

## Confined Space Entry & Tunnel Safety – Appendix E: Confined Space Index – Sylvania Campus

The following table provides index and initial space classification for spaces at Sylvania Campus. The numbers noted are related to notation on maps.

| Map Location #  | Building/Location   | Space Type or Name / Conditions   | Initial Classification               |
|---|---|---|--------------------------------------|
| <b>100 - Vault with Single / Double and Triple Square Covers</b>  |   |   |                                      |
| Outside locations throughout the campus includes: Backflow Preventer Vaults, FDC valves and electrical vaults |   |   |                                      |
| 101   | Auto Shop West Side of Storage Bldg.<br>Fire FDC Water Vault                    | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 102   | South perimeter G Street below SCB.<br>Fire FDC Water Vault                     | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 103   | CSB yard.<br>Fire FDC Water Vault   | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 104   | Between LRC and TCB walkway.<br>Fire FDC Water Vault                            | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 105   | North of PAC.<br>Fire FDC Water Vault   | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 106   | North of CT yard.<br>Fire FDC Water Vault                                       | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 107   | Off CC at south ramp.<br>Fire FDC Water Vault                                   | Single square vault metal cover about 5' by 6'  | PERMIT / ALTERNATIVE                 |
| 108   | North side of LRC lower level in grass  | Single hatch 6' by 8' and probably at least 6' deep vault – NEED to check purpose if it is backflow or other type of vault          | PERMIT until vault function verified |
| 110   | SW side of SCB  | Concrete hatch that is about 2 ½' by 2 ½' sides right next to the building  | Not accessible space                 |
| 111   | North side of the Library leading to the parking area along K St. (next to 112) | Single metal hatch covered vault for 2 Fire and Domestic booster pumps, backflows - about 10 feet deep with fixed ladder            | PERMIT / ALTERNATIVE                 |
| 112   | North side of the Library leading to the parking area along K Street            | Double metal hatch covered vault – Electrical vault   | PERMIT / ALTERNATIVE                 |
| 113   | North side of the Library center way just above the walkway – elevated vault    | Single metal vault  | PERMIT                               |
| 114   | North side of the Library but next to the library in grass area                 | Single metal covered vault (8 by 6 vault)   | PERMIT / ALTERNATE                   |
| 115   | J Street down from Bookstore in roadway   | Metal single square vault cover Water Back flow vault with installed ladder and single hinged vault cover at least 4 to 5 feet deep | PERMIT                               |

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| Map Location #/Responsible Group | Building/Location   | Space Type or Name / Conditions   | Initial Classification                                    |
|----------------------------------|---|---|---|
| 116                              | North end of the Bookstore across K street and corner of P9 on east end   | Triple metal hatch vault – probably electrical                                  | <b>PERMIT</b>   |
| 117                              | Main 49 <sup>th</sup> Street Entry north end by the main pay station on G Street                                    |   | <b>PERMIT/ALTERNATE</b>                                   |
| 118                              | Outside pool area (HT) on south perimeter roadway H Street  | Double metal hatch covered vault  | <b>Permit</b>   |
| 119                              | West side of HT off the short term and handicap parking lot   | Rectangle vault cover   | <b>SHALLOW VAULT WITH IRRIGATION – NOT CONFINED SPACE</b> |
| 120                              | South side of HT across access roadway (next to 116)  | Solid square metal vault lid next to upright electrical or telecommunications   | <b>PERMIT until more information</b>                      |
| 121                              | NE of AM building stairs to yard  | Rectangle metal cover   | <b>PERMIT until more information</b>                      |
| 122 & 123                        | North road way entrance to service yard in CSB. #122 cover on vault, #123 circular manhole cover north of the vault | 2 Circular metal manhole covers at P4 accessible parking only sign to Auto Shop | <b>PERMIT</b>   |
| 124                              | North East side of the walkway at TCB   | Triple metal hatch vault, label VT29 ELECTRICAL VAULT                           | <b>PERMIT</b>   |
| 125                              | Walkway to AM P4 stairs   | Single hatch for what looks like electrical                                     | <b>Permit</b>   |
| 126                              | Next to 118 on H Street across from HT pool area  | Single hatch may be for telecommunication and may be shallow                    | <b>May be shallow if not Permit/alternate</b>             |
| 127                              | SW corner off HT at roadway and P12 under tree  | Triple electrical vault #VT 24  | <b>PERMIT</b>   |
| 128                              | G Street south side down from CC building   | Triple vault label VT23   | <b>PERMIT</b>   |
| 129                              | G Street south side down from SS Building   | Triple vault label VT22   |   |
| 130                              | G Street South side down from SS building   | Triple hatch vault label VT21   | <b>PERMIT</b>   |
| 131                              | Outside SCB/perimeter road on west (G Street)   | Double door vault   | <b>PERMIT</b>   |
| 132                              | NE side of the perimeter drive way (G St.) next to a plaque. (next to 133)  | Double metal hatch covered vault  | <b>PERMIT</b>   |
| 133                              | NE side of the perimeter drive way (G St.) next to a plaque   | Triple metal hatch covered vault  | <b>PERMIT</b>   |
| 134 next to 135                  | Off the CSB above the yard debris compost   | PGE Electrical Vaults with double hatch door                                    | <b>Permit</b>   |

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|----------------------------------|--|---|---|
| 135                              | Off the CSB above the yard debris compost  | PGE Electrical Triple metal hatch covered vault   | <b>Permit</b>                               |
| 136                              | Off CSB at green house   | Double metal hatch vault on the perimeter road G Street   | <b>Permit</b>                               |
| 137                              | Off from heat plant on perimeter road G Street   | Triple metal hatch cover on the west side   | <b>Permit</b>                               |
| 138                              | P11 Parking Area in east shrub area  | Raised Triple vault PGE electrical vault #126   | <b>PERMIT</b>                               |
| 139                              | P10 and L Street Vault   | Pre-junction electrical vault   | <b>Permit – no photo</b>                    |
| 140                              | G St. West side at G and L off in landscape area   | Water Backflow preventer vault. 6 by 8 by 6 feet deep   | <b>Permit/Alternate</b>                     |
| 141                              | G Street near the main pay station and Water notation on map                                     | Single metal hatch covered vault – 10 feet deep with fixed ladder – irrigation vault, pump has been moved to ground level – entrance would now be rare. | <b>Permit/Alternate</b>                     |
| 142                              | East side of the CSB along the perimeter road/ Outfall B Also see 157 and 158 part of the system | Manhole to the storm water outfall connects to the Bail Creek   | <b>PERMIT</b>                               |
| 143 (many spaces)                | Sewer Manholes Throughout the roadways and parking lots  | MANY Metal circular sewer manhole covers  | <b>PERMIT</b>                               |
| 144                              | SS Building Women's Restroom Tower North Side  | SEWER SUMP PUMP confined space with access in the custodial closet at SS Building   | <b>PERMIT</b>                               |
| 145                              | ST 107a Sump Pump  | SUMP PUMP by the elevator room in ST building room ST 107a  | <b>PERMIT</b>                               |
| 146                              | P5 and G Street  | Round manhole cover that confirmed what the space is  | <b>PERMIT UNTIL CONFIRMED WHAT SPACE IS</b> |
| 147                              | By the Main Bus Stop in grass  | Triple Vault VT 128 – electrical  | <b>PERMIT</b>                               |
| 148                              | Off G St. south by yard debris transformer   | Single Vault for electrical transformer   | <b>PERMIT</b>                               |
| 149                              | NE side of the perimeter drive way (E St.) next to a plaque                                      | Double metal hatch covered vault  | <b>PERMIT</b>                               |
| 150                              | From the lower entrance to the campus – Off G St.  | Several metal hatch covered vaults and continue vaults taking first road to HT and back side of pool  | <b>PERMIT</b>                               |
| 151                              | South side of HP on perimeter road   | Double metal hatch vault that is most likely for fire water valves  | <b>PERMIT</b>                               |
| 152                              | Lesser Road Entrance prior to the stop sign on the campus site                                   | Double metal hatch covered vault  | <b>PERMIT</b>                               |

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|----------------------------------|--|---|---|
| 153                              | HT Pool are 2 metal hatches that lead to the return water system                   | Two single metal hatches down by the high dive board. Fixed ladder access to 12-foot deep space with water at the bottom. There are valves in the space | <b>PERMIT</b>   |
| 154                              | Off CSB center parking area  | Single metal hatch backflow preventer vault and oil water separator system in center of the parking area – 10 feet deep                                 | <b>Permit – due to the depth and condition of the water in the vault</b>  |
| 155                              | On perimeter road off CSB  | 3 Metal hatch covered vault   | <b>PERMIT</b>   |
| 156                              | Outside HT Cooling Tower on West side Circle driveway sidewalk at FDC              | Triple square metal covered vaulted at FDC  | <b>PERMIT</b>   |
| 157                              | Off G perimeter road south end of campus off CSB in the woods                      | Single manhole cover on large storm water manhole vault   | <b>Permit/Alternate</b>   |
| 158                              | Off G perimeter road south end of campus off CSB in the woods – just down from 157 | Large rectangle concrete structure for stormwater run off   | <b>Permit to Non-permit depending on rain water outfall conditions.</b>   |
| 159                              | South Parking Area for CSB building off G Street                                   | Two manhole covers over large stormwater retention system at least 10 feet deep   | <b>Permit due to depth and condition of high flow during rain periods</b> |
| 160                              | See location 147 – near bus stops in grass to the west                             | Single vault with ID tag – most likely is PGE electrical vault  | <b>PERMIT</b>   |
| 161                              | See location 147 – near bus stops in grass to the west                             | Single vault with “Telephone” on surface of lid   | <b>PERMIT/ALTERNATE</b>   |
| 162                              | South perimeter G Street below CDC Fire FDC Water Vault (near location 102)        | Single square vault metal cover about 5' by 6'  | <b>PERMIT / ALTERNATIVE</b>   |

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| Map Location #   | Building/Location  | Space Type or Name  | Initial Classification  |
|--|--|---|---|
| <b>200 - Tunnel System and Facilities Access Hatches</b> |  |   |   |
| 200  | Tunnel system that runs the length of the campus under the buildings providing runs for water, sewer, utility services including electrical, phone, internet, HVAC hot water, HVAC units and pumps, air compressors, swimming pool plumbing are frequently inspected multiple times a week, and other facility equipment | <b>Tunnel System and Facilities Access Hatches work in tunnel includes sealing gaps against rodents, changing light bulbs and general maintenance of facilities equipment and structures.</b> | <b>NON-PERMIT</b>   |
| 201  | Heat Plant   | Tunnel under the heat plant has stair entrances, natural ventilation  | <b>Not a confined space</b>   |
| 202  | Heat Plant   | Condensate Drain in Heat Plant drain, shallow   | <b>Not a confined space too shallow</b>   |
| 203  | Walkway next to Heat Plant by Stairs and Grounds Lunchroom   | Personal door entrance to tunnels – stand walkway with mechanical ventilation   | <b>NOT a confined space at this point.</b>  |
| 204  | Buildings and Restroom outbuildings  | In many of the buildings are plumbing and pipe chase hatch openings off found in the restrooms and labs   | <b>NON-PERMIT</b> for inspection and minor repairs – natural and in some cases mechanical ventilation. They really are not large enough to really enter and do work |

| Map Location #                                | Building/Location  | Space Type or Name   | Initial Classification   |
|---|--|--|--|
| <b>300- HVAC Cooling Tower and HVAC Units</b> |  |  |  |
| 301   | Outside the Library on NW side   | Small Cooling Tower  | <b>Not large enough to enter – NOT CONFINED SPACE</b>  |
| 302   | West side by HT off of Child Care Rooms  | Small cooling tower  | <b>Not large enough to enter – NOT CONFINED SPACE</b>  |
| 303   | Outside the Heat Plant on South side   | Cooling tower with manhole entry to the tanks - Entry portals on side and top        | <b>PERMIT</b>  |
| 304   | HVAC Air Plenum Enclosures – Entry varies from in the Tunnel under the CC/HT building to on the building roofs for AM, TCV, ST, SS, LRC, PAC, CT | Many large HVAC air return and mixing plenums with near personnel door sized entries | <b>NON-PERMIT if no fall hazard and all units are in lockout (energy control) if entering the exposed fan section.</b> |
| 305   | HVAC Supply Air outside CT next to Bookstore   | Large open cement structure at ground level to about 8 feet deep                     | <b>Confined Space but NOT permit required</b>  |

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|   |  |  |  |
|---|--|--|--|
|   |  |  | because does not meet PRCS definition        |
| <b>400 - Boiler Systems</b>               |  |  |  |
| 400                                       | Heat Plant   | <b>Boiler Systems</b> Note: new boilers are not confined spaces – cannot be entered (no access and small)<br>Ductwork is also too small to enter | <b>Not a permit space</b>                    |
| 401                                       | Heat Plant RED & Orange older boiler   | Boiler Water Tubes and fire box  | <b>PERMIT Boiler has number of entrances</b> |
| 402                                       | Heat Plant Orange upper section of the older boiler  | Boiler Water tubes and fire box  | <b>PERMIT Upper section of same boiler</b>   |
| 403                                       | Heat Plant   | Small Expansion Water Tank in main boiler room   | <b>PERMIT</b>                                |
| 404                                       | Heat Plant – room to east of main boiler room  | Large Expansion Water Tank   | <b>PERMIT</b>                                |
| <b>500 - Tanks</b>                        |  |  |  |
| 500                                       | HT Pool chemical return water system tank (also see 153 hatch entries into the pool return water from the pool deck by diving board) | Raised water return tank   | <b>PERMIT</b>                                |
| 501                                       | CSB Yard   | Diesel Tank  | <b>PERMIT – NO ENTRY</b>                     |
| 502                                       | Off AM on north side   | 2 Metal covers for the gasoline and diesel fueling tanks   | <b>PERMIT – NO ENTRY</b>                     |
| 503                                       | Heat Plant   | Large Chiller Tanks: Large pressurized vessels with bolted ends  | <b>PERMIT</b>                                |
| 504                                       | West side of CC Bldg off the loading dock  | Diesel tank  | <b>PERMIT – NO ENTRY</b>                     |
| <b>SEWER RELATED and SUMP PUMP SPACES</b> |  |  |  |
| 1   | West side of TCB 3' by 3' tower vault some 30 feet deep  | Sewer lift station   | <b>PERMIT</b>                                |
| 2   | Same location as #1 sewer manhole  | Sewer manhole  | <b>Permit</b>                                |
| 3   | West side of Bookstore loading dock  | Circular manhole cover   | <b>Permit</b>                                |
| 4   | West side of Bookstore at roadway corner to loading dock, next to fire hydrant   | Circular manhole – sewer   | <b>Permit</b>                                |
| 5   | SW corner off HT across roadway on G Street  | Circular manhole cover – most likely sewer   | <b>PERMIT</b>                                |
| 6 and 7                                   | Off CSB at greenhouse  | Storm water circular cover and 2 sewer manhole covers  | <b>PERMIT</b>                                |
| 8   | NE side of TCB in the sidewalk next to Handicap parking at D street  | Circular manhole cover   | <b>PERMIT</b>                                |
| 9   | East side of the LRC in the landscaping  | Circular manhole cover – sewer   | <b>PERMIT</b>                                |

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