

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLATION OF NEW MAINS, VALVES, MANHOLES, TRENCHES, AND JOIST REPAIRS OF THE DILITY PROVIDED.
2. ALL WATER MAINS AND SERVICE LINES 4" # AND LARGER SHALL BE CLASS 160 POLYETHYLENE (PE) (SDR-26) TYPE 1, GRADE 1, ASTM A2521.
3. NO DIRECT TRIPPING OF THE PIPE WALL BE PERMITTED FOR MANHOSE CONNECTIONS. SERVICE SOULDS STRAPPED FOR USE WITH PFC PIPE. LE COOL NO. 3007 (ALL SIZES) OR CONDUIT SHALL BE USED FOR ALL SERVICE LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
4. THE PROTECTION OF THE PIPE SHALL COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE APPLICABLE REQUIREMENTS OF THE UTILITY PROVIDER. THE PROTECTION SHALL BE EXTENDED TO THE FULL LENGTH OF THE PIPE. THE PROTECTION SHALL BE EXTENDED TO THE FULL LENGTH OF THE PIPE. THE PROTECTION SHALL BE EXTENDED TO THE FULL LENGTH OF THE PIPE. THE PROTECTION SHALL BE EXTENDED TO THE FULL LENGTH OF THE PIPE.
5. ALL VALVES AND TRENCHES MUST BE PROVIDED BY THE CONTRACTOR DIRECTLY FROM THE MANUFACTURER OR HIS REPRESENTATIVE.
6. THE EXISTING UTILITIES SHALL BE PROTECTED. THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES SHALL BE REMOVED BY THE CONTRACTOR WITH EQUAL OR BETTER MATERIALS SUPPLIED BY THE CONTRACTOR AT HIS EXPENSE.
7. THE CONTRACTOR SHALL USE THE NECESSARY FITTINGS TO PROVIDE A RIGID JUNCTION AND WATER MAINS. THE SAME CLEARANCE REQUIREMENTS APPLY FOR WATER AND SEWER SERVICES.
8. DISPOSITION OF WATER MAINS AND SERVICE LINES SHALL BE PERFORMED BY CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES SHALL BE REMOVED BY THE CONTRACTOR WITH EQUAL OR BETTER MATERIALS SUPPLIED BY THE CONTRACTOR AT HIS EXPENSE.
9. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.
10. PRIOR TO FINAL INSPECTION AND TESTING OF THE SYSTEM, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COMPLETE LIST OF ALL TRENCHES, SERVICE LINES AND JOINTS TO BE REMOVED. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.
11. IN AREAS WHERE THE GRADE OF THE CURB OR SIDEWALK HAS CHANGED THE WATER BODIES SHALL NOT BE ADJUSTED. SERVICE LINES, OF SIMILAR MATERIAL, SHALL BE USED THROUGH THE CURB AND SIDEWALK. THERE SHALL BE NO SEPARATION BETWEEN THE

WATER NOTES

12. SERVICE LINES SHALL BE A MINIMUM OF 1" AND SHALL BE POLYETHYLENE (PE) (SDR-26) TYPE 1, GRADE 1, ASTM A2521.
13. FIRE HYDRANTS TO BE ASTM C-502 COMPRESSION TYPE 5, 5/8" VALVE OPERING, 3-1/2" TYPICAL STANDARDS. 2 1/2" X 8" X 6" WATER CONNECTION WITH MINIMUM STANDARD TRENCHES WITH SECTION 40-204, "TRENCH WATER SYSTEMS OF ORDINARY P.A.S. NO. 34-117, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.
14. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.
15. PRIOR TO FINAL INSPECTION AND TESTING OF THE SYSTEM, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COMPLETE LIST OF ALL TRENCHES, SERVICE LINES AND JOINTS TO BE REMOVED. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.

WATER DETAILS

15. ALL CHANGES IN PIPE MAIN DIRECTION SHALL BE STABILIZED BY USE OF RIGID JOINTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
16. CONDUIT SHALL BE USED FOR ALL SERVICE LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
17. THE CONTRACTOR SHALL USE THE NECESSARY FITTINGS TO PROVIDE A RIGID JUNCTION AND WATER MAINS. THE SAME CLEARANCE REQUIREMENTS APPLY FOR WATER AND SEWER SERVICES.
18. DISPOSITION OF WATER MAINS AND SERVICE LINES SHALL BE PERFORMED BY CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES SHALL BE REMOVED BY THE CONTRACTOR WITH EQUAL OR BETTER MATERIALS SUPPLIED BY THE CONTRACTOR AT HIS EXPENSE.
19. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.
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21. THE CONTRACTOR SHALL PROTECT THE EXISTING UTILITIES BY PROVIDING ADEQUATE PROTECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
22. SERVICE LINES SHALL BE A MINIMUM OF 1" AND SHALL BE POLYETHYLENE (PE) (SDR-26) TYPE 1, GRADE 1, ASTM A2521.
23. FIRE HYDRANTS TO BE ASTM C-502 COMPRESSION TYPE 5, 5/8" VALVE OPERING, 3-1/2" TYPICAL STANDARDS.

SEWER NOTES

1. ALL OF THE SANITARY SEWER PIPE SHALL BE PFC PIPE CONFORMING TO ASTM F4818 TYPE 1, GRADE 1, ASTM A2521.
2. SERVICE LINES SHALL BE A MINIMUM OF 1" AND SHALL BE POLYETHYLENE (PE) (SDR-26) TYPE 1, GRADE 1, ASTM A2521.
3. FIRE HYDRANTS TO BE ASTM C-502 COMPRESSION TYPE 5, 5/8" VALVE OPERING, 3-1/2" TYPICAL STANDARDS.
4. A 5/8" (6) FOOT MINIMUM HORIZONTAL SPACING SHALL BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND WATER LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
5. THE 6" PFC SERVICE CONNECTIONS SHALL BE PFC SDR-35 AND ADJUSTING RING, AS REQUIRED.
6. THE CONDITIONS OF EXISTING UTILITIES SHALL BE APPROVED BY CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
7. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THE EXISTING SERVICE LINES AND SERVICE MANHOLES.
8. ALL SEWER SERVICE CONNECTIONS INSTALLED BY THE CONTRACTOR SHALL BE PROPERLY PLACED AND MARKED.
9. CONNECTION OF SEWER SERVICE TO EXISTING OR PROPOSED MANHOLES SHALL BE OF RIGID SEWER MANHOLE TYPE. THE DISTANCE BETWEEN INVERT OF PIPE AND BOTTOM OF MANHOLE SHALL BE 3 FEET, 1/2" TO 6 INCHES MAX.
10. ALL NEW MANHOLE CONSTRUCTION SHALL HAVE COAL, THE EXISTING LINES SHALL BE REPAIRED BY THE CONTRACTOR WITH EQUAL OR BETTER MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
11. TRENCH PROTECTION SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
12. BACKFILL WITH SELECTED FILL MATERIAL, FREE OF STUMPS, DEBRIS, AND VOIDS. BACKFILL MATERIAL, BENEATH AND WITHIN TRENCHES SHALL BE COMPACTED TO 95% RELATIVE DENSITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES.
13. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.
14. PRIOR TO FINAL INSPECTION AND TESTING OF THE SYSTEM, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COMPLETE LIST OF ALL TRENCHES, SERVICE LINES AND JOINTS TO BE REMOVED. THE CONTRACTOR SHALL MAINTAIN ALL TRENCHES AND SHALL PROVIDE ALL TRENCHES FOR TRENCHES IN THE CONTRACT DOCUMENTS.

