touchscreen monitor, Extron 1808 AV presentation switch for 4K images or Extron IN1608xi AV presentation switch for 1920x1200 projectors, 70V amp and ceiling speakers, ALS 72Mhz (infrared version for adjacent large lecture rooms), Cisco SG250 8 port switch from AV rack for connection to Uteology server and connection to Uteology controlled devices in room, Fusion 8X2 power conditioner, gooseneck microphone, Bluray, etc. |
| 257 | PROJECTOR | EPSON, PANASONIC, Minimum WUXGA (1920 x 1200) resolution, Laser/LED >=6000 Lumens, HDBase T Connectivity. Lens w/ image shift , 3-chip color processing (3xLCD or 3xDLP, no single-chip models) |
| 258 | PROJECTOR SCREEN | DA-LITE, ELITE SRM, Draper - use 16:10 with image starting a minimum of AFF 48" (113" diagonal 16:10 best matches traditional screen line-of-sight/size balance for most classrooms). |
| 259 | LECTERN | SPECTRUM FREEDOM XRS, FORBES-AV, VREM AV, Spectrum, Masters lectern |

| | STANDARD | CAMPUS ALTERNATIVES |
|-----|--|---|
| 260 | DOCUMENT CAMERA | EPSON, WOLFFVISION |
| 261 | MICROPHONE | SHURE |
| 262 | NETWORK SWITCH | Cisco Catalyst 9300 IP Based-POE+, upgradable to latest technical advances; Cisco SG250-08 (for AV racks.) |
| 263 | ANNOTATION DEVICE | SMART TECHNOLOGIES |
| 264 | INTERACTIVE DISPLAY | Smart Technologies, Epson, Panasonic |
| 265 | CLASSROOM LIGHTING CONTROL | Smart system, preferably in the IoT platform. The controls will have to communicate and work with HVAC controls through BACnet. Enlighted, Blue Ridge Tech |
| 266 | SPEAKERS | JBL, EXTRON (70W mono for most classrooms) |
| 267 | PC COMPUTERS | HP ELITE 800 SERIES (16GB with BluRay for instructor stations) |
| 268 | LECTURE CAPTURE | Ensemble |
| 269 | ELECTRONIC QUEUEING SYSTEM | Q-Matic, Q-Less |
| 270 | DIV. 28: ELECTRONIC SAFETY & SECURITY | |
| 271 | 28 10 00 ELECTRONIC ACCESS CONTROL | |
| 272 | CARD READER | HID Global 920NMPTEKMA007, 921NMPTEKMA008 (use OSDP communication only) NOTE: Required at all building entries, classroom doors (if more than one door, then at least one required), all building utility rooms (electrical, mechanical, BDF/IDF, Janitorial closets), staff/faculty office suite entrances. Refer to latest District Standards. Readers shall be connected via OSDP using Belden 658GMS composite cable. |
| 273 | CREDENTIALS | HID Global 5006PGGAN with LACCD Corporate 1000 Format: H800003 |
| 274 | ACCESS CONTROL CABLE | Belden 658GMS |
| 275 | ACCESS CONTROL PANEL | Lenel LNL-X4420 |
| 276 | POWER SUPPLY | LifeSafety Power FPO150/250-3D8P2M8NL4E8M2/P16 with BDM or FPO250/250-3D8P5M8PNLXE12M |
| 277 | DOOR POSITION SENSOR | Schlage 7764 |
| 278 | LOCKDOWN BUTTON | STI SS2026LD-EN with 6/18 cable to Access Control Panel |
| 279 | ACCESS CONTROL SYSTEM | Lenel OnGuard Enterprise |
| 280 | 28 20 00 ELECTRONIC SURVEILLANCE | |
| 281 | Security Cameras | High Definition 8 MEGA Pixel Axis P-Series + Q-Series w/zipstream |
| 282 | ANALOG VIDEO to IP ENCODER | AXIS: Q74 Series |
| 283 | System Server | BCD Video System for Storage and Milestone XProtect Corporate for VMS |
| 284 | Recording System | BCD Video System for Storage and Milestone XProtect Corporate for VMS |
| 285 | WIRELESS ACCESS POINTS | |
| 286 | Indoor Access Points | Cisco Aironet 4200 Series ; Cisco Aironet 1800? E Series W/NEMA 4 ENCLOSURE + Ext antennas |
| 287 | Outdoor Access Points | Cisco Aironet 3802E Series W/NEMA 4 ENCLOSURE + Ext antennas |
| 288 | FIRE ALARM SYSTEM | |
| 289 | GENERAL | Edwards (EST 4) with Mass Notification |
| 290 | FIRE ALARM PULL STATION | EST CAT 45 KEY |
| 291 | SPEAKER/STROLL AMBER ALERT | Edwards (EST 4) with Mass Notification |
| 292 | DIV. 32: EXTERIOR IMPROVEMENTS | |
| 293 | IRRIGATION SYSTEMS | |
| 294 | IRRIGATION CONTROLLER | Toro TMC-424E Series, Irritol TMC 424 Series |

| | STANDARD | CAMPUS ALTERNATIVES |
|------------|--------------------------------------|---|
| 295 | CONTROLLER REMOTE SITE MANAGEMENT | Toro TriComm Site Management |
| 296 | CONTROLLER HAND-HELD REMOTE CONTROL | Toro TMR-1 |
| 297 | CONTROLLER ENCLOSURE | V.I.T. Strong Box SB-xxSS with QP, CSA, RGVRS Options |
| 298 | RAIN SENSOR | Toro TRS |
| 299 | CONTROL WIRE - COMMON | Paige P7001D 12 AWG White |
| 300 | CONTROL WIRE - HOT | Paige P7001D 14 AWG Colored |
| 301 | WATERPROOF WIRE CONNECTOR | Spears DS-500 Dri-Splice |
| 302 | GROUNDING ROD | Paige 182007 with Paige 1820037P Connection |
| 303 | DIELECTRIC CONNECTION | Approved by Electrical Engineer |
| 304 | BOOSTER PUMP | Barrett Irriboost with Variable Speed Drive and SS Enclosure |
| 305 | BASKET STRAINER | Yardney SBx-T Series, Purple |
| 306 | BASKET STRAINER ENCLOSURE | V.I.T. Strong Box SBBC-xxSS with QP Option |
| 307 | PRESSURE REGULATOR | Wilkins 500 Series |
| 308 | MASTER VALVE | Toro 220 Brass or Toro P-220S Platic, or Rainbird P220 Brass series with Pressure regulator |
| 309 | FLOW SENSOR | Toro TFS Series |
| 310 | FERTILIZER INJECTOR | EZ-FLO EZ Series |
| 311 | GATE VALVE (2" and SMALLER) | Nibco T-113 Series |
| 312 | GATE VALVE (2 1/2" and LARGER) | Nibco F-619-SON Series |
| 313 | BALL VALVE (2" and SMALLER) | Nibco T-585-70 Series |
| 314 | AIR RELEASE VALVE | Cla-Val #33-A Series |
| 315 | QUICK COUPLING VALVE | Rain Bird #44-NP or TORO #44 NP Series |
| 316 | ELECTRIC CONTROL VALVE | Toro 220 Brass, Toro P-220S PlaticM, or Rainbird P-220 brass series |
| 317 | DRIP ZONE VALVE KIT | Toro TPV Series |
| 318 | VALVE BOX | NDS Pro Plus Series (green plastic with purple bolt-down cover) |
| 319 | MAINLINE PIPING (6" and LARGER) | Pacific Plastics or equal CL200 PVC Gasketed - Purple |
| 320 | MAINLINE PIPING (2" - 4") | Pacific Plastics or equal CL315 Solvent-Weld PVC - Purple |
| 321 | MAINLINE PIPING (1 1/2" and SMALLER) | Pacific Plastics or equal SCH 40 Solvent-Weld PVC – Purple or Sch 80 PVC |
| 322 | LATERL LINE PIPING | Pacific Plastics or equal SCH 40 Solvent-Weld PVC – Purple, or SCH 80 PVC |
| 323 | PIPE / WIRE SLEEVING | Pacific Plastics or equal SCH 40 Solvent-Weld PVC |
| 324 | PIPE FITTINGS (MAINLINE) | Spears or equal SCH 80 PVC |
| 325 | PIPE FITTINGS (LATERAL LINES) | Spears or equal SCH 40 PVC |
| 326 | ARTIFICIAL TURF COOLING SYSTEM HEADS | Toro TS90TP Series |
| 327 | LARGE TURF ROTOR HEADS | Toro TR70P Series |
| 328 | MEDIUM ROTOR HEADS | Toro T5 Series |
| 329 | SMALL ROTOR HEADS | Toro 570Z-PRX-COM-E with Tor Precision Rotating Nozzle |
| 330 | FIXED SPRAY HEADS | Toro 570Z-PRX-COM-E with Toro Precision Spray Nozzle |
| 331 | FLOOD BUBBLER | Toro 570Z-PRX-COM-E with Toro FB-PC Nozzle |
| 332 | TREE ROOT WATERING SYSTEM | Rain Bird RWS Series |
| 333 | DRIP LINE SYSTEMS | Toro DL2000 RGP-xxx-xx-E Series |
| 334 | DRIP SYSTEM FITTINGS / ACCESSORIES | Toro - Miscellaneous |
| 335 | LANDSCAPE DESIGN | |
| 336 | LARGE TREES | Ceadrus deodora, Deodar cedar |
| 337 | LARGE TREES | Platanus racemosa, California sycamore |
| 338 | LARGE TREES | Quercus agrifolia, Coast live oak |
| 339 | MEDIUM TREES PRIMARILY FOR SHADE | Cinnamonium camphora, Camphor tree |
| 340 | MEDIUM TREES PRIMARILY FOR SHADE | Jacaranda mimosifolia, Jacaranda |

| | STANDARD | CAMPUS ALTERNATIVES |
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| 341 | MEDIUM TREES PRIMARILY FOR SHADE | Liriodendron arnoldii, Tulip tree |
| 342 | MEDIUM TREES PRIMARILY FOR SHADE | Platanus acerifolia 'Yarwoodii', Yarwood plane tree |
| 343 | MEDIUM TREES PRIMARILY FOR SHADE | Podocarpus gracilior, Fern pine |
| 344 | MEDIUM TREES PRIMARILY FOR SHADE | Quercus ilex, Holly oak |
| 345 | MEDIUM TREES PRIMARILY FOR SHADE | Ulmus parvifolia 'Drake', Drake Chinese elm |
| 346 | SMALL TREES FOR FLOWERS & FRAGRANCE | Agonis flexusa, Peppermint tree |
| 347 | SMALL TREES FOR FLOWERS & FRAGRANCE | Arbutus 'Marina', Marina strawberry tree |
| 348 | SMALL TREES FOR FLOWERS & FRAGRANCE | Bauhinia 'Blakeana' Hong Kong orchid tree |
| 349 | SMALL TREES FOR FLOWERS & FRAGRANCE | Callistemon viminalis, Weeping bottle brush |
| 350 | SMALL TREES FOR FLOWERS & FRAGRANCE | Cassia leptophylla, Gold medallion tree |
| 351 | SMALL TREES FOR FLOWERS & FRAGRANCE | Eucalyptus erythricorys, Red cap gum |
| 352 | SMALL TREES FOR FLOWERS & FRAGRANCE | Eucalyptus torquata, Coral gum |
| 353 | SMALL TREES FOR FLOWERS & FRAGRANCE | Lagerstromia indica, Crape myrtle |
| 354 | SMALL TREES FOR FLOWERS & FRAGRANCE | Laurus nobilis, Sweet bay |
| 355 | SMALL TREES FOR FLOWERS & FRAGRANCE | Lyonothamus asplenifolius, Catalina ironwood |
| 356 | SMALL TREES FOR FLOWERS & FRAGRANCE | Magnolia "Little gem", Little gem magnolia |
| 357 | SMALL TREES FOR FLOWERS & FRAGRANCE | Pistacia chinensis, Chinese pistace |
| 358 | SMALL TREES FOR FLOWERS & FRAGRANCE | Tabebuia lpe, Pink trumpet tree |
| 359 | PALMS | Brahea armata, Mexican blue palm |
| 360 | PALMS | Chamaerops humilis, Mediterranean fan palm |
| 361 | PALMS | Cycas revoluta, Sago palm |
| 362 | PALMS | Trachycarpus fortunei, Winmill palm |
| 363 | PALMS | Washingtonia filifera, California fan palm |
| 364 | PALMS | Washingtonia robusta, Mexican fan palm |
| 365 | SHRUBS INACTIVE AREAS | Achillea sp., Yarrow |
| 366 | SHRUBS INACTIVE AREAS | Arctostaphylos 'Sunset', Sunset manzanita |
| 367 | SHRUBS INACTIVE AREAS | Berberis 'Golden abundance' Oregon grape |
| 368 | SHRUBS INACTIVE AREAS | Carpenteria Calif., Bush anemone |
| 369 | SHRUBS INACTIVE AREAS | Fremontedendron 'California gold', California fremontia |
| 370 | SHRUBS INACTIVE AREAS | Garrya elliptica, Coast silk tassel |
| 371 | SHRUBS INACTIVE AREAS | Heteromeles arbutifolia, Toyon |
| 372 | SHRUBS INACTIVE AREAS | Heuchera sp., Alum root |
| 373 | SHRUBS INACTIVE AREAS | Penstemon 'Margarita BOP', Penstemon |
| 374 | SHRUBS INACTIVE AREAS | Rhamnus calif. 'San Bruno's mound', Coffeeberry |
| 375 | SHRUBS INACTIVE AREAS | Rhus integrifolia, Lemonade berry |
| 376 | SHRUBS INACTIVE AREAS | Ribes sanguineum, Pink flowering currant |
| 377 | SHRUBS INACTIVE AREAS | Ribes viburnifolium, Catalina evergreen currant |
| 378 | SHRUBS INACTIVE AREAS | Romneya coulteri, Matilija poppy |
| 379 | SHRUBS IN IRRIGATED AREAS | Agave attenuata, Fox tail agave |
| 380 | SHRUBS IN IRRIGATED AREAS | Anigozanthus sp., Kangaroo paw |
| 381 | SHRUBS IN IRRIGATED AREAS | Baccharis pilularis 'Pigeon point', Coyote bush |

| | STANDARD | CAMPUS ALTERNATIVES |
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| 382 | SHRUBS IN IRRIGATED AREAS | Callistemon 'Little John' Little John bottlebrush |
| 383 | SHRUBS IN IRRIGATED AREAS | Cistus sp., Rockrose |
| 384 | SHRUBS IN IRRIGATED AREAS | Coelonema pulchrum, Pink breath of heaven |
| 385 | SHRUBS IN IRRIGATED AREAS | Cotoneaster sp., Cotoneaster |
| 386 | SHRUBS IN IRRIGATED AREAS | Elaeagnus pungens, Silverberry |
| 387 | SHRUBS IN IRRIGATED AREAS | Hemerocallis sp., Daylily |
| 388 | SHRUBS IN IRRIGATED AREAS | Juniperus sp., Juniper |
| 389 | SHRUBS IN IRRIGATED AREAS | Lantana sp., Lantana |
| 390 | SHRUBS IN IRRIGATED AREAS | Leptospermum sp., Australian tea tree |
| 391 | SHRUBS IN IRRIGATED AREAS | Ligustrum texanum, Texas privet |
| 392 | SHRUBS IN IRRIGATED AREAS | Myrtus communis, Myrtle |
| 393 | SHRUBS IN IRRIGATED AREAS | Osmanthus fragrans, Sweet olive |
| 394 | SHRUBS IN IRRIGATED AREAS | Phormium tenax, Flax |
| 395 | SHRUBS IN IRRIGATED AREAS | Pittosporum tobira sp., Tobira |
| 396 | SHRUBS IN IRRIGATED AREAS | Raphiolepis indica sp., Indian hawthorne |
| 397 | SHRUBS IN IRRIGATED AREAS | Rosmarinus officinalis, Rosemary |
| 398 | SHRUBS IN IRRIGATED AREAS | Viburnum tinus sp., Laurustinus |
| 399 | SHRUBS IN IRRIGATED AREAS | Westringia fruticosa, Coast rosemary |